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CITY OF Grand Junction COLORADO

NOTICE TO PROCEED

Date: July 27, 2020

Contractor: M.A. Concrete Construction, Inc.

Project: Riverfront at Dos Rios Phase II Construction IFB-4799-20-DH

In accordance with the contract dated July 16, 2020 the Contractor is hereby notified to begin work on the Project on or before August 17, 2020.

The date of final completion as determined is 305 Calendar Days from the start date of this Notice to Proceed.

CITY OF GRAND JUNCTION, COLORADO

DocuSigned by:
Duane Hoff Jr., Senior Buyer – City of Grand Junction
9F789E7D50F1...
Duane Hoff Jr., Senior Buyer

Receipt of this Notice to Proceed is hereby acknowledged:

Contractor: M.A. Concrete Construction, Inc.

By: DocuSigned by:
Martin Azcarraga – President, M.A. Concrete Construction, Inc.
D8D21E733BA3471...

Print Name: Martin Azcarraga - President, M.A. Concrete Construction, Inc.

Title: President

Date: 7/28/2020 | 07:52 MDT

CHANGE ORDER

Number 1

Date: December 15, 2020
To: M.A. Concrete Construction, Inc.
From: City of Grand Junction, Department of Public Works and Utilities
Project: **2019 Riverfront at Dos Rios Phase II**
P.O.: **2020-00000518**

It is agreed to modify the Contract for the Project as follows:

Change Order No. 1 is for the replacement of the existing sanitary sewer within Hale Avenue. All other utilities shall be replaced prior to a newly constructed Hale Avenue. The existing sanitary sewer in Hale Ave. is 100 years old, and neeeds replaced. The replacement includes 500-lf of 15" PVC sewer, 2 manholes, 1 new service line and removal of the old system. The cost for the sewer main replacement is estimated at $57,766. The requested amount should be transferred from account 902-615-090-8425, project code F0016-F001639.

Summary of Contract price adjustments - itemized on the attached sheet(s):

Original Contract Amount	$8,457,117.68
Approved Change Orders	0.00
This Change Order	57,766.00
Revised Contract Amount	$8,514,883.68

Summary of Contract time adjustments:

Original Contract Time	305.	Cal. Days
Approved Change Orders	0.	
This Change Order	0.	
Revised Contract Time	305.	Cal. Days

Construction Start Date:	August 17, 2020
Contract Completion Date:	June 17, 2021

This modification constitutes compensation in full for all costs and mark-ups directly and/or indirectly attributable to the changes ordered herein, for all delays, impacts and disruptions related thereto and for performance of the changes within the Contract Time.

Owner: **City of Grand Junction**

Prepared by: _____ Date: 12-15-20
Brendan Hines, Project Manager

Recommended by: _____ Date: 12/15/20
Trent Prall, Public Works Director

Approved by: _____ Date: 12/16/2020
Greg Caton, City Manager

Contractor: **M.A. Concrete Construction, Inc.**

Signature: _____ Date: 12-16-20

Name and Title: _____

DocuSign Envelope ID: C38FFC4B-B00B-46FD-BCFE-BD0BA2661814

CHANGE ORDER

Number 1

Date: September 28, 2020
To: M.A. Concrete Construction
From: City of Grand Junction, Department of Public Works and Utilities – Engineering Division
Project: **Riverfront at Dos Rios Phase II Construction IFB-4799-20-DH**
P.O.: **2020-00000518**

It is agreed to modify the Contract for the Project as follows:

As stated in the original contract document dated July 16, 2020, this change order is being executed as City Council has approved the required supplemental budge appropriation to award the remaining project awarded amount of $6,457,117.68. This was done at the July 15, 2020 meeting and has also passed the 30-day waiting period.

Summary of Contract price adjustments - itemized on the attached sheet(s):

Original Contract Amount	$2,000,000.00
Approved Change Orders	0.00
This Change Order	$6,457,117.68
Revised Contract Amount	$8,457,117.68

Summary of Contract time adjustments:

Original Contract Time	305.	Cal. Days
Approved Change Orders	0.	
This Change Order	0.	
Revised Contract Time	305.	Cal. Days

Construction Start Date:	August 17, 2020
Contract Completion Date:	June 17, 2021

This modification constitutes compensation in full for all costs and mark-ups directly and/or indirectly attributable to the changes ordered herein, for all delays, impacts and disruptions related thereto and for performance of the changes within the Contract Time.

Owner: **City of Grand Junction**

Prepared by: DocuSigned by: Brendan Hines – Project Engineer, City of Grand Junction 56344CFEF9F1499... Date: 9/29/2020 | 16:32 MDT

Brendan Hines, Project Engineer

Approved by: DocuSigned by: Trent Prall F666983B4D30492... Date: 10/8/2020 | 15:06 MDT

Trent Prall, Director of Public Works – Engineering

Approved by: DocuSigned by: Greg Caton – City Manager – City of Grand Junction 2F1EE1D337B6492... Date: 10/8/2020 | 15:42 MDT

Greg Caton, City Manager

Contractor: **M.A. Concrete Construction, Inc.**

Signature: DocuSigned by: Martin Azcarraga – President, M.A. Concrete Construction, Inc. 36B24E706BA64F4... **Date:** 10/8/2020 | 17:49 MDT

Name and Title: Martin Azcarraga - President, M.A. Concrete Construction, Inc. President

DocuSign Envelope ID: 676A9DE8-CCB5-48AF-AFA6-180931300848

CITY OF GRAND JUNCTION, COLORADO

****

CONTRACT

This CONTRACT made and entered into this 16th day of July, 2020 by and between the **City of Grand Junction, Colorado,** a government entity in the County of Mesa, State of Colorado, hereinafter in the Contract Documents referred to as the "Owner" and **M.A. Concrete Construction, Inc.** hereinafter in the Contract Documents referred to as the "Contractor."

WITNESSETH:

WHEREAS, the Owner advertised that sealed Bids would be received for furnishing all labor, tools, supplies, equipment, materials, and everything necessary and required for the Project described by the Contract Documents and known as **Riverfront at Dos Rios Phase II Construction IFB-4799-20-DH**.

WHEREAS, the Contract has been awarded to the above named Contractor by the Owner, and said Contractor is now ready, willing and able to perform the Work specified in the Notice of Award, in accordance with the Contract Documents;

NOW, THEREFORE, in consideration of the compensation to be paid the Contractor, the mutual covenants hereinafter set forth and subject to the terms hereinafter stated, it is mutually covenanted and agreed as follows:

ARTICLE 1

Contract Documents: It is agreed by the parties hereto that the following list of instruments, drawings, and documents which are attached hereto, bound herewith, or incorporated herein by reference constitute and shall be referred to either as the "Contract Documents" or the "Contract", and all of said instruments, drawings, and documents taken together as a whole constitute the Contract between the parties hereto, and they are fully a part of this agreement as if they were set out verbatim and in full herein:

The order of contract document governance shall be as follows:

a. The body of this contract agreement
b. Solicitation Documents for the Project; **Riverfront at Dos Rios Phase II Construction;**
c. Notice of Award
d. Contractors Response to the Solicitation
e. Work Change Requests (directing that changed work be performed);
f. Field Orders
g. Change Orders.

ARTICLE 2

Definitions: The clauses provided in the Solicitation apply to the terms used in the Contract and all the Contract Documents.

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ARTICLE 3

Contract Work: The Contractor agrees to furnish all labor, tools, supplies, equipment, materials, and all that is necessary and required to complete the tasks associated with the Work described, set forth, shown, and included in the Contract Documents as indicated in the Solicitation Document.

ARTICLE 4

Contract Time and Liquidated Damages: Time is of the essence with respect to this Contract. The Contractor hereby agrees to commence Work under the Contract on or before the date specified in the Solicitation from the Owner, and to achieve Substantial Completion and Final Completion of the Work within the time or times specified in the Solicitation. In the event the Work is not completed in the times set forth and as agreed upon, the Contractor further agrees to pay Liquidated Damages to the Owner as set forth in the Solicitation. The Contractor acknowledges and recognizes the delays, expenses and difficulties involved in proving in a legal proceeding the actual losses suffered by the Owner if the work is not completed on time. Accordingly, instead of requiring any such proof, the Owner and the Contractor agree that as Liquidated Damages for delay, but not as a penalty, the Contractor shall pay to the Owner the amounts specified in the Solicitation.

ARTICLE 5

Contract Price and Payment Procedures: The Contractor shall accept as full and complete compensation for the performance and completion of all of the Work specified in the Contract Documents, the initial sum of **Two Million and 00/100 Dollars ($2,000,000.00).** Once the supplemental budget appropriation first and second readings at City Council have taken place and accepted, and the 30 Day waiting period has passed, a Change Order will be executed for the remaining award amount sum of **Six Million Four Hundred Fifty Seven Thousand One Hundred Seventeen and 68/100 Dollars ($6,457,117.68). Total award amount sum for the project is Eight Million Four Hundred Fifty-Seven Thousand One Hundred Seventeen and 68/100 Dollars ($8,457,117.68).** If this Contract contains unit price pay items, the Contract Price shall be adjusted in accordance with the actual quantities of items completed and accepted by the Owner at the unit prices quoted in the Solicitation Response. The amount of the Contract Price is and has heretofore been appropriated by the Grand Junction City Council for the use and benefit of this Project. The Contract Price shall not be modified except by Change Order or other written directive of the Owner. The Owner shall not issue a Change Order or other written directive which requires additional work to be performed, which work causes the aggregate amount payable under this Contract to exceed the amount appropriated for this Project, unless and until the Owner provides Contractor written assurance that lawful appropriations to cover the costs of the additional work have been made.

Unless otherwise provided in the Solicitation, monthly partial payments shall be made as the Work progresses. Applications for partial and Final Payment shall be prepared by the Contractor and approved by the Owner in accordance with the Solicitation.

Upon Final Completion of the Work under the Contract and before the Contractor shall receive final payment, the Owner shall publish at least twice in a newspaper of general circulation published in the County a notice that: 1. the Owner has accepted such Work as completed according to the Contract Documents; 2. the Contractor is entitled to final payment therefore; 3. thirty days after the first publication, specifying the exact date, the Owner shall pay the full balance due under the Contract; and 4. persons having claims for

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labor, materials, team hire, sustenance, provisions, provender, or other supplies used or consumed by the Contractor or a subcontractor shall file a verified statement of the amount due and unpaid on account of such claim prior to the date specified for such payment. Nothing herein shall be construed as relieving the Contractor and the Sureties on the Contractor's Bonds from any claim or claims for work or labor done or materials or supplies furnished in the execution of the Contract.

ARTICLE 6

Bonds: The Contractor shall furnish currently herewith the Bonds required by the Contract Documents, such Bonds being attached hereto. The Performance Bond shall be in an amount not less than one hundred percent (100%) of the Contract Price set forth in Article 5. The Payment Bond shall be in an amount not less than one hundred (100%) of the Contract Price set forth in Article 5.

ARTICLE 7

Contract Binding: The Owner and the Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto in respect to all covenants, agreements and obligations contained in the Contract Documents. The Contract Documents constitute the entire agreement between the Owner and Contractor and may only be altered, amended or repealed by a duly executed written instrument. Neither the Owner nor the Contractor shall, without the prior written consent of the other, assign or sublet in whole or in part its interest under any of the Contract Documents and specifically, the Contractor shall not assign any moneys due or to become due without the prior written consent of the Owner.

ARTICLE 8

Severability: If any part, portion or provision of the Contract shall be found or declared null, void or unenforceable for any reason whatsoever by any court of competent jurisdiction or any governmental agency having the authority thereover, only such part, portion or provision shall be effected thereby and all other parts, portions and provisions of the Contract shall remain in full force and effect.

IN WITNESS WHEREOF, City of Grand Junction, Colorado, has caused this Contract to be subscribed and sealed and attested in its behalf; and the Contractor has signed this Contract the day and the year first mentioned herein.

The Contract is executed in two counterparts.

CITY OF GRAND JUNCTION, COLORADO

DocuSigned by:
By: Duane Hoff Jr., Senior Buyer – City of Grand Junction 7/21/2020 | 11:38 MDT
9F789E7D50F14BC...
Duane Hoff Jr., Senior Buyer Date

M.A. Concrete Construction, Inc.

DocuSigned by:
By: Martin Azcarraga – President, M.A. Concrete Construction, Inc. 7/21/2020 | 11:22 MDT
D8D21E7383A3471...
Date

Purchasing Division

Invitation for Bid

IFB-4799-20-DH
Riverfront at Dos Rios Phase II Construction

Responses Due:

June 29, 2020 prior to 3:30pm

Accepting Electronic Responses Only

Responses Only Submitted Through the Rocky Mountain E-Purchasing System (RMEPS)

https://www.rockymountainbidsystem.com/default.asp

(Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor MUST contact RMEPS to resolve issue prior to the response deadline. 800-835-4603)

Purchasing Representative:
Duane Hoff Jr., Senior Buyer
duaneh@gjcity.org
970-244-1545

This document has been developed specifically to solicit competitive responses for this solicitation, and may not be the same as previous City of Grand Junction solicitations. All vendors are urged to thoroughly review this solicitation prior to responding. Submittal by **FAX, EMAIL or HARD COPY IS NOT ACCEPTABLE** for this solicitation.

Invitation for Bids

Table of Contents

Section 1	Instruction to Bidders
Section 2	General Contract Conditions
Section 3	Statement of Work
Section 4	Contractor's Bid Form
	Price Proposal/Bid Schedule Form
	Appendix
	Attachments

1. Instructions to Bidders

1.1. **Purpose:** The City of Grand Junction is soliciting competitive bids from qualified and interested companies for all labor, equipment, and materials required to successfully complete the Riverfront at Dos Rios Phase II Construction. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

IFB Questions:
Duane Hoff Jr., Senior Buyer
duaneh@gjcity.org

The City would like to remind all Contractors, Sub-Contractors, Vendors, Suppliers, Manufacturers, Service Providers, etc. that (with the exception of Pre-Bid or Site Visit Meetings) all questions, inquiries, comments, or communication pertaining to any formal solicitation (whether process, specifications, scope, etc.) must be directed (in writing) to the Purchasing Agent assigned to the project, or Purchasing Division. Direct communication with the City assigned Project Managers/Engineers is not appropriate for public procurement, and may result in disqualification.

1.2. **Mandatory Pre-Bid Meeting:** **Prospective bidders are required to attend one of two, mandatory pre-bid meetings being offered for this solicitation process.** Meeting location shall be in the City Hall Auditorium, located at 250 N. 5th Street, Grand Junction, CO. The purpose of this visit will be to inspect and to clarify the contents of this Invitation for Bids (IFB).

Two pre-bid meetings will be offered to all Contractors interested in this project. Attending at least one **(and only one)** of these meetings is required by all Primary/General Contractors intending to submit a response to this IFB. Due to the limited number of seating available at this time, all attendees must pre-register with the purchasing agent assigned, and receive a conformation e-mail acknowledging their reservation. Since pre-bid meeting attendance is only required for the Primary/General Contractors, they shall be given preference over Sub-Contractors and Suppliers for pre-bid meeting pre-registration and attendance. We also request that no more than one representative from each company attend the pre-bid meeting.

Please contact Duane Hoff Jr., Senior Buyer at 970-244-1545 or via e-mail at duaneh@gjcity.org .

We ask that all attendees practice social distancing guidelines, and wear masks, if possible.

-The 1st pre-bid meeting shall be held at the City of Grand Junction City Hall Auditorium located at 250, N. 5th Street, Grand Junction, CO on June 8, 2020 at 1:00pm.

OR

-The 2nd pre-bid meeting shall be held at the City of Grand Junction City Hall Auditorium located at 250, N. 5th Street, Grand Junction, CO on June 8, 2020 at 2:00pm

1.3. **The Owner:** The Owner is the City of Grand Junction, Colorado and is referred to throughout this Solicitation. The term Owner means the Owner or his authorized representative.

1.4. **Procurement Process:** Procurement processes shall be governed by the most current version of the City of Grand Junction Purchasing Policy and Procedure Manual.

1.5. **Submission:** ***Each bid shall be submitted in electronic format only, and only through the Rocky Mountain E-Purchasing website (https://www.rockymountainbidsystem.com/default.asp).*** *This site offers both "free" and "paying" registration options that allow for full access of the Owner's documents and for electronic submission of proposals. (Note: "free" registration may take up to 24 hours to process. Please Plan accordingly.)* Please view our "**Electronic Vendor Registration Guide"** at http://www.gjcity.org/business-and-economic-development/bids/ for details. (Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor **MUST** contact RMEPS to resolve issue prior to the response deadline. **800-835-4603**)

1.6. **Modification and Withdrawal of Bids Before Opening.** Bids may be modified or withdrawn by an appropriate document stating such, duly executed and submitted to the place where Bids are to be submitted at any time prior to Bid Opening.

1.7. **Printed Form for Price Bid:** All Price Bids must be made upon the Price Bid Schedule attached, and should give the amounts both in words and in figures, and must be signed and acknowledged by the bidder.

The Offeror shall specify a unit price in figures for each pay item for which a quantity is given and shall provide the products (in numbers) of the respective unit prices and quantities in the Extended Amount column. The total Bid price shall be equal to the sum of all extended amount prices. When an item in the Price Bid Schedule provides a choice to be made by the Offeror, Offeror's choice shall be indicated in accordance with the specifications for that particular item and thereafter no further choice shall be permitted.

Where the unit of a pay item is lump sum, the lump sum amount shall be shown in the "extended amount" column and included in the summation of the total Bid.

All blank spaces in the Price Bid Schedule must be properly filled out.

Bids by corporations must be executed in the corporate name by the president or vice president or other corporate office accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown below the signature.

Bids by partnerships must be executed in the partnership name and signed by a partner whose title must appear under the signature and the official address of the partnership must be shown below the signature.

All names must be typed or printed below the signature.

The Offeror's Bid shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the Contractor's Bid Form.

The contact information to which communications regarding the Bid are to be directed must be shown.

1.8. Exclusions: No oral, telephonic, emailed, or facsimile bid will be considered

1.9. Contract Documents: The complete IFB and bidder's response compose the Contract Documents. Copies of bid documents can be obtained from the City Purchasing website, http://www.gjcity.org/business-and-economic-development/bids/ .

1.10. Additional Documents: The July 2010 edition of the "City Standard Contract Documents for Capital Improvements Construction", Plans, Specifications and other Bid Documents are available for review or download on the Public Works & Planning/Engineering page at www.gjcity.org. Electronic copies may be obtained on a CD format at the Department of Public Works and Planning at City Hall.

1.11. Definitions and Terms: See Article I, Section 3 of the General Contract Conditions in the *Standard Contract Documents for Capital Improvements Construction*.

1.12. Examination of Specifications: Bidders shall thoroughly examine and be familiar with the project Statement of Work. The failure or omission of any Offeror to receive or examine any form, addendum, or other document shall in no way relieve any Offeror from any obligation with respect to his bid. The submission of a bid shall be taken as evidence of compliance with this section. Prior to submitting a bid, each Offeror shall, at a minimum:

a. Examine the *Contract Documents* thoroughly;

b. Visit the site to familiarize themselves with local conditions that may in any manner affect cost, progress, or performance of the Work;

c. Become familiar with federal, state, and local laws, ordinances, rules, and regulations that may in any manner affect cost, progress or performance of the Work;

d. Study and carefully correlate Bidder's observations with the *Contract Documents*, and;

e. Notify the Purchasing Agent of all conflicts, errors, ambiguities or discrepancies in or among the *Contract Documents* within the designated inquiry period.

On request, the Owner will provide each Offeror access to the site to conduct such investigations and tests as each Bidder deems necessary for submission of a Bid. It shall be the Offeror's responsibility to make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (including without limitation, surface, subsurface and underground utilities) at or contiguous to the site or otherwise which

may affect cost, progress or performance of the work and which the Offeror deems necessary to determine its Bid for performing the work in accordance with the time, price and other terms and conditions of the Contract Documents. Location of any excavation or boring made by Offeror shall be subject to prior approval of Owner and applicable agencies. Offeror shall fill all holes, restore all pavements to match the existing structural section and shall clean up and restore the site to its former condition upon completion of such exploration. The Owner reserves the right to require the Offeror to execute an access agreement with the Owner prior to accessing the site.

The lands upon which the Work is to be performed, rights of way, and access thereto, and other lands designated for use by Contractor in performing the Work, are identified on the Drawings.

Information and data reflected in the *Contract Documents* with respect to underground utilities at or contiguous to the site are based upon information and data furnished to the Owner and the Engineer by the owners of such underground utilities or others, and the Owner does not assume responsibility for the accuracy or completeness thereof, unless it is expressly provided otherwise in the *Contract Documents*.

By submission of a Bid, the Offeror shall be conclusively presumed to represent that the Offeror has complied with every requirement of these Instructions to Bidders, that the *Contract Documents* are not ambiguous and are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.

1.13. Questions Regarding Statement of Work: Any information relative to interpretation of Scope of Work or specifications shall be requested of the Purchasing Representative, in writing, in ample time, prior to the inquiry deadline.

1.14. Addenda & Interpretations: If it becomes necessary to revise any part of this solicitation, a written addendum will be posted electronically on the City's website at http://www.gjcity.org/business-and-economic-development/bids/ . The Owner is not bound by any oral representations, clarifications, or changes made in the written specifications by Owner, unless such clarification or change is provided in written addendum form from the City Purchasing Representative.

1.15. Taxes: The Owner is exempt from State retail and Federal tax. The bid price must be net, exclusive of taxes.

1.16. Sales and Use Taxes: The Contractor and all Subcontractors are required to obtain exemption certificates from the Colorado Department of Revenue for sales and use taxes in accordance with the provisions of the General Contract Conditions. Bids shall reflect this method of accounting for sales and use taxes on materials, fixtures and equipment.

1.17. Offers Binding 60 Days: Unless additional time is required by the Owner, or otherwise specified, all formal offers submitted shall be binding for sixty (60) calendar days following opening date, unless the Bidder, upon request of the Purchasing Representative, agrees to an extension.

1.18. Exceptions and Substitutions: Bidders taking exception to the specifications and/or scope of work shall do so at their own risk. The Owner reserves the right to accept or reject any or all substitutions or alternatives. When offering substitutions and/or alternatives, Bidder must state these exceptions in the section pertaining to that area. Exception/substitution, if accepted, must meet or exceed the stated intent and/or specifications and/or scope of work. The absence of such a list shall indicate that the Bidder has not taken exceptions, and if awarded a contract, shall hold the Bidder responsible to perform in strict accordance with the specifications and/or scope of work contained herein.

1.19. Collusion Clause: Each bidder by submitting a bid certifies that it is not party to any collusive action or any action that may be in violation of the Sherman Antitrust Act. Any and all bids shall be rejected if there is evidence or reason for believing that collusion exists among bidders. The Owner may, or may not, accept future bids for the same services or commodities from participants in such collusion.

1.20. Disqualification of Bidders: A Bid will not be accepted from, nor shall a Contract be awarded to, any person, firm, or corporation that is in arrears to the Owner, upon debt or contract, or that has defaulted, as surety or otherwise, upon any obligation to the Owner, or that is deemed irresponsible or unreliable.

Bidders may be required to submit satisfactory evidence that they are responsible, have a practical knowledge of the project bid upon and that they have the necessary financial and other resources to complete the proposed Work.

Either of the following reasons, without limitation, shall be considered sufficient to disqualify a Bidder and Bid:

a. More than one Bid is submitted for the same Work from an individual, firm, or corporation under the same or different name; and

b. Evidence of collusion among Bidders. Any participant in such collusion shall not receive recognition as a Bidder for any future work of the Owner until such participant has been reinstated as a qualified bidder.

1.21. Public Disclosure Record: If the bidder has knowledge of their employee(s) or sub-contractors having an immediate family relationship with a City employee or elected official, the bidder must provide the Purchasing Representative with the name(s) of these individuals. These individuals are required to file an acceptable "Public Disclosure Record", a statement of financial interest, before conducting business with the City.

2. General Contract Conditions for Construction Projects

2.1. The Contract: This Invitation for Bid, submitted documents, and any negotiations, when properly accepted by the City, shall constitute a contract equally binding between the City and Contractor. The contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or

agreements, either written or oral. The contract may be amended or modified with Change Orders, Field Orders, or Addendums.

2.2. The Work: The term Work includes all labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in such construction.

2.3. Execution, Correlation, Intent, and Interpretations: The Contract Documents shall be signed by the Owner (City) and Contractor. City will provide the contract. By executing the contract, the Contractor represents that he/she has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents. The Contract Documents are complementary, and what is required by any one, shall be as binding as if required by all. The intention of the documents is to include all labor, materials, equipment and other items necessary for the proper execution and completion of the scope of work as defined in the technical specifications and drawings contained herein. All drawings, specifications and copies furnished by the City are, and shall remain, City property. They are not to be used on any other project, and with the exception of one contract set for each party to the contract, are to be returned to the owner on request at the completion of the work.

2.4. The Owner: The Owner is the City of Grand Junction, Colorado and is referred to throughout the Contract Documents. The term Owner means the Owner or his authorized representative. The Owner shall, at all times, have access to the work wherever it is in preparation and progress. The Contractor shall provide facilities for such access. The Owner will make periodic visits to the site to familiarize himself generally with the progress and quality of work and to determine, in general, if the work is proceeding in accordance with the contract documents. Based on such observations and the Contractor's Application for Payment, the Owner will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts, as provided in the contract. The Owner will have authority to reject work which does not conform to the Contract documents. Whenever, in his reasonable opinion, he considers it necessary or advisable to insure the proper implementation of the intent of the Contract Documents, he will have authority to require the Contractor to stop the work or any portion, or to require special inspection or testing of the work, whether or not such work can be then be fabricated, installed, or completed. The Owner will not be responsible for the acts or omissions of the Contractor, and sub-Contractor, or any of their agents or employees, or any other persons performing any of the work.

2.5. Contractor: The Contractor is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents. The term Contractor means the Contractor or his authorized representative. The Contractor shall carefully study and compare the General Contract Conditions of the Contract, Specification and Drawings, Scope of Work, Addenda and Modifications and shall at once report to the Owner any error, inconsistency or omission he may discover. Contractor shall not be liable to the Owner for any damage resulting from such errors, inconsistencies or omissions. The Contractor shall not commence work without clarifying Drawings, Specifications, or Interpretations.

2.6. Sub-Contractors: A sub-contractor is a person or organization who has a direct contract with the Contractor to perform any of the work at the site. The term sub-contractor is referred to throughout the contract documents and means a sub-contractor or his authorized representative.

2.7. Award of Sub-Contractors & Other Contracts for Portions of the Work: Contractor shall submit with their bid response to the Owner, in writing for acceptance, a list of the names of the sub-contractors or other persons or organizations proposed for such portions of the work as may be designated in the proposal requirements, or, if none is so designated, the names of the sub-contractors proposed for the principal portions of the work. Prior to the award of the contract, the Owner shall notify the successful Contractor in writing if, after due investigation, has reasonable objection to any person or organization on such list. If, prior to the award of the contract, the Owner has a reasonable and substantial objection to any person or organization on such list, and refuses in writing to accept such person or organization, the successful Contractor may, prior to the award, withdraw their proposal without forfeiture of proposal security. If the successful Contractor submits an acceptable substitute with an increase in the proposed price to cover the difference in cost occasioned by the substitution, the Owner may, at their discretion, accept the increased proposal or may disqualify the Contractor. If, after the award, the Owner refuses to accept any person or organization on such list, the Contractor shall submit an acceptable substitute and the contract sum shall be increased or decreased by the difference in cost occasioned by such substitution and an appropriate Change Order shall be issued. However, no increase in the contract sum shall be allowed for any such substitution unless the Contractor has acted promptly and responsively in submitting a name with respect thereto prior to the award.

2.8. Quantities of Work and Unit Price: Materials or quantities stated as unit price items in the Bid are supplied only to give an indication of the general scope of the Work, and are as such, estimates only. The Owner does not expressly or by implication agree that the actual amount of Work or material will correspond therewith, and reserves the right after award to increase or decrease the quantity of any unit item of the Work without a change in the unit price except as set forth in Article VIII, Section 70 of the *General Contract Conditions*. The City also reserves the right to make changes in the Work (including the right to delete any bid item in its entirety or add additional bid items) as set forth in Article VIII, Sections 69 through 71 of the *General Contract Conditions*.

2.9. Substitutions: The materials, products and equipment described in the *Solicitation Documents* shall be regarded as establishing a standard of required performance, function, dimension, appearance, or quality to be met by any proposed substitution. No substitution will be considered prior to receipt of Bids unless the Offeror submits a written request for approval to the City Purchasing Division at least ten (10) days prior to the date for receipt of Bids. Such requests for approval shall include the name of the material or equipment for which substitution is sought and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for evaluation, including samples if requested. The Offeror shall set forth changes in other materials, equipment, or other portions of the Work including changes of the work of other contracts, which incorporation of the proposed substitution would require to be included. The Owner's decision of approval or disapproval of a proposed substitution shall be final. If the Owner approves a proposed substitution before receipt

of Bids, such approval will be set forth in an Addendum. Offerors shall not rely upon approvals made in any other manner.

2.10. Supervision and Construction Procedures: The Contractor shall supervise and direct the work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the contract.

2.11. Warranty: The Contractor warrants to the Owner that all materials and equipment furnished under this contract will be new unless otherwise specified, and that all work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All work not so conforming to these standards may be considered defective. If required by Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. If within ten (10) days after written notice to the Contractor requesting such repairs or replacement, the Contractor should neglect to make or undertake with due diligence to the same, the City may make such repairs or replacements. All indirect and direct costs of such correction or removal or replacement shall be at the Contractor's expense. The Contractor will also bear the expenses of making good all work of others destroyed or damaged by the correction, removal or replacement of his defective work.

2.12. Permits, Fees, & Notices: The Contractor shall secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the work. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority bearing on the performance of the work. If the Contractor observes that any of the Contract Documents are at variance in any respect, he shall promptly notify the Owner in writing, and any necessary changes shall be adjusted by approximate modification. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Owner, he shall assume full responsibility and shall bear all costs attributable.

2.13. Responsibility for Those Performing the Work: The Contractor shall be responsible to the Owner for the acts and omissions of all his employees and all sub-contractors, their agents and employees, and all other persons performing any of the work under a contract with the Contractor.

2.14. Use of the Site: The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents, and shall not unreasonably encumber the site with any materials or equipment.

2.15. Cleanup: The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of work, he shall remove all his waste materials and rubbish from and about the project, as well as all his tools, construction equipment, machinery and surplus materials.

2.16. Insurance: The Contractor shall secure and maintain such insurance policies as will provide the coverage and contain other provisions specified in the General Contract Conditions, or as modified in the Special Contract Conditions.

The Contractor shall file a copy of the policies or Certificates of Insurance acceptable to the City with the Engineer within ten (10) Calendar Days after issuance of the Notice of Award. These Certificates of Insurance shall contain a provision that coverage afforded under the policies shall not be canceled unless at least thirty (30) Calendar Days prior written notice has been given to the City.

2.17. Indemnification: The Contractor shall defend, indemnify and save harmless the Owner, and all its officers, employees, insurers, and self-insurance pool, from and against all liability, suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the Contractor, or of any Contractor's agent, employee, sub-contractor or supplier in the execution of, or performance under, any contract which may result from proposal award. Contractor shall pay any judgment with cost which may be obtained against the Owner growing out of such injury or damages.

2.18. Miscellaneous Conditions: Material Availability: Contractors must accept responsibility for verification of material availability, production schedules, and other pertinent data prior to submission of bid. It is the responsibility of the bidder to notify the Owner immediately if materials specified are discontinued, replaced, or not available for an extended period of time. **OSHA Standards:** All bidders agree and warrant that services performed in response to this invitation shall conform to the standards declared by the US Department of Labor under the Occupational Safety and Health Act of 1970 (OSHA). In the event the services do not conform to OSHA standards, the Owner may require the services to be redone at no additional expense to the Owner.

2.19. Time: Time is of the essence with respect to the time of completion of the Project and any other milestones or deadline which are part of the Contract. It will be necessary for each Bidder to satisfy the City of its ability to complete the Work within the Contract Time set forth in the Contract Documents. The Contract Time is the period of time allotted in the Contract Documents for completion of the work. The date of commencement of the work is the date established in a Notice to Proceed. If there is no Notice to Proceed, it shall be the date of the Contract or such other date as may be established therein, or as established as entered on the Bid Form. The Date of Final Completion of the work is the date certified by the Owner when all construction, and all other work associated to include, but not be limited to: testing, QA/QC, receipt of required reports and/or forms, grant requirements (if applicable), punch list items, clean-up, receipt of drawings and/or as-builts, etc., is fully complete, and in accordance with the Contract Documents.

2.20. Progress & Completion: The Contractor shall begin work on the date of commencement as defined in the Contract, and shall carry the work forward expeditiously with adequate forces and shall complete it within the contract time.

2.21. Payment & Completion: The Contract Sum is stated in the Contract and is the total amount payable by the Owner to the Contractor for the performance of the work under the Contract Documents. Upon receipt of written notice that the work is ready for final inspection and acceptance and upon receipt of application for payment, the Owner's Project Manager will promptly make such inspection and, when he finds the work

acceptable under the Contract Documents and the Contract fully performed, the Owner shall make payment in the manner provided in the Contract Documents.

2.22. Bid Bond: Each Bid shall as a guaranty of good faith on the part of the Bidder be accompanied by a Bid Guaranty consisting of: a certified or cashier's check drawn on an approved national bank or trust company in the state of Colorado, and made payable without condition to the City; or a **Bid Bond** written by an approved corporate surety in favor of the City. The amount of the Bid Guaranty shall not be less than 5% of the total Bid amount. Once a Bid is accepted and a Contact is awarded, the apparent successful bidder has ten calendar days to enter into a contractor in the form prescribed and to furnish the bonds with a legally responsible and approved surety. Failure to do so will result I forfeiture of the Bid Guaranty to the City as Liquidated Damages.

Each bidder shall guaranty its total bid price for a period of sixty (60) Calendar Days from the date of the bid opening.

2.23. Performance & Payment Bonds: Contractor shall furnish a Performance and a Payment Bond, each in an amount at least equal to that specified for the contract amount as security for the faithful performance and payment of all Contractor's obligations under the Contract Documents. These bonds shall remain in effect for the duration of the Warranty Period (as specified in the Special Conditions). Contractor shall also furnish other bonds that may be required by the Special Conditions. All bonds shall be in the forms prescribed by the Contract Documents and be executed by such sureties as (1) are licensed to conduct business in the State of Colorado and (2) are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Accounts, U.S. Treasury Department. All bonds singed by an agent must be accompanied by a certified copy of the Authority Act. If the surety on any bond furnished by the Contractor is declared bankrupt, or becomes insolvent, or its rights to do business in Colorado are terminated, or it ceases to meet the requirements of clauses (1) and (2) of this section, Contractor shall within five (5) days thereafter substitute another bond and surety, both of which shall be acceptable to the City.

2.24. Retention: The Owner will deduct money from the partial payments in amounts considered necessary to protect the interest of the Owner and will retain this money until after completion of the entire contract. The amount to be retained from partial payments will be five (5) percent of the value of the completed work, and not greater than five (5) percent of the amount of the Contract. When the retainage has reached five (5) percent of the amount of the Contract no further retainage will be made and this amount will be retained until such time as final payment is made.

2.25. Liquidated Damages for Failure to Enter Into Contract: Should the Successful Bidder fail or refuse to enter into the Contract within ten Calendar Days from the issuance of the Notice of Award, the City shall be entitled to collect the amount of such Bidder's Bid Guaranty as Liquidated Damages, not as a penalty but in consideration of the mutual release by the City and the Successful Bidder of all claims arising from the City's issuance of the Notice of Award and the Successful Bidder's failure to enter into the

Contract and the costs to award the Contract to any other Bidder, to readvertise, or otherwise dispose of the Work as the City may determine best serves its interest.

2.26. Liquidated Damages for Failure to Meet Project Completion Schedule: If the Contractor does not achieve Final Completion by the required date, whether by neglect, refusal or any other reason, the parties agree and stipulate that the Contractor shall pay liquidated damages to the City for each such day that final completion is late. As provided elsewhere, this provision does not apply for delays caused by the City. The date for Final Completion may be extended in writing by the Owner.

The Contractor agrees that as a part of the consideration for the City's awarding of this Contract liquidated damages in the daily amount of **$2,000.00** is reasonable and necessary to pay for the actual damages resulting from such delay. The parties agree that the real costs and injury to the City for such delay include hard to quantify items such as: additional engineering, inspection and oversight by the City and its agents; additional contract administration; inability to apply the efforts of those employees to the other work of the City; perceived inefficiency of the City; citizens having to deal with the construction and the Work, rather than having the benefit of a completed Work, on time; inconvenience to the public; loss of reputation and community standing for the City during times when such things are very important and very difficult to maintain.

The Contractor must complete the Work and achieve final completion included under the Bid Schedule in the number of consecutive calendar days after the City gives is written Notice to Proceed. When the Contractor considers the entire Work ready for its intended use, Contractor shall certify in writing that the Work is fully complete. Final Completion date is the date by which the Contractor shall have fully completed all clean-up, and all items that were identified by the City in the inspection for final completion. Unless otherwise stated in the Special Conditions, for purposes of this liquidated damages clause, the Work shall not be finished and the Contract time shall continue to accrue until the City gives its written Final Acceptance.

If the Contractor shall fail to pay said liquidated damages promptly upon demand thereof after having failed to achieve Final Completion on time, the City shall first look to any retainage or other funds from which to pay said liquidated damages; if retainage or other liquid funds are not available to pay said liquidated damages amounts, the Surety on the Contractor's Performance Bond and Payment Bond shall pay such liquidated damages. In addition, the City may withhold all, or any part of, such liquidated damages from any payment otherwise due the Contractor.
Liquidated damages as provided do not include any sums to reimburse the City for extra costs which the City may become obligated to pay on other contracts which were delayed or extended because of the Contractor's failure to complete the Work within the Contract Time. Should the City incur additional costs because of delays or extensions to other contracts resulting from the Contractor's failure of timely performance, the Contractor agrees to pay these costs that the City incurs because of the Contractor's delay, and these payments are separate from and in addition to any liquidated damages.

The Contractor agrees that the City may use its own forces or hire other parties to obtain Final Completion of the work if the time of completion has elapsed and the Contractor is

not diligently pursuing completion. In addition to the Liquidated Damages provided for, the Contractor agrees to reimburse the City for all expenses thus incurred.

2.27. Contingency/Force Account: Contingency/Force Account work will be authorized by the Owner's Project Manager and is defined as minor expenses to cover miscellaneous or unforeseen expenses related to the project. The expenses are not included in the Drawings, Specifications, or Scope of Work and are necessary to accomplish the scope of this contract. Contingency/Force Account Authorization will be directed by the Owner through an approved form. Contingency/Force Account funds are the property of the Owner and any Contingency/Force Account funds, not required for project completion, shall remain the property of the Owner. Contractor is not entitled to any Contingency/Force Account funds, that are not authorized by Owner or Owner's Project Manager.

2.28. Protection of Persons & Property: The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. Contractor shall erect and maintain, as required by existing safeguards for safety and protection, and all reasonable precautions, including posting danger signs or other warnings against hazards promulgating safety regulations and notifying owners and users of adjacent utilities. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct by the Contractor in the execution of the work, or in consequence of the non-execution thereof by the Contractor, he shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or it shall make good such damage or injury in an acceptable manner.

2.29. Changes in the Work: The Owner, without invalidating the contract, may order changes in the work within the general scope of the contract consisting of additions, deletions or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by Change Order and shall be executed under the applicable conditions of the contract documents. A Change Order is a written order to the Contractor signed by the Owner issued after the execution of the contract, authorizing a change in the work or an adjustment in the contract sum or the contract time. The contract sum and the contract time may be changed only by Change Order.

2.30. Claims for Additional Cost or Time: If the Contractor wishes to make a claim for an increase in the contract sum or an extension in the contract time, he shall give the Owner written notice thereof within a reasonable time after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the work, except in an emergency endangering life or property in which case the Contractor shall precede in accordance with the regulations on safety. No such claim shall be valid unless so made. Any change in the contract sum or contract time resulting from such claim shall be authorized by Change Order.

2.31. Minor Changes in the Work: The Owner shall have authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time and not inconsistent with the intent of the contract documents.

2.32. Field Orders: The Owner may issue written Field Orders which interpret the Contract Documents in accordance with the specifications, or which order minor changes in the work in accordance with the agreement, without change in the contract sum or time. The Contractor shall carry out such Field Orders promptly.

2.33. Uncovering & Correction of Work: The Contractor shall promptly correct all work rejected by the Owner as defective or as failing to conform to the contract documents whether observed before or after substantial completion and whether or not fabricated installed or competed. The Contractor shall bear all costs of correcting such rejected work, including the cost of the Owner's additional services thereby made necessary. If within one (1) year after the date of completion or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the contract documents, any of the work found to be defective or not in accordance with the contract documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discover of condition. All such defective or non-conforming work under the above paragraphs shall be removed from the site where necessary and the work shall be corrected to comply with the contract documents without cost to the Owner. The Contractor shall bear the cost of making good all work of separate Contractors destroyed or damaged by such removal or correction. If the Owner prefers to accept defective or non-conforming work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect an appropriate reduction in the payment or contract sum, or, if the amount is determined after final payment, it shall be paid by the Contractor.

2.34. Amendment: No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All amendments to the contract shall be made in writing by the Owner.

2.35. Assignment: The Contractor shall not sell, assign, transfer or convey any contract resulting from this IFB, in whole or in part, without the prior written approval from the Owner.

2.36. Compliance with Laws: Bids must comply with all Federal, State, County and local laws governing or covering this type of service and the fulfillment of all ADA (Americans with Disabilities Act) requirements.

2.37. Confidentiality: All information disclosed by the Owner to the Contractor for the purpose of the work to be done or information that comes to the attention of the Contractor during the course of performing such work is to be kept strictly confidential.

2.38. Conflict of Interest: No public official and/or City/County employee shall have interest in any contract resulting from this IFB.

2.39. Contract Termination: This contract shall remain in effect until any of the following occurs: (1) contract expires; (2) completion of services; (3) acceptance of services or,

(4) for convenience terminated by either party with a written *Notice of Cancellation* stating therein the reasons for such cancellation and the effective date of cancellation.

2.40. Employment Discrimination: During the performance of any services per agreement with the Owner, the Contractor, by submitting a Bid, agrees to the following conditions:

3.40.1 The Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, handicap, or national origin except when such condition is a legitimate occupational qualification reasonably necessary for the normal operations of the Contractor. The Contractor agrees to post in conspicuous places, visible to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

3.40.2 The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, shall state that such Contractor is an Equal Opportunity Employer.

3.40.3 Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

2.41. Affirmative Action: In executing a Contract with the City, the Contractor agrees to comply with Affirmative Action and Equal Employment Opportunity regulations presented in the General Contract Conditions.

2.42. Immigration Reform and Control Act of 1986 and Immigration Compliance: The Offeror certifies that it does not and will not during the performance of the contract employ illegal alien workers or otherwise violate the provisions of the Federal Immigration Reform and Control Act of 1986 and/or the immigration compliance requirements of State of Colorado C.R.S. § 8-17.5-101, *et.seq.* (House Bill 06-1343).

2.43. Ethics: The Contractor shall not accept or offer gifts or anything of value nor enter into any business arrangement with any employee, official, or agent of the Owner.

2.44. Failure to Deliver: In the event of failure of the Contractor to deliver services in accordance with the contract terms and conditions, the Owner, after due oral or written notice, may procure the services from other sources and hold the Contractor responsible for any costs resulting in additional purchase and administrative services. This remedy shall be in addition to any other remedies that the Owner may have.

2.45. Failure to Enforce: Failure by the Owner at any time to enforce the provisions of the contract shall not be construed as a waiver of any such provisions. Such failure to enforce shall not affect the validity of the contract or any part thereof or the right of the Owner to enforce any provision at any time in accordance with its terms.

2.46. Force Majeure: The Contractor shall not be held responsible for failure to perform the duties and responsibilities imposed by the contract due to legal strikes, fires, riots,

rebellions, and acts of God beyond the control of the Contractor, unless otherwise specified in the contract.

2.47. Independent Contractor: The Contractor shall be legally considered an Independent Contractor and neither the Contractor nor its employees shall, under any circumstances, be considered servants or agents of the Owner. The Owner shall be at no time legally responsible for any negligence or other wrongdoing by the Contractor, its servants, or agents. The Owner shall not withhold from the contract payments to the Contractor any federal or state unemployment taxes, federal or state income taxes, Social Security Tax or any other amounts for benefits to the Contractor. Further, the Owner shall not provide to the Contractor any insurance coverage or other benefits, including Workers' Compensation, normally provided by the Owner for its employees.

2.48. Nonconforming Terms and Conditions: A bid that includes terms and conditions that do not conform to the terms and conditions of this Invitation for Bid is subject to rejection as non-responsive. The Owner reserves the right to permit the Contractor to withdraw nonconforming terms and conditions from its bid prior to a determination by the Owner of non-responsiveness based on the submission of nonconforming terms and conditions.

Items for non-responsiveness may include, but not be limited to:

3.48.1 Submission of the Bid on forms other than those supplied by the City;

3.48.2 Alteration, interlineation, erasure, or partial detachment of any part of the forms which are supplied herein;

3.48.3 Inclusion of unauthorized additions conditional or alternate Bids or irregularities of any kind which may tend to make the Bid incomplete, indefinite, or ambiguous as to its meaning;

3.48.4 Failure to acknowledge receipt of any or all issued Addenda;

3.48.5 Failure to provide a unit price or a lump sum price, as appropriate, for each pay item listed except in the case of authorized alternative pay items;

3.48.6 Failure to list the names of Subcontractors used in the Bid preparation as may be required in the Solicitation Documents;

3.48.7 Submission of a Bid that, in the opinion of the Owner, is unbalanced so that each item does not reasonably carry its own proportion of cost or which contains inadequate or unreasonable prices for any item;

3.48.8 Tying of the Bid with any other bid or contract; and

3.48.9 Failure to calculate Bid prices as described herein.

2.49. Evaluation of Bids and Offerors: The Owner reserves the right to:

- reject any and all Bids,
- waive any and all informalities,
- take into account any prompt payment discounts offered by Bidder,
- negotiate final terms with the Successful Bidder,
- take into consideration past performance of previous awards/contracts with the Owner of any Contractor, Vendor, Firm, Supplier, or Service Provider in determining final award; and
- disregard any and all nonconforming, nonresponsive or conditional Bids.

Discrepancies between words and figures will be resolved in favor of words. Discrepancies between Unit Prices and Extended Prices will be resolved in favor of the Unit Prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. The corrected extensions and totals will be shown in the tabulation of Bids.

The Owner may consider the qualifications and experience of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the work as to which the identity of Subcontractors and other persons and organizations must be submitted. Operating costs, maintenance considerations performance data, and guarantees of materials and equipment may also be considered by the Owner.

The Owner will conduct such investigations as deemed necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Offeror, proposed Subcontractors and other persons and organizations to do the Work in accordance with the *Contract Documents* to the City's satisfaction within the Contract Time.

The Offeror shall furnish the Owner all information and data requested by the Owner to determine the ability of the Offeror to perform the Work. The Owner reserves the right to reject the Bid if the evidence submitted by, or investigation of such Offeror fails to satisfy the Owner that such Offeror is properly qualified to carry out the obligations of the Contract and to complete the Work contemplated therein.

By submitting a Bid, each Offeror authorizes the Owner to perform such investigation of the Offeror as the Owner deems necessary to establish the responsibility, qualifications and financial ability of the Offeror and, by its signature thereon, authorizes the Owner to obtain reference information concerning the Offeror and releases the party providing such information and the Owner from any and all liability to the Offeror as a result of such reference information so provided.

The Owner reserves the right to reject the Bid of any Offeror who does not pass any evaluation to the Owner's satisfaction.

If the Contract is to be awarded, it will be awarded to the Offeror who, by evaluation, the Owner determines will best meet the Owner's interests.

The Owner reserves the right to accept or reject the Work contained in any of the Price Bid Schedules or alternates, either in whole or in part.

2.50. Award of Contract: Unless otherwise indicated, a single award will be made for all the bid items in an individual bid schedule. In the event that the Work is contained in more than one Bid Schedule, the City may award Schedules individually or in combination. In the case of two Bid Schedules which are alternative to each other, only one of such alternative Schedules will be awarded. Within forty-five (45) Calendar Days of Bid Opening, the City will issue a Notice of Award to the Successful Bidder which will be accompanied by four (4) unsigned copies of the Contract and the Performance and Payment Bond forms. Within ten (10) Calendar Days thereafter, the Successful Bidder shall sign and deliver four (4) copies of the Contract, Performance Bond, Payment Bond and Certificates of Insurance to the City. Within ten (10) Calendar Days thereafter, the City will deliver two (2) fully executed counterparts of the Contract to the Contractor. No contract shall exist between the Successful Bidder and the City and the Successful Bidder shall have no rights at law or in equity until the Contract has been duly executed by the City.

The Successful Bidder's failure to sign and submit a Contract and other documents set forth in this Paragraph within the prescribed time shall be just cause of annulment of the award, and forfeiture of the Bid Guaranty. The award of Contract may then be made to the next qualified Bidder in the same manner as previously prescribed.

2.51. Ownership: All plans, prints, designs, concepts, etc., shall become the property of the Owner.

2.52. Oral Statements: No oral statement of any person shall modify or otherwise affect the terms, conditions, or specifications stated in this document and/or resulting agreement. All modifications to this request and any agreement must be made in writing by the Owner.

2.53. Patents/Copyrights: The Contractor agrees to protect the Owner from any claims involving infringements of patents and/or copyrights. In no event shall the Owner be liable to the Contractor for any/all suits arising on the grounds of patent(s)/copyright(s) infringement. Patent/copyright infringement shall null and void any agreement resulting from response to this IFB.

2.54. Remedies: The Contractor and Owner agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

2.55. Venue: Any agreement as a result of responding to this IFB shall be deemed to have been made in, and shall be construed and interpreted in accordance with, the laws of the City of Grand Junction, Mesa County, Colorado.

2.56. Expenses: Expenses incurred in preparation, submission and presentation of this IFB are the responsibility of the company and cannot be charged to the Owner.

2.57. Sovereign Immunity: The Owner specifically reserves its right to sovereign immunity pursuant to Colorado State Law as a defense to any action arising in conjunction to this agreement.

2.58. Non-Appropriation of Funds: The contractual obligation of the Owner under this contract is contingent upon the availability of appropriated funds from this fiscal year budget as approved by the City Council or Board of County Commissioners from this fiscal year only. State of Colorado Statutes prohibit obligation of public funds beyond the fiscal year for which the budget was approved. Anticipated expenditures/obligations beyond the end of the current Owner's fiscal year budget shall be subject to budget approval. Any contract will be subject to and must contain a governmental non-appropriation of funds clause.

2.59. Cooperative Purchasing: Purchases as a result of this solicitation are primarily for the City/County. Other governmental entities may be extended the opportunity to utilize the resultant contract award with the agreement of the successful provider and the participating agencies. All participating entities will be required to abide by the specifications, terms, conditions and pricings established in this Bid. The quantities furnished in this bid document are for only the City/County. It does not include quantities for any other jurisdiction. The City or County will be responsible only for the award for its jurisdiction. Other participating entities will place their own awards on their respective Purchase Orders through their purchasing office or use their purchasing card for purchase/payment as authorized or agreed upon between the provider and the individual entity. The City/County accepts no liability for payment of orders placed by other participating jurisdictions that choose to piggy-back on our solicitation. Orders placed by participating jurisdictions under the terms of this solicitation will indicate their specific delivery and invoicing instructions.

2.60. Keep Jobs in Colorado Act: Contractor shall be responsible for ensuring compliance with Article 17 of Title 8, Colorado Revised Statutes requiring 80% Colorado labor to be employed on public works. Contractor shall, upon reasonable notice provided by the Owner, permit the Owner to inspect documentation of identification and residency required by C.R.S. §8-17-101(2)(a). If Contractor claims it is entitled to a waiver pursuant to C.R.S. §8-17-101(1), Contractor shall state that there is insufficient Colorado labor to perform the work such that compliance with Article 17 would create an undue burden that would substantially prevent a project from proceeding to completion, and shall include evidence demonstrating the insufficiency and undue burden in its response.

Unless expressly granted a waiver by the Owner pursuant to C.R.S. §8-17-101(1), Contractor shall be responsible for ensuring compliance with Article 17 of Title 8, Colorado Revised Statutes requiring 80% Colorado labor to be employed on public works. Contractor shall, upon reasonable notice provided by the Owner, permit the Owner to inspect documentation of identification and residency required by C.R.S. §8-17-101(2)(a).

3.60.1 "Public project" is defined as:

(a) any construction, alteration, repair, demolition, or improvement of any land, building, structure, facility, road, highway, bridge, or other public improvement suitable for and intended for use in the promotion of the public health, welfare, or safety and any maintenance programs for the upkeep of such projects

(b) for which appropriate or expenditure of moneys may be reasonably expected to be $500,000.00 or more in the aggregate for any fiscal year
(c) except any project that receives federal moneys.

3. Statement of Work

3.1. GENERAL: The City of Grand Junction is soliciting competitive bids from qualified and interested companies for all labor, equipment, and materials required to perform earthwork, concrete, asphalt, utility installation and all other work associated with the Riverfront at Dos Rios Phase 2 Project. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

***Site electrical plan set, specifications and updated bid schedule will be issued in a later Addendum. This work shall include, but may not be limited to: approximately 176 pedestrian and 15 street light poles and bases, vendor power supply, park holiday lighting supply and all appurtenances associated to complete said work. The plan set shall also include joint trench detail consisting of Xcel, Century Link, Charter and City Fiber Conduit mainline and laterals, pull boxes and appurtenances**.

Total length for the joint trenching is an approximation, and is so noted within the Bid Schedule. The final length shall be revised up or down, and will be reflected within a later Addendum.

***Landscaping and Irrigation Plan set will be issued in a later Addendum.**

***Final construction plans for approximately 900 lineal feet of bank stabilization along the Colorado River will be issued in a later Addendum. Construction for bank stabilization will not be allowed until after September 1st as part of CPW construction restrictions during migratory fish spawning and bird nesting seasons.**

***Final construction plans for Dos Rios Park shelters and restroom structure, to be issued in a later Addendum.**

NOTE: The descriptions of the pay items listed in the Price Bid Schedule for this Project may not agree with those listed in the Standard Specifications. Payment for all Work performed, as required in the Contract Documents, will be in accordance with the items and units listed in the Price Bid Schedule.

The performance of the Work for this Project shall conform to the General Contract conditions presented in the City of Grand Junction's Standard Contract Documents for Capital Improvements Construction, revised July 2010, except as specifically modified or supplemented herein or on the Construction Drawings.

3.2. PROJECT DESCRIPTION: (Refer to Plan Sets)

3.3. SPECIAL CONDITIONS & PROVISIONS:

3.3.1 Mandatory Pre-Bid Meeting: **Prospective bidders are required to attend one of two, mandatory pre-bid meetings being offered for this solicitation process.** Meeting location shall be in the City Hall Auditorium, located at 250 N. 5th Street, Grand Junction, CO. The purpose of this visit will be to inspect and to clarify the contents of this Invitation for Bids (IFB).

Two pre-bid meetings will be offered to all Contractors interested in this project. Attending at least one **(and only one)** of these meetings is required by all Primary/General Contractors intending to submit a response to this IFB. Due to the limited number of seating available at this time, all attendees must pre-register with the purchasing agent assigned, and receive a conformation e-mail acknowledging their reservation. Since pre-bid meeting attendance is only required for the Primary/General Contractors, they shall be given preference over Sub-Contractors and Suppliers for pre-bid meeting pre-registration and attendance. We also request that no more than one representative from each company attend the pre-bid meeting.

Please contact Duane Hoff Jr., Senior Buyer at 970-244-1545 or via e-mail at duaneh@gjcity.org

We ask that all attendees practice social distancing guidelines, and wear masks, if possible.

-The 1st pre-bid meeting shall be held at the City of Grand Junction City Hall Auditorium located at 250, N. 5th Street, Grand Junction, CO on June 8, 2020 at 1:00pm.

OR

-The 2nd pre-bid meeting shall be held at the City of Grand Junction City Hall Auditorium located at 250, N. 5th Street, Grand Junction, CO on June 8, 2020 at 2:00pm

3.3.2 QUESTIONS REGUARDING SOLICIATION PROCESS/SCOPE OF WORK:
Duane Hoff Jr., Senior Buyer
City of Grand Junction
duaneh@gjcity.org

3.3.3 Project Manager: The Project Manager for the Project is Brendan Hines, Project Engineer who can be reached at (970)256-4038. During Construction, all notices, letters, submittals, and other communications directed to the City shall be addressed and mailed or delivered to:

City of Grand Junction
Department of Public Works and Planning
Attn: Brendan Hines, Project Manager
250 North Fifth Street
Grand Junction, CO 81501

3.3.4 Affirmative Action: The Contractor is not required to submit a written Affirmative

Action Program for the Project.

3.3.5 Pricing: Pricing shall be all inclusive to include but not be limited to: all labor, equipment, supplies, materials, freight (F.O.B. Destination – Freight Pre-paid and Allowed to each site), travel, mobilization costs, fuel, set-up and take down costs, and full-time inspection costs, and all other costs related to the successful completion of the project.

The Owner shall not pay nor be liable for any other additional costs including but not limited to: taxes, shipping charges, insurance, interest, penalties, termination payments, attorney fees, liquidated damages, etc.

3.3.6 Freight/Shipping: All freight/shipping shall be F.O.B. Destination – Freight Pre-Paid and Allowed to the project site(s), Grand Junction, CO.

Contractor must meet all federal, state, and local rules, regulations, and requirements for providing such services.

3.3.7 References: A minimum of five (5) **references** with name, address, telephone number, and email address that can attest to your experience in projects of similar scope and size.

3.3.8 Contract: A binding contract shall consist of: (1) the IFB and any amendments thereto, (2) the bidder's response (bid) to the IFB, (3) clarification of the bid, if any, and (4) the City's Purchasing Department's acceptance of the bid by "Notice of Award" or by "Purchase Order". All Exhibits and Attachments included In the IFB shall be incorporated into the contract by reference.

A. The contract expresses the complete agreement of the parties and, performance shall be governed solely by the specifications and requirements contained therein.

B. Any change to the contract, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the bidder and the City Purchasing Division or by a modified Purchase Order prior to the effective date of such modification. The bidder expressly and explicitly understands and agrees that no other method and/or no other document, including acts and oral communications by or from any person, shall be used or construed as an amendment or modification to the contract.

3.3.9 Time of Completion: The scheduled time of Completion for the Project is 305 Calendar Days from the starting date specified in the Notice to Proceed.

Completion is achieved when site cleanup and all punch list items (resulting from the final inspection) have been completed. Completion shall have the meaning set forth in Article I, Section 3 (Definitions and Terms) of the General Contract Conditions.

3.3.10 Working Days and Hours: The working days and hours shall be as stated in the General Contract Conditions or as mutually agreed upon in the preconstruction meeting with the following exception:

All work shall be performed between the hours of 7:00 AM to 5:00 PM.

3.3.11 Licenses and Permits: Contractor is responsible for obtaining all necessary licenses and permits required for Construction, at Contractors expense. See Section 2.12. Contractor shall supply to Owner all copies of finalized permits.

3.3.12 Permits: The following permits are required for the Project and will be obtained by the City at no cost to the Contractor:

- CDPHE Construction Storm Water Permit

The following permits are required for the Project and will be obtained by the City at no cost to the Contractor:

- Mesa County Storm Water Permit.

3.3.13 City Furnished Materials: The City will furnish the following materials for the Project:

- Door-hangers

3.3.14 Project Newsletters: A newsletter for the Project will be prepared and distributed by the City. It will include general information about the Project including interruptions in utility services, street closures, parking restrictions, project schedule, and the names and telephone numbers of the contacts for the City and Contractor. The newsletter will be mailed approximately one week before the Contractor commences work.

The Contractor will be responsible for notifying all businesses and / or residents located adjacent to the work. Door hanger notifications shall be distributed at least two (2) working days prior to the day the work is scheduled to begin.

3.3.15 Project Sign: Project signs, if any, will be furnished and installed by the City.

3.3.16 Authorized Representatives of the City: Those authorized to represent the City shall include Purchasing Agent, Engineers, and Inspectors employed by the City, only.

3.3.17 Stockpiling Materials and Equipment: All stockpiling/storage shall be in accordance with General Contract Condition Section 51.

3.3.18 Traffic Control: The Contractor shall provide and maintain traffic control in accordance with the approved Traffic Control Plan and the Manual on Uniform Traffic Control Devices. A Traffic Control Plan shall be prepared by the Contractor and reviewed by the City two days prior to the pre-construction meeting.

3.3.19 Temporary Parking to Bicycle Playground: After construction activities conclude each day at 5pm, as well as during weekend days, the Contractor shall open access to 2601 Dos Rios Drive, with access from Dos Rios Drive, off of Riverside Parkway. This property shall be used as temporary public parking for those using the bicycle playground. Material stockpiling shall not be placed within 2601 Dos Rios Drive. The Contractor shall provide materials for vehicles to drive over the existing mountable curb within Dos Rios Drive, and provide space within the lot for approximately 20 vehicles to park. The Contractor must incorporate this access into their **traffic control plans**, as well as the installation of temporary signage for 2601 Dos Rios

Drive to be used for bicycle playground parking, which shall be reflected on the Riverfront Trail Detour Plans. Upon completion of the Riverfront Trail improvements, the Contractor shall coordinate with the Project Engineer about removing the temporary parking within 2601 Dos Rios Drive.

3.3.20 Riverfront Trail: The Contractor shall provide detour signage to route all southbound Riverfront Trail traffic to the Riverside Parkway sidewalk, by way of Fairview Avenue, prior to approaching Hale Avenue. The Contractor shall detour all northbound Riverfront Trail traffic to the Riverside Parkway sidewalk by way of the Highway 50/Riverside Parkway off ramp. The Contractor must provide an approved detour plan for all Riverfront Trail traffic as part of their submittal list items. Contractor must coordinate with the City prior to commencement of work.

3.3.21 Clean-Up: The Contractor is responsible for cleaning up all loose materials that have been deposited or swept into gutters, and onto sidewalks and driveways as a result of sidewalk operations. The costs for all clean-up work shall be considered incidental and will not be paid for separately.

3.3.22 Quality Control Testing: Supplier shall perform Quality Control (QC) testing on the Asphalt. The Contractor shall provide QC throughout the Contract, with the use of their own QC Technicians or the use of a certified laboratory. In accordance with Section 401.06.3 of the City of Grand Junction Standard Specifications for Road and Bridge Construction, results of all QC tests shall be submitted to the Project Engineer and the City's Quality Assurance (QA) Technician within 4 hours of the time of sampling. Failure to do so may require that paving be suspended until all sampling results have been received, reviewed, and approved. The Contractor shall supply QC Lab personnel for night work for comparison of test data. If lab personnel are not supplied, paving operations will be suspended until one is available. QC Field personnel shall remain on site during the duration of the paving operation or until in-place density are met.

The Contractor/Supplier shall perform QC testing on all concrete. The City will perform QA testing for concrete.

The Contractor, at their own discretion, may elect to forgo the soils QC field testing (in-place soils density) for placement of Embankment and Aggregate Base Course. QA testing for these items will be performed by the City, and laboratory results for submittal purposes will be provided by the contractor. However, if a sufficient number of failed test results are observed by the City and/or it's QA testing representatives, written notification will be provided to the contractor, and back payment to the City for failed location re-tests will be required.

3.3.23 Discrepancy between Bid Schedule and Construction Notes: In the event of a discrepancy between a Pay Item description in the Bid Schedule and the description for the same Pay Item in the drawings/construction notes; the language in the Bid Schedule shall govern or supersede that found elsewhere.

3.3.24 Schedule of Submittals: Contractor shall deliver these submittals at least two days prior to the pre-construction meeting:

- Traffic Control Plans

- Riverfront Trail Detour Plans
- Project Schedule

3.3.25 Uranium Mill Tailings: Radioactive mill tailings are not anticipated to be encountered on this Project. However, if encountered the Contractor shall adhere to the Uranium Mill Tailings Management Plan throughout all phases of construction, supplied in Appendix D.

3.3.26 Fugitive Petroleum or Other Contamination: It is anticipated that soil contamination from fugitive petroleum or other contaminants will not be encountered with the Project.

3.3.27 Excess Material: All excess materials shall be disposed in accordance with General Contract Condition Section 50. All asphalt millings shall be delivered to the City Storage Yard located adjacent to the City Cemetery at 2620 Legacy Way, and become the property of the City of Grand Junction.

3.3.28 Existing Utilities and Structures: Utilities were **not** potholed during design of this project. The location of existing utilities and structures shown on the Plans is approximate with the information gathered during design. It is the responsibility of the Contractor to pothole/locate and protect all structures and utilities in accordance with General Contract Condition Section 37.

The site currently has several CDPHE monitoring wells located throughout the proposed development for the purposes of monitoring VOCs and SVOCs. The Contractor must coordinate with the City prior to removing them. Current location of well is provided in Appendix F.

3.3.29 Incidental Items: Any item of work not specifically identified or paid for directly, but which is necessary for the satisfactory completion of any paid items of work, will be considered as incidental to those items, and will be included in the cost of those items.

3.3.30 Survey: The Contractor shall give the City survey crew a minimum of 72 hours' notice for all requested survey.

The cost of any survey necessary for the completion of the project will be considered incidental to the work and will not be paid for separately.

3.3.31 Work to be Performed by the City (Prior to Construction Work for each site listed below):

3.3.31.1 Easement acquisition from 636 Lawrence Avenue: The City is in the process of acquiring the necessary right-of-way and easement from 636 Lawrence Avenue for the project. The City does not anticipate completion of this acquisition until November 25, 2020. Contractor shall plan accordingly.

3.3.31.2 Environmental No Action Determination (N.A.D.): The City is currently coordinating with the Colorado Department of Public Health and Environment (CDPHE), for the No Further Action Determination (NAD), after minimal site cleanup within several newly acquired properties (603

Lawrence Ave, as well as 201, 205, 211 & 219 Hale Avenue). The City does not anticipate acceptance of the (NAD) by the State until the week of July 6th, 2020. The Contractor shall plan the phasing of their improvements around these properties accordingly.

3.3.31.3 201 Lila Avenue: The City anticipates that 201 Lila will not be available to include within the overall development until November 25, 2020. The Contractor shall plan accordingly to work around the property until it becomes available.

3.3.31.4 Demolition of Existing Building at 211 Hale Ave.: It is proposed to demolish the existing building and any appurtenances currently residing at 211 Hale Avenue. The City anticipates the existing structure(s) will be demolished and removed by August 1st, prior to the beginning of construction.

3.3.32 Existing Concrete Sidewalks, Pans, Fillets, Curbs and Gutters: The existing sidewalks, pans, fillets, curb and gutter are in good serviceable condition. In most instances the installation of new sidewalk and pavement will be adjacent to existing concrete. The Contractor will need to protect all concrete adjacent to construction. If the concrete is damaged during construction the Contractor will be responsible for its replacement at no cost to the City. The Contractor, the City Project Inspector, and/or the City Project Manager will walk and record any concrete that is deemed to be damaged before construction has started.

3.3.33 ACI Concrete and Flatwork Finisher and Technician: Hand finishing concrete will be permitted only when performed under the direct supervision of a craftsman holding the following certificate: ACI Concrete Flatwork Finisher and Technician (ACICFFT) or other Flatwork Finisher certification program approved by the City Public Works Director.

3.3.34 Payment for Hot Mix Asphalt: Section 401.07.1 of the City of Grand Junction Standard Specifications for Road and Bridge Construction will be used to determine Pay Factors for calculating the basis of payment for Hot Bituminous Pavement with the following modifications:

The pay factor (PF) should be calculated for mat density (excluding joint density), air voids, and VMA daily. An average daily pay factor (DPF) should then be calculated/weighted in the following proportion:

- Mat Density (excluding joint density) – 50%
- Air Voids – 25%
- VMA – 25%

The incentive payment will then be based on a weighted average project pay factor (PPF). The PPF shall be calculated/weighted per the DPFs and accepted quantities placed for each day's production of each pay item. This PPF will then be applied to the total accepted quantities for each pay item, as applicable.

3.3.35 Materials: In the event that excavation of the manholes grade rings are disturbed or removed and replaced due to damage the contractor is instructed to follow these guidelines:

The annular area beneath the bottom of the uppermost grade ring shall either be filled with a self-consolidating material, i.e. ¾" screened rock or engineer approved equal or shall be completely filled with Quikrete's Rapid Road Repair or Engineer approved equal. No other means will be considered.

3.3.36 Work by others / Coordination:

3.3.36.1 Xcel Energy/Gas, Charter, and Century Link: Xcel Energy/Gas and Charter shall provide and place conduit, and install utilities within the Joint Trench. The trench shall be excavated by the Contractor per plans and specifications.

Along with said work, the Contractor shall also be responsible for providing and installing conduit in the trench for Century Link. Coordination with Xcel, Charter and Century Link shall be the responsibility of the Contractor. The Contractor shall be responsible for bedding, haunching and backfill of the trench. See Special Provisions 8 (SP – 7) for more information.

City Traffic Department to supply and install street/stop signs and double yellow striping.

3.3.36.2 Xcel Energy: Xcel Energy shall be removing the existing 230KV transmission towers, currently located throughout the proposed development, and shall be installing new transmission towers within the proposed median of Hale Avenue, and extending across Riverside Parkway. Materials will be delivered in mid-July, with construction beginning in mid-September. Delivered materials shall be stored within 2600 Riverside PKWY, which is the property located on the east side of Riverside Parkway, directly across from the Dos Rios site. The Contractor shall coordinate construction phasing with Xcel Energy to avoid overlapping construction activities within Hale Avenue. The Contractor shall coordinate with Xcel Energy for the undergrounding of the existing under-hung service line(s), currently installed on the transmission towers prior to the existing transmission towers being removed.

3.3.36.3 535 Hale Avenue: Construction for the private development, owned by Buena Vida, LLC is tentatively scheduled to begin in April of 2021. However, construction may be underway by the time construction for the overall Dos Rios site begins. The contractor shall coordinate with Buena Vida, LLC to ensure access to 535 Hale is maintained throughout construction.

3.4. SCOPE OF WORK:

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION:

The ***City of Grand Junction Standard Specifications for Road and Bridge Construction*** are hereby modified or supplemented for this Project by the following modifications to ***The Standard Specifications for Road and Bridge Construction***, State Department of Highways, Division of Highways, State of Colorado:

SP-1 SECTION 103 – REMOVALS, EXCAVATION, BACKFILL AND RESTORATION:

Add the following:

103.4 Bracing and Sheeting of Trenches

Add the following:

Trench wall support will be required when installing all new pipeline included in this project. The Contractor shall provide trench boxes, sheet piles and bracing, or other approved method of supporting trench walls that will limit the top width of any trench to a maximum of six (6) feet. Payment for trench bracing by the Contractors chosen method shall be included in the lineal foot pipe price for all pipe installed in this contract. Bracing required for manhole installation shall be included in the price of the manhole.

103.10 Cutoff Walls.

Add the following:

The cost of installing cutoff walls shall be incidental to the cost of pipe installation.

103.16 Earth Backfill Material (Imported Trench Backfill).

Add the following:

Material excavated on site shall not be used in the trench backfill if determined to be unsuitable by the Engineer or his representative. The excavated material shall ***NOT*** be hauled off, rather stockpiled on site in designated location approved by the Project Engineer. Imported Trench Backfill shall be pitrun or other approved material meeting the requirements of Section 103.16. During placement of imported backfill over the initial backfill material (Type A) that extends to 6 inches above the top of the pipe, the Contractor shall not place any rocks over 4 inches in diameter within the first 12 inches above the initial backfill material to protect the pipe from damage.

SP-2 SECTION 202- REMOVAL OF STRUCTURES AND OBSTRUCTIONS:

Section 202 of the Standard Specifications for Road and Bridge Construction is hereby revised for this Project as follows:

Subsection 202.07, shall include the following:

Excess Material. Excavated material generated on site shall remain on site and is to be stockpiled in designated area(s). Materials may only leave the site when directed by the City of Grand Junction. Prior from being removed from the site,

materials must first undergo testing for radioactivity. Any/all materials over or under radioactivity limits that are directed to be removed from the site shall be delivered to a licensed disposal facility or to the interim storage facility to be defined by the City of Grand Junction and as described in the Uranium Mill Tailings Management Plan (UMTMP) provided in Appendix B. A log of these actions must be kept.

The current Uranium Mill Tailings Management Plan shall be adhered to during all construction activities. The most current version can be found at the State of Colorado's website https://www.colorado.gov/pacific/sites/default/files/HM_umilltail-mgt-plan.pdf. All contractors and trades working on this project shall become familiar with this and related documents.

SP-3 SECTION 203 – EXCAVATION AND EMBANKMENT

Section 203 of the Standard Specifications is hereby revised for this project as follows:

Subsections 203.1 General, shall include the following:

Excavated material generated during construction phases such as, but not limited to roadway construction, utility installation, and any other work that is deemed suitable for embankment shall be placed per plan at building foot print(s) and identified fill areas. Stockpiled material on site shall be included as part of said work. Material shall be screened onsite as necessary to ensure a maximum partial dimension no greater than 8" and all embankment material be free of trash and organic materials. Aggregate generated from screening processes from said work shall be stockpiled.

The material that classify as cohesive materials per ASTM shall be placed in maximum 9-Inch loose lifts, moisture conditioned, and compacted at a minimum of 95% of the standard Proctor maximum dry density, within +/-2% of optimum moisture content as determined by ASTM D-698 or 95% of the modified Proctor ASTM D-1557 for materials that classify non-cohesive.

203.14 Basis of Payment.

Add the following:

Payment for work shall be made under Excavation and Embankment and will be measured by cubic yard of placed and compacted material per plan. Unsuitable material generated from utility construction will not be measured or paid for separately and shall be stockpiled on site in designated area. Material placed and compacted is be quantified by survey following completion of work.

Pay Item	**Pay Unit**
Excavation and Embankment	CY

SP-4 SECTION 601 – STRUCTURAL CONCRETE

Section 601 of the Standard Specifications is hereby revised for this project as follows:

Subsection 601.02, Classification:

CONCRETE SHALL MEET THE FOLLOWING REQUIREMENTS:

- 4,500 PSI Compressive at 28 Days
- 6% air ±1.5%
- Slump 4", Loads exceeding 4 ½" shall be rejected
- Maximum Water Cement Ratio no greater than 0.45.

Subsection 601.06, Batching:

This CDOT Specification has been added to this Project:

The Contractor shall furnish a batch ticket (delivery ticket) with each load for all concrete. Concrete delivered without a batch ticket containing complete information as specified shall be rejected. The Contractor shall collect and complete the batch ticket at the placement site and deliver all batch tickets to the Engineer or his representative at the end of each day. The Engineer or his representative shall have access to the batch tickets at any time during the placement. The following information shall be provided on each ticket:

1. Suppliers name and date
2. Truck number
3. Project name and location
4. Concrete class and designation number
5. Cubic yards batched
6. Type brand and amount of each admixture
7. Type, brand, and amount of cement and fly ash
8. Weights of fine and course aggregates
9. Moisture of fine and course aggregates
10. Gallons of batch water

The contractor shall add the following information to the batch ticket at time of placement:

1. Gallons of water added by the truck operator.
2. Number of revolutions of the drum for mixing
3. Discharge time

SP-5 SECTION 608 – CURBS, GUTTERS, SIDEWALKS, AND TRAILS

Section 608 of the Standard Specifications is hereby revised for this project as follows:

Subsections 608.06, Basis of Payment shall include the following:

The Contract Unit Price for the various concrete items shall be full compensation for all equipment, labor, materials, and incidentals required for the complete installation. Incidental items include excavation, subgrade compaction, cutting and removal of asphalt and concrete in areas where new concrete will be installed; disposal of

excavated and removed materials; furnishing, placement and compaction of Aggregate Base Course; forming, furnishing and placement, finishing, curing and protection of the concrete; reinforcing steel, jointing (tool or saw cut) and joint filler.

Concrete walk greater than 8' in width shall be saw cut longitudinally at w/2.

SP-7 SECTION 613 – CONDUIT

ELECTRICAL CONDUIT AND PULL BOXES

Section 613 of the Colorado Department of Transportation Standard Specifications is hereby revised for this project as follows:

MATERIALS

Subsection 613.02 shall include the following:

All materials furnished, assembled, fabricated, or installed under this item shall be new, corrosion resistant and in strict accordance with the Plans and these Special Provisions.

CONDUIT

Conduit shall be Schedule 80 OR C-900, as called out for in the Plans, with a nominal diameter of 2" and 6". The conduit shall be constructed out of either RNC (i.e., PVC) or HDPE. The coefficient of friction and cut-through rating of the conduit shall meet or exceed the requirements stated in Bellcore/Telcordia GR-356-CORE *Generic Requirements for Optical Cable Innerduct and Accessories*.

All empty conduit runs shall have a pull rope (8KN) installed in each conduit after installation. Broad Band conduit shall include 10 AWG tracer wire. Pull boxes for City Fiber shall have fiber called out on the lid. Pull rope, tracer wire and tape will not be measured and paid separately, but shall be included in the unit price for conduit.

Conduit shall always enter a pull box, hand-hole, or any other type structure from the direction of the run only.

PVC conduit shall be listed as approved for use by the RUS. PVC conduit shall be manufactured in accordance with the following industry standards:

- NEMA TC-2 *Electrical Polyvinyl Chloride (PVC) Conduit*
- UL 651 *Schedule 40 and 80 Rigid PVC Conduit and Fittings*

PVC fittings shall be manufactured in accordance with the following industry standards:

- NEMA TC-3 *PVC Fittings for Use with Rigid PVC Conduit and Tubing*
- UL 514B *Conduit, Tubing, and Cable Fittings*

HDPE conduit shall be listed as approved for use by the RUS. HDPE conduit shall be manufactured in accordance with the following industry standards:

- ASTM D-2447 *Standard Specification for PE Plastic Pipe, Schedules 40 and 80, Based on Outside Diameter*
- ASTM F-2160 *Standard Specification for Solid Wall HDPE Conduit Based on Controlled Outside Diameter*
- NEMA TC-7 *Smooth-Wall Coilable Electrical PE Conduit*
- EPEC-80 for Schedule 80 HDPE

HDPE conduit shall be capable of being coiled or placed on reels in continuous lengths, transported, stored outdoors and subsequently uncoiled for installation without affecting its properties or performance.

The Contractor shall utilize either all PVC or HDPE conduit for underground installations on this Contract. The mixing of PVC and HDPE conduit types for underground installations shall not occur without prior written approval from the Engineer.

All underground-to-aboveground and aboveground conduit installations shall utilize RMC as indicated on the Plans.

Where RMC is used, the uncoupled end shall be covered by industry color-coded thread protectors to aid in trade size recognition and protect the threads. Since 2",4" and 6" diameter conduit is called out throughout the entire project, the thread protectors should be color-coded blue. Threads shall conform to ANSI B1.20.1 *Pipe Threads, General Purpose (inch)*. RMC, including factory manufactured threads, shall be hot-dipped galvanized inside and out. It shall also be top-coated with a compatible organic layer to inhibit white rust and increase corrosion resistance. RMC shall meet UL safety standard UL 6 *Electrical Rigid Metal Conduit - Steel* and be manufactured to ANSI C80.1 *Electrical Rigid Steel Conduit (ERSC)*.

All conduit transitions shall be constructed in a smooth and gradual manner as directed by the Engineer. Conduit sweeps into pull boxes and splice vaults shall be installed to facilitate pulling fiber optic cable directly through the pull box or splice vault. PVC conduits shall utilize 45° elbows with a minimum radius of 36". Similarly, HDPE conduits shall be installed with a 45° bend with a minimum radius of 36". The sum of the individual conduit bends, both horizontal and vertical, on a single conduit run between two pull boxes or a pull box and splice vault shall not exceed 270°. No individual bend shall be greater than 45°, unless indicated on the Plans for building access and pole-mounted cabinets where conduits transition from underground to above ground installations.

When conduits are coupled, the coupling technology shall allow the conduit to plug together without the need for special tools, and shall form both an airtight and watertight seal. Breaking force between segments shall exceed 250 lbs. The couplings shall be specifically designed for use with the size and type of conduits to be joined. Where toneable conduits are to be joined, the couplings shall be specifically designed for that purpose to ensure continuous conduit run detectability. If the Contractor intends to employ air-assisted fiber optic cable installation techniques, the couplings shall be pressure tight to internal conduit pressures not less than 200 psi when unrestrained.

The Contractor shall use conduit plugs and sealing plugs for sealing all empty conduits and conduits occupied with cabling, respectively, installed under this Contract. Conduit plugs shall be utilized in conduit ends (for all empty conduits shown on the Plans) as soon as the conduit is installed. End caps, appropriately sized for the installed conduit, shall be utilized on conduit ends (for all conduits to be occupied with cabling as shown on the Plans) as soon as the conduit is installed and sealed with electrical tape. The end caps shall be replaced with the appropriate sealing plugs as soon as cabling is installed within the conduit. Conduits shall be plugged or capped at all termination points such as pull boxes, splice vaults, junction boxes and building entries.

- Conduit plugs shall be manufactured from high-impact plastic components, combined with durable elastic gaskets. They shall be corrosion proof and appropriate for use as either a long-term or temporary seal. Conduit plugs shall be removable and reusable. They shall be both watertight and airtight to prevent the flow of water and buildup of sedimentation within the conduit. Each conduit plug shall be equipped with a rope tie device to allow the securing of pull rope to the plug's back compression plate. The Contractor shall attach the pull rope to the back compression plate of the plug and store excess slack pull rope behind the plug within the conduit for future use.

- Sealing plugs shall be simplex, biplex or triplex depending on the number of cables within a single conduit. They shall be removable and reusable. All sealing plugs shall be of the split type design, manufactured without metallic parts and easily removable and reinstallable around in-place cables without damaging the outer cable jacket. Sealing plugs shall provide a minimum watertight and airtight seal of 20 psi. They shall be installable by hand without using special tools and have no sharp corners that could damage the outer cable jacket.

Pull rope shall be a pre-lubricated, woven polyester tape made from low friction, high abrasion resistant yarns providing a low coefficient of friction. It shall be printed with sequential footage markings. The pull rope shall not be less than ½" with a minimum tensile strength of 1,250 lbs.

Warning tape shall be of the non-detectable variety. It shall be fabricated using a pigmented polyolefin film that has been specially treated so as not to degrade when exposed to acids or other destructive chemicals. The warning tape thickness shall be at least 4 mil and have a width not less than 3". The color of the warning tape shall be an APWA-approved orange color with black letters of approximately ¾" printed on one side with the wording "CAUTION FIBER OPTIC CABLE BURIED BELOW". The wording shall be repeated at approximately 3' intervals. Fiber optic warning tape shall be installed above the conduit in all open trenches for short conduit runs where directional boring methods are not feasible. A ½" diameter by 8' long ground rod shall be installed in each vault. The cost of the ground rod shall be included in the price of the vault or manhole.

Prior to installation, the specifications for all conduit types, couplings, fittings, elbows, L-bends, mounting hardware, conduit plugs, sealing plugs, pull tape, warning tape and curb markers shall be submitted to the Engineer for written approval.

BASIS OF PAYMENT

Subsection 613.11 shall include the following:

Accepted quantities of electrical conduit will be paid as measured above which price includes all items as listed above including full compensation for trenching, furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in furnishing and installing electrical conduit as shown on the Plans, as specified in the Standard Plans and Standard Specifications, as specified in these Special Provisions, and as directed by the Engineer.

Accepted quantities of pull boxes and junction boxes will be paid as measured above which price includes all items as listed above including full compensation for excavation, furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in furnishing and installing each pull box and junction box as shown on the Plans, as specified in the Standard Plans and Standard Specifications, as specified in these Special Provisions, and as directed by the Engineer.

The Contractor shall coordinate work with Utility Companies as the trench work may be multiphase.

Joint Utility Trench: At any time the joint utility trench may consist of the following conduits. Plans, specifications and bid schedule for site electrical and dry utilities will be included in **Addendum No. 1**.

- Site Lighting (Street and Holiday)
  - 2" SCHD. 80 PVC –Contractor Provide and Place
- Electrical Conduit (Extra)
  - 2" SCHD. 80 PVC – Contractor Provide and Place
- Broadband Infrastructure
  - 2" SCHD. 80 PVC – Contractor Provide and Place
- CATV (Charter)
  - 2" SCHD. 80 PVC – Charter Provide and Place
- Communications Cable (Century Link)
  - 2" SCHD. 80 PVC – Contractor Provide and Place
  - 4" SCHD. 80 PVC – Contractor Provide and Place
- Vault(s) – Century Link Provides, Contractor Installs.
- Gas Main (Xcel)
  - 4" P.E. – Xcel Provide and Place
- Electrical Primary (Xcel)
  - 6" SCHD. 80 PVC – Xcel Provide and Place
  - 6" SCHD. 80 PVC (Extra) – Xcel Provide and Place
- Single Phase Power (Xcel)
  - 2" SCHD. 80 PVC – Xcel Provide and Place
- Three Phase Power (Xcel)
  - 4" SCHD. 80 PVC – Xcel Provide and Place

3/8" chips or #10 CHAT (rock crusher reject) is to be utilized as bedding and haunching for both the Street and Property Side Joint Utility Trench. Cost of materials shall be included in the linear foot contract price in the bid schedule and we considered incidental.

Payment will be made under:

Pay Item	**Pay Unit**
Joint Trench (30" W x 42" D)	LF
4" SCHD 80 PVC	LF
2" SCHD 80PVC	LF

Pay Item	**Pay Unit**
Vault (Century Link)	EA
Vault (City Fiber)	EA

3.5. Attachments:

Appendix A: Project Submittal Form
Appendix B: Landscape and Irrigation Specifications
Appendix C: Geotechnical Report
Appendix D: Uranium Mill Tailings Management Plan
Appendix E: Construction Drawings
Appendix F: Existing CDPHE Monitoring Well Location Exhibit
Appendix G: Preliminary Plaza Shelter and Restroom Structure Plans (in future addendum)

3.6. Contractor Bid Documents: For Contractor's convenience, the following is a list of forms/items to be submitted with the Contractor's bid response. However, should a form/item not be listed in this section, but required in the solicitation documents, it is the Contractor's responsibility to ensure all forms/items are submitted.

- **Contractor's Bid Form**
- **Price Bid Schedule**
- **References**

3.7. IFB TENTATIVE TIME SCHEDULE:

Invitation For Bids available	May 22, 2020
Mandatory Pre-Bid Meeting (two options)	June 8, 2020
Inquiry deadline, no questions after this date	June 17, 2020
Addendum Posted	June 19, 2020
Submittal deadline for proposals	June 29, 2020
City Council Approval	July 15, 2020
Notice of Award & Contract execution	July 16, 2020
Bonding & Insurance Cert due	July 23, 2020
Preconstruction meeting	July 24, 2020
Work begins no later than	Upon Receipt of Notice to Proceed
Final Completion	305 Calendar Days from Notice to Proceed
Holidays:	September 7, 2020
	November 11, 2020
	November 26-27, 2020
	December 25, 2020
	January 1, 2020
	January 18, 2020
	February 15, 2020
	May 31, 2020

Contractor's Bid Form

Bid Date: _____

Project: IFB-4799-20-DH "Riverfront at Dos Rios Phase II Construction"

Bidding Company: _____

Name of Authorized Agent: _____

Email _____

Telephone_____ **Address**_____

City_____**State**_____**Zip**_____

The undersigned Bidder, in compliance with the Invitation for Bids, having examined the Instruction to Bidders, General Contract Conditions, Statement of Work, Specifications, and any and all Addenda thereto, having investigated the location of, and conditions affecting the proposed work, hereby proposes to furnish all labor, materials and supplies, and to perform all work for the Project in accordance with Contract Documents, within the time set forth and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this Contractor's Bid Form is a part.

The undersigned Contractor does hereby declare and stipulate that this offer is made in good faith without collusion or connection to any person(s) providing an offer for the same work, and that it is made in pursuance of, and subject to, all terms and conditions of the Instructions to Bidders, the Specifications, and all other Solicitation Documents, all of which have been examined by the undersigned.

The Contractor also agrees that if awarded the Contract, to provide insurance certificates within ten (10) working days of the date of Notification of Award. Submittal of this offer will be taken by the Owner as a binding covenant that the Contractor will be prepared to complete the project in its entirety.

The Owner reserves the right to make the award on the basis of the offer deemed most favorable, to waive any formalities or technicalities and to reject any or all offers. It is further agreed that this offer may not be withdrawn for a period of sixty (60) calendar days after closing time. Submission of clarifications and revised offers automatically establish a new thirty day (30) period.

Prices in the bid proposal have not knowingly been disclosed with another provider and will not be prior to award.

- Prices in this bid proposal have been arrived at independently, without consultation, communication or agreement for the purpose of restricting competition.
- No attempt has been made nor will be to induce any other person or firm to submit a bid proposal for the purpose of restricting competition.
- The individual signing this bid proposal certifies they are a legal agent of the offeror, authorized to represent the offeror and is legally responsible for the offer with regard to supporting documentation and prices provided.
- Direct purchases by the City of Grand Junction are tax exempt from Colorado Sales or Use Tax. Tax exempt No. 98-903544. The undersigned certifies that no Federal, State, County or Municipal tax will be added to the above quoted prices.
- City of Grand Junction payment terms shall be Net 30 days.
- Prompt payment discount of _____ percent of the net dollar will be offered to the Owner if the invoice is paid within _____ days after the receipt of the invoice. The Owner reserves the right to take into account any such discounts when determining the bid award.

RECEIPT OF ADDENDA: the undersigned Contractor acknowledges receipt of Addenda to the Solicitation, Specifications, and other Contract Documents.

State number of Addenda received: _____.

It is the responsibility of the Bidder to ensure all Addenda have been received and acknowledged.

By signing below, the Undersigned agree to comply with all terms and conditions contained herein.

Company: _____

Authorized Signature: _____

Title: _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	626	Mobilization	1.	Lump Sum	$ _____	$ _____
2	626	Construction Surveying	1.	Lump Sum	$ _____	$ _____
3	620	Sanitary Facility	1.	EA	$ _____	$ _____
4	209	Dust Abatement	500.	DAYS	$ _____	$ _____
5	208	Stabilized Construction Entrance	5.	EA	$ _____	$ _____
6	208	Erosion Control (Complete in Place)	1.	Lump Sum	$ _____	$ _____
7		Potholing	1.	Lump Sum	$ _____	$ _____
8	108.2	4" Sewer Service Pipe (SDR 35)	786.	LF	$ _____	$ _____
9	108.2	6" Sewer Service Pipe (SDR 35)	93.	LF	$ _____	$ _____
10	108.2	8" Gravity Sewer Pipe (SDR 35)	1,682.	LF	$ _____	$ _____
11	108.2	Import Trench Backfill	4,000.	CY	$ _____	$ _____
12	108.3	4" Sewer Service Tap to Existing Main	18.	EA	$ _____	$ _____
13	108.3	4" Sewer Service Tap to New Main	8.	EA	$ _____	$ _____
14	108.3	8" End Cap/Plug Sewer	1.	EA	$ _____	$ _____
15	108.3	Sanitary Sewer Cleanout (2-way) to Include Appurtenances per City Standard Detail SS-07.	26.	EA	$ _____	$ _____
16	108.5	Sanitary Sewer Basic Manhole Placed on Existing Line (60" I.D.) (Complete in Place).	2.	EA	$ _____	$ _____
17	108.5	Sanitary Sewer Basic Manhole Placed on Existing Line (48" I.D.) (Complete in Place).	1.	EA	$ _____	$ _____
18	108.5	Sanitary Sewer Basic Manhole (48" I.D.) (Complete in Place).	12.	EA	$ _____	$ _____
19	108.5	Sanitary Manhole Barrel Section (D>5') (60" I.D.).	6.	VLF	$ _____	$ _____
20	108.5	Sanitary Manhole Barrel Section (D>5') (48" I.D.).	33.6	VLF	$ _____	$ _____
21	108.5	Connect to Existing Manhole or Sewer Main	3.	EA	$ _____	$ _____
22	210	Adjust Sewer Manhole to Finished Grade.	15.	EA	$ _____	$ _____
23	104.4	Fully Encased Sewer in Concrete per City Standard Detail GU-04. See Plan Sheet 6.	11.	EA	$ _____	$ _____
24	104.4	Cap Top Half of Sewer in Concrete per City Standard Detail GU-04.	12.	EA	$ _____	$ _____
25	108.2	6" Water Pipe (C-900 PVC).	632.	LF	$ _____	$ _____
26	108.2	8" Water Pipe (C-900 PVC).	5,230.	LF	$ _____	$ _____
27	108.3	6" Gate Valve	16.	EA	$ _____	$ _____
28	108.3	8" Gate Valve	22.	EA	$ _____	$ _____
29	108.3	8" X 6" Tee	14.	EA	$ _____	$ _____
30	108.3	8" X 8" Tee	5.	EA	$ _____	$ _____
31	108.3	8" X 6" Cross	1.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
32	108.3	8" Cross	1.	EA	$ _____	$ _____
33	108.3	8", 22.5° Elbow	10.	EA	$ _____	$ _____
34	108.3	8", 45° Elbow	8.	EA	$ _____	$ _____
35	108.3	8", 11.25° Elbow	14.	EA	$ _____	$ _____
36	108.3	6", 45° Elbow	3.	EA	$ _____	$ _____
37	108.3	8" X 6" Reducer	4.	EA	$ _____	$ _____
38	108.3	6" End Cap/Plug Water	4.	EA	$ _____	$ _____
39	108.3	Fire Hydrant Assembly	12.	EA	$ _____	$ _____
40	108.3	1" Tapping Saddle	27.	EA	$ _____	$ _____
41	108.3	1" Corporation Stop	27.	EA	$ _____	$ _____
42	108.3	Potable Water - 8" Tapping Sleeve	1.	EA	$ _____	$ _____
43	108.4	Water Service Line (1") (Type K Copper)	1,130.	LF	$ _____	$ _____
44	108.4	1" Water Service Assembly	27.	EA	$ _____	$ _____
45	202	Remove Water Valve	3.	EA	$ _____	$ _____
46	202	Remove Fire Hydrant	1.	EA	$ _____	$ _____
47	202	Abandon Water Valve	2.	EA	$ _____	$ _____
48	202	Abandon Water Pipe (Plug Remaining Ends with Concrete).	4.	EA	$ _____	$ _____
49	202	Remove Water Meter	2.	EA	$ _____	$ _____
50	210	Adjust Water Valve to Finished Grade	4.	EA	$ _____	$ _____
51	210	Adjust Water Meter to Finished Grade	2.	EA	$ _____	$ _____
52	210	Adjust Fire Hydrant to Finished Grade	1.	EA	$ _____	$ _____
53	108.2	Storm Drain Pipe - 72" x 24" Concrete Box Culvert	557.	LF	$ _____	$ _____
54	108.2	Storm Drain Pipe - 29" x 18" Concrete Horizontal Elliptical Arch Pipe.	895.	LF	$ _____	$ _____
55	108.2	Storm Drain Pipe - 48" Concrete Pipe	50.	LF	$ _____	$ _____
56	108.2	Storm Drain Pipe - 42" Concrete Pipe	363.	LF	$ _____	$ _____
57	108.2	Storm Drain Pipe - 36" Concrete Pipe	1,092.	LF	$ _____	$ _____
58	108.2	Storm Drain Pipe - 24" Concrete Pipe	853.	LF	$ _____	$ _____
59	108.2	Storm Drain Pipe - 18" Concrete Pipe	2,252.	LF	$ _____	$ _____
60	108.2	Storm Drain Pipe - 12" Concrete Pipe	703.	LF	$ _____	$ _____
61	108.2	Storm Drain Pipe - 8" PVC Pipe (C-900)	68.	LF	$ _____	$ _____
62	108.5	Storm Drain Manhole (48" I.D.)	6.	EA	$ _____	$ _____
63	108.5	Storm Drain Manhole (60" I.D.)	4.	EA	$ _____	$ _____
64	108.5	Storm Drain Manhole (60" I.D.) with Flat Top Lid	5.	EA	$ _____	$ _____
65	108.5	Storm Drain Manhole (72" I.D.)	1.	EA	$ _____	$ _____
66	108.6	Storm Drain - Outlet Structure - See "Water Quality Outlet Structure" to Include All Appurtenances (Complete in Place).	1.	EA	$ _____	$ _____
67	108.6	Storm Drain Inlet with Vertical Curb Opening (24" x 36")	20.	EA	$ _____	$ _____
68	108.6	Storm Drain Inlet with Drive Over Curb Opening (24" x 36")	2.	EA	$ _____	$ _____
69	108.6	Storm Drain - Large Area Inlet (24" x 36")	14.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
70	108.5	Storm Drain - Concrete Headwall (8'-9" wide x 9'-10" height) per CDOT M&S Standard Plan M-601-10 and 48" Flap	1.	EA	$ _____	$ _____
71	108.5	Storm Drain - Conflict Structure	1.	EA	$ _____	$ _____
72	108.5	Storm Drain - Access Manhole	3.	EA	$ _____	$ _____
73	108.5	Storm Drain - Access Inlet (24" x 36" I.D.) Vertical Curb Opening	1.	EA	$ _____	$ _____
74	108.6	Storm Drain - Access Inlet (24" x 36" I.D.) Area Inlet Opening	1.	EA	$ _____	$ _____
75	108.6	Storm Drain - 42" x 48" Tee Manhole	2.	EA	$ _____	$ _____
76	108.6	Storm Drain - 42" x 48" x 36" Tee	1.	EA	$ _____	$ _____
77	108.5	Storm Drain - 36" x (24" x 36" Box Leg) Tee Inlet Area Inlet Frame and Grate (24" x 36" Opening)	1.	EA	$ _____	$ _____
78	108.5	Storm Drain - 72" x 24" Prefabricated Pipe Elbow	2.	EA	$ _____	$ _____
79	108.5	Storm Drain - Inlet Over MH (Vertical Curb Opening) (24" x 36" I.D.)	2.	EA	$ _____	$ _____
80	108.5	Storm Drain - Inlet Over MH (Large Area Inlet Opening) (24" x 36" I.D.)	4.	EA	$ _____	$ _____
81	108.5	Storm Drain - Prefab Pipe Transition per Plan	1.	EA	$ _____	$ _____
82	108.6	Storm Drain - Manhole Barrel Section (D>5')(72" I.D.)	5.1	VLF	$ _____	$ _____
83	108.5	Storm Drain - Manhole Barrel Section (D>5')(60" I.D.)	2.2	VLF	$ _____	$ _____
84	108.5	Storm Drain - Manhole Barrel Section (D>5')(48" I.D.)	5.23	VLF	$ _____	$ _____
85	108.5	Core and Connect New 18" Storm Pipe to New Box Culvert	4.	EA	$ _____	$ _____
86	108.7	Granular Stabilization Material (Type B)	2,300.	TON	$ _____	$ _____
87	202	Remove Storm Drain Inlet	1.	EA	$ _____	$ _____
88	202	Remove 15" Flared End Section	1.	EA	$ _____	$ _____
89	202	Remove 15" Storm Pipe	90.	LF	$ _____	$ _____
90	202	Abandon Storm Pipe	1.	EA	$ _____	$ _____
91	210	Reset Storm Drain Inlet D1-252-099	1.	EA	$ _____	$ _____
92	210	Connect to and Adjust to Finished Grade Storm MH C4-252-017	1.	EA	$ _____	$ _____
93	210	Adjust Storm Manhole to Finished Grade	1.	EA	$ _____	$ _____
94	420	Geosynthetics - Mirifi RS580i or Approved Equal	5,600.	SY	$ _____	$ _____
95	506	Riprap (d50=12" to Include Geogrid)	40.	SY	$ _____	$ _____
96	203	Unclassified Excavation	43,790.	CY	$ _____	$ _____
97	203	Unclassified Embankment	67,341.	CY	$ _____	$ _____
98	203	Debris Processing and Removal	12,000.	CY	$ _____	$ _____
99	203	Colorado River Bank Stabilization	900.	LF	$ _____	$ _____
100	203	Import and Place Clean Fill	43,753.	CY	$ _____	$ _____
101	210	Adjust Pull Box to Finished Grade	9.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
102	210	Adjust Light Pole and Foundation to Finished Grade	2.	EA	$ _____	$ _____
103	613	Joint Trench with Broad Band (Site Electrical - Street LT Circuits (2)-2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	32,600.	LF	$ _____	$ _____
104	613	Joint Trench with Site Electrical (Broad Band (3)-2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	48,900.	LF	$ _____	$ _____
105	613	Joint Trench with XCEL Energy and Charter who provides and places their materials (Century Link - 4" Schedule 80 PVC conduit). Refer to Utility Trench	16,300.	LF	$ _____	$ _____
106	613	Joint Trench with XCEL Energy and Charter who provides and places their materials (Century Link - 2" Schedule 80 PVC conduit). Refer to Utility Trench	16,300.	LF	$ _____	$ _____
107	613	Large Splice Box (Quasite) (3' - 2 5/8" x 2'-2") Broadband Logo.	32.	EA	$ _____	$ _____
108	613	Splice Box (Provided by Others - Century Link)	20.	EA	$ _____	$ _____
109	613	Type One Pull Box	211.	EA	$ _____	$ _____
110	Elec	Wiring (LCBP x1.74)	1.	Lump Sum	$ _____	$ _____
111	Elec	Light Standard and Luminaire	176.	EA	$ _____	$ _____
112	Elec	Light Standard and Luminaire (Street)	15.	EA	$ _____	$ _____
113	Elec	Light Standard Foundation (Pedestrian)	176.	EA	$ _____	$ _____
114	Elec	Light Standard Foundation (Street)	15.	EA	$ _____	$ _____
115	Elec	Lighting Control Center PWR Pedestal (Special) (LCBP x1.74)	5.	EA	$ _____	$ _____
116	202	Remove Asphalt Mat	11,800.	SY	$ _____	$ _____
117	202	Remove Concrete	400.	SY	$ _____	$ _____
118	202	Romove Ground Sign	10.	EA	$ _____	$ _____
119	202	Remove High Voltage Overhead Power Pole Foundations	2.	EA	$ _____	$ _____
120	202	Remove Tree	10.	EA	$ _____	$ _____
121	202	Remove Property Pin (No Reference or Reset)	4.	EA	$ _____	$ _____
122	202	Remove Fencing (Includes All Gates and Associated Appurtenances.)	2,000.	LF	$ _____	$ _____
123	202	Remove Mail Box	1.	EA	$ _____	$ _____
124	202	Clearing and Grubbing	1.	Lump Sum	$ _____	$ _____
125	210	Reference/Reset Survey Monument	6.	EA	$ _____	$ _____
126	210	Reset Ground Sign	2.	EA	$ _____	$ _____
127	304	Aggregate Base Course (Class 6) (4" Thick)(Co. River Trail Shoulder)	1,015.	SY	$ _____	$ _____
128	304	Subgrade Stabilization - Aggregate Base Course (Class 3)(12" Thick)	5,600.	SY	$ _____	$ _____
129	304	Aggregate Base Course (Class 6) (13" Thick)	18,200.	SY	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
130	304	Aggregate Base Course (Class 6) (6" Thick)	30.	SY	$ _____	$ _____
131	306	Reconditioning (12" Deep)	25,000.	SY	$ _____	$ _____
132	401	Hot Mix Asphalt (5" Thick) (Grading SX 75, Binder Grade 64-22) (Roadways)	5,000.	TON	$ _____	$ _____
133	401	Hot Mix Asphalt (3" Thick) (Grading SX 75, Binder Grade 64-22) (Driveways)	5.	TON	$ _____	$ _____
134	627	Preformed Thermoplastic Pavement Marking (Handicap Symbol)	4.	EA	$ _____	$ _____
135	627	Preformed Thermoplastic Pavement Marking (X-walk) (2' x 10' TYP.)	131.	EA	$ _____	$ _____
136	627	Preformed Thermoplastic Pavement Marking (8" White Dotted Line, 2' Segment, 3' Gap)	100.	LF	$ _____	$ _____
137	627	Preformed Thermoplastic Pavement Marking (4" White Solid)	2,750.	LF	$ _____	$ _____
138	627	Preformed Thermoplastic Pavement Marking (2' White Solid)	170.	LF	$ _____	$ _____
139	630	Traffic Control (Complete In Place)	1.	Lump Sum	$ _____	$ _____
140	630	Trafic Control Plan	1.	Lump Sum	$ _____	$ _____
141	202	Remove Asphalt Mat	40.	SY	$ _____	$ _____
142	202	Remove Concrete	313.	SY	$ _____	$ _____
143	202	Remove Pull Box	2.	EA	$ _____	$ _____
144	202	Remove Concrete Pole Box	3.	EA	$ _____	$ _____
145	202	Remove Tree	7.	EA	$ _____	$ _____
146	203	Unclassified Excavation	437.	CY	$ _____	$ _____
147	208	Erosion Control (Complete in Place)	1.	Lump Sum	$ _____	$ _____
148	304	Aggregate Base Course (Class 6) (8" Thick) (Left Turn Lane)	565.	SY	$ _____	$ _____
149	401	Hot Mix Asphalt (6" Thick) (Grading SX, Binder Grade 64-22) (Left Turn Lane)	187.	TON	$ _____	$ _____
150	608	Concrete Bullnose End Section (8" Thick) to include 6" of Class 6 Aggregate Base Course	5.	SY	$ _____	$ _____
151	608	Concrete Curb and Spill Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	320.	LF	$ _____	$ _____
152	608	Concrete Median Edging (2' Wide) (Colored Concrete) (Davis Colors Sunset Rose) to include 6" of Class 6 Aggregate Base Course	40.	LF	$ _____	$ _____
153	608	Concrete Cover Material (Colored Concrete) (Davis Colors Sunset Rose) (4" Thick) to include 6" of Class 6 Aggregate Base Course	185.	SY	$ _____	$ _____
154	627	Preformed Thermoplastic Pavement Marking (Left Turn Symbol)	2.	EA	$ _____	$ _____
155	630	Traffic Control (Complete In Place)	1.	Lump Sum	$ _____	$ _____
156	630	Traffic Control Plan	1.	Lump Sum	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
157	SP	Safe Hit Flexible Delineator (SH248GP3--WS 09) to include 4" PVC Sleeve	2.	EA	$ _____	$ _____
158	608	Concrete Pavement (Roundabout) (10" Thick) to include 6" Class 6 Aggregate Base Course	1,415.	SY	$ _____	$ _____
159	608	Concrete Curb and Spill Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	1,705.	LF	$ _____	$ _____
160	608	Concrete Truck Apron (Roundabout) (10" Thick) to include 6" of Class 6 Aggregate Base Course	310.	SY	$ _____	$ _____
161	608	Concrete Curb (6" Wide) (6" High) to include 6" of Class 6 Aggregate Base Course.	975.	LF	$ _____	$ _____
162	608	Concrete Curb and Gutter (2' Wide) (Both Collector and Spill Gutters) to include 6" of Class 6 Aggregate Base Course.	9,500.	LF	$ _____	$ _____
163	608	Concrete Drive-Over Curb and Gutter both 3' and 3.5' Wide and Both Collector and Spill Gutter to include 6" of Class 6 Aggregate Base Course.	1,075.	LF	$ _____	$ _____
164	608	Concrete Sidewalk (6" Thick) to include 6" of Class 6 Aggregate Base Course	13,875.	SY	$ _____	$ _____
165	608	Concrete Pavement (Parking & Plain Color Paving Bike Park Plaza) (8" Thick) to include 6" of Class 6 Aggregate Base Course.	4,725.	SY	$ _____	$ _____
166	608	Concrete Sculpture Pad (Bike Park Plaza) (8" Thick) to include 6" of Class 6 Aggregate Base Course and Reinforcement as Specified.	20.	SY	$ _____	$ _____
167	608	Concrete Pavement Band (Bike Park Plaza) (8" Thick) (Color Landscape per Landscape Plans) to include 6" of Class 6 Aggregate Base Course.	80.	SY	$ _____	$ _____
168	608	Concrete Drainage Pan (3' Wide) to include 6" of Class 6 Aggregate Base	307.	LF	$ _____	$ _____
169	608	Concrete Drainage Pan (6' Wide) to include 6" of Class 6 Aggregate Base	27.	LF	$ _____	$ _____
170	608	Concrete Intersection Corner (8" Thick) to include 6" of Class 6 Aggregate Base Course. Includes All Items Labeled as Concrete Bullnose End Section and Concrete Corner Fillet on the Plans.	85.	SY	$ _____	$ _____
171	608	Concrete Curb Ramp to include 6" of Class 6 Aggregate Base Course.	600.	SY	$ _____	$ _____
172	608	Concrete Driveway Section (8" Thick) (Commercial) to include 6" Class 6 Aggregate Base Course.	190.	SY	$ _____	$ _____
173	608	Detectable Warning (Cast Iron, Wet Set (2'x2')	150.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
174	RAW 108.2	4" Raw Water Pipe (C-900 PVC)	255.	LF	$ _____	$ _____
175	RAW 108.2	8" Raw Water Pipe (C-900 PVC)	2,585.	LF	$ _____	$ _____
176	RAW 108.2	10" Raw Water Pipe (C-900 PVC)	2,500.	LF	$ _____	$ _____
177	RAW 108.3	Raw Water - 4" Gate Valve	5.	EA	$ _____	$ _____
178	RAW 108.3	Raw Water - 8" Butterfly Valve	7.	EA	$ _____	$ _____
179	RAW 108.3	Raw Water - 10" Butterfly Valve	3.	EA	$ _____	$ _____
180	RAW 108.3	Raw Water - Combination Air Valve and Vault Assembly. Complete in Place	8.	EA	$ _____	$ _____
181	RAW 108.3	Raw Water - 8" x 4" Tee	3.	EA	$ _____	$ _____
182	RAW 108.3	Raw Water - 8" x 8" Tee	2.	EA	$ _____	$ _____
183	RAW 108.3	Raw Water - 8" Cross	1.	EA	$ _____	$ _____
184	RAW 108.3	Raw Water - 10" x 4" Tee	2.	EA	$ _____	$ _____
185	RAW 108.3	Raw Water - 10" x 10" Tee	1.	EA	$ _____	$ _____
186	RAW 108.3	Raw Water - 4", 11.25° Elbow	5.	EA	$ _____	$ _____
187	RAW 108.3	Raw Water - 4", 22.5° Elbow	5.	EA	$ _____	$ _____
188	RAW 108.3	Raw Water - 8", 11.25° Elbow	6.	EA	$ _____	$ _____
189	RAW 108.3	Raw Water - 8", 22.5° Elbow	14.	EA	$ _____	$ _____
190	RAW 108.3	Raw Water - 8", 45° Elbow	10.	EA	$ _____	$ _____
191	RAW 108.3	Raw Water - 8", 90° Elbow	1.	EA	$ _____	$ _____
192	RAW 108.3	Raw Water - 10", 11.25° Elbow	11.	EA	$ _____	$ _____
193	RAW 108.3	Raw Water - 10", 22.5° Elbow	16.	EA	$ _____	$ _____
194	RAW 108.3	Raw Water - 10", 45° Elbow	6.	EA	$ _____	$ _____
195	RAW 108.3	Raw Water - 8" x 4" Reducer	4.	EA	$ _____	$ _____
196	RAW 108.3	Raw Water - 10" x 8" Reducer	1.	EA	$ _____	$ _____
197	RAW 108.3	Raw Water - 10" x 4" Reducer	1.	EA	$ _____	$ _____
198	RAW 108.3	Raw Water - 8" End Cap/Plug	1.	EA	$ _____	$ _____
199	RAW 108.3	Raw Water - 4" End Cap/Plug	10.	EA	$ _____	$ _____
200	RAW 202	Remove Raw Water Blow off Assembly	1.	EA	$ _____	$ _____
201	LSC in ROW	Topsoil (18" Thick) (All Planting Areas Within ROW)	4,800.	SY	$ _____	$ _____
202	LSC in ROW	Cost per SF of Area to be Landscaped Inside the Roadway ROW.	50,000.	SF	$ _____	$ _____
203	LSC in ROW	Riparian Restoration	108,900.	SF	$ _____	$ _____
204	LSC in ROW	Irrigation Controls (Inside ROW)	2.	EA	$ _____	$ _____
205	LSC in ROW	Trees, 2" Deciduous	50.	EA	$ _____	$ _____
206	LSC in ROW	Trees, 1-1/2" Deciduous	25.	EA	$ _____	$ _____
207	LSC in ROW	Shrubs	200.	EA	$ _____	$ _____
208	LSC in Park	Restroom Shelter	1.	EA	$ _____	$ _____
209	LSC in Park	Small Shelters	1.	Lump Sum	$ _____	$ _____
210	LSC in Park	Modular Block Walls (Versa-Lok)(Park Plaza Amphitheater)	424.	FF	$ _____	$ _____
211	LSC in Park	Concrete Landscape Edger	45.	LF	$ _____	$ _____
212	LSC in Park	Play Area Barrier Curb	290.	LF	$ _____	$ _____
213	LSC in Park	Engineered Wood Fiber Play Material	319.	CY	$ _____	$ _____
214	LSC in Park	Play Area ADA Ramp	2.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
215	LSC in Park	Concrete Stain Treatment	741.	SF	$ _____	$ _____
216	LSC in Park	Benches	10.	EA	$ _____	$ _____
217	LSC in Park	Bike Racks - (Inverted "U") Style	5.	EA	$ _____	$ _____
218	LSC in Park	Trees, 2" Deciduous	58.	EA	$ _____	$ _____
219	LSC in Park	Trees, 1-1/2" Deciduous	5.	EA	$ _____	$ _____
220	LSC in Park	Shrubs	128.	EA	$ _____	$ _____
221	LSC in Park	Perennials	24.	EA	$ _____	$ _____
222	LSC in Park	Boulders, 3' x 2'	10.	EA	$ _____	$ _____
223	LSC in Park	Boulders, 3' x 5'	14.	EA	$ _____	$ _____
224	LSC in Park	Lawn Fine Grade, Seed	45,683.	SF	$ _____	$ _____
225	LSC in Park	Irrigation System	1.	Lump Sum	$ _____	$ _____
226	LSC in Park	Soil Amendment, Delivered, Tilled,	50,383.	SF	$ _____	$ _____
227	LSC in Park	Shrub Bed - Fine Grade, Rock Mulch	4,700.	SF	$ _____	$ _____
228	LSC Bike Prk	Lawn Fine Grade, Seed	25,500.	SF	$ _____	$ _____
229	LSC Bike Prk	Lawn Irrigation	25,500.	SF	$ _____	$ _____
230	LSC Bike Prk	Irrigation Controls	1.	Lump Sum	$ _____	$ _____
231	LSC Bike Prk	Soil Amendment, Delivered, Tilled,	25,000.	SF	$ _____	$ _____
232	LSC Bike Prk	Split 2-Rail Fence, Cedar, Not incl. Future Track or Pump Park	965.	LF	$ _____	$ _____
233	LSC Bike Prk	Concrete Landscape Edger, Not incl. Future Track or Pump Park	968.	LF	$ _____	$ _____
234	LSC Bike Prk	Trees, 2" Deciduous	26.	EA	$ _____	$ _____
235	LSC Bike Prk	Trees, 1-1/2" Deciduous	8.	EA	$ _____	$ _____
236	LSC Bike Prk	Rock Type 1 (Smaller), not incl. Future Track or Pump Park, no Fabric or Soil Prep	11,291.	SF	$ _____	$ _____
237	LSC Bike Prk	Rock Type 2 (Larger), not incl. Future Track or Pump Park, no Fabric or Soil Prep	17,106.	SF	$ _____	$ _____
238	Amenities	Trash Recepticals	5.	EA	$ _____	$ _____
239	Amenities	Drinking Fountains	1.	EA	$ _____	$ _____
240	Amenities	Concrete for Bike/Racks Bollards (8 ft x 8 ft)	5.	EA	$ _____	$ _____
241	Amenities	Picnic Tables Associated with Restrooms/Shelters	8.	EA	$ _____	$ _____
MCR		Minor Contract Revisions	---	---	---	$ 319,715.00

Bid Amount: **$** _____

Bid Amount:

_____ **dollars**

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price

Contractor Name:
Contractor Address:
Contractor Phone #:

The undersigned Bidder proposes to subcontract the following portion of Work:

Name & address of Sub-Contractor	Description of work to be performed	% of Contract

The undersigned Bidder acknowledges the right of the City to reject any and all Bids submitted and to waive informalities and irregularities therein in the City's sole discretion.

By submission of the Bid, each Bidder certifies, and in the case of a joint Bid each party thereto certifies as to his own organization, that this Bid has been arrived at independently, without collusion, consultation, communication, or agreement as to any matter relating to this Bid with any other Bidder or with any competitor.

Appendix A

Project Submittal Form

PROJECT SUBMITTAL FORM

PROJECT: **Riverfront at Dos Rios Phase II Construction**

CONTRACTOR: _____

PROJECT MANAGER: Brendan Hines

Description	Date Received	Resubmittal Requested	Resubmittal Received	Date Accepted
STREET CONSTRUCTION				
Pavement mix design				
Base course gradation, Proctor curve				
Sub-base course gradation, Proctor curve				
Concrete mix designs				
Class 3 Pit Run				
STORM DRAINAGE CONSTRUCTION				
Pipe				
Bedding gradation				
Backfill gradation, Proctor curve, plasticity index (PI)				
Manhole				
Ring and cover				
Inlet box				
Grate & frame				
Flared End Section				
Pipe to manhole / inlet connection				
Outlet Structure – Water Quality Pond				
Small Area Inlets				

Description	Date Received	Resubmittal Requested	Resubmittal Received	Date Accepted

SEWER CONSTRUCTION

Pipe				
Connectors				
Bedding gradation				
Backfill gradation, Proctor curve, plasticity index (PI)				
48” Manhole				
60” Manhole				
Ring and cover				
Pipe to manhole connection				
Sewer Service Tap (Full Body Wye)				
Clean Out Appurtenances				

WATER CONSTRUCTION

Pipe				
2” HDPE				
Fittings				
Valves				
Tracing Wire				
Tapping Saddle and Corp Stop.				
Ring and Cover				
Bedding Gradation				
Backfill Gradation, Procter Curve, Plasticity Index (PI)				
Valve Box				
Yard Hydrant				
Fire Hydrant				

Description	Date Received	Resubmittal Requested	Resubmittal Received	Date Accepted

EROSION CONTROL / STORMWATER MANAGEMENT

Mesa County Storm Water Permit				
Construction Entrance				
Inlet Protection				
Concrete Washout				
Straw Bale				
Erosion Log				

PERMITS, PLANS, OTHER

Traffic Control Plan				
Dewatering Permit				
ACI Flatwork Finisher and Technician				
Construction Schedule				
Thermoplastic				
Large Splice Box (Quasite)				
Irrigation Pull Box (Large)				
Detectable Warning				
Geosynthetics – Mirafi or equivalent				
Topsoil				
Import Fill				
Reinforcing Steel (epoxy coated)				

Appendix B

Landscape and Irrigation Specifications

Technical Specifications for:

Dos Rios Park

129 Other Furnishings

1 General

129040.021 Scope of Site Improvements

Site Improvements include specified 16' square shelter, benches and bike posts/racks, and associated concrete footings. Contractor shall perform required assembly. Acquire Stamped Engineered Drawings from manufacturer, obtain and pay for any permits or inspections required for the construction of improvements described in the scope of work

129371.011 Locations

Stake locations of site improvements prior to installation. Notify Owner's Representative to verify locations.

2 Products

129340.22 16' Steel Shelter

Small Shelters to be Icon DS16X16M-P64 16'x16' square shelter with "Surrey Beige" Powder-coated steel frame and columns, and Colonial Red multi-rib steel roof panels as available through: Recreation Plus: 15207 W. Ellsworth Drive, Golden, CO 80228, 303-278 -1455

129371.22 Anchor Bolts

Hilti Kwik-Bolts 1/2"dia. x 2-1/2"

129371.22 Bench-Embed Mount

Bench to be Wabash Valley Contemporary Series Welded Wire 6' inground mount. Bench and Leg color to be blue, Rib pattern with Plastisol. Bench is available through Recreation Plus : 15207 W. Ellsworth Drive, Golden, CO 80228, 303-278-1455

129373.22 Bike Post

Bike Post shall be "Inverted U" bike racks, model #1608-01, 2-3/8" inch diameter, in ground/Permanent mount, as manufactured by Patterson Williams and available through Recreation Plus, Ltd. 888-278-145. Color to be Regal Blue.

3 Materials

129371.33 Concrete for Footings

Concrete footings are to be constructed as per Stamped engineered drawings from Shelter Manufacturer.

4 Execution

129340.44 16' Steel Shelter

Shelter to be installed on specified foundation as shown in drawings and details. Contractor is to install footings to a depth adequate to allow minimum coverage of foundation with road base prior to installation of pavement. Pavement is to be installed to grades shown on drawings and details.

129371.44 Bike Post

Bike Post shall be located and installed according to drawings & details.

129371.44 Bench-Embed Mount

Install plumb and level in concrete footing as shown on detail. Top of footing is to be below finish grade of granite fines and sloped to allow drainage away from support posts, .

1 General

328400.011 Scope of Landscape Irrigation Work

Furnish all labor, equipment, appliances, materials and perform all operations required to complete irrigation system installation and other work as shown on the applicable drawings and as specified herein, guarantee and meet conditions of this Contract.

328400.451 Job Supervision - Irrigation

All work specified herein shall be performed under the direct supervision of a superintendent thoroughly familiar with the work of this Section and who shall be at the Project site for the duration of the work of this Section.

328400.541 Job Conditions and Provisions-Irrigation

No irrigation system construction shall take place during freezing or wet weather or when temperatures are less than 40 degrees Fahrenheit, and no trenches shall be backfilled with frozen material. Installation of the system shall not take place until all earthwork has been substantially completed, compacted. Errors, conflicts or omissions from the Drawings or Specifications, or the misdescription of details of work which are manifestly necessary to carry out the intent of the Drawings or Specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details or work, but they shall be performed as if fully and clearly set forth and described in the Drawings and Specifications.

328400.551 Substitute Products

Requests for substitution of products named in this section must be approved by the Owner's Representative one week prior to bid opening.

328401.011 Tolerances

Depths of mains shall be twenty-four inches (24") bury, and laterals eighteen inches (18"), and pitch of pipes as specified shall be minimums. Coverage achieved on site shall be guaranteed according to plan; any unwatered areas due to poor placement of or insufficient heads shall be corrected by the Contractor.

328401.021 Layout of Lines & Levels

Before any installation operations are started, the site shall be completely staked out for the work of this Section by the Contractor. Pipes are not to be installed through tree root ball locations. All mains and valve locations shall be staked out for approval before installation by the Owners Representative.

2 Products

328413.512 Automatic Master Valve

Automatic Master Valve are to be Bermad IR-410-X solenoid controlled normally open control valve, or equal.

328413.552 Flow Sensor

Rainbird FS300P Flow Sensor for use with control system.

328413.562 Pressure Regulating Valve

Pressure regulating valve to be Bermad IR-420-KXZ pressure reducing valve, including installation hardware and fittings.

328418.342 Bubbler Head
Bubbler heads shall be Rainbird 1401 full circle pressure compensating nozzle, mounted on 1/2" swing pipe and SB Series Spiral Barb Fittings, as shown on detail or equal, approved prior to bidding.
Minimum length to be 2'.

328423.112 4" Spray Sprinkler Head for Small Lawn Areas
Pop-up spray heads shall be Rainbird 1804 plastic 4" pop-up heads with Rainbird R-VAN Rotary Nozzles as shown on drawing, or equal, approved prior to bidding.

328423.412 Gear Drive Rotor Pop-Up Sprinkler Head - Mid-size Lawn areas
Rotor Pop-Up Sprinkler Heads shall be Rainbird 5004 4" Pop-Up with both Standard and MPR nozzle sized as indicated on drawing.

328424.092 Automatic Control Valves
Automatic Control Valves are to be Rainbird PEB Electric Remote Control Irrigation Valves of size indicated on drawings, or equal.

328424.362 Isolation Gate Valve
Isolation valves (3") are to be 3" Mueller A-2360 Resilient Wedge Gate Valve, and shall be listed by NSF for use in potable water service.

328424.382 Quick Coupler Valves
Quick coupler valves are to be Rainbird #33-D two piece assembly with 3/4" schedule. 80 PVC nipple of length to bring head 1" above finish grade. Marlex Street Ells are to be used for a swing joint assembly to main line.

328424.662 Manual Drain Valves
Manual Drain Valves shall be 3/4" Mueller curb stop or equal. Valves shall be of bronze construction with threaded connections, cross handle and operating key;

328424.702 Valve Boxes
Super Jumbo box (2 valves max), or equal.

328424.722 Manual Drain Valve Boxes
Manual drain valve boxes shall be 10" circular box with lid.

328425.102 Irrigation Pipe - Main Pressure Line
Main Pressure Line pipe shall be 3 inch Class 200, solvent weld PVC, with PVC schedule 40 fittings, sized as shown on plans.

328425.202 Irrigation Pipe - Lateral Lines
Pipe shall be PVC Class 160 with PVC Schedule 40 fittings, solvent weld, as detailed, sized as shown on the plan.

328427.342 Irrigation Head Risers- Swing Pipe
All sprinkler heads with less than 5 gallons per minute flow shall have Rainbird SP-100 Swing Pipe, SB Series Spiral Barb Fittings, as shown in detail. Maximum length of swing pipe to be 10', minimum length to be 2'. No Spiral Barbed "T" fittings are to be used without prior approval from Owners Representative.

328428.402 CL 200 PVC Sleeving
PVC sleeving shall be PVC Class 200, solvent weld, sized as shown on drawings

328429.452 Pipe Thread Material
All threaded pipe connections shall be made with Weld-on 87685 thread sealant shall be used, or equal.

328429.462 Solvent Weld Primer & Cement
Solvent Weld Primer & Cement shall be only that which is recommended for use on pipe installed.

328446.202 Irrigation Controller- LXD with IQ
Automatic irrigation controller shall be Rainbird ESP-LXD Two Wire Decoder Controller with IQ Communications Cartridge computer type controller.

328449.882 Irrigation 2 wire Field Decoder
Field decoder shall be Rainbird FD-101TURF. Contractor may use FD-102 for two valves in one location, or FD-104 for 4 valves in one location.

328449.922 Rainbird Sensor Decoder
Rainbird SD-210 Decoder for use with irrigation controller system

328452.132 Wire Connectors
Wire connectors at electric control valves and all splices of irrigation controller wire in the field shall be made using "3M DBR-6" only.

328454.132 P7072 Decoder Cable
Communication cable for irrigation system shall be P7072 Shielded Communication Cable. Connections are to be made with waterproof connectors.

328454.512 Surge Protection for 2 wire system
Surge protection for 2 wire system shall be Rainbird LSP-1, or equal.

328455.092 Irrigation Controller Grounding
Copper components, ground enhancing material and ground rods as required per detail

328460.232 Irrigation Controller Cabinet
Automatic irrigation controller cabinet shall be Rainbird stainless steel pedestal and cabinet, Models LXMMSSPED AND LXMSS, floor mount, with locking door. Cabinet shall have mounting brackets to allow the installation of all components without puncturing the cabinet enclosure or door. Power conduit shall be of size to allow 110 power and valve control wires to be pulled without damage to either the wire or conduit.

3 Materials

328452.113 Controller 110V Power Wire
Electrical wire to controller shall be 14 gauge UV rated insulated copper U.L. approved for direct burial. All other wiring materials shall be per applicable codes.

4 Execution

328410.204 Water Service Connection - Raw Water line
The Contractor shall tie into existing raw water line where shown on drawing. Contractor to coordinate with City of Grand Junction (Public Works) for tie-in. See specifications and details for appliances.

328413.514 Automatic Master Valve

Automatic Master Valve is to be installed as shown in the detail. Valve control is to include FD -102Turf decoder connected to the irrigation control system

328413.554 Flow Sensor

Install Flow Sensor in valve box as shown on drawings, with no fittings on the upstream side for 10 diameters of the pipe, and no fittings on the downstream side for 5 pipe diameters, according to manufacturer's recommendations.

328418.354 Bubbler Head

Install bubbler heads on Rainbird SP-100 Swing Pipe, SB Series Spiral Barb Fittings as shown on the detail. Heads shall be set perpendicular with finished grade, bubbler nozzle 2" above finished grade, at locations shown on drawing. After finished grades are established and the ground has settled, Contractor shall adjust heads within adjacent planting saucer of shrub or perennial.

328423.154 Pop-Up Spray Sprinkler Head

Install spray heads as shown in detail. Spray heads shall be set perpendicular with finished grade at locations shown on drawing. After finished grades are established and the ground has settled, Contractor shall lower heads to finished grade.

328423.304 Gear Drive Rotor Pop-Up Sprinkler Head

Install gear drive rotor pop-up heads as shown in detail. Gear Drive Rotor Pop-Up Sprinkler heads shall be set perpendicular with finished grade at locations shown on drawing. Where finish grade has not been established, head shall be installed on temporary risers extending minimum 3" above grade. After finished grades are established and the ground has settled, Contractor shall lower heads to finished grade.

328424.384 Quick Coupler Valves

Quick coupler valves are to be installed on swing pipe swing joint at location and grade as indicated on drawings and as per details. Installation in soft soils may require staking and tying quick coupler to stake. Drive stake to 4" below grade and tie with nylon tie.

328424.664 Manual Drain Valves

Manual drain valve shall be located at low points on irrigation main. A drain sump of not less than 4.0 cu. ft. of 3/4" washed gravel shall be installed surrounding each drain valve.

328424.694 Pressure Regulating Valve

Pressure regulating valve to be installed per detail and manufacturer's recommendations.

328424.714 Valve Boxes

Install valve box at locations shown on drawings. Extensions and adjustments shall be made to establish the valve box and cover flush with the final grade level, and provide 4" layer of washed gravel as sump.

328424.724 Manual Drain Valve Boxes

All manual drain valves are to be installed with 6" round valve box and cover and 4" PVC sleeve of length to allow hand access to valve.

328428.424 CL 200 PVC Sleeving

Sleeving shall be installed in locations noted on drawings and at a depth to accommodate irrigation lines at their required depth. No changes in direction are allowed in sleeves. Ends are to be taped to prevent filling by backfill. Mark locations with lath and notation indicating "sleeve".

328440.44 Automatic Control Valves

All control valves shall be installed as close as possible to the locations shown on the plan; any variances must be approved by the Owners Representative. Install valves, unions, reducers, pipes, wiring, etc. per detail. Control valves shall be installed in accordance with the manufacturer's recommendations. All valves shall have sufficient clearance from adjacent obstructions to provide accessibility for maintenance, including complete removal without removal of valve box. Valves are not to be located in flow line of swales or drainages.

328446.084 Irrigation Controller Cabinet

Install automatic irrigation controller cabinet in locations noted with anchor bolts specified in concrete pad as per drawings. Secure all conduit as per code.

328449.884 Irrigation 2 wire Field Decoder

Field decoder shall be installed in line at valve locations as per manufacturer's directions

328449.934 Sensor Decoder

Install Sensor Decoder in valve box as shown on drawings and according to manufacturer's recommendations.

328452.024 Wire Connectors

Wire connectors are to be installed as per manufacturers recommendation.

328454.134 P7072 Decoder Cable

Communication cable for irrigation system is to be installed below irrigation mainline with loops at valve locations allowing connections to be made in valve boxes. Splices are to be made in valve boxes only.

328454.514 Surge Protection for 2 wire system

Surge protection for 2 wire system shall be installed as per manufacturer's instructions at locations shown. Surge protection is provided if FD-401 Field Decoder is used.

328455.104 Irrigation Controller Grounding

All Maxicom components to meet current Rainbird grounding specifications. Grounding resistance shall be tested by a Meggar or Vigra Ground type equipment. Contractor is required to achieve a maximum resistance of 5 ohms.

328455.154 Trench Excavation

Trenches shall be cut to true line and grade. Over-excavation of trenches for piping shall require compacted backfill to bring bottom of trench up to grade. Provide for surface drainage during construction. De-water all excavations immediately.

328455.164 Trenching & Backfilling

Comply with earthwork specifications, see Civil spec as required.

328456.044 Piping- general

Manufacturer's specifications covering installation of their material shall be followed. Underground lines up to 2" shall have minimum horizontal clearance of 2" of each other. No sprinkler lines shall be stacked vertically in a common trench. Lines shall have minimum horizontal clearance of 12" from the lines of other trades, and minimum 2" vertical clearance between lines crossing at 45° - 90°. Trenches for irrigation mainline shall be excavated so that the pipe shall drain uniformly toward drain valves deemed necessary to properly drain the system. Minimum grade of piping to drains shall be 3"/100'. When pipe laying is not in progress, or at end of each day, pipe ends shall be closed with tight plug or cap.

328464.44 Irrigation Head Risers

Riser assembly is to be installed to allow free movement of head without interfering with pipe, wire, or other obstructions. Follow manufacturers recommendations.

328470.054 Irrigation Valve Control Wires

Control wires shall be placed carefully alongside and slightly below the water main where it will receive the greatest possible protection. Control wire not protected by the water main shall be laid in a suitable sized PVC conduit unless otherwise noted on the plans. Control wire shall have an eighteen (18") inch expansion loop at each valve and every 200' of wire. Contractor to avoid mid-line splices, but where necessary will adequately note location on the "as-builts".

5 Warranty

328400.815 As-Built Submittals

Contractor shall submit an as-built or record plan upon completion of work showing precise location of control valves, mains, drain valves, etc., and any changes in location of heads, piping, etc. to the Owner and their representative before final application for payment. Provide one reproducible and three prints.

329380.55 Vandalism

Minor vandalism or other damage to the plantings or related work shall be the responsibility of the Contractor until all work receives Final Acceptance. Major vandalism or damage caused by others through no fault of the Contractor or his subcontractors shall be immediately brought to the attention of the Owners Representative who will be the sole judge as to the extent of such damage. Major damage is typically any damage over $500.00 worth of materials and/or labor required to repair the damage. For the Contractor to be awarded additional monies under the provisions of "extra work" stated in the General Conditions, he shall have fully protected his work as specified herein. Any failure, however slight, of the Contractor to have protected his work shall be grounds to nullify any request for additional remuneration.

1 General

329000.121 Scope of Landscape Work
Include labor, equipment, material, incidentals, for the completion of planting, boulder placement, lawn, edging, and mulch work shown on the Drawings, stated in the Specifications or otherwise required.

329080.501 Stake Out Location of Landscape Work
The Contractor shall completely stake out the location of all trees, shrubs, and lawn area limits on the site for the approval of the Landscape Architect, making modifications as required.

329301.081 Applicable Standards
U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act, American Association of Nurserymen, current edition of "American Standard for Nursery Stock". Published by the American Association of Nurserymen, Inc., 635-636 Southern Building, Washington D.C. and/or Colorado State Law, whichever is greater.

329301.101 Shipment and Delivery
No plant materials shall be delivered to the site more than 3 days before planting. Plants left unplanted for more than 3 days shall be subject to rejection by the Owners Representative. A suitable method of handling shall be employed to insure the careful, workmanlike delivery of all plants, especially heavy balled trees. The Contractor shall protect the stock in a temporary nursery at the project, protected from sun, drying winds and shaded, kept moist and protected with damp soil, moss or other acceptable material.

329301.151 Notification of Delivery
The Landscape Contractor shall notify the General Contractor and Owners Representative a minimum of 2 days in advance of the delivery of the plant materials. Notification shall include the time and method of delivery.

329301.181 Quality Control Submittals
Certificates of Inspection for Plants: All necessary State, Federal and other inspection certificates shall accompany the invoice for each shipment of plant materials as may be required by law, and showing source of origin. Certificates shall be filed with the Owners Representative prior to his acceptance of the material.

329301.201 Plant Material Labeling
Durable, legible labels stating in weather-resistant ink indicating the correct plant name and size as specified on the plant list shall be securely attached to all plants, bundles or packages of plants of a single species and size, or plant container delivered to the planting site. Plants not properly labeled shall be subject to rejection by the Owners Representative.

329301.211 Plant List
A list of purchased plants to be provided is shown on the Drawings.

329301.221 Plant Material Inspection

The Owners Representative reserves the right to reject at any time or place prior to acceptance, any and all materials which in their opinion fail to meet specifications. Inspection of materials is primarily for quality, size and variety, but other requirements are not waived even though visual inspection results in approval. Plants may be inspected where available, but inspected at the places of supply shall not preclude the right of rejection at the site. Rejected materials shall be promptly removed from the site. No installation shall occur prior to inspection and acceptance of all plant material.

329320.021 Plant Sizes

Requirements for the measurement follow the code for standards currently recommended by the American Association of Nurserymen, Inc. in the American Standard for Nursery Stock

329350.011 Planting Commencement

No planting work shall commence until the adjacent site improvements, drainage improvements, pavements, irrigation installation and finish grading is completed. No heavy trucking or moving of plant materials or equipment shall be permitted on newly completed pavements, sod or seeded areas. Further, the irrigation system shall have been tested in the presence of the Operator's Representative and be in operating order prior to any planting, seeding or sodding, with the exception of drip emitters, which shall be placed following planting.

329350.051 Weather Restrictions

No lawn or planting work shall take place during inclement weather or when the ground conditions are, in the opinion of the Owners Representative, not in a condition to be properly worked.

329350.151 Irrigation & Establishment Restrictions

No seeding or planting operations shall occur prior to April 15 nor later than September 30.

329381.011 Substitute Products

Requests for substitution of products named in this section must be approved by the Owner's Representative one week prior to bid opening.

2 Products

329219.032 "No Mow" Fescue Lawn Seed Mix

Contractor shall submit variety and mixture to the Landscape Architect for approval. Quantity of bulk seed required to provide the specified PLS/1000 S.F. shall be calculated from purity and germination (as shown on sack tags) of the lot of seed actually purchased.
Fescue seed mix shall be No Mow Lawn Seed Mix available from Prairie Nursery. https://www.prairienursery.com/resources-and-guides/no-mow-resources/. Mixture to include Hard Fescue, Sheep Fescue, Chewings Fescue, Red Fescue, and Creeping Red Fescue.

329219.752 Hydromulch-Conwed

"Conwed 2000" or approved equal

329219.802 Fertilizer for Seeded Lawn Areas

A commercial fertilizer of di-ammonium phosphate (18-46-0) shall be supplied, in original manufacturer's containers, with label showing composition intact, free-flowing and dry, in quantity necessary to apply 1 pound/1000 sq. ft. over all areas to be seeded with the lawn mix. Retain all invoices for proof of purchase.

329333.022 Fertilizer for Shrub Areas

A commercial fertilizer providing 2 pounds per 1000 sq. ft. Phosphate, and 1 pound per 1000 sq. ft. Potash, shall be supplied, in original manufacturer's containers, with label showing composition intact, free-flowing and dry, in quantities necessary to apply over all shrub bed areas.

329413.012 Biosol Soil Amendment

Biosol soil amendment shall be "Biosol Planters Kit" as manufactured by Rocky Mountain Bio Products, 10801 E 54th Avenue, Denver, CO 80239 (888)696-8960, (20 lb Biosol, 50 lb humate, and 1 lb all purpose mycorrhizae),
or equal if approved by Owner's Representative prior to bidding.

329413.022 Concrete Edging

Concrete Edging for use as shrub bed borders shall be 6" x 4" fiber mesh reinforced extruded Mortar. Mortar shall consist of fine and course sands, 6 sacks Portland Cement per cubic yard, fiber mesh reinforcing as per manufacturers recommendations. Mix at least three minutes and not more than five minutes in mechanical batch mixer, with maximum amount of water to produce workable consistency.

329443.042 Tree Wrapping Material

Tree wrapping material shall be first quality 4" wide, bituminous impregnated tape, corrugated or crepe paper, brown in color, specifically manufactured for tree wrapping and having qualities to resist insect infestation.

329443.062 Protective Nylon Loops

1-1/2" wide (min.) for restraining tree in guying operations. Lengths as required.

329443.072 Guy Wire

10 or 12 gauge, double strand, pliable galvanized steel wire twisted to remove slack to each stake.

3 Materials

329113.013 Soil Amendment

50% Ground well-aged cow or chicken manure, or ground sheep manure, 50% finely ground and aged wood chip, with a proven analysis to verify organic content, PH, electro-conductivity, nitrogen, potassium, and phosphorus content. A sample of the material will be supplied to the Owner's Representative with an analysis.

329301.223 Specifics for the Selection of Shade Trees, Part 1

1. Trees greater than one and one-half inches (1-1/2") caliper shall be able to stand erect without a supporting stake.
2. Trees shall have straight trunks with less than a five percent (5%) bow. 3. Branches shall be less than two-thirds (2/3) the trunk diameter.
4. Trees shall be healthy and have had adequate annual growth the previous two (2) growing seasons for that species. (See fact sheets on growth rates).
5. Trees shall be rooted into the root ball so that soil or media remains intact and trunk and root ball move as one when lifted, bur not root bound. The trunk should bend when gently pushed and should not be loose so it pivots at or below the soil line.
6. Trees shall have no roots larger than one-fifth (1/5) the diameter of the trunk protruding from the grow bag or container.

329301.233 Specifics for the Selection of Shade Trees, Part 2

7. Trees shall have one dominant leader for the top of the tree with a viable terminal bud or shoot.
8. Trees shall have no vertical branches except for those cultivars reported to be fastigiated.
9. Trees shall have branches evenly distributed around the trunk and no branches shall be directly above another.
10. The largest branches shall be spaced at least six inches (6") apart except for those cultivars with characteristic multiple tops.
11. The tree canopy shall be mostly symmetrical and free of large voids. Clear trunk should be no more than 40% of tree height unless otherwise specified in the planting specifications.
12. If any of the above conditions are not met, trees may be rejected by the Owner.

329301.243 General Considerations for Plant Quality

Trees and shrubs will be inspected by the Owner prior to panting and rejected if damage or imperfections in development are noted to include: flush cuts or open injuries on the main trunk; trunk cankers; Loose or torn bark in excess of 10% of the circumference of the trunk or branch; Borer holes or boring dust in trunks or main branches; Branch attachments with the included bark; Co-dominate stems - trees only; Trees and Shrubs in violation of Rules and Regulations pertaining to Title 34, Article 26 of the Colorado Nursery Act; Damaged or incomplete graft unions; When in leaf, with more than five percent (5%) chlorotic leaves; When any root is greater than one-tenth (1/10th) the diameter of the trunk, circles more than one-third (1/3) the trunk and is in the top half of the root ball; Plants infested with colonies of other insect pests will be rejected or properly treated at the discretion of the Owner.

329401.013 Granite Rock Mulch -1/2" for shrub beds

Rock Mulch shall be 1/2" inch tan granite covering shrub beds. Rock mulch shall be free of trash, sticks or roots, Submit sample to Owner's Representative prior to construction.

329401.013 Rock Mulch -Larger type for Bike park

Rock Mulch in between Bike park tracks and smaller type rock, where shown on drawings shall be 3" Rounded Colorado River Rock. Rock mulch shall be free of trash, sticks or roots, Submit sample to Owner's Representative prior to construction.

329401.013 Rock Mulch - Smaller type for Bike park

Rock Mulch adjacent to Bike park Dirt Track shall be 1/2" inch red decomposed granite. Rock mulch shall be free of trash, sticks or roots, Submit sample to Owner's Representative prior to construction.

329460.083 Boulders

Landscape boulders to be of two sizes shown on drawings. Boulders shall be buried such that exposed rock surface depicts natural exposure of outcrop formation. Boulders are to be Rounded Colorado River Rock. Exposed surface of installed landscape boulders shall not show machine caused scarring or breakage. Contractor to submit sample to Owner's Representative prior to acquisition.

4 Execution

329113.314 Fine Grading for Landscape areas

Smooth surface, contour to distribute irrigation to root ball. Remove any saucers/dikes in shrub beds at bubblers where there are no plants. Form trench at all landscape edgers or pavements to accommodate mulch at depth specified. See details. All rocks bigger than 1" shall be picked up and removed from the site

329219.064 Hydroseed Fescue Lawn

Following approval of the lawn seed bed by the Landscape Architect, seed shall be applied with a hydroseeder at a rate of 6 lbs. /1000 s.f. The hydromulch shall be applied at a rate of 45 pounds per 1000 s.f. (1 ton/acre). Contractor to apply with a dye to allow inspection for proper coverage. Contractor shall be responsible for the masking and or cleaning of all adjacent surfaces, including but not limited to: pavements, fencing, plant materials, buildings, utility appurtenances, and foundations.

329219.504 Hydromulch of Seed Mix

After seeding operations have been completed, the entire seeded area shall be hydromulched with specified hydromulch material. The hydromulch shall be applied by using a mechanical hydromulcher, evenly distributed on a still day. The hydromulch material shall be applied at the rate of one ton per acre (50 lbs/1000 s.f.).

329219.804 Fertilizer for Seeded lawn areas

Fertilizer shall be spread at the rate of 1 pound/1000 sq. ft. The area shall again be disced or rototilled at right angles to the first tillage, seed beds shall be totally free from rock or clay clods over 1" diameter.

329219.814 Irrigation of Lawn Areas

Within 12 hours after planting lawn, the sprinkler system shall be activated to moisten planted areas to a depth of 1". All areas shall be kept moistened by frequent light watering for 3 weeks, or until the Final Acceptance of the Project, and such watering shall be the responsibility of the Contractor until seeded areas are accepted by the Owner.

329301.224 Tree Location conflicts with Underground Lines

The Contractor shall be responsible for damage to any underground utility, irrigation line or other improvements. In the event a pipe or line obstructs a plant location, the Contractor will notify the Owners Representative to receive a new plant location.

329310.024 Layout of Plant Locations

Contractor stake out the location of all trees, shrubs, perennials, and lawn area limits, or place containerized shrubs and perennials for approval by Landscape Architect prior to planting. All planting stake locations shall be observed and approved by the Landscape Architect, prior to planting operations.

329310.034 Layout of Planted Areas

The Contractor shall layout and stake the boundary of all areas to be planted and rough grades. All layout and rough grades to be approved by the Landscape Architect prior to commencing any work.

329312.044 Amended Plant Pit Backfill

Amended planter soil shall be used for backfill after being mixed with 1/3 part specified soil amendment. Gravel shall be replaced with topsoil.

329312.054 Plant Pit Excavation

The plant pit, centered on the location stake, shall be excavated at least twice the spread of ball, spade or container in a cylindrical shape with tapered sides and flat or saucer-shaped bottom. Sides of pit shall be rough and irregular, not smooth. Plant pits shall be excavated below finish grade as required to accommodate the ball.

329312.084 Planting Techniques - Part 1

1. Trees, shrubs and perennial flowers shall be in planting areas separate from turf areas.
a. In those instances where the Owner requires trees or shrubs planted in turf areas, the turf will be established prior to installation of trees or shrubs.
b. Trees and shrubs shall be planted a minimum of four inches (4") above the finished grade of the turf or mulched area based on their uppermost structural roots.
c. If the planting hole is inadvertantly dug too deep, soil shall be added and compacted.
d. The width of the planting hole shall be a minimum of at least one and one-half times the diameter of the root ball, two times the diameter of the rootball where possible.
2. Trees and shrubs shall be planted with two (2) or more of the upper-most structural roots no more than two inches (2") below the surface of the root ball measured three to four inches (3-4") from the trunk (except as noted below).

329312.094 Planting Techniques - Part 2

Soil shall be removed from the top of the root ball prior to planting to determine the actual depth of the structural roots. a. Hackberry (*Celtis occidentalis*), green ash (*Fraxinus americana*), red maple (*Acer rubrum*), little leaf linden (*Tilia cordata*), crabapples (*Malus spp.*) and poplars (*Populus spp.*) shall be planted with no more than one inch (1") of soil over the uppermost structural roots. b. Adventitious roots above the structural roots shall be removed. c. The presence of encircling roots shall be checked for and treated as in 9. below. d. The planting hole shall be dug two to four inches (2-4") shallower than the depth of the root ball (based on the location of the structural roots.) e. Soil shall be graded from the surrounding soil to near the top of the root ball to cover the exposed sides of the root ball. f. There shall be no landscape soil placed on top of the root ball.

329312.104 Planting Techniques - Part 3

3. The top 12 to 18 inches (two or three levels) of wire basket shall be removed from the root ball. The bottom half of baskets more than about 40 inches in diameter can be left intact.
4. All twine and wire at the base of the trunk shall be removed and disposed of offsite.
5. All synthetic and plastic burlap shall be cut as far down the root ball as possible so soil along the side of the root ball is in direct contact with backfill soil. All synthetic and plastic burlap shall be removed from the site.
6. Natural burlap shall be removed from the top of the ball and at least one-half (1/2) way down the side of the root ball. Burlap shall be removed from the site.
7. Fertilizer shall not be added to the back-fill soil.
8. Containers shall be removed from the root ball prior to planting. Containers shall be removed from the site and properly disposed of.

329312.114 Planting Techniques - Part 4

9. Pot bound (root bound) trees and shrubs shall be avoided.
a. There shall be no roots greater than 1/10 diameter of the trunk circling more than one-third the way around the top half of the root ball. There shall be no kinked roots greater than 1/5 the trunk diameter. Roots in violation can be cut and the tree accepted at the option of the Owner. b. If it is necessary to plant a pot bound tree or shrub, encircling roots shall be cut to prevent them from girdling the plant in the future. Three (3) or four (4) slices one inch (1") or two inches (2") deep shall be made from the bottom to the top of the root ball.
10. Mulch shall be placed on the root ball to within 6 to 8 inches of the trunk or main stem(s), and no closer.

329312.124 Planting Techniques - Part 5

11. The planting of clump aspen and other trees (i.e. two or more stems in one root ball) shall be avoided.
a. If a clump effect is desired, separate trees shall be planted with their root balls touching.
12. Trees and shrubs shall be moved by their root balls, not their trunks, in such a manner that trunk and branch damage shall be avoided.
13. Trees and shrubs planted on slopes shall be set so the to-most root in the ball on the uphill side is even with the soil. The side of the root ball on the downhill side shall be well above the surrounding soil and a basin formed to retain water. Sufficient soil shall be applied to cover the sides of the root ball.

329312.134 Planting Techniques - Part 6

14. A three inch (3") layer of mulch shall be applied around trees and shrubs to within six to eight (6-8") inches of the trunk or stem (s). A mulched area two feet (2') in diameter for each one inch (1") of tree trunk DBH (with a minimum diameter of eight feet (8') for trees), shall be maintained during the establishment period.
15. If staking is necessary it shall be accomplished using one of the following methods:
a. Two or three wood dowels shall be driven through the edge of the root ball into the underlying soil for three gallon and smaller trees.
b. One horizontal 2X2 shall be screwed or nailed to two 2X2's driven 12 inches into undisturbed soil on each side of the root ball. Two sets shall be needed for each root ball.
c. Two or three (2-3) t-posts driven into a minimum of 12 inches of undisturbed soil.

329312.144 Planting Techniques - Part 7

i. When two (2) posts are specified, these shall be placed on either side of the tree parallel to the prevalent wind direction.
ii. When three (3) posts are specified these shall be placed equidistant (120 degrees) around the tree.
iii. Stakes will be kept clear of branches to prevent rub damage.
iv. Guys shall be flagged with a conspicuous material and replaced as required by the Owner.
16. Feather growth on the lower portion of the trunk shall remain in place for one (1) year after planting.

329312.154 Planting Techniques - Part 8

17. Pruning other than to correct structural problems or remove broken branches shall be avoided.
18. The trunks and large branches and foliage of all pines shall be sprayed with a pyrethrum (organic product), pyrethroid or similar insecticide prior to or within a day of planting by a qualified applicator.
a. A wettable powder formulation shall be used if available.
b. Phytotoxicity resulting from this treatment shall be the responsibility of the applicator.

329312.204 Plant Pit Backfill

On-site soil shall be used for backfill (unless excavated soil is gravel) after being mixed with 1/3 part specified soil amendment. Gravel shall be replaced with topsoil.

329343.054 Layout of Tree Locations

The Contractor shall locate and stake all tree locations. All planting stake locations shall be observed and approved by the Landscape Architect, prior to planting operations.

329343.104 Watering

All trees and shrubs shall be watered-in using a deep-watering device, immediately after planting, staking and guying. All planting shall be watered the same day it is planted.

329401.014 Installation of Rock Mulch

Place rock in all areas shown to receive mulch on drawings. Spread carefully and evenly to a minimum depth of 3" on areas shown on drawing.

329401.024 Preparation for Mulch

Perimeter of Shrub Beds shall be graded 2" below top of curbs, walks, edger (see detail), or any other grade level improvements for receiving mulch. Planted area of shrub bed shall remain at the same grade or higher than adjacent pavements or lawn areas to insure adequate drainage of shrub beds.

329413.014 Biosol Soil Amendment

Biosol Planters Mix shall be incorporated at the following rates

a. 1/2 cup per 1 gal Perennial
b. 1 cup per 5 gal shrub
c. 2 cups per 2" caliper of tree size of each tree.

329413.034 Concrete Edging

The Contractor shall lay out and stake the location of all concrete edger defining shrub beds (coordinate with irrigation) to be approved by the Landscape Architect prior to commencing any work. Upon approval, concrete edger shall be installed to match existing top of curb or walk (where adjoining), or 1/2" to 3/4" above finish grade of lawn area. Lines are to be straight, and curbs to be single radius curves with adjoining lines tangent to curve. Curbing installed not in line, grade, or proper curve will be removed and replaced at Contractor expense. Edger to be scored perpendicular to vertical face at intervals not to exceed 4'.

329413.044 Concrete Edging

Concrete Edging shall be extruded into a trench which allows the top of curbing to be 1/2"-1" above adjacent lawn grade. Curbing installed not in line, grade, or proper curve will be removed and replaced at Contractor expense.

329443.044 Tree Wrapping Material

All deciduous tree trunks shall be wrapped after October 1, with wrapping material overlapping one and one-half (1 1/2") inches wound from ground line to the second branch, and securely taped at five places, including the top, middle and bottom. Wrap is to be removed the following spring.

329460.094 Play Boulders

Boulders are to be placed where indicated on drawings. The nature of the selected rock will require excavation of a pit approximately 1/3 the height of the rock in the position rock is to be placed, as shown on detail. Backfill following placement, compact.

5 Warranty

329219.905 Maintenance Period for Lawn Areas (seed)

The maintenance period shall begin immediately after each area is seeded and continue for thirty days or until final acceptance, whichever is longer. During this time the Contractor shall be responsible for watering, mowing, spraying, weeding, repair of areas damaged by erosion, wind, fire or other causes. Such areas shall be repaired to reestablish the condition and grade of the soil prior to application of the netting or mulch and shall be refertilized, reseeded, and remulched as directed. After 30 days or until final acceptance of the entire project (whichever is longer), maintenance shall become the responsibility of Owner. The Landscape Architect will direct the Contractor on what seed areas need to be replaced at the final walk-through.

329219.955 Final Acceptance for Lawn Areas

The seeded area shall be accepted on the basis of having a uniform plant growth over the entire seeded area. Acceptable uniform plant growth shall be defined as when the scattered bare spots, not greater then one (1) sq. ft., do not exceed five (5%) percent of the irrigated seeded area.

329310.015 Protection and Maintenance of Plant Materials

All planting shall be protected and maintained until final acceptance of all work. Maintenance shall include watering, weeding, cultivating, mulching, insect control (through spraying, biological control, or whatever method is recommended by the Tri River Extension Service), tightening and repairs of guys, removal of dead branches, resetting plants to proper grade or upright position, and other necessary operations.

329380.025 Replacement

All replacement planting is to be executed within ten (10) days of notice to replace such plants. Replacement of planting is to be in accordance with the original specifications and its cost considered to be included in the bid price. All areas damaged by tree or shrub planting or replacement operations are to be fully restored to their original condition as specified.

329380.055 Final Inspection and Acceptance

Inspection of the work to determine completion of contract, exclusive of the possible replacement of plants, will be made by the Owners Representative at the conclusion of construction operations. The condition of all planting will be noted and a determination made by the Owners Representative whether maintenance shall continue in any part. Contractor will be notified of acceptance of the work or any deficiencies in the requirements for completion. Plants must be in excellent and vigorous conditions. Excessively pruned trees and shrubs which, in the opinion of the Owners Representative, are no longer excellent representatives of their species shall be replaced prior to Final Acceptance.

Appendix C

Geotechnical Report

Huddleston-Berry
Engineering & Testing, LLC

GEOLOGIC HAZARDS AND GEOTECHNICAL INVESTIGATION RIVERFRONT AT DOS RIOS GRAND JUNCTION, COLORADO PROJECT#00208-0111

CITY OF GRAND JUNCTION
333 WEST AVENUE, BLDG C
GRAND JUNCTION, COLORADO 81501

MARCH 10, 2020

Huddleston-Berry Engineering and Testing, LLC
2789 Riverside Parkway
Grand Junction, Colorado 81501

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1.0 INTRODUCTION

As part of continued development in Western Colorado, the City of Grand Junction proposes to create the Riverfront at Dos Rios mixed development in Grand Junction. As part of the design development process, Huddleston-Berry Engineering and Testing, LLC (HBET) was retained by the City of Grand Junction to conduct a geologic hazards and geotechnical investigation at the site.

1.1 Scope

As discussed above, a geologic hazards and geotechnical investigation was conducted for the Riverfront at Dos Rios in Grand Junction, Colorado. The scope of the investigation included the following components:

- Conducting a subsurface investigation to evaluate the subsurface conditions at the site.
- Collecting soil samples and conducting laboratory testing to determine the engineering properties of the soils at the site.
- Providing preliminary recommendations for foundation types and subgrade preparation.
- Providing preliminary recommendations for bearing capacity.
- Providing recommendations for lateral earth pressure.
- Providing recommendations for drainage, grading, and general earthwork.
- Providing recommendations for pavements.
- Evaluating potential geologic hazards at the site.

The investigation and report were completed by a Colorado registered professional engineer in accordance with generally accepted geotechnical and geological engineering practices. This report has been prepared for the exclusive use of the City of Grand Junction.

1.2 Site Location and Description

The site includes roughly 40 acres south of Hale Avenue and west of the Riverside Parkway, north and east of the Colorado River. The project location is shown on Figure 1 – Site Location Map.

At the time of the investigation, most of the site was open. However, several small existing structures were present in the northeastern corner of the site. In addition, large piles of fill materials were stockpiled in the northwestern portion of the site. With the exception of the fill materials, the general site grade was gently down to the south/southwest towards the Colorado River. Vegetation consisted primarily of grasses and weeds, with brush along the river. The site was bordered to the north by Hale Avenue, to the north and east by the Riverside Parkway, to the east by railroad tracks, and to the south and west by the Colorado River.

1.3 Proposed Construction

The proposed construction is anticipated to initially include site grading and infrastructure including utilities and new site roadways. The future development at the site is anticipated to include both multi-family residential and commercial construction.

2.0 GEOLOGIC SETTING

2.1 Soils

Soils data was obtained from the USDA Natural Resource Conservation Service Web Soil Survey. The data indicates that the site is underlain by Massadona silty clay loam, saline surface, 0 to 2 percent slopes and Green River clay loam, 0 to 2 percent slopes. Soil survey data is included in Appendix A.

Structure construction in the Massadona soils is described as being somewhat limited to very limited due to shrink-swell, flooding, and/or depth to saturated zone. Road construction in the site soils is indicated to be somewhat limited to very limited due to frost action, low strength, flooding, and/or shrink-swell. Excavation in the site soils is described as being somewhat limited due to dust, clay content, depth to saturated zone, and/or unstable excavation walls. The site soils are indicated to have a low to moderate potential for frost action, high risk of corrosion of steel, and moderate to high risk of corrosion of concrete.

2.2 Geology

According to the *Geologic Map of the Grand Junction Quadrangle, Mesa County, Colorado* (2002), most of the site is underlain by the youngest alluvium deposited by the Colorado River. However, the eastern portion of the site is mapped as being underlain by undivided alluvium and colluvium.

2.3 Groundwater

Groundwater was encountered in the subsurface at depths of between 7.0 and 13.0 feet below the existing ground surface at the time of the investigation. However, due to the proximity of the site to the Colorado River, the groundwater elevations at the site will fluctuate based upon the river level. During the spring runoff, HBET anticipates that the groundwater elevations across the site will be significantly higher than encountered during the subsurface investigation.

3.0 FIELD INVESTIGATION

3.1 Current Subsurface Investigation

The current subsurface investigation was conducted in February 2020 and included twelve borings and six test pits. The borings and test pits extended to depths of between 6.0 and 20.0 feet below the existing ground surface. Boring and test pit locations are shown on Figure 2 – Site Plan. Typed boring and test pit logs are included in Appendix B. Samples of the native soils were collected during Standard Penetration Testing (SPT) and using bulk sampling methods at the locations shown on the logs.

As shown on the logs, the subsurface conditions were variable. However, the borings and test pits generally encountered native clay, sand, and silt soils in the shallow subsurface. The native clay, sand, and silt soils were underlain by dense to very dense gravel and cobble soils to the depths explored.

Borings B-11 and B-12, conducted in the western portion of the site, encountered 4 feet of fill material above the native soils. In addition, Test Pits TP-2 and TP-3 encountered thick trash and debris materials. These materials are similar to those encountered during previous subsurface exploration at the site which will be discussed in the following section.

In addition to the borings and test pits, HBET collected random samples of the more clayey fill materials stockpiled on the site. HBET understands that the City will be using the stockpiled materials to raise the grade across the site. The sampling was to verify that the materials are generally suitable for use as grading fill. The locations of the samples are shown on Figure 2.

3.2 Previous Subsurface Investigation

In 2017, HBET conducted a soils investigation for a proposed commercial property in the southeastern portion of the site. Unfortunately, municipal waste materials were encountered in the subsurface. As a result, subsequently, the City of Grand Junction in conjunction with Austin Civil Group completed a large scale subsurface investigation across the site to delineate the extents of the waste. Figure 3 is a copy of the summary plan prepared by Austin Civil Group showing the limits of the waste.

HBET understands that a portion of the waste at the south end of Dos Rios Way was already removed. In addition, HBET understands that the waste materials north and west of Dos Rios Way are proposed to be removed. However, the waste materials in the southeastern portion of the site is an area proposed to be greenspace and a bicycle playground. As a result, the waste in this area will likely remain.

4.0 LABORATORY TESTING

Selected native soil samples collected from the borings, test pits, and stockpiled fill materials were tested in the Huddleston-Berry Engineering and Testing LLC geotechnical laboratory for natural moisture content, grain size analysis, Atterberg limits, maximum dry density and optimum moisture (Proctor), California Bearing Ratio (CBR), and water soluble sulfates content. The laboratory testing results are included in Appendix C.

The laboratory testing results indicate that the native clay range from slightly to moderately plastic. In addition, the CBR results indicate that the native clay soils are very slightly expansive with up to approximately 0.9% expansion measured in the laboratory.

The native sand soils were indicated to be non-plastic. The native silt soils were indicated to be very slightly plastic. In general, based upon our experience with similar soils in the vicinity of the subject site, the native sand and silt soils are anticipated to be slightly collapsible. Water soluble sulfates were detected in the site soils in a concentration of 0.1%.

The stockpiled materials with higher clay content were indicated to be slightly plastic. As a result, these materials are generally suitable for use as grading fill across the site.

5.0 GEOLOGIC INTERPRETATION

5.1 Geologic Hazards

The most significant geologic hazard identified on the site is the potential impacts to the site of flooding of the Colorado River. However, The City of Grand Junction has been placing fill materials across the site to raise the general site grade above the 100-year floodplain. In addition to the risk of flooding, moisture sensitive soils were also encountered at the site. Shallow groundwater was encountered in portions of the site.

5.2 Geologic Constraints

In general, the primary geologic constraint to construction at the site is the presence of moisture sensitive soils. However, shallow groundwater and associated soft soil conditions may also impact the construction depending upon the time of year that construction is completed.

5.3 Water Resources

No water supply wells were observed on the property. As discussed previously, the site lies adjacent to the Colorado River. In general, with proper design and construction, the development of the property is not anticipated to adversely impact surface water or groundwater.

5.4 Mineral Resources

Potential mineral resources in western Colorado generally include gravel, uranium ore, and commercial rock products such as flagstone. As discussed previously, gravels were encountered in the subsurface at the site. However, economic valuation of gravel extraction at this site is beyond the scope of our work.

6.0 CONCLUSIONS

Based upon the available data sources, field investigation, and nature of the proposed construction, HBET does not believe that there are any geologic conditions which should preclude construction at this site. However, foundations, pavements, and earthwork may have to consider the impacts of moisture sensitive soils, potential flooding of the Colorado River, and/or shallow groundwater.

7.0 RECOMMENDATIONS

7.1 Foundations

As discussed previously, moisture sensitive soils were encountered at the site. However, the magnitude of anticipated volume change in most of the soils is small. As a result, for lightly loaded structures, HBET believes that shallow foundations such as spread footings or monolithic structural slabs will be appropriate. However, for multi-story or other heavily loaded structures, deep foundations such as helical piles are an appropriate alternative due to the generally shallow depth to a competent bearing stratum. The generally recommended foundation alternatives are discussed in the following sections. However, HBET should be provided the opportunity to evaluate individual structures proposed at the site to ensure that the best foundation alternative is used for each structure.

Shallow Foundations

In order to provide a uniform bearing stratum and reduce the potential for excessive differential movements, HBET recommends that shallow foundations be constructed above a minimum of 24-inches of structural fill. Structural fill materials will be discussed later in this report.

For spread footing foundations, the footing areas may be trenched. However, for monolithic slab foundations, the structural fill should extend across the entire building pad area to a depth of 24-inches below the lowest portion of the foundation. Structural fill should extend laterally beyond the edges of the foundation a distance equal to the thickness of structural fill for both foundation types.

Prior to placement of structural fill, it is recommended that the bottoms of the foundation excavations be scarified to a depth of 9 to 12-inches, moisture conditioned, and compacted to a minimum of 95% of the standard Proctor maximum dry density, within ± 2% of the optimum moisture content, as determined in accordance with ASTM D698. However, depending upon the depth of excavation and time of year during construction, shallow groundwater and associated soft soil conditions may exist. It may be necessary to utilize geotextile and/or geogrid in conjunction with up to approximately 30-inches of granular fill to stabilize the subgrade.

Structural fill should be extended to within 0.1-feet of the bottom of the foundation. No more than 0.1-feet of gravel should be placed below the footings or turndown edge as a leveling course.

Structural fill should be moisture conditioned, placed in maximum 8-inch loose lifts, and compacted to a minimum of 95% of the standard Proctor maximum dry density for fine grained soils and 90% of the modified Proctor maximum dry density for coarse grained soils, within ± 2% of the optimum moisture content as determined in accordance with ASTM D698 and D1557, respectively.

For the foundation building pads prepared as recommended with structural fill in accordance with this report, a maximum allowable bearing capacity of 1,500 psf may be used. In addition, a modulus of subgrade reaction of 150 pci may be used for structural fill consisting of suitable native soils and a modulus of 200 pci may be used for structural fill consisting of approved imported materials as discussed later in this report. The bottoms of exterior foundations should extend a minimum of 24-inches below grade for frost protection.

For shallow foundations prepared as recommended, HBET believes that structure settlements will be less than 1.0-inch.

Helical Piles

Helical piles consist of circular or square steel shafts with load carrying helices attached to them. Some of these types of piers are proprietary. In general, the precise type, size, and quantity of piles should be established by the contractor in conjunction with the structural engineer. However, HBET provides the following preliminary design comments.

In general, helical piles should be designed to penetrate the shallow soils and bear into the dense gravel and cobble soils. It is anticipated that the helical piles will reach refusal within 3 to 10 feet of the top of the gravel and cobble soils. Therefore, pile lengths of up to approximately 20 feet may be possible (measured from existing grade).

In general, for helical piles installed to refusal, the allowable structural capacity is used. Based upon our experience with other projects utilizing helical piles, allowable axial capacities of between approximately 20 and 40 tons are anticipated for helical piles, depending upon the shaft diameter. However, higher capacities are possible, if necessary. The actual allowable capacity should be determined based upon the results of load testing conducted on the individual project sites. To eliminate reductions in capacity from group effects, the piles should be spaced a distance equal to three times the diameter of the largest helix.

For helical pile foundations in accordance with the above, HBET believes that structure settlements will be less than 1.0-inch.

7.2 Structural Fill and Site Grading Fill

As discussed above, the native clay soils ranged from slightly to moderately plastic. In general, the native silt, sand, and low plasticity clay soils are suitable for reuse as structural fill. However, the moderately plastic clay soils are not suitable for reuse as structural fill. HBET recommends that native soils on each building site proposed to be reused as structural fill be evaluated to verify that they are suitable for reuse.

Imported structural fill should consist of a non-free draining, non-expansive material approved by HBET. It is anticipated that CDOT Class 6 base course, ¼-inch minus, or other commonly available structural fill material in Western Colorado will be suitable.

As discussed previously, HBET understands that the City proposes to raise the grade across the site to be above the 100-year floodplain. In addition, HBET understands that the fill materials stockpiled in the northwestern portion of the site are proposed to be used as the grading fill. The laboratory testing results on stockpiled materials observed to have a higher clay content indicates that the clays are slightly plastic. As a result, the stockpiled materials are anticipated to be generally suitable for use as site grading fill. However, a significant quantity of fill will be necessary to raise the site grade and variations in the imported materials may occur. Therefore, it is recommended that periodic sampling and testing of the imported materials be conducted to ensure that expansive or otherwise deleterious materials are not present in the grading fill.

7.3 Seismic Design Criteria

In general, based upon the results of the subsurface investigation, the site classifies as Site Class D for a stiff soil profile.

7.4 Corrosion of Concrete and Steel

As indicated previously, water soluble sulfates were encountered in the site soils in a concentration of 0.1%. This concentration represents a moderate degree of potential sulfate attack on concrete. Therefore, Type I-II sulfate resistant cement is recommended for construction at this site.

The Soil Survey Data suggests that the native soils have a high potential for corrosion of steel. In addition, groundwater levels are anticipated to fluctuate over time and the Colorado River elevation fluctuates and this will increase the corrosion potential. As a result, HBET recommends that helical piles be galvanized or that steel section loss due to corrosion be considered in the design.

7.5 Non-Structural Floor Slabs and Exterior Flatwork

As mentioned above, moisture sensitive soils are present at the site. Therefore, in order to reduce the risk of excessive differential movements, it is recommended that floor slabs be constructed above a minimum of 18-inches of structural fill. Exterior flatwork around structures should be constructed above a minimum of 12-inches of structural fill.

7.6 Drainage

In order to improve the long-term performance of the foundations and slabs-on-grade, grading around the structures should be designed to carry precipitation and runoff away from the structures. It is recommended that the finished ground surface drop at least twelve inches within the first ten feet away from the structures. However, where impermeable surfaces (i.e. sidewalks, pavements, etc.) are adjacent to the structures, the grade can be reduced to approximately 2.5-inches (ADA grade) within the first ten feet away from the structures. Downspouts should empty beyond the backfill zone. It is recommended that landscaping within five feet of the structures include primarily desert plants with low water requirements. In addition, it is recommended that automatic irrigation within ten feet of foundations, including drip lines, be minimized.

7.7 Lateral Earth Pressures

Stemwalls and/or any retaining walls should be designed to resist lateral earth pressures. For backfill consisting of the native soils, stockpiled fill, or imported granular, non-free draining, non-expansive material, we recommend that the walls be designed for an active equivalent fluid unit weight of 50 pcf in areas where no surcharge loads are present. An at-rest equivalent fluid unit weight of 70 pcf may be used. Lateral earth pressures should be increased as necessary to reflect any surcharge loading behind the walls.

7.8 Excavations

Excavations in the soils at the site may stand for short periods of time but should not be considered to be stable. The native soils generally classify as Type C soil with regard to OSHA's *Construction Standards for Excavations*. For Type C soils, the maximum allowable slope in temporary cuts is 1.5H:1V.

7.9 Pavements

The proposed construction is anticipated to include new parking lots and internal site roadways. As discussed previously, the pavement subgrade materials at the site range from clay soils to fill materials. The design California Bearing Ratio (CBR) of a composite sample of the site soils was determined in the laboratory to be less than 2.0. Therefore, the minimum recommended Resilient Modulus of 3,000 psi was used for the design.

Based upon the subgrade conditions and anticipated traffic loading, pavement section alternatives were developed using M-E procedures through the PerRoad software program. The following pavement section alternatives are recommended:

Automobile Parking Areas (Limited Truck Traffic)

ALTERNATIVE	PAVEMENT SECTION (Inches)				
	Hot-Mix Asphalt Pavement	CDOT Class 6 Base Course	CDOT Class 3 Subbase Course	Concrete Pavement	TOTAL
A	3.0	13.0			16.0
B	4.0	10.0			14.0
C	3.0	6.0	10.0		19.0
Rigid Pavement		6.0		6.0	12.0

Mixed Use Areas (Higher Truck Traffic)

ALTERNATIVE	PAVEMENT SECTION (Inches)				
	Hot-Mix Asphalt Pavement	CDOT Class 6 Base Course	CDOT Class 3 Subbase Course	Concrete	TOTAL
A	4.0	14.0			18.0
B	5.0	11.0			16.0
C	4.0	6.0	11.0		21.0
Concrete Pavement		6.0		8.0	14.0

Internal Roadways

ALTERNATIVE	PAVEMENT SECTION (Inches)				
	Hot-Mix Asphalt Pavement	CDOT Class 6 Base Course	CDOT Class 3 Subbase Course	Concrete	TOTAL
A	4.0	16.0			20.0
B	5.0	13.0			18.0
C	4.0	6.0	14.0		24.0
Concrete Pavement		6.0		8.0	14.0

Prior to new pavement placement, areas to be paved should be stripped of all topsoil, uncontrolled fill, or other unsuitable materials. It is recommended that the subgrade soils be scarified to a depth of 12-inches; moisture conditioned, and recompacted to a minimum of 95% of the standard Proctor maximum dry density, within ±2% of optimum moisture content as determined by AASHTO T-99. However, as discussed previously, soft soils may be encountered associated with shallow groundwater. It may be necessary to utilize geotextile and/or geogrid in conjunction with up to approximately 30-inches of granular fill to stabilize the subgrade.

Aggregate base course and subbase course should be placed in maximum 9-inch loose lifts, moisture conditioned, and compacted to a minimum of 95% and 93% of the maximum dry density, respectively, at -2% to +3% of optimum moisture content as determined by AASHTO T-180. In addition to density testing, base course should be proofrolled to verify subgrade stability.

It is recommended that Hot-Mix Asphaltic (HMA) pavement conform to CDOT grading SX or S specifications and consist of an approved 75 gyration Superpave method mix design. HMA pavement should be compacted to between 92% and 96% of the maximum theoretical density. An end point stress of 50 psi should be used. It is recommended that rigid pavements consist of CDOT Class P concrete or alternative approved by the Engineer. In addition, pavements should conform to local specifications.

The long-term performance of the pavements is dependent on positive drainage away from the pavements. Ditches, culverts, and inlet structures in the vicinity of paved areas must be maintained to prevent ponding of water on the pavement

8.0 GENERAL

The recommendations included above are based upon the results of the subsurface investigation and on our local experience. These conclusions and recommendations are valid only for the proposed construction.

As discussed previously, the subsurface conditions encountered at the site were variable. However, the precise nature and extent of any subsurface variability may not become evident until construction. As a result, it is recommended that HBET provide construction materials testing and engineering oversight during the entire construction process.

It is important to note that the recommendations herein are intended to reduce the risk of structural movement and/or damage, to varying degrees, associated with volume change in the native soils. However, HBET cannot predict long-term changes in subsurface moisture conditions and/or the precise magnitude or extent of volume change. Where significant increases in shallow subsurface moisture occur due to poor grading, improper stormwater management, utility line failure, excess irrigation, or other cause, either during construction or the result of actions of the property owner, several inches of movement of shallow foundations and/or slabs on grade are possible. In addition, any failure to comply with the recommendations in this report releases Huddleston-Berry Engineering & Testing, LLC of any liability with regard to the structure performance.

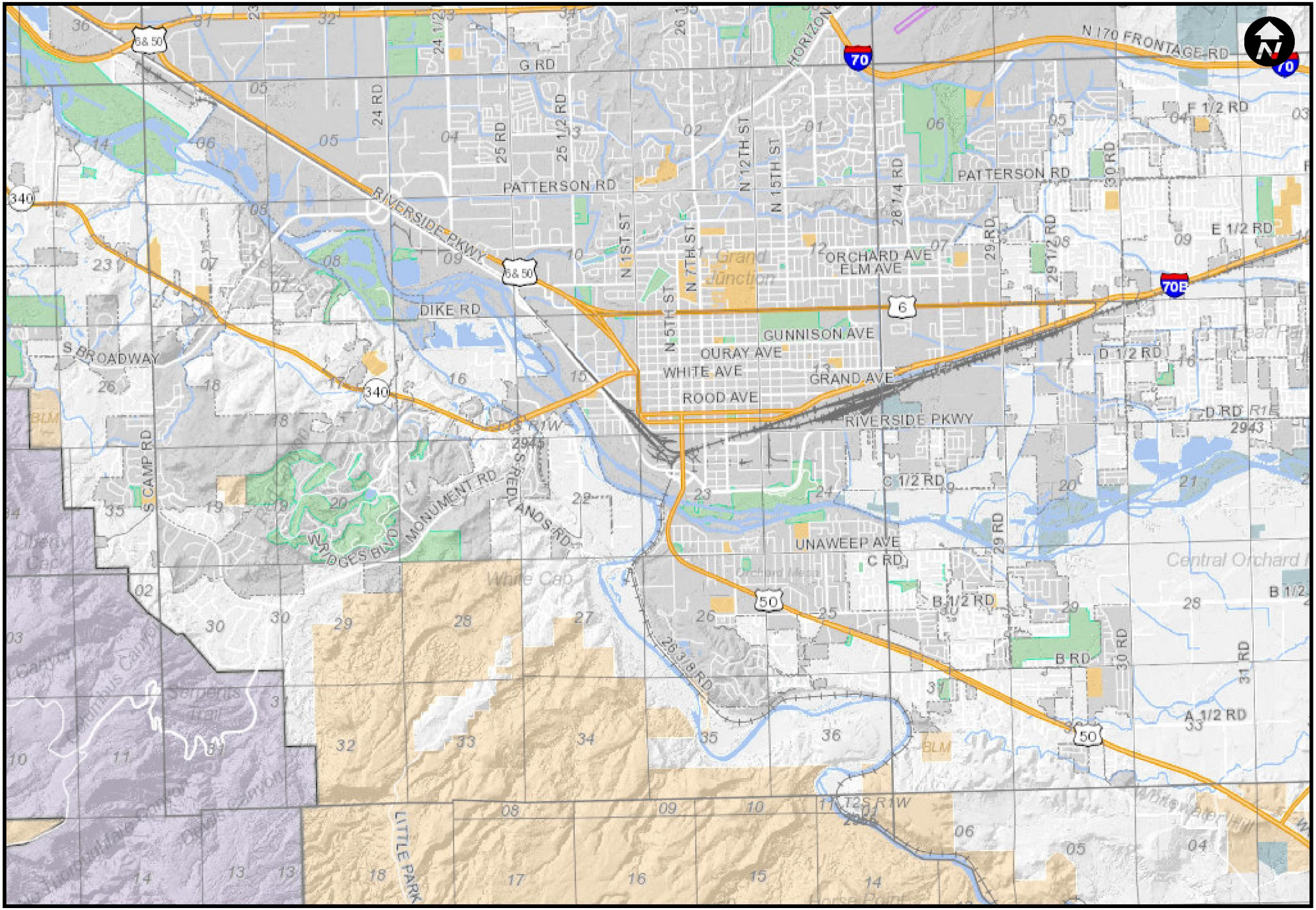
Huddleston-Berry Engineering and Testing, LLC is pleased to be of service to your project. Please contact us if you have any questions or comments regarding the contents of this report.

Respectfully Submitted:
Huddleston-Berry Engineering and Testing, LLC



Michael A. Berry, P.E.
Vice President of Engineering

FIGURES



Mesa County Map

The Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended or does not replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of location in this GIS cannot be substitute for actual legal surveys.
The information contained herein is believed accurate and suitable for the limited uses, and subject to the limitations, set forth above. Mesa County makes no warranty as to the accuracy or suitability of any information contained herein. Users assume all risk and responsibility for any and all damages, including consequential damages, which may flow from the user's use of this information.

0 0.5 1 2 mi
0 0.5 1 2 km

Print Date: March 10, 2020

Mesa County, Colorado
GIS/IT Department
gis.mesacounty.us

City of Grand Junction



N

0 0.28 0.55 mi

Printed: 3/10/2020

1 inch equals 376 feet

Scale: 1:4,514

CITY OF Grand Junction COLORADO GEOGRAPHIC INFORMATION SYSTEM

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET
ADJUST SCALES ACCORDINGLY

REVISIONS

NO.	DESCRIPTION	DATE	BY

A • C • G
AUSTIN CIVIL GROUP, INC
Land Planning • Civil Engineering • Development Services
123 N 7th Street, Suite 300 • Grand Junction, Colorado 81501
(970) 242-7540

JARVIS PROPERTY

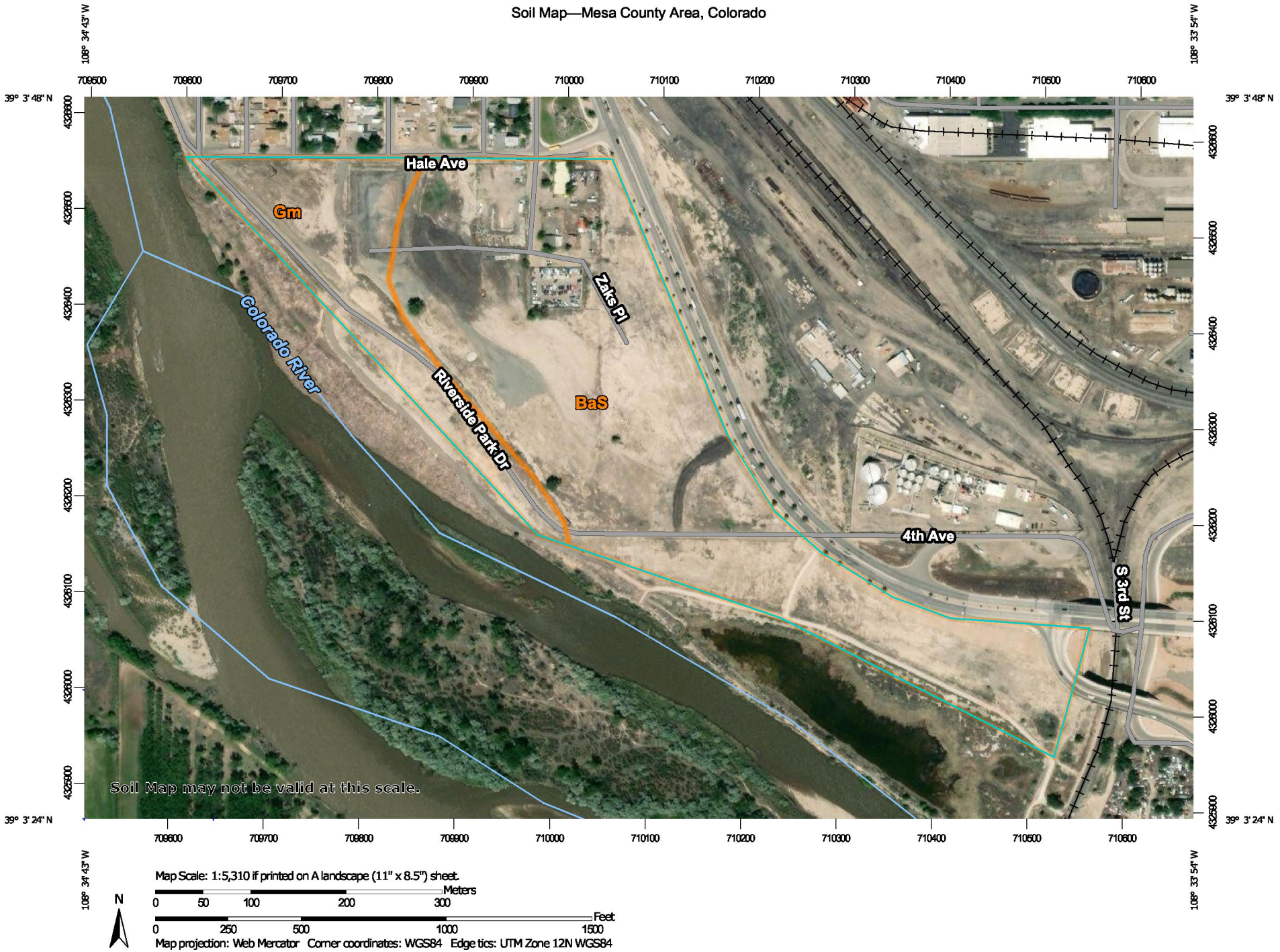
TEST PIT & TRENCH LOCATIONS

CITY OF GRAND JUNCTION

DRAWN BY:	JOS
DESIGNED BY:	JOS
CHECKED BY:	MRA
APPROVED BY:	MRA
JOB NUMBER:	1024.006
DATE:	5/23/17
SCALE:	1" = 100'
SHEET NO:	C-1

APPENDIX A
Soil Survey Data

Soil Map—Mesa County Area, Colorado



Map Scale: 1:5,310 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Mesa County Area, Colorado
Survey Area Data: Version 10, Sep 13, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 13, 2010—Aug 8, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BaS	Massadona silty clay loam, saline surface, 0 to 2 percent slopes	35.0	79.2%
Gm	Green River clay loam, 0 to 2 percent slopes	9.2	20.8%
Totals for Area of Interest		**44.2**	**100.0%**

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named, soils that are similar to the named components, and some minor components that differ in use and management from the major soils.

Most of the soils similar to the major components have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Some minor components, however, have properties and behavior characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description

Mesa County Area, Colorado

BaS—Massadona silty clay loam, saline surface, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: k06p

Elevation: 4,490 to 4,920 feet
Mean annual precipitation: 6 to 9 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Massadona, saline surface, and similar soils: 70 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Massadona, Saline Surface

Setting

Landform: Fan remnants
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Cretaceous source alluvium derived from clayey shale

Typical profile

Apz - 0 to 2 inches: silty clay loam
Bwz - 2 to 12 inches: silty clay
Bkyz - 12 to 24 inches: silty clay
BCkyz1 - 24 to 48 inches: fine sandy loam
BCkyz2 - 48 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.07 to 0.21 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Gypsum, maximum in profile: 2 percent
Salinity, maximum in profile: Strongly saline (16.0 to 40.0 mmhos/cm)
Available water storage in profile: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): 7s
Land capability classification (nonirrigated): 7c
Hydrologic Soil Group: C
Ecological site: Desert Clay (Castlevalley saltbush) (R034BY103UT)
Hydric soil rating: No

Gm—Green River clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: k0dd
Elevation: 4,430 to 4,820 feet
Mean annual precipitation: 6 to 9 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 135 to 180 days
Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

Green river and similar soils: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Green River

Setting

Landform: Flood-plain steps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey alluvium over coarse-loamy alluvium derived from sandstone and shale

Typical profile

Ap - 0 to 10 inches: clay loam
C1 - 10 to 16 inches: fine sandy loam
C2 - 16 to 24 inches: fine sandy loam
C3 - 24 to 32 inches: fine sandy loam
C4 - 32 to 44 inches: fine sandy loam
C5 - 44 to 52 inches: fine sandy loam
2C - 52 to 60 inches: very cobbly sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.21 to 0.71 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: Very rare
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): 4e

Land capability classification (nonirrigated): 7c
Hydrologic Soil Group: C
Ecological site: River Floodplain (Fremont Cottonwood) (R034BY011UT)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Mesa County Area, Colorado
Survey Area Data: Version 10, Sep 13, 2019

Dwellings and Small Commercial Buildings

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. This table shows the degree and kind of soil limitations that affect dwellings and small commercial buildings.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Report—Dwellings and Small Commercial Buildings

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Dwellings and Small Commercial Buildings–Mesa County Area, Colorado							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BaS—Massadona silty clay loam, saline surface, 0 to 2 percent slopes							
Massadona, saline surface	70	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.17	Shrink-swell	0.06	Shrink-swell	0.17

Dwellings and Small Commercial Buildings–Mesa County Area, Colorado							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Gm—Green River clay loam, 0 to 2 percent slopes							
Green river	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.89		

Data Source Information

Soil Survey Area: Mesa County Area, Colorado
Survey Area Data: Version 10, Sep 13, 2019

Roads and Streets, Shallow Excavations, and Lawns and Landscaping

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. This table shows the degree and kind of soil limitations that affect local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Report—Roads and Streets, Shallow Excavations, and Lawns and Landscaping

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Roads and Streets, Shallow Excavations, and Lawns and Landscaping–Mesa County Area, Colorado							
Map symbol and soil name	Pct. of map unit	Lawns and landscaping		Local roads and streets		Shallow excavations	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BaS—Massadona silty clay loam, saline surface, 0 to 2 percent slopes							
Massadona, saline surface	70	Very limited		Very limited		Somewhat limited	
		Salinity	1.00	Low strength	1.00	Dusty	0.50
		Dusty	0.50	Shrink-swell	0.17	Too clayey	0.02
		Droughty	0.11			Unstable excavation walls	0.01

Roads and Streets, Shallow Excavations, and Lawns and Landscaping–Mesa County Area, Colorado							
Map symbol and soil name	Pct. of map unit	Lawns and landscaping		Local roads and streets		Shallow excavations	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Gm—Green River clay loam, 0 to 2 percent slopes							
Green river	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.23	Frost action	0.50	Depth to saturated zone	0.89
		Salinity	0.13	Flooding	0.20	Dusty	0.23
						Unstable excavation walls	0.01

Data Source Information

Soil Survey Area: Mesa County Area, Colorado
Survey Area Data: Version 10, Sep 13, 2019

Soil Features

This table gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage, or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, saturated hydraulic conductivity (Ksat), content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low*, *moderate*, or *high.* It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Report—Soil Features

Soil Features–Mesa County Area, Colorado									
Map symbol and soil name	**Restrictive Layer**				**Subsidence**		**Potential for frost action**	**Risk of corrosion**	
	Kind	**Depth to top**	**Thickness**	**Hardness**	**Initial**	**Total**		**Uncoated steel**	**Concrete**
		Low-RV-High	*Range*		*Low-High*	*Low-High*			
		In	*In*		*In*	*In*			
BaS—Massadona silty clay loam, saline surface, 0 to 2 percent slopes									
Massadona, saline surface		—	—		0	0	Low	High	High
Gm—Green River clay loam, 0 to 2 percent slopes									
Green river		—	—		0	0	Moderate	High	Moderate

Data Source Information

Soil Survey Area: Mesa County Area, Colorado
Survey Area Data: Version 10, Sep 13, 2019

APPENDIX B
Typed Boring and Test Pit Logs

Huddleston-Berry Engineering & Testing, LLC
2789 Riverside Parkway
Grand Junction, CO 81501
970-255-8005

BORING NUMBER B-1

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION _____ **HOLE SIZE** 4-inch
DRILLING CONTRACTOR S. McKracken
GROUND WATER LEVELS:
DRILLING METHOD Simco 2000 Track Rig
AT TIME OF DRILLING 9.0 ft
LOGGED BY SD **CHECKED BY** MAB
AT END OF DRILLING 9.0 ft
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Lean CLAY (CL), brown, moist, stiff to very stiff										
		***Lab Classified SS1	SS 1	78	7-9-14 (23)			17	45	23	22	97
5												
		Silty SAND (SM), brown, moist to wet, loose to medium dense										
		***Lab Classified SS2	SS 2	56	4-4-3 (7)			20	NP	NP	NP	21
10		Sandy GRAVEL and COBBLES (gw), brown, wet, dense to very dense										
15			SS 3	100	18-32							
		Bottom of hole at 16.0 feet.										

Huddleston-Berry Engineering & Testing, LLC
2789 Riverside Parkway
Grand Junction, CO 81501
970-255-8005

BORING NUMBER B-2

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION _____ **HOLE SIZE** 4-inch
DRILLING CONTRACTOR S. McKracken
GROUND WATER LEVELS:
DRILLING METHOD Simco 2000 Track Rig
AT TIME OF DRILLING 8.0 ft
LOGGED BY SD **CHECKED BY** MAB
AT END OF DRILLING 8.0 ft
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Silty SAND (sm), brown, moist, medium dense										
2.5			SS 1	61	8-13-11 (24)							
5.0		Sandy GRAVEL and COBBLES (gw), brown, moist to wet, medium dense to very dense										
7.5		***Unable to sample past 8 ft due to caving	SS 2	83	4-4-5 (9)							
10.0												
12.5												
		Bottom of hole at 14.0 feet.										

GEOTECH BH COLUMNS 00208-0111 RIVERFRONT AT DOS RIOS.GPJ GINT US LAB.GDT 3/5/20

Huddleston-Berry Engineering & Testing, LLC
2789 Riverside Parkway
Grand Junction, CO 81501
970-255-8005

BORING NUMBER B-3

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION _____ **HOLE SIZE** 4-inch
DRILLING CONTRACTOR S. McKracken
GROUND WATER LEVELS:
DRILLING METHOD Simco 2000 Track Rig
AT TIME OF DRILLING dry
LOGGED BY SD **CHECKED BY** MAB
AT END OF DRILLING dry
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Sandy Lean CLAY (CL), brown, moist, medium stiff to stiff										
2.5		***Lab Classified SS1	SS 1	72	3-5-5 (10)			14	26	17	9	69
5.0												
7.5		Sandy GRAVEL and COBBLES (gw), brown, moist, dense to very dense	SS 2	83	19-50							
		***Auger refusal at 8 ft										
		Bottom of hole at 8.0 feet.										

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BORING NUMBER B-4

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION ---- **HOLE SIZE** 4-inch
DRILLING CONTRACTOR S. McKracken
GROUND WATER LEVELS:
DRILLING METHOD Simco 2000 Track Rig
AT TIME OF DRILLING 7.5 ft
LOGGED BY SD **CHECKED BY** MAB
AT END OF DRILLING 7.5 ft
NOTES
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Silty SAND (sm), brown, moist, loose to medium dense										
2.5			SS 1	94	2-2-2 (4)							
5.0												
7.5		Sandy GRAVEL and COBBLES (gw), brown, moist to wet, dense to very dense	SS 2	89	20-50/3"							
		***Auger refusal at 8 ft										
		Bottom of hole at 8.0 feet.										

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Huddleston-Berry Engineering & Testing, LLC
2789 Riverside Parkway
Grand Junction, CO 81501
970-255-8005

BORING NUMBER B-5

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION _____ **HOLE SIZE** 4-inch
DRILLING CONTRACTOR S. McKracken
GROUND WATER LEVELS:
DRILLING METHOD Simco 2000 Track Rig
AT TIME OF DRILLING dry
LOGGED BY SD **CHECKED BY** MAB
AT END OF DRILLING dry
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Sandy Lean CLAY (cl), brown, moist, medium stiff to stiff										
2.5			SS 1	72	5-7-7 (14)							
5.0												
7.5		Silty SAND (sm), brown, moist, loose to medium dense	SS 2	61	3-3-3 (6)							
		Sandy GRAVEL and COBBLES (gw), brown, moist, dense to very dense										
10.0		***Auger refusal at 10 ft Bottom of hole at 10.0 feet.										

Huddleston-Berry Engineering & Testing, LLC
2789 Riverside Parkway
Grand Junction, CO 81501
970-255-8005

BORING NUMBER B-6

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION _____ **HOLE SIZE** 4-inch
DRILLING CONTRACTOR S. McKracken
GROUND WATER LEVELS:
DRILLING METHOD Simco 2000 Track Rig
AT TIME OF DRILLING dry
LOGGED BY SD **CHECKED BY** MAB
AT END OF DRILLING dry
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Sandy Lean CLAY (cl), brown, moist, medium stiff to stiff										
2.5			SS 1	72	3-5-9 (14)							
5.0												
7.5		Sandy GRAVEL and COBBLES (gw), brown, moist, dense to very dense	SS 2	83	50							
10.0		***Auger refusal at 10 ft Bottom of hole at 10.0 feet.										

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Grand Junction, CO 81501
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BORING NUMBER B-7

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION _____ **HOLE SIZE** 4-inch
DRILLING CONTRACTOR S. McKracken
GROUND WATER LEVELS:
DRILLING METHOD Simco 2000 Track Rig
AT TIME OF DRILLING dry
LOGGED BY SD **CHECKED BY** MAB
AT END OF DRILLING dry
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Silty SAND (sm), brown, moist, loose to medium dense										
2.5			SS 1	78	3-3-3 (6)							
5.0		Sandy GRAVEL and COBBLES (gw), brown, moist, dense to very dense ***Auger refusal at 6.75 ft	SS 2	89	45-50/3"							
		Bottom of hole at 6.8 feet.										

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BORING NUMBER B-8

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION ---- **HOLE SIZE** 4-inch
DRILLING CONTRACTOR S. McKracken
GROUND WATER LEVELS:
DRILLING METHOD Simco 2000 Track Rig
AT TIME OF DRILLING 7.0 ft
LOGGED BY SD **CHECKED BY** MAB
AT END OF DRILLING 7.0 ft
NOTES
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Silty SAND (sm), brown, moist, loose to medium dense										
2.5			SS 1	89	5-5-5 (10)							
5.0		Sandy GRAVEL and COBBLES (gw), brown, moist to wet, dense to very dense										
7.5			SS 2	50	33-50							
		***Auger refusal at 8 ft										
		Bottom of hole at 8.0 feet.										

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BORING NUMBER B-9

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION ___ **HOLE SIZE** 4-inch
DRILLING CONTRACTOR S. McKracken
GROUND WATER LEVELS:
DRILLING METHOD Simco 2000 Track Rig
AT TIME OF DRILLING 7.0 ft
LOGGED BY SD **CHECKED BY** MAB
AT END OF DRILLING 7.0 ft
NOTES
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Silty SAND (sm), brown, moist, loose to medium dense										
2.5			SS 1	83	5-3-3 (6)							
5.0												
7.5		Sandy GRAVEL and COBBLES (gw), brown, wet, dense to very dense	SS 2	67	1-6-12 (18)							
10.0												
12.5			SS 3	75	26-25							
		Bottom of hole at 13.0 feet.										

Huddleston-Berry Engineering & Testing, LLC
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Grand Junction, CO 81501
970-255-8005

BORING NUMBER B-10

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION ---- **HOLE SIZE** 4-inch
DRILLING CONTRACTOR S. McKracken
GROUND WATER LEVELS:
DRILLING METHOD Simco 2000 Track Rig
AT TIME OF DRILLING 7.0 ft
LOGGED BY SD **CHECKED BY** MAB
AT END OF DRILLING 7.0 ft
NOTES
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Silty SAND (sm), brown, moist, loose to medium dense										
		Sandy GRAVEL and COBBLES (gw), brown, moist to wet, medium dense to very dense	SS 1	56	13-15-13 (28)							
5												
10			SS 2	39	6-8-11 (19)							
15												
20		***Auger refusal at 20 ft Bottom of hole at 20.0 feet.										

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BORING NUMBER B-11

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION ___ **HOLE SIZE** 4-inch
DRILLING CONTRACTOR S. McKracken
GROUND WATER LEVELS:
DRILLING METHOD Simco 2000 Track Rig
AT TIME OF DRILLING 9.0 ft
LOGGED BY SD **CHECKED BY** MAB
AT END OF DRILLING 9.0 ft
NOTES
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Sandy GRAVEL (FILL)										
2.5			SS 1	0	13-13-17 (30)							
5.0		Sandy Lean CLAY (cl), brown, moist, medium stiff										
7.5		Silty SAND (sm), brown, moist, loose to medium dense	SS 2	72	5-6-9 (15)							
		Sandy GRAVEL and COBBLES (gw), brown, moist, dense to very dense ***Auger refusal at 9 ft	SS 3	100	50							
		Bottom of hole at 9.5 feet.										

GEOTECH BH COLUMNS 00208-0111 RIVERFRONT AT DOS RIOS.GPJ GINT US LAB.GDT 3/5/20

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970-255-8005

BORING NUMBER B-12

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION ___ **HOLE SIZE** 4-inch
DRILLING CONTRACTOR S. McKracken
GROUND WATER LEVELS:
DRILLING METHOD Simco 2000 Track Rig
AT TIME OF DRILLING 13.0 ft
LOGGED BY SD **CHECKED BY** MAB
AT END OF DRILLING 13.0 ft
NOTES
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Sandy GRAVEL (FILL)										
2.5		***Lab Classified SS1	SS 1	44	4-5-3 (8)			10	31	19	12	53
5.0		Gravelly Lean CLAY with Sand (CL), brown, moist, medium stiff to stiff										
7.5			SS 2	39	4-5-8 (13)							
10.0		Sandy GRAVEL and COBBLES (gw), brown, moist to wet, medium dense to very dense										
12.5			SS 3	33	6-13-13 (26)							
		Bottom of hole at 13.5 feet.										

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TEST PIT NUMBER TP-1

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION _____ **TEST PIT SIZE** 4-inch
EXCAVATION CONTRACTOR S. McKracken
GROUND WATER LEVELS:
EXCAVATION METHOD Simco 2000 Track Rig
AT TIME OF EXCAVATION dry
LOGGED BY SD **CHECKED BY** MAB
AT END OF EXCAVATION dry
NOTES _____
AFTER EXCAVATION ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Sandy Lean CLAY (CL), brown, moist, medium stiff										
2.5		***Lab Classified GB1	GB 1					8	27	18	9	70
5.0		Silty SAND (SM), brown, moist, loose to medium dense										
		***Lab Classified GB2	GB 2					5	NP	NP	NP	20
7.5		***Gravel and Cobbles at bottom of excavation										
		Bottom of test pit at 8.0 feet.										

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TEST PIT NUMBER TP-2

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION _____ **TEST PIT SIZE** 4-inch
EXCAVATION CONTRACTOR S. McKracken
GROUND WATER LEVELS:
EXCAVATION METHOD Simco 2000 Track Rig
AT TIME OF EXCAVATION dry
LOGGED BY SD **CHECKED BY** MAB
AT END OF EXCAVATION dry
NOTES _____
AFTER EXCAVATION ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Trash, debris, etc. mixed with clayey sand (FILL)										
5.0		Sandy GRAVEL and COBBLES (gw), brown, moist, dense to very dense										
		Bottom of test pit at 7.0 feet.										

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TEST PIT NUMBER TP-3

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION _____ **TEST PIT SIZE** 4-inch
EXCAVATION CONTRACTOR S. McKracken
GROUND WATER LEVELS:
EXCAVATION METHOD Simco 2000 Track Rig
AT TIME OF EXCAVATION dry
LOGGED BY SD **CHECKED BY** MAB
AT END OF EXCAVATION dry
NOTES _____
AFTER EXCAVATION ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Trash, debris, etc. mixed with gravel and cobbles (FILL)										
2.5												
5.0												
		Bottom of test pit at 7.0 feet.										

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TEST PIT NUMBER TP-4

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION _____ **TEST PIT SIZE** 4-inch
EXCAVATION CONTRACTOR S. McKracken
GROUND WATER LEVELS:
EXCAVATION METHOD Simco 2000 Track Rig
AT TIME OF EXCAVATION dry
LOGGED BY SD **CHECKED BY** MAB
AT END OF EXCAVATION dry
NOTES _____
AFTER EXCAVATION ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Sandy GRAVEL and COBBLES (gw), brown, moist, dense to very dense										
2.5												
5.0												
		Bottom of test pit at 6.0 feet.										

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TEST PIT NUMBER TP-5

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION _____ **TEST PIT SIZE** 4-inch
EXCAVATION CONTRACTOR S. McKracken
GROUND WATER LEVELS:
EXCAVATION METHOD Simco 2000 Track Rig
AT TIME OF EXCAVATION dry
LOGGED BY SD **CHECKED BY** MAB
AT END OF EXCAVATION dry
NOTES _____
AFTER EXCAVATION ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Sandy SILT (ML), brown, moist, loose to medium dense										
2.5		***Lab Classifed GB1	GB 1					4	23	21	2	62
5.0		***Gravel and Cobbles at bottom of excavation										
		Bottom of test pit at 7.0 feet.										

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TEST PIT NUMBER TP-6

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO
DATE STARTED 2/12/20 **COMPLETED** 2/12/20
GROUND ELEVATION _____ **TEST PIT SIZE** 4-inch
EXCAVATION CONTRACTOR S. McKracken
GROUND WATER LEVELS:
EXCAVATION METHOD Simco 2000 Track Rig
AT TIME OF EXCAVATION dry
LOGGED BY SD **CHECKED BY** MAB
AT END OF EXCAVATION dry
NOTES _____
AFTER EXCAVATION ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0.0		Silty SAND (SM), brown, moist, loose to medium dense										
2.5		***Lab Classified GB1	GB 1					17	NP	NP	NP	43
5.0		***Gravel and Cobbles at bottom of excavation										
		Bottom of test pit at 7.0 feet.										

APPENDIX C
Laboratory Testing Results

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Grand Junction, CO 81501
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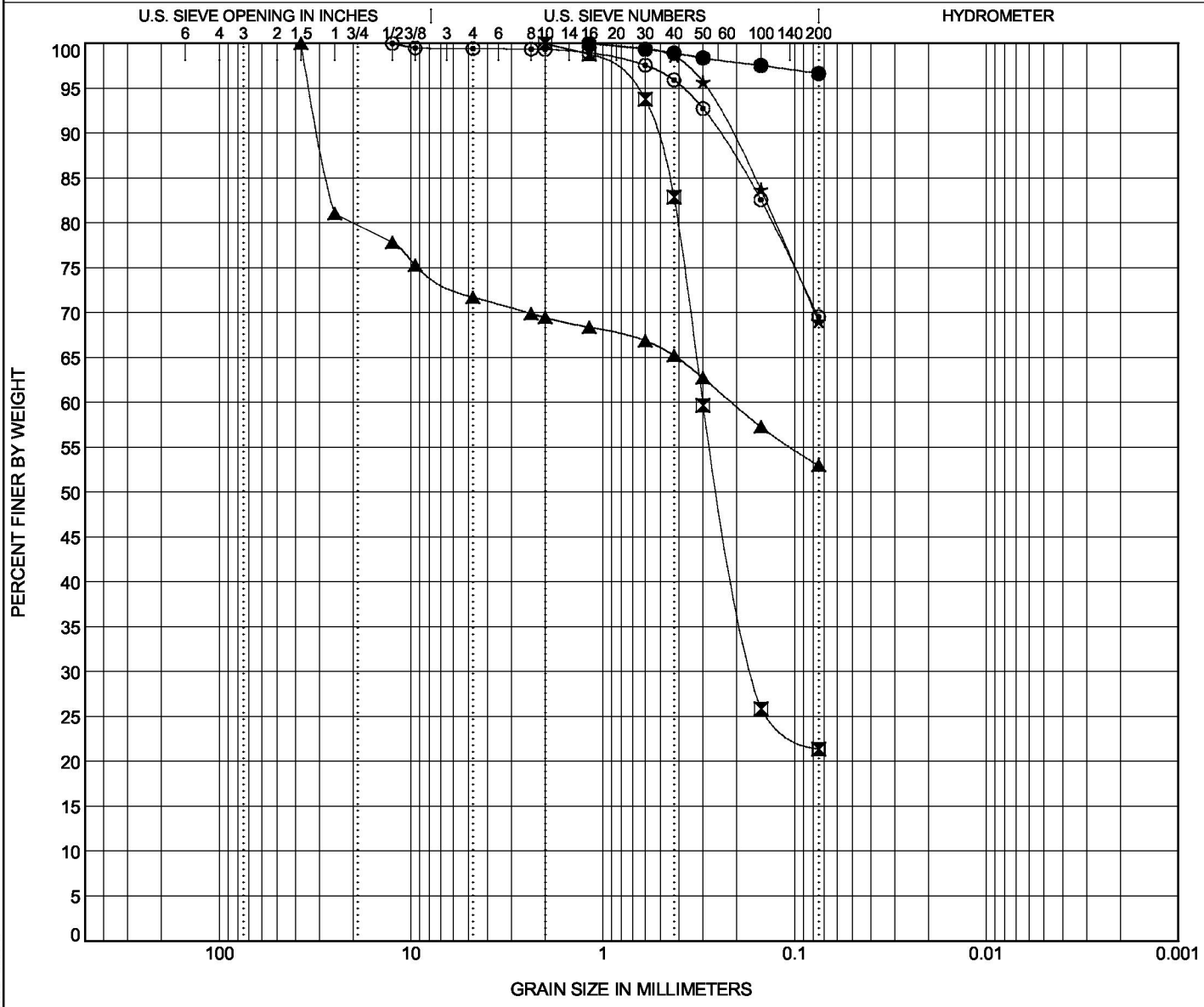
GRAIN SIZE DISTRIBUTION

CLIENT City of Grand Junction **PROJECT NAME** Riverfront at Dos Rios

PROJECT NUMBER 00208-0111 **PROJECT LOCATION** Grand Junction, CO



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	B-1, SS1	2/20	LEAN CLAY(CL)	45	23	22		
⊠	B-1, SS2	2/20	SILTY SAND(SM)	NP	NP	NP		
▲	B-12, SS1	2/20	GRAVELLY LEAN CLAY with SAND(CL)	31	19	12		
★	B-3, SS1	2/20	SANDY LEAN CLAY(CL)	26	17	9		
⊙	TP-1, GB1	2/20	SANDY LEAN CLAY(CL)	27	18	9		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	B-1, SS1	2/20	1.18				0.0	3.4	96.6	
⊠	B-1, SS2	2/20	2	0.301	0.163		0.0	78.6	21.4	
▲	B-12, SS1	2/20	37.5	0.213			28.3	18.8	53.0	
★	B-3, SS1	2/20	1.18				0.0	30.9	69.1	
⊙	TP-1, GB1	2/20	12.5				0.6	29.9	69.5	

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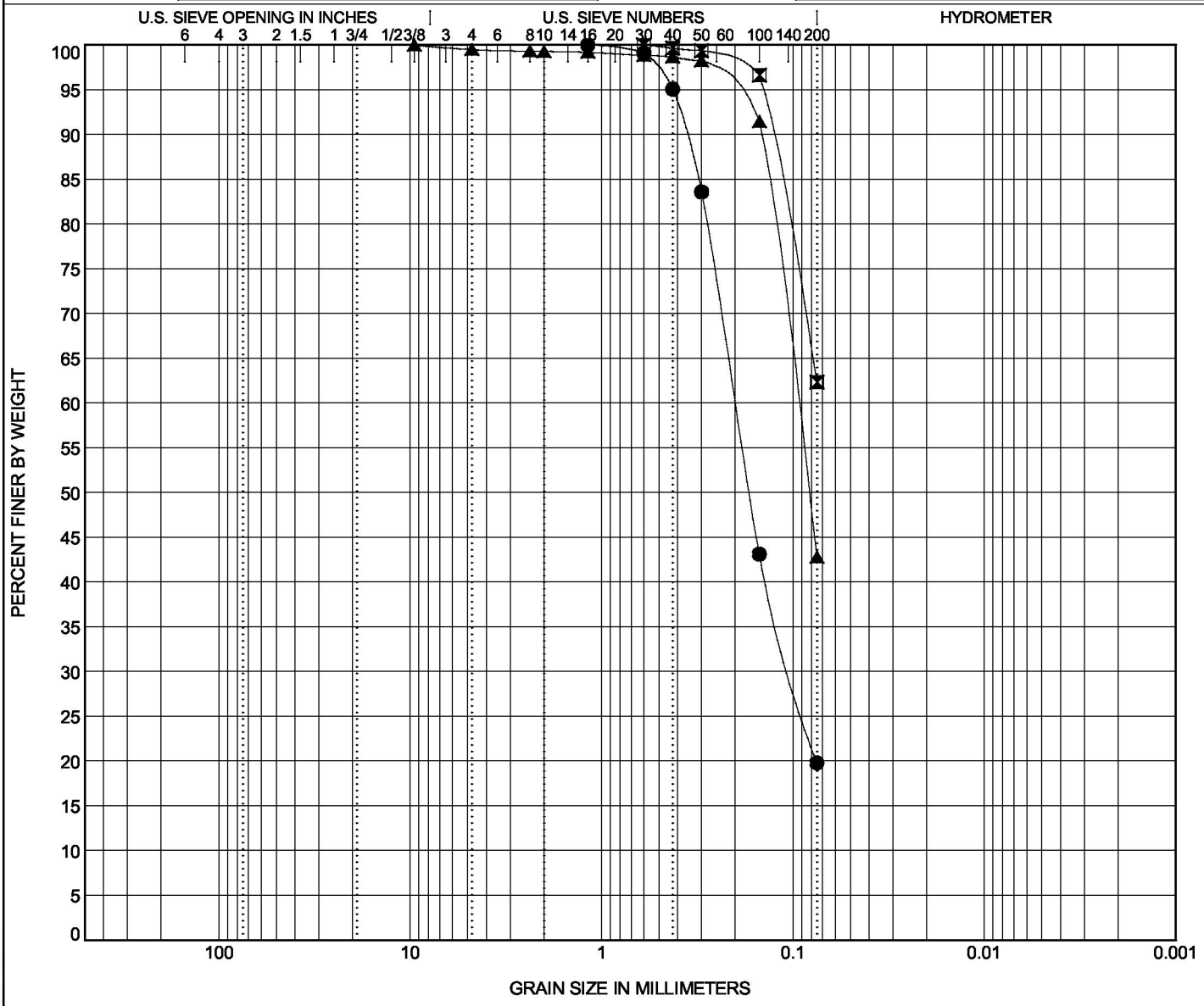
GRAIN SIZE DISTRIBUTION

CLIENT City of Grand Junction **PROJECT NAME** Riverfront at Dos Rios

PROJECT NUMBER 00208-0111 **PROJECT LOCATION** Grand Junction, CO



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● TP-1, GB2 2/20	SILTY SAND(SM)	NP	NP	NP		
⊠ TP-5, GB1 2/20	SANDY SILT(ML)	23	21	2		
▲ TP-6, GB1 2/20	SILTY SAND(SM)	NP	NP	NP		

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● TP-1, GB2 2/20	1.18	0.2	0.102		0.0	80.2	19.8	
⊠ TP-5, GB1 2/20	0.6				0.0	37.7	62.3	
▲ TP-6, GB1 2/20	9.5	0.096			0.5	56.7	42.8	

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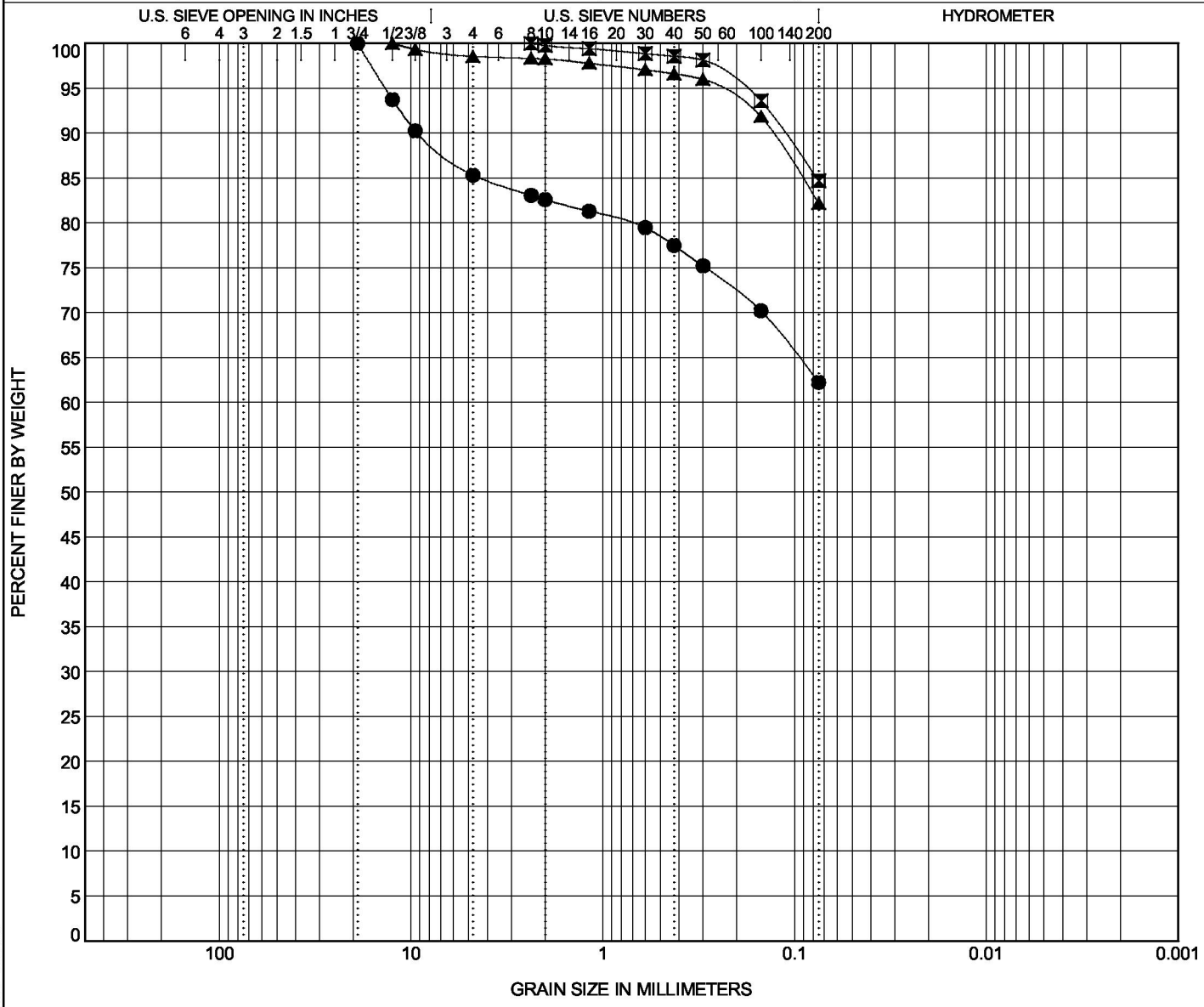
GRAIN SIZE DISTRIBUTION

CLIENT City of Grand Junction **PROJECT NAME** Riverfront at Dos Rios

PROJECT NUMBER 00208-0111 **PROJECT LOCATION** Grand Junction, CO



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Classification	LL	PL	PI	Cc	Cu
●	P1	2/20/2020	SANDY LEAN CLAY(CL)	25	16	9		
⊠	P2	2/20/2020	LEAN CLAY with SAND(CL)	28	17	11		
▲	P3	2/20/2020	LEAN CLAY with SAND(CL)	26	18	8		

Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	P1	2/20/2020	19				14.7	23.1	62.2	
⊠	P2	2/20/2020	2.36				0.0	15.3	84.7	
▲	P3	2/20/2020	12.5				1.4	16.4	82.2	

GRAIN SIZE 00208-0111 RIVERFRONT AT DOS RIOS.GPJ GINT US LAB.GDT 3/10/20

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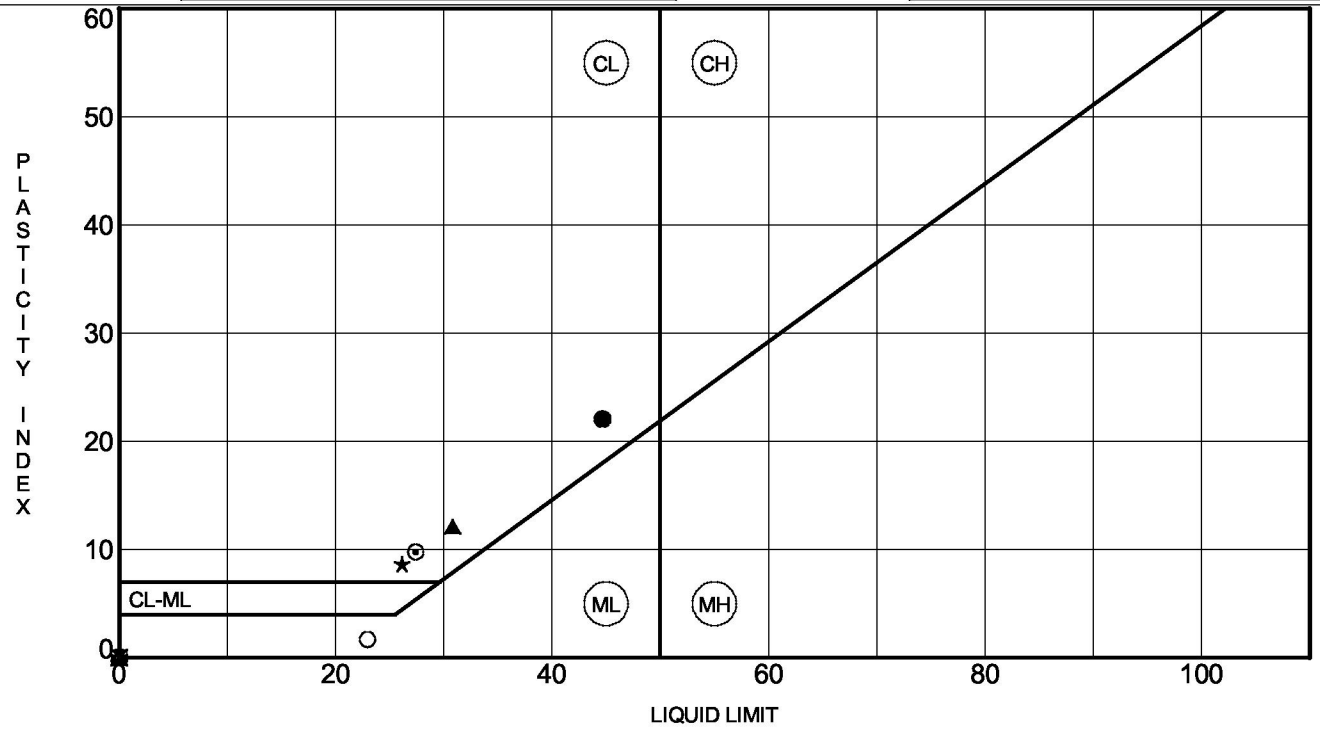
970-255-8005

ATTERBERG LIMITS' RESULTS

CLIENT City of Grand Junction **PROJECT NAME** Riverfront at Dos Rios

PROJECT NUMBER 00208-0111 **PROJECT LOCATION** Grand Junction, CO



	Specimen Identification		LL	PL	PI	#200	Classification
●	B-1, SS1	2/12/2020	45	23	22	97	LEAN CLAY(CL)
⧓	B-1, SS2	2/12/2020	NP	NP	NP	21	SILTY SAND(SM)
▲	B-12, SS1	2/12/2020	31	19	12	53	GRAVELLY LEAN CLAY with SAND(CL)
★	B-3, SS1	2/12/2020	26	17	9	69	SANDY LEAN CLAY(CL)
⊙	TP-1, GB1	2/12/2020	27	18	9	70	SANDY LEAN CLAY(CL)
✡	TP-1, GB2	2/12/2020	NP	NP	NP	20	SILTY SAND(SM)
○	TP-5, GB1	2/12/2020	23	21	2	62	SANDY SILT(ML)
△	TP-6, GB1	2/12/2020	NP	NP	NP	43	SILTY SAND(SM)

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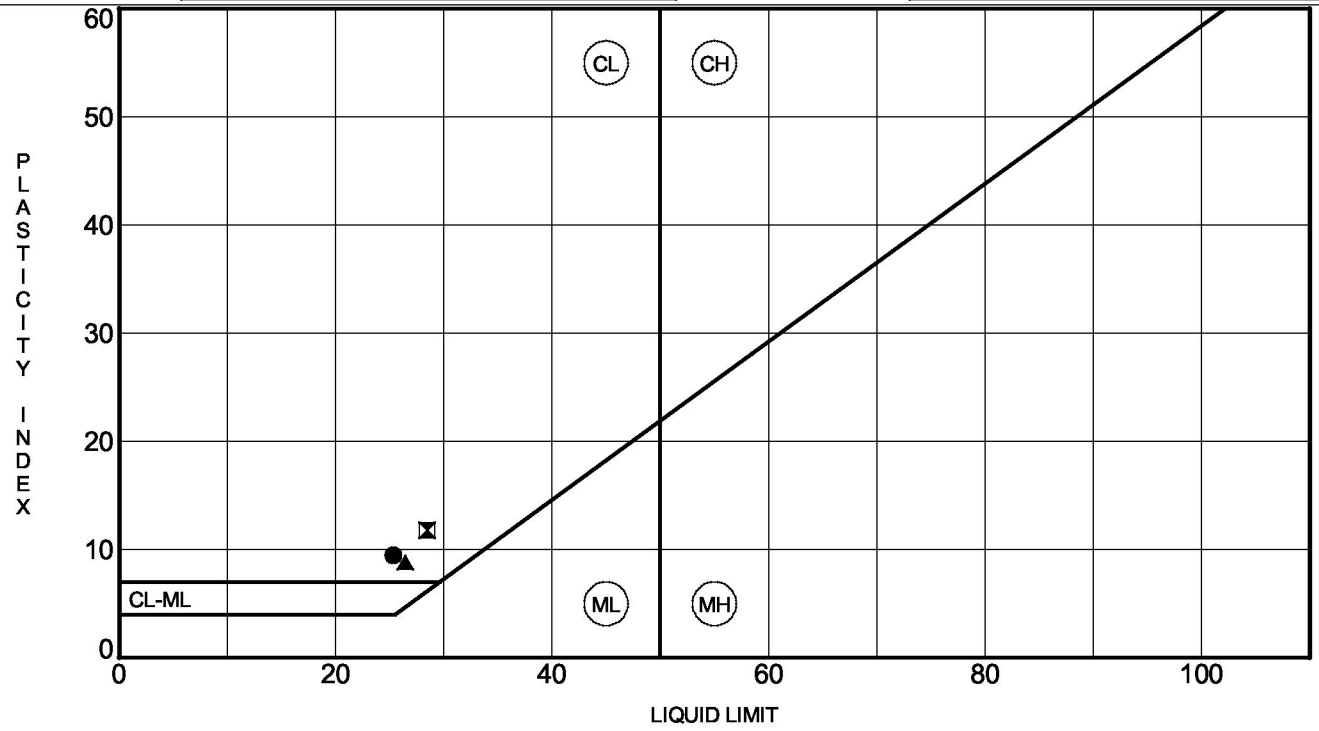
ATTERBERG LIMITS' RESULTS

CLIENT City of Grand Junction **PROJECT NAME** Riverfront at Dos Rios

PROJECT NUMBER 00208-0111 **PROJECT LOCATION** Grand Junction, CO



	Specimen Identification		LL	PL	PI	#200	Classification
●	P1	2/20/2020	25	16	9	62	SANDY LEAN CLAY(CL)
⧓	P2	2/20/2020	28	17	11	85	LEAN CLAY with SAND(CL)
▲	P3	2/20/2020	26	18	8	82	LEAN CLAY with SAND(CL)

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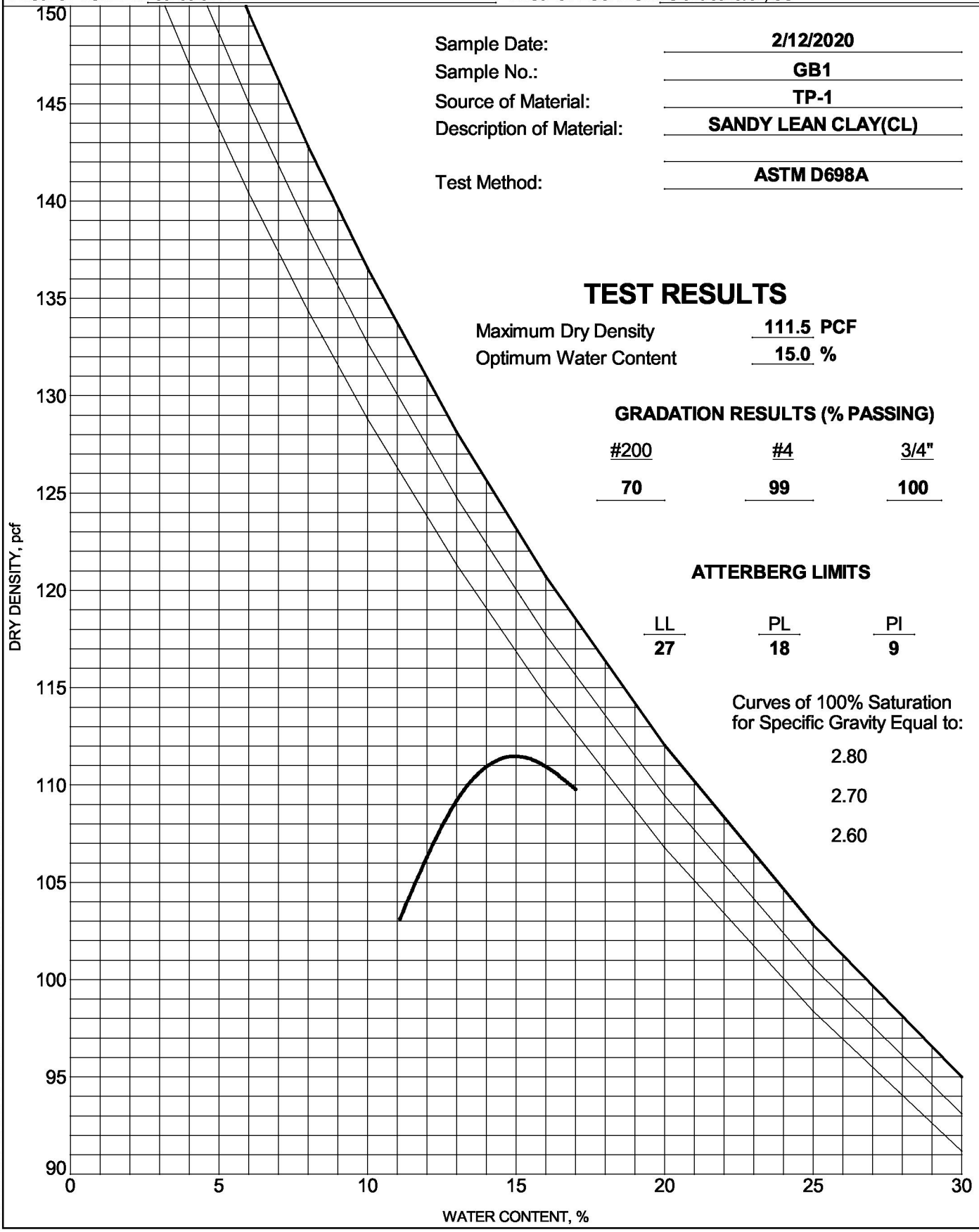
MOISTURE-DENSITY RELATIONSHIP

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO



Sample Date: 2/12/2020
Sample No.: GB1
Source of Material: TP-1
Description of Material: SANDY LEAN CLAY(CL)
Test Method: ASTM D698A

TEST RESULTS

Maximum Dry Density 111.5 PCF
Optimum Water Content 15.0 %

GRADATION RESULTS (% PASSING)

#200	#4	3/4"
70	99	100

ATTERBERG LIMITS

LL	PL	PI
27	18	9

Curves of 100% Saturation for Specific Gravity Equal to:

2.80
2.70
2.60

COMPACTION 00208-0111 RIVERFRONT AT DOS RIOS.GPJ GINT US LAB.GDT 3/5/20

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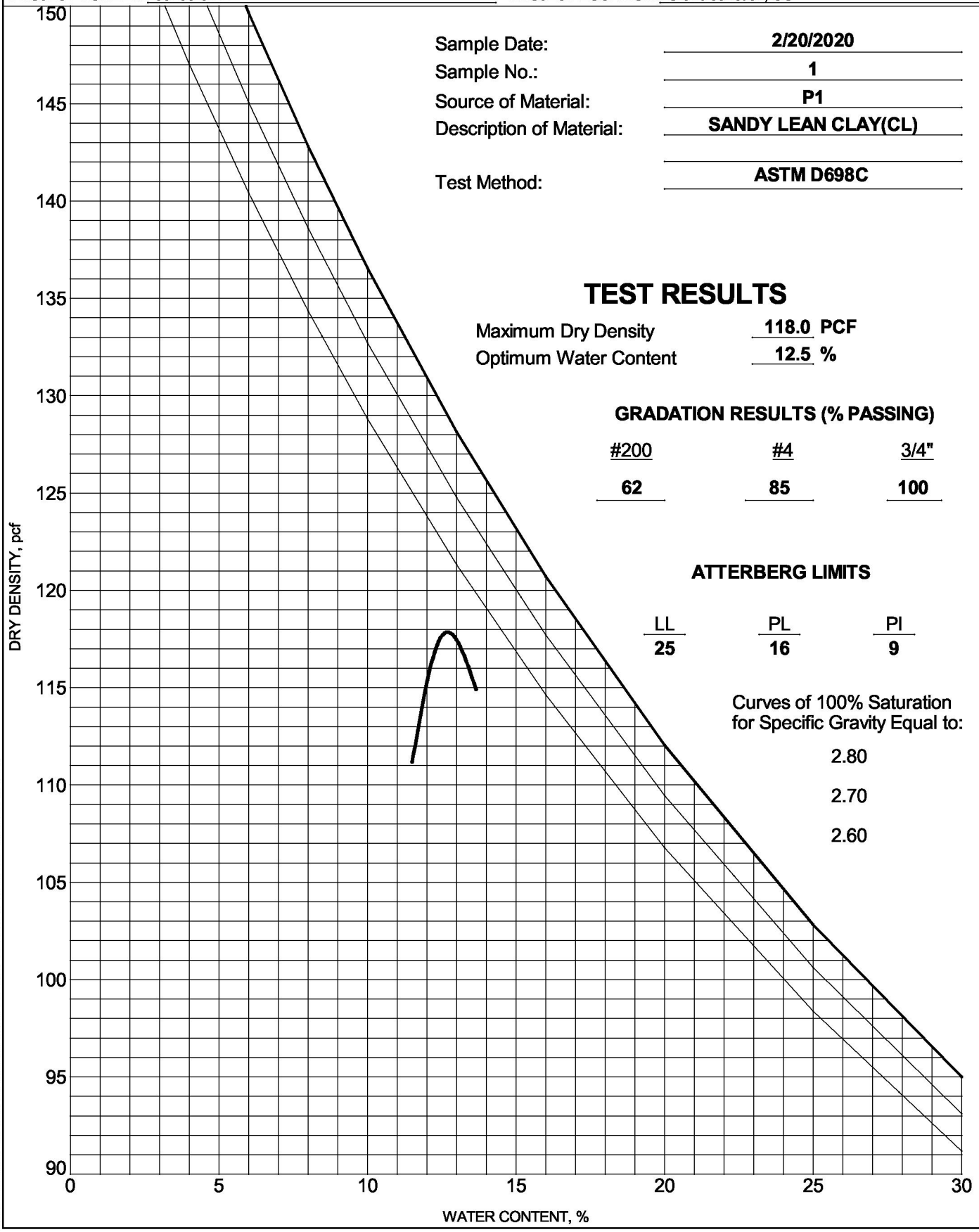
MOISTURE-DENSITY RELATIONSHIP

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO



Sample Date: 2/20/2020
Sample No.: 1
Source of Material: P1
Description of Material: SANDY LEAN CLAY(CL)

Test Method: ASTM D698C

TEST RESULTS

Maximum Dry Density 118.0 PCF
Optimum Water Content 12.5 %

GRADATION RESULTS (% PASSING)

#200	#4	3/4"
62	85	100

ATTERBERG LIMITS

LL	PL	PI
25	16	9

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

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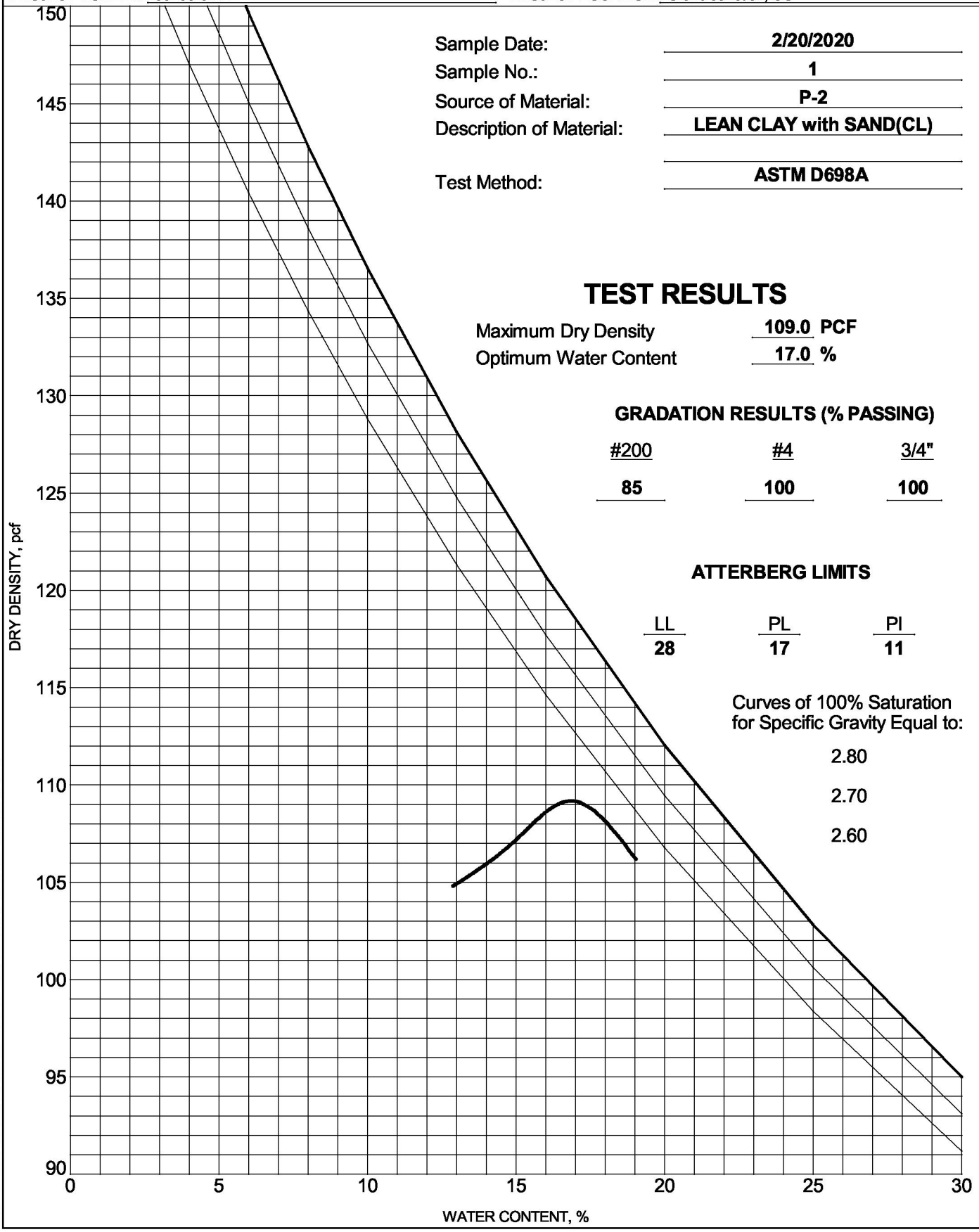
MOISTURE-DENSITY RELATIONSHIP

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO



Sample Date: **2/20/2020**
Sample No.: **1**
Source of Material: **P-2**
Description of Material: **LEAN CLAY with SAND(CL)**
Test Method: **ASTM D698A**

TEST RESULTS

Maximum Dry Density **109.0** PCF
Optimum Water Content **17.0** %

GRADATION RESULTS (% PASSING)

#200	#4	3/4"
85	100	100

ATTERBERG LIMITS

LL	PL	PI
28	17	11

Curves of 100% Saturation for Specific Gravity Equal to:

2.80
2.70
2.60

COMPACTION 00208-0111 RIVERFRONT AT DOS RIOS.GPJ GINT US LAB.GDT 3/10/20

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Grand Junction, CO 81501
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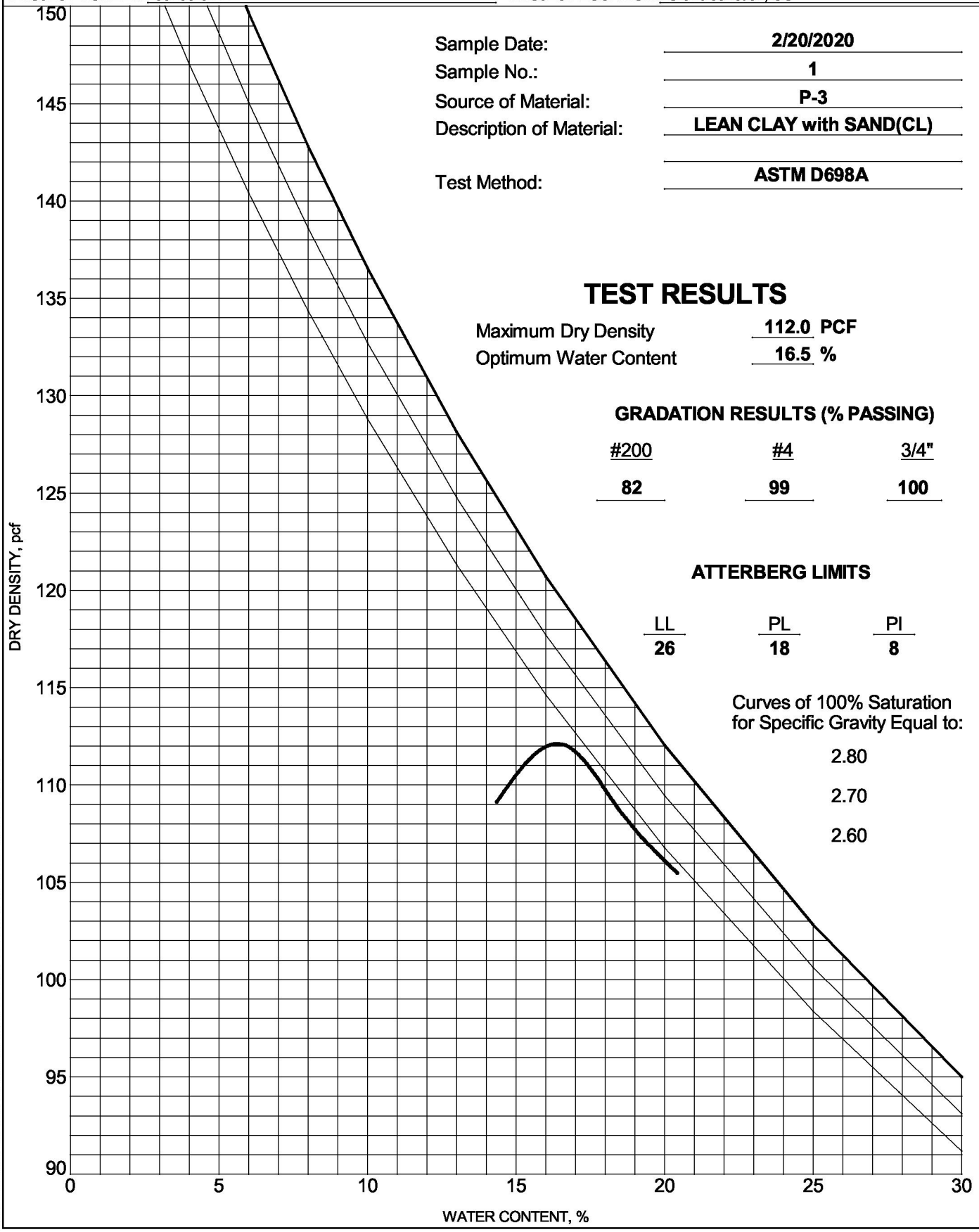
MOISTURE-DENSITY RELATIONSHIP

CLIENT City of Grand Junction
PROJECT NAME Riverfront at Dos Rios
PROJECT NUMBER 00208-0111
PROJECT LOCATION Grand Junction, CO



Sample Date: 2/20/2020
Sample No.: 1
Source of Material: P-3
Description of Material: LEAN CLAY with SAND(CL)
Test Method: ASTM D698A

TEST RESULTS

Maximum Dry Density 112.0 PCF
Optimum Water Content 16.5 %

GRADATION RESULTS (% PASSING)

#200	#4	3/4"
82	99	100

ATTERBERG LIMITS

LL	PL	PI
26	18	8

Curves of 100% Saturation for Specific Gravity Equal to:

2.80
2.70
2.60

Huddleston-Berry
Engineering & Testing, LLC

CALIFORNIA BEARING RATIO
ASTM D1883

Project No.:	00205-0111		**Authorized By:**	Client	**Date:** 02/19/20
Project Name:	Riverside at Dos Rios		**Sampled By:**	SD	**Date:** 02/19/20
Client Name:	City of Grand Junction		**Submitted By:**	SD	**Date:** 02/19/20
Sample Number:	20-0107	**Location:** TP-1, GB1	**Reviewed By:**	MAB	**Date:** 03/06/20

Compaction Method: ASTM D698, Method A

Maximum Dry Density (pcf): 111.5

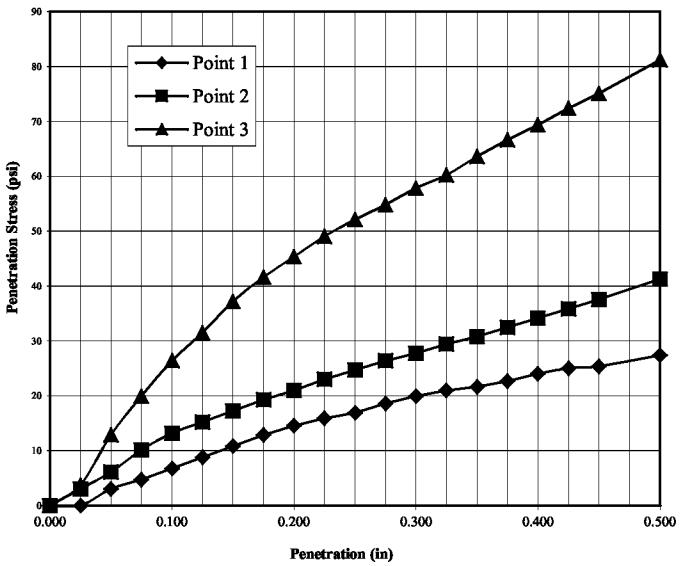
Opt. Moisture Content (%): 15.0

Sample Condition: Soaked

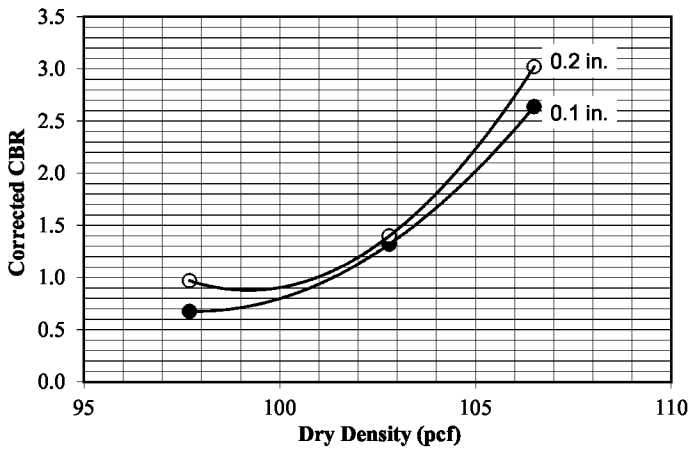
Remarks:

		Sample Data		
		Point 1	Point 2	Point 3
Blows per Compacted Lift:		15	25	56
Surcharge Weight (lbs):		10.0	10.0	10.0
Dry Density Before Soak (pcf):		97.7	102.8	106.5
Dry Density After Soak (pcf):		96.9	102.0	105.6
Moisture Content (%)	Bottom Pre-Test	15.3	14.9	15.0
	Top Pre-Test	15.6	14.2	15.4
	Top 1" After Test	26.9	27.0	24.5
	Average After Soak:	21.3	19.7	18.8
Percent Swell After Soak:		0.8	0.8	0.9

Load Pentration Curve(s)



Dry Density vs CBR



Penetration Data								
Point 1			Point 2			Point 3		
Dist. (in)	Load (lbs)	Stress (psi)	Dist. (in)	Load (lbs)	Stress (psi)	Dist. (in)	Load (lbs)	Stress (psi)
0.000	0	0	0.000	0	0	0.000	0	0
0.025	0	0	0.025	9	3	0.025	11	4
0.050	9	3	0.050	18	6	0.050	38	13
0.075	14	5	0.075	30	10	0.075	59	20
0.100	20	7	0.100	39	13	0.100	78	26
0.125	26	9	0.125	45	15	0.125	93	31
0.150	32	11	0.150	51	17	0.150	110	37
0.175	38	13	0.175	57	19	0.175	123	42
0.200	43	15	0.200	62	21	0.200	134	45
0.225	47	16	0.225	68	23	0.225	145	49
0.250	50	17	0.250	73	25	0.250	154	52
0.275	55	19	0.275	78	26	0.275	162	55
0.300	59	20	0.300	82	28	0.300	171	58
0.325	62	21	0.325	87	29	0.325	178	60
0.350	64	22	0.350	91	31	0.350	188	64
0.375	67	23	0.375	96	32	0.375	197	67
0.400	71	24	0.400	101	34	0.400	205	69
0.425	74	25	0.425	106	36	0.425	214	72
0.450	75	25	0.450	111	38	0.450	222	75
0.500	81	27	0.500	122	41	0.500	240	81

Corrected CBR @ 0.1"		
0.7	1.3	2.6
Corrected CBR @ 0.2"		
1.0	1.4	3.0

Penetration Distance Correction (in)		
0.000	0.000	0.000

Figure: ____

Appendix D

Uranium Mill Tailings Management Plan

URANIUM MILL TAILINGS MANAGEMENT PLAN

FOR MANAGING TITLE I URANIUM MILL TAILINGS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES IN WESTERN COLORADO

UPDATED May 2015

Colorado Department
of Public Health
and Environment

URANIUM MILL TAILINGS MANAGEMENT PLAN

FOR MANAGING TITLE I URANIUM MILL TAILINGS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES IN WESTERN COLORADO

UPDATED MAY 2015

Colorado Department
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and Environment

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INTRODUCTION

PURPOSE

In 1978 the U.S. Congress passed the Uranium Mill Tailings Radiation Control Act (UMTRCA Public Law 95-604) which tasked the U.S. Department of Energy with stabilizing, disposing, and controlling uranium mill tailings and other contaminated material at 24 inactive uranium processing (mill) sites located in ten different states, where uranium was processed for sale to a federal agency. Nine of the inactive uranium processing sites are located in Colorado. These Title I sites (referred to as "Title I" because the sites were listed in Title I of the law) were located in Grand Junction, Gunnison, Rifle (2), Durango, Maybell, Naturita and Slick Rock (2). While the active cleanup required by UMTRCA has been completed, residual uranium mill tailings remain in the nine affected communities. These residual tailings deposits are referred to as "UMTRA Title I uranium mill tailings" throughout this plan, in order to clearly delineate that this plan pertains only to radioactive materials that originated from UMTRA Title I mill sites.

The Colorado Department of Public Health and Environment is authorized by Colorado Revised Statutes (C.R.S. 25-11-301 et. seq.) to assist local governments in the identification and management of uranium mill tailings remaining in western Colorado communities. Because tailings deposits are often associated with utility rights-of-ways and private property, this plan is also designed to assist utilities and private parties in the identification, proper handling and disposal of uranium mill tailings.

The purpose of this plan is to describe responsibilities and procedures for managing UMTRA Title I uranium mill tailings encountered or disturbed during construction activities in the nine UMTRA communities in western Colorado. All work procedures are designed to minimize worker contact with radioactive materials and comply with the ALARA principle, keeping radiation exposures As Low As Reasonably Achievable. All work will be performed in accordance with *Colorado Rules and Regulations Pertaining to Radiation Control,* (Regulations) 6CCR-100-7, current version.

HISTORY

Beginning around the turn of the century, exploration for ore deposits bearing radioactive elements began in the United States. Western Colorado and adjoining states in the Four Corners area, being rich in these deposits, were heavily prospected. Radium was the primary radioactive element of interest produced by the early mines and mills, followed by exploration for, and production of vanadium, which occurs in the same geologic ores. Then, in the 1940s, the demand for uranium rapidly grew as research progressed for development of atomic weapons and energy. After World War II, the continued research,

nuclear reactor use and the arms race accelerated the demand for uranium, which produced a uranium boom lasting through the 1950s and into the 1960s.

Many hundreds of mines were explored and often developed for ores. Many mill pilot plants, and later operating mill sites, were built to crush ore and separate uranium compounds from the waste materials. The mills produced a uranium product called "yellowcake" and waste tailings sands. These tailings contained most of the original natural radioactivity of the ore, since only one of the radioactive constituents was recovered in the milling process.

The waste tailings were piled at the mills, but erosion from wind and water invariably spread the tailings to adjacent areas. In addition, tailings from many of the mills were transported off site and used for construction or as fill materials. As the mills fell into disuse and obsolescence, and as the uranium boom faded, more of the tailings were eroded away or removed for construction.

The Public Health Service and the Colorado Department of Health conducted studies that demonstrated the magnitude of the health-related issues caused by the presence of uranium mill tailings in residential areas. Health effects result from exposure to gamma radiation, inhalation of radioactive particles and from radon gas, produced by natural radioactive breakdown of radium contained in the tailings. In places where uranium mill tailings were used for construction, radon can seep into buildings (homes, offices, schools) and can build up to high concentrations. Many research studies have demonstrated that people breathing air containing elevated levels of radon are at greater risk of lung cancer.

The Public Health Service documented the association between elevated radon and lung cancer during uranium mine studies conducted in the 1950s. In the 1960s, the Colorado Department of Health and the Public Health Service expanded the studies to include areas around mill sites. The studies concluded that excessive radiation exposure could result from indiscriminate use of tailings and that persons were at increased risk due to the presence of the uranium mill tailings. By this time, thousands of tons of tailings from the uranium mills had been used in residential areas for construction. In Grand Junction, Colorado, mill tailings from the former Climax Mill Site, which had been spread throughout the community, were identified as a health risk and the Colorado Department of Health soon issued an order to cease the use of tailings in construction.

Because of the availability and many possible uses of the sandy uranium mill tailings as a building material, the dispersal and misuse was widespread. Some examples of uranium mill tailings use were: soil attenuation, concrete mix, bedding for concrete and utilities, stucco, and brick production.

Experience has shown that as construction and demolition activities occur, new uranium mill tailings deposits will be discovered and disturbance of known deposits will occur. New construction close to such deposits increases potential public exposure to gamma radiation and radon.

GRAND JUNCTION REMEDIAL ACTION PROGRAM

Concerns about health risks and property values grew as the extent of the uranium mill tailings misuse became public. Nationwide publicity announced and often exaggerated the problem. Congressional hearings were conducted, and in 1972, Public Law 92-314 created the Grand Junction Remedial Action Program to reduce radiation exposures inside structures affected by uranium tailings in the Grand Junction community. The U.S. Surgeon General published cleanup guidelines for the voluntary project. During the 15-year program, 594 structures in Mesa County underwent remedial action, where the radioactive material was removed by government contractors.

URANIUM MILL TAILINGS REMEDIAL ACTION PROGRAM

From the late 1960s, it was known that the misuse of uranium tailings was not unique to the Grand Junction, Mesa County area. In 1978, the U.S. Congress passed Public Law 95-604, the Uranium Mill Tailings Radiation Control Act (UMTRCA). This law enabled the creation of the Uranium Mill Tailings Remedial Action Project and required the U.S. Environmental Protection Agency to develop cleanup standards. The U.S. Department of Energy was responsible for stabilizing, disposing, and controlling uranium mill tailings and other contaminated material in cooperation with States and Tribes. The project extended the assessment and cleanup of uranium tailings nationwide for both structure interiors and exterior deposits. By the conclusion of the Uranium Mill Tailings Remedial Action Program in 1998, approximately 5,000 properties and nine uranium mill sites had been cleaned up in Colorado. In Colorado alone, approximately 15 million cubic yards of uranium tailings were removed to controlled disposal sites.

Nine uranium mill sites in western Colorado qualified for remedial action under Title I of the Uranium Mill Tailings Remedial Action Program. These Title I sites were located in Grand Junction, Gunnison, Rifle (2), Durango, Maybell, Naturita and Slick Rock (2). These were inactive or abandoned sites, which had sold uranium to the U.S. Atomic Energy Commission exclusively. The Department of Energy performed site assessments and environmental impact studies and developed options for permanent, environmentally safe disposal of the radioactively contaminated materials.

Disposal cells were designed and constructed to comply with strict criteria regarding ground water protection, seismology, erosion protection, settlement and infiltration. The cells were designed to last for 200 to1,000 years. Therefore, erosion resistant, natural materials were used in the construction of the cells. The typical cell was excavated into low permeability bedrock and filled with compacted uranium mill tailings. A very low permeability layer was added on top of the uranium mill tailings as a cover to contain the radon gas and limit the entry of water. An erosion resistant rock layer capped the cells.

All of the Colorado Title I disposal cells, except for the Maybell site in Moffat County, were located away from the mill sites to situate the tailings out of floodplains and away from shallow ground water. The Maybell tailings pile was reengineered and reworked to provide compaction and erosion protection and capped in place. All of the disposal cells will be monitored and maintained under the Long Term Surveillance and Maintenance Program managed by the Department of Energy.

The Title I disposal cell for Mesa County, known as the Grand Junction Disposal Facility (GJDF) at 4800 Hwy 50 Whitewater, CO will remain open to receive tailings from all UMTRA Title I communities until at least 2023. (The GJDF was formerly known as the Cheney Disposal Site or Cell.) Recognizing the need for long term management and storage of the remaining uncontrolled tailings, Congress revised the Uranium Mill Tailings Radiation Control Act in 1996 to allow for continued use of the GJDF. The Department of Energy will continue to maintain, operate and fund the GJDF cell. The GJDF cell is the only Uranium Mill Tailings Remedial Action Program site remaining open and available to receive uranium tailings.

MANAGEMENT OF UNCONTROLLED TITLE I URANIUM MILL TAILINGS

UNCONTROLLED TITLE I URANIUM MILL TAILINGS

Despite widespread publicity, two cleanup programs extending over 25 years, and thousands of property investigations, Title I uranium mill tailings remain in several western Colorado communities. It is suspected that up to half a million cubic yards of tailings remain outside of the controlled disposal cells.

Over 70,000 properties have been surveyed in Colorado for uranium mill tailings. Because of the voluntary nature of the project and difficulty in finding hidden, shielded deposits such as those beneath soils or under foundations, not all properties were investigated and not all deposits were found. Also, in some circumstances an owner refused to participate in the cleanup project after tailings were found on their property.

In addition to tailings that were never detected, or those where the owner refused cleanup, there were several other situations where tailings were left in place, including 1) Tailings excluded from exterior removals; 2) Tailings excluded from interior removals and 3) Supplemental Standards areas. All of these situations, explained in detail below, represent potential instances where tailings may be uncovered and require safe management in the future.

TAILINGS EXCLUDED FROM EXTERIOR REMOVALS

The Environmental Protection Agency standards for exteriors allowed measurements of radiation exposure to be averaged over 100 square meters. Thus, a small area of elevated contamination was often averaged with uncontaminated areas, resulting in small quantities of uranium mill tailings being left in place. The Colorado Department of Public Health and Environment now advises/recommends that all areas of elevated concentrations (also known as "hot spots") be removed from the construction footprint plus a ten-foot buffer area, in order to minimize future exposure to the hot spot and/or further spreading of the tailings material during future construction activities.

TAILINGS EXCLUDED FROM INTERIOR REMOVALS

The Environmental Protection Agency standards for interiors addressed the interior average gamma exposure rate and the annual average radon levels. Contaminated structural materials, such as foundations or tailings under slabs, were often left in place if the interior radiation levels were below the standards. The State advises removal of all tailings from under slabs or structures.

SUPPLEMENTAL STANDARDS

The Environmental Protection Agency cleanup standards allowed for a variance from meeting standards in certain situations. This variance was called "supplemental standards." The most common use of supplemental standards was in situations where the cost of tailings removal was greater than the health risks associated with leaving the tailings deposit in place. The use of supplemental standards resulted in tailings being left in place. Approval of supplemental standards by the Colorado Department of Public Health and Environment and the Nuclear Regulatory Commission required that the deposit was in such an area that current and future land use would result in minimal radiation exposures to the public. Often, when Supplemental Standards were used, some partial removal would take place to remove surface contamination, but leave uranium mill tailings at depth. Records of Supplemental Standards applications are available from the Colorado Department of Public Health and Environment.

Examples of areas containing uranium mill tailings left in place through the application of supplemental standards include railroad tracks, city streets and curb/gutter, steep slopes, river islands, basements, patios, currently uninhabited structures, and utility lines. Grand Junction, Colorado, has the greatest number of supplemental standards areas, but supplemental standards deposits also exist in the Maybell, Durango, Rifle, Gunnison, Naturita and Slick Rock communities.

TAILINGS MANAGEMENT PLAN

The laws and regulations pertaining to UMTRA Title I materials did not anticipate the impacts on new construction projects or changes in land use when residual tailings were left in place after the remediation projects were completed. Thus, there is a need for a long-term management plan to help guide persons who may contact residual Title I tailings materials. This management plan is designed to be relatively simple and easy to use. The main elements of the management plan include:

1) the availability of an interim storage facility, useable by local governments, utilities and private parties on short notice,
2) the assignment of responsibilities,
3) health and safety concerns, including procedures to limit radiation exposure
4) training requirements and responsibilities,
5) procedures for excavation and transportation, and
6) the availability of a long-term disposal site.

These elements are addressed in the following sections.

The general process related to uncontrolled tailings is outlined as follows, and discussed in greater detail in the following sections. A property owner, owner's representative or realtor requests information about a property from the Colorado Department of Public Health and Environment, either for a property transaction or a building permit application. Available records are provided to the property owner at that time. If no records exist, or if there is a question about whether or not tailings may be present, the Colorado Department

of Public Health and Environment may send an inspector to the property to conduct a gamma radiation survey. If tailings are present on the property, the Colorado Department of Public Health and Environment will provide a recommendation and information regarding the procedures for removing the material, following this plan. The removal of the material may be conducted by the property owner (referred to later in this plan as "private citizen") or through the use a contractor. Local governments may also conduct tailings removals. The tailings are removed from the property, following the procedures outlined in this plan, and hauled to the Interim Storage Facility. Once the materials are safely stored and the vehicle and personnel have been decontaminated and released by the Colorado Department of Public Health and Environment, the materials are stored until the Grand Junction Disposal Facility is opened to accept material. The material is then hauled to the Disposal Facility by the City of Grand Junction. The Department of Energy requires compliance with the Waste Acceptance Criteria for the Grand Junction Disposal Site (most recent version).

INTERIM STORAGE FACILITY



THE FACILITY

The Interim Storage Facility (ISF) is a temporary holding area for uranium mill tailings. The facility is owned by the City of Grand Junction and operated in coordination with the Colorado Department of Public Health and Environment. The facility is located at 333 West Avenue, Grand Junction, Colorado.

The ISF provides a temporary, secure, and safe storage for uranium mill tailings excavated during construction activities in Colorado communities. Access to the ISF is facilitated through the Colorado Department of Public Health and Environment or the City of Grand Junction. The tailings will ultimately be transported to the Grand Junction Disposal Facility (GJSF) south of Grand Junction, Colorado. This transfer is normally scheduled on an annual basis.

The interim storage facility consists of an abandoned sewage treatment plant clarifier that is 75 feet in diameter and surrounded by concrete walls approximately 10 feet high. The bottom is a concrete slab, sloping to the center for drainage. A slot has been cut through the walls wide enough to admit a dump truck. A concrete ramp provides access to the entrance. A lockable gate protects the entrance. All holes in the bottom were sealed to make a water-tight storage area.

The facility also includes a shed for storage of records regarding materials brought to the ISF. The City provides a water line extension for decontamination spray or dust control upon request.

The Colorado Department of Public Health and Environment is responsible for access control, decontamination, and maintenance of records regarding materials brought to the

ISF. If Department personnel are not available, such as during an emergency water main break, the City of Grand Junction may assume these duties. Prior to accessing the ISF, the Colorado Department of Public Health and Environment will arrange for someone to meet the truck and provide a radiation meter for frisking and decontamination. Supervision of unloading, decontamination of vehicles and personnel after Colorado Department of Public Health and Environment working hours is the responsibility of the City of Grand Junction, which is the only entity authorized to access the facility after hours.

UNLOADING

The hauling truck will back into the facility to place the load as close as possible to the back wall or near already placed material. The driver should prevent tires from coming in contact with contaminated materials in order to reduce the need for decontamination. Material brought to the interim storage facility must be sized as small as possible to allow for compaction at the Grand Junction Disposal Facility site. No debris may exceed 3 feet cubed or 10 feet in any dimension. Waste brought to the ISF should be in compliance with the Department of Energy's Waste Acceptance Criteria for the Grand Junction Disposal Site (most recent version). No uncovered loads may be brought to the ISF unless all transported contamination is in a solid form; such as bound in concrete (see Hauling).

DECONTAMINATION

The truck bed will be inspected for visible uranium mill tailings contamination, soil and debris remaining after dumping. Material that did not dislodge will be pushed out with shovels or brooms. The truck will then proceed to the entrance for inspection of tires and undercarriage. All visible or measureable contamination will be removed from the tires and undercarriage.

Any use of the interim storage facility will be recorded. . The logbook will be kept in the facility shed. Logbook records will be transferred to the Colorado Department of Public Health and Environment office quarterly for permanent storage. The following information is required for every load brought to the ISF:

Date
Origin of contamination (street address)
Estimated cubic yardage
Name of driver/Company
Truck identification (license number)
Inspection for hazardous wastes
High gamma meter reading of the material
Time in and out of the facility
Decontamination status/notes/information

The truck tires and tailgate will undergo frisking according to the frisking procedure in Appendix B. If the tailgate or tires will not pass the frisking limits, the water hose will be

used to further decontaminate the vehicle. If material cannot be dislodged from the bed, it can also be sprayed out at this point. After washing, the tires and tailgate will again be frisked. All water or dislodged material will drain into the interim storage facility. No uranium mill tailings contamination shall be allowed to escape containment within the facility walls.

Individuals that have had physical contact with the uranium mill tailings will have all visible contamination removed by sweeping. The individual will undergo a full body frisk with the frisking meter. If the frisking limits are exceeded, further sweeping or washing will occur, followed by another frisking. If clothing will not decontaminate visibly or pass the frisking survey, the clothing will be changed out in the storage shed. Contaminated clothing will be left at the ISF for disposal.

Once decontamination is deemed complete by the Colorado Department of Public Health and Environment, and the logbook has been filled out, the truck and users may leave the interim storage facility access area. All materials used in decontamination will be returned to the shed. The gate and shed will be locked. The final determination that all procedures, including decontamination, have been completed according to the protocols is the responsibility of the Colorado Department of Public Health and Environment.

RESPONSIBILITIES

Colorado Department of Public Health and Environment

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

The Colorado Department of Public Health and Environment is responsible for the overall oversight of the Title I Uranium Mill Tailings Management Plan. The Department has more than 30 years experience in the management of uranium mill tailings, including expertise in radiation protection, clean up programs, record keeping, public information and health physics.

Colorado Department of Public Health and Environment's responsibilities include:

1) Maintaining, updating and sharing records and documentation
2) Conducting inspections
3) Conducting excavation control
4) Providing technical expertise
5) Overseeing use of the ISF
6) Providing instrumentation

PUBLIC RECORDS AND DOCUMENTATION

The Uranium Mill Tailings Management Plan will be used for technical information and field guidance. The Colorado Department of Public Health and Environment is responsible for the maintenance, distribution and revision of this plan.

The Colorado Department of Public Health and Environment will maintain and update uranium mill tailings records available to the general public and local government agencies. The Colorado Department of Public Health and Environment will produce or update property records as the conditions change due to excavation of the uranium mill tailings. The Colorado Department of Public Health and Environment will provide personnel to interpret records and give health risk information to the public regarding the presence of uranium mill tailings on properties.

The Colorado Department of Public Health and Environment will keep records of Title I uranium mill tailings excavated, received at the interim storage facility, and transported to Grand Junction Disposal Facility. The Colorado Department of Public Health and Environment will maintain records for decontamination of personnel and equipment.

For the UMTRA Title I communities outside of Grand Junction/Mesa County, the Colorado Department of Public Health and Environment will provide general information about uranium mill tailings to the public and local governments.

INSPECTIONS

The Colorado Department of Public Health and Environment will provide inspections of new building areas and demolition sites and inform the appropriate City and County Planning agencies for all pertinent building permits in Mesa County. All properties in Mesa County are to be monitored for the presence of mill tailings by the Colorado Department of Public Health and Environment, and if any are detected they are to be removed from all building sites before new construction commences.

For the UMTRA Title I communities outside of Grand Junction/Mesa County, the Colorado Department of Public Health and Environment will keep available Title I uranium mill tailings records and coordinate inspections of new construction in other communities as time permits and as requested.

EXCAVATION CONTROL

The Colorado Department of Public Health and Environment will provide excavation control for uranium mill tailings removals by private parties, contactors and government agencies by request.

Tailings co-mingled with other wastes cannot be hauled to the ISF or to the GJDF, as these materials are not in compliance with the Department of Energy's Waste Acceptance

Criteria for the Grand Junction Disposal Site. The Colorado Department of Public Health and Environment will conduct inspections prior to tailings removal for the presence of hazardous wastes that could be commingled with uranium mill tailings. The Colorado Department of Public Health and Environment will provide expertise on segregation, testing and storage of commingled waste. The Colorado Department of Public Health and Environment will provide documentation to the Department of Energy that materials transported to the Grand Junction Disposal Facility do not contain commingled waste.

TECHNICAL EXPERTISE

The Colorado Department of Public Health and Environment will provide technical expertise to communities, local governments or private parties in identifying, handling and management of Title I uranium mill tailings.

INTERIM STORAGE FACILITY

The Colorado Department of Public Health and Environment will routinely manage operations and record keeping at the interim storage facility. The Colorado Department of Public Health and Environment will conduct radiological surveys of the interim storage facility to insure its proper operation and containment of material. Spot checks will occur during heavy use, high winds or rain.

RADIOLOGICAL SURVEY INSTRUMENTS

The Colorado Department of Public Health and Environment will provide radiological survey instruments on loan to local governments and private parties on an as-needed basis. The Colorado Department of Public Health and Environment will maintain and calibrate the instruments annually as budgets allow and provide training in the use of the instruments.

TRAINING

The Colorado Department of Public Health and Environment will provide training to workers excavating tailings and will provide on-site safety briefings as needed. The Colorado Department of Public Health and Environment will be available to explain technical problems, options, radiation health risks or any part of the Uranium Mill Tailings Management Plan. The "Training" section of this plan describes the safety training in more detail.

LOCAL GOVERNMENTS AND PUBLIC UTILITIES



The local governments and public utilities are responsible for following the procedures in this plan, designed to locate residual uranium mill tailings in construction areas, and to excavate and transport contaminated material while minimizing impact and radiation exposure. The local governments and utilities recognize that cooperation and coordination between the Colorado Department of Public Health and Environment, the Department of Energy, utilities, and local governments is paramount. All parties recognize and understand that some inconvenience and costs are involved in the proper handling and disposal of residual uranium mill tailings.

TRAINING

Local governments and utilities will require and assign radiation training as required under this plan for workers potentially exposed to ionizing radiation from uranium mill tailings. Training requirements are described later in this document.

COSTS

The costs of excavation, handling and transporting of uranium mill tailings by local governments and public utilities will be borne by these entities. Local governments may apply for grants to cover these costs in accordance with HB 97-1248, through the Colorado Department of Local Affairs and the Associated Governments of Northwest Colorado.

ENFORCEMENT OF PROCEDURES

Local governments and public utilities will be responsible for monitoring and enforcing the procedures for workers under their direct control. Supervisors will observe operations and enforce the written procedures of the Uranium Mill Tailings Management Plan, and the Colorado Rules and Regulations Pertaining to Radiation Control.

POINT OF CONTACT

Local governments and public utilities will identify personnel responsible for contact and coordination with Colorado Department of Public Health and Environment.

INSTRUMENTS

Local governments and public utilities will maintain the radiological detection instruments provided on loan by the Colorado Department of Public Health and Environment in good working order. The instruments are expensive and require proper care and usage. The instruments will be kept on hand for ease of checking potentially contaminated areas. The

instruments will be returned to the Colorado Department of Public Health and Environment annually for an operations check.

Surveys must be performed in accordance with Appendix D and Colorado Department of Public Health and Environment training.

HAZARDOUS WASTE

Local governments and public utilities will notify the Colorado Department of Public Health and Environment of unusual coloration, smells, or materials such as car batteries or transformers discovered in excavations. Coordination with the Colorado Department of Public Health and Environment shall be made prior to the removal of such materials or soils, as they may contain hazardous wastes substances like asbestos which require special storage, handling or treatment if excavated. A certified asbestos inspector should be used to determine the presence or absence of asbestos contamination if it is suspected. If hazardous material is suspected it should be analyzed by a qualified inspector. Hazardous material may not be taken to the interim storage facility. If hazardous material is taken to the interim storage facility by any local government or public utility, that entity will be responsible for removing the hazardous waste and associated tailings within 30 days of being so notified and manage the material in accordance with all federal, state and local requirements. The Hazardous Materials and Waste Management Division technical assistance line (303) 692-3320 is available to provide instructions on how to manage the waste. All materials brought to the ISF must comply with the Department of Energy's Waste Acceptance Criteria for the Grand Junction Disposal Site (most recent version.)

RECORDS CHECK

Local governments and public utilities are responsible for checking available records or maps prior to a planned excavation activity. Up-front knowledge of tailings locations will enable subcontractors to more accurately bid projects. The Colorado Department of Public Health and Environment has copies of the supplemental standards database to assist in locating tailings deposits. The Colorado Department of Public Health and Environment also will retain the records of several thousand properties assessed or cleaned up in Uranium Mill Tailings Remedial Action Program communities.

PERMITS

Construction activities in public right-of-ways are controlled by local governments through the issuance of permits. Work permitted in an area of known tailings involvement will have the statement "tailings procedures in effect" written on the work order and will include a requirement for coordination with the Colorado Department of Public Health and Environment.

EXCAVATION CONTROL

The local governments and public utilities supervising excavations into deposits of uranium mill tailings will minimize over-excavation. Over-excavation is the removal of uncontaminated materials or mixing of uncontaminated materials with uranium tailings for transport to the interim storage facility. Over-excavation is controlled by radiological surveys and segregation of contaminated and uncontaminated material. In most cases, tailings deposits are small and localized. For such situations, a small excavator is the appropriate equipment for this type of removal. In general, the size and capacity of the excavator should match the size of the job. The excavation tool should fit the job to prevent over excavation.

INTERIM STORAGE FACILITY

The City of Grand Junction will be responsible for providing and maintaining the infrastructure necessary for operation of the interim storage facility (ISF), including an operating water line. The City will provide a gate and lock for security of the ISF and equipment shed. The City will also consolidate stockpiles within the ISF as requested by the Colorado Department of Public Health and Environment. No material will enter the ISF without proper documentation completed and stored in the ISF shed. All non-city generated material will be cleared through the Grand Junction UMTRA CDPHE office prior to placement in the ISF.

TRANSPORT TO THE GRAND JUNCTION DISPOSAL FACILITY

The City of Grand Junction will be responsible for transport of the uranium mill tailings to the Department of Energy disposal site from the interim storage facility. All training and procedures required by the Department of Energy for entering the Grand Junction Disposal Facility site (GJDF) will be adhered to. In cases of large quantities, the Colorado Department of Public Health and Environment may arrange for direct transport of the material from the excavation to the GJDF cell. In these cases, the property owner is responsible for transportation. Transportation must meet the requirements of the Colorado Rules and Regulations Pertaining to Radiation Control Part 17 and Colorado Department of Transportation requirements. In addition, all material hauled to the GJDF must be cleared by the CDPHE and meet the Waste Acceptance Criteria for the Grand Junction Disposal Site, as established by the Department of Energy.

UNITED STATES DEPARTMENT OF ENERGY

OPERATION OF THE GRAND JUNCTION DISPOSAL FACILITY

The Department of Energy is responsible for providing resources and coordination necessary to receive uranium mill tailings at the GJDF disposal cell periodically from the

stockpile at the interim storage facility. Currently, it is projected that materials will be trucked from the interim storage facility to the GJDF at least once a year for a two-to-three-week period. This frequency will vary as needed.

The Department of Energy is responsible for providing resources and coordination necessary to receive uranium mill tailings at the GJDF during large planned construction projects, such as sewer line replacement in a supplemental standards area. Planned disturbance of large quantities of uranium mill tailings may be trucked directly to the GJDF without using the interim storage facility, if approved by the Department of Energy.

The Department of Energy is also responsible for developing and maintaining the Waste Acceptance Criteria for the Grand Junction Disposal Site and for assuring that any changes to the criteria are communicated to the Colorado Department of Public Health and Environment.

LONG TERM SURVEILLANCE AND MAINTENANCE

The Department of Energy is responsible for the long-term surveillance and maintenance of the Grand Junction Disposal Facility disposal cell. All costs associated with the operation and maintenance of Grand Junction Disposal Facility is at Department of Energy expense.

CONTACT PERSON

The Department of Energy shall provide a point of contact for coordinating and planning between local governments, utilities and the Colorado Department of Public Health and Environment. The point of contact will receive any reports that the Department of Energy requires.

MAPS

The Department of Energy will provide maps delineating supplemental standards areas to the Colorado Department of Public Health and Environment and local governments.

PRIVATE PROPERTY OWNERS



In Mesa County, private parties or their contractors will notify the Colorado Department of Public Health and Environment of a request for a building or demolition permit through the Mesa County Planning Department. The owners or contractors will follow the recommendations issued to the Planning Department by the Colorado Department of Public Health and Environment through the Building Permit Survey Program.

In Title I uranium mill tailings impacted communities, property owners bear the costs of excavating, stockpiling, and transporting of uranium mill tailings contaminated materials to the interim storage facility, a licensed disposal facility, or to the GJDF. Prior to moving material to the facility, the owner must coordinate with the Colorado Department of Public Health and Environment

The private parties or their contractors will follow the ALARA principle throughout all work with uranium mill tailings. See the ALARA section.

HEALTH AND SAFETY

IONIZING RADIATION EXPOSURE CONCERNS



Uranium mill tailings consist of sand-like wastes generated from the milling of uranium ores to extract "yellowcake," a uranium oxide compound. These tailings contain most of the original radioactivity found in the unprocessed ores. Radioactive radium, thorium, lead and other elements in tailings are unstable and decay by ejecting alpha and beta particles from the nucleus and by releasing excess energy as radiation. The radiation from the decaying tailings atoms has the potential to cause cancer in living tissues.

The main radiation exposures from uranium mill tailings are from direct exposure to gamma radiation, inhalation of radon, and inhalation of airborne radioactive particles.

Based on a human health risk assessment conducted by the Department of Energy (DOE, 1989) gamma radiation exposure to the public from residual uranium mill tailings is expected to be below the 100 millirem per year exposure limit for the general public.

Radon is formed when the radium in the tailings decays. Radon decays by ejecting alpha and beta particles and forms a series of short-lived radioactive products. The particles ejected by radon and its products cannot travel very far in air and cannot penetrate skin, thus are not an external hazard. However, if inhaled, these particles can cause damage to the lungs that could eventually result in lung cancer. Radon is found naturally in air in small amounts. Exposure to radon becomes a health hazard when it accumulates in buildings or mines to higher levels and is inhaled for extended periods. .

A third potential source of radiation exposure is radioactive particles (dust) associated with the tailings that can become airborne. Once airborne, these particles can be inhaled, with subsequent exposure to the respiratory tract. Airborne particulate contamination is routinely controlled to negligible concentrations by the application of water mists or sprays to equipment or tailings releasing dust. Dust masks can also be worn to control this exposure for workers.

The radiation exposures to utility workers excavating uranium mill tailings are greatest in trenches. Radon is heavier than air, and before dispersal occurs, will be at higher levels at the bottom of the trench. The radon levels would probably be greatest when the trench is opened up and lessen somewhat later due to mixing with air. Gamma radiation exposure is also more likely in a contaminated trench. There may be pure tailings in the bedding of the utility line and tailings mixed with the soils in the walls of the trench. The result is radiation exposure to workers from the sides as well as the bottom of the trench.

RADIATION RISK ANALYSIS

The limit for radiation exposure from uranium mill tailings for non-radiation workers is 100 millirem per year in the Regulations, Part 4.14.1, Radiation Dose Limits for Individual Members of the Public. This is a "total dose limit" which includes both internal and external exposure, rather than only external exposure to gamma radiation. The Environmental Protection Agency is currently considering lowering this limit to 15 millirem per year, while the Nuclear Regulatory Commission believes that 25 millirem per year should be used (as applied in the decommissioning of facilities). The allowable exposure for radiation workers is 5,000 millirem per year. Radiation workers are carefully and continuously scrutinized in a radiation workers health monitoring program.

The Department of Energy prepared a health risk analysis in 1989 for utility workers entering trenches that contain uranium mill tailings. The analysis calculated potential worst-case exposures to workers in trenches and compared them to the regulatory limit, (100 millirem per year above background for non-radiation workers, required by the Code of Federal Regulations (CFR), Title I0, Part 20). In the Colorado, background radiation varies from 350 to 650 millirems per year.

The analysis was based on a series of hypothetical projects to remove uranium mill tailings surrounding buried utilities. Water line repairs were estimated to last 39 hours. It was assumed that an individual worker would be in the trench only 25 percent of the time due to scheduling rotations. Thus, 10 hours per year of exposure was allotted to water line repairs.

Approximately eight hours of exposure was allotted to sewer line work with an individual spending only 10 percent of the time in a contaminated trench. Extra exposures were added to account for potential manhole repair. Therefore, two hours of exposure was used in the calculation for sewer line work.

Twelve total hours (10 for water lines and 2 for sewer lines) of yearly potential exposure at the highest, worst-case radiation levels detected in trenches gives an estimated exposure of 9.6 millirem to a utility worker, or 1/10 of the 100 millirem limit.

No exposure limit or regulation exists for radon in outside air, except for uranium and thorium mill tailings disposal cells. The radon limit for miners is four working level months per year. The Environmental Protection Agency has set a voluntary suggested indoor action level at 0.02 Working Levels (WL). This equates to about one working level month per year. The highest radon levels encountered in trenches during the analysis were 0.058 WL. The potential annual working level months-per-year after exposure to 0.058 working levels for 12 hours is 0.004 working level months-per-year, which is below the Environmental Protection Agency indoor action level.

The conclusion of the Department of Energy health risk analysis is that based upon these presumptions, "there is no clear present or future health risk to utility workers in Mesa

County due to potential gamma or radon exposure, even based upon the worst-case scenarios."

AS LOW AS REASONABLY ACHIEVABLE (ALARA)

Even though the Department of Energy's risk assessment demonstrated that risk to utility workers in trenches containing uranium mill tailings is expected to remain below regulatory limits, the Tailings Management Plan supports adherence to the ALARA philosophy, as stated in Part 4.5 of the Regulations, to limit exposure to levels less than the regulatory requirement.

ALARA is an approach to radiation protection to manage and control exposures (both individual and collective to the work force and the general public) and release of radioactive materials to the environment at levels as low as is practical below the regulatory requirement, taking into account social, technical, economic, practical and public policy considerations. As used in this context, ALARA is not a dose limit but a process, which has the objective of attaining doses as far below the applicable controlling limits as is reasonably achievable.

The ALARA principle will be the primary philosophy and tool used for controlling radiation exposures during all activities of managing uranium mill tailings. The ALARA principle will be implemented by use of the following requirements to control exposure:

- The upper limit of gamma exposure allowed will be 15 millirem per year. Supervisors of local government and utility workers should maintain records regarding the number of hours of exposure for their employees who work near uranium mill tailings. If badges are not used to track actual exposures, the exposures can be roughly estimated. Using the average tailings activity, approximately 300 hours of trench work is allowable per year under this exposure limit. The local government or public utility and the Colorado Department of Public Health and Environment may consider additional rotations out of trench work when any individual worker has accumulated 100 hours of work in contaminated trenches in any given year, in order to ensure worker protection.

- When possible, the local government or public utility should consider establishing a control area around exposed tailings. Only trained personnel should be allowed into the controlled area. Individuals entering the controlled area will limit the amount of time spent within the controlled area. Individuals will position their work as far from the contaminated areas as possible. Only necessary equipment or tools will be allowed into the controlled area. Uranium mill tailings contaminated areas will be fenced off from the public during non work hours. No unauthorized entry into the controlled areas is allowed by the public.

- No visible dust is allowed to leave the controlled area. Dust will be controlled through the use of water sprays. However, spraying should be limited to the

amount necessary to keep the excavation dust-free, but should not create runoff from the excavation.

- No eating, drinking, chewing, or smoking is allowed in the controlled area.

- All equipment and personnel in contact with tailings will be surveyed with a radiation meter. If contamination is present, they must undergo decontamination. Haul trucks and contaminated personnel will be frisked with a radiation meter to verify decontamination. Surface meter readings should be under 18 μ R/hr (microRem [Rem = roentgen equivalent man] per hour) or equivalent.

- Haul trucks will be covered with a tarp to prevent windblown transportation. . If the tailings are wet or have the potential of leaking out, a plastic sheet should be positioned in the tailgate to contain tailings.

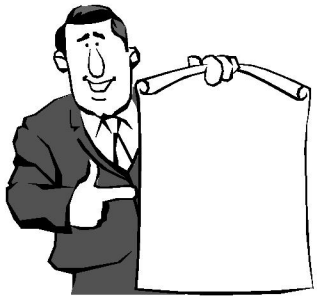
- If a spill occurs, the spill procedures must be followed (see "Transport of Tailings").

- Tailings deposits excavated from the top three feet of an excavation should not be replaced into the excavation. These tailings should be removed and transported to a controlled onsite stockpile or to the interim storage facility. Clean fill should replace tailings deposits for up to three feet from the ground surface. If this is not readily performable, a cap of 6 inches in non traffic areas and 18 inches in high traffic areas should be placed over the tailings at a minimum. This should be placed over stockpiled material as well and a tactifyer such as magnesium chloride should be applied to minimize weathering. This tactifyer should be applied to all temporary stockpiled tailings if stored over 30 days or if weather conditions indicate that tailings may be spread from the stockpile.

TRAINING

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

The Colorado Department of Public Health and Environment employees responsible for implementing the Uranium Mill Tailings Management Plan, and employees who may receive radiological exposures in the work place, will be provided with training and be proficient in the following areas:



40 Hour Hazardous Waste Training
8-hr Refresher Training

Radiological Worker Training
Radiological Refresher Training

The Department will develop and update the curriculum for training of local government and public utilities workers or private owners and agents. The curriculum will include:

Basic Health Physics
Radiation Exposure Limits and Monitoring
Excavation and Transport Procedures
Survey Meter Operation
The ALARA Principle
Decontamination Procedures

LOCAL GOVERNMENTS AND PUBLIC UTILITIES

It is recommended that local governments and public utilities workers who may potentially be exposed to uranium mill tailings will receive training in the following areas:

Radiological Worker Training
Radiological Refresher Training

The workers for these agencies will attend on-site briefings to review uranium mill tailings management procedures before beginning work in an area known to contain uranium mill tailings. The Colorado Department of Public Health and Environment or the local government/public utility supervisors will conduct the briefings.

EXCAVATION PROCEDURES

RADIATION SURVEY

A gamma radiation survey instrument will be accessible to excavation crews working in areas known to be contaminated with uranium mill tailings. The instrument will be provided on loan by the Colorado Department of Public Health and Environment and will be capable of detecting uranium mill tailings in the range of 0-1000 micro Roentgen per hour (μR/h).

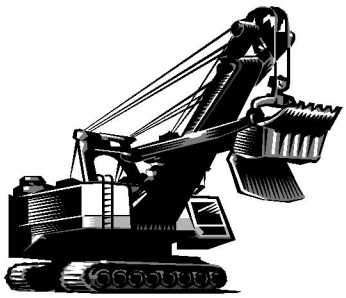
A field operations check on the instrument will be performed before surveying for uranium tailings contamination.

Refer to Appendix D – Generic Survey Procedures for more detailed procedures.

IDENTIFYING CONTAMINATED MATERIAL

For purposes of this plan, residual uranium mill tailings will be identified based on a reading of 30 percent above the normal background gamma radiation. A reading of fourteen μR/h is generally considered the average for western Colorado soils. As such, the background gamma plus 30 percent results in a value of 18 μR/h. Any reading of 18 μR/hr will be considered contaminated with uranium tailings. In non-habitable areas (and non-habitable in the future), a reading of 20 μR/h is allowable. Every area with contamination is to be evaluated and handled individually based on consultation with the Colorado Department of Public Health and Environment. For purposes of this Uranium Mill Tailings Management Plan, and in adherence to the ALARA principle, hot spots will be removed and area averaging is not allowed.

Uranium mill tailings contamination may be in surface deposits or buried, especially in utility trenches. Where applicable, the Department of Energy supplemental standards maps may be used to generally indicate potential areas of contamination. Prior to surface penetration, a check shall be made with a scintillometer. After a trench is excavated, the meter shall be lowered for spot checks along the length of the excavation. Any suspicious gray or purple sands should be particularly checked.
Tailings are often mixed with soils are indistinguishable and appear to be normal dirt.



EXCAVATION

CONTROLLED AREAS

If tailings are identified, a controlled area shall be established, extending 10 feet from the edge of the deposit. Once tailings are identified,

tailings excavation procedures and ALARA principles immediately become effective. The supervisor/property owner is responsible for enforcement of the procedures.

HAZARDOUS WASTES

Uranium mill tailings contaminated areas shall be inspected for asbestos, visible discoloration, odd smells, or for materials such as car batteries or transformers. Mixing of hazardous wastes with the tailings will probably cause the deposit to be considered a commingled waste. Commingled wastes, if above regulatory limits, and untreated, cannot be hauled to the Grand Junction Disposal Facility disposal site. Material hauled to the Grand Junction Disposal Facility must meet the Department of Energy's Waste Acceptance Criteria.

Co-mingled wastes are regulated with specific handling and storage requirements. The Colorado Department of Public Health and Environment shall be notified immediately upon suspicion of such wastes. These deposits shall not be excavated unless necessary and then shall be segregated and stored separately from the other non-comingled tailings and clean soils. The local government or public utility will be responsible for managing commingled wastes in accordance with applicable hazardous waste regulations.

AVOIDING OVER EXCAVATION

If uranium mill tailings need to be excavated, the amount of material disturbed or removed should be minimized. Over excavation causes extra handling costs and fills the limited permanent storage room available in the Grand Junction Disposal Facility disposal cell. Appropriately sized equipment should be used based on the size of the deposit to be excavated. If the tailings cannot be directly loaded onto transportation, stockpiled tailings should be placed onto concrete or plastic sheeting to delineate and separate from the clean soil below it.

Uncontaminated overburden shall be removed and segregated from uranium mill tailings below. Only uranium mill tailings contaminated materials shall be transported to the interim storage facility or Grand Junction Disposal Facility. Care shall be taken to avoid mixing contaminated soils with uncontaminated soils. The radiation meter shall be used to identify soils in question.

The uranium mill tailings contaminated areas considered for removal will be visibly marked for the machine operator. This is to segregate the contaminated material and avoid mixing. Spray paint, colored flags or fencing are appropriate to delineate the uranium mill tailings contaminated areas.

No trash, wood, tires or other non-contaminated solid waste shall be shipped to the interim storage facility or GJDF. Such materials may be decontaminated and disposed of as solid waste. Care shall be taken to segregate uncontaminated concrete from contaminated concrete (It has been our experience that uncontaminated concrete is the material that most

often is improperly brought to the interim storage facility). Contaminated concrete or asphalt shall be sized properly to allow compaction at Grand Junction Disposal Facility. No debris shall be larger than 3 feet in any dimension. No pipe shall be longer than 10 feet in length. All materials shall be sized in accordance with the Department of Energy's Waste Acceptance Criteria for the Grand Junction Disposal Site.

Proper disposal of tailings is always the best means of dealing with tailings. It is the ultimate final termination of the contamination. However, in some cases, particularly in Title I communities outside of the Grand Junction area, transportation to the ISF or GJDF is just not feasible. In these situations, uranium mill tailings can be re-buried on site provided that the following conditions are met:

1) A discussion with CDPHE about disposal options prior to any excavation activities must be conducted.
2) Tailings may be returned to the original excavation, in a last out-first in order.
3) The tailings should be re-buried under a minimum of 6 inches of clean soil in low exposure/traffic areas and 18 inches in high exposure/traffic areas and no deeper than a foot above the vadose (ground-water capillary) zone. 18 inches of clean cover should be used in areas with high erosion potential.
4) Contaminated surface deposits must be re-buried beneath clean fill material as listed in 2).
5) A written record that indicates the approximate volume of material that was re-buried, the meter reading for the material, the approximate depth of burial and the burial location, shall be submitted to CDPHE. These records shall also be maintained in perpetuity by the property owner, provided to any subsequent owner and to any contractors performing work on the property.

STOCKPILING

Stockpiling of uranium mill tailings contaminated material should be avoided whenever possible. Stockpiling may cause concerns to property owners, and may present an exposure hazard. Stockpiling on the same property that the tailings came from is allowable, but not advisable. Tailings may not be removed from the original property except to be taken to a licensed disposal facility, the interim disposal facility at the City of Grand Junction's yard, or the Grand Junction Disposal Facility in Whitewater, CO. Stockpiled material should be fenced from public access, and must be covered or a tacktifyer applied to prevent wind and water erosion. Stockpiles should not be left in place longer than 60 days. If it is necessary to leave them longer than that, or if inclimate weather is emanate, they must be properly covered or sealed.

ASPHALT

When working with asphalt placed over uranium mill tailings contaminated soils, care shall be taken to not penetrate into the tailings and/or mix the tailings with the asphalt. If tailings are mixed with the asphalt, the asphalt should be inspected with a meter. If the

mixture shows a meter reading of 30 percent above the radiological background (a reading of 18 uR/hr or greater), it is considered contaminated.

Asphalt removed in chunks over uranium mill tailings contaminated soils should be inspected on the underside with the survey meter. If excavation into the bedding material is necessary, care must be taken to segregate contaminated and uncontaminated materials.

WATER MAIN BREAKS

If uranium mill tailings are washing away due to a water line break, sediment dams shall be established to halt the spread of contamination. Following repair of the break, a meter survey should be conducted downstream to insure that any contaminated materials spread by the break are identified and are cleaned up. Any material exceeding 30 percent above background (18 μR/hr) should be returned to the excavation or taken to the interim storage facility.

DECONTAMINATION

All equipment used for excavation or hauling of tailings shall be inspected and decontaminated. Visible tailings shall be swept or sprayed away and placed in the ISF.

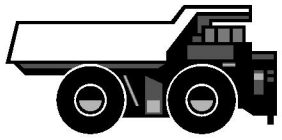
Workers in contact with tailings shall be decontaminated. Visible tailings shall be swept or washed away. These workers shall be frisked with the beta-gamma meter for verification of decontamination (See Appendix B). If clothing will not pass the frisk, the workers shall change into clean clothing. Contaminated clothing and contaminated decontamination materials shall be taken to the interim storage facility for further decontamination and frisking or disposal. The Colorado Department of Public Health and Environment will be available to assist in these operations.

CEASE WORK

Work shall cease when the project supervisor or the Colorado Department of Public Health and Environment determines that the procedures have not or cannot be followed. Examples include: high winds making it impossible to control dust, a truck that leaks tailings or non-cooperation of workers. Work may be resumed when the supervisor and the CDPHE determines that the procedures issue has been resolved and it is safe to resume work.

TRANSPORT OF TAILINGS

REGULATIONS



Transportation of radioactive material over public roads in Colorado is regulated under the Code of Federal Regulations (CFR) Title 49, Parts 171-178 and 390-397, and Part 17 of the Colorado Regulations, which mirror 49 CFR. Generally, uranium decay series material is low specific activity as defined by the International Atomic Energy Agency and U.S. Department of Transportation.

The Department of Transportation defines a concentration of radioactivity above which material like uranium mill tailings is considered radioactive for purposes of the transportation regulations. At present, the Department of Transportation defines any material with radioactivity greater than 70 Becquerel per gram (B/g) as radioactive for transport purposes. For uranium mill tailings, 70 B/gm total activity is calculated to be less than approximately 174 pCi/g radium-226. Therefore, if a truckload of tailings material averages overall below less than 174 pCi/g radium-226, it is not considered radioactive material for purposes of transportation under 49 CFR and Part 17 of the Regulations. From our experience in the Uranium Mill Tailings Remedial Action Program, tailings excavated from streets or other properties are usually mixed with clean soil and do not exceed 174 pCi/g radium-226.

HAULING

The ALARA principle will be followed during transportation of tailings. This will be insured by covering and not overfilling loads to prevent dust or spillage. If very wet or fine-grained material is to be loaded, a plastic sheet diaper will be placed in the rear of the truck bed in a manner to exclude leaking out the tailgate. Loads should not be piled any higher than the sidewall of the truck. The most direct route possible with no off-road stops will be used to transport tailings to the interim storage facility. All loads will be covered to ensure that no tailings are blown out during transport.

SPILL PROCEDURE

When transporting mill tailings, if a spill from the haul truck occurs, the supervisor and the Colorado Department of Public Health and Environment will be notified as soon as possible. The spill will be isolated and protected from further dispersal. Traffic cones and flagmen will be used as necessary for traffic safety. The truck should pull off the road if possible. If there has been an accident, the driver should call the state patrol or 911 as necessary. Drivers should also call their supervisor and the Colorado Department of Public Health and Environment in responding to the spill. Traffic safety has priority over isolating or recovering the spill

The spill will be swept up and put into a closed container appropriate to its volume and transported to the interim storage facility for disposal. The area is considered clean if no contamination is seen or detected. If the spill was onto a dirt road, the radiation survey meter will be used to verify the spill cleanup. If no readings above 18 μR/h are noted on the gamma survey meter, the area is considered clean.

APPENDIX A

DEFINITIONS

Access Control: A designated entrance/exit point to a controlled area.

ALARA: Acronym for "As Low as Reasonably Achievable," a basic concept of radiation protection that specifies that radioactive discharges from nuclear plants and radiation exposures to personnel be kept as far below regulatory limits as feasible.

Alpha Particle: A positively charged particle ejected spontaneously from the nucleus of some radioactive elements. It is identical to a helium nucleus and has a mass number of 4 and an electrostatic charge of +2. It has low penetrating power and short range. The most energetic alpha particle will generally fail to penetrate the skin. Alphas are hazardous when an alpha-emitting isotope is introduced into the body.

Beta Particle: A charged particle emitted from a nucleus during radioactive decay. A negatively charged beta is identical to an electron. A positively charged beta particle is called a positron. Large amounts of beta radiation may cause skin burns. Beta emitters are harmful if they enter the body. A thin sheet of metal or plastic easily stops beta particles.

Grand Junction Disposal Facility (GJDF): The Uranium Mill Tailings Remedial Action Program disposal cell, operated by Department of Energy, located about 15 miles south of Grand Junction on U.S. Highway 50, will remain open until the year 2023 or until filled. This will be the only permanent (program) disposal cell available to uranium mill tailings disturbed by construction activities after 1998. This cell was previously known as the Cheney Disposal Cell and was renamed in 2012.

Contamination: Unwanted radioactive materials (uranium mill tailings) that are present on/in a particular object or area. It can also refer to other contaminants such as asbestos.

Controlled Area: Any area to which access is managed in order to protect individuals from exposure to radiation and/or radioactive material. Individuals who enter a controlled area are not expected to receive a total effective dose equivalent of more than 100 millirem in one year.

Decontamination: The reduction or removal of contaminating radioactive material from a structure, area, object or person.

Frisk: A radiological survey of personnel or equipment utilizing a portable radiation detector.

Gamma Ray: High-energy, short wavelength electromagnetic radiation (a packet of energy) emitted from the nucleus of an unstable atom. It is very penetrating and is best stopped by dense materials such as lead. They are similar to x-rays but are usually more energetic.

Interim Storage Facility: The facility located in Grand Junction available for temporary storage of uranium mill tailings disturbed during construction activities. The interim storage facility is located on the City of Grand Junction property at 333 West Avenue, Grand Junction, Co. and managed by the Colorado Department of Public Health and Environment.

Radiation: Particles (alpha, beta or neutrons), or photons (gamma) emitted from the nucleus of an unstable (radioactive) atom as a result of radioactive decay.

Radioactive: Exhibiting radioactivity or pertaining to radioactivity.

Radioactivity: The spontaneous emission of radiation, generally alpha or beta particles often accompanied by gamma rays, from the nucleus of an unstable atom.

Uranium Mill Tailings: Radioactive residues from the processing of uranium ore into yellowcake in a mill. Although the milling process recovers about 93 percent of the uranium, the residues, or tailings, contain several radioactive elements, including uranium, thorium, radium and polonium.

Yellowcake: A product of uranium milling process, yellowcake is a solid uranium oxide compound (U3O8) that takes its name from its color and texture. Yellowcake is the feed material for fuel enrichment and fuel pellet fabrication.

APPENDIX B

FRISKING AND DECONTAMINATION PROCEDURE

FRISKING

PURPOSE

This procedure establishes the requirements for decontamination frisking prior to exiting the controlled area of the interim storage facility. Frisking for contamination will limit exposure of the workers and the general public to radioactive material and prevent the spread of contamination beyond controlled areas.

APPLICABILITY

This procedure applies to all people entering and exiting the controlled area of the interim storage facility.

PRECAUTIONS

All personnel who enter a controlled area (the interim storage facility or an excavation into tailings) are expected to keep their exposures to radiation and radioactive materials as low as reasonably achievable (ALARA).

Personnel or equipment may not leave the interim storage facility with any detectable radioactive contamination.

FRISKING SURVEY METER

A portable monitor, such as the Ludlum Model 44-9, pancake GM beta-gamma detector, or equivalent, shall be used for frisking. The frisking instrument shall have a valid calibration and be functionally checked before using this procedure.

EQUIPMENT FOR FRISKING AND DECONTAMINATION

Frisking Meter	Broom
Sturdy Brush	Wash Tub
Mild Soap	Laundry Soap
Garden Hose	Frisking Log

FRISKING PROCEDURE

Personnel shall frisk using the techniques defined. Personal items such as flashlights, notebooks or hats shall be subject to the same frisking requirements as the person carrying them.

Verify the instrument is in service, set to the proper scale, and the audio output can be heard during frisking.

Hold the probe less than half an inch from the surface being surveyed.

Move the probe slowly over the surface, approximately two inches per second.

If the count rate increases during frisking, pause for 5 to 10 seconds over the area to provide adequate time for instrument response.

If the count rate increases beyond background, the area shall be decontaminated and frisked again.

PERSONNEL FRISKING ORDER

Frisk the hands before picking up the probe.

Frisk in the following order:

Head (pause at the mouth and nose for five seconds)
Neck
Arms (pause at the elbows)
Chest and abdomen
Back, hips and seat of pants
Legs (pause at the knees and cuffs)
Shoes
Shoe bottoms
Personal items (hat, gloves)

DECONTAMINATION

PERSONNEL DECONTAMINATION

Skin contamination may be removed by washing with lukewarm water and mild soap. Personnel may flush ears/eyes with cool, clear water to decontaminate those areas. If flushing is not successful, qualified medical personnel shall direct additional decontamination efforts.

Clothing and shoes may be brushed clean. If clothing will not decontaminate with brushing, it shall be removed and exchanged with the supplied coveralls in the access shed. Contaminated shoes may be brushed and washed without removing and re-frisked.

EQUIPMENT AND TRUCK DECONTAMINATION

Prior to frisking a truck, the vehicle engine will be shut off, placed in 1st gear and have the wheels chocked. No person shall physically go beneath a piece of equipment to perform inspections or decontamination.

All visible contamination shall be swept or washed into the interim storage facility. Tailgate areas and tires will be frisked with the probe at two inches per second and with the probe half inch from the surface. If the instrument rate count registers above background, further brushing and washing will be performed until it is deemed acceptable.

EXITING THE INTERIM STORAGE FACILITY

Return the frisk probe to its holder. The probe shall be placed face up to allow the next person to monitor his/her hands before holding the probe.

After decontamination of equipment and personnel and successful frisking, personnel may leave the controlled area, sign out on the access/frisking log, secure the gate and shed and exit the area.

APPENDIX C

BUILDING PERMIT SURVEYS

BUILDING PERMIT SURVEY HISTORY

In 1971, the Colorado Department of Public Health and Environment, formerly the Colorado Department of Health, began a cooperative program with the Mesa County Planning Department to conduct radiation surveys at new construction sites. The radiation surveys were integrated into the building permit process, and it was therefore called the Building Permit Survey Program.

As discussed in the History section of the Uranium Mill Tailings Management Plan, radioactive tailings were used in Mesa County and other uranium mill towns for building materials and fill dirt. Many structures were modified or built over tailings. Therefore, potential health risks were being created due to the increased gamma radiation and radon exposure.

Surveys are performed by the Colorado Department of Public Health and Environment before a building permit is issued. The surveys include the footprint of the proposed building, plus 10 feet extra around the perimeter. After the survey, an inspection form is filled out indicating that no radioactive materials were found or with recommendations for removal, or other options, if tailings are found. The form is given to the owner (or contractor) with a copy entered into the Colorado Department of Public Health and Environment database. If tailings are found, a map is drawn indicating the areas of concern.

When tailings are removed from a building site, another form and map is filled out declaring the removal of the contamination, which allows the issuance of the building permit. Copies of the information are entered into the Colorado Department of Public Health and Environment database for reference and documentation.

The survey is considered valid for six months, after which another survey may be necessary if the structure hasn't been constructed. This is because, within six months, the site could have been re-contaminated.

The surveys include all structures that could possibly be converted into living spaces. During the oil shale boom, people were known to live in sheds or any space available. Thus, sheds and garages, as well as business sites and houses, are inspected. Areas such as patios, carports and porches are also inspected as these are often enclosed later as part of the living space.

Currently, the Colorado Department of Public Health and Environment surveys demolition

sites and building sites in Mesa County. Procedures now concentrate the surveys on properties or areas with a known history of tailings. Much of the construction activity currently in Mesa County is new subdivisions in former fields, where tailings are unlikely to be encountered.

PROCEDURES FOR THE REQUIREMENT OF A BUILDING PERMIT SURVEY

Upon receiving a request for a building permit survey, a record review will be performed by the Colorado Department of Public Health and Environment to ascertain the need for a field survey. The review will include the CDPHE gamma table, and, if necessary, the Department of Energy microfiche records for the location.

The following criteria will result in the execution of a field survey:

1. Records indicate the presence of historic tailings or ore. . Historic tailings properties will always be surveyed, even if remedial action took place. Remedial actions did not always find or completely remove tailings.

2. Tailings have been found on an adjacent property. Adjacent properties will be surveyed if it is in an area where extensive tailings were used.

3. For information: Information surveys are in areas where previous surveys were not performed. The inspector will perform surveys on several properties in the new area (subdivisions) and determine from visual observations which properties in the area may need surveys when they are requested, due to radiation readings, fill areas, geography, or previous structures.

If it is determined that a survey is not to be performed, the program assistant will fill out a Building Permit Records card, print out a form in duplicate, sign the form and give one copy to the requestor. The other copy is filed and entered into the database. The Building Permit Records form indicates, "No field survey is required based upon a record review of the vicinity of the building site. No tailings deposits were identified from available records that would affect the construction site."

In communities outside of Mesa County, the Colorado Department of Public Health and Environment will provide assistance to monitor construction and demolition sites with a history of tailings involvement, if requested. The Colorado Department of Public Health and Environment data and files may be used to determine if a site needs a radiation survey. The Department may perform site visits to conduct the surveys if the data base information is inconclusive.

APPENDIX D

GAMMA RADIATION SURVEY PROCEDURES

GAMMA RADIATION SURVEYS

OBJECTIVES OF GAMMA SURVEYS

The objective of a gamma survey is to determine if radioactive materials, especially uranium mill tailings, are present on individual properties, to acquire sufficient data to evaluate the gamma levels and health risks, and to document the location and conditions of radioactive materials. Uranium mill tailings are the primary radioactive materials being surveyed, due to their radium content and potential to cause elevated radon gas in structures. The gamma surveys may locate natural soils, rocks or ores that have elevated gamma radiation and have the potential to increase indoor radon levels. The gamma survey may also locate and identify other radioactive sources such as ore or petrified wood, which may not have a potential to increase radon, but increases health risks through gamma exposure.

BACKGROUND GAMMA RADIATION

Background radiation is the natural radioactivity of an area. Background radiation varies due to the influence of natural mineral deposits, building materials and elevation. The most common outside background levels in Mesa County are 10 to 14 micro roentgens per hour (μR/h). Fourteen μR/h shall be considered background in Mesa County, Colorado. A meter reading 30 percent higher than the local background level (18 μR/h) is significant and requires investigation.

NON-TAILINGS GAMMA SOURCES

There are many different radioactive materials besides uranium mill tailings that may be encountered during a gamma survey. Luminous-dial compasses, clocks, aircraft instruments, propane tanks, petrified wood, dinosaur bones and ore samples may emit gamma radiation levels above 20 μR/h. Natural outcroppings of granite rocks may demonstrate elevated gamma radiation. These objects may act as point sources, as the gamma field drops off rapidly when the survey meter is moved away. Coal ash and shale may also cause meter readings above 20 μR/h, but seldom appear as point sources. Brick may cause readings of 22 μR/h due to the materials used in their manufacture. Some granite countertops exhibit meter readings far in excess of 20 μR/h as well.

INTERPRETATION OF READINGS

SHINE

Radiation detected that is from a source some distance away is called shine. Shine will make it more difficult to determine the levels of radiation from nearby objects. The meter readings are higher than if the shine radiation did not exist. An example of a shine source is a large pile of radioactive tailings or large radioactive ore pile. Shine fields are also created by strong local radioactive sources such as density gauges or metal weld x-ray devices.

To check for shine, the meter reading can be compared at ground level, waist level and overhead. If a shine field is present, the meter will detect about the same radiation levels at waist and surface levels.

Lead shielding can be used to help interpret meter readings in a shine field. A lead shield may be wrapped around the sides of the meter to block the shine.

A comparison of shielded meter readings and unshielded readings, called a differential, may help distinguish localized elevated gamma levels from shine. A sheet of lead is placed between the instrument and the suspected area, and a meter reading is taken. The shield is removed, and a second meter reading is taken. The difference between the shielded and unshielded reading is the differential. The differential should not be greater than six, which is about 30 percent, for background radiation areas around 14 μR/h. If the differential is greater than six, the area under the shielding may be contaminated with a radioactive source. This technique loses accuracy when higher gamma fields are encountered.

The Colorado Department of Public Health and Environment will provide assistance if a shine field is suspected and the meter readings are difficult to interpret.

GEOMETRY

A meter reading in a hole or trench may indicate higher radiation levels than a flat surface. The meter receives gamma radiation from many directions in a hole, while a surface reading mainly detects the area directly beneath it.

SHIELDING

Dense materials shield gamma radiation from detection. Examples are rock road base, asphalt, concrete and hard packed soils. The amount of shielding depends upon the thickness. Radiation surveys over asphalt or concrete need to be performed more slowly so that the technician can observe small fluctuations on the meter. While normal soils reading 14 μR/h usually indicate no contamination, this reading on asphalt or concrete may indicate a shielded radioactive deposit.

STANDARD GAMMA SURVEY PROCEDURE

SURVEY INSTRUMENTS

The survey instruments used by the Colorado Department of Public Health and Environment and loaned to local governments, public utilities, and private parties are adequate to locate uranium mill tailings situated close to the ground surface. If a deposit is heavily shielded, the meter may not indicate any change from background radiation. The meters are calibrated yearly and should be given an operations check before use. Many of the instruments have been calibrated and electronically modified to give a fast response time. Instruments with an audio device are the easiest to use as one can notice the faster change in the sound (clicking speed), which is an indication of a radioactive source. The instruments are designed to give a meter reading in micro roentgen per hour. If the surveyor's meter shows 18 μR/h on the scale, this is considered 30 percent above background of 14 μR/h and that tailings contamination is present.

PERMISSION TO SURVEY

Permission to access private property must be obtained before a survey is undertaken. The owner or owner representative may give a verbal or written permission to enter a property. The surveyor should identify himself to residents on the property and state the purpose of the survey.

HEALTH AND SAFETY

Performing a gamma radiation survey is not entirely risk free. The major hazards are potential physical injuries due to falling or being trapped in a confined space. The surveyor should comply with Occupational Safety and Health Administration (OSHA)-confined space entry requirements. Prior to entering any crawlspace, the surveyor should notify a coworker of the location and intent to survey. Some crawlspaces are too tight to enter safely. If such areas must be checked for a radiation source, an extension pole attached to a meter with audio capability would allow limited probing into the tight areas.

No hole or trench deeper than 4 feet or with sides steeper than a 45-degree angle should be entered unless the sidewall stability conforms to OSHA standards. These areas, as well as vertical cliffs, can be surveyed by lowering the meter on a rope and listening to the audio or observing the meter face with binoculars.

Head injuries can be avoided by not watching the meter while walking. Tree limbs, air conditioners, pipes and other extending objects are commonly at head level around houses. Using meters with the audio capability and watching the path of the survey will avoid injury.

Dogs are potentially a risk when surveying. Always ask the residents if there are dogs present and to place them indoors or tie them up in an area not needed to be surveyed. Personnel should always be watching for dogs when entering a property.

Exposure to gamma radiation is a potential health risk to the surveyor. During the many years that the Colorado Department of Public Health and Environment has conducted gamma surveys, it is rare that the monitoring badges worn by surveyors record any exposures above background. It would be possible to receive limited gamma exposure if uranium ore samples were carried around in a vehicle. If ore is transported, it should be placed as far away from occupants as possible and removed from the vehicle and properly disposed of as soon as possible.

If the surveyor detects a radiation source above 1,000 micro roentgen per hour (one mill roentgen), and the source is not obviously ore or uranium mill tailings, the surveyor should immediately leave the area and notify the Colorado Department Of Public Health And Environment, Radiation Control Program. Such sources could be radium sources or instruments, such as moisture density gauges.

The surveyor is expected to adhere to the ALARA principle and keep all radiation exposures As Low As Reasonably Achievable.

GENERIC SURVEY PROCEDURES

All gamma surveys will use generic procedures that address situations commonly encountered. These are centered on the readiness of the survey meter; interpretation of findings and investigating shielded radiation sources.

The survey meter must be checked for operation before use. The meter battery level and meter scales can be compared with historical levels by using known radioactive sources. If the instrument is in the field, and no radioactive check source is available, the meter can be placed on the ground and comparisons made between the different scales and background level.

Before surveying, the area background must be determined. Background is the normal radiation level in an uncontaminated area. Radiological contamination may be assumed if the meter registers 30 percent above background. However, holes or trenches may register 30 percent above background and not be contaminated due to the geometry. Interpretation of meter readings in trenches and holes is difficult and usually requires experience and a judgment call. It is not unusual for a water meter pit to read 20 μR/h on the survey meter and not be contaminated. If a water meter pit reads over 20 μR/h on the survey meter, one should be suspicious of possible uranium tailings.

The survey should be conducted at a slow walk, using an established grid pattern. Specific spots may be checked by hesitating, placing the meter on the ground and noting the reading. The meter should be carried no more than one to four inches from the surface

when walking with no wide arcing swings. The meter is placed in fast response mode on the lower scale with the audio switch on.

When surveying areas with tall vegetation (weeds), the meter will have to be alternately lifted and lowered rather than maintaining a constant one to four inches from the surface.

Shielding will hide radioactive sources from detection. The survey may detect borderline elevated readings. These areas should be explored by removing some of the shielding. Dirt or gravel may be kicked aside or shoveled away. Asphalt and concrete may be checked from the edge where an inspection hole can be dug. Woodpiles and debris may be moved to find a spot to lower the meter to the ground. Water meter pits and manholes can be inspected by removing the cover and lowering the meter. Large manhole covers are heavy and may need a shovel or crowbar to pry it off and therefore may not be accessible. At no time will the Colorado Department Of Public Health And Environment conduct a survey where personnel safety may be compromised.

SPECIFIC SURVEY PROCEDURES

BUILDING PERMIT SURVEY (NEW STRUCTURE)

In Mesa County, a cooperative program exists between the Colorado Department of Public Health and Environment and the City/County Planning Department to screen proposed building sites for uranium mill tailings. The generic survey procedures apply. Three-foot survey grids extending an extra 10 feet beyond the site footprint are adequate to screen for radioactive materials.

The Colorado Department of Public Health and Environment requires that the builder stake out the site footprint. If the site is not staked or marked at the time of the survey, the requester may mark it out and reschedule the survey. The property must be clear of hindrances or restrictions so that a valid survey can be completed. Dirt/gravel piles must be removed as well as any obstructions for a survey. Colorado Department Of Public Health And Environment requires any proposed building site be officially addressed by the City/County Planning Department before any field gamma screening are preformed or Building Permit Survey forms are issued.

If no unusual gamma radiation above background is detected, the Building Permit Survey form is completed, signed and given to the builder for inclusion with paperwork submitted to the Planning Department for a building permit.

If elevated gamma radiation is detected, the surveyor will explore the area to determine the source. The elevated gamma area may be checked by digging out shovel scoops. This method often determines that the source of elevated gamma is a small ore rock or that the source is not extensive.

If an extensive gamma source is discovered that cannot be removed by a few shovel scoops, the Building Permit Survey form is filled out to reflect the finding, a map is drawn to locate and document the area and the builder notified.

The Colorado Department of Public Health and Environment presents options to owners to mitigate radiation sources discovered on building sites. The main concern is mitigation of potential radon sources inside the structure. The secondary concern is mitigation of gamma radiation exposure through the floors of the structure. The optimum solution is the complete removal of the source of radiation.

BUILDING PERMIT SURVEY (DEMOLITION)

Structures being demolished in Mesa County are controlled through the permit system of the County Planning Department. Structures planned for destruction should be surveyed to locate any potential uranium mill tailings contamination in the building materials.

The lower levels and all floors made from concrete should be scanned using 5-foot grids. The inspection should also include closets, bathrooms and kitchens.

Areas to survey include the following:

Lower Level Floors	Cinder Blocks
Foundations	Stucco
Brick and Mortar	Sidewalks
Driveways	Rock Walls/Fences
Sandboxes	Rock Gardens
Planters	Patios
Garages	Carports

If radioactive sources are discovered, the survey form is filled out, and the owner or contractor is notified. Options are discussed to separate radioactive contaminated materials from other debris. The radioactive materials can be located by the survey meter and marked with paint. Contaminated materials should be segregated and stockpiled or taken to the interim storage facility. Items transported to the interim storage facility shall comply with the Department of Energy's Waste Acceptance Criteria for the Grand Junction Disposal Site.

These procedures are in addition to the State of Colorado Demolition permit processes.

GAMMA RADIATION SURVEY FOR INFORMATION

The Colorado Department of Public Health and Environment has a vast database documents the radiological conditions on thousands of properties in western Colorado. However, many properties were never surveyed, and no information is available. Thus, the

Department will occasionally conduct a gamma survey on a property for information purposes.

Surveys on an entire property present a problem because of the size of the area. The grids for survey must be appropriate to the area. If the area is no larger than two acres, 10-foot grids are used. . For very large areas, grids as large as 50 feet may be used.

The larger the grid size, the greater the chance of overlooking a radiation source. In the case of very large properties, the areas one inspects, like a potential building site may be more important than walking the entire site on grids. Disturbed areas, likely dump areas, roads and gates should be inspected. Any structures should be checked using the techniques for demolition sites. Lawns, gardens, and septic systems should be checked. All concrete, metal debris, hoses, and fiberglass panels should be inspected.

If a linear pattern of elevated gamma readings is detected, it may indicate a buried utility line packed in uranium mill tailings. The Colorado Department of Public Health and Environment may assist in conducting large-area surveys, but the responsibility for a complete (non-building permit) survey on any property is that of the owner. A survey meter may be checked out (borrowed) from the Colorado Department of Public Health and Environment, or a consulting company/contractor may be hired by the property owner. However, Colorado Department of Public Health and Environment will conduct complete surveys on building sites.

STREETS, ALLEYS, AND UTILITY LINE CONSTRUCTION

Prior to construction involving streets, alleys or utility lines, the contractors should consult Department of Energy maps delineating supplemental standard areas. City workers or their contractors using instruments on loan from the Colorado Department of Public Health and Environment can survey the areas. Identified uranium mill tailings contaminated areas can be marked with paint. As trenches and excavations are opened, the meter can be lowered down to better determine if the subsurface material is contaminated. If the contamination is to be removed, it must be segregated from other materials and transported to the interim storage facility.

Surveys over concrete or asphalt should be conducted at a slow walk to give the meter time to respond. The meter must be in the fast response mode. Concrete and asphalt shields radioactive materials below, and meter changes may be only slightly higher than background when measured through them.

PRIVATE REMOVALS

Private removals are remedial actions performed by property owners or their contractors to clear an area, or entire property, of radioactive uranium mill tailings. The material may have been identified by the Building Permit Survey, by an information survey or street/utility line construction.

For private parties, the Colorado Department of Public Health and Environment will identify and delineate uranium mill tailings for removal. The identified contamination will be excavated by the owner and segregated from clean material by stockpiling on site or removal from the property to the interim storage facility with Colorado Department of Public Health and Environment approval. A meter may be checked out by the private party.

For private parties, the removals of uranium mill tailings will be monitored by the Colorado Department of Public Health and Environment to guide and document the excavation. The Department will perform excavation control, provide health and safety guidance and operate the interim storage facility. The Department will document the results of the removal.

DOCUMENTATION MAPS

In Mesa County, maps are generally required for the documentation of radioactive contamination discovered or removed during a Building Permit Survey, information survey or private removal. The Colorado Department of Public Health and Environment will map and document any uranium tailings discovered, disturbed or removed from the communities in western Colorado that were not already mapped., as appropriate.

The map will include the following information in the upper right corner:

Location Number (assigned by the Department)
Street Address, Date, and Name of Surveyor

The map will include a legend with an arrow indicating north. Permanent and semi-permanent reference points, such as structures, streets, driveways, streets, power poles or irrigation ditches, will be drawn on the map.

Shading with cross marking or other appropriate indicators should show areas of radiation contamination. The meter readings for the contamination should be written in the contaminated area. If the area is too small to write in, the meter reading should be indicated by an arrow drawn to the contaminated area.

If a private removal of radioactive contamination occurs, the documentation may include a map showing the conditions of the area after excavation. If the area is large, a range of readings will be shown. The gamma reading and an arrow pointing to the spot will identify areas still demonstrating elevated gamma readings.

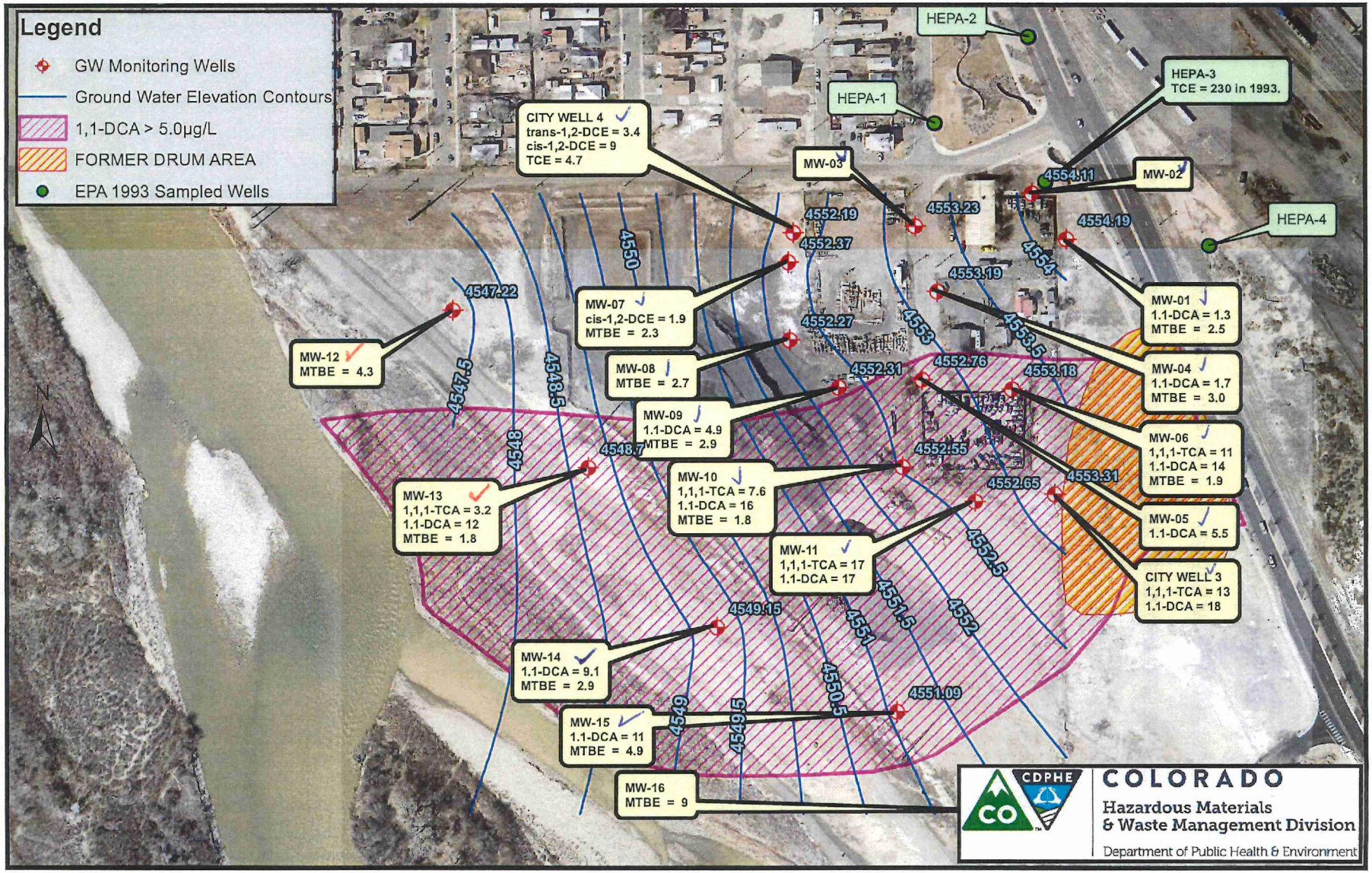
Appendix E

Construction Drawings
(See in Separate Attachments)

Appendix F

Existing CDPHE Monitoring Well Location Exhibit

FIGURE 1 - GRAND JUNCTION - HANSEN CONTAINER GROUND WATER ELEVATION and RESULTS MAP



March, 2019

THE RIVERFRONT AT DOS RIOS
BID SET PLANS
May 21, 2020

Site Development Plans

1	Cover Sheet
2	Standard Abbreviations, Legend, & Symbols
3	Summary of Earthwork
4	Project Overview
5	Control Plan
6–17	Removal Plan
18–34	Composite Utility Plan
35–56	Sanitary Sewer Plan and Profile
57–72	Raw Water Line
73–94	Storm Drain Plan and Profile
95–107	Water Line Plan and Profile
108–109	Typical Cross Section
110–125	Improvement Plan
126–144	Road Profile
145–180	Road Cross Sections
181–245	Staking Plan
246–247	Overlot Grading Plan
248–262	Signing and Striping Plan
263–266	Storm Water Management Plan

Plans for Riverside Parkway Left Turn Lane

267	Summary of Earthwork
268	Survey Control Plan
269–271	Existing Condition Plan
272–274	Improvement Plan
275	Edge of Gutter Profile
276	Parkway Cross Sections
277–279	Staking Plan
280	Striping Plan

Plans for Colorado River Bank Stabilization

281	Summary of Earthwork
282–285	Improvement Plan
286–287	Bank Stabilization Profile
288–293	Bank Stabilization Cross Sections

Dos Rios Park Irrigation And Landscape Plans

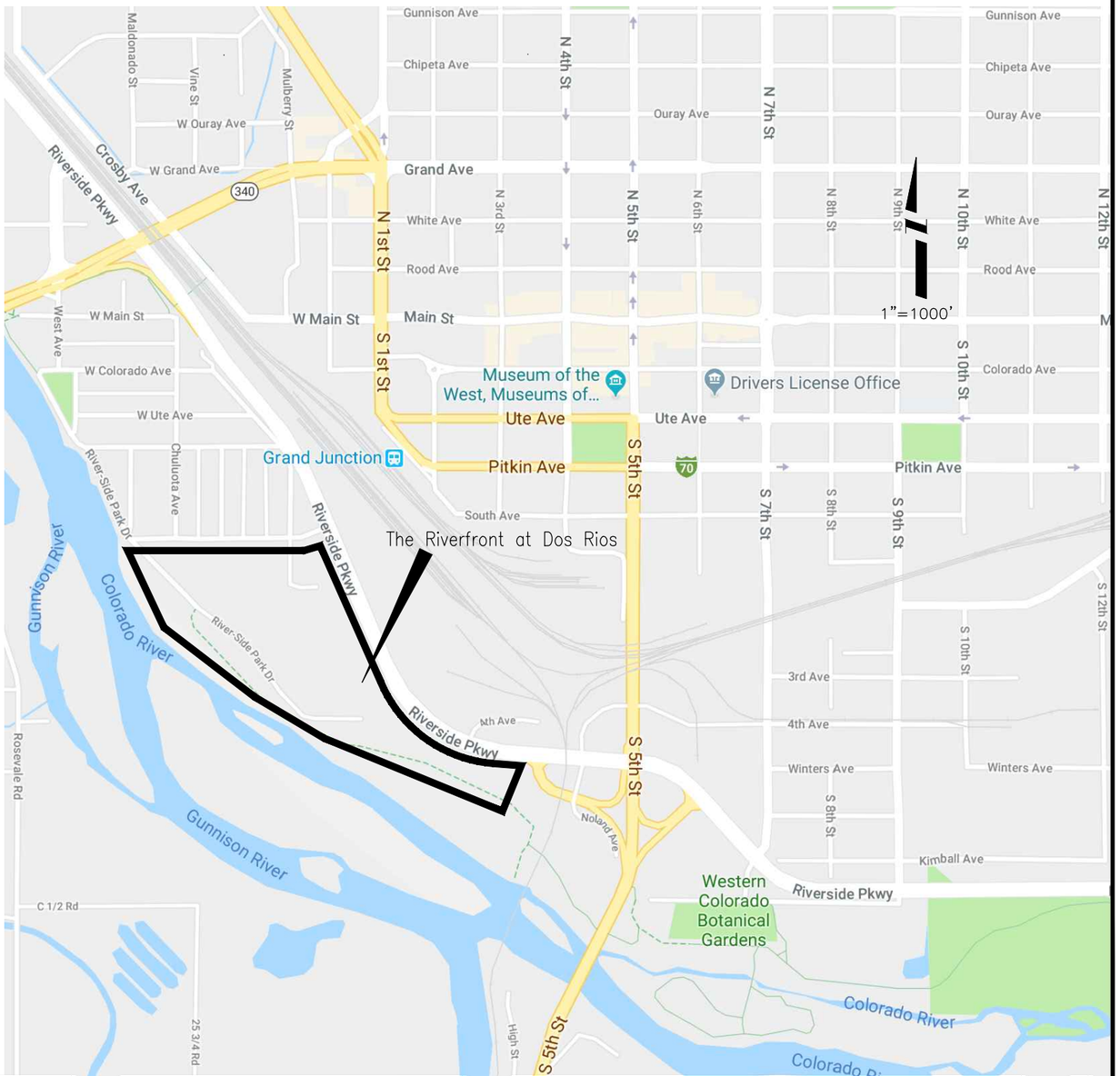
294–303	Irrigation and Landscape Plans

Dos Rios Bicycle Playground Irrigation And Landscape Plans

304–310	Irrigation and Landscape Plans

Lighting Plans

311–351	Lighting Plans



Know what's **below.** **Call** before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 NA NA NA
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COVER SHEET – 1
May 21, 2020

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABC	AGGREGATE BASE COURSE
AC	ASBESTOS CEMENT
AP	ANGLE POINT
ASB	ANCHORED STRAW BALES
ASP	ALUMINIZED STEEL PIPE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BUTTERFLY VALVE
BOW	BACK OF WALK
BCR	BEGIN CURB RETURN
BOT	BOTTOM
BSWMP	BETTER STORM WATER MANAGEMENT PRACTICES
CH	CHORD
CAP	CORRUGATED ALUMINUM PIPE
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CI	CAST IRON
C,G,& SW	CURB, GUTTER & SIDEWALK
℄	CENTER LINE
CL	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COMB	COMBINATION (AS IN STORM SEWER AND SANITARY SEWER)
CONC	CONCRETE
CSM	CITY SURVEY MONUMENT
CSP	CORRUGATED STEEL PIPE
CU	COPPER
DI	DUCTILE IRON
DWY	DRIVEWAY
E	ELECTRIC
ECR	END CURB RETURN
EG	EDGE OF GUTTER
EL	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FB	FULL BODY
FC	FACE OF CURB
FG	FINISHED GRADE
℉	FLOW LINE
FL	FLANGE
FM	FORCE MAIN
FO	FIBER OPTICS
FS	FAR SIDE
FTG	FOOTING
G	GAS
GB	GRADE BREAK
GM	GAS METER
GV	GATE VALVE
HBP	HOT BITUMINOUS PAVEMENT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
IRR	IRRIGATION
L	LENGTH OF ARC
LC	LONG CHORD
LF	LINEAR FEET
LL	LONG ARC
LS	SHORT ARC
LT	LEFT
MB	MAILBOX
MCSM	MESA COUNTY SURVEY MONUMENT
MH	MANHOLE
MJ	MECHANICAL JOINT
MW	MILL WRAP
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOP	NO ONE PERSON
NRCP	NON-REINFORCED CONCRETE PIPE
NS	NEAR SIDE
NTS	NOT TO SCALE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PE	POLYETHYLENE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PIP	PLASTIC IRRIGATION PIPE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RC	RESTRAINED GLANDS
RL	LONG RADIUS
ROW	RIGHT OF WAY
RP	RADIUS POINT
RR	RAIL ROAD
RS	SHORT RADIUS
RT	RIGHT
S	SLOPE
SAN	SANITARY
SC	SHORT CHORD
SCD	STANDARD CONTRACT DOCUMENTS
SCH	SCHEDULE
SF	SILT FENCE
SL	SECTION LINE
SSRB	STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION
SSUU	STANDARD SPECIFICATIONS FOR CONSTRUCTION OF UNDERGROUND UTILITIES
STA	STATION
STL	STEEL
STM	STORM
T	TELEPHONE
TAN	LENGTH OF TANGENT
TC	TOP OF CURB
TH	TEST HOLE
TV	TELEVISION
(TYP)	TYPICAL
UU	UNDERGROUND UTILITIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPCC	VERTICAL POINT OF COMPOUND CURVATURE
VPRC	VERTICAL POINT OF REVERSE CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WATER
△	DELTA ANGLE

LEGEND

BSWMP
DRAINAGE BASIN BOUNDARY

BSWMP
ANCHORED STRAW BALES

BSWMP
SILT FENCE

BUILDING

CONCRETE CURB AND GUTTER — 2' CURB AND GUTTER

CONCRETE CURB,GUTTER, & SIDEWALK — 7' C, G, & SW

CONCRETE DITCH — CONCRETE

CONCRETE SIDEWALK — 4' SW

CULVERT — 18" RCP

EARTH DITCH

EDGE OF GRAVEL

EDGE OF PAVEMENT

FENCE (HT & MATL NOTED) — 6' CHAINLINK

GUARD RAIL

HATCHING:
INDICATES ASPHALT REMOVAL

HATCHING:
INDICATES CONCRETE REMOVAL

HATCHING:
INDICATES STAGING AREA — ~STAGING AREA~

LINE (CENTER OF IMPROVEMENTS) — CENTERLINE

LINE (CITY LIMITS) — CITY LIMITS

LINE (CONTROL) — CONTROL LINE

LINE (EASEMENT)

LINE (MONUMENT/SECTION) — MONUMENT/SECTION LINE

LINE (PROPERTY)

LINE (RIGHT OF WAY)

MATCH LINE — MATCH LINE

PIPE (IRRIGATION)

PIPE (SIPHON)

PROPOSED CONCRETE CURB AND GUTTER

PROPOSED CONCRETE CURB,GUTTER,& SIDEWALK

PROPOSED CONCRETE SIDEWALK

PROPOSED "WET" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN) — 8" PVC SANITARY SEWER

ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE

RAIL ROAD

RETAINING WALL — 1' RETAINING WALL

STRIPING (CONTINUOUS WHITE) — WHITE

STRIPING (DASHED WHITE) — WHITE

STRIPING (CONTINUOUS YELLOW) — YELLOW

STRIPING (DASHED YELLOW) — YELLOW

TOP OF SLOPE — 4580

CONTOUR LINES (SHOWN BETWEEN TOP & TOE) — 4570

TOE OF SLOPE

TRAFFIC DETECTOR LOOP

UTILITY LINE (ABANDON) (THIS CASE A WATER LINE) — (ABANDONED)

UTILITY LINE (CABLE TV)

UTILITY LINE (ELECTRIC)

UTILITY LINE (FIBER OPTIC)

UTILITY LINE (GAS)

UTILITY LINE (HIGH VOLTAGE OVERHEAD POWER)

UTILITY LINE (OVERHEAD POWER)

UTILITY LINE (OVERHEAD TELEPHONE)

UTILITY LINE (SANITARY SEWER)

UTILITY LINE (SANITARY SEWER FORCE MAIN)

UTILITY LINE (SANITARY SEWER SERVICE)

UTILITY LINE (STORM SEWER)

UTILITY LINE (STORM SEWER, PERFORATED)

UTILITY LINE (STORM/SANITARY SEWER SEWER COMBINATION)

UTILITY LINE (TELEPHONE)

UTILITY LINE (WATER)

SYMBOLS

BENCH MARK — A
CATCH BASIN
CLEAN OUT — SSCO
CURB STOP
FIRE HYDRANT
GUY WIRE ANCHOR
HEADGATE
IRRIGATION PUMP — IP
MAILBOX — MB
MANHOLE (ELECTRIC) — E
MANHOLE (GAS) — G
MANHOLE (SANITARY/STORM)
MANHOLE (TELEPHONE) — T
MANHOLE (TV) — TV
MANHOLE (WATER) — W
METER (GAS) — GM
METER (WATER)
PEDESTAL (TELEPHONE)
PEDESTAL (TV) — TV
PROPERTY PIN — PIN
PULL BOX
REDUCER FITTING
SIGN OR POST (SIGN TYPE NOTED) — STOP
SPRINKLER HEAD
STREET LIGHT
SURVEY MONUMENT (CITY) — CSM
SURVEY MONUMENT (TYPE NOTED) — MCSM
TEST HOLE — TH #1
TRAFFIC PAINT MARKING
TRAFFIC SIGNAL POLE AND MAST ARM
UTILITY POLE
VALVE (GAS) — GV
VALVE (IRRIGATION) — IRR
VALVE (WATER)
VEGETATION (HEDGE OR BUSH)
VEGETATION (TREE STUMP)
VEGETATION (TREE) (CALIPER SIZE NOTED) — 6"
WATER HYDRANT — WH
WEIR
YARD LIGHT

NORTH ARROW:

BAR SCALE:

GRAPHIC SCALE
10 0 20 60
(IN FEET)
1 inch = 20 ft.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

STANDARD ABBREVIATIONS LEGEND AND SYMBOLS – 1
May 20, 2020

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SUMMARY OF EARTHWORK QUANTITIES

INDEX Book	INDEX Page	INDEX Sheet		PROJECT TOTAL CU. YD.	PROJECT TOTAL *As Const.*
			203-00010 UNCLASSIFIED EXCAVATION (CIP)		
			ON SITE (QUANTITY CALCULATED FROM CIVIL3D - TIN SUBTRACTION)		
			UNCLASSIFIED EXCAVATION	28735	
			ADDITION OF CONCRETE AND PAVING PRISM	17872	
			REMOVAL OF PAVEMENT REMOVAL PAY ITEMS	-2817	
			TOTAL FOR PAY QUANTITIES	**43790**	
			EMBANKMENT MATERIAL (CIP) (FOR INFORMATION ONLY)	**CU. YD.**	
			QUANTITY CALCULATED FROM CIVIL3D - TIN SUBTRACTION		
			UNCLASSIFIED EMBANKMENT	67341	
			TOTAL	**67341**	

INDEX Book	INDEX Page	INDEX Sheet	ROADWAY QUANTITIES BALANCE (FOR INFORMATION ONLY)	PROJECT TOTAL CU. YD.	PROJECT TOTAL *As Const.*
			Total Unclassified Excavation	43790	
			Total Embankment (net)	67341	
			EMBANKMENT TIMES FACTOR 1.3	87543	
			Import Material (Material to be Imported by Contractor)	43753	

NOTES:

TOP 4 INCHES OF ALL EMBANKMENT SHALL BE FREE OF DEBRIS AND ROCKS OR CLODS GREATER THAN 3 INCHES IN DIAMETER, AND SHALL BE SUITABLE AS NATIVE TOPSOIL.

ALL IMPORTED EMBANKMENT MATERIAL SHALL MEET A MINIMUM OF R-VALUE = 40.

DESCRIPTION	DATE
REVISION ⚠	–
REVISION ⚠	–
REVISION ⚠	–
REVISION ⚠	–

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
SUMMARY OF EARTHWORK – 1
May 20, 2020

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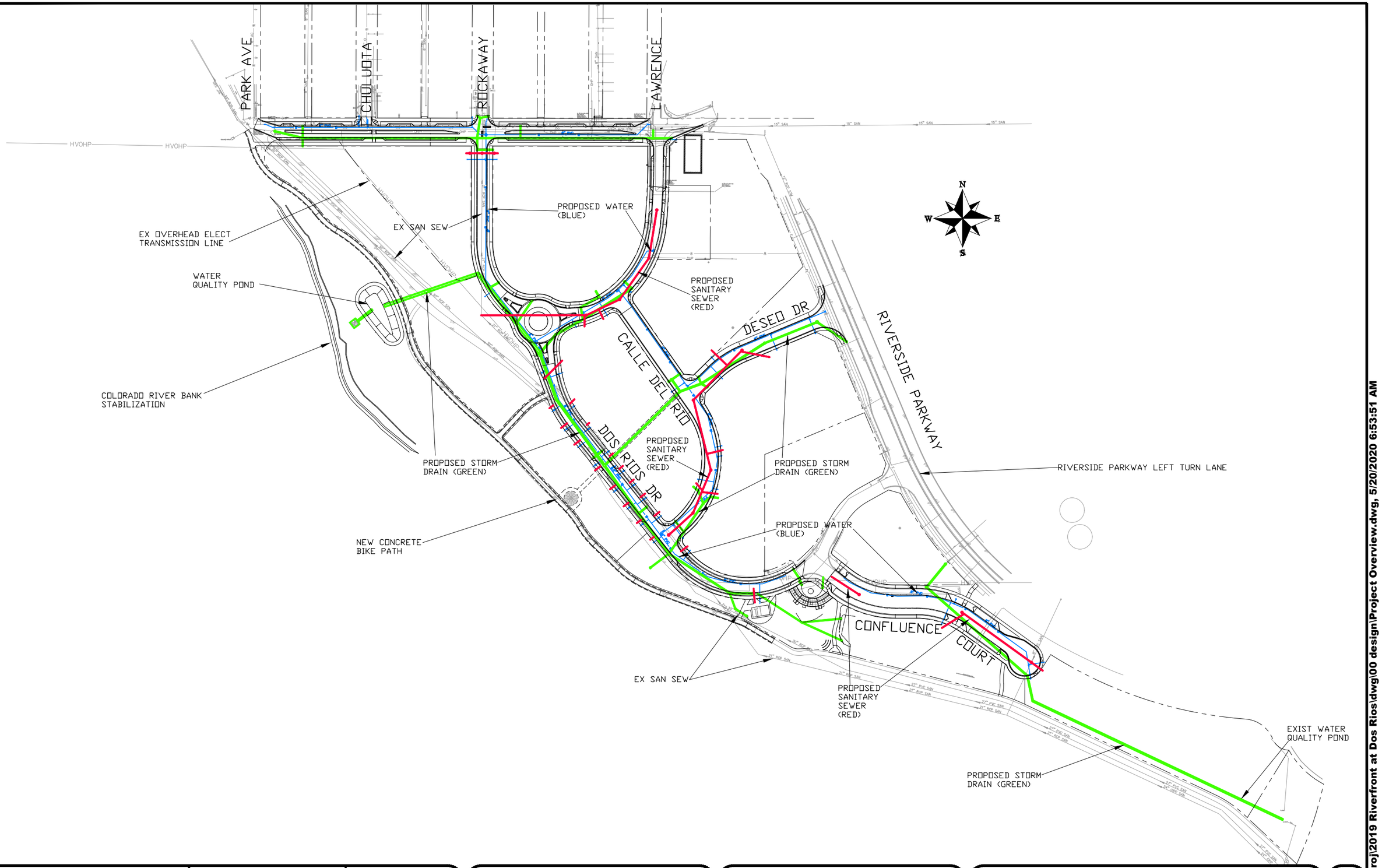

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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 125 250
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
PROJECT OVERVIEW
May 20, 2020

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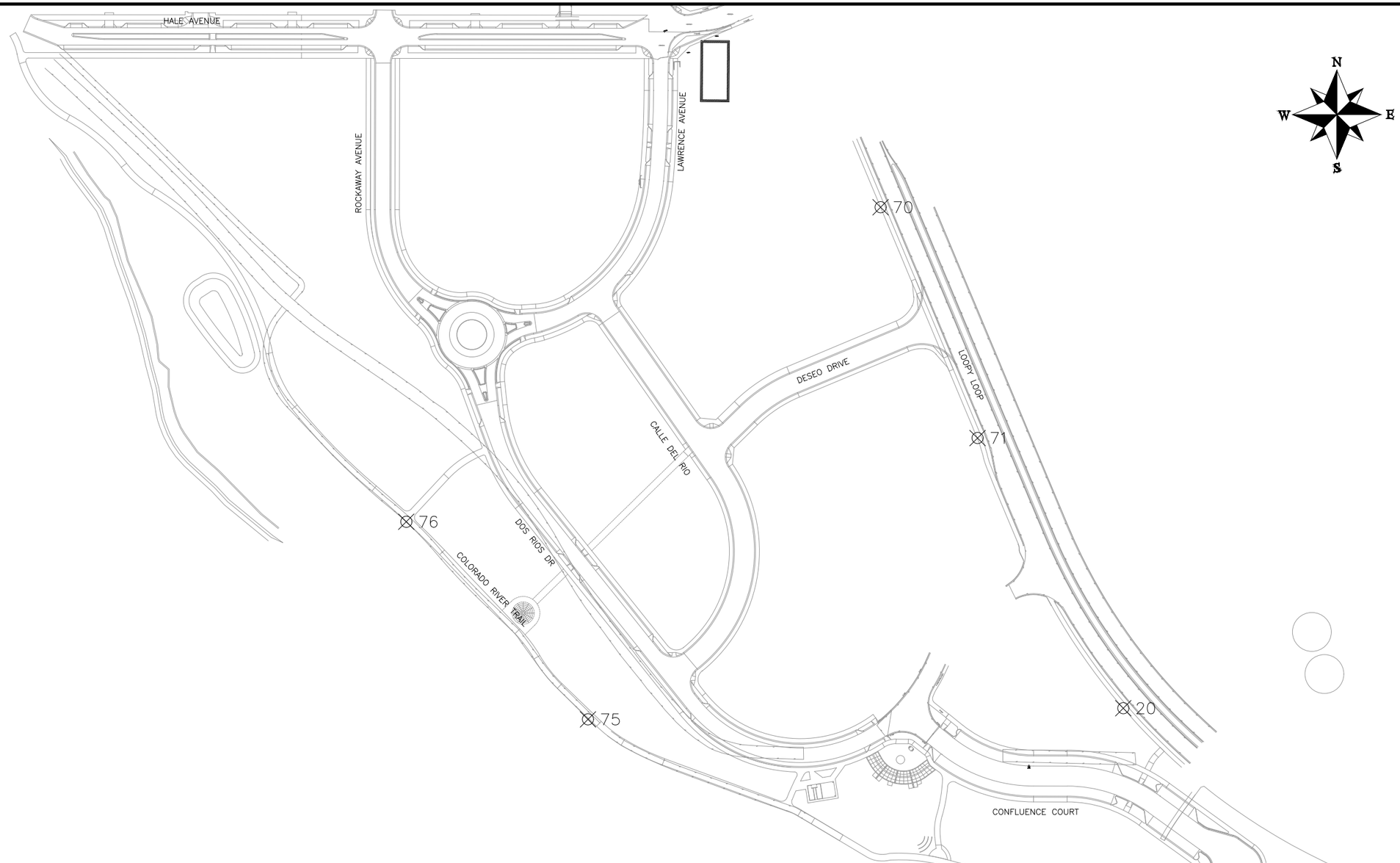


PNT NO	NORTHING	EASTING	ELEVATION	DESCRIPTION
20	32987.11	89615.49	4570.40	CP /PK /
70	33887.20	89179.15	4570.72	CP /PK/
71	33472.48	89353.57	4572.79	CP /PK 16/
75	32967.02	88653.12	4563.76	CP /80D/
76	33322.14	88326.50	4562.65	CP /PK/

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

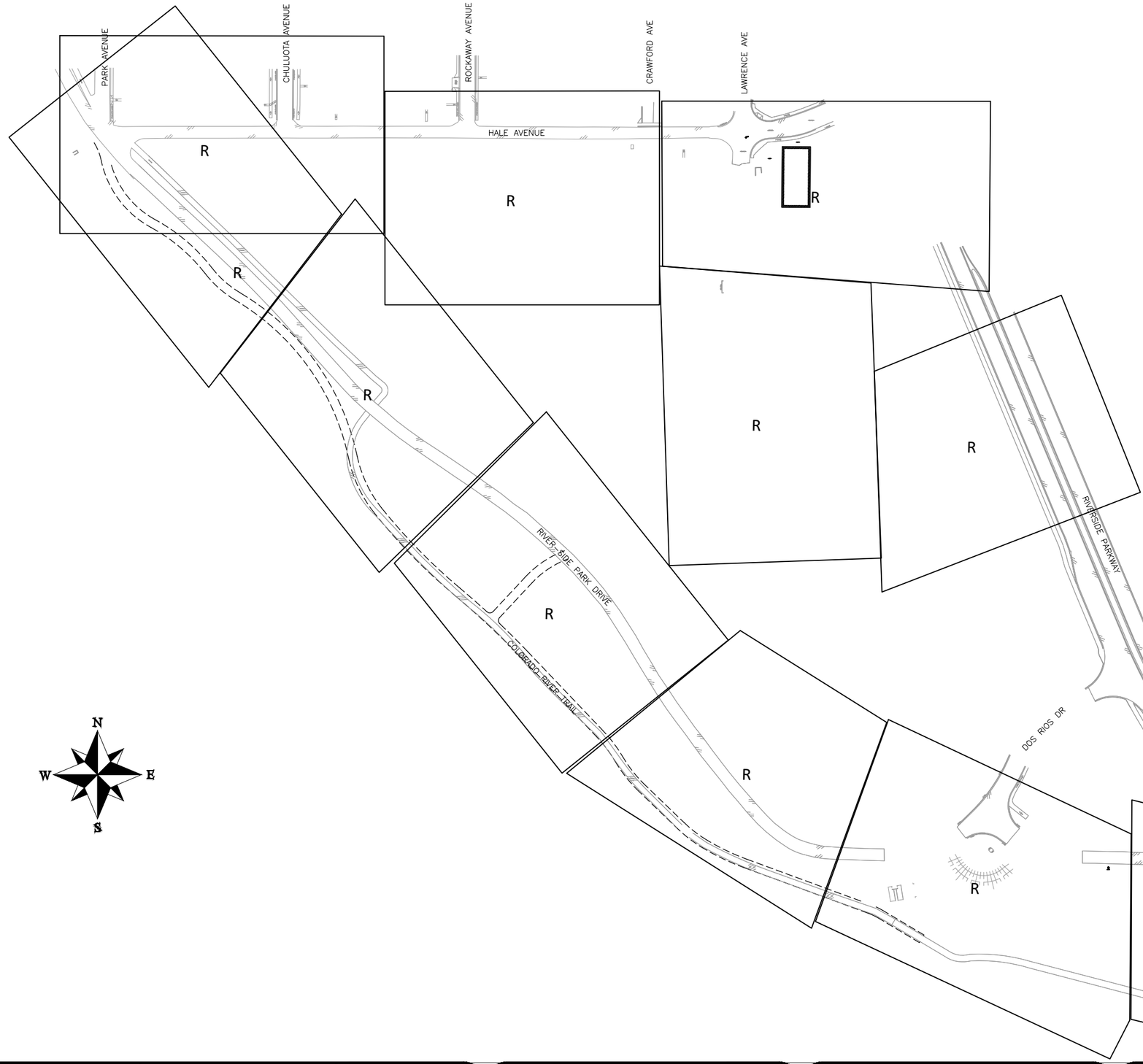
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
CONTROL PLAN
May 20, 2020

5

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Control Plan.dwg, 5/20/2020 6:53:57 AM



DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN SHEET INDEX
May 20, 2020

6

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Removal Plan Sheet index.dwg, 5/20/2020 6:53:59 AM

PARK AVE

CHULUOTA AVE

HALE AVE

MATCH LINE STA 5+00

MOVE STORM DRAIN INLET D1-252-099 10' SOUTH INTO LANDSCAPE AREA. INCLUDES REMOVAL OF EXISTING PIPE AS NEEDED AND ADJUSTMENT TO FINAL GRADE.

COORDINATE GAS LINE PROTECTION OR REPLACEMENT WITH XCEL ENERGY

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS.

EXISTING WATERLINE TO BE ABANDON PER WATERLINE PLAN AND PROFILES

ADJUST SEWER MANHOLE TO FINISHED GRADE

PROTECT FENCE AND GATE IN PLACE. ANY DAMAGE THAT OCCURS DURING CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.

PROTECT UTILITY POLE IN PLACE (IF NEED BE CONTRACTOR SHALL PLACE EXPANSION JOINT MATERIAL AROUND POLE AND POUR WALK AROUND)

RESET UTILITY POLE. (BY OTHERS)

REMOVAL OF GROUND SIGN. (STOP & STREET NAME)

FIRE HYDRANT REMAINS IN PLACE

REMOVAL OF TREES

ABANDON WATERLINE/VALVES (SEE WATERLINE PLAN AND PROFILES)

REMOVAL OF CONCRETE. REMOVE CONCRETE WALK & CURB AND GUTTER TO NEW CONSTRUCTION LIMITS

PROTECT TREES

PROTECT FENCE AND GATES IN PLACE. ANY DAMAGE THAT OCCURS DURING CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.

PROTECT GUY ANCHORS IN PLACE

REMOVAL OF TREE

EXISTING WATERLINE TO BE ABANDON PER WATERLINE PLAN AND PROFILES

ADJUST WATER VALVE BOX TO FINISHED GRADE.

REMOVAL OF GROUND SIGN. (NO DUMPING)

REMOVE STORM DRAIN INLET. (SEE STORM DRAIN PLAN AND PROFILES FOR ADDITIONAL INFORMATION)

RESET GUY ANCHOR. (BY OTHERS)

RESET UTILITY POLE (BY OTHERS)

RESET GUY ANCHOR AND UTILITY POLE (BY OTHERS)

REMOVE PROPERTY PINS. NO REFERENCE OR RESET REQUIRED

RESET UTILITY POLE. (BY OTHERS)

REMOVAL OF CONCRETE. REMOVE CONCRETE PATH, CURB AND GUTTER, AND DRIVE APRON TO NEW CONSTRUCTION LIMITS

REMOVAL OF GROUND SIGN. (SPEED LIMIT SIGNS)

REMOVE CONCRETE POLE FOUNDATION. POLE WILL BE REMOVED BY OTHERS.

REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION.

COORDINATE GAS LINE PROTECTION OR REPLACEMENT WITH XCEL ENERGY

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS.

PROTECT UTILITY POLE IN PLACE (IF NEED BE CONTRACTOR SHALL PLACE EXPANSION JOINT MATERIAL AROUND POLE AND POUR WALK AROUND)

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS.

DAYLIGHT LINE

D1-252-019
RIM 4556.45
INV E>W
4552.37

D1-252-099
CRATE 4555.55 ~ DECORATIVE GRAVEL
INV 4551.55

D1-252-100
RIM 4556.94
INVnE 4550.74
INVnN 4550.79
INVoutSW 4549.80

C4-252-010
GRATE 4555.40
INV 4551.40

IVoutSW 4548.22

CP /CAP/
N 34044.0420
E 88025.30
EL 4559.22

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DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-1
May 20, 2020

MATCH LINE STA 5+00

ROCKAWAY AVE

0+00

1+00

2+00

3+00

6+00

7+00

8+00

9+00

HALE AVE

CRAWFORD AVE

MATCH LINE STA 10+00

PROTECT FENCES AND GATES IN PLACE. ANY DAMAGE THAT OCCURS DURING CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.

RESET GROUND SIGN. (STOP & STREET NAME)

ADJUST MH TO FINISHED GRADE (SEE SANITARY SEWER PLAN AND PROFILES)

PROTECT TREES

REMOVAL OF CONCRETE. REMOVE CONCRETE WALK & CURB AND GUTTER TO NEW CONSTRUCTION LIMITS

EXISTING WATER VALVES AND HYDRANT REMOVED PER WATERLINE PLAN AND PROFILES.

EXISTING WATERLINE TO BE ABANDON PER WATERLINE PLAN AND PROFILES

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS.

ADJUST WV TO FG

DAYLIGHT LINE

REMOVE FENCE POSTS AS NEEDED TO FACILITATE SIDEWALK CONSTRUCTION

REMOVAL OF CONCRETE. REMOVE CONCRETE WALK, CURB AND GUTTER, AND DRIVEWAY TO NEW CONSTRUCTION LIMITS

REMOVAL OF TREES

EX MH D1-252-049
RIM 4569.94
INVinN 4564.74
(15")INV 4561.15

ADJUST WM TO FINISHED GRADE (SEE WATERLINE PLAN AND PROFILES) TIE SERVICE TO NEW LINE IN HALE AVE.

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS.

ADJUST WV TO FINISHED GRADE (SEE WATERLINE PLAN AND PROFILES) TIE CRAWFORD WATER LINE TO NEW LINE IN HALE AVE.

COORDINATE GAS LINE PROTECTION OR REPLACEMENT WITH XCEL ENERGY

ADJUST MH TO FINISHED GRADE (SEE SANITARY SEWER PLAN AND PROFILES)

REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION. 2 EA.

D1-252-042
RIM 4558.81
INVinS 4552.30
INVinE 4552.34

PNT 402W
STA 0+67.94'
N 34203.70
E 88284.98
ELEV 4558.44
CSW W
HALE AVE AND ROCKWAY AVE

PNT 403
STA 9+80.40
N 34203.41
E 88605.46
ELEV 4568.24
CSW W
HALE AND CRAWFORD

RESET UTILITY POLE. (BY OTHERS)

RESET UTILITY POLE. (BY OTHERS)

REMOVE PROPERTY PIN. NO REFERENCE OR RESET REQUIRED

REMOVE PROPERTY PIN. NO REFERENCE OR RESET REQUIRED

REMOVE WATER METER AND ABANDON SERVICE LINE

REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION.

RESET GUY ANCHOR. (BY OTHERS)

RELOCATE ELECTRIC LINE. (BY OTHERS)

RESET ELECTRIC TRANSFORMER, UTILITY POLE, AND GUY ANCHOR (BY OTHERS)

REMOVAL OF FENCE AND GATES

RELOCATE ELECTRIC LINE. CATV LINE, AND COMMUNICATION LINE. (BY OTHERS)

REMOVAL OF FENCE

REMOVAL OF FENCE

REMOVE FLARED END SECTION, LAST 50 FEET OF PIPE, AND ABANDON REMAINING STORM PER STORM DRAIN PLAN AND PROFILES.

SEE SANITARY SEWER PLAN AND PROFILES

CITY WELL 4

MON WELL 7

MON WELL 8

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DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

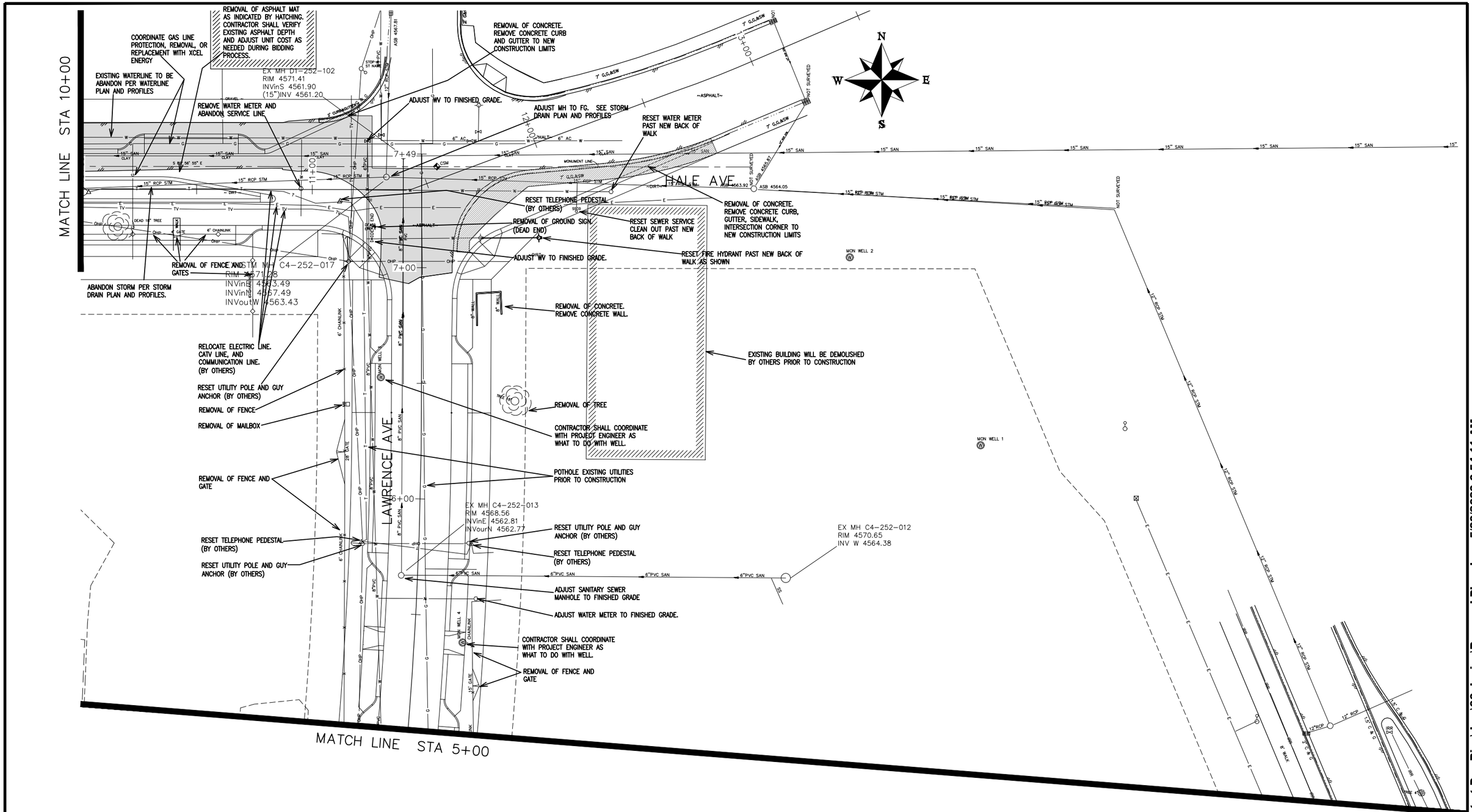
DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-2
May 20, 2020



DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-3
May 20, 2020

9

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TEMPORARY CONTROL DOES NOT NEED TO BE RESET. CONTRACTOR'S SURVEYOR MAY WANT TO REFERENCE OR TRANSFER TO SAFE LOCATION PRIOR TO CONSTRUCTION. NO PAY.

CP /CAP/ N 34044.07 E 8802.61 EL 45'

HVOHP

REMOVE CONCRETE POLE FOUNDATION. POLE WILL BE REMOVED BY OTHERS.

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

SEE REMOVAL PLAN FOR HALE AVE TO ADDRESS EXISTING CONDITIONS IN HALE AND EAST OF BIKE PATH

HALE AVE

SEE SANITARY SEWER PLAN AND PROFILES

MCW WELL 12

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. BIKE PATH

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. ROADWAY

REMOVAL OF GROUND SIGN. (35 MHP AND 25 MPH)

D1-252-099 RIM 4557.45 INV E 4551.59

D1-252-100 RIM 4556.74 INVin E 4550.74 INVin S 4550.19 INVout SW 4549.80

D1-252-019 RIM 4556.45 INV E 4552.37

INVout SW 4548.22

MATCH LINE STA 5+00

COLORADO RIVER TRAIL

REMOVAL OF CONCRETE. REMOVE CONCRETE PATH TO NEW CONSTRUCTION LIMITS

PROTECT UTILITY POLE IN PLACE (IF NEED BE CONTRACTOR SHALL PLACE EXPANSION JOINT MATERIAL AROUND POLE AND POUR WALK AROUND)

TREE SHALL REMAIN IN PLACE. NO SPECIAL PROVISIONS REQUIRED FOR PROTECTION.

DAYLIGHT LINE

CLEARING AND GRUBBING. ANY VEGETATION OR OTHER MISCELLANEOUS ITEMS NOT NOTED AS REMOVED OR RESET HEREON SHALL BE REMOVED FROM SITE UNDER CLEARING AND GRUBBING PAY ITEM. CLEARING AND GRUBBING WILL BE PAID FOR AS A LUMP SUM FOR THE ENTIRE SITE.

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-4
May 20, 2020

10

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ROCKABOUT AVE

RIVERSIDE PARK DRIVE

COLORADO RIVER TRAIL

MATCH LINE STA 5+00

MATCH LINE STA 10+00

REMOVAL OF FENCE

6' CHAINLINK

CONCRETE POLE FOUNDATION WILL REMAIN IN PLACE. FG IS 2 FT.± ABOVE FOUNDATION. POLE WILL BE REMOVED BY OTHERS.

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

HVOHP

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

ADJUST SANITARY SEWER MANHOLES TO FINISHED GRADE. SEE SANITARY SEWER PLAN AND PROFILES FOR MORE INFORMATION.

C4-252-002
RIM 4559.42
INVin 4552.66
INVout 4552.52

REMOVAL OF GROUND SIGN. (BIKE CROSSING SIGNS)

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. ROADWAY

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. BIKE PATH

ADJUST SANITARY SEWER MANHOLE TO FINISHED GRADE

C4-252-001
RIM 4557.48
INV E 4547.21

C4-252-006
RIM 4557.48
INV E 4543.50

TEMPORARY CONTROL DOES NOT NEED TO BE RESET. CONTRACTOR'S SURVEYOR MAY WANT TO REFERENCE OR TRANSFER TO SAFE LOCATION PRIOR TO CONSTRUCTION. NO PAY.

CR 600/
3376' 98°00'
R=30.00
L=51.33
CH=45.25

MON WELL 1.5

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. BIKE PATH

CLEARING AND GRUBBING. ANY VEGETATION OR OTHER MISCELLANEOUS ITEMS NOT NOTED AS REMOVED OR RESET HEREON SHALL BE REMOVED FROM SITE UNDER CLEARING AND GRUBBING PAY ITEM. CLEARING AND GRUBBING WILL BE PAID FOR AS A LUMP SUM FOR THE ENTIRE SITE.

DAYLIGHT LINE

BIKE PATH

BIKE XING

30" RCP SAN

21" RCP SAN

4+00

5+00

6+00

7+00

8+00

9+00

N

E

W

S

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-5
May 20, 2020

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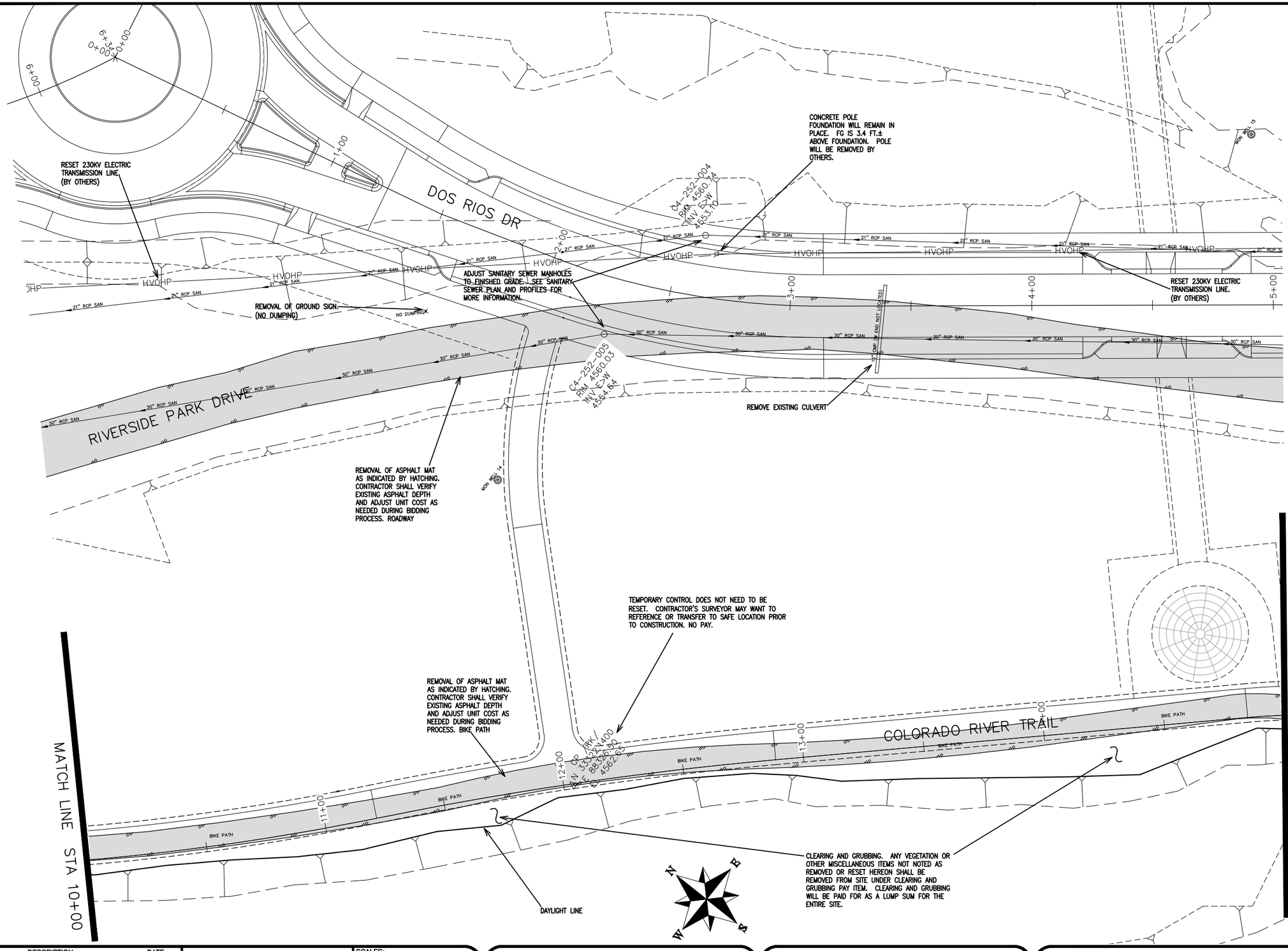

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REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-6
May 20, 2020

12

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CONCRETE POLE FOUNDATION WILL REMAIN IN PLACE. FG IS 3.7 FT.± ABOVE FOUNDATION. POLE WILL BE REMOVED BY OTHERS.

REMOVAL OF FENCE

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

REMOVAL OF TREE

CONCRETE POLE FOUNDATION WILL REMAIN IN PLACE. FG IS 2 FT.± ABOVE FOUNDATION. POLE WILL BE REMOVED BY OTHERS.

ADJUST SANITARY SEWER MANHOLES TO FINISHED GRADE. SEE SANITARY SEWER PLAN AND PROFILES FOR MORE INFORMATION.

REMOVAL OF FENCE

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. ROADWAY

TEMPORARY CONTROL DOES NOT NEED TO BE RESET. CONTRACTOR'S SURVEYOR MAY WANT TO REFERENCE OR TRANSFER TO SAFE LOCATION PRIOR TO CONSTRUCTION. NO PAY.

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. BIKE PATH

ADJUST SANITARY SEWER MANHOLES TO FINISHED GRADE. SEE SANITARY SEWER PLAN AND PROFILES FOR MORE INFORMATION.

CLEARING AND GRUBBING. ANY VEGETATION OR OTHER MISCELLANEOUS ITEMS NOT NOTED AS REMOVED OR RESET HEREON SHALL BE REMOVED FROM SITE UNDER CLEARING AND GRUBBING PAY ITEM. CLEARING AND GRUBBING WILL BE PAID FOR AS A LUMP SUM FOR THE ENTIRE SITE.

DAYLIGHT LINE

COVERED 3.7' TO FG

CALLE DEL RIO

DOS RIOS DR

COLORADO RIVER TRAIL

MATCH LINE STA 15+00

MATCH LINE STA 20+00

C4-252-008 RIM 4558.86 INV E,W 4554.97

C4-252-007 RIM 4559.87 INV E,W 4553.98

C4-252-003 RIM 4560.95 INV E,W 4555.56

INV E 4554.44

INV 21" 4553.52

6+00 7+00 8+00 9+00 9+02 16+00 17+00 18+00 19+00

HVOHP

21" RCP SAN

30" RCP SAN

4" WOVEN WIRE

8" PVC SAN

BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-7
May 20, 2020

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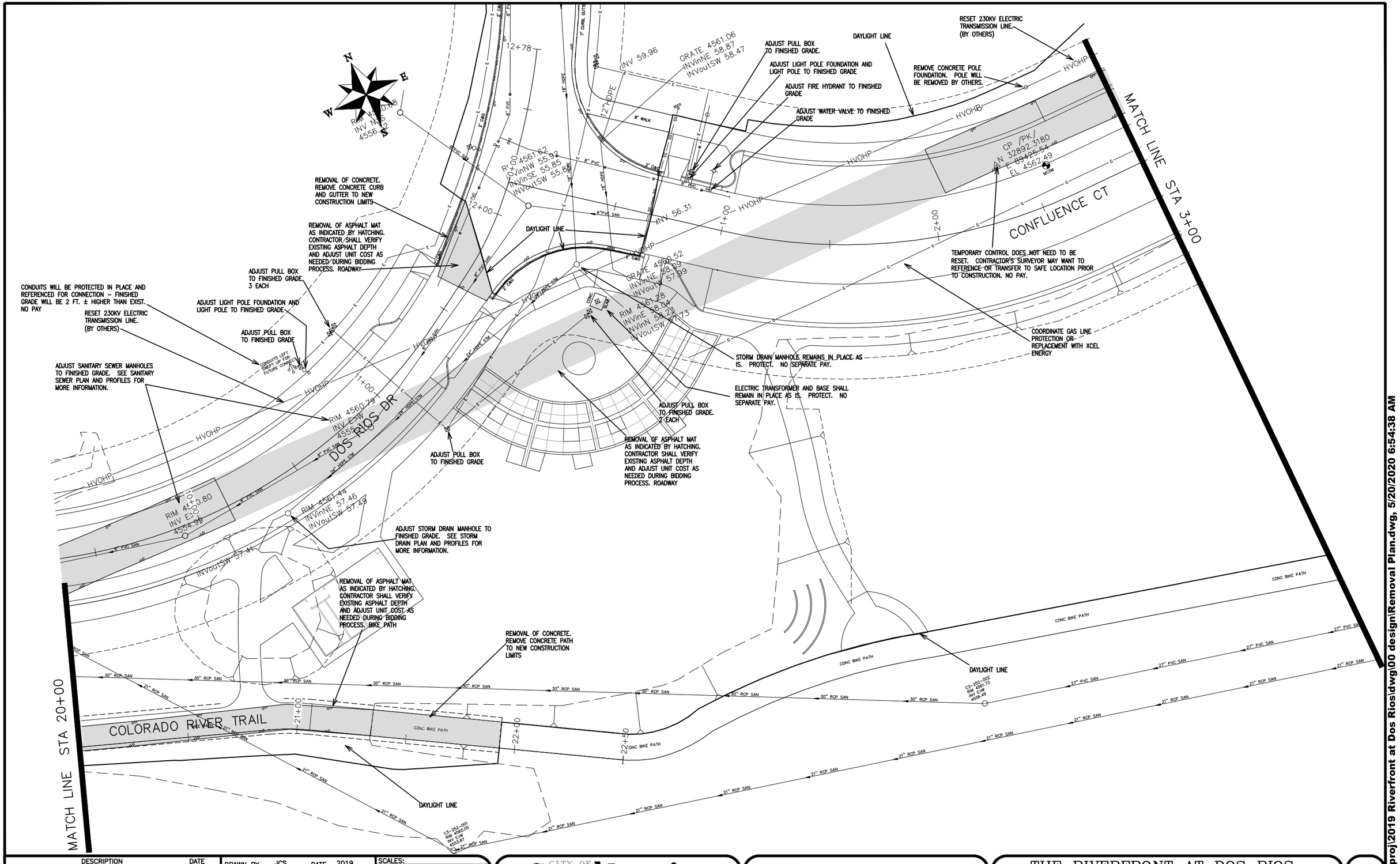

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DESIGNED BY	JCS	DATE	2019
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APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-8
May 20, 2020

14

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MATCH LINE STA 3+00

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

HVOHP

DAYLIGHT LINE

ADJUST PULL BOX TO FINISHED GRADE.

8' WALK

2" C & G

CONFLUENCE CT

4+00

5+00

6+00

7+00

7+36

RIM 4571.03
INVinNE 4561.41
INVoutSW 4561.34

8" PVC SAN

N

E

S

W

COORDINATE GAS LINE PROTECTION OR REPLACEMENT WITH XCEL ENERGY

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. ROADWAY

CONC BIKE PATH

REMOVAL OF CONCRETE. REMOVE CONCRETE BIKE PATH TO NEW CONSTRUCTION LIMITS

EXISTING CULVERT WILL BE ABANDON IN PLACE. CULVERT WILL HAVE 5' PLUS FILL OVER. NO PAY

12" RCP (E END NOT LOCATED)

REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION.

PIN /CITY/

DAYLIGHT LINE

C3-261-002
RIM 4563.19
INV E&W 4557.23

27" PVC SAN

21" RCP SAN

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REVISION △	–
REVISION △	–
REVISION △	–

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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-9
May 20, 2020

15

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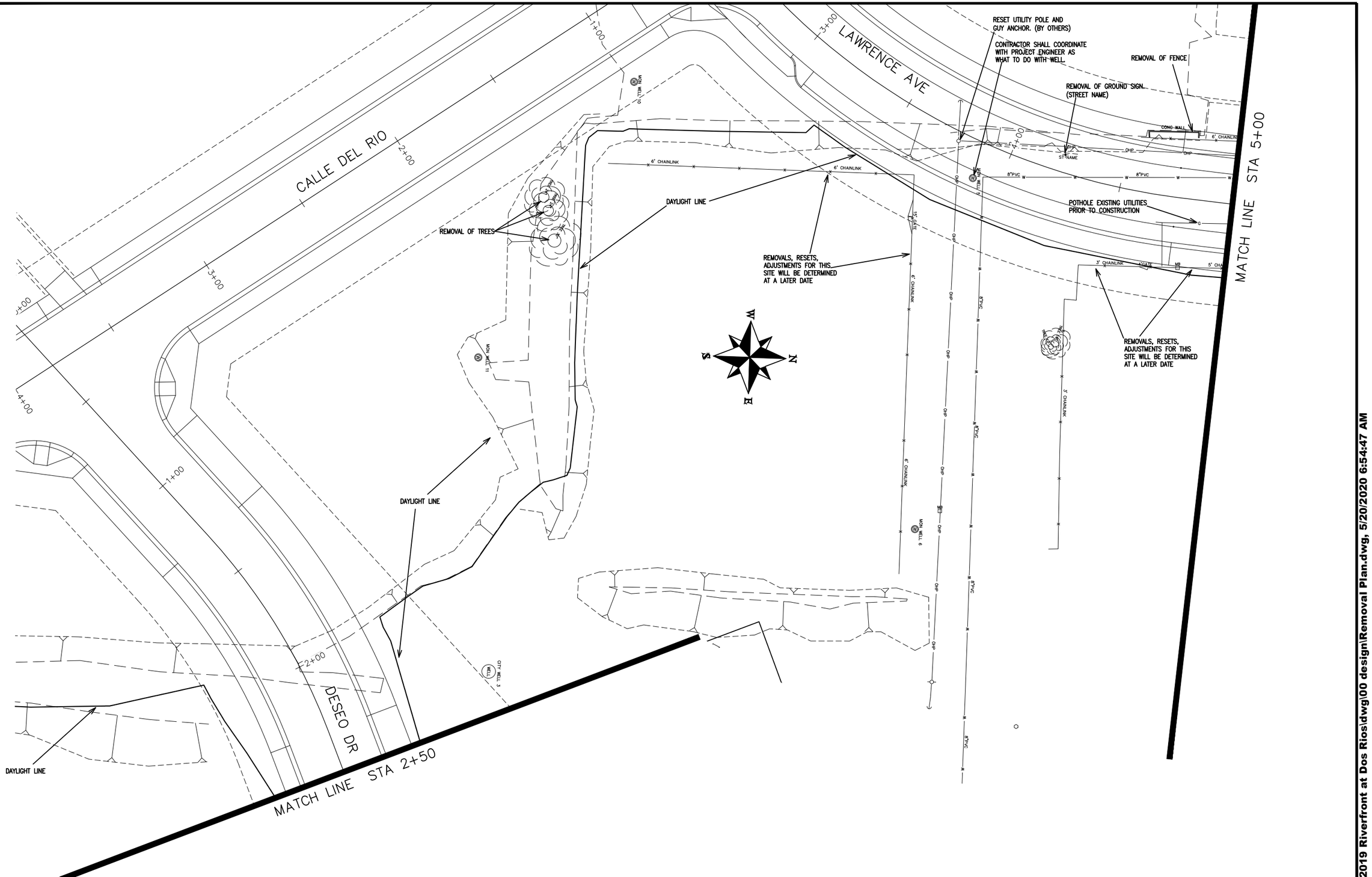

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
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APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-10
May 20, 2020

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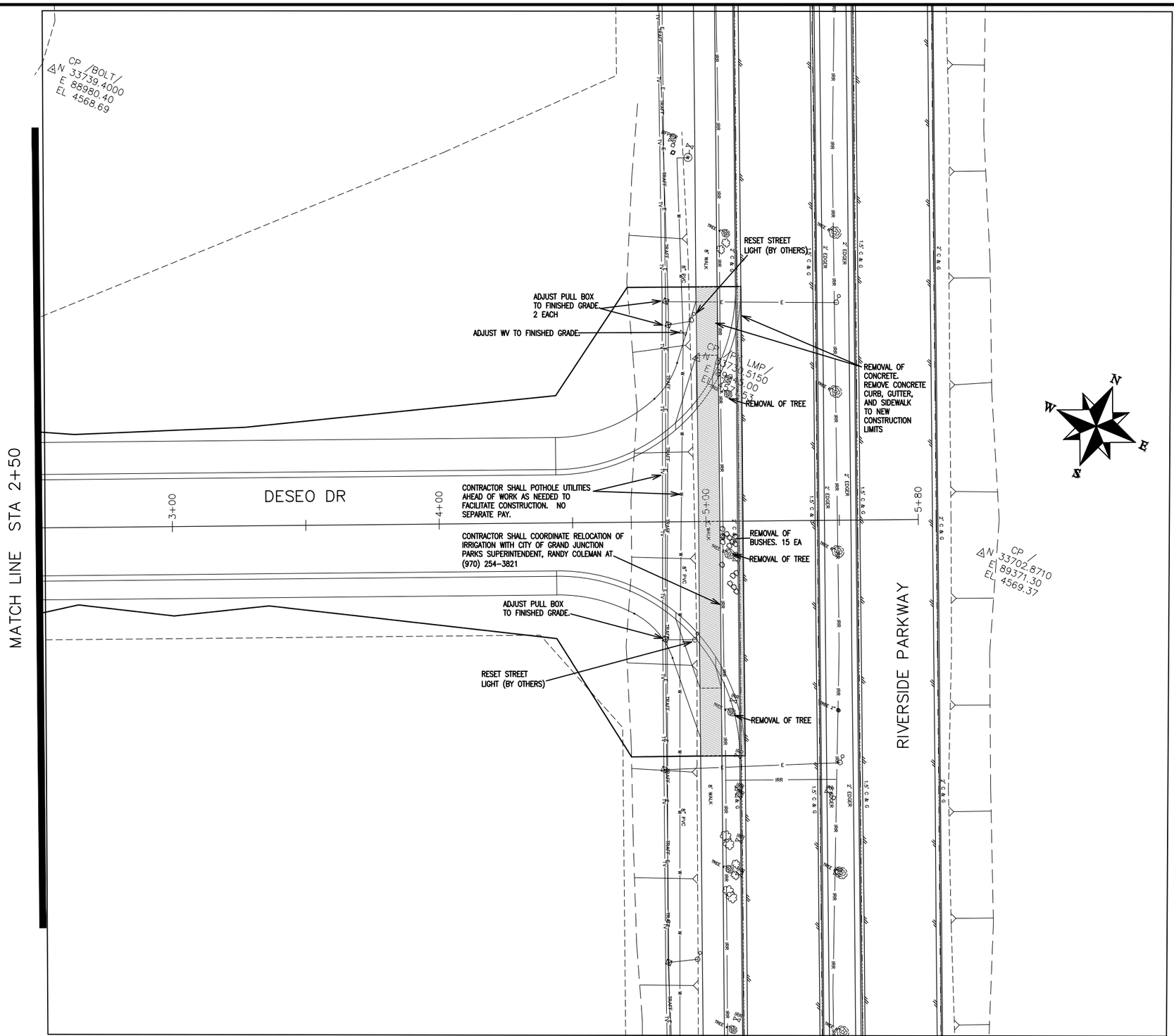

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REVISION △	–

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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R–11
May 20, 2020

17

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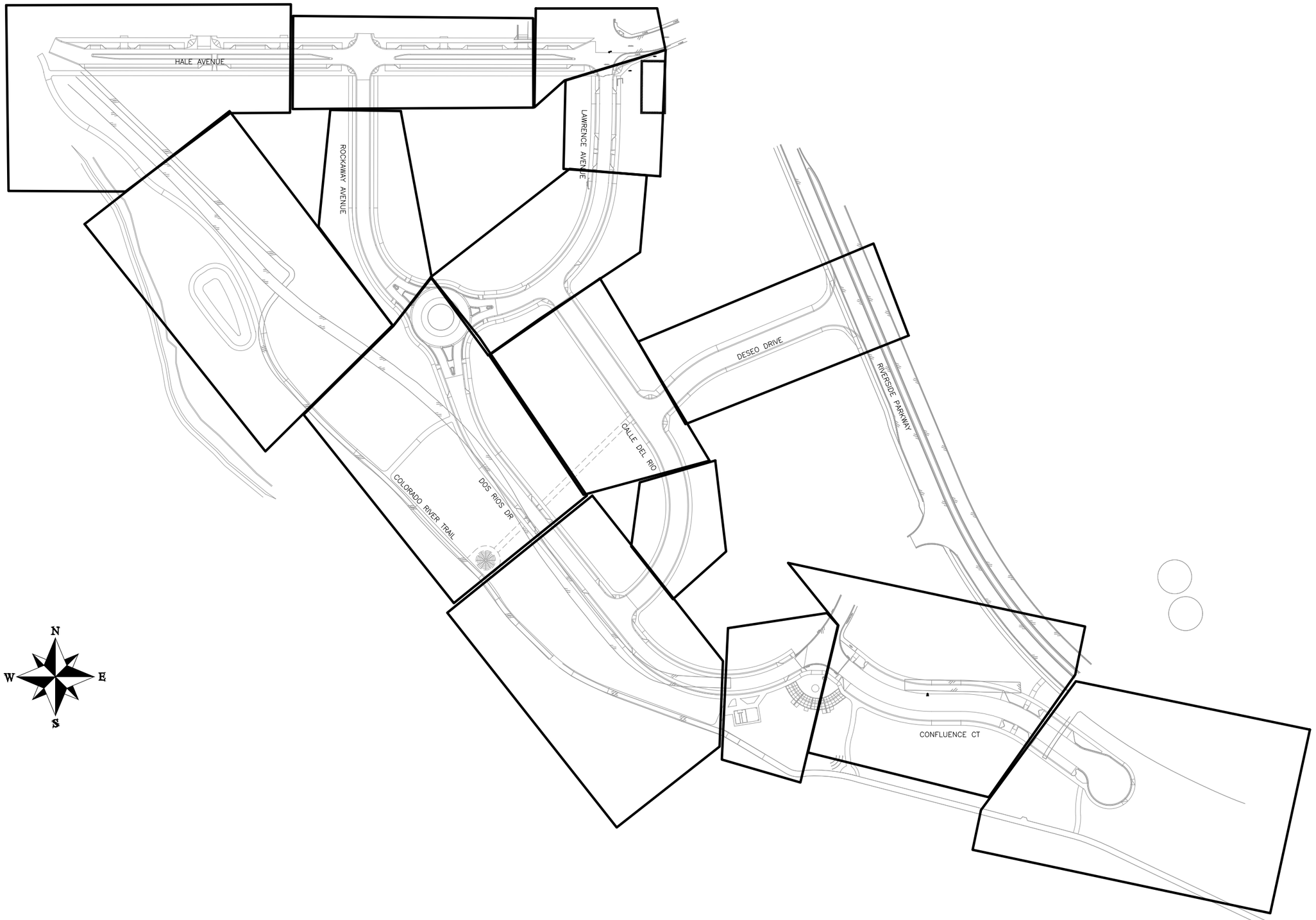

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN SHEET INDEX – 1
May 20, 2020

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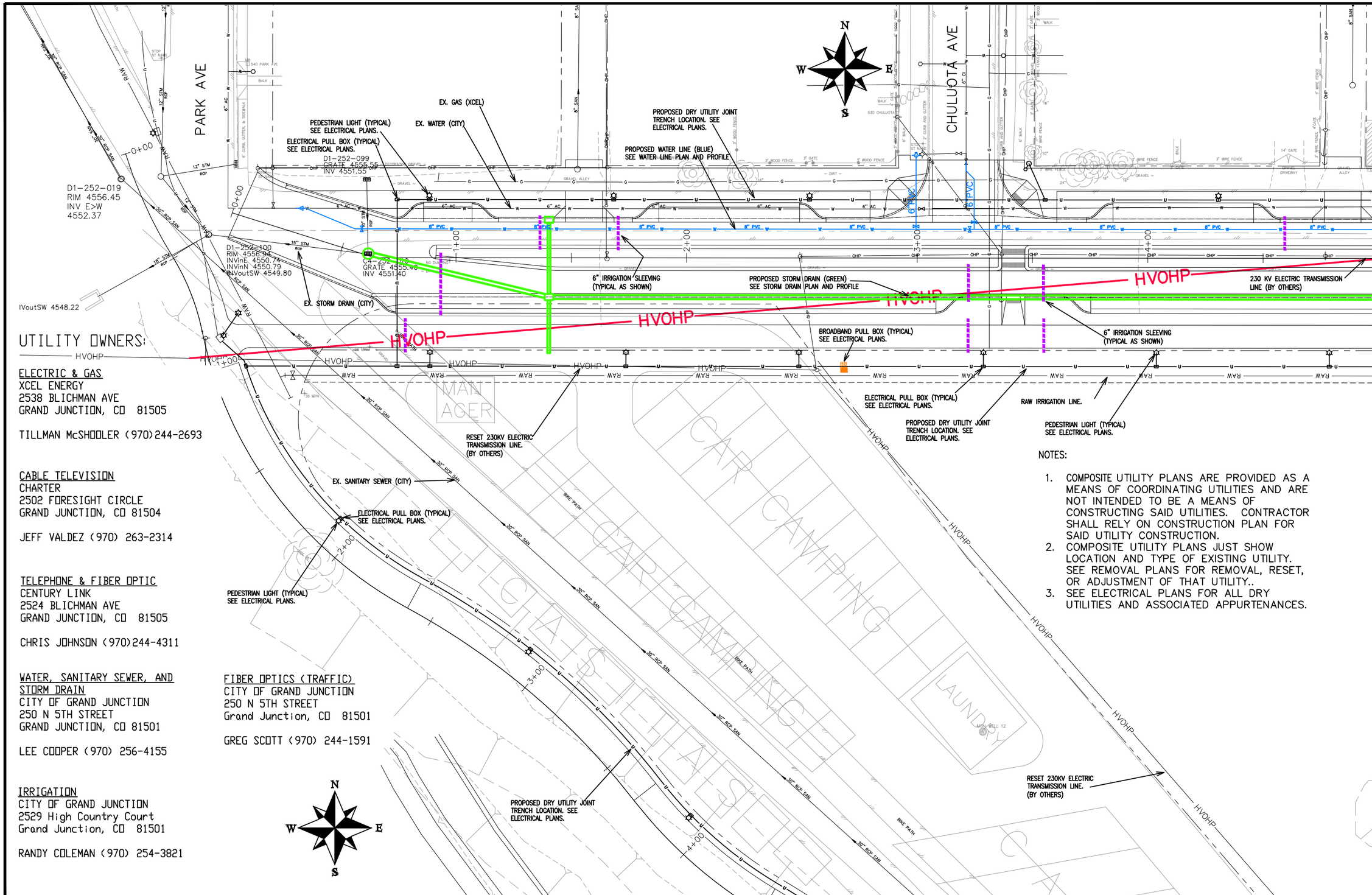

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

NOTES:

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SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-1
May 20, 2020

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UTILITY OWNERS:

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XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

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CABLE TELEVISION
CHARTER
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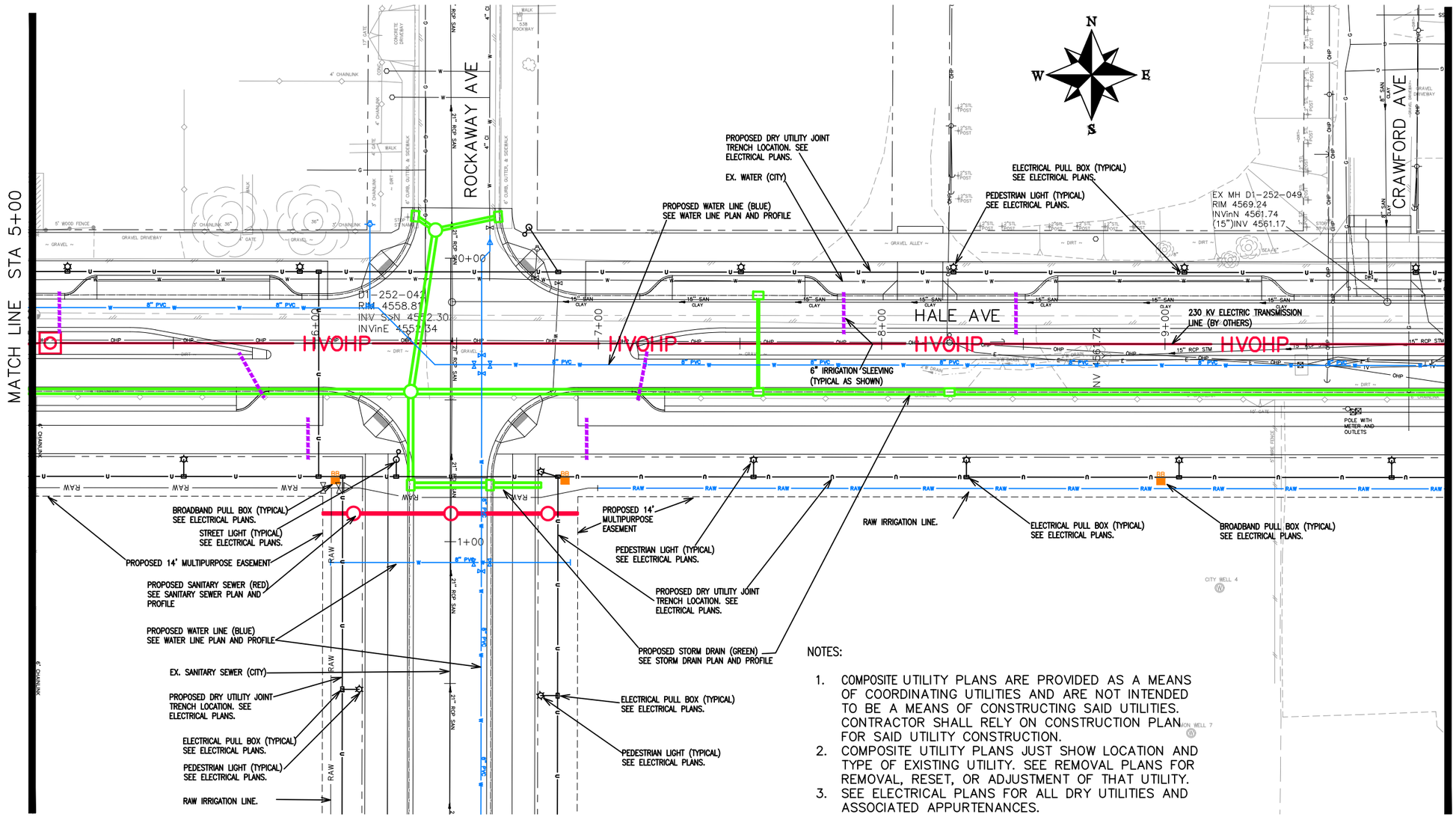
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591



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APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-2
May 20, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
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TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

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CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

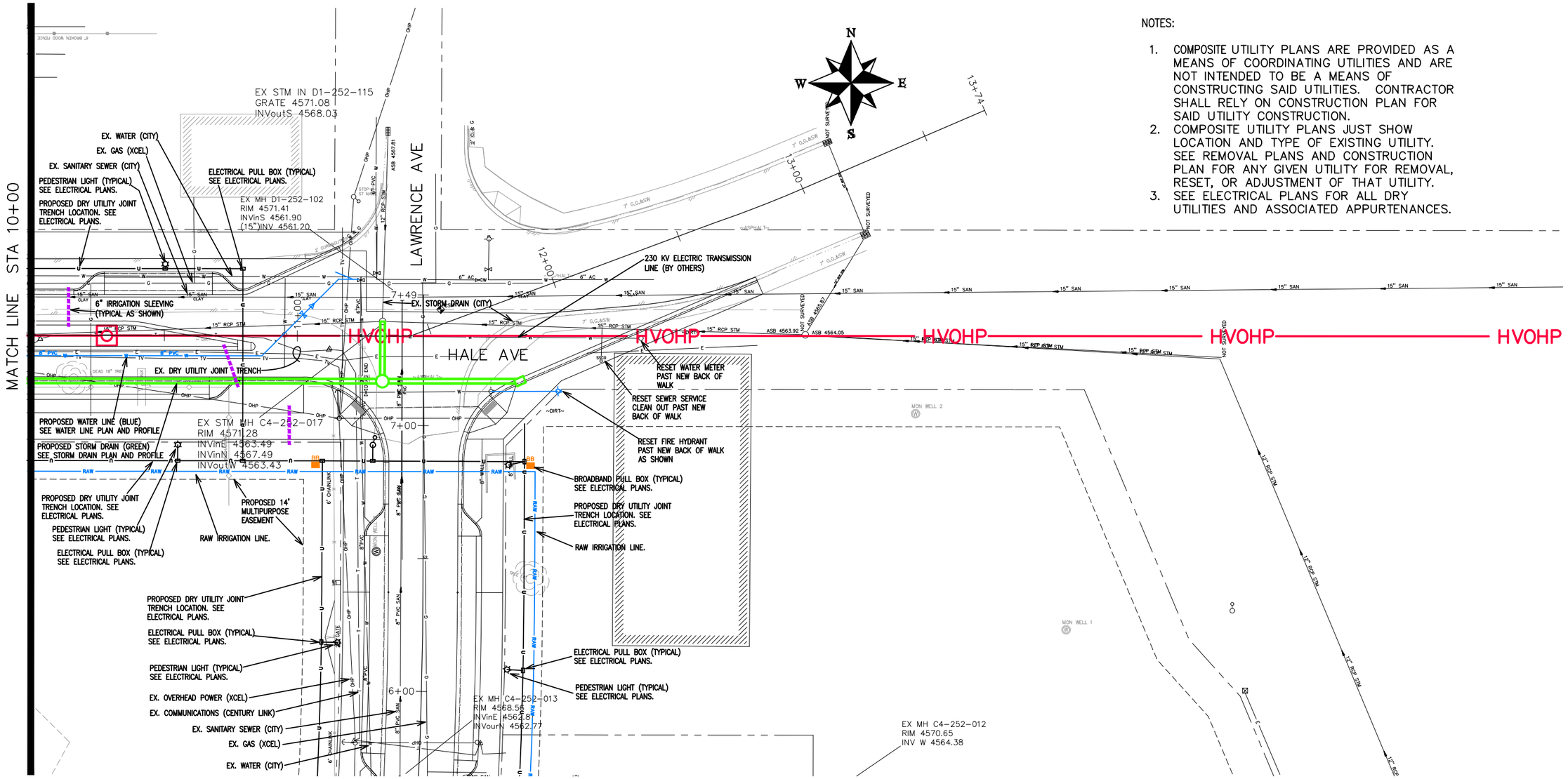
LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591



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REVISION △	

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APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-3
May 20, 2020

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UTILITY OWNERS:

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XCEL ENERGY
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CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

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CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

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WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

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FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
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Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

HALE AVE

ROCKAWAY AVE

HVOHP

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

EX. SANITARY SEWER (CITY)

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

PROPOSED 14' MULTIPURPOSE EASEMENT

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

STREET LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

RAW IRRIGATION LINE.

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

C4-252-002
RIM 4559.42
INVin 4552.66
INVout 4552.52

C4-252-006
RIM 4557.48
INV. E>W
4553.50

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

6' CHAINLINK

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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-4
May 20, 2020

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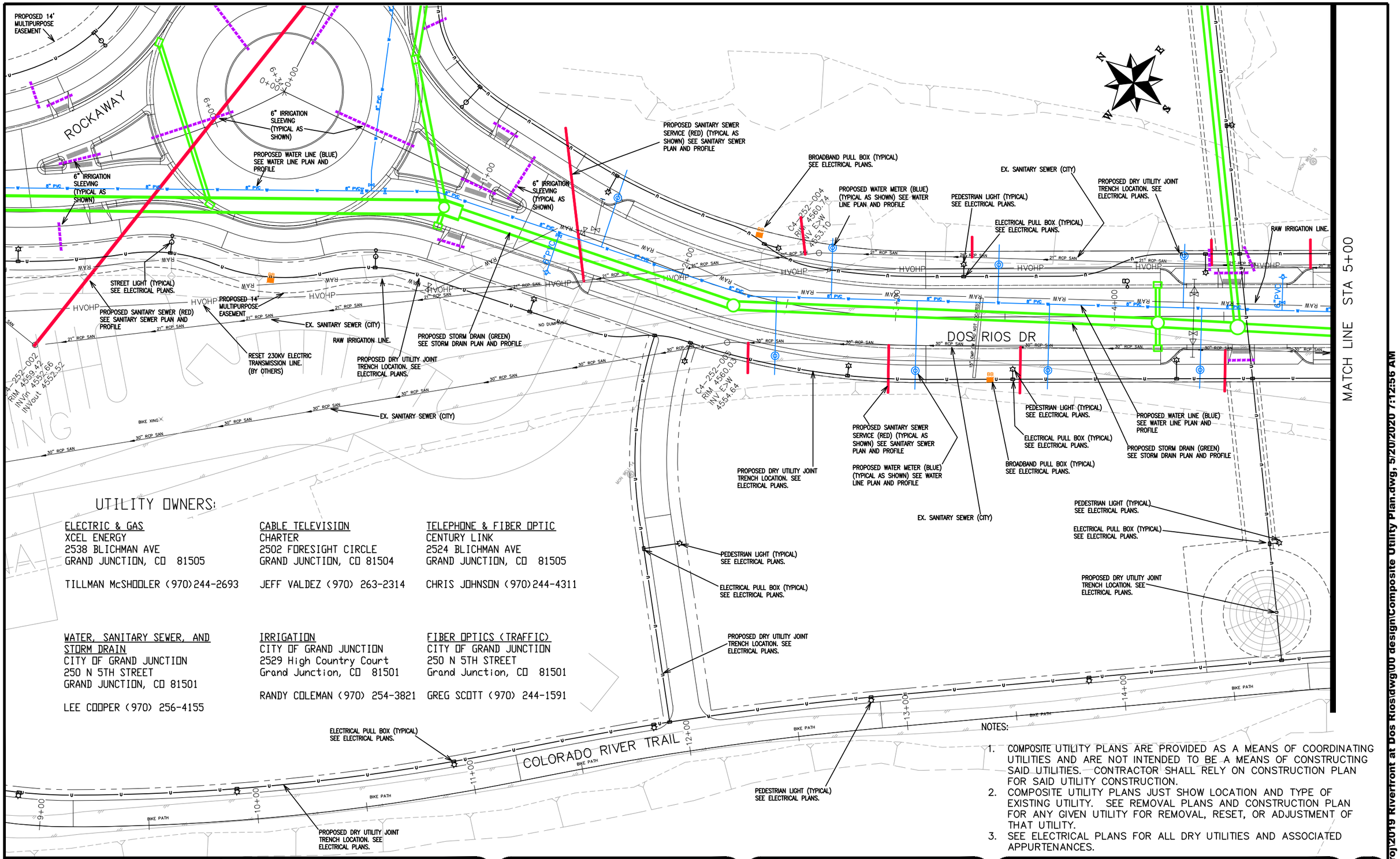

UTILITY OWNERS:

ELECTRIC & GAS	CABLE TELEVISION	TELEPHONE & FIBER OPTIC
XCEL ENERGY	CHARTER	CENTURY LINK
2538 BLICHMAN AVE	2502 FORESIGHT CIRCLE	2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505	GRAND JUNCTION, CO 81504	GRAND JUNCTION, CO 81505
TILLMAN McSHOOLER (970)244-2693	JEFF VALDEZ (970) 263-2314	CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN	IRRIGATION	FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION	CITY OF GRAND JUNCTION	CITY OF GRAND JUNCTION
250 N 5TH STREET	2529 High Country Court	250 N 5TH STREET
GRAND JUNCTION, CO 81501	Grand Junction, CO 81501	Grand Junction, CO 81501
LEE COOPER (970) 256-4155	RANDY COLEMAN (970) 254-3821	GREG SCOTT (970) 244-1591

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SCALES:
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VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-5
May 20, 2020

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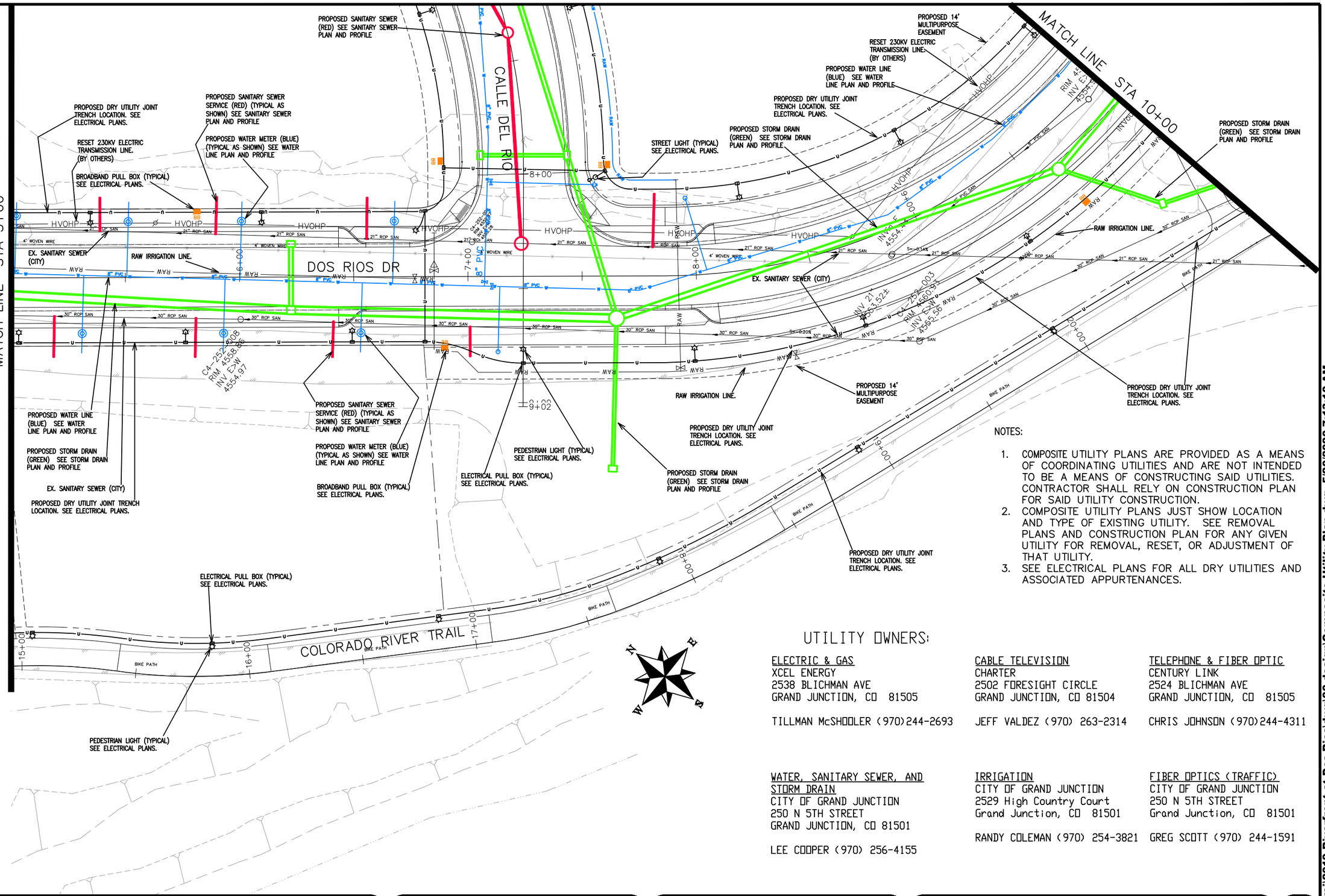

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

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VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-6
May 20, 2020

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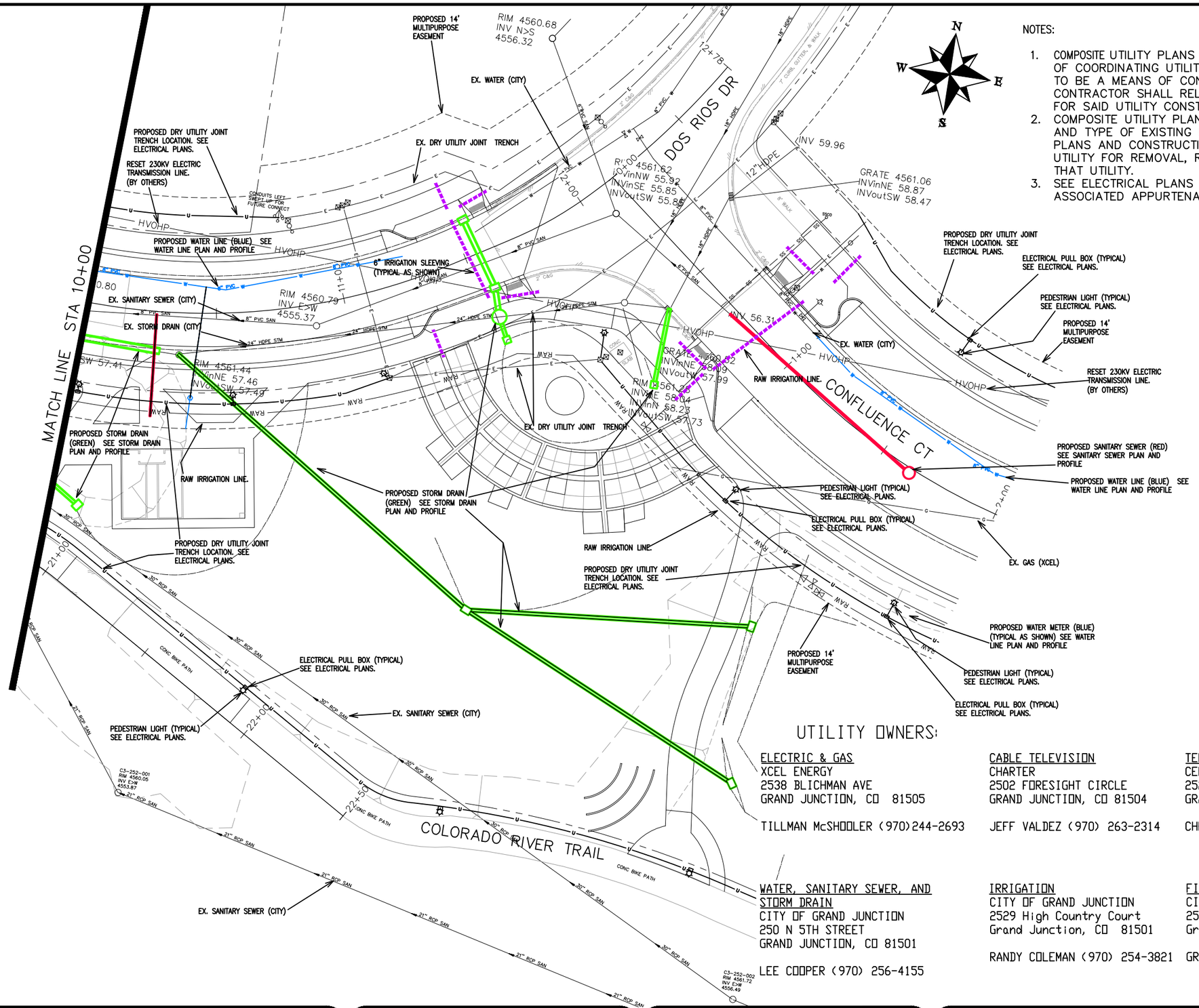

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WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
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GRAND JUNCTION, CO 81501
LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501
RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501
GREG SCOTT (970) 244-1591

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VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-7
May 20, 2020

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NOTES:

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2. COMPOSITE UTILITY PLANS JUST SHOW LOCATION AND TYPE OF EXISTING UTILITY. SEE REMOVAL PLANS AND CONSTRUCTION PLAN FOR ANY GIVEN UTILITY FOR REMOVAL, RESET, OR ADJUSTMENT OF THAT UTILITY.
3. SEE ELECTRICAL PLANS FOR ALL DRY UTILITIES AND ASSOCIATED APPURTENANCES.

ROCKAWAY AVE
LAWRENCE AVE
DOS RIOS DR
CALLE DEL RIO
MATCH LINE STA 5+00
PROPOSED 14' MULTIPURPOSE EASEMENT
PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.
PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE
PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE
BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.
ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.
STREET LIGHT (TYPICAL) SEE ELECTRICAL PLANS.
PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE
PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.
6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)
PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE
PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE
EX. GAS (XCEL)
EX. WATER (CITY)
EX. OVERHEAD POWER (XCEL)
RAW IRRIGATION LINE.

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-8
May 20, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

NOTES:

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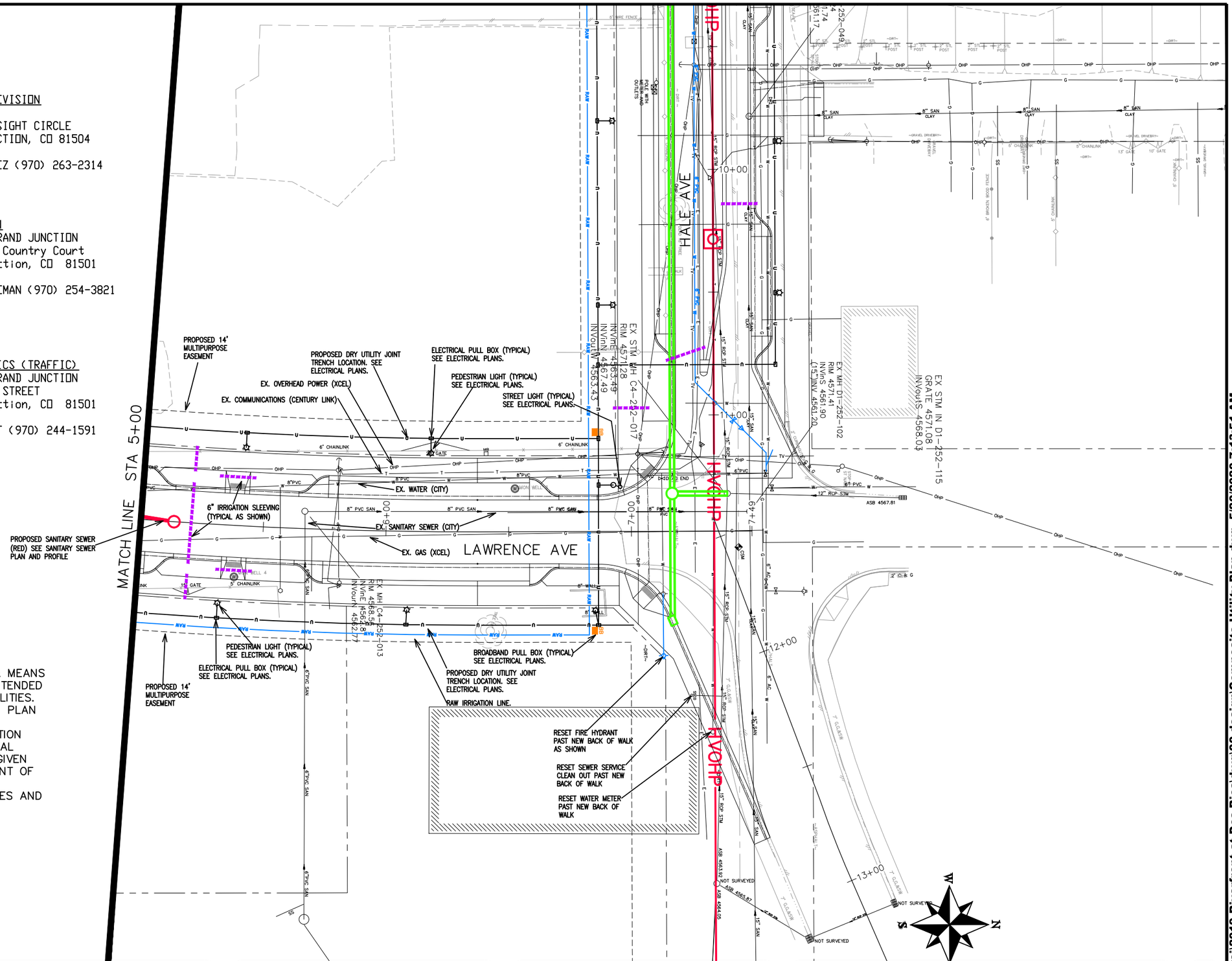
3. SEE ELECTRICAL PLANS FOR ALL DRY UTILITIES AND ASSOCIATED APPURTENANCES.



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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-9
May 20, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

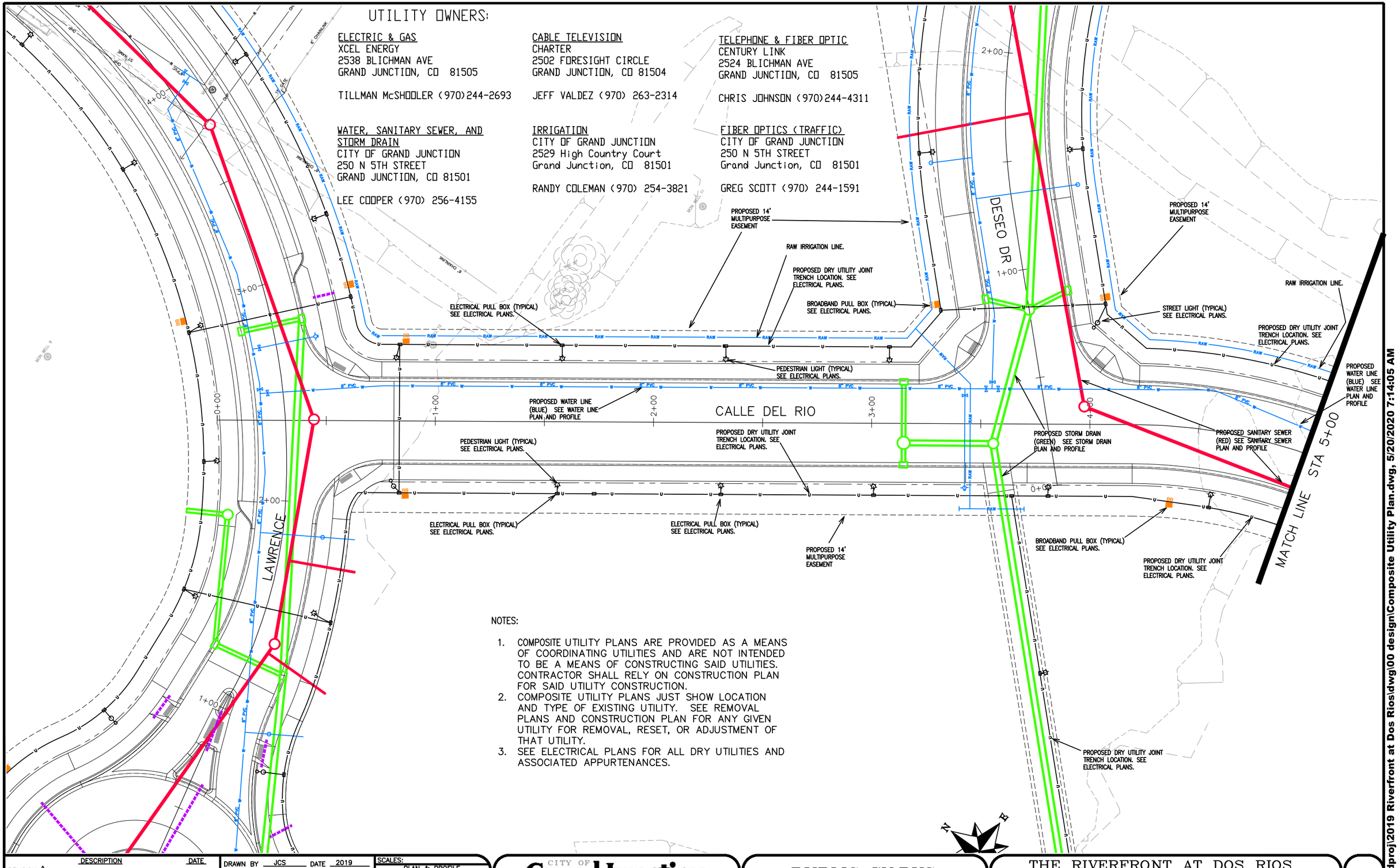
LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591



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REVISION △	–

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
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THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C–10
May 20, 2020

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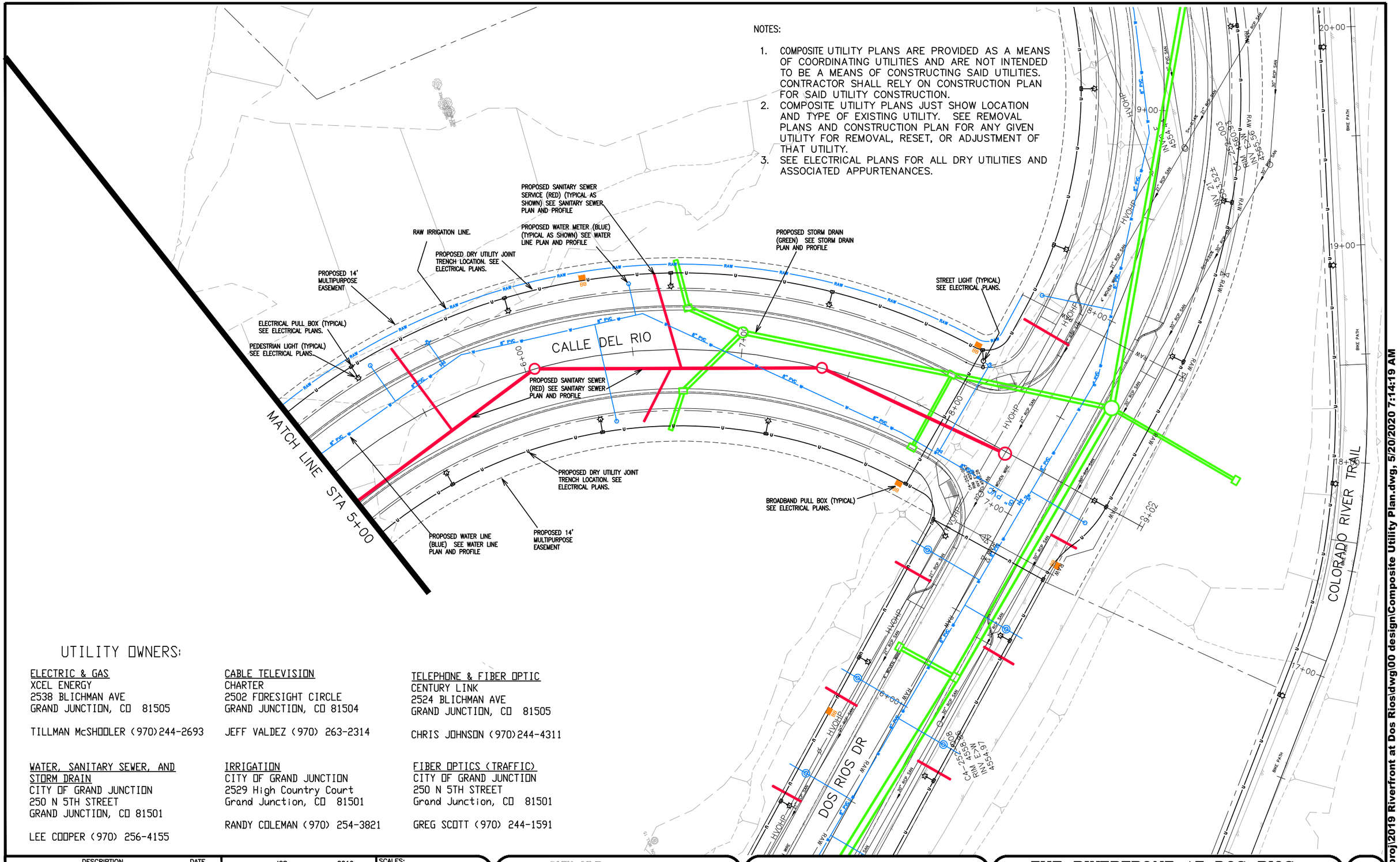

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

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REVISION △	
REVISION △	

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

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ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-11
May 20, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

CALLE DEL RIO

DESEO DR

RIVERSIDE PARKWAY

PROPOSED 14' MULTIPURPOSE EASEMENT

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

RAW IRRIGATION LINE.

STREET LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED 14' MULTIPURPOSE EASEMENT

PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

RAW IRRIGATION LINE.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

EX. WATER (CITY)

EX. IRR (CITY)

EX. TRAFF (CITY)

EX. TV (CHARTER)

EX. ELECT (XCEL)

NOTES:

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REVISION △	–

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-12
May 20, 2020

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NOTES:

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3. SEE ELECTRICAL PLANS FOR ALL DRY UTILITIES AND ASSOCIATED APPURTENANCES.

DOS RIOS DR
RIVERSIDE PARKWAY
CONFLUENCE CT
MATCH LINE STA 5+00
RIM 4562.94 INV 59.24 (CALC'D NOT MEASURED)
RIM 4560.68 INV N>S 4556.32
INV 59.96
GRATE 4561.06 INVinNE 58.87 INVoutSW 58.47
RIM 4561.62 INVinNW 55.92 INVinSE 55.85 INVoutSW 55.55
INV 56.31
RIM 4561.25 INVinE 56.04 INVinN 58.25 INVoutSW 57.73
GRATE 4560.82 INVinNE 58.19 INVoutNW 57.99
EX. DRY UTILITY JOINT TRENCH
EX. WATER (CITY)
EX. SANITARY SEWER (CITY)
EX. GAS (XCEL)
PROPOSED 14' MULTIPURPOSE EASEMENT
PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.
RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)
ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.
PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.
6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)
PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE
PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE
PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE
PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE
BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.
PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE
PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE
RAW IRRIGATION LINE.
PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.
PROPOSED 14' MULTIPURPOSE EASEMENT
PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.
ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505
TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504
JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505
CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501
LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501
RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501
GREG SCOTT (970) 244-1591

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REVISION △	

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

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ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-13
May 20, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

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MATCH LINE STA 5+00

CONFLUENCE CT

RIM 4571.03
INVinNE 4561.41
INVoutSW 4561.34

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

EX. SANITARY SEWER (CITY)

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

RAW IRRIGATION LINE.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

12" RCP (E END NOT LOCATED)

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

RAW IRRIGATION LINE.

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

EX. SANITARY SEWER (CITY)

C3-261-001
RIM 4562.28
INV E>W
4553.63
INVinNE
4554.12

C3-261-002
RIM 4563.19
INV E>W
4557.23

MATCH LINE

CONC BIKE PATH

6+00

7+00

7+36

DESCRIPTION	DATE
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REVISION △	–
REVISION △	–

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APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-14
May 20, 2020

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RIVERSIDE PARKWAY

MATCH LINE

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505
TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504
JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505
CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
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LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501
RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501
GREG SCOTT (970) 244-1591

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

RAW IRRIGATION LINE.

EX. SANITARY SEWER (CITY)

CONC BIKE PATH

RAW

27" PVC SAN

24" CIPP SAN

C3-261-004 RIM 4564.5 INV SE>NW 4554.36

C3-261-008 RIM 4565.3 INV SE>NW 4558.46

C3-261-007 RIM 4563.4 INV SE>NW 4554.70

Inv 4556.82

Inv 4556.75

15" RCP

24" RCP

36" RCP

WALL

N E S W

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-15
May 20, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

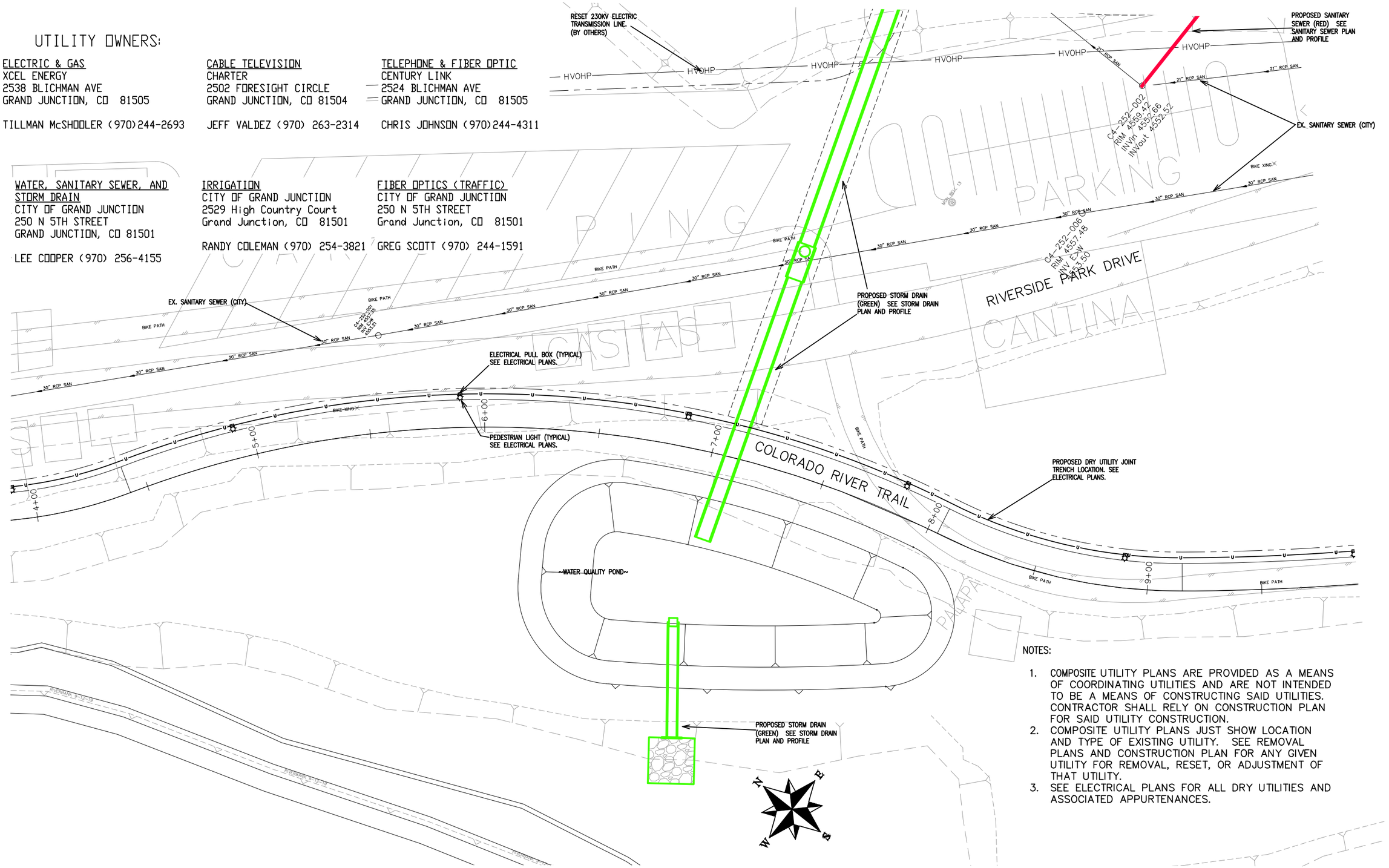
LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591



NOTES:

1. COMPOSITE UTILITY PLANS ARE PROVIDED AS A MEANS OF COORDINATING UTILITIES AND ARE NOT INTENDED TO BE A MEANS OF CONSTRUCTING SAID UTILITIES. CONTRACTOR SHALL RELY ON CONSTRUCTION PLAN FOR SAID UTILITY CONSTRUCTION.
2. COMPOSITE UTILITY PLANS JUST SHOW LOCATION AND TYPE OF EXISTING UTILITY. SEE REMOVAL PLANS AND CONSTRUCTION PLAN FOR ANY GIVEN UTILITY FOR REMOVAL, RESET, OR ADJUSTMENT OF THAT UTILITY.
3. SEE ELECTRICAL PLANS FOR ALL DRY UTILITIES AND ASSOCIATED APPURTENANCES.

DESCRIPTION	DATE
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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-16
May 20, 2020

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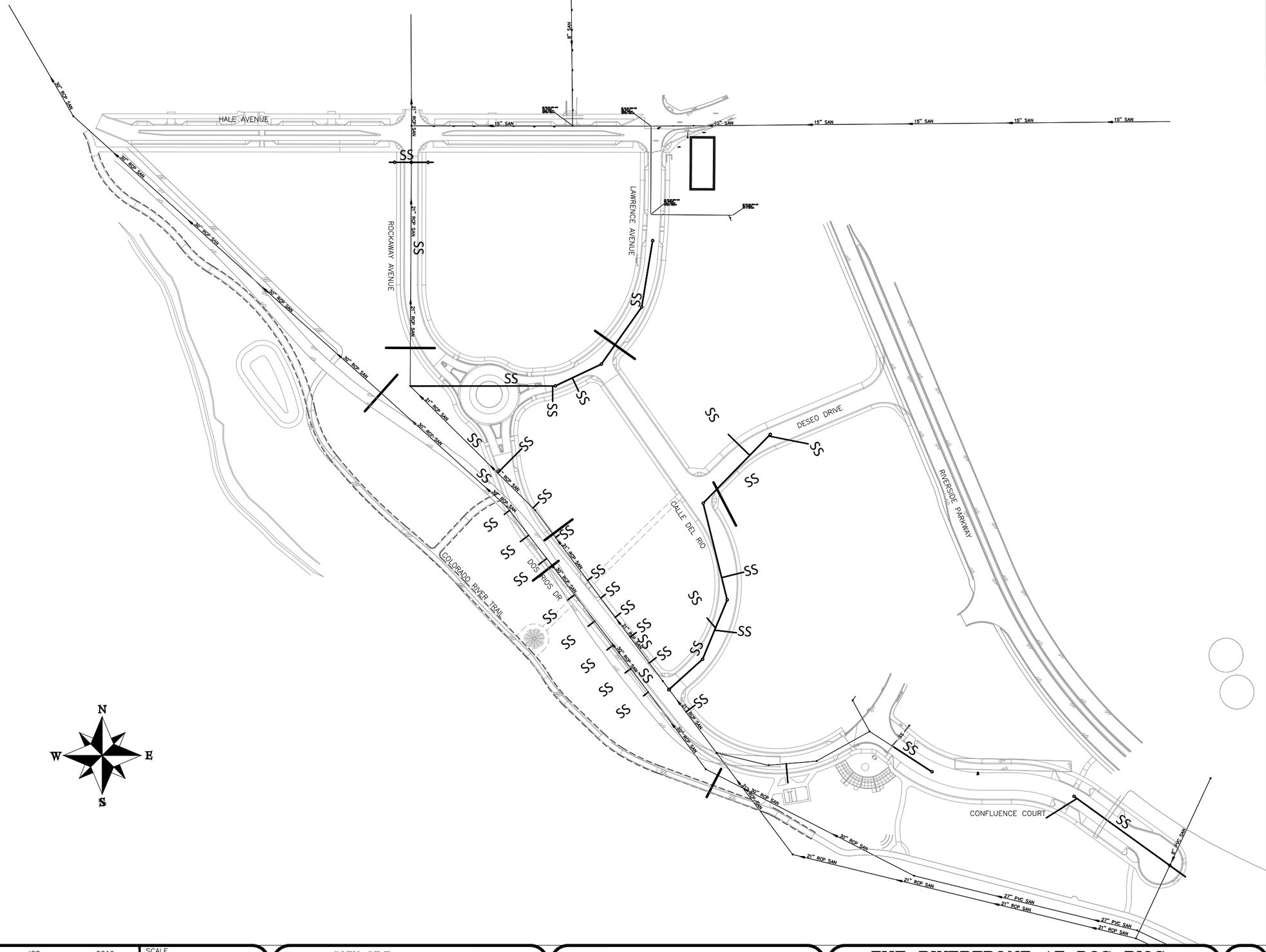

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER SHEET INDEX
May 20, 2020

35

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CONNECT MANHOLE TO EXISTING SANITARY SEWER (21" PIPE). CONTRACTOR SHALL USE A CAST-IN-PLACE BASE TO FORM INVERT AROUND THE EXISTING PIPE. "O" RING GASKETS OR OTHER WATER STOPS ARE TO BE PLACED AROUND THE INLET AND OUTLET PIPES TO ENSURE A WATER TIGHT SEAL IS PROVIDED AT THE MH BASE. CARE SHOULD BE TAKEN SO THAT THE EXISTING LINE DOES NOT SAG OR FLOAT DURING CONSTRUCTION OF THE BASE. THE TOP OF THE EXISTING PIPE SHALL BE CUT AND REMOVED TO PROVIDE FOR THE NEW INVERT IN. CONTRACTOR SHALL CONTROL SEWER FLOW AND NOT ALLOW DEBRIS TO ENTER THE PIPE.

WATERLINE TO BE INSTALLED BELOW SEWER PIPE. FULL CONCRETE ENCASEMENT AROUND SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

ADJUST MH TO FINISHED GRADE

RAW WATER TO BE INSTALLED BELOW SEWER PIPE. ENCASE SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

Structure - (77)
STA 1+11.48, 0.00
N 34133.74
E 88319.06

8in.PVC Pipe

SANITARY SEWER MANHOLE (60" I.D.)
Structure - (76)
STA 0+77.23, 0.00
N 34133.76
E 88284.81

8in.PVC Pipe

8in.PVC Pipe

CCOW

8in.PVC Pipe

POTHOLE EXIST. UTIL. PRIOR TO CONSTRUCTION

WATERLINE TO BE INSTALLED ABOVE SEWER PIPE. PLACE CONCRETE CAP ON SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

Structure - (75)
STA 0+42.86, 0.00
N 34133.78
E 88250.44

POTHOLE EXIST. UTIL. PRIOR TO CONSTRUCTION

ROCKAWAY AVE

HALE AVE

MATCH LINE STA 5+00

NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

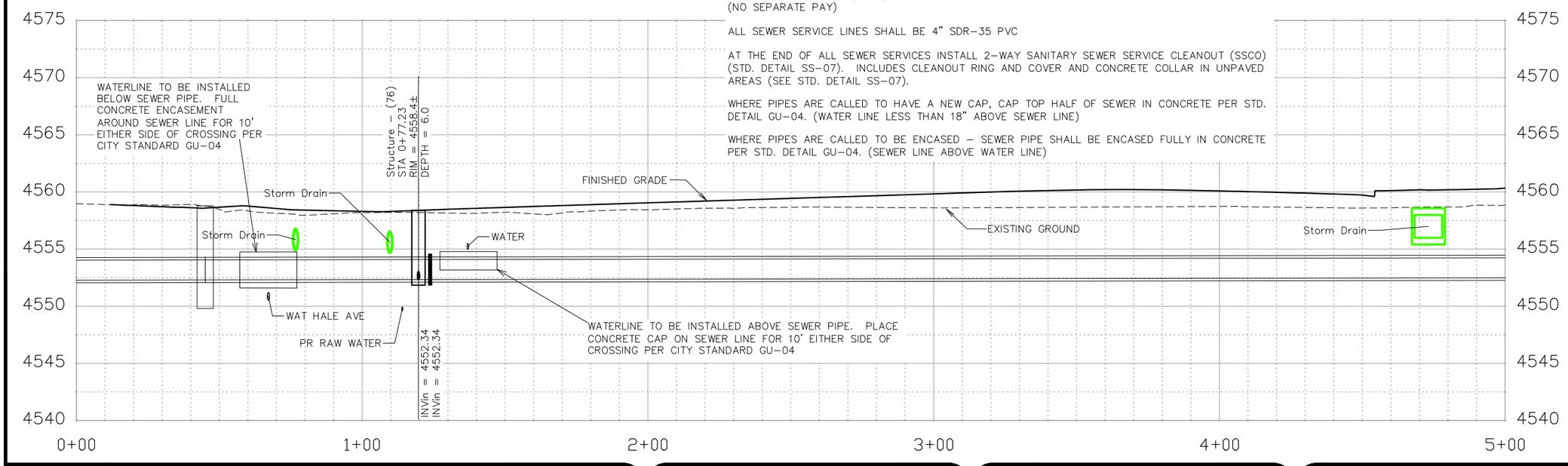
CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED ON THE UPSTREAM PIPE SIDES OF ALL MANHOLES. (NO SEPARATE PAY)

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

WHERE PIPES ARE CALLED TO BE ENCASED - SEWER PIPE SHALL BE ENCASED FULLY IN CONCRETE PER STD. DETAIL GU-04. (SEWER LINE ABOVE WATER LINE)



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REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 - SS1
May 20, 2020

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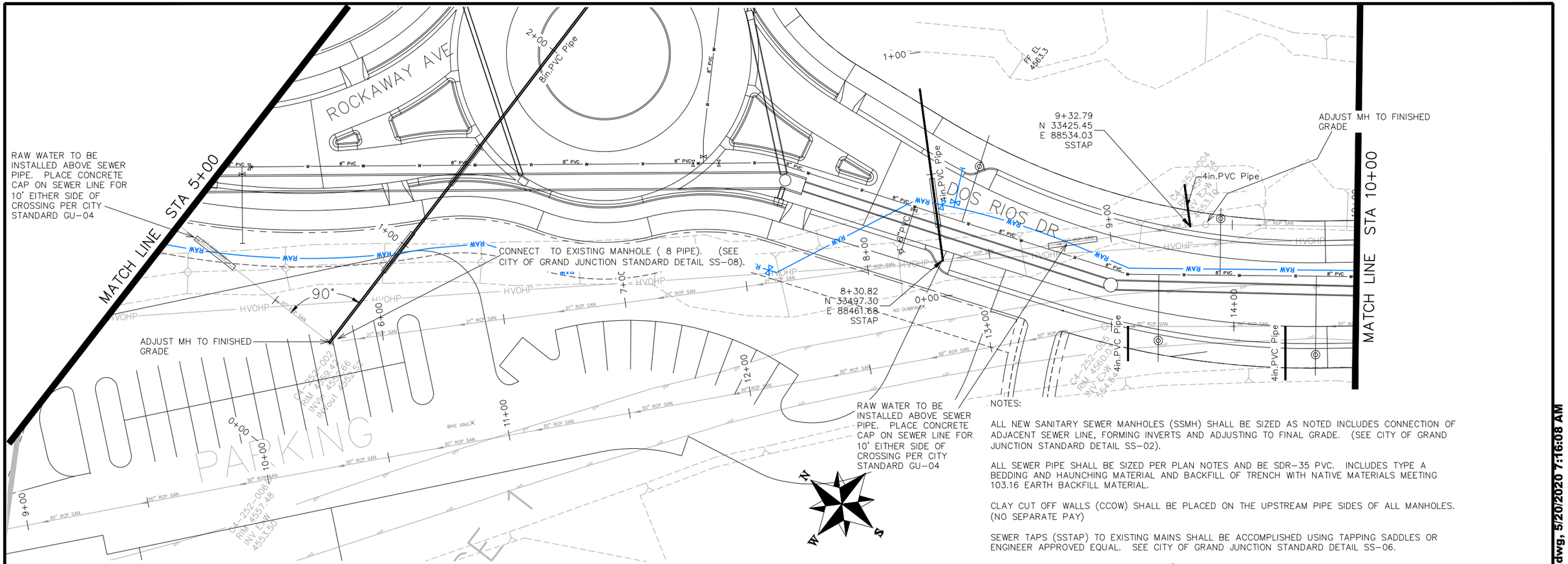

NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED ON THE UPSTREAM PIPE SIDES OF ALL MANHOLES. (NO SEPARATE PAY)

SEWER TAPS (SSTAP) TO EXISTING MAINS SHALL BE ACCOMPLISHED USING TAPPING SADDLES OR ENGINEER APPROVED EQUAL. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

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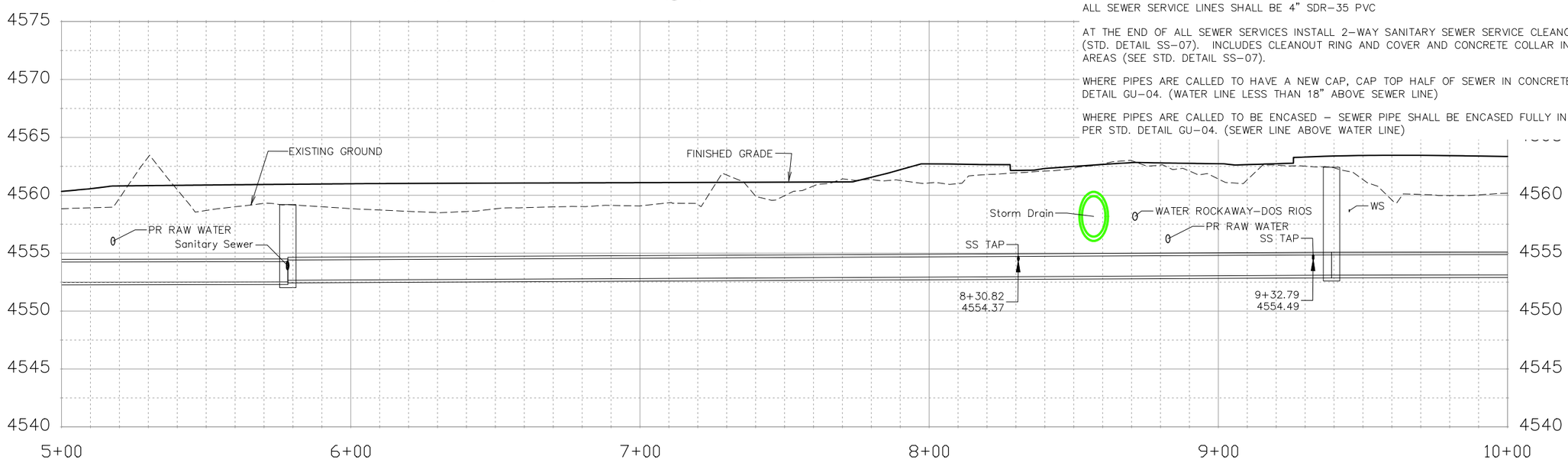

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS2
May 20, 2020

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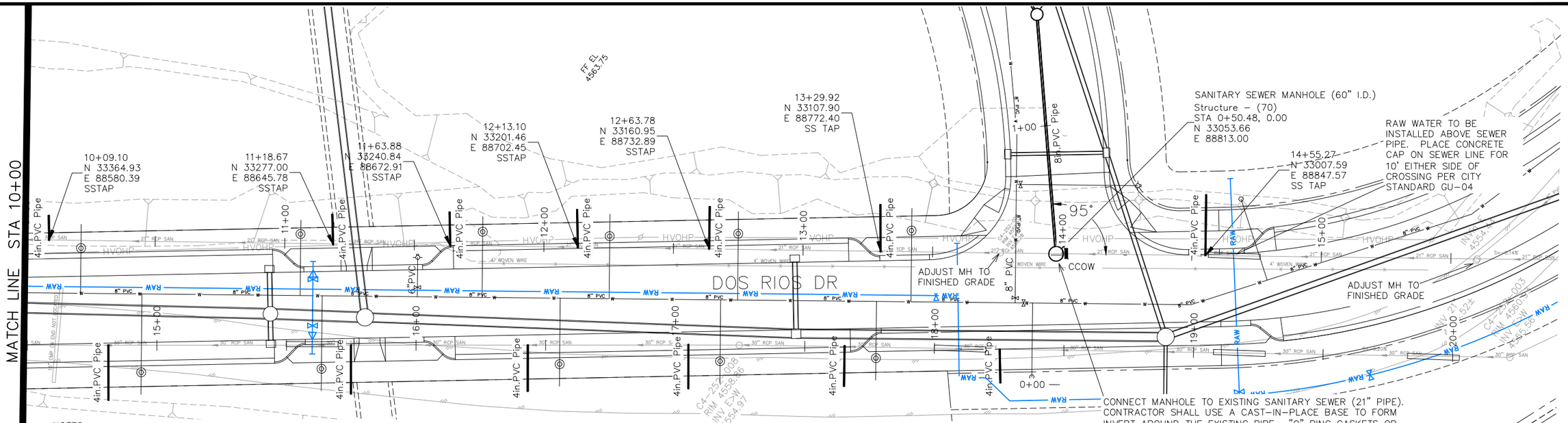
MATCH LINE STA 10+00



NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED ON THE UPSTREAM PIPE SIDES OF ALL MANHOLES. (NO SEPARATE PAY)

SEWER TAPS (SSTAP) TO EXISTING MAINS SHALL BE ACCOMPLISHED USING TAPPING SADDLES OR ENGINEER APPROVED EQUAL. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

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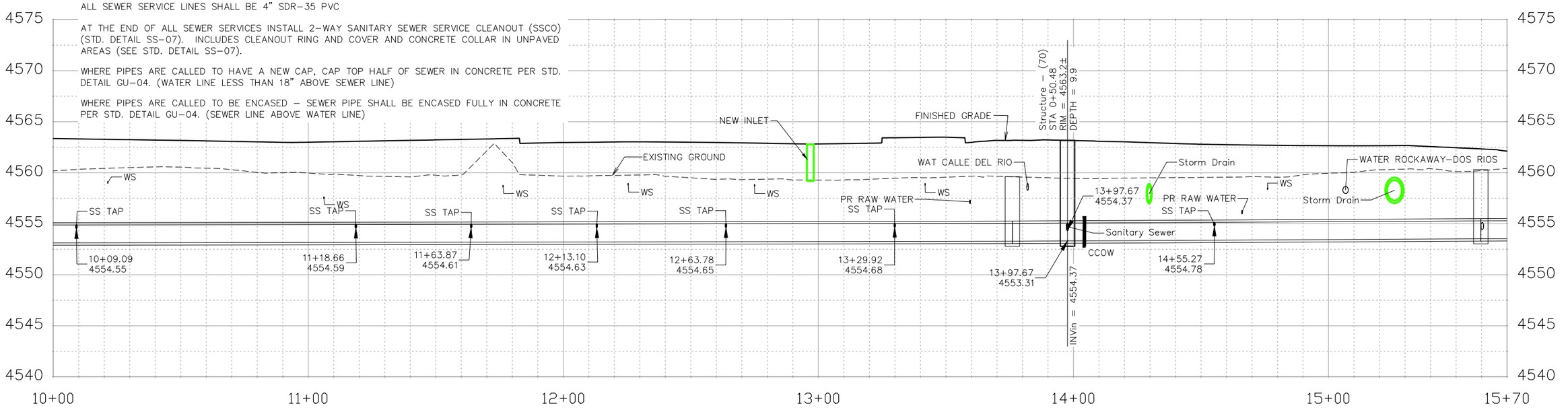

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS3
May 20, 2020

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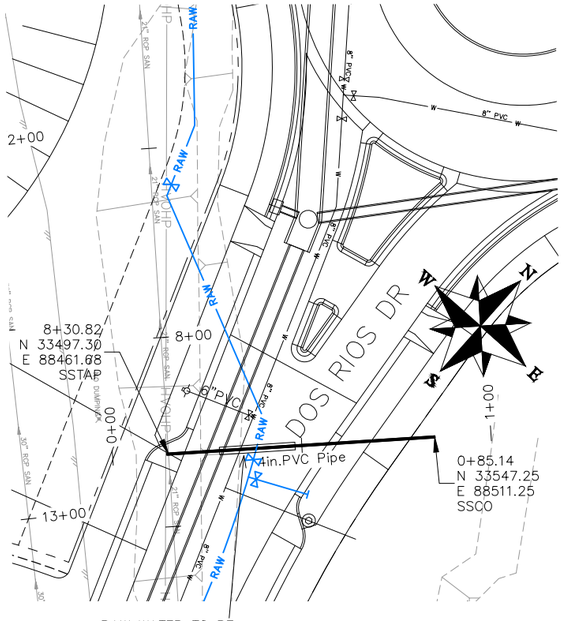
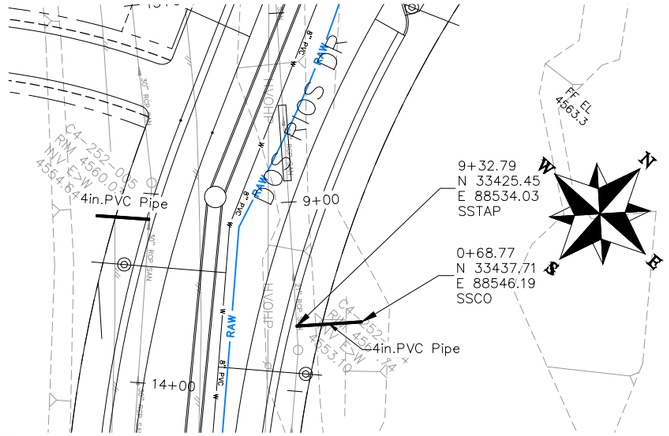


RAW WATER TO BE INSTALLED ABOVE SEWER PIPE. PLACE CONCRETE CAP ON SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04



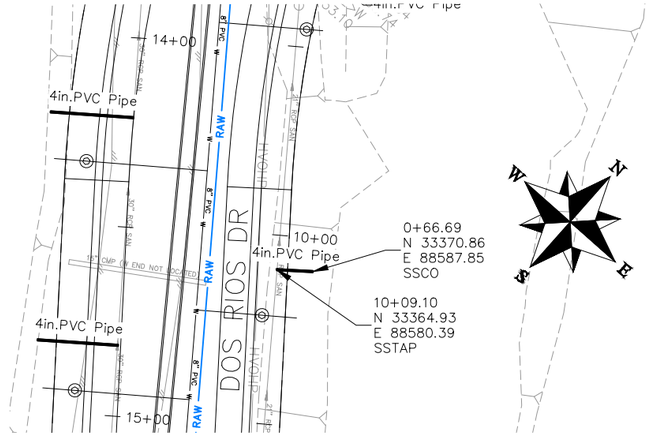
NOTES:

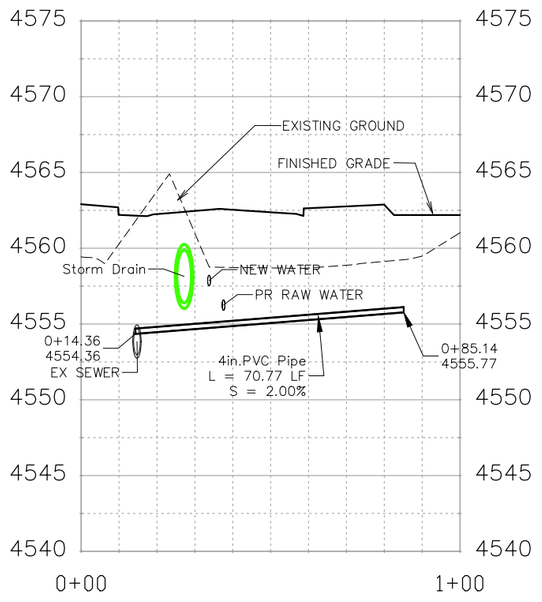
ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

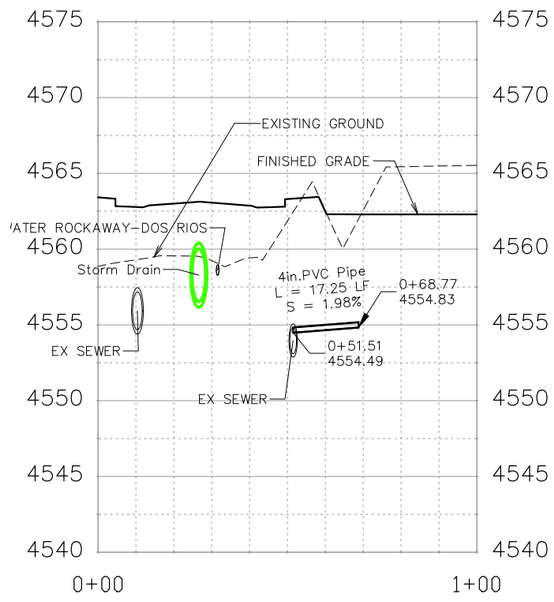
SEWER TAPS (SSTAP) TO EXISTING MAINS SHALL BE ACCOMPLISHED USING TAPPING SADDLES OR ENGINEER APPROVED EQUAL. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

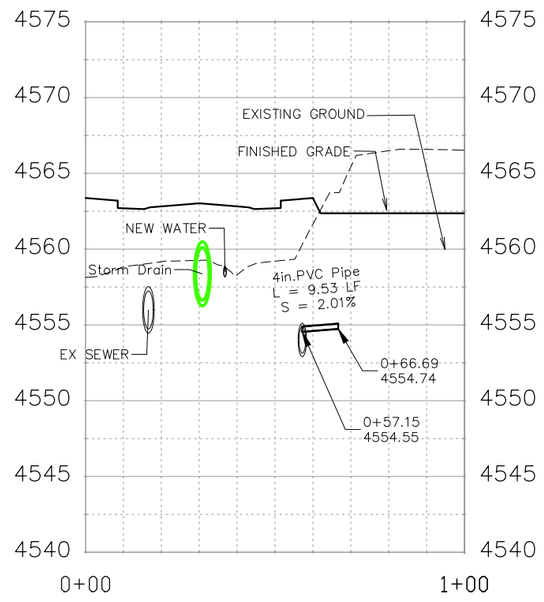
ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).









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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS4
May 20, 2020

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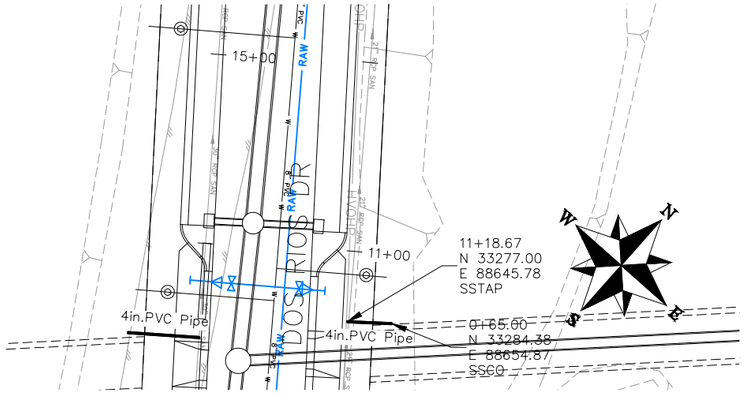
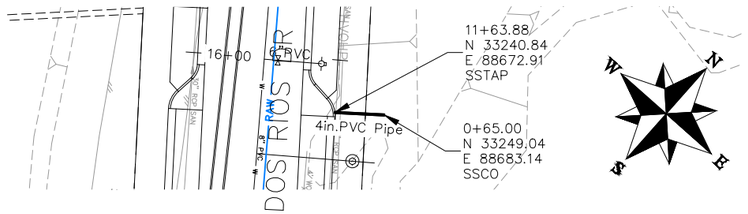
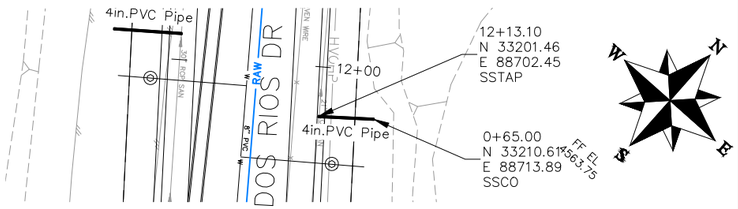






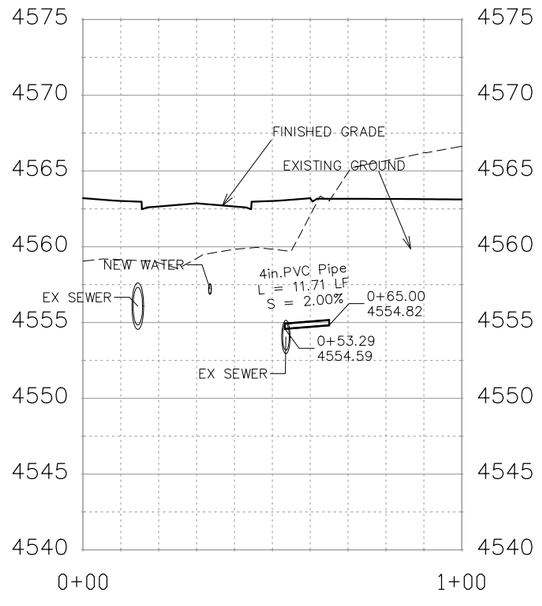
NOTES:

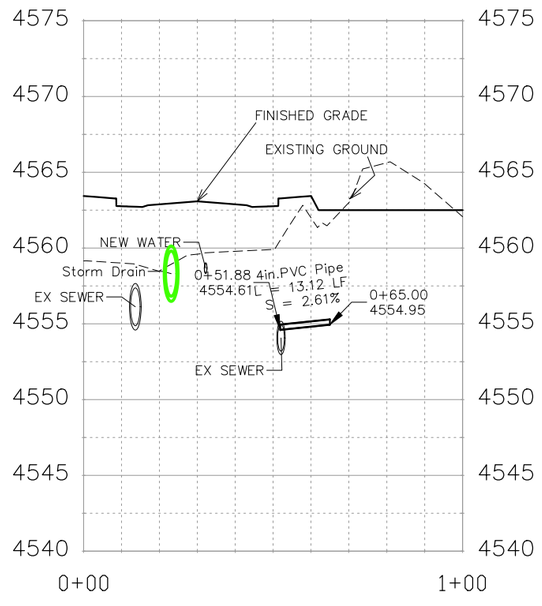
ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

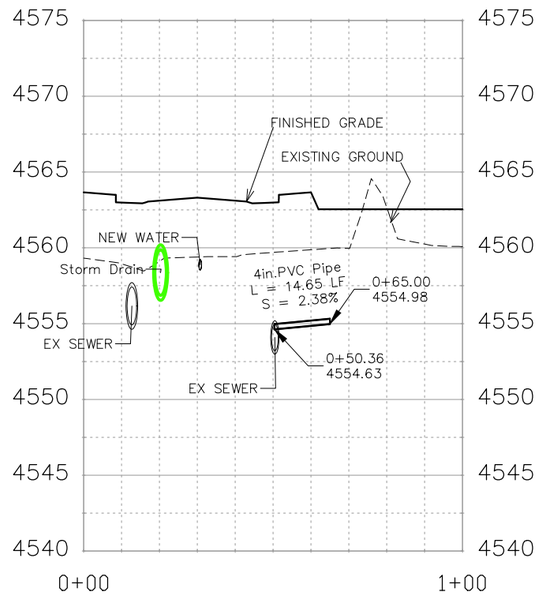
SEWER TAPS (SSTAP) TO EXISTING MAINS SHALL BE ACCOMPLISHED USING TAPPING SADDLES OR ENGINEER APPROVED EQUAL. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).







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APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS5
May 20, 2020

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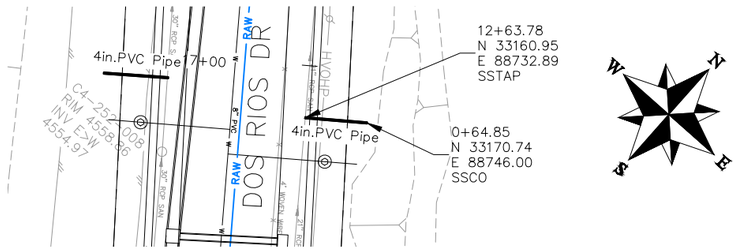

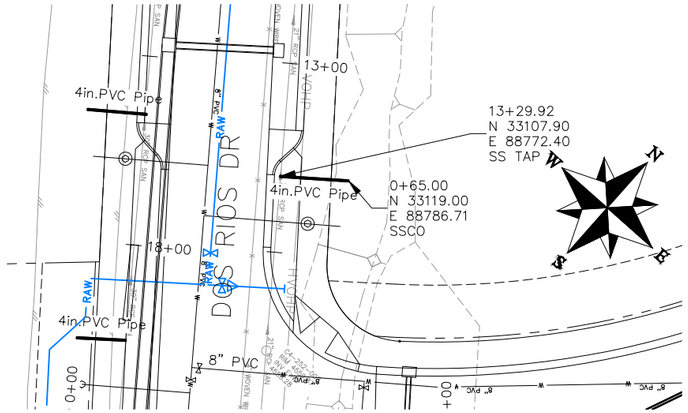

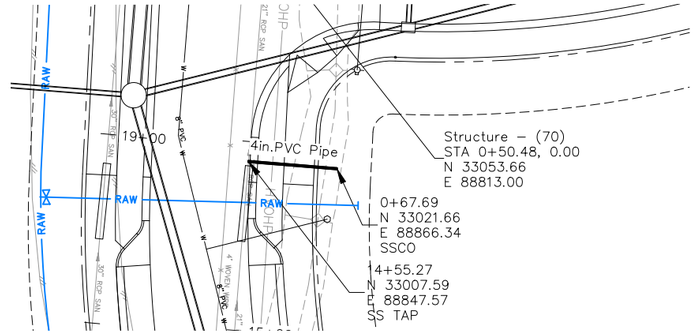

NOTES:

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR–35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

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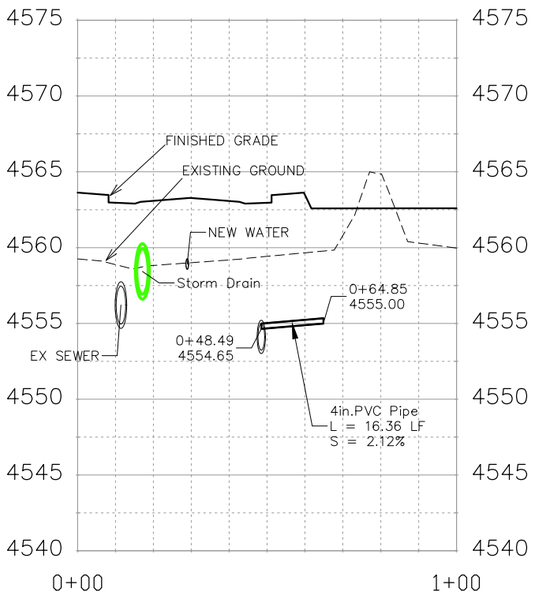
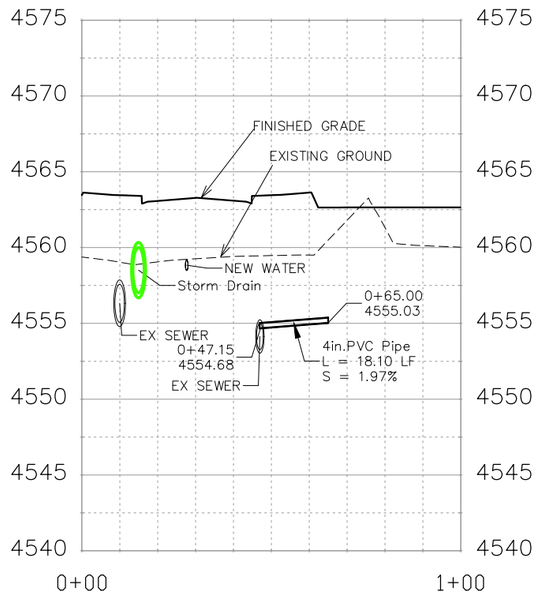
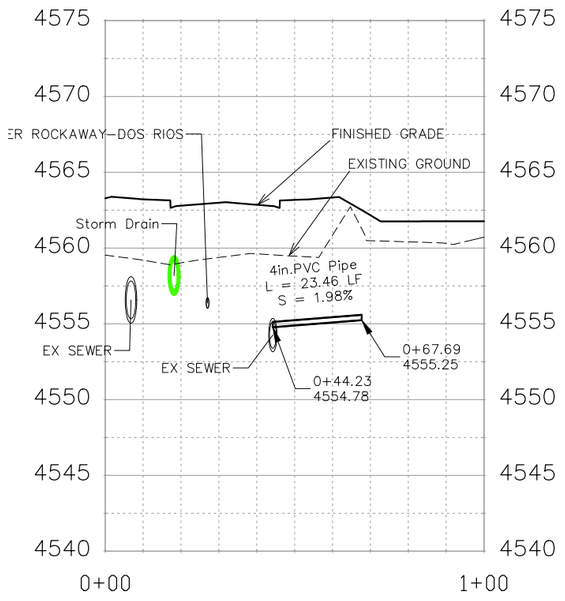
ALL SEWER SERVICE LINES SHALL BE 4" SDR–35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2–WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS–07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS–07).







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REVISION △	–
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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS6
May 20, 2020

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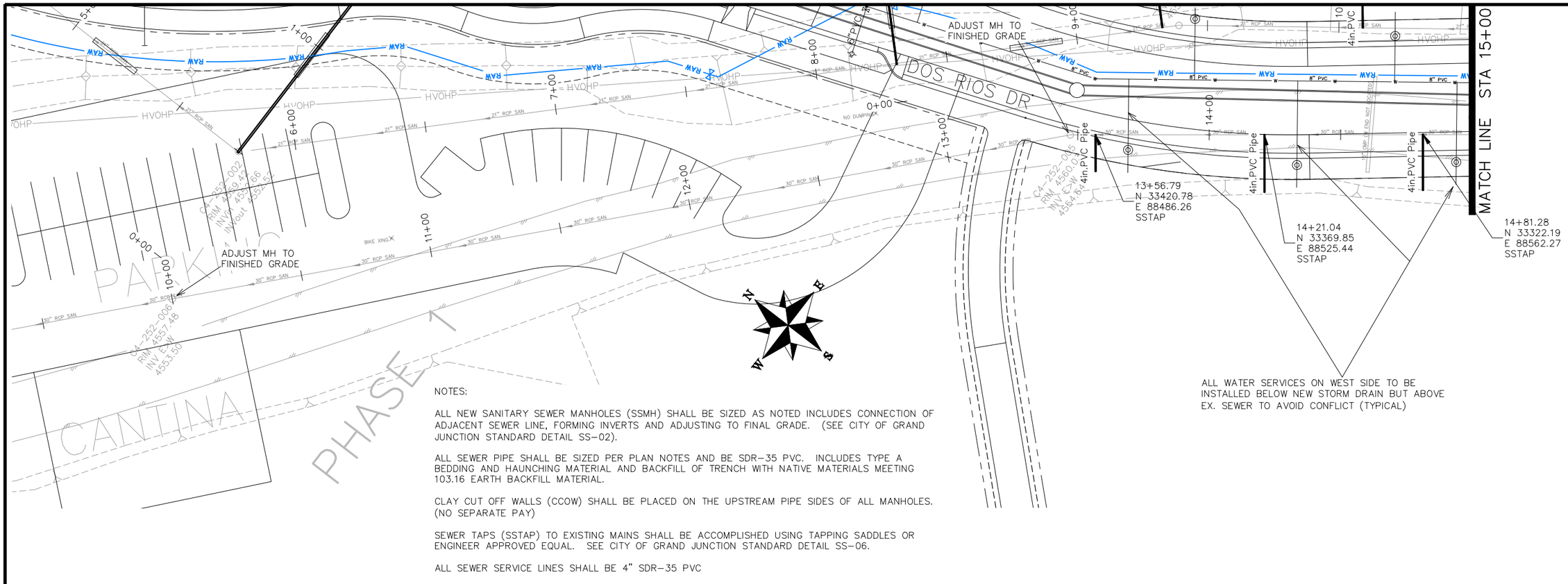


NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED ON THE UPSTREAM PIPE SIDES OF ALL MANHOLES. (NO SEPARATE PAY)

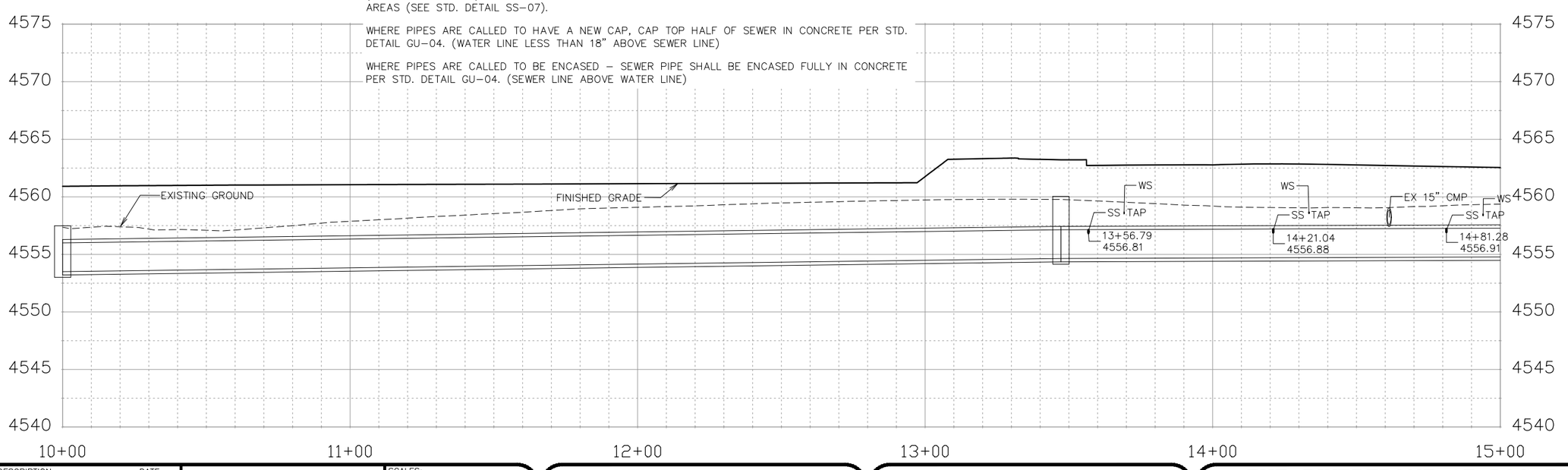
SEWER TAPS (SSTAP) TO EXISTING MAINS SHALL BE ACCOMPLISHED USING TAPPING SADDLES OR ENGINEER APPROVED EQUAL. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

WHERE PIPES ARE CALLED TO BE ENCASED - SEWER PIPE SHALL BE ENCASED FULLY IN CONCRETE PER STD. DETAIL GU-04. (SEWER LINE ABOVE WATER LINE)



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REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 - SS7
May 20, 2020

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MATCH LINE STA 15+00

DOS RIOS DR

14+81.28
N 33322.19
E 88562.27
SSTAP

POTHOLE EX. UTIL. PRIOR TO CONSTRUCTION

15+74.89
N 33247.91
E 88619.24
SSTAP

RAW WATER TO BE INSTALLED BELOW SEWER PIPE. ENCASE SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

16+43.11
N 33193.84
E 88660.85
SSTAP

ADJUST MH TO FINISHED GRADE

17+05.09
N 33144.85
E 88698.80
SSTAP

MAINTAIN AT LEAST 6" HORIZONTAL CLEARANCE BETWEEN OUTSIDE OF NEW STORM STRUCTURES AND EXIST. SEWER PIPE

17+65.35
N 33096.78
E 88735.16
SSTAP

RAW WATER TO BE INSTALLED BELOW SEWER PIPE. ENCASE SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

18+25.21
N 33048.54
E 88770.58
SSTAP

Structure – (70)
STA 0+50.48, 0.00
N 33053.66
E 88813.00

RAW WATER TO BE INSTALLED BELOW SEWER PIPE. ENCASE SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

ADJUST MH TO FINISHED GRADE

NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

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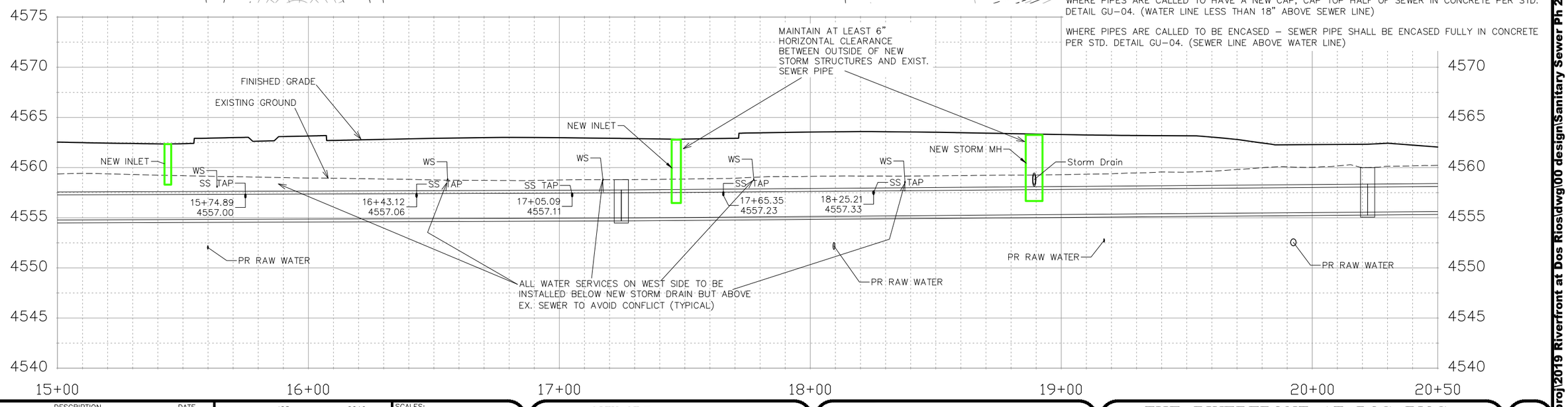

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS8
May 20, 2020

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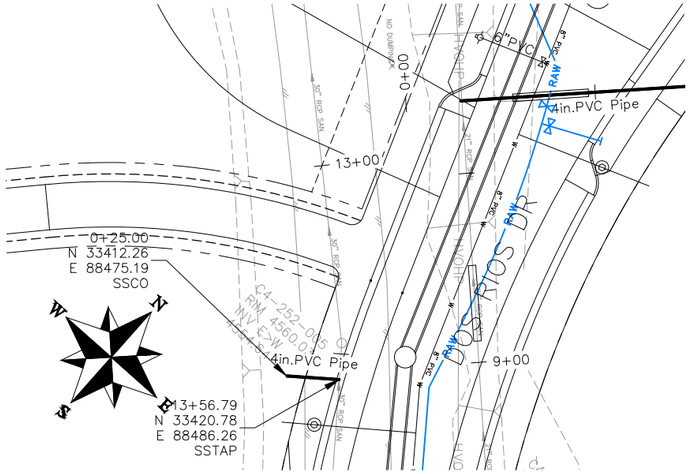

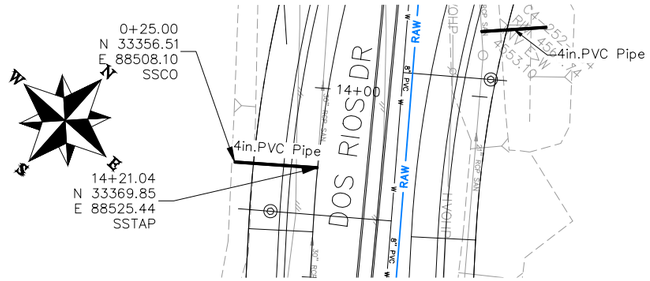

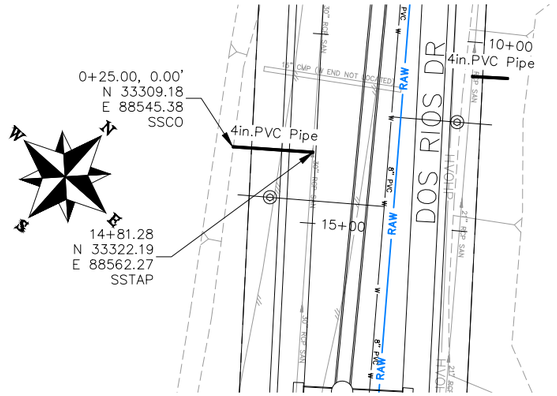

NOTES:

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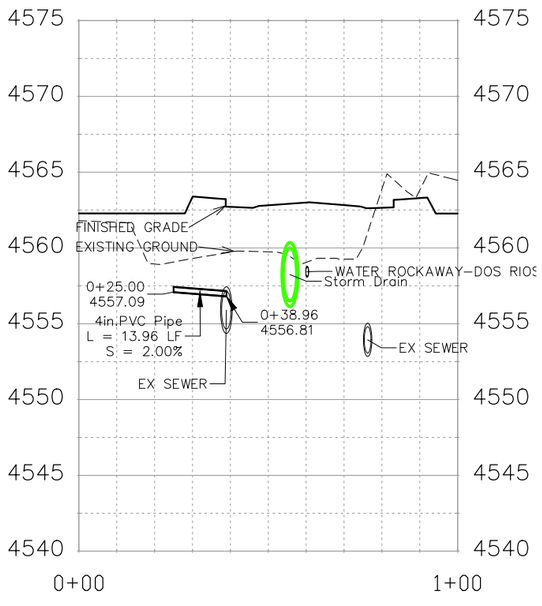
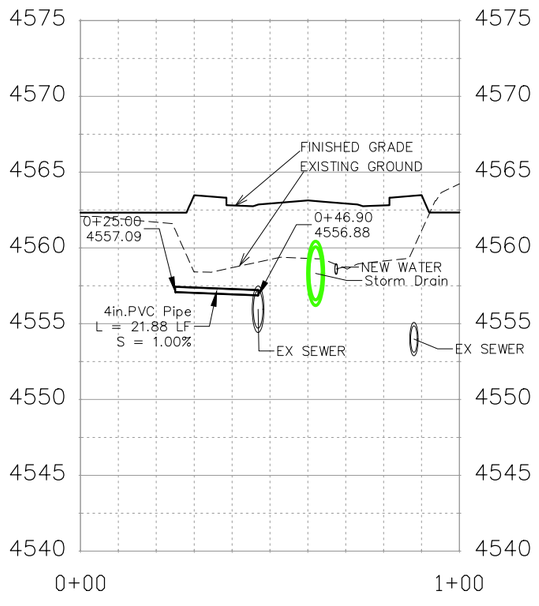
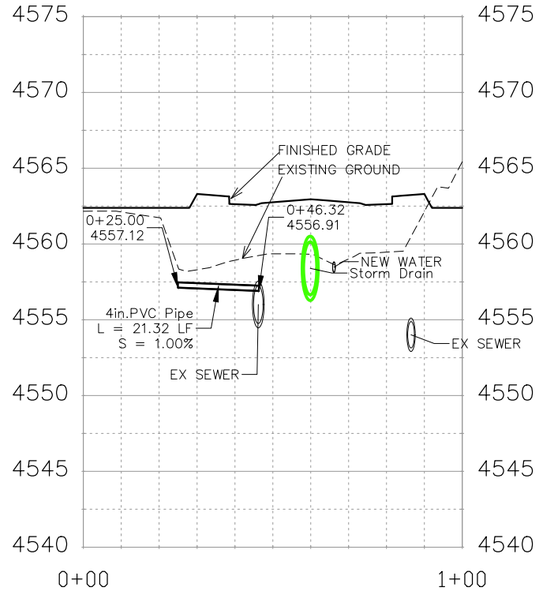
AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).







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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS9
May 20, 2020

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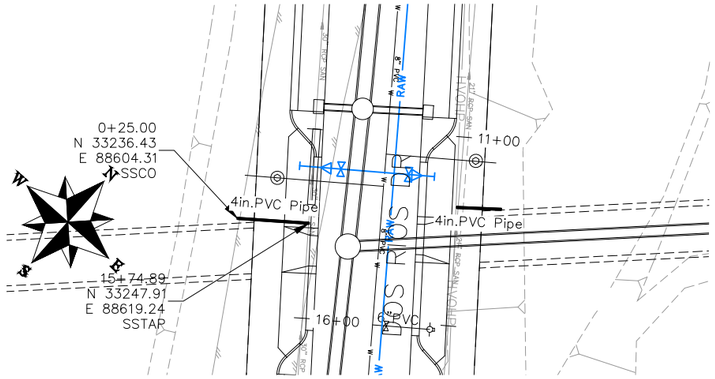

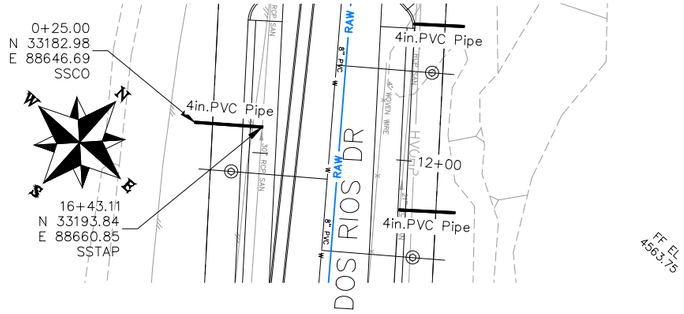

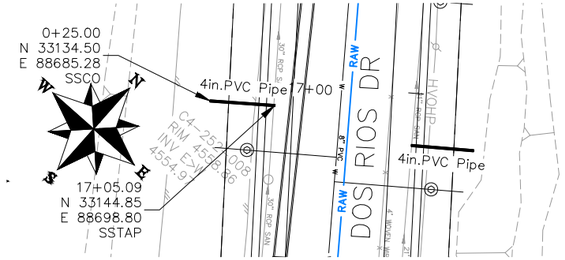

NOTES:

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

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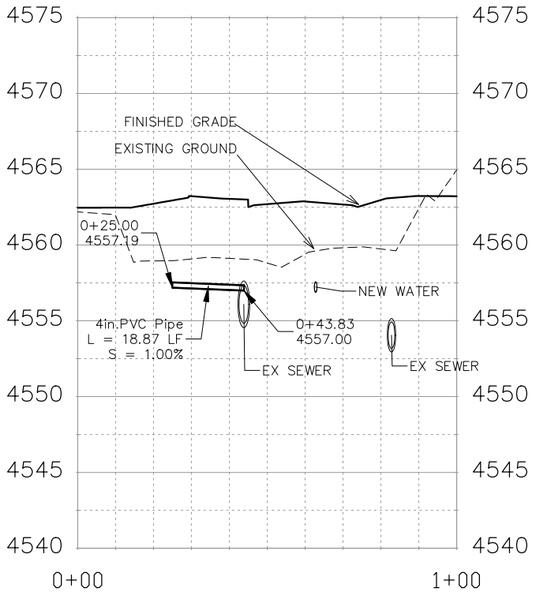
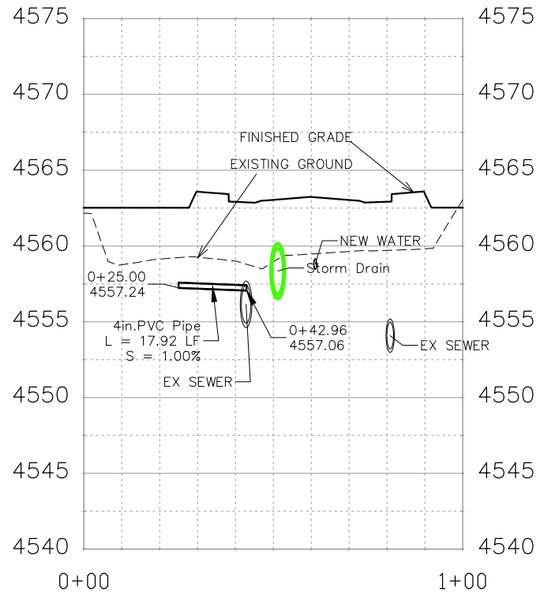
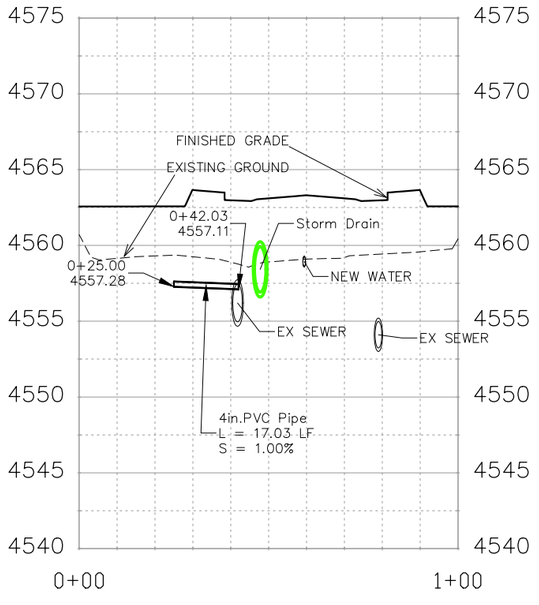
ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).







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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS10
May 20, 2020

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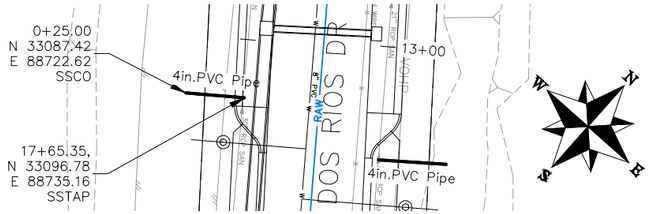

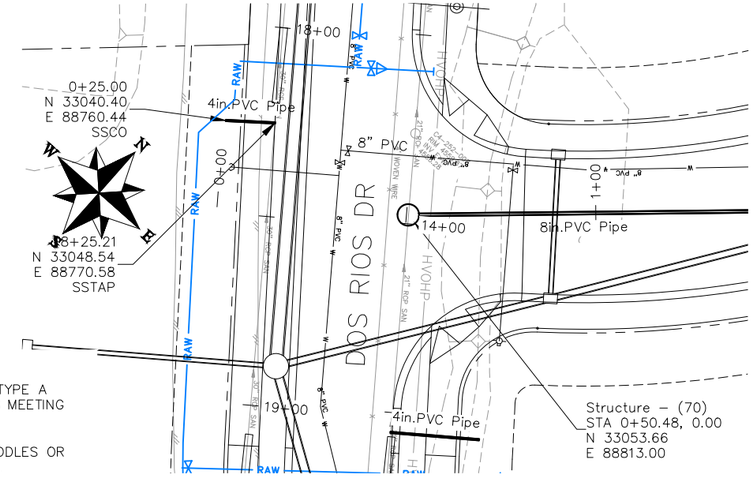

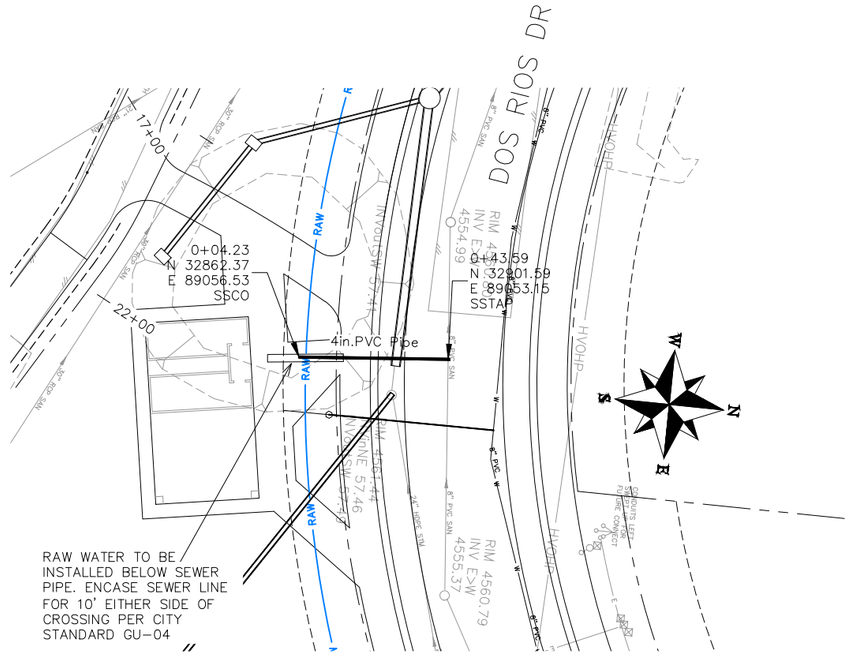

NOTES:

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

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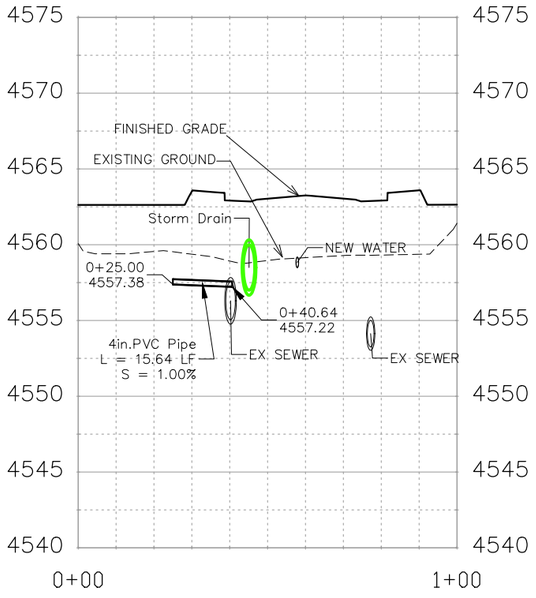
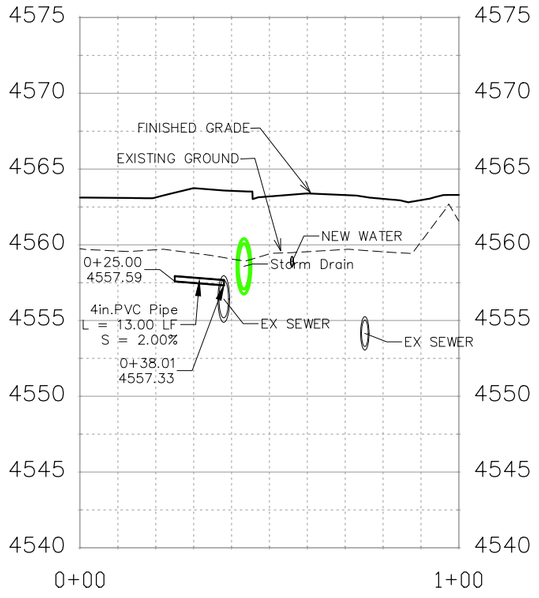
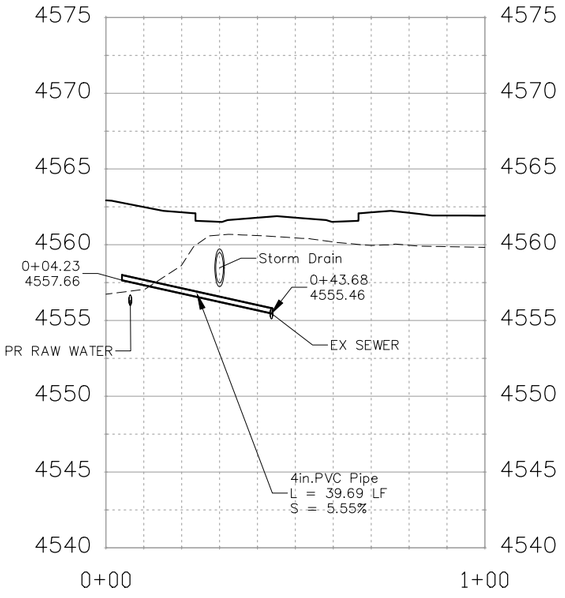
ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).







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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS11
May 20, 2020

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NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

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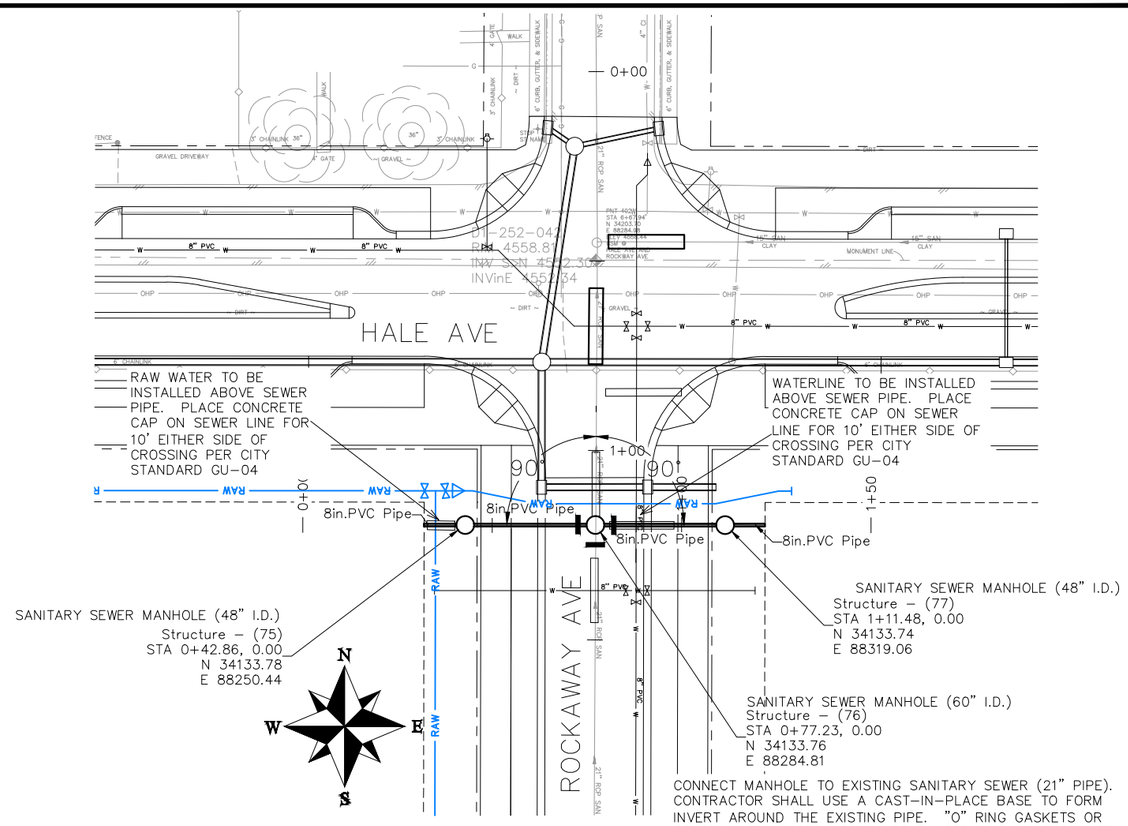

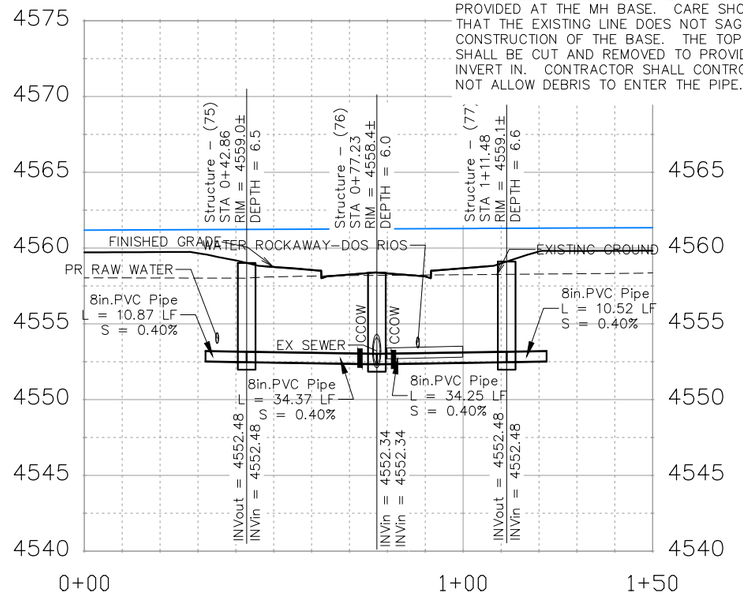

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS12
May 20, 2020

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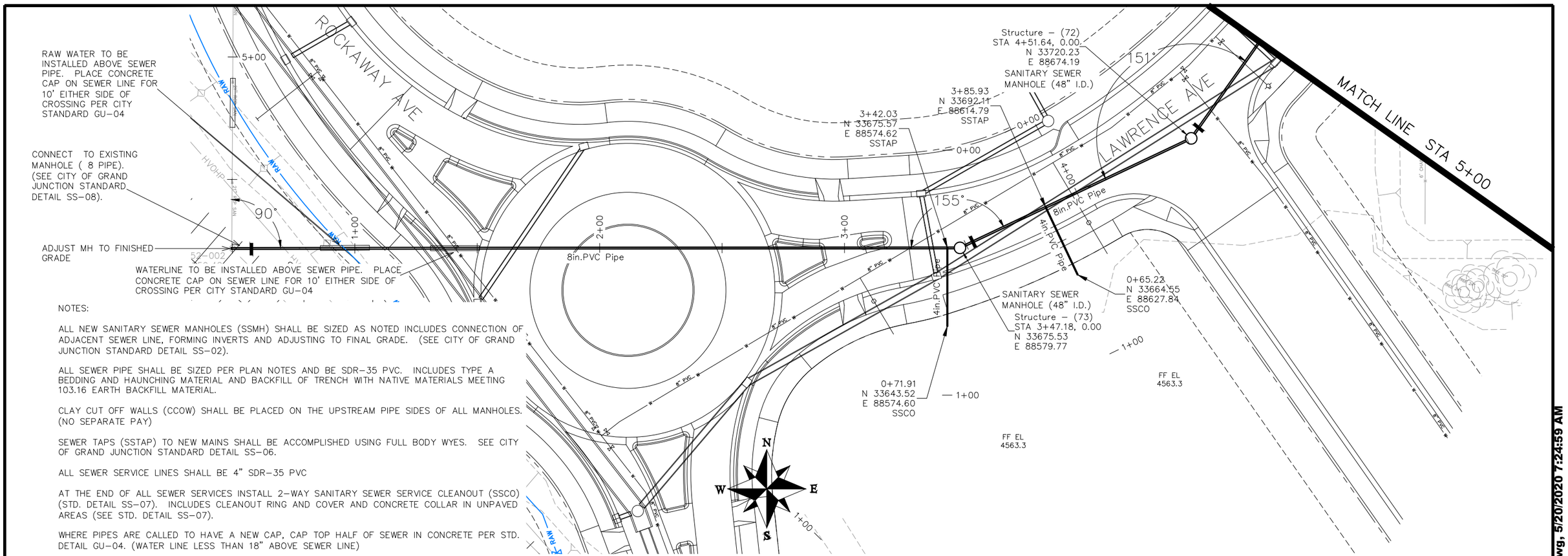

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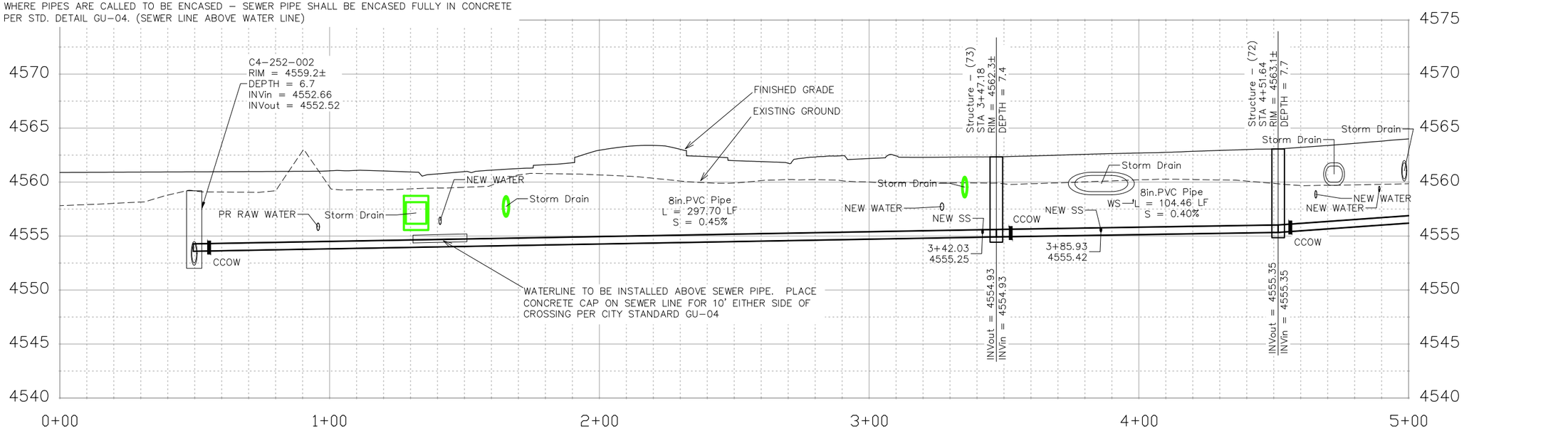
ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

WHERE PIPES ARE CALLED TO BE ENCASED - SEWER PIPE SHALL BE ENCASED FULLY IN CONCRETE PER STD. DETAIL GU-04. (SEWER LINE ABOVE WATER LINE)



ELEVATION

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 - SS13
May 20, 2020

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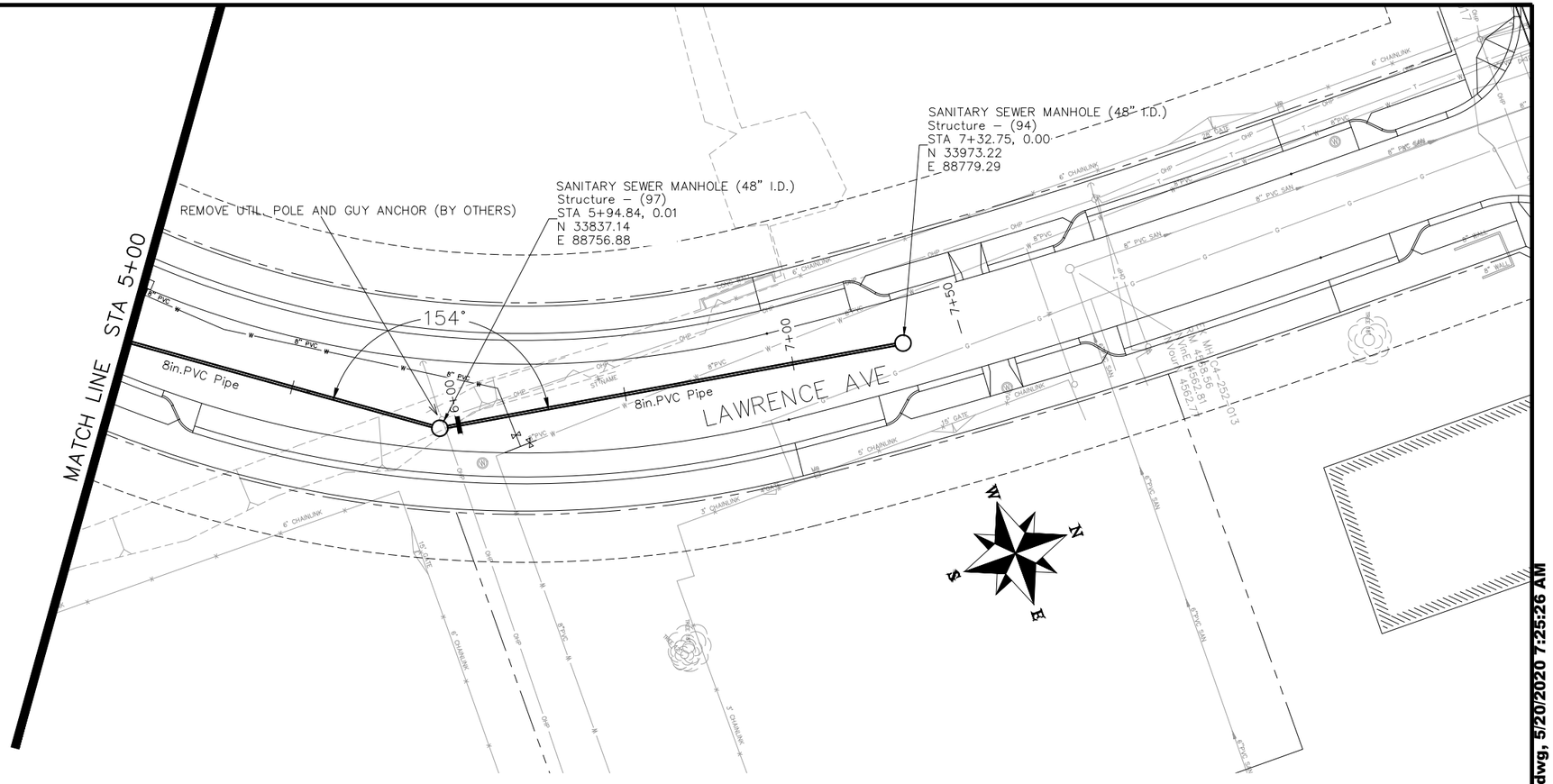

NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED ON THE UPSTREAM PIPE SIDES OF ALL MANHOLES. (NO SEPARATE PAY)

SEWER TAPS (SSTAP) TO NEW MAINS SHALL BE ACCOMPLISHED USING FULL BODY WYES. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

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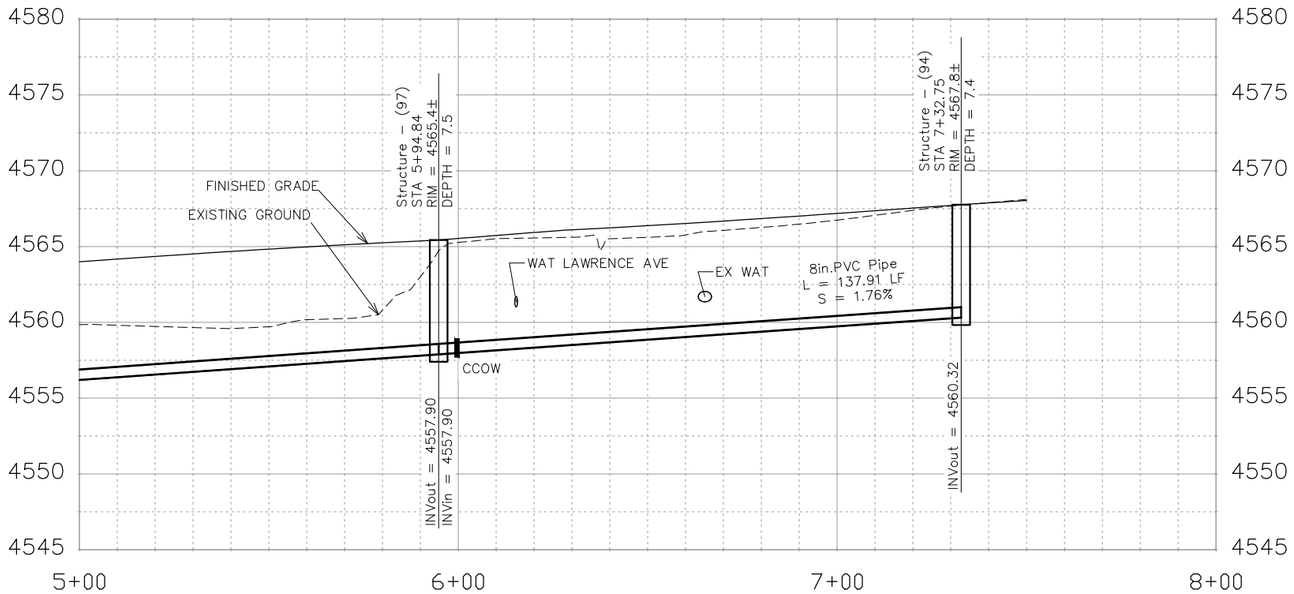

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS14
May 20, 2020

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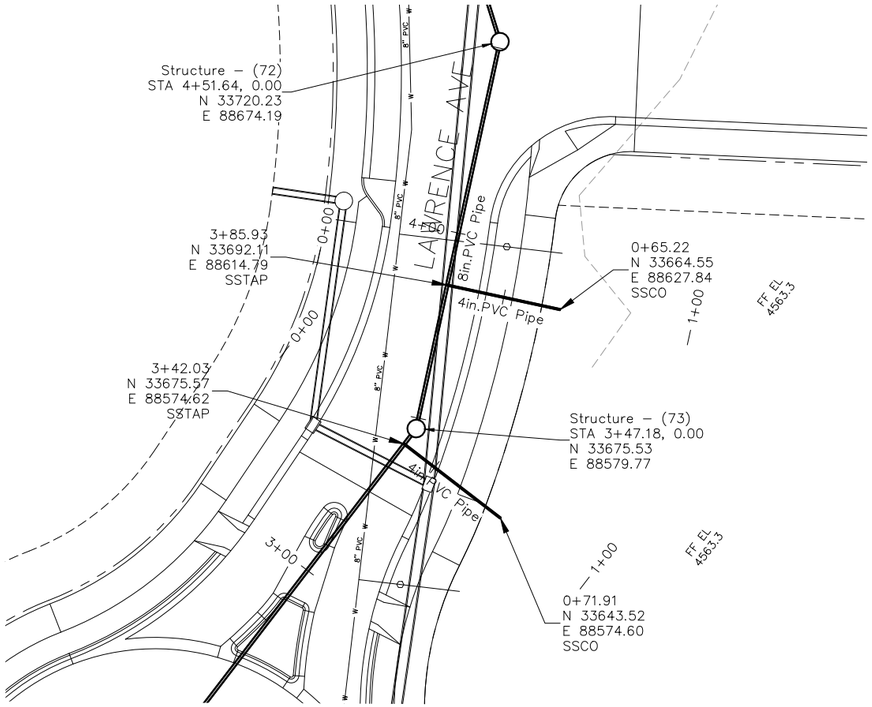

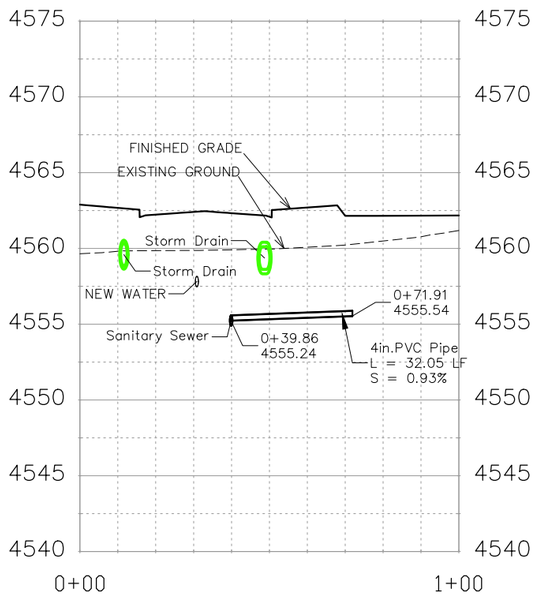

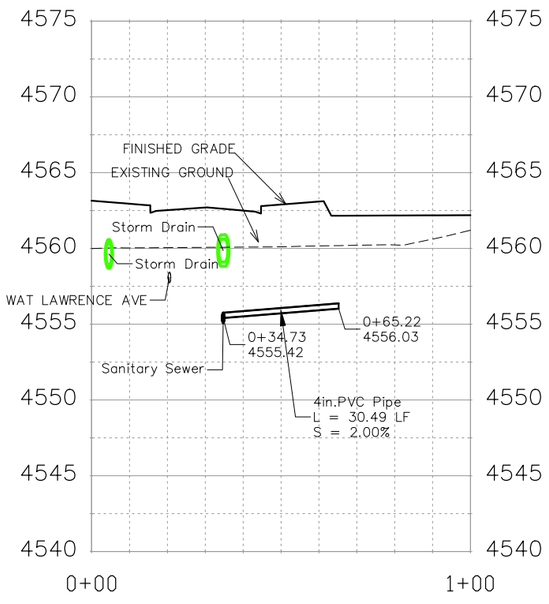

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REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS15
May 20, 2020

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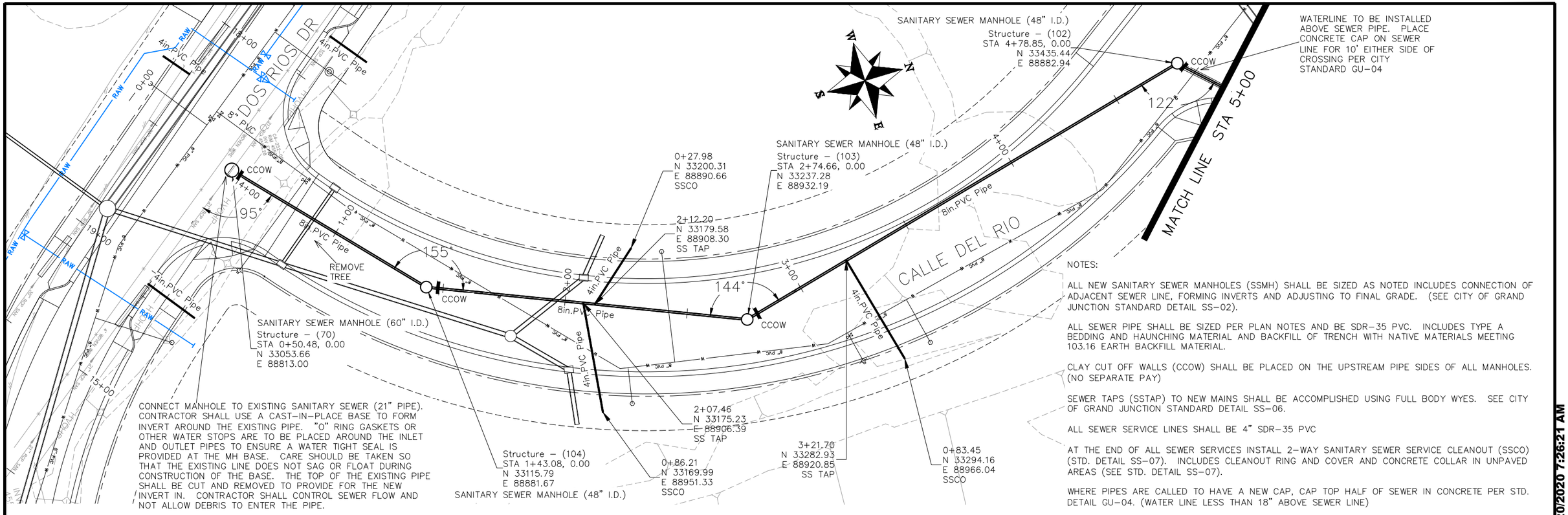

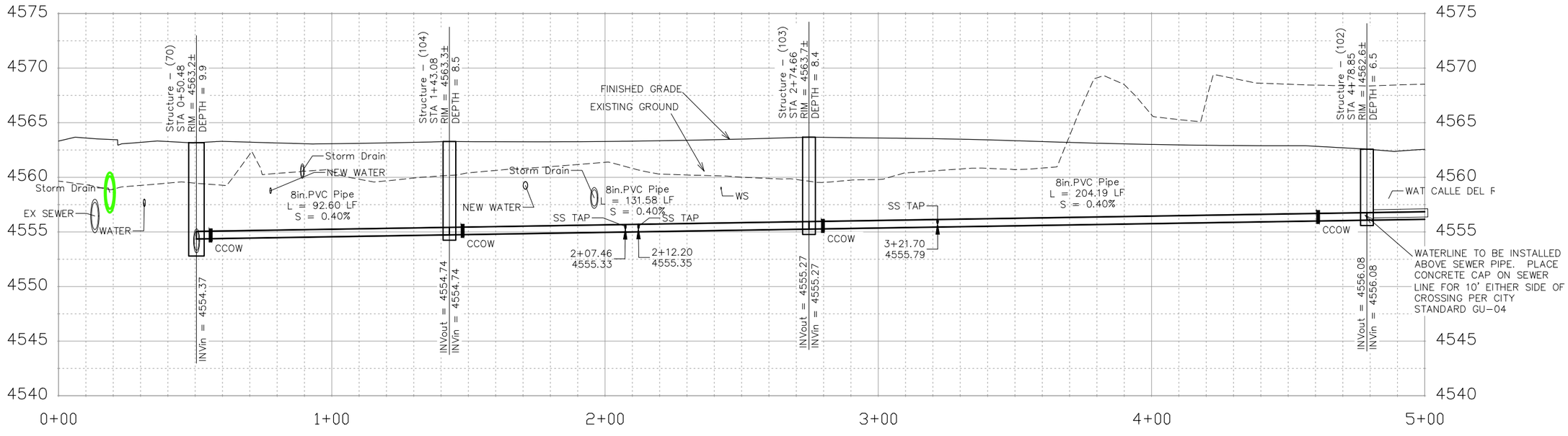

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS16
May 20, 2020

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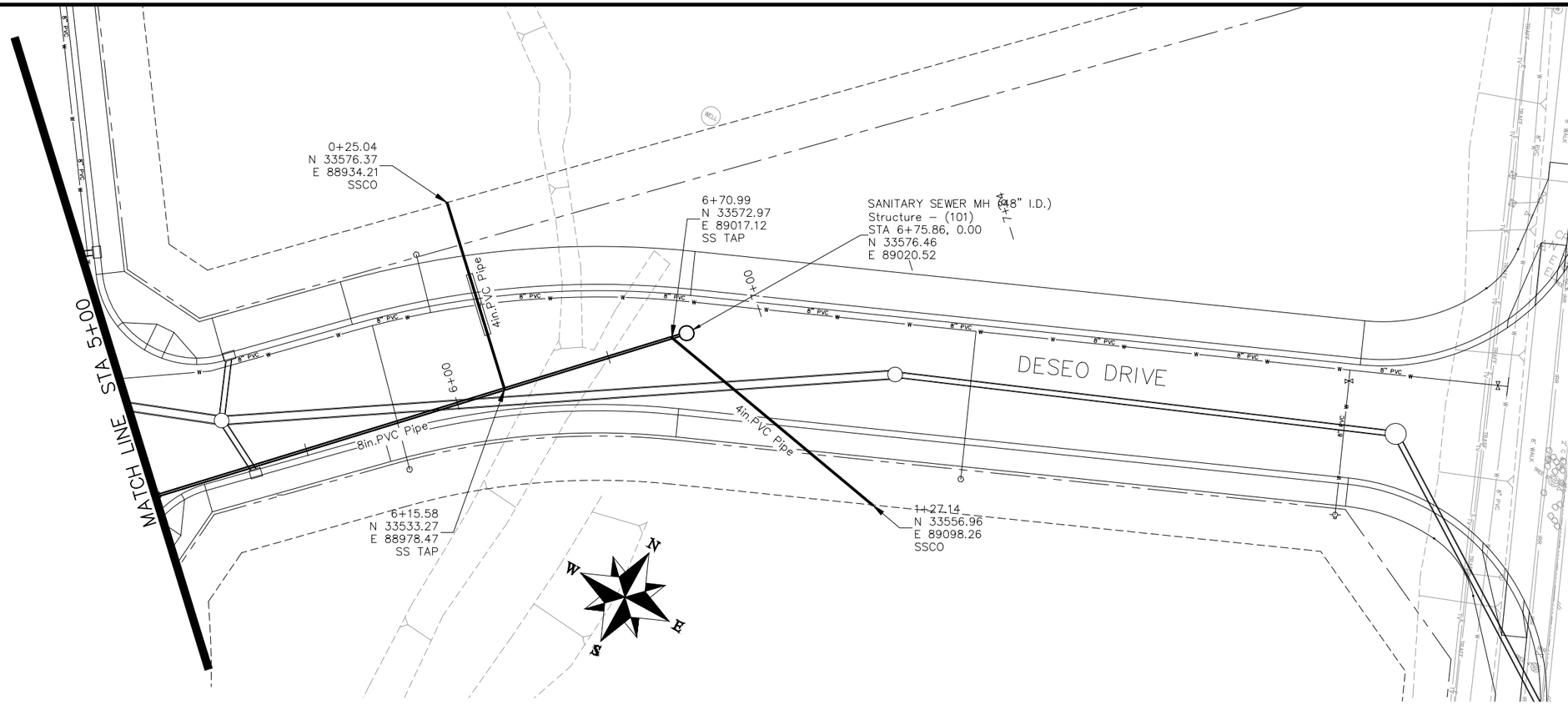

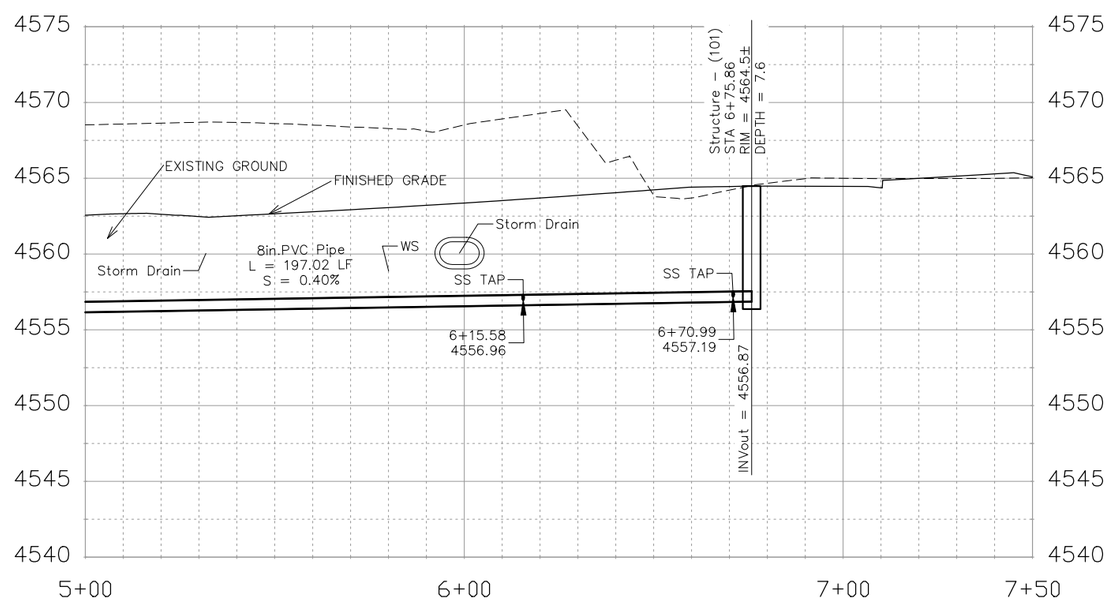

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS17
May 20, 2020

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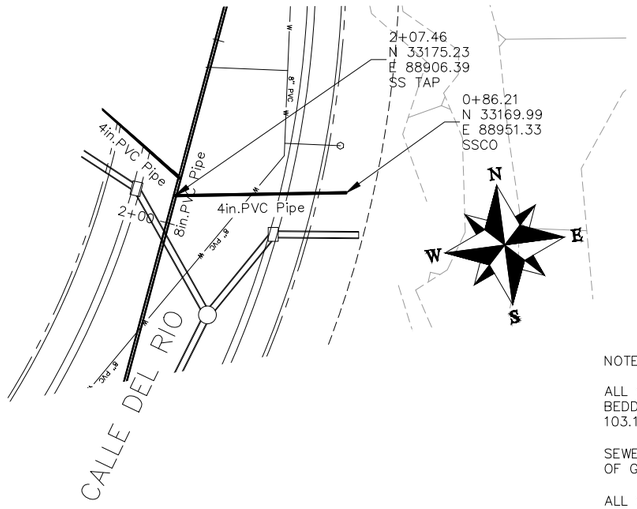

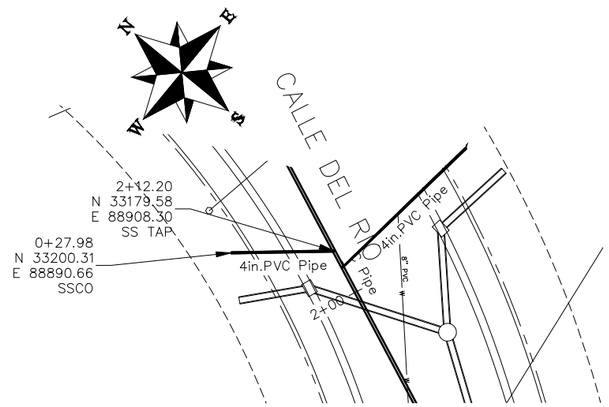

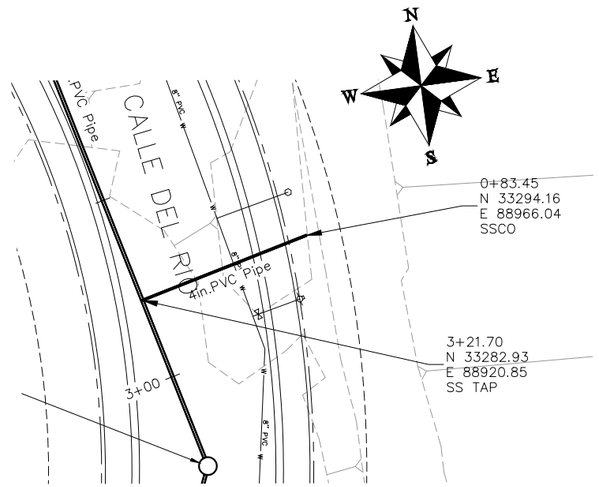

NOTES:

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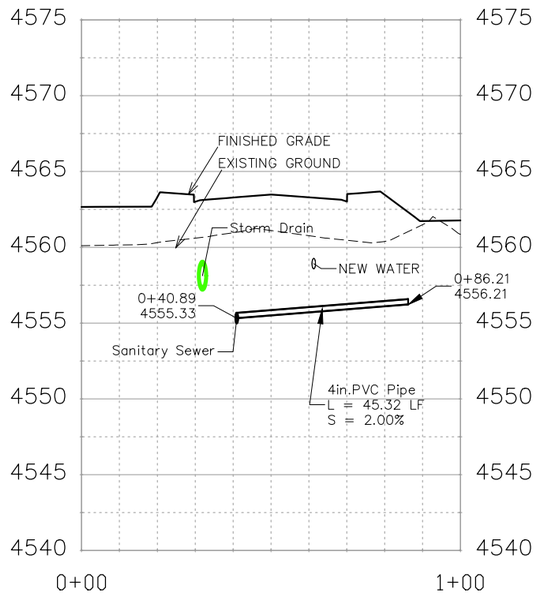

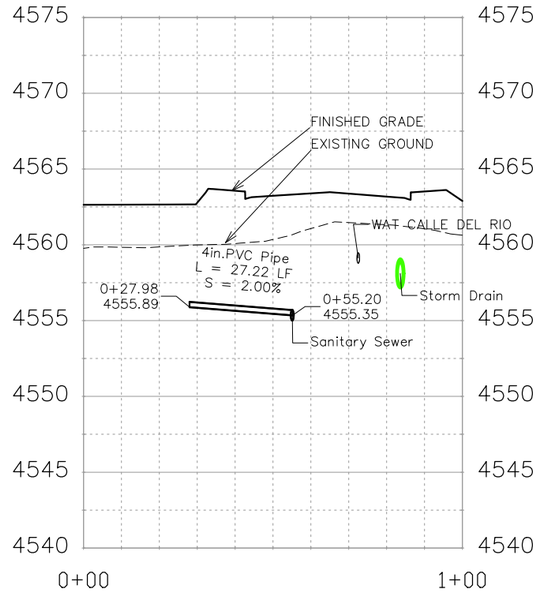

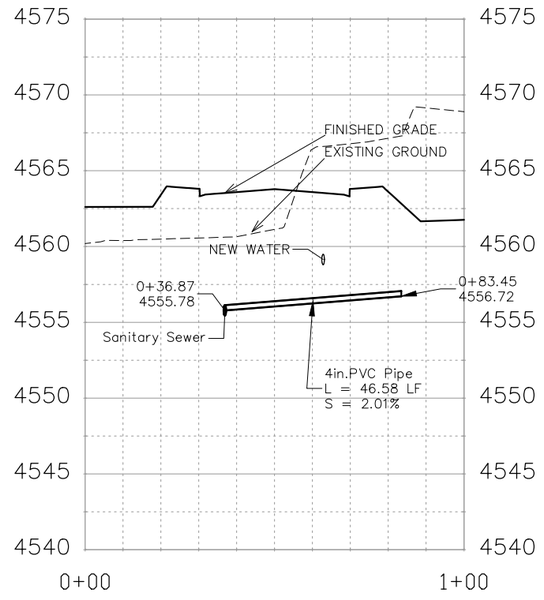

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS18
May 20, 2020

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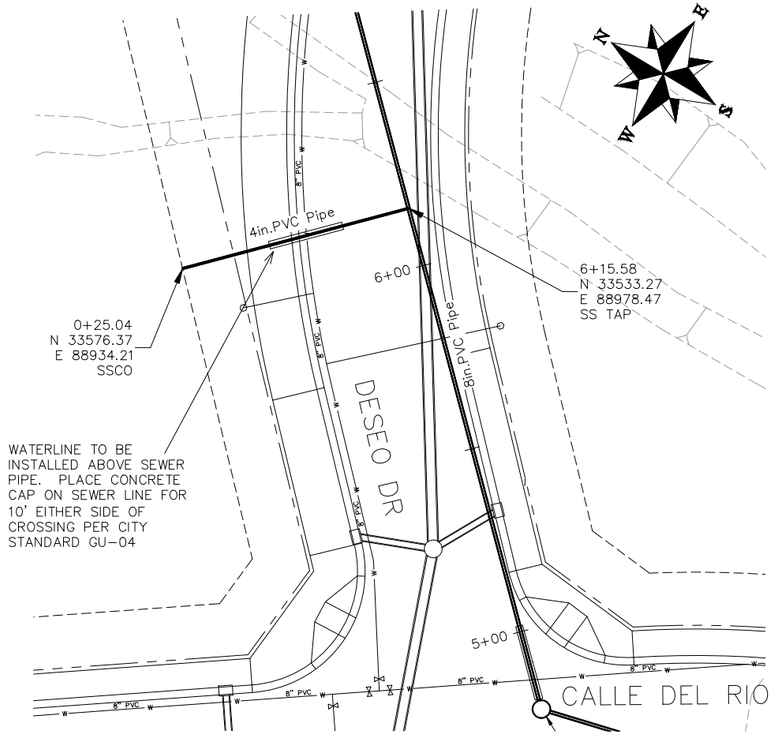

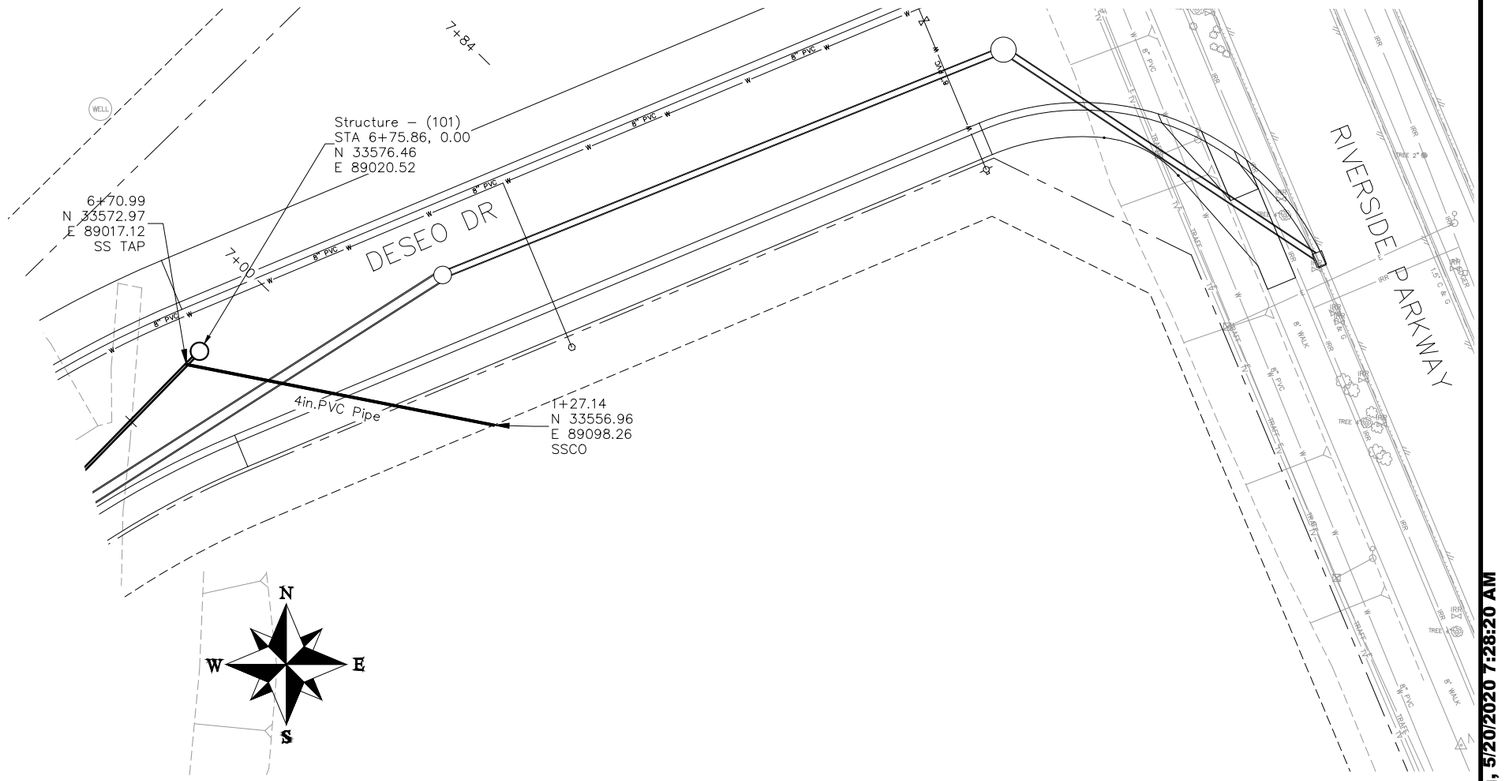

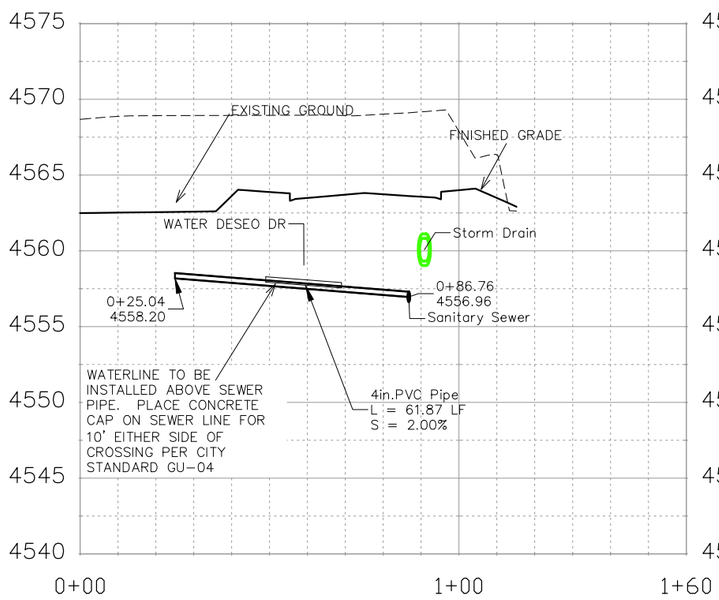

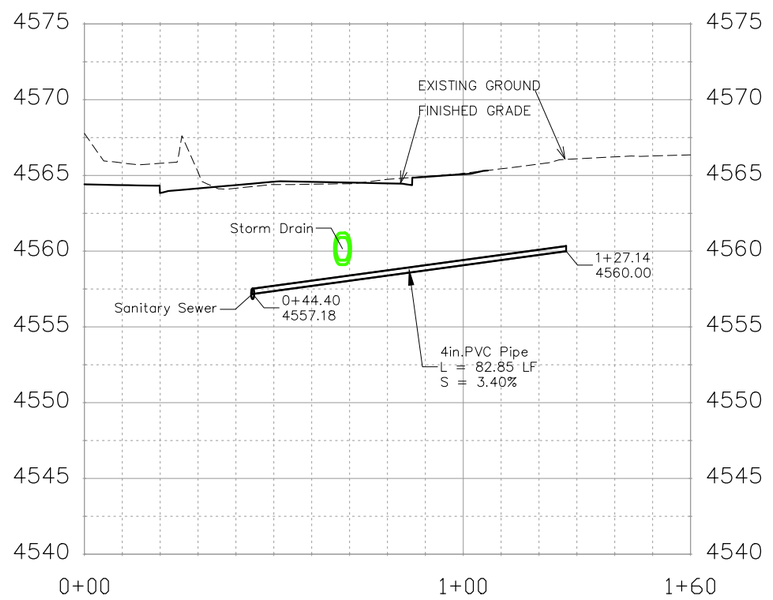

NOTES:

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DESCRIPTION	DATE
REVISION △	
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REVISION △	
REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 - SS19
May 20, 2020

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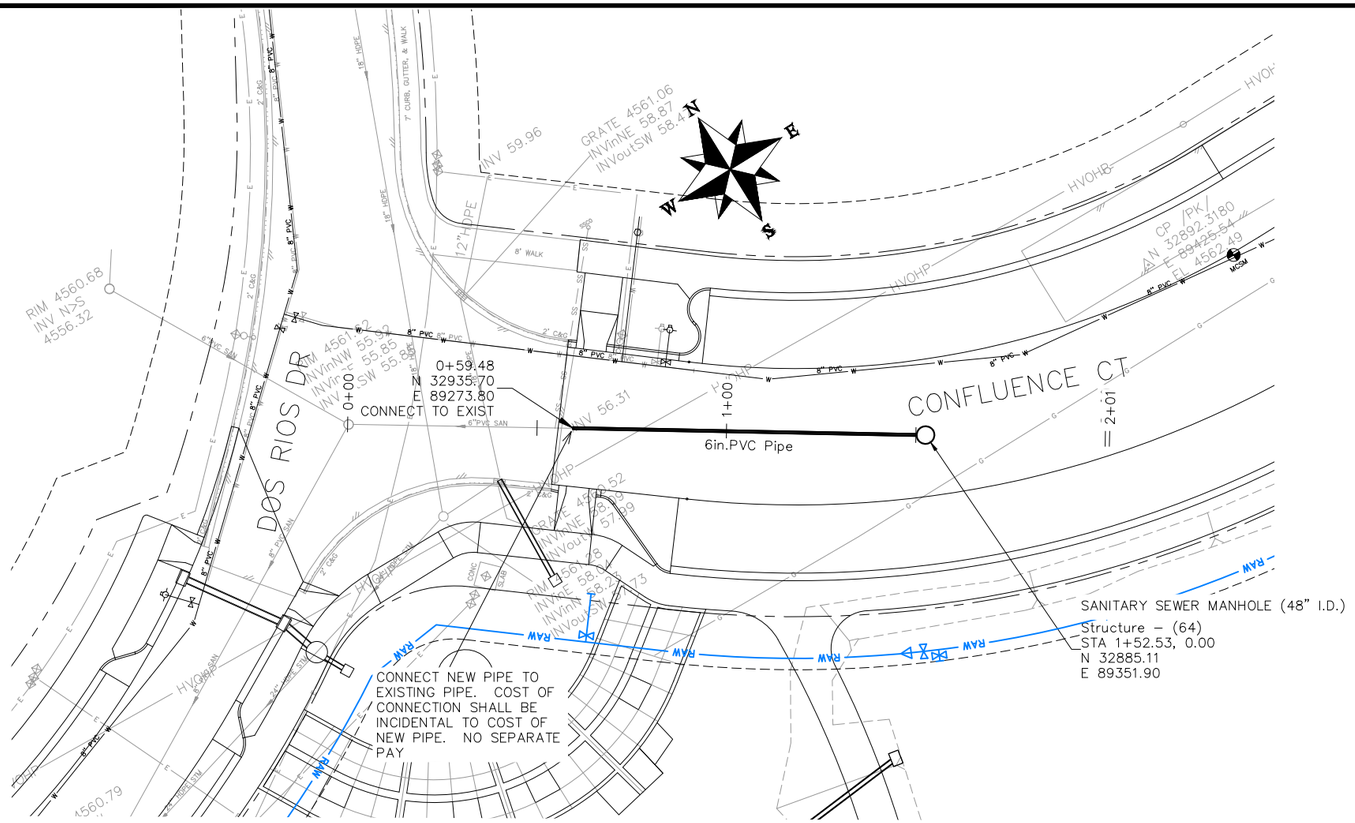

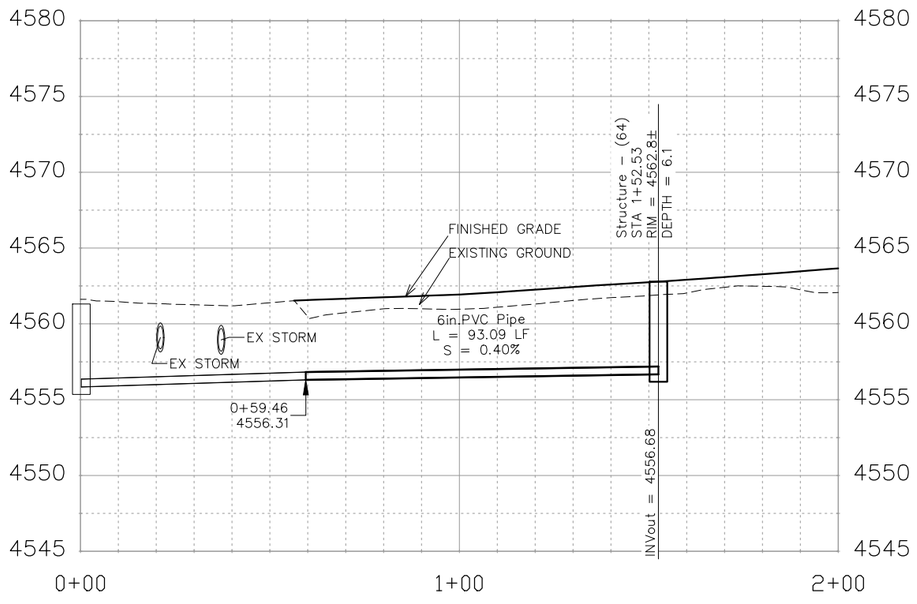

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS20
May 20, 2020

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CONNECT MANHOLE TO EXISTING SANITARY SEWER (8" PIPE). CONTRACTOR SHALL USE A CAST-IN-PLACE BASE TO FORM INVERT AROUND THE EXISTING PIPE. "O" RING GASKETS OR OTHER WATER STOPS ARE TO BE PLACED AROUND THE INLET AND OUTLET PIPES TO ENSURE A WATER TIGHT SEAL IS PROVIDED AT THE MH BASE. CARE SHOULD BE TAKEN SO THAT THE EXISTING LINE DOES NOT SAG OR FLOAT DURING CONSTRUCTION OF THE BASE. THE TOP OF THE EXISTING PIPE SHALL BE CUT AND REMOVED TO PROVIDE FOR THE NEW INVERT IN. CONTRACTOR SHALL CONTROL SEWER FLOW AND NOT ALLOW DEBRIS TO ENTER THE PIPE.

POTHOLE EXIST. UTIL. PRIOR TO CONSTRUCTION

SANITARY SEWER MANHOLE (48" I.D.)
Structure – (48)
STA 0+50.09, 0.00
N 32834.74
E 89643.03

SANITARY SEWER MANHOLE (48" I.D.)
Structure – (62)
STA 2+92.08, 0.00
N 32693.16
E 89839.27

CAP END OF PIPE AND MARK WITH A 4X4 PAINTED GREEN EXTENDING 3' ABOVE FINISHED GRADE
3+31.97
N 32669.80
E 89871.61

0+57.60
N 32830.46
E 89649.20
SS TAP

8in.PVC Pipe

CONFLUENCE CT

CCOW

100°

80°

4in.PVC Pipe

0+19.14
N 32797.55
E 89596.99
SSCO

NOTES:

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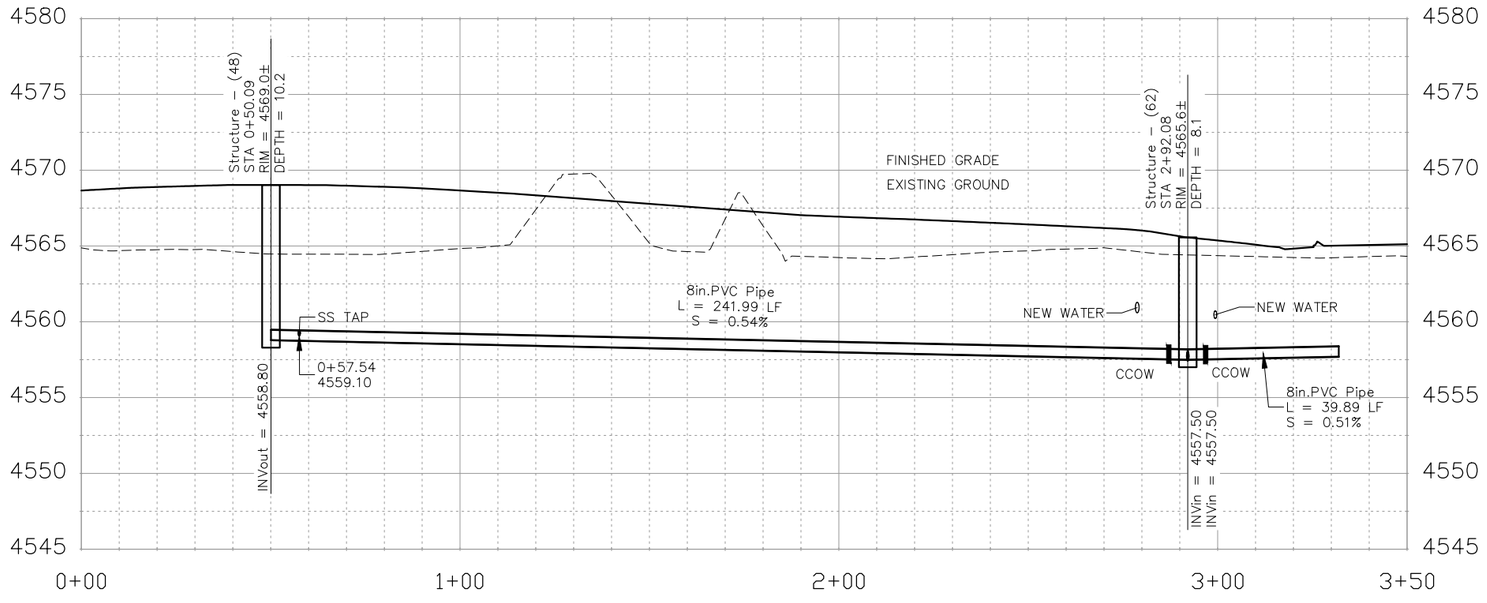

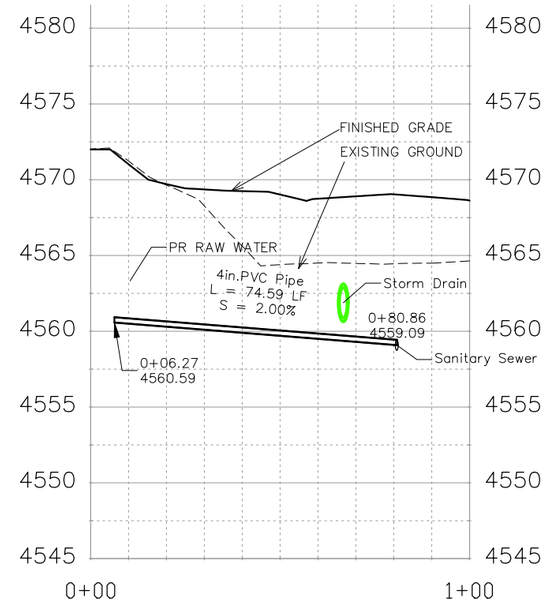

DESCRIPTION	DATE
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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS21
May 20, 2020

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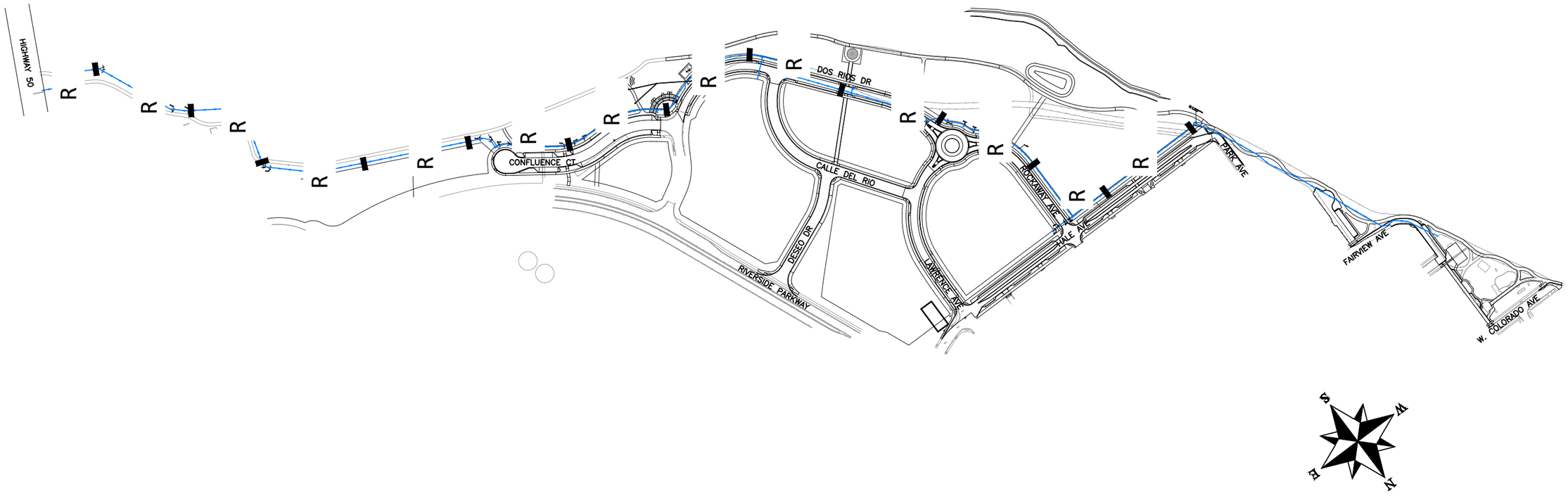


DESCRIPTION	DATE
REVISION 1	–
REVISION 2	–
REVISION 3	–
REVISION 4	–

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES
0 100 200 400

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – KEYMAP
May 20, 2020

N:\Landproj\2020 RAW IRRIGATION LINE\60CAD\DWG\00 DESIGN\RAW WATER LINE.dwg, 5/20/2020 7:13:24 AM

CONSTRUCTION NOTES

(3) 202 – REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS NEEDED FOR PIPE INSTALLATION.

27 202 – REMOVE BLOW–OFF ASSEMBLY. INCLUDES ALL FITTINGS, VALVES, AND BLOW–OFF HYDRANT.

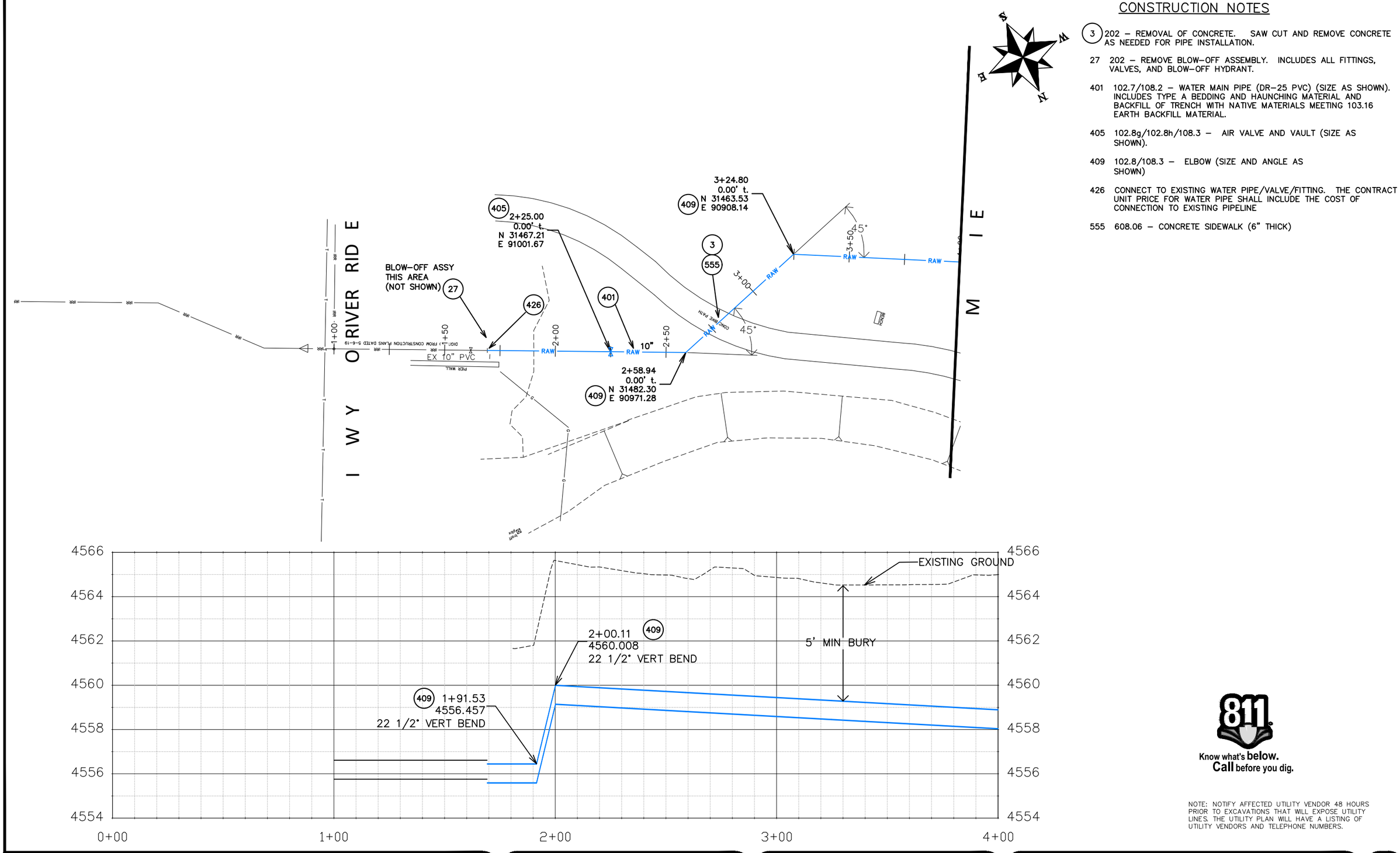
401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

405 102.8g/102.8h/108.3 – AIR VALVE AND VAULT (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

426 CONNECT TO EXISTING WATER PIPE/VALVE/FITTING. THE CONTRACT UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE

555 608.06 – CONCRETE SIDEWALK (6" THICK)



Know what's **below.**
Call before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA1
May 20, 2020

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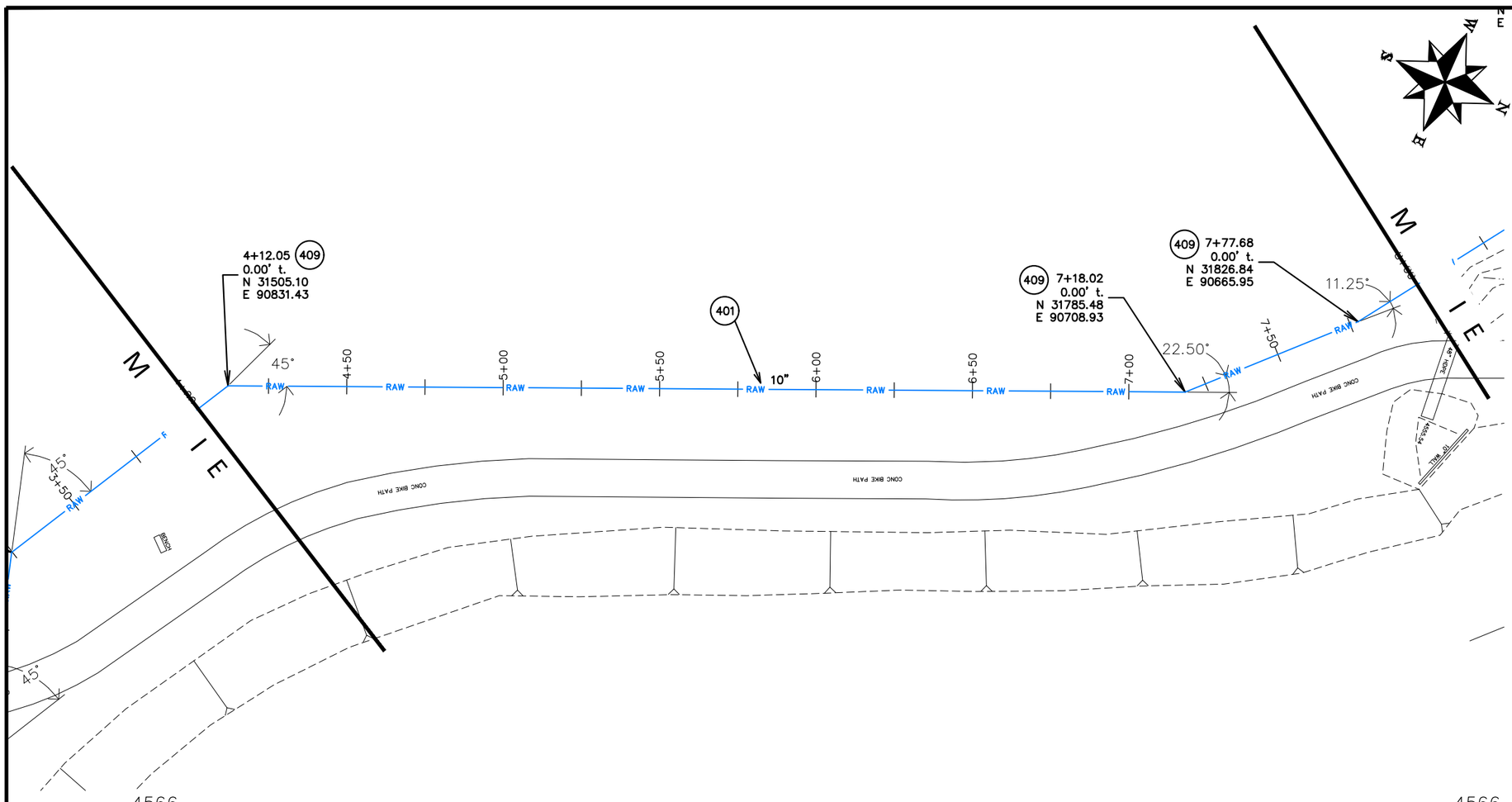
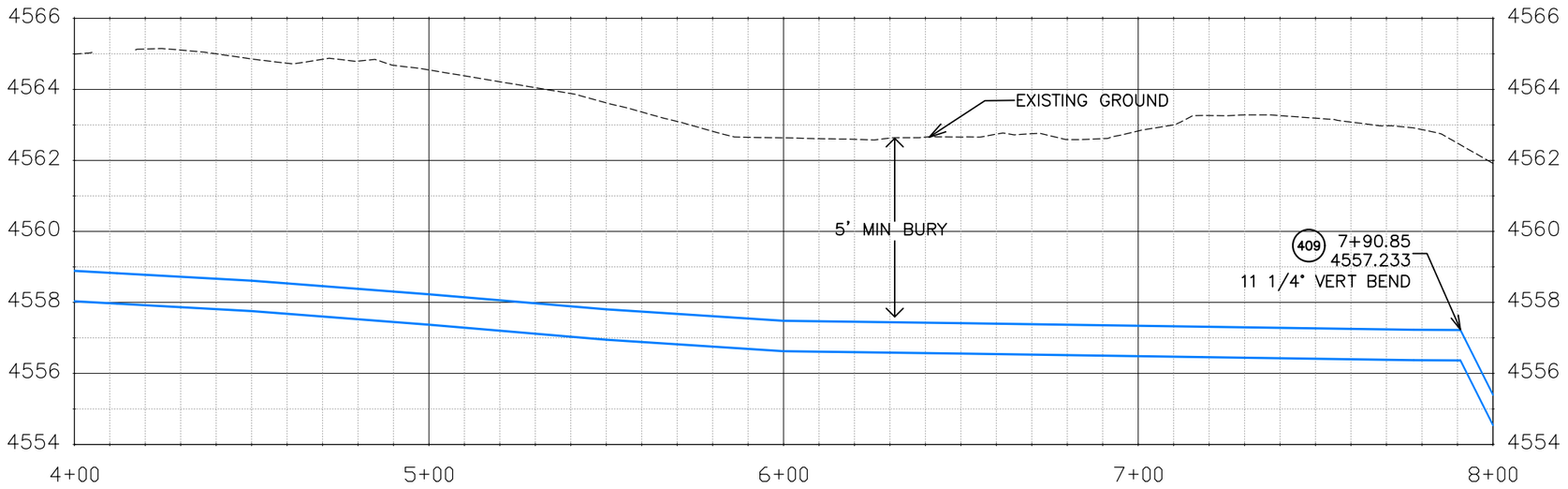
CONSTRUCTION NOTES

(401) 102.7/108.2 – WATER MAIN PIPE (DR-25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)





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REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA2
May 20, 2020

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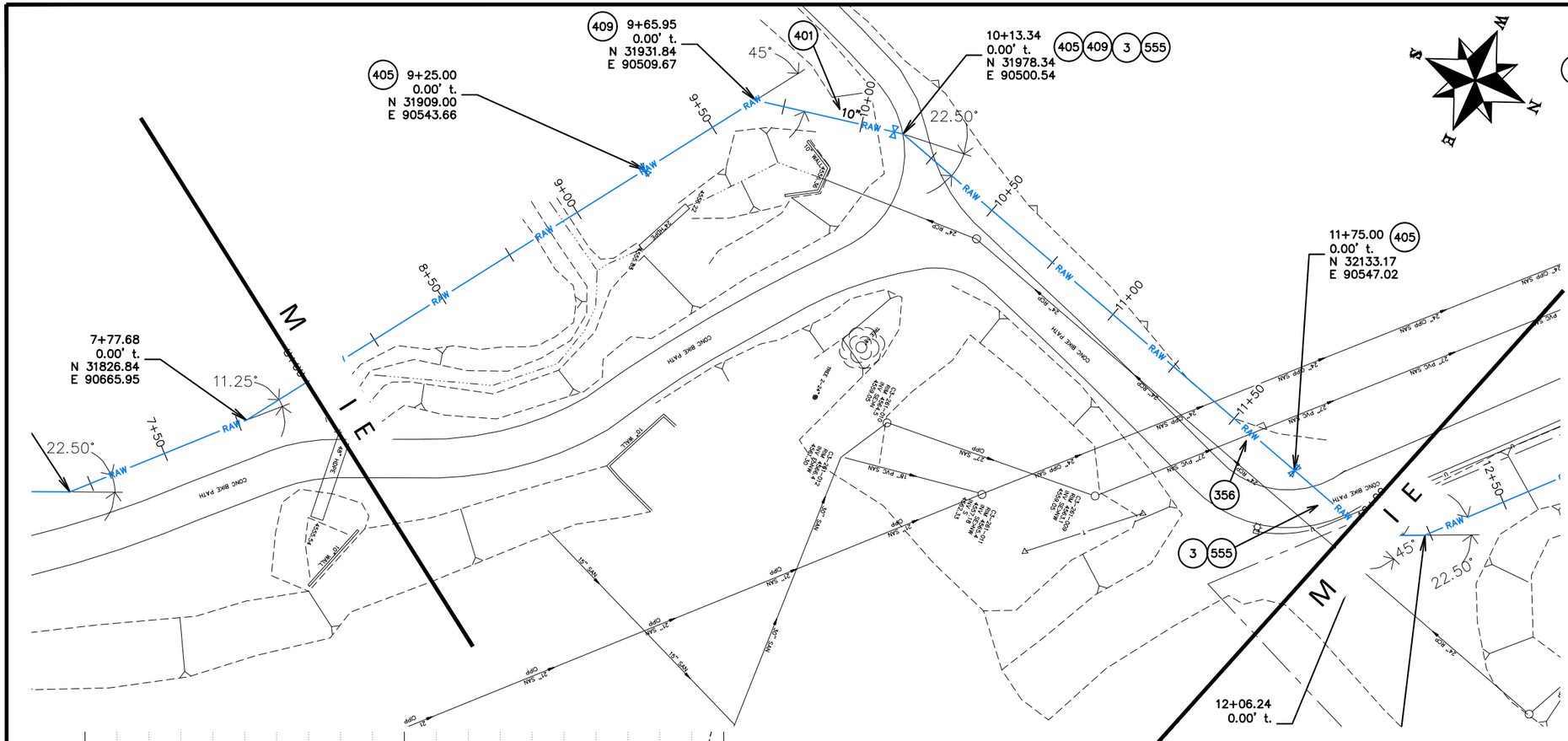

CONSTRUCTION NOTES

(3) 202 – REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS NEEDED FOR PIPE INSTALLATION.

356 104.40 – ENCASE ENTIRE SEWER IN REINFORCED CONCRETE PER STD. DETAIL GU–04. (ALL CASES WHERE WATER LINE BELOW SEWER LINE OR AT WATERWAY CROSSING)

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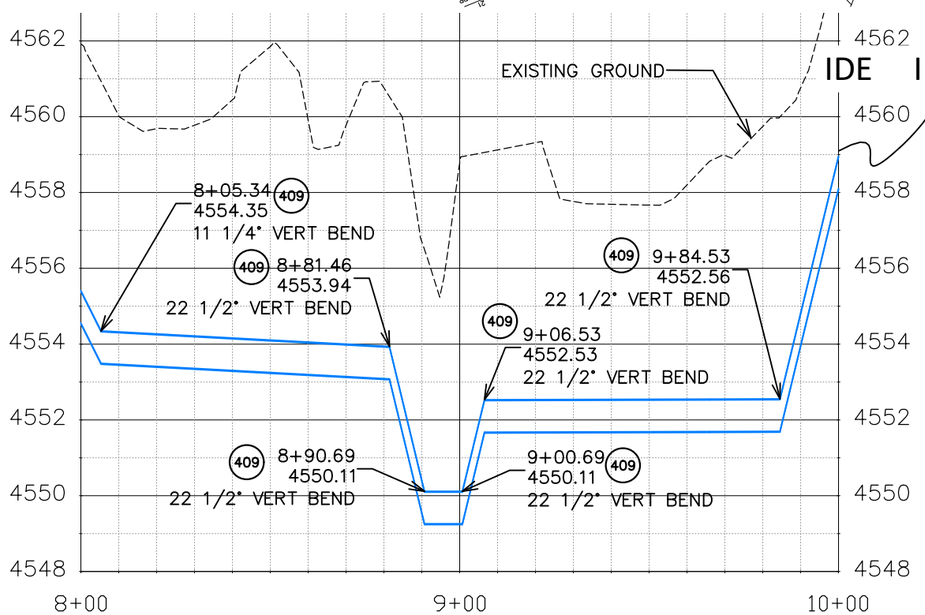

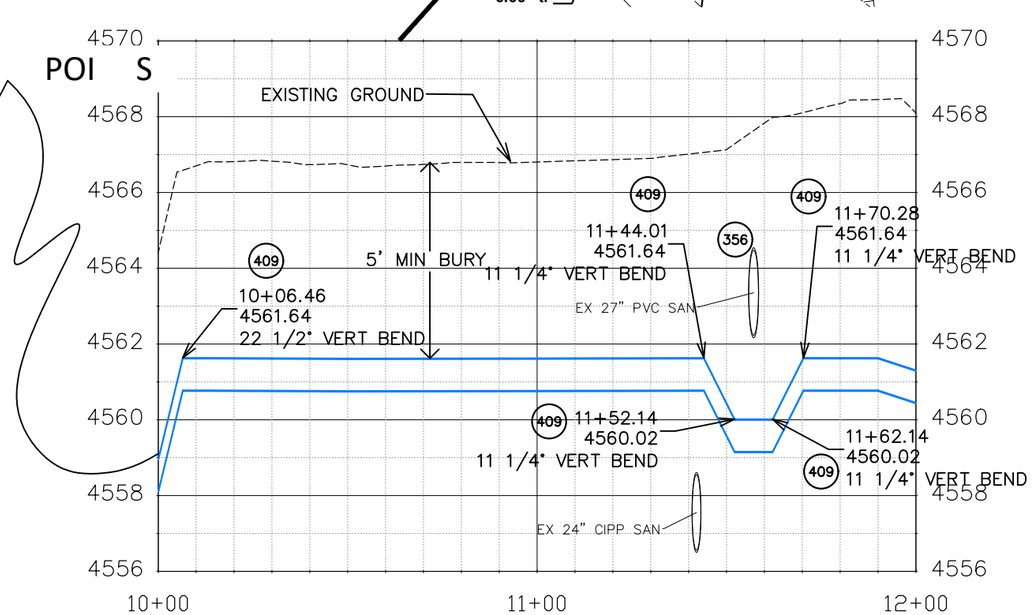

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REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA3
May 20, 2020

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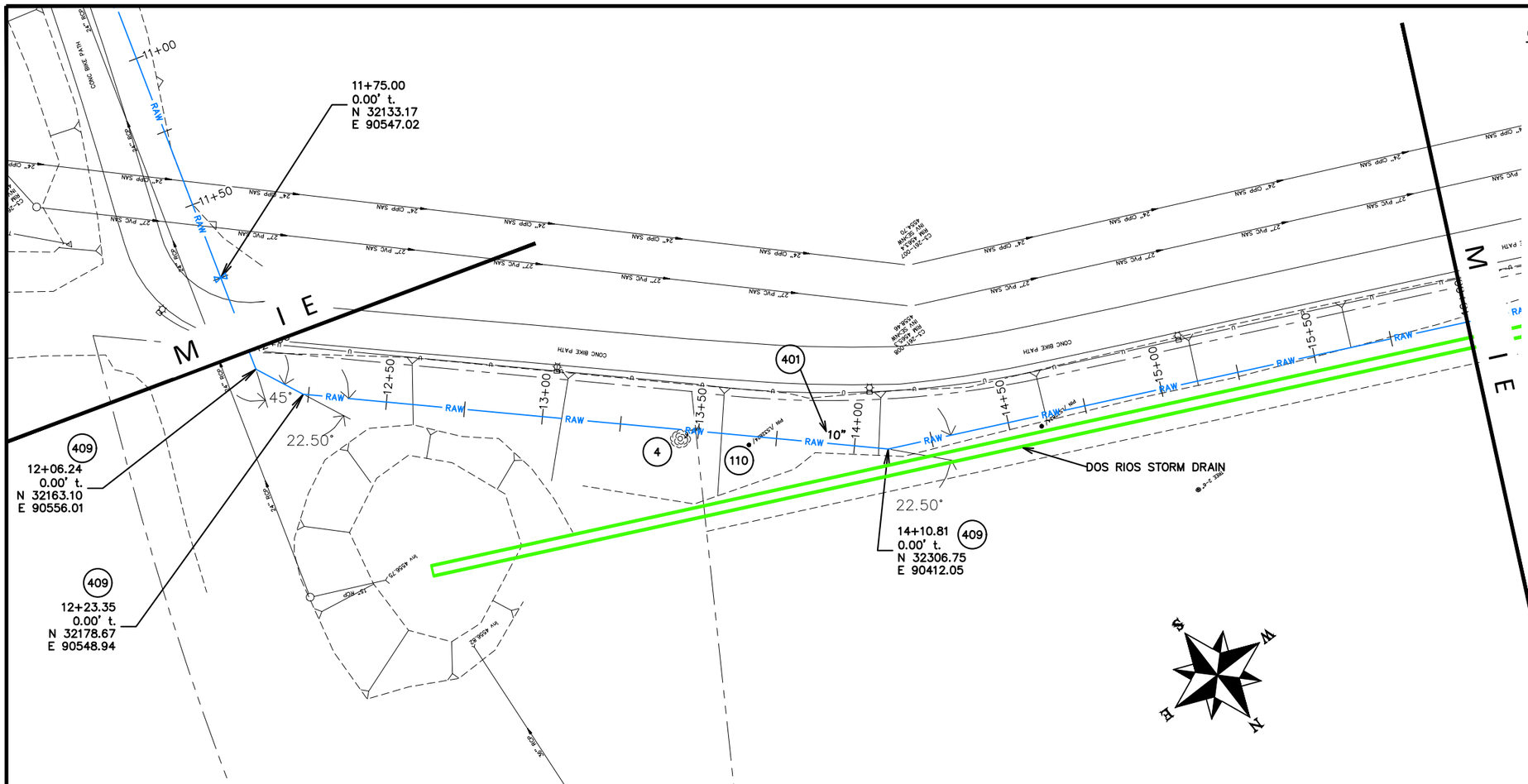

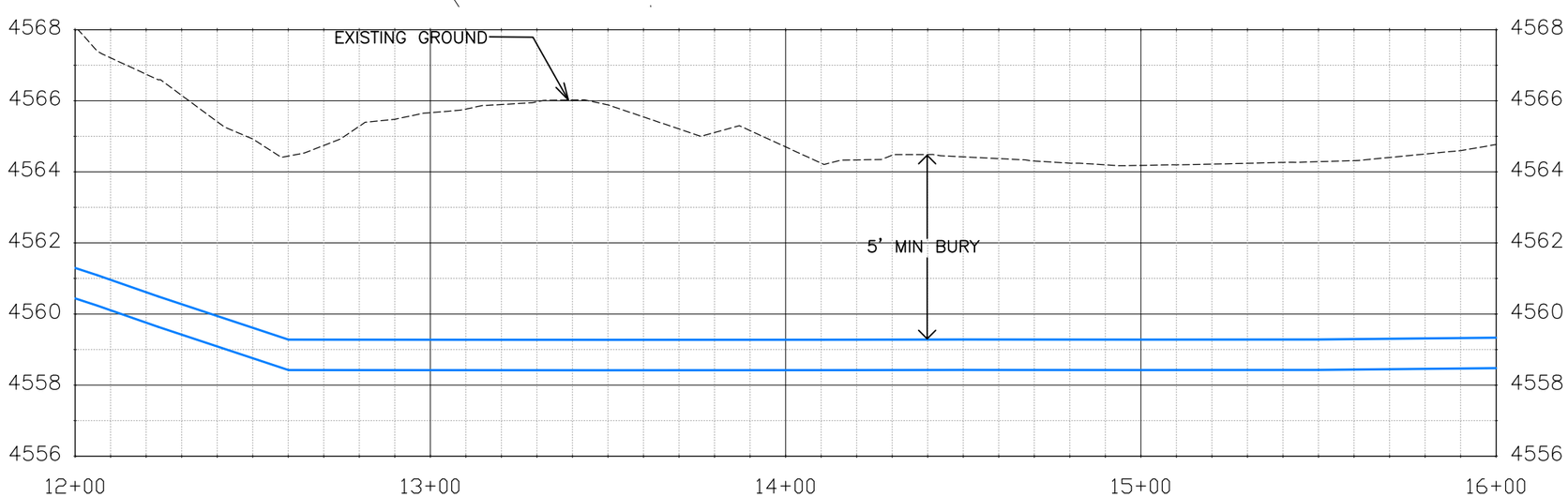

CONSTRUCTION NOTES

(4) 202 – REMOVAL OF TREE (SIZE AS SHOWN ON PLAN)

110 629 – REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION.

401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

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DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA4
May 20, 2020

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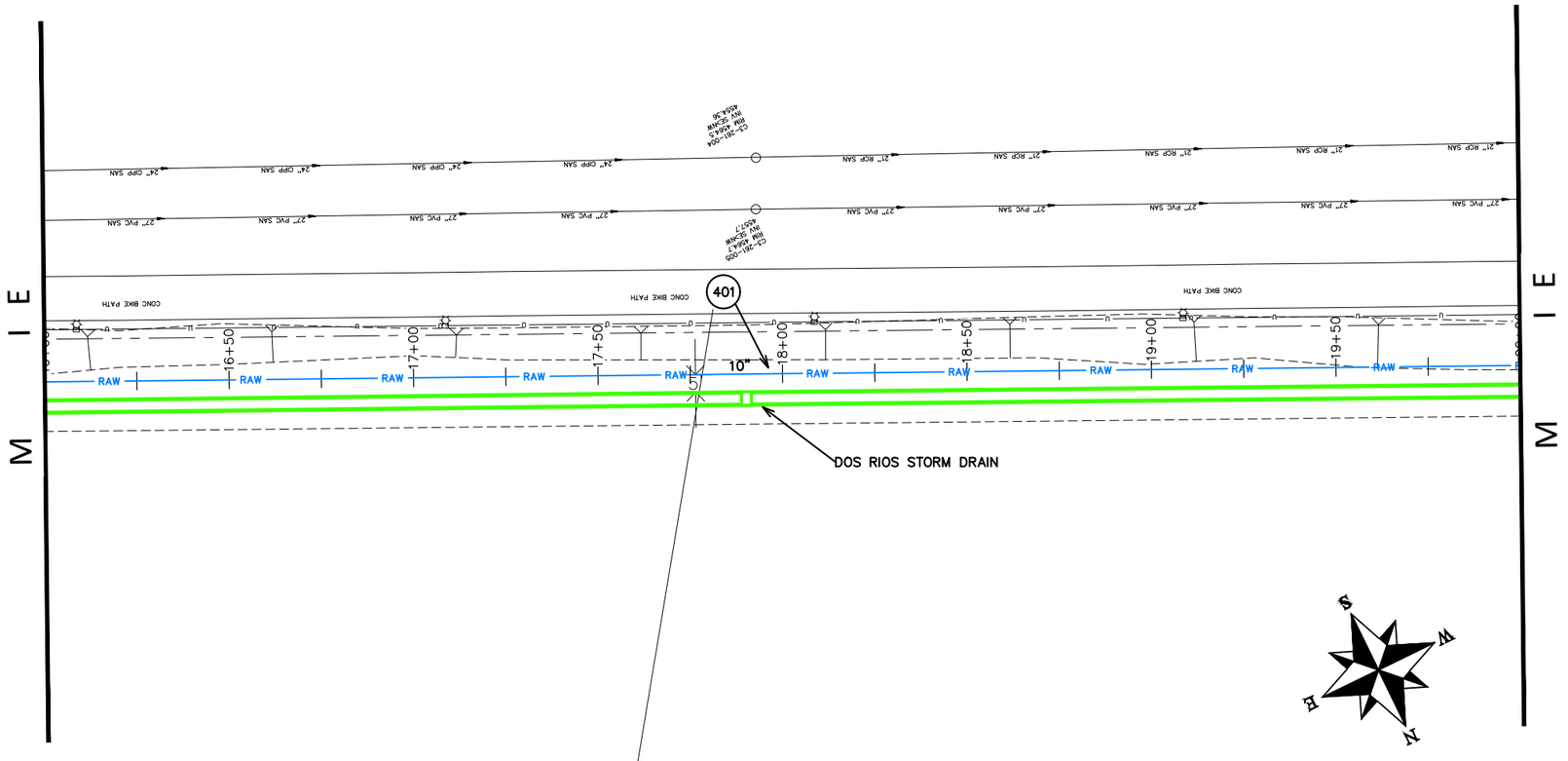
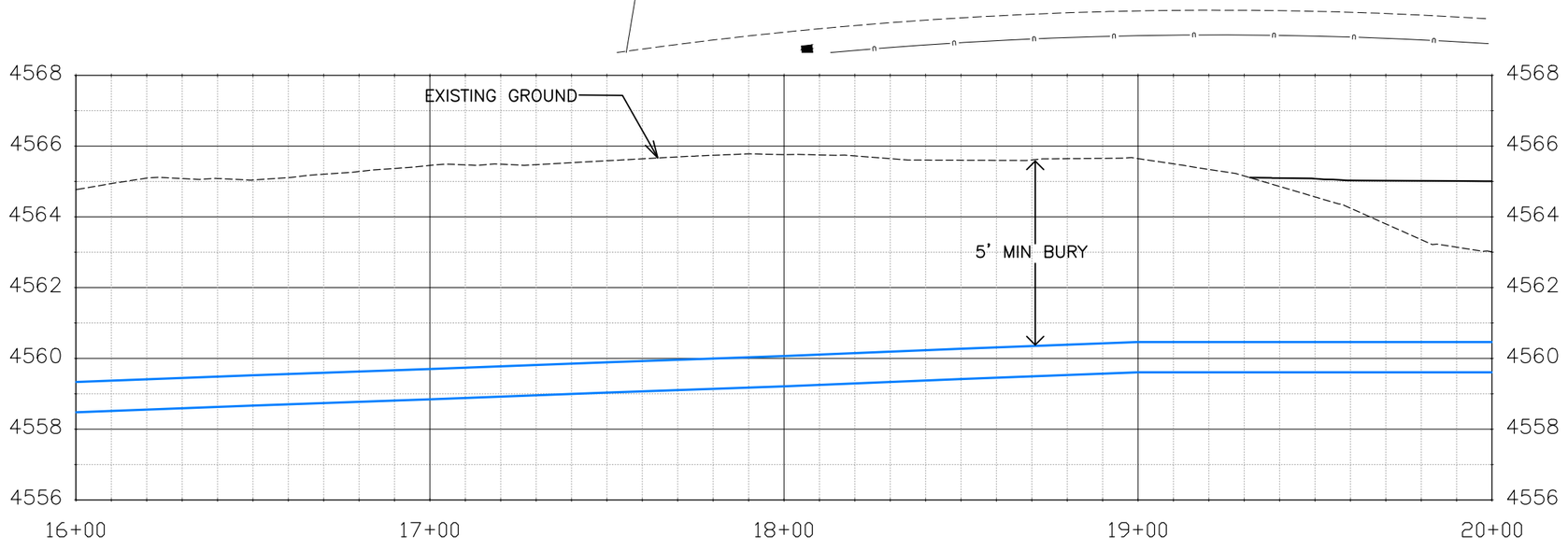
CONSTRUCTION NOTES

(401) 102.7/108.2 – WATER MAIN PIPE (DR-25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.





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DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA5
May 20, 2020

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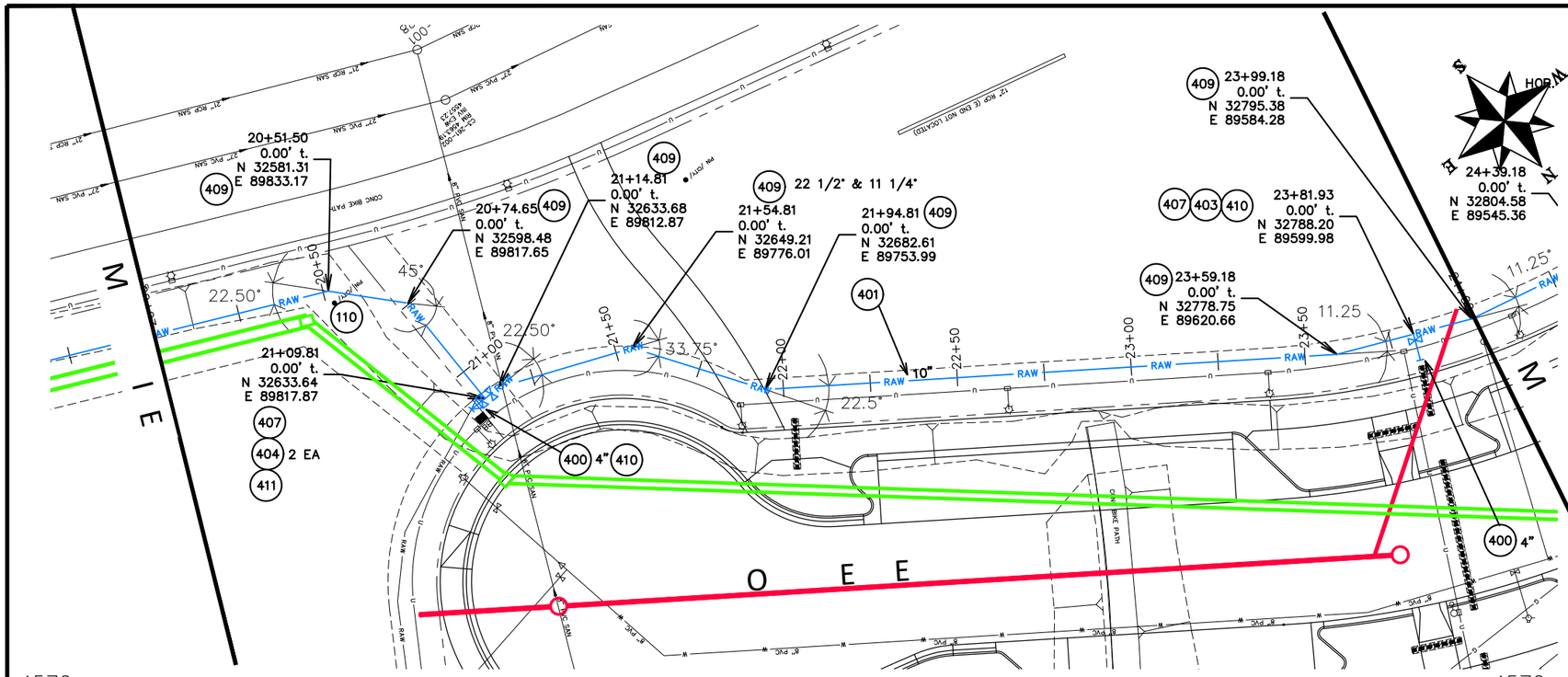

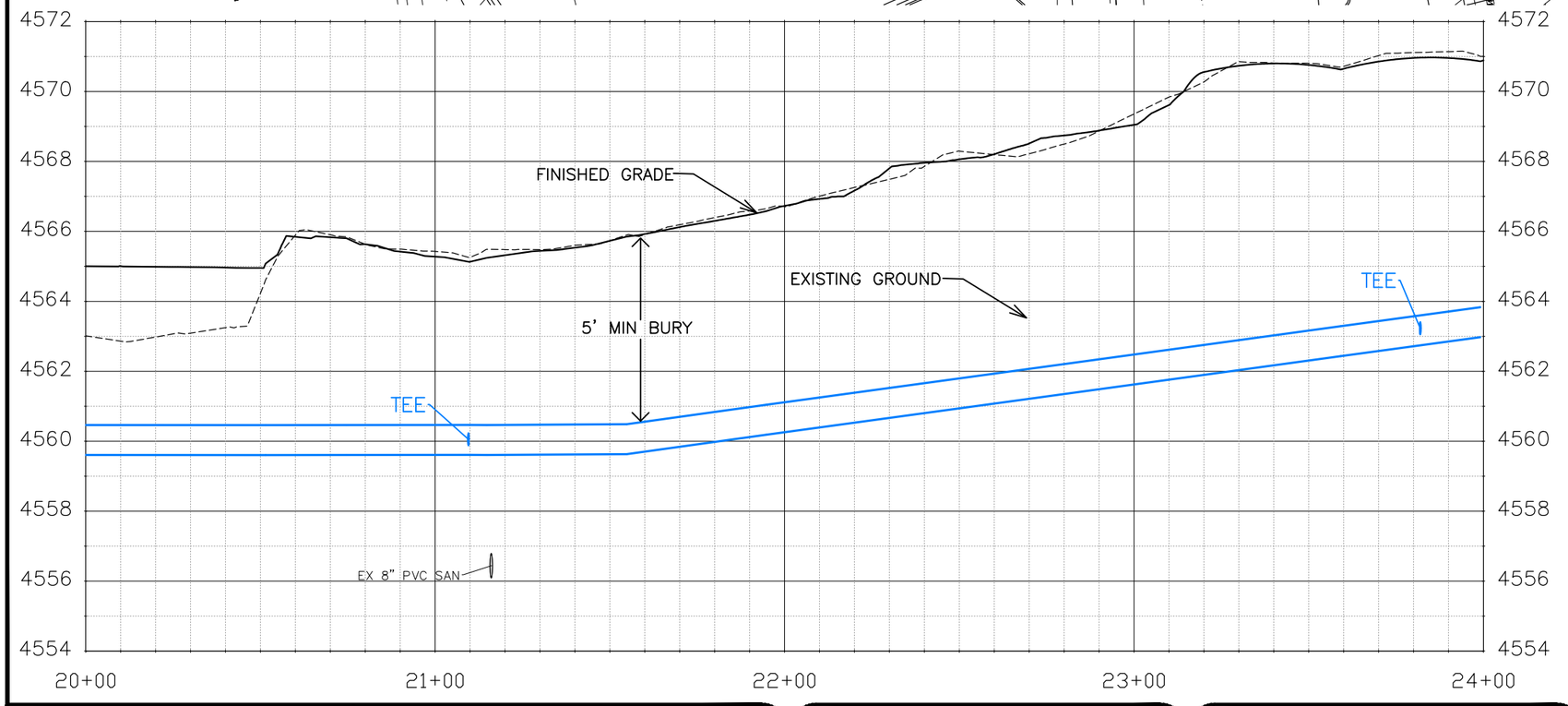

CONSTRUCTION NOTES

(110) 629 – REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION.

400 102.7/108.2 – WATER MAIN PIPE (C–900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

403 102.8b/108.3 – GATE VALVE. (SIZE AS SHOWN)

404 102.8e/108.3 – BUTTERFLY VALVE (SIZE AS SHOWN).

407 102.8/108.3 – TEE (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

410 102.8/108.3 – END CAP / PLUG (SIZE AS SHOWN).

411 102.8/108.3 – REDUCER (SIZE AS SHOWN).

811 Know what's **below.** **Call** before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA6
May 20, 2020

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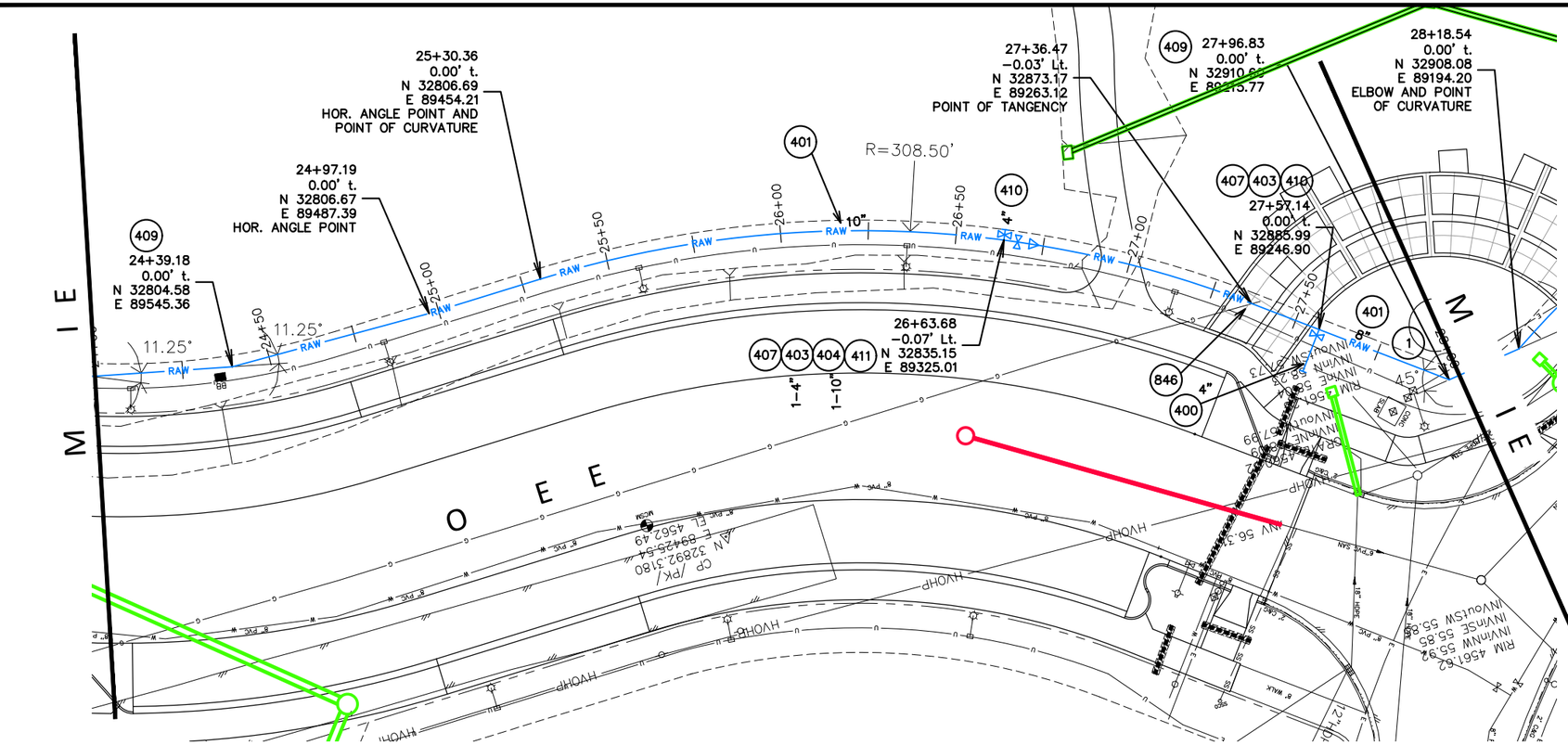

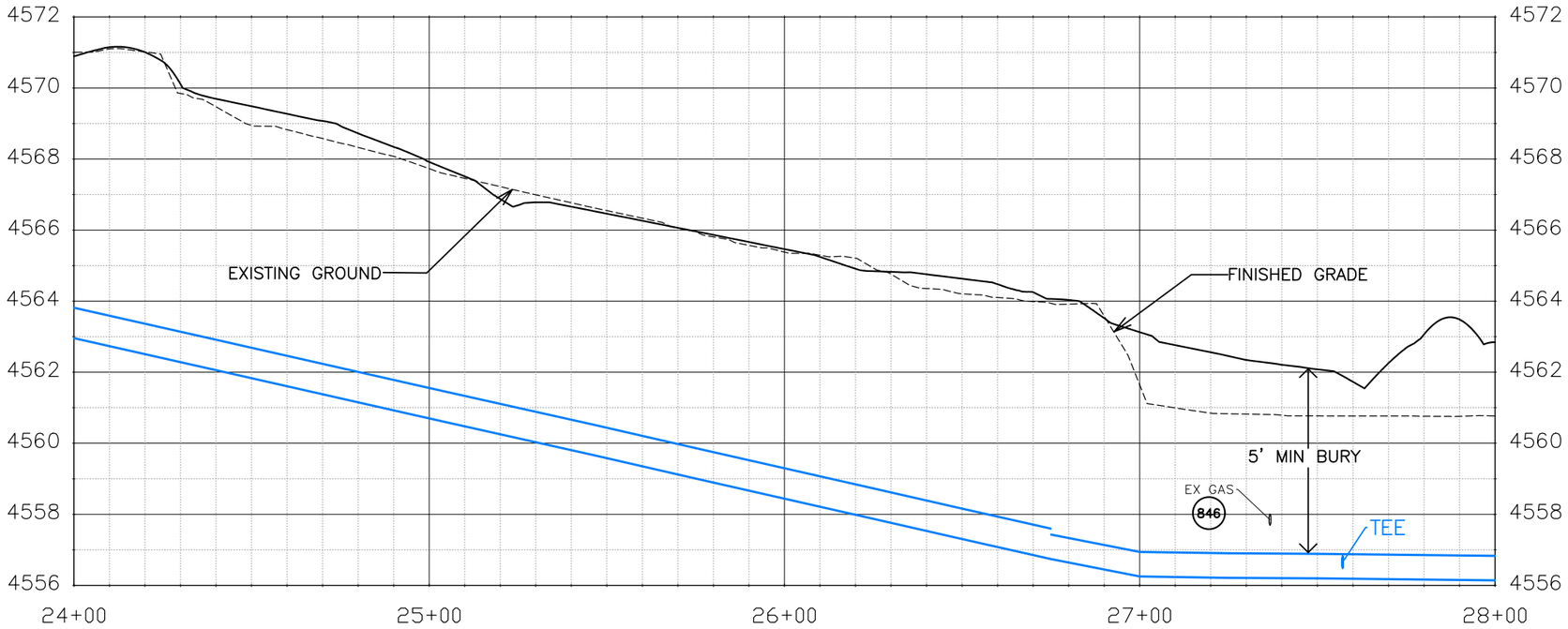

CONSTRUCTION NOTES

1 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS NEEDED FOR PIPE INSTALLATION.

400 102.7/108.2 – WATER MAIN PIPE (C–900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

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407 102.8/108.3 – TEE (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

410 102.8/108.3 – END CAP / PLUG (SIZE AS SHOWN).

411 102.8/108.3 – REDUCER (SIZE AS SHOWN).

846 POTHOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.

Know what's **below.** **Call** before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

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REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA7
May 20, 2020

N:\Landproj\2020 RAW IRRIGATION LINE\60CADDWG\00 DESIGN\RAW WATER LINE.dwg, 5/20/2020 7:16:17 AM

CONSTRUCTION NOTES

(1) 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS NEEDED FOR PIPE INSTALLATION.

355 104.40 – CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU–04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

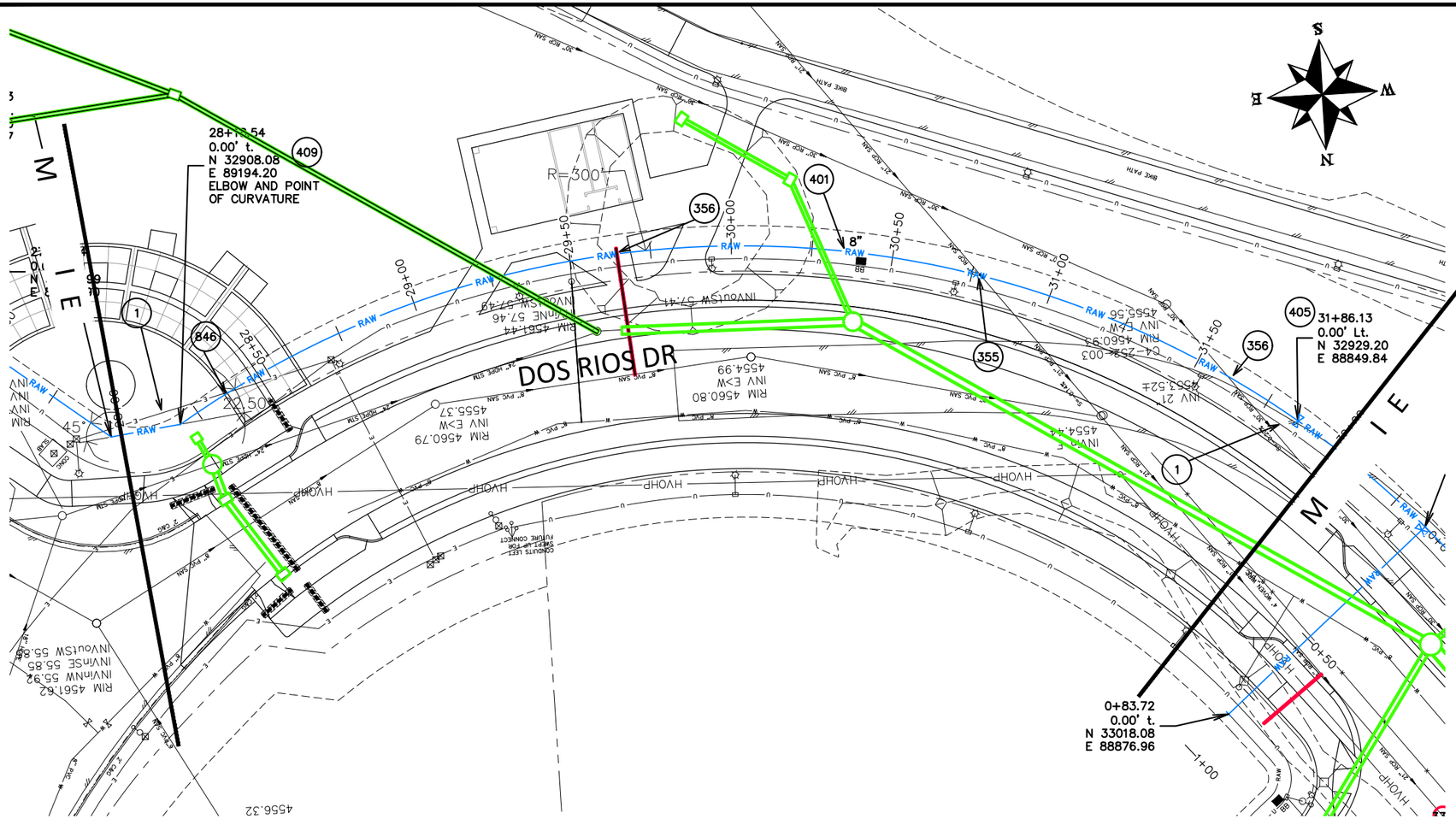
356 104.40 – ENCASE ENTIRE SEWER IN REINFORCED CONCRETE PER STD. DETAIL GU–04. (ALL CASES WHERE WATER LINE BELOW SEWER LINE OR AT WATERWAY CROSSING)

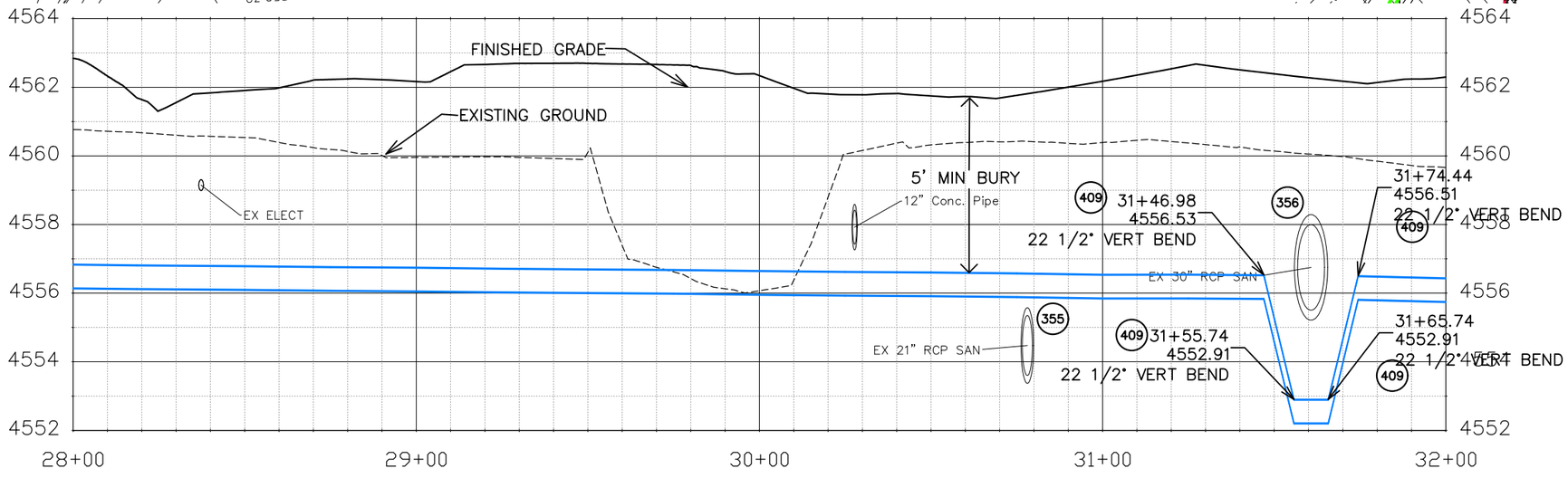
401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

405 102.8g/102.8h/108.3 – AIR VALVE AND VAULT (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

846 POTHOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.





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REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
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APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA8
May 20, 2020

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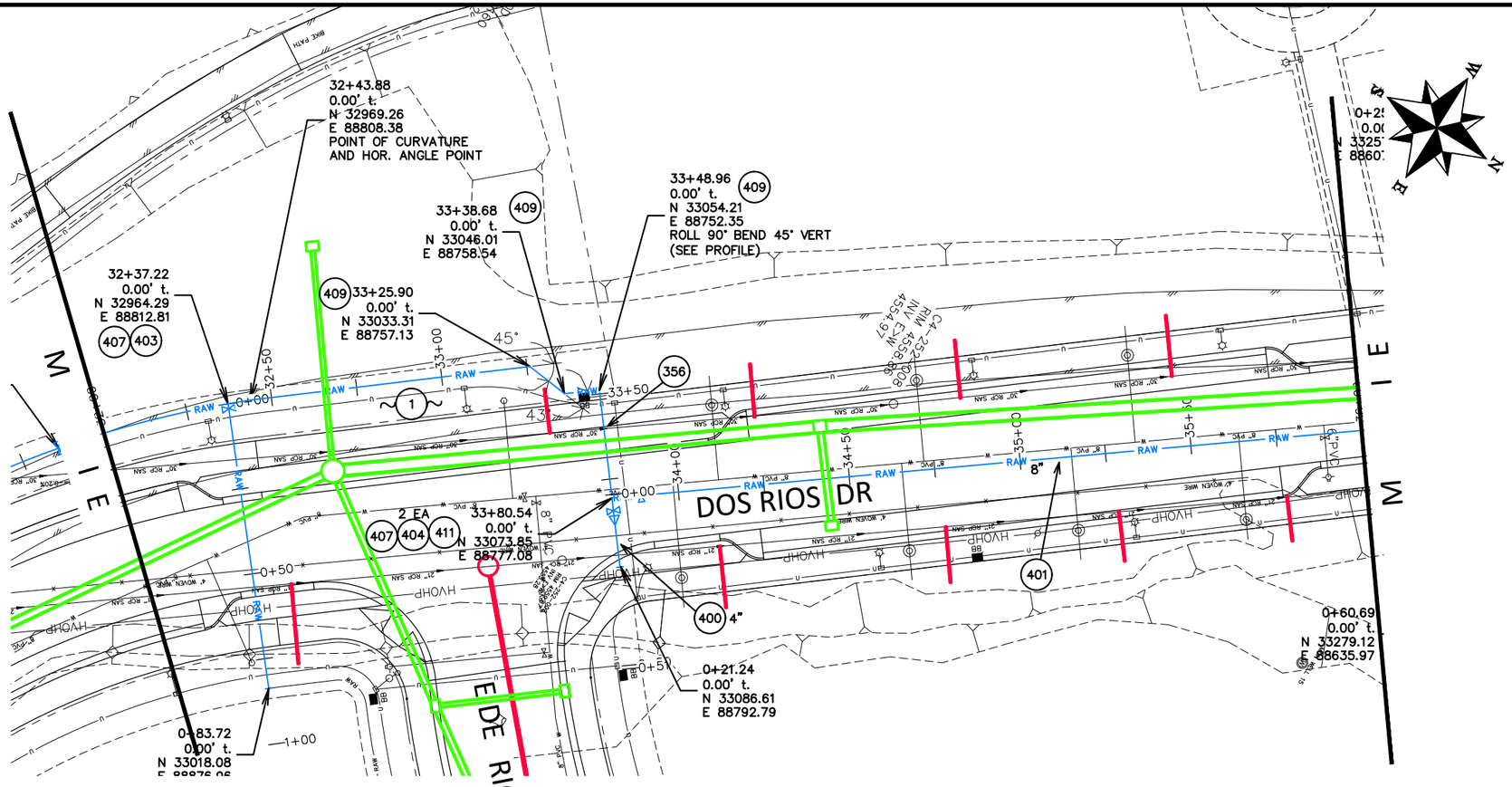

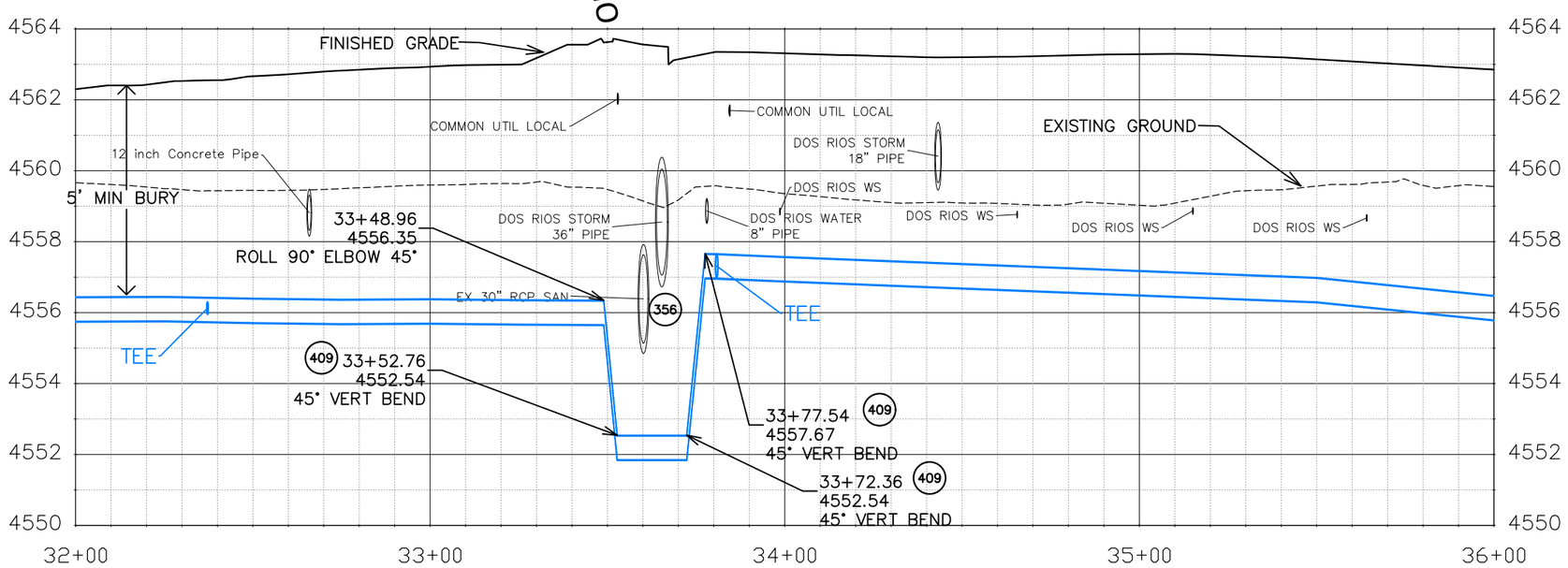

CONSTRUCTION NOTES

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411 102.8/108.3 – REDUCER (SIZE AS SHOWN).

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REVISION 2	
REVISION 3	
REVISION 4	

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DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

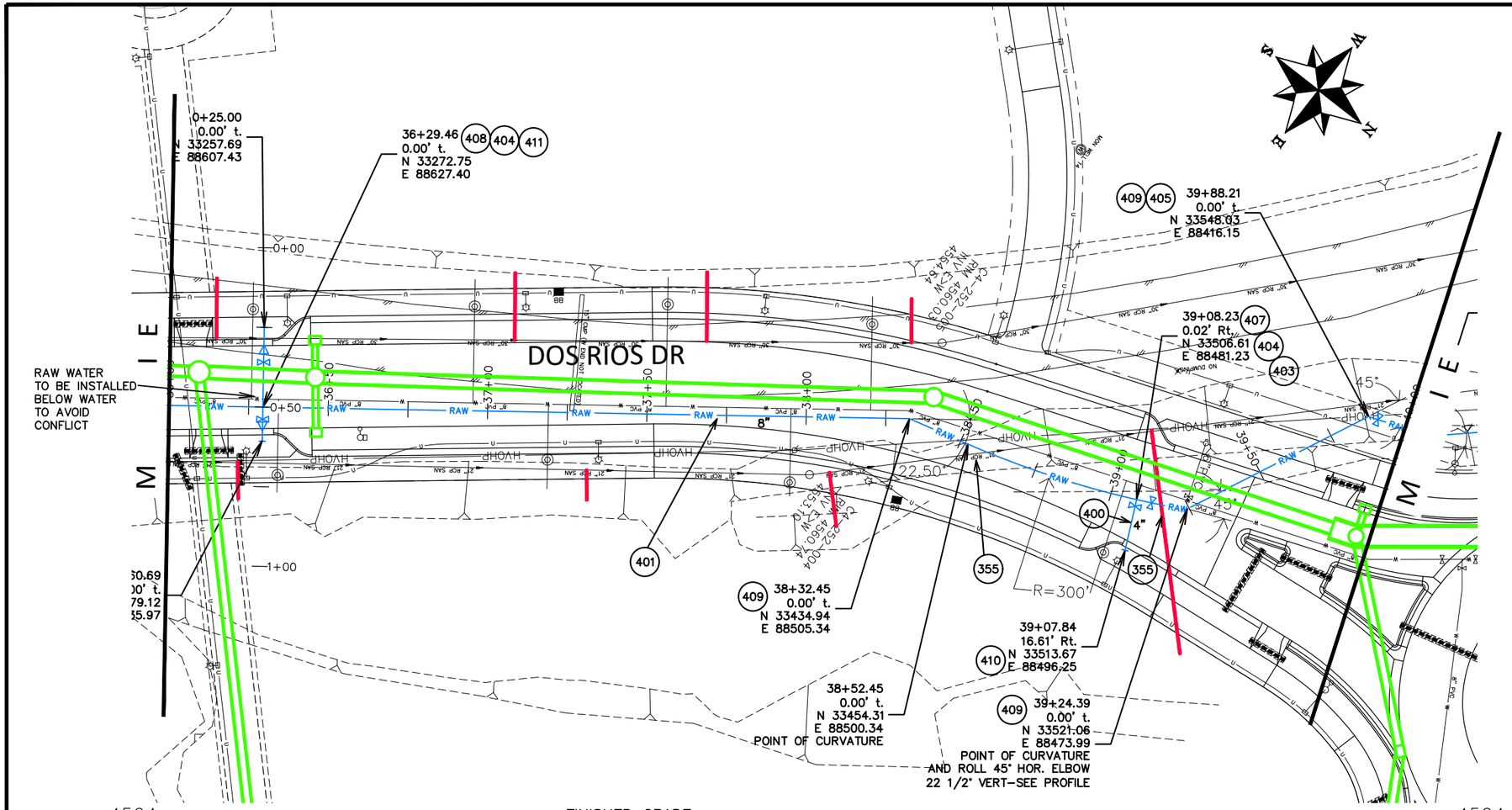
SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

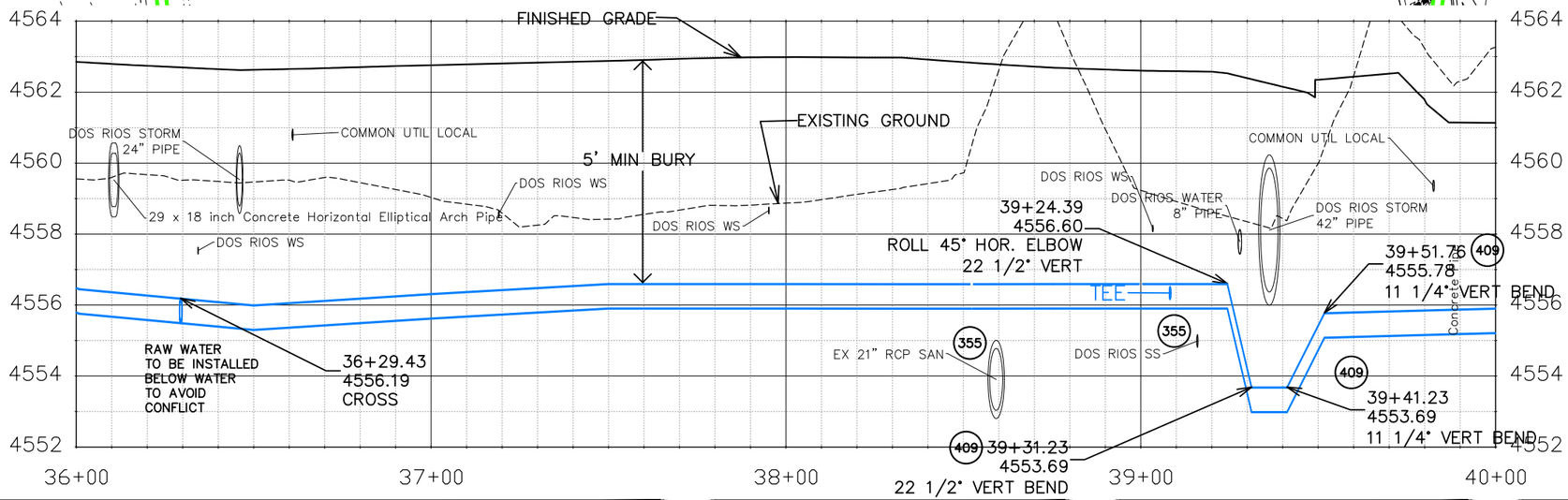
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA9
May 20, 2020

N:\Landproj\2020 RAW IRRIGATION LINE\60CAD\DWG\00 DESIGN\RAW WATER LINE.dwg, 5/20/2020 7:17:13 AM





CONSTRUCTION NOTES

(355) 104.40 – CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU–04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

400 102.7/108.2 – WATER MAIN PIPE (C–900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

403 102.8b/108.3 – GATE VALVE. (SIZE AS SHOWN)

404 BUTTERFLY VALVE (SIZE AS SHOWN).

405 102.8g/102.8h/108.3 – AIR VALVE AND VAULT (SIZE AS SHOWN).

407 102.8/108.3 – TEE (SIZE AS SHOWN).

408 102.8/108.3 – CROSS (SIZE AS SHOWN)

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

410 102.8/108.3 – END CAP / PLUG (SIZE AS SHOWN).

411 102.8/108.3 – REDUCER (SIZE AS SHOWN).

Know what's **below.**
Call before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA10
May 20, 2020

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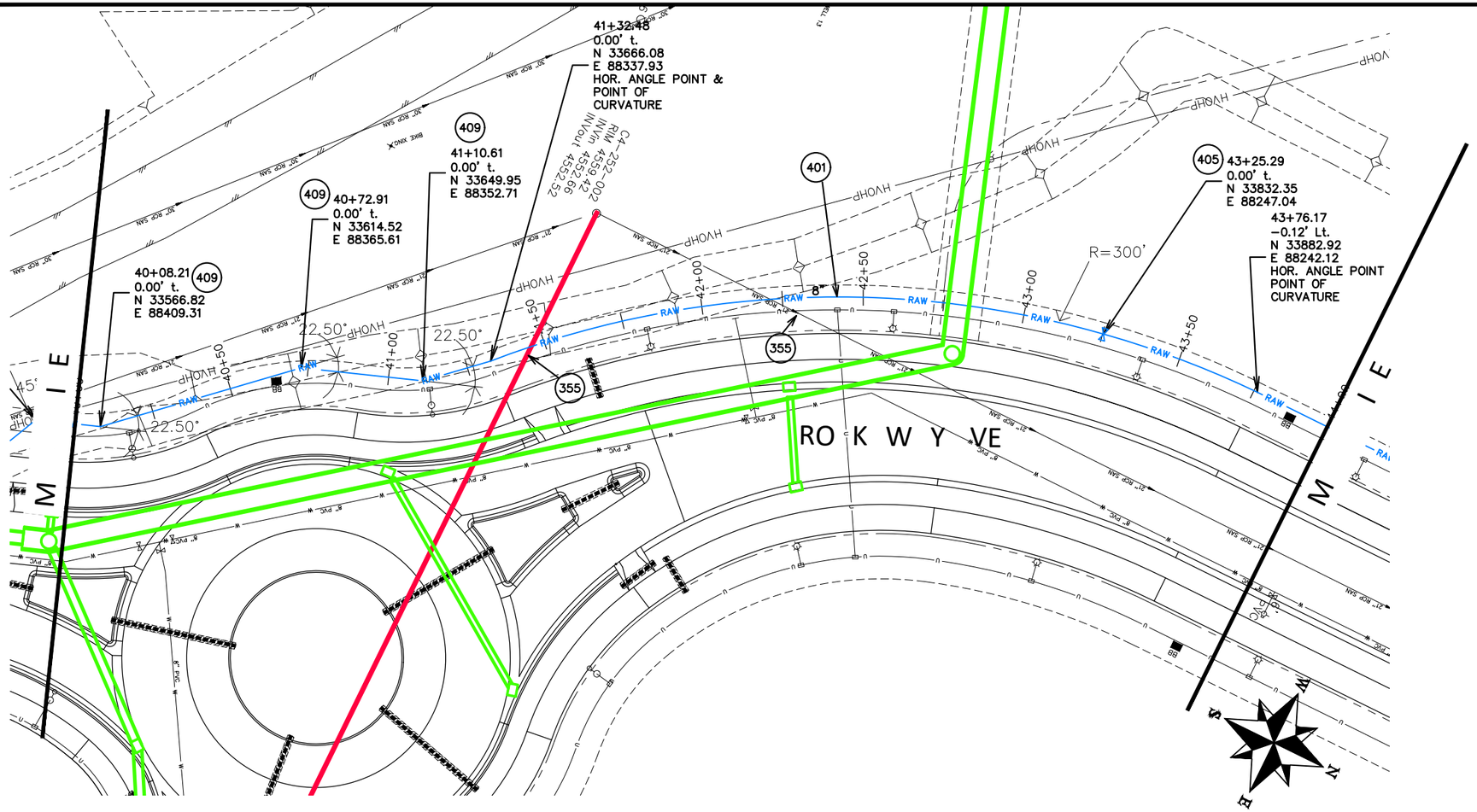

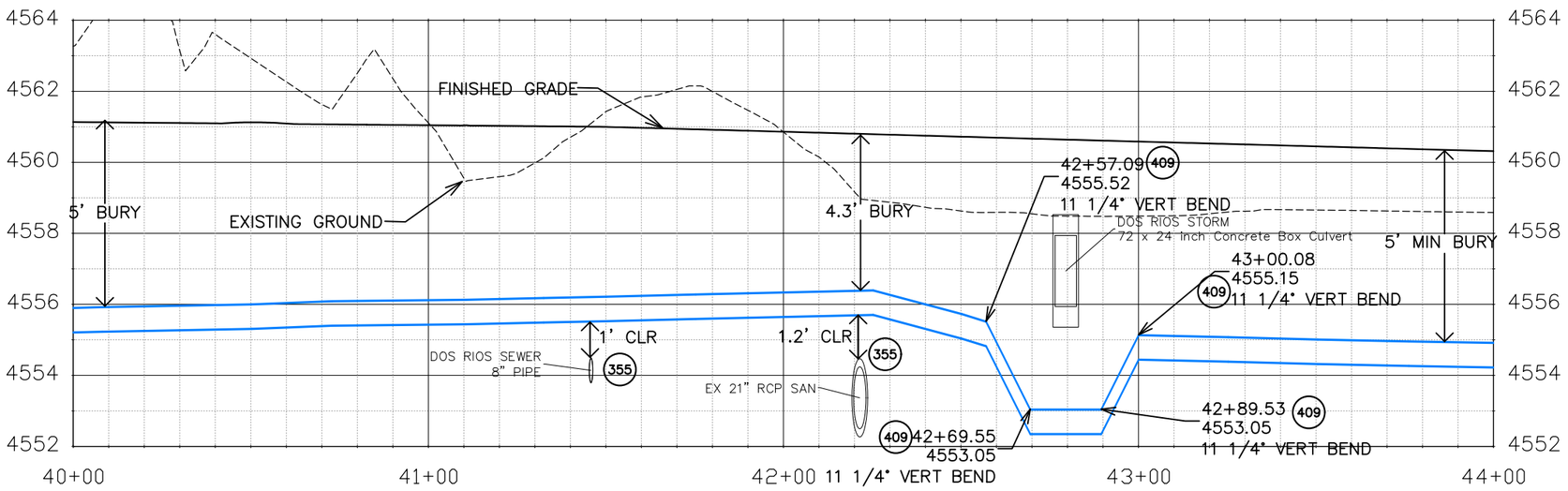

CONSTRUCTION NOTES

(355) 104.40 – CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

401 102.7/108.2 – WATER MAIN PIPE (DR-25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

405 102.8g/102.8h/108.3 – AIR VALVE AND VAULT (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

.

811 Know what's **below.** **Call** before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA11
May 20, 2020

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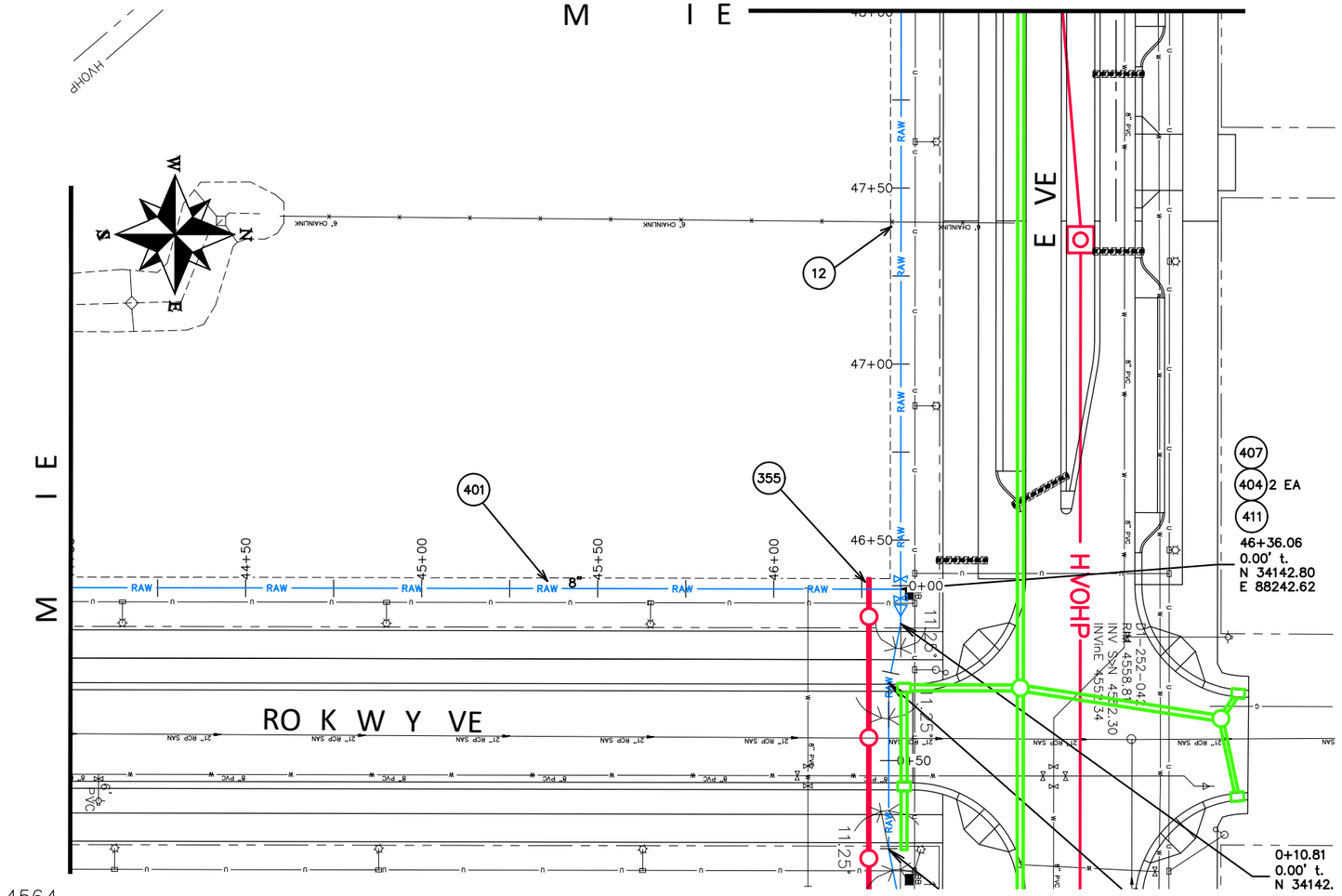

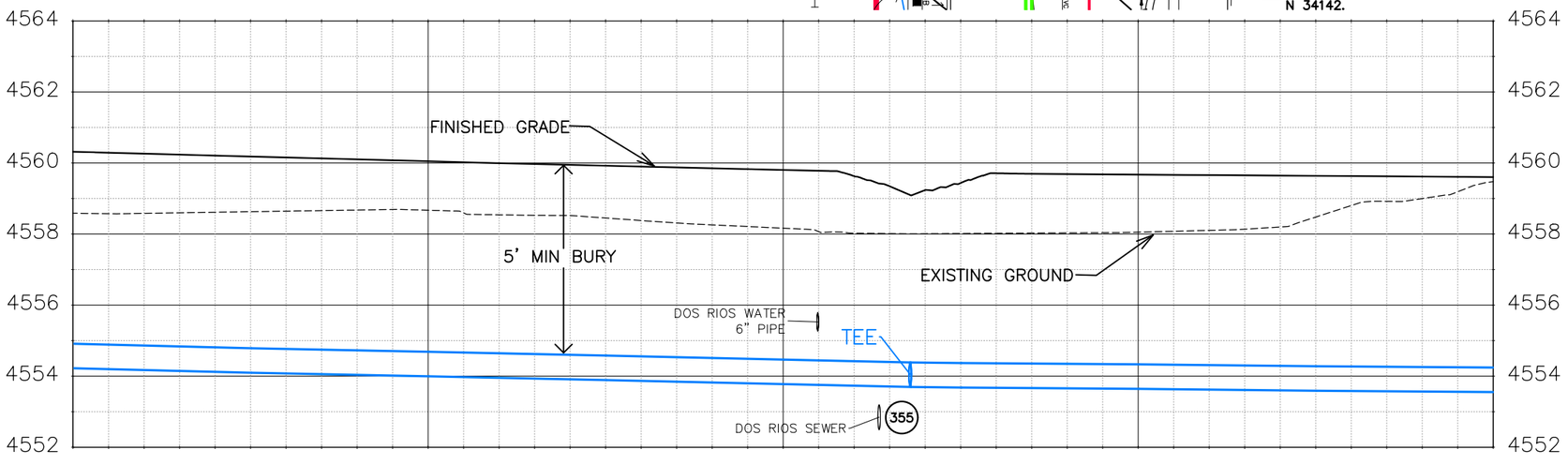

CONSTRUCTION NOTES

(12) 202 – REMOVAL OF FENCE AS SHOWN. (HEIGHT AND MATERIAL AS SHOW ON PLAN)

355 104.40 – CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

401 102.7/108.2 – WATER MAIN PIPE (DR-25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

404 BUTTERFLY VALVE (SIZE AS SHOWN).

407 102.8/108.3 – TEE (SIZE AS SHOWN).

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DESCRIPTION	DATE
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DRAWN BY JCS DATE 2020
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APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA12
May 20, 2020

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CONSTRUCTION NOTES

(1) 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS NEEDED FOR PIPE INSTALLATION.

3 202 – REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS NEEDED FOR PIPE INSTALLATION.

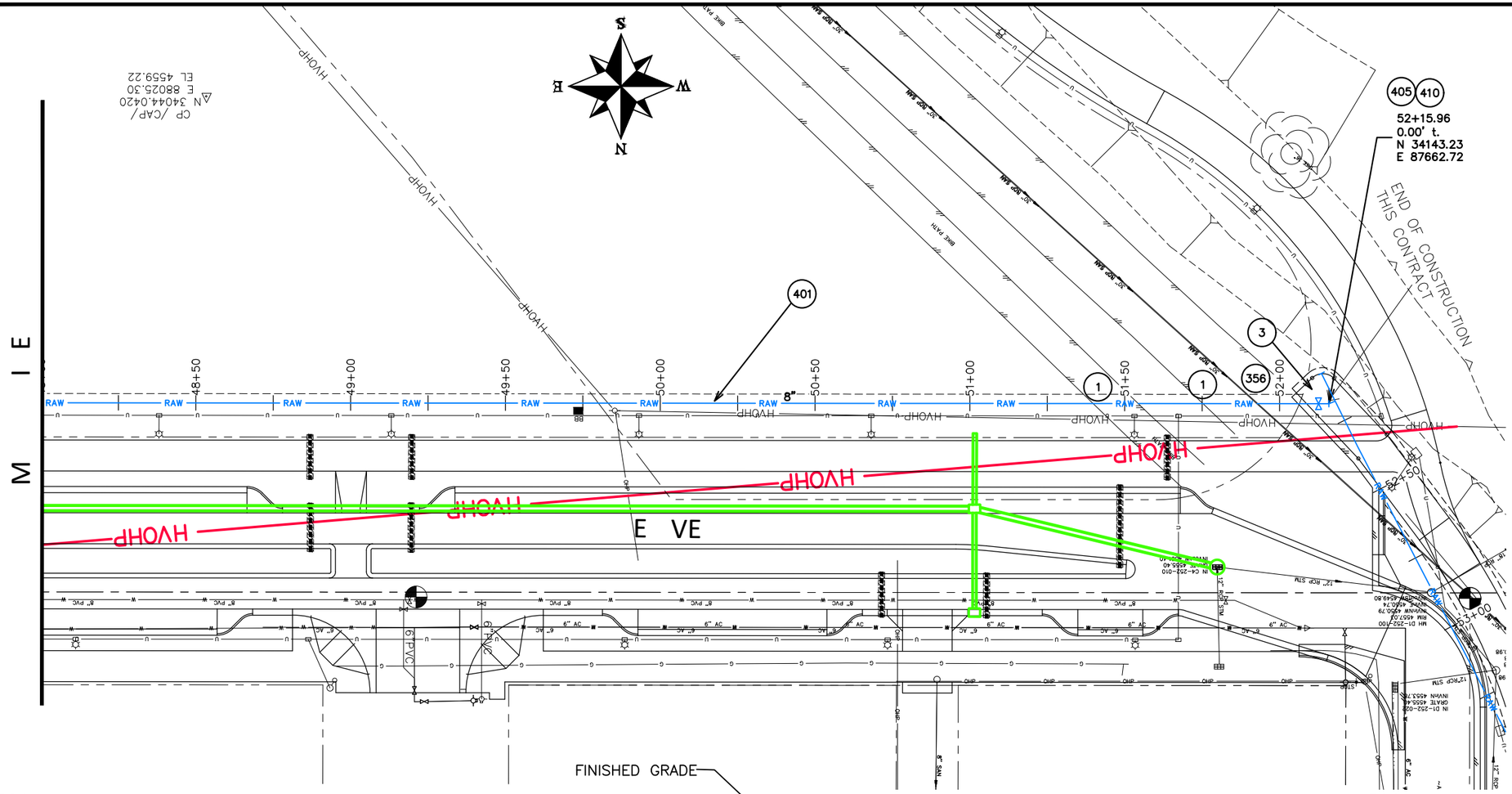
356 104.40 – ENCASE ENTIRE SEWER IN REINFORCED CONCRETE PER STD. DETAIL GU–04. (ALL CASES WHERE WATER LINE BELOW SEWER LINE OR AT WATERWAY CROSSING)

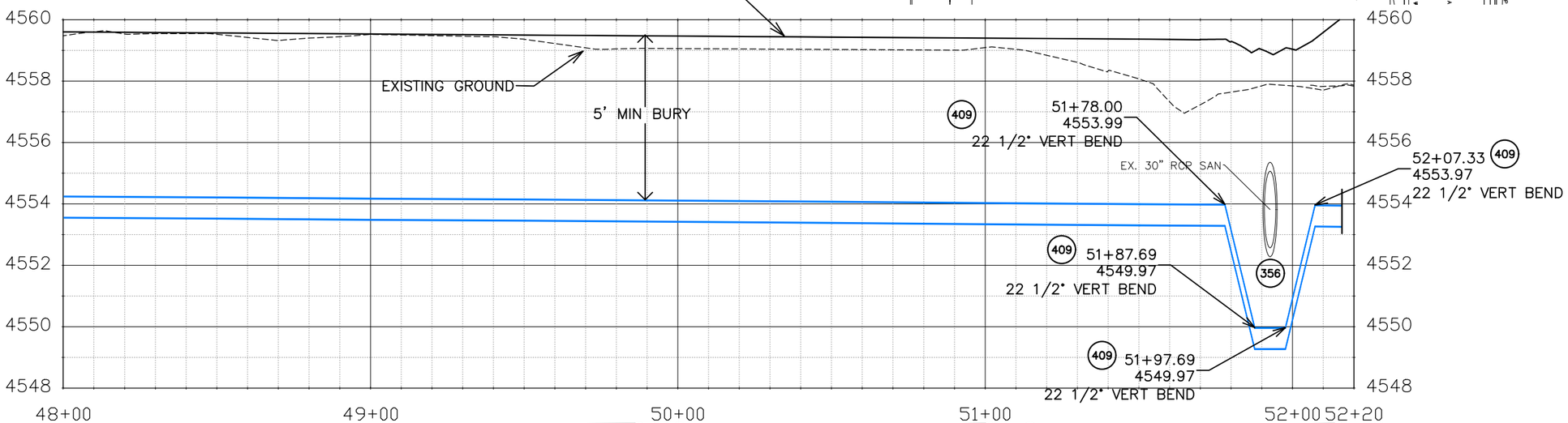
401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

405 102.8g/102.8h/108.3 – AIR VALVE AND VAULT (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

410 102.8/108.3 – END CAP / PLUG (SIZE AS SHOWN).





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REVISION 4	

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CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA13
May 20, 2020

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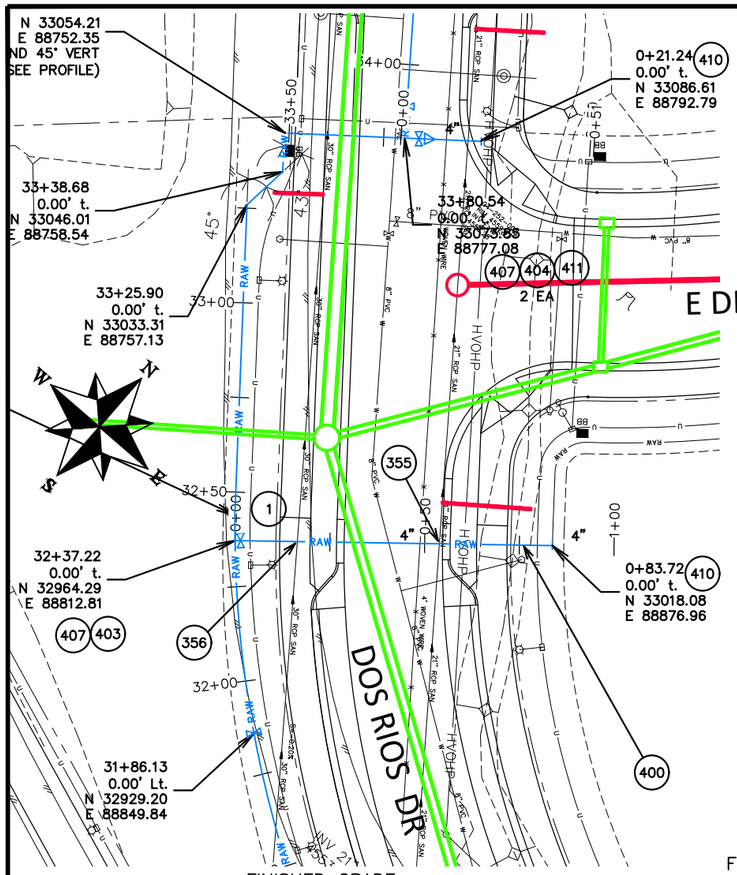

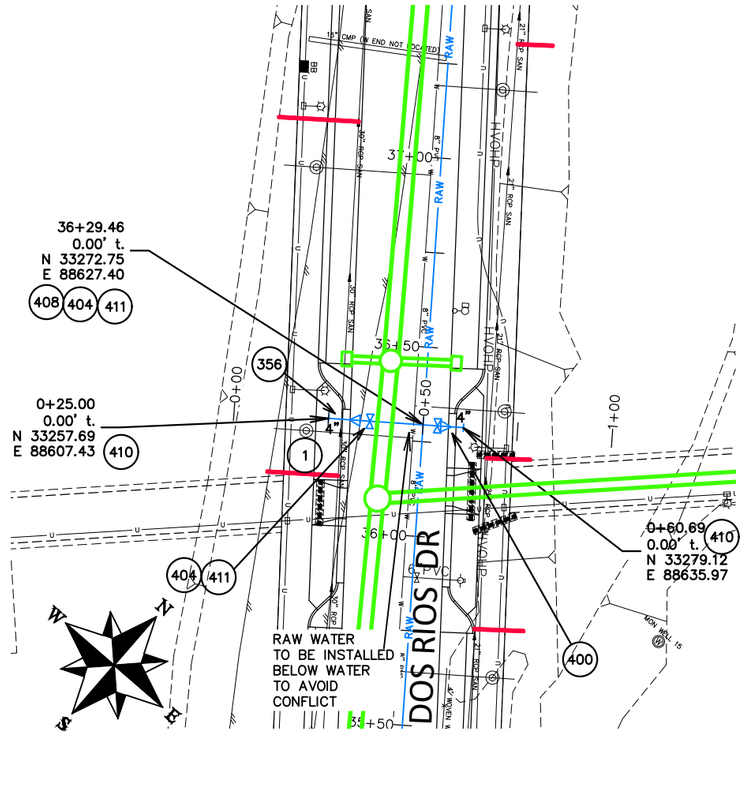

CONSTRUCTION NOTES

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355 104.40 – CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU–04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

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407 102.8/108.3 – TEE (SIZE AS SHOWN).

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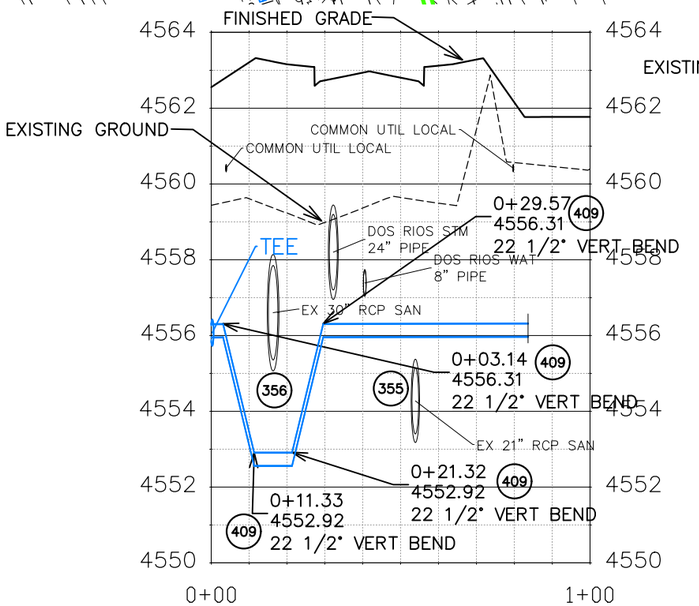
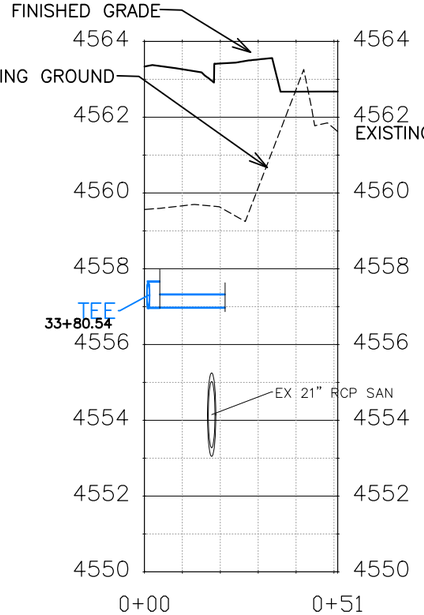
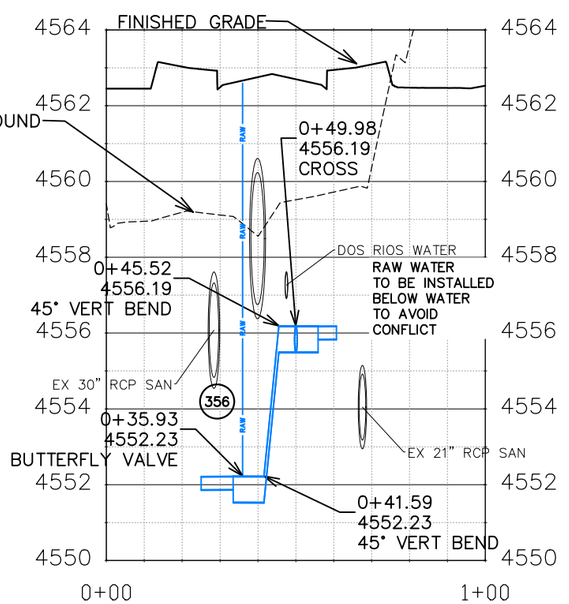
409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

410 102.8/108.3 – END CAP/PLUG (SIZE AS SHOWN).

411 102.8/108.3 – REDUCER (SIZE AS SHOWN).







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DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – XINGS
May 20, 2020

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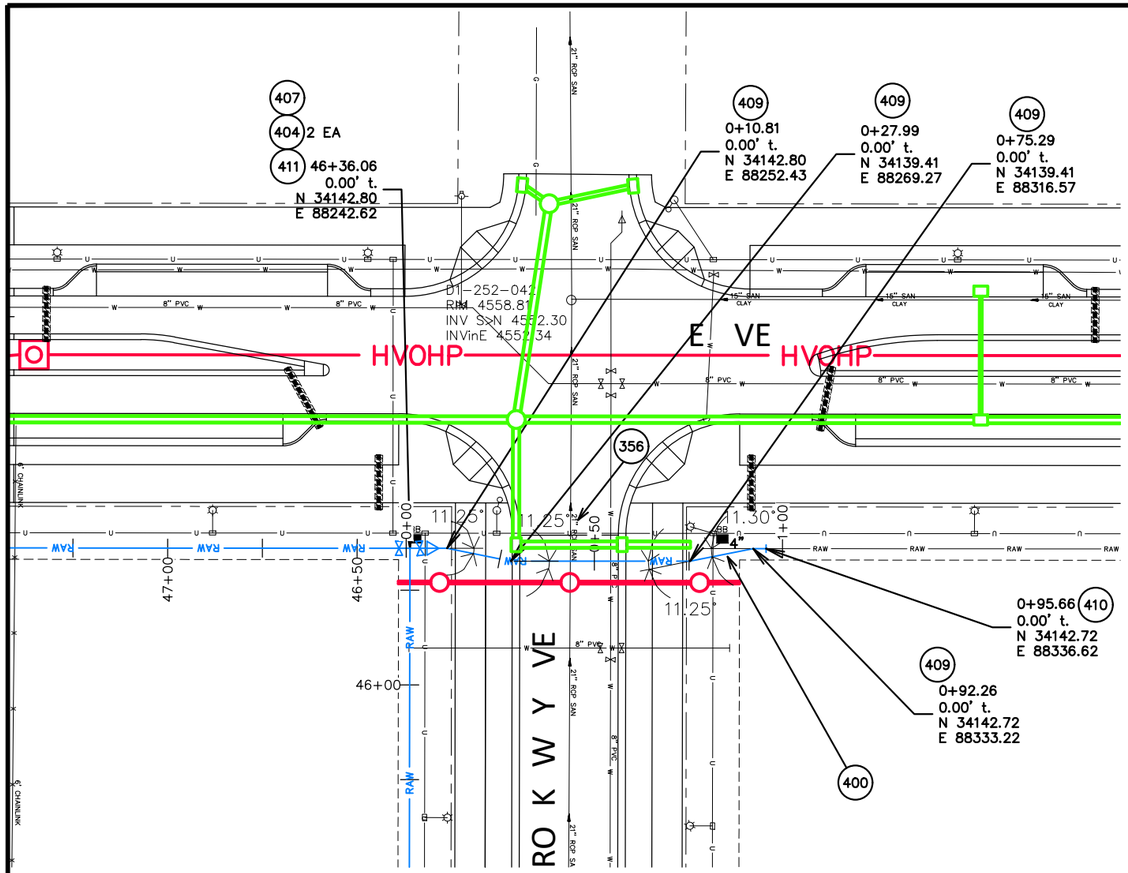

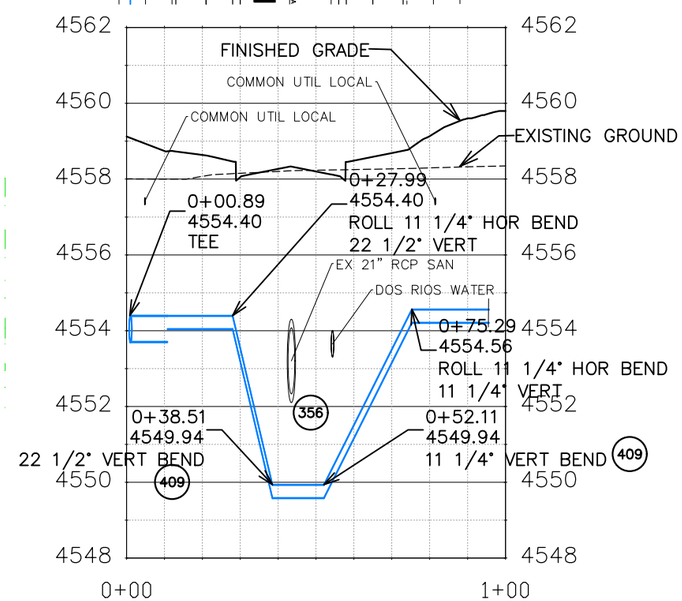

CONSTRUCTION NOTES

(356) 104.40 – ENCASE ENTIRE SEWER IN REINFORCED CONCRETE PER STD. DETAIL GU-04. (ALL CASES WHERE WATER LINE BELOW SEWER LINE OR AT WATERWAY CROSSING)

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DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – XINGS.
May 20, 2020

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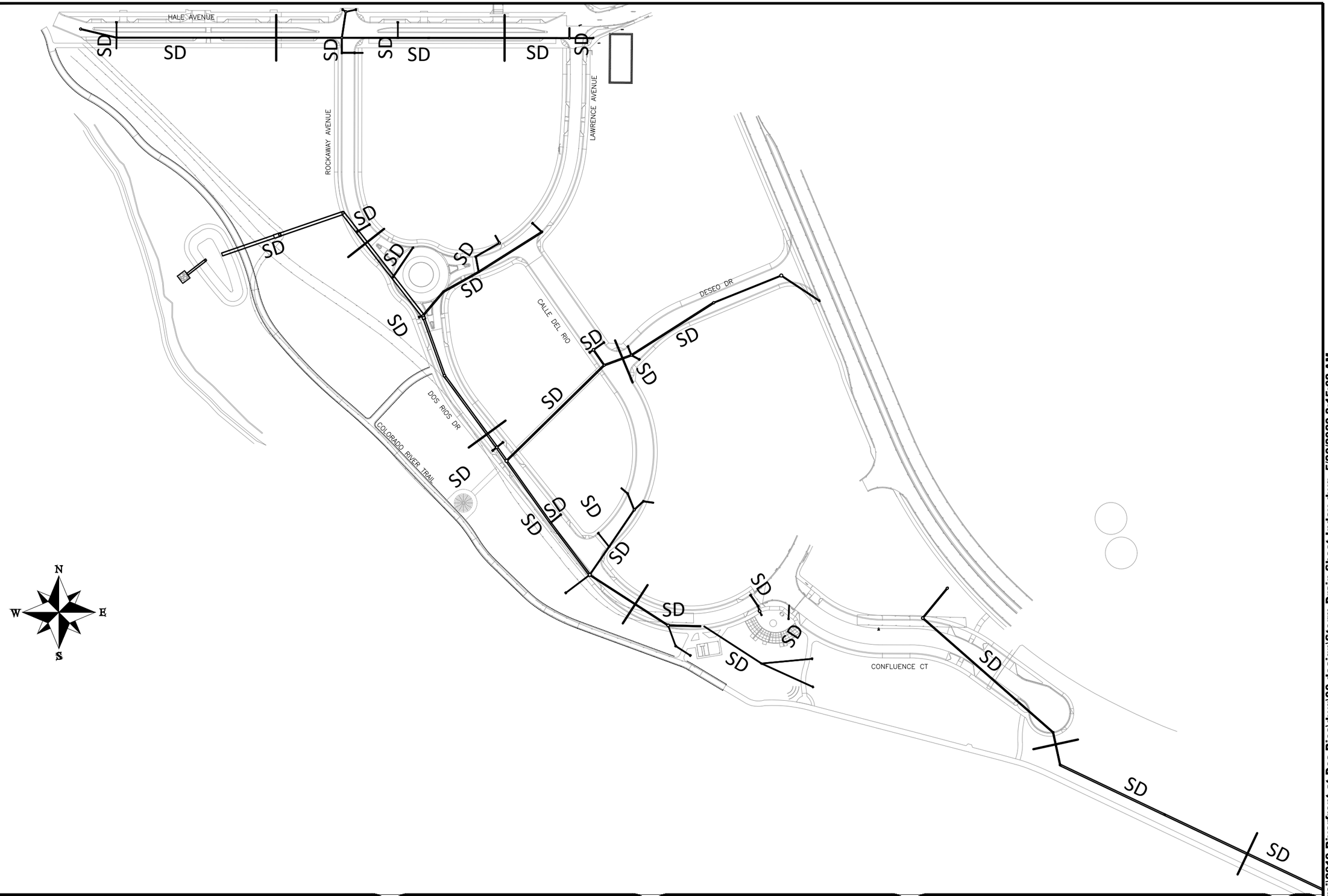

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
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REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN SHEET INDEX
May 20, 2020

73

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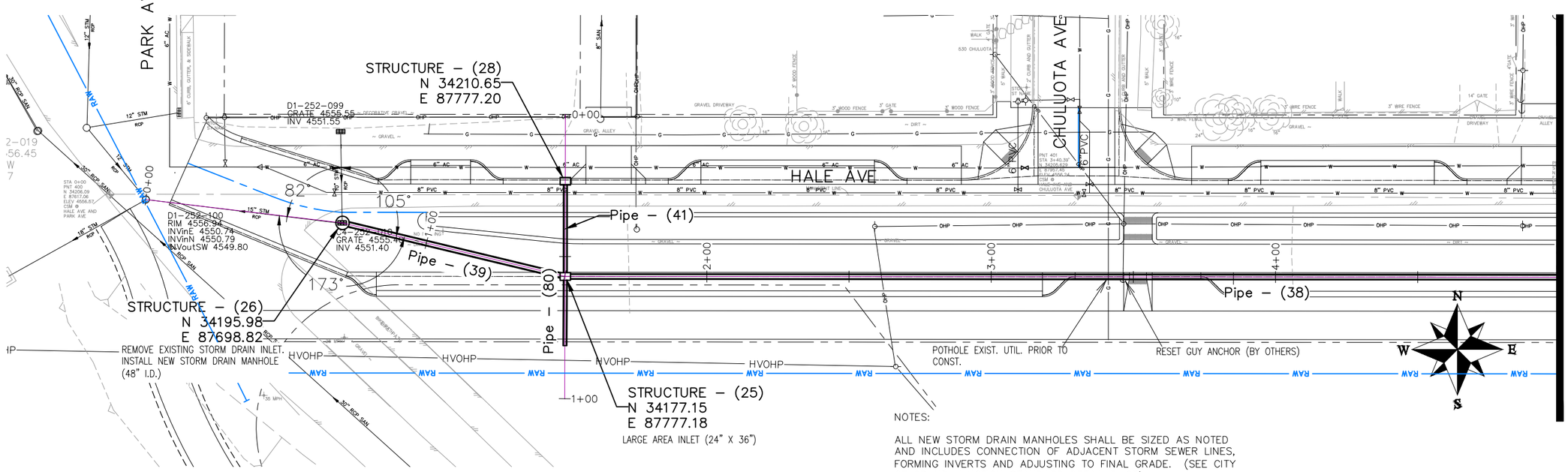
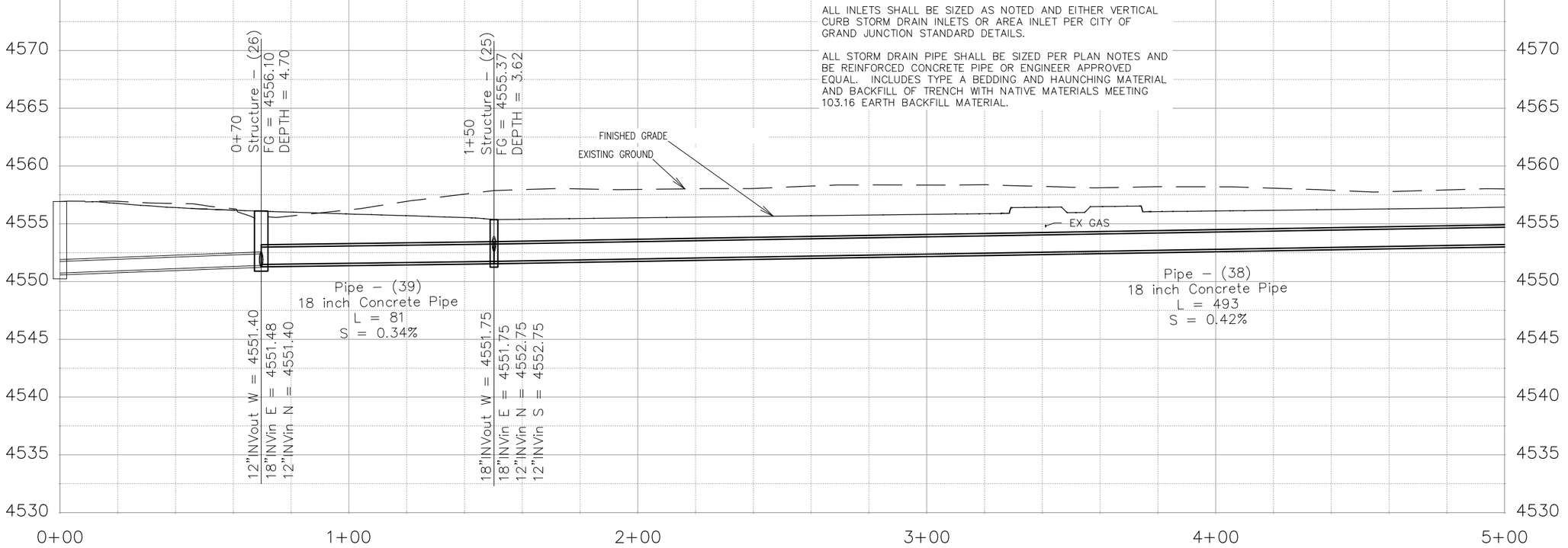


NOTES:

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D–03).

ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



DESCRIPTION	DATE
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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–1
May 20, 2020

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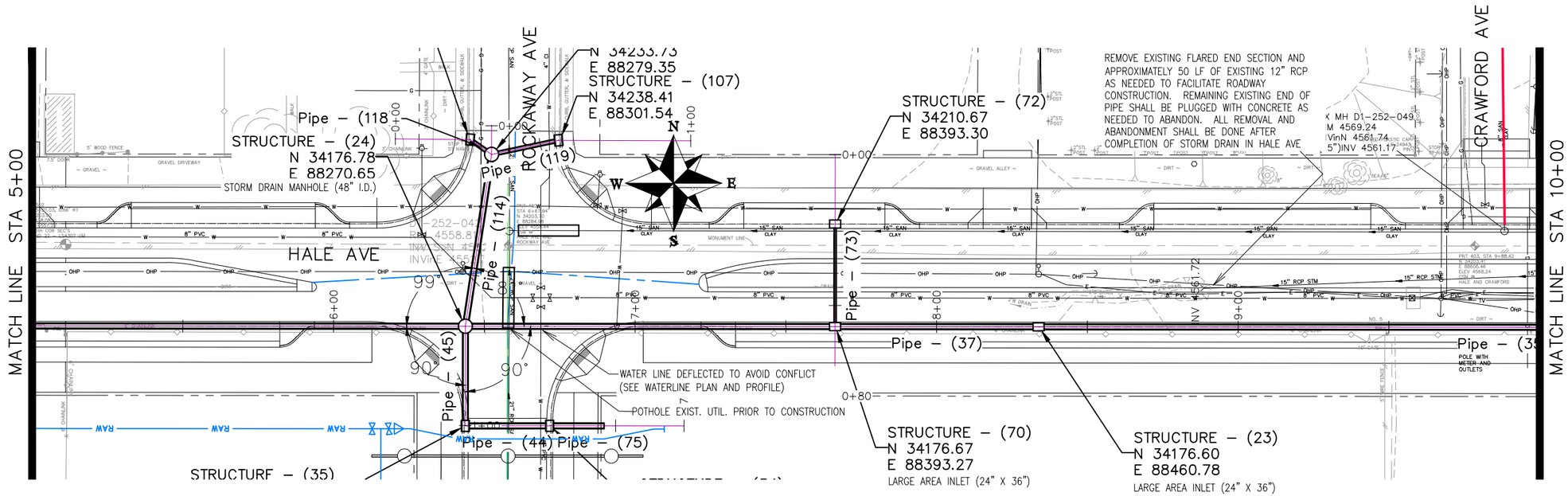

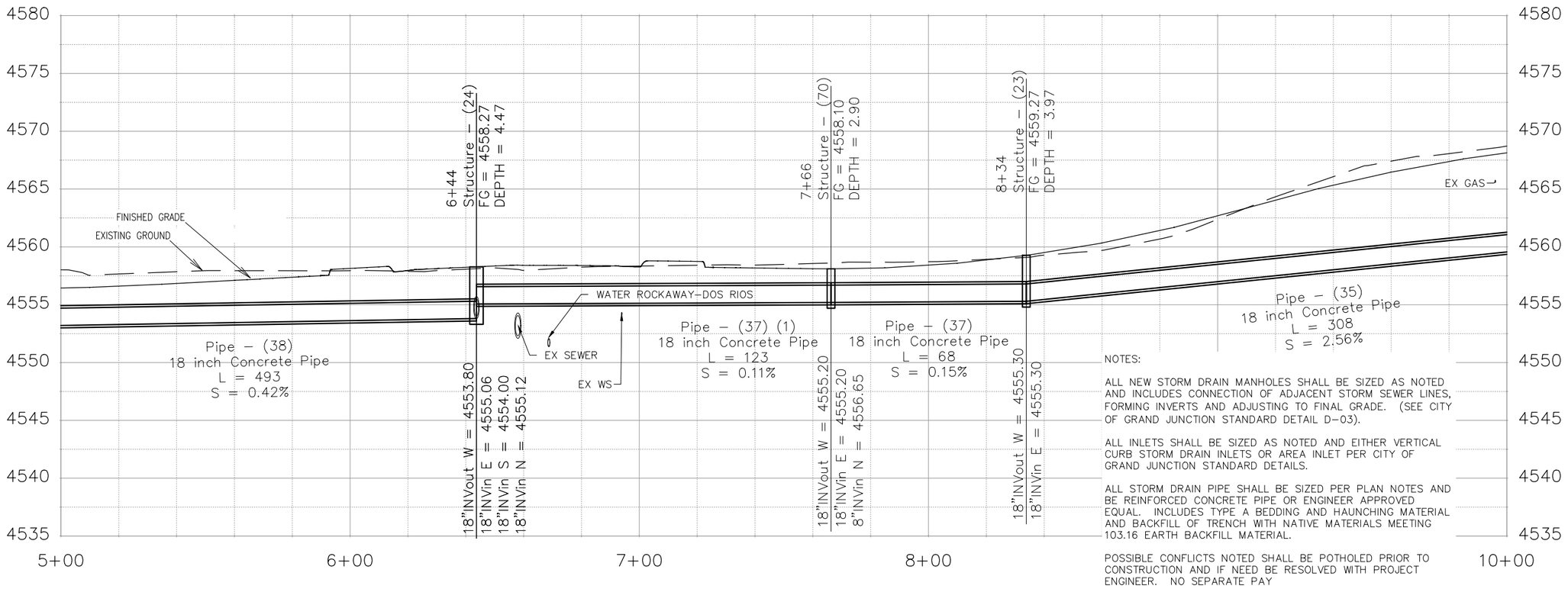

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POSSIBLE CONFLICTS NOTED SHALL BE POTHOLED PRIOR TO CONSTRUCTION AND IF NEED BE RESOLVED WITH PROJECT ENGINEER. NO SEPARATE PAY

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
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APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–2
May 20, 2020

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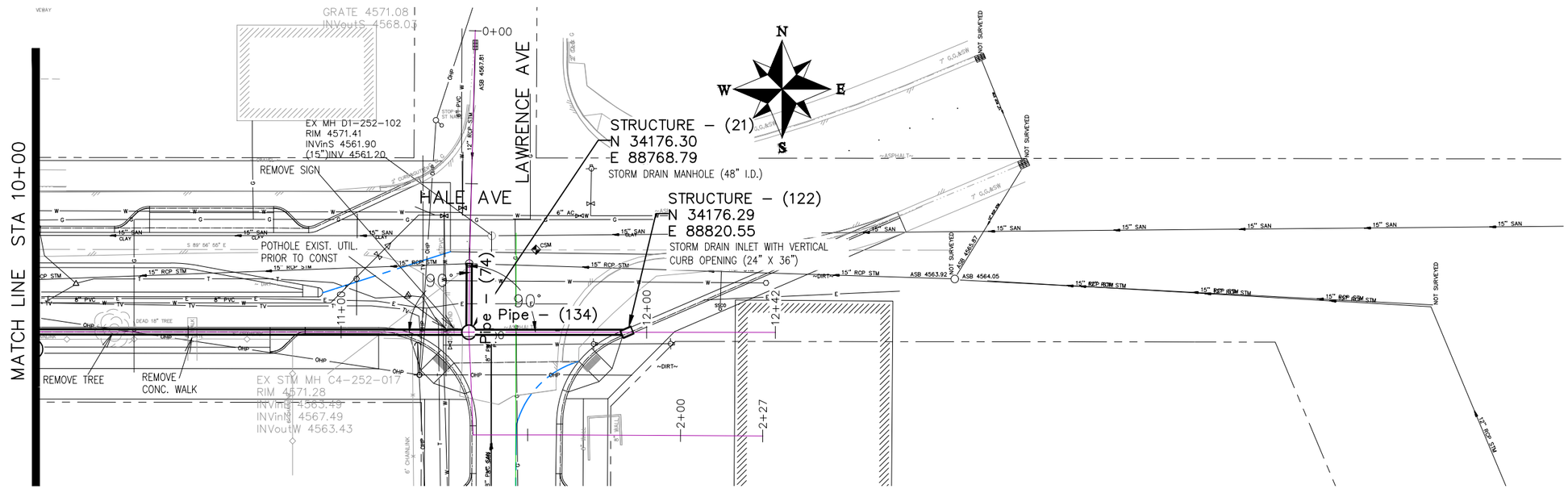

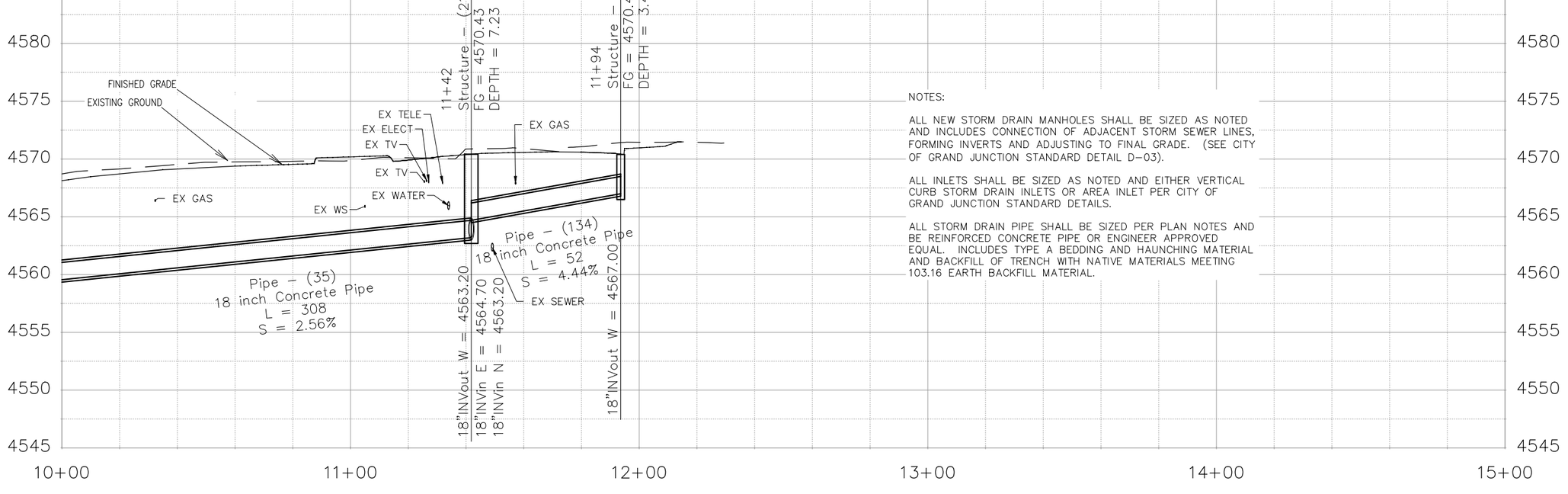

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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 - SD-3
May 20, 2020

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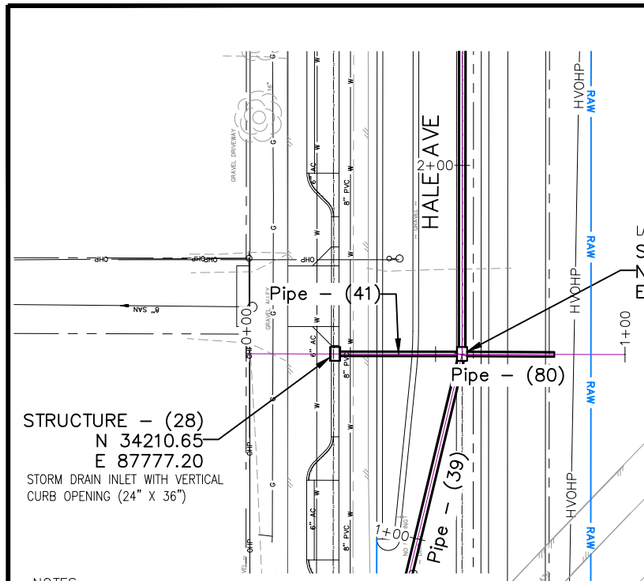
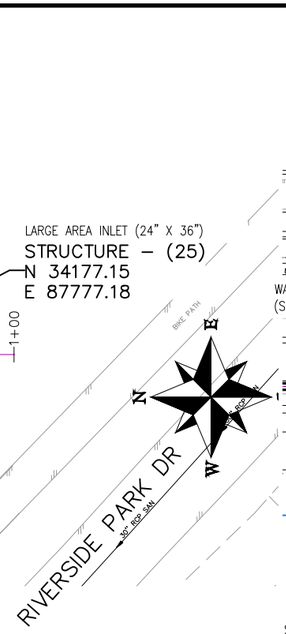
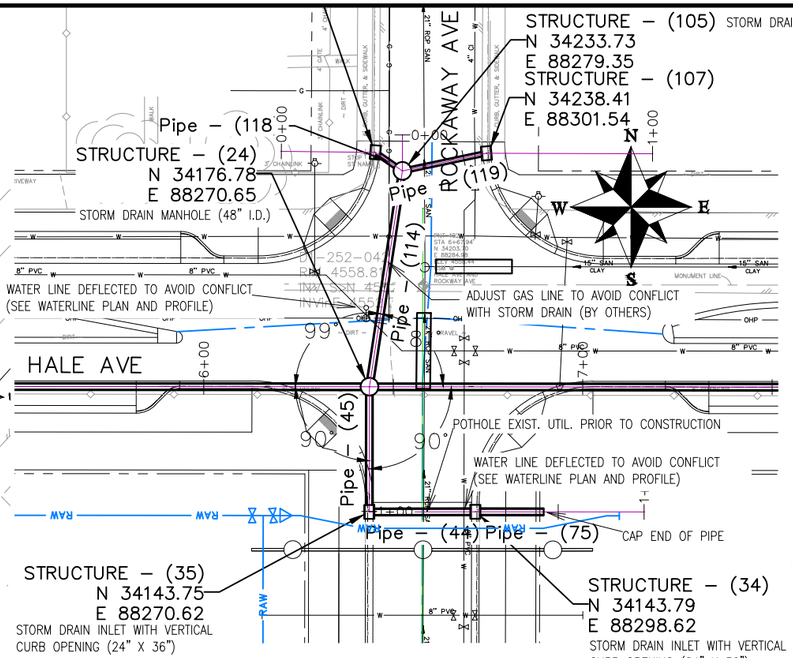
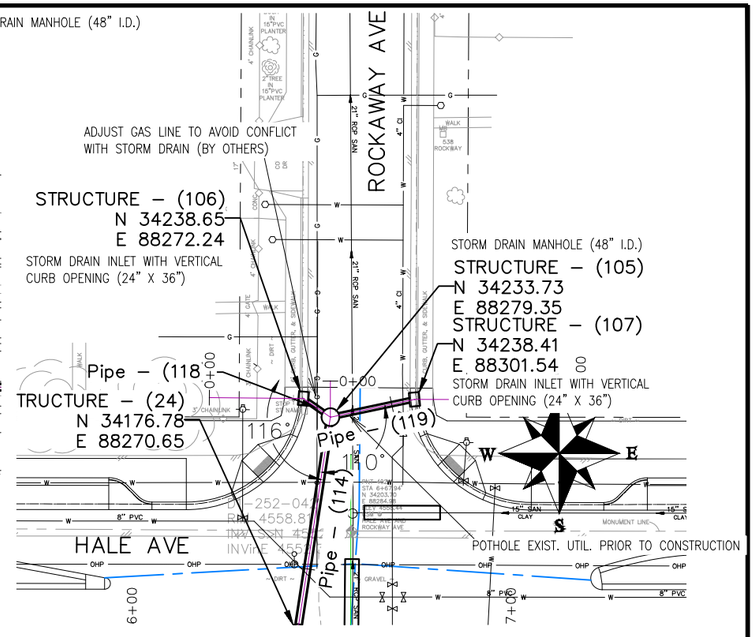






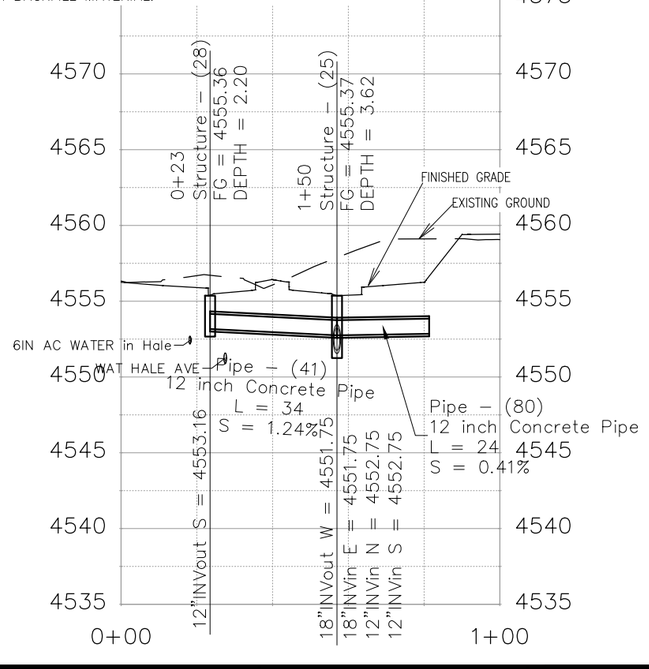


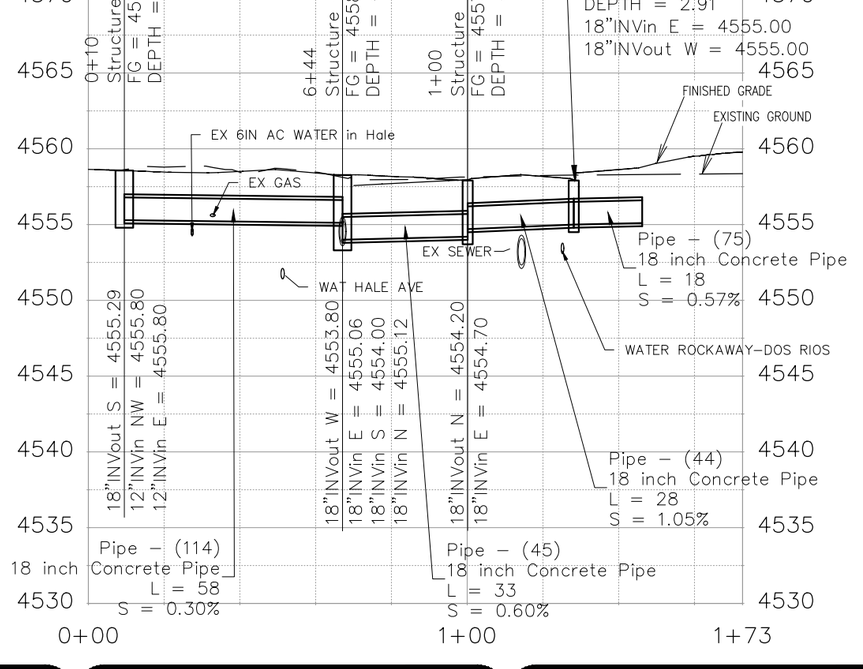
NOTES:

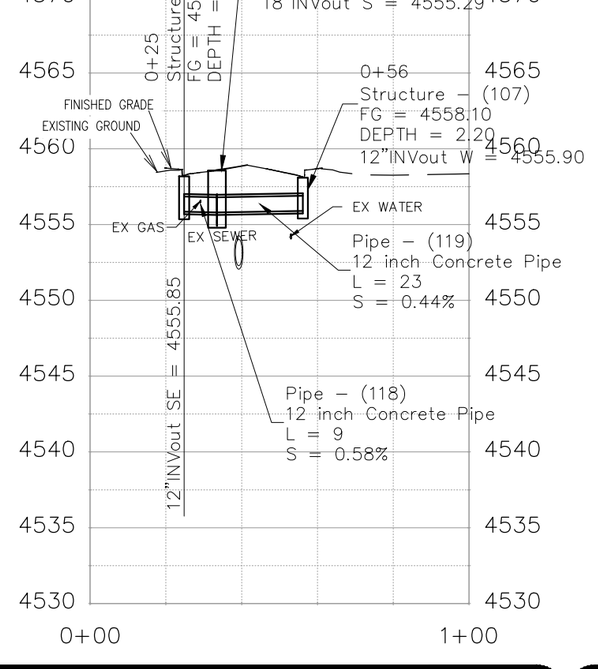
ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).

ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.







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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-4
May 20, 2020

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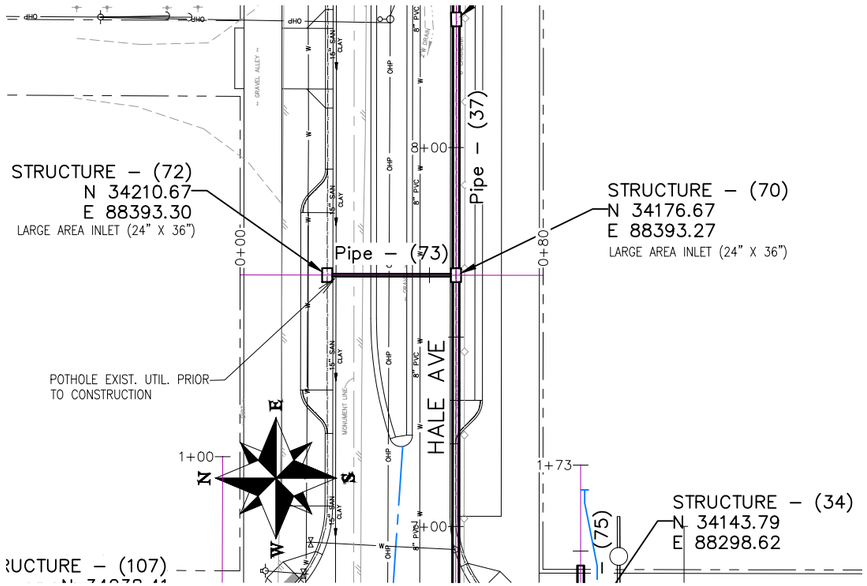
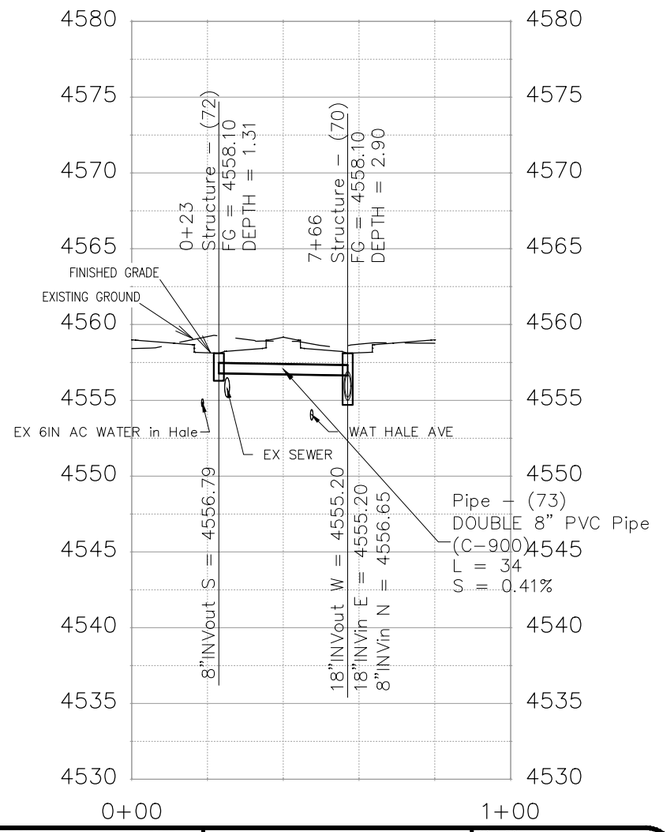
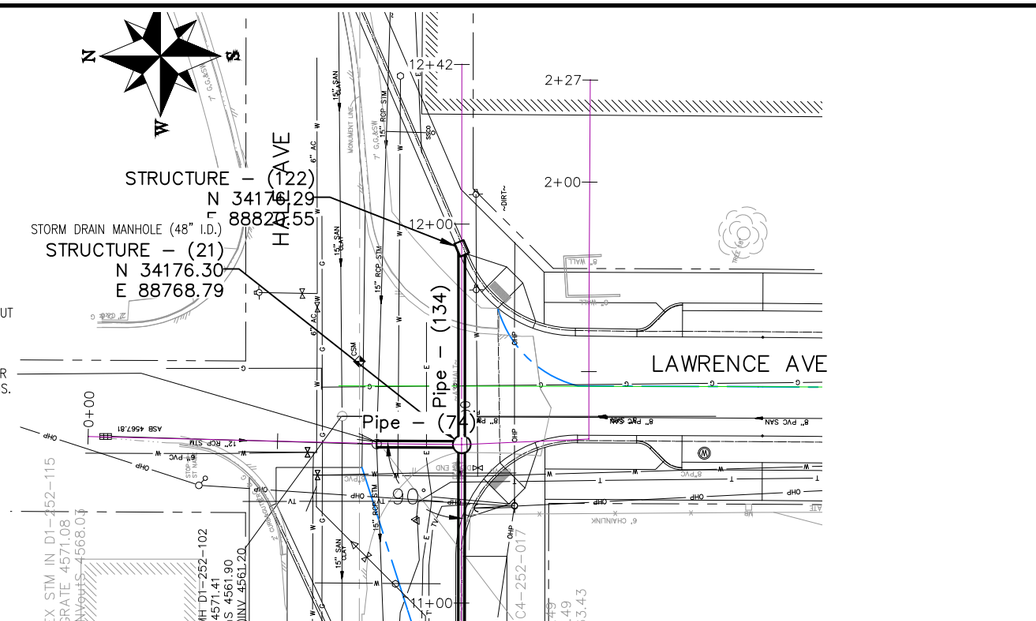
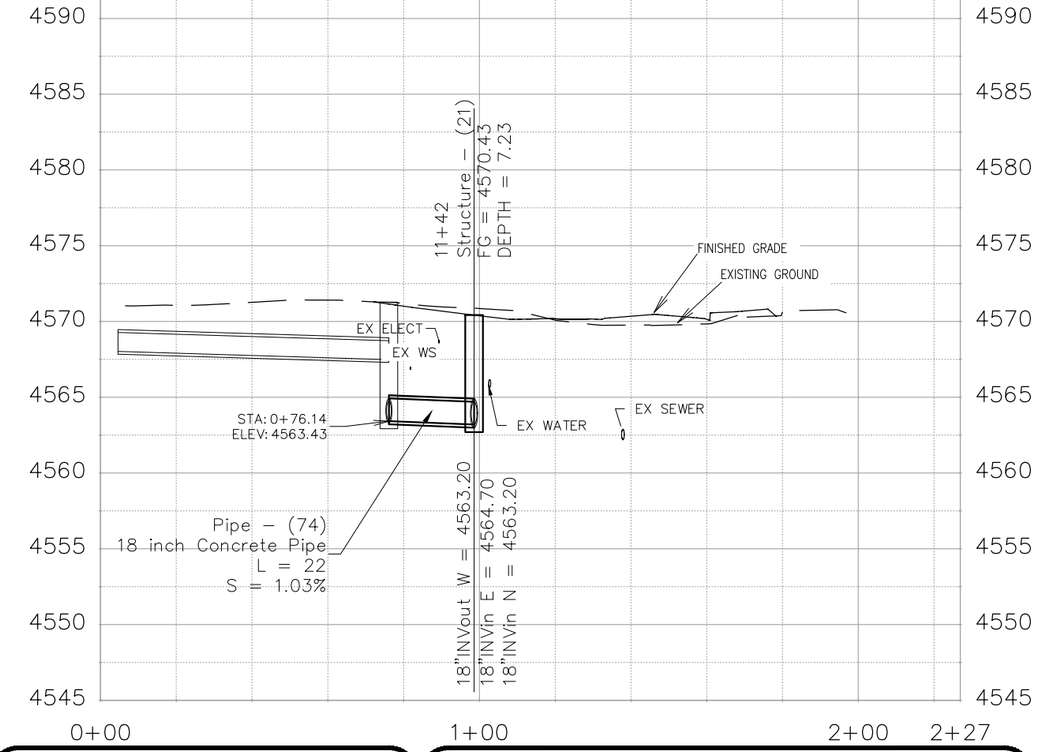




CORE AND CONNECT NEW INVERT OUT TO EXISTING MH, PLUG EXISTING INVERT OUT AFTER COMPLETION OF NEW STORM LINE IN HALE, AND ADJUST MH TO FINISHED GRADE PER CITY STANDARDS AND SPECIFICATIONS. ALL WORK SHALL BE PAID FOR UNDER PAY ITEM CONNECT TO AND ADJUST STORM MH C4–252–017





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REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–5
May 20, 2020

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NOTES:

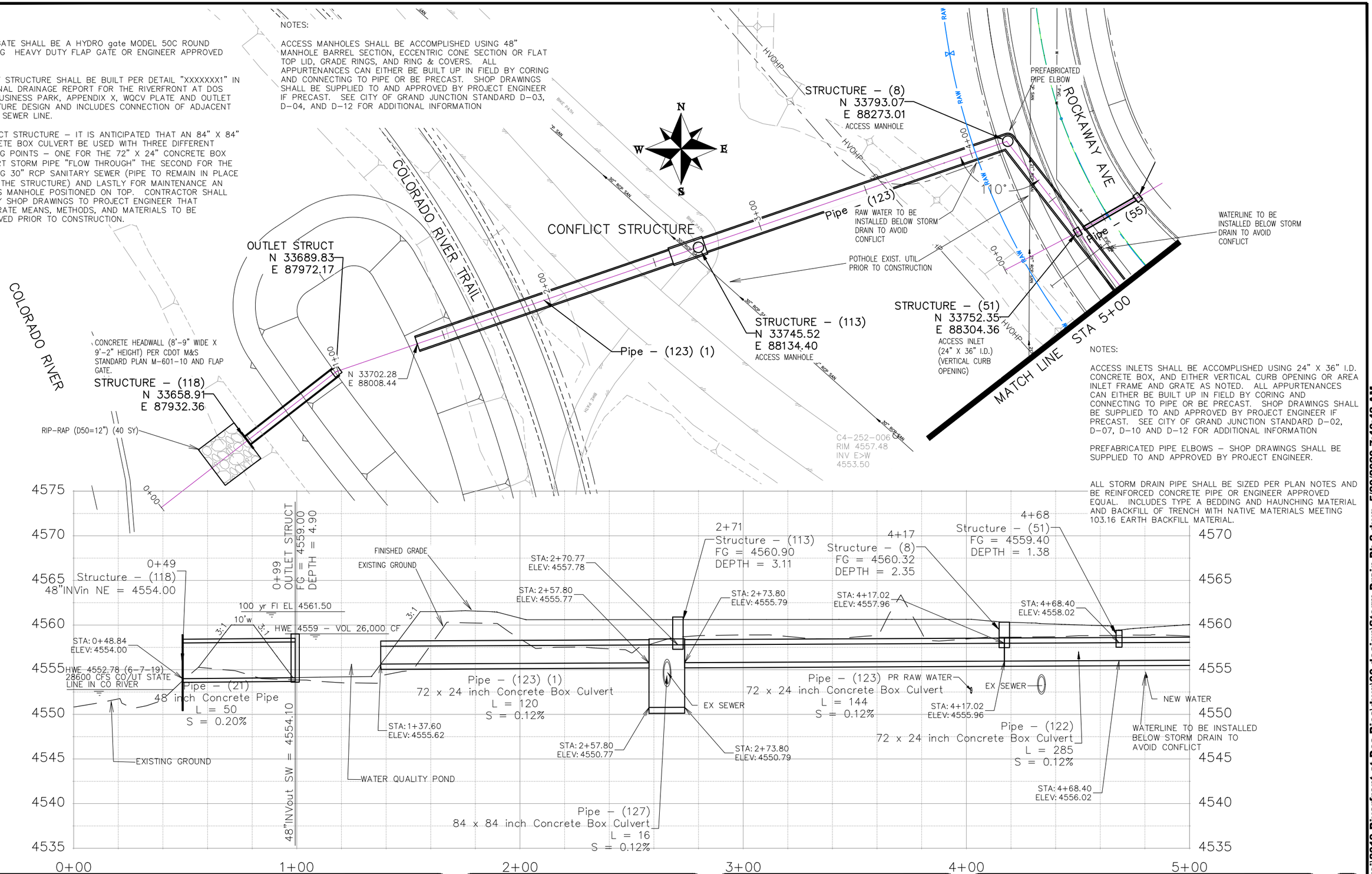
FLAP GATE SHALL BE A HYDRO gate MODEL 50C ROUND OPENING HEAVY DUTY FLAP GATE OR ENGINEER APPROVED EQUAL.

OUTLET STRUCTURE SHALL BE BUILT PER DETAIL "XXXXXXX1" IN THE FINAL DRAINAGE REPORT FOR THE RIVERFRONT AT DOS RIOS BUSINESS PARK, APPENDIX X, WQCV PLATE AND OUTLET STRUCTURE DESIGN AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINE.

CONFLICT STRUCTURE – IT IS ANTICIPATED THAT AN 84" X 84" CONCRETE BOX CULVERT BE USED WITH THREE DIFFERENT OPENING POINTS – ONE FOR THE 72" X 24" CONCRETE BOX CULVERT STORM PIPE "FLOW THROUGH" THE SECOND FOR THE EXISTING 30" RCP SANITARY SEWER (PIPE TO REMAIN IN PLACE INSIDE THE STRUCTURE) AND LASTLY FOR MAINTENANCE AN ACCESS MANHOLE POSITIONED ON TOP. CONTRACTOR SHALL SUPPLY SHOP DRAWINGS TO PROJECT ENGINEER THAT ILLUSTRATE MEANS, METHODS, AND MATERIALS TO BE APPROVED PRIOR TO CONSTRUCTION.

NOTES:

ACCESS MANHOLES SHALL BE ACCOMPLISHED USING 48" MANHOLE BARREL SECTION, ECCENTRIC CONE SECTION OR FLAT TOP LID, GRADE RINGS, AND RING & COVERS. ALL APPURTENANCES CAN EITHER BE BUILT UP IN FIELD BY CORING AND CONNECTING TO PIPE OR BE PRECAST. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER IF PRECAST. SEE CITY OF GRAND JUNCTION STANDARD D–03, D–04, AND D–12 FOR ADDITIONAL INFORMATION



NOTES:

ACCESS INLETS SHALL BE ACCOMPLISHED USING 24" X 36" I.D. CONCRETE BOX, AND EITHER VERTICAL CURB OPENING OR AREA INLET FRAME AND GRATE AS NOTED. ALL APPURTENANCES CAN EITHER BE BUILT UP IN FIELD BY CORING AND CONNECTING TO PIPE OR BE PRECAST. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER IF PRECAST. SEE CITY OF GRAND JUNCTION STANDARD D–02, D–07, D–10 AND D–12 FOR ADDITIONAL INFORMATION

PREFABRICATED PIPE ELBOWS – SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

DESCRIPTION	DATE
REVISION △	–
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REVISION △	–
REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–6
May 20, 2020

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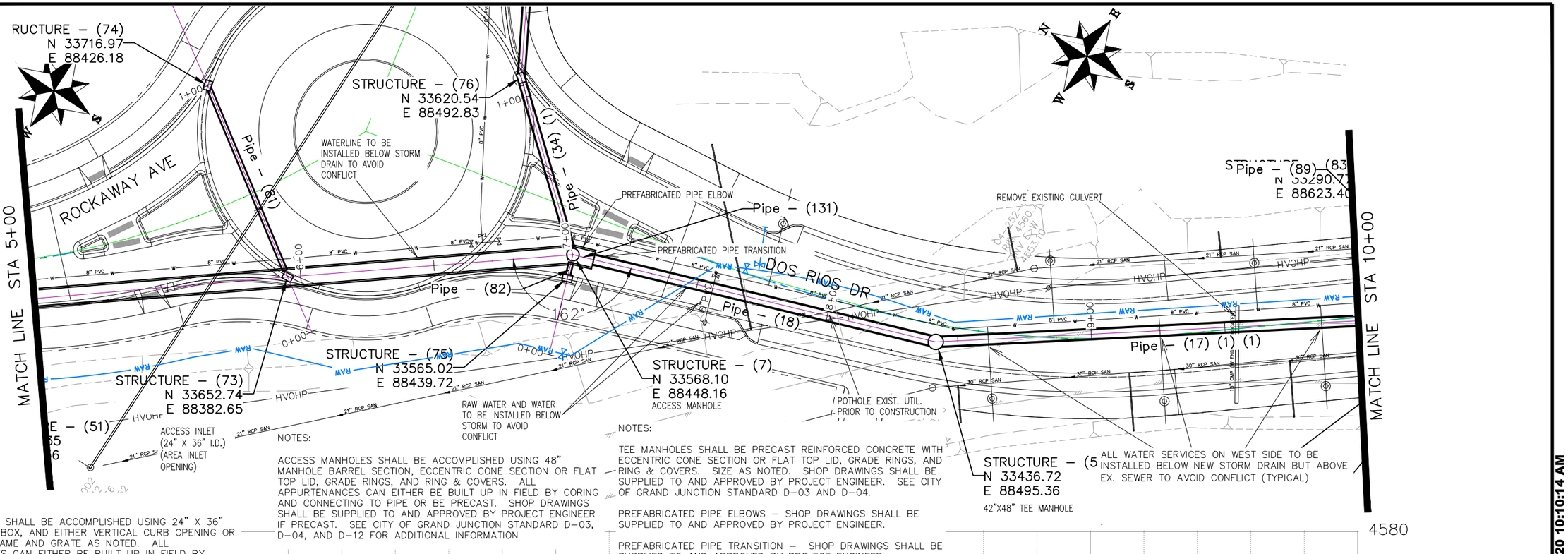


NOTES:

ACCESS INLETS SHALL BE ACCOMPLISHED USING 24" X 36" I.D. CONCRETE BOX, AND EITHER VERTICAL CURB OPENING OR AREA INLET FRAME AND GRATE AS NOTED. ALL APPURTENANCES CAN EITHER BE BUILT UP IN FIELD BY CORING AND CONNECTING TO PIPE OR BE PRECAST. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER IF PRECAST. SEE CITY OF GRAND JUNCTION STANDARD D–02, D–07, D–10 AND D–12 FOR ADDITIONAL INFORMATION

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

NOTES:

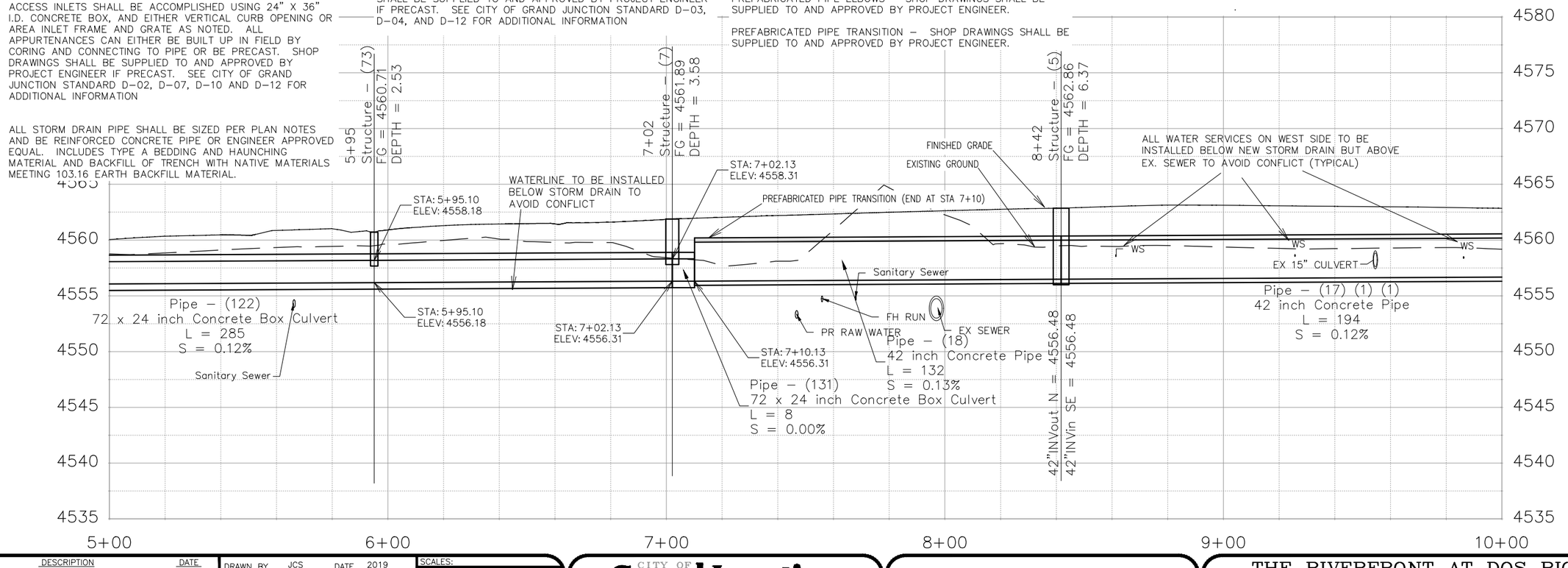
ACCESS MANHOLES SHALL BE ACCOMPLISHED USING 48" MANHOLE BARREL SECTION, ECCENTRIC CONE SECTION OR FLAT TOP LID, GRADE RINGS, AND RING & COVERS. ALL APPURTENANCES CAN EITHER BE BUILT UP IN FIELD BY CORING AND CONNECTING TO PIPE OR BE PRECAST. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER IF PRECAST. SEE CITY OF GRAND JUNCTION STANDARD D–03, D–04, AND D–12 FOR ADDITIONAL INFORMATION

NOTES:

TEE MANHOLES SHALL BE PRECAST REINFORCED CONCRETE WITH ECCENTRIC CONE SECTION OR FLAT TOP LID, GRADE RINGS, AND RING & COVERS. SIZE AS NOTED. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D–03 AND D–04.

PREFABRICATED PIPE ELBOWS – SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER.

PREFABRICATED PIPE TRANSITION – SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER.



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DRAWN BY JCS DATE 2019
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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–7
May 20, 2020

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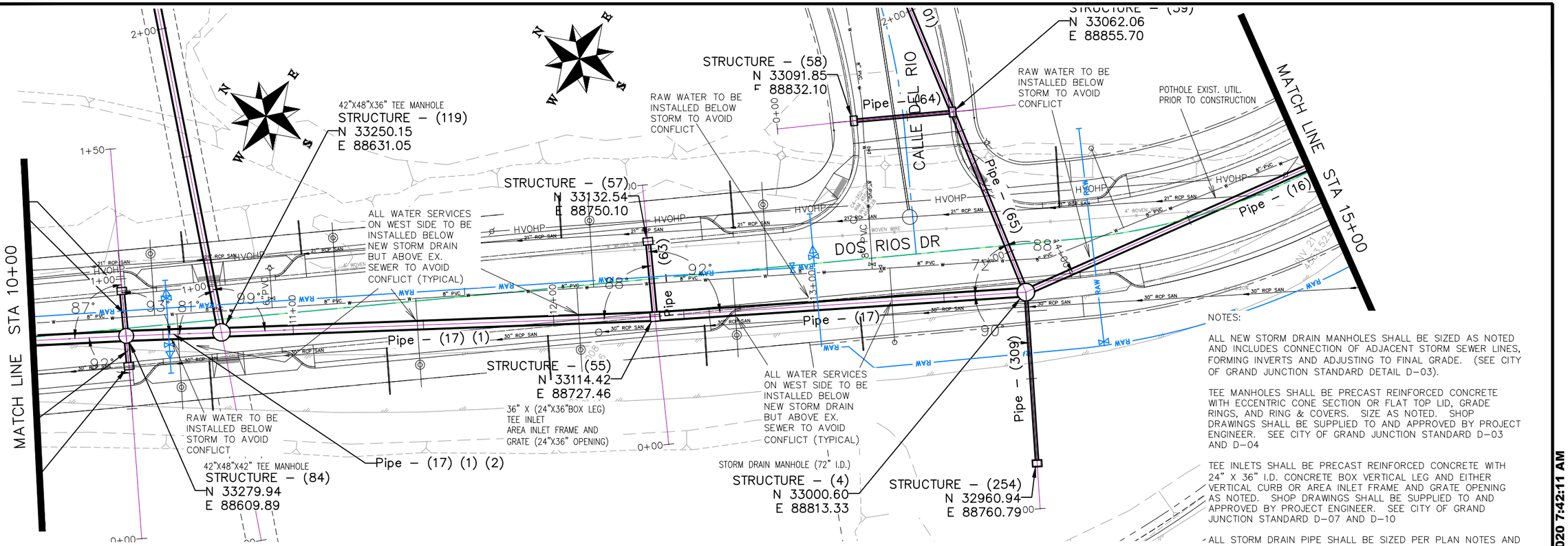


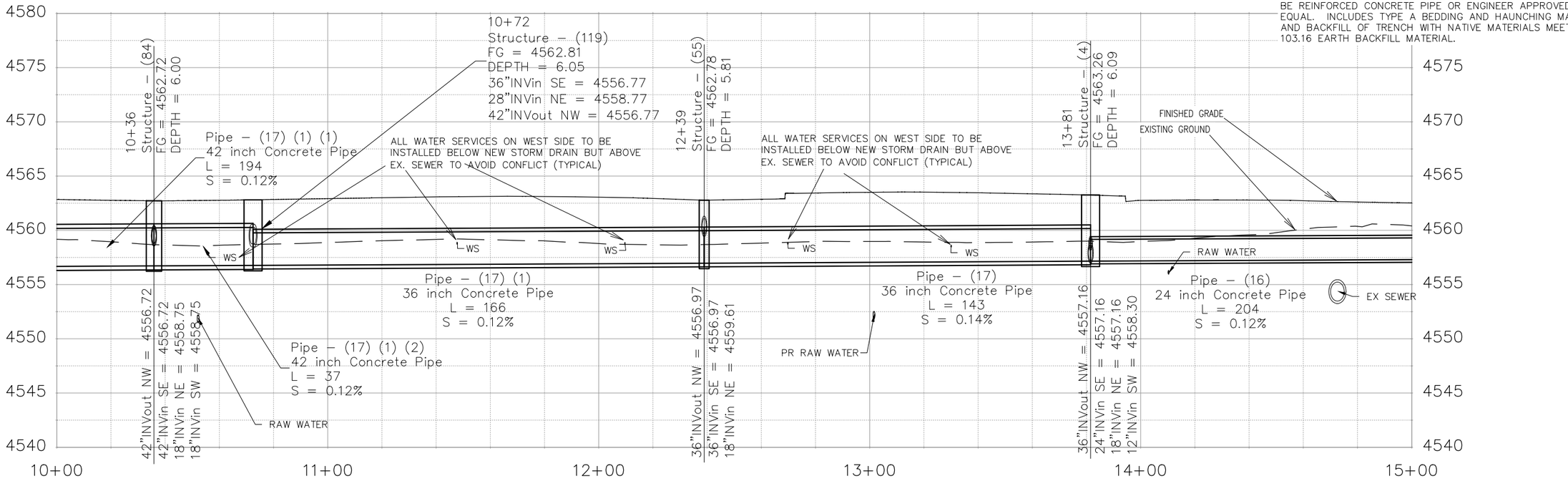
NOTES:

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D–03).

TEE MANHOLES SHALL BE PRECAST REINFORCED CONCRETE WITH ECCENTRIC CONE SECTION OR FLAT TOP LID, GRADE RINGS, AND RING & COVERS. SIZE AS NOTED. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D–03 AND D–04

TEE INLETS SHALL BE PRECAST REINFORCED CONCRETE WITH 24" X 36" I.D. CONCRETE BOX VERTICAL LEG AND EITHER VERTICAL CURB OR AREA INLET FRAME AND GRATE OPENING AS NOTED. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D–07 AND D–10

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–8
May 20, 2020

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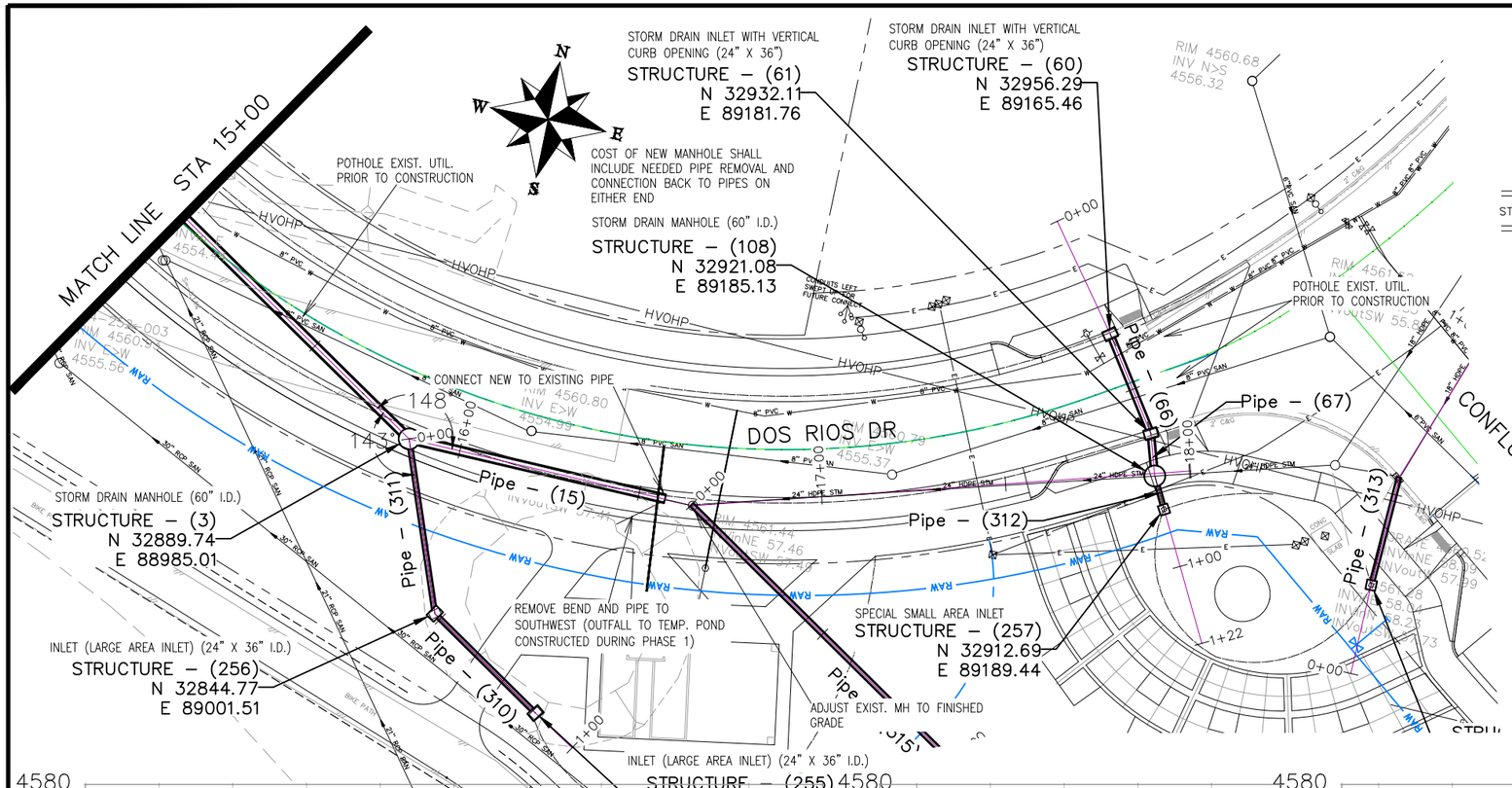
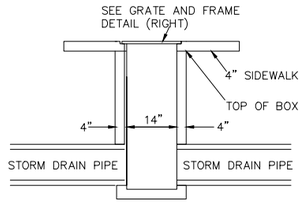
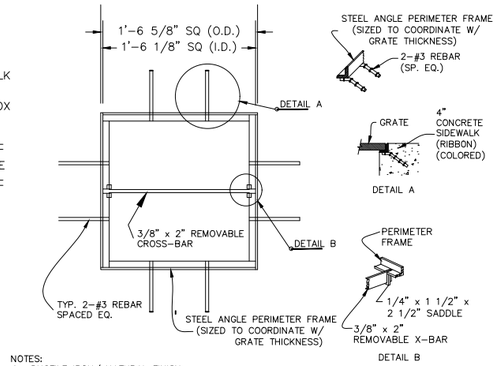
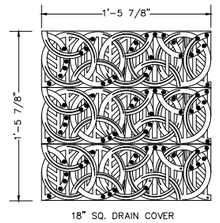




SPECIAL SMALL AREA INLET
N.T.S.

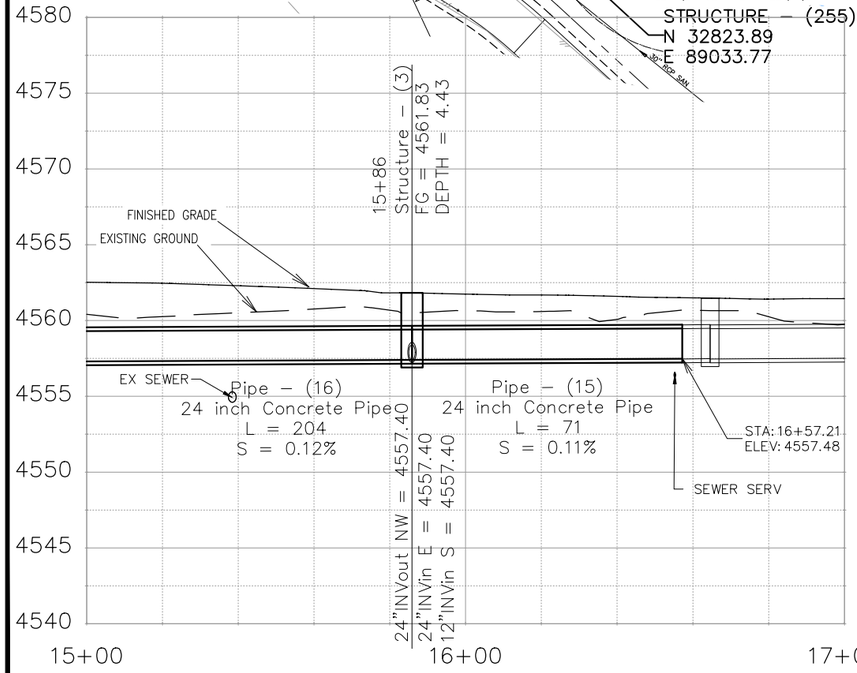


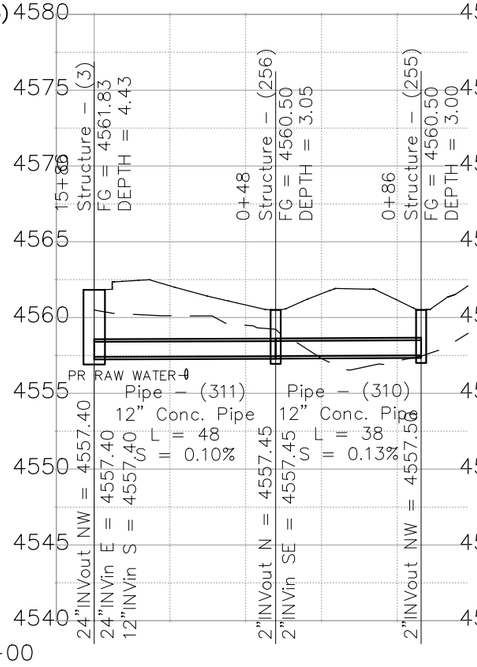
NOTES:
1. DUCTILE IRON/ NATURAL FINISH
2. CAST IN ONE PIECE, 3/4" THICK
3. NO OPENINGS GREATER THAN 3/8"



NOTE
1. URBAN ACCESSORIES 18 INCH SQ. MEDIUM DUTY "S" FRAME OR APPROVED EQUAL.
2. URBAN ACCESSORIES OT TITLE-24, 18 INCH SQ. DRAIN COVER OR APPROVED EQUAL.

GRATE FRAME FOR SPECIAL SMALL AREA INLET





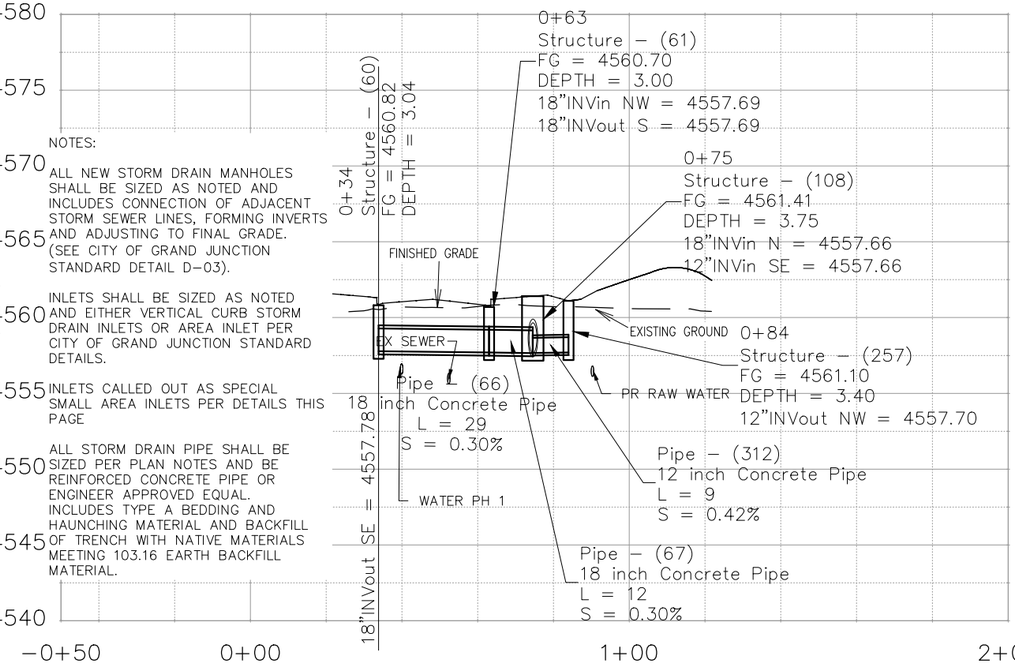
NOTES:

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).

INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

INLETS CALLED OUT AS SPECIAL SMALL AREA INLETS PER DETAILS THIS PAGE

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-9
May 20, 2020

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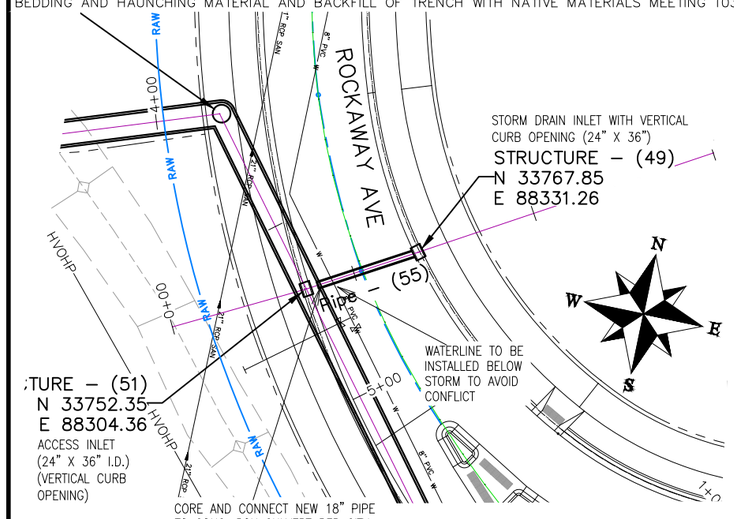
NOTES:

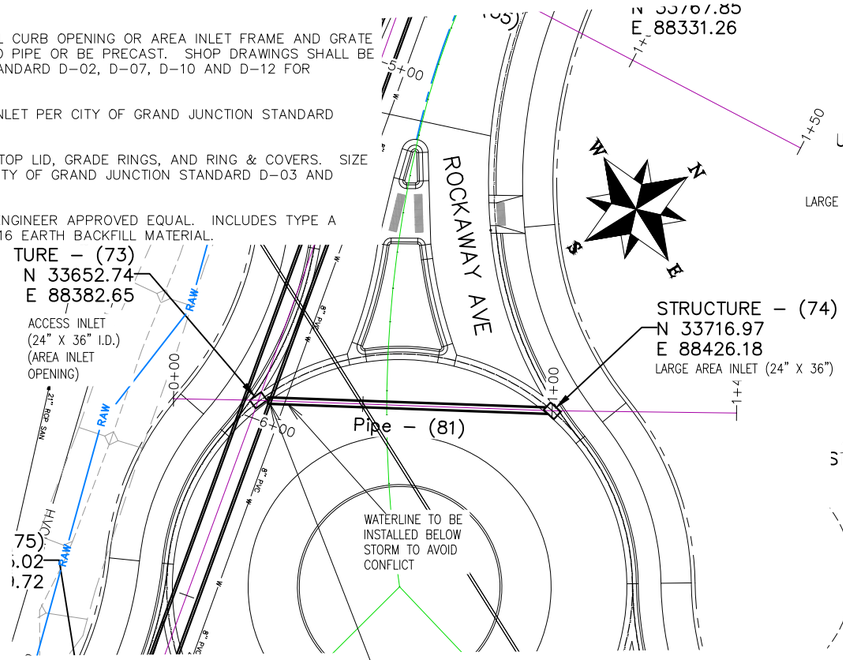
ACCESS INLETS SHALL BE ACCOMPLISHED USING 24" X 36" I.D. CONCRETE BOX, AND EITHER VERTICAL CURB OPENING OR AREA INLET FRAME AND GRATE AS NOTED. ALL APPURTENANCES CAN EITHER BE BUILT UP IN FIELD BY CORING AND CONNECTING TO PIPE OR BE PRECAST. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER IF PRECAST. SEE CITY OF GRAND JUNCTION STANDARD D–02, D–07, D–10 AND D–12 FOR ADDITIONAL INFORMATION

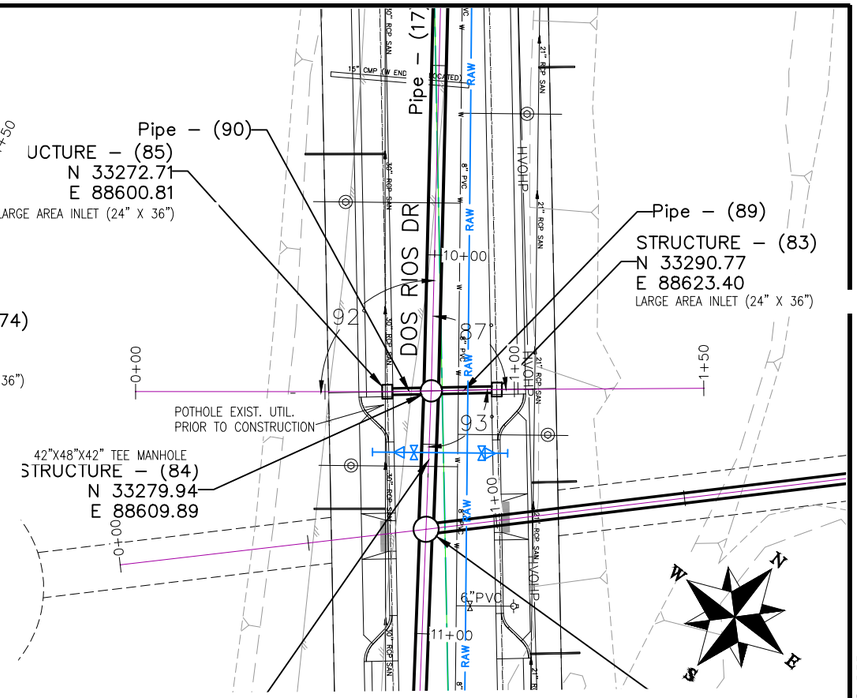
ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

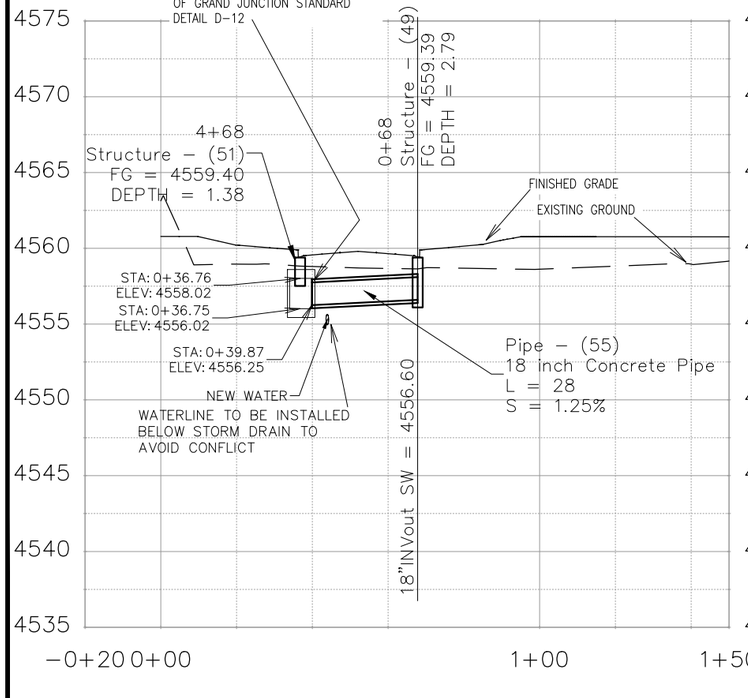
TEE MANHOLES SHALL BE PRECAST REINFORCED CONCRETE WITH ECCENTRIC CONE SECTION OR FLAT TOP LID, GRADE RINGS, AND RING & COVERS. SIZE AS NOTED. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D–03 AND D–04

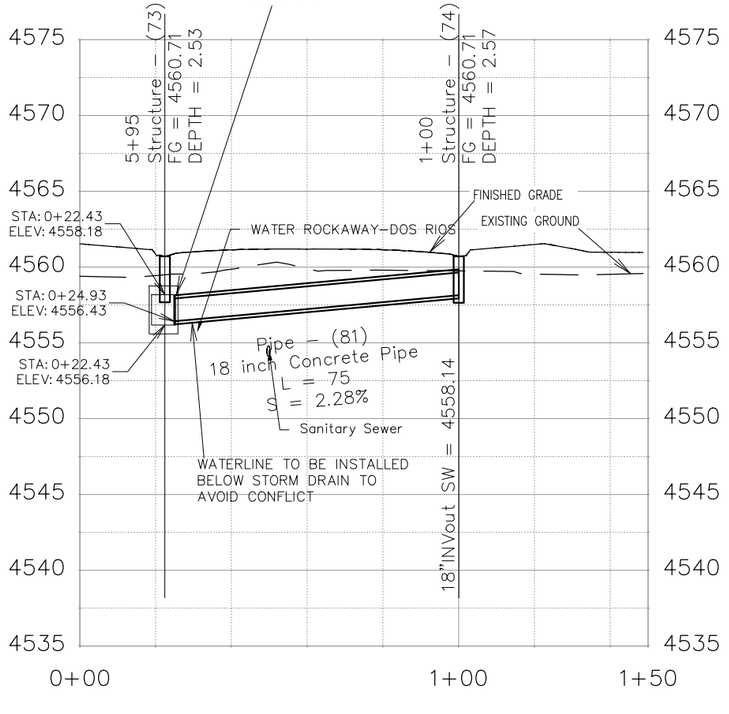
ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

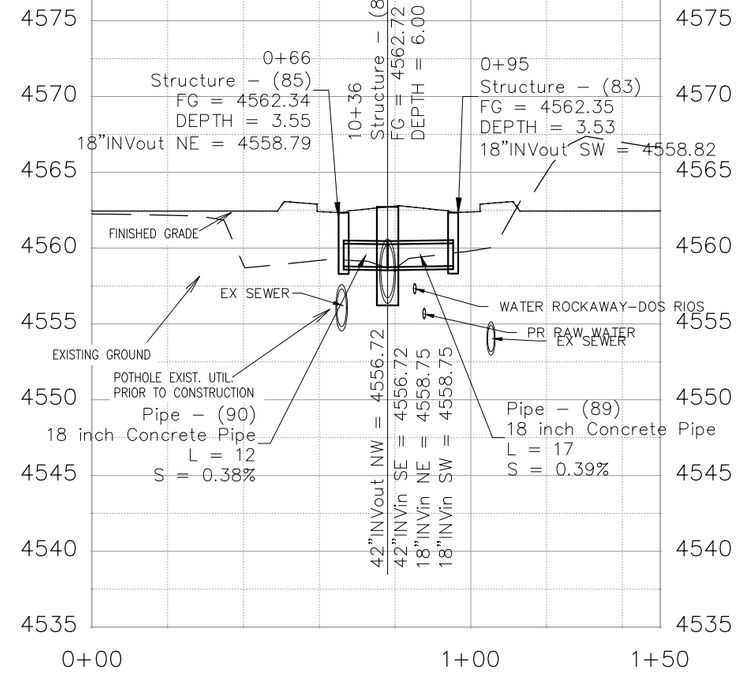












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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–10
May 20, 2020

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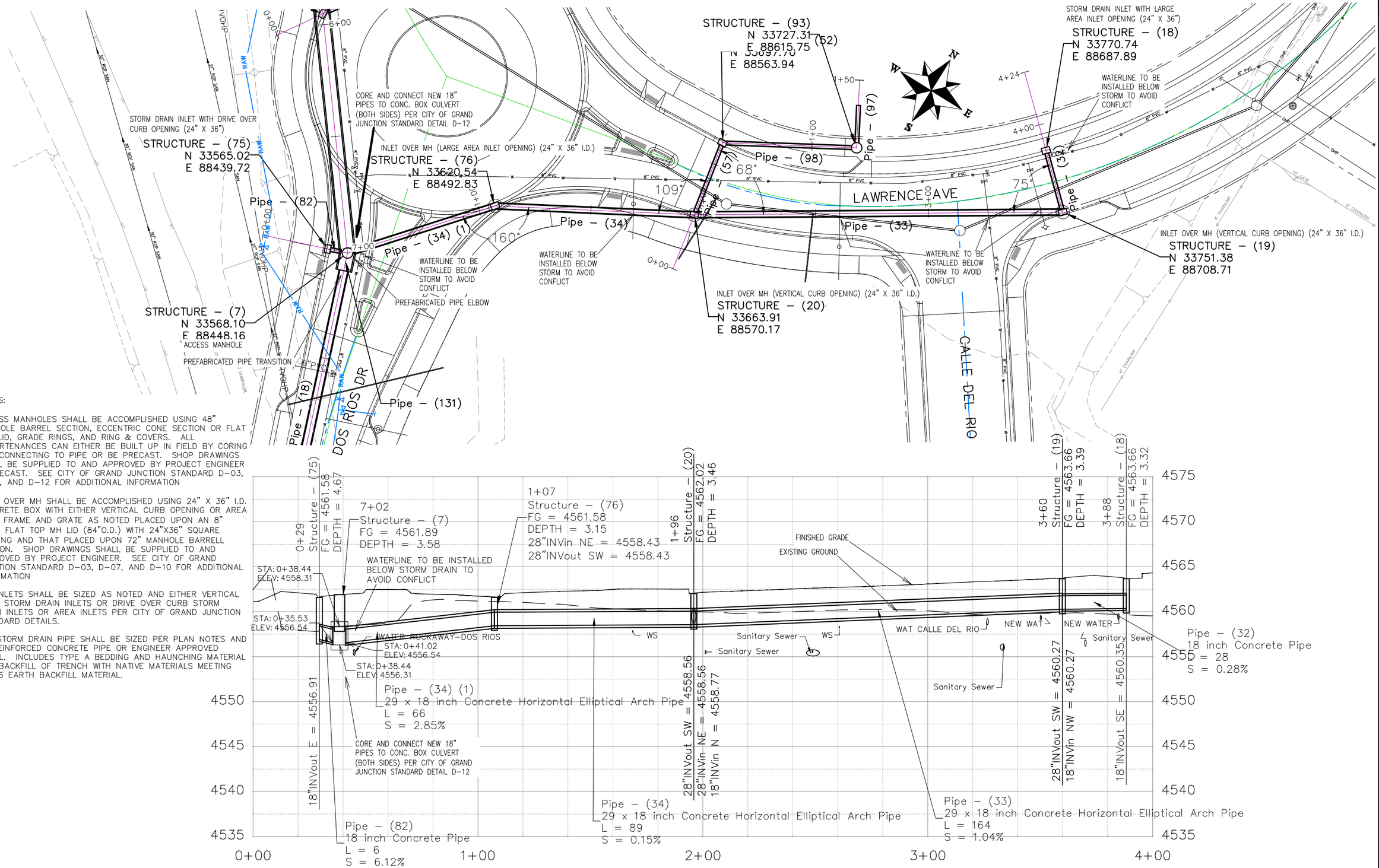

NOTES:

ACCESS MANHOLES SHALL BE ACCOMPLISHED USING 48" MANHOLE BARREL SECTION, ECCENTRIC CONE SECTION OR FLAT TOP LID, GRADE RINGS, AND RING & COVERS. ALL APPURTENANCES CAN EITHER BE BUILT UP IN FIELD BY CORING AND CONNECTING TO PIPE OR BE PRECAST. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER IF PRECAST. SEE CITY OF GRAND JUNCTION STANDARD D-03, D-04, AND D-12 FOR ADDITIONAL INFORMATION

INLET OVER MH SHALL BE ACCOMPLISHED USING 24" X 36" I.D. CONCRETE BOX WITH EITHER VERTICAL CURB OPENING OR AREA INLET FRAME AND GRATE AS NOTED PLACED UPON AN 8" THICK FLAT TOP MH LID (84"O.D.) WITH 24"X36" SQUARE OPENING AND THAT PLACED UPON 72" MANHOLE BARRELL SECTION. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D-03, D-07, AND D-10 FOR ADDITIONAL INFORMATION

ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR DRIVE OVER CURB STORM DRAIN INLETS OR AREA INLETS PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-11
May 20, 2020

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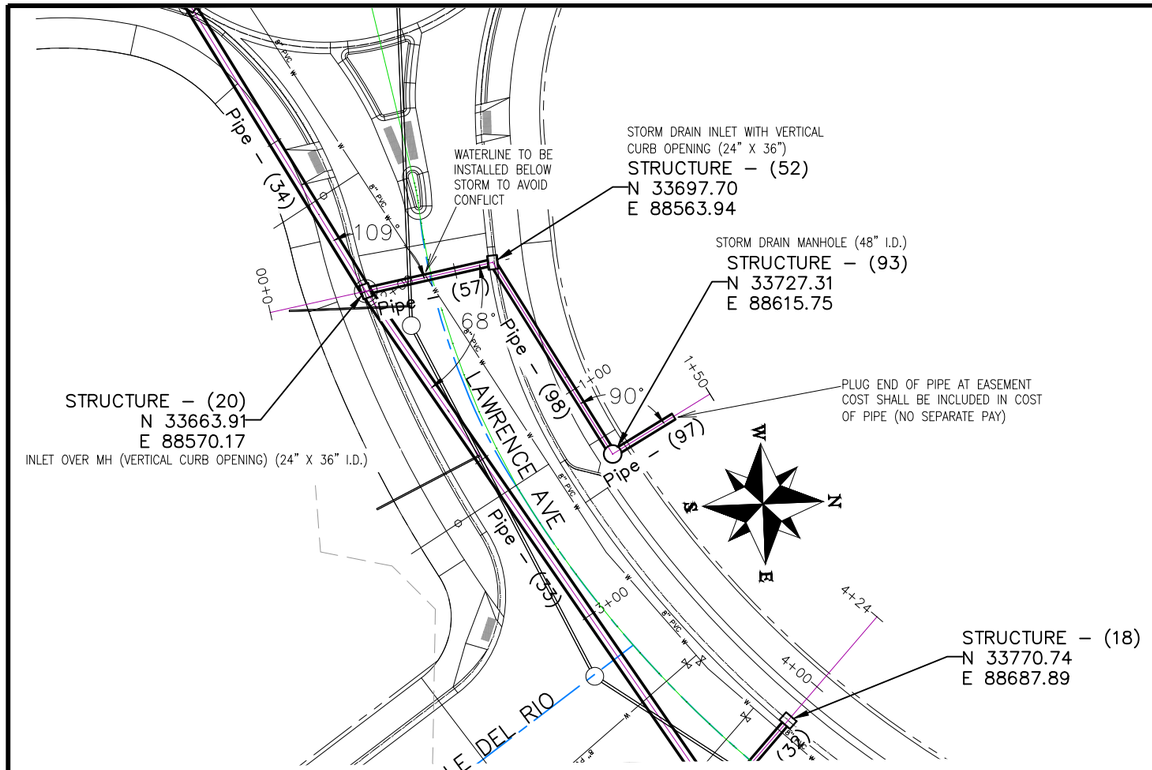
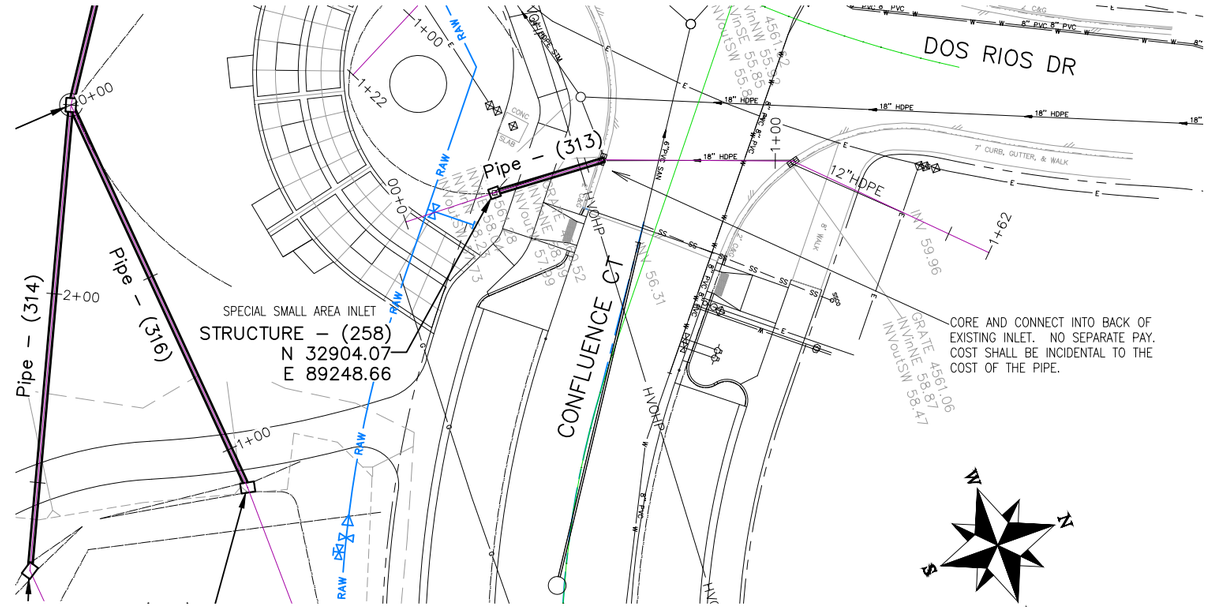
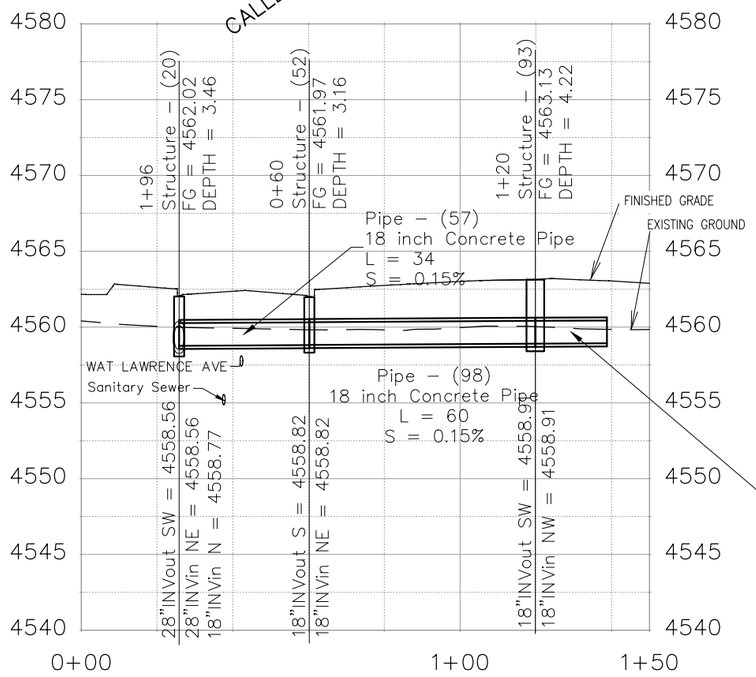






NOTES:

INLET OVER MH SHALL BE ACCOMPLISHED USING 24" X 36" I.D. CONCRETE BOX WITH EITHER VERTICAL CURB OPENING OR AREA INLET FRAME AND GRATE AS NOTED PLACED UPON AN 8" THICK FLAT TOP MH LID (84"O.D.) WITH 24"X36" SQUARE OPENING AND THAT PLACED UPON 72" MANHOLE BARRELL SECTION. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D–03, D–07, AND D–10 FOR ADDITIONAL INFORMATION

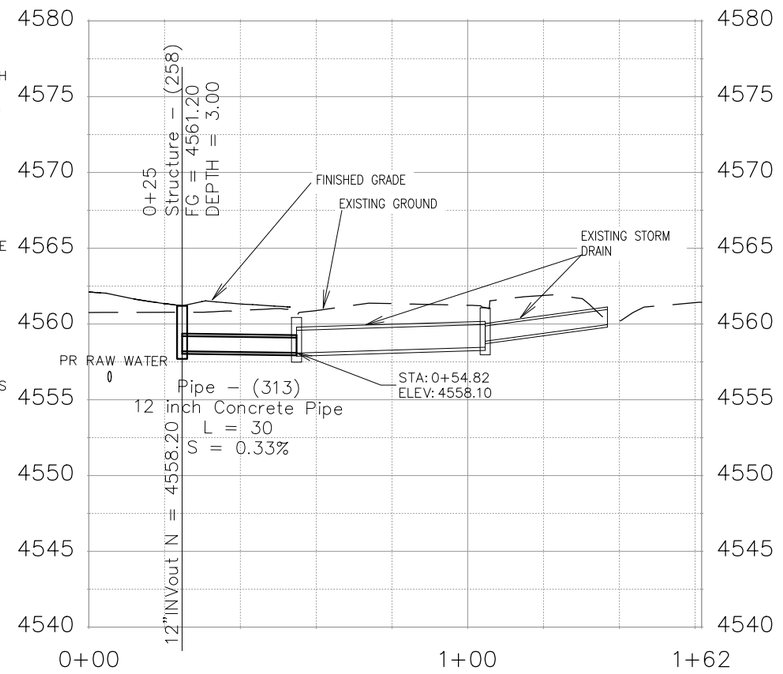
INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR DRIVE OVER CURB STORM DRAIN INLETS OR AREA INLETS PER CITY OF GRAND JUNCTION STANDARD DETAILS.

INLETS CALLED OUT AS SPECIAL SMALL AREA INLETS PER DETAILS PAGE SD–9

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D–03).

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

Pipe – (97)
18 inch Concrete Pipe
L = 19
S = 0.10%



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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–12
May 20, 2020

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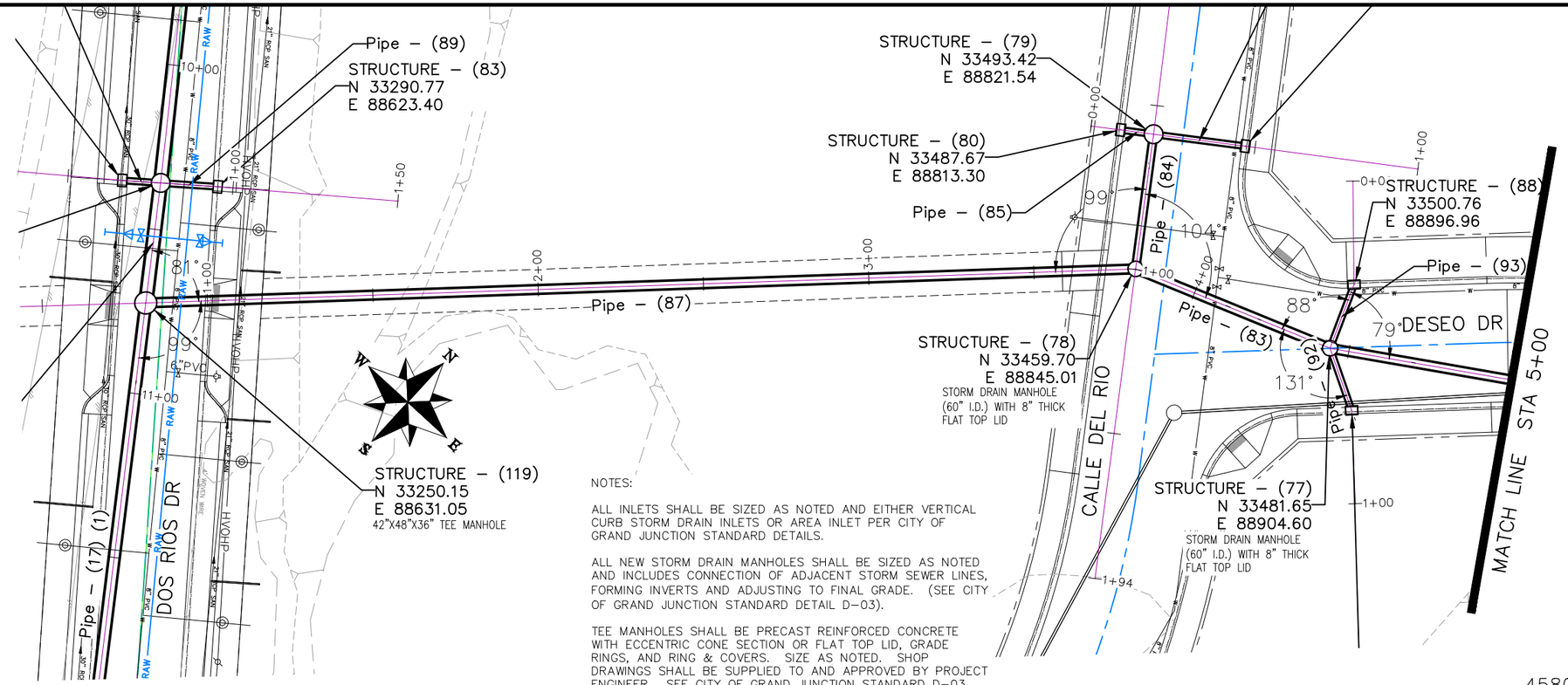

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–13
May 20, 2020

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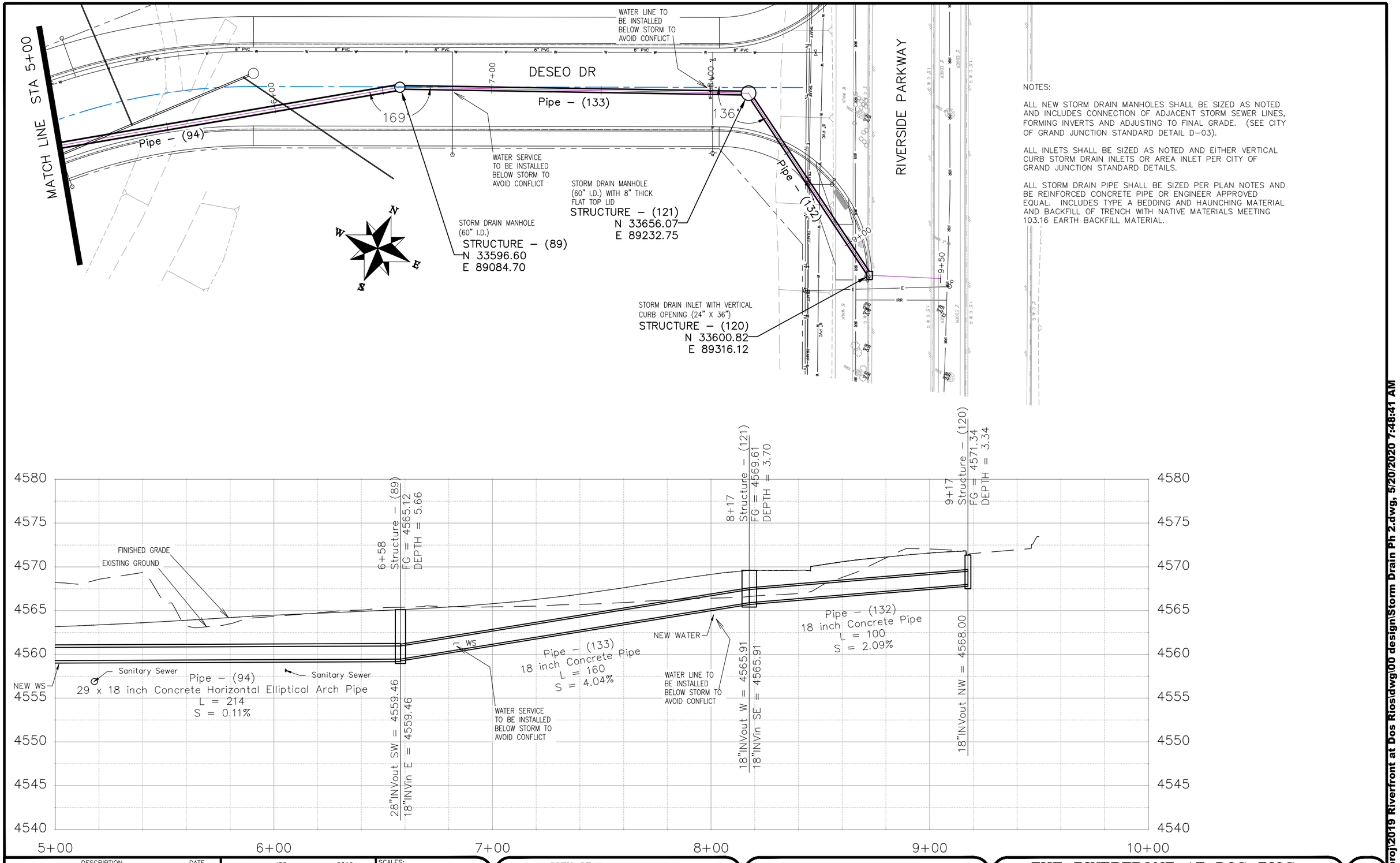

NOTES:

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D–03).

ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–14
May 20, 2020

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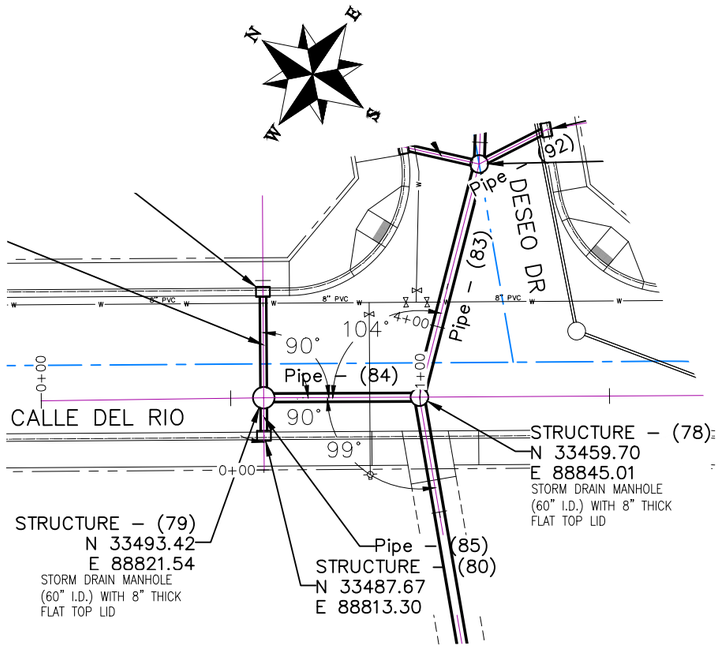

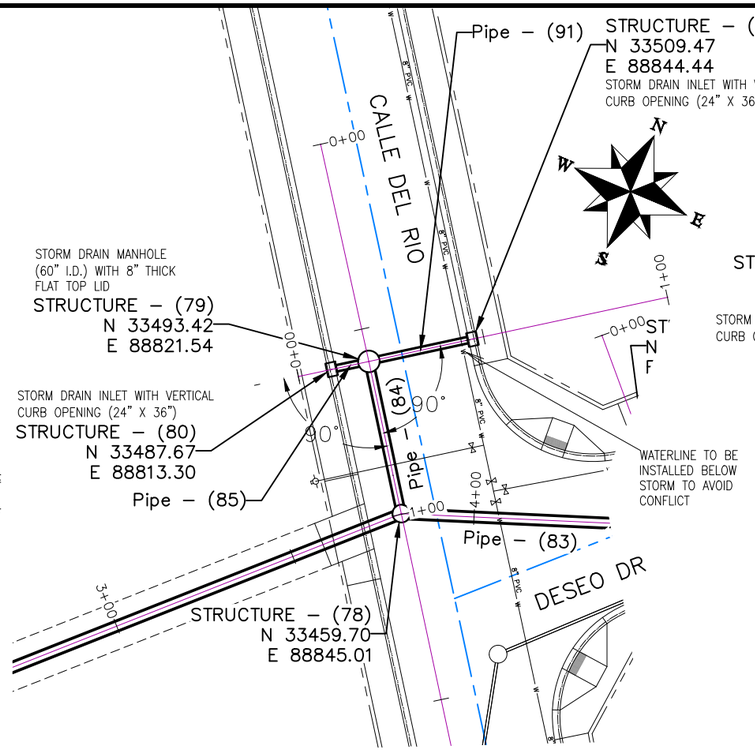

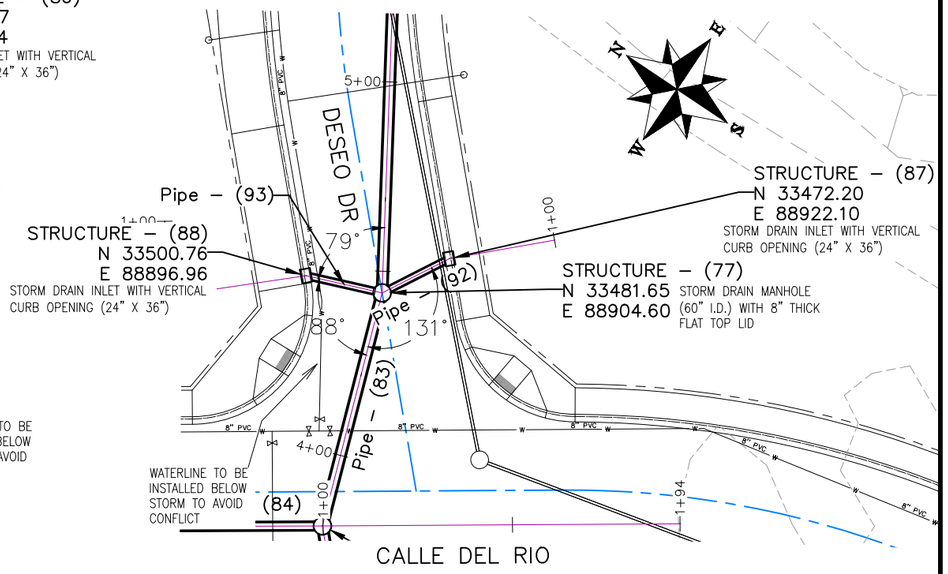

NOTES:

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).

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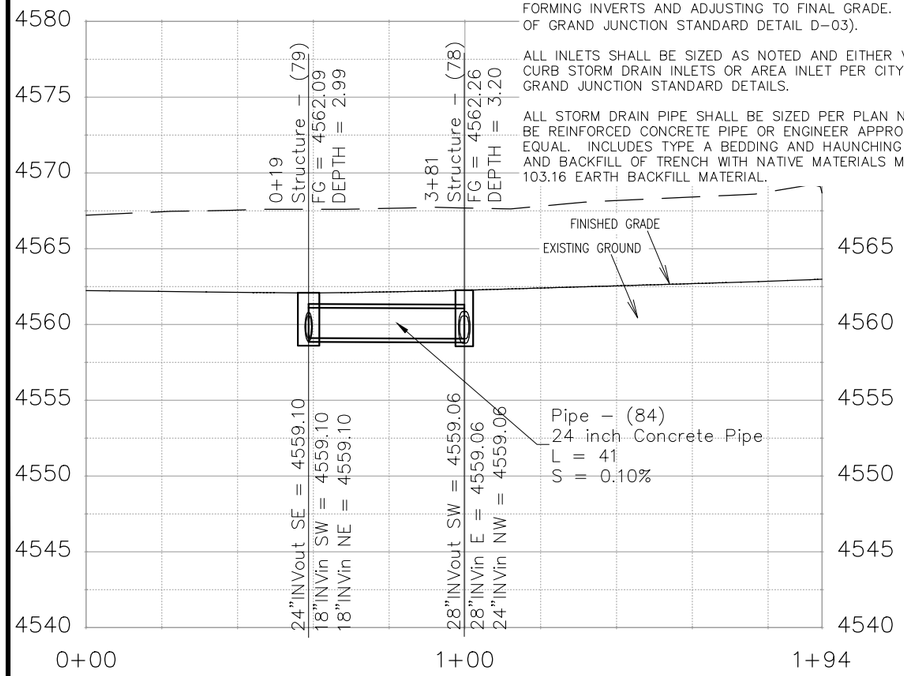

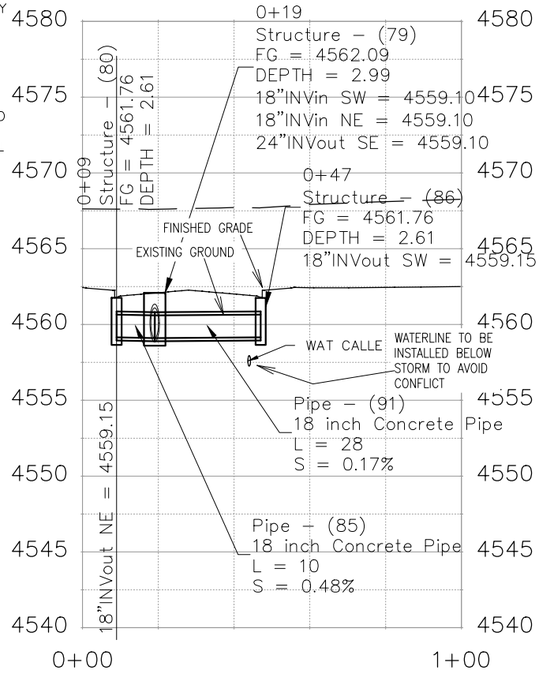

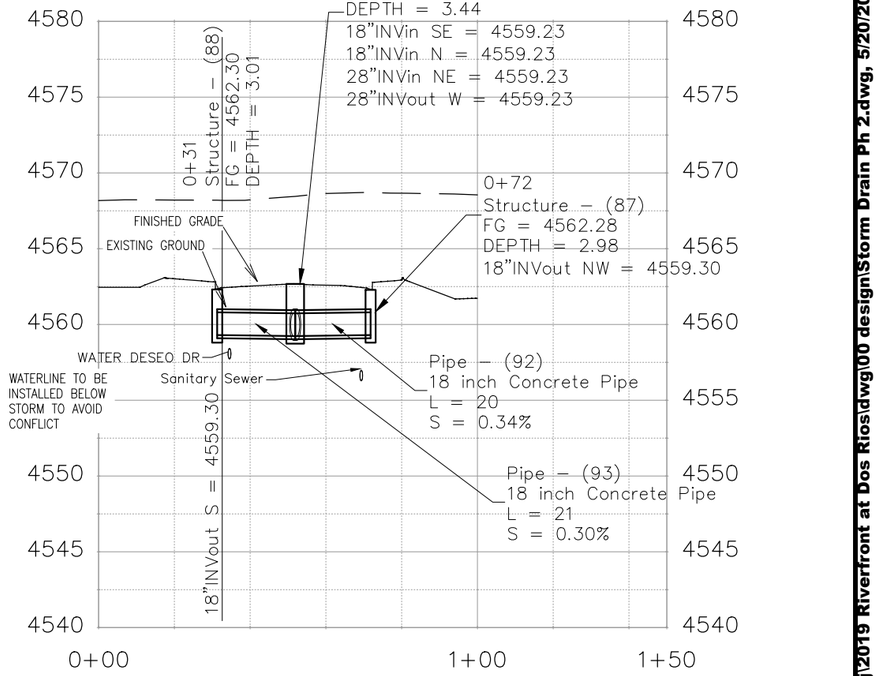

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-15
May 20, 2020

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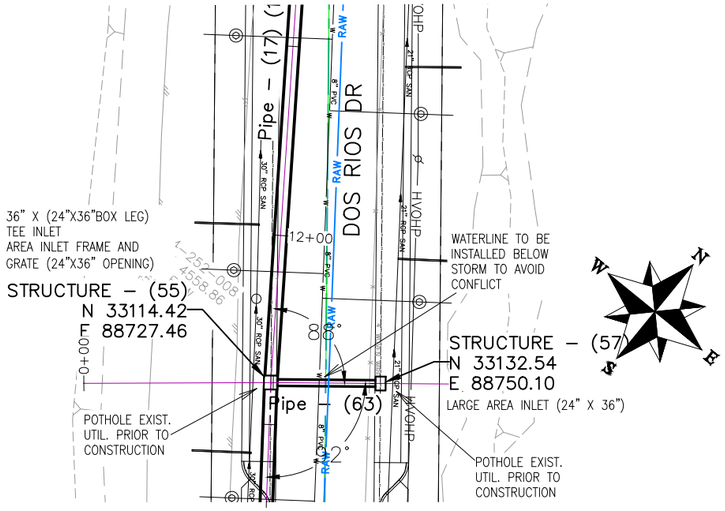
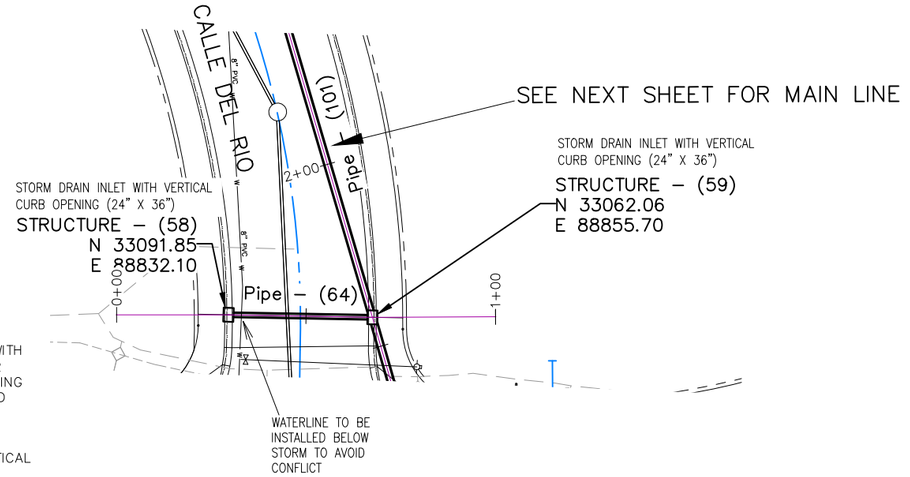


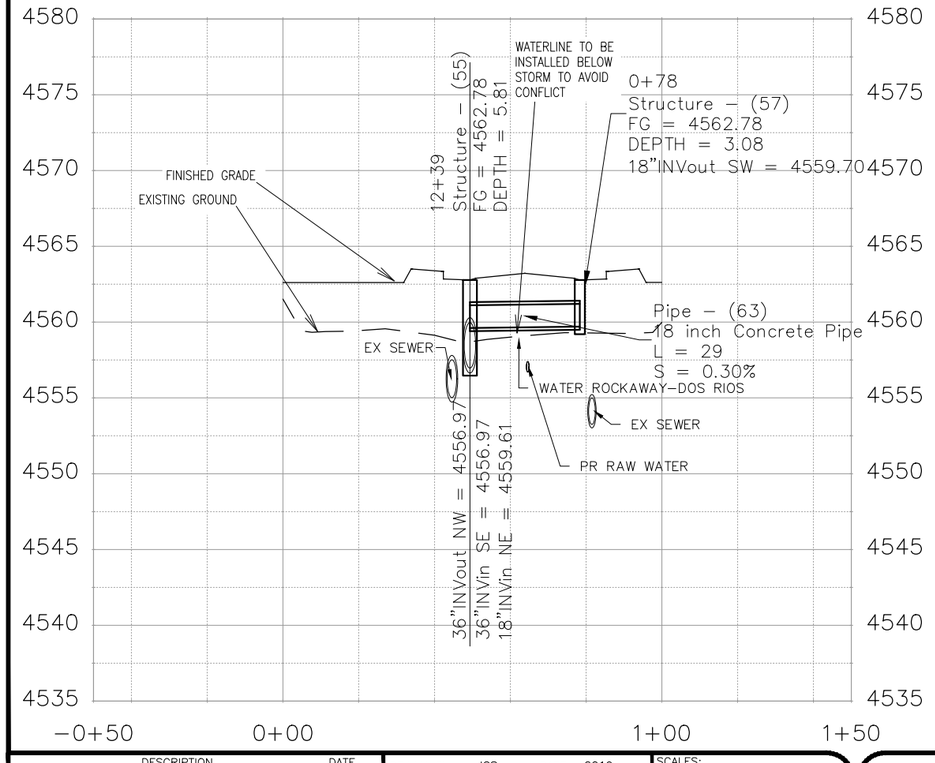
NOTES:

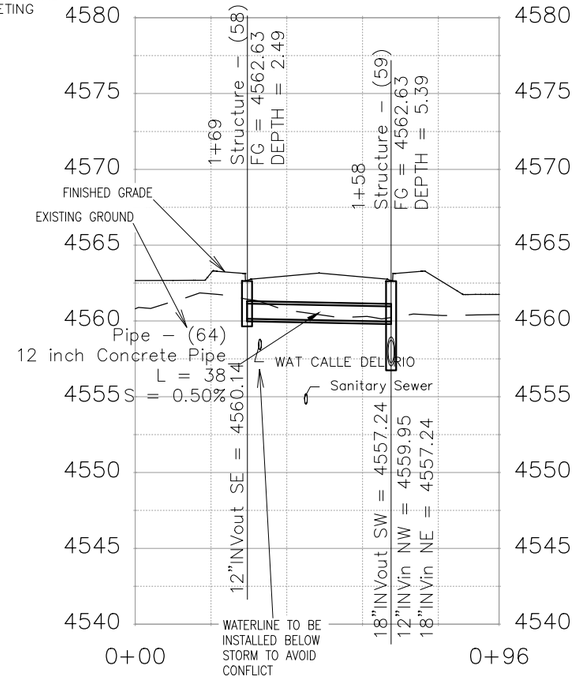
TEE INLETS SHALL BE PRECAST REINFORCED CONCRETE WITH 24" X 36" I.D. CONCRETE BOX VERTICAL LEG AND EITHER VERTICAL CURB OR AREA INLET FRAME AND GRATE OPENING AS NOTED. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D–07 AND D–10

ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.







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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–16
May 20, 2020

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NOTES:

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).

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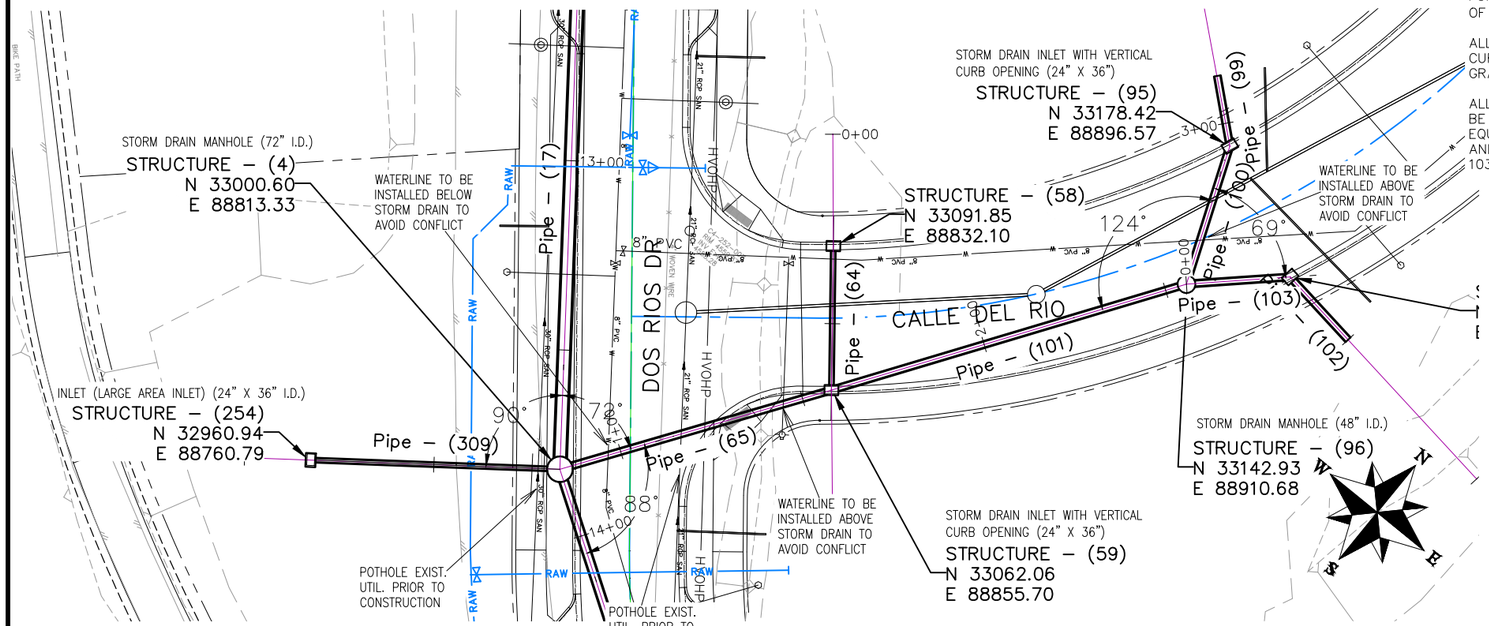

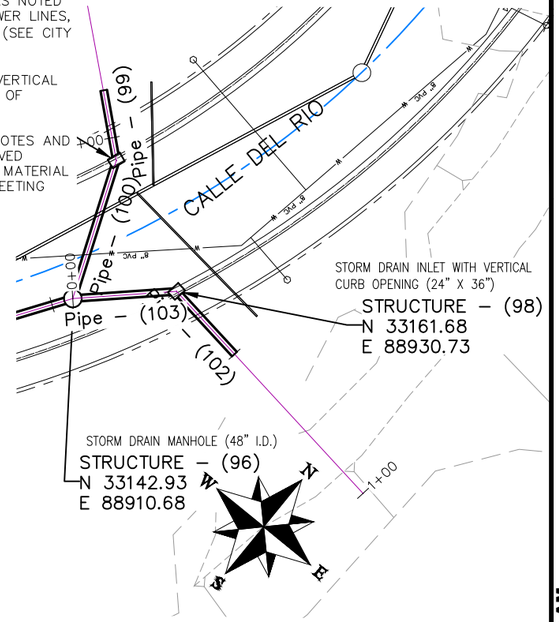

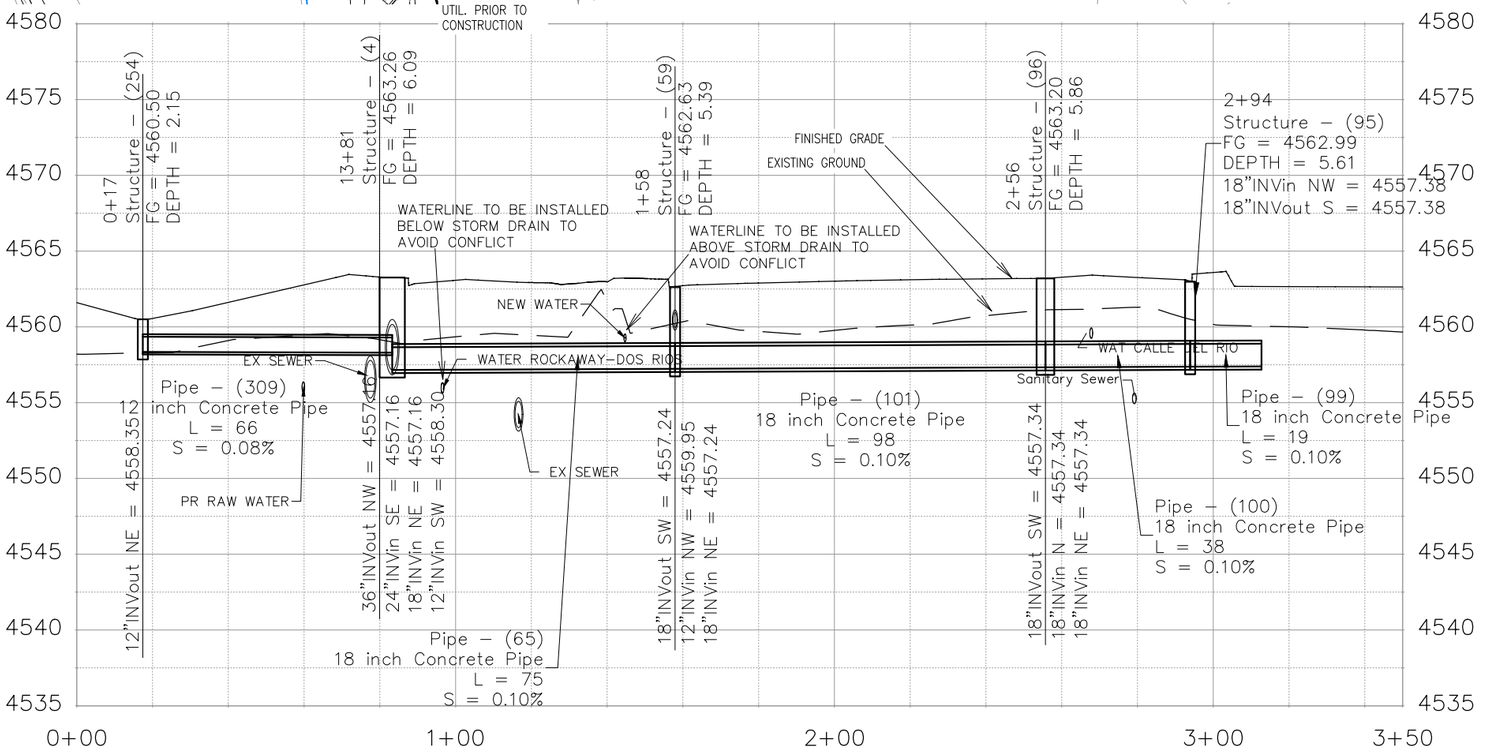

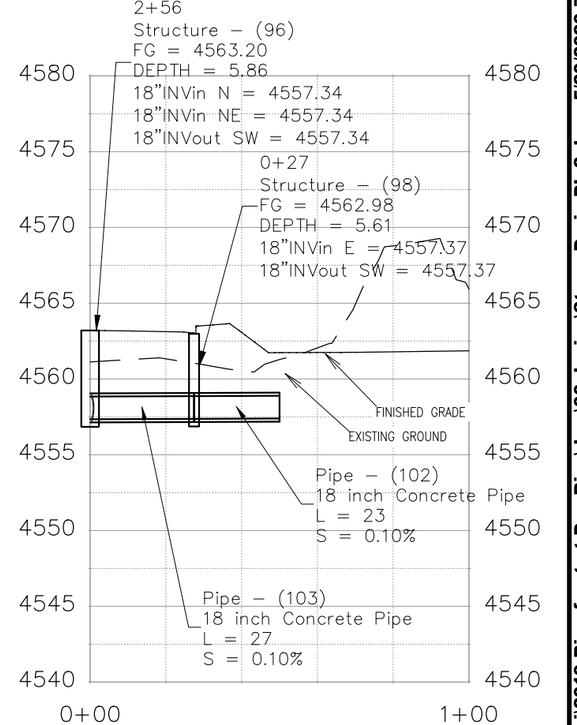

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REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-17
May 20, 2020

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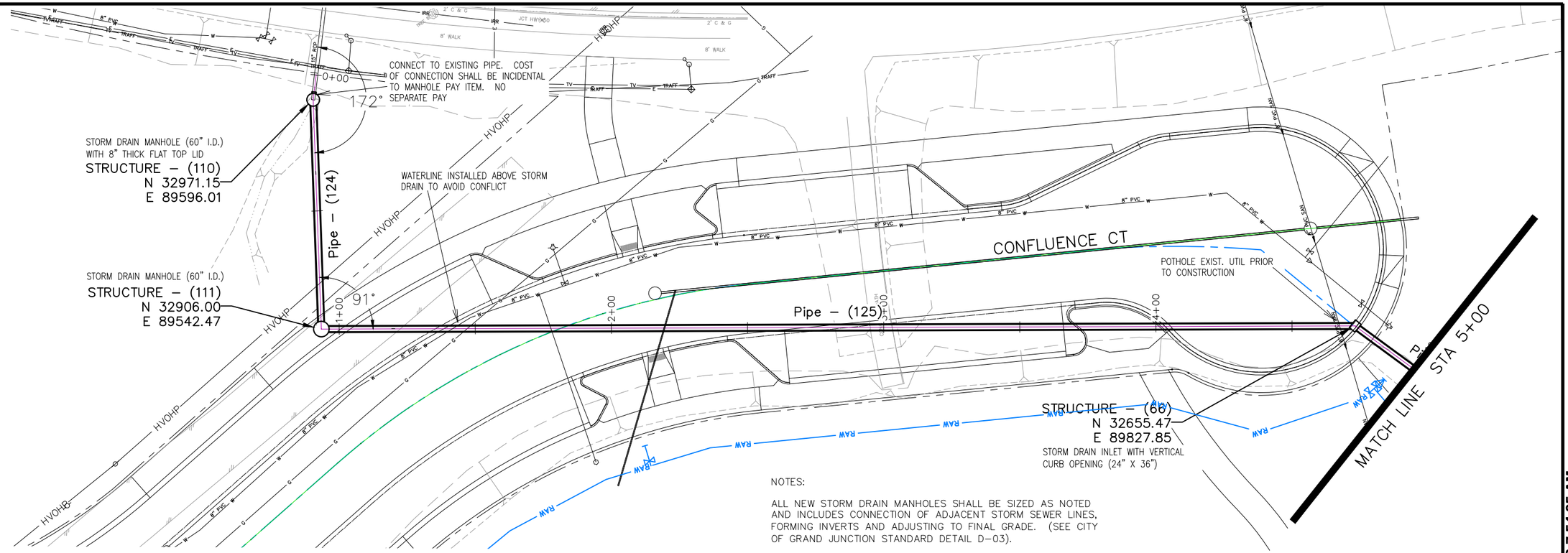

NOTES:

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D–03).

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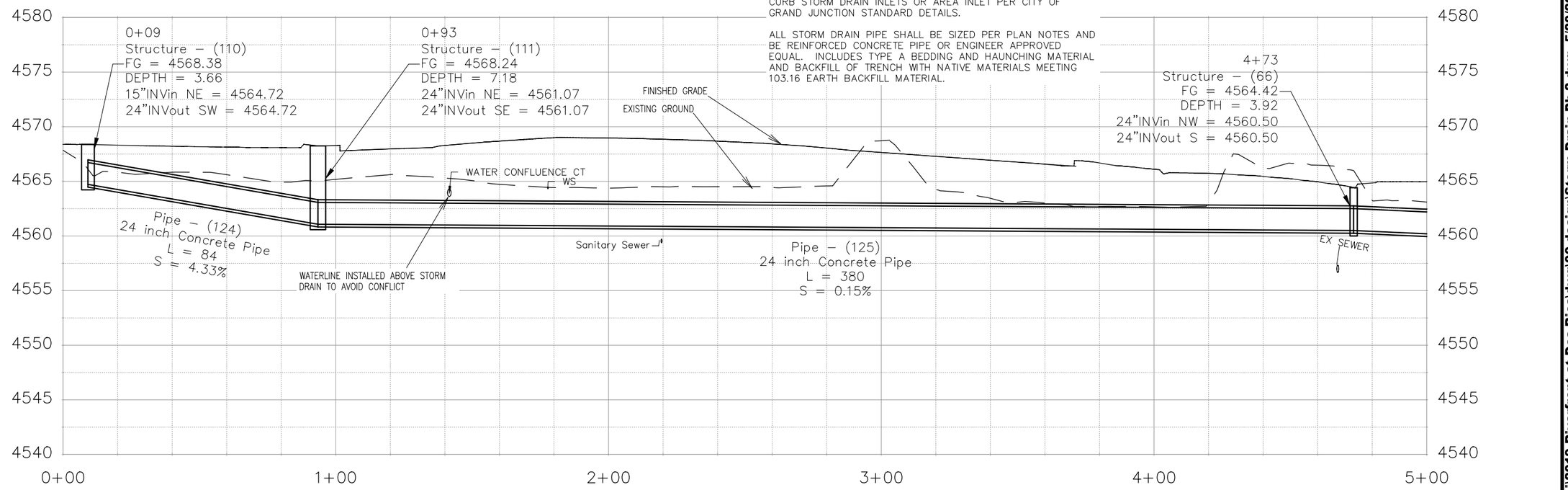

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–18
May 20, 2020

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NOTES:

INLET OVER MH SHALL BE ACCOMPLISHED USING 24" X 36" I.D. CONCRETE BOX WITH EITHER VERTICAL CURB OPENING OR AREA INLET FRAME AND GRATE AS NOTED PLACED UPON AN 8" THICK FLAT TOP MH LID (84"O.D.) WITH 24"X36" SQUARE OPENING AND THAT PLACED UPON 72" MANHOLE BARRELL SECTION. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D-03, D-07, AND D-10 FOR ADDITIONAL INFORMATION

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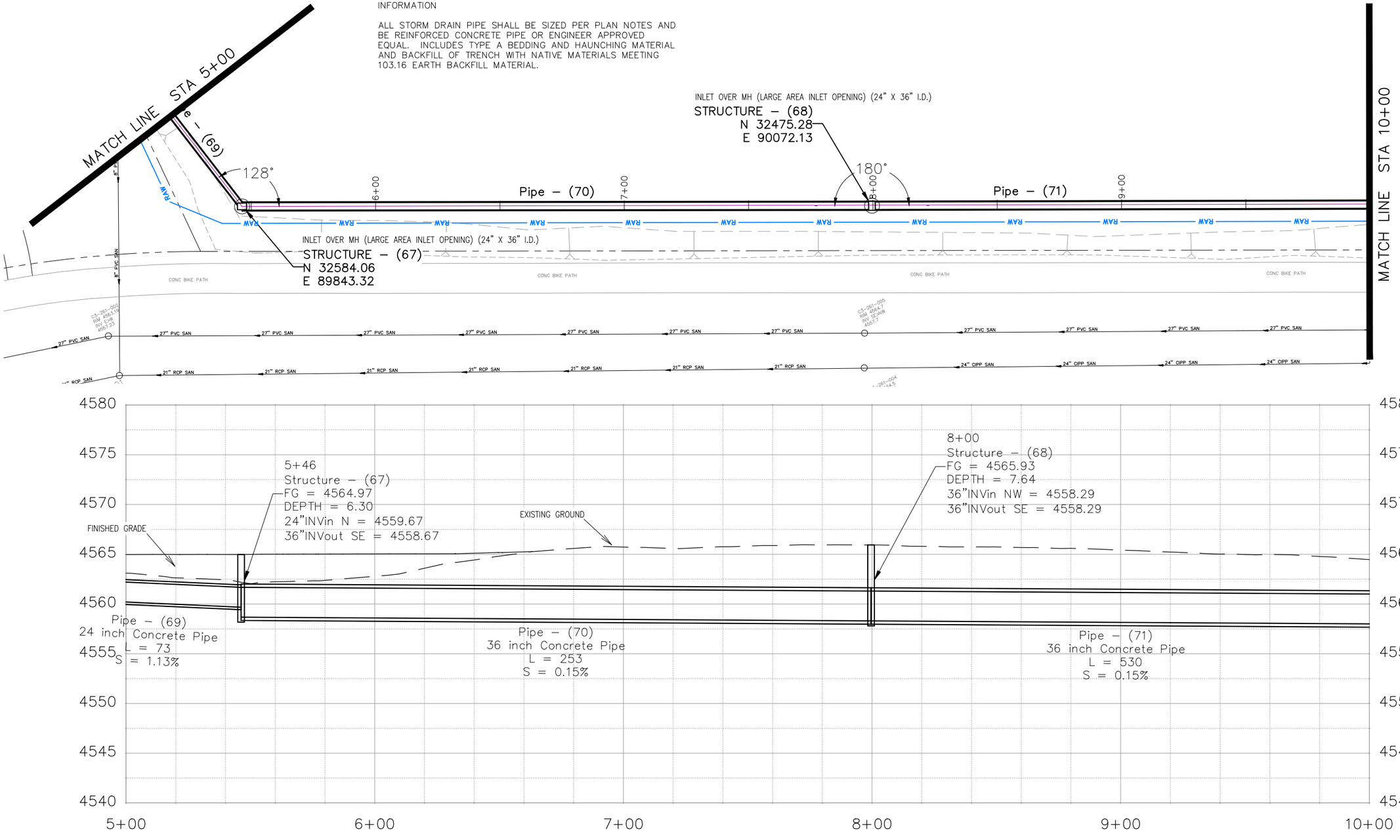

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-19
May 20, 2020

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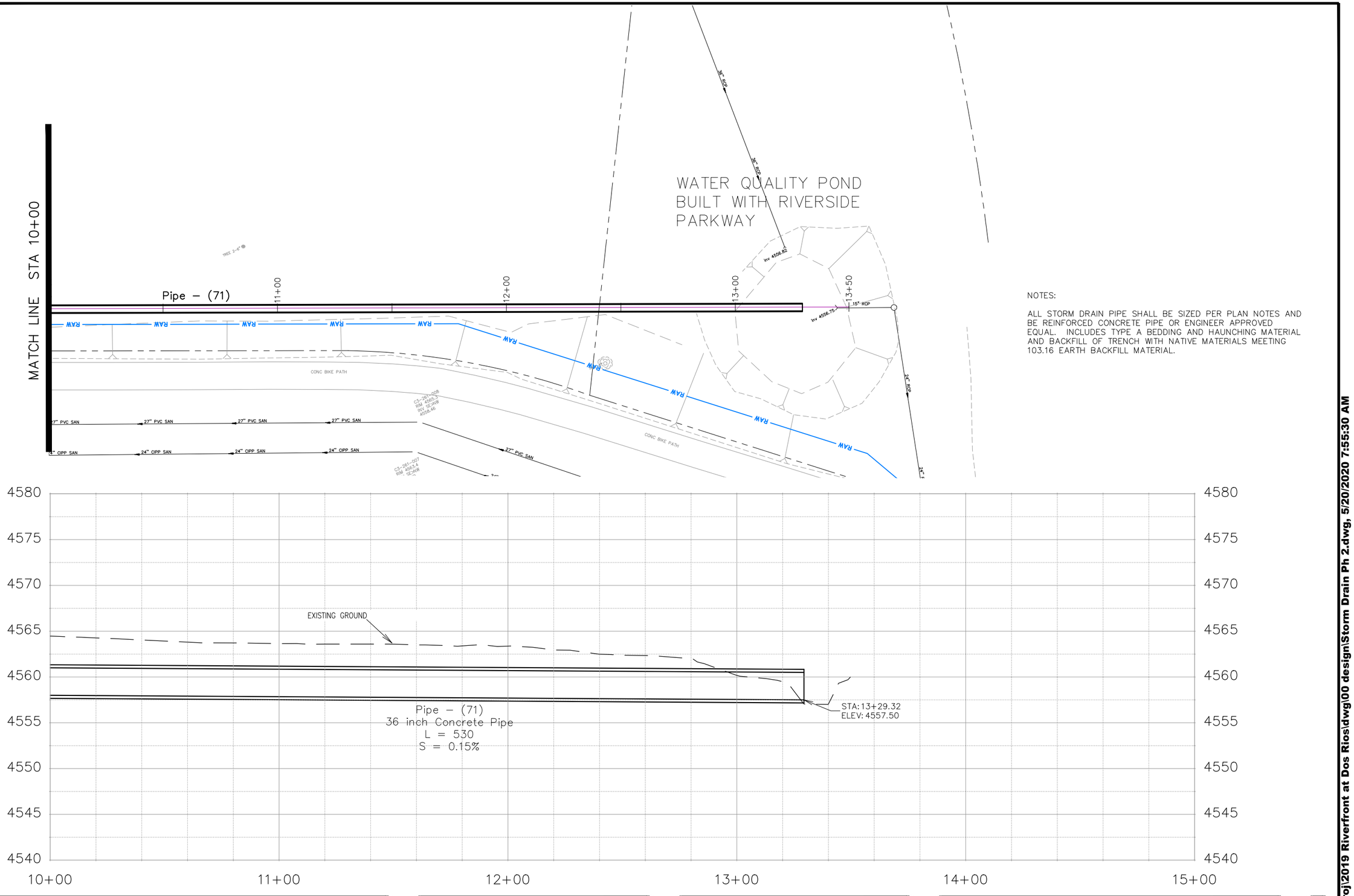

NOTES:

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-20
May 20, 2020

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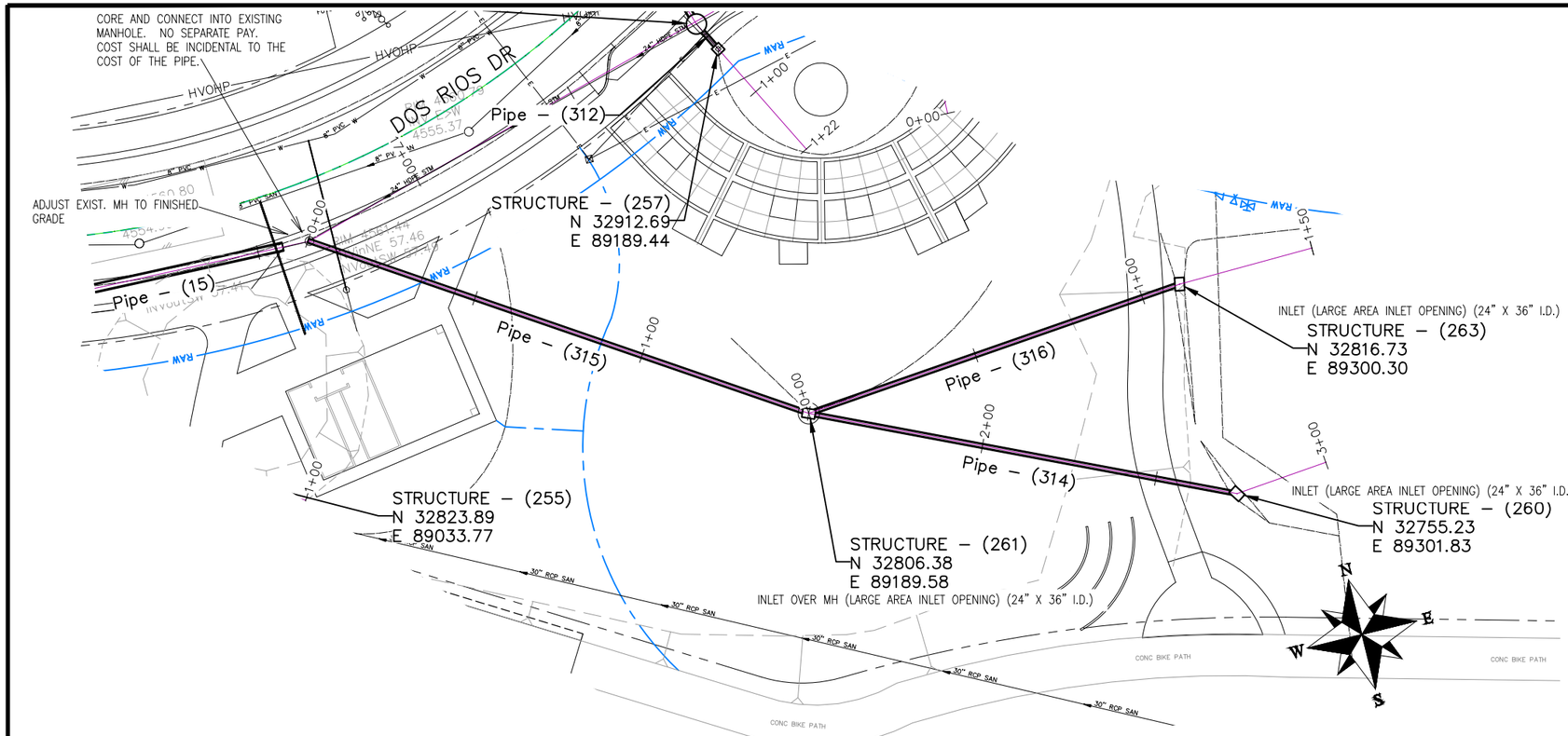

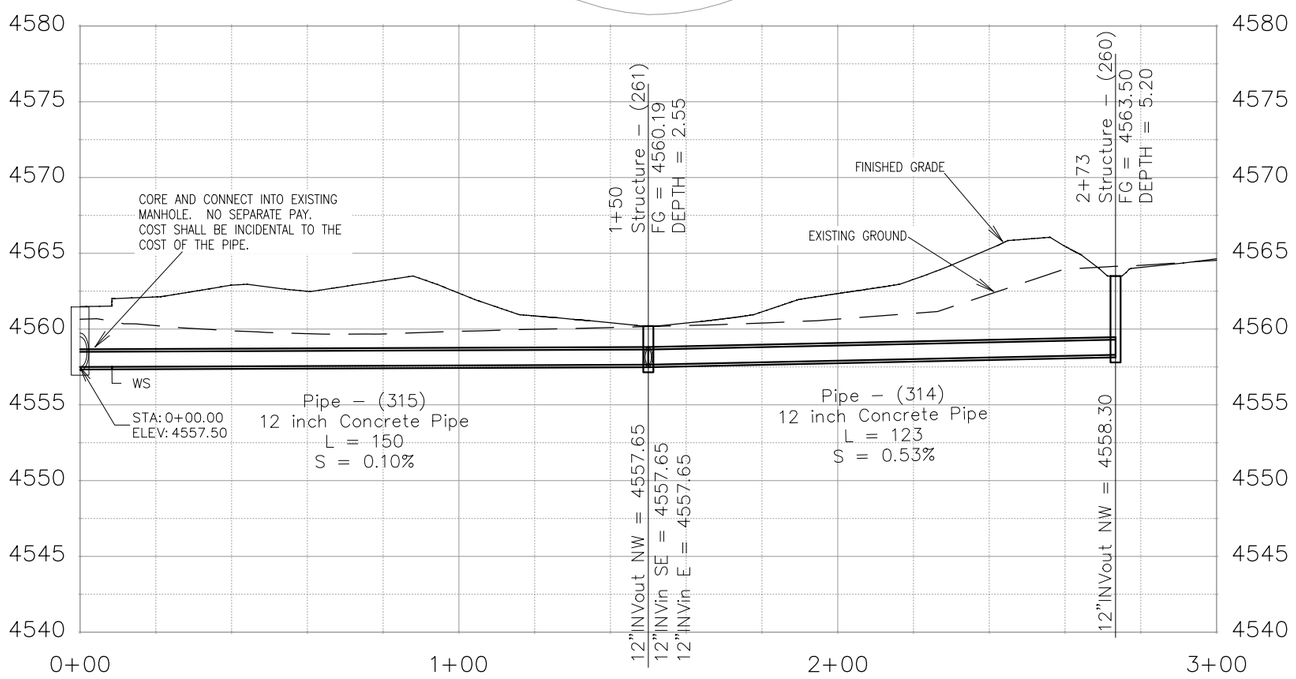

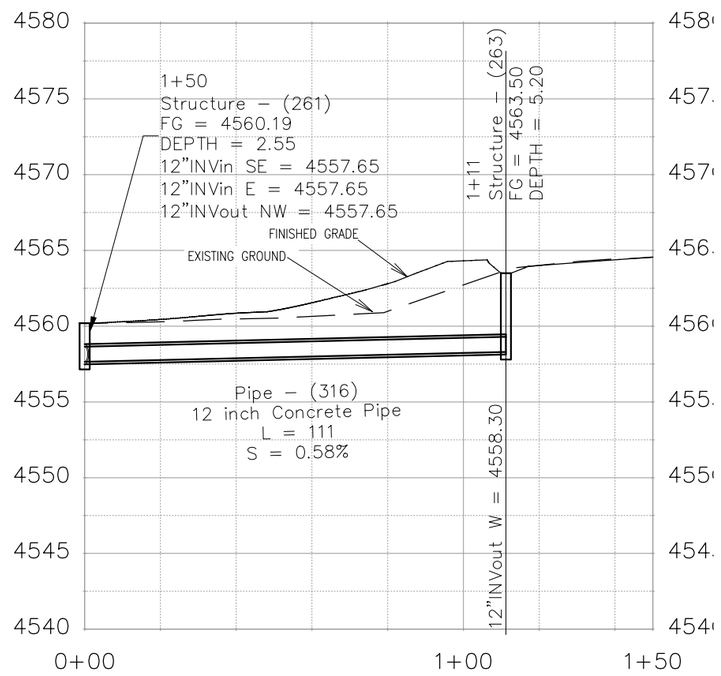

NOTES:

INLET OVER MH SHALL BE ACCOMPLISHED USING 24" X 36" I.D. CONCRETE BOX WITH EITHER VERTICAL CURB OPENING OR AREA INLET FRAME AND GRATE AS NOTED PLACED UPON AN 8" THICK FLAT TOP MH LID (84"O.D.) WITH 24"X36" SQUARE OPENING AND THAT PLACED UPON 72" MANHOLE BARRELL SECTION. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D–03, D–07, AND D–10 FOR ADDITIONAL INFORMATION

INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–21
May 20, 2020

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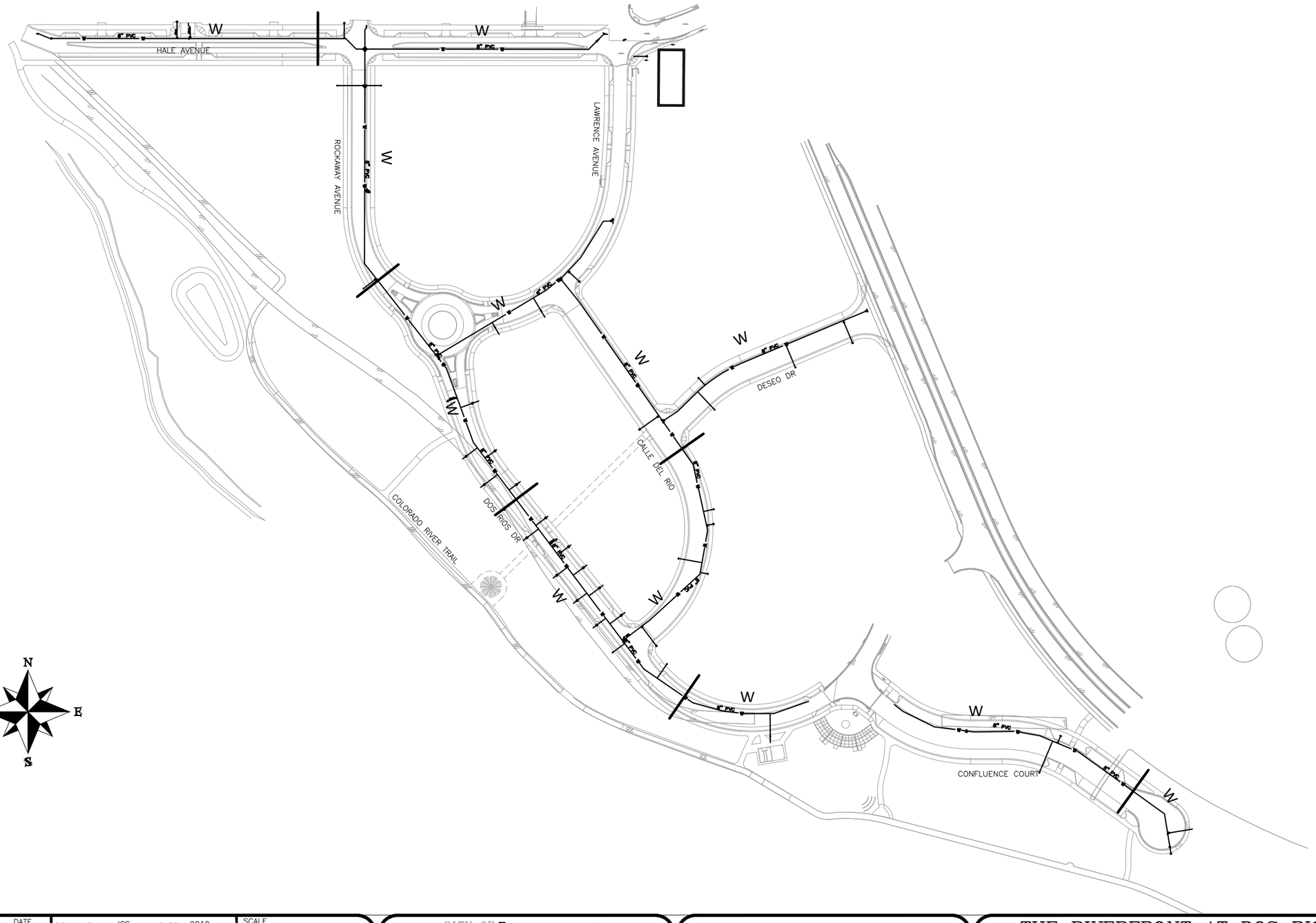

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER SHEET INDEX
May 20, 2020

95

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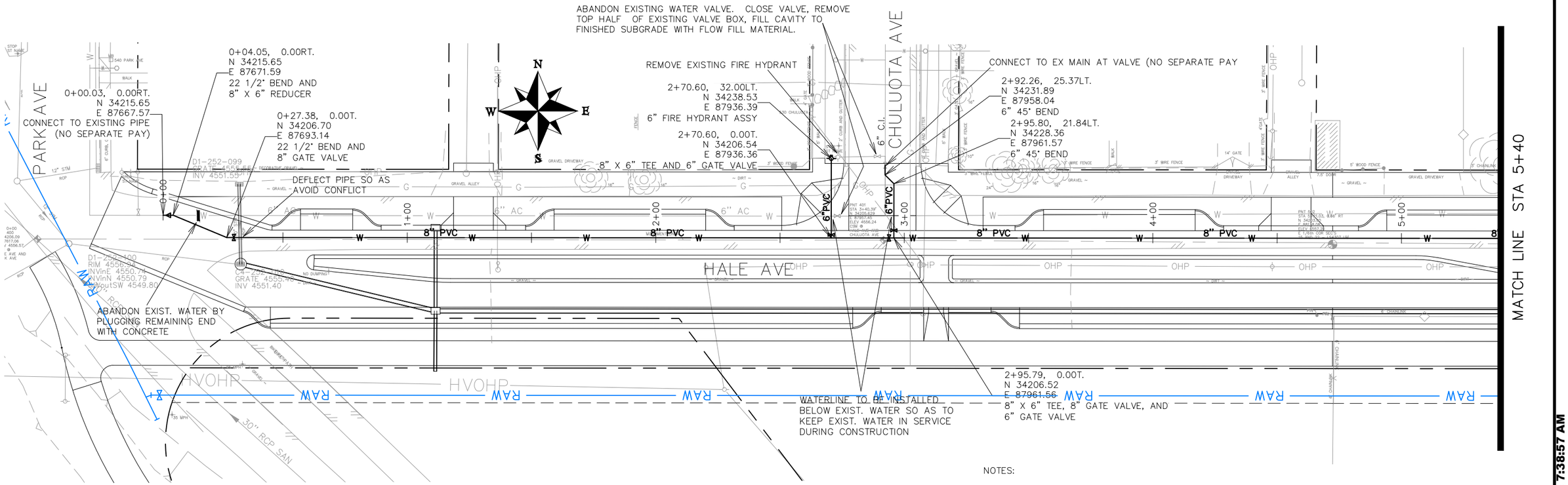

NOTES:

ALL WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

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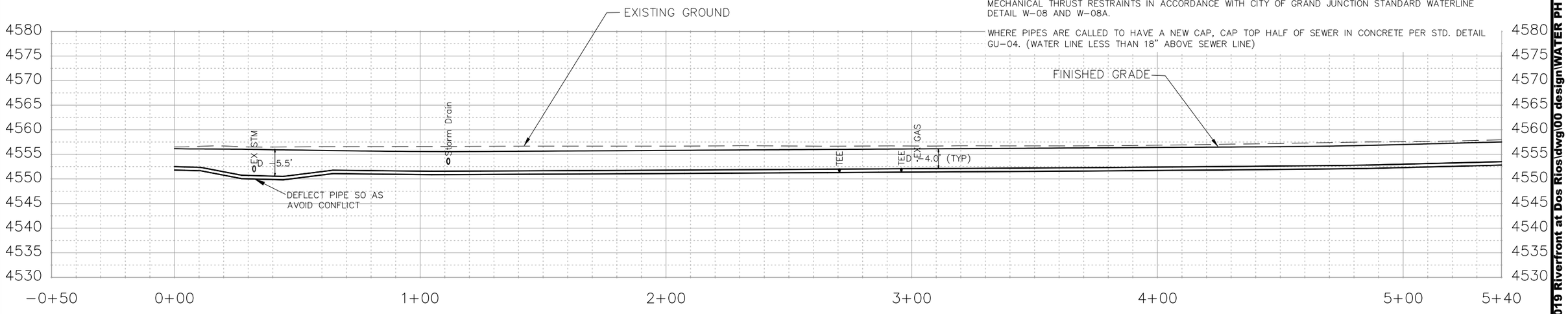
WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)



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REVISION △	

DRAWN BY JCS DATE 2018
DESIGNED BY JCS DATE 2018
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APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-1
May 20, 2020

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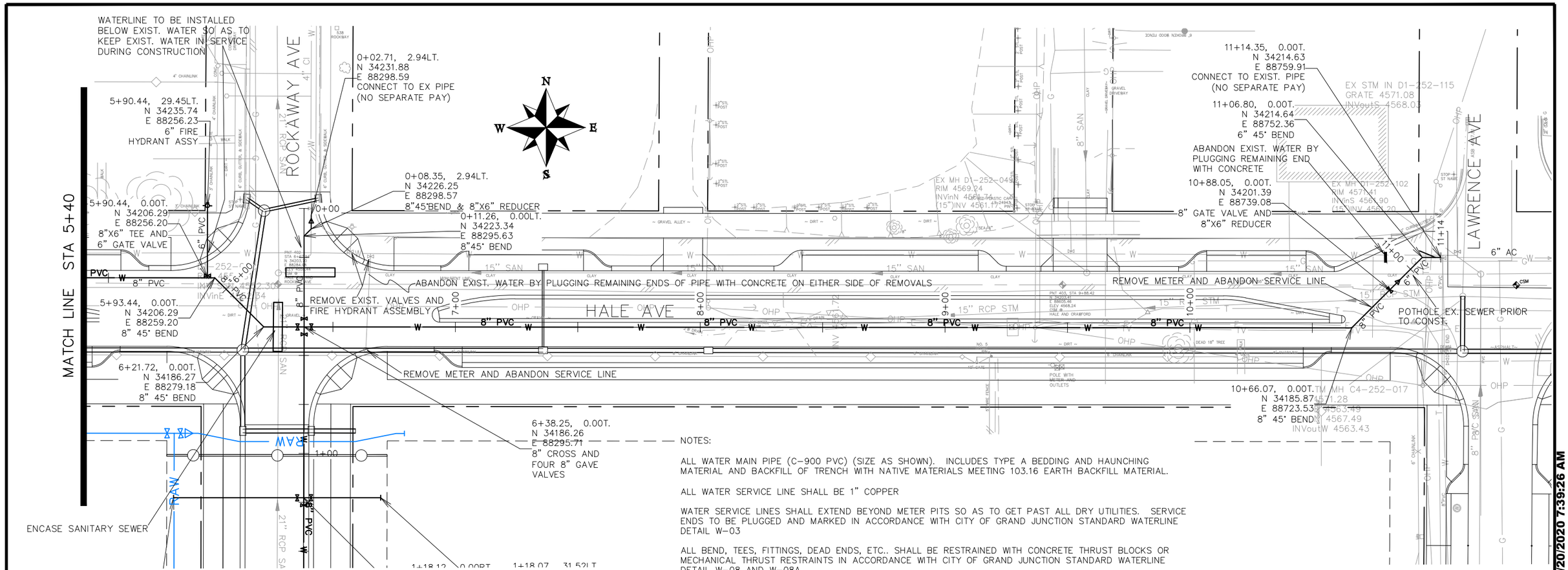

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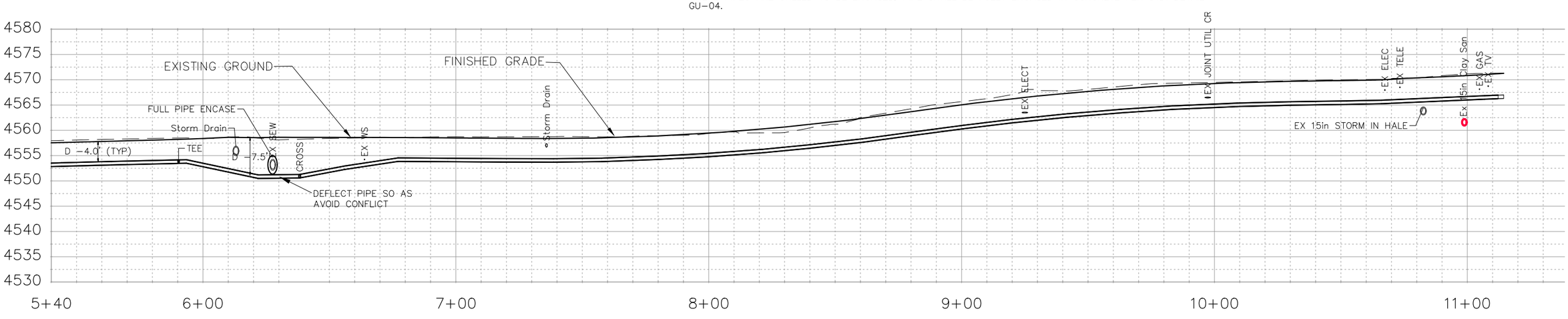

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REVISION △	
REVISION △	

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DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-2
May 20, 2020

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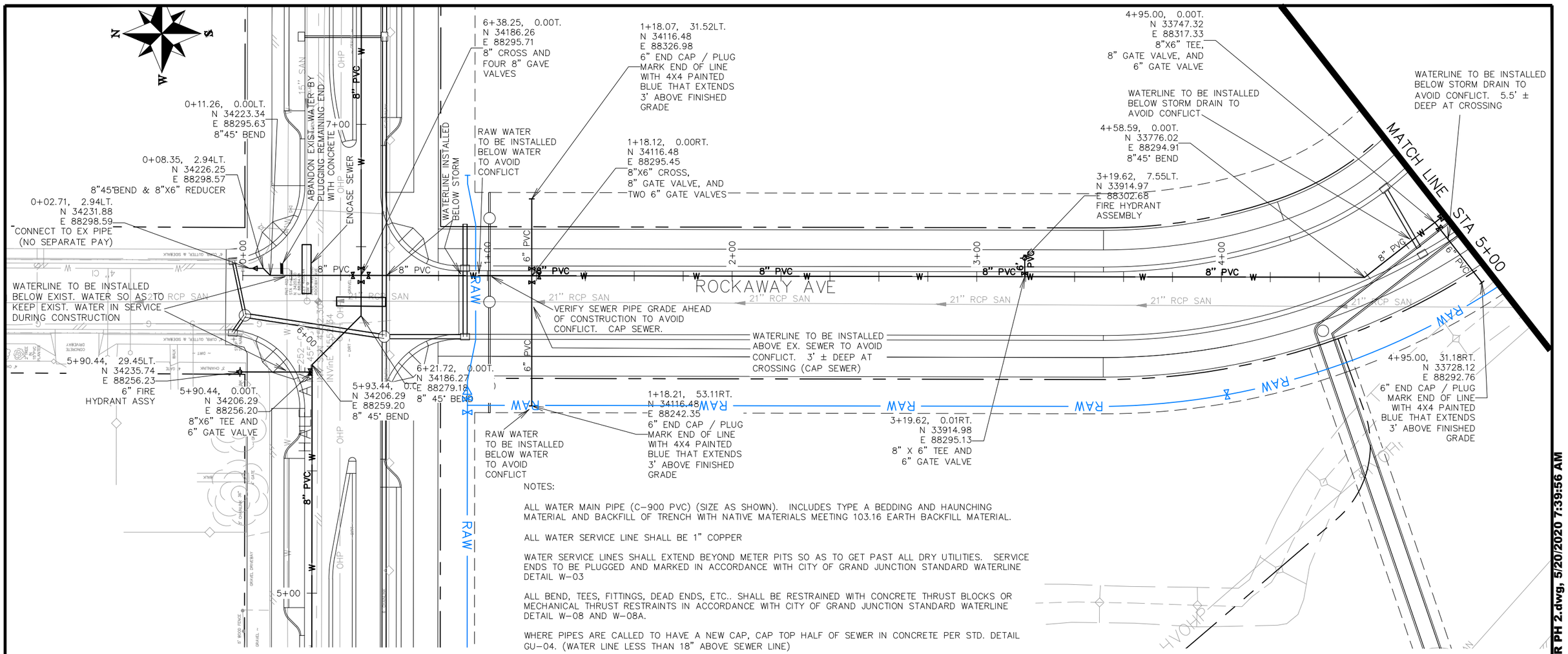

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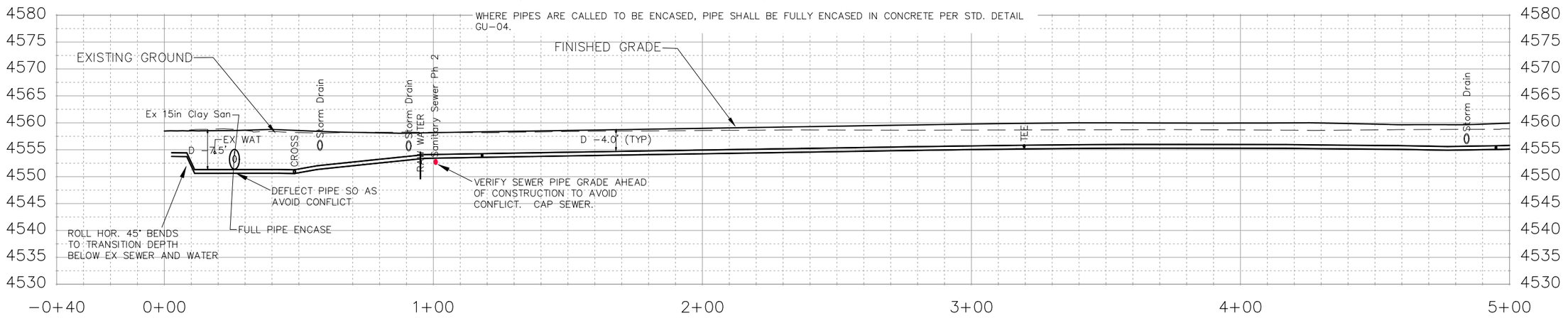

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REVISION △	
REVISION △	

DRAWN BY JCS DATE 2018
DESIGNED BY JCS DATE 2018
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APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-3
May 20, 2020

98

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MATCH LINE STA 5+00

MATCH LINE STA 10+00

ROCKAWAY AVE

DOS RIOS DR

0+09.38, 0.00T.
N 33604.57
E 88440.76
PIPE HOR. A.P.

1+00

7+12.89, 0.00T.
N 33575.62
E 88451.47
8" 22 1/2 ° BEND

DEFLECT WATERLINE SO AS TO BE BELOW STORM DRAIN

8+63.88, 0.00T.
N 33433.74
E 88503.12
8" 22 1/2 ° BEND

9+01.50, 23.17LT.
N 33417.61
E 88544.24
1" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

7+72.66, 0.00T.
N 33519.46
E 88471.92
8"X6" TEE AND
6" GATE VALVE

RAW WATER
TO BE INSTALLED
BELOW WATER
TO AVOID
CONFLICT

9+77.63, 17.40LT.
N 33353.31
E 88585.42
1" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

7+92.74, 23.65LT.
N 33508.67
E 88501.01
1" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

9+77.63, 0.00T.
N 33342.85
E 88571.51
1" TAPPING SADDLE AND
1" CORPORATION STOP

DEFLECT WATERLINE SO AS TO BE
BELOW STORM DRAIN BUT STILL
ABOVE SEWER TO NORTHWEST

6+83.48, 0.00T.
N 33598.80
E 88433.37
8" TEE AND
TWO 8" GATE VALVES

WATERLINE TO BE INSTALLED
BELOW STORM DRAIN TO
AVOID CONFLICT. 7.5' ±
DEEP AT CROSSING

8+76.50, 0.00T.
N 33423.65
E 88510.70
1" TAPPING SADDLE AND
1" CORPORATION STOP

REMOVE EXISTING CULVERT

9+40.78, 0.00T.
N 33372.29
E 88549.36
1" TAPPING SADDLE AND
1" CORPORATION STOP

8+76.51, 26.91RT.
N 33407.47
E 88489.20
1" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

9+01.50, 0.00T.
N 33403.68
E 88525.74
1" TAPPING SADDLE AND
1" CORPORATION STOP

9+40.78, 32.01RT.
N 33353.04
E 88523.78
1" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

7+72.66, 18.85RT.
N 33513.01
E 88454.20
6" FIRE HYDRANT ASSY

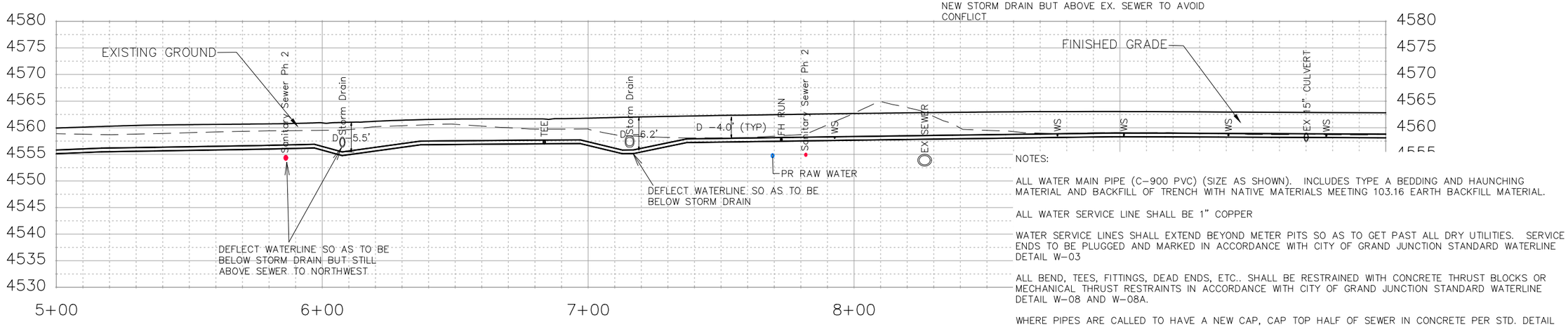
7+92.74, 0.00T.
N 33500.59
E 88478.79
1" TAPPING SADDLE AND
1" CORPORATION STOP

WATER SERVICES ON WEST SIDE TO BE INSTALLED BELOW
NEW STORM DRAIN BUT ABOVE EX. SEWER TO AVOID
CONFLICT

C4-252-002
RIM 4559.42
INVin 4552.66
INVout 4552.52

C4-252-004
RIM 4560.74
INV EZW
4553.70

C4-252-003
RIM 4560.03
INV EZW
4554.64



NOTES:

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WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2018
DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-4
May 20, 2020

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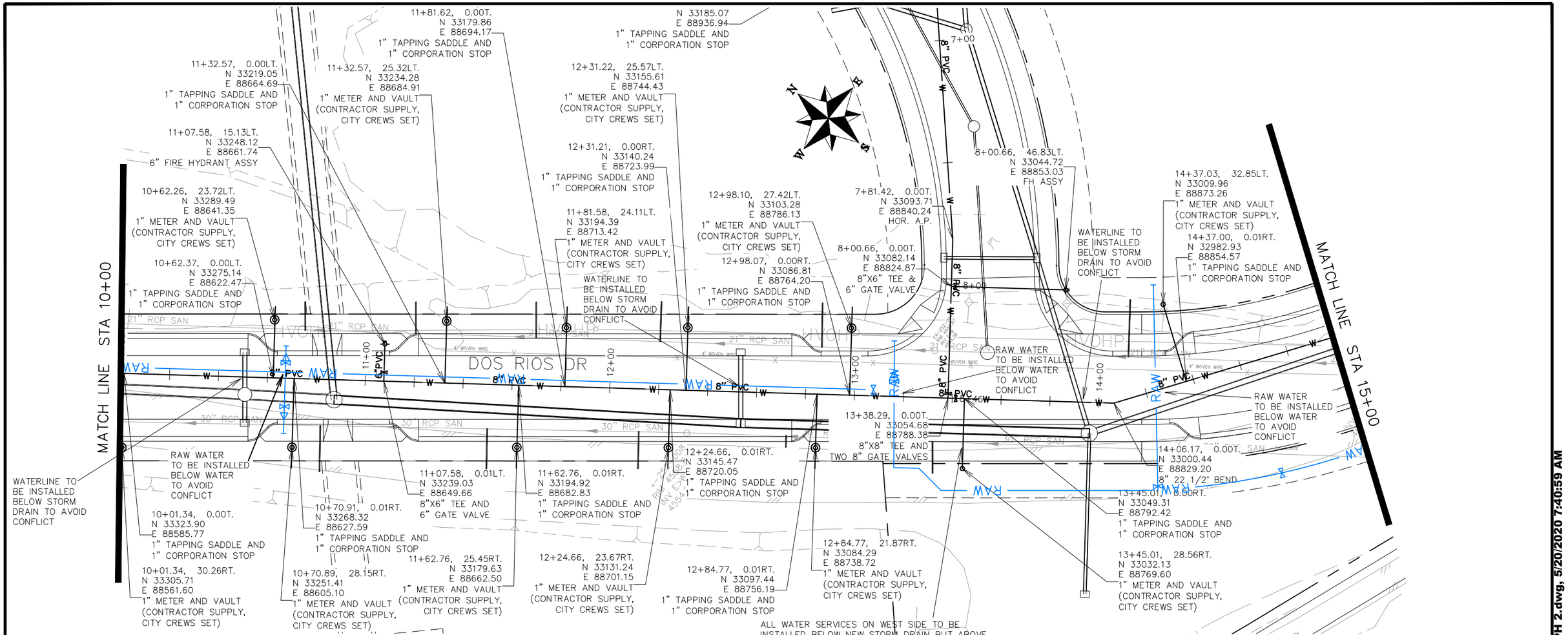

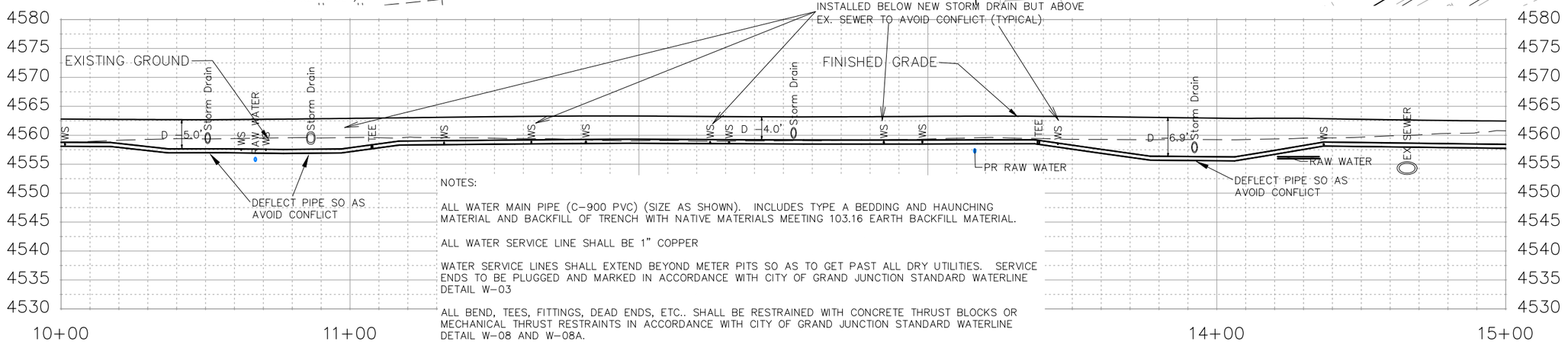

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DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-5
May 20, 2020

100

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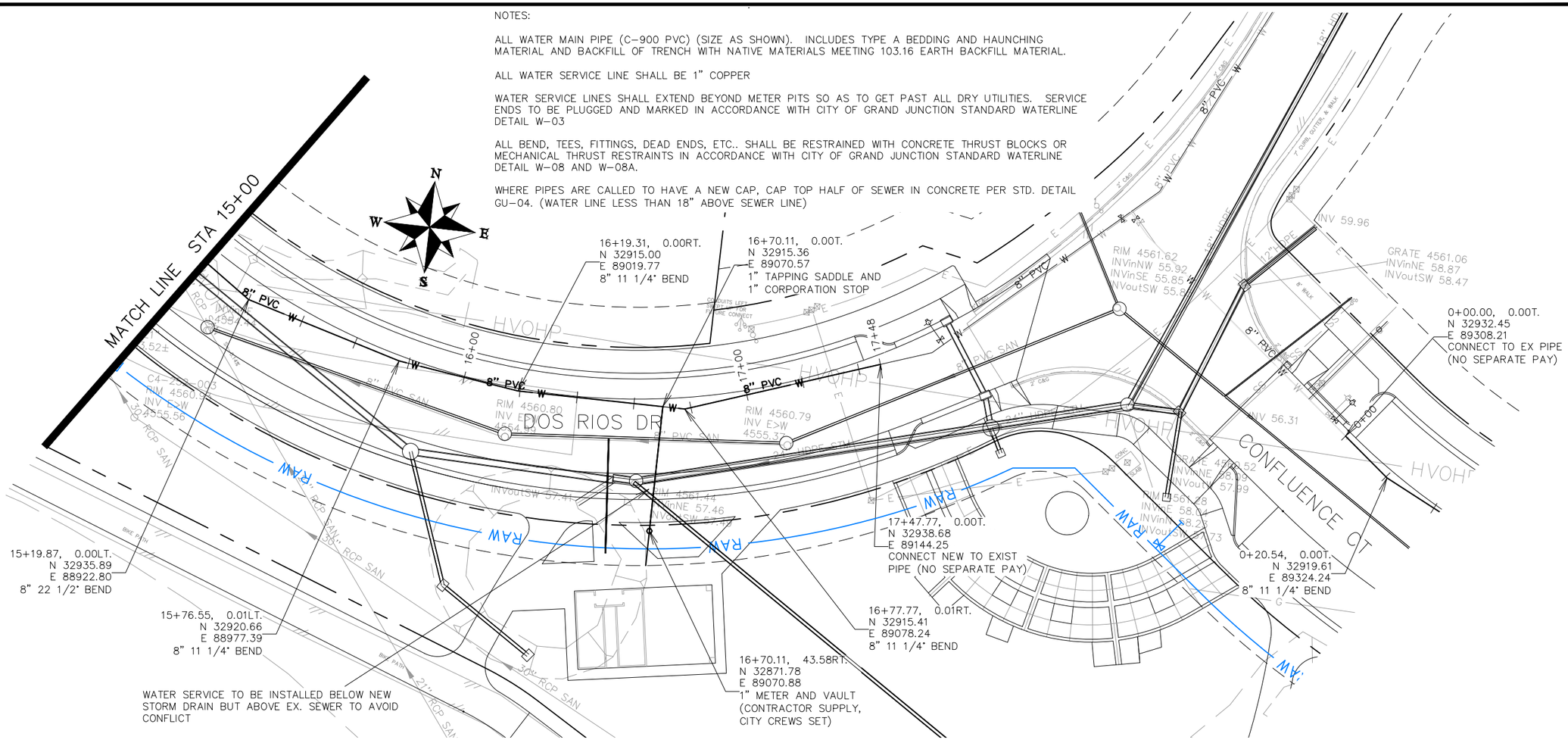

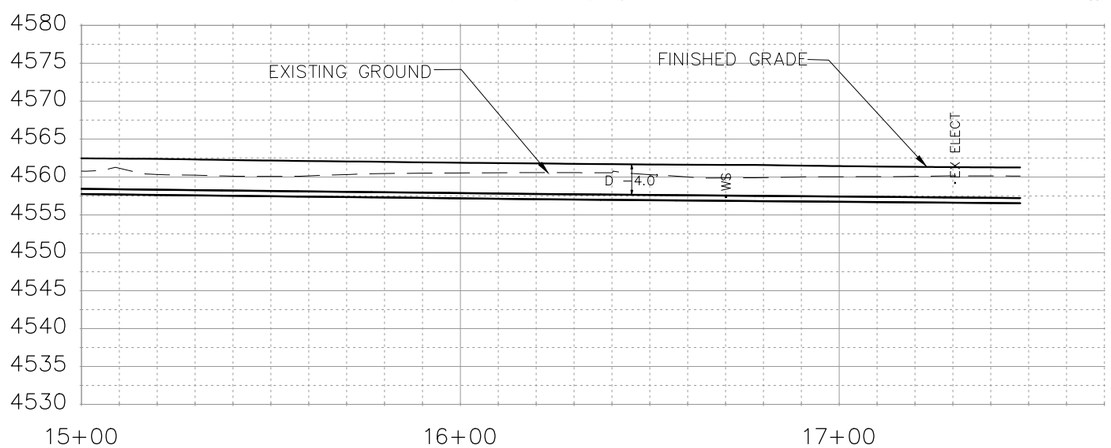

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SCALES:
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HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-6
May 20, 2020

101

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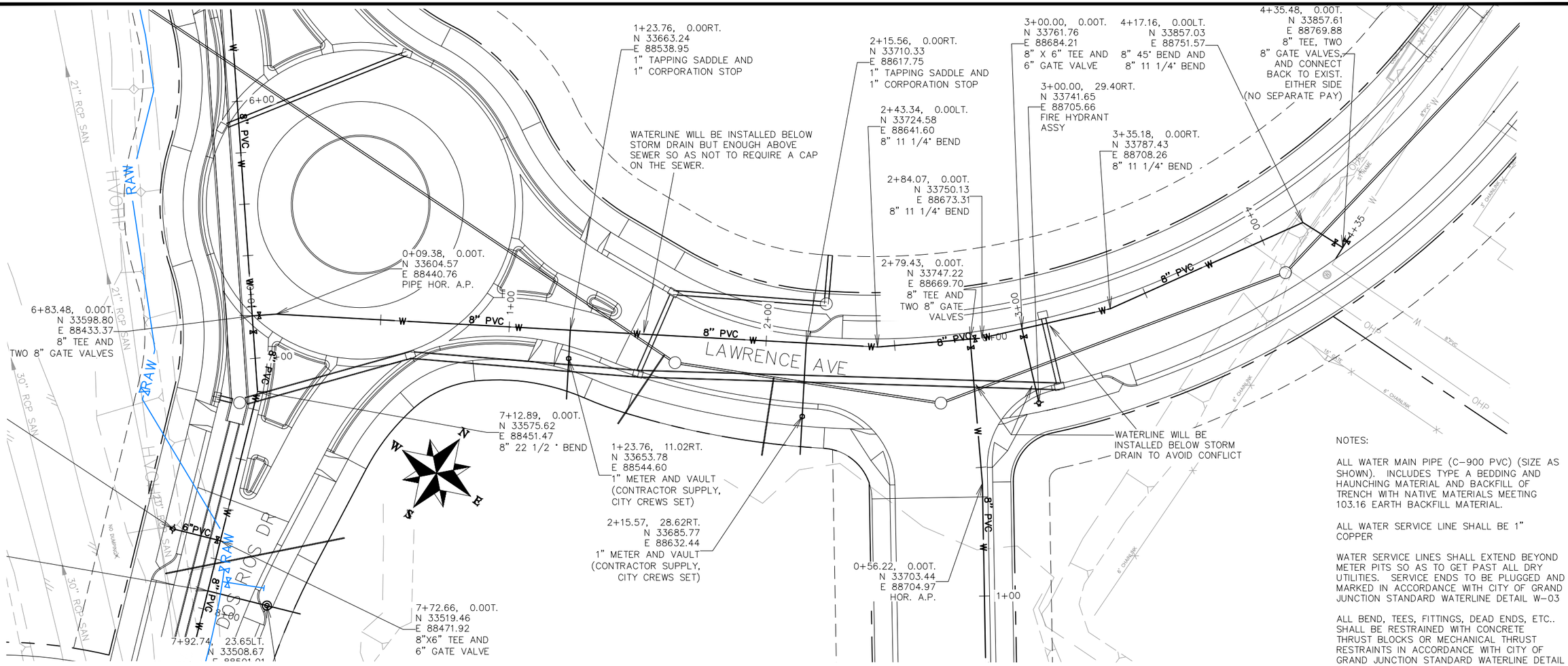

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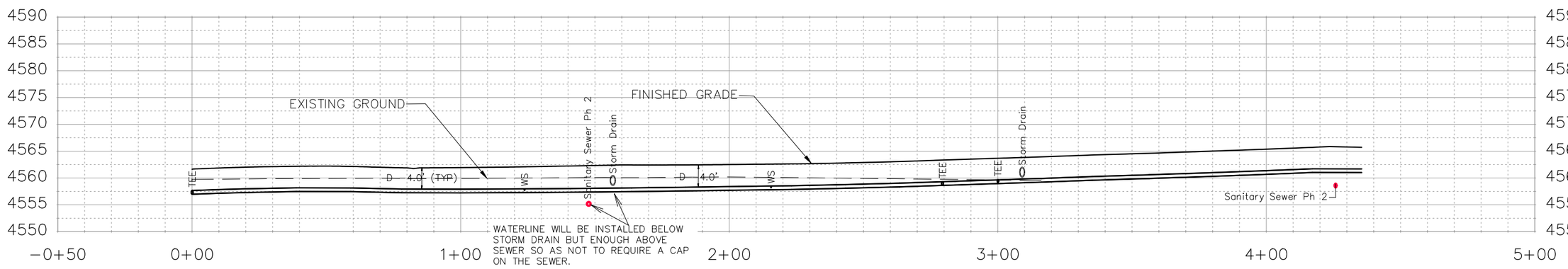

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-7
May 20, 2020

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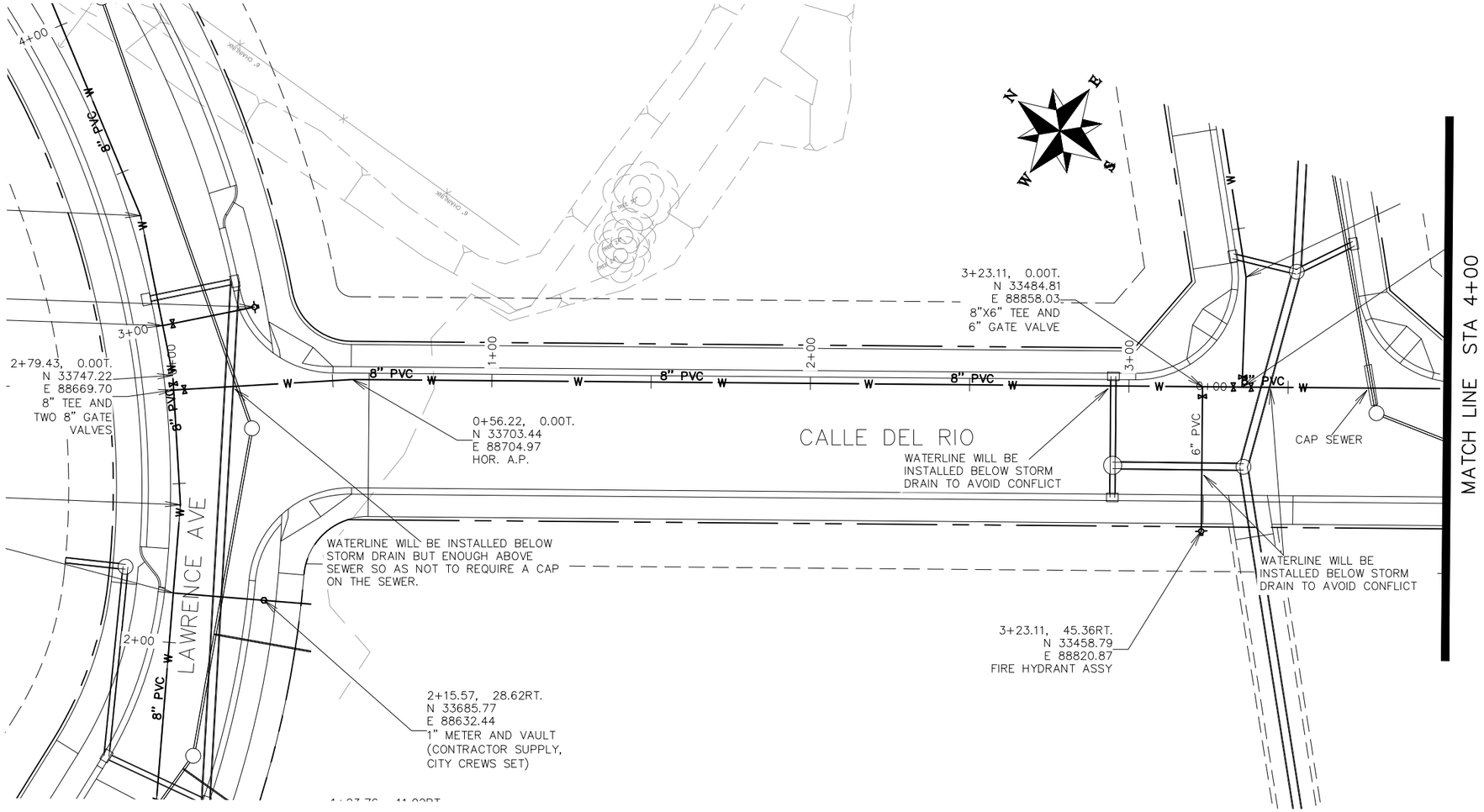
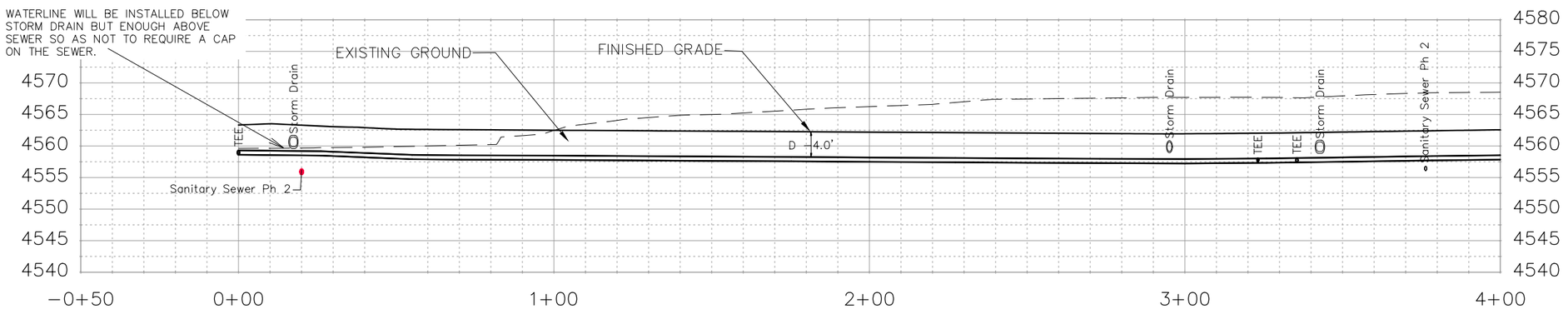
WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)





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REVISION △	
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REVISION △	
REVISION △	

DRAWN BY JCS DATE 2018
DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-8
May 20, 2020

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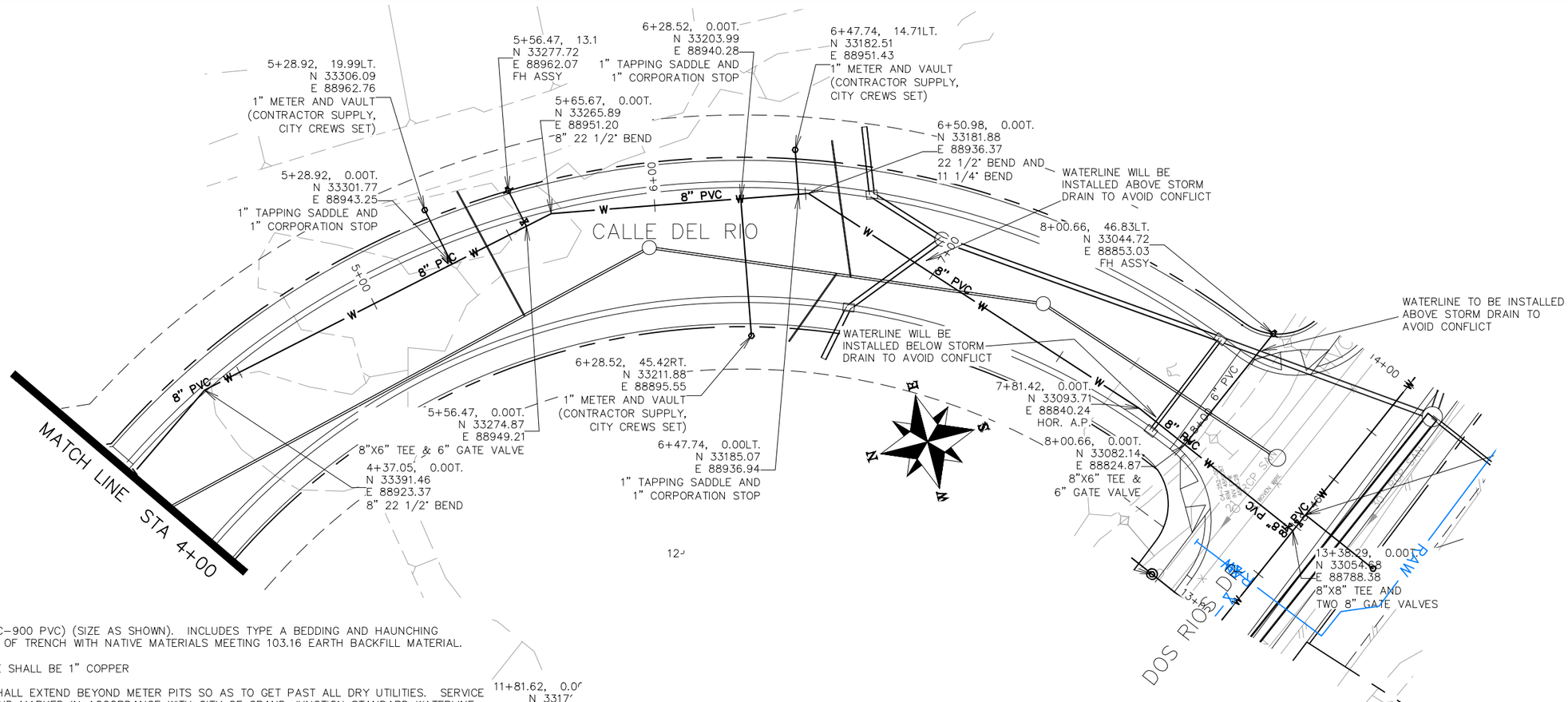


NOTES:

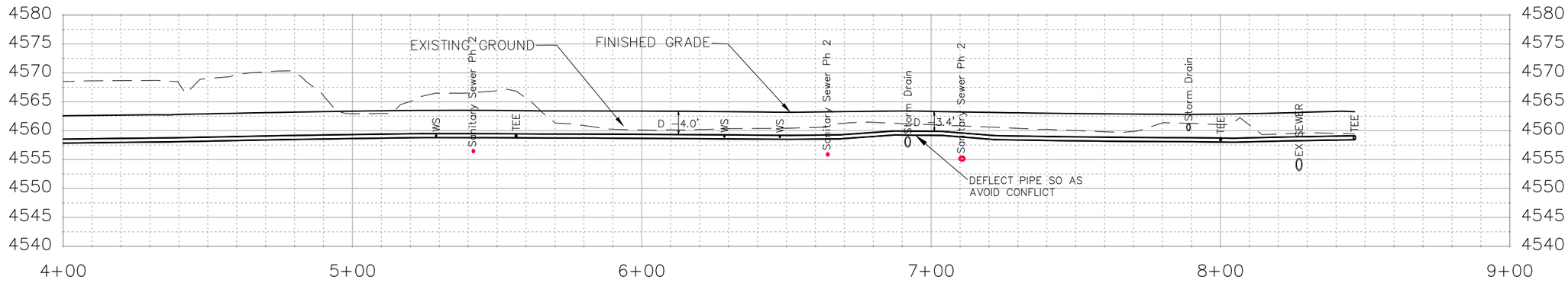
ALL WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

ALL WATER SERVICE LINE SHALL BE 1" COPPER

WATER SERVICE LINES SHALL EXTEND BEYOND METER PITS SO AS TO GET PAST ALL DRY UTILITIES. SERVICE ENDS TO BE PLUGGED AND MARKED IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-03

ALL BEND, TEES, FITTINGS, DEAD ENDS, ETC.. SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS OR MECHANICAL THRUST RESTRAINTS IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-08 AND W-08A.

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)



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REVISION △	

DRAWN BY JCS DATE 2018
DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-9
May 20, 2020

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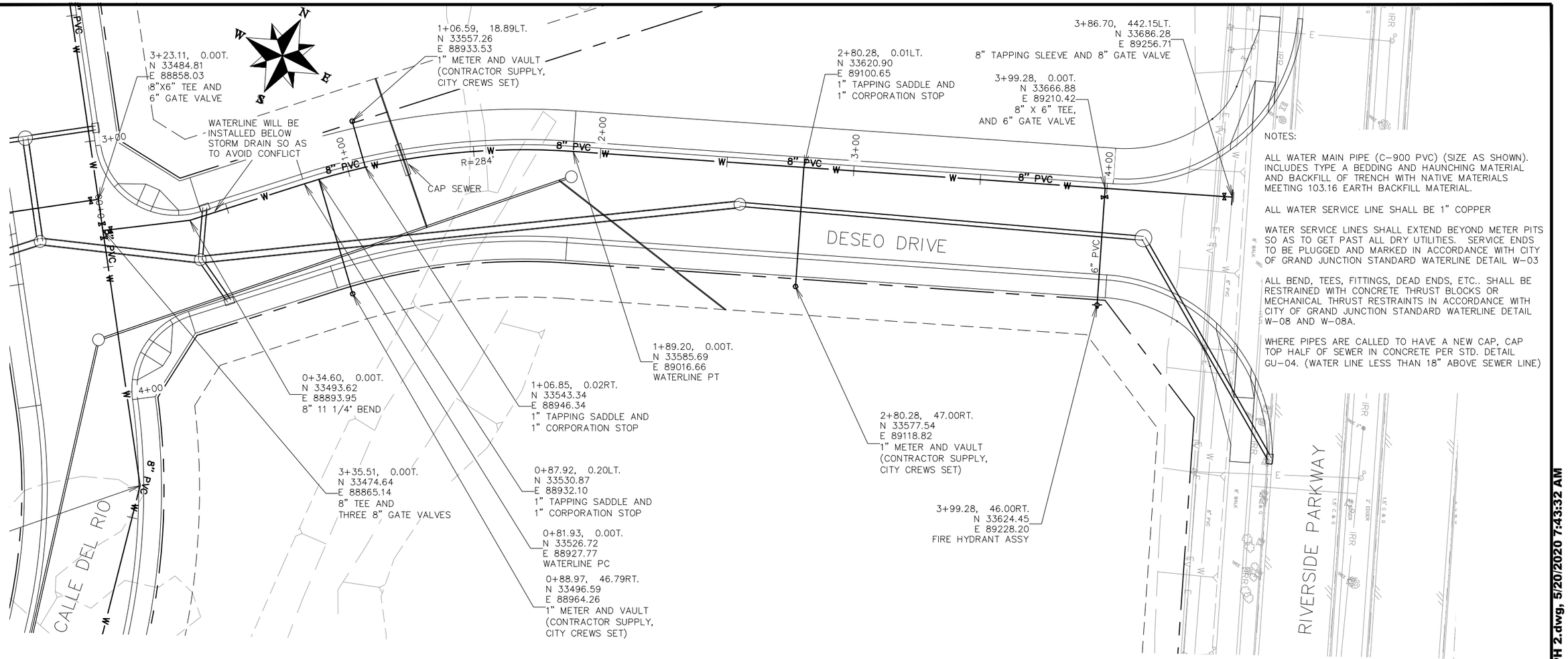

NOTES:

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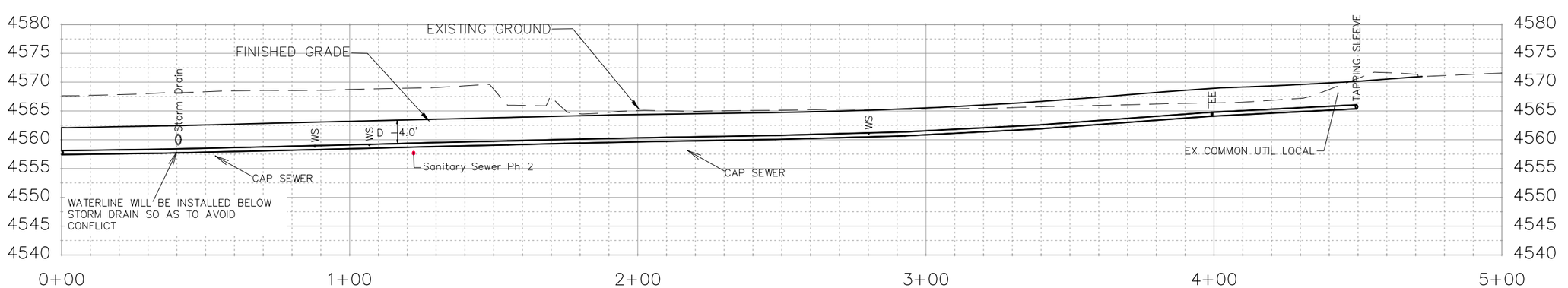
WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)



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DRAWN BY JCS DATE 2018
DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-10
May 20, 2020

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NOTES:

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WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

DOS RIOS DR

CONFLUENCE CT

0+00.00, 0.00T.
N 32932.45
E 89308.21
CONNECT TO EX PIPE
(NO SEPARATE PAY)

0+88.04, 0.00T.
N 32889.76
E 89384.78
8" 22 1/2° BEND

WATERLINE WILL BE INSTALLED ABOVE STORM DRAIN TO AVOID CONFLICT

1+63.98, 0.00T.
N 32880.19
E 89460.12
8" 11 1/4° BEND

2+41.99, 0.00T.
N 32881.22
E 89538.12
8" 11 1/4° BEND

3+17.61, 0.00T.
N 32862.58
E 89610.95
1" TAPPING SADDLE AND
1" CORPORATION STOP

2+91.02, 0.00T.
N 32872.88
E 89586.44
8" 11 1/4° BEND

3+27.80, 14.59LT.
N 32872.08
E 89626.00
FIRE HYDRANT ASSY

3+71.57, 0.00T.
N 32841.67
E 89660.69
8" 11 1/4° BEND

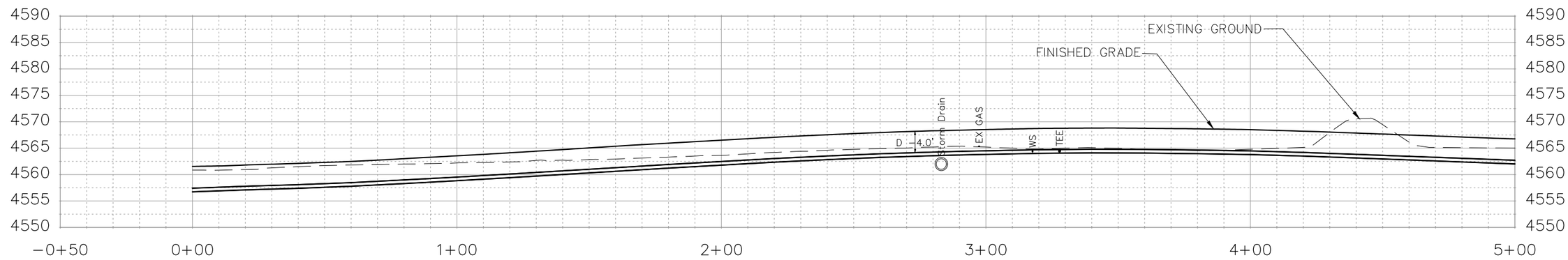
3+27.80, 0.00T.
N 32858.63
E 89620.34
8"X6" TEE &
6" GATE VALVE

3+17.61, 65.07RT.
N 32802.59
E 89585.74
1" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

0+20.54, 0.00T.
N 32919.61
E 89324.24
8" 11 1/4° BEND

MATCH LINE STA 5+00

RAW



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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2018
DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-11
May 20, 2020

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NOTES:

ALL WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

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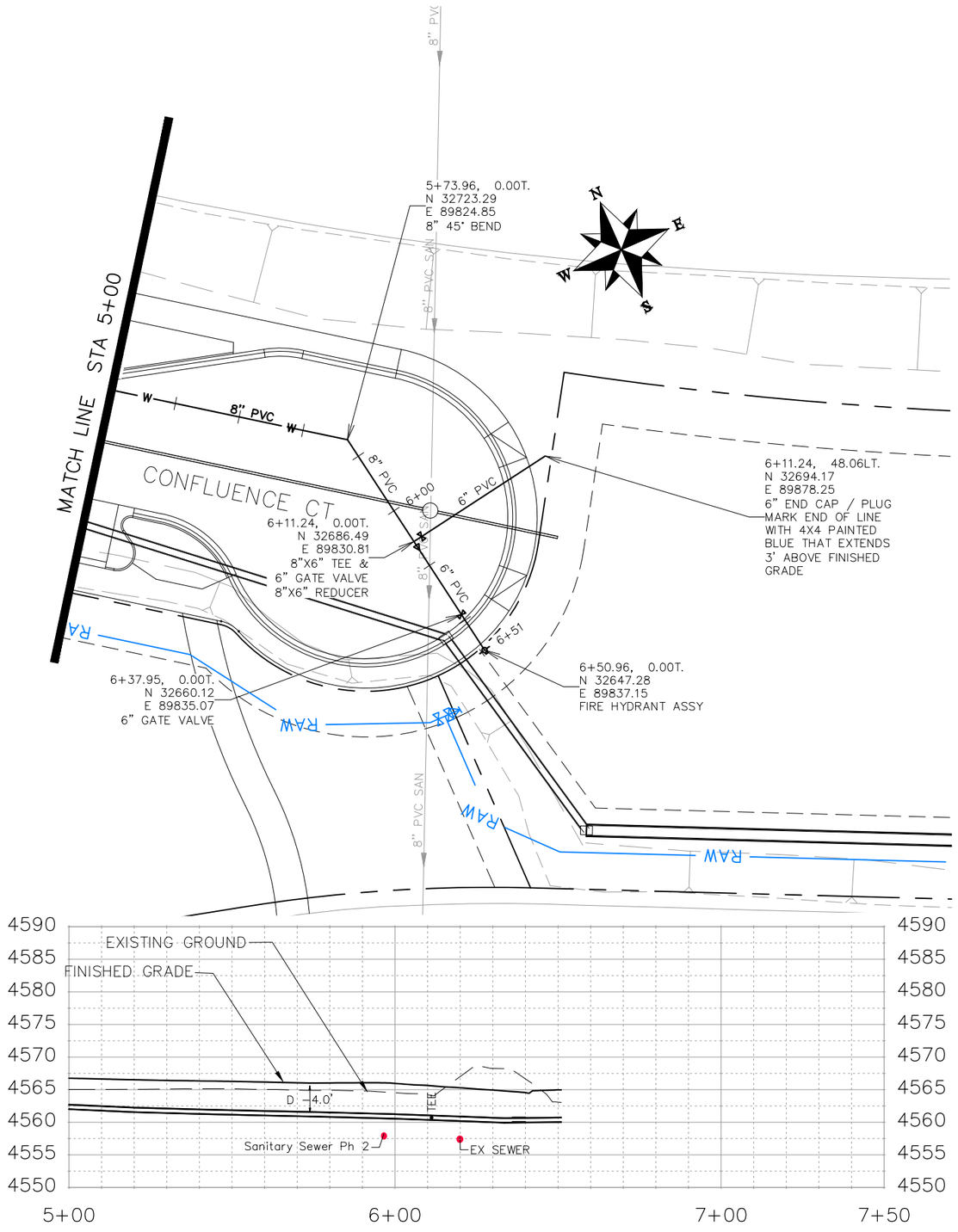
WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)



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DRAWN BY JCS DATE 2018
DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-12
May 20, 2020

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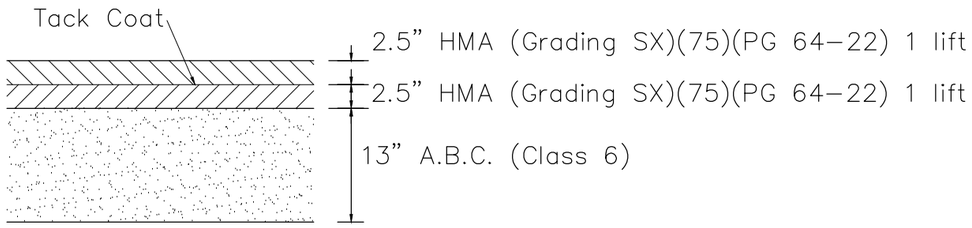
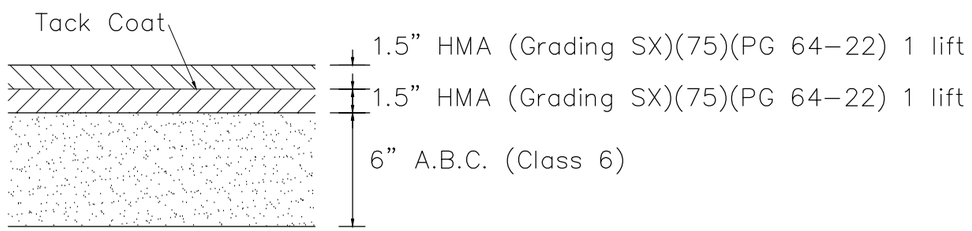
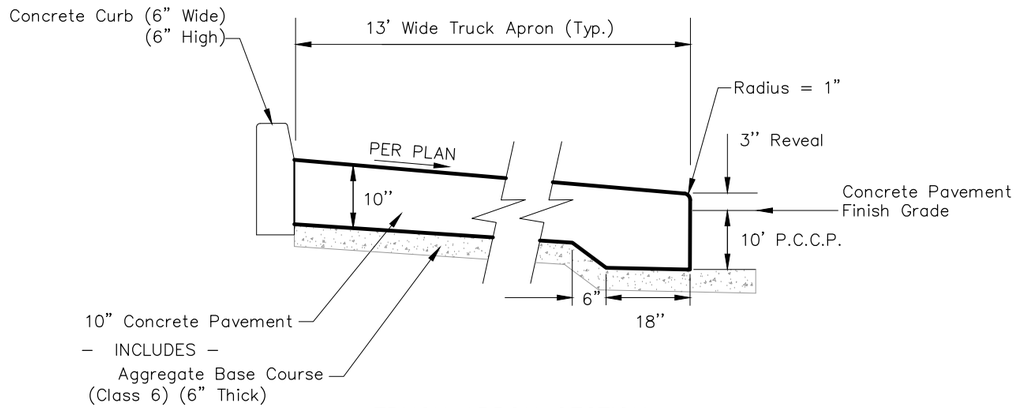


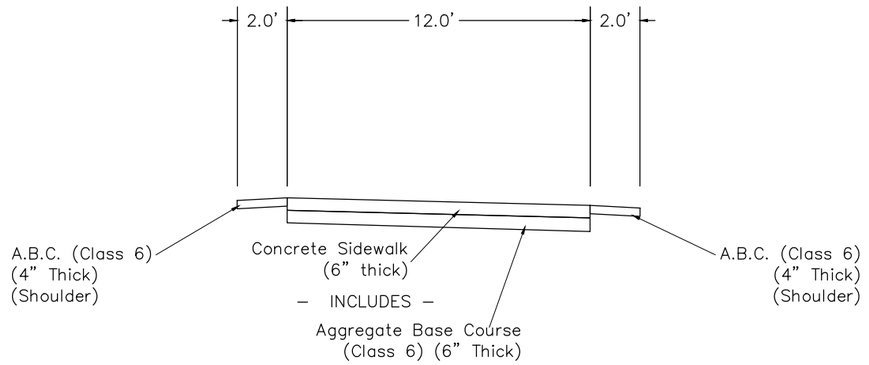
ROADWAY ASPHALT PAVEMENT DETAIL



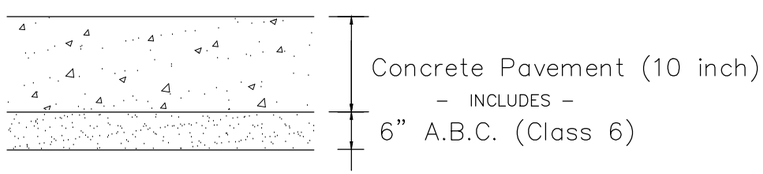
DRIVEWAY ASPHALT PAVEMENT DETAIL



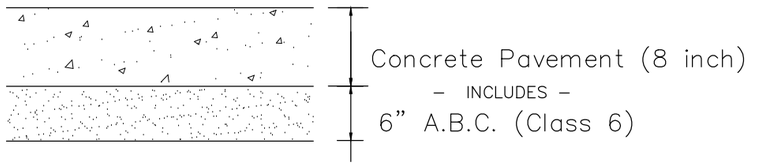
TRUCK APRON SECTION



COLORADO RIVER TRAIL SECTION



CONCRETE PAVEMENT SECTION (10" THICK) (ROUNDABOUT)



CONCRETE PAVEMENT SECTION (8" THICK) (ON STREET PARKING)

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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY TCP DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 NA NA NA
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
TYPICAL CROSS SECTIONS – 1
May 20, 2020

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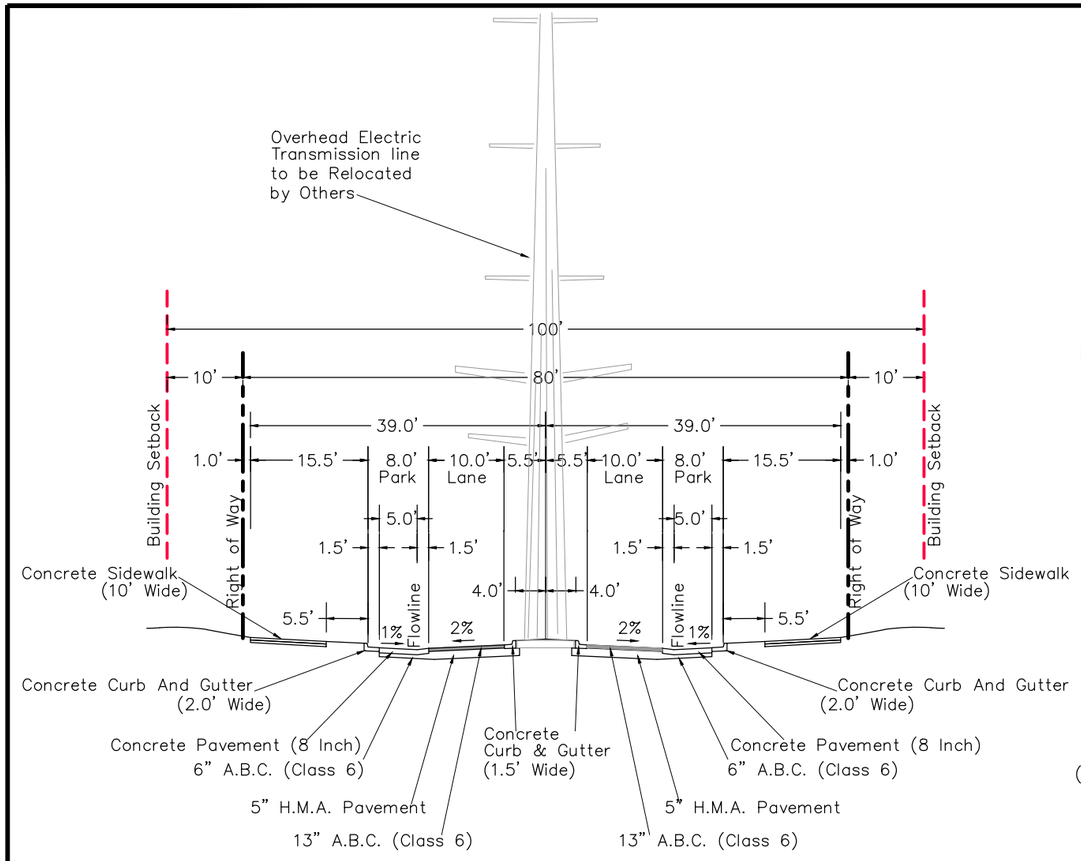
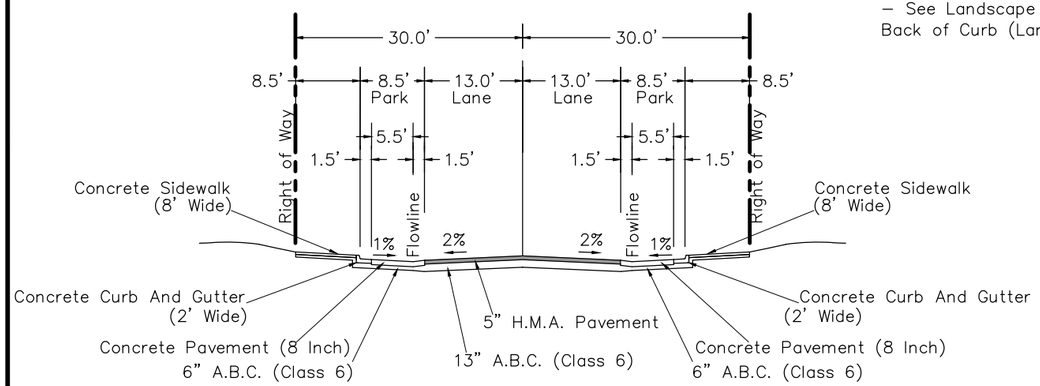
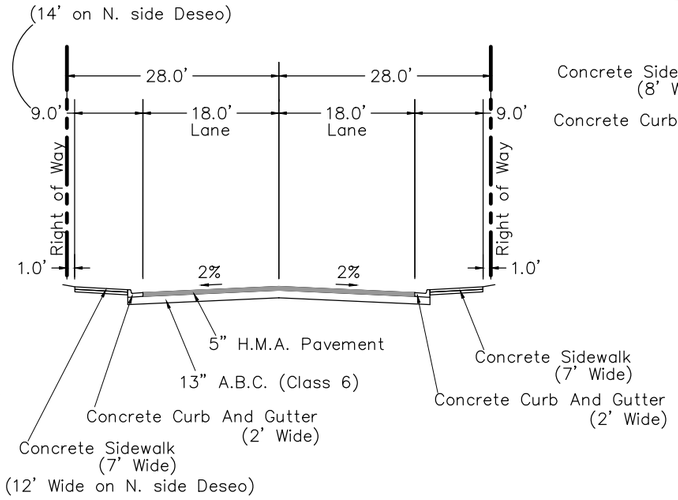


TYPICAL SECTION
HALE AVENUE FROM PARK TO RIVERSIDE PARKWAY



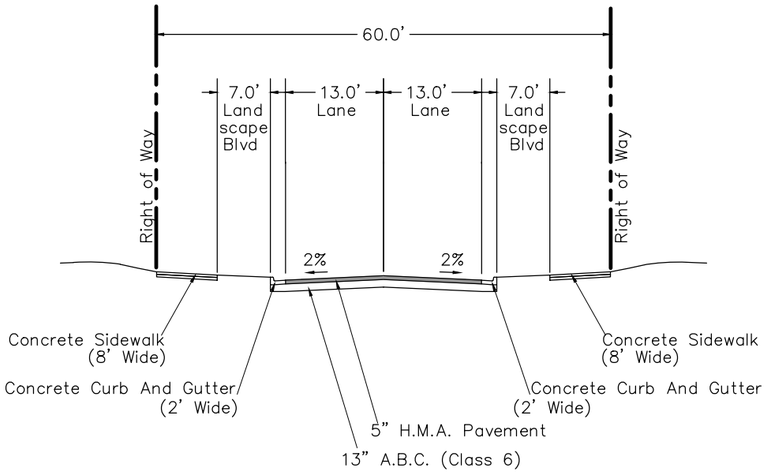
TYPICAL SECTION
LAWRENCE AVENUE FROM ROUNDABOUT TO HALE
DOS RIOS DR FROM ROUNDABOUT TO CONFLUENCE CT



TYPICAL SECTION
CALLE DEL RIO AND DESEO DRIVE

Notes:

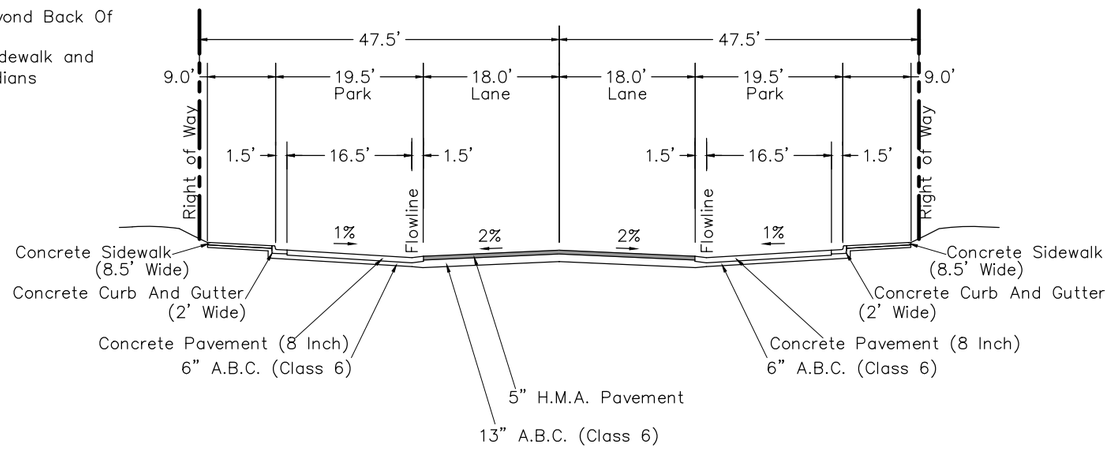
– Extend Full Pavement Base Section 6" Beyond Back Of Curbs (Typical)
– See Landscape Plans For Work Between Sidewalk and Back of Curb (Landscape Boulevard) and Medians



TYPICAL SECTION
ROCKAWAY AVE FROM HALE TO ROUNDABOUT

TYPICAL SECTION NOTES

STATIONING REFERENCE IS GENERAL – SEE PLANS FOR MORE INFO
P.C.C.P. ~ Portland Cement Concrete Pavement
H.MA. ~ Hot Mix Asphalt
A.B.C. ~ Aggregate Base Course



TYPICAL SECTION
CONFLUENCE CT

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
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REVISION △	–

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	TCP	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
TYPICAL CROSS SECTIONS – 2
May 20, 2020

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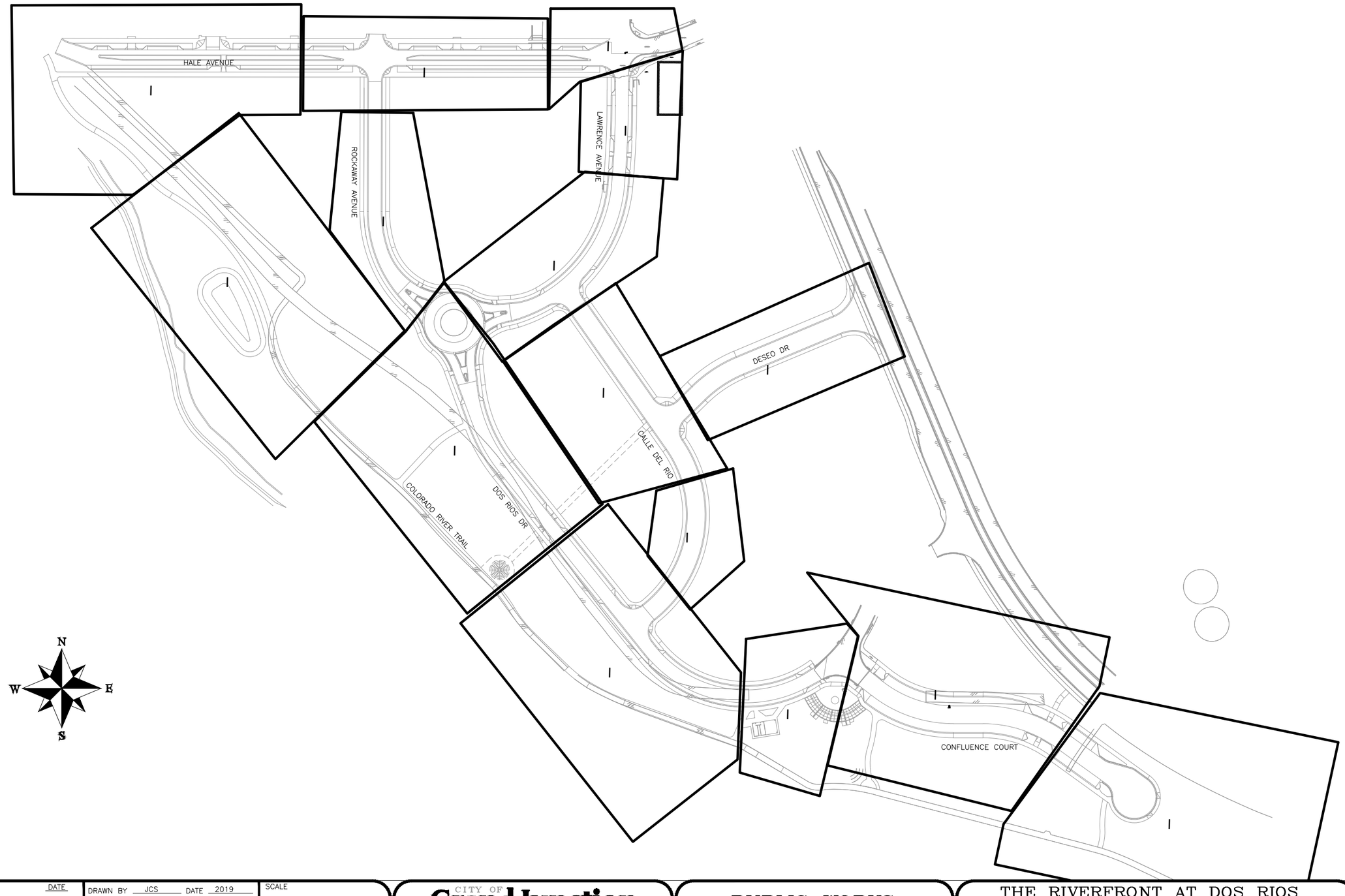

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REVISION △	–
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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN SHEET INDEX
May 20, 2020

110

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PARK AVE

CHULUOTA AVE

HALE AVE

MATCH LINE STA 5+00

CONCRETE SIDEWALK (6" THICK)

MATCH NEW TO EXISTING CURB AND GUTTER AT THIS POINT. NO SEPARATE PAY.

CONCRETE CURB AND GUTTER (2' WIDE)

CONCRETE CURB (6" WIDE) (6" HIGH)

CONCRETE CURB WITH SPILL GUTTER (2' WIDE) (SEE STAKING PLANS FOR GUTTER GRADES)

DRIVEWAY ASPHALT PAVEMENT

CONCRETE DRIVEWAY SECTION (8" THICK) (COMMERCIAL)

~LANDSCAPE~

CONCRETE PAVEMENT (8" THICK)

CONCRETE CURB RAMP (8" THICK)

DETECTABLE WARNING IN ACCORDANCE WITH ADA

~CONCRETE SIDEWALK (6" THICK)~

~ROADWAY ASPHALT PAVEMENT~

CONCRETE V-PAN (8" THICK) (6' WIDE

CONCRETE CORNER FILLET (8" THICK)

~ROADWAY ASPHALT PAVEMENT~

CONCRETE CURB WITH SPILL GUTTER (1.5' WIDE)

230 KV ELECTRIC TRANSMISSION LINE (BY OTHERS)

HVOHP

CONCRETE BULLNOSE END SECTION (8" THICK) (SEE STAKING PLANS FOR GRADE TRANSITION FROM 0" HT. TO 6" HT.)

CONCRETE SIDEWALK (6" THICK)

0+00

1+00

2+00

3+00

4+00

MON WELL 12

NOTES:

1. SEE TYPICAL CROSS SECTIONS FOR MORE INFORMATION REGARDING ROADWAY CONSTRUCTION AND PAVEMENT COMPOSITION.
2. SEE STAKING PLAN FOR LOCATION OF ALL IMPROVEMENTS.
3. CONCRETE CURB, GUTTER, V-PAN, SIDEWALK, DRIVEWAY, CURB RAMP, CORNER FILLET, CONCRETE PAVEMENT FOR ON STREET PARKING & ROUNDABOUT ETC. SHALL INCLUDE CLASS 6 AGGREGATE BASE COURSE AS SPECIFIED IN CITY STANDARDS AND THERE WILL BE NO SEPARATE PAY.
4. ASPHALT PAVEMENT SHALL HAVE BASE COURSE AS SPECIFIED ON THE TYPICAL CROSS SECTIONS. ALL BASE BENEATH PAVEMENT WILL BE QUANTIFIED AND PAID FOR SEPARATELY FROM THE PAVEMENT.

DESCRIPTION	DATE
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REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
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APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I-1
May 20, 2020

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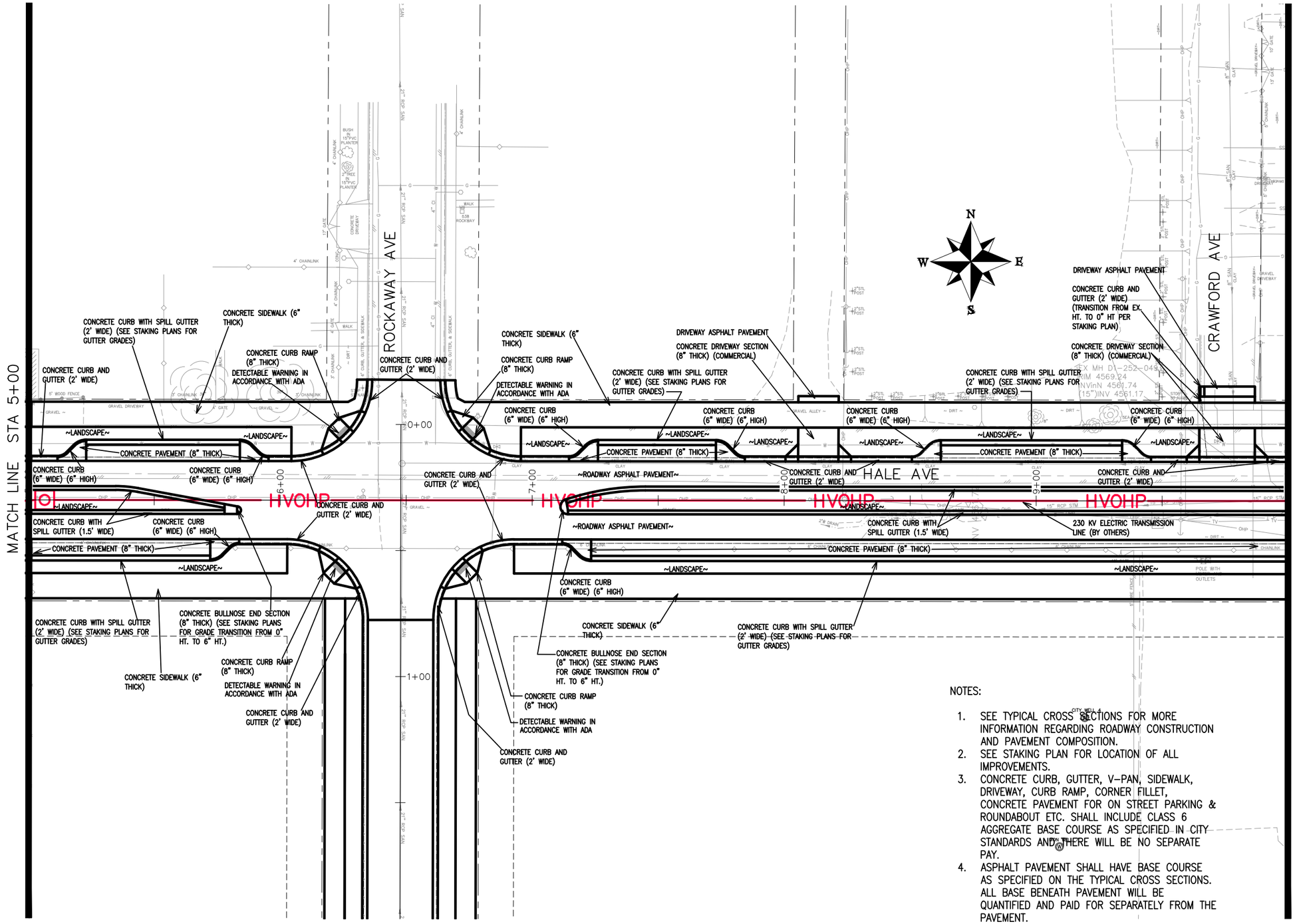

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DRAWN BY JCS DATE 2019
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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

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CITY OF Grand Junction COLORADO

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ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I-2
May 20, 2020

112

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NOTES:

1. SEE TYPICAL CROSS SECTIONS FOR MORE INFORMATION REGARDING ROADWAY CONSTRUCTION AND PAVEMENT COMPOSITION.
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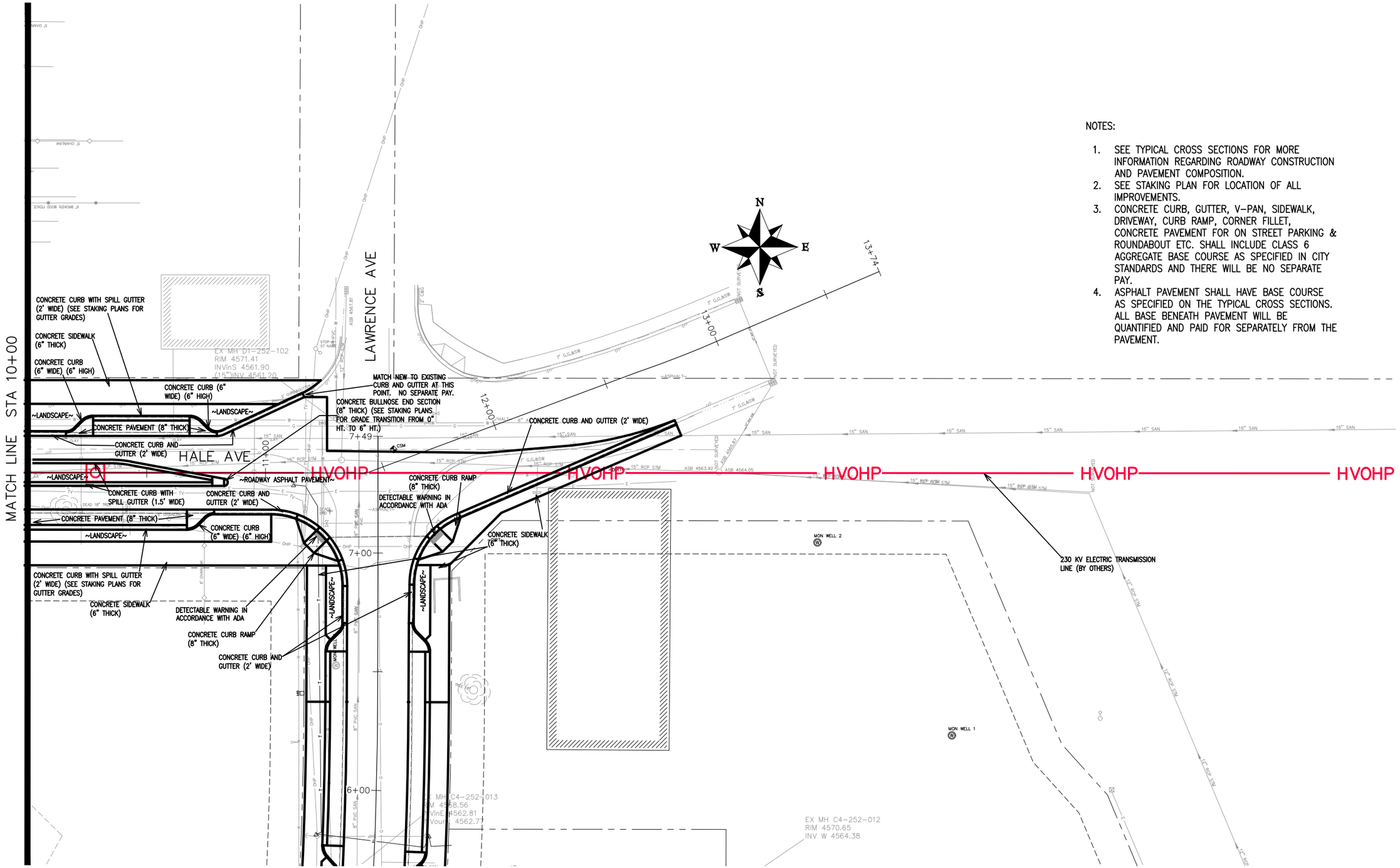

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I-3
May 20, 2020

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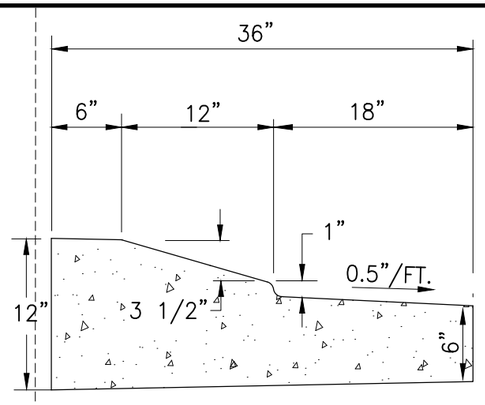
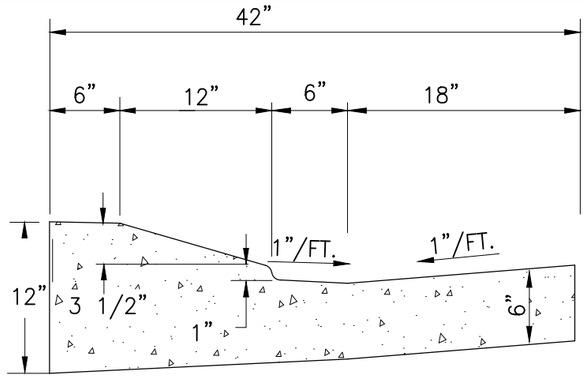


ROUNDABOUT SPLITTER ISLAND
CURB AND GUTTERS – LEG SIDES



ROUNDABOUT SPLITTER ISLAND
CURB GUTTERS VPAN INTERFACE
AT ROUNDABOUT VPAN RING

NOTES:

1. SEE TYPICAL CROSS SECTIONS FOR MORE INFORMATION REGARDING ROADWAY CONSTRUCTION AND PAVEMENT COMPOSITION.
2. SEE STAKING PLAN FOR LOCATION OF ALL IMPROVEMENTS.
3. CONCRETE CURB, GUTTER, V-PAN, SIDEWALK, DRIVEWAY, CURB RAMP, CORNER FILLET, CONCRETE PAVEMENT FOR ON STREET PARKING & ROUNDABOUT ETC. SHALL INCLUDE CLASS 6 AGGREGATE BASE COURSE AS SPECIFIED IN CITY STANDARDS AND THERE WILL BE NO SEPARATE PAY.
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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–4
May 20, 2020

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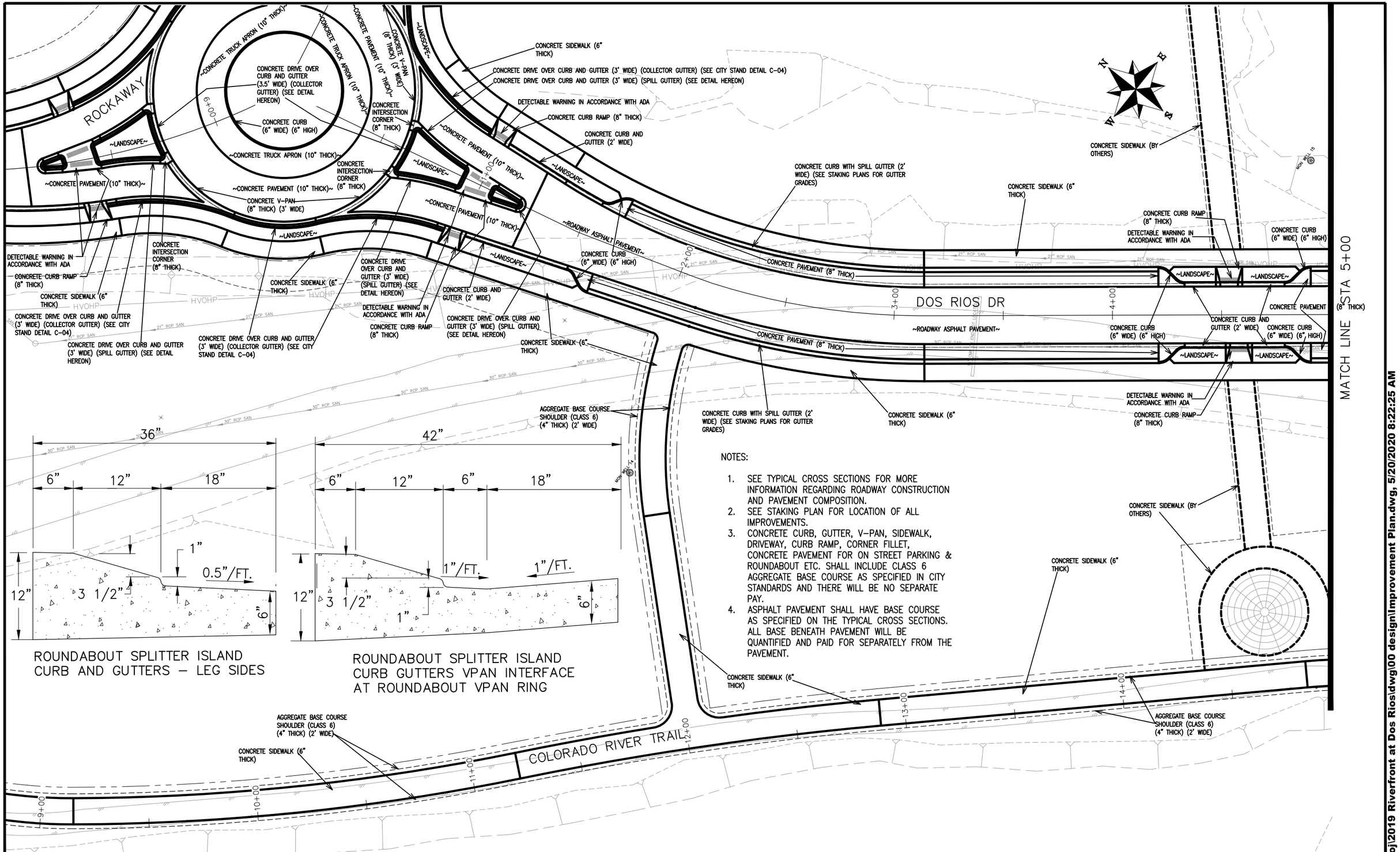

ROUNDABOUT SPLITTER ISLAND
CURB AND GUTTERS – LEG SIDES

ROUNDABOUT SPLITTER ISLAND
CURB GUTTERS VPAN INTERFACE
AT ROUNDABOUT VPAN RING

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I-5
May 20, 2020

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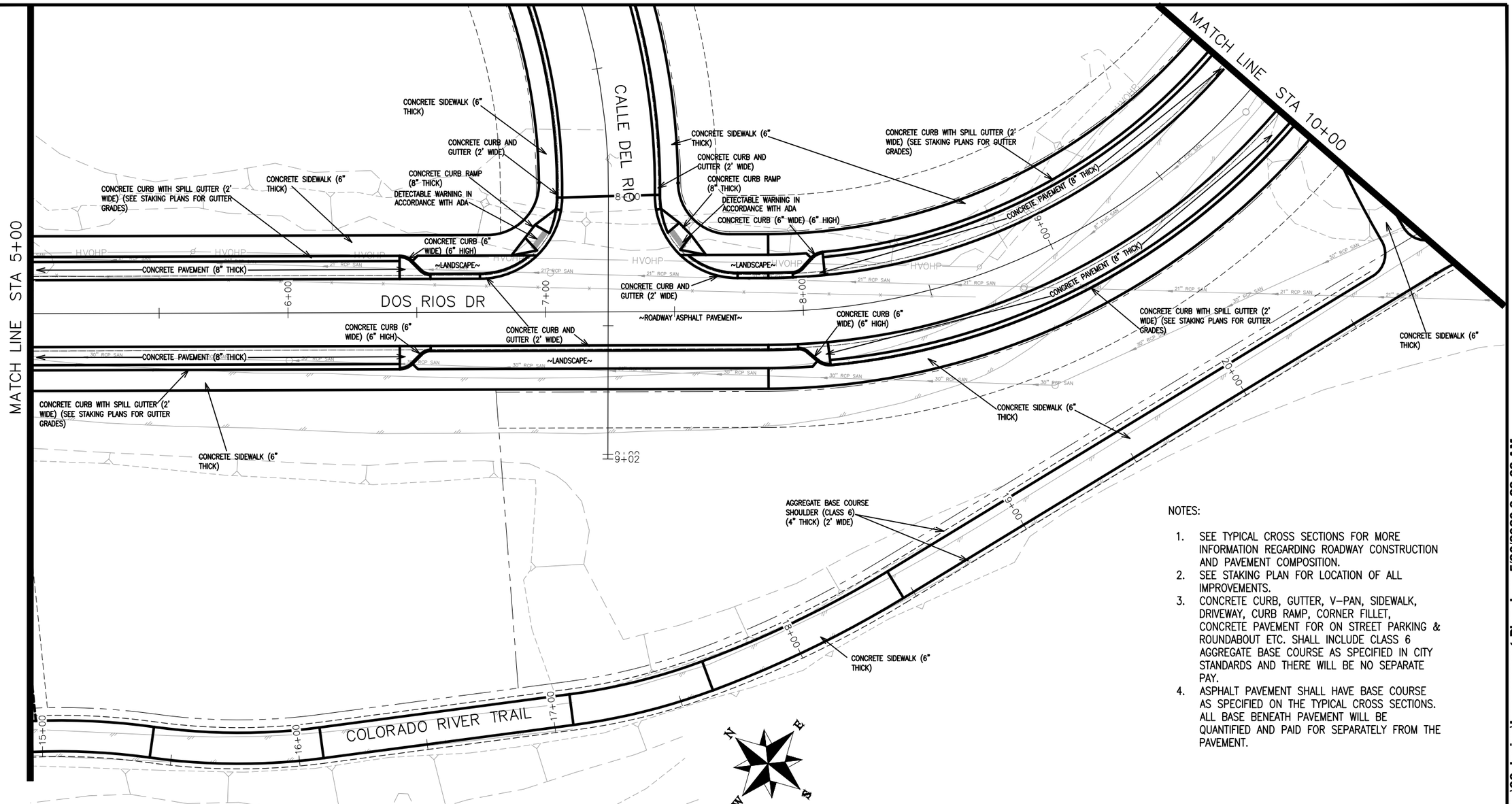

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
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VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–6
May 20, 2020

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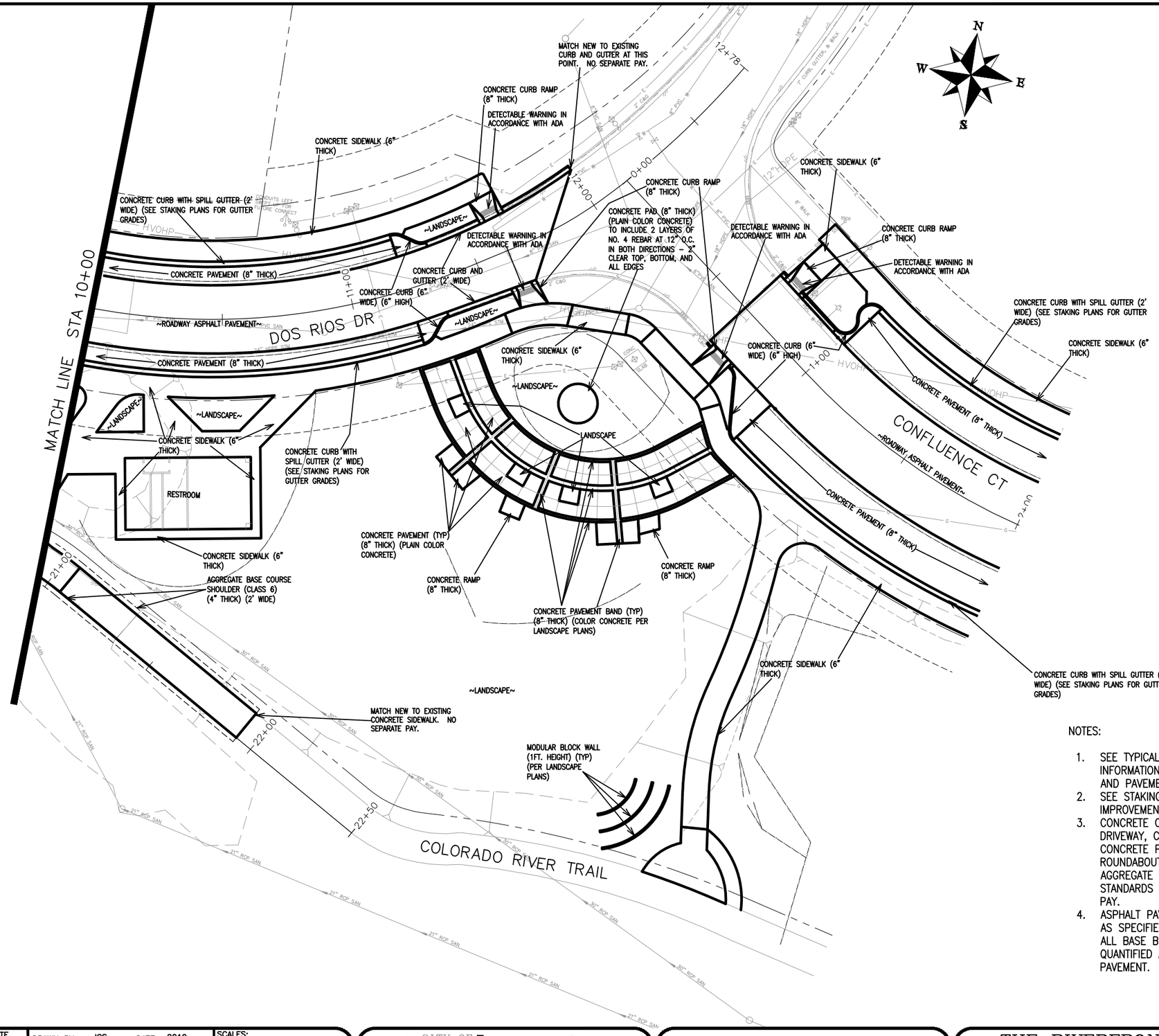

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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–7
May 20, 2020

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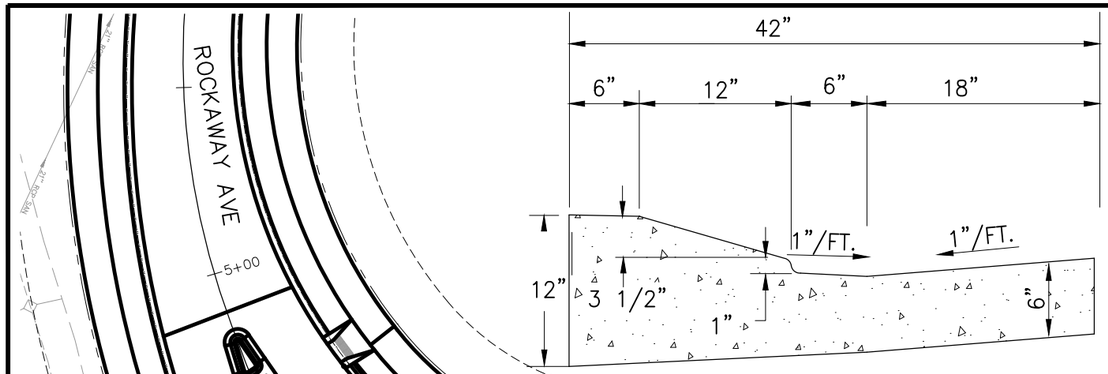
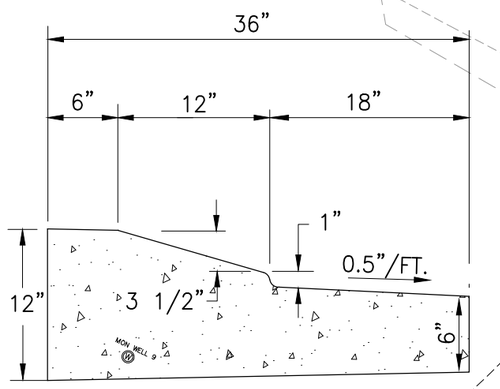


ROUNDABOUT SPLITTER ISLAND
CURB GUTTERS VPAN INTERFACE
AT ROUNDABOUT VPAN RING



ROUNDABOUT SPLITTER ISLAND
CURB AND GUTTERS – LEG SIDES

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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–8
May 20, 2020

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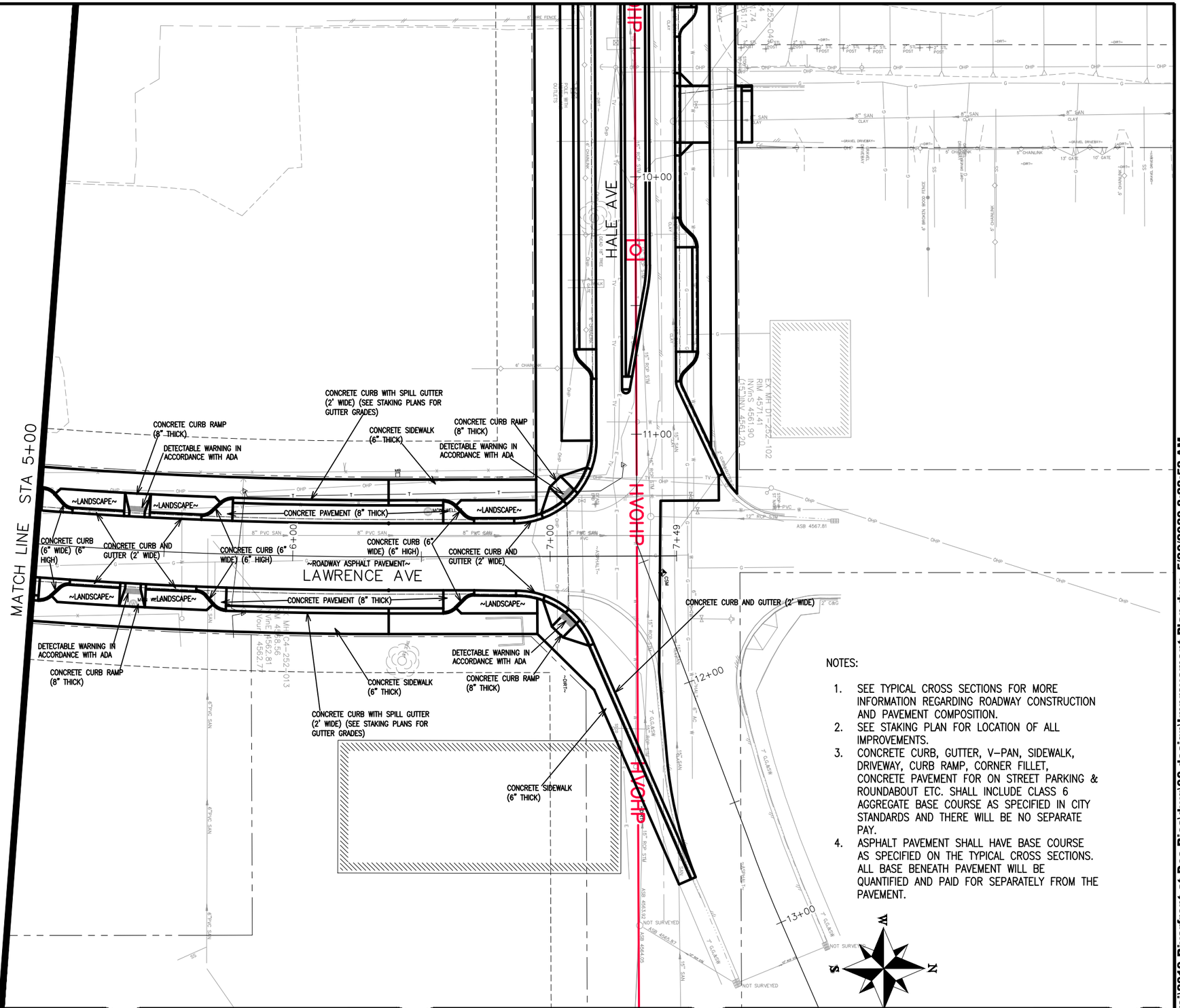

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APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I-9
May 20, 2020

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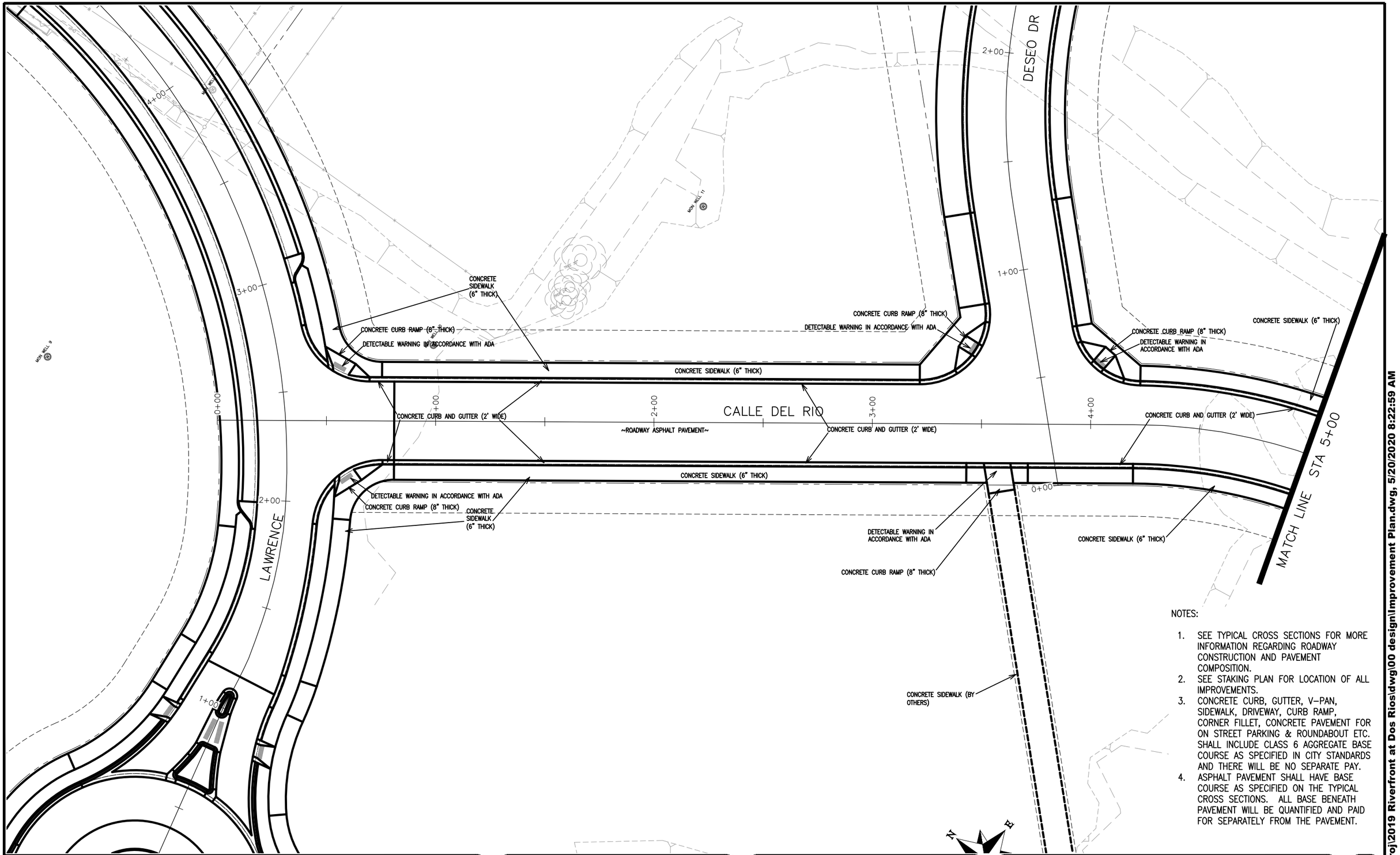

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE
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VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–10
May 20, 2020

120

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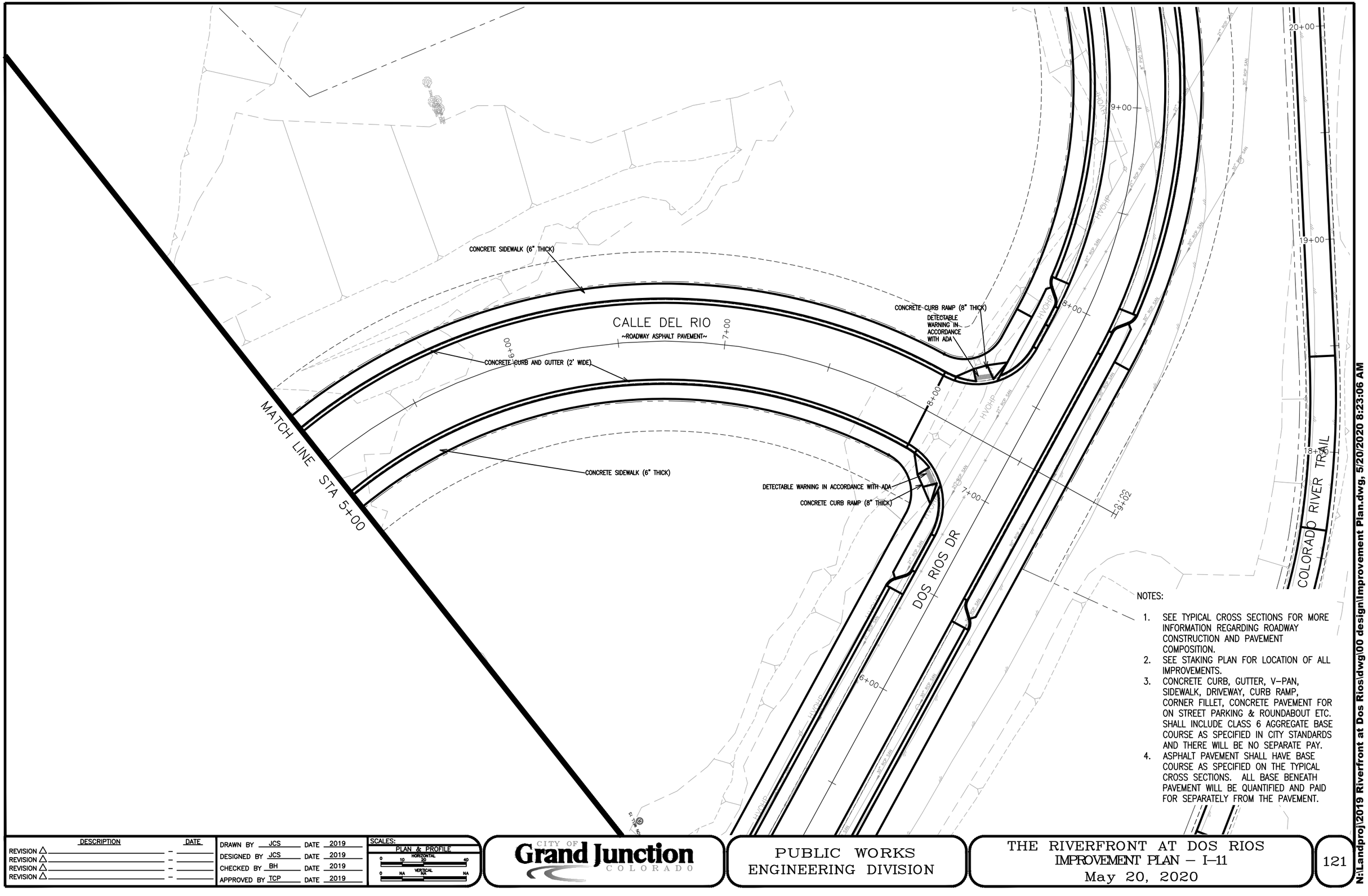

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APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–11
May 20, 2020

121

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CALLE DEL RIO

2+00

3+00

4+00

5+00

MON. WELL 11

CITY WELL 3

CONCRETE CURB RAMP (8" THICK)

DETECTABLE WARNING IN ACCORDANCE WITH ADA

CONCRETE SIDEWALK (6" THICK)

CONCRETE SIDEWALK (6" THICK)

CONCRETE CURB RAMP (8" THICK)

DETECTABLE WARNING IN ACCORDANCE WITH ADA

CONCRETE SIDEWALK (6" THICK)

CONCRETE CURB AND GUTTER (2' WIDE)

1+00

2+00

3+00

4+00

5+00

DESEO DR

~ROADWAY ASPHALT PAVEMENT~

CONCRETE CURB AND GUTTER (2' WIDE)

RIVERSIDE PARKWAY

CONCRETE SIDEWALK (6" THICK)

DETECTABLE WARNING IN ACCORDANCE WITH ADA

CONCRETE CURB RAMP (8" THICK)

CONCRETE SIDEWALK (6" THICK)

CONCRETE SIDEWALK (6" THICK)

DETECTABLE WARNING IN ACCORDANCE WITH ADA

CONCRETE CURB RAMP (8" THICK)

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APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–12
May 20, 2020

122

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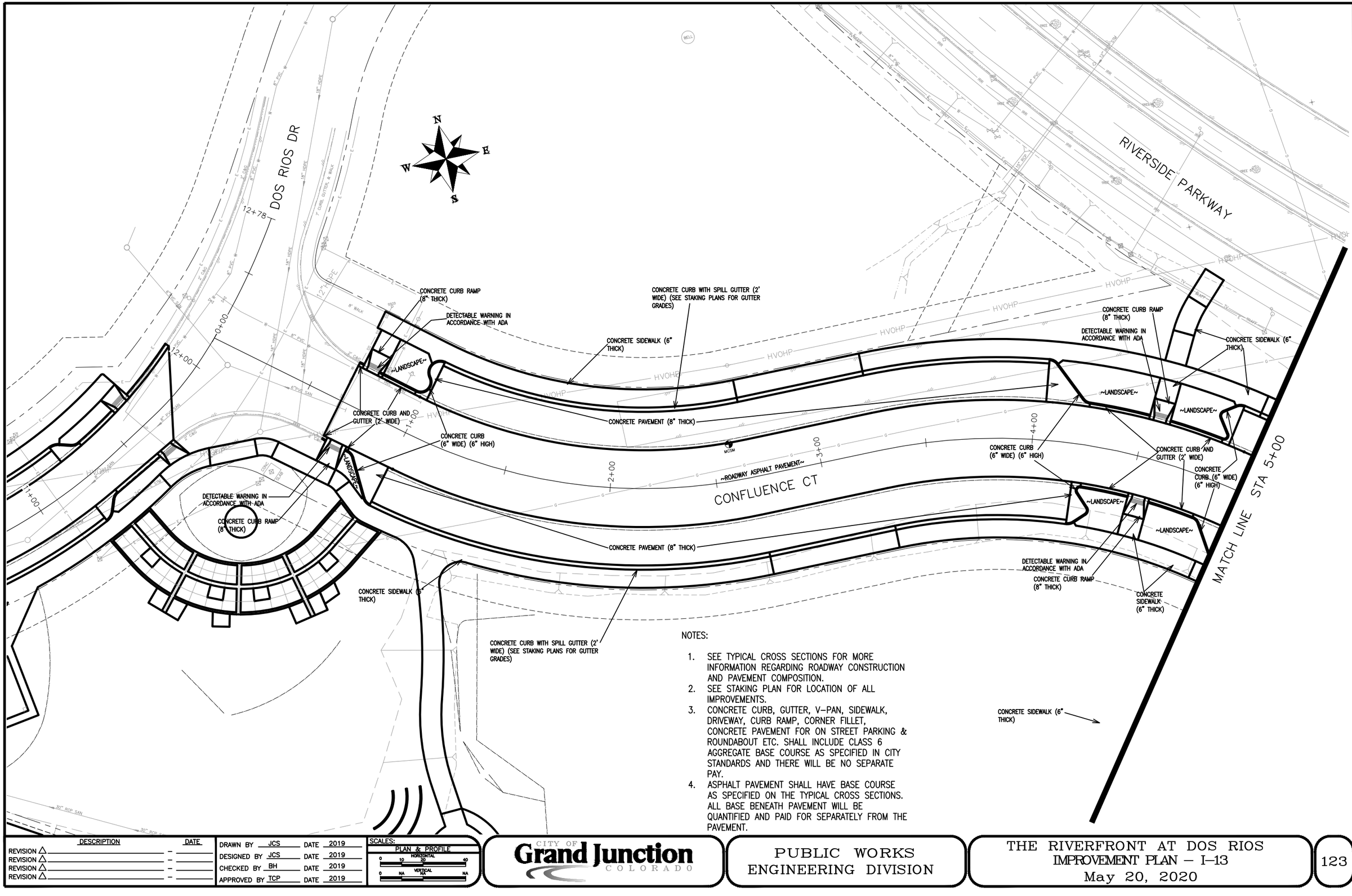

NOTES:

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–13
May 20, 2020

123

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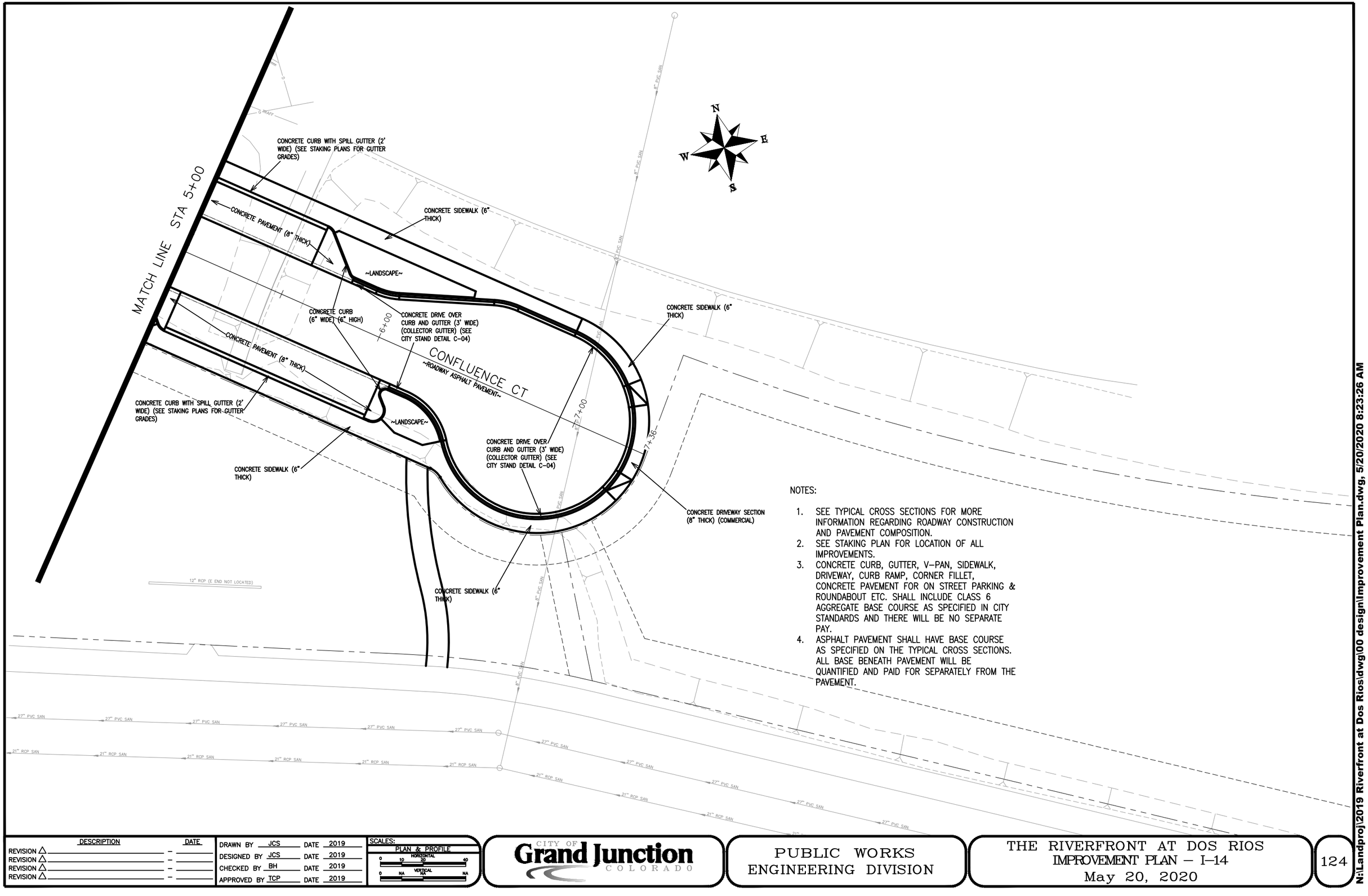

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I-14
May 20, 2020

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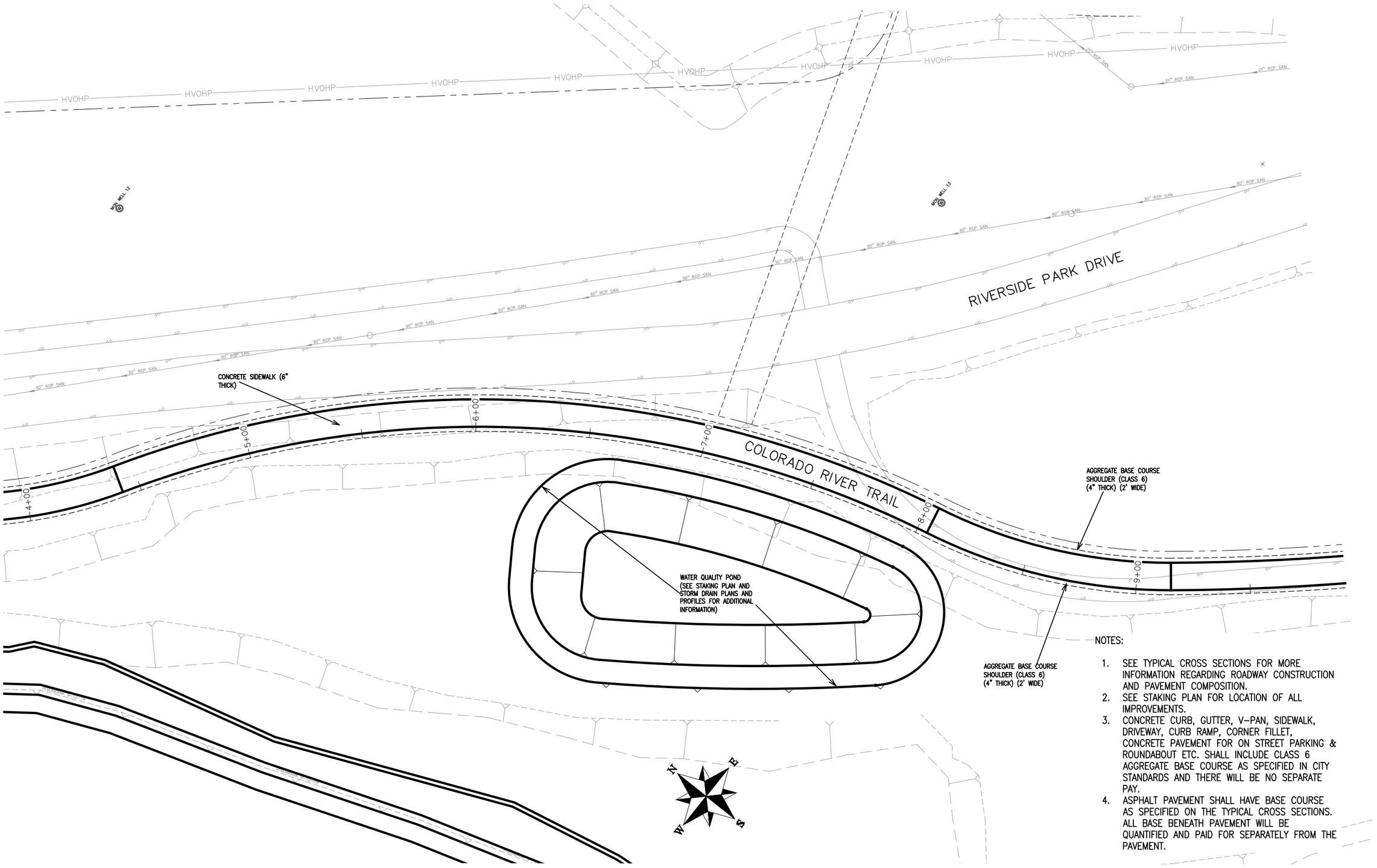

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SCALES:
PLAN & PROFILE
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VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–15
May 20, 2020

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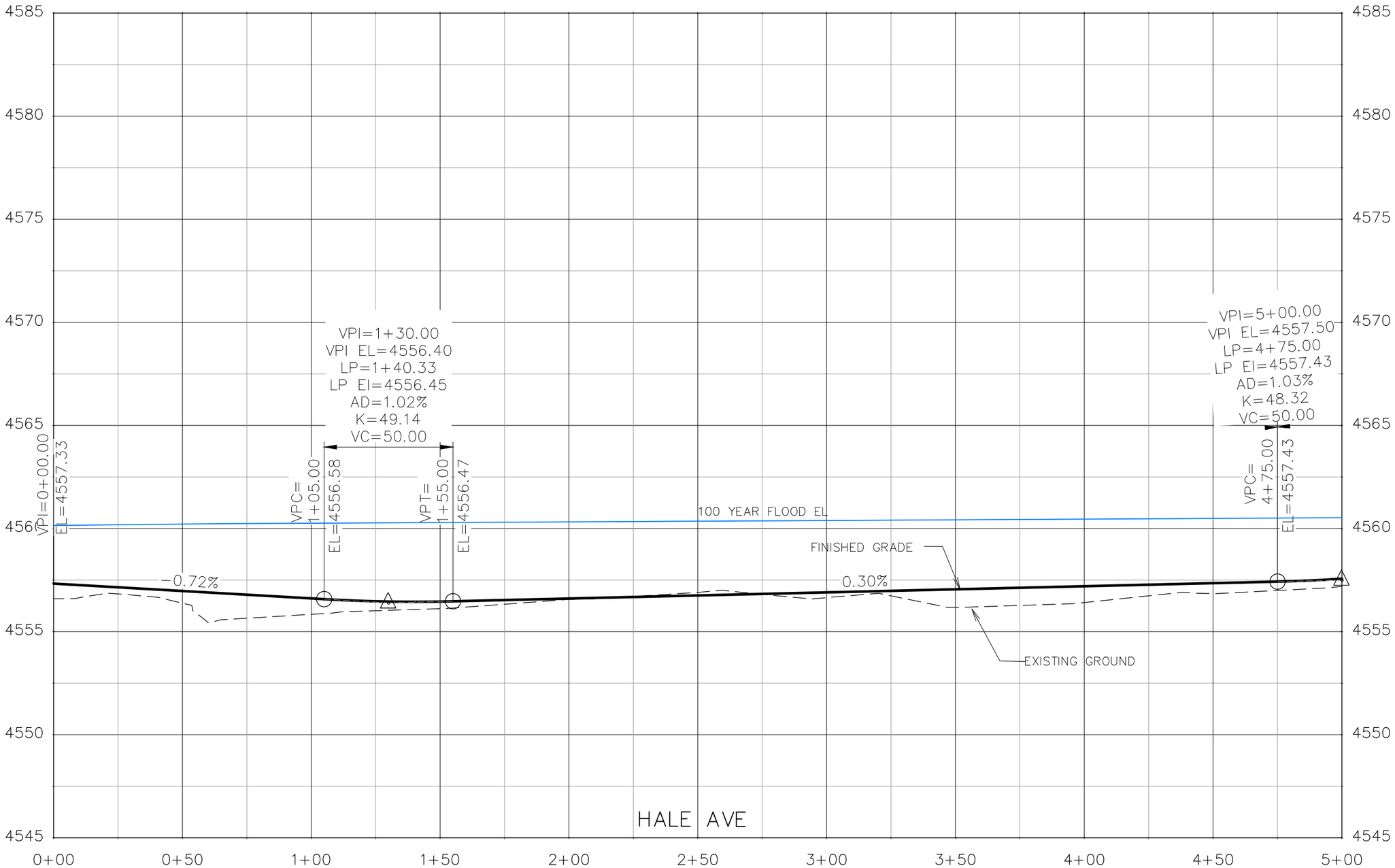

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (1)
May 20, 2020

126

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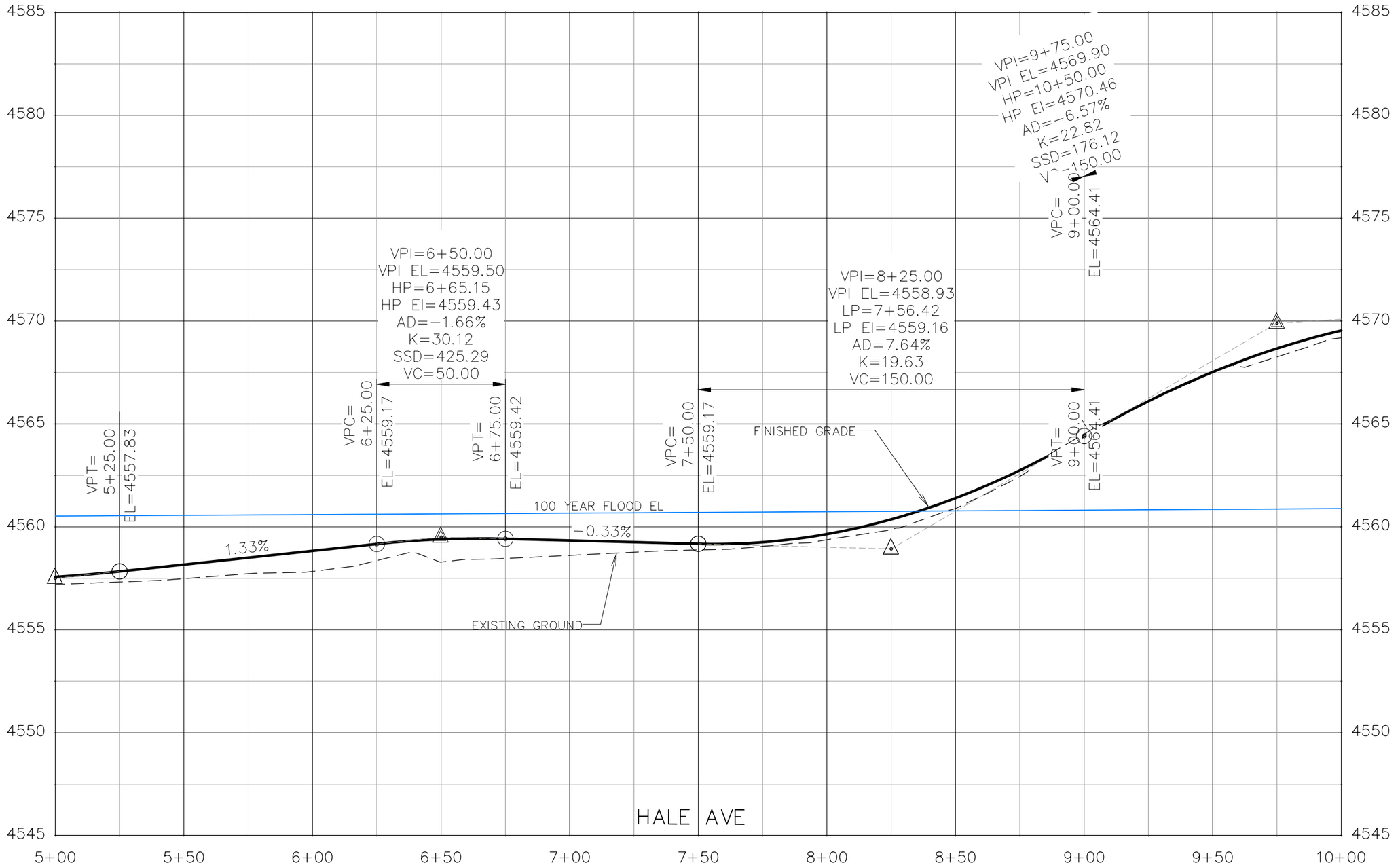

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (2)
May 20, 2020

127

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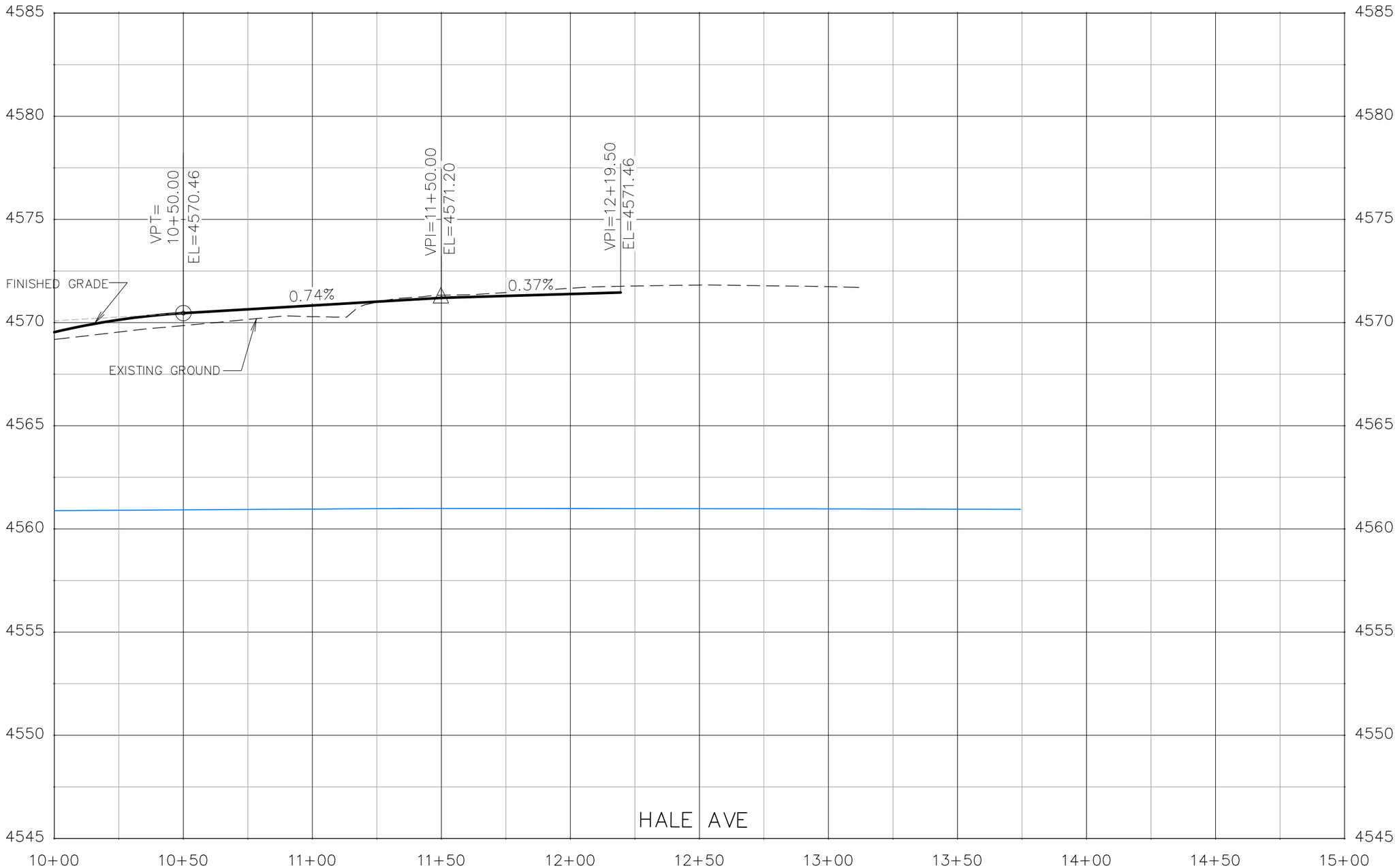

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (3)
May 20, 2020

128

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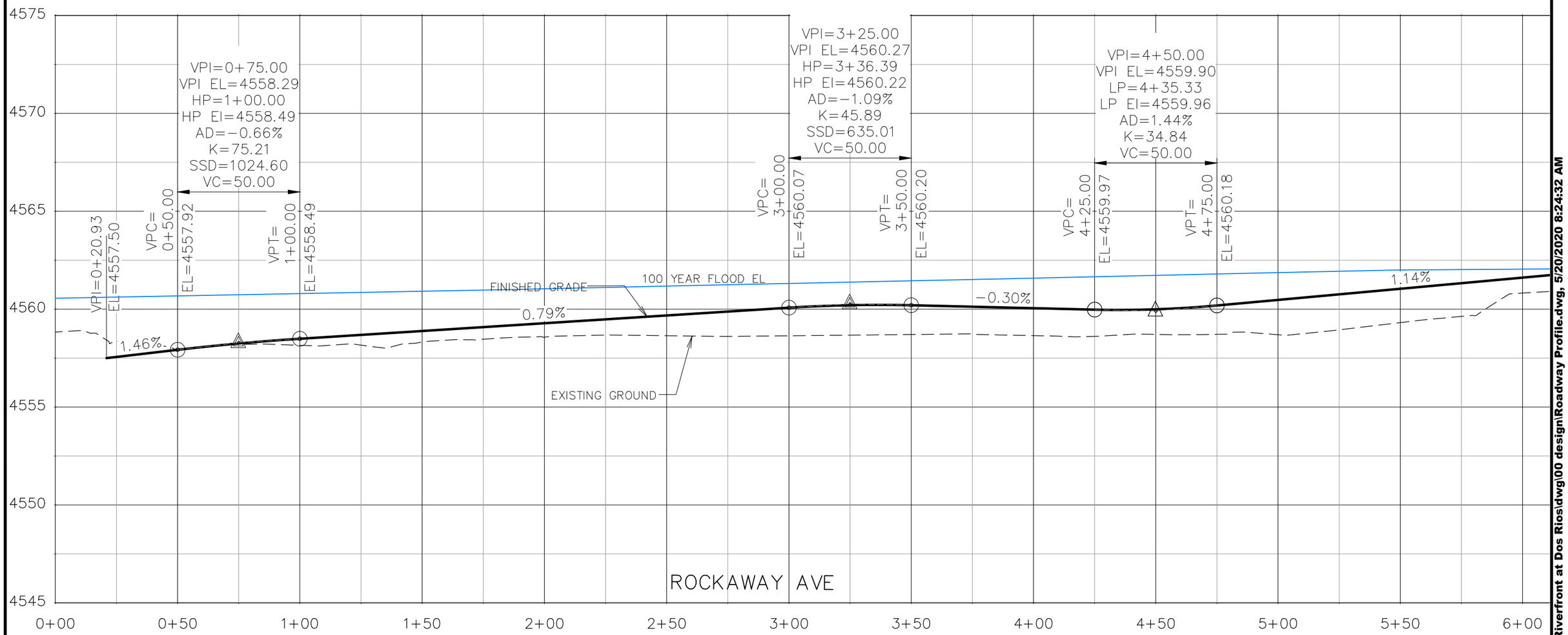

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REVISION △	

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (4)
May 20, 2020

129

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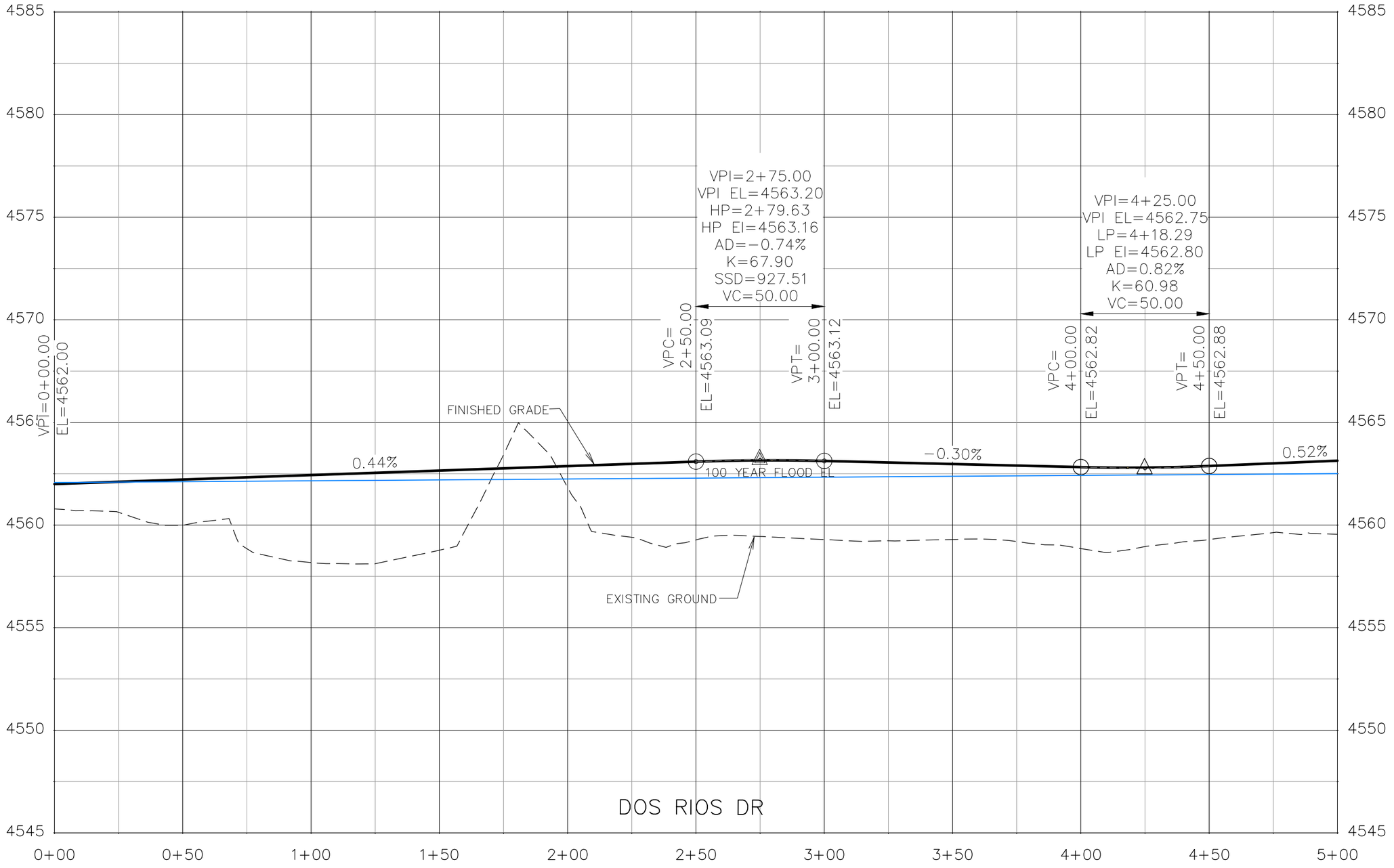

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (5)
May 20, 2020

130

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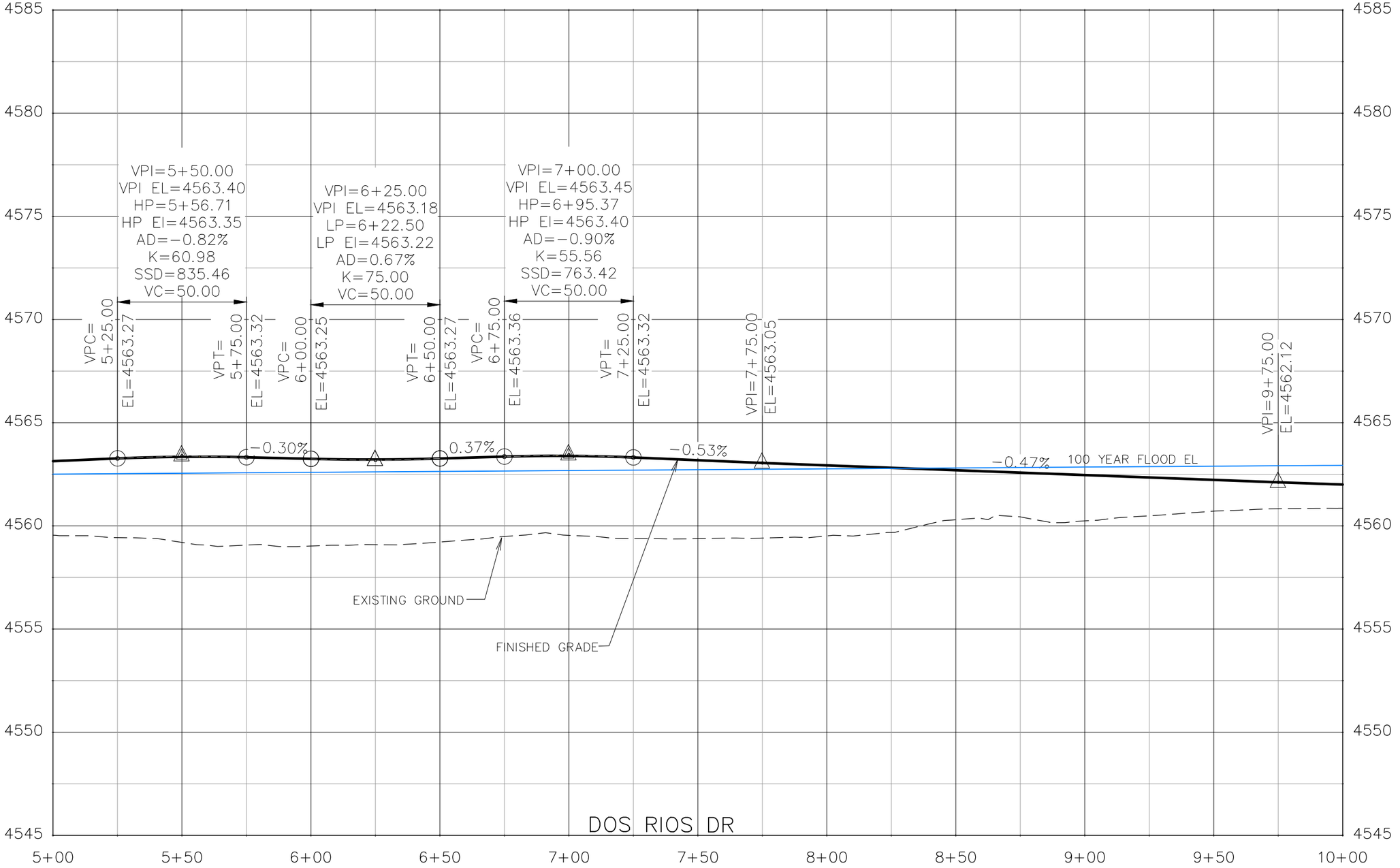

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (6)
May 20, 2020

131

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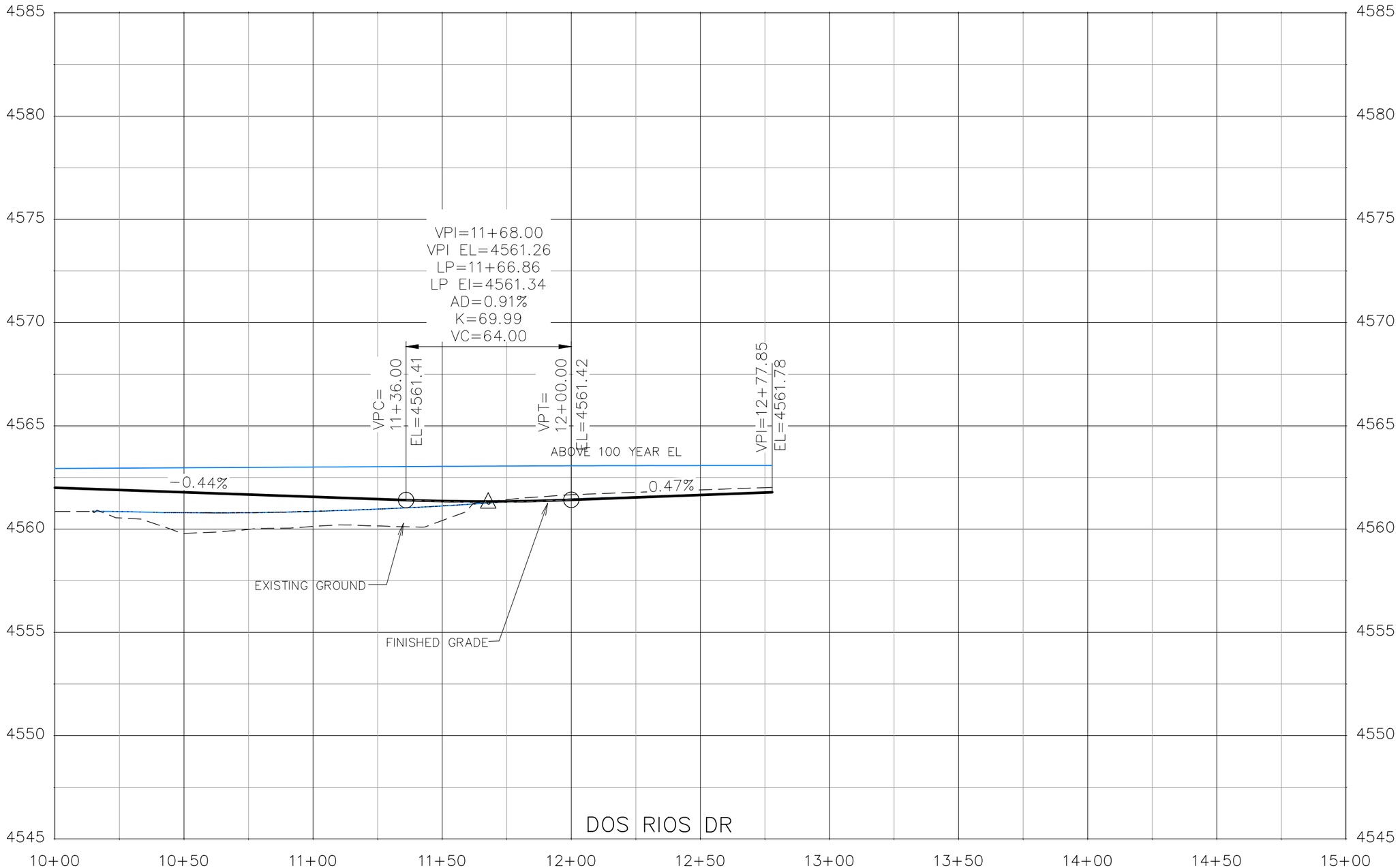

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REVISION △	–
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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (7)
May 20, 2020

132

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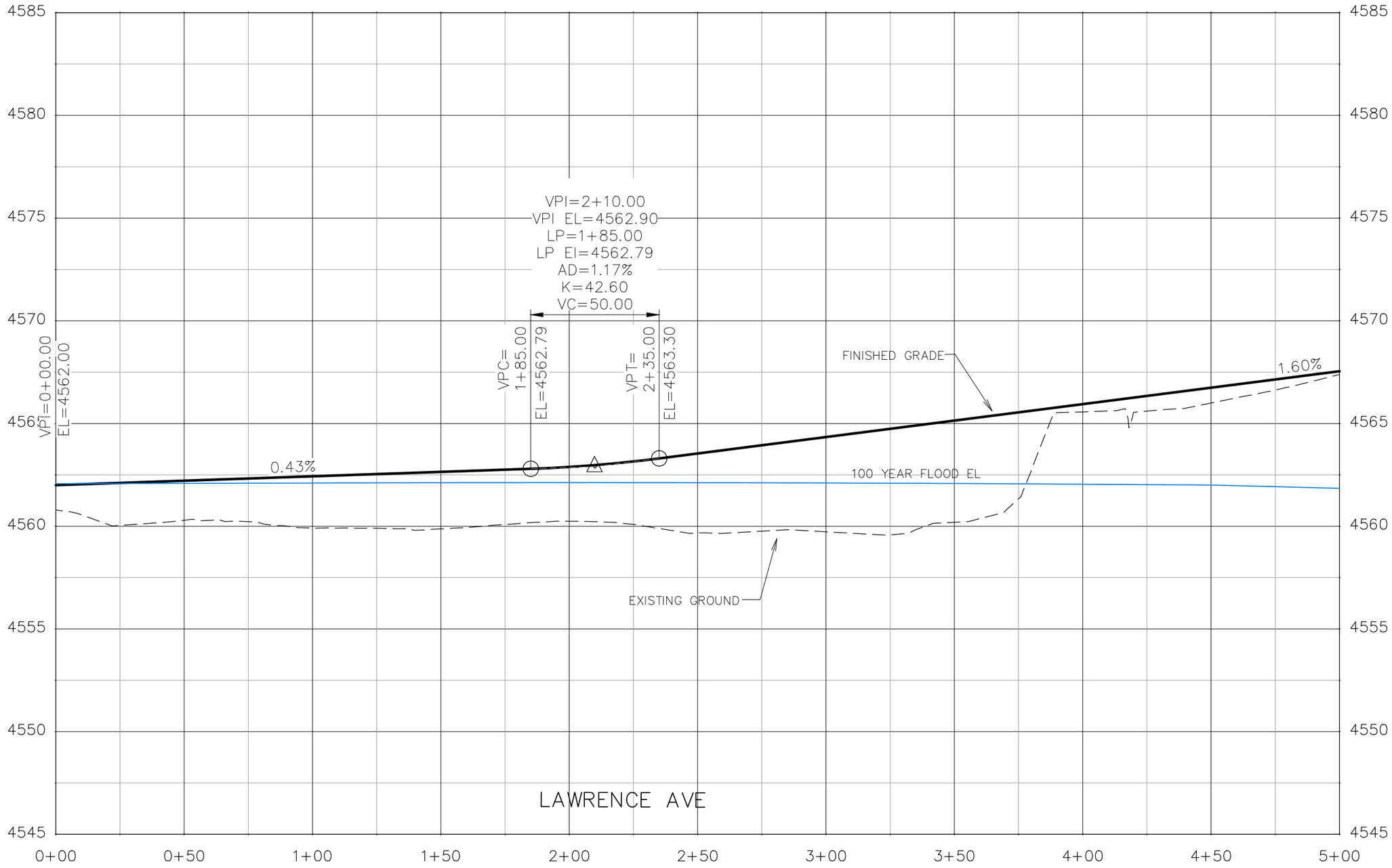

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (8)
May 20, 2020

133

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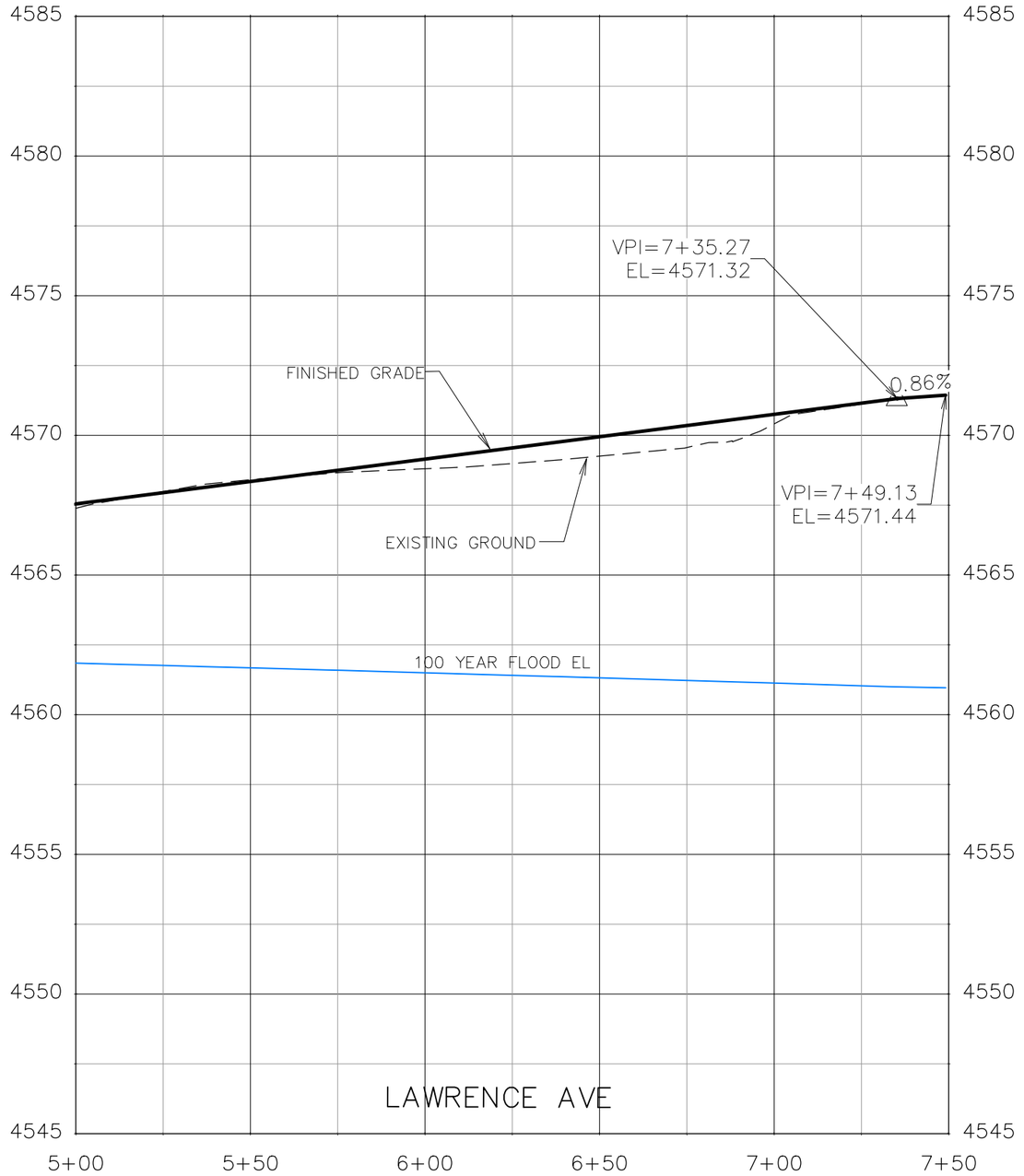

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (9)
May 20, 2020

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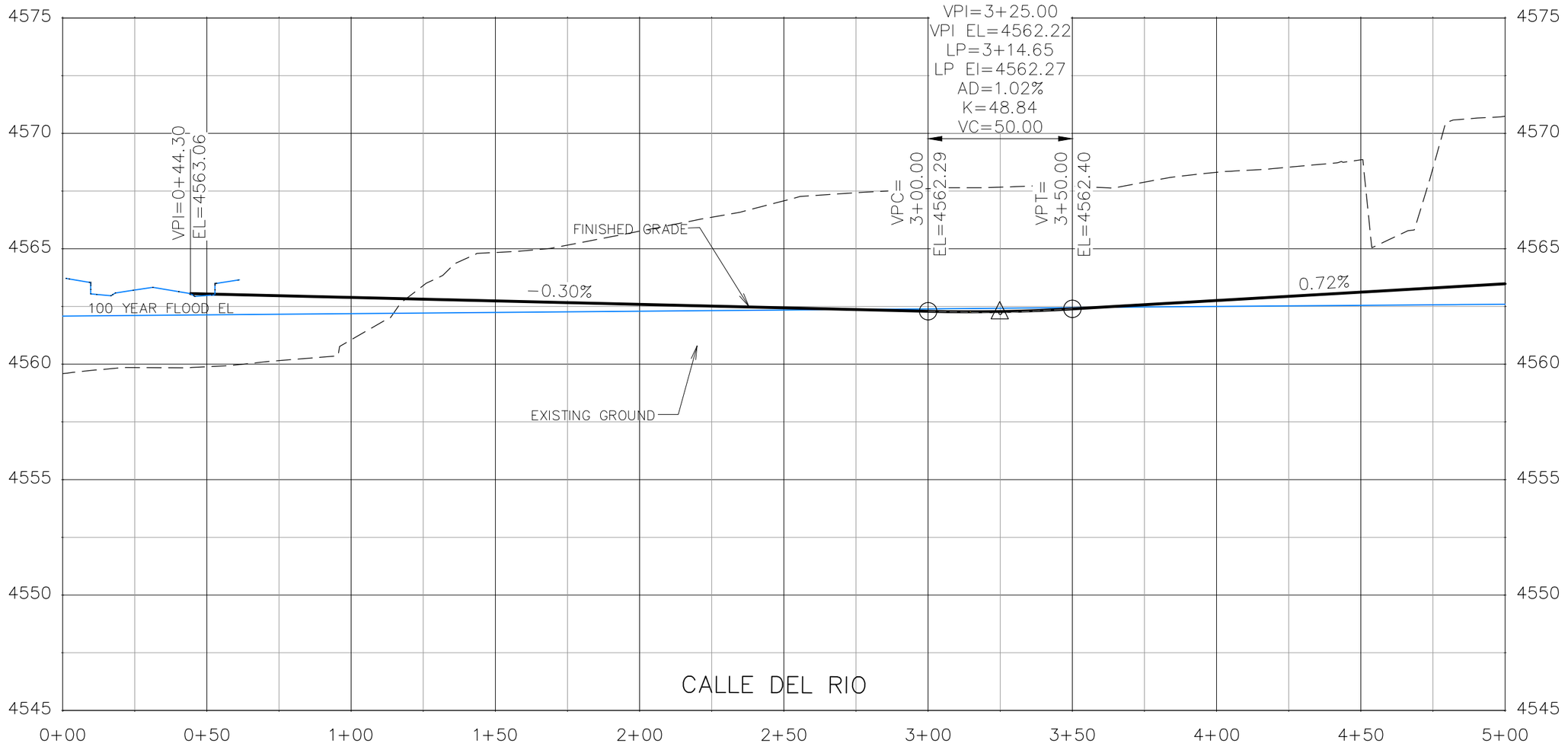

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (10)
May 20, 2020

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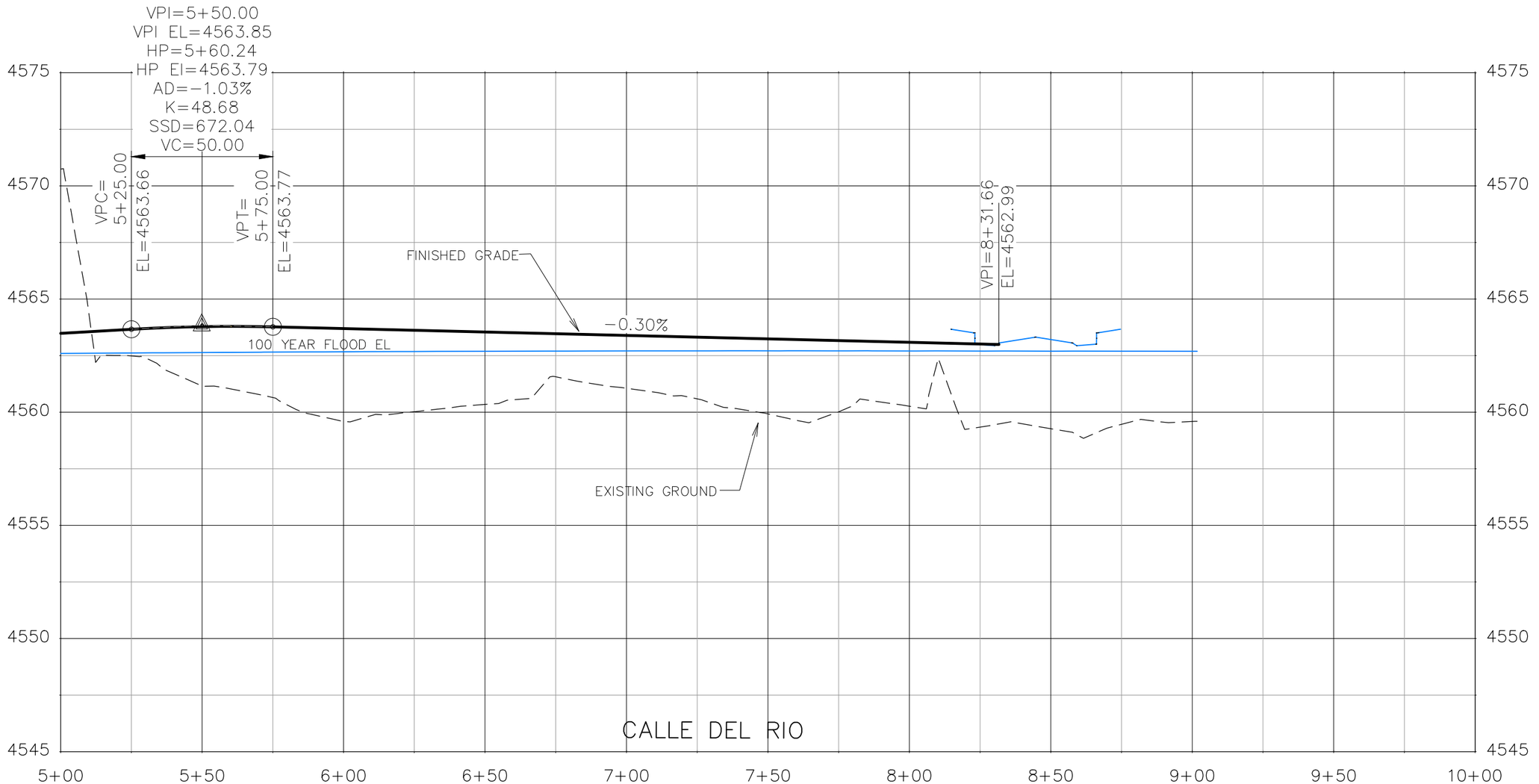

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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (11)
May 20, 2020

136

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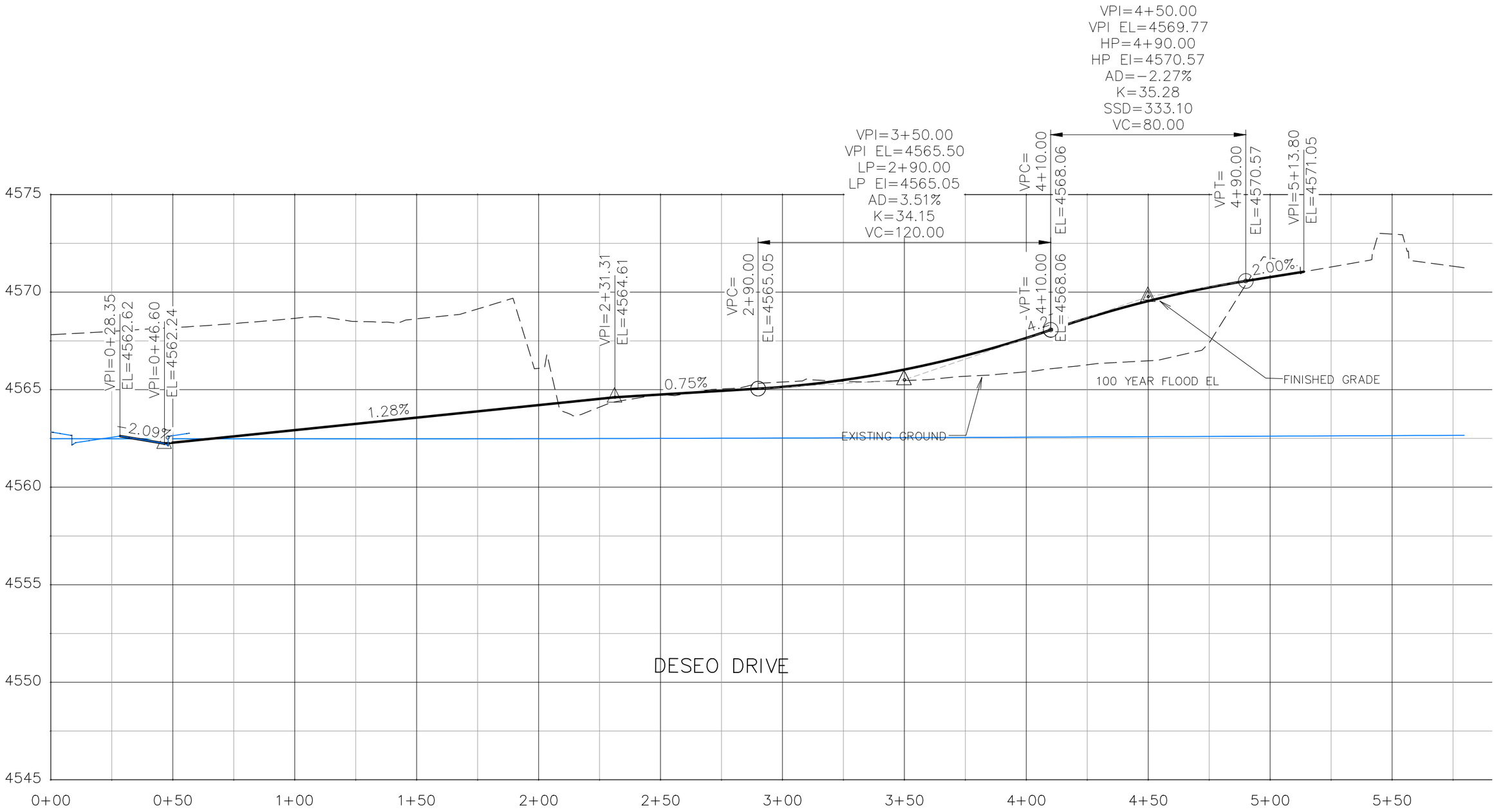

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (12)
May 20, 2020

137

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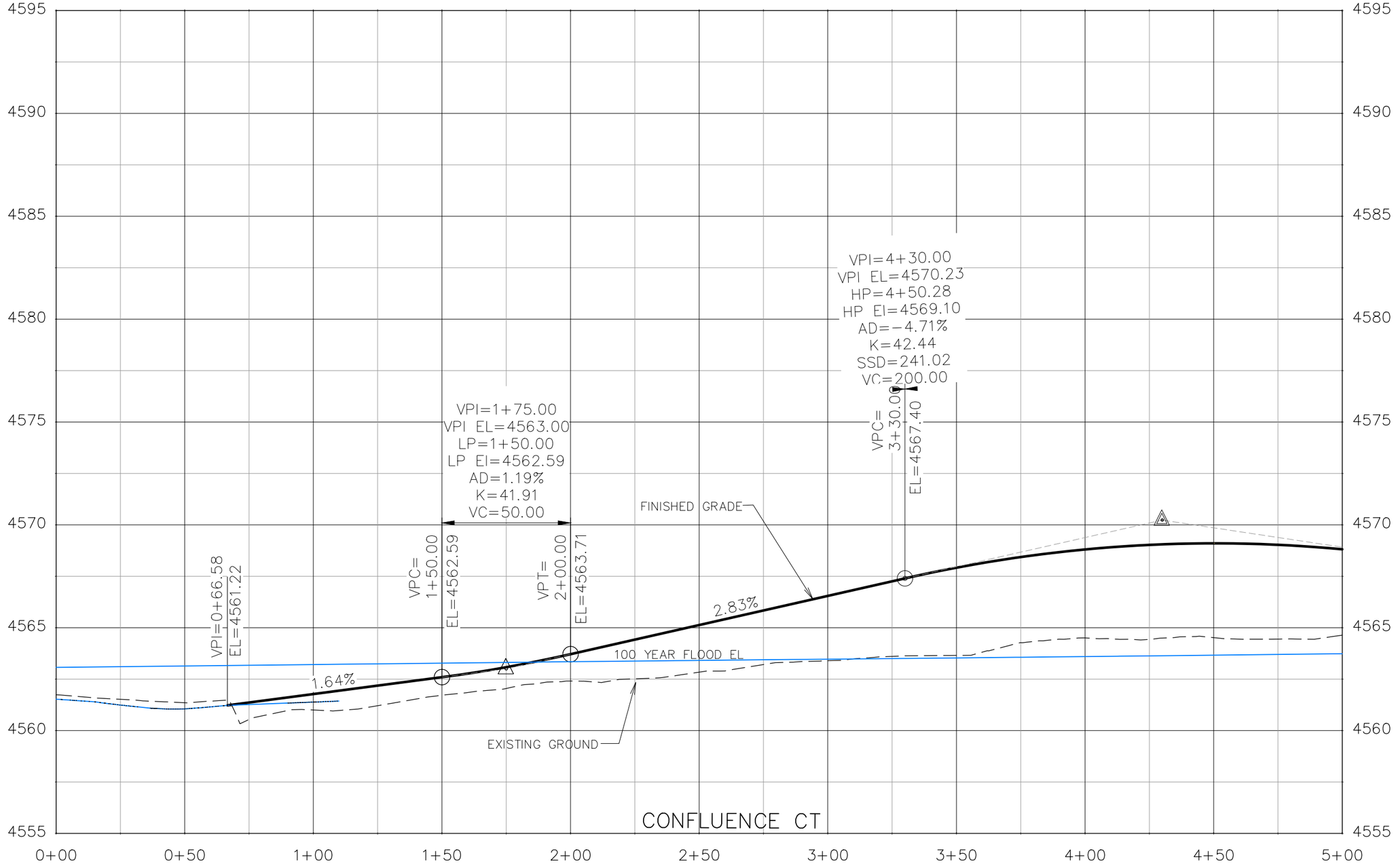

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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (13)
May 20, 2020

138

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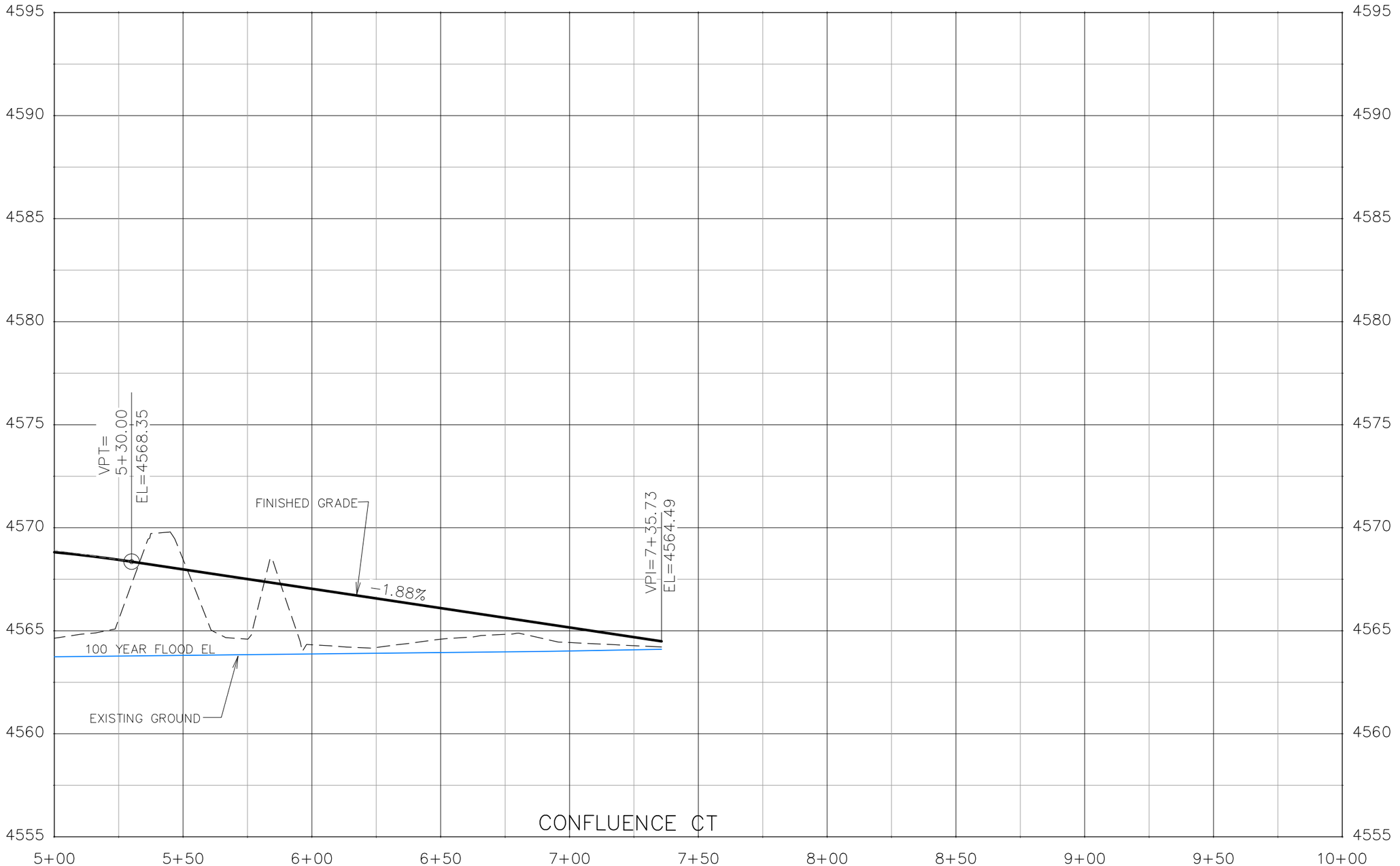

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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (14)
May 20, 2020

139

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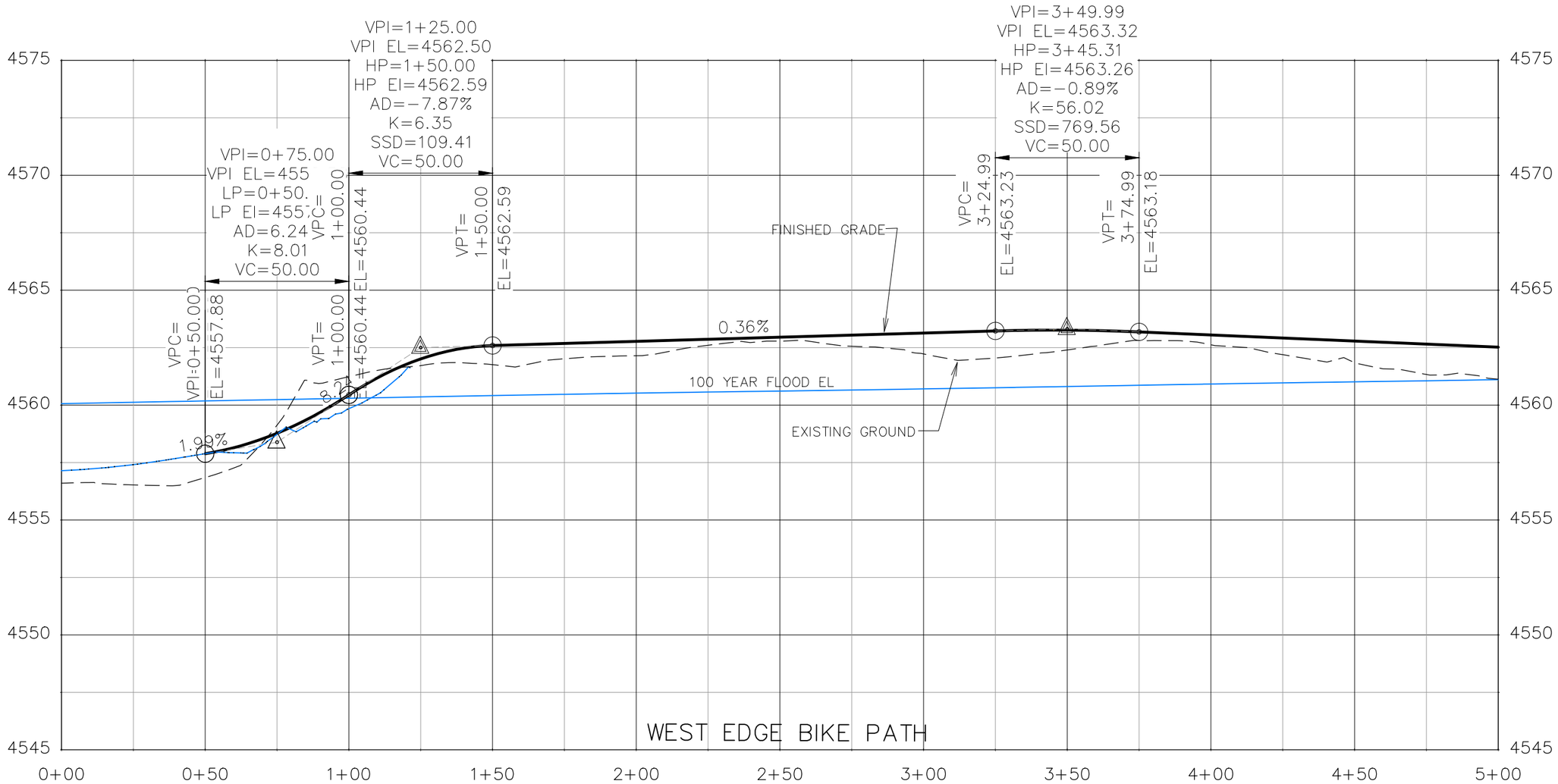

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (15)
May 20, 2020

140

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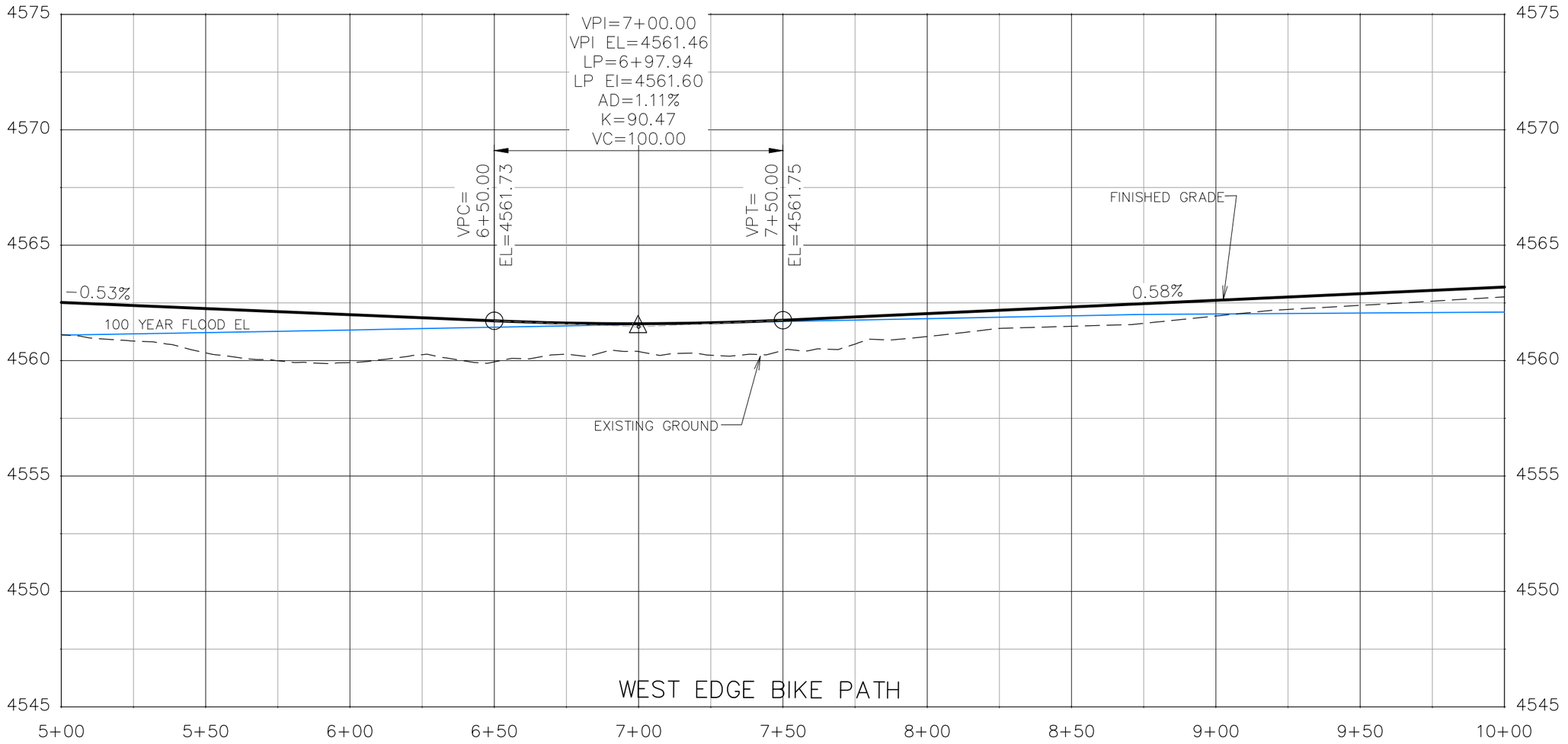

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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (16)
May 20, 2020

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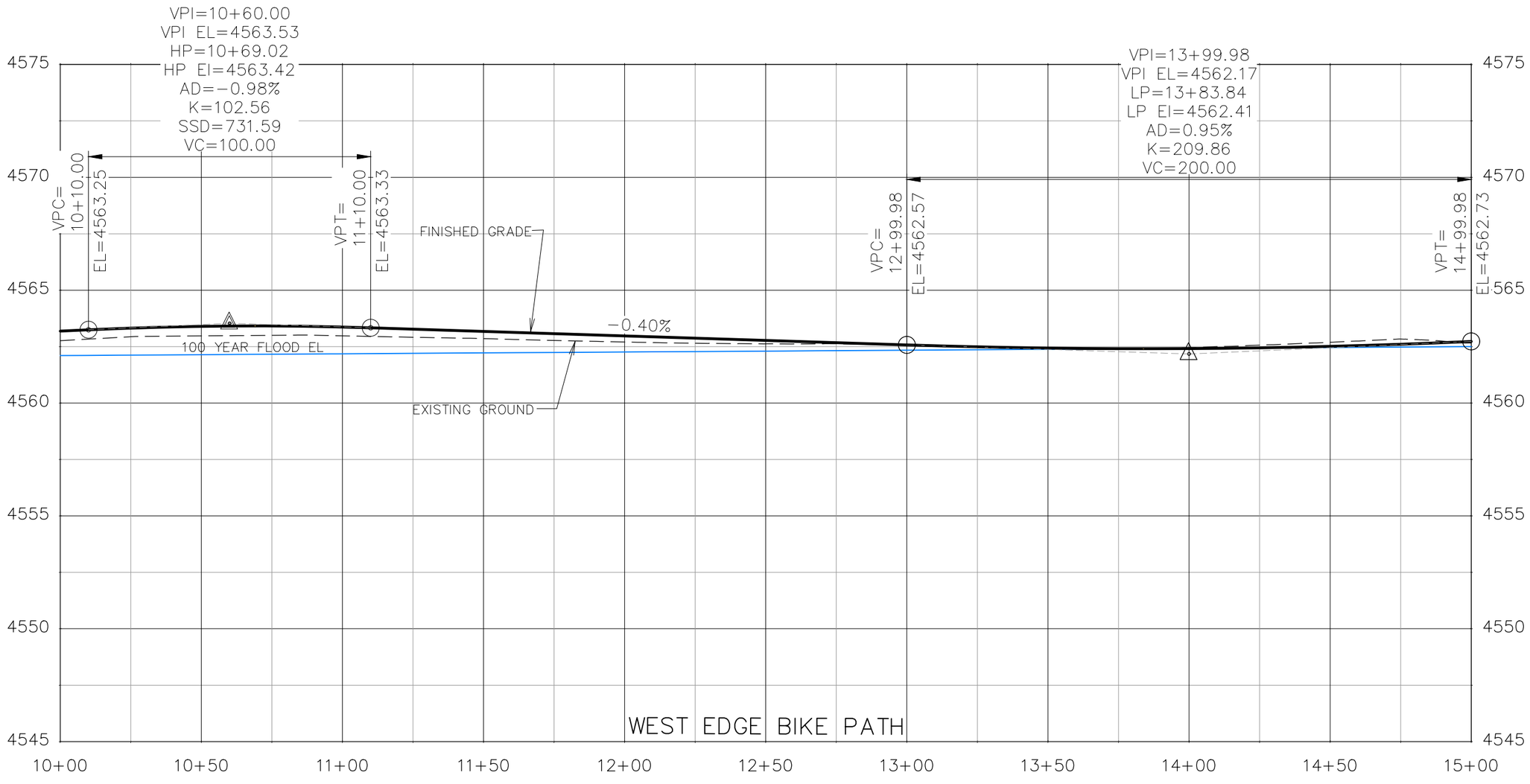

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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (17)
May 20, 2020

142

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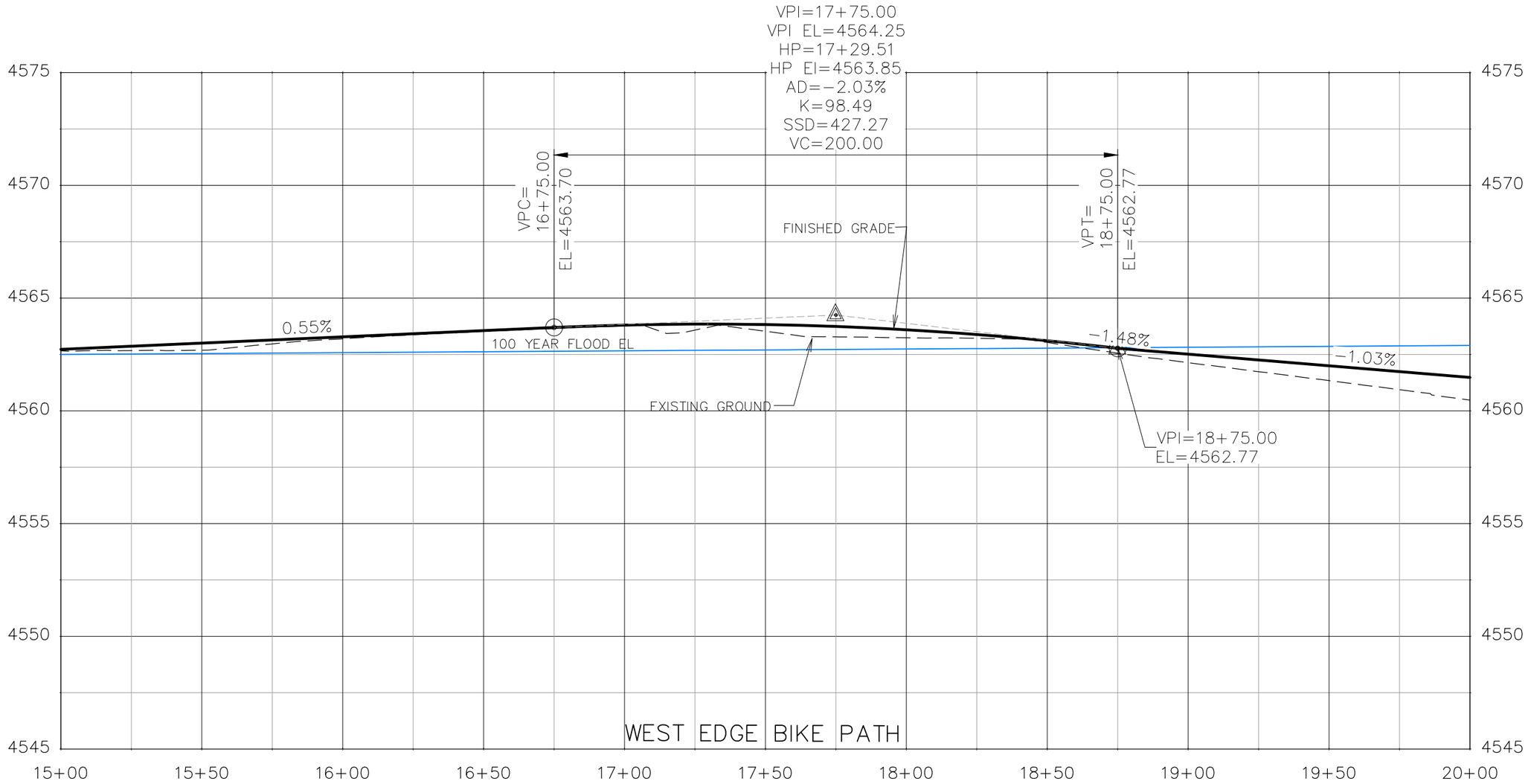

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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (18)
May 20, 2020

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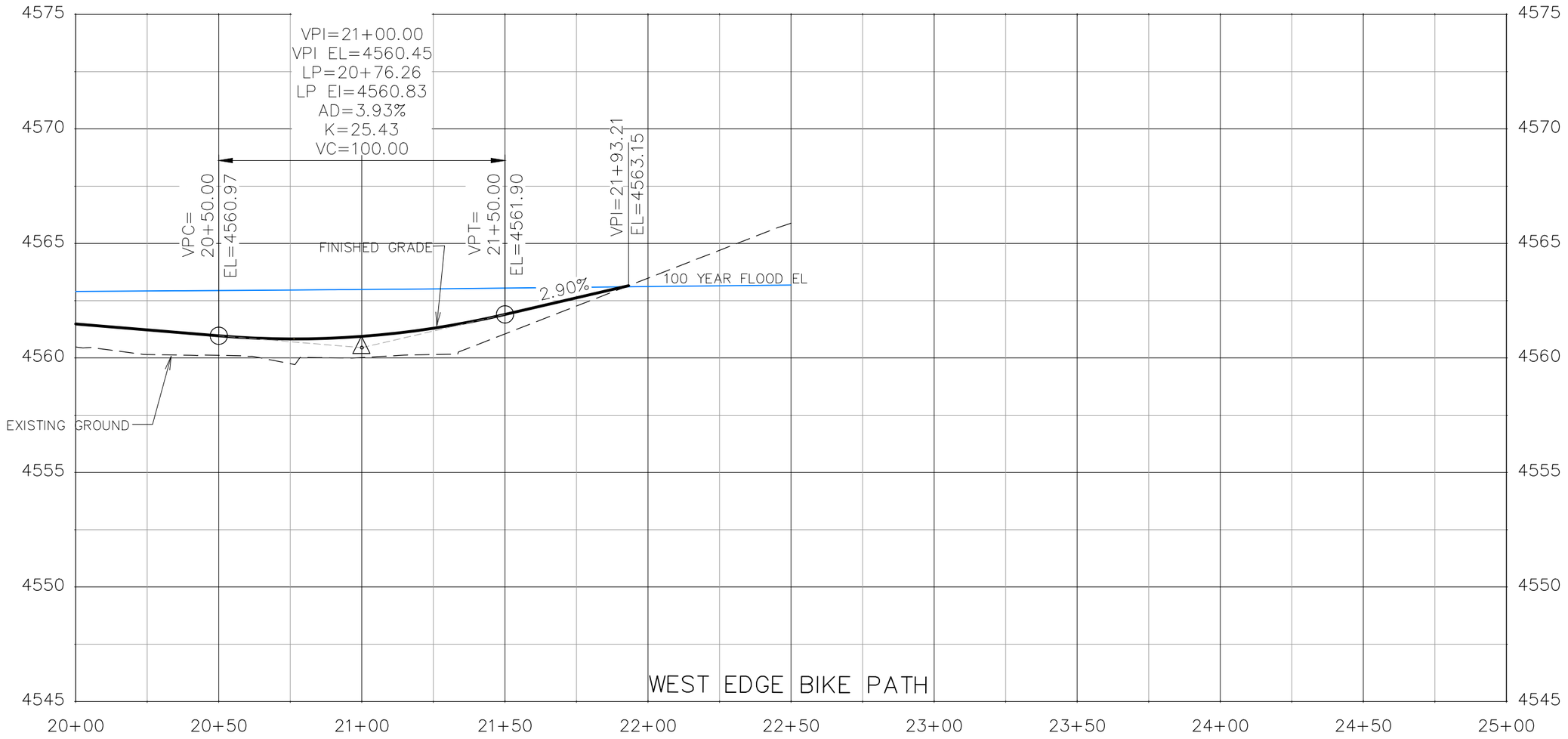

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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (19)
May 20, 2020

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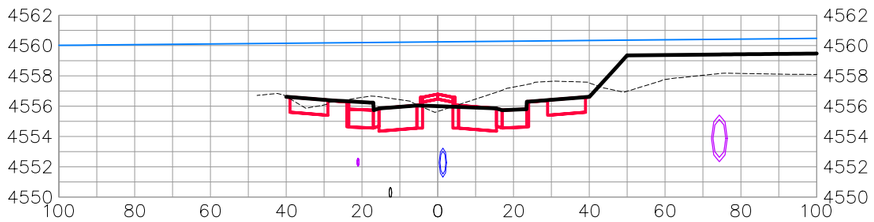

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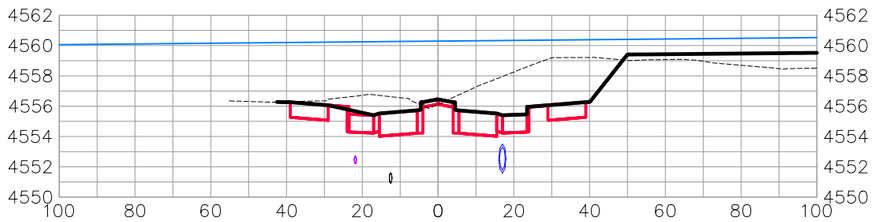

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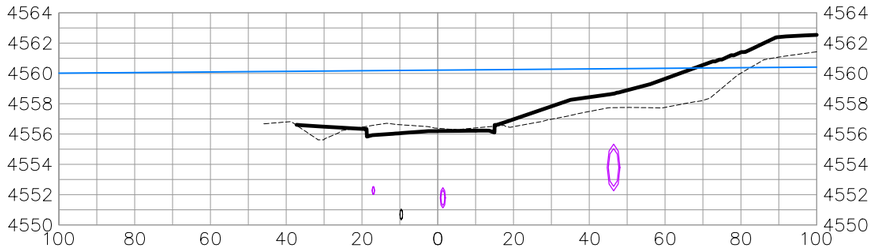

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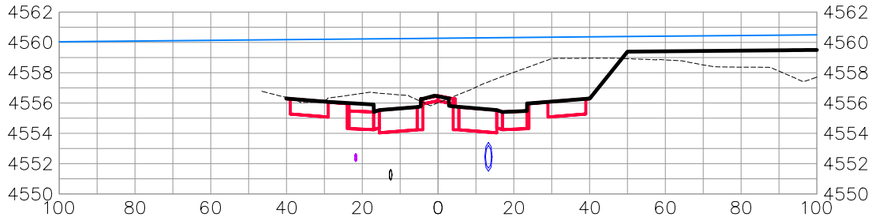

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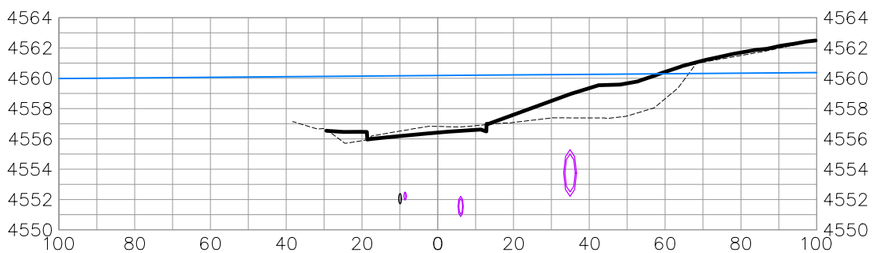

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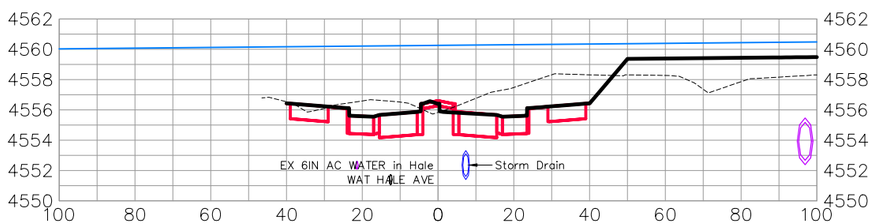

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REVISION △	–

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (1)
May 20, 2020

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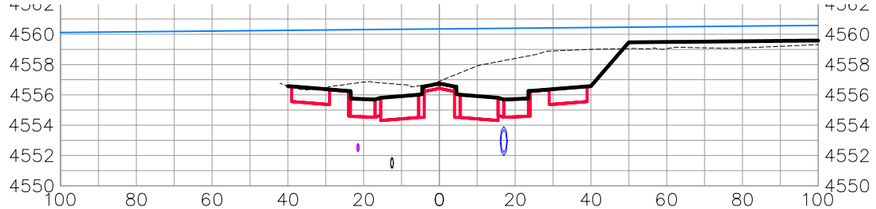

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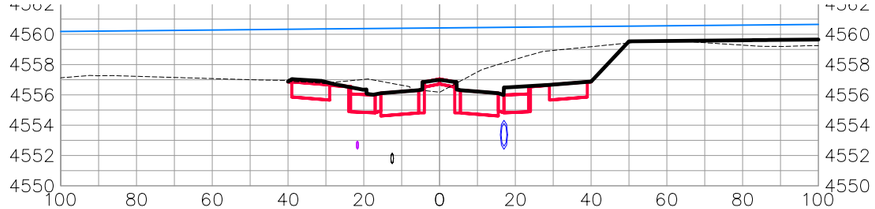

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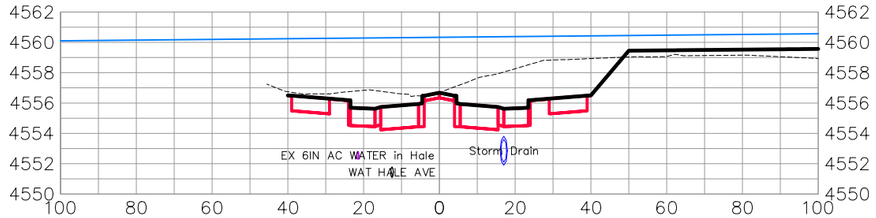

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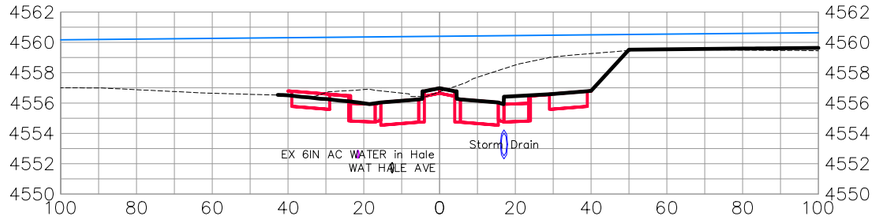

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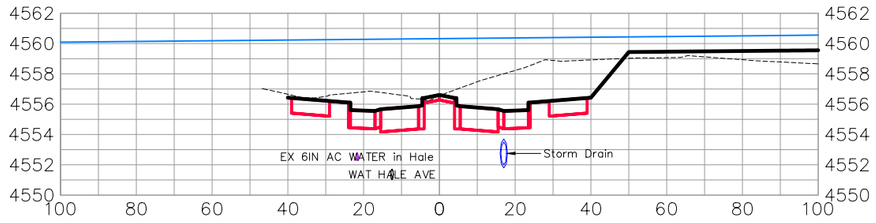

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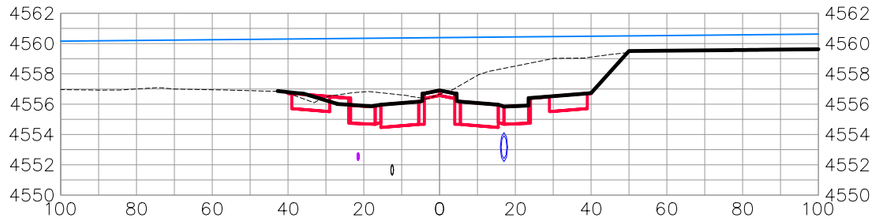

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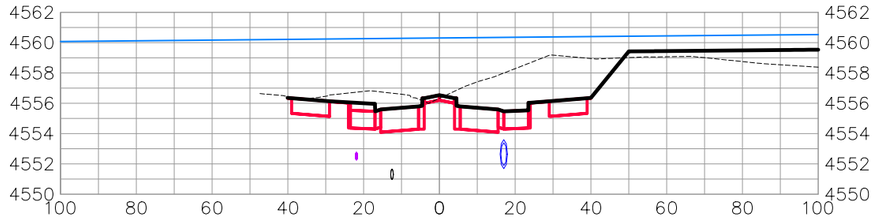

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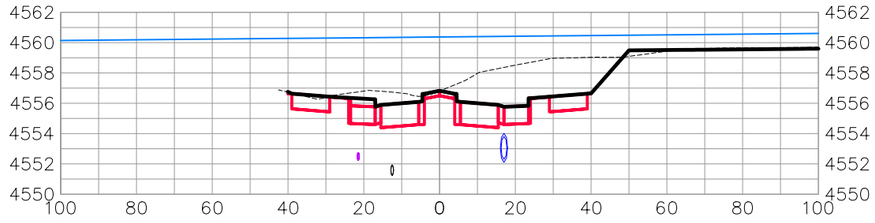

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HALE AVE

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (2)
May 20, 2020

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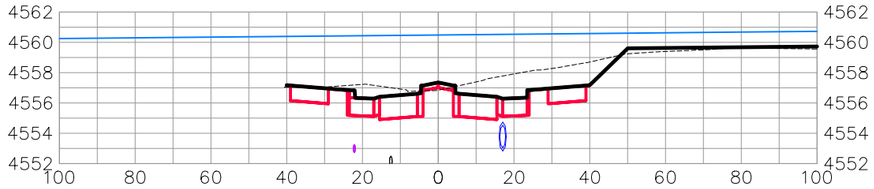

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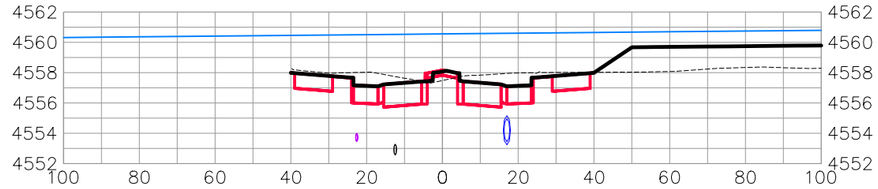

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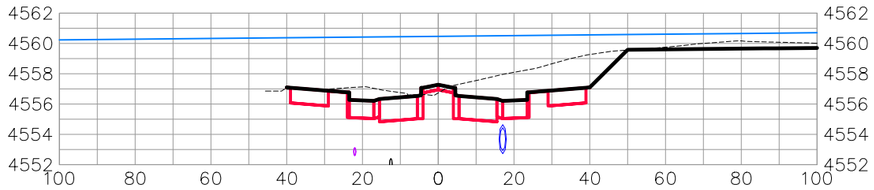

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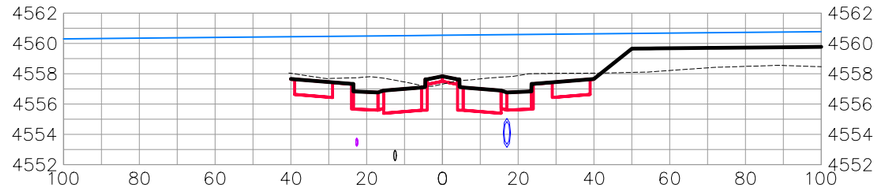

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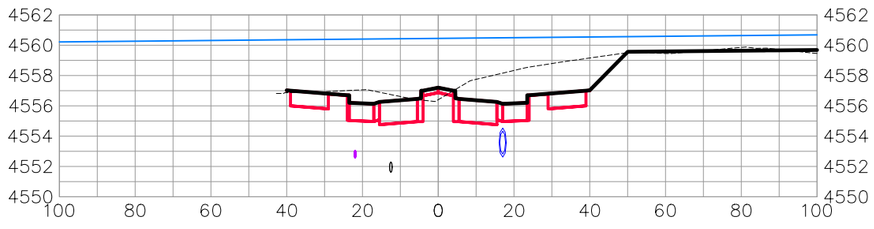

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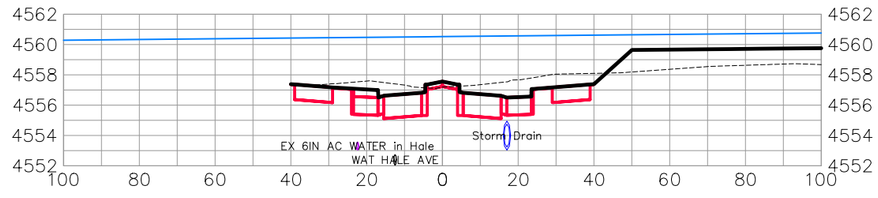

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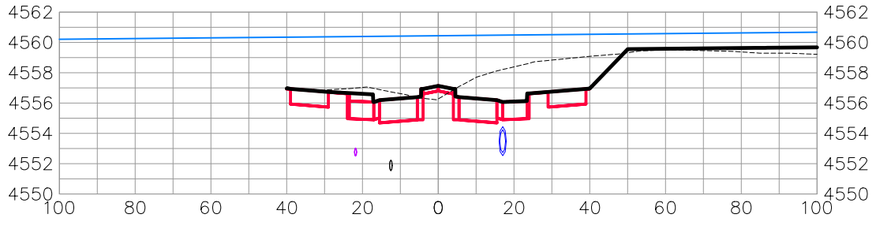

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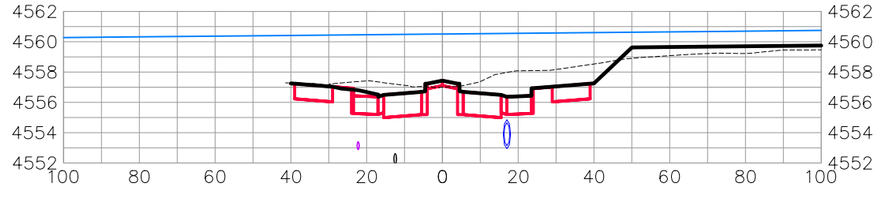

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HALE AVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (3)
May 20, 2020

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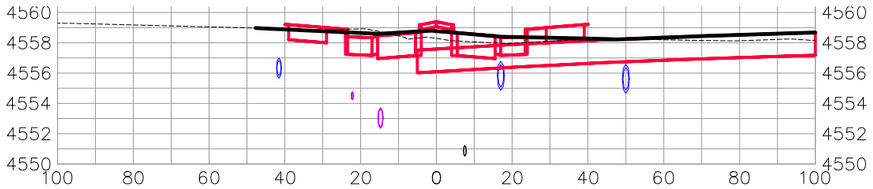

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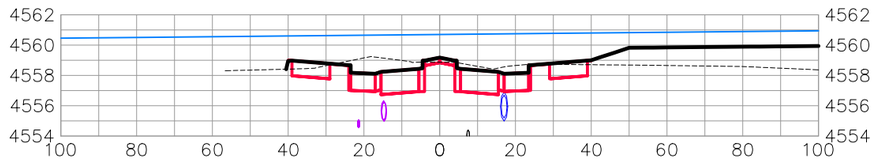

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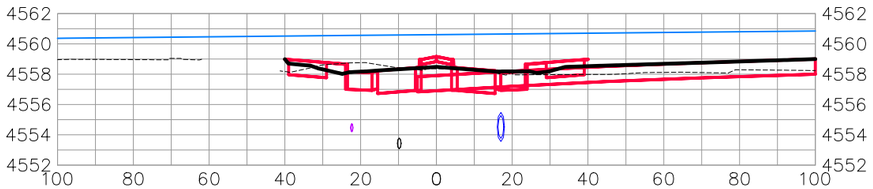

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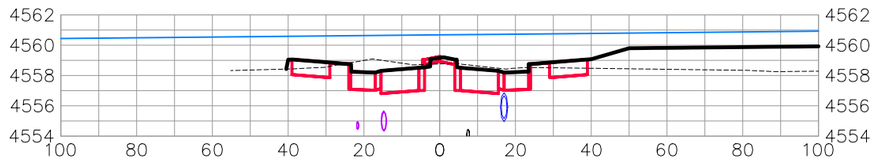

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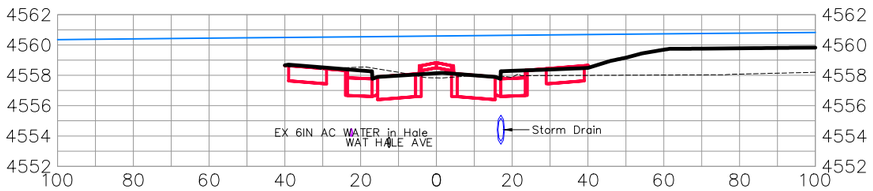

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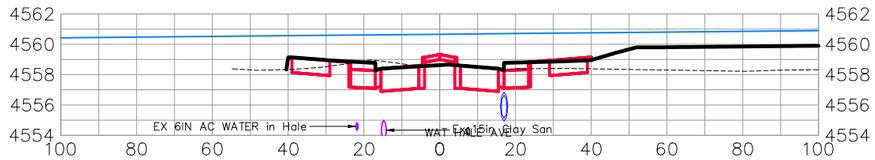

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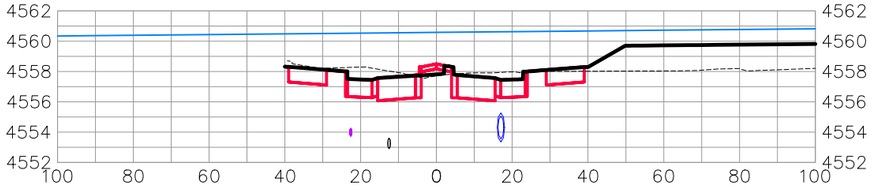

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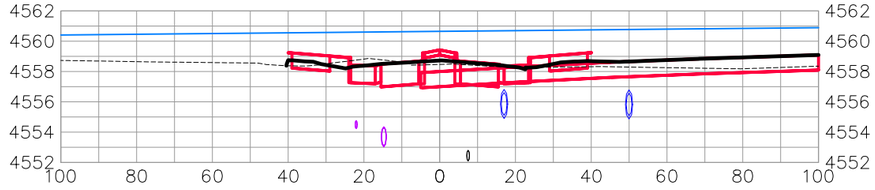

6+75.00

HALE AVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (4)
May 20, 2020

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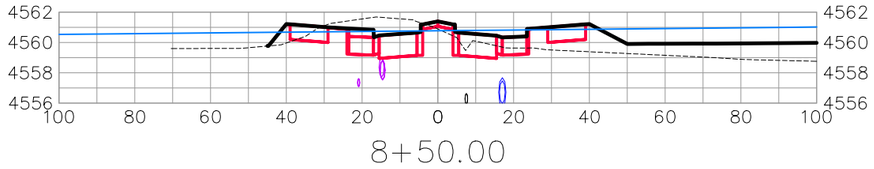

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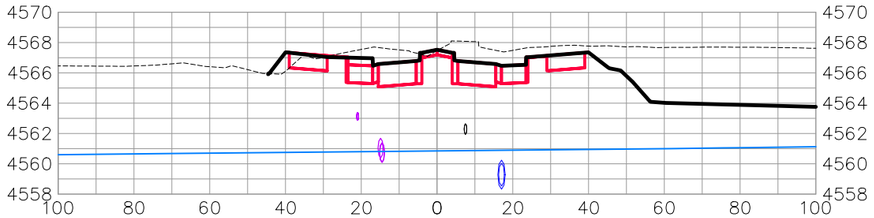

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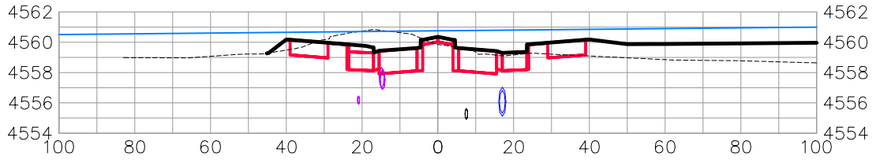

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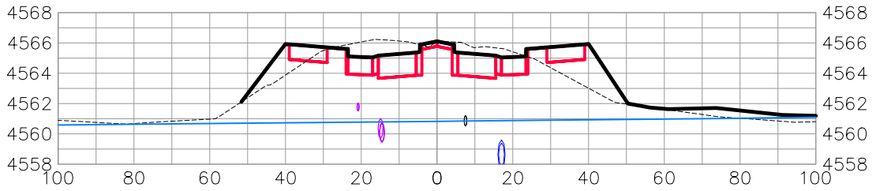

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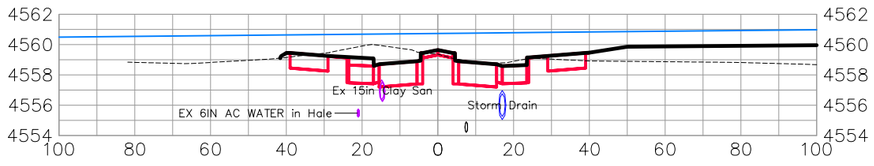

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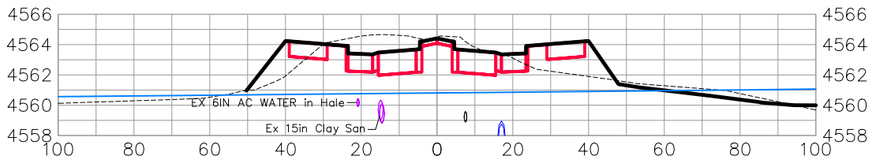

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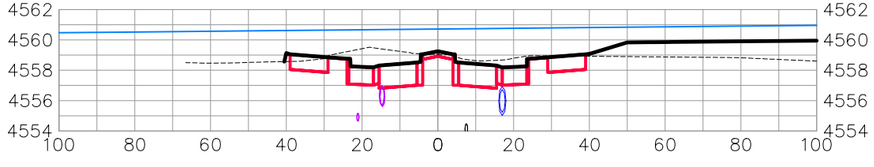

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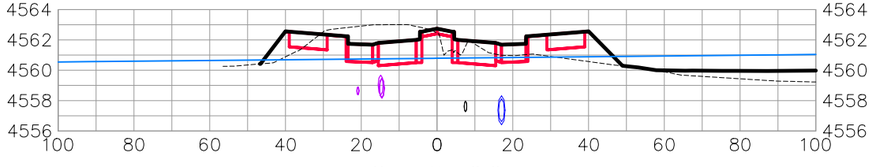

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HALE AVE

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (5)
May 20, 2020

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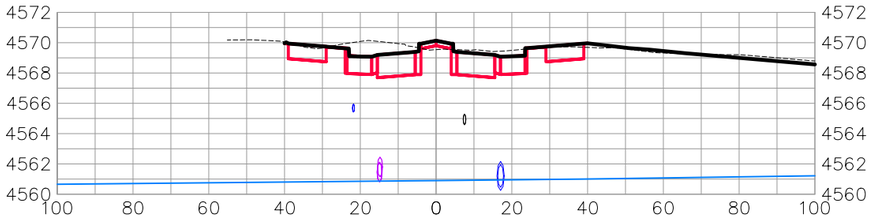

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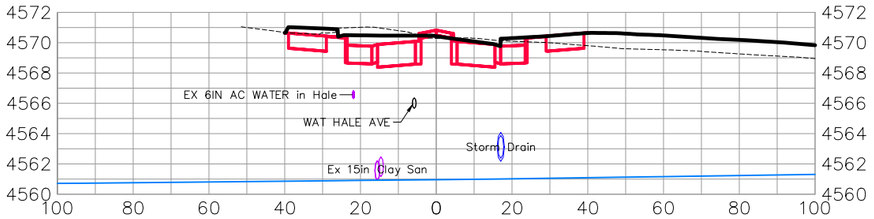

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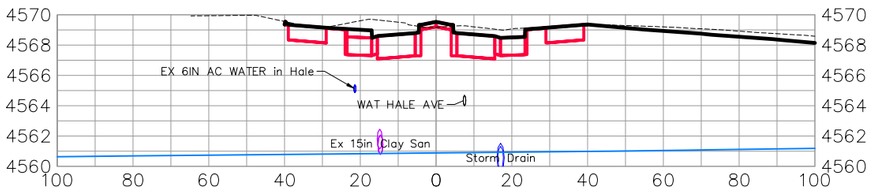

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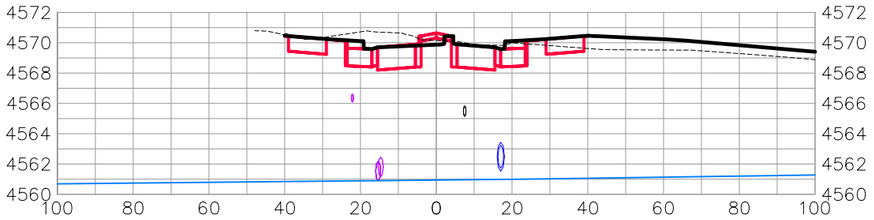

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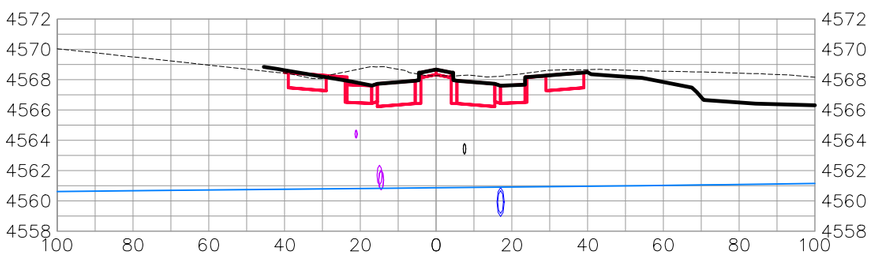

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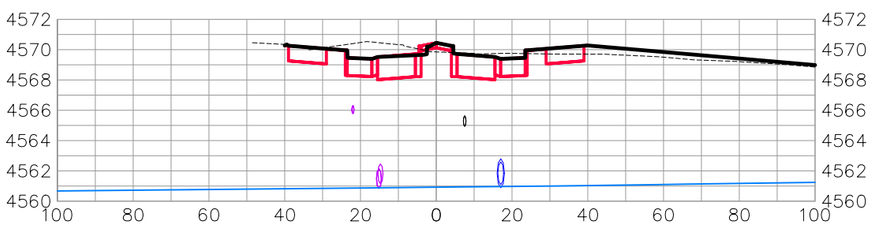

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HALE AVE

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (6)
May 20, 2020

150

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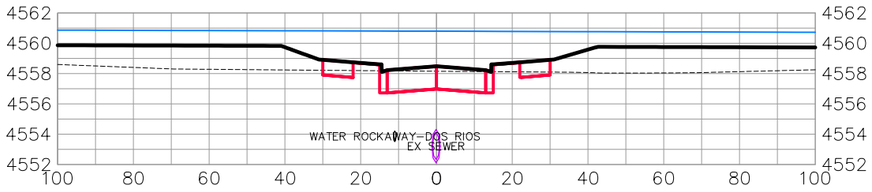

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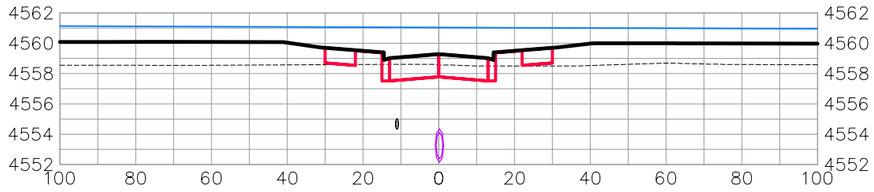

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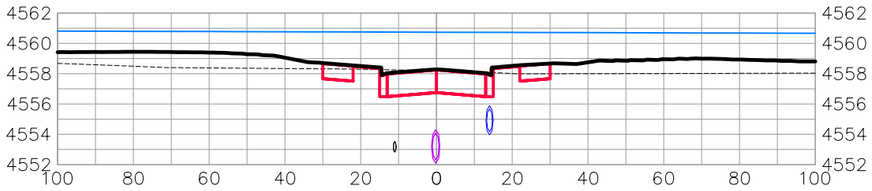

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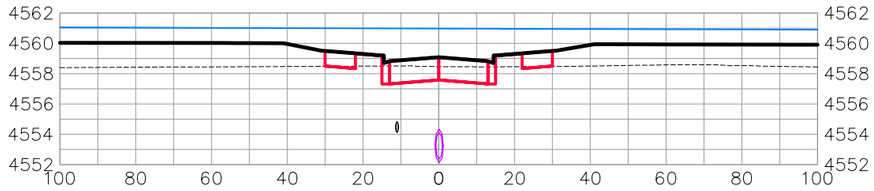

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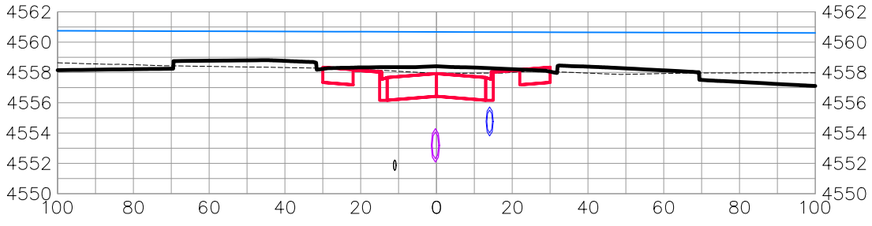

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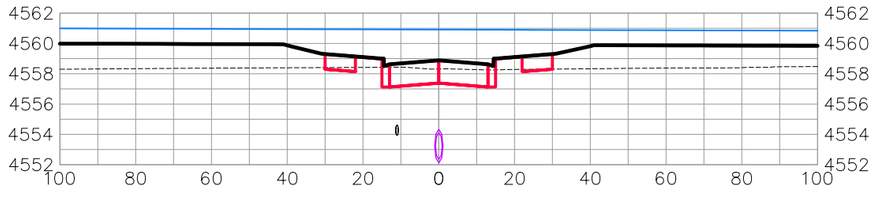

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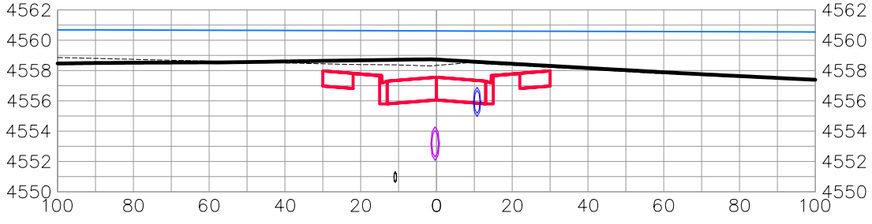

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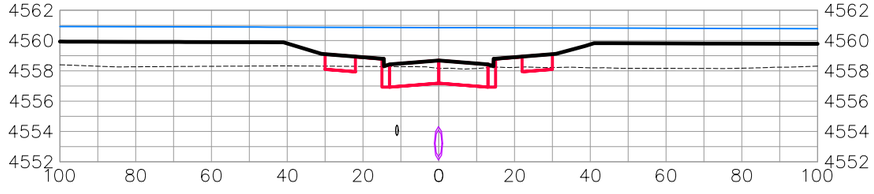

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ROCKAWAY AVE

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (7)
May 20, 2020

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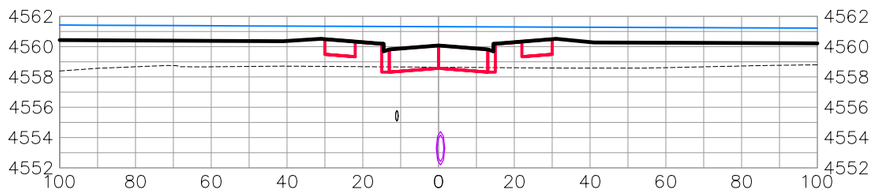

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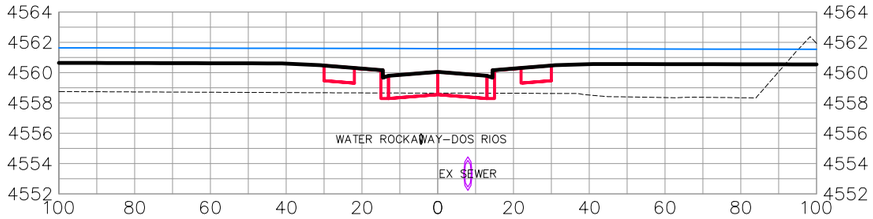

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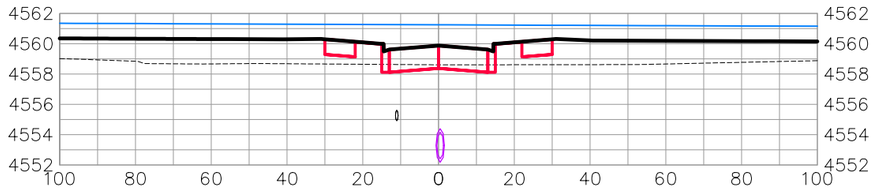

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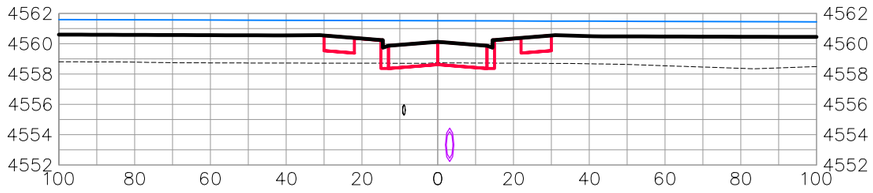

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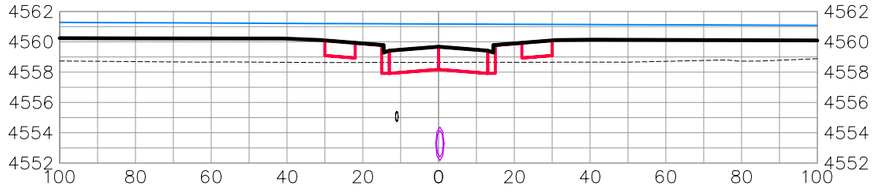

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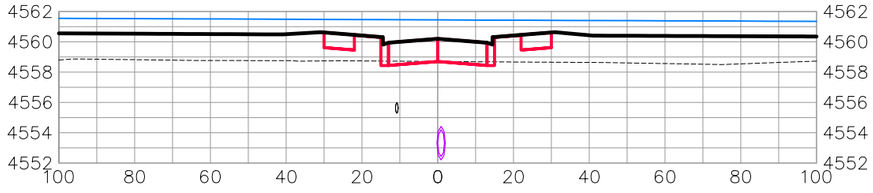

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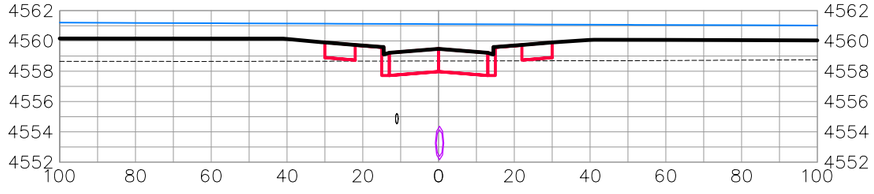

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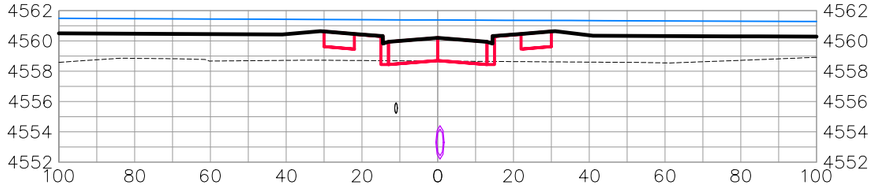

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ROCKAWAY AVE

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (8)
May 20, 2020

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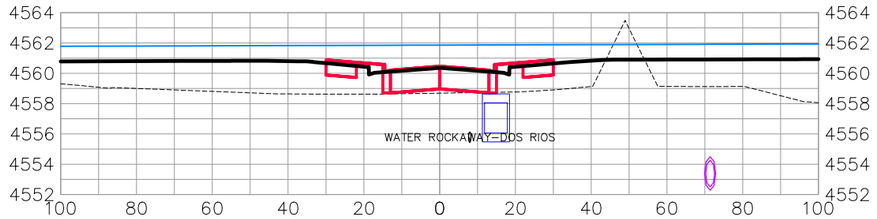

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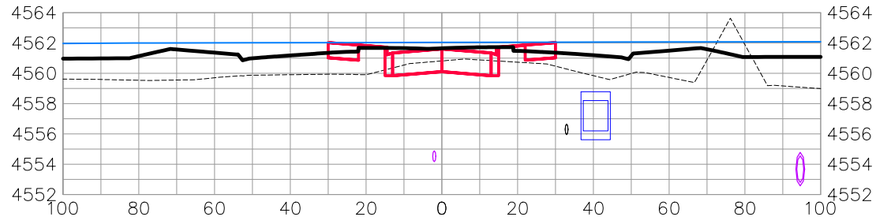

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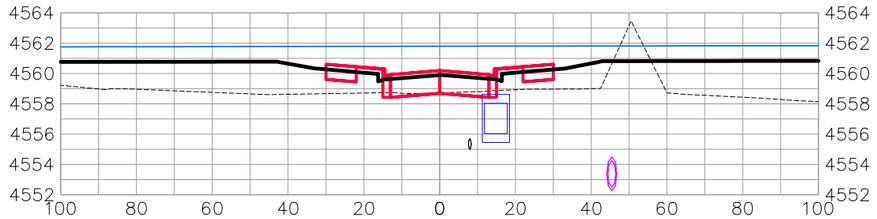

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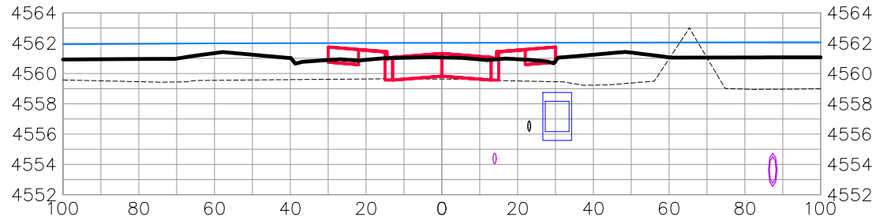

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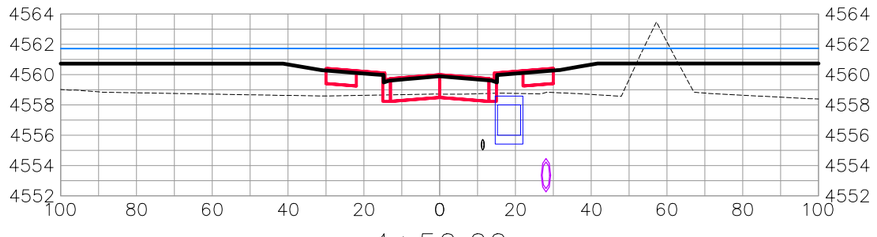

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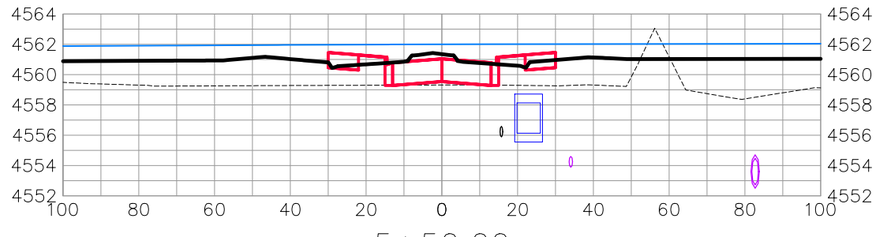

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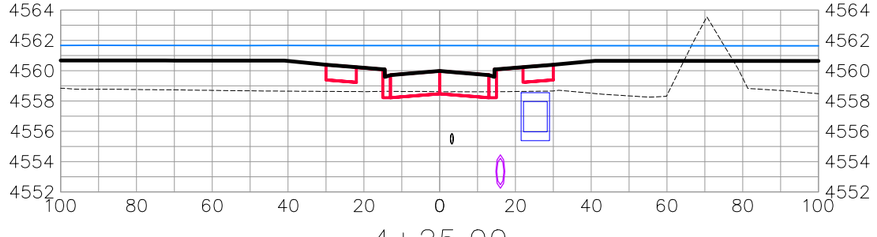

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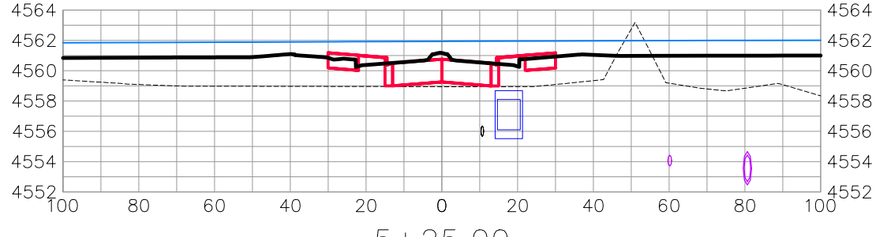

5+25.00

ROCKAWAY AVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (9)
May 20, 2020

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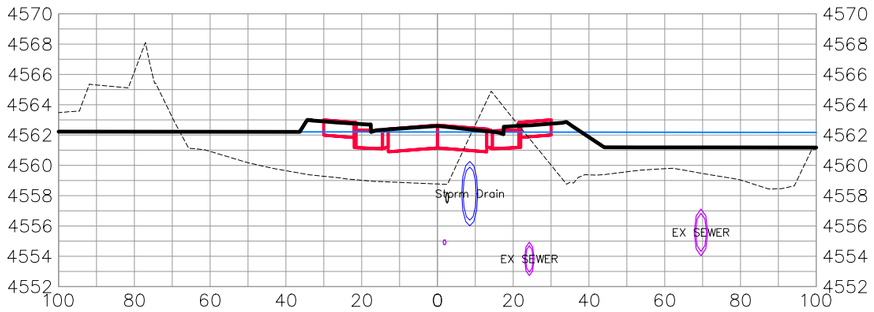

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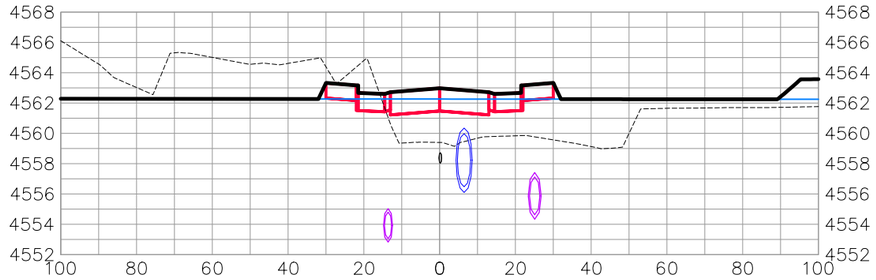

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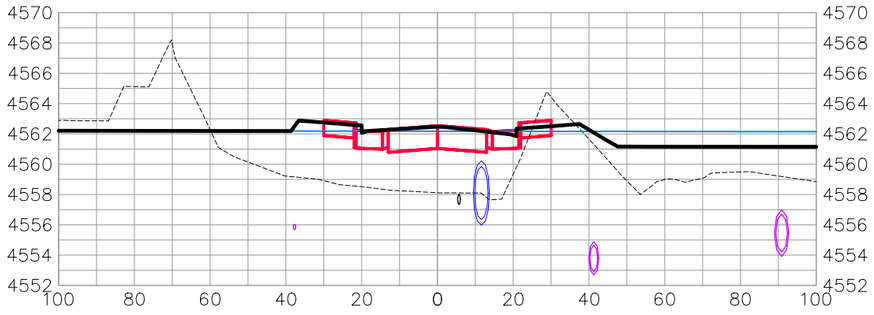

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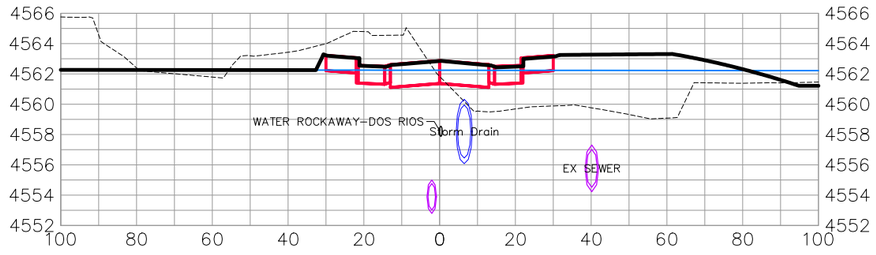

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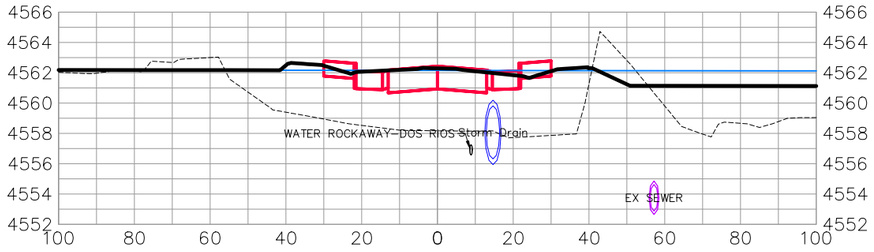

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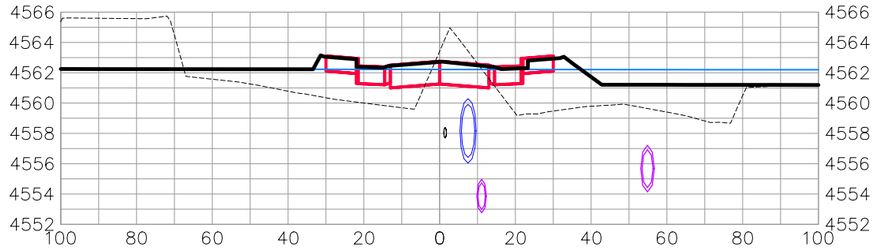

1+75.00

DOS RIOS DR

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (10)
May 20, 2020

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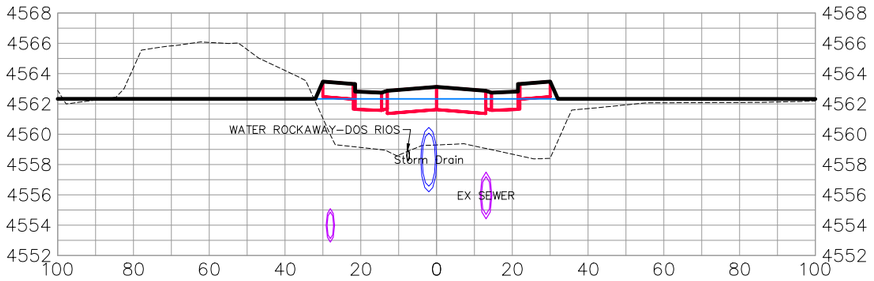

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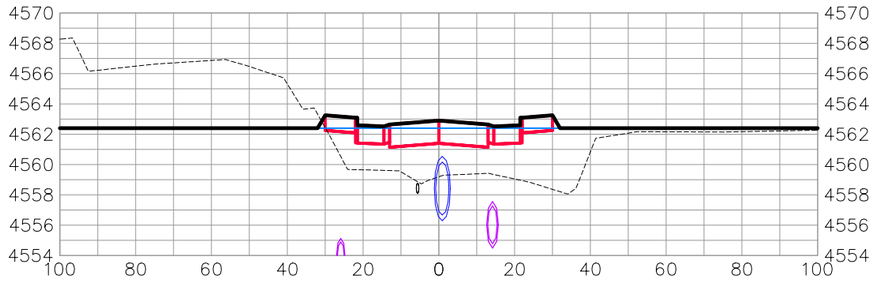

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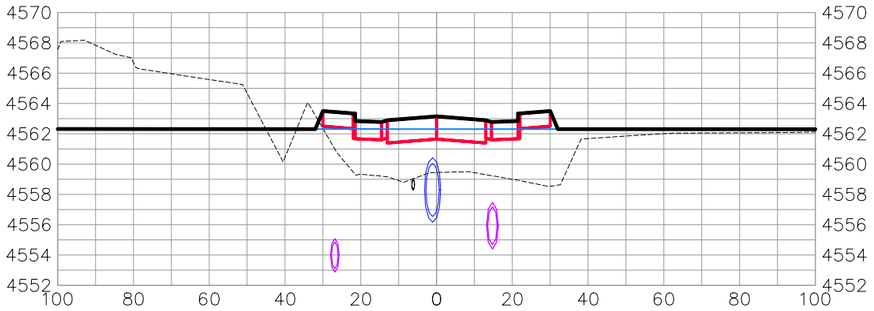

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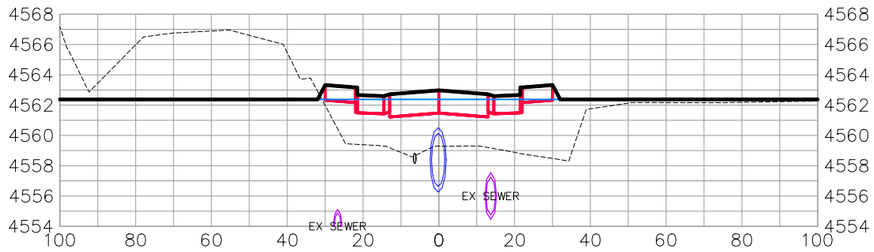

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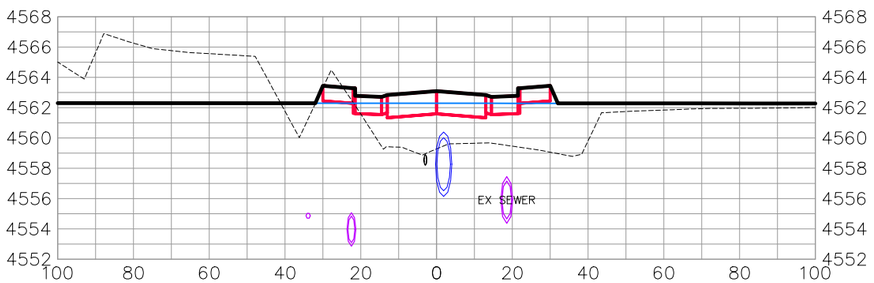

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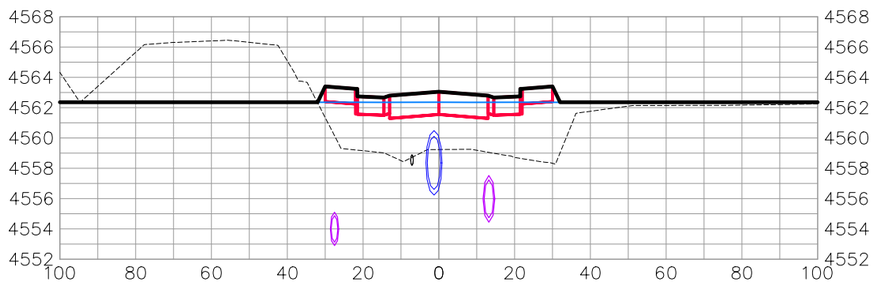

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (11)
May 20, 2020

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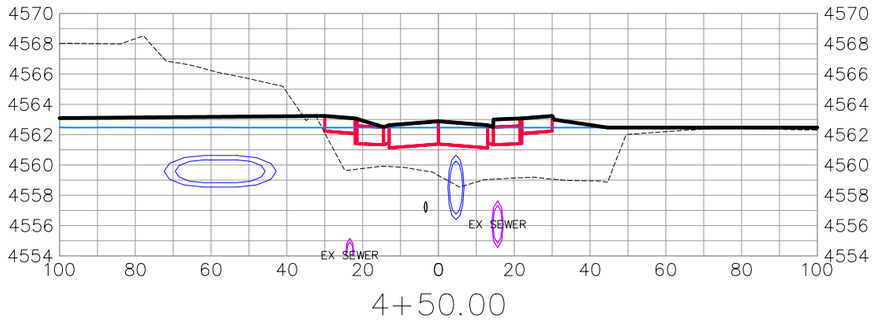

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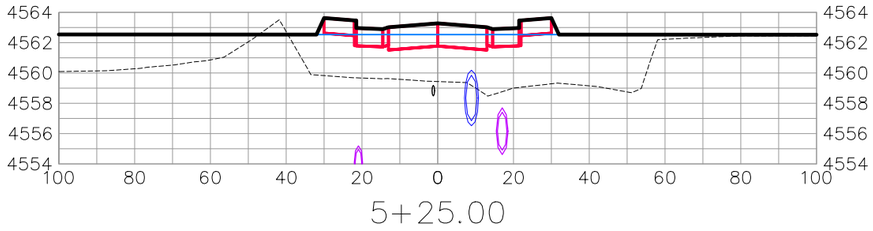

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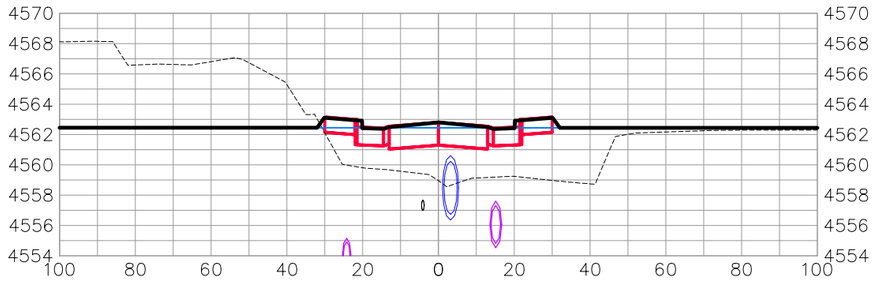

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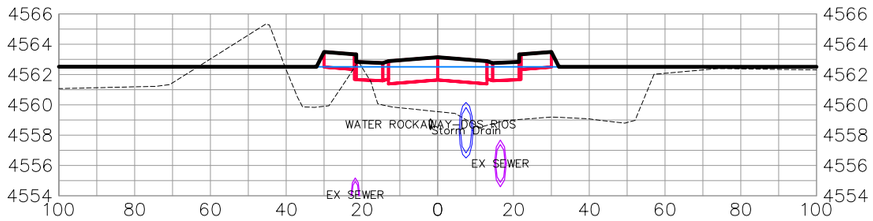

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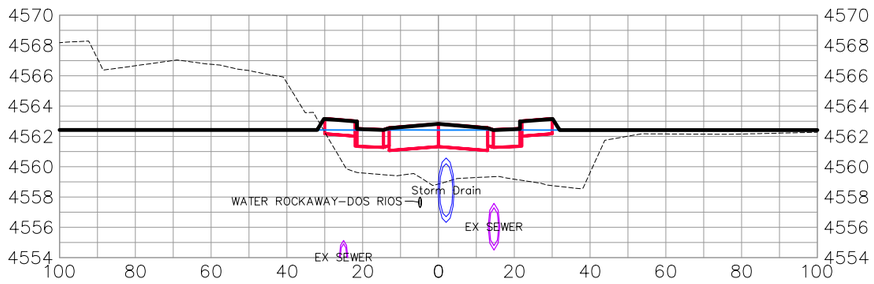

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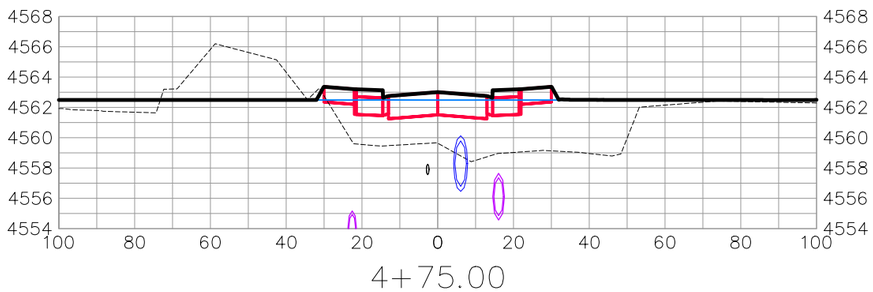

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (12)
May 20, 2020

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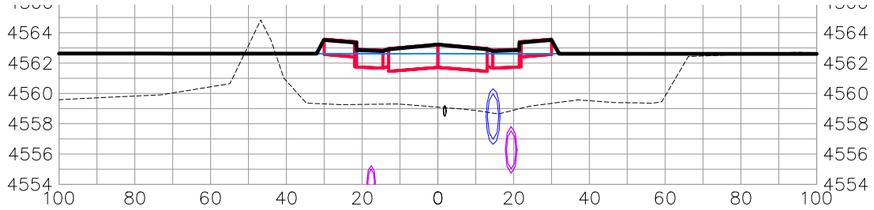

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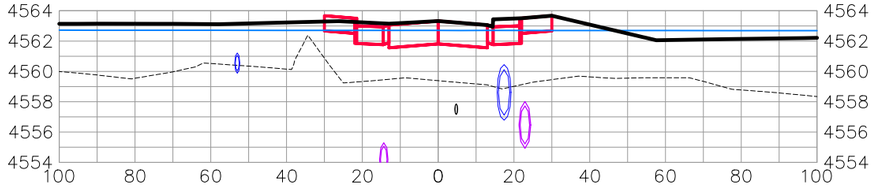

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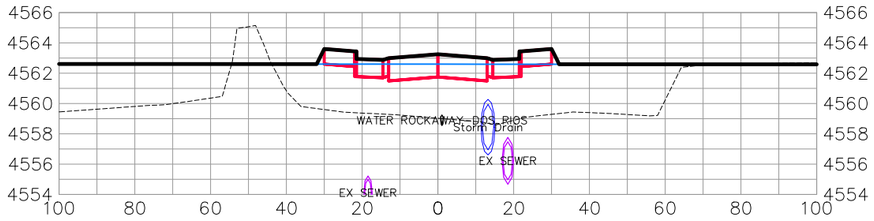

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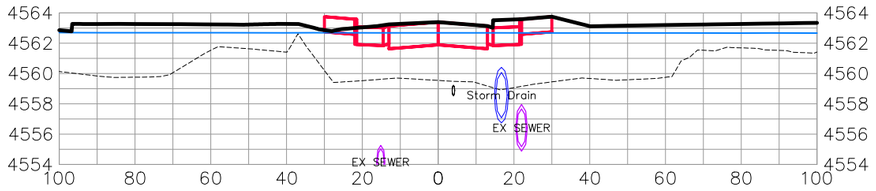

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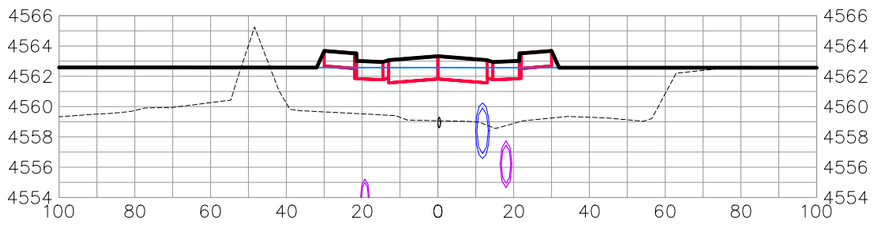

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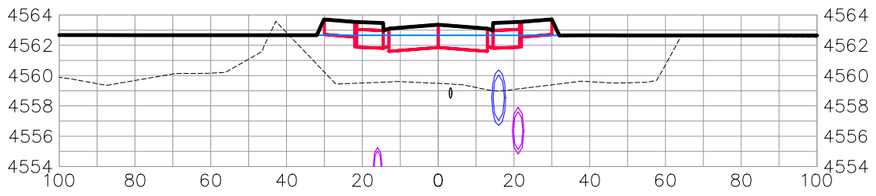

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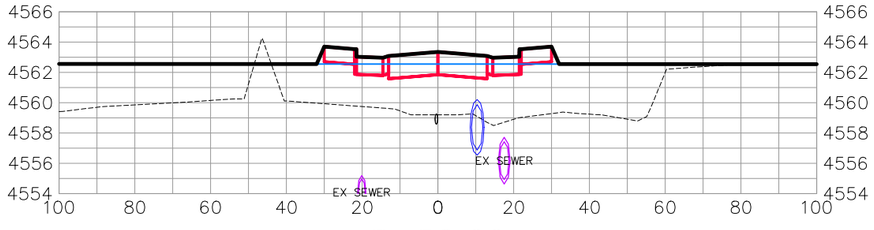

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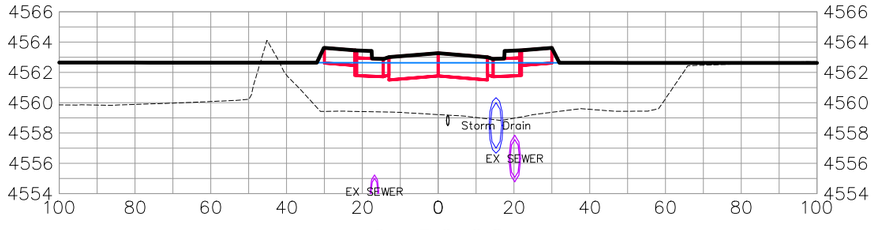


6+50.00

DOS RIOS DR

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

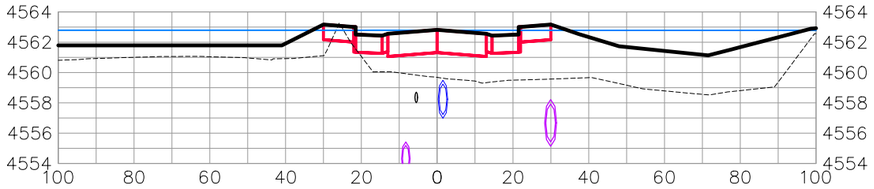
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (13)
May 20, 2020

157

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Road Cross Sections.dwg, 5/20/2020 8:32:48 AM



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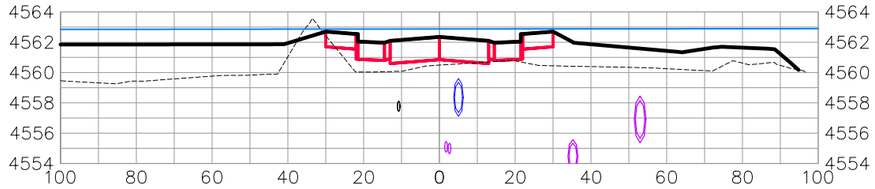

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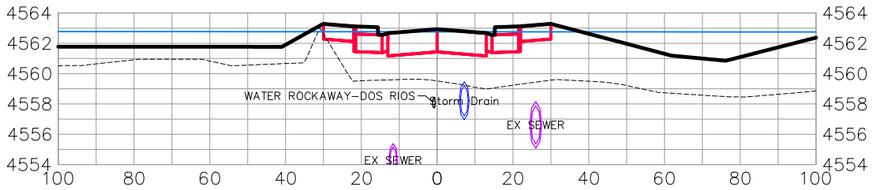

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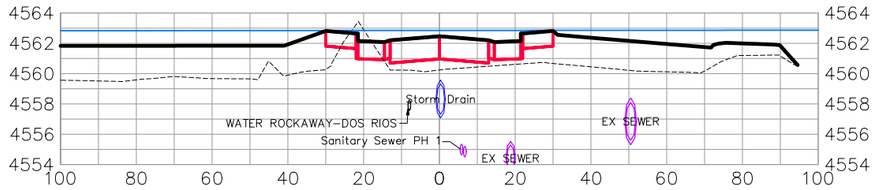

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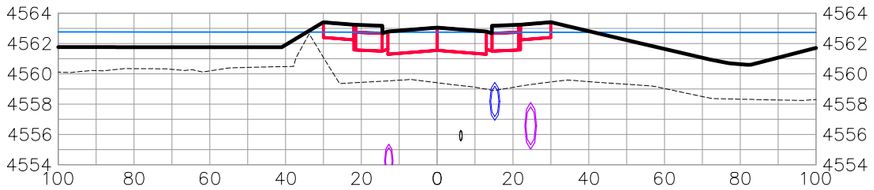

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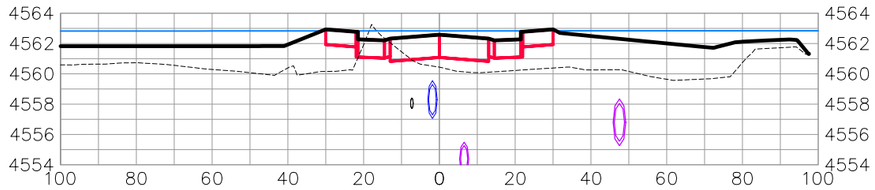

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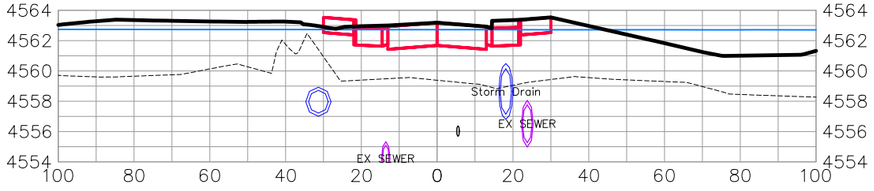

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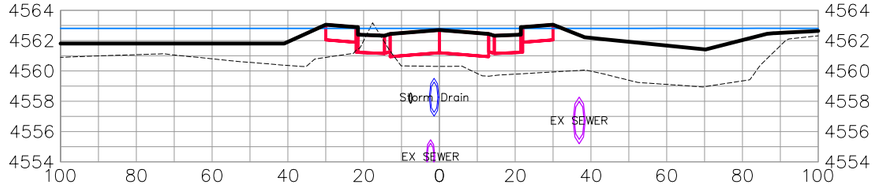

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (14)
May 20, 2020

158

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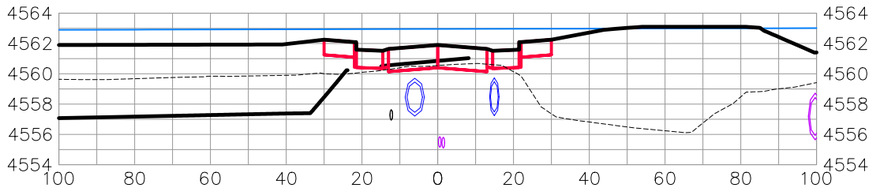

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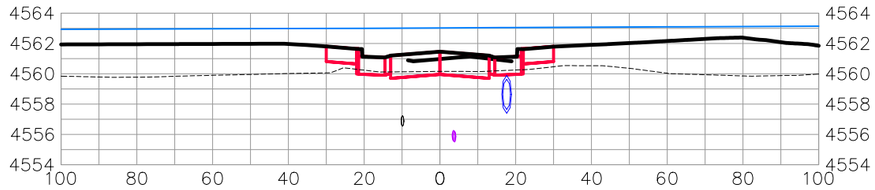

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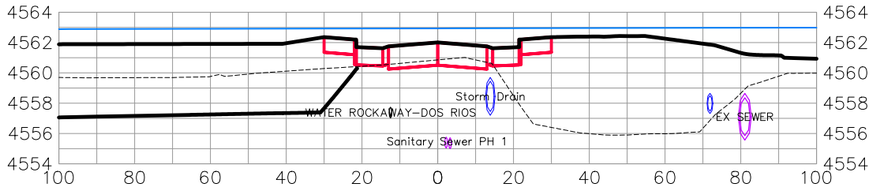

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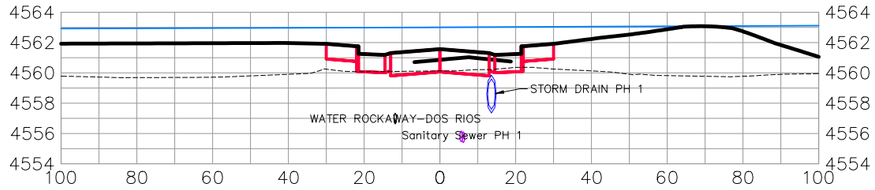

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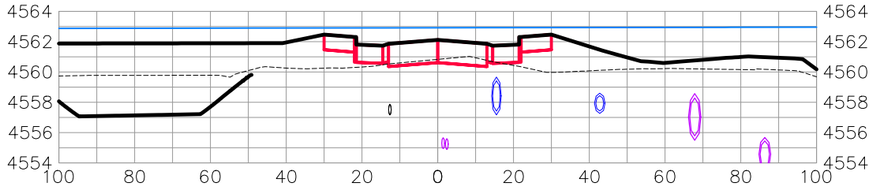

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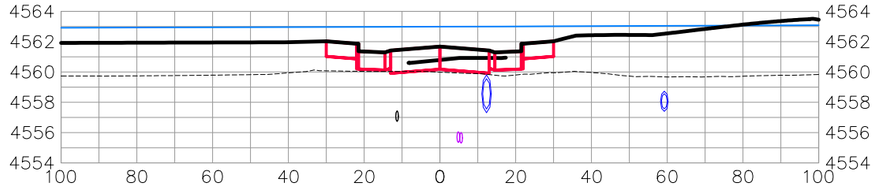

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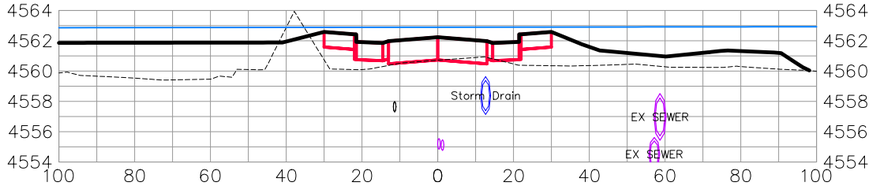

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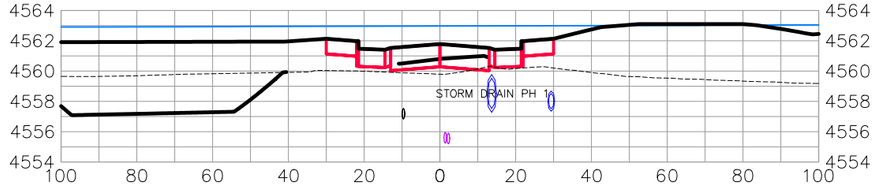

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (15)
May 20, 2020

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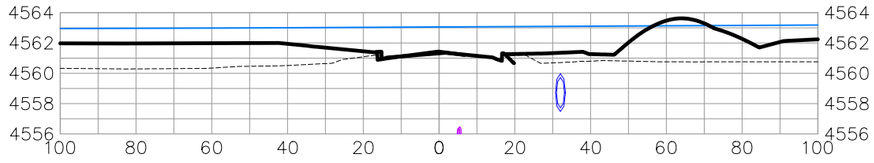

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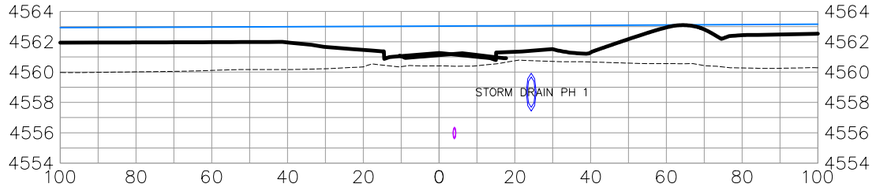

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
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APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (16)
May 20, 2020

160

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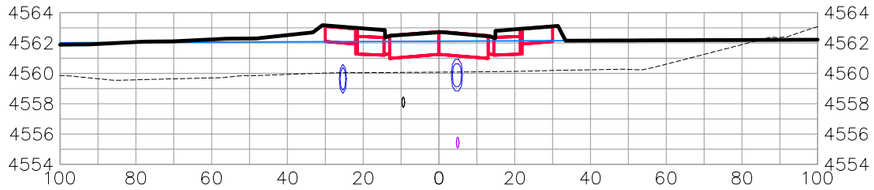

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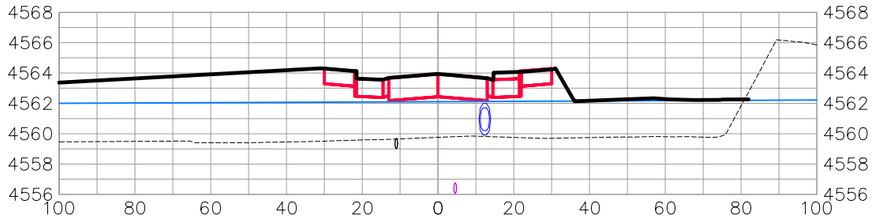

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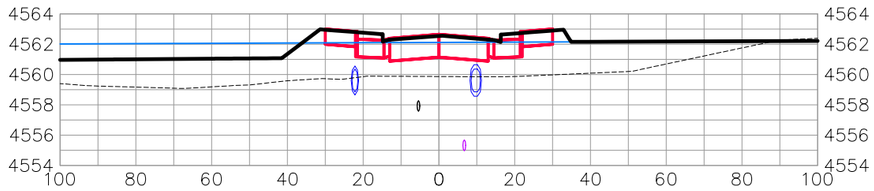

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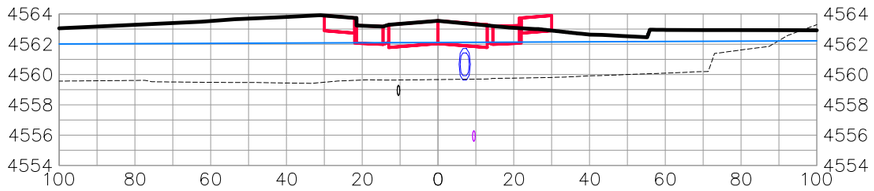

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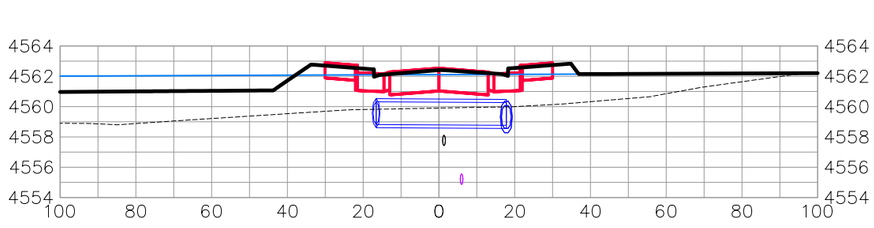

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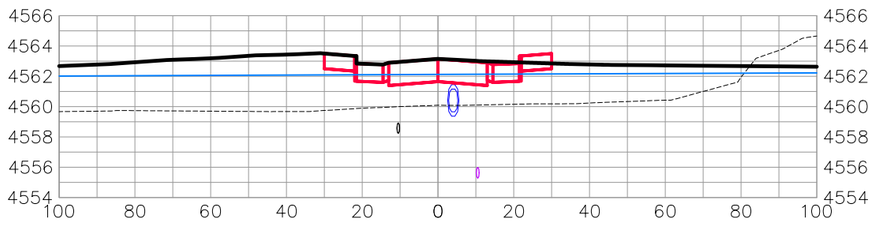

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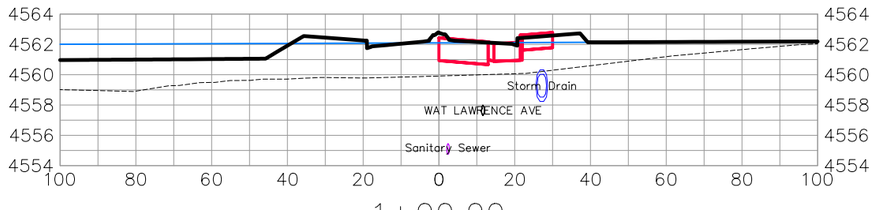

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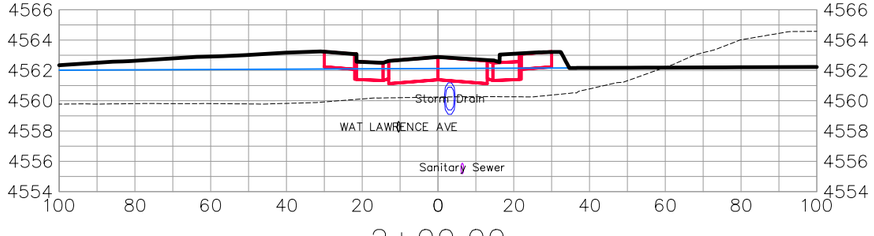

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LAWRENCE AVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (17)
May 20, 2020

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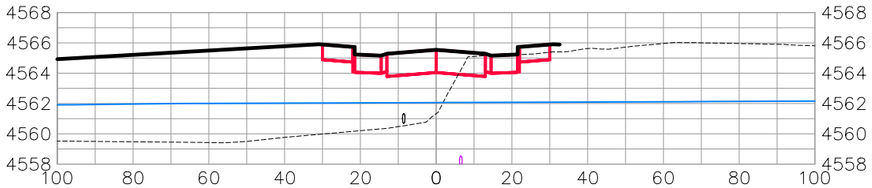

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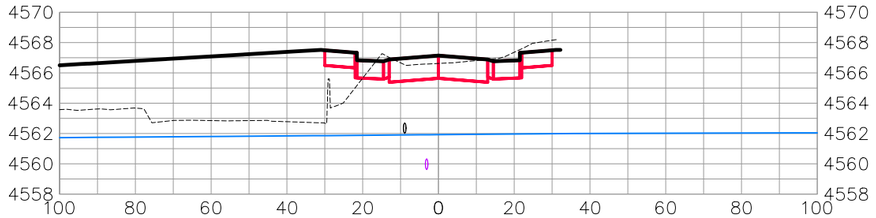

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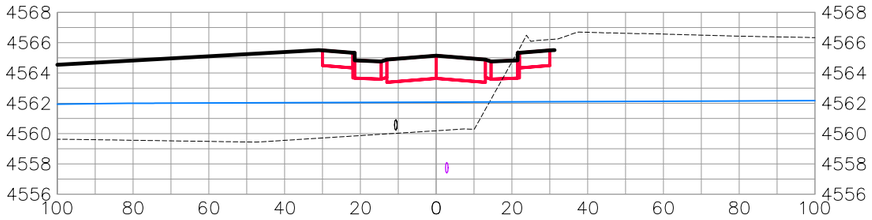

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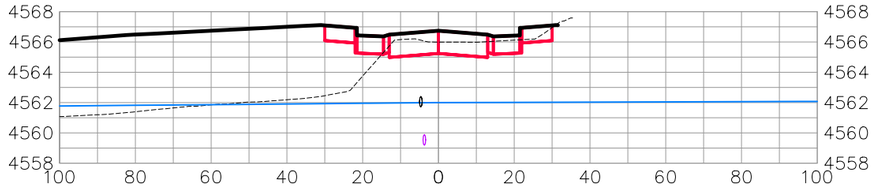

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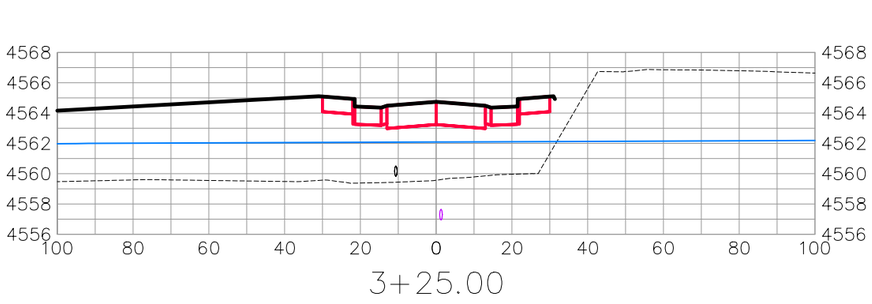

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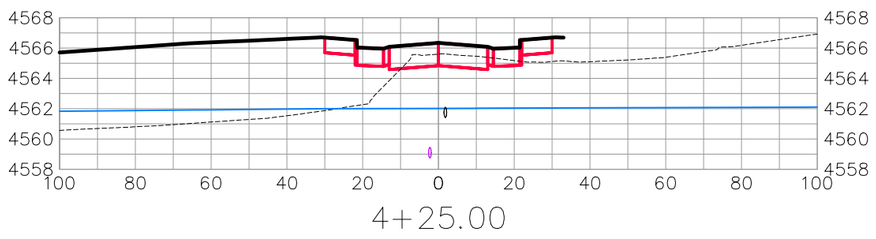

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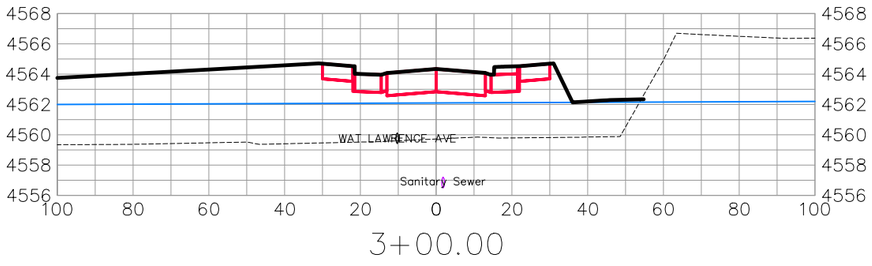

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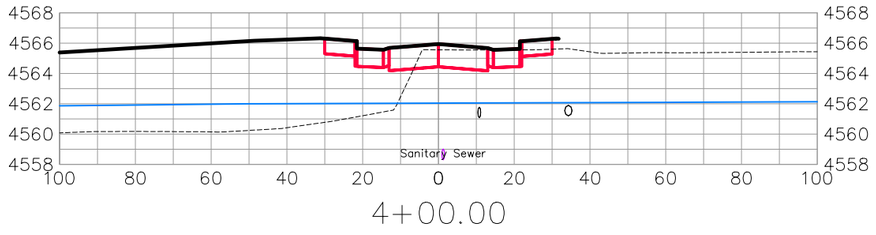

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LAWRENCE AVE

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (18)
May 20, 2020

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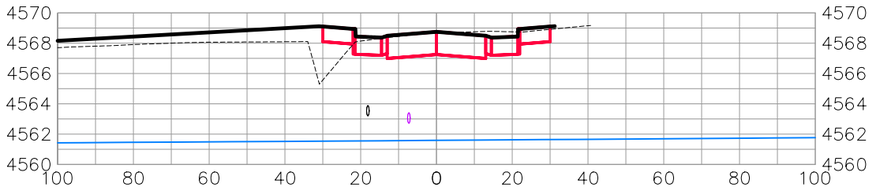

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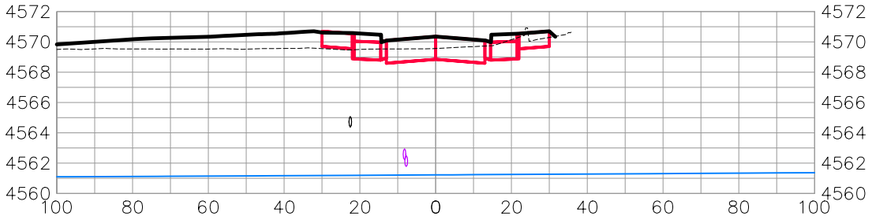

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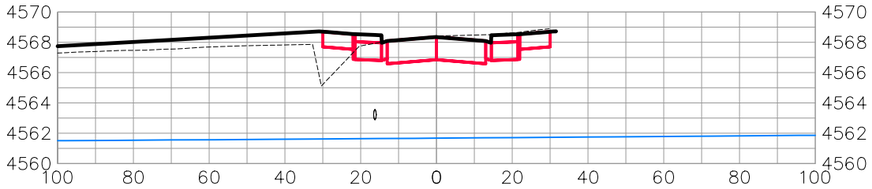

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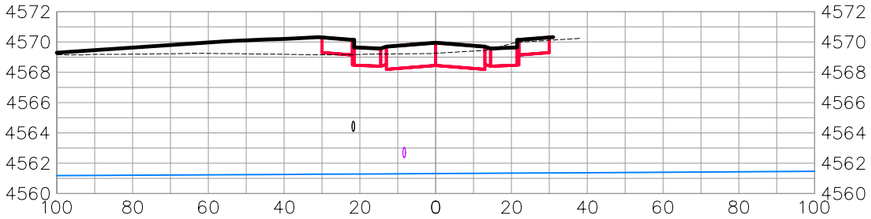

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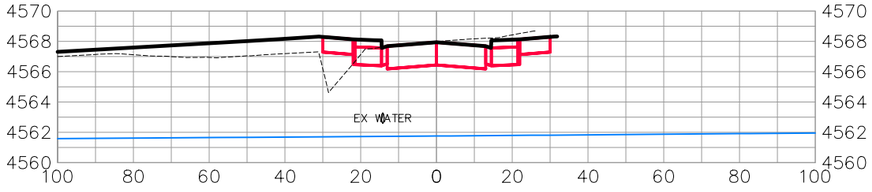

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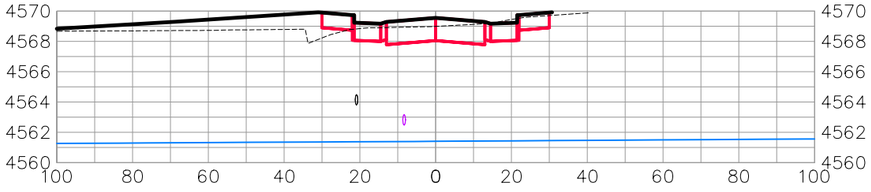

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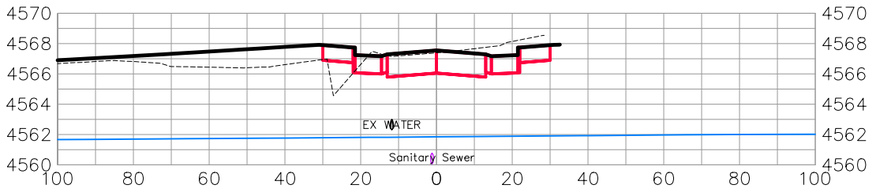

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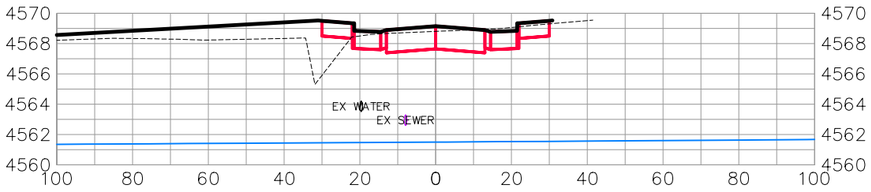

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LAWRENCE AVE

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (19)
May 20, 2020

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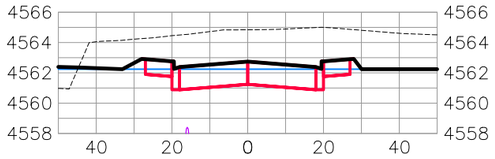

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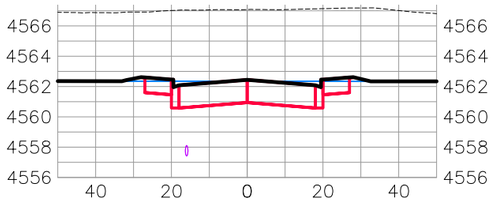

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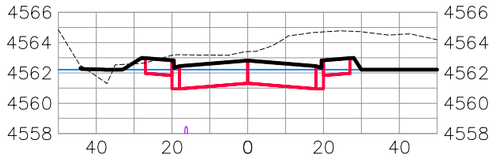

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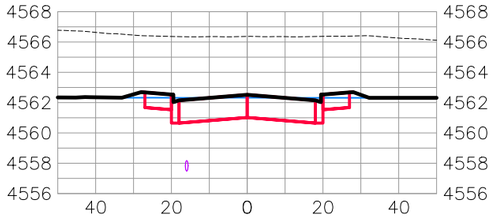

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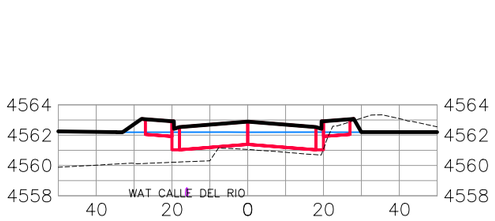

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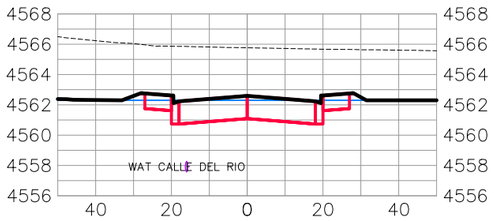

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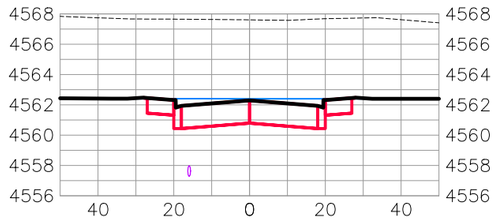

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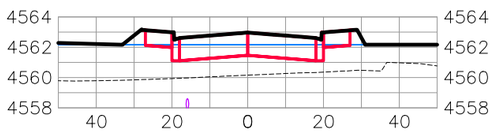

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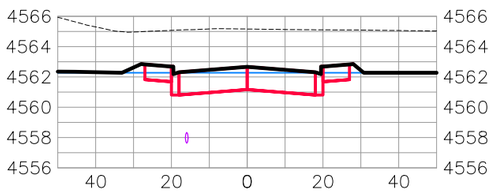

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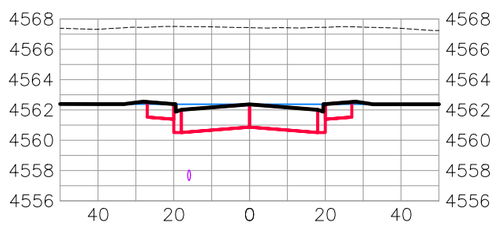

2+75.00

CALLE DEL RIO

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (20)
May 20, 2020

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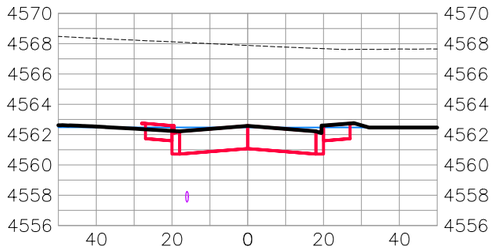

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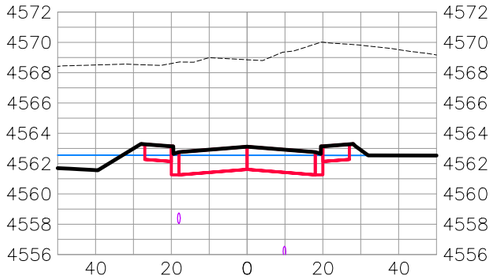

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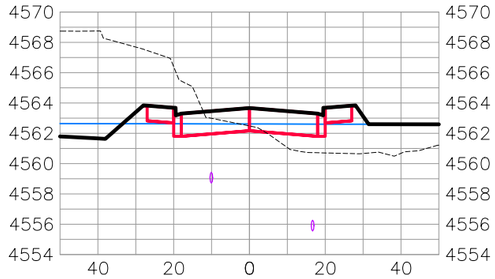

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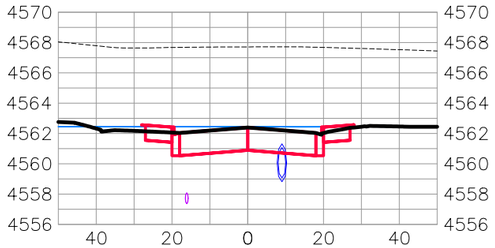

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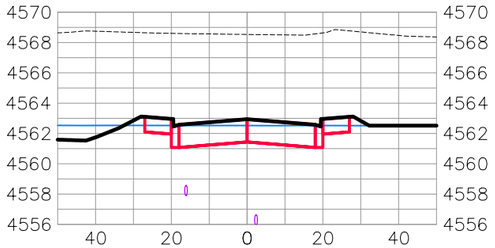

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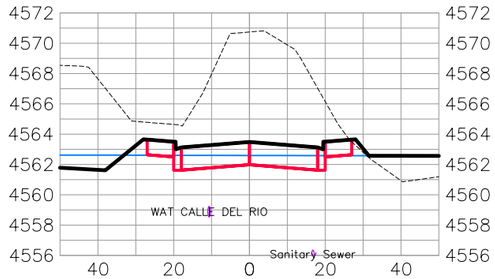

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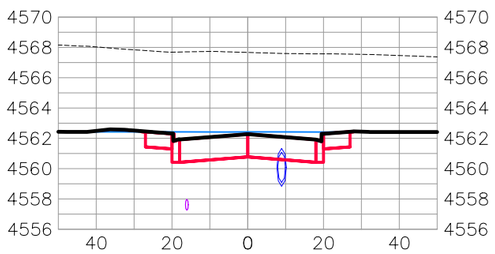

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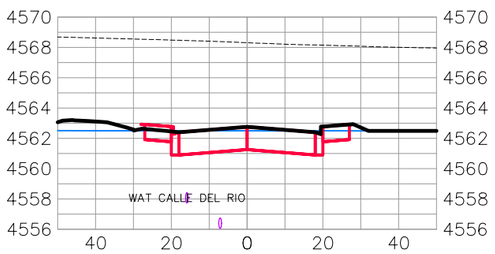

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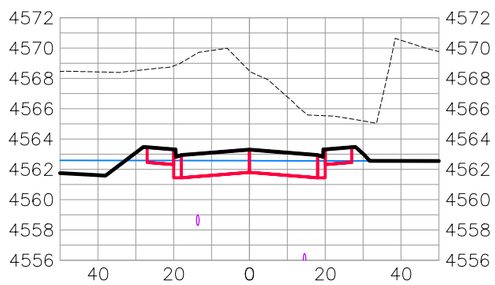

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CALLE DEL RIO

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (21)
May 20, 2020

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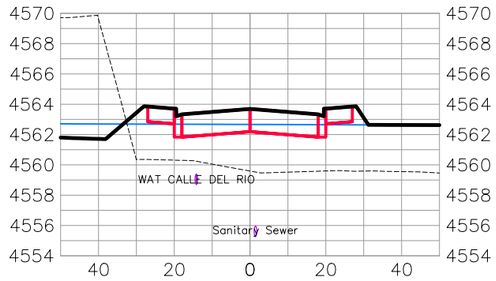

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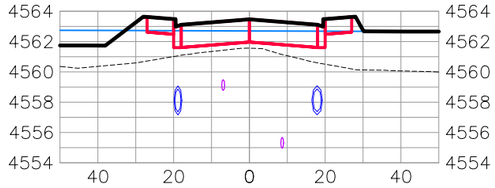

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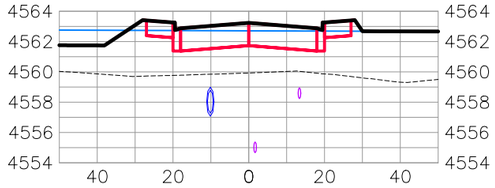

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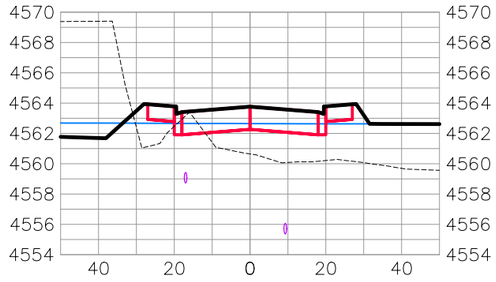

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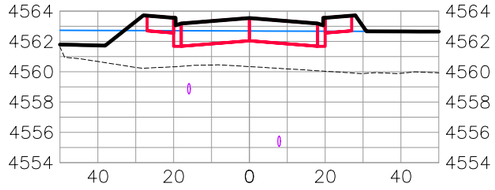

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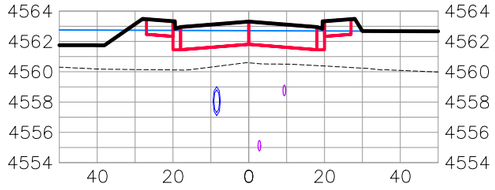

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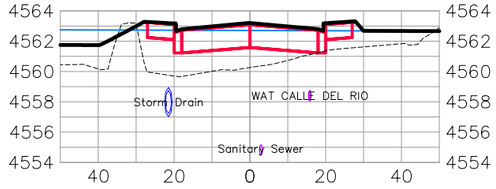

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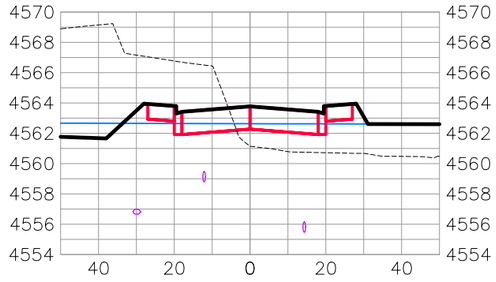

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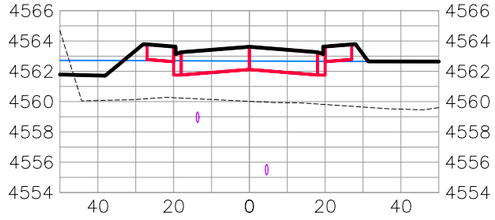

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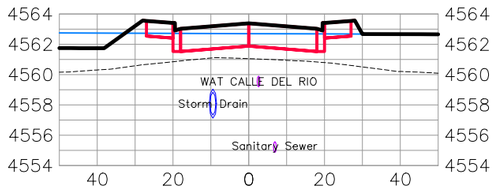

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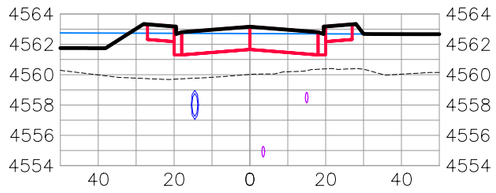

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CALLE DEL RIO

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (22)
May 20, 2020

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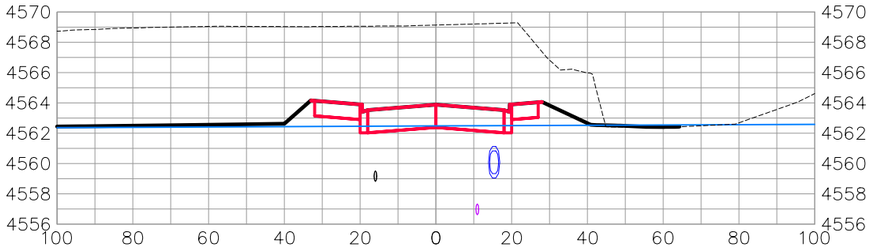

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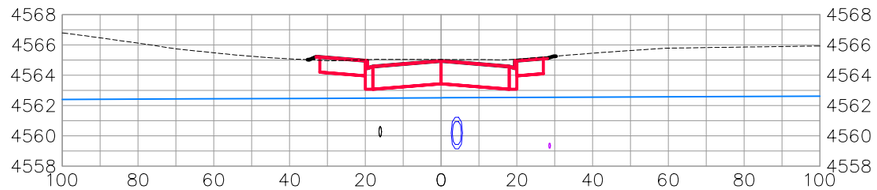

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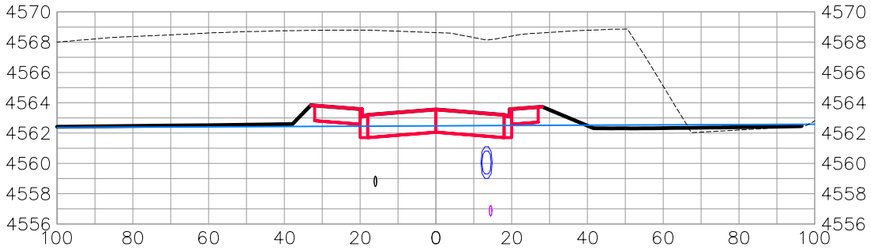

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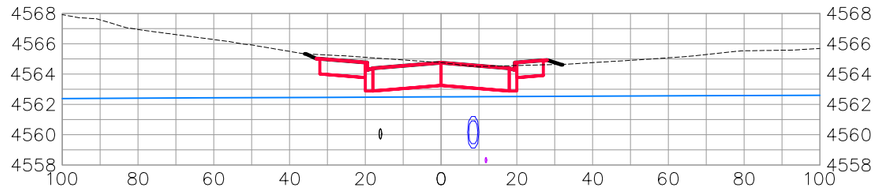

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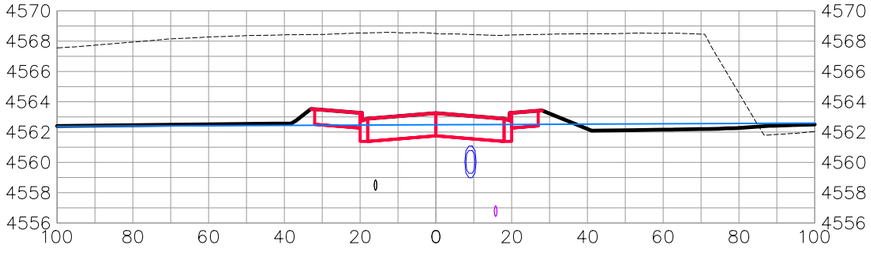

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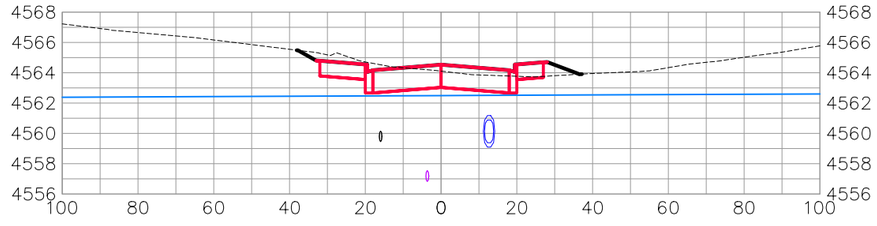

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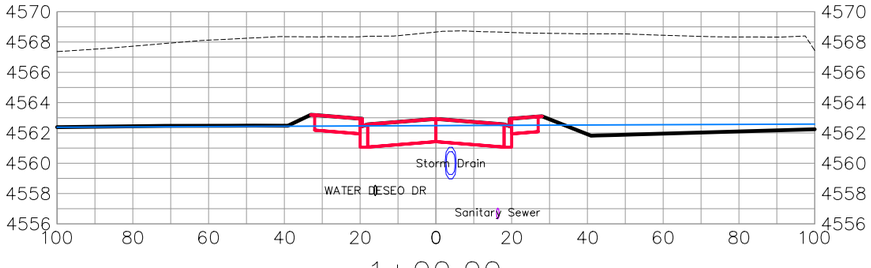

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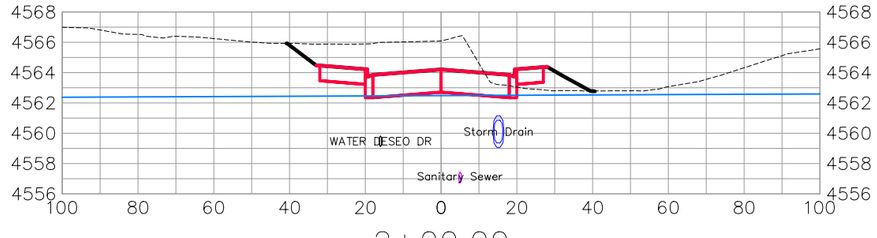

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DESEO DRIVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (23)
May 20, 2020

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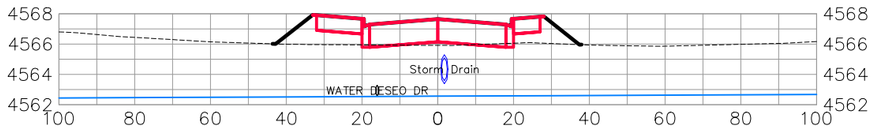

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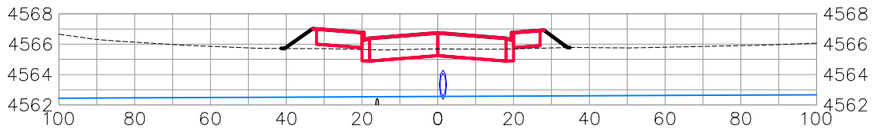

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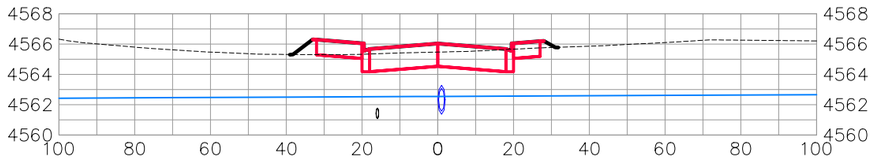

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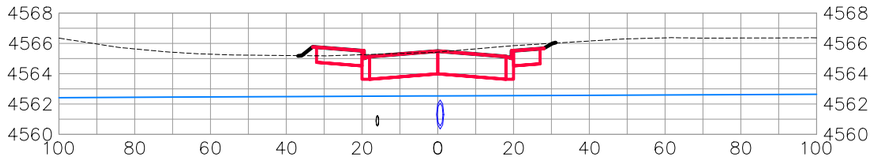

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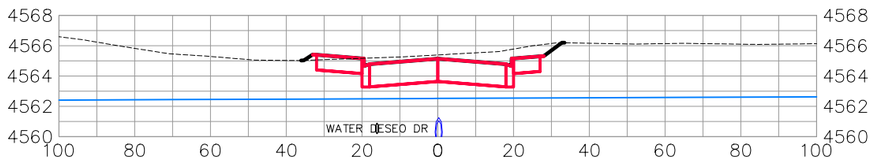

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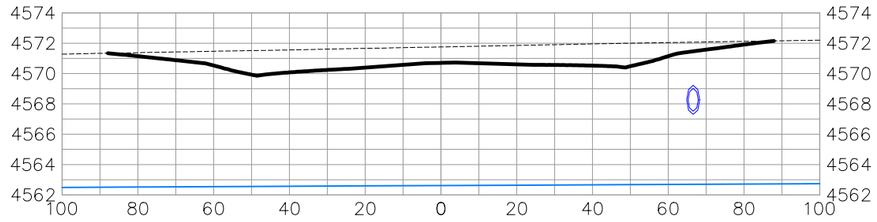

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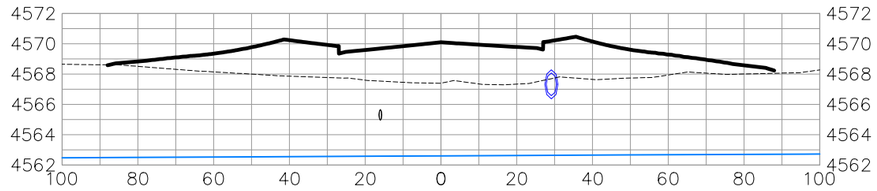

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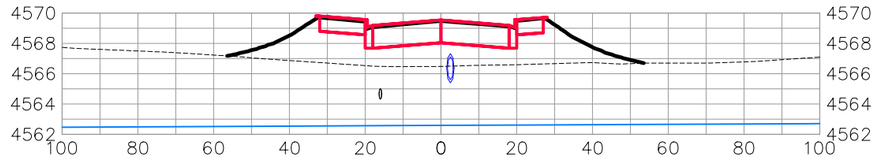

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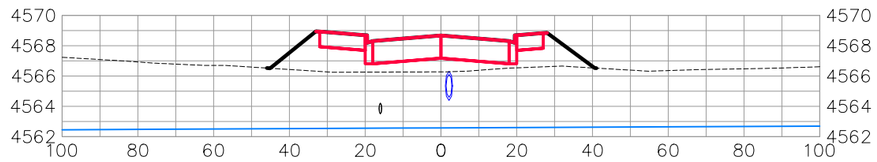

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DESEO DRIVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (24)
May 20, 2020

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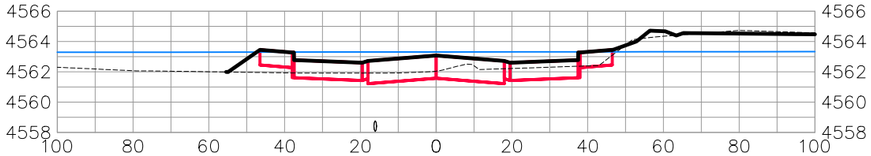

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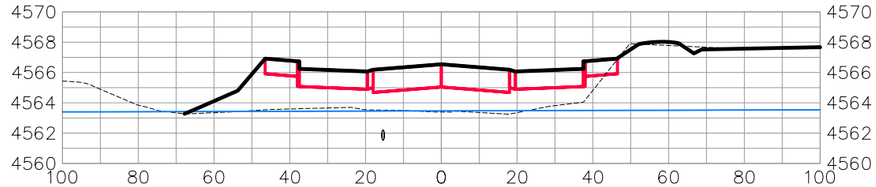

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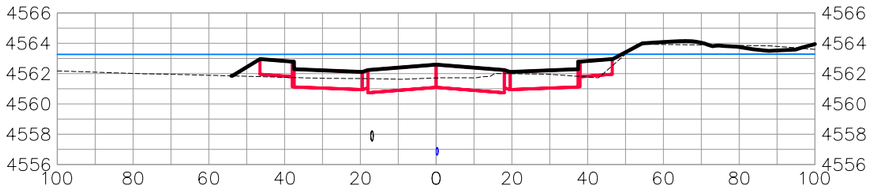

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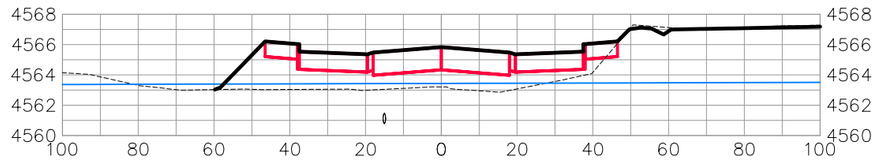

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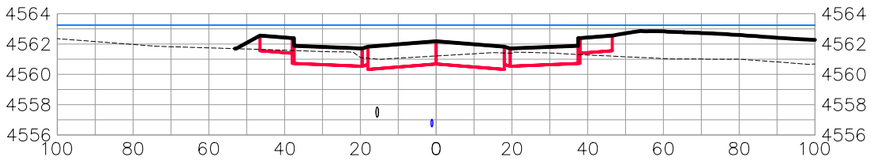

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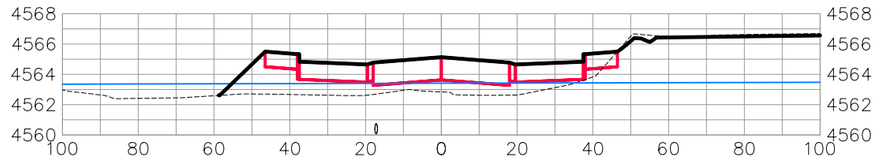

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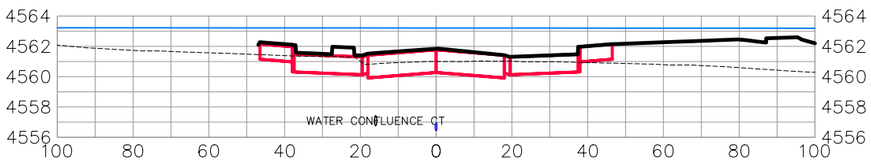

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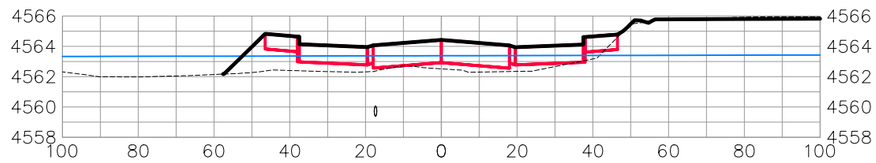

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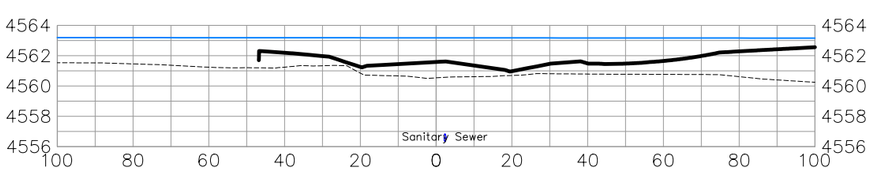

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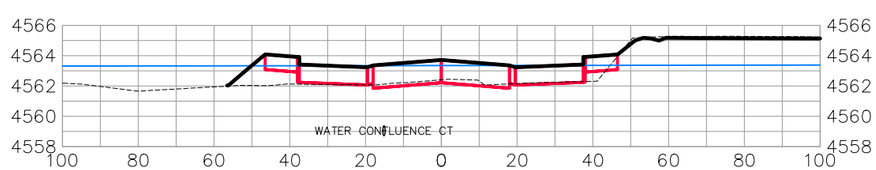

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CONFLUENCE CT

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (25)
May 20, 2020

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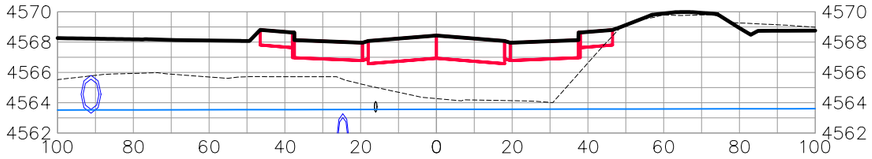

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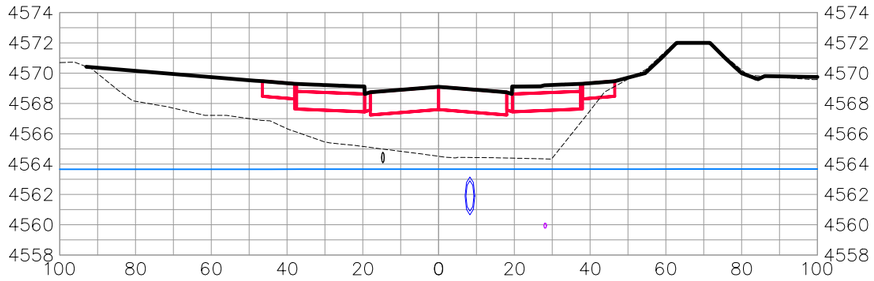

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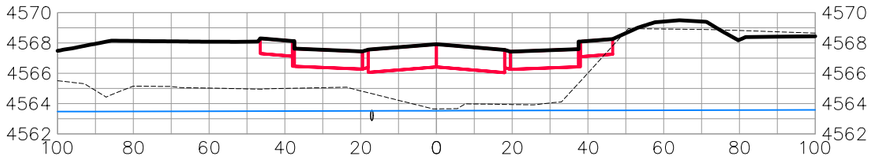

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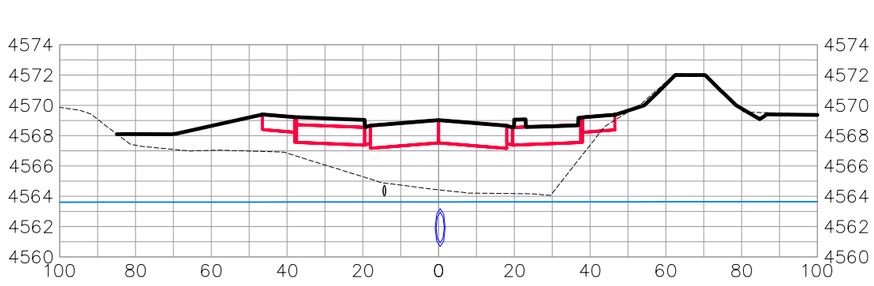

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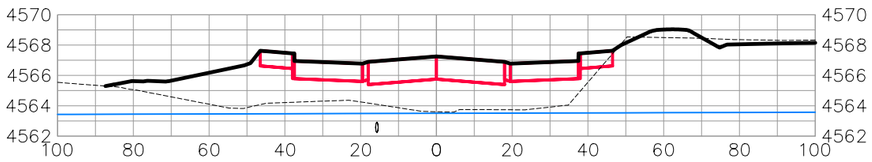

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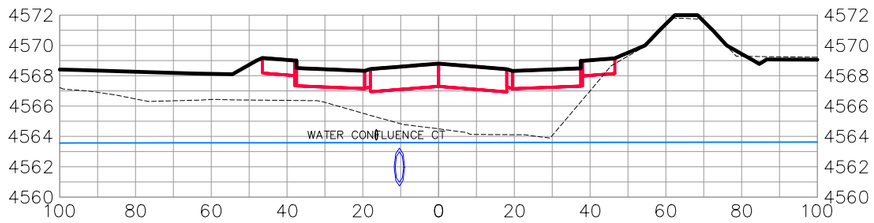

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CONFLUENCE CT

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (26)
May 20, 2020

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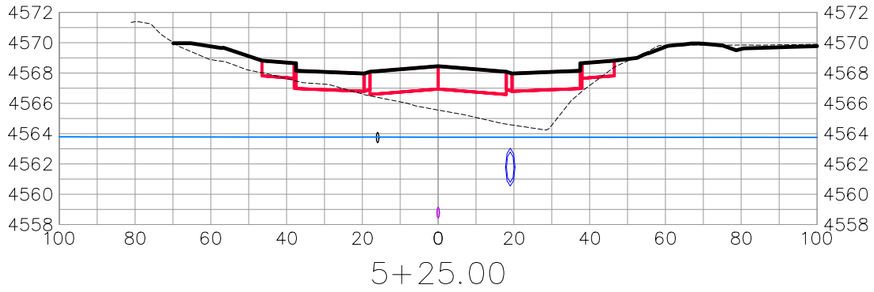

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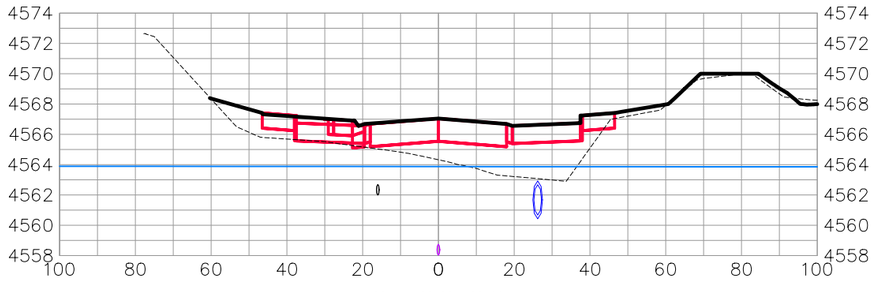

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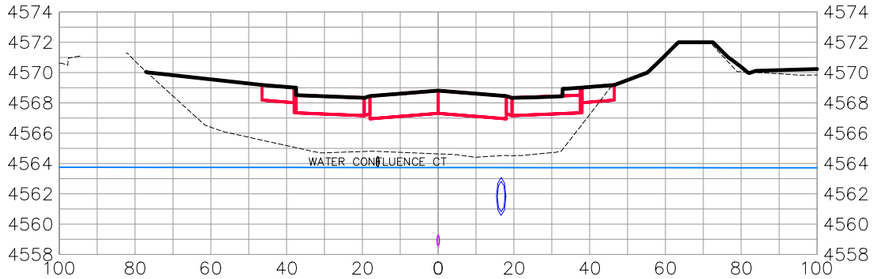

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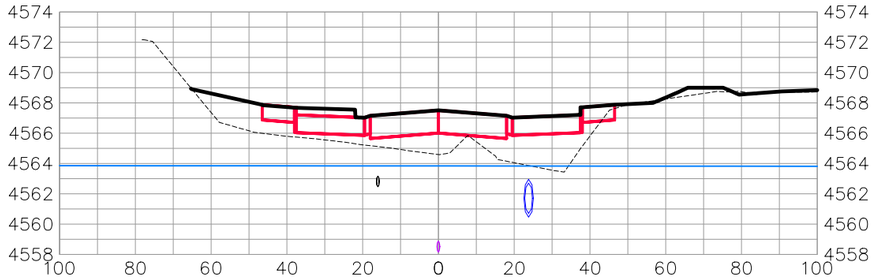

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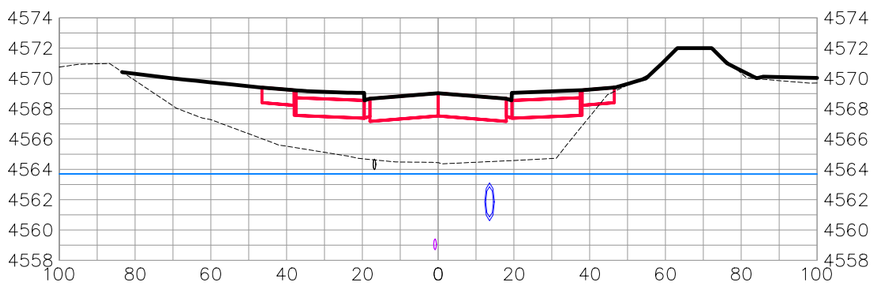

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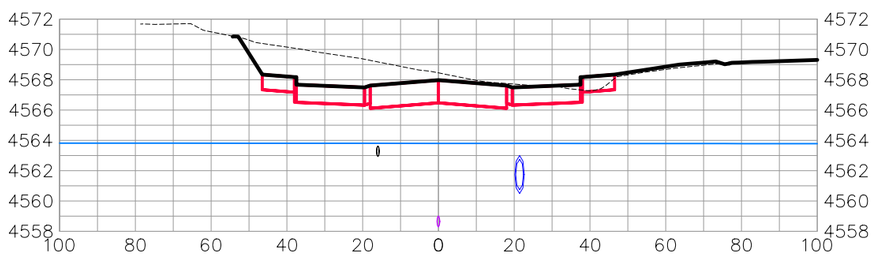

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CONFLUENCE CT

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (27)
May 20, 2020

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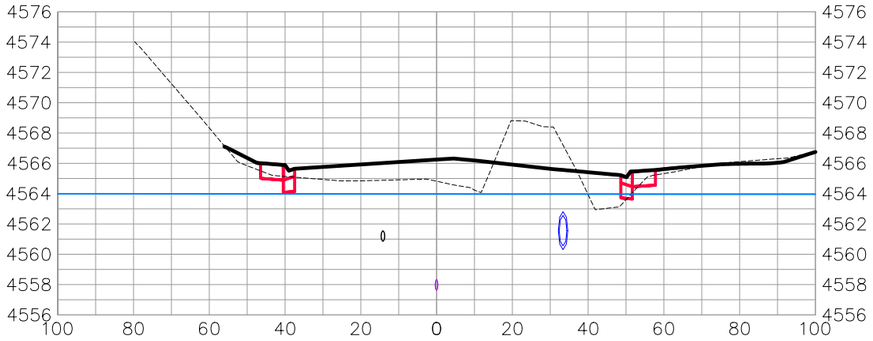

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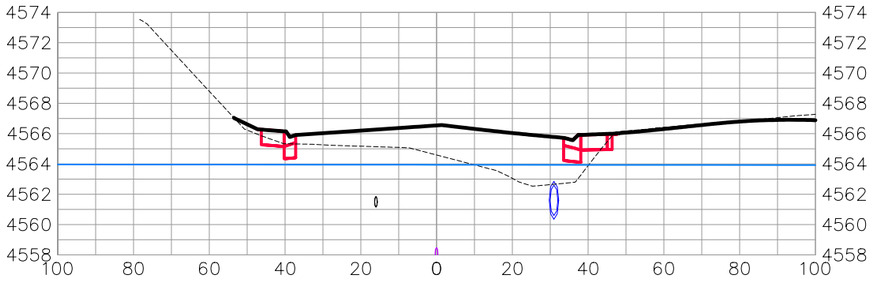

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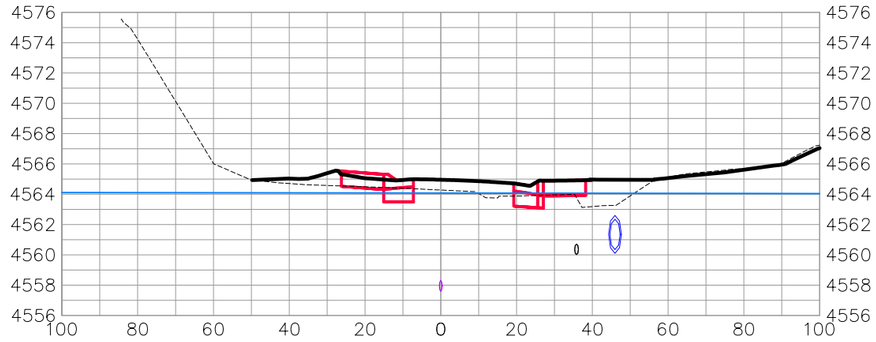

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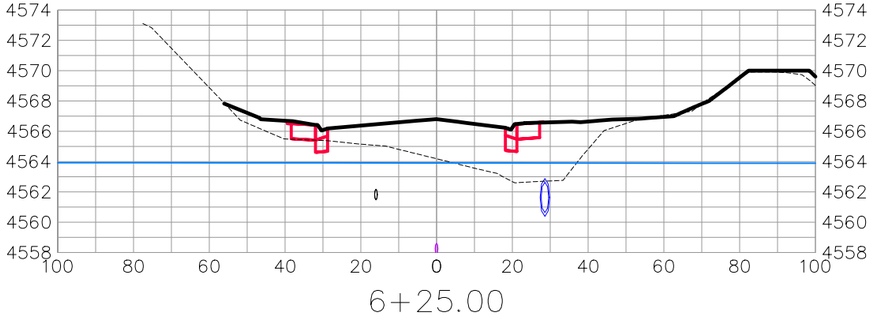

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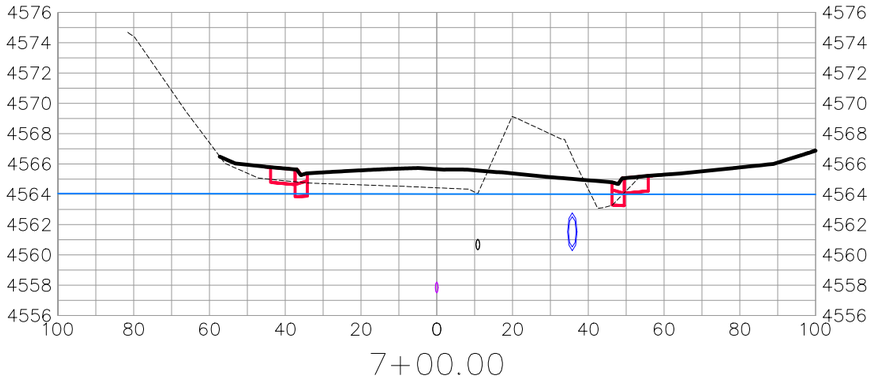

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CONFLUENCE CT

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (28)
May 20, 2020

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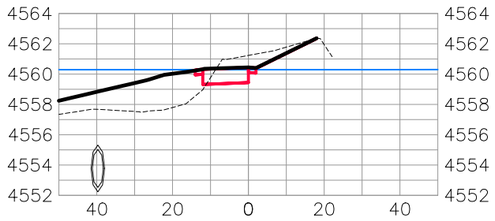

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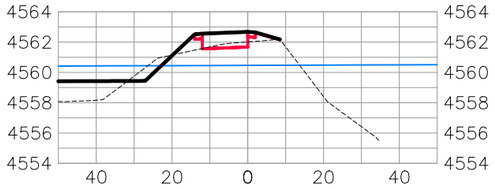

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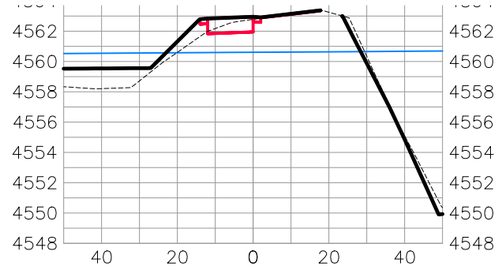

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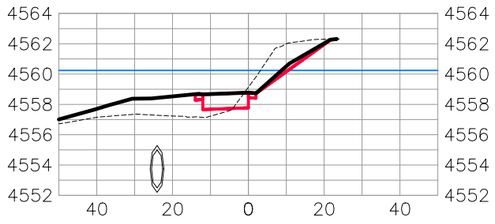

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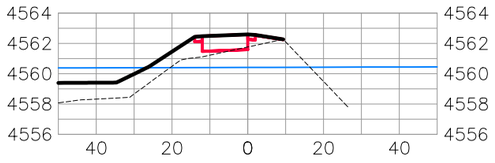

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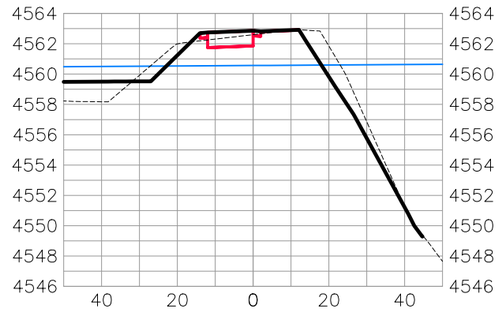

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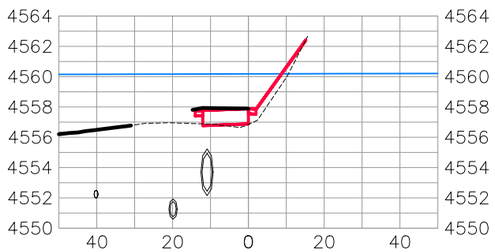

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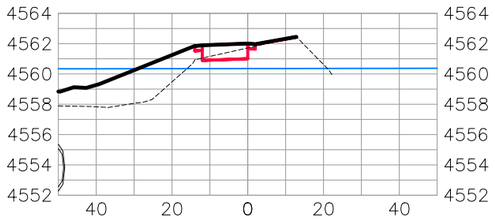

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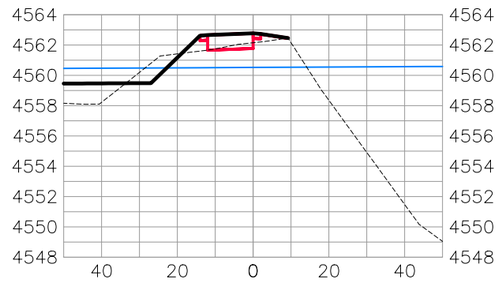

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BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (29)
May 20, 2020

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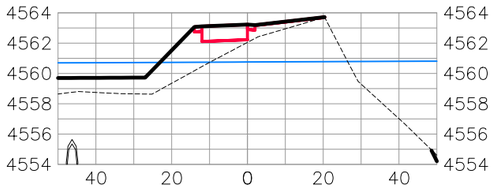

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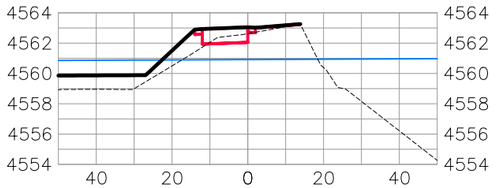

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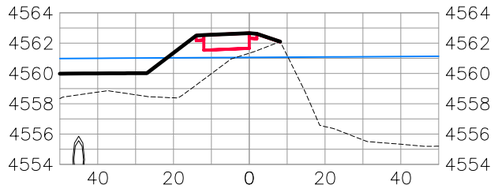

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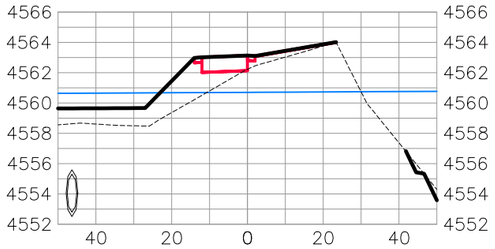

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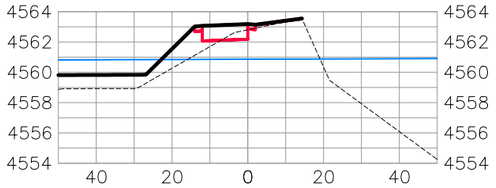

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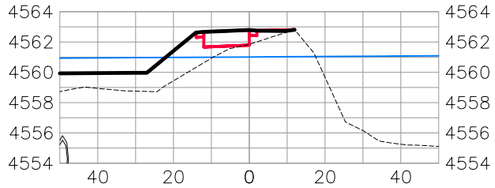

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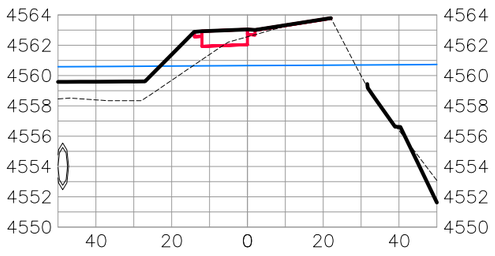

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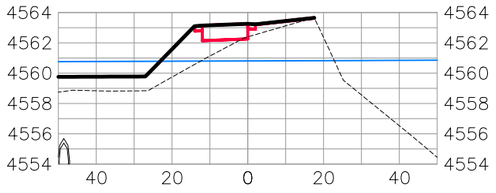

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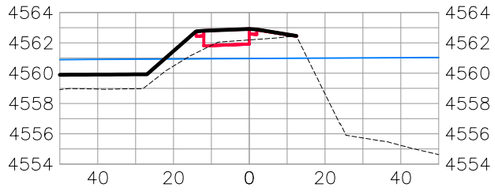

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BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (30)
May 20, 2020

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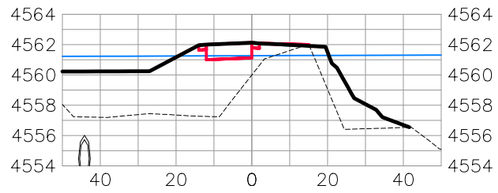

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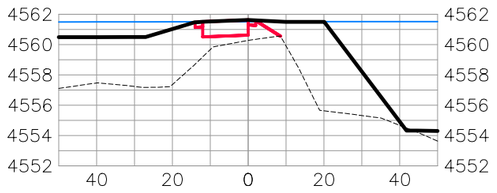

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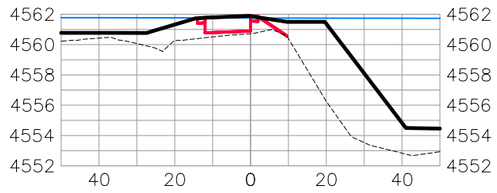

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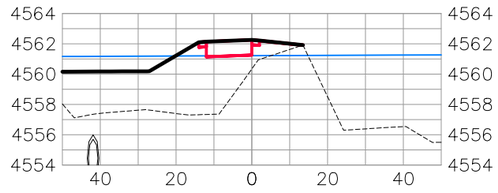

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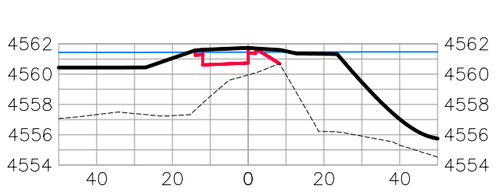

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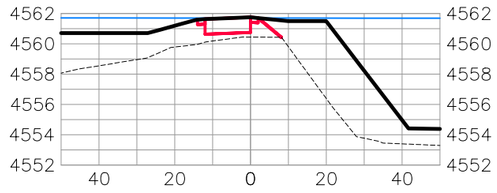

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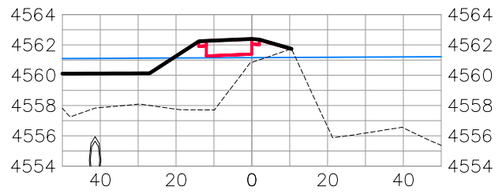

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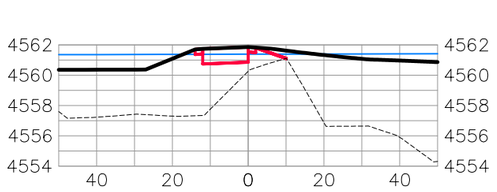

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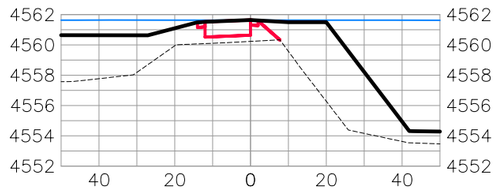

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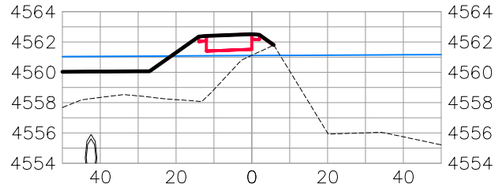

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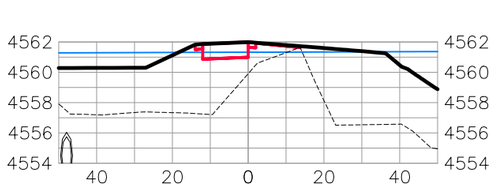

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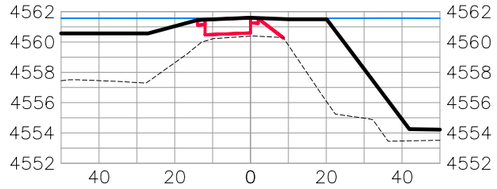

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BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (31)
May 20, 2020

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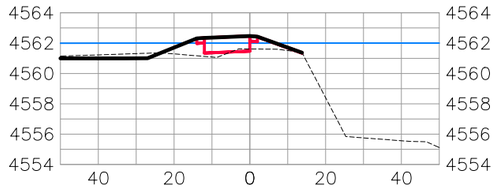

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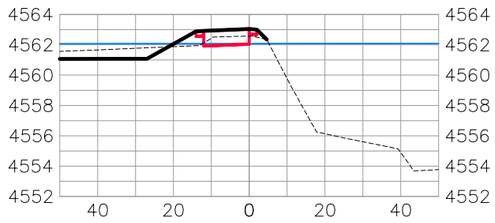

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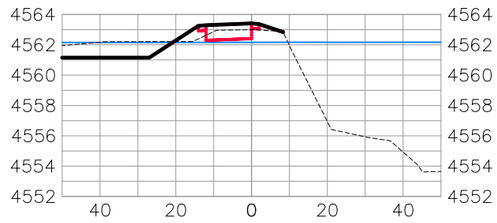

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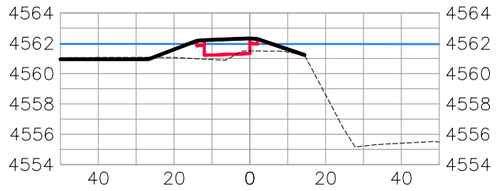

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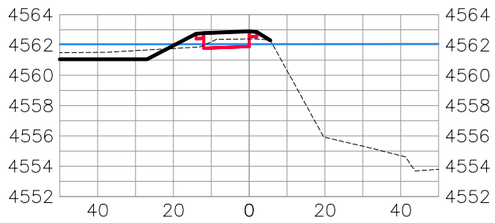

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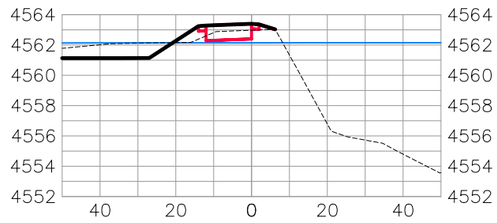

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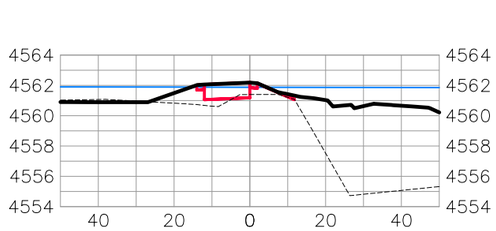

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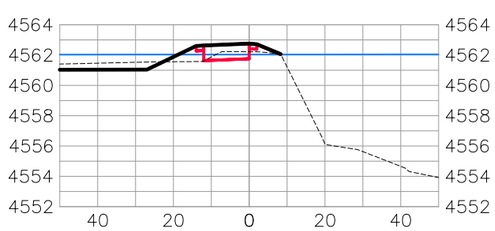

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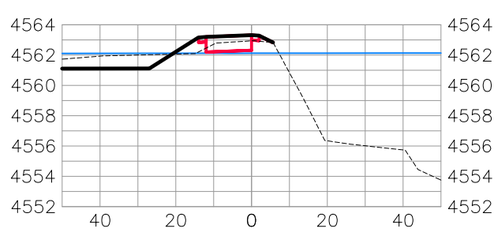

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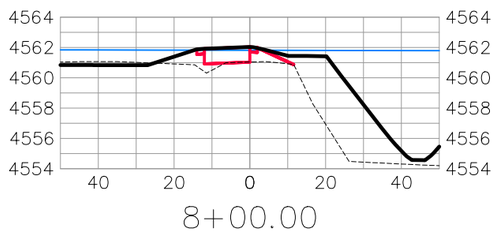

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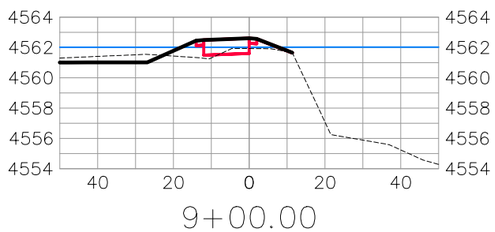

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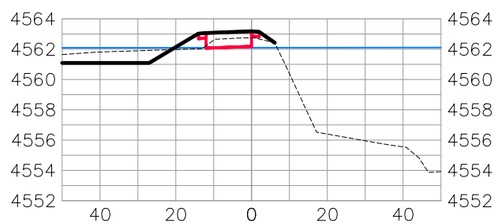

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BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (32)
May 20, 2020

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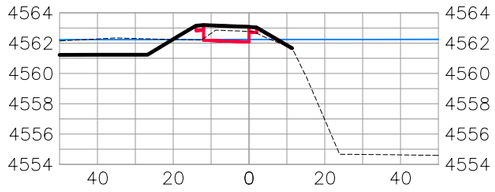

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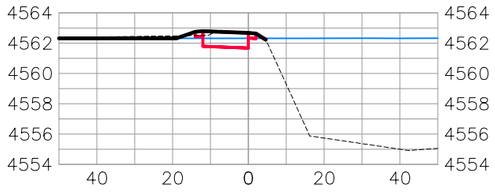

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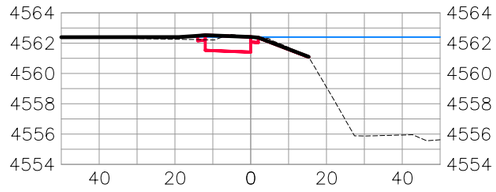

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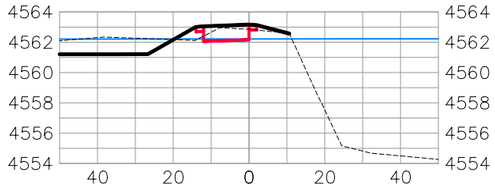

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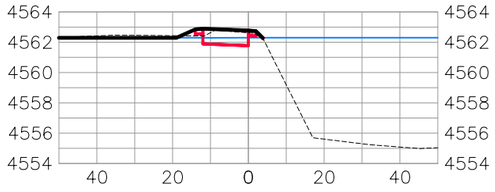

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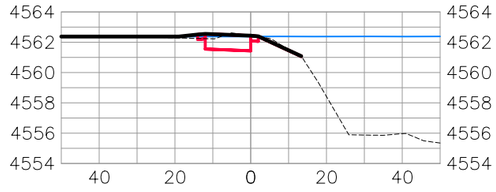

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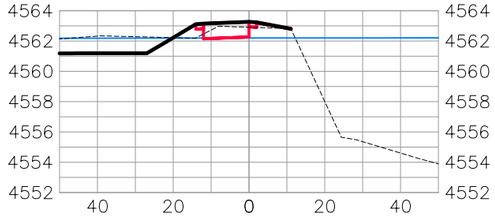

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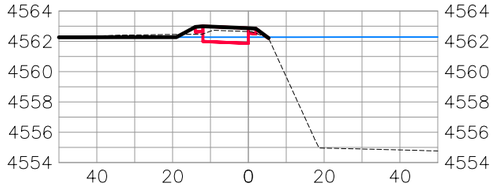

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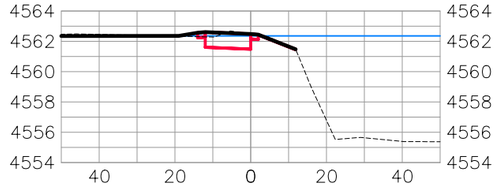

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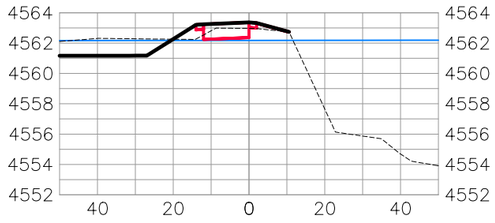

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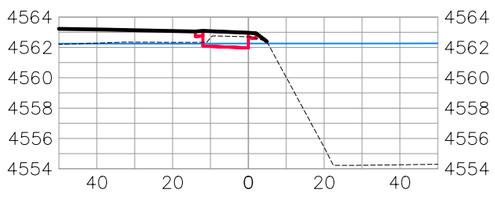

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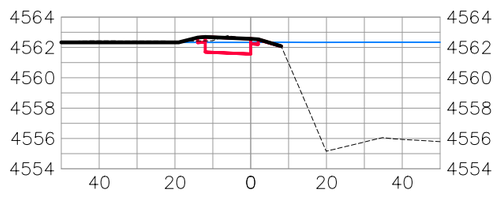

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BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (33)
May 20, 2020

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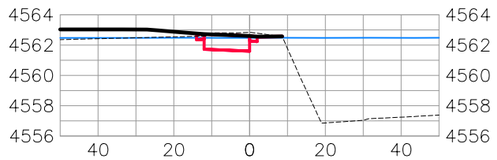

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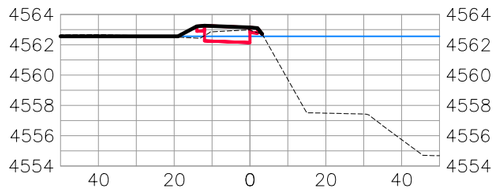

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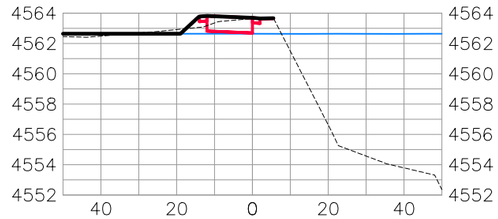

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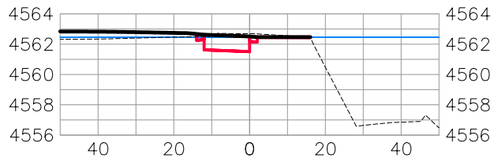

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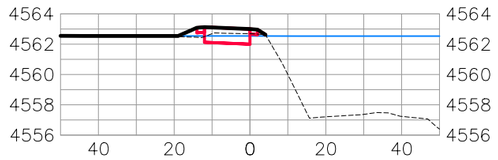

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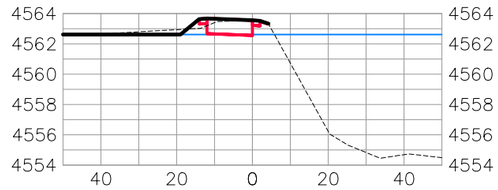

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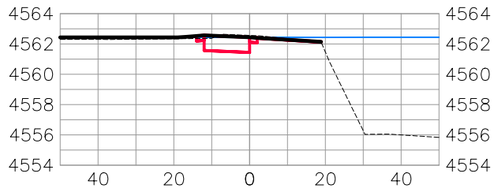

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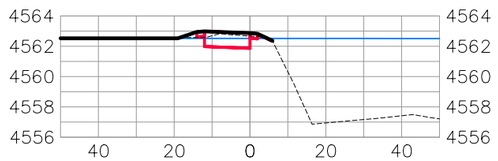

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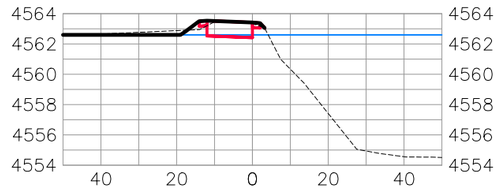

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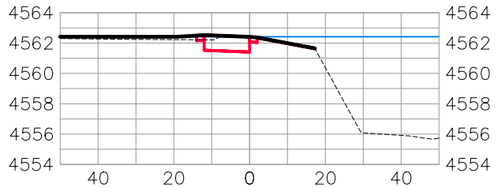

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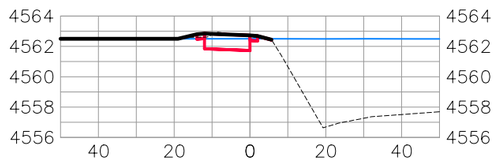

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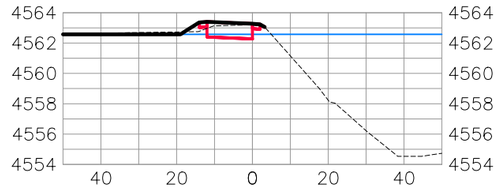

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BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (34)
May 20, 2020

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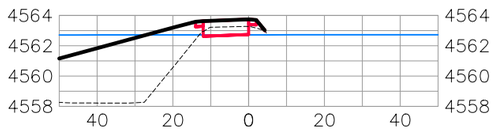

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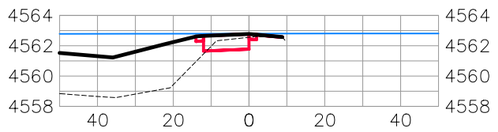

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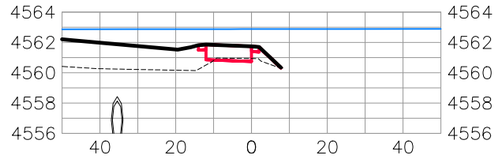

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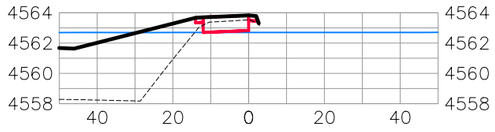

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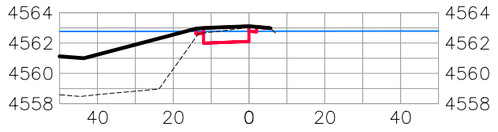

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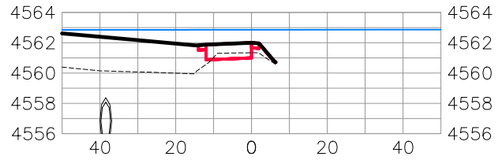

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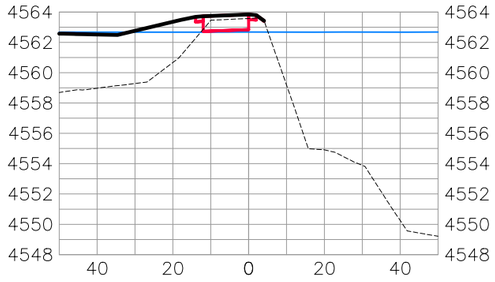

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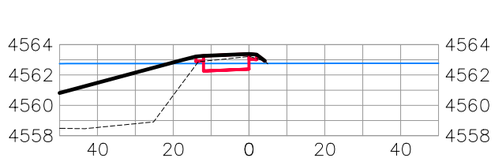

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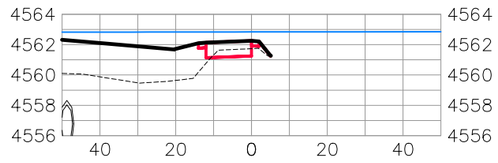

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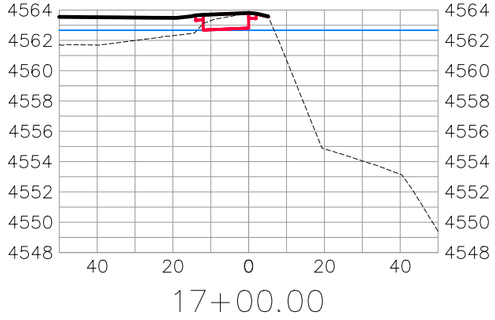

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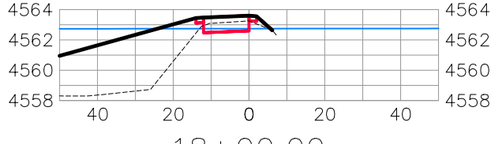

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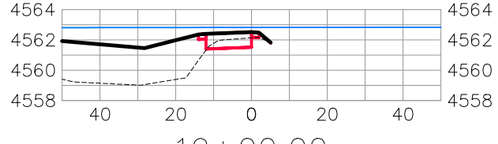

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BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (35)
May 20, 2020

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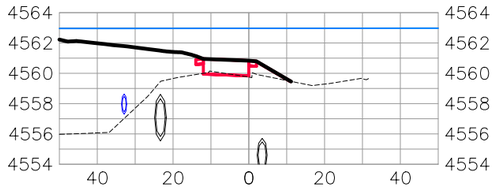

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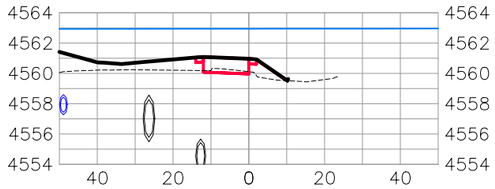

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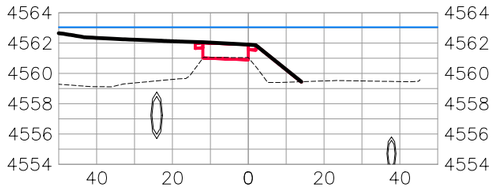

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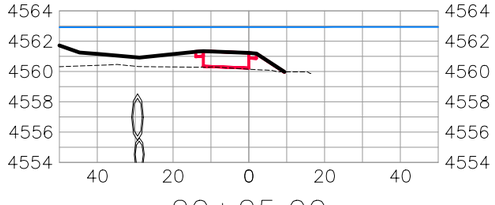

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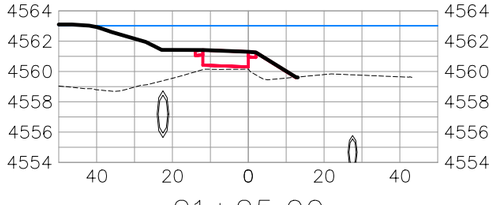

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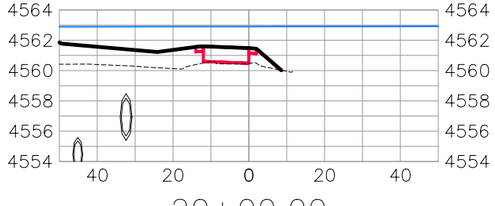

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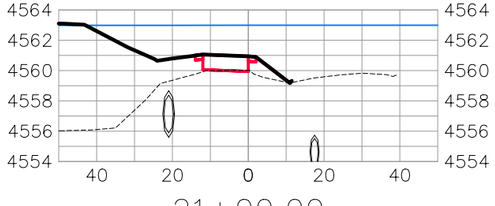

21+00.00

BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (36)
May 20, 2020

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DESCRIPTION	DATE
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REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN SHEET INDEX
May 20, 2020

181

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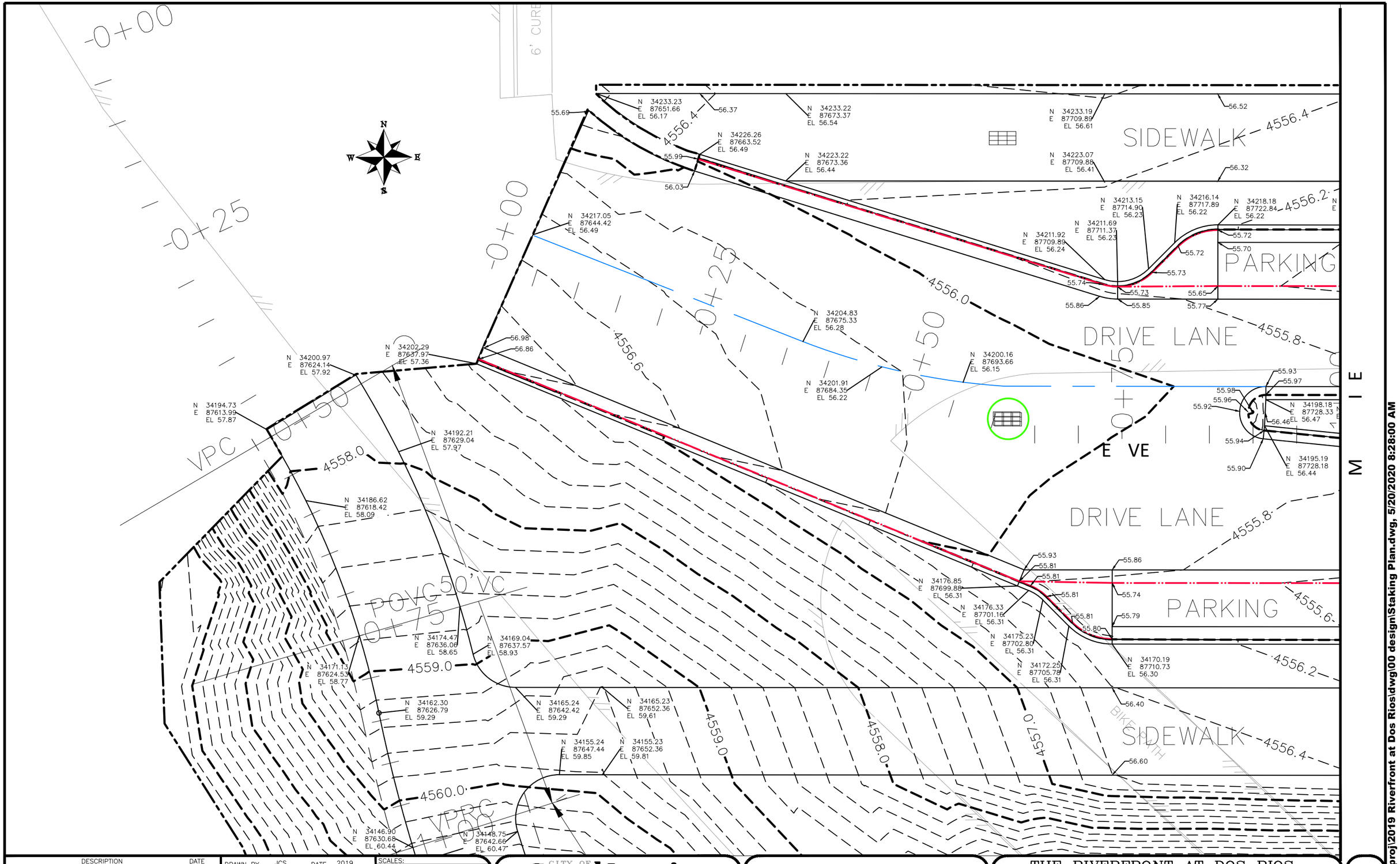

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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES: PLAN & PROFILE HORIZONTAL 0 2.5 5 10 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-1
May 20, 2020

182

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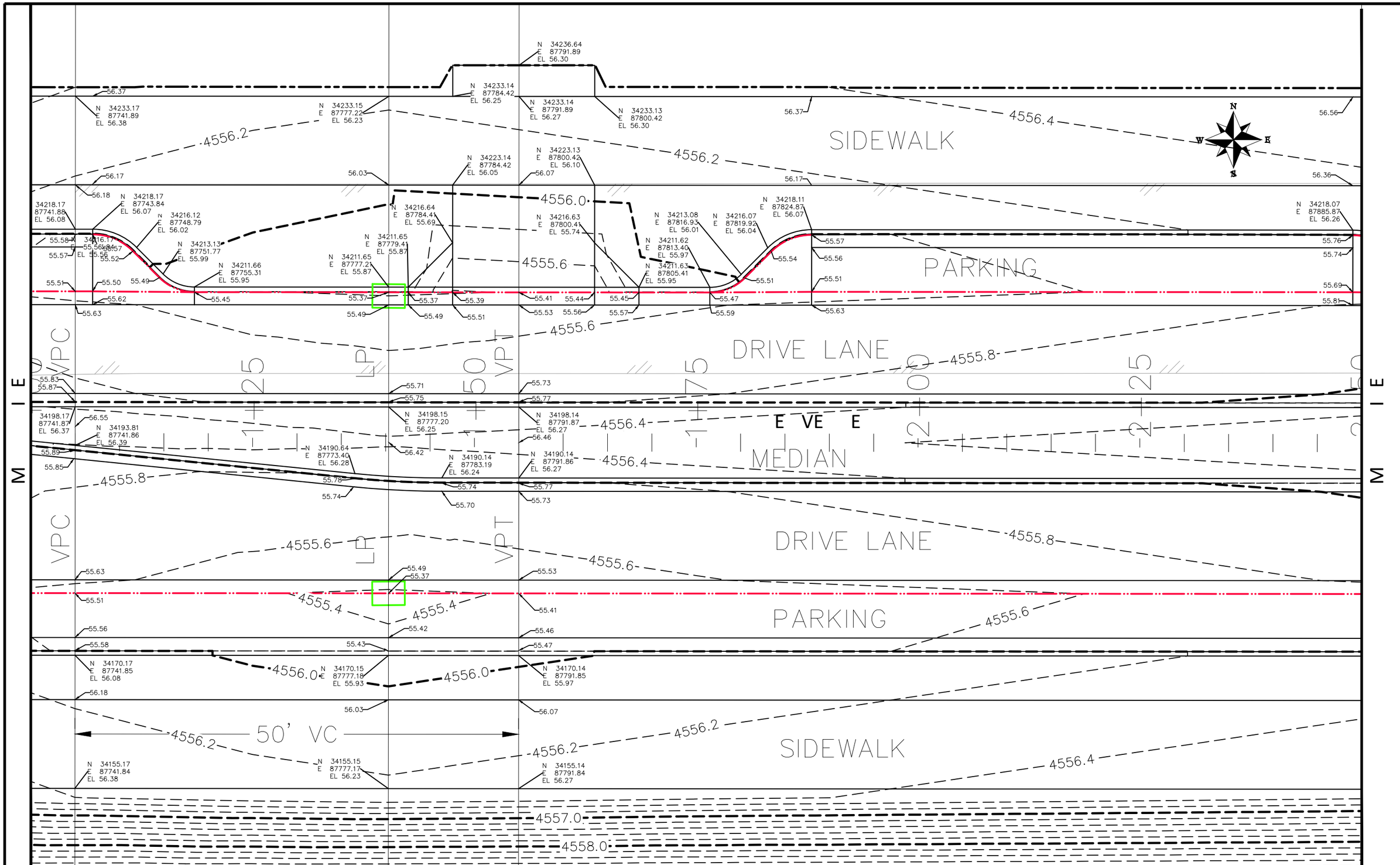

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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-2
May 20, 2020

183

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 5/20/2020 8:28:18 AM

SIDEWALK

PARKING

DRIVE LANE

MEDIAN

DRIVE LANE

PARKING

SIDEWALK

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-3
May 20, 2020

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 5/20/2020 8:28:35 AM

WALK

SIDEWALK

PARKING

DRIVE LANE

MEDIAN

DRIVE LANE

PARKING

SIDEWALK

50' VC

VPC

POVC

VPT

4557.0

4556.8

4556.6

4556.4

4556.2

4557.2

4557.4

4557.6

4557.8

4558.0

4559.0

N 34237.92 E 88113.48 EL 57.45
N 34237.91 E 88129.45 EL 57.45
N 34232.92 E 88111.89 EL 57.23
N 34232.92 E 88113.46 EL 57.24
N 34232.91 E 88129.43 EL 57.33
N 34232.90 E 88136.89 EL 57.37
N 34232.90 E 88138.12 EL 57.38
N 34232.88 E 88161.90 EL 57.64
N 34222.92 E 88113.41 EL 57.04
N 34222.91 E 88129.39 EL 57.13
N 34217.94 E 88082.79 EL 56.84
N 34215.88 E 88087.74 EL 56.83
N 34212.90 E 88090.72 EL 56.82
N 34216.42 E 88113.39 EL 56.68
N 34216.47 E 88129.38 EL 56.78
N 34211.43 E 88094.26 EL 56.81
N 34211.41 E 88108.37 EL 56.85
N 34211.41 E 88134.34 EL 56.99
N 34211.40 E 88136.88 EL 57.00
N 34211.40 E 88138.10 EL 57.01
N 34211.39 E 88148.48 EL 57.13
N 34215.75 E 88154.92 EL 57.24
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N 34217.79 E 88159.88 EL 57.31
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N 34197.92 E 88111.87 EL 57.23
N 34189.92 E 88111.86 EL 57.23
N 34197.90 E 88136.87 EL 57.36
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N 34197.07 E 88180.31 EL 57.89
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DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-4
May 20, 2020

185

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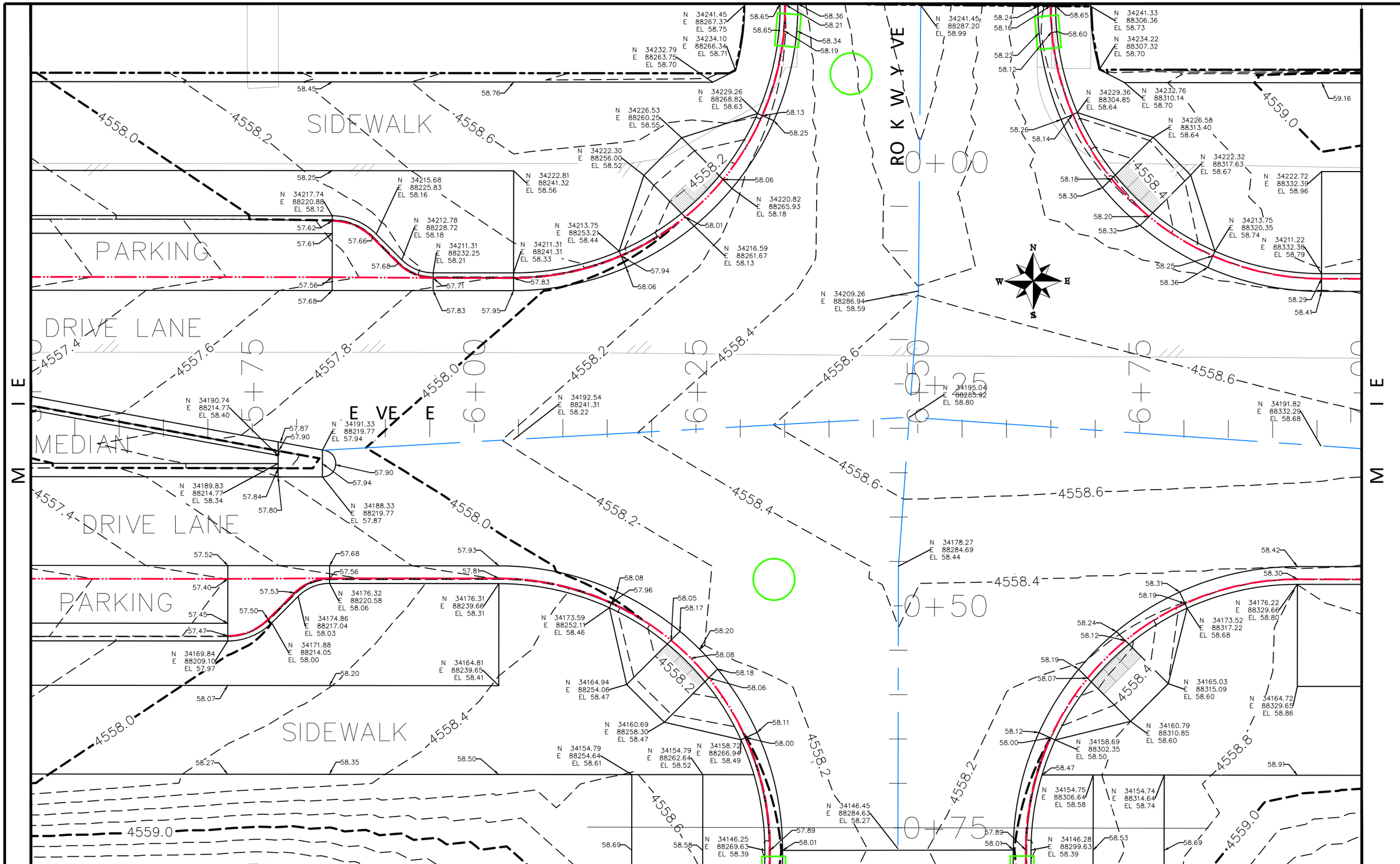

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-5
May 20, 2020

186

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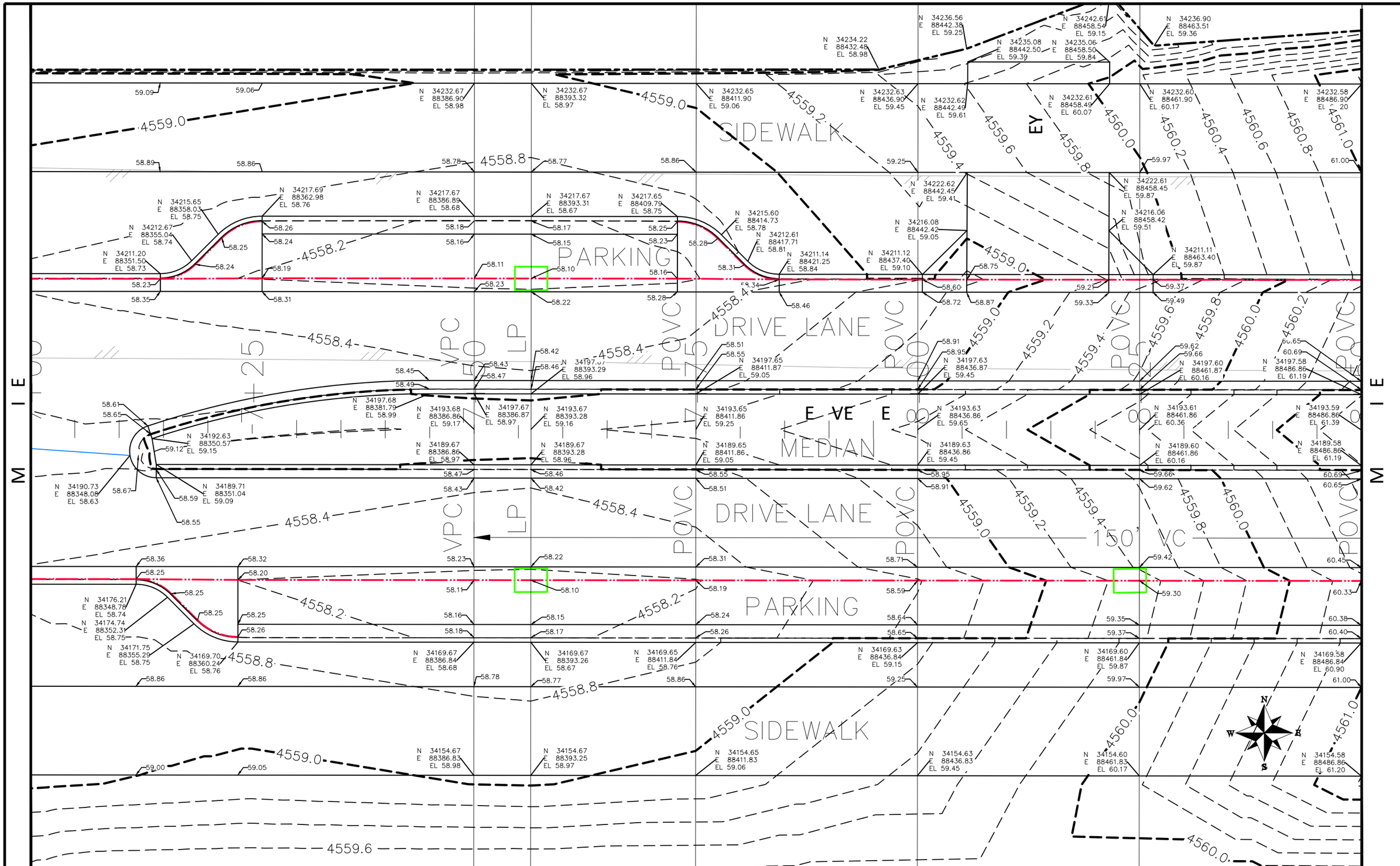

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-6
May 20, 2020

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 5/20/2020 8:29:30 AM

SIDEWALK

PARKING

DRIVE LANE

PARKING

SIDEWALK

15" RCP STM

15" RCP STM

15" RCP STM

SIDEWALK
PARKING
DRIVE LANE
MEDIAN
DRIVE LANE
PARKING
SIDEWALK
ASPHALT
2' CURB & GUTTER
15" RCP STM
24" RCP STM
WRE
7+49
7+25
7+00
4569.4
4569.6
4569.8
4570.0
4570.2
4570.4
4570.6
4570.8
4571.0
4571.2
4568.8
4569.0
N 34232.42 E 88661.90 EL 69.94
N 34232.40 E 88686.90 EL 70.26
N 34232.33 E 88760.06 EL 71.58
N 34227.08 E 88752.35 EL 71.45
N 34225.27 E 88762.74 EL 71.27
N 34222.35 E 88742.17 EL 71.08
N 34217.42 E 88664.29 EL 69.67
N 34217.40 E 88686.89 EL 69.96
N 34217.38 E 88704.90 EL 70.09
N 34215.37 E 88659.34 EL 69.55
N 34215.33 E 88709.85 EL 70.10
N 34212.39 E 88656.35 EL 69.46
N 34212.34 E 88712.84 EL 70.11
N 34210.93 E 88652.81 EL 69.36
N 34210.87 E 88716.37 EL 70.12
N 34211.34 E 88718.48 EL 70.22
N 34202.63 E 88762.74 EL 71.23
N 34202.63 E 88784.23 EL 71.38
N 34197.42 E 88661.87 EL 69.93
N 34197.41 E 88671.24 EL 70.05
N 34196.62 E 88679.96 EL 70.14
N 34190.85 E 88719.43 EL 69.96
N 34189.42 E 88661.86 EL 69.93
N 34189.40 E 88686.86 EL 70.26
N 34190.27 E 88714.42 EL 70.45
N 34189.36 E 88714.42 EL 70.46
N 34189.22 E 88720.92 EL 70.00
N 34187.85 E 88719.42 EL 69.96
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N 34173.95 E 88749.75 EL 70.37
N 34169.42 E 88661.84 EL 69.64
N 34169.40 E 88686.84 EL 69.96
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N 34159.59 E 88757.30 EL 70.63
N 34158.93 E 88791.66 EL 70.46
N 34154.42 E 88661.83 EL 69.94
N 34154.40 E 88686.83 EL 70.26
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N 34156.23 E 88767.39 EL 70.57
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N 34145.58 E 88784.24 EL 70.52
N E W S

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-8
May 20, 2020

189

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 5/20/2020 8:30:07 AM

SIDEWALK

DRIVE LANE

RO K W Y VE

DRIVE LANE

SIDEWALK

0+75 1+00 1+25 1+50 1+75 2+00 2+25

CB

4559.0 4559.2 4559.4 4559.6 4559.8

4558.2 4558.4 4558.6 4558.8

58.69 34154.74 88314.64 58.74

N 34123.75 E 88314.58 EL 58.90

58.53 34154.75 88306.64 58.58

58.74 58.60 58.11 58.23

N 34146.28 E 88299.63 EL 58.39

57.89 58.01

N 34123.81 E 88284.58 EL 58.49

58.23 58.11 58.60

N 34146.25 E 88269.67 EL 58.39

58.58 58.74 58.69

N 34123.86 E 88254.58 EL 58.90

DESCRIPTION	DATE
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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-9
May 20, 2020

190

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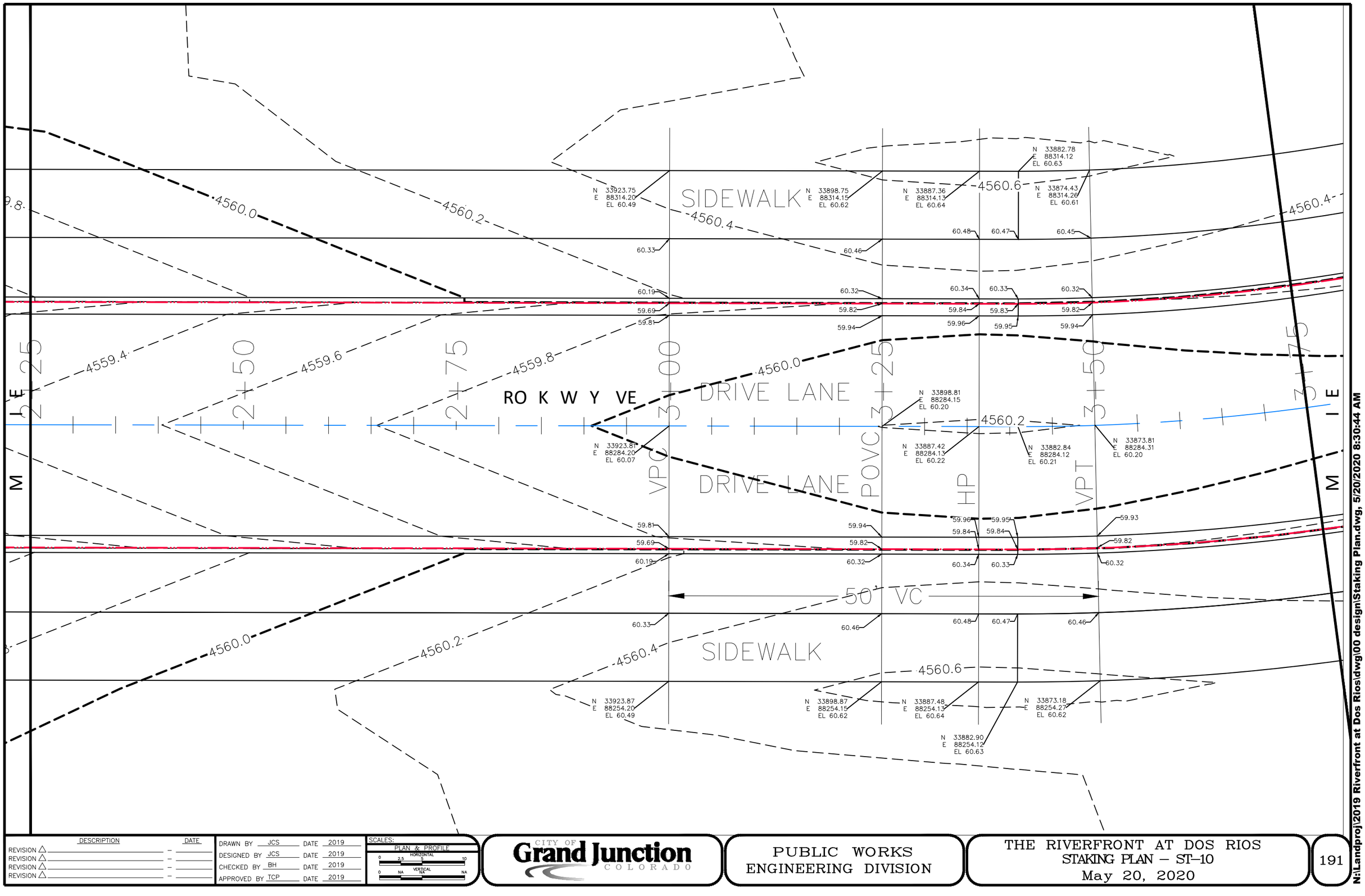

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REVISION △	
REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-10
May 20, 2020

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N 33882.78
E 88314.12
EL 60.63

N 33874.43
E 88314.26
EL 60.61

60.45

4560.4

4560.4

N 33811.67
E 88325.78
EL 60.40

60.24

SIDEWALK

N 33777.70
E 88343.88
EL 60.19

60.03

N 33806.85
E 88311.58
EL 60.10

59.60

59.71

4560.0

N 33768.64
E 88331.97
EL 59.89

59.39

59.51

4559.6

4560.0

13+75

14+00

14+25

DRIVE LANE

14+50

14+75

15+00

4560.0

4561.0

61.04

N 33754.93
E 88366.77
EL 60.91

N 33740.52
E 88373.93
EL 60.88

60.75

60.74

N 33742.95
E 88357.74
EL 60.61

60.24

60.11

60.23

N 33732.96
E 88369.05
EL 60.36

N 33741.72
E 88356.06
EL 60.22

N 33725.45
E 88350.94
EL 60.62

60.65

60.61

4560.0

N 33728.23
E 88342.95
EL 60.56

N 33724.66
E 88346.48
EL 60.65

60.71

61.08

N 33803.16
E 88296.99
EL 59.99

N 33790.75
E 88301.74
EL 59.95

N 33760.01
E 88317.60
EL 59.81

ROKWY VE

4560.0

N 33715.63
E 88330.71
EL 60.22

59.60

N 33798.43
E 88284.86
EL 59.71

60.10

DRIVE LANE

4559.6

N 33752.85
E 88305.22
EL 59.52

59.40

59.90

4560.0

4560.0

60.10

60.60

60.67

60.24

4560.4

N 33793.01
E 88268.75
EL 60.40

SIDEWALK

60.04

4560.2

60.74

60.90

N 33744.47
E 88290.42
EL 60.20

DESCRIPTION	DATE
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REVISION △	–
REVISION △	–
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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-11
May 20, 2020

192

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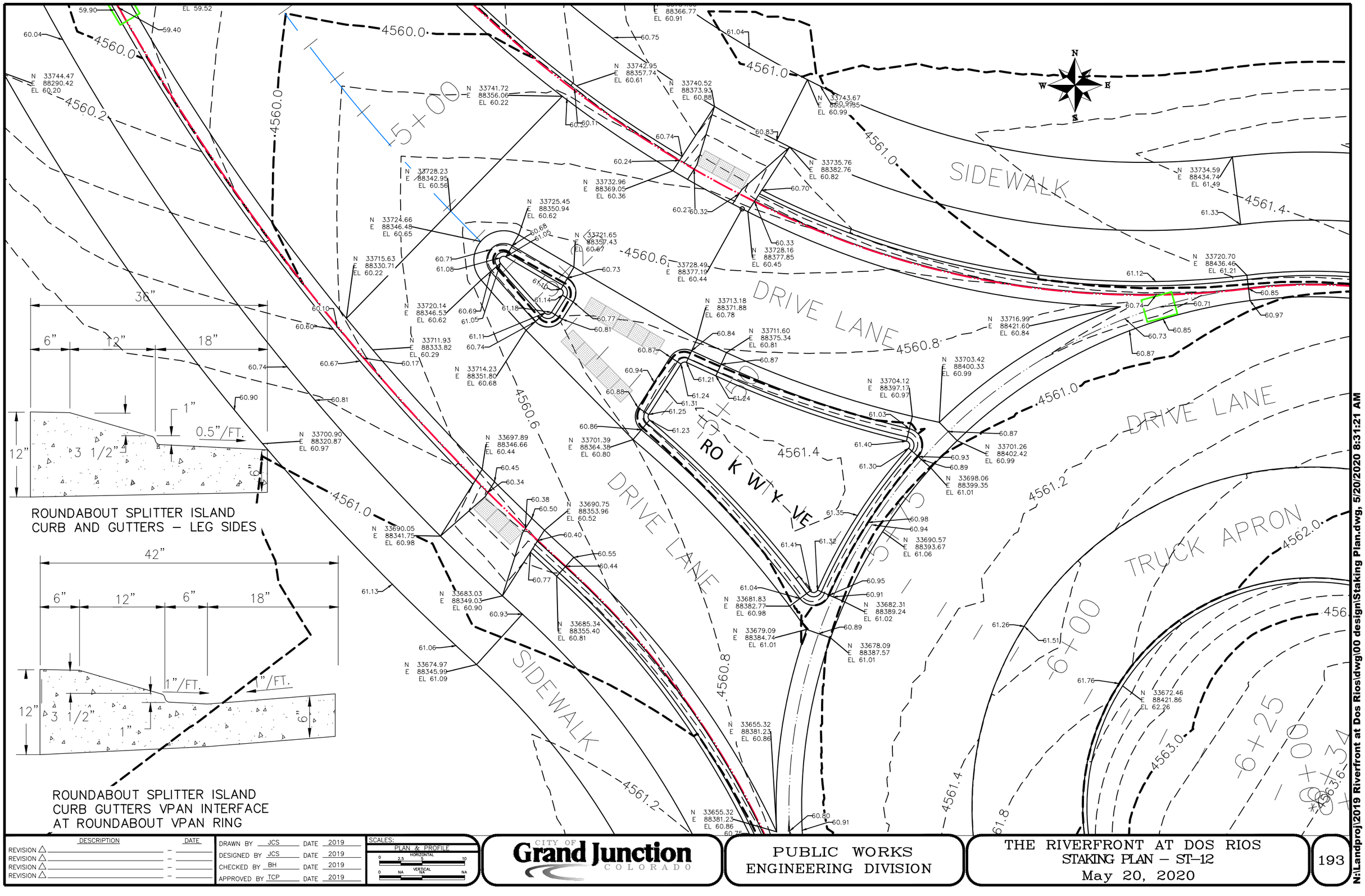

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-12
May 20, 2020

193

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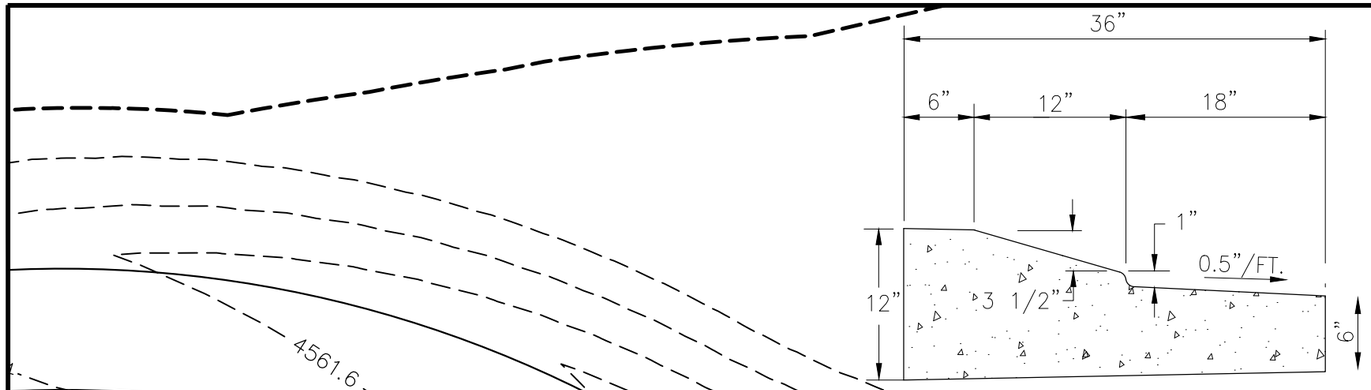

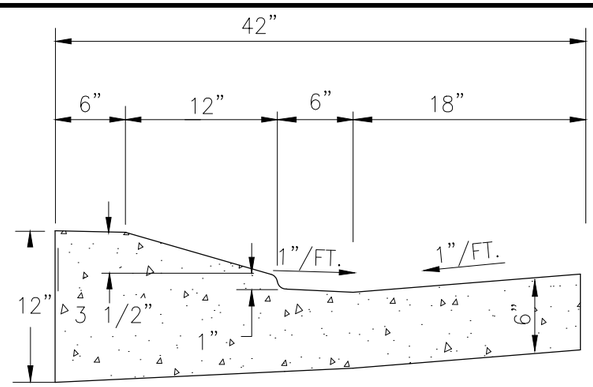

ROUNDABOUT SPLITTER ISLAND
CURB AND GUTTERS – LEG SIDES

ROUNDABOUT SPLITTER ISLAND
CURB GUTTERS VPAN INTERFACE
AT ROUNDABOUT VPAN RING

SIDEWALK

DRIVE LANE

TRUCK APPRON

DRIVE LANE

WRE E VE

DRIVE LANE

4561.4
4561.6
4561.8
4562.0
4562.2
4562.4
4562.6
4562.8
4563.0

N 33723.96
E 88484.17
EL 61.84

N 33712.00
E 88476.90
EL 61.56

N 33703.91
E 88520.62
EL 62.08

N 33703.62
E 88530.69
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EL 62.73

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E 88488.92
EL 61.42

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EL 61.82

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E 88556.13
EL 62.02

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EL 61.76

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E 88502.73
EL 61.76

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E 88505.91
EL 61.79

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EL 62.16

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EL 62.26

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E 88558.41
EL 62.37

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EL 62.33

N 33676.11
E 88501.42
EL 61.81

N 33675.29
E 88549.07
EL 62.28

N 33673.44
E 88541.66
EL 62.23

N 33663.84
E 88470.07
EL 63.10

N 33661.71
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EL 61.98

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EL 62.10

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EL 62.10

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E 88507.16
EL 61.95

N 33657.08
E 88539.72
EL 62.01

N 33663.00
E 88570.66
EL 62.52

N 33659.24
E 88555.45
EL 62.46

LS 00+50

LS 00+34

LS 00+00

LS 00+50

LS 00+00

61.68 61.97 61.81 62.24 62.48 62.70 61.19 61.31 61.69 61.32 61.35 61.48 62.36 62.54 62.57 61.97 61.63 61.68 62.19 61.70 61.61 61.75 61.80 61.72 61.84 61.90 62.40 61.94 62.06 62.32 62.59 62.69 62.60 62.66 62.71 62.39 62.76 62.34 62.22 62.10 62.33 62.40 62.45 62.08 62.03 61.96 61.85 61.73 61.69 62.23 62.29 62.15 62.52 62.53 62.16 62.35 62.10 62.60 62.27 62.41 61.90 61.86 61.83 62.04 62.00 61.89 62.08 61.96 61.98 62.48 62.14 62.02 62.66

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-13
May 20, 2020

194

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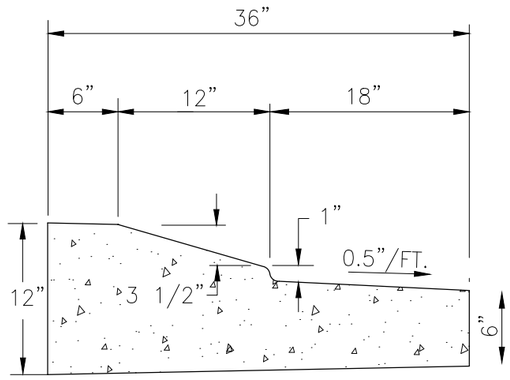
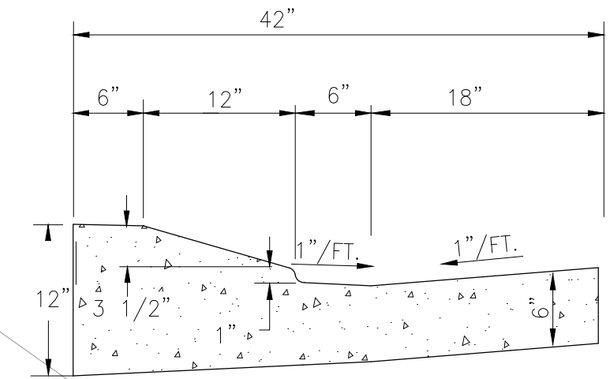
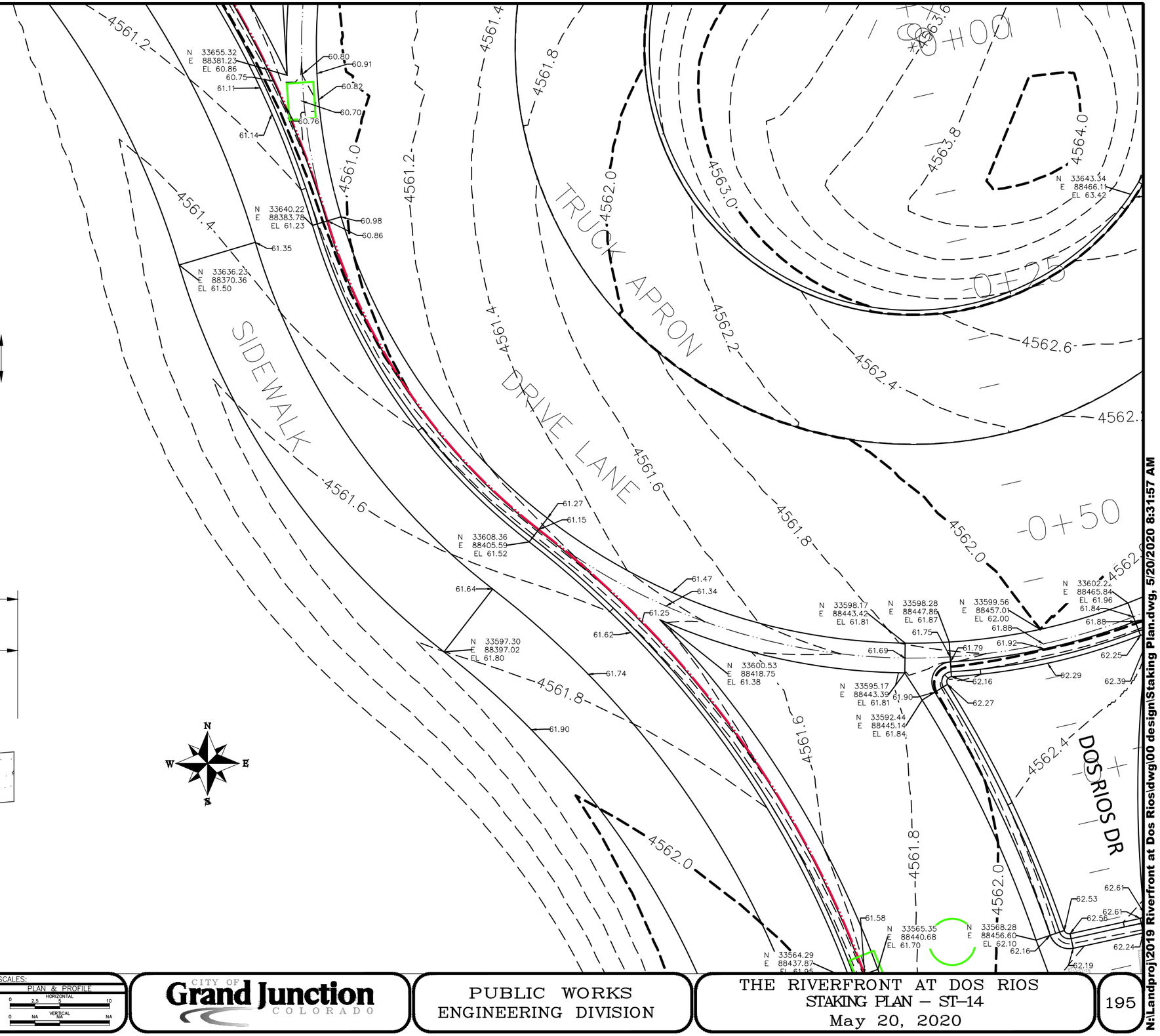


ROUNDABOUT SPLITTER ISLAND
CURB AND GUTTERS – LEG SIDES



ROUNDABOUT SPLITTER ISLAND
CURB GUTTERS VPAN INTERFACE
AT ROUNDABOUT VPAN RING



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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-14
May 20, 2020

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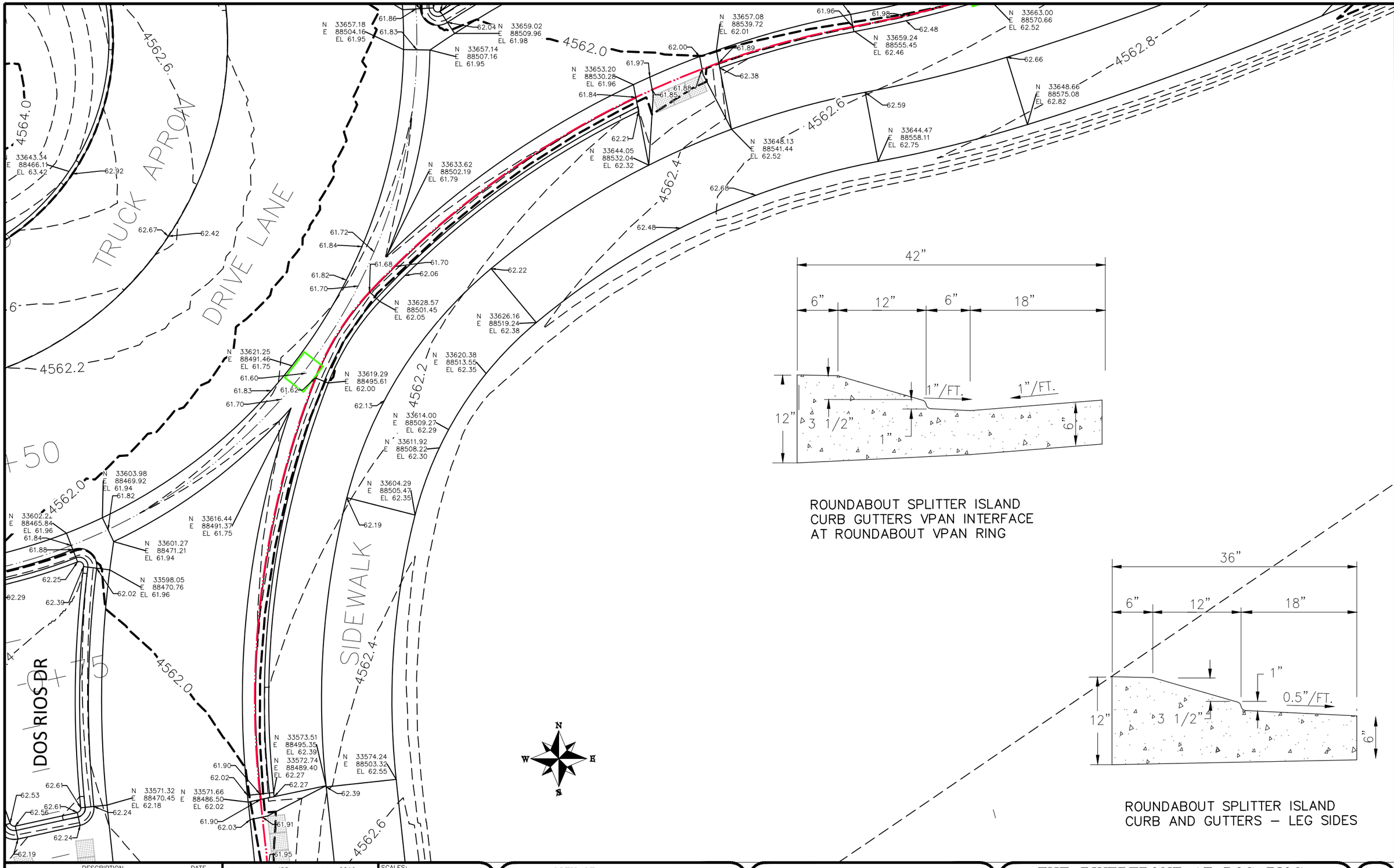

ROUNDABOUT SPLITTER ISLAND
CURB GUTTERS VPAN INTERFACE
AT ROUNDABOUT VPAN RING

ROUNDABOUT SPLITTER ISLAND
CURB AND GUTTERS – LEG SIDES

DESCRIPTION	DATE
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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-15
May 20, 2020

196

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-16
May 20, 2020

197

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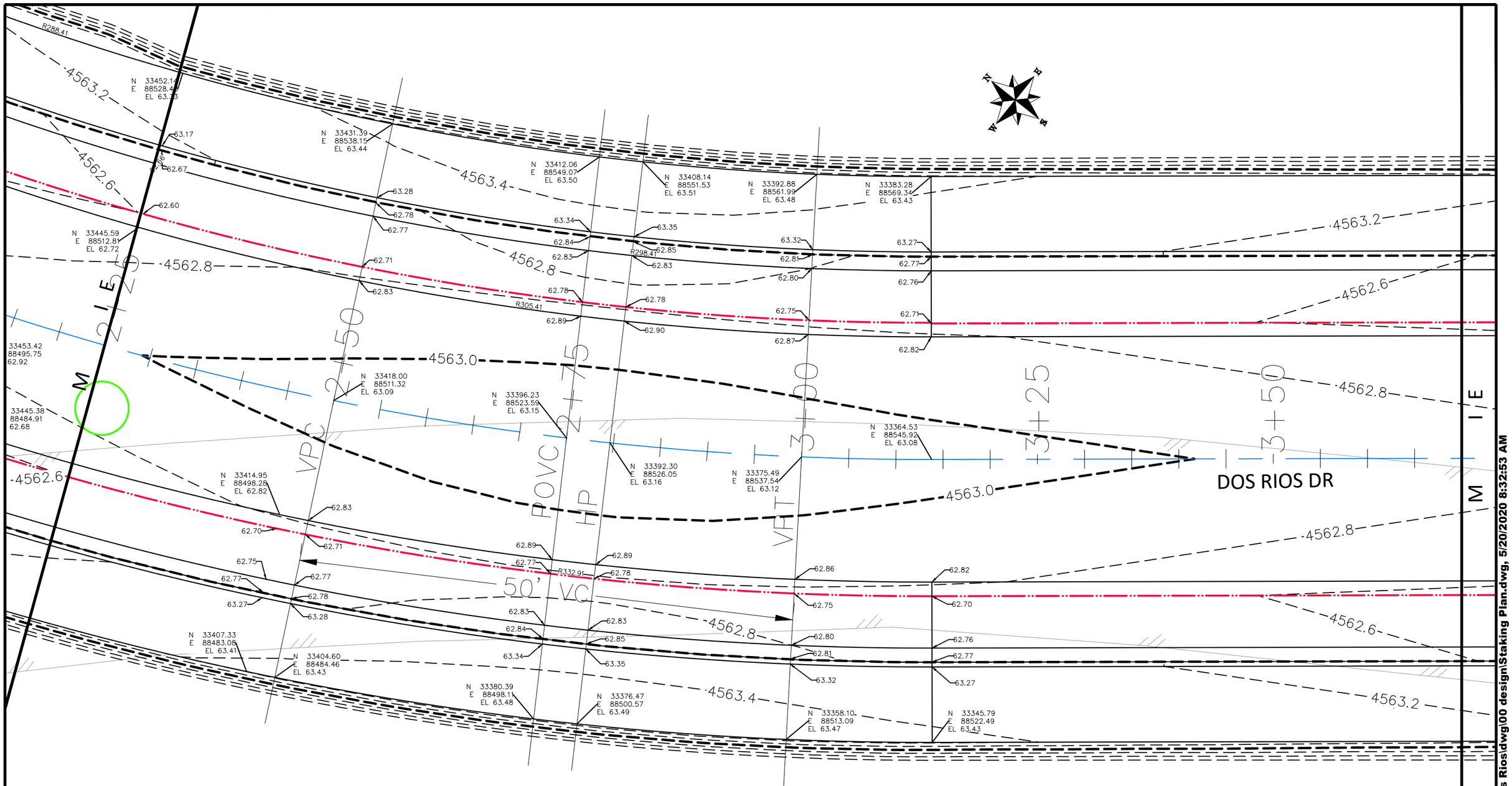

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–17
May 20, 2020

198

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 5/20/2020 8:32:53 AM

CURB, GUTTER, ETC
GRADED INDEPENDENT
OF VERTICAL CURB

50'+VC

DOS RIOS DR

3+75 | 4+00 | 4+25 | 4+50 | 4+75 | 5+00

PC 4+00.00
LP 4+20.00
PCVC 4+20.00
VP 4+50.00

N 33315.96 E 88623.20 EL 63.15
N 33301.68 E 88634.63 EL 63.08
N 33294.49 E 88630.13 EL 62.92
N 33289.34 E 88631.62 EL 62.92
N 33289.02 E 88634.51 EL 62.96
N 33284.45 E 88631.08 EL 62.91
N 33280.77 E 88632.15 EL 62.91
N 33279.52 E 88630.58 EL 62.53
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N 33277.70 E 88615.39 EL 62.80
N 33279.55 E 88652.33 EL 63.22
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N 33270.13 E 88659.87 EL 63.28
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N 33268.30 E 88639.56 EL 62.61
N 33264.51 E 88654.12 EL 63.12
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N 33245.49 E 88669.34 EL 63.25
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REVISION △	–

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-18
May 20, 2020

199

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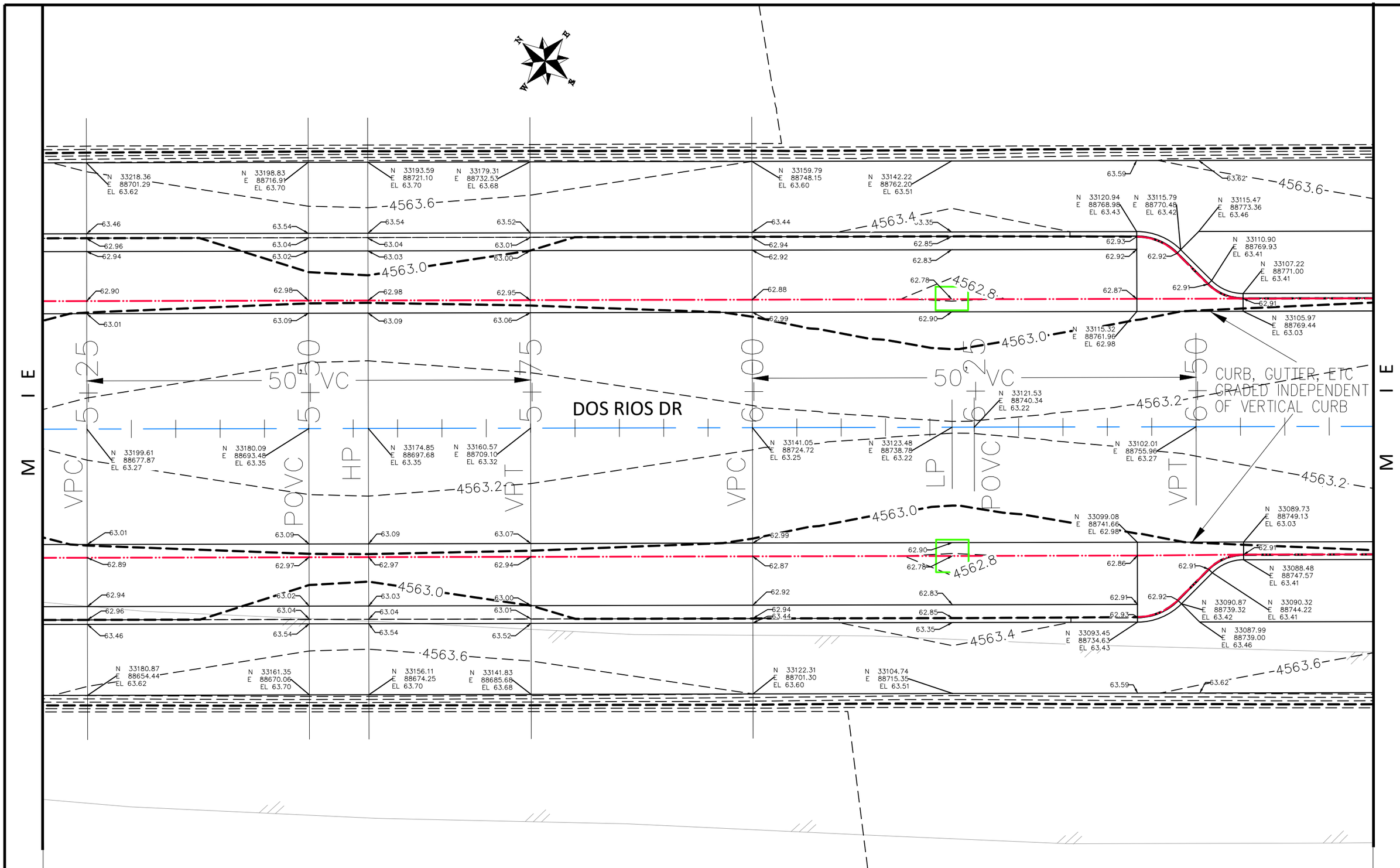

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-19
May 20, 2020

200

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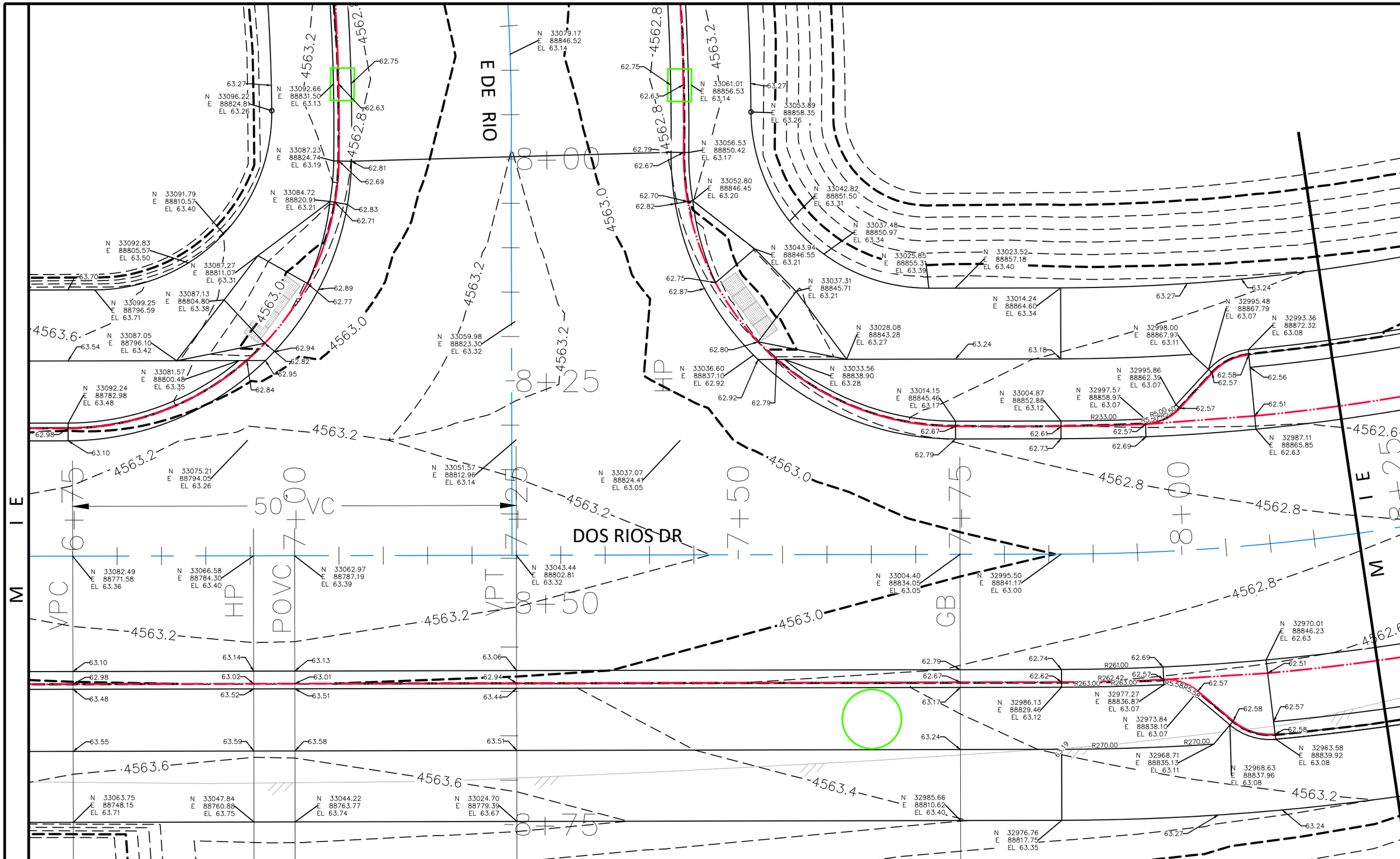

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-20
May 20, 2020

201

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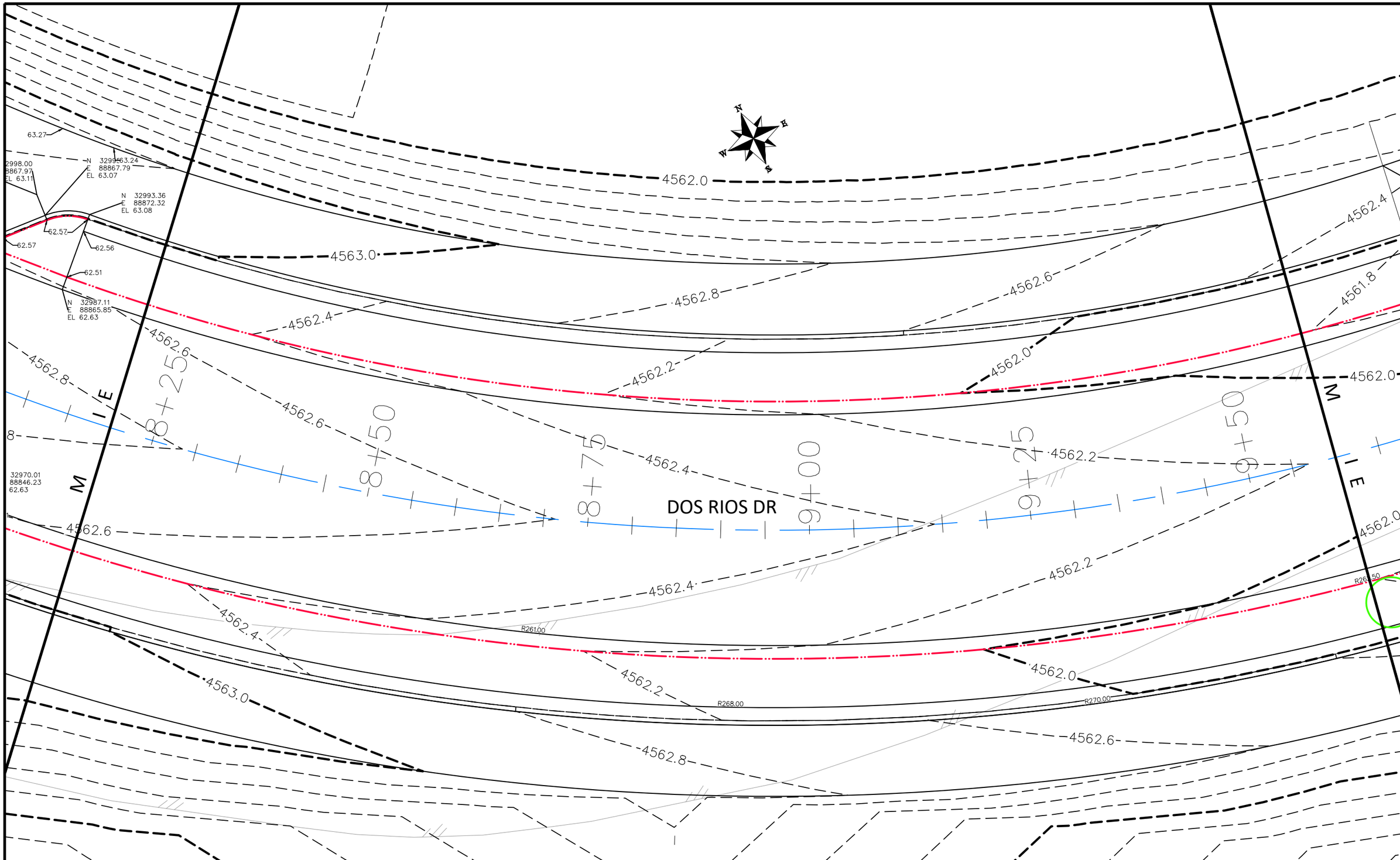

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-21
May 20, 2020

202

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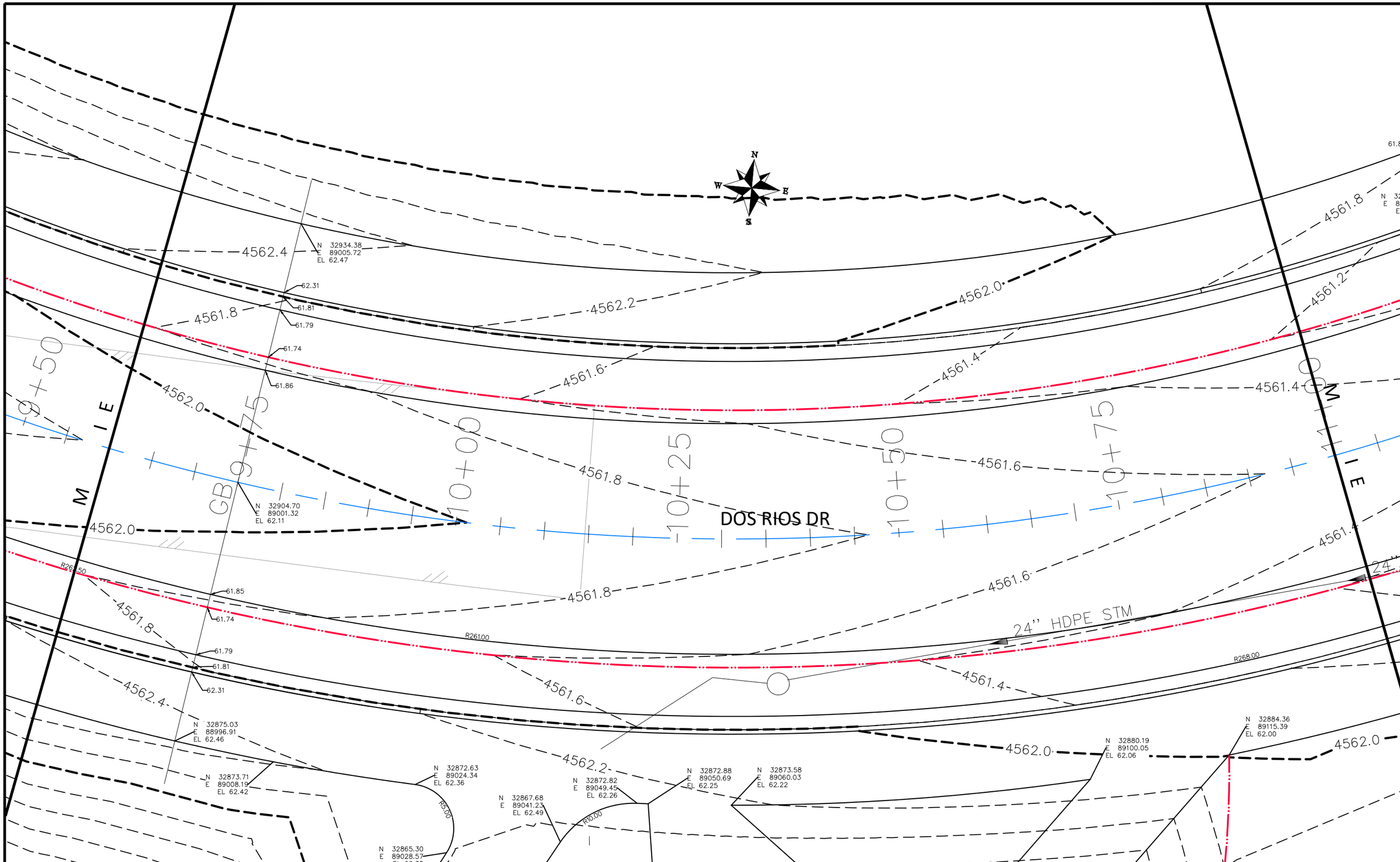

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-22
May 20, 2020

203

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 5/20/2020 8:34:26 AM

DOS RIOS DR

24" HDPE STM

18" HDPE

2' C&G

CONC

FLOWLINE

4561.8

4561.2

4562.0

4563.0

4561.4

12+50

12+00

11+75

11+25

0+80

0+25

0+50

N 32975.48
E 89164.88
EL 61.65

N 32975.27
E 89166.27
EL 61.63

N 32970.45
E 89157.83
EL 61.63

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E 89170.34
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N 32963.85
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N 32962.47
E 89175.88
EL 60.94

N 32956.64
E 89167.75
EL 60.94

N 32955.49
E 89166.06
EL 60.94

N 32947.87
E 89139.10
EL 61.62

N 32950.28
E 89139.77
EL 61.62

N 32947.42
E 89134.13
EL 61.66

N 32946.40
E 89144.36
EL 61.57

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E 89148.14
EL 61.53

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E 89150.21
EL 61.15

N 32945.10
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N 32939.44
E 89138.29
EL 61.21

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REVISION △ – –
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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–23
May 20, 2020

204

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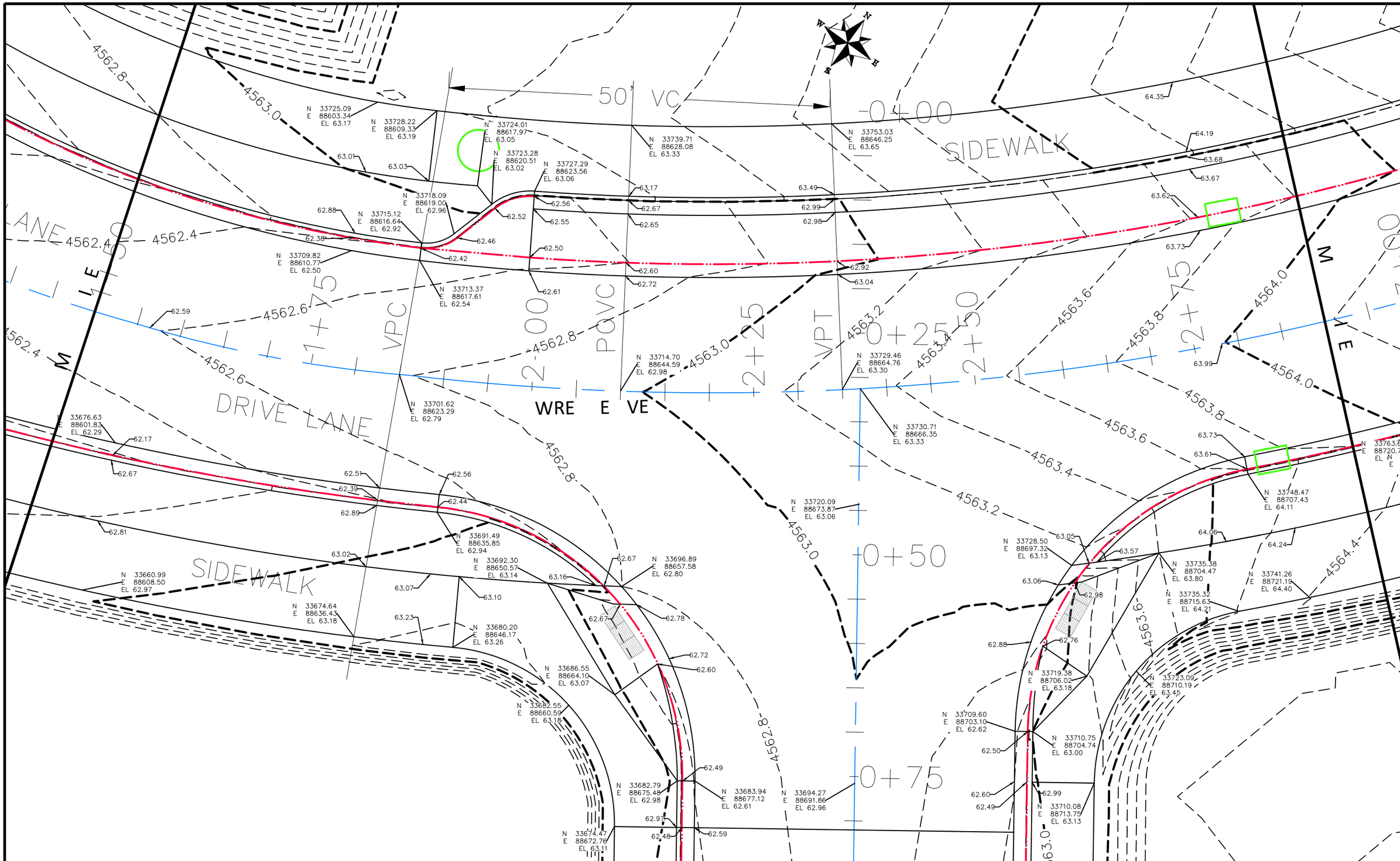

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-24
May 20, 2020

205

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 5/20/2020 8:35:02 AM

SIDEWALK

PARKING

DRIVE LANE

WRE E VE

DRIVE LANE

PARKING

SIDEWALK

MON WELL

64.35
64.19
63.68
63.67
64.04
63.92
64.22
64.00
64.10
64.07
64.15
64.17
64.71
64.83

N 33763.63
E 88720.75
EL 64.42

N 33765.43
E 88724.16
EL 64.50

N 33765.84
E 88728.65
EL 64.57

N 33762.62
E 88728.94
EL 64.55

N 33768.56
E 88733.59
EL 64.67

4564.0
4565.0
4566.0
4566.2
4566.4
4566.6
4565.8

3+00
3+25
3+50
3+75
4+00

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–25
May 20, 2020

206

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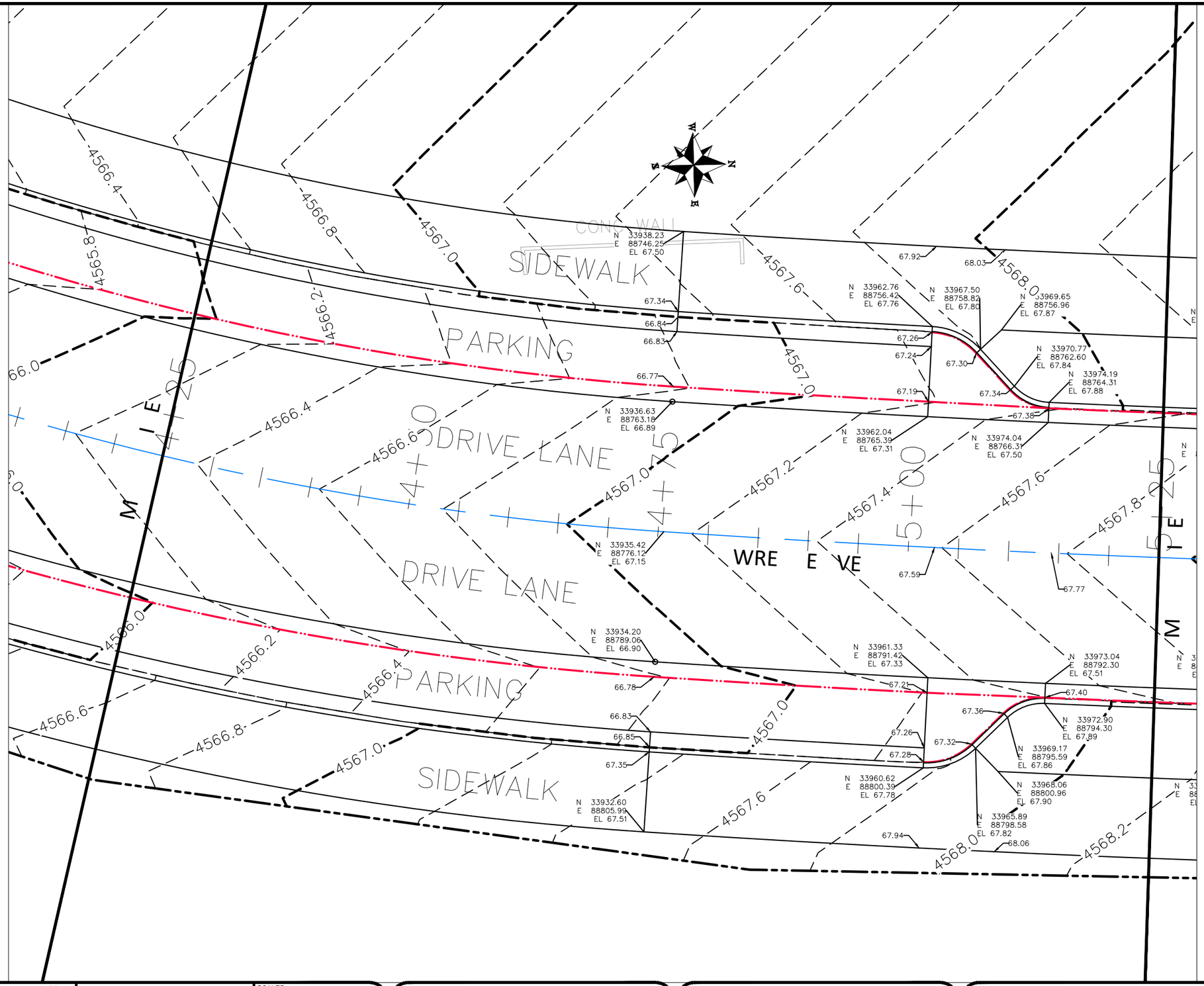

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-26
May 20, 2020

207

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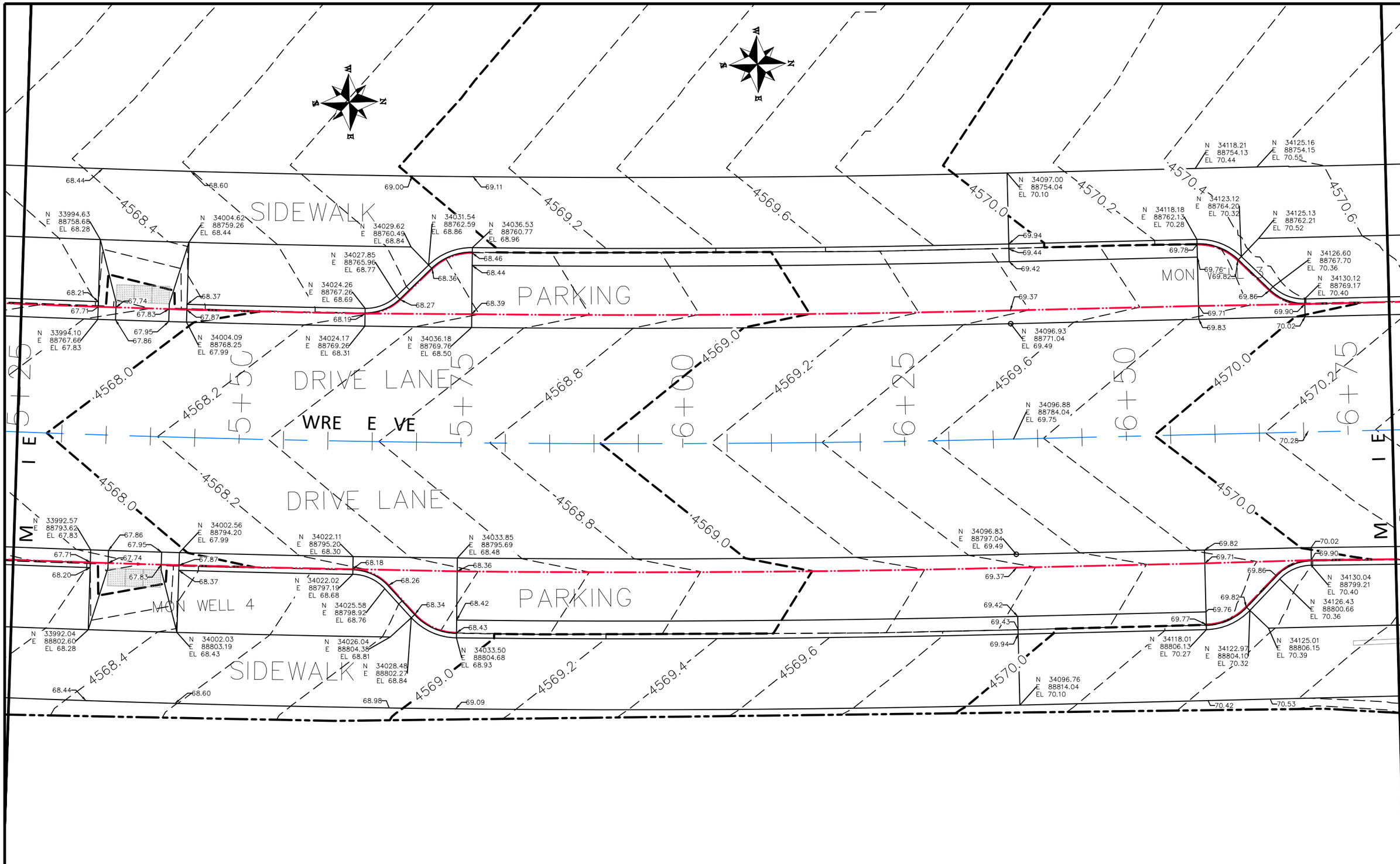

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-27
May 20, 2020

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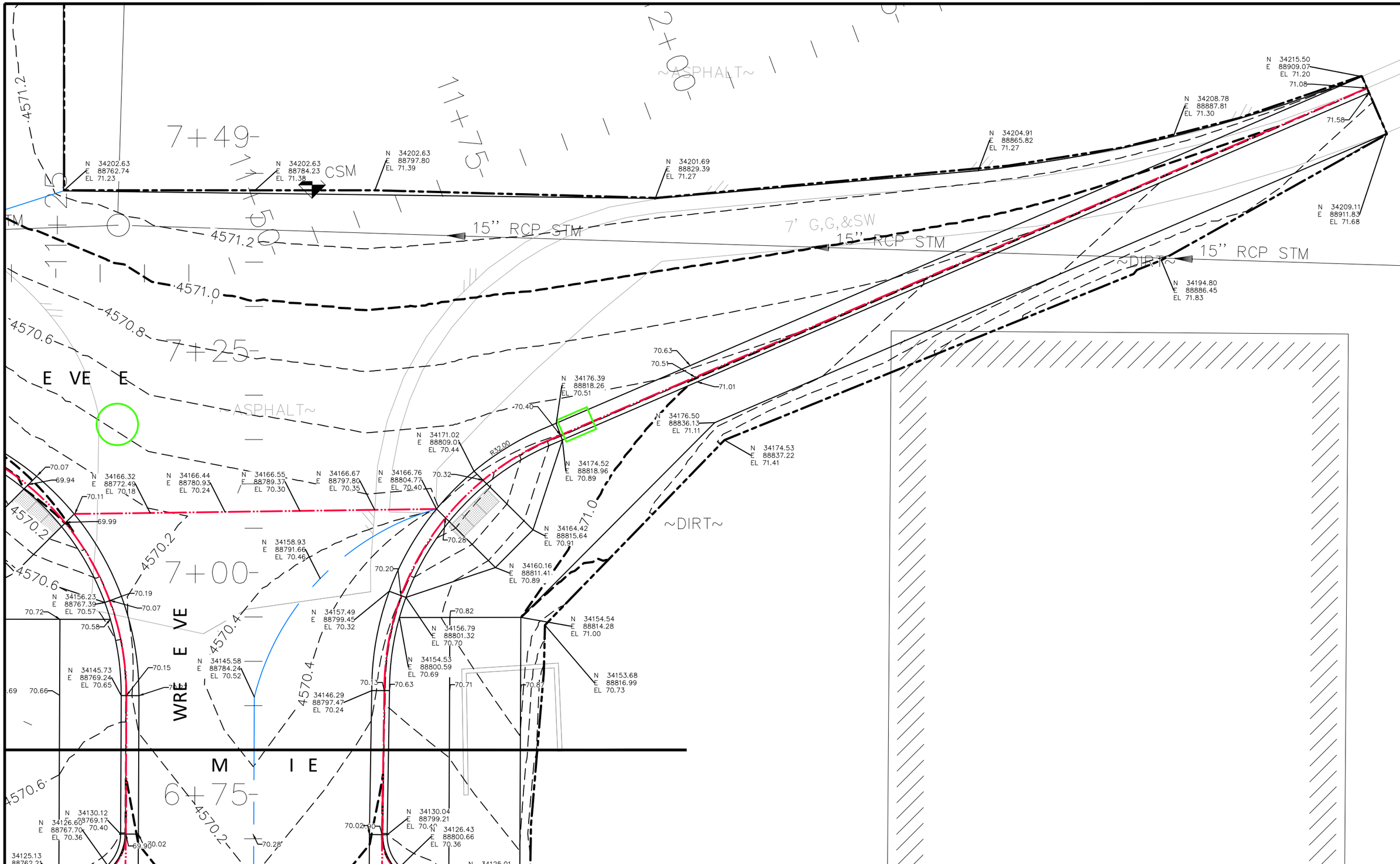

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-28
May 20, 2020

209

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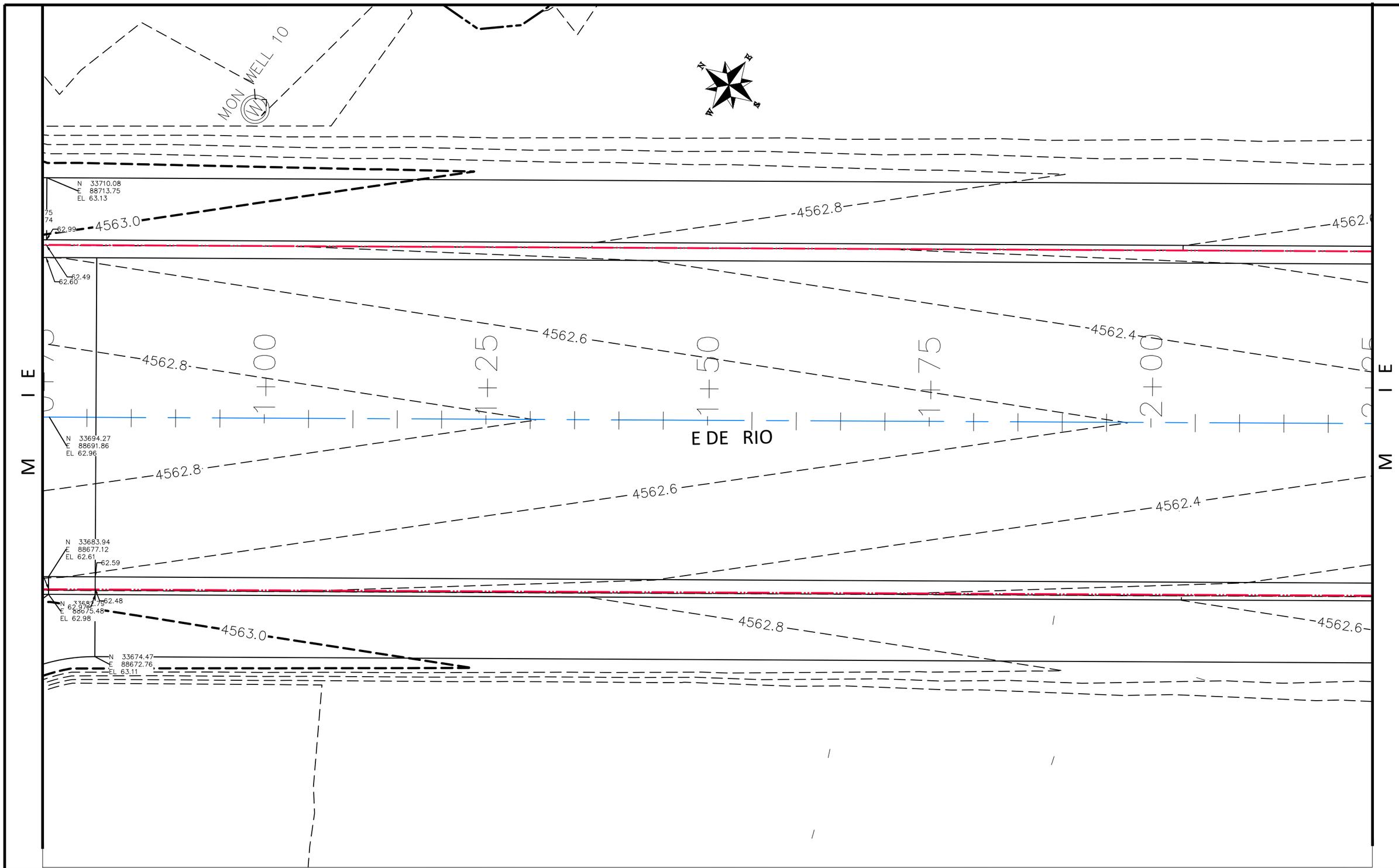

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-29
May 20, 2020

210

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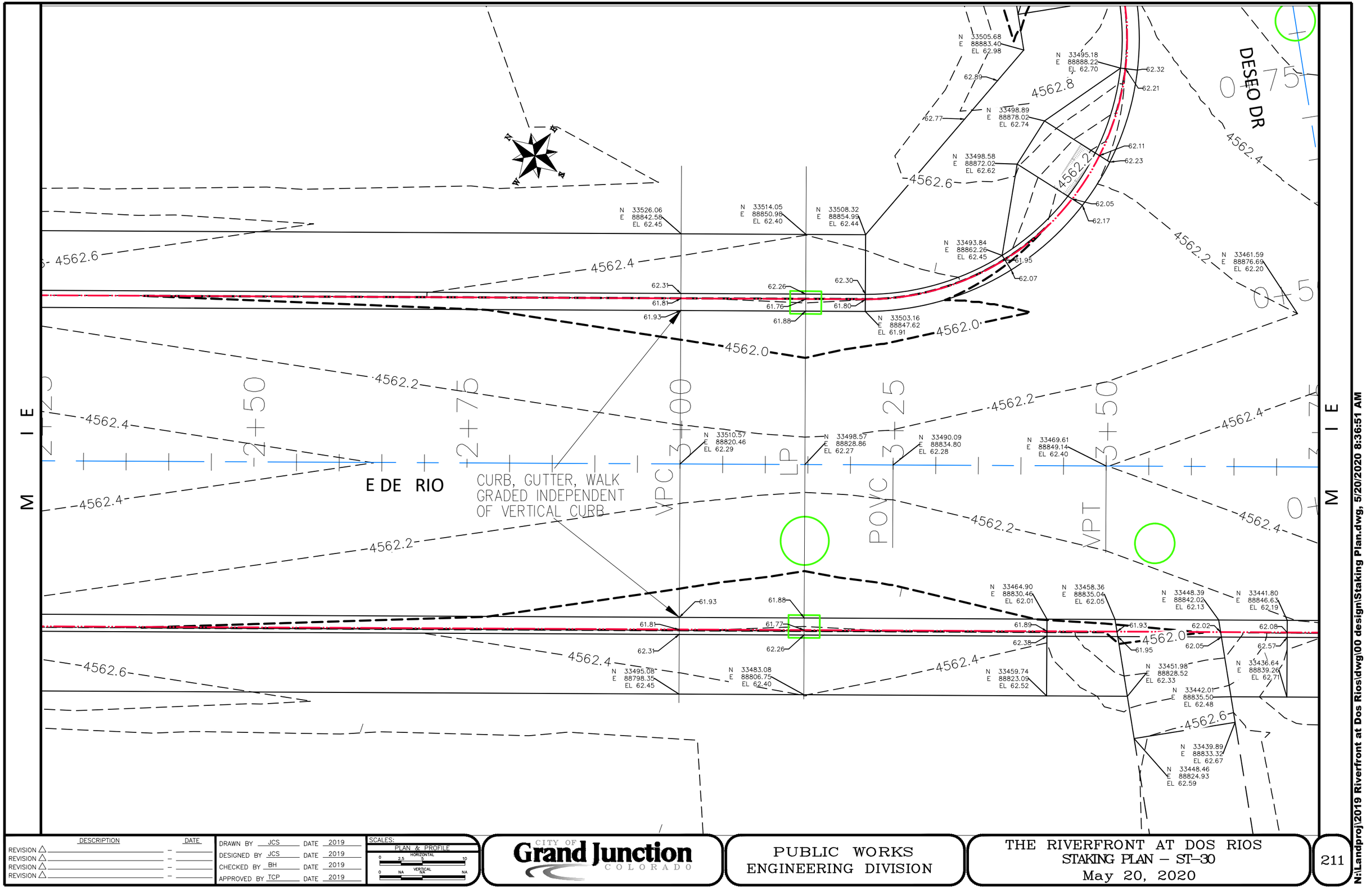

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REVISION △	–
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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-30
May 20, 2020

211

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 5/20/2020 8:36:51 AM

DESEO DRIVE

E DE RIO

N 33454.90
E 88915.86
EL 63.21

N 33461.33
E 88909.57
EL 62.70

N 33454.06
E 88906.32
EL 63.05

N 33443.58
E 88910.72
EL 63.08

N 33437.61
E 88910.13
EL 63.05

N 33425.49
E 88912.95
EL 63.08

N 33428.19
E 88903.76
EL 62.96

N 33420.42
E 88905.52
EL 62.56

N 33438.96
E 88892.54
EL 62.40

N 33461.59
E 88876.69
EL 62.20

N 33413.58
E 88888.36
EL 62.89

N 33441.80
E 88846.63
EL 62.19

N 33436.64
E 88839.26
EL 62.71

N 33397.18
E 88866.85
EL 63.06

N 33439.89
E 88833.32
EL 62.67

0+75

0+50

0+25

0+00

4+00

4+25

4+50

4+75

5+00

4562.0
4562.2
4562.4
4562.6
4562.8
4563.0
4563.2
4563.4
4563.6

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-31
May 20, 2020

212

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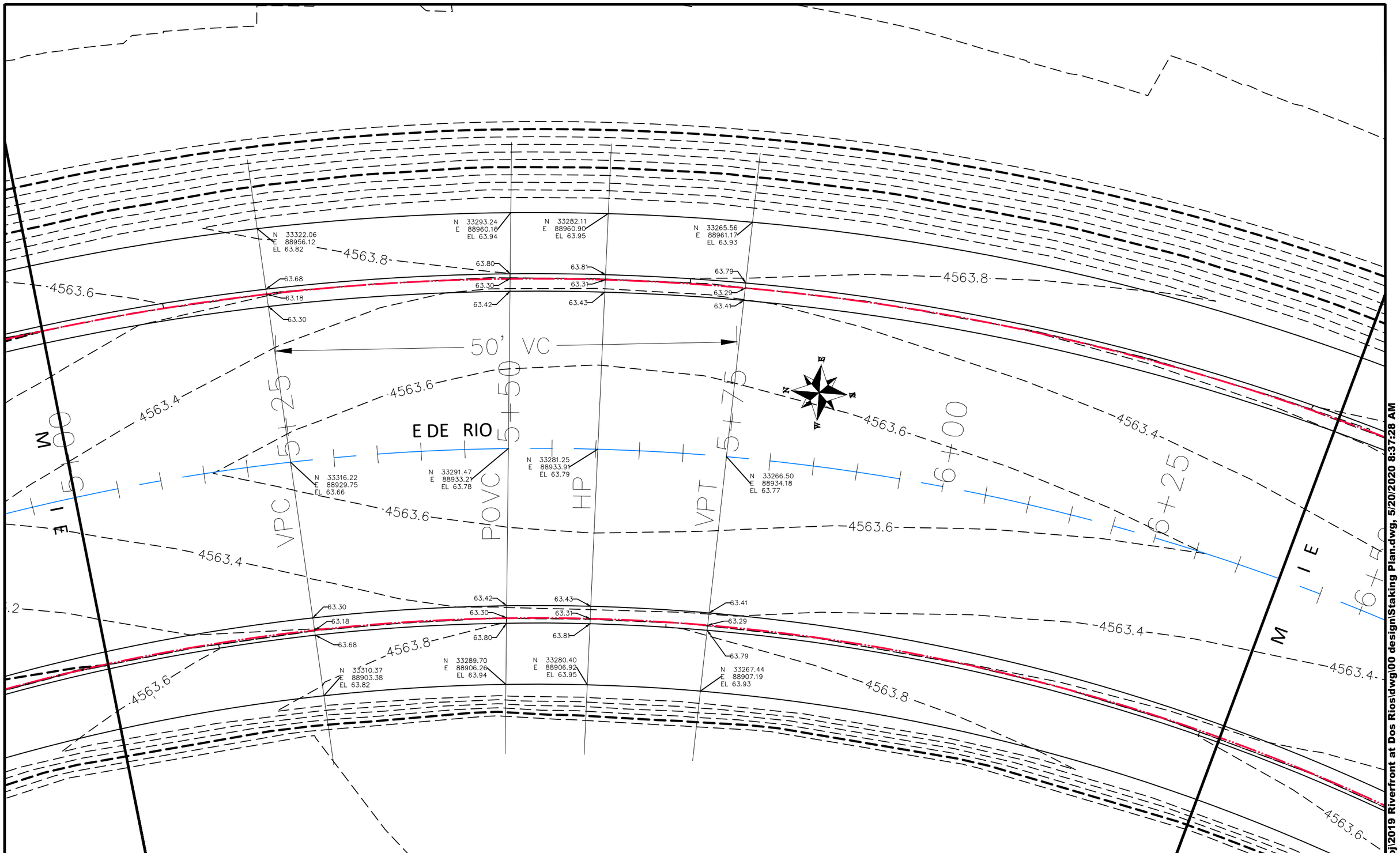

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL NA 0 NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–32
May 20, 2020

213

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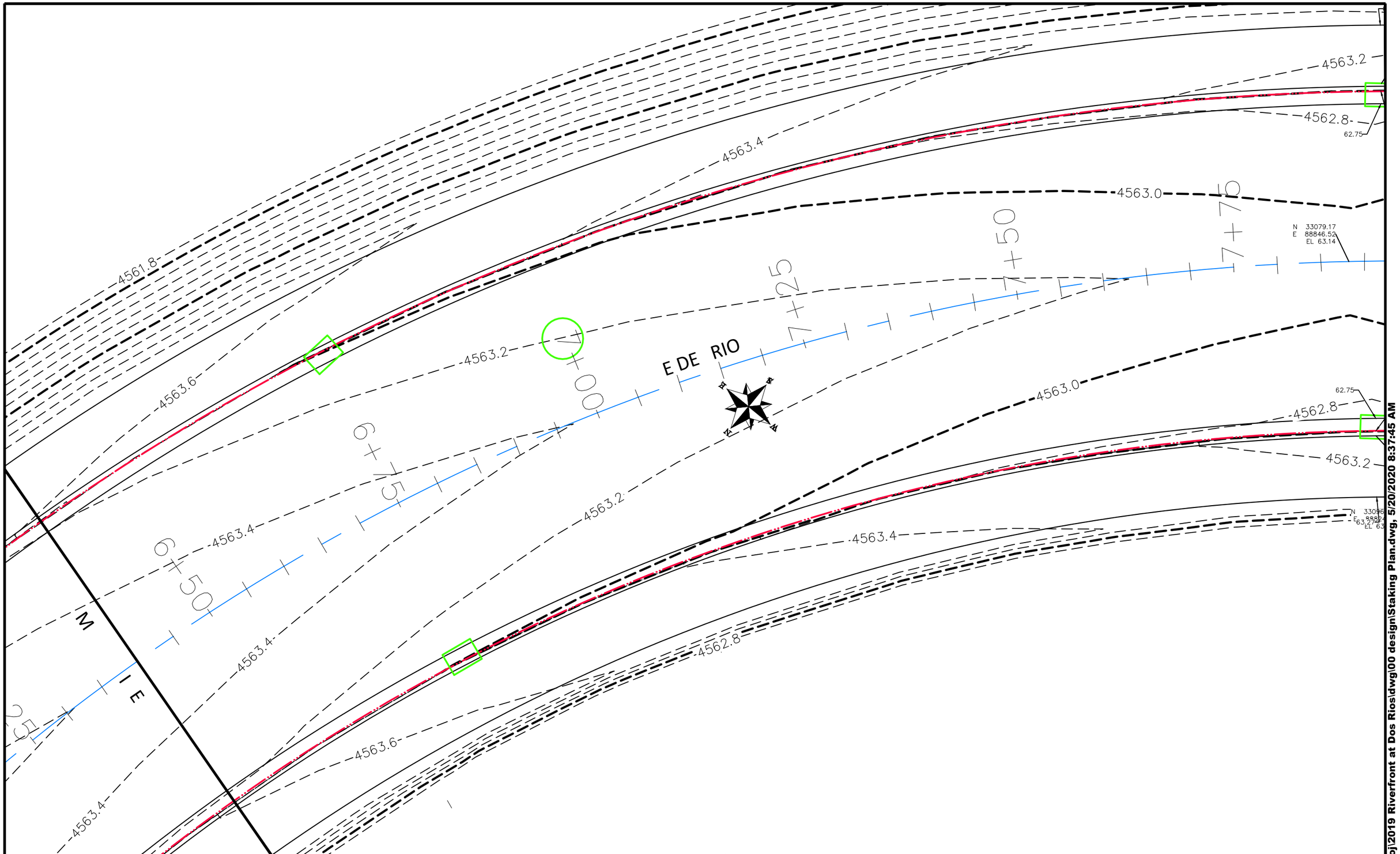

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–33
May 20, 2020

214

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 5/20/2020 8:37:45 AM

EL 62.45

N 33514.05
E 88850.98
EL 62.40

N 33508.32
E 88854.99
EL 62.44

N 33542.46
E 88911.93
EL 62.57

N 33538.16
E 88916.58
EL 63.56

N 33505.68
E 88883.40
EL 62.98

N 33508.65
E 88886.43
EL 63.02

N 33498.58
E 88872.02
EL 62.62

N 33493.84
E 88862.26
EL 62.45

N 33498.89
E 88[illegible].02
EL 62.[illegible]

N 33495.18
E 88888.22
EL 62.70

N 33498.65
E 88896.21
EL 62.40

N 33515.29
E 88938.96
EL 63.30

N 33485.77
E 88908.81
EL 62.76

N 33461.59
E 88876.69
EL 62.20

N 33495.99
E 88957.85
EL 63.46

N 33515.62
E 89004.61
EL 62.65

N 33461.33
E 88909.57
EL 62.70

N 33466.48
E 88927.69
EL 62.92

N 33454.90
E 88915.86
EL 63.21

N 33454.06
E 88906.32
EL 63.05

62.77 62.89 62.98 63.32 62.82 62.94 62.07 61.95 62.78 62.28 62.17 62.05 62.22 62.11 62.21 62.32 62.40 62.28 62.78 62.94 62.83 63.32 62.67 62.55 62.58 63.07

4562.6 4563.0 4562.8 4562.2 4562.4 4563.0 4562.6 4562.8 4563.0 4562.6 4562.8 4563.0 4562.6 4562.8 4563.0 4562.8 4562.4 4562.0

4564.0 4563.8 4563.6 4563.4 4563.2 4563.0 4564.0 4564.2 4564.0 4562.8 4562.6 4562.8 4562.4

DESEO DRIVE

50 + 00 | | | | | 55 | | | | | 60 + 00 | | | | | 65 | | | | | 70 + 00 | | | | | 75 | | | | | 80 + 00

HP LP

M I E

N W E S

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–34
May 20, 2020

215

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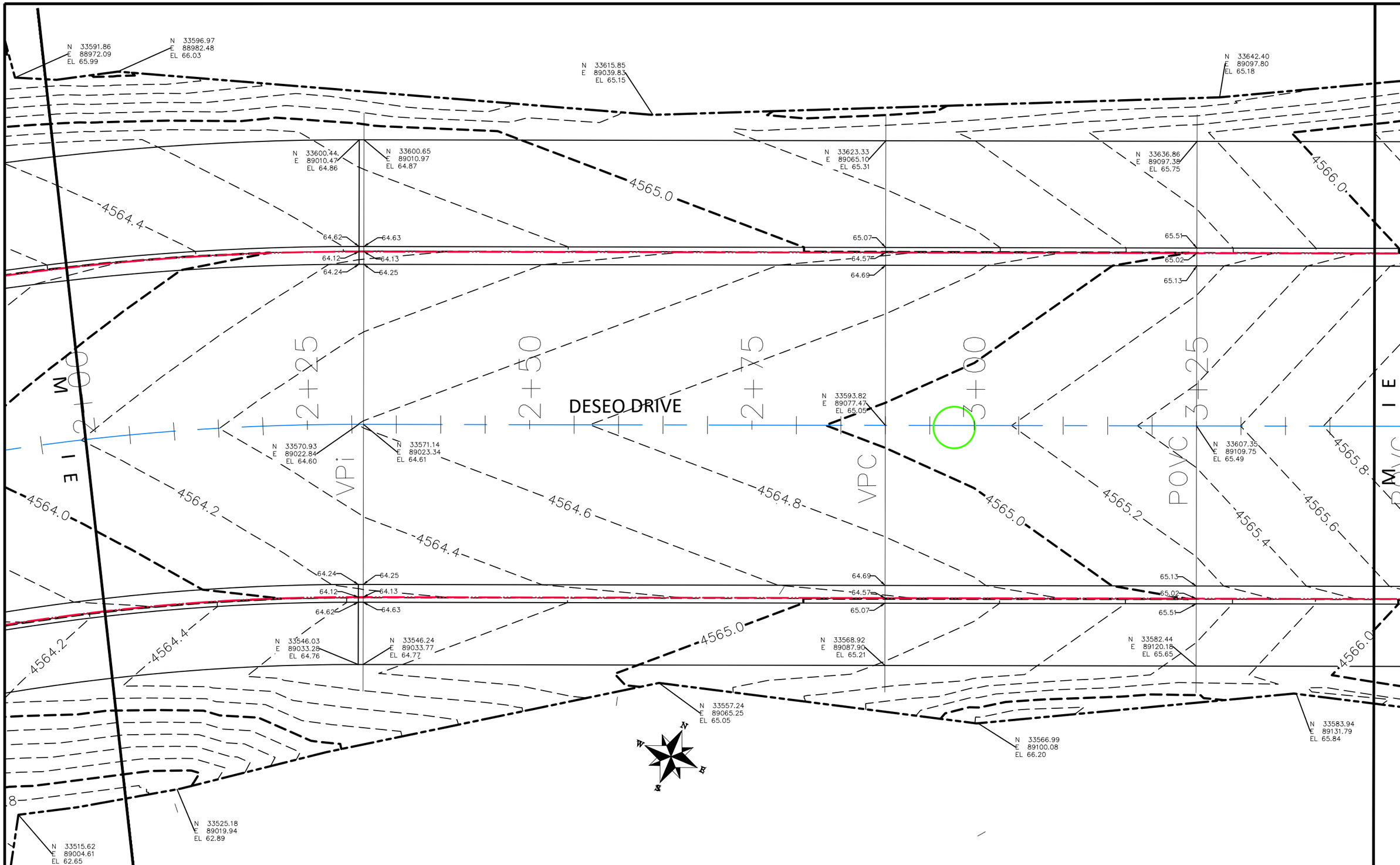

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REVISION △	
REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-35
May 20, 2020

216

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 5/20/2020 8:38:21 AM

DESEO DRIVE

N 33642.40
E 89097.80
EL 65.18

N 33646.52
E 89120.44
EL 66.29

N 33656.18
E 89143.50
EL 67.01

N 33669.71
E 89175.78
EL 68.32

N 33675.51
E 89189.61
EL 68.93

N 33682.81
E 89207.04
EL 69.59

N 33697.36
E 89201.17
EL 66.90

4566.0
4566.0
4567.0
4568.0
4569.0

66.05
65.55
65.67
66.77
66.27
66.39
68.08
67.59
67.70
68.69
68.19
68.31
69.35
68.85
68.97

I E
3+50
3+75
4+00
4+25
4+50
I E

N 33607.35
E 89109.75
EL 65.49

N 33617.01
E 89132.81
EL 66.03

N 33626.67
E 89155.86
EL 66.75

N 33640.20
E 89188.14
EL 68.06

N 33645.99
E 89201.98
EL 68.67

N 33653.28
E 89219.36
EL 69.33

M
4565.8
4565.6
4565.4
POVC
POVC
VPRC
POVC
4569.0
M

68.97
68.85
68.69
68.31
68.19
67.70
67.59
68.08
66.39
66.27
66.77
65.67
65.55
66.05
4567.0
4566.0
4568.0
4569.2

N 33592.11
E 89143.24
EL 66.19

N 33601.77
E 89166.30
EL 66.91

N 33615.29
E 89198.58
EL 68.22

N 33621.09
E 89212.41
EL 68.83

N 33628.38
E 89229.80
EL 69.49

N 33583.94
E 89131.79
EL 65.84

N 33613.25
E 89235.97
EL 66.55

N
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DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA 1" NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-36
May 20, 2020

217

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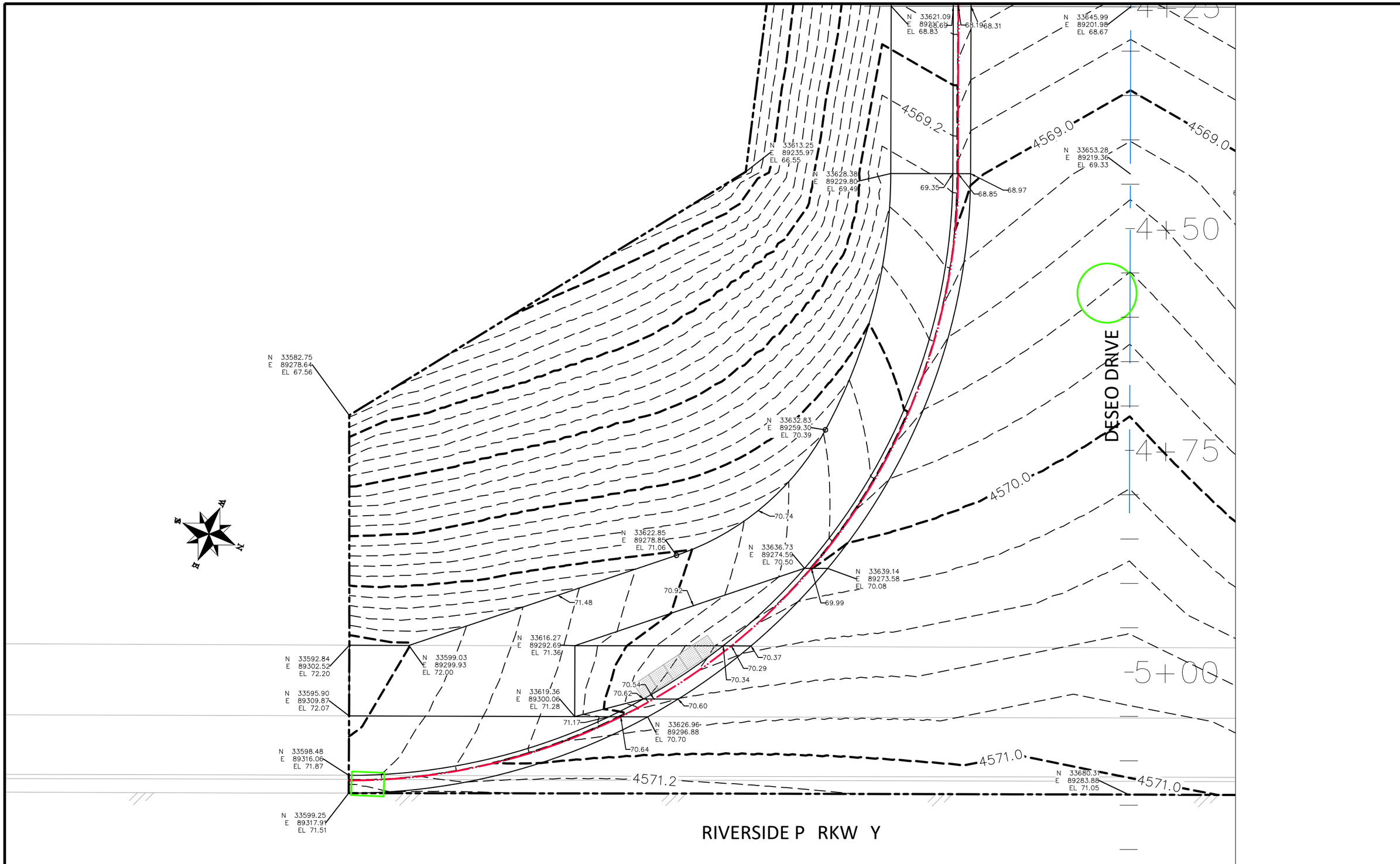

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REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-37
May 20, 2020

218

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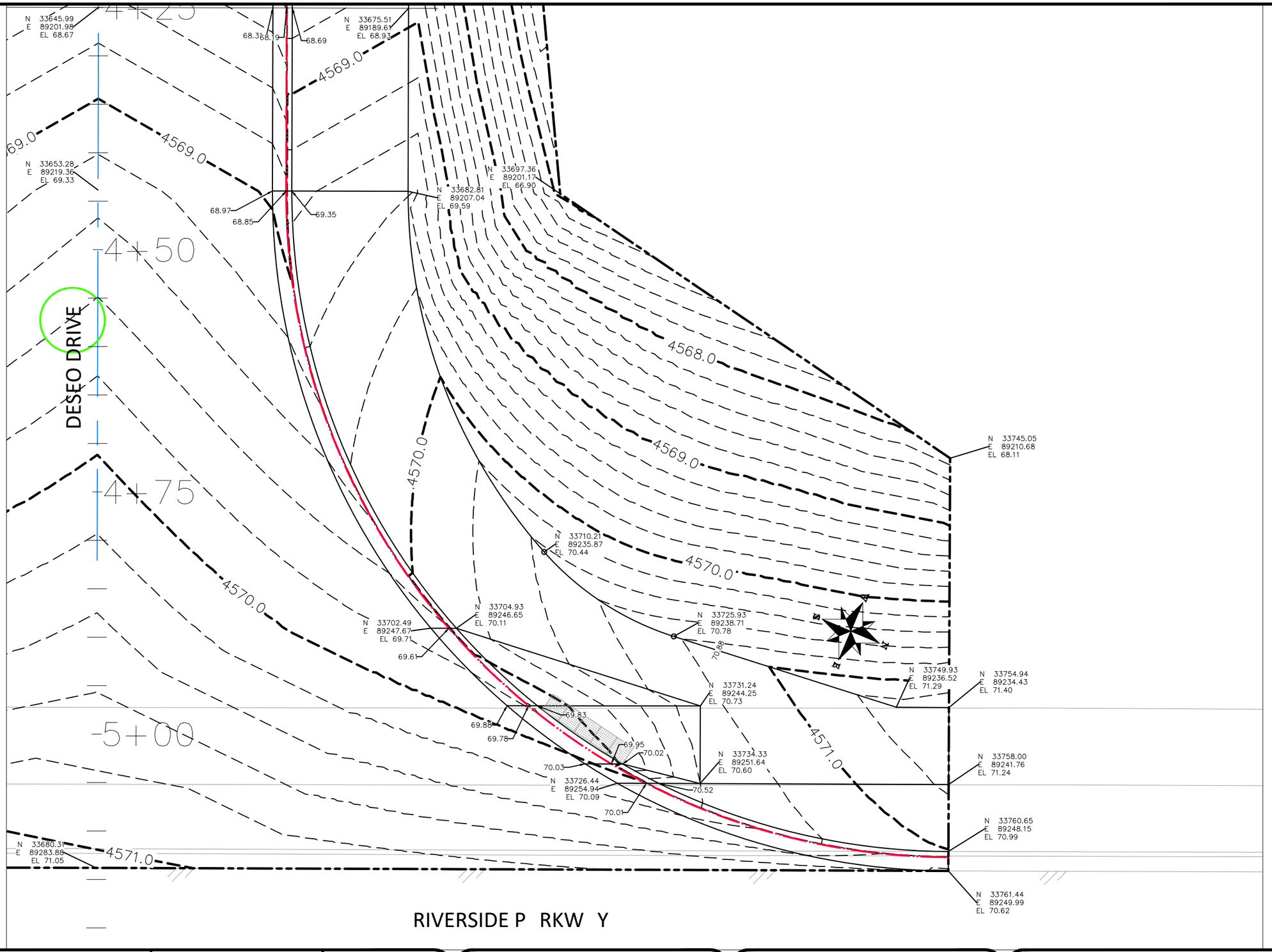

DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–38
May 20, 2020

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DOS RIOS DR

8' WALK

12" H

2' C&G

18" HDPE

24" HDPE STM

SIDEWALK

PARKING

DRIVE LANE

SIDEWALK

CONC SLAB

LIP

VPOE 1E

0+25

0+50

0+75

1+00

1+25

1+50

4562.2

4562.0

4561.8

4561.6

4561.4

4561.2

4561.0

N 32976.93 E 89301.63 EL 62.32
62.30
N 32956.62 E 89326.89 EL 62.27
62.27
N 32933.87 E 89362.05 EL 62.96
63.28
62.78
62.76
N 32970.21 E 89296.43 EL 62.18
N 32968.85 E 89298.12 EL 62.18
N 32962.58 E 89305.97 EL 62.15
N 32953.41 E 89317.32 EL 62.12
N 32948.00 E 89324.09 EL 62.10
62.79
62.29
62.28
61.60
61.58
N 32948.40 E 89317.93 EL 62.04
61.54
N 32961.06 E 89291.85 EL 61.91
N 32954.79 E 89299.64 EL 61.94
N 32942.83 E 89315.27 EL 61.99
61.49
61.48
N 32941.87 E 89315.41 EL 61.98
61.76
61.76
61.74
61.19
61.21
61.23
61.24
61.34
61.30
61.20
61.37
61.41
N 32937.69 E 89308.15 EL 61.87
61.94
61.44
N 32937.25 E 89315.71 EL 61.44
62.12
N 32898.93 E 89370.43 EL 62.72
N 32954.64 E 89283.87 EL 61.27
N 32953.26 E 89285.59 EL 61.28
N 32947.00 E 89293.38 EL 61.36
N 32934.41 E 89309.03 EL 61.51
N 32932.22 E 89311.79 EL 61.53
N 32908.46 E 89349.13 EL 62.24
N 32937.28 E 89271.15 EL 61.54
N 32912.79 E 89307.68 EL 61.95
N 32892.42 E 89340.97 EL 62.59
N 32918.70 E 89270.62 EL 61.10
N 32924.85 E 89262.73 EL 60.96
N 32926.07 E 89261.17 EL 60.93
60.87
60.99
60.99
60.90
61.48
61.12
61.00
61.07
60.85
60.96
61.07
61.10
61.35
61.37
N 32905.29 E 89287.80 EL 61.41
N 32903.95 E 89289.50 EL 61.44
N 32876.38 E 89332.81 EL 62.23
62.11
61.30
61.33
N 32913.09 E 89272.08 EL 61.57
N 32927.40 E 89239.97 EL 61.17
N 32916.36 E 89270.36 EL 61.50
N 32909.24 E 89263.23 EL 61.50
N 32915.39 E 89255.35 EL 61.40
N 32902.06 E 89268.51 EL 61.69
R18.00
N 32902.93 E 89258.31 EL 61.66
61.40
61.45
62.28
62.29
62.80
N 32931.21 E 89229.13 EL 61.21
N 32923.21 E 89228.90 EL 61.30
N 32921.09 E 89235.05 EL 61.25
R10.00
R5.50
61.47
N 32893.55 E 89272.65 EL 61.90
N 32913.87 E 89243.39 EL 61.38
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N 32889.62 E 89275.37 EL 61.97
N 32904.07 E 89248.66 EL 61.20
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N 32887.73 E 89266.52 EL 62.02
N 32872.56 E 89284.01 EL 62.38
N 32853.91 E 89314.27 EL 62.87
N 32850.97 E 89319.90 EL 62.95
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R14.00
N 32882.59 E 89270.56 EL 62.15
N 32887.31

DESCRIPTION	DATE
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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-39
May 20, 2020

220

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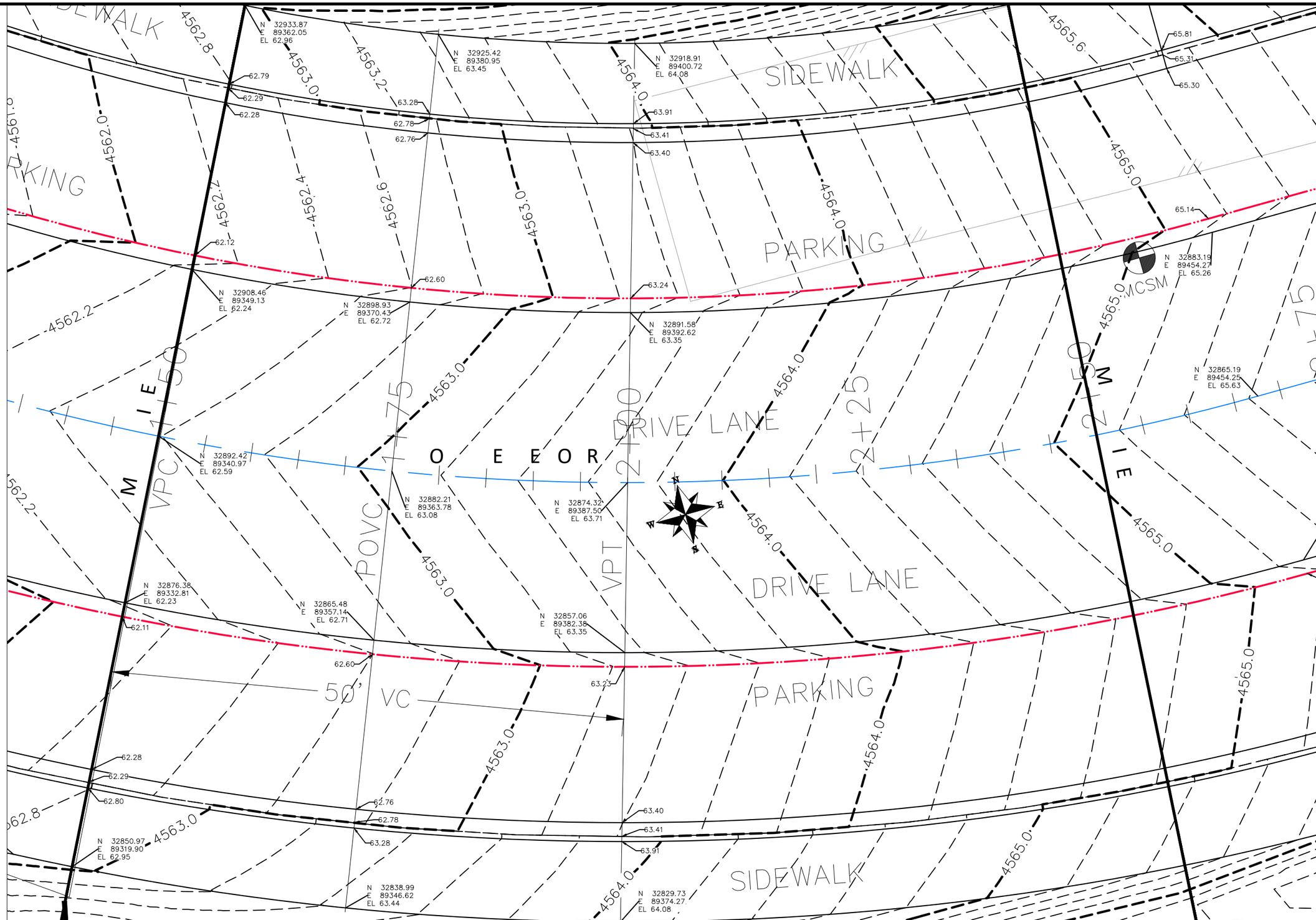

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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-40
May 20, 2020

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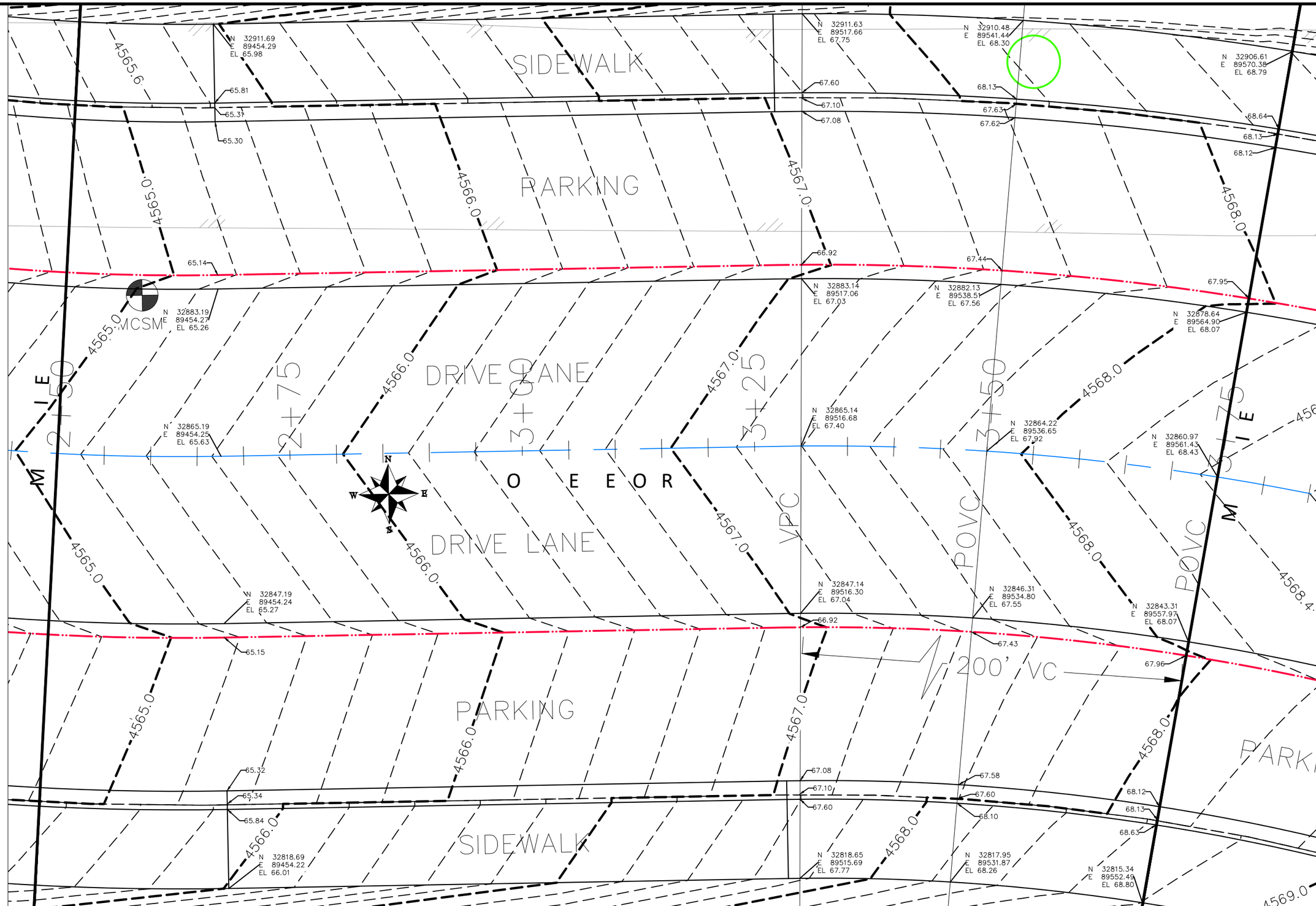

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-41
May 20, 2020

222

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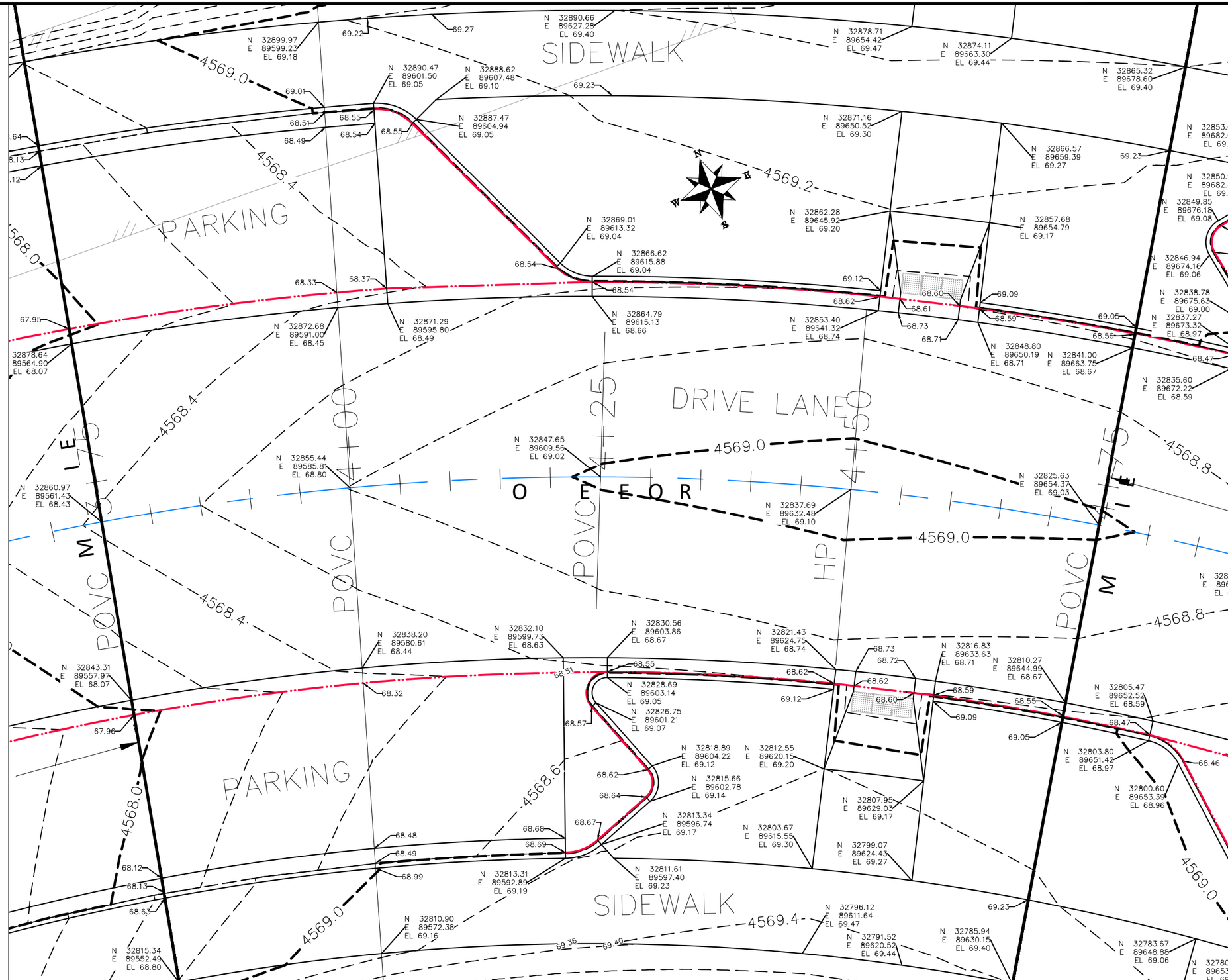

DESCRIPTION	DATE
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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-42
May 20, 2020

223

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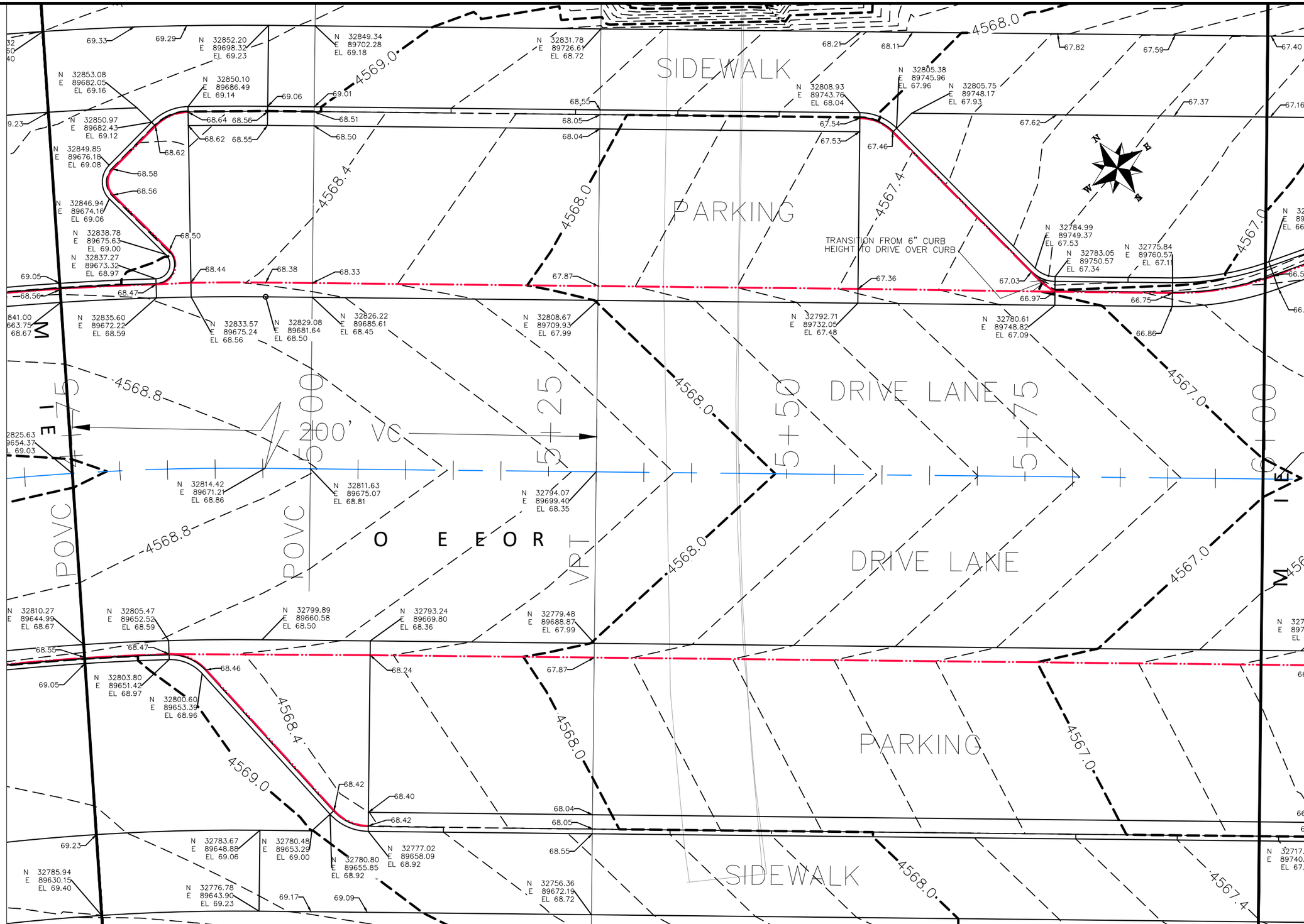

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REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-43
May 20, 2020

224

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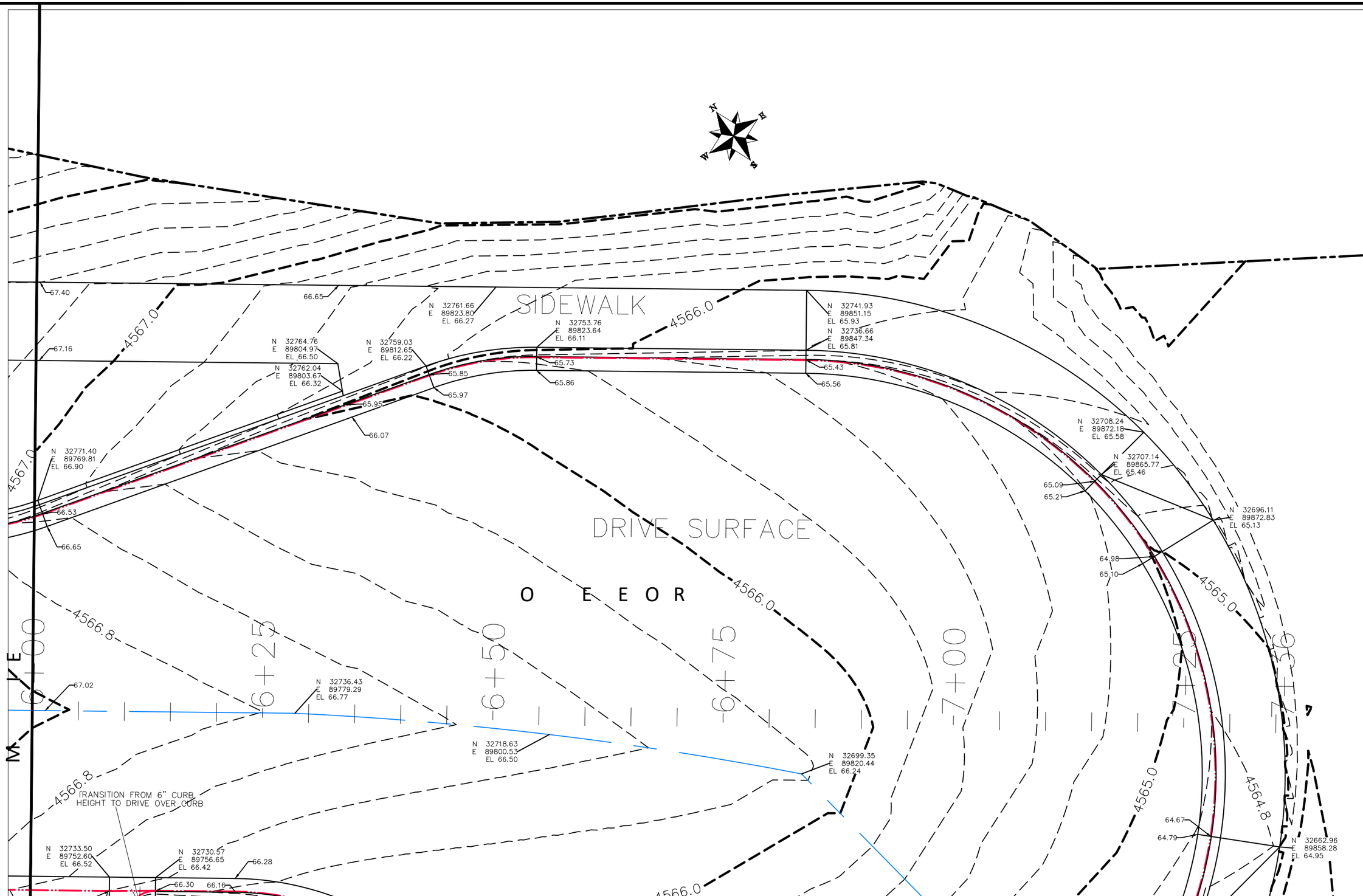

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REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-44
May 20, 2020

225

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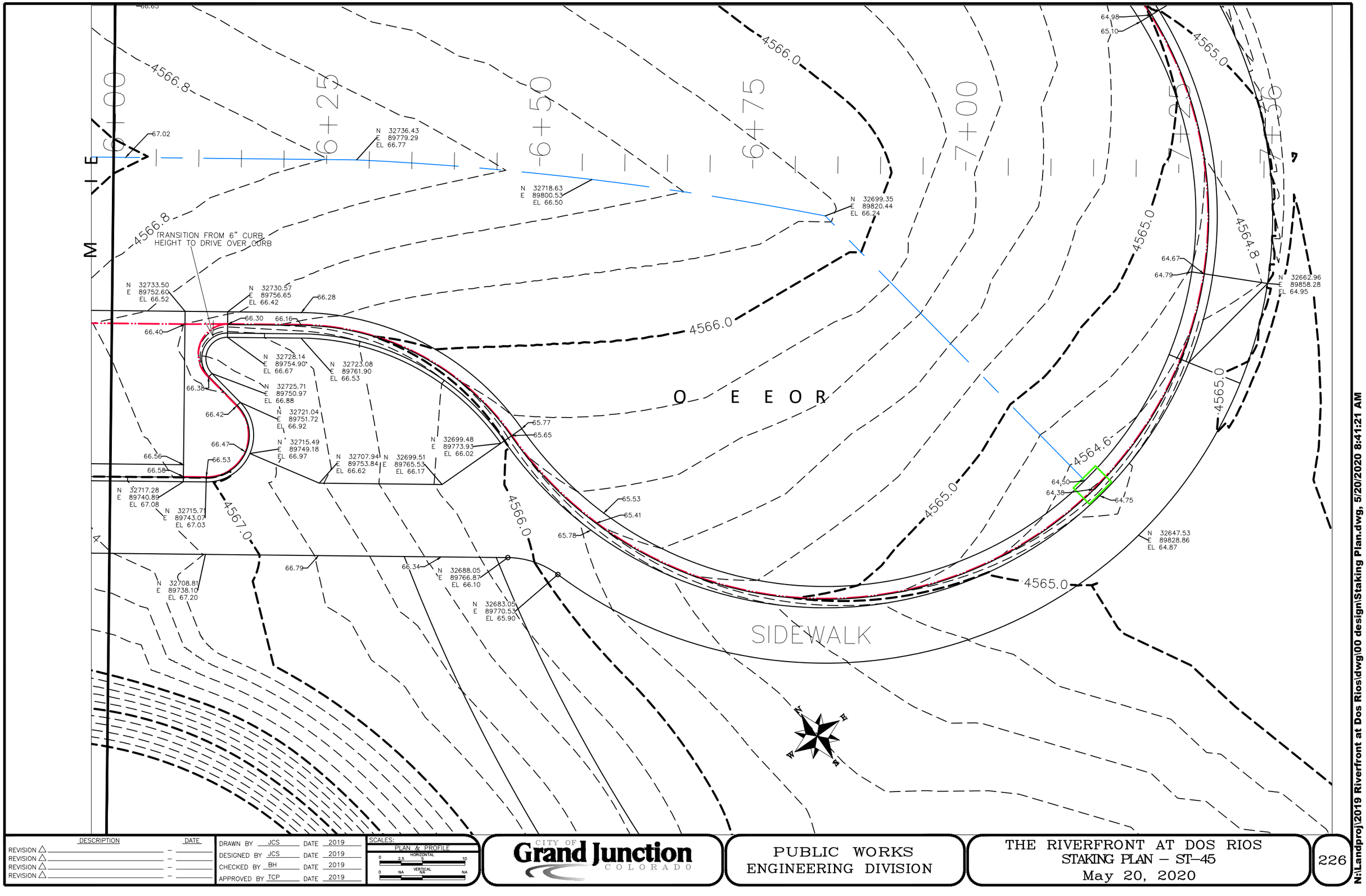

DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES: PLAN & PROFILE HORIZONTAL 0 2.5 5 10 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-45
May 20, 2020

226

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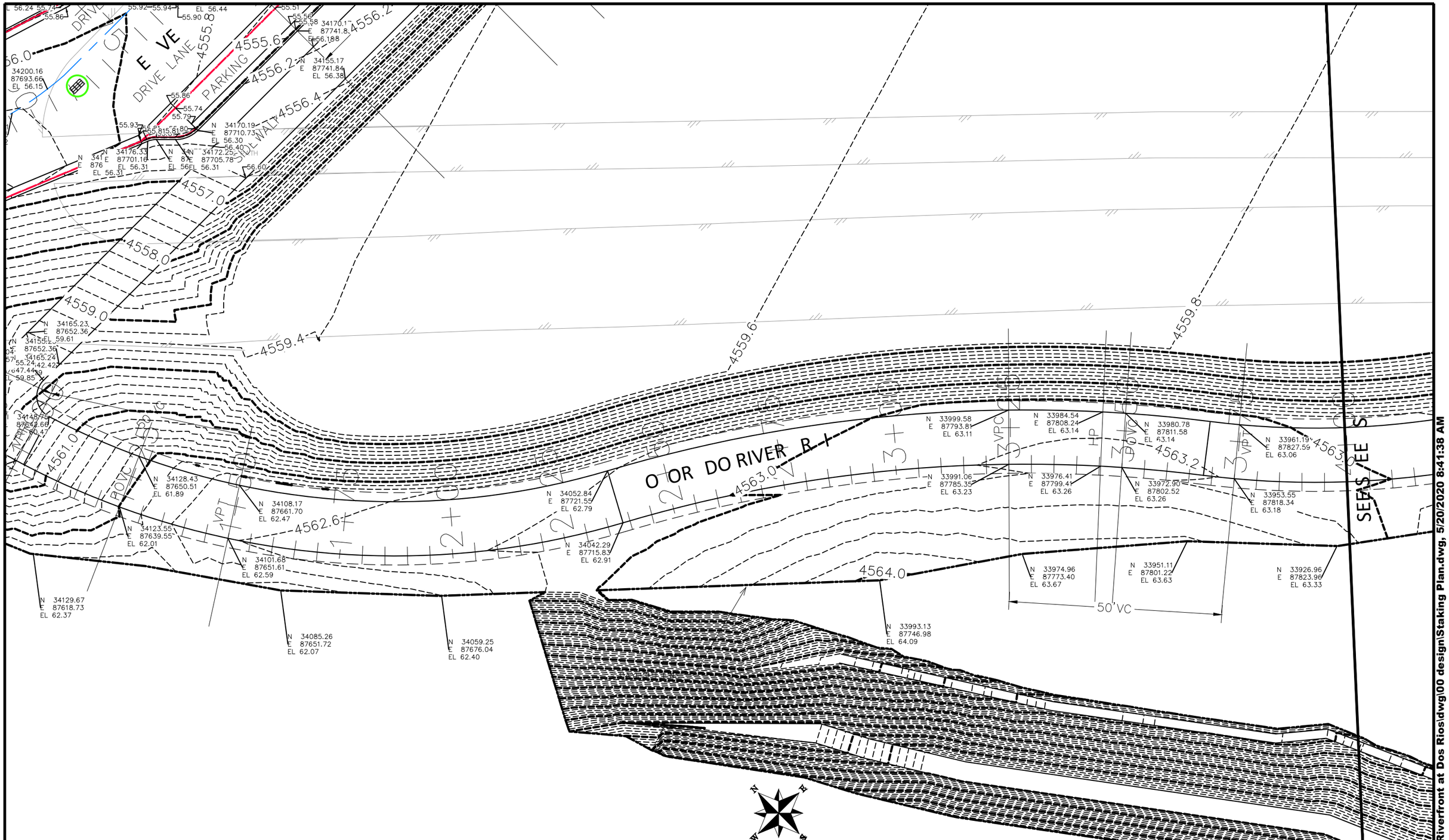

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REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–46
May 20, 2020

227

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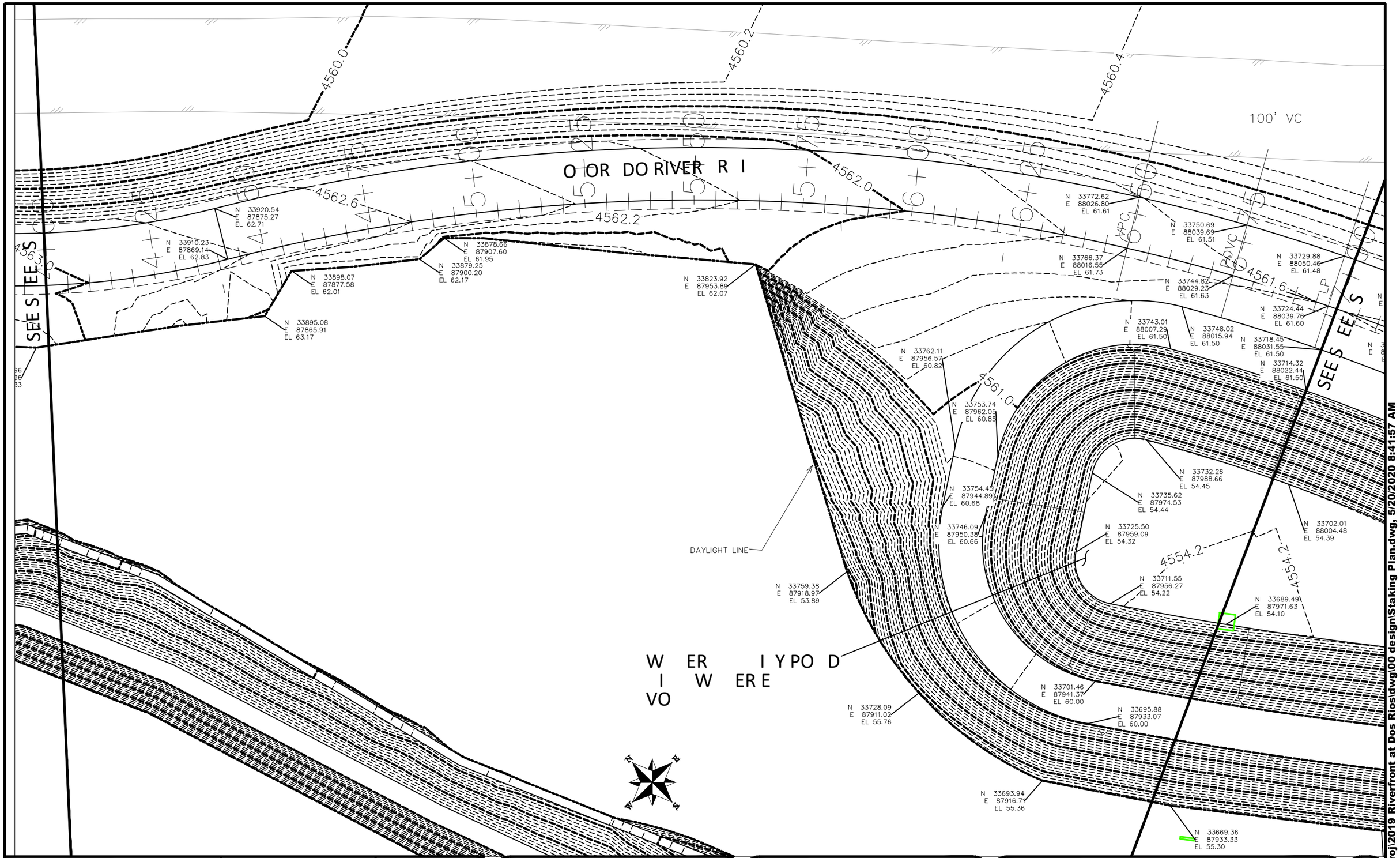

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-47
May 20, 2020

228

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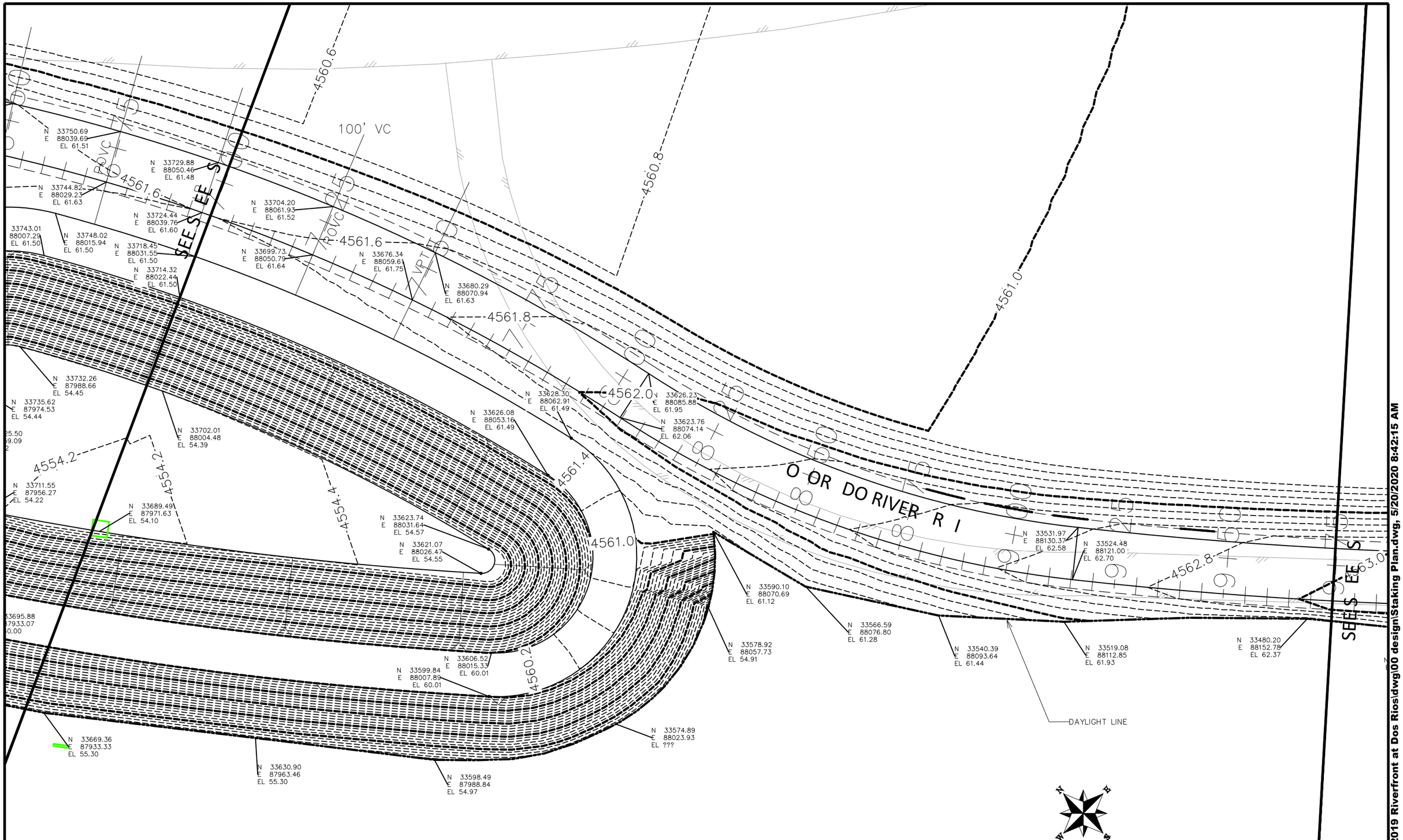

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-48
May 20, 2020

229

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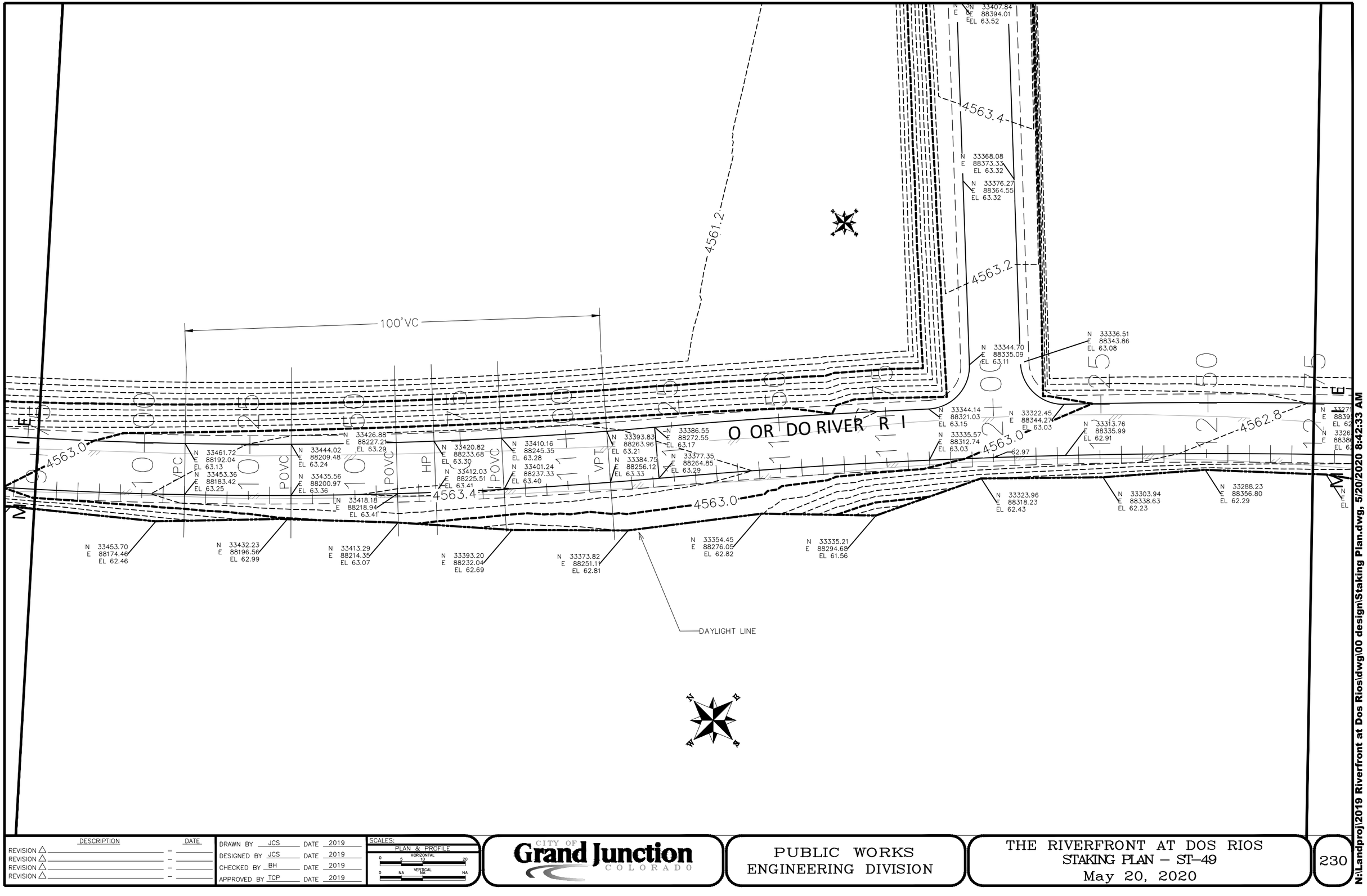

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–49
May 20, 2020

230

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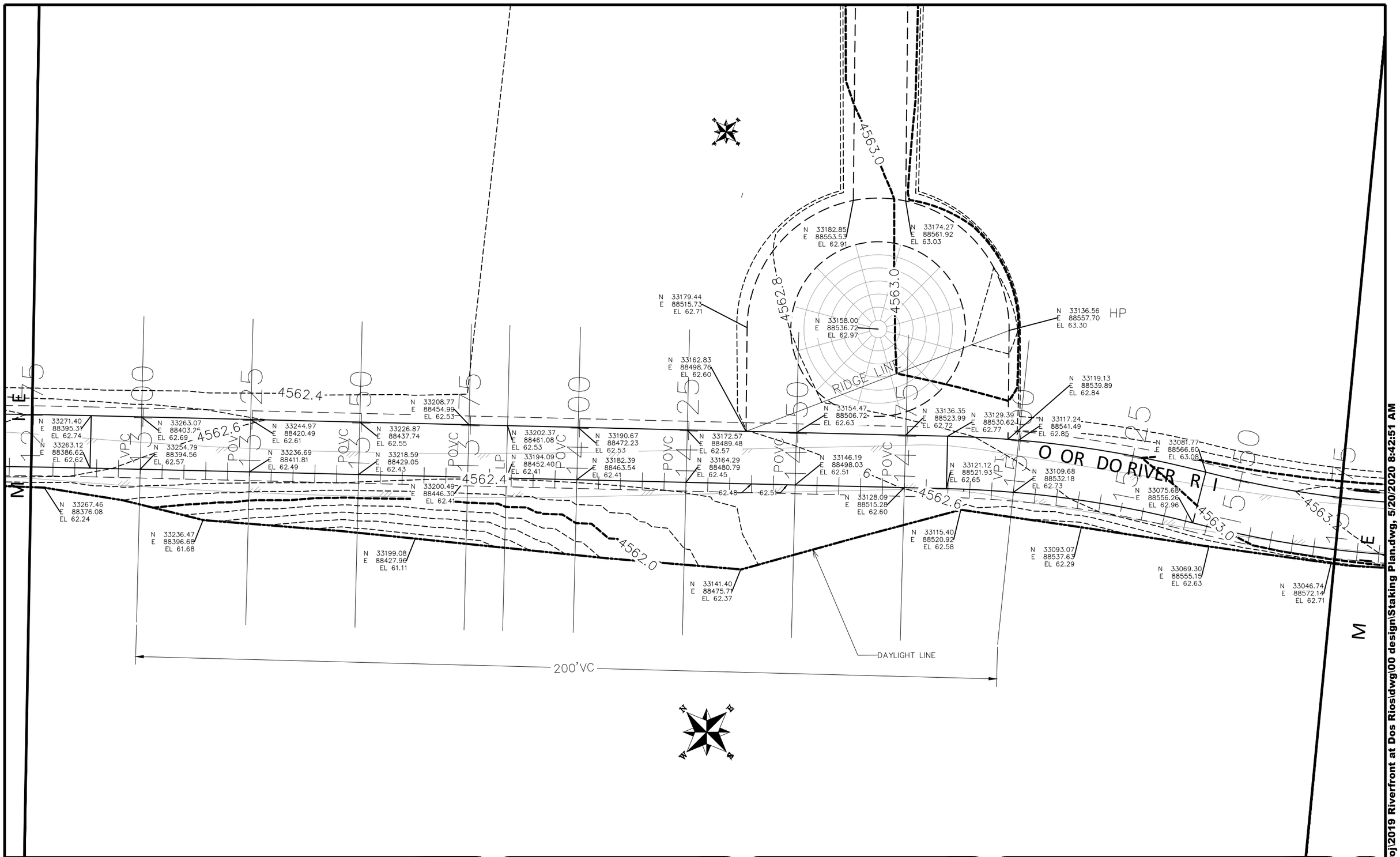

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REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–50
May 20, 2020

231

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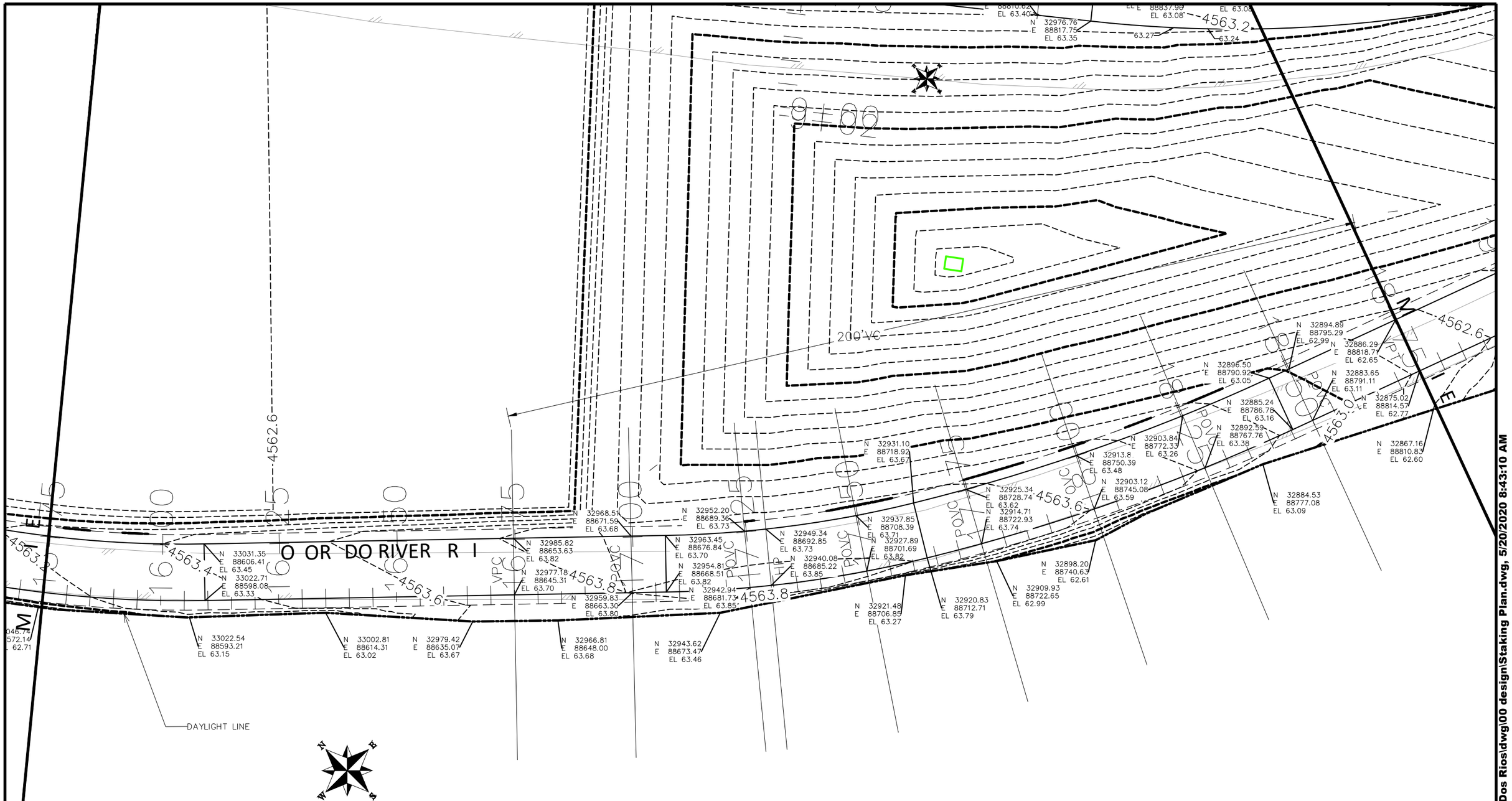

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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–51
May 20, 2020

232

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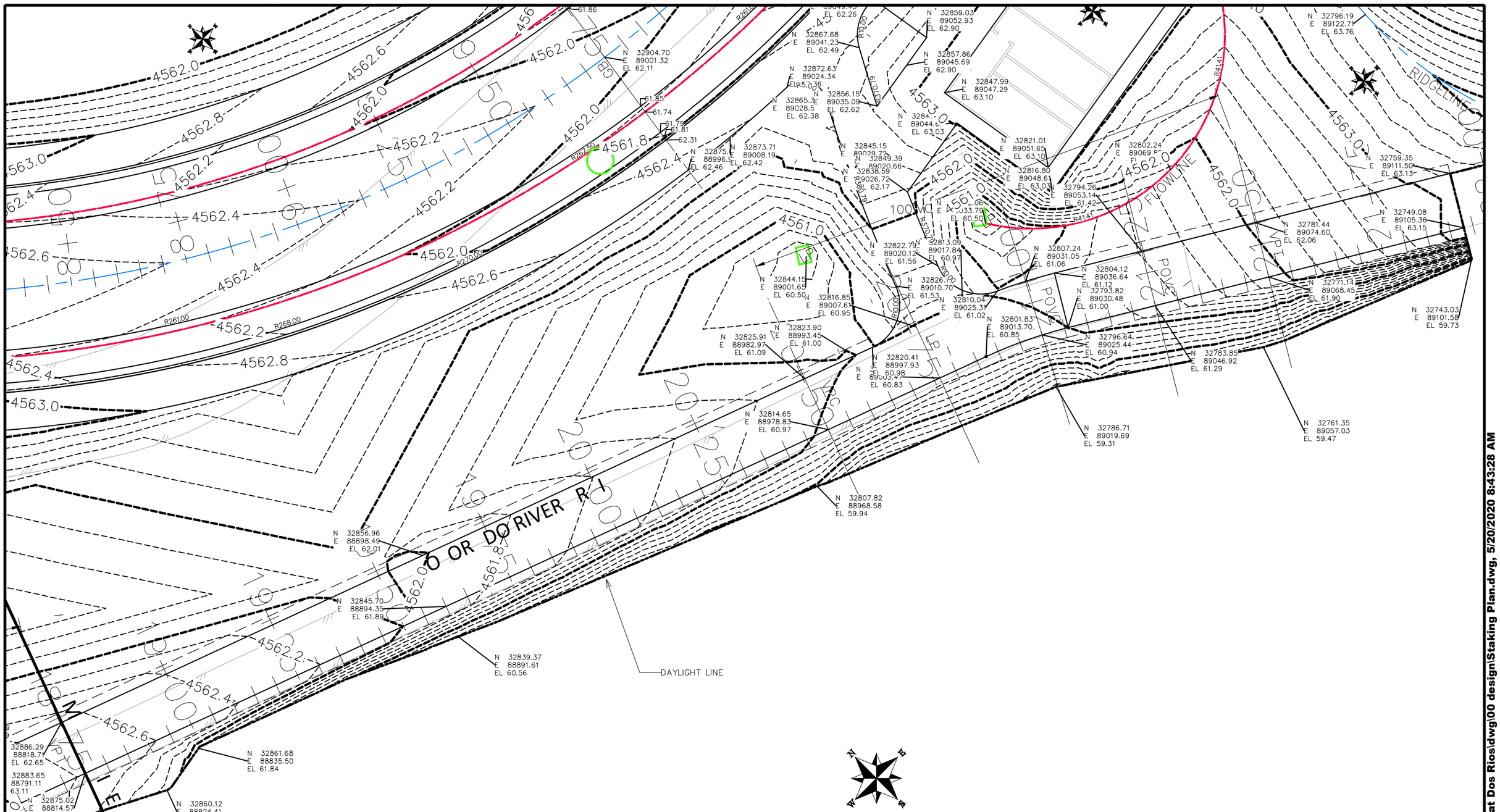
RIDGELINE
RIDGELINE
DAYLIGHT LINE
N 32796.19
E 89122.71
EL 63.76
N 32859.03
E 89052.93
EL 62.90
N 32857.86
E 89045.69
EL 62.90
N 32847.99
E 89047.29
EL 63.10
N 32867.68
E 89041.23
EL 62.49
N 32872.63
E 89024.34
N 32856.15
E 89035.09
EL 62.62
N 32865.3
E 89028.5
EL 62.38
N 32821.01
E 89051.65
EL 63.10
N 32816.80
E 89048.61
EL 63.03
N 32802.24
N 32759.35
E 89111.50
EL 63.13
N 32794.26
E 89053.14
EL 61.42
N 32749.08
E 89105.36
EL 63.15
N 32781.44
E 89074.60
EL 62.06
N 32807.24
E 89031.05
EL 61.06
N 32804.12
E 89036.64
EL 61.12
N 32793.82
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EL 61.00
N 32771.14
E 89068.45
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N 32743.03
E 89101.58
EL 59.73
N 32796.64
E 89025.44
EL 60.94
N 32783.85
E 89046.92
EL 61.29
N 32801.83
E 89013.70.
EL 60.85
N 32810.04
E 89025.31
EL 61.02
N 32822.79
E 89020.12
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N 32813.09
E 89017.84
EL 60.97
N 32826.19
E 89010.70
EL 61.53
N 32844.15
E 89001.65
EL 60.50
N 32816.85
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E 88993.45
EL 61.00
N 32825.91
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61.85
61.74
61.79
61.81
62.31
4562.0
4562.2
4562.4
4562.6
4562.8
4563.0
4561.8
4561.0
R261.00
R268.00
R264.50
R100.00
R41.41
100 YEAR FLOWLINE
100 YEAR FLOWLINE
100 YEAR FLOWLINE
100 YEAR FLOWLINE
100 YEAR FLOWLINE
100 YEAR FLOWLINE
DOLORES RIVER R/W
DOLORES RIVER R/W
DOLORES RIVER R/W

N 33335.21
E 88294.68
EL 61.56

11+75

N 33335.57
E 88312.74
EL 63.03

12+00

N 33323.96
E 88318.23
EL 62.43

62.97

4563.0

N 33344.70
E 88335.09
EL 63.11

4563.2

N 33376.27
E 88364.55
EL 63.32

4563.4

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EL 63.52

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N 33399.66
E 88402.79
EL 63.58

N 33322.45
E 88344.27
EL 63.03

N 33313.76
E 88335.99
EL 62.91

12+25

N 33336.51
E 88343.86
EL 63.08

N 33303.94
E 88338.63
EL 62.23

O OR DO RIVER R I

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–53
May 20, 2020

234

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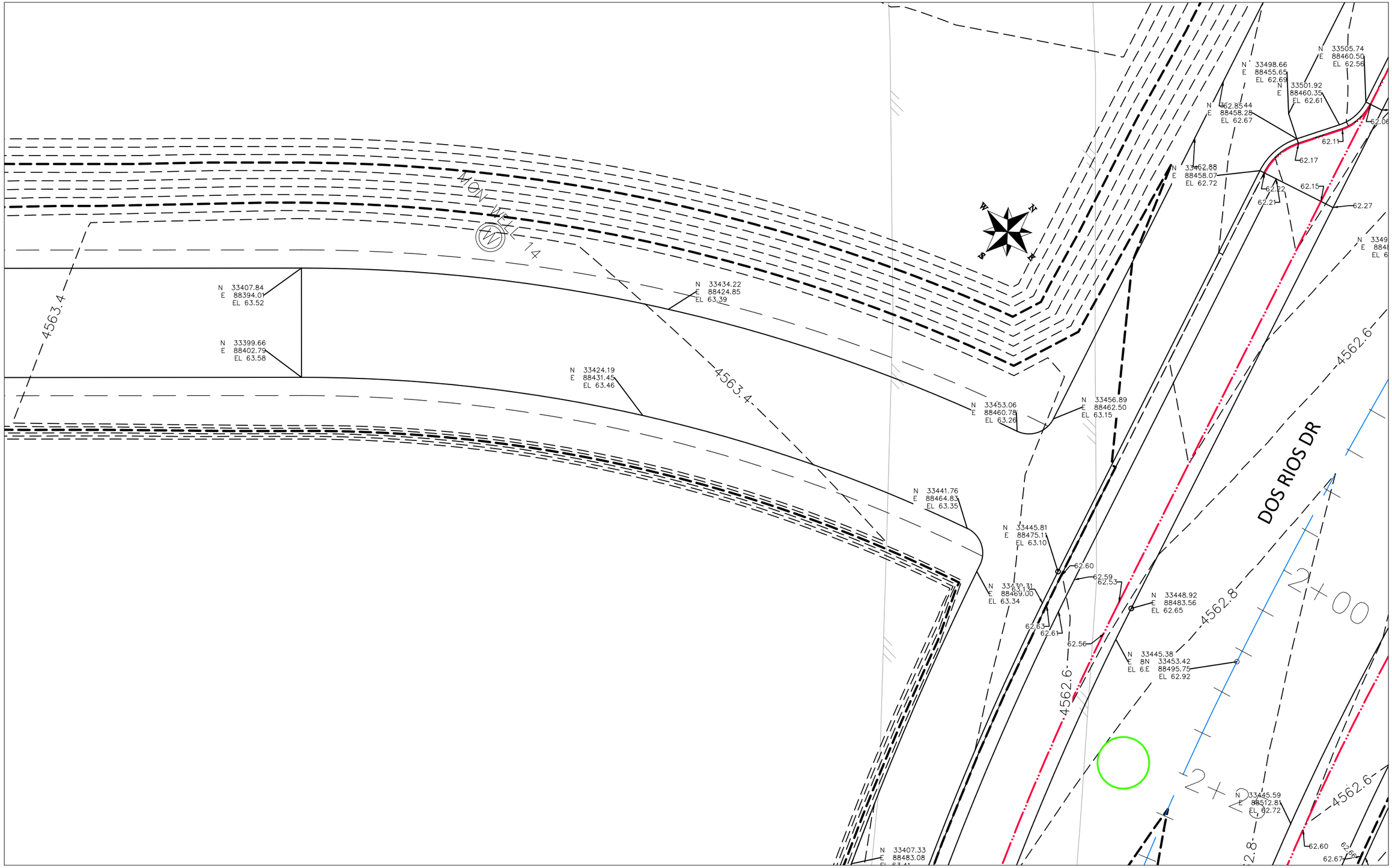

DESCRIPTION	DATE
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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-54
May 20, 2020

235

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14+25

N 33164.29
E 33172.57
E 88489.48
EL 62.57

N 33162.83
E 88498.76
EL 62.60

N 33179.44
E 88515.73
EL 62.71

POVC

14+00

O OR D RIVER R I

4562.6

4562.8

N 33154.47
E 88506.72
EL 62.63

RIDGE LINE

N 33158.00
E 88536.72
EL 62.97

N 33182.85
E 88553.53
EL 62.91

4563.0

4563.0

4563.2

POVC

14+75

N 33136.35
E 88523.99
EL 62.72

N 33174.27
E 88561.92
EL 63.03

N 33121.12
E 88521.93
EL 62.65

N 33129.39
E 88530.62
EL 62.77

VPT

5+00

N 33109.68
E 88532.18
EL 62.73

N 33117.24
E 88541.49
EL 62.85

N 33136.56
E 88557.70
EL 63.30

N 33119.13
E 88539.89
EL 62.84

N 33264.
E 88
EL 63.08

N 33267.00
E 88595.78
EL 63.0892

N 33
E 88600.15
EL 62.96

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EL 63.23

N 33242.99
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N 33237.37
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EL 63.24

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EL 63.14

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3226.26
3637.34
EL 63.15

N 33218.00
E 88634.98
EL 63.25

63.41

N 33217.68
E 88637.86
EL 63.24

62.74

N 33212.54
E 88639.35
EL 63.26

62.78 62.77 62.71

4563.4

DOS RIOS DR

562.8

M I E

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–55
May 20, 2020

236

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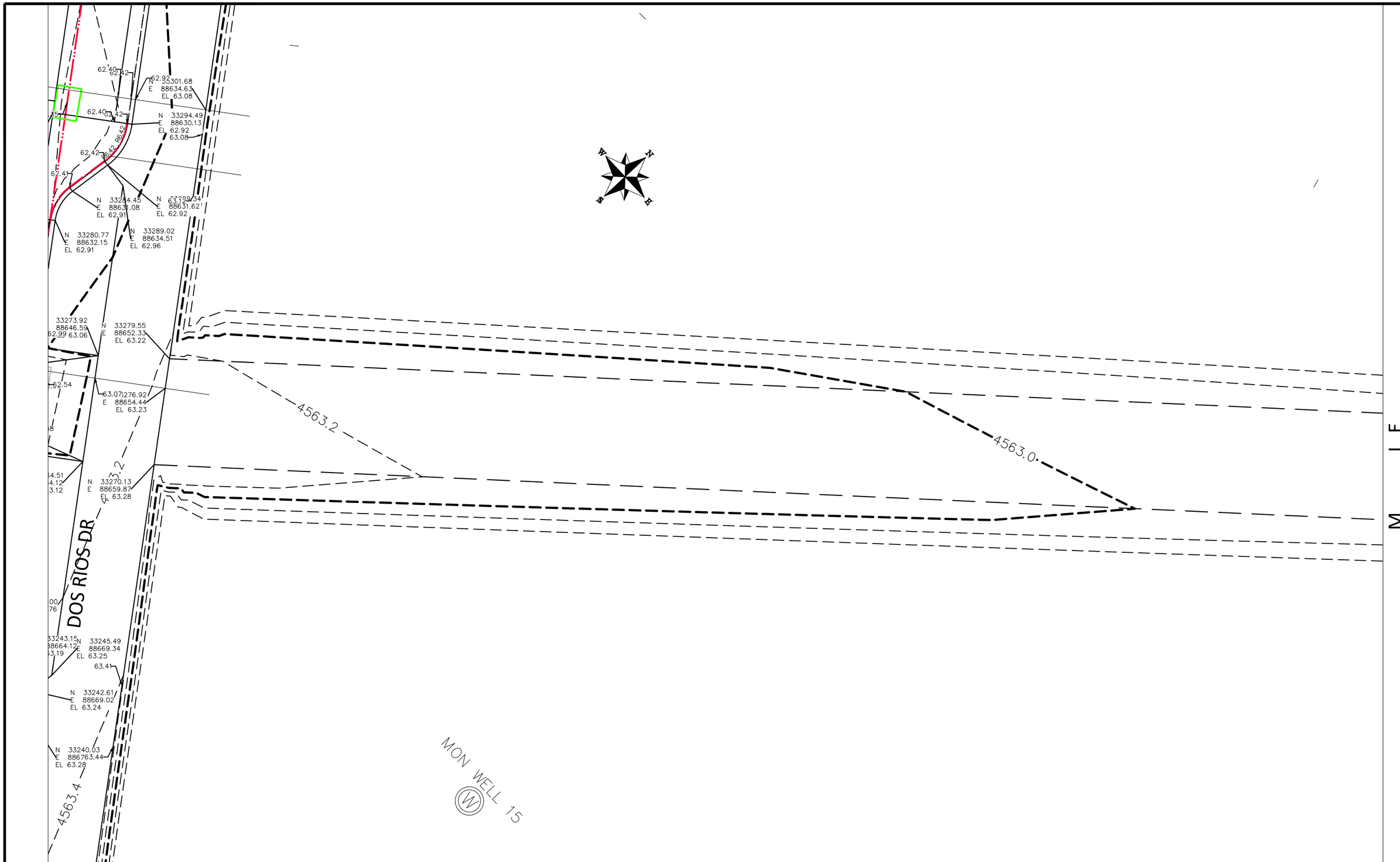

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REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-56
May 20, 2020

237

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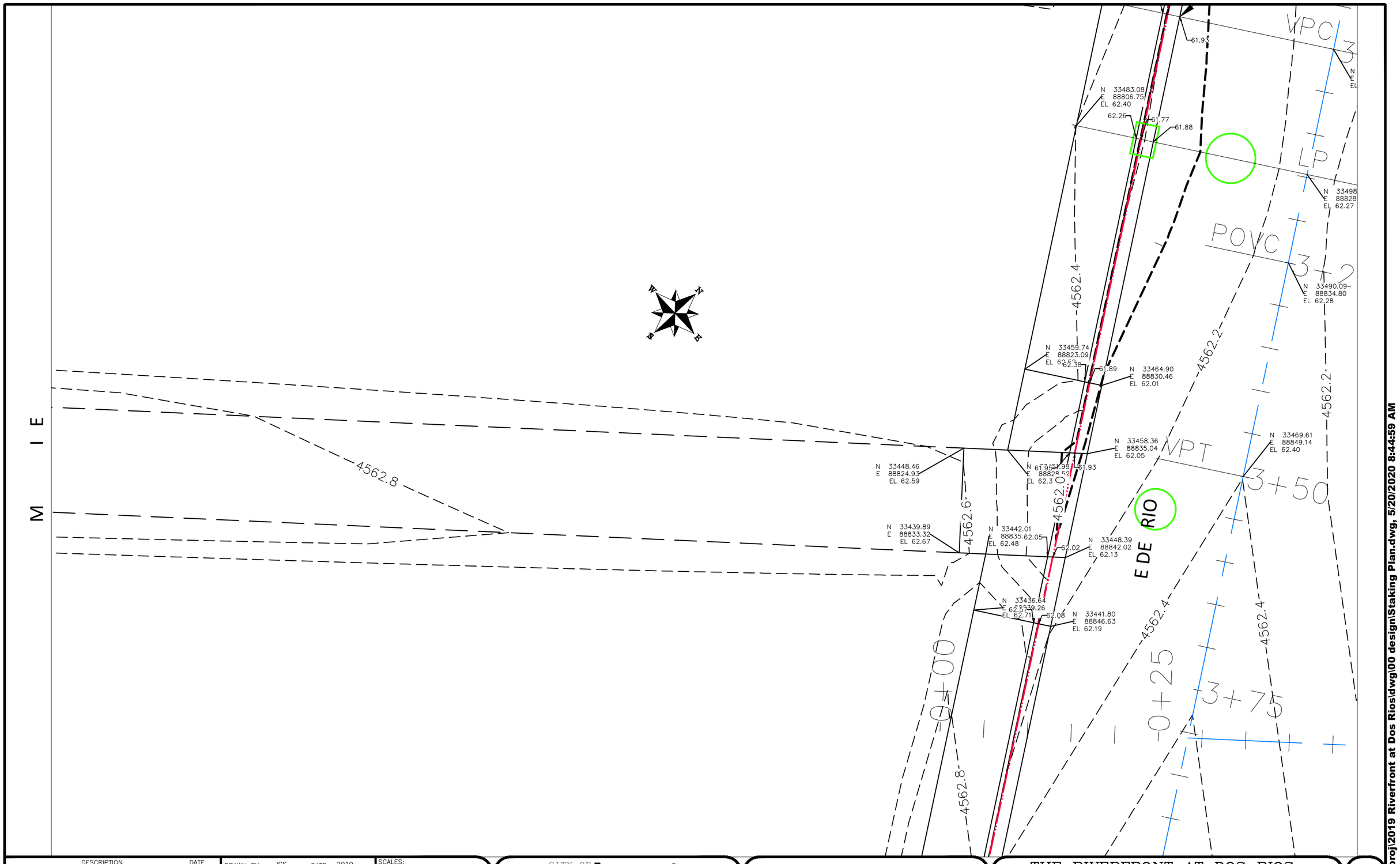

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-57
May 20, 2020

238

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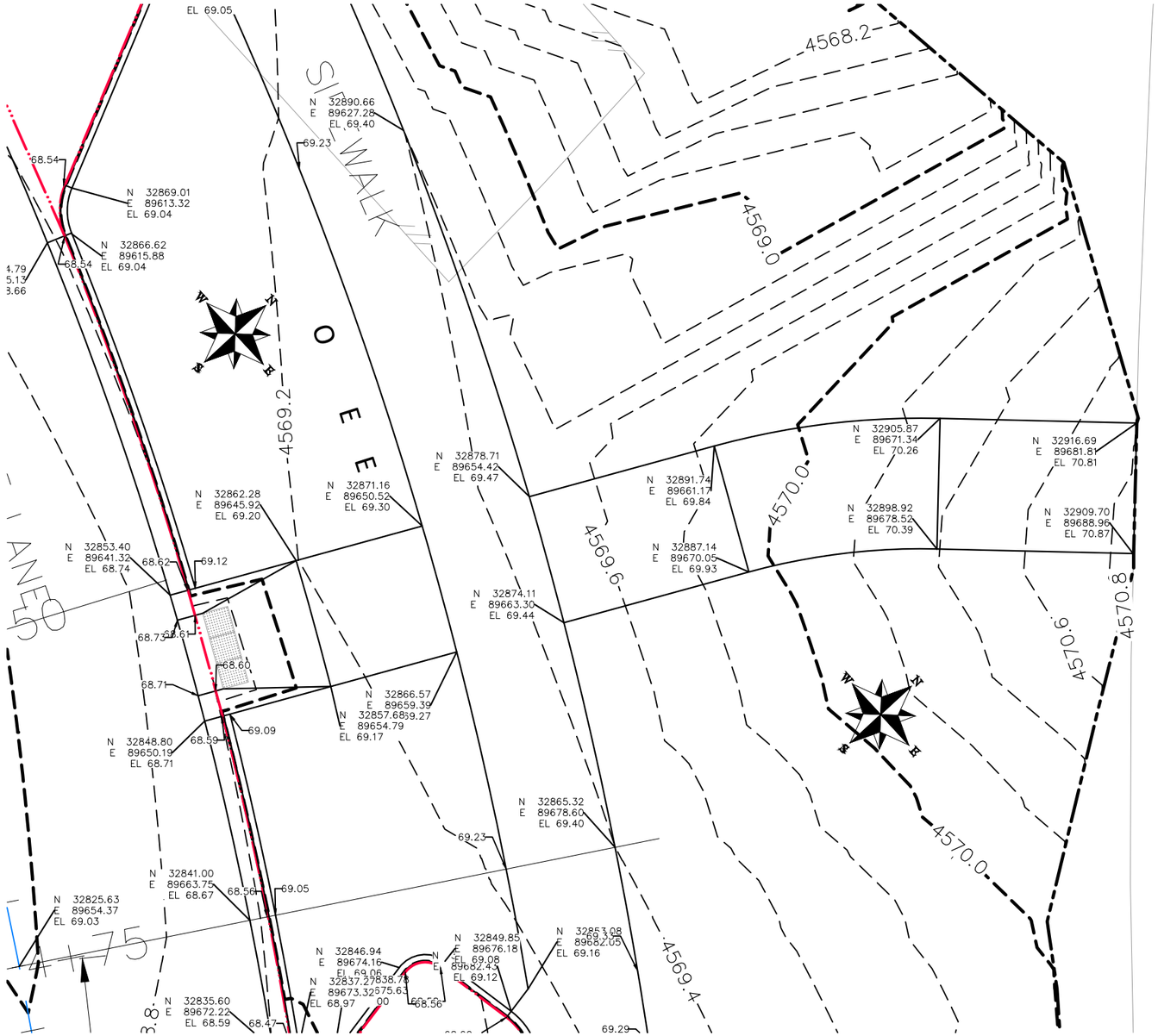

DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–58
May 20, 2020

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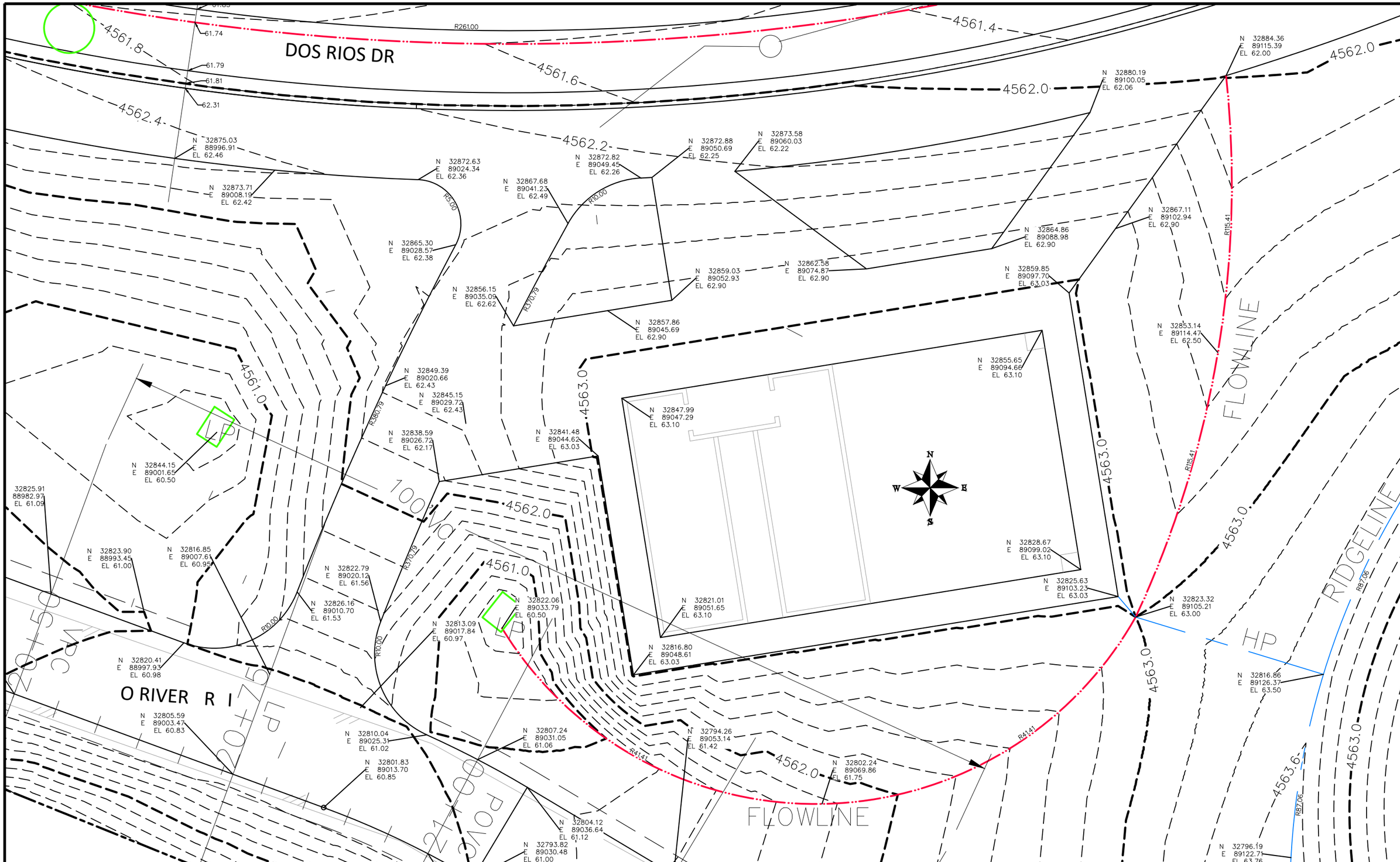

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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-59
May 20, 2020

240

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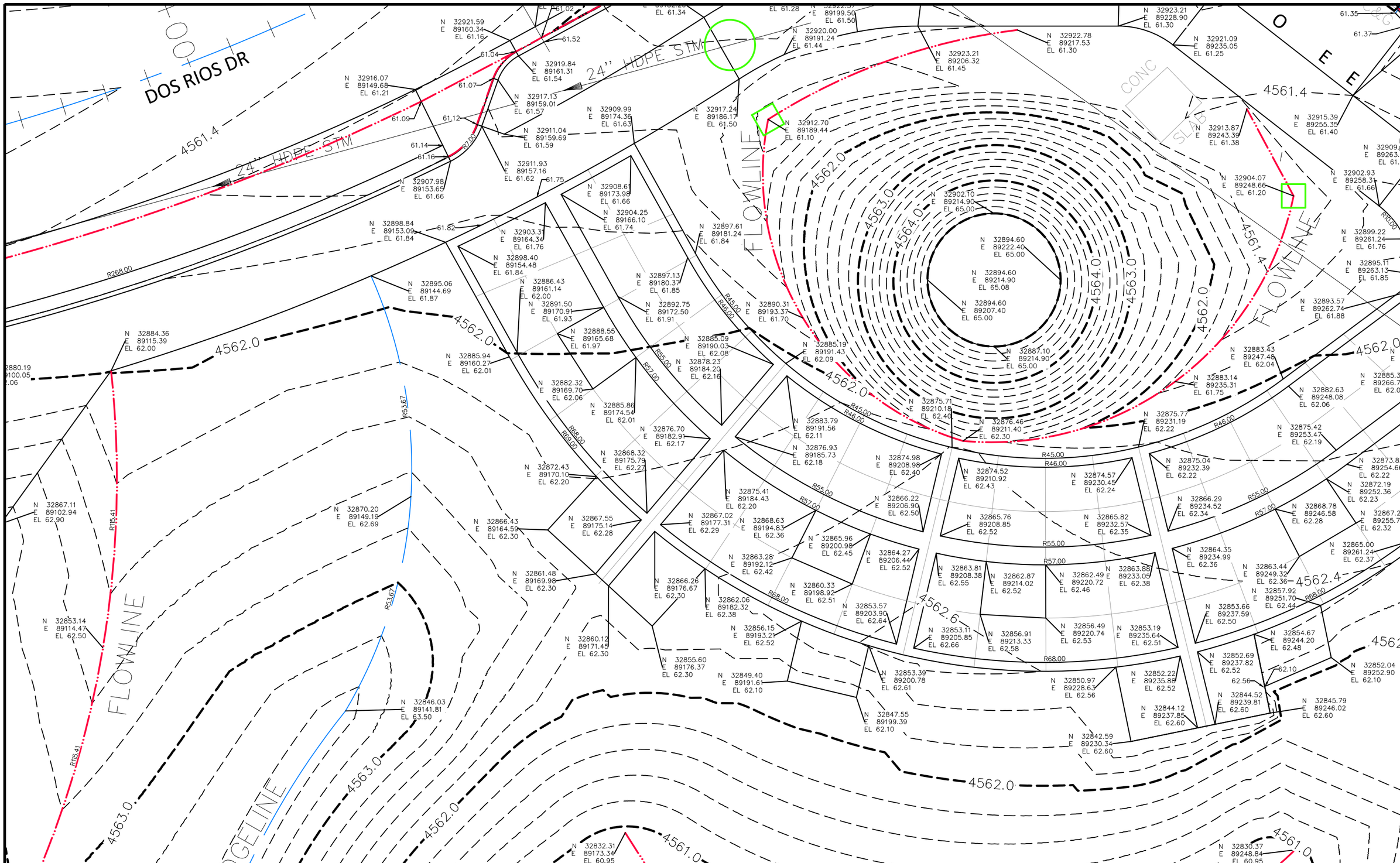

DESCRIPTION	DATE
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REVISION △	
REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-60
May 20, 2020

241

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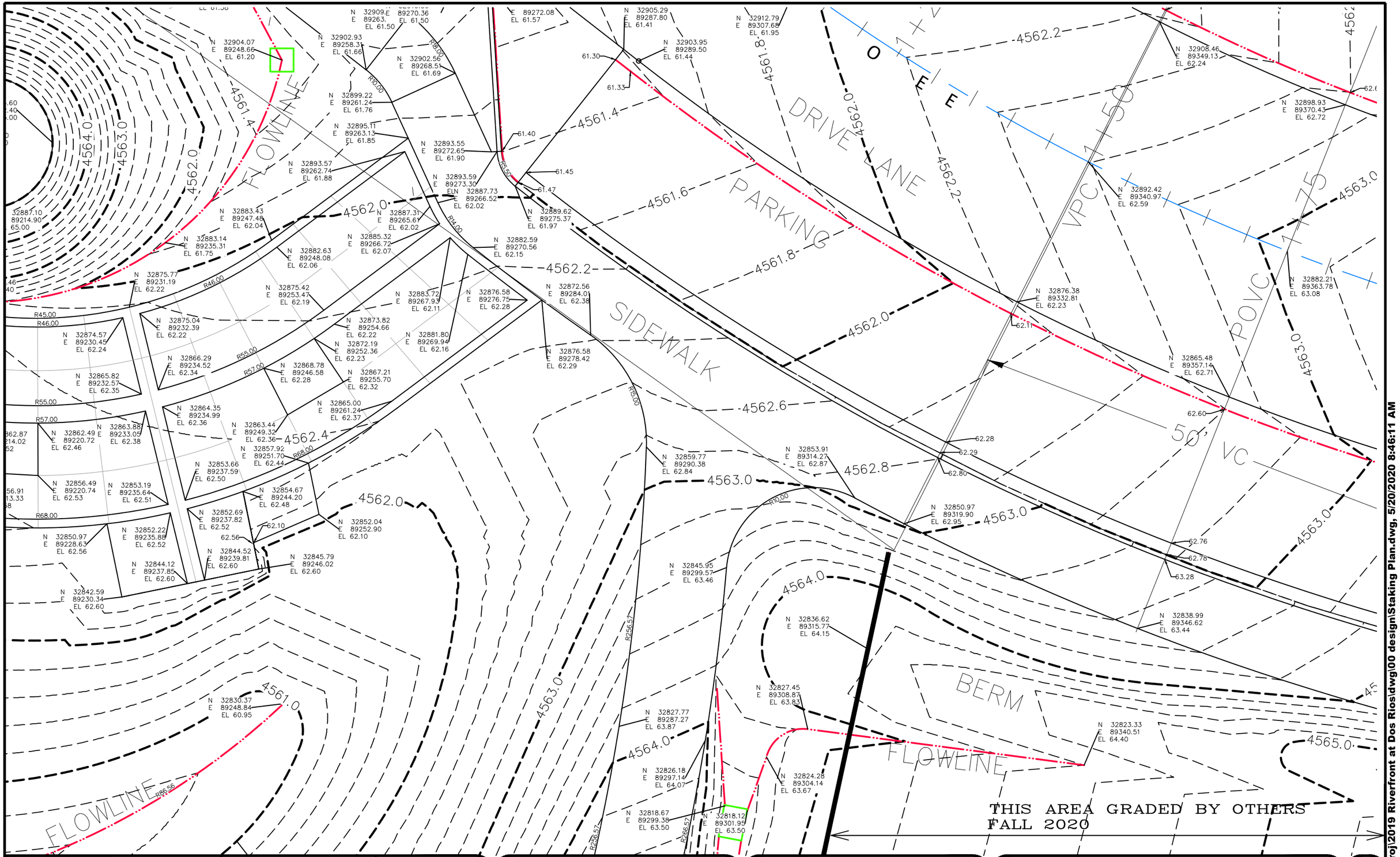

DESCRIPTION	DATE
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REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-61
May 20, 2020

242

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EL 60.50

N 32821.01
E 89051.65
EL 63.10

N 32816.80
E 89048.61
EL 63.03

N 32825.63
E 89103.23
EL 63.03

N 32823.32
E 89105.21
EL 63.00

N 32816.86
E 89126.37
EL 63.50

N 32807.24
E 89031.05
EL 61.06

N 32794.26
E 89053.14
EL 61.42

N 32802.24
E 89069.86
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EL 61.12

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EL 61.00

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EL 61.00

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EL 60.20

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EL 62.06

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EL 59.47

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E 89101.58
EL 59.73

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EL 62.00

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EL 64.00

N 32747.91
E 89172.40
EL 63.00

N 32744.58
E 89136.28
EL 64.40

N 32739.70
E 89172.20
EL 64.00

4560.4
4561.0
4562.0
4563.0
4564.0

R87.06
R414.1

FLOWLINE
RIDGELINE
HP
O RIVER R I
21+25
21+50
21+75
22+00
22+25

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA N/A NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–62
May 20, 2020

243

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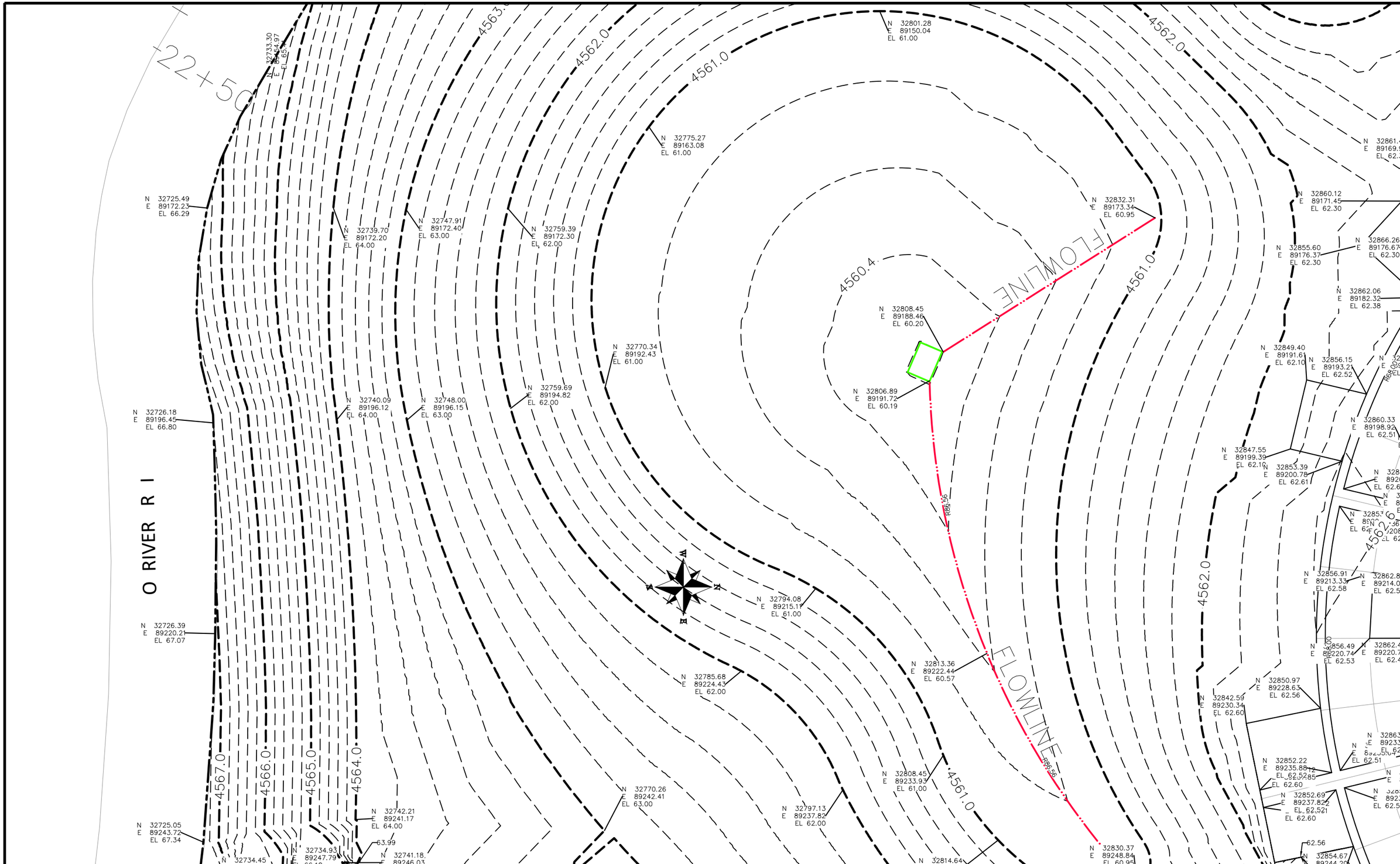

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REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-63
May 20, 2020

244

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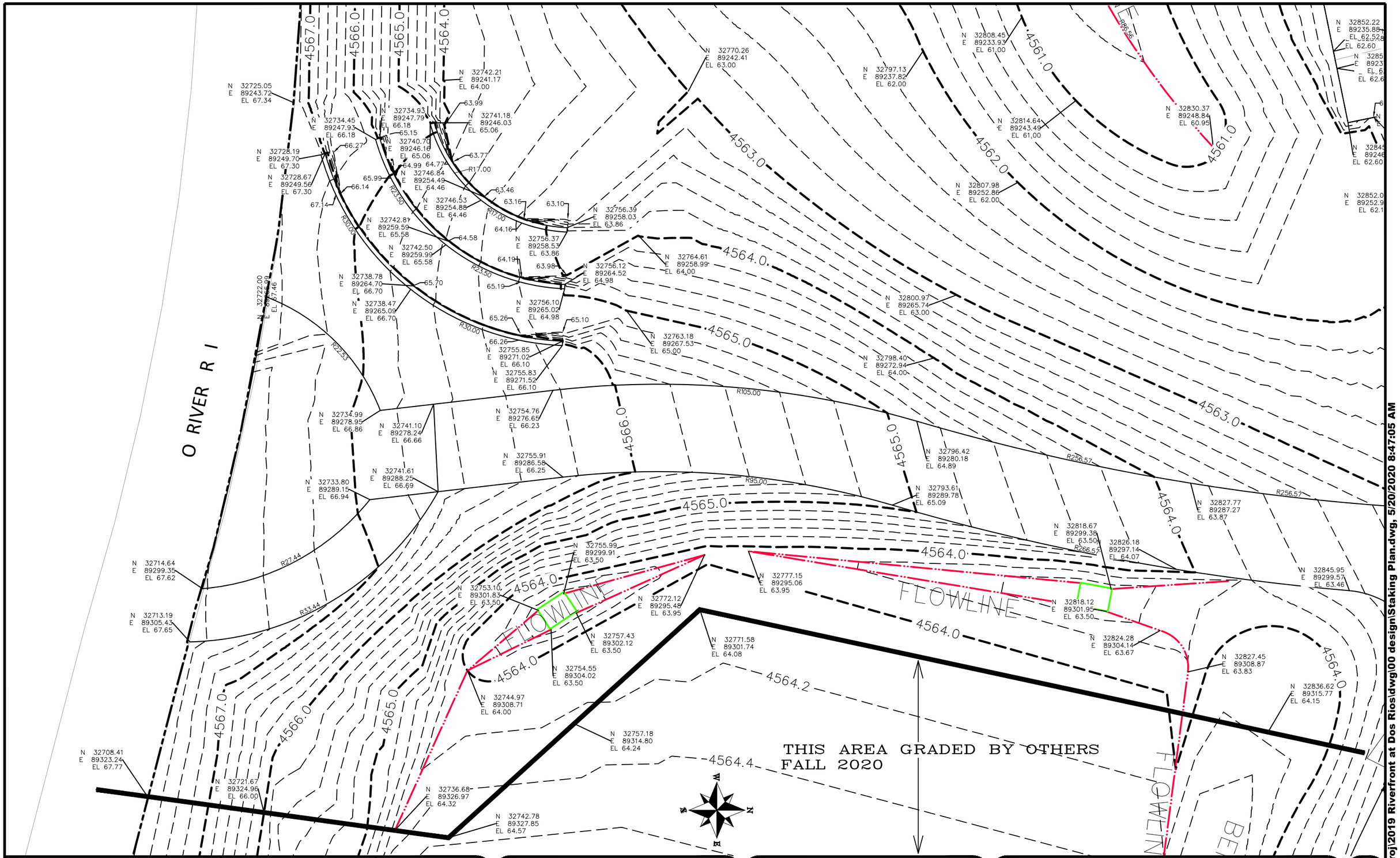

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-64
May 20, 2020

245

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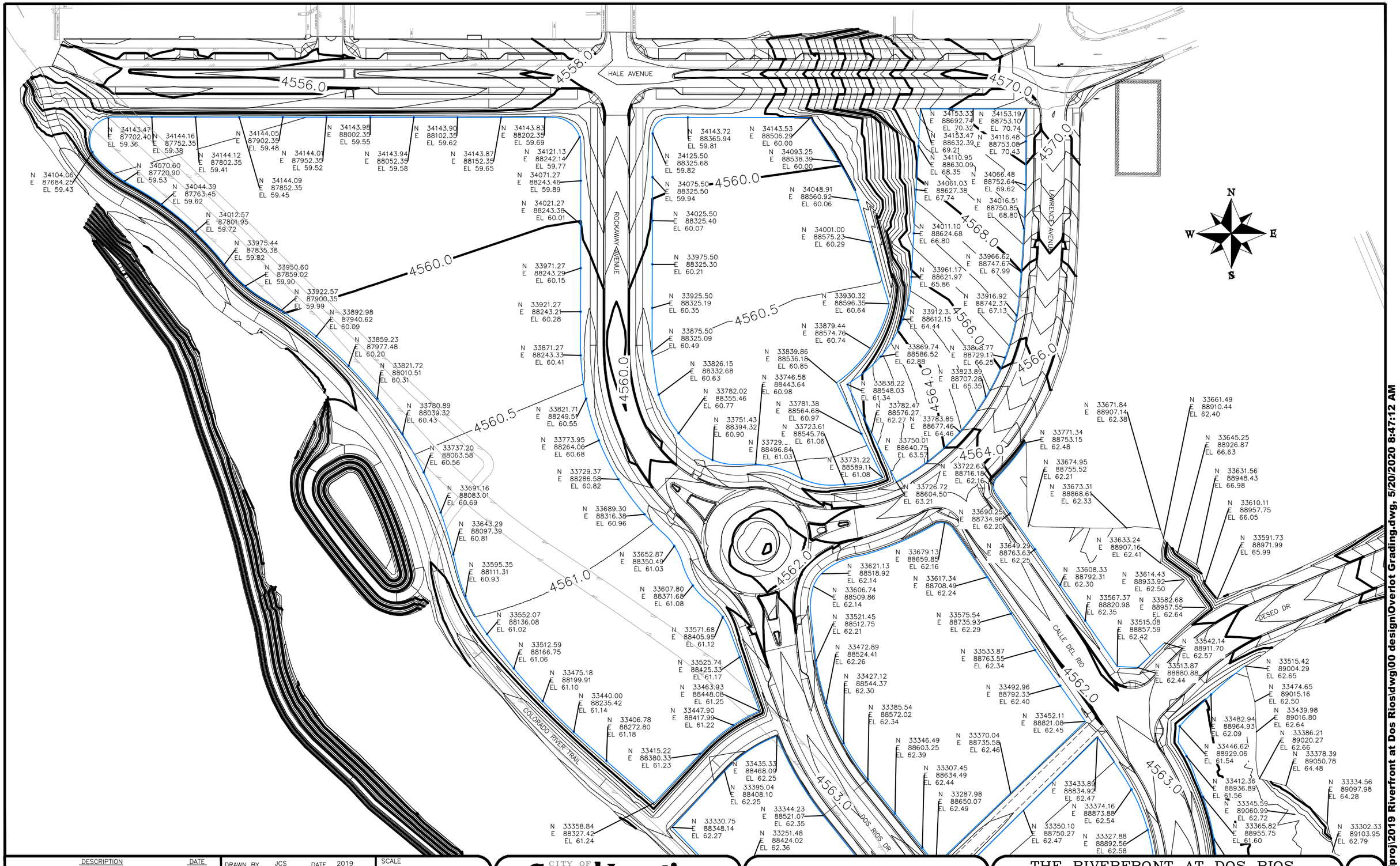

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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BCH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 25 50 100

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
OVERLOT GRADING – 1
May 20, 2020

246

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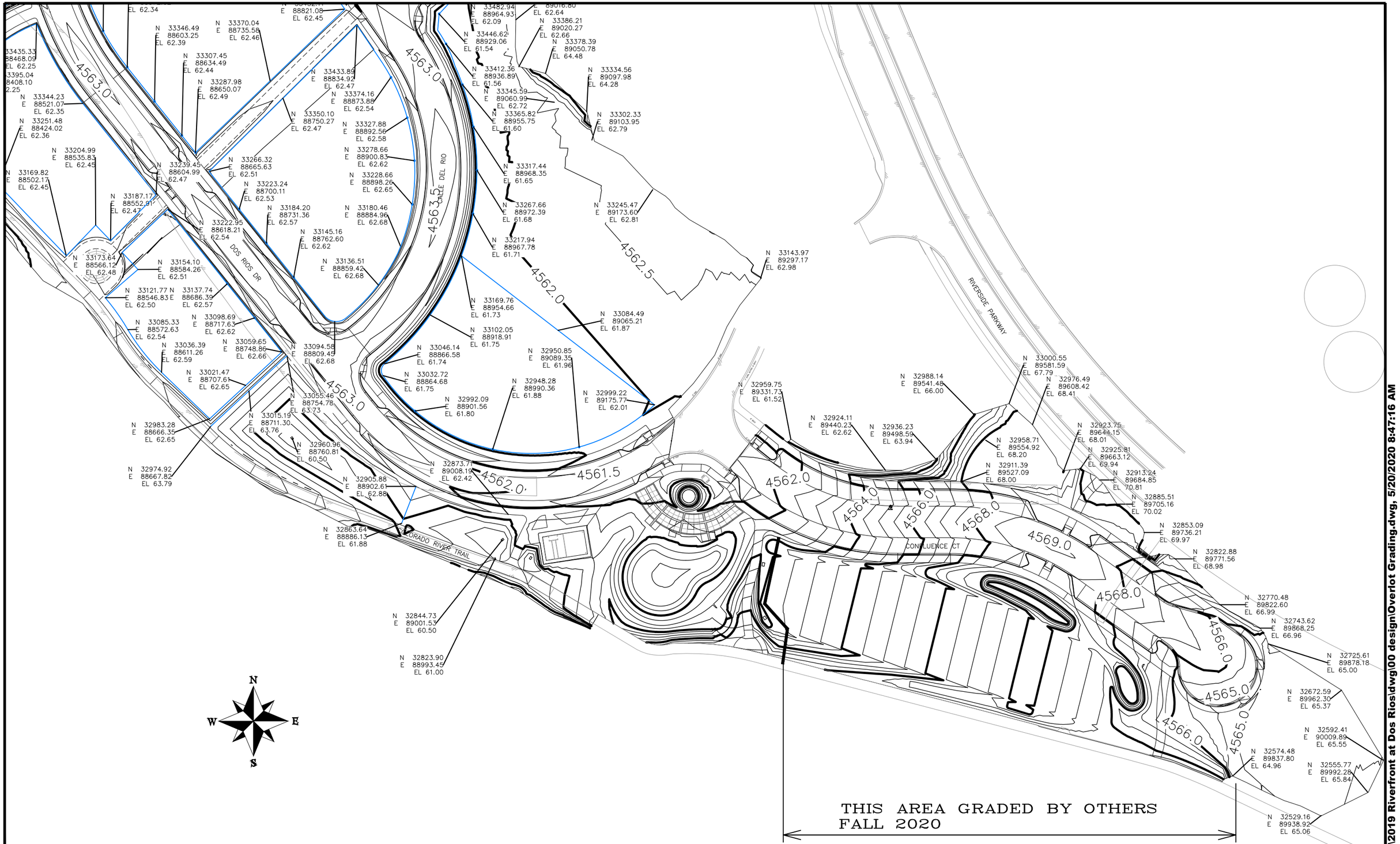

THIS AREA GRADED BY OTHERS
FALL 2020

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BCH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 25 50 100

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
OVERLOT GRADING – 2
May 20, 2020

247

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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN INDEX – 1
May 20, 2020

248

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PARK AVE

CHULUOTA AVE

HALE AVE

MATCH LINE STA 5+00

NEIGHBORHOOD R2-5BP (BY CITY)

SPEED LIMIT 25 R2-1 (BY CITY)

UNLESS OTHERWISE POSTED R2-5P (BY CITY)

1 SPACE

3 SPACES

3 SPACES

Hale Ave

STOP

PROTECT EXISTING SIGNS IN PLACE

Hale Ave

STOP

PROTECT EXISTING SIGNS IN PLACE

W11-2 (BY CITY)

W16-7P (BY CITY)

REMOVE SIGN

EPOXY PAINT PAVEMENT MARKING (BY CITY) (4" DOUBLE YELLOW SOLID)

R4-7C (BY CITY)

REMOVE SIGN

11 SPACES

10 SPACES

PREFORMED THERMOPLASTIC PAVEMENT MARKING (4" WHITE SOLID) (TYPICAL) (INCLUDES BLACK CONTRAST THERMOPLASTIC PAVEMENT MARKING)

W11-2 (BY CITY)

W16-7P (BY CITY)

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE CROSSWALK LINES 2'X10'(TYPICAL)

0+00

1+00

2+00

3+00

4+00

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-1
May 20, 2020

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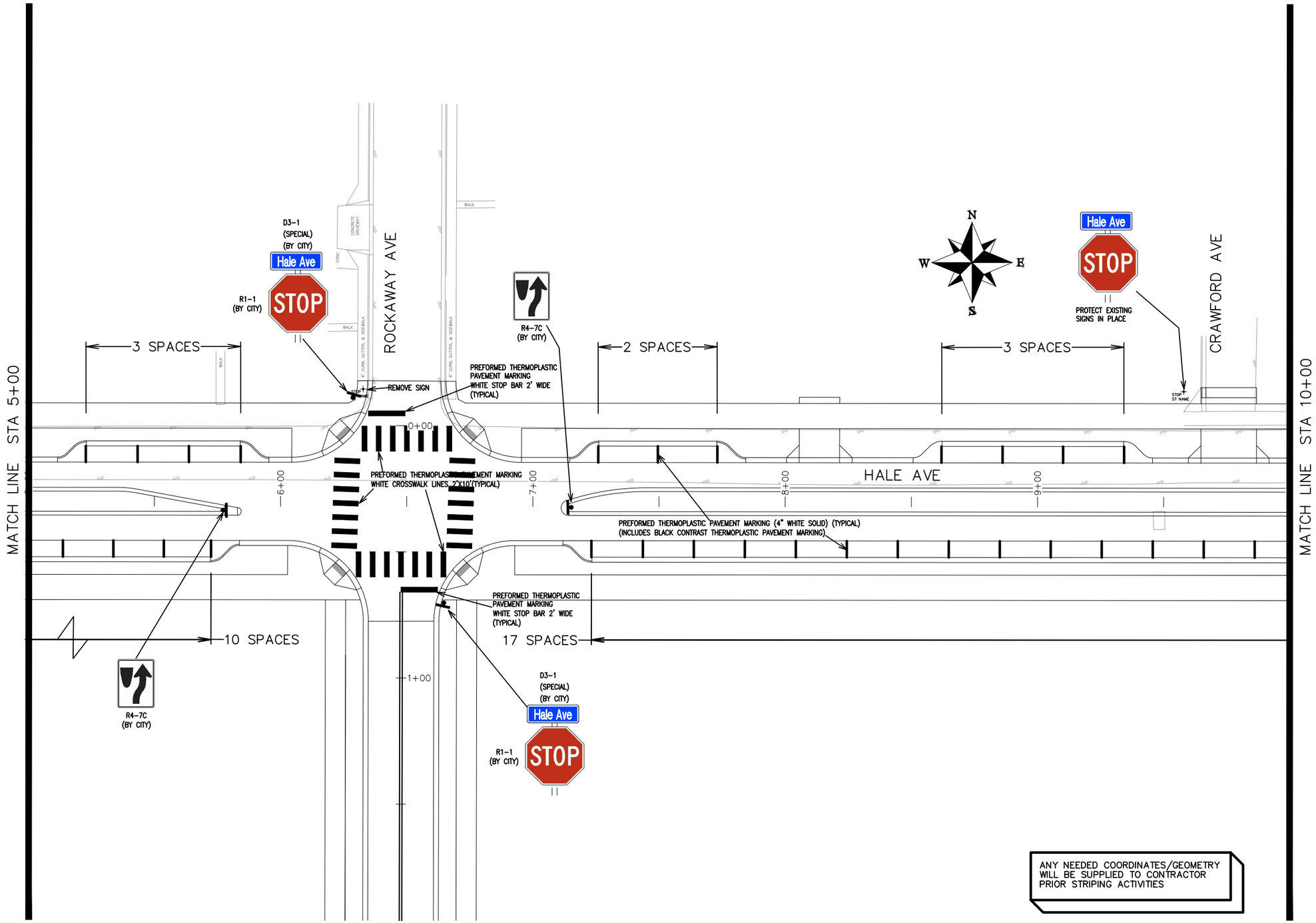

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-2
May 20, 2020

250

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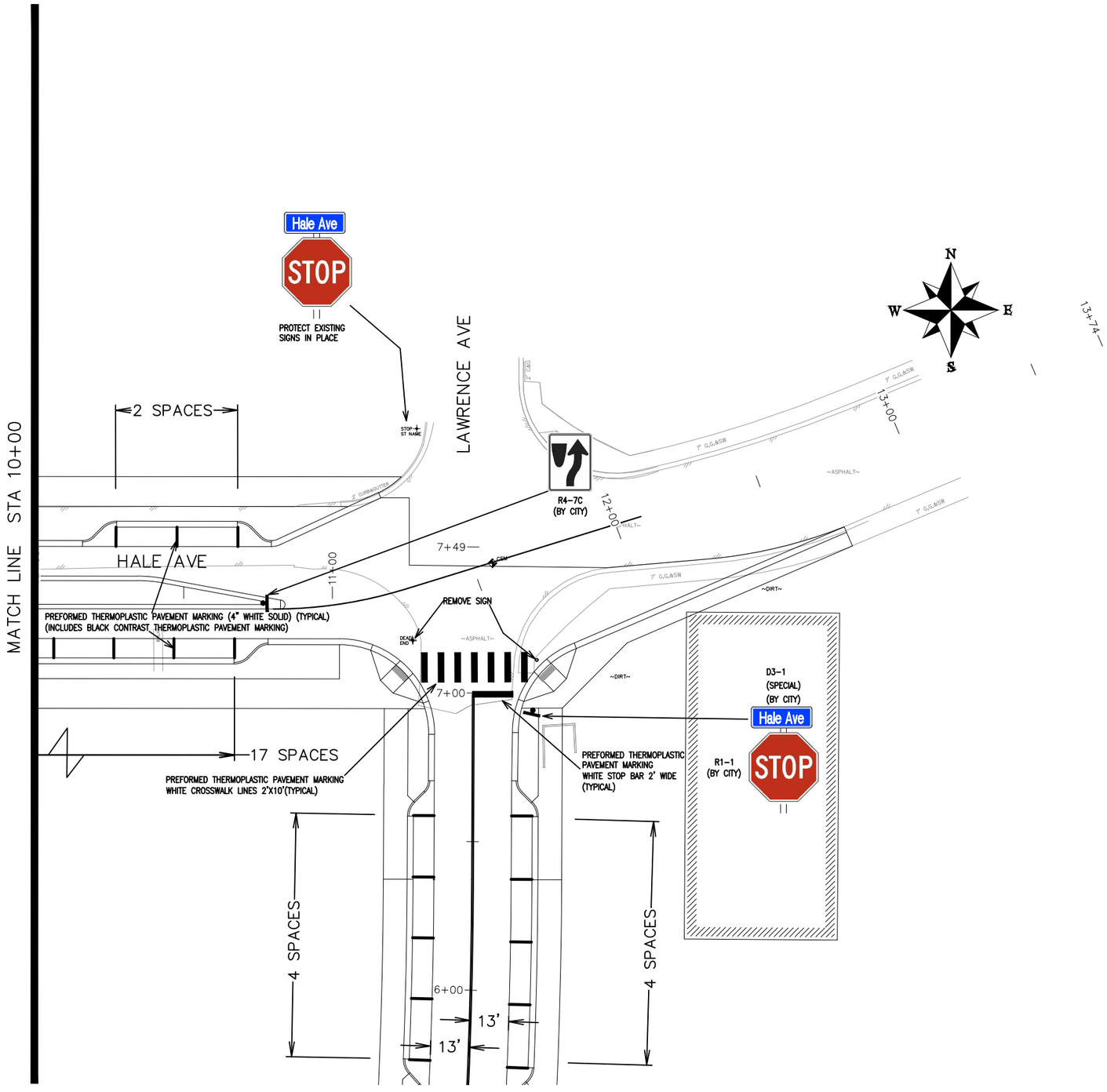

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-3
May 20, 2020

251

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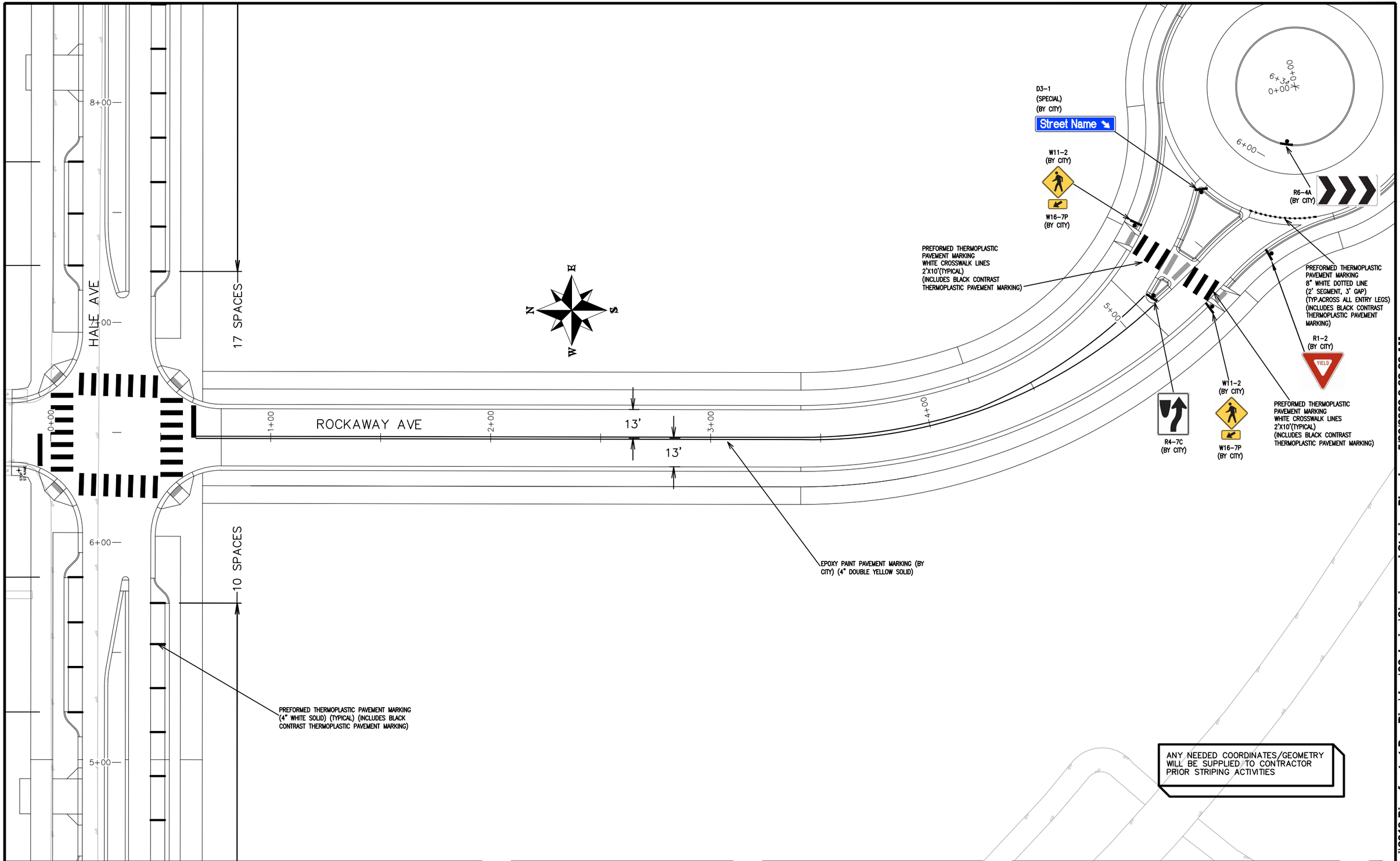

DESCRIPTION	DATE
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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA 1in NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-4
May 20, 2020

252

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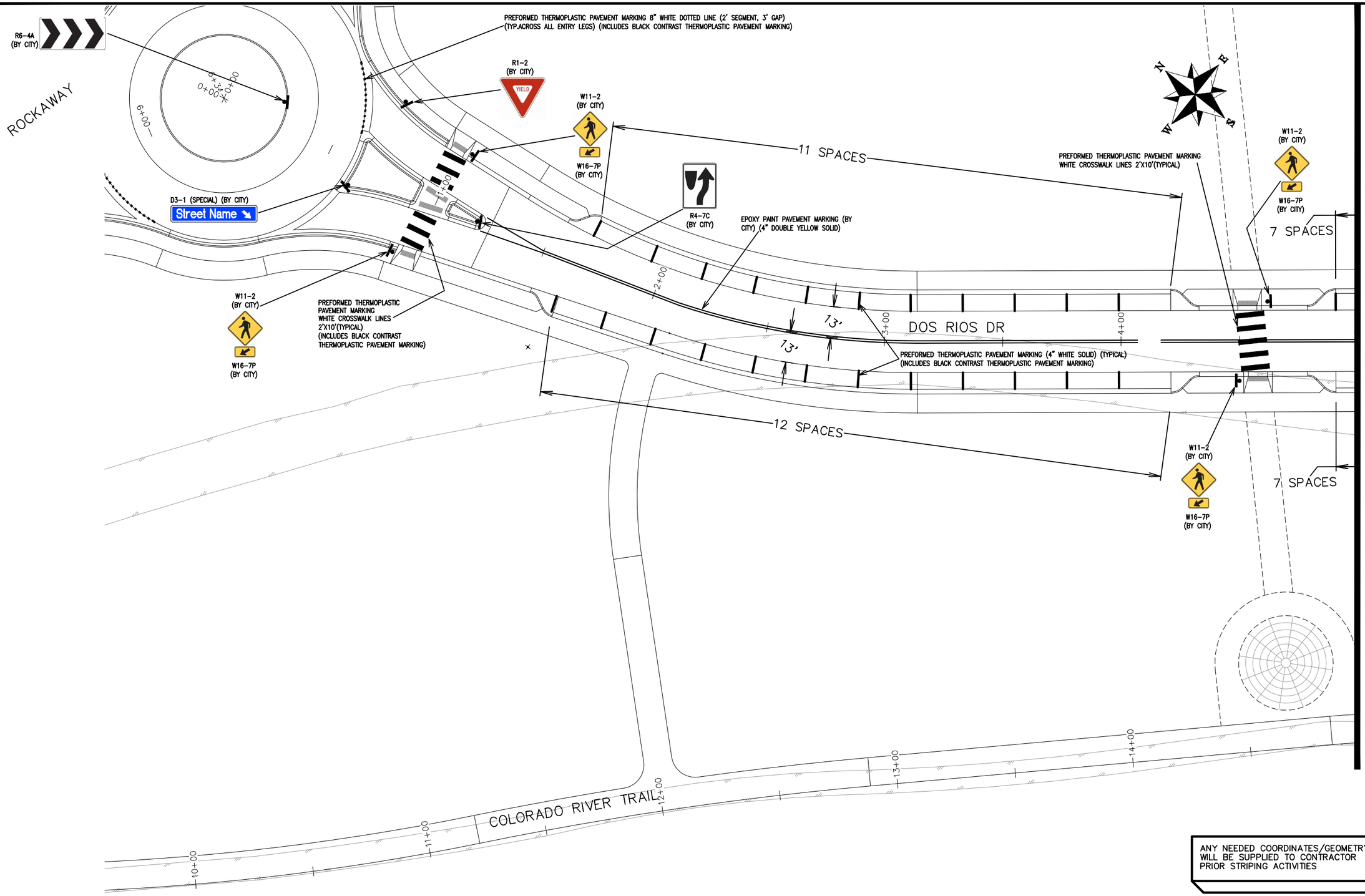

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-5
May 20, 2020

253

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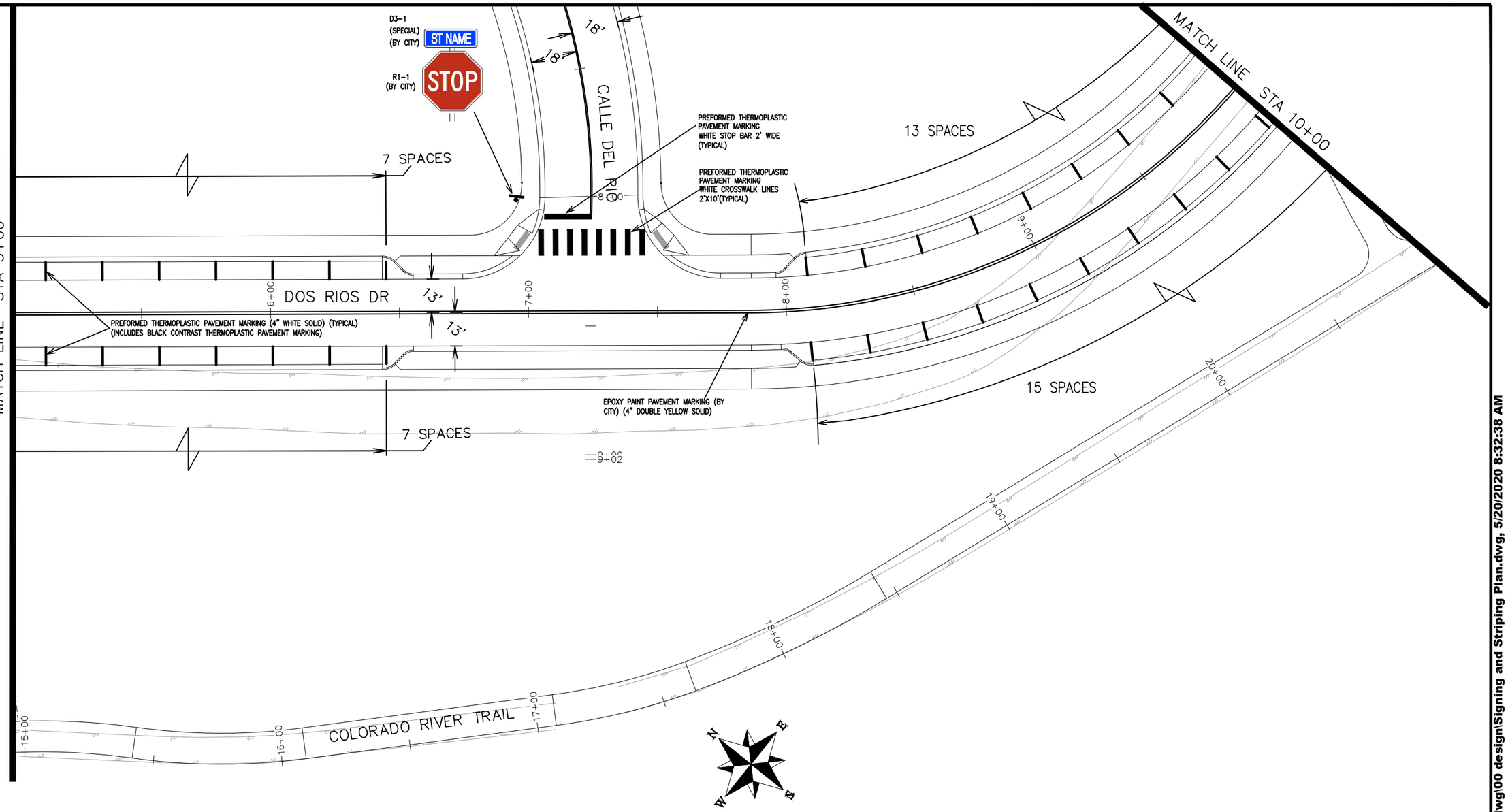

ANY NEEDED COORDINATES/GEOMETRY
WILL BE SUPPLIED TO CONTRACTOR
PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-6
May 20, 2020

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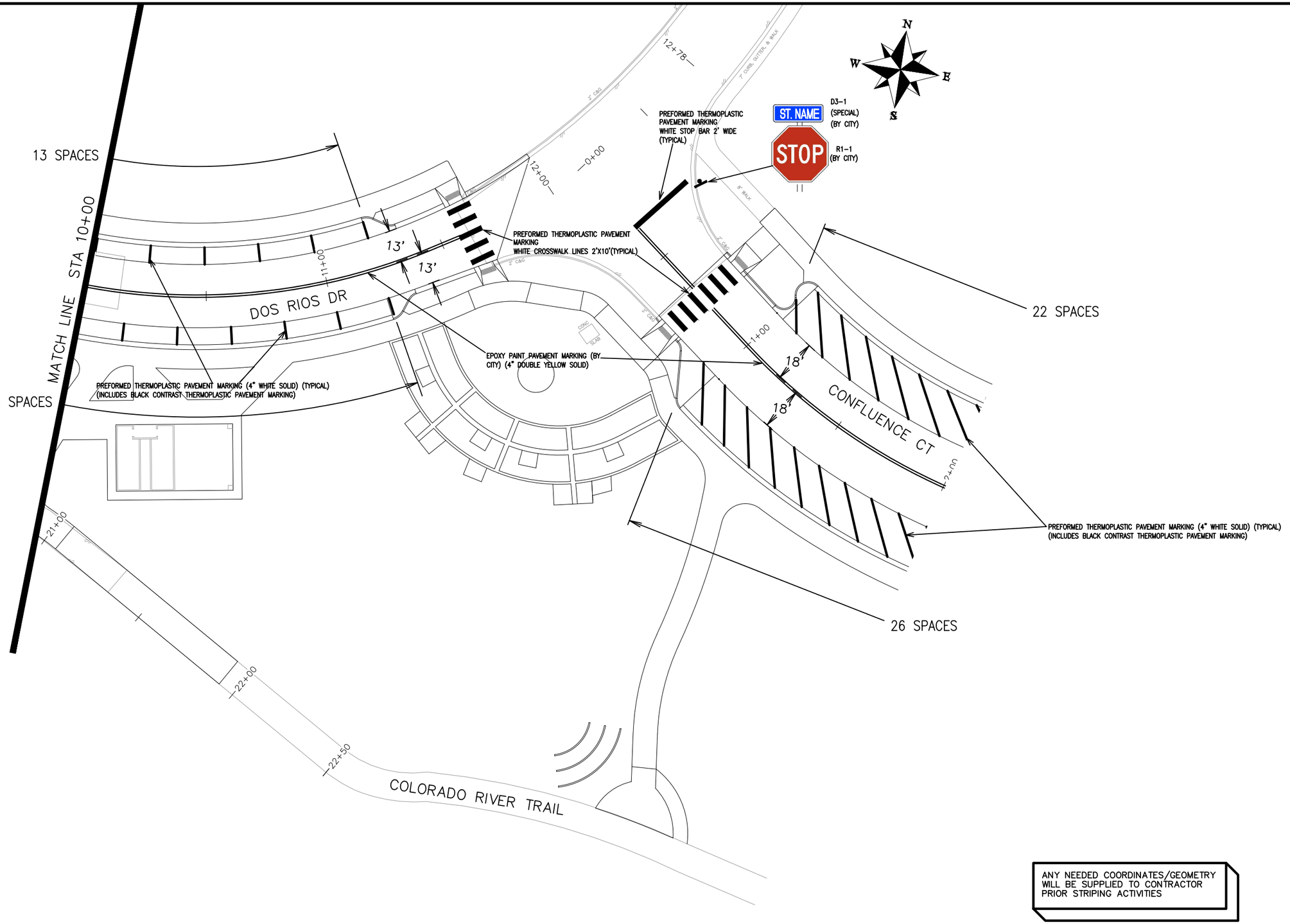

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI–7
May 20, 2020

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MATCH LINE STA 5+00

14 SPACES

10 SPACES

LAWRENCE AVE

PREFORMED THERMOPLASTIC PAVEMENT MARKING 8" WHITE DOTTED LINE (2' SEGMENT, 3' GAP) (TYP.ACROSS ALL ENTRY LEGS) (INCLUDES BLACK CONTRAST THERMOPLASTIC PAVEMENT MARKING)

R1-2 (BY CITY)

YIELD

W11-2 (BY CITY)

W16-7P (BY CITY)

R6-4A (BY CITY)

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE CROSSWALK LINES 2'X10'(TYPICAL) (INCLUDES BLACK CONTRAST THERMOPLASTIC PAVEMENT MARKING)

0+00

1+00

2+00

3+00

4+00

13'

13'

EPOXY PAINT PAVEMENT MARKING (BY CITY) (4" DOUBLE YELLOW SOLID)

D3-1 (SPECIAL) (BY CITY)

Street Name

PREFORMED THERMOPLASTIC PAVEMENT MARKING (4" WHITE SOLID) (TYPICAL) (INCLUDES BLACK CONTRAST THERMOPLASTIC PAVEMENT MARKING)

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE CROSSWALK LINES 2'X10'(TYPICAL)

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE STOP BAR 2' WIDE (TYPICAL)

D3-1 (SPECIAL) (BY CITY)

ST NAME

R1-1 (BY CITY)

STOP

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE CROSSWALK LINES 2'X10'(TYPICAL) (INCLUDES BLACK CONTRAST THERMOPLASTIC PAVEMENT MARKING)

R4-7C (BY CITY)

W11-2 (BY CITY)

W16-7P (BY CITY)

DOS RIOS DR

CALLE DEL RIO

1+00

2+00

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-8
May 20, 2020

256

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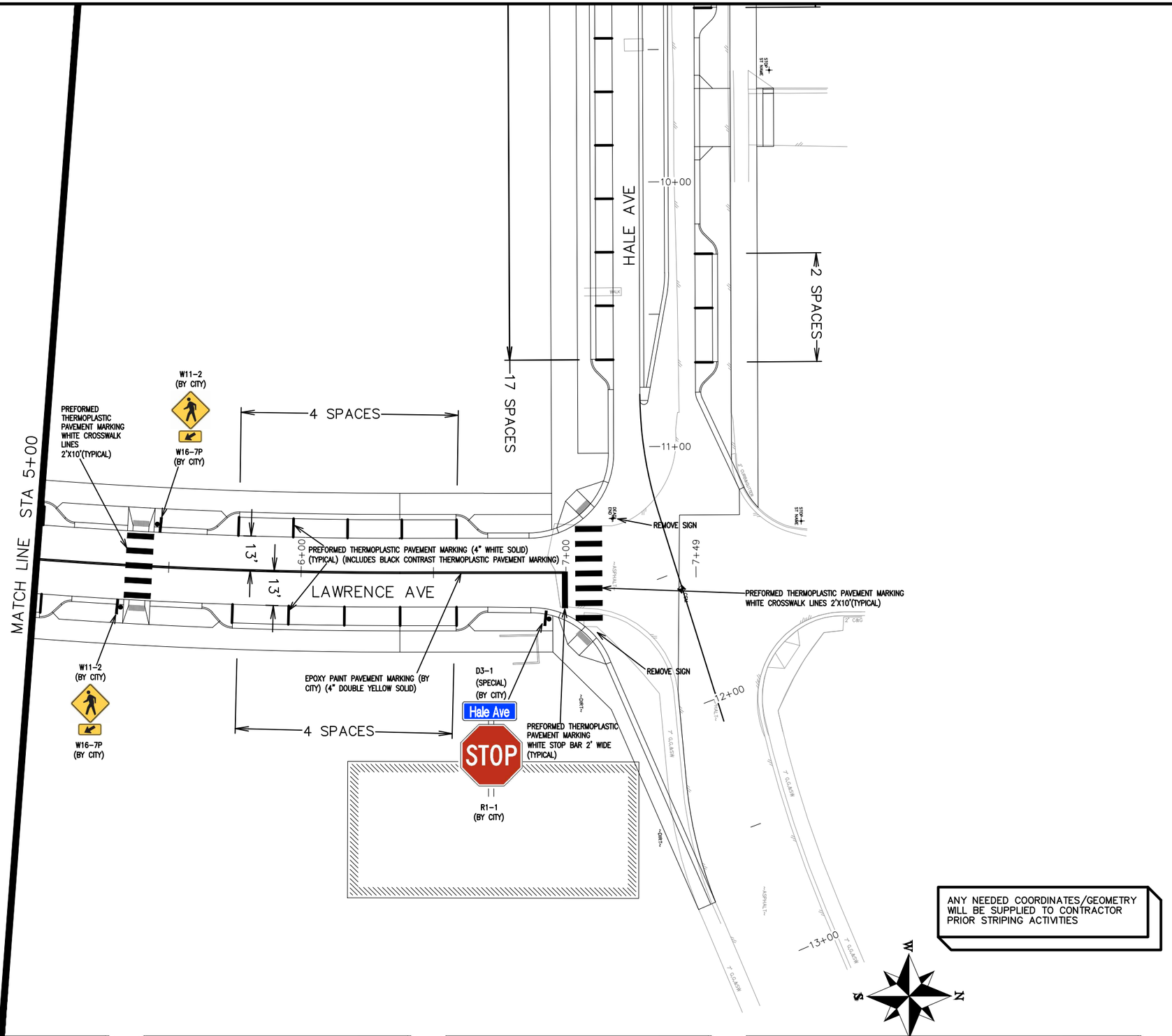

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REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-9
May 20, 2020

257

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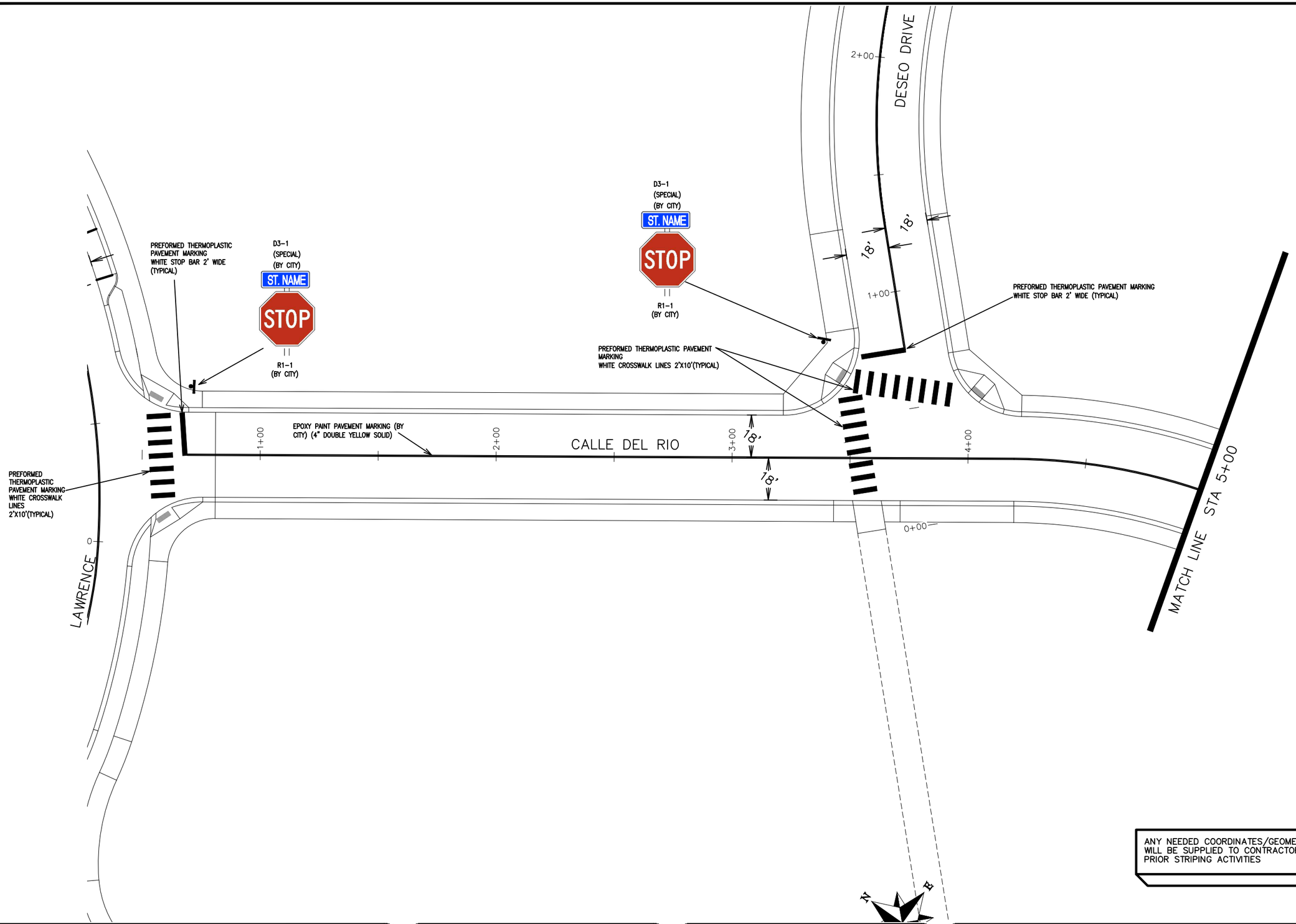

DESCRIPTION	DATE
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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-10
May 20, 2020

258

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CALLE DEL RIO

6+00

7+00

8+00

9+00

18'

18'

MATCH LINE STA 5+00

EPOXY PAINT PAVEMENT MARKING (BY CITY) (4" DOUBLE YELLOW SOLID)

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE STOP BAR 2' WIDE (TYPICAL)

D3-1
(SPECIAL)
(BY CITY)

ST. NAME

STOP

R1-1
(BY CITY)

PREFORMED THERMOPLASTIC PAVEMENT MARKING (4" WHITE SOLID) (TYPICAL)

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE CROSSWALK LINES 2'X10'(TYPICAL)

7 SPACES

DOS RIOS DR

13'

7+00

6+00

9+02

EPOXY PAINT PAVEMENT MARKING (BY CITY) (4" DOUBLE YELLOW SOLID)

7 SPACES

20+00

19+00

18+00

17+00

COLORADO RIVER TRAIL

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-11
May 20, 2020

259

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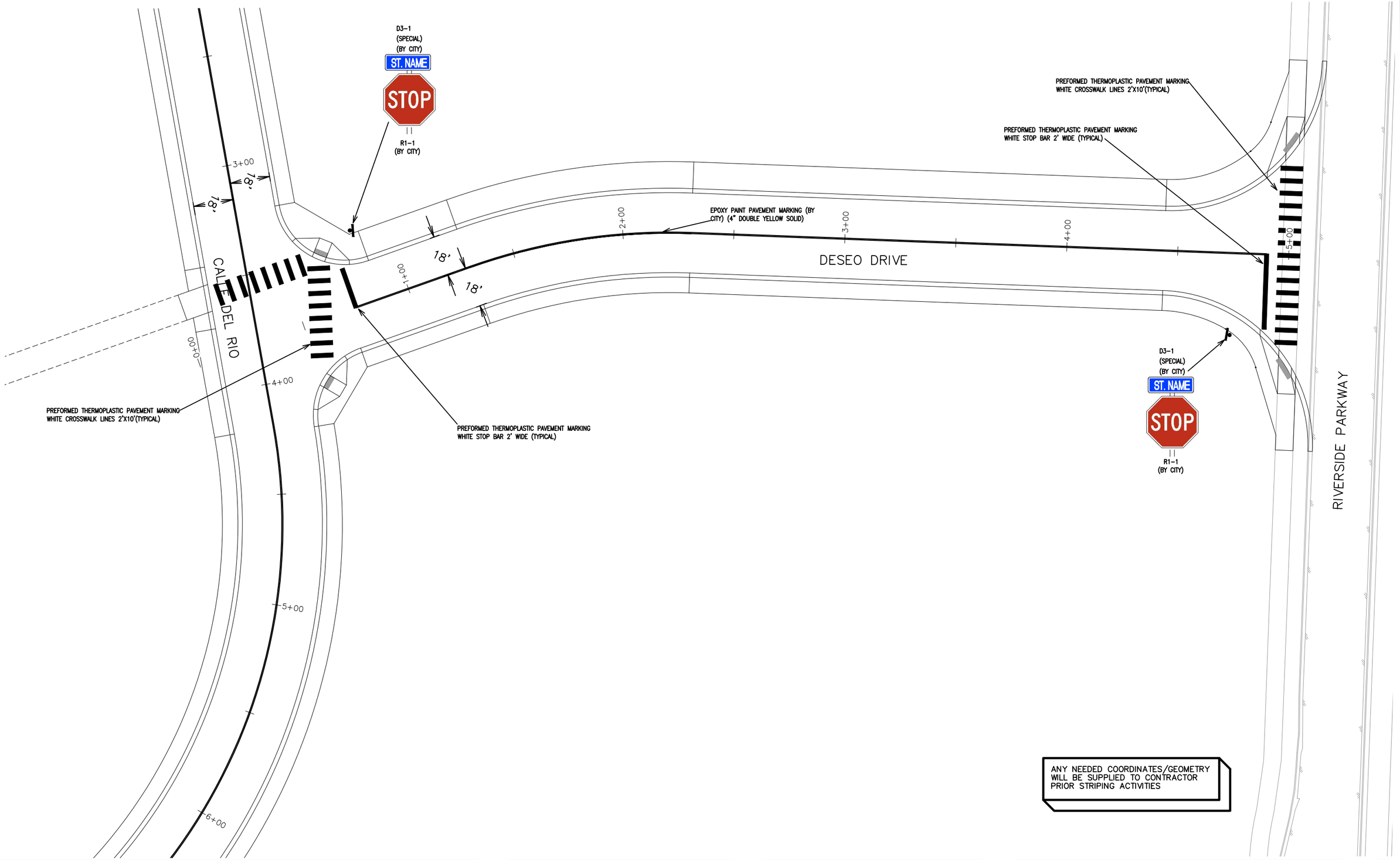

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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA 1in NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-12
May 20, 2020

260

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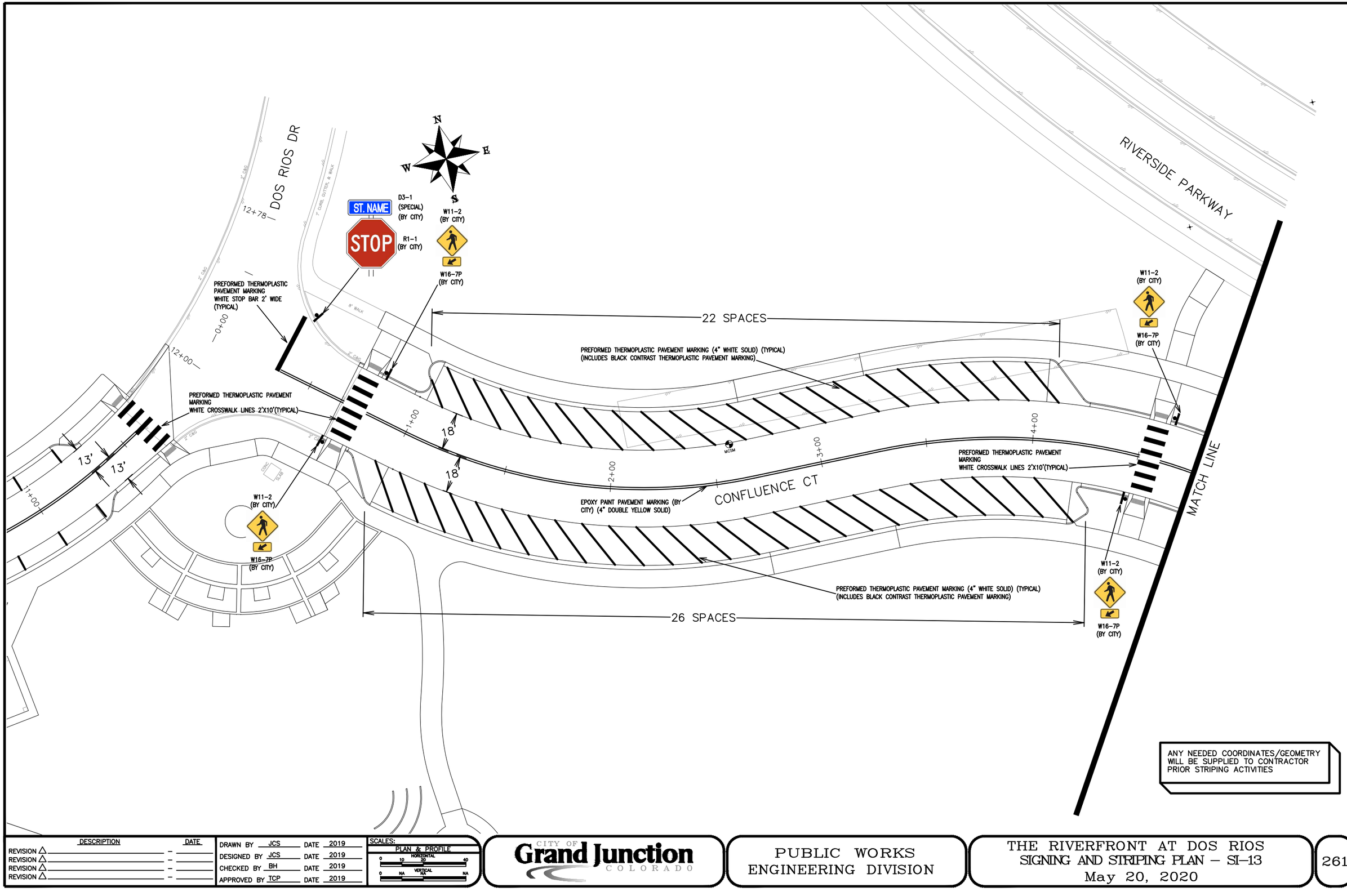

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-13
May 20, 2020

261

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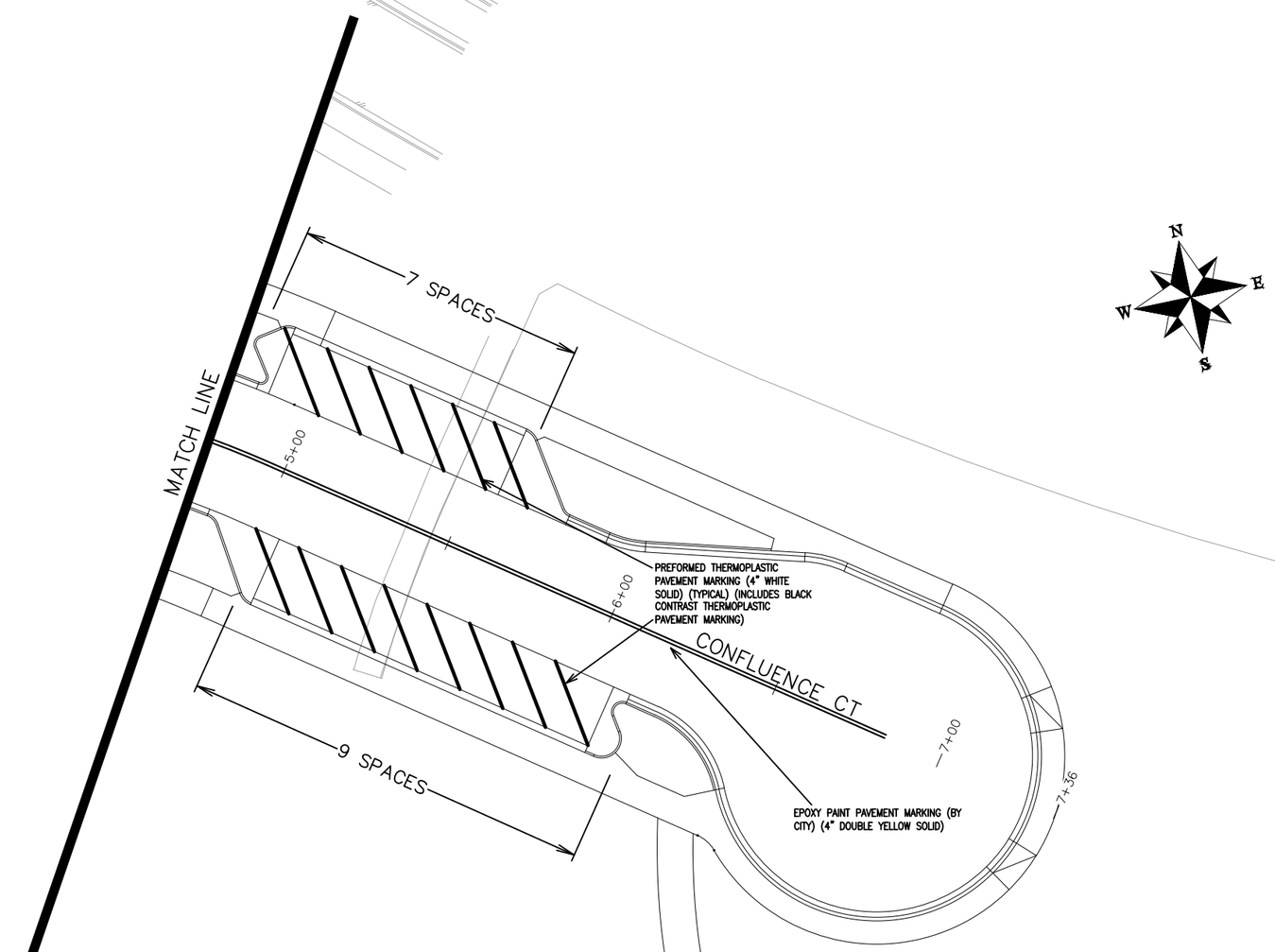

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI–14
May 20, 2020

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EROSION CONTROL MEASURES

Contractor to update the SWMP according to specific construction phasing and stormwater management practices for current construction activity when warranted.

Site Description

1. The site has a total disturbance area of 40± acres with the majority of disturbance being caused by the development of The Riverfront at Dos Rios Business Park.
2. Stormwater leaves the central portion and majority of the site through a 48" RCP installed as a part of improvements as the outlet works for a permanent water quality basin where it drains directly to the Colorado River. Stormwater leaves the east portion of the site through a 36" RCP that discharges into the existing water quality basin that in turn drains to the Colorado River via an existing outlet works system. Stormwater leaves the improvements to be made to Hale Ave through an existing storm drain system at the west end of Hale Ave. that drains directly to the Colorado River.
3. Proposed utilities for this project include: storm drain, sanitary sewer, potable water, gas, electricity, telephone, cable television, and broadband infrastucture.

EROSION CONTROL MEASURES

Performance Standards

The general requirements for erosion control work shall be as follows:

1. Any grading shall be conducted in such a manner so as to effectively reduce accelerated soil erosion and resulting sedimentation.
2. All grading shall be designed, constructed and completed in such a manner so that exposed area of any disturbed land shall be limited to the shortest time period.
3. Sediment caused by accelerated soil erosion shall be removed from runoff water before leaving the site.
4. The contractor shall try to minimize the amount of disturbance necessary for the construction project by preserving established vegetation to act as a BMP.

During Construction (Temporary Measures)

1. Anchored Straw Bales (ASB): The use of hay bales is proposed as a culvert outlet trap at the 48" RCP outlet from the new permanent water quality basin and at the 36" RCP outlet that discharges to the existing water quality basin on the east end of the site to stop any sediment produced from stormwater runoff from continueing to the Colorado River.
2. Erosion Logs: The use of erosion logs is proposed at the toe of cut and fill slopes and other areas where sediment from upstream flows may spill to existing drainage ways. Other locations are shown on the plan. Installation shall be in accordance with the detail as shown on the plans.
3. Inlet Protection: The use of inlet protection is proposed at all inlets to trap sediment before entering the storm drain system.

After Construction (Permanent Measures)

1. Rip-Rap: The use of rip-rap per construction drawings is proposed for around the outlet of several pipes as noted and shown.

1. Reseeding: the majority of the site will be seeded with grass or other plantings as shown in the landscape plans. All disturbed areas will be seeded if otherwise not proposed to be paved.

Maintenance

1. The contractor or his designated representative shall make routine checks on all erosion control measures to determine if repairs or sediment removal is necessary.
2. After each rainfall or moderate snow melt, erosion control measures are to be checked. If repairs are needed, they shall be completed immediately.
3. Silt and sediment shall be removed when they reach a height of one-half of the barrier (erosion log or anchored straw bale).
4. When temporary measures are to be removed, any silt and sediment deposits shall be removed and spread evenly in fill areas.

General Notes

1. The SWMP establishes the minimum acceptable requirements for stormwater pollution prevention on site. The Contractor may supplement these requirements as appropriate for specific construction activites. Any changes to the practices shown on this plan must be reviewed by Project Inspector/Engineer prior to implementation.
2. At all times during construction, erosion and sediment control shall be maintained by the contractor or his designated representative.
3. Erosion control systems shall be installed as grading progresses.
4. The Contractor shall provide and maintain a portable concrete washout facilty.
5. Details shown are schematic only. Adjust as necessary to fit field conditions.
6. Erosion bales shall be placed to avoid runoff flowing between, around or under bales. Bales shall be anchored with 2" x 2" x 4' wooden stakes or #4 reinforcing bars, two per bale (see details for further instructions).
7. Negative impacts to downstream areas (or receiving waters) caused by the slope grading to be monitored and corrected by the contractor.
8. Construction traffic entrances shall be cleaned on a continual basis during slope grading.
9. A copy of the SWMP and construction plans shall be maintained on site at all times.

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE NTS

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM WATER MANAGEMENT PLAN – SHT 1
May 20, 2020

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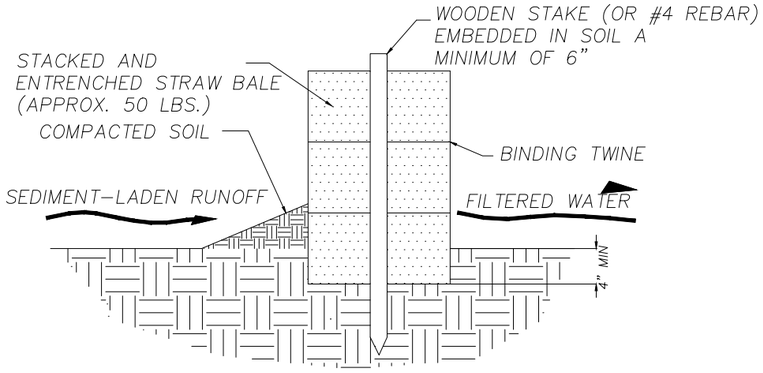
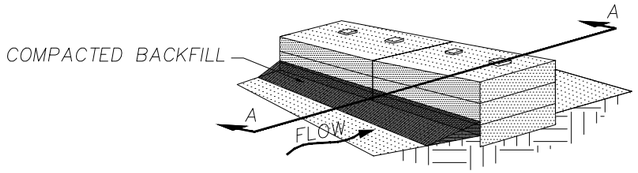
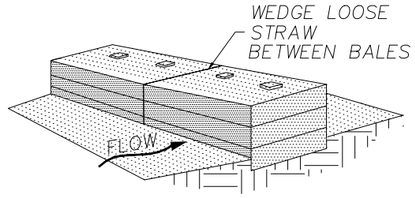


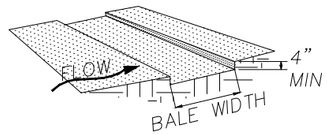
SECTION A–A



STEP 3. PLACE COMPACTED BACKFILL AGAINST THE UPSTREAM FACE.

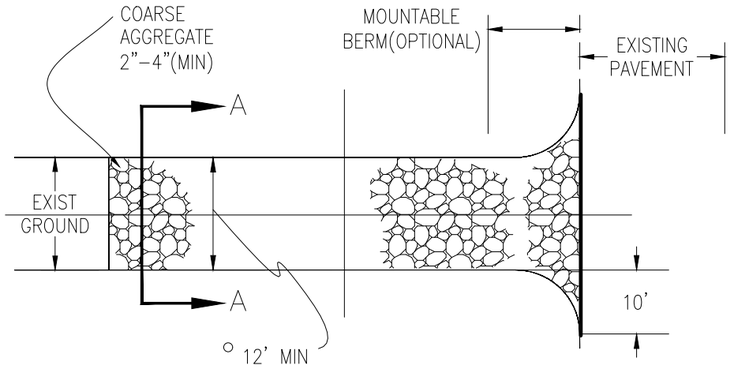


STEP 2. PLACE BALE IN TRENCH, STAKE IN PLACE



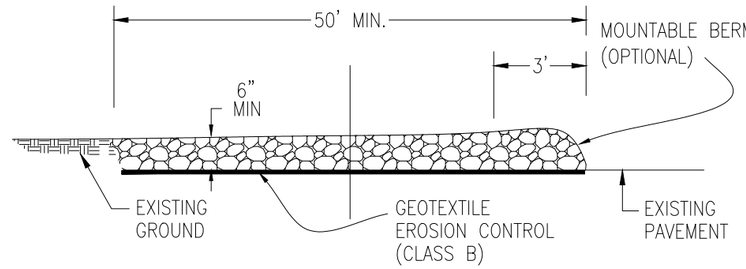
STEP 1. EXCAVATE TRENCH FOR BALES

BALE INSTALLATION PROCEDURE

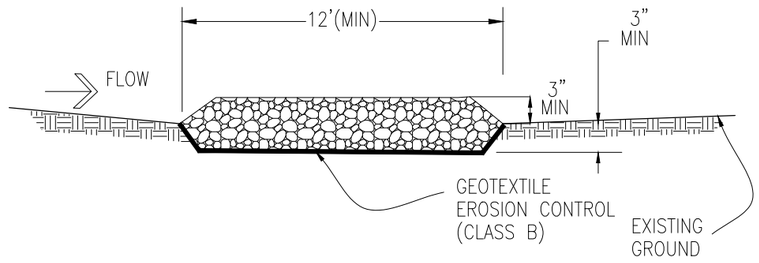


PLAN VIEW

○ MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION.

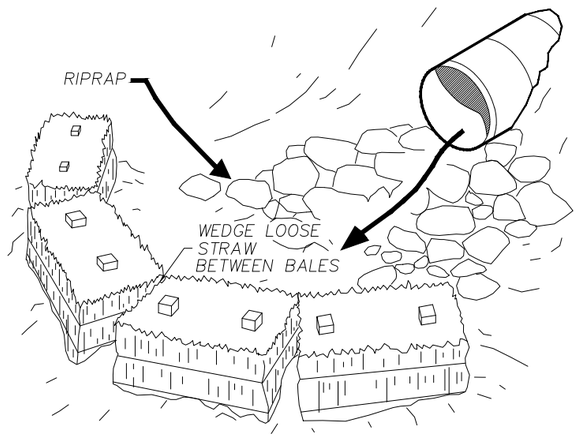


SIDE ELEVATION



SECTION A–A

STABILIZED CONSTRUCTION ENTRANCE



CULVERT OUTLET TRAP
N.T.S.
ANCHORED STRAW BALE (A.S.B.)

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE NTS

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM WATER MANAGEMENT PLAN – SHT 2
May 20, 2020

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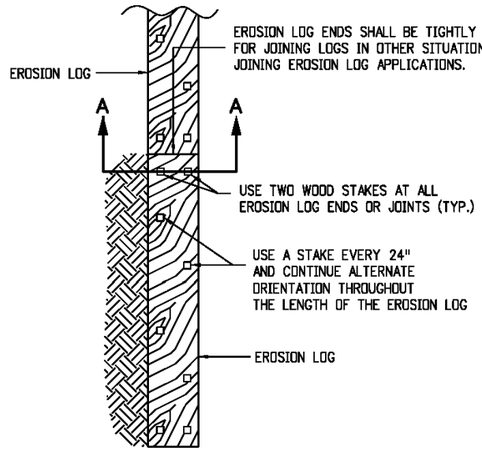
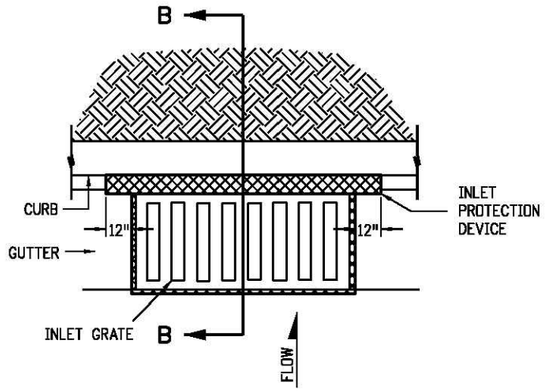
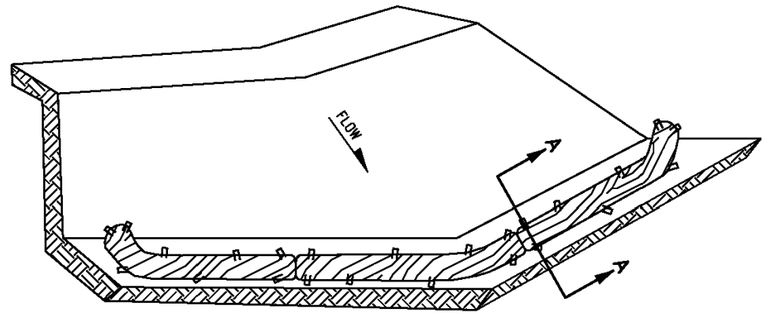


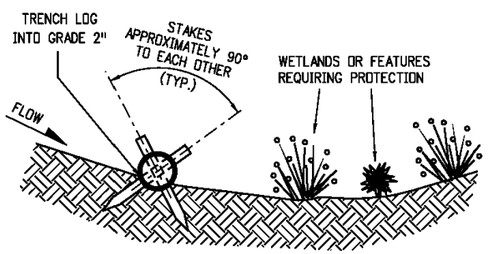
PLAN VIEW



PLAN VIEW

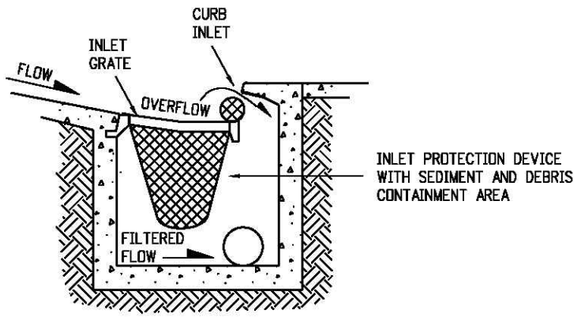


ISOMETRIC VIEW



SECTION A-A

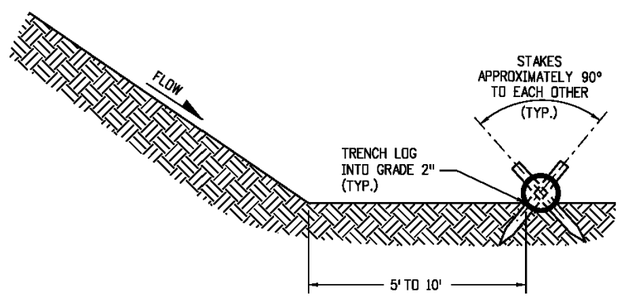
TYPICAL STAKE INSTALLATION



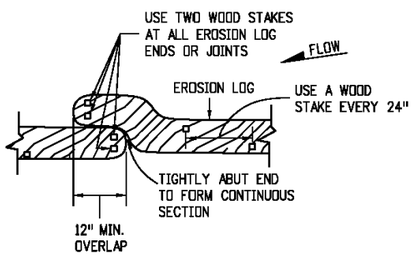
SECTION B-B

OPTION A

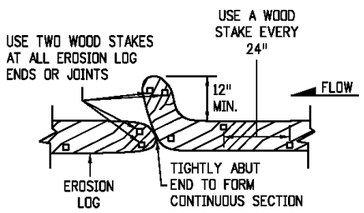
STORM DRAIN INLET PROTECTION (TYPE II)



SECTION A-A

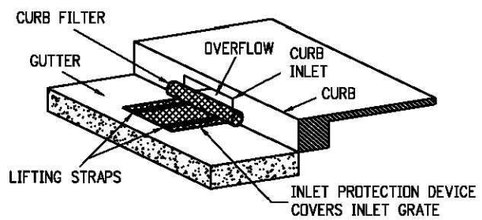


OVERLAP JOINING DETAIL



J-HOOK JOINING DETAIL

JOINING EROSION LOG APPLICATIONS



ISOMETRIC VIEW

OPTION B

STORM DRAIN INLET PROTECTION (TYPE II)

NOTES:

1. EROSION LOGS USED AT TOE OF SLOPE SHALL BE PLACED 5 TO 10 FEET BEYOND TOE OF SLOPE TO PROVIDE STORAGE CAPACITY.
2. EROSION LOGS SHALL BE PLACED ON THE CONTOUR WITH ENDS FLARED UP SLOPE.
3. SEE SHEET 2 OF 11 FOR JOINING LOGS DETAIL.

EROSION LOGS PAY ITEMS	
NUMBER	DESCRIPTION
208-00012	TYPE 1 (9")
208-00002	TYPE 1 (12")
208-00013	TYPE 1 (20")
208-00007	TYPE 2 (8")
208-00008	TYPE 2 (12")
208-00009	TYPE 2 (18")

EROSION LOG TOE OF SLOPE PROTECTION

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
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APPROVED BY TCP DATE 2019

SCALE NTS

CITY OF Grand Junction COLORADO

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ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM WATER MANAGEMENT PLAN – SHT 3
May 20, 2020

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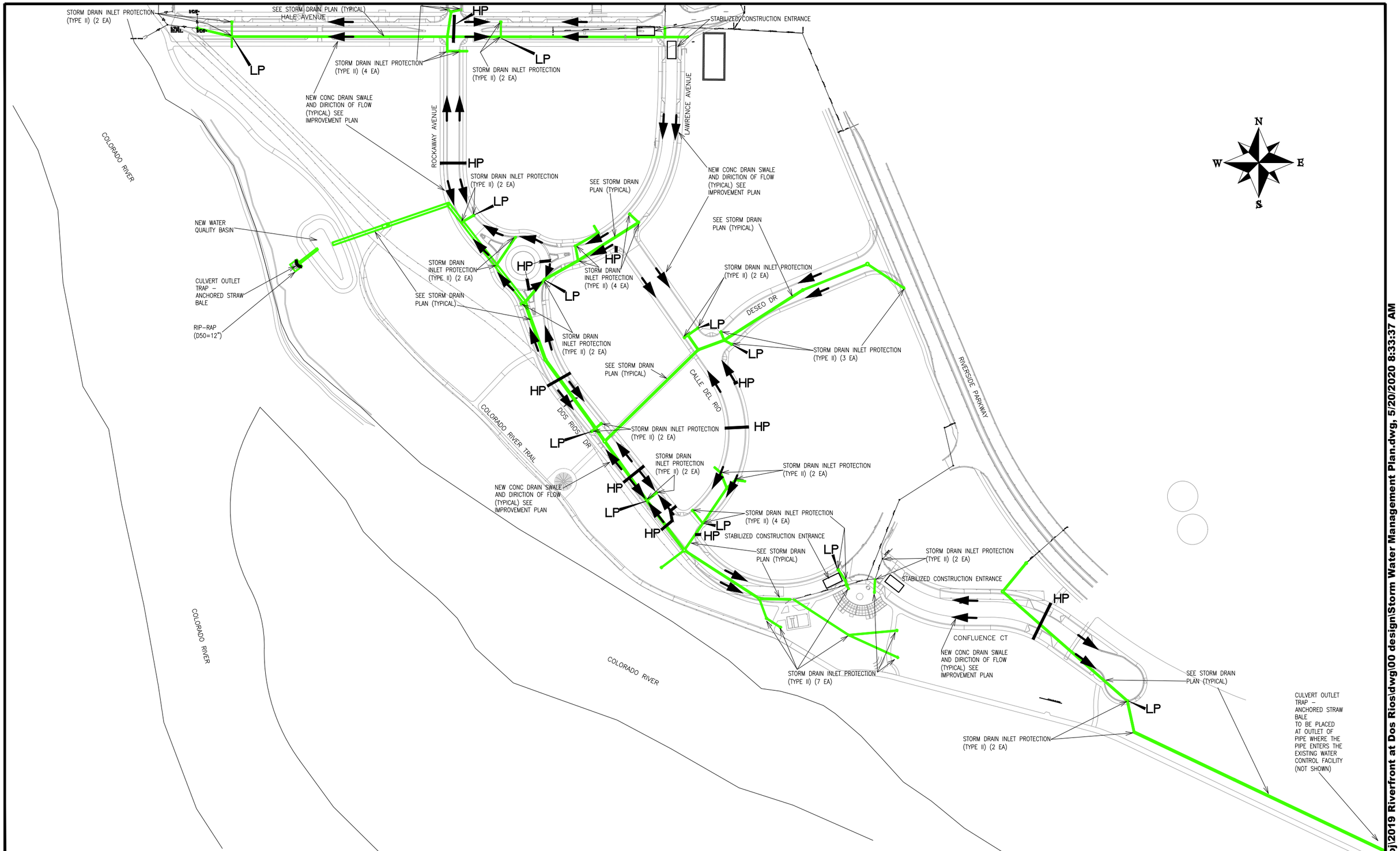

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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

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THE RIVERFRONT AT DOS RIOS
STORM WATER MANAGEMENT PLAN – SHT 4
May 20, 2020

266

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SUMMARY OF EARTHWORK QUANTITIES

INDEX Book	INDEX Page	INDEX Sheet		PROJECT TOTAL CU. YD.	PROJECT TOTAL *As Const.*
			203-00010 UNCLASSIFIED EXCAVATION (CIP)	**CU. YD.**	*As Const.*
			ROADWAY (QUANTITY CALCULATED FROM CIVIL3D TIN VOL. COMPARE)		
			Riverside Parkway Left Turn into Dos Rios	250	
			ADDITION OF CONCRETE AND PAVING PRISM	292	
			REMOVAL OF PAVEMENT REMOVAL PAY ITEMS	-105	
			SUBTOTAL:	437	
			TOTAL FOR PAY QUANTITIES	**437**	
			EMBANKMENT MATERIAL (CIP) (FOR INFORMATION ONLY)	**CU. YD.**	
			QUANTITY CALCULATED FROM CIVIL3D		
			Riverside Parkway Left Turn into Dos Rios	0	
			TOTAL	**0**	

INDEX Book	INDEX Page	INDEX Sheet	**ROADWAY QUANTITIES BALANCE (FOR INFORMATION ONLY)**	PROJECT TOTAL CU. YD.	PROJECT TOTAL *As Const.*
				CU. YD.	*As Const.*
			Total Unclassified Excavation	437	
			Total Embankment (net)	0	
			EMBANKMENT TIMES FACTOR 1.2	0	
			Haul Material (Material to be Hauled Away by Contractor)	437	

DESCRIPTION	DATE
REVISION 1	–
REVISION 2	–
REVISION 3	–
REVISION 4	–

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DESIGNED BY JCS DATE 2020
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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
SUMMARY OF EARTHWORK – 1
May 20, 2020

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CP /
N 33354.9880
E 89540.04
EL 4570.37

CP /PK 16/
N 33422.4800
E 89353.57
EL 4577.79

CP /PK /
N 33454.4410
E 89360.56
EL 4572.76

RIVERSIDE P RKW Y

CP /PK /
N 32987.1080
E 89615.49
EL 4570.40

CP /BOLT/
N 33201.8810
E 89426.11
EL 4599.68

DOS RIOS DR

N

DESCRIPTION	DATE
REVISION 1	–
REVISION 2	–
REVISION 3	–
REVISION 4	–

DRAWN BY JCS DATE 2020
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CITY OF Grand Junction COLORADO

PUBLIC WORKS
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RIVERSIDE PARKWAY LEFT TURN LANE
SURVEY CONTROL – 1
May 20, 2020

268

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2' C & G

N 33350.42
E 89469.86

1.5' C & G

N 33349.84
E 89468.48

2' EDGER

IRR

N 33344.40
E 89455.61

2' EDGER

IRR

1.5' C & G

N 33304.85
E 89470.64

204+50

205+00

205+50

REMOVE POLE BASE (REMOVE TOP OF BASE AND BOLTS TO 18" BELOW GRADE. FILL HOLE WITH CLASS 6 AGGREGATE BASE COURSE.)

REMOVE CONCRETE MEDIAN EDGING (2' WIDE)

REMOVE CONCRETE CURB AND GUTTER (1'-6" WIDE)

LIGHTING SHALL BE RESET BY OTHERS

REMOVE PULLBOX

TREE 6"

TREE 9"

REMOVE TREE

REMOVE TREE

REMOVE CONCRETE CURB AND GUTTER (1'-6" WIDE)

REMOVE CONCRETE MEDIAN EDGING (2' WIDE)

RIVERSIDE PKWY

IRRIGATION FOR PARKWAY PLANTINGS WILL BE RESET BY CITY OF GRAND JUNCTION PARKS CREWS. COORDINATE WORK WITH RANDY COLEMAN, (970) 254-3821

DOS RIOS DR

2' C & G

8' WALK

CP

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMON MCSCHOOLER
(970)244-2695

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

RANDY COLEMAN (970)254-3821

NOTE:
THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

M I E

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
EXISTING CONDITION PLAN – 1
May 20, 2020

269

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UTILITY OWNERS:

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XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMON MCSCHOOLER
(970)244-2695

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
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CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

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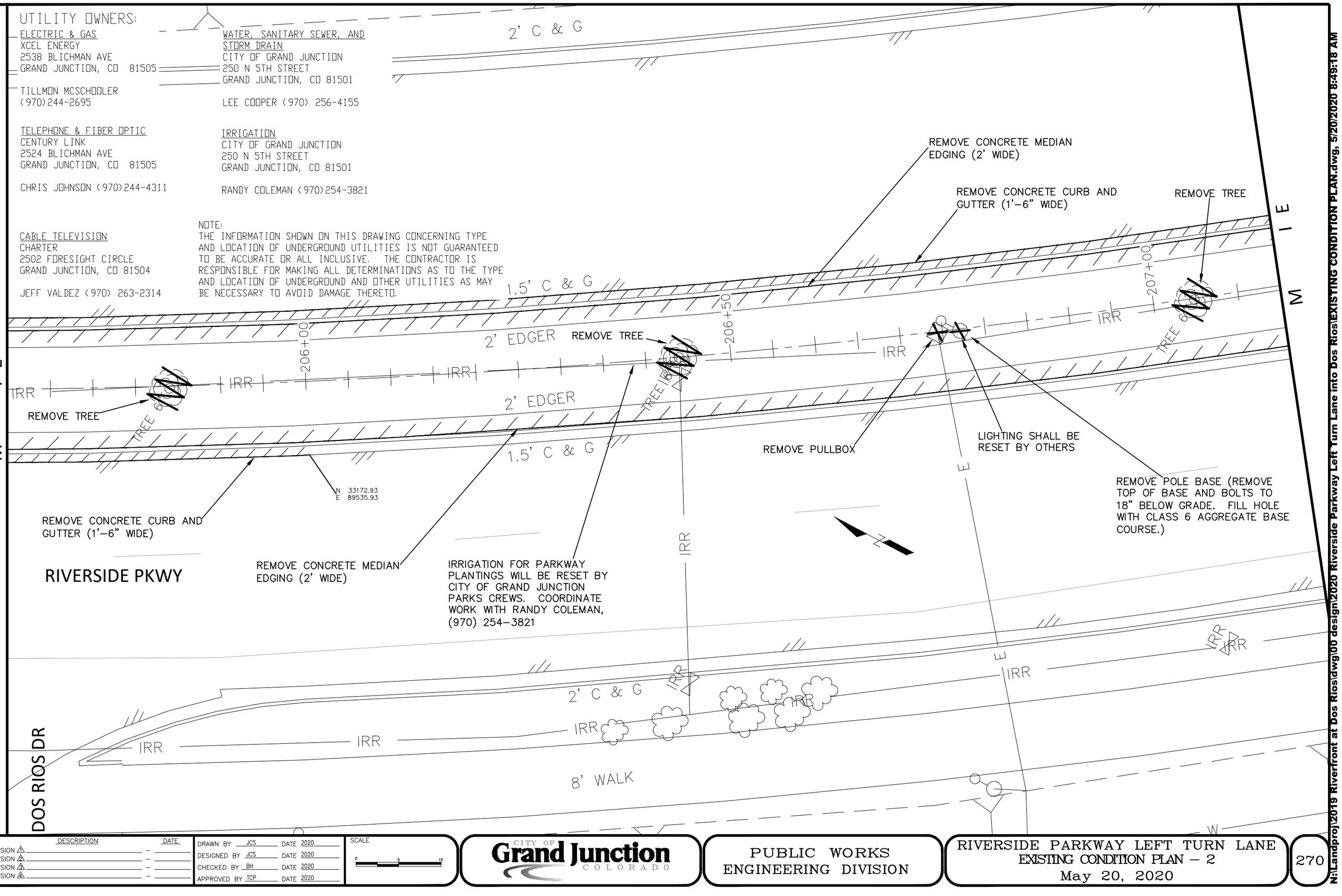

DESCRIPTION	DATE
REVISION 1	
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REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
EXISTING CONDITION PLAN – 2
May 20, 2020

270

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMON MCSCHOOLER
(970)244-2695

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

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IRRIGATION
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

RANDY COLEMAN (970)254-3821

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RIVERSIDE PKWY

MAIN ST

PLACE STORM DRAIN INLET PROTECTION, CDOT M&S STD. TYPE II, AT EXISTING INLET DURING CONSTRUCTION.

REMOVE CONCRETE MEDIAN EDGING (2' WIDE)

REMOVE CONCRETE CURB AND GUTTER (1'-6" WIDE)

2' C & G

1.5' C & G

2' EDGER

12"ROP

12" RCP STM

8" PVC W

207+50

208+00

208+50

N 32970.24
E 89713.85

N 32969.17
E 89712.80

N 32959.31
E 89703.03

REMOVE TREE

TREE 6"

TREE 5"

IRR

REMOVE POLE BASE (REMOVE TOP OF BASE AND BOLTS TO 18" BELOW GRADE. FILL HOLE WITH CLASS 6 AGGREGATE BASE COURSE.)

LIGHTING SHALL BE RESET BY OTHERS

IRRIGATION FOR PARKWAY PLANTINGS WILL BE RESET BY CITY OF GRAND JUNCTION PARKS CREWS. COORDINATE WORK WITH RANDY COLEMAN, (970) 254-3821

PLACE STORM DRAIN INLET PROTECTION, CDOT M&S STD. TYPE II, AT EXISTING INLET DURING CONSTRUCTION.

REMOVE CONCRETE MEDIAN EDGING (2' WIDE)

JCT HV

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY	JCS	DATE	2020
DESIGNED BY	JCS	DATE	2020
CHECKED BY	BH	DATE	2020
APPROVED BY	TCP	DATE	2020

SCALE 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
EXISTING CONDITION PLAN – 3
May 20, 2020

271

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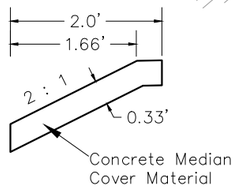


Concrete Median Edging

CONCRETE MEDIAN COVER MATERIAL (COLORED CONC.,DAVIS COLORS SUNSET ROSE) (4" THICK)

CONCRETE MEDIAN EDGING (SEE DETAIL) (COLORED CONC.,DAVIS COLORS SUNSET ROSE) (4" THICK) (2' WIDE)

CONCRETE CURB AND GUTTER (1'–6" WIDE) (SPILL GUTTER)

EDGE OF GUTTER ALIGNMENT (PROFILE REFERENCE)

HOT BITUMINOUS PAVEMENT PATCHING: HOT BITUMINOUS PAVEMENT (6" THICK) (GRADING SX, BINDER GRADE PG 64–22) (THREE 2" LIFTS) – OVER – 8" A.B.C. (Class 6)

2+50

3+00

3+50

204+50

205+00

205+50

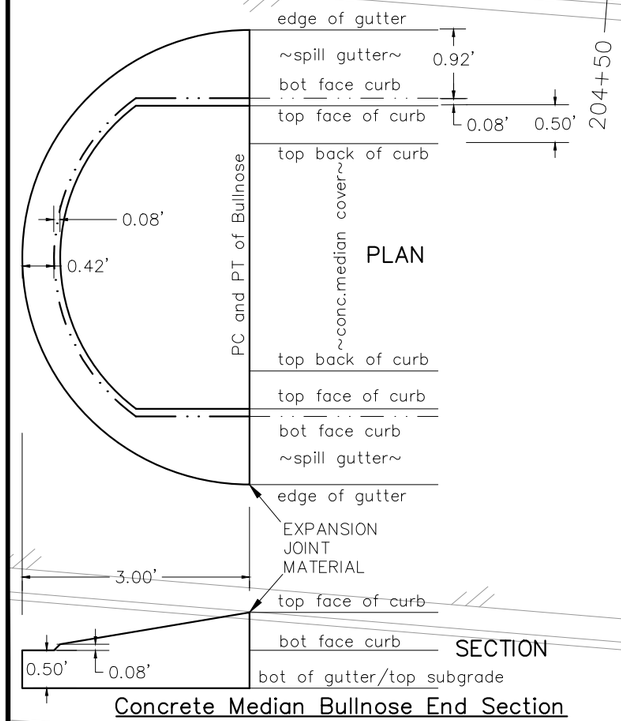
CENTERLINE OF PKWY ALIGNMENT (CROSS SECTION REFERENCE)

CONCRETE MEDIAN BULLNOSE SECTION (SEE DETAIL)

PROTECT EXISTING CURB AND GUTTER IN PLACE UP TO BULLNOSE SECTION

RIVERSIDE PKWY

DOS RIOS DR



Concrete Median Bullnose End Section

SEE STAKING PLANS FOR PAY ITEM LOCATION

DESCRIPTION	DATE
REVISION 1	–
REVISION 2	–
REVISION 3	–
REVISION 4	–

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
IMPROVEMENT PLAN – 1
May 20, 2020

272

M I E

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\2020 Riverside Parkway Left Turn Lane into Dos Rios\IMPROVEMENT PLAN.dwg, 5/20/2020 8:49:24 AM

SEE STAKING PLANS
FOR PAY ITEM LOCATION

HOT BITUMINOUS PAVEMENT PATCHING: HOT BITUMINOUS PAVEMENT (6" THICK) (GRADING SX, BINDER GRADE PG 64–22) (THREE 2" LIFTS)
– OVER –
8" A.B.C. (Class 6)

CONCRETE MEDIAN COVER MATERIAL (COLORED CONC.,DAVIS COLORS SUNSET ROSE) (4" THICK)

CONCRETE CURB AND GUTTER (1'–6" WIDE) (SPILL GUTTER)

EDGE OF GUTTER ALIGNMENT (PROFILE REFERENCE)

4+00

4+50

5+00

206+00

206+50

207+00

CENTERLINE OF PKWY ALIGNMENT (CROSS SECTION REFERENCE)

CONCRETE MEDIAN BULLNOSE SECTION (SEE DETAIL)

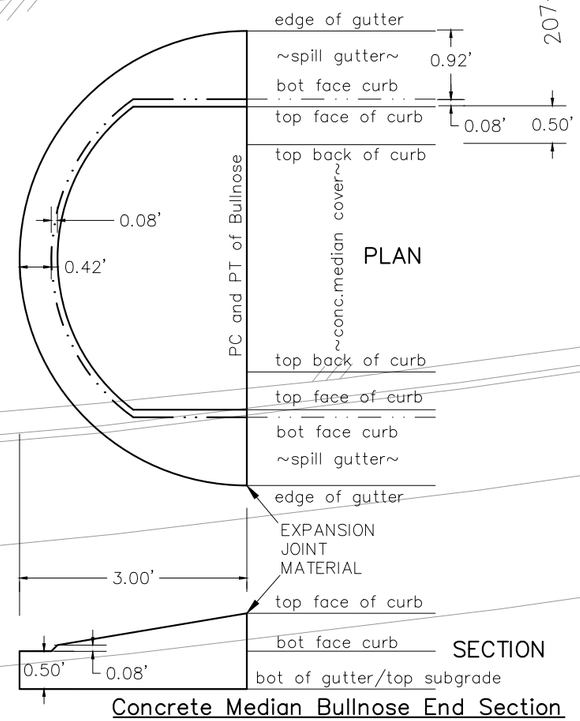
PROTECT EXISTING CURB AND GUTTER IN PLACE FROM BULLNOSE SECTION

RIVERSIDE PKWY

DOS RIOS DR

M I E

M I E



Concrete Median Bullnose End Section

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
IMPROVEMENT PLAN – 2
May 20, 2020

273

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RIVERSIDE PKWY

HOT BITUMINOUS PAVEMENT PATCHING: HOT BITUMINOUS PAVEMENT (6" THICK) (GRADING SX, BINDER GRADE PG 64–22) (THREE 2" LIFTS)
– OVER –
8" A.B.C. (Class 6)

CONCRETE CURB AND GUTTER (1'–6" WIDE) (SPILL GUTTER)

EDGE OF GUTTER ALIGNMENT (PROFILE REFERENCE)

CENTERLINE OF PKWY ALIGNMENT (CROSS SECTION REFERENCE)

205+50

206+00

207+50

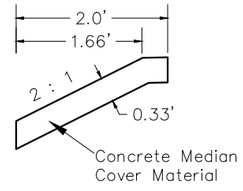
208+00

208+50

206+50

CONCRETE MEDIAN COVER MATERIAL (COLORED CONC.,DAVIS COLORS SUNSET ROSE) (4" THICK)

CONCRETE MEDIAN EDGING (SEE DETAIL) (COLORED CONC.,DAVIS COLORS SUNSET ROSE) (4" THICK) (2' WIDE)



Concrete Median Edging

PROTECT EXISTING CURB AND GUTTER IN PLACE FROM BULLNOSE SECTION

SEE STAKING PLANS FOR PAY ITEM LOCATION

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
IMPROVEMENT PLAN – 3
May 20, 2020

274

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4600
4595
4590
4585
4580
4575
4570
4565
4560
4555

VPI=2+00.00
EL=4572.16

VPI=6+00.00
VPI EL=4570.40
LP=6+06.28
LP EL=4570.44
AD=0.70%
K=71.01
VC=50.00

VPC=
5+75.00
EL=4570.51

VPT=
6+25.00
EL=4570.47

VPI=6+71.83
EL=4570.59

VPI=7+00.00
EL=4570.78

−0.44%

0.26%

0.66%

SEE STAKING PLANS
FOR STAKING DATA

1+50 2+00 2+50 3+00 3+50 4+00 4+50 5+00 5+50 6+00 6+50 7+00 7+50

DESCRIPTION	DATE
REVISION 1	–
REVISION 2	–
REVISION 3	–
REVISION 4	–

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE
SEE PROFILE FOR REFERENCE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
EDGE OF GUTTER PROFILE – 1
May 20, 2020

275

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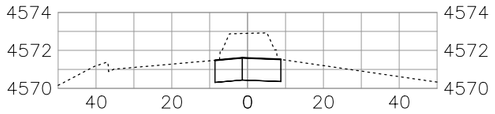

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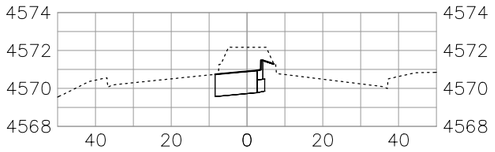

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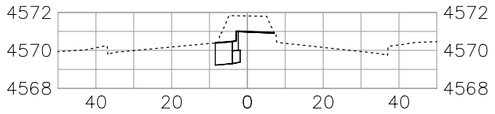

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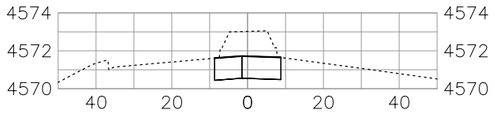

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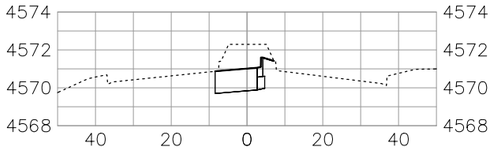

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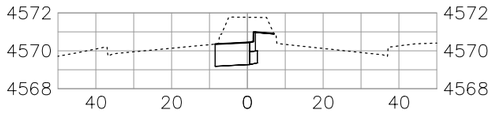

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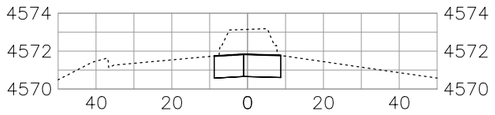

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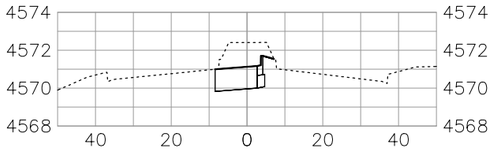

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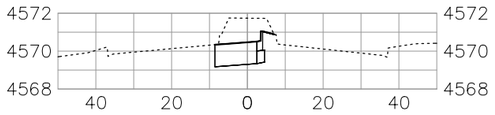

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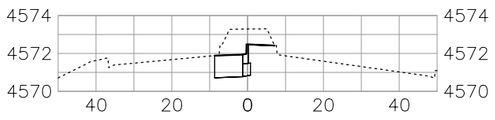

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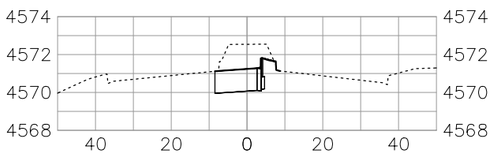

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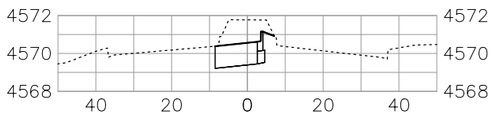
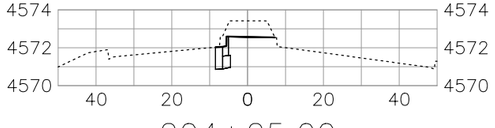


207+50.00

SEE STAKING PLANS
FOR STAKING DATA



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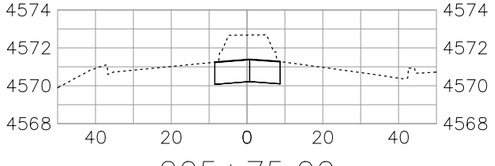

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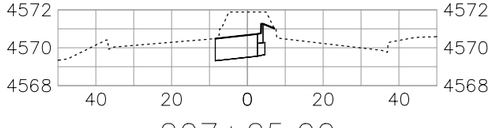

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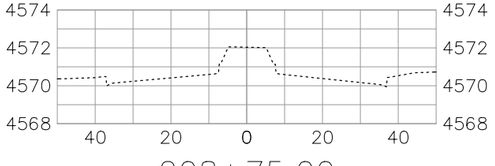

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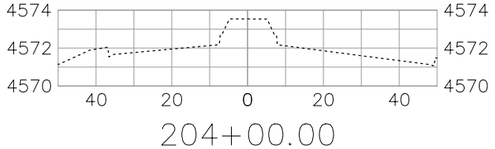

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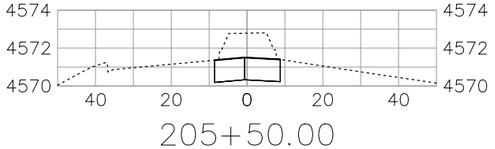

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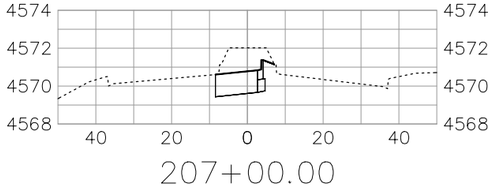

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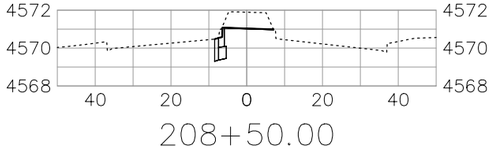

208+50.00

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE
SEE SECTIONS FOR REFERENCE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
PARKWAY CROSS SECTIONS – 1
May 20, 2020

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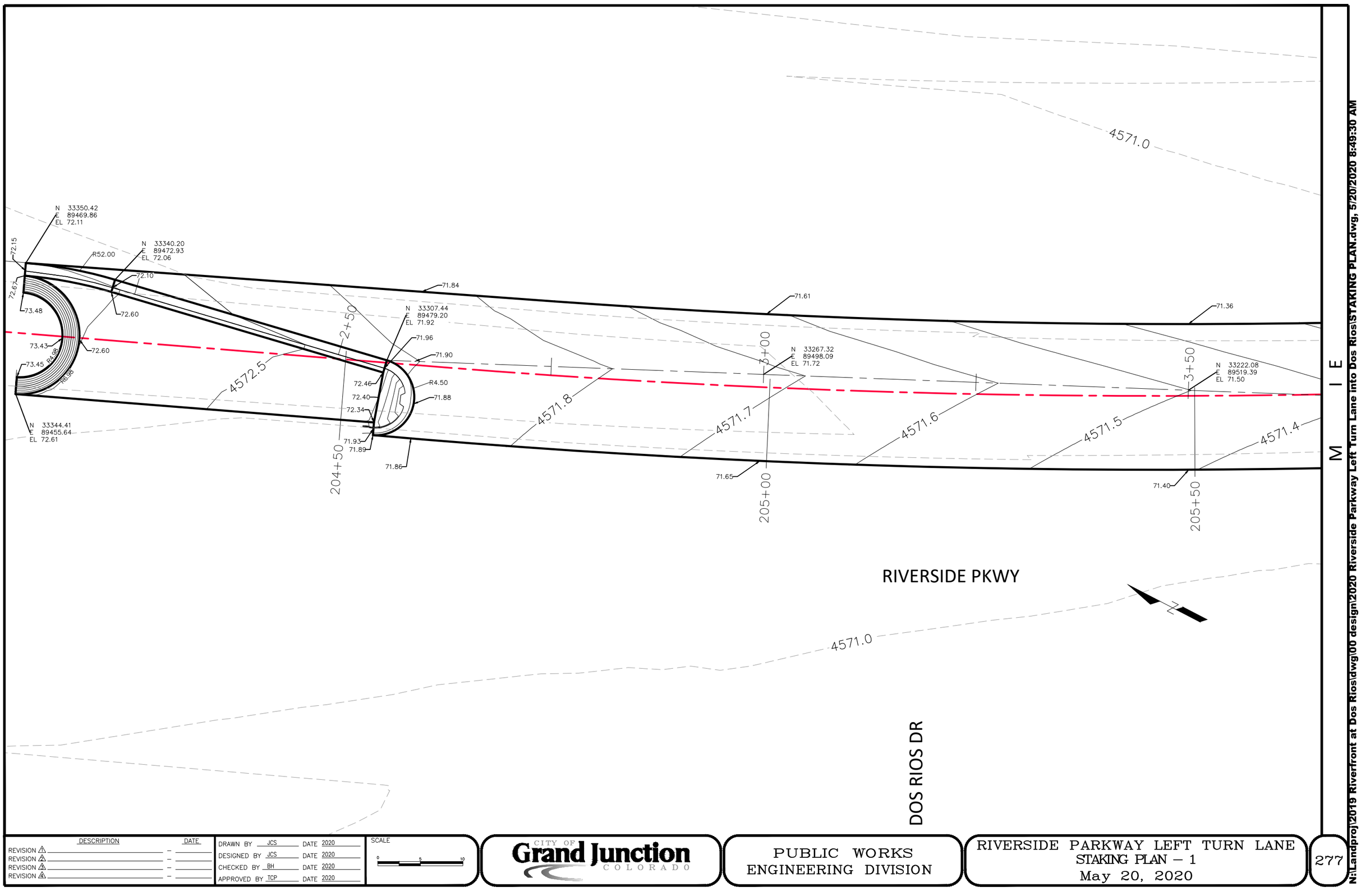

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
STAKING PLAN – 1
May 20, 2020

277

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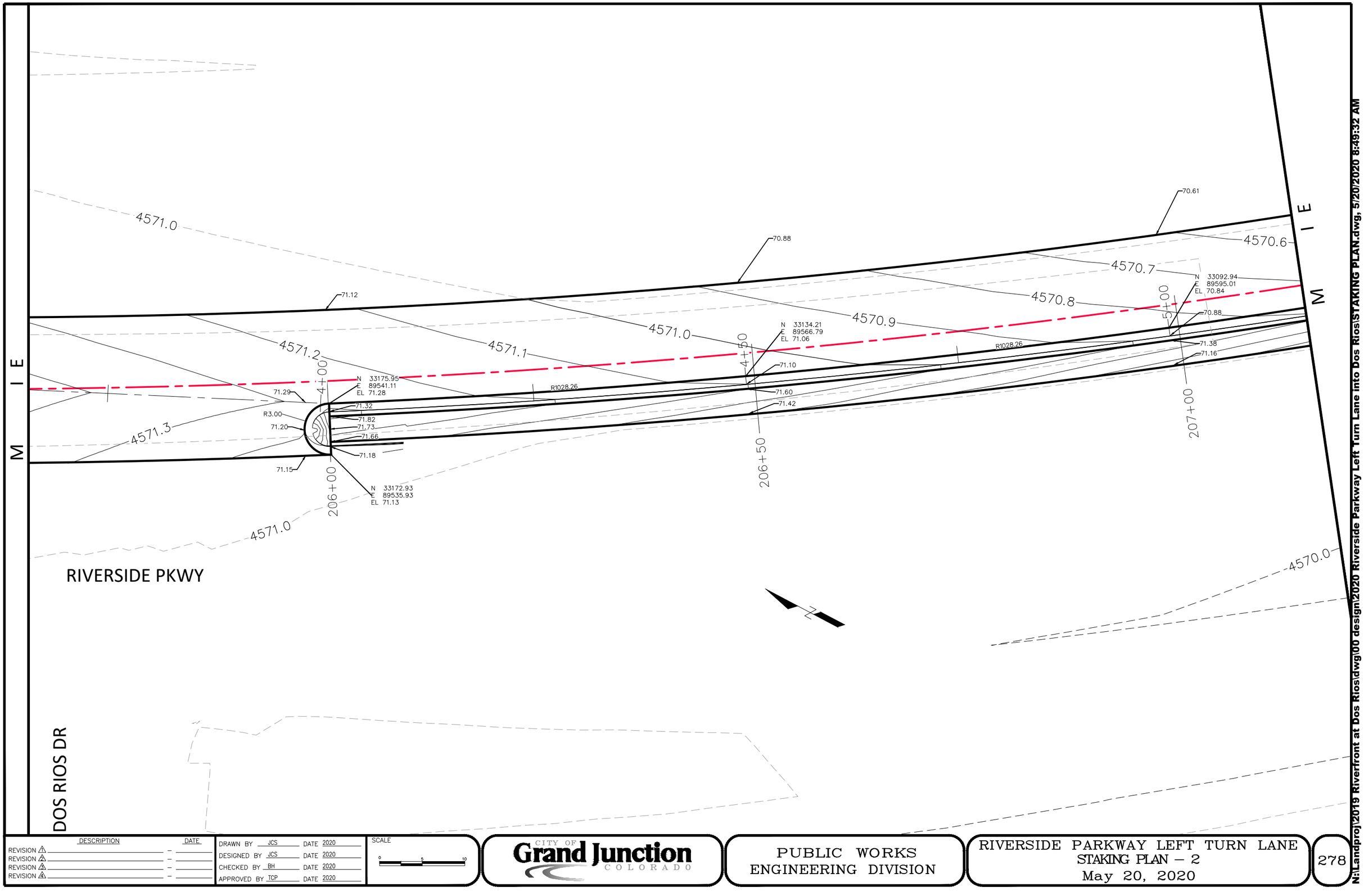

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
STAKING PLAN – 2
May 20, 2020

278

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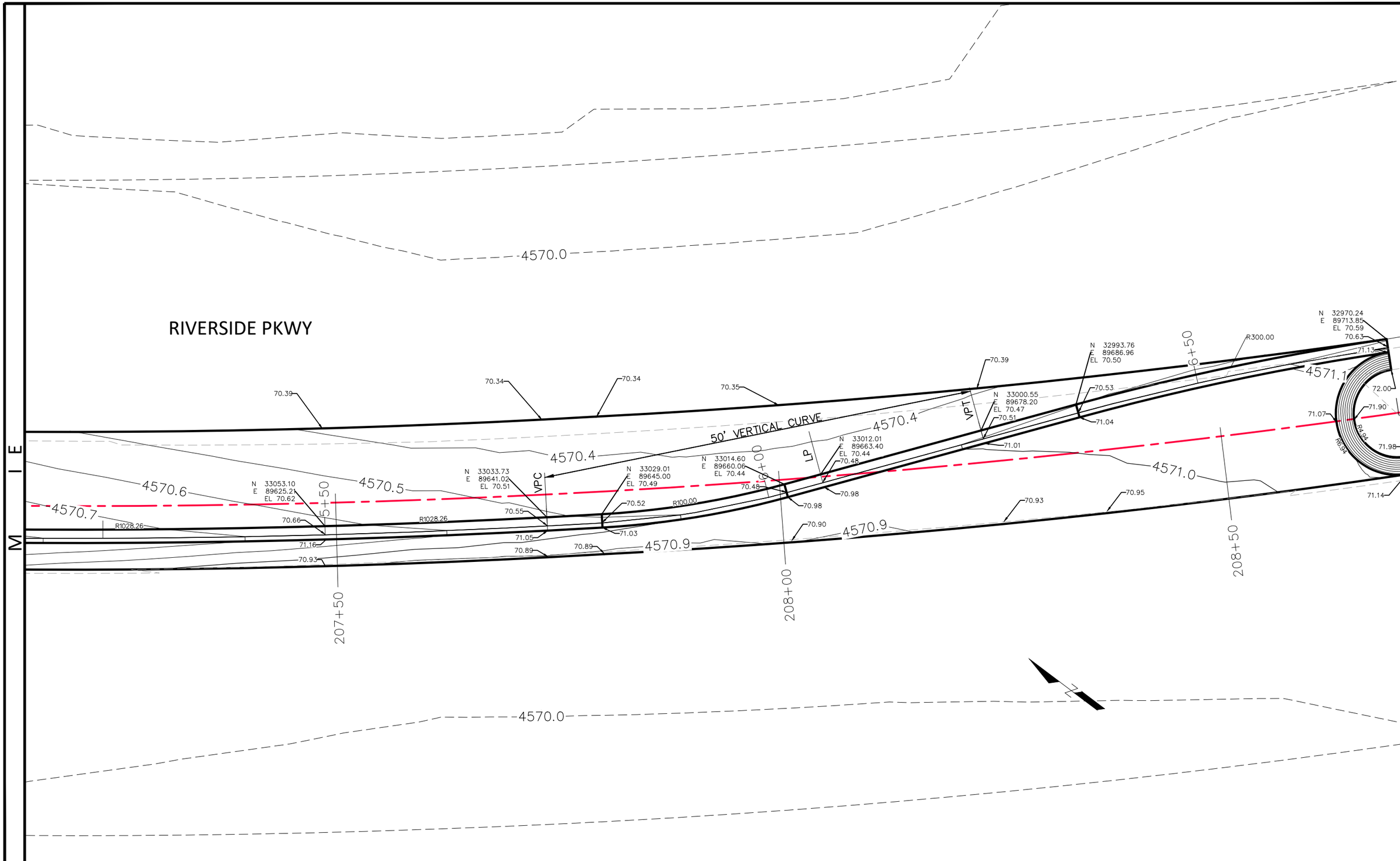

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY	JCS	DATE	2020
DESIGNED BY	JCS	DATE	2020
CHECKED BY	BH	DATE	2020
APPROVED BY	TCP	DATE	2020

SCALE 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
STAKING PLAN – 3
May 20, 2020

279

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\2020 Riverside Parkway Left Turn Lane into Dos Rios\STAKING PLAN.dwg, 5/20/2020 8:49:34 AM

EPOXY PAINT PAVEMENT MARKING
(BY CITY) (8" WHITE SOLID)

SAFE HIT FLEXIBLE
DELINEATOR
SH248GP3--WS 09
TO INCLUDE 4" PVC
SLEEVE. 2 EACH -
ONE AT EACH
BULLNOSE.

206+00
Northing=33181.49
Easting=89550.61

207+80
Northing=33036.12
Easting=89653.40

206+00

PREFORMED THERMOPLASTIC
PAVEMENT MARKING (LEFT
TURN SYMBOL)

206+50

207+00

207+50

PREFORMED THERMOPLASTIC
PAVEMENT MARKING (LEFT
TURN SYMBOL)

208+00

208+50

RIVERSIDE PKWY

DOS RIOS DR

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE 0 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
STRIPING PLAN - .
May 20, 2020

280

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SUMMARY OF EARTHWORK QUANTITIES

INDEX Book	INDEX Page	INDEX Sheet		PROJECT TOTAL CU. YD.	PROJECT TOTAL *As Const.*
			203-00010 UNCLASSIFIED EXCAVATION (CIP)		
			ON SITE (QUANTITY CALCULATED FROM CIVIL3D - TIN SUBTRACTION)		
			UNCLASSIFIED EXCAVATION	1370	
			ADDITION OF RIPRAP PRISM	2370	
			TOTAL FOR PAY QUANTITIES	**3740**	
			EMBANKMENT MATERIAL (CIP) (FOR INFORMATION ONLY)	**CU. YD.**	
			QUANTITY CALCULATED FROM CIVIL3D - TIN SUBTRACTION		
			UNCLASSIFIED EMBANKMENT	576	
			TOTAL	**576**	

INDEX Book	INDEX Page	INDEX Sheet	**EARTHWORK QUANTITIES BALANCE (FOR INFORMATION ONLY)**	**PROJECT TOTAL CU. YD.**	**PROJECT TOTAL *As Const.***
			Total Unclassified Excavation	3740	
			Total Embankment (net)	576	
			EMBANKMENT TIMES FACTOR 1.3	749	
			Excess Material leftover (Material to be spoiled on site by Contractor)	2991	

NOTES:

TOP 4 INCHES OF ALL EMBANKMENT SHALL BE FREE OF DEBRIS AND ROCKS OR CLODS GREATER THAN 3 INCHES IN DIAMETER, AND SHALL BE SUITABLE AS NATIVE TOPSOIL.

ALL IMPORTED EMBANKMENT MATERIAL SHALL MEET A MINIMUM OF R-VALUE = 40.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

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SCALE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
SUMMARY OF EARTHWORK – 1
May 20, 2020

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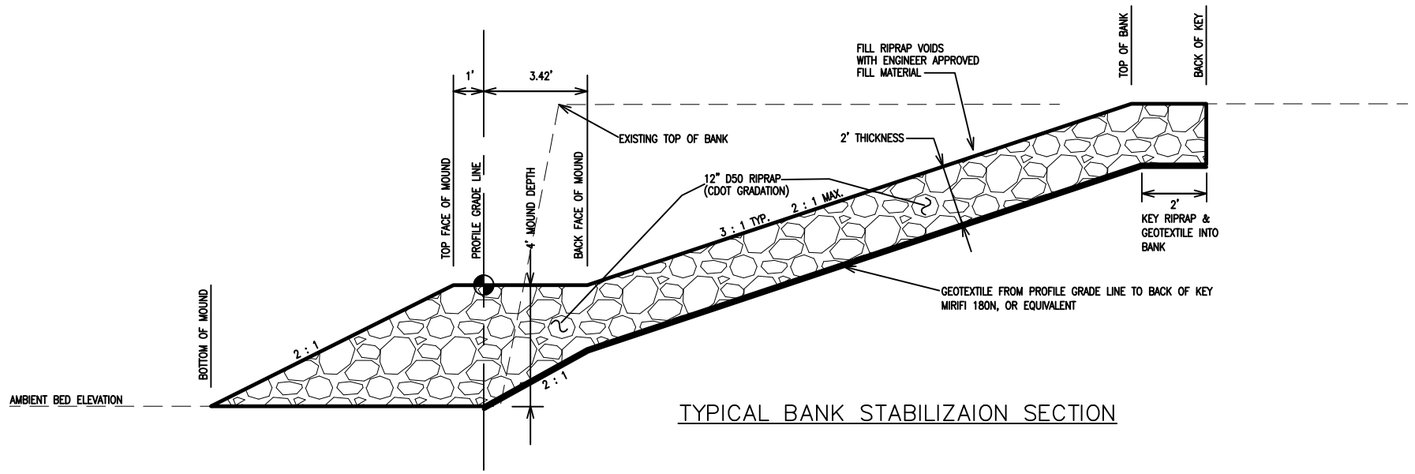
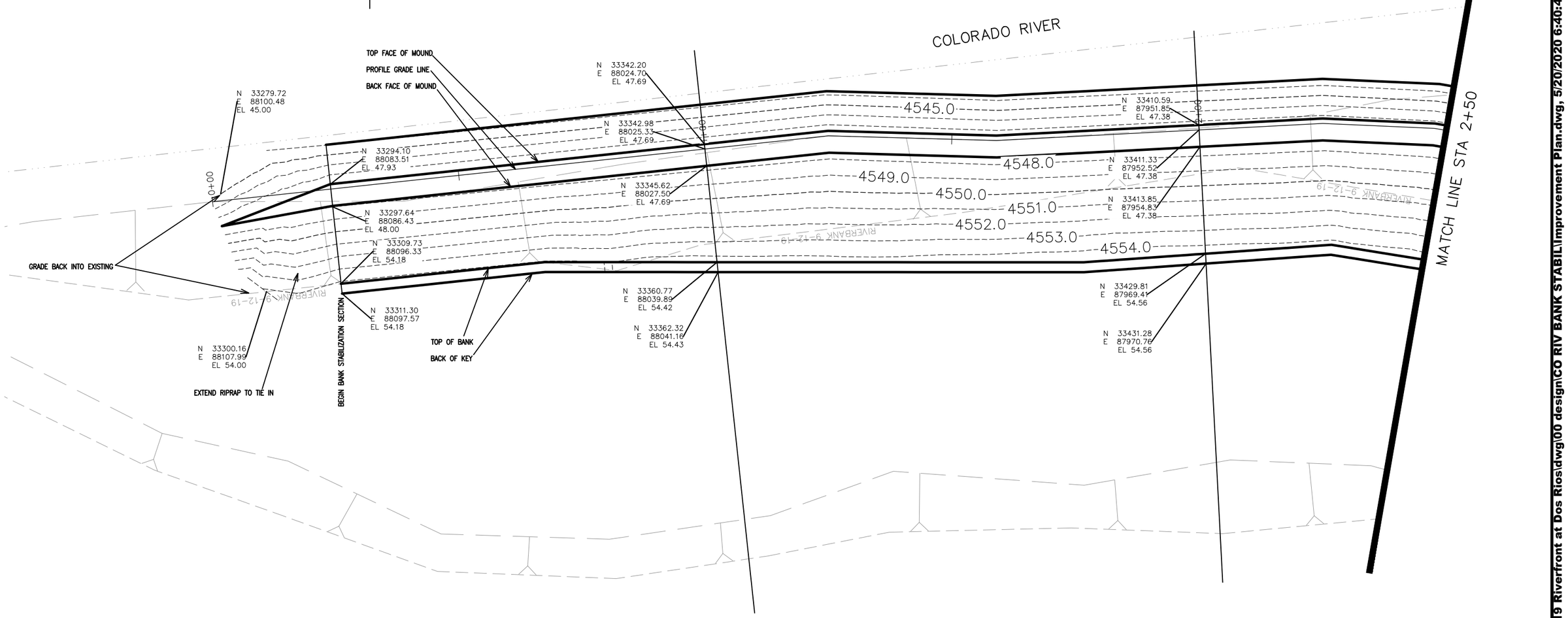


TYPICAL BANK STABILIZAION SECTION



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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA 1" NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
IMPROVEMENT PLAN – I–1
May 20, 2020

282

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\CO RIV BANK STABIL\Improvement Plan.dwg, 5/20/2020 6:40:46 AM

TOP FACE OF MOUND
PROFILE GRADE LINE
BACK FACE OF MOUND

COLORADO RIVER

MATCH LINE STA 2+50

MATCH LINE STA 5+50

N 33490.30
E 87892.77
EL 47.08

N 33490.67
E 87893.70
EL 47.08

N 33491.93
E 87896.87
EL 47.08

N 33499.67
E 87916.26
EL 53.90

N 33500.41
E 87918.12
EL 53.90

N 33587.64
E 87870.33
EL 47.00

N 33587.89
E 87871.29
EL 47.00

N 33588.78
E 87874.60
EL 47.00

N 33595.19
E 87898.45
EL 55.22

N 33595.72
E 87900.45
EL 55.22

N 33684.50
E 87845.78
EL 47.00

N 33684.79
E 87846.74
EL 47.00

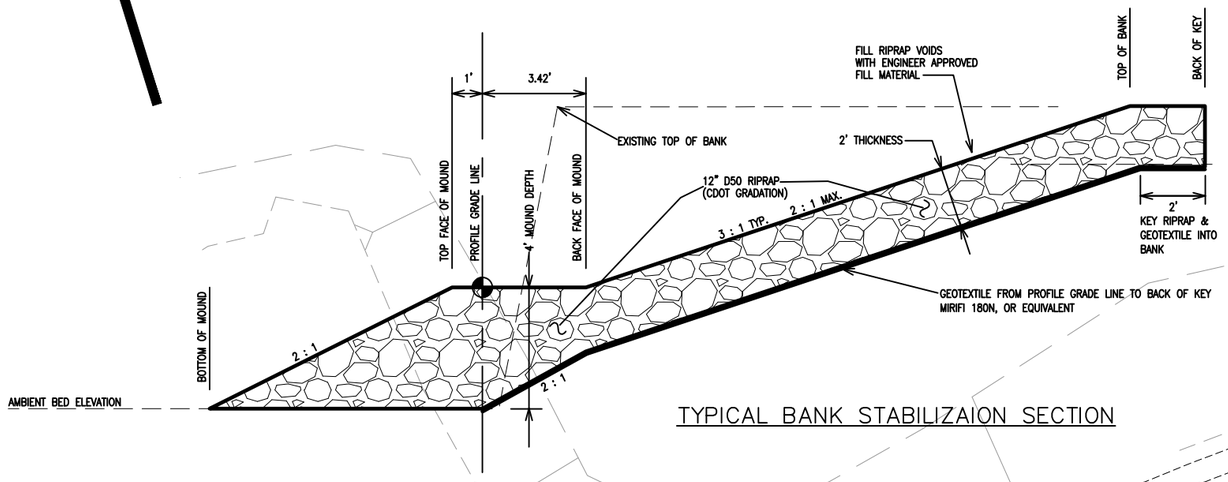
N 33685.77
E 87850.01
EL 47.00

N 33691.01
E 87867.54
EL 52.68

N 33691.59
E 87869.46
EL 52.68

4545.0
4548.0
4549.0
4550.0
4551.0
4552.0

TOP OF BANK
BACK OF KEY



TYPICAL BANK STABILIZAION SECTION

WATER QUALITY POND

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
IMPROVEMENT PLAN – I–2
May 20, 2020

283

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\CO RIV BANK STABIL\Improvement Plan.dwg, 5/20/2020 6:40:53 AM

COLORADO RIVER

MATCH LINE STA 5+50

MATCH LINE STA 7+50

TOP FACE OF MOUND
PROFILE GRADE LINE
BACK FACE OF MOUND

N 33779.09
E 87813.63
EL 47.00

N 33779.43
E 87814.57
EL 47.00

N 33780.60
E 87817.79
EL 47.00

N 33784.16
E 87827.61
EL 50.40

N 33784.85
E 87829.50
EL 50.40

N 33873.53
E 87781.23
EL 47.00

N 33873.93
E 87782.15
EL 47.00

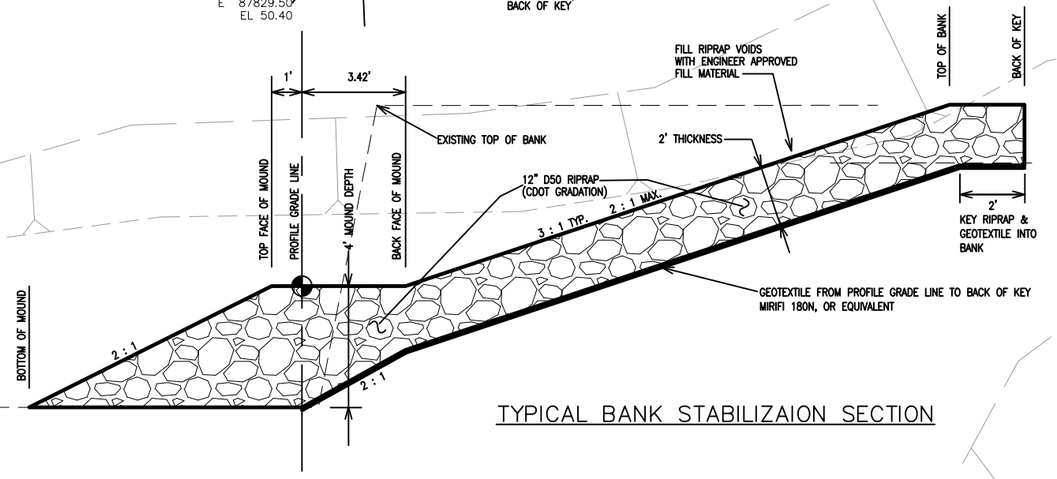
N 33875.28
E 87785.29
EL 47.00

N 33881.48
E 87799.70
EL 52.12

N 33882.28
E 87801.53
EL 52.12

4545.0
4548.0
4549.0
4550.0
4551.0

TOP OF BANK
BACK OF KEY



TYPICAL BANK STABILIZAION SECTION

WATER QUALITY POND

COLORADO RIVER TRAIL

4+00

5+00

30" RCP SAN

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
IMPROVEMENT PLAN – I–3
May 20, 2020

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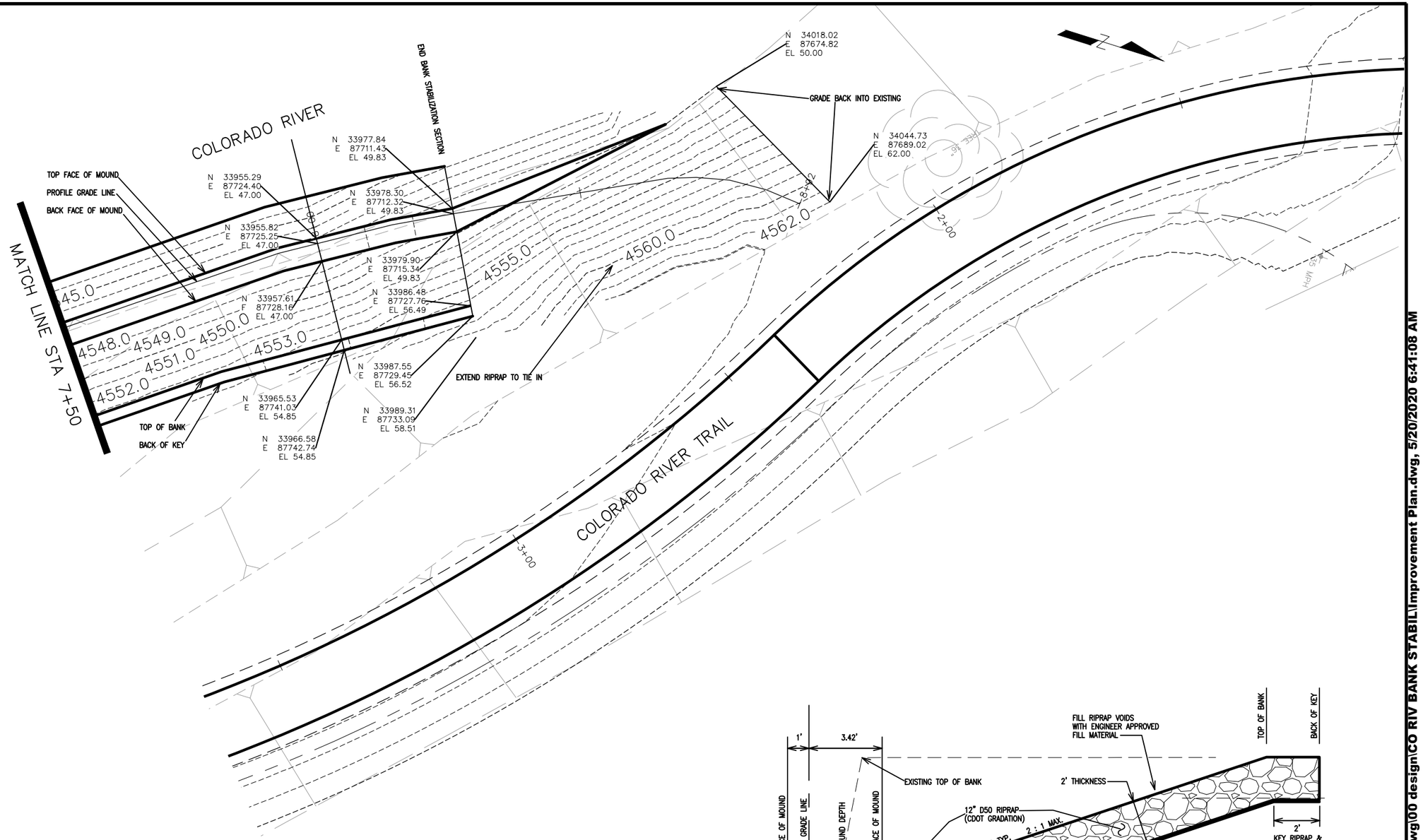

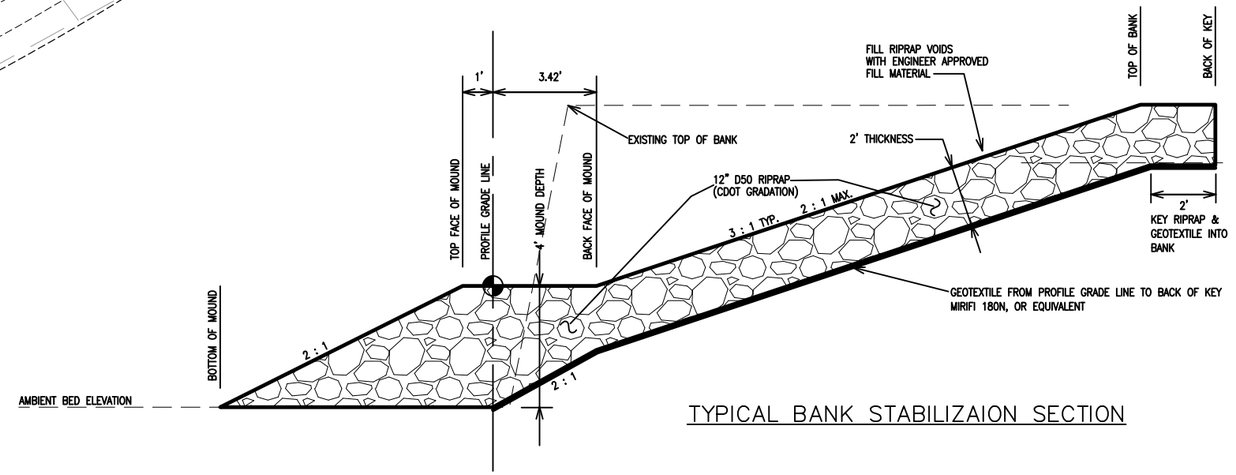

TYPICAL BANK STABILIZAION SECTION

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
IMPROVEMENT PLAN – I–4
May 20, 2020

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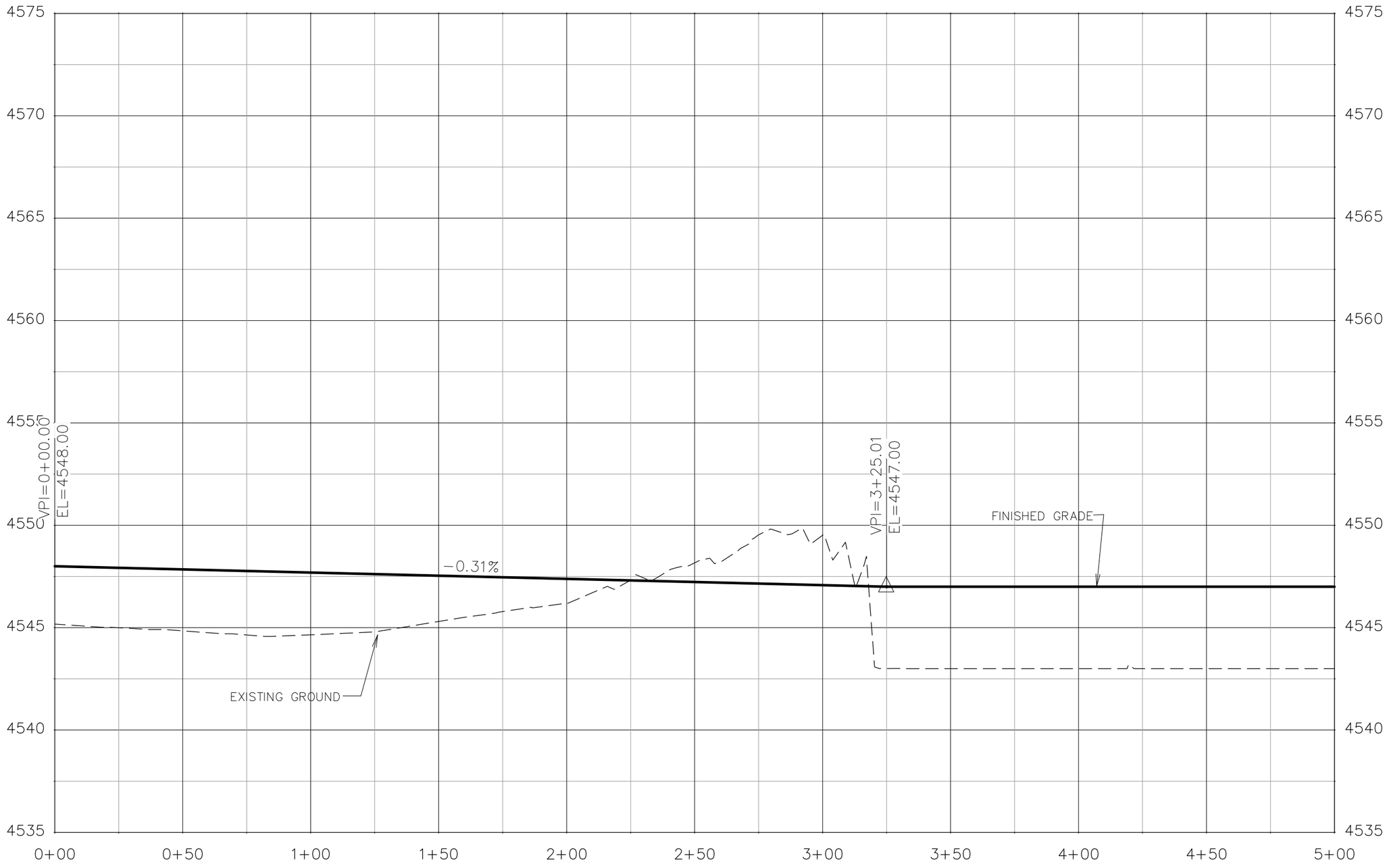

PROFILE GRADE LINE BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATON PROFILE – 1
May 20, 2020

286

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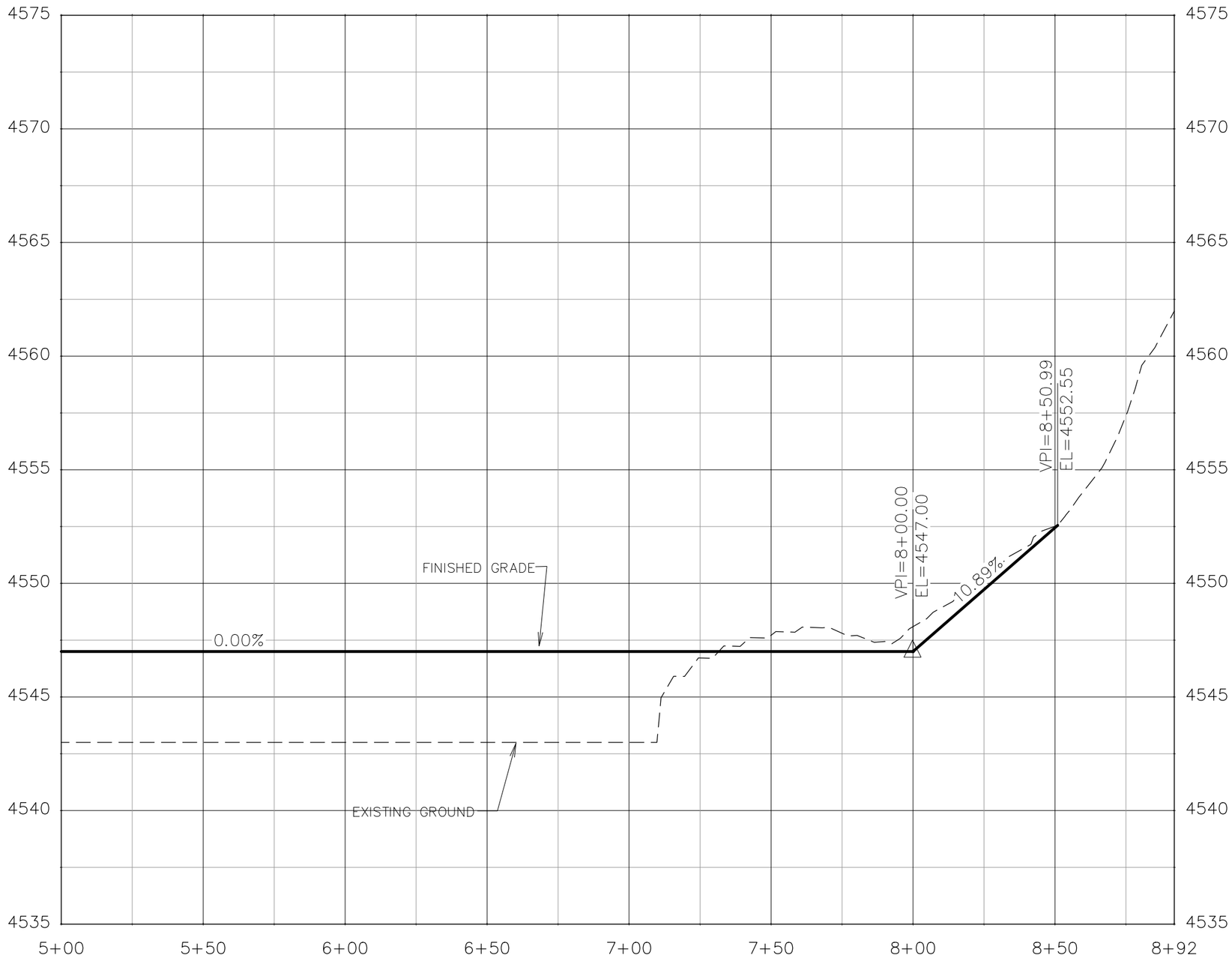

PROFILE GRADE LINE BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATON PROFILE – 2
May 20, 2020

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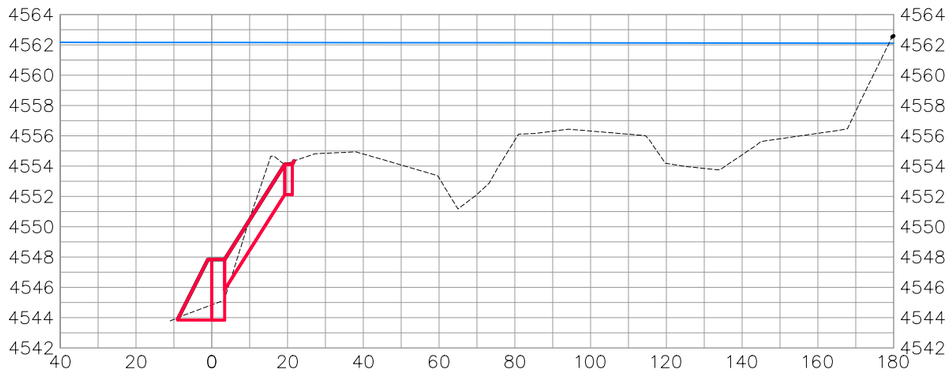

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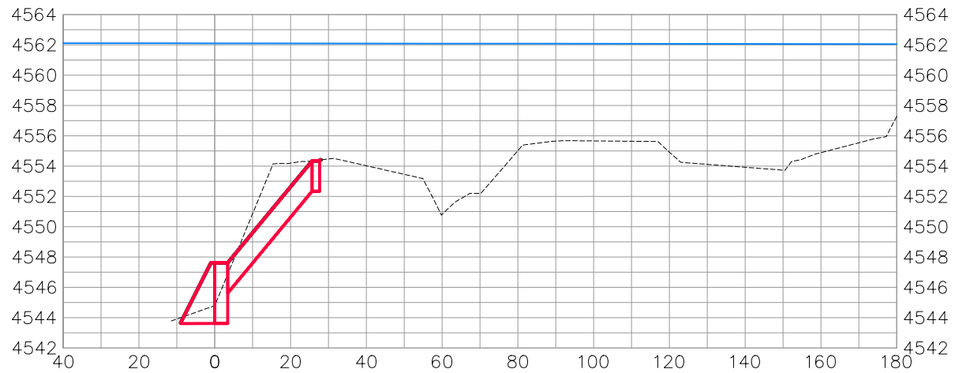

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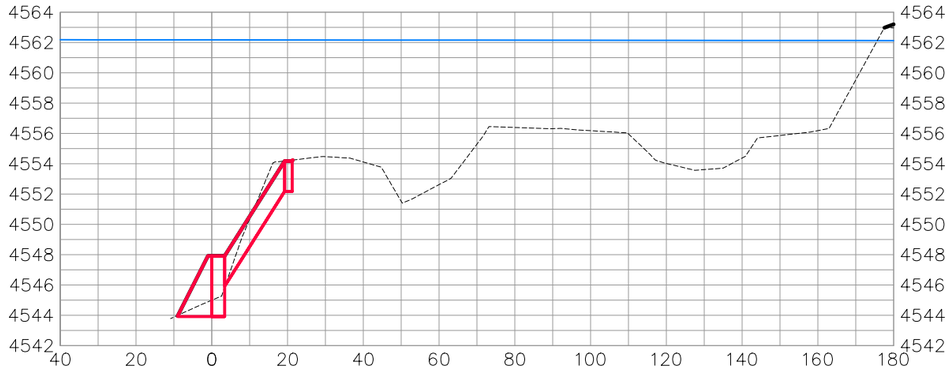

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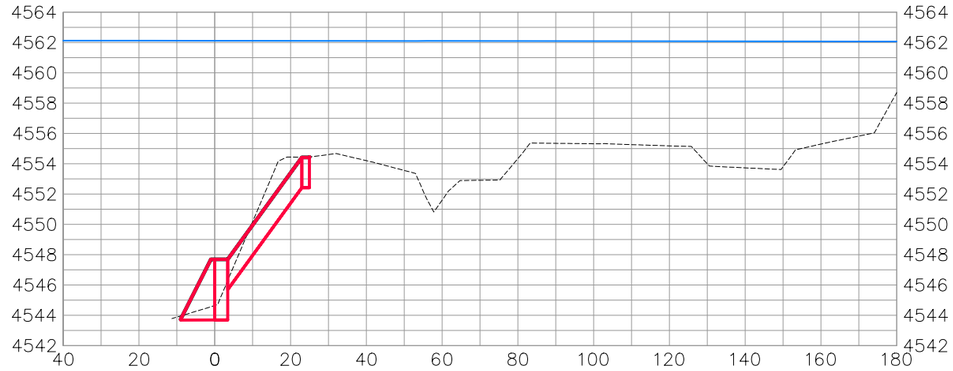

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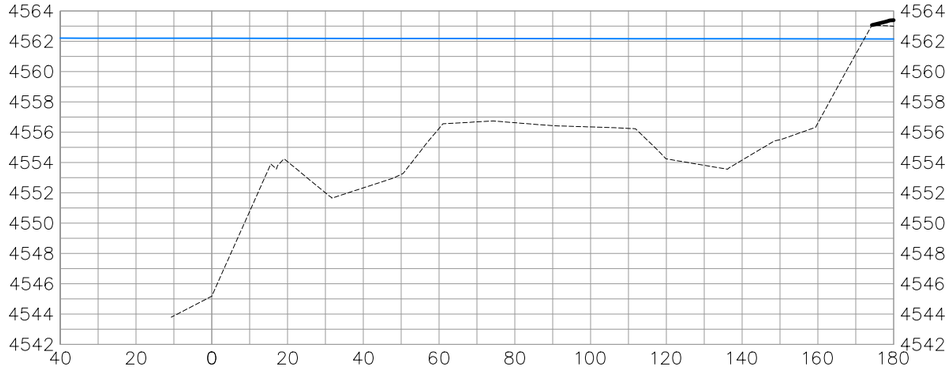

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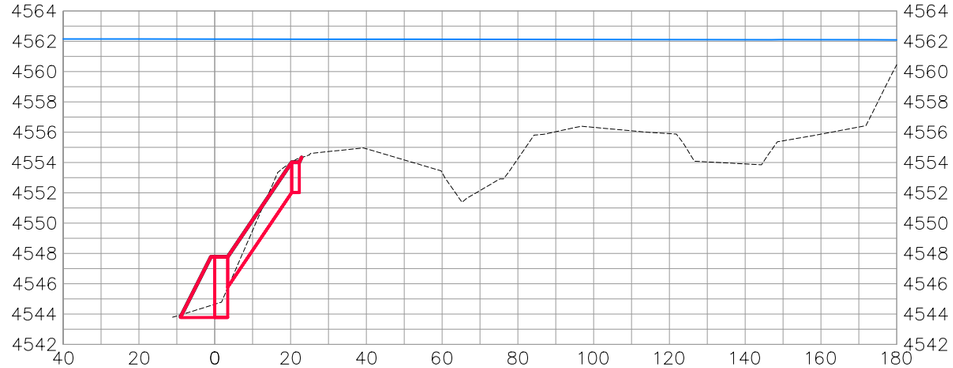

0+75.00

BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATION SECTIONS-1
May 20, 2020

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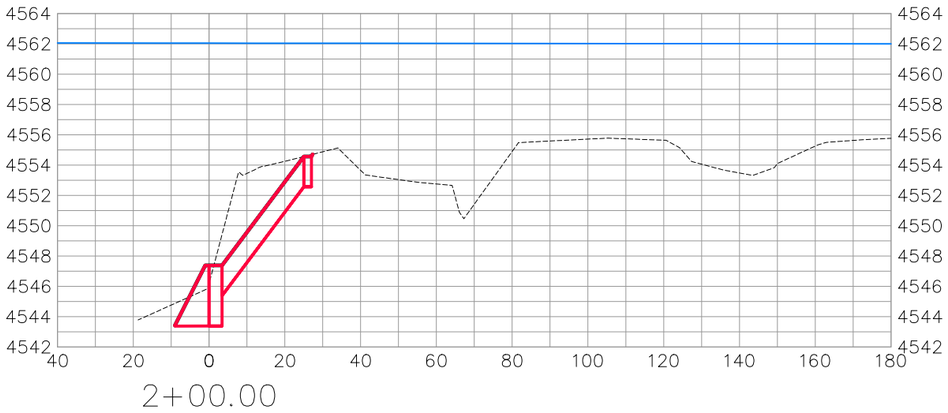

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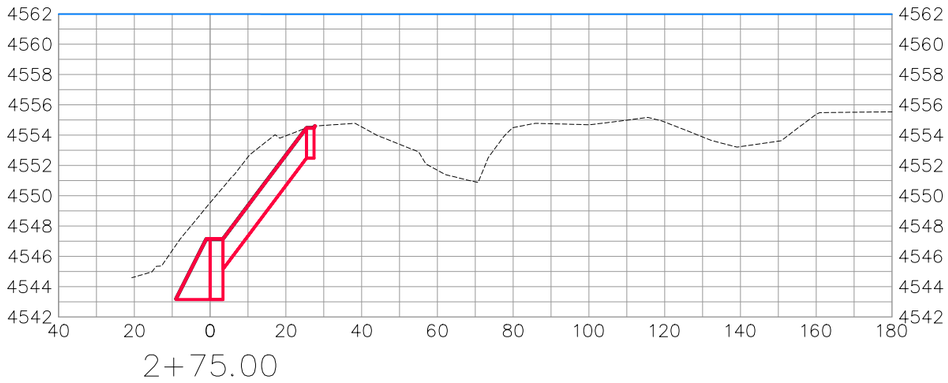

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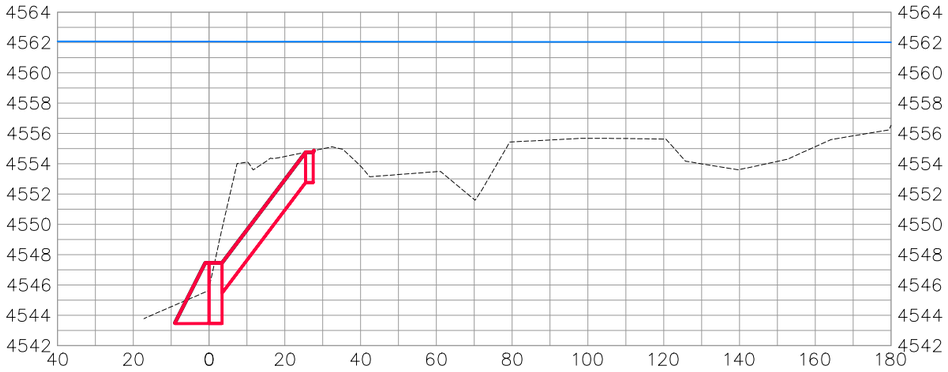

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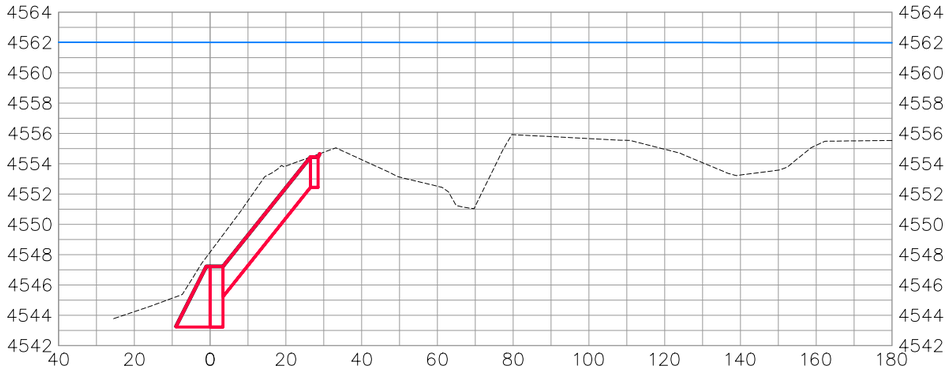

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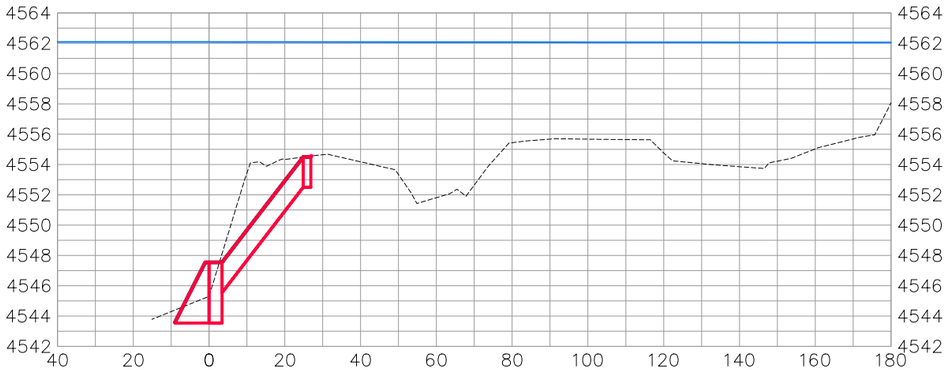

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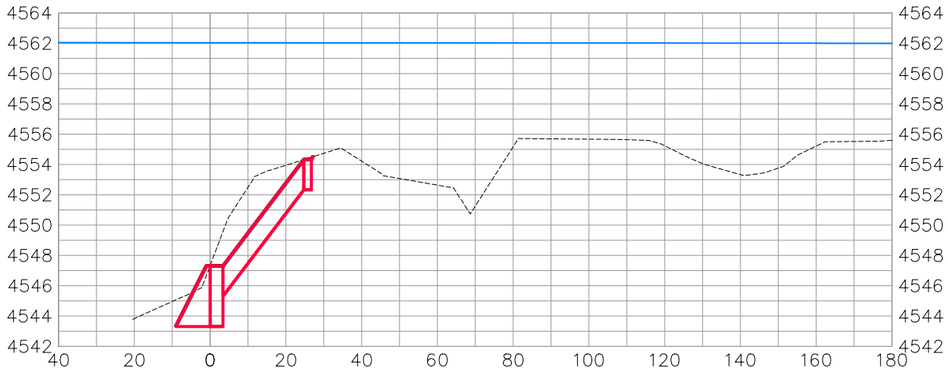

2+25.00

BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATION SECTIONS-2
May 20, 2020

289

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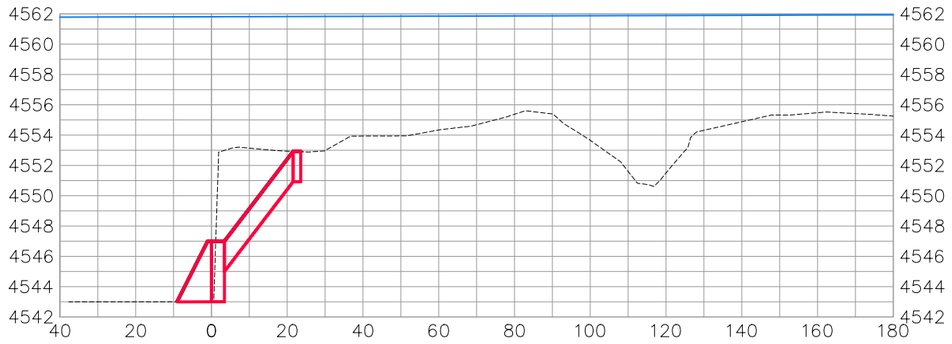

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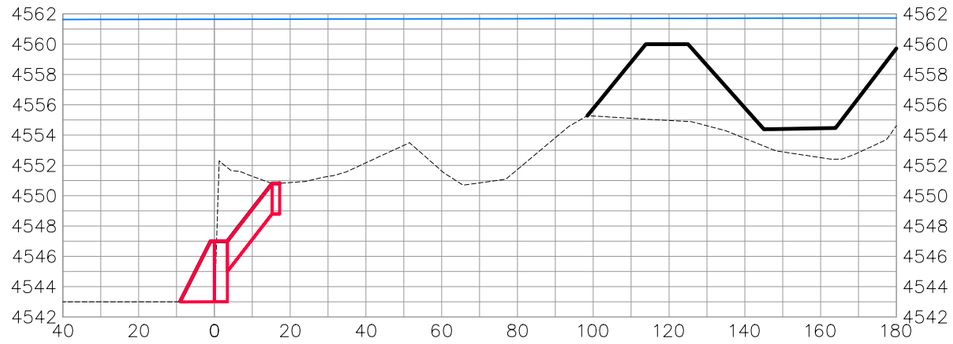

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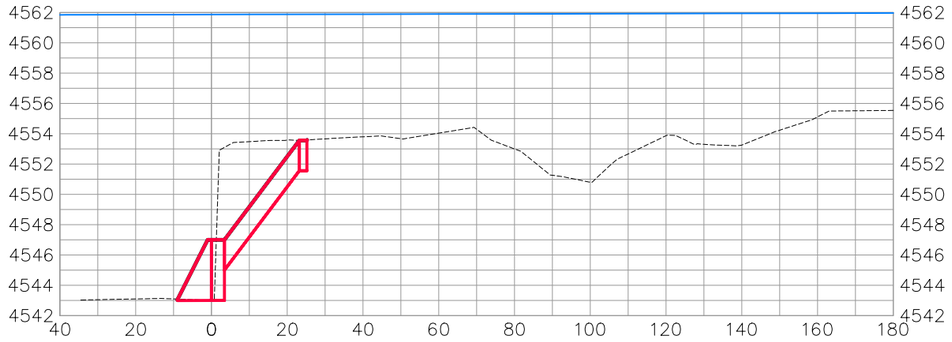

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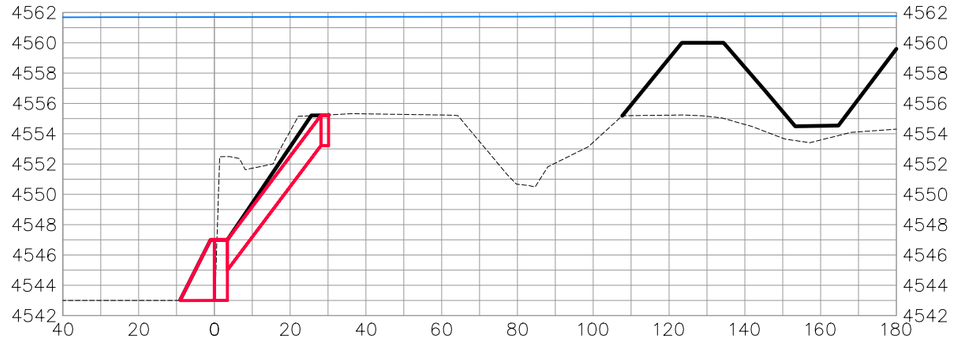

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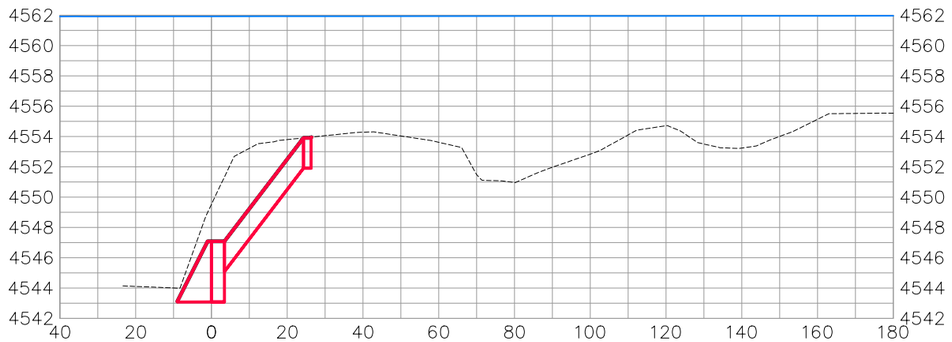

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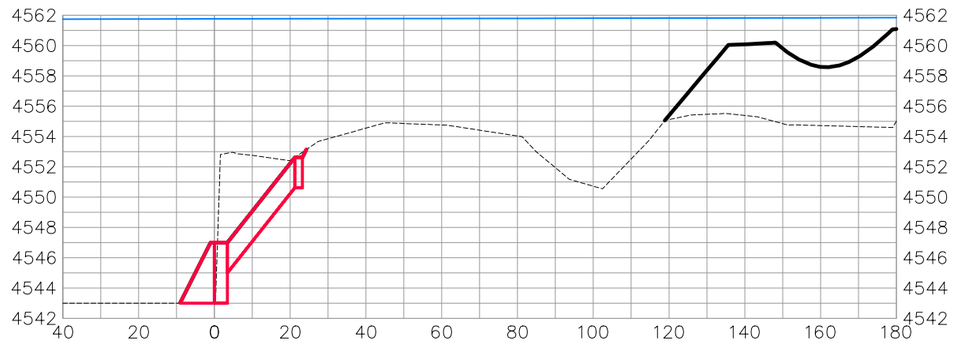

3+75.00

BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATION SECTIONS-3
May 20, 2020

290

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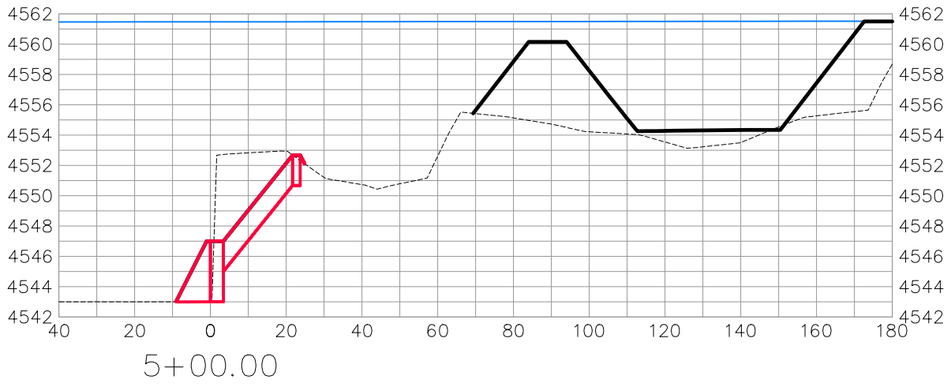

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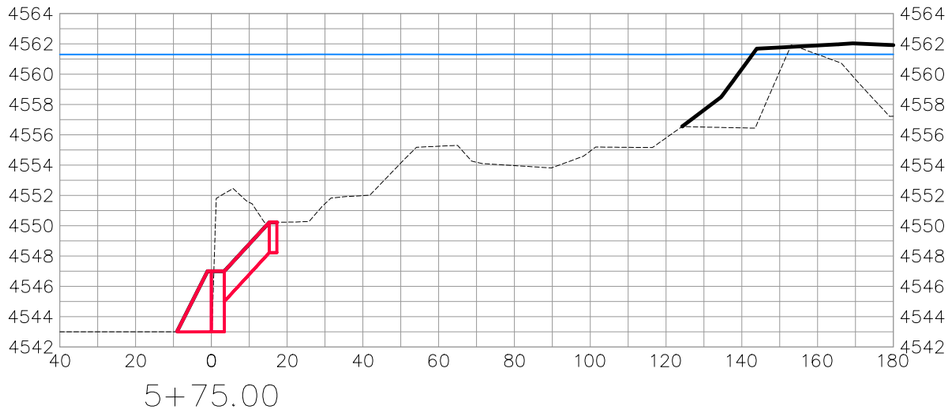

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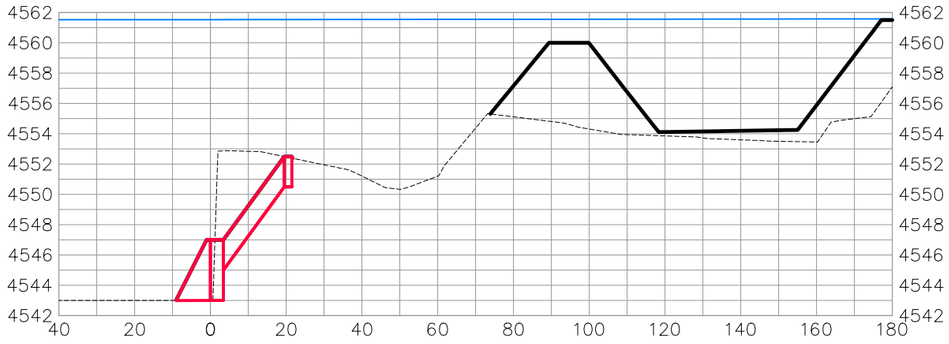

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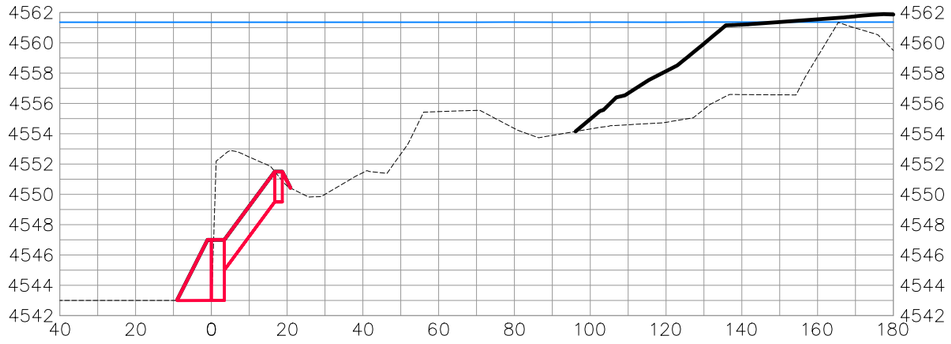

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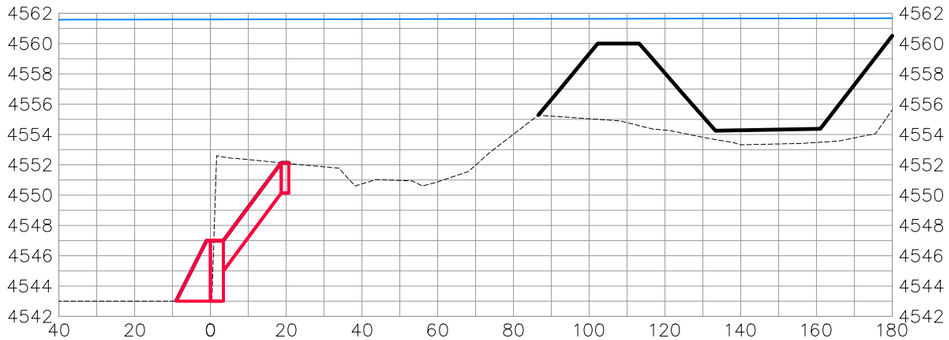

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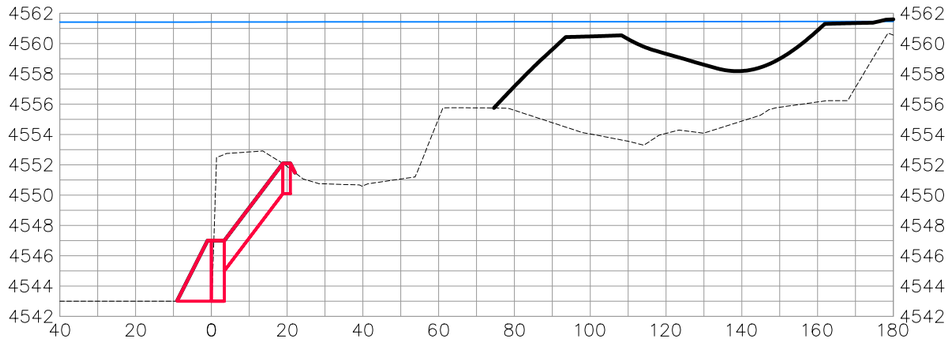

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BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATION SECTIONS-4
May 20, 2020

291

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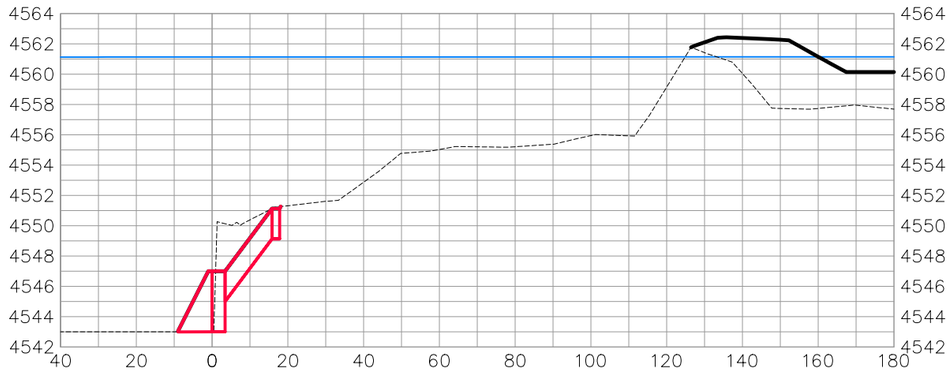

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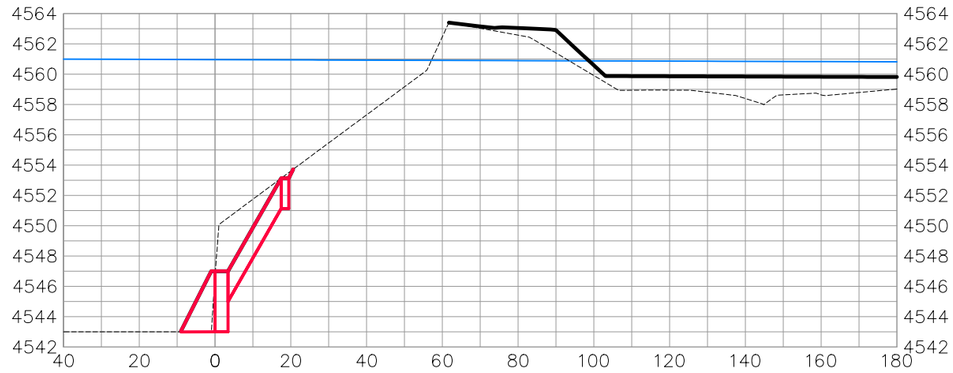

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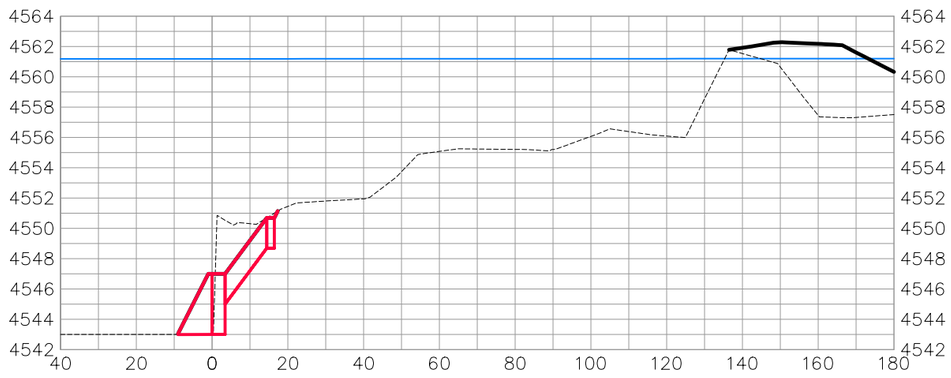

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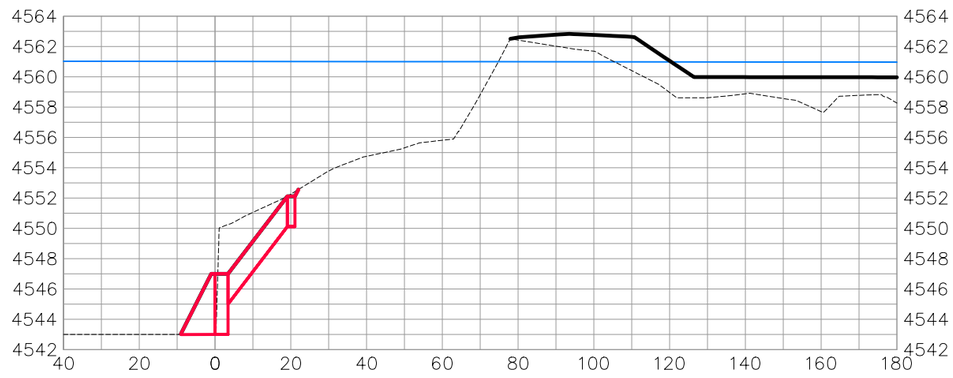

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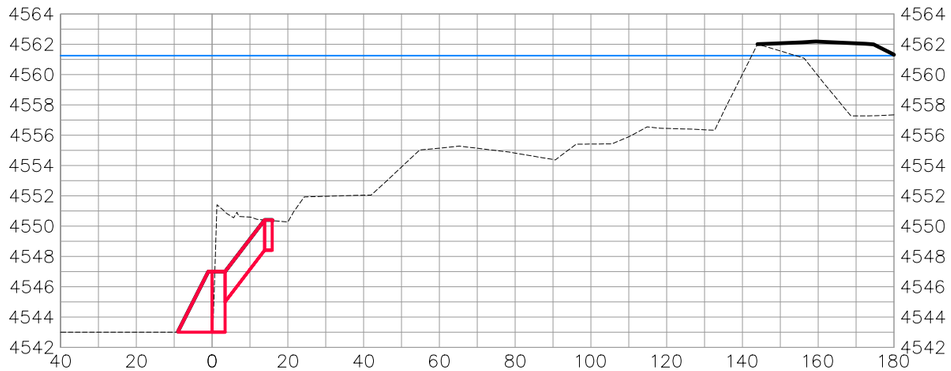

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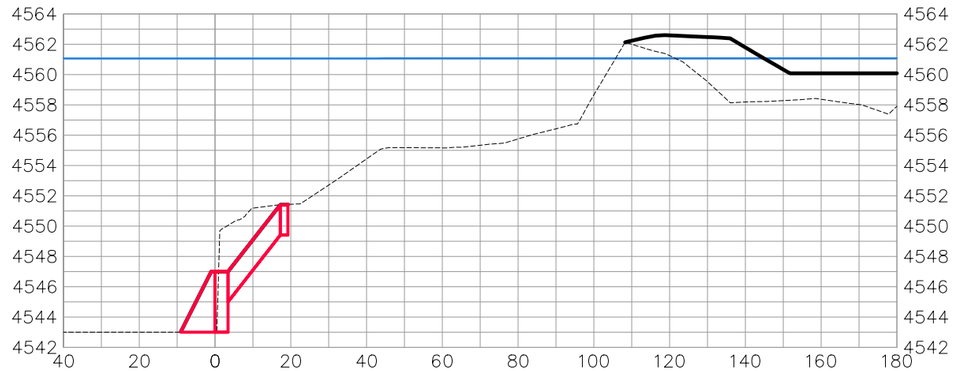

6+75.00

BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATION SECTIONS–5
May 20, 2020

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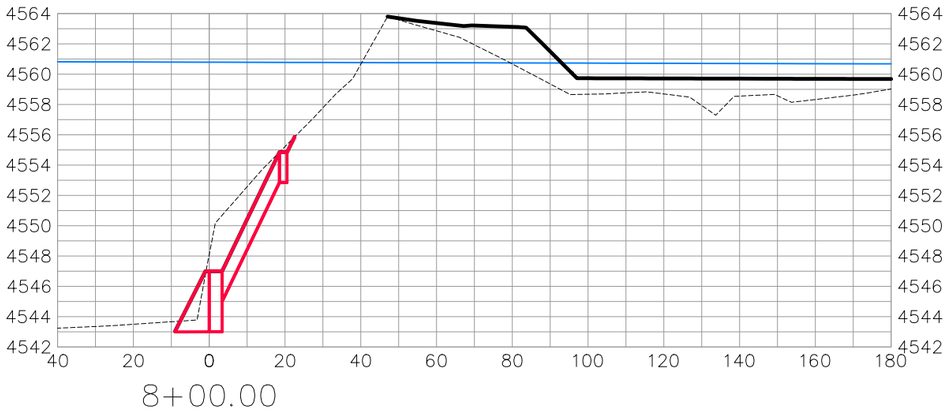

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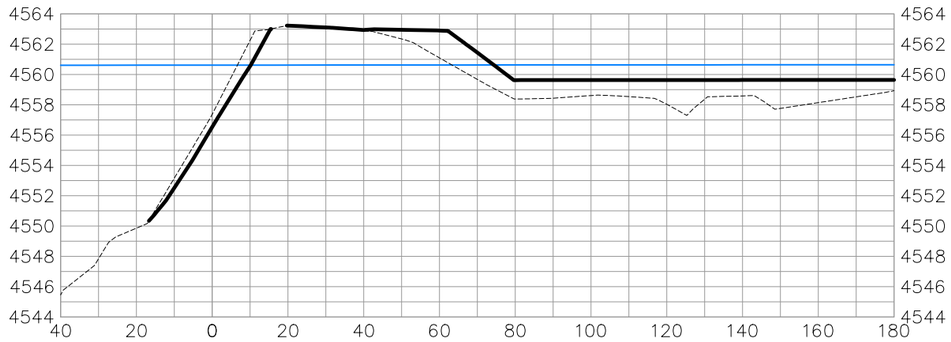

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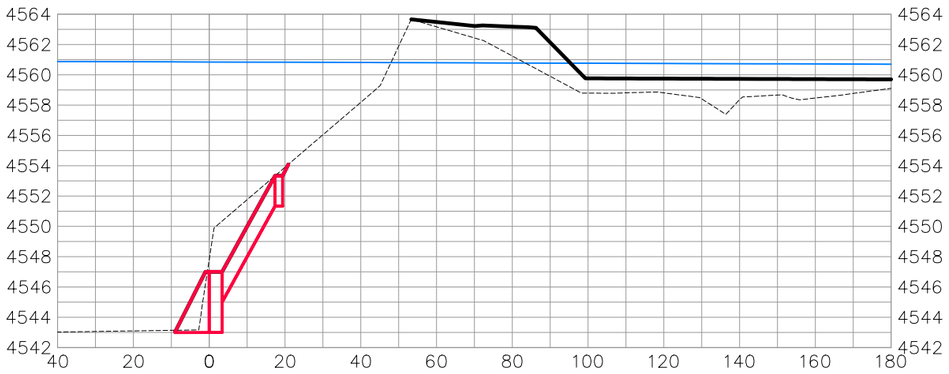

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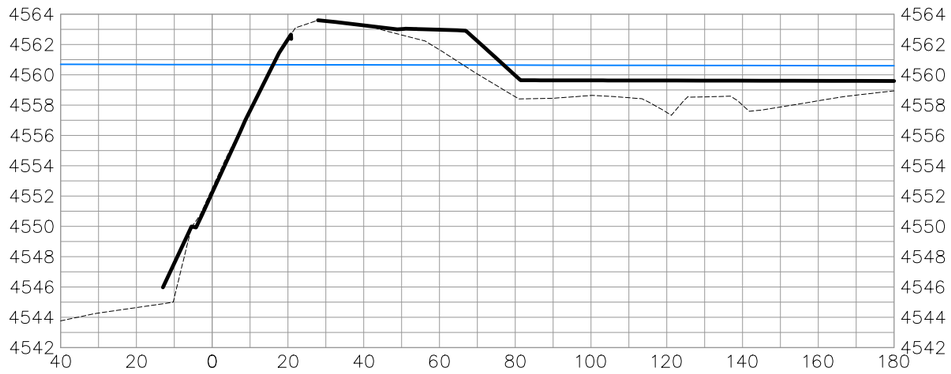

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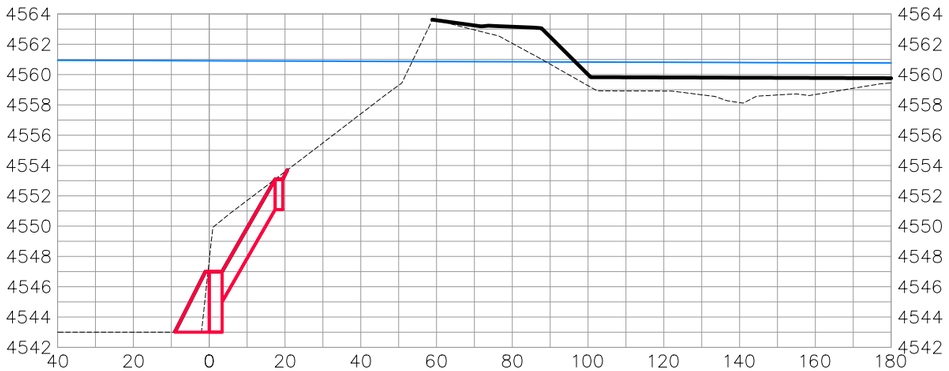

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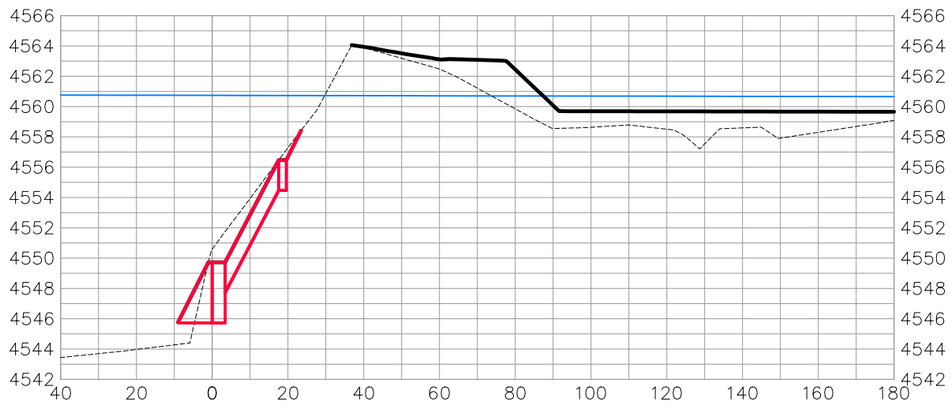

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BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATION SECTIONS-6
May 20, 2020

293

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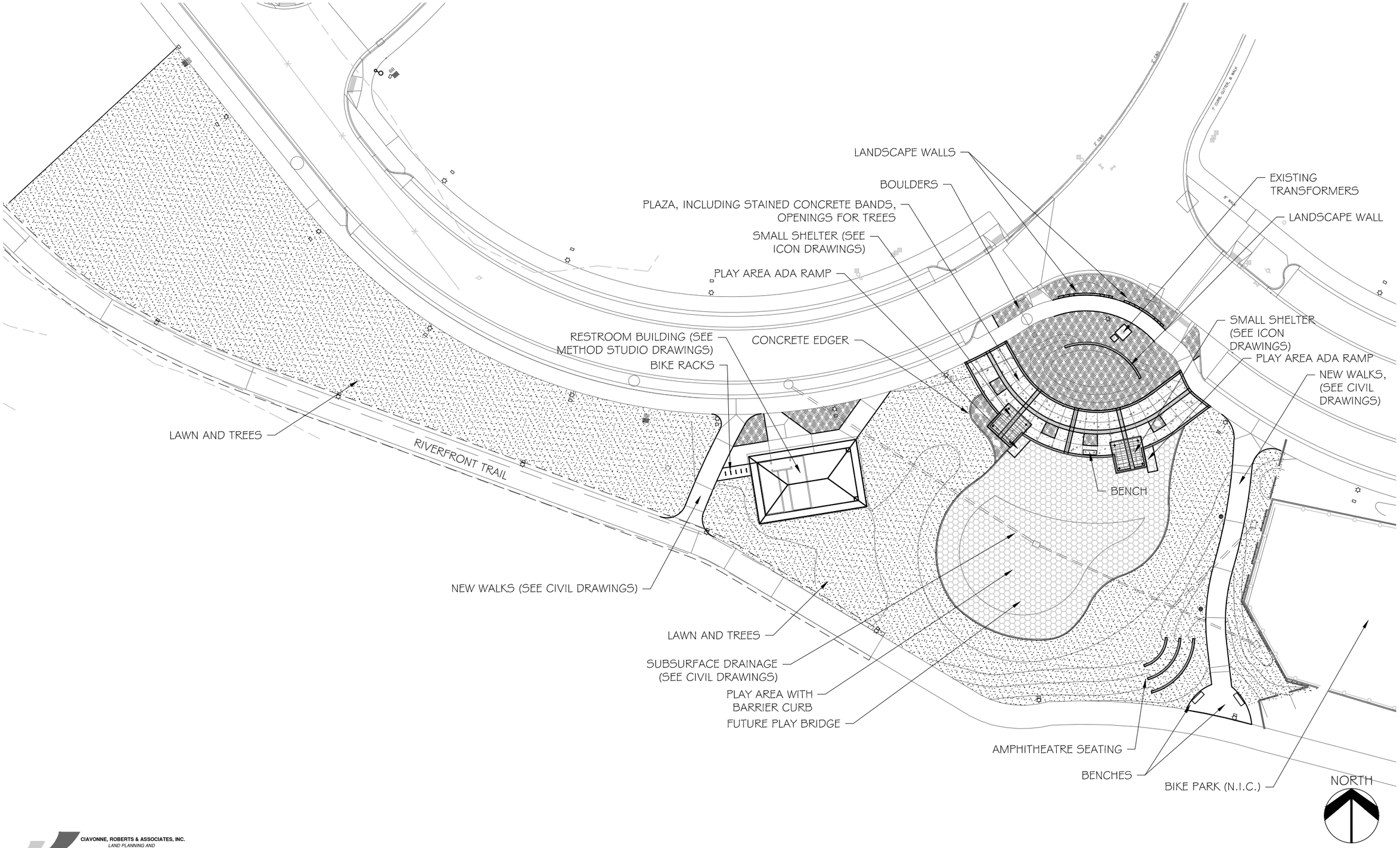

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CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY MH DATE 5-15-2020
DESIGNED BY MH DATE 5-15-2020
CHECKED BY CR DATE 5-15-2020
APPROVED BY TCP DATE

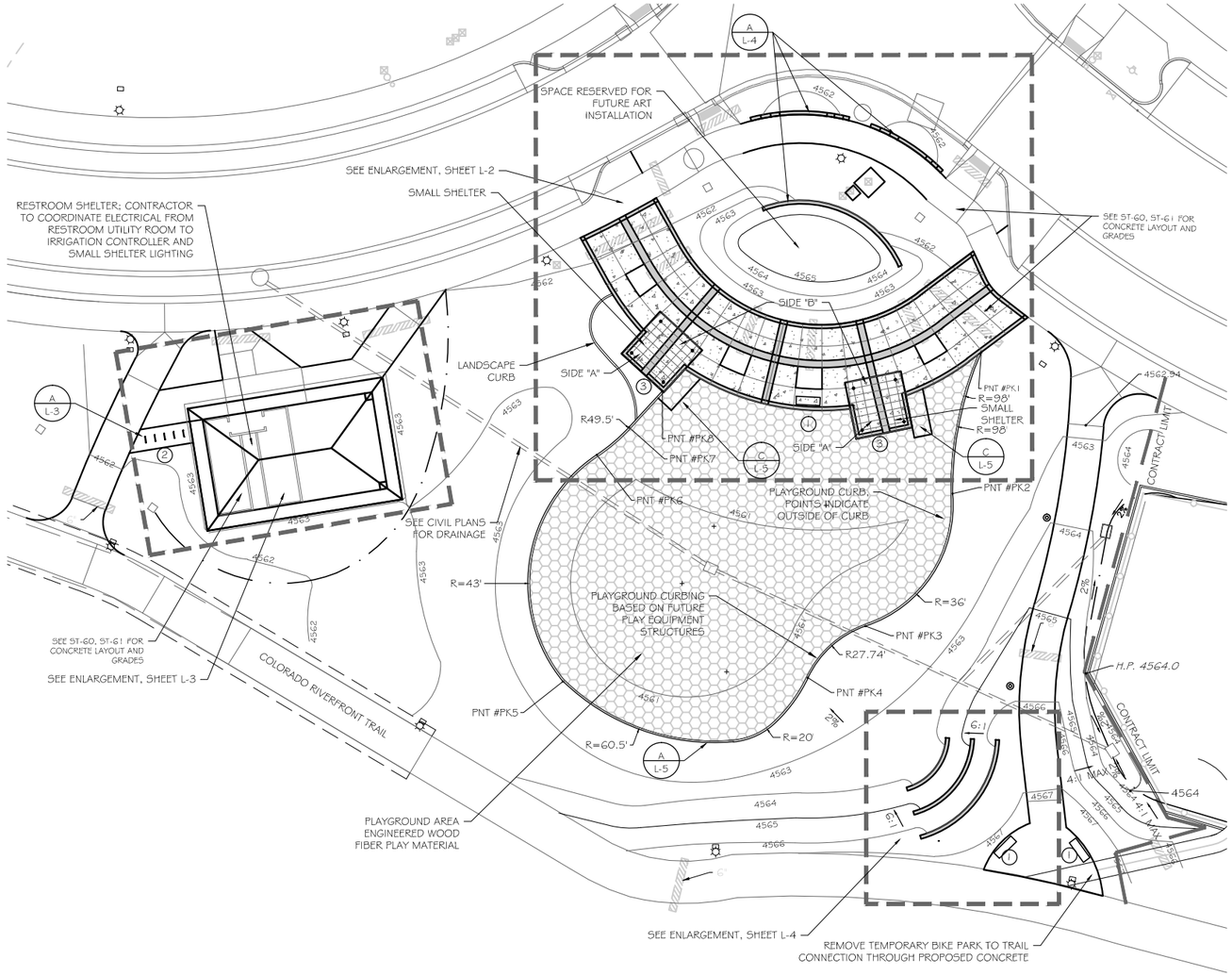
SCALES
NOT TO SCALE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
DOS RIOS PARK OVERVIEW

L-0



PARK POINT TABLE

PNT#	DESC	N	E	ELEV.
PK1	PC	32866.8	89265.3	4562.36 (MATCH)
PK2	PT	32827.2	89257.3	4562.30
PK3	PC	32790.1	89232.9	4562.30
PK4	PT	32775.7	89216.8	4562.30
PK5	PC	32774.7	89148.2	4562.30
PK6	PT	32837.7	89157.6	4562.30
PK7	PC	32845.8	89166.7	4562.30
PK8	PT	MATCH	MATCH	4562.30 (MATCH)

ABBREVIATION LEGEND

BK	BIKE RACK
BR	BOTTOM OF RAMP
BW	BOTTOM OF WALL (GRADE)
CP	CENTER OF POST (SHELTER)
FG	FINISH GRADE
HP	HIGH POINT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
RP	RADIUS POINT
TW	TOP OF WALL

LAYOUT & GRADING NOTES:

1. SEE DETAILS ON THESE PLANS AND CITY OF GRAND JUNCTION SPECIFICATIONS AS THEY APPLY TO THIS AND RELATED WORK.
2. ALL WORK SHALL BE PER EXISTING CITY AND STATE CODES, IS SUBJECT TO INSPECTION AND APPROVAL BY APPROPRIATE INSPECTORS, AND IS RESPONSIBLE FOR SECURING PERMITS FROM THE CITY OF GRAND JUNCTION AND PROVIDING FOR ANY TRAFFIC CONTROL.
3. THE CONTRACTOR OR HIS SURVEYOR SHALL VERIFY ALL FURNISHED SURVEY AND TOPOGRAPHIC DATA AND ALL POINTS, LINES, AND ELEVATIONS. THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER OF ANY DISCREPANCIES BETWEEN INFORMATION GIVEN ON DRAWINGS AND ACTUAL SITE OR FIELD CONDITIONS AND SHALL NOT PRECEDE WITH ANY AFFECTED WORK UNTIL THE OWNER'S REPRESENTATIVE ISSUES INSTRUCTIONS. ADDITIONAL BURIED UTILITIES NOT SHOWN ON THESE DRAWINGS MAY BE PRESENT IN THE PROJECT AREA. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR SPECIFIC LOCATIONS PRIOR TO COMMENCING ANY EXCAVATION.
4. CONTRACTOR SHALL PROTECT AND MAINTAIN ALL BENCHMARKS, CORNER MONUMENTS AND OTHER POINTS; IF DISTURBED OR DESTROYED, CONTRACTOR SHALL REPLACE AS DIRECTED, AT NO COST TO THE OWNER.
5. ALL PROPOSED LAYOUT & GRADING IS BASED ON EXISTING SURVEY AND PROPOSED GRADES FROM THE CITY OF GRAND JUNCTION.
6. SEE CIVIL DRAWINGS FOR DRAINAGE STRUCTURES IN PARK.
6. CONCRETE PAVEMENT PLACEMENT TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
7. CONTRACTOR TO COORDINATE SITE FURNITURE LOCATION AND INSTALLATION WITH SUPPLIER TO INSURE COLORS AND INSTALLATION METHODS.
8. CONCRETE COLOR BANDING TO BE TOOLED JOINTS AND ACID-STAINED. STAIN TO BE SURESTAIN BY SURECRETE, COLOR = "SPICENUT". www.surecretedesign.com, OR EQUAL. CONTRACTOR TO PROVIDE (2) 2 FT X 2 FT. TEST PANELS WITH COLOR TO PROJECT MANAGER FOR APPROVAL PRIOR TO STAINING PLAZA CONCRETE. FINISH CONCRETE WITH SPARTAN CONCRETE SEAL.
9. PROPOSED GRADES DEPICT FINISH SURFACE OF MATERIAL. CONTRACTOR IS RESPONSIBLE FOR DETERMINING SUBGRADE ELEVATIONS.

SITE FURNISHINGS SCHEDULE

ITEM	QTY	MANUFACTURER	DESCRIPTION
(1)	4	WABASH VALLEY	'CONTEMPORARY' 6 FT BENCH WITH RIB PATTERN, IN-GROUND-MOUNT, COLOR=BLUE
(2)	5	PATTERSON-WILLIAMS	RAINBOW "INVERTED U" BIKE RACK, MODEL #1608-01P, M1 IN-GROUND-MOUNT, POWDER COAT COLOR = "REGAL BLUE"
(3)	2	ICON SHELTER SYSTEMS	DS16X16M-P64, FRAME COLOR = SURREY BEIGE, 24 GAUGE PRE-CUT MULTI RIB ROOF PANEL; COLOR = COLONIAL RED; (ENGINEERED DRAWINGS REQUIRED BY MANUFACTURER) ROOF PITCHES OF 4:12 AND 6:12. FRAME COLOR = "SURREY BEIGE". LOWER ROOF TO BE ON PLAYGROUND SIDE.

0 40 80 120

NORTH

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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REVISION △	
REVISION △	

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APPROVED BY TCP DATE

SCALES 0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
DOS RIOS PARK LAYOUT & GRADING

L-1

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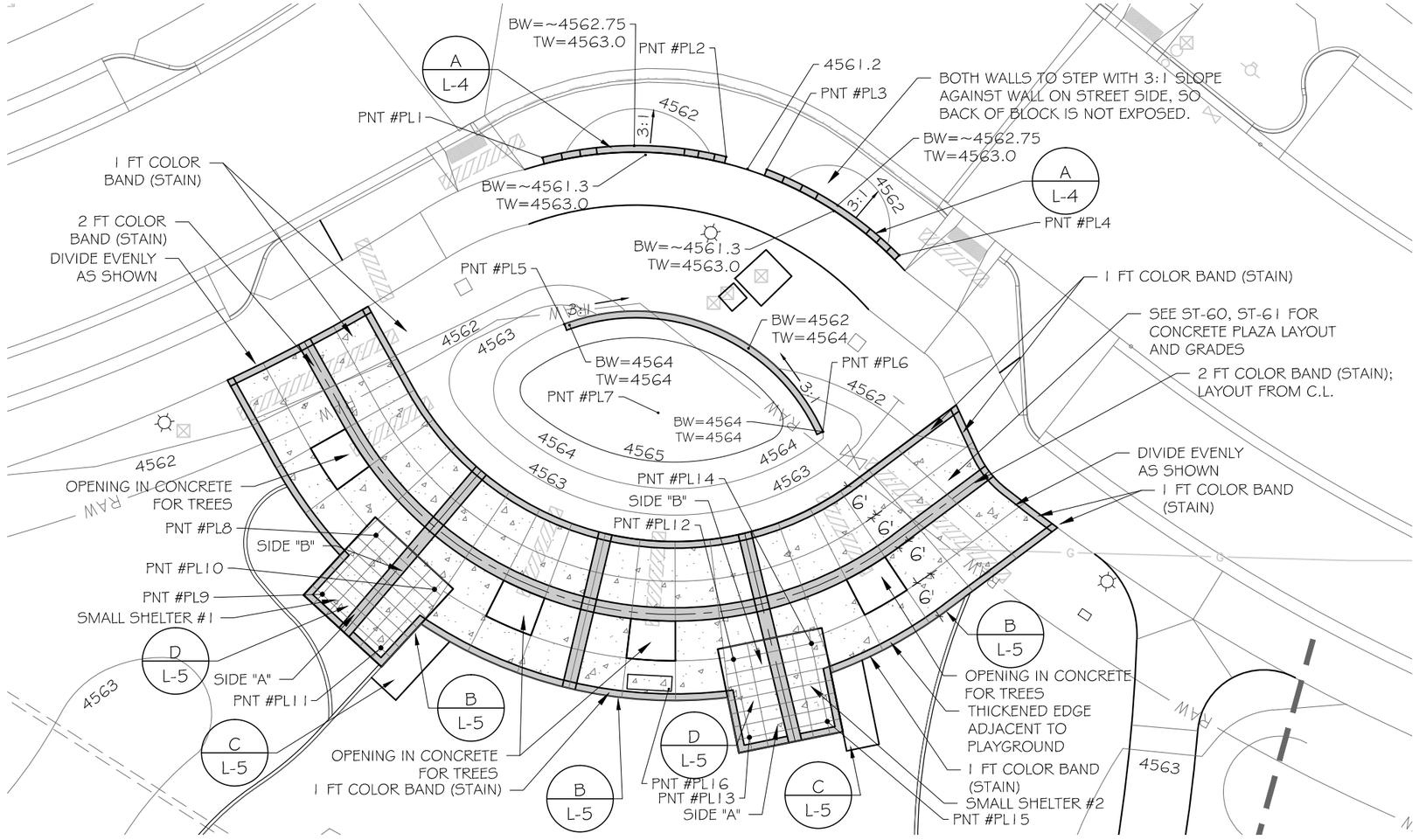
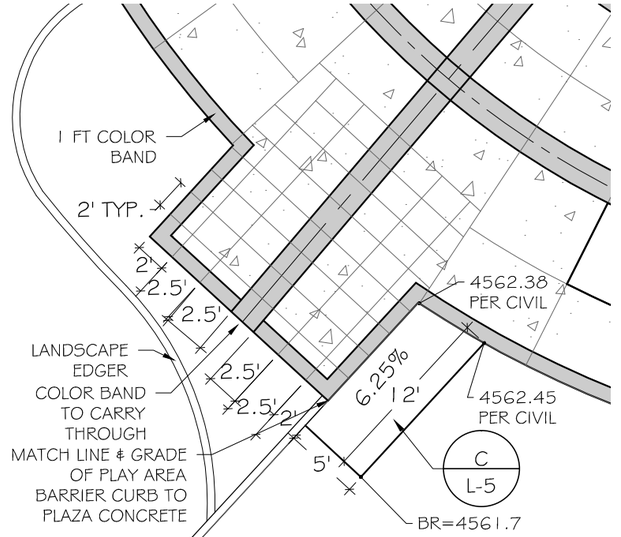
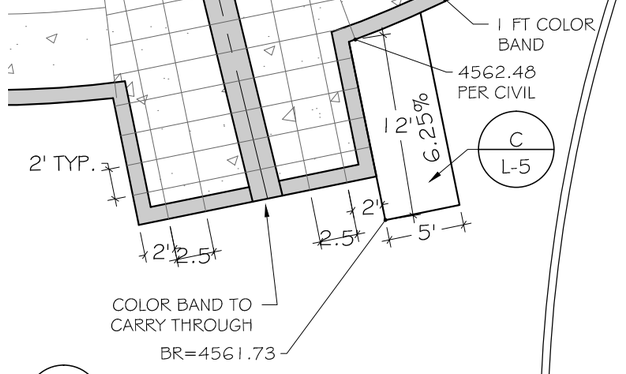




A L-2 SMALL SHELTER #1 AND PLAY AREA ADA RAMP ENLARGEMENT
NOT TO SCALE



B L-2 SMALL SHELTER #2 AND PLAY AREA ADA RAMP ENLARGEMENT
NOT TO SCALE

LEGEND

COLOR-STAINED CONCRETE AND TOOLED JOINTS. SEE NOTES, SHEET L-1

CONCRETE AS SPECIFIED ON CIVIL PLANS.

PVC IRRIGATION SLEEVING, 4" UNLESS OTHERWISE SHOWN; SEE SHEETS I-1, I-2

WALK/PLAZA CENTERLINE

SCORE JOINT PATTERN

ABBREVIATION LEGEND

BK	BIKE RACK
BR	BOTTOM OF RAMP
BW	BOTTOM OF WALL (GRADE)
CP	CENTER OF POST (SHELTER)
FG	FINISH GRADE
HP	HIGH POINT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
RP	RADIUS POINT
TW	TOP OF WALL

PLAZA AREA POINT TABLE

PNT#	DESC	N	E	ELEV.
PL1	TW	32932.5	89200.7	4561.30
PL2	TW	32932.6	89228.4	4561.30
PL3	TW	32930.7	89234.5	4561.30
PL4	TW	32917.7	89254.5	4560.00

NOTE: WALLS N OF TRANSFORMER TO STEP UP FROM END TO 4563.0

PL5	TW	32907.3	89204.0	4564.00
PL6	TW	32891.1	89243.0	4564.00
PL7	HP	32893.9	89218.2	4565.15
PL8	CP	32875.4	89175.5	MATCH CIVIL GRADES FOR PAVEMENT
PL9	CP	32866.5	89167.4	
PL10	CP	32867.3	89184.4	
PL11	CP	32858.4	89176.3	
PL12	CP	32856.7	89229.5	
PL13	CP	32844.9	89231.9	
PL14	CP	32859.1	89241.3	
PL15	CP	32847.3	89243.7	
PL16	CP	32852.2	89219.7	

NOTE: COORDINATES PROVIDED FOR TW OCCUR AT FACE OF WALL; USE MANUFACTURER -PROVIDED TEMPLATE FOR BENCH FOOTING LAYOUT

0 20 40 60

NORTH

0 10 20 30

NORTH

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

DESCRIPTION	DATE
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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
DOS RIOS PARK PLAZA ENLARGEMENTS

L-2

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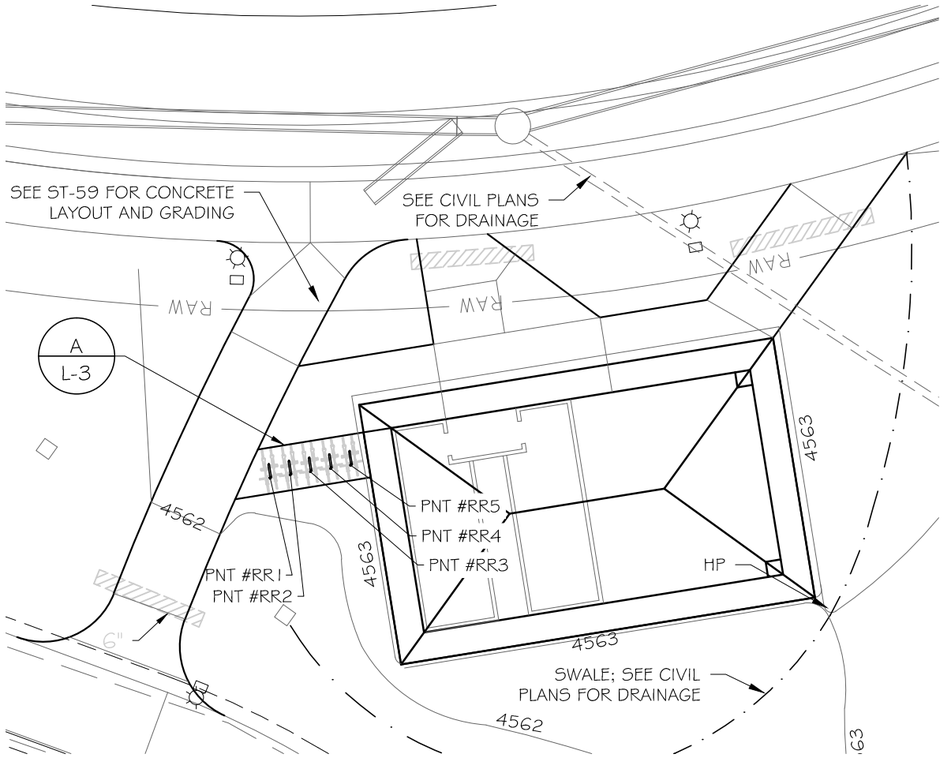


ABBREVIATION LEGEND

BK	BIKE RACK
BR	BOTTOM OF RAMP
BW	BOTTOM OF WALL (GRADE)
CP	CENTER OF POST (SHELTER)
FG	FINISH GRADE
HP	HIGH POINT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
RP	RADIUS POINT
TW	TOP OF WALL

LEGEND

BIKE RACK (SEE DETAIL, THIS SHEET; BIKE POSITION SHOWN)

PVC IRRIGATION SLEEVING, 4" UNLESS OTHWERWISE SHOWN

SHELTER AREA POINT TABLE

PNT#	DESC	N	E	ELEV.
RR1	BK	32841.5	89031.4	MATCH CIVIL GRADES FOR PAVEMENT
RR2	BK	32841.9	89034.1	
RR3	BK	32842.3	89036.7	
RR4	BK	32842.8	89269.28	
RR5	BK	32843.2	89042.1	

NOTE: BIKE RACK POINTS ARE FOR CENTER OF SOUTH FOOTING

A
L-3

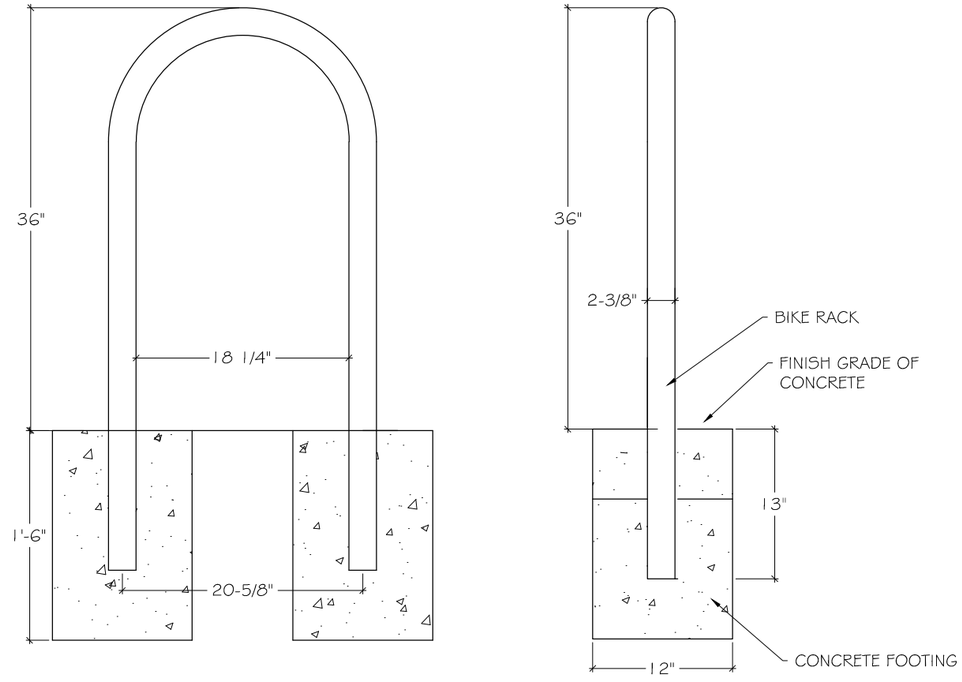
INVERTED U BIKE RACK

NOT TO SCALE

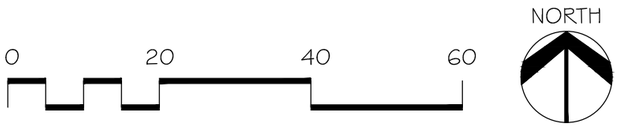
MODEL #1608-01P DESCRIPTION: "RAINBOW" BIKE RACK, IN GROUND MOUNT, REGAL BLUE.

PATTERSON-WILLIAMS, INC.
P.O. BOX 1290
SALEM, IL 62881
(618) 548-2890
www.pattersonwilliams.com

NOTES:
1. INSTALL BIKE RACKS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. OWNER TO SELECT COLOR (FINISH).
3. SEE MANUFACTURER'S SPECIFICATIONS FOR INSTALLATION
4. SEE SITE PLAN FOR LOCATION.



PERMANENT IN GROUND MOUNT



CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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REVISION △	
REVISION △	
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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
DOS RIOS PARK SHELTER BIKE RACKS AND DETAIL

L-3

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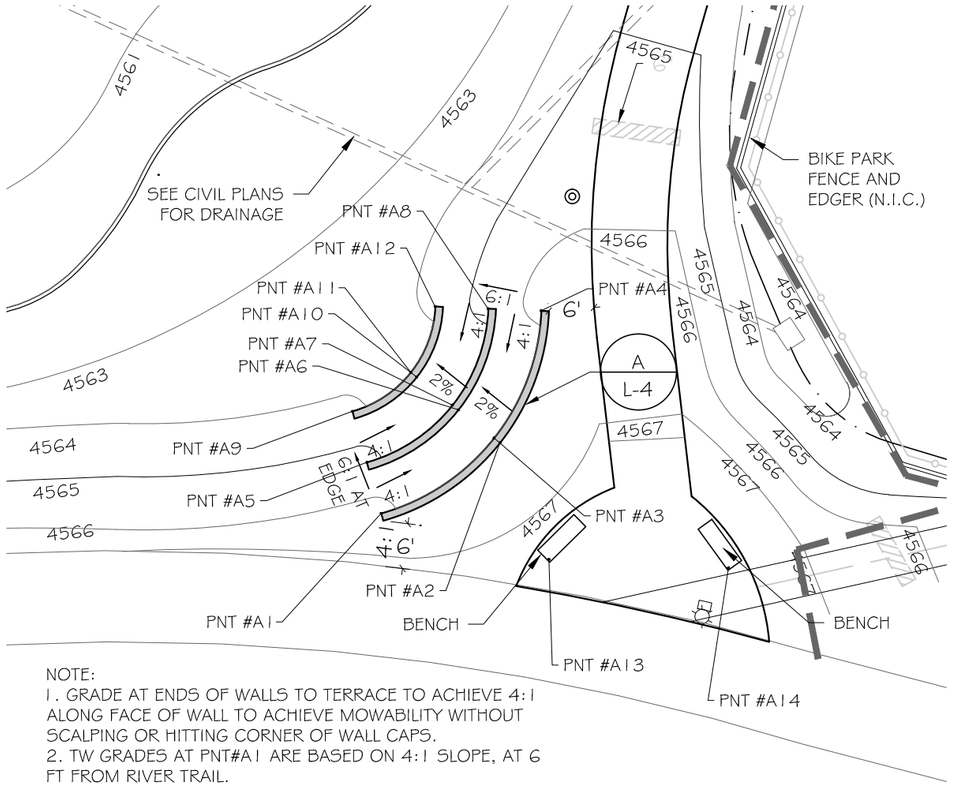
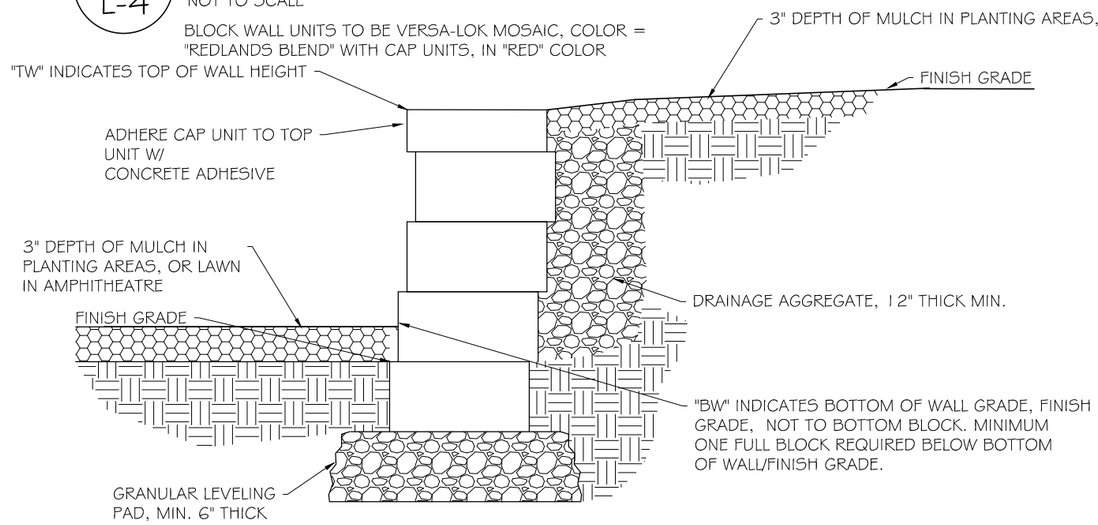


NOTE:
1. GRADE AT ENDS OF WALLS TO TERRACE TO ACHIEVE 4:1 ALONG FACE OF WALL TO ACHIEVE MOWABILITY WITHOUT SCALPING OR HITTING CORNER OF WALL CAPS.
2. TW GRADES AT PNT#A1 ARE BASED ON 4:1 SLOPE, AT 6 FT FROM RIVER TRAIL.

A / L-4 MODULAR BLOCK WALLS

NOT TO SCALE



NOTE: THIS DETAIL APPLIES TO LANDSCAPE WALLS ON L-2 AND TO AMPHITHEATRE WALLS ON L-4

LEGEND

MODULAR BLOCK WALLS, SEE DETAIL, THIS SHEET

PVC IRRIGATION SLEEVING, 4" UNLESS OTHWERWISE SHOWN

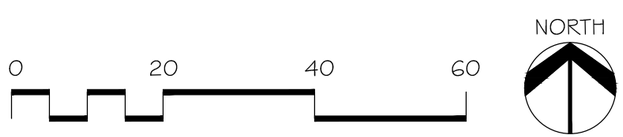
ABBREVIATION LEGEND

BK	BIKE RACK
BR	BOTTOM OF RAMP
BW	BOTTOM OF WALL (GRADE)
CP	CENTER OF POST (SHELTER)
FG	FINISH GRADE
HP	HIGH POINT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
RP	RADIUS POINT
TW	TOP OF WALL

AMPHITHEATRE AREA POINT TABLE

PNT#	DESC	N	E	ELEV.
A1	TW	32731.6	89248.2	4565.84
A2	TW	32741.5	89263.1	4565.84
A3	BW	32741.5	89263.1	4564.84
A4	TW	32758.3	89269.28	4565.84
A5	TW	32738.3	89246.3	4565.72
A6	TW	32745.9	89257.6	4565.72
A7	BW	32745.9	89257.6	4564.72
A8	TW	32758.6	89262.3	4565.72
A9	TW	32745.1	89244.4	4564.60
A10	TW	32750.2	89252.1	4564.60
A11	BW	32750.2	89252.1	4563.60
A12	TW	32758.9	89255.3	4564.60
A13	CP	32725.5	89270.3	
A14	CP	32724.4	89294.0	

NOTE: COORDINATES PROVIDED FOR TW OCCUR AT FACE OF WALL; USE MANUFACTURER -PROVIDED TEMPLATE FOR BENCH FOOTING LAYOUT



CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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REVISION △	
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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
DOS RIOS PARK AMPHITHEATRE

L-4

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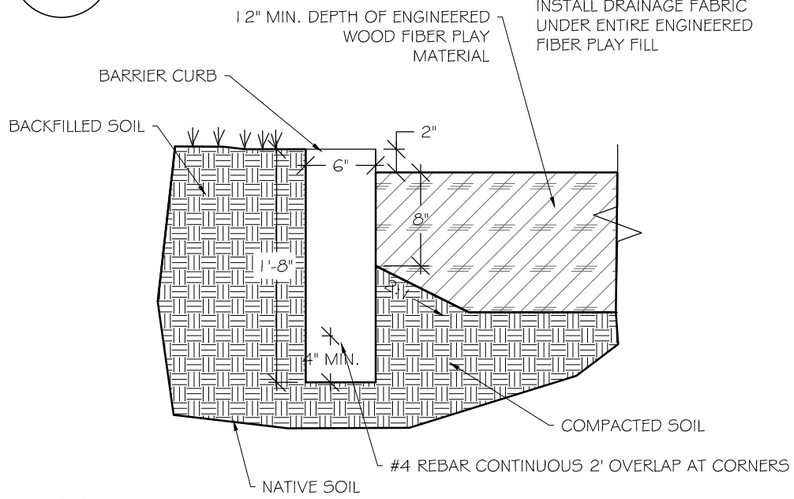
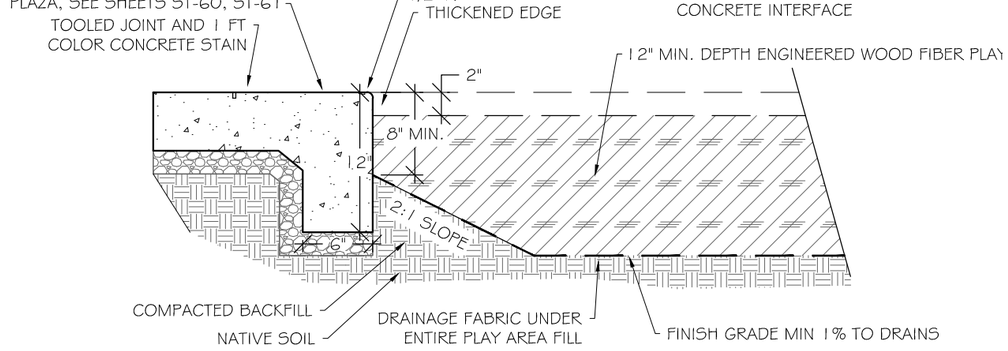
A L-5 PLAY AREA BARRIER CURB

NOT TO SCALE



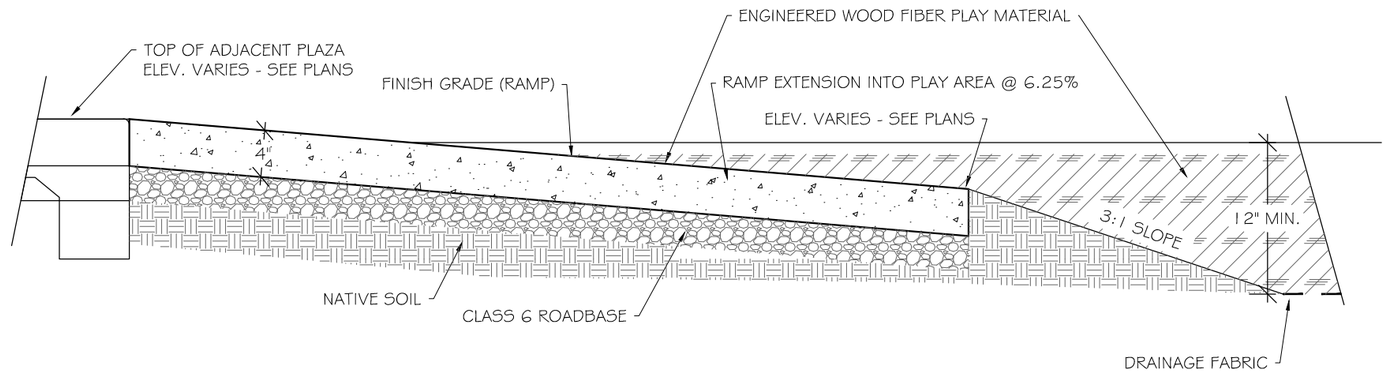
B L-5 THICKENED EDGE AT PLAYGROUND

NOT TO SCALE



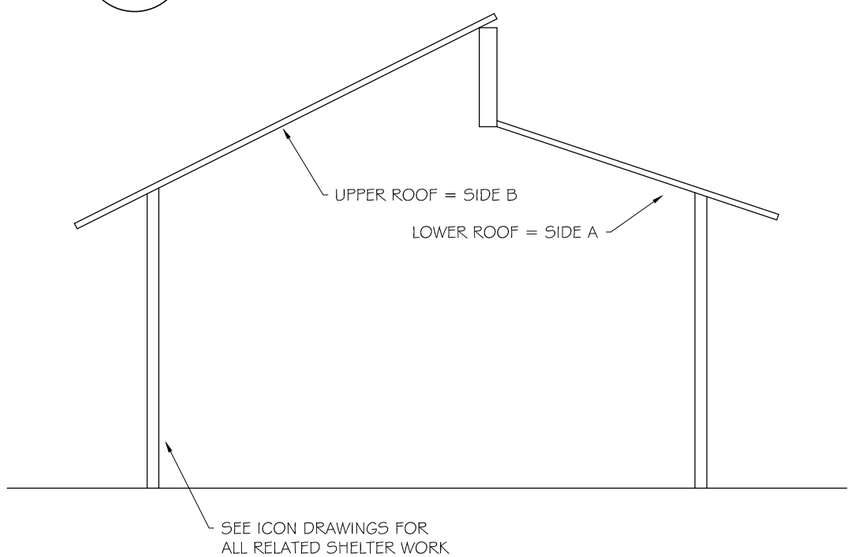
C L-5 PLAY AREA ADA RAMP

NOT TO SCALE



D L-5 SMALL SHELTER

NOT TO SCALE



CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

DESCRIPTION	DATE
REVISION △	
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REVISION △	
REVISION △	

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SCALES

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PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
DOS RIOS PARK LANDSCAPE DETAILS

L-5

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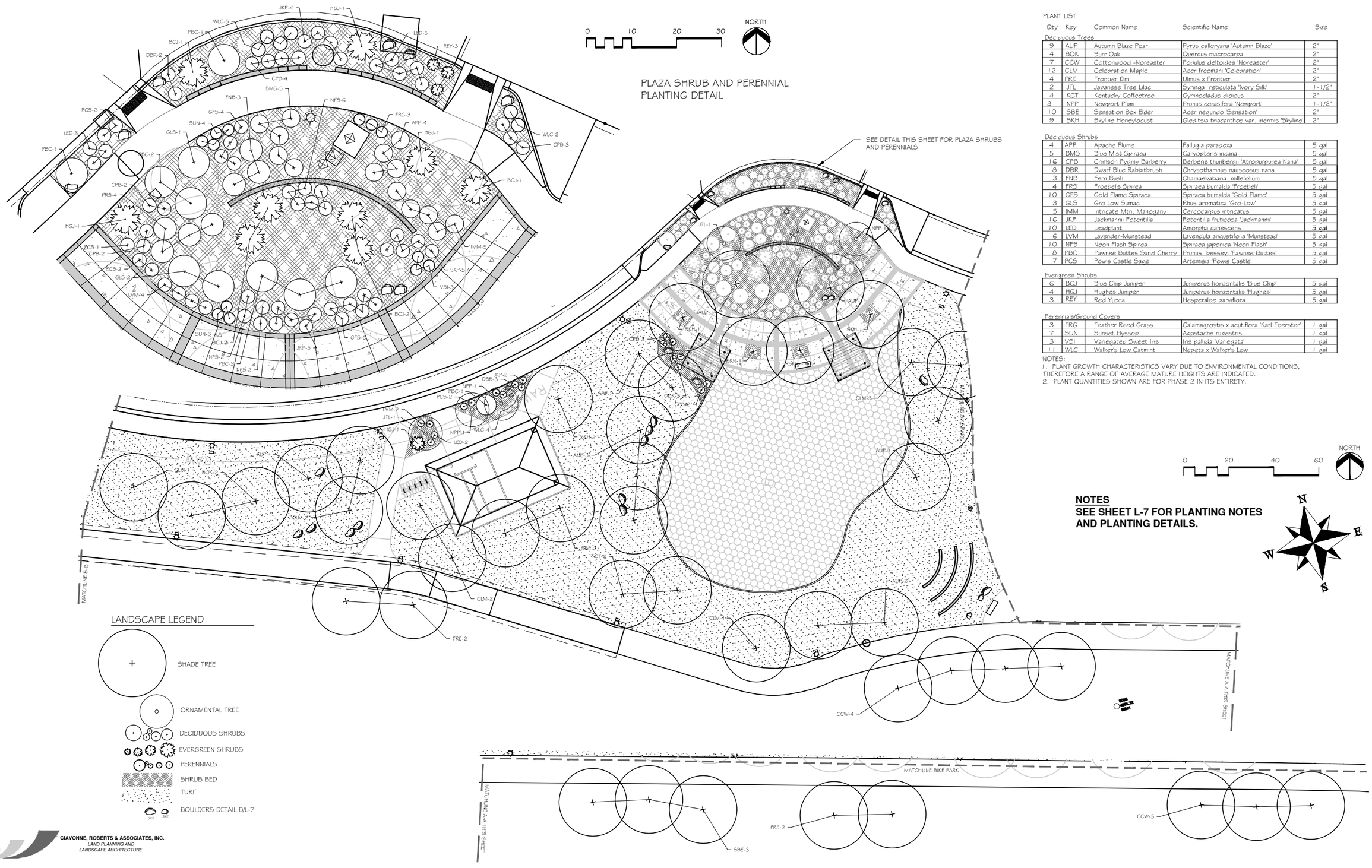

PLANT LIST

Qty	Key	Common Name	Scientific Name	Size
Deciduous Trees				
9	AUP	Autumn Blaze Pear	Pyrus calleryana 'Autumn Blaze'	2"
4	BOK	Burr Oak	Quercus macrocarpa	2"
7	COW	Cottonwood -Noreaster	Populus deltoides 'Noreaster'	2"
12	CLM	Celebration Maple	Acer freemani 'Celebration'	2"
4	FRE	Frontier Elm	Ulmus x Frontier	2"
2	JTL	Japanese Tree Lilac	Syringa reticulata 'Ivory Silk'	1-1/2"
4	KCT	Kentucky Coffeetree	Gymnocladus dioicus	2"
3	NPP	Newport Plum	Prunus cerasifera 'Newport'	1-1/2"
10	SBE	Sensation Box Elder	Acer negundo 'Sensation'	2"
9	SKH	Skyline Honeylocust	Gleditsia triacanthos var. inermis 'Skyline'	2"
Deciduous Shrubs				
4	APP	Apache Plume	Fallugia paradoxa	5 gal
5	BMS	Blue Mist Spiraea	Caryopteris incana	5 gal
16	CPB	Crimson Pygmy Barberry	Berberis thunbergii 'Atropurpurea Nana'	5 gal
8	DBR	Dwarf Blue Rabbitbrush	Chrysothamnus nauseosus nana	5 gal
3	FNB	Fern Bush	Chamaebatiana millefolium	5 gal
4	FRS	Froebel's Spirea	Spiraea bumalda 'Froebeli'	5 gal
10	GFS	Gold Flame Spiraea	Spiraea bumalda 'Gold Flame'	5 gal
3	GLS	Gro Low Sumac	Rhus aromatica 'Gro-Low'	5 gal
5	IMM	Intricate Mtn. Mahogany	Cercocarpus intricatus	5 gal
16	JKP	Jackmanii Potentilla	Potentilla fruticosa 'Jackmanii'	5 gal
10	LED	Leadplant	Amorpha canescens	5 gal
6	LVM	Lavender-Munstead	Lavendula angustifolia 'Munstead'	5 gal
10	NFS	Neon Flash Spirea	Spiraea japonica 'Neon Flash'	5 gal
8	PBC	Pawnee Buttes Sand Cherry	Prunus besseyi 'Pawnee Buttes'	5 gal
7	PCS	Powis Castle Sage	Artemisia 'Powis Castle'	5 gal
Evergreen Shrubs				
6	BCJ	Blue Chip Juniper	Juniperus horizontalis 'Blue Chip'	5 gal
4	HGJ	Hughes Juniper	Juniperus horizontalis 'Hughes'	5 gal
3	REY	Red Yucca	Hesperaloe parviflora	5 gal
Perennials/Ground Covers				
3	FRG	Feather Reed Grass	Calamagrostis x acutiflora 'Karl Foerster'	1 gal
7	SUN	Sunset Hyssop	Agastache rupestris	1 gal
3	VSI	Variegated Sweet Ins	Ins pallida 'Vanegata'	1 gal
11	WLC	Walker's Low Catmint	Nepeta x Walker's Low	1 gal

NOTES:
1. PLANT GROWTH CHARACTERISTICS VARY DUE TO ENVIRONMENTAL CONDITIONS, THEREFORE A RANGE OF AVERAGE MATURE HEIGHTS ARE INDICATED.
2. PLANT QUANTITIES SHOWN ARE FOR PHASE 2 IN ITS ENTIRETY.

NOTES
SEE SHEET L-7 FOR PLANTING NOTES AND PLANTING DETAILS.

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

DESCRIPTION	DATE
REVISION △	
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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

The Riverfront at Dos Rios
DOS RIOS PARK PLANTING

L-6

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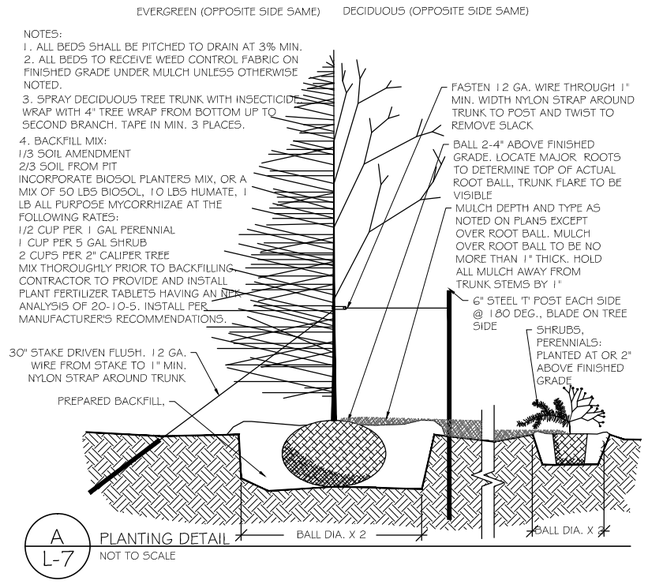
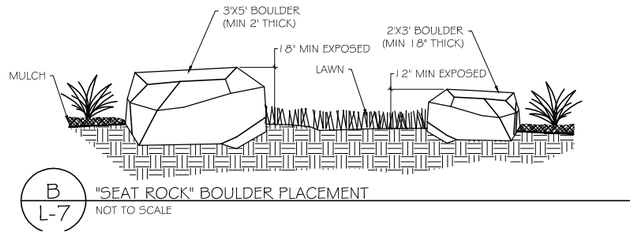




LANDSCAPE LEGEND

SHADE TREE

ORNAMENTAL TREE

DECIDUOUS SHRUBS

EVERGREEN SHRUBS

PERENNIALS

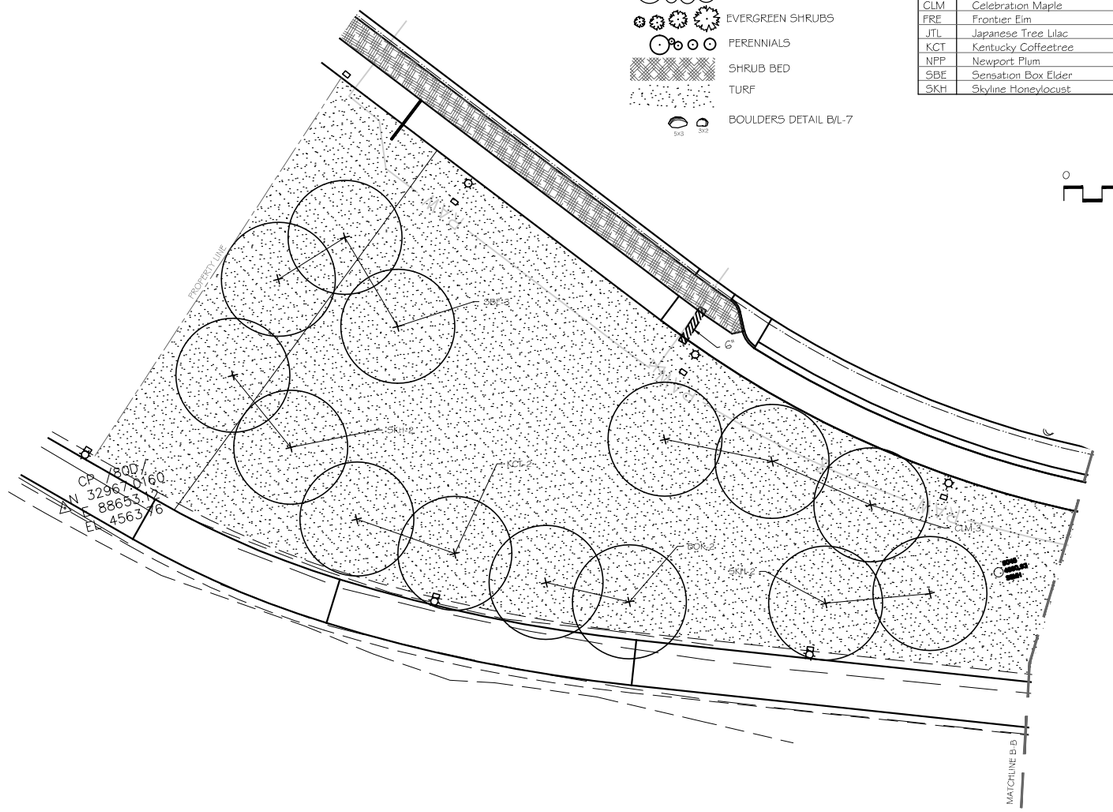
SHRUB BED

TURF

BOULDERS DETAIL B/L-7

PLANT LIST

Key	Common Name	Scientific Name	Size
Deciduous Trees			
AUP	Autumn Blaze Pear	Pyrus calleryana 'Autumn Blaze'	2"
BOK	Burr Oak	Quercus macrocarpa	2"
CCW	Cottonwood -Noreaster	Populus deltoides 'Noreaster'	2"
CLM	Celebration Maple	Acer freemani 'Celebration'	2"
FRE	Frontier Elm	Ulmus x Frontier	2"
JTL	Japanese Tree Lilac	Syringa reticulata 'Ivory Silk'	1-1/2"
KCT	Kentucky Coffeetree	Gymnocladus dioicus	2"
NPP	Newport Plum	Prunus cerasifera 'Newport'	1-1/2"
SBE	Sensation Box Elder	Acer negundo 'Sensation'	2"
SKH	Skyline Honeylocust	Gleditsia tracanthos var. inermis 'Skyline'	2"



0 20 40 60

NORTH

PLANTING NOTES

1. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. ALL LANDSCAPING AND IRRIGATION TO CONFORM TO CURRENT ASSOCIATED LANDSCAPE CONTRACTORS OF COLORADO STANDARDS AND SPECIFICATIONS.
3. EQUAL PART MIXTURE OF ROUND-UP AND 2-4-D DILUTED AS PER MANUFACTURER'S RECOMMENDATIONS SHALL BE APPLIED TO ALL ACTIVELY GROWING WEEDS TWO WEEKS PRIOR TO ANY OPERATIONS.
4. ALL LAWN AREAS TO RECEIVE SOIL AMENDMENT. SHRUB BEDS TO RECEIVE 3 INCH DEPTH OF ROCK MULCH.
5. AREAS TO BE PLANTED (AS PER DRAWINGS) TO RECEIVE SOIL AMENDMENT. REMOVE UNSATISFACTORY MATERIAL (INCLUDING ROAD BASE, ASPHALT, CONCRETE AND TRASH) AND REMOVE FROM SITE. ALL LAWN AREAS AND SHRUB BEDS TO RECEIVE 6 YDS/1000 S.F. SOIL AMENDMENT. SCARIFY ALL AREAS TO RECEIVE SOIL AMENDMENT TO A DEPTH OF 6".
6. SOIL AMENDMENT IS TO CONSIST OF 50% GROUND WELL-AGED MANURE, 50% FINELY GROUND AND AGED WOOD CHIPS. AMENDMENT IS TO BE INCORPORATED WITH FERTILIZER BY TILLING AT THE RATE OF 6 CUBIC YARDS/1000 SF INTO ALL LAWN AREAS.
7. SOIL IS TO BE COMPACTED TO 85% MODIFIED PROCTOR (WHEEL ROLL) TO MINIMIZE SETTLING. BEDS ARE TO BE FILLED TO A DEPTH OF 6" ABOVE ADJACENT EDGE OF CURB, SHAPED TO FORM MOUNDED PLANTING AREA. SHRUB BED TO BE FINISHED WITH A 4:1 SLOPE FROM 2" BELOW ADJACENT CONCRETE TO FINISH GRADE. SHRUB BEDS ADJACENT TO BUILDINGS ARE TO DRAIN AWAY FROM BUILDING.
8. NO WEED FABRIC TO BE USED IN THIS PROJECT
9. TREES ARE TO SPACED AS SCALED FROM THE PLANTING PLAN.
10. ROCK MULCH SHALL BE ¾" CRUSHED GRANITE. ROCK SHALL BE FREE OF TRASH, STICKS, ROOTS OR OTHER DEBRIS.
11. DI-AMMONIUM PHOSPHATE (18-46-0) SHALL BE SUPPLIED IN QUANTITY NECESSARY TO APPLY 1 LB/1000 SF TO ALL LAWN SEED AREAS.
12. LAWN AREAS ARE TO BE HYDROSEEDED WITH SPECIES AND RATES SHOWN ON THIS SHEET AND HYDROMULCHED WITH DYE TO ALLOW INSPECTION FOR COVERAGE. CONTRACTOR IS RESPONSIBLE FOR CLEANING ANY NON-LAWN SURFACES.
13. CONTRACTOR IS TO GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF WORK. CONTRACTOR IS TO MAINTAIN LAWN AREAS AFTER EACH AREA IS SEEDED AND CONTINUE FOR 30 DAYS OR UNTIL FINAL ACCEPTANCE, WHICHEVER IS LONGER.

"LO-MOW" FESCUE LAWN SEED MIX:

*AVAILABLE FROM PRAIRIE NURSERY.COM
https://www.prairienursery.com/resources-and-guides/no-mow-resources/

HYDROSEED 5 lbs/1000 sf

HYDROMULCH:
FOLLOWING SEED APPLICATION, HYDROMULCH 50 lbs/1000 sf.

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND
LANDSCAPE ARCHITECTURE

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REVISION 2	
REVISION 3	
REVISION 4	

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

The Riverfront at Dos Rios
DOS RIOS PARK PLANTING

L-7

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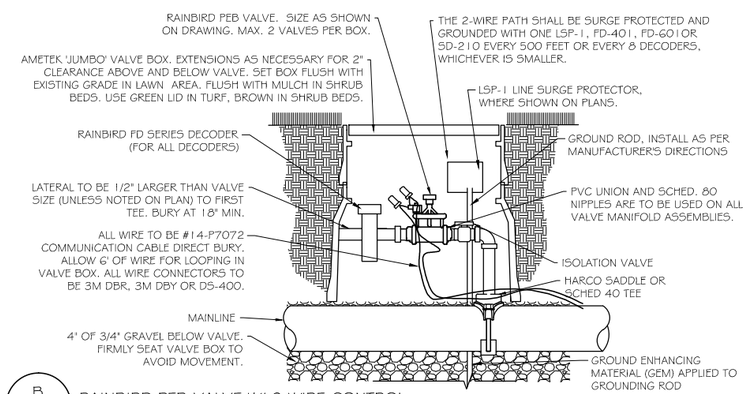
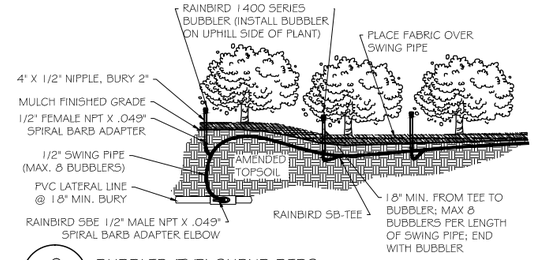


B / 1-1 RAINBIRD PEB VALVE W/ 2 WIRE CONTROL
NOT TO SCALE



C / 1-1 BUBBLER (TYP) SHRUB BEDS
NOT TO SCALE

LEGEND

- 30 RAINBIRD 5000 MPR 1/4 NOZZLE W/RADIUS
- 30 RAINBIRD 5000 MPR 1/3 NOZZLE W/RADIUS
- 30 RAINBIRD 5000 MPR 1/2 NOZZLE W/RADIUS
- 30 RAINBIRD 5000 MPR FULL NOZZLE W/RADIUS
- 4 RAINBIRD 5000 NOZZLE AS SHOWN
- 1804 SERIES SPRAY HEAD WITH R-VAN ROTARY NOZZLE
- R-VAN 14 NOZZLE
- 360 R-VAN 14 360 NOZZLE
- R-VAN 18 NOZZLE
- 360 R-VAN 18 360 NOZZLE
- R-VAN 24 NOZZLE
- 360 R-VAN 24 360 NOZZLE
- 1402 BUBBLER DETAIL B/I-1
- RAW 12" CL900 RAW WATER SUPPLY (BY OTHERS)
- CLASS 200 PVC MAIN, 3"
- LATERAL PVC PIPING 1" UNLESS NOTED
- 2" PIPE SIZING
- IRRIGATION SLEEVE, 4" UNLESS NOTED
- #0 RAINBIRD PEB ZONE VALVE, DETAIL A/I-1 SIZE PER VALVE SCHEDULE
- QUICK COUPLER VALVE DETAIL C/I-2
- MANUAL DRAIN VALVE DETAIL D/I-2

IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	PRECIP RATE	
#1	1-1/2"	TURF STREAM ROTOR	51	.62 in/hr	BIKE PARK
#2	1-1/2"	TURF STREAM ROTOR	79/58	.62 in/hr	
#3	1-1/2"	TURF STREAM ROTOR	67/57	.62 in/hr	
#4	1-1/2"	PLAZA BUBBLERS	40	.25 gal/min	DOS RIOS PARK
#5	1-1/2"	5000 MPR ROTOR	62.9	.62 in/hr	
#6	1-1/2"	SOUTH TREE BUBBLERS	10.5	.25 gal/min	
#7	1-1/2"	TURF STREAM ROTOR	58.0	.62 in/hr	
#8	1-1/2"	5000 ROTOR	46.5	.76 in/hr	
#9	1-1/2"	5000 ROTOR	40.0	.36 in/hr	
#10	1-1/2"	5000 ROTOR	47.0	.43 in/hr	

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

The Riverfront at Dos Rios
DOS RIOS PARK

I-1

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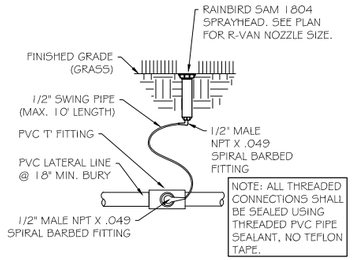
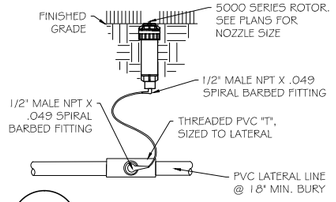
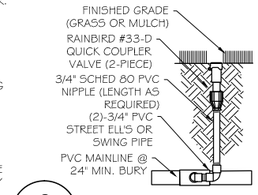


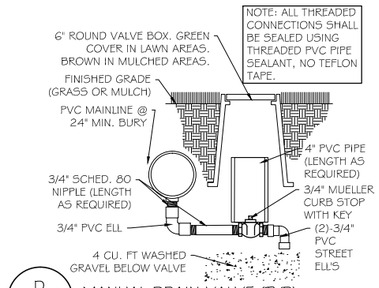
A I-2 RAINBIRD 1804 SPRAYHEAD W/R-VAN NOZZLE
NOT TO SCALE



B I-2 5000 ROTOR
NOT TO SCALE



C I-2 QUICK COUPLER VALVE
NOT TO SCALE



D I-2 MANUAL DRAIN VALVE (TYP)
NOT TO SCALE

LEGEND

- 30 RAINBIRD 5000 MPR 1/4 NOZZLE W/RADIUS
- 30 RAINBIRD 5000 MPR 1/3 NOZZLE W/RADIUS
- 30 RAINBIRD 5000 MPR 1/2 NOZZLE W/RADIUS
- 30 RAINBIRD 5000 MPR FULL NOZZLE W/RADIUS
- 4 RAINBIRD 5000 NOZZLE AS SHOWN
- 1804 SERIES SPRAY HEAD WITH R-VAN ROTARY NOZZLE
- R-VAN 14 NOZZLE
- 360 R-VAN 14 360 NOZZLE
- R-VAN 18 NOZZLE
- 360 R-VAN 18 360 NOZZLE
- R-VAN 24 NOZZLE
- 360 R-VAN 24 360 NOZZLE
- 1402 BUBBLER DETAIL B/I-1
- RAW 12" CL900 RAW WATER SUPPLY (BY OTHERS)
- CLASS 200 PVC MAIN, 3"
- LATERAL PVC PIPING 1" UNLESS NOTED
- 2" PIPE SIZING
- IRRIGATION SLEEVE, 4" UNLESS NOTED
- #0 RAINBIRD PEB ZONE VALVE, DETAIL A/I-1 SIZE PER VALVE SCHEDULE
- QUICK COUPLER VALVE DETAIL C/I-2
- MANUAL DRAIN VALVE DETAIL D/I-2



0 20 40 60 NORTH

IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	PRECIP RATE	
#1	1-1/2"	TURF STREAM ROTOR	51	.62 in/hr	BIKE PARK
#2	1-1/2"	TURF STREAM ROTOR	79/56	.62 in/hr	
#3	1-1/2"	TURF STREAM ROTOR	57/57	.62 in/hr	
#4	1-1/2"	PLAZA BUBBLERS	40	.25 gal/min	DOS RIOS PARK
#5	1-1/2"	5000 MPR ROTOR	62.9	.62 in/hr	
#6	1-1/2"	SOUTH TREE BUBBLERS	10.5	.25 gal/min	
#7	1-1/2"	TURF STREAM ROTOR	58.0	.62 in/hr	
#8	1-1/2"	5000 ROTOR	46.5	.76 in/hr	
#9	1-1/2"	5000 ROTOR	40.0	.36 in/hr	
#10	1-1/2"	5000 ROTOR	47.0	.43 in/hr	

IRRIGATION NOTES:

1. ALL WORK SHALL BE PER EXISTING COUNTY OR STATE CODE AND IS SUBJECT TO INSPECTION AND APPROVAL BY APPROPRIATE INSPECTORS AND THE OWNER'S REPRESENTATIVE.
2. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. IRRIGATION CONTROLLER TO BE PROVIDED BY LICENSED ELECTRICIAN.
4. ALL LATERAL AND MAIN LINES IN SYSTEM WILL BE CONTAINED IN SLEEVES WHEREVER CONCRETE IS TO BE OVERLAID.
5. MAXIMUM LENGTH OF SWING PIPE ON ROTARY HEADS SHALL BE 10 FT., MINIMUM LENGTH SHALL BE 2 FT. MAXIMUM LENGTH OF SWING PIPE ON BUBBLER HEADS TO BE 50'.
6. ALL MAINS SHALL BE BURIED AT A MINIMUM DEPTH OF 18 IN. ALL LATERALS AT A DEPTH OF 18 IN. ALL CONTROL WIRE PLACED BELOW IRRIGATION PIPING FOR PROTECTION.
7. CONTRACTOR TO INSTALL MANUAL DRAIN VALVES AT LOW POINT ON ALL MAIN LINES.
8. SEE SHEET I-3 FOR DETAILS.
9. SYSTEM IS DESIGNED TO OPERATE AT 55 PSI, PROVIDING MINIMUM 45 PSI AT HEADS.
10. WHERE IRRIGATION IS TO BE LOCATED ADJACENT TO FENCING, LATERALS SHALL BE LOCATED 12 INCHES FROM BACK OF WALK AND 3 INCHES FROM FACE OF FENCE.
11. PIPE FROM CONTROL VALVE TO FIRST " TEE" TO USE 1/2" LARGER THAN VALVE UNLESS NOTED OTHERWISE
12. PIPE SIZE NOTATION INDICATES MINIMUM PIPE SIZE DOWNSTREAM FROM THAT POINT.

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

The Riverfront at Dos Rios
DOS RIOS PARK

I-2

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LANDSCAPE LEGEND

SHADE TREE

ORNAMENTAL TREE

SMALLER ROCK TYPE 1 = 1/2" RED DECOMPOSED GRANITE

LARGER ROCK TYPE 2 - 3 INCH COLORADO RIVER ROCK

TURF WITH CONCRETE EDGER

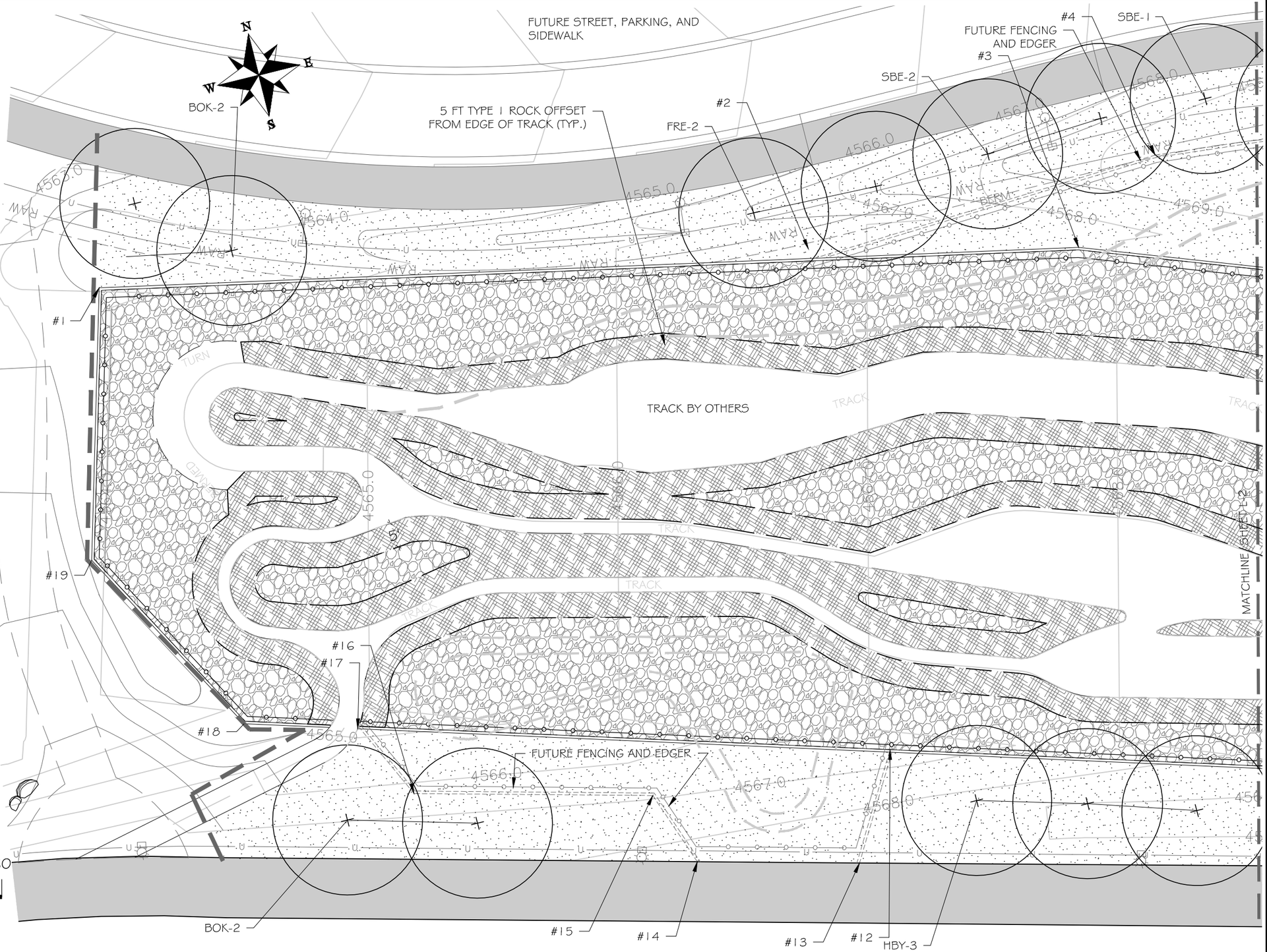
2 RAIL FENCE, SEE DETAIL SHEET L-4

FUTURE 2 RAIL FENCE

FUTURE CONCRETE

NOTES

*** SEE SHEET L-3 FOR PLANTING NOTES, PLANT LIST AND PLANTING DETAILS.**
*** SEE SHEET L-4 FOR FENCING DETAIL**
*** SEE SHEET L-4 FOR EDGER LAYOUT POINTS**
***BIKE TRACK AND OBJECTS ARE AN APPROXIMATION FROM AMERICAN RAMP CO.**



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CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

The Riverfront at Dos Rios
Bike Park Area Landscape

L-1

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HLO-3
FUTURE FENCING AND EDGER
#8
SBE-3
FUTURE STREET AND SIDEWALK
#9
FRE-1
JTL-3
SSA-4
#5
#6
#7
FUTURE FENCING AND EDGER
TRACK BY OTHERS
TRACK
STARTING PLATFORM
MATCHLINE SHEET L-3
#10
#11
SBE-2
5 FT TYPE 1 ROCK OFFSET FROM EDGE OF TRACK (TYP.)
BOK-2
HLO-1
FRE-2
GRT-1

LANDSCAPE LEGEND

- SHADE TREE
- ORNAMENTAL TREE
- SMALLER ROCK TYPE 1 = 1/2" RED DECOMPOSED GRANITE
- LARGER ROCK TYPE 2 - 3 INCH COLORADO RIVER ROCK
- TURF WITH CONCRETE EDGER
- 2 RAIL FENCE, SEE DETAIL SHEET L-4
- FUTURE 2 RAIL FENCE
- FUTURE CONCRETE EDGER

NOTES

*** SEE SHEET L-3 FOR PLANTING NOTES, PLANT LIST AND PLANTING DETAILS.**
*** SEE SHEET L-4 FOR FENCING DETAIL**
*** SEE SHEET L-4 FOR EDGER LAYOUT POINTS**
***BIKE TRACK AND OBJECTS ARE AN APPROXIMATION FROM AMERICAN RAMP CO.**

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CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

The Riverfront at Dos Rios
Bike Park Area Landscape

L-2

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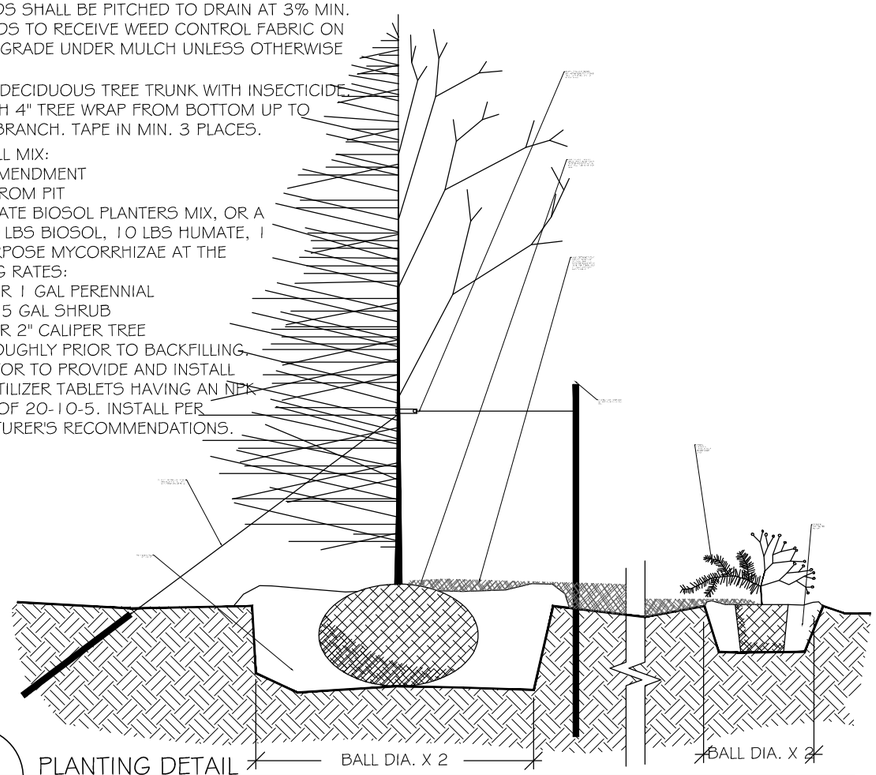
EVERGREEN (OPPOSITE SIDE SAME) DECIDUOUS (OPPOSITE SIDE SAME)

NOTES:
1. ALL BEDS SHALL BE PITCHED TO DRAIN AT 3% MIN.
2. ALL BEDS TO RECEIVE WEED CONTROL FABRIC ON FINISHED GRADE UNDER MULCH UNLESS OTHERWISE NOTED.
3. SPRAY DECIDUOUS TREE TRUNK WITH INSECTICIDE. WRAP WITH 4" TREE WRAP FROM BOTTOM UP TO SECOND BRANCH. TAPE IN MIN. 3 PLACES.
4. BACKFILL MIX:
1/3 SOIL AMENDMENT
2/3 SOIL FROM PIT
INCORPORATE BIOSOL PLANTERS MIX, OR A MIX OF 50 LBS BIOSOL, 10 LBS HUMATE, 1 LB ALL PURPOSE MYCORRHIZAE AT THE FOLLOWING RATES:
1/2 CUP PER 1 GAL PERENNIAL
1 CUP PER 5 GAL SHRUB
2 CUPS PER 2" CALIPER TREE
MIX THOROUGHLY PRIOR TO BACKFILLING.
CONTRACTOR TO PROVIDE AND INSTALL PLANT FERTILIZER TABLETS HAVING AN NPK ANALYSIS OF 20-10-5. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.



A / L-3 PLANTING DETAIL
NOT TO SCALE

PLANTING NOTES

1. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. ALL LANDSCAPING AND IRRIGATION TO CONFORM TO CURRENT ASSOCIATED LANDSCAPE CONTRACTORS OF COLORADO STANDARDS AND SPECIFICATIONS.
3. EQUAL PART MIXTURE OF ROUND-UP AND 2-4-D DILUTED AS PER MANUFACTURER'S RECOMMENDATIONS SHALL BE APPLIED TO ALL ACTIVELY GROWING WEEDS TWO WEEKS PRIOR TO ANY OPERATIONS.
4. ALL LAWN AREAS TO RECEIVE SOIL AMENDMENT. SHRUB BEDS TO RECEIVE AND 3 INCH DEPTH OF ROCK MULCH.
5. AREAS TO BE PLANTED (AS PER DRAWINGS) TO RECEIVE SOIL AMENDMENT. REMOVE UNSATISFACTORY MATERIAL (INCLUDING ROAD BASE, ASPHALT, CONCRETE AND TRASH) AND REMOVE FROM SITE. ALL LAWN AREAS TO RECEIVE 6 YDS/1000 S.F. SOIL AMENDMENT. SCARIFY ALL AREAS TO RECEIVE SOIL AMENDMENT TO A DEPTH OF 6".
6. SOIL AMENDMENT IS TO CONSIST OF 50% GROUND WELL-AGED MANURE, 50% FINELY GROUND AND AGED WOOD CHIPS. AMENDMENT IS TO BE INCORPORATED WITH FERTILIZER BY TILLING AT THE RATE OF 6 CUBIC YARDS/1000 SF INTO ALL LAWN AREAS.
7. SOIL IS TO BE COMPACTED TO 85% MODIFIED PROCTOR (WHEEL ROLL) TO MINIMIZE SETTLING. BEDS ARE TO BE FILLED TO A DEPTH OF 6" ABOVE ADJACENT EDGE OF CURB, SHAPED TO FORM MOUNDED PLANTING AREA. SHRUB BED TO BE FINISHED WITH A 4:1 SLOPE FROM 2" BELOW ADJACENT CONCRETE TO FINISH GRADE. SHRUB BEDS ADJACENT TO BUILDINGS ARE TO DRAIN AWAY FROM BUILDING.
8. NO WEED FABRIC TO BE USED IN THIS PROJECT
9. TREES ARE TO SPACED AS SCALED FROM THE PLANTING PLAN.
10. ROCK MULCH SHALL BE OF TYPES SPECIFIED PER AREA ON PLANS. ROCK SHALL BE FREE OF TRASH, STICKS, ROOTS OR OTHER DEBRIS.
11. DI-AMMONIUM PHOSPHATE (18-46-0) SHALL BE SUPPLIED IN QUANTITY NECESSARY TO APPLY 1 LB/1000 SF TO ALL LAWN SEED AREAS.
12. LAWN AREAS ARE TO BE HYDROSEEDED WITH SPECIES AND RATES SHOWN ON THIS SHEET AND HYDROMULCHED WITH DYE TO ALLOW INSPECTION FOR COVERAGE. CONTRACTOR IS RESPONSIBLE FOR CLEANING ANY NON-LAWN SURFACES.
13. CONTRACTOR IS TO GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF WORK. CONTRACTOR IS TO MAINTAIN LAWN AREAS AFTER EACH AREA IS SEEDED AND CONTINUE FOR 30 DAYS OR UNTIL FINAL ACCEPTANCE, WHICHEVER IS LONGER.

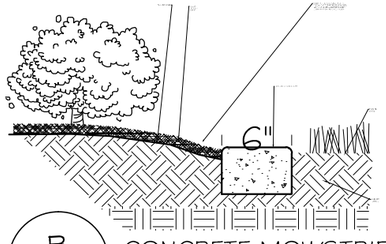
NOTE:

STATE LAW REQUIRES THESE PLANS TO BE PREPARED AND STAMPED BY A LICENSED LANDSCAPE ARCHITECT. SUBSEQUENTLY, ANY CHANGES OR MODIFICATIONS TO THESE PLANS, INCLUDING BUT NOT LIMITED TO LANDSCAPE MATERIAL SUBSTITUTIONS AND/OR RELOCATIONS, MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. FAILURE TO DO SO IS CONSIDERED A CRIMINAL OFFENSE PER CRS 12-45.

PLANT LIST

Qty	Key	Common Name	Scientific Name	Size	Mature Height
Deciduous Trees					
6	BOK	Burr Oak	Quercus macrocarpa	2"	50-60'
5	FRE	Frontier Elm	Ulmus x Frontier	2"	25-35'
1	GRT	Golden Rain Tree	Koelreuteria paniculata	1-1/2"	25-30'
3	HBY	Hackberry	Celtis occidentalis	2"	35-60'
4	HLO	Sunburst Honeylocust	Gleditsia triacanthos inermis 'Sunburst'	2"	45-70'
3	JTL	Japanese Tree Lilac	Syringa reticulata 'Ivory Silk'	1-1/2"	15-18'
8	SBE	Sensation Box Elder	Acer negundo 'Sensation'	2"	25-40'
4	SSA	Spring Snow Crabapple	Malus 'Spring Snow'	1-1/2"	15-20'

NOTES:
1. PLANT GROWTH CHARACTERISTICS VARY DUE TO ENVIRONMENTAL CONDITIONS, THEREFORE A RANGE OF AVERAGE MATURE HEIGHTS ARE INDICATED.
2. QUANTITIES SHOWN ARE INCLUSIVE OF ALL SHEETS



B / L-3 CONCRETE MOWSTRIP
NOTES:
EDGER OCCURS WHERE INDICATED ON PLAN. ALL CURVES TO BE SMOOTH IN TRANSITION, ALL CORNERS TO BE SQUARE. TOP OF EDGER TO BE SAME AS ADJACENT FINISHED GRADE.
NOT TO SCALE

"LO-MOW" FESCUE LAWN SEED MIX:

*AVAILABLE FROM PRAIRIE NURSERY.COM
https://www.prairienursery.com/resources-and-guides/no-mow-resources/

HYDROSEED 5 lbs/1000 sf

HYDROMULCH:
FOLLOWING SEED APPLICATION, HYDROMULCH 50 lbs/1000 sf.

CONCRETE LANDSCAPE EDGER
POINT OF INTERSECTION TABLE

PNT#	NORTHING	EASTING	EDGER IN THIS CONTRACT	EDGER IN FUTURE
1	32829.7	89309.8	X	
2	32800.5	89450		X
3	32789.7	89501.9	X	
4	32803.9	89521.2		X
5	32801.3	89547.6		X
6	32791.7	89584.1		X
7	32779.5	89611.7		X
8	32740.3	89635.7		X
9	32723.3	89681.9	X	
10	32657.3	89699.2	X	

PNT#	NORTHING	EASTING	EDGER IN THIS CONTRACT	EDGER IN FUTURE
11	32626.4	89690	X	
12	32700.9	89441		X
13	32680.9	89429.3		X
14	32689.1	89397.9		X
15	32704.1	89392.5		X
16	32716.1	89346.2		X
17	32731.9	89338.7		X
18	32738	89316.6	X	
19	32777.1	89295.1	X	

** FUTURE POINTS ARE PROVIDED FOR CURRENT CONTRACT IRRIGATION LAYOUT CONVENIENCE

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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REVISION △	
REVISION △	
REVISION △	

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APPROVED BY TCP DATE 2020

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

The Riverfront at Dos Rios
Bike Park Area Landscape

L-3

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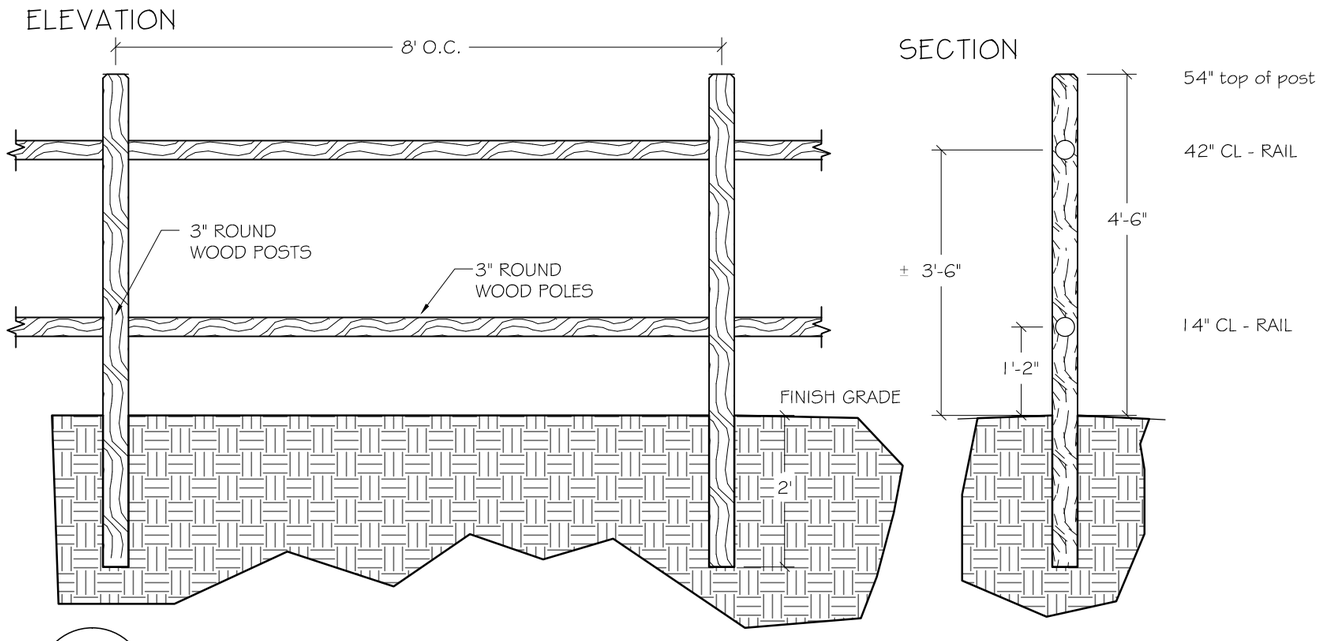

C / L-4 2 RAIL FENCE
NOT TO SCALE

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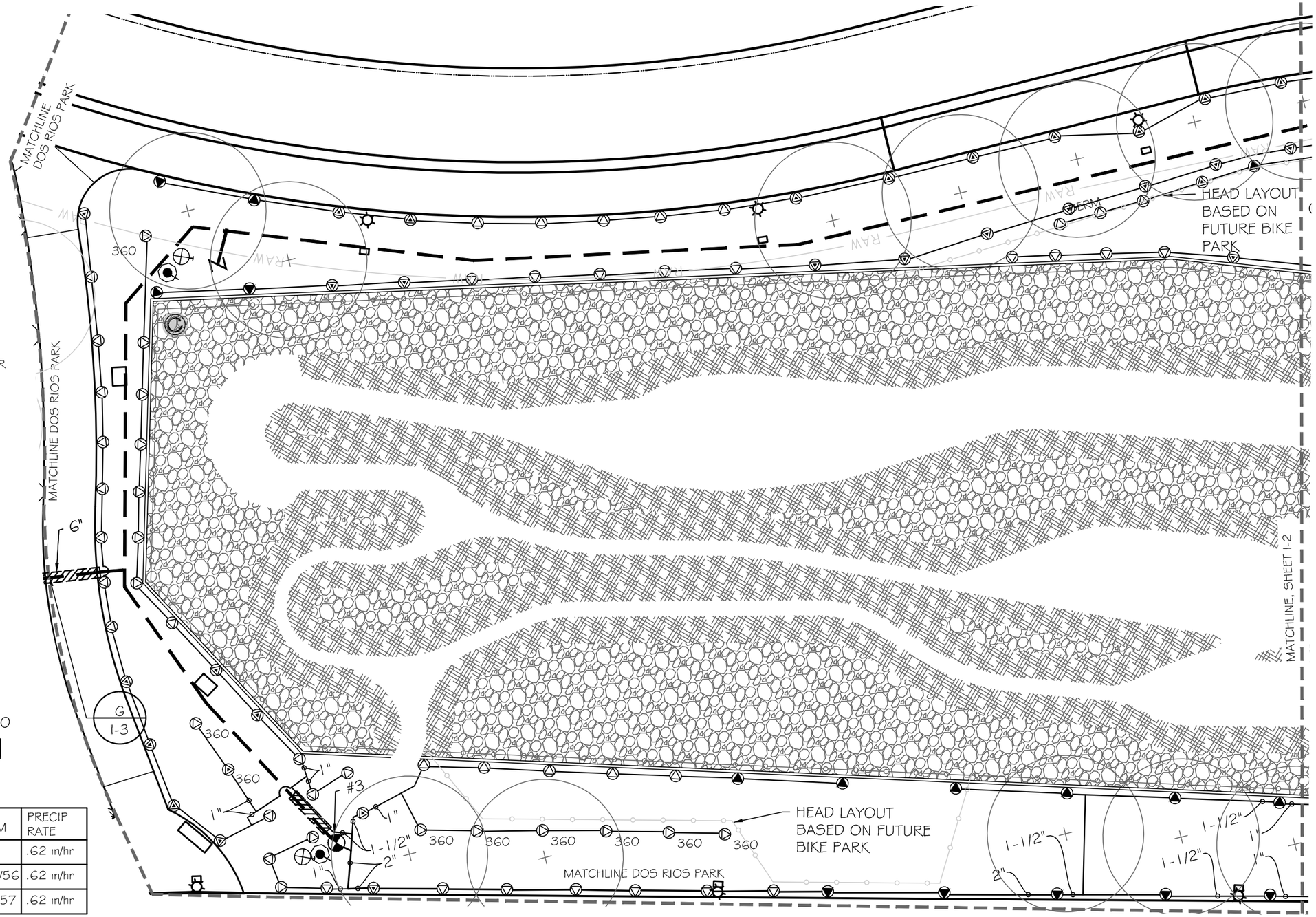
The Riverfront at Dos Rios
Bike Park Area Landscape

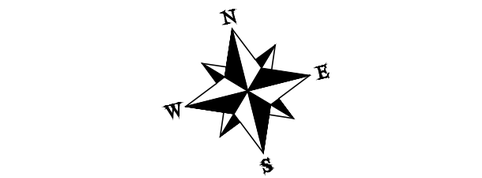
L-4

LEGEND

- RAINBIRD 1804 SERIES SPRAY HEAD WITH R-VAN ROTARY NOZZLE
- R-VAN 14 NOZZLE
- 360 R-VAN 14 360 NOZZLE
- R-VAN 18 NOZZLE
- 360 R-VAN 18 360 NOZZLE
- R-VAN 24 NOZZLE
- 360 R-VAN 24 360 NOZZLE
- RAW — 12" CL900 RAW WATER SUPPLY
- CLASS 200 PVC MAIN, 3"
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- 2" PIPE SIZING
- IRRIGATION SLEEVE, 4" UNLESS NOTED OTHERWISE
- N IRRIGATION CONNECTION DETAIL A/I-3
- C RAINBIRD LX-D IRRIGATION CONTROLLER WITH GROUND, DETAIL C/I-3, D/I-3
- #0 RAINBIRD PEB ZONE VALVE, SIZE PER VALVE SCHEDULE, DETAIL B/I-3
- QUICK COUPLER VALVE DETAIL F/I-3
- MANUAL DRAIN VALVE DETAIL H/I-3

NOTES
SEE SHEET I-3 FOR IRRIGATION NOTES AND IRRIGATION DETAILS.





IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	PRECIP RATE
#1	1-1/2"	TURF STREAM ROTOR	51	.62 in/hr
#2	1-1/2"	TURF STREAM ROTOR	79/56	.62 in/hr
#3	1-1/2"	TURF STREAM ROTOR	67/57	.62 in/hr

* SECOND GPM ESTIMATE IS FOLLOWING BIKE PARK EXPANSION
* OPTIMUM PRESSURE FOR ZONES: 45 PSI

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The Riverfront at Dos Rios
Bike Park Area Irrigation

I-1

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IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	PRECIP RATE
#1	1-1/2"	TURF STREAM ROTOR	51	.62 in/hr
#2	1-1/2"	TURF STREAM ROTOR	79/56	.62 in/hr
#3	1-1/2"	TURF STREAM ROTOR	67/57	.62 in/hr

* SECOND GPM ESTIMATE IS FOLLOWING BIKE PARK EXPANSION
* OPTIMUM PRESSURE FOR ZONES: 45 PSI

LEGEND

- RAINBIRD 1804 SERIES SPRAY HEAD WITH R-VAN ROTARY NOZZLE
- R-VAN 14 NOZZLE
- 360 R-VAN 14 360 NOZZLE
- R-VAN 18 NOZZLE
- 360 R-VAN 18 360 NOZZLE
- R-VAN 24 NOZZLE
- 360 R-VAN 24 360 NOZZLE
- RAW — 12" CL900 RAW WATER SUPPLY
- CLASS 200 PVC MAIN, 3"
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- 2" PIPE SIZING
- IRRIGATION SLEEVE, 4" UNLESS NOTED OTHERWISE
- N IRRIGATION CONNECTION DETAIL A/I-3
- C RAINBIRD LX-D IRRIGATION CONTROLLER WITH GROUND, DETAIL C/I-3, D/I-3
- #0 RAINBIRD PEB ZONE VALVE, SIZE PER VALVE SCHEDULE, DETAIL B/I-3
- QUICK COUPLER VALVE DETAIL F/I-3
- MANUAL DRAIN VALVE DETAIL H/I-3

HEAD LAYOUT BASED ON FUTURE BIKE PARK

G I-3

MATCHLINE, SHEET I-1

12" RCP (E END NOT LOCATED)

MATCHLINE DOS RIOS PARK

PIN /CAP

NOTES
SEE SHEET I-3 FOR IRRIGATION NOTES AND IRRIGATION DETAILS.

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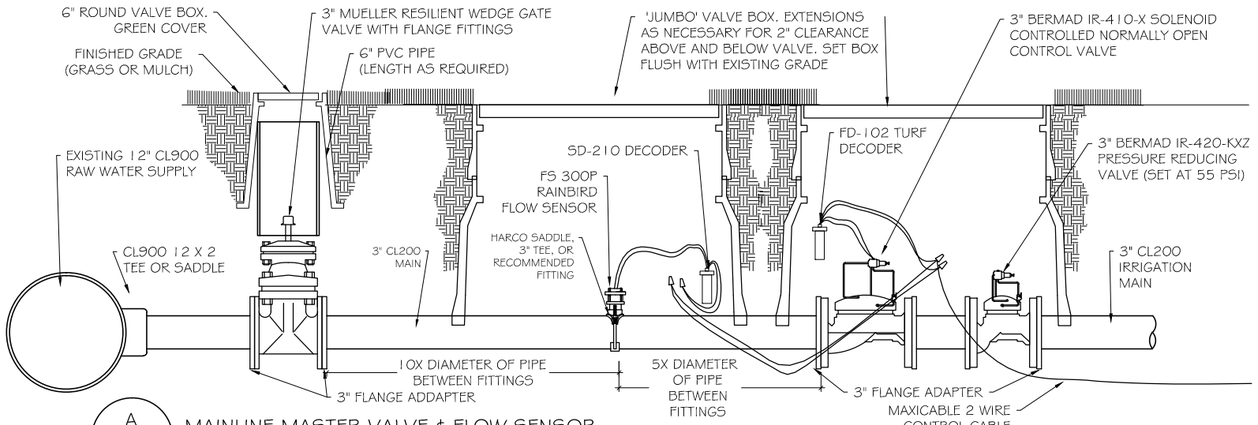
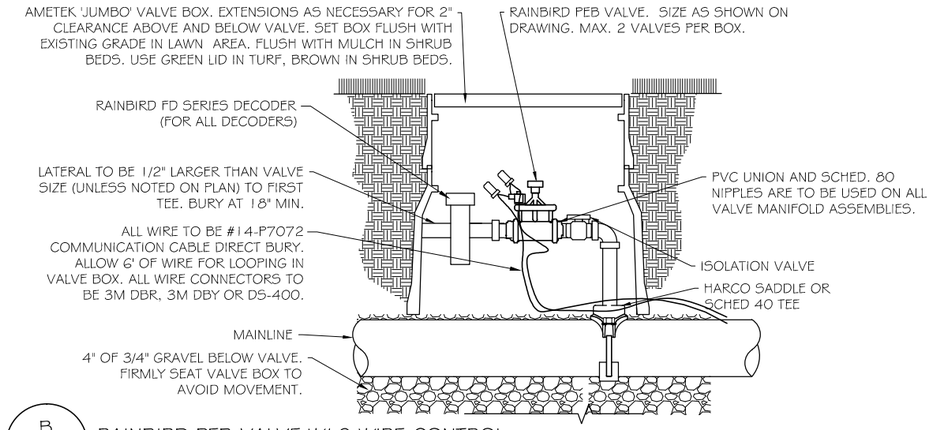
The Riverfront at Dos Rios
Bike Park Area irrigation

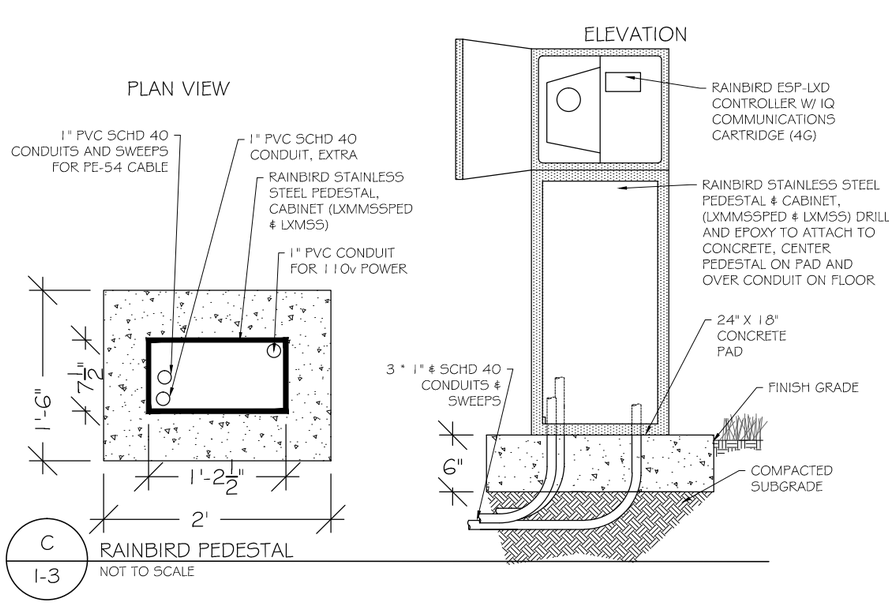
I-2



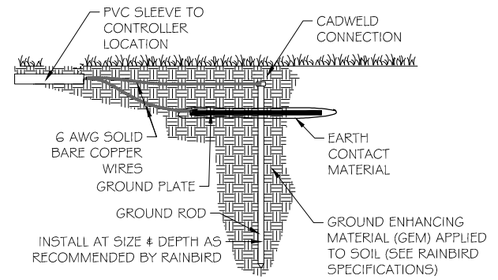
A / I-3 MAINLINE MASTER VALVE & FLOW SENSOR
NOT TO SCALE



B / I-3 RAINBIRD PEB VALVE W/ 2 WIRE CONTROL
NOT TO SCALE

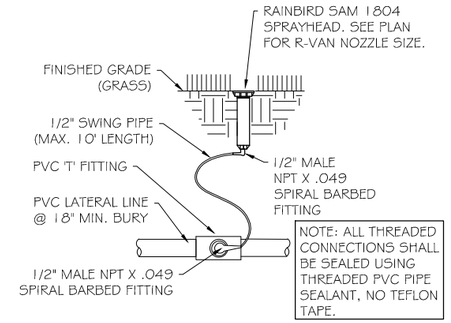


C / I-3 RAINBIRD PEDESTAL
NOT TO SCALE

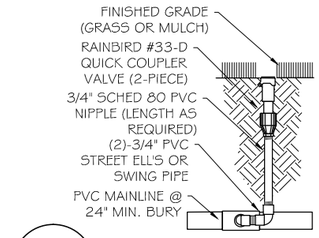


SEE SPECIFICATIONS FOR GROUNDING

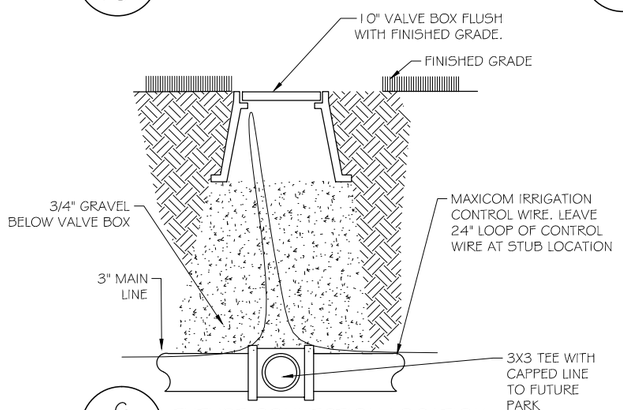
D / I-3 GROUND PLATE & GROUNDING ROD
NOT TO SCALE



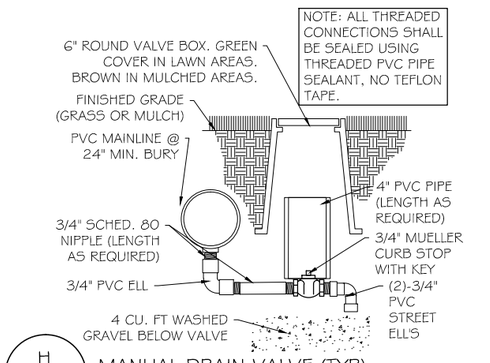
E / I-3 RAINBIRD 1804 SPRAYHEAD W/R-VAN NOZZLE
NOT TO SCALE



F / I-2 QUICK COUPLER VALVE
NOT TO SCALE



G / I-3 FUTURE CONNECTION LOCATION
NOT TO SCALE



H / I-3 MANUAL DRAIN VALVE (TYP)
NOT TO SCALE

IRRIGATION NOTES:

1. ALL WORK SHALL BE PER EXISTING COUNTY OR STATE CODE AND IS SUBJECT TO INSPECTION AND APPROVAL BY APPROPRIATE INSPECTORS AND THE OWNER'S REPRESENTATIVE.
2. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. IRRIGATION CONTROLLER TO BE PROVIDED BY LICENSED ELECTRICIAN.
4. ALL LATERAL AND MAIN LINES IN SYSTEM WILL BE CONTAINED IN SLEEVES WHEREVER CONCRETE IS TO BE OVERLAID.
5. MAXIMUM LENGTH OF SWING PIPE ON ALL HEADS SHALL BE 10 FT., MINIMUM LENGTH SHALL BE 2 FT.
6. ALL MAINS SHALL BE BURIED AT A MINIMUM DEPTH OF 18 IN. ALL LATERALS AT A DEPTH OF 18 IN. ALL CONTROL WIRE PLACED BELOW IRRIGATION PIPING FOR PROTECTION.
7. CONTRACTOR TO INSTALL MANUAL DRAIN VALVES AT LOW POINT ON ALL MAIN LINES.
8. SEE SHEET I-3 FOR DETAILS.
9. SYSTEM IS DESIGNED TO OPERATE AT 55 PSI, PROVIDING MINIMUM 45 PSI AT HEADS.
10. WHERE IRRIGATION IS TO BE LOCATED ADJACENT TO FENCING, LATERALS SHALL BE LOCATED 12 INCHES FROM BACK OF WALK AND 3 INCHES FROM FACE OF FENCE.
11. PIPE FROM CONTROL VALVE TO FIRST " TEE" TO USE 1/2" LARGER THAN VALVE UNLESS NOTED OTHERWISE
12. PIPE SIZE NOTATION INDICATES MINIMUM PIPE SIZE DOWNSTREAM FROM THAT POINT.

CIAVONNE, ROBERTS & ASSOCIATES, INC.
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ENGINEERING DIVISION

The Riverfront at Dos Rios
Bike Park Area Irrigation

I-3

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STREET LIGHTING GENERAL NOTES:

1. THIS PROJECT WILL BE BID FOR THE INSTALLATION OF THE PEDESTRIAN, AND STREET LIGHTING. BASE PROJECT: COMPLETE THE MAIN PATH PEDESTRIAN AND STREET LIGHTING FOR PHASE 2 THE RIVER FRONT AT DOS RIOS.

2. THIS PROJECT CONSISTS OF WORK TO INSTALL ALL WIRING, CONDUIT, PULL BOXES, AND POWER PANEL. REFERENCE SCHEDULE OF LIGHTING DEVICES AND SUMMARY OF QUANTITIES.

3. TYPES "SA & SB" LIGHT STANDARD & LUMINARIES (PEDESTRIAN AND STREET LIGHT), SHALL INCLUDE THE FOLLOWING ITEMS FROM VISUAL INTEREST LIGHTING LOCATED AT 3444 BRIGHTON BLVD, DENVER, CO 80216, 303.861.8448.

4. TYPE "SA" PHILLIP GARDCO GL13-1-2-70LA-6345-NW-UNV-BLP-LF, PROVIDE COLLISION BREAK AWAY CONNECTORS. FIXTURE TO BE 15' ABOVE FINISHED GRADE TO BOTTOM OF LIGHT. POLE #FRS-15-4-D1-BLP

5. TYPE "SB" PHILLIP GARDCO GL18-1-2-2230LA-9600-NW-UNV-LF-PC-RPA2, PROVIDE COLLISION BREAK AWAY CONNECTORS. FIXTURE TO BE 27' ABOVE FINISHED GRADE TO BOTTOM OF LIGHT. POLE #FRS-27-5-D1-BLP

6. PROVIDE 2 TOTAL NEW MILL BANK PANELS (PP2, PP3), 208V, 3PH, 4W 100A , #CP3B515IXK42CSXCSL1 LOCATED AS SHOWN IN DRAWINGS. PANEL PP1 IS EXISTING AND TO BE REUSED AS SHOWN IN DRAWINGS

7. ALL PEDESTRIAN LIGHTING FIXTURES(TYPE "SA") INSTALLED ON THE PROJECT WILL BE CONTROLLED WITH A ELECTRICAL CONTRACTOR SUPPLIED PHOTO CELL TO BE LOCATED IN EACH NEW MILBANK POWER PEDESTALS IN SWITCHED SECTION OF PANEL. ORIENT PANEL SO THAT PHOTOCELL WILL BE ORIENTED NORTH, TYPICAL.

8. ALL STREET LIGHTING FIXTURES(TYPE "SB") WILL EACH BE ORDERED WITH THEIR OWN PHOTOCELL INSTALLED IN THE FIXTURE, AND POWERED WITH NEW 208 VOLT 3PHASE MILBANK POWER PEDESTAL ON UN-SWITCHED SECTION.

9. PROVIDE 2" PVC SCHEDULE 80 CONDUIT BETWEEN EACH JUNCTION BOX LABELED "UB".

10. COORDINATE LOCATION AND WIRING FOR SPRINKLER CONTROLLER WITH PROVIDER PRIOR TO TRENCHING, REFERENCE DRAWING E6.

11. ELEVATIONS SHOWN IN THE SCHEDULE OF LIGHTING DEVICES ON THE PLANS SHEETS REPRESENT THE DESIGN FINISHED GRADE OR THE EXISTING GROUND FINISHED GRADE. THESE ELEVATIONS DO NOT INDICATE THE TOP ELEVATION OF THE LUMINARIES (PEDESTRIAN) FOUNDATION. PEDESTRIAN LIGHTING FOUNDATIONS SHALL BE CONSTRUCTED PER THE MANUFACTURERS RECOMMENDATIONS.

12. PULL BOXES FOR LIGHT STANDARD (PEDESTRIAN AND STREET) WILL BE TYPE 1 CDOT PULL BOXES 11"X18"X12".

13. PULL BOXES WILL BE INSTALLED IN GRADES WITHOUT CONCRETE WHERE POSSIBLE.

14. ALL ELECTRICAL CONDUIT SHALL BE SCHEDULE 80 PVC UNLESS NOTED OTHERWISE, TYPICAL.

15. UNLESS OTHERWISE NOTED, THE WORK DESCRIBED ON THE PLANS SHALL INCLUDE PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM. FURNISH ALL REQUIRED ITEMS WHETHER SUCH ARE SPECIFICALLY SHOWN OR NOT.

16. INFORMATION SHOWN ON DRAWINGS IS DIAGRAMMATIC ONLY AND SHALL NOT BE SCALED. OBTAIN VERIFY EXACT LOCATIONS, MEASUREMENTS, LEVELS, SPACE REQUIREMENTS, POTENTIAL CONFLICTS AMONG TRADES AND FOR ADJUSTING THE WORK REQUIRED BY THE ACTUAL CONDITIONS OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDER GROUND OBSTRUCTIONS AND MAKING ALLOWANCES FOR FIELD ADJUSTMENT OF LOCATION OF LUMINARIES TO AVOID SHUT DOWN OF ANY SERVICES OR SYSTEMS THAT ARE TO REMAIN.

17. BEFORE SUBMITTING THE BID ELECTRICAL CONTRACTOR SHALL VISIT AND EXAMINE THE PREMISES AND/OR JOB SITE SO AS TO ASCERTAIN THE EXISTING CONDITIONS IN WHICH THE CONTRACTOR WILL BE OBLIGED TO OPERATE IN PERFORMING HIS PART OF THE CONTRACT TO ANTICIPATE ANY POSSIBLE SPACE RESTRICTIONS OR CONSTRAINTS THAT COULD AFFECT THE TIMELY COMPLETION OF THE ELECTRICAL WORK IN ACCORDANCE WITH THE INTENT OF THE SPECIFICATIONS AND DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL REPORT TO THE THE PROJECT ENGINEER OR GENERAL CONTRACTOR ANY CONDITIONS THAT MIGHT PREVENT THE SPECIFIED ELECTRICAL WORK FROM BEING PERFORMED IN THE MANNER INTENDED. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED TO THE ELECTRICAL CONTRACTOR FOR FAILURE TO VISIT THE PROJECT SITE, OR FOR ANY ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED OR WORK TO BE DONE..

18. THE ELECTRICAL CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL TRADES WHOSE WORK RELATES TO OR IS DEPENDENT ON ELECTRICAL WORK TO BECOME FULLY INFORMED OF THE EXTENT AND CHARACTER OF THEIR SPECIFIED WORK AND BE ABLE TO COORDINATE WITH OTHER TRADES WHILE AVOIDING POSSIBLE INTERFERENCE WITH THE ELECTRICAL WORK.

19. THE CONTRACTOR SHALL USE CONDUIT PLUGS AND SEALING PLUGS FOR SEALING ALL EMPTY CONDUITS AND CONDUITS OCCUPIED WITH CABLING, RESPECTIVELY, INSTALLED UNDER THIS CONTRACT. CONDUIT PLUGS SHALL BE MANUFACTURED FROM HIGH-IMPACT PLASTIC COMPONENTS, COMBINED WITH DURABLE ELASTIC GASKETS. THEY SHALL BE CORROSION PROOF AND APPROPRIATE FOR USE AS EITHER A LONG-TERM OR TEMPORARY SEAL. CONDUIT PLUGS SHALL BE REMOVABLE AND REUSABLE. THEY SHALL BE BOTH WATERTIGHT AND AIRTIGHT TO PREVENT THE FLOW OF WATER AND BUILDUP OF SEDIMENTATION WITHIN THE CONDUIT. EACH CONDUIT PLUG SHALL BE EQUIPPED WITH A ROPE TIE DEVICE TO ALLOW THE SECURING OF PULL ROPE TO THE PLUG'S BACK COMPRESSION PLATE. THE CONTRACTOR SHALL ATTACH THE PULL ROPE TO THE BACK COMPRESSION PLATE OF THE PLUG AND STORE EXCESS SLACK PULL ROPE BEHIND THE PLUG WITHIN THE CONDUIT FOR FUTURE USE.

20. LIGHT LEVELS FOR PATHWAYS WAS DESIGNED FOR A MINIMUM OF 0.6 FOOT-CANDLES AS RECOMMENDED BY THE ILLUMINATION ENGINEERS SOCIETY(IES). CHANGES TO LIGHTING WILL REQUIRE RECALCULATION OF LIGHT LEVELS TO INSURE ADEQUATE COVERAGE.

PP1-X ELECTRICAL CIRCUIT NUMBER (REFER TO PANEL SCHEDULES)

UB □ HEAVY DUTY, TRAFFIC RATED, FLUSH-TO-GRADE POLYMER CONCRETE SPLICE BOX WITH HEAVY DUTY, TRAFFIC RATED, BOLTED COVER. 11"X18"X12" TYPE 1. NUMBER ASSOCIATED IS NOT THE QUANTITY BUT THE IDENTIFIER ONLY.

UNDER GROUND BURIED RACEWAY (2#6 THWN CU AND 1#8 GND) IN 2" PVC CONDUIT (UNLESS NOTED OTHERWISE ON PLANS) IN 24" DEEP TRENCH, BURY AND COMPACTED BACKFILL TO CITY STANDARDS.

INSTALL SINGLE ARM PEDESTRIAN STANDARD OR STREET STANDARD AS SPECIFIED. NUMBER ASSOCIATED IS NOT THE QUANTITY BUT THE IDENTIFIER ONLY.

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EMAIL: joelm@ACMengrs.com

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DRAWN BY AJM DATE 5-6-2020
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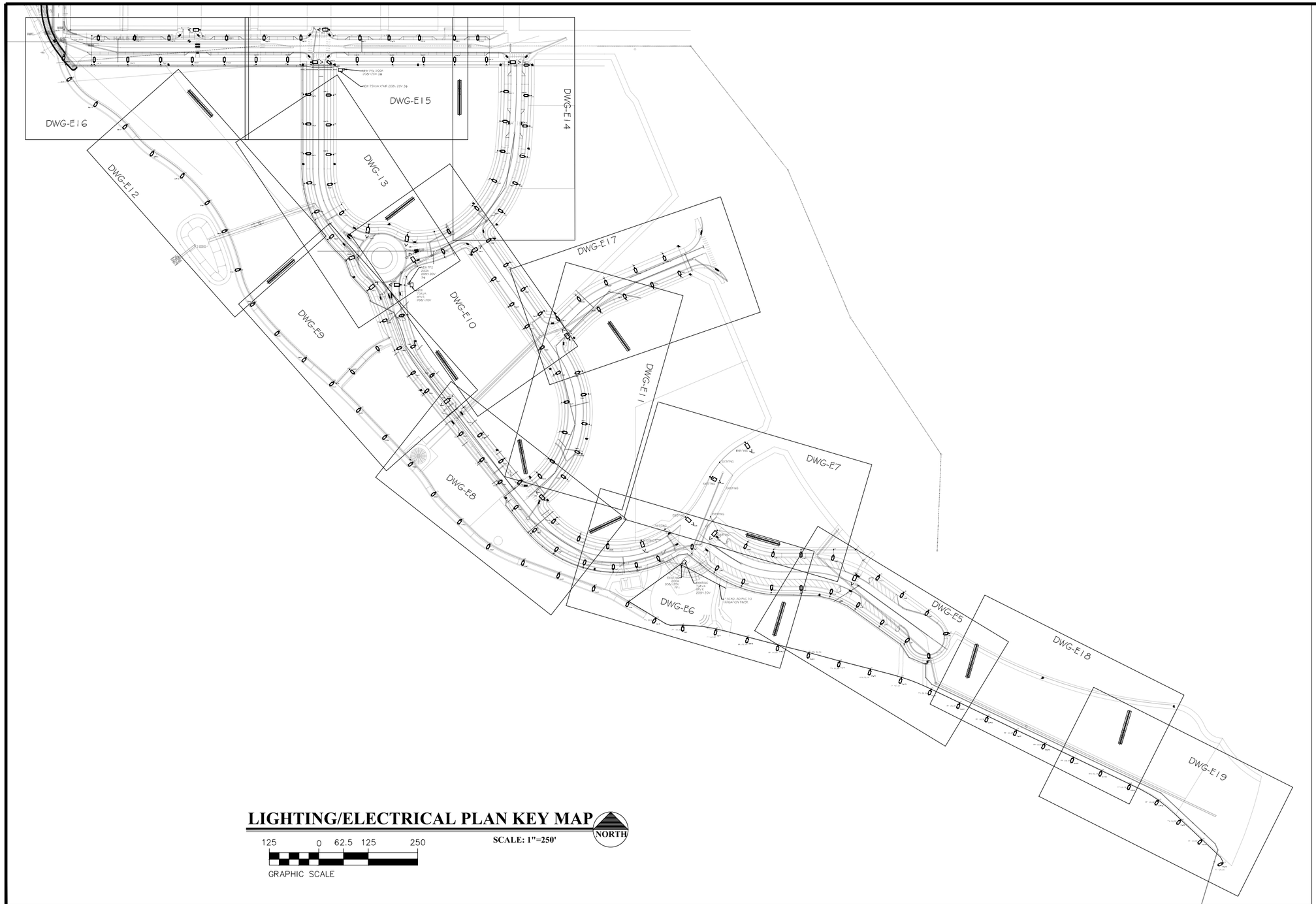
CHECKED BY AJM DATE 5-6-2020
APPROVED BY BH DATE 5-6-2020

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
COVER SHEET PLAN



LIGHTING/ELECTRICAL PLAN KEY MAP

NORTH

SCALE: 1"=250'

125 0 62.5 125 250

GRAPHIC SCALE

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
COMPOSITE UTILITY PLAN

Schedule of Lighting Devices

DESCRIPTION				LUMINAIRE LED PEDESTRIAN (70 WATT) TYPE SA	FOUNDATION SPECIAL	LUMINAIRE LED STREET (250 WATT) TYPE SB	NOTES
				EACH	EACH	EACH	
SHEET NO.	TYPE	NORTH	EAST	PLAN	PLAN	PLAN	
E5	SA-1	89825.877	32646.663	1	1		1
E5	SA-2	89766.867	32688.009	1	1		1
E5	SA-3	89875.282	32710.292	1	1		1
E5	SA-4	89704.615	32732.812	1	1		1
E5	SA-5	89824.337	32766.157	1	1		1
E5	SA-6	89643.788	32776.589	1	1		1
E5	SA-8	89577.506	32809.046	1	1		1
E5	SA-9	89761.277	32811.541	1	1		1
E5	SA-10	89503.034	32817.926	1	1		1
E5	SA-14	89700.450	32855.319	1	1		1
E5,E7	SA-22	89585.113	32906.980	1	1		1
E5	SA-150	89523.015	32659.990	1	1		1
E5	SA-151	89600.022	32637.874	1	1		1
E5	SA-152	89677.760	32617.219	1	1		1
E5	SA-153	89755.837	32596.210	1	1		1
E5	SA-154	89830.708	32566.494	1	1		1
E5	SB-1	89642.680	32858.944		1	1	1
E6	SA-7	89067.257	32789.217	1	1		1
E6	SA-11	89428.044	32819.141	1	1		1
E6	SA-12	88980.872	32828.921	1	1		1
E6	SA-13	89354.793	32835.247	1	1		1
E6	SA-16	89287.203	32869.590	1	1		1
E6	SA-17	89028.317	32871.241	1	1		1
E6	SA-18	89088.116	32876.147	1	1		1
E6,E8	SA-19	88954.272	32883.173	1	1		1
E6	SA-20	89144.888	32893.418	1	1		1
E6,E7	SA-23	89502.985	32914.926	1	1		1
E6,E7	SA-24	89432.995	32916.104	1	1		1
E6	SA-26	89227.297	32922.143	1	1		1
E6,E7	SA-28	89365.799	32935.719	1	1		1
E6	SA-29	89015.169	32936.155	1	1		1
E6	SA-45	89135.640	32746.932	1	1		1
E6	SA-51	89204.262	32728.130	1	1		1
E6	SA-57	89288.069	32718.602	1	1		1
E6	SA-146	89368.124	32698.521	1	1		1
E6	SA-147	89444.958	32678.506	1	1		1
E8	SA-15	88891.713	32861.684	1	1		1
E8	SA-21	88802.444	32894.107	1	1		1
E8	SA-25	88881.804	32917.061	1	1		1
E8	SA-27	88716.260	32934.333	1	1		1
E8	SA-30	88943.781	32955.242	1	1		1
E8	SA-31	88825.169	32966.229	1	1		1
E8	SA-32	88644.405	32996.725	1	1		1
E8	SA-33	88882.280	32998.104	1	1		1
E8	SA-34	88778.023	33024.558	1	1		1
TABLE TOTALS				44	45	1	

SCHEDULE OF LIGHTING DEVICES NOTES:

1. FOUNDATION TOP HEIGHT EQUAL TO ADJACENT SIDEWALK

Schedule of Lighting Devices

DESCRIPTION				LUMINAIRE LED PEDESTRIAN (70 WATT) TYPE SA	FOUNDATION SPECIAL	LUMINAIRE LED STREET (250 WATT) TYPE SB	NOTES
				EACH	EACH	EACH	
SHEET NO.	TYPE	NORTH	EAST	PLAN	PLAN	PLAN	
E8	SA-35	88579.315	33065.667	1	1		1
E8	SA-36	88737.685	33088.173	1	1		1
E8	SA-37	88797.000	33096.491	1	1		1
E8	SA-40	88521.380	33141.028	1	1		1
E8	SA-41	88691.748	33144.907	1	1		1
E8	SA-43	88750.126	33148.836	1	1		1
E8	SA-47	88639.035	33210.086	1	1		1
E8	SA-48	88696.742	33215.044	1	1		1
E8	SB-5	88855.953	33046.379		1	1	1
E8,E9	SB-8	88616.513	33302.918		1	1	1
E9	SA-46	88455.632	33209.637	1	1		1
E9	SA-52	88389.741	33278.318	1	1		1
E9	SA-55	88552.359	33318.702	1	1		1
E9	SA-56	88322.082	33344.725	1	1		1
E9	SA-58	88517.701	33364.368	1	1		1
E9	SA-60	88374.841	33365.523	1	1		1
E9	SA-61	88575.881	33366.080	1	1		1
E9	SA-63	88251.939	33405.657	1	1		1
E9	SA-64	88436.835	33423.772	1	1		1
E9	SA-65	88481.902	33427.611	1	1		1
E9	SA-67	88528.979	33436.968	1	1		1
E9	SA-71	88183.822	33471.982	1	1		1
E9	SA-73	88445.239	33497.828	1	1		1
E9	SA-75	88500.500	33513.864	1	1		1
E9	SA-78	88122.302	33544.574	1	1		1
E10,E17	SA-66	88843.398	33428.109	1	1		1
E10,E17	SA-76	88848.968	33521.133	1	1		1
E10,E17	SA-81	88805.898	33582.500	1	1		1
E10	SA-83	88721.758	33601.364	1	1		1
E10	SA-85	88762.805	33643.901	1	1		1
E10,E13	SA-86	88601.720	33669.160	1	1		1
E10	SA-87	88719.143	33706.112	1	1		1
E10	SA-90	88609.531	33730.500	1	1		1
E10,E14	SA-94	88679.223	33787.797	1	1		1
E10	SA-148	88767.086	33536.848	1	1		1
E10	SA-149	88805.489	33481.367	1	1		1
E10,E13	SB-13	88492.078	33590.140		1	1	1
E10,E13	SB-14	88528.906	33645.840		1	1	1
E10	SB-16	88670.287	33673.021		1	1	1
E10,E13	SB-17	88508.727	33716.969		1	1	1
E10,E13	SB-18	88410.274	33738.172		1	1	1
E11,E8	SA-38	88907.782	33102.077	1	1		1
E11,E8	SA-39	88839.327	33112.007	1	1		1
E11	SA-42	88869.449	33148.362	1	1		1
E11	SA-44	88943.586	33165.668	1	1		1
TABLE TOTALS				38	45	7	

SCHEDULE OF LIGHTING DEVICES NOTES:

1. FOUNDATION TOP HEIGHT EQUAL TO ADJACENT SIDEWALK

STREET LIGHTING GENERAL NOTES:

1. EACH LIGHT TO HAVE A PULL BOX "UB", REFERENCE ELECTRICAL SHEETS.

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
LIGHTING SCHEDULES

Schedule of Lighting Devices

DESCRIPTION				LUMINAIRE LED PEDESTRIAN (70 WATT) TYPE SA	FOUNDATION SPECIAL	LUMINAIRE LED STREET (250 WATT) TYPE SB	NOTES
				EACH	EACH	EACH	
SHEET NO.	TYPE	NORTH	EAST	PLAN	PLAN	PLAN	
E11	SA-49	88899.793	33218.998	1	1		1
E11	SA-50	88961.955	33238.784	1	1		1
E11	SA-53	88904.358	33293.535	1	1		1
E11	SA-54	88960.104	33313.979	1	1		1
E11,E17	SA-59	88883.819	33365.333	1	1		1
E11	SA-62	88944.106	33370.537	1	1		1
E11,E17	SA-68	89060.206	33555.161	1	1		1
E11,E17	SA-70	88884.955	33509.630	1	1		1
E11,E17	SA-72	88937.937	33559.725	1	1		1
E11,E17	SA-77	89007.585	33601.555	1	1		1
E11,E17	SA-144	88995.711	33523.163	1	1		1
E11,E17	SB-9	88917.842	33452.640		1	1	1
E12	SA-84	88086.190	33629.657	1	1		1
E12	SA-89	88051.764	33728.364	1	1		1
E12	SA-95	88007.968	33801.451	1	1		1
E12	SA-100	87943.524	33870.820	1	1		1
E12	SA-104	87866.733	33926.631	1	1		1
E12,E16	SA-107	87799.399	33993.838	1	1		1
E13,E9	SA-88	88312.094	33708.512	1	1		1
E13	SA-91	88273.968	33772.977	1	1		1
E13	SA-93	88347.463	33776.082	1	1		1
E13	SA-97	88319.120	33844.832	1	1		1
E13	SA-98	88254.074	33847.095	1	1		1
E13	SA-102	88315.875	33919.388	1	1		1
E13	SA-103	88251.877	33921.486	1	1		1
E13,E15	SA-108	88315.931	33994.388	1	1		1
E13,E15	SA-109	88251.933	33996.486	1	1		1
E13,E15	SA-113	88315.986	34069.388	1	1		1
E13,E9	SB-12	88411.110	33578.558		1	1	1
E13,E9	SB-15	88358.297	33655.672		1	1	1
E14	SA-92	88749.273	33773.632	1	1		1
E14	SA-96	88787.044	33844.722	1	1		1
E14	SA-99	88722.440	33855.748	1	1		1
E14	SA-101	88805.322	33913.807	1	1		1
E14	SA-105	88742.779	33928.466	1	1		1
E14	SA-106	88812.136	33991.140	1	1		1
E14	SA-110	88748.738	34003.233	1	1		1
E14	SA-112	88815.202	34068.307	1	1		1
E14	SA-115	88751.360	34078.469	1	1		1
E14	SA-117	88815.647	34145.239	1	1		1
E14,E15	SA-128	88628.039	34152.668	1	1		1
E14	SA-129	88708.539	34152.687	1	1		1
E14,E15	SA-141	88627.201	34220.615	1	1		1
E14	SA-142	88686.534	34220.688	1	1		1
E14	SB-20	88764.615	34152.709		1	1	1
TABLE TOTALS				41	45	4	

SCHEDULE OF LIGHTING DEVICES NOTES:

1. FOUNDATION TOP HEIGHT EQUAL TO ADJACENT SIDEWALK

Schedule of Lighting Devices

DESCRIPTION				LUMINAIRE LED PEDESTRIAN (70 WATT) TYPE SA	FOUNDATION SPECIAL	LUMINAIRE LED STREET (250 WATT) TYPE SB	NOTES
				EACH	EACH	EACH	
SHEET NO.	TYPE	NORTH	EAST	PLAN	PLAN	PLAN	
E15	SA-114	88251.988	34071.486	1	1		1
E15	SA-118	88316.045	34148.357	1	1		1
E15	SA-124	88126.086	34152.519	1	1		1
E15	SA-125	88381.599	34152.601	1	1		1
E15	SA-126	88470.906	34152.625	1	1		1
E15	SA-127	88549.485	34152.644	1	1		1
E15	SA-130	88206.141	34152.715	1	1		1
E15	SA-136	88146.676	34220.535	1	1		1
E15	SA-137	88239.535	34220.559	1	1		1
E15	SA-138	88388.809	34220.549	1	1		1
E15	SA-139	88462.283	34220.568	1	1		1
E15	SA-140	88539.064	34220.592	1	1		1
E15	SB-19	88264.931	34152.567		1	1	1
E15	SB-22	88311.670	34234.580		1	1	1
E16	SA-111	87724.235	34051.497	1	1		1
E16	SA-116	87659.467	34112.734	1	1		1
E16	SA-119	87717.195	34152.320	1	1		1
E16	SA-120	87802.195	34152.363	1	1		1
E16	SA-121	87884.959	34152.402	1	1		1
E16	SA-122	87964.961	34152.443	1	1		1
E16	SA-123	88046.203	34152.481	1	1		1
E16	SA-131	87641.969	34169.211	1	1		1
E16	SA-132	87727.863	34220.320	1	1		1
E16	SA-133	87819.506	34220.359	1	1		1
E16	SA-134	87906.331	34220.402	1	1		1
E16	SA-143	88051.809	34220.496	1	1		1
E16	SB-21	87984.644	34234.453		1	1	1
E17	SA-69	89129.391	33584.196	1	1		1
E17	SA-74	89198.538	33613.170	1	1		1
E17	SA-80	89082.631	33632.955	1	1		1
E17	SA-145	89155.630	33663.436	1	1		1
E18,E5	SA-155	89902.802	32532.258	1	1		1
E18	SA-156	89974.077	32498.173	1	1		1
E18	SA-157	90046.235	32463.915	1	1		1
E18	SA-158	90117.729	32429.843	1	1		1
E18,E19	SA-159	90190.302	32395.274	1	1		1
E18,E19	SA-160	90261.782	32361.475	1	1		1
E18,E19	SA-161	90333.805	32327.339	1	1		1
E19	SA-162	90404.819	32287.582	1	1		1
E19	SA-163	90461.023	32237.713	1	1		1
E19	SA-164	90567.924	32129.683	1	1		1
E19	SA-165	90514.775	32188.105	1	1		1
TABLE TOTALS				39	42	3	

SCHEDULE OF LIGHTING DEVICES NOTES:

1. FOUNDATION TOP HEIGHT EQUAL TO ADJACENT SIDEWALK

Tabulation of Approximate Quantities

Item No.	Ref. No.	Construction Note Description	Quantity	Unit	NOTES
		2 Inch Electrical Conduit (Plastic)	19384	LF	
		Type One Pull Box	196	EA	
		Wiring	1	LS	
		Light Standard and Luminaire (Pedestrian)	162	EA	
		Light Standard and Luminaire (Street)	15	EA	
		Light Standard Foundation (Special)	177	EA	
		Lighting Control Center (Special)	2	EA	
SUMMARY NOTES:					

STREET LIGHTING GENERAL NOTES:

1. EACH LIGHT TO HAVE A PULL BOX "UB", REFERENCE ELECTRICAL SHEETS.

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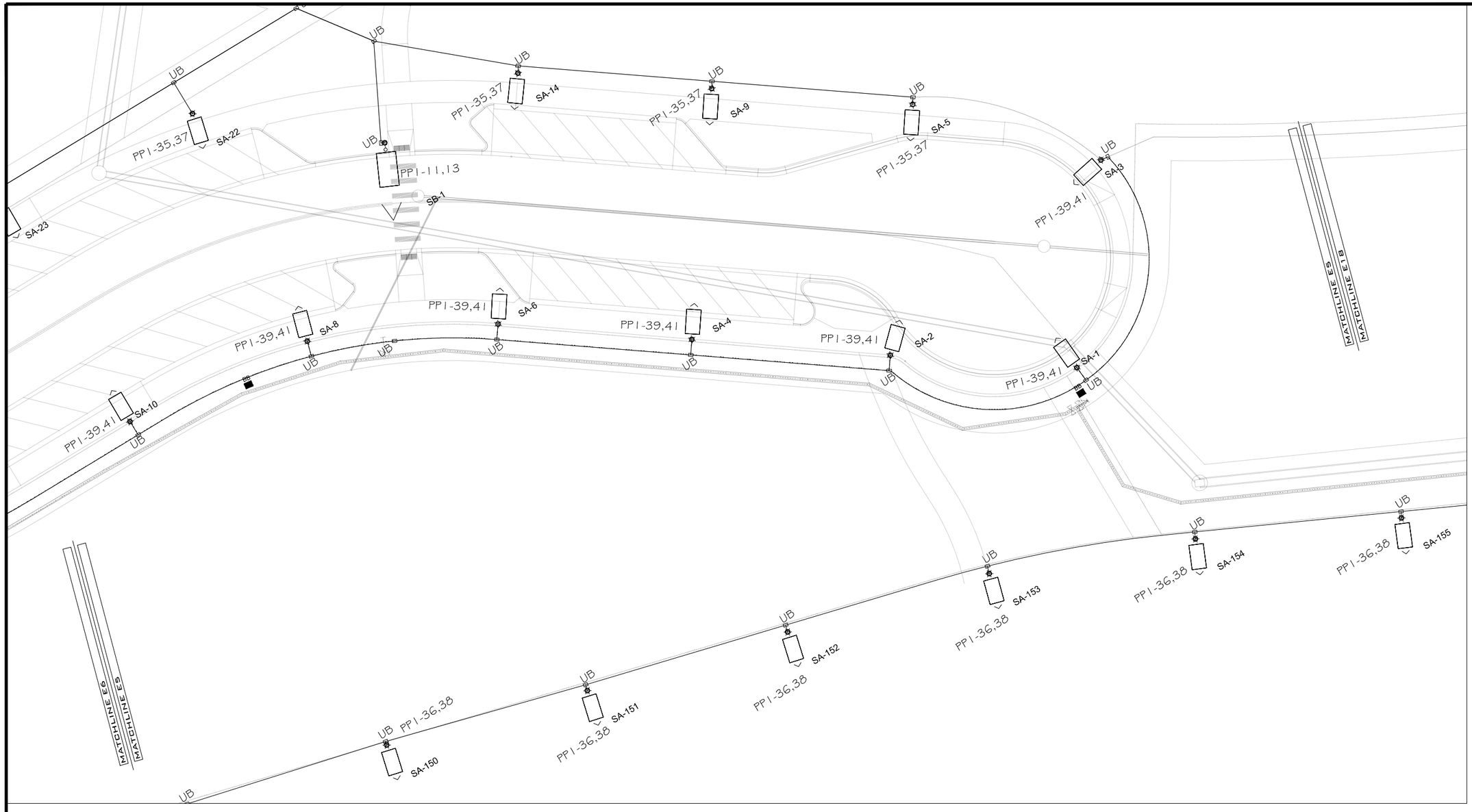
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
LIGHTING SCHEDULES



LIGHTING/ELECTRICAL PLAN

SCALE: 1"=40'

NORTH

20 0 10 20 40

GRAPHIC SCALE

GENERAL NOTES:

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO ROADWAY AND SHINE ON ROADWAY, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.

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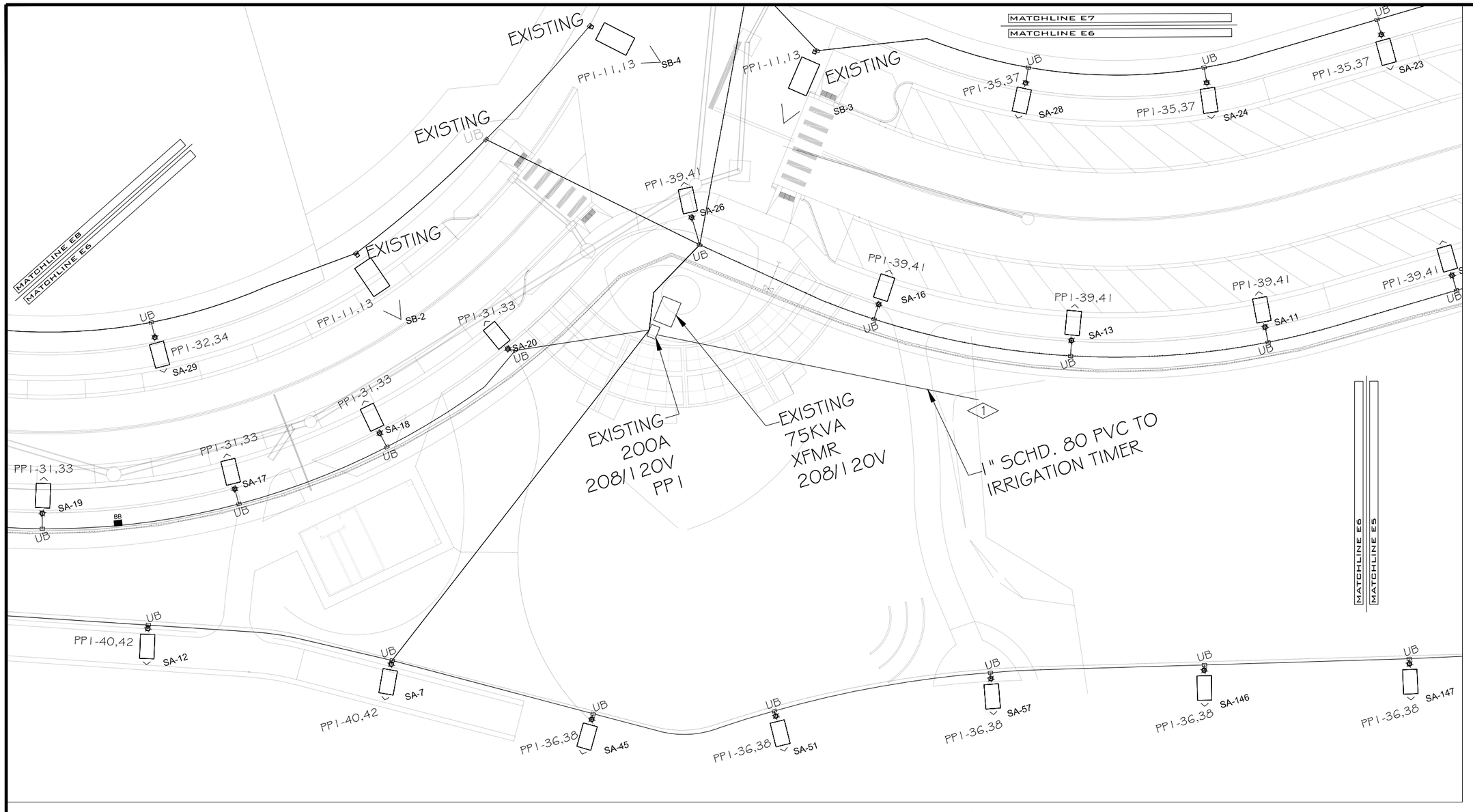
COMPOSITE UTILITY PLAN



LIGHTING/ELECTRICAL PLAN

SCALE: 1"=40'

NORTH

20 0 10 20 40

GRAPHIC SCALE

GENERAL NOTES:

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO ROADWAY AND SHINE ON ROADWAY, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.

FLAG NOTES:

<1> PROVIDE NEW 20 AMP 120V, 1PH, 22KAIC BREAKER IN PANEL "PP1" FOR FEED TO IRRIGATION CONTROLLER. PROVIDE (2-#10 THWN + #12GND CU) IN 1" SCHEDULE 80 PVC FROM PANEL "PP1". FIELD VERIFY EXACT LOCATION AND WIRING OF CONTROLLER WITH IRRIGATION PROVIDER PRIOR TO TRENCHING.

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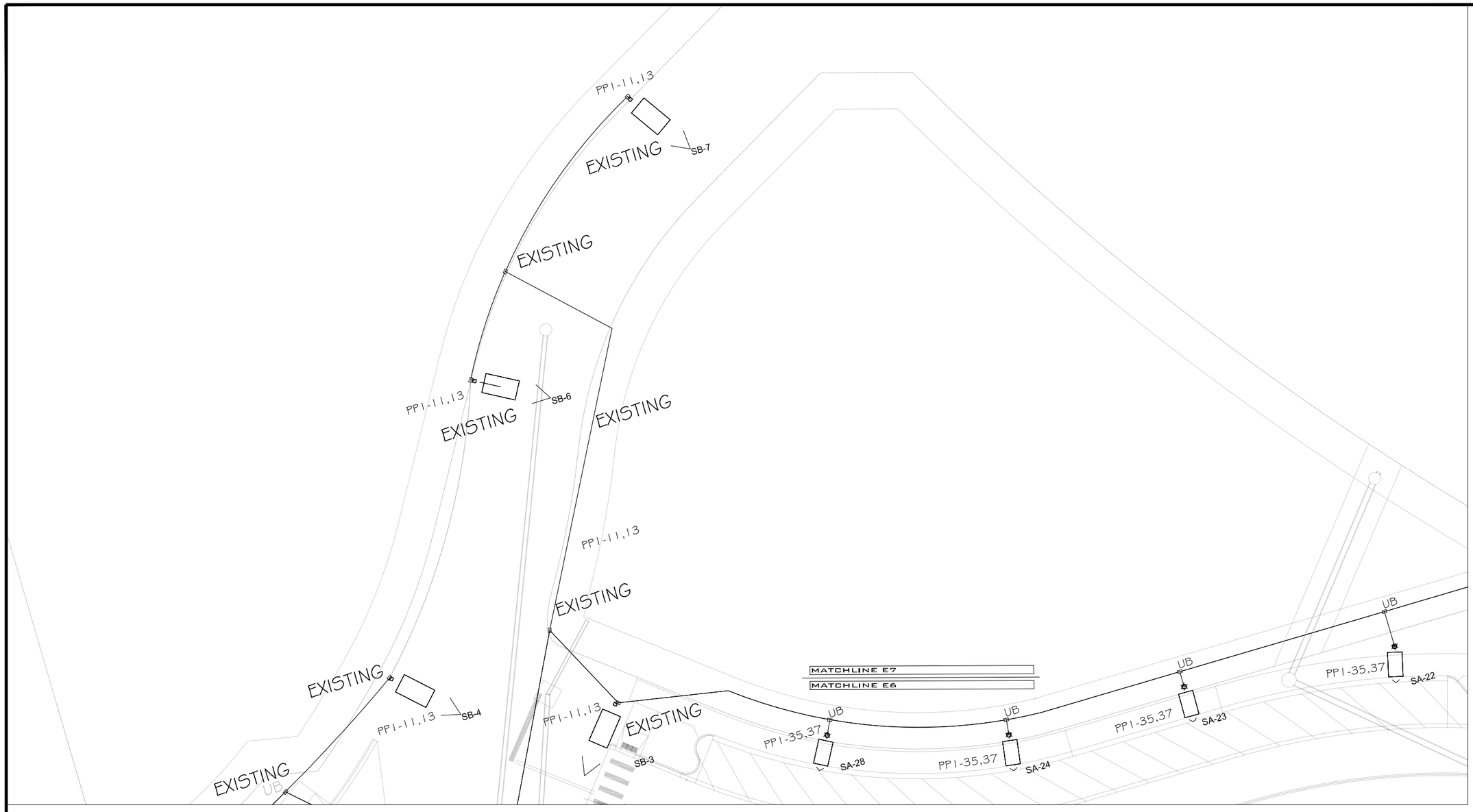
COMPOSITE UTILITY PLAN



GENERAL NOTES:

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO ROADWAY AND SHINE ON ROADWAY, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.
4. SB-4, SB-6, SB-7 ARE EXISTING AND TO BE REUSED AND WIRED FROM PANEL "PP1" AS SHOWN IN PANEL SCHEDULES.

LIGHTING/ELECTRICAL PLAN

SCALE: 1"=40'

NORTH

20 0 10 20 40

GRAPHIC SCALE

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PO 3211 GRAND JCT., CO 81502
EMAIL: joelm@ACMengrs.com

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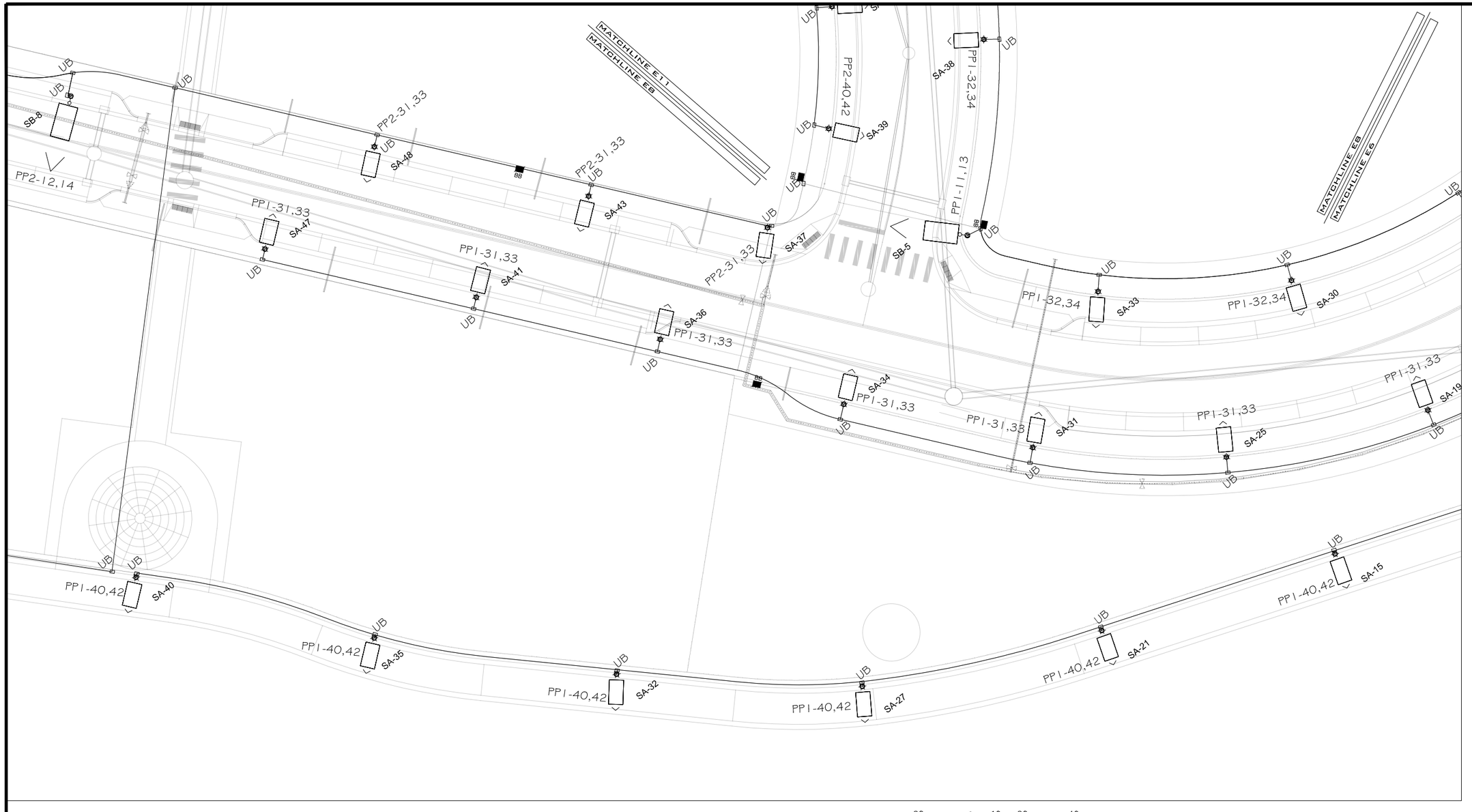
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
COMPOSITE UTILITY PLAN



LIGHTING/ELECTRICAL PLAN

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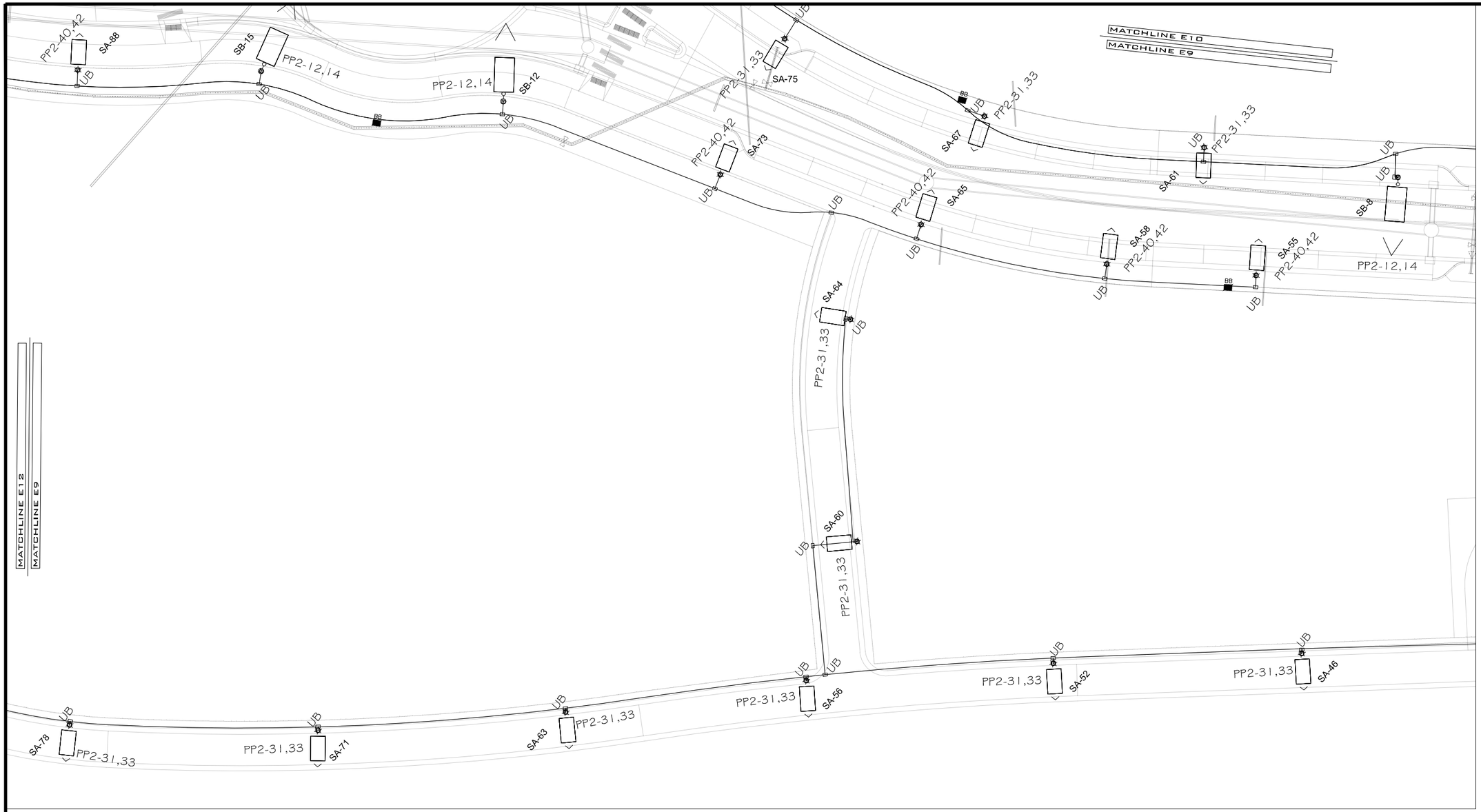

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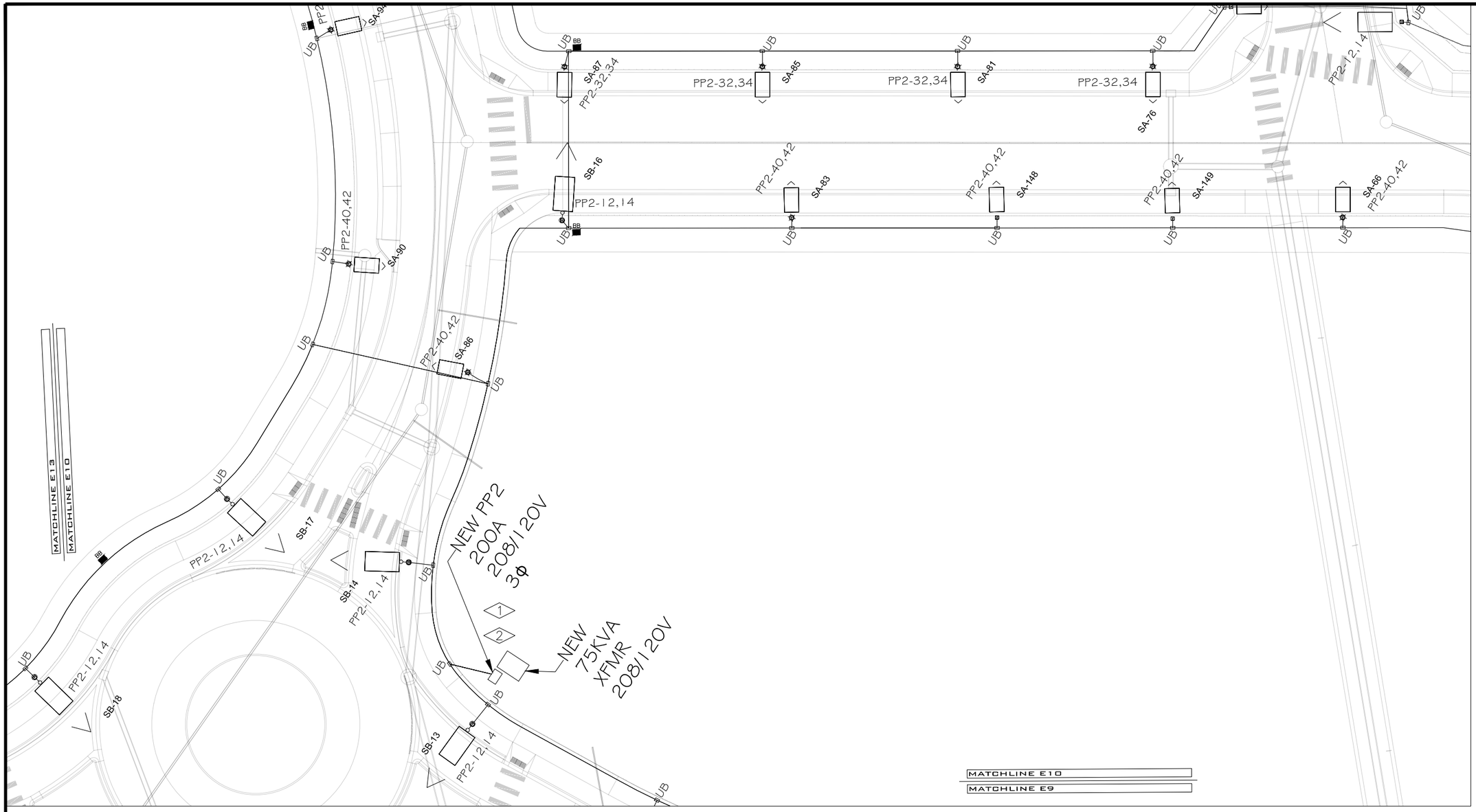

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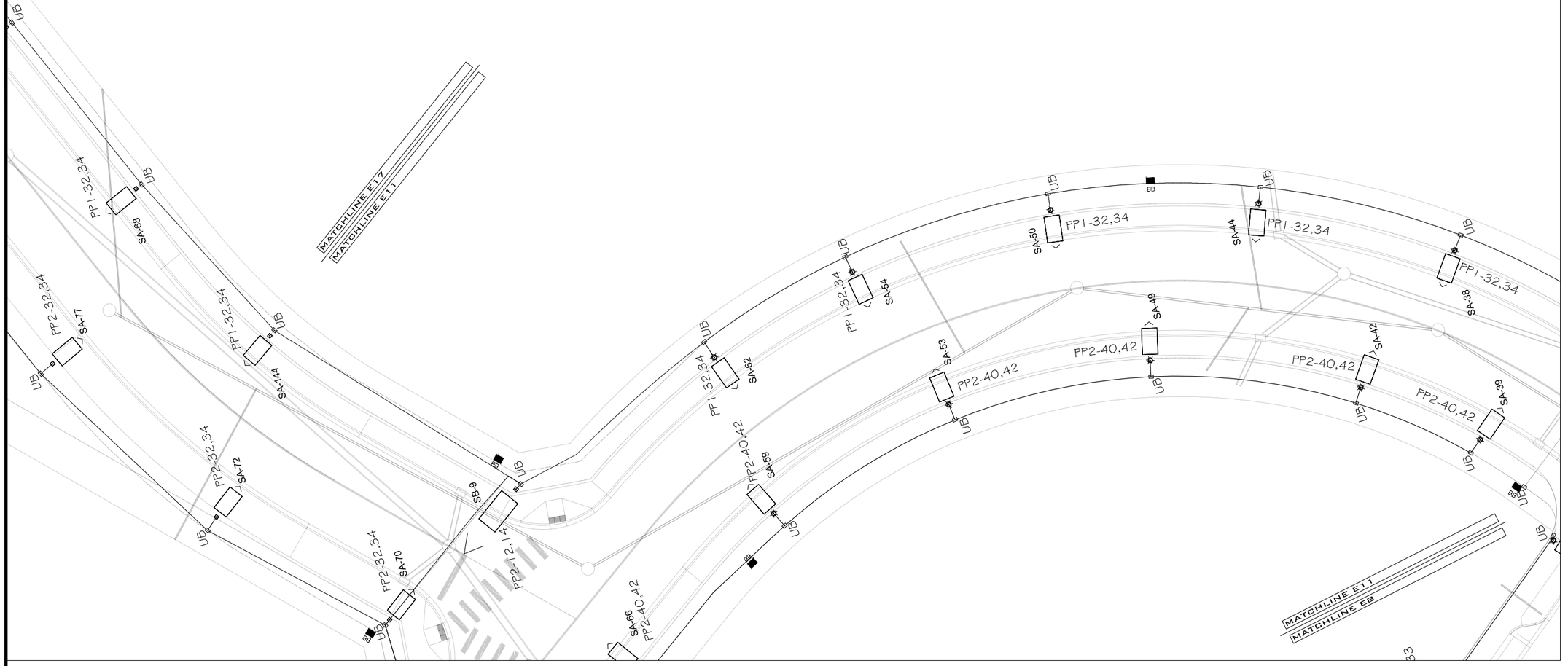

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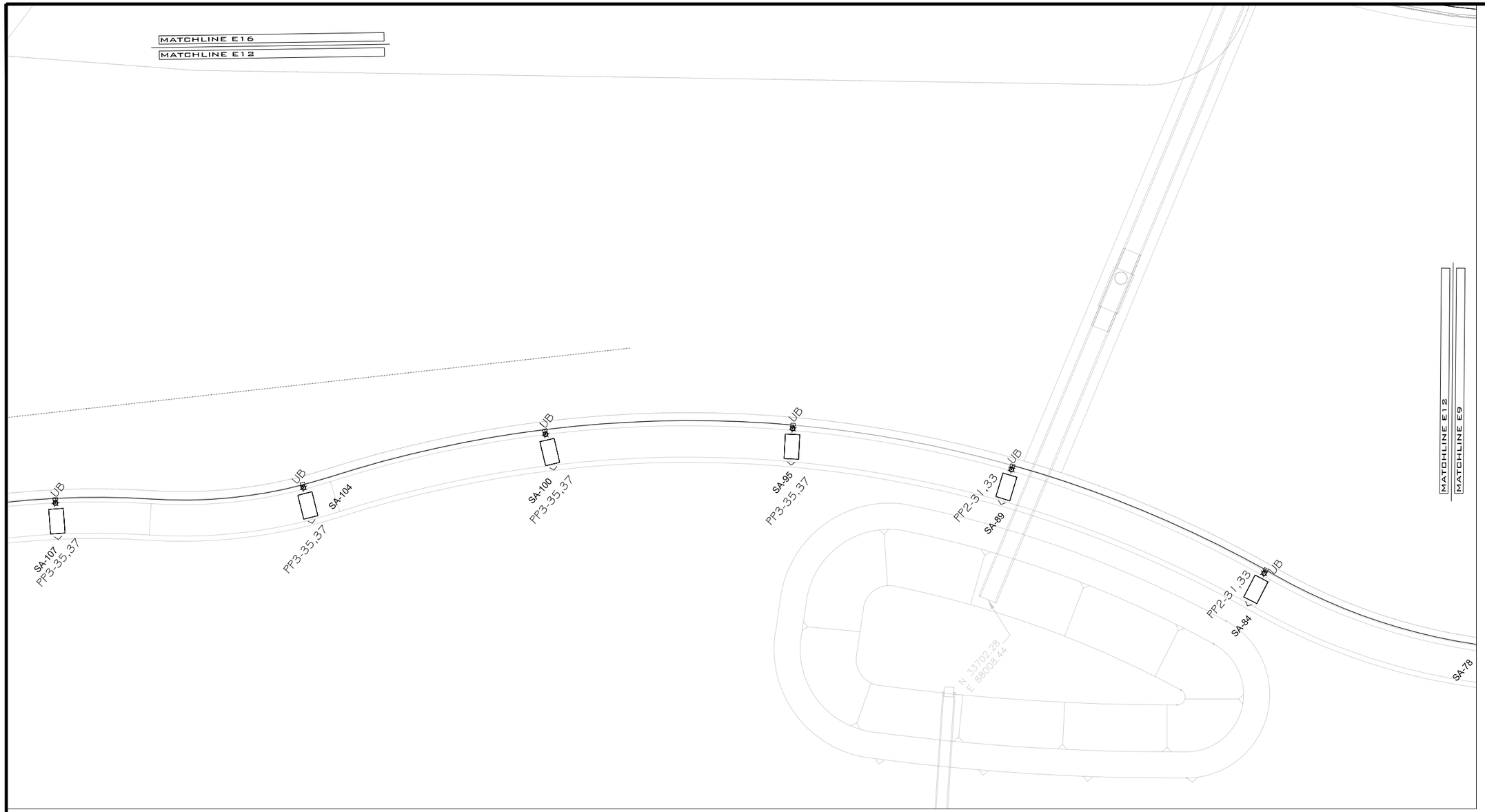

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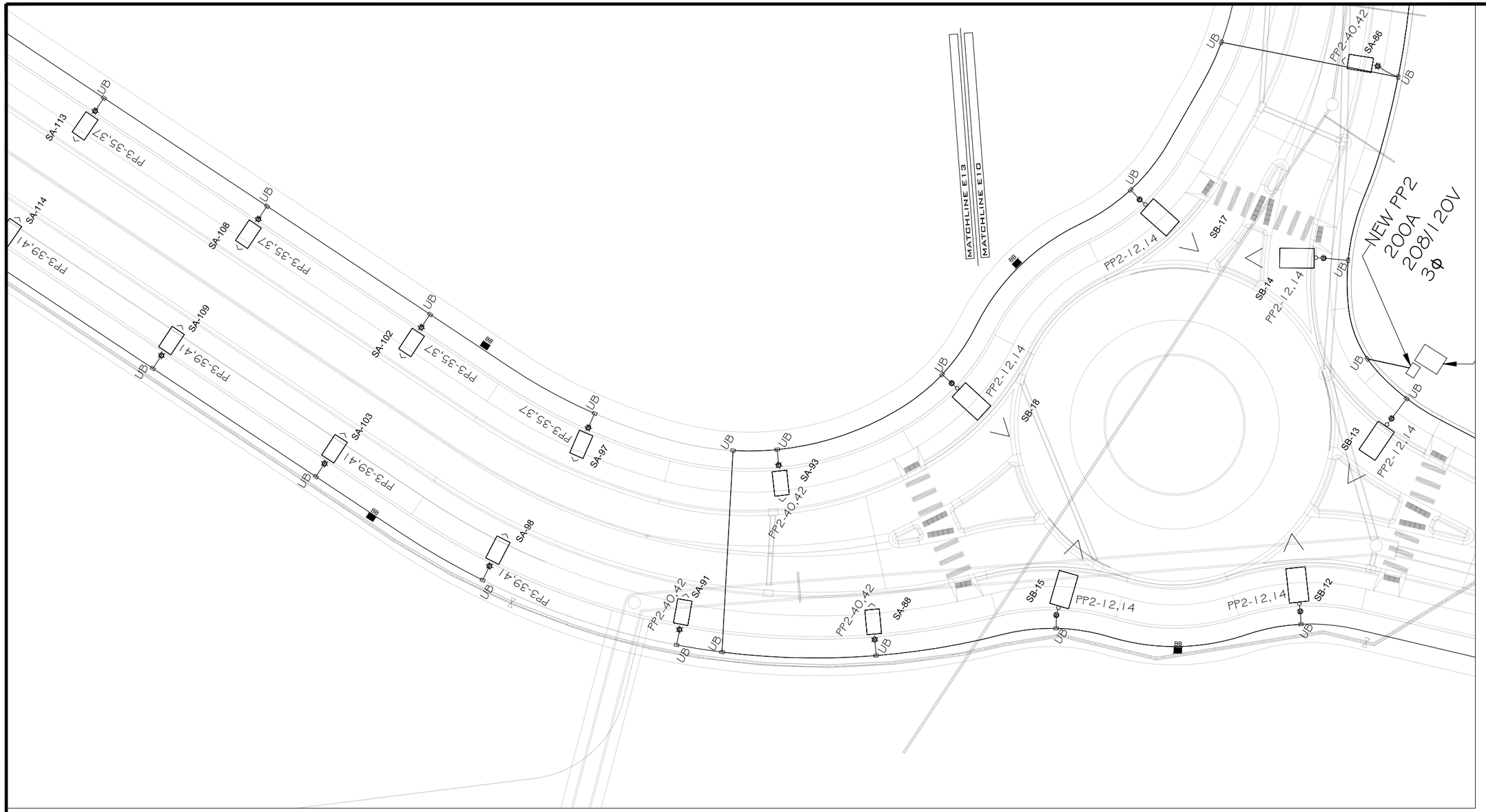

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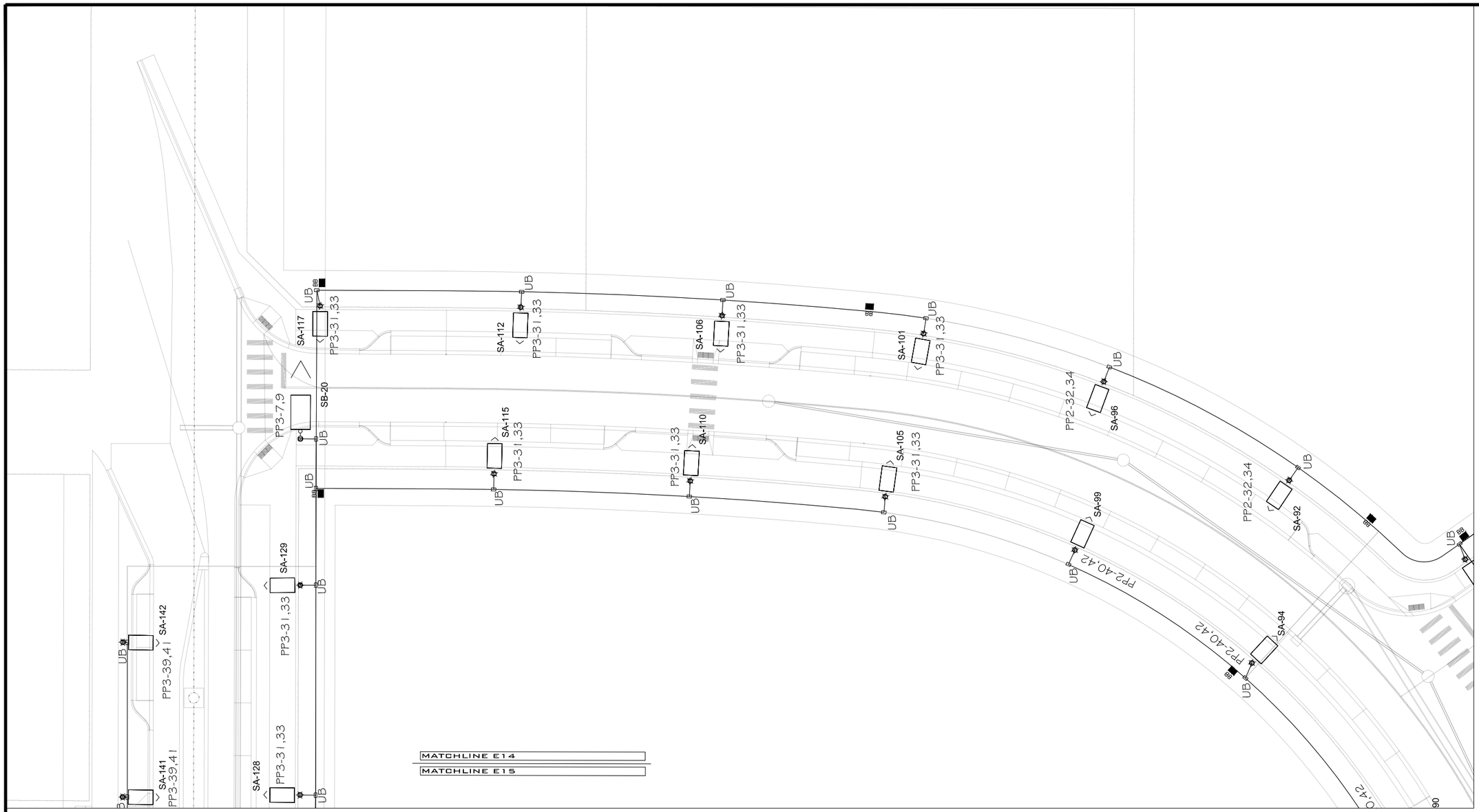

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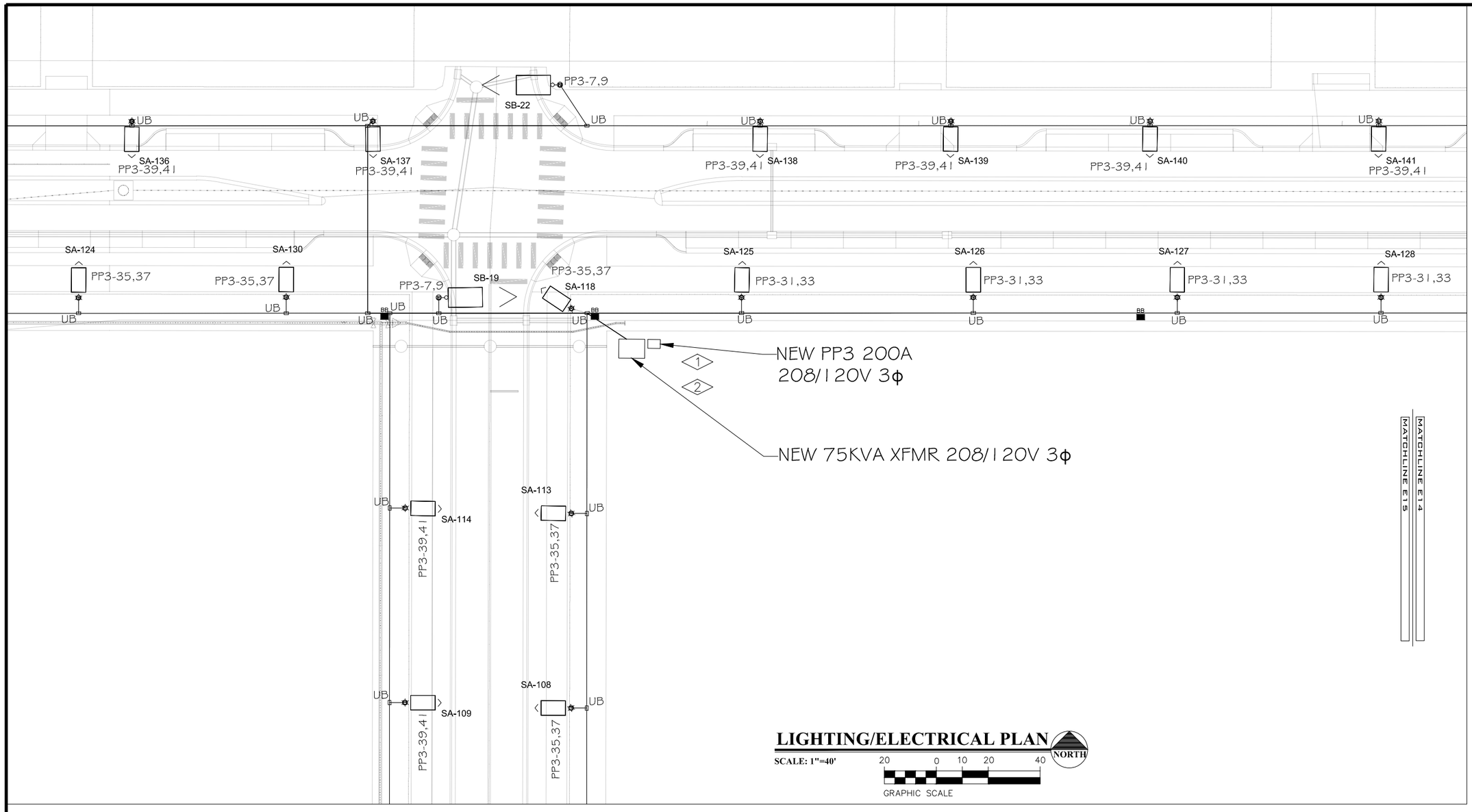

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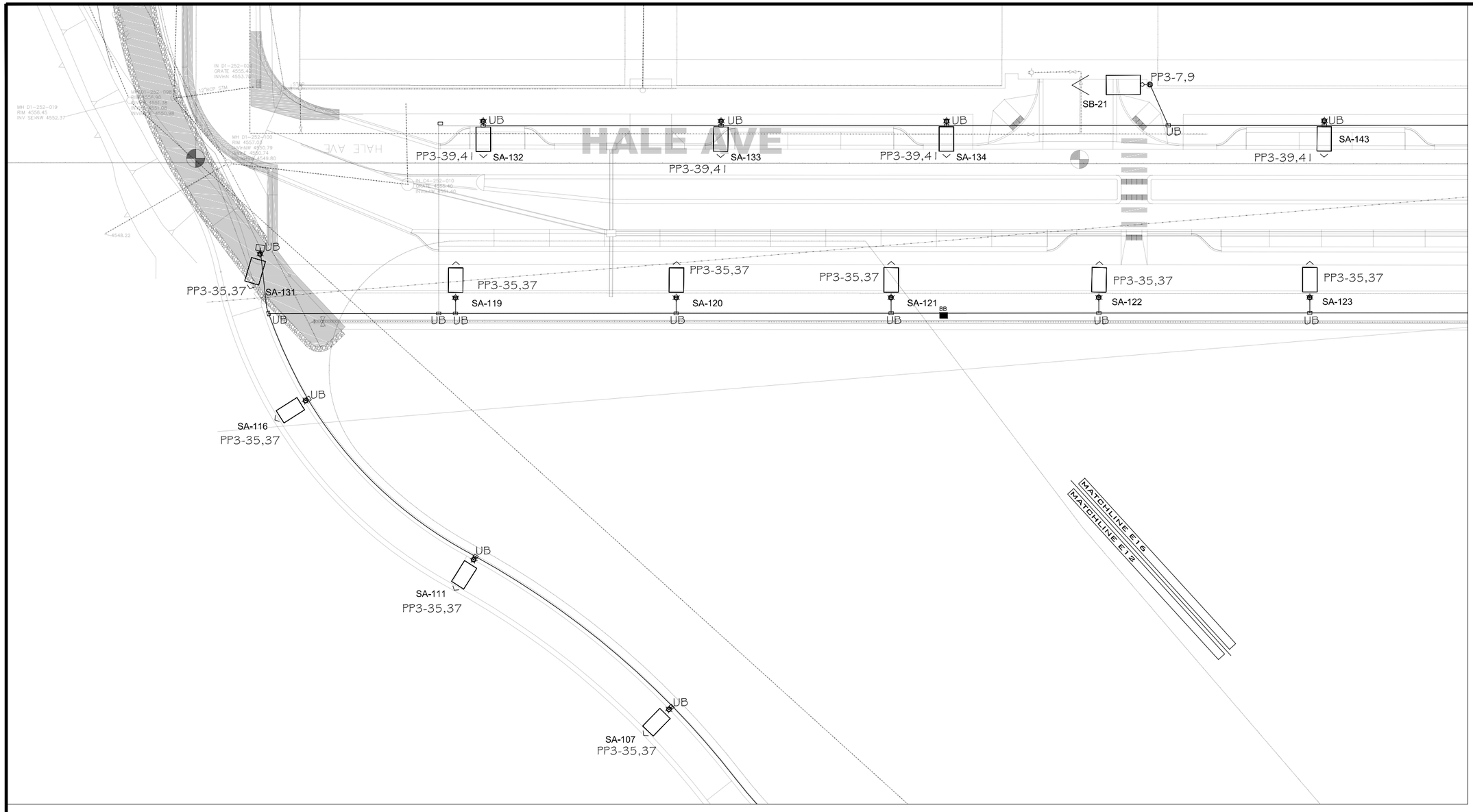

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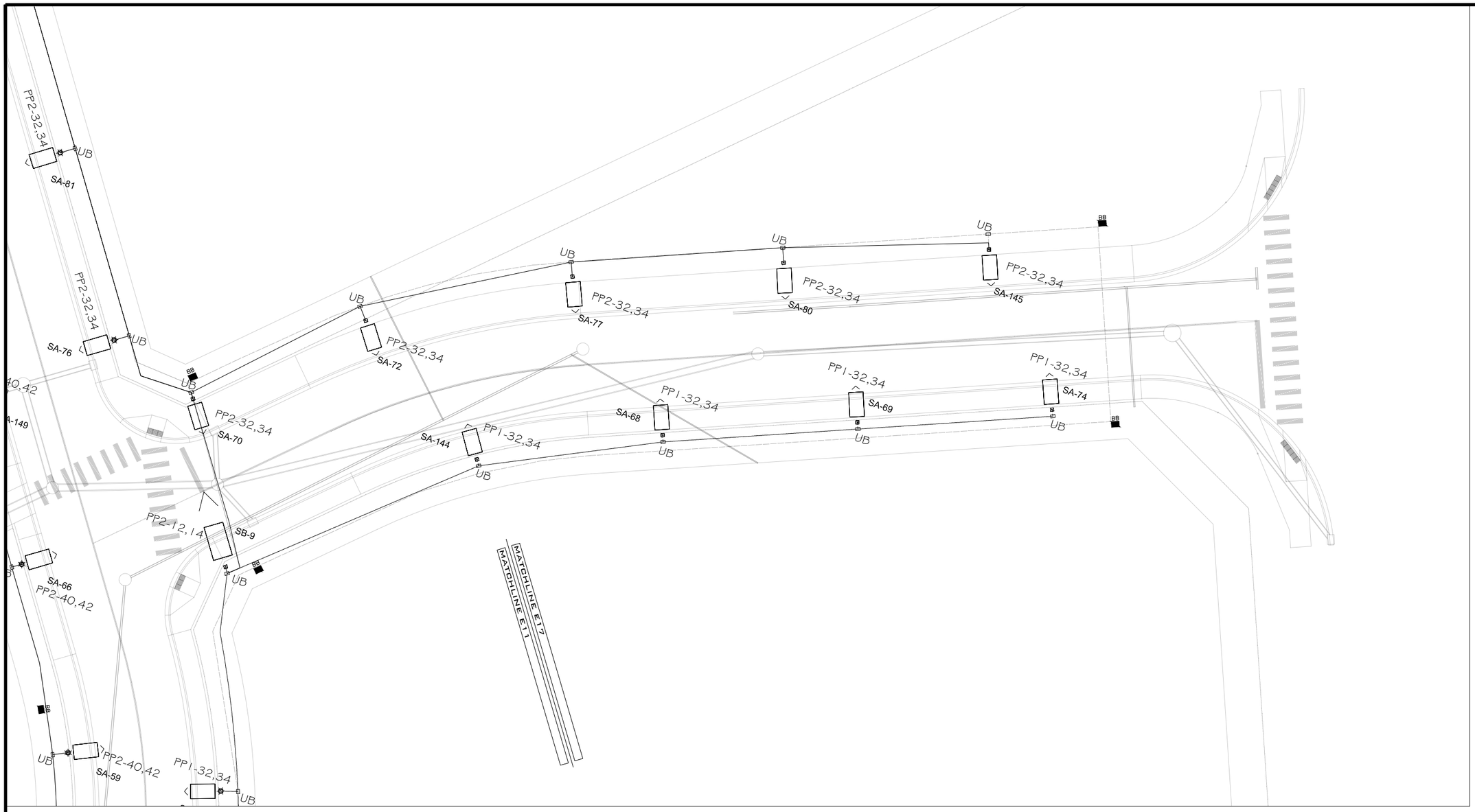

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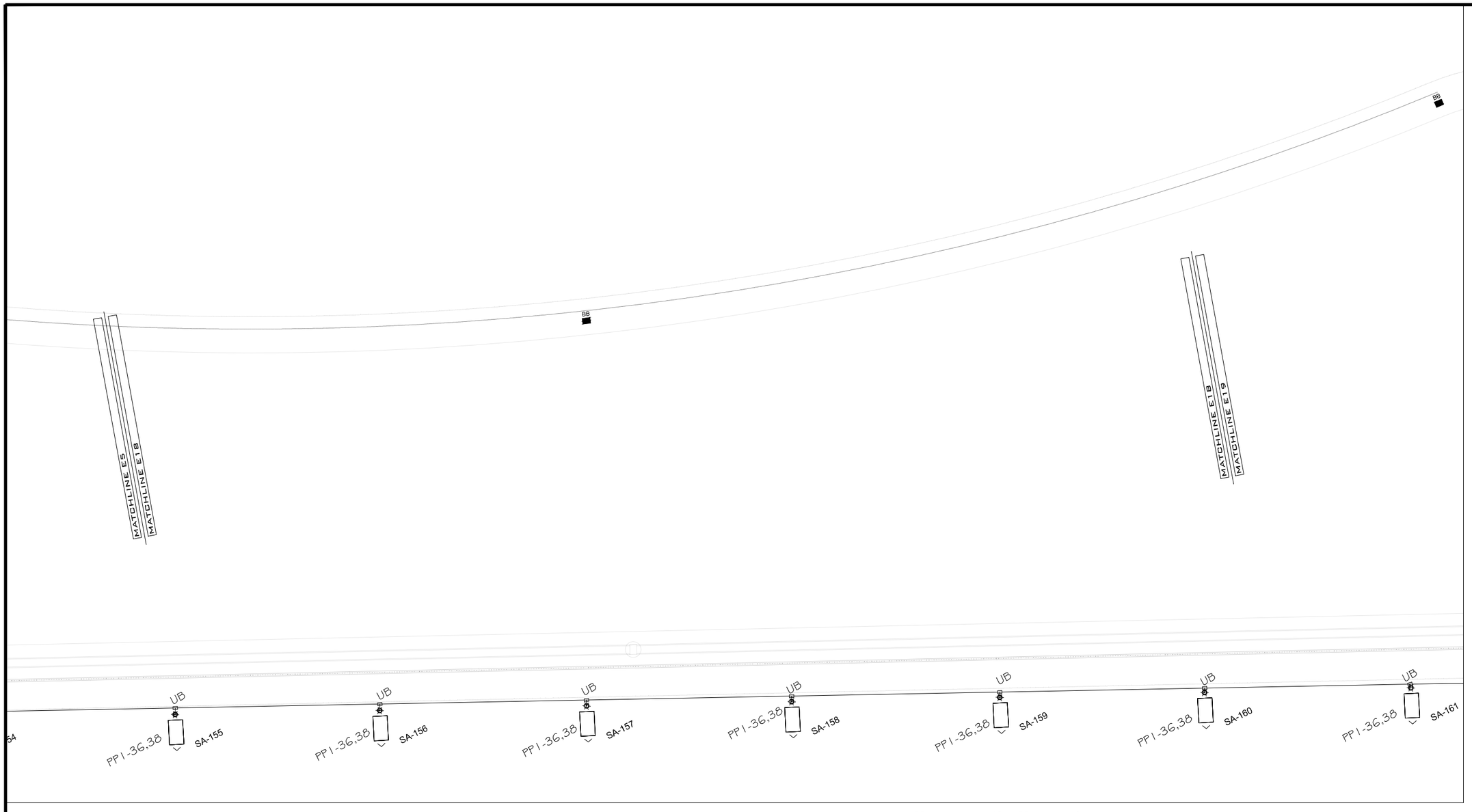

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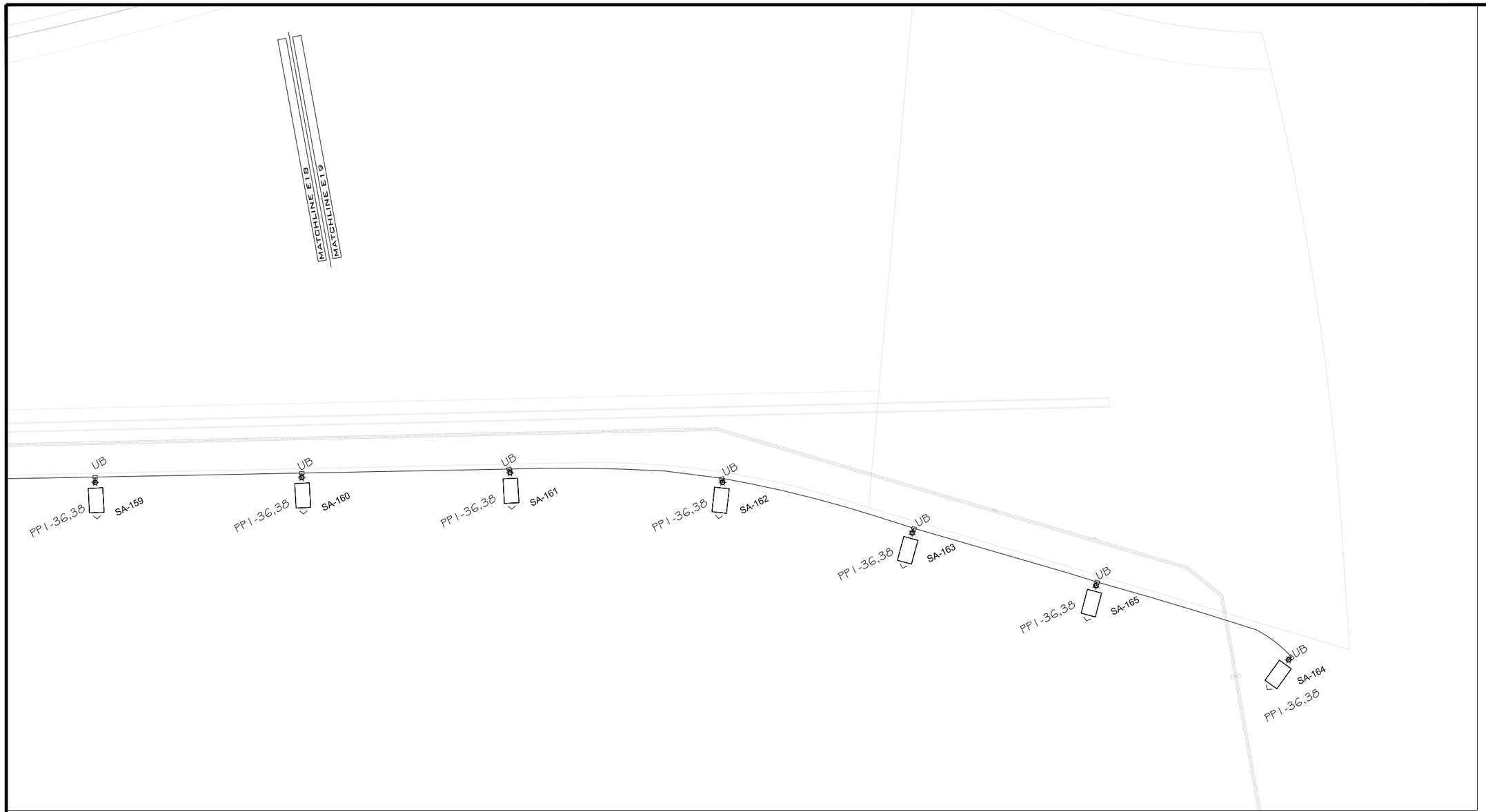

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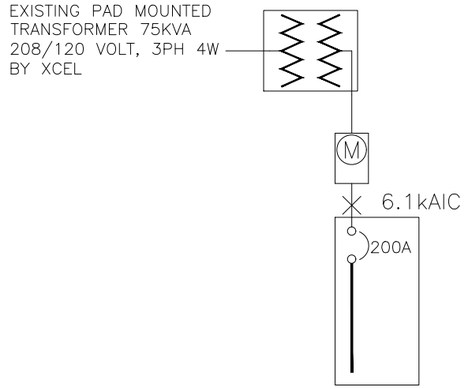
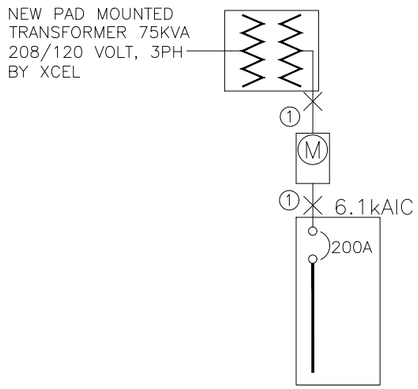


EXISTING PP1 200A MCB MILBANK
PEDESTAL CP3B5251XB22CSSL1, 24
UNSWITCHED/12 SWITCHED CKTS
208/120V 3PH, 4W
22 kAIC

① 1 SET(S)[2.5"" PVC
SCHED. 80
(4#3/0(CU,THWN)+1#4(CU)GND]

A/1 ONE-LINE DIAGRAM

NOT TO SCALE



NEW PANEL PP2 100A MCB
MILBANK PEDESTAL
CP3B5151XK42CSXCSL1, 24
UNSWITCHED/12 SWITCHED CKTS
208/120 3PH, 4W
22 kAIC

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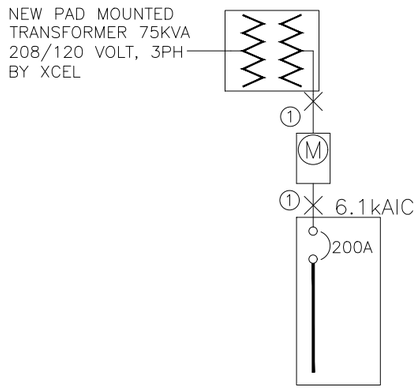

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NOT TO SCALE

GENERAL NOTES:

1. IN AS MUCH AS DESIGN REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS, AND BECAUSE SOME OF THESE ASSUMPTIONS CANNOT BE VERIFIED. FIELD COORDINATION DURING CONSTRUCTION SERVICES IS IMPERATIVE. CONTRACTORS BIDDING THIS WORK MUST MAKE REASONABLE ALLOWANCES FOR UNFORESEEN CONTINGENCIES.
2. THE SERVING ELECTRICAL ASSOCIATION SHALL ADVISE THE OWNER/ENGINEER PRIOR TO SERVICE MODIFICATION REQUIRING COST TO THE OWNER.
3. REFERENCE CIVIL, LANDSCAPE AND IRRIGATION DRAWING PLANS FOR COORDINATION AND LOCATION OF ALL UNDER GROUND SYSTEMS.
4. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES AS REQUIRED: REFERENCE CIVIL LANDSCAPE AND IRRIGATION DRAWINGS.
5. ALL WIRING IS SHOWN DIAGRAMMATICALLY ON DRAWINGS, FIELD VERIFY ALL CONDITIONS PRIOR TO ROUGH-IN.
6. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL CODES.
7. ALL WIRE TO BE #6 UNLESS NOTED OTHERWISE.
8. CONDUCTOR COUNT IS SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL ENSURE THAT ANY AND ALL DEVICES AND EQUIPMENT ARE CIRCUITED PROPERLY. CONTRACTOR SHALL ENSURE THAT NO EQUIPMENT OR DEVICES ARE COMBINED OTHER THAN WHAT IS DEPICTED.
9. FIELD VERIFY ALL DIMENSIONS, DO NOT SCALE DRAWINGS.
10. COORDINATE INSTALLATION OF METER AND ELECTRICAL REQUIREMENTS WITH XCEL ENERGY.
11. PEDESTAL MUST MEET ALL XCEL ENERGY REQUIREMENTS I.E. COLD SEQUENCE PADLOCK SLIP LATCH ON METER COVER, HOLD OPEN BAR ON METER HOOD.

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ONE-LINE DIAGRAMS

PANEL: PP1 | OC DEVICE TYPE: Breaker | ENCLOSURE: NEMA 3R | MAINS(A): BKR | CONTINUOUS(A): 200
LOCATION: | DEVICE FAMILY: Bolt On | MOUNTING: Free Standing | WIRING: 3-Phase 4-Wire | BUS SC RATING(A) 22000
FED FROM: BUS-0002 | | VOLTAGE: 208/120 | | FAULT CURRENT(A): 6149
INCIDENT ENERGY: 0.10 Cal/cm2 @18.00(in) | | BOUNDARY: 3.82(in) <1>

OC AMPS P	NOTES	DESCRIPTION	DEMAND CODE	VA	CKT	PHASE LOADS VA A	B	C	CKT	VA	DEMAND CODE	DESCRIPTION	NOTES	OC AMPS P
20 2		SPARE	SPARE	0	1	0			2	0	GENERAL	CONTROL PWR		15 1
"		"		0	3		150		4	150	GENERAL	SWITCHED LC CNTRL		20 2
					5			150	6	150		"		"
					7	0			8	0	SPARE	SPARE		20 1
					9		600		10	600	GENERAL	IRRIGATION CONTROL		20 1
20 2		STREET LIGHTS N.	NONE	805	11			805	12					
"		"		805	13	805			14					
					15				16					
					17				18					
					19				20					
					21				22					
					23				24					
					25				26					
					27				28					
					29				30					
20 2		PED. LTS NW	NONE	350	31	770			32	420	NONE	PED. LTS N.W.		20 2
"		"		350	33		770		34	420		"		"
20 2		PED. LTS NW	NONE	245	35			980	36	735	NONE	PED. LTS S.E.		20 2
"	<2>	"		245	37	980			38	735		"		"
20 2		PED. LTS SE	NONE	385	39		665		40	280	NONE	PED. LTS NE		20 2
"		"		385	41			665	42	280		"		"

ALL CONNECTED	KVA	3P AVE AMPS	* PHASE TOTALS	VA	AMPS	BUS TOTALS	KVA
TOTAL CONNECTED	7.33	20.3	* A-N	2555.2	21.3	CONNECTED	8.53
TOTAL DEMAND	7.33	20.3	* B-N	2176.3	18.1	DEMAND	8.53
TOTAL DESIGN	7.33	20.3	* C-N	2597.4	21.6	DESIGN	8.53

PANEL: PP2 | OC DEVICE TYPE: Breaker | ENCLOSURE: NEMA 3R | MAINS(A): BKR | CONTINUOUS(A): 200
LOCATION: | DEVICE FAMILY: Bolt On | MOUNTING: Free Standing | WIRING: 3-Phase 4-Wire | BUS SC RATING(A) 22000
FED FROM: BUS-0008 | | VOLTAGE: 208/120 | | FAULT CURRENT(A): 6149
INCIDENT ENERGY: 0.10 Cal/cm2 @18.00(in) | | BOUNDARY: 3.82(in) <3>

OC AMPS P	NOTES	DESCRIPTION	DEMAND CODE	VA	CKT	PHASE LOADS VA A	B	C	CKT	VA	DEMAND CODE	DESCRIPTION	NOTES	OC AMPS P
20 2		SPARE	SPARE	0	1	22			2	22	GENERAL	CONTROL PWR		15 1
"		"		0	3		150		4	150	GENERAL	SWITCHED LC CNTRL		60 2
					5			150	6	150		"		"
					7	0			8	0	SPARE	SPARE		20 1
					9		0		10	0	SPARE	SPARE		20 1
20 2		SPARE	SPARE	0	11			1035	12	1035	NONE	ST LIGHTS CENT N&S		20 2
"		"		0	13	1035			14	1035		"		"
					15				16					
					17				18					
					19				20					
					21				22					
					23				24					
					25				26					
					27				28					
					29				30					
20 2		PED LTS NW-SE	NONE	560	31	1015			32	455	NONE	PED. LTS CNT NE-SE		20 2
"		"		560	33		1015		34	455		"		"
20 2		SPARE	SPARE	0	35			0	36					
"	<2>	"		0	37	0			38					
					39		700		40	700	NONE	PED LTS CNTR N,S		20 2
					41			700	42	700		"		"

ALL CONNECTED	KVA	3P AVE AMPS	* PHASE TOTALS	VA	AMPS	BUS TOTALS	KVA
TOTAL CONNECTED	5.82	16.1	* A-N	2071.2	17.2	CONNECTED	5.82
TOTAL DEMAND	5.82	16.1	* B-N	1862.5	15.5	DEMAND	5.82
TOTAL DESIGN	5.82	16.1	* C-N	1882.4	15.7	DESIGN	5.82

FLAG NOTES:

<1> PANEL "PP1" CKTS 12 AND 14 ARE EXISTING AND WERE INSTALLED IN PHASE 1 AND TO BE REUSED AND WIRED AS SHOWN. PROVIDE ADDITIONAL BREAKERS IN EXISTING PANEL FOR NEW LIGHTING.

<2> CIRCUITS 31 TO 42 ARE SWITCHED CIRCUITS, TYPICAL

<3> PANEL "PP2" IS A NEW PANEL, COORDINATE INSTALLATION OF METER AND EXACT LOCATION OF TRANSFORMER WITH EXCEL PRIOR TO ROUGH-IN.

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PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
PANEL SCHEDULES

PANEL: PP3 <2> DC DEVICE TYPE: Breaker ENCLOSURE: NEMA 3R MAINS(A): BKR CONTINUOUS(A): 100
LOCATION: DEVICE FAMILY: Bolt On MOUNTING: Free Standing WIRING: 3-Phase 4-Wire BUS SC RATING(A) 22000
FED FROM: BUS-0006 VOLTAGE: 208/120 FAULT CURRENT(A): 6149
INCIDENT ENERGY: 0.10 Cal/cm2 @18.00(in) BOUNDARY: 3.82(in)

DC AMPS P	NOTES	DESCRIPTION	DEMAND CODE	VA	CKT	PHASE LOADS VA A	B	C	CKT	VA	DEMAND CODE	DESCRIPTION	NOTES	DC AMPS P
20 2		SPARE	GENERAL	0	1	180			2	180	GENERAL	CONTROL PWR		15 1
"		"		0	3		150		4	150	GENERAL	SWITCHED LC CNTRL		60 2
					5			150	6	150		"		"
20 2		STREET LTS HALE	NONE	460	7	460			8	0	GENERAL	SPARE		20 1
"		"		460	9		460		10	0	GENERAL	SPARE		20 1
					11				12					
					13				14					
					15				16					
					17				18					
					19				20					
					21				22					
					23				24					
					25				26					
					27				28					
					29				30					
20 2		PED LTS E	NONE	420	31	420			32	0	GENERAL	SPARE		20 2
"		"		420	33		420		34	0		"		"
20 2	<1>	PED LTS N-S	NONE	665	35			665	36					
"		"		665	37	665			38				<1>	
20 2		PED LTS N.	NONE	525	39		525		40					
"		"		525	41			525	42					

ALL CONNECTED	KVA	3P AVE AMPS	* PHASE TOTALS	VA	AMPS	BUS TOTALS	KVA
TOTAL CONNECTED	4.61	12.8	* A-N	1722.0	14.3	CONNECTED	4.61
TOTAL DEMAND	4.61	12.8	* B-N	1552.5	12.9	DEMAND	4.61
TOTAL DESIGN	4.61	12.8	* C-N	1337.5	11.1	DESIGN	4.61

FLAG NOTES:

<1> CIRCUITS 31 TO 42 ARE SWITCHED CIRCUITS, TYPICAL.

<2> PANEL "PP3" IS A NEW PANEL, COORDINATE INSTALLATION OF METER AND EXACT LOCATION OF TRANSFORMER WITH EXCEL PRIOR TO ROUGH-IN.

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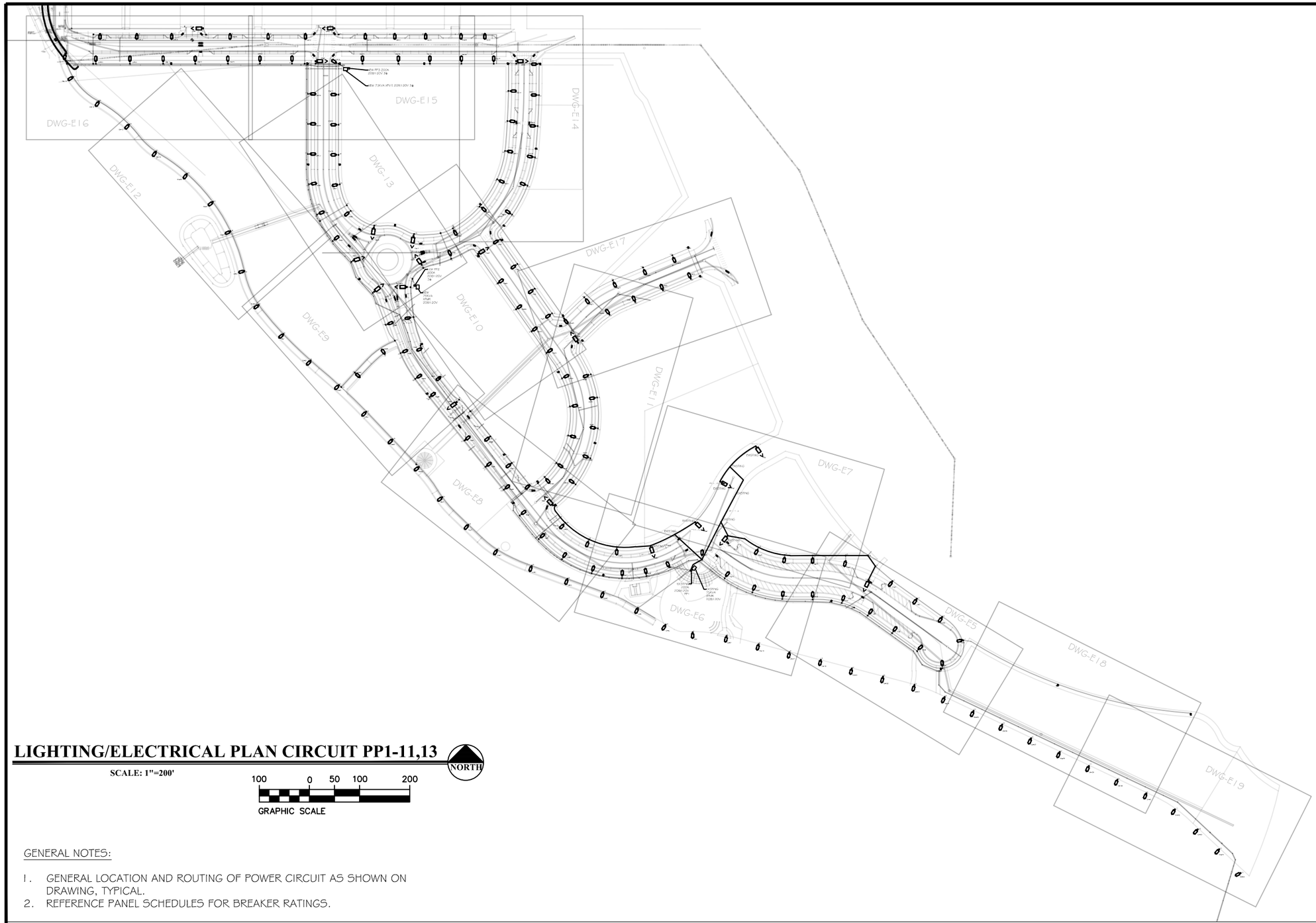
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
PANEL SCHEDULES



LIGHTING/ELECTRICAL PLAN CIRCUIT PP1-11,13

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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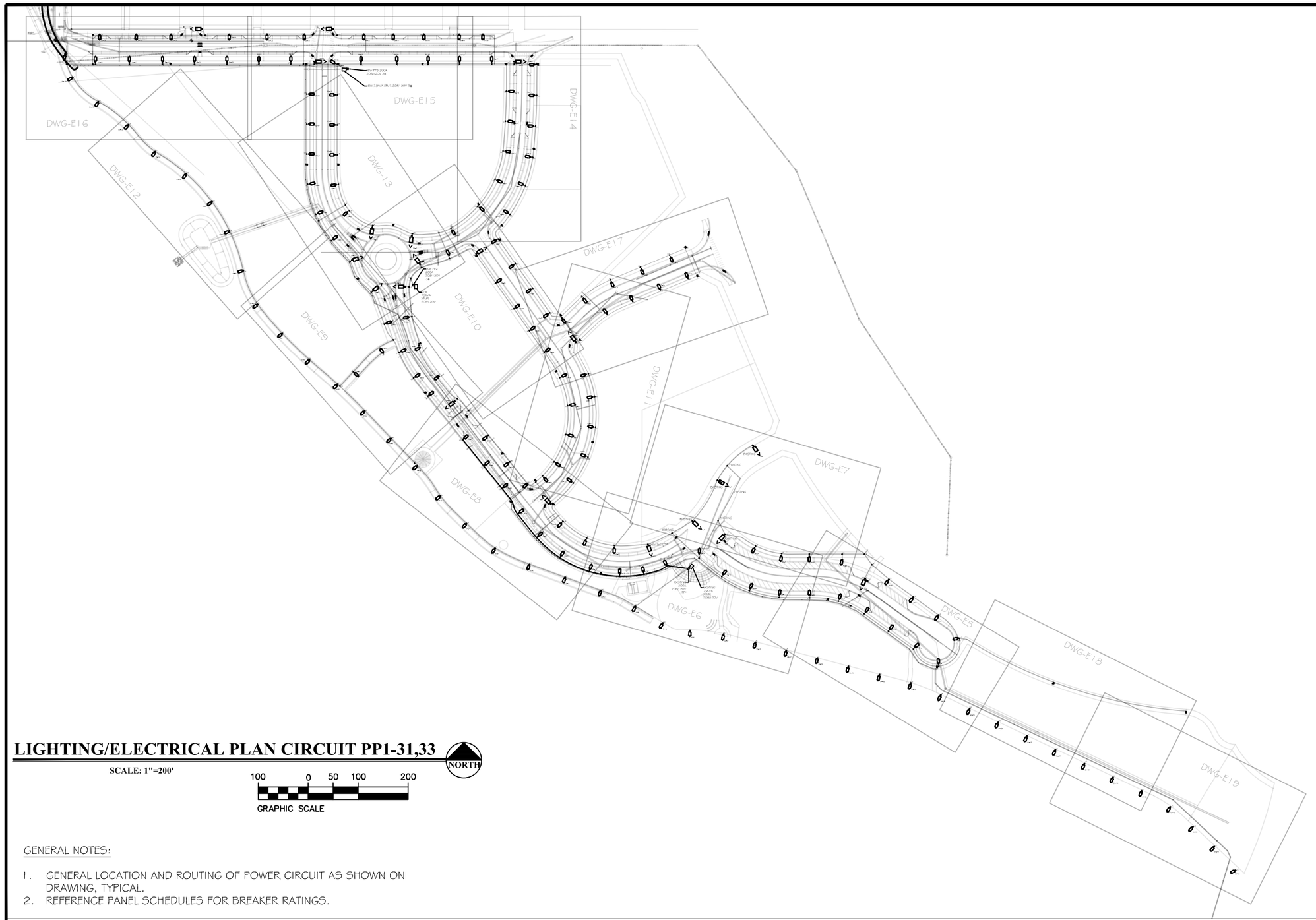
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
COMPOSITE UTILITY PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP1-31,33

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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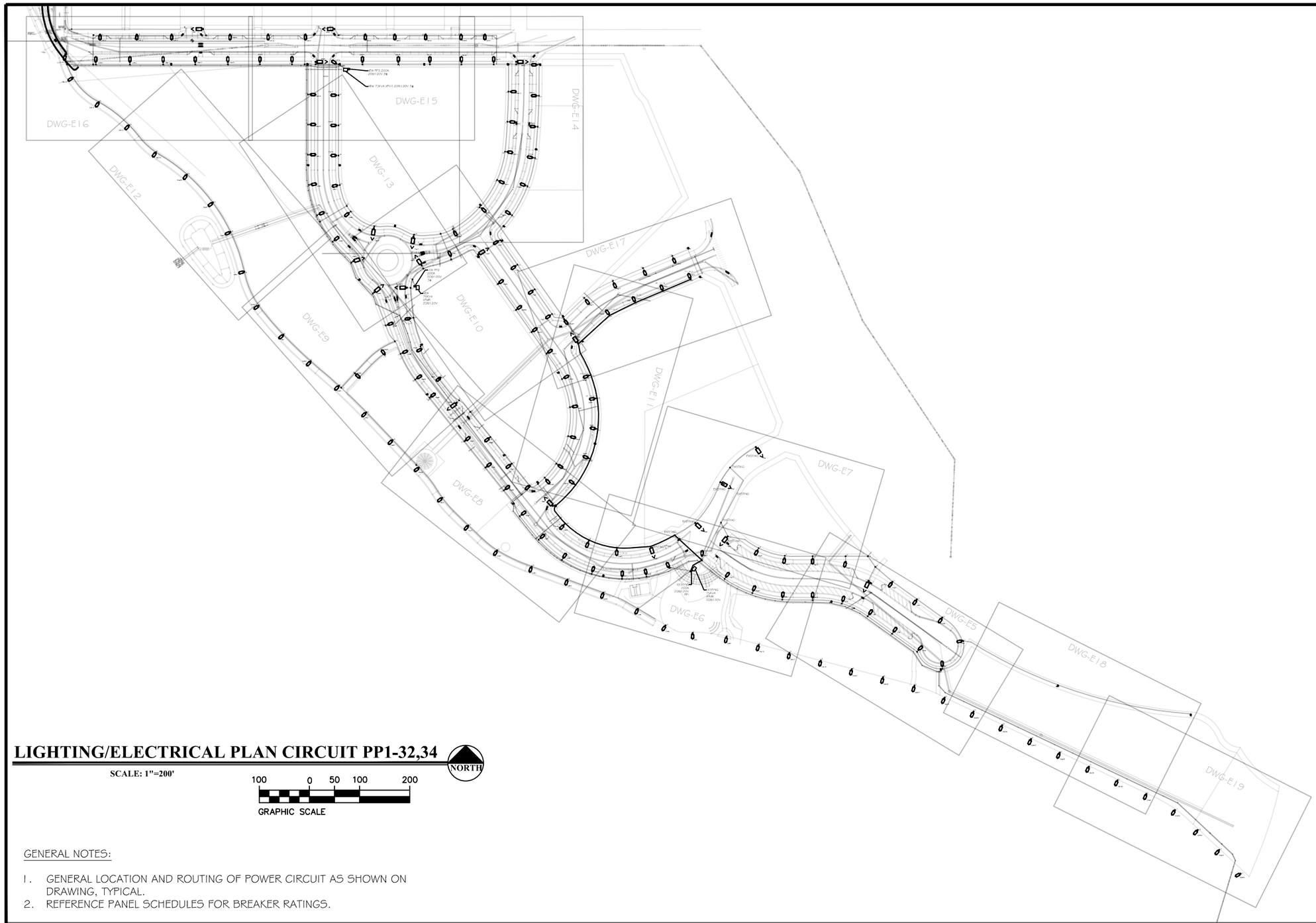
COMPOSITE UTILITY PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP1-32,34

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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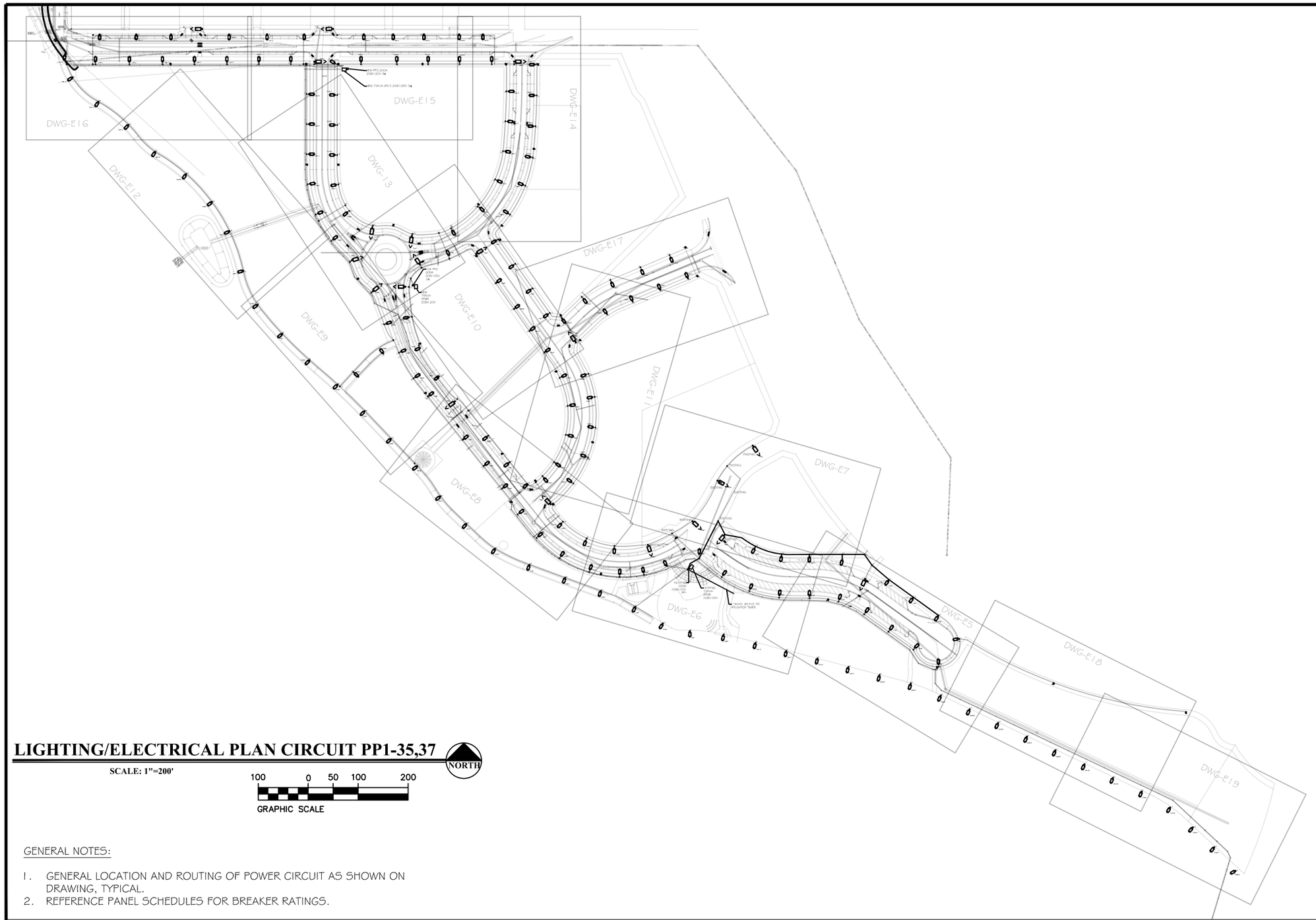

LIGHTING/ELECTRICAL PLAN CIRCUIT PP1-35,37

NORTH

SCALE: 1"=200'

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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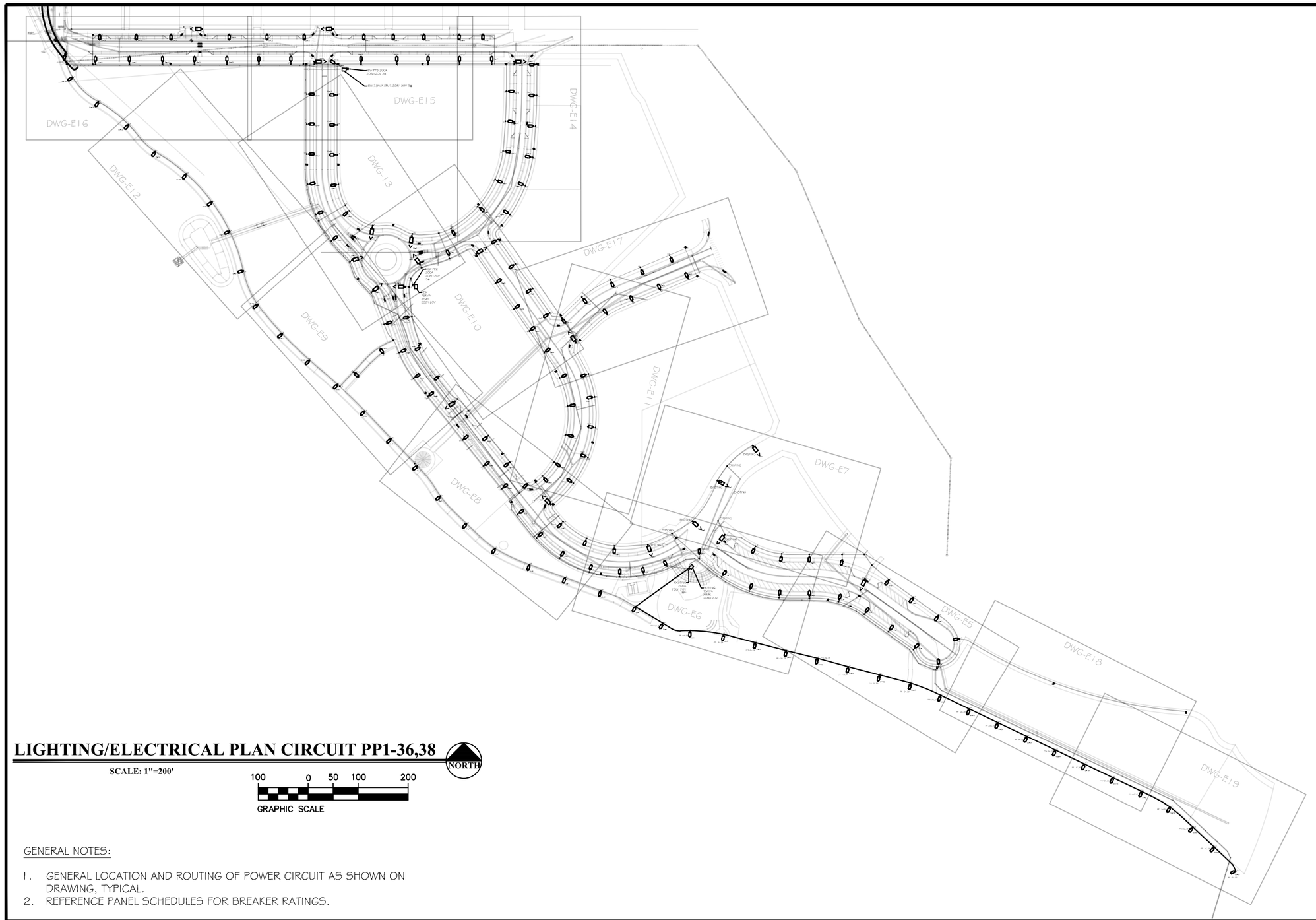
COMPOSITE UTILITY PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP1-36,38

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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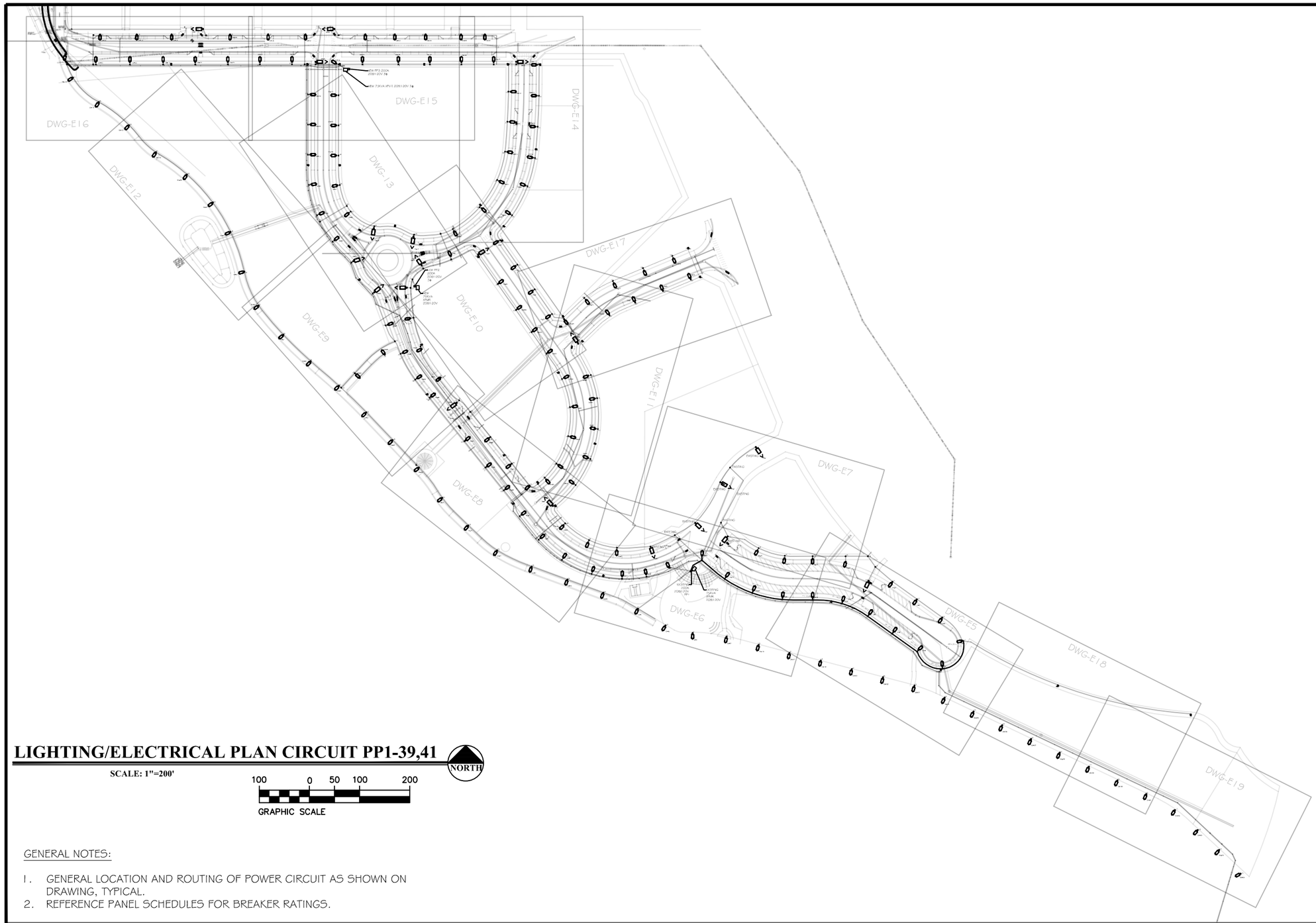
COMPOSITE UTILITY PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP1-39,41

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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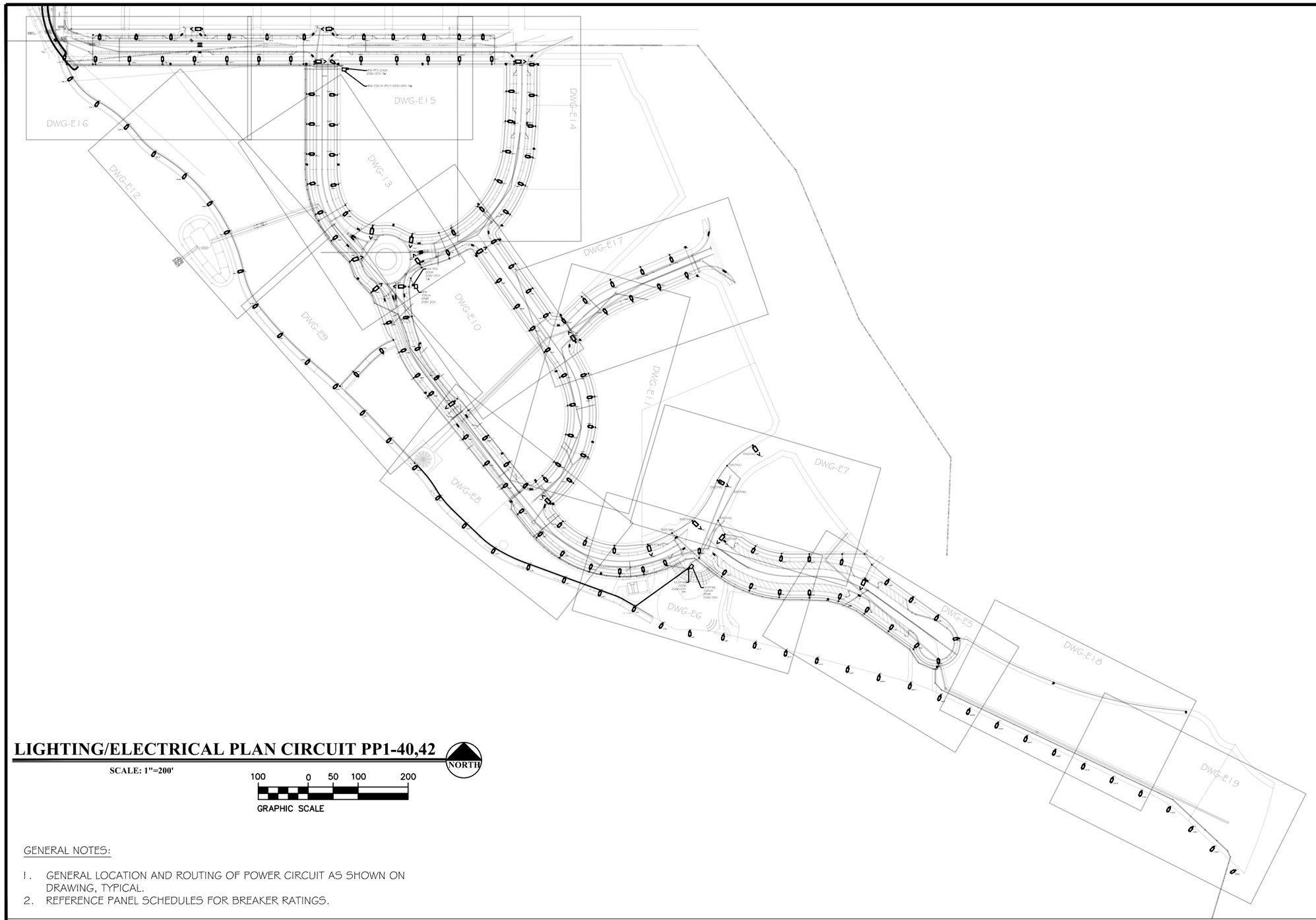

LIGHTING/ELECTRICAL PLAN CIRCUIT PP1-40,42

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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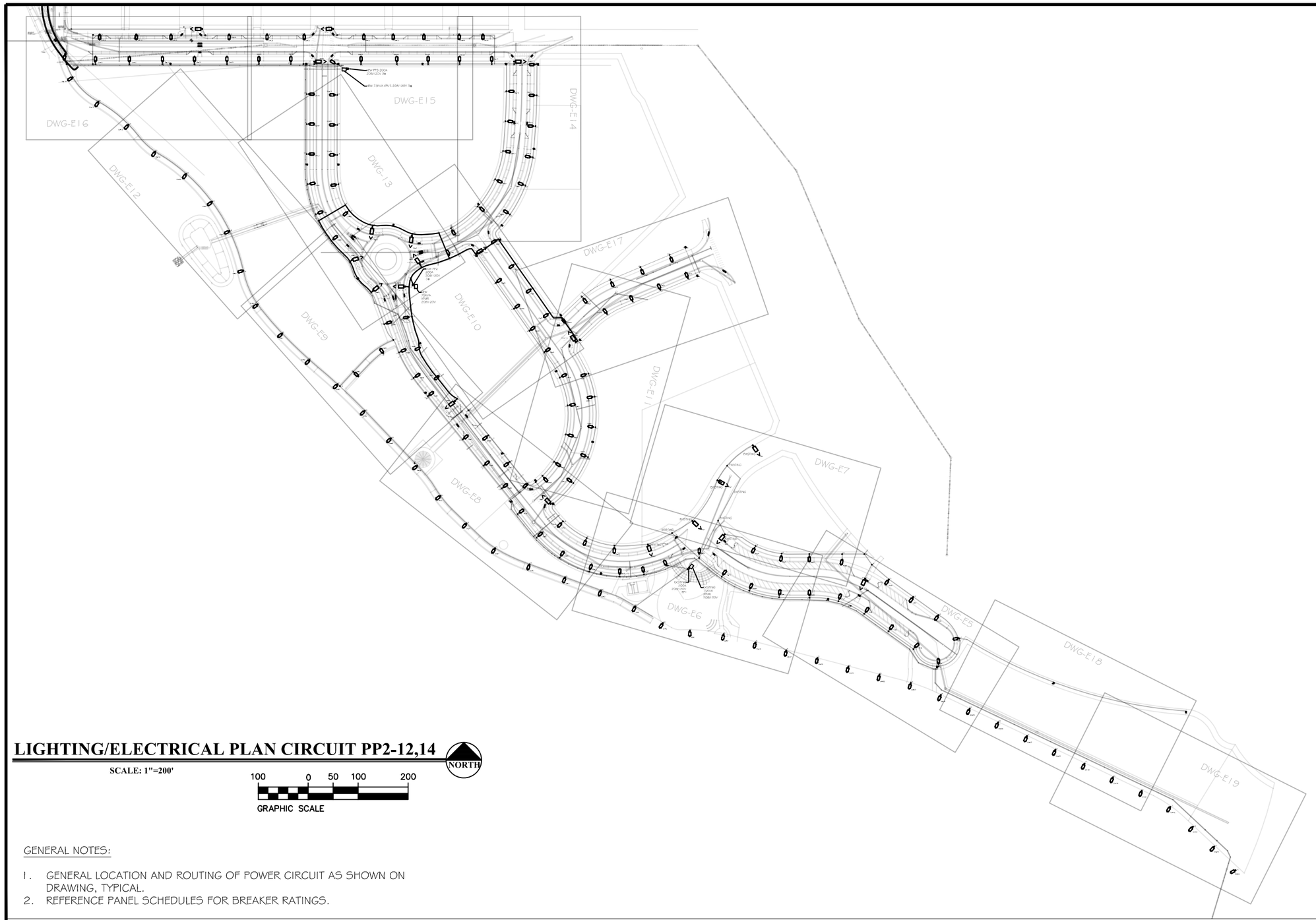

LIGHTING/ELECTRICAL PLAN CIRCUIT PP2-12,14

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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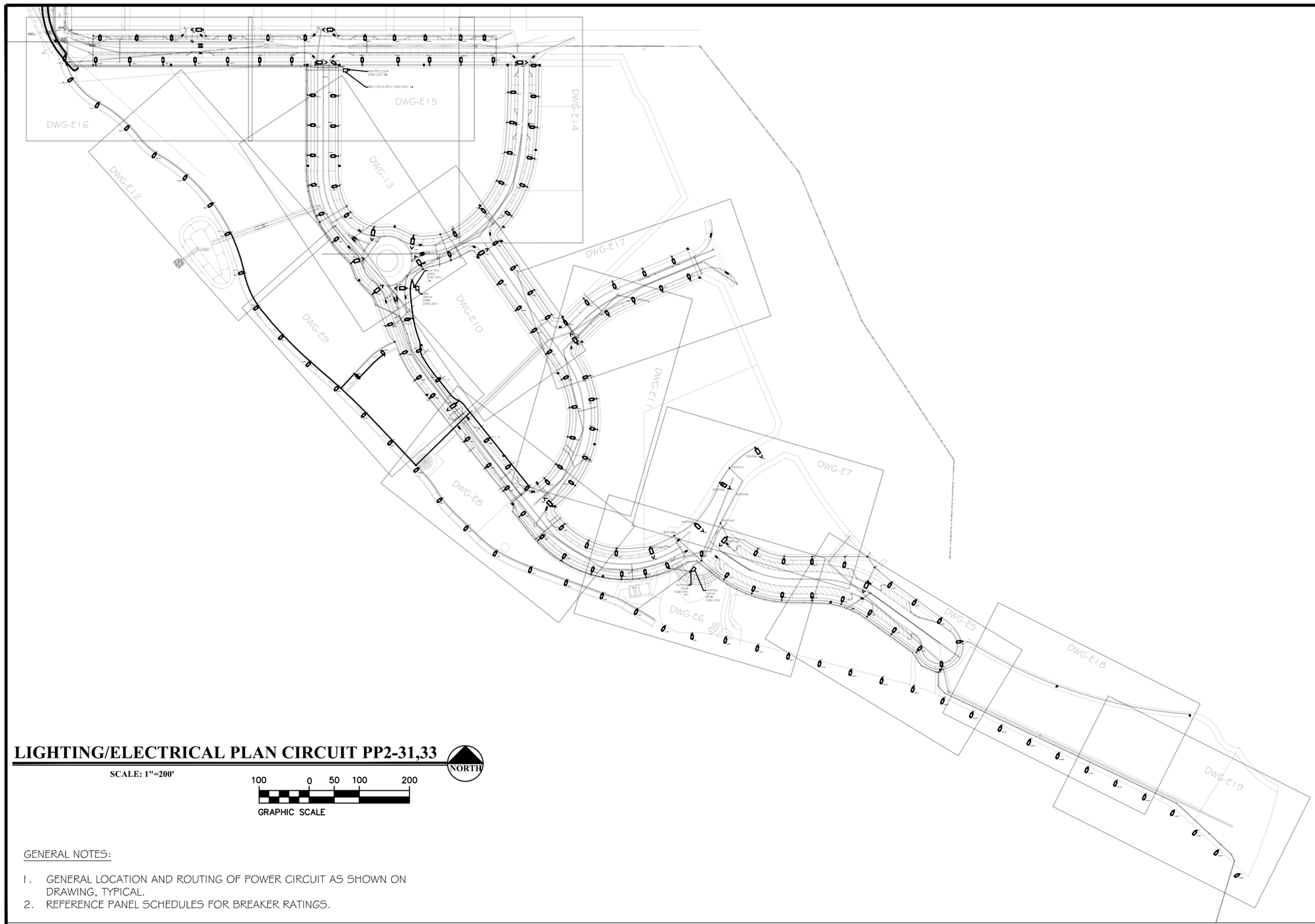

LIGHTING/ELECTRICAL PLAN CIRCUIT PP2-31,33

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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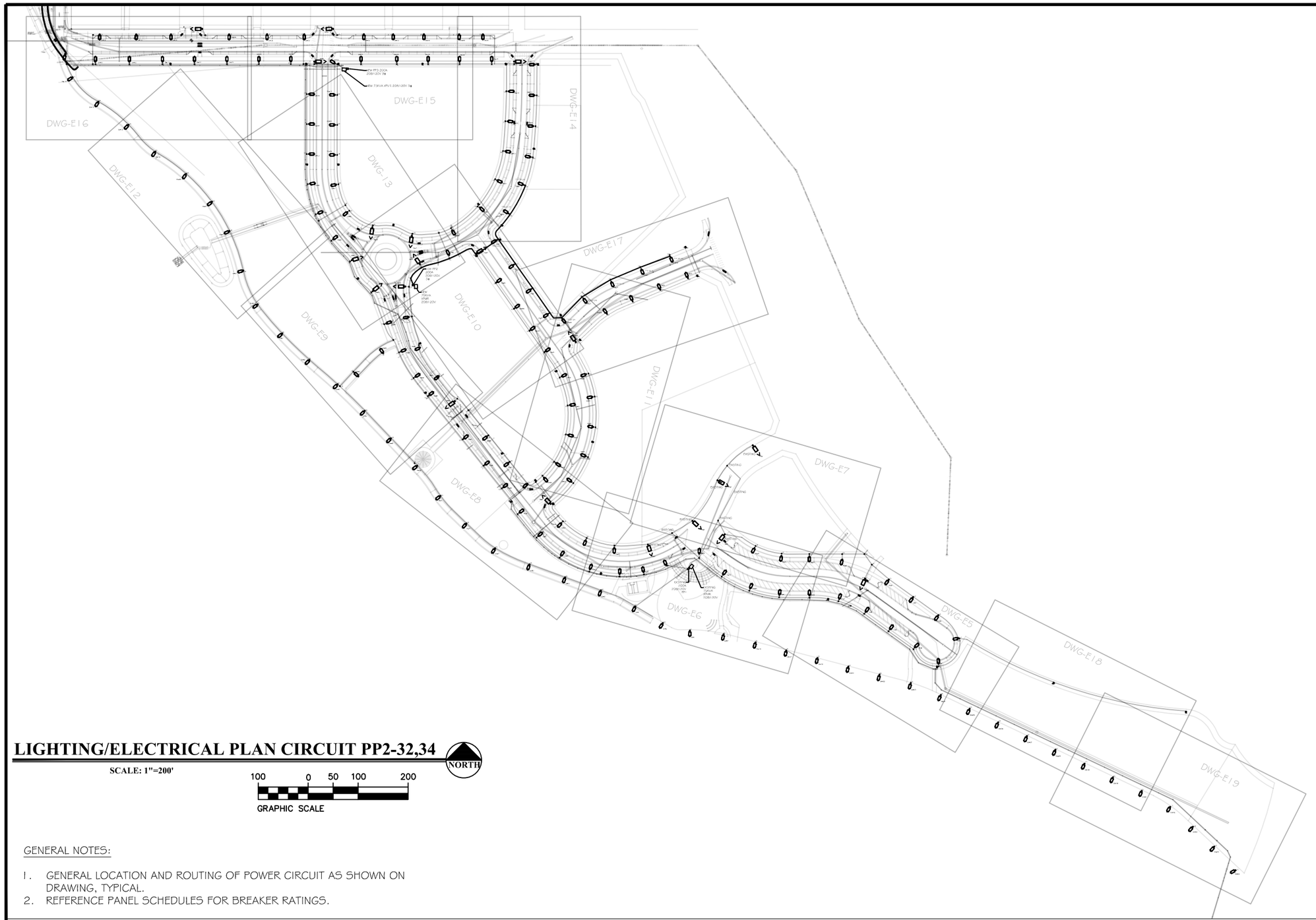
COMPOSITE UTILITY PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP2-32,34

NORTH

SCALE: 1"=200'

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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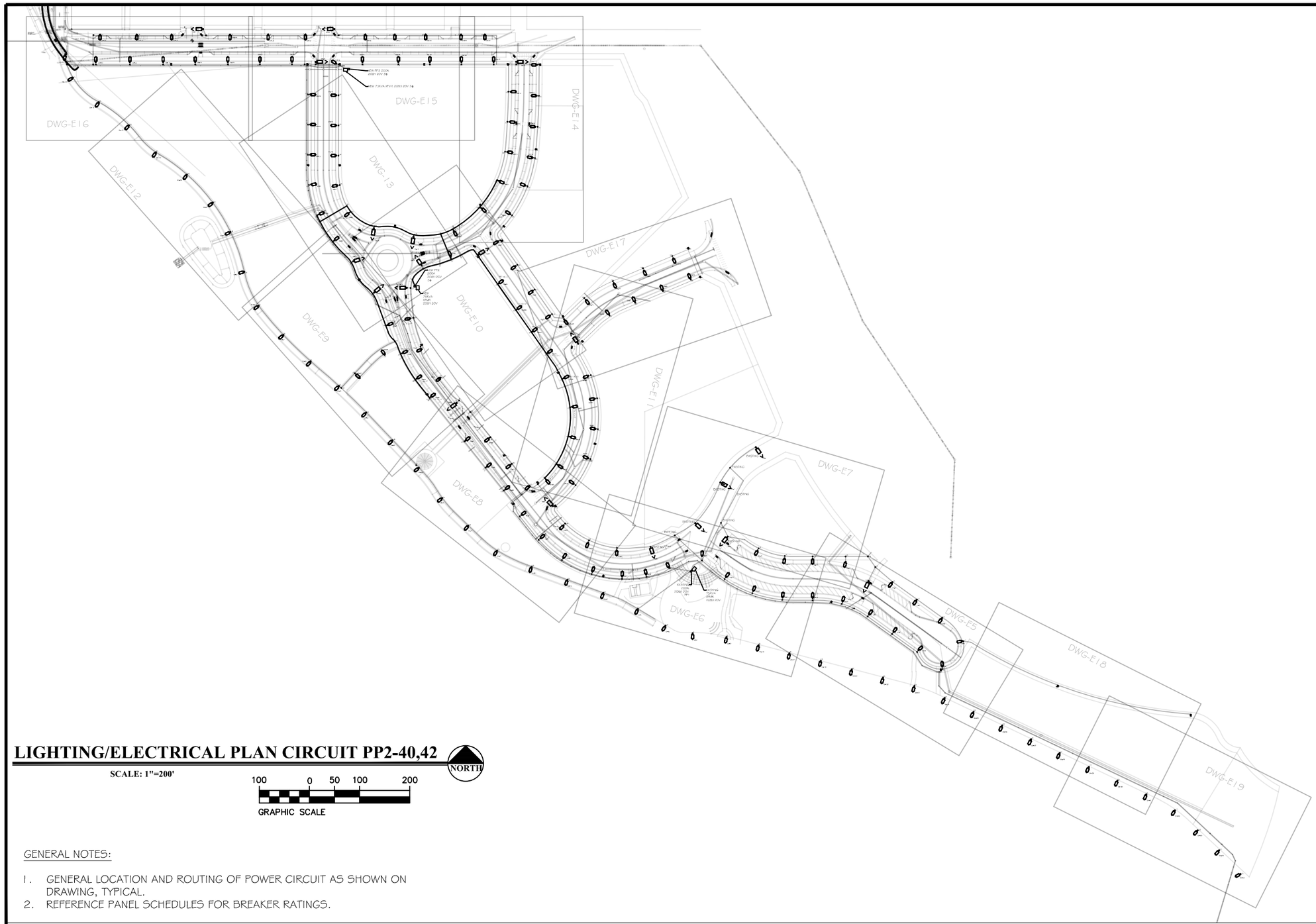
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
COMPOSITE UTILITY PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP2-40,42

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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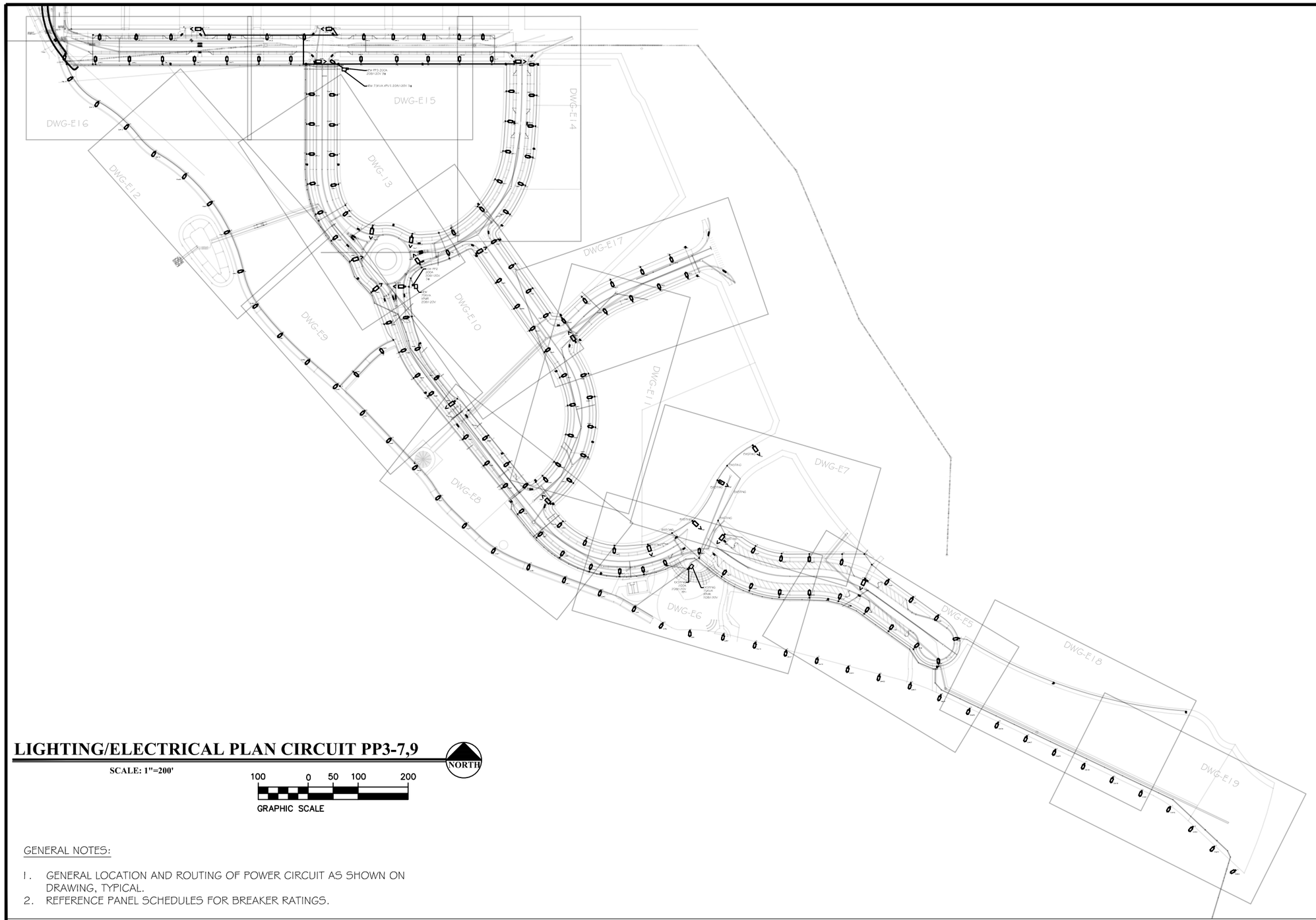
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
COMPOSITE UTILITY PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP3-7,9

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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ELECTRICAL DESIGN, CONSULTING ENGINEERS; PH: 970-245-7292
PO 3211 GRAND JCT., CO 81502
EMAIL: joelm@ACMengrs.com

811
Know what's **below.**
Call before you dig.

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DRAWN BY AJM DATE 5-6-2020
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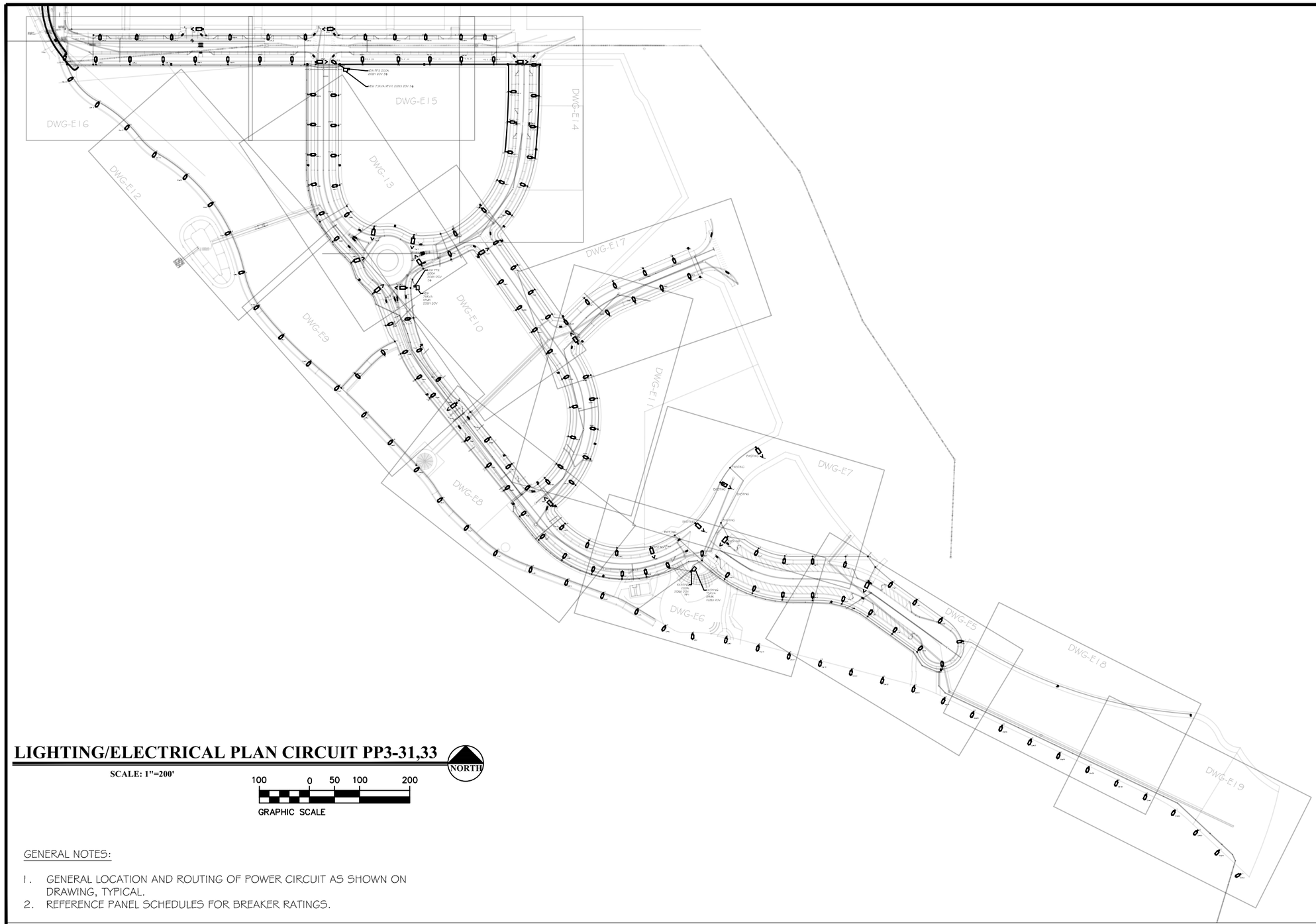
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
COMPOSITE UTILITY PLAN


DWG-E16
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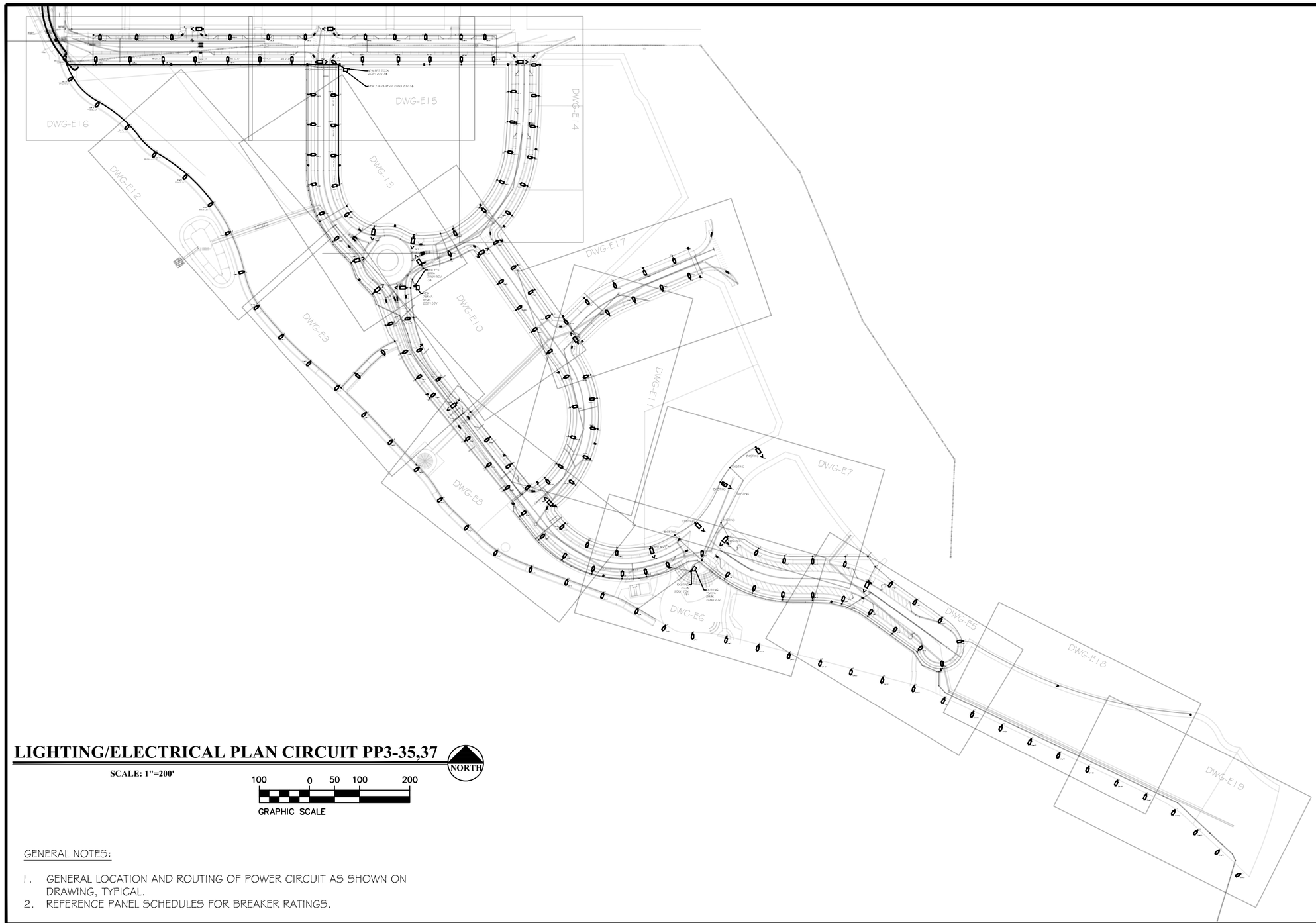
DWG-E11
DWG-E8
DWG-E7
DWG-E6
DWG-E5
DWG-E18
DWG-E19
NEW PP3 200A 208Y/120V 3Φ
NEW 75KVA XFMR 208Y/120V 3Φ
NEW PP2 200A 208Y/120V 3Φ
NEW 150KVA XFMR 208Y/120V
EXISTING
EXISTING
EXISTING



LIGHTING/ELECTRICAL PLAN CIRCUIT PP3-35,37

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
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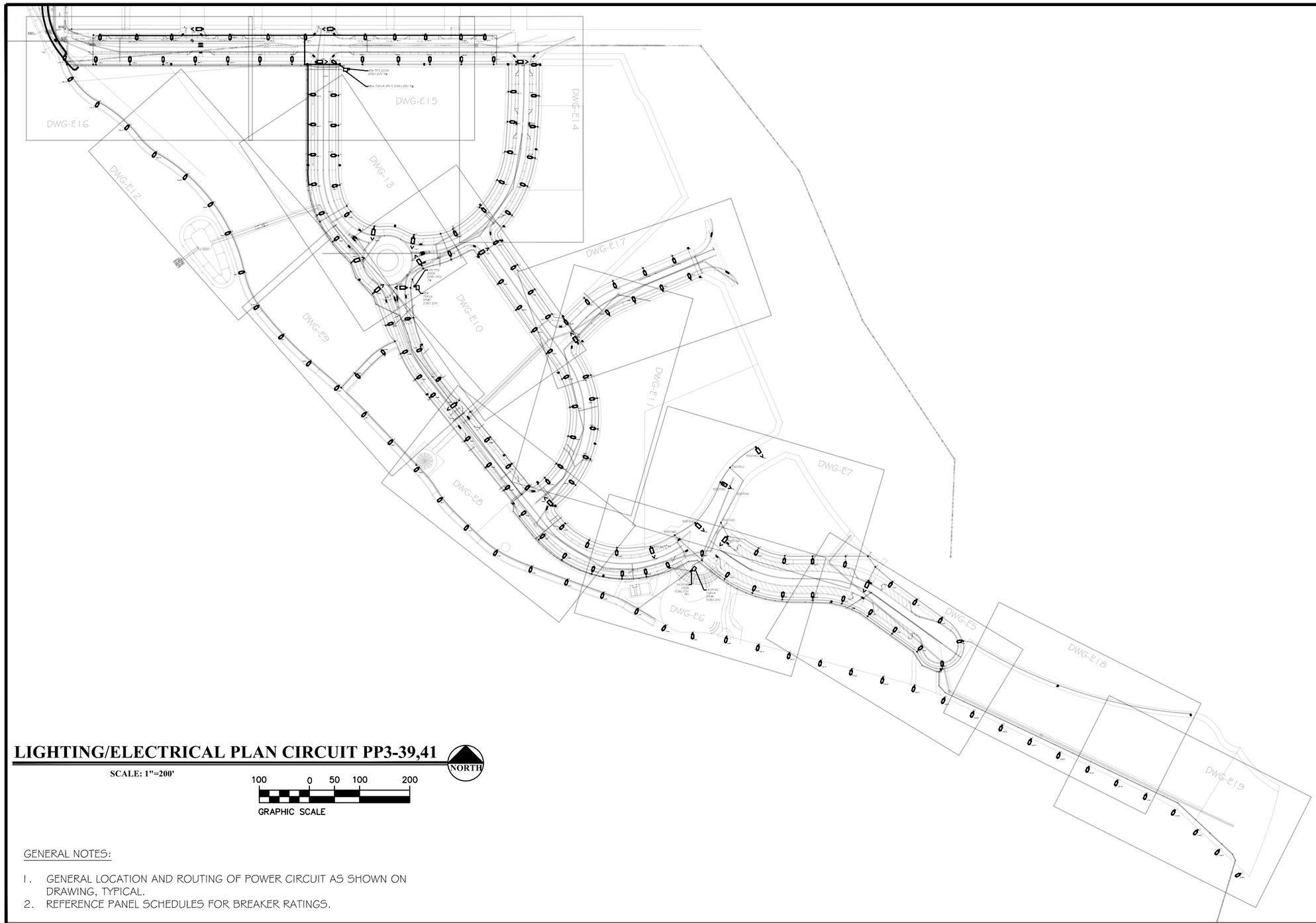
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
COMPOSITE UTILITY PLAN


DWG-E16
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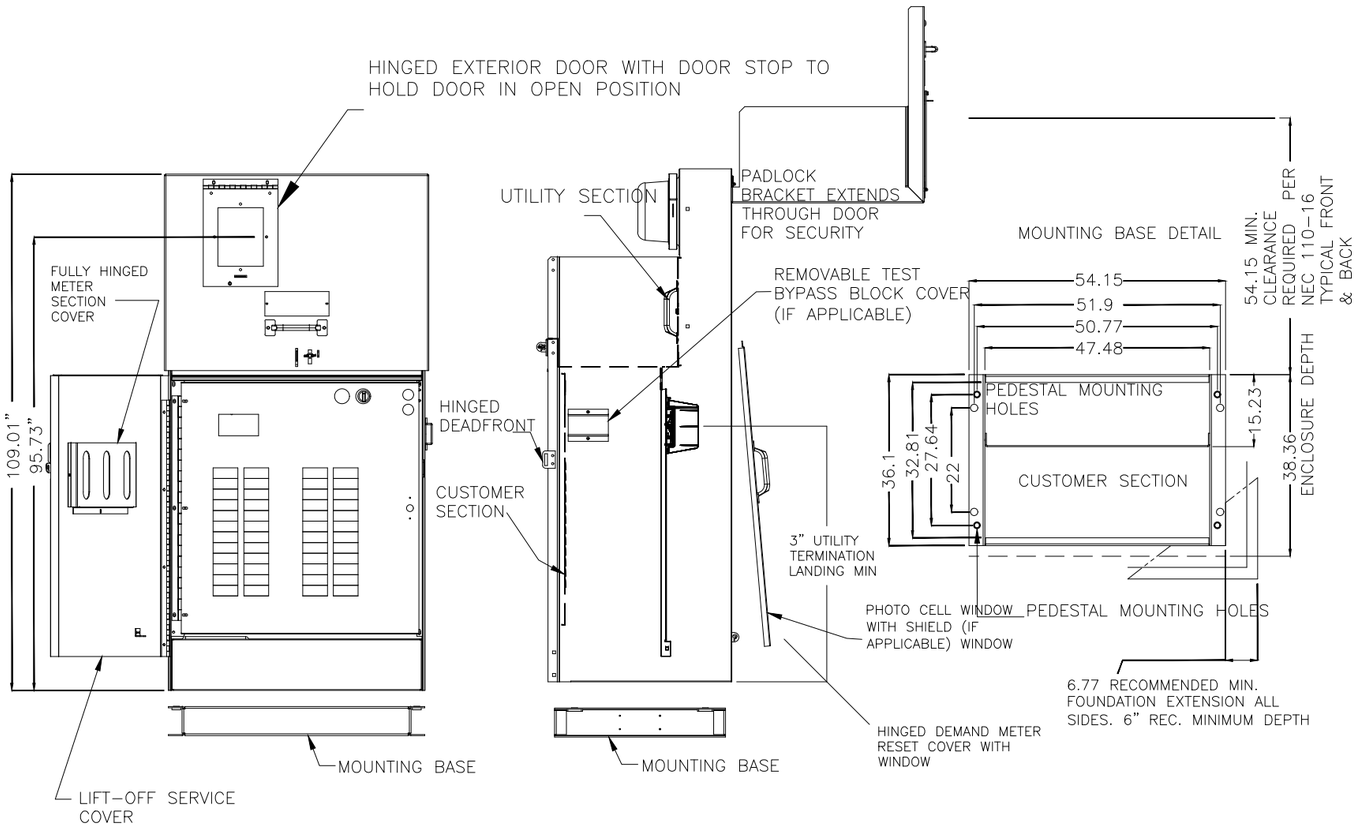
DWG-E8
DWG-E7
DWG-E6
DWG-E5
DWG-E18
DWG-E19
NEW PP3 200A 208Y/120V 3ø
NEW 75KVA XFMR 208Y/120V 3ø
NEW PP3 200A 208Y/120V 3ø
NEW 150KVA XFMR 208Y/120V
EXISTING
EXISTING
EXISTING

24" COMMERCIAL PEDESTAL



B/1 **TYPICAL 3-PHASE POWER PEDESTAL/LIGHTING CONTROL CENTER PLAN**

NOT TO SCALE

NOTES

1. COORDINATE EXACT INSTALATION REQUIREMENTS WITH PROVIDER PRIOR TO ROUGH-IN OR TRENCHING.CONTROL CABINET SHALL BE U/L LISTED "INDUSTRIAL CONTROL PANEL" PER UL 508.
2. CONSTRUCTION SHALL BE NEMA 3R. 12 GA. A60 STEEL POWDER COATED MINT GREEN WITH PHOTO ELECTRIC CELL IN SERVICE CABINET. ELECTRICAL CONTRACTOR TO PROVIDE PHOTOCELL.
3. VOLTAGE RATINGS OF SERVICE EQUIPMENT SHALL CONFORM TO THE SERVICE VOLTAGES INDICATED ON THE PLANS.
4. SERVICE EQUIPMENT ENCLOSURE AND METERING EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE SERVING UTILITY. WHEN THE SERVING UTILITY PROVIDES BOTH METERED AND UNMETERED CIRCUITS, A SEPARATE BUS SHALL BE PROVIDED FOR EACH CIRCUIT. THE METER AREA SHALL HAVE A SEALING, LOCKABLE, RAIN TIGHT COVER THAT CAN BE REMOVED WITHOUT THE USE OF TOOLS.
5. SERVICE EQUIPMENT SHALL BE FACTORY WIRED AND CONFORM TO NEMA STANDARDS.
6. THE EXTERIOR DOOR SHALL HAVE PROVISIONS FOR PADLOCKING. THE PADLOCK HOLE SHALL BE A MINIMUM DIAMETER OF 11mm.
7. ALL TERMINALS FOR INCOMING SERVICE CONDUCTORS SHALL BE COMPATIBLE WITH EITHER COPPER OR ALUMINUM CONDUCTORS SIZED TO SUIT THE CONDUCTORS SHOWN ON THE PLAN. TERMINAL LUGS SHALL BE COPPER OR TIN-PLATED ALUMINUM. SOLID NEUTRAL TERMINAL STRIP SHALL BE RATED 100A UNLESS OTHERWISE SPECIFIED AND FOR USE WITH COPPER OR ALUMINUM CONDUCTORS. THE TERMINAL SHOULD INCLUDE BUT NOT BE LIMITED TO:
   A) INCOMING TERMINALS (LANDING LUGS)
   B) NEUTRAL LUGS
   C) SOLID NEUTRAL TERMINAL STRIP.
   D) TERMINAL STRIPS FOR CONDUCTORS WITHIN THE ENCLOSURE.
8. CIRCUIT BREAKER SPACES (20mm NOMINAL) SHALL BE PROVIDED FOR BRANCH CIRCUITS. CIRCUIT BREAKER INTERIORS SHALL BE COPPER. INTERIORS SHALL ACCEPT PLUG-IN OR CABLE-IN/ CABLE-OUT CIRCUIT BREAKERS.
9. PLUG-IN CIRCUIT BREAKERS MAY BE MOUNTED IN THE VERTICAL OR HORIZONTAL POSITION. CABLE-IN/ CABLE-OUT CIRCUIT BREAKERS SHALL BE MOUNTED IN THE VERTICAL POSITION.
10. FASTENERS ON THE EXTERIOR OF THE ENCLOSURE SHALL BE VANDAL RESISTANT AND SHALL NOT BE REMOVABLE FROM THE EXTERIOR. ALL NUTS, BOLTS, SCREWS, WASHERS, AND HINGES SHALL BE STAINLESS STEEL.
11. PHENOLIC NAME PLATES SHALL BE PROVIDED AS REQUIRED.
12. A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
13. FOUNDATION SHALL EXTEND 50mm MINIMUM BEYOND EDGE OF ENCLOSURE.
14. PANEL WILL ADHERE TO XCEL ENERGY REQUIREMENT FOR COLD SEQUENCE DISCONNECTION.

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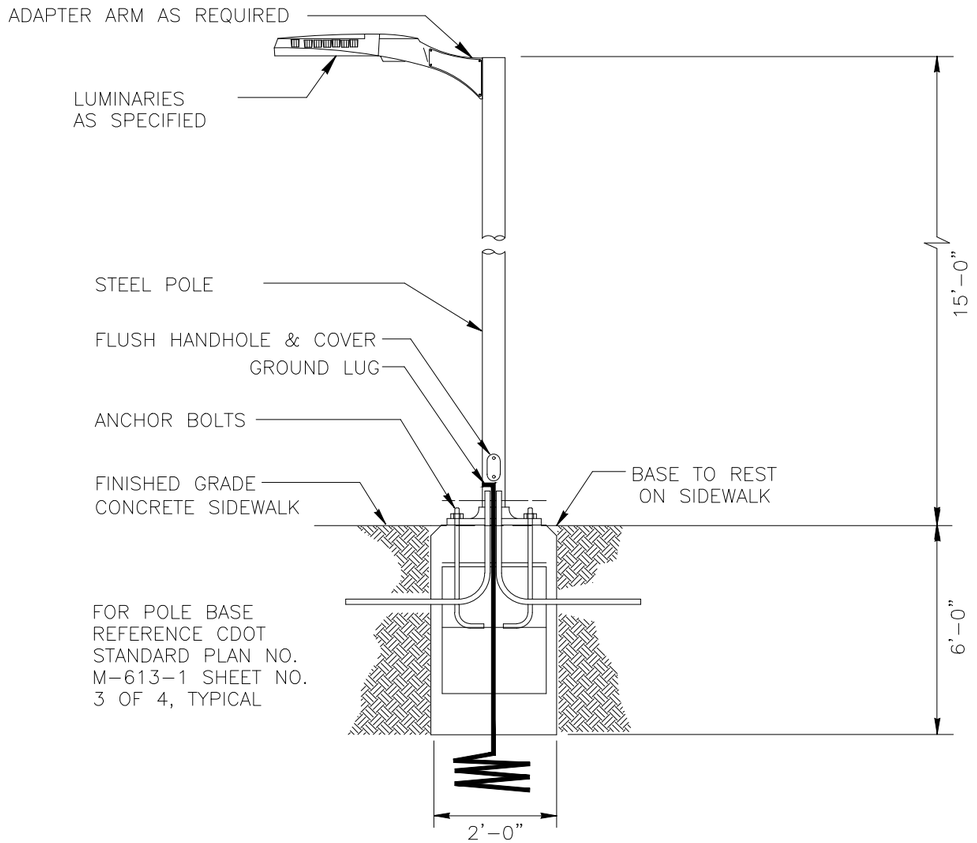
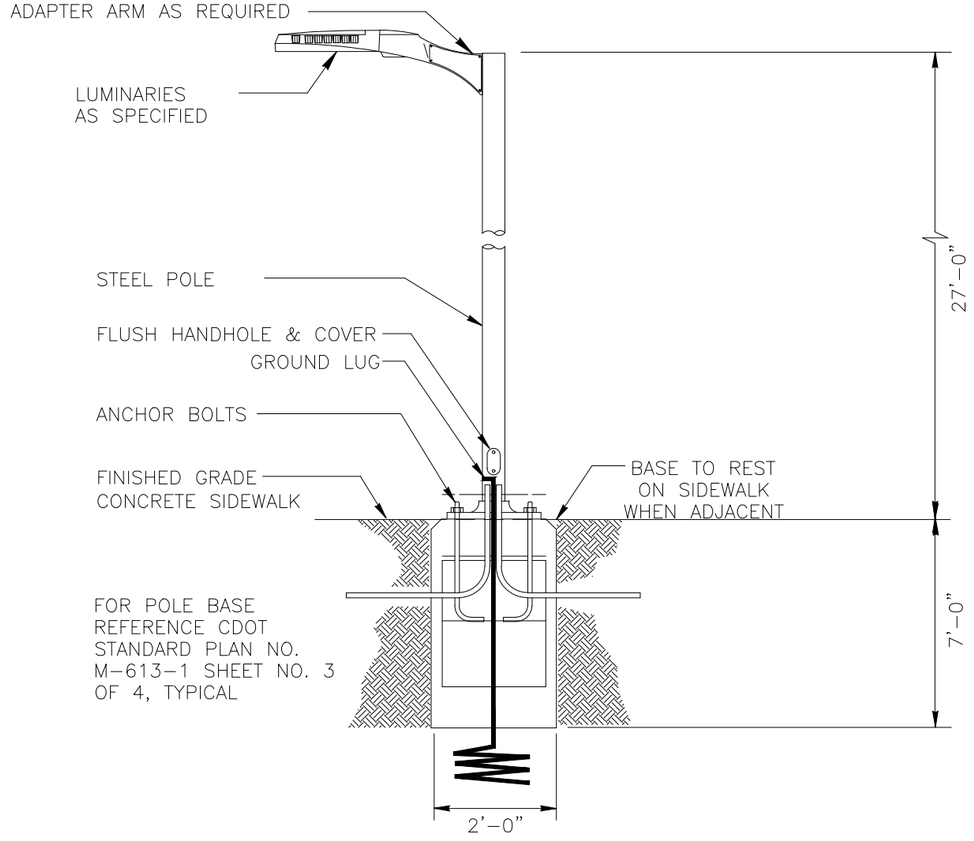
PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
PEDESTAL DETAILS



TYPICAL SA LIGHT DETAIL

NOT TO SCALE



TYPICAL SB LIGHT DETAIL

NOT TO SCALE

GENERAL NOTES TYPES "A" AND "B":

1. ELECTRICAL CONTRACTOR TO ORDER ALL REQUIRED HARDWARE FOR MOUNTING OF EACH LUMINARIES.
2. VERIFY THE BURY DEPTH AND DIAMETER OF THE SONOTUBE FOR POLE LUMINARIES WITH THE CIVIL ENGINEER PRIOR TO PURCHASING THE EQUIPMENT. DEPTH WILL DEPEND ON SOIL CONDITIONS. TYPICAL CONCRETE DEPTH IS 7 FT. VERIFY WITH CIVIL ENGINEER.
3. ELECTRICAL CONTRACTOR TO VERIFY THAT ALL FIXTURES TO COMPLY WITH LIGHT TRESPASS AND AND DARK SKY CODES.
4. NOTIFY ENGINEER OF ANY OBSTRUCTIONS TO POLE PLACEMENT IMMEDIATELY BEFORE PROCEEDING.
5. VERIFY REQUIRED VOLTAGE OF FOR EACH LUMINARIES WITH AVAILABLE VOLTAGES PRIOR TO ORDERING.
6. REFERENCE CDOT STANDARD PLAN NO. M-613-1 SHEET NO. 3 OF 4, TYPICAL

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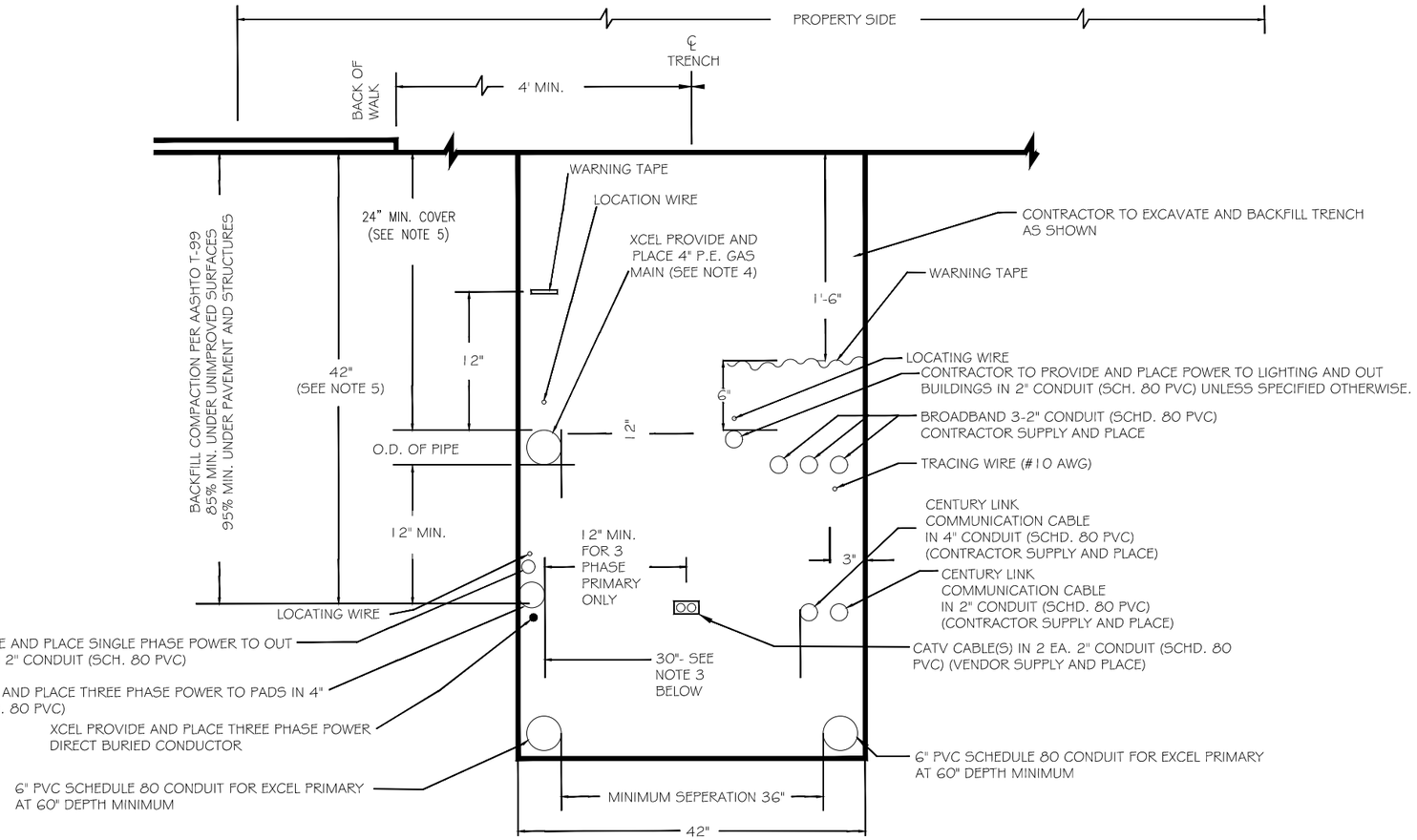
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
LIGHTING DETAILS



GENERAL NOTES:

1. FOR EASE OF CONSTRUCTION AND MAINTENANCE, PRIMARY CABLE SHOULD BE 12" TO 24" FROM COMMUNICATION CABLES. HOWEVER NESC REQUIREMENTS PERMIT "SUPPLY AND COMMUNICATION CABLES TO BE BURIED TOGETHER AT THE SAME DEPTH WIN NO DELIBERATE SEPARATIONS BETWEEN FACILITIES PROVIDED ALL PARTIES ARE IN AGREEMENT."

2. ONLY SINGLE PHASE SUPPLY CABLES CAN BE BURIED AT THE SAME DEPTH WITH NO DELIBERATE SEPARATION WITH COMMUNICATION CABLES. THREE PHASE CABLES MUST BE SEPARATED BY A MINIMUM OF 1 FOOT (REFERENCE NESC 354.D.3A).

3. 30" TRENCH WIDTH SHOULD BE USED WHEN ALL FOUR UTILITIES ARE INCLUDED.

4. STEEL GAS PIPE OR STEEL DUCT IS NOT ALLOWED FOR JOINT TRENCH CONSTRUCTION.

5. WHERE UNDERGROUND UTILITIES CROSS OR ENCROACH INTO CITY STREETS THEY SHALL BE INSTALLED TO A DEPTH PROVIDING 3' MINIMUM COVER BELOW FINISHED GRADE.

TYPICAL COMMON TRENCH DETAIL PROPERTY SIDE

NOT TO SCALE

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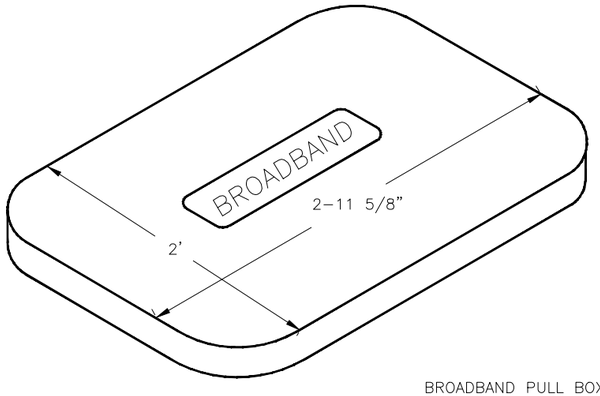
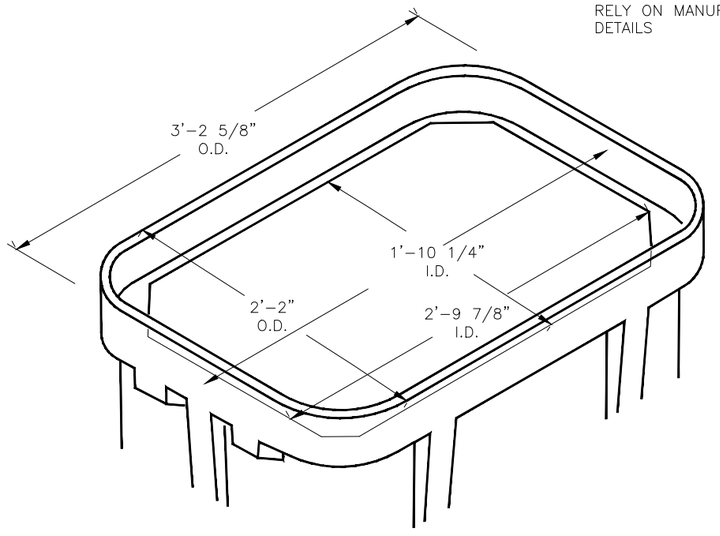
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
UTILITY DETAILS DETAILS



COVER

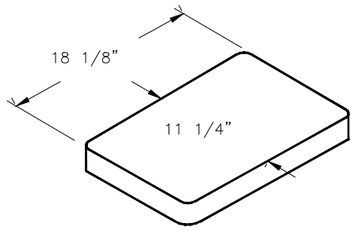
BROADBAND PULL BOX (HUBBEL QUAZITE BOX) (BOX PART NO PG2436BA30) COVER PART NO PG2436HA00) OR ENGINEER APPROVED EQUAL DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS

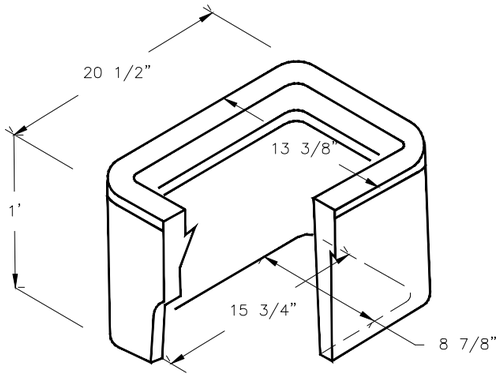


BOX

BROADBAND PULL BOX

DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS





STREET LIGHT AND PEDESTRIAN LIGHT PULL BOX

DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS

GENERAL NOTES:

1. PULL BOXES, PULL BOX COVERS AND EXTENSIONS SHALL BE MADE OF FIBERGLASS REINFORCED POLYMER CONCRETE. PULL BOXES SHALL BE VERIFIED BY 3RD PARTY NATIONALLY RECOGNIZED INDEPENDENT TESTING LABORATORY AS MEETING ALL TEST PROVISIONS OF THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING. CERTIFICATION DOCUMENTS SHALL BE SUBMITTED WITH MATERIALS SUBMITTALS. THE PULL BOX SHALL HAVE A DETACHABLE COVER WITH A SKID RESISTANT SURFACE AND HAVE THE WORDS ELECTRICAL CAST INTO THE SURFACE. FAINTING THE WORDS SHALL NOT BE ACCEPTED. MARKINGS SHOWING THE TIER 22 RATING MUST BE LABELED OR STENCILED ON THE INSIDE AND OUTSIDE OF THE BOX AND THE ON UNDER SIDE OF THE COVER. THE COVER SHALL BE ATTACHED TO THE PULL BOX BODY BY MEANS OF A MINIMUM 3/8–7 UNIFIED NATIONAL COURSE (UNC) STAINLESS STEEL PENTA HEAD BOLTS SHALL HAVE TWO LIFT SLOTS TO AIDE IN THE REMOVAL OF THE LID.

2. PULL SLOTS SHALL BE RATED FOR A MINIMUM PULL OUT OF 3,000 POUNDS. MAGNESIUM CHLORIDE TESTS SHOULD BE PERFORMED IN ACCORDANCE WITH THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING.

TYPICAL PULLBOX DETAIL

NOT TO SCALE

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
UTILITY DETAILS DETAILS

CITY OF Grand Junction COLORADO

Purchasing Division

ADDENDUM NO. 1

DATE: May 29, 2020
FROM: City of Grand Junction Purchasing Division
TO: All Offerors
RE: Riverfront at Dos Rios Phase II Construction IFB-4799-20-DH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

1. Q. For the purposes of bonding if there is a projected cost range for this project?

A. The projected cost range/project estimate will not be released until after the scheduled bid opening date and time.

2. Q. I assume this project is funded through or by the City?

A. This project is funded through Dos Rios General Improvement District Bonds.

3. Q. Would the City of Grand Junction will accept bids that use a fiberglass pole (Wagners Composite Fiber Technologies Light Poles) over a steel pole?

A. The proposed light poles, as called out in the solicitation documents were selected to exactly match the light poles that were installed for the Las Colonias Business Park, as well as along the newly constructed concrete path that connects Riverside Park to Las Colonias Business Park. The requested Wagners Light Poles will not be accepted as an alternative light pole for the Dos Rios Phase 2 Project.

4. Q. Would the City of Grand Junction will accept bids that use HP Storm and Nyloplast to be quoted as an equal/alternate to the RCP and concrete boxes currently shown in the plans for the Riverfront at Dos Rios?

A. The requested (HP Storm and Nyloplast) drainage pipes, from Advanced Drainage Solutions (ADS), or approved equivalent, shall be considered an approved equal/alternate material to the original proposed RCP pipe. This approved alternate shall only be allowed for circular RCP pipe segments. All segments of arch pipe and box culvert will remain concrete, as called-out in the original construction plans. The Contractor is responsible for verifying the manufactures' specifications on minimal coverage for the alternate pipe material, and verify which segments of pipe have sufficient cover as proposed. Any pipe segments that do not have sufficient cover per manufacturers' specifications shall be bid as RCP pipe.

5. Q. I see on the Bid schedule for Dos Rios project they have 895 LF of 29" x 18" Horizontal Elliptical Arched RCP which nobody in the State manufactures anymore. I am wanting to see if we

can substitute 19" x 30" ID Horizontal Elliptical RCP in place of the Arched Pipe. It is the same equivalent as round pipe, (24" Dia.) but it has a lower profile for cover than the arch pipe does.

A. The request to use a 19" x 30" Horizontal Elliptical RCP pipe instead of the originally proposed 29" x 18" Horizontal Elliptical Arched RCP pipe is accepted.

6. Q. Will ADS HP be an acceptable alternate to the RCP for the Dos Rios project?

A. See reply to (Question #4) above.

7. Q. We would request The City of Grand Junction to accept the use of Fiberglass Light Poles instead of steel. We supply 4" and 5" square light poles up to 30' and 9" round poles up to 40', all manufactured from our unique pull winding process to ensure structural requirements are met.

The product we would advocate to supply is:

-Typical SA Light Detail, 15' anchor based steel pole = 15' Anchor Based 5" Square Wagners FRP Pole.
-Typical SB Light Detail, 27' anchor based steel pole = 27' Anchor Based 9" Round Wagners FRP Pole.

A. See reply to (Question #3) above. Fiberglass light poles shall not be considered as an alternate to the proposed steel light poles.

8. **General Contractor/Bidder Pre-Qualification:** Due to the complexity, size, and scope of this project, the City has determined that a pre-qualification process is prudent to ensuring that the awarded bidder is both qualified and capable of successfully performing and completing the project. Therefore, in an effort to be respectful of the time and cost of General Contractors/Bidders putting together a bid packages for which they may not be qualified to perform, we are requiring that all General Contractors/Bidders intending to submit a bid response to this solicitation process, complete and submit the attached Pre-Qualification Application and all required documents to the City's Purchasing Agent (via e-mail duaneh@gjcity.org) **no later than June 10, 2020** General Contractors/Bidders shall be notified of their pre-qualification status **no later than June 17, 2020**.

CDOT pre-qualification can be substituted for the City's Pre-Qualification Process, provided that the CDOT pre-qualification meets or exceeds the Contractor's bid amount for this project, and is for the type of work to be performed for this project. If substituting CDOT pre-qualification, said qualification must be submitted and received by the City's Purchasing Agent (via e-mail duaneh@gjcity.org) **no later than June 20, 2020.** General Contractors/Bidders shall be notified of their pre-qualification status **no later than June 17, 2020**.

9. Additional plans, as stated in the solicitation document, will be forthcoming in a future addendum.

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,

Duane Hoff Jr., Senior Buyer
City of Grand Junction, Colorado

CITY OF Grand Junction COLORADO

PUBLIC WORKS AND PLANNING DEPARTMENT
CONTRACTOR PREQUALIFICATION STATEMENT
(EXPERIENCE, EQUIPMENT AND FINANCIAL)

Please **e-mail** to:	
And then	Attention: Gail Howe
Mail hard copy to:	City of Grand Junction 333 West Ave., Bldg. C Grand Junction, CO 81501
OR FAX to:	970-256-4022
Questions:	Call Gail at 970-256-4082

Instructions to Contractor: **Date submitted:**

- Complete this form and submit to the Department of Public Works & Planning prior to the first day of the quarter in which prequalification is requested and before you bid on a project. Failure to do so will delay your prequalification and our ability to award a bid. Bids cannot be awarded to a contractor who is not prequalified. If additional space is needed, attach sheets showing the section and number to which each sheet applies.
- Resubmit this form during the year if there are changes in your company or financial standing.
- Indicate Prequalification limits requested:

  Contracts not to exceed $500,000 ☐

  Contracts not to exceed $2 Million ☐ (Requires a Financial Statement reviewed by a licensed C.P.A.)

  Contracts on Any Project ☐ (Requires a Financial Statement audited by a licensed C.P.A.)

- **It is your responsibility to submit this form before the date your prior prequalification expires. Your failure to reapply will result in automatic expiration of your prequalification.**

Company name	Phone #	FAX #	E-Mail Address
Company physical address (street, city, county, state and zip code)			
Company mailing address (if different from above)			
Contact person name & title			
Business Type ☐ Corporation ☐ Partnership ☐ Individual ☐ Other (Specify)		No. of employees	Federal Employer Identification Number

Contractor desires to: (check all that apply)

☐ bid on any type of City project subject to the limit above (I understand my company must be prequalified in order to bid).

☐ bid on bid on the following **upcoming project**(s). **Application must be received no later than 2 weeks prior to bid**:

City project name or general description — Scheduled bid opening date

City project name or general description — Scheduled bid opening date

bid on non-city public project: (e.g. Enterprise fund projects, D.D.A. projects)

Public Project — Scheduled bid opening date

Project ID #

Description of Work:

☐ Request a new prequalification rating
(describe changes/requested rating)

SECTION ONE – GENERAL INFORMATION AND HISTORY

- Report any changes in numbers 3, 9, 10 and 13 to the City within 10 days of the change

1. If your company is a partnership or a limited liability company, complete:

Organization Date

Type:

☐ General ☐ Limited ☐ Association ☐ Other

Partner/Member names and addresses (street, city, state and zip)

Name	Street address	City, State, Zip Code

2. If your company is incorporated, complete:

Date Incorporated

State Incorporated

In good standing?

☐ yes ☐ no (if no, explain)

Address of primary location, if different from page 1:

3. If you are an out-of-state contractor, who is your Colorado registered agent?

Name:

Phone #

Address:

4. List your business partner(s), member(s) or associates(s) who have held a financial interest with you in the last 5 years.

Name	Name

5. How many years has your company been in the contracting business?

General contracting?

Subcontracting?

6. List the construction experience of the principle individuals who work for you. Use additional pages if necessary.

OR, ☐ CHECK HERE if entire list is attached, and marked as Attachment (example; "Attachment A")

Name	Present Position	Years experience	Magnitude and type of work	In what capacity

7. List the projects you completed in the last 5 years **for the City of Grand Junction**. If none, write "none" in a space below. Use additional pages if necessary.

OR, ☐ CHECK HERE if entire list is attached, and marked as Attachment (example; "Attachment A")

Year	Type of work	Employer name	Contract Amt.	Work location (City, state)	Contact Name	Contact Phone #

8. List other projects you completed in the last 3 years. Include any projects completed for Mesa County or the State of Colorado. If you plan to bid on a specific upcoming project, be sure to include projects you've completed that are of a nature similar to the upcoming project. Use additional pages if necessary.

OR, ☐ CHECK HERE if entire list is attached, and marked as Attachment (example; "Attachment A")

Year	Type of work	Employer name	Contract Amt.	Work location (City, state)	Contact Name	Contact Phone #

9. Attach a list of your construction equipment (include the quantity, name, description and capacity).

10. Attach a list of your parent, affiliate or subsidiary companies (include relationship, percentage of ownership and principals).

11. Has your company, its parent, affiliate or subsidiary been denied prequalification in the past 5 years by any governmental agency in Colorado or any other state?

☐ no ☐ yes (attach explanation)

12. Have you ever failed to complete, or has it been alleged that you have not completed, any contract awarded to you?

☐ no ☐ yes (attach statement with date, work location and reason)

13. Has any surety ever paid any payment or performance bond claim of any kind on your behalf? On behalf of your company?

Attach a confirmation letter from your surety/bonding company stating single and aggregate limits.

☐ no ☐ yes

14. Have any of your officers or partners failed to complete a contract while working for another company or managing a contract under their own name.

☐ no ☐ yes (attach statement with employee name, company name and reason)

15. Has any officer in your company, its parent, affiliate or subsidiary been indicted/convicted of bid/contract-related violations in the last five years?

☐ no ☐ yes (attach explanation)

16. Does your company have financial interests in other businesses?

☐ no ☐ yes (attach a list of the businesses)

17. Is your company owned or controlled by minorities or women? ☐ no ☐ yes

- If "yes" – is your company certified by the Department of Regulatory Agencies? ☐ no ☐ yes

- If "no" – are you or will you be applying for certification? ☐ no ☐ yes

18. Has your company been cited by OSHA in the past five years? ☐ no ☐ yes

- Do you have a current health and safety plan? ☐ no ☐ yes

- When was it last updated? _____

- What is your current Experience Modifier? _____ (Above 1.60 requires Risk Manager review).

19. Attach a Certificate of Insurance for General Liability, Auto, and Workers Compensation. (If awarded contract, the City of Grand Junction must be included on your coverage as an Additional Insured by Endorsement.)

SECTION TWO – EXPERIENCE AND EQUIPMENT

CONSTRUCTION TYPE – Indicate the work your company performs using the equipment you own.

1		GENERAL CONSTRUCTION	Ability to mobilize and undertake work of any type and magnitude.
2.		GRADING (GENERAL)	Roadway excavation and embankment of any magnitude.
3.		LIGHT GRADING	Substantially less in scope than general grading category; minor widening reconstruction; blading, structure excavation, etc.
4.		AGGREGATES	Commercial-scale gravel producing operation.
5.		PAVING (GENERAL)	Bituminous or Portland cement concrete paving of any magnitude.
6		BITUMINOUS CONCRETE	Hot bituminous pavement production and/or replacement.
7		SEAL COAT	Chip seal (plant or road mix) and related work.
8.		PORTLAND CEMENT CONCRETE	Portland cement concrete pavement production and/or placement.
9.		STRUCTURES (GENERAL)	Highway structures of any magnitude and level of complexity.
10.		SMALL BRIDGES	Steel, up to 80 ft. span (typical); concrete up to 50 ft. span (typical), bridge deck rehabilitation; all other lesser structures.
11.		MINOR STRUCTURES	Minor drainage up to 20 ft. span (typical), etc.

INCIDENTAL – Check only if work of this type is normally performed with your own forces.

12		CURB, GUTTER, FLATWORK	Curb, gutter, bikeway, median cover, slope paving, etc.
13.		FENCING	Standard highway fencing (wire, chain link, etc.); noise barrier fence; delineation.
14.		GUARD RAIL	Standard guard rail; concrete barrier; bridge rail; impact attenuator.
15.		LANDSCAPING	Seeding, sodding, topsoil, planting, fertilizing, mulching, etc.
16.		PAVEMENT MARKING	Painted and/or thermoplastic pavement markings.
17.	☐	CONSTRUCTION TRAFFIC CONTROL	Flagging, traffic control supervision, and/or construction traffic devices.

SPECIALTY – Check only if you are a likely bidder on projects consisting of this work type

18.		PAVEMENT REPAIR	Pavement sawing, joint repair, mud-jacking, pressure grouting, milling, etc.
19.		STRUCTURE REPAIR	Miscellaneous structural component repair; pier caps, bearing devices, expansion devices, girders, bridge rail, etc.
20.		ELECTRICAL, SIGNALS	Lighting, wiring, signalization, traffic monitoring devices, etc.
21.		BUILDING CONSTRUCTION	Rest areas, ports of entry, miscellaneous building-related construction.
22.		WATERLINE	Water lines, taps, and fittings; miscellaneous underground utility relocations.
23.		SPRINKLER SYSTEM	Installation, adjustment, and repair of landscape irrigation systems.
24.	☐	SEWERS OR STORM DRAINS	Gravity pipe systems, including all appurtenances.

25. OTHER (list)

SECTION THREE – FINANCIAL STATEMENT

If you intend to bid on contracts: (1) greater than $500,000, skip this section, attach a reviewed financial statement; or (2) greater than $2,000,000, skip this section, attach an audited financial statement and go to SECTION FOUR – CERTIFICATION.

Instructions: In writing, answer the following and attach required documents including a compilation opinion signed by the CFO, controller or financial officer.

1. A summary describing the accounting methods you used to:

   a. Compute profit on jobs in progress. Describe whether the profits are based on a complete contract or on a percentage of completion.

      - If based on a percentage of completion, describe the method used to measure progress (total estimated cost to date, estimate of total hours of labor to date, etc.).

   b. Compute income tax if you used a method different from the method used on the financial statement.

   c. Determine the inventory value.

   d. Depreciate and/or amortize your property, plant and equipment (include the depreciation/amortization period).

2. A general banking/financial reference statement.

3. A description of all your outstanding loans and notes payable including:

   - Loan amounts
   - Repayment terms
   - Interest rate
   - Collateral (if any)

4. A description of your commitments and contingent liabilities such as:

   - long-term, non-cancelable leases.
   - purchase orders for large equipment leases
   - unsettled lawsuits and claims, with case numbers and court/jurisdiction

5. A description of your transactions with related parties including:

   - the business purpose of the transaction
   - the nature of the relationship
   - any special or unusual payment terms
   - the volume of the transactions

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FINANCIAL BALANCE SHEET – AS OF (date) _____

- Add line items, if necessary, under the appropriate caption.

ASSETS

CURRENT ASSETS		
Cash and Short-Term Investments		
Marketable Securities at Cost		
Accounts Receivable:		
Current Billings on Contracts		
Retention on Contracts		
Current Portion of Notes Receivable		
Other Receivables		
Less: Allowance for Doubtful Accounts		
Net Receivables		
Equity and Advances to Joint Ventures		
Costs and Estimated Earnings in Excess of		
Billings on contracts		
Or		
Costs in Excess of Billings on Contracts		
Inventory		
Prepaid Expenses		
Other Current Assets		
TOTAL CURRENT ASSETS		
OTHER ASSETS		
Due from Officers and Employees		
Investments in and Advances to Affiliated Companies		
Cash Value of Life Insurance		
Less Policy Loans of		
Other		
TOTAL OTHER ASSETS		
PROPERTY, PLANT AND EQUIPMENT		
Plant		
Buildings		
Equipment		
Less: Accumulated Depreciation		
TOTAL		
Land		
TOTAL PROPERTY, PLANT AND EQUIPMENT		
TOTAL ASSETS		

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Add line items, if necessary, under the appropriate caption.

LIABILITIES

CURRENT LIABILITIES

Accounts Payable		
Trade		
Due Subcontractors - Current		
Due Subcontractors - Retention		
TOTAL		
Notes Payable and Current Maturities of		
Long Term Debt		
Current Portion of Accounts Payable		
Billings in Excess of Costs and		
Estimated Earnings on Contracts		
OR		
Billings in Excess of Costs on Contracts		
Advance Payments on Contracts		
Accrued Expenses		
Accrued Income Taxes		
Other Current Liabilities (describe)		
TOTAL CURRENT LIABILITIES		
DEFERRED INCOME TAXES - NONCURRENT		
LONG-TERM DEBT LESS CURRENT MATURITIES		
OTHER (describe)		
CONTINGENT LIABILITIES (see note / attach explanation)		
TOTAL LIABILITIES		
STOCKHOLDERS/OWNERS EQUITY (or NET WORTH)		
Individual or Partnership Capital		
Preferred Stock, _____Par Value, _____		
Shares, Authorized, _____Shares _____		
Issued and Outstanding		
Common Stock, _____Par Value, _____		
Shares, Authorized, _____Shares _____		
Issued and Outstanding Additional Paid in Capital		
Retained Earnings		
Less Cost of _____Shares of Treasury Stock		
TOTAL STOCKHOLDERS/OWNERS EQUITY		
TOTAL LIABILITIES AND STOCKHOLDERS/OWNERS EQUITY		

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SECTION FOUR – CERTIFICATION

- **NOTE: You must sign exactly as bid proposals and contracts will be signed**

I / WE CERTIFY AND UNDERSTAND:

- That the financial documents were prepared from the books and records of my/our company and details all company assets and liabilities.
- That any changes in my/our financial condition requires me/us to refrain from bidding until I/we submit an updated financial statement and the statement is approved by the City Engineer.
- Any reference listed is authorized to supply the City Engineer with all necessary information to verify this statement.
- That my surety/bonding agent is now and will continue to be rated "A" or better by Am Best.
- That my surety/bonding agent is listed on Circular 570 as an acceptable surety for federal projects.
- That my company is insured for workers compensation and no less than $1 million general liability.
- That my company is duly licensed (contractors license, sales/use tax, etc.) and that all required licenses are current and in good standing.

President Name and signature	Date
Vice-President name and signature	
Secretary name and signature	
Treasurer name and signature	
Co-partner signature and title (if applicable)	
Co-partner signature and title (if applicable)	
Co-partner signature and title (if applicable)	

IF YOU ARE A COPORATION, PLEASE AFFIX YOUR COMPANY SEAL

CITY OF Grand Junction COLORADO

Purchasing Division

ADDENDUM NO. 2

DATE: June 4, 2020
FROM: City of Grand Junction Purchasing Division
TO: All Offerors
RE: Riverfront at Dos Rios Phase II Construction IFB-4799-20-DH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

1. Item 8 of Addendum 1 has been corrected/modified as follow:

General Contractor/Bidder Pre-Qualification: Due to the complexity, size, and scope of this project, the City has determined that a pre-qualification process is prudent to ensuring that the awarded bidder is both qualified and capable of successfully performing and completing the project. Therefore, in an effort to be respectful of the time and cost of General Contractors/Bidders putting together a bid packages for which they may not be qualified to perform, we are requiring that all General Contractors/Bidders intending to submit a bid response to this solicitation process, complete and submit the attached Pre-Qualification Application and all required documents to the City's Purchasing Agent (via e-mail duaneh@gjcity.org) **no later than June 10, 2020** General Contractors/Bidders shall be notified of their pre-qualification status **no later than June 17, 2020**.

CDOT pre-qualification can be substituted for the City's Pre-Qualification Process, provided that the CDOT pre-qualification meets or exceeds the Contractor's bid amount for this project, and is for the type of work to be performed for this project. If substituting CDOT pre-qualification, said qualification must be submitted and received by the City's Purchasing Agent (via e-mail duaneh@gjcity.org) **no later than June 10, 2020.** General Contractors/Bidders shall be notified of their pre-qualification status **no later than June 17, 2020**.

2. Q. Is a Contractor's License for the City of Grand Junction required? Is a Contractor's License for Mesa County required? When does the License(s) need to be obtained?

A. For work being conducted within Grand Junction city limits. A Contractor's License for the City of Grand Junction must be obtained through the Mesa County Building Department. Contractor's License must be obtained prior to award going to City Council for approval.

3. Q. With the article in the Daily Sentinel yesterday in regard to the Dos Rios plans not yet being approved by City Council, what does this mean for the current request for bid? Is this project already approved? Is there a chance this project will not bid right now?

A. This was passed at the June 3, 2020 City Council meeting, and the June 3, 2020 Dos Rios Board Meeting.

4. Q. Question regarding asphalt paving. Will the city be requiring the use of a MTV / Shuttle Buggy for this project? I would assume this will be paved in sections?

A. We are not requiring the use of a MTV/Shuttle Buggy for this project.

5. For Contractor's additional information, as stated in the article of the May 31st edition of the Daily Sentinel, the project cost estimate could be up to $12.3M.

6. At this point in the solicitation process, it appears that there will be adequate seating to allow Contractor's to attend both pre-bid meetings, if they desire to do so. However, Contractor's must, at a minimum, attend the pre-bid meeting they are pre-registered for.

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,

Duane Hoff Jr., Senior Buyer
City of Grand Junction, Colorado

CITY OF Grand Junction COLORADO

Purchasing Division

ADDENDUM NO. 3

DATE: June 12, 2020
FROM: City of Grand Junction Purchasing Division
TO: All Offerors
RE: Riverfront at Dos Rios Phase II Construction IFB-4799-20-DH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

Question #1: Can Duane include who has been pre-qualified as part of Addendum 3?

Answer #1: *Yes. Please see the attached to-date pre-qualification list for the Riverfront at Dos Rios Phase 2 project.*

Question #2: Bid documents state that the hours of operation are from 7am to 5pm, Monday through Friday. The pre-bid meeting agenda states that the hours of operation are from 8am to 5pm. Please clarify the hours of operation.

Answer #2: *The hours of operation are from 8am to 5pm, Monday through Friday.*

Question #3: What is the timeframe for XCEL energy to install the 230KV transmission towers.

Answer #3: *The anticipated construction duration for the installation of the 230KV transmission towers is approximately 3 to 4 months.*

Question #4: Is the $12.3M dollars, as stated in the daily sentinel, an actual estimate for the construction of the project?

Answer #4: *NO. The amount mentioned in the paper is the limit that the City is willing to take out as bonds for funding the project. This amount is not what the Engineers estimate reflects.*

Question #5: Is there any concern that the project won't be funded?

Answer #5: *No. However, this question was answered in Addendum #2.*

Question #6: I would like to follow up in regards to the use of Wagners Fiberglass poles for the Riverfront at Dos Rios Project light poles after learning more from the pre bid meeting.

I've been out to the site and seen the existing poles and I am very confident that the existing poles will blend with the proposed supply of poles well. There will be significant benefits in the use of

fiberglass in safety and installation cost, and the purchase of the materials will be a significant cost saver for the city.
Is there any chance the City of Grand Junction will reconsider the use of WCFT poles?

Answer #6: *The City has reconsidered the use of WCFT poles. Please note that the City requires the light pole and luminaire as a combined price. No separate line items shall be made for the luminaire and the light poles.*

Question #7: Is there a line item for stockpiling any trash debris if encountered?

Answer #7: *Yes. Line item #98 (Debris Processing and Removal) addresses debris if encountered. If debris is encountered, it shall be screened to separate trash from soil, then stockpiled prior to hauling to landfill. Contractor must inform Project Manager if debris is encountered, prior to hauling to landfill.*

Question #8: With addendum 3 being a fairly large addendum when it comes to changes, I would like to see if the bid date can be extended. Even though this is a unit price project, we would need to re-look our takeoffs and determine where these changes took place to ensure we provide a complete proposal to you. Also, can the NTP be delayed? 305 days is a tight schedule and it would be beneficial to have another month before NTP for pre-planning and setting the contract up.

Answer #8: *The bid date shall not be extended. The NTP is not a set date. It is a to be determined date (TBD), that is dependent on the contract documents, bonding and insurance issuance. Once the NTP is issued, the 305-day construction clock begins.*

Question #9: Page 47- 8" SWR pipe, what are the ends to be…caps, it shows open?

Item #27 6" GV- bid has 16, plans have 17.
Item #28 8" GV- bid has 22, plans have 20.
Item #33 8" 22ell- bid has 10, plans have 9.
Item #34 8" 45ell- bid has 8, plans have 10, includes 2 vert as shown on page 98.
Item #37 8x6 red- bid has 4, plans have 3. Also, page 20 shows existing as 4" AC, so reducer would be 8x4?

Answer #9: *On Page 47, the SWR pipe ends in question are to be capped.*

Item #27 (6" Gate Valve) has been updated within the Bid Schedule

Item #28 (8" Gate Valve) has been updated within the Bid Schedule.

Item #33 (8" 22° Elbow) has been updated within the Bid Schedule.

Item #34 (8" 45° Elbow) has been updated within the Bid Schedule. The number of elbows is actually 9.

Item #37 (8"x6" Reducer) has been updated within the Bid Schedule.

Question #10: A site furnishings vendor was putting together pricing for Dos Rios and asked me about the picnic tables and trash receptacles that are on the bid schedule, but they are not specified, and not on our plans so I told her I can ask that it be clarified by the City for an upcoming Addenda.

Answer #10:

Picnic Tables shall be as follows: (G R Marolt & Associates LLC)

(2)Each: (TRT08-C-01-002) - (Tcoat 8' Rectangular Portable Table – Accessible Alt – Expanded Metal – Industry Standard Coating – Brown Seat/Top-Black Frame)

(6)Each: (TRT08-C-01-000) - (Tcoat 8' Rectangular Portable Table – Expanded Metal – Industry Standard Coating – Brown Seat/Top-Black Frame)

Trash Receptacles will be as follows: (RJ Thomas Mfg Co Inc)

(5)Each: (CK-5) - CABLE KIT 3' PLSTC COATED / W/ 2-3/32" COMPRESSION

(5)Each: (CN-R/DW-32) - TRASH RECEPTABLE ROUND 32 GAL / BROWN THRM CT

(5)Each: (CN/B-1827) - CAN LINER 36 GAL HEAVY DUTY / RIGID PLSTC

(5)Each: (T/CB-2410R) - CAN LID 24" W/10" HOLE & RAIN / COVER BLACK PWD CT

Question #11: Would it be possible to change the potholing item from a Lump Sum to Hour?

Answer #11: *The potholing line item will remain as a lump sum paid item.*

Question #12: Normally the truck apron at the roundabout is colored concrete but this is not indicated in the documents. Is color required? If so, please provide the name / number of desired color.

Answer #12: *Yes. The concrete shall be (Davis Colors Sunset Rose). The Bid Schedule has been updated to reflect the required color for the concrete apron.*

Question #13: Are the tie bars at the 10" paving longitudinal contraction joints required to be epoxy coated?

Answer #13: *Yes. All tie bars shall be epoxy coated.*

Question #14: According to page C-29 of the City Standards, the table for smooth dowels only goes up to 8" slab thickness. What is the dowel size for 10" thick pavement? Are these dowels to be epoxy coated?

Answer #14: *The dowel size for the 10" thick pavement shall be 1.25" in diameter. All dowels and tie bars shall be epoxy coated. Please note the reference to follow the most current version of CDOT Standard Specifications for Road and Bridge unless specified otherwise by the City of Grand Junction Standard Specifications for Road and Bridge Construction, or as specified in the Special Provisions of the project bid documents.*

Question #15: Based on the bid schedule quantity, item 158 includes the roundabout and the approach lanes. Is there any other 10" paving on the project that is included under this item?

Answer #15: *No.*

Question #16: The documents do not provide a detail for the transition between the roundabout paving and the truck apron. Should we consider this a construction joint or an isolation joint?

Answer #16: *The Contractor should consider the transition between the roundabout paving and truck apron as a construction joint.*

Question #17: Can the City provide CAD files for us to verify earthwork?

Answer #17: *If requested, the City will provide the necessary CAD files to the Contractor after the project is awarded.*

Question #18: What are removal/demo limits of the high voltage pole foundations? Any details of existing available?

Answer #18: *In addition to the construction notes that are listed on the Construction Plans, the Contractor shall remove the foundation base to ensure the top of the foundation is no less than 2-ft below the proposed sub-grade elevation.*

The City has been informed that there are no As-Builts available for the transmission towers that are to be removed.

Question #19: Does the concrete/asphalt removal quantities take into account utility installations?

Answer #19: *Yes. Any connections to existing utilities is included within the limits of the concrete or asphalt to be removed.*

Question #20: Does item #20 (48" VF Barrel MH) account for the adjustments as well?

Answer #20: *No. These are separate items. Item #20 refers only to proposed manholes, with the unit as vertical feet that exceed 5 feet in depth. Item #22 pertains to the rim adjustment of existing manholes to finished grade.*

Question #21: Storm Manhole #70 48" Manhole shows 15" RCP as the outlet pipe on plan view, profile is showing 12" RCP. Please verify.

Answer #21: *The As-Built survey shows the pipe diameter to be 15-inches.*

Question #22: The granular stabilization item includes the excavation and hauling off of the material as incidental. Should this material be stockpiled onsite?

Answer #22: *Stockpiling of the spoils material shall be determined on a case by case scenario. Contractor to coordinate with Project Engineer when encountering unsuitable material, prior to hauling away.*

CLARIFICATIONS:

1. The Construction plans for the Colorado River Bank Stabilization were actually included in the original bid solicitation package. They are not included as an item in addendum #3.
2. The XCEL distribution plans are not included in addendum #3. They will be included in a forthcoming addendum.
3. Please see the attached revised Bid Schedule, reflecting the clarifications to the questions from addendum #3. Contractor's shall utilize this Addendum 3 Price Bid Schedule when

submitting their bid responses. For your convenience, it has been made into a pdf fillable form.

4. Please see attached the revised site lighting plans.
5. Please see attached the right-of-way landscaping and Irrigation plans.
6. Please see attached the Dos Rios Park restroom / shelter construction plans.
7. Please see attached the Dos Rios Park small shelter plans.
8. Please see attached the Revised Composite Utility Plan set, reflecting the updated 6" irrigation sleeves.

23. For further clarification pertaining to Question #2 for Addendum #2, a Contractor's License must be obtained for projects that require it. It is the responsibility of the Contractor to verify if a Contractor's License is needed for this, or any other, City Project by contacting the Mesa County Building Department (MCBD). MCBD will provide determination of whether or not a City of Grand Junction Contractor's License is required.

24. The following companies have been approved or are in review:

Company Name	Location	Name	Phone	E-Mail	Pre-Qualification Approved/Not Approved
Johnson Construction, Inc.	Rifle, CO	Rob Bercher	970-625-2251	rob@johnconinc.com	Approved
M.A. Concrete Construction	Grand Junction, CO	Jeff Nimon	970-243-3221	maconcretenimon@bresnan.net	Approved
ESCO Constructin Co.	Evergreen, CO	Shelly McCarron	303-674-3385	smccarron@escomailbox.com	Approved
FCI Constructors, Inc.	Grand Junction, CO	Brian Young	970-434-9093	byoung@fciol.com	Approved
American Civil Constructors/ AAC Mountain West	Littleton, CO	Jody Randall	303-730-4504	jrandall@accbuilt.com	Approved
Scott Contracting, Inc.	Centennial, CO	Kym Johnson	720-889-4403	kymjohnson@scottcontracting.com	Approved
CON-SY, Inc.	Grand Junction, CO	Carie Slape	970-549-1270	consyinc@aol.com	Under Review
Oldcastle SW Group Inc., dba United Companies	Grand Junction, CO	Jacob Davis	970-243-4900	jacob.davis@unitedco.com	Under Review
Milestone Companies, LLC	Keenesburg, CO	Nick LaBorde	720-729-3170	nlaborde@milestoneco.us	Under Review
MM Skyline Contracting, Inc.	Grand Junction, CO	John Chutka	970-434-9121	jchutka@skyconinc.com	Under Review

This list will be updated in the next addendum.

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,

Duane Hoff Jr., Senior Buyer
City of Grand Junction, Colorado

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	626	Mobilization	1.	Lump Sum	$ _____	$ _____
2	626	Construction Surveying	1.	Lump Sum	$ _____	$ _____
3	620	Sanitary Facility	1.	EA	$ _____	$ _____
4	209	Dust Abatement	500.	DAYS	$ _____	$ _____
5	208	Stabilized Construction Entrance	5.	EA	$ _____	$ _____
6	208	Erosion Control (Complete in Place)	1.	Lump Sum	$ _____	$ _____
7		Potholing	1.	Lump Sum	$ _____	$ _____
8	108.2	4" Sewer Service Pipe (SDR 35)	786.	LF	$ _____	$ _____
9	108.2	6" Sewer Service Pipe (SDR 35)	93.	LF	$ _____	$ _____
10	108.2	8" Gravity Sewer Pipe (SDR 35)	1,682.	LF	$ _____	$ _____
11	108.2	Import Trench Backfill	4,000.	CY	$ _____	$ _____
12	108.3	4" Sewer Service Tap to Existing Main	18.	EA	$ _____	$ _____
13	108.3	4" Sewer Service Tap to New Main	8.	EA	$ _____	$ _____
14	108.3	8" End Cap/Plug Sewer	1.	EA	$ _____	$ _____
15	108.3	Sanitary Sewer Cleanout (2-way) to Include Appurtenances per City Standard Detail SS-07.	26.	EA	$ _____	$ _____
16	108.5	Sanitary Sewer Basic Manhole Placed on Existing Line (60" I.D.) (Complete in Place).	2.	EA	$ _____	$ _____
17	108.5	Sanitary Sewer Basic Manhole Placed on Existing Line (48" I.D.) (Complete in Place).	1.	EA	$ _____	$ _____
18	108.5	Sanitary Sewer Basic Manhole (48" I.D.) (Complete in Place).	12.	EA	$ _____	$ _____
19	108.5	Sanitary Manhole Barrel Section (D>5') (60" I.D.).	6.	VLF	$ _____	$ _____
20	108.5	Sanitary Manhole Barrel Section (D>5') (48" I.D.).	33.6	VLF	$ _____	$ _____
21	108.5	Connect to Existing Manhole or Sewer Main	3.	EA	$ _____	$ _____
22	210	Adjust Sewer Manhole to Finished Grade.	15.	EA	$ _____	$ _____
23	104.4	Fully Encased Sewer in Concrete per City Standard Detail GU-04. See Plan Sheet 6.	11.	EA	$ _____	$ _____
24	104.4	Cap Top Half of Sewer in Concrete per City Standard Detail GU-04.	12.	EA	$ _____	$ _____
25	108.2	6" Water Pipe (C-900 PVC).	632.	LF	$ _____	$ _____
26	108.2	8" Water Pipe (C-900 PVC).	5,230.	LF	$ _____	$ _____
27	108.3	6" Gate Valve	17.	EA	$ _____	$ _____
28	108.3	8" Gate Valve	22.	EA	$ _____	$ _____
29	108.3	8" X 6" Tee	14.	EA	$ _____	$ _____
30	108.3	8" X 8" Tee	5.	EA	$ _____	$ _____
31	108.3	8" X 6" Cross	1.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
32	108.3	8" Cross	1.	EA	$ _____	$ _____
33	108.3	8", 22.5° Elbow	10.	EA	$ _____	$ _____
34	108.3	8", 45° Elbow	9.	EA	$ _____	$ _____
35	108.3	8", 11.25° Elbow	14.	EA	$ _____	$ _____
36	108.3	6", 45° Elbow	3.	EA	$ _____	$ _____
37	108.3	8" X 6" Reducer	4.	EA	$ _____	$ _____
38	108.3	8" X 4" Reducer	1.	EA	$ _____	$ _____
39	108.3	6" End Cap/Plug Water	4.	EA	$ _____	$ _____
40	108.3	Fire Hydrant Assembly	12.	EA	$ _____	$ _____
41	108.3	1" Tapping Saddle	27.	EA	$ _____	$ _____
42	108.3	1" Corporation Stop	27.	EA	$ _____	$ _____
43	108.3	Potable Water - 8" Tapping Sleeve	1.	EA	$ _____	$ _____
44	108.4	Water Service Line (1") (Type K Copper)	1,130.	LF	$ _____	$ _____
45	108.4	1" Water Service Assembly	27.	EA	$ _____	$ _____
46	202	Remove Water Valve	3.	EA	$ _____	$ _____
47	202	Remove Fire Hydrant	1.	EA	$ _____	$ _____
48	202	Abandon Water Valve	2.	EA	$ _____	$ _____
49	202	Abandon Water Pipe (Plug Remaining Ends with Concrete).	4.	EA	$ _____	$ _____
50	202	Remove Water Meter	2.	EA	$ _____	$ _____
51	210	Adjust Water Valve to Finished Grade	4.	EA	$ _____	$ _____
52	210	Adjust Water Meter to Finished Grade	2.	EA	$ _____	$ _____
53	210	Adjust Fire Hydrant to Finished Grade	1.	EA	$ _____	$ _____
54	108.2	Storm Drain Pipe - 72" x 24" Concrete Box Culvert	557.	LF	$ _____	$ _____
55	108.2	Storm Drain Pipe - 29" x 18" Concrete Horizontal Elliptical Arch Pipe.	895.	LF	$ _____	$ _____
56	108.2	Storm Drain Pipe - 48" Concrete Pipe	50.	LF	$ _____	$ _____
57	108.2	Storm Drain Pipe - 42" Concrete Pipe	363.	LF	$ _____	$ _____
58	108.2	Storm Drain Pipe - 36" Concrete Pipe	1,092.	LF	$ _____	$ _____
59	108.2	Storm Drain Pipe - 24" Concrete Pipe	853.	LF	$ _____	$ _____
60	108.2	Storm Drain Pipe - 18" Concrete Pipe	2,252.	LF	$ _____	$ _____
61	108.2	Storm Drain Pipe - 12" Concrete Pipe	703.	LF	$ _____	$ _____
62	108.2	Storm Drain Pipe - 8" PVC Pipe (C-900)	68.	LF	$ _____	$ _____
63	108.5	Storm Drain Manhole (48" I.D.)	6.	EA	$ _____	$ _____
64	108.5	Storm Drain Manhole (60" I.D.)	4.	EA	$ _____	$ _____
65	108.5	Storm Drain Manhole (60" I.D.) with Flat Top Lid	5.	EA	$ _____	$ _____
66	108.5	Storm Drain Manhole (72" I.D.)	1.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
67	108.6	Storm Drain - Outlet Structure - See "Water Quality Outlet Structure" to Include All Appurtenances (Complete in Place).	1.	EA	$ _____	$ _____
68	108.6	Storm Drain Inlet with Vertical Curb Opening (24" x 36")	20.	EA	$ _____	$ _____
69	108.6	Storm Drain Inlet with Drive Over Curb Opening (24" x 36")	2.	EA	$ _____	$ _____
70	108.6	Storm Drain - Large Area Inlet (24" x 36")	14.	EA	$ _____	$ _____
71	108.5	Storm Drain - Concrete Headwall (8'-9" wide x 9'-10" height) per CDOT M&S Standard Plan M-601-10 and 48" Flap	1.	EA	$ _____	$ _____
72	108.5	Storm Drain - Conflict Structure	1.	EA	$ _____	$ _____
73	108.5	Storm Drain - Access Manhole	3.	EA	$ _____	$ _____
74	108.5	Storm Drain - Access Inlet (24" x 36" I.D.) Vertical Curb Opening	1.	EA	$ _____	$ _____
75	108.6	Storm Drain - Access Inlet (24" x 36" I.D.) Area Inlet Opening	1.	EA	$ _____	$ _____
76	108.6	Storm Drain - 42" x 48" Tee Manhole	2.	EA	$ _____	$ _____
77	108.6	Storm Drain - 42" x 48" x 36" Tee Manhole	1.	EA	$ _____	$ _____
78	108.5	Storm Drain - 36" x (24" x 36" Box Leg) Tee Inlet Area Inlet Frame and Grate (24" x 36" Opening)	1.	EA	$ _____	$ _____
79	108.5	Storm Drain - 72" x 24" Prefabricated Pipe Elbow	2.	EA	$ _____	$ _____
80	108.5	Storm Drain - Inlet Over MH (Vertical Curb Opening) (24" x 36" I.D.)	2.	EA	$ _____	$ _____
81	108.5	Storm Drain - Inlet Over MH (Large Area Inlet Opening) (24" x 36" I.D.)	4.	EA	$ _____	$ _____
82	108.5	Storm Drain - Prefab Pipe Transition per Plan	1.	EA	$ _____	$ _____
83	108.6	Storm Drain - Manhole Barrel Section (D>5')(72" I.D.)	5.1	VLF	$ _____	$ _____
84	108.5	Storm Drain - Manhole Barrel Section (D>5')(60" I.D.)	2.2	VLF	$ _____	$ _____
85	108.5	Storm Drain - Manhole Barrel Section (D>5')(48" I.D.)	5.23	VLF	$ _____	$ _____
86	108.5	Core and Connect New 18" Storm Pipe to New Box Culvert	4.	EA	$ _____	$ _____
87	108.7	Granular Stabilization Material (Type B)	2,300.	TON	$ _____	$ _____
88	202	Remove Storm Drain Inlet	1.	EA	$ _____	$ _____
89	202	Remove 15" Flared End Section	1.	EA	$ _____	$ _____
90	202	Remove 15" Storm Pipe	90.	LF	$ _____	$ _____
91	202	Abandon Storm Pipe	1.	EA	$ _____	$ _____
92	210	Reset Storm Drain Inlet D1-252-099	1.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
93	210	Connect to and Adjust to Finished Grade Storm MH C4-252-017	1.	EA	$ _____	$ _____
94	210	Adjust Storm Manhole to Finished Grade	1.	EA	$ _____	$ _____
95	420	Geosynthetics - Mirifi RS580i or Approved Equal	5,600.	SY	$ _____	$ _____
96	506	Riprap (d50=12" to Include Geogrid)	40.	SY	$ _____	$ _____
97	203	Unclassified Excavation	43,790.	CY	$ _____	$ _____
98	203	Unclassified Embankment	67,341.	CY	$ _____	$ _____
99	203	Debris Processing and Removal	12,000.	CY	$ _____	$ _____
100	203	Colorado River Bank Stabilization	900.	LF	$ _____	$ _____
101	203	Import and Place Clean Fill	43,753.	CY	$ _____	$ _____
102	210	Adjust Pull Box to Finished Grade	9.	EA	$ _____	$ _____
103	210	Adjust Light Pole and Foundation to Finished Grade	2.	EA	$ _____	$ _____
104	613	Joint Trench with Broad Band (Site Electrical - Street LT Circuits (2)-2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	32,600.	LF	$ _____	$ _____
105	613	Joint Trench with Site Electrical (Broad Band (3)-2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	48,900.	LF	$ _____	$ _____
106	613	Joint Trench with XCEL Energy and Charter who provides and places their materials (Century Link - 4" Schedule 80 PVC conduit). Refer to Utility Trench Detail	16,300.	LF	$ _____	$ _____
107	613	Joint Trench with XCEL Energy and Charter who provides and places their materials (Century Link - 2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	16,300.	LF	$ _____	$ _____
108	613	Large Splice Box (Quasite) (3' - 2 5/8" x 2'-2") Broadband Logo.	32.	EA	$ _____	$ _____
109	613	Splice Box (Provided by Others - Century Link)	20.	EA	$ _____	$ _____
110	613	Type One Pull Box	211.	EA	$ _____	$ _____
111	Elec	Wiring (LCBP x1.74)	1.	Lump Sum	$ _____	$ _____
112	Elec	Light Standard and Luminaire (Pedestrian)	176.	EA	$ _____	$ _____
113	Elec	Light Standard and Luminaire (Street)	15.	EA	$ _____	$ _____
114	Elec	Light Standard Foundation (Pedestrian)	176.	EA	$ _____	$ _____
115	Elec	Light Standard Foundation (Street)	15.	EA	$ _____	$ _____
116	Elec	Lighting Control Center PWR Pedestal (Special) (LCBP x1.74)	5.	EA	$ _____	$ _____
117	202	Remove Asphalt Mat	11,800.	SY	$ _____	$ _____
118	202	Remove Concrete	400.	SY	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
119	202	Romove Ground Sign	10.	EA	$ _____	$ _____
120	202	Remove High Voltage Overhead Power Pole Foundations	2.	EA	$ _____	$ _____
121	202	Remove Tree	10.	EA	$ _____	$ _____
122	202	Remove Property Pin (No Reference or Reset)	4.	EA	$ _____	$ _____
123	202	Remove Fencing (Includes All Gates and Associated Appurtenances.)	2,000.	LF	$ _____	$ _____
124	202	Remove Mail Box	1.	EA	$ _____	$ _____
125	202	Clearing and Grubbing	1.	Lump Sum	$ _____	$ _____
126	210	Reference/Reset Survey Monument	6.	EA	$ _____	$ _____
127	210	Reset Ground Sign	2.	EA	$ _____	$ _____
128	304	Aggregate Base Course (Class 6) (4" Thick)(Co. River Trail Shoulder)	1,015.	SY	$ _____	$ _____
129	304	Subgrade Stabilization - Aggregate Base Course (Class 3)(12" Thick)	5,600.	SY	$ _____	$ _____
130	304	Aggregate Base Course (Class 6) (13" Thick)	18,200.	SY	$ _____	$ _____
131	304	Aggregate Base Course (Class 6) (6" Thick)	30.	SY	$ _____	$ _____
132	306	Reconditioning (12" Deep)	25,000.	SY	$ _____	$ _____
133	401	Hot Mix Asphalt (5" Thick) (Grading SX 75, Binder Grade 64-22) (Roadways)	5,000.	TON	$ _____	$ _____
134	401	Hot Mix Asphalt (3" Thick) (Grading SX 75, Binder Grade 64-22) (Driveways)	5.	TON	$ _____	$ _____
135	627	Preformed Thermoplastic Pavement Marking (Handicap Symbol)	4.	EA	$ _____	$ _____
136	627	Preformed Thermoplastic Pavement Marking (X-walk) (2' x 10' TYP.)	131.	EA	$ _____	$ _____
137	627	Preformed Thermoplastic Pavement Marking (8" White Dotted Line, 2' Segment, 3' Gap)	100.	LF	$ _____	$ _____
138	627	Preformed Thermoplastic Pavement Marking (4" White Solid)	2,750.	LF	$ _____	$ _____
139	627	Preformed Thermoplastic Pavement Marking (2' White Solid)	170.	LF	$ _____	$ _____
140	630	Traffic Control (Complete In Place)	1.	Lump Sum	$ _____	$ _____
141	630	Trafic Control Plan	1.	Lump Sum	$ _____	$ _____
142	202	Remove Asphalt Mat	40.	SY	$ _____	$ _____
143	202	Remove Concrete	313.	SY	$ _____	$ _____
144	202	Remove Pull Box	2.	EA	$ _____	$ _____
145	202	Remove Concrete Pole Box	3.	EA	$ _____	$ _____
146	202	Remove Tree	7.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
147	203	Unclassified Excavation	437.	CY	$ _____	$ _____
148	208	Erosion Control (Complete in Place)	1.	Lump Sum	$ _____	$ _____
149	304	Aggregate Base Course (Class 6) (8" Thick) (Left Turn Lane)	565.	SY	$ _____	$ _____
150	401	Hot Mix Asphalt (6" Thick) (Grading SX, Binder Grade 64-22) (Left Turn Lane)	187.	TON	$ _____	$ _____
151	608	Concrete Bullnose End Section (8" Thick) to include 6" of Class 6 Aggregate Base Course	5.	SY	$ _____	$ _____
152	608	Concrete Curb and Spill Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	320.	LF	$ _____	$ _____
153	608	Concrete Median Edging (2' Wide) (Colored Concrete) (Davis Colors Sunset Rose) to include 6" of Class 6 Aggregate Base Course	40.	LF	$ _____	$ _____
154	608	Concrete Cover Material (Colored Concrete) (Davis Colors Sunset Rose) (4" Thick) to include 6" of Class 6 Aggregate Base Course	185.	SY	$ _____	$ _____
155	627	Preformed Thermoplastic Pavement Marking (Left Turn Symbol)	2.	EA	$ _____	$ _____
156	630	Traffic Control (Complete In Place)	1.	Lump Sum	$ _____	$ _____
157	630	Traffic Control Plan	1.	Lump Sum	$ _____	$ _____
158	SP	Safe Hit Flexible Delineator (SH248GP3--WS 09) to include 4" PVC Sleeve	2.	EA	$ _____	$ _____
159	608	Concrete Pavement (Roundabout) (10" Thick) to include 6" Class 6 Aggregate Base Course	1,415.	SY	$ _____	$ _____
160	608	Concrete Curb and Spill Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	1,705.	LF	$ _____	$ _____
161	608	Concrete Truck Apron (Roundabout) (10" Thick) to include 6" of Class 6 Aggregate Base Course	310.	SY	$ _____	$ _____
162	608	Concrete Curb (6" Wide) (6" High) to include 6" of Class 6 Aggregate Base Course.	975.	LF	$ _____	$ _____
163	608	Concrete Curb and Gutter (2' Wide) (Both Collector and Spill Gutters) to include 6" of Class 6 Aggregate Base Course.	9,500.	LF	$ _____	$ _____
164	608	Concrete Drive-Over Curb and Gutter both 3' and 3.5' Wide and Both Collector and Spill Gutter to include 6" of Class 6 Aggregate Base Course.	1,075.	LF	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
165	608	Concrete Sidewalk (6" Thick) to include 6" of Class 6 Aggregate Base Course	13,875.	SY	$ _____	$ _____
166	608	Concrete Pavement (Parking & Plain Color Paving Bike Park Plaza) (8" Thick) to include 6" of Class 6 Aggregate Base Course.	4,725.	SY	$ _____	$ _____
167	608	Concrete Sculpture Pad (Bike Park Plaza) (8" Thick) to include 6" of Class 6 Aggregate Base Course and Reinforcement as Specified.	20.	SY	$ _____	$ _____
168	608	Concrete Pavement Band (Bike Park Plaza) (8" Thick) (Color Landscape per Landscape Plans) to include 6" of Class 6 Aggregate Base Course.	80.	SY	$ _____	$ _____
169	608	Concrete Drainage Pan (3' Wide) to include 6" of Class 6 Aggregate Base	307.	LF	$ _____	$ _____
170	608	Concrete Drainage Pan (6' Wide) to include 6" of Class 6 Aggregate Base	27.	LF	$ _____	$ _____
171	608	Concrete Intersection Corner (8" Thick) to include 6" of Class 6 Aggregate Base Course. Includes All Items Labeled as Concrete Bullnose End Section and Concrete Corner Fillet on the Plans.	85.	SY	$ _____	$ _____
172	608	Concrete Curb Ramp to include 6" of Class 6 Aggregate Base Course.	600.	SY	$ _____	$ _____
173	608	Concrete Driveway Section (8" Thick) (Commercial) to include 6" Class 6 Aggregate Base Course.	190.	SY	$ _____	$ _____
174	608	Detectable Warning (Cast Iron, Wet Set (2'x2')	150.	EA	$ _____	$ _____
175	RAW 108.2	4" Raw Water Pipe (C-900 PVC)	255.	LF	$ _____	$ _____
176	RAW 108.2	8" Raw Water Pipe (C-900 PVC)	2,585.	LF	$ _____	$ _____
177	RAW 108.2	10" Raw Water Pipe (C-900 PVC)	2,500.	LF	$ _____	$ _____
178	RAW 108.3	Raw Water - 4" Gate Valve	5.	EA	$ _____	$ _____
179	RAW 108.3	Raw Water - 8" Butterfly Valve	7.	EA	$ _____	$ _____
180	RAW 108.3	Raw Water - 10" Butterfly Valve	3.	EA	$ _____	$ _____
181	RAW 108.3	Raw Water - Combination Air Valve and Vault Assembly. Complete in Place	8.	EA	$ _____	$ _____
182	RAW 108.3	Raw Water - 8" x 4" Tee	3.	EA	$ _____	$ _____
183	RAW 108.3	Raw Water - 8" x 8" Tee	2.	EA	$ _____	$ _____
184	RAW 108.3	Raw Water - 8" Cross	1.	EA	$ _____	$ _____
185	RAW 108.3	Raw Water - 10" x 4" Tee	2.	EA	$ _____	$ _____
186	RAW 108.3	Raw Water - 10" x 10" Tee	1.	EA	$ _____	$ _____
187	RAW 108.3	Raw Water - 4", 11.25° Elbow	5.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
188	RAW 108.3	Raw Water - 4", 22.5° Elbow	5.	EA	$ _____	$ _____
189	RAW 108.3	Raw Water - 8", 11.25° Elbow	6.	EA	$ _____	$ _____
190	RAW 108.3	Raw Water - 8", 22.5° Elbow	14.	EA	$ _____	$ _____
191	RAW 108.3	Raw Water - 8", 45° Elbow	10.	EA	$ _____	$ _____
192	RAW 108.3	Raw Water - 8", 90° Elbow	1.	EA	$ _____	$ _____
193	RAW 108.3	Raw Water - 10", 11.25° Elbow	11.	EA	$ _____	$ _____
194	RAW 108.3	Raw Water - 10", 22.5° Elbow	16.	EA	$ _____	$ _____
195	RAW 108.3	Raw Water - 10", 45° Elbow	6.	EA	$ _____	$ _____
196	RAW 108.3	Raw Water - 8" x 4" Reducer	4.	EA	$ _____	$ _____
197	RAW 108.3	Raw Water - 10" x 8" Reducer	1.	EA	$ _____	$ _____
198	RAW 108.3	Raw Water - 10" x 4" Reducer	1.	EA	$ _____	$ _____
199	RAW 108.3	Raw Water - 8" End Cap/Plug	1.	EA	$ _____	$ _____
200	RAW 108.3	Raw Water - 4" End Cap/Plug	10.	EA	$ _____	$ _____
201	RAW 202	Remove Raw Water Blow off Assembly	1.	EA	$ _____	$ _____
202	LSC in ROW	Soil Amendment, Delivered, Tilled, Spread	41,265.	SF	$ _____	$ _____
203	LSC in ROW	Shrub Bed - Fine Grade, Rock Mulch	41,265.	SF	$ _____	$ _____
204	LSC in ROW	Riparian Restoration	108,900.	SF	$ _____	$ _____
205	LSC in ROW	Irrigation System	1.	Lump Sum	$ _____	$ _____
206	LSC in ROW	Trees, 2" Deciduous	70.	EA	$ _____	$ _____
207	LSC in ROW	Trees, 1-1/2" Deciduous	66.	EA	$ _____	$ _____
208	LSC in ROW	Shrubs	1,021.	EA	$ _____	$ _____
209	LSC in ROW	Perennials	45.	EA	$ _____	$ _____
210	LSC in ROW	Boulders, 3'X2'	43.	EA	$ _____	$ _____
211	LSC in ROW	Additional Sleeving - 6" PVC CL 200	1,700.	LF	$ _____	$ _____
212	LSC in Park	Restroom Shelter	1.	EA	$ _____	$ _____
213	LSC in Park	Small Shelters	1.	Lump Sum	$ _____	$ _____
214	LSC in Park	Modular Block Walls (Versa-Lok)(Park Plaza Amphitheater)	424.	FF	$ _____	$ _____
215	LSC in Park	Concrete Landscape Edger	45.	LF	$ _____	$ _____
216	LSC in Park	Play Area Barrier Curb	290.	LF	$ _____	$ _____
217	LSC in Park	Engineered Wood Fiber Play Material	319.	CY	$ _____	$ _____
218	LSC in Park	Play Area ADA Ramp	2.	EA	$ _____	$ _____
219	LSC in Park	Concrete Stain Treatment	741.	SF	$ _____	$ _____
220	LSC in Park	Benches	10.	EA	$ _____	$ _____
221	LSC in Park	Bike Racks - (Inverted "U") Style	5.	EA	$ _____	$ _____
222	LSC in Park	Trees, 2" Deciduous	58.	EA	$ _____	$ _____
223	LSC in Park	Trees, 1-1/2" Deciduous	5.	EA	$ _____	$ _____
224	LSC in Park	Shrubs	128.	EA	$ _____	$ _____
225	LSC in Park	Perennials	24.	EA	$ _____	$ _____
226	LSC in Park	Boulders, 3' x 2'	10.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
227	LSC in Park	Boulders, 3' x 5'	14.	EA	$ _____	$ _____
228	LSC in Park	Lawn Fine Grade, Seed	45,683.	SF	$ _____	$ _____
229	LSC in Park	Irrigation System	1.	Lump Sum	$ _____	$ _____
230	LSC in Park	Soil Amendment, Delivered, Tilled, Spread	50,383.	SF	$ _____	$ _____
231	LSC in Park	Shrub Bed - Fine Grade, Rock Mulch	4,700.	SF	$ _____	$ _____
232	LSC Bike Prk	Lawn Fine Grade, Seed	25,500.	SF	$ _____	$ _____
233	LSC Bike Prk	Lawn Irrigation	25,500.	SF	$ _____	$ _____
234	LSC Bike Prk	Irrigation Controls	1.	Lump Sum	$ _____	$ _____
235	LSC Bike Prk	Soil Amendment, Delivered, Tilled, Spread	25,000.	SF	$ _____	$ _____
236	LSC Bike Prk	Split 2-Rail Fence, Cedar, Not incl. Future Track or Pump Park	965.	LF	$ _____	$ _____
237	LSC Bike Prk	Concrete Landscape Edger, Not incl. Future Track or Pump Park	968.	LF	$ _____	$ _____
238	LSC Bike Prk	Trees, 2" Deciduous	26.	EA	$ _____	$ _____
239	LSC Bike Prk	Trees, 1-1/2" Deciduous	8.	EA	$ _____	$ _____
240	LSC Bike Prk	Rock Type 1 (Smaller), not incl. Future Track or Pump Park, no Fabric or Soil Prep	11,291.	SF	$ _____	$ _____
241	LSC Bike Prk	Rock Type 2 (Larger), not incl. Future Track or Pump Park, no Fabric or Soil Prep	17,106.	SF	$ _____	$ _____
242	Amenities	Trash Recepticals	5.	EA	$ _____	$ _____
243	Amenities	Drinking Fountains	1.	EA	$ _____	$ _____
244	Amenities	Concrete for Bike/Racks Bollards (8 ft x 8 ft)	5.	EA	$ _____	$ _____
245	Amenities	Picnic Tables Associated with Restrooms/Shelters	8.	EA	$ _____	$ _____
MCR		Minor Contract Revisions	---	---	---	$ 320,000.00
DISC		X.XX% Discount For Prompt Payment (X-Days)	---	---	---	

Bid Amount: **$** _____

Bid Amount:

_____ **dollars**

Bid Schedule: 2019 Riverfront at Dos Rios (PH2)

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price

Contractor Name:
Contractor Address:
Contractor Phone #:

THE RIVERFRONT AT DOS RIOS
BID SET PLANS
June 12, 2020

Site Development Plans

1	Cover Sheet
2	Standard Abbreviations, Legend, & Symbols
3	Summary of Earthwork
4	Project Overview
5	Control Plan
6–17	Removal Plan
18–34	Composite Utility Plan
35–56	Sanitary Sewer Plan and Profile
57–72	Raw Water Line
73–94	Storm Drain Plan and Profile
95–107	Water Line Plan and Profile
108–109	Typical Cross Section
110–125	Improvement Plan
126–144	Road Profile
145–180	Road Cross Sections
181–245	Staking Plan
246–247	Overlot Grading Plan
248–262	Signing and Striping Plan
263–266	Storm Water Management Plan

Plans for Riverside Parkway Left Turn Lane

267	Summary of Earthwork
268	Survey Control Plan
269–271	Existing Condition Plan
272–274	Improvement Plan
275	Edge of Gutter Profile
276	Parkway Cross Sections
277–279	Staking Plan
280	Striping Plan

Plans for Colorado River Bank Stabilization

281	Summary of Earthwork
282–285	Improvement Plan
286–287	Bank Stabilization Profile
288–293	Bank Stabilization Cross Sections

Dos Rios Park Irrigation And Landscape Plans

294–303 Irrigation and Landscape Plans

Dos Rios Bicycle Playground Irrigation And Landscape Plans

304–310 Irrigation and Landscape Plans

Dos Rios Right–of–Way Irrigation And Landscape Plans

311–322 Irrigation and Landscape Plans

Dos Rios Park Restroom / Shelter Plans

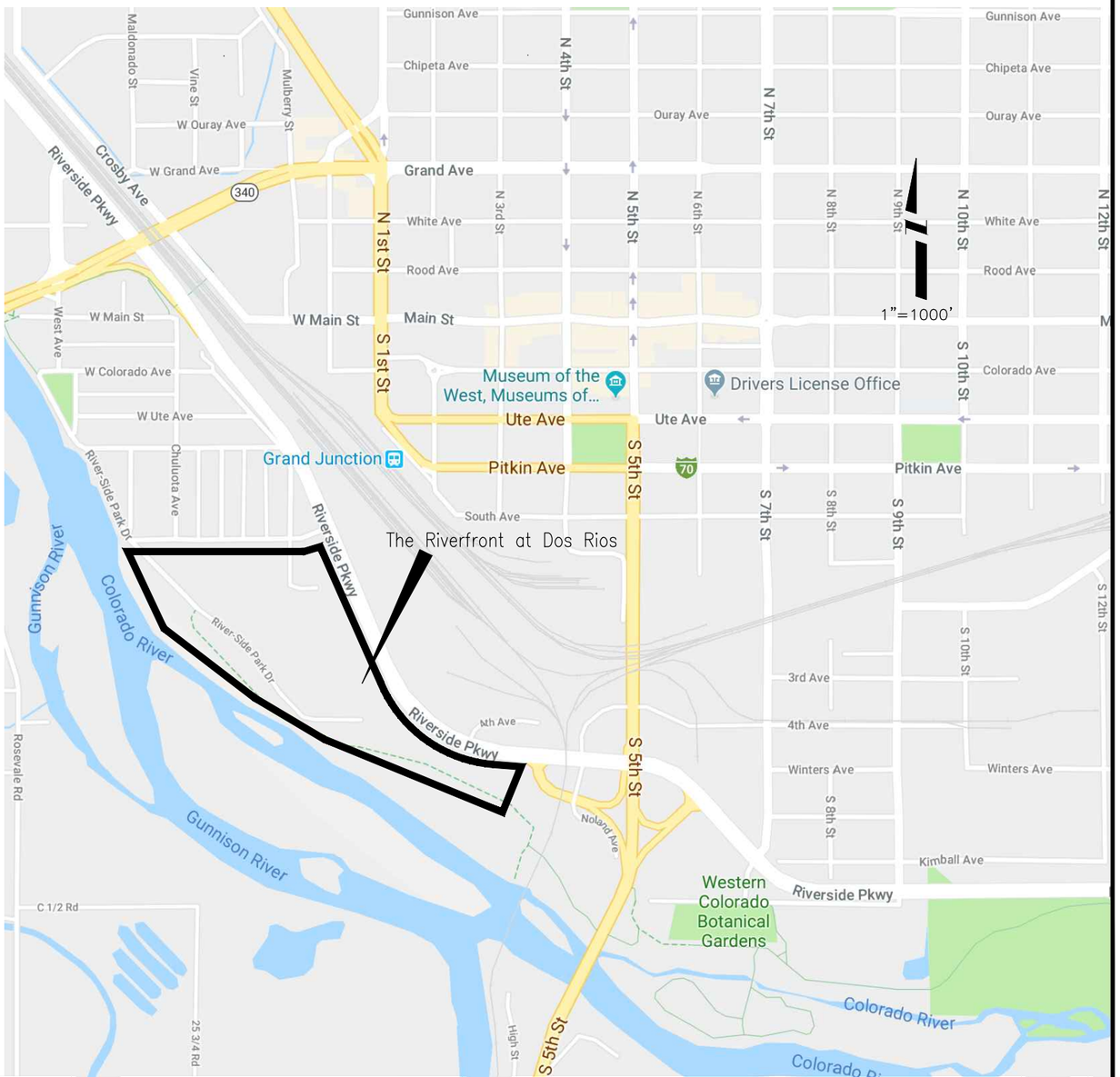
323–348 Restroom Plans

Dos Rios Park small Shelter Plans

349–352 Shelter Plans

Lighting Plans

353–393 Lighting Plans



811 Know what's below. Call before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

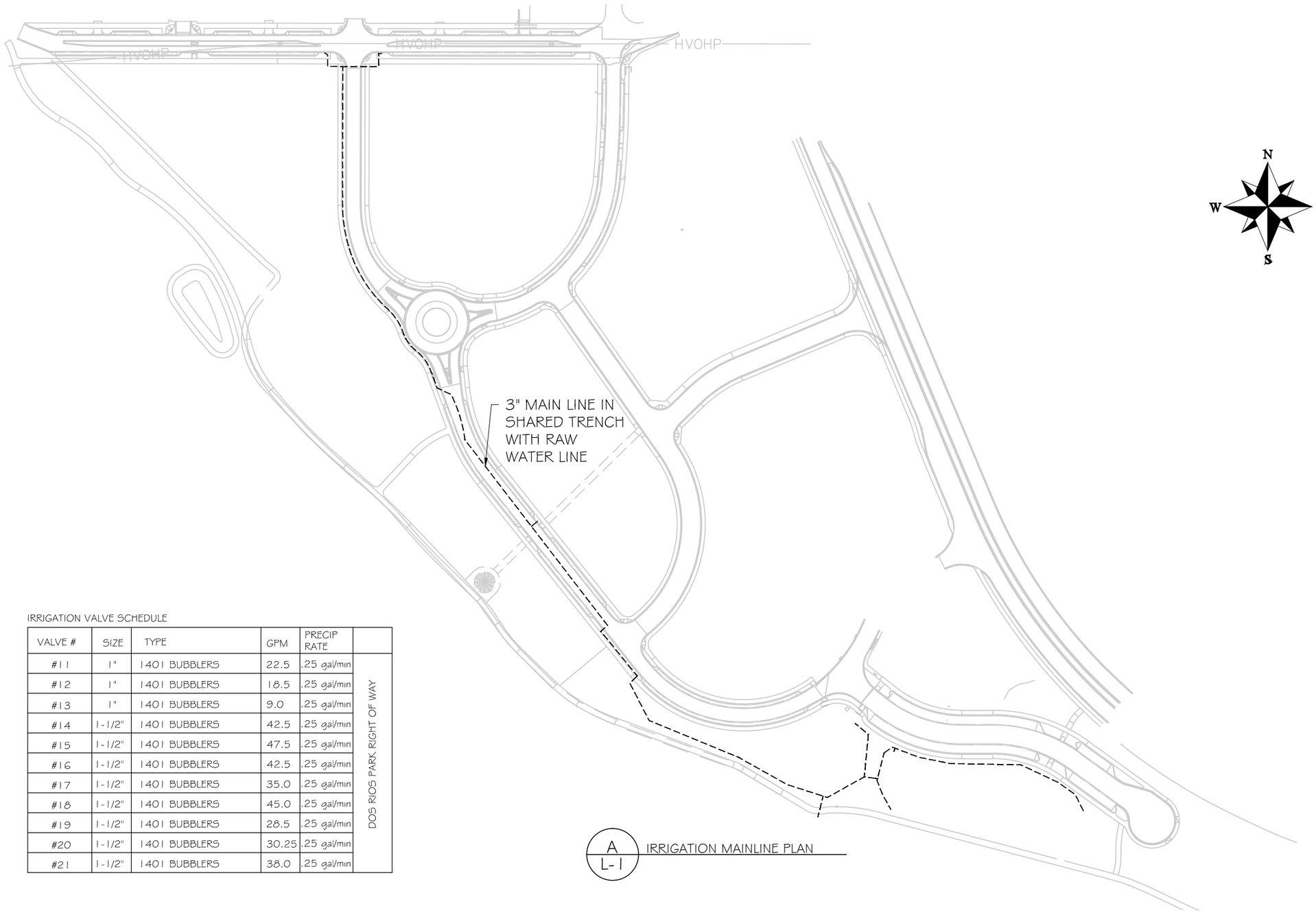
DRAWN BY	JCS	DATE 2019
DESIGNED BY	JCS	DATE 2019
CHECKED BY	BH	DATE 2019
APPROVED BY	TCP	DATE 2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 NA NA NA
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COVER SHEET – 1
June 12, 2020



A L-1 IRRIGATION MAINLINE PLAN

LEGEND

---- CLASS 200 PVC MAIN, 3"

N W E S

NOTES

1. SEE SHEET L-12 FOR R.O.W. PLANT LIST.
2. SEE SHEET L-7, "DOS RIOS PARK PLANTING" FOR PLANTING NOTES, PLANTING DETAIL AND BOULDER PLACEMENT DETAIL.
3. SEE SHEET I-1 AND I-2 " DOS RIOS PARK" FOR IRRIGATION NOTES AND IRRIGATION DETAILS.
4. SEE DOS RIOS PARK SHEET I-1 CONTROLLER AND CONNECTION TO RAW WATER LINE
5. FOR SLEEVING SEE CIVIL DRAWINGS

0 100 200 300 NORTH

IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	PRECIP RATE	
#11	1"	1401 BUBBLERS	22.5	.25 gal/min	DOS RIOS PARK RIGHT OF WAY
#12	1"	1401 BUBBLERS	18.5	.25 gal/min	
#13	1"	1401 BUBBLERS	9.0	.25 gal/min	
#14	1-1/2"	1401 BUBBLERS	42.5	.25 gal/min	
#15	1-1/2"	1401 BUBBLERS	47.5	.25 gal/min	
#16	1-1/2"	1401 BUBBLERS	42.5	.25 gal/min	
#17	1-1/2"	1401 BUBBLERS	35.0	.25 gal/min	
#18	1-1/2"	1401 BUBBLERS	45.0	.25 gal/min	
#19	1-1/2"	1401 BUBBLERS	28.5	.25 gal/min	
#20	1-1/2"	1401 BUBBLERS	30.25	.25 gal/min	
#21	1-1/2"	1401 BUBBLERS	38.0	.25 gal/min	

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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SCALES

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

The Riverfront at Dos Rios
Dos Rios R.O.W. Landscape & Irrigation

L-1

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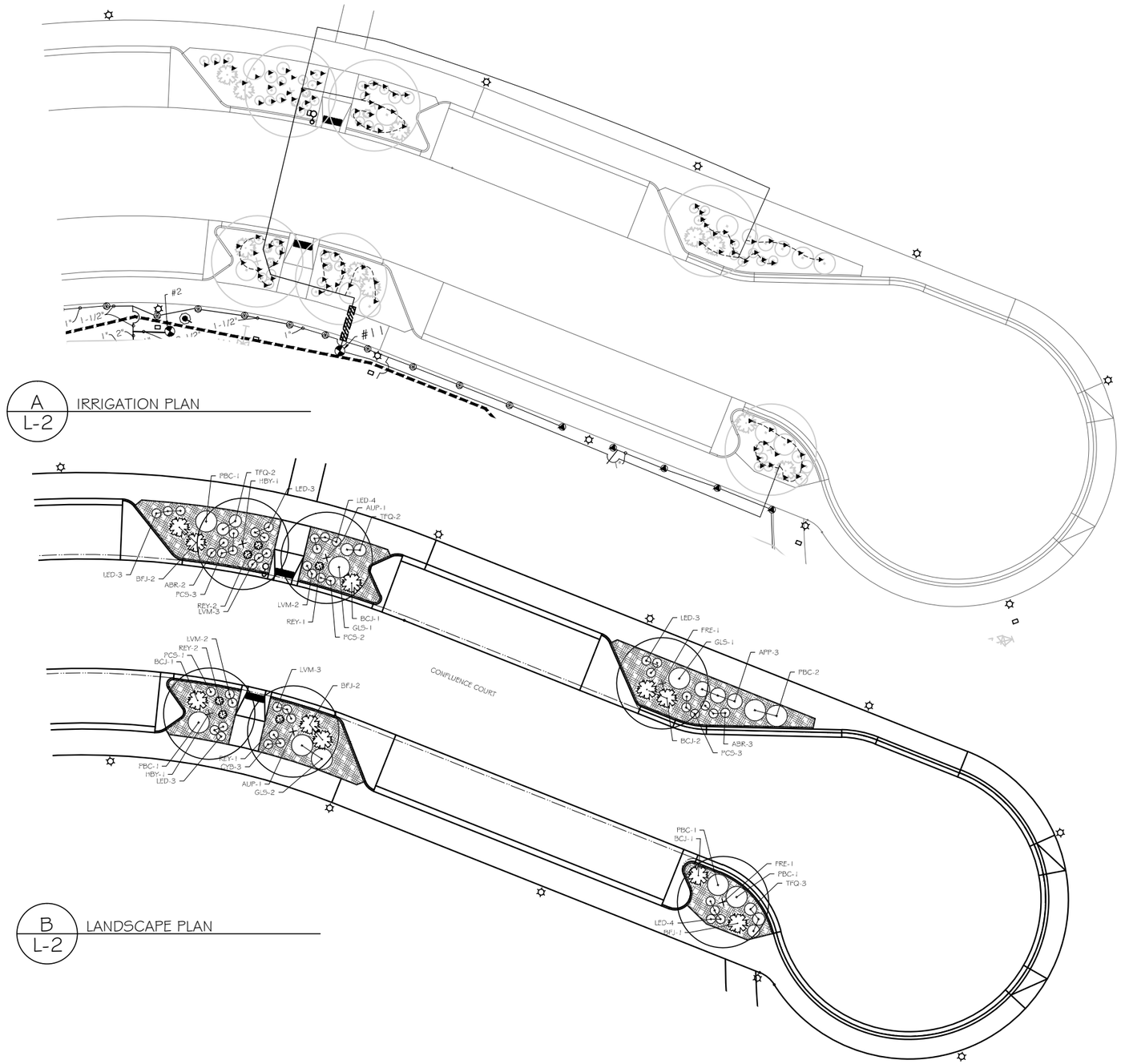

A
L-2
IRRIGATION PLAN

B
L-2
LANDSCAPE PLAN

LEGEND

—RAW— 12" CL900 RAW WATER SUPPLY
CLASS 200 PVC MAIN, 3"
LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
3/4" SWING PIPE, SEE DOS RIOS PARK DETAIL C/I-1
2" PIPE SIZING
IRRIGATION SLEEVE, SEE CIVIL DRAWINGS
1401 BUBBLER, SEE DOS RIOS PARK DETAIL C/I-1
#0 RAINBIRD PEB ZONE VALVE, SIZE PER VALVE SCHEDULE, SEE DOS RIOS PARK DETAIL B/I-1
QUICK COUPLER VALVE DETAIL F/I-3
ISOLATION VALVE
—HVOHP— HIGH VOLTAGE OVERHEAD POWER LINE

SHADE TREE
ORNAMENTAL TREE
DECIDUOUS SHRUBS
EVERGREEN SHRUBS
PERENNIALS
SHRUB BED
BOULDERS: DETAIL B/L-7 "DOS RIOS PARK PLANTING"

NOTES
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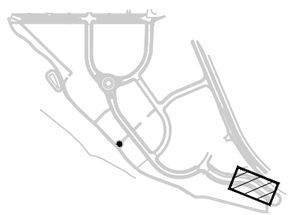
0 20 40 60 NORTH



CIAVONNE, ROBERTS & ASSOCIATES, INC.
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ENGINEERING DIVISION

The Riverfront at Dos Rios
Dos Rios R.O.W. Landscape & Irrigation

L-2

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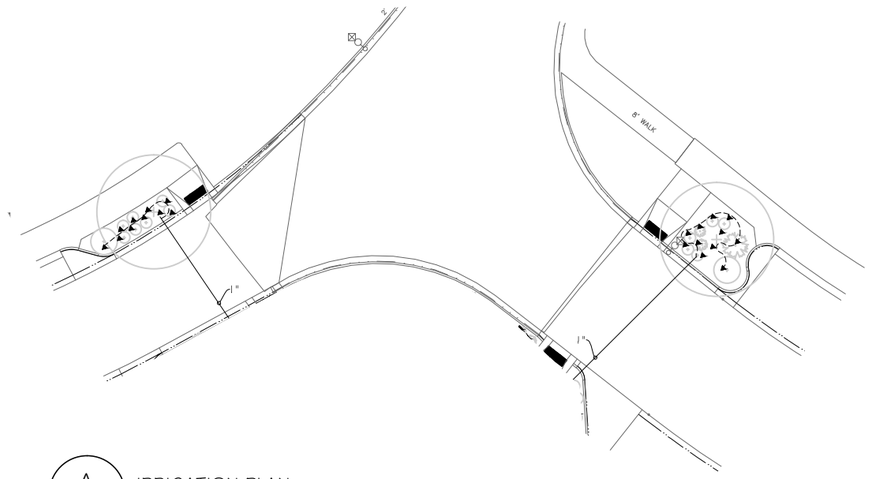
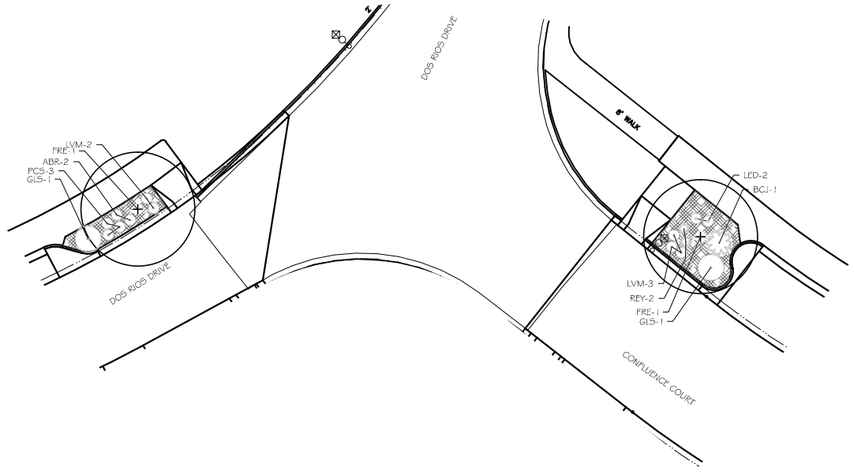


A
L-3
IRRIGATION PLAN



B
L-3
LANDSCAPE PLAN

LEGEND

—RAW— 12" CL900 RAW WATER SUPPLY
CLASS 200 PVC MAIN, 3"
LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
¾" SWING PIPE, SEE DOS RIOS PARK DETAIL C/I-1
2" PIPE SIZING
IRRIGATION SLEEVE, SEE CIVIL DRAWINGS
1401 BUBBLER, SEE DOS RIOS PARK DETAIL C/I-1
#0 RAINBIRD PEB ZONE VALVE, SIZE PER VALVE SCHEDULE, SEE DOS RIOS PARK DETAIL B/I-1
QUICK COUPLER VALVE DETAIL F/I-3
ISOLATION VALVE
—HVOHP— HIGH VOLTAGE OVERHEAD POWER LINE

SHADE TREE
ORNAMENTAL TREE
DECIDUOUS SHRUBS
EVERGREEN SHRUBS
PERENNIALS
SHRUB BED
BOULDERS: DETAIL B/L-7 "DOS RIOS PARK PLANTING"

N
W E
S

NOTES
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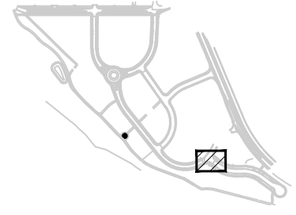
0 20 40 60 NORTH



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LAND PLANNING AND LANDSCAPE ARCHITECTURE

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ENGINEERING DIVISION

The Riverfront at Dos Rios
Dos Rios R.O.W. Landscape & Irrigation

L-3

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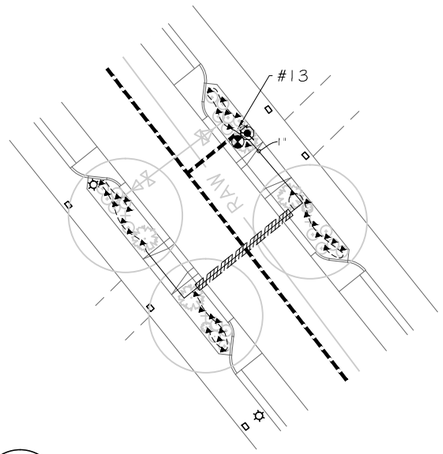
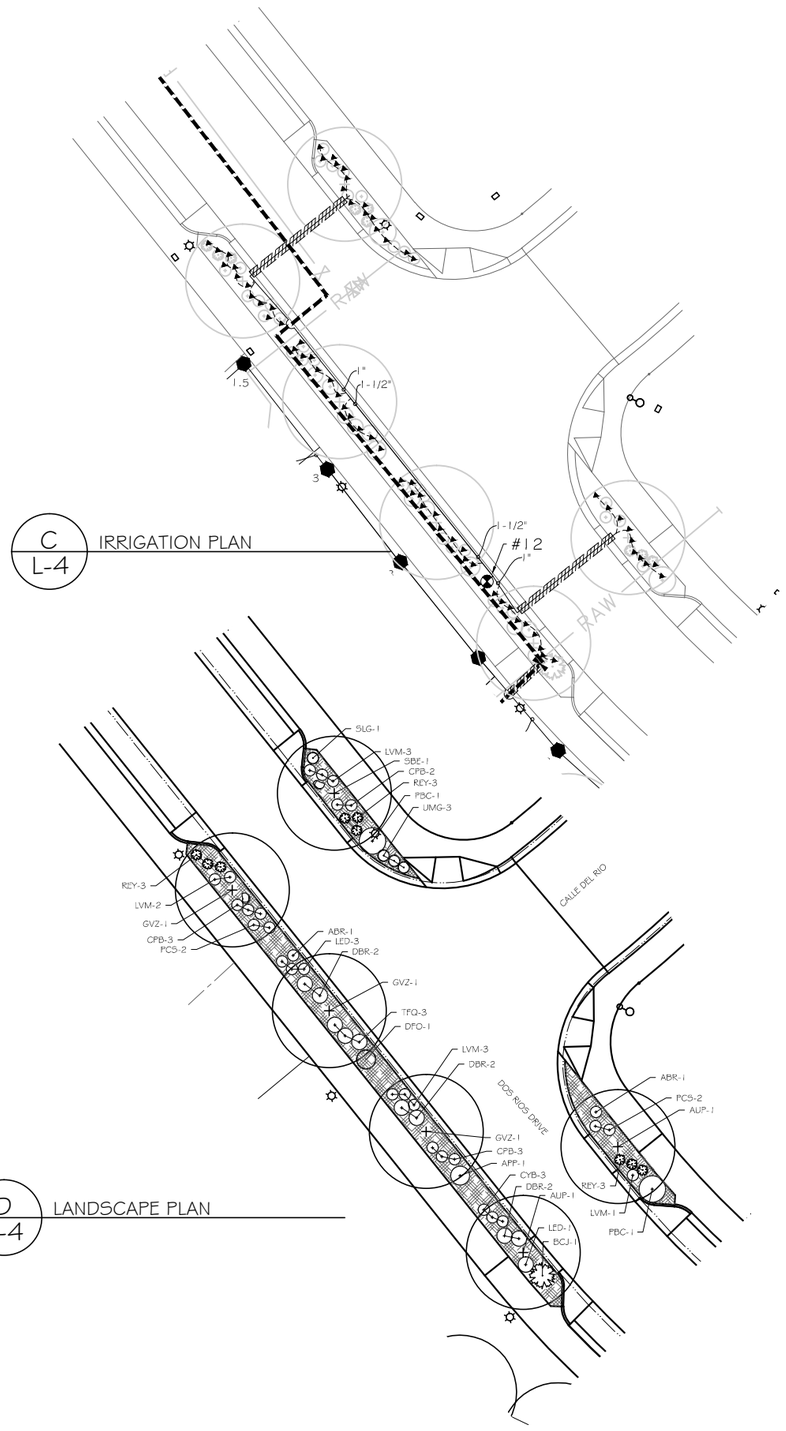
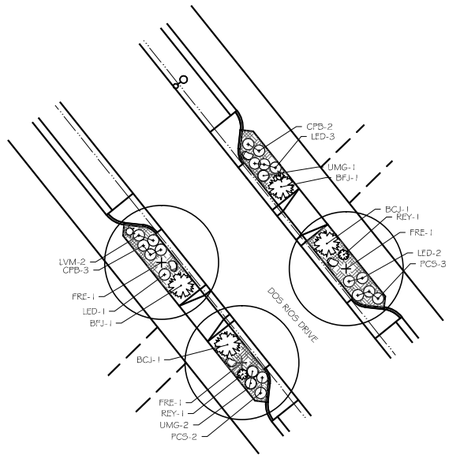


A L-4 IRRIGATION PLAN



C L-4 IRRIGATION PLAN



B L-4 LANDSCAPE PLAN

D L-4 LANDSCAPE PLAN

LEGEND

- —RAW— 12" CL900 RAW WATER SUPPLY
- CLASS 200 PVC MAIN, 3"
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- 3/4" SWING PIPE, SEE DOS RIOS PARK DETAIL C/I-1
- 2" PIPE SIZING
- IRRIGATION SLEEVE, SEE CIVIL DRAWINGS
- 1401 BUBBLER, SEE DOS RIOS PARK DETAIL C/I-1
- #0 — RAINBIRD PEB ZONE VALVE, SIZE PER VALVE SCHEDULE, SEE DOS RIOS PARK DETAIL B/I-1
- QUICK COUPLER VALVE DETAIL F/I-3
- ISOLATION VALVE
- —HVOHP— HIGH VOLTAGE OVERHEAD POWER LINE
- SHADE TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- PERENNIALS
- SHRUB BED
- BOULDERS: DETAIL B/L-7 "DOS RIOS PARK PLANTING"

N W E S

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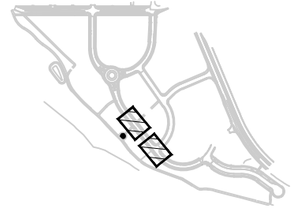

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ENGINEERING DIVISION

The Riverfront at Dos Rios
Dos Rios R.O.W. Landscape & Irrigation

L-4

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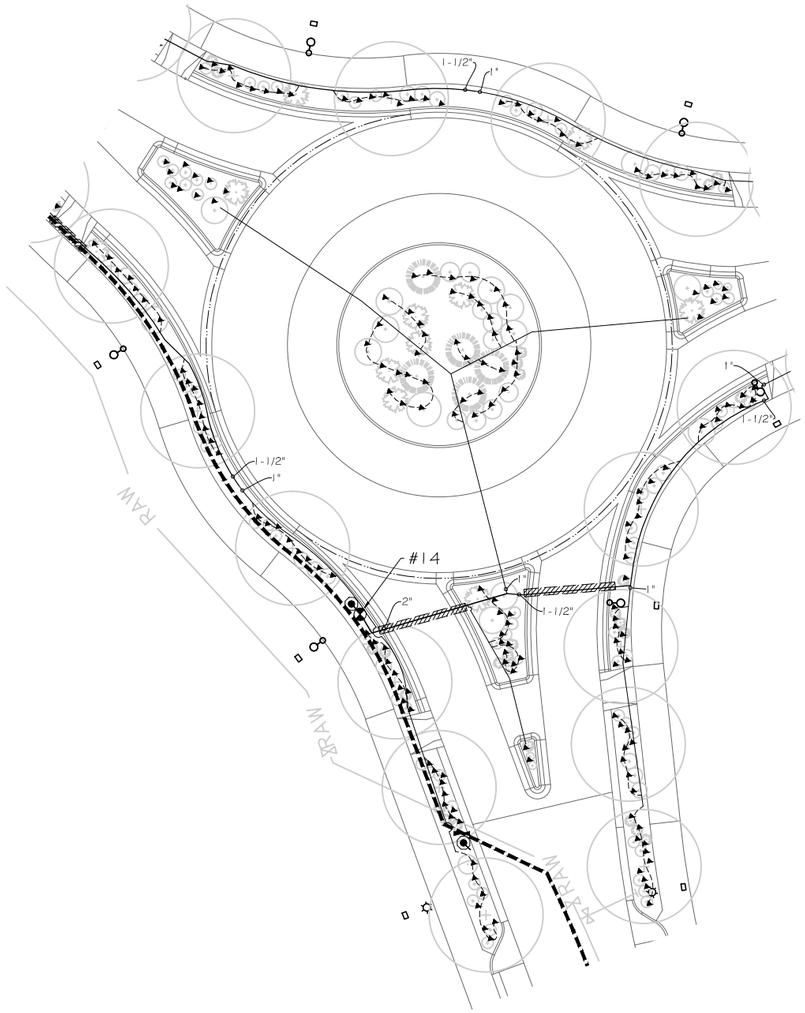
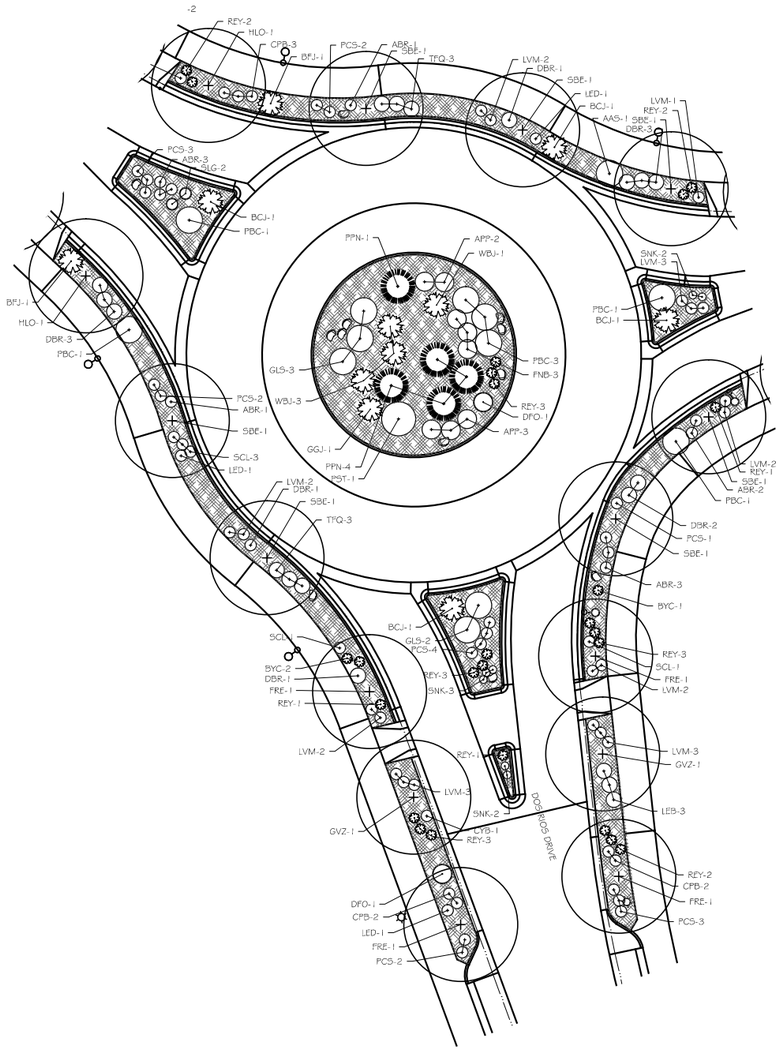


A L-5 IRRIGATION PLAN



B L-5 LANDSCAPE PLAN

LEGEND

- —RAW— 12" CL900 RAW WATER SUPPLY
- CLASS 200 PVC MAIN, 3"
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- 3/4" SWING PIPE, SEE DOS RIOS PARK DETAIL C/I-1
- 2" PIPE SIZING
- IRRIGATION SLEEVE, SEE CIVIL DRAWINGS
- 1401 BUBBLER, SEE DOS RIOS PARK DETAIL C/I-1
- #O RAINBIRD PEB ZONE VALVE, SIZE PER VALVE SCHEDULE, SEE DOS RIOS PARK DETAIL B/I-1
- QUICK COUPLER VALVE DETAIL F/I-3
- ISOLATION VALVE
- —HVOHP— HIGH VOLTAGE OVERHEAD POWER LINE
- SHADE TREE
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- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- PERENNIALS
- SHRUB BED
- BOULDERS: DETAIL B/L-7 "DOS RIOS PARK PLANTING"

NOTES

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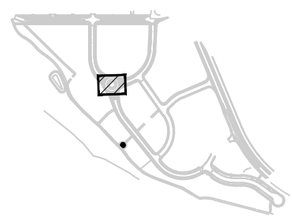
N W E S

0 20 40 60 NORTH



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ENGINEERING DIVISION

The Riverfront at Dos Rios
Dos Rios R.O.W. Landscape & Irrigation

L-5

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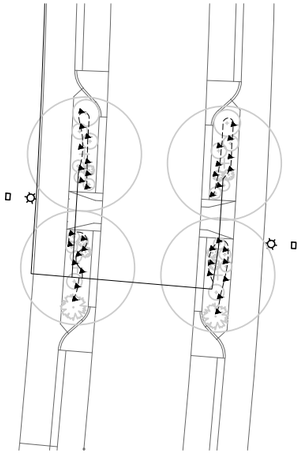
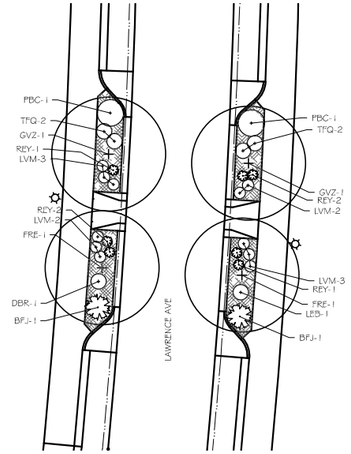


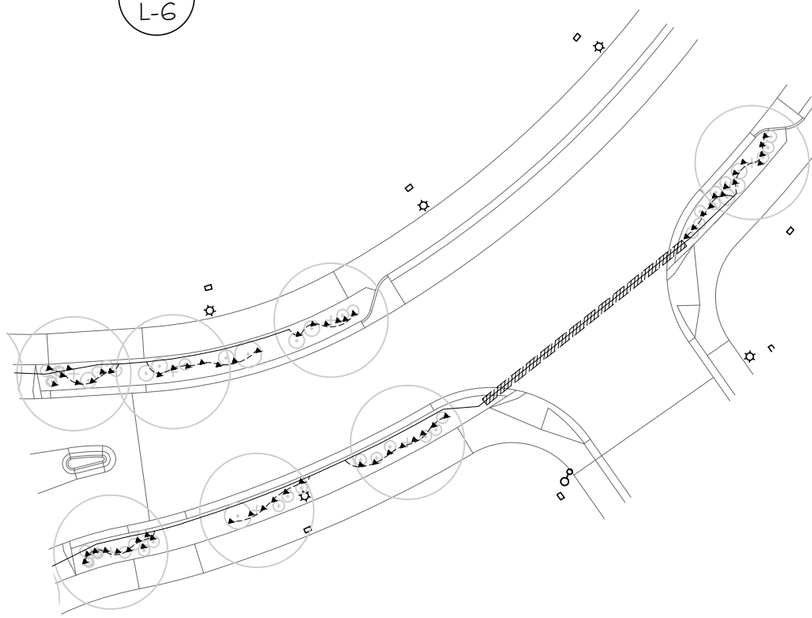
A L-6 IRRIGATION PLAN



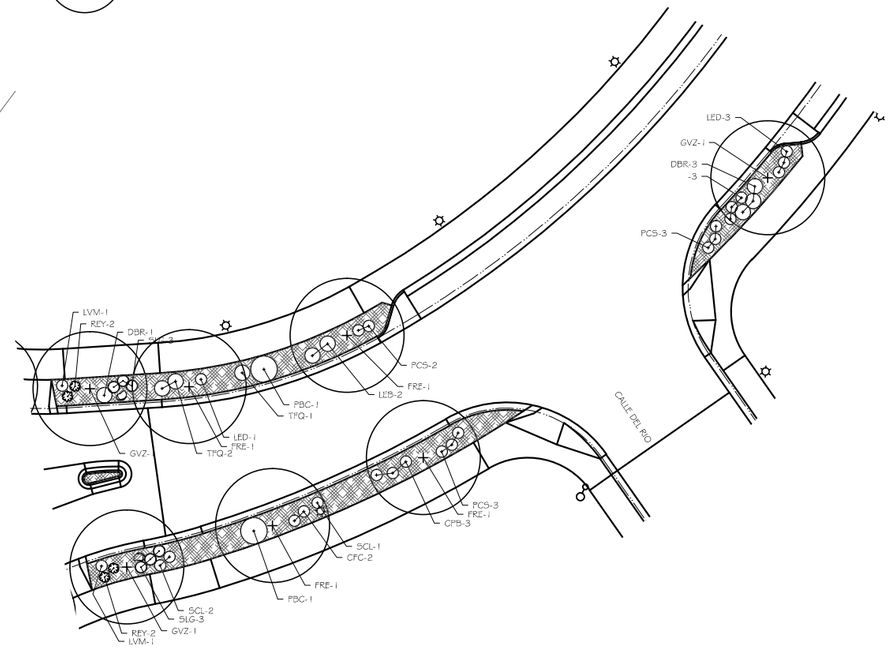
B L-6 LANDSCAPE PLAN

LEGEND

- —RAW— 12" CL900 RAW WATER SUPPLY
- CLASS 200 PVC MAIN, 3"
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- ¾" SWING PIPE, SEE DOS RIOS PARK DETAIL C/I-1
- 2" PIPE SIZING
- IRRIGATION SLEEVE, SEE CIVIL DRAWINGS
- 1401 BUBBLER, SEE DOS RIOS PARK DETAIL C/I-1
- #0 RAINBIRD PEB ZONE VALVE, SIZE PER VALVE SCHEDULE, SEE DOS RIOS PARK DETAIL B/I-1
- QUICK COUPLER VALVE DETAIL F/I-3
- ISOLATION VALVE
- —HVOHP— HIGH VOLTAGE OVERHEAD POWER LINE
- SHADE TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- PERENNIALS
- SHRUB BED
- BOULDERS: DETAIL B/L-7 "DOS RIOS PARK PLANTING"



C L-6 IRRIGATION PLAN



D L-6 LANDSCAPE PLAN

NOTES

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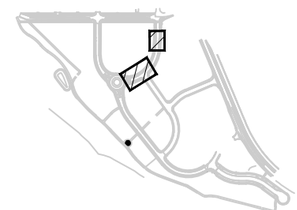
N W E S

0 20 40 60 NORTH



CIAVONNE, ROBERTS & ASSOCIATES, INC.
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ENGINEERING DIVISION

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Dos Rios R.O.W. Landscape & Irrigation

L-6

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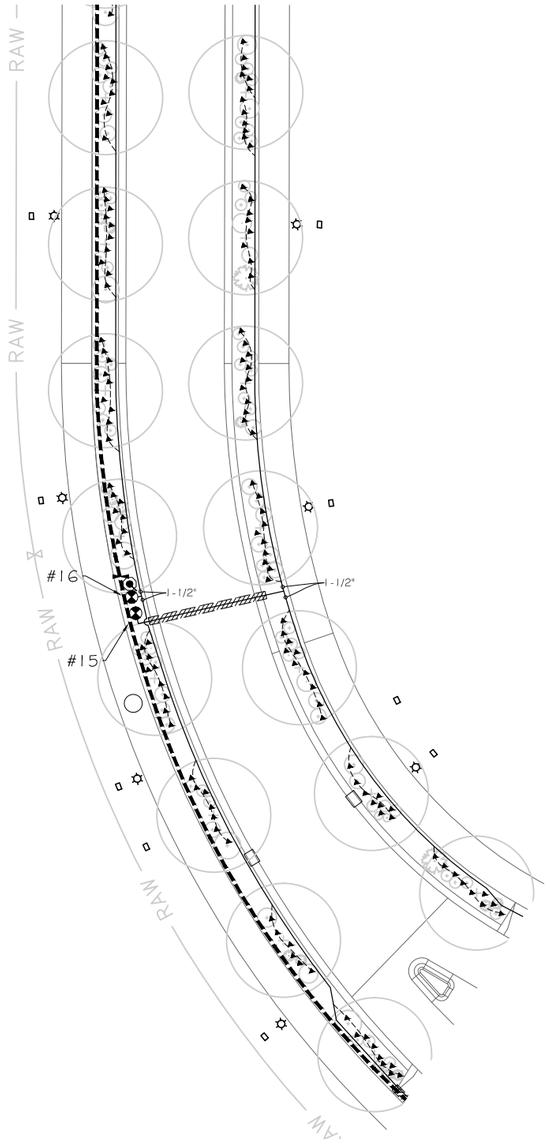
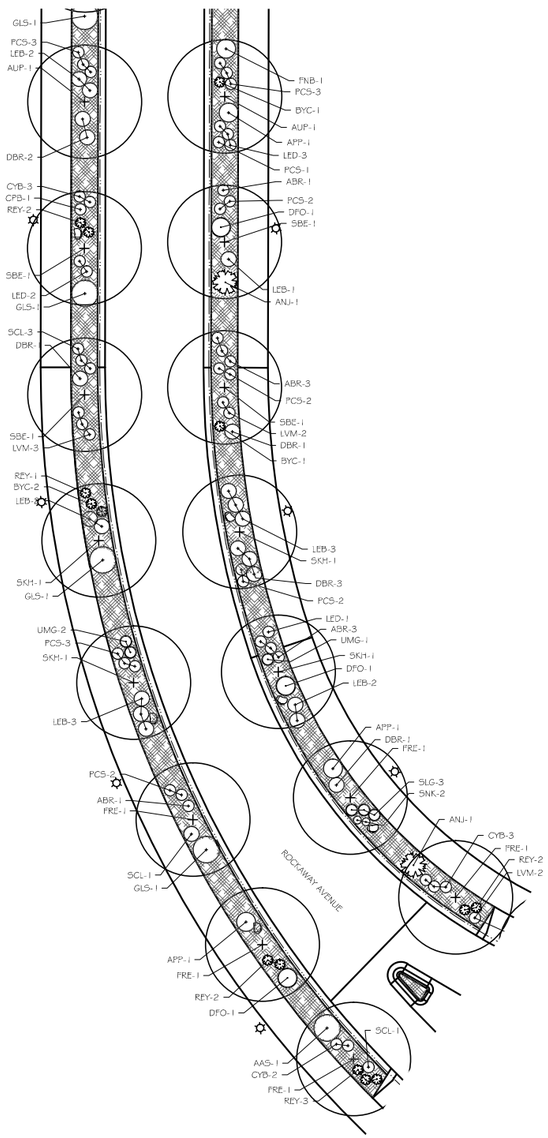


A L-7 IRRIGATION PLAN



B L-7 LANDSCAPE PLAN

LEGEND

- —RAW— 12" CL900 RAW WATER SUPPLY
- CLASS 200 PVC MAIN, 3"
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- 3/4" SWING PIPE, SEE DOS RIOS PARK DETAIL C/I-1
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- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- PERENNIALS
- SHRUB BED
- BOULDERS: DETAIL B/L-7 "DOS RIOS PARK PLANTING"

N W E S

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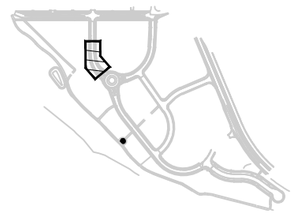
0 20 40 60 NORTH



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ENGINEERING DIVISION

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Dos Rios R.O.W. Landscape & Irrigation

L-7

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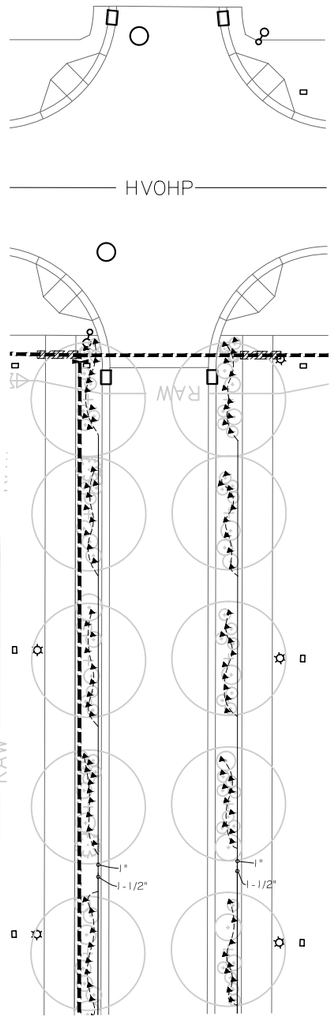
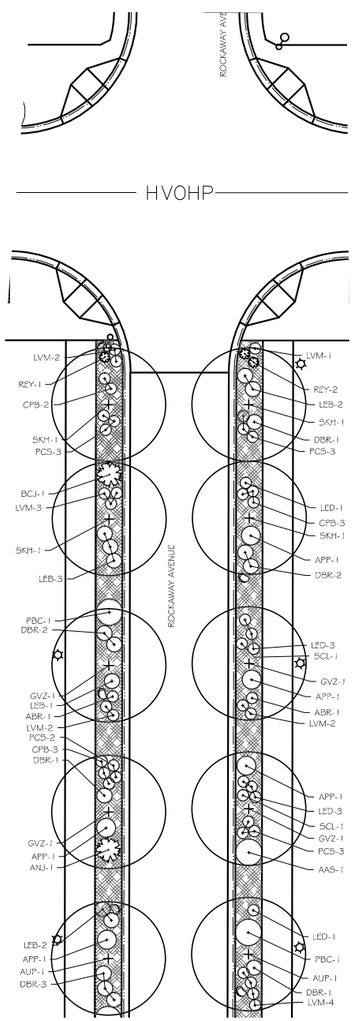


A L-8 IRRIGATION PLAN



B L-8 LANDSCAPE PLAN

LEGEND

- —RAW— 12" CL900 RAW WATER SUPPLY
- CLASS 200 PVC MAIN, 3"
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- IRRIGATION SLEEVE, SEE CIVIL DRAWINGS
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N W E S

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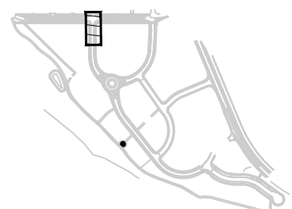
0 20 40 60 NORTH



CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

The Riverfront at Dos Rios
Dos Rios R.O.W. Landscape & Irrigation

L-8

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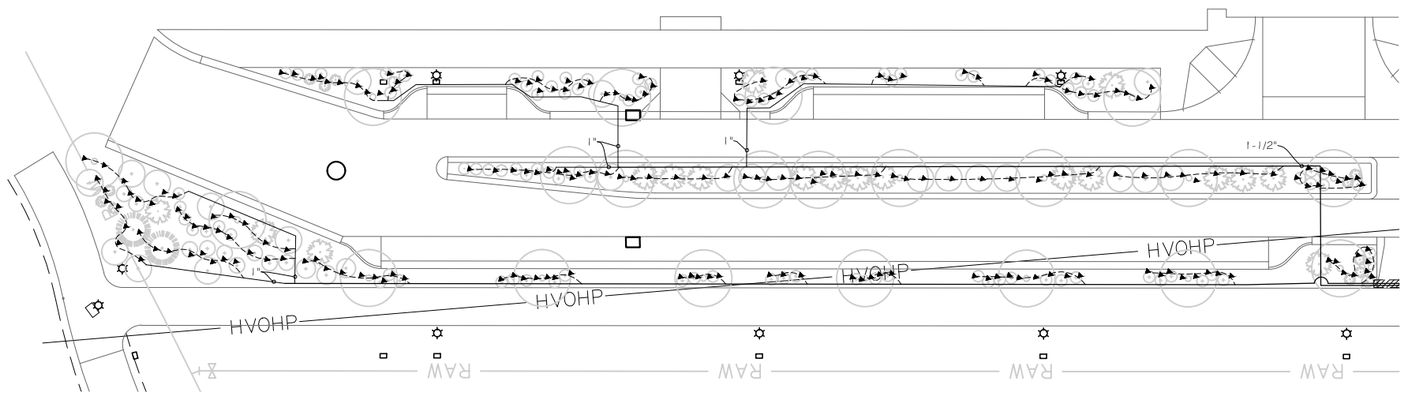
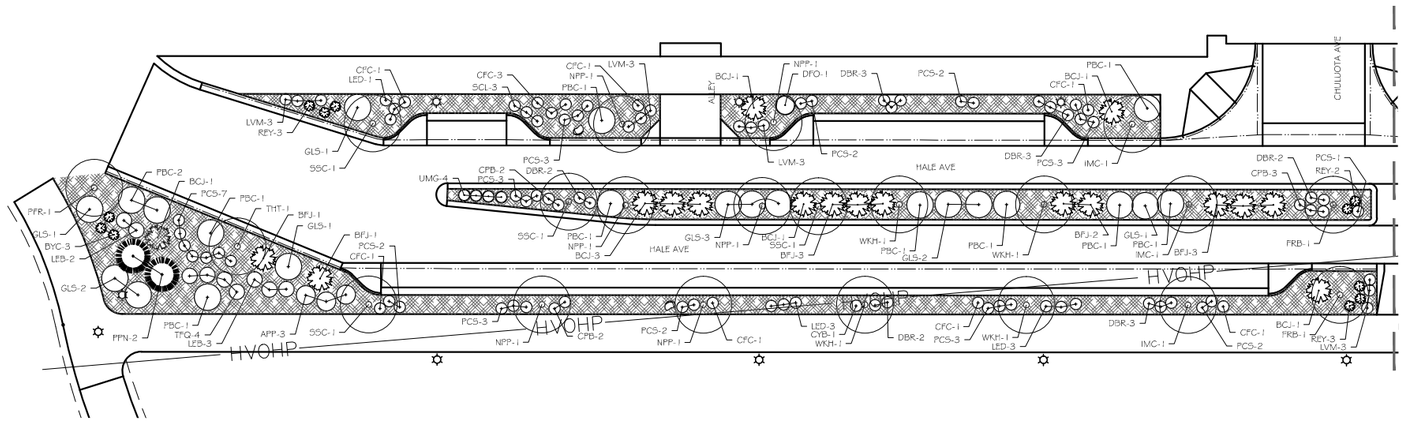


A L-9 IRRIGATION PLAN

LEGEND

—RAW— 12" CL900 RAW WATER SUPPLY
CLASS 200 PVC MAIN, 3"
LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
3/4" SWING PIPE, SEE DOS RIOS PARK DETAIL C/I-1
2" PIPE SIZING
IRRIGATION SLEEVE, SEE CIVIL DRAWINGS
1401 BUBBLER, SEE DOS RIOS PARK DETAIL C/I-1
#0 RAINBIRD PEB ZONE VALVE, SIZE PER VALVE SCHEDULE, SEE DOS RIOS PARK DETAIL B/I-1
QUICK COUPLER VALVE DETAIL F/I-3
ISOLATION VALVE
—HVOHP— HIGH VOLTAGE OVERHEAD POWER LINE
SHADE TREE
ORNAMENTAL TREE
DECIDUOUS SHRUBS
EVERGREEN SHRUBS
PERENNIALS
SHRUB BED
BOULDERS: DETAIL B/L-7 "DOS RIOS PARK PLANTING"



B L-9 LANDSCAPE PLAN

NOTES
1. SEE SHEET L-12 FOR R.O.W. PLANT LIST.
2. SEE SHEET L-7, "DOS RIOS PARK PLANTING" FOR PLANTING NOTES, PLANTING DETAIL AND BOULDER PLACEMENT DETAIL.
3. SEE SHEET I-1 AND I-2 " DOS RIOS PARK" FOR IRRIGATION NOTES AND IRRIGATION DETAILS.

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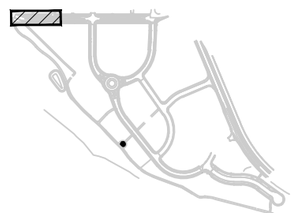

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Dos Rios R.O.W. Landscape & Irrigation

L-9

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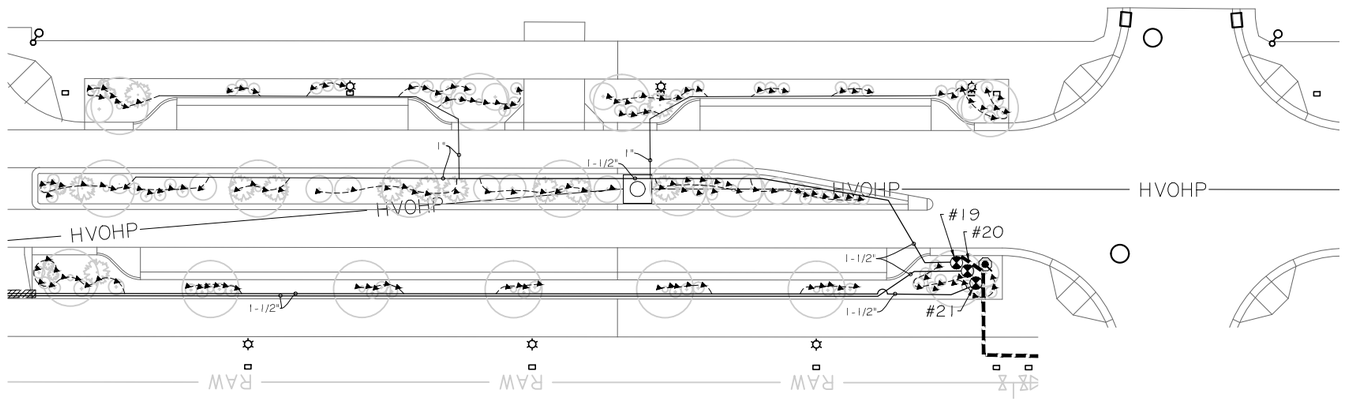
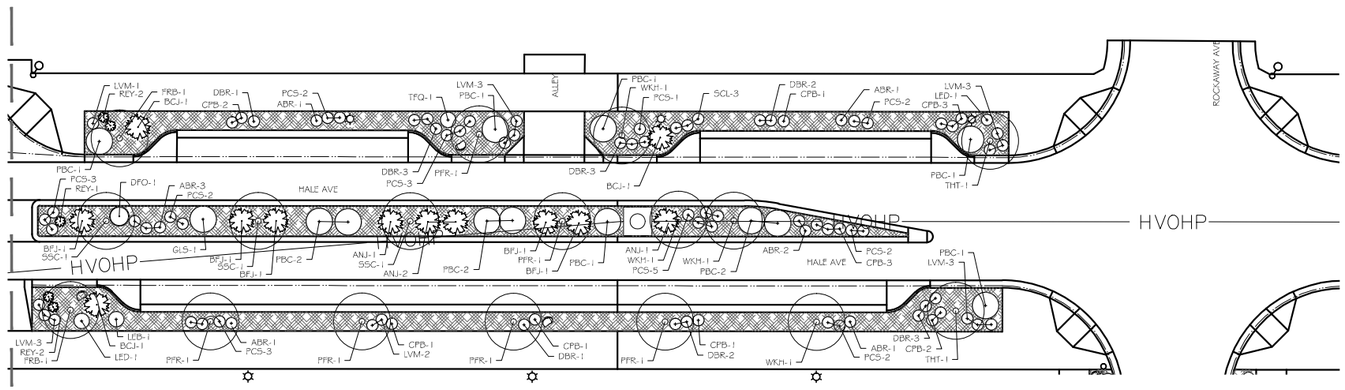


A L-10 IRRIGATION PLAN



B L-10 LANDSCAPE PLAN

LEGEND

- RAW — 12" CL900 RAW WATER SUPPLY
- CLASS 200 PVC MAIN, 3"
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- 3/4" SWING PIPE, SEE DOS RIOS PARK DETAIL C/I-1
- 2" PIPE SIZING
- IRRIGATION SLEEVE, SEE CIVIL DRAWINGS
- 1401 BUBBLER, SEE DOS RIOS PARK DETAIL C/I-1
- #0 — RAINBIRD PEB ZONE VALVE, SIZE PER VALVE SCHEDULE, SEE DOS RIOS PARK DETAIL B/I-1
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- ISOLATION VALVE
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- SHADE TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- PERENNIALS
- SHRUB BED
- BOULDERS: DETAIL B/L-7 "DOS RIOS PARK PLANTING"

N W E S

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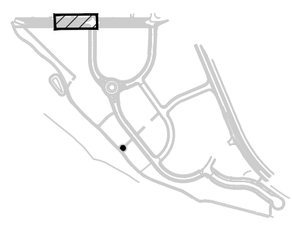

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Dos Rios R.O.W. Landscape & Irrigation

L-10

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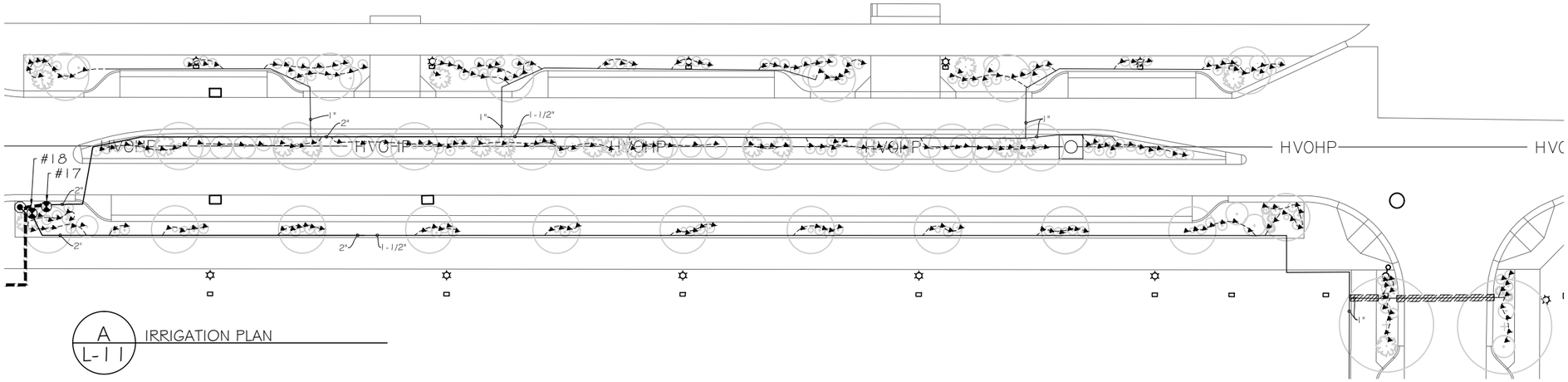

A
L-11 IRRIGATION PLAN

LEGEND

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- CLASS 200 PVC MAIN, 3"
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- ½" SWING PIPE, SEE DOS RIOS PARK DETAIL C/I-1
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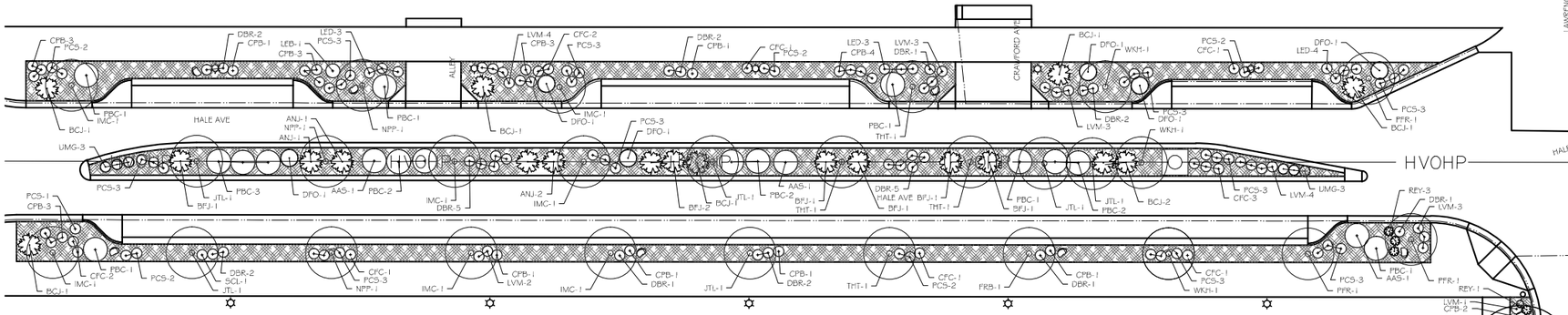
- PERENNIALS
- SHRUB BED
- BOULDERS: DETAIL B/L-7 "DOS RIOS PARK PLANTING"



B
L-11 LANDSCAPE PLAN

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NOTES

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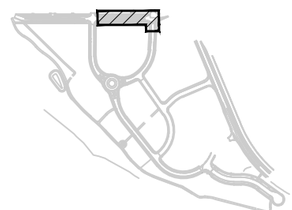

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

The Riverfront at Dos Rios
Dos Rios R.O.W. Landscape & Irrigation

L-11

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PLANT LIST-RIGHT OF WAY PLANTINGS

		Common Name	Scientific Name	Size	Mature Height
Deciduous Trees					
8	AUP	Autumn Blaze Pear	Pyrus calleryana 'Autumn Blaze'	2"	30-35'
5	FRB	Forest Pansy Redbud	Cercis canadensis 'Forest Pansy'	1-1/2"	18-23'
22	FRE	Frontier Elm	Ulmus x Frontier	2"	25-35'
14	GVZ	Green Vase Zelkova	Zelkova serrata 'Green Vase'	2"	40-60'
2	HBY	Hackberry	Celtis occidentalis	2"	35-60'
2	HLO	Sunburst Honeylocust	Gleditsia triacanthos inermis 'Sunburst'	2"	45-70'
10	IMC	Indian Magic Crabapple	Malus sp. 'Indian Magic'	1-1/2"	12-17'
6	JTL	Japanese Tree Lilac	Syringa reticulata 'Ivory Silk'	1-1/2"	15-18'
9	NPP	Newport Plum	Prunus cerasifera 'Newport'	1-1/2"	15-20'
10	PFR	Prairiefire Crabapple	Malus Sp. 'Prairiefire'	1-1/2"	15-20'
14	SBE	Sensation Box Elder	Acer negundo 'Sensation'	2"	25-40'
8	SKH	Skyline Honeylocust	Gleditsia triacanthos var. inermis 'Skyline'	2"	40-50'
7	SSC	Spring Snow Crabapple	Malus 'Spring Snow'	1-1/2"	15-20'
7	THT	Toba Hawthorn	Crataegus morenensis 'Toba'	1-1/2"	15-20'
11	WKH	Winter King Hawthorn	Crataegus viridis 'Winter King'	1-1/2"	15-20'
Evergreen Trees					
1	GGJ	Gray Gleam Juniper	Juniperus scopulorum 'Gray Gleam'	6'	10-15'
7	PPN	Pinon Pine	Pinus cembroides edulis	6'	10-15'
4	WBJ	Wichita Juniper	Juniperus sabina "Wichita"	6'	10-15'
Deciduous Shrubs					
6	AAS	Autumn Amber Sumac	Rhus trilobata 'Autumn Amber'	5 gal	1-2'
38	ABR	Appleblossom Carpet Rose	Rosa x Flower Carpet 'Noamel'	2 gal	2-2.5'
20	APP	Apache Plume	Fallugia paradoxa	5 gal	3-6'
24	CFC	Coral Flower Carpet Rose	Rosa x Flower Carpet 'Noala'	2 gal	2-2.5'
78	CPB	Crimson Pygmy Barberry	Berberis thunbergii 'Atropurpurea Nana'	5 gal	1.5-2'
16	CYB	Corymb Buckwheat	Eriogonum corymbosum	5 gal	2-3'
94	DBR	Baby Blue Rabbit Brush	Chrysothamnus nauseosus	5 gal	1.5-2.5'
5	FNB	Fern Bush	Chamaebatiaria millefolium	5 gal	4-7'
28	GLS	Gro-low Sumac	Rhus aromatica 'Gro-Low'	5 gal	1.5-2.5'
34	LEB	Lena Broom	Cytisus x 'Lena'	5 gal	3-4'
75	LED	Leadplant	Amorpha canescens	5 gal	2-3'
128	LVM	Munstead Lavender	Lavandula 'Munstead'	1 gal	1-2.5'
59	PBC	Pawnee Buttes Sand Cherry	Prunus besseyi 'Pawnee Buttes'	5 gal	1-2'
174	PCS	Powis Castle Sage	Artemisia 'Powis Castle'	1 gal	2-2.5'
1	PST	Purple Smoke Tree	Cotinus coggygria 'Royal Purple'	5 gal	10-15'
22	SCL	Shadscale	Atriplex confertifolia	5 gal	1-2'
9	SNK	Snakeweed	Gutierrezia sarothrae	1 gal	1-2'
28	TFQ	Texas Scarlet Flowering Quince	Chaenomeles japonica 'Texas Scarlet'	5 gal	3-4'
Evergreen Shrubs					
11	ANJ	Andorra Juniper	Juniperus horizontalis 'Andorra'	5 gal	1-1.5'
34	BCJ	Blue Chip Juniper	Juniperus horizontalis 'Blue Chip'	5 gal	.5-1'
33	BFJ	Buffalo Juniper	Juniperus sabina 'Buffalo'	5 gal	1-2'
10	BYC	Banana Yucca	Yucca baccata	5 gal	2-4'
82	REY	Red Yucca	Hesperaloe parviflora	5 gal	1.5-2.5'
Perennials/Ground Covers					
14	DFO	Desert 4 O'Clock	Mirabilis multiflora	1 gal	1-2.5'
12	SLG	Sand Love Grass	Eragrostis trichodes	1 gal	2-4'
19	UMG	Undaunted Ruby Muhly Grass	Muhlenbergia reverchonii 'Undaunted'	1 gal	1.5-2.5'

NOTES:
1. PLANT GROWTH CHARACTERISTICS VARY DUE TO ENVIRONMENTAL CONDITIONS, THEREFORE A RANGE OF AVERAGE MATURE HEIGHTS ARE INDICATED.
2. ALL LANDSCAPE AREAS TO BE WATERED WITH AN UNDERGROUND, PRESSURIZED IRRIGATION SYSTEM.
3. QUANTITIES SHOWN ARE INCLUSIVE OF ALL ROW LANDSCAPE AND IRRIGATION SHEETS, L-2 TO L-11

NOTES
1. SEE SHEET L-7, "DOS RIOS PARK PLANTING" FOR PLANTING NOTES, PLANTING DETAIL AND BOULDER PLACEMENT DETAIL.
2. SEE SHEET I-1 AND I-2 " DOS RIOS PARK" FOR IRRIGATION NOTES AND IRRIGATION DETAILS.

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LAND PLANNING AND LANDSCAPE ARCHITECTURE

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The Riverfront at Dos Rios
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L-12

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Grand Junction Dos Rios Park Restroom

PERMIT SET 29 May 2020

DRAWING INDEX

Sheet #	Sheet Description
General	
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GI002	General Information
Architectural	
AE101	Floor, RCP & Roof Plans
AE201	Exterior & Interior Elevations
AE301	Wall Sections & Details
Structural	
S001	General Structural Notes
S002	General Structural Notes
S003	Special Inspections
S101	Structural Plans
S501	Details
S502	Details
S511	Details
S512	Details
S601	Schedules
Mechanical	
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Plumbing	
PE001	Plumbing Cover Sheet
PE501	Plumbing Details
PE601	Plumbing Schedules
PL101	Plumbing Plans
Electrical	
EE001	Electrical Cover Sheet
EE101	Electrical Plans
EE601	Electrical Schedules
EE801	Electrical Specifications

STATE OF COLORADO
KELLY KEVIN MORGAN
ARC-401582
LICENSED ARCHITECT

5-29-2020

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salt lake city, utah 84101
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consultant:

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project:

Grand Junction Dos Rios Park Restroom

CITY OF Grand Junction COLORADO

project#: 18.0850
date: 29 May 2020

revisions :

title:

Cover Sheet

sheet:

GI001

PERMIT SET

01000 – GENERAL REQUIREMENTS

SUMMARY OF WORK
Work required by the successful bidder of this project shall be conducted in a professional manner and to the satisfaction of the Architect. If the instructions and information contained in the Construction Documents are not sufficient for the Contractor to produce high quality work or if discrepancies or questions exist, the Contractor shall request interpretation, clarification or corrections prior to bidding. If the Contractor fails to take such action work must be be performed in a satisfactory manner and requests for additional time or fees may be denied. By submitting a bid, the Contractor represents that he fully understands the nature and extent of the work, all factors and conditions affecting or which may be affected by it and characteristics of its various parts and elements and their fitting together and functioning.

PROJECT COORDINATION
A. The Contractor shall be responsible for coordination of the Project. It is recognized the the Construction Drawings are diagrammatic in showing certain physical relationships of the various elements and systems and their interfacing with other elements and systems. Establishment and coordination of these relationships is the exclusive responsibility of the Contractor. Each entity involved in the performance of the Work shall cooperate in the overall coordination of the work.
B. The Owner shall designate a Project Coordinator who shall represent and be authorized to act on behalf of the Owner with respect to the Project.
C. During construction, coordinate use of site and facilities through the Project Coordinator.
D. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
E. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities.
F. Coordinate field engineering and layout work under instructions of the Project Coordinator.
G. Make the following types of submittals to Architect through the Project Coordinator: Shop drawings, product data, and samples. Test and inspection reports. Closeout submittals.

RECORD DOCUMENTS
A. Maintain at job site, one copy of the Construction Drawings. Make note of revisions and note the actual location of concealed controls, underground utilities and conduits for future use.

EXISTING UTILITIES
A. Verify locations of all existing utilities prior to starting any work. Coordinate service and utility extensions to the Project site.

WASTE DISPOSAL
A. Establish and enforce a daily system for collecting and disposing of waste materials. Provide dumpster on site.

COMPLETE SYSTEMS
A. It is the intent of the Construction Drawings that all systems, including mechanical and electrical, be complete and functional to provide the intended or specified performance. The Contractor shall provide all incidental items and parts necessary to achieve this requirement. Provide power, utilities, piping, drains, services and their connections to equipment and systems requiring them.

CLEANING AND PROTECTION OF THE WORK
A. At the time each unit of the work or element of the construction is completed (substantially) in each area of the project, clean the unit or element to a condition suitable for use and repair damage. Replace elements which in the opinion of the Architect are damaged beyond successful restoration. Protect, clean and restore the Project elements throughout the Construction period until the Owner officially takes possession.

GUARANTEES
A. The basic warranty of the project and all of its elements shall extend for not less than one year after the Owner takes official possession.

SECTION 01400 – QUALITY REQUIREMENTS

CONTROL OF INSTALLATION
A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
B. Comply with manufacturers' instructions, including each step in sequence. All manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.
C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
E. Have Work performed by persons qualified to produce required and specified quality.
F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

DEFECT ASSESSMENT
A. Replace Work or portions of the Work not conforming to specified requirements.
B. If, in the opinion of Architect, it is not practical to remove and replace the Work, Architect will direct an appropriate remedy or adjust payment.

SECTION 01600 – PRODUCT REQUIREMENTS

SUBMITTALS
A. Submit five (5) copies of shop drawings, product data and samples for all manufactured materials. Such submittals shall be completely reviewed by the Contractor prior to delivery to the Project Manager. The Contractor shall verify conformance with the requirements of Construction Documents and shall verify dimensions and compatibility with other elements of the Project. The Contractor shall submit with such promptness as to cause no delay in his own work allowing not less than two (2) weeks for Architect's review.
B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
C. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

TRANSPORTATION AND HANDLING
A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
B. Transport and handle products in accordance with manufacturer's instructions.
C. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

SECTION 01600 – PRODUCT REQUIREMENTS (continued)

STORAGE AND PROTECTION
B. Store and protect products in accordance with manufacturers' instructions.
C. Store with seals and labels intact and legible.
D. Prevent contact with material that may cause corrosion, discoloration, or staining.
E. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

SECTION 01700 – EXECUTION REQUIREMENTS

COORDINATION
A. Coordinate scheduling, submittals, and work of the various sections of the Project Requirements to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
B. Notify affected utility companies and comply with their requirements.
C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
D. Coordinate space requirements, supports, and installation of mechanical and electrical work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
F. Coordinate completion and clean-up of work of separate sections.
G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PATCHING MATERIALS
A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

EXAMINATION
A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
C. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
D. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

PREPARATION
A. Clean substrate surfaces prior to applying next material or substance.
B. Seal cracks or openings of substrate prior to applying next material or substance.
C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

LAYING OUT THE WORK
A. Promptly notify Architect of any discrepancies discovered.

GENERAL INSTALLATION REQUIREMENTS
A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
E. Make neat transitions between different surfaces, maintaining texture and appearance.

CUTTING AND PATCHING
A. Execute cutting and patching including excavation and fill to complete the work, to uncover work in order to install improperly sequenced work, to remove and replace defective or non-conforming work, to remove samples of installed work for testing when requested, to provide openings in the work for penetration of mechanical and electrical work, to execute patching to complement adjacent work, and to fit products together to integrate with other work.
B. Execute work by methods to avoid damage to other work, and which will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
C. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
D. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
E. Restore work with new products in accordance with requirements of Contract Documents.
F. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material to full thickness of the penetrated element.
G. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
H. Make neat transitions. Patch work to match adjacent work in texture and appearance. Where new work abuts or aligns with existing, perform a smooth and even transition.

PROGRESS CLEANING
A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
C. Remove debris, junk, and trash from site.
D. Leave site in clean condition, ready for subsequent work.
E. Clean up spillage and wind-blown debris from public and private lands.

PROTECTION OF INSTALLED WORK
A. Protect installed work from damage by construction operations.

ADJUSTING
A. Adjust operating products and equipment to ensure smooth and unhindered operation.

FINAL CLEANING
A. Use cleaning materials that are nonhazardous.
B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
C. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
D. Clean filters of operating equipment.

SECTION 01700 – EXECUTION REQUIREMENTS (continued)

CLOSEOUT PROCEDURES
A. Make submittals that are required by governing or other authorities.
B. Notify Architect when work is considered ready for Substantial Completion.
C. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's review.
D. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to Owner-occupied areas.
E. Notify Architect when work is considered finally complete.
F. Complete items of work determined by Architect's final inspection.

SECTION 02200 – EARTHWORK

TEST REPORTS-EXCAVATING, FILLING AND GRADING
A. The Owner, at his own discretion and cost, may engage soil testing and inspection service (Soils Engineer) for quality control testing during earthwork operations.
B. The Soils Engineer shall be consulted as an Owner's representative and shall approve fill materials, method of placement, moisture contents and percent compaction. Soil materials, whether from sources on or off site must be approved by the Soils Engineer as suitable for intended use and specifically for foundation bearing, fill and backfill.
C. Location of the new structure and proposed Finish Floor Elevation shall be staked on site and approved by the Owner's Project Manager.
D. Finished Excavation shall be observed by the Soils Engineer and Structural Engineer prior to placement of any Concrete.
E. Backfill material shall be free of deleterious material and rocks having a diameter of more than 4". Fill material in areas to receive new concrete walks shall be placed in even layers not exceeding 8" of loose depth and uniformly compacted as directed by the Soils Engineer (not less than 95 percent of maximum dry density as defined by ASTM D698). Provide organic topsoil in other disturbed areas, compact and grade to match adjacent areas. Grade areas surrounding the structure to cause rapid runoff of surface water. Provide the slope required by the Soils Engineer or not less than 6" in 12 feet. Finish grade surfaces shall be free from irregular changes and within 0.10 foot of required sub or finish grade elevations. Spread stockpiled topsoil and compact to minimum six (6) inch depth at all areas not designated for walks, paving or structures.

SECTION 03300 – CONCRETE

A. STANDARDS: Conform to applicable ACI and ASTM Standards including but not limited to:
1. ACI 301 Specifications for Structural Concrete for Buildings
2. ASTM C-94 Specifications for Ready-Mixed Concrete
3. ACI 318 Building Code Requirements for Reinforced Concrete
B. SUBMITTALS: Furnish proposed design mix for each class of concrete specified, a minimum of two (2) weeks prior to placement. Provide product data for curing and sealing compounds.
C. CONCRETE MATERIALS: Refer to the Structural drawings for concrete strength and reinforcing requirements.
D. STAINING AND SEALING COMPOUNDS: Lithochrome Tintura Stain and Scofield Selectseal-W by L.M. Scofield Co., or approved equal.
E. EXECUTION:
1. Construct forms complying with ACI 347, to the exact sizes, shapes, lines and dimensions shown, and as required to obtain accurate alignment, location, grades, level and plumb work in finished structures. Plumbing and utilities which pass through floor slabs shall be isolated from the slab.
2. Comply with the specified codes and standards, and Concrete Reinforcing Steel Institute recommended practice for "Placing Reinforcing Bars," for details and methods of reinforcement placement and supports, and coordinate locations of dowels with the Masonry Contractor.
3. Furnish ready-mixed concrete mixed and delivered per ASTM C94.
4. Place concrete in compliance with the practices and recommendations of ACI 304R-89, and as herein specified. Protect freshly placed concrete from premature drying and excessive cold and hot temperatures, and maintain without drying at a relatively constant temperature for the period of time necessary for hydration of the cement and proper hardening of the concrete. Cure in accordance with ACI 301 procedures.
5. After placing slabs, plane the surface to a tolerance not exceeding 1/8 inch in two feet. Slope surfaces uniformly to drain where required. After leveling, finish per the Architect.
6. Apply float finish to monolithic slab surfaces that are to receive trowel finish and other finishes as hereinafter specified. At Interior floors, apply trowel finish, unless otherwise shown. At Exterior walks, apply a non-slip broom finish. Broom finish shall be applied perpendicular to length of walk.
7. Do not use liquid curing materials on interior flatwoor. Cure interior flatwork with new, nonstaining, high quality curing paper.
8. Interior concrete shall be sufficiently cured to allow concrete to become reactive, minimum 28 days.
9. Prepare surfaces and apply stain and sealer in strict conformance with manufacturers directions.

SECTION 04220 – MASONRY

REFERENCES
A. ASTM C90-03. All applicable NCMA TEK publications.

SUBMITTALS
A. Product Data on Concrete Masonry Units, reinforcing and all accessories. CMU and mortar color samples.

CONCRETE MASONRY UNITS
A. Provide light weight colored CMU with a compressive strength not less than 1900 psi. Architect shall select colors and pattern.

GENERAL PROCEDURES AND PROJECT CONDITIONS
1. Comply with applicable codes and National Concrete Masonry Association TEK publications.
2. Install units in a running bond pattern with concave mortar joints. Rake out mortar in preparation for application of sealants. Prevent grout, mortar or other materials from staining the face of masonry to be left exposed.
3. Provide high quality colored mortar, Type M or S in accordance with Table No. 2103.7 of the International Building Code. Submit True Tone Mortar colors for selection by the Architect.
4. Insulate exterior walls with Perlite.

SECTION 06100 – ROUGH CARPENTRY

REFERENCES
A. All lumber shall be gradestamped by an agency certified by the Board of Review of the American Lumber Standards Committee, Inc. and manufactured in accordance with Product Standard PS 20, as published by the U.S. Department of Commerce.

SUBMITTALS
A. Provide product data. Provide Cedar Siding samples.

PRODUCTS
A. Framing Lumber, provide Hem-Fir dress lumber, S4S, unless otherwise noted, kiln dried to maximum 19% moisture content, Stud Grade with Fb = 675 psi and E = 1,200,000 psi.. Plywood concealed, APA rated sheathing grade, Exposure 1, Group 1 or 2 species for wall and roof sheathing.
B. Plywood soffits, 1/2" fir siding with grooves @ 4", T-1-11 or approved equal.

SECTION 06100 – ROUGH CARPENTRY (continued)

PRODUCTS
C. Cedar siding (for soffits), 1x4 tongue and groove, Select Tight Knot – STK grading.
D. Continuous soffit vents, aluminum, painted brown, provide model SV202 by Airvent or approved equal.

INSTALLATION
A. Refer to International Building Code for maximum span tables and fastening schedules.
B. Set carpentry work accurately to required levels and lines, with members plumb and true and accurately cut and fitted.
C. Comply with recommendations of the APA for installation of plywood. Provide Simpson Strong-Tie Panel Sheathing Clips to brace unsupported sheathing edges.

SECTION 06194 – FABRICATED WOOD TRUSSES

SUBMITTALS
A. Trusses shall be designed by a professional engineer employed by the Manufacturer and registered in the State of Colorado.
B. Shop Drawings: Indicate materials, component profiles and elevations, assembly methods, details, fastening methods, accessory listings, hardware location and design loads.

INSTALLATION
A. Follow Manufacturer's installation instructions and recommendations.
B. Lift trusses into position, taking care to prevent out-of-plane bending. Set and secure level, plumb and at correct locations. Install permanent bracing and bridging prior to application of loads.

SECTION 07210 – BUILDING INSULATION

PRODUCTS
A. MINERAL/GLASS FIBER BATT INSULATION. Glass or other inorganic (non-asbestos) fibers formed with binders into resilient, flexible blankets or semi-rigid batts; ASTM C665, types as indicated, density not less than 0.5 pounds per cubic foot for glass and 2.5 pounds per cubic foot for mineral wool; thermal conductivity (k-value at 75oF) of 0.27; manufacturer's standard sizes, thicknesses to provide R-30 at roofs.

EXECUTION
A. Comply with manufacturer's instructions for the particular conditions of installation in each case. If printed instructions are not available or do not apply to the project conditions, consult the manufacturer's technical representative for specific recommendations before proceeding with the work. Extend insulation full thickness as shown over entire surface to be insulated. Cut and fit tightly around obstructions, and fill voids with insulation and mastic. Apply a single layer of insulation of the required thickness, unless otherwise shown or required to make up the total thickness.

SECTION 07610 – METAL ROOFING

SUBMITTALS
A. Product data. Color samples.

PRODUCTS
A. Continuous length-roll formed panels with 1 3/4" tall ribs on 16 inch centers. Fastening system shall be concealed. Panel materials shall be minimum 24 gauge. Roof system shall include all flashings and fascia trims in materials and colors to match the roofing panel. Provide Snap-Clad metal panel system by PAC-CLAD Petersen Aluminum or approved equal. Panel finish selected from manufacturer's full line of colors including metallic finishes.
B. Provide all necessary items, trims, clips, nuts, and bolts necessary for a sound and secure weather-tight installation.
C. W.R. Grace Ice and Water Guard roof underlayment, or approved equal.

EXECUTION
A. Comply with manufacturer's instructions for the particular conditions of installation. If printed instructions are not available or do not apply to the project conditions, consult the manufacturer's technical representative for specific recommendations before proceeding with the work.
B. Roll form radius roof panels as required to meet profile of arched roof.
C. Install metal roofing over a self adhesive, composite 40 mil rubberized membrane.

SECTION 07720 – ROOF ACCESSORIES

SUBMITTALS
A. Product data.

PRODUCTS
A. SKYLIGHTS: Provide Model #2448G by AIA industries or approved equal. Skylight shall be manufacturer's standard curb mount skylight. Provide curb extension as required for proper installation of skylight, membrane flashings, metal roofing, roofing flashings and roof insulation. Outside unit dimensions shall be approximately 24x48 (inches). Provide with heat-mirror treated, clear Glazing. Fabricate units to withstand 40 pound live loading.

EXECUTION
A. Separate metal surfaces of roof accessories from dissimilar metals, and from wood and cementitious substrates, by a thick coating of fibrated bituminous compound or other separation as recommended by the metal manufacturer, and as required to prevent corrosive action.
B. Anchor roof accessories permanently to the substrate by methods which are adequate for the sizes and locations of units. Comply with manufacturer's instructions for the particular conditions of installation. If printed instructions are not available or do not apply to the project conditions, consult the manufacturer's technical representative for specific recommendations before proceeding with the work.

08100 – HOLLOW METAL DOORS AND FRAMES

STANDARDS
1. ANSI/SDI-100-98 – Recommended Specifications for Standard Steel Doors an Frames
2. SDI-105-91 – Recommended Erection Instructions for Steel Frames
3. SDI-107-78 – Hardware on Steel Doors (reinforcement application)
4. ANSI-A250.4-1994 – Steel Doors and Frames Physical Endurance
5. Conform to HMMA 861 standards except where more stringent requirements are specified
6. IBC 2006 – International Building Code
7. ANSI-A117.1 – Accessible and Usable Building and Facilities

SUBMITTALS
A. Submit shop drawings showing fabrication and installation of standard steel doors and frames. Include details of each frame type, elevations of door and frame types, conditions at openings, details of construction, location and installation requirements of door and frame hardware reinforcements, and details of joints and connections. Show anchorage and accessory items.

PRODUCTS
A. All doors and frames shall be manufactured of commercial quality cold rolled steel per ASTM-A366 and A568 general requirements or galvanized to A60 or G60 minimum coating weight standard per ASTM-A924. Internal reinforcing may be manufactured of hot rolled pickled and oiled steel per ASTM-A569.

08100 – HOLLOW METAL DOORS AND FRAMES (continued)

PRODUCTS
B. Supports and anchors shall be fabricated of not less that 18-gauge sheet steel, galvanized where galvanized frames are used.
C. Where items are to be built into exterior walls, inserts, bolts and fasteners shall be hot dipped galvanized in compliance with ASTM-A153, Class C or D as applicable.
D. Rust inhibitive enamel or paint primer shall be used, baked on, and suitable as a base for specified finish paints complying with ANSI A224.1, "Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces on Steel Doors and Frames."

DOORS
A. Provide 1 3/4" thick doors of materials and ANSI/SDI-100 grades and models.
B. Exterior Doors: Level 3, Model 2 – Seamless. Exterior doors shall be minimum 16-gauge steel with both lock and hinge rail edge of door intermittently welded, filled and ground smooth the full height of door. Exterior doors shall be insulated with a solid slab of expanded polystyrene or polyurethane foam permanently bonded to the inside of each face skin. The top of all doors shall be closed flush by the addition of a 16-gauge screwed-in top cap to prevent water infiltration.

FRAMES
A. Provide hollow metal frames for doors of types and styles as shown on the drawings and schedules. Conceal fastenings unless otherwise indicated. Exterior Frames: Level 2, 16-gauge. 5 3/4 inch jamb depth base bid, 7 3/4 inch jamb depth for stone veneer alternate.
B. Fabricate frames with mitered and faces only welded corners, re-prime at the welded areas. All welds to be flush with neatly mitered or butted material cuts.
C. All frames shall have minimum 7 gauge hinge reinforcements, 14-gauge lock strike reinforcing, and 12-gauge closer reinforcing.
D. Provide temporary shipping bars to be removed before setting frames.

INSTALLATION
A. Comply with provisions of SDI-105, "Recommended Erection Instructions for Steel Door Frames," unless otherwise indicated. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.
B. In masonry construction, install at least 3 wall anchors per jamb adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb. Acceptable anchors include masonry wire anchors and masonry T-shaped anchors. Coordinate frame anchor placement with wall construction.
C. Coordinate installation of hardware.
D. Maximum Diagonal Distortion: 1/16 inch measured with straight edges, crossed corner to corner.

08700 – DOOR HARDWARE

SUBMITTALS
A. Submit copies of finish hardware schedule in vertical format, listing each door opening, and organized into "hardware sets" indicating complete designations of every item required for each door opening to function as intended. Note any special mounting instructions or requirements with the hardware schedule.
B. Submit catalog cuts and/or product data sheets for all scheduled finish hardware.

WARRANTY
A. All items, except as noted below, shall be warranted in writing by the manufacturer against failure due to defective materials and workmanship for a minimum period of one (1) year commencing on the date of final completion and acceptance. In the event of product failure, promptly repair or replace item with no additional cost to the owner. Cylindrical locksets – Heavy Duty: Five (5) years. Door closers: Ten (10) years

HARDWARE GROUPS
A. MEN and WOMEN (doors 101 and 102) – Provide pushplate, pull, deadbolt, flushbolt, closer with adjustble stop and hold open, sign, weathering, and hinges.
B. STORAGE (door 103) – Provide storeroom type lever-lockset, latch-guard, deadbolt, overhead stop, weathering and hinges.

PRODUCTS
A. Provide the following or approved equal:

Hinges	Hager BB1279
Closers	Norton CLP-8301T – NO SUBSTITUTIONS
Locksets	Best 9K Series
Deadbolts	Best 9K Series
Flushbolts	Adams Rite Cylinder Operated Flushbolt –1870 HM Series (Restroom Doors to lock in the full open position)
Cylinders	Best (verify with Owner)
Push/Pulls	Trimco (4" x 16")
Latch-guard	Trimco
Weathering	Pemko
Wall Stops	Rockwood
Signs	Trimco (Men, Women, International symbol of accessibility).

FINISHES
A. All hardware to be furnished in US32D 630 Stainless Steel Satin Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.

INSTALLATION
A. Mount hardware units at heights indicated in the following applicable publications, except as specifically indicated or required to comply with the governing regulations.
1. "Recommended Locations for Builders Hardware for Standard Steel Doors and Frames" by the Door and Hardware Institute (DHI.)
2. All hardware shall be applied and installed in accordance with best trade practice by an experienced hardware installer. Care shall be exercised not to mar or damage adjacent work.
B. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Where cutting and fitting is required to install hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation or application of surface protection with finishing work specified in the Division 9 Sections. Do not install surface-mounted items until finishes have been completed on the substrates involved.

SECTION 09900 – PAINTS AND COATINGS

GENERAL
A. The work of this Section includes prep, priming, sanding and cleaning; painting/staining and finishing of all walls, ceilings, soffits, beams and wood trim; painting of all hollow metal door and door frames; painting of unfinished mechanical, plumbing and electrical items; application of graffiti protection; and caulking of all joints as required by these specifications and as directed by the Architect.
B. Paint and stain colors will be selected by the Architect after all samples are submitted and approved. The Architect will issue a color schedule with an itemized list of colors to be applied. No paint shall be applied until the color schedule is issued.
C. Rquirements of this section are that all items, and surfaces which are normally painted and finished in a project of this type and quality be included. All toilet room walls shall have block-fill and an elastomeric paint system. Typical plywood and cedar siding finished soffits and ceilings shall be stained. Provide a clear graffiti-guard system over CMU and stone surfaces that are not painted (submit a sample of each with the graffiti guard applied, prior to approval).

SECTION 09900 – PAINTS AND COATINGS (continued)

SUBMITTALS
A. Product Data: Provide data on all finishing products, including VOC content. Paint color fan deck.
B. Samples: Submit two paper chip samples, 8 x 8 inch in size illustrating range of colors and textures available for each surface finishing product scheduled.
C. Manufacturer's Instructions: Indicate special surface preparation procedures.
D. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

EXAMINATION
A. Verify that surfaces are ready to receive Work as instructed by the product manufacturer.
B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

PREPARATION
A. Surface Appurtenances: Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.
B. Surfaces: Correct defects and clean surfaces which affect work of this section. Remove or repair existing coatings that exhibit surface defects.
C. Impervious Surfaces: Remove mildew by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
D. Shop-Primed Steel Surfaces to be Finish Painted: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.
E. Interior Wood Items to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.
F. Interior Wood Items to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.

APPLICATION
A. Apply products in accordance with manufacturer's instructions.
B. Caulk joints between similar materials, fill nail holes, prime and clean surfaces to be painted prior to painting.
C. Two separate coats of paint or stain shall be applied. Allow applied coats to dry before next coat is applied. Apply each coat to uniform appearance.
D. Caulk joints at perimeter of plumbing fixture and wall or floor.

SECTION 10155 – TOILET PARTITIONS

SUBMITTALS.
A. Submit manufacturer's detailed technical data for materials, fabrication and installation. Include catalog cuts of hardware, anchors, fastenings and accessories. Transmit copy of each to the Installer. Submit shop drawings for the fabrication and erection of toilet partition assemblies which are not fully described in manufacturer's data. Show all anchorage and accessory items. Provide one set actual samples of available finishes for Architect's selection.
B. Comply with Handicap Accessibility requirements of "The Americans With Disabilities Act." Submit setting drawings, templates and instructions for the installation of anchorage devices built into other work.

PRODUCTS
A. The work of this section includes stall doors at each of the toilets. Partitions shall be constructed of CMU. Provide heavy-duty high density polyethylene doors and hardware by Santana or approved equal.

Material: Solid Plastic High Density Polyethylene
Type: Pilaster type,
Finish: Colors as selected from manufacturer's standards

B. Hardware and Accessories: solid plastic pilaster shoes and full continuous plastic wall brackets, color to coordinate with system. Hardware: Manufacturer's standard design, heavy-duty operating hardware and accessories, cast aluminum. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of finished to match hardware, with security screw-type heads and nuts.

For each stall, pull, heavy slide bar latch, rubber-tipped bumpers, gravity hinges with concealed ball-bearing rollers. Coordinate, prepare as required for other accessories as specified in this section.

INSTALLATION
A. When possible, take field measurement prior to preparation of shop drawings and fabrications to ensure proper fitting of the work. Otherwise, indicate field measurements on final shop drawings. Furnish inserts and anchoring devices which must be built into other work for the installation of toilet partitions and related work. Coordinate delivery with other work to avoid delay.
B. Install partitions rigid, straight, plumb and level, with the panels laid out as shown on Drawings. Provide clearances of not more than 1/2 inch between pilasters and panels, and not more than one inch between panels and walls. Install door bumpers on partitions or walls.

SECTION 10800 – TOILET ACCESSORIES

SUBMITTALS.
A. Submit product literature of each proposed accessory to the Architect for review and approval. Submit manufacturer's technical data and installation instructions for each accessory. Transmit copies of installation instructions to the Installer.
B. Comply with Handicap Accessibility requirements of "The Americans With Disabilities Act." Submit setting drawings, templates and instructions for the installation of anchorage devices built into other work.

PRODUCTS
A. The work of this section includes the following items:

Hand Dryer, World Hand Dryer model XA5 surface mount.
Baby Changing Stations, Koala Kare KB112-01RE
Grab Bars, Bradley Model 812 (or approved equal)
Stainless Steel Mirrors (provide at each lav), Bradley Model 748, 24" x 30", (or approved equal)
Napkin/Tampon Disposal (provide at each women's toilet), Bradley 4722-15 (or approved equal)

Toilet Paper Holders, Supplied by Owner, Installed by General Contractor
Paper Towel Dispenser, Supplied by Owner, Installed by General Contractor

INSTALLATION
A. Use concealed fastenings. Provide anchors, bolts and other necessary anchorages, and attach accessories securely to walls and partitions in locations as shown or directed.
B. Install concealed mounting devices and fasteners fabricated of the same material as the accessories, or of galvanized steel, as recommended by manufacturer.
C. Install exposed mounting devices and fasteners finished to match the accessories.
D. Provide theft-resistant fasteners for all accessory mountings. Secure accessories in accordance with the manufacturer's instructions for each item and each type of substrate construction.
E. Unless otherwise indicated, align units with fixtures, other elements and as directed by Architect. Conform to The Americans With Disabilities Act for positions and mounting heights for access to the handicapped.

STATE OF COLORADO
KELLY KOVIC MORGAN
PAC-0015862
LICENSED ARCHITECT
5-29-2020

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project:

Grand Junction Dos Rios Park Restroom

CITY OF Grand Junction COLORADO

project#: 18.0850
date: 29 May 2020

revisions :

title:

General Information

sheet:

GI002

PERMIT SET

DOOR SCHEDULE

Number	Door Dimensions WD	HGT	THK	Door Material	Door Finish	Frame Material	Frame Finish	Hardware Set	Comments
101A	3' - 0"	7' - 0"	1 3/4"	HM	PAINT	HM	PAINT		INSULATED WITH 4" FRAME HEAD
102A	3' - 0"	7' - 0"	1 3/4"	HM	PAINT	HM	PAINT		INSULATED WITH 4" FRAME HEAD
103A	3' - 0"	7' - 0"	1 3/4"	HM	PAINT	HM	PAINT		INSULATED WITH 4" FRAME HEAD

FINISH SCHEDULE

ROOMS Number	Name	FLOORS Floor Finish	Wall Material	Wall Finish	Ceiling Material	Ceiling Finish	Comments
100	ENTRY	CONCRETE SEALER	CMU	GRAFFITI GUARD	T&G CEDAR	STAIN	
101	WOMEN	CONCRETE SEALER	CMU	PAINT	GROOVED PLYWOOD	STAIN	
102	MEN	CONCRETE SEALER	CMU	PAINT	GROOVED PLYWOOD	STAIN	
103	CHASE	CONCRETE SEALER	CMU	PAINT	GROOVED PLYWOOD	STAIN	
104	SHELTER	CONCRETE SEALER	CMU	GRAFFITI GUARD	T&G CEDAR	STAIN	

EXTERIOR FINISHES

COLORED CMU 01	8X8X16 INTEGRAL COLORED, HONED CMU - "BUFF" COLOR BY BRICKYARD GJ, OR EQUAL
COLORED CMU 02	8X8X16 INTEGRAL COLORED, HONED CMU - "MT. GARFIELD" COLOR BY BRICKYARD GJ, OR EQUAL
METAL ROOFING	COLOR AS APPROVED BY ARCHITECT. CONTRACTOR TO PROVIDE AVAILABLE COLORS.
PAINT	COLOR TO MATCH METAL ROOFING COLOR AS APPROVED, SIMILAR TO SHERWIN WILLIAMS SW097 "STURDY BROWN"
STAIN	AS SELECTED FROM MANUFACTURER'S FULL RANGE OF COLORS

CODE ANALYSIS

APPLICABLE CODES

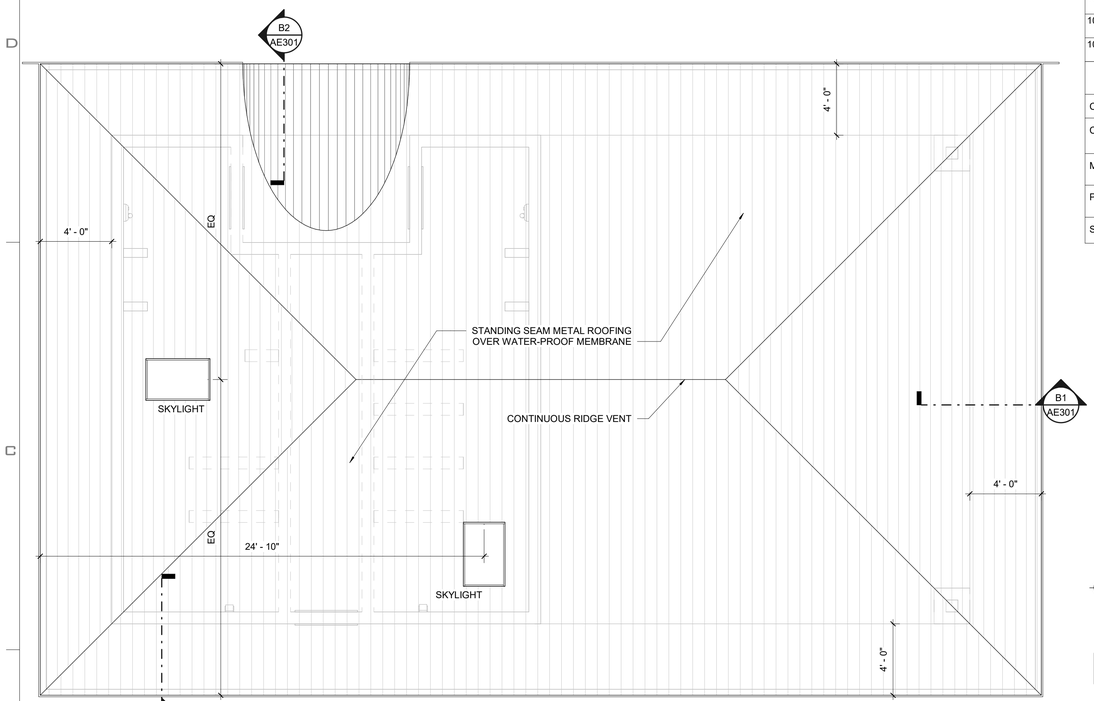
	Year		Year
International Building Code	2018	National Electrical Code	2017
International Mechanical Code	2018	Uniform Code for Building Conservation	
International Plumbing Code	2018	ADA Accessibility Guildelines	2010
International Fire Code	2018		
International Energy Conservation Code	2009		

A. Occupancy: GROUP B

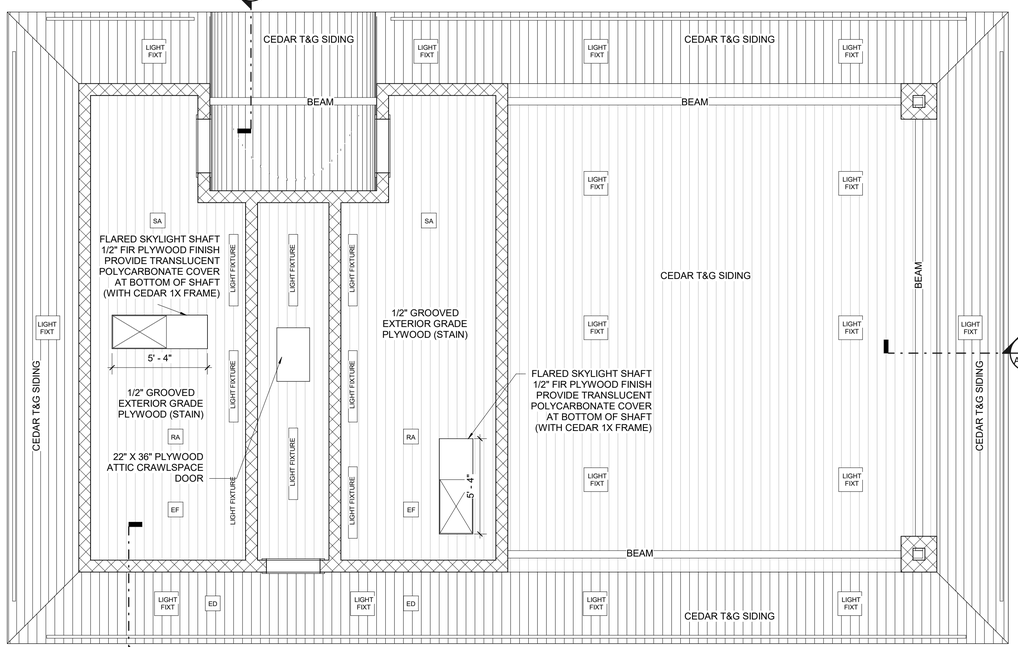
B. Type of Construction (circle one):

I A	I B	II A	II B	III A	III B	IV HT	V A	V B

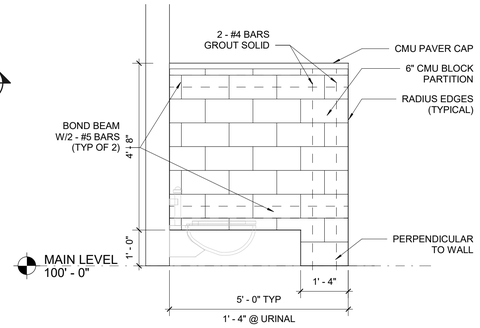
C: Total Interior Floor Area: 1,296 SF



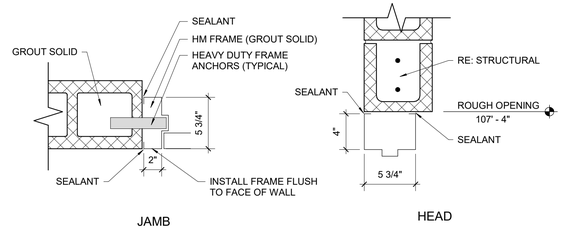
C1 SHELTER ROOF PLAN
1/4" = 1'-0"



A1 SHELTER REFLECTED CEILING PLAN
1/4" = 1'-0"

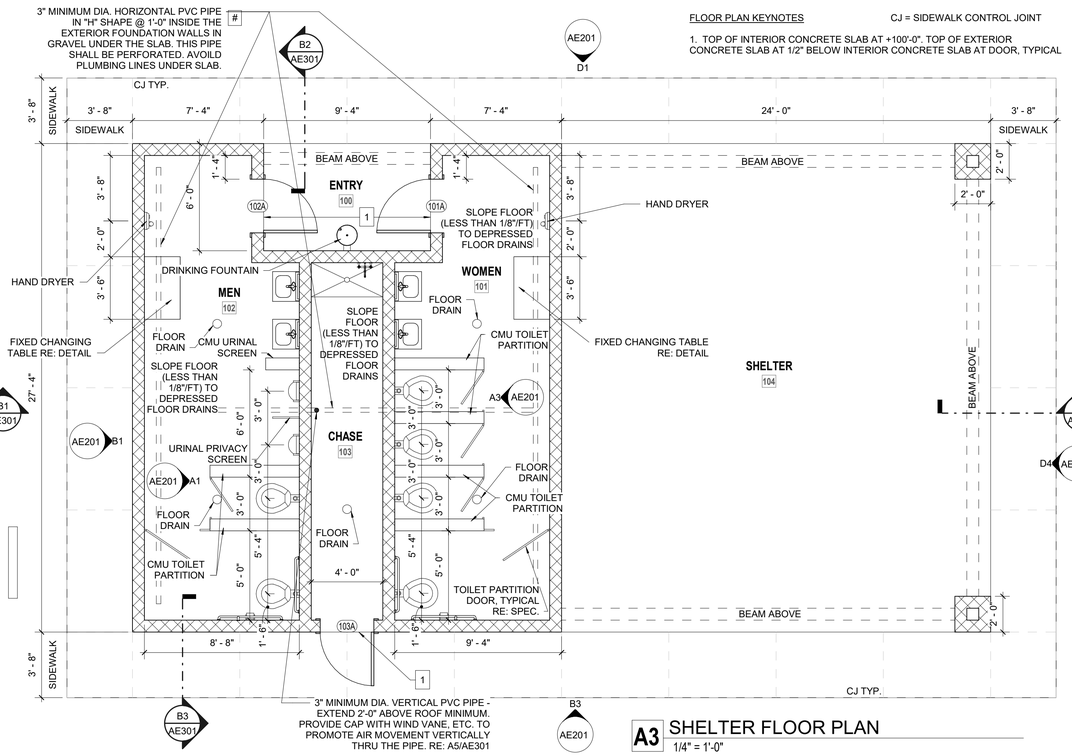


C3 TYPICAL INTERIOR PARTITION (URINAL SCREEN SIM.)
1/2" = 1'-0"



JAMB HEAD

C5 DOOR FRAME DETAILS
1 1/2" = 1'-0"



A3 SHELTER FLOOR PLAN
1/4" = 1'-0"

STATE OF COLORADO
KELLY KOVIC MORGAN
AIC-401582
LICENSED ARCHITECT
5-29-2020

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project:

Grand Junction Dos Rios Park Restroom

CITY OF Grand Junction COLORADO

project#: 18.0850
date: 29 May 2020

revisions :

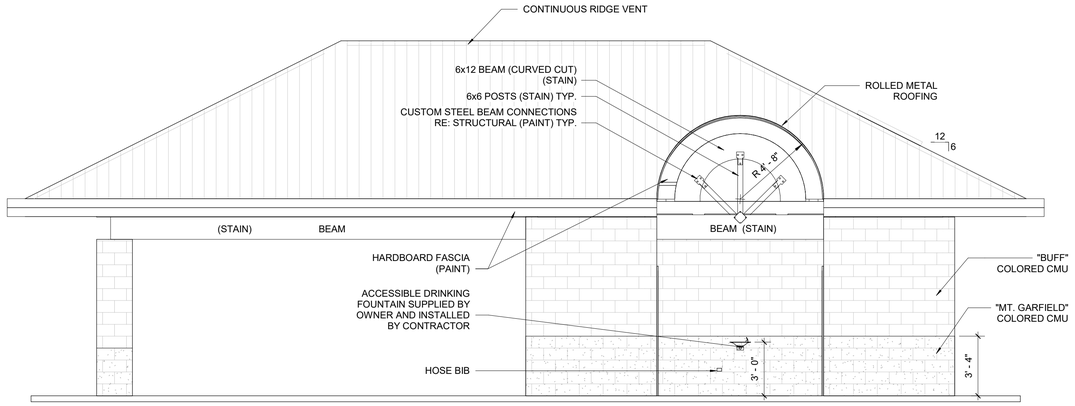
title:

Floor, RCP & Roof Plans

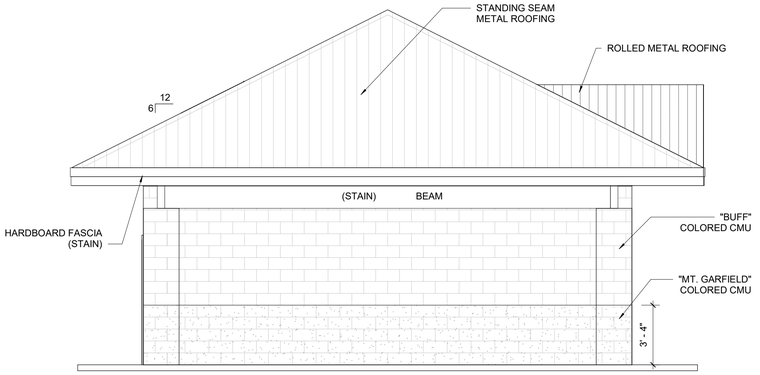
sheet:

AE101

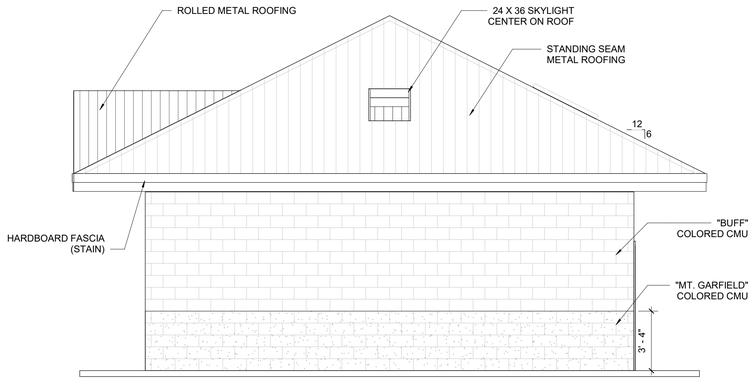
PERMIT SET



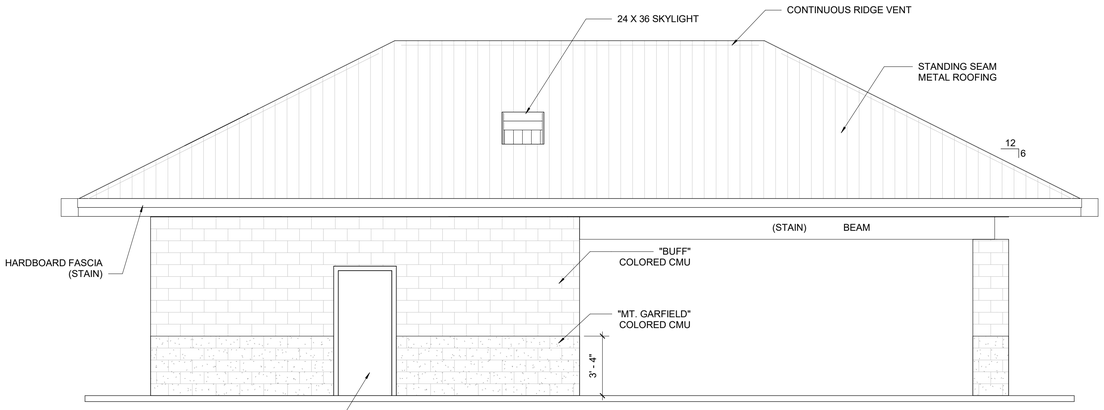
D1 North Exterior Elevation
1/4" = 1'-0"



D4 West Exterior Elevation
1/4" = 1'-0"

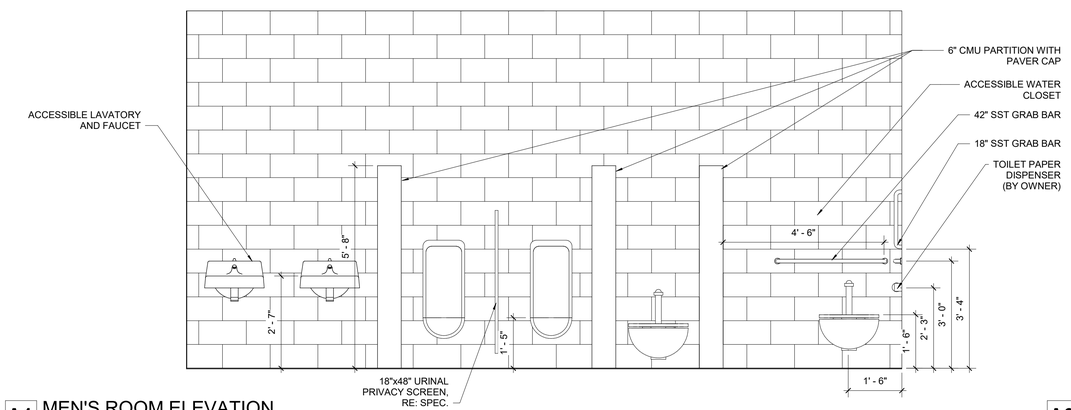


B1 East Exterior Elevation
1/4" = 1'-0"

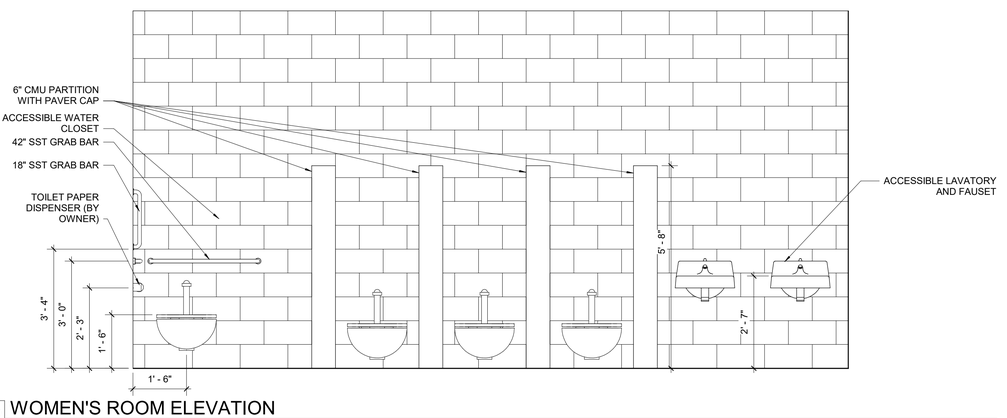


B3 South Exterior Elevation
1/4" = 1'-0"

TYPICAL DOORS: INSULATED HM DOOR AND FRAME (PAINT)



A1 MEN'S ROOM ELEVATION
1/2" = 1'-0"



A3 WOMEN'S ROOM ELEVATION
1/2" = 1'-0"

STATE OF COLORADO
KELLY KEVIN MORGAN
ARC-401582
LICENSED ARCHITECT
5-29-2020

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project:
Grand Junction Dos Rios Park Restroom

CITY OF Grand Junction COLORADO

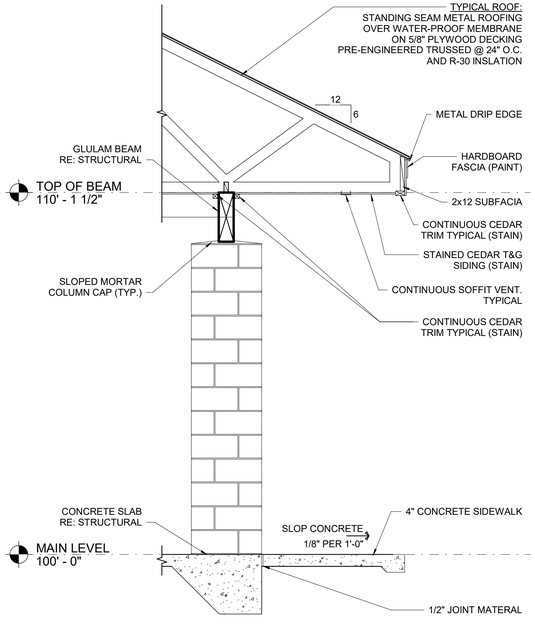
project#: 18.0850
date: 29 May 2020

revisions :

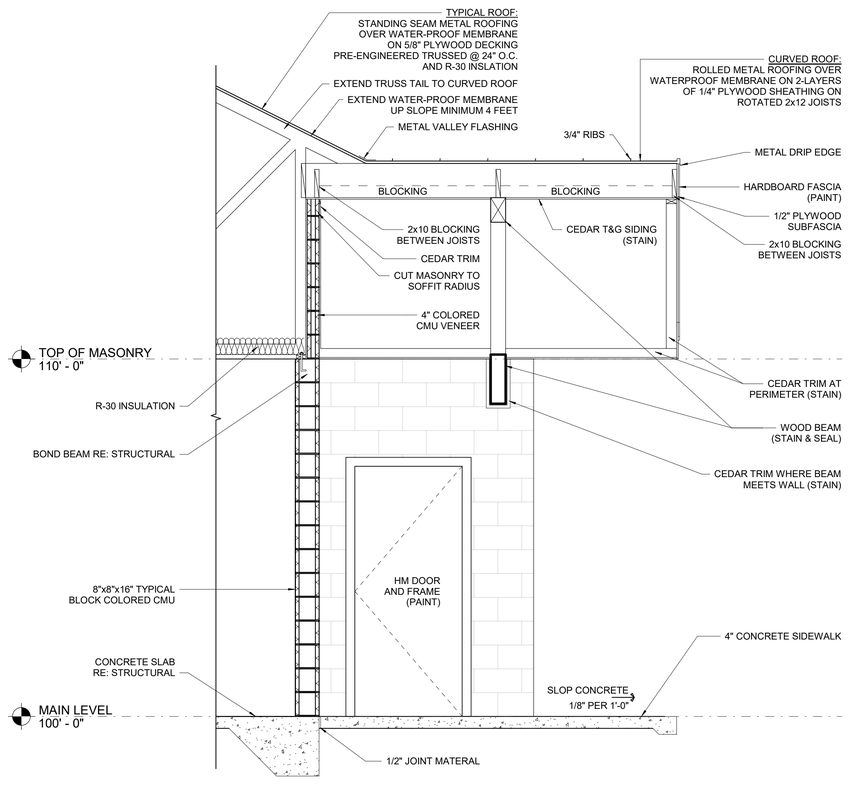
title:
Exterior & Interior Elevations

sheet:
AE201

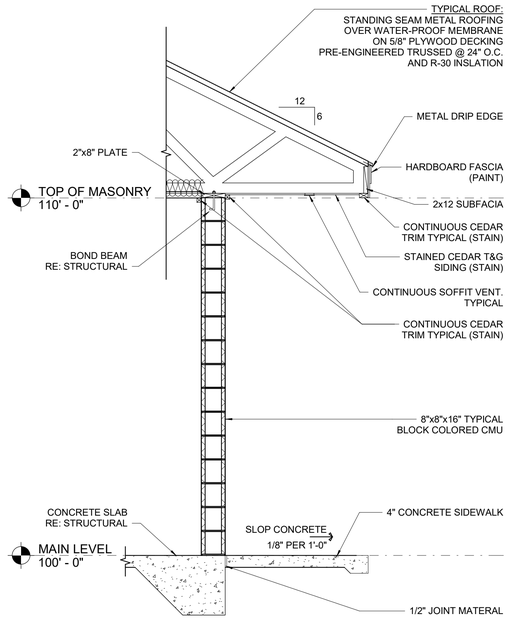
PERMIT SET



B1 WALL SECTION
1/2" = 1'-0"



B2 BEAM SECTION
1/2" = 1'-0"



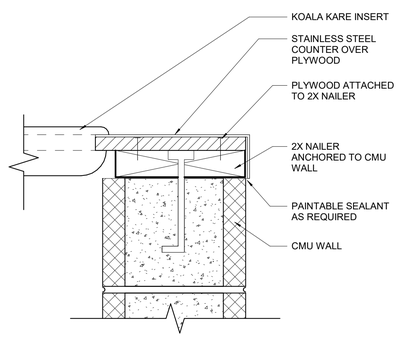
B3 WALL SECTION 2
1/2" = 1'-0"

NOTES:

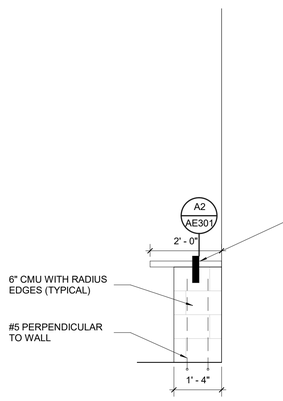
1. ALL CONCRETE SLABS THAT COME IN CONTACT WITH THE GROUND SHALL BE LAID OVER A GAS PERMEABLE MATERIAL MADE UP OF EITHER A MINIMUM 4" THICK UNIFORM LAYER OF CLEAN AGGREGATE, OR A MINIMUM 4" THICK UNIFORM LAYER OF SAND, OVERLAIN BY A LAYER OR STRIPS OF MANUFACTURED MATTING DESIGNED TO ALLOW THE LATERAL FLOW OF SOIL GASES.

2. ALL OPENINGS, GAPS, AND JOINTS IN FLOOR AND WALL ASSEMBLIES IN CONTACT WITH SOIL OR GAPS AROUND PIPES, TOILETS, BATHTUBS OR DRAINS PENETRATING THESE ASSEMBLIES SHALL BE FILLED OR CLOSED WITH MATERIALS THAT PROVIDE A PERMANENT AIR-TIGHT SEAL. SEAL LARGE OPENINGS WITH NON-SHRINK MORTAR, GROUTS OR EXPANDING FOAM MATERIALS AND SMALLER GAPS WITH AN ELASTOMERIC JOINT SEALANT, AS DEFINED IN 'ASTM C920-87'.

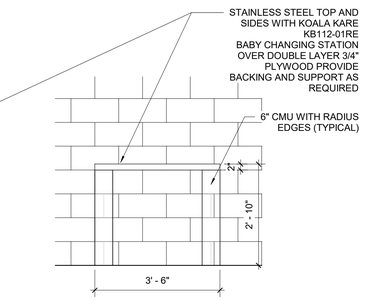
3. VENT PIPES SHALL BE INSTALLED SO THAT ANY RAINWATER OR CONDENSATION DRAINS DOWNWARD INTO THE GROUND BENEATH THE SLAB OR SOIL-GAS-RETARDER MEMBRANE.



A2 CHANGING TABLE DETAIL
3" = 1'-0"

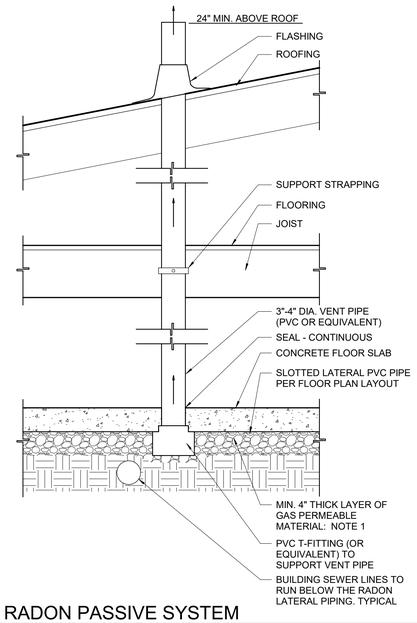


A3 FIXED CHANGING TABLE SIDE
1/2" = 1'-0"



A4 FIXED CHANGING TABLE FRONT
1/2" = 1'-0"

EXHAUST (10' FROM OPENINGS INTO
CONDITIONED SPACES OF BUILDING)



A5 RADON PASSIVE SYSTEM
1" = 1'-0"

STATE OF COLORADO
KELLY KOVIC MORGAN
ARC-401582
LICENSED ARCHITECT
5-29-2020

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project:
Grand Junction Dos Rios Park Restroom

CITY OF Grand Junction COLORADO

project#: 18.0850
date: 29 May 2020

revisions :

title:
Wall Sections & Details

sheet:
AE301

PERMIT SET

GENERAL STRUCTURAL NOTES

GENERAL

1. The structural notes are intended to complement the project specifications. Specific notes and details in the drawings shall govern over the structural notes and typical details.

2. Typical details and sections shall apply where specific details are not shown.

3. The structural drawings are not all-inclusive and do not contain all dimensions, elevations, openings, mechanical shafts and penetrations needed to build the structure. The contractor shall coordinate these items with the Architectural, Mechanical and Electrical drawings.

4. The contractor shall verify all site conditions and dimensions. If actual conditions differ from those shown in the contract drawings, the contractor shall immediately notify the architect/engineer before proceeding with the fabrication or construction of any affected elements.

5. Omissions or conflicts between the contract drawings and/or specifications shall be brought to the attention of the architect/engineer before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the architect/engineer at no additional cost to the owner.

6. The contractor shall submit a written request to the architect/engineer before proceeding with any changes, substitutions or modifications. Any work done by the contractor before receiving written approval will be at the contractor's risk.

7. The contractor shall coordinate with all trades any items that are to be integrated into the structural system such as openings, penetrations, mechanical and electrical equipment, etc. Sizes and locations of mechanical and other equipment that differs from those shown on the contract drawings shall be reported to the architect/engineer.

8. The contractor shall provide adequate shoring and bracing as required for the chosen method of erection. Shoring and bracing shall remain in place until final connections for the permanent members are completed. The building shall not be considered stable until all connections are completed. Walls shall not be considered self-supporting and shall be braced until the roof system is completed.

9. Site observations by BHB Consulting Engineers' field representative shall not be construed as approval of construction procedures nor special inspection.

10. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings. The structural drawings shall be used in conjunction with the architectural and other consultant's drawings. Some dimensions and elements such as elevations, depressions, slopes, mechanical housekeeping pads, etc. are not shown in the structural drawings. All dimensions shown on structural drawings shall be verified by contractor with architectural, mechanical and electrical drawings.

11. Contractor shall review shop drawings for compliance with contract documents, and stamp shop drawings with review stamp prior to submission to architect for review. Review of shop drawings by BHB Consulting Engineers is for general compliance only and is not intended for approval. The shop drawing review shall not relieve the contractor from the responsibility of completing the project according to the contract documents. Fabrication shall not begin until shop drawings review process is complete. Shop drawings made from reproductions of the contract drawings will be rejected unless the contractor signs a release agreement prior to the shop drawings being reviewed.

12. Only an authorized representative of BHB Consulting Engineers may make changes to these contract drawings. BHB Consulting Engineers shall not be held responsible or liable for any claims arising directly or indirectly from changes made without written authorization by an authorized representative of BHB Consulting Engineers.

BASIS OF DESIGN

1.	Governing Code	International Building Code 2018
	a. Risk Category	II
2.	Snow Loads	
	a. Ground Snow Load, Non-Reducible	P_g = 30 psf
	b. Roof Snow Load	P_f = 30 psf
3.	Rain Loads	
	a. Rain Intensity	i = 1.5 in/hr
4.	Roof Live Load	20 psf
5.	Seismic Loads	
	a. Seismic Importance Factor, I_e	1.0
	b. Seismic Design Category	D
	c. Site Specific Ground Motion Hazard Analysis	Not Required per section 11.4.8 of ASCE 7
	d. Mapped Spectral Acceleration	S_s = 0.237g S_1 = 0.065g
	e. Soil Site Class	D
	f. Soil Site Coefficients	F_a = 1.6 F_v = 2.4
	g. 5% Damped Design Spectral Response Acceleration	$S_{DS} = 2/3 * F_a * S_S$ = 0.253g $S_{D1} = 2/3 * F_v * S_1$ = 0.104g
	h. Seismic-Force-Resisting System	Special Masonry Shear Walls
	i. Response Modification Coefficient	R = 5.0
	j. System Over-strength Factor	Ω_0 = 2.5
	k. Deflection Amplification Factor	C_d = 3.5
	l. Redundancy Factors	ρ_x = 1.0; ρ_y = 1.0
	m. Fundamental Building Period	T = 0.152 seconds
	n. Seismic Response Coefficient	$Cs = S_{DS} * I_e / R$ $Cs = S_{D1} * I_e / (R*T)$
	o. W	Dead Loads of Structure
	p. Base Shear	$Vx = C_S * W$ = 0.051 * W $Vy = C_S * W$ = 0.051 * W
	q. Analysis Procedure	Equivalent Lateral Force (Static)
6.	Wind Loads	
	a. Basic Wind Velocity (3 Second Gust)	103 mph
	b. Exposure Type	C
	c. Internal Pressure Coefficient, GCpi	+/-0.18
	d. Topographic Factor, Kzt	1.0
	e. Ground Elevation Factor, Ke	0.86

FOUNDATION

1. Soils Report
   a. Author: Huddleston-Berry Engineering and Testing, LLC
   b. Dated: March 10, 2020
   c. Project No: 00208-0111

2. Soil Bearing Pressure: 1500 psf, on Compacted Fill.

3. Frost Protection: 24" minimum to bottom of footing. Contractor shall field verify that the footing elevations and final grades indicated on the plans will provide the minimum frost protection. The contractor shall notify the architect/engineer if there are any locations where the minimum frost protection might not be achieved prior to placing concrete.

4. Lateral Soil Pressure Fluid Equivalent Density:
   a. Active: 50 pcf (retaining walls)
   b. At Rest: 70 pcf (rigid foundation walls)

EARTHWORK

1. All footings shall bear on 2'-0" of compacted structural fill. See detail 3/S502.

2. Consult the project specifications and soils report for further earthwork requirements.

CONCRETE

1. Materials, unless noted otherwise:
   a. Normal weight aggregates: ASTM C 33
      i. Combined aggregate gradation for slabs on grade and other designated concrete shall be 8% - 18% for large top size aggregates (1.1/2") or 8% - 22% for smaller top size aggregates (1" or 3/4") retained on each sieve below the top size and above the No. 100. The range for the No. 30 and No.50 sieves shall be 8% - 15% retained in each. To avoid gap gradation the following shall occur:
         1. The percent retained on two adjacent sieves shall not fall below 5%.
         2. The percent retained on three adjacent sieves shall not fall below 8%.
         3. When the percent retained on two adjacent sieves is less than 8%, the total retained on either of these sieves and the adjacent outside sieve shall be at least 13%. See ACI 302 Section 5.4.3.3 for more information.
      ii. Maximum Aggregate Size shall not be larger than:
         1. 3.1/2" or 1/5 the narrowest dimension of the forms
         2. 1/3 the depth of the slab
         3. 3/4 the minimum clear spacing between bars
   b. Reinforcing Steel: ASTM 615 Grade 60 (Fy = 60 ksi)
Use Grade 40 (Fy = 40 ksi) for field bent dowels with spacings indicated reduced by 1/3.
   c. Headed Stud Anchors (HSA): ASTM A108
   d. Anchor Rods: ASTM F1554, Grade 36, with ASTM A563 heavy hex nuts and hardened washers Grade A
   e. Admixtures:
      i. Air-entraining admixtures shall comply with ASTM C 260 (when used).
      ii. Calcium chloride shall not be added to the concrete mix.
      iii. Water-reducing admixture shall comply with ASTM C 494/C 494M, Type A (when used)
      iv. Retarding admixture shall comply with ASTM C 494/C 494M, Type B (when used).
      v. Water-reducing and retarding admixture shall comply with ASTM C 494/C 494M, Type D (when used).
      vi. High-range, water-reducing admixture shall comply with ASTM C 494/C 494M, Type F (when used).
      vii. High-range, water-reducing and retarding admixture shall comply with ASTM C 494/C 494M Type G (when used).
      viii. Admixture manufacturer shall have ISO 9001 Quality Certification. To ensure compatibility all admixtures shall be from the same manufacturer.
   f. Type I/II cement complying with ASTM C-150 shall be used for all concrete. Cement source shall remain the same for the entire job.
   g. The water/cementitious materials ratios shall meet the requirements of Table 19.3.2.1 of ACI 318-14.
   h. Fly Ash - ASTM C618, Class F – 25% maximum cementitious content.
   i. Provide air entraining as recommended by Table 19.3.3.1 of ACI 318-14. Concrete that extends above grade and is exposed to freezing and thawing while moist shall be air-entrained.
   j. No aluminum conduit or product containing aluminum or any other material injurious to concrete shall be embedded in concrete.

2. Compressive strengths of concrete at 28 days shall be as follows
   a. Exterior Footings & Exterior Foundation Walls
      Strength: 4,000 psi
      Classification: F1, S1, W0, C0
   b. All Site Concrete with Reinforcement
      Strength: 5,000 psi
      Classification: F3, S1, W1, C2
   c. All Site Concrete without Reinforcement
      Strength: 4,500 psi
      Classification: F3, S1, W1, C2

3. Reinforcement for concrete slabs on grade:
   a. 6" thick concrete slab on grade. Reinforce slab with #3 bars at 18" o.c. each way with 2" max cover below the top surface of the concrete.
      i. At contractor's option, macro-synthetic fiber or welded wire fabric may be used in lieu of reinforcing bars with the following requirements:
         1. 3 lbs minimum per cubic yard of macro-synthetic fiber reinforcing (ASTM C 1116 Type 3) with the following requirements:
            a. Length 1.1/2" – 2"
            b. Equivalent diameter of 0.016" to 0.05"
            c. Minimum aspect ratio (length to equivalent diameter) of 50 to 90.
            d. Provide a fiber dosage to achieve a minimum post-crack residual strength (f_{e3}) of 200 psi when tested according to ASTM C1609.
            e. Maximum concrete shrinkage shall be 0.04% when tested according to ASTM C157 or C157 modified.
            f. Fiber manufacturer shall provide the following:
            g. Fiber dosage
            h. Mix design
            i. Finishing practices
         2. 6" x 6" – W4/W4 welded wire fabric (ASTM A185 and A497) minimum, unless noted otherwise. Welded Wire Fabric with 2" of cover below the top surface of the concrete.

4. Only one grade or type of concrete shall be poured on the site at any given time.

5. The contractor shall be responsible for the design, detailing, care, placement and removal of all formwork and shores.
   a. Supporting forms and shoring shall not be removed until structural members have acquired sufficient strength to safely support their own weight and any construction load to which they may be subjected. In no case, however, shall forms and shoring be removed in less than 24 hours after concrete placement.

6. Reinforcement shall have the following concrete cover:

a. Cast-in-place Concrete	Clear Cover
i. Cast against and permanently exposed to earth	3"
ii. Formed concrete exposed to earth or weather:	
#6 thru #18 bars	2"
#5 and smaller bars	1.1/2"
iii. Concrete not exposed to weather or in contact with ground:	
Slabs, Walls, Joists; #11 bars and smaller	3/4"

7. Detailing:
   a. Lap splice lengths shall be detailed to comply with the "Concrete Reinforcing Bar Lap Splice Schedule" on sheet S601. Splices may be made with mechanical splices capable of 125% tension capacity of the bar being spliced. Mechanical splices shall be the positive connecting type coupler and shall meet all International Building Code requirements and shall have a current ICC-ES report or IAPMO Certification. Use "Lenton" Standard Couplers (ICC ER-3967), "Bar-Lock" (ICC ESR-2495) or equal with internal protector. If mechanical splices are used, splices or couplers on adjacent bars shall be staggered a minimum of 24" apart along the longitudinal axis of the reinforcing bars.
   b. At joints, provide reinforcing dowels to match the member reinforcing, unless noted otherwise.
   c. At all discontinuous control or construction slab on grade joints, provide 2 - #4 x 48".
   d. Corner Bars: Provide corner bars at intersecting wall corners using the same bar size and spacing as the horizontal wall reinforcing. Corner bars shall lap the horizontal reinforcing with the required lap splice length. See detail 2/S501.
   e. All vertical reinforcing shall be doweled to footings, or to the structure below with the same size and spacing as the vertical reinforcing for the element above. Dowels extending into footings shall terminate with a 90-degree standard hook and shall extend to within 4" of the bottom of the footing. Footing dowels (#8 bars and smaller) with hooks need not extend more than 20" into footings.
   f. Horizontal wall reinforcing shall be continuous through construction and control joints.

8. Construction Joints, Control (Contraction) Joints:
   a. Construction joints in all horizontal and vertical construction joints including between top of footing and foundation walls shall be intentionally roughened to a full amplitude of approximately 1/4". The laitance on the concrete (thin, flaky layer of harden, weakened hydrated cement) shall be mechanically removed from the surface after the concrete has achieved final set. Construction joints in slabs on grade shall not exceed a distance of 125'-0" o.c. in any direction.
   b. Control joints shall be installed in slabs on grade so the length to width ratio of the slab is no more than 1.25:1. Control joints shall be completed as soon as final set is achieved and it is okay to operate the cutter on the slab. Final set is typically achieved within the first 4 to 12 hours after the slab has been finished in an area (depending on weather conditions and concrete hydration rate; 4 hours in hot weather to 12 hours in cold weather). For early entry saw cutting, joints should be cut within the first 1 to 4 hours (depending on weather conditions and concrete hydration rate; 1 hour for hot weather and 4 hours for cold weather). Where saw cut joints cannot be cut along the entire projected length of the joint, a 90-degree hand grinder or other tool shall be used to complete the joint. Control joints may be installed by:
      i. Saw cut a depth of 1/4 the thickness of the slab (1.1/4" ± for early entry saws) minimum.
      ii. Tooled joints a depth of 1/4 the thickness of the slab
   c. For interior concrete slabs-on-grade that are to receive **no** floor covering, install construction or control joints in slabs on grade at a spacing not to exceed 24 times the slab thickness in any direction, unless noted otherwise. For interior concrete slabs-on-grade that are to receive floor coverings the contractor has the option to increase the control joint spacing to 36 times the slab thickness in any direction.

9. Construction
   a. Use chairs or other support devices recommended by the CRSI to support and tie reinforcement bars prior to placing concrete. Reinforcing steel for slabs on grade shall be adequately supported. Support reinforcing steel of slabs on grade with precast concrete units. Lifting the reinforcing off the grade during placement of concrete is not permitted.
   b. Concrete to be mechanically consolidated during placement per ACI standards.
   c. Contractor shall coordinate placement of all openings, curbs, dowels, sleeves, conduits, bolts, inserts and other embedded items prior to concrete placement.
   d. All embeds, anchors and dowels shall be securely tied to formwork or to adjacent reinforcing prior to the placement of concrete.
   e. No pipes, ducts, sleeves, etc shall be placed in structural concrete unless specifically detailed or approved by the structural engineer. Penetrations through walls when approved shall be built into the wall prior to concrete placement. Penetrations will not be allowed in footings or grade beams unless detailed. Piping shall be routed around footings and grade beams and unless detailed. Footings shall be stepped to avoid piping.
   f. Reinforcing Bars shall not be welded. Do not substitute reinforcing bars for DBAs or HSAs.

POST-INSTALLED ANCHORS

1. General Post-Installed Anchor Notes
   a. Do not install adhesive anchors in concrete if less than 21 days old; do not install mechanical anchors, screw anchor or powder actuated anchors in concrete less than 7 days old. Contractor must obtain written approval from the engineer to install prior to these time periods. Do not apply full load to anchors until concrete has reached 28-day compression strength.
   b. Anchors or adhesives specified in details shall be provided; alternative anchors or adhesives may be used if the contractor provides calculations demonstrating that the alternative can achieve the performance values of the specified product. These calculations, along with an ICC-ES ESR or IAPMO-UES ER approval compliant with the specified codes herein, must be submitted to the structural engineer prior to use.
   c. Follow all the manufacturer's recommendations and certification testing reports for anchor installation. See specific anchors below for more information.
   d. No anchor shall be installed within 1.5 anchor rod diameters of an abandoned hole that has been filled with non-shrink grout; increase distance to 3 anchor rod diameters when the abandoned hole has not been filled.

2. Adhesive Anchors
   a. For anchors in concrete, the adhesives shall be divided into two groups: Standard Adhesives and High Strength Adhesives. Standard adhesives can be used in general applications. High Strength adhesive groups will be specified for the particular application in the drawings and details. When a High Strength Adhesive is specified, the contractor has the option to use any of the adhesives in the High Strength group. When a Standard Adhesive is specified, the contractor has the option to use any of the adhesives in either group. See below for the acceptable adhesives in each group.
      i. Standard Adhesive Group for anchors in concrete includes the following adhesives:
         1. SET-XP (ICC-ES ESR-2508) by Simpson Strong-Tie
         2. Pure 50+ (ICC-ES ESR-3576) by Dewalt
         3. AC100+ Gold (ICC-ES ESR-2582) by Dewalt
         4. HIT-RE 100 (ICC-ES ESR-3829) by Hilti, Inc.
      ii. High Strength Adhesive Group for anchors in concrete includes the following adhesives:
         1. SET-3G (ICC-ES ESR-4057) by Simpson Strong-Tie
         2. Pure 110+ (ICC-ES ESR-3298) by Dewalt
         3. AC200+ (ICC-ES ESR-4027) by Dewalt
         4. HIT-RE 500-V3 (ICC-ES ESR-3814) by Hilti Inc.
         5. HIT-HY 200 (ICC-ES ESR-3187) by Hilti Inc.
   b. For anchors in grouted masonry, the adhesive shall be HIT-HY-200-A (ICC-ES ESR-3963) by Hilti Inc., HIT-HY-200-R (ICC-ES ESR-3963) by Hilti Inc., SET-XP (IAPMO UES ER-265) by Simpson Strong-Tie Inc. or AT-XP (IAPMO UES ER-281) by Simpson Strong-Tie Inc., AC100+ (ICC-ES ESR-3200) by Dewalt or CIA GEL (ICC-ES ESR-1702) by USP.
   c. For anchors in ungrouted masonry, the adhesive shall be HIT-HY 270 (ICC-ES ESR-4143) by Hilti Inc., or SET (ICC-ES ESR-1772) by Simpson Strong-Tie Inc. or AC100+ (ICC-ES ESR-3200) by Dewalt. Plastic mesh or stainless steel screen tubes shall be used.
   d. Adhesive shall be within the manufacturer's recommended life time and prior to expiration date. Do not use adhesive that has not been stored per manufacturer's recommendations or may have experienced freeze thaw cycles or extreme heat.

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project:

Grand Junction Dos Rios Park Restroom

project#: 200558
date: 27 May, 2020

revisions:

title:

GENERAL STRUCTURAL NOTES

sheet:

S001

PERMIT SET

GENERAL STRUCTURAL NOTES

e. Do not install adhesive anchor in wet or damp hole unless product is approved for such conditions without strength reduction. Do not install adhesive anchors if concrete temperature is below 50-degree F unless adhesive is approved for lower temperature without strength reduction. Refer to manufacturer's published installation instructions.
f. Follow all the manufacturer's recommendations and certification testing reports regarding hole cleaning prior to adhesive installation. All holes shall be drilled with ANSI standard bits designed for concrete. Diamond core drilled holes are not allowed unless indicated in specific details or approved by the structural engineer prior to use.

3. Mechanical Anchors
   a. For concrete, the mechanical anchor shall be Kwik Bolt TZ (ICC-ES ESR-1917) by Hilti Inc., Strong-Bolt 2 (ICC-ES ESR-3037) by Simpson Strong-Tie Inc. or Power-Stud+ SD2 (ICC-ES ESR-2502) by Dewalt.
   b. For grouted masonry, the mechanical anchor shall be Kwik Bolt 3 (ICC-ES ESR-1385) by Hilti Inc., Wedge-All (ICC-ES ESR-1396) by Simpson Strong-Tie or Strong-Bolt 2 (IAPMO-UES ER-240) by Simpson Strong-Tie or Power-Stud+ SD1 (ICC-ES ESR-2966) by Dewalt.

4. Screw Anchors
   a. For concrete and grouted masonry, the screw anchors shall be Titen HD (ICC-ES ESR-2713 for concrete only and ICC-ES ESR-1056 for grouted masonry) by Simpson Strong-Tie, or Screw-Bolt + (ICC-ER ESR-3889 for concrete only) by DeWalt, Screw-Bolt+ (ICC-ES ESR-4042 for grouted masonry) by Dewalt, or Kwik HUS-EZ (ICC-ES ESR-3027 for concrete only and ICC-ES ESR-3056 for grouted masonry) by Hilti Inc.

5. Powder Actuated Fasteners
   a. For fasteners driven into steel (except at metal decks), the fastener shall be X-U P8 TH Universal Knurled Shank Fastener (ICC-ES ESR-2269) by Hilti Inc., PDPA (ICC-ES ESR-2138) by Simpson Strong-Tie Inc. or 8mm Head Spiral CSI Drive Pin (ICC-ES ESR-2024) by Dewalt.

MASONRY

1. Materials, unless noted otherwise:
   a. Concrete Masonry Units (CMU) ASTM C90: Lightweight (minimum net area unit strength of 2,000 psi). f'_m = 2,000 psi.
   b. Mortar Cement ASTM C270: Use Type "S"
   c. Masonry Grout ASTM C476: grout shall attain a minimum compressive strength of 2,500 psi at 28 days.
   d. Reinforcing Steel — ASTM 615 Grade 60 (Fy = 60 ksi)
   e. Deformed Bar Anchors (DBA) — ASTM A496
   f. Headed Stud Anchors (HSA) — ASTM A108
   g. Anchor Rods — ASTM F1554, Grade 36 with ASTM A563 heavy hex nuts and ASTM F436 hardened washers

2. Reinforcement shall have the following cover:
   a. Typical reinforcement shall have a minimum coverage of one bar diameter over all the bars, but not less than 3/4". When masonry is exposed to soil, minimum coverage shall be 1.1/2".

3. Detailing Requirement
   a. Lap all masonry reinforcing per "Masonry Reinforcing Lap Schedule" on sheet S601.
   b. All vertical reinforcing shall be doweled to the foundation wall, footing (structure below) and to the structure below with the same size dowel, spacing (and in the same core) as the vertical wall reinforcing above.
   c. Corner Bars: Provide corner bars at intersecting wall corners using the same bar size and spacing as the horizontal wall reinforcing. Corner bars shall lap the horizontal reinforcing with the required lap splice length. See detail 2/S501.
   d. Wall Openings: For unscheduled openings wider than 24", provide reinforcing on all sides per detail 7/S501. Also, for all scheduled openings, provide horizontal bar at bottom of opening per detail 7/S501. Vertical bars shall extend from floor level below to the floor, or roof level above. Horizontal bars for all openings shall extend a minimum of 48 bar diameters beyond the corners of the opening. Where a 48-bar diameter extension is not possible, extend bars as far beyond the opening as possible and terminate the bar(s) with a 90-degree standard ACI hook.
   e. Horizontal wall reinforcing shall be continuous through joining concrete walls, masonry walls, columns, and pilasters. Provide a key between the wall and the column or pilaster. Horizontal wall reinforcing shall be placed inside the column vertical reinforcing.
   f. Horizontal wall reinforcing shall terminate with a hook at edge of openings and at each side of control joints except at floor and roof levels, lintels, beams and at top of parapets. See details 9/S501.
   g. All masonry column ties shall terminate with 135-degree hooks plus a 6-bar diameter extension (4" minimum).

4. Construction Requirements:
   a. Masonry coursing shall be coordinated with the architectural drawings.
   b. All units shall be laid with full mortar beds on the face shells. All head joints shall be filled solidly with mortar for a distance in from the face of the units not less than the thickness of the longitudinal face shells. Cells which are to be grouted shall have full head joints.
   c. Masonry walls, beams and columns shall be constructed with running bond, unless noted otherwise.
   d. All cells containing reinforcement, embeds, anchor bolts, etc. shall be filled solid with grout. Grout shall be placed by mechanical vibration during placing and re-vibrated after excess moisture has been absorbed but before workability is lost. Rodding of grout is not allowed.
   e. Where walls are not grouted solid, each grout pour shall terminate flush with the top of the uppermost unit except at cells with vertical reinforcing where the grout shall be 1.1/2" below top of unit to provide construction key.
   f. Grout pours shall be limited to 5'-4" unless written approval is obtained from the engineer of record.
   g. All walls below grade shall be grouted solid.
   h. Vertical cells to be filled with grout shall have vertical alignment sufficient to maintain a clear, unobstructed vertical cell measuring not less than 2" by 3". All steel reinforcement shall be secured against displacement prior to grouting by wire positioners or other suitable devices at intervals not exceeding 200 bar diameters or 10 ft maximum, or at bar splice locations. Vertical reinforcing shall be located at the center of the wall unless noted otherwise
   i. Reinforcing Bars shall not be welded. Do not substitute reinforcing bars for DBAs or HSAs.
   j. Control Joints: Spacing shall not exceed 30'-0". See architectural drawings for locations.
   k. Grout all beam and joist pockets solid after installation of beams and joists.
   l. Embed channels and plates shall be placed so as to create a flush surface with the face of the wall.
   m. Anchor bolts and headed stud anchors shall be set in a grouted cell. Anchor bolts and headed stud anchors shall have 1" grout surrounding the shank at its penetration. Grout shall be flush with the face or top of the masonry.
   n. Pipes, conduits, and ducts shall not be placed in grouted cells without written approval from engineer.
   o. No aluminum conduit or product containing aluminum or any other material injurious to the masonry or grout shall be embedded in the masonry.
   p. Contractor shall coordinate placement of all openings, dowels, sleeves conduits, bolts, inserts and other embedded items prior to placing grout.

WOOD

1. Materials:
   a. Dimensional Lumber
      i. All dimensional lumber shall be #2 Douglas Fir-Larch or better unless noted otherwise.
   b. Engineered Lumber
      i. Engineered lumber shall be provided by manufacturer of the products specified on these structural drawings. If an alternative manufacturer is proposed, the contractor shall submit a revised engineered lumber list, prior to construction, that includes the following information:
         1. Specified lumber product as indicated on these structural drawings
         2. Proposed substitution lumber product
         3. Documentation that includes a comparison of the section properties and material strengths of the proposed substitution lumber product compared to that of the specified lumber product.
   c. Glu-lam Lumber
      i. Glu-lam beams shall be Douglas-fir combination number 24F-V4 except cantilevered and continuous beams shall be combination number 24F-V8.
      ii. Glu-lam columns shall be DF L2D (combination symbol #3) for columns.
   d. Sheathing
      i. Wood sheathing shall meet the minimum performance criteria given in APA PRP-108, Performance Standards and Policies for Structural-Use Panels, Form E445, Voluntary Product Standard PS 1 & PS 2 and Performance Standard for Wood-Based Structural-Use Panels, Form S350, and Structural Plywood, Form H860. Panels shall be unsanded plywood or oriented strand board (OSB) and shall be interior grade with exterior glue and have the minimum following thickness and span rating indicated in the "Sheathing Schedule at Roof and Floor" on sheet S601.
   e. Fasteners
      i. General framing and carpentry shall be connected as per "Minimum Nailing Schedule" on sheet S601 unless noted otherwise.
      ii. All fasteners, including nails, for preservative-treated and fire retardant-treated wood shall be hot-dipped zinc-coated galvanized steel or stainless steel.
      iii. Bolts for general wood to wood connections shall be ASTM A307A or A36 with ASTM A563A hex nuts and ATSM F844 washers, Grade A, unless noted otherwise.
   f. Framing connectors:
      i. All framing anchors, connectors, post caps, hold downs, column bases, joist hangers, etc. shall be provided by Simpson Strong-Tie as indicated on these plans. If the contractor elects to substitute for another manufacturer, the contractor shall submit a revised connector list, prior to construction, that includes the following information:
         1. Specified connector indicated on these plans
         2. Requested substitution connector
         3. Allowable capacity of the requested substitution connector

2. All wood (with the exception of engineered lumber) in contact with concrete, masonry or soil shall be pressure treated.

PRE-FABRICATED METAL PLATE WOOD TRUSSES

1. The Pre-fabricated metal plate wood trusses shall be designed, signed, and sealed by a Professional Engineer registered in the same state as the project location. They shall be designed to support the concentrated and other distributed loads as shown on the framing plans in addition to the following uniform loads:
   a. Dead Load (Top Chord)= 10 psf
   b. Dead Load (Bottom Chord)= 10 psf
   c. Snow Load (Top Chord)= 30 psf
   50 psf Total Load
   The wood truss designer shall consider unbalanced snow loading for all sloped roofs exceeding 2.38 degrees (1/2 on 12) or less than 70 degrees.
   Correlate the design with all mechanical equipment, fire sprinkling systems and hanging walls supported by the trusses. Provide extra trusses where required.

2. Design all wood trusses and bearing attachments for wind uplift. Assume a dead load of 8 psf to resist uplift.

3. Refer to architectural drawings for truss profile. Detailing and shop drawing production for prefab metal plate wood trusses will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings. The structural drawings shall be used in conjunction with the architectural and other consultant's drawings. Some dimensions and elements such as elevation and slopes are not shown in the structural drawings. All dimensions shown on structural drawings shall be verified by contractor with architectural drawings. Coordinate roof slope with architectural roof plan, sections and elevations.

4. All truss-to-truss connections shall be designed and provided by the truss manufacturer.

5. Design, handling, erection, and permanent bracing of metal plate connected wood trusses shall be in accordance with ANSI/TPI-1, National Design Standard for Metal Plated Connected Wood Truss Construction.

6. Steel Connector Plates: All steel gusset plates shall be galvanized and shall be approved by the "Research Committee for the International Code Council". Submit a copy of the ICC Report for the connector plate used. Values established by this committee must be indicated on the shop drawings.
   a. Stress increases for steel connector plate values for duration of load are not allowed.
   b. The minimum size for any connector shall be 8 square inches (not required at truss blocking).
   c. All steel gusset plates shall be located on the joint as the stresses require and shall provide a minimum bite of 2.1/2" length on all tension members (not required at truss blocking).
   d. All steel plate dimensions shall be increased by 10% above that required by analysis.
   e. Plates shall be pressed or rolled into member to obtain full penetration without crushing the outer surfaces of wood.

7. No wane, knots, skips, or other defects shall occur in the plated contact area or scarfed area of web members. Plates shall be centered with one required each side of wood truss

8. The trusses shall be handled and stored in a manner to prevent moisture from being absorbed by the wood.

9. Requirements for truss stability and erection shall comply with the Truss Plate Institute publications entitled "Commentary and Recommendations for Bracing Wood Trusses" and "Commentary and Recommendations for Handling and Erecting Wood Trusses." The contractor shall have copies of these publications on site and shall be familiar with their contents.

10. Shop Drawings: Complete calculations and shop drawings indicating all member forces, stresses, duration factors, lumber grades, dimensions, truss to truss connections, steel truss plate sizes and locations shall be submitted and reviewed by the engineer before fabrication. Each connector shall be dimensioned on the shop drawings as to its exact location at the joint.

LEGEND OF MARKS AND ABBREVIATIONS

AB	ANCHOR BOLT(S)	JT	JOINT
ABV	ABOVE		
ALT	ALTERNATE	k	KIP(S) = 1000 POUNDS
APPROX	APPROXIMATE	KLF	KIPS PER LINEAL FOOT
ARCH	ARCHITECT(URAL)	KSF	KIPS PER SQUARE FOOT
BLDG	BUILDING	LBS	POUNDS
BLW	BELOW	LF	LINEAL FOOT
BM	BEAM		
B.N.	BOUNDARY NAILING	MAS	MASONRY
BOT	BOTTOM	MAX	MAXIMUM
BRG	BEARING	MCJ	MASONRY CONTROL JOINT
BTWN	BETWEEN	MC-x	MASONRY COLUMN MARK
		MECH	MECHANICAL
CC.	CENTER-TO CENTER	MFR	MANUFACTURER
C.J.	CONST/CONTROL JOINT	MIN	MINIMUM
CMU	CONCRETE MASONRY UNIT	MISC	MISCELLANEOUS
COL	COLUMN	ML-x	MASONRY LINTEL
CONC	CONCRETE	MP-x	MASONRY PIER
CONST	CONSTRUCTION	MW-x	MASONRY WALL
CP-x	CONCRETE PIER		
CTR	CENTER	NIC	NOT IN CONTRACT
CW-x	CONCRETE WALL	NTS	NOT TO SCALE
DB	DECK BEARING	O.C.	ON CENTER
DBA	DEFORMED BAR ANCHOR	O.F.	OUTSIDE FACE
DBE	DECK BEARING ELEVATION	OPNG	OPENING
DBL	DOUBLE	OPP	OPPOSITE
DET	DETAIL		
DIA	DIAMETER	PAF	POWDER-ACTUATED FASTENER
DIM	DIMENSION	PCF	POUNDS PER CUBIC FOOT
DN	DOWN	PLF	POUNDS PER LINEAL FOOT
DWG	DRAWING	PSF	POUNDS PER SQUARE FOOT
DWL	DOWEL	PSI	POUNDS PER SQUARE INCH
		PT	POINT
EA	EACH		
E.N.	EDGE NAILING	REINF	REINFORCING
E.F.	EACH FACE	REQD	REQUIRED
E.J.	EXPANSION JOINT	R.D.	ROOF DRAIN
ELEC	ELECTRICAL	RTU	ROOF TOP UNITS
ELEV	ELEVATION		
EQUIP	EQUIPMENT	SHT	SHEET
EQ	EQUAL	SI	SPECIAL INSPECTION
E.W.	EACH WAY	SIM	SIMILAR
EXT	EXTERIOR	SMU	SUSPENDED MECHANICAL UNITS
		SOG	SLAB-ON-GRADE
FC-x	CONTINUOUS FOOTING MARK	SQ	SQUARE
F.D.	FLOOR DRAIN	STAG	STAGGERED
FDN	FOUNDATION	STD	STANDARD
F.F.	FINISHED FLOOR	STL	STEEL
F.N.	FIELD NAILING	STR	STRUCTURAL
FS-x	SQUARE FOOTING MARK	STS	SELF TAPPING SCREWS
FT	FOOT		
FTG	FOOTING	T&B	TOP AND BOTTOM
FTS-x	THICKENED SLAB MARK	TEMP	TEMPERATURE
		THDS	THREADS
GA	GAUGE	T.O.	TOP OF
GALV	GALVANIZED	TOC	TOP OF CONCRETE
GLB	GLU-LAM BEAM	TOD	TOP OF DECK
GSN	GENERAL STRUCTURAL NOTES	TOF	TOP OF FOOTING
		TOW	TOP OF WALL
HORIZ	HORIZONTAL	TYP	TYPICAL
HSA	HEADED STUD ANCHOR		
HT	HEIGHT	UNO	UNLESS NOTED OTHERWISE
		VERT	VERTICAL
ICC	INTERNATIONAL CODE COUNCIL		
IBC	INTERNATIONAL BUILDING CODE	W/	WITH
I.F.	INSIDE FACE	WT	WALL THICKNESS
IN.	INCH	WWF	WELDED WIRE FABRIC
INT	INTERIOR	WWM	WELDED WIRE MESH

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Grand Junction Dos Rios Park Restroom

project#: 200558
date: 27 May, 2020

revisions :

title:
GENERAL STRUCTURAL NOTES

sheet:
S002

PERMIT SET

REQUIREMENTS FOR SPECIAL INSPECTION, MATERIALS TESTING AND STRUCTURAL OBSERVATION

STATEMENT OF SPECIAL INSPECTION AND QUALITY ASSURANCE

Special inspection and quality assurance (including structural testing), as required by section 1704 and 1705 of the 2018 IBC, shall be provided by an independent agency employed by the owner for the items in this section and other areas of the approved construction documents, unless waived by the building official.	
The names and credentials of the Special Inspectors to be used shall be submitted to the Building Official for approval.	
Responsibilities of the Special Inspector	
	Special Inspector shall review all work listed in the special inspection schedules herein for conformance with the approved construction plans, specifications and 2018 IBC.
	Testing and inspection reports shall be sent on a weekly basis to the architect, engineer, building official and contractor for review. All items not in compliance shall be brought to the immediate attention of the contractor for correction, and if uncorrected, to the architect, engineer and building official.
	Once corrections have been made by the contractor, the special inspector shall submit a final signed report to the building official stating that the work requiring special inspection was, to the best of the special inspector's knowledge, in conformance with the approved construction plans, specifications and 2018 IBC.
Responsibilities of the Contractor	
	The contractor shall submit a written statement of responsibility to the owner and the building official prior to the commencement of work in accordance with 2018 IBC section 1704.4. This statement shall indicate that the contractor will coordinate and cooperate with the required inspections contained herein.
	The contractor shall notify the designated special inspector that work is ready for inspection at least 24 hours before said inspection is required.
	All work requiring special inspection shall remain open and accessible until it has been observed by the special inspector and deemed acceptable through inspection report.
	Special inspection during fabrication is not required if the fabricator is registered and approved by the authority having jurisdiction to perform such work without special inspection. Upon completion of fabrication, the approved fabricator shall submit a certificate of compliance for submittal to the building official.
	The contractor shall be responsible for their own quality control including materials, fabrication, erection, etc.

SOILS CONSTRUCTION INSPECTIONS

Soils (2018 IBC Section 1705.6)

ITEM FOR VERIFICATION & INSPECTION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
Site Preparation	-	X	Verify that the site has been prepared in accordance with the soils report prior to placement of prepared fill.
Fill Material	X	-	Verify that the material being used, the maximum lift thickness and the in-place dry density of the compacted fill material comply with the soils report during placement and compaction of the fill material during placement and compaction. (
Continuous Footing Backfill: at least one test for each 40 linear feet or less of wall length, but no fewer than 2 tests.	-	X	At each compacted backfill layer.
Spot Footing Backfill: Minimum of one compaction test for each lift for each spot footing.	-	X	At each compacted backfill layer.
See specifications for further requirements.	-	-	

WOOD CONSTRUCTION INSPECTIONS

ITEM FOR VERIFICATION & INSPECTION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
Prefabricated metal plate wood trusses (2018 IBC Sections 1704.2.5, 1705.5.2, 1705.11.1, and 1705.12.2)			
Shop fabrication of trusses	-	X	Verify that detailed fabrication and quality control procedures exist that provide a basis of inspection control of the workmanship and the fabricator's ability to conform to approved construction documents and referenced standards.

POST-INSTALLED ANCHOR INSPECTIONS

ITEM FOR VERIFICATION & INSPECTION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
Post-Installed Anchors and Reinforcing Bars (2018 IBC Section 1705.1.1)			
Adhesive Anchors and Reinforcing Bars	X	-	Special inspection shall be performed per manufacturer's requirements and approved ICC-ES reports noted in POST-INSTALLED ANCHOR section of the General Structural Notes prior to installation of epoxy and anchor rod. If the anchor is not installed in a horizontal, upwardly inclined or overhead orientation meant to resist sustained tension loads, special inspection may be reduced to a periodic frequency.
Mechanical Anchors and Screw Anchors	-	X	Special inspection shall be provided per manufacturer's requirements and approved ICC-ES reports noted in POST-INSTALLED ANCHOR section of the General Structural Notes prior to installation of mechanical or screw anchor.

STRUCTURAL OBSERVATION PROGRAM

If structural observations are required, they shall be done by the Engineer of Record or an approved subordinate at the stages of construction listed in the Construction Notification Phases section of these notes. At the conclusion of the project, the designated structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies that to the best of the structural observer's knowledge have not been resolved (See IBC 2018 1704.6).

STRUCTURAL OBSERVATION PROGRAM REQUIRED BY CODE:	YES	NO
		X

CONSTRUCTION MILESTONE SCHEDULE

CONTRACTOR TO NOTIFY ENGINEER AT THE FOLLOWING CONSTRUCTION PHASES:	
CONCRETE	
Footings, stem walls and piers	Prior to pouring concrete
MASONRY	
Masonry walls	Prior to pouring grout
WOOD	
Wall framing	After substantial portion of framing is completed
Roof framing	After substantial portion of framing is completed
Wood roof sheathing	After substantial portion of framing is completed and prior to roofing

DEFERRED SUBMITTALS

For the purposes of this section, deferred submittals are defined as per section 107.3.4.1 of the IBC 2018. Submittal documents for deferred submittal items shall be submitted to the engineer, architect and building official for their review for general conformance with the design of the building.

DEFERRED STRUCTURAL SUBMITTALS FOR THIS PROJECT ARE

Prefabricated metal plate wood trusses

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PROFESSIONAL ENGINEER
5-29-2020

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project:

Grand Junction Dos Rios Park Restroom

project#: 200558
date: 27 May, 2020

revisions :

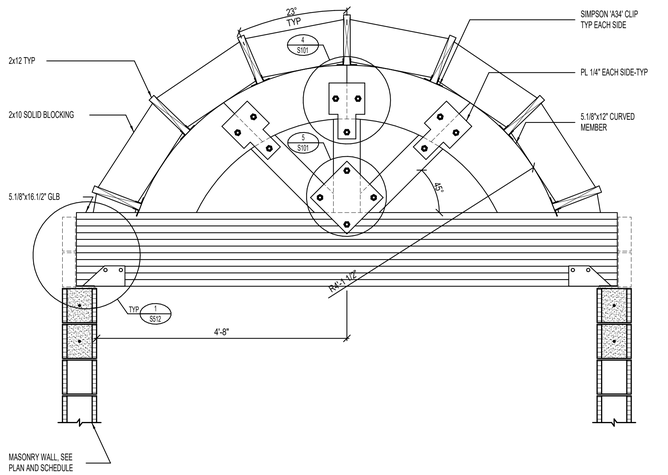
title:

SPECIAL INSPECTIONS

sheet:

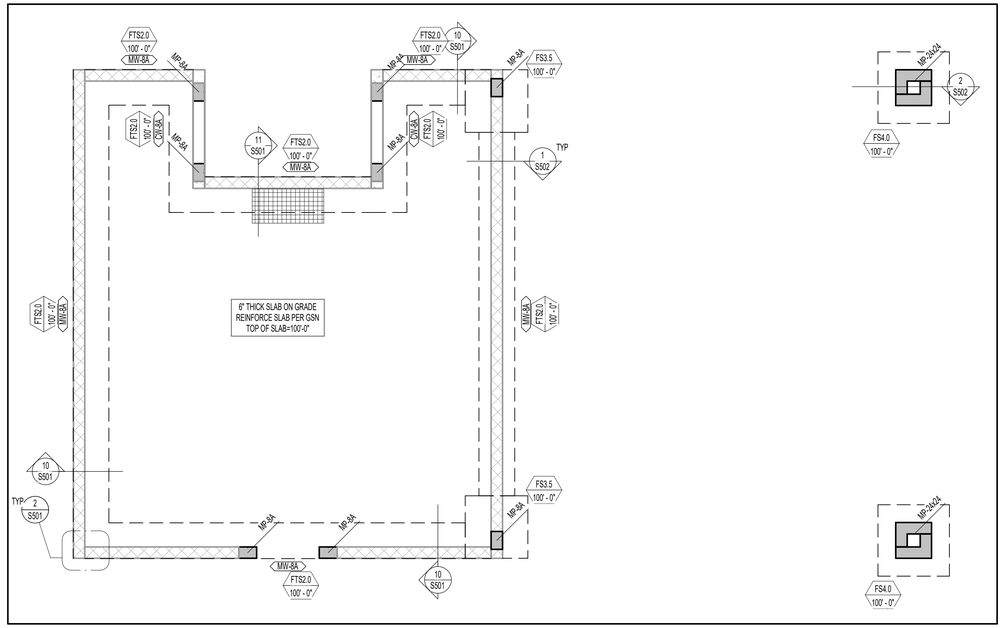
S003

PERMIT SET



3 ARCH TRUSS ELEVATION

NO SCALE



1 FOOTING AND FOUNDATION PLAN

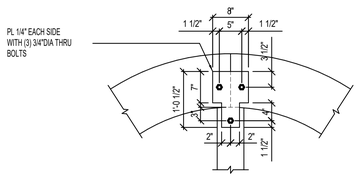
1/4" = 1'-0" 0" 2'-0" 4'-0" 8'-0"

MARKS AND SYMBOLS LEGEND

- SECTION MARK
- SHEET NUMBER
- FOOTING DESIGNATION
- TOP OF FOOTING ELEVATION
- INDICATES MASONRY WALL. DASHED WALLS STOP AT DECK
- DEPRESS FOUNDATION WALL AND POUR SLAB OVER. SEE DETAIL
- INDICATES DEPRESSED SLAB, SEE ARCHITECTURAL PLANS.
- MW-x — INDICATES MASONRY WALL TYPE. SEE SCHEDULE ON SHEET S601
- FCx.x — INDICATES CONTINUOUS FOOTING. SEE SCHEDULE ON SHEET S601
- FSx.x — INDICATES SPOT FOOTING. SEE SCHEDULE ON SHEET S601
- FTSx.x — INDICATES THICKENED SLAB FOOTING. SEE SCHEDULE ON SHEET S601
- MP-x — INDICATES MASONRY PIER TYPE. SEE SCHEDULE ON SHEET S601

FOOTING AND FOUNDATION PLAN NOTES

1. COORDINATE LOCATION OF DEPRESSED SLABS, SLOPED SLABS, AND FLOOR DRAINS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
2. SEE ARCHITECTURAL AND CIVIL DRAWINGS FOR EXTERIOR CONCRETE WORK AT DOORS, SIDEWALKS, ETC.
3. SEE ARCHITECTURAL DRAWINGS FOR CONTROL JOINT LOCATIONS.
4. SEE "EARTHWORK" NOTES ON SHEET S001 FOR MINIMUM FILL REQUIRED BENEATH FOOTINGS.
5. ALL SPOT FOOTINGS SHALL BE CENTERED UNDER COLUMNS (UNO).
6. SEE DETAILS 1/S301 AND 6/S501 FOR CONDITION WHERE BURIED PIPES RUN PARALLEL AND PERPENDICULAR TO FOOTINGS.
7. SEE DETAIL 3/S501 FOR TYPICAL CONTROL/CONSTRUCTION JOINTS IN CONCRETE SLAB ON GRADE.
8. SEE DETAIL 5/S501 FOR SLAB REINFORCING WHERE CONTROL JOINTS ARE DISCONTINUOUS.
9. SEE DETAIL 7/S501 FOR ADDITIONAL REINFORCING AT MISCELLANEOUS OPENINGS IN MASONRY WALLS.
10. SEE DETAIL 8/S501 FOR CONDITION AT RECESSES IN MASONRY WALLS.
11. SEE DETAIL 9/S501 FOR TERMINATION OF HORIZONTAL REINFORCING IN MASONRY WALLS.
12. INTERIOR WALLS NOT SHOWN, REINFORCE AS MW-8A. DRILL AND EPOXY VERTICAL REINFORCEMENT 3.1/2" INTO SLAB.



4 TRUSS CONNECTION DETAIL

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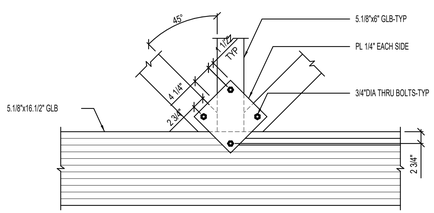

5 CONNECTION DETAIL

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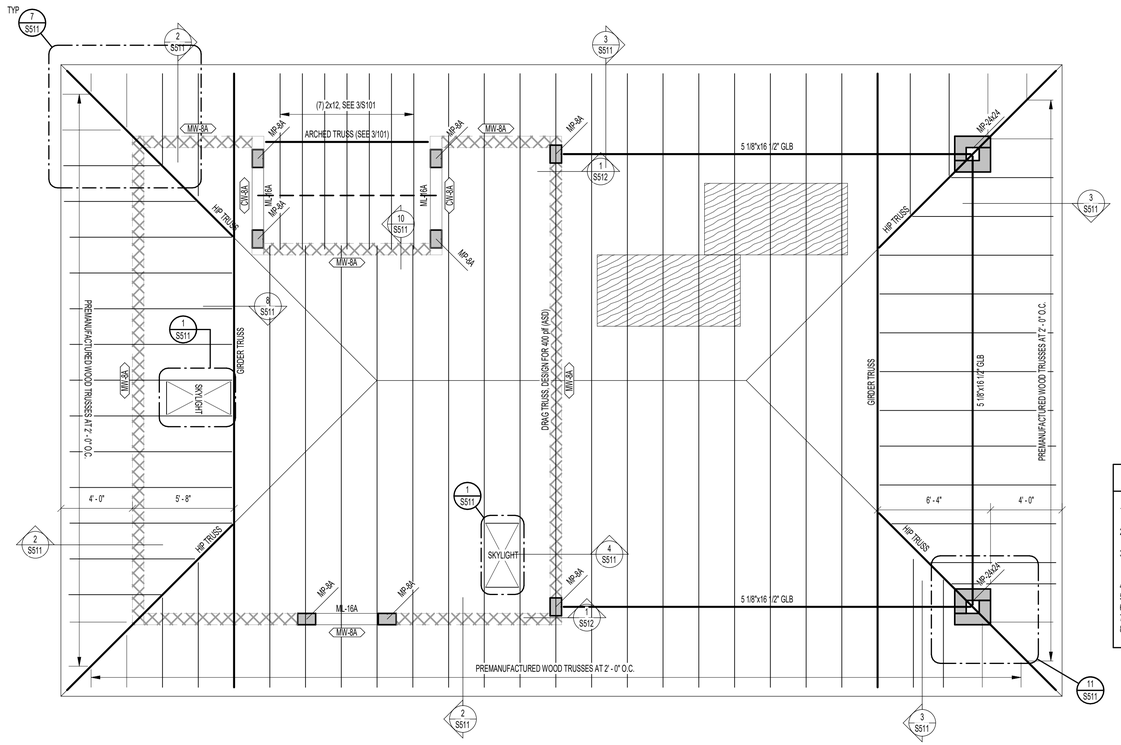

2 ROOF FRAMING PLAN

1/4" = 1'-0" 0" 2'-0" 4'-0" 8'-0"

MARKS AND SYMBOLS LEGEND

- SECTION MARK
- SHEET NUMBER
- INDICATES MASONRY WALL. DASHED WALLS STOP AT DECK
- MW-x — INDICATES MASONRY WALL TYPE. SEE SCHEDULE ON SHEET S601
- INDICATES PLYWOOD ROOF SHEATHING, SEE SCHEDULE ON SHEET
- MP-x — INDICATES MASONRY PIER TYPE. SEE SCHEDULE ON SHEET S601
- ML-x — INDICATES MASONRY LINTEL TYPE. SEE SCHEDULE ON SHEET S601

ROOF FRAMING PLAN NOTES

1. VERIFY ALL ROOF OPENINGS FOR MECHANICAL SHAFTS, DRAINS, ETC. WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
2. ALL ROOF OPENINGS GREATER THAN, OR EQUAL TO, 12" x 12" SHALL BE FRAMED AS INDICATED IN DETAIL 1/S511.
3. VERIFY SIZE, WEIGHT, AND LOCATION OF ALL ROOF TOP MECHANICAL UNITS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. COORDINATE OPENINGS WITH MECHANICAL, ELECTRICAL, AND GENERAL CONTRACTORS.
4. LOCATE MISCELLANEOUS MECHANICAL OPENINGS BETWEEN JOISTS, NOT UNDERNEATH THEM.
5. SEE DETAIL 7/S501 FOR ADDITIONAL REINFORCING AT MISCELLANEOUS OPENINGS IN MASONRY WALLS.
6. SEE DETAIL 8/S501 FOR CONDITION AT RECESSES IN MASONRY WALLS.
7. SEE DETAIL 9/S501 FOR TERMINATION OF HORIZONTAL REINFORCING IN MASONRY WALLS.
8. INTERIOR WALLS NOT SHOWN, REINFORCE AS MW-8A. SEE DETAILS 5/S511 AND 6/S511 FOR TOP OF WALL BRACING.

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5-29-2020

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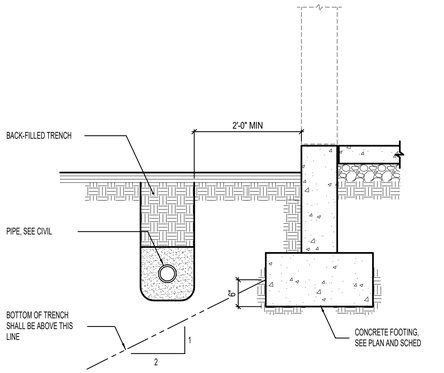
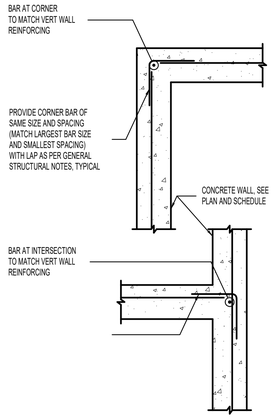
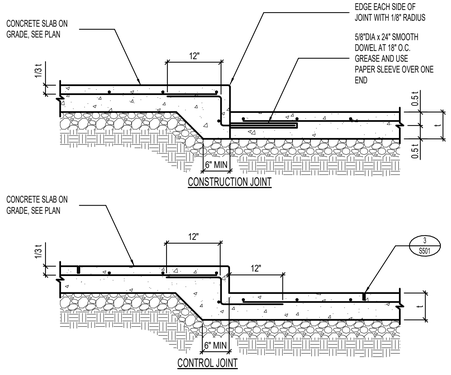


1 CONDITION AT PIPE PARALLEL TO CONCRETE FOOTING — NO SCALE

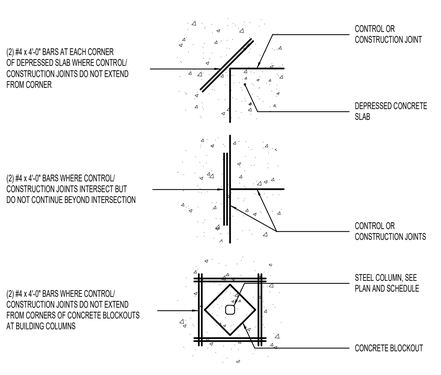


2 TYPICAL CORNER WALL REINFORCING [PLAN VIEW] — NO SCALE

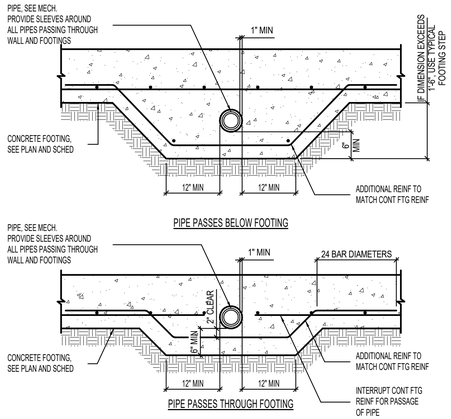


3 TYPICAL SLAB ON GRADE JOINT DETAILS — NO SCALE

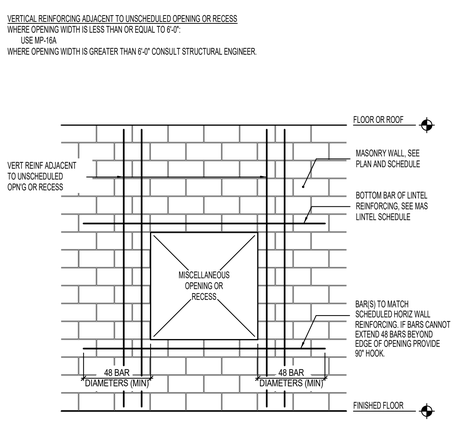
4 JOINT DETAILS AT SLAB DEPRESSIONS — NO SCALE



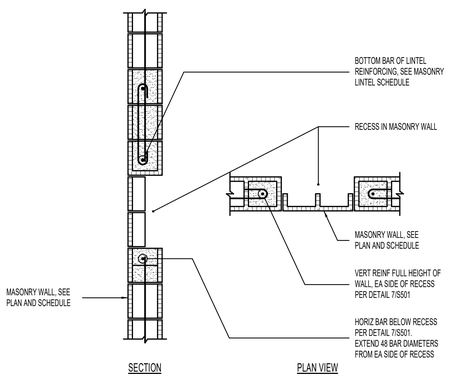
5 LOCATIONS REQUIRING ADDITIONAL SLAB REINFORCING [PLAN VIEW] — NO SCALE



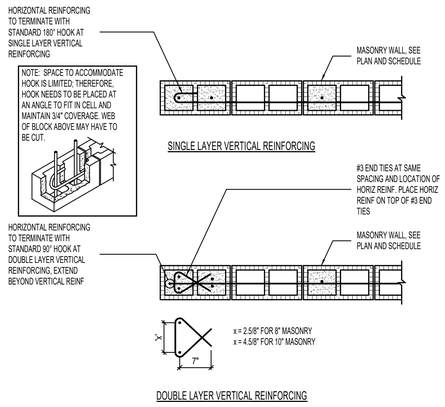
6 CONDITIONS AT PIPE PERPENDICULAR TO FOOTING — NO SCALE



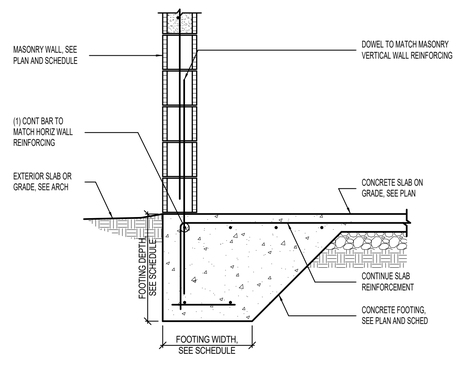
7 REINFORCING AT UNSCHEDULED MISCELLANEOUS OPENINGS OR RECESSES IN MASONRY WALLS — NO SCALE



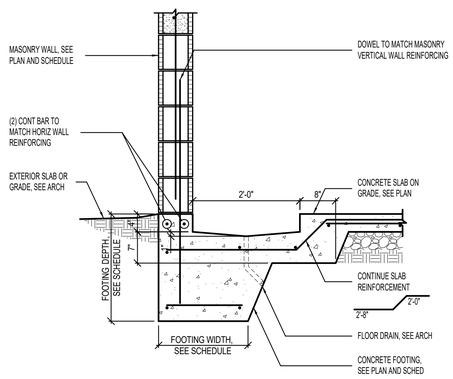
8 TYPICAL REINFORCING AT RECESS IN 8" OR 10" MASONRY WALLS — NO SCALE



9 TERMINATION OF HORIZONTAL REINFORCING IN 8" OR 10" MASONRY WALL [PLAN VIEW] — NO SCALE



10 FOUNDATION WALL DETAIL — NO SCALE



11 FOUNDATION WALL DETAIL AT DRAIN — NO SCALE

CHRISTIAN L. HOFFMAN 337436 PROFESSIONAL ENGINEER
5-29-2020

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project#: 200558
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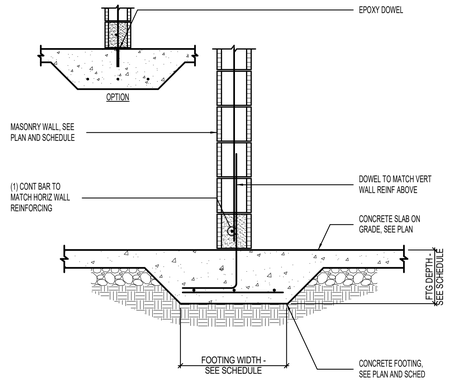
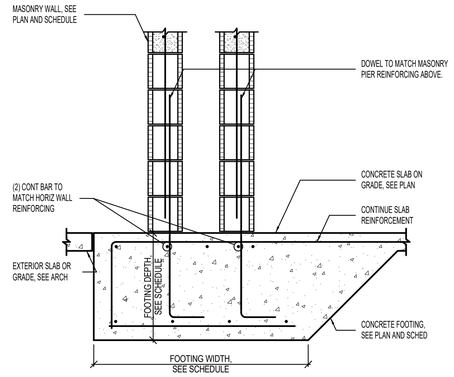


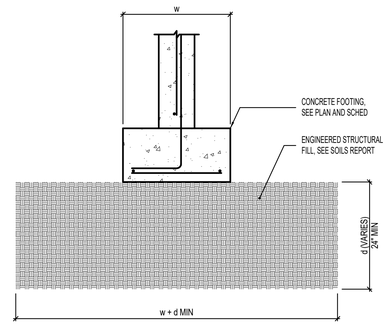
1 THICKENED SLAB FOOTING AT 8" OR 10" MASONRY WALL

NO SCALE



2 FOUNDATION WALL DETAIL

NO SCALE



3 ENGINEERED STRUCTURAL FILL DETAIL

NO SCALE

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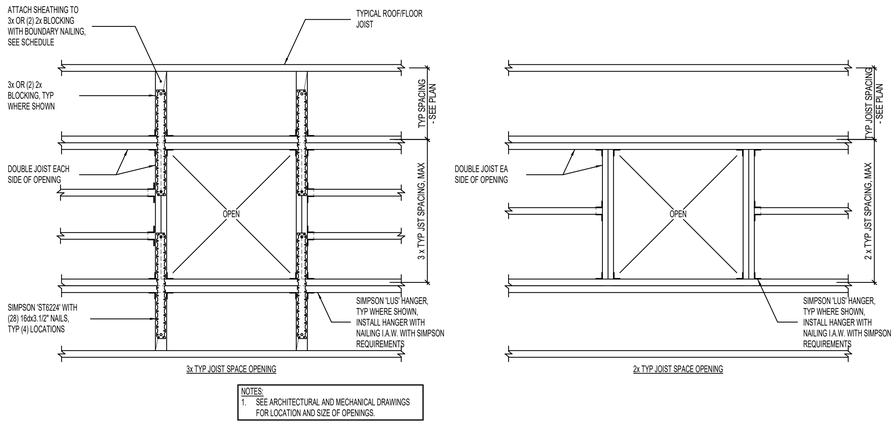
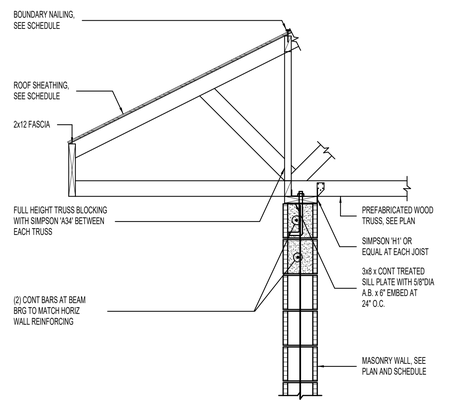
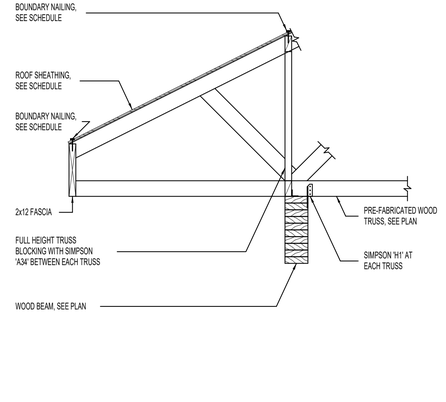


NOTES:
1. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATION AND SIZE OF OPENINGS.

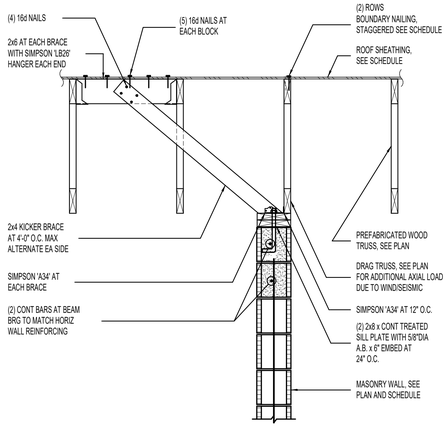
1 FRAMING AT CONVENTIONALLY FRAMED ROOF OPENINGS [PLAN VIEW]
NO SCALE



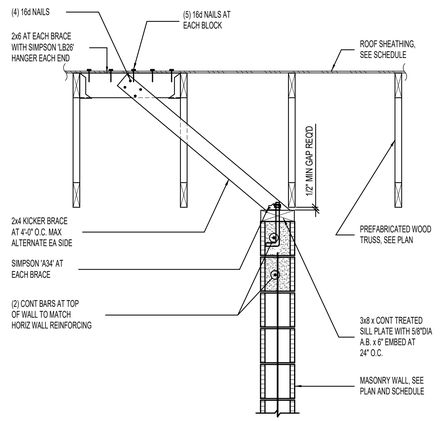
2 WOOD TRUSS BEARING AT MASONRY WALL
NO SCALE



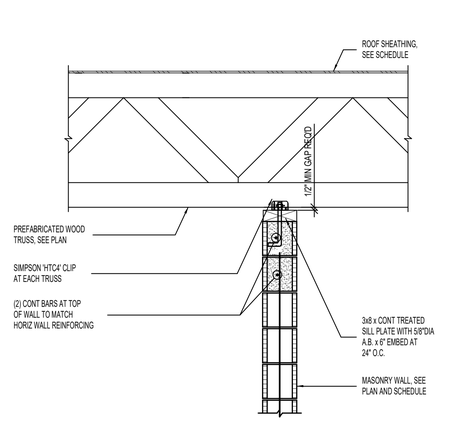
3 WOOD TRUSS AT WOOD BEAM
NO SCALE



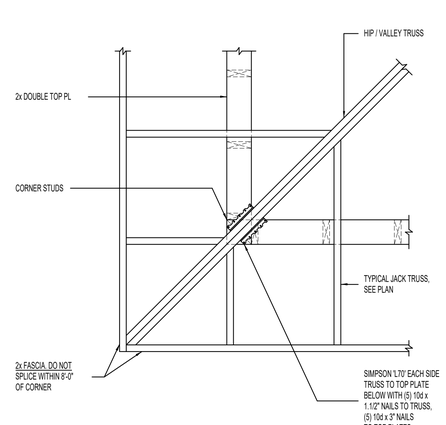
4 MASONRY SHEAR WALL PARALLEL TO WOOD TRUSS
NO SCALE



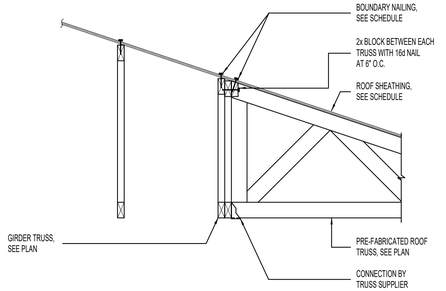
5 BRACING OF INTERIOR NON-BEARING MASONRY WALL PARALLEL TO TRUSS
NO SCALE



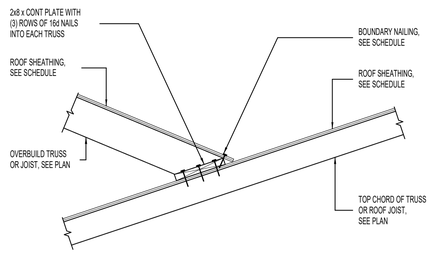
6 BRACING OF INTERIOR NON-BEARING MASONRY WALL PERPENDICULAR TO TRUSS
NO SCALE



7 CORNER SOFFIT FRAMING [PLAN VIEW]
NO SCALE



8 JACK TRUSS TO GIRDER TRUSS
NO SCALE



9 OVERBUILD DETAIL
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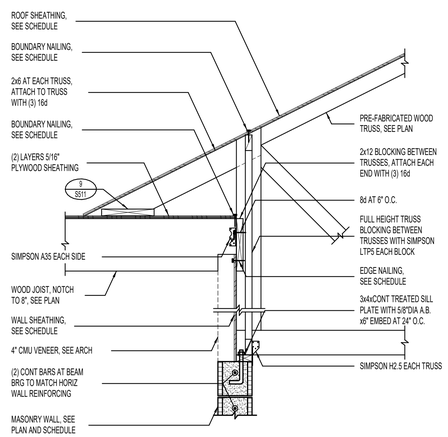
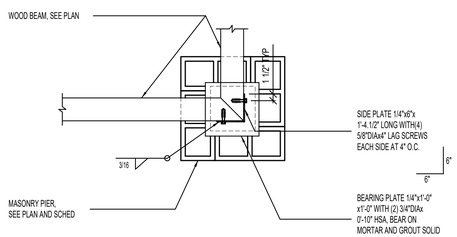


10 ARCH ROOF DETAIL
NO SCALE



11 WOOD BEAM AT MASONRY PIER DETAIL
NO SCALE

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5-29-2020

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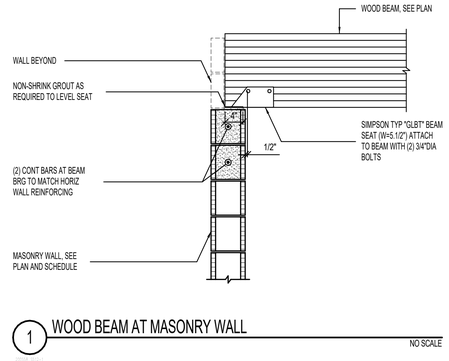

1 WOOD BEAM AT MASONRY WALL

NO SCALE

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PROFESSIONAL ENGINEER

5-29-2020

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CONCRETE FOOTING SCHEDULE

MARK	WIDTH	LENGTH	DEPTH	REINFORCING CROSSWISE				REINFORCING LENGTHWISE				COMMENTS
				No.	SIZE	LENGTH	SPACING	No.	SIZE	LENGTH	SPACING	
FTS2.0	2'-0"	CONT	24"	-	#4	1'-6"	48"	3	#4	CONT	EQ	THICKENED SLAB
FS3.5	3'-6"	3'-6"	24"	5	#4	3'-0"	EQ	5	#4	3'-0"	EQ	THICKENED SLAB
FS4.0	4'-0"	4'-0"	24"	6	#4	3'-6"	EQ	6	#4	3'-6"	EQ	THICKENED SLAB

CONCRETE FOOTING NOTES:
1. PLACE ALL FOOTING REINFORCING IN THE BOTTOM OF THE FOOTING WITH 3" CLEAR CONCRETE COVER (UNO).
2. TOP REINFORCING, WHERE OCCURS, SHALL BE PLACED IN THE TOP OF THE FOOTING WITH 2" MINIMUM CONCRETE COVER.
3. IF FOOTINGS ARE EARTH-FORMED, FOOTINGS SHALL BE 6" LONGER AND WIDER THAN SCHEDULED.
4. RUN CONTINUOUS FOOTING REINFORCEMENT THROUGH SPOT FOOTINGS.
5. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
6. SOME SCHEDULED FOOTINGS MAY NOT BE USED, SEE FOOTING AND FOUNDATION PLAN FOR FOOTING MARKS.

1 CONCRETE FOOTING SCHEDULE — NO SCALE

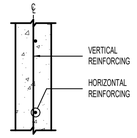
WALLS NOT DESIGNATED IN PLAN

THICKNESS	REINFORCING	
	VERTICAL	HORIZONTAL
6"	#4 AT 18" O.C.	#4 AT 16" O.C.
8"	#4 AT 18" O.C.	#4 AT 12" O.C.
10"	#4 AT 16" O.C.	#5 AT 15" O.C.
12"	#4 AT 18" O.C. E.F.	#4 AT 16" O.C. E.F.

CONCRETE FOUNDATION WALL NOTES:
1. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

ABBREVIATIONS:
E.F. EACH FACE
I.F. INSIDE FACE
O.F. OUTSIDE FACE

WALL REINFORCING PLACEMENT TYPES:



TYPE 'A'

2 CONCRETE WALL SCHEDULE — NO SCALE

CONCRETE REINFORCING BAR LAP SPLICE SCHEDULE

BAR SIZE	f'_c = 3000psi & f'_c = 3500 psi				f'_c = 4000psi & f'_c = 4500 psi				f'_c = 5000psi			
	REGULAR		TOP		REGULAR		TOP		REGULAR		TOP	
	CLASS		CLASS		CLASS		CLASS		CLASS		CLASS	
	A	B	A	B	A	B	A	B	A	B	A	B
#3	17"	22"	22"	28"	15"	19"	19"	24"	13"	17"	17"	22"
#4	22"	29"	29"	37"	19"	25"	25"	32"	17"	22"	22"	29"
#5	28"	36"	36"	47"	24"	31"	31"	40"	22"	28"	28"	36"

TABULATED VALUES ARE FOR CASE 1 REINFORCEMENT, WHERE THE REQUIREMENTS OF TABLE BELOW ARE MET. WHERE THESE CONDITIONS ARE NOT MET, MULTIPLY THE LAP LENGTHS ($\sqrt{f'_c}$) BY 1.5.

REQUIREMENT FOR CASE 1 LAP LENGTHS

BAR CLEAR SPACING	CLEAR COVER	STIRRUPS OR TIES
>=d_b	>=d_b	>=CODE FOR MINIMUM THROUGHOUT $\sqrt{f'_c}$
>=2d_b	>=d_b	NO REQUIREMENT

d_b = BAR DIAMETER

CONCRETE REINFORCING BAR LAP SPLICE NOTES:
1. THIS SCHEDULE SHALL BE USED FOR ALL BAR SPLICES IN CONCRETE WALLS, UNLESS NOTED OTHERWISE.
2. CLASS 'A' SPLICES MAY BE USED ONLY IN CASES WHERE 50% OR LESS OF THE BARS ARE SPLICED WITHIN THE LAP SPLICE LENGTH.
3. CLASS 'B' SPLICES SHALL BE USED FOR ALL SPLICES UNLESS THE REQUIREMENTS OF NOTE No. 2 ABOVE ARE MET.
4. TIES AND STIRRUPS SHALL NOT BE SPLICED.
5. DO NOT SPLICE VERTICAL BARS IN RETAINING WALLS UNLESS SPECIFICALLY SHOWN.
6. THE VALUES TABULATED IN SCHEDULE ARE FOR GRADE 60 REINFORCING BARS. FOR GRADE 75, MULTIPLY LAP LENGTHS BY 1.25 AND FOR GRADE 80, MULTIPLY BY 1.33.
7. THE VALUES TABULATED IN SCHEDULE ARE MINIMUM REQUIREMENTS. LONGER LENGTHS MAY BE USED FOR CONSTRUCTIBILITY.
8. TOP BARS ARE CLASSIFIED AS HORIZONTAL BARS WHERE 12", OR MORE, OF FRESH CONCRETE IS CAST BELOW THE REINFORCING BAR.
9. FOR EPOXY-COATED OR ZINC AND EPOXY DUAL-COATED BARS WITH CLEAR COVER < 3d $_b$ OR CLEAR SPACING <6d $_b$, MULTIPLY LAP LENGTHS BY 1.5. FOR ALL OTHER CASES MULTIPLY BY 1.2
10. FOR LIGHT WEIGHT CONCRETE, MULTIPLY LAP LENGTHS BY 1.33 UNLESS THE AVERAGE SPLITTING TENSILE STRENGTH (F_{ct}) IS SPECIFIED. FOR LIGHT WEIGHT CONCRETE WHERE F_{ct} IS SPECIFIED, REFER TO ACI318-14 SECTION 19.2.4.3
11. SPLICES FOR BUNDLED BARS:
    a. FOR BUNDLED BARS OF THREE OR LESS, LAP SPLICE LENGTHS SHALL BE MULTIPLIED BY 1.2.
    b. FOR BUNDLED BARS OF FOUR OR MORE, LAP SPLICE LENGTHS SHALL BE MULTIPLIED BY 1.33.
    c. INDIVIDUAL BAR SPLICES WITHIN A BUNDLE SHALL NOT OVERLAP.
    d. ENTIRE BUNDLES SHALL NOT BE LAP SPLICED.
12. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

3 CONCRETE REINFORCING BAR LAP SPLICE SCHEDULE — NO SCALE

MASONRY WALL SCHEDULE

MARK	THICKNESS	MATERIAL	SOLID GROUT	REINFORCING			COMMENTS
				VERTICAL	HORIZONTAL	JOINTS	
MW-8A	8"	CMU	NO	#5 AT 32" O.C.	#5 AT 48" O.C.	NONE	SEE NOTE 10

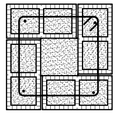
MASONRY WALL NOTES:
1. COORDINATE WALL FINISHES, MATERIALS, COURSING, ETC. WITH ARCHITECTURAL DRAWINGS.
2. DO NOT SOLID GROUT WALLS UNLESS REQUIRED BY SCHEDULE, NOTES, OR DETAILS.
3. SOLID GROUT ALL MASONRY COURSES BELOW GRADE.
4. SINGLE LAYER OF VERTICAL REINFORCING SHALL BE CENTERED IN WALL (UNO).
5. VERTICAL REINFORCING SHALL EXTEND INTO FOOTINGS AND TERMINATE WITH STANDARD HOOK. FOR CONCRETE FOUNDATION WALLS 4'-0" OR TALLER, VERTICAL WALL REINFORCING SHALL DOWEL 3'-0" MINIMUM INTO THE FOUNDATION WALL (UNO).
6. PROVIDE TWO VERTICAL BARS (MIN) AT ALL CORNERS AND END OF WALLS.
7. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING OCCUR IN THE SAME COURSE, USE THE LARGER REINFORCING.
8. SEE DETAILS 7/S501 FOR WHERE HORIZONTAL REINFORCING TERMINATES AT EDGE OF OPENINGS.
9. IN CONCRETE FOUNDATION WALL BELOW, ALTERNATE VERTICAL CONCRETE WALL REINFORCING WITH VERTICAL MASONRY REINFORCING.
10. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

4 MASONRY WALL SCHEDULE — NO SCALE

MASONRY PIER SCHEDULE

MARK	SIZE	REINFORCING		REINFORCING SCHEMATIC	COMMENTS
		VERTICAL	TIES		
MP-8A	WT x 8"	(2) #5	NONE		
MP-24x24	24"x24	(4) #5	#3 AT 8" O.C.	TYPE A	

MASONRY PIER NOTES:
1. VERTICAL REINFORCING AND TIES SHALL EXTEND FULL HEIGHT OF WALL (UNO).
2. VERTICAL MASONRY PIER REINFORCING SHALL EXTEND INTO THE FOOTING AND TERMINATE WITH A STANDARD 90° HOOK. FOR CONCRETE FOUNDATION WALLS 4'-0" OR TALLER, VERTICAL PIER REINFORCING SHALL DOWEL 3'-0" MINIMUM INTO THE FOUNDATION WALL (UNO).
3. IN CONCRETE FOUNDATION WALLS, PROVIDE #3 TIE AT TOP OF FOUNDATION WALL WITH SAME CONFIGURATION OF MASONRY PIER ABOVE. HORIZONTAL REINFORCING OF ADJACENT WALLS SHALL RUN CONTINUOUS THROUGH MASONRY PIERS.
4. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.



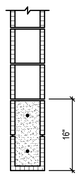
TYPE A

5 MASONRY PIER SCHEDULE — NO SCALE

MASONRY LINTEL SCHEDULE

MARK	DEPTH	MAXIMUM SPAN FOR UNSCHEDULED OPENINGS	REINFORCING		COMMENTS
			HORIZONTAL	STIRRUPS	
ML-16A	16"	6'-0"	(1) #5 x CONT TOP AND BOTTOM	NONE	.

MASONRY LINTEL NOTES:
1. LINTEL WIDTH AND MATERIAL TYPE SHALL BE THE SAME AS THE WALL IN WHICH THE LINTEL IS CONSTRUCTED.
2. GROUT MASONRY LINTELS MONOLITHICALLY WITH THE SUPPORT WALL OR PIER AT EACH END.
3. MASONRY LINTEL ML-16A SHALL BE USED OVER OPENINGS IN MASONRY WALLS WHEN A SPECIFIC MASONRY LINTEL IS NOT OTHERWISE SPECIFIED. WHEN A LINTEL IS SPECIFIED ON THE PLANS, THE MAXIMUM SPAN AS NOTED IN THIS SCHEDULE SHALL NOT APPLY. CONSULT THE STRUCTURAL ENGINEER FOR LINTELS NOT SPECIFIED ON THE PLANS WHICH HAVE A SPAN GREATER THAN 6'-0".
4. EXTEND ALL HORIZONTAL REINFORCING 48 BAR DIAMETERS MINIMUM BEYOND THE EDGE OF ALL OPENINGS. IF HORIZONTAL REINFORCING CANNOT EXTEND 48 BAR DIAMETERS BEYOND EDGE OF OPENING, PROVIDE 90° STANDARD HOOK.
5. SPLICE TOP BARS AT MIDSPAN OF LINTEL ONLY AND BOTTOM BARS OVER SUPPORTS ONLY.
6. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING OCCUR IN THE SAME COURSE, USE THE LARGER REINFORCING.
7. DOWEL VERTICAL REINFORCING OF WALL ABOVE LINTEL INTO THE FULL DEPTH OF LINTEL OR 48 BAR DIAMETERS, WHICHEVER IS LESS.
8. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.



ML-16A

6 MASONRY LINTEL SCHEDULE — NO SCALE

MASONRY REINFORCING LAP SCHEDULE

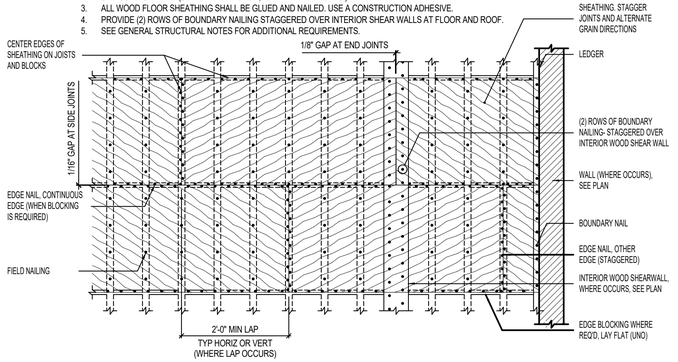
BAR SIZE	(1) BAR PER CELL	(2) BARS PER CELL
#3	16"	16"
#4	24"	24"
#5	40"	40"

7 MASONRY REINFORCING LAP SCHEDULE (1500psi) — NO SCALE

SHEATHING SCHEDULE AT ROOF

LOCATION	WOOD SHEATHING THICKNESS	SPAN RATING	NAIL SIZE	EDGE NAIL		FIELD NAIL	BOUNDARY NAIL	EDGE BLOCK	COMMENTS
				CONT EDGE	OTHER EDGE				
ROOF	19/32"	40/20	10d	6"	6"	12"	6"	NO	

SHEATHING NOTES:
1. MINIMUM NAIL PENETRATION INTO FRAMING: 8d-1.1/2", 10d-1.5/8".
2. USE COMMON NAILS (8d DIAMETER = 0.131", 10d DIAMETER = 0.148").
3. ALL WOOD FLOOR SHEATHING SHALL BE GLUED AND NAILED. USE A CONSTRUCTION ADHESIVE.
4. PROVIDE (2) ROWS OF BOUNDARY NAILING STAGGERED OVER INTERIOR SHEAR WALLS AT FLOOR AND ROOF.
5. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.



8 SHEATHING SCHEDULE AT ROOF AND FLOOR [PLAN VIEW] — NO SCALE

MINIMUM NAILING SCHEDULE

CONNECTION	NAILING
SILL PLATE TO JOIST OR BLOCKING, FACE NAIL	16d AT 16" O.C.
BRIDGING TO JOIST, TOENAIL EACH END	(2) 8d
BLOCKING BETWEEN JOIST OR RAFTERS TO TOP PLATE, TOE NAIL	(3) 8d
RIM JOIST TO TOP PLATE, TOE NAIL	8d AT 6" O.C.
COLLAR TIE TO RAFTER, FACE NAIL	(3) 10d
JACK RAFTER TO HIP, TOE NAIL	(3) 10d
FACE NAIL	(2) 16d
ROOF RAFTER TO 2x RIDGE BEAM, TOE NAIL	(2) 16d
FACE NAIL	(2) 16d
JOIST TO BAND JOIST, FACE NAIL	(3) 16d
LEDGER STRIP, FACE NAIL	(3) 16d
TOP PLATE TO STUD, END NAIL	(2) 16d
DOUBLE STUDS, FACE NAIL	16d AT 24" O.C.
DOUBLED TOP PLATES, FACE NAIL	16d AT 16" O.C.
TOP PLATES, LAPS & INTERSECTION, FACE NAIL	(2) 16d
CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOENAIL	(3) 8d
CONTINUOUS HEADER TO STUD, TOENAIL	(4) 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	(3) 16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	(3) 16d
RAFTER TO PLATE, TOENAIL	(3) 8d
1" BRACE TO EACH STUD & PLATE, FACE NAIL	(2) 8d
BUILT-UP CORNER STUDS	16d AT 24" O.C.
BUILT-UP GIRDER & BEAMS	20d AT 32" O.C. AT TOP, BOTTOM, AND STAGGERED ON OPPOSITE SIDES. (2) 20d AT ENDS AND AT EACH SPLICE.
STUD TO SOLE PLATE, TOE NAIL	(4) 8d
STUD TO SOLE PLATE, END NAIL	(2) 16d
PLYWOOD & PARTICLEBOARD:	SEE WOOD SCHEDULE USED IN DRAWINGS FOR NAIL SIZE AND SPACING

MINIMUM NAILING NOTES:
1. NAILING SCHEDULE IS PER TABLE 2304.10.1 OF THE I.B.C. 2018.
2. NAILING REQUIREMENTS SHOWN HERE DO NOT REPLACE HARDWARE SHOWN ON THE PLANS OR DETAILS.
3. MINIMUM NAIL PENETRATION INTO FRAMING: 8D - 1.1/2", 10D - 1.5/8", 16D - 1.3/4" (UNO).
4. USE COMMON NAILS (8d DIAMETER = 0.131", 10d DIAMETER = 0.148", 16d DIAMETER = 0.162")
5. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

9 MINIMUM NAILING SCHEDULE — NO SCALE

COLORADO LICENSED
CHRISTIAN L. HOFFMAN
37436
PROFESSIONAL ENGINEER
5-29-2020

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project:
Grand Junction Dos Rios Park Restroom

project#: 200558
date: 27 May, 2020

revisions :

title:
SCHEDULES

sheet:
S601

PERMIT SET

SYMBOL LEGEND

SYMBOL	DESCRIPTION
VALVES, METERS, AND GAUGES	
	SHUT OFF VALVE
	GATE VALVE
	CHECK VALVE
	AUTO 2-WAY VALVE
	AUTO 3-WAY VALVE
	GLOBE VALVE
	BALL VALVE
	RELIEF VALVE
	CHAIN OPERATED GATE VALVE
	PRESSURE REDUCING VALVE
	BUTTERFLY VALVE
	SOLENOID VALVE
	ANGLE VALVE
	VENTURI
	BALANCING OR PLUG COCK
	FLOW SETTER
	EXPANSION VALVE (REFRIG.)
	GAS COCK
MAV	MANUAL AIR VENT
	STRAINER
	GAUGE COCK
	FLEXIBLE CONNECTION
	PRESSURE GAUGE
	THERMOMETER
	VICTUALIC COUPLING
	REDUCER CONCENTRIC
	REDUCER ECCENTRIC
	REFRIGERANT SITE GLASS
	REFRIGERANT STRAINER
	REFRIGERANT FILTER DRIER
	90 DEG ELBOW UP
	90 DEG ELBOW DOWN
	90 DEG TEE UP
	90 DEG TEE DOWN
	UNION
	CAPPED PIPE
	ANCHOR
	FLOAT AND THERMOSTATIC TRAP
HVAC SYMBOLS	
T	THERMOSTAT
S	TEMPERATURE SENSOR
H	HUMIDISTAT

SYMBOL LEGEND

SYMBOL	DESCRIPTION

DUCT WORK

SINGLE LINE	DOUBLE LINE	DESCRIPTION
		RECTANGULAR SUPPLY DUCT UP
		RECTANGULAR SUPPLY DUCT DOWN
		RECTANGULAR RETURN DUCT UP
		RECTANGULAR RETURN DUCT DOWN
		RECTANGULAR EXHAUST DUCT UP
		RECTANGULAR EXHAUST DUCT DOWN
		ROUND DUCT UP
		ROUND DUCT DOWN
		ACCOUSTICALLY LINED RECTANGULAR DUCT
		90° RECTANGULAR ELBOW WITH TURNING VANES
		90° RADIUS ELBOW R=1.5
		DUCT SIZE OR SHAPE TRANSITION
		OPPOSED BLADE BALANCING DAMPER (O.B.D.) IN RECT DUCT
		BUTTERFLY BALANCING DAMPER IN ROUND DUCTS
		COMBINATION TEE
		SPLITTER DAMPER
		SQUARE OR RECTANGULAR CEILING DIFFUSER
		ROUND CEILING DIFFUSER
		SIDEWALL REGISTER SUPPLY OR RETURN
		ROUND FLEXIBLE DUCT
		RETURN GRILLE
		EXHAUST GRILLE
		FIRE SMOKE DAMPER
		FIRE DAMPER
SD	SD	SMOKE DAMPER
FC	FC	FLEXIBLE CONNECTION
		FLEXIBLE CONNECTION
		DUCT TO BE REMOVED

PIPING LEGEND

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

HPS	HIGH PRESSURE STEAM
MPS	MEDIUM PRESSURE STEAM
LPS	LOW PRESSURE STEAM
HPC	HIGH PRESSURE CONDENSATE RETURN
MPC	MEDIUM PRESSURE CONDENSATE RETURN
LPC	LOW PRESSURE CONDENSATE RETURN
PC	PUMP DISCHARGE
TWS	TEMPERED WATER SUPPLY
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
HHWS	HEATING HOT WATER SUPPLY
HHWR	HEATING HOT WATER RETURN
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUPPLY
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
D	DRAIN LINE
HG	HOT GAS BYPASS
GS	GLYCOL SUPPLY
GR	GLYCOL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

SYMBOL LEGEND

SYMBOL	DESCRIPTION
REFERENCE LINES AND SYMBOLS	
# / SHEET	DETAIL INDICATOR: # INDICATES DETAIL NUMBER, SHEET INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
# / SHEET	ELEVATION OR SECTION INDICATOR, EXTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
# / SHEET	ELEVATION OR SECTION INDICATOR, INTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
100	SPACE NUMBER
1	KEYNOTE INDICATOR
	REVISION INDICATOR
	EQUIPMENT INDICATOR
	PLUMBING FIXTURE INDICATOR
TYPE / CFM / SIZE	DIFFUSER/GRILLE INDICATOR
TYPE / SIZE	DIFFUSER/GRILLE INDICATOR
	BREAK, STRAIGHT
	BREAK, ROUND
MATCH LINE / SEE XX/X-XXX	MATCHLINE INDICATOR
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE
	NEW CONNECTION TO EXISTING
	POINT OF DEMOLITION

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

(E)	EXISTING
(F)	FUTURE
AD	ACCESS DOOR
AIR COND	AIR CONDITION(-ING,-ED)
APD	AIR PRESSURE DROP
BD	BALANCING DAMPER
BHP	BRAKE HORSE POWER
BTU	BRITISH THERMAL UNIT
BTUH	BTU/HOUR
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	COOLING
COMP	COMPONENT
COND	CONDENS(-ER, -ING, -ATION)
CV	CONTROL VALVE
DB	DRY BULB TEMPERATURE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRC
DIA	DIAMETER
DISCH	DISCHARGE
DP	DEPTH OR DEEP
EA	EXHAUST AIR
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
EG	ETHYLENE GLYCOL
ELEC	ELECTRIC
ELEV	ELEVATION
ENT	ENTERING
EVAP	EVAPORAT(-E, -ING, -ED, -OR)
EWT	ENTERING WATER TEMPERATURE
EXT	EXTERNAL
FC	FLEXIBLE CONNECT(-OR, -ION)
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FSD	FIRE SMOKE DAMPER
GAL	GALLON(S)
GE	GREASE EXHAUST
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HD	HEAD
HG	MERCURY
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HTG	HEATING
HZ	HERTZ (FREQUENCY)
ID	INSIDE DIAMETER
IN	INCH
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LG	LENGTH
LH	LATENT HEAT
LRA	LOCKED ROTOR AMPS
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MFR	MANUFACTUR(-ER, -ED)
NC	NOISE CRITERIA
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
OZ	OUNCE
PD	PRESSURE DROP OR DIFFERENCE
PG	PROPOLENE GLYCOL
PH	PHASE
PPM	PARTS PER MILLION
PRESS	PRESSURE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAUGE
R	THERMAL RESISTANCE
RA	RETURN AIR
RECIRC	RECIRCULATE
REFR	REFRIGERATION
REQD	REQUIRED
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SC	SHADING COEFFICIENT
SCFM	STANDARD CUBIC FEET PER MINUTE
SCW	SOFT COLD WATER
SF	SAFETY FACTOR
SH	SENSIBLE HEAT
SP	STATIC PRESSURE
SPEC(S)	SPECIFICATION(S)
SQ	SQUARE
STD	STANDARD
SW	SOIL, WASTE
TA(R)	TRANSFER AIR (RETURN)
TA(S)	TRANSFER AIR (SUPPLY)
TD	TEMP. DROP OR DIFF.
TEMP	TEMPERATURE
THERM	THERMAL
TOT	TOTAL
TSTAT	THERMOSTAT
V	VOLT
V	VENT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY TEMPERATURE
VEL	VELOCITY
VENT	VENT, VENTILATION
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
WB	WET BULB TEMP
WC	WATER COLUMN
WG	WATER GAUGE
WPD	WATER PRESSURE DROP
WT	WEIGHT
WTR	WATER

MECHANICAL GENERAL NOTES

1 THE MECHANICAL DRAWINGS SHOW THE GENERAL DESIGN, ARRANGEMENT & EXTENT OF THE MECHANICAL SYSTEM. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, THESE DRAWINGS DO NOT SHOW ALL OFFSETS, BENDS OR ELBOWS NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. CONTRACTOR SHALL MAKE SUCH SLIGHT ALTERATIONS AS MAY BE NECESSARY TO MAKE THE SYSTEM COMPLETE & OPERATIONAL IN ACCORDANCE WITH THE DESIGN INTENT.

MAJOR DEVIATIONS SUCH AS CHANGES IN COMPONENT SIZES, WEIGHTS, QUANTITIES OR MATERIAL REQUIRE PRIOR APPROVAL BY THE DESIGN ENGINEER.

2 THE DRAWINGS & SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER & SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH THE ITEMS SHOWN ON ONE & NOT THE OTHER BEING FURNISHED & INSTALLED AS THOUGH SHOWN & CALLED OUT IN BOTH.

3 THE ENTIRE MECHANICAL INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY ADOPTED BUILDING CODES, MECHANICAL CODE, PLUMBING CODE, ELECTRICAL CODE, & ALL OTHER APPLICABLE CITY, COUNTY, STATE, & FEDERAL CODES & REGULATIONS IN EFFECT.

4 THE ENTIRE MECHANICAL INSTALLATION SHALL CONFORM TO ANY CODES, RULES, REGULATIONS & REQUIREMENTS OF THE BUILDING OWNER.

5 PRIOR TO FABRICATION & INSTALLATION OF ANY MECHANICAL COMPONENT THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL MECHANICAL WORK WITH ALL OTHER BUILDING TRADES, INCLUDING BUILDING TRADES HIRED DIRECTLY BY THE OWNER. WHERE CONFLICTS MAY OCCUR, THEY SHALL BE RESOLVED PRIOR TO INSTALLATION.

6 THE SPACE ABOVE ALL CEILINGS IS LIMITED. CAREFUL COORDINATION IS REQUIRED WITH ALL TRADES BEFORE ANY PIPE, DUCT, OR EQUIPMENT IS ORDERED & OR INSTALLED. ANY CONFLICTS &/OR CHANGES FOUND DURING INSTALLATION THAT RESULTS FROM THE LACK OF COORDINATION BY THE CONTRACTORS DURING THE SHOP DRAWING PROCESS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

7 ALL MECHANICAL INFORMATION IS NOT SHOWN ON THE MECHANICAL DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENT.

8 THE CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW & USE, WHERE APPROPRIATE, ALL THE MECHANICAL DETAILS SHOWN ON THE DRAWINGS. DETAILS MAY OR MAY NOT BE CALLED OUT ON THE DRAWINGS WITH SYMBOLS OR KEYED NOTES. ANY CHANGES RESULTING FROM FAILURE TO INSTALL THE MECHANICAL SYSTEM WITHOUT USING THE INCLUDED DETAILS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

9 THE STRUCTURE SHOWN ON ALL DETAILS MAY OR MAY NOT PERTAIN TO A PORTION OR ANY PORTION OF THE BUILDING. COORDINATE ALL MOUNTING REQUIREMENTS WITH ARCHITECTURAL & STRUCTURAL DRAWINGS.

10 ANY PART OF THE MECHANICAL INSTALLATION THAT FAILS, IS UNFIT, OR BECOMES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

11 SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING DIFFUSERS & GRILLES.

12 CONTRACTOR SHALL OPERATE THE SYSTEM & DEMONSTRATE ALL ASPECTS OF THE SYSTEM TO THE ENGINEER &/OR OWNER TO PROVE ALL SYSTEMS ARE OPERATIONAL.

13 DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN A SET OF AS-BUILT REDLINED RECORD DRAINING AT THE PROJECT SITE. ALL CHANGES IN LAYOUT, ROUTING, EQUIPMENT, COMPONENTS, & ACCESSORIES SHALL BE RECORDED. THESE REDLINED DRAWINGS SHALL BE GIVEN TO THE ARCHITECT/ENGINEER AFTER THE FINAL INSPECTION IN ACCORDANCE WITH SPECIFICATIONS.

GENERAL EQUIPMENT NOTES

1 ALL CAPACITIES ARE AT JOB SITE CONDITIONS & ARE MINIMUM CAPACITY.

2 ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED TO CONFORM WITH LOCAL SEISMIC REQUIREMENTS & THE REQUIREMENTS OF THESE CONSTRUCTION DOCUMENTS.

3 VERIFY ALL REQUIRED SERVICE CONNECTIONS, INCLUDING ELECTRICAL CHARACTERISTICS FOR ALL EQUIPMENT PRIOR TO ORDERING EQUIPMENT.

4 ALL EQUIPMENT SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURAL MEMBERS.

5 ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.

6 ALL SIMILAR EQUIPMENT SHALL BE OF THE SAME MANUFACTURER.

7 AIR INLETS & OUTLETS SHALL BE OF THE SAME MANUFACTURER.

8 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HVAC EQUIPMENT CHECK-IN, SAFEKEEPING, & DAMAGE.

MECHANICAL SHEET INDEX

ME001	MECHANICAL COVER SHEET
ME501	MECHANICAL DETAILS
ME601	MECHANICAL SCHEDULES
MH101	MECHANICAL PLANS

COLORADO REGISTERED
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05/29/2020
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project:
Grand Junction Dos Rios Park Restroom

project#: 18.0850
date: 29 MAY 2020

revisions :

title:
MECHANICAL COVER SHEET

sheet:
ME001

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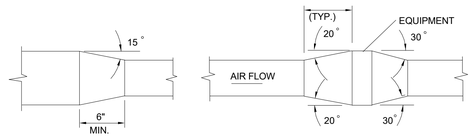
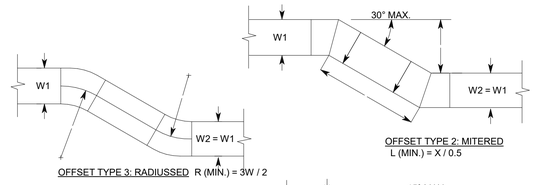
NOTE: UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.



PLAN OR SIDE VIEW
DUCT TRANSITION

PLAN OR SIDE VIEW
DUCT TRANSITION WITH EQUIPMENT IN DUCT

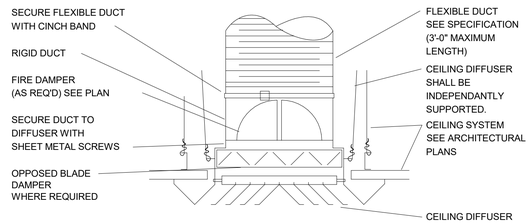
4 DUCT TRANSITION
NTS



NOTES:
1. UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.
2. ALL OFFSETS SHOWN ON DRAWINGS SHALL BE MADE WITH ANY OF THE 3 OFFSET TYPES ABOVE.

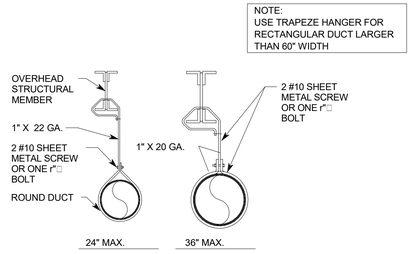
3 DUCT OFFSETS
NTS

NOTE:
CEILING INLETS AND OUTLETS SHALL BE INDEPENDENTLY SUPPORTED.



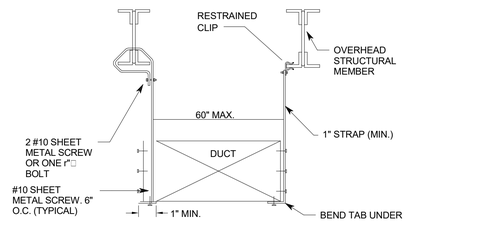
2 CEILING DIFFUSER(SURFACE)
NTS

NOTE:
USE TRAPEZE HANGER FOR RECTANGULAR DUCT LARGER THAN 60" WIDTH



5 ROUND DUCT HANGER
NTS

NOTE:
USE TRAPEZE HANGER FOR RECTANGULAR DUCT LARGER THAN 60" WIDTH



1 RECTANGULAR DUCT HANGER
NTS

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project:

Grand Junction Dos Rios Park Restroom

project#: 18.0850
date: 29 MAY 2020

revisions :

title:

MECHANICAL DETAILS

sheet:

ME501

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EXHAUST FAN SCHEDULE

SYMBOL	AREA SERVED	MANUFACTURER	MODEL NO.	CONFIG.	AIRFLOW (CFM)	STATIC PRESSURE (INCHES W.G.)	FAN SPEED (RPM)	MOTOR				MAXIMUM NOISE LEVEL (SONES)	OPTIONS AND ACCESSORIES	CONTROL	NOTES / COMMENTS
								HP	VOLTZ	PHASE	HERTZ				
EF-1	RESTROOMS	LOREN COOK	100 SDB	INLINE	280	0.4	1089	1 / 6	115	1	60	8	(1) (2)	(11)	(101)

ACCEPTABLE MANUFACTURERS	OPTIONS & ACCESSORIES	CONTROLS	NOTES & COMMENTS
LOREN COOK TWIN CITY PENN VENTILATOR GREENHECK	(1) GRAVITY BACKDRAFT DAMPER AT PENETRATION THROUGH BUILDING ENVELOPE. (2) ALUMINUM CONSTRUCTION.	(11) INTERLOCK OPERATION OF FAN WITH LIGHTS/OCCUPANCY SENSOR. (12) CONTINUOUS OPERATION.	(101) ALL CAPACITIES AT JOB SITE ELEVATION.

DUCT INSULATION REQUIREMENTS

DUCT SYSTEM	DUCT LOCATION	INSULATION MATERIAL	MINIMUM THERMAL RESISTANCE ("R")	FIELD APPLIED JACKET	VAPOR RETARDER REQ'D
SUPPLY AIR	BUILDING INTERIOR, CONCEALED	MINERAL-FIBER BLANKET	6.0	NONE	NO
	BUILDING INTERIOR, EXPOSED, OUTSIDE CONDITIONED SPACE	MINERAL-FIBER BLANKET	6.0	NONE	NO
	BUILDING EXTERIOR (OUTSIDE BUILDING INSULATION)	MINERAL-FIBER BLANKET	12.0	ALUMINUM	NO
RETURN AIR	BUILDING INTERIOR, CONCEALED	MINERAL-FIBER BLANKET	6.0	NONE	NO
	BUILDING INTERIOR, EXPOSED, OUTSIDE CONDITIONED SPACE	MINERAL-FIBER BLANKET	6.0	NONE	NO
	BUILDING EXTERIOR (OUTSIDE BUILDING INSULATION)	MINERAL-FIBER BLANKET	12.0	ALUMINUM	NO
EXHAUST AIR	ALL	NONE	---	---	---
OUTSIDE AIR	BUILDING INTERIOR, CONCEALED OR EXPOSED	MINERAL-FIBER BLANKET	12.0	NONE	NO
FLEXIBLE DUCT	BUILDING INTERIOR	MINERAL-FIBER BLANKET POLYETHYLENE INNER & OUTER JACKET	6.0	NONE	NO

NOTES

(1) ALL DUCT INSUL ATION SHALL HAVE ALL SERVICE JACKET MANUFACTURERED FROM KRAFT PAPER, REINFORCED SCRIM, ALUMI NUM FOIL OR VINYL FILM.
(2) DUCT INSULATION SHALL BE MECHANICAL Y FASTENED TO DUCTS WIDER THAN 24" AND SHALL BE AFFIXED TO BOTTOM OF DUCT WITH WELDED METAL PINS AND 2" WAHSERS AT 18" MAXIMUM SPACING.
(3) DUCT LINER, WHERE SHOWN ON DRAWINGS, SHALL BE A MINIMUM OF 1" THICK AND SHALL HAVE A MINIMUM "R" VALUE OF 6.
(4) DUCT LINER SHALL NOT BE SUBSTITUTED FOR DUCT LINER UNLESS THE MINIMUM "R" VALUE OF THE DUCT LINER IS INCREASED TO A MINIMUM OF 6.0.
(5) DUCT DIMENSIONS SHOWN ON THE DRAWINGS ARE NET FREE AREA. WHERE DUCT LINER IS SHOWN, INCREASE METAL DUCT SIZE TO ALLOW FOR THICKNESS OF DUCT LINER.
(6) TOTAL LENGTH OF FLEXIBLE DUCT RUN SHALL NOT EXCEE D 3'-0". EXTEND SHEET METAL DUCT TO WITHIN 3'-0" OF THE AIR INLET OR AIR OUTLET DEVICE.
(7) OFFSET OF FLEXIBLE DUCT SHALL NOT EXCEED ONE-HALF (1/2) OF THE DUCT DIAMETER.
(8) ALL DUCT CHANGES IN DIRECTION SHALL BE MADE WITH RIGID ELBOWS OR OTHER RIGID METAL FITTINGS.
(9) INDOOR DUCT INSULATION AND RELATED MATERIALS SHALL HAVE A FLAME-SPREAD INDEX OF 25 OR LESS, AND SMOKE-DEVELOPED INDEX OF 50 OR LESS WHEN TESTED TO ASTM E 84.
(10) OUTDOOR DUCT INSULATION AND RELATED MATERIALS SHALL HAVE A FLAME-SPREAD INDEX OF 75 OR LESS, AND SMOKE-DEVELOPED INDEX OF 150 OR LESS WHEN TESTED TO ASTM 84.
(11) ALL DUCT COVERINGS AND LININGS SHALL NOT FLAME, GLOW, SMOLDER OR SMOKE WHEN TESTED IN ACCORDANCE WITH ASTM C 411.
(12) ALL MATERIALS USED AS INTERNAL INSULATION AND EXPOSED TO THE AIR STREAM IN DUCTS SHALL BE SHOWN TO BE DURABLE WHEN TESTED IN ACCORDANCE WITH UL 181.

CEILING DIFFUSER, REGISTER & GRILLE SCHEDULE

SYMBOL	DESCRIPTION	SIZES		ACCEPTABLE MANUFACTURERS
		NOMINAL SIZE (NECK SIZE)	AIR FLOW (CFM)	
CD	CEILING DIFFUSER: FULL LOUVER FACE, REMOVABLE CORE, LAY-IN CEILING MOUNTING, 24" X 24" PANEL SIZE, 4-WAY PATTERN, ROUND NECK, ALUMINUM CONSTRUCTION NC-35 MAXIMUM, TESTED IN ACCORDANCE WITH ADC TEST 1062, OPTIONS & ACCESSORIES: BAKED ENAMEL WHITE FINISH. PROVIDE CEILING MOUNT TO MATCH CEILING TYPE.	6" DIA. 8" DIA. 10" DIA. 12" DIA. 14" DIA.	120 200 400 700 1000	KRUEGER 51400 TITUS PRICE
CG	CEILING EXHAUST GRILLE: PERFORATED FACEPLATE, ALUMINUM, CEILING MOUNTING, NC-35 MAXIMUM, TESTED IN ACCORDANCE WITH ADC 1062. 3/16" HOLES ON 1/4" STAGGERED CENTERS OPTIONS & ACCESSORIES: BAKED ENAMEL WHITE FINISH	6" X 6" 8" X 8" 10" X 10" 12" X 12" 14" X 14" 22" X 22"	130 260 450 700 900 2000	KRUEGER S580P PRICE TITUS
EG	CEILING EXHAUST GRILLE: EGGCRATE, 1/2"X1/2"X1/2", ALUMINUM NC-35 MAXIMUM, TESTED IN ACCORDANCE WITH ADC 1062. BAKED ENAMEL WHITE FINISH	SEE PLANS	SEE PLANS	KRUEGER EGC5 PRICE TITUS

AIR HANDLING UNIT SCHEDULE

SYMBOL	AREA SERVED	CFM	EXT S.P. @ S.L.	MIN. CKT. AMPS	HEATING COIL				UNIT		MANUGACTURER & MODEL NO.	NOTES
					NO.	KW	□	VOLT	□	VOLT		
AHU-1	ENTIRE BUILDING	660	.3"	27.1	1	6	1	230	1	230	FIRST CO. 18XMBX	(1)

NOTES:

(1) HORIZONTAL FAN COIL, WITH 1/8 HP DIRECT DRIVE THERMALLY PROTECTED MOTOR. 6 KW HEATER, FILTERS, CONTACTOR, AND RELAY TO CYCLE FAN AND HEATING ELEMENTS.

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project:

Grand Junction Dos Rios Park Restroom

project#: 18.0850
date: 29 MAY 2020

revisions :

title:

MECHANICAL SCHEDULES

sheet:

ME601

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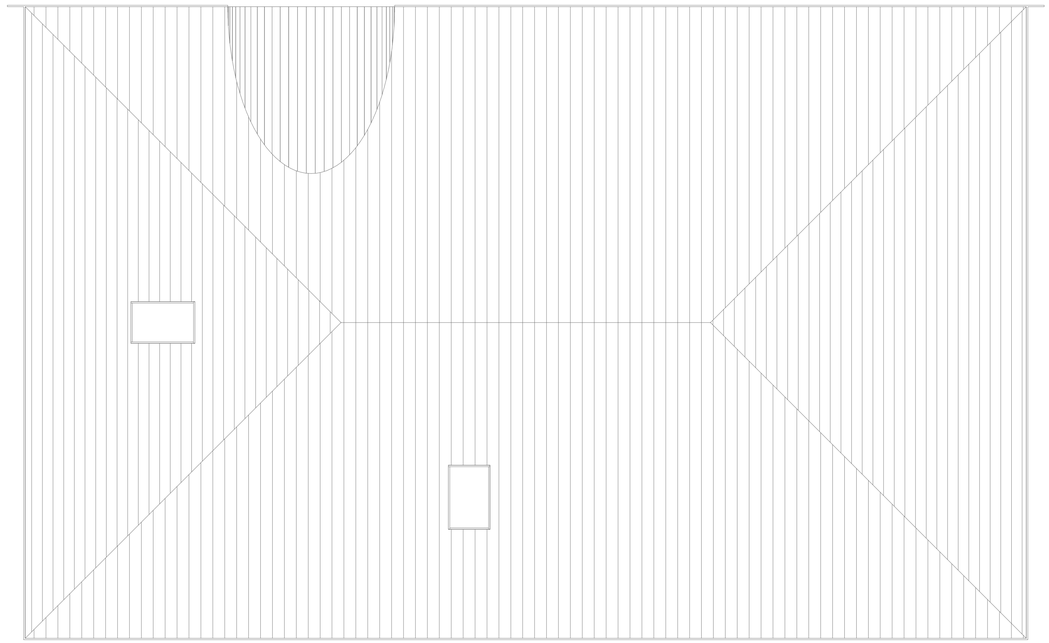
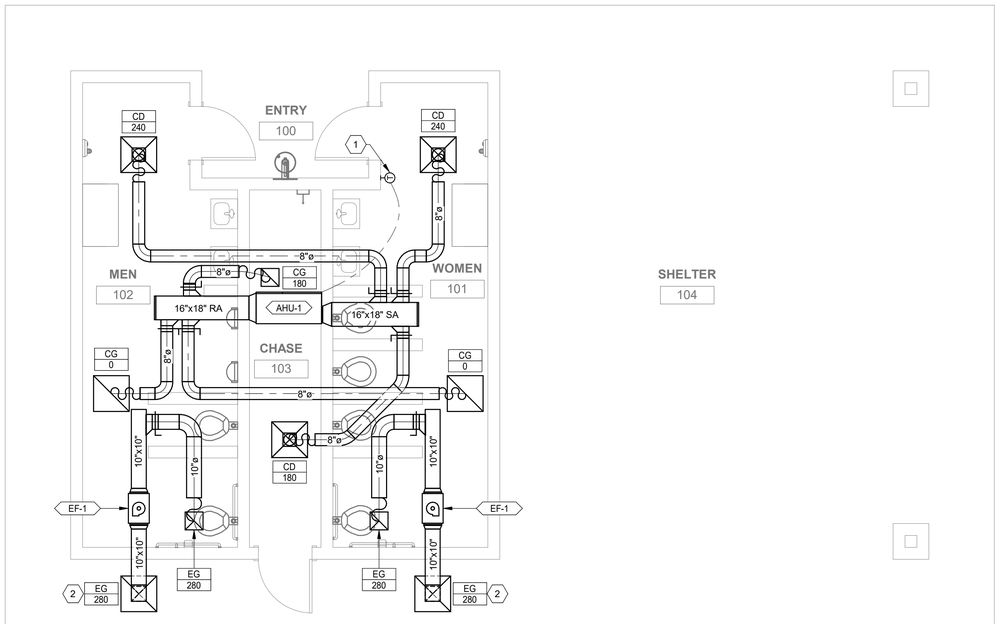


2 ROOF MECHANICAL PLAN
1/4" = 1'-0"



1 MAIN LEVEL MECHANICAL PLAN
1/4" = 1'-0"

SHEET KEYNOTES

1 PROVIDE TAMPER PROOF THERMOSTAT COVER WITH LOCK AND KEY. BASIS OF DESIGN HONEYWELL 2E379.

2 INSTALL EXHAUST GRILLE ON UNDERSIDE OF AWNING.

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project:
Grand Junction Dos Rios Park Restroom

project#: 18.0850
date: 29 MAY 2020

revisions:

title:
MECHANICAL PLANS

sheet:
MH101

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MISC. SYMBOL LEGEND

SYMBOL	DESCRIPTION
# / SHEET	DETAIL INDICATOR: # INDICATES DETAIL NUMBER, SHEET INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
# / SHEET	ELEVATION OR SECTION INDICATOR, EXTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
100	ROOM OR SPACE NUMBER.
1	KEYNOTE INDICATOR.
	REVISION INDICATOR.
CU-1	EQUIPMENT INDICATOR.
P-	PLUMBING FIXTURE INDICATOR.
TYPE / CFM / SIZE	DIFFUSER/GRILLE INDICATOR.
TYPE / SIZE	DIFFUSER/GRILLE INDICATOR.
	BREAK, STRAIGHT
	BREAK, ROUND.
	MATCH LINE INDICATOR
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE.
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.
	NEW CONNECTION POINT TO EXISTING

PLUMBING SYMBOL LEGEND

SYMBOL	DESCRIPTION
C.B.	CATCH BASIN
M.H.	MANHOLE
W.H.	WALL HYDRANT
H.B.	HOSE BIBB
	CLEANOUT TO GRADE
	FLOOR CLEANOUT
	WALL CLEANOUT
1/2	1/2 GRATE
3/4	3/4 GRATE
F	FULL GRATE

PLUMBING PIPING LEGEND

SYMBOL	DESCRIPTION
	SANITARY SEWER (SS)
	GREASE WASTE (GW)
	VENT (V)
AV	ACID VENT
AW	ACID WASTE
	DOMESTIC COLD WATER (DCW)
	DOMESTIC HOT WATER (DHW)
	DOMESTIC HOT WATER RECIRC (DHWR)
180	180°F HOT WATER
180R	180° HOT WATER RETURN
160	160° HOT WATER
160R	160° HOT WATER RETURN
RW	RAINWATER
SRW	SECONDARY RAINWATER
SD	STORM DRAIN
VTR	VENT THRU ROOF
#	NON POTABLE WATER
(E)	EXISTING PIPE
(E)	EXISTING PIPE TO BE REMOVED
IW	IRRIGATION WATER
SS	SANITARY SEWER
LPS	LOW PRESSURE STEAM
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
HHWS	HEATING HOT WATER SUPPLY
HHWR	HEATING HOT WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
GS	GLYCOL SUPPLY
GR	GLYCOL RETURN
G	GAS
FP	FIRE PROTECTION
LPG	PROPANE
VAC	VACUUM
CA	COMPRESSED AIR
MA	MEDICAL AIR
O	OXYGEN
NO	NITROUS OXIDE
N	NITROGEN
CO2	CARBON DIOXIDE
EVAC	EVACUATION

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	VALVES, METERS, AND GAUGES
	SHUT OFF VALVE
	GATE VALVE
	CHECK VALVE
	AUTO 2-WAY VALVE
	AUTO 3-WAY VALVE
	GLOBE VALVE
	BALL VALVE
	RELIEF VALVE
	CHAIN OPERATED GATE VALVE
	PRESSURE REDUCING VALVE
	BUTTERFLY VALVE
	SOLENOID VALVE
	ANGLE VALVE
	VENTURI
	BALANCING OR PLUG COCK
	FLOW SETTER
	EXPANSION VALVE (REFRIG.)
	GAS COCK
MAV	MANUAL AIR VENT
	STRAINER
	GAUGE COCK
	FLEXIBLE CONNECTION
	PRESSURE GAUGE
	THERMOMETER
	VICTUALIC COUPLING
	REDUCER CONCENTRIC
	REDUCER ECCENTRIC
	REFRIGERANT SITE GLASS
	REFRIGERANT STRAINER
	REFRIGERANT FILTER DRIER
	90 DEG ELBOW UP
	90 DEG ELBOW DOWN
	90 DEG TEE UP
	90 DEG TEE DOWN
	UNION
	CAPPED PIPE
	ANCHOR
	FLOAT AND THERMOSTATIC TRAP

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

(E)	EXISTING
(F)	FUTURE
AD	ACCESS DOOR
AIR COND	AIR CONDITION(-ING,-ED)
APD	AIR PRESSURE DROP
BD	BALANCING DAMPER
BHP	BRAKE HORSE POWER
BTU	BRITISH THERMAL UNIT
BTUH	BTU/HOUR
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	COOLING
COMP	COMPONENT
COND	CONDENS(-ER, -ING, -ATION)
CV	CONTROL VALVE
DB	DRY BULB TEMPERATURE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRC
DIA	DIAMETER
DISCH	DISCHARGE
DP	DEPTH OR DEEP
EA	EXHAUST AIR
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
EG	ETHYLENE GLYCOL
ELEC	ELECTRIC
ELEV	ELEVATION
ENT	ENTERING
EVAP	EVAPORAT(-E, -ING, -ED, -OR)
EWT	ENTERING WATER TEMPERATURE
EXT	EXTERNAL
FC	FLEXIBLE CONNECT(-OR, -ION)
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FSD	FIRE SMOKE DAMPER
GAL	GALLON(S)
GE	GREASE EXHAUST
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HD	HEAD
HG	MERCURY
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HTG	HEATING
HZ	HERTZ (FREQUENCY)
ID	INSIDE DIAMETER
IN	INCH
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LG	LENGTH
LH	LATENT HEAT
LRA	LOCKED ROTOR AMPS
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MFR	MANUFACTUR(-ER, -ED)
NC	NOISE CRITERIA
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
OZ	OUNCE
PD	PRESSURE DROP OR DIFFERENCE
PG	PROPOLENE GLYCOL
PH	PHASE
PPM	PARTS PER MILLION
PRESS	PRESSURE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAUGE
R	THERMAL RESISTANCE
RA	RETURN AIR
RECIRC	RECIRCULATE
REFR	REFRIGERATION
REQD	REQUIRED
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SC	SHADING COEFFICIENT
SCFM	STANDARD CUBIC FEET PER MINUTE
SCW	SOFT COLD WATER
SF	SAFETY FACTOR
SH	SENSIBLE HEAT
SP	STATIC PRESSURE
SPEC(S)	SPECIFICATION(S)
SQ	SQUARE
STD	STANDARD
SW	SOIL, WASTE
TA(R)	TRANSFER AIR (RETURN)
TA(S)	TRANSFER AIR (SUPPLY)
TD	TEMP. DROP OR DIFF.
TEMP	TEMPERATURE
THERM	THERMAL
TOT	TOTAL
TSTAT	THERMOSTAT
V	VOLT
V	VENT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY TEMPERATURE
VEL	VELOCITY
VENT	VENT, VENTILATION
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
WB	WET BULB TEMP
WC	WATER COLUMN
WG	WATER GAUGE
WPD	WATER PRESSURE DROP
WT	WEIGHT
WTR	WATER

PLUMBING GENERAL NOTES

1 THE PLUMBING DRAWINGS SHOW THE GENERAL DESIGN, ARRANGEMENT AND EXTENT OF THE PLUMBING SYSTEM. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, THESE DRAWINGS DO NOT SHOW ALL OFFSETS, BENDS OR ELBOWS NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. CONTRACTOR SHALL MAKE SUCH SLIGHT ALTERATIONS AS MAY BE NECESSARY TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL IN ACCORDANCE WITH THE DESIGN INTENT. MAJOR DEVIATIONS SUCH AS CHANGES IN COMPONENT SIZES, WEIGHTS, QUANTITIES OR MATERIAL REQUIRE PRIOR APPROVAL BY THE DESIGN ENGINEER.

2 THE DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH THE ITEMS SHOWN ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN BOTH.

3 THE ENTIRE PLUMBING INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY ADOPTED BUILDING CODES, MECHANICAL CODE, PLUMBING CODE, ELECTRICAL CODE, AND ALL OTHER APPLICABLE CITY, COUNTY, STATE, AND FEDERAL CODES AND REGULATIONS IN EFFECT.

4 THE ENTIRE PLUMBING INSTALLATION SHALL CONFORM TO ANY CODES, RULES, REGULATIONS AND REQUIREMENTS OF THE BUILDING OWNER.

5 PRIOR TO FABRICATION AND INSTALLATION OF ANY PLUMBING COMPONENT THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL PLUMBING WORK WITH ALL OTHER BUILDING TRADES, INCLUDING BUILDING TRADES HIRED DIRECTLY BY THE OWNER. WHERE CONFLICTS MAY OCCUR, THEY SHALL BE RESOLVED PRIOR TO INSTALLATION.

6 ALL PLUMBING INFORMATION IS NOT SHOWN ON THE PLUMBING DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS.

7 . THE CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW AND USE, WHERE APPROPRIATE, ALL THE PLUMBING DETAILS SHOWN ON THE DRAWINGS. DETAILS MAY OR MAY NOT BE CALLED OUT ON THE DRAWINGS WITH SYMBOLS OR KEYED NOTES. ANY CHANGES RESULTING FROM FAILURE TO INSTALL THE PLUMBING SYSTEM WITHOUT USING THE INCLUDED DETAILS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

8 ANY PART OF THE PLUMBING INSTALLATION THAT FAILS, IS UNFIT, OR BECOMES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

9 PROVIDE PROPER PROVISIONS FOR EXPANSION, CONTRACTION, OR MOVEMENT OF ALL PIPING.

10 PROVIDE LARGE ENOUGH PIPE SLEEVES THROUGH WALL OR FLOOR TO ALLOW FOR ANTICIPATED DIFFERENTIAL MOVEMENT.

11 ALL PIPING SHALL BE SUPPORT WITH CLEVIS HANGERS (MSS TYPE 1). PERFORATED METAL STRAPS OR PLASTIC STRAPPING (PLUMBER TAPE) SHALL NOT BE USED TO SUPPORT OR BRACE ANY PIPE.

12 PROVIDE PIPE HANGERS WITHIN 18-INCHES OF ALL CHANGES OF DIRECTION.

13 PROVIDE SWAY BRACING FOR ALL PIPING 4" AND LARGER AT ALL CHANGES IN DIRECTION GREATER THAN 45-DEGREES.

14 ALL STEEL CLEVIS HANGERS USED TO SUPPORT COPPER PIPING SHALL BE COPPER OR PLASTIC COATED.

15 COPPER PIPING SHALL NOT COME IN CONTACT WITH FIRE TREATED LUMBER. PROVIDE ½" THICK SLIP-ON CLOSED CELL INSULATION WHERE COPPER PIPING IS ADJACENT TO FIRE TREATED LUMBER. CLOSED CELL INSULATION SHALL EXTEND A MINIMUM OF 1-1/2" PAST LUMBER.

16 ALL EXPOSED PIPING SHALL BE INSTALLED IN A NEATLY ARRANGED MANNER PARALLEL TO THE BUILDING STRUCTURE.

17 ALL EXPOSED DOMESTIC WATER PIPE IN OCCUPIED SPACES SHALL BE POLISHED CHROME PLATED.

18 ALL EXPOSED DRAINAGE PIPING IN OCCUPIED SPACES INCLUDING TRAPS UNDER SINKS SHALL BE POLISHED CHROME PLATED.

19 DRAWINGS SHOW GENERAL ARRANGEMENT OF THE DRAIN WASTE AND VENT SYSTEM WITH THE REQUIRED CLEANOUTS. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL CLEANOUTS AS REQUIRED BY THE PLUMBING CODE.

20 ALL SANITARY DRAINAGE SYSTEM PIPING 3" AND LARGER SHALL BE SLOPED IN DIRECTION OF FLOW AT A MINIMUM OF 1/8" PER FOOT.

21 ALL SANITARY DRAINAGE SYSTEM PIPING SMALLER THAN 3" SHALL BE SLOPED IN DIRECTION OF FLOW AT A MINIMUM OF 1/4" PER FOOT.

22 SLOPE VENT SYSTEM TOWARDS DRAINAGE SYSTEM.

23 SIMILAR EQUIPMENT SHALL BE OF THE SAME MANUFACTURER.

24 ALL EQUIPMENT SHALL PROVIDE THE SCHEDULED PERFORMANCE AT THE JOB SITE ELEVATION.

25 FIXTURE AND EQUIPMENT MODEL NUMBERS SHOWN IN PLUMBING FIXTURE SCHEDULE AND PLUMBING EQUIPMENT SCHEDULE ARE SHOWN TO ESTABLISH THE TYPE OF PRODUCT THAT SHALL BE USED. THE SELECTED PRODUCT SHALL MEET THE SCHEDULED PERFORMANCE DATA SHOWN ON THE SCHEDULE EVEN IF A DIFFERENT MODEL IS SUPPLIED THAT IS DIFFERENT THAN THAT SCHEDULED.

26 ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE ALL NECESSARY FITTINGS, TRANSITIONS, VALVES AND OTHER DEVICES AND ACCESSORIES REQUIRED FOR A COMPLETE, WORKABLE INSTALLATION.

27 SEE "PLUMBING FIXTURE SCHEDULE" FOR INDIVIDUAL TRAPS, WASTE, VENT, AND DOMESTIC WATER PIPING FOR INDIVIDUAL FIXTURES.

28 ALL PLUMBING EQUIPMENT SHALL BE LISTED AND LABELED BY AN APPROVED TESTING AGENCY.

29 FIXTURES, EQUIPMENT AND PIPING INSTALLATION SHALL MEET NSF STANDARDS.

PLUMBING SHEET INDEX

PE001	PLUMBING COVER SHEET
PE501	PLUMBING DETAILS
PE601	PLUMBING SCHEDULES
PL101	PLUMBING PLANS

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JAMES W. McCULLOUGH
05/29/2020
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project:
Grand Junction Dos Rios Park Restroom

project#: 18.0850
date: 29 MAY 2020

revisions :

title:
PLUMBING COVER SHEET

sheet:
PE001

PERMIT SET

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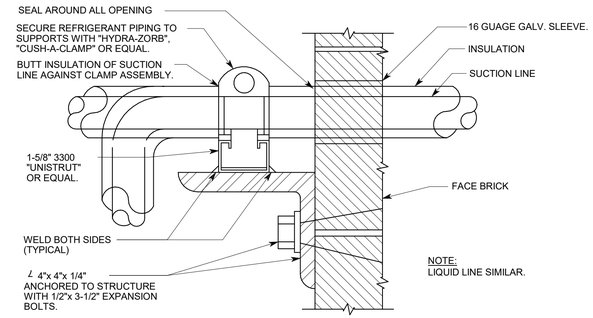

4 PIPE PENETRATION DETAIL

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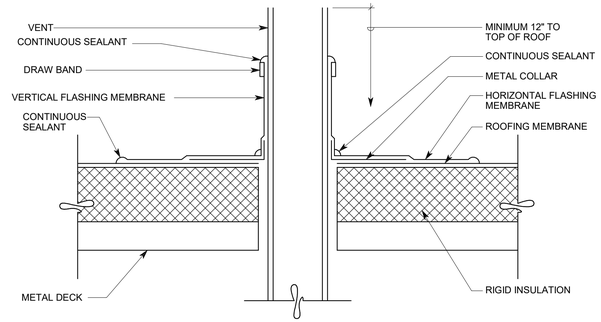

3 VENT THROUGH ROOF DETAIL

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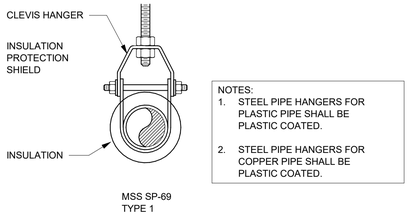
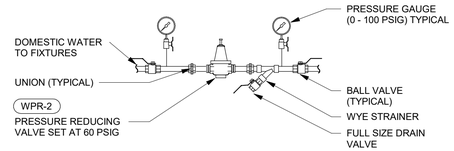


6 PIPE HANGER

SCALE: NTS



2 WATER PRESSURE REGULATOR DETAIL

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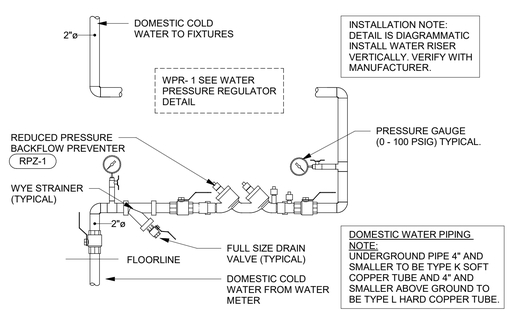
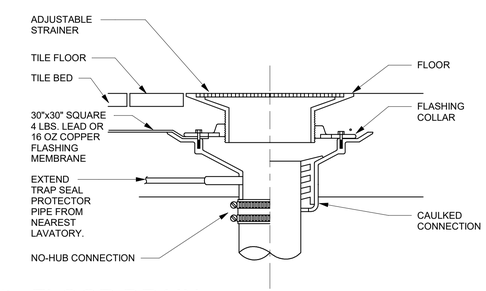


5 DOMESTIC WATER RISER

SCALE: NTS



1 FLOOR DRAIN

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project:

Grand Junction Dos Rios Park Restroom

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date: 29 MAY 2020

revisions :

title:

PLUMBING DETAILS

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PE501

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DOMESTIC COLD WATER DEMAND

EQUIPMENT	OCCUPANCY	TYPE OF SUPPLY CONTROL	QUANTITY	INDIVIDUAL WATER SUPPLY FIXTURE UNITS		TOTAL COLD WATER FIXTURE UNITS	TOTAL WATER SERVICE FIXTURE UNITS
				COLD WATER	TOTAL		
URINAL	PUBLIC	FLUSHOMETER VALVE	2	5.0	5.0	10	10
LAVATORY	PUBLIC	FAUCET	4	1.5	2.0	6	8
MOP SINK	PUBLIC	FAUCET	1	2.25	3.0	2	3
DRINKING FOUNTAIN	PUBLIC	MIXING VALVE	1	.25	.25	0.3	0.25
WATER CLOSET, 1.6 GPF	PUBLIC	FLUSHOMETER VALVE	6	10.0	10.0	60	60
TOTAL WATER SUPPLY FIXTURE UNITS (WSFU)							81
CONVERSION FROM WSFU TO FLOW RATE (IPC TABLE E103.3(3)) (GPM)							62
ADDITIONAL FIXTURES (GPM)							0
CHAPTER 10 - WATER SUPPLY AND DISTRUBUTION, AND		SYSTEM IS PREDOMINATELY FLUSH VALVES					
TOTAL GPM							62
PIPE SIZE (WATER SUPPLY TO BUILDING) :						2"	
2012 IPC FIGURE E103.3(6) - FRICTION LOSS (PSI) FOR FAIRLY ROUGH PIPE						4	PSIG / 100 FEET
2012 IPC FIGURE E103.3(6) - FLUID VELOCITY (FPS) FOR FAIRLY ROUGH PIPE						6	FPS

SANITARY SEWER DEMAND

EQUIPMENT	OCCUPANCY	QUANTITY	INDIVIDUAL DRAINAGE FIXTURE UNIT	TOTAL DRAINAGE FIXTURE UNITS
LAVATORY	PUBLIC	4	1.0	4
DRINKING FOUNTAIN	PUBLIC	1	.5	1
SHOWER	PUBLIC	0	2.0	0
URINAL	PUBLIC	2	4.0	8
MOP SINK	PUBLIC	2	2.0	4
FLOOR DRAIN, 2" TRAP	PUBLIC	5	2.0	10
WATER CLOSET, 1.6 GPF FLUSHOMETER VALVE	PUBLIC	4	6.0	24
MISCELLANEOUS LOADS				0
TOTAL (WSFU):				50.5
2012 INTERNATIONAL PLUMBING CODE		SLOPE:	1/8" PER FOOT	4"
CHAPTER 11 - SANITARY DRAINAGE		REQUIRED PIPE SIZE		
TABLE 709.1 - DRAINAGE FIXTURE UNITS FOR FIXTURES & GROUPS		(160 DFU'S PERMITTED ON 4" MAIN)		
ADDITIONAL DRAINAGE CAPACITY FOR SELECTED BUILDING DRAIN SIZE		109.5		

WATER HAMMER ARRESTER SCHEDULE

SYMBOL	INLET SIZE (INCHES)	PDI SYMBOL	CAPACITY (WFU)
WHA-A	½	A	1-11
WHA-B	3/4	B	12-32
WHA-C	1	C	33-60
WHA-D	1	D	61-113

ACCEPTBLE MANUFACTURERS	NOTES / REMARKS
SOUIX CHIEF "HYDRA-ARRESTER" 652 MIFAB "MWH" PPP "SC" WATTS LF05	(1) ANSI/ASSE 1010 LISTED (2) LEAD FREE CONSTRUCTION (3) COPPR TUBE BODY; POLY PISTON; EPDM O-RINGS

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	TRAP	WASTE	VENT	DOMESTIC COLD WATER	DOMESTIC HOT WATER	DESCRIPTION	BASIS OF DESIGN MANUFACTURER AND MODEL
WC	WATER CLOSET	INT.	4"	2"	1-1/4"	----	WALL MOUNTED, FLUSH VALVE, VITREOUS CHINA, ELONGATED, 1-1/2" REAR SPUD, BEDPAN LUGS, 15" RIM HEIGHT, SIPHON JET, 2-1/8" MINIMUM TRAPWAY, 1.6 GPF, SYSTEM PERFORMANCE MAP SCORE: 1,000 G. AT 1.28 GPF. LOW CONSUMPTION, DIAPHRAGM TYPE ELECTRONIC SENSOR FLUSH VALVE, 24V HARDWIRED, 1.6 GALLON PER FLUSH, PROVIDE TRANSFORMER. POLISHED CHROME PLATED BRASS. OPEN FRONT SEAT, LESS SEAT, HEAVY DUTY MOLDED PLASTIC, ELONGATED, STAINLESS STEEL HINGE POSTS.	KOHLER K-84323 SLOAN 140 ESS-1.6 BEMIS 1955C
WC-A	WATER CLOSET (ACCESSIBLE PUBLIC TOILET ROOM)	INT.	4"	2"	1-1/4"	----	WALL MOUNTED, FLUSH VALVE, VITREOUS CHINA, ELONGATED, 1-1/2" REAR SPUD, BEDPAN LUGS, 15" RIM HEIGHT, SIPHON JET, 2-1/8" MINIMUM TRAPWAY, 1.6 GPF, INSTALL MINIMUM 17" AFF. SYSTEM PERFORMANCE MAP SCORE: 1,000 G. AT 1.28 GPF. LOW CONSUMPTION, DIAPHRAGM TYPE ELECTRONIC SENSOR FLUSH VALVE, 24V HARDWIRED, 1.6 GALLON PER FLUSH, PROVIDE TRANSFORMER. POLISHED CHROME PLATED BRASS. OPEN FRONT SEAT, LESS SEAT, HEAVY DUTY MOLDED PLASTIC, ELONGATED, STAINLESS STEEL HINGE POSTS.	KOHLER K-84323 SLOAN 140 ESS-1.6 BEMIS 1955C
UR	URINAL (ACCESSIBLE)	INT.	2"	2"	1"	---	WALL MOUNTED, FLUSHING RIM, WASHOUT, VITREOUS CHINA. 3/4" REAR SPUD. ELECTRONIC, HARD WIRED, 24V, DIAPHRAGM TYPE FLUSH VALVE, 0.25 GALLON PER FLUSH POLISHED CHROME PLATED BRASS FLOOR MOUNTED SUPPORT, FLOOR BEARING PLATE, TOP AND BOTTOM BEARING STUDS	KOHLER K-4991-ER SLOAN 195 ESS J.R. SMITH 0615
LAV	LAVATORY (ACCESSIBLE)	1-1/4"	1-1/2"	1-1/2"	1/2"	1/2"	FIXTURE: VITREOUS CHINA, WALL MOUNTED, 4" CENTERS, ADA. FAUCET: SENSOR FAUCET, 24V HARD WIRED CONNECTION, LAMINAR FLOW RESTRICTOR, POLISHED CHROME PLATED LEAD FREE BRASS. DRAIN: CHROME PLATED GRID TYPE DRAIN, CHROME PLATED BRASS TAILPIECE, OFFSET TAILPIECE. TRAP: WHITE POLYVINYL CHLORIDE (PVC). AERATOR: POLISHED CHROME PLATED LEAD-FREE BRASS, LAMINAR FLOW, 0.5 GPM. STOPS: 1/2" I.P.S. x 3/8" O.D COMPRESSION, POLISHED CHROME PLATED HEAVY PATTERN LEAD FREE BRASS ANGLE BALL VALVE. SUPPLIES: PEX TUBING, FORMED NOSEPIECE WITH FLANGE, RUBBER WASHER OR GASKET, PLASTIC COMPRESSION SLEEVE, ASTM A112.18.6, ASTMF877. ENCLOSURE: RIGID POLYVINYL CHLORIDE ENCLOSURE, ADA ACCESSIBLE, UL LISTED	KOHLER K-2007 SLOAN ETF-600 MCGUIRE 155WCECO DEARBORN 9701-1 BRASSCRAFT KTCR19XC BRASSCRAFT P1-15A TRUEBRO "LAV SHIELD" 2018
MS	MOP SINK	3"	3"	2"	1/2"	1/2"	CAST - IN - PLACE CONCRETE. COORDINATE DIMENSIONS WITH OWNER. FLAT GRID DRAIN, POLISHED CHROME PLATED. POLISHED CHROME PLATED LEAD-FREE BRASS, ATMOSPHERIC VACUUM BREAKER, 3/4" THREADED HOSE CONNECTION. LEVER HANDLES OFFSET INLETS ARM WITH INTEGRAL CHECK PROVIDE ADDITIONAL HOSE BIB WATER CONNECTION FOR CHEMICAL DISPENSER. PROVIDE DOUBLE CHECK WITH VACUUM BREAKER ON WATER LINE SERVING ADDITIONAL HOSE BIB.	CHICAGO FAUCET 540-LD897SWXFABCP
DF	DRINKING FOUNTAIN	1-1/4"	1-1/2"	1-1/2"	1/2"	--	FIXTURE FURNISHED BY OWNER, INSTALLED BY THIS CONTRACTOR. SCHEDULE 40 PVC P-TRAP ANGLE BALL VALVE STOPS, 1/2" I.P.S. x 3/8" O.D COMPRESSION, POLISHED CHROME PLATED LEAD FREE BRASS, HEAVY PATTERN RIGID POLISHED CHROME PLATED COPPER TUBING SUPPLIES REMOTE CHILLER. 115V/1PH/60HZ	DEARBORN 9701-1 BRASSCRAFT KTCR19XC BRASSCRAFT P1-15A ELKAY ECH8

NOTES:
1. PROVIDE ALL FIXTURE CARRIERS FOR WALL MOUNTED PLUMBING FIXTURES.
2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

PLUMBING FIXTURE SCHEDULE (DRAINS)

SYMBOL	FIXTURE	TRAP	WASTE	VENT	DOMESTIC COLD WATER	DOMESTIC HOT WATER	DESCRIPTION		MANUFACTURERS AND MODEL
FD	FLOOR DRAIN	2"	2"	2"	---	---	FIXTURE: STRAINER: TRAP:	PVC BODY, FLASHING COLLAR, TRAP PRIMER CONNECTION. 5" ROUND NICKEL BRONZE ADJUSTABLE. PVC P-TRAP.	JRS PRODUCTS 212 JRS PRODUCTS 210-12
CO	CLEANOUT	---	SAME AS PIPE	---	---	---	EQUIPMENT:	CAST IRON BLIND PLUG.	CHARLOTTE PIPE NH-50
FCO	FLOOR CLEANOUT	---	SAME AS PIPE	---	---	---	EQUIPMENT:	HEAVY DUTY NICKEL BRONZE TOP, BRASS PLUG	J. R. SMITH 4113S-NB
COTG	CLEANOUT TO GRADE	---	SAME AS PIPE	---	---	---	EQUIPMENT:	HEAVY DUTY NICKEL BRONZE TOP, BRASS PLUG	J. R. SMITH 4113S-NB
WCO	WALL CLEANOUT	---	SAME AS PIP	---	---	---	EQUIPMENT:	ROUND FLAT STAINLESS STEEL WALL PLATE	J.R. SMITH 4532S
ACCEPTABLE MANUFACTURERS:									
DRAINAGE (FLOOR DRAINS, ETC):		J.R. SMITH,	ZURN,	WATTS					

PLUMBING FIXTURE SCHEDULE (MISC. VALVES)

SYMBOL	FIXTURE	TRAP	WASTE	VENT	DOMESTIC COLD WATER	DOMESTIC HOT WATER	DESCRIPTION		MANUFACTURER AND MODEL
NFWH	NON-FREEZE WALL HYDRANT	---	---	---	3/4"	---	EQUIPMENT:	ENCASED, NON FREEZE, COMPRESSION CLOSURE VALVE, HINGED COVER WITH KEY LOCK 3/4" HOSE CONNECTION, INTEGRAL VACUUM BREAKER.	ZURN Z1305
WPR-1	WATER PRESSURE REGULATOR	---	---	---	2"	---	EQUIPMENT: CAPACITY:	LEAD FREE CONSTRUCTION, HIGH CAPACITY, WITH STRAINER 75 GPM AT 15 PSIG FALL OFF PRESSURE	WATTS LF223
RPZ-1	BACKFLOW PREVENTER	---	---	---	2"	---	EQUIPMENT:	REDUCED PRESSURE ZONE ASSEMBLY, LEAD FREE BRONZE BODY, BRONZE SEATS, OSY SEATED GATE VALVES, ASSE 1013 LISTED. 10 PSI DROP @ 75 GPM.	WATTS 909QT
BV	BALANCING VALVE	---	---	---	---	1/2"	EQUIPMENT:	CALIBRATED, LEAD FREE BRASS BODY, STAINLESS STEEL BALL, TEFLON SEAT RINGS, NSF 61-G COMPLIANT.	BELL & GOSSETT CB-LF
ACCEPTABLE MANUFACTURERS:									
BACKFLOW PREVENTER: BALANCING VALVE: PRESSURE REDUCING VALVES:		WATTS, ARMSTRONG, POWERS,		FEBCO, BELL & GOSSETT,					

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project:
Grand Junction Dos Rios Park Restroom

project#: 18.0850
date: 29 MAY 2020

revisions :

title:
PLUMBING SCHEDULES

sheet:
PE601

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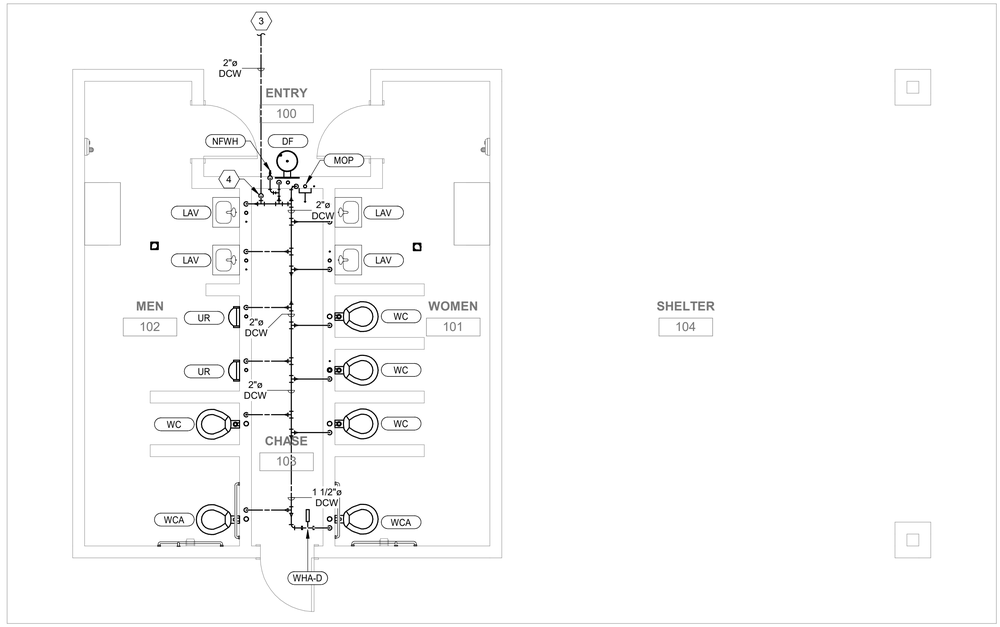
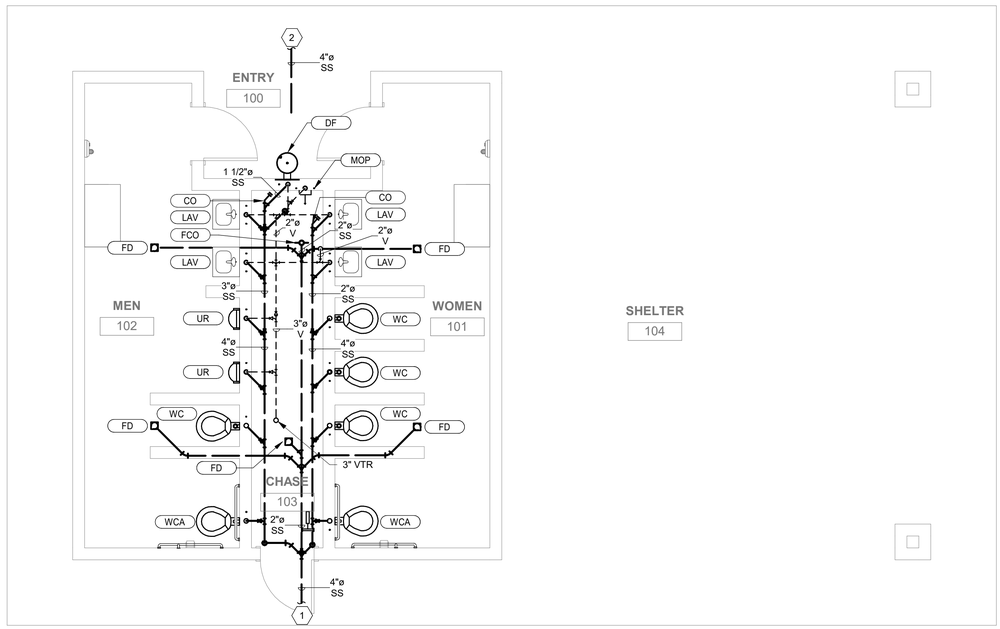


2 MAIN LEVEL PLUMBING PLAN - WATER

1/4" = 1'-0"



1 MAIN LEVEL PLUMBING PLAN - DWV

1/4" = 1'-0"

SHEET KEYNOTES

1 SANITARY MAIN TO CIVIL. MINIMUM INVERT DEPTH 36"

2 ALTERNATE LOCATION FOR WASTE LINE CONNECTION TO RESTROOMS. IF ROUTING IS REQUIRED TO ROUTE THIS WAY, DRAINAGE PIPING TO MIRROR LAYOUT INDICATED.

3 DOMESTIC WATER LINE TO CIVIL. PROVIDE STOP AND WASTE VALVE.

4 DOMESTIC WATER RISER. SEE DETAILS. SLOPE WATER LINES BACK TO MAIN RISER. PROVIDE ISOLATION VALVE AT BASE OF RISER AND HOSE BIBB ABOVE ISOLATION VALVE FOR DRAINING.

COLORADO REGISTERED
JAMES W. McCULLOUGH
05/29/2020
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SYMBOLS LEGEND

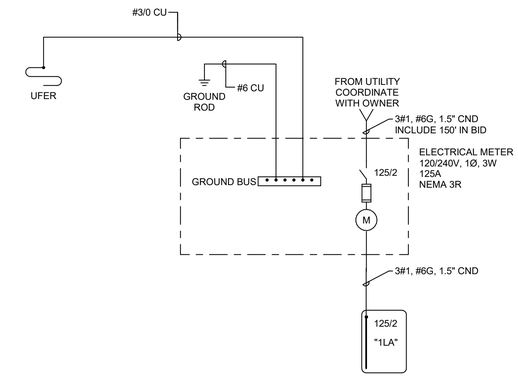
SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
ROOM NAME 100	ROOM IDENTIFIER WITH ROOM NAME AND NUMBER.
1	KEYNOTE INDICATOR.
1	REVISION INDICATOR.
X-X XMDP	MECHANICAL EQUIPMENT INDICATOR. "X-X" INDICATES EQUIPMENT MARK SHOWN ON EQUIPMENT SCHEDULE. "XMDP" IDENTIFIES PANEL EQUIPMENT IS CIRCUITED TO. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING
	BREAK, ROUND
	NEW LINE: MEDIUM LINE.
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE
	EXISTING TO REMAIN LINE: THIN LINE.
	DEMOLITION LINE: DASHED, MEDIUM LINE
WIRING METHODS	
	WIRING.
	WIRING TURNED UP OR TOWARDS OBSERVER.
	WIRING TURNED DOWN OR AWAY FROM OBSERVER.
A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN THE ELECTRICAL SPECIFICATIONS.
1 A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT SCHEDULE. FOR BRANCH WIRING USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN THE ELECTRICAL SPECIFICATIONS.
	LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE.
	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK.
1	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.
HC	ADA ACCESS PUSH PLATE
	JUNCTION BOX.
PB	PULL BOX.
C	JUNCTION BOX, CEILING.
	MECHANICAL EQUIPMENT CONNECTION. REFER TO EQUIPMENT SCHEDULE FOR REQUIREMENTS.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
WIRING DEVICES	
	RECEPTACLE, DUPLEX: NEMA 5-20R.
DF	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, DRINKING FOUNTAIN. CONCEAL WATER COOLER RECEPTACLE BEHIND WATER COOLER. SEE MECHANICAL/PLUMBING SHOP DRAWINGS FOR INSTALLATION REQUIREMENTS.
W	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WET LABEL, "WEATHERPROOF IN USE": NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
	RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
X $	SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED).
ELECTRICAL POWER AND DISTRIBUTION	
M	METER.
	DISCONNECT SWITCH, FUSED.
	DISCONNECT SWITCH, UNFUSED.
	STARTER, COMBINATION WITH DISCONNECT SWITCH.
	STARTER OR MOTOR CONTROLLER.
	PUSHBUTTON.
	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
	LIGHTING CONTROL STATION.
$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
LIGHTING (REFER TO FIXTURE SCHEDULE FOR SYMBOLS)	
(W-3)	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
LIGHTING CONTROL	
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL.
a,b	LOW VOLTAGE DIGITAL LIGHTING CONTROL SWITCH: LETTER "a,b" INDICATES ZONING WHERE SHOWN (REFER TO PLANS, SCHEDULES, AND DETAILS FOR EXACT BUTTON CONFIGURATION AND PROGRAMMING REQUIREMENTS)
DC	DIGITAL LIGHTING DIMMING CONTROLLER
RC	DIGITAL LIGHTING ROOM CONTROLLER
L X	LIGHTING SPACE CONTROL TYPE. X INDICATES TYPE. SEE SCHEDULE / DIAGRAM.



B2 ONE-LINE DIAGRAM

SCALE: 1/8" = 1'-0"

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

1P	SINGLE POLE
1PH	SINGLE-PHASE
1WAY	ONE-WAY
2/C	TWO-CONDUCTOR
2WAY	TWO-WAY
3/C	THREE-CONDUCTOR
3WAY	THREE-WAY
4OUT	QUADRUPLE RECEPTACLE OUTLET
4PDT	FOUR-POLE DOUBLE THROW
4PST	FOUR-POLE SINGLE THROW
4W	FOUR-WIRE
4WAY	FOUR-WAY
A	ABOVE COUNTER
AC	ARMORED CABLE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ALUM	ALUMINUM
AMP	AMPERE
ANN	ANNUNCIATOR
AP	ACCESS POINT (WIRELESS DATA)
AR	AS REQUIRED
ASC	AMPS SHORT CIRCUIT
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAGE
BB XFMR	BUCK-BOOST TRANSFORMER
C	CEILING MOUNTED
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCBA	CUSTOM COLOR AS SELECTED BY ARCHITECT
CCTV	CLOSED CIRCUIT TELEVISION
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CFBA	CUSTOM FINISH AS SELECTED BY ARCHITECT
CKT	CIRCUIT
CM	CONSTRUCTION MANAGER
CND	CONDUIT
CO	CONVENIENCE OUTLET
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
CTV	CABLE TELEVISION
CU	COPPER
dBA	UNIT OF SOUND LEVEL
DPDT	DOUBLE POLE, DOUBLE THROW
DS	DISCONNECT SWITCH
EA	EACH
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRIC NONMETALLIC TUBING
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
EX	EXISTING
F	FURNITURE MOUNTED
FA	FIRE ALARM
FCP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT
FOB	FREIGHT ON BOARD
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
G	GROUND
GEN	GENERATOR
GFCI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HD	HEAVY DUTY
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HZ	HERTZ
I/O	INPUT/ OUTPUT
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IN/IS	INSULATED/ ISOLATED
IR	INFRARED
J-BOX	JUNCTION BOX
kV	KILOVOLT
kVA	KILOVOLT AMPERE
kVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
kWh	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MC	METAL CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MDP	MAIN DISTRIBUTION PANEL
MG	MOTOR GENERATOR
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIOANL ELECTRICAL MANUFACTURERS ASSOCIATION
NFC	NATIONAL FIRE CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OCP	OVER CURRENT PROTECTION
OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/ OWNER INSTALLED
OFP	OBTAIN FROM PLANS
OH DR	OVERHEAD (COILING) DOOR
OL	OVERLOAD
PB	PUSHBUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PTZ	PAN/TILT/ZOOM
QTY	QUANTITY
R	REMOVE
RCP	REFLECTED CEILING PLAN
RMC	RIGID METAL CONDUIT
RNC	RIGID NONMETAL CONDUIT
RPM	REVOLUTIONS PER MINUTE
RR	REMOVE AND RELOCATE
S/S	START/STOP
SCA	SHORT CIRCUIT AMPS
SCBA	STANDARD COLOR AS SELECTED BY ARCHITECT
SF	SQUARE FOOT (FEET)
SFBA	STANDARD FINISH AS SELECTED BY ARCHITECT
SPD	SURGE PROTECTIVE DEVICE
SPDT	SINGLE POLE, DOUBLE THROW
SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
ST	SINGLE THROW
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TL	TWIST LOCK
TP	TELEPHONE POLE
TP	TWISTED PAIR
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UF	UNDERFLOOR
UGND	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPERE
VFC/VFD	VARIABLE FREQUENCY MOTOR CONTROLLER
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER

ELECTRICAL SHEET INDEX

EE001	ELECTRICAL COVER SHEET
EE101	ELECTRICAL PLANS
EE601	ELECTRICAL SCHEDULES
EE801	ELECTRICAL SPECIFICATIONS

GENERAL ELECTRICAL NOTES

1. CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.

2. OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.

   A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.

   B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.

   C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE.THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.

3. EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.

4. SUBMITTALS: PROVIDE ORIGINAL ELECTRONIC PDF FORMAT, BOUND, BOOKMARKED (EACH SECTION AND PRODUCT), AND HIGHLIGHTED. JOB NAME AND SUBCONTRACTOR SHALL BE ON THE FRONT COVER. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.

5. REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.

6. ALL WORK SHALL BE DONE ACCORDING TO THE CURRENT NATIONAL ELECTRIC CODE (NEC), IBC, NFPA, AND IFC. COMPLIANCE AND FINAL APPROVAL IS SUBJECT TO THE ON SITE FIELD INSPECTION OF THE AHJ.

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

COLORADO REGISTERED DAVID E. WESSEL 37706 5/29/2020 PROFESSIONAL ENGINEER

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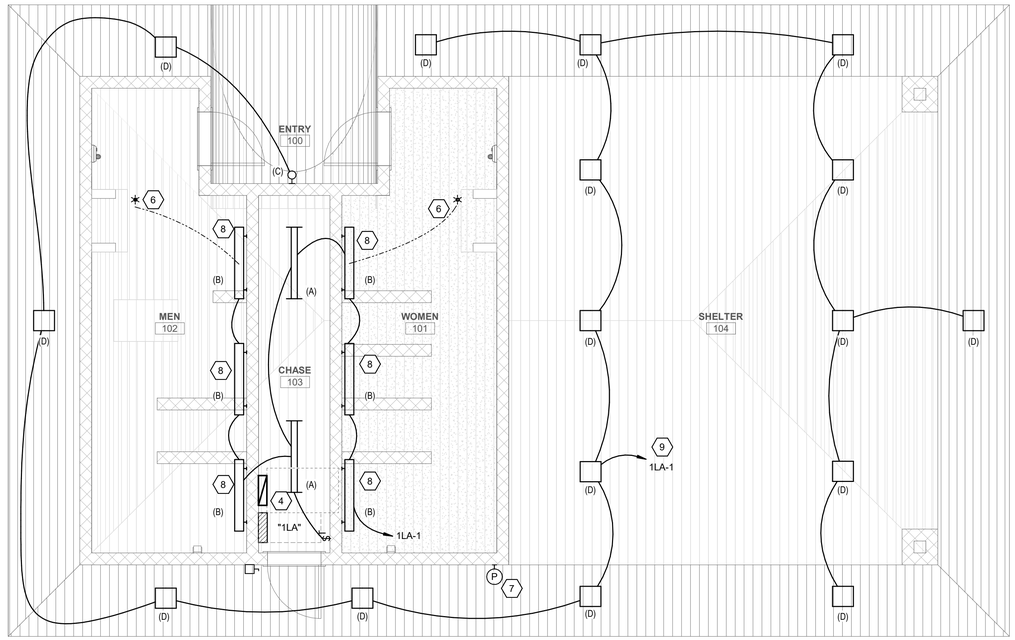
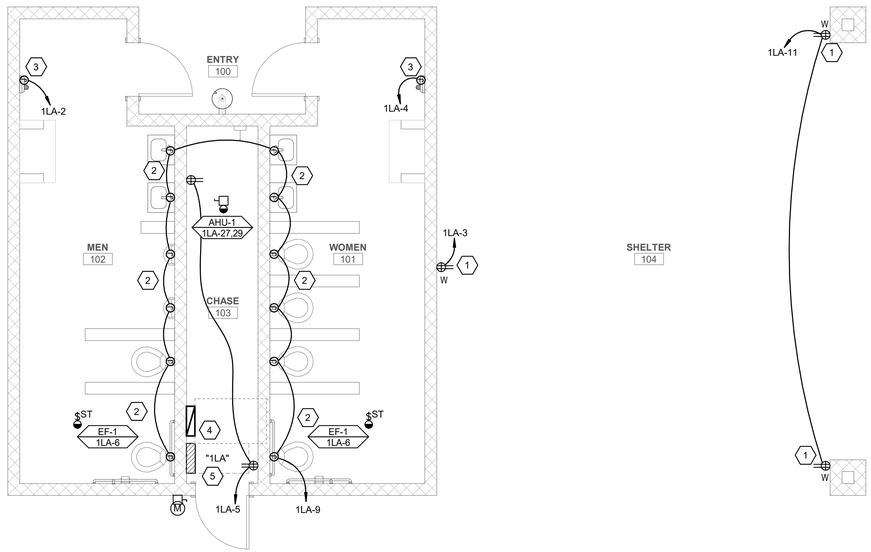


C2 LEVEL 1 LIGHTING PLAN

SCALE: 1/4" = 1'-0"



A2 LEVEL 1 POWER PLAN

SCALE: 1/4" = 1'-0"

GENERAL SHEET NOTES

SHEET KEYNOTES

1 EXTERIOR RECEPTACLES AND PLUG COVERS SHALL BE WEATHERPROOF TO COMPLY WITH NEC REQUIREMENTS. THEY SHALL BE MORTARED-IN TYPE, FLUSH MOUNTED AND LOCKABLE. ALL EXTERIOR RECEPTACLE AND PLUG COVERS SHALL BE OPENED BY A SINGLE KEY. EXTERIOR RECEPTACLE AND PLUG COVERS SHALL BE MADE OF HEAVY-DUTY CAST ALUMINUM. COORDINATE COLOR WITH THE ARCHITECT/OWNER. INSTALL CONDUITS FEEDING THE SHELTER AREA RECEPTACLES UNDER THE FLOOR SLAB.

2 PROVIDE ELECTRICAL CONNECTIONS TO FAUCET AND FLUSH VALVES. COORDINATE EXACT LOCATION WITH THE PLUMBING INSTALLERS. ALL CONNECTIONS AND CONDUITS SHALL BE RECESSED AND ACCESSIBLE ONLY IN THE PLUMBING CHASE.

3 PROVIDE ELECTRICAL CONNECTIONS TO HAND DRYERS. CIRCUIT WITH 2#10, #10G IN 0.75" CONDUIT. COORDINATE EXACT LOCATION WITH INSTALLERS PRIOR TO ROUGH-IN.

4 PROVIDE LIGHTING CONTACTOR PANEL WITH ASTRONOMICAL CLOCK OR EXTERIOR RATED ROOM CONTROLLER WITH ASTRONOMICAL CLOCK FOR LIGHTING CONTROL. COORDINATE PROGRAMMING OF THE LIGHTING WITH THE OWNER.

5 STUB (2) 1" PVC CONDUITS AND (4) 2" PVC CONDUITS FROM PANELBOARD LOCATION TO 5' BEYOND ADJACENT CONCRETE. MARK GPS COORDINATES OF CONDUITS ON RECORD DRAWINGS FOR FUTURE USE.

6 PROVIDE VANDAL RESISTENT OCCUPANCY SENSOR. MOUNT SENSOR AS HIGH AS POSSIBLE TO AVOID VANDALISM. PROVIDE SENSOR WITH AUXILIARY RELAY. CONNECT AUXILIARY RELAY TO EXHAUST FAN FOR CONTROL.

7 PROVIDE EXTERIOR RATED PHOTOCELL, PRECISION #T-168 OR APPROVED EQUIVALENT.

8 MOUNT FIXTURES WITH THE TOP OF THE FIXTURE TIGHT AGAINST THE CEILING.

9 CIRCUIT THROUGH LIGHTING CONTROLLER. COORDINATE PROGRAMMING WITH THE OWNER.

COLORADO REGISTERED DAVID E. WESEMANN 37276 5/29/2020 PROFESSIONAL ENGINEER

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INTERIOR LIGHTING FIXTURE SCHEDULE

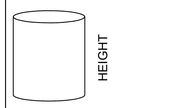
ABBREVIATIONS

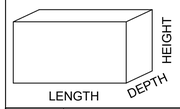
MOUNTING

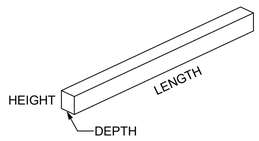
- B - BASE
- C - CEILING
- F - FLANGE
- G - GRID
- P - PENDANT
- PL - POLE
- R - RECESSED
- S - SURFACE
- W - WALL

LUMINAIRE OPTIONS

- ARHR - AIR RETURN AND HEAT REJECTION
- DL - DAMP LOCATION
- EQC - EARTHQUAKE CLIPS
- F - FUSING
- HLD - HINGED AND LATCHED DOOR
- HS - HOUSE SIDE SHIELD
- PS - PHOTOCELL SWITCH
- QRS - QUARTZ RESTRIKE
- ST - STATIC
- WG - WIRE GUARD
- WL - WET LOCATION







FINISH

- MW - MATTE WHITE
- BL - BLACK
- SL - SILVER
- GL - GOLD
- CL - CLEAR
- PW - PAINTED WHITE
- EA - EXTRUDED ALUMINUM
- S - STEEL
- GS - GALVANIZED STEEL
- C - CAST
- CBA - COLOR BY ARCHITECT
- SCBA - STANDARD COLOR BY ARCHITECT
- CCA - CUSTOM COLOR BY ARCHITECT
- FS 209D - MEETS FEDERAL STANDARD 209D
- TP - THERMALLY PROTECTED
- FL - FLUSH
- R - REGRESS
- M - MITERED

DIFFUSER/LENS

- #A - ACRYLIC #THICK
- #OA - ACRYLIC #THICK (OPAL)
- GC - GLASS (CLEAR)
- GO - GLASS (OPAL)
- GF - GLASS (FROSTED)
- SGL - SOFT GLOW LENS
- HPL - HIGH PERFORMANCE LENS
- DO - DROP OPAL
- CGL - CONVEX GLASS LENS
- S - SATIN LENS

REFLECTOR

- OP - NONE/OPEN
- SP - SPECULAR
- SS - SEMI-SPECULAR
- D - DIFFUSE (WHITE ENAMEL)
- SC - SPECULAR (COLORED)
- PR - PRISMATIC
- FDR - FULL DEPTH REFLECTOR
- DS - DIFFUSE (SEMI SPECULAR) SILVER
- LI - LOW IRIDESCENT
- IR - IRIDESCENT
- SL - SILVER
- GL - GOLD
- CA - CLEAR ALZAK

NOTES

GENERAL NOTES

1. PROVIDE UNIT PRICES AND FIXTURE BRAND SELECTED FOR ADD/DELETE CHANGES FOR EACH FIXTURE TYPES SHOWN WITHIN 48 BUSINESS HOURS OF THE BID DATE. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY DISQUALIFY THE PRODUCTS AND EMPOWER THE ENGINEER TO DETERMINE FAIR VALUE FOR FIXTURE AND INSTALLATION CHANGES, WITHOUT FURTHER INPUT FROM THE CONTRACTOR OR INSTALLER.
2. CONTRACTOR ALLOWANCE PRICES ARE ACCURATE WHEN THIS JOB WAS SPECIFIED, CONTRACTOR AND ELECTRICAL DISTRIBUTOR SHALL VERIFY THIS ALLOWANCE AND REPORT ANY PROBLEMS TO THE ENGINEER BEFORE THE BID. ALLOWANCE PRICE MAY OR MAY NOT INCLUDE LAMP(S) OR FREIGHT AS NOTED, AND DO NOT INCLUDE ANY TAXES.
3. SUBSTITUTIONS AND/OR EQUAL FIXTURES MUST RECEIVE APPROVAL PRIOR TO BIDDING, THEY MUST BE SUBMITTED TO THE ENGINEER NO LESS THAN 2 WEEKS PRIOR TO BID OPENING.
4. SAMPLES MUST BE PROVIDED FOR ANY AND ALL FIXTURES UPON A/E REQUEST PRIOR TO RELEASING FIXTURES.
5. ALL FIXTURES SHALL BE LISTED AND APPROVED FOR THEIR INTENDED USE AND LOCATION.
6. VERIFY THE PROPER MOUNTING KITS OR ACCESSORIES TO FACILITATE INSTALLATION AS SHOWN AT EACH LOCATION ON THE DRAWINGS.
7. COMPLY WITH THE "INTERIOR LIGHTING" SECTION OF THE SPECIFICATIONS.
8. REFER TO SPECIFICATIONS FOR IMPORTANT TECHNICAL REQUIREMENTS FOR LIGHTING FIXTURES, DRIVERS, AND LAMPS.
9. ALL LIGHT FIXTURES TO BE EITHER "DLC" OR "LIGHTING FACTS" LISTED OR TO BE APPROVED BY ARCHITECT/ENGINEER AND OWNER.

ID	DESCRIPTION	NOMINAL SIZE LENGTH	NOMINAL SIZE DEPTH	NOMINAL SIZE HEIGHT	NOMINAL SIZE DIAMETER/ APERTURE	MOUNTING	TYPE	COLOR TEMP	CRI	DRIVER CONFIGURATION	VOLTAGE	WATTS	FINISH	FIXTURE LUMENS	DIFFUSER/LENS	REFLECTOR	OPTIONS	NOTES	MANUFACTURER (CATALOG SERIES) OPTION 1	OPTION 2	OPTION 3
(A)	GENERAL PURPOSE LENSED LED STRIPLIGHT.	4'	5"	4"		P	LED	3500K		LED DRIVER	120V	42		5000					COLUMBIA (LCL-4-35-ML-E-U)		
(B)	VANDAL RESISTANT CORNER MOUNT LINEAD LED FIXTURE.	4'	9"	9"			LED	3500K		LED DRIVER	120V	73		6500					FAIL-SAFE (FCC-X-4-LD4-2-STD-35-1 20-80/85-EDC-1-WL)		
(C)	PERIMETER LED WALL PACK.	12"	7"	6"		W	LED	5000K		LED DRIVER	120V	17		1700					HUBBELL (NRG-356L-5K-U-PC)		
(D)	SURFACE MOUNT LED FIXTURE.	14"	14"	8"		GS	LED	5000K		LED DRIVER	120V	35		4400					HUBBELL (NRG-4-30LU-5K-035-SCB A)		

EQUIPMENT SCHEDULE

GRAND JUNCTION RESTROOM

EQUIPMENT SCHEDULE KEY

E - DIVISION 26
Q - FURNISHED WITH EQUIPMENT
* - COORDINATE WITH THE DIVISION 23 TEMPERATURE CONTROL INSTALLER
** - AUTOMATIC CONTROL WIRING BY DIVISION 23

NOTES:
1. NEMA 3R
2. TOGGLE SWITCH W/ THERMAL OVERLOAD
3. PROVIDE FUSED DISCONNECT ELEVATOR POWER MODULE WITH SHUNT TRIP
4. CONTRACTOR TO PERFOM FINAL CONNECTION TO LINE VOLTAGE THERMOSTATS
5. TOGGLE SWITCH W/BACNET INTERFACE.
6. INDOOR UNITS FED FROM OUTDOOR UNIT. PROVIDE DISCONNECTS FOR BOTH.
7. PROVIDE SWITCH WITH BACNET MS/TP CAPABILITY.
8. PROVIDE LABEL ON DISCONNECT "DISCONNECT OUTDOOR UNIT PRIOR TO INDOOR."
9. LINE VOLTAGE THERMOSTAT ON WALL.
10. PROVIDE EXPLOSION PROOF DEVICES AND WIRING METHODS.
11. PROVIDE DUAL-REDUNDANT 100% RATED VFD'S FOR AIR HANLDER.
12. PROVIDE MANUAL STARTER WITH THERMAL OVERLOAD AND RELAY FOR ATC/BAS CONTROL.

MARK	QTY	ITEM DESCRIPTION	LOAD DATA HP	kW	MCA	FLA	VOLT	PH	Hz	WIRE AND CONDUIT SIZE	OVERCURRENT PROTECTION FURN BY	DEVICE	LOCATION	DISCONNECT FURN BY	DEVICE	LOCATION	STARTER FURN BY	DEVICE	SIZES	SELECTOR SWITCH	PILOT LAMP	NORMALLY OPEN CONTACT	NORMALLY CLOSED CONTACT	PHASE FAILURE RELAY	NOTES	MARK
AHU-1	1	AIR HANDLING UNIT	-	6	-	27	240	1	60	2 #8, #10 GR 1" CND	E	30/2 CB	1LA	E	30A/2P NF	ADJ TO EQUIP	Q	-	-	-	-	-	-	-		AHU-1
EF-1	2	EXHAUST FAN	1/6	-	-	4.4	120	1	60	2 #12, #12 GR 0.75" CND	E	20/1 CB	1LA	E	TOGGLE SWITCH	ADJ TO EQUIP	Q	-	-	-	-	-	-	-		EF-1

PANEL: "1LA"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	FED FROM:	CABINET:	LOCATION:	NOTES:
120/240 V, 1 PH 3 WIRE	22" W x 6" D, BOLT-ON	100 AMPERE		SURFACE	CHASE 103	

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR — **AIC RATING:**

CKT NO	OCP AMP	OCP POLE	OCP BKR	LOAD (kVA) LTG	LOAD (kVA) PWR	LOAD (kVA) CO	DESCRIPTION	PHASE LOAD A	PHASE LOAD B	DESCRIPTION	LOAD (kVA) CO	LOAD (kVA) PWR	LOAD (kVA) LTG	OCP BKR	OCP POLE	OCP AMP	CKT NO
1	20	1		121...	0.0	0.0	AREA LIGHTING	12...	2.3	PWR: HAND DRYER	0.0	2.3	0.0		1	25	2
3	20	1		0.0	0.0	0.2	CO: SHELTER 104		0.2	2.3	PWR: HAND DRYER	0.0	2.3	0.0		1	25	4
5	20	1		0.0	0.0	0.4	CO CHASE 103	0.4	0.6		MOTOR ROOM 102, 101	0.0	0.6	0.0		1	20	6
7	20	1		--	--	--	SPARE		0.0	0.0	SPARE	--	--	--		1	20	8
9	20	1		0.0	0.1	0.0	PWR: SENSORS	0.1	0.0		SPARE	--	--	--		1	20	10
11	20	1		0.0	0.0	0.4	CO: SHELTER 104		0.4	0.0	SPARE	--	--	--		1	20	12
13	20	1		--	--	--	SPARE	0.0	0.0		SPARE	--	--	--		1	20	14
15	20	1		--	--	--	SPARE		0.0	0.0	SPARE	--	--	--		1	20	16
17	20	1		--	--	--	SPARE	0.0	0.0		SPARE	--	--	--		1	20	18
19	20	1		--	--	--	SPARE		0.0	0.0	SPARE	--	--	--		1	20	20
21	20	1		--	--	--	SPARE	0.0	0.0		SPARE	--	--	--		1	20	22
23	20	1		--	--	--	SPARE		0.0	0.0	SPARE	--	--	--		1	20	24
25	20	1		--	--	--	SPARE	0.0	0.0		SPARE	--	--	--		1	20	26
27	20	2		0.0	2.0	0.0	MOTOR CHASE 103		1.0	0.0	SPARE	--	--	--		1	20	28
29	--	--		--	--	--	--	1.0	0.0		SPARE	--	--	--		1	20	30

TOTALS: CONNECTED kVA PER PHASE **1221** **4** — CONNECTED TOTAL kVA = **1225**
CONNECTED AMPS PER PHASE **10174** **32** — AVERAGE CONNECTED AMPS PER PHASE = **5103**

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS: **1216.5 kVA @ 125% = 1520.6...** - 100% CONNECTED LOAD PLUS 25% — DIVERSIFIED TOTAL kVA = **1529**
RECEPTACLES: **0.9 kVA @ 100% = 0.9 kVA** - FIRST 10kVA @ 100%, REMAINDER @ 50% — AVERAGE AMPS PER PHASE = **6372**
ALL OTHER LOADS @ 100% : **7.8 kVA** - MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH LARGEST MOTOR CALCULATED @ 125% PER NEC

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCAKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER, AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI

NOTES:

COLORADO REGISTERED
DAVID E. WEBSTER
37776
5/29/2020
PROFESSIONAL ENGINEER

UNLESS A PROFESSIONAL SEAL WITH SIGNATURE AND DATE IS AFFIXED, THIS DOCUMENT IS PRELIMINARY AND IS NOT INTENDED FOR CONSTRUCTION, RECORDING PURPOSES, OR IMPLEMENTATION

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project:

Grand Junction Dos Rios Park Restroom

project#: 18.0850
date: 29 May 2020

revisions :

title:

ELECTRICAL SCHEDULES

sheet:

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SECTION 260500 - COMMON WORK RESULTS FOR ELECTRICAL
GENERAL

MATERIALS AND INSTALLATION SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE, OTHER APPLICABLE NFPA SECTIONS, STATE AND LOCAL CODES, AND RECOGNIZED INDUSTRY STANDARDS AND PRACTICES.

LISTING AND LABELING: PROVIDE PRODUCTS THAT ARE UL LISTED AND LABELED.

NEMA COMPLIANCE: COMPLY WITH CONSTRUCTION AND INSTALLATION REQUIREMENTS OF APPLICABLE NEMA STANDARDS.

SUBMITTALS: SUBMIT PRODUCT DATA AND SHOP DRAWING ON THE FOLLOWING EQUIPMENT FOR APPROVAL:

1. WIRING DEVICES.
2. LIGHTING FIXTURES.

PRIOR TO SUBMITTING BID, VISIT SITE TO VERIFY ALL EXISTING CONDITIONS AND ANY ITEMS THAT WILL AFFECT WORK OF THIS PROJECT. INCLUDE ALL COSTS IN BID.

MAINTAIN A SET OF REDLINED AS-BUILT DRAWINGS AND DELIVER TO OWNER UPON COMPLETION OF PROJECT.

PROTECT ADJACENT MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE BARRIERS TO KEEP DIRT, DUST, AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE PROTECTION AND BARRIERS AFTER DEMOLITION OPERATIONS ARE COMPLETE.

LOCATE, IDENTIFY, AND PROTECT ELECTRICAL SERVICES WITHIN OR PASSING THROUGH DEMOLITION AREA AND SERVING OTHER AREAS OUTSIDE THE DEMOLITION LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE DEMOLITION LIMITS. WHEN SERVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS. COORDINATE POWER INTERRUPTIONS ONE WEEK IN ADVANCE WITH OWNER. IF POWER INTERRUPTIONS DISTURB NORMAL OPERATIONS, THEN POWER INTERRUPTIONS ARE ONLY ALLOWED DURING NON-BUSINESS OR NON-OPERATION HOURS.

PATCH AND REPAIR SURFACES THAT ARE DISTURBED OR DAMAGED AS A RESULT OF ELECTRICAL INSTALLATION. RESTORE SURFACES TO ORIGINAL CONDITION.

INSTALLATION OF FIRE-STOPPING SEALANT: INSTALL UL-LISTED SEALANT, INCLUDING FORMING, PACKING, AND OTHER ACCESSORY MATERIALS, TO FILL OPENINGS AROUND ELECTRICAL SERVICES PENETRATING FLOORS AND WALLS, TO PROVIDE FIRE-STOPS WITH FIRE-RESISTANCE RATINGS INDICATED FOR FLOOR OR WALL ASSEMBLY IN WHICH PENETRATION OCCURS. COMPLY WITH INSTALLATION REQUIREMENTS ESTABLISHED BY TESTING AND INSPECTING AGENCY.

SECTION 260519 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PRODUCTS

PROVIDE STEEL RACEWAY, FITTING, AND BOX SYSTEM FOR ALL WIRING, EXCEPT FOR PLASTIC CONDUIT MAY BE INSTALLED UNDERGROUND.

RIGID STEEL CONDUIT: ANSI C80.1.

INTERMEDIATE METAL CONDUIT: ANSI C80.6.

PLASTIC-COATED STEEL CONDUIT AND FITTINGS: NEMA RN 1.

PLASTIC-COATED INTERMEDIATE METAL CONDUIT AND FITTINGS: NEMA RN 1.

ELECTRICAL METALLIC TUBING AND FITTINGS: ANSI C80.3 WITH SET-SCREW OR COMPRESSION-TYPE FITTINGS. CAST FITTINGS ARE NOT ALLOWED.

FLEXIBLE METAL CONDUIT: ZINC-COATED STEEL.

LIQUIDTIGHT FLEXIBLE METAL CONDUIT: FLEXIBLE STEEL CONDUIT WITH PVC JACKET.

FITTINGS: NEMA FB 1, COMPATIBLE WITH CONDUIT/TUBING MATERIALS AND SUITABLE FOR USE AND LOCATION.

RIGID NONMETALLIC CONDUIT (RNC): NEMA TC 2, SCHEDULE 40 OR 80 PVC.

PVC CONDUIT AND TUBING FITTINGS: NEMA TC 3; MATCH TO CONDUIT OR CONDUIT/TUBING TYPE AND MATERIAL. OUTLET AND DEVICE BOXES: USE ONE OF THE FOLLOWING:

1. SHEET METAL BOXES: NEMA OS 1.

EXECUTION

PROVIDE MINIMUM 3/4" RACEWAY.

OUTDOORS WIRING METHODS: USE THE FOLLOWING WIRING METHODS:

1. EXPOSED: RIGID OR INTERMEDIATE METAL CONDUIT.
2. CONCEALED: RIGID OR INTERMEDIATE METAL CONDUIT.
3. UNDERGROUND: RIGID NONMETALLIC CONDUIT, EXCEPT THAT WRAPPED RIGID METAL SHALL BE USED FOR BENDS GREATER THAN 22 DEGREES.
4. PENETRATING CONCRETE FLOORS AND FOUNDATIONS: WRAPPED RIGID METAL CONDUIT (MINIMUM 4' EACH SIDE).
5. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, OR ELECTRIC SOLENOID OR MOTOR-DRIVEN EQUIPMENT): LIQUIDTIGHT FLEXIBLE METAL CONDUIT.
6. BOXES AND ENCLOSURES: NEMA TYPE 3R OR TYPE 4.

DIRECT BURIED CONDUIT OUTSIDE A BUILDING SHALL NOT BE LESS THAN 24" DEEP, WITH MAGNETIC "YELLOW WARNING" RIBBON 12" DIRECTLY ABOVE AND 6" BELOW FINIISHED GRADE MEASURED FROM THE TOP OF THE CONDUIT.

INDOORS WIRING METHODS: USE THE FOLLOWING WIRING METHODS:

1. CONNECTION TO VIBRATING EQUIPMENT, INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, OR ELECTRIC SOLENOID OR MOTOR-DRIVEN EQUIPMENT: FLEXIBLE METAL CONDUIT WITH MINIMUM 18" OF LIQUID-TIGHT FLEXIBLE CONDUIT (MAXIMUM OF 6 FEET), EXCEPT IN WET OR DAMP LOCATIONS USE LIQUIDTIGHT FLEXIBLE METAL CONDUIT (MAXIMUM OF 6 FEET).
2. DAMP OR WET LOCATIONS: RIGID STEEL CONDUIT.
3. EXPOSED: ELECTRICAL METALLIC TUBING, RIGID OR INTERMEDIATE METAL CONDUIT WHERE SUBJECT TO PHYSICAL DAMAGE.
4. CONCEALED: ELECTRICAL METALLIC TUBING.
5. CONNECTION FOR CONDUIT IN CRAMPED QUARTERS OR MISALIGNMENT EXIST. FLEXIBLE METAL CONDUIT (MINIMUM 1/2").

CONCEAL CONDUIT AND EMT, UNLESS OTHERWISE INDICATED, WITHIN FINISHED WALLS, CEILINGS, AND FLOORS.

INSTALL RACEWAYS LEVEL AND SQUARE AND AT PROPER ELEVATIONS. RUN PERPENDICULAR AND AT RIGHT ANGLES TO BUILDING AND STRUCTURAL ELEMENTS. RUN PARALLEL OR BANKED RACEWAYS TOGETHER, ON COMMON SUPPORTS WHERE PRACTICAL. MAKE BENDS IN PARALLEL OR BANKED RUNS FROM SAME CENTER LINE TO MAKE BENDS PARALLEL.

SUPPORT RACEWAYS AS FOLLOWS, IN COMPLIANCE WITH DIVISION 16 SECTION "SUPPORTING DEVICES": TWO SUPPORTS PER 10' RUN, WITHING 12" OF A COUPLING, FITTING OR BEND GREATER THAN 45 DEGREES, AND WITHIN 12" OF EVERY BOX TO WHICH THE RACEWAY IS ENTERING OR EXITING.

RUN CONCEALED RACEWAYS WITH A MINIMUM OF BENDS IN THE SHORTEST PRACTICAL DISTANCE CONSIDERING THE TYPE OF BUILDING CONSTRUCTION AND OBSTRUCTIONS, EXCEPT AS OTHERWISE INDICATED.

RACEWAYS EMBEDDED IN SLABS: INSTALL IN MIDDLE THIRD OF THE SLAB THICKNESS WHERE PRACTICAL, AND LEAVE AT LEAST 1 INCH (25 MM) CONCRETE COVER.

JOINTS AND TERMINATIONS: JOIN RACEWAYS WITH FITTINGS DESIGNED AND APPROVED FOR THE PURPOSE AND MAKE JOINTS AND TERMINATIONS TIGHT.

1. MAKE RACEWAY TERMINATIONS TIGHT. USE BONDING BUSHINGS OR WEDGES AT CONNECTIONS SUBJECT TO VIBRATION.
2. USE BONDING JUMPERS WHERE JOINTS CANNOT BE MADE TIGHT.
3. USE INSULATED THROAT OR EQUAL TYPE PLASTIC BUSHINGS FOR BOX CONNECTIONS TO PROTECT CONDUCTORS.
4. CONNECTORS ON FLEXIBLE CONDUIT AND MC CABLE SHALL BE THREADED TYPE - NOT PUSH-IN QUICK CONNECT TYPE.

INSTALL 200-LB NYLON PULL CORD IN ALL EMPTY RACEWAYS. CAP RACEWAY USING A BLANK COVER SIMILAR TO ADJACENT WIRING DEVICE COVERS.

ALL FUTURE RACEWAYS SHALL TERMINATE IN AN ACCESSIBLE CEILING SPACE UNLESS NOTED OTHERWISE. EXTEND AS NECESSARY.

RECORD CIRCUIT NUMBERS ON THE INSIDE BACK OF RECEPTACLE AND LIGHTING OUTLET BOXES USING A PERMANT MARKER OR PERMANENT LABEL.

PROVIDE GROUNDING CONNECTIONS FOR RACEWAY, BOXES, AND COMPONENTS AS INDICATED AND INSTRUCTED BY MANUFACTURER. TIGHTEN CONNECTORS AND TERMINALS, INCLUDING SCREWS AND BOLTS, ACCORDING TO EQUIPMENT MANUFACTURER'S PUBLISHED TORQUE-TIGHTENING VALUES FOR EQUIPMENT CONNECTORS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT INDICATED, TIGHTEN CONNECTORS AND TERMINALS ACCORDING TO TIGHTENING TORQUES SPECIFIED IN UL STANDARD 486A.

SECTION 260526 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PRODUCTS

WIRES AND CABLES: TYPE THHN/THWN COPPER CONDUCTOR.

SOLID CONDUCTOR FOR 10 AWG AND SMALLER; STRANDED CONDUCTOR FOR LARGER THAN 10 AWG.

CONNECTORS AND SPLICES: UL-LISTED FACTORY-FABRICATED WIRING CONNECTORS OF SIZE, AMPACITY RATING, MATERIAL, AND TYPE AND CLASS FOR APPLICATION AND FOR SERVICE INDICATED. SELECT TO COMPLY WITH PROJECT'S INSTALLATION REQUIREMENTS AND AS SPECIFIED IN THE "EXECUTION" ARTICLE.

DO NOT PROVIDE THE FOLLOWIN G UNLESS APPROVED BY THE DIRECTOR:

1. EXPOSED CABLE WIRING.
2. SPLICES IN PANELBOARD, SWITCHBOARD ENCLOSURES, OR IN CONDUIT BODIES.

DO NOT USE ALLUMINUM CONDUCTORS OR NON-METALLIC SHEATHED CABLE.

COLOR-CODING OF SECONDARY PHASE CONDUCTORS: COLOR CODE SWITCH LEGS, TRAVELERS AND OTHER WIRING FOR BRANCH CIRCUITS OTHER THAN THOSE LISTED BELOW. PERMANENTLY POST COLOR CODE AT EACH BRANCH PANELBOARD. USE THE FOLLOWING COLORS FOR SERVICE, FEEDER AND BRANCH-CIRCUIT PHASE CONDUCTORS:

1. 208/120-V CONDUCTORS:
   a. PHASE A: BLACK.
   b. PHASE B: RED.
   c. PHASE C: BLUE.
   d. NEUTRAL: WHITE.
   e. GROUND: GREEN.
   f. INSULATED GROUND: GREEN WITH WHITE STRIPE.
2. 480/277-V CONDUCTORS:
   a. PHASE A: BROWN.
   b. PHASE B: YELLOW
   c. PHASE C: VIOLET.
   d. NEUTRAL: GRAY.
   e. GROUND: GREEN.
3. ORANGE IS RESERVED FOR THE HIGH-LEG OF CENTER-TAPPED DELTA SYSTEM.
4. #8 AND LARGER CONDUCTORS MAY BE TAPED WITH 8" OF HALF-LAPPED COLORED TAPE AT TERMINATIONS AND PULL BOXES.

EXECUTION

INSTALL WIRES AND CABLES AS INDICATED, ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND THE NECA "STANDARD OF INSTALLATION."

PULL CONDUCTORS INTO RACEWAY SIMULTANEOUSLY WHERE MORE THAN ONE IS BEING INSTALLED IN SAME RACEWAY.

CONDUCTOR SPLICES: KEEP TO MINIMUM.

INSTALL SPLICES AND TAPES THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN CONDUCTORS BEING SPLICED.

USE SPLICE AND TAP CONNECTORS THAT ARE COMPATIBLE WITH CONDUCTOR MATERIAL. DO NOT USE PUSH-IN TYPE QUICK-WIRE DEVICES OR WIRE CONNECTORS.

WIRING AT OUTLETS: INSTALL WITH AT LEAST 12 INCHES (300 MM) OF SLACK CONDUCTOR AT EACH OUTLET.

CONNECT OUTLETS AND COMPONENTS TO WIRING AND TO GROUND AS INDICATED AND INSTRUCTED BY MANUFACTURER. TIGHTEN CONNECTORS AND TERMINALS, INCLUDING SCREWS AND BOLTS, ACCORDING TO EQUIPMENT MANUFACTURER'S PUBLISHED TORQUE-TIGHTENING VALUES FOR EQUIPMENT CONNECTORS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT INDICATED, TIGHTEN CONNECTORS AND TERMINALS ACCORDING TO TIGHTENING TORQUES SPECIFIED IN UL STANDARD 486A.

METAL CLAD (MC) CABLE:

1. MC CABLE MAY BE USED FOR FINAL CONNECTIONS TO DEVICES AND AT THE TAIL END OF THE ELECTRICAL CIRCUITS BUT NEVER FOR HOMERUNS OR IN THE ELECTRICAL ROOM.

SECTION 260529 - WIRING DEVICES

PRODUCTS

WIRING DEVICES: COMPLY WITH NEMA STANDARD WD 1, "GENERAL PURPOSE WIRING DEVICES."
COLOR: AS SELECTED BY ARCHITECT/OWNER, EXCEPT AS OTHERWISE INDICATED OR REQUIRED BY CODE.

STANDARD DUPLEX RECEPTACLES: 20A DEVICES; PROVIDE NYLON FACE, BACK AND SIDE WIRING. COMPLY WITH FEDERAL SPECIFICATION W-C-596 AND HEAVY-DUTY GRADE OF UL STANDARD 498, "ELECTRICAL ATTACHMENT PLUGS AND RECEPTACLES." PROVIDE NRTL LABELING OF DEVICES TO VERIFY THESE COMPLIANCES.

GROUND-FAULT CIRCUIT INTERRUPTER (GFCI) RECEPTACLES: UL STANDARD 943, "GROUND FAULT CIRCUIT INTERRUPTERS," FEED-THROUGH TYPE, WITH INTEGRAL NEMA 5-20R DUPLEX RECEPTACLE ARRANGED TO PROTECT CONNECTED DOWNSTREAM RECEPTACLES ON THE SAME CIRCUIT. DESIGN UNITS FOR INSTALLATION IN A 2-3/4-INCH (70-MM) DEEP OUTLET BOX WITHOUT AN ADAPTER.

SNAP SWITCHES: 20A DEVICES; PROVIDE NYLON FACE, QUIET-TYPE A.C. SWITCHES, NRTL LISTED AND LABELED AS COMPLYING WITH UL STANDARD 20 "GENERAL USE SNAP SWITCHES," AND WITH FEDERAL SPECIFICATION W-S-896.

TELEPHONE JACK: RJ-45, 8-POSITION, MODULAR, LATCHING-PLUG TYPE, FLUSH IN FACE OF WALL PLATED.

WALL PLATES: SINGLE AND COMBINATION TYPES THAT MATE AND MATCH WITH CORRESPONDING WIRING DEVICES. FEATURES INCLUDE THE FOLLOWING:

1. COLOR: MATCHES WIRING DEVICE EXCEPT AS OTHERWISE INDICATED.
2. PLATE-SECURING SCREWS: METAL WITH HEADS COLORED TO MATCH PLATE FINISH.
3. MATERIAL FOR FINISHED SPACES: NYLON EXCEPT AS OTHERWISE INDICATED.
4. MATERIAL FOR UNFINISHED SPACES: STAINLESS STEEL.

EXECUTION

WIRING DEVICES SHALL CONNNECT CONDUCTORS USING THREADED SCREWS. DO NOT USE PUSH-IN QUICK-WIRE CONNECTIONS.

DO NOT USE GFCI FEED-THROUGHS,

INSTALL DEVICES AND ASSEMBLIES PLUMB AND SECURE. PROTECT DEVICES AND ASSEMBLIES DURING PAINTING AND INSTALL WALL PLATES WHEN PAINTING IS COMPLETE.

ARRANGEMENT OF DEVICES: EXCEPT AS OTHERWISE INDICATED, MOUNT FLUSH, WITH LONG DIMENSION VERTICAL AND GROUNDING TERMINAL OF RECEPTACLES ON TOP. GROUP ADJACENT SWITCHES UNDER SINGLE, MULTIGANG WALL PLATES.

SECTION 260533 - LIGHTING CONTROL DEVICES

MANUFACTURERS:

1. INTERMATIC, INC.
2. PARAGON ELECTRIC CO.
3. TORK.

INDOOR OCCUPANCY SENSORS

MANUFACTURERS:

1. HUBBELL LIGHTING INC.
2. LEVITON MFG. COMPANY INC.
3. LITHONIA LIGHTING.
4. SENSOR SWITCH, INC.
5. COOPER/GREENGATE CONTROLS.
6. WATT STOPPER (THE).

GENERAL DESCRIPTION: WALL- OR CEILING-MOUNTING, SOLID-STATE UNITS WITH A SEPARATE RELAY UNIT.

1. OPERATION: UNLESS OTHERWISE INDICATED, TURN LIGHTS ON WHEN COVERED AREA IS OCCUPIED AND OFF WHEN UNOCCUPIED; WITH A TIME DELAY FOR TURNING LIGHTS OFF, ADJUSTABLE OVER A MINIMUM RANGE OF 1 TO 15 MINUTES.
2. SENSOR OUTPUT: CONTACTS RATED TO OPERATE THE CONNECTED RELAY, COMPLYING WITH UL 773A. SENSOR SHALL BE POWERED FROM THE RELAY UNIT.
3. RELAY UNIT: DRY CONTACTS RATED FOR 20-A BALLAST LOAD AT 120- AND 277-V AC, FOR 13-A TUNGSTEN AT 120-V AC, AND FOR 1 HP AT 120-V AC. POWER SUPPLY TO SENSOR SHALL BE 24-V DC, 150-MA, CLASS 2 POWER SOURCE AS DEFINED BY NFPA 70.
4. MOUNTING:
   a. SENSOR: SUITABLE FOR MOUNTING IN ANY POSITION ON A STANDARD OUTLET BOX.
   b. RELAY: EXTERNALLY MOUNTED THOUGH A 1/2-INCH (13-MM) KNOCKOUT IN A STANDARD ELECTRICAL ENCLOSURE.
   c. TIME-DELAY AND SENSITIVITY ADJUSTMENTS: RECESSED AND CONCEALED BEHIND HINGED DOOR.
5. INDICATOR: LED, TO SHOW WHEN MOTION IS BEING DETECTED DURING TESTING AND NORMAL OPERATION OF THE SENSOR.
6. BYPASS SWITCH: OVERRIDE THE ON FUNCTION IN CASE OF SENSOR FAILURE.

DUAL-TECHNOLOGY TYPE: CEILING MOUNTING; DETECT OCCUPANCY BY USING A COMBINATION OF PIR AND ULTRASONIC DETECTION METHODS IN AREA OF COVERAGE. PARTICULAR TECHNOLOGY OR COMBINATION OF TECHNOLOGIES THAT CONTROLS ON AND OFF FUNCTIONS SHALL BE SELECTABLE IN THE FIELD BY OPERATING CONTROLS ON UNIT.

1. SENSITIVITY ADJUSTMENT: SEPARATE FOR EACH SENSING TECHNOLOGY.
2. DETECTOR SENSITIVITY: DETECT OCCURRENCES OF 6-INCH (150-MM) MINIMUM MOVEMENT OF ANY PORTION OF A HUMAN BODY THAT PRESENTS A TARGET OF AT LEAST 36 SQ. IN. (232 SQ. CM), AND DETECT A PERSON OF AVERAGE SIZE AND WEIGHT MOVING AT LEAST 12 INCHES (305 MM) IN EITHER A HORIZONTAL OR A VERTICAL MANNER AT AN APPROXIMATE SPEED OF 12 INCHES/S (305 MM/S).
3. DETECTION COVERAGE (STANDARD ROOM): DETECT OCCUPANCY ANYWHERE WITHIN A CIRCULAR AREA OF 1000 SQ. FT. (93 SQ. M) WHEN MOUNTED ON A 96-INCH- (2440-MM-) HIGH CEILING.

MULTIPOLE CONTACTORS

MANUFACTURERS:

1. ALLEN-BRADLEY/ROCKWELL AUTOMATION.
2. ASCO POWER TECHNOLOGIES, LP; A DIVISION OF EMERSON ELECTRIC CO.
3. CUTLER-HAMMER; EATON CORPORATION.
4. GE INDUSTRIAL SYSTEMS; TOTAL LIGHTING CONTROL.
5. SIEMENS.
6. SQUARE D.

DESCRIPTION: ELECTRICALLY OPERATED AND MECHANICALLY HELD, COMPLYING WITH NEMA ICS 2 AND UL 508.

1. CURRENT RATING FOR SWITCHING: LISTING OR RATING CONSISTENT WITH TYPE OF LOAD SERVED, INCLUDING TUNGSTEN FILAMENT, INDUCTIVE, AND HIGH-INRUSH BALLAST (BALLAST WITH 15 PERCENT OR LESS TOTAL HARMONIC DISTORTION OF NORMAL LOAD CURRENT).
2. CONTROL-COIL VOLTAGE: MATCH CONTROL POWER SOURCE.

CONDUCTORS AND CABLES

POWER WIRING TO SUPPLY SIDE OF REMOTE-CONTROL POWER SOURCES: NOT SMALLER THAN NO. 12 AWG, COMPLYING WITH DIVISION 16 SECTION " CONDUCTORS AND CABLES."

CLASSES 2 AND 3 CONTROL CABLE: MULTICONDUCTOR CABLE WITH STRANDED COPPER CONDUCTORS NOT SMALLER THAN NO. 18 AWG, COMPLYING WITH DIVISION 16 SECTION "CONDUCTORS AND CABLES."

CLASS 1 CONTROL CABLE: MULTICONDUCTOR CABLE WITH STRANDED COPPER CONDUCTORS NOT SMALLER THAN NO. 14 AWG, COMPLYING WITH DIVISION 16 SECTION "CONDUCTORS AND CABLES."

INSTALL UNSHIELDED, TWISTED-PAIR CABLE FOR CONTROL AND SIGNAL TRANSMISSION CONDUCTORS, COMPLYING WITH DIVISION 16 SECTION "VOICE AND DATA COMMUNICATION CABLING."

EXECUTION

WIRING WITHIN ENCLOSURES: BUNDLE, LACE, AND TRAIN CONDUCTORS TO TERMINAL POINTS. SEPARATE POWER-LIMITED AND NONPOWER-LIMITED CONDUCTORS ACCORDING TO CONDUCTOR MANUFACTURER'S WRITTEN INSTRUCTIONS.

SIZE CONDUCTORS ACCORDING TO LIGHTING CONTROL DEVICE MANUFACTURER'S WRITTEN INSTRUCTIONS, UNLESS OTHERWISE INDICATED.

SPLICES, TAPS, AND TERMINATIONS: MAKE CONNECTIONS ONLY ON NUMBERED TERMINAL STRIPS IN JUNCTION, PULL, AND OUTLET BOXES; TERMINAL CABINETS; AND EQUIPMENT ENCLOSURES.

TIGHTEN ELECTRICAL CONNECTORS AND TERMINALS ACCORDING TO MANUFACTURER'S PUBLISHED TORQUE-TIGHTENING VALUES. IF MANUFACTURER'S TORQUE VALUES ARE NOT INDICATED, USE THOSE SPECIFIED IN UL 486A AND UL 486B.

PERFORM THE FOLLOWING FIELD TESTS AND INSPECTIONS AND PREPARE TEST REPORTS:

1. AFTER INSTALLING TIME SWITCHES AND SENSORS, AND AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, ADJUST AND TEST FOR COMPLIANCE WITH REQUIREMENTS.
2. OPERATIONAL TEST: VERIFY ACTUATION OF EACH SENSOR AND ADJUST TIME DELAYS.

SECTION 260543 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PRODUCTS

MANUFACTURED SUPPORTING DEVICES:

1. RACEWAY SUPPORTS: CLEVIS HANGERS, RISER CLAMPS, CONDUIT STRAPS, THREADED C-CLAMPS WITH RETAINERS, CEILING TRAPEZE HANGERS, WALL BRACKETS, AND SPRING STEEL CLAMPS.
2. FASTENERS: TYPES, MATERIALS, AND CONSTRUCTION FEATURES AS FOLLOWS:
   a. EXPANSION ANCHORS: CARBON STEEL WEDGE OR SLEEVE TYPE.
   b. TOGGLE BOLTS: ALL STEEL SPRINGHEAD TYPE.
   c. POWDER-DRIVEN THREADED STUDS: HEAT-TREATED STEEL, DESIGNED SPECIFICALLY FOR THE INTENDED SERVICE.
3. U-CHANNEL SYSTEMS: 16-GAGE STEEL CHANNELS, WITH 9/16-INCH- DIAMETER HOLES, AT A MINIMUM OF 8 INCHES ON CENTER, IN TOP SURFACE. PROVIDE FITTINGS AND ACCESSORIES THAT MATE AND MATCH WITH U-CHANNEL AND ARE OF THE SAME MANUFACTURER.

FABRICATED SUPPORTING DEVICES: SHOP-OR FIELD-FABRICATED SUPPORTS OR MANUFACTURED SUPPORTS ASSEMBLED FROM U-CHANNEL COMPONENTS.

1. STEEL BRACKETS: FABRICATED OF ANGLES, CHANNELS, AND OTHER STANDARD STRUCTURAL SHAPES. CONNECT WITH WELDS AND MACHINE BOLTS TO FORM RIGID SUPPORTS.

EXECUTION

INSTALL SUPPORTING DEVICES TO FASTEN ELECTRICAL COMPONENTS SECURELY AND PERMANENTLY TO BUILDING STRUCTURE IN ACCORDANCE WITH NEC REQUIREMENTS. COORDINATE WITH THE BUILDING STRUCTURAL SYSTEM AND WITH OTHER ELECTRICAL INSTALLATIONS.

RACEWAY SUPPORTS: COMPLY WITH THE NEC AND THE FOLLOWING REQUIREMENTS:

1. CONFORM TO MANUFACTURER'S RECOMMENDATIONS FOR SELECTION AND INSTALLATION OF SUPPORTS.
2. STRENGTH OF EACH SUPPORT SHALL BE ADEQUATE TO CARRY PRESENT AND FUTURE LOAD MULTIPLIED BY A SAFETY FACTOR OF AT LEAST FOUR, BUT IN NO CASES SHALL BE LESS THAN 200 LBS IN THE STRENGTH OF EACH SUPPORT.
3. INSTALL INDEPENDENT AND LISTED INDIVIDUAL AND MULTIPLE (TRAPEZE) RACEWAY HANGERS AND RISER CLAMPS AS NECESSARY TO SUPPORT RACEWAYS. PROVIDE U-BOLTS, CLAMPS, ATTACHMENTS, AND OTHER HARDWARE NECESSARY FOR HANGER ASSEMBLY AND FOR SECURING HANGER RODS AND CONDUITS.

MISCELLANEOUS SUPPORTS: SUPPORT MISCELLANEOUS ELECTRICAL COMPONENTS AS REQUIRED TO PRODUCE THE SAME STRUCTURAL SAFETY FACTORS AS SPECIFIED FOR RACEWAY SUPPORTS. INSTALL METAL CHANNEL RACKS FOR MOUNTING CABINETS, PANELBOARDS, DISCONNECTS, CONTROL ENCLOSURES, PULL BOXES, JUNCTION BOXES, TRANSFORMERS, AND OTHER DEVICES.

IN OPEN OVERHEAD SPACES, SUPPORT SHEET METAL BOXES INDEPENDANTLY AND DIRECTLY FROM THE BUILDING STRUCTURE OR BY BAR HANGERS. WHERE BAR HANGERS ARE USED, ATTACH THE BAR TO RACEWAYS ON OPPOSITE SIDES OF THE BOX AND SUPPORT THE RACEWAY WITH AN APPROVED TYPE OF FASTENER NOT MORE THAN 24 INCHES FROM THE BOX.

OUTLET BOXES: PROVIDE OUTLET BOXES WITH RIGID SUPPORT USING METAL BAR HANGERS BETWEEN STUDS.

FASTENING: UNLESS OTHERWISE INDICATED, FASTEN ELECTRICAL ITEMS AND THEIR SUPPORTING HARDWARE SECURELY TO THE BUILDING STRUCTURE, INCLUDING BUT NOT LIMITED TO CONDUITS, RACEWAYS, CABLES, CABLE TRAYS, BUSWAYS, CABINETS, PANELBOARDS, TRANSFORMERS, BOXES, DISCONNECT SWITCHES, AND CONTROL COMPONENTS IN ACCORDANCE WITH THE FOLLOWING:

1. FASTEN BY MEANS OF WOOD SCREWS OR SCREW-TYPE NAILS ON WOOD, TOGGLE BOLTS ON HOLLOW MASONRY UNITS, CONCRETE INSERTS OR EXPANSION BOLTS ON CONCRETE OR SOLID MASONRY, AND MACHINE SCREWS, WELDED THREADED STUDS, OR SPRING-TENSION CLAMPS ON STEEL. THREADED STUDS DRIVEN BY A POWDER CHARGE AND PROVIDED WITH LOCK WASHERS AND NUTS MAY BE USED INSTEAD OF EXPANSION BOLTS AND MACHINE OR WOOD SCREWS. DO NOT WELD CONDUIT, PIPE STRAPS, OR ITEMS OTHER THAN THREADED STUDS TO STEEL STRUCTURES. IN PARTITIONS OF LIGHT STEEL CONSTRUCTION, USE SHEET METAL SCREWS.
2. HOLES CUT TO DEPTH OF MORE THAN 1-1/2 INCHES IN REINFORCED CONCRETE BEAMS OR TO DEPTH OF MORE THAN ¾ INCH IN CONCRETE SHALL NOT CUT THE MAIN REINFORCING BARS. FILL HOLES THAT ARE NOT USED.
3. ENSURE THAT THE LOAD APPLIED TO ANY FASTENER DOES NOT EXCEED 25 PERCENT OF THE PROOF TEST LOAD. USE VIBRATION- AND SHOCK- RESISTANT FASTENERS FOR ATTACHMENTS TO CONCRETE SLABS.

SECTION 260548 – GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PRODUCTS

GROUNDING AND BONDING PRODUCTS: TYPES AS INDICATED. WHERE TYPES, SIZES, RATINGS, AND QUANTITIES INDICATED DIFFER FROM NEC REQUIREMENTS, THE MORE STRINGENT REQUIREMENTS AND THE GREATER SIZE, RATING, AND QUANTITY INDICATIONS GOVERN.

CONDUCTOR MATERIALS: COPPER.

EQUIPMENT GROUNDING CONDUCTOR: GREEN INSULATED.

GROUNDING ELECTRODE CONDUCTOR: STRANDED CABLE.

BARE COPPER CONDUCTORS: CONFORM TO THE FOLLOWING:

1. SOLID CONDUCTORS: ASTM B-3.
2. ASSEMBLY OF STRANDED CONDUCTORS: ASTM B-8.
3. TINNED CONDUCTORS: ASTM B-33.

GROUND BUS: BARE ANNEALED COPPER BARS OF RECTANGULAR CROSS-SECTION.

BRAIDED BONDING JUMPERS: COPPER TAPE, BRAIDED FROM NO. 30-GAGE BARE COPPER WIRE AND TERMINATED WITH COPPER FERRULES.

BONDING STRAP CONDUCTOR/CONNECTORS: SOFT COPPER, 0.05 INCH THICK AND 2 INCHES WIDE, EXCEPT AS INDICATED.

CONNECTOR PRODUCTS: LISTED AND LABELED AS GROUNDING CONNECTORS FOR THE MATERIALS WITH WHICH USED.

PRESSURE CONNECTORS: HIGH-CONDUCTIVITY PLATED UNITS.

BOLTED CLAMPS: HEAVY-DUTY UNITS LISTED FOR THE APPLICATION.

EXOTHERMIC WELDED CONNECTIONS: PROVIDED IN KIT FORM AND SELECTED FOR THE SPECIFIC TYPES, SIZES, AND COMBINATIONS OF CONDUCTORS AND OTHER ITEMS TO BE CONNECTED.

GROUND RODS: COPPER-CLAD STEEL, 3/4 INCH BY 10 FEET, MINIMUM.

EXECUTION

EQUIPMENT GROUNDING CONDUCTOR APPLICATION: COMPLY WITH NEC ARTICLE 250 FOR SIZES AND QUANTITIES OF EQUIPMENT GROUNDING CONDUCTORS, EXCEPT WHERE LARGER SIZES OR MORE CONDUCTORS ARE INDICATED. INSTALL EQUIPMENT GROUND CONDUCTORS IN ALL FEEDER AND BRANCH CIRCUIT RACEWAYS.

SIGNAL AND COMMUNICATIONS: FOR TELEPHONE, ALARM, AND COMMUNICATION SYSTEMS, PROVIDE A #4 AWG MINIMUM GREEN INSULATED COPPER CONDUCTOR IN RACEWAY FROM THE GROUNDING ELECTRODE SYSTEM TO EACH TERMINAL CABINET OR CENTRAL EQUIPMENT LOCATION.

SEPARATELY DERIVED SYSTEMS REQUIRED BY NEC TO BE GROUNDED SHALL BE GROUNDED AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.

METAL POLES SUPPORTING OUTDOOR LIGHTING FIXTURES: GROUND POLE TO A GROUNDING ELECTRODE AS INDICATED IN ADDITION TO SEPARATE EQUIPMENT GROUNDING CONDUCTOR RUN WITH SUPPLY BRANCH CIRCUIT.

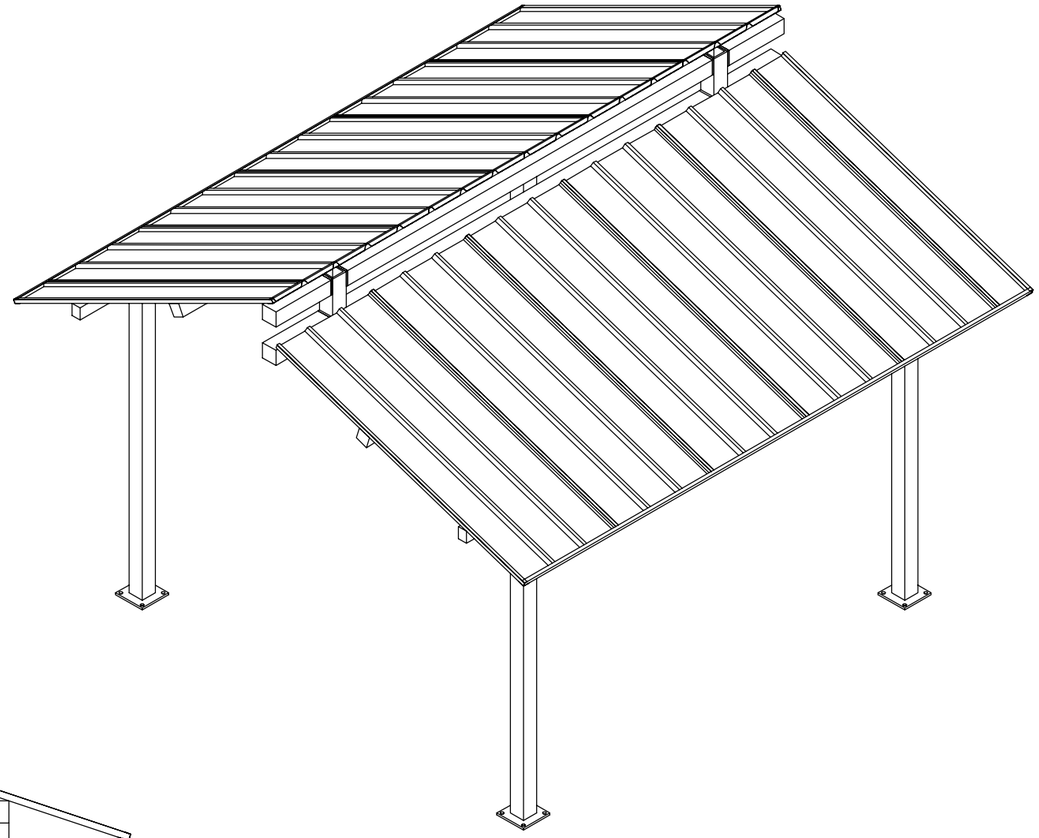
INSTALLATION, GENERAL: GROUND ELECTRICAL SYSTEMS AND EQUIPMENT IN ACCORDANCE WITH NEC EXCEPT WHERE GROUNDING IN EXCESS OF NEC REQUIREMENTS IS INDICATED.

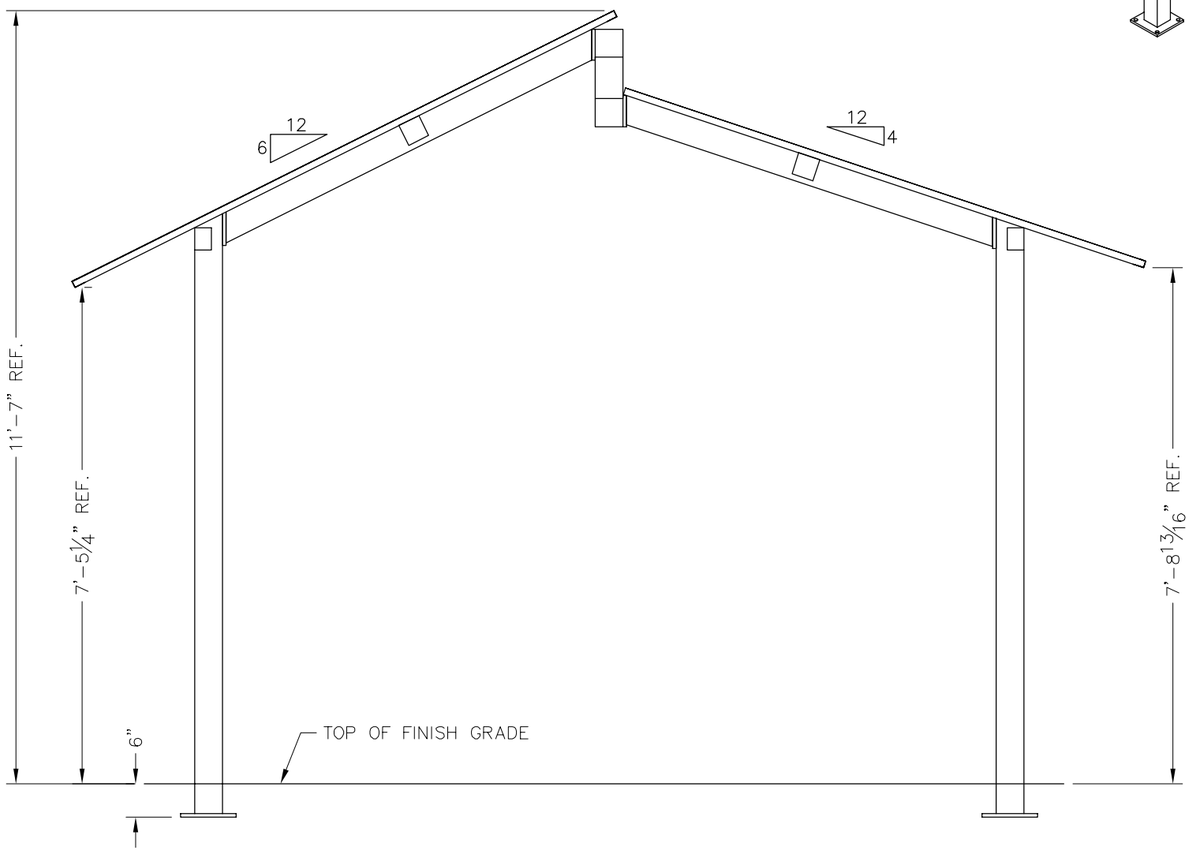
GROUND RODS: LOCATE A MINIMUM OF ONE-ROD LENGTH FROM EACH OTHER AND AT LEAST THE SAME DISTANCE FROM ANY OTHER GROUNDING ELECTRODE. INTERCONNECT GROUND RODS WITH BARE CONDUCTORS BURIED AT LEAST 24 INCHES BELOW GRADE. CONNECT BARE-CABLE GROUND CONDUCTORS TO GROUND RODS BY MEANS OF EXOTHERMIC WELDS EXCEPT AS OTHERWISE INDICATED. MAKE THESE CONNECTIONS WITHOUT DAMAGING THE COPPER COATING OR EXPOSING THE STEEL. DRIVE RODS UNTIL TOPS ARE 6 INCHES BELOW FINISHED FLOOR OR FINAL GRADE EXCEPT AS OTHERWISE INDICATED.

GROUNDING ELECTRODE CONDUCTOR: PROVIDE INSULATED COPPER CONDUCTOR, SIZED AS INDICATED, IN CONDUIT. BOND THE GROUND CONDUCTOR CONDUIT TO THE CONDUCTOR AT EACH END. WHERE A DIELECTRIC FITTING IS INSTALLED IN THE MAIN METALLIC WATER SERVICE PIPE, CONNECT THE GROUND CONDUCTOR TO THE STREET SIDE OF THE FITTING. DO NOT INSTALL A GROUNDING JUMPER AROUND DIELECTRIC FITTINGS. BOND THE GROUND CONDUCTOR CONDUIT TO THE CONDUCTOR AT EACH END.

BRAIDED-TYPE BONDING JUMPERS: INSTALL TO CONNECT GROUND CLAMPS ON WATER METER PIPING TO ELECTRICALLY BYPASS WATER METERS. USE ELSEW

PRELIMINARY: NOT FOR CONSTRUCTION





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Elevation

DRAWN BY:	MB
DATE:	4/29/15
JOB NO.:	STANDARD
REVISION:	
BUILDING TYPE:	DS16X16M-P64
PROJECT NAME:	

SHEET 1.0

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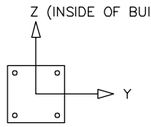
DWG: \\iss-server02\Company\Engineering\Standards\Shelters\DS\16X16\M-P6-50-90-150\Drawings\Preliminary\DS16M-P64-50-90-150~31296.dwg



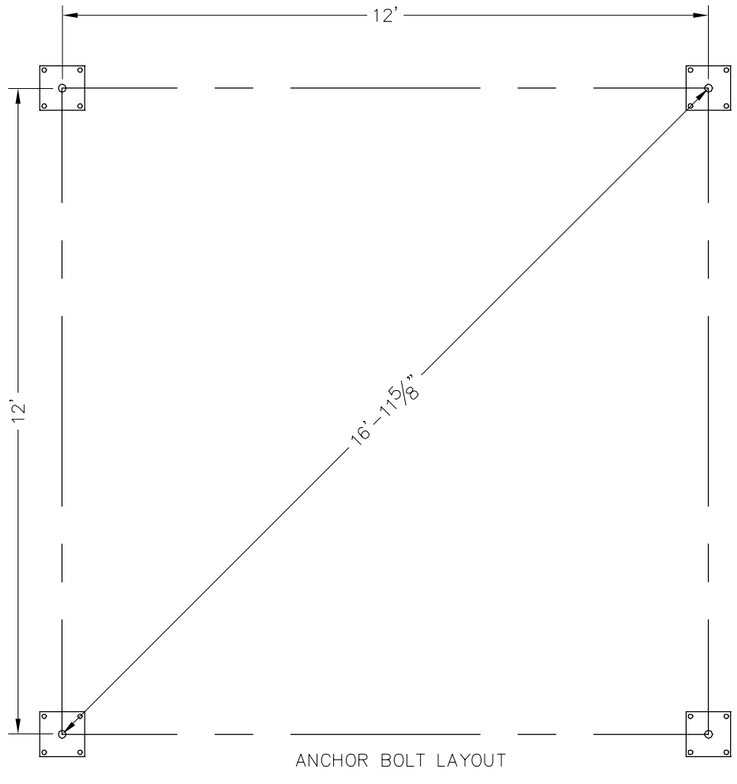
THESE FOUNDATION LOADS ARE FOR ESTIMATING PURPOSE ONLY.
THE ACTUAL LOADS WILL BE DETERMINED IN THE FINAL ENGINEERING

CL1

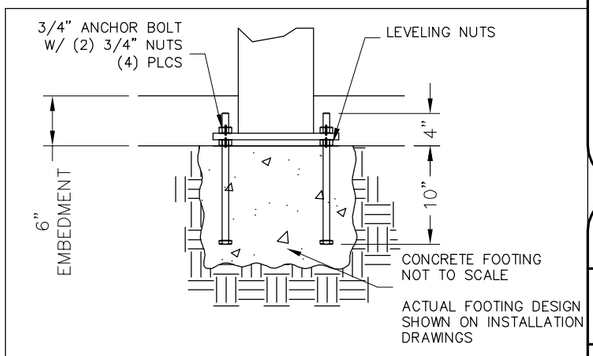
LOADS TO FOUNDATION (KIPS, IN-KIPS)	FOUNDATION LOADS				
LOAD COMBINATION	AXIAL (Fx)	SHEAR (Fy)	SHEAR (Fz)	MOMENT (My)	MOMENT (Mz)
DL	0.55	−0.02	0.11	−4.75	−0.79
SL	3.29	0.21	0.69	−30.35	7.63
W−UPLIFT	−0.89	−0.21	−0.15	6.11	−13.97
W−FY	−0.88	0.22	−0.15	6.69	14.39
W−FZ	0.60	0.01	0.38	−22.79	0.54
E−FY	0.26	−0.45	0.04	−1.91	−34.86
E−Z	0.33	−0.01	0.47	−31.71	−0.26

NOTES:
- TABLE SHOWS UNFACTORED SERVICE LOADS
- A FOUNDATION DESIGN HAS NOT BEEN PERFORMED BY ICON SHELTER SYSTEMS INC.
- A LICENSED ENGINEER FAMILIAR WITH SOIL CONDITIONS AT CONSTRUCTION SITE MUST PERFORM A FOUNDATION DESIGN.
- THE STRUCTURE HAS BEEN ENGINEERED AS AN OPEN STRUCTURE.
- CONSULT ICON SHELTER SYSTEMS INC. IF THE STRUCTURE IS TO BE ENCLOSED.
- COORDINATES ARE LOCAL TO THE COLUMN

DEFINITIONS:
DL = SERVICE LEVEL DEAD LOAD REACTION WITH THE GREATEST AXIAL LOAD
SL = SERVICE LEVEL SNOW LOAD REACTION WITH THE GREATEST AXIAL LOAD
W−UL = SERVICE LEVEL WIND LOAD REACTION WITH THE GREATEST UPLIFT LOAD
W−Y = SERVICE LEVEL WIND LOAD REACTION WITH THE GREATEST MAGNITUDE OF SHEAR IN THE LOCAL Y DIRECTION
W−Z = SERVICE LEVEL WIND LOAD REACTION WITH THE GREATEST SHEAR VALUE ACTING IN THE SAME DIRECTION AS THE DL SHEAR LOAD
E−Y = SERVICE LEVEL SEISMIC LOAD REACTION WITH THE GREATEST MAGNITUDE OF SHEAR IN THE LOCAL Y DIRECTION
E−Z = SERVICE LEVEL SEISMIC LOAD REACTION WITH THE GREATEST MAGNITUDE OF SHEAR IN THE LOCAL Z DIRECTION

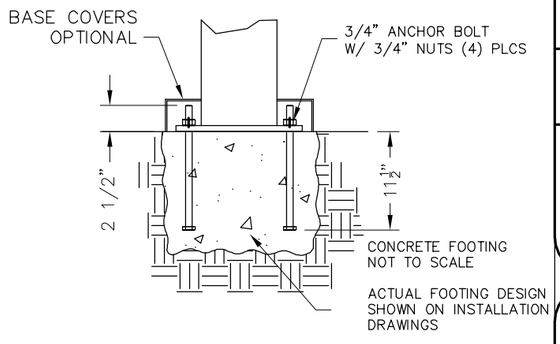


PRELIMINARY: NOT FOR CONSTRUCTION



PRELIMINARY DRAWINGS SHOWN AS 6" BURIED

STANDARD BASE CONNECTION
COLUMN TYPE: A (6" BURIED)



OPTIONAL BASE CONNECTION
COLUMN TYPE: B (SURFACE MOUNT W/ COVERS)

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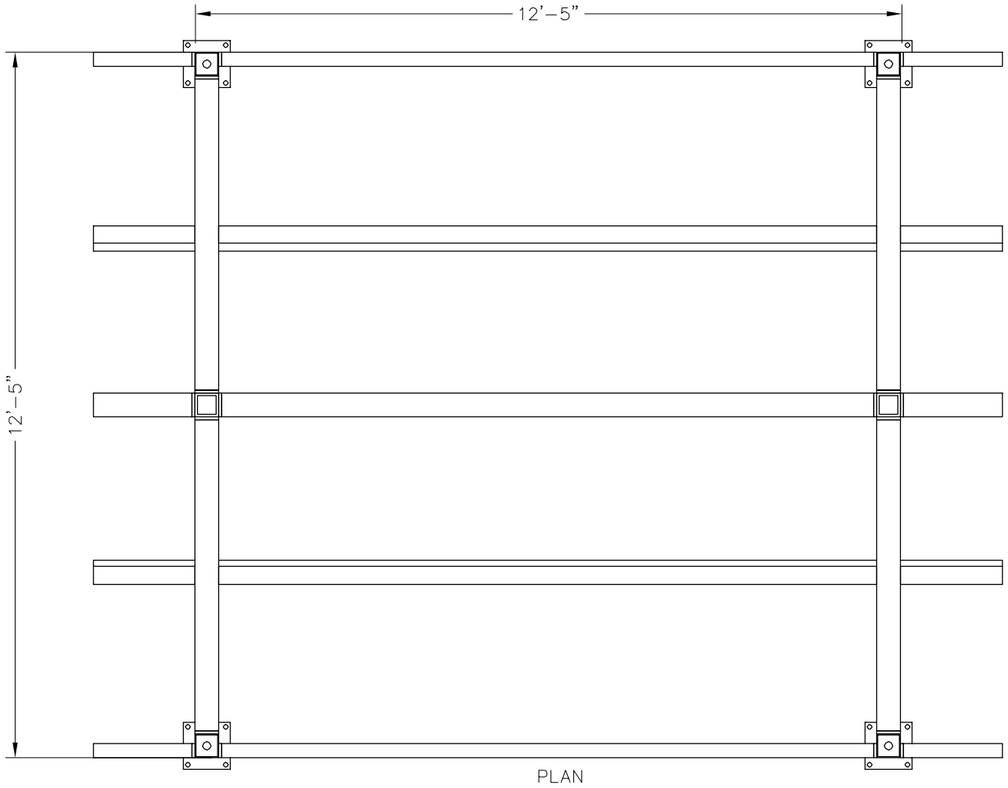
Anchor Bolt Layout

DRAWN BY: MB
DATE: 4/29/15
JOB NO.: STANDARD
REVISION:
BUILDING TYPE: DS16X16M−P64
PROJECT NAME:

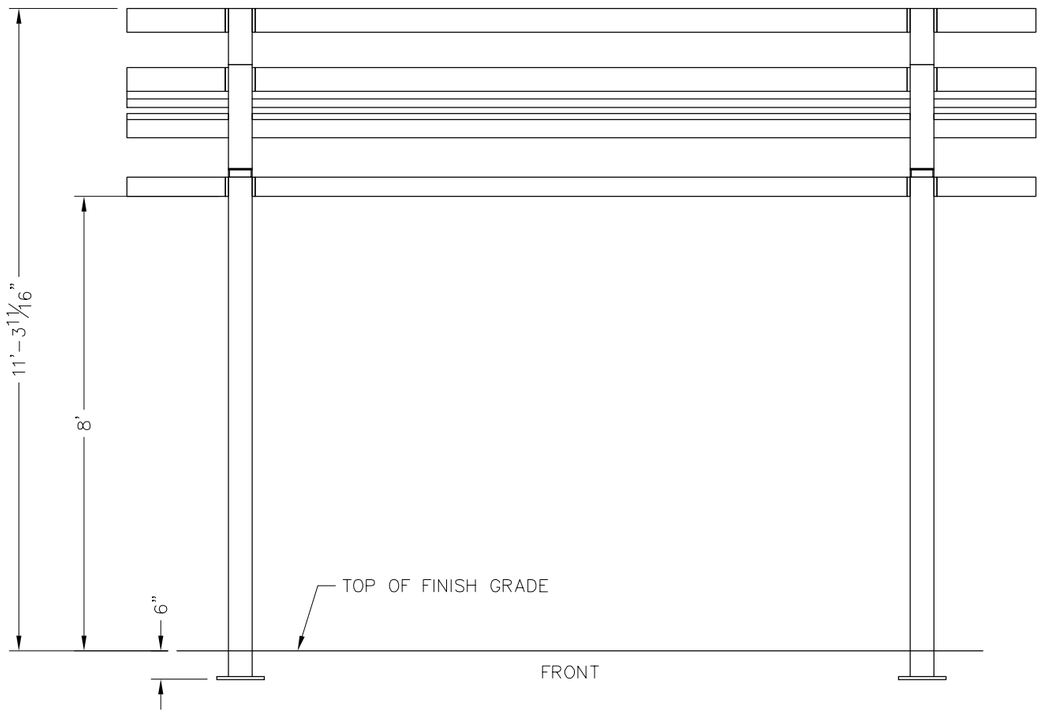
SHEET 2.0

Engineering\AcadStandard\Blocks\Titles\ICONPRETB
QF−73−01−42

DWG: \\iss-server02\Company\Engineering\Standards\Shelters\DS\16X16\M-P6-50-90-150\Drawings\Preliminary\DS16M-P64-50-90-150~31296.dwg



PLAN



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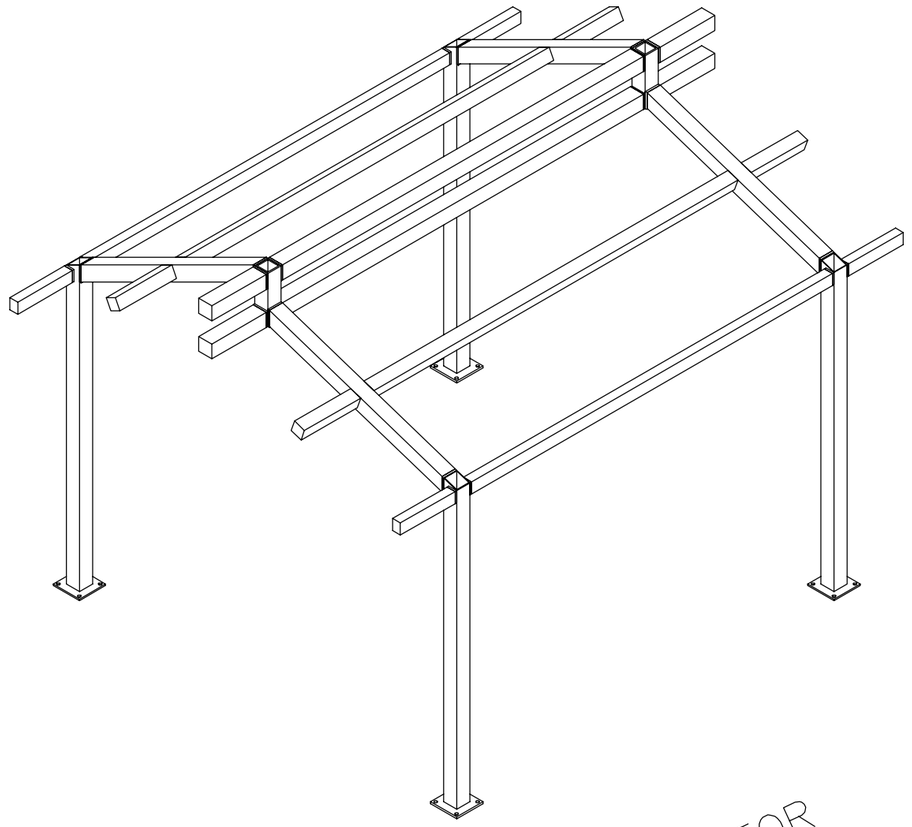

PRELIMINARY: NOT FOR CONSTRUCTION

ALL STRUCTURAL COMPONENTS WILL BE:
TUBE: ASTM A500 GRADE B
PLATE: ASTM A36
BOLTS: ASTM A325
NUTS: ASTM A563
WELDING: GMAW

NOTE:
COLUMN SIZE: HSS 5x5x3/16

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Frame

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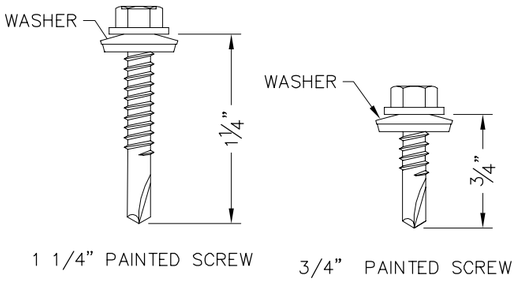
DWG: \\iss-server02\Company\Engineering\Standards\Shelters\DS\16X16\M-P6-50-90-150\Drawings\Preliminary\DS16M-P64-50-90-150~31296.dwg



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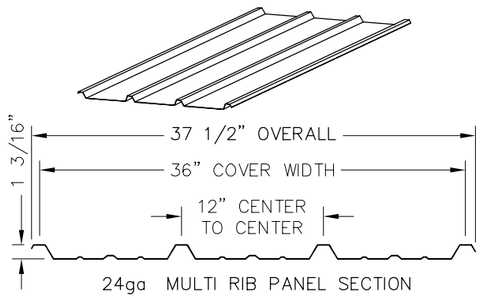
3/4" PAINTED SCREW



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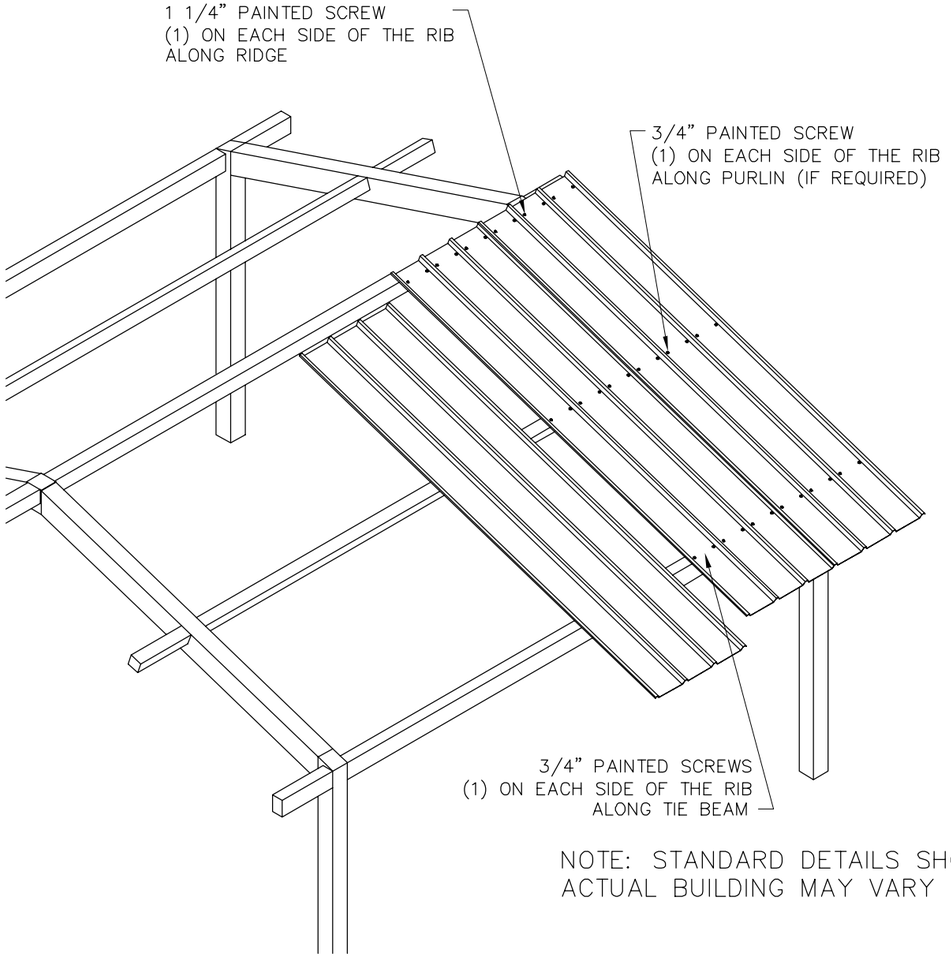
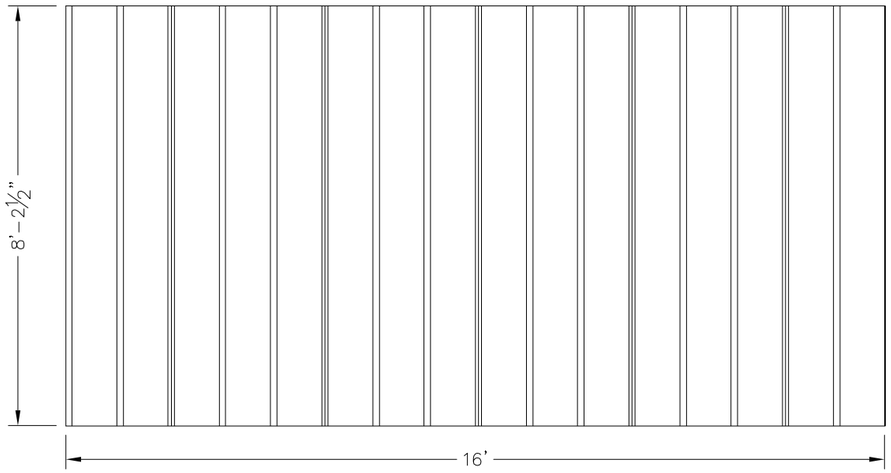
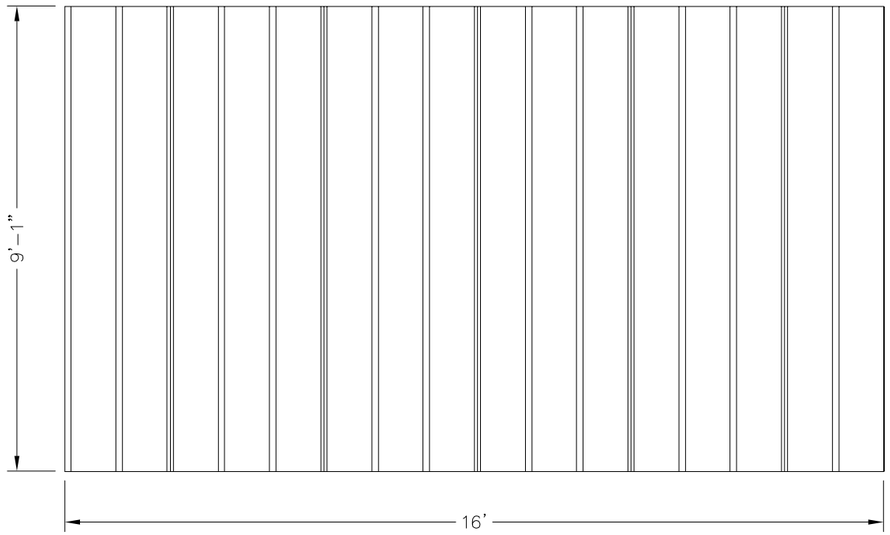


NOTE: STANDARD DETAILS SHOWN
ACTUAL BUILDING MAY VARY





ROOF LAYOUT

PRELIMINARY: NOT FOR CONSTRUCTION

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DISTINCTIVE STEEL SHELTERS
WWW.ICONSHELTERS.COM
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1455 LINCOLN AVE.
HOLLAND MI, 49423

616.396.0919
800.748.0985
616.396.0944 FX

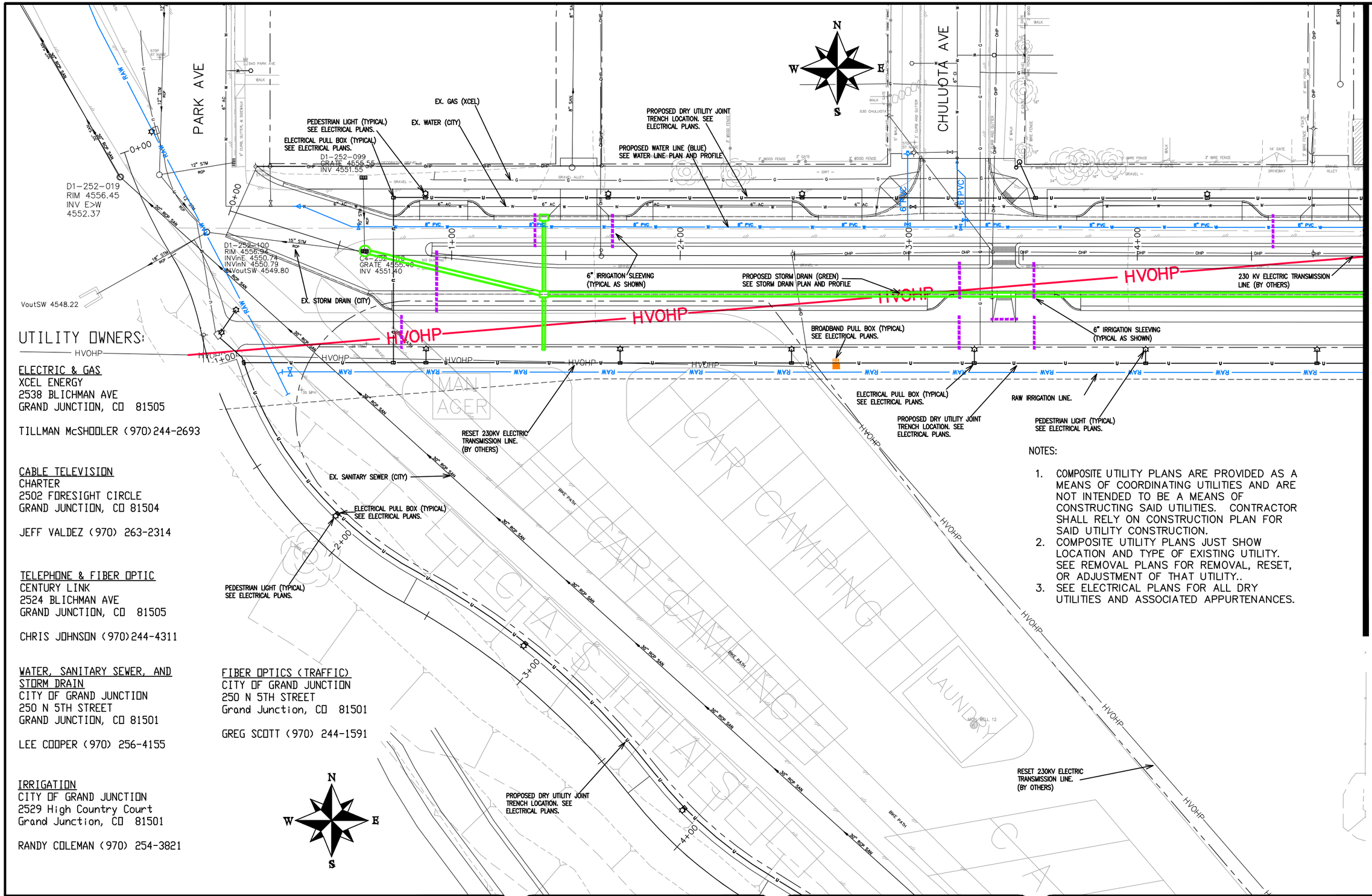
Roof Layout

DRAWN BY:	MB
DATE:	4/29/15
JOB NO.:	STANDARD
REVISION:	
BUILDING TYPE:	DS16X16M-P64
PROJECT NAME:	

SHEET 4.0

Engineering\AcadStandards\Blocks\Titles\ICONPRETB
QF-73-01-42

DWG: \\iss-server02\Company\Engineering\Standards\Shelters\DS\16X16\M-P6-50-90-150\Drawings\Preliminary\DS16M-P64-50-90-150~31296.dwg



UTILITY OWNERS:

HVOHP

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

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DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-1
June 12, 2020

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UTILITY OWNERS:

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XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
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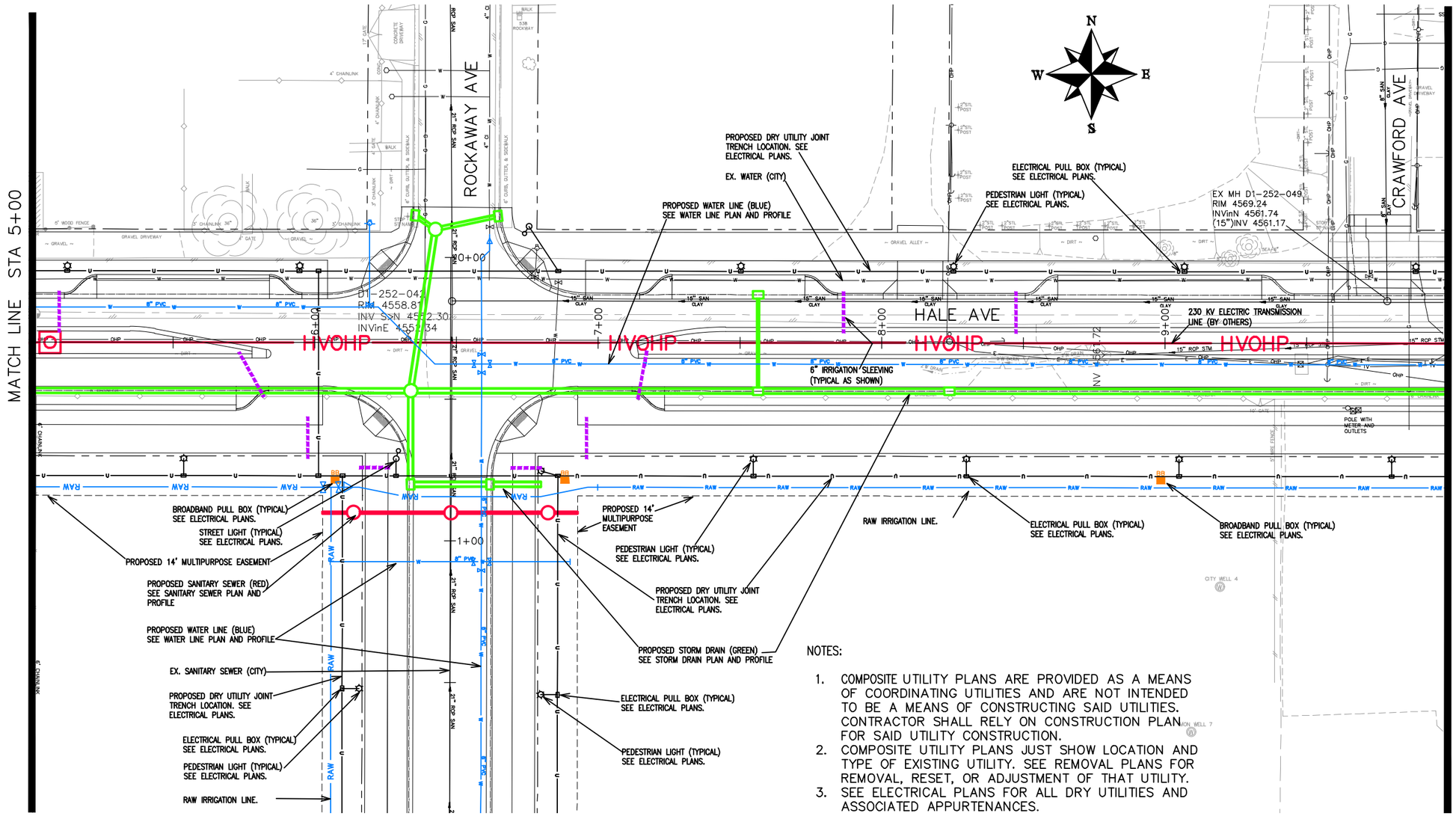
GREG SCOTT (970) 244-1591



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REVISION △	
REVISION △	

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-2
June 12, 2020

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XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
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CITY OF GRAND JUNCTION
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GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
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2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

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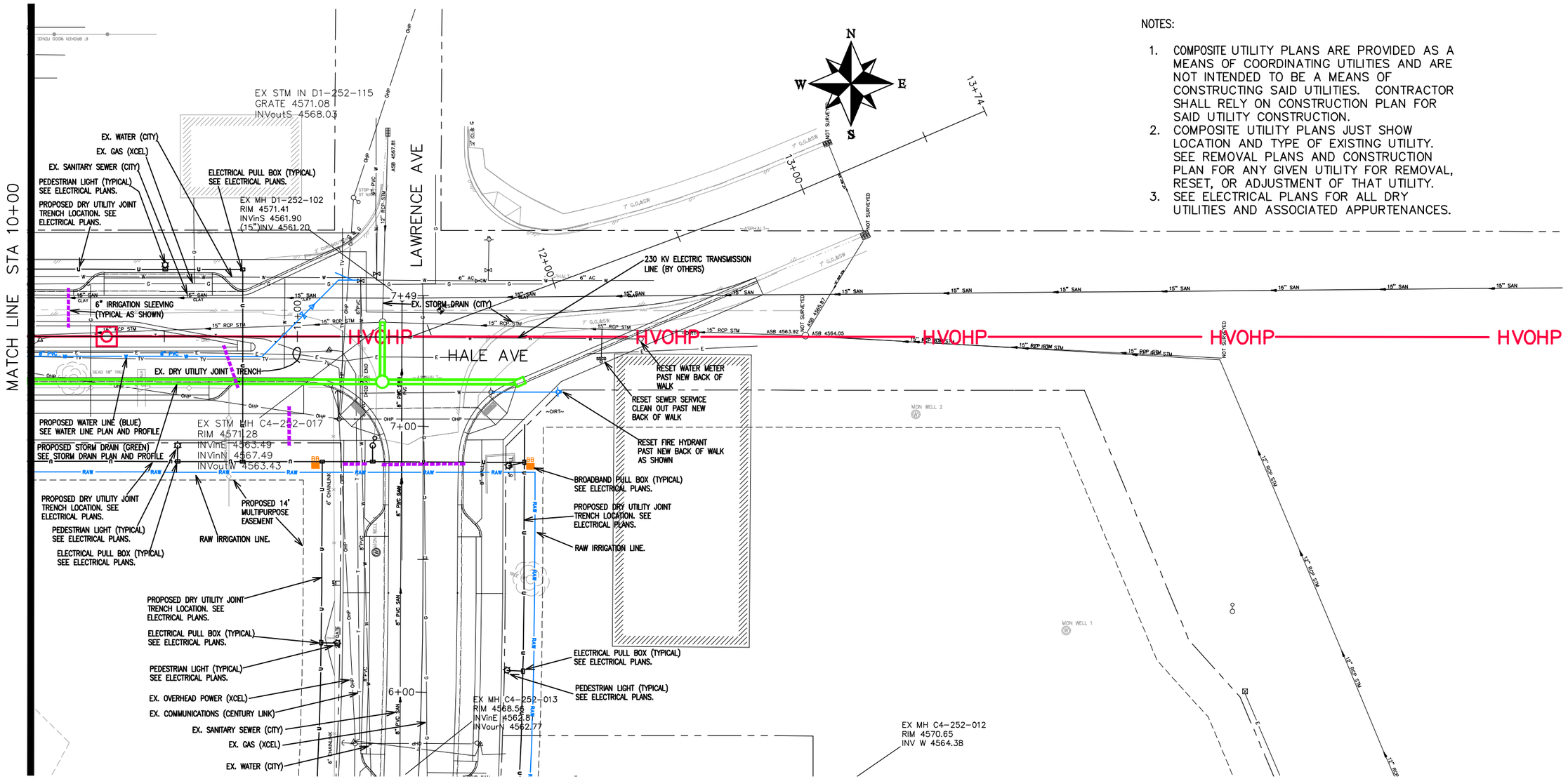
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591



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REVISION △	

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-3
June 12, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
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CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

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CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

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CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

HALE AVE

ROCKAWAY AVE

HVOHP

RAW

8+00

7+00

6+00

5+00

0+00

1+00

2+00

3+00

4+00

6+00

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

STREET LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

PROPOSED 14' MULTIPURPOSE EASEMENT

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

EX. SANITARY SEWER (CITY)

RAW IRRIGATION LINE.

EX. SANITARY SEWER (CITY)

C4-252-004
RIM 4558.81
INV SSN 4552.30
INVinE 4552.34

C4-252-002
RIM 4559.42
INVin 4552.66
INVout 4552.52

C4-252-006
RIM 4557.48
INV E>W 4553.50

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

6' CHAINLINK

NOTES:

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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-4
June 12, 2020

22

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PROPOSED 14' MULTIPURPOSE EASEMENT

ROCKAWAY

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE

EX. SANITARY SEWER (CITY)

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

RAW IRRIGATION LINE.

C4-252-004
RIM 4560.14
INV E-W 4553.10

STREET LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED 14' MULTIPURPOSE EASEMENT

EX. SANITARY SEWER (CITY)

RAW IRRIGATION LINE.

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

C4-252-002
RIM 4559.42
INVin 4552.66
INVout 4552.52

C4-252-003
RIM 4560.03
INV E-W 4554.64

DOS RIOS DR

PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

EX. SANITARY SEWER (CITY)

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

COLORADO RIVER TRAIL

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

MATCH LINE STA 5+00

UTILITY OWNERS:

ELECTRIC & GAS	CABLE TELEVISION	TELEPHONE & FIBER OPTIC
XCEL ENERGY	CHARTER	CENTURY LINK
2538 BLICHMAN AVE	2502 FORESIGHT CIRCLE	2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505	GRAND JUNCTION, CO 81504	GRAND JUNCTION, CO 81505
TILLMAN McSHOOLER (970)244-2693	JEFF VALDEZ (970) 263-2314	CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN	IRRIGATION	FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION	CITY OF GRAND JUNCTION	CITY OF GRAND JUNCTION
250 N 5TH STREET	2529 High Country Court	250 N 5TH STREET
GRAND JUNCTION, CO 81501	Grand Junction, CO 81501	Grand Junction, CO 81501
LEE COOPER (970) 256-4155	RANDY COLEMAN (970) 254-3821	GREG SCOTT (970) 244-1591

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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-5
June 12, 2020

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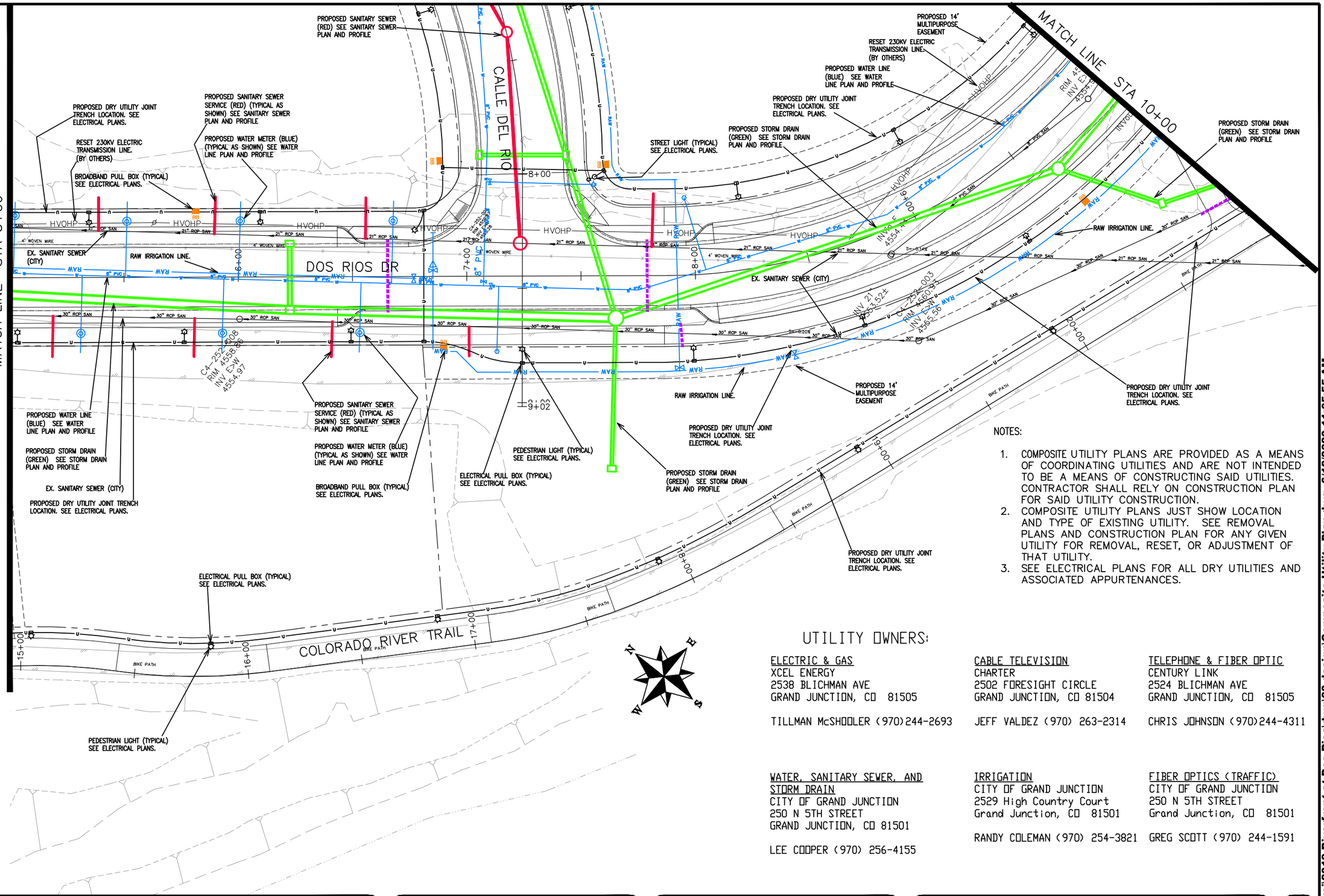
MATCH LINE STA 5+00
MATCH LINE STA 10+00
CALLE DEL RIO
DOS RIOS DR
COLORADO RIVER TRAIL
BIKE PATH
PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE
PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.
RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)
BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.
PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE
PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE
EX. SANITARY SEWER (CITY)
RAW IRRIGATION LINE.
PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE
PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE
PROPOSED 14' MULTIPURPOSE EASEMENT
STREET LIGHT (TYPICAL) SEE ELECTRICAL PLANS.
PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE
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PROPOSED 14' MULTIPURPOSE EASEMENT
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EX. SANITARY SEWER (CITY)
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ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.
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RAW IRRIGATION LINE.
PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE
PROPOSED 14' MULTIPURPOSE EASEMENT
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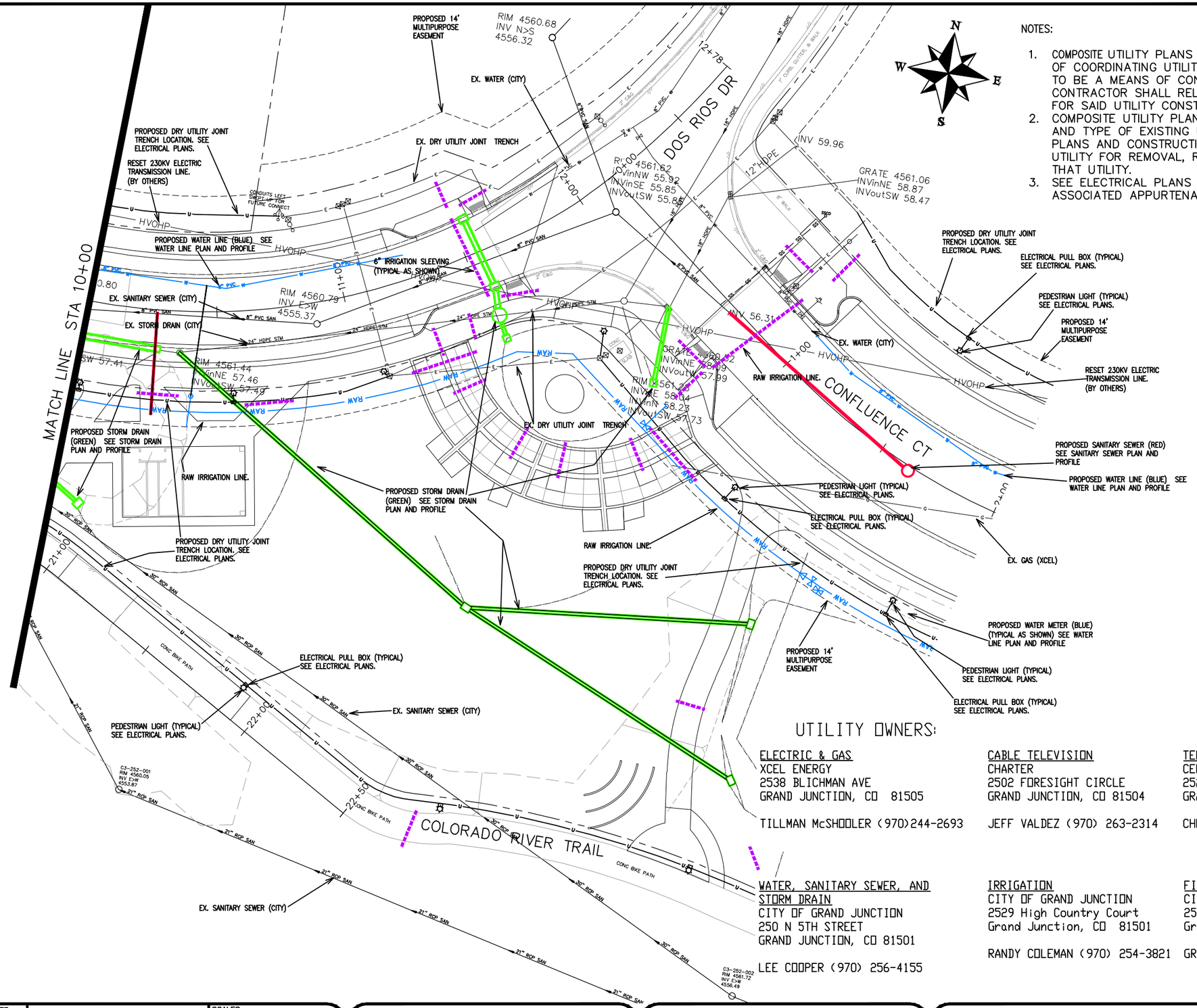

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FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501
GREG SCOTT (970) 244-1591

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-7
June 12, 2020

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NOTES:

1. COMPOSITE UTILITY PLANS ARE PROVIDED AS A MEANS OF COORDINATING UTILITIES AND ARE NOT INTENDED TO BE A MEANS OF CONSTRUCTING SAID UTILITIES. CONTRACTOR SHALL RELY ON CONSTRUCTION PLAN FOR SAID UTILITY CONSTRUCTION.
2. COMPOSITE UTILITY PLANS JUST SHOW LOCATION AND TYPE OF EXISTING UTILITY. SEE REMOVAL PLANS AND CONSTRUCTION PLAN FOR ANY GIVEN UTILITY FOR REMOVAL, RESET, OR ADJUSTMENT OF THAT UTILITY.
3. SEE ELECTRICAL PLANS FOR ALL DRY UTILITIES AND ASSOCIATED APPURTENANCES.

ROCKAWAY AVE
DOS RIOS DR
CALLE DEL RIO
LAWRENCE AVE
MATCH LINE STA 5+00
5+00
4+00
3+00
2+00
1+00
0+00
0+34
PROPOSED 14' MULTIPURPOSE EASEMENT
BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.
PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.
ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.
STREET LIGHT (TYPICAL) SEE ELECTRICAL PLANS.
PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE
PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE
PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE
6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)
PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE
PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE
PROPOSED 14' MULTIPURPOSE EASEMENT
EX. GAS (XCEL)
PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.
EX. WATER (CITY)
PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.
RAW IRRIGATION LINE.
EX. OVERHEAD POWER (XCEL)

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505
TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504
JEFF VALDEZ (970) 263-2314

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501
LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501
RANDY COLEMAN (970) 254-3821

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505
CHRIS JOHNSON (970)244-4311

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501
GREG SCOTT (970) 244-1591

DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-8
June 12, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

NOTES:

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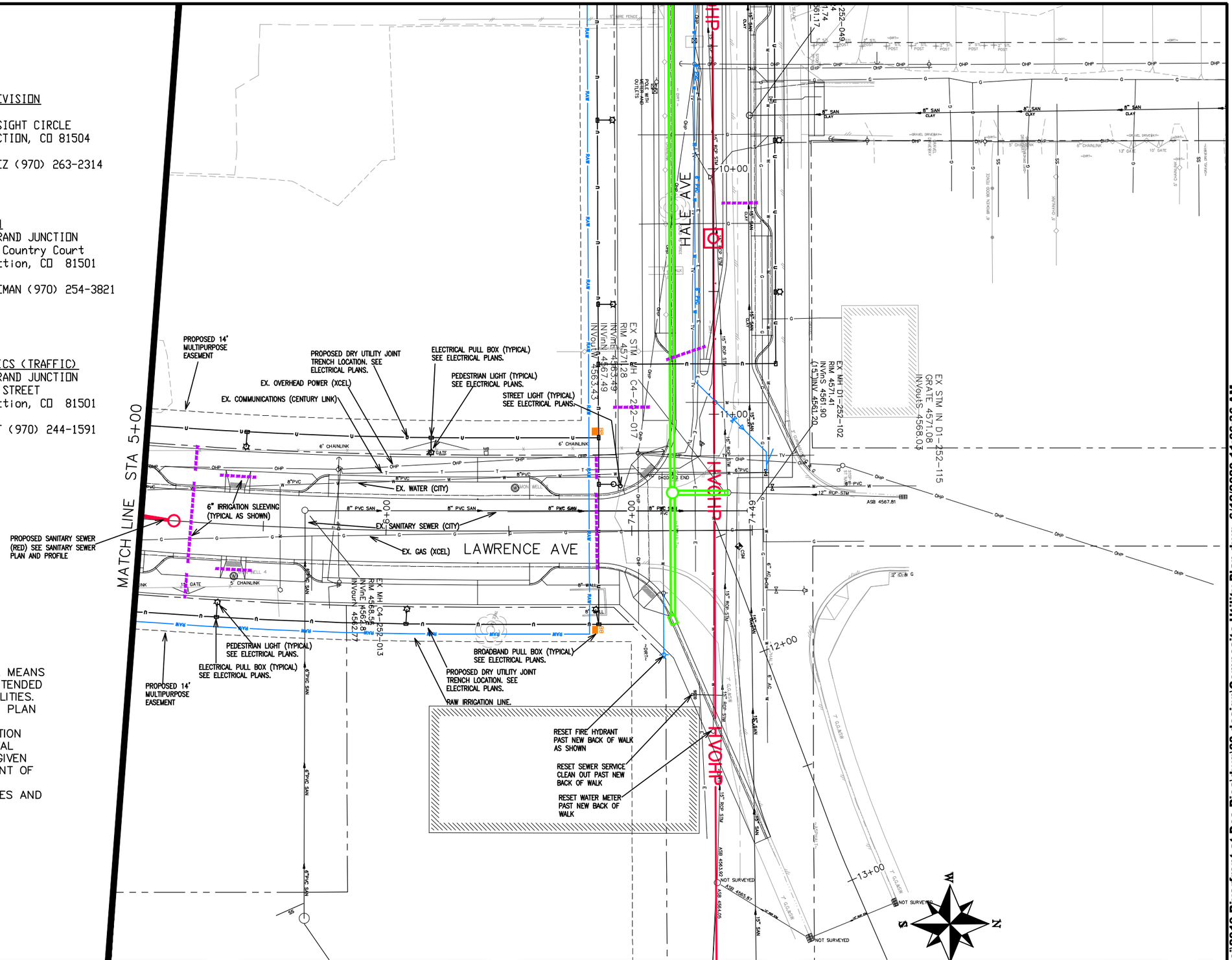

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-9
June 12, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

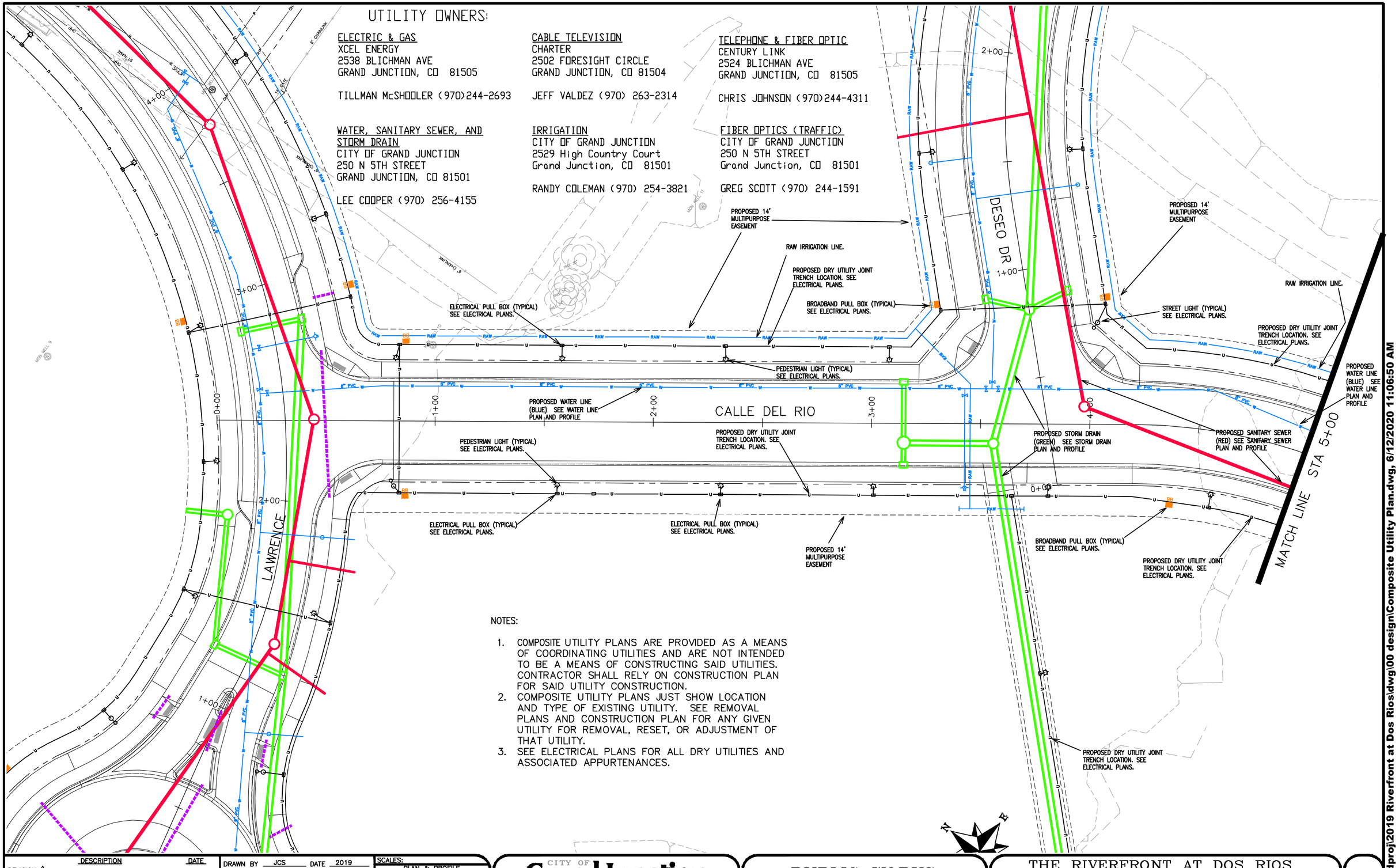
LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591



NOTES:

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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C–10
June 12, 2020

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NOTES:

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3. SEE ELECTRICAL PLANS FOR ALL DRY UTILITIES AND ASSOCIATED APPURTENANCES.

PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE

RAW IRRIGATION LINE.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PROPOSED 14' MULTIPURPOSE EASEMENT

STREET LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

CALLE DEL RIO

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

MATCH LINE STA 5+00

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

PROPOSED 14' MULTIPURPOSE EASEMENT

DOS RIOS DR

COLORADO RIVER TRAIL

BIKE PATH

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-11
June 12, 2020

29

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

CALLE DEL RIO

DESEO DR

RIVERSIDE PARKWAY

PROPOSED 14' MULTIPURPOSE EASEMENT

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

RAW IRRIGATION LINE.

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

EX. WATER (CITY)

EX. IRR (CITY)

EX. TRAFF (CITY)

EX. TV (CHARTER)

EX. ELECT (XCEL)

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

STREET LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

NOTES:

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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C–12
June 12, 2020

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NOTES:

1. COMPOSITE UTILITY PLANS ARE PROVIDED AS A MEANS OF COORDINATING UTILITIES AND ARE NOT INTENDED TO BE A MEANS OF CONSTRUCTING SAID UTILITIES. CONTRACTOR SHALL RELY ON CONSTRUCTION PLAN FOR SAID UTILITY CONSTRUCTION.
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3. SEE ELECTRICAL PLANS FOR ALL DRY UTILITIES AND ASSOCIATED APPURTENANCES.

DOS RIOS DR

RIVERSIDE PARKWAY

CONFLUENCE CT

MATCH LINE STA 5+00

RIM 4562.94
INV 59.24
(CALC'D NOT MEASURED)

RIM 4560.68
INV N>S
4556.32

INV 59.96

GRATE 4561.06
INVinNE 58.87
INVoutSW 58.47

RIM 4561.62
INVinNW 55.92
INVinSE 55.85
INVoutSW 55.55

INV 56.31

GRATE 4560.32
INVinNE 57.19
INVoutNW 57.09

RIM 4561.25
INVinNE 58.04
INVinSW 58.25
INVoutSW 57.73

4560.79
E>W
5.37

EX. DRY UTILITY JOINT TRENCH

EX. WATER (CITY)

EX. SANITARY SEWER (CITY)

EX. GAS (XCEL)

PROPOSED 14' MULTIPURPOSE EASEMENT

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE

PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

RAW IRRIGATION LINE.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

PROPOSED 14' MULTIPURPOSE EASEMENT

UTILITY OWNERS:

ELECTRIC & GAS	CABLE TELEVISION	TELEPHONE & FIBER OPTIC	WATER, SANITARY SEWER, AND STORM DRAIN	IRRIGATION	FIBER OPTICS (TRAFFIC)
XCEL ENERGY	CHARTER	CENTURY LINK	CITY OF GRAND JUNCTION	CITY OF GRAND JUNCTION	CITY OF GRAND JUNCTION
2538 BLICHMAN AVE	2502 FORESIGHT CIRCLE	2524 BLICHMAN AVE	250 N 5TH STREET	2529 High Country Court	250 N 5TH STREET
GRAND JUNCTION, CO 81505	GRAND JUNCTION, CO 81504	GRAND JUNCTION, CO 81505	GRAND JUNCTION, CO 81501	Grand Junction, CO 81501	Grand Junction, CO 81501
TILLMAN McSHOOLER (970)244-2693	JEFF VALDEZ (970) 263-2314	CHRIS JOHNSON (970)244-4311	LEE COOPER (970) 256-4155	RANDY COLEMAN (970) 254-3821	GREG SCOTT (970) 244-1591

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REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-13
June 12, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970) 244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970) 244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

NOTES:

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MATCH LINE STA 5+00

CONFLUENCE CT

RIM 4571.03
INVinNE 4561.41
INVoutSW 4561.34

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

EX. SANITARY SEWER (CITY)

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

RAW IRRIGATION LINE.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

12" RCP (E END NOT LOCATED)

CONC BIKE PATH

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

EX. SANITARY SEWER (CITY)

C3-261-001
RIM 4562.28
INV E>W
4553.63
INVinNE
4554.12

C3-261-002
RIM 4563.19
INV E>W
4557.23

6+00

7+00

7+36

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

RAW IRRIGATION LINE.

MATCH LINE

DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-14
June 12, 2020

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RIVERSIDE PARKWAY

MATCH LINE

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

RAW IRRIGATION LINE.

EX. SANITARY SEWER (CITY)

CONC BIKE PATH

RAW

27" PVC SAN

24" CIPP SAN

C-261-004 RIM 4564.0 INV SE>NW 4554.36

C-261-008 RIM 4565.3 INV SE>NW 4558.46

C-261-007 RIM 4563.4 INV SE>NW 4564.70

Inv 4556.82

Inv 4556.75

15" RCP

36" RCP

24" RCP

WALL

N

E

W

S

NOTES:

1. COMPOSITE UTILITY PLANS ARE PROVIDED AS A MEANS OF COORDINATING UTILITIES AND ARE NOT INTENDED TO BE A MEANS OF CONSTRUCTING SAID UTILITIES. CONTRACTOR SHALL RELY ON CONSTRUCTION PLAN FOR SAID UTILITY CONSTRUCTION.
2. COMPOSITE UTILITY PLANS JUST SHOW LOCATION AND TYPE OF EXISTING UTILITY. SEE REMOVAL PLANS AND CONSTRUCTION PLAN FOR ANY GIVEN UTILITY FOR REMOVAL, RESET, OR ADJUSTMENT OF THAT UTILITY.
3. SEE ELECTRICAL PLANS FOR ALL DRY UTILITIES AND ASSOCIATED APPURTENANCES.

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-15
June 12, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

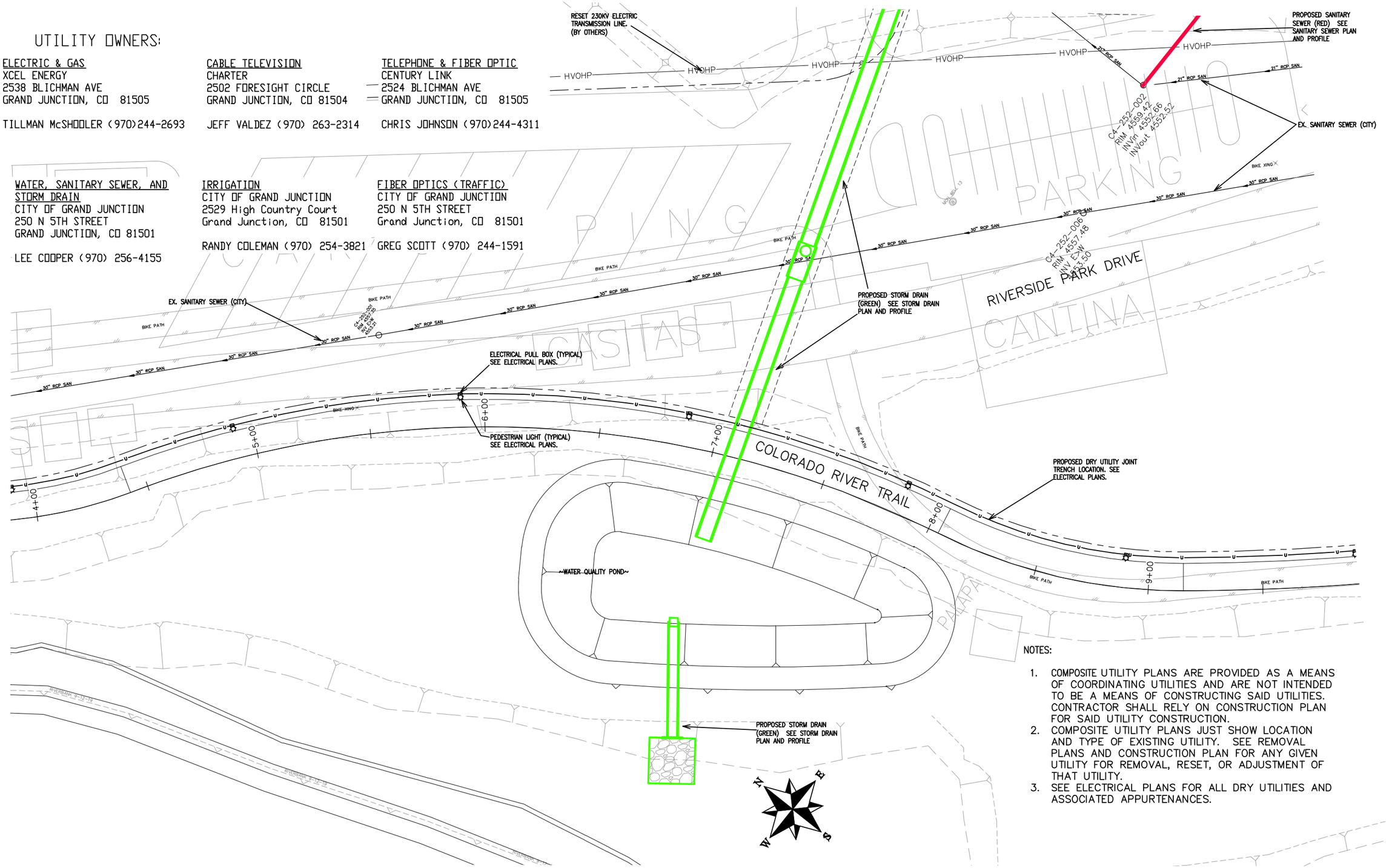
LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591



NOTES:

1. COMPOSITE UTILITY PLANS ARE PROVIDED AS A MEANS OF COORDINATING UTILITIES AND ARE NOT INTENDED TO BE A MEANS OF CONSTRUCTING SAID UTILITIES. CONTRACTOR SHALL RELY ON CONSTRUCTION PLAN FOR SAID UTILITY CONSTRUCTION.
2. COMPOSITE UTILITY PLANS JUST SHOW LOCATION AND TYPE OF EXISTING UTILITY. SEE REMOVAL PLANS AND CONSTRUCTION PLAN FOR ANY GIVEN UTILITY FOR REMOVAL, RESET, OR ADJUSTMENT OF THAT UTILITY.
3. SEE ELECTRICAL PLANS FOR ALL DRY UTILITIES AND ASSOCIATED APPURTENANCES.

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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-16
June 12, 2020

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STREET LIGHTING GENERAL NOTES:

1. THIS PROJECT WILL BE BID FOR THE INSTALLATION OF THE PEDESTRIAN, AND STREET LIGHTING. BASE PROJECT: COMPLETE THE MAIN PATH PEDESTRIAN AND STREET LIGHTING FOR PHASE 2 THE RIVER FRONT AT DOS RIOS.

2. THIS PROJECT CONSISTS OF WORK TO INSTALL ALL WIRING, CONDUIT, PULL BOXES, AND POWER PANEL. REFERENCE SCHEDULE OF LIGHTING DEVICES AND SUMMARY OF QUANTITIES.

3. TYPES "SA & SB" LIGHT STANDARD & LUMINARIES (PEDESTRIAN AND STREET LIGHT), SHALL INCLUDE THE FOLLOWING ITEMS FROM VISUAL INTEREST LIGHTING LOCATED AT 3444 BRIGHTON BLVD, DENVER, CO 80216, 303.861.8448.

4. TYPE "SA" PHILLIP GARDCO GL13-1-2-70LA-6345-NW-UNV-BLP-LF, PROVIDE COLLISION BREAK AWAY CONNECTORS. FIXTURE TO BE 15' ABOVE FINISHED GRADE TO BOTTOM OF LIGHT. POLE #FRS-15-4-D1-BLP

5. TYPE "SB" PHILLIP GARDCO GL18-1-2-2230LA-9600-NW-UNV-LF-PC-RPA2, PROVIDE COLLISION BREAK AWAY CONNECTORS. FIXTURE TO BE 27' ABOVE FINISHED GRADE TO BOTTOM OF LIGHT. POLE #FRS-27-5-D1-BLP

6. PROVIDE 2 TOTAL NEW MILL BANK PANELS (PP2, PP3), 208V, 3PH, 4W 100A , #CP3B5151XK42C5XCSL1 LOCATED AS SHOWN IN DRAWINGS. PANEL PP1 IS EXISTING AND TO BE REUSED AS SHOWN IN DRAWINGS

7. ALL PEDESTRIAN LIGHTING FIXTURES(TYPE "SA") INSTALLED ON THE PROJECT WILL BE CONTROLLED WITH A ELECTRICAL CONTRACTOR SUPPLIED PHOTO CELL TO BE LOCATED IN EACH NEW MILBANK POWER PEDESTALS IN SWITCHED SECTION OF PANEL. ORIENT PANEL SO THAT PHOTOCELL WILL BE ORIENTED NORTH, TYPICAL.

8. ALL STREET LIGHTING FIXTURES(TYPE "SB") WILL EACH BE ORDERED WITH THEIR OWN PHOTOCELL INSTALLED IN THE FIXTURE, AND POWERED WITH NEW 208 VOLT 3PHASE MILBANK POWER PEDESTAL ON UN-SWITCHED SECTION.

9. PROVIDE 2" PVC SCHEDULE 80 CONDUIT BETWEEN EACH JUNCTION BOX LABELED "UB".

10. COORDINATE LOCATION AND WIRING FOR SPRINKLER CONTROLLER WITH PROVIDER PRIOR TO TRENCHING, REFERENCE DRAWING E6.

11. ELEVATIONS SHOWN IN THE SCHEDULE OF LIGHTING DEVICES ON THE PLANS SHEETS REPRESENT THE DESIGN FINISHED GRADE OR THE EXISTING GROUND FINISHED GRADE. THESE ELEVATIONS DO NOT INDICATE THE TOP ELEVATION OF THE LUMINARIES (PEDESTRIAN) FOUNDATION. PEDESTRIAN LIGHTING FOUNDATIONS SHALL BE CONSTRUCTED PER THE MANUFACTURERS RECOMMENDATIONS.

12. PULL BOXES FOR LIGHT STANDARD (PEDESTRIAN AND STREET) WILL BE TYPE 1 CDOT PULL BOXES 11"X18"X12".

13. PULL BOXES WILL BE INSTALLED IN GRADES WITHOUT CONCRETE WHERE POSSIBLE.

14. ALL ELECTRICAL CONDUIT SHALL BE SCHEDULE 80 PVC UNLESS NOTED OTHERWISE, TYPICAL.

15. UNLESS OTHERWISE NOTED, THE WORK DESCRIBED ON THE PLANS SHALL INCLUDE PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM. FURNISH ALL REQUIRED ITEMS WHETHER SUCH ARE SPECIFICALLY SHOWN OR NOT.

16. INFORMATION SHOWN ON DRAWINGS IS DIAGRAMMATIC ONLY AND SHALL NOT BE SCALED. OBTAIN VERIFY EXACT LOCATIONS, MEASUREMENTS, LEVELS, SPACE REQUIREMENTS, POTENTIAL CONFLICTS AMONG TRADES AND FOR ADJUSTING THE WORK REQUIRED BY THE ACTUAL CONDITIONS OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDER GROUND OBSTRUCTIONS AND MAKING ALLOWANCES FOR FIELD ADJUSTMENT OF LOCATION OF LUMINARIES TO AVOID SHUT DOWN OF ANY SERVICES OR SYSTEMS THAT ARE TO REMAIN.

17. BEFORE SUBMITTING THE BID ELECTRICAL CONTRACTOR SHALL VISIT AND EXAMINE THE PREMISES AND/OR JOB SITE SO AS TO ASCERTAIN THE EXISTING CONDITIONS IN WHICH THE CONTRACTOR WILL BE OBLIGED TO OPERATE IN PERFORMING HIS PART OF THE CONTRACT TO ANTICIPATE ANY POSSIBLE SPACE RESTRICTIONS OR CONSTRAINTS THAT COULD AFFECT THE TIMELY COMPLETION OF THE ELECTRICAL WORK IN ACCORDANCE WITH THE INTENT OF THE SPECIFICATIONS AND DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL REPORT TO THE THE PROJECT ENGINEER OR GENERAL CONTRACTOR ANY CONDITIONS THAT MIGHT PREVENT THE SPECIFIED ELECTRICAL WORK FROM BEING PERFORMED IN THE MANNER INTENDED. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED TO THE ELECTRICAL CONTRACTOR FOR FAILURE TO VISIT THE PROJECT SITE, OR FOR ANY ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED OR WORK TO BE DONE..

18. THE ELECTRICAL CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL TRADES WHOSE WORK RELATES TO OR IS DEPENDENT ON ELECTRICAL WORK TO BECOME FULLY INFORMED OF THE EXTENT AND CHARACTER OF THEIR SPECIFIED WORK AND BE ABLE TO COORDINATE WITH OTHER TRADES WHILE AVOIDING POSSIBLE INTERFERENCE WITH THE ELECTRICAL WORK.

19. THE CONTRACTOR SHALL USE CONDUIT PLUGS AND SEALING PLUGS FOR SEALING ALL EMPTY CONDUITS AND CONDUITS OCCUPIED WITH CABLING, RESPECTIVELY, INSTALLED UNDER THIS CONTRACT. CONDUIT PLUGS SHALL BE MANUFACTURED FROM HIGH-IMPACT PLASTIC COMPONENTS, COMBINED WITH DURABLE ELASTIC GASKETS. THEY SHALL BE CORROSION PROOF AND APPROPRIATE FOR USE AS EITHER A LONG-TERM OR TEMPORARY SEAL. CONDUIT PLUGS SHALL BE REMOVABLE AND REUSABLE. THEY SHALL BE BOTH WATERTIGHT AND AIRTIGHT TO PREVENT THE FLOW OF WATER AND BUILDUP OF SEDIMENTATION WITHIN THE CONDUIT. EACH CONDUIT PLUG SHALL BE EQUIPPED WITH A ROPE TIE DEVICE TO ALLOW THE SECURING OF PULL ROPE TO THE PLUG'S BACK COMPRESSION PLATE. THE CONTRACTOR SHALL ATTACH THE PULL ROPE TO THE BACK COMPRESSION PLATE OF THE PLUG AND STORE EXCESS SLACK PULL ROPE BEHIND THE PLUG WITHIN THE CONDUIT FOR FUTURE USE.

20. PER OWNERS REQUEST LIGHT LEVELS ALONG PATHWAYS WERE SPACED AT A MINIMUM OF 120 FT OF SPACING. LIGHT LEVELS MAY BE BELOW THE RECOMMENDED DESIGN FOR A MINIMUM OF 0.6 FOOT-CANDLES AS RECOMMENDED BY THE ILLUMINATION ENGINEERS SOCIETY(IES). CHANGES TO LIGHTING WILL REQUIRE RECALCULATION OF LIGHT LEVELS TO INSURE ADEQUATE COVERAGE.

PP1-X ELECTRICAL CIRCUIT NUMBER (REFER TO PANEL SCHEDULES)

UB □ HEAVY DUTY, TRAFFIC RATED, FLUSH-TO-GRADE POLYMER CONCRETE SPLICE BOX WITH HEAVY DUTY, TRAFFIC RATED, BOLTED COVER. 11"X18"X12" TYPE 1. NUMBER ASSOCIATED IS NOT THE QUANTITY BUT THE IDENTIFIER ONLY.

UNDER GROUND BURIED RACEWAY (2#6 THWN CU AND 1#8 GND) IN 2" PVC CONDUIT (UNLESS NOTED OTHERWISE ON PLANS) IN 24" DEEP TRENCH, BURY AND COMPACTED BACKFILL TO CITY STANDARDS.

INSTALL SINGLE ARM PEDESTRIAN STANDARD OR STREET STANDARD AS SPECIFIED. NUMBER ASSOCIATED IS NOT THE QUANTITY BUT THE IDENTIFIER ONLY.

COLORADO REGISTERED JOEL MARTINEZ 37580 5-21-20 PROFESSIONAL ENGINEER

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ACM CONSULTING
ELECTRICAL DESIGN, CONSULTING ENGINEERS; PH: 970-245-7292
PO 3211 GRAND JCT., CO 81502
EMAIL: joelm@ACMengrs.com

DESCRIPTION	DATE
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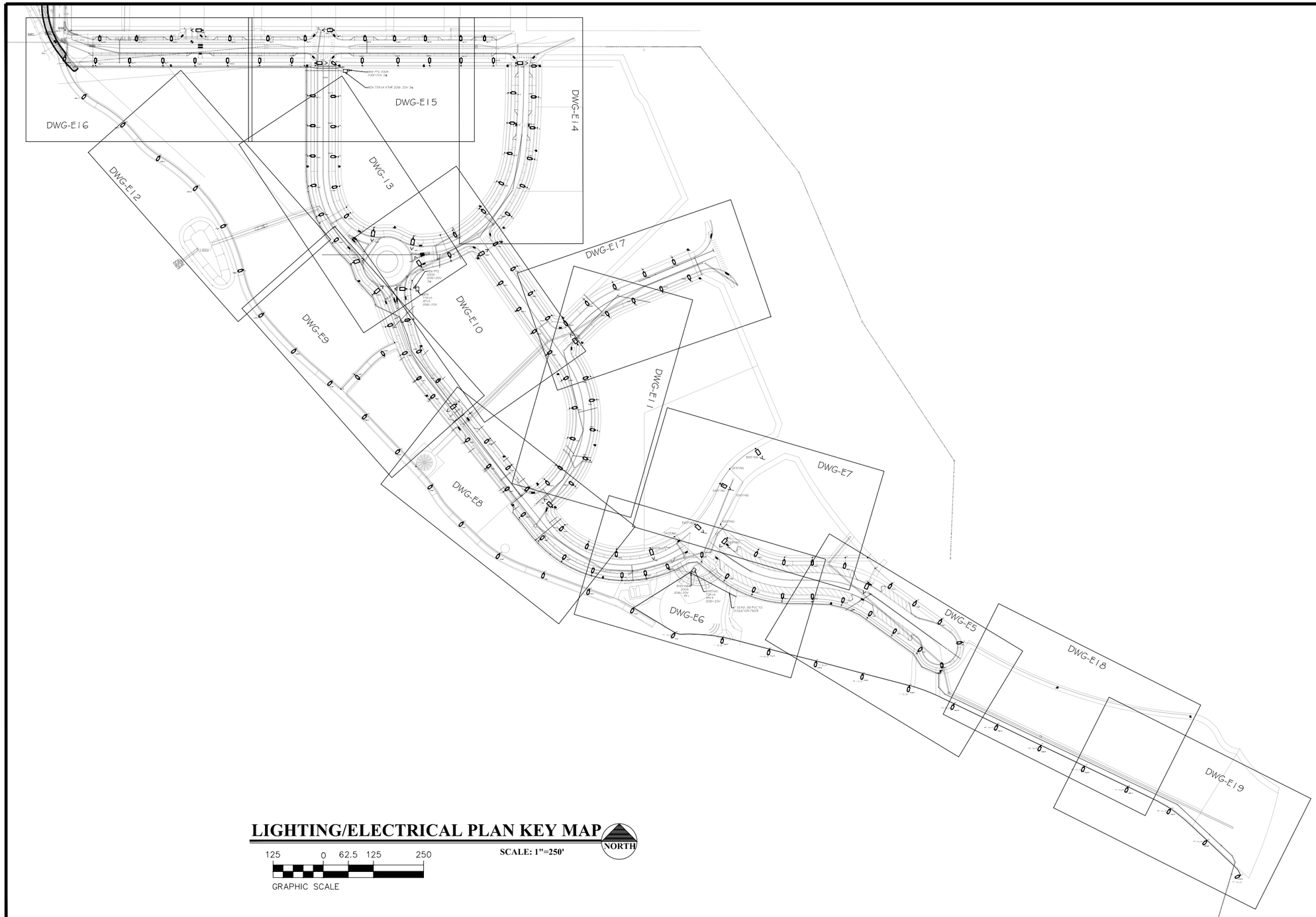
REVISION △	
REVISION △	
REVISION △	

DRAWN BY AJM DATE 5-21-2020
DESIGNED BY AJM DATE 5-21-2020
CHECKED BY AJM DATE 5-21-2020
APPROVED BY BH DATE 5-21-2020

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
COVER SHEET PLAN



LIGHTING/ELECTRICAL PLAN KEY MAP

NORTH

SCALE: 1"=250'

125 0 62.5 125 250

GRAPHIC SCALE

COLORADO REGISTERED JOEL M. HANSEN 37580 5-21-20 PROFESSIONAL ENGINEER

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CHECKED BY	AJM	DATE	5-21-2020
APPROVED BY	BH	DATE	5-21-2020

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
SITE LIGHTING PLAN

Schedule of Lighting Devices

DESCRIPTION				LUMINAIRE LED PEDESTRIAN (70 WATT) TYPE SA EACH	FOUNDATION SPECIAL EACH	LUMINAIRE LED STREET (250 WATT) TYPE SB EACH	NOTES
SHEET NO.	TYPE	NORTH	EAST	PLAN	PLAN	PLAN	
E5	SA-1	89825.877	32646.663	1	1		1
E5	SA-2	89766.867	32688.009	1	1		1
E5	SA-3	89875.282	32710.292	1	1		1
E5	SA-4	89704.615	32732.812	1	1		1
E5	SA-5	89824.337	32766.157	1	1		1
E5	SA-6	89643.788	32776.589	1	1		1
E5	SA-8	89577.506	32809.046	1	1		1
E5	SA-9	89761.277	32811.541	1	1		1
E5	SA-10	89503.034	32817.926	1	1		1
E5	SA-14	89700.450	32855.319	1	1		1
E5,E7	SA-22	89585.113	32906.980	1	1		1
E5	SA-149	89512.574	32662.010	1	1		1
E5	SA-150	89628.253	32630.508	1	1		1
E5	SA-151	89744.258	32599.834	1	1		1
E5,E18	SA-152	89854.843	32554.955	1	1		1
E5	SB-1	89642.680	32858.944		1	1	1
E6	SA-7	89159.698	32732.425	1	1		1
E6	SA-11	89428.044	32819.141	1	1		1
E6	SA-12	89057.243	32794.893	1	1		1
E6	SA-13	89354.793	32835.247	1	1		1
E6	SA-15	88946.924	32841.466	1	1		1
E6	SA-16	89287.203	32869.590	1	1		1
E6	SA-17	89028.317	32871.241	1	1		1
E6	SA-18	89088.116	32876.147	1	1		1
E6	SA-19	88954.272	32883.173	1	1		1
E6	SA-20	89144.888	32893.418	1	1		1
E6,E7	SA-23	89502.985	32914.926	1	1		1
E6,E7	SA-24	89432.995	32916.104	1	1		1
E6	SA-26	89227.297	32922.143	1	1		1
E6,E7	SA-28	89365.799	32935.719	1	1		1
E6	SA-29	89015.169	32936.155	1	1		1
E6	SA-147	89279.737	32720.320	1	1		1
E6	SA-148	89395.920	32691.264	1	1		1
E8	SA-21	88834.155	32882.494	1	1		1
E8	SA-25	88881.804	32917.061	1	1		1
E8	SA-27	88723.476	32929.958	1	1		1
E8	SA-30	88943.781	32955.242	1	1		1
E8	SA-31	88825.169	32966.229	1	1		1
E8	SA-32	88632.438	33008.958	1	1		1
E8	SA-33	88882.280	32998.104	1	1		1
E8	SA-34	88778.023	33024.558	1	1		1
E8	SA-35	88555.805	33101.104	1	1		1
E8	SA-36	88737.685	33088.173	1	1		1
E8	SA-37	88797.000	33096.491	1	1		1
E8,E11	SA-38	88907.782	33102.077	1	1		1
TABLE TOTALS				44	45	1	

SCHEDULE OF LIGHTING DEVICES NOTES:
1. FOUNDATION TOP HEIGHT EQUAL TO ADJACENT SIDEWALK

Schedule of Lighting Devices

DESCRIPTION				LUMINAIRE LED PEDESTRIAN (70 WATT) TYPE SA EACH	FOUNDATION SPECIAL EACH	LUMINAIRE LED STREET (250 WATT) TYPE SB EACH	NOTES
SHEET NO.	TYPE	NORTH	EAST	PLAN	PLAN	PLAN	
E8,E11	SA-39	88839.327	33112.007	1	1		1
E8	SA-41	88691.748	33144.907	1	1		1
E8	SA-43	88750.126	33148.836	1	1		1
E8	SA-47	88639.035	33210.086	1	1		1
E8	SA-48	88696.742	33215.044	1	1		1
E8	SB-5	88855.953	33046.379		1	1	1
E8,E9	SB-8	88616.513	33302.918		1	1	1
E9	SA-46	88474.569	33189.430	1	1		1
E9	SA-52	88391.743	33276.214	1	1		1
E9	SA-55	88552.359	33318.702	1	1		1
E9	SA-58	88517.701	33364.368	1	1		1
E9	SA-60	88374.841	33365.523	1	1		1
E9	SA-61	88575.881	33366.080	1	1		1
E9	SA-63	88305.665	33359.659	1	1		1
E9	SA-64	88436.835	33423.772	1	1		1
E9	SA-65	88481.902	33427.611	1	1		1
E9	SA-67	88528.979	33436.968	1	1		1
E9	SA-73	88445.239	33497.828	1	1		1
E9	SA-75	88500.500	33513.864	1	1		1
E9	SA-78	88215.818	33439.407	1	1		1
E9	SA-84	88134.827	33528.157	1	1		1
E9,E13	SA-88	88312.094	33708.512	1	1		1
E9,E13	SB-12	88411.110	33578.558		1	1	1
E9,E13	SB-15	88358.297	33655.672		1	1	1
E10,E17	SA-66	88843.398	33428.109	1	1		1
E10,E17	SA-76	88848.968	33521.133	1	1		1
E10,E17	SA-81	88805.898	33582.500	1	1		1
E10	SA-83	88721.758	33601.364	1	1		1
E10	SA-85	88762.805	33643.901	1	1		1
E10,E13	SA-86	88601.720	33669.160	1	1		1
E10	SA-87	88719.143	33706.112	1	1		1
E10	SA-90	88609.531	33730.500	1	1		1
E10	SA-143	88766.386	33535.916	1	1		1
E10	SA-144	88804.789	33480.437	1	1		1
E10,E13	SB-13	88492.078	33590.140		1	1	1
E10,E13	SB-14	88528.906	33645.840		1	1	1
E10	SB-16	88670.287	33673.021		1	1	1
E10,E13	SB-17	88508.727	33716.969		1	1	1
E10,E13	SB-18	88410.274	33738.172		1	1	1
E11	SA-42	88869.449	33148.362	1	1		1
E11	SA-44	88943.586	33165.668	1	1		1
E11	SA-49	88899.793	33218.998	1	1		1
E11	SA-50	88961.955	33238.784	1	1		1
E11	SA-53	88904.358	33293.535	1	1		1
E11	SA-54	88960.104	33313.979	1	1		1
TABLE TOTALS				36	45	9	

SCHEDULE OF LIGHTING DEVICES NOTES:
1. FOUNDATION TOP HEIGHT EQUAL TO ADJACENT SIDEWALK

STREET LIGHTING GENERAL NOTES:

1. EACH LIGHT TO HAVE A PULL BOX "UB", REFERENCE ELECTRICAL SHEETS.

COLORADO REGISTERED JOEL A. MARKEL PROFESSIONAL ENGINEER 37580 5-21-20

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EMAIL: joelm@ACMengrs.com

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
LIGHTING SCHEDULES

Schedule of Lighting Devices

DESCRIPTION				LUMINAIRE LED PEDESTRIAN (70 WATT) TYPE SA	FOUNDATION SPECIAL	LUMINAIRE LED STREET (250 WATT) TYPE SB	NOTES
				EACH	EACH	EACH	
SHEET NO.	TYPE	NORTH	EAST	PLAN	PLAN	PLAN	
E11,E17	SA-59	88883.819	33365.333	1	1		1
E11	SA-62	88944.106	33370.537	1	1		1
E11,E17	SA-68	88995.711	33523.163	1	1		1
E11,E17	SA-69	89060.206	33555.161	1	1		1
E11,E17	SA-70	88884.955	33509.630	1	1		1
E11,E17	SA-72	88937.937	33559.725	1	1		1
E11,E17	SA-77	89007.585	33601.555	1	1		1
E11,E17	SB-9	88917.842	33452.640		1	1	1
E12	SA-89	88084.391	33637.489	1	1		1
E12	SA-95	88041.108	33749.087	1	1		1
E12	SA-100	87970.470	33845.052	1	1		1
E12	SA-104	87877.028	33920.183	1	1		1
E13	SA-91	88273.968	33772.977	1	1		1
E13	SA-93	88347.463	33776.082	1	1		1
E13	SA-97	88319.120	33844.832	1	1		1
E13	SA-98	88254.074	33847.095	1	1		1
E13	SA-102	88315.875	33919.388	1	1		1
E13	SA-103	88251.877	33921.486	1	1		1
E13,E15	SA-108	88315.931	33994.388	1	1		1
E13,E15	SA-109	88251.933	33996.486	1	1		1
E13,E15	SA-113	88315.986	34069.388	1	1		1
E14	SA-92	88749.273	33773.632	1	1		1
E14	SA-94	88679.223	33787.797	1	1		1
E14	SA-96	88787.044	33844.722	1	1		1
E14	SA-99	88722.440	33855.748	1	1		1
E14	SA-101	88805.322	33913.807	1	1		1
E14	SA-105	88742.779	33928.466	1	1		1
E14	SA-106	88812.136	33991.140	1	1		1
E14	SA-110	88748.738	34003.233	1	1		1
E14	SA-112	88815.202	34068.307	1	1		1
E14	SA-115	88751.360	34078.469	1	1		1
E14	SA-117	88815.647	34145.239	1	1		1
E14	SA-129	88708.539	34152.687	1	1		1
E14	SA-142	88686.534	34220.688	1	1		1
E14	SB-20	88764.615	34152.709		1	1	1
E15	SA-114	88251.988	34071.486	1	1		1
E15	SA-118	88316.045	34148.357	1	1		1
E15	SA-124	88126.086	34152.519	1	1		1
E15	SA-125	88381.599	34152.601	1	1		1
E15	SA-126	88470.906	34152.625	1	1		1
E15	SA-127	88549.485	34152.644	1	1		1
E15	SA-128	88628.039	34152.668	1	1		1
E15	SA-130	88206.141	34152.715	1	1		1
E15	SA-136	88146.676	34220.535	1	1		1
E15	SA-137	88239.535	34220.559	1	1		1
TABLE TOTALS				43	45	2	

SCHEDULE OF LIGHTING DEVICES NOTES:

1. FOUNDATION TOP HEIGHT EQUAL TO ADJACENT SIDEWALK

Schedule of Lighting Devices

DESCRIPTION				LUMINAIRE LED PEDESTRIAN (70 WATT) TYPE SA	FOUNDATION SPECIAL	LUMINAIRE LED STREET (250 WATT) TYPE SB	NOTES
				EACH	EACH	EACH	
SHEET NO.	TYPE	NORTH	EAST	PLAN	PLAN	PLAN	
E15	SA-138	88388.809	34220.549	1	1		1
E15	SA-139	88462.283	34220.568	1	1		1
E15	SA-140	88539.064	34220.592	1	1		1
E15	SA-141	88627.201	34220.615	1	1		1
E15	SB-19	88264.931	34152.567		1	1	1
E15	SB-22	88311.670	34234.580		1	1	1
E16	SA-107	87789.870	34003.196	1	1		1
E16	SA-116	87692.590	34073.496	1	1		1
E16	SA-119	87717.195	34152.320	1	1		1
E16	SA-120	87802.195	34152.363	1	1		1
E16	SA-121	87884.959	34152.402	1	1		1
E16	SA-122	87964.961	34152.443	1	1		1
E16	SA-123	88046.203	34152.481	1	1		1
E16	SA-131	87641.969	34169.211	1	1		1
E16	SA-132	87727.863	34220.320	1	1		1
E16	SA-133	87819.506	34220.359	1	1		1
E16	SA-134	87906.331	34220.402	1	1		1
E16	SA-135	88051.809	34220.496	1	1		1
E16	SB-21	87984.644	34234.453		1	1	1
E17	SA-74	89155.630	33663.436	1	1		1
E17	SA-80	89082.631	33632.955	1	1		1
E17	SA-145	89129.391	33584.196	1	1		1
E17	SA-146	89198.538	33613.170	1	1		1
E18	SA-153	89963.136	32503.412	1	1		1
E18	SA-154	90071.585	32451.795	1	1		1
E18,E19	SA-155	90179.932	32400.232	1	1		1
E18,E19	SA-156	90288.281	32348.806	1	1		1
E19	SA-157	90394.443	32294.565	1	1		1
E19	SA-158	90484.895	32216.186	1	1		1
E19	SA-159	90567.924	32129.683	1	1		2
TABLE TOTALS				27	30	3	

SCHEDULE OF LIGHTING DEVICES NOTES:

1. FOUNDATION TOP HEIGHT EQUAL TO ADJACENT SIDEWALK

Tabulation of Approximate Quantities

Item No.	Ref. No.	Construction Note Description	Quantity	Unit	NOTES
		2 Inch Electrical Conduit (Plastic)	21595	LF	
		Type One Pull Box	184	EA	
		Wiring	1	LS	
		Light Standard and Luminaire (Pedestrian)	150	EA	
		Light Standard and Luminaire (Street)	15	EA	
		Light Standard Foundation (Special)	165	EA	
		Lighting Control Center (Special)	2	EA	
SUMMARY NOTES:					

STREET LIGHTING GENERAL NOTES:

1. EACH LIGHT TO HAVE A PULL BOX "UB", REFERENCE ELECTRICAL SHEETS.

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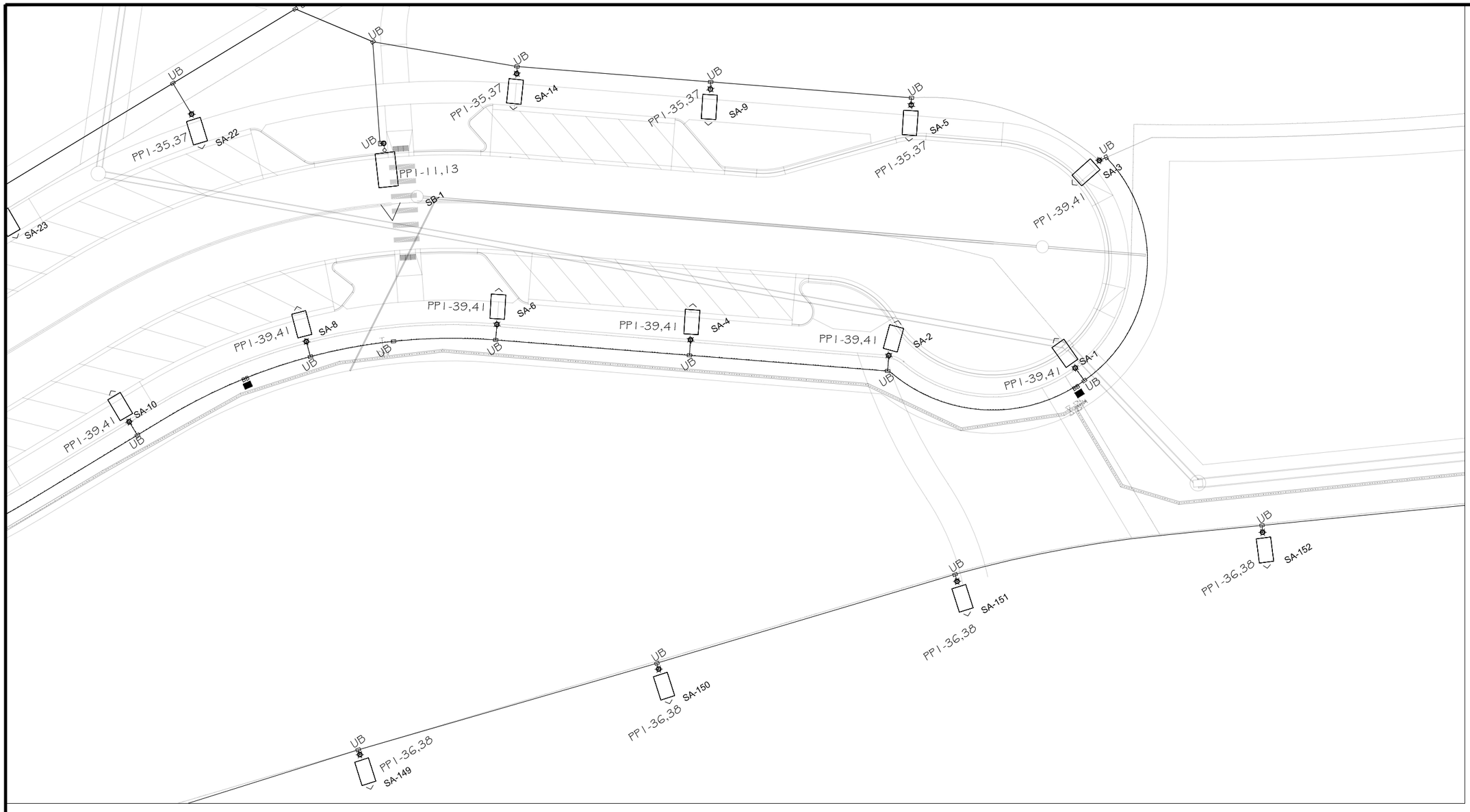
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
LIGHTING SCHEDULES



LIGHTING/ELECTRICAL PLAN

SCALE: 1"=40'

NORTH

20 0 10 20 40

GRAPHIC SCALE

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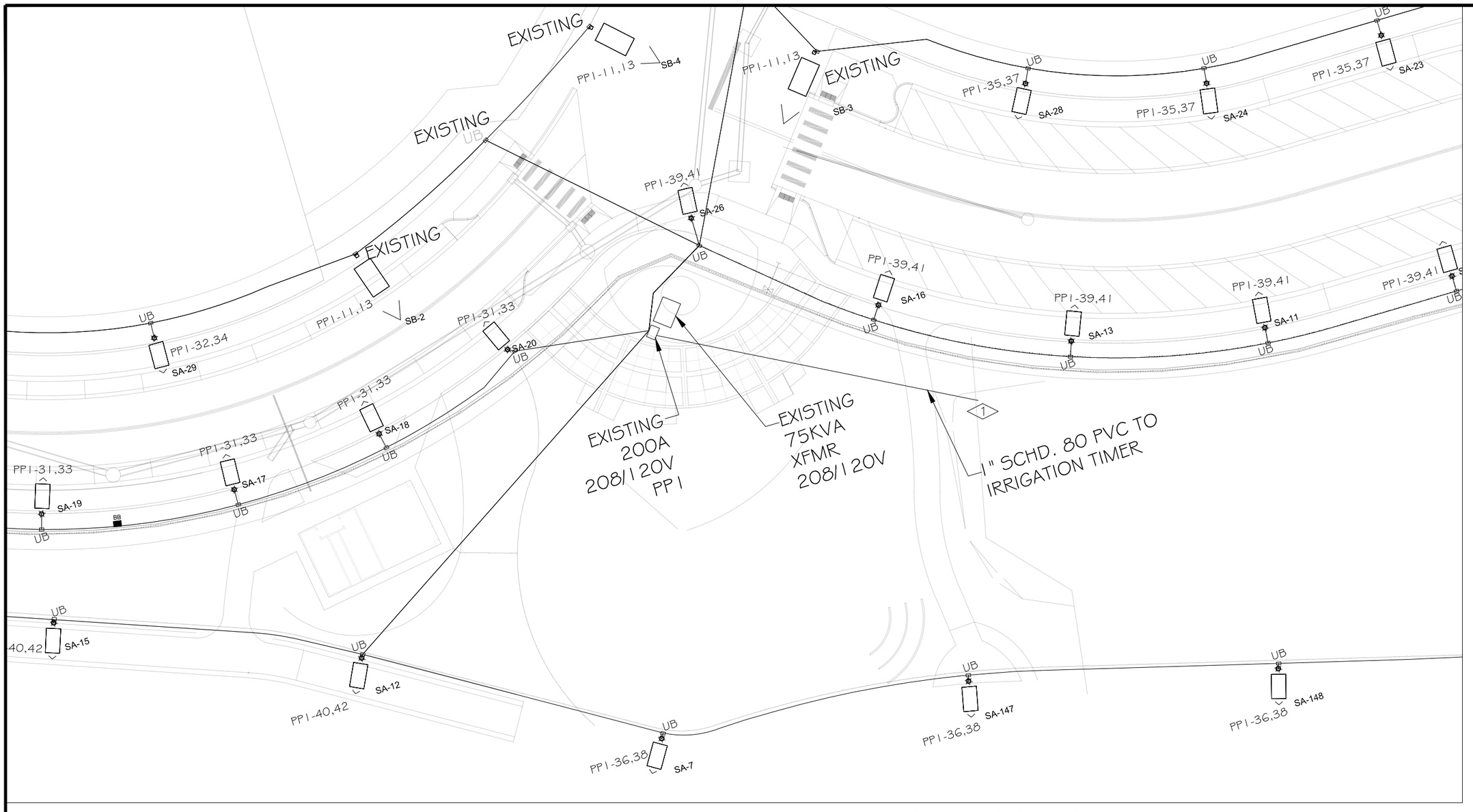
SITE LIGHTING PLAN



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FLAG NOTES:

1 PROVIDE NEW 20 AMP 120V, 1PH, 22KAIC BREAKER IN PANEL "PP1" FOR FEED TO IRRIGATION CONTROLLER. PROVIDE (2-#10 THWN + #12GND CU) IN 1" SCHEDULE 80 PVC FROM PANEL "PP1". FIELD VERIFY EXACT LOCATION AND WIRING OF CONTROLLER WITH IRRIGATION PROVIDER PRIOR TO TRENCHING.

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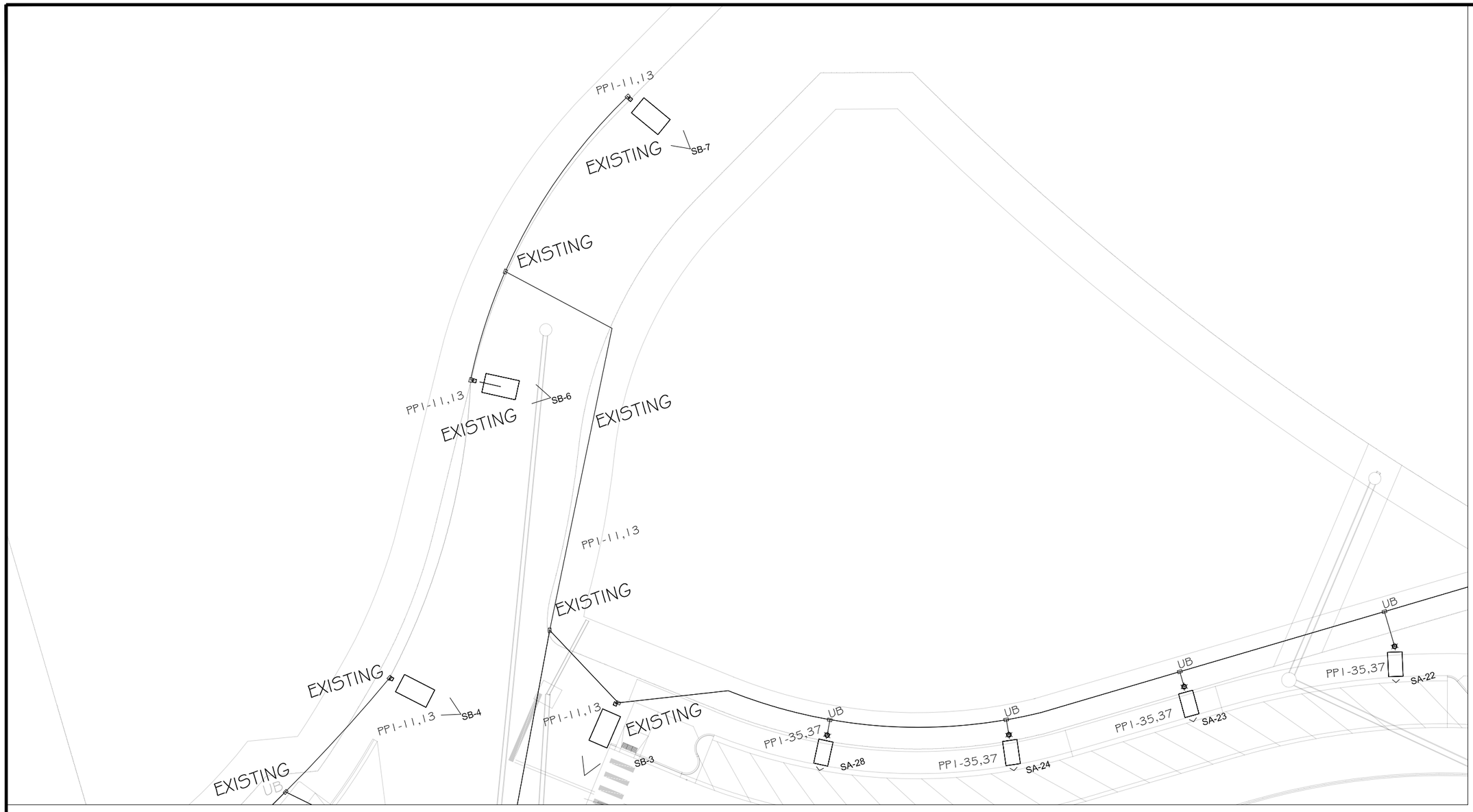

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4. SB-4, SB-6, SB-7 ARE EXISTING AND TO BE REUSED AND WIRED FROM PANEL "PP1" AS SHOWN IN PANEL SCHEDULES.

LIGHTING/ELECTRICAL PLAN

SCALE: 1"=40'

NORTH

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GRAPHIC SCALE

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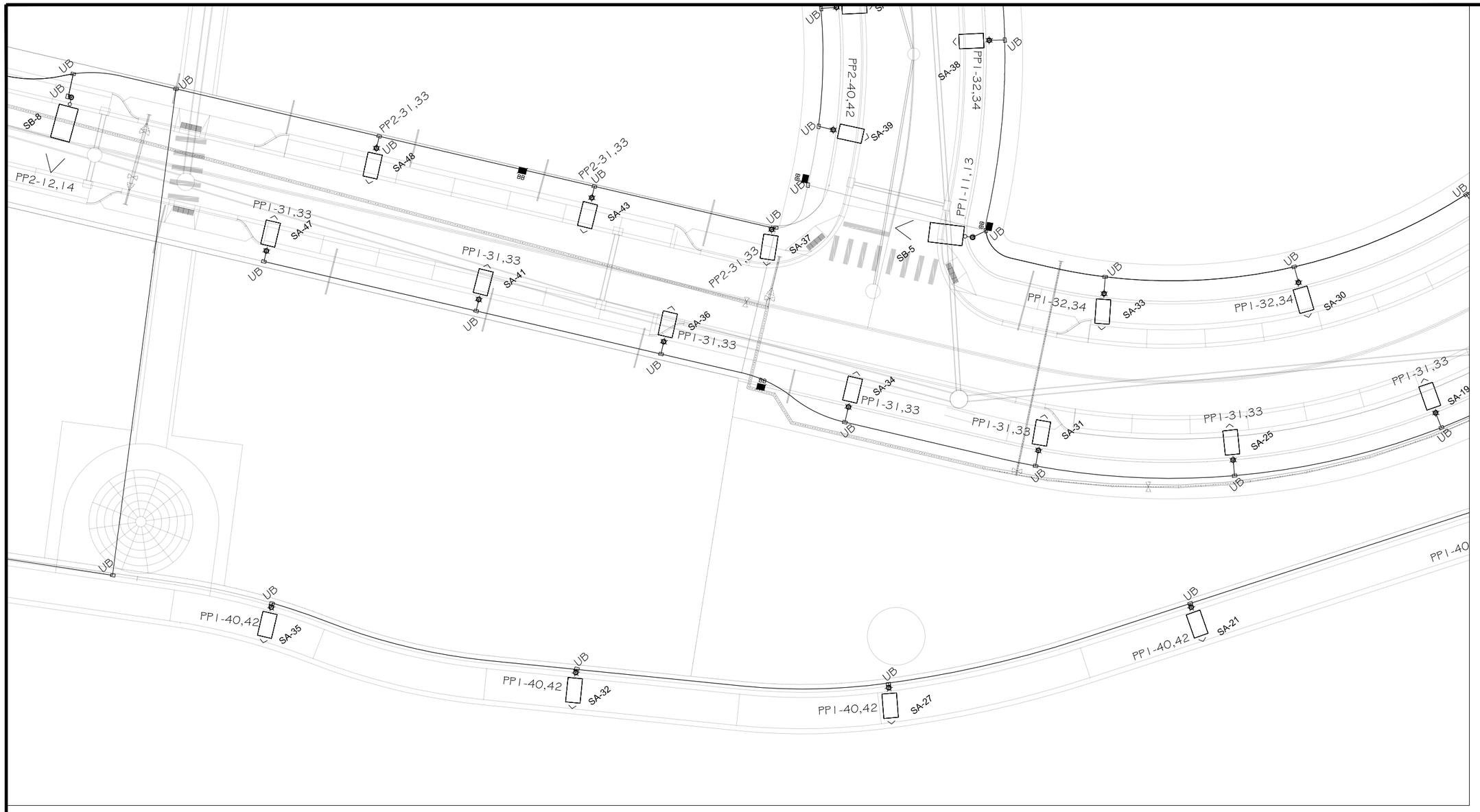

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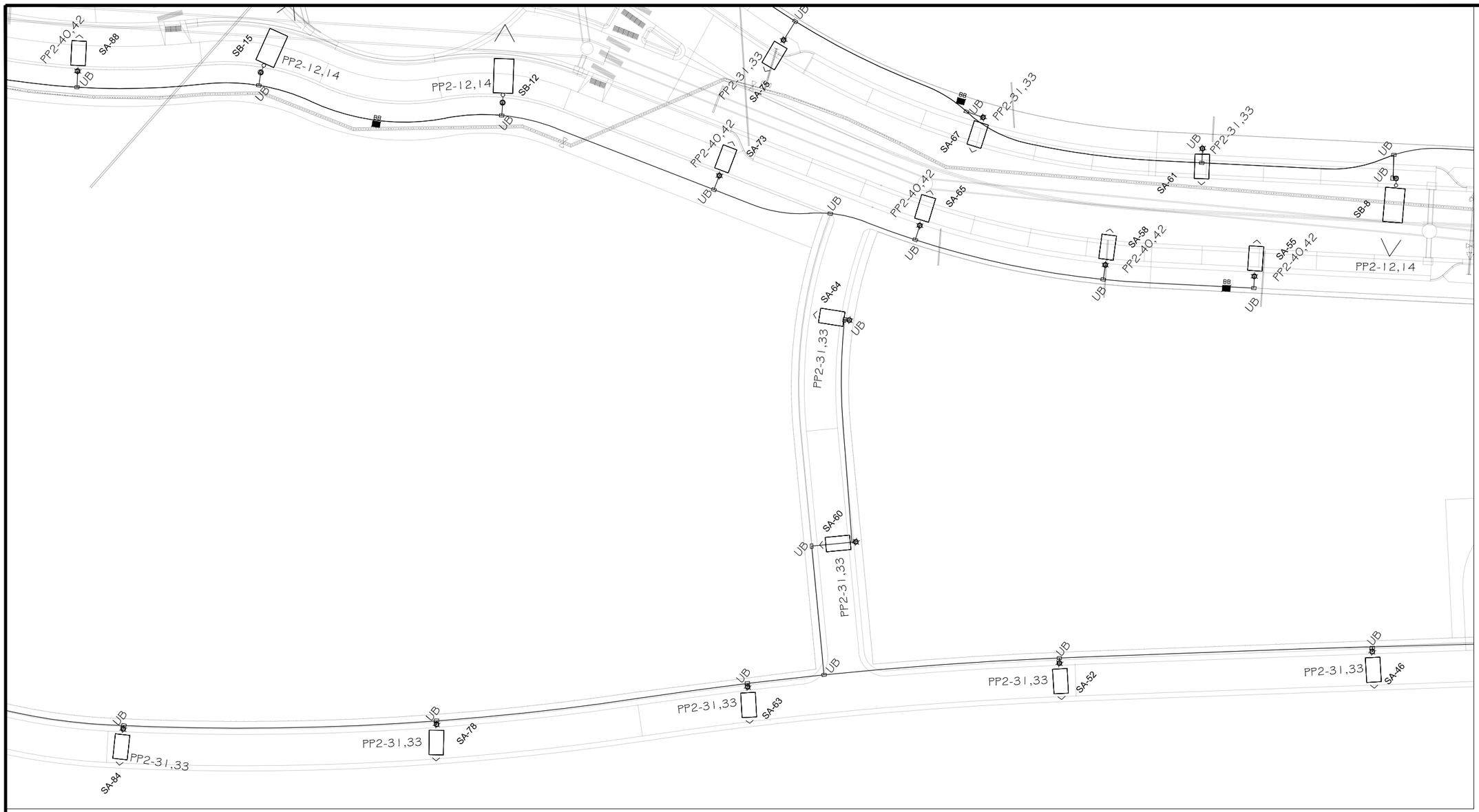

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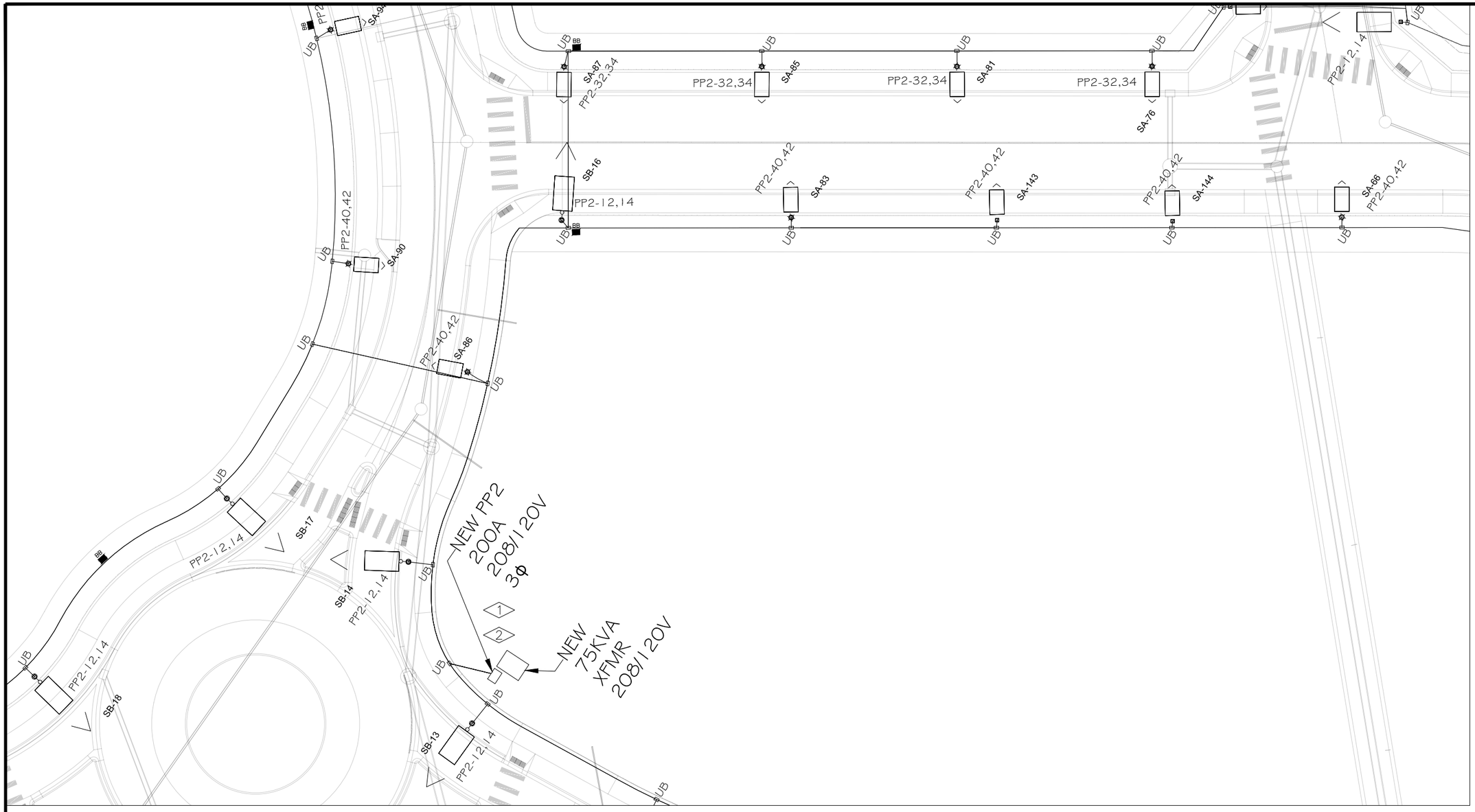

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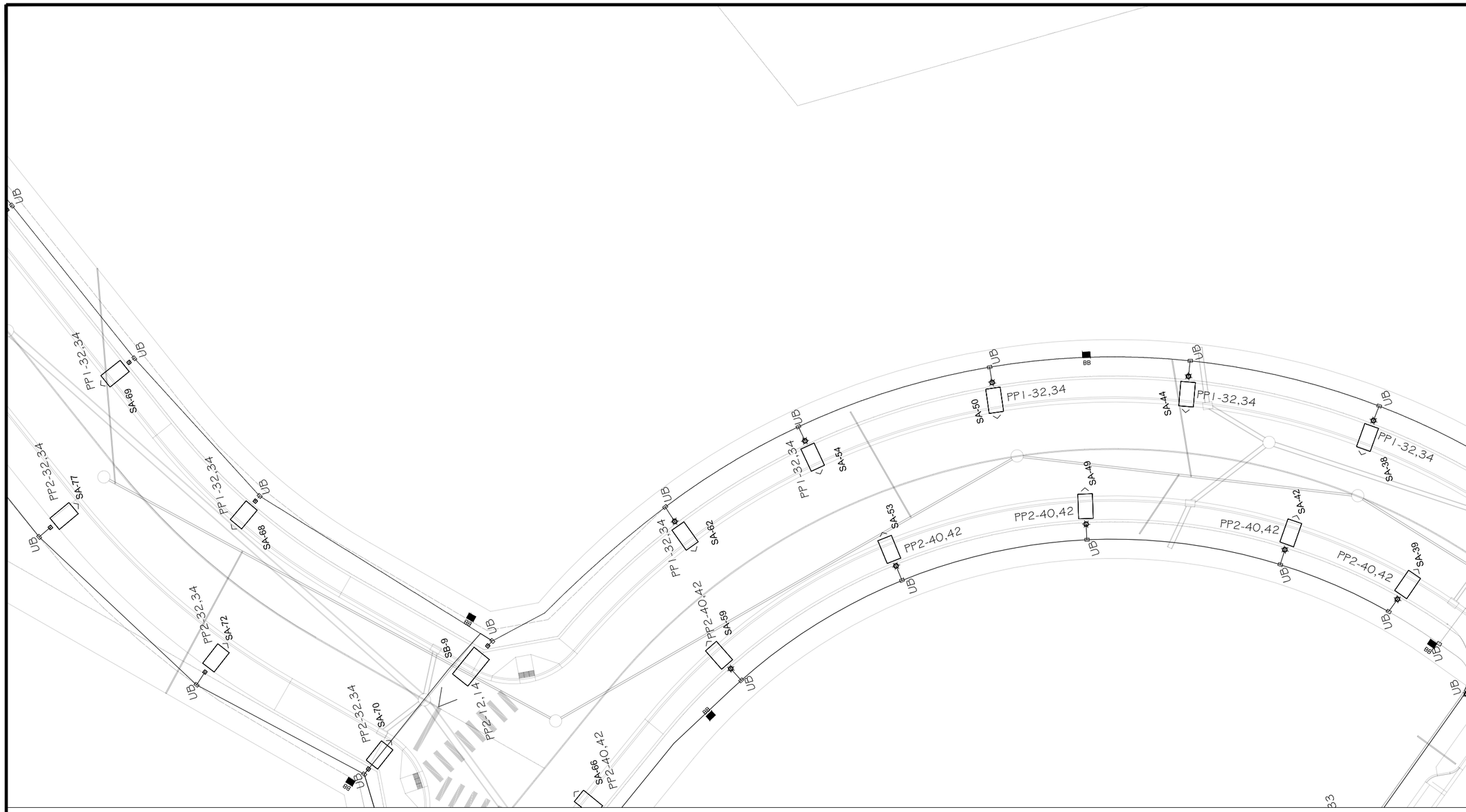

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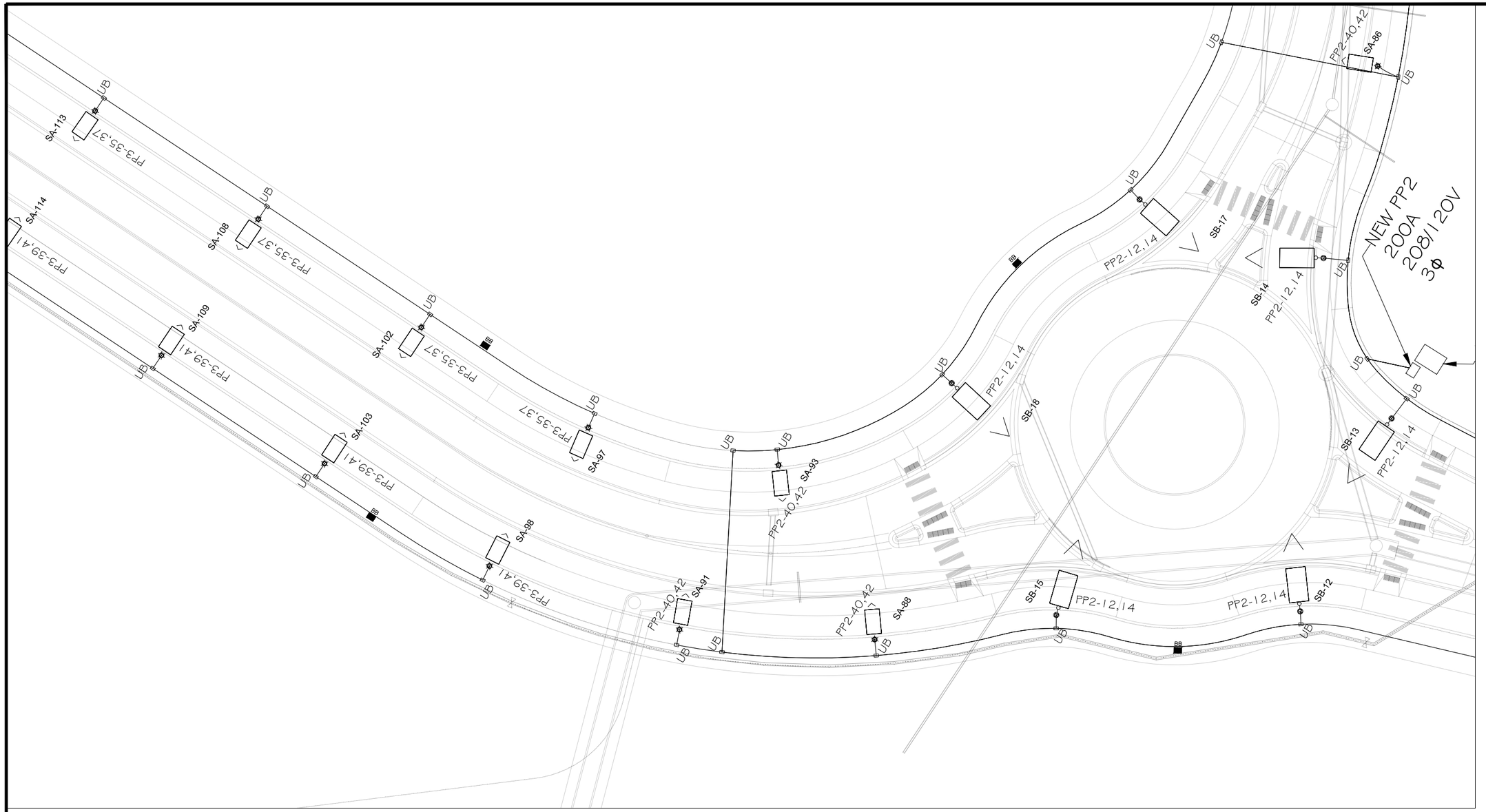

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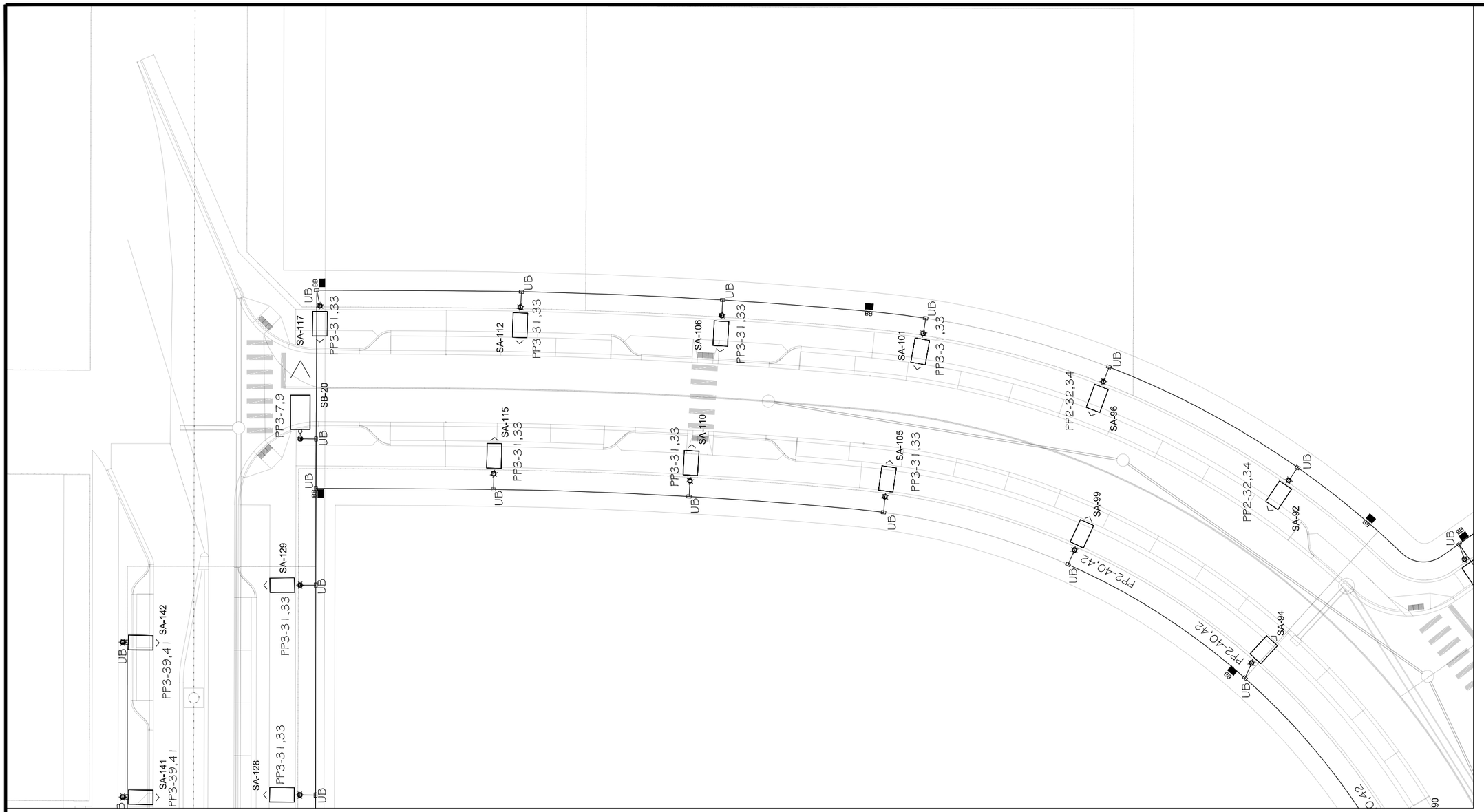

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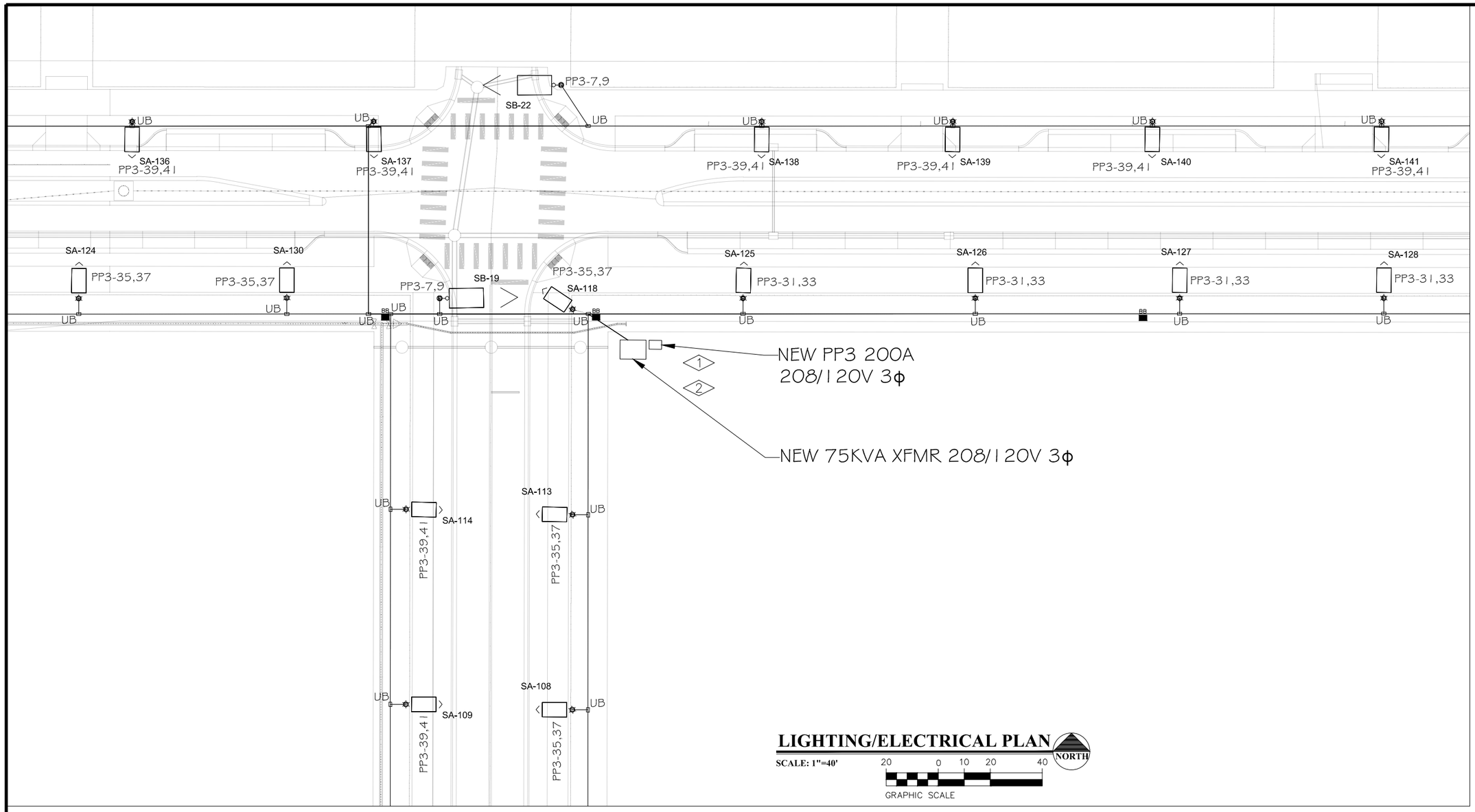

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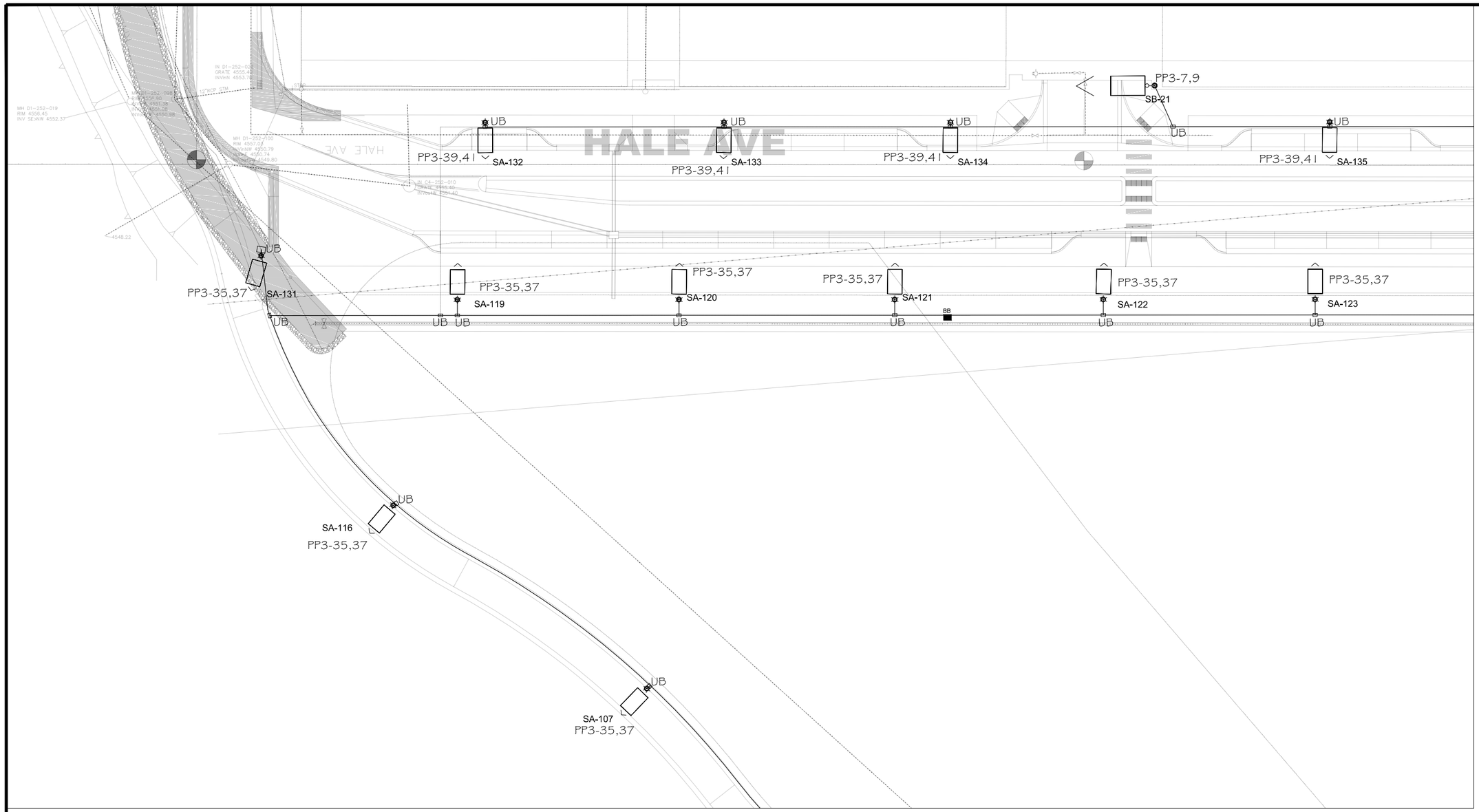
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
SITE LIGHTING PLAN



LIGHTING/ELECTRICAL PLAN

SCALE: 1"=40'

NORTH

20 0 10 20 40

GRAPHIC SCALE

GENERAL NOTES:

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO ROADWAY AND SHINE ON ROADWAY, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.

COLORADO REGISTERED JOEL M. HANSEN 37580 5-21-20 PROFESSIONAL ENGINEER

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ENGINEERING DIVISION

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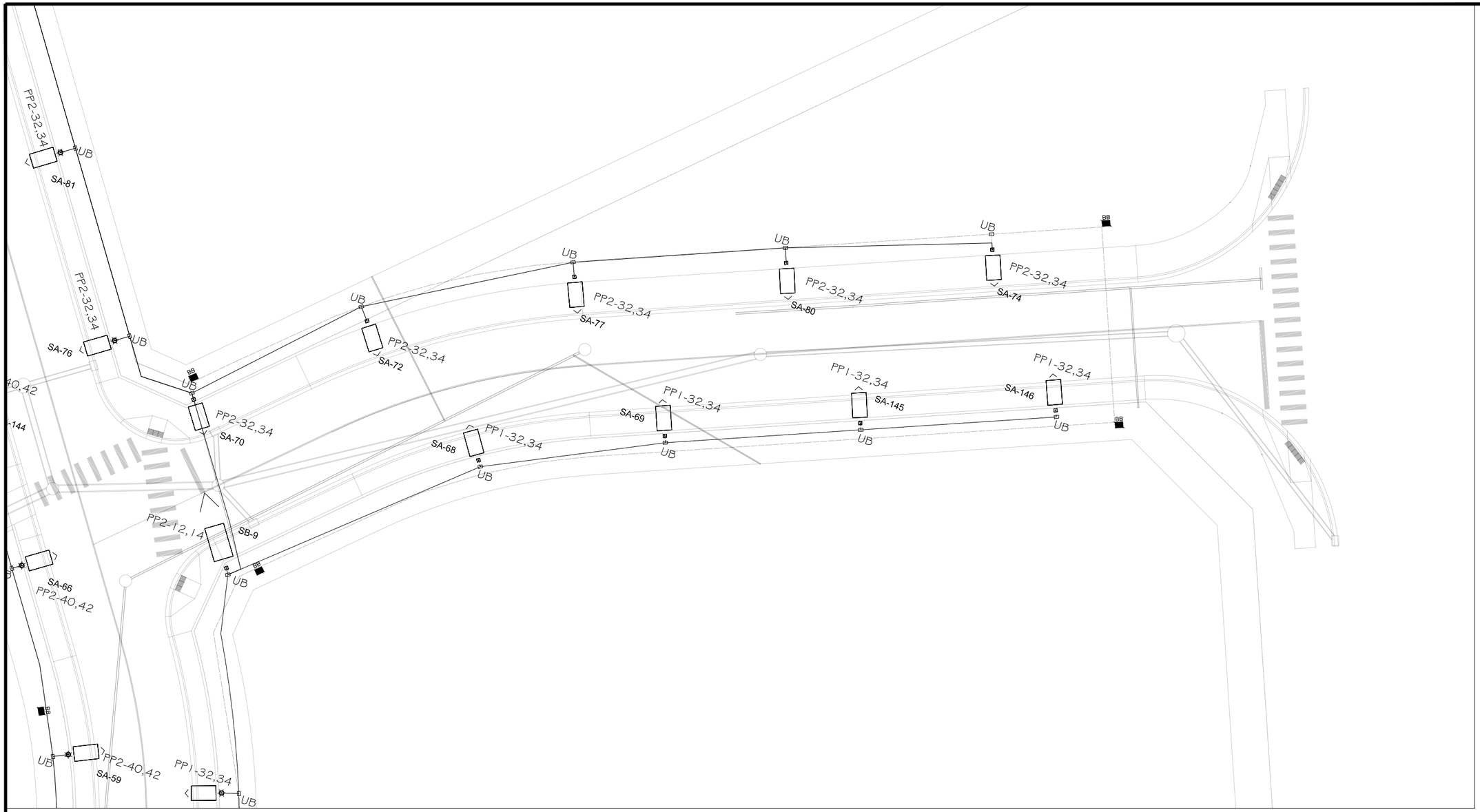
SITE LIGHTING PLAN



LIGHTING/ELECTRICAL PLAN

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ENGINEERING DIVISION

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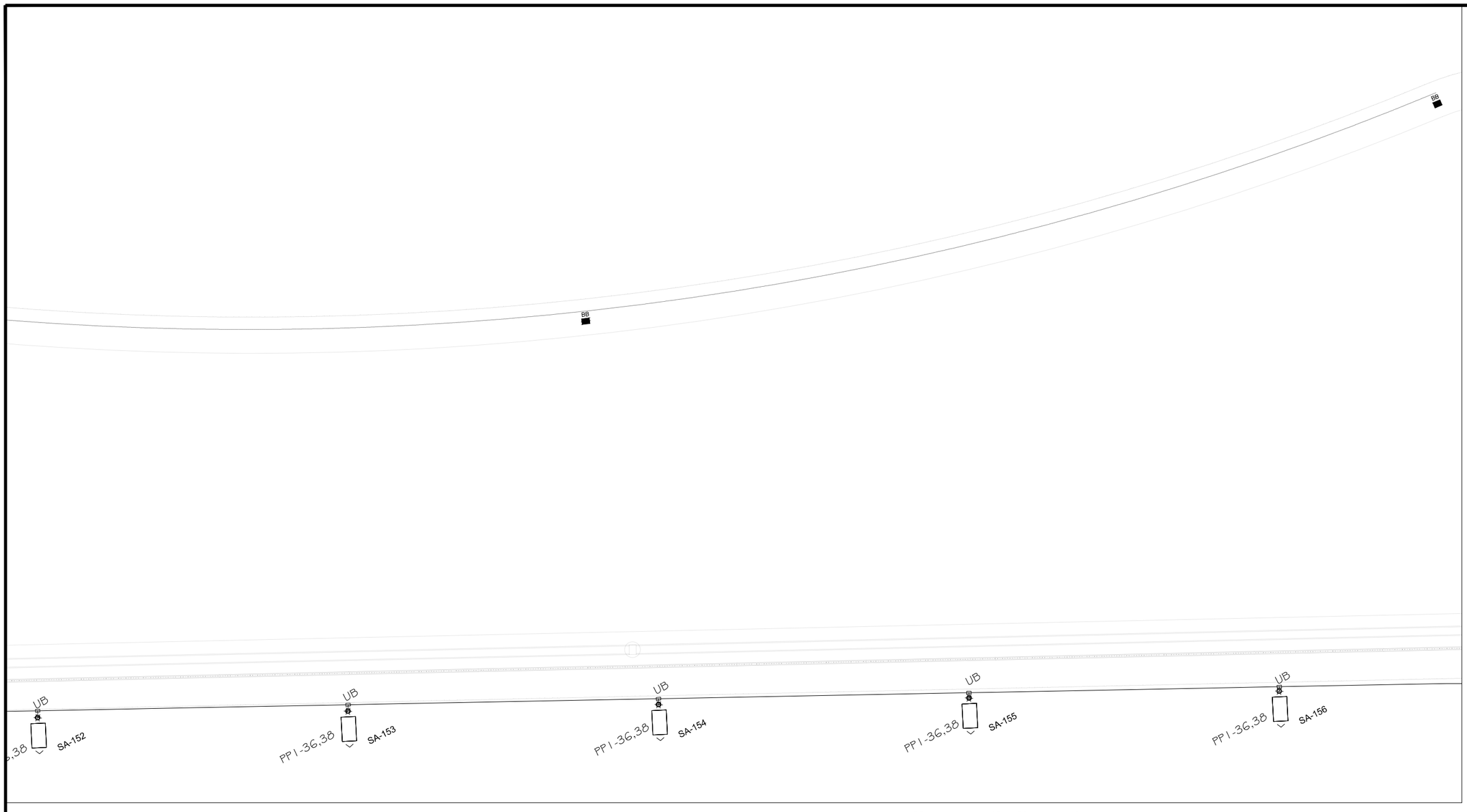
SITE LIGHTING PLAN



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ENGINEERING DIVISION

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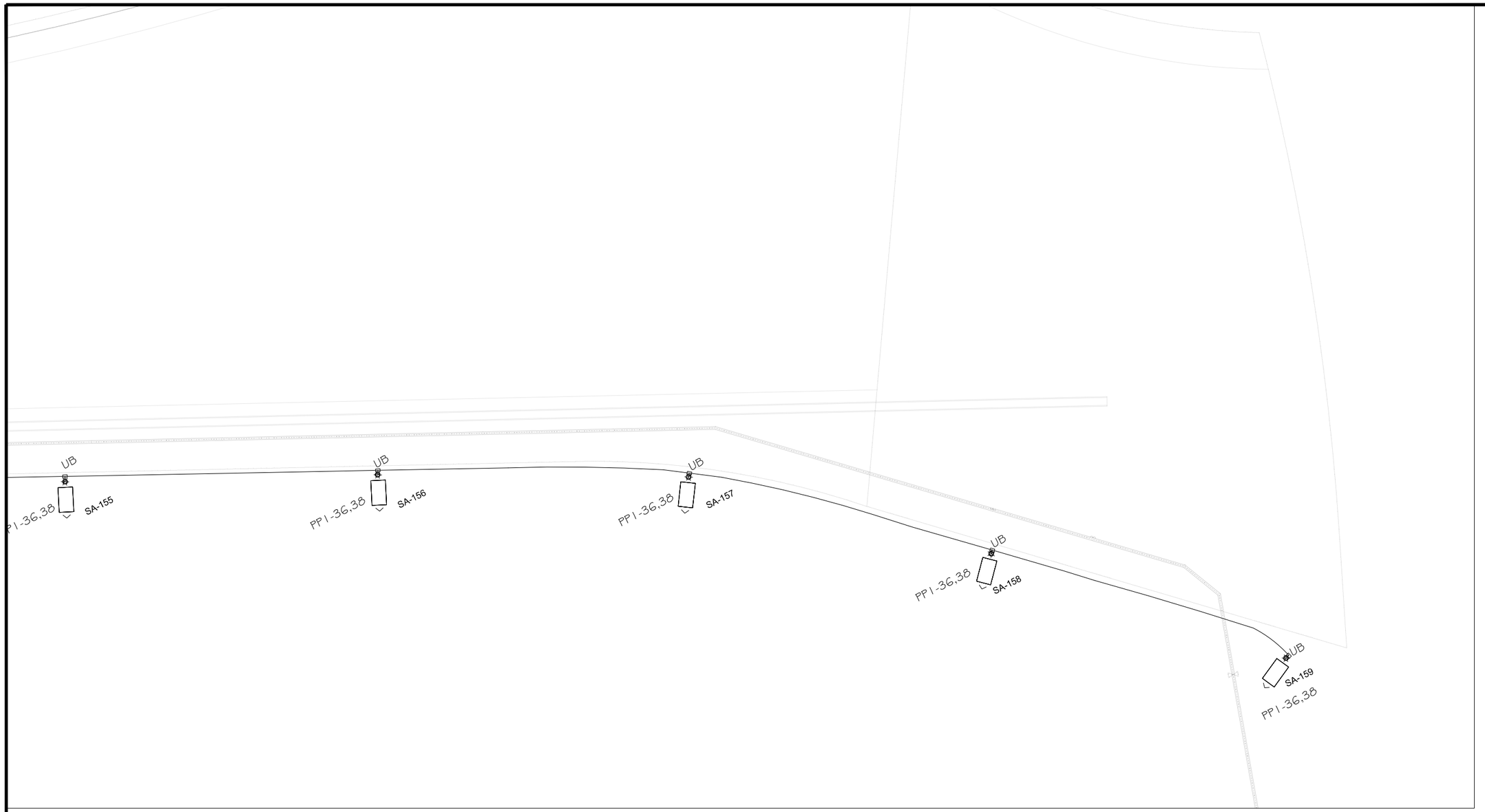

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SCALE: 1"=40'

NORTH

20 0 10 20 40

GRAPHIC SCALE

GENERAL NOTES:

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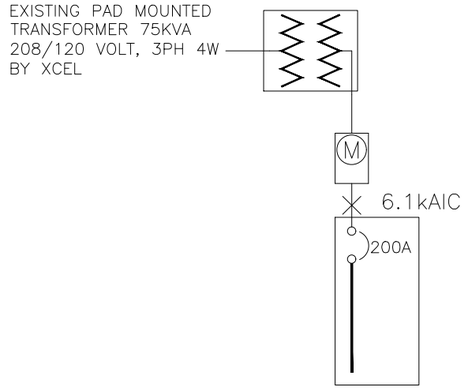
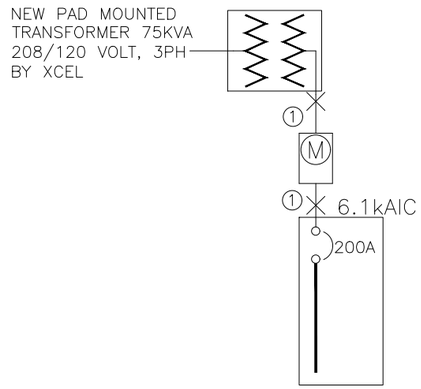


EXISTING PP1 200A MCB MILBANK
PEDESTAL CP3B5251XB22CSSL1, 24
UNSWITCHED/12 SWITCHED CKTS
208/120V 3PH, 4W
22 kAIC

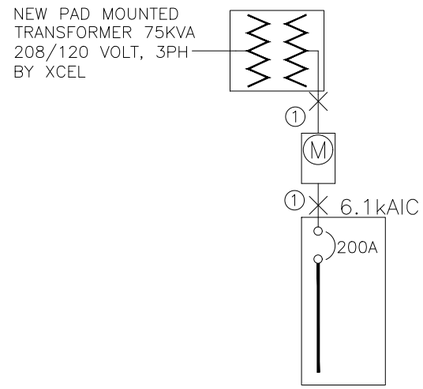
① 1 SET(S)[2.5"" PVC
SCHED. 80
(4#3/0(CU,THWN)+1#4(CU)GND]

A/1 ONE-LINE DIAGRAM
NOT TO SCALE



NEW PANEL PP2 100A MCB
MILBANK PEDESTAL
CP3B5151XK42CSXCSL1, 24
UNSWITCHED/12 SWITCHED CKTS
208/120 3PH, 4W
22 kAIC

A/1 ONE-LINE DIAGRAM
NOT TO SCALE



NEW PANEL PP3 100A MCB
MILBANK PEDESTAL
CP3B5151XK42CSXCSL1, 24
UNSWITCHED/12 SWITCHED CKTS
208/120 3PH, 4W
22 kAIC

A/1 ONE-LINE DIAGRAM
NOT TO SCALE

GENERAL NOTES:

1. IN AS MUCH AS DESIGN REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS, AND BECAUSE SOME OF THESE ASSUMPTIONS CANNOT BE VERIFIED. FIELD COORDINATION DURING CONSTRUCTION SERVICES IS IMPERATIVE. CONTRACTORS BIDDING THIS WORK MUST MAKE REASONABLE ALLOWANCES FOR UNFORESEEN CONTINGENCIES.
2. THE SERVING ELECTRICAL ASSOCIATION SHALL ADVISE THE OWNER/ENGINEER PRIOR TO SERVICE MODIFICATION REQUIRING COST TO THE OWNER.
3. REFERENCE CIVIL, LANDSCAPE AND IRRIGATION DRAWING PLANS FOR COORDINATION AND LOCATION OF ALL UNDER GROUND SYSTEMS.
4. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES AS REQUIRED: REFERENCE CIVIL LANDSCAPE AND IRRIGATION DRAWINGS.
5. ALL WIRING IS SHOWN DIAGRAMMATICALLY ON DRAWINGS, FIELD VERIFY ALL CONDITIONS PRIOR TO ROUGH-IN.
6. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL CODES.
7. ALL WIRE TO BE #6 UNLESS NOTED OTHERWISE.
8. CONDUCTOR COUNT IS SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL ENSURE THAT ANY AND ALL DEVICES AND EQUIPMENT ARE CIRCUITED PROPERLY. CONTRACTOR SHALL ENSURE THAT NO EQUIPMENT OR DEVICES ARE COMBINED OTHER THAN WHAT IS DEPICTED.
9. FIELD VERIFY ALL DIMENSIONS, DO NOT SCALE DRAWINGS.
10. COORDINATE INSTALLATION OF METER AND ELECTRICAL REQUIREMENTS WITH XCEL ENERGY.
11. PEDESTAL MUST MEET ALL XCEL ENERGY REQUIREMENTS I.E. COLD SEQUENCE PADLOCK SLIP LATCH ON METER COVER, HOLD OPEN BAR ON METER HOOD.



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PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
ONE-LINE DIAGRAMS

PANEL: PP1 | OC DEVICE TYPE: Breaker | ENCLOSURE: NEMA 3R | MAINS(A): BKR | CONTINUOUS(A): 200
LOCATION: | DEVICE FAMILY: Bolt On | MOUNTING: Free Standing | WIRING: 3-Phase 4-Wire | BUS SC RATING(A) 22000
FED FROM: BUS-0002 | | VOLTAGE: 208/120 | | FAULT CURRENT(A): 6149
INCIDENT ENERGY: 0.10 Cal/cm2 @18.00(in) | | BOUNDARY: 3.82(in) <1>

OC AMPS P	NOTES	DESCRIPTION	DEMAND CODE	VA	CKT	PHASE LOADS VA A	B	C	CKT	VA	DEMAND CODE	DESCRIPTION	NOTES	OC AMPS P
20 2		SPARE	SPARE	0	1	0			2	0	GENERAL	CONTROL PWR		15 1
"		"		0	3		150		4	150	GENERAL	SWITCHED LC CNTRL		20 2
					5			150	6	150		"		"
					7	0			8	0	SPARE	SPARE		20 1
					9		600		10	600	GENERAL	IRRIGATION CONTROL		20 1
20 2		STREET LIGHTS N.	NONE	805	11			805	12					
"		"		805	13	805			14					
					15				16					
					17				18					
					19				20					
					21				22					
					23				24					
					25				26					
					27				28					
					29				30					
20 2		PED. LTS NW	NONE	350	31	770			32	420	NONE	PED. LTS N.W.		20 2
"		"		350	33		770		34	420		"		"
20 2		PED. LTS NW	NONE	245	35			980	36	735	NONE	PED. LTS S.E.		20 2
"	<2>	"		245	37	980			38	735		"		"
20 2		PED. LTS SE	NONE	385	39		665		40	280	NONE	PED. LTS NE		20 2
"		"		385	41			665	42	280		"		"

ALL CONNECTED	KVA	3P AVE AMPS	* PHASE TOTALS	VA	AMPS	BUS TOTALS	KVA
TOTAL CONNECTED	7.33	20.3	* A-N	2555.2	21.3	CONNECTED	8.53
TOTAL DEMAND	7.33	20.3	* B-N	2176.3	18.1	DEMAND	8.53
TOTAL DESIGN	7.33	20.3	* C-N	2597.4	21.6	DESIGN	8.53

PANEL: PP2 | OC DEVICE TYPE: Breaker | ENCLOSURE: NEMA 3R | MAINS(A): BKR | CONTINUOUS(A): 200
LOCATION: | DEVICE FAMILY: Bolt On | MOUNTING: Free Standing | WIRING: 3-Phase 4-Wire | BUS SC RATING(A) 22000
FED FROM: BUS-0008 | | VOLTAGE: 208/120 | | FAULT CURRENT(A): 6149
INCIDENT ENERGY: 0.10 Cal/cm2 @18.00(in) | | BOUNDARY: 3.82(in) <3>

OC AMPS P	NOTES	DESCRIPTION	DEMAND CODE	VA	CKT	PHASE LOADS VA A	B	C	CKT	VA	DEMAND CODE	DESCRIPTION	NOTES	OC AMPS P
20 2		SPARE	SPARE	0	1	22			2	22	GENERAL	CONTROL PWR		15 1
"		"		0	3		150		4	150	GENERAL	SWITCHED LC CNTRL		60 2
					5			150	6	150		"		"
					7	0			8	0	SPARE	SPARE		20 1
					9		0		10	0	SPARE	SPARE		20 1
20 2		SPARE	SPARE	0	11			1035	12	1035	NONE	ST LIGHTS CENT N&S		20 2
"		"		0	13	1035			14	1035		"		"
					15				16					
					17				18					
					19				20					
					21				22					
					23				24					
					25				26					
					27				28					
					29				30					
20 2		PED LTS NW-SE	NONE	560	31	1015			32	455	NONE	PED. LTS CNT NE-SE		20 2
"		"		560	33		1015		34	455		"		"
20 2		SPARE	SPARE	0	35			0	36					
"	<2>	"		0	37	0			38					
					39		700		40	700	NONE	PED LTS CNTR N,S		20 2
					41			700	42	700		"		"

ALL CONNECTED	KVA	3P AVE AMPS	* PHASE TOTALS	VA	AMPS	BUS TOTALS	KVA
TOTAL CONNECTED	5.82	16.1	* A-N	2071.2	17.2	CONNECTED	5.82
TOTAL DEMAND	5.82	16.1	* B-N	1862.5	15.5	DEMAND	5.82
TOTAL DESIGN	5.82	16.1	* C-N	1882.4	15.7	DESIGN	5.82

FLAG NOTES:

<1> PANEL "PP1" CKTS 12 AND 14 ARE EXISTING AND WERE INSTALLED IN PHASE 1 AND TO BE REUSED AND WIRED AS SHOWN. PROVIDE ADDITIONAL BREAKERS IN EXISTING PANEL FOR NEW LIGHTING.

<2> CIRCUITS 31 TO 42 ARE SWITCHED CIRCUITS, TYPICAL

<3> PANEL "PP2" IS A NEW PANEL, COORDINATE INSTALLATION OF METER AND EXACT LOCATION OF TRANSFORMER WITH EXCEL PRIOR TO ROUGH-IN.

COLORADO REGISTERED JOEL MARTINEZ 37580 5-21-20 PROFESSIONAL ENGINEER

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PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
PANEL SCHEDULES

PANEL: PP3 <2> DC DEVICE TYPE: Breaker ENCLOSURE: NEMA 3R MAINS(A): BKR CONTINUOUS(A): 100
LOCATION: DEVICE FAMILY: Bolt On MOUNTING: Free Standing WIRING: 3-Phase 4-Wire BUS SC RATING(A) 22000
FED FROM: BUS-0006 VOLTAGE: 208/120 FAULT CURRENT(A): 6149
INCIDENT ENERGY: 0.10 Cal/cm2 @18.00(in) BOUNDARY: 3.82(in)

DC AMPS P	NOTES	DESCRIPTION	DEMAND CODE	VA	CKT	PHASE LOADS VA A	B	C	CKT	VA	DEMAND CODE	DESCRIPTION	NOTES	DC AMPS P
20 2		SPARE	GENERAL	0	1	180			2	180	GENERAL	CONTROL PWR		15 1
"		"		0	3		150		4	150	GENERAL	SWITCHED LC CNTRL		60 2
					5			150	6	150		"		"
20 2		STREET LTS HALE	NONE	460	7	460			8	0	GENERAL	SPARE		20 1
"		"		460	9		460		10	0	GENERAL	SPARE		20 1
					11				12					
					13				14					
					15				16					
					17				18					
					19				20					
					21				22					
					23				24					
					25				26					
					27				28					
					29				30					
20 2		PED LTS E	NONE	420	31	420			32	0	GENERAL	SPARE		20 2
"		"		420	33		420		34	0		"		"
20 2	<1>	PED LTS N-S	NONE	665	35			665	36					
"		"		665	37	665			38				<1>	
20 2		PED LTS N.	NONE	525	39		525		40					
"		"		525	41			525	42					

ALL CONNECTED	KVA	3P AVE AMPS	* PHASE TOTALS	VA	AMPS	BUS TOTALS	KVA
TOTAL CONNECTED	4.61	12.8	* A-N	1722.0	14.3	CONNECTED	4.61
TOTAL DEMAND	4.61	12.8	* B-N	1552.5	12.9	DEMAND	4.61
TOTAL DESIGN	4.61	12.8	* C-N	1337.5	11.1	DESIGN	4.61

FLAG NOTES:

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<2> PANEL "PP3" IS A NEW PANEL, COORDINATE INSTALLATION OF METER AND EXACT LOCATION OF TRANSFORMER WITH EXCEL PRIOR TO ROUGH-IN.

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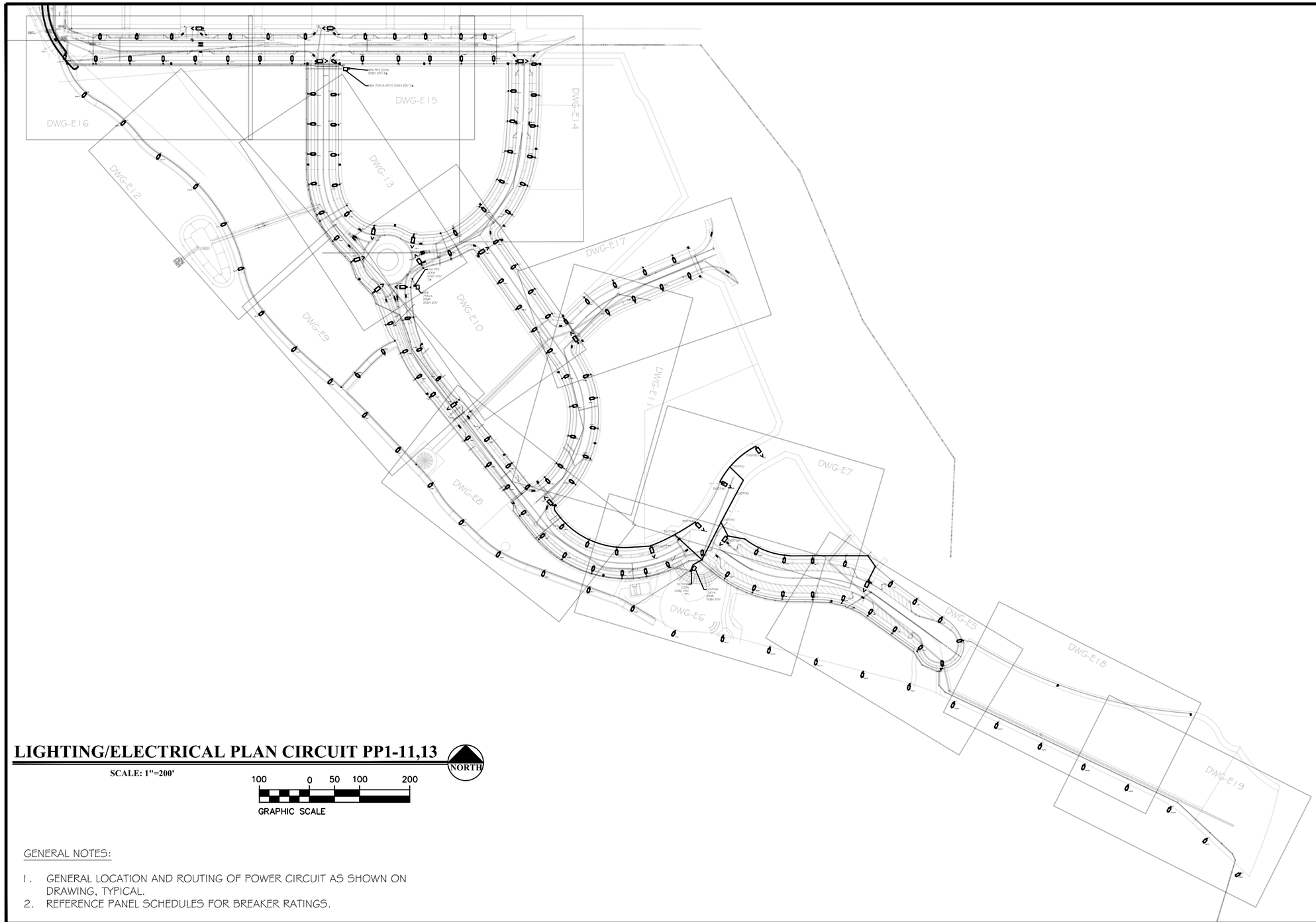
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
PANEL SCHEDULES



LIGHTING/ELECTRICAL PLAN CIRCUIT PP1-11,13

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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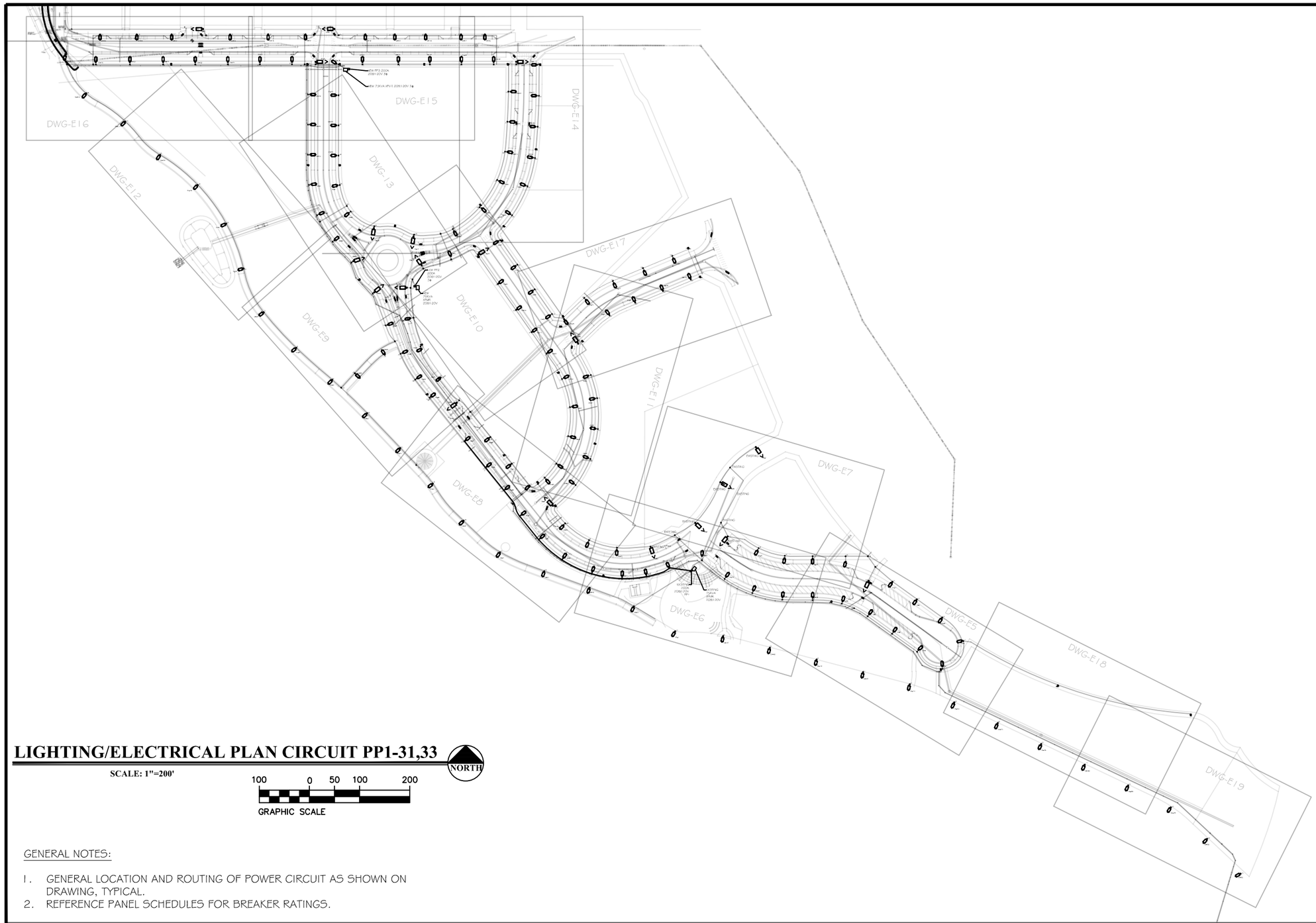

LIGHTING/ELECTRICAL PLAN CIRCUIT PP1-31,33

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

COLORADO REGISTERED JOEL M. MARTINEZ 37580 5-21-20 PROFESSIONAL ENGINEER

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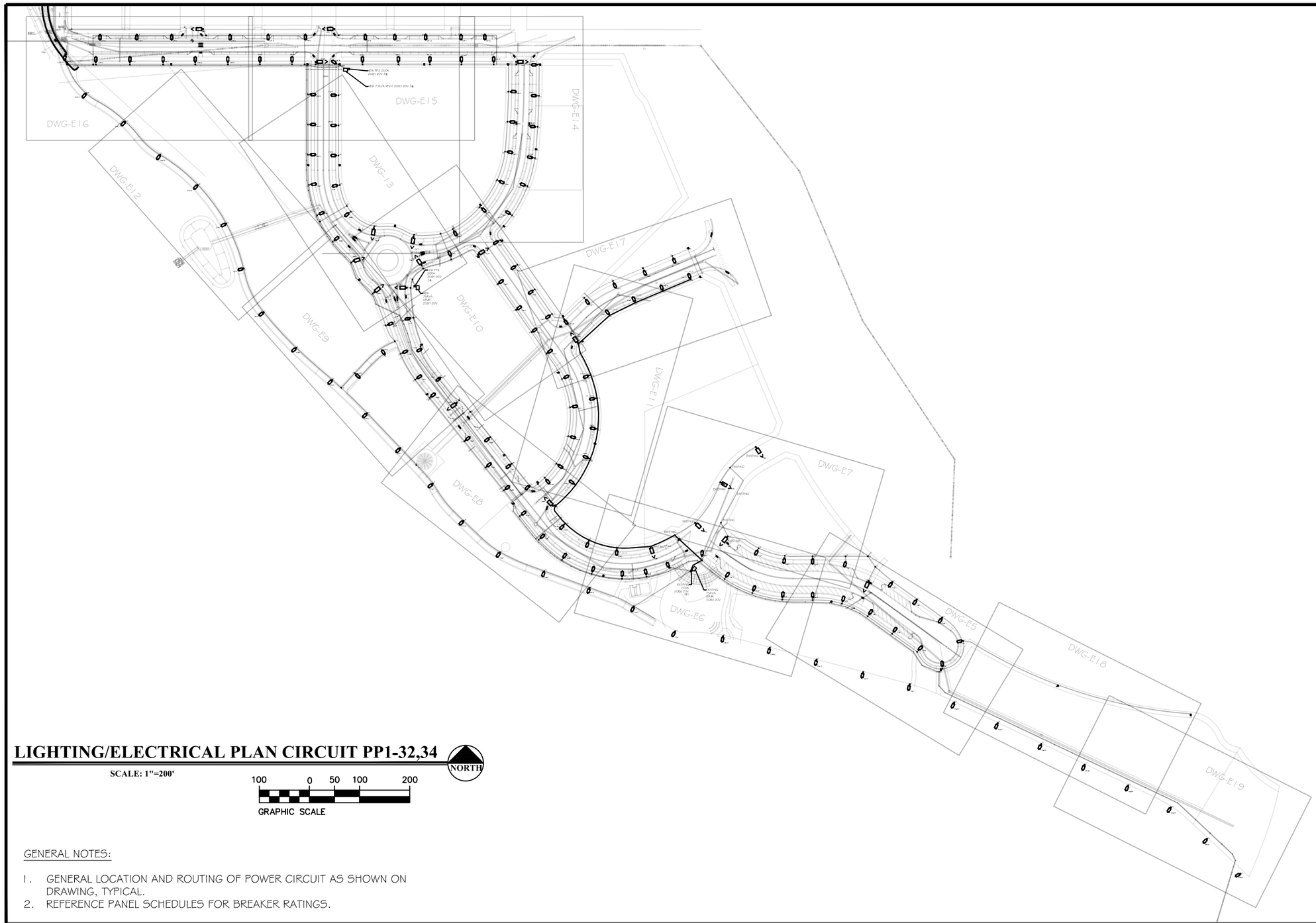

LIGHTING/ELECTRICAL PLAN CIRCUIT PP1-32,34

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

COLORADO REGISTERED PROFESSIONAL ENGINEER
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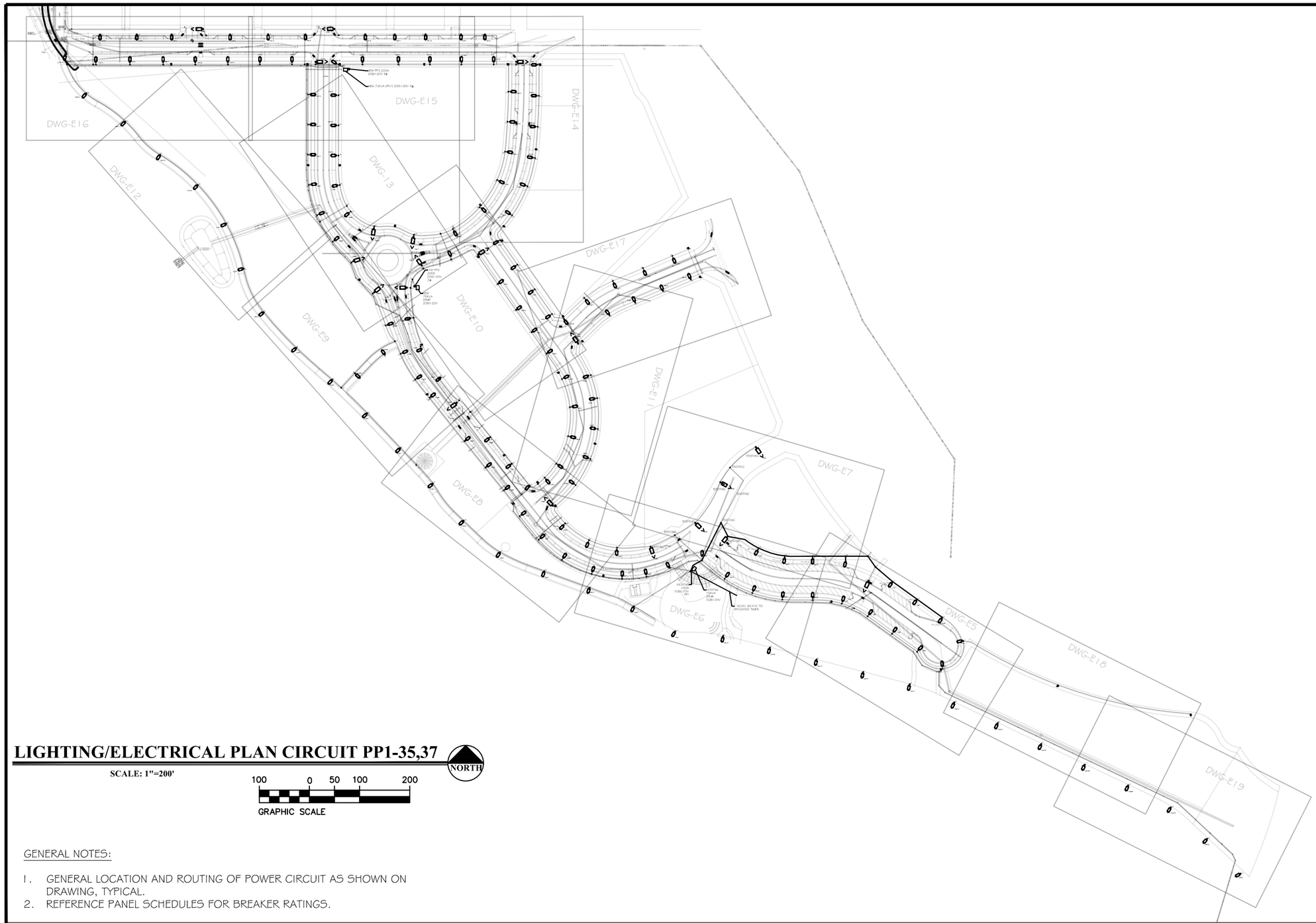
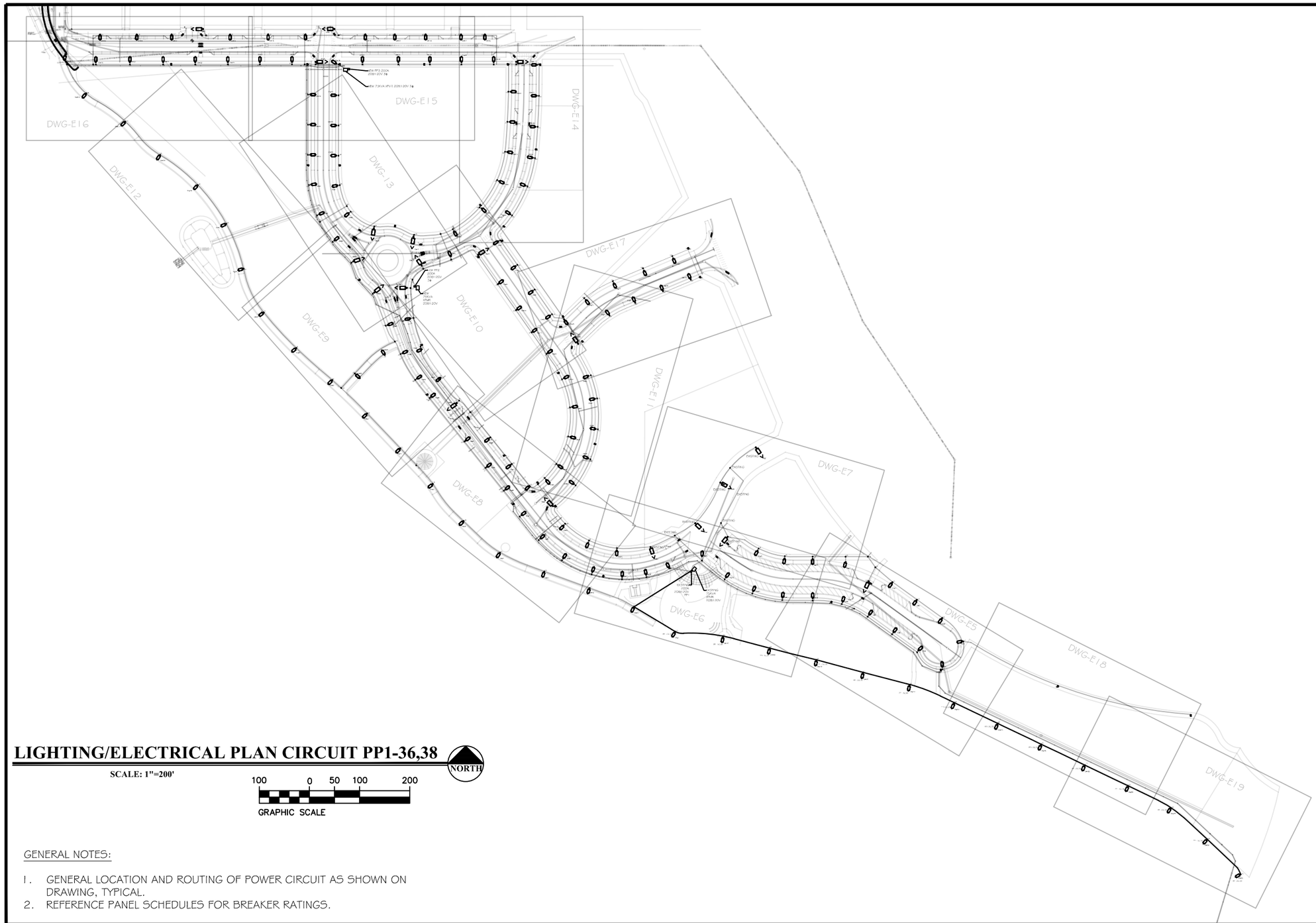
PUBLIC WORKS ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2 SITE LIGHTING PLAN


DWG-E16
DWG-E15
DWG-E14
DWG-E12
DWG-E13
DWG-E17
DWG-E9
DWG-E10
DWG-E11
DWG-E8
DWG-E7
DWG-E6
DWG-E5
DWG-E18
DWG-E19
NEW PP2 200A 208Y/120V 3φ
NEW 75KVA XFMR 208Y/120V 3φ
NEW PP1 200A 208Y/120V 3φ
NEW 150KVA XFMR 208Y/120V
NEW EXISTING 200A 208Y/120V 3φ
EXISTING
EXISTING XFMR 208Y/120V
NEW EXISTING 200A 208Y/120V 3φ
NEW



LIGHTING/ELECTRICAL PLAN CIRCUIT PP1-36,38

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

COLORADO REGISTERED PROFESSIONAL ENGINEER
37580
5-21-20

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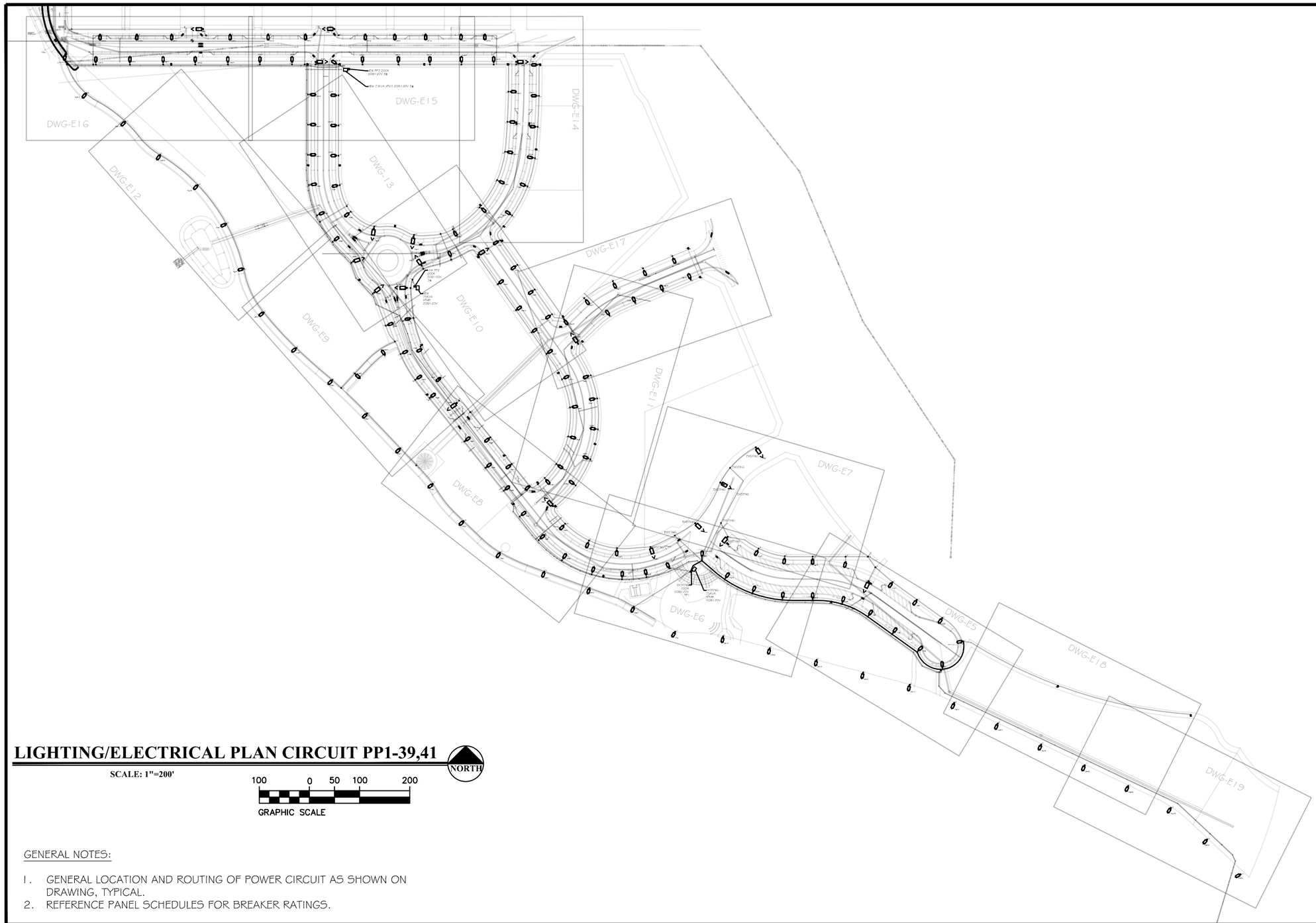
CITY OF Grand Junction COLORADO

PUBLIC WORKS ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
SITE LIGHTING PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP1-39,41

NORTH

SCALE: 1"=200'

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

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2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

COLORADO REGISTERED JOEL J. MARTINEZ 37580 5-21-20 PROFESSIONAL ENGINEER

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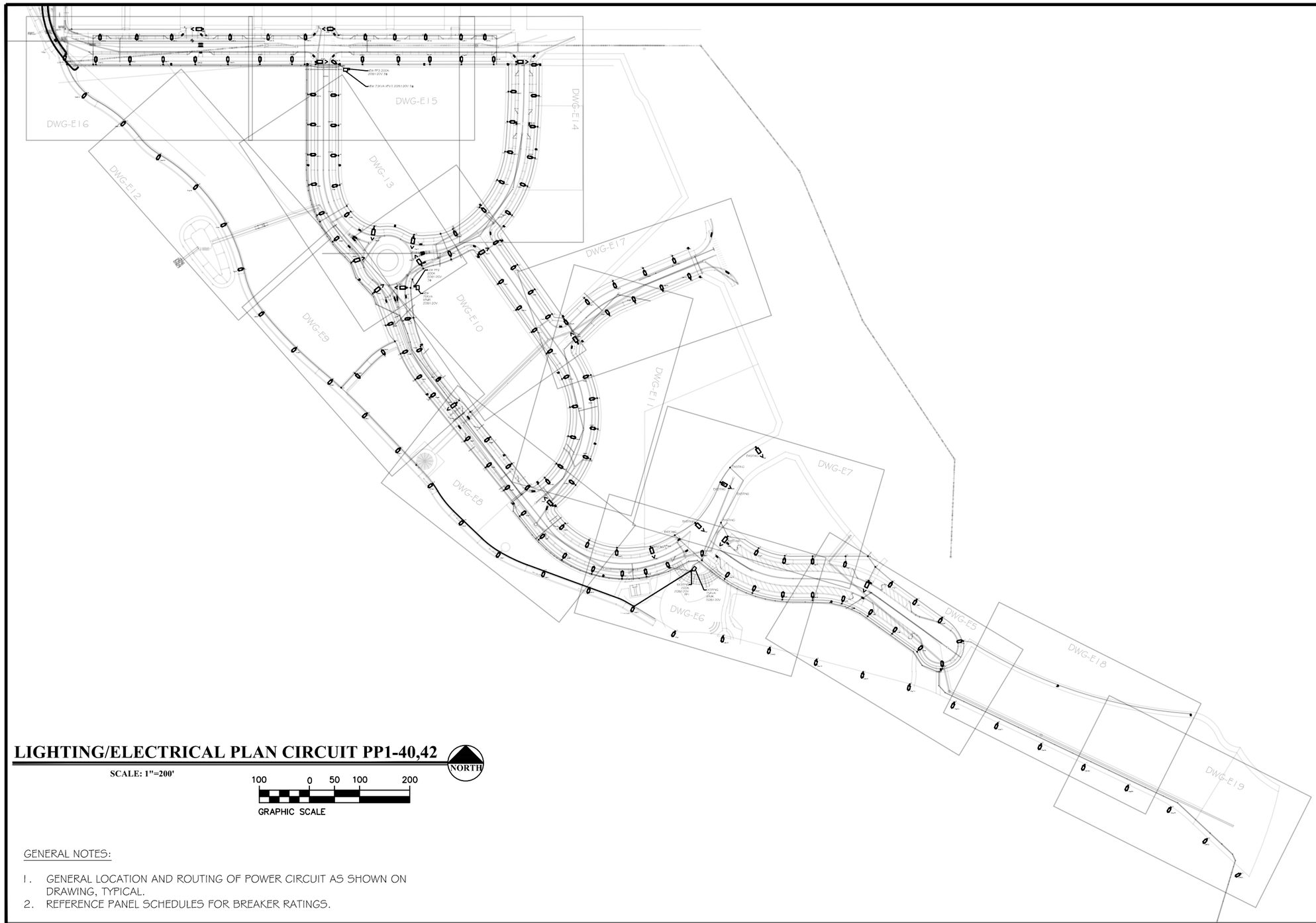
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
SITE LIGHTING PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP1-40,42

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

COLORADO REGISTERED PROFESSIONAL ENGINEER
ALFONSO JOEL MARTINEZ
37580
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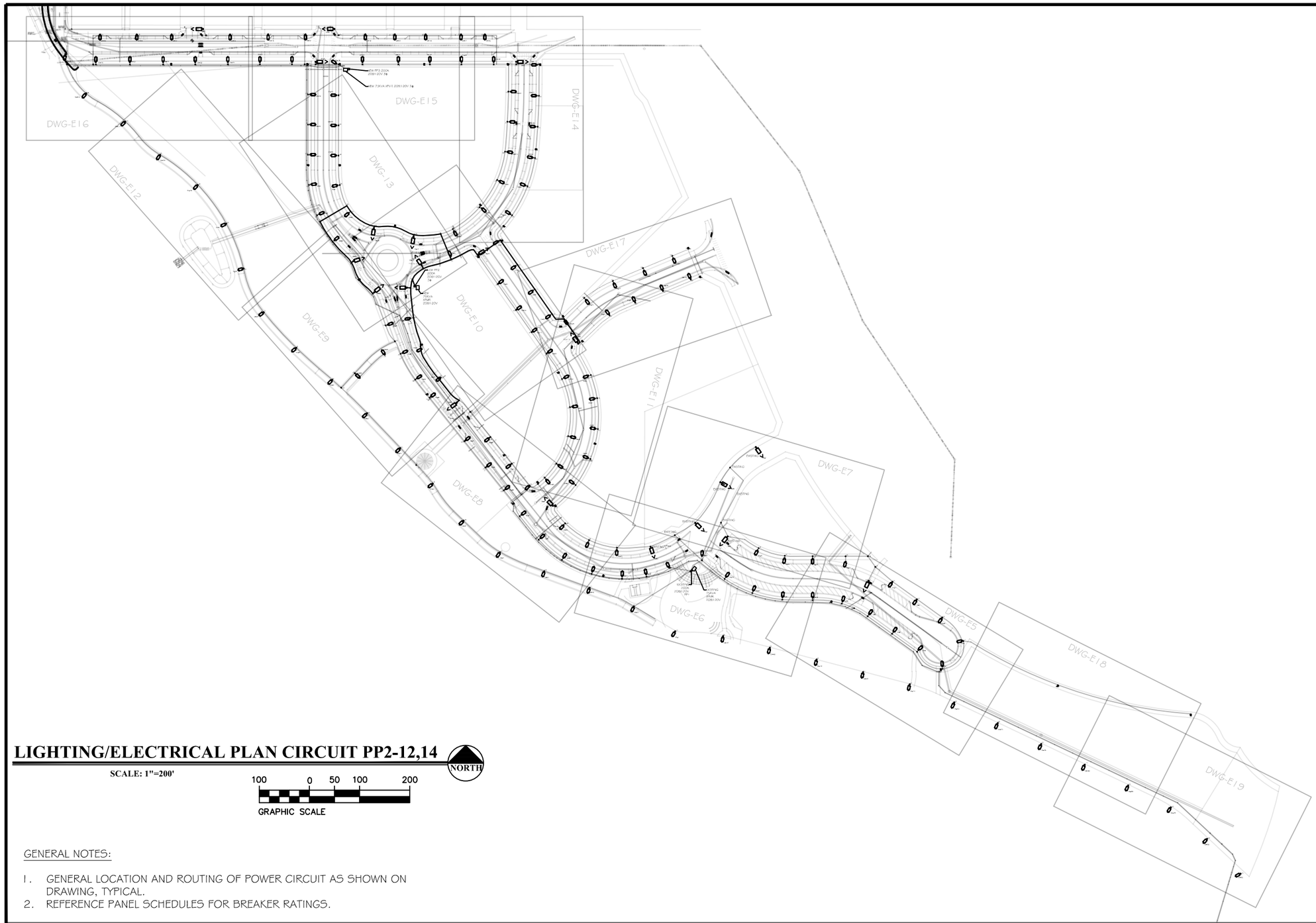
CITY OF Grand Junction COLORADO

PUBLIC WORKS ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2 SITE LIGHTING PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP2-12,14

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

COLORADO REGISTERED JOEL J. MARTINEZ 37580 5-21-20 PROFESSIONAL ENGINEER

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CITY OF Grand Junction COLORADO

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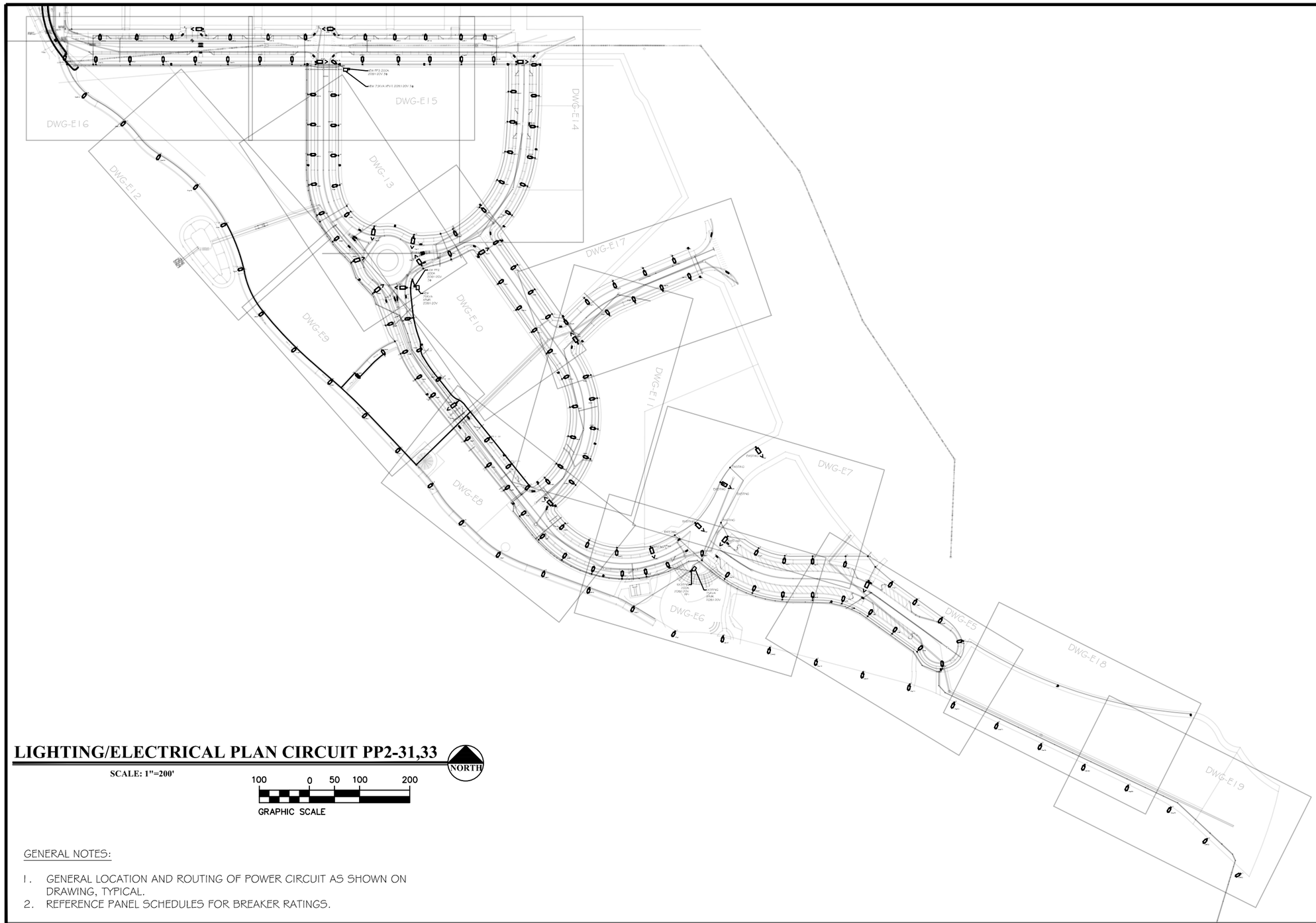
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
SITE LIGHTING PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP2-31,33

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

COLORADO REGISTERED JOEL J. MARNEY 37580 5-21-20 PROFESSIONAL ENGINEER

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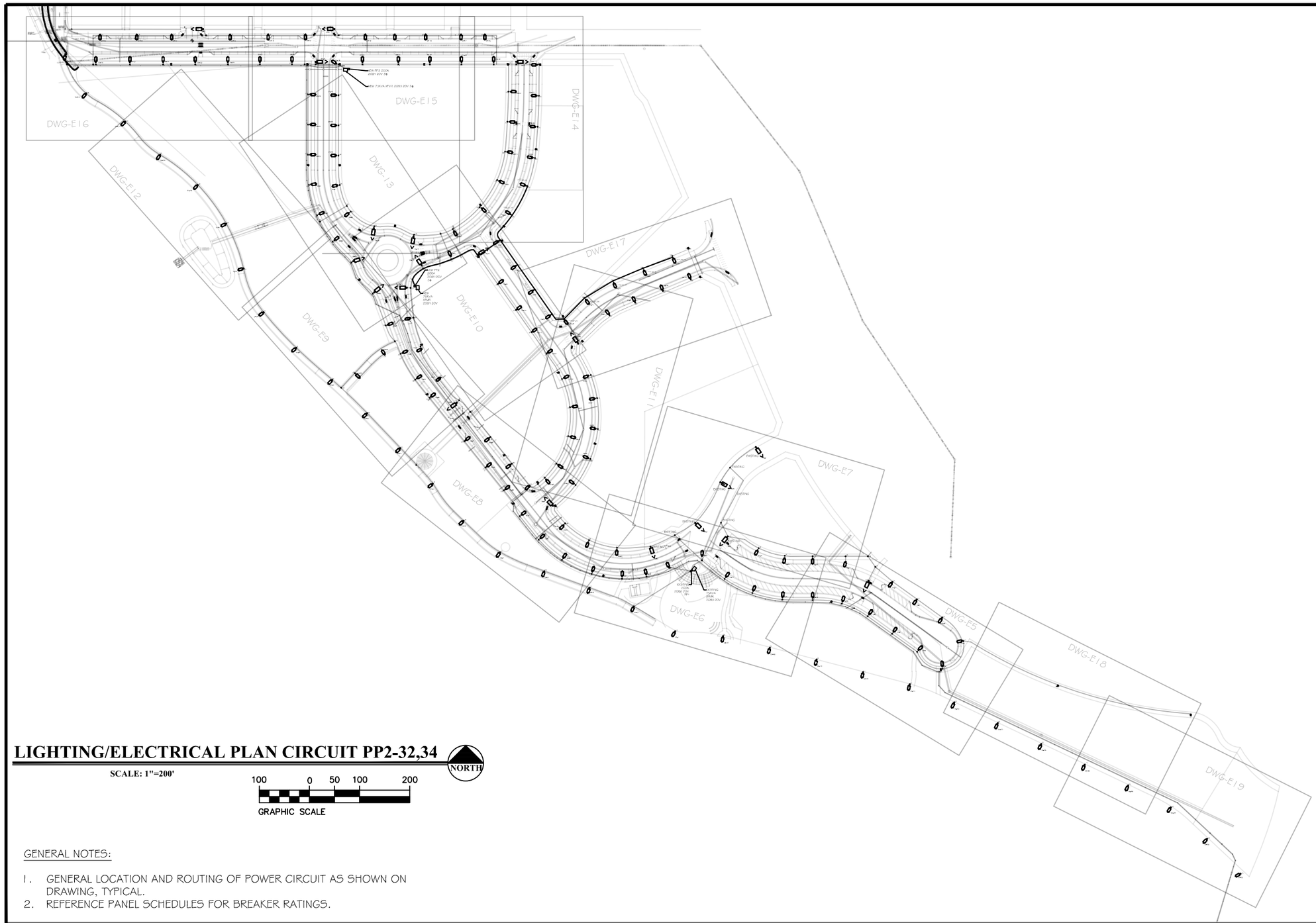
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
SITE LIGHTING PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP2-32,34

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

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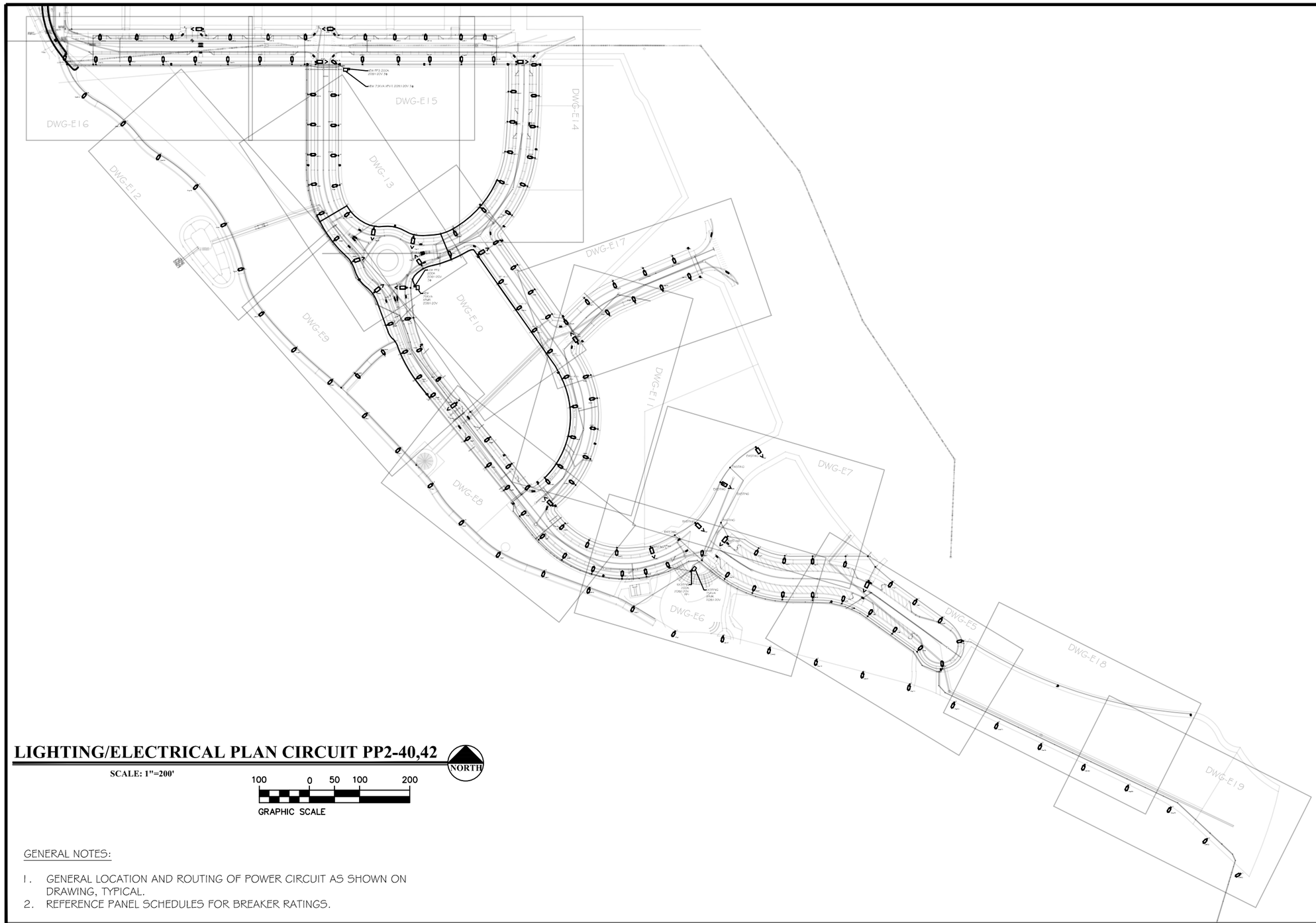
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
SITE LIGHTING PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP2-40,42

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

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2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

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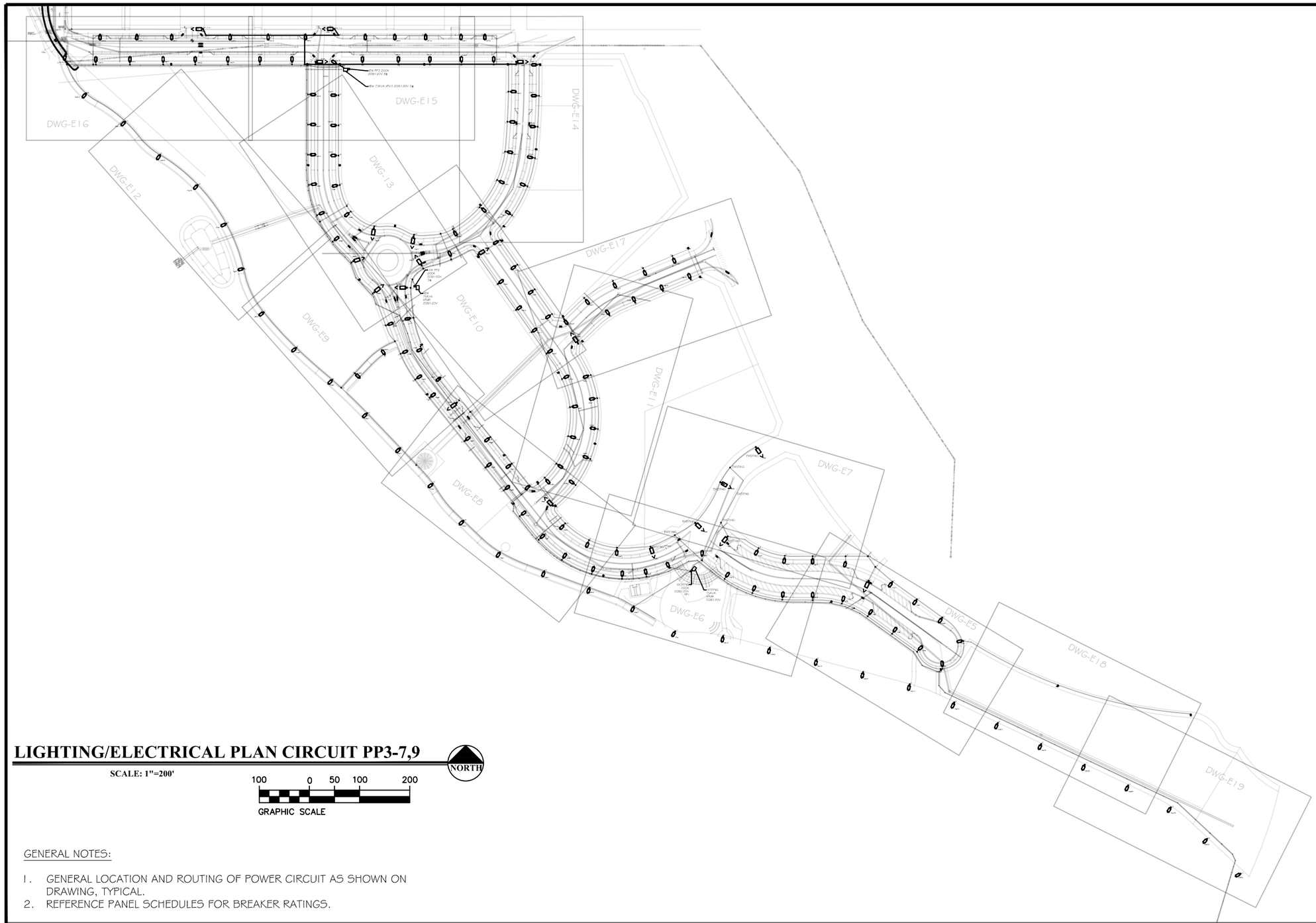
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
SITE LIGHTING PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP3-7,9

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

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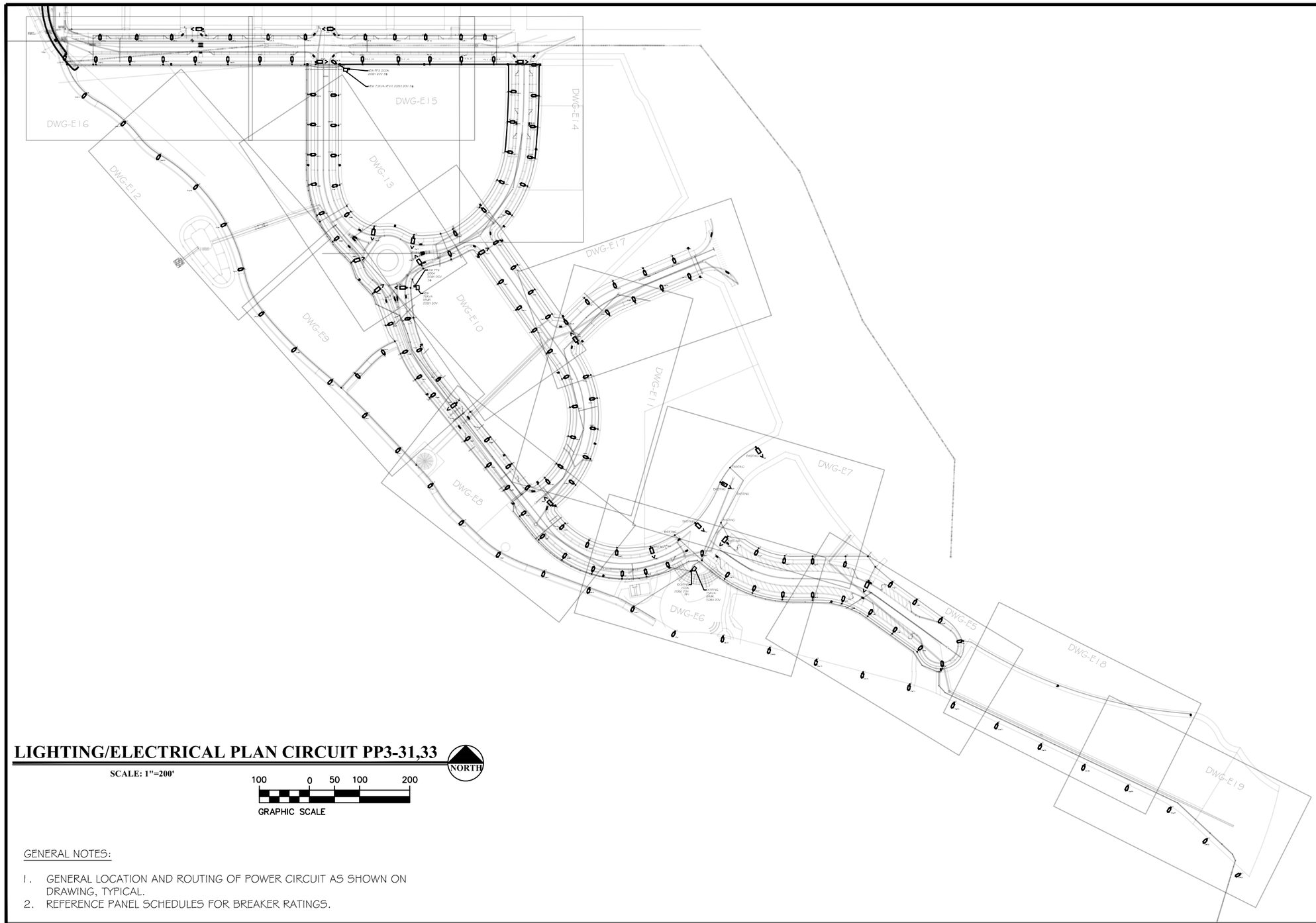
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
SITE LIGHTING PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP3-31,33

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

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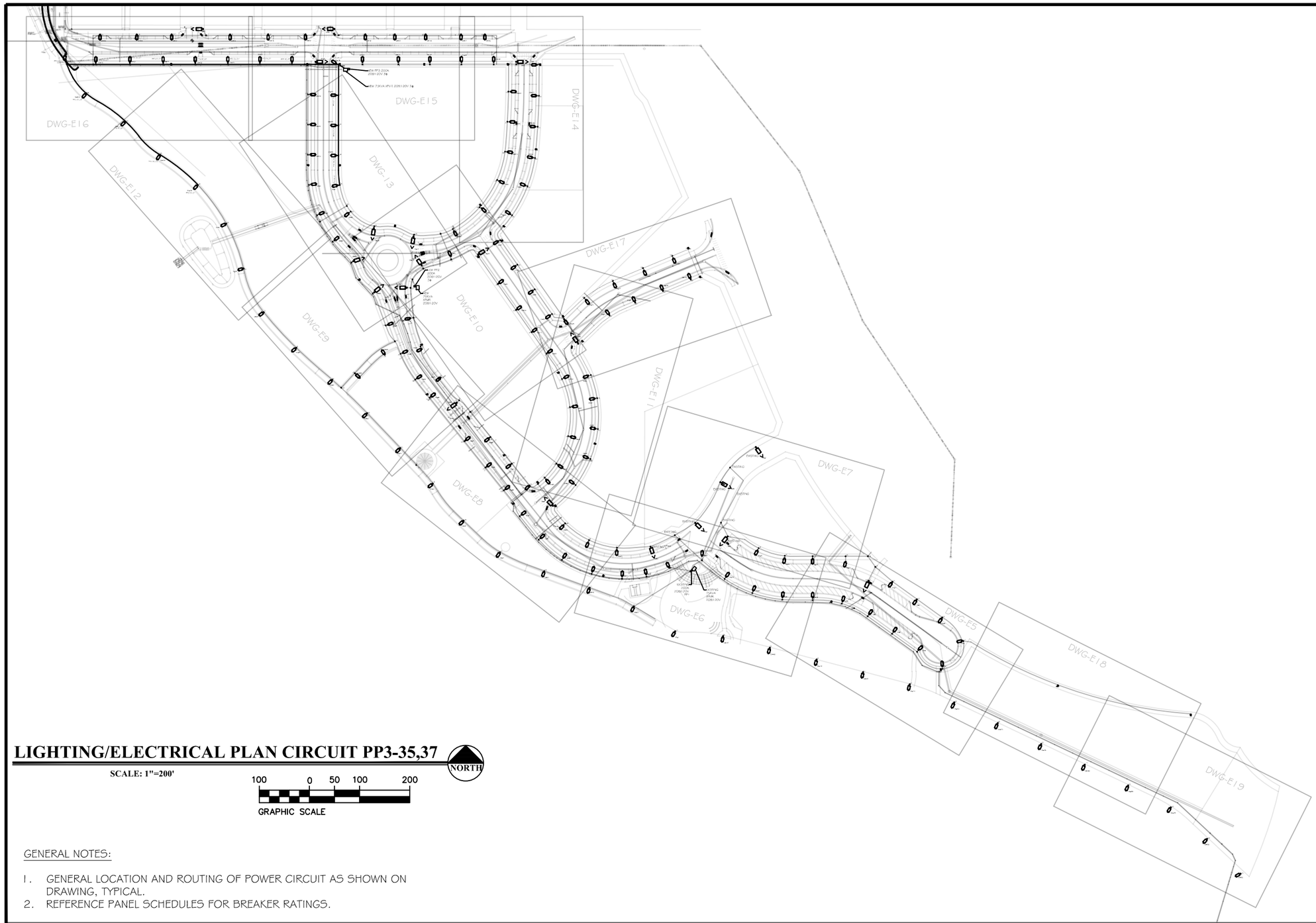
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
SITE LIGHTING PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP3-35,37

SCALE: 1"=200'

NORTH

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. REFERENCE PANEL SCHEDULES FOR BREAKER RATINGS.

COLORADO REGISTERED JOEL A. MARNELL 37580 5-21-20 PROFESSIONAL ENGINEER

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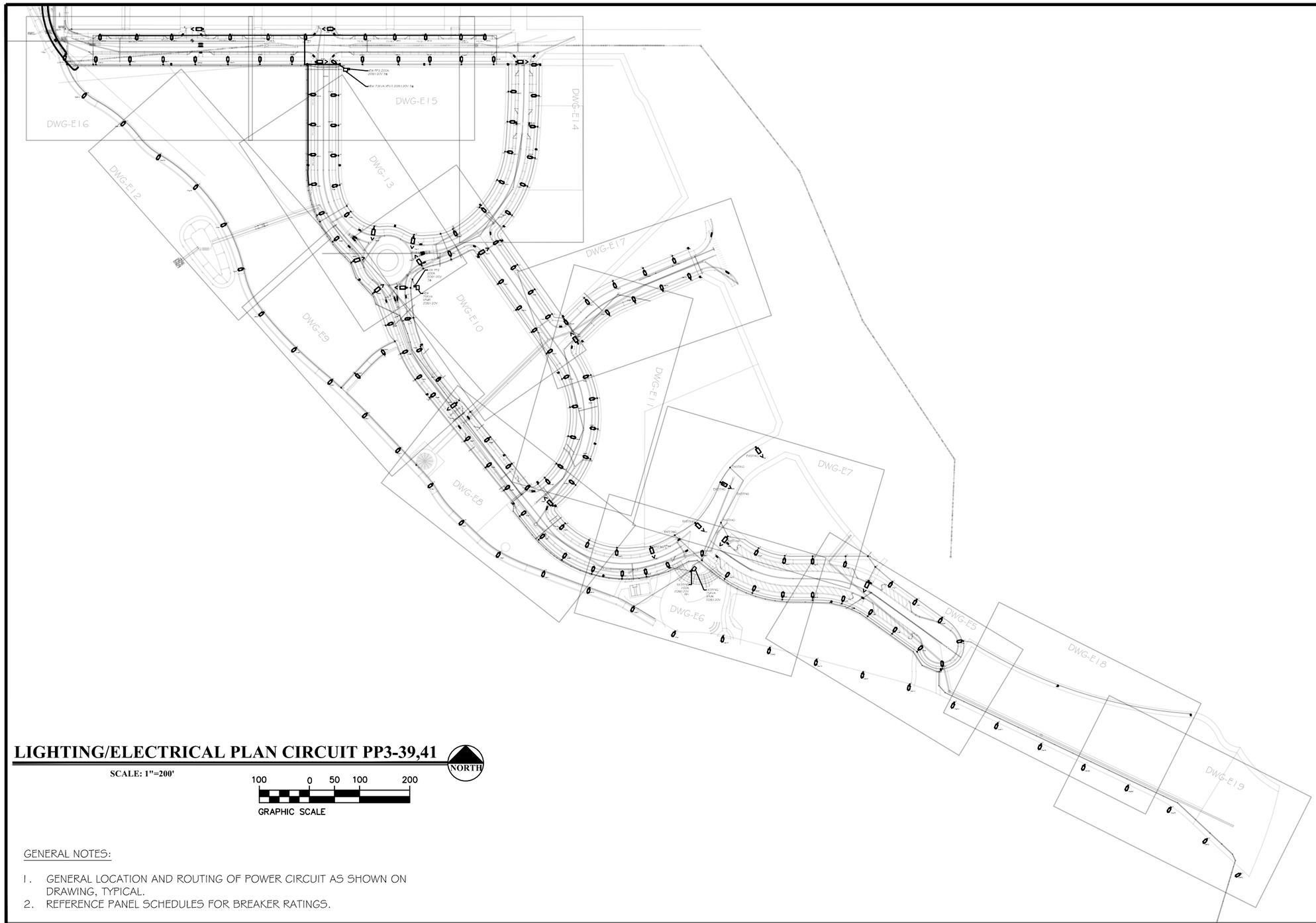
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
SITE LIGHTING PLAN



LIGHTING/ELECTRICAL PLAN CIRCUIT PP3-39,41

NORTH

SCALE: 1"=200'

100 0 50 100 200

GRAPHIC SCALE

GENERAL NOTES:

1. GENERAL LOCATION AND ROUTING OF POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
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COLORADO REGISTERED JOEL M. JIMENEZ 37580 5-21-20 PROFESSIONAL ENGINEER

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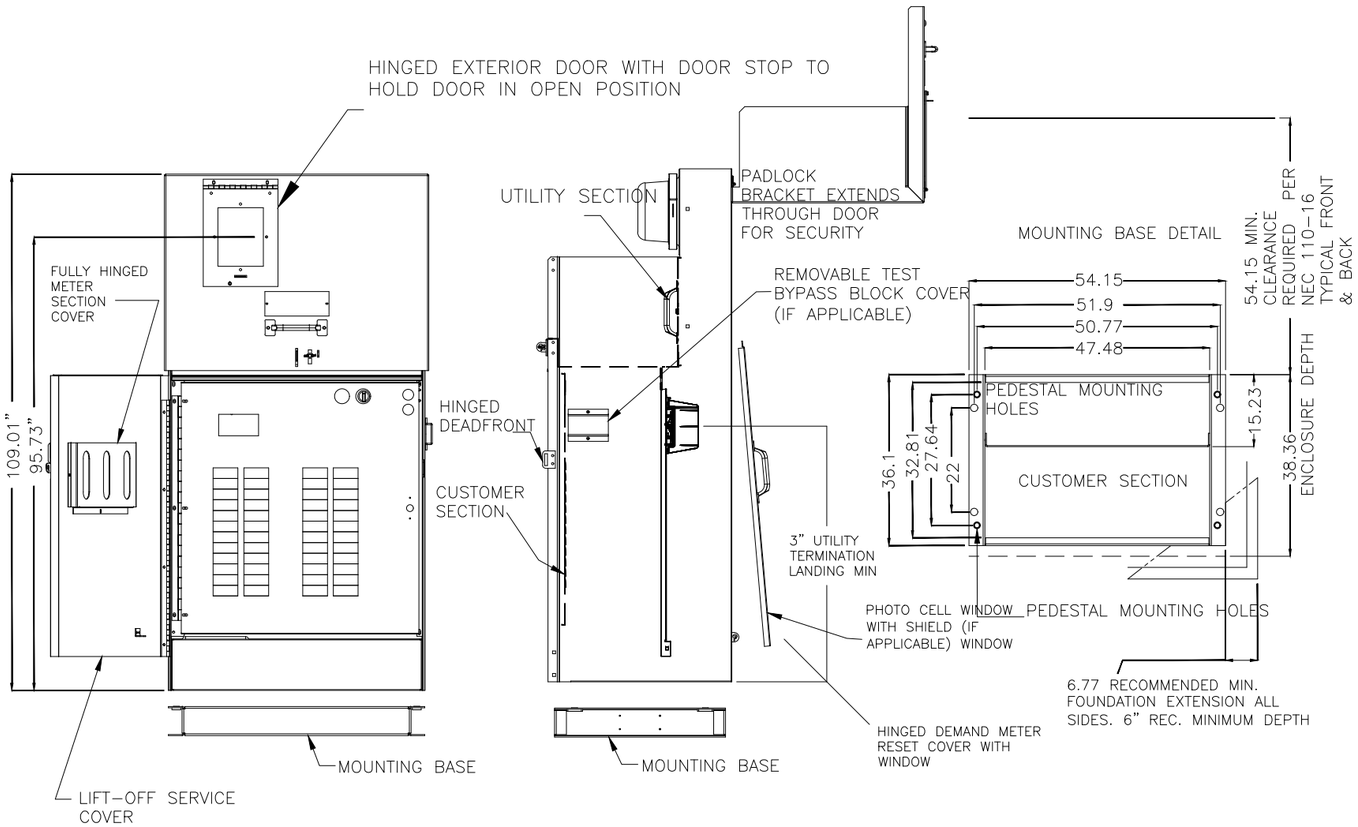
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
SITE LIGHTING PLAN

24" COMMERCIAL PEDESTAL



B/1 **TYPICAL 3-PHASE POWER PEDESTAL/LIGHTING CONTROL CENTER PLAN**

NOT TO SCALE

NOTES

1. COORDINATE EXACT INSTALATION REQUIREMENTS WITH PROVIDER PRIOR TO ROUGH-IN OR TRENCHING.CONTROL CABINET SHALL BE U/L LISTED "INDUSTRIAL CONTROL PANEL" PER UL 508.
2. CONSTRUCTION SHALL BE NEMA 3R. 12 GA. A60 STEEL POWDER COATED MINT GREEN WITH PHOTO ELECTRIC CELL IN SERVICE CABINET. ELECTRICAL CONTRACTOR TO PROVIDE PHOTOCELL.
3. VOLTAGE RATINGS OF SERVICE EQUIPMENT SHALL CONFORM TO THE SERVICE VOLTAGES INDICATED ON THE PLANS.
4. SERVICE EQUIPMENT ENCLOSURE AND METERING EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE SERVING UTILITY. WHEN THE SERVING UTILITY PROVIDES BOTH METERED AND UNMETERED CIRCUITS, A SEPARATE BUS SHALL BE PROVIDED FOR EACH CIRCUIT. THE METER AREA SHALL HAVE A SEALING, LOCKABLE, RAIN TIGHT COVER THAT CAN BE REMOVED WITHOUT THE USE OF TOOLS.
5. SERVICE EQUIPMENT SHALL BE FACTORY WIRED AND CONFORM TO NEMA STANDARDS.
6. THE EXTERIOR DOOR SHALL HAVE PROVISIONS FOR PADLOCKING. THE PADLOCK HOLE SHALL BE A MINIMUM DIAMETER OF 11mm.
7. ALL TERMINALS FOR INCOMING SERVICE CONDUCTORS SHALL BE COMPATIBLE WITH EITHER COPPER OR ALUMINUM CONDUCTORS SIZED TO SUIT THE CONDUCTORS SHOWN ON THE PLAN. TERMINAL LUGS SHALL BE COPPER OR TIN-PLATED ALUMINUM. SOLID NEUTRAL TERMINAL STRIP SHALL BE RATED 100A UNLESS OTHERWISE SPECIFIED AND FOR USE WITH COPPER OR ALUMINUM CONDUCTORS. THE TERMINAL SHOULD INCLUDE BUT NOT BE LIMITED TO:
   A) INCOMING TERMINALS (LANDING LUGS)
   B) NEUTRAL LUGS
   C) SOLID NEUTRAL TERMINAL STRIP.
   D) TERMINAL STRIPS FOR CONDUCTORS WITHIN THE ENCLOSURE.
8. CIRCUIT BREAKER SPACES (20mm NOMINAL) SHALL BE PROVIDED FOR BRANCH CIRCUITS. CIRCUIT BREAKER INTERIORS SHALL BE COPPER. INTERIORS SHALL ACCEPT PLUG-IN OR CABLE-IN/ CABLE-OUT CIRCUIT BREAKERS.
9. PLUG-IN CIRCUIT BREAKERS MAY BE MOUNTED IN THE VERTICAL OR HORIZONTAL POSITION. CABLE-IN/ CABLE-OUT CIRCUIT BREAKERS SHALL BE MOUNTED IN THE VERTICAL POSITION.
10. FASTENERS ON THE EXTERIOR OF THE ENCLOSURE SHALL BE VANDAL RESISTANT AND SHALL NOT BE REMOVABLE FROM THE EXTERIOR. ALL NUTS, BOLTS, SCREWS, WASHERS, AND HINGES SHALL BE STAINLESS STEEL.
11. PHENOLIC NAME PLATES SHALL BE PROVIDED AS REQUIRED.
12. A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
13. FOUNDATION SHALL EXTEND 50mm MINIMUM BEYOND EDGE OF ENCLOSURE.
14. PANEL WILL ADHERE TO XCEL ENERGY REQUIREMENT FOR COLD SEQUENCE DISCONNECTION.

COLORADO REGISTERED JOEL A. MARNEY 37580 5-21-20 PROFESSIONAL ENGINEER

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CITY OF Grand Junction COLORADO

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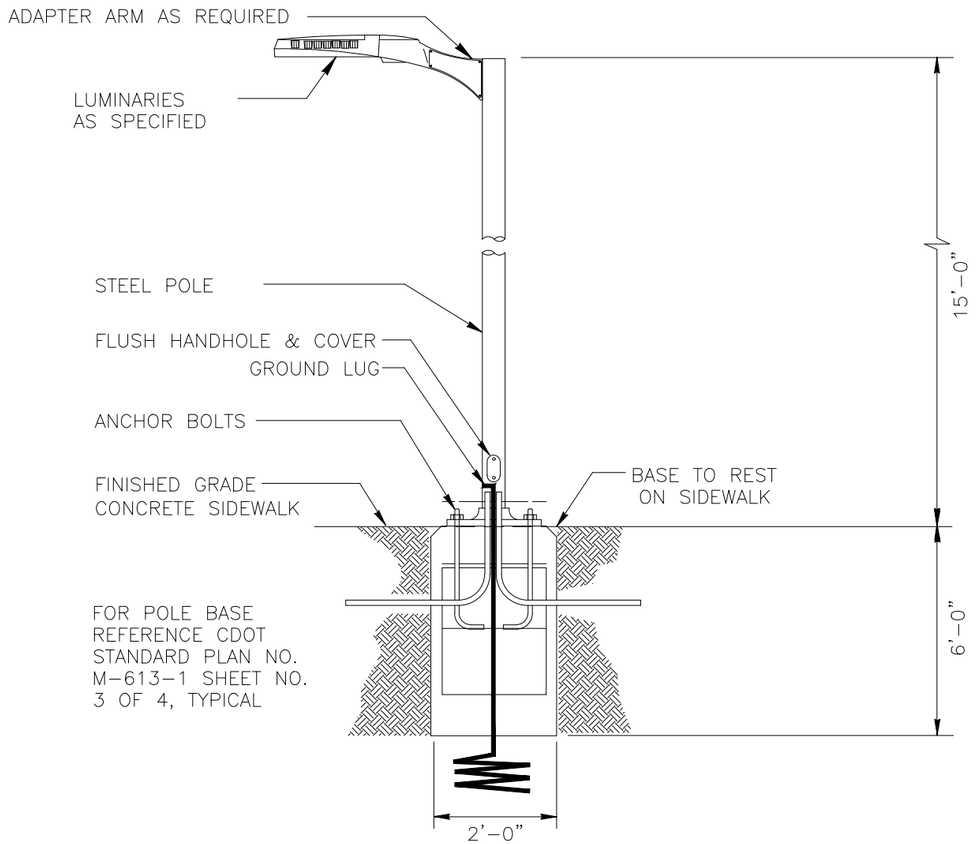
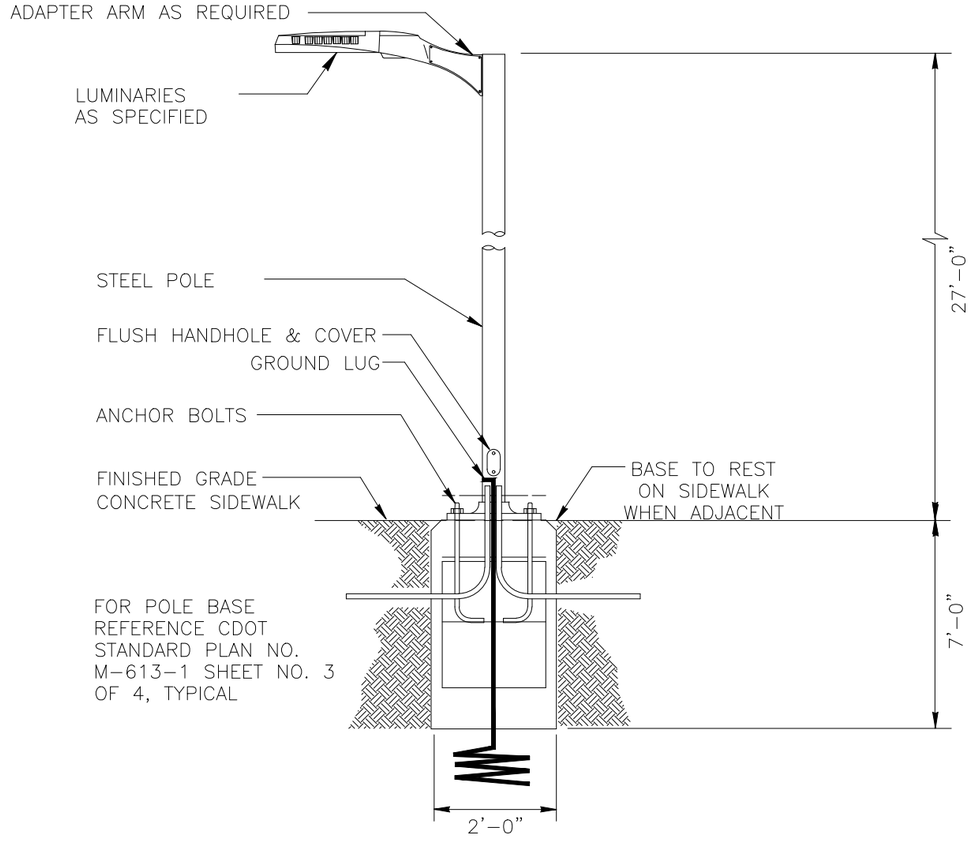
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
PEDESTAL DETAILS



TYPICAL SA LIGHT DETAIL

NOT TO SCALE



TYPICAL SB LIGHT DETAIL

NOT TO SCALE

GENERAL NOTES TYPES "A" AND "B":

1. ELECTRICAL CONTRACTOR TO ORDER ALL REQUIRED HARDWARE FOR MOUNTING OF EACH LUMINARIES.
2. VERIFY THE BURY DEPTH AND DIAMETER OF THE SONOTUBE FOR POLE LUMINARIES WITH THE CIVIL ENGINEER PRIOR TO PURCHASING THE EQUIPMENT. DEPTH WILL DEPEND ON SOIL CONDITIONS. TYPICAL CONCRETE DEPTH IS 7 FT. VERIFY WITH CIVIL ENGINEER.
3. ELECTRICAL CONTRACTOR TO VERIFY THAT ALL FIXTURES TO COMPLY WITH LIGHT TRESPASS AND AND DARK SKY CODES.
4. NOTIFY ENGINEER OF ANY OBSTRUCTIONS TO POLE PLACEMENT IMMEDIATELY BEFORE PROCEEDING.
5. VERIFY REQUIRED VOLTAGE OF FOR EACH LUMINARIES WITH AVAILABLE VOLTAGES PRIOR TO ORDERING.
6. REFERENCE CDOT STANDARD PLAN NO. M-613-1 SHEET NO. 3 OF 4, TYPICAL



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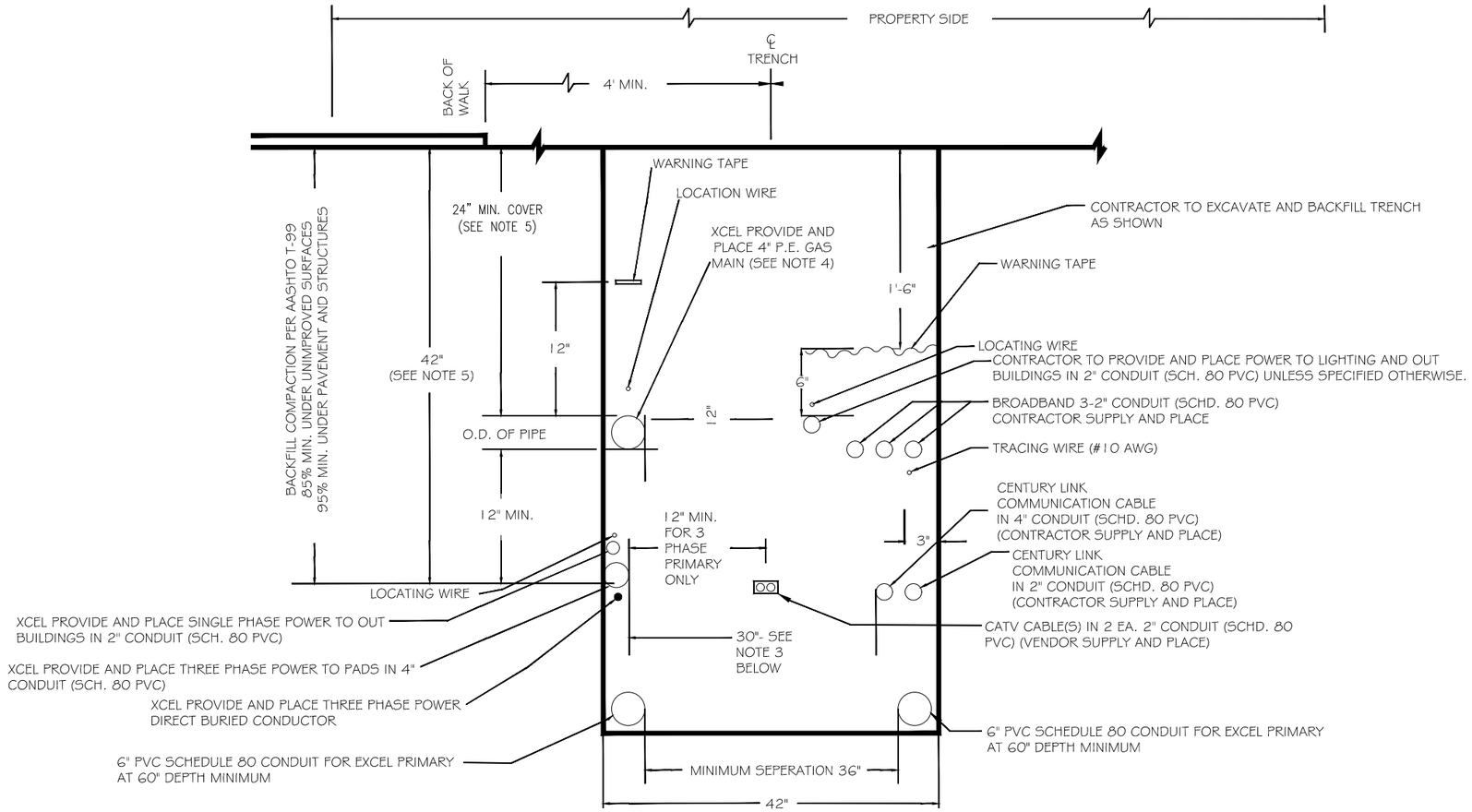
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2
LIGHTING DETAILS



GENERAL NOTES:

1. FOR EASE OF CONSTRUCTION AND MAINTENANCE, PRIMARY CABLE SHOULD BE 12" TO 24" FROM COMMUNICATION CABLES. HOWEVER NESC REQUIREMENTS PERMIT "SUPPLY AND COMMUNICATION CABLES TO BE BURIED TOGETHER AT THE SAME DEPTH WIN NO DELIBERATE SEPARATIONS BETWEEN FACILITIES PROVIDED ALL PARTIES ARE IN AGREEMENT."

2. ONLY SINGLE PHASE SUPPLY CABLES CAN BE BURIED AT THE SAME DEPTH WITH NO DELIBERATE SEPARATION WITH COMMUNICATION CABLES. THREE PHASE CABLES MUST BE SEPARATED BY A MINIMUM OF 1 FOOT (REFERENCE NESC 354.D.3A).

3. 30" TRENCH WIDTH SHOULD BE USED WHEN ALL FOUR UTILITIES ARE INCLUDED.

4. STEEL GAS PIPE OR STEEL DUCT IS NOT ALLOWED FOR JOINT TRENCH CONSTRUCTION.

5. WHERE UNDERGROUND UTILITIES CROSS OR ENCROACH INTO CITY STREETS THEY SHALL BE INSTALLED TO A DEPTH PROVIDING 3' MINIMUM COVER BELOW FINISHED GRADE.

TYPICAL COMMON TRENCH DETAIL PROPERTY SIDE

NOT TO SCALE

COLORADO REGISTERED JOEL MAYNES 37580 5-21-20 PROFESSIONAL ENGINEER

811 Know what's **below.** **Call** before you dig.

ACM CONSULTING
ELECTRICAL DESIGN, CONSULTING ENGINEERS; PH: 970-245-7292
PO 3211 GRAND JCT., CO 81502
EMAIL: joelm@ACMengrs.com

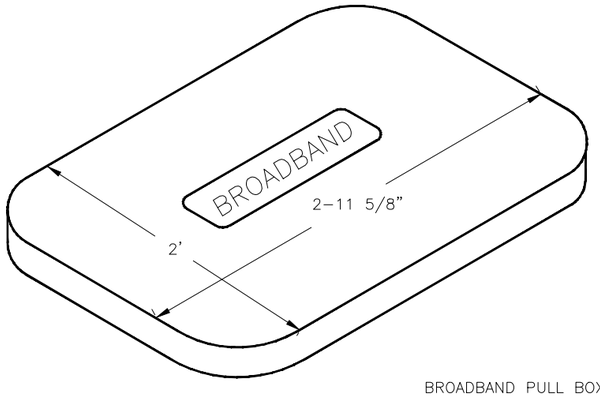
DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY AJM DATE 5-21-2020
DESIGNED BY AJM DATE 5-21-2020
CHECKED BY AJM DATE 5-21-2020
APPROVED BY BH DATE 5-21-2020

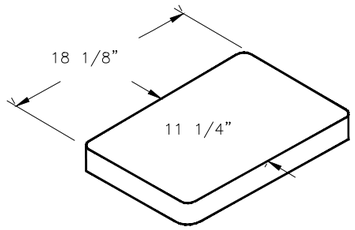
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

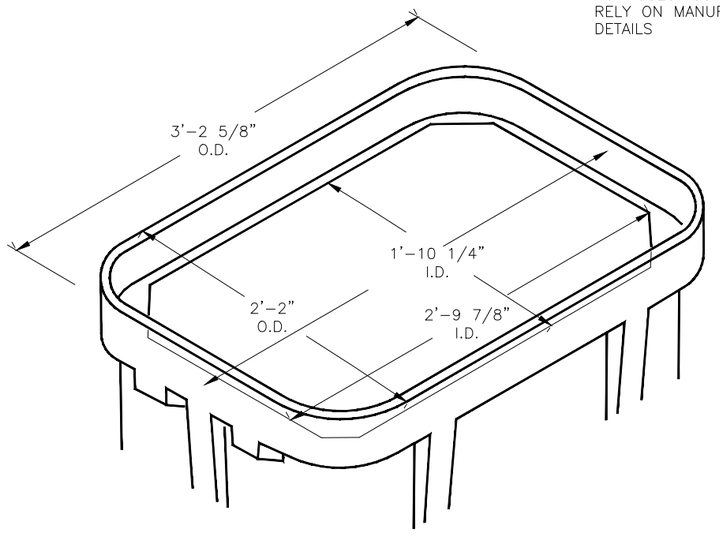
THE RIVERFRONT AT DOS RIOS WAY PHASE 2
UTILITY DETAILS DETAILS



COVER



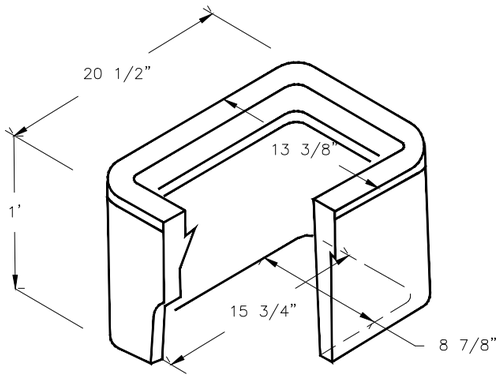
BROADBAND PULL BOX (HUBBEL QUAZITE BOX) (BOX PART NO PG2436BA30) COVER PART NO PG2436HA00) OR ENGINEER APPROVED EQUAL DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS



BOX

BROADBAND PULL BOX

DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS



STREET LIGHT AND PEDESTRIAN LIGHT PULL BOX

DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS

TYPICAL PULLBOX DETAIL

NOT TO SCALE

GENERAL NOTES:

1. PULL BOXES, PULL BOX COVERS AND EXTENSIONS SHALL BE MADE OF FIBERGLASS REINFORCED POLYMER CONCRETE. PULL BOXES SHALL BE VERIFIED BY 3RD PARTY NATIONALLY RECOGNIZED INDEPENDENT TESTING LABORATORY AS MEETING ALL TEST PROVISIONS OF THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING. CERTIFICATION DOCUMENTS SHALL BE SUBMITTED WITH MATERIALS SUBMITTALS. THE PULL BOX SHALL HAVE A DETACHABLE COVER WITH A SKID RESISTANT SURFACE AND HAVE THE WORDS ELECTRICAL CAST INTO THE SURFACE. FAINTING THE WORDS SHALL NOT BE ACCEPTED. MARKINGS SHOWING THE TIER 22 RATING MUST BE LABELED OR STENCILED ON THE INSIDE AND OUTSIDE OF THE BOX AND THE ON UNDER SIDE OF THE COVER. THE COVER SHALL BE ATTACHED TO THE PULL BOX BODY BY MEANS OF A MINIMUM 3/8-7 UNIFIED NATIONAL COURSE (UNC) STAINLESS STEEL PENTA HEAD BOLTS SHALL HAVE TWO LIFT SLOTS TO AIDE IN THE REMOVAL OF THE LID.

2. PULL SLOTS SHALL BE RATED FOR A MINIMUM PULL OUT OF 3,000 POUNDS. MAGNESIUM CHLORIDE TESTS SHOULD BE PERFORMED IN ACCORDANCE WITH THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING.

COLORADO REGISTERED PROFESSIONAL ENGINEER
ALFONSO JOEL MARTINEZ
37580
5-21-20

811
Know what's below.
Call before you dig.

ACM CONSULTING
ELECTRICAL DESIGN, CONSULTING ENGINEERS; PH: 970-245-7292
PO 3211 GRAND JCT., CO 81502
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DESCRIPTION	DATE
REVISION △	-
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REVISION △	-
REVISION △	-

DRAWN BY	AJM	DATE	5-21-2020
DESIGNED BY	AJM	DATE	5-21-2020
CHECKED BY	AJM	DATE	5-21-2020
APPROVED BY	BH	DATE	5-21-2020

CITY OF Grand Junction COLORADO

PUBLIC WORKS ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS WAY PHASE 2 UTILITY DETAILS DETAILS

CITY OF Grand Junction COLORADO

Purchasing Division

ADDENDUM NO. 4

DATE: June 19, 2020
FROM: City of Grand Junction Purchasing Division
TO: All Offerors
RE: Riverfront at Dos Rios Phase II Construction IFB-4799-20-DH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

1. The following companies have been approved for this project:

Company Name	Location	Name	Phone	E-Mail	Pre-Qualification Approved/Not Approved
Johnson Construction, Inc.	Rifle, CO	Rob Bercher	970-625-2251	rob@johnconinc.com	Approved
M.A. Concrete Construction	Grand Junction, CO	Jeff Nimon	970-243-3221	maconcretenimon@bresnan.net	Approved
ESCO Constructin Co.	Evergreen, CO	Shelly McCarron	303-674-3385	smccarron@escomailbox.com	Approved
FCI Constructors, Inc.	Grand Junction, CO	Brian Young	970-434-9093	byoung@fciol.com	Approved
American Civil Constructors/ AAC Mountain West	Littleton, CO	Jody Randall	303-730-4504	jrandall@accbuilt.com	Approved
Scott Contracting, Inc.	Centennial, CO	Kym Johnson	720-889-4403	kymjohnson@scottcontracting.com	Approved
CON-SY, Inc.	Grand Junction, CO	Carie Slape	970-549-1270	consyinc@aol.com	Approved
Oldcastle SW Group Inc., dba United Companies	Grand Junction, CO	Jacob Davis	970-243-4900	jacob.davis@unitedco.com	Approved
MM Skyline Contracting, Inc.	Grand Junction, CO	John Chutka	970-434-9121	jchutka@skyconinc.com	Approved

2. Q. Is there a specific model number or specifications for the luminaires in line items 112 & 113?

A. *Yes. See sheet E1 of the Site Lighting Plans for specific luminaire models (overall sheet 353). Also, refer to luminaire manufacturer for specifications.*

3. Q. Do you know if there is a plan sheet that shows an existing surface topo? The only existing elevation information we can find is on the cross-sections but a topo surface would be appreciated.

A. *Please see the attached exhibit sheets EGC1 & EGC2, showing existing contours. The existing contour sheets were created from the Overlot Grading Plans (sheets 246 & 247). The*

existing grading sheets will reflect the existing surface at the same contour interval as sheets 246 & 247.

4. Q. Do you have a detail of the outlet structure for this project? See a note on page 79 referring to a detail but can't find one.

A. *Yes. Please see the answer to question #8.*

5. Q. Line Item #99 Debris Processing and Removal:
   - Can you identify where the 12,000 cy of material is on the site?
   - The line item refers to "removal". Which material needs to be removed?

A. *Line item #99 (Debris Processing and Removal):*
- *The anticipated 12,000 CY of debris to be processed and removed is based on previous test pits and trench locations. Please see the attached C-1 sheet.*
- *Within the northern area as shown on sheet C-1, the possibility of trash debris exists. The encountered debris, as well as within any other area encountered on the site, shall be processed and removed.*

6. Q. Line Item #101 Import and Place Clean Fill:
   - Drawing 3 requires all imported embankment material to have a minimum RValue of 40. Will this material qualify for the "Clean Fill" as stated in the line item.
   - Addenda #3 eliminated all the imported topsoil. Will this R-40 material qualify for topsoil to be planted on?

A. *Line Item #101 (Import and Place Clean Fill):*
- *The statement referring to a required minimum R-Value of 40 has been removed from the plan set.*
- *The updated bid schedule that was provided in Addendum #3 eliminated the need for the additional topsoil. The R-Value of 40 is no longer required.*

7. Q. Line Item #54 Storm Drain Pipe 72"x24" Concrete Box Culvert:
   - Is there a detail for the box culvert?
   - Can it be pre cast?

A. *Line Item #54 (Storm Drain Pipe 72"x24" Concrete Box Culvert):*
- *There is no current detail from the City for the box culvert. Contractor should reference CDOT specifications and detail for single-cell, pre-cast concrete box culvert.*
- *Yes. The box culvert may be pre-cast.*

8. Q. Line Item #67 Storm Drain Outlet Structure:
   - Is there a drawing for this structure? (Drawing 79 Notes refers to "Detail xxxxxxx1 in the Final Drainage Report for the Riverfront at Dos Rios Business Park, Appendix X WQCV Plate and Outlet Structure") I cannot find this report.

A. *Line Item #67 (Storm Drain Outlet Structure):*

- *Yes. Please see sheet C-1 (Water Quality Outlet Structure) plan of the Final Drainage Report (overall sheet 158) of the report, attached. The detail reference on drawing sheet 79 has been updated.*

9. Q. Line Item # 241 Rock Type 2 (Larger) :
   - Drawings L-1 and L-2 Legend Notes identify this material as " -3 inch Colorado River Rock". Is this a brand name for a material provided by a specific supplier or is it rock from the Colorado River?

A. *Line Item #241 (Rock Type 2 (Larger)):*
- *3" Colorado River Rock refers to rounded cobbles, originating from rivers, within the state of Colorado. One may reference the "Rock Shop", located close to the project site, which contains this size river cobble as well as a number of other river cobbles, and are designated as Colorado River Rock (Gravels and Cobbles).*

10. Q. Can a PDF with existing topo lines be provided with Drawings 246 and 247?

A. *Yes. Please see the answer to question #3, above.*

11. Q. Will the day count for completion time be suspended during winter months when work is restricted?

A. *Perhaps. Please refer to Section 2.46 Force Majeure, of the solicitation document, as part of the original Bid Documents.*

12. Q. Only finding 1 ea. Curb Inlet with Drive-over curb hood, bid schedule shows 2 ea. can you assist?

A. *There are (2) drive-over curb inlets. Structure(s) #66 & 75. Structure #66 (at the end of Confluence Court) was previously labeled incorrectly.*

13. Q. #45 water service assy- I assume this is for the pit/yoke/meter….which is supplied by the City of GJ so not needed in the bid?

A. *No. This line item is needed. The Contractor is responsible for installing the saddle connection, corp stop, and piping to the meter pit. The City will provide the pit structure, yoke, and meter.*

14. Q. After looking through the project plans and standard specs I haven't ben able to find a trench detail for flexible pipe materials (PVC, HDPE or PP pipe). The City of Grand Junction Standard Specifications for the Construction of Underground Utilities references 'City Standard Drawings' but wasn't able to find that on the City website. Can you help point me in the right direction? I just want to make sure the project is being bid equitably.

I read through the written spec for HDPE, however, what ADS is proposing is Polypropylene (HP Storm), which is 2x stiffer than HDPE. Because of the increase rigidity, lower classification backfills can be used while still maintaining structural integrity. With the different backfill materials there are different maximum cover requirements (see attached note A2.04). ADS recommends a minimum cover of 1' (top of rigid pavement, bottom of flexible pavement), using a Class III material per ASTM D2321 (see classes of Embedment and Backfill Materials) for reference.

A. *For Contractors wanting to price out an alternative pipe material (only allowed for circular RCP pipe), the Contractor must follow the manufacturer's specifications for pipe bedding and backfill materials, as well as minimum required coverage. If minimum coverage per the manufacturer is not achievable, as shown on the construction plans, the Contractor must install RCP pipe.*
The pipe bedding and backfill materials for the alternative plastic pipe is incidental to the pipe installation, and shall be included in the unit cost. There will be no separate pay items for pipe bedding or backfill materials.

Regarding the alternate pipe trench detail that is not in the City of Grand Junction's "City Standard Drawings", please refer to the 2017, CDOT Standard Specifications for Road and Bridge Construction.

16. Q. Does the designer want the 8" concrete pavement in the bus pull-ins / parking stalls to be reinforced? If so please indicate type of reinforcement (Dowels, mat of bar, etc), size, spacing, and orientation.

A. *No. Reinforcement within the 8" concrete section for parallel parking is not required.*

17. Q. Does the designer want the sidewalks to be doweled into the restroom slab? If so please indicate length, size, and spacing.

A. *No.*

18. Q. Is the asphalt thickness known for existing asphalt on Hale Avenue and Trail?

A. *The existing asphalt thickness for Hale Avenue and the existing asphalt trail are not known. The Contractor should assume a minimum thickness of 4" for the trail, and 6" for Hale Ave.*

19. Q. Will construction water be available from existing hydrants onsite?

A. *No. The Contractor shall utilize the filling station located adjacent to City Shops.*

20. Q. What agency will construction water be purchased from?

A. *The City of Grand Junction.*

21. Q. Would the owner accept a 6x3 precast box culvert as an alternate to the 6x2 precast box culvert that is stated on the plans?

A. *No. There is not enough available cover over the box to allow for 3'.*

22. Q. Is it possible to provide the site existing grades to correspond with plan sheets 246 & 247 overlot grading plans ?

A. *Please see answer to question #4 above.*

23. Q. Erosion Control Plans are not provided, can these plans be provided?

A. *Please see the Stormwater Management Plan sheets (overall sheets 263-266).*

24. Q. Evergreen Trees have been lumped into bid item 208 - Shrubs (1021 EA). Can these two be separated into two separate bid items?

A. *Evergreen trees have been added to the bid schedule as a new line item #208. There are 12 evergreen trees in the bid schedule. "Shrubs" have been changed to bid item #209.*

25. Q. Bid item 207 - Trees, 1-1/2" Deciduous should have a quantity of 65 instead of 66.

A. *Bid item 207 has been confirmed at 66 trees.*

26. Q. Bid item 222 - Trees, 2" Deciduous should have a quantity of 59 instead of 58.

A. *The 2" Deciduous tree count has been revised to 59 trees. This bid item # has been changed from 222 to 223.*

27. Q. Please clarify the total quantity of irrigation controllers and irrigation connections (Detail A/I-3) and their locations on the plans.

A. *The total number of irrigation controllers are 1. The total number of irrigation connections to the raw waterline are 1. Please see sheet I-1 of the Dos Rios Bicycle Playground Landscape and Irrigation Plans (overall sheet 308).*

28. Q. The bid schedule includes 10 benches (bid item 220), but the site furnishing schedule on sheet L-1 on calls out 4. Please confirm the bench quantity.

A. *This bid item has been changed to bid item #221. The Contractor shall bid-out the number of benches included in the Bid schedule. The final location of the remaining benches will be decided at the pre-construction meeting after the project is awarded.*

29. Q. Item #181- What size are the actual air vac/valves to be? Qty 4 off of 10" pipe, qty 4 off of 8" pipe.

A. *The actual size of the air vac valves, as shown in City Standard Drawing W-11, shall be 6-inches.*

30. Q. Please clarify what is to be included in bid item 204 – Riparian Restoration – 108,900 SF.

A. *The Riparian Restoration line item refers to the upland area adjacent to the riverbank stabilization portion of the project (See sheets 281-293). The restoration includes clearing and grubbing prior to bank stabilization construction. The Contractor shall include a soil amendment, similar to bid item(s) #202, 231 and 236. In addition, the Contractor shall include a general riparian seed mix for planting after the soil has been amended.*

31. Q. I see you are allowing alternate materials for round RCP but you are specifying Fabricated Manhole Tee's. If these Tee's are not available in alternate materials how can the pipe be allowed as an alternate?

A. *If the tee in question is not available in an alternative material, the Contractor may propose to the Project Engineer the installation of a standard manhole. This will be decided on a case by case scenario.*

32. Q. We would like to submit our substitution request for the shelters on the upcoming Riverfront at Dos Rios Phase II Construction bid. Per the bid documents we have attached the 3-part specification and preliminary drawing for your review. We have seen in the past approving more than one supplier will allow the City to get the best pricing out of all suppliers. It is also worthwhile to mention that RCP Shelters has been in business since 1957, longer than any other shelter manufacturer, and have projects in all 50 states, multiple countries, and have designed shelters in the harshest of loading conditions including 265 psf snow loads, and 150 mph wind load.

A. *The City will allow the RCP shelter as a bid alternative to the Shelter plans that were included in Addendum #3.*

33. Contractors shall utilize the attached revised Addendum 4 Price Bid Schedule when submitting their bid responses.

34. Additional Clarifications:

1. Please see attached the additional option for the Dos Rios Park "alternate" small shelter plans and specifications.

2. Please see attached the revised Construction Plans (Sheets 1-293). The major revisions include:
   a. Upsizing all water service assemblies from 1" to 2" services. Please note the applicable line item changes, including the pipe material.
   b. Updates to Removal Plan R-8.

3. Addition of Existing Ground Contour Plans EGC1 & EGC2 for topo clarification.

4. The quantity of the luminaires, light foundations, and pedestals for the site lighting plans have been updated. See revised Bid Schedule reflecting the updated quantities.

5. Updated Addendum 4 Price Bid Schedule.

6. See attached "Test Pit and Trench Location" Exhibit for potential debris removal locations.

7. See attached Final Drainage Report, containing outlet structure detail.

8. See below for Special Condition #8 (SP-8), regarding early access to the Parcels MU-3 & MU-4. See attached exhibit of the envisioned build-out for the Dos Rios Phase 2 development.

SP-8 – EARLY ACCESS

DEVELOPER ACCESS TO PARCELS MU-3 & MU-4

The Developer for the entire Dos Rios project site has requested that Parcels MU-3 & MU-4 have all weather access available to them by April 19, 2021. This means that the General Contractor shall provide access off of Dos Rios Drive, or Calle Del Rio, by ensuring that a minimum, the bottom asphalt mat will be installed within each road by April 19th, 2021. For Dos Rios Drive, the segment south of the proposed roundabout shall have the bottom mat installed, extending to the termination

point of the existing phase 1 Dos Rios road stub. If the Contractor chooses to provide access to MU-3 by way of Calle del Rio, that portion of the road adjacent to MU-3 must have at a minimum the bottom mat of asphalt pavement installed.

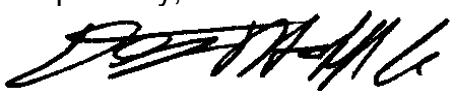
There will be no separate pay items for providing access to parcels MU-3 or MU-4, and shall be part of the bid items included in the original bid solicitation.

Once April 19th arrives, and depending on how much of the right-of-way hardscape (i.e. curb, gutter, and sidewalk) has been installed adjacent to said parcels, it will be the developer's responsibility to protect and maintain that hardscape.

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,



Duane Hoff Jr., Senior Buyer
City of Grand Junction, Colorado

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #4

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	626	Mobilization	1.	Lump Sum	$ _____	$ _____
2	626	Construction Surveying	1.	Lump Sum	$ _____	$ _____
3	620	Sanitary Facility	1.	EA	$ _____	$ _____
4	209	Dust Abatement	500.	DAYS	$ _____	$ _____
5	208	Stabilized Construction Entrance	5.	EA	$ _____	$ _____
6	208	Erosion Control (Complete in Place)	1.	Lump Sum	$ _____	$ _____
7		Potholing	1.	Lump Sum	$ _____	$ _____
8	108.2	4" Sewer Service Pipe (SDR 35)	786.	LF	$ _____	$ _____
9	108.2	6" Sewer Service Pipe (SDR 35)	93.	LF	$ _____	$ _____
10	108.2	8" Gravity Sewer Pipe (SDR 35)	1,682.	LF	$ _____	$ _____
11	108.2	Import Trench Backfill	4,000.	CY	$ _____	$ _____
12	108.3	4" Sewer Service Tap to Existing Main	18.	EA	$ _____	$ _____
13	108.3	4" Sewer Service Tap to New Main	8.	EA	$ _____	$ _____
14	108.3	8" End Cap/Plug Sewer	1.	EA	$ _____	$ _____
15	108.3	Sanitary Sewer Cleanout (2-way) to Include Appurtenances per City Standard Detail SS-07.	26.	EA	$ _____	$ _____
16	108.5	Sanitary Sewer Basic Manhole Placed on Existing Line (60" I.D.) (Complete in Place).	2.	EA	$ _____	$ _____
17	108.5	Sanitary Sewer Basic Manhole Placed on Existing Line (48" I.D.) (Complete in Place).	1.	EA	$ _____	$ _____
18	108.5	Sanitary Sewer Basic Manhole (48" I.D.) (Complete in Place).	12.	EA	$ _____	$ _____
19	108.5	Sanitary Manhole Barrel Section (D>5') (60" I.D.).	6.	VLF	$ _____	$ _____
20	108.5	Sanitary Manhole Barrel Section (D>5') (48" I.D.).	33.6	VLF	$ _____	$ _____
21	108.5	Connect to Existing Manhole or Sewer Main	3.	EA	$ _____	$ _____
22	210	Adjust Sewer Manhole to Finished Grade.	15.	EA	$ _____	$ _____
23	104.4	Fully Encased Sewer in Concrete per City Standard Detail GU-04. See Plan Sheet 6.	11.	EA	$ _____	$ _____
24	104.4	Cap Top Half of Sewer in Concrete per City Standard Detail GU-04.	12.	EA	$ _____	$ _____
25	108.2	6" Water Pipe (C-900 PVC).	632.	LF	$ _____	$ _____
26	108.2	8" Water Pipe (C-900 PVC).	5,230.	LF	$ _____	$ _____
27	108.3	6" Gate Valve	17.	EA	$ _____	$ _____
28	108.3	8" Gate Valve	22.	EA	$ _____	$ _____
29	108.3	8" X 6" Tee	14.	EA	$ _____	$ _____
30	108.3	8" X 8" Tee	5.	EA	$ _____	$ _____
31	108.3	8" X 6" Cross	1.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #4

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
32	108.3	8" Cross	1.	EA	$ _____	$ _____
33	108.3	8", 22.5° Elbow	10.	EA	$ _____	$ _____
34	108.3	8", 45° Elbow	9.	EA	$ _____	$ _____
35	108.3	8", 11.25° Elbow	14.	EA	$ _____	$ _____
36	108.3	6", 45° Elbow	3.	EA	$ _____	$ _____
37	108.3	8" X 6" Reducer	4.	EA	$ _____	$ _____
38	108.3	8" X 4" Reducer	1.	EA	$ _____	$ _____
39	108.3	6" End Cap/Plug Water	4.	EA	$ _____	$ _____
40	108.3	Fire Hydrant Assembly	12.	EA	$ _____	$ _____
41	108.3	2" Tapping Saddle	27.	EA	$ _____	$ _____
42	108.3	2" Corporation Stop	27.	EA	$ _____	$ _____
43	108.3	Potable Water - 8" Tapping Sleeve	1.	EA	$ _____	$ _____
44	108.4	Water Service Line (2") (HDPE)	1,130.	LF	$ _____	$ _____
45	108.4	2" Water Service Assembly	27.	EA	$ _____	$ _____
46	202	Remove Water Valve	3.	EA	$ _____	$ _____
47	202	Remove Fire Hydrant	1.	EA	$ _____	$ _____
48	202	Abandon Water Valve	2.	EA	$ _____	$ _____
49	202	Abandon Water Pipe (Plug Remaining Ends with Concrete).	4.	EA	$ _____	$ _____
50	202	Remove Water Meter	2.	EA	$ _____	$ _____
51	210	Adjust Water Valve to Finished Grade	4.	EA	$ _____	$ _____
52	210	Adjust Water Meter to Finished Grade	2.	EA	$ _____	$ _____
53	210	Adjust Fire Hydrant to Finished Grade	1.	EA	$ _____	$ _____
54	108.2	Storm Drain Pipe - 72" x 24" Concrete Box Culvert	557.	LF	$ _____	$ _____
55	108.2	Storm Drain Pipe - 29" x 18" Concrete Horizontal Elliptical Arch Pipe.	895.	LF	$ _____	$ _____
56	108.2	Storm Drain Pipe - 48" Concrete Pipe	50.	LF	$ _____	$ _____
57	108.2	Storm Drain Pipe - 42" Concrete Pipe	363.	LF	$ _____	$ _____
58	108.2	Storm Drain Pipe - 36" Concrete Pipe	1,092.	LF	$ _____	$ _____
59	108.2	Storm Drain Pipe - 24" Concrete Pipe	853.	LF	$ _____	$ _____
60	108.2	Storm Drain Pipe - 18" Concrete Pipe	2,252.	LF	$ _____	$ _____
61	108.2	Storm Drain Pipe - 12" Concrete Pipe	703.	LF	$ _____	$ _____
62	108.2	Storm Drain Pipe - 8" PVC Pipe (C-900)	68.	LF	$ _____	$ _____
63	108.5	Storm Drain Manhole (48" I.D.)	6.	EA	$ _____	$ _____
64	108.5	Storm Drain Manhole (60" I.D.)	4.	EA	$ _____	$ _____
65	108.5	Storm Drain Manhole (60" I.D.) with Flat Top Lid	5.	EA	$ _____	$ _____
66	108.5	Storm Drain Manhole (72" I.D.)	1.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #4

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
67	108.6	Storm Drain - Outlet Structure - See "Water Quality Outlet Structure" to Include All Appurtenances (Complete in Place).	1.	EA	$ _____	$ _____
68	108.6	Storm Drain Inlet with Vertical Curb Opening (24" x 36")	20.	EA	$ _____	$ _____
69	108.6	Storm Drain Inlet with Drive Over Curb Opening (24" x 36")	2.	EA	$ _____	$ _____
70	108.6	Storm Drain - Large Area Inlet (24" x 36")	14.	EA	$ _____	$ _____
71	108.5	Storm Drain - Concrete Headwall (8'-9" wide x 9'-10" height) per CDOT M&S Standard Plan M-601-10 and 48" Flap	1.	EA	$ _____	$ _____
72	108.5	Storm Drain - Conflict Structure	1.	EA	$ _____	$ _____
73	108.5	Storm Drain - Access Manhole	3.	EA	$ _____	$ _____
74	108.5	Storm Drain - Access Inlet (24" x 36" I.D.) Vertical Curb Opening	1.	EA	$ _____	$ _____
75	108.6	Storm Drain - Access Inlet (24" x 36" I.D.) Area Inlet Opening	1.	EA	$ _____	$ _____
76	108.6	Storm Drain - 42" x 48" Tee Manhole	2.	EA	$ _____	$ _____
77	108.6	Storm Drain - 42" x 48" x 36" Tee Manhole	1.	EA	$ _____	$ _____
78	108.5	Storm Drain - 36" x (24" x 36" Box Leg) Tee Inlet Area Inlet Frame and Grate (24" x 36" Opening)	1.	EA	$ _____	$ _____
79	108.5	Storm Drain - 72" x 24" Prefabricated Pipe Elbow	2.	EA	$ _____	$ _____
80	108.5	Storm Drain - Inlet Over MH (Vertical Curb Opening) (24" x 36" I.D.)	2.	EA	$ _____	$ _____
81	108.5	Storm Drain - Inlet Over MH (Large Area Inlet Opening) (24" x 36" I.D.)	4.	EA	$ _____	$ _____
82	108.5	Storm Drain - Prefab Pipe Transition per Plan	1.	EA	$ _____	$ _____
83	108.6	Storm Drain - Manhole Barrel Section (D>5')(72" I.D.)	5.1	VLF	$ _____	$ _____
84	108.5	Storm Drain - Manhole Barrel Section (D>5')(60" I.D.)	2.2	VLF	$ _____	$ _____
85	108.5	Storm Drain - Manhole Barrel Section (D>5')(48" I.D.)	5.23	VLF	$ _____	$ _____
86	108.5	Core and Connect New 18" Storm Pipe to New Box Culvert	4.	EA	$ _____	$ _____
87	108.7	Granular Stabilization Material (Type B)	2,300.	TON	$ _____	$ _____
88	202	Remove Storm Drain Inlet	1.	EA	$ _____	$ _____
89	202	Remove 15" Flared End Section	1.	EA	$ _____	$ _____
90	202	Remove 15" Storm Pipe	90.	LF	$ _____	$ _____
91	202	Abandon Storm Pipe	1.	EA	$ _____	$ _____
92	210	Reset Storm Drain Inlet D1-252-099	1.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #4

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
93	210	Connect to and Adjust to Finished Grade Storm MH C4-252-017	1.	EA	$ _____	$ _____
94	210	Adjust Storm Manhole to Finished Grade	1.	EA	$ _____	$ _____
95	420	Geosynthetics - Mirifi RS580i or Approved Equal	5,600.	SY	$ _____	$ _____
96	506	Riprap (d50=12" to Include Geogrid)	40.	SY	$ _____	$ _____
97	203	Unclassified Excavation	43,790.	CY	$ _____	$ _____
98	203	Unclassified Embankment	67,341.	CY	$ _____	$ _____
99	203	Debris Processing and Removal	12,000.	CY	$ _____	$ _____
100	203	Colorado River Bank Stabilization	900.	LF	$ _____	$ _____
101	203	Import and Place Clean Fill	43,753.	CY	$ _____	$ _____
102	210	Adjust Pull Box to Finished Grade	9.	EA	$ _____	$ _____
103	210	Adjust Light Pole and Foundation to Finished Grade	2.	EA	$ _____	$ _____
104	613	Joint Trench with Broad Band (Site Electrical - Street LT Circuits (2)-2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	32,600.	LF	$ _____	$ _____
105	613	Joint Trench with Site Electrical (Broad Band (3)-2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	48,900.	LF	$ _____	$ _____
106	613	Joint Trench with XCEL Energy and Charter who provides and places their materials (Century Link - 4" Schedule 80 PVC conduit). Refer to Utility Trench Detail	16,300.	LF	$ _____	$ _____
107	613	Joint Trench with XCEL Energy and Charter who provides and places their materials (Century Link - 2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	16,300.	LF	$ _____	$ _____
108	613	Large Splice Box (Quasite) (3' - 2 5/8" x 2'-2") Broadband Logo.	32.	EA	$ _____	$ _____
109	613	Splice Box (Provided by Others - Century Link)	20.	EA	$ _____	$ _____
110	613	Type One Pull Box	184.	EA	$ _____	$ _____
111	Elec	Wiring (Complete in Place)	1.	Lump Sum	$ _____	$ _____
112	Elec	Light Standard and Luminaire (Pedestrian)	150.	EA	$ _____	$ _____
113	Elec	Light Standard and Luminaire (Street)	15.	EA	$ _____	$ _____
114	Elec	Light Standard Foundation (Pedestrian)	150.	EA	$ _____	$ _____
115	Elec	Light Standard Foundation (Street)	15.	EA	$ _____	$ _____
116	Elec	Lighting Control Center PWR Pedestal (Special) (Complete in Place) to include Appurtenances	2.	EA	$ _____	$ _____
117	202	Remove Asphalt Mat		SY		
118	202	Remove Concrete	400.	SY	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #4

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
119	202	Romove Ground Sign	10.	EA	$ _____	$ _____
120	202	Remove High Voltage Overhead Power Pole Foundations	2.	EA	$ _____	$ _____
121	202	Remove Tree	10.	EA	$ _____	$ _____
122	202	Remove Property Pin (No Reference or Reset)	4.	EA	$ _____	$ _____
123	202	Remove Fencing (Includes All Gates and Associated Appurtenances.)	2,000.	LF	$ _____	$ _____
124	202	Remove Mail Box	1.	EA	$ _____	$ _____
125	202	Clearing and Grubbing	1.	Lump Sum	$ _____	$ _____
126	210	Reference/Reset Survey Monument	6.	EA	$ _____	$ _____
127	210	Reset Ground Sign	2.	EA	$ _____	$ _____
128	304	Aggregate Base Course (Class 6) (4" Thick)(Co. River Trail Shoulder)	1,015.	SY	$ _____	$ _____
129	304	Subgrade Stabilization - Aggregate Base Course (Class 3)(12" Thick)	5,600.	SY	$ _____	$ _____
130	304	Aggregate Base Course (Class 6) (13" Thick)	18,200.	SY	$ _____	$ _____
131	304	Aggregate Base Course (Class 6) (6" Thick)	30.	SY	$ _____	$ _____
132	306	Reconditioning (12" Deep)	25,000.	SY	$ _____	$ _____
133	401	Hot Mix Asphalt (5" Thick) (Grading SX 75, Binder Grade 64-22) (Roadways)	5,000.	TON	$ _____	$ _____
134	401	Hot Mix Asphalt (3" Thick) (Grading SX 75, Binder Grade 64-22) (Driveways)	5.	TON	$ _____	$ _____
135	627	Preformed Thermoplastic Pavement Marking (Handicap Symbol)	4.	EA	$ _____	$ _____
136	627	Preformed Thermoplastic Pavement Marking (X-walk) (2' x 10' TYP.)	131.	EA	$ _____	$ _____
137	627	Preformed Thermoplastic Pavement Marking (8" White Dotted Line, 2' Segment, 3' Gap)	100.	LF	$ _____	$ _____
138	627	Preformed Thermoplastic Pavement Marking (4" White Solid)	2,750.	LF	$ _____	$ _____
139	627	Preformed Thermoplastic Pavement Marking (2' White Solid)	170.	LF	$ _____	$ _____
140	630	Traffic Control (Complete In Place)	1.	Lump Sum	$ _____	$ _____
141	630	Trafic Control Plan	1.	Lump Sum	$ _____	$ _____
142	202	Remove Asphalt Mat	40.	SY	$ _____	$ _____
143	202	Remove Concrete	313.	SY	$ _____	$ _____
144	202	Remove Pull Box	2.	EA	$ _____	$ _____
145	202	Remove Concrete Pole Box	3.	EA	$ _____	$ _____
146	202	Remove Tree	7.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #4

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
147	203	Unclassified Excavation	437.	CY	$ _____	$ _____
148	208	Erosion Control (Complete in Place)	1.	Lump Sum	$ _____	$ _____
149	304	Aggregate Base Course (Class 6) (8" Thick) (Left Turn Lane)	565.	SY	$ _____	$ _____
150	401	Hot Mix Asphalt (6" Thick) (Grading SX, Binder Grade 64-22) (Left Turn Lane)	187.	TON	$ _____	$ _____
151	608	Concrete Bullnose End Section (8" Thick) to include 6" of Class 6 Aggregate Base Course	5.	SY	$ _____	$ _____
152	608	Concrete Curb and Spill Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	320.	LF	$ _____	$ _____
153	608	Concrete Median Edging (2' Wide) (Colored Concrete) (Davis Colors Sunset Rose) to include 6" of Class 6 Aggregate Base Course	40.	LF	$ _____	$ _____
154	608	Concrete Cover Material (Colored Concrete) (Davis Colors Sunset Rose) (4" Thick) to include 6" of Class 6 Aggregate Base Course	185.	SY	$ _____	$ _____
155	627	Preformed Thermoplastic Pavement Marking (Left Turn Symbol)	2.	EA	$ _____	$ _____
156	630	Traffic Control (Complete In Place)	1.	Lump Sum	$ _____	$ _____
157	630	Traffic Control Plan	1.	Lump Sum	$ _____	$ _____
158	SP	Safe Hit Flexible Delineator (SH248GP3--WS 09) to include 4" PVC Sleeve	2.	EA	$ _____	$ _____
159	608	Concrete Pavement (Roundabout) (10" Thick) to include 6" Class 6 Aggregate Base Course	1,415.	SY	$ _____	$ _____
160	608	Concrete Curb and Spill Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	1,705.	LF	$ _____	$ _____
161	608	Concrete Truck Apron (Roundabout) (10" Thick) to include 6" of Class 6 Aggregate Base Course	310.	SY	$ _____	$ _____
162	608	Concrete Curb (6" Wide) (6" High) to include 6" of Class 6 Aggregate Base Course.	975.	LF	$ _____	$ _____
163	608	Concrete Curb and Gutter (2' Wide) (Both Collector and Spill Gutters) to include 6" of Class 6 Aggregate Base Course.	9,500.	LF	$ _____	$ _____
164	608	Concrete Drive-Over Curb and Gutter both 3' and 3.5' Wide and Both Collector and Spill Gutter to include 6" of Class 6 Aggregate Base Course.	1,075.	LF	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #4

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
165	608	Concrete Sidewalk (6" Thick) to include 6" of Class 6 Aggregate Base Course	13,875.	SY	$ _____	$ _____
166	608	Concrete Pavement (Parking & Plain Color Paving Bike Park Plaza) (8" Thick) to include 6" of Class 6 Aggregate Base Course.	4,725.	SY	$ _____	$ _____
167	608	Concrete Sculpture Pad (Bike Park Plaza) (8" Thick) to include 6" of Class 6 Aggregate Base Course and Reinforcement as Specified.	20.	SY	$ _____	$ _____
168	608	Concrete Pavement Band (Bike Park Plaza) (8" Thick) (Color Landscape per Landscape Plans) to include 6" of Class 6 Aggregate Base Course.	80.	SY	$ _____	$ _____
169	608	Concrete Drainage Pan (3' Wide) to include 6" of Class 6 Aggregate Base	307.	LF	$ _____	$ _____
170	608	Concrete Drainage Pan (6' Wide) to include 6" of Class 6 Aggregate Base	27.	LF	$ _____	$ _____
171	608	Concrete Intersection Corner (8" Thick) to include 6" of Class 6 Aggregate Base Course. Includes All Items Labeled as Concrete Bullnose End Section and Concrete Corner Fillet on the Plans.	85.	SY	$ _____	$ _____
172	608	Concrete Curb Ramp to include 6" of Class 6 Aggregate Base Course.	600.	SY	$ _____	$ _____
173	608	Concrete Driveway Section (8" Thick) (Commercial) to include 6" Class 6 Aggregate Base Course.	190.	SY	$ _____	$ _____
174	608	Detectable Warning (Cast Iron, Wet Set (2'x2')	150.	EA	$ _____	$ _____
175	RAW 108.2	4" Raw Water Pipe (C-900 PVC)	255.	LF	$ _____	$ _____
176	RAW 108.2	8" Raw Water Pipe (C-900 PVC)	2,585.	LF	$ _____	$ _____
177	RAW 108.2	10" Raw Water Pipe (C-900 PVC)	2,500.	LF	$ _____	$ _____
178	RAW 108.3	Raw Water - 4" Gate Valve	5.	EA	$ _____	$ _____
179	RAW 108.3	Raw Water - 8" Butterfly Valve	7.	EA	$ _____	$ _____
180	RAW 108.3	Raw Water - 10" Butterfly Valve	3.	EA	$ _____	$ _____
181	RAW 108.3	Raw Water - Combination Air Valve and Vault Assembly. Complete in Place	8.	EA	$ _____	$ _____
182	RAW 108.3	Raw Water - 8" x 4" Tee	3.	EA	$ _____	$ _____
183	RAW 108.3	Raw Water - 8" x 8" Tee	2.	EA	$ _____	$ _____
184	RAW 108.3	Raw Water - 8" Cross	1.	EA	$ _____	$ _____
185	RAW 108.3	Raw Water - 10" x 4" Tee	2.	EA	$ _____	$ _____
186	RAW 108.3	Raw Water - 10" x 10" Tee	1.	EA	$ _____	$ _____
187	RAW 108.3	Raw Water - 4", 11.25° Elbow	5.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #4

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
188	RAW 108.3	Raw Water - 4", 22.5° Elbow	5.	EA	$ _____	$ _____
189	RAW 108.3	Raw Water - 8", 11.25° Elbow	6.	EA	$ _____	$ _____
190	RAW 108.3	Raw Water - 8", 22.5° Elbow	14.	EA	$ _____	$ _____
191	RAW 108.3	Raw Water - 8", 45° Elbow	10.	EA	$ _____	$ _____
192	RAW 108.3	Raw Water - 8", 90° Elbow	1.	EA	$ _____	$ _____
193	RAW 108.3	Raw Water - 10", 11.25° Elbow	11.	EA	$ _____	$ _____
194	RAW 108.3	Raw Water - 10", 22.5° Elbow	16.	EA	$ _____	$ _____
195	RAW 108.3	Raw Water - 10", 45° Elbow	6.	EA	$ _____	$ _____
196	RAW 108.3	Raw Water - 8" x 4" Reducer	4.	EA	$ _____	$ _____
197	RAW 108.3	Raw Water - 10" x 8" Reducer	1.	EA	$ _____	$ _____
198	RAW 108.3	Raw Water - 10" x 4" Reducer	1.	EA	$ _____	$ _____
199	RAW 108.3	Raw Water - 8" End Cap/Plug	1.	EA	$ _____	$ _____
200	RAW 108.3	Raw Water - 4" End Cap/Plug	10.	EA	$ _____	$ _____
201	RAW 202	Remove Raw Water Blow off Assembly	1.	EA	$ _____	$ _____
202	LSC in ROW	Soil Amendment, Delivered, Tilled, Spread	41,265.	SF	$ _____	$ _____
203	LSC in ROW	Shrub Bed - Fine Grade, Rock Mulch	41,265.	SF	$ _____	$ _____
204	LSC in ROW	Riparian Restoration	108,900.	SF	$ _____	$ _____
205	LSC in ROW	Irrigation System	1.	Lump Sum	$ _____	$ _____
206	LSC in ROW	Trees, 2" Deciduous	70.	EA	$ _____	$ _____
207	LSC in ROW	Trees, 1-1/2" Deciduous	66.	EA	$ _____	$ _____
208	LSC in ROW	Evergreen Trees, 6 FT	12.	EA	$ _____	$ _____
209	LSC in ROW	Shrubs	1,021.	EA	$ _____	$ _____
210	LSC in ROW	Perennials	45.	EA	$ _____	$ _____
211	LSC in ROW	Boulders, 3'X2'	43.	EA	$ _____	$ _____
212	LSC in ROW	Additional Sleeving - 6" PVC CL 200	1,700.	LF	$ _____	$ _____
213	LSC in Park	Restroom Shelter	1.	EA	$ _____	$ _____
214	LSC in Park	Small Shelters	1.	Lump Sum	$ _____	$ _____
215	LSC in Park	Modular Block Walls (Versa-Lok)(Park Plaza Amphitheater)	424.	FF	$ _____	$ _____
216	LSC in Park	Concrete Landscape Edger	45.	LF	$ _____	$ _____
217	LSC in Park	Play Area Barrier Curb	290.	LF	$ _____	$ _____
218	LSC in Park	Engineered Wood Fiber Play Material	319.	CY	$ _____	$ _____
219	LSC in Park	Play Area ADA Ramp	2.	EA	$ _____	$ _____
220	LSC in Park	Concrete Stain Treatment	741.	SF	$ _____	$ _____
221	LSC in Park	Benches	10.	EA	$ _____	$ _____
222	LSC in Park	Bike Racks - (Inverted "U") Style	5.	EA	$ _____	$ _____
223	LSC in Park	Trees, 2" Deciduous	59.	EA	$ _____	$ _____
224	LSC in Park	Trees, 1-1/2" Deciduous	5.	EA	$ _____	$ _____
225	LSC in Park	Shrubs	128.	EA	$ _____	$ _____
226	LSC in Park	Perennials	24.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #4

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
227	LSC in Park	Boulders, 3' x 2'	10.	EA	$ _____	$ _____
228	LSC in Park	Boulders, 3' x 5'	14.	EA	$ _____	$ _____
229	LSC in Park	Lawn Fine Grade, Seed	45,683.	SF	$ _____	$ _____
230	LSC in Park	Irrigation System	1.	Lump Sum	$ _____	$ _____
231	LSC in Park	Soil Amendment, Delivered, Tilled, Spread	50,383.	SF	$ _____	$ _____
232	LSC in Park	Shrub Bed - Fine Grade, Rock Mulch	4,700.	SF	$ _____	$ _____
233	LSC Bike Prk	Lawn Fine Grade, Seed	25,500.	SF	$ _____	$ _____
234	LSC Bike Prk	Lawn Irrigation	25,500.	SF	$ _____	$ _____
235	LSC Bike Prk	Irrigation Controls	1.	Lump Sum	$ _____	$ _____
236	LSC Bike Prk	Soil Amendment, Delivered, Tilled, Spread	25,000.	SF	$ _____	$ _____
237	LSC Bike Prk	Split 2-Rail Fence, Cedar, Not incl. Future Track or Pump Park	965.	LF	$ _____	$ _____
238	LSC Bike Prk	Concrete Landscape Edger, Not incl. Future Track or Pump Park	968.	LF	$ _____	$ _____
239	LSC Bike Prk	Trees, 2" Deciduous	26.	EA	$ _____	$ _____
240	LSC Bike Prk	Trees, 1-1/2" Deciduous	8.	EA	$ _____	$ _____
241	LSC Bike Prk	Rock Type 1 (Smaller), not incl. Future Track or Pump Park, no Fabric or Soil Prep	11,291.	SF	$ _____	$ _____
242	LSC Bike Prk	Rock Type 2 (Larger), not incl. Future Track or Pump Park, no Fabric or Soil Prep	17,106.	SF	$ _____	$ _____
243	Amenities	Trash Recepticals	5.	EA	$ _____	$ _____
244	Amenities	Drinking Fountains	1.	EA	$ _____	$ _____
245	Amenities	Concrete for Bike/Racks Bollards (8 ft x 8 ft)	5.	EA	$ _____	$ _____
246	Amenities	Picnic Tables Associated with Restrooms/Shelters	8.	EA	$ _____	$ _____
MCR		Minor Contract Revisions	---	---	---	$ 320,000.00

Bid Amount: **$** _____

Bid Amount:

_____ **dollars**

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #4

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price

Contractor Name:
Contractor Address:
Contractor Phone #:

SECTION 10 73 46
PRE-FABRICATED SITE SHELTERS

PART 1 GENERAL

1.1 SUMMARY

A. Design, fabrication, finishing, and delivery of pre-engineered, factory-fabricated site shelters.

B. Site work related to installation, by Contractor or Owner, including:
1. Unloading and temporary storage, if any.
2. Soil testing, if necessary.
3. Site preparation.
4. Column foundations, rebar, anchor bolts, and anchor embedment.
5. Concrete slab and embedment.
6. Erection.
7. Field touch up painting of factory finishes, if necessary.

C. Site access for delivery vehicles to be provided by Owner.

D. Related Sections: Section 033000 - Cast-In-Place Concrete: Concrete footings and slabs.

1.2 SYSTEM DESCRIPTION

A. Design shall meet or exceed applicable building code.

B. Pre-fabricated package shall include structural steel framing members, pre-cut roof panels, trim, and fasteners.

C. All bolts shall be hidden, concealed inside the steel tubes.

D. Field labor required to install the pre-fabricated parts. Onsite welding shall not be required or permitted.

1.3 REFERENCES

A. American Society of Testing Material (ASTM)
1. ASTM A325 - Standard Specification for Structural Bolts, Steel, Heat Treated
2. ASTM A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
3. ASTM A563 - Standard Specification for Carbons and Alloy Steel Nuts
4. ASTM A572 - Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel
5. ASTM F1554 – Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength

B. American Institute of Steel Construction (AISC)

C. American Welding Society (AWS)

D. Steel Structures Painting Council (SSPC); SSPC-SP10 - Near-White Blast Cleaning

E. Leadership in Energy and Environmental Design (LEED)

F. OSHA Standards 29 CFR, Part 1926, Subpart R (Steel Erection), Standard Number 1926.755: Compliance requires a minimum of four anchor bolts per column.

1.4 QUALITY ASSURANCE

A. Designer Qualifications: Design under direct supervision of a Professional Engineer experienced in design of this type of work and licensed in the State where the Project is located.

B. Manufacturer Qualifications: Company experienced in design and manufacture of shelters of the type specified, and having the following:
   1. Minimum five years of experience in design and fabrication of pre-fabricated steel shelters.
   2. Three references of similar shelters completed within the past year.
   3. Fabricator membership in American Institute of Steel Construction (AISC), requiring quality control documentation and procedures. Provide current AISC shop certification upon request.
   4. All welding to be performed to AWS standards by AWS certified welders. Provide welding certification upon request.

C. Perform the work in accordance with applicable federal, State, and local building and safety codes and regulations.

1.5 SUBMITTALS

A. Minimum 5 sets of shop drawings, showing all details of construction, including foundation sizes, reinforcement, and locations.
   1. Provide the licensed professional engineer’s state stamp or seal on the shop drawings.
   2. Provide the licensed professional engineer’s state stamp or seal on the structural calculations.

B. Selection Samples: For each finish product specified, color charts representing manufacturer's full range of available colors.

C. Warranty
   1. Provide minimum five year frame warranty against manufacturer defects.
   2. Provide roofing manufacturer’s limited warranty.

1.6 DELIVERY, STORAGE, AND PROTECTION

A. Package factory-finished steel components in foam, cardboard, and stretch wrap to protect the finish during transit.

B. Shipped knocked down for minimal shipping charges.

C. Deliver products to project site in manufacturer's protective packaging.

D. Follow shelter manufacturer's recommendations and instructions, including those printed on the shop drawings. To minimize damage during unloading, use only padded forks or non-marring slings.

E. Store products in manufacturer's unopened packaging well off the ground and covered out of weather until ready for installation.

PART 2 PRODUCTS

2.1 GENERAL

A. Model: TS-CL1616-0406 as manufactured by RCP Shelters, Inc.

B. Size and dimensions
1. Shape: square
2. Dimensions: 16’ x 16’
3. Roof Style: clerestory gable
4. Roof Pitch: 4:12 & 6:12
5. Eave Height: minimum 7’-6”
6. Quantity: 2

C. Approved Manufacturer: RCP Shelters, Inc.
1. 2100 SE Rays Way, Stuart, FL 34994.
2. Toll Free: 800-525-0207
3. Fax: 772-288-0207
4. Website: www.rcpshelters.com
5. Email: info@rcpshelters.com

D. Substitutions: Products other than specified must request and receive approval in writing by addendum at least ten (10) days prior to the bid date. See Instructions to Bidders for further instructions.

2.2 STEEL STRUCTURAL COMPONENTS

A. Structural Framing: fabricated for field assembly using bolted connections with no welding required or permitted; cold-formed shapes prohibited.
1. Columns & Beams: ASTM A500 Grade C structural steel tube. The following shapes are prohibited: I-beams, wide-flange beams, C-channels, Z-shapes.
2. Plates: ASTM A572 Grade 50.
3. Compression Ring: steel plate, ASTM A572 Grade 50.
4. Fasteners
   a. Bolts: ASTM A325 high strength bolts.
   b. Nuts: ASTM A563 high strength nuts.
5. Column Anchors: ASTM F1554 Grade 36, provided by Contractor or Owner, attached to top of foundation, recessed below slab on grade.

6. Cap plates: factory bent and field installed with hidden fasteners on hip and ridge beams not normal to roof so that metal roof deck does not bear structurally on beam corner only
7. Finish: Powder Coat
    a. Pre-blast inspection to catch and remove oil, grease, and other coatings impeding contaminants
    b. Steel grit blasted to near white condition in accordance with SSPC-SP10, removing all oil residue, mil scale, weld spatter, and slag
    c. Five stage phosphate wash (includes detergent, phosphate, rust protectant sealant)
    d. Epoxy powder coat primer
    e. Double topcoat TGIC polyester powder coat; color to be selected from manufacturer's standard color chart by Owner.
    f. Primer plus finish coats shall be 7-12 mils thick
    g. All materials inspected to meet 100% coating, proper cure, film thickness, and impact resistance
    h. Wet-coat alternatives shall not be acceptable.

B. Roof System: Galvalume® structural metal roof panels with exposed fasteners.
1. Acceptable Panel Profiles:
    a. Galvalume® panels with 1-3/16" high ribs, 12" on center.
    b. Galvalume® panels with 1-1/2" high ribs, 7.2" on center.
2. Panel Gauge: minimum 24-gauge.
3. Panel Width: 3'-0".
4. Panel Length: Precut to the length from the eave to the ridge; angles factory precut.
5. Panel Orientation: Ribs shall run with the pitch of the roof for proper drainage.
6. Trim: Provide matching roof trim and fasteners.
7. Finish: Factory pre-finished with Kynar 500® paint system; color to be selected by Owner from standard color chart.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that site earthwork has been performed as required for satisfactory installation.

3.2 PREPARATION

A. Install footings and column anchors of size, design, and location as specified by shelter manufacturer on approved shop drawings.

3.3 INSTALLATION

A. Perform installation in accordance with applicable federal, State, and local building and safety codes.

B. Structural special inspections, if required, are to be arranged and paid for by the Contractor or Owner.

C. Install shelter in accordance with manufacturer's approved shop drawing and good construction practices.

D. Install slab in accordance with shelter manufacturer's shop drawings. Slab perimeter dimensions determined by Owner.

3.4 CLEANING AND PROTECTION

A. Clean installed work to like-new condition.

B. Protect installed products until completion of project.

C. Touch-up, repair, or replace damaged finishes before Substantial Completion. Touch up paint provided by manufacturer.

END OF SECTION

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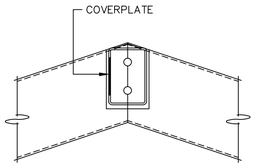
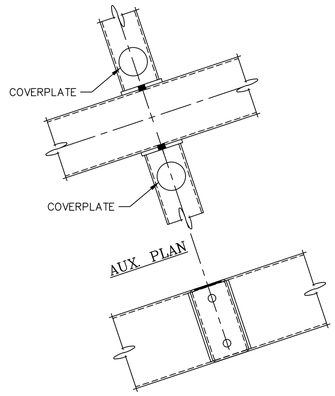
TS-CL1616-0406



RIDGE PURLIN TO FRAME CONNECTION



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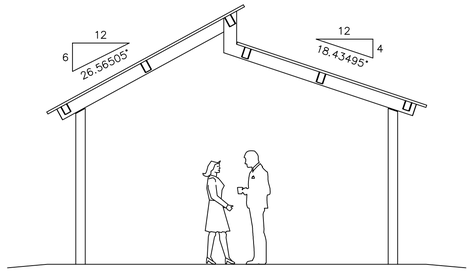
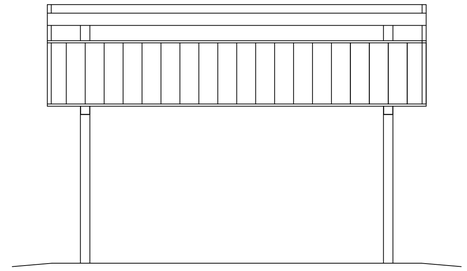
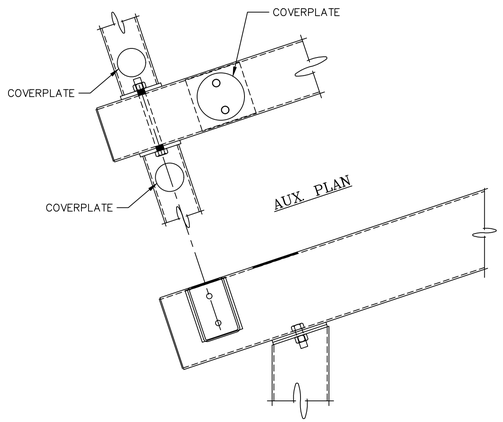


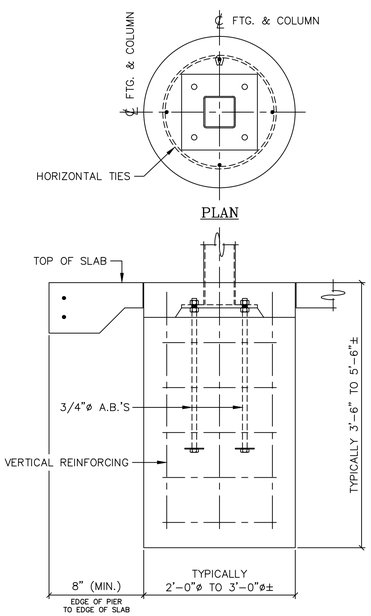
END ELEVATION



SIDE ELEVATION

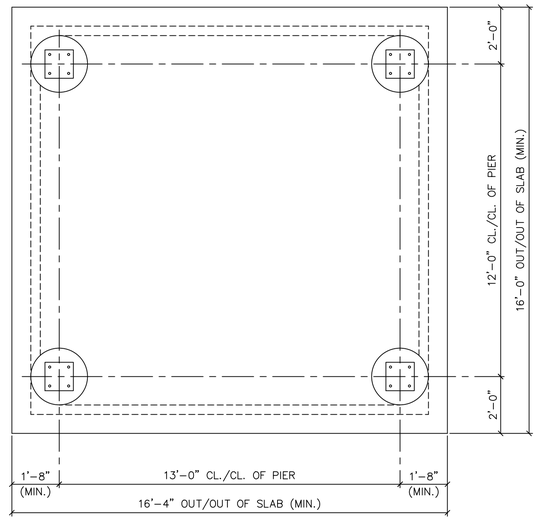


COLUMN TO FRAME CONNECTION

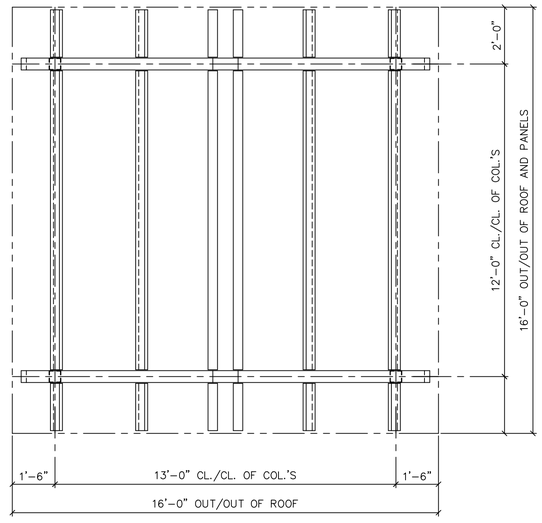


COLUMN PIER DETAIL

ACTUAL DESIGN WILL VARY DUE TO BUILDING CODE REQUIREMENTS AND MAY BE SUBSTANTIALLY LARGER



FOUNDATION PLAN



ROOF FRAMING PLAN

RCP SHELTERS, INC.
2100 SE RAYS WAY STUART, FL 34994 PO BOX 25 STUART, FL 34995-0025
■ SHELTERS ■ PAVILIONS ■ CONCESSIONS ■ KIOSKS ■ FABRIC SHADE
■ RESTROOMS ■ BANDSHELLS ■ MINI-SHELTERS ■ DUGOUTS ■ FABRIC SAIL
Phone 800-525-0207 Fax 772-288-0207
www.rcpshelters.com Email info@rcpshelters.com

PROJ. NO.:	
DRAWN:	
CHK'D:	
REV 1:	
REV 2:	
REV 3:	
REV 4:	
REV 5:	
CAD NO.:	
EEC JOB NO.:	
SHEET NO.:	1X OF 1X

THE RIVERFRONT AT DOS RIOS
BID SET PLANS
June 18, 2020

Site Development Plans

1	Cover Sheet
2	Standard Abbreviations, Legend, & Symbols
3	Summary of Earthwork
4	Project Overview
5	Control Plan
6–17	Removal Plan
18–34	Composite Utility Plan
35–56	Sanitary Sewer Plan and Profile
57–72	Raw Water Line
73–94	Storm Drain Plan and Profile
95–107	Water Line Plan and Profile
108–109	Typical Cross Section
110–125	Improvement Plan
126–144	Road Profile
145–180	Road Cross Sections
181–245	Staking Plan
246–247	Overlot Grading Plan
248–262	Signing and Striping Plan
263–266	Storm Water Management Plan

Plans for Riverside Parkway Left Turn Lane

267	Summary of Earthwork
268	Survey Control Plan
269–271	Existing Condition Plan
272–274	Improvement Plan
275	Edge of Gutter Profile
276	Parkway Cross Sections
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280	Striping Plan

Plans for Colorado River Bank Stabilization

281	Summary of Earthwork
282–285	Improvement Plan
286–287	Bank Stabilization Profile
288–293	Bank Stabilization Cross Sections

Dos Rios Park Irrigation And Landscape Plans

294–303 Irrigation and Landscape Plans

Dos Rios Bicycle Playground Irrigation And Landscape Plans

304–310 Irrigation and Landscape Plans

Dos Rios Right–of–Way Irrigation And Landscape Plans

311–322 Irrigation and Landscape Plans

Dos Rios Park Restroom / Shelter Plans

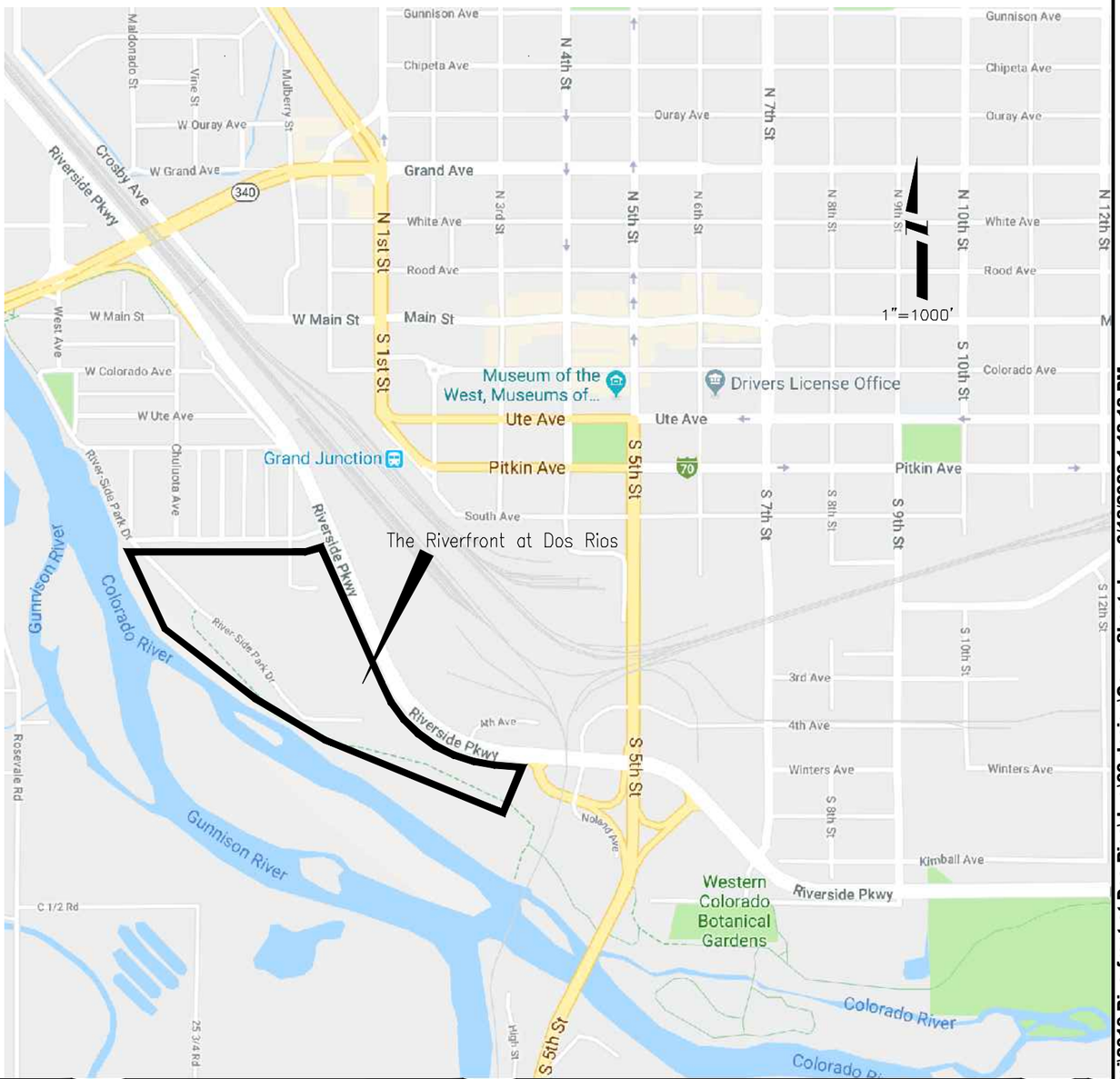
323–348 Restroom Plans

Dos Rios Park small Shelter Plans

349–352 Shelter Plans

Lighting Plans

353–393 Lighting Plans



811 Know what's below. Call before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 NA NA NA VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COVER SHEET – 1
June 18, 2020

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ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABC	AGGREGATE BASE COURSE
AC	ASBESTOS CEMENT
AP	ANGLE POINT
ASB	ANCHORED STRAW BALES
ASP	ALUMINIZED STEEL PIPE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BUTTERFLY VALVE
BOW	BACK OF WALK
BCR	BEGIN CURB RETURN
BOT	BOTTOM
BSWMP	BETTER STORM WATER MANAGEMENT PRACTICES
CH	CHORD
CAP	CORRUGATED ALUMINUM PIPE
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CI	CAST IRON
C,G,& SW	CURB, GUTTER & SIDEWALK
℄	CENTER LINE
CL	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COMB	COMBINATION (AS IN STORM SEWER AND SANITARY SEWER)
CONC	CONCRETE
CSM	CITY SURVEY MONUMENT
CSP	CORRUGATED STEEL PIPE
CU	COPPER
DI	DUCTILE IRON
DWY	DRIVEWAY
E	ELECTRIC
ECR	END CURB RETURN
EG	EDGE OF GUTTER
EL	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FB	FULL BODY
FC	FACE OF CURB
FG	FINISHED GRADE
℄	FLOW LINE
FL	FLANGE
FM	FORCE MAIN
FO	FIBER OPTICS
FS	FAR SIDE
FTG	FOOTING
G	GAS
GB	GRADE BREAK
GM	GAS METER
GV	GATE VALVE
HBP	HOT BITUMINOUS PAVEMENT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
IRR	IRRIGATION
L	LENGTH OF ARC
LC	LONG CHORD
LF	LINEAR FEET
LL	LONG ARC
LS	SHORT ARC
LT	LEFT
MB	MAILBOX
MCSM	MESA COUNTY SURVEY MONUMENT
MH	MANHOLE
MJ	MECHANICAL JOINT
MW	MILL WRAP
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOP	NO ONE PERSON
NRCP	NON-REINFORCED CONCRETE PIPE
NS	NEAR SIDE
NTS	NOT TO SCALE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PE	POLYETHYLENE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PIP	PLASTIC IRRIGATION PIPE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RG	RESTRAINED GLANDS
RL	LONG RADIUS
ROW	RIGHT OF WAY
RP	RADIUS POINT
RR	RAIL ROAD
RS	SHORT RADIUS
RT	RIGHT
S	SLOPE
SAN	SANITARY
SC	SHORT CHORD
SCD	STANDARD CONTRACT DOCUMENTS
SCH	SCHEDULE
SF	SILT FENCE
SL	SECTION LINE
SSRB	STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION
SSUU	STANDARD SPECIFICATIONS FOR CONSTRUCTION OF UNDERGROUND UTILITIES
STA	STATION
STL	STEEL
STM	STORM
T	TELEPHONE
TAN	LENGTH OF TANGENT
TC	TOP OF CURB
TH	TEST HOLE
TV	TELEVISION
(TYP)	TYPICAL
UU	UNDERGROUND UTILITIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPCC	VERTICAL POINT OF COMPOUND CURVATURE
VPRC	VERTICAL POINT OF REVERSE CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WATER
△	DELTA ANGLE

LEGEND

BSWMP
DRAINAGE BASIN BOUNDARY

BSWMP
ANCHORED STRAW BALES — ASB ASB ASB ASB ASB ASB ASB

BSWMP
SILT FENCE — SF SF SF SF SF SF SF

BUILDING

CONCRETE CURB AND GUTTER — 2' CURB AND GUTTER

CONCRETE CURB,GUTTER, & SIDEWALK — 7' C, G, & SW

CONCRETE DITCH — CONCRETE

CONCRETE SIDEWALK — 4' SW

CULVERT — 18" RCP

EARTH DITCH — EARTH EARTH EARTH

EDGE OF GRAVEL

EDGE OF PAVEMENT

FENCE (HT & MATL NOTED) — 6' CHAINLINK

GUARD RAIL

HATCHING:
INDICATES ASPHALT REMOVAL

HATCHING:
INDICATES CONCRETE REMOVAL

HATCHING:
INDICATES STAGING AREA — ~STAGING AREA~

LINE (CENTER OF IMPROVEMENTS) — CENTERLINE

LINE (CITY LIMITS) — CITY LIMITS

LINE (CONTROL) — CONTROL LINE

LINE (EASEMENT)

LINE (MONUMENT/SECTION) — MONUMENT/SECTION LINE

LINE (PROPERTY)

LINE (RIGHT OF WAY)

MATCH LINE — MATCH LINE

PIPE (IRRIGATION) — 4" IRR

PIPE (SIPHON) — 4" SIPHON

PROPOSED CONCRETE CURB AND GUTTER

PROPOSED CONCRETE CURB,GUTTER,& SIDEWALK

PROPOSED CONCRETE SIDEWALK

PROPOSED "WET" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN) — 8" PVC SANITARY SEWER

ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE

RAIL ROAD

RETAINING WALL — 1' RETAINING WALL

STRIPING (CONTINUOUS WHITE) — WHITE

STRIPING (DASHED WHITE) — WHITE

STRIPING (CONTINUOUS YELLOW) — YELLOW

STRIPING (DASHED YELLOW) — YELLOW

TOP OF SLOPE — 4580

CONTOUR LINES
(SHOWN BETWEEN TOP & TOE)

TOE OF SLOPE — 4570

TRAFFIC DETECTOR LOOP

UTILITY LINE (ABANDON)
(THIS CASE A WATER LINE) — W (ABANDONED) 8" W

UTILITY LINE (CABLE TV) — TV TV

UTILITY LINE (ELECTRIC) — E E

UTILITY LINE (FIBER OPTIC) — FO QWEST FO

UTILITY LINE (GAS) — G 1 1/4" MW G

UTILITY LINE (HIGH VOLTAGE OVERHEAD POWER) — HVOHP

UTILITY LINE
(OVERHEAD POWER) — OHP

UTILITY LINE
(OVERHEAD TELEPHONE) — OHT

UTILITY LINE
(SANITARY SEWER) — 8" SAN

UTILITY LINE
(SANITARY SEWER FORCE MAIN) — 8" FM

UTILITY LINE
(SANITARY SEWER SERVICE) — SS

UTILITY LINE
(STORM SEWER) — 8" STM

UTILITY LINE
(STORM SEWER, PERFORATED) — 6" PERF

UTILITY LINE
(STORM/SANITARY SEWER SEWER COMBINATION) — 18" COMB

UTILITY LINE (TELEPHONE) — T T

UTILITY LINE (WATER) — W 8" W

SYMBOLS

BENCH MARK — A
CATCH BASIN
CLEAN OUT — SSCO
CURB STOP
FIRE HYDRANT
GUY WIRE ANCHOR
HEADGATE
IRRIGATION PUMP
MAILBOX — MB
MANHOLE (ELECTRIC) — E
MANHOLE (GAS) — G
MANHOLE (SANITARY/STORM)
MANHOLE (TELEPHONE) — T
MANHOLE (TV) — TV
MANHOLE (WATER) — W
METER (GAS) — GM
METER (WATER)
PEDESTAL (TELEPHONE)
PEDESTAL (TV) — TV
PROPERTY PIN — PIN
PULL BOX
REDUCER FITTING
SIGN OR POST (SIGN TYPE NOTED) — STOP
SPRINKLER HEAD
STREET LIGHT
SURVEY MONUMENT (CITY) — CSM
SURVEY MONUMENT (TYPE NOTED) — MCSM
TEST HOLE — TH #1
TRAFFIC PAINT MARKING
TRAFFIC SIGNAL POLE AND MAST ARM
UTILITY POLE
VALVE (GAS) — GV
VALVE (IRRIGATION) — IRR
VALVE (WATER)
VEGETATION (HEDGE OR BUSH)
VEGETATION (TREE STUMP)
VEGETATION (TREE) (CALIPER SIZE NOTED) — 6"
WATER HYDRANT — WH
WEIR — W
YARD LIGHT

BAR SCALE:

GRAPHIC SCALE
10 0 20 40
(IN FEET)
1 inch = 20 ft.

NORTH ARROW:

N
W E
S

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SEE PLAN FOR SCALE INFO

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
CITY STANDARD ABBREVIATIONS LEGEND AND SYMBOLS – .

2

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SUMMARY OF EARTHWORK QUANTITIES

INDEX Book	INDEX Page	INDEX Sheet		PROJECT TOTAL CU. YD.	PROJECT TOTAL *As Const.*
			203-00010 UNCLASSIFIED EXCAVATION (CIP)		
			ON SITE (QUANTITY CALCULATED FROM CIVIL3D - TIN SUBTRACTION)		
			UNCLASSIFIED EXCAVATION	28735	
			ADDITION OF CONCRETE AND PAVING PRISM	17872	
			REMOVAL OF PAVEMENT REMOVAL PAY ITEMS	-2817	
			TOTAL FOR PAY QUANTITIES	**43790**	
			EMBANKMENT MATERIAL (CIP) (FOR INFORMATION ONLY)	**CU. YD.**	
			QUANTITY CALCULATED FROM CIVIL3D - TIN SUBTRACTION		
			UNCLASSIFIED EMBANKMENT	67341	
			TOTAL	**67341**	

INDEX Book	INDEX Page	INDEX Sheet	**ROADWAY QUANTITIES BALANCE (FOR INFORMATION ONLY)**	PROJECT TOTAL CU. YD.	PROJECT TOTAL *As Const.*
			Total Unclassified Excavation	43790	
			Total Embankment (net)	67341	
			EMBANKMENT TIMES FACTOR 1.3	87543	
			Import Material (Material to be Imported by Contractor)	43753	

NOTES:

TOP 4 INCHES OF ALL EMBANKMENT SHALL BE FREE OF DEBRIS AND ROCKS OR CLODS GREATER THAN 3 INCHES IN DIAMETER, AND SHALL BE SUITABLE AS NATIVE TOPSOIL.

ALL IMPORTED EMBANKMENT MATERIAL SHALL MEET A MINIMUM OF R-VALUE = 40.

DESCRIPTION	DATE
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REVISION ⚠	–
REVISION ⚠	–

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SCALE

CITY OF Grand Junction COLORADO

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ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
SUMMARY OF EARTHWORK – 1
June 19, 2020

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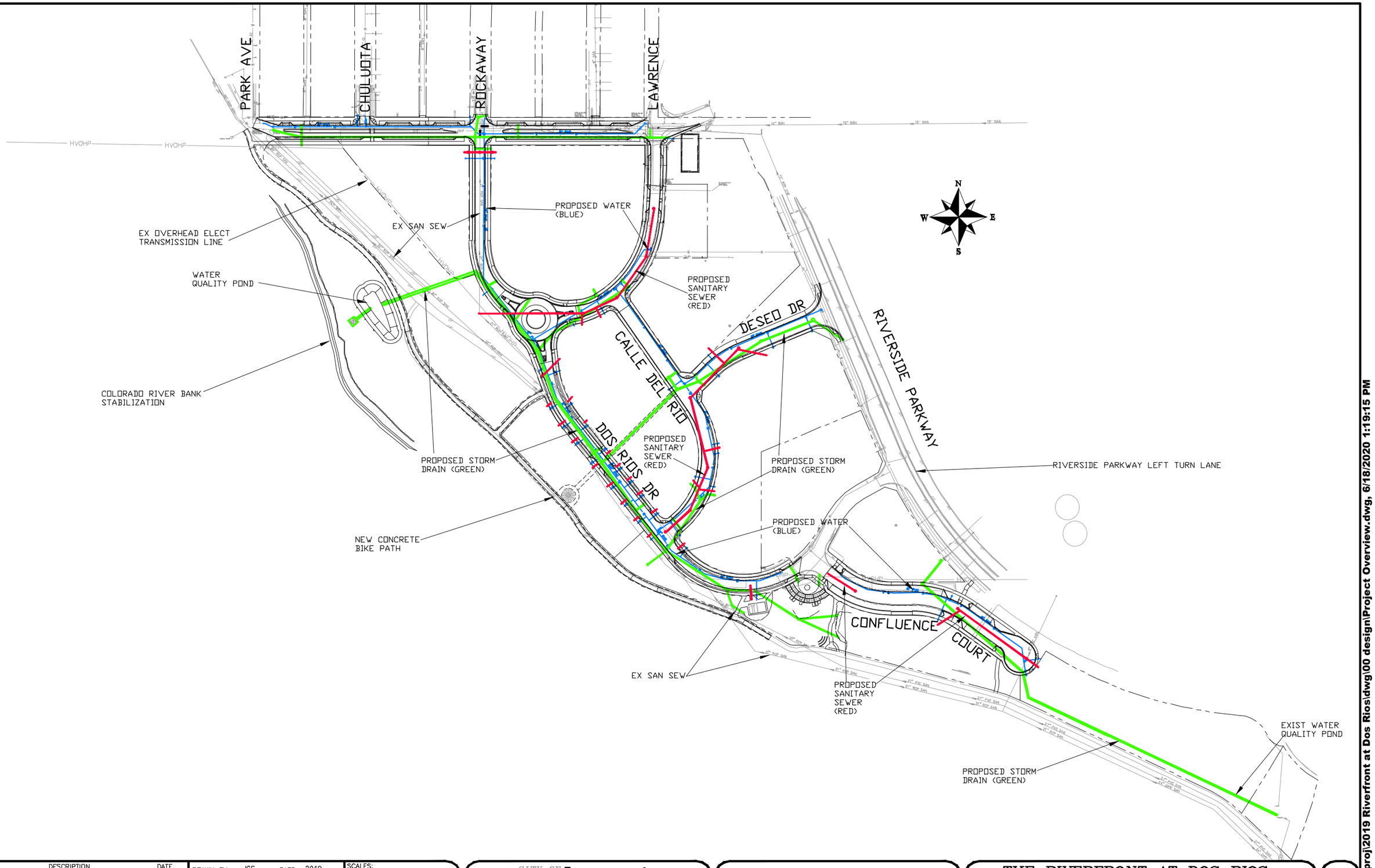

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
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SCALES:
PLAN & PROFILE
HORIZONTAL 0 125 250
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
PROJECT OVERVIEW
June 18, 2020

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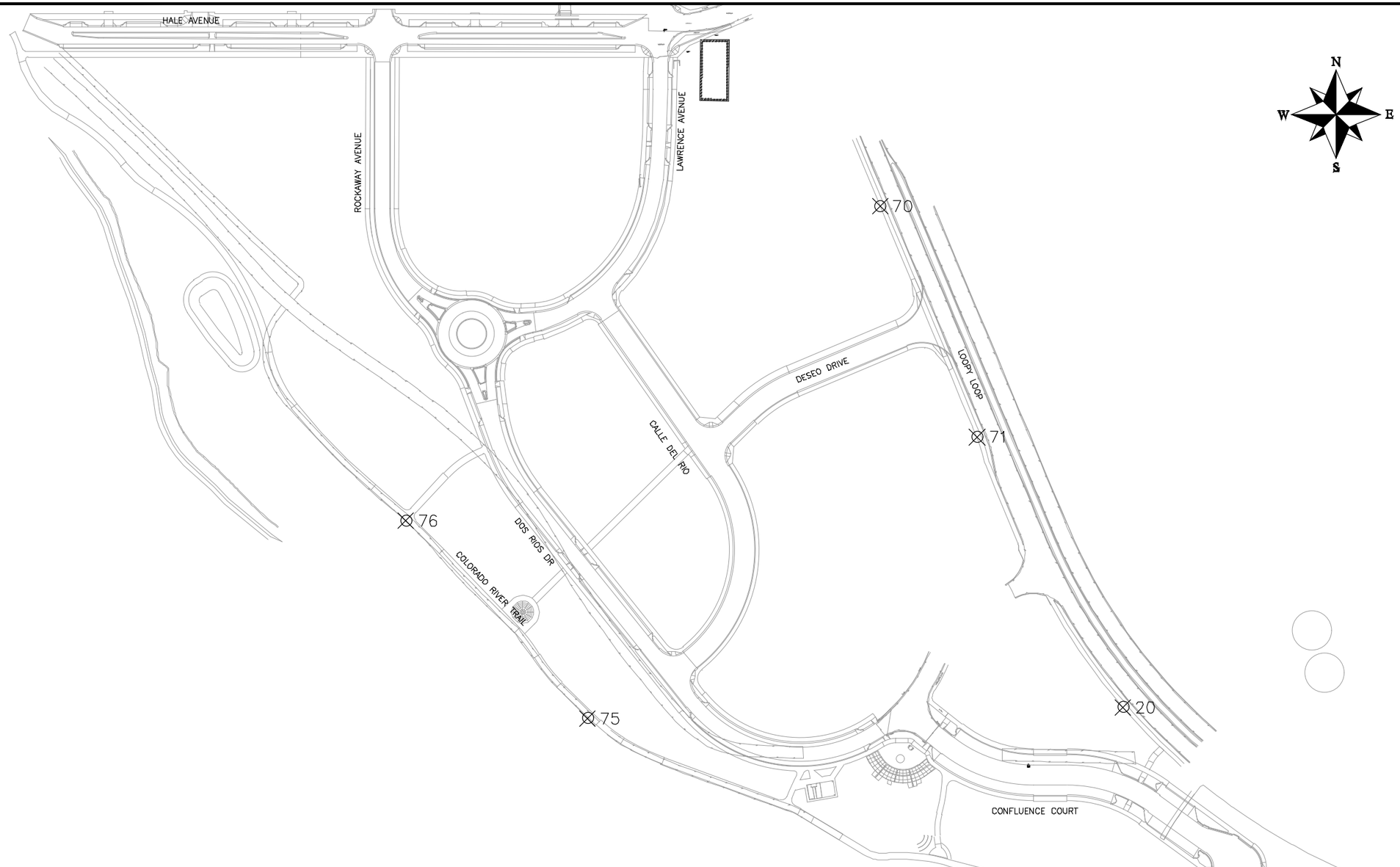

PNT NO	NORTHING	EASTING	ELEVATION	DESCRIPTION
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70	33887.20	89179.15	4570.72	CP /PK/
71	33472.48	89353.57	4572.79	CP /PK 16/
75	32967.02	88653.12	4563.76	CP /BOD/
76	33322.14	88326.50	4562.65	CP /PK/

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

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THE RIVERFRONT AT DOS RIOS
CONTROL PLAN
June 18, 2020

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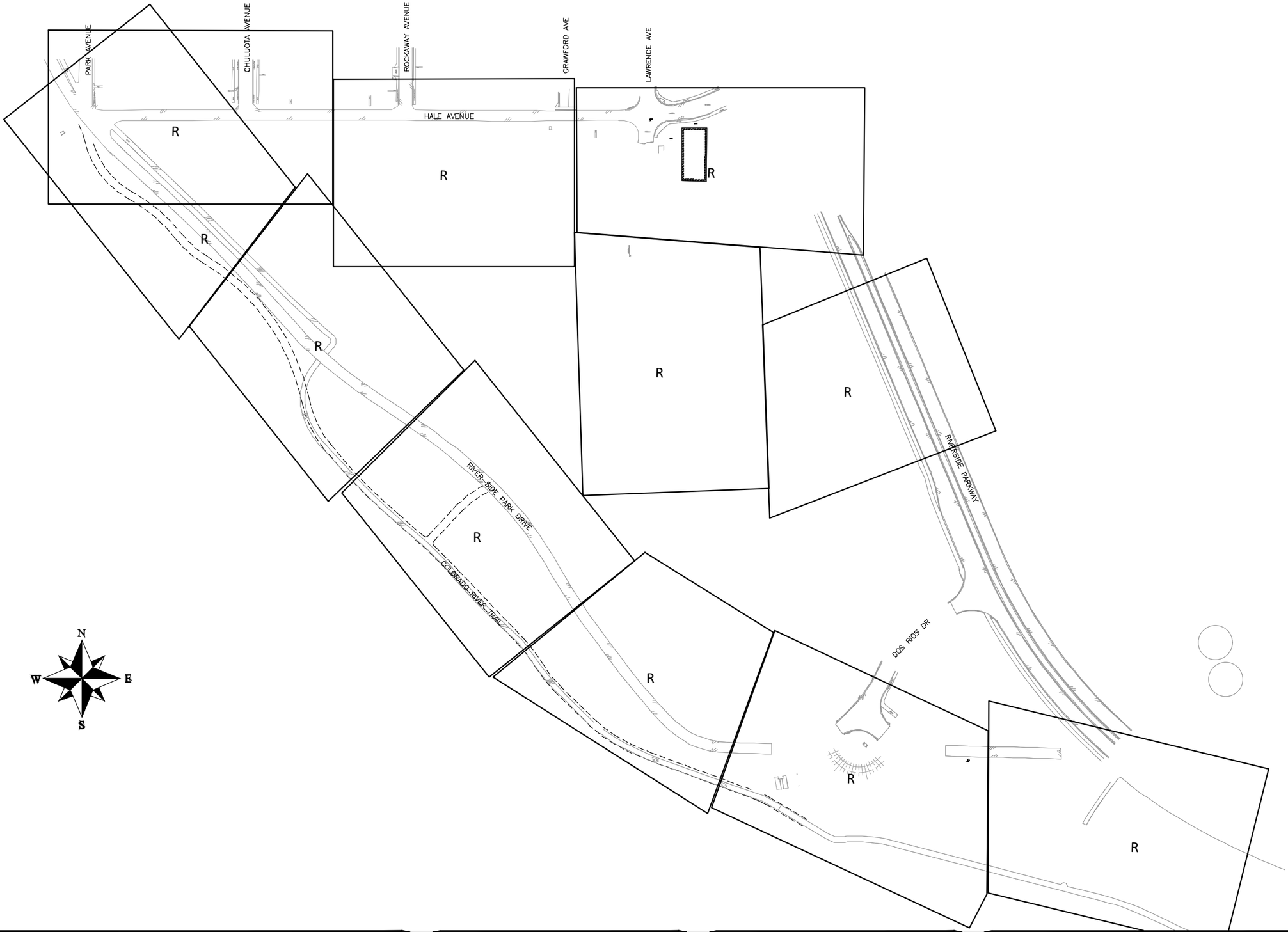

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THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN SHEET INDEX
June 18, 2020

6

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PARK AVE

CHULUOTA AVE

HALE AVE

MATCH LINE STA 5+00

MOVE STORM DRAIN INLET D1-252-099 10' SOUTH INTO LANDSCAPE AREA. INCLUDES REMOVAL OF EXISTING PIPE AS NEEDED AND ADJUSTMENT TO FINAL GRADE.

COORDINATE GAS LINE PROTECTION OR REPLACEMENT WITH XCEL ENERGY

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS.

EXISTING WATERLINE TO BE ABANDON PER WATERLINE PLAN AND PROFILES

PROTECT FENCE AND GATE IN PLACE. ANY DAMAGE THAT OCCURS DURING CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.

ADJUST SEWER MANHOLE TO FINISHED GRADE

PROTECT UTILITY POLE IN PLACE (IF NEED BE CONTRACTOR SHALL PLACE EXPANSION JOINT MATERIAL AROUND POLE AND POUR WALK AROUND)

RESET UTILITY POLE. (BY OTHERS)

REMOVAL OF GROUND SIGN. (STOP & STREET NAME)

FIRE HYDRANT REMAINS IN PLACE

REMOVAL OF TREES

ABANDON WATERLINE/VALVES (SEE WATERLINE PLAN AND PROFILES)

REMOVAL OF CONCRETE. REMOVE CONCRETE WALK & CURB AND GUTTER TO NEW CONSTRUCTION LIMITS

PROTECT TREES

PROTECT FENCE AND GATES IN PLACE. ANY DAMAGE THAT OCCURS DURING CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.

PROTECT GUY ANCHORS IN PLACE

REMOVAL OF TREE

EXISTING WATERLINE TO BE ABANDON PER WATERLINE PLAN AND PROFILES

ADJUST WATER VALVE BOX TO FINISHED GRADE.

REMOVAL OF GROUND SIGN. (NO DUMPING)

RESET GUY ANCHOR (BY OTHERS)

RESET GUY ANCHOR AND UTILITY POLE (BY OTHERS)

REMOVE PROPERTY PINS. NO REFERENCE OR RESET REQUIRED

RESET UTILITY POLE. (BY OTHERS)

REMOVE STORM DRAIN INLET. (SEE STORM DRAIN PLAN AND PROFILES FOR ADDITIONAL INFORMATION)

RESET UTILITY POLE (BY OTHERS)

REMOVAL OF CONCRETE. REMOVE CONCRETE PATH, CURB AND GUTTER, AND DRIVE APRON TO NEW CONSTRUCTION LIMITS

REMOVAL OF GROUND SIGN. (SPEED LIMIT SIGNS)

REMOVE CONCRETE POLE FOUNDATION. POLE WILL BE REMOVED BY OTHERS.

REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION.

COORDINATE GAS LINE PROTECTION OR REPLACEMENT WITH XCEL ENERGY

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS.

PROTECT UTILITY POLE IN PLACE (IF NEED BE CONTRACTOR SHALL PLACE EXPANSION JOINT MATERIAL AROUND POLE AND POUR WALK AROUND)

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS.

DAYLIGHT LINE

D1-252-019
RIM 4556.45
INV E>W
4552.37

D1-252-099
GRATE 4555.55
INV 4551.55

D1-252-100
RIM 4556.94
INVnE 4550.74
INVnW 4550.79
INVoutSW 4549.80

C4-252-010
GRATE 4555.40
INV 4551.40

VoutSW 4548.22

CP /CAP/
N 34044.0420
E 88025.30
EL 4559.22

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-1
June 19, 2020

7

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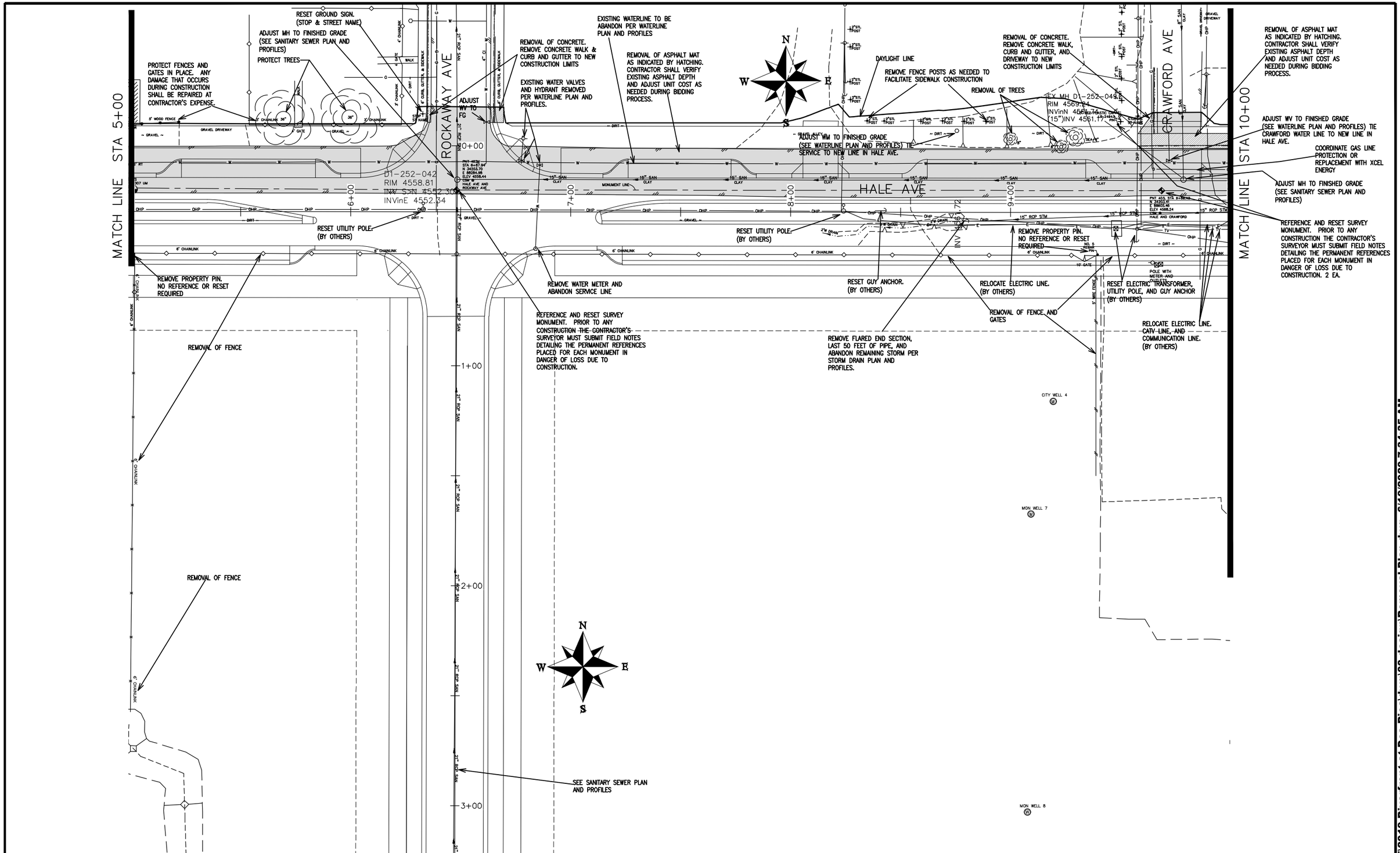

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REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-2
June 19, 2020

8

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MATCH LINE STA 10+00

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS.

COORDINATE GAS LINE PROTECTION, REMOVAL, OR REPLACEMENT WITH XCEL ENERGY

EXISTING WATERLINE TO BE ABANDON PER WATERLINE PLAN AND PROFILES

EX MH D1-252-102
RIM 4571.41
INVinS 4561.90
(15")INV 4561.20

REMOVE WATER METER AND ABANDON SERVICE LINE

ADJUST WV TO FINISHED GRADE.

REMOVAL OF CONCRETE. REMOVE CONCRETE CURB AND GUTTER TO NEW CONSTRUCTION LIMITS

ADJUST MH TO FG. SEE STORM DRAIN PLAN AND PROFILES

RESET WATER METER PAST NEW BACK OF WALK

RESET TELEPHONE PEDESTAL (BY OTHERS)

REMOVAL OF GROUND SIGN. (DEAD END)

RESET SEWER SERVICE CLEAN OUT PAST NEW BACK OF WALK

REMOVAL OF CONCRETE. REMOVE CONCRETE CURB, GUTTER, SIDEWALK, INTERSECTION CORNER TO NEW CONSTRUCTION LIMITS

ADJUST WV TO FINISHED GRADE.

RESET FIRE HYDRANT PAST NEW BACK OF WALK AS SHOWN

REMOVAL OF FENCE AND GATES

ABANDON STORM PER STORM DRAIN PLAN AND PROFILES.

STM MH C4-252-017
RIM 4571.28
INVinE 4563.49
INVinW 4567.49
INVoutW 4563.43

REMOVAL OF CONCRETE. REMOVE CONCRETE WALL.

EXISTING BUILDING WILL BE DEMOLISHED BY OTHERS PRIOR TO CONSTRUCTION

RELOCATE ELECTRIC LINE. CATV LINE, AND COMMUNICATION LINE. (BY OTHERS)

RESET UTILITY POLE AND GUY ANCHOR (BY OTHERS)

REMOVAL OF FENCE

REMOVAL OF MAILBOX

REMOVAL OF TREE

CONTRACTOR SHALL COORDINATE WITH PROJECT ENGINEER AS WHAT TO DO WITH WELL.

POTHOLE EXISTING UTILITIES PRIOR TO CONSTRUCTION

REMOVAL OF FENCE AND GATE

EX MH C4-252-013
RIM 4568.56
NVinE 4562.81
NVourN 4562.77

RESET UTILITY POLE AND GUY ANCHOR (BY OTHERS)

RESET TELEPHONE PEDESTAL (BY OTHERS)

RESET UTILITY POLE AND GUY ANCHOR (BY OTHERS)

EX MH C4-252-012
RIM 4570.65
INV W 4564.38

ADJUST SANITARY SEWER MANHOLE TO FINISHED GRADE

ADJUST WATER METER TO FINISHED GRADE.

CONTRACTOR SHALL COORDINATE WITH PROJECT ENGINEER AS WHAT TO DO WITH WELL.

REMOVAL OF FENCE AND GATE

HALE AVE

LAWRENCE AVE

MON WELL 1

MON WELL 2

MON WELL 4

MATCH LINE STA 5+00

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REVISION △	–
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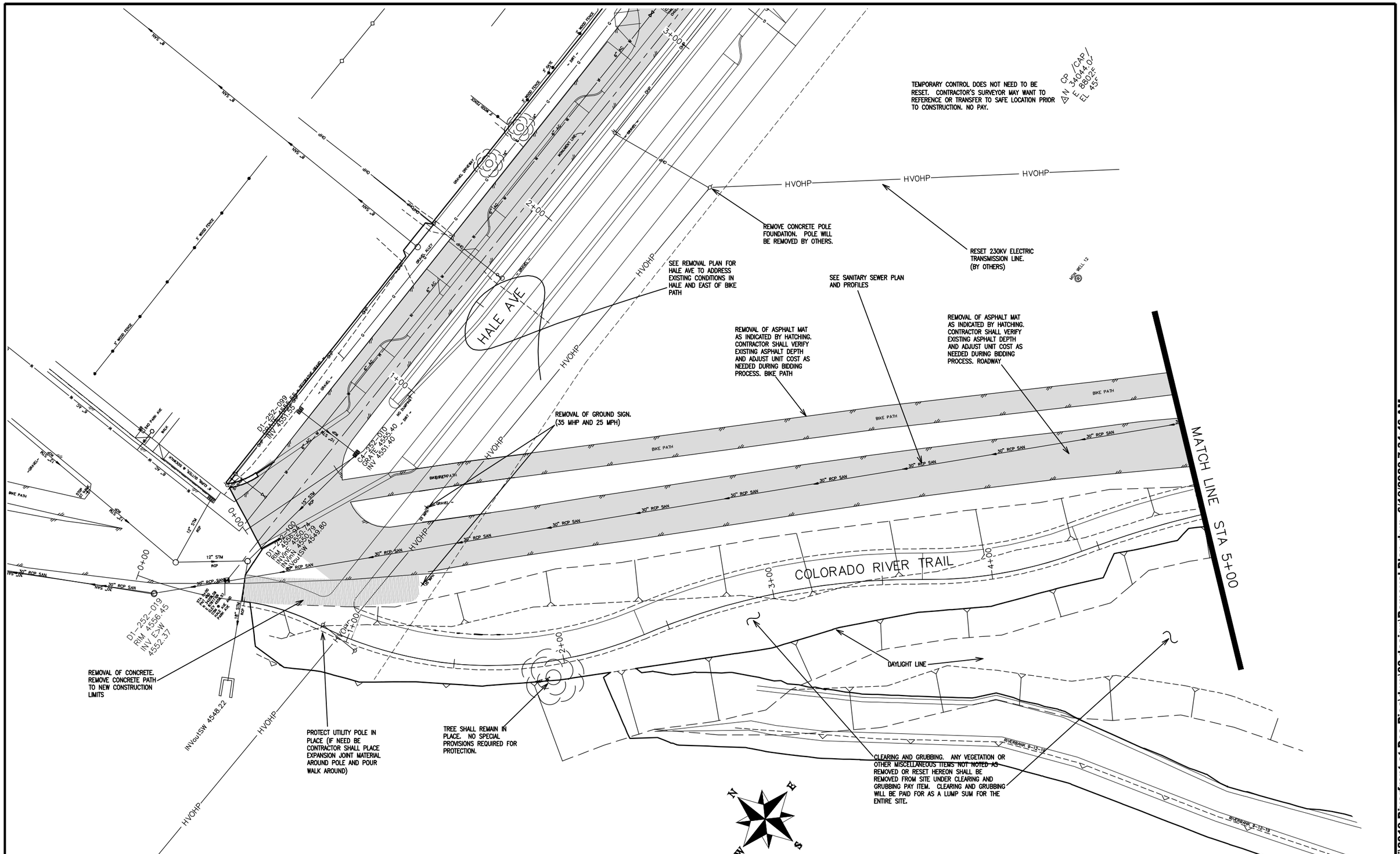
DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA 1/4 NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-3
June 19, 2020



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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-4
June 19, 2020

10

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ROCKABOUT AVE

RIVERSIDE PARK DRIVE

COLORADO RIVER TRAIL

MATCH LINE STA 5+00

MATCH LINE STA 10+00

REMOVAL OF FENCE

6' CHAINLINK

CONCRETE POLE FOUNDATION WILL REMAIN IN PLACE. FG IS 2 FT.± ABOVE FOUNDATION. POLE WILL BE REMOVED BY OTHERS.

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

HVOHP

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

ADJUST SANITARY SEWER MANHOLES TO FINISHED GRADE. SEE SANITARY SEWER PLAN AND PROFILES FOR MORE INFORMATION.

C4-252-002
RIM 4559.42
INVin 4552.66
INVout 4552.52

C4-252-006
RIM 4557.48
INV E=W 4553.50

REMOVAL OF GROUND SIGN. (BIKE CROSSING SIGNS)

BIKE XING

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. BIKE PATH

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. ROADWAY

ADJUST SANITARY SEWER MANHOLE TO FINISHED GRADE

C4-252-001
RIM 4567.98
INV E=W 4554.21

TEMPORARY CONTROL DOES NOT NEED TO BE RESET. CONTRACTOR'S SURVEYOR MAY WANT TO REFERENCE OR TRANSFER TO SAFE LOCATION PRIOR TO CONSTRUCTION. NO PAY.

CR 600/
N 3376198.40
E 2800135.38
EL 4500.85

CLEARING AND GRUBBING. ANY VEGETATION OR OTHER MISCELLANEOUS ITEMS NOT NOTED AS REMOVED OR RESET HEREON SHALL BE REMOVED FROM SITE UNDER CLEARING AND GRUBBING PAY ITEM. CLEARING AND GRUBBING WILL BE PAID FOR AS A LUMP SUM FOR THE ENTIRE SITE.

DAYLIGHT LINE

MON WELL 13

BIKE PATH

30" RCP SAN

21" RCP SAN

4" RCP SAN

5+00

6+00

7+00

8+00

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-5
June 19, 2020

11

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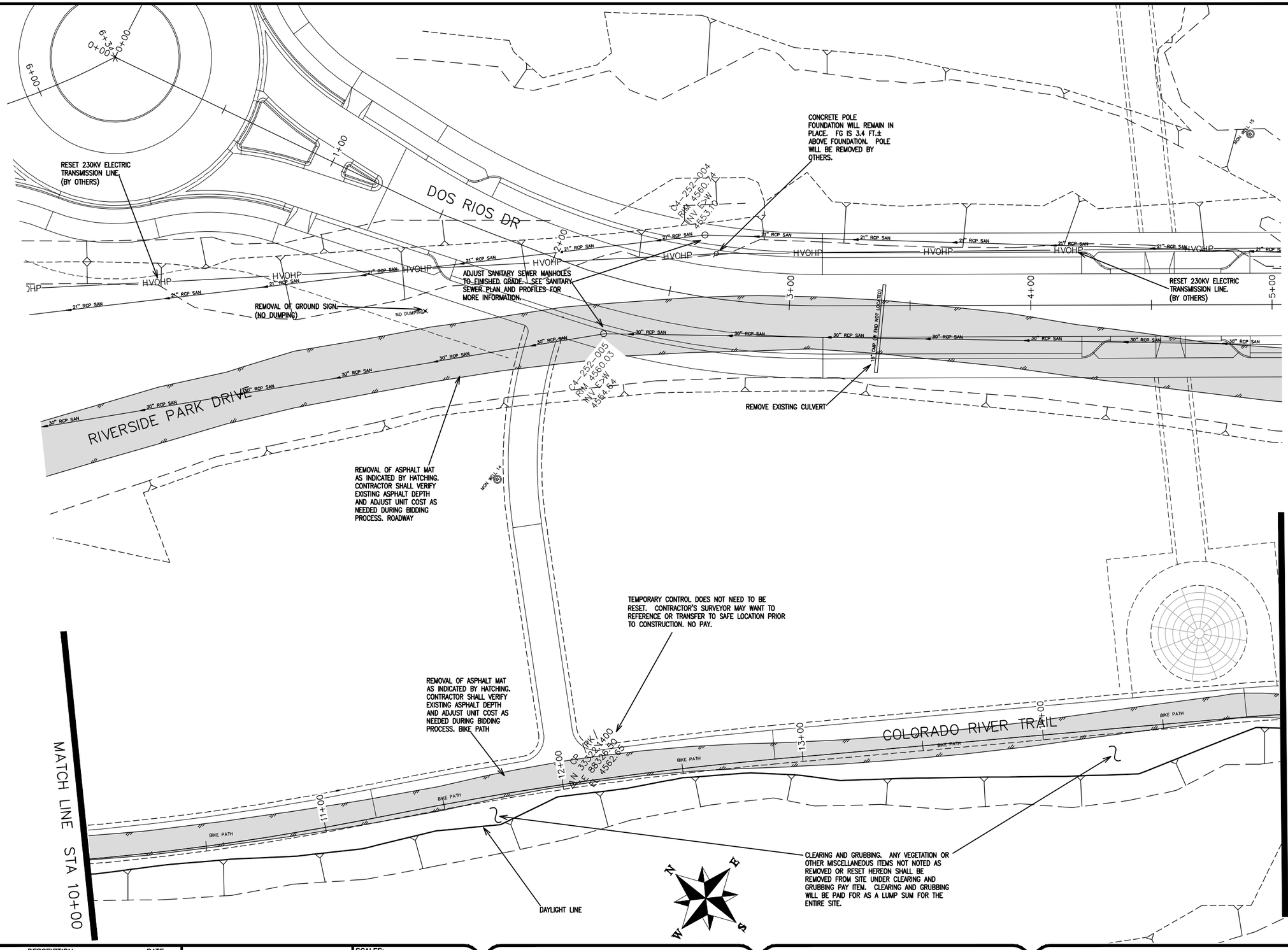

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REVISION △	–

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA 1in NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-6
June 19, 2020

12

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CONCRETE POLE FOUNDATION WILL REMAIN IN PLACE. FG IS 3.7 FT.± ABOVE FOUNDATION. POLE WILL BE REMOVED BY OTHERS.

REMOVAL OF FENCE

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

REMOVAL OF TREE

CONCRETE POLE FOUNDATION WILL REMAIN IN PLACE. FG IS 2 FT.± ABOVE FOUNDATION. POLE WILL BE REMOVED BY OTHERS.

ADJUST SANITARY SEWER MANHOLES TO FINISHED GRADE. SEE SANITARY SEWER PLAN AND PROFILES FOR MORE INFORMATION.

REMOVAL OF FENCE

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. ROADWAY

TEMPORARY CONTROL DOES NOT NEED TO BE RESET. CONTRACTOR'S SURVEYOR MAY WANT TO REFERENCE OR TRANSFER TO SAFE LOCATION PRIOR TO CONSTRUCTION. NO PAY.

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. BIKE PATH

ADJUST SANITARY SEWER MANHOLES TO FINISHED GRADE. SEE SANITARY SEWER PLAN AND PROFILES FOR MORE INFORMATION.

CLEARING AND GRUBBING. ANY VEGETATION OR OTHER MISCELLANEOUS ITEMS NOT NOTED AS REMOVED OR RESET HEREON SHALL BE REMOVED FROM SITE UNDER CLEARING AND GRUBBING PAY ITEM. CLEARING AND GRUBBING WILL BE PAID FOR AS A LUMP SUM FOR THE ENTIRE SITE.

DAYLIGHT LINE

COVERED 3.7' TO FG

CALLE DEL RIO

DOS RIOS DR

COLORADO RIVER TRAIL

MATCH LINE STA 15+00

MATCH LINE STA 20+00

C4-252-008 RIM 4558.86 INV E,W 4554.97

INV E 4554.44

INV 21" 4553.52

C4-252-003 RIM 4560.95 INV E,W 4555.56

C4-252-007 RIM 4559.87 INV E,W 4553.78

C4-252-010 RIM 4563.76 INV W 4559.60

HVOHP

BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA 1A NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-7
June 19, 2020

13

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REMOVAL OF CONCRETE. REMOVE CONCRETE CURB AND GUTTER TO NEW CONSTRUCTION LIMITS

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. ROADWAY

ADJUST PULL BOX TO FINISHED GRADE. 3 EACH

CONDUITS WILL BE PROTECTED IN PLACE AND REFERENCED FOR CONNECTION – FINISHED GRADE WILL BE 2 FT. ± HIGHER THAN EXIST. NO PAY

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

ADJUST LIGHT POLE FOUNDATION AND LIGHT POLE TO FINISHED GRADE

ADJUST PULL BOX TO FINISHED GRADE

ADJUST SANITARY SEWER MANHOLES TO FINISHED GRADE. SEE SANITARY SEWER PLAN AND PROFILES FOR MORE INFORMATION.

ADJUST PULL BOX TO FINISHED GRADE

ADJUST STORM DRAIN MANHOLE TO FINISHED GRADE. SEE STORM DRAIN PLAN AND PROFILES FOR MORE INFORMATION.

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. BIKE PATH

REMOVAL OF CONCRETE. REMOVE CONCRETE PATH TO NEW CONSTRUCTION LIMITS

DAYLIGHT LINE

DAYLIGHT LINE

ADJUST PULL BOX TO FINISHED GRADE. 2 EACH

REMOVAL OF ASPHALT MAT AS INDICATED BY HATCHING. CONTRACTOR SHALL VERIFY EXISTING ASPHALT DEPTH AND ADJUST UNIT COST AS NEEDED DURING BIDDING PROCESS. ROADWAY

ELECTRIC TRANSFORMER AND BASE SHALL REMAIN IN PLACE AS IS. PROTECT. NO SEPARATE PAY.

STORM DRAIN MANHOLE REMAINS IN PLACE AS IS. PROTECT. NO SEPARATE PAY.

ADJUST PULL BOX TO FINISHED GRADE.

ADJUST LIGHT POLE FOUNDATION AND LIGHT POLE TO FINISHED GRADE

ADJUST FIRE HYDRANT TO FINISHED GRADE

ADJUST WATER VALVE TO FINISHED GRADE

DAYLIGHT LINE

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

REMOVE CONCRETE POLE FOUNDATION. POLE WILL BE REMOVED BY OTHERS.

TEMPORARY CONTROL DOES NOT NEED TO BE RESET. CONTRACTOR'S SURVEYOR MAY WANT TO REFERENCE OR TRANSFER TO SAFE LOCATION PRIOR TO CONSTRUCTION. NO PAY.

COORDINATE GAS LINE PROTECTION OR REPLACEMENT WITH XCEL ENERGY

REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION.

MATCH LINE STA 3+00

MATCH LINE STA 20+00

CONFLUENCE CT

DOS RIOS DR

COLORADO RIVER TRAIL

CONC BIKE PATH

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-8
June 19, 2020

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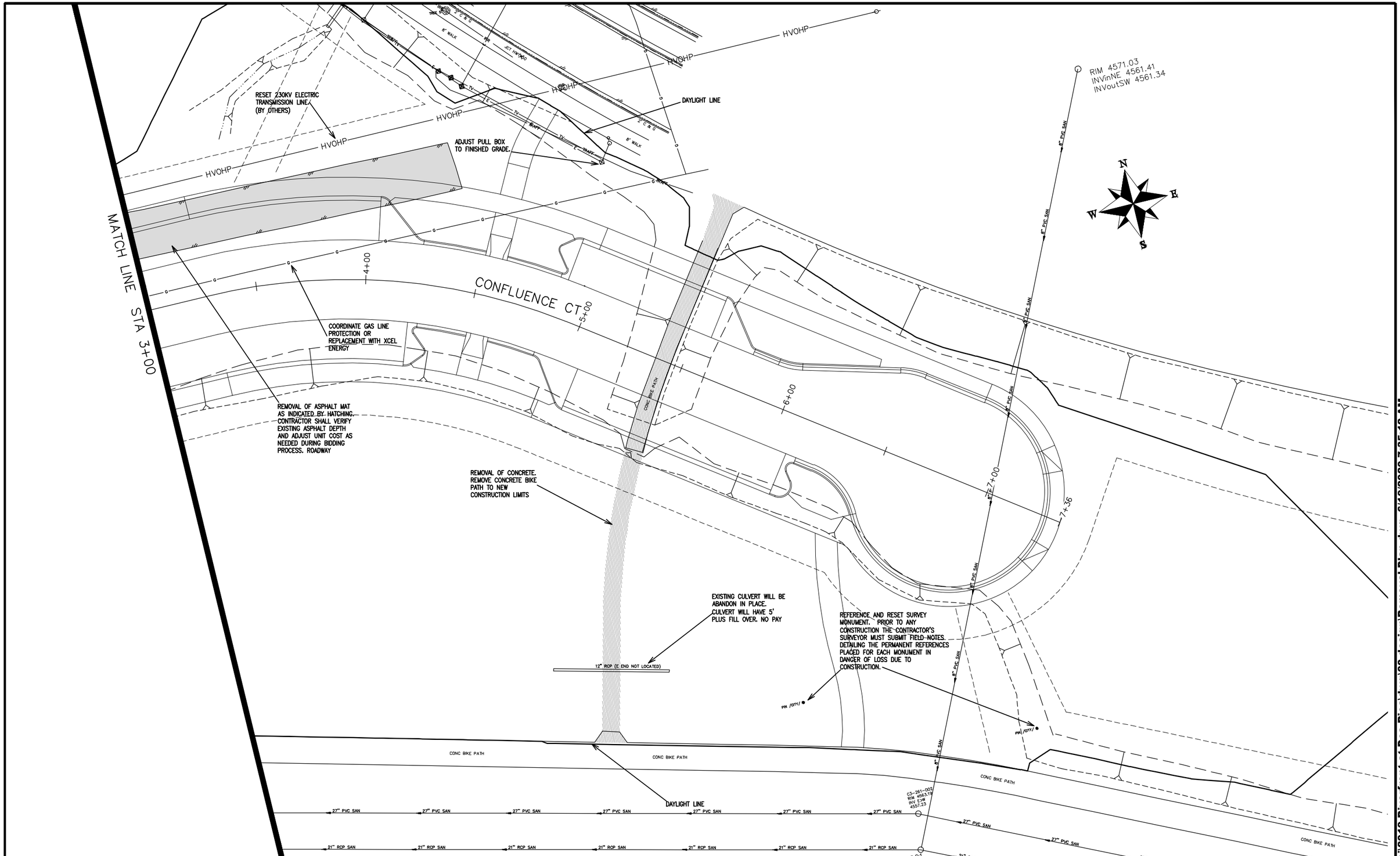

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REVISION △	–
REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-9
June 19, 2020

15

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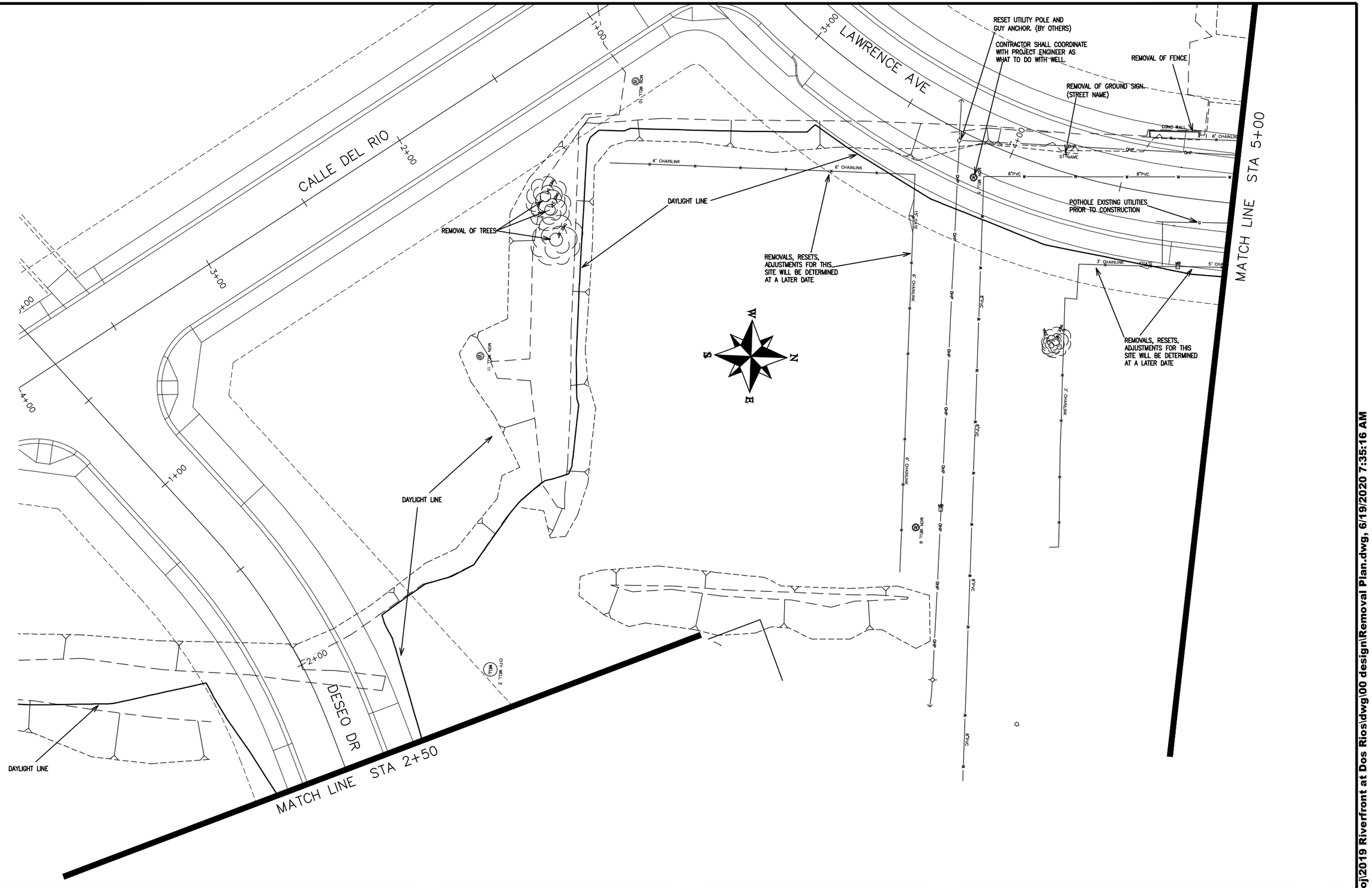

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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-10
June 19, 2020

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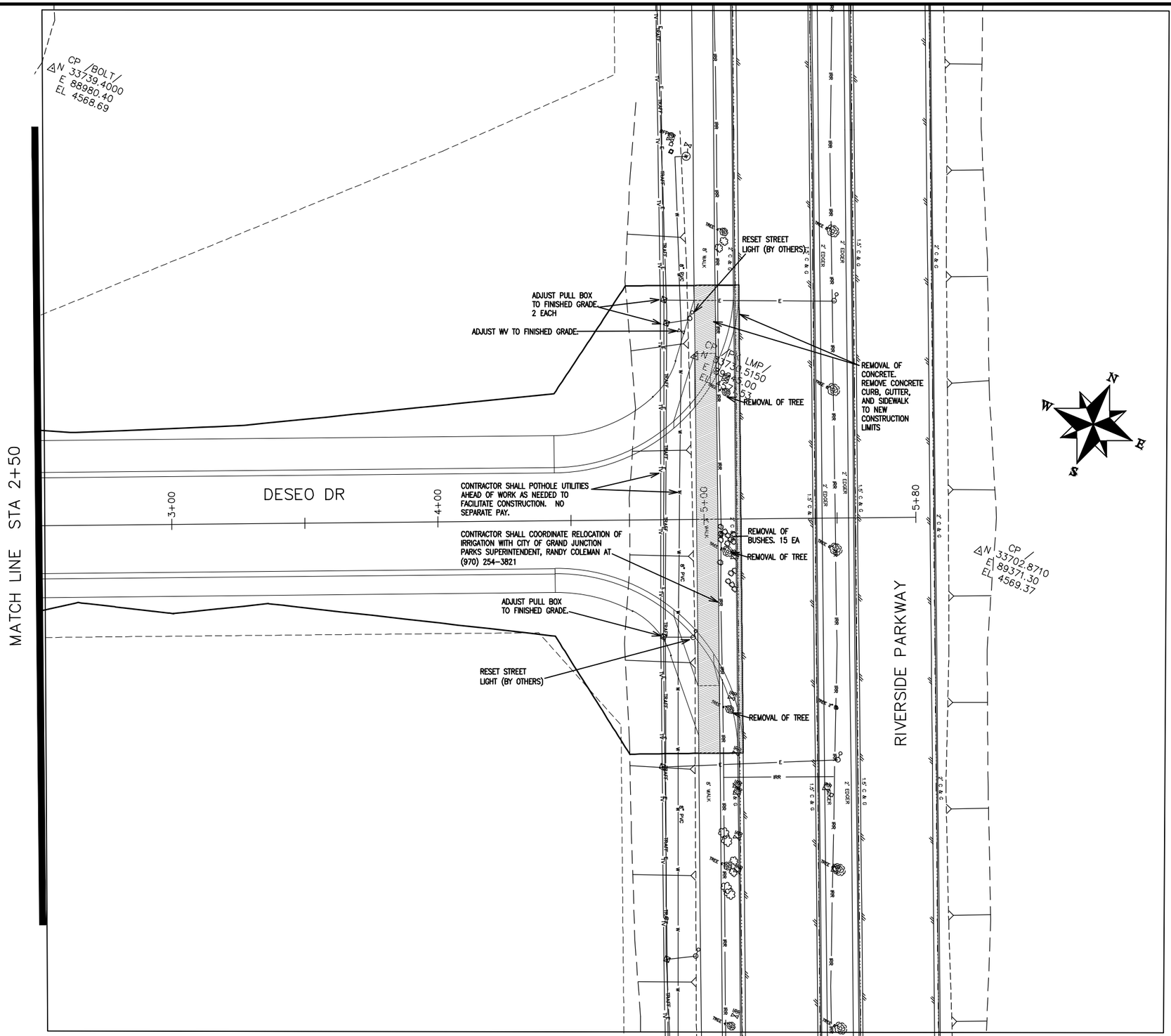

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN – R-11
June 19, 2020

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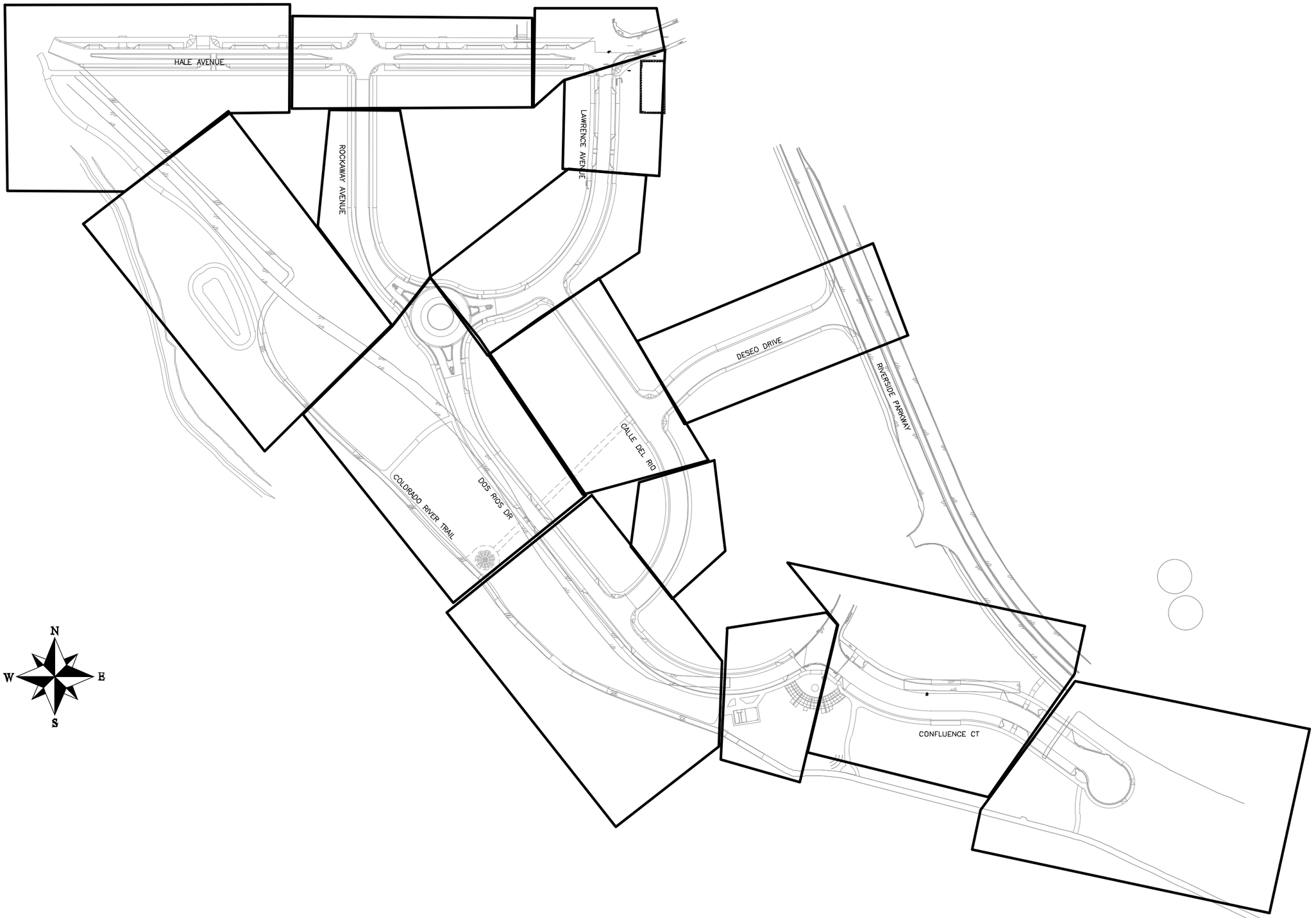

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
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SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN SHEET INDEX – 1
June 18, 2020

18

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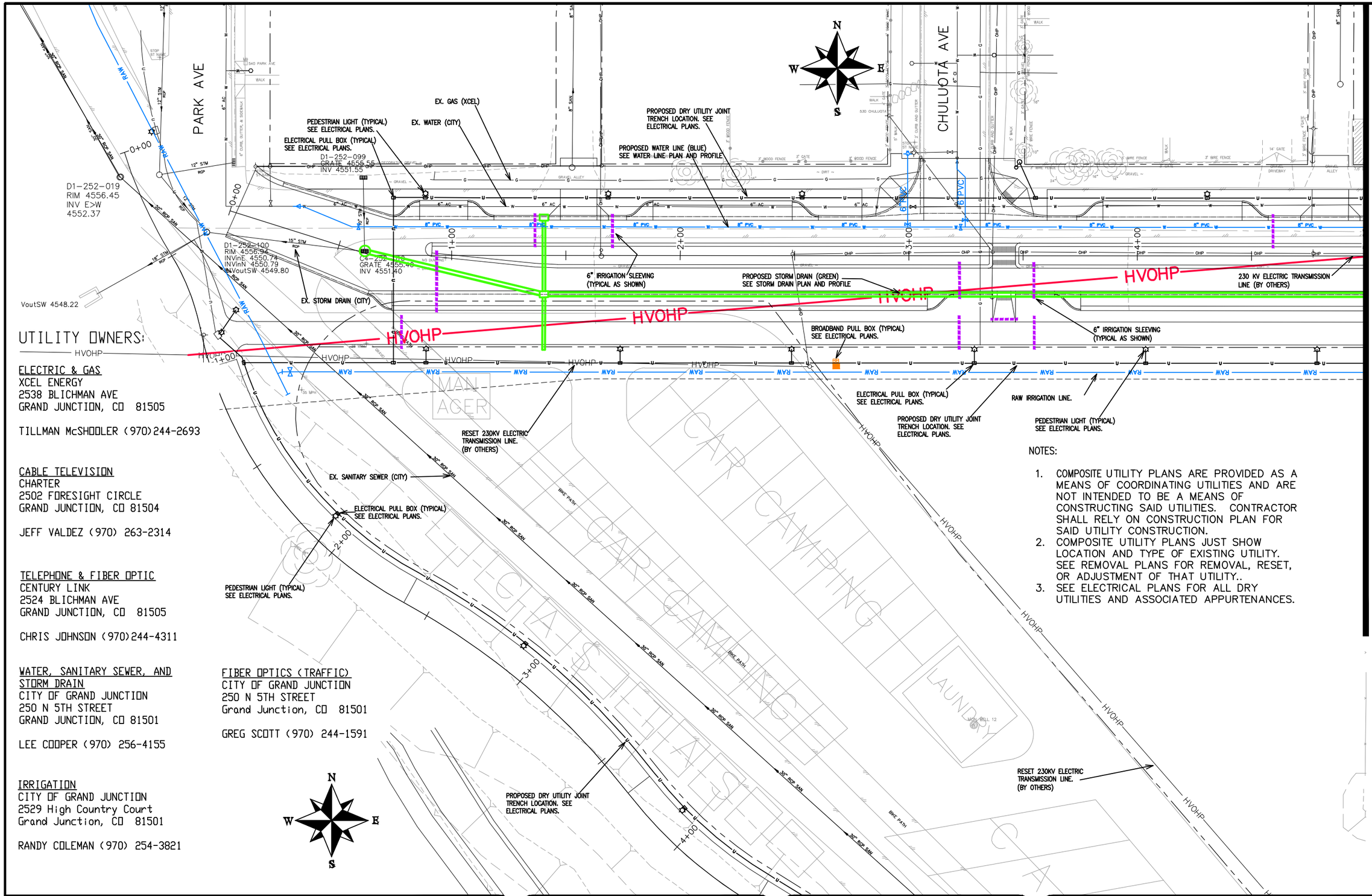

UTILITY OWNERS:

HVOHP

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

NOTES:

1. COMPOSITE UTILITY PLANS ARE PROVIDED AS A MEANS OF COORDINATING UTILITIES AND ARE NOT INTENDED TO BE A MEANS OF CONSTRUCTING SAID UTILITIES. CONTRACTOR SHALL RELY ON CONSTRUCTION PLAN FOR SAID UTILITY CONSTRUCTION.
2. COMPOSITE UTILITY PLANS JUST SHOW LOCATION AND TYPE OF EXISTING UTILITY. SEE REMOVAL PLANS FOR REMOVAL, RESET, OR ADJUSTMENT OF THAT UTILITY..
3. SEE ELECTRICAL PLANS FOR ALL DRY UTILITIES AND ASSOCIATED APPURTENANCES.

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-1
June 19, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

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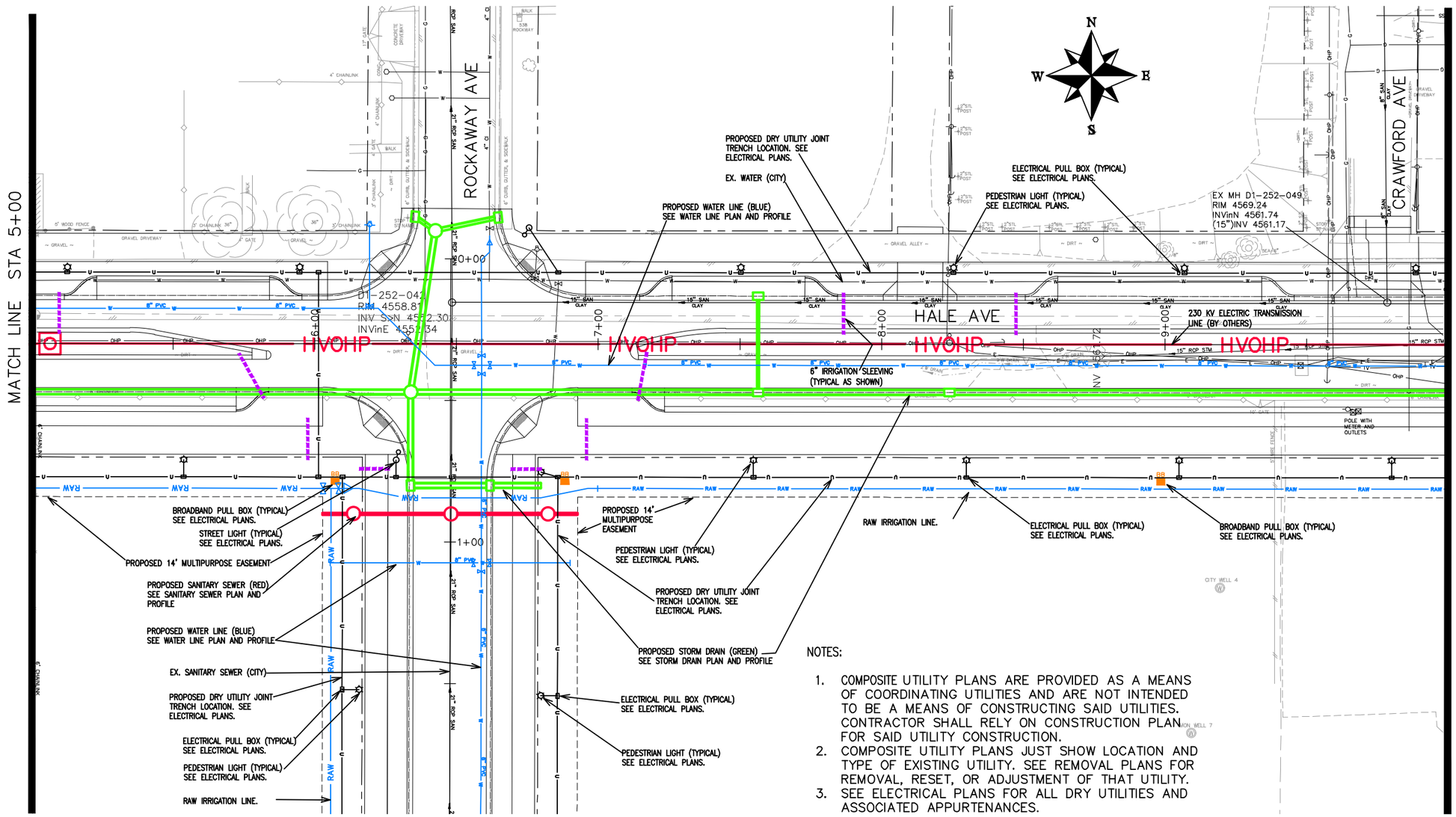
FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591



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DESCRIPTION	DATE
REVISION △	
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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-2
June 19, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

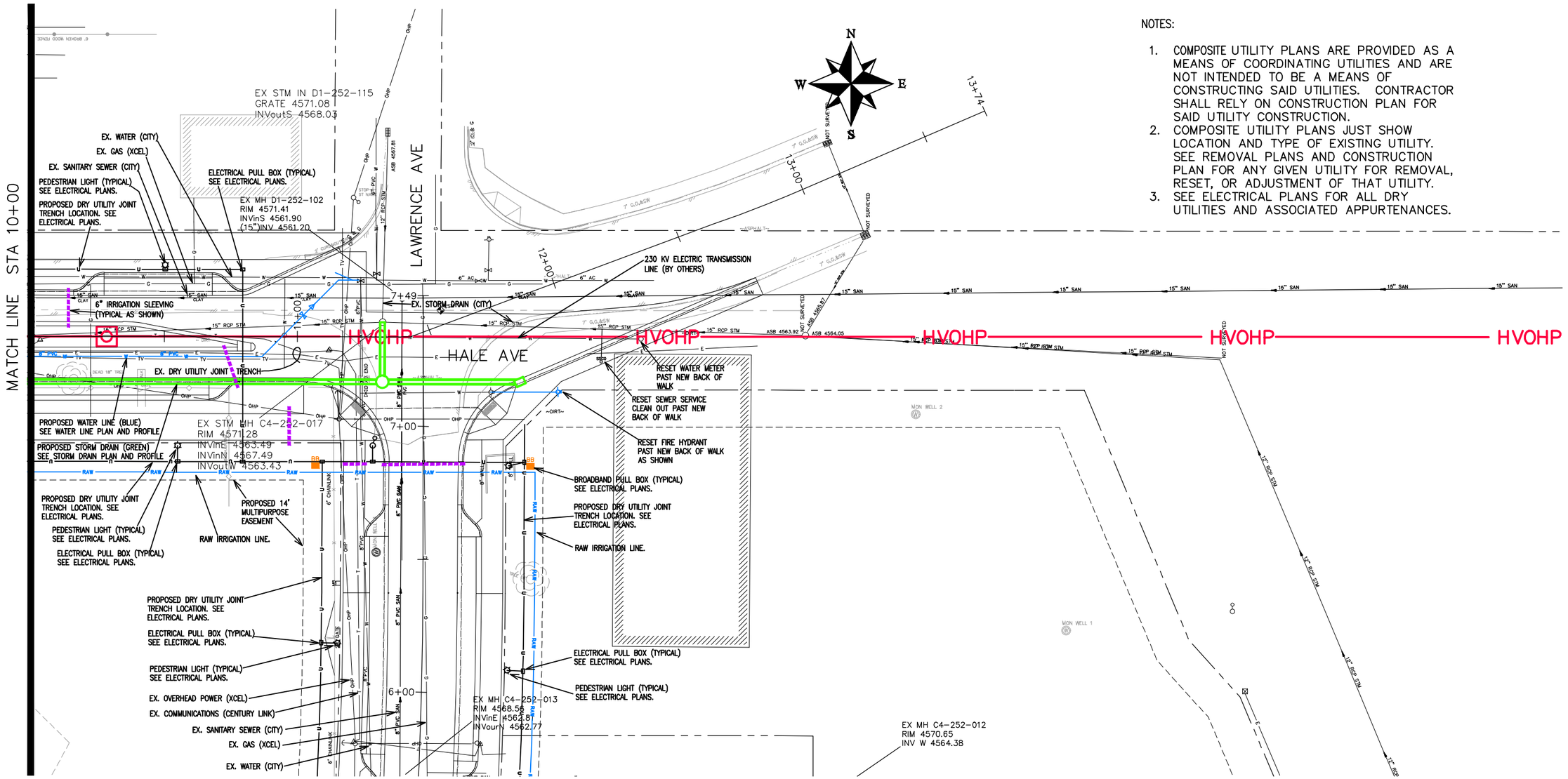
LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591



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APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-3
June 19, 2020

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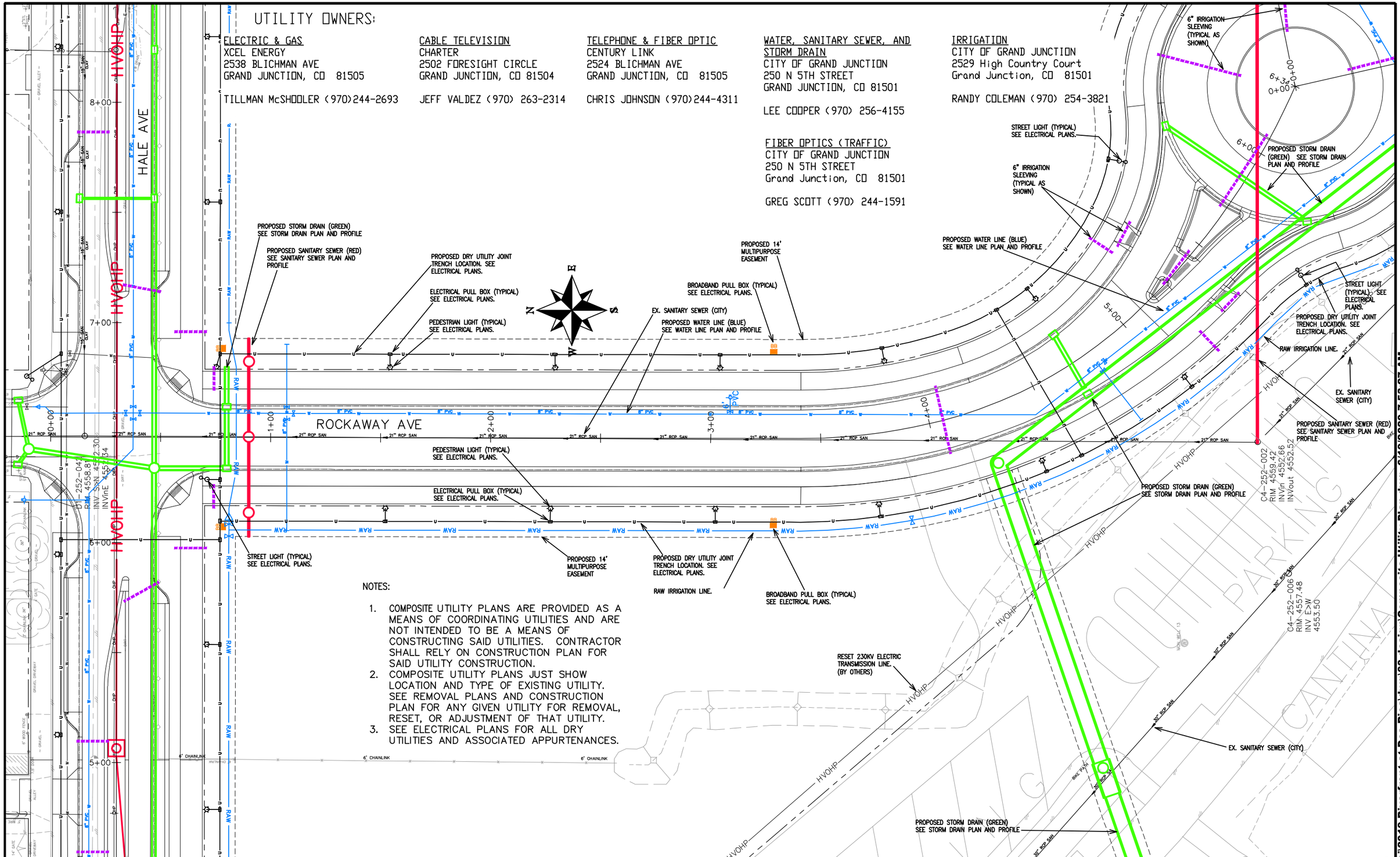

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

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REVISION △	-

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-4
June 19, 2020

22

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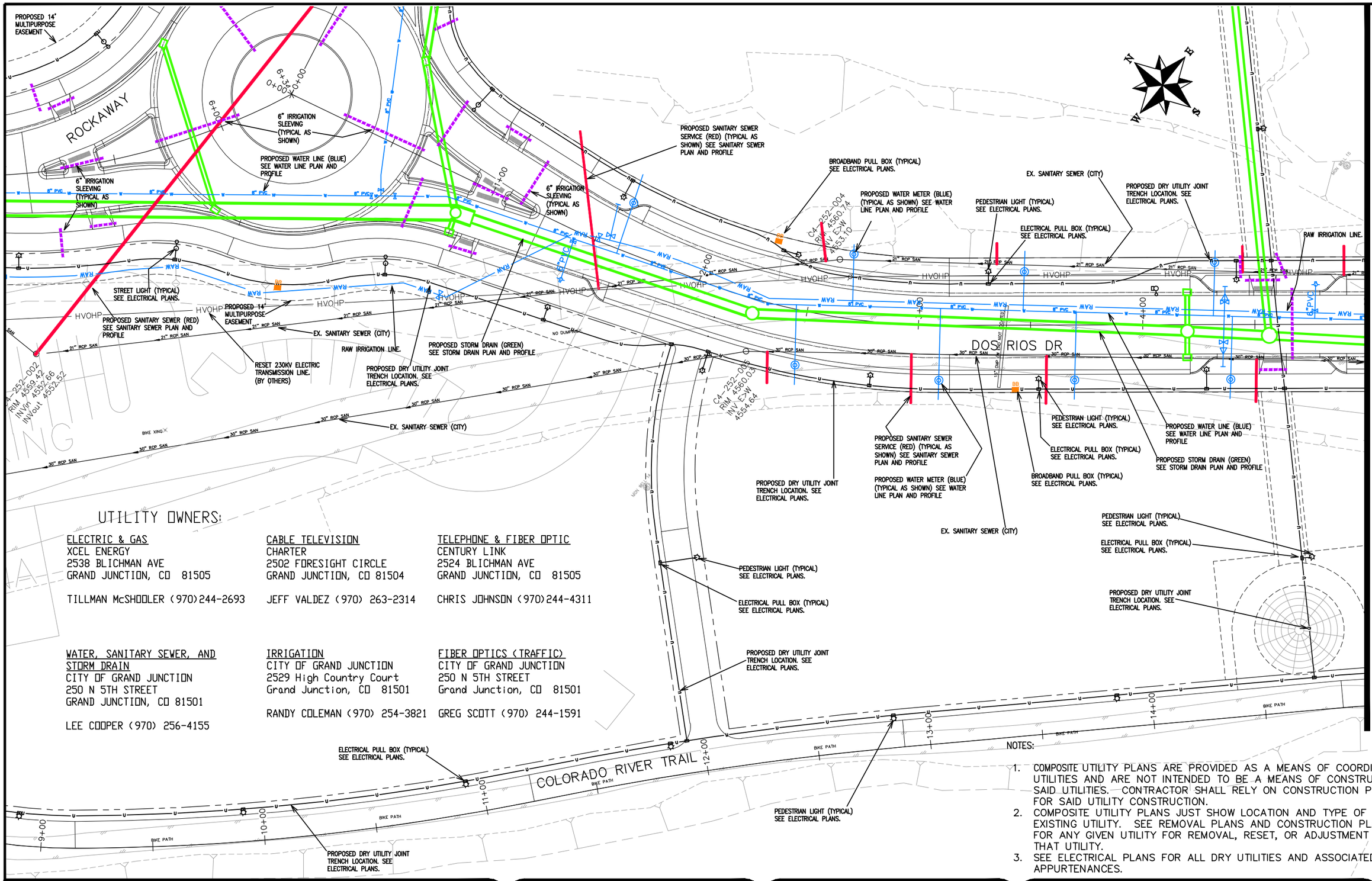

UTILITY OWNERS:

ELECTRIC & GAS	CABLE TELEVISION	TELEPHONE & FIBER OPTIC
XCEL ENERGY	CHARTER	CENTURY LINK
2538 BLICHMAN AVE	2502 FORESIGHT CIRCLE	2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505	GRAND JUNCTION, CO 81504	GRAND JUNCTION, CO 81505
TILLMAN McSHOOLER (970)244-2693	JEFF VALDEZ (970) 263-2314	CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN	IRRIGATION	FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION	CITY OF GRAND JUNCTION	CITY OF GRAND JUNCTION
250 N 5TH STREET	2529 High Country Court	250 N 5TH STREET
GRAND JUNCTION, CO 81501	Grand Junction, CO 81501	Grand Junction, CO 81501
LEE COOPER (970) 256-4155	RANDY COLEMAN (970) 254-3821	GREG SCOTT (970) 244-1591

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SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-5
June 19, 2020

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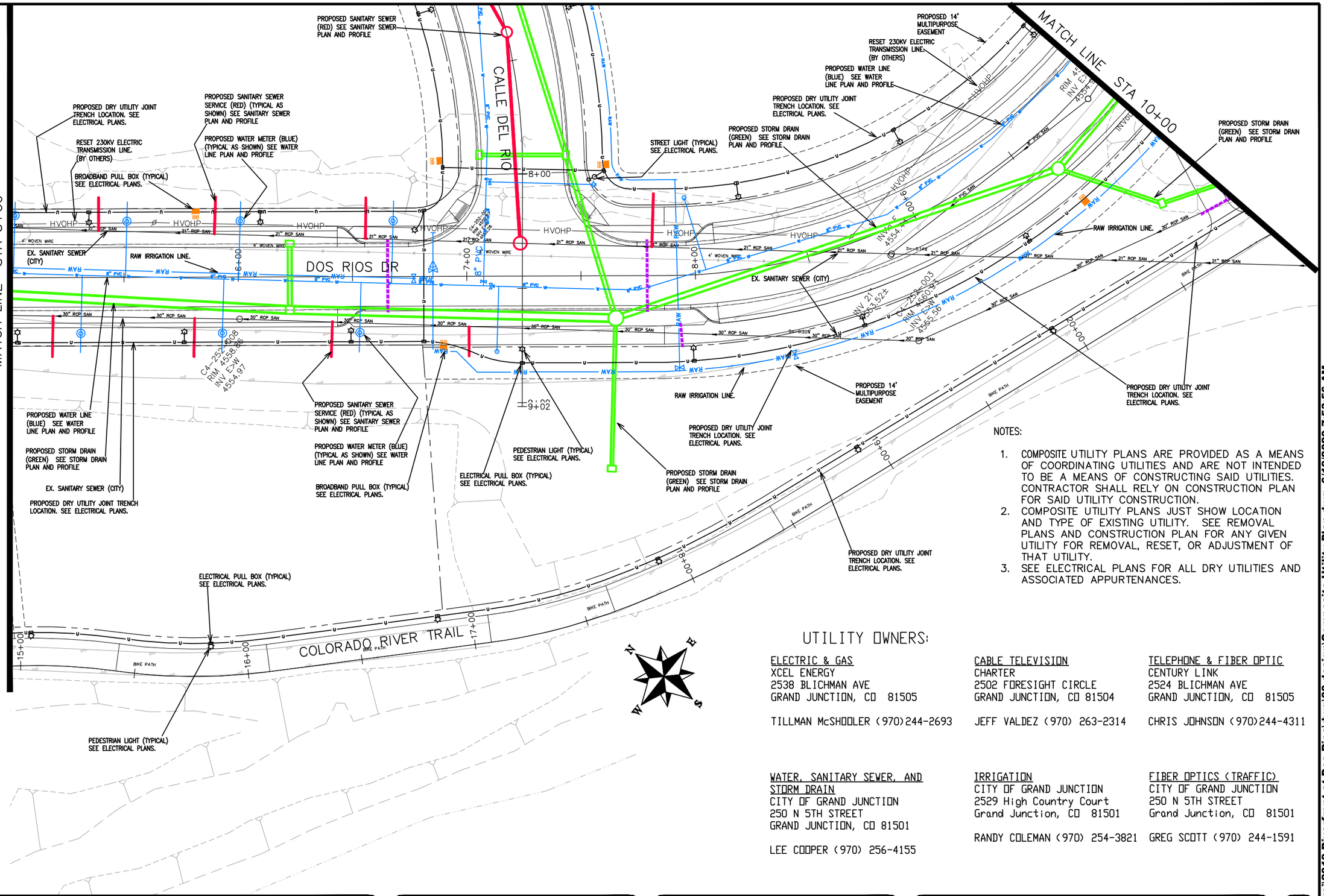

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

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REVISION △	

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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-6
June 19, 2020

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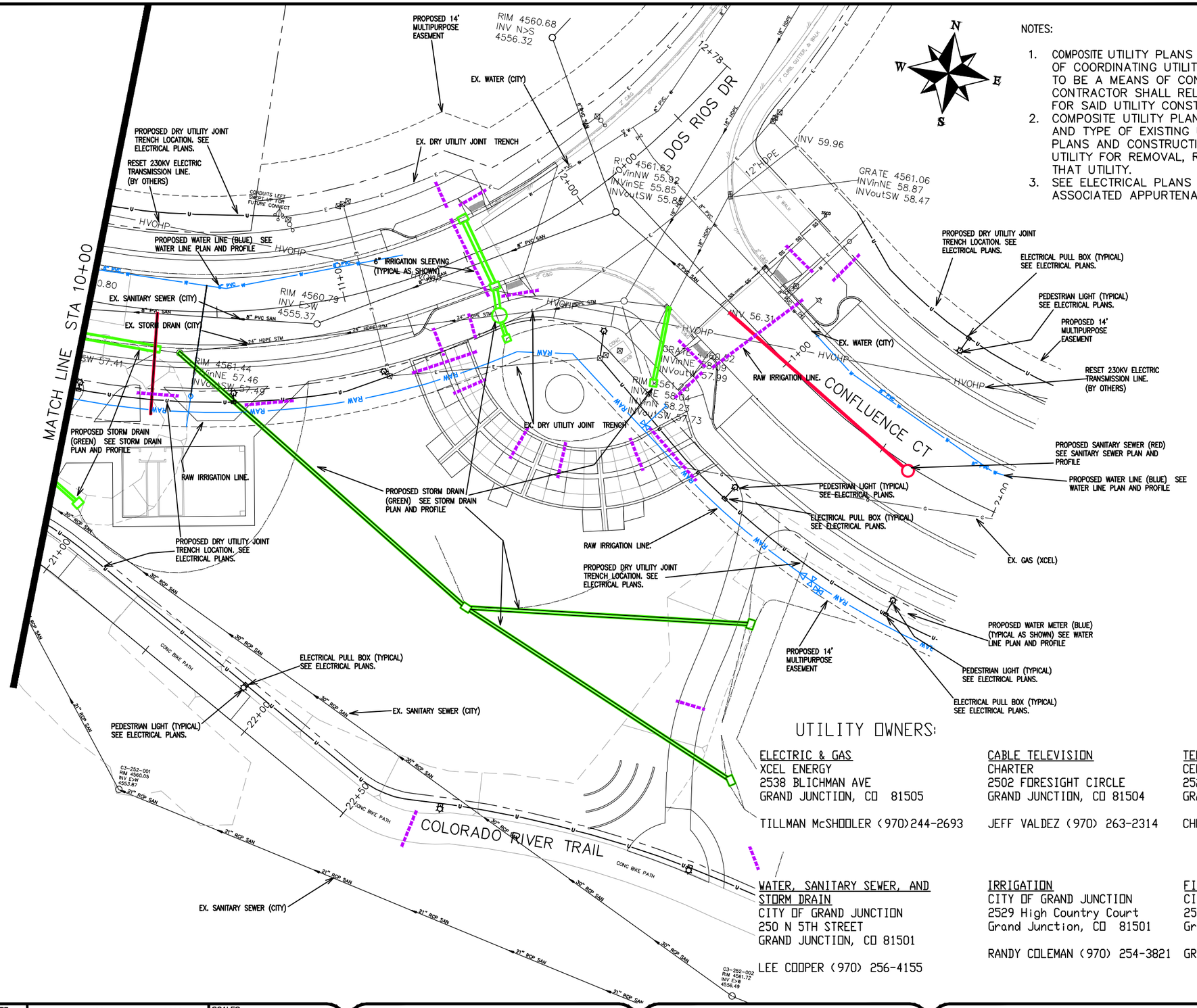

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UTILITY OWNERS:

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XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505
TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
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GRAND JUNCTION, CO 81504
JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505
CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501
LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501
RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501
GREG SCOTT (970) 244-1591

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REVISION △	–
REVISION △	–
REVISION △	–

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-7
June 19, 2020

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ROCKAWAY AVE

DOS RIOS DR

CALLE DEL RIO

LAWRENCE AVE

MATCH LINE STA 5+00

PROPOSED 14' MULTIPURPOSE EASEMENT

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

STREET LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE

PROPOSED 14' MULTIPURPOSE EASEMENT

EX. GAS (XCEL)

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

EX. WATER (CITY)

EX. OVERHEAD POWER (XCEL)

RAW IRRIGATION LINE.

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-8
June 19, 2020

26

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

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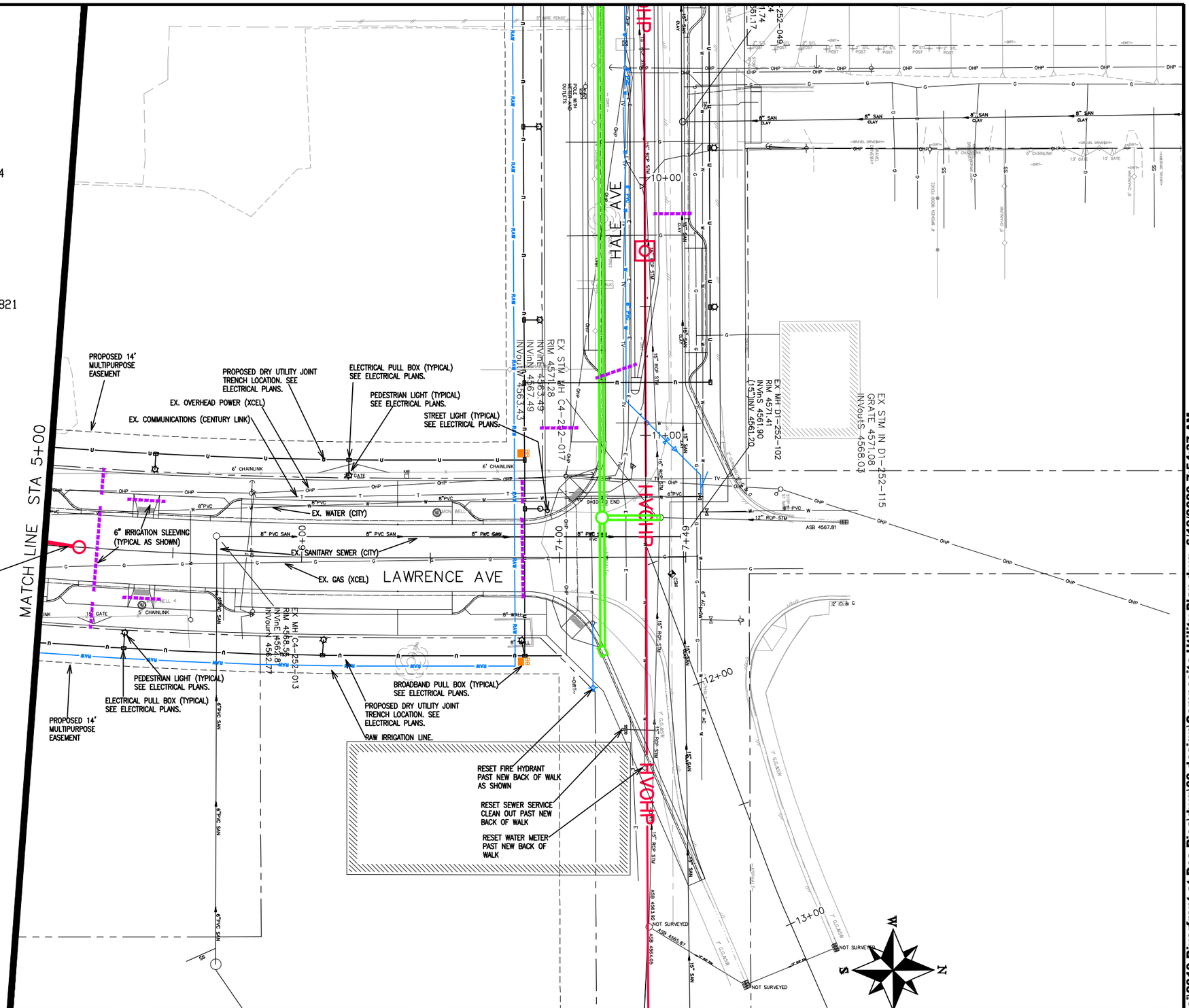
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591



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APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-9
June 19, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

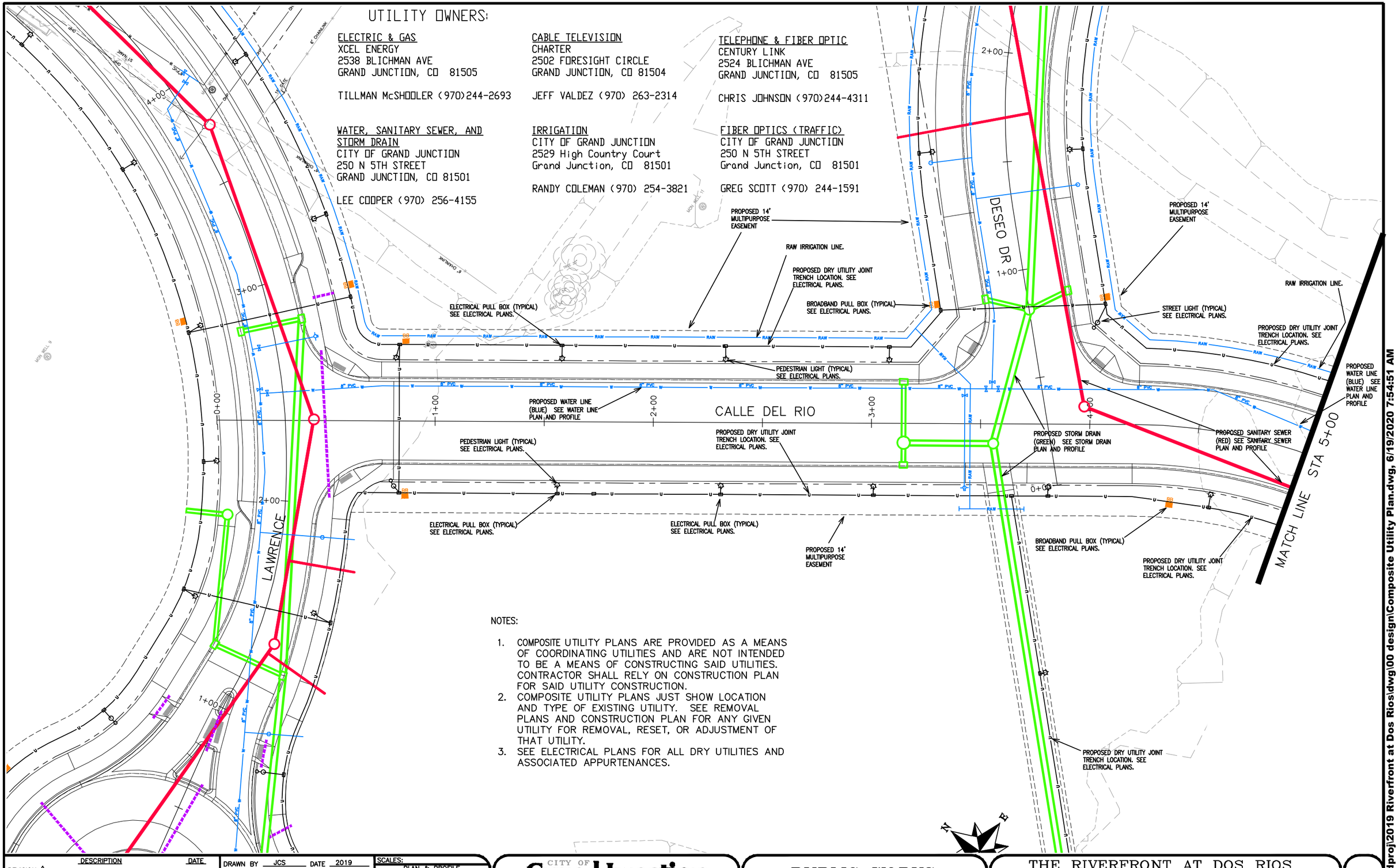
LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591



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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C–10
June 19, 2020

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PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE

RAW IRRIGATION LINE.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PROPOSED 14' MULTIPURPOSE EASEMENT

STREET LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

CALLE DEL RIO

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

MATCH LINE STA 5+00

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

PROPOSED 14' MULTIPURPOSE EASEMENT

DOS RIOS DR

COLORADO RIVER TRAIL

BIKE PATH

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

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WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-11
June 19, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

CALLE DEL RIO

DESEO DR

RIVERSIDE PARKWAY

PROPOSED 14' MULTIPURPOSE EASEMENT

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

RAW IRRIGATION LINE.

STREET LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED 14' MULTIPURPOSE EASEMENT

PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

RAW IRRIGATION LINE.

EX. WATER (CITY)

EX. IRR (CITY)

EX. TRAFF (CITY)

EX. TV (CHARTER)

EX. ELECT (XCEL)

NOTES:

1. COMPOSITE UTILITY PLANS ARE PROVIDED AS A MEANS OF COORDINATING UTILITIES AND ARE NOT INTENDED TO BE A MEANS OF CONSTRUCTING SAID UTILITIES. CONTRACTOR SHALL RELY ON CONSTRUCTION PLAN FOR SAID UTILITY CONSTRUCTION.
2. COMPOSITE UTILITY PLANS JUST SHOW LOCATION AND TYPE OF EXISTING UTILITY. SEE REMOVAL PLANS AND CONSTRUCTION PLAN FOR ANY GIVEN UTILITY FOR REMOVAL, RESET, OR ADJUSTMENT OF THAT UTILITY.
3. SEE ELECTRICAL PLANS FOR ALL DRY UTILITIES AND ASSOCIATED APPURTENANCES.

DESCRIPTION	DATE
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REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C–12
June 19, 2020

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NOTES:

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3. SEE ELECTRICAL PLANS FOR ALL DRY UTILITIES AND ASSOCIATED APPURTENANCES.

DOS RIOS DR

RIVERSIDE PARKWAY

CONFLUENCE CT

MATCH LINE STA 5+00

RIM 4562.94
INV 59.24
(CALCD NOT MEASURED)

RIM 4560.68
INV N>S
4556.32

INV 59.96

GRATE 4561.06
INVinNE 58.87
INVoutSW 58.47

RIM 4561.62
INVinNW 55.92
INVinSE 55.85
INVoutSW 55.55

INV 56.31

GRATE 4560.32
INVinNE 57.89
INVoutNW 57.99

RIM 4561.25
INVinE 58.04
INVinN 58.25
INVoutSW 57.73

4560.79
E>W
5.37

12"HDPE

EX. DRY UTILITY JOINT TRENCH

EX. WATER (CITY)

EX. SANITARY SEWER (CITY)

EX. GAS (XCEL)

EX. DRY UTILITY JOINT TRENCH

PROPOSED 14' MULTIPURPOSE EASEMENT

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

RESET 230KV ELECTRIC TRANSMISSION LINE. (BY OTHERS)

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED WATER METER (BLUE) (TYPICAL AS SHOWN) SEE WATER LINE PLAN AND PROFILE

PROPOSED SANITARY SEWER SERVICE (RED) (TYPICAL AS SHOWN) SEE SANITARY SEWER PLAN AND PROFILE

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

RAW IRRIGATION LINE.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

PROPOSED 14' MULTIPURPOSE EASEMENT

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505
TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504
JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505
CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501
LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501
RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501
GREG SCOTT (970) 244-1591

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REVISION △	
REVISION △	

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-13
June 19, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970) 244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970) 244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

NOTES:

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3. SEE ELECTRICAL PLANS FOR ALL DRY UTILITIES AND ASSOCIATED APPURTENANCES.

MATCH LINE STA 5+00

CONFLUENCE CT

RIM 4571.03
INVinNE 4561.41
INVoutSW 4561.34

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

EX. SANITARY SEWER (CITY)

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED WATER LINE (BLUE) SEE WATER LINE PLAN AND PROFILE

PROPOSED SANITARY SEWER (RED) SEE SANITARY SEWER PLAN AND PROFILE

RAW IRRIGATION LINE.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

6" IRRIGATION SLEEVING (TYPICAL AS SHOWN)

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

12" RCP (E END NOT LOCATED)

CONC BIKE PATH

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

EX. SANITARY SEWER (CITY)

C3-261-001
RIM 4562.28
INV E>W
4553.63
INVinNE
4554.12

C3-261-002
RIM 4563.19
INV E>W
4557.23

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

RAW IRRIGATION LINE.

MATCH LINE

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-14
June 19, 2020

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RIVERSIDE PARKWAY

MATCH LINE

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

BROADBAND PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591

ELECTRICAL PULL BOX (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED STORM DRAIN (GREEN) SEE STORM DRAIN PLAN AND PROFILE

PEDESTRIAN LIGHT (TYPICAL) SEE ELECTRICAL PLANS.

PROPOSED DRY UTILITY JOINT TRENCH LOCATION. SEE ELECTRICAL PLANS.

RAW IRRIGATION LINE.

EX. SANITARY SEWER (CITY)

CONC BIKE PATH

WALL

NOTES:

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REVISION △	

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-15
June 19, 2020

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UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMAN McSHOOLER (970)244-2693

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

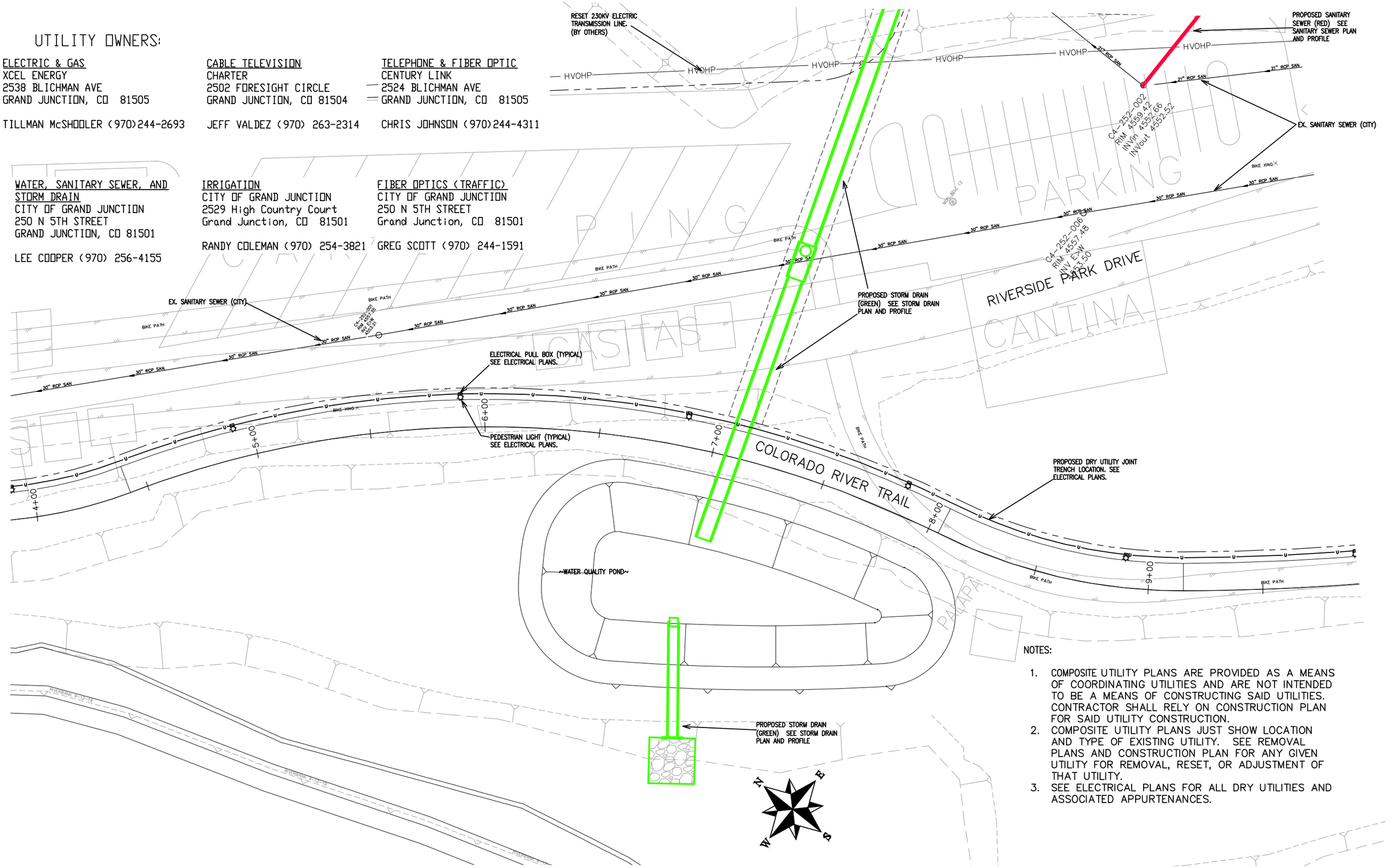
LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
2529 High Country Court
Grand Junction, CO 81501

RANDY COLEMAN (970) 254-3821

FIBER OPTICS (TRAFFIC)
CITY OF GRAND JUNCTION
250 N 5TH STREET
Grand Junction, CO 81501

GREG SCOTT (970) 244-1591



NOTES:

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REVISION △	

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
COMPOSITE UTILITY PLAN – C-16
June 19, 2020

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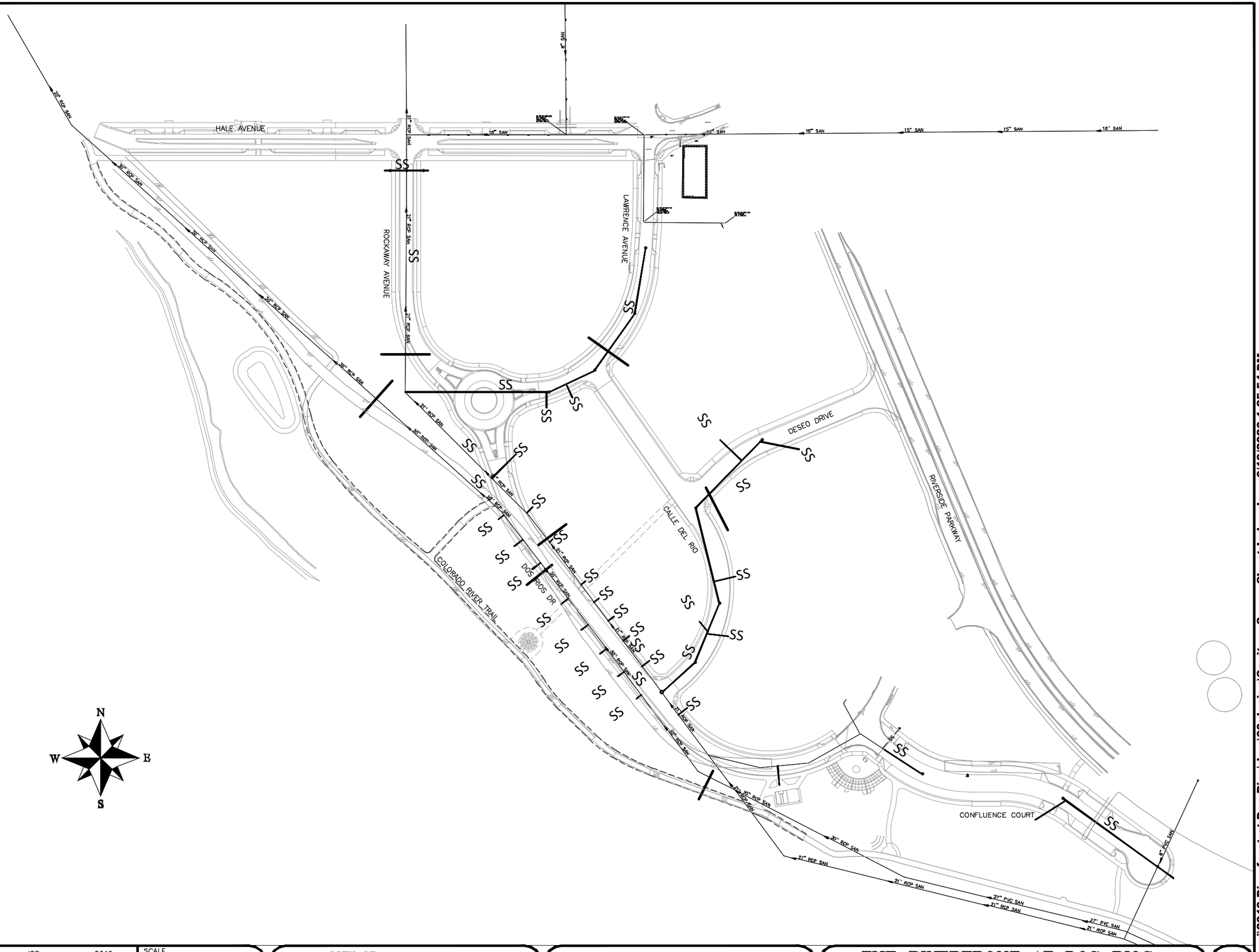

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REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER SHEET INDEX
June 18, 2020

35

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WATERLINE TO BE INSTALLED BELOW SEWER PIPE. FULL CONCRETE ENCASEMENT AROUND SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

ADJUST MH TO FINISHED GRADE

RAW WATER TO BE INSTALLED BELOW SEWER PIPE. ENCASE SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

CONNECT MANHOLE TO EXISTING SANITARY SEWER (21" PIPE). CONTRACTOR SHALL USE A CAST-IN-PLACE BASE TO FORM INVERT AROUND THE EXISTING PIPE. "O" RING GASKETS OR OTHER WATER STOPS ARE TO BE PLACED AROUND THE INLET AND OUTLET PIPES TO ENSURE A WATER TIGHT SEAL IS PROVIDED AT THE MH BASE. CARE SHOULD BE TAKEN SO THAT THE EXISTING LINE DOES NOT SAG OR FLOAT DURING CONSTRUCTION OF THE BASE. THE TOP OF THE EXISTING PIPE SHALL BE CUT AND REMOVED TO PROVIDE FOR THE NEW INVERT IN. CONTRACTOR SHALL CONTROL SEWER FLOW AND NOT ALLOW DEBRIS TO ENTER THE PIPE.

Structure - (77)
STA 1+11.48, 0.00
N 34133.74
E 88319.06

8in.PVC Pipe

SANITARY SEWER MANHOLE (60" I.D.)
Structure - (76)
STA 0+77.23, 0.00
N 34133.76
E 88284.81

8in.PVC Pipe

8in.PVC Pipe

CCOW

POTHOLE EXIST. UTIL. PRIOR TO CONSTRUCTION

8in.PVC Pipe

WATERLINE TO BE INSTALLED ABOVE SEWER PIPE. PLACE CONCRETE CAP ON SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

Structure - (75)
STA 0+42.86, 0.00
N 34133.78
E 88250.44

POTHOLE EXIST. UTIL. PRIOR TO CONSTRUCTION

ROCKAWAY AVE

HALF AVE

MATCH LINE STA 5+00

NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

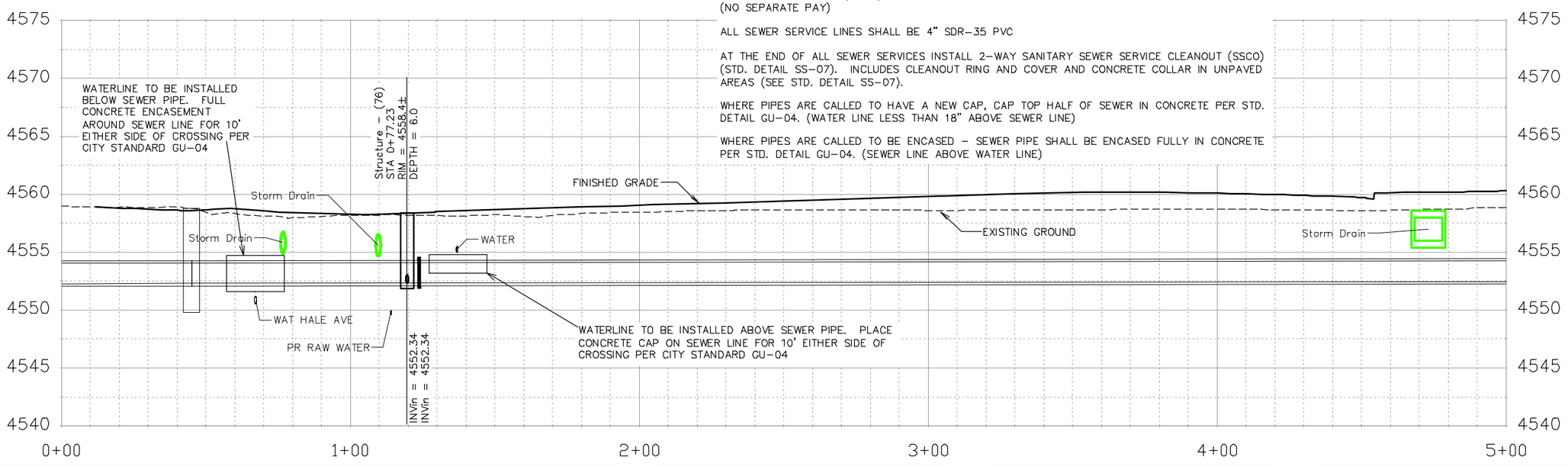
CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED ON THE UPSTREAM PIPE SIDES OF ALL MANHOLES. (NO SEPARATE PAY)

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

WHERE PIPES ARE CALLED TO BE ENCASED - SEWER PIPE SHALL BE ENCASED FULLY IN CONCRETE PER STD. DETAIL GU-04. (SEWER LINE ABOVE WATER LINE)



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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 - SS1
June 18, 2020

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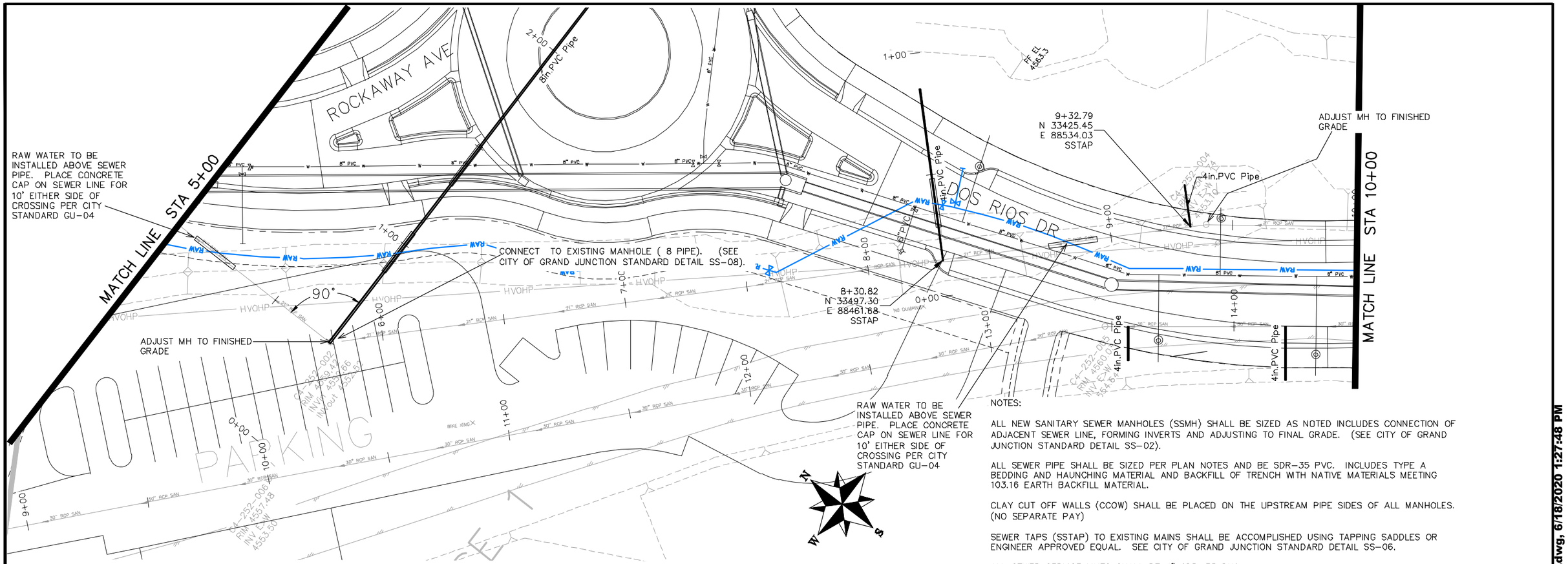


NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED ON THE UPSTREAM PIPE SIDES OF ALL MANHOLES. (NO SEPARATE PAY)

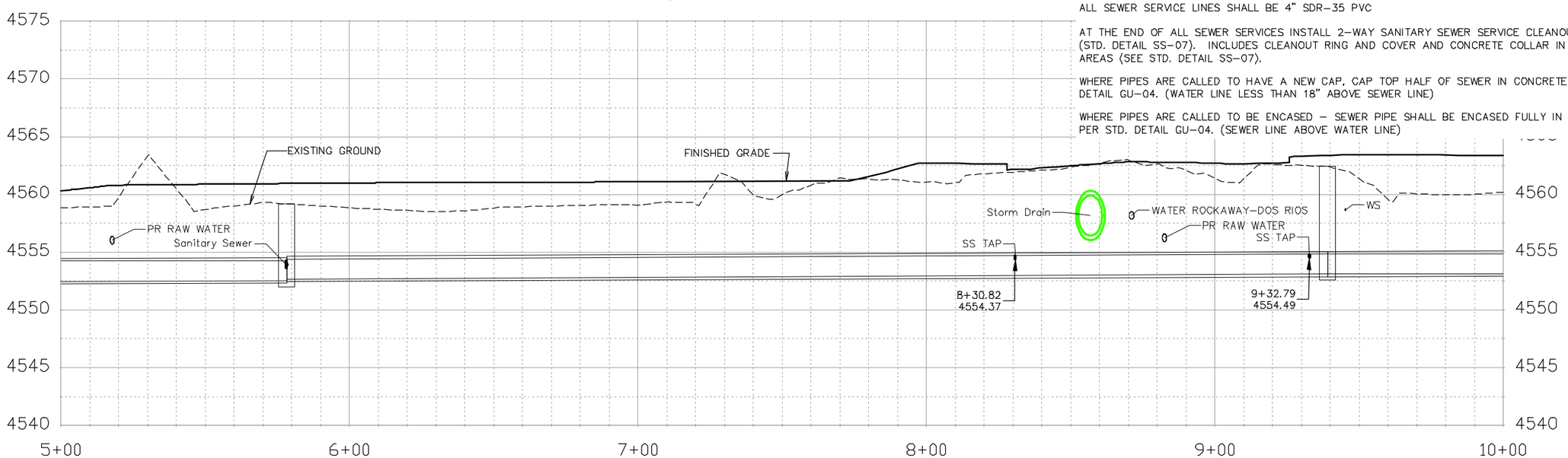
SEWER TAPS (SSTAP) TO EXISTING MAINS SHALL BE ACCOMPLISHED USING TAPPING SADDLES OR ENGINEER APPROVED EQUAL. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

WHERE PIPES ARE CALLED TO BE ENCASED – SEWER PIPE SHALL BE ENCASED FULLY IN CONCRETE PER STD. DETAIL GU-04. (SEWER LINE ABOVE WATER LINE)



DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS2
June 18, 2020

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MATCH LINE STA 10+00

10+09.10
N 33364.93
E 88580.39
SSTAP

11+18.67
N 33277.00
E 88645.78
SSTAP

11+63.88
N 33240.84
E 88672.91
SSTAP

12+13.10
N 33201.46
E 88702.45
SSTAP

12+63.78
N 33160.95
E 88732.89
SSTAP

13+29.92
N 33107.90
E 88772.40
SS TAP

SANITARY SEWER MANHOLE (60" I.D.)
Structure – (70)
STA 0+50.48, 0.00
N 33053.66
E 88813.00

14+55.27
N 33007.59
E 88847.57
SS TAP

RAW WATER TO BE INSTALLED ABOVE SEWER PIPE. PLACE CONCRETE CAP ON SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

FF EL 4563.75

DOS RIOS DR

ADJUST MH TO FINISHED GRADE

ADJUST MH TO FINISHED GRADE

95°

CCOW

CONNECT MANHOLE TO EXISTING SANITARY SEWER (21" PIPE). CONTRACTOR SHALL USE A CAST-IN-PLACE BASE TO FORM INVERT AROUND THE EXISTING PIPE. "O" RING GASKETS OR OTHER WATER STOPS ARE TO BE PLACED AROUND THE INLET AND OUTLET PIPES TO ENSURE A WATER TIGHT SEAL IS PROVIDED AT THE MH BASE. CARE SHOULD BE TAKEN SO THAT THE EXISTING LINE DOES NOT SAG OR FLOAT DURING CONSTRUCTION OF THE BASE. THE TOP OF THE EXISTING PIPE SHALL BE CUT AND REMOVED TO PROVIDE FOR THE NEW INVERT IN. CONTRACTOR SHALL CONTROL SEWER FLOW AND NOT ALLOW DEBRIS TO ENTER THE PIPE.

NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED ON THE UPSTREAM PIPE SIDES OF ALL MANHOLES. (NO SEPARATE PAY)

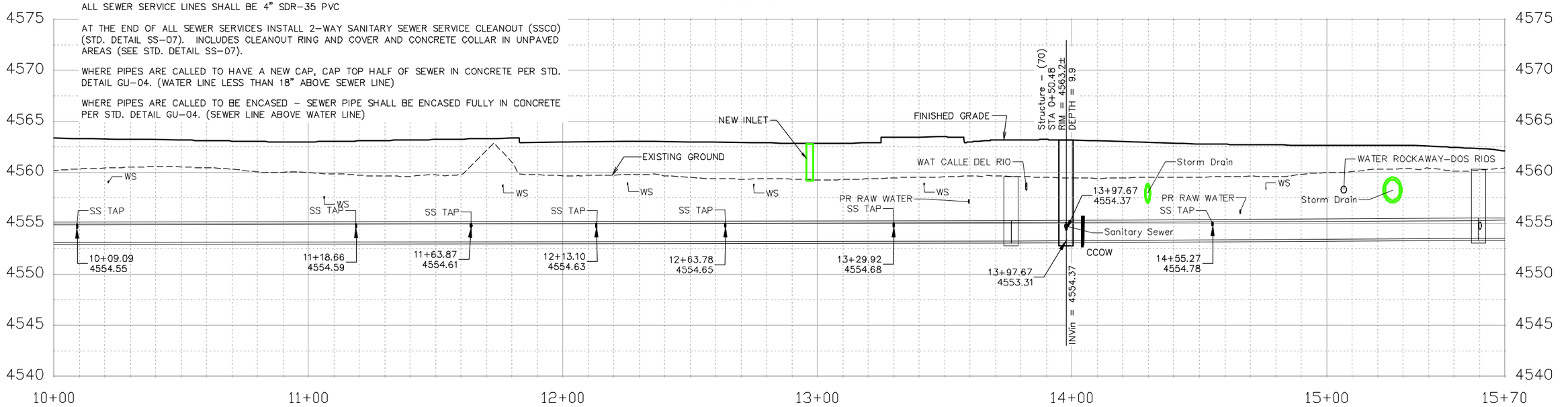
SEWER TAPS (SSTAP) TO EXISTING MAINS SHALL BE ACCOMPLISHED USING TAPPING SADDLES OR ENGINEER APPROVED EQUAL. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

WHERE PIPES ARE CALLED TO BE ENCASED – SEWER PIPE SHALL BE ENCASED FULLY IN CONCRETE PER STD. DETAIL GU-04. (SEWER LINE ABOVE WATER LINE)



DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS3
June 18, 2020

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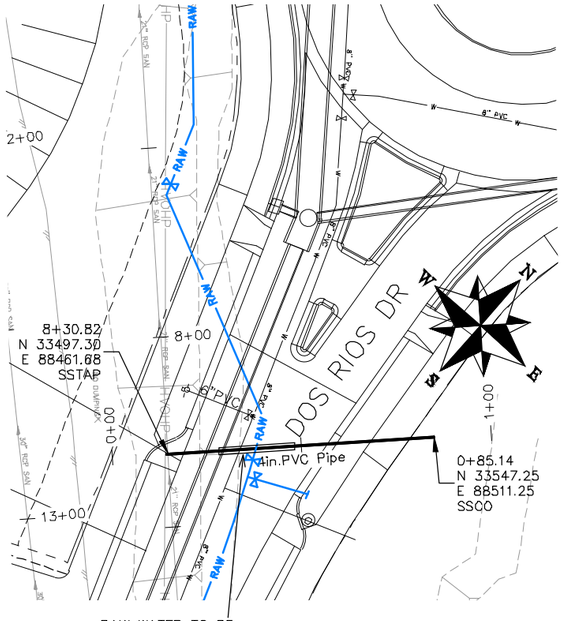
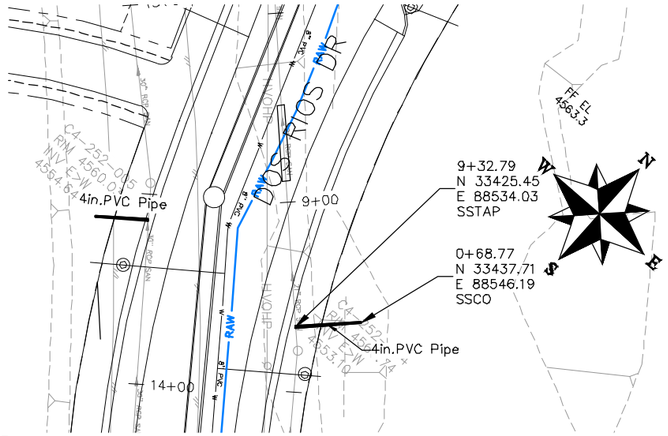


RAW WATER TO BE INSTALLED ABOVE SEWER PIPE. PLACE CONCRETE CAP ON SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04



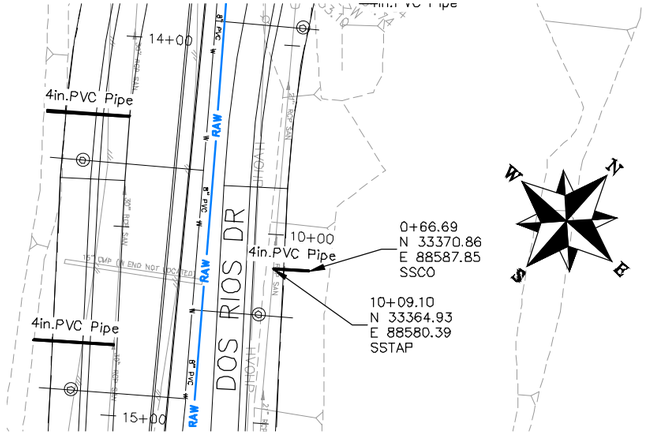
NOTES:

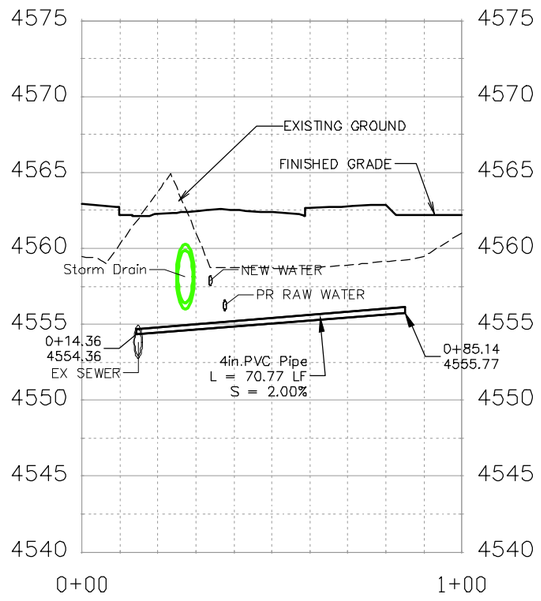
ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

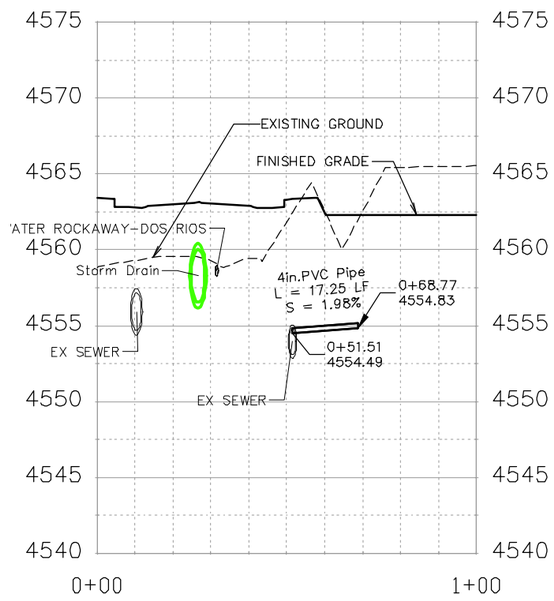
SEWER TAPS (SSTAP) TO EXISTING MAINS SHALL BE ACCOMPLISHED USING TAPPING SADDLES OR ENGINEER APPROVED EQUAL. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

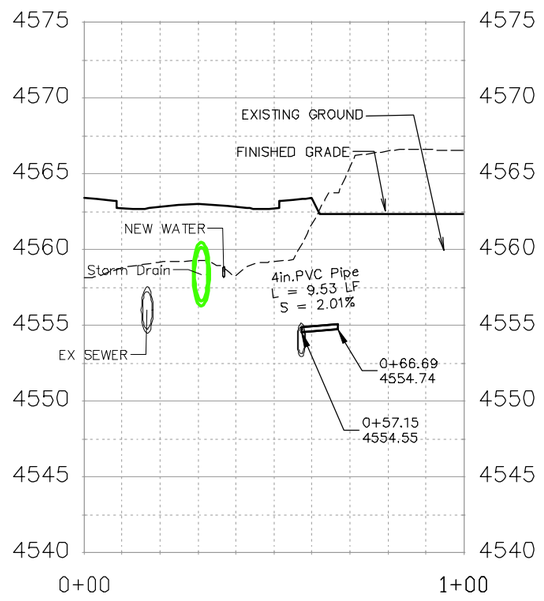
ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).









DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS4
June 18, 2020

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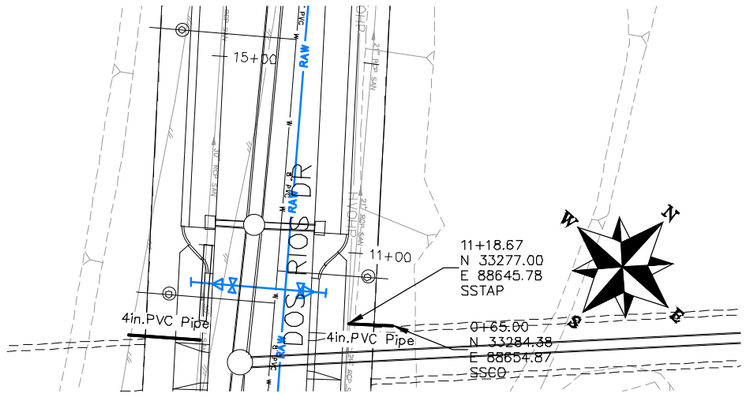
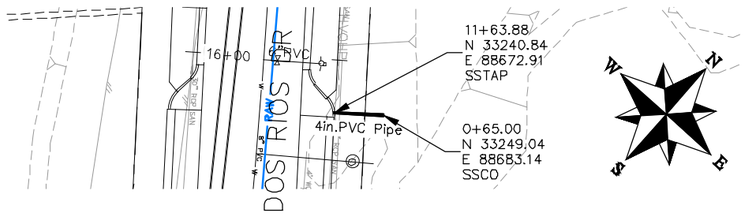
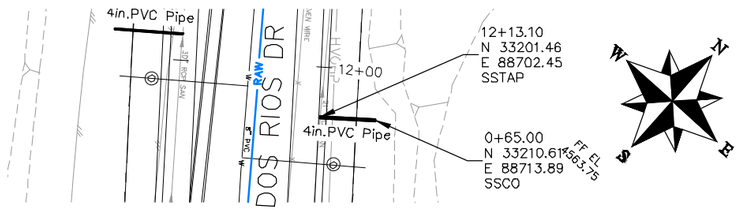






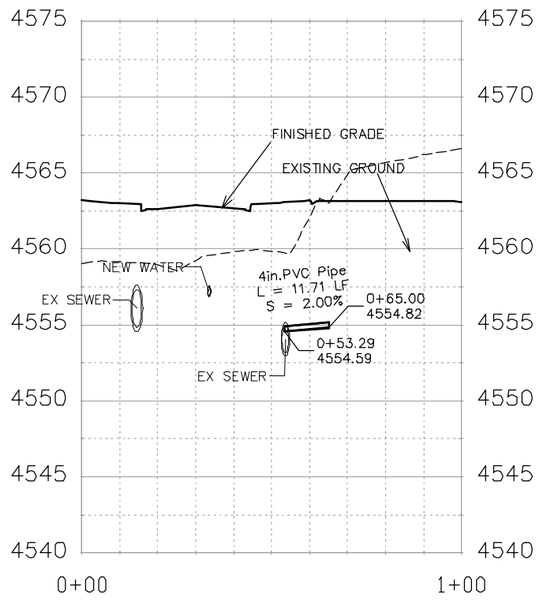
NOTES:

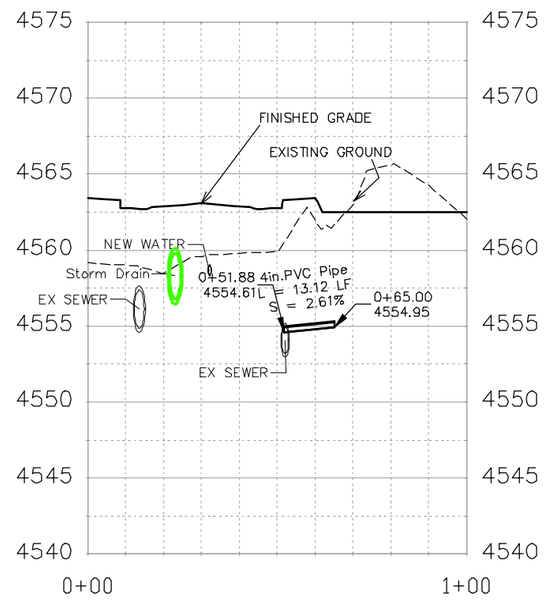
ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

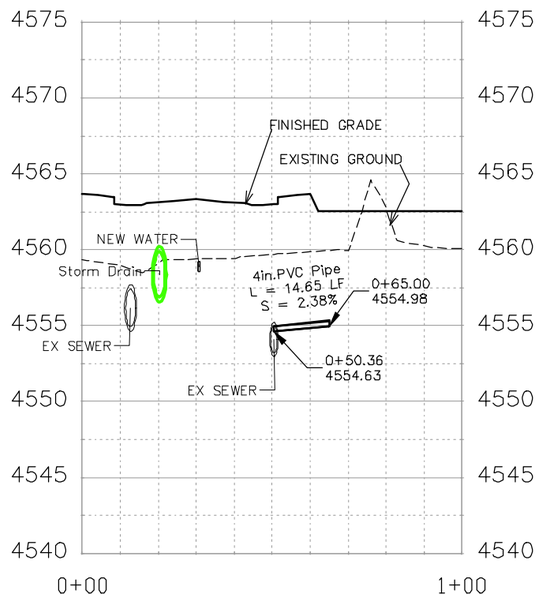
SEWER TAPS (SSTAP) TO EXISTING MAINS SHALL BE ACCOMPLISHED USING TAPPING SADDLES OR ENGINEER APPROVED EQUAL. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).







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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS5
June 18, 2020

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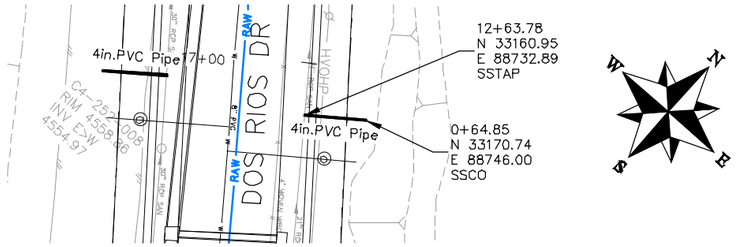
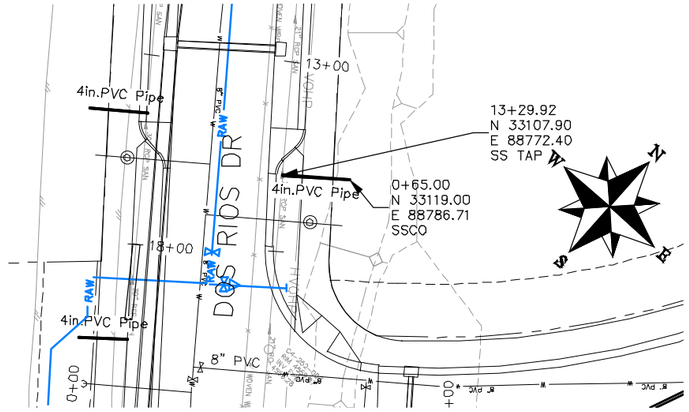
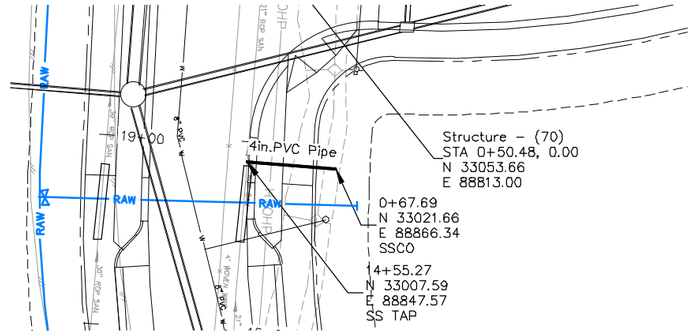






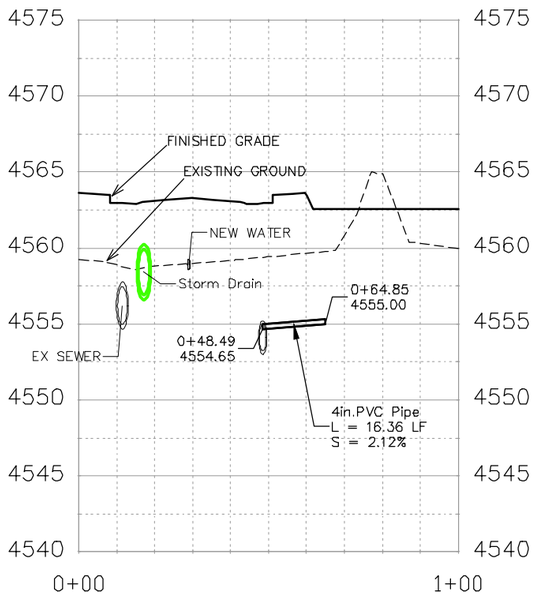
NOTES:

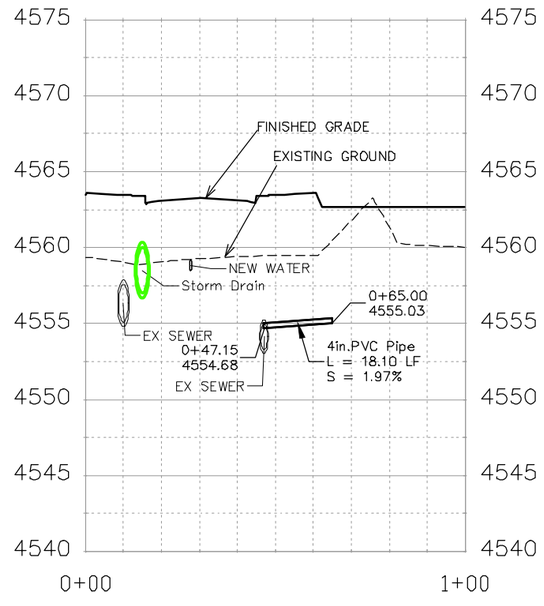
ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

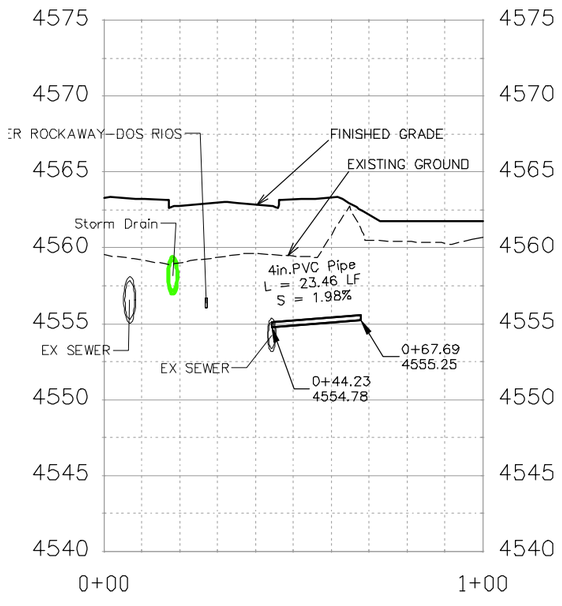
SEWER TAPS (SSTAP) TO EXISTING MAINS SHALL BE ACCOMPLISHED USING TAPPING SADDLES OR ENGINEER APPROVED EQUAL. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).







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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS6
June 18, 2020

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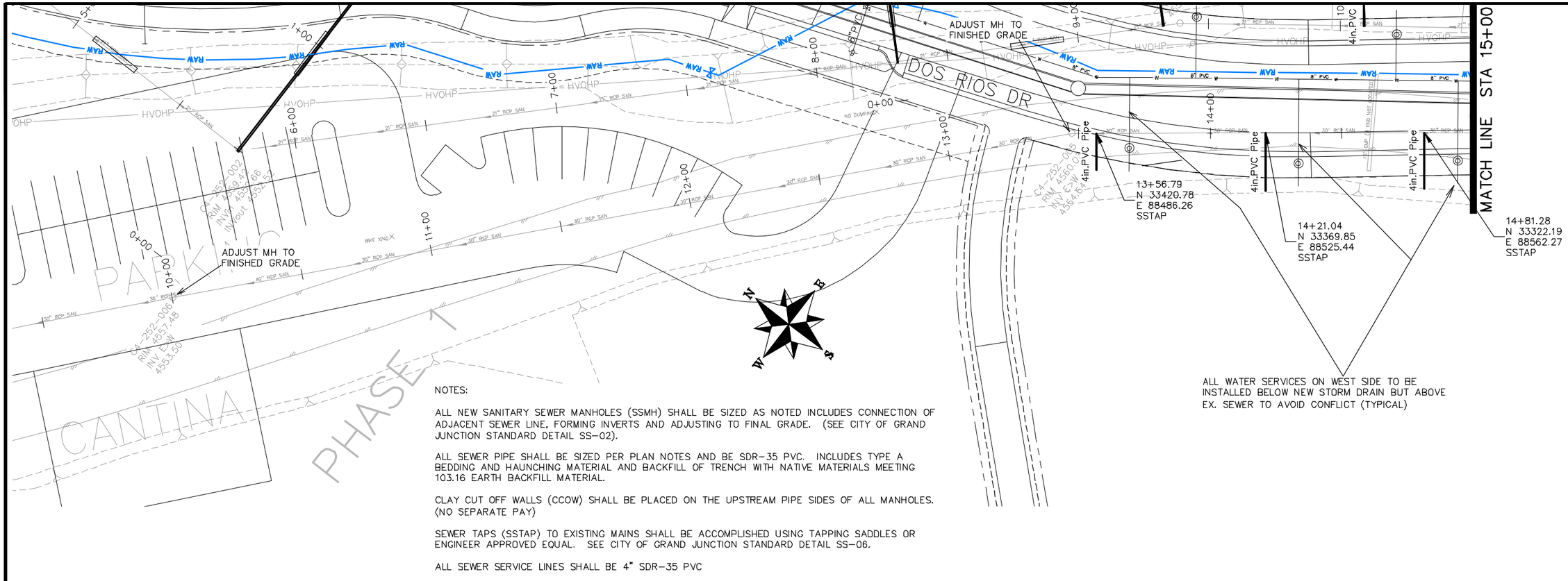


NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED ON THE UPSTREAM PIPE SIDES OF ALL MANHOLES. (NO SEPARATE PAY)

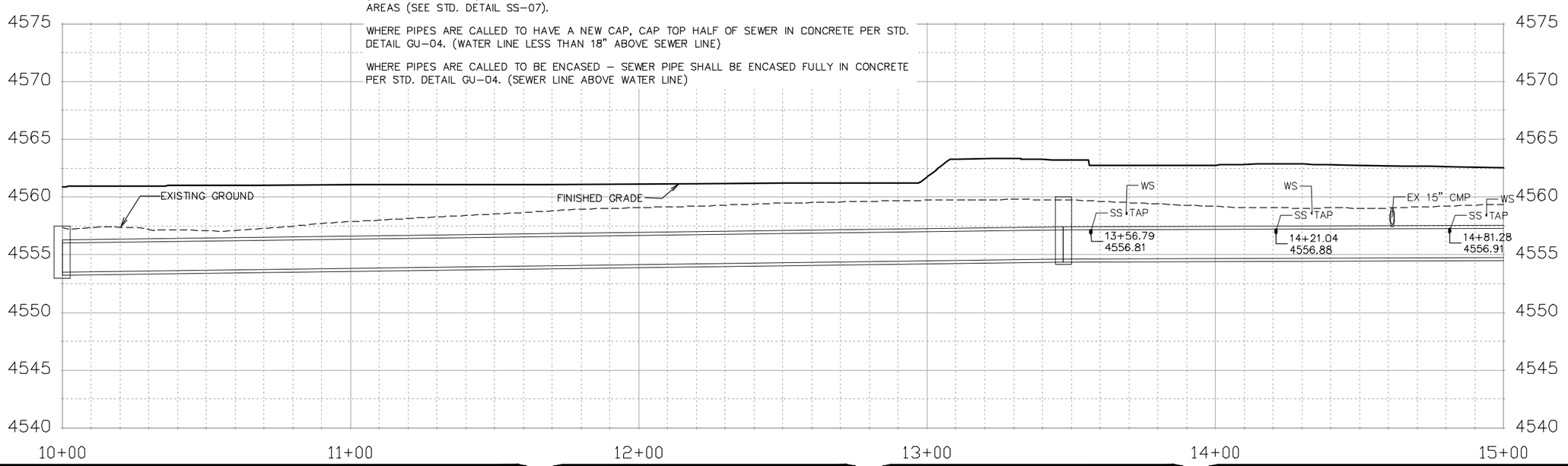
SEWER TAPS (SSTAP) TO EXISTING MAINS SHALL BE ACCOMPLISHED USING TAPPING SADDLES OR ENGINEER APPROVED EQUAL. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

WHERE PIPES ARE CALLED TO BE ENCASED – SEWER PIPE SHALL BE ENCASED FULLY IN CONCRETE PER STD. DETAIL GU-04. (SEWER LINE ABOVE WATER LINE)



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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS7
June 18, 2020

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MATCH LINE STA 15+00

DOS RIOS DR

FF EL. 4563.75

MAINTAIN AT LEAST 6" HORIZONTAL CLEARANCE BETWEEN OUTSIDE OF NEW STORM STRUCTURES AND EXIST. SEWER PIPE

Structure – (70)
STA 0+50.48, 0.00
N 33053.66
E 88813.00

RAW WATER TO BE INSTALLED BELOW SEWER PIPE. ENCASE SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

ADJUST MH TO FINISHED GRADE

14+81.28
N 33322.19
E 88562.27
SSTAP

POTHOLE EX. UTIL. PRIOR TO CONSTRUCTION

15+74.89
N 33247.91
E 88619.24
SSTAP

16+43.11
N 33193.84
E 88660.85
SSTAP

17+05.09
N 33144.85
E 88698.80
SSTAP

17+65.35
N 33096.78
E 88735.16
SSTAP

18+25.21
N 33048.54
E 88770.58
SSTAP

RAW WATER TO BE INSTALLED BELOW SEWER PIPE. ENCASE SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

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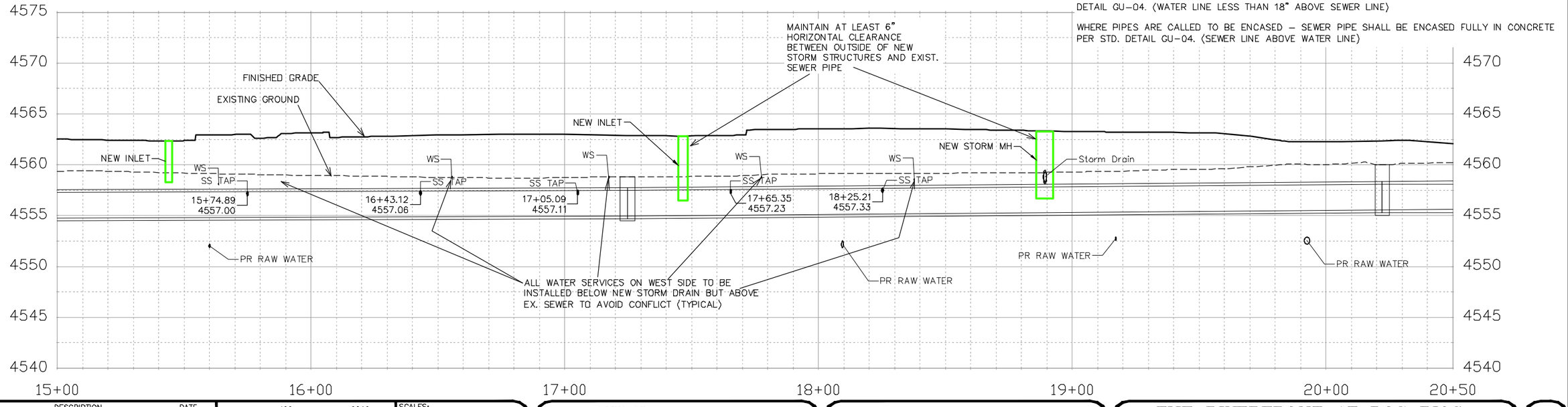
ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

WHERE PIPES ARE CALLED TO BE ENCASED – SEWER PIPE SHALL BE ENCASED FULLY IN CONCRETE PER STD. DETAIL GU-04. (SEWER LINE ABOVE WATER LINE)



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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS8
June 18, 2020

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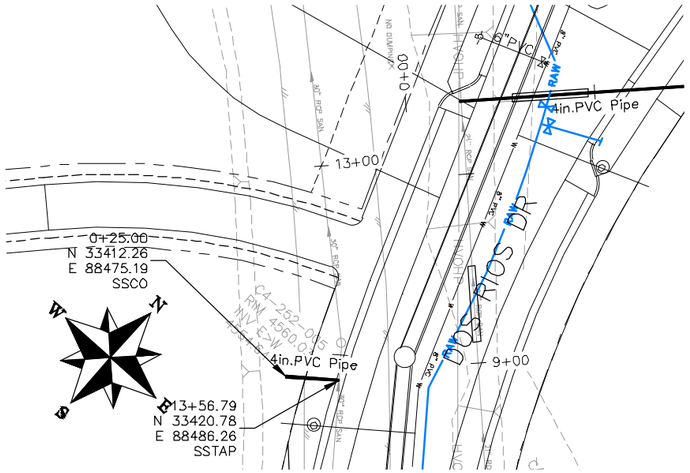
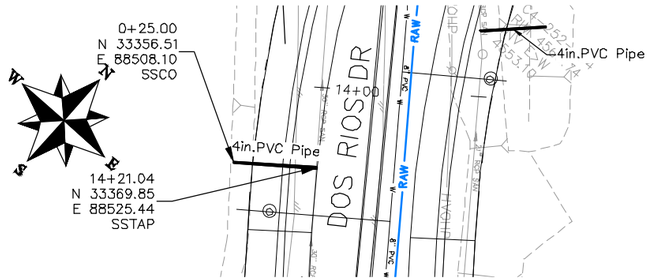
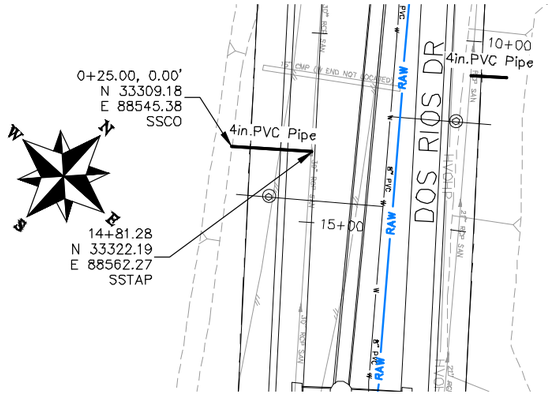






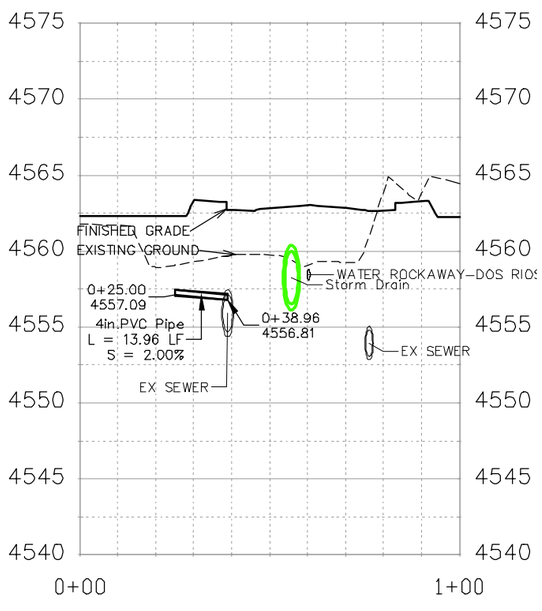
NOTES:

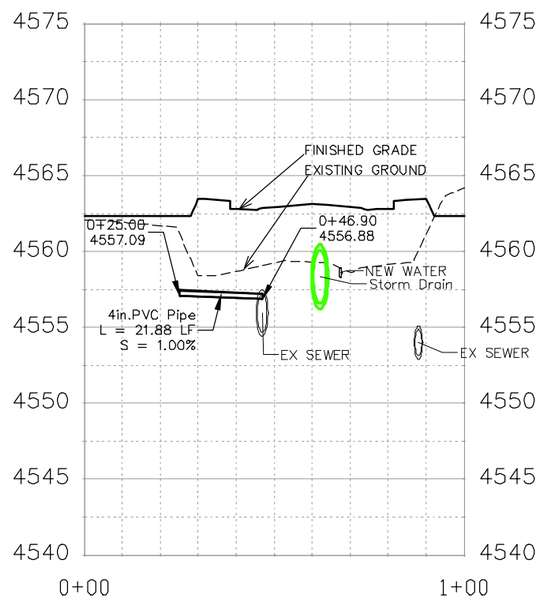
ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

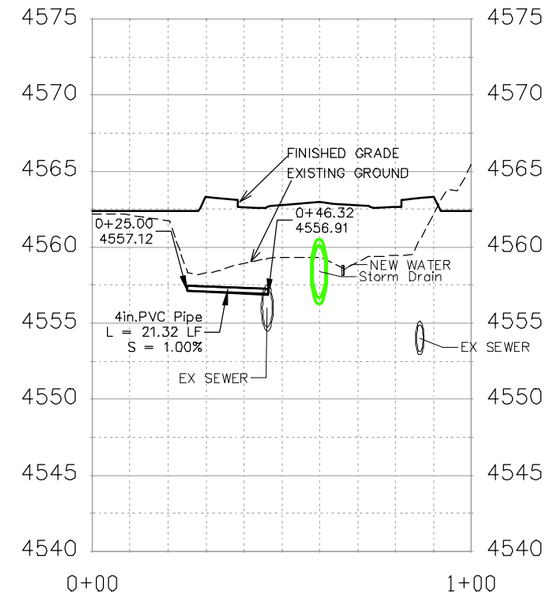
SEWER TAPS (SSTAP) TO EXISTING MAINS SHALL BE ACCOMPLISHED USING TAPPING SADDLES OR ENGINEER APPROVED EQUAL. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).







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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS9
June 18, 2020

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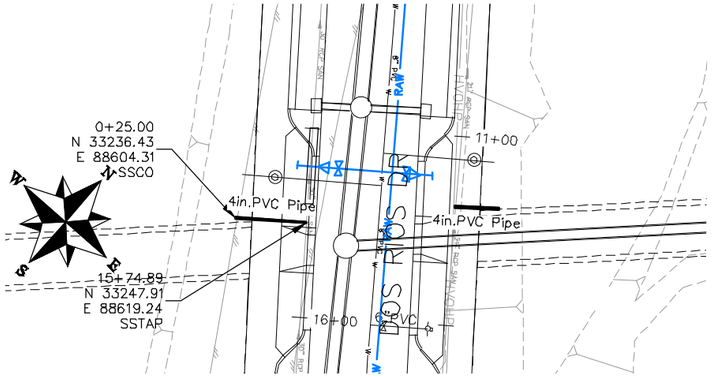

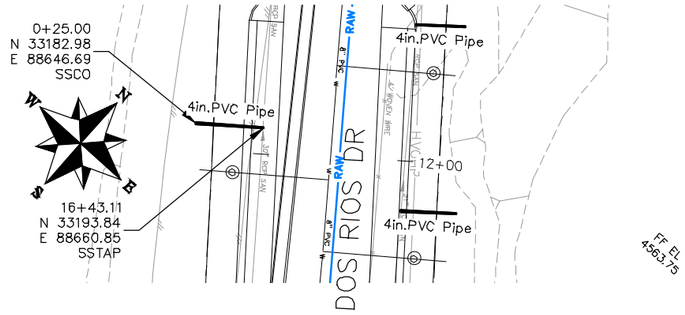

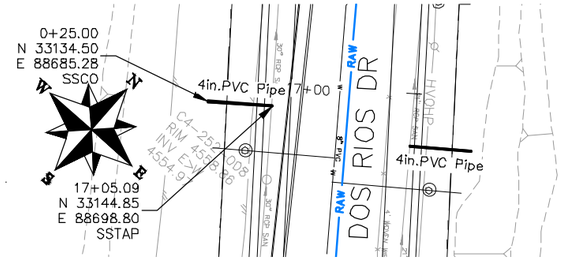

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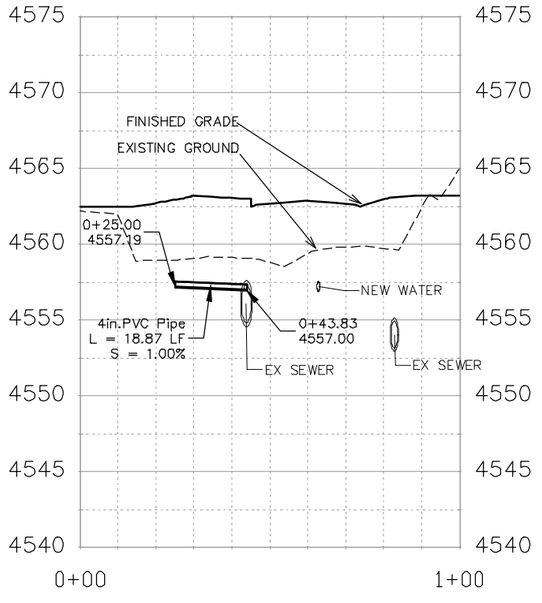

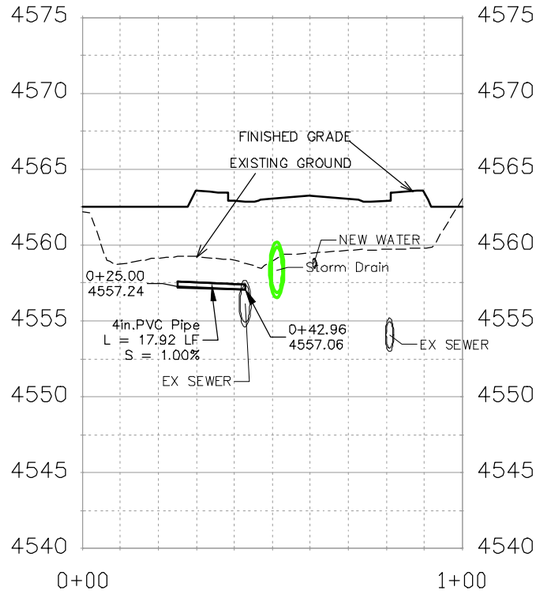

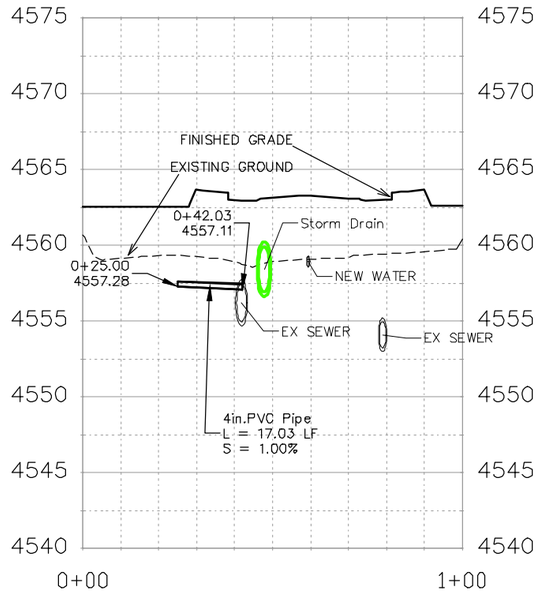

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DRAWN BY JCS DATE 2019
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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS10
June 18, 2020

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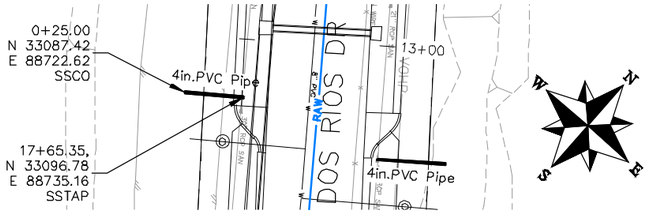

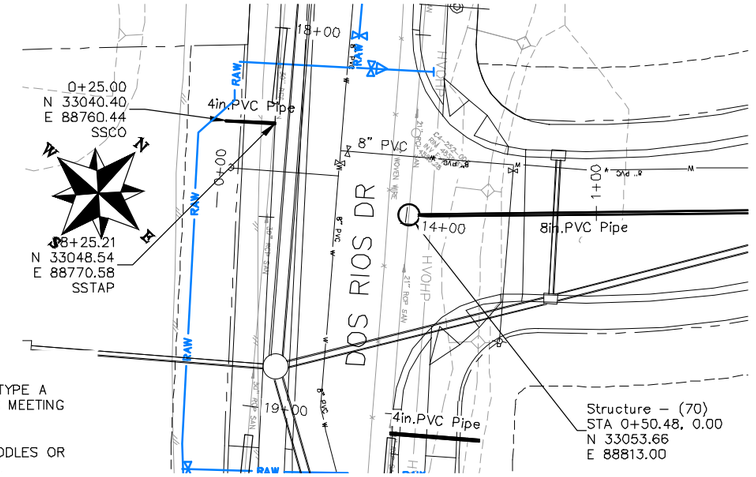

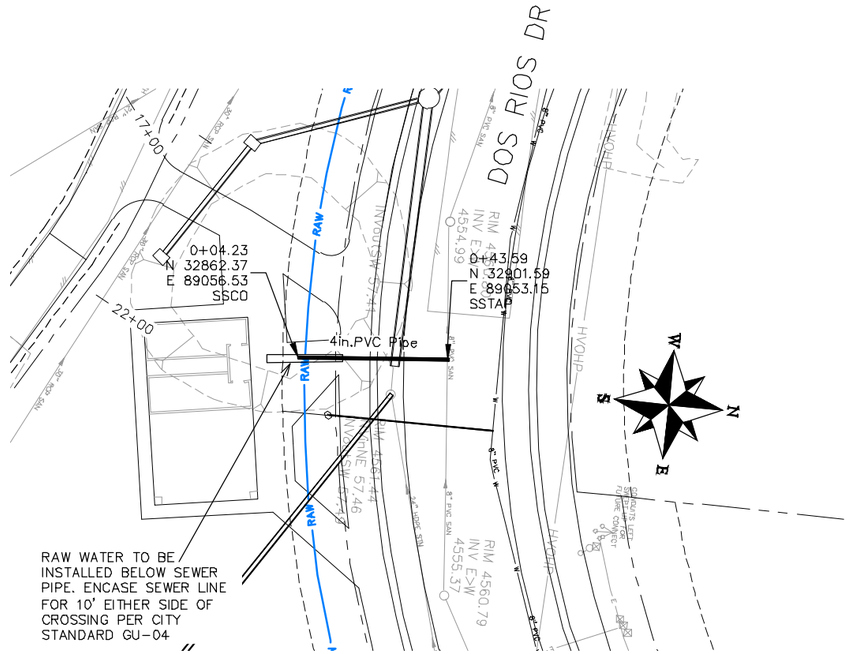

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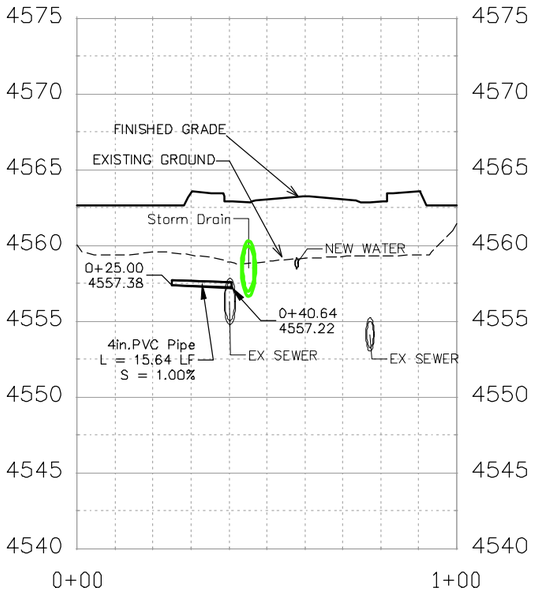

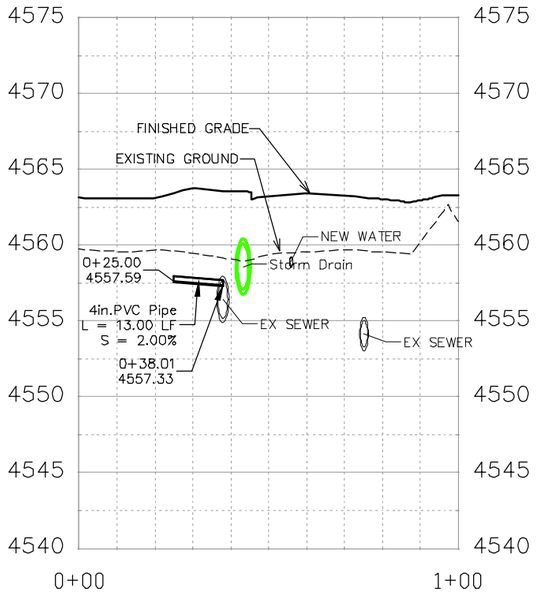

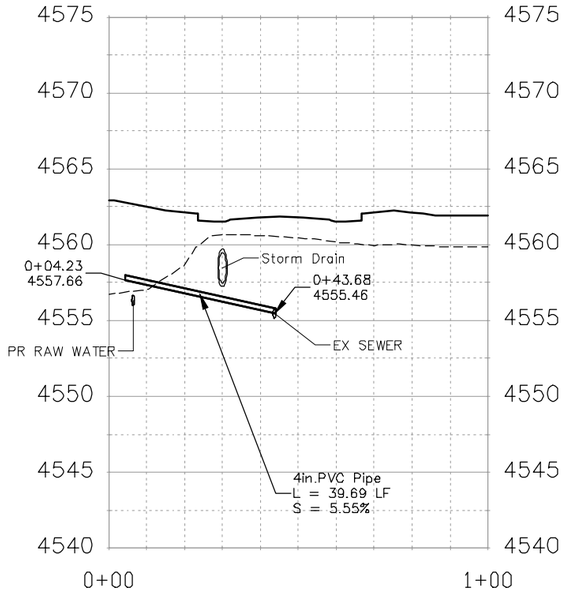

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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS11
June 18, 2020

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NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED ON THE UPSTREAM PIPE SIDES OF ALL MANHOLES. (NO SEPARATE PAY)

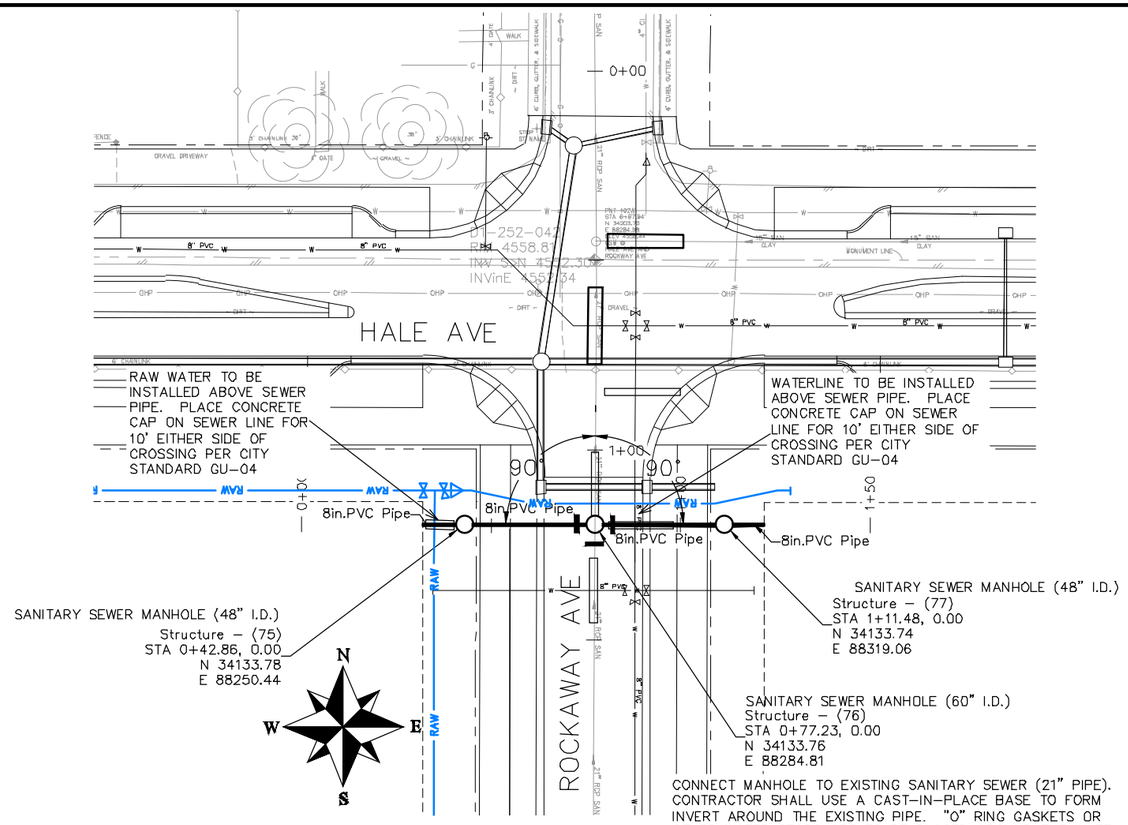
SEWER TAPS (SSTAP) TO EXISTING MAINS SHALL BE ACCOMPLISHED USING TAPPING SADDLES OR ENGINEER APPROVED EQUAL. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

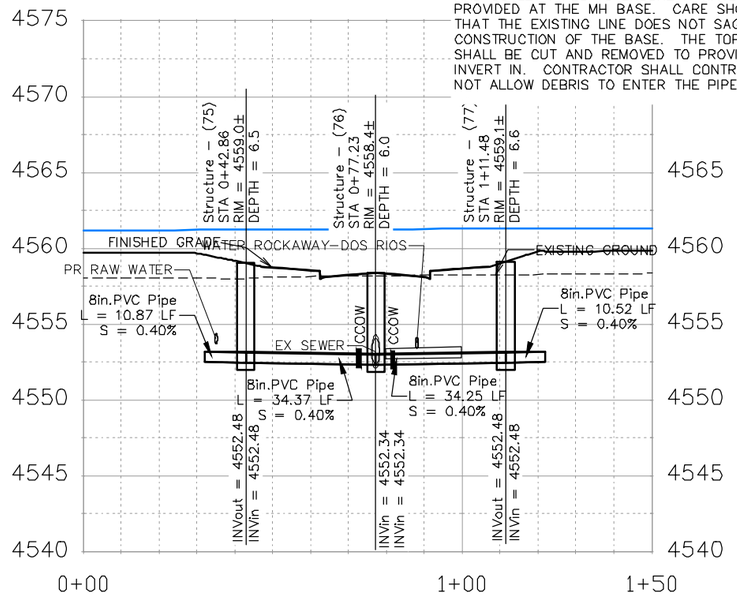
AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

WHERE PIPES ARE CALLED TO BE ENCASED – SEWER PIPE SHALL BE ENCASED FULLY IN CONCRETE PER STD. DETAIL GU-04. (SEWER LINE ABOVE WATER LINE)



CONNECT MANHOLE TO EXISTING SANITARY SEWER (21" PIPE). CONTRACTOR SHALL USE A CAST-IN-PLACE BASE TO FORM INVERT AROUND THE EXISTING PIPE. "O" RING GASKETS OR OTHER WATER STOPS ARE TO BE PLACED AROUND THE INLET AND OUTLET PIPES TO ENSURE A WATER TIGHT SEAL IS PROVIDED AT THE MH BASE. CARE SHOULD BE TAKEN SO THAT THE EXISTING LINE DOES NOT SAG OR FLOAT DURING CONSTRUCTION OF THE BASE. THE TOP OF THE EXISTING PIPE SHALL BE CUT AND REMOVED TO PROVIDE FOR THE NEW INVERT IN. CONTRACTOR SHALL CONTROL SEWER FLOW AND NOT ALLOW DEBRIS TO ENTER THE PIPE.



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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS12
June 18, 2020

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RAW WATER TO BE INSTALLED ABOVE SEWER PIPE. PLACE CONCRETE CAP ON SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

CONNECT TO EXISTING MANHOLE (8 PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08).

ADJUST MH TO FINISHED GRADE

WATERLINE TO BE INSTALLED ABOVE SEWER PIPE. PLACE CONCRETE CAP ON SEWER LINE FOR 10' EITHER SIDE OF CROSSING PER CITY STANDARD GU-04

ROCKAWAY AVE

LAWRENCE AVE

MATCH LINE STA 5+00

Structure – (72)
STA 4+51.64, 0.00
N 33720.23
E 88674.19
SANITARY SEWER MANHOLE (48" I.D.)

3+85.93
N 33692.11
E 88614.79
SSTAP

3+42.03
N 33675.57
E 88574.62
SSTAP

0+65.22
N 33664.55
E 88627.84
SSCO

SANITARY SEWER MANHOLE (48" I.D.)
Structure – (73)
STA 3+47.18, 0.00
N 33675.53
E 88579.77

0+71.91
N 33643.52
E 88574.60
SSCO

8in.PVC Pipe

4in.PVC Pipe

90°

155°

151°

FF EL 4563.3

FF EL 4563.3

NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED ON THE UPSTREAM PIPE SIDES OF ALL MANHOLES. (NO SEPARATE PAY)

SEWER TAPS (SSTAP) TO NEW MAINS SHALL BE ACCOMPLISHED USING FULL BODY WYES. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

WHERE PIPES ARE CALLED TO BE ENCASED – SEWER PIPE SHALL BE ENCASED FULLY IN CONCRETE PER STD. DETAIL GU-04. (SEWER LINE ABOVE WATER LINE)

ELEVATION

C4-252-002
RIM = 4559.2±
DEPTH = 6.7
INVin = 4552.66
INVout = 4552.52

FINISHED GRADE

EXISTING GROUND

PR RAW WATER

NEW WATER

Storm Drain

8in.PVC Pipe
L = 297.70 LF
S = 0.45%

CCOW

Structure – (73)
STA 3+47.18
RIM = 4562.3±
DEPTH = 7.4

3+42.03
4555.25

INVout = 4554.93
INVin = 4554.93

NEW SS

3+85.93
4555.42

8in.PVC Pipe
L = 104.46 LF
S = 0.40%

Structure – (72)
STA 4+51.64
RIM = 4563.1±
DEPTH = 7.7

INVout = 4555.35
INVin = 4555.35

4575
4570
4565
4560
4555
4550
4545
4540

0+00 1+00 2+00 3+00 4+00 5+00

DESCRIPTION	DATE
REVISION △	
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REVISION △	
REVISION △	

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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS13
June 18, 2020

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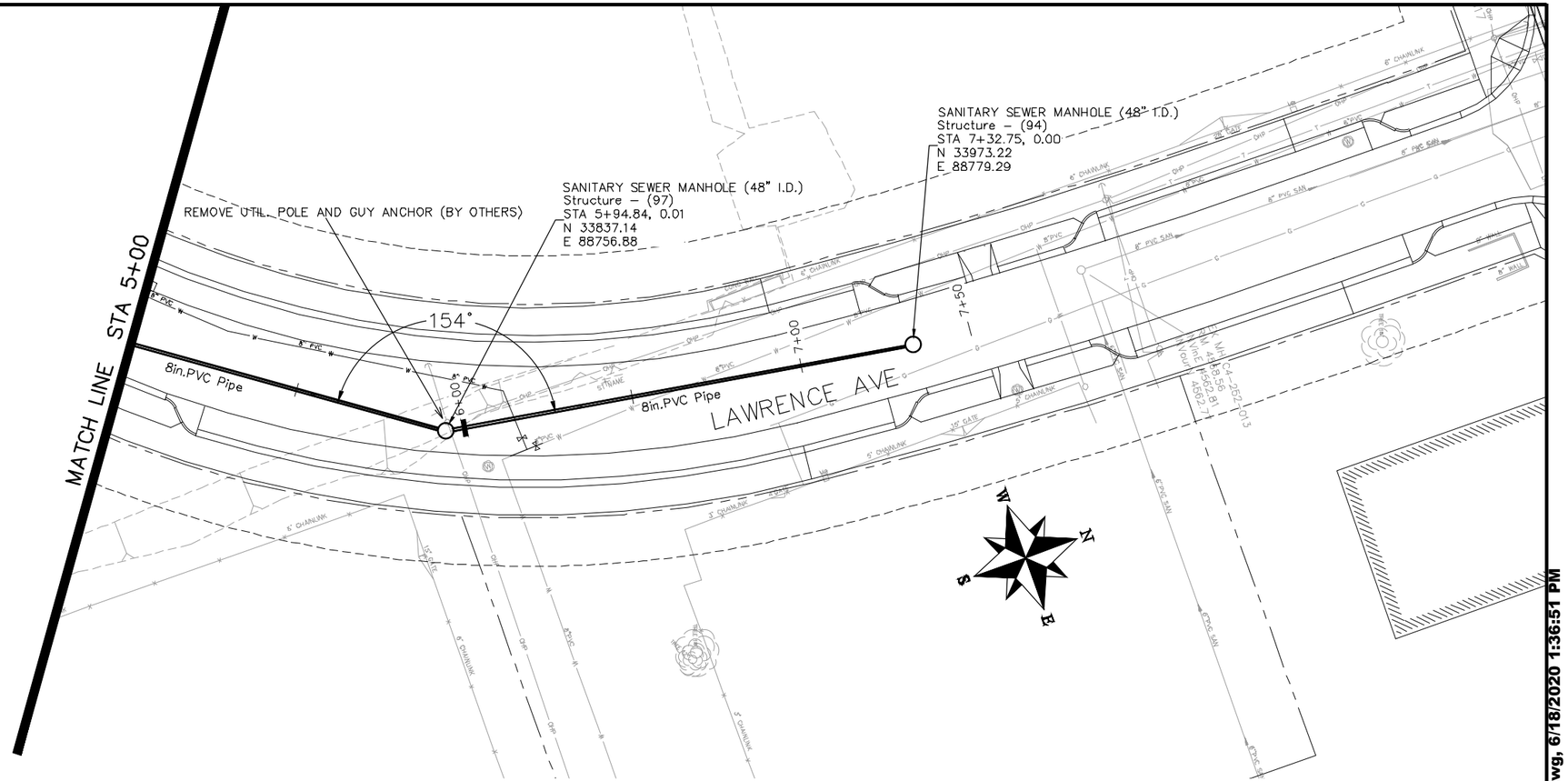

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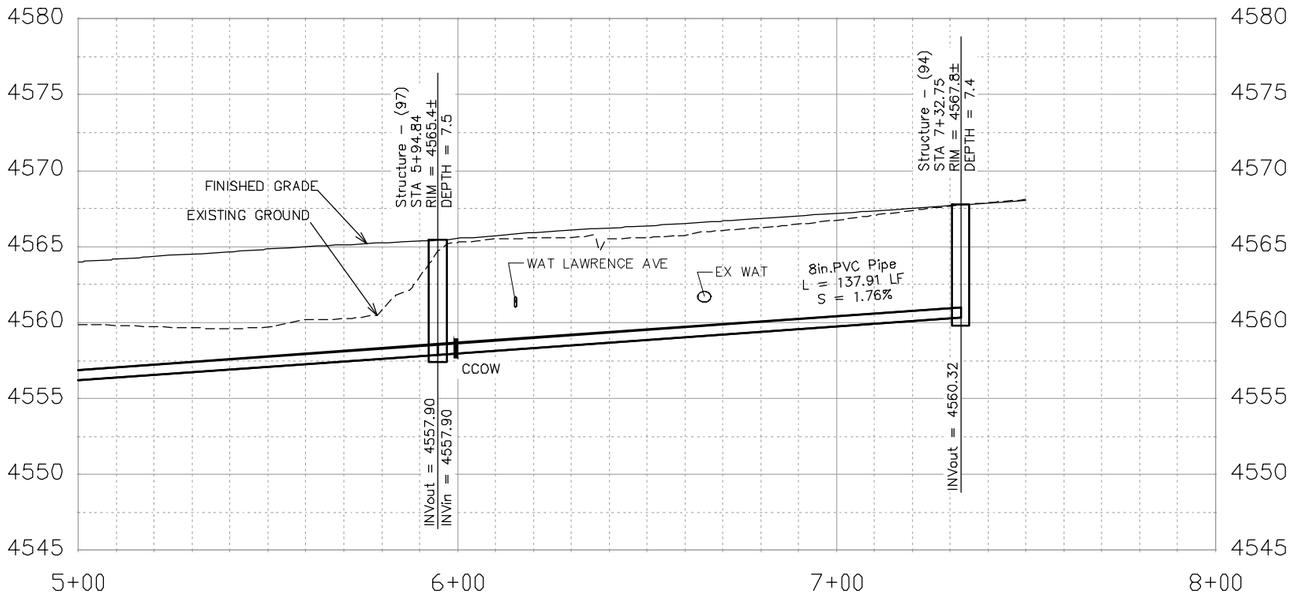

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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS14
June 18, 2020

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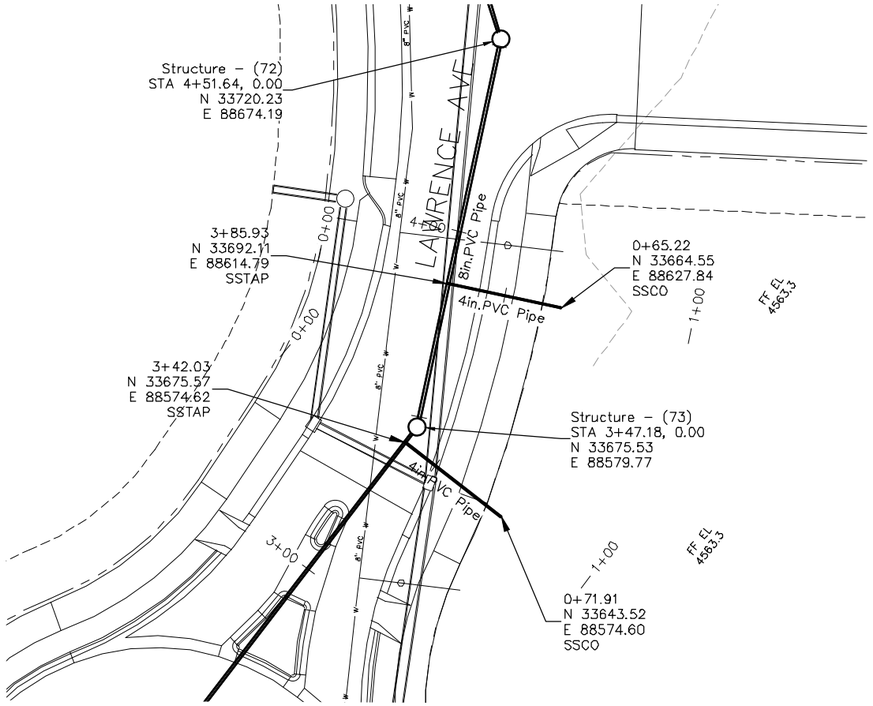

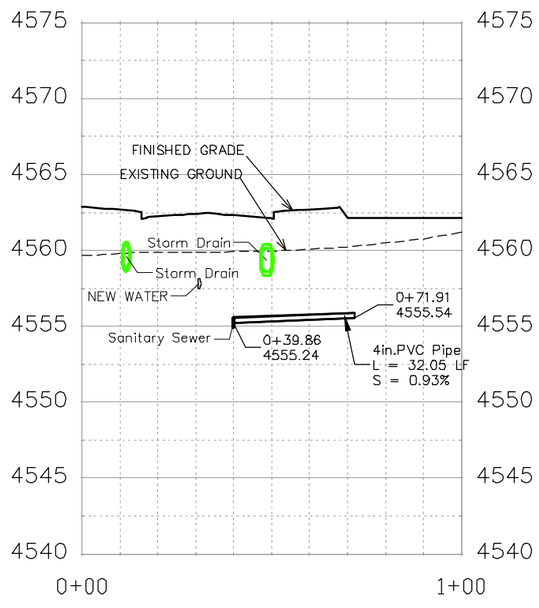

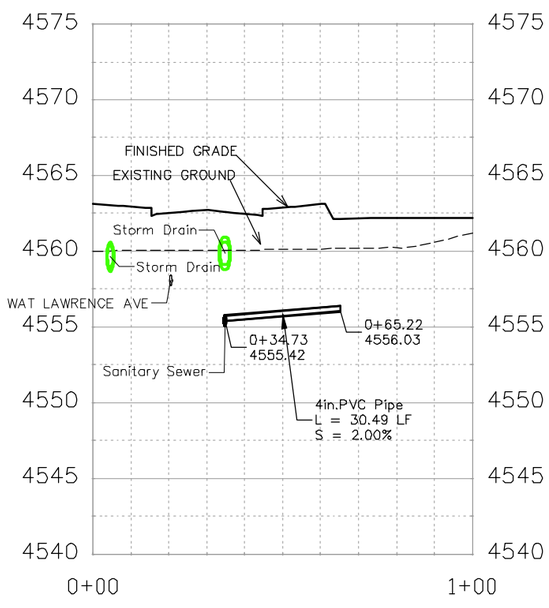

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VERTICAL 0 2.5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS15
June 18, 2020

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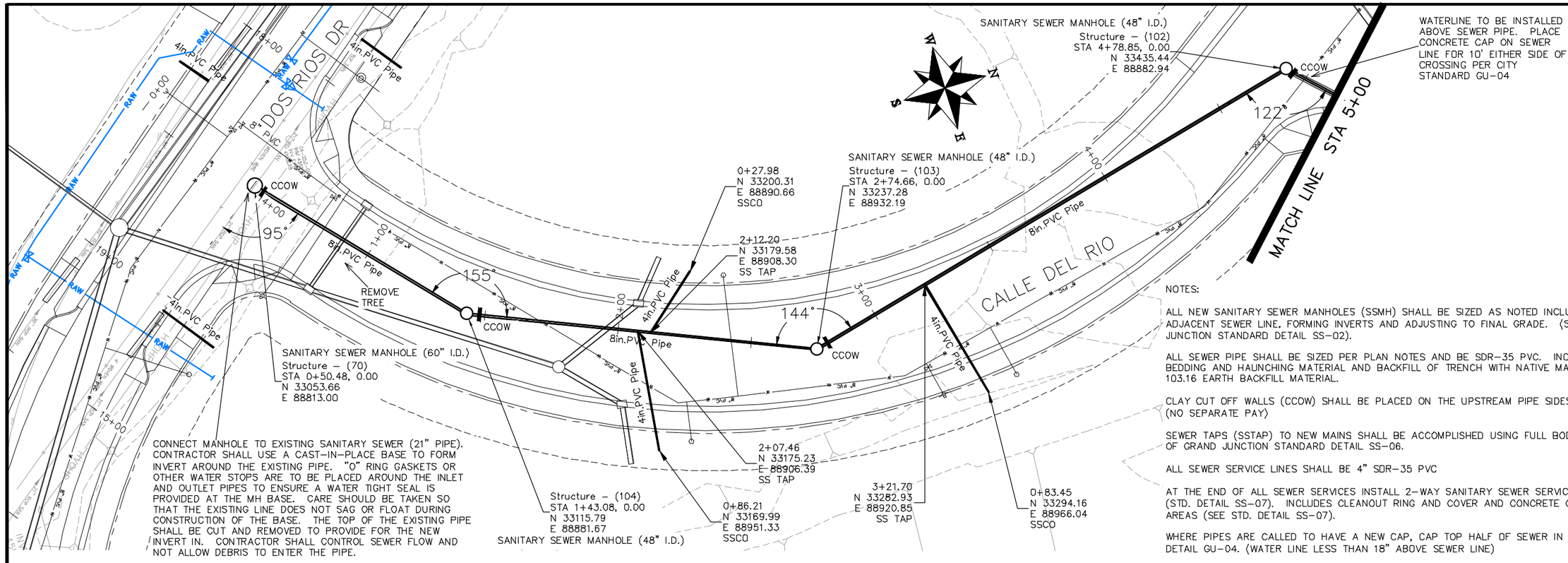

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ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED ON THE UPSTREAM PIPE SIDES OF ALL MANHOLES. (NO SEPARATE PAY)

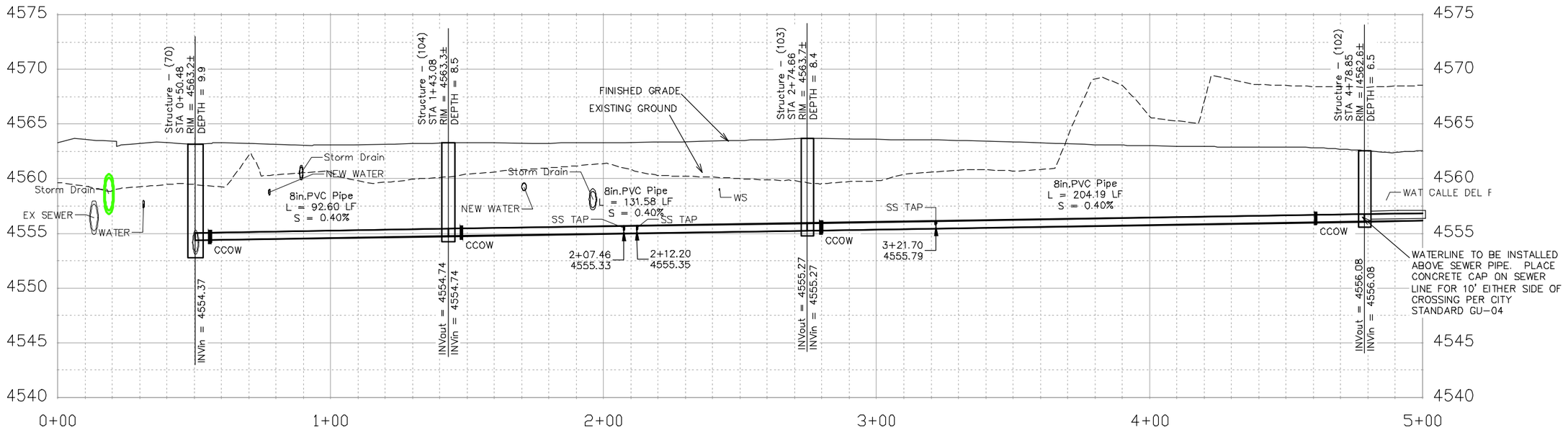
SEWER TAPS (SSTAP) TO NEW MAINS SHALL BE ACCOMPLISHED USING FULL BODY WYES. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

WHERE PIPES ARE CALLED TO BE ENCASED – SEWER PIPE SHALL BE ENCASED FULLY IN CONCRETE PER STD. DETAIL GU-04. (SEWER LINE ABOVE WATER LINE)



DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS16
June 18, 2020

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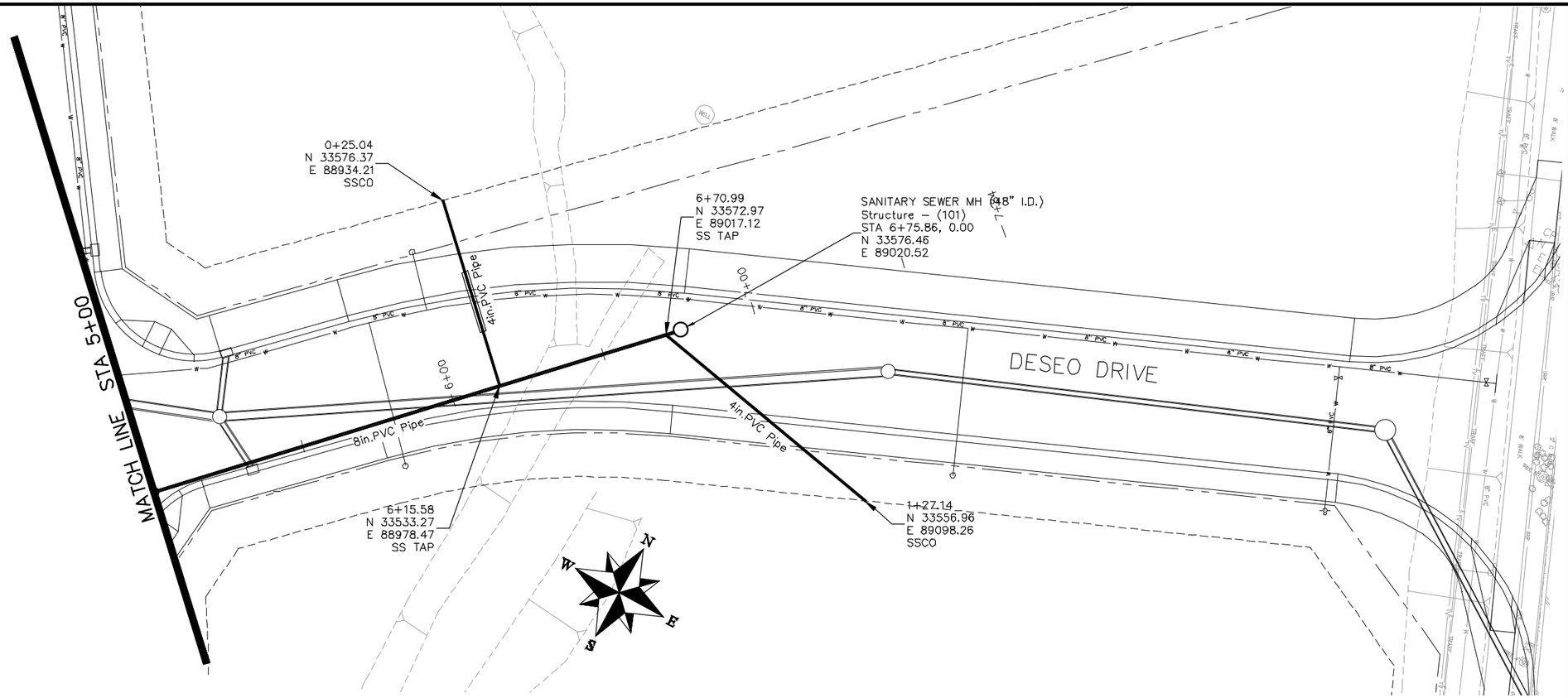

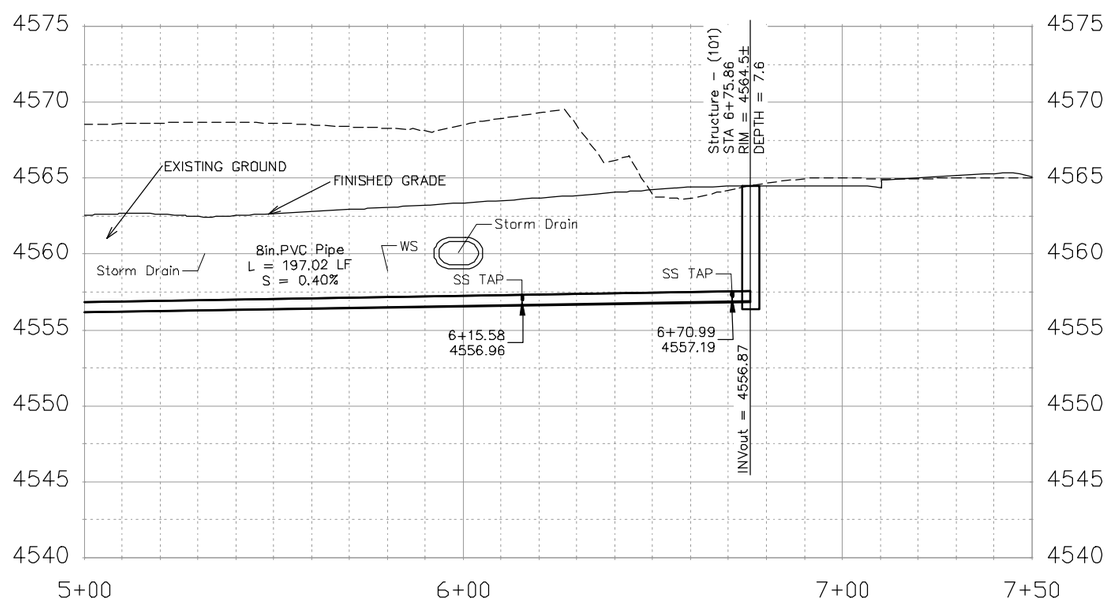

NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS–02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR–35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED ON THE UPSTREAM PIPE SIDES OF ALL MANHOLES. (NO SEPARATE PAY)

SEWER TAPS (SSTAP) TO NEW MAINS SHALL BE ACCOMPLISHED USING FULL BODY WYES. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS–06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR–35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2–WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS–07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS–07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU–04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

WHERE PIPES ARE CALLED TO BE ENCASED – SEWER PIPE SHALL BE ENCASED FULLY IN CONCRETE PER STD. DETAIL GU–04. (SEWER LINE ABOVE WATER LINE)

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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS17
June 18, 2020

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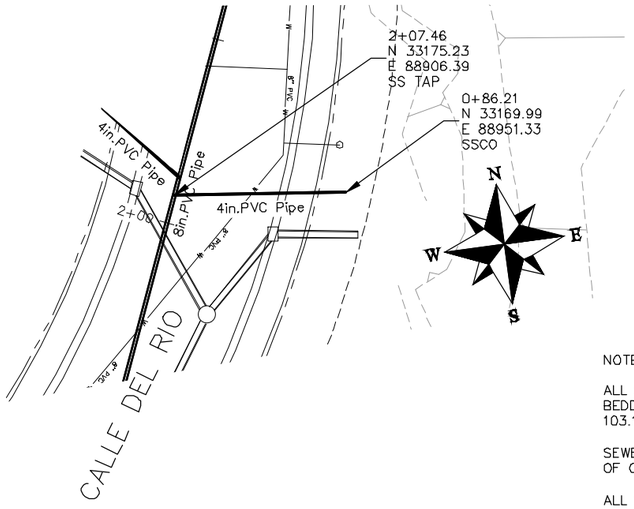
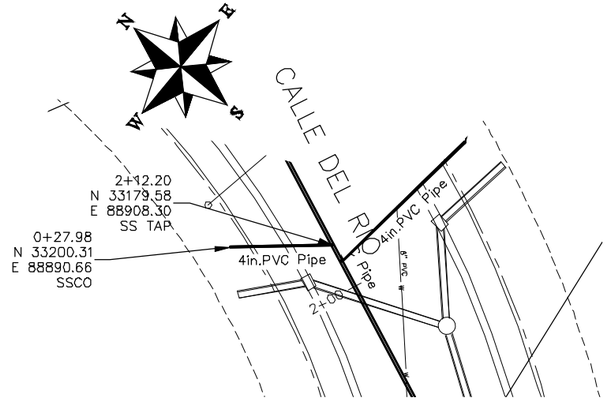
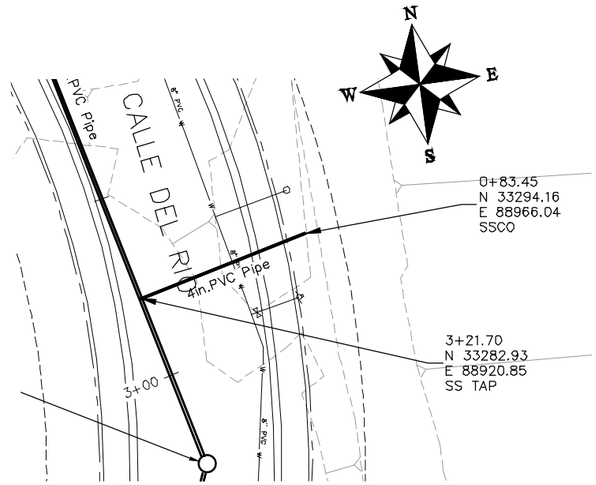






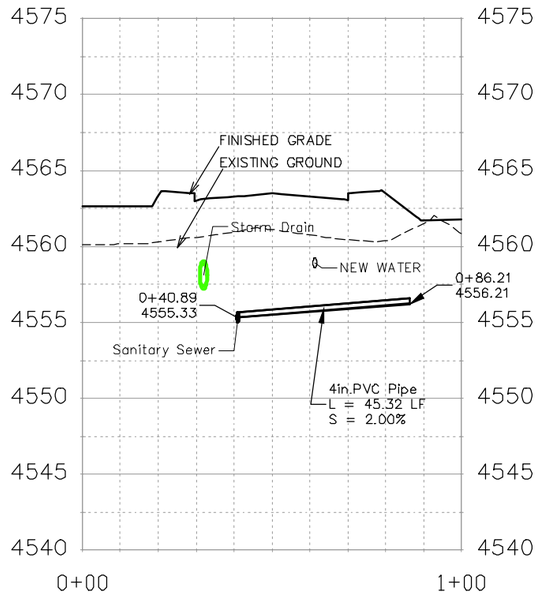
NOTES:

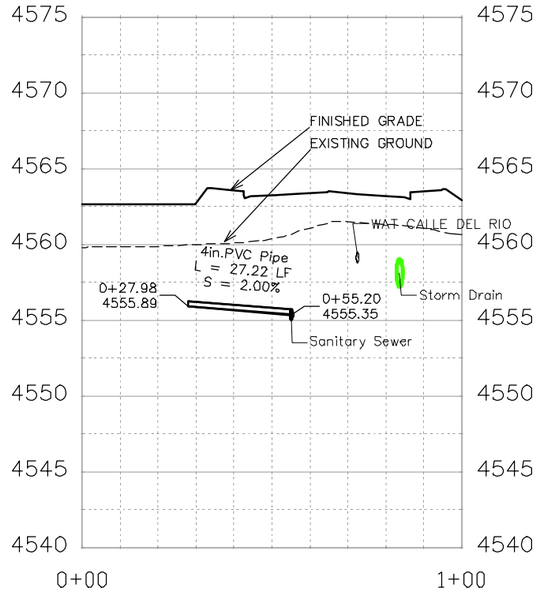
ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

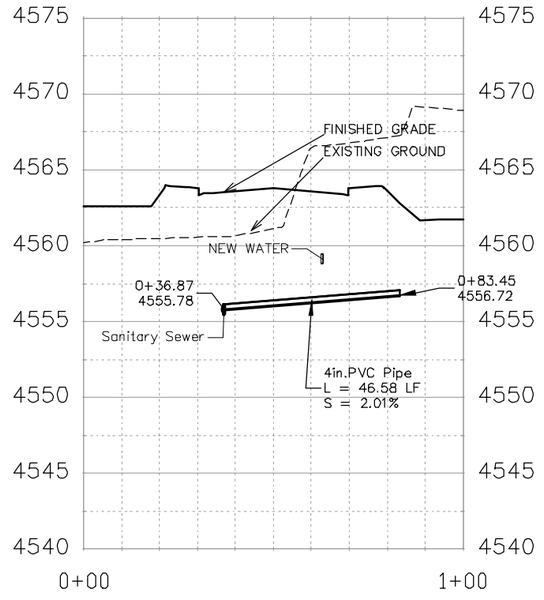
SEWER TAPS (SSTAP) TO NEW MAINS SHALL BE ACCOMPLISHED USING FULL BODY WYES. SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-06.

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).







DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS18
June 18, 2020

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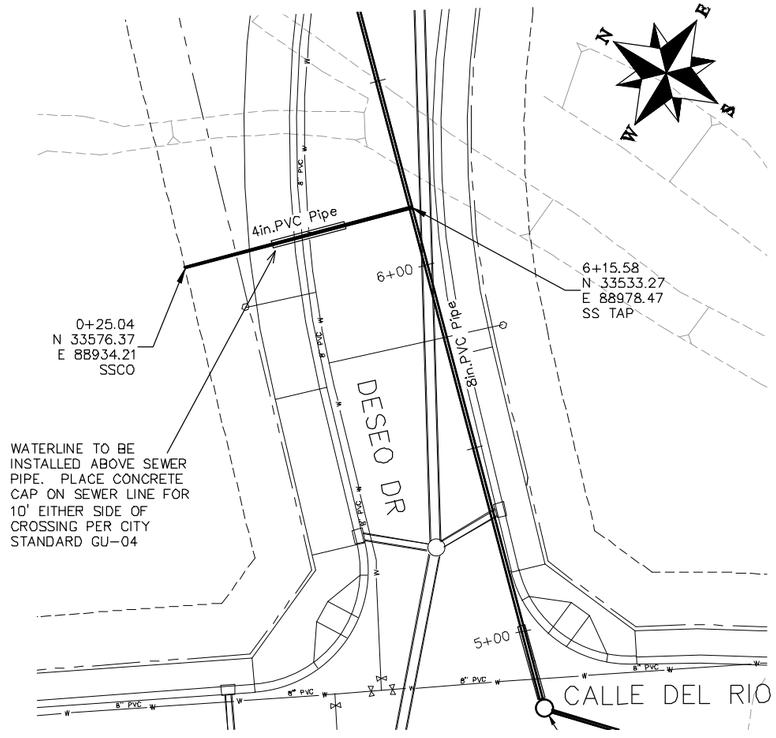

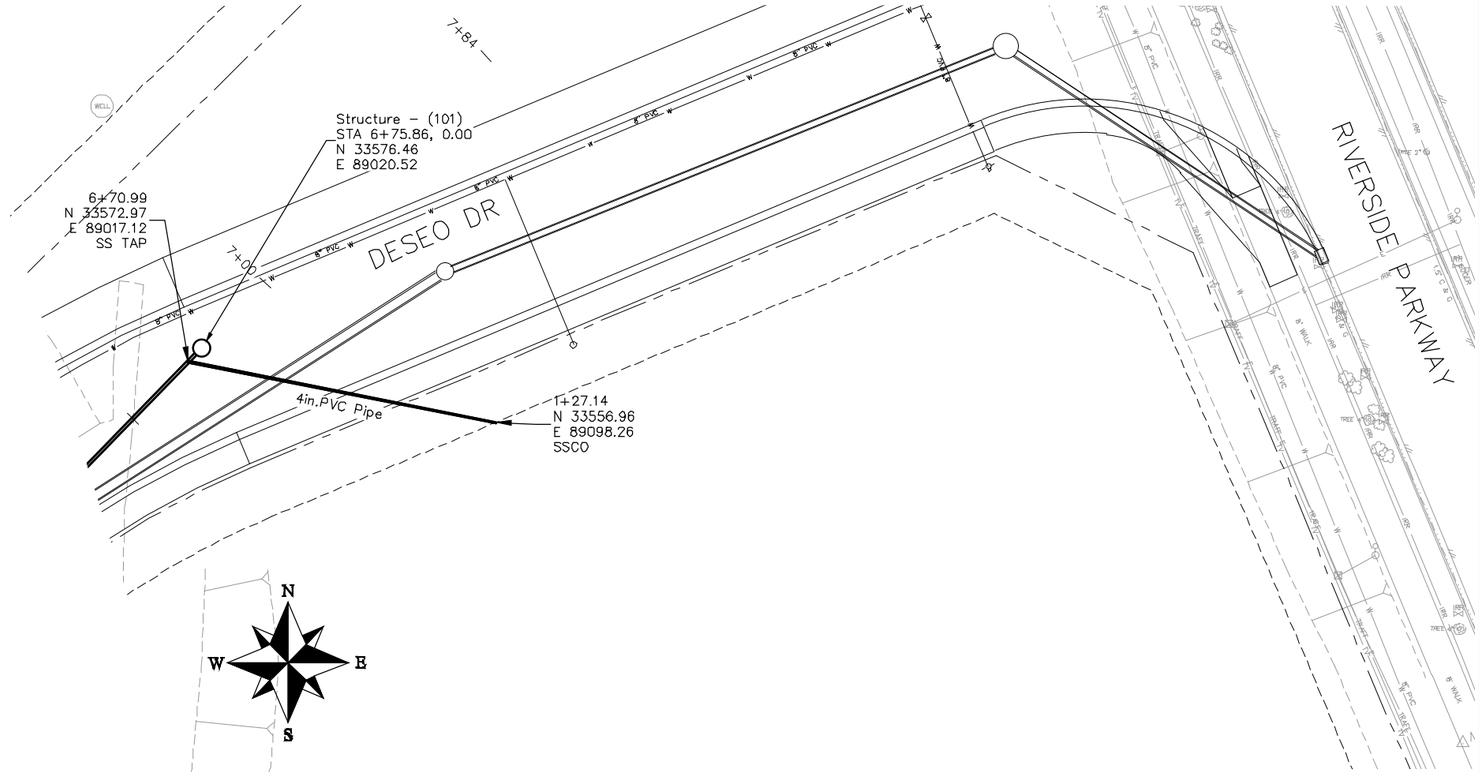

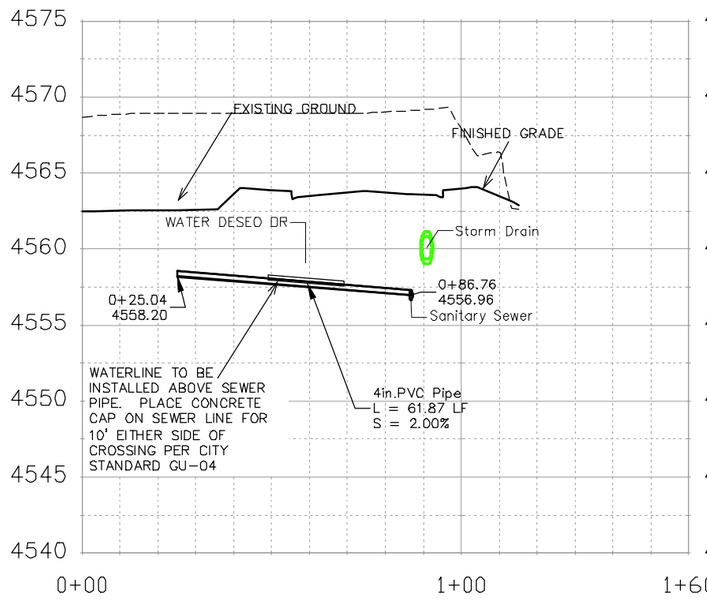

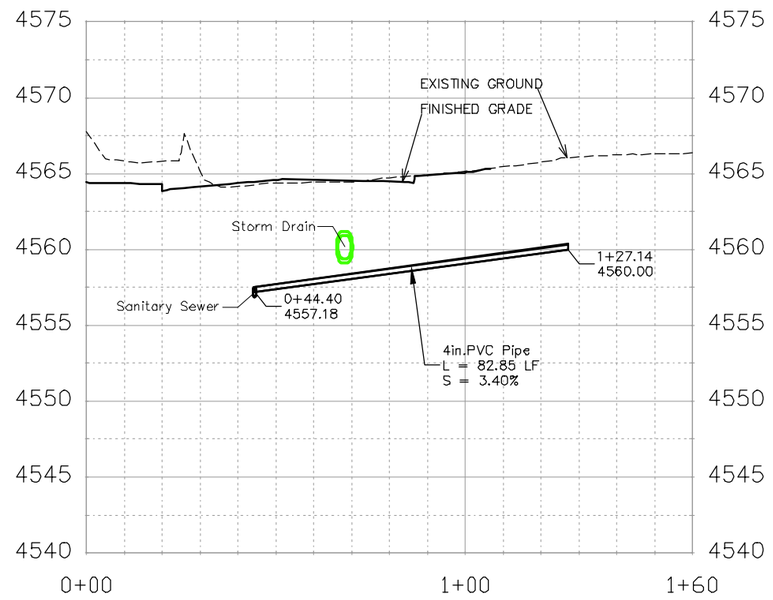

NOTES:

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

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AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

DESCRIPTION	DATE
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REVISION	
REVISION	
REVISION	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 - SS19
June 18, 2020

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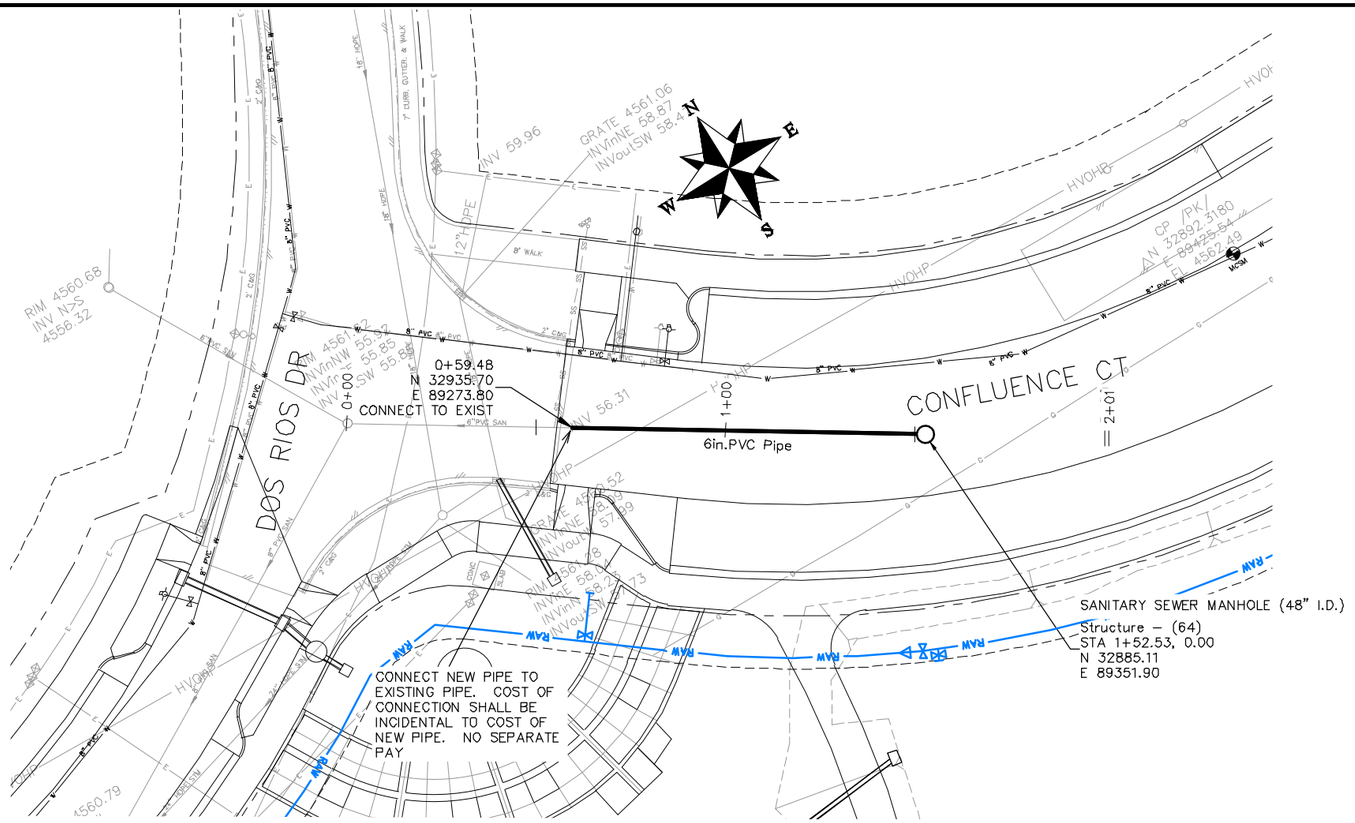

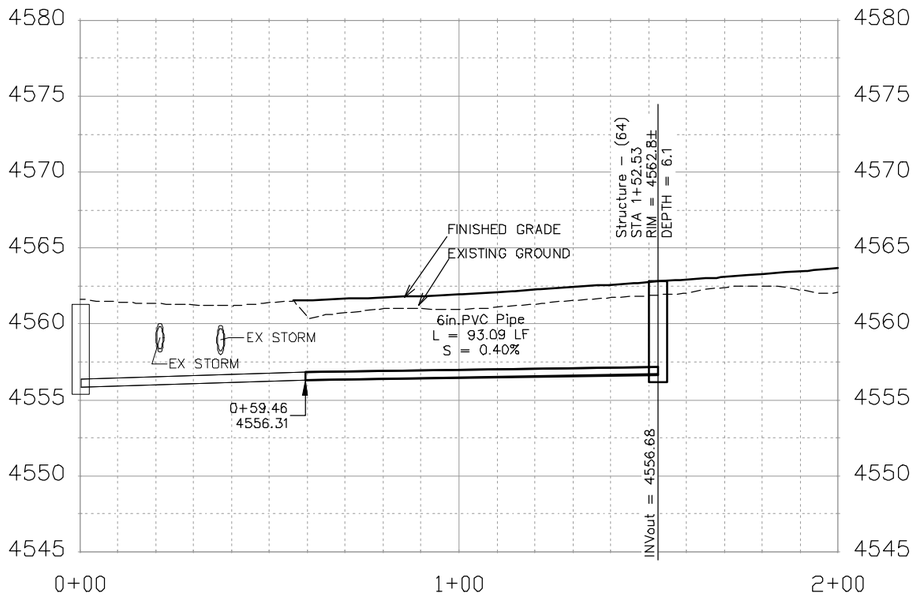

NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS–02).

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REVISION △	
REVISION △	

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS20
June 18, 2020

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CONNECT MANHOLE TO EXISTING SANITARY SEWER (8" PIPE). CONTRACTOR SHALL USE A CAST-IN-PLACE BASE TO FORM INVERT AROUND THE EXISTING PIPE. "O" RING GASKETS OR OTHER WATER STOPS ARE TO BE PLACED AROUND THE INLET AND OUTLET PIPES TO ENSURE A WATER TIGHT SEAL IS PROVIDED AT THE MH BASE. CARE SHOULD BE TAKEN SO THAT THE EXISTING LINE DOES NOT SAG OR FLOAT DURING CONSTRUCTION OF THE BASE. THE TOP OF THE EXISTING PIPE SHALL BE CUT AND REMOVED TO PROVIDE FOR THE NEW INVERT IN. CONTRACTOR SHALL CONTROL SEWER FLOW AND NOT ALLOW DEBRIS TO ENTER THE PIPE.

POTHOLE EXIST. UTIL. PRIOR TO CONSTRUCTION

SANITARY SEWER MANHOLE (48" I.D.)
Structure – (48)
STA 0+50.09, 0.00
N 32834.74
E 89643.03

SANITARY SEWER MANHOLE (48" I.D.)
Structure – (62)
STA 2+92.08, 0.00
N 32693.16
E 89839.27

CAP END OF PIPE AND MARK WITH A 4X4 PAINTED GREEN EXTENDING 3' ABOVE FINISHED GRADE
3+31.97
N 32669.80
E 89871.61

0+57.60
N 32830.46
E 89649.20
SS TAP

8in.PVC Pipe

CONFLUENCE CT

4in.PVC Pipe

CCOW

100°

80°

0+19.14
N 32797.55
E 89596.99
SSCO

NOTES:

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

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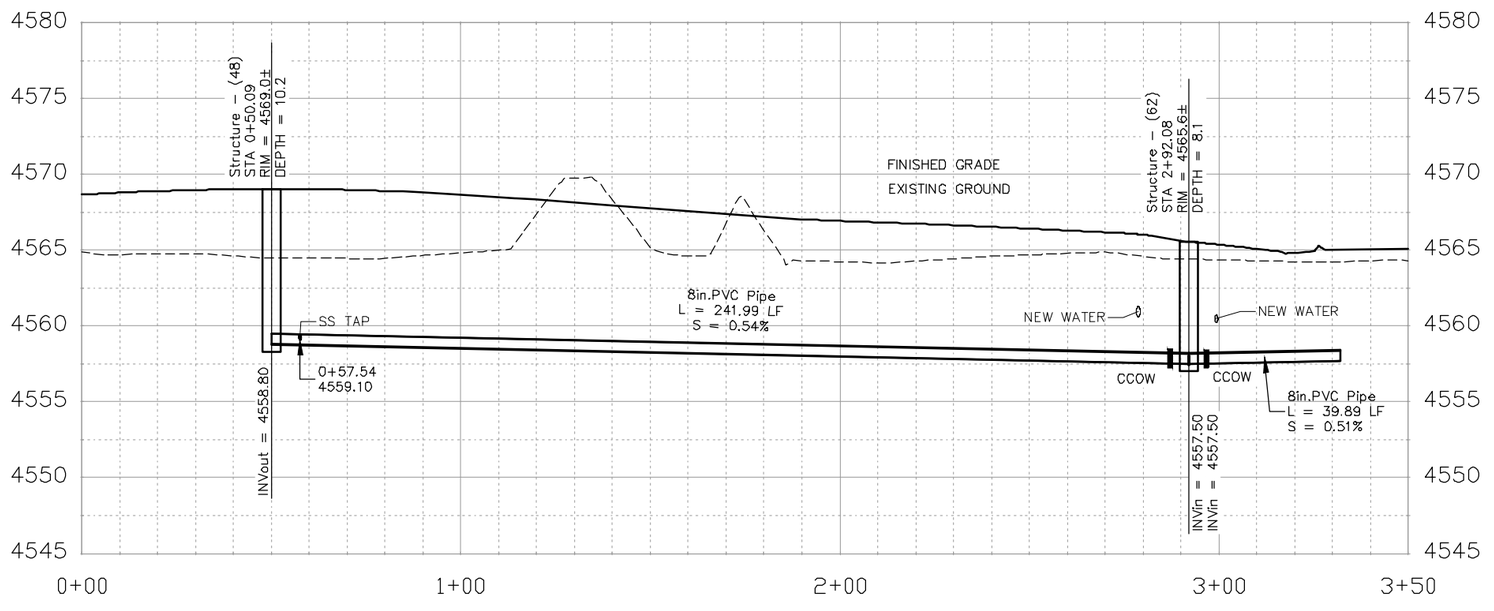

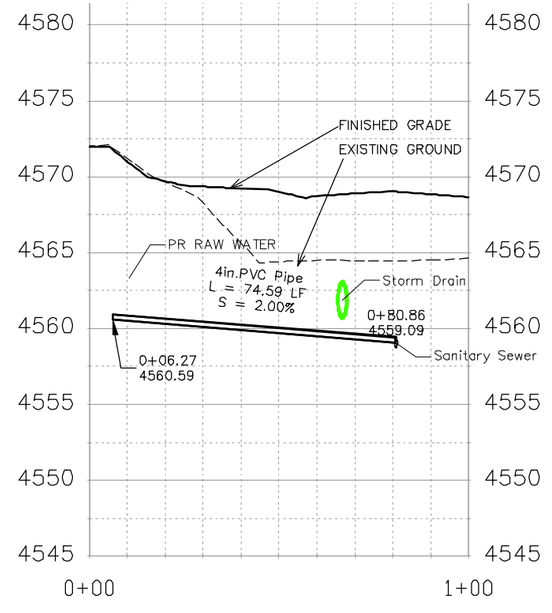

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PH 2 – SS21
June 18, 2020

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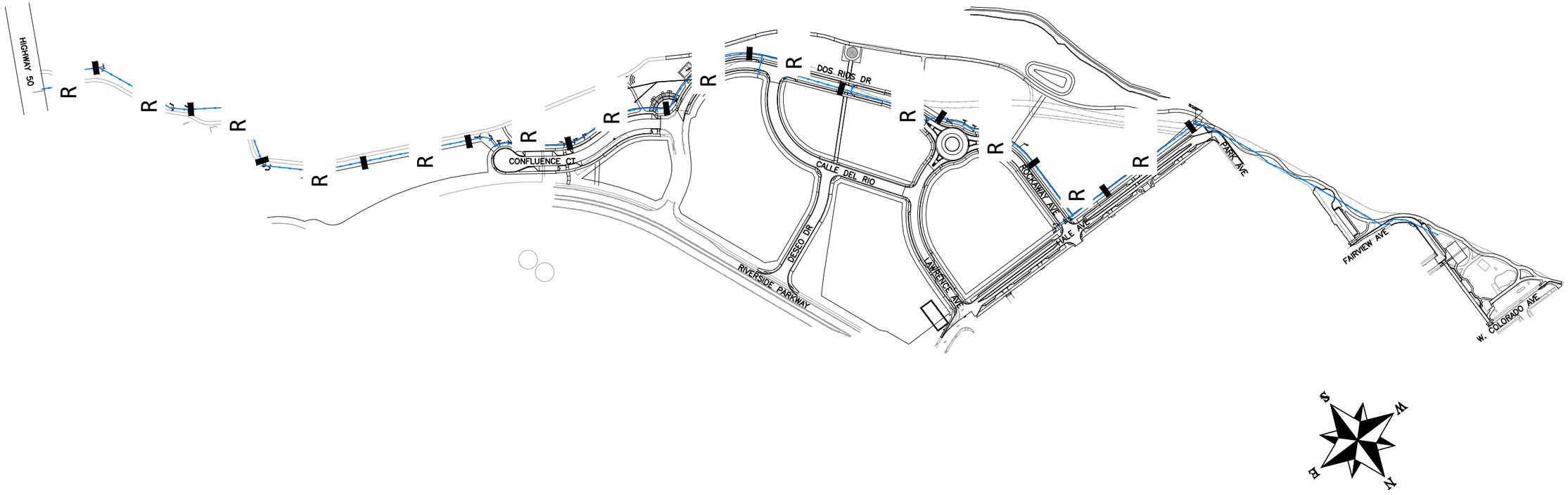

DESCRIPTION	DATE
REVISION 1	–
REVISION 2	–
REVISION 3	–
REVISION 4	–

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES 0 100 200 400

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – KEYMAP
June 19, 2020

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CONSTRUCTION NOTES

(3) 202 – REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS NEEDED FOR PIPE INSTALLATION.

27 202 – REMOVE BLOW–OFF ASSEMBLY. INCLUDES ALL FITTINGS, VALVES, AND BLOW–OFF HYDRANT.

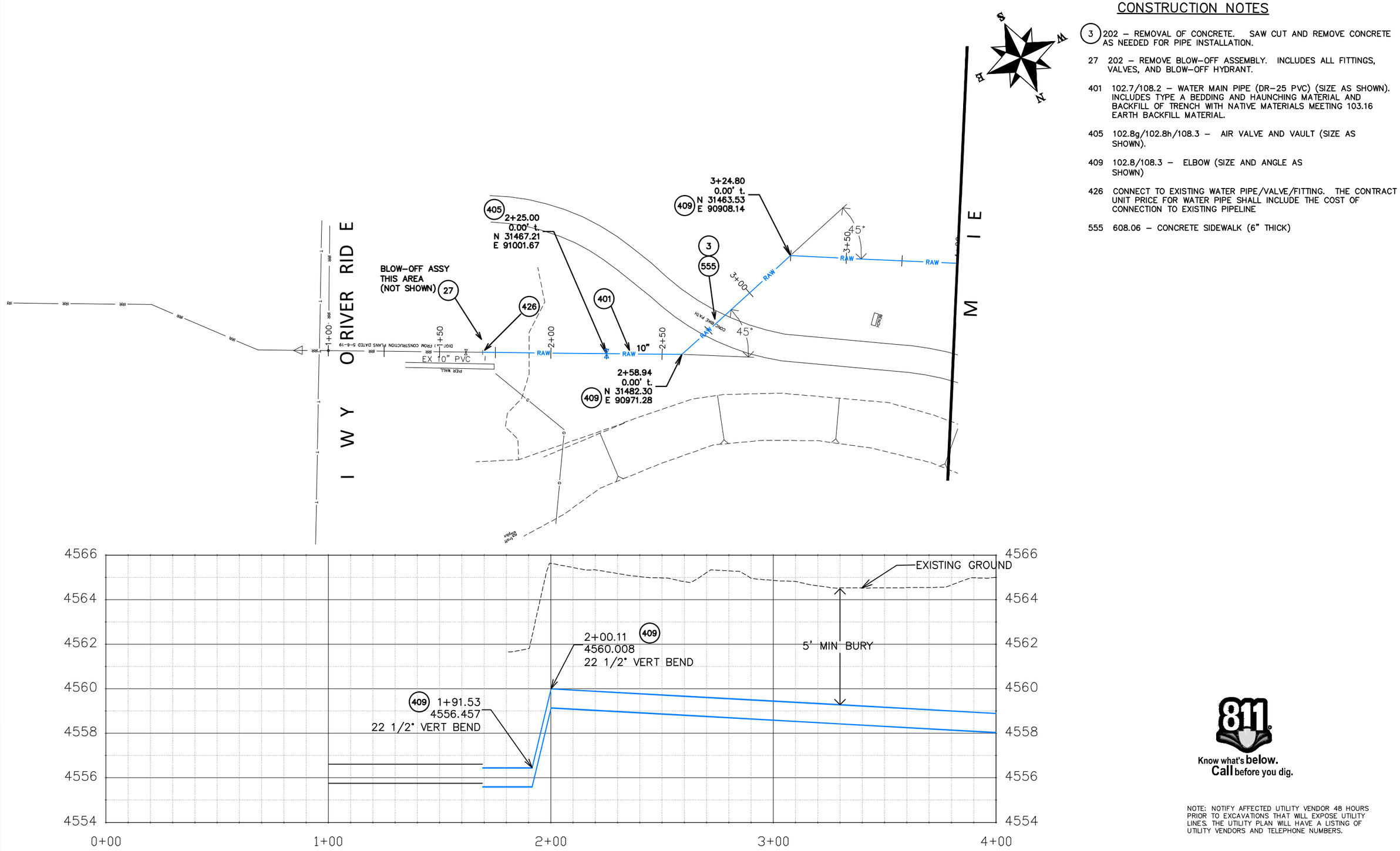
401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

405 102.8g/102.8h/108.3 – AIR VALVE AND VAULT (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

426 CONNECT TO EXISTING WATER PIPE/VALVE/FITTING. THE CONTRACT UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE

555 608.06 – CONCRETE SIDEWALK (6" THICK)



Know what's **below.**
Call before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA1
June 19, 2020

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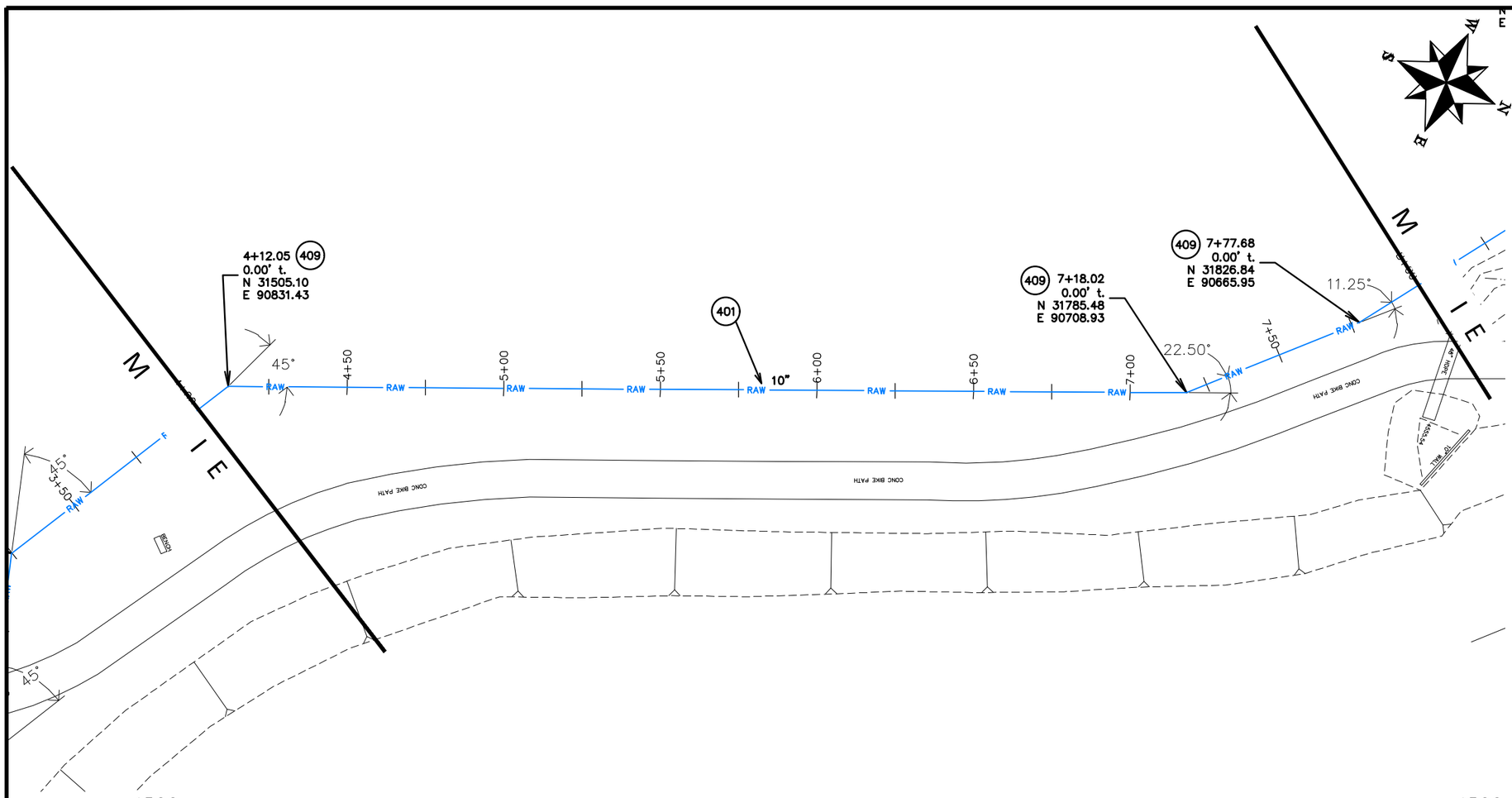
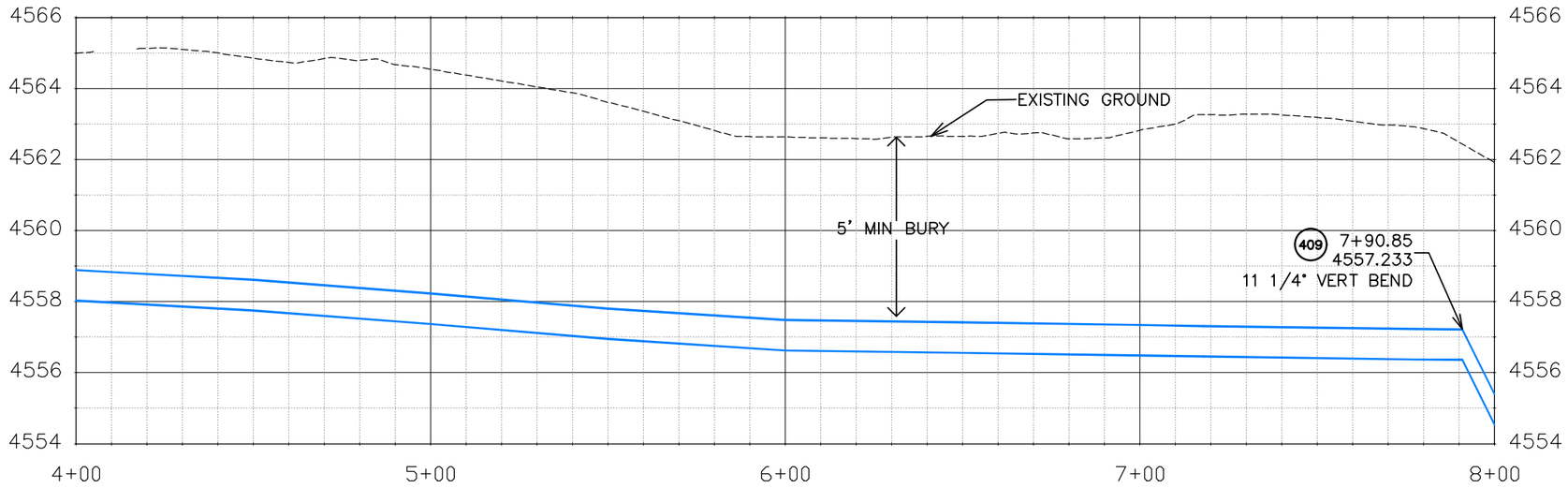
CONSTRUCTION NOTES

(401) 102.7/108.2 – WATER MAIN PIPE (DR-25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)





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DESCRIPTION	DATE
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REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
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CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA2
June 19, 2020

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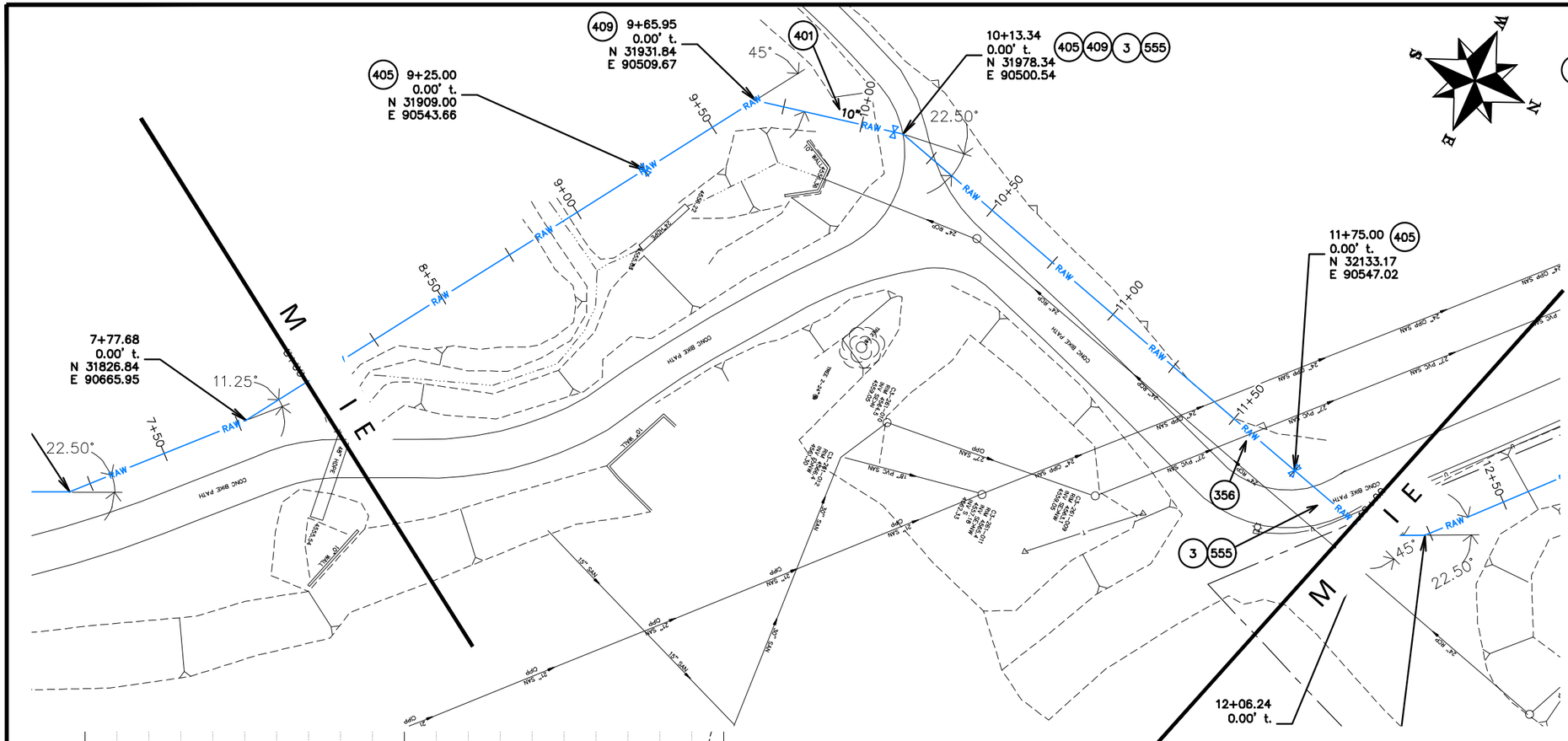


CONSTRUCTION NOTES

(3) 202 – REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS NEEDED FOR PIPE INSTALLATION.

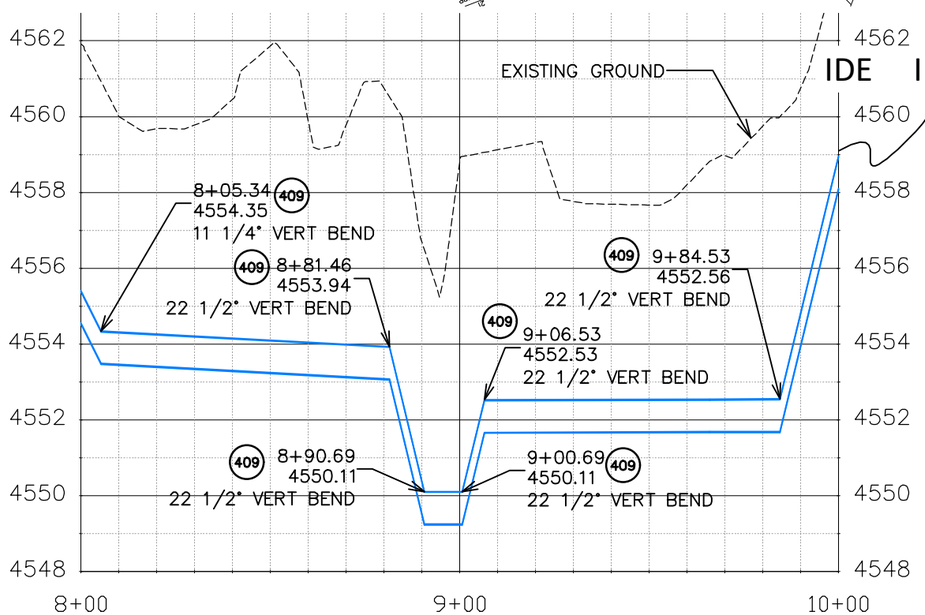
356 104.40 – ENCASE ENTIRE SEWER IN REINFORCED CONCRETE PER STD. DETAIL GU–04. (ALL CASES WHERE WATER LINE BELOW SEWER LINE OR AT WATERWAY CROSSING)

401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

405 102.8g/102.8h/108.3 – AIR VALVE AND VAULT (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

555 608.06 – CONCRETE SIDEWALK (6" THICK)



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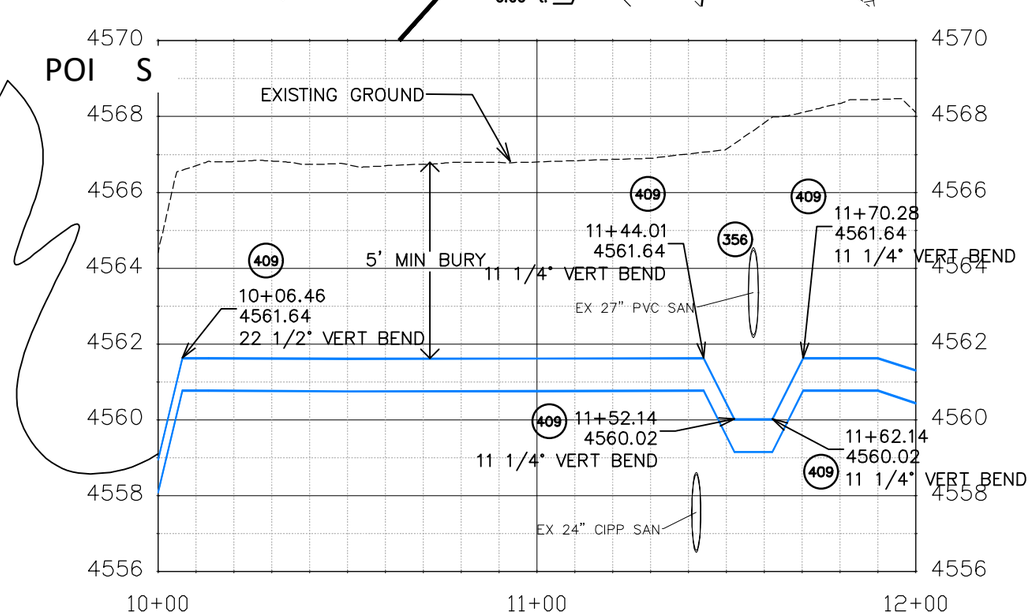

811 Know what's below. Call before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA3
June 19, 2020

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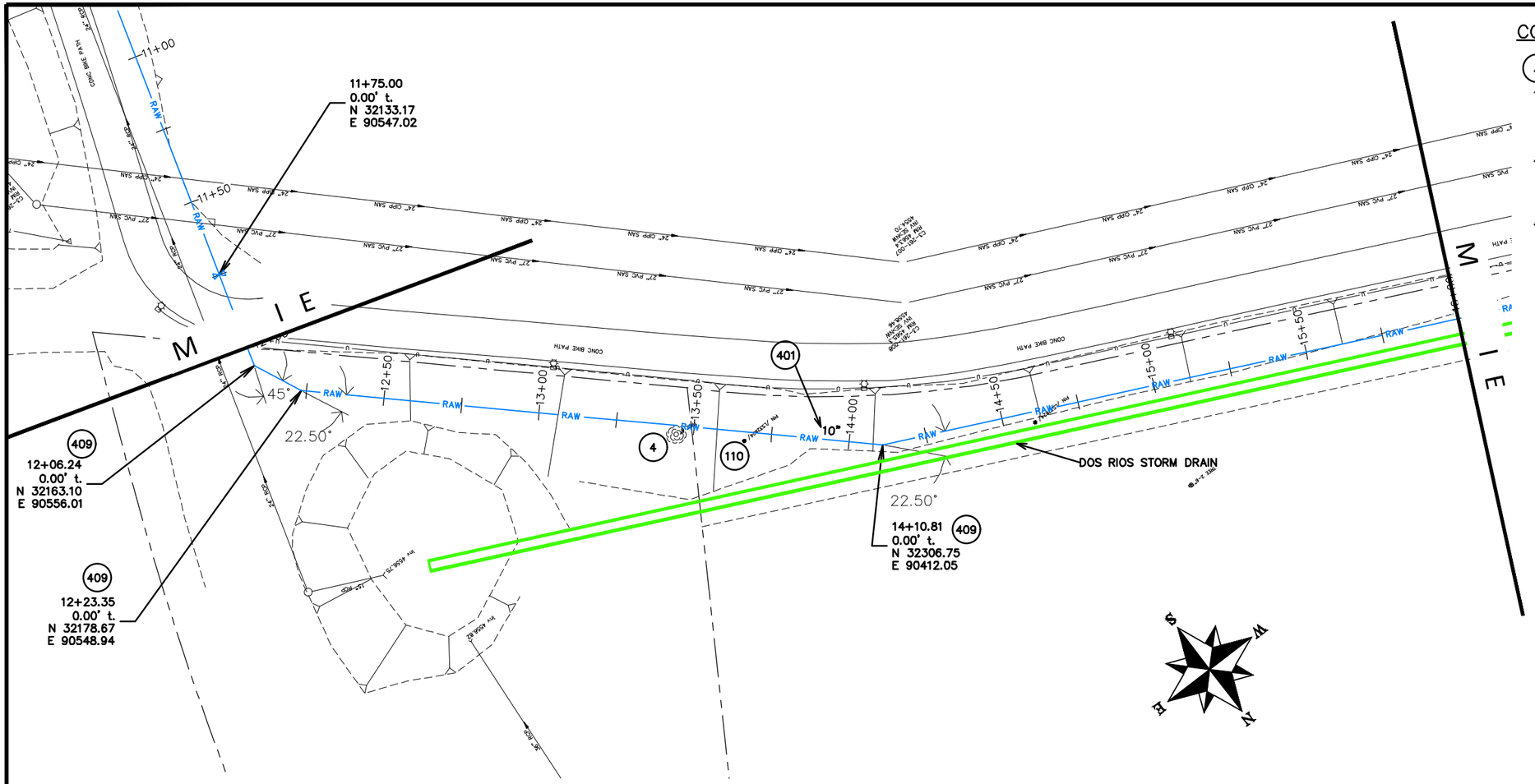
CONSTRUCTION NOTES

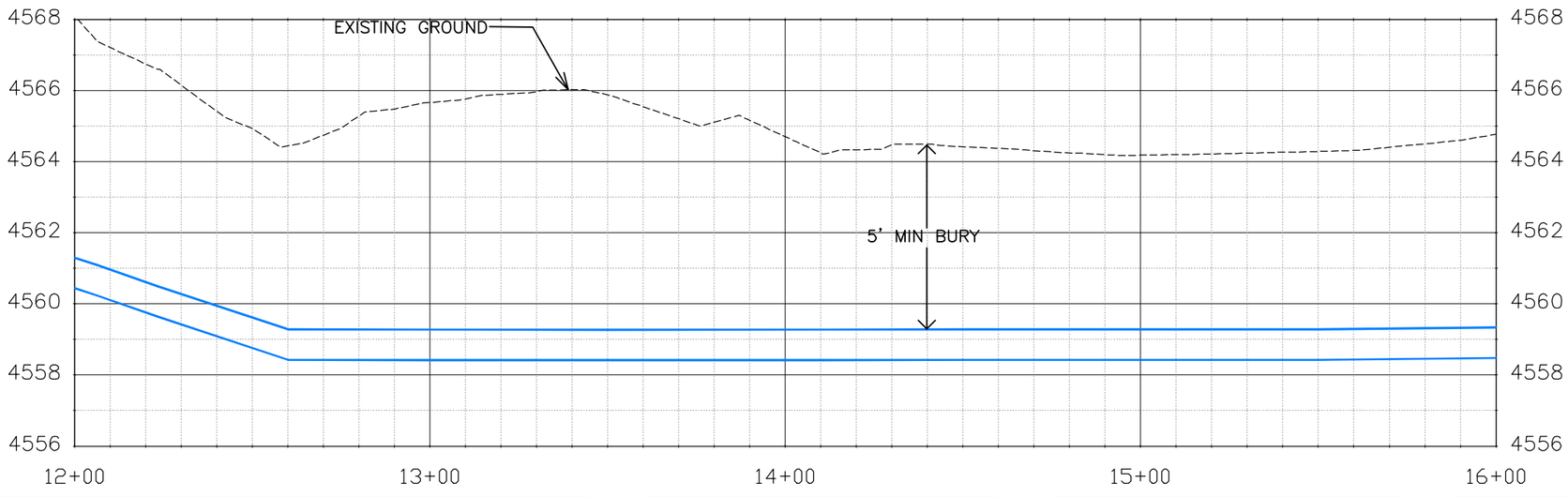
(4) 202 – REMOVAL OF TREE (SIZE AS SHOWN ON PLAN)

110 629 – REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION.

401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)





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REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA4
June 19, 2020

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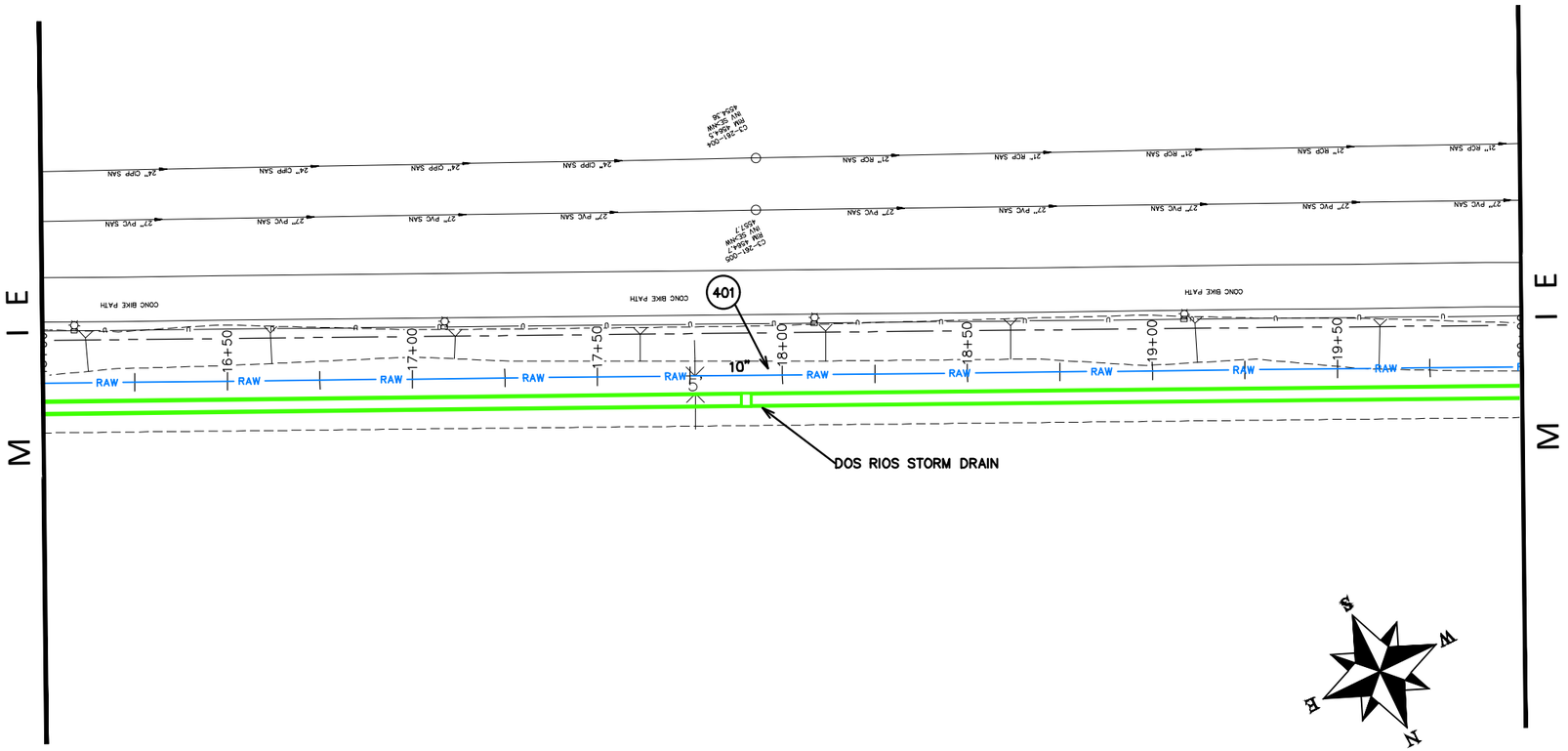
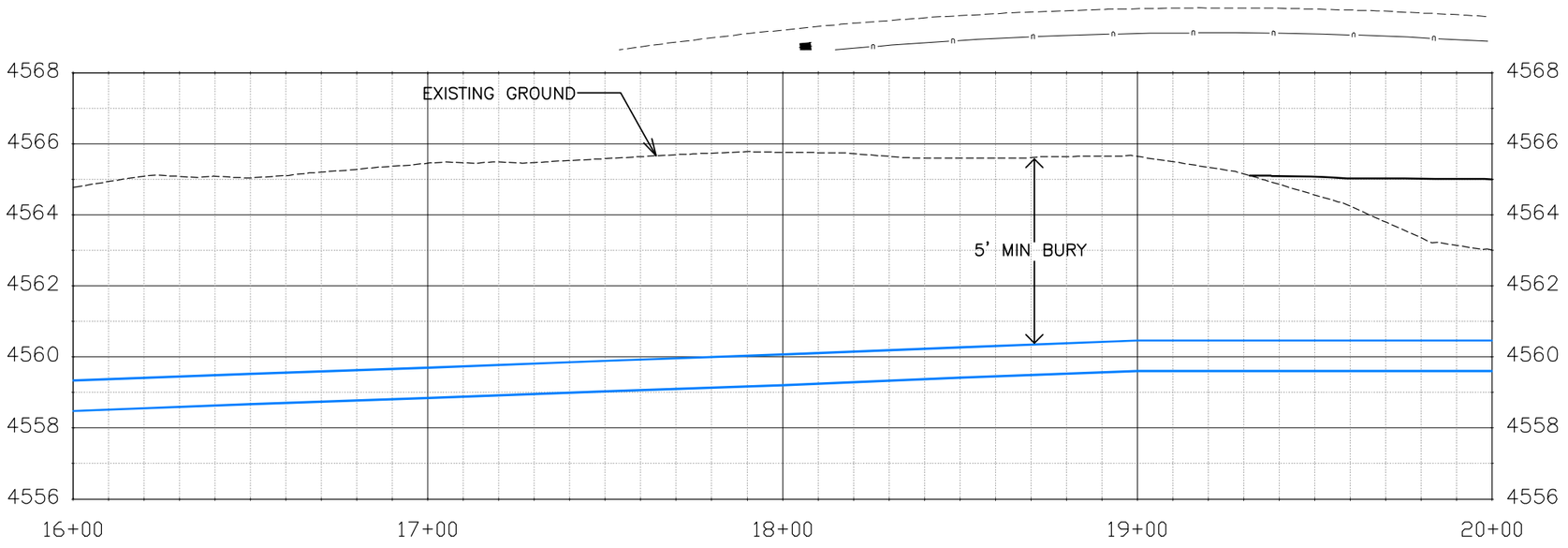
CONSTRUCTION NOTES

(401) 102.7/108.2 – WATER MAIN PIPE (DR-25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.





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APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA5
June 19, 2020

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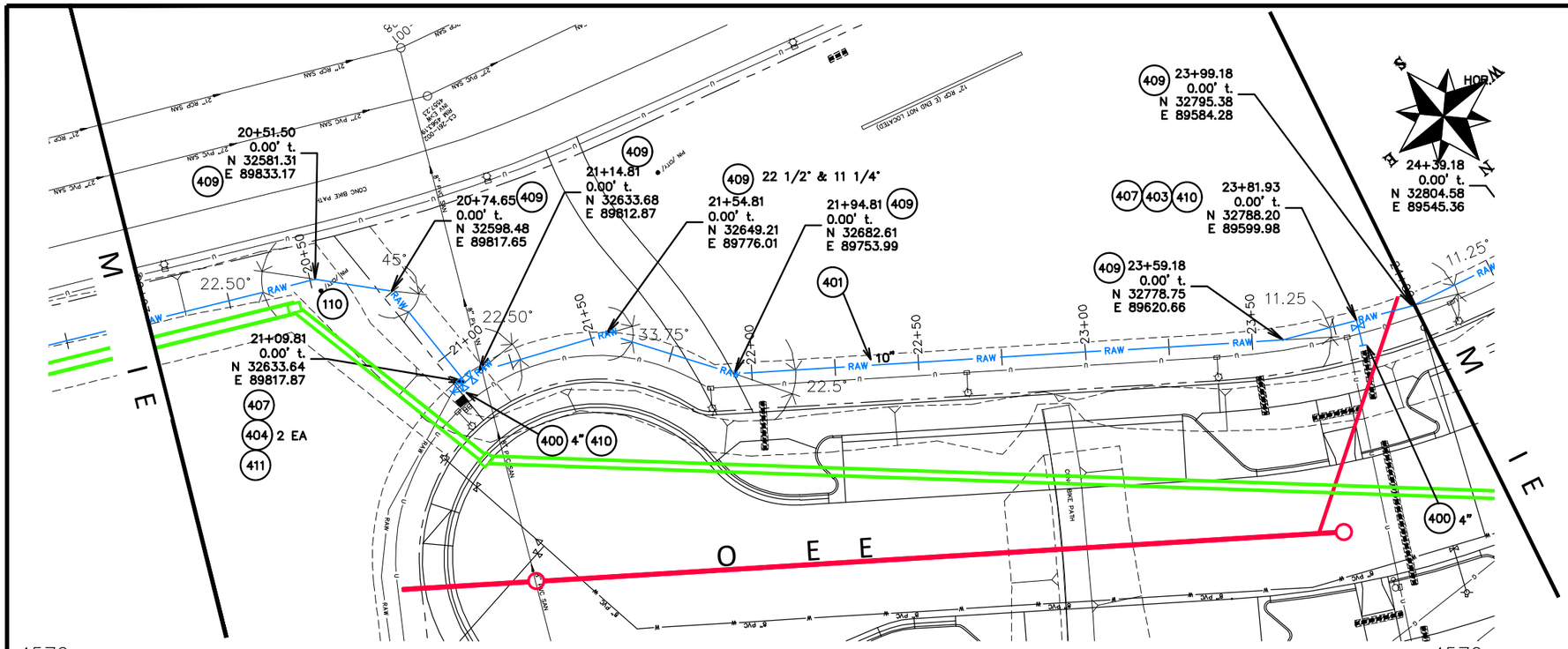

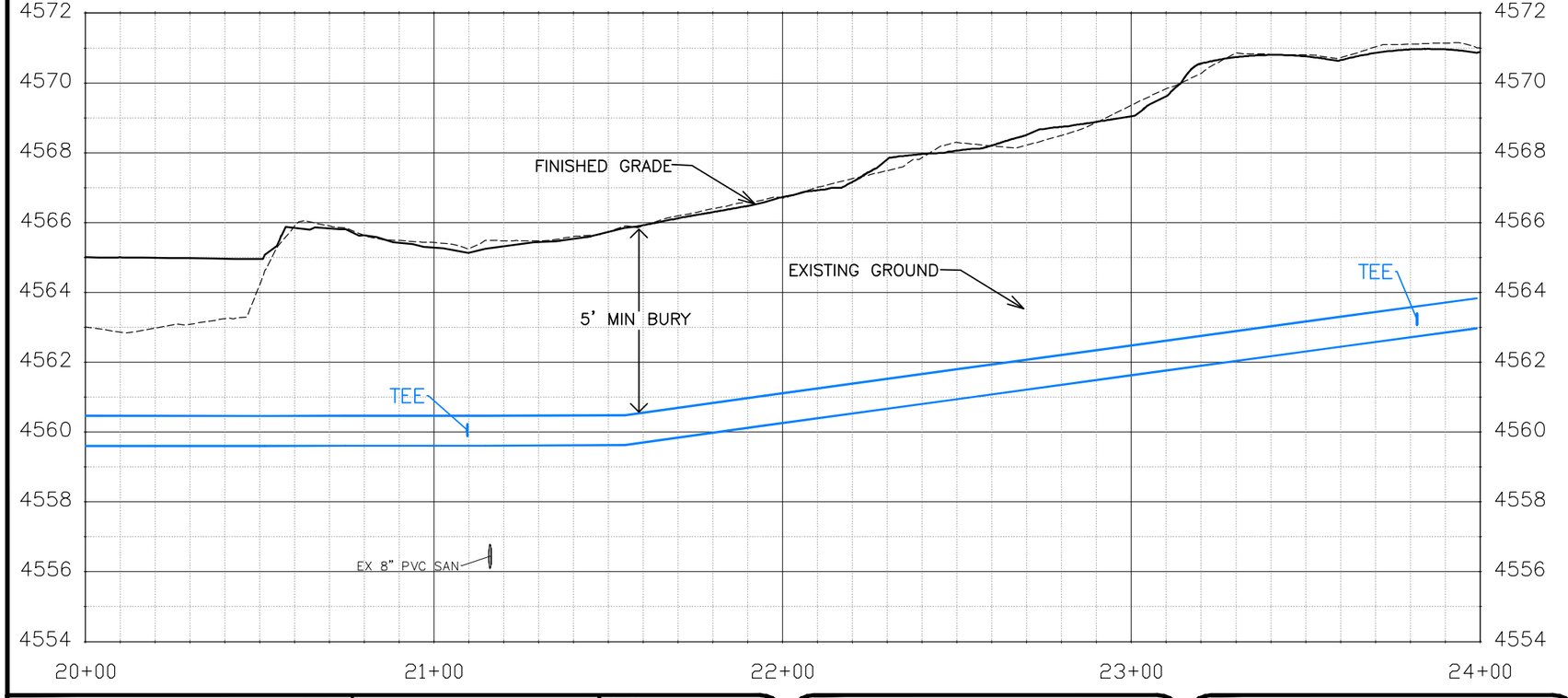

CONSTRUCTION NOTES

(110) 629 – REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION.

400 102.7/108.2 – WATER MAIN PIPE (C–900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

403 102.8b/108.3 – GATE VALVE. (SIZE AS SHOWN)

404 102.8e/108.3 – BUTTERFLY VALVE (SIZE AS SHOWN).

407 102.8/108.3 – TEE (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

410 102.8/108.3 – END CAP / PLUG (SIZE AS SHOWN).

411 102.8/108.3 – REDUCER (SIZE AS SHOWN).

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CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA6
June 19, 2020

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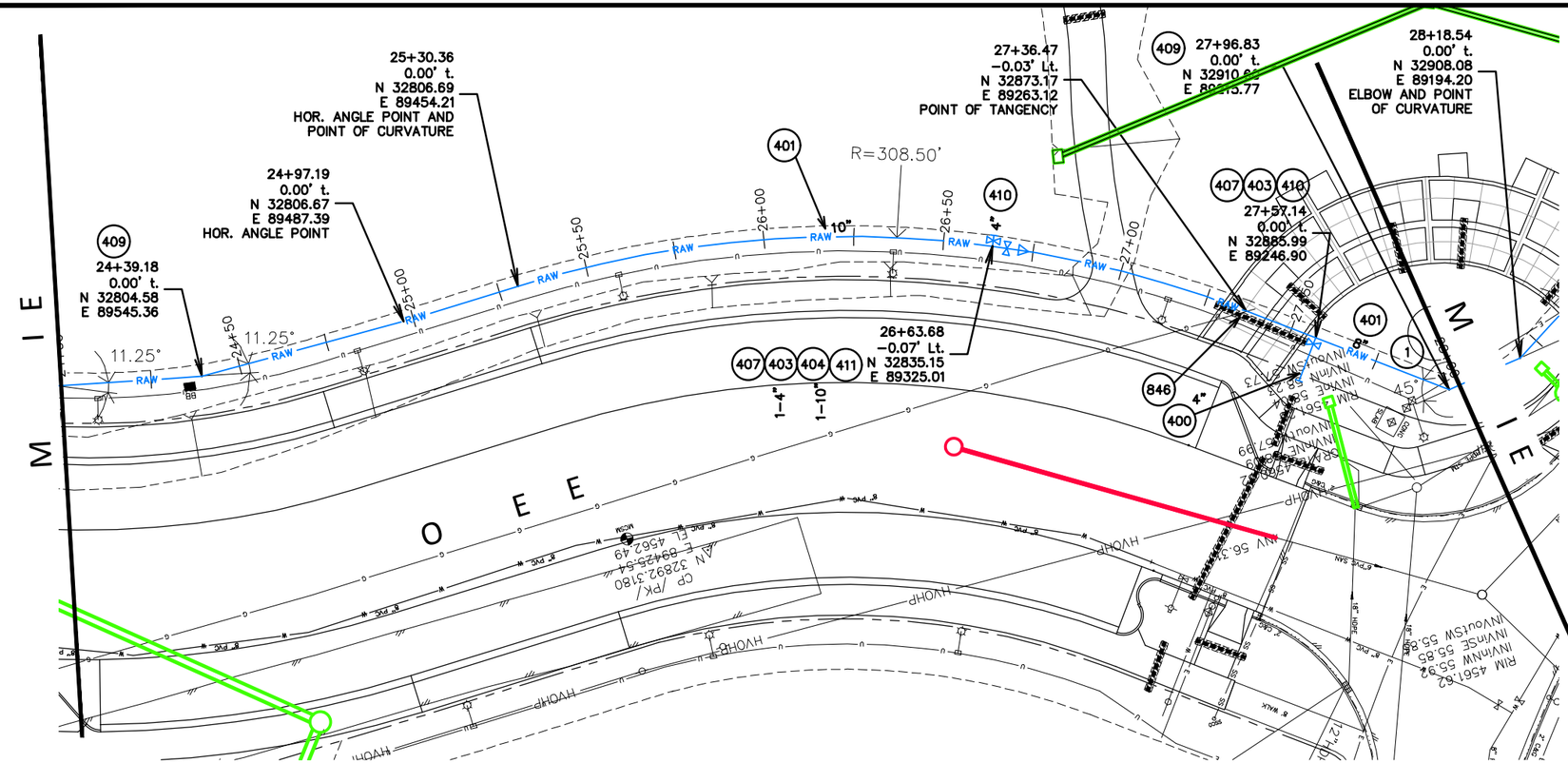

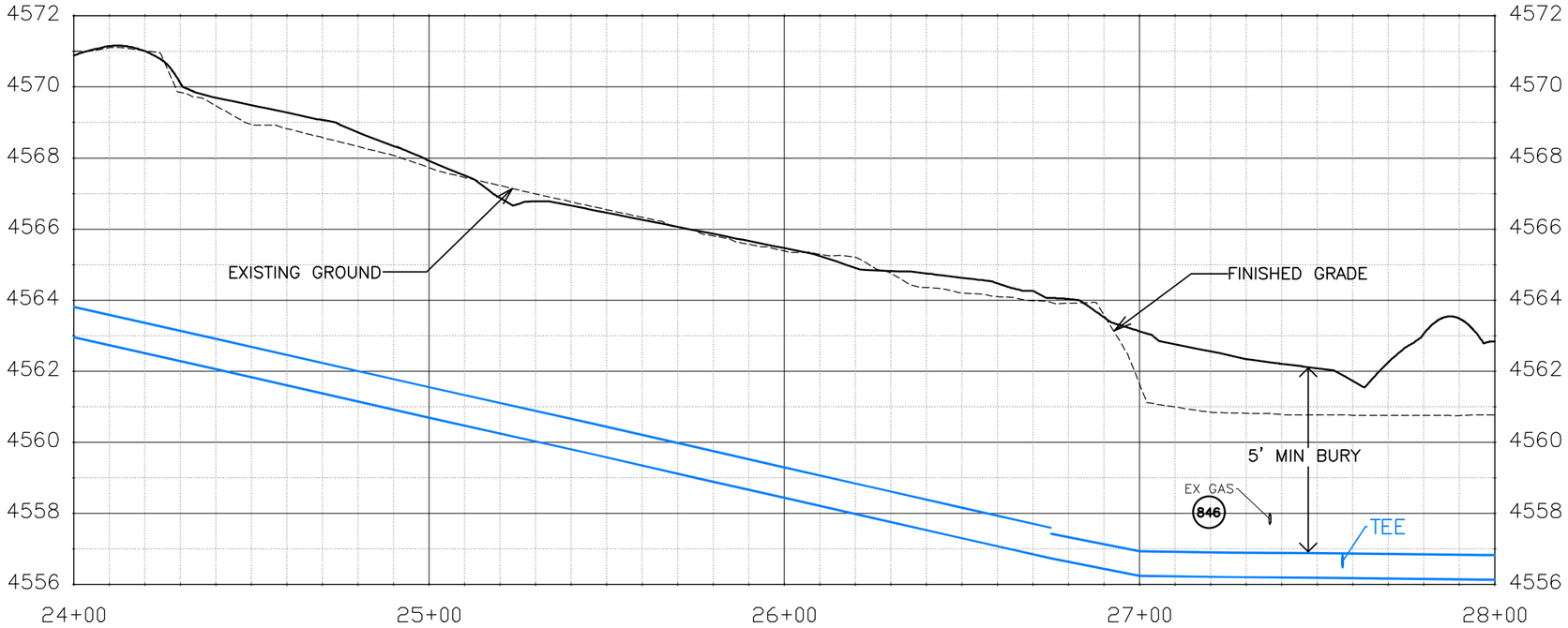

CONSTRUCTION NOTES

1 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS NEEDED FOR PIPE INSTALLATION.

400 102.7/108.2 – WATER MAIN PIPE (C–900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

403 102.8b/108.3 – GATE VALVE. (SIZE AS SHOWN)

407 102.8/108.3 – TEE (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

410 102.8/108.3 – END CAP / PLUG (SIZE AS SHOWN).

411 102.8/108.3 – REDUCER (SIZE AS SHOWN).

846 POTHOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.

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APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA7
June 19, 2020

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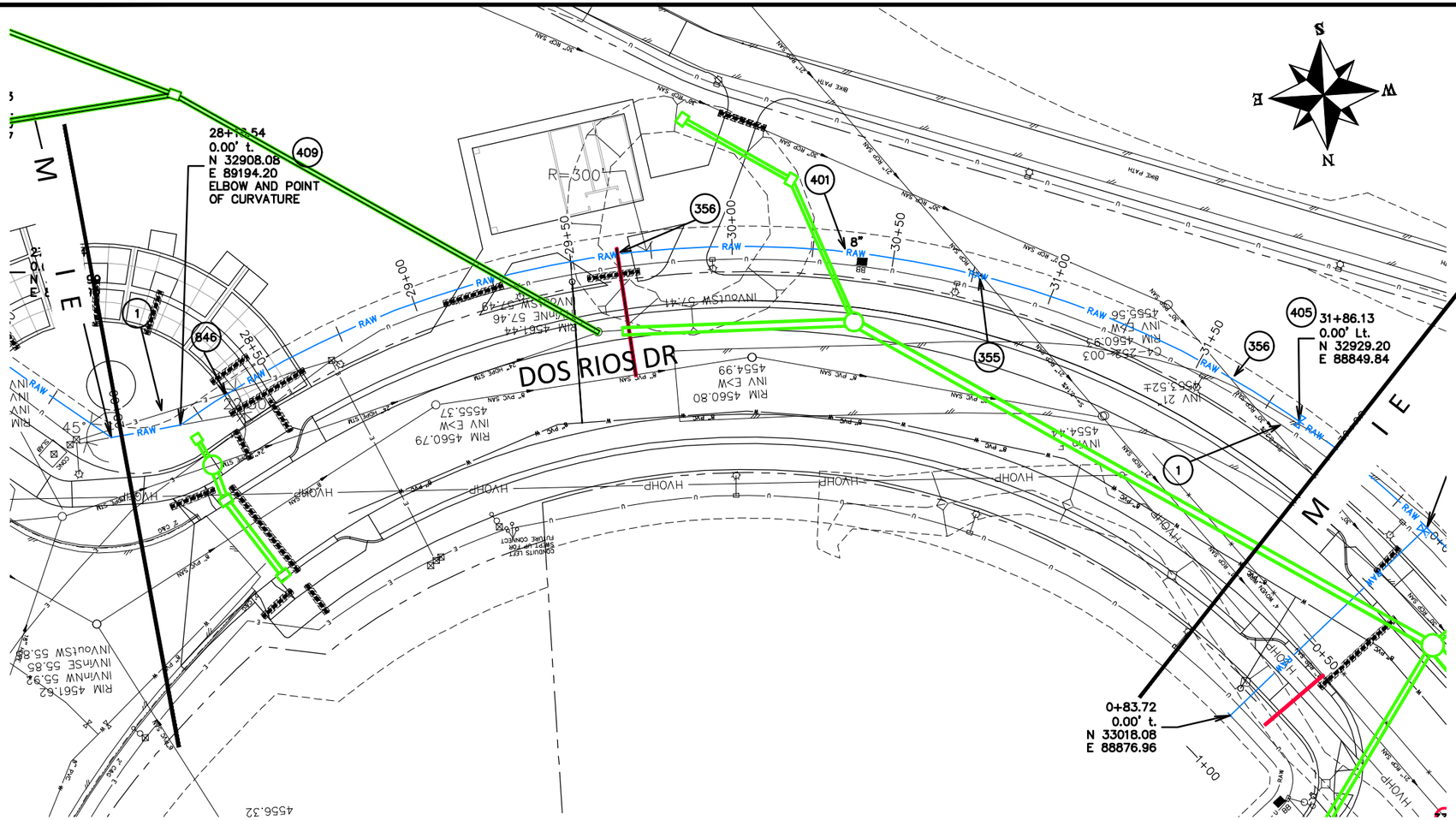

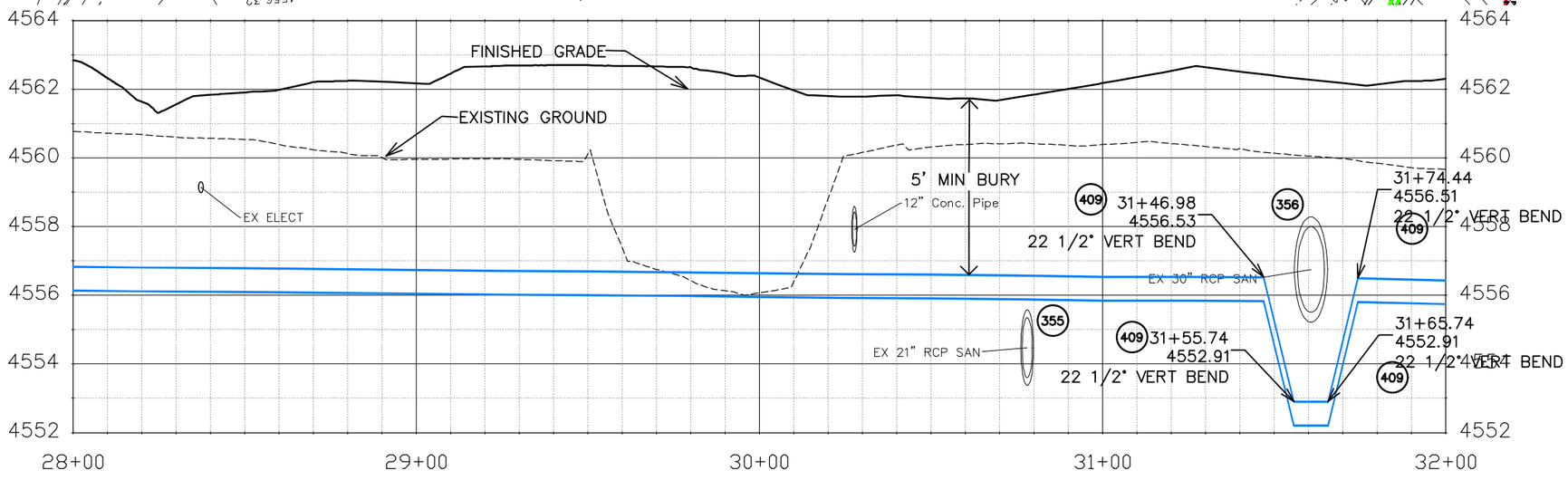

CONSTRUCTION NOTES

(1) 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS NEEDED FOR PIPE INSTALLATION.

355 104.40 – CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU–04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

356 104.40 – ENCASE ENTIRE SEWER IN REINFORCED CONCRETE PER STD. DETAIL GU–04. (ALL CASES WHERE WATER LINE BELOW SEWER LINE OR AT WATERWAY CROSSING)

401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

405 102.8g/102.8h/108.3 – AIR VALVE AND VAULT (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

846 POTHOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.

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SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA8
June 19, 2020

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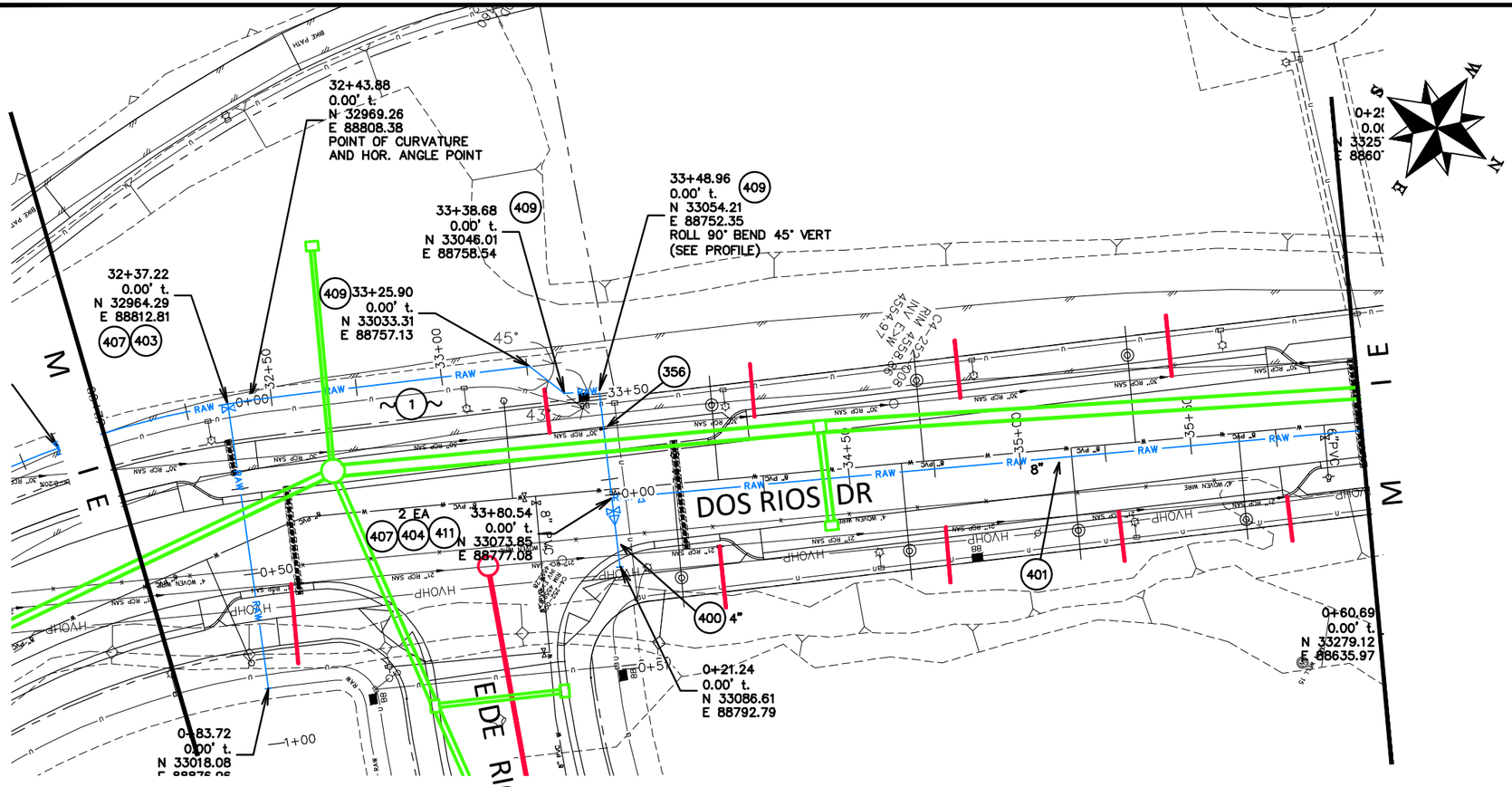

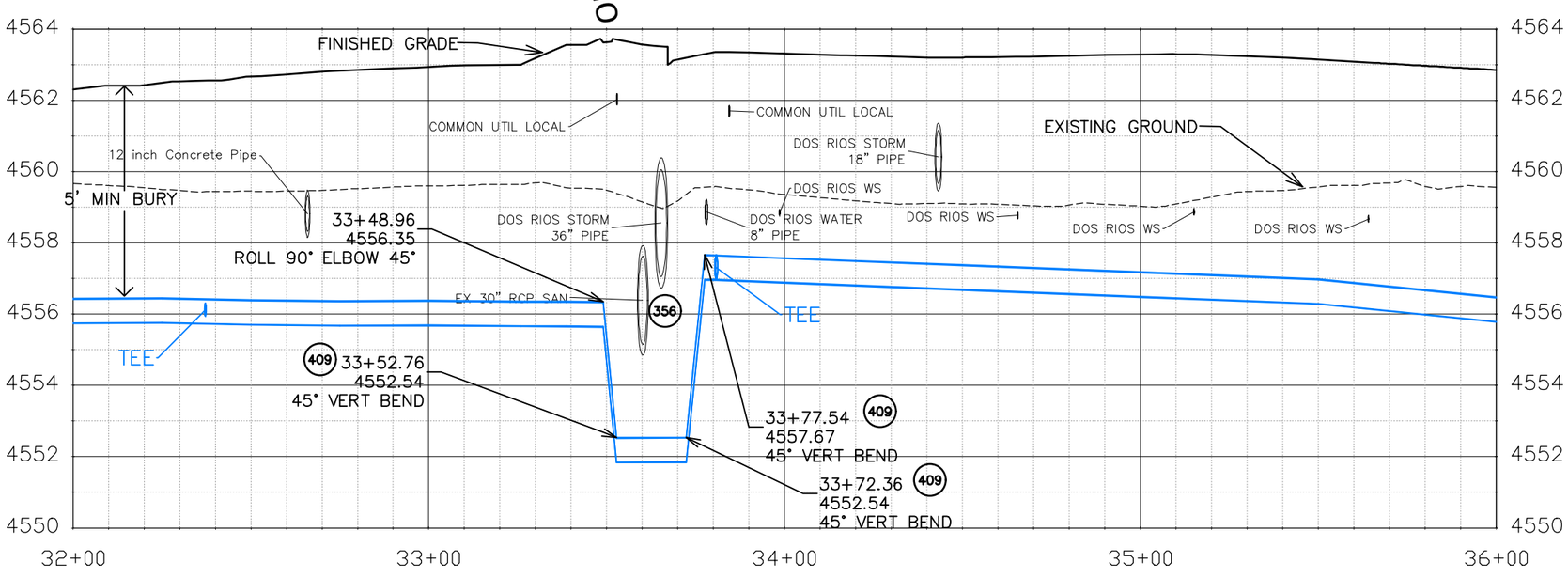

CONSTRUCTION NOTES

(1) 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS NEEDED FOR PIPE INSTALLATION.

356 104.40 – ENCASE ENTIRE SEWER IN REINFORCED CONCRETE PER STD. DETAIL GU–04. (ALL CASES WHERE WATER LINE BELOW SEWER LINE OR AT WATERWAY CROSSING)

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403 102.8b/108.3 – GATE VALVE. (SIZE AS SHOWN)

404 BUTTERFLY VALVE (SIZE AS SHOWN).

407 102.8/108.3 – TEE (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

411 102.8/108.3 – REDUCER (SIZE AS SHOWN).

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SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA9
June 19, 2020

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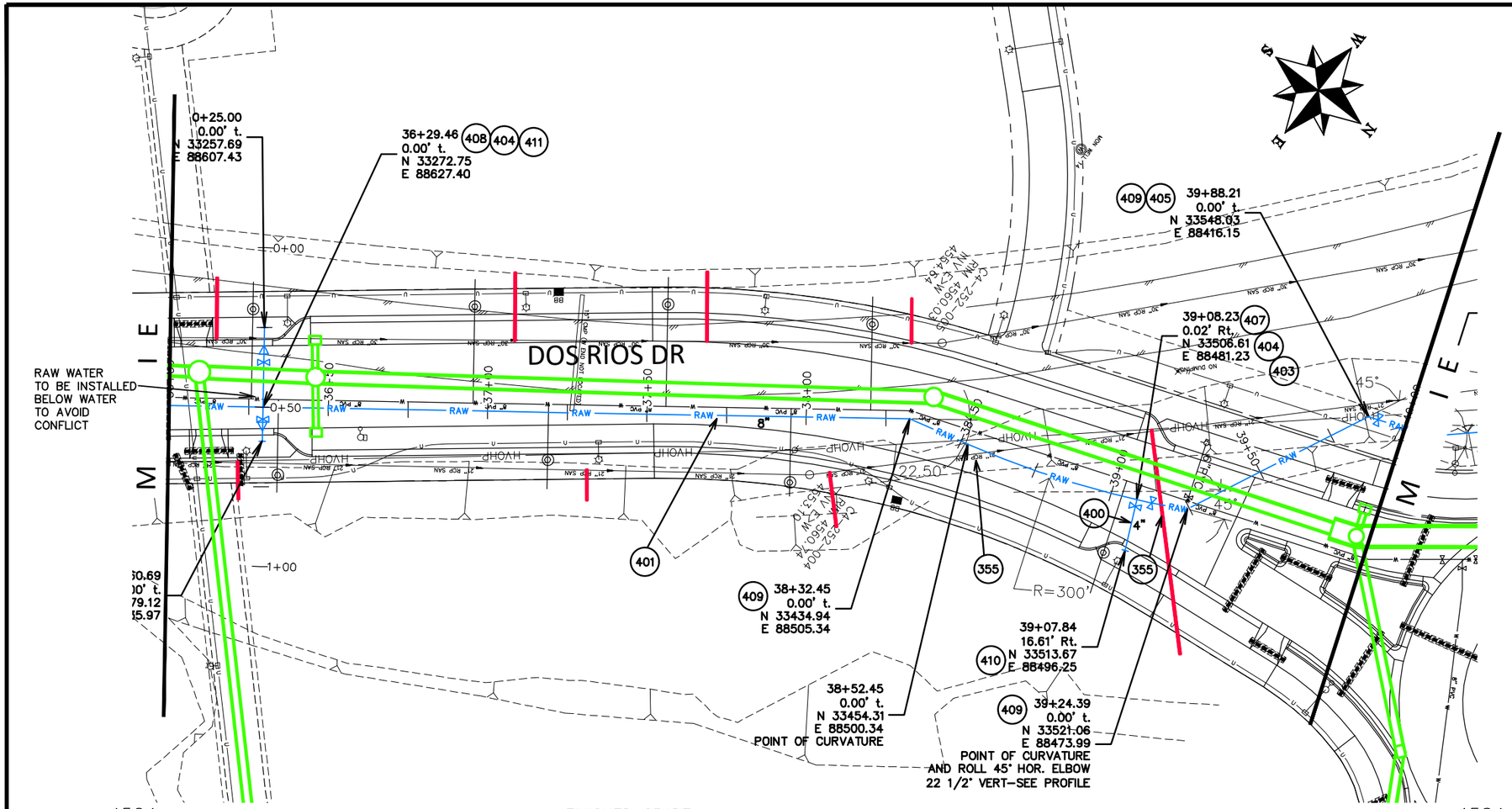

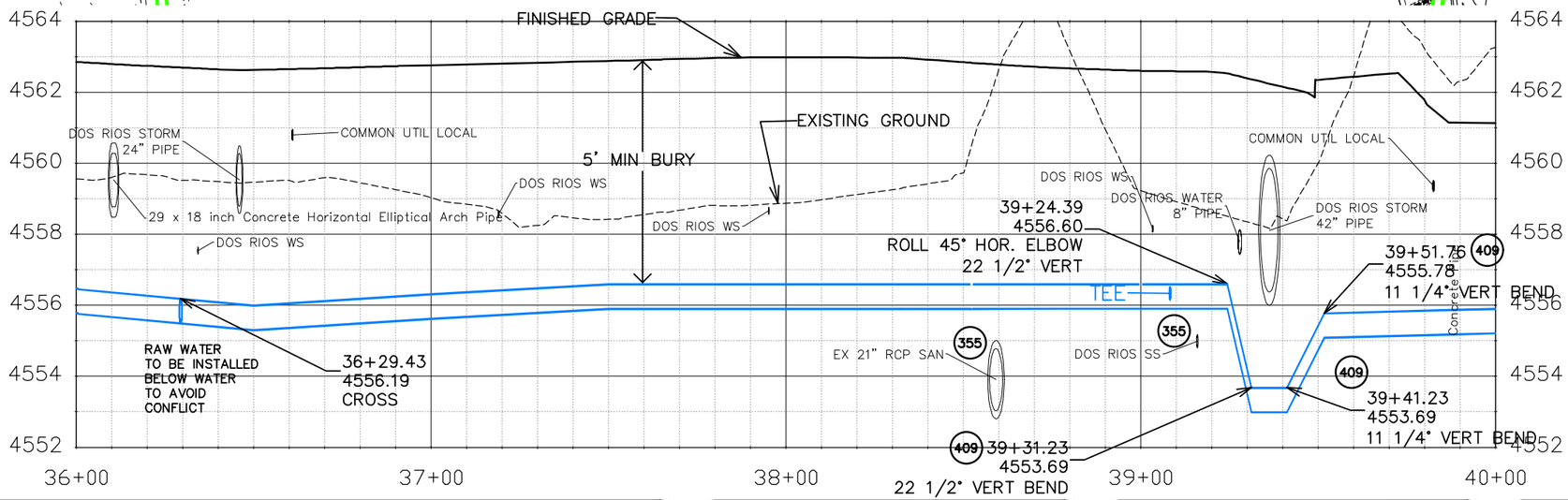

CONSTRUCTION NOTES

(355) 104.40 – CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU–04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

400 102.7/108.2 – WATER MAIN PIPE (C–900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

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403 102.8b/108.3 – GATE VALVE. (SIZE AS SHOWN)

404 BUTTERFLY VALVE (SIZE AS SHOWN).

405 102.8g/102.8h/108.3 – AIR VALVE AND VAULT (SIZE AS SHOWN).

407 102.8/108.3 – TEE (SIZE AS SHOWN).

408 102.8/108.3 – CROSS (SIZE AS SHOWN)

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

410 102.8/108.3 – END CAP / PLUG (SIZE AS SHOWN).

411 102.8/108.3 – REDUCER (SIZE AS SHOWN).

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APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA10
June 19, 2020

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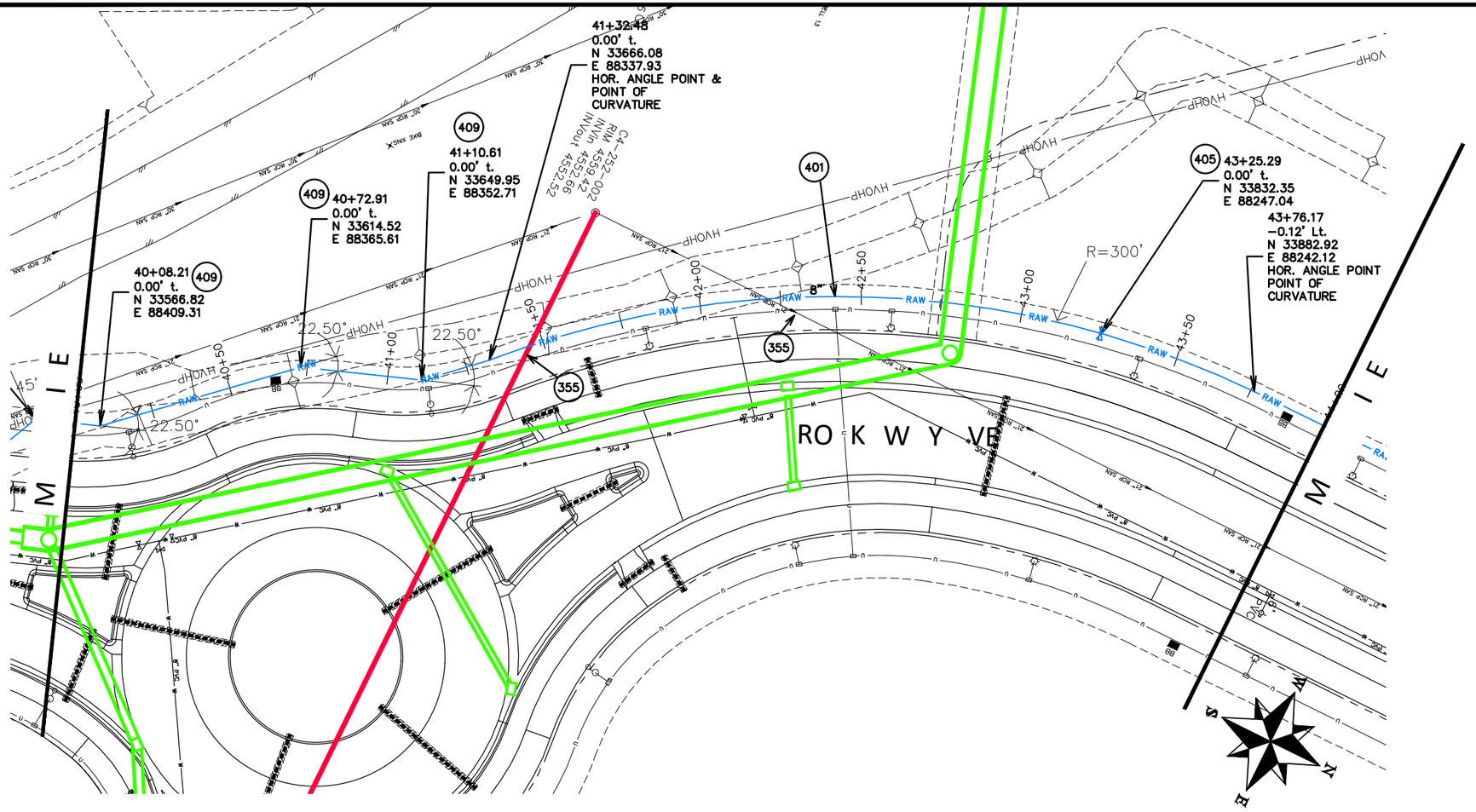

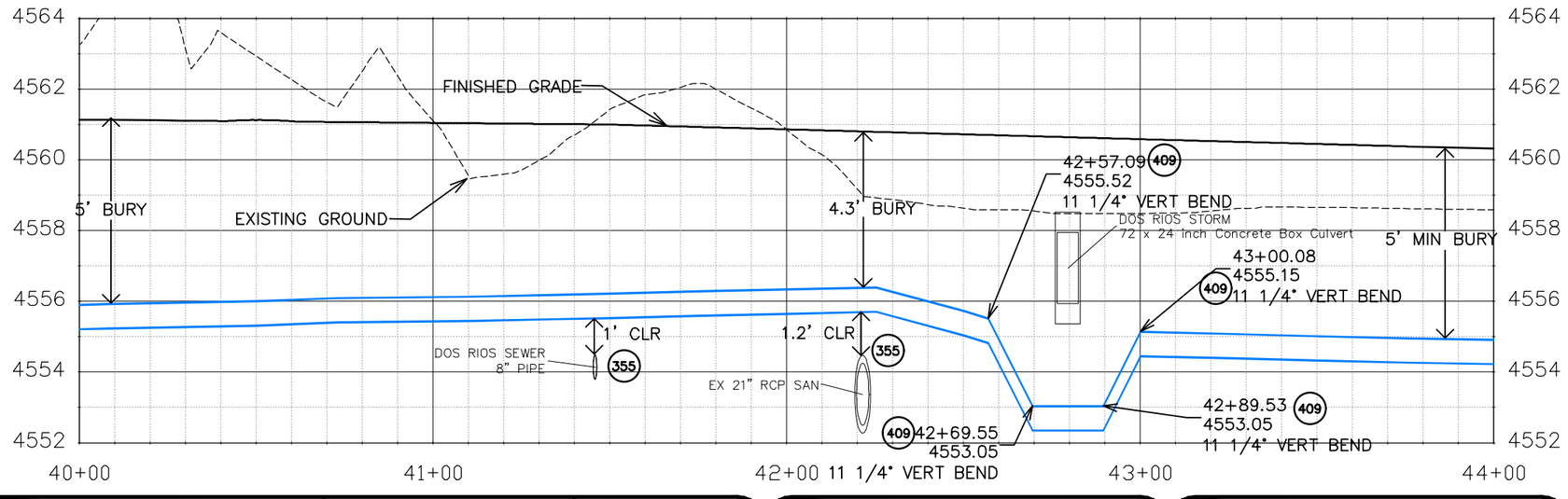

CONSTRUCTION NOTES

(355) 104.40 – CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

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405 102.8g/102.8h/108.3 – AIR VALVE AND VAULT (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

.

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SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA11
June 19, 2020

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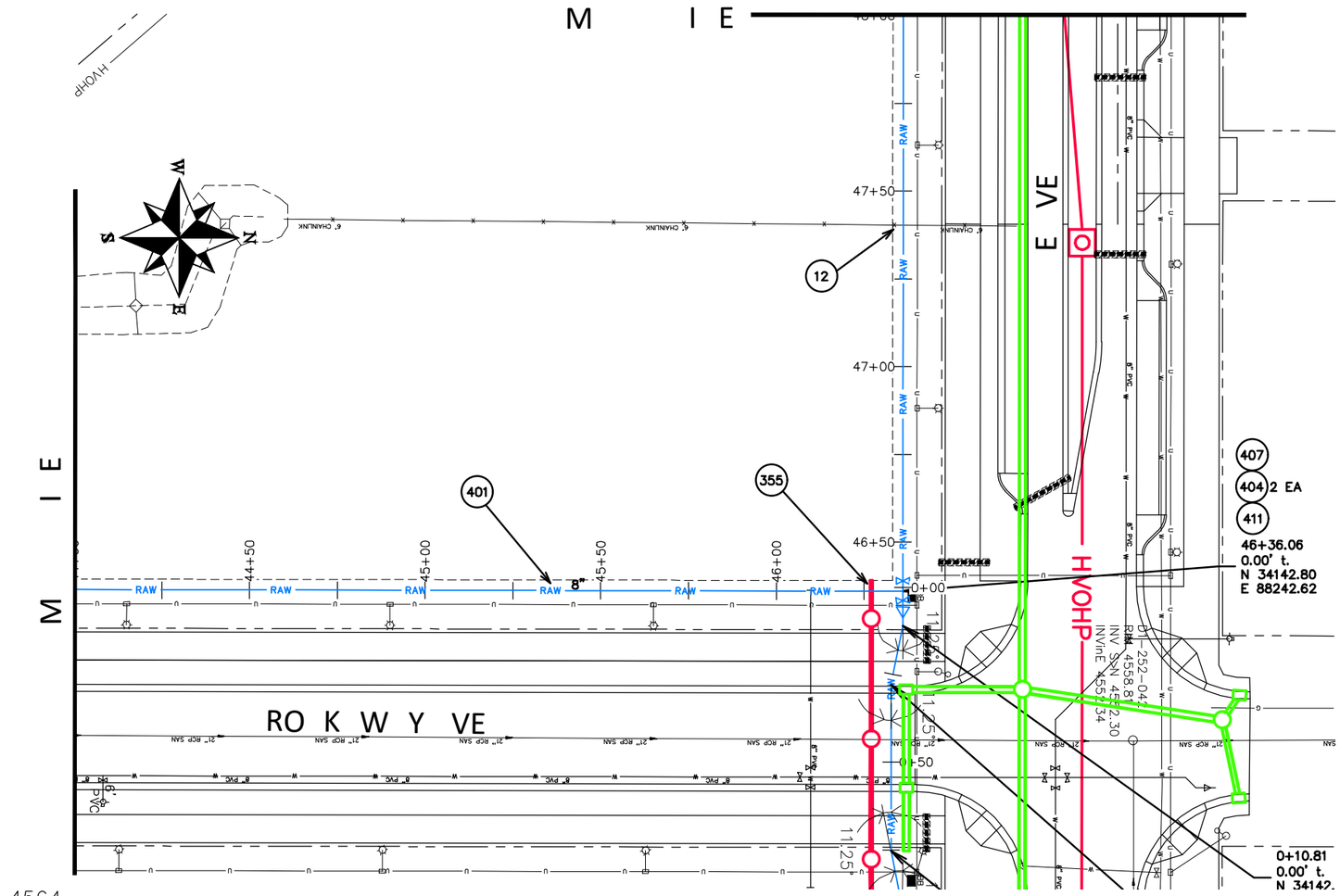

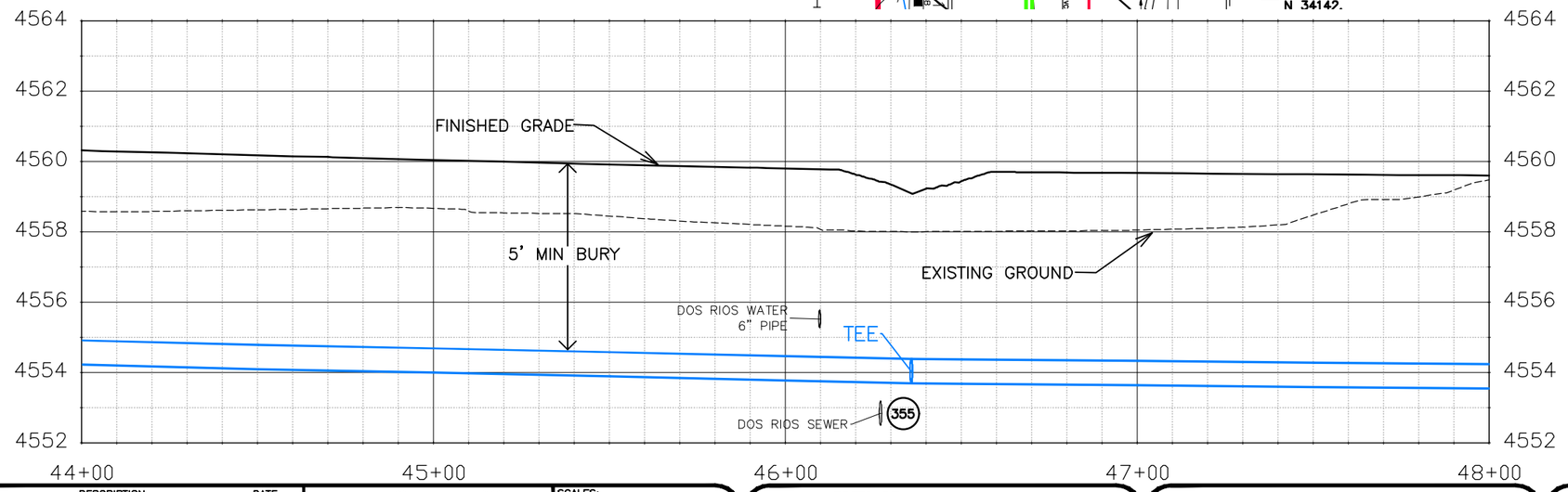

CONSTRUCTION NOTES

(12) 202 – REMOVAL OF FENCE AS SHOWN. (HEIGHT AND MATERIAL AS SHOW ON PLAN)

355 104.40 – CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU–04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

404 BUTTERFLY VALVE (SIZE AS SHOWN).

407 102.8/108.3 – TEE (SIZE AS SHOWN).

411 102.8/108.3 – REDUCER (SIZE AS SHOWN).

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA12
June 19, 2020

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CONSTRUCTION NOTES

(1) 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS NEEDED FOR PIPE INSTALLATION.

3 202 – REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS NEEDED FOR PIPE INSTALLATION.

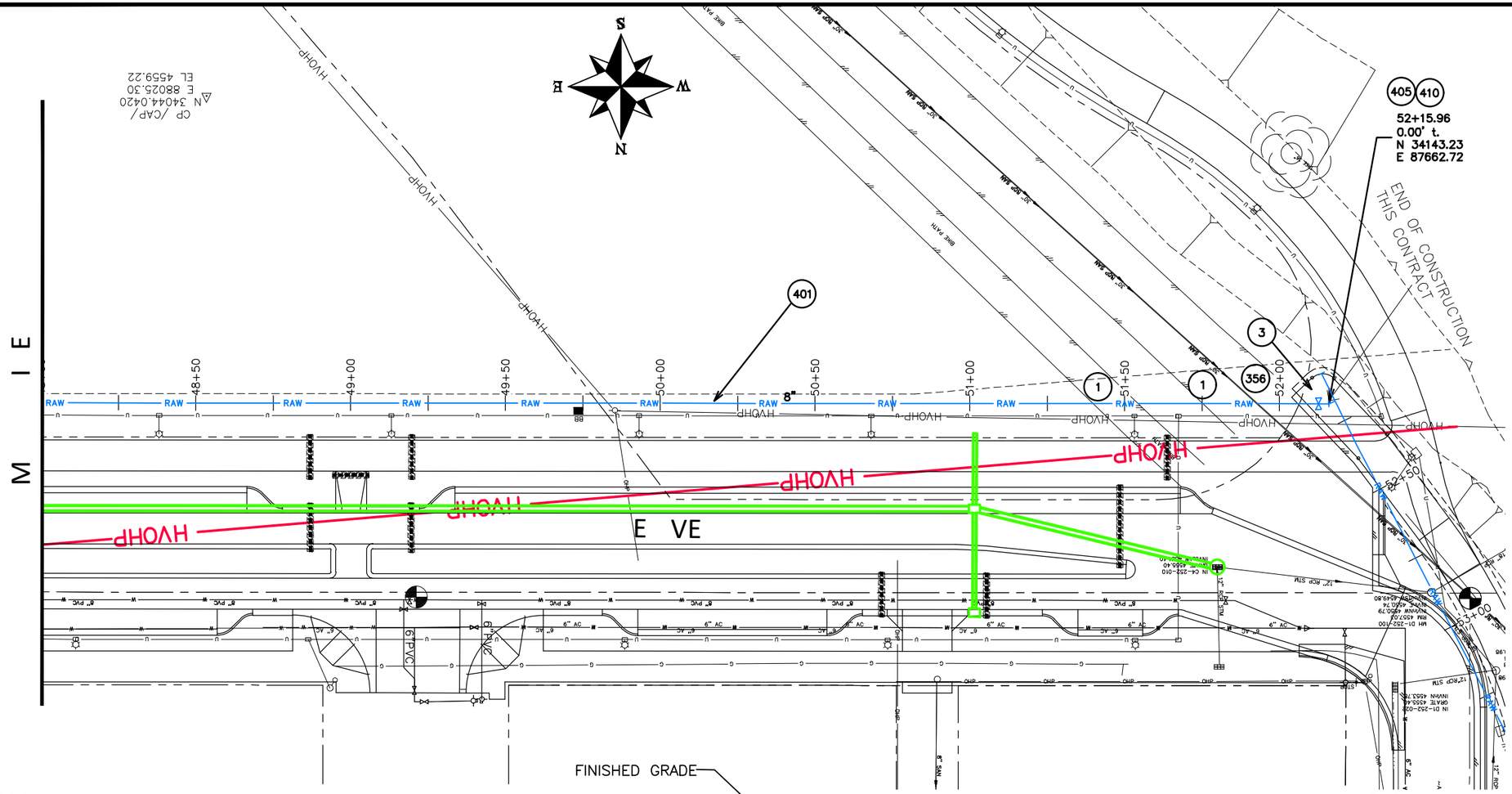
356 104.40 – ENCASE ENTIRE SEWER IN REINFORCED CONCRETE PER STD. DETAIL GU–04. (ALL CASES WHERE WATER LINE BELOW SEWER LINE OR AT WATERWAY CROSSING)

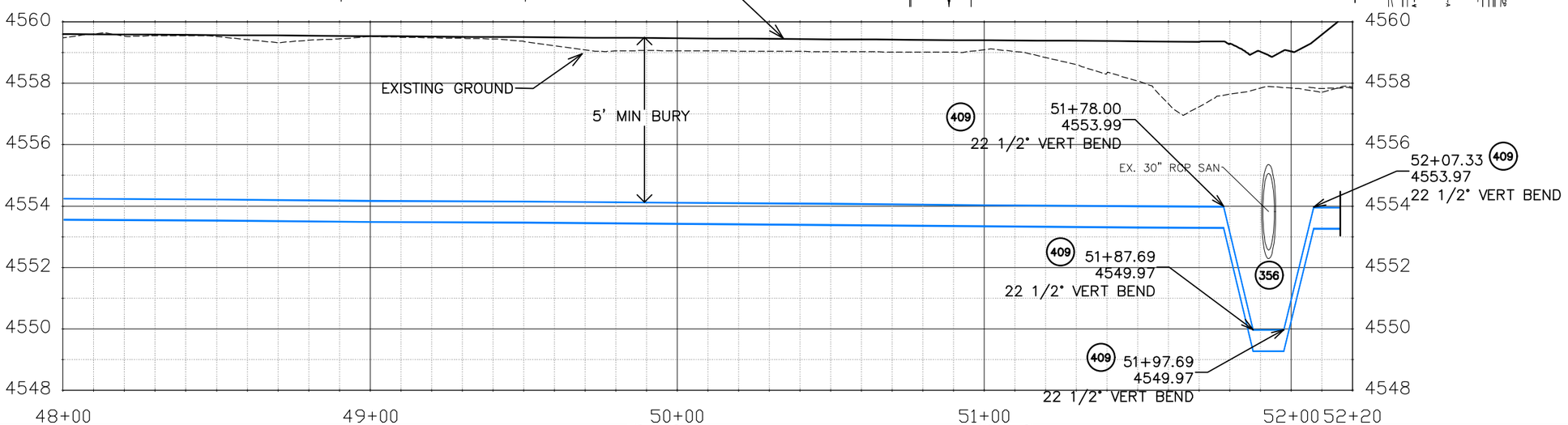
401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

405 102.8g/102.8h/108.3 – AIR VALVE AND VAULT (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

410 102.8/108.3 – END CAP / PLUG (SIZE AS SHOWN).





Know what's below. Call before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – RA13
June 19, 2020

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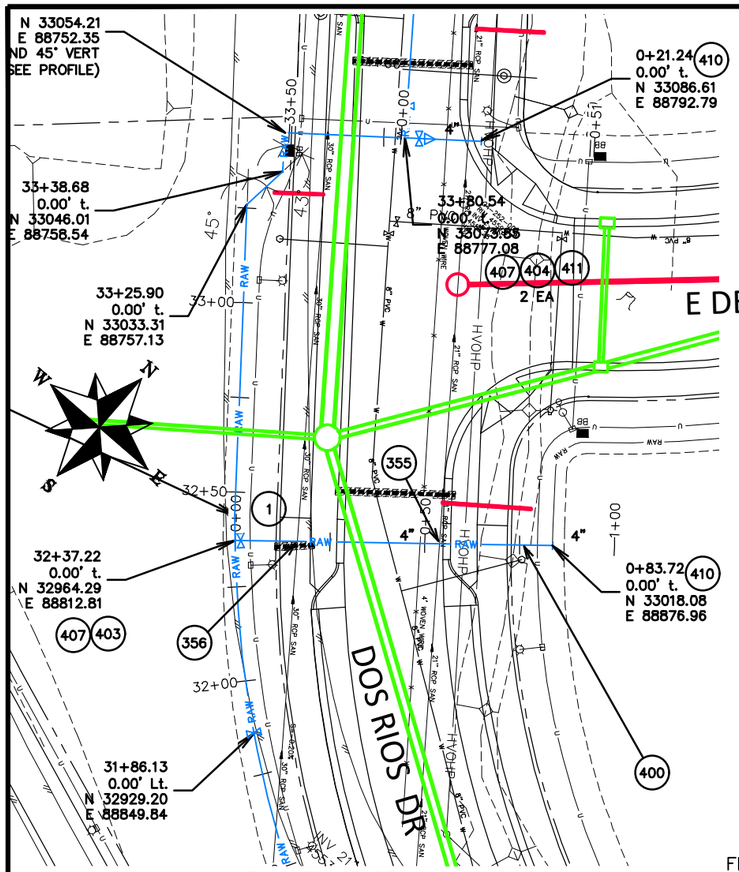
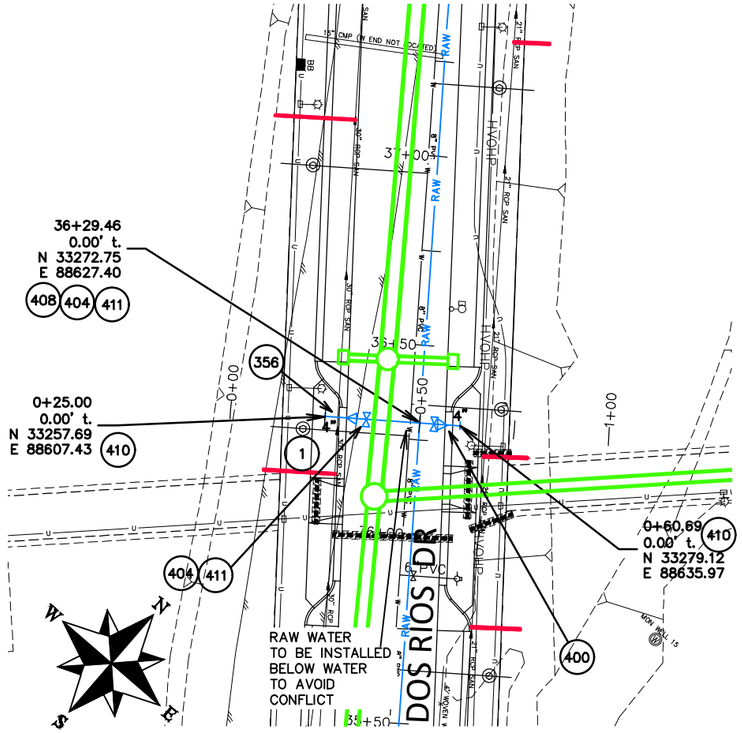




CONSTRUCTION NOTES

(1) 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS NEEDED FOR PIPE INSTALLATION.

355 104.40 – CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU–04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

356 104.40 – ENCASE ENTIRE SEWER IN REINFORCED CONCRETE PER STD. DETAIL GU–04. (ALL CASES WHERE WATER LINE BELOW SEWER LINE OR AT WATERWAY CROSSING)

400 102.7/108.2 – WATER MAIN PIPE (C–900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

401 102.7/108.2 – WATER MAIN PIPE (DR–25 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

403 102.8b/108.3 – GATE VALVE. (SIZE AS SHOWN)

404 BUTTERFLY VALVE (SIZE AS SHOWN).

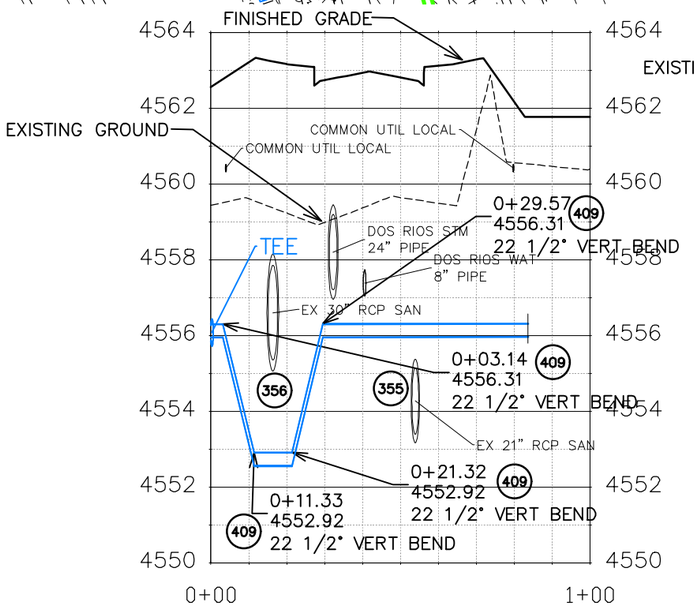
407 102.8/108.3 – TEE (SIZE AS SHOWN).

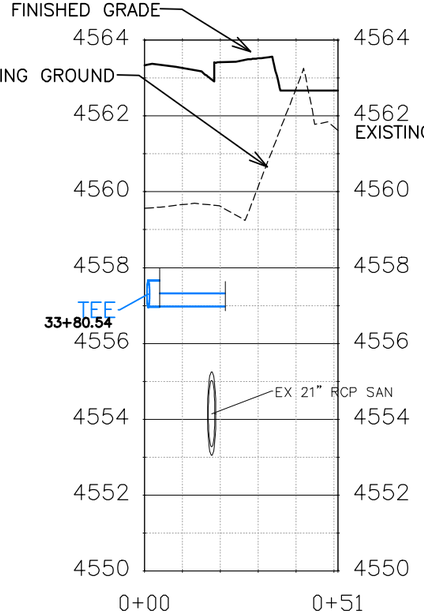
408 102.8/108.3 – CROSS (SIZE AS SHOWN).

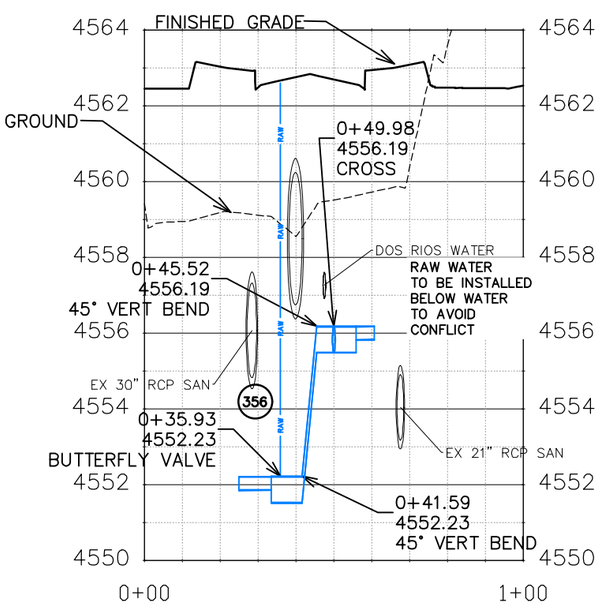
409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

410 102.8/108.3 – END CAP/PLUG (SIZE AS SHOWN).

411 102.8/108.3 – REDUCER (SIZE AS SHOWN).







Know what's **below.**
Call before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – XINGS
June 19, 2020

71

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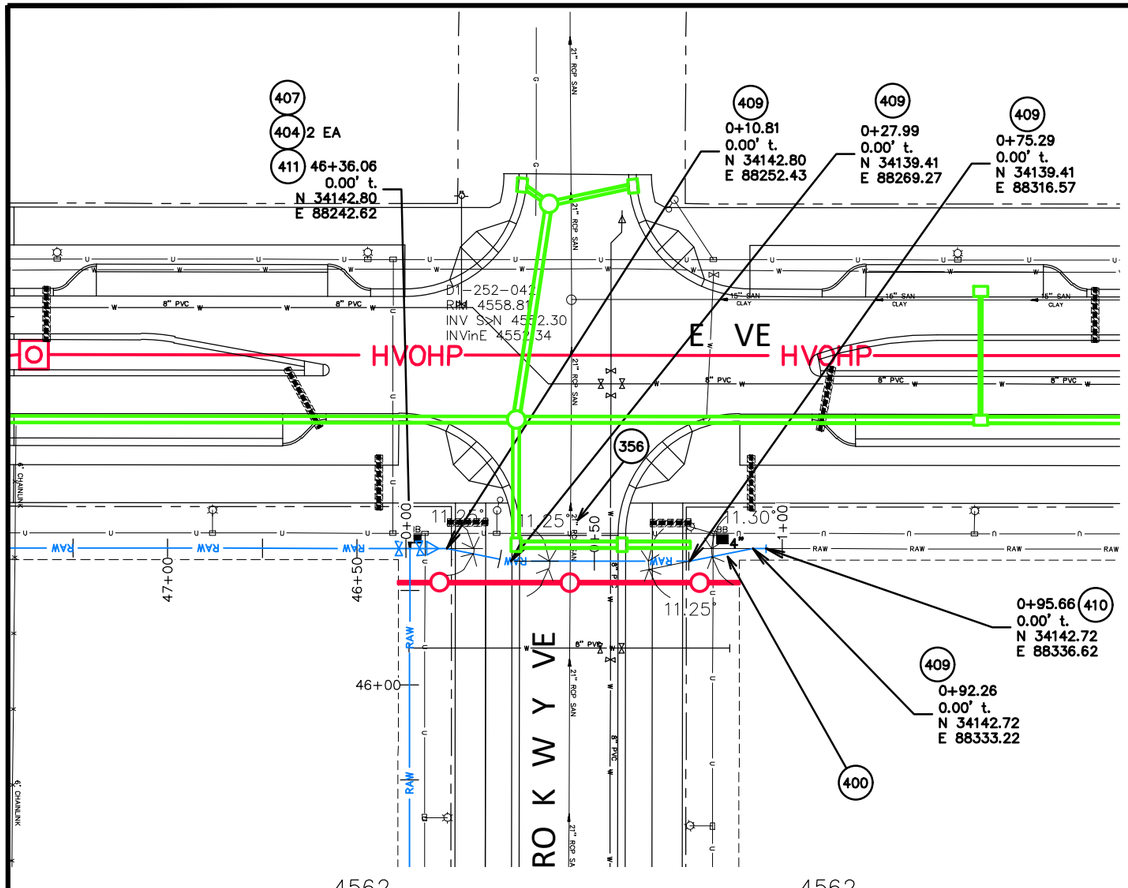

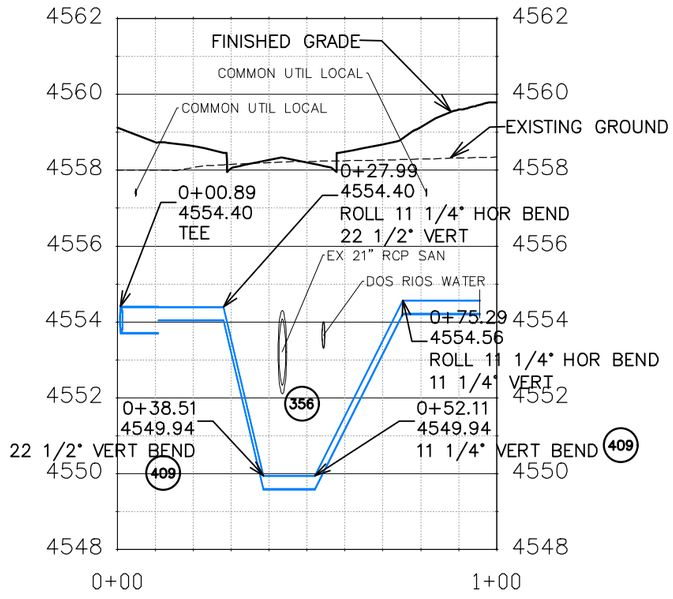

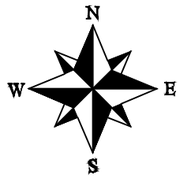

CONSTRUCTION NOTES

(356) 104.40 – ENCASE ENTIRE SEWER IN REINFORCED CONCRETE PER STD. DETAIL GU-04. (ALL CASES WHERE WATER LINE BELOW SEWER LINE OR AT WATERWAY CROSSING)

400 102.7/108.2 – WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

404 BUTTERFLY VALVE (SIZE AS SHOWN).

407 102.8/108.3 – TEE (SIZE AS SHOWN).

409 102.8/108.3 – ELBOW (SIZE AND ANGLE AS SHOWN)

410 102.8/108.3 – END CAP/PLUG (SIZE AS SHOWN).

411 102.8/108.3 – REDUCER (SIZE AS SHOWN).

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REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY BH/JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1 2 4

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
RAW WATER LINE – XINGS.
June 19, 2020

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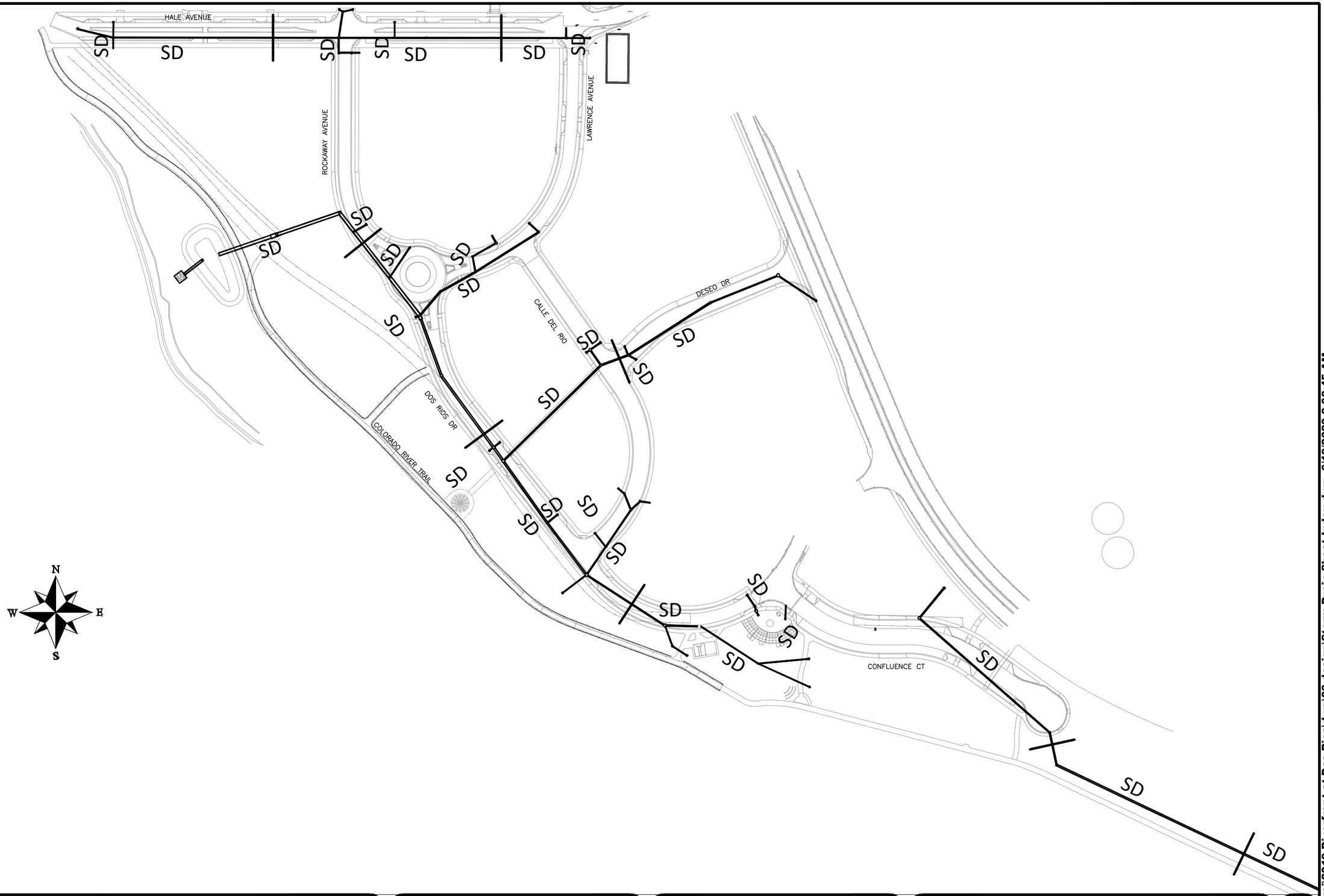

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN SHEET INDEX
June 19, 2020

73

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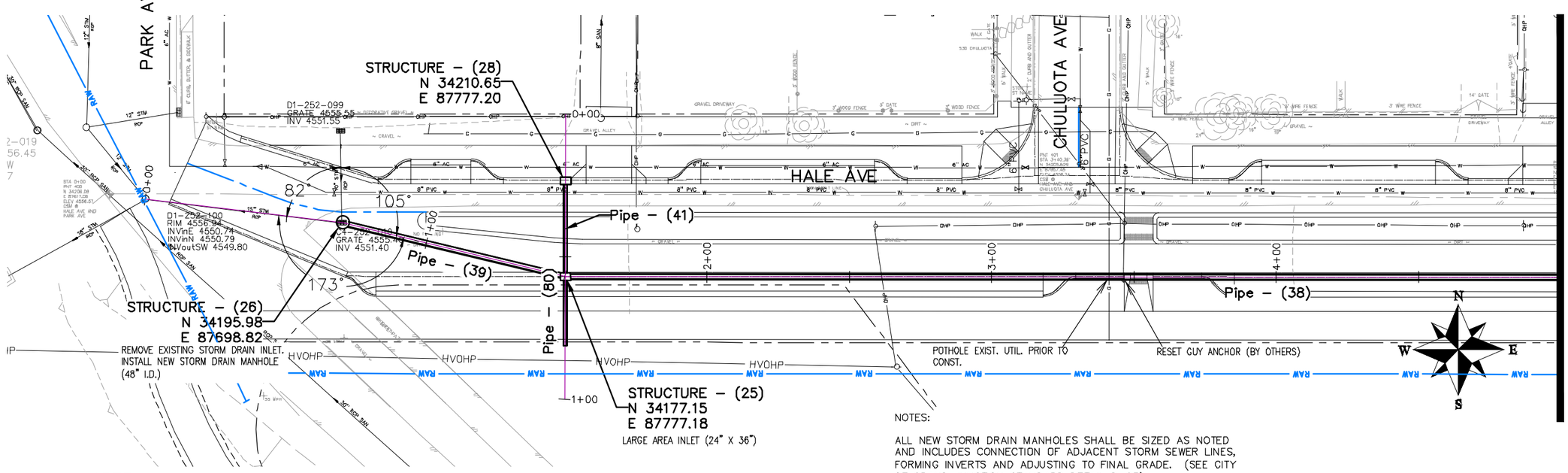
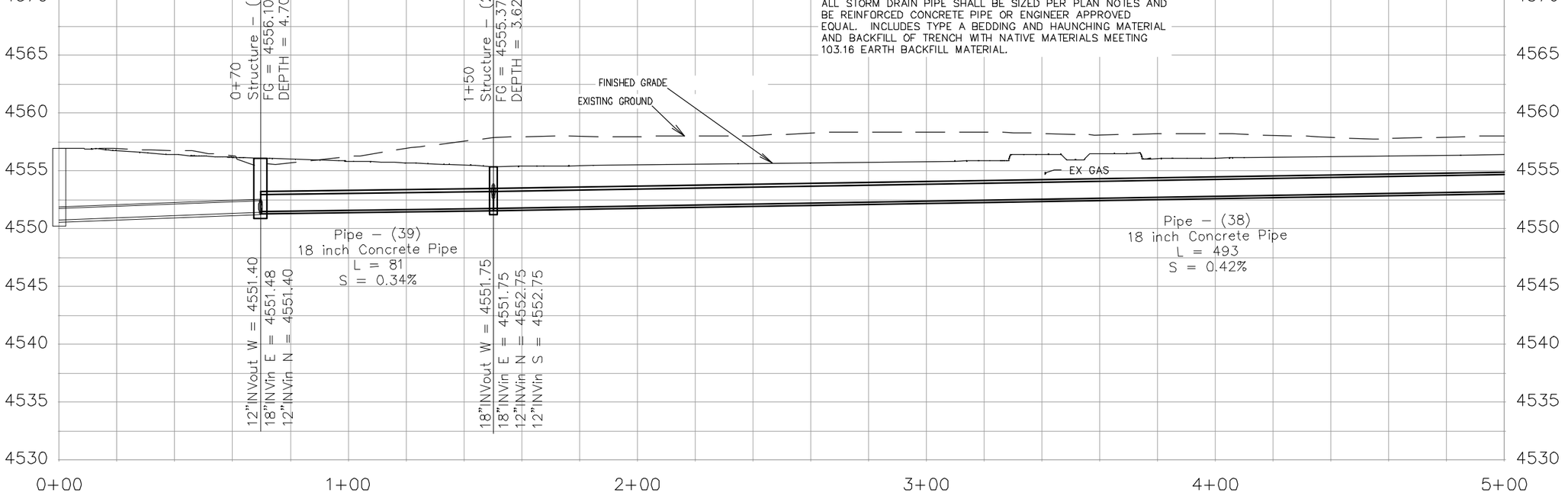


NOTES:

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D–03).

ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–1
June 19, 2020

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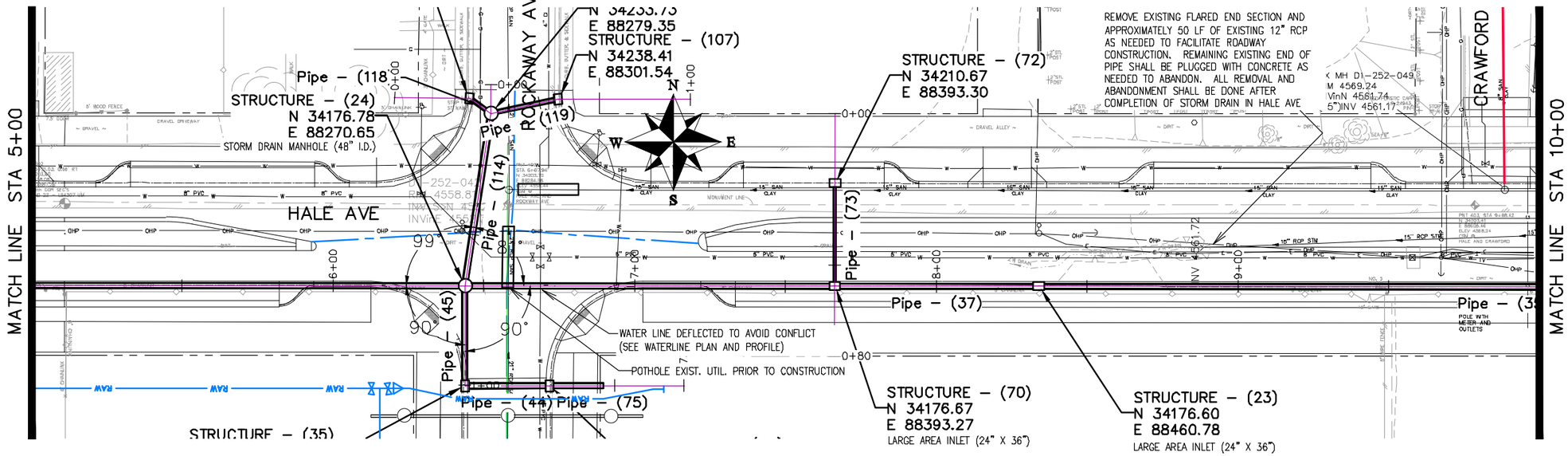

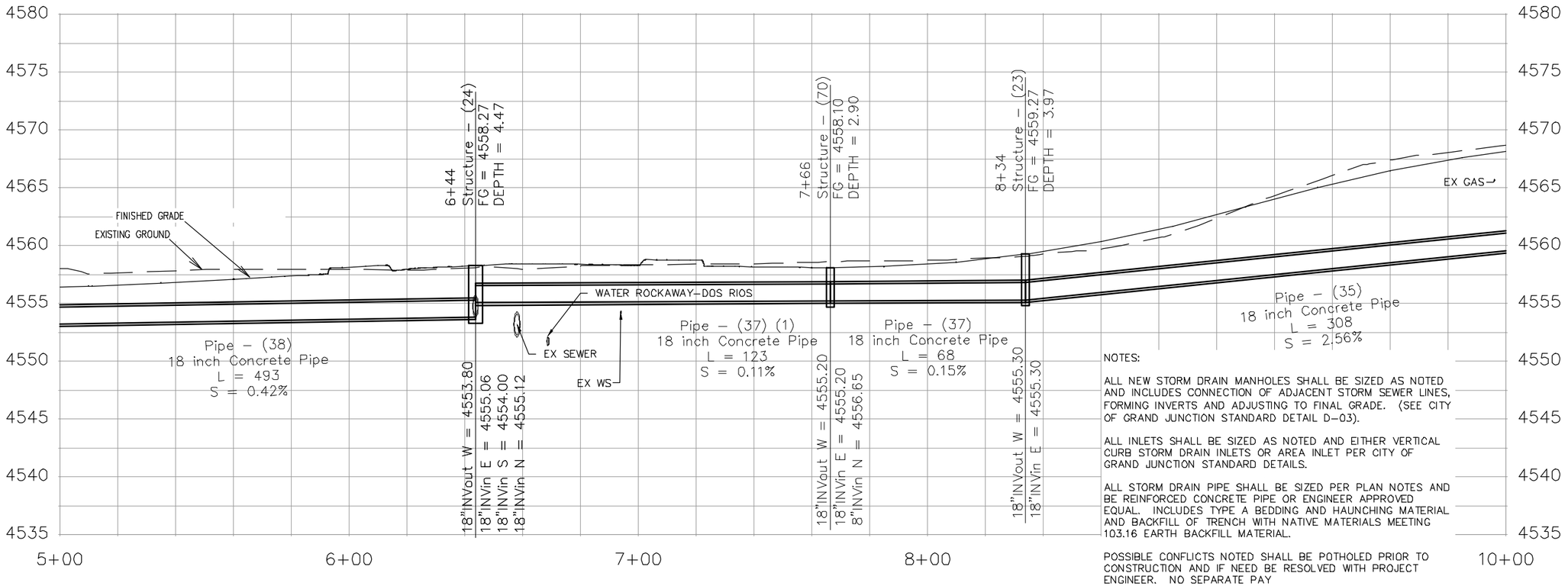

NOTES:

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POSSIBLE CONFLICTS NOTED SHALL BE POTHOLED PRIOR TO CONSTRUCTION AND IF NEED BE RESOLVED WITH PROJECT ENGINEER. NO SEPARATE PAY

DESCRIPTION	DATE
REVISION △	–
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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-2
June 19, 2020

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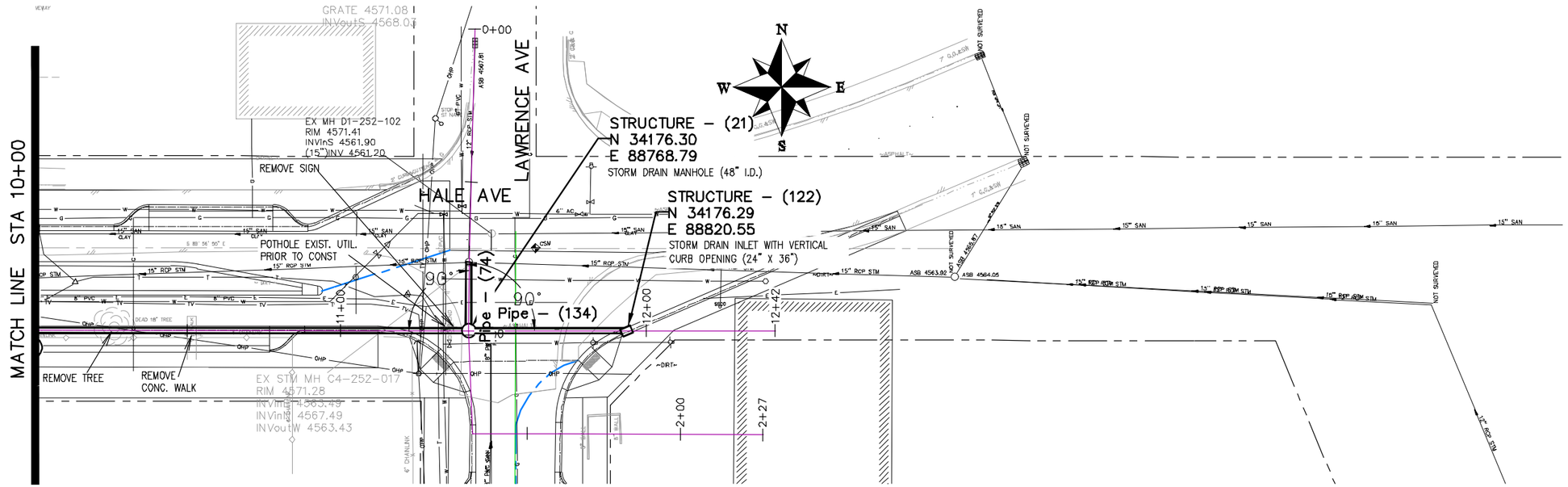

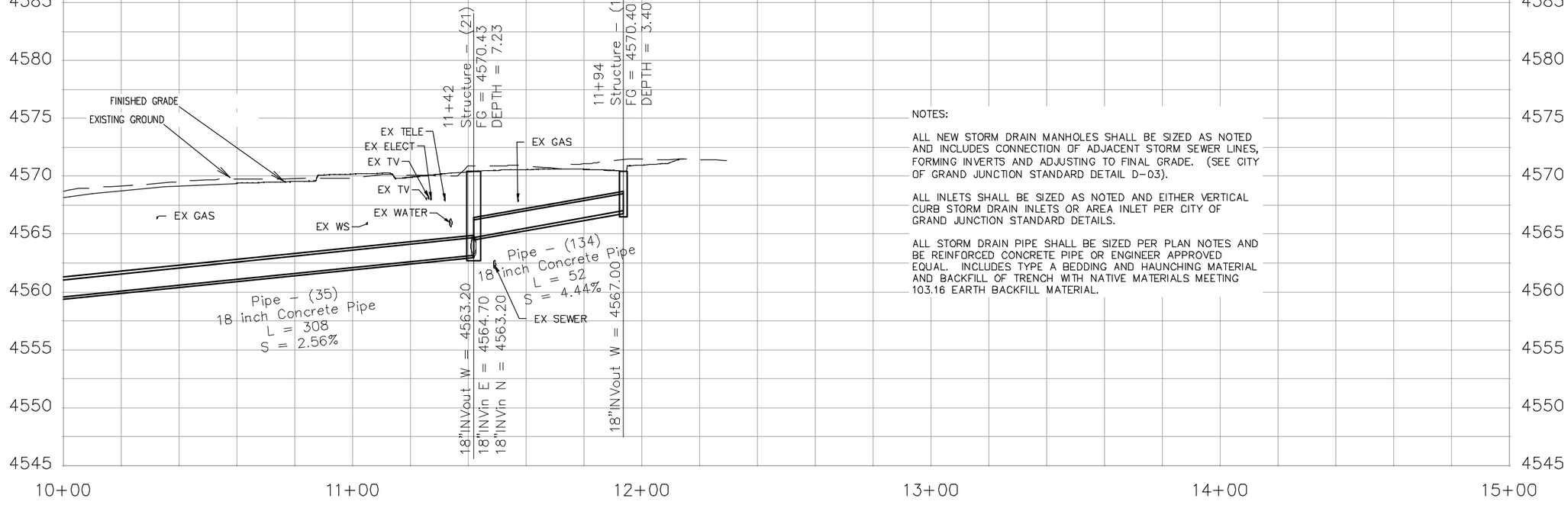

NOTES:

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).

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DESCRIPTION	DATE
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REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-3
June 19, 2020

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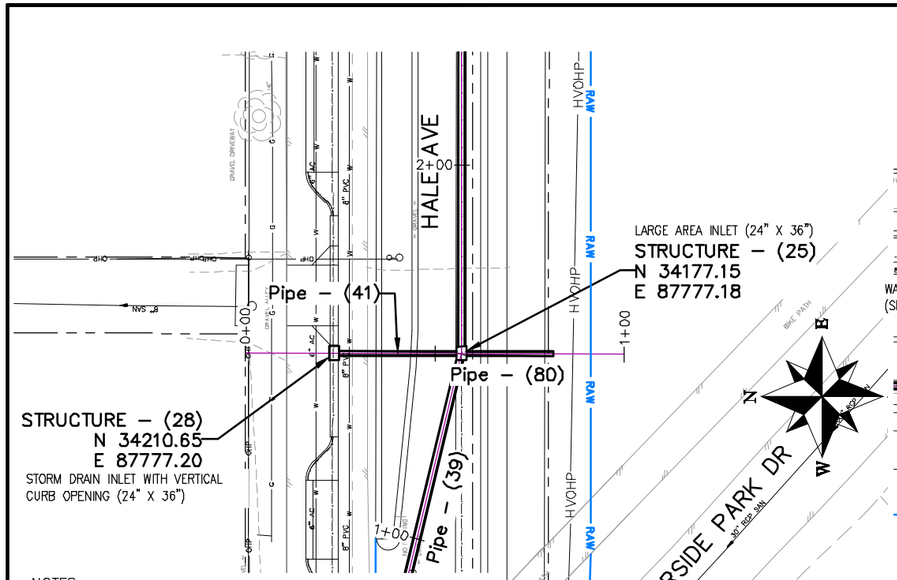

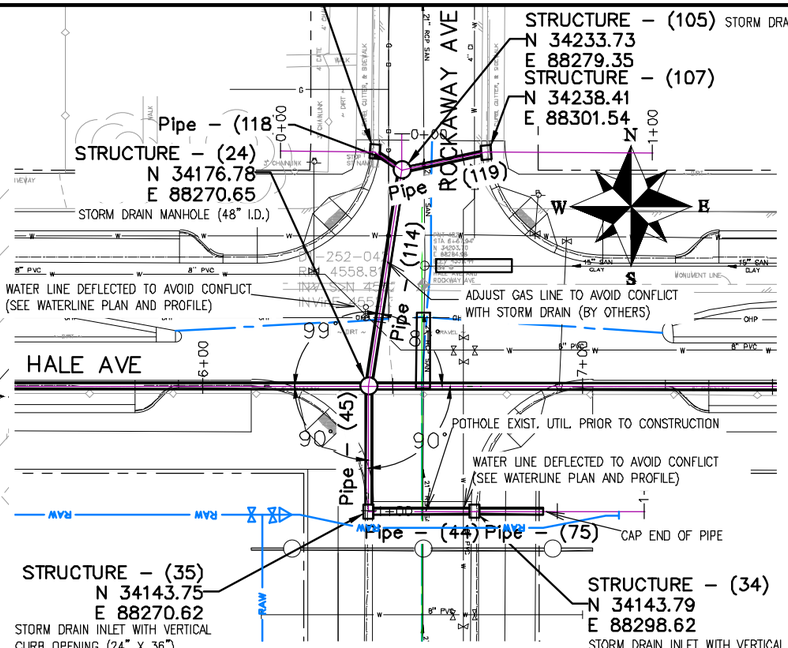

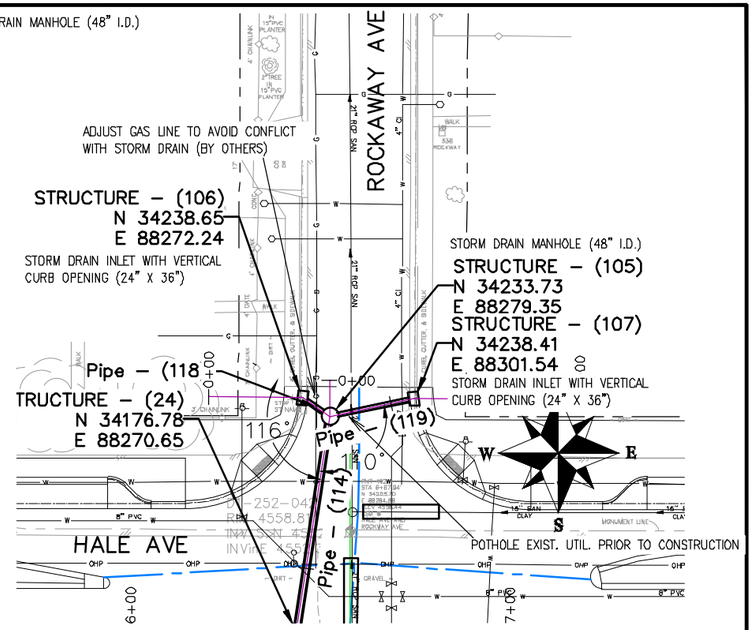

NOTES:

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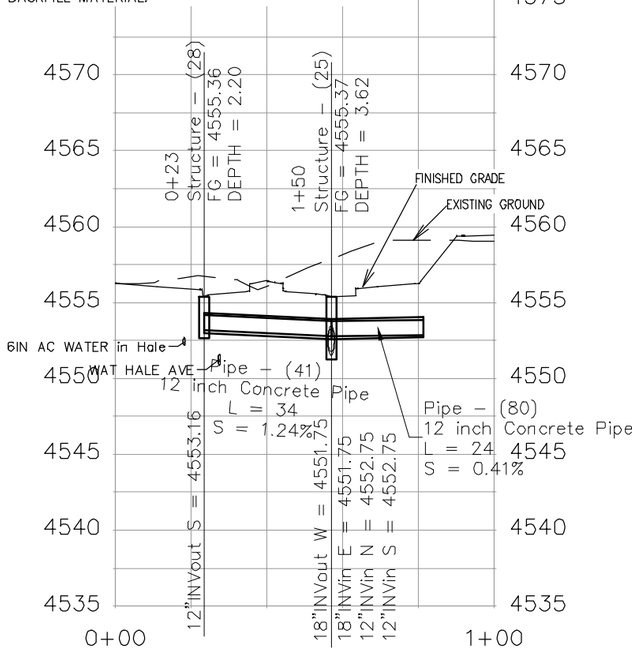

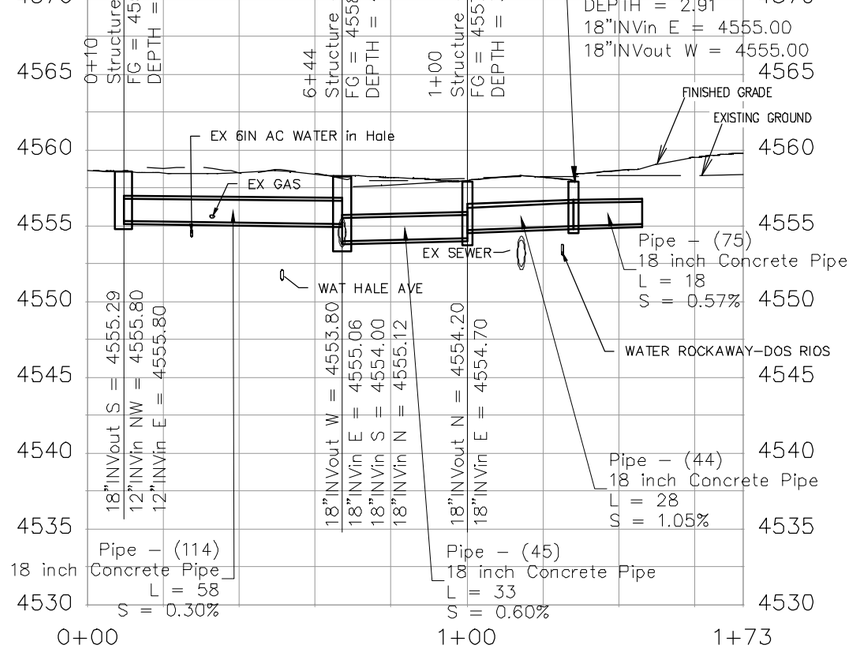

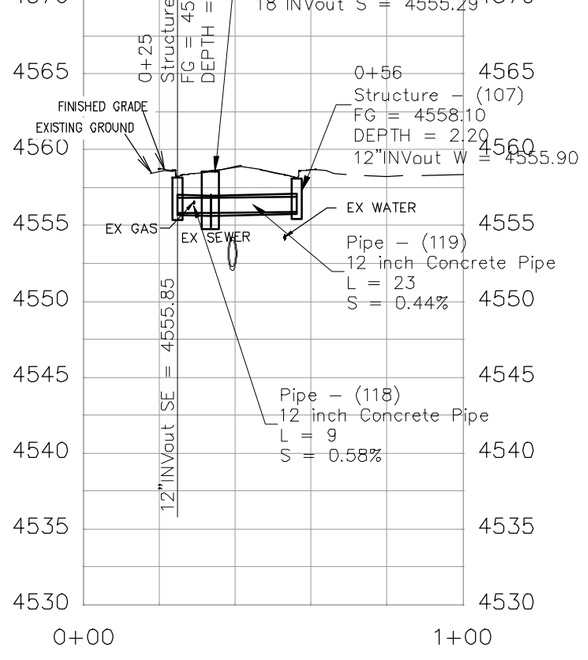

DESCRIPTION	DATE
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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-4
June 19, 2020

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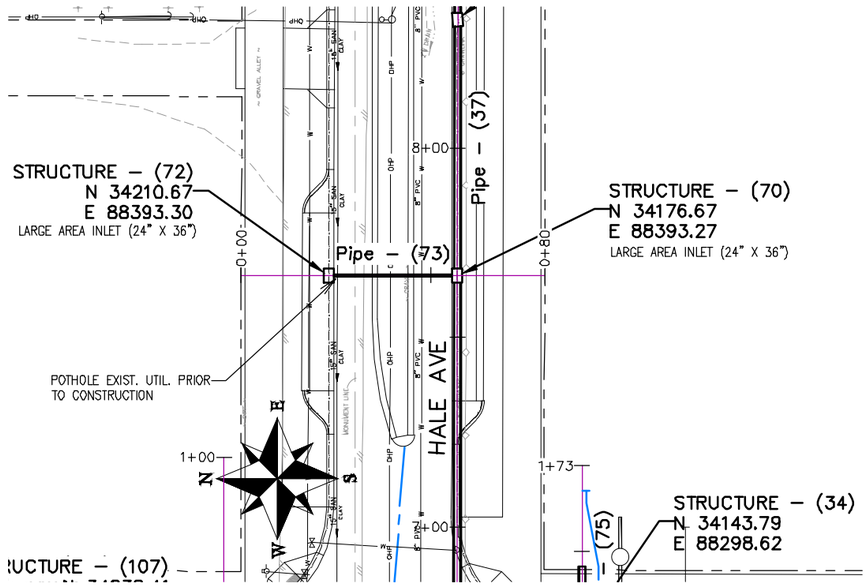
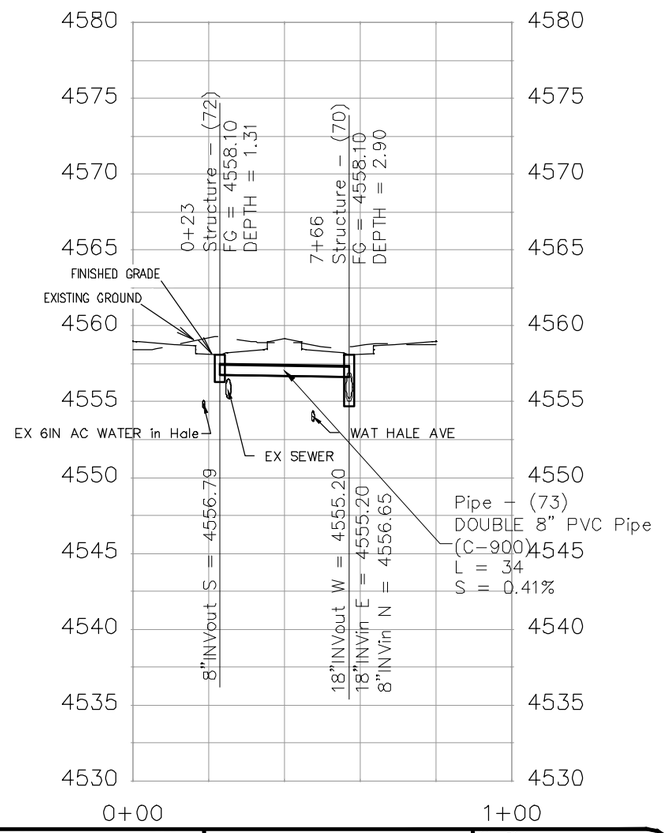
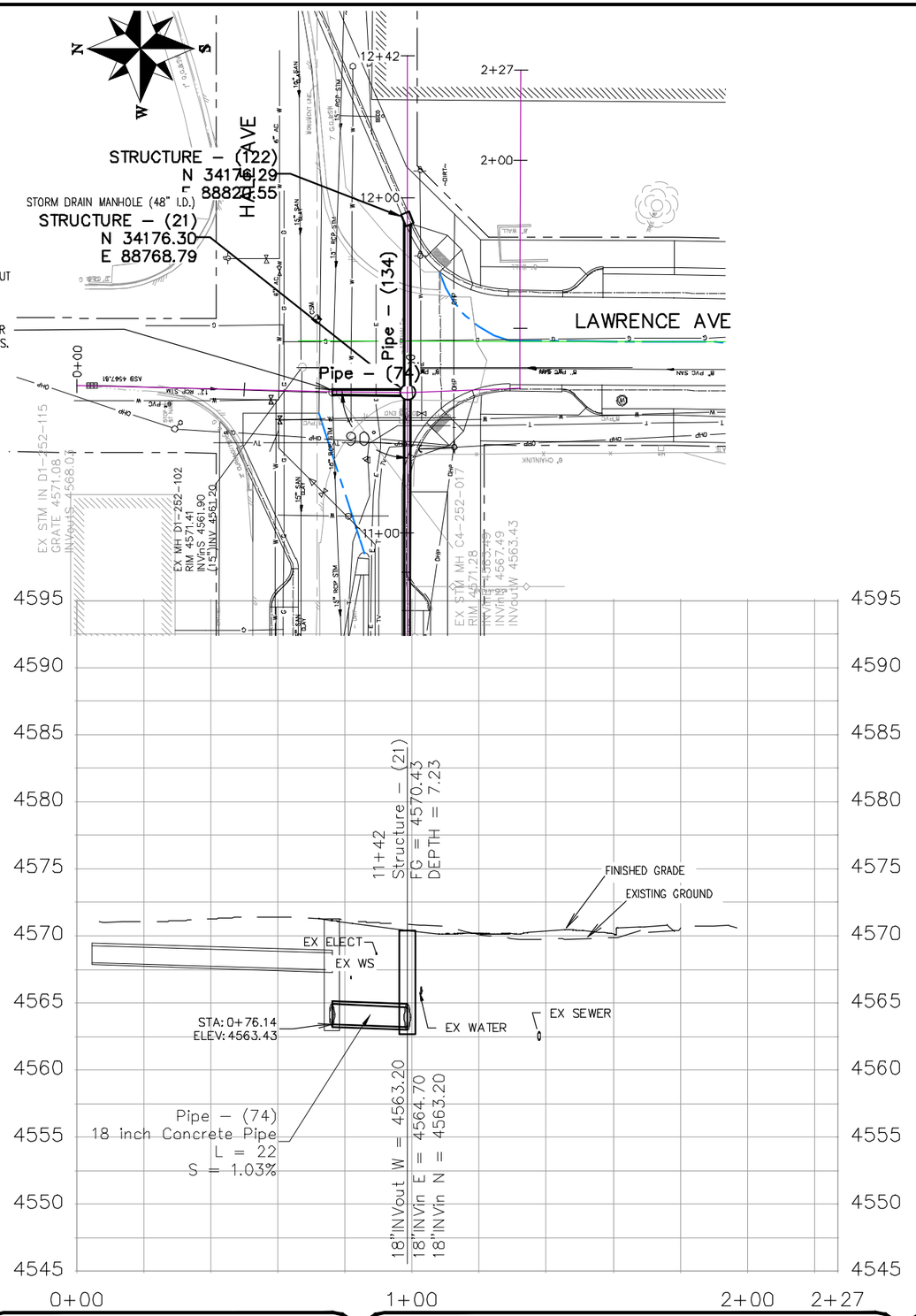




CORE AND CONNECT NEW INVERT OUT TO EXISTING MH, PLUG EXISTING INVERT OUT AFTER COMPLETION OF NEW STORM LINE IN HALE, AND ADJUST MH TO FINISHED GRADE PER CITY STANDARDS AND SPECIFICATIONS. ALL WORK SHALL BE PAID FOR UNDER PAY ITEM CONNECT TO AND ADJUST STORM MH C4–252–017



DESCRIPTION	DATE
REVISION △	–
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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–5
June 19, 2020

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NOTES:

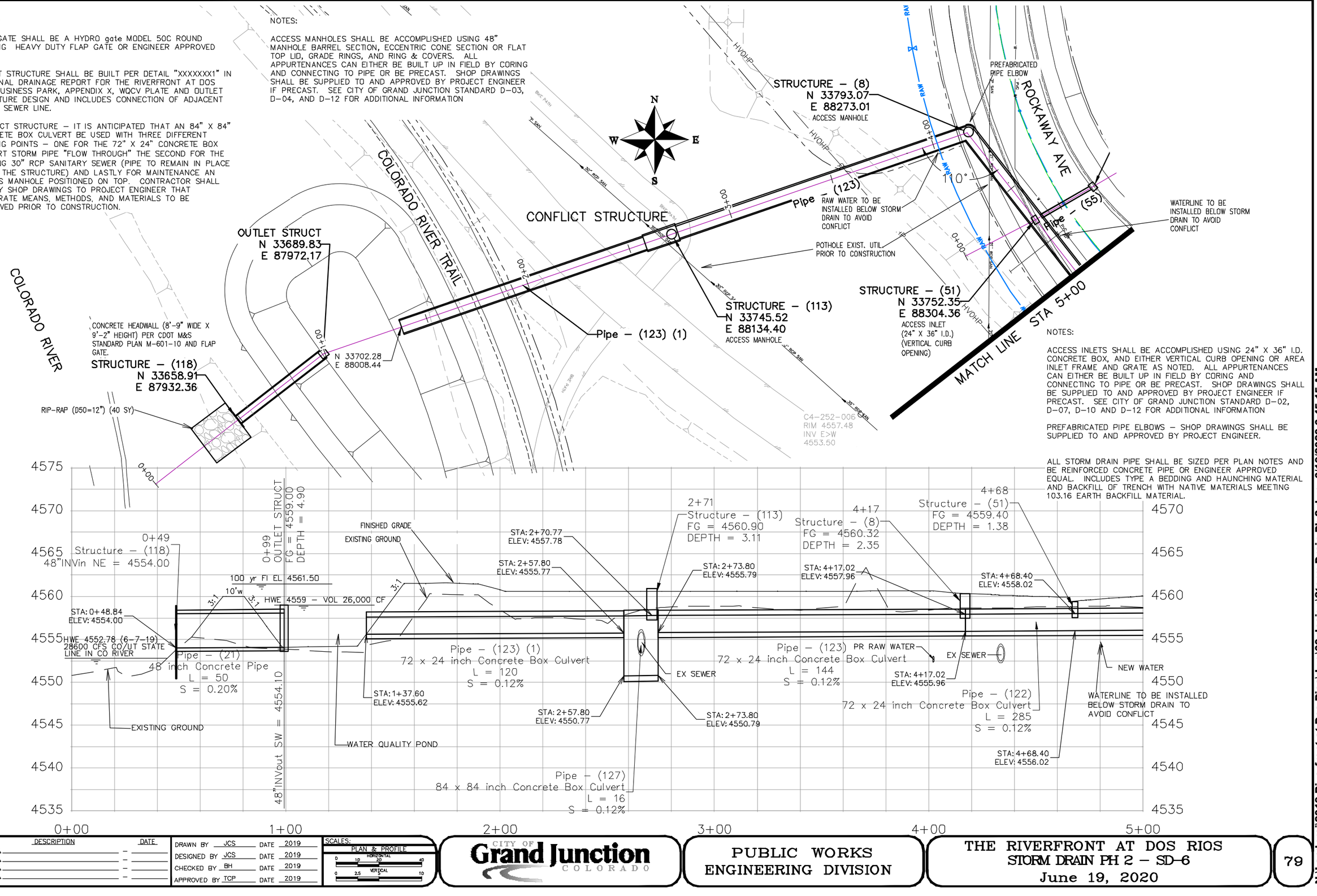
FLAP GATE SHALL BE A HYDRO gate MODEL 50C ROUND OPENING HEAVY DUTY FLAP GATE OR ENGINEER APPROVED EQUAL.

OUTLET STRUCTURE SHALL BE BUILT PER DETAIL "XXXXXXX1" IN THE FINAL DRAINAGE REPORT FOR THE RIVERFRONT AT DOS RIOS BUSINESS PARK, APPENDIX X, WQCV PLATE AND OUTLET STRUCTURE DESIGN AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINE.

CONFLICT STRUCTURE – IT IS ANTICIPATED THAT AN 84" X 84" CONCRETE BOX CULVERT BE USED WITH THREE DIFFERENT OPENING POINTS – ONE FOR THE 72" X 24" CONCRETE BOX CULVERT STORM PIPE "FLOW THROUGH" THE SECOND FOR THE EXISTING 30" RCP SANITARY SEWER (PIPE TO REMAIN IN PLACE INSIDE THE STRUCTURE) AND LASTLY FOR MAINTENANCE AN ACCESS MANHOLE POSITIONED ON TOP. CONTRACTOR SHALL SUPPLY SHOP DRAWINGS TO PROJECT ENGINEER THAT ILLUSTRATE MEANS, METHODS, AND MATERIALS TO BE APPROVED PRIOR TO CONSTRUCTION.

NOTES:

ACCESS MANHOLES SHALL BE ACCOMPLISHED USING 48" MANHOLE BARREL SECTION, ECCENTRIC CONE SECTION OR FLAT TOP LID, GRADE RINGS, AND RING & COVERS. ALL APPURTENANCES CAN EITHER BE BUILT UP IN FIELD BY CORING AND CONNECTING TO PIPE OR BE PRECAST. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER IF PRECAST. SEE CITY OF GRAND JUNCTION STANDARD D–03, D–04, AND D–12 FOR ADDITIONAL INFORMATION



NOTES:

ACCESS INLETS SHALL BE ACCOMPLISHED USING 24" X 36" I.D. CONCRETE BOX, AND EITHER VERTICAL CURB OPENING OR AREA INLET FRAME AND GRATE AS NOTED. ALL APPURTENANCES CAN EITHER BE BUILT UP IN FIELD BY CORING AND CONNECTING TO PIPE OR BE PRECAST. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER IF PRECAST. SEE CITY OF GRAND JUNCTION STANDARD D–02, D–07, D–10 AND D–12 FOR ADDITIONAL INFORMATION

PREFABRICATED PIPE ELBOWS – SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–6
June 19, 2020

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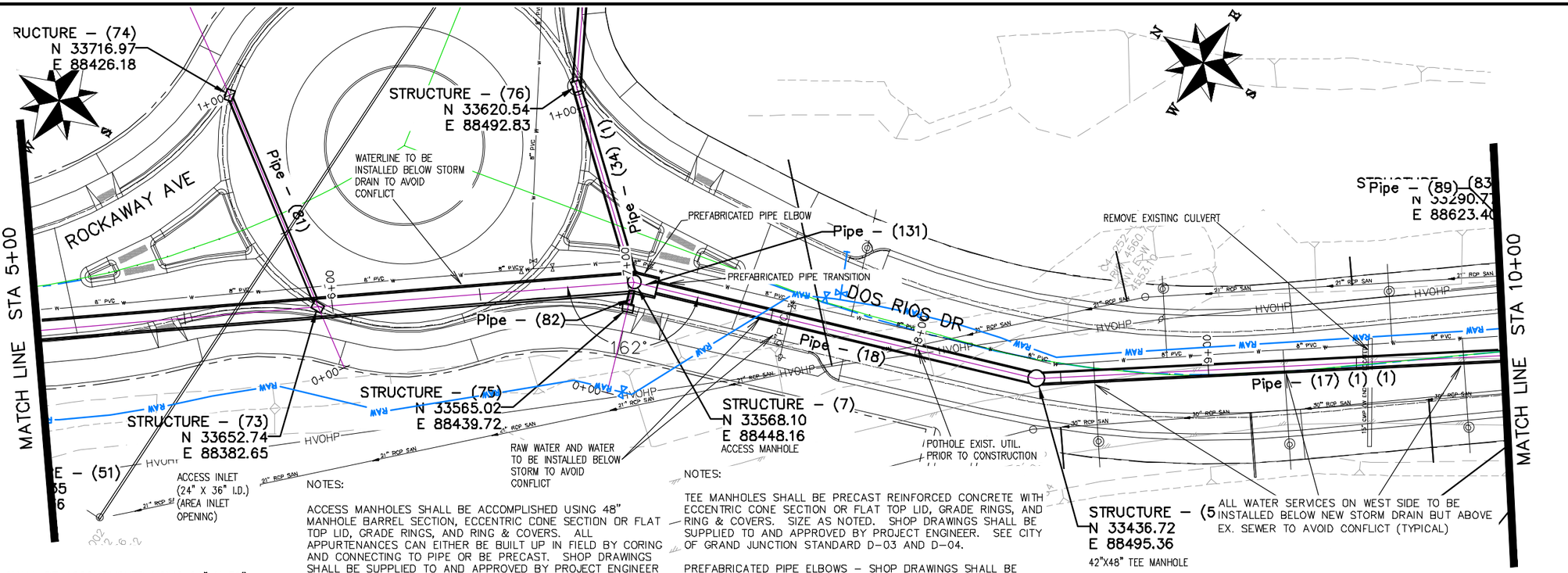

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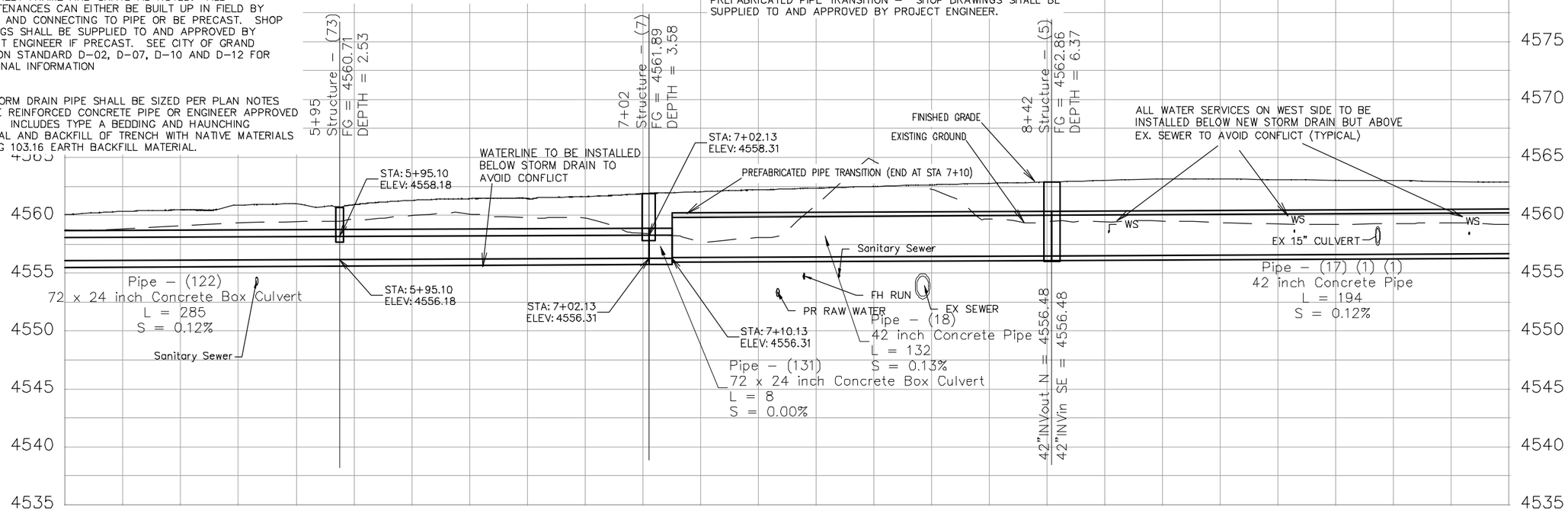
NOTES:

TEE MANHOLES SHALL BE PRECAST REINFORCED CONCRETE WITH ECCENTRIC CONE SECTION OR FLAT TOP LID, GRADE RINGS, AND RING & COVERS. SIZE AS NOTED. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D–03 AND D–04.

PREFABRICATED PIPE ELBOWS – SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER.

PREFABRICATED PIPE TRANSITION – SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER.



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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–7
June 19, 2020

80

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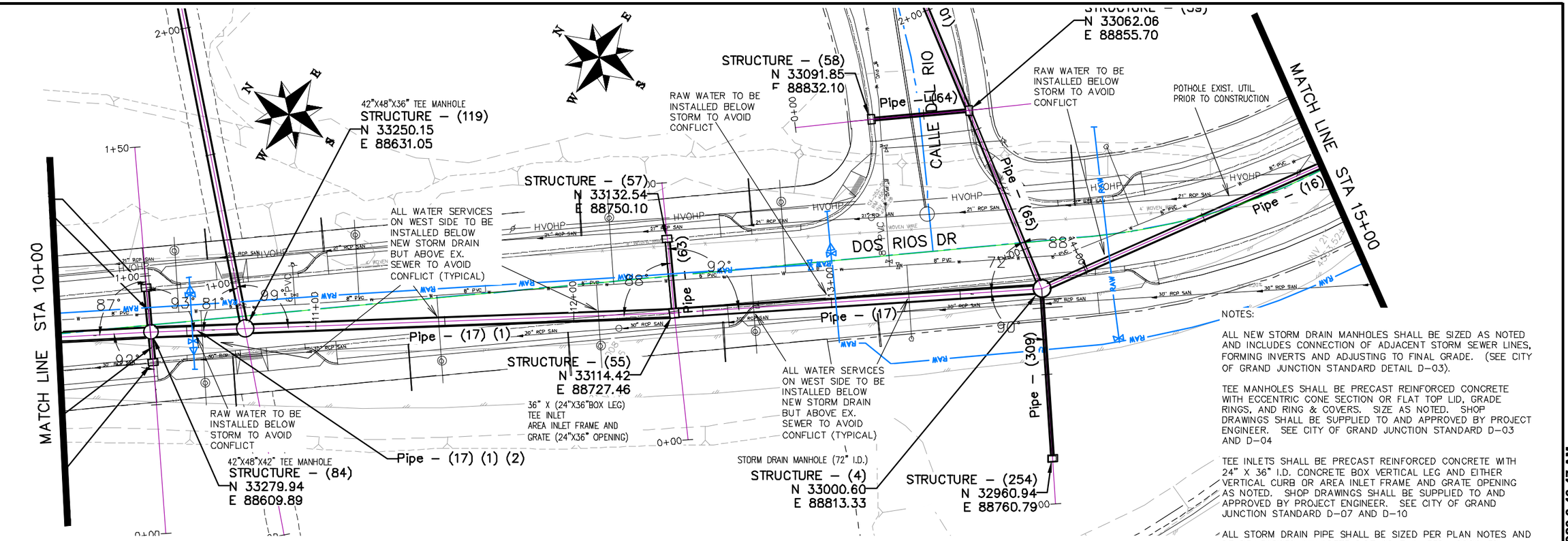

NOTES:

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D–03).

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TEE INLETS SHALL BE PRECAST REINFORCED CONCRETE WITH 24" X 36" I.D. CONCRETE BOX VERTICAL LEG AND EITHER VERTICAL CURB OR AREA INLET FRAME AND GRATE OPENING AS NOTED. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D–07 AND D–10

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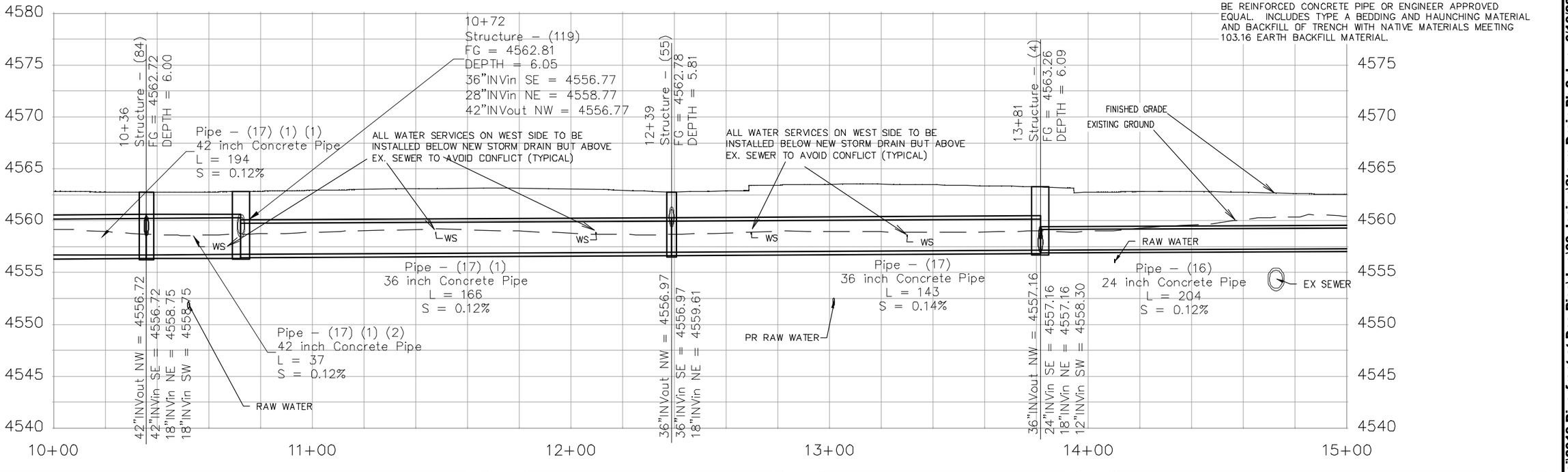

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–8
June 19, 2020

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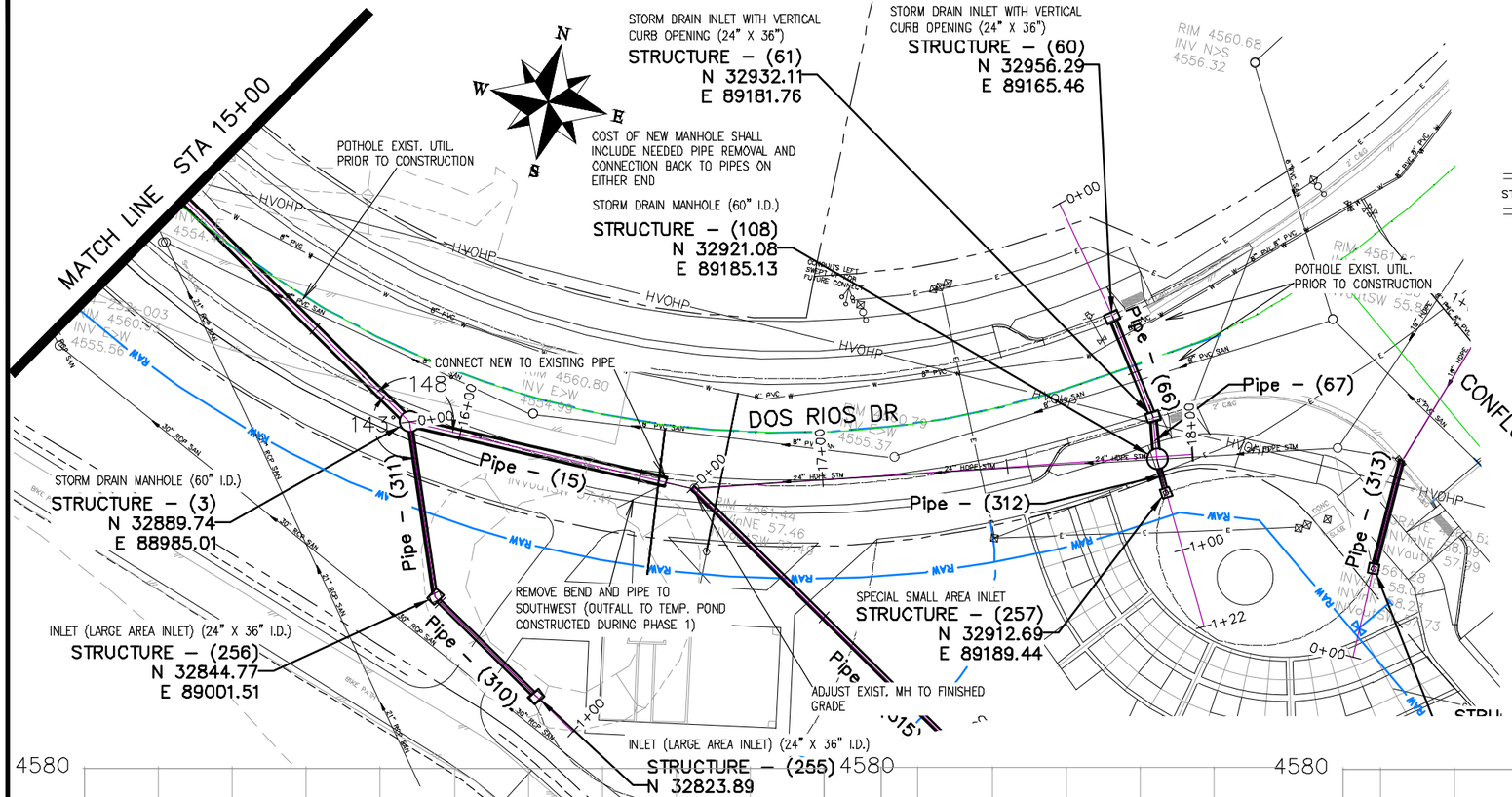

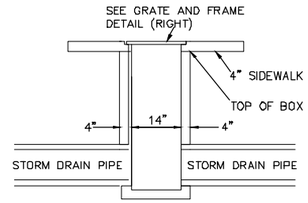

SPECIAL SMALL AREA INLET
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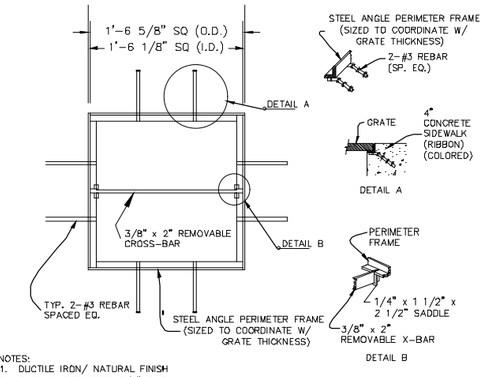
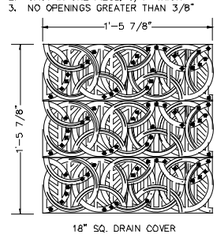


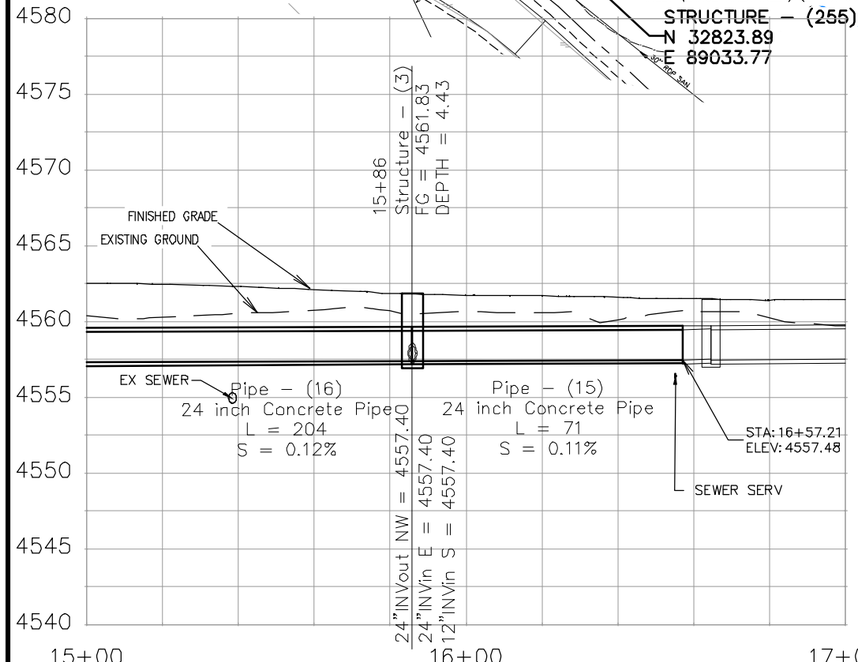
NOTES:
1. DUCTILE IRON/ NATURAL FINISH
2. CAST IN ONE PIECE, 3/4" THICK
3. NO OPENINGS GREATER THAN 3/8"

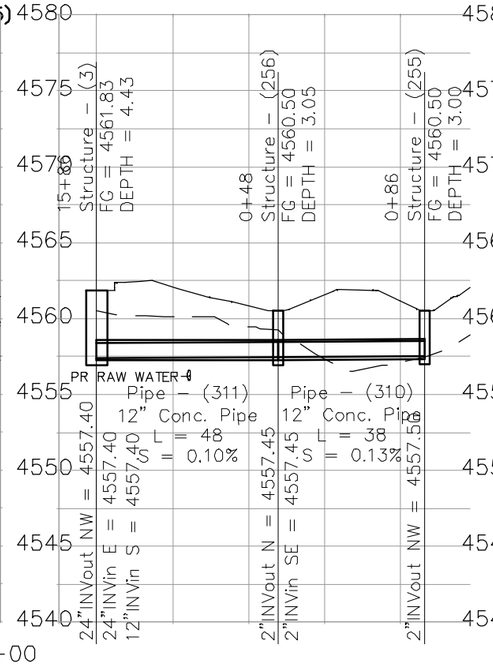


18" SQ. DRAIN COVER

NOTE
1. URBAN ACCESSORIES 18 INCH SQ. MEDIUM DUTY "S" FRAME OR APPROVED EQUAL.
2. URBAN ACCESSORIES OT TITLE–24, 18 INCH SQ. DRAIN COVER OR APPROVED EQUAL.

GRATE FRAME FOR SPECIAL SMALL AREA INLET





NOTES:

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D–03).

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INLETS CALLED OUT AS SPECIAL SMALL AREA INLETS PER DETAILS THIS PAGE

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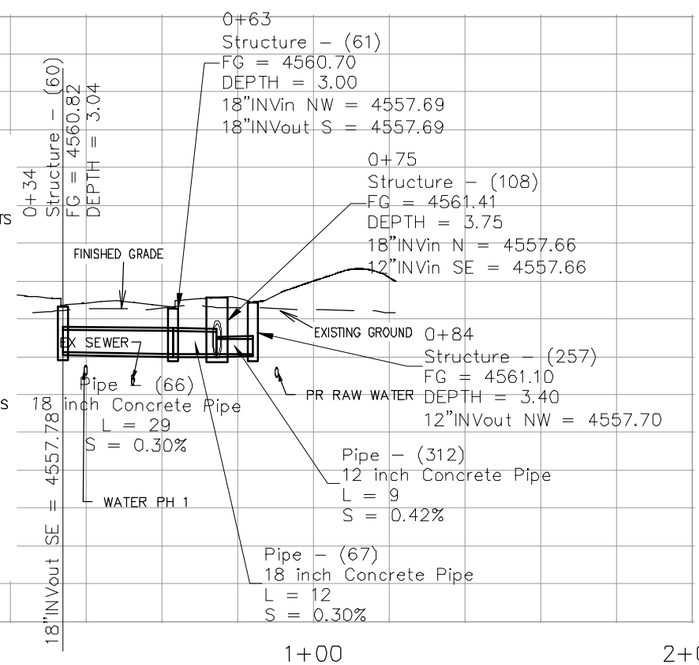

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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–9
June 19, 2020

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NOTES:

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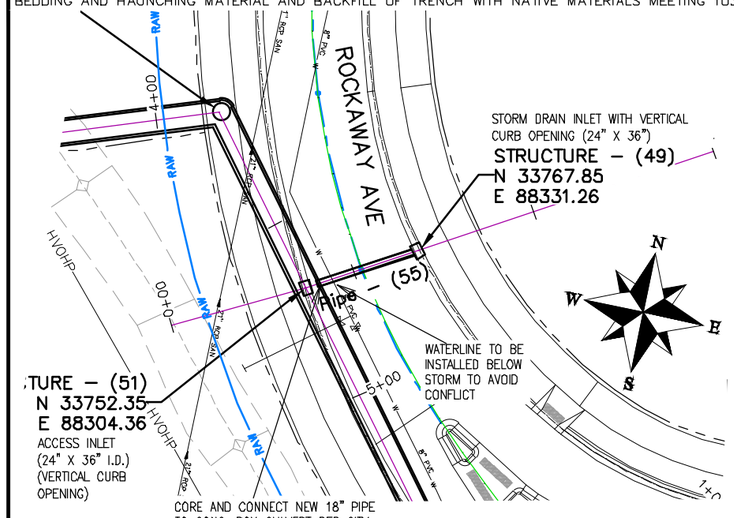

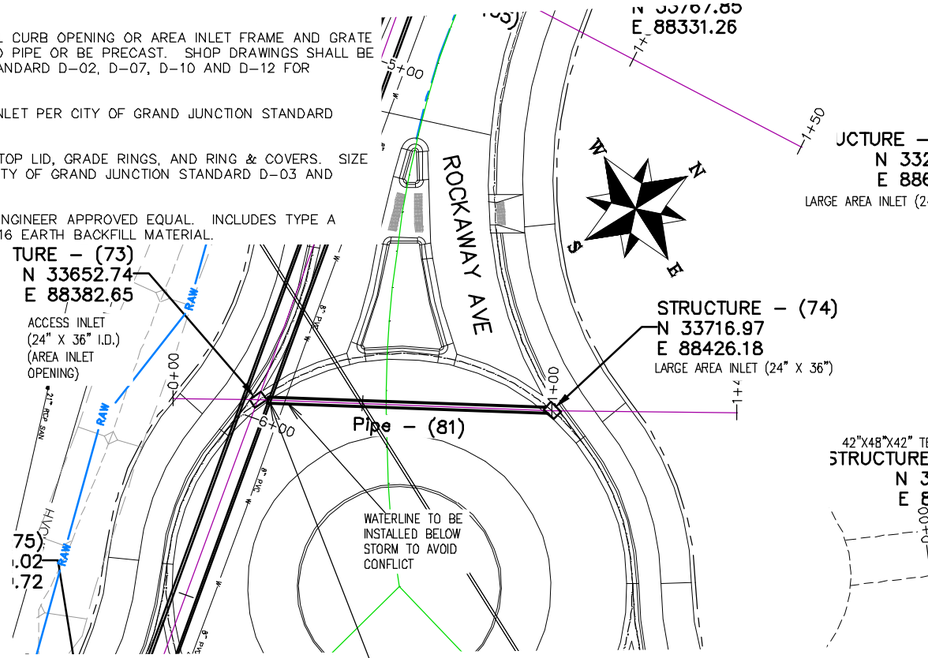

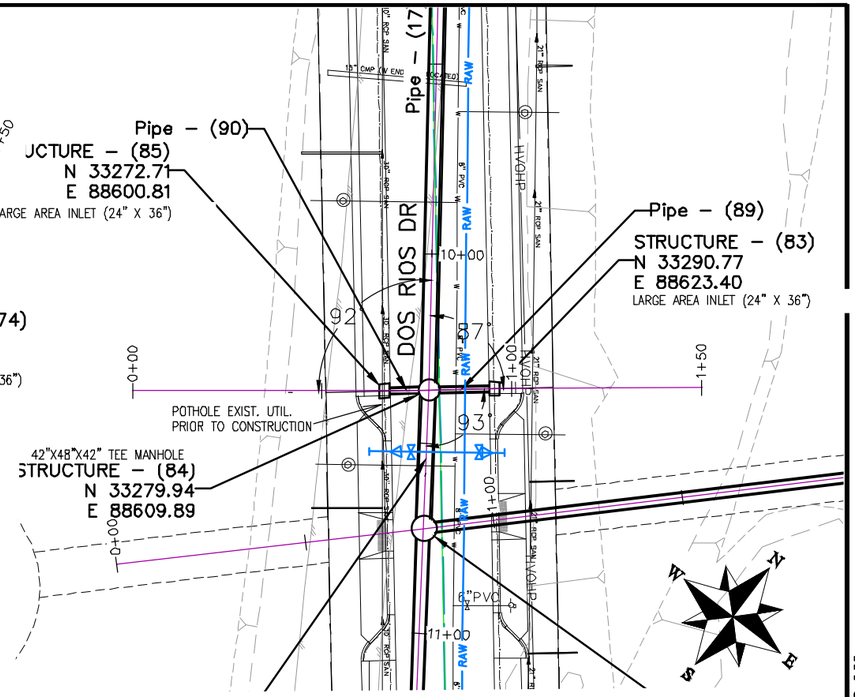

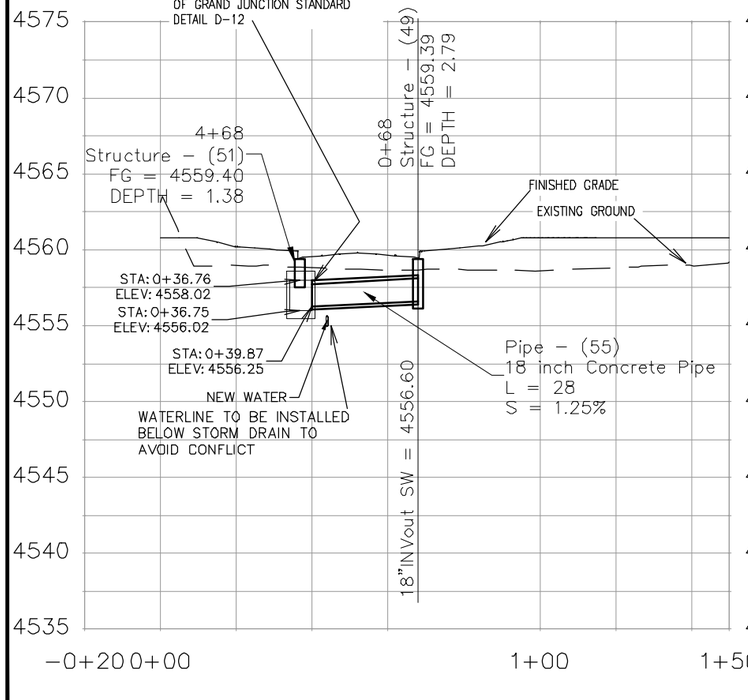

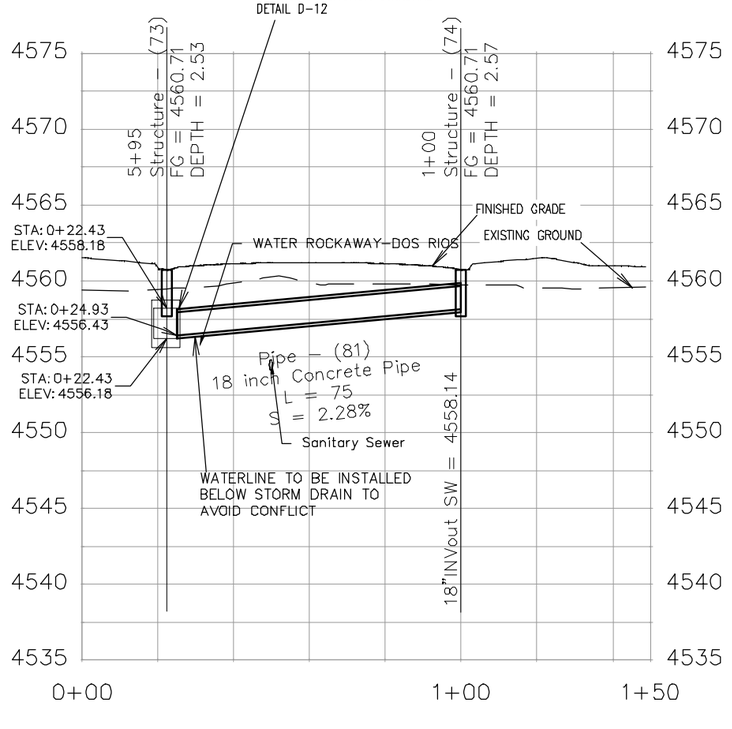

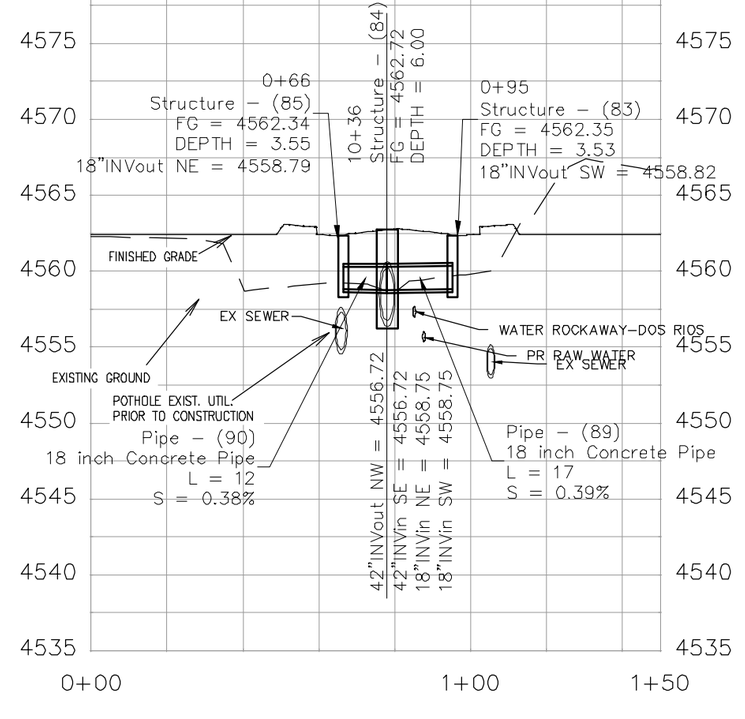

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-10
June 19, 2020

83

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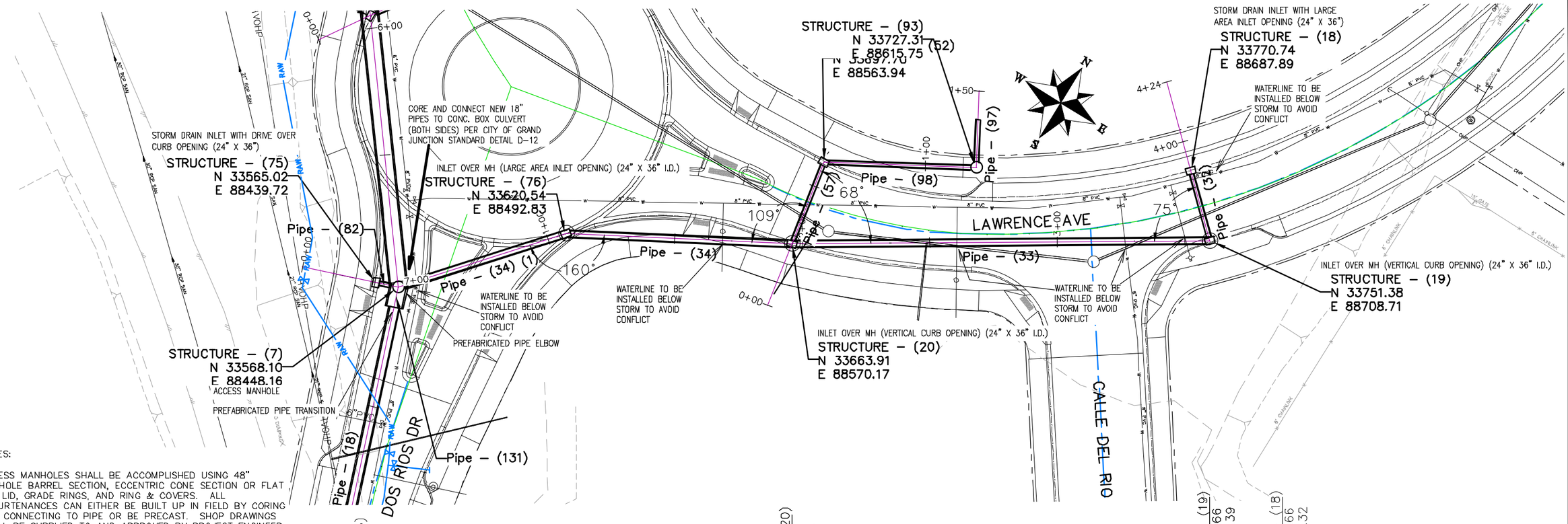

NOTES:

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INLET OVER MH SHALL BE ACCOMPLISHED USING 24" X 36" I.D. CONCRETE BOX WITH EITHER VERTICAL CURB OPENING OR AREA INLET FRAME AND GRATE AS NOTED PLACED UPON AN 8" THICK FLAT TOP MH LID (84"O.D.) WITH 24"X36" SQUARE OPENING AND THAT PLACED UPON 72" MANHOLE BARRELL SECTION. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D–03, D–07, AND D–10 FOR ADDITIONAL INFORMATION

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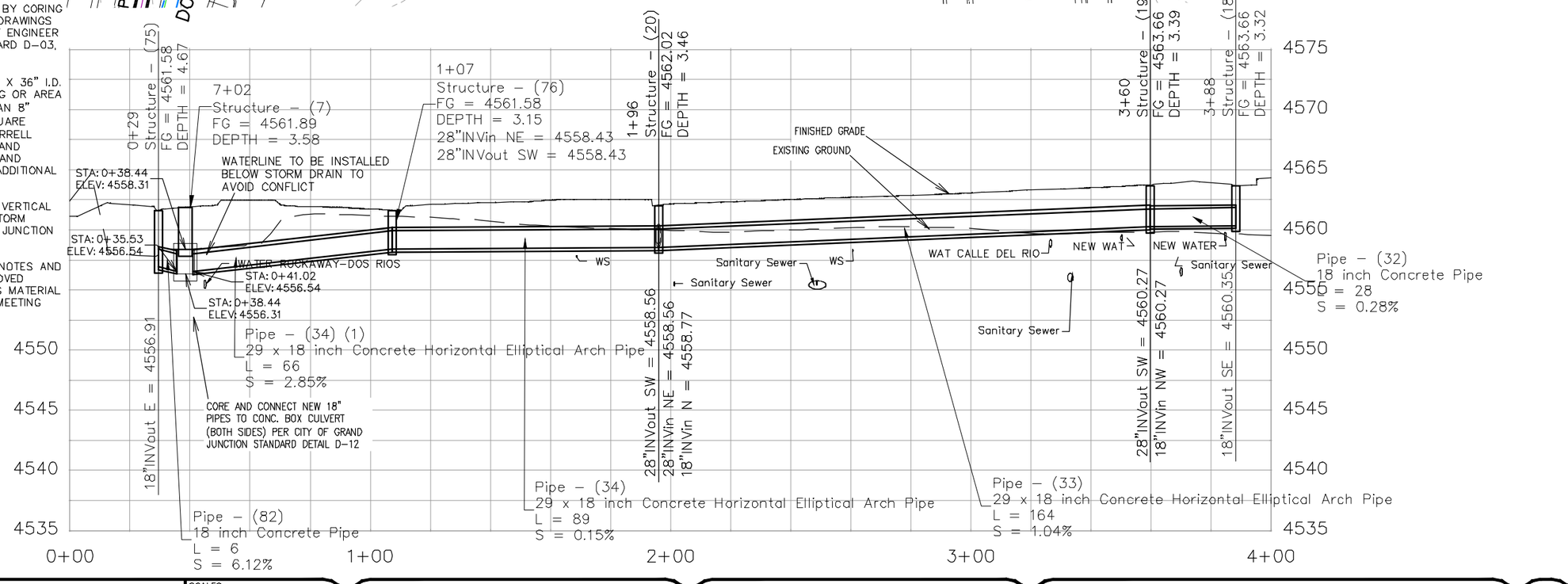

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–11
June 19, 2020

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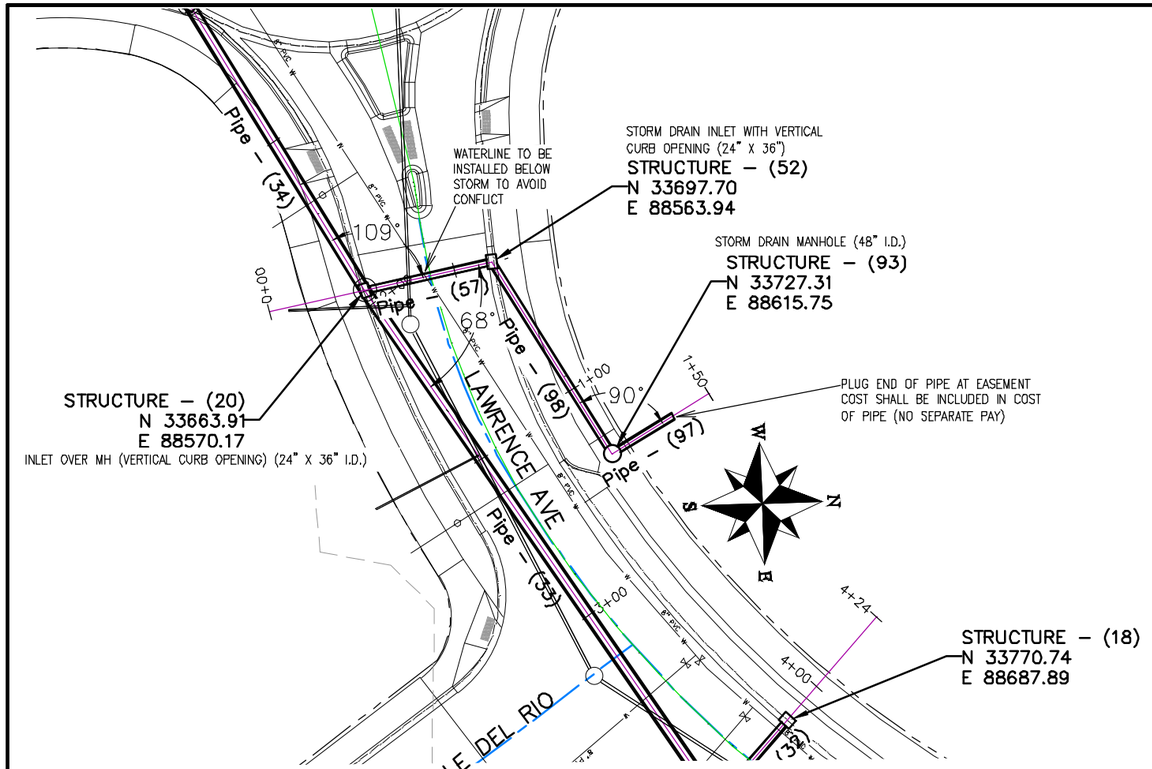

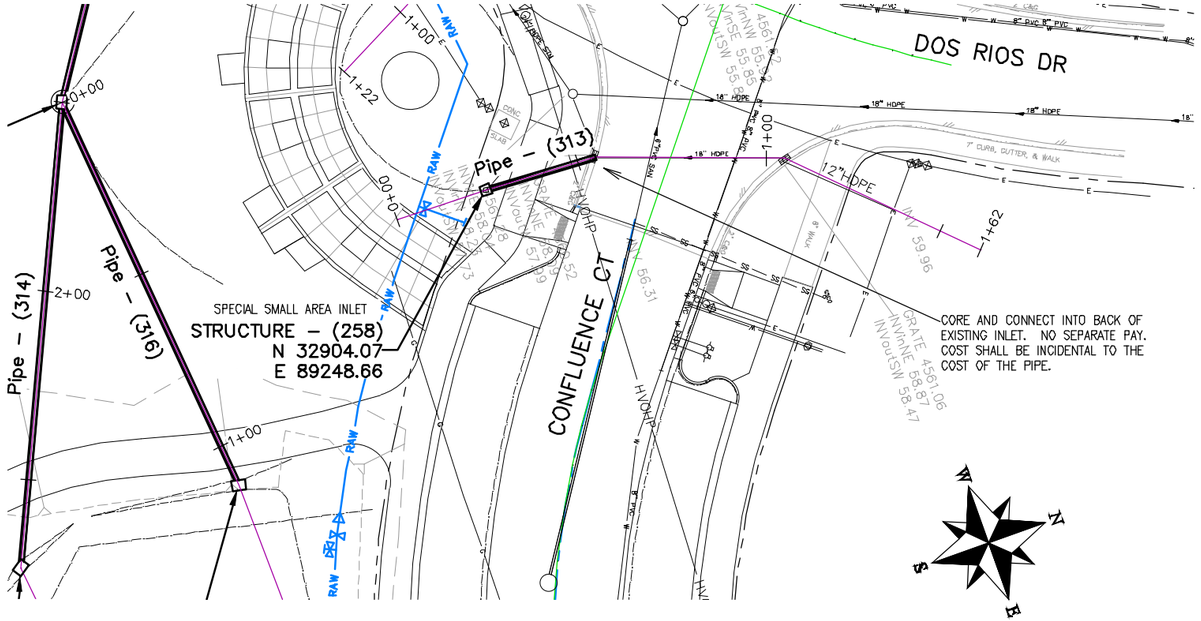

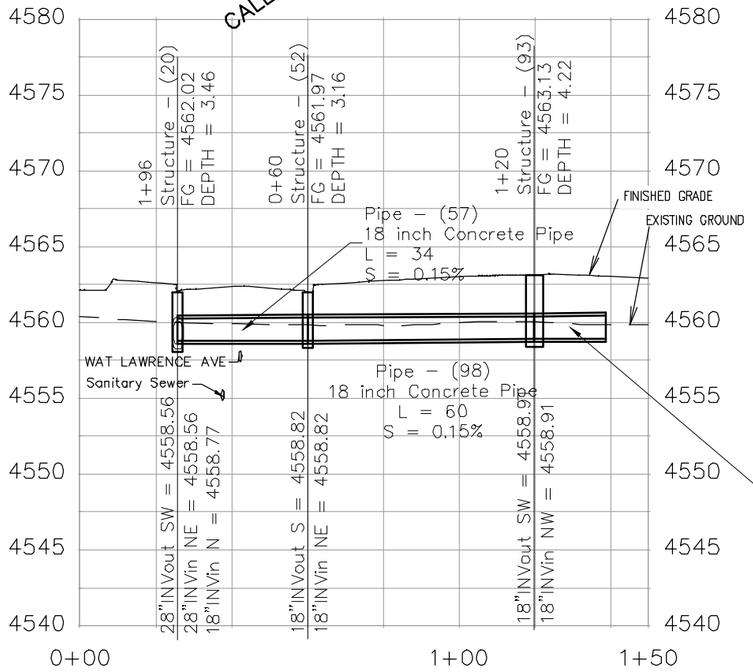

NOTES:

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INLETS CALLED OUT AS SPECIAL SMALL AREA INLETS PER DETAILS PAGE SD–9

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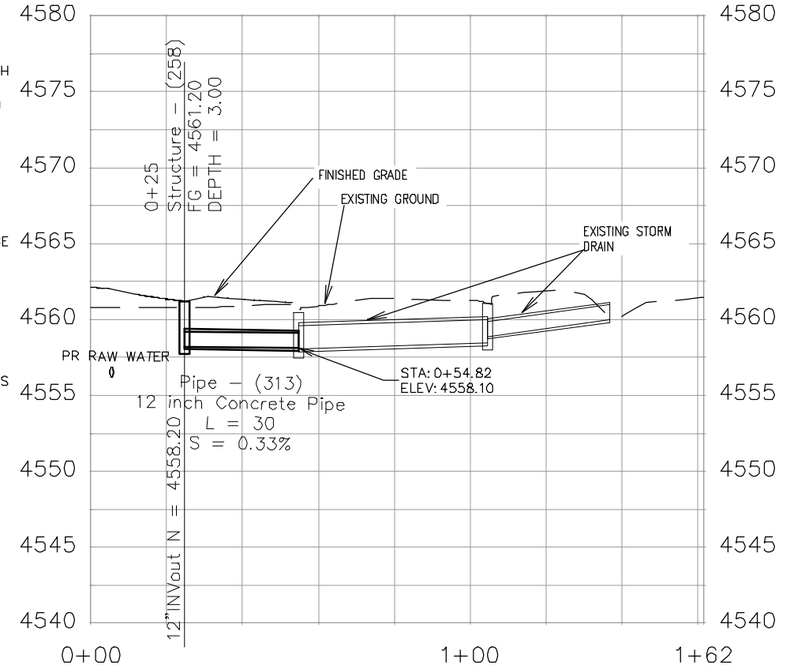

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–12
June 19, 2020

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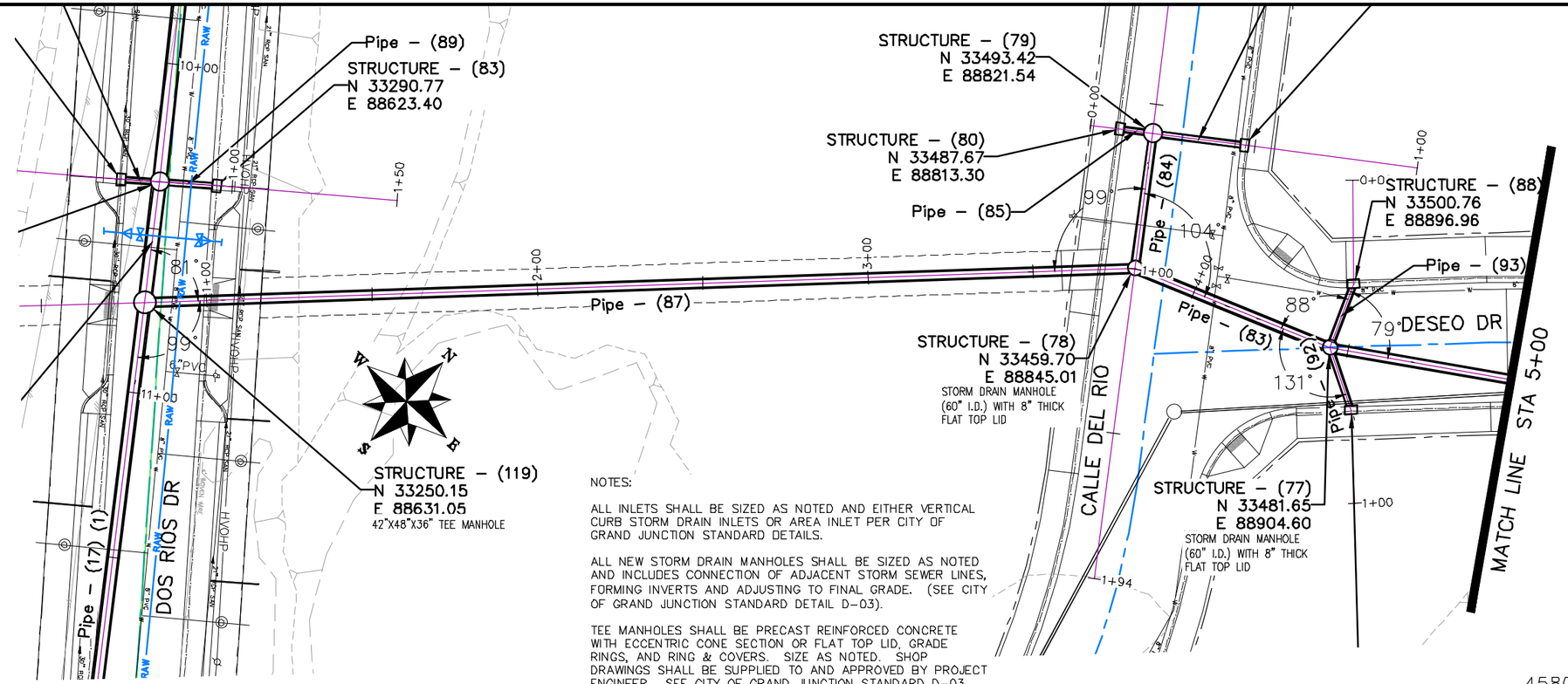


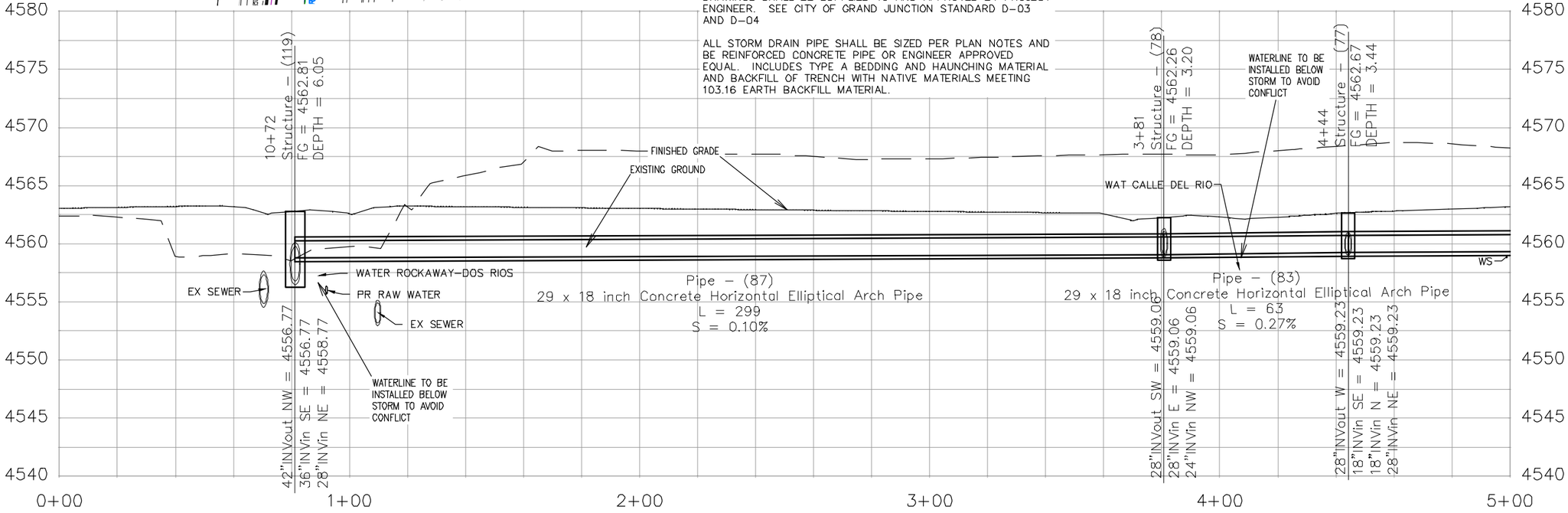
NOTES:

ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).

TEE MANHOLES SHALL BE PRECAST REINFORCED CONCRETE WITH ECCENTRIC CONE SECTION OR FLAT TOP LID, GRADE RINGS, AND RING & COVERS. SIZE AS NOTED. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D-03 AND D-04

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-13
June 19, 2020

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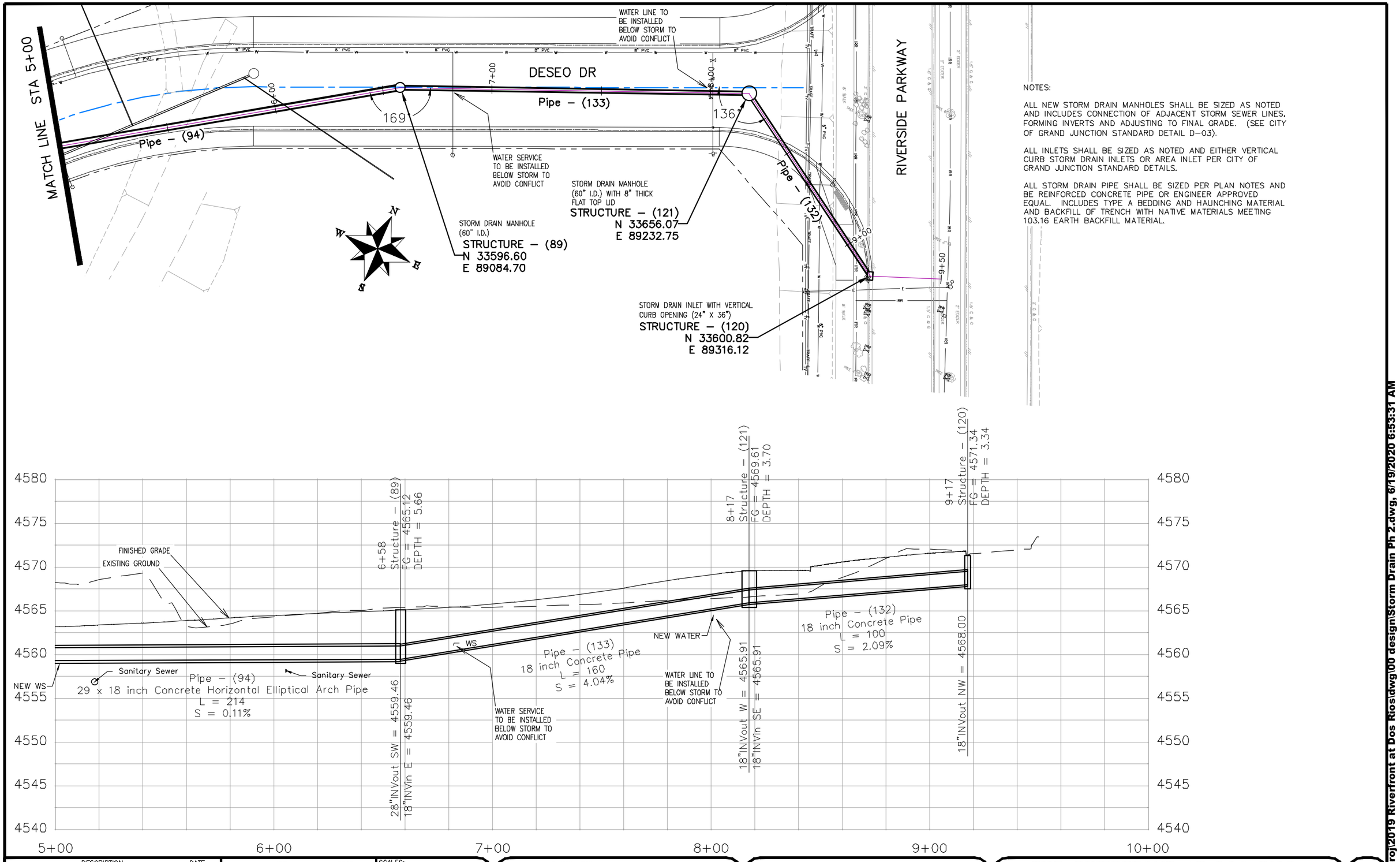

NOTES:

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D–03).

ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

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REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-14
June 19, 2020

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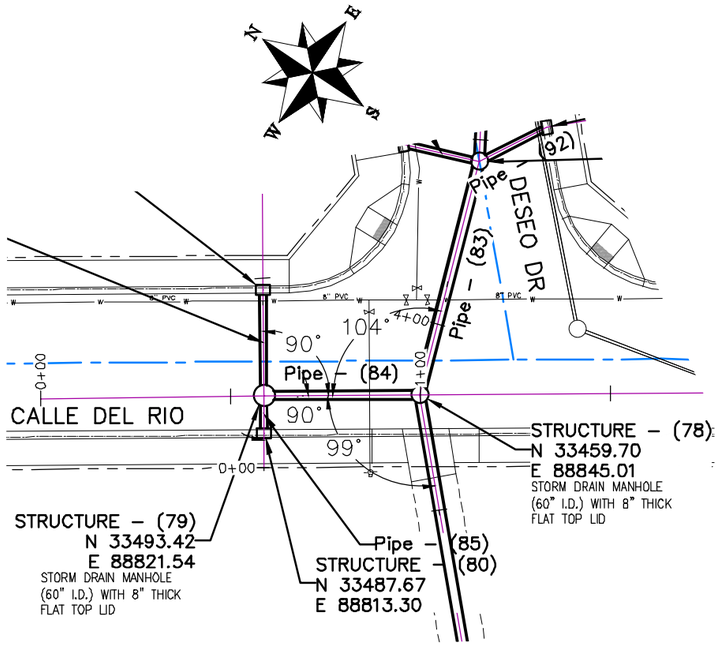
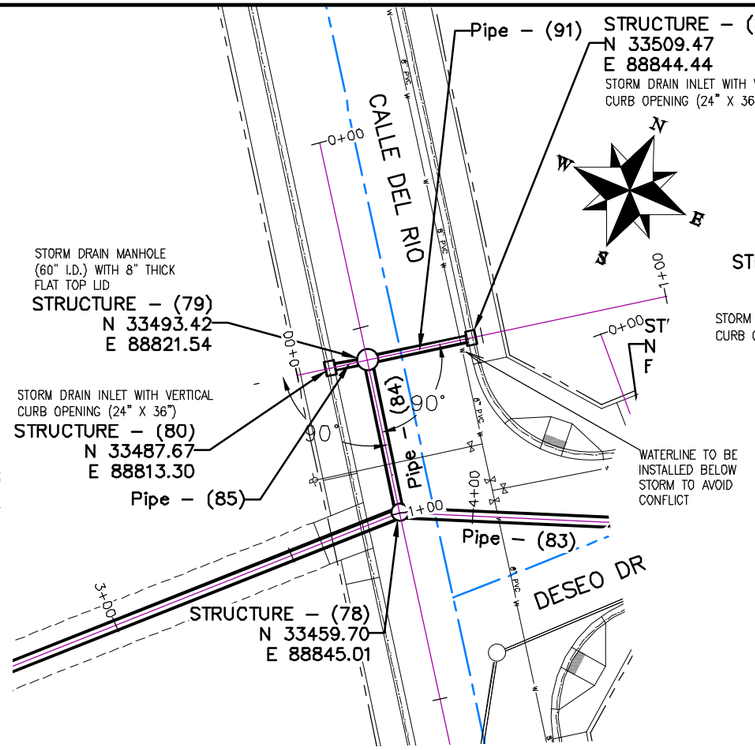
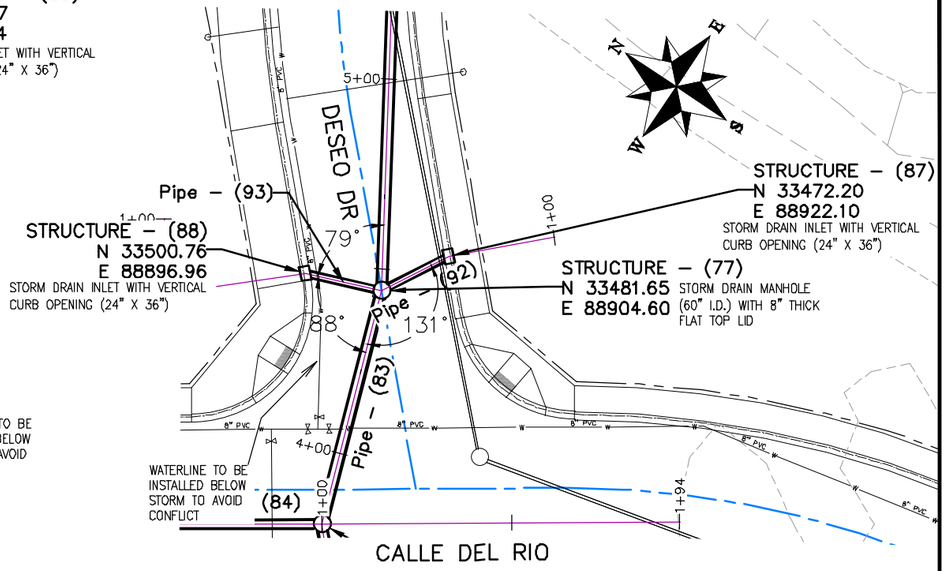




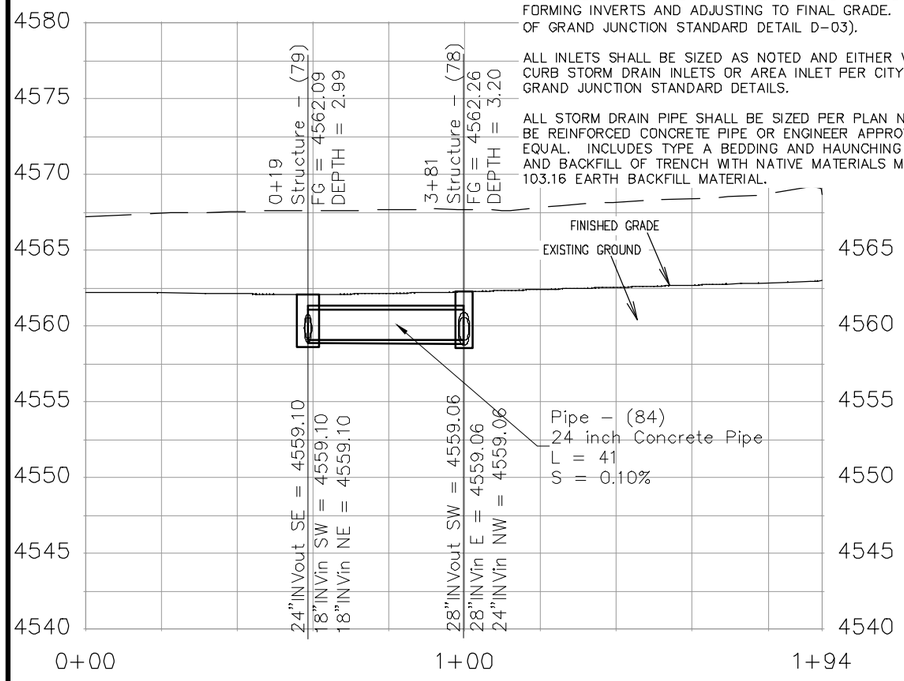


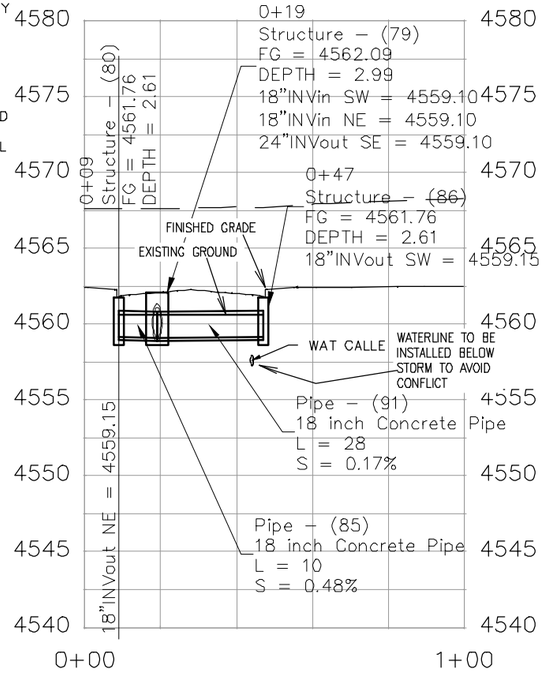
NOTES:

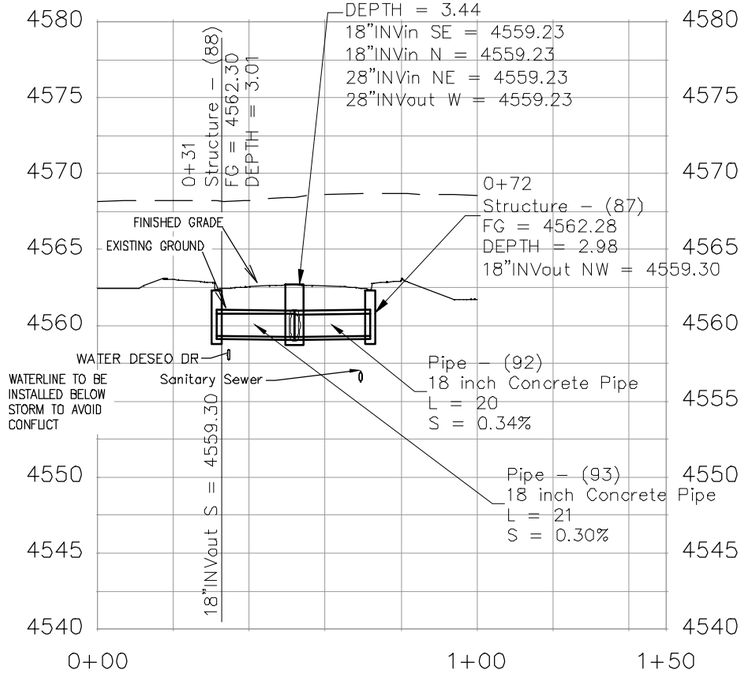
ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).

ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.







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REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-15
June 19, 2020

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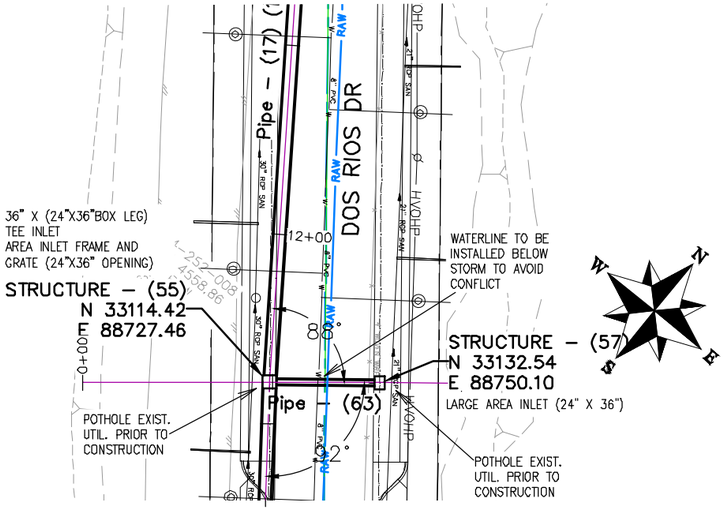
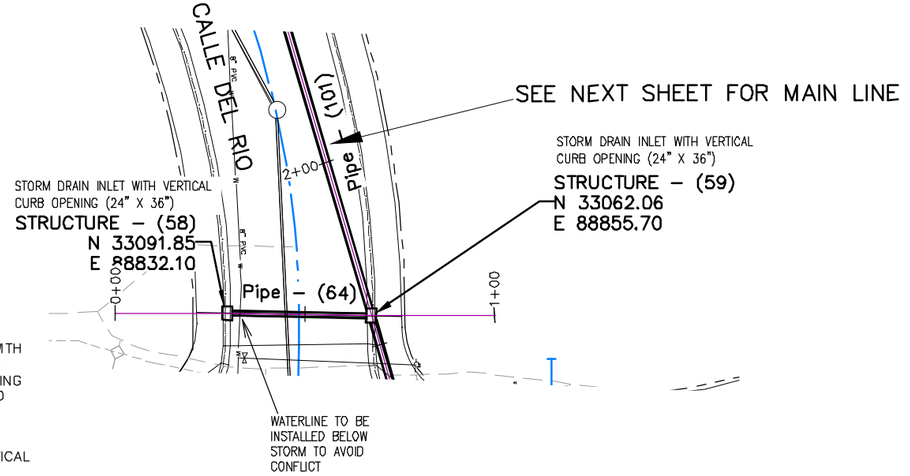


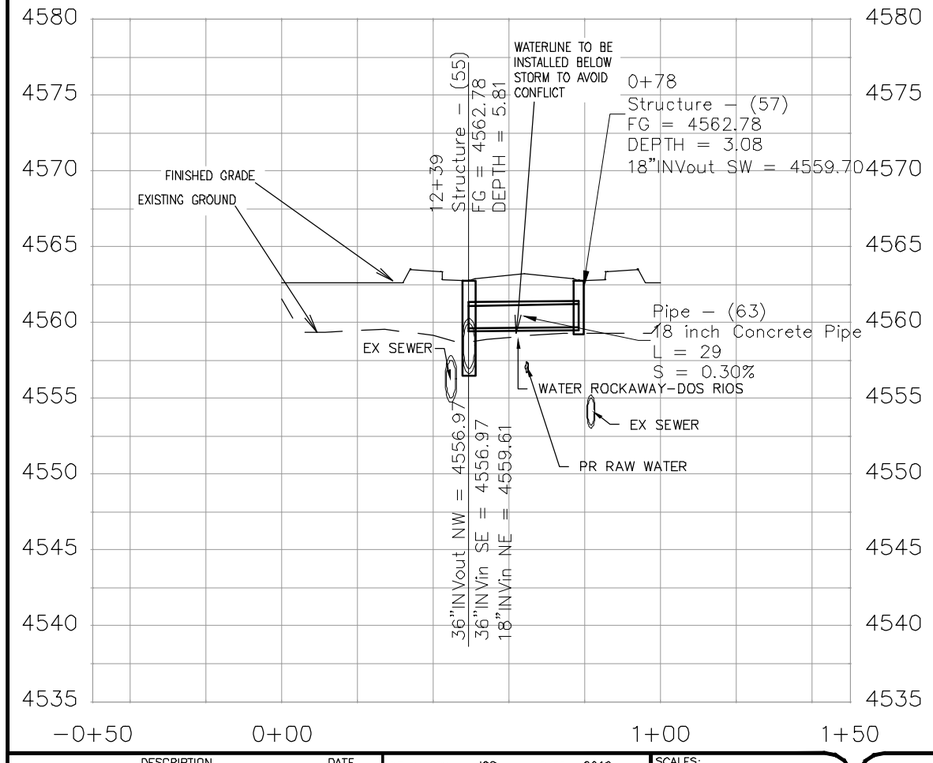
NOTES:

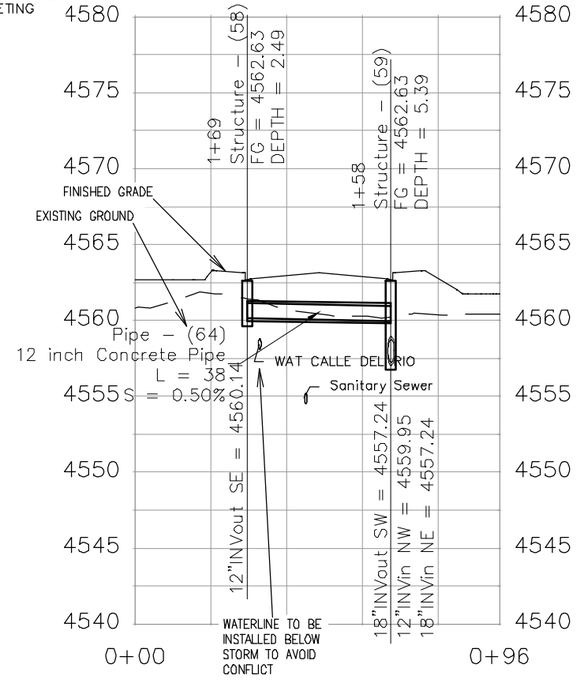
TEE INLETS SHALL BE PRECAST REINFORCED CONCRETE WITH 24" X 36" I.D. CONCRETE BOX VERTICAL LEG AND EITHER VERTICAL CURB OR AREA INLET FRAME AND GRATE OPENING AS NOTED. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D–07 AND D–10

ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.







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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD–16
June 19, 2020

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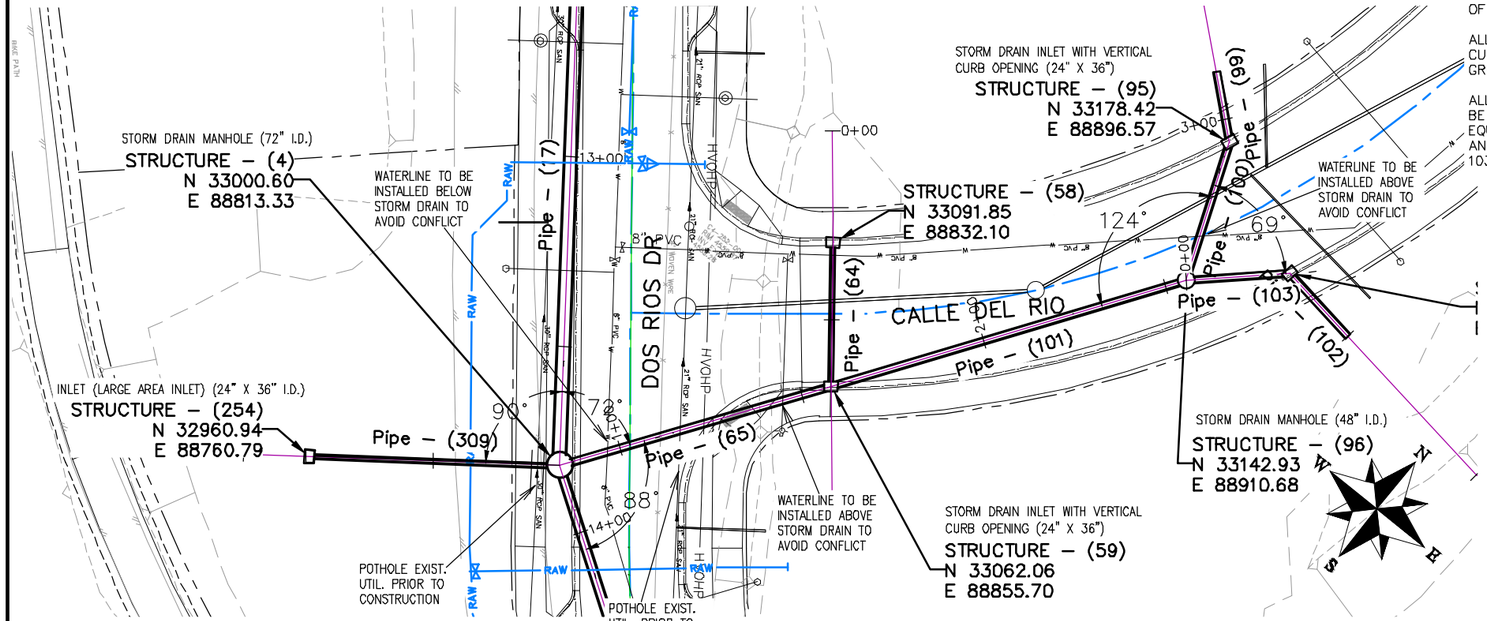
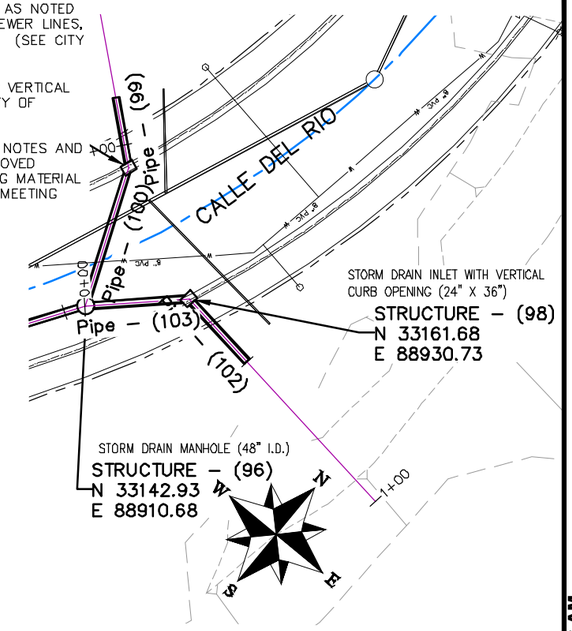
NOTES:

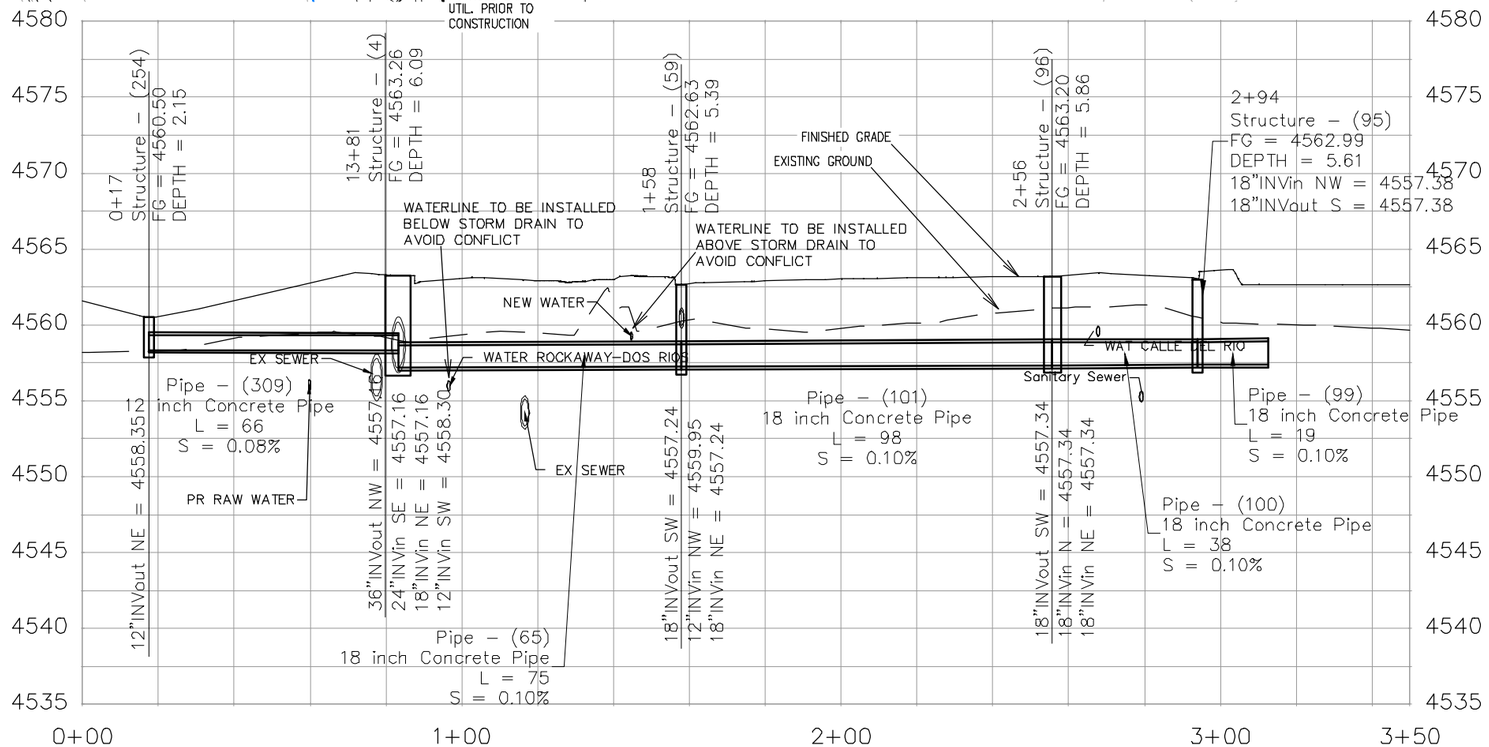
ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).

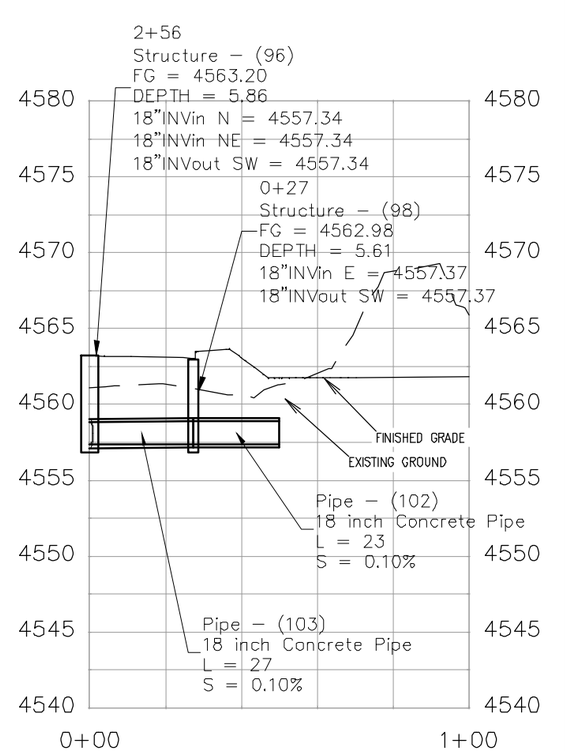
ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.









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REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-17
June 19, 2020

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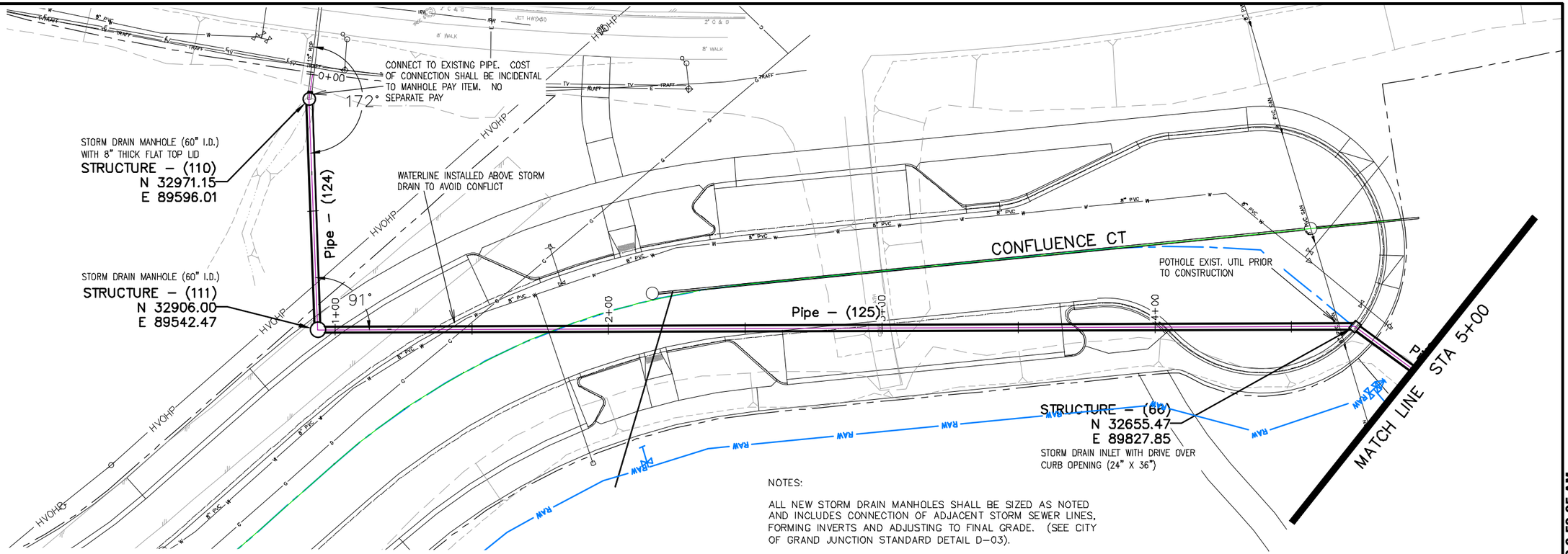
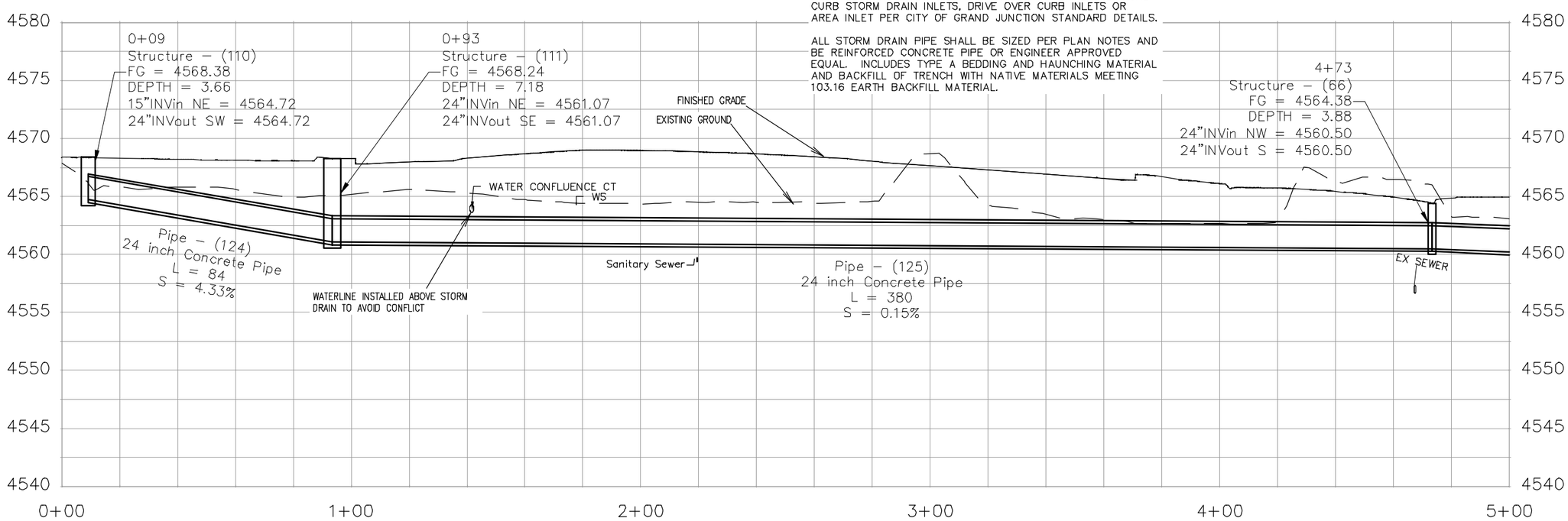


NOTES:

ALL NEW STORM DRAIN MANHOLES SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D–03).

ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS, DRIVE OVER CURB INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-18
June 19, 2020

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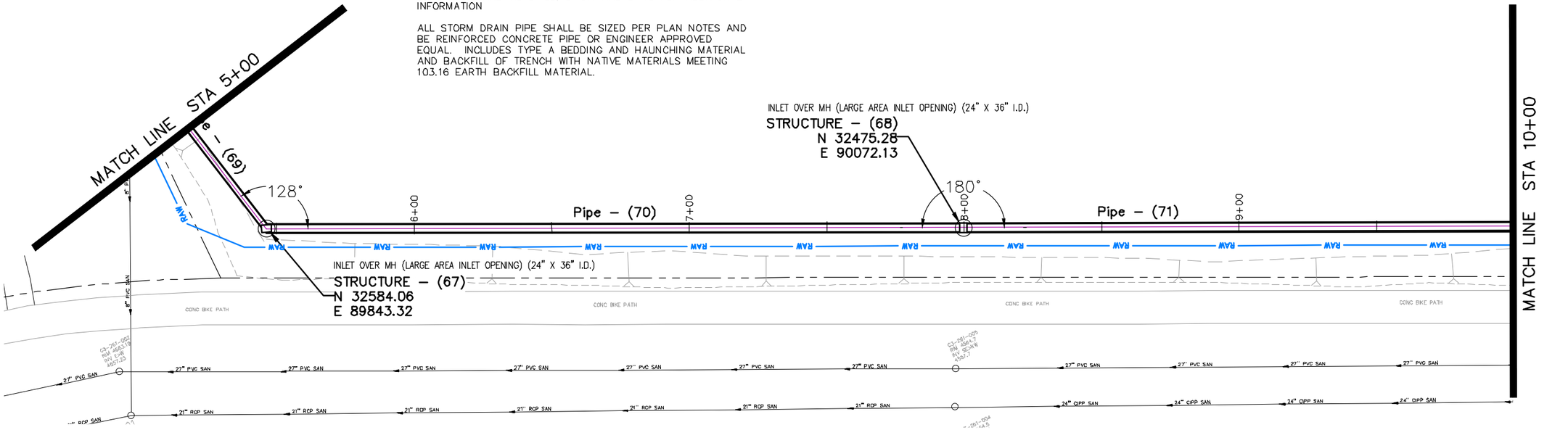
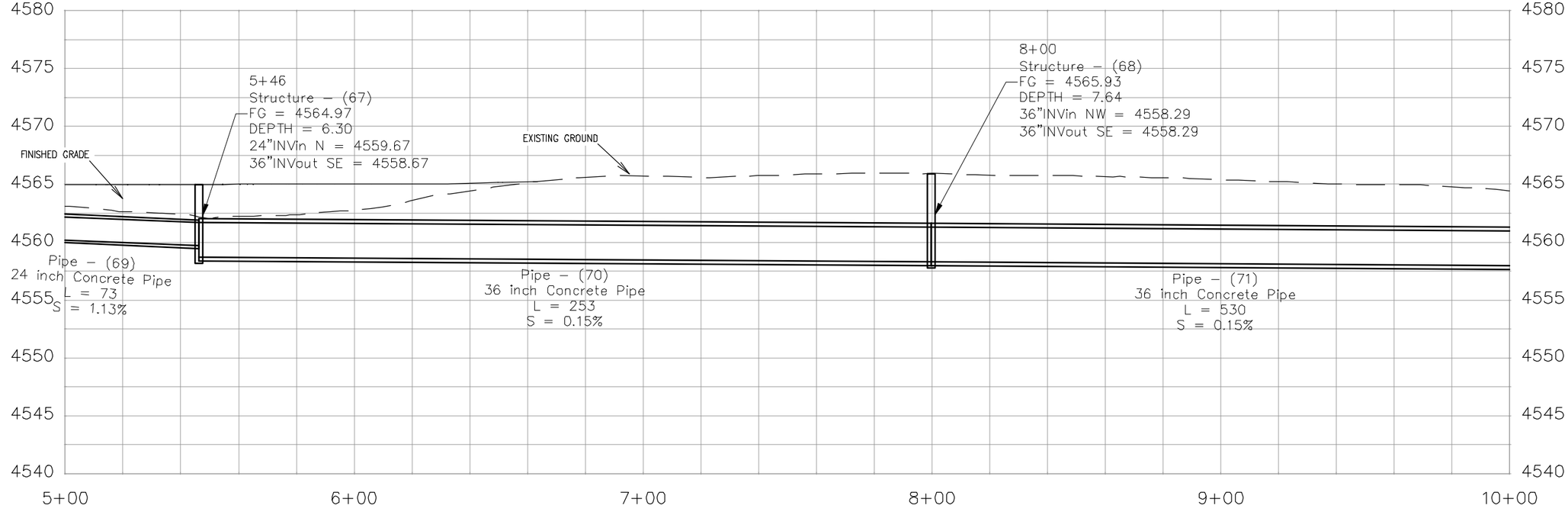
NOTES:

INLET OVER MH SHALL BE ACCOMPLISHED USING 24" X 36" I.D. CONCRETE BOX WITH EITHER VERTICAL CURB OPENING OR AREA INLET FRAME AND GRATE AS NOTED PLACED UPON AN 8" THICK FLAT TOP MH LID (84"O.D.) WITH 24"X36" SQUARE OPENING AND THAT PLACED UPON 72" MANHOLE BARRELL SECTION. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D-03, D-07, AND D-10 FOR ADDITIONAL INFORMATION

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.





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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-19
June 19, 2020

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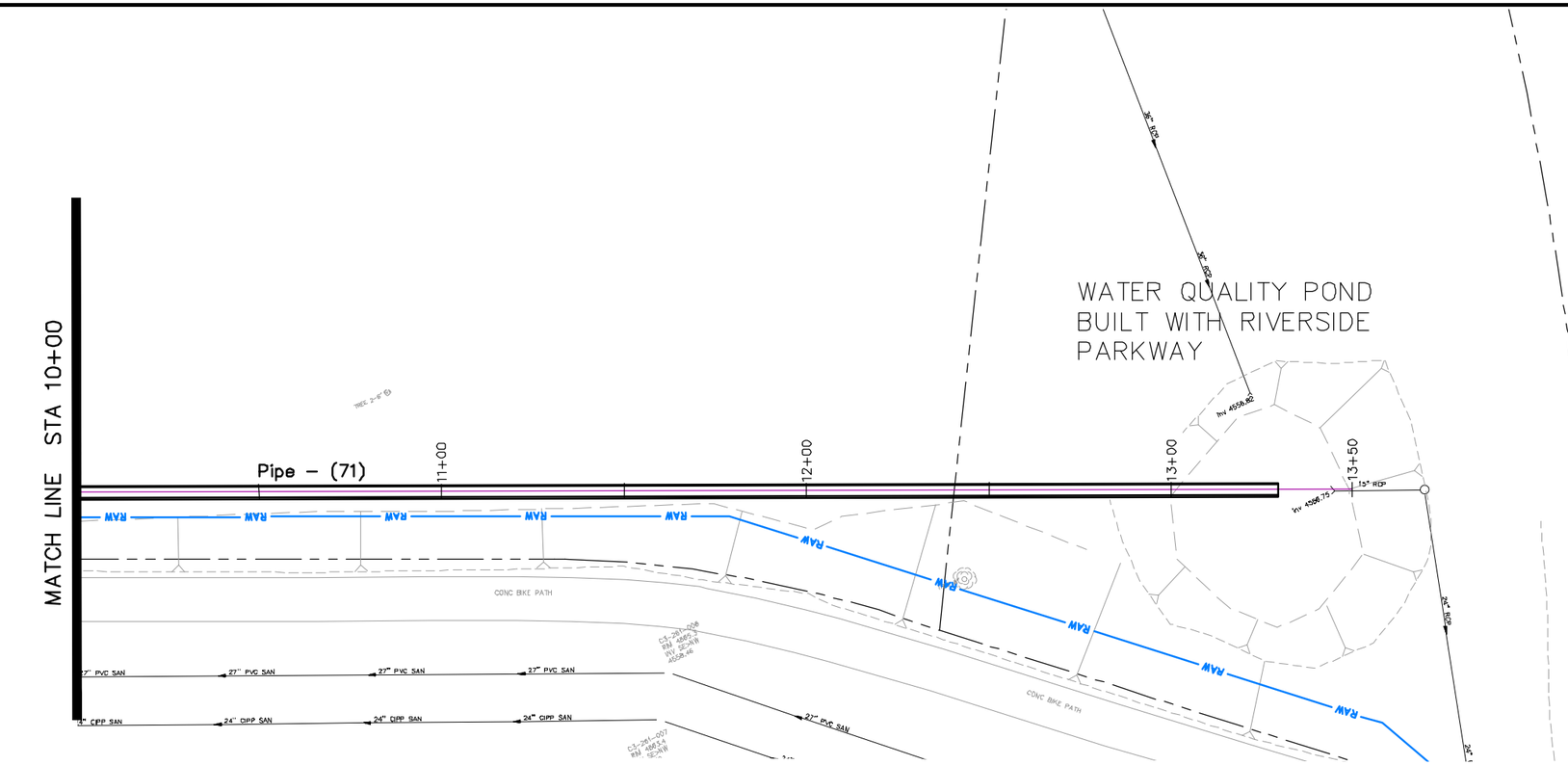
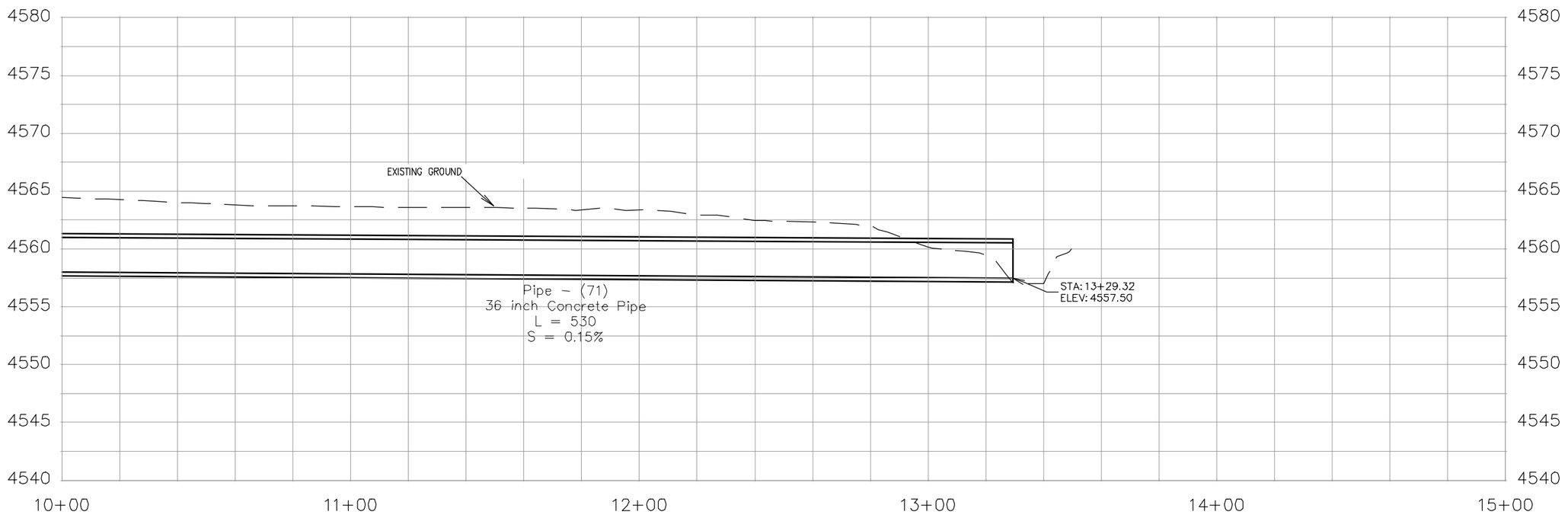


NOTES:

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



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REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-20
June 19, 2020

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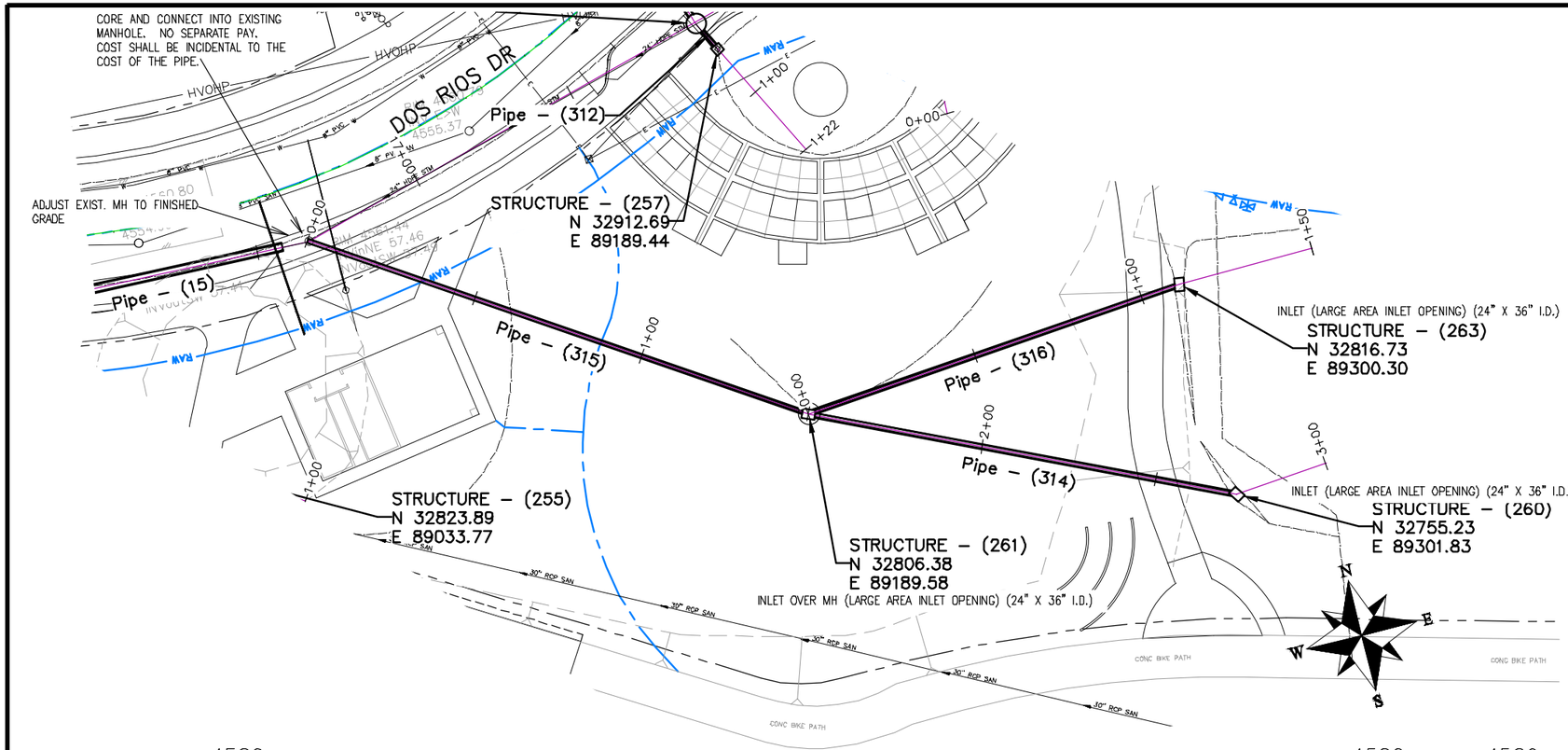

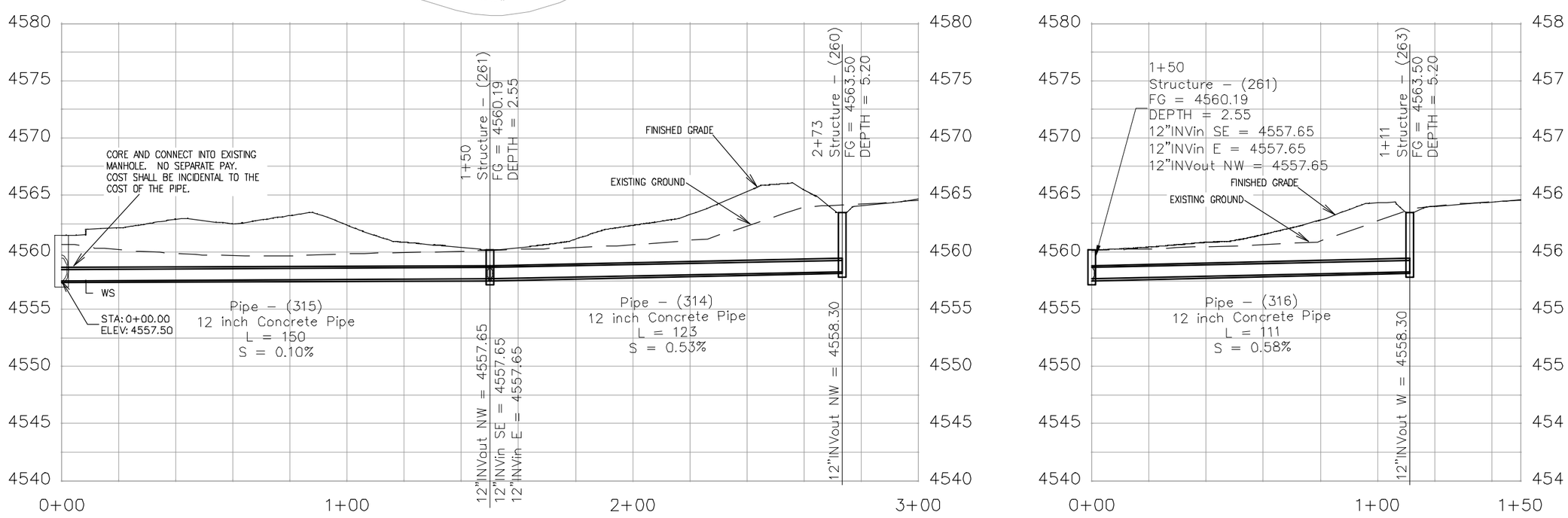

NOTES:

INLET OVER MH SHALL BE ACCOMPLISHED USING 24" X 36" I.D. CONCRETE BOX WITH EITHER VERTICAL CURB OPENING OR AREA INLET FRAME AND GRATE AS NOTED PLACED UPON AN 8" THICK FLAT TOP MH LID (84"O.D.) WITH 24"X36" SQUARE OPENING AND THAT PLACED UPON 72" MANHOLE BARRELL SECTION. SHOP DRAWINGS SHALL BE SUPPLIED TO AND APPROVED BY PROJECT ENGINEER. SEE CITY OF GRAND JUNCTION STANDARD D–03, D–07, AND D–10 FOR ADDITIONAL INFORMATION

INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS OR AREA INLET PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE OR ENGINEER APPROVED EQUAL. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PH 2 – SD-21
June 19, 2020

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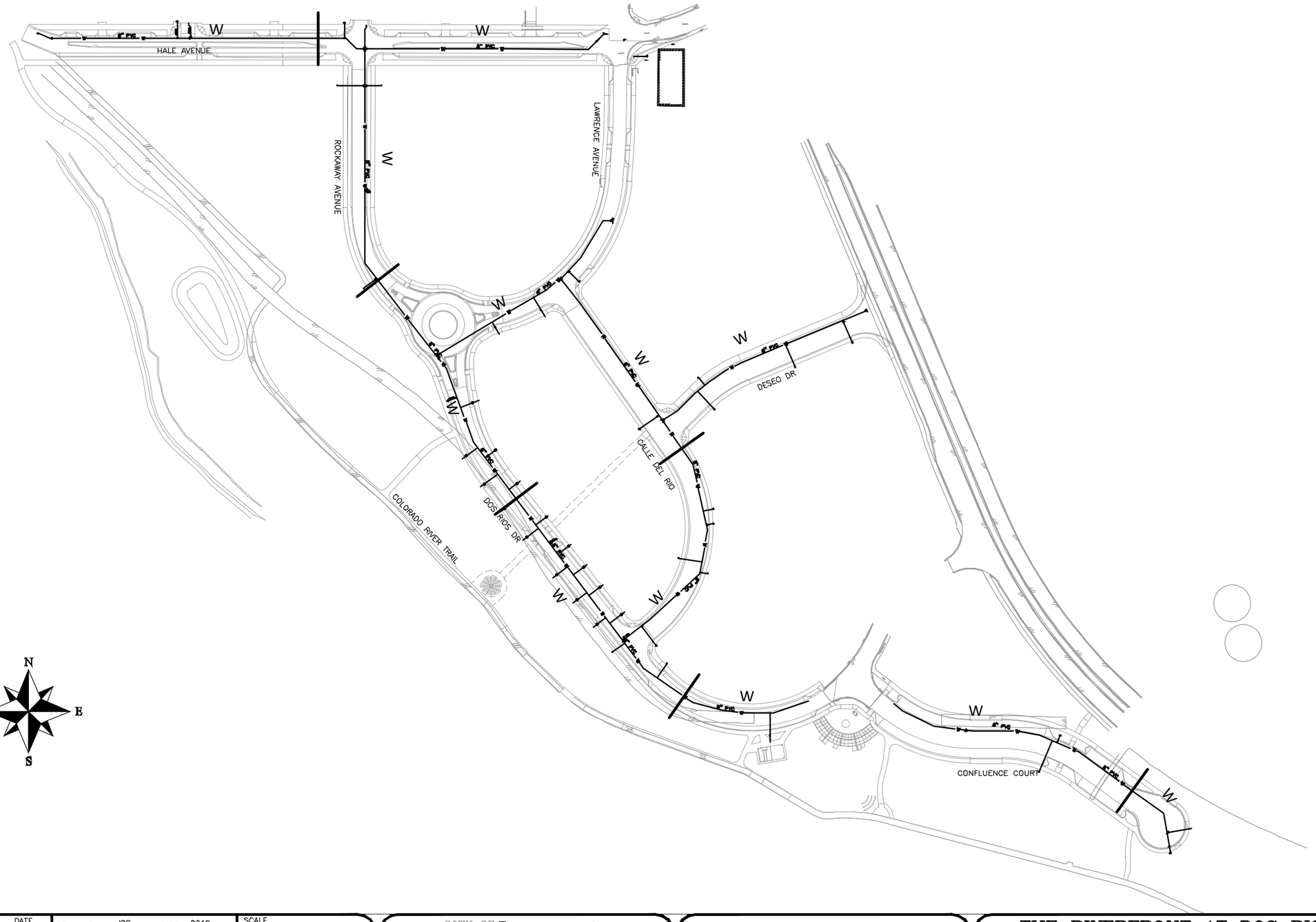

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REVISION △	–
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REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER SHEET INDEX
June 19, 2020

95

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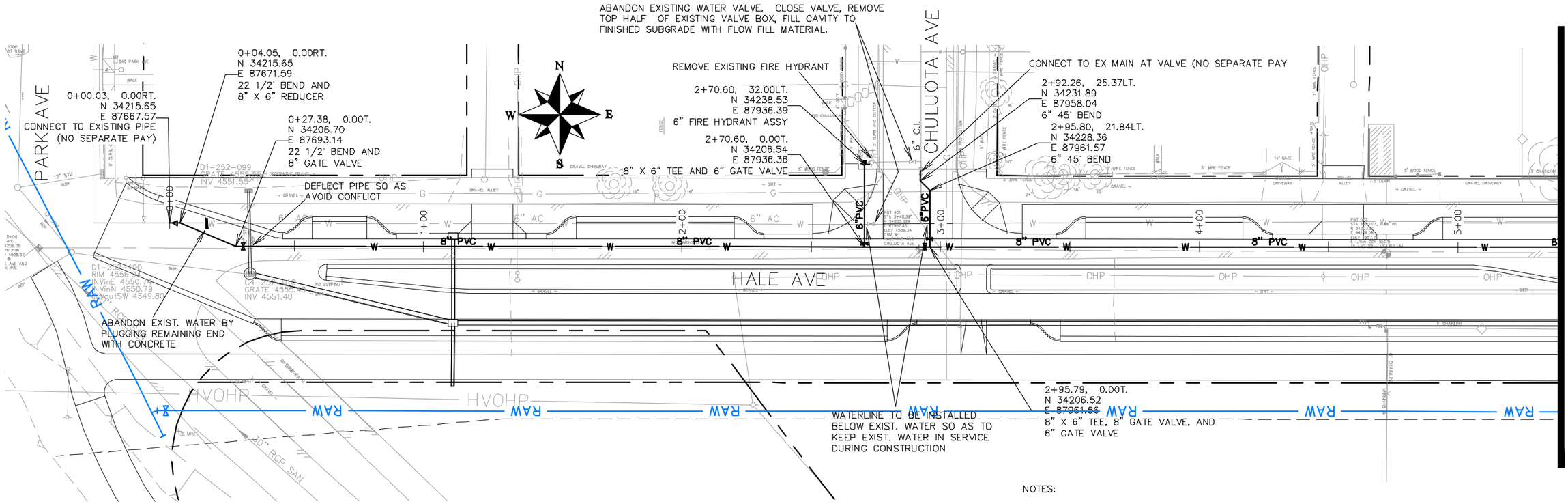


NOTES:

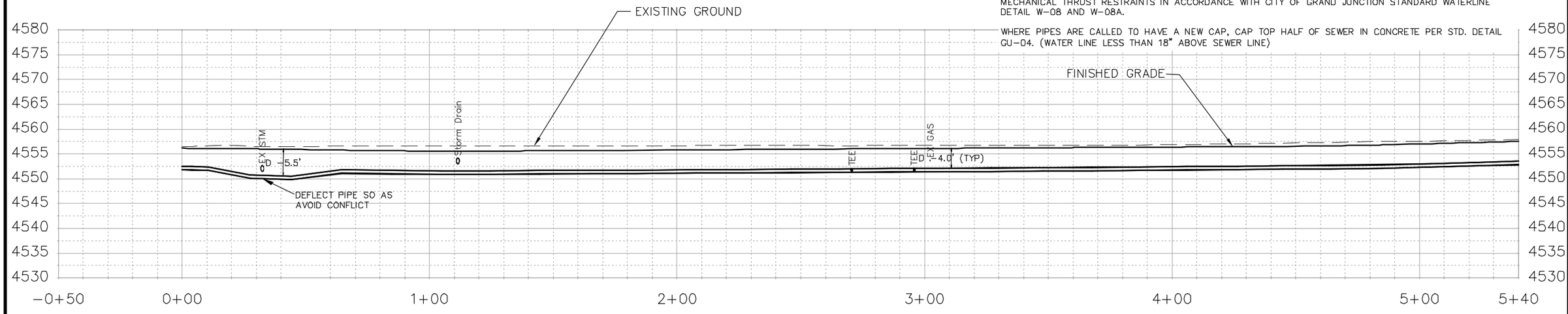
ALL WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

ALL WATER SERVICE LINE SHALL BE 2" PURE CORE HDPE

WATER SERVICE LINES SHALL EXTEND BEYOND METER PITS SO AS TO GET PAST ALL DRY UTILITIES. SERVICE ENDS TO BE PLUGGED AND MARKED IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-03

ALL BEND, TEES, FITTINGS, DEAD ENDS, ETC.. SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS OR MECHANICAL THRUST RESTRAINTS IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-08 AND W-08A.

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)



DESCRIPTION	DATE
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REVISION △	

DRAWN BY JCS DATE 2018
DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-1
June 19, 2020

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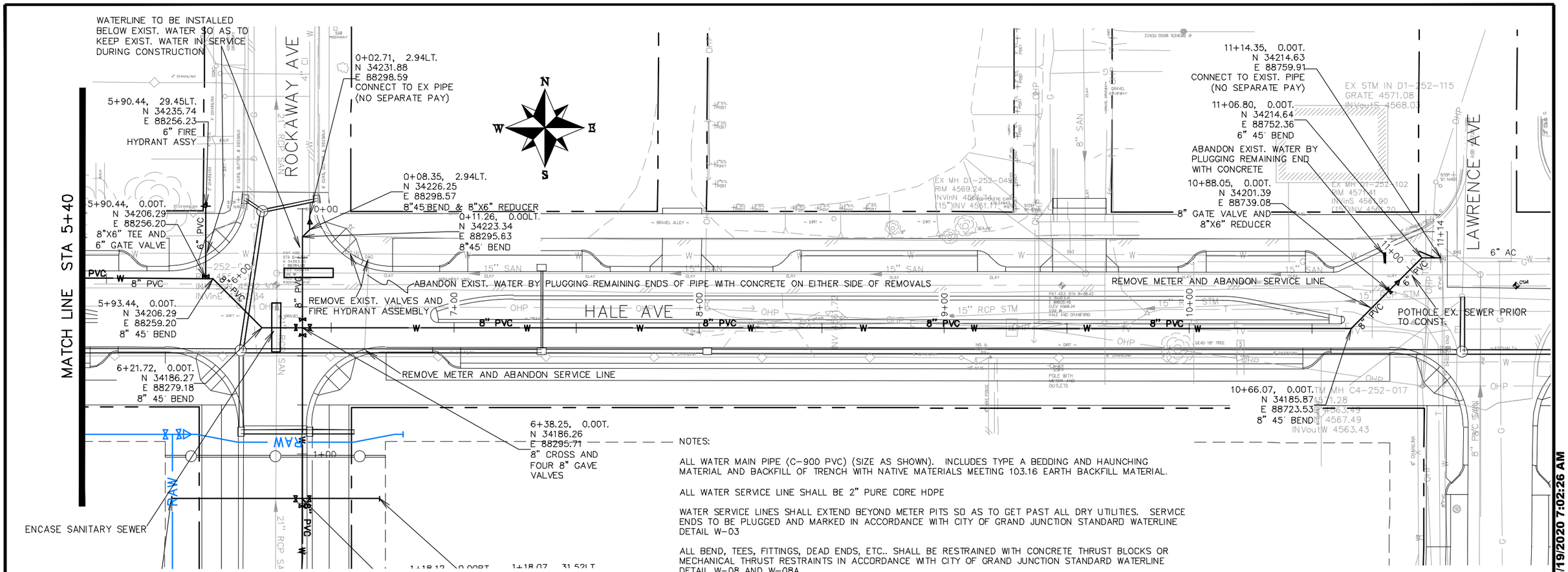

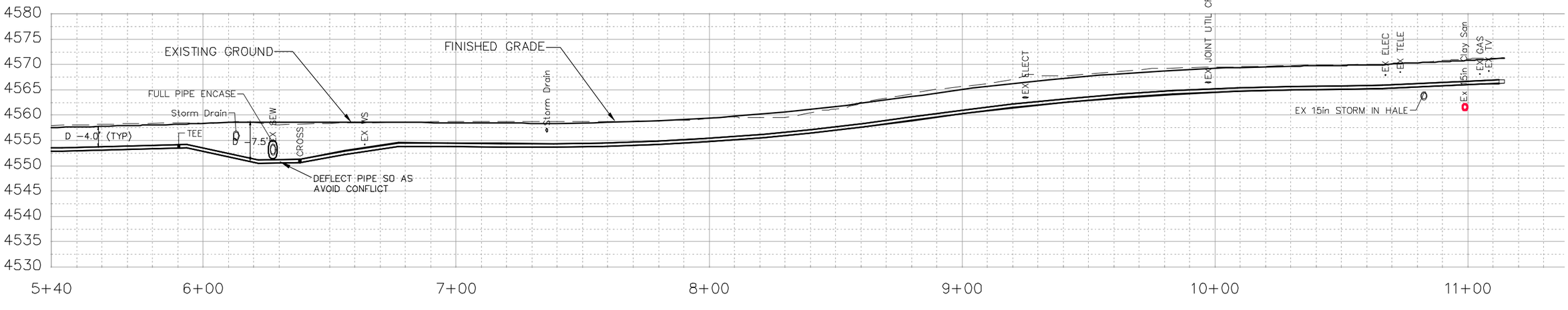

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REVISION △	
REVISION △	

DRAWN BY JCS DATE 2018
DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-2
June 19, 2020

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0+11.26, 0.00LT.
N 34223.34
E 88295.63
8"45° BEND

0+08.35, 2.94LT.
N 34226.25
E 88298.57
8"45°BEND & 8"X6" REDUCER

0+02.71, 2.94LT.
N 34231.88
E 88298.59
CONNECT TO EX PIPE
(NO SEPARATE PAY)

ABANDON EXIST. WATER BY PLUGGING REMAINING END WITH CONCRETE

ENCASE SEWER

WATERLINE TO BE INSTALLED BELOW EXIST. WATER SO AS TO KEEP EXIST. WATER IN SERVICE DURING CONSTRUCTION

5+90.44, 29.45LT.
N 34235.74
E 88256.23
6" FIRE
HYDRANT ASSY

5+90.44, 0.00T.
N 34206.29
E 88256.20
8"X6" TEE AND
6" GATE VALVE

5+93.44, 0.00T.
N 34206.29
E 88259.20
8" 45° BEND

6+21.72, 0.00T.
N 34186.27
E 88279.18
8" 45° BEND

6+38.25, 0.00T.
N 34186.26
E 88295.71
8" CROSS AND
FOUR 8" GAVE
VALVES

WATERLINE INSTALLED BELOW STORM

RAW WATER
TO BE INSTALLED
BELOW WATER
TO AVOID
CONFLICT

RAW WATER
TO BE INSTALLED
BELOW WATER
TO AVOID
CONFLICT

1+18.07, 31.52LT.
N 34116.48
E 88326.98
6" END CAP / PLUG
MARK END OF LINE
WITH 4X4 PAINTED
BLUE THAT EXTENDS
3' ABOVE FINISHED
GRADE

1+18.12, 0.00RT.
N 34116.48
E 88295.45
8"X6" CROSS,
8" GATE VALVE, AND
TWO 6" GATE VALVES

1+18.21, 53.11RT.
N 34116.48
E 88242.35
6" END CAP / PLUG
MARK END OF LINE
WITH 4X4 PAINTED
BLUE THAT EXTENDS
3' ABOVE FINISHED
GRADE

VERIFY SEWER PIPE GRADE AHEAD OF CONSTRUCTION TO AVOID CONFLICT. CAP SEWER.

WATERLINE TO BE INSTALLED ABOVE EX. SEWER TO AVOID CONFLICT. 3' ± DEEP AT CROSSING (CAP SEWER)

3+19.62, 0.01RT.
N 33914.98
E 88295.13
8" X 6" TEE AND
6" GATE VALVE

3+19.62, 7.55LT.
N 33914.97
E 88302.68
FIRE HYDRANT
ASSEMBLY

4+58.59, 0.00T.
N 33776.02
E 88294.91
8"45° BEND

WATERLINE TO BE INSTALLED BELOW STORM DRAIN TO AVOID CONFLICT

4+95.00, 0.00T.
N 33747.32
E 88317.33
8"X6" TEE,
8" GATE VALVE, AND
6" GATE VALVE

WATERLINE TO BE INSTALLED BELOW STORM DRAIN TO AVOID CONFLICT. 5.5' ± DEEP AT CROSSING

MATCH LINE STA 5+00

4+95.00, 31.18RT.
N 33728.12
E 88292.76
6" END CAP / PLUG
MARK END OF LINE
WITH 4X4 PAINTED
BLUE THAT EXTENDS
3' ABOVE FINISHED
GRADE

ROCKAWAY AVE

NOTES:

ALL WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

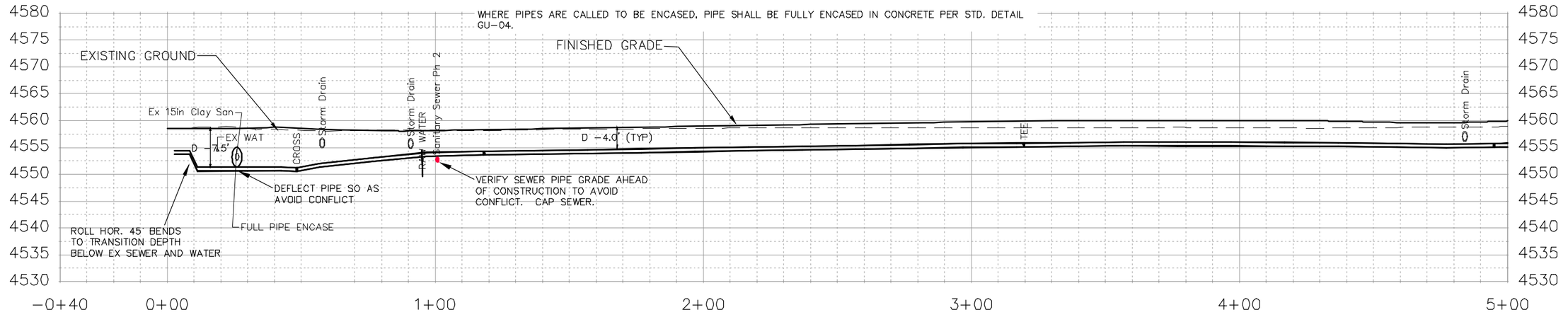
ALL WATER SERVICE LINE SHALL BE 2" PURE CORE HDPE

WATER SERVICE LINES SHALL EXTEND BEYOND METER PITS SO AS TO GET PAST ALL DRY UTILITIES. SERVICE ENDS TO BE PLUGGED AND MARKED IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-03

ALL BEND, TEES, FITTINGS, DEAD ENDS, ETC.. SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS OR MECHANICAL THRUST RESTRAINTS IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-08 AND W-08A.

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

WHERE PIPES ARE CALLED TO BE ENCASED, PIPE SHALL BE FULLY ENCASED IN CONCRETE PER STD. DETAIL GU-04.



DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2018
DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-3
June 19, 2020

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MATCH LINE STA 5+00

MATCH LINE STA 10+00

ROCKAWAY AVE

DOS RIOS DR

0+09.38, 0.00T.
N 33604.57
E 88440.76
PIPE HOR. A.P.

7+12.89, 0.00T.
N 33575.62
E 88451.47
8" 22 1/2 ° BEND

DEFLECT WATERLINE SO AS TO BE BELOW STORM DRAIN

8+63.88, 0.00T.
N 33433.74
E 88503.12
8" 22 1/2 ° BEND

9+01.50, 23.17LT.
N 33417.61
E 88544.24
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

7+72.66, 0.00T.
N 33519.46
E 88471.92
8"X6" TEE AND
6" GATE VALVE

RAW WATER
TO BE INSTALLED
BELOW WATER
TO AVOID
CONFLICT

9+77.63, 17.40LT.
N 33353.31
E 88585.42
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

7+92.74, 23.65LT.
N 33508.67
E 88501.01
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

9+77.63, 0.00T.
N 33342.85
E 88571.51
2" TAPPING SADDLE AND
2" CORPORATION STOP

DEFLECT WATERLINE SO AS TO BE BELOW STORM DRAIN BUT STILL ABOVE SEWER TO NORTHWEST

6+83.48, 0.00T.
N 33598.80
E 88433.37
8" TEE AND
TWO 8" GATE VALVES

WATERLINE TO BE INSTALLED BELOW STORM DRAIN TO AVOID CONFLICT. 7.5' ± DEEP AT CROSSING

8+76.50, 0.00T.
N 33423.65
E 88510.70
2" TAPPING SADDLE AND
2" CORPORATION STOP

REMOVE EXISTING CULVERT

9+40.78, 0.00T.
N 33372.29
E 88549.36
2" TAPPING SADDLE AND
2" CORPORATION STOP

8+76.51, 26.91RT.
N 33407.47
E 88489.20
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

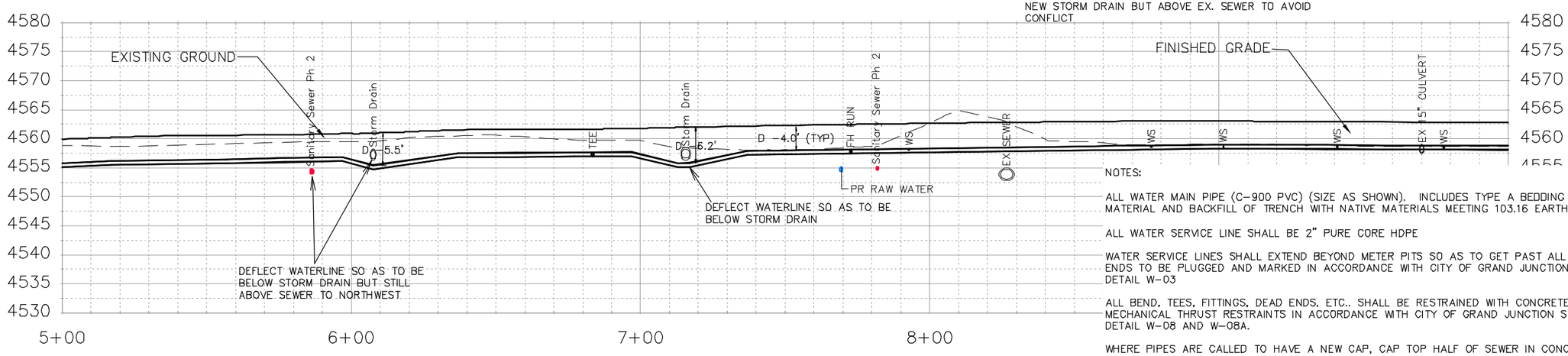
7+72.66, 18.85RT.
N 33513.01
E 88454.20
6" FIRE HYDRANT ASSY

7+92.74, 0.00T.
N 33500.59
E 88478.79
2" TAPPING SADDLE AND
2" CORPORATION STOP

9+01.50, 0.00T.
N 33403.68
E 88525.74
2" TAPPING SADDLE AND
2" CORPORATION STOP

9+40.78, 32.01RT.
N 33353.04
E 88523.78
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

WATER SERVICES ON WEST SIDE TO BE INSTALLED BELOW NEW STORM DRAIN BUT ABOVE EX. SEWER TO AVOID CONFLICT



NOTES:

ALL WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

ALL WATER SERVICE LINE SHALL BE 2" PURE CORE HDPE

WATER SERVICE LINES SHALL EXTEND BEYOND METER PITS SO AS TO GET PAST ALL DRY UTILITIES. SERVICE ENDS TO BE PLUGGED AND MARKED IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-03

ALL BEND, TEES, FITTINGS, DEAD ENDS, ETC.. SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS OR MECHANICAL THRUST RESTRAINTS IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-08 AND W-08A.

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-4
June 19, 2020

99

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MATCH LINE STA 10+00

MATCH LINE STA 15+00

DOS RIOS DR

11+81.62, 0.00T.
N 33179.86
E 88694.17
2" TAPPING SADDLE AND
2" CORPORATION STOP

N 33185.07
E 88936.94
2" TAPPING SADDLE AND
2" CORPORATION STOP

11+32.57, 0.00LT.
N 33219.05
E 88664.69
2" TAPPING SADDLE AND
2" CORPORATION STOP

11+32.57, 25.32LT.
N 33234.28
E 88684.91
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

12+31.22, 25.57LT.
N 33155.61
E 88744.43
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

11+07.58, 15.13LT.
N 33248.12
E 88661.74
6" FIRE HYDRANT ASSY

12+31.21, 0.00RT.
N 33140.24
E 88723.99
2" TAPPING SADDLE AND
2" CORPORATION STOP

8+00.66, 46.83LT.
N 33044.72
E 88853.03
FH ASSY

14+37.03, 32.85LT.
N 33009.96
E 88873.26
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

14+37.00, 0.01RT.
N 32982.93
E 88854.57
2" TAPPING SADDLE AND
2" CORPORATION STOP

10+62.26, 23.72LT.
N 33289.49
E 88641.35
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

11+81.58, 24.11LT.
N 33194.39
E 88713.42
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

12+98.10, 27.42LT.
N 33103.28
E 88786.13
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

7+81.42, 0.00T.
N 33093.71
E 88840.24
HOR. A.P.

10+62.37, 0.00LT.
N 33275.14
E 88622.47
2" TAPPING SADDLE AND
2" CORPORATION STOP

WATERLINE TO
BE INSTALLED
BELOW STORM
DRAIN TO AVOID
CONFLICT

12+98.07, 0.00RT.
N 33086.81
E 88764.20
2" TAPPING SADDLE AND
2" CORPORATION STOP

8+00.66, 0.00T.
N 33082.14
E 88824.87
8"X6" TEE &
6" GATE VALVE

WATERLINE TO
BE INSTALLED
BELOW STORM
DRAIN TO AVOID
CONFLICT

RAW WATER
TO BE INSTALLED
BELOW WATER
TO AVOID
CONFLICT

RAW WATER
TO BE INSTALLED
BELOW WATER
TO AVOID
CONFLICT

13+38.29, 0.00T.
N 33054.68
E 88788.38
8"X8" TEE AND
TWO 8" GATE VALVES

14+06.17, 0.00T.
N 33000.44
E 88829.20
8" 22 1/2° BEND

13+45.01, 0.00RT.
N 33049.31
E 88792.42
2" TAPPING SADDLE AND
2" CORPORATION STOP

WATERLINE TO
BE INSTALLED
BELOW STORM
DRAIN TO AVOID
CONFLICT

10+01.34, 0.00T.
N 33323.90
E 88585.77
2" TAPPING SADDLE AND
2" CORPORATION STOP

10+01.34, 30.26RT.
N 33305.71
E 88561.60
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

10+70.91, 0.01RT.
N 33268.32
E 88627.59
2" TAPPING SADDLE AND
2" CORPORATION STOP

10+70.89, 28.15RT.
N 33251.41
E 88605.10
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

11+07.58, 0.01LT.
N 33239.03
E 88649.66
8"X6" TEE AND
6" GATE VALVE

11+62.76, 25.45RT.
N 33179.63
E 88662.50
2"METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

11+62.76, 0.01RT.
N 33194.92
E 88682.83
2" TAPPING SADDLE AND
2" CORPORATION STOP

12+24.66, 0.01RT.
N 33145.47
E 88720.05
2" TAPPING SADDLE AND
2" CORPORATION STOP

12+24.66, 23.67RT.
N 33131.24
E 88701.15
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

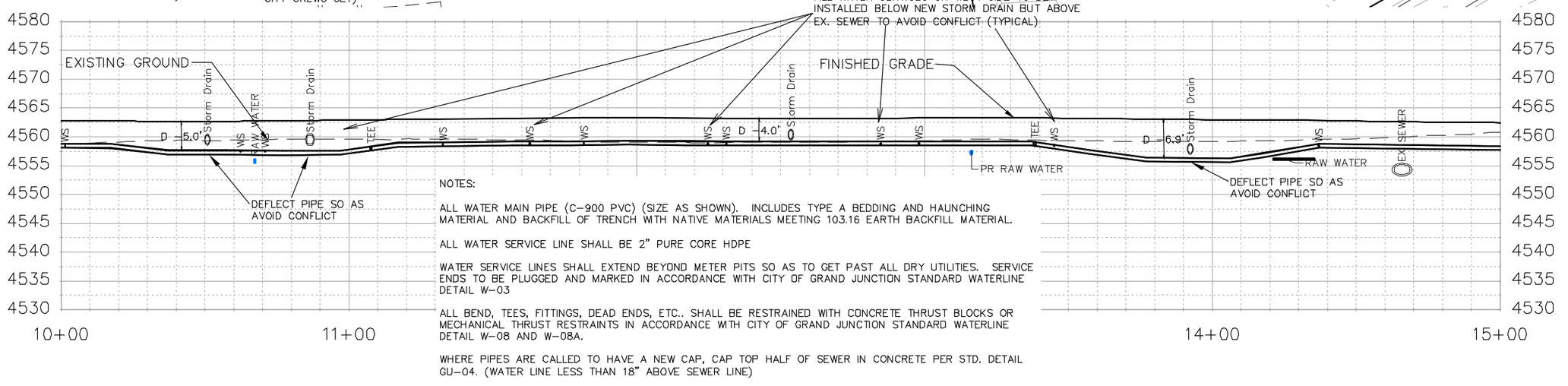
12+84.77, 0.01RT.
N 33097.44
E 88756.19
2" TAPPING SADDLE AND
2" CORPORATION STOP

12+84.77, 21.87RT.
N 33084.29
E 88738.72
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

13+45.01, 28.56RT.
N 33032.13
E 88769.60
2" METER AND VAULT
(CONTRACTOR SUPPLY,
CITY CREWS SET)

RAW WATER
TO BE INSTALLED
BELOW WATER
TO AVOID
CONFLICT

RAW WATER
TO BE INSTALLED
BELOW WATER
TO AVOID
CONFLICT



NOTES:

ALL WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

ALL WATER SERVICE LINE SHALL BE 2" PURE CORE HDPE

WATER SERVICE LINES SHALL EXTEND BEYOND METER PITS SO AS TO GET PAST ALL DRY UTILITIES. SERVICE ENDS TO BE PLUGGED AND MARKED IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-03

ALL BEND, TEES, FITTINGS, DEAD ENDS, ETC.. SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS OR MECHANICAL THRUST RESTRAINTS IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-08 AND W-08A.

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2018
DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-5
June 19, 2020

100

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NOTES:

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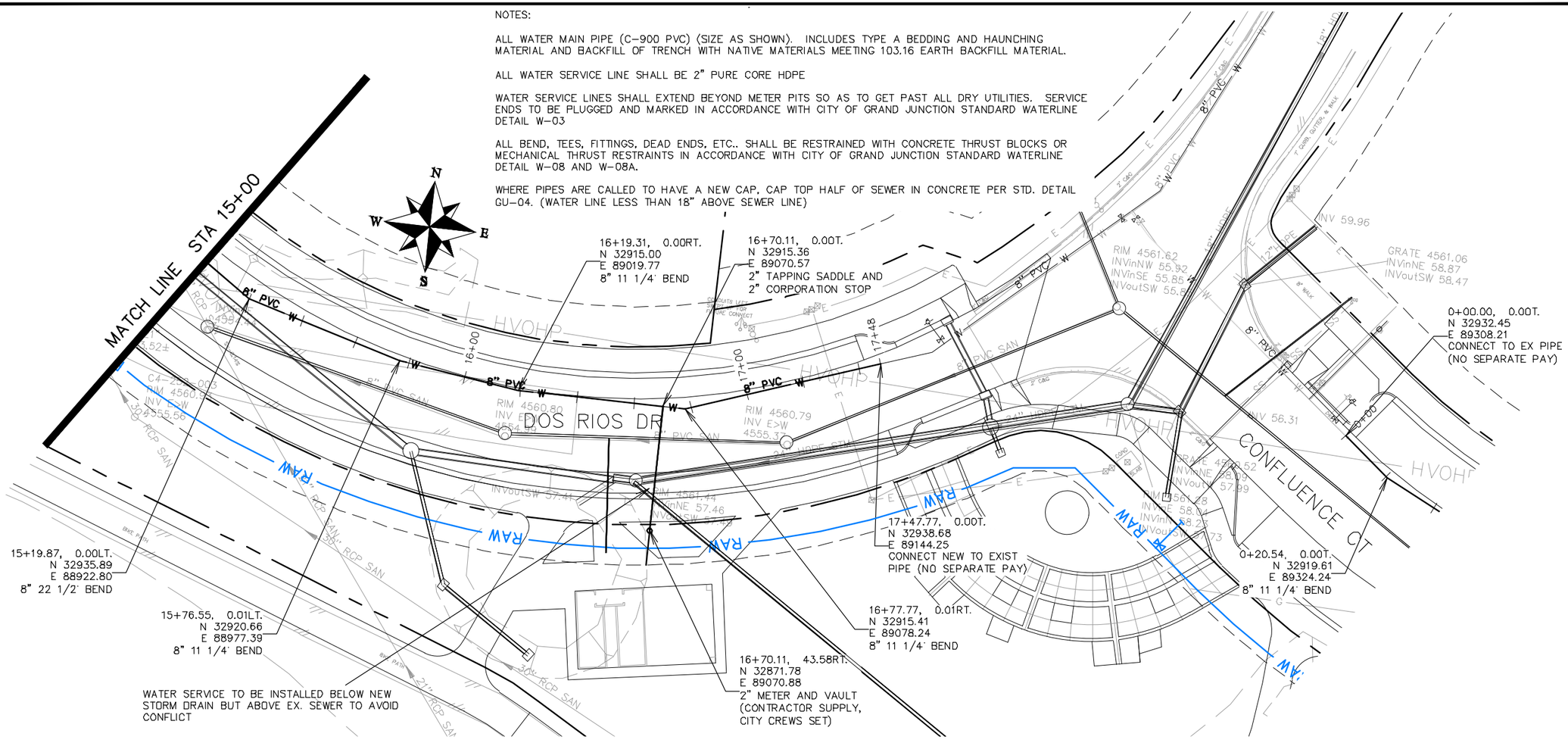

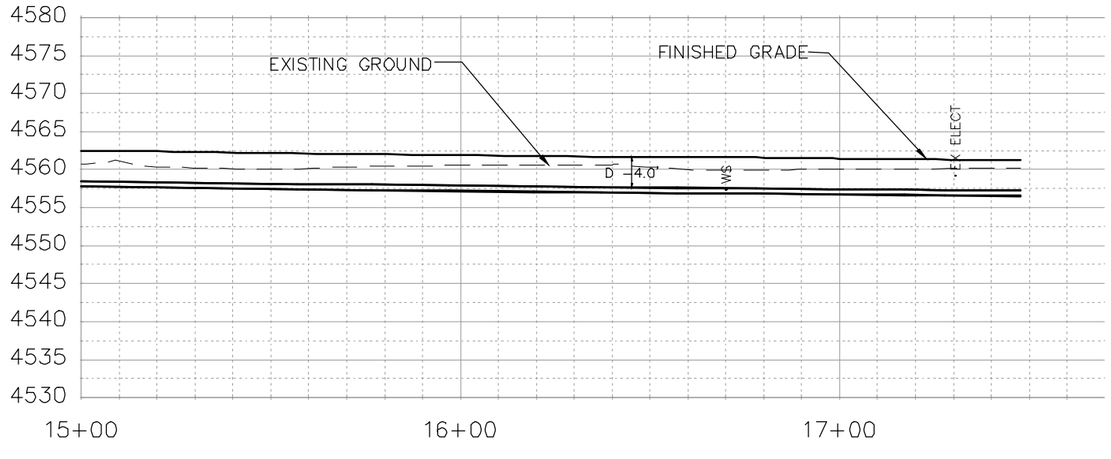

DESCRIPTION	DATE
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REVISION △	–
REVISION △	–
REVISION △	–

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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-6
June 19, 2020

101

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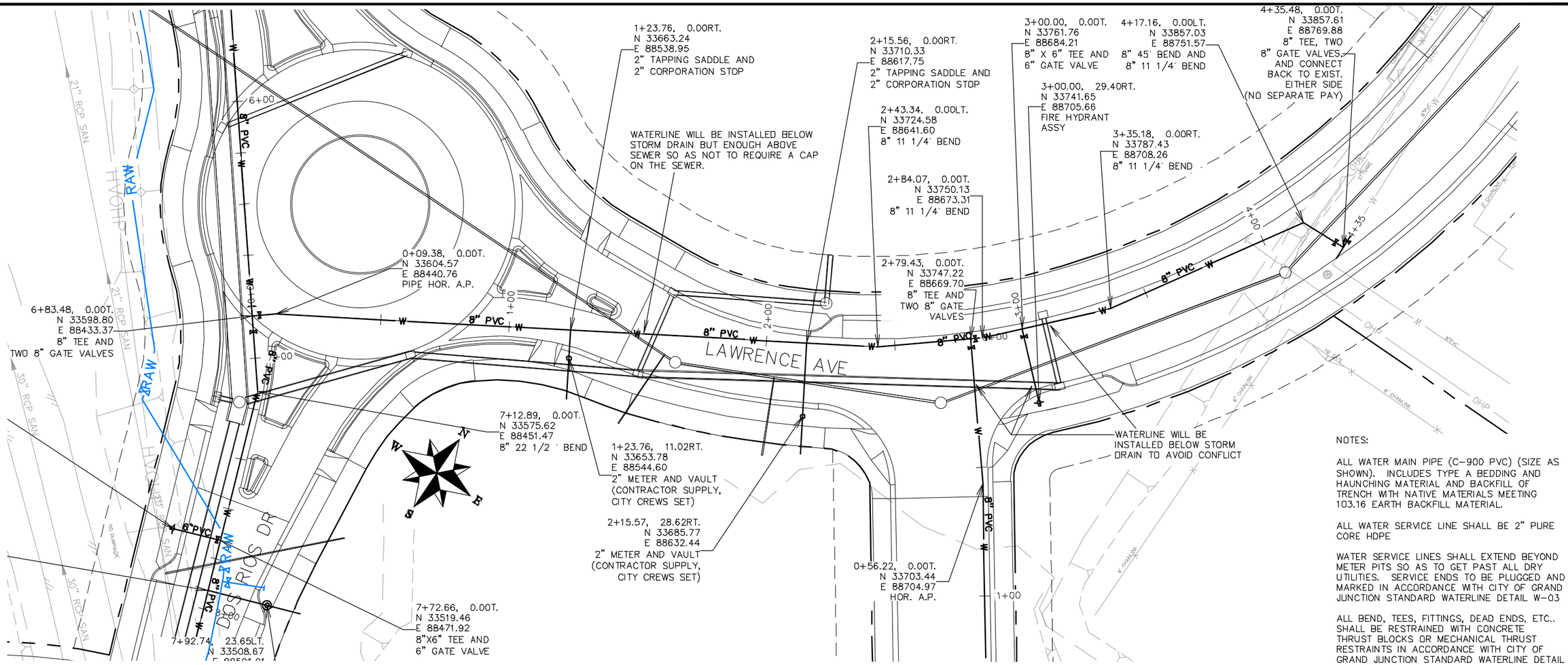

NOTES:

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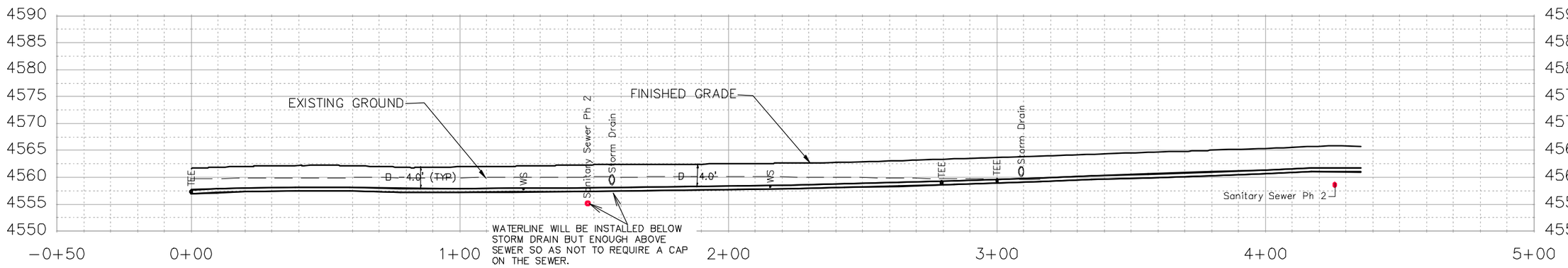

DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-7
June 19, 2020

102

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NOTES:

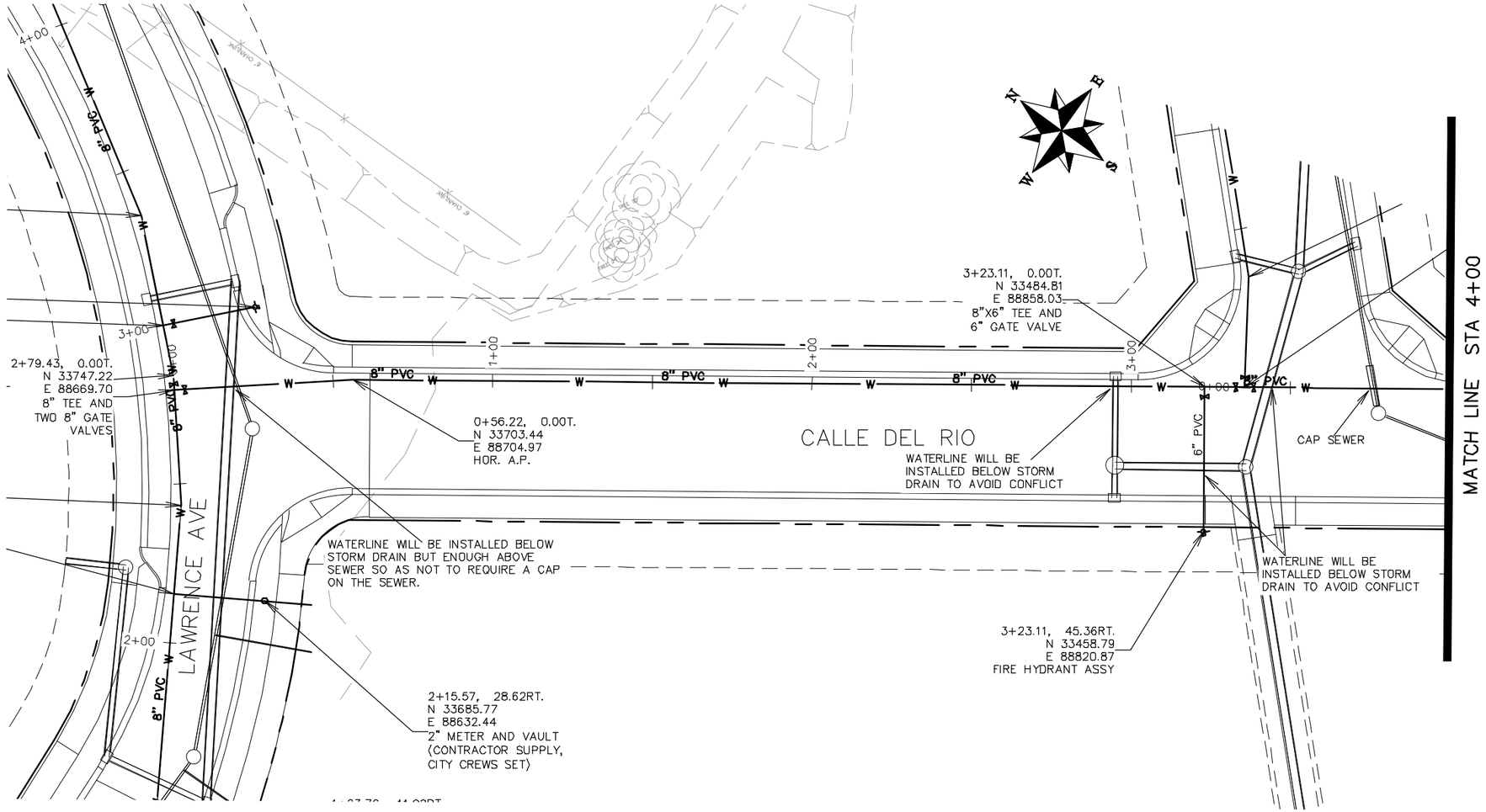
ALL WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

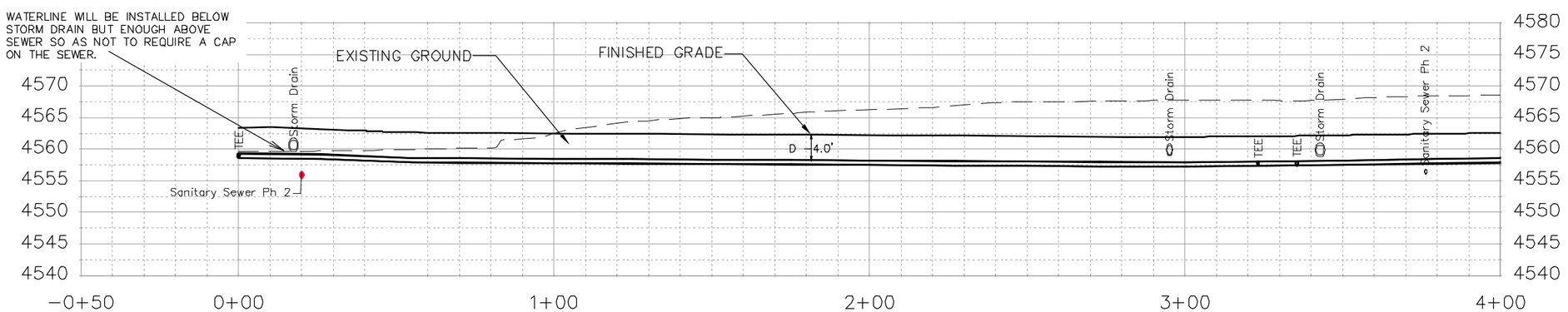
ALL WATER SERVICE LINE SHALL BE 2" PURE CORE HDPE

WATER SERVICE LINES SHALL EXTEND BEYOND METER PITS SO AS TO GET PAST ALL DRY UTILITIES. SERVICE ENDS TO BE PLUGGED AND MARKED IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-03

ALL BEND, TEES, FITTINGS, DEAD ENDS, ETC.. SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS OR MECHANICAL THRUST RESTRAINTS IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-08 AND W-08A.

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)





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DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-8
June 19, 2020

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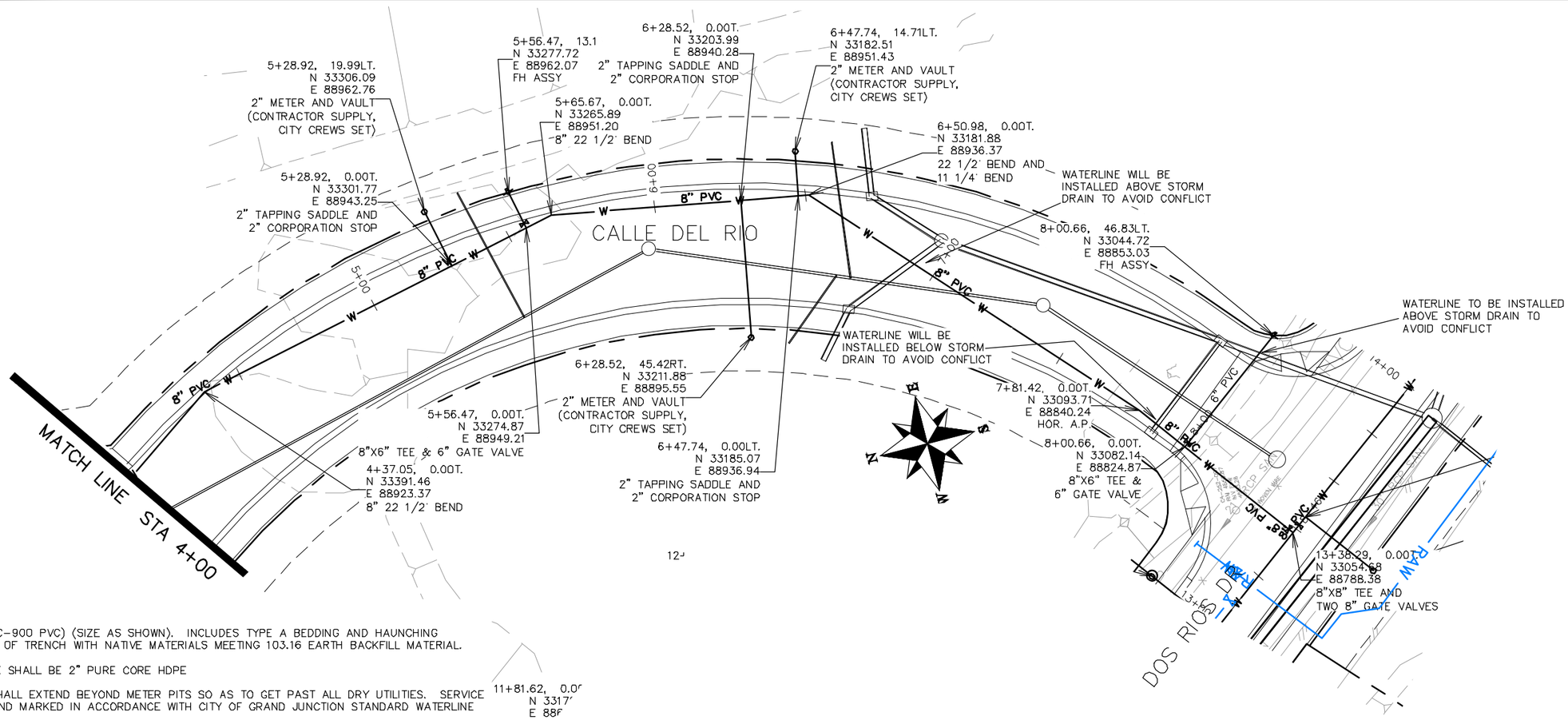

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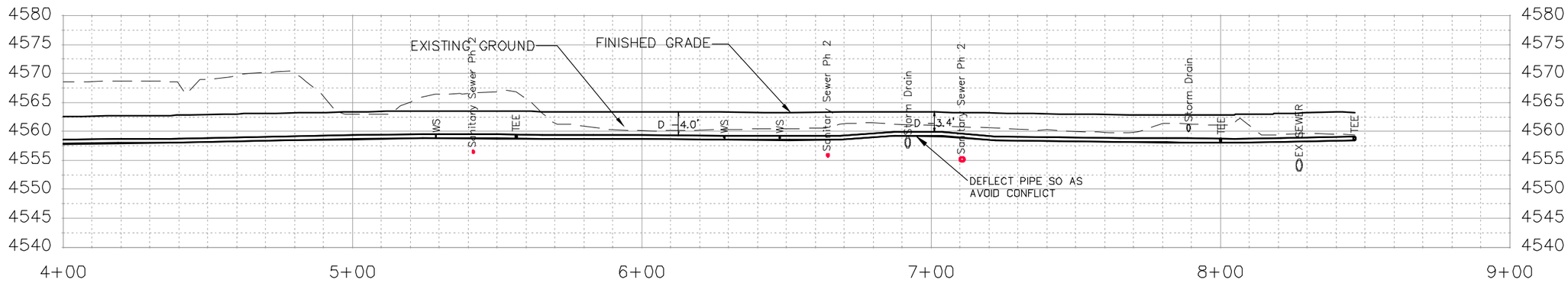

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DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-9
June 19, 2020

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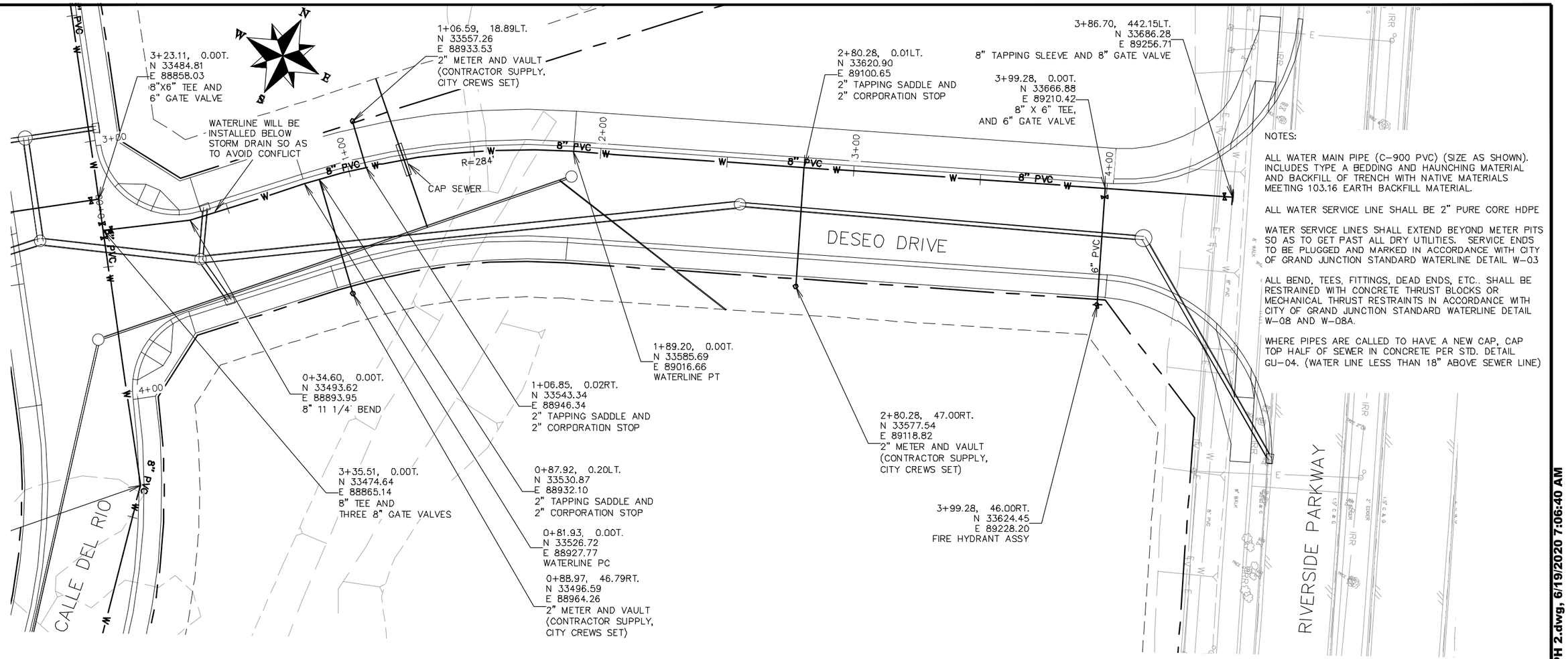

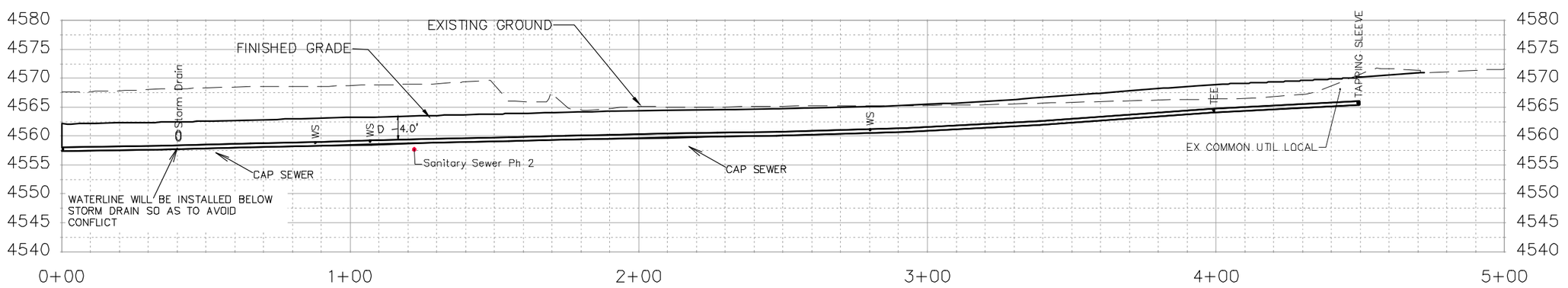

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CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
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VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-10
June 19, 2020

105

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NOTES:

ALL WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

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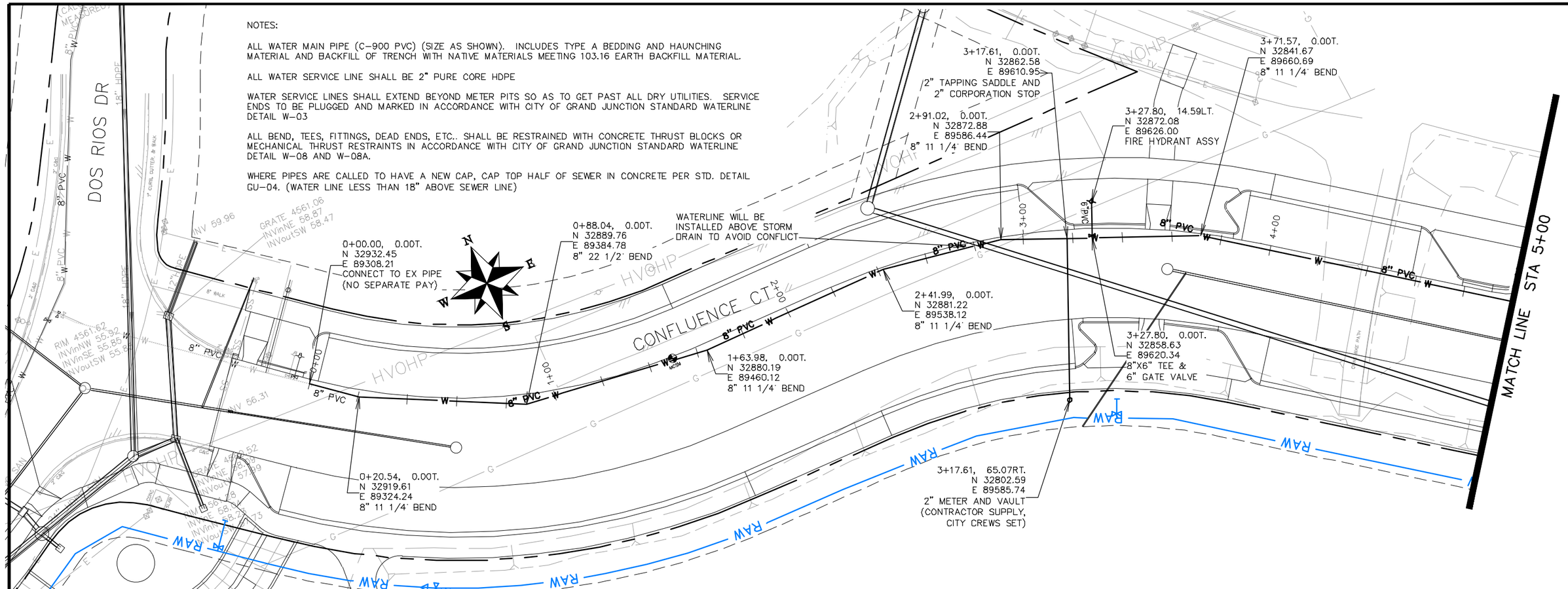

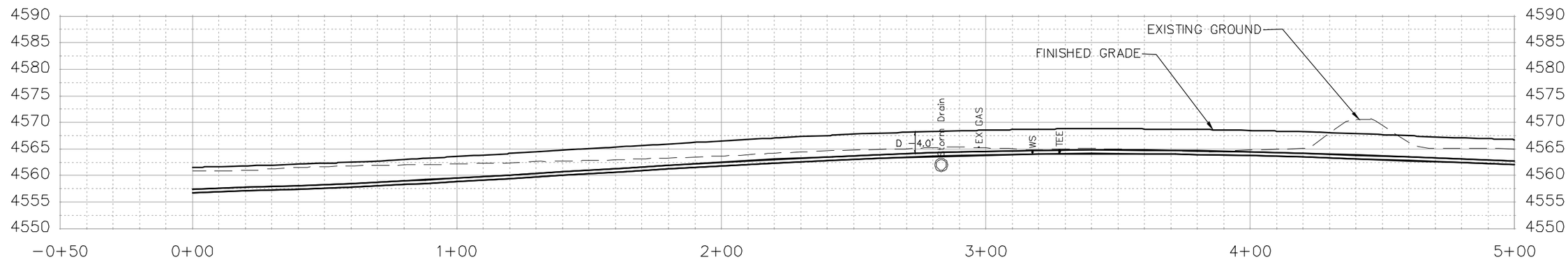

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DESIGNED BY JCS DATE 2018
CHECKED BY TCP DATE 2018
APPROVED BY TCP DATE 2018

SCALES:
PLAN & PROFILE
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VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-11
June 19, 2020

106

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NOTES:

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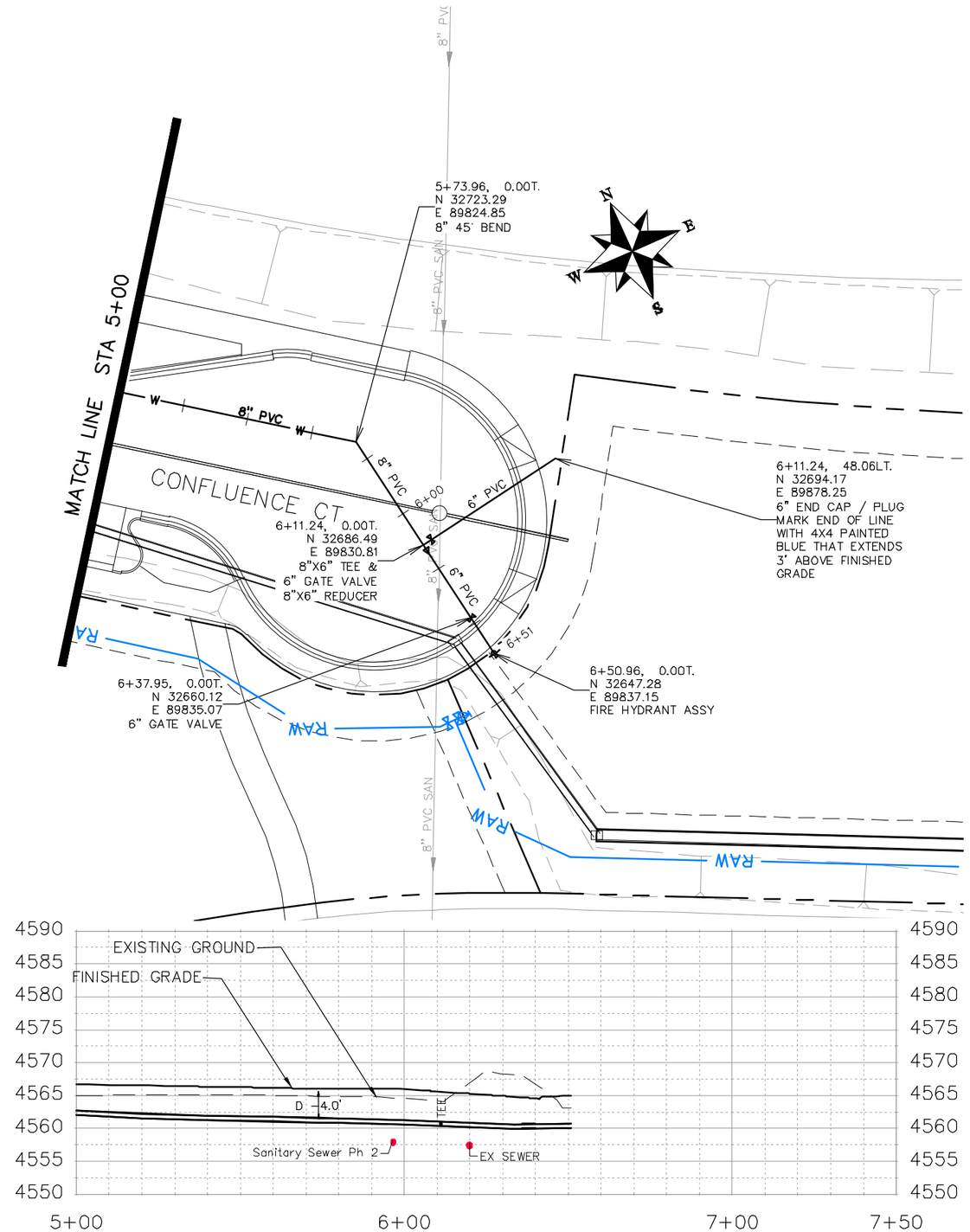

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CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALES:
PLAN & PROFILE
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VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATER PH 2 – W-12
June 19, 2020

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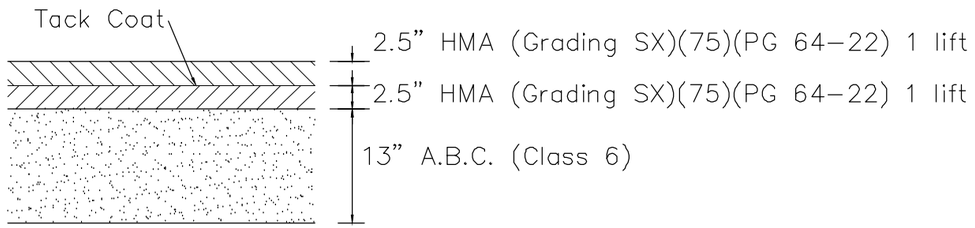
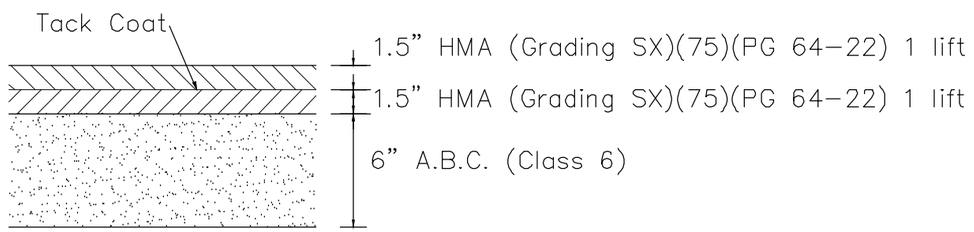
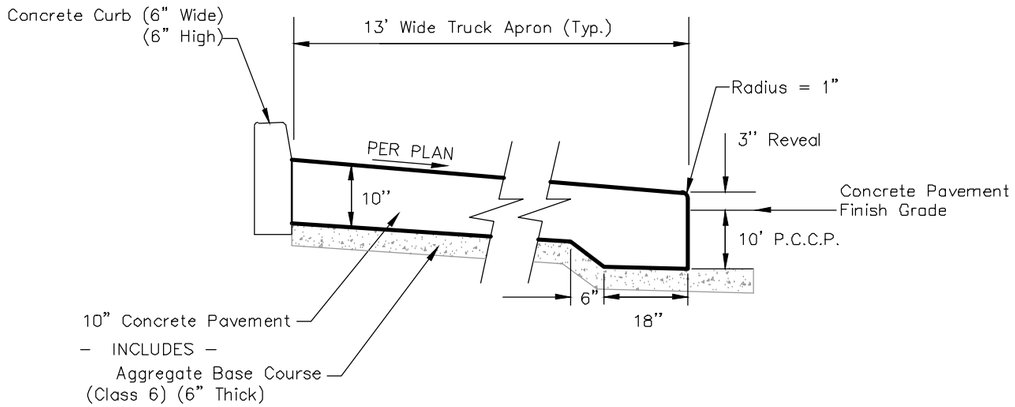


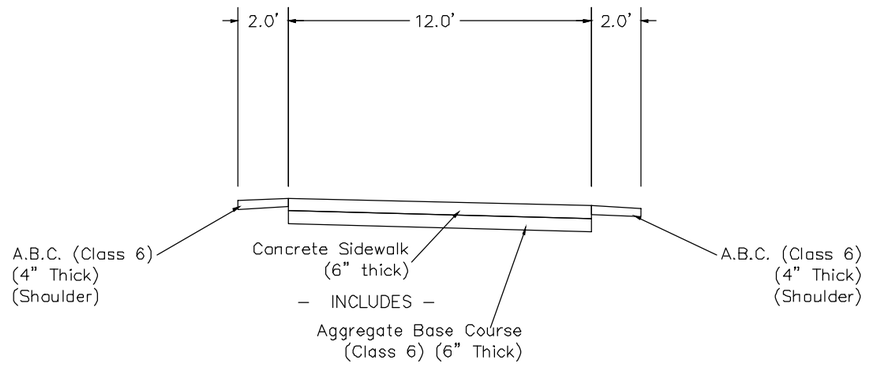
ROADWAY ASPHALT PAVEMENT DETAIL



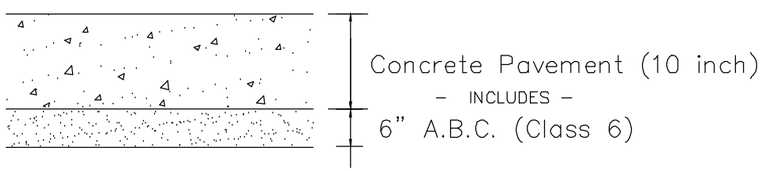
DRIVEWAY ASPHALT PAVEMENT DETAIL



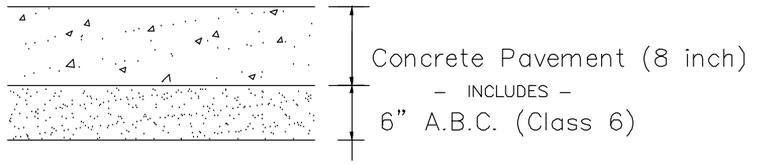
TRUCK APRON SECTION



COLORADO RIVER TRAIL SECTION



CONCRETE PAVEMENT SECTION (10" THICK) (ROUNDABOUT)



CONCRETE PAVEMENT SECTION (8" THICK) (ON STREET PARKING)

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY TCP DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 NA NA
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
TYPICAL CROSS SECTIONS – 1
June 19, 2020

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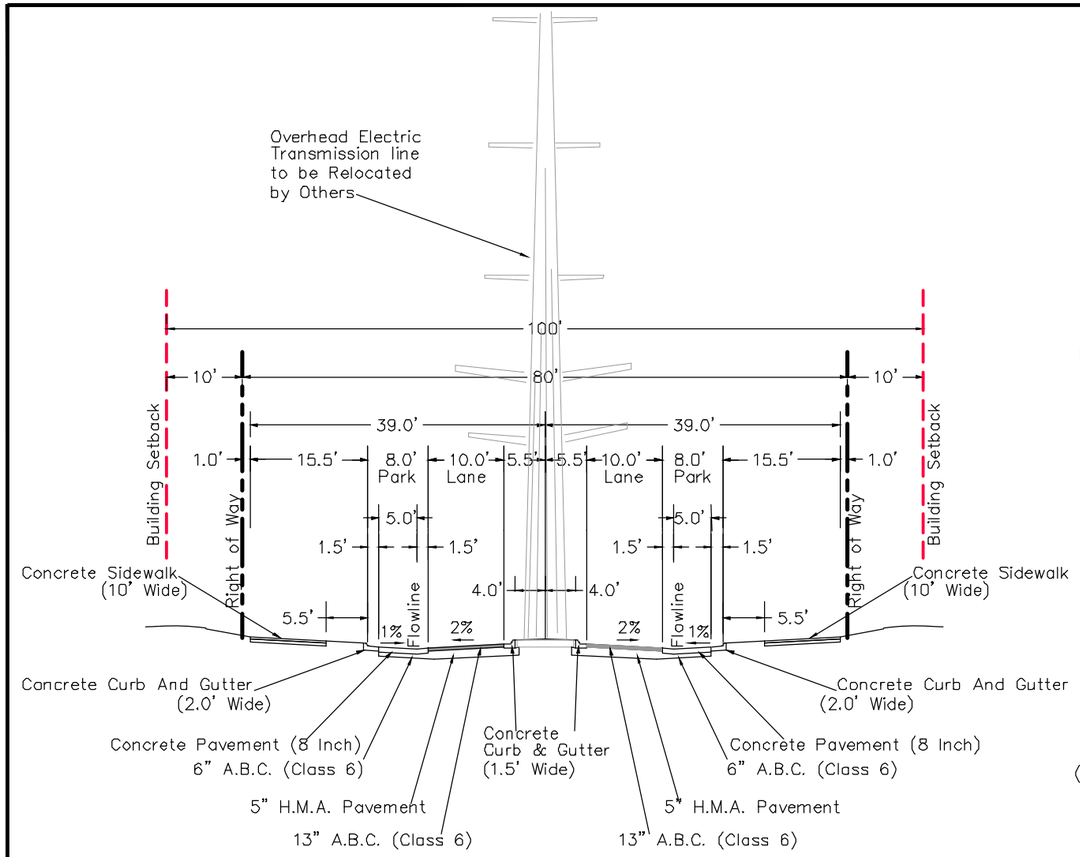
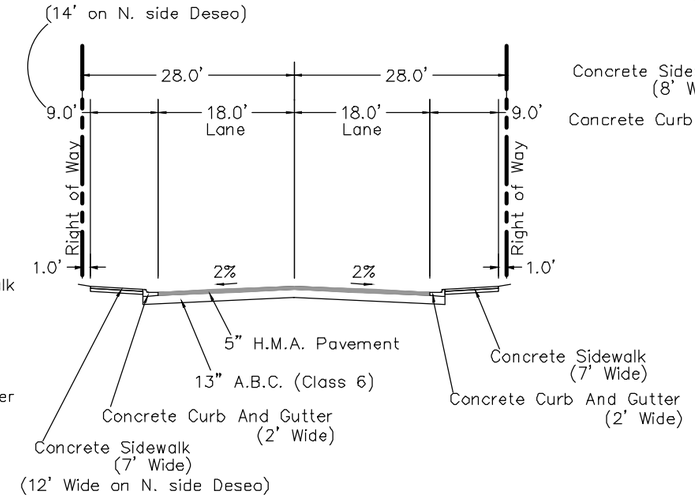


TYPICAL SECTION
HALE AVENUE FROM PARK TO RIVERSIDE PARKWAY



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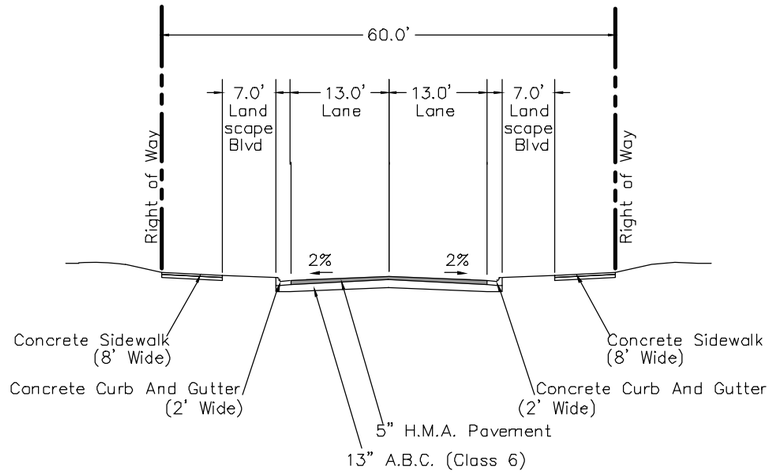


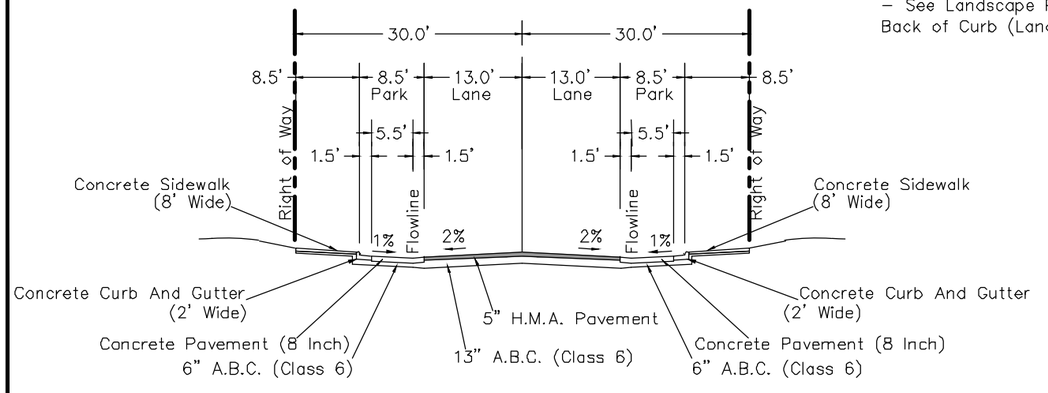
TYPICAL SECTION
ROCKAWAY AVE FROM HALE TO ROUNDABOUT

TYPICAL SECTION NOTES

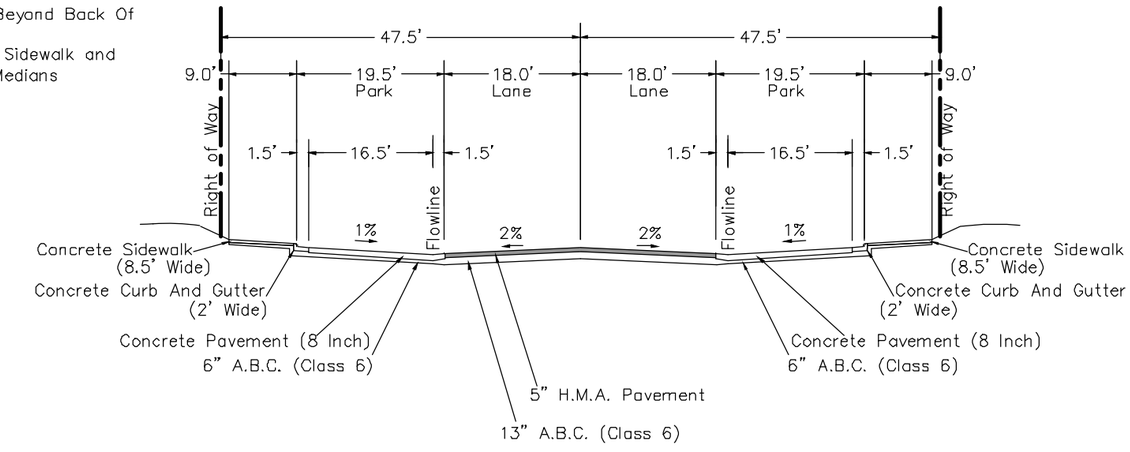
STATIONING REFERENCE IS GENERAL – SEE PLANS FOR MORE INFO
P.C.C.P. ~ Portland Cement Concrete Pavement
H.MA. ~ Hot Mix Asphalt
A.B.C. ~ Aggregate Base Course

Notes:

– Extend Full Pavement Base Section 6" Beyond Back Of Curbs (Typical)
– See Landscape Plans For Work Between Sidewalk and Back of Curb (Landscape Boulevard) and Medians



TYPICAL SECTION
LAWRENCE AVENUE FROM ROUNDABOUT TO HALE
DOS RIOS DR FROM ROUNDABOUT TO CONFLUENCE CT



TYPICAL SECTION
CONFLUENCE CT

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DESIGNED BY JCS DATE 2019
CHECKED BY TCP DATE 2019
APPROVED BY TCP DATE 2019

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
TYPICAL CROSS SECTIONS – 2
June 19, 2020

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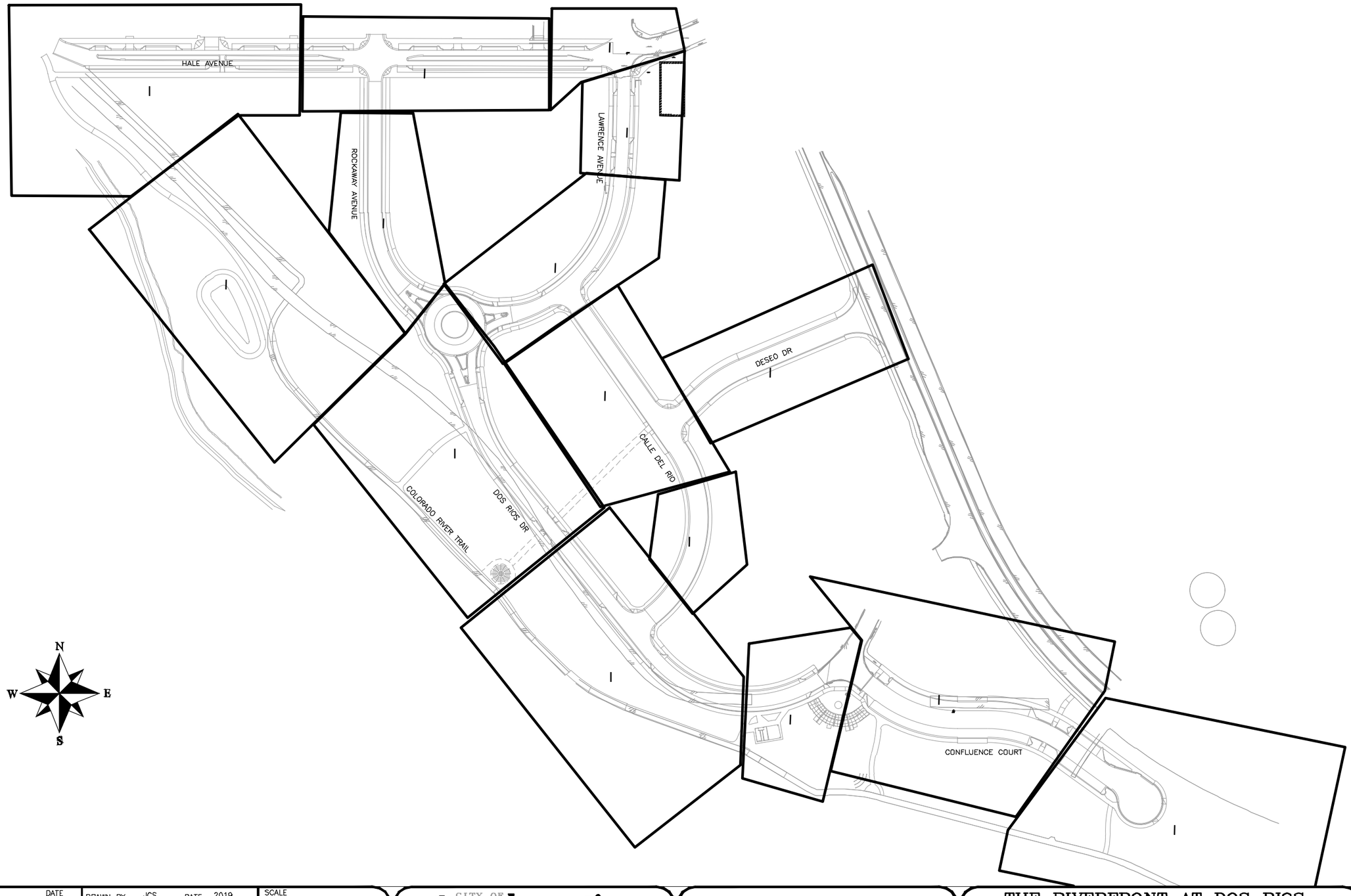

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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN SHEET INDEX
June 19, 2020

110

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PARK AVE

CHULUOTA AVE

HALE AVE

MATCH LINE STA 5+00

CONCRETE SIDEWALK (6" THICK)

MATCH NEW TO EXISTING CURB AND GUTTER AT THIS POINT. NO SEPARATE PAY.

CONCRETE CURB AND GUTTER (2' WIDE)

CONCRETE CURB (6" WIDE) (6" HIGH)

CONCRETE CURB WITH SPILL GUTTER (2' WIDE) (SEE STAKING PLANS FOR GUTTER GRADES)

DRIVEWAY ASPHALT PAVEMENT

CONCRETE DRIVEWAY SECTION (8" THICK) (COMMERCIAL)

~LANDSCAPE~

CONCRETE PAVEMENT (8" THICK)

CONCRETE CURB WITH SPILL GUTTER (1.5' WIDE)

CONCRETE BULLNOSE END SECTION (8" THICK) (SEE STAKING PLANS FOR GRADE TRANSITION FROM 0" HT. TO 6" HT.)

CONCRETE CURB RAMP (8" THICK)

DETECTABLE WARNING IN ACCORDANCE WITH ADA

~CONCRETE SIDEWALK (6" THICK)~

~ROADWAY ASPHALT PAVEMENT~

CONCRETE V-PAN (8" THICK) (6' WIDE

CONCRETE CORNER FILLET (8" THICK)

230 KV ELECTRIC TRANSMISSION LINE (BY OTHERS)

HVOHP

0+00

1+00

2+00

3+00

4+00

MON WELL 12

NOTES:

1. SEE TYPICAL CROSS SECTIONS FOR MORE INFORMATION REGARDING ROADWAY CONSTRUCTION AND PAVEMENT COMPOSITION.
2. SEE STAKING PLAN FOR LOCATION OF ALL IMPROVEMENTS.
3. CONCRETE CURB, GUTTER, V-PAN, SIDEWALK, DRIVEWAY, CURB RAMP, CORNER FILLET, CONCRETE PAVEMENT FOR ON STREET PARKING & ROUNDABOUT ETC. SHALL INCLUDE CLASS 6 AGGREGATE BASE COURSE AS SPECIFIED IN CITY STANDARDS AND THERE WILL BE NO SEPARATE PAY.
4. ASPHALT PAVEMENT SHALL HAVE BASE COURSE AS SPECIFIED ON THE TYPICAL CROSS SECTIONS. ALL BASE BENEATH PAVEMENT WILL BE QUANTIFIED AND PAID FOR SEPARATELY FROM THE PAVEMENT.

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REVISION △	
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APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I-1
June 19, 2020

111

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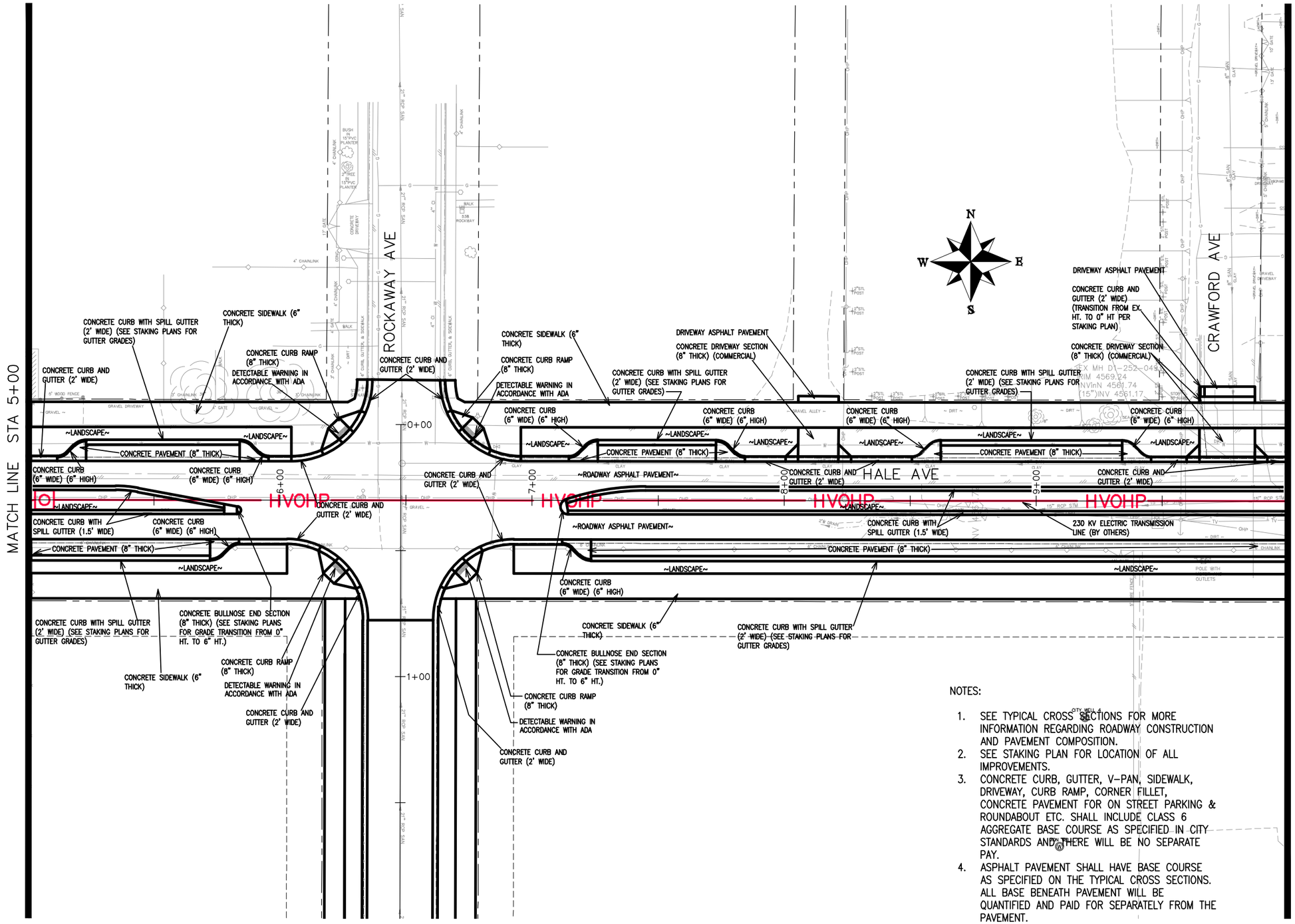

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APPROVED BY	TCP	DATE	2019

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I-2
June 19, 2020

112

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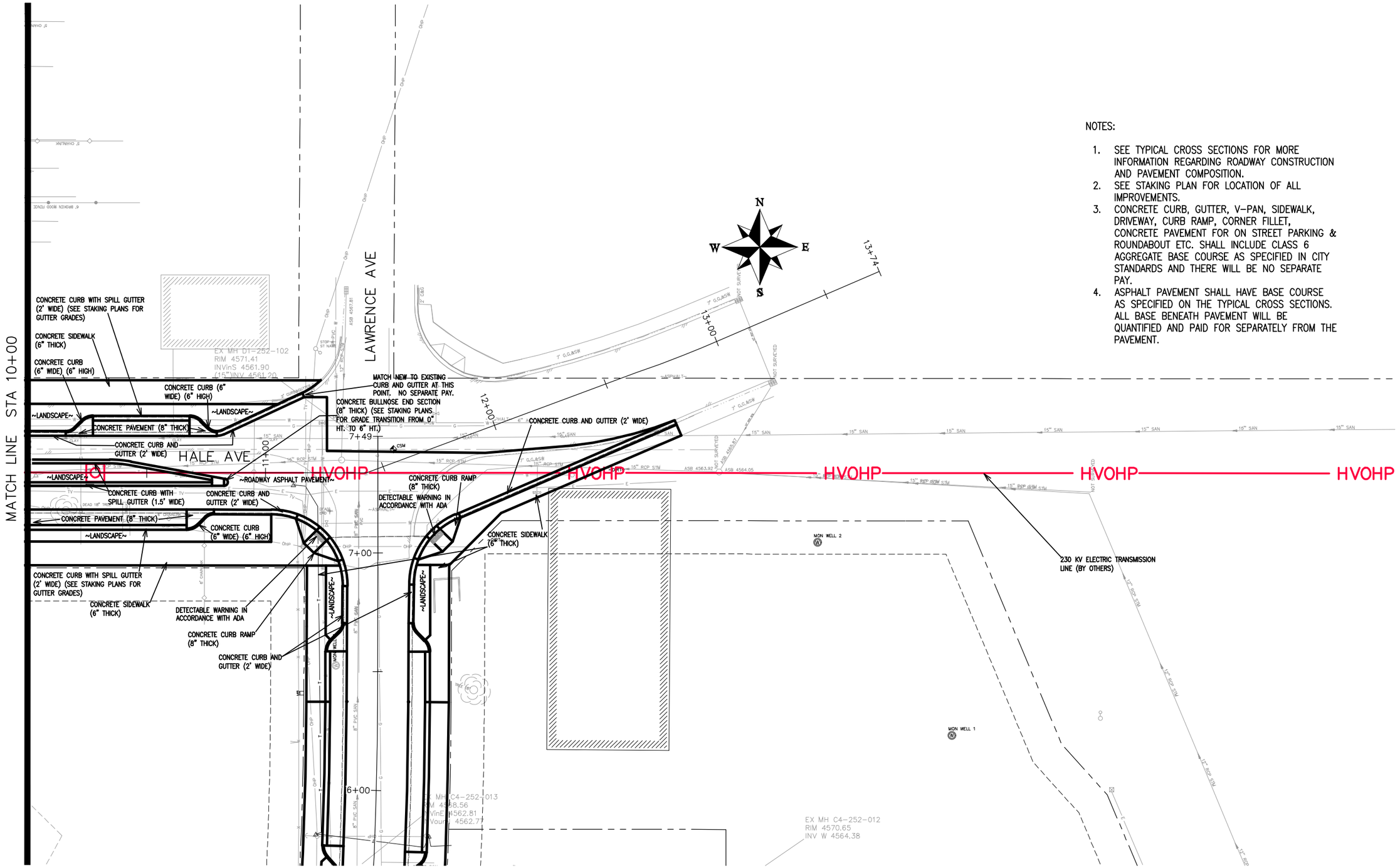

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I-3
June 19, 2020

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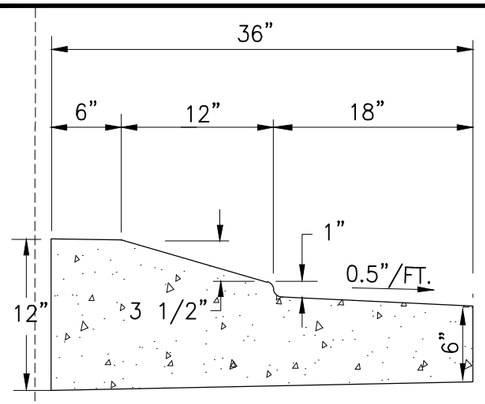
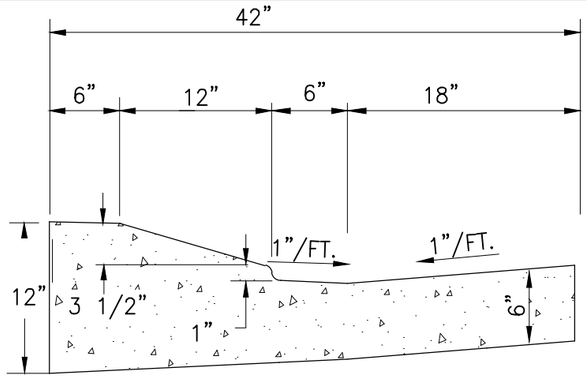


ROUNDABOUT SPLITTER ISLAND
CURB AND GUTTERS – LEG SIDES



ROUNDABOUT SPLITTER ISLAND
CURB GUTTERS VPAN INTERFACE
AT ROUNDABOUT VPAN RING

NOTES:

1. SEE TYPICAL CROSS SECTIONS FOR MORE INFORMATION REGARDING ROADWAY CONSTRUCTION AND PAVEMENT COMPOSITION.
2. SEE STAKING PLAN FOR LOCATION OF ALL IMPROVEMENTS.
3. CONCRETE CURB, GUTTER, V–PAN, SIDEWALK, DRIVEWAY, CURB RAMP, CORNER FILLET, CONCRETE PAVEMENT FOR ON STREET PARKING & ROUNDABOUT ETC. SHALL INCLUDE CLASS 6 AGGREGATE BASE COURSE AS SPECIFIED IN CITY STANDARDS AND THERE WILL BE NO SEPARATE PAY.
4. ASPHALT PAVEMENT SHALL HAVE BASE COURSE AS SPECIFIED ON THE TYPICAL CROSS SECTIONS. ALL BASE BENEATH PAVEMENT WILL BE QUANTIFIED AND PAID FOR SEPARATELY FROM THE PAVEMENT.

DESCRIPTION	DATE
REVISION △	–
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REVISION △	–
REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–4
June 19, 2020

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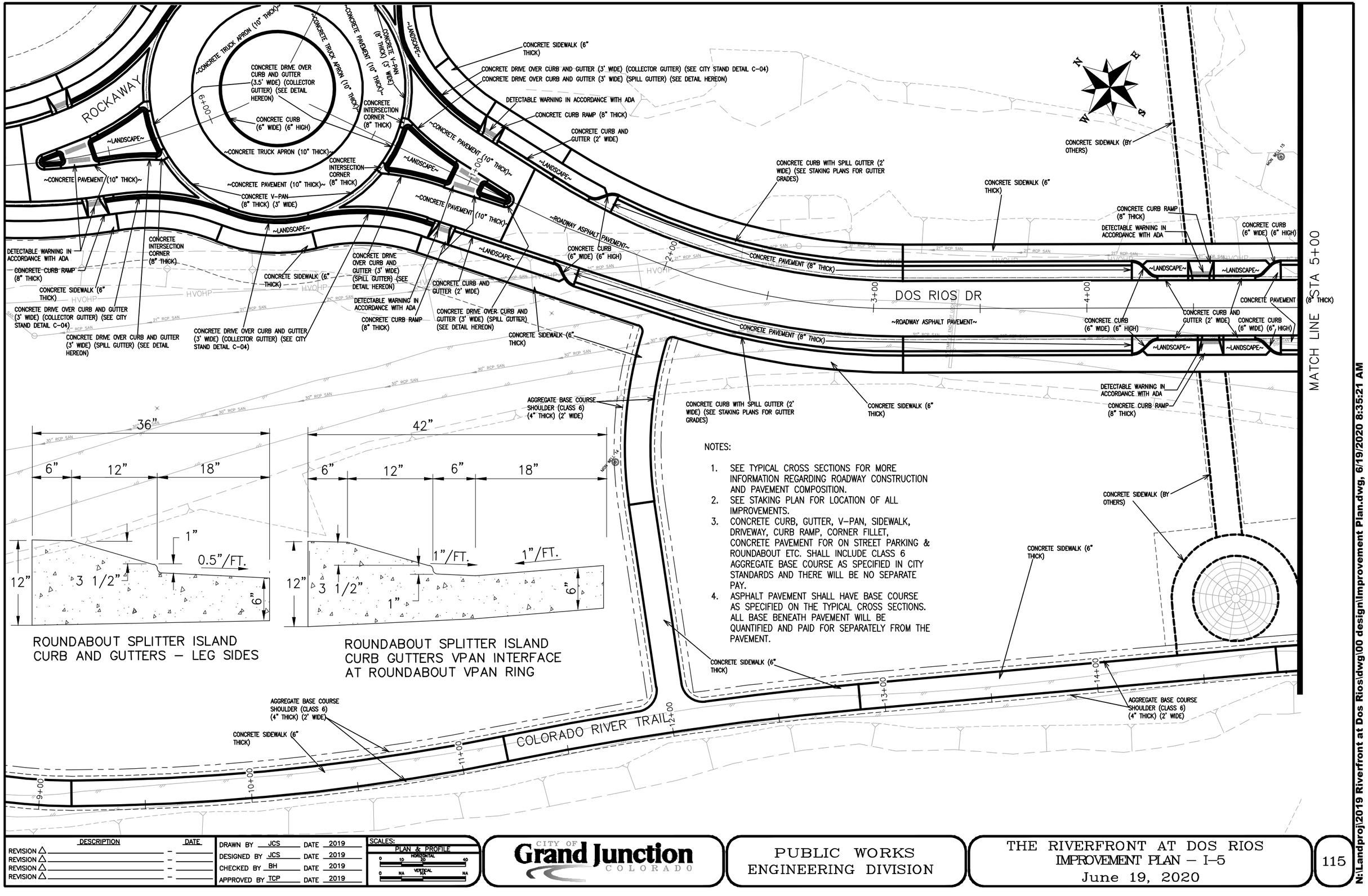

ROUNDABOUT SPLITTER ISLAND
CURB AND GUTTERS – LEG SIDES

ROUNDABOUT SPLITTER ISLAND
CURB GUTTERS VPAN INTERFACE
AT ROUNDABOUT VPAN RING

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REVISION △	

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DESIGNED BY JCS DATE 2019
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SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I-5
June 19, 2020

115

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MATCH LINE STA 5+00

MATCH LINE STA 10+00

CALLE DEL RIO

DOS RIOS DR

COLORADO RIVER TRAIL

CONCRETE SIDEWALK (6" THICK)

CONCRETE CURB AND GUTTER (2' WIDE)

CONCRETE CURB RAMP (8" THICK)

DETECTABLE WARNING IN ACCORDANCE WITH ADA

CONCRETE CURB WITH SPILL GUTTER (2' WIDE) (SEE STAKING PLANS FOR GUTTER GRADES)

CONCRETE CURB (6" WIDE) (6" HIGH)

CONCRETE PAVEMENT (8" THICK)

~LANDSCAPE~

~ROADWAY ASPHALT PAVEMENT~

AGGREGATE BASE COURSE SHOULDER (CLASS 6) (4" THICK) (2' WIDE)

NOTES:

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REVISION △	–
REVISION △	–
REVISION △	–

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–6
June 19, 2020

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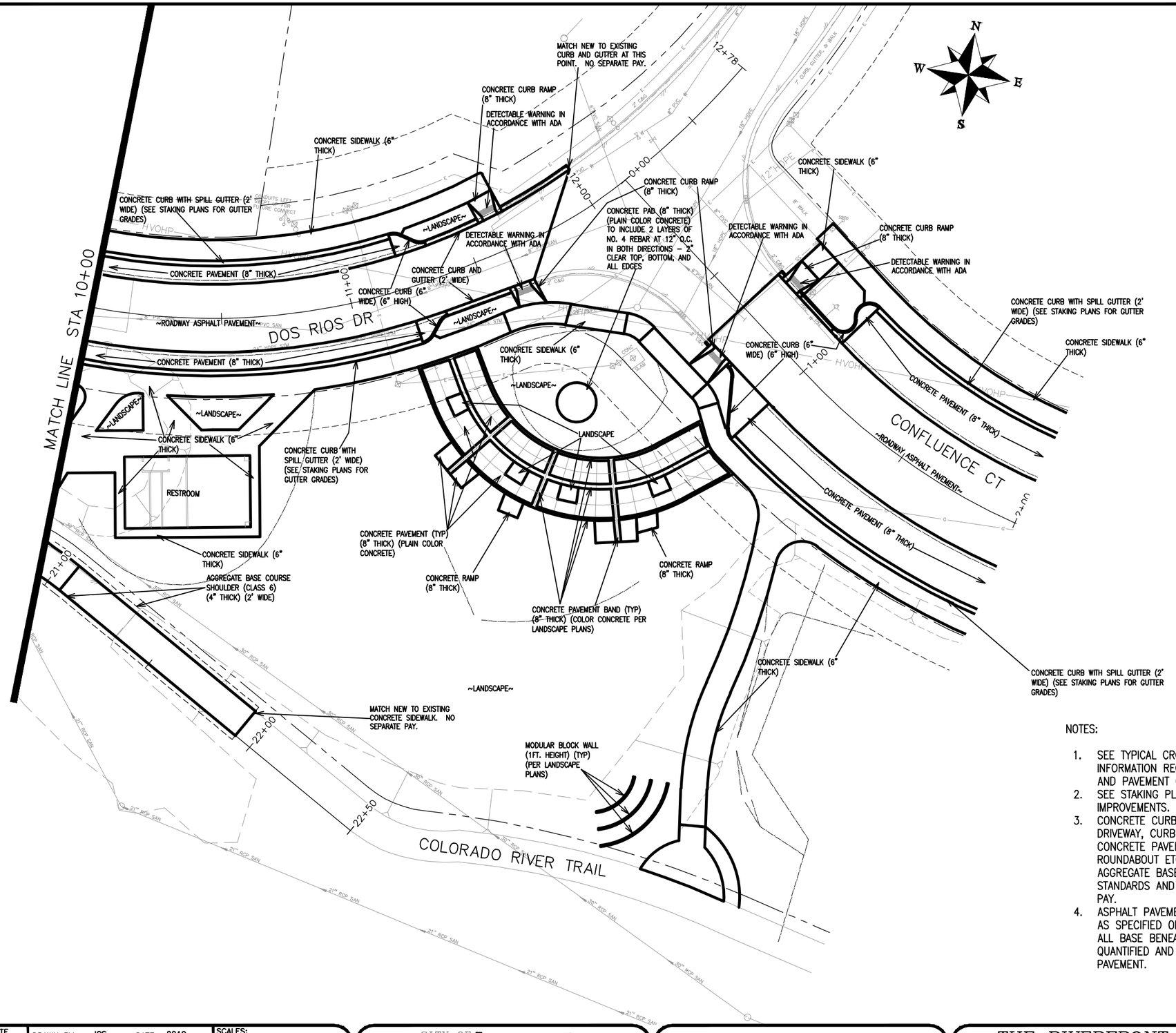

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REVISION △	

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–7
June 19, 2020

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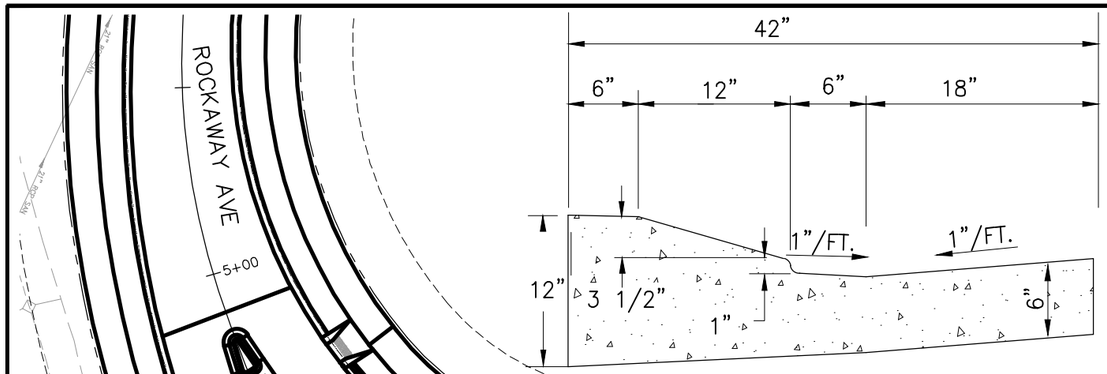
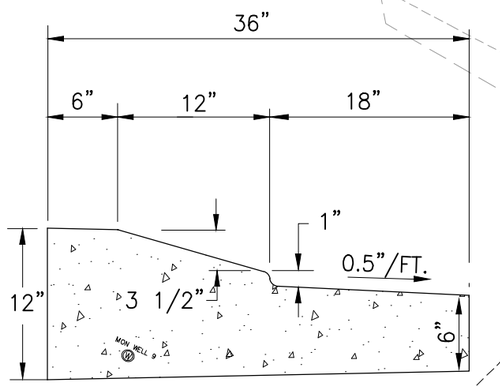


ROUNDABOUT SPLITTER ISLAND
CURB GUTTERS VPAN INTERFACE
AT ROUNDABOUT VPAN RING



ROUNDABOUT SPLITTER ISLAND
CURB AND GUTTERS – LEG SIDES

NOTES:

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REVISION △	
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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–8
June 19, 2020

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MATCH LINE STA 5+00

HALE AVE

LAWRENCE AVE

10+00

11+00

12+00

13+00

6+00

7+00

7+49

CONCRETE CURB WITH SPILL GUTTER (2' WIDE) (SEE STAKING PLANS FOR GUTTER GRADES)

CONCRETE CURB RAMP (8" THICK)

CONCRETE SIDEWALK (6" THICK)

DETECTABLE WARNING IN ACCORDANCE WITH ADA

~LANDSCAPE~

CONCRETE PAVEMENT (8" THICK)

CONCRETE CURB (6" WIDE) (6" HIGH)

CONCRETE CURB AND GUTTER (2' WIDE)

~ROADWAY ASPHALT PAVEMENT~

CONCRETE CURB AND GUTTER (2' WIDE)

NOTES:

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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I-9
June 19, 2020

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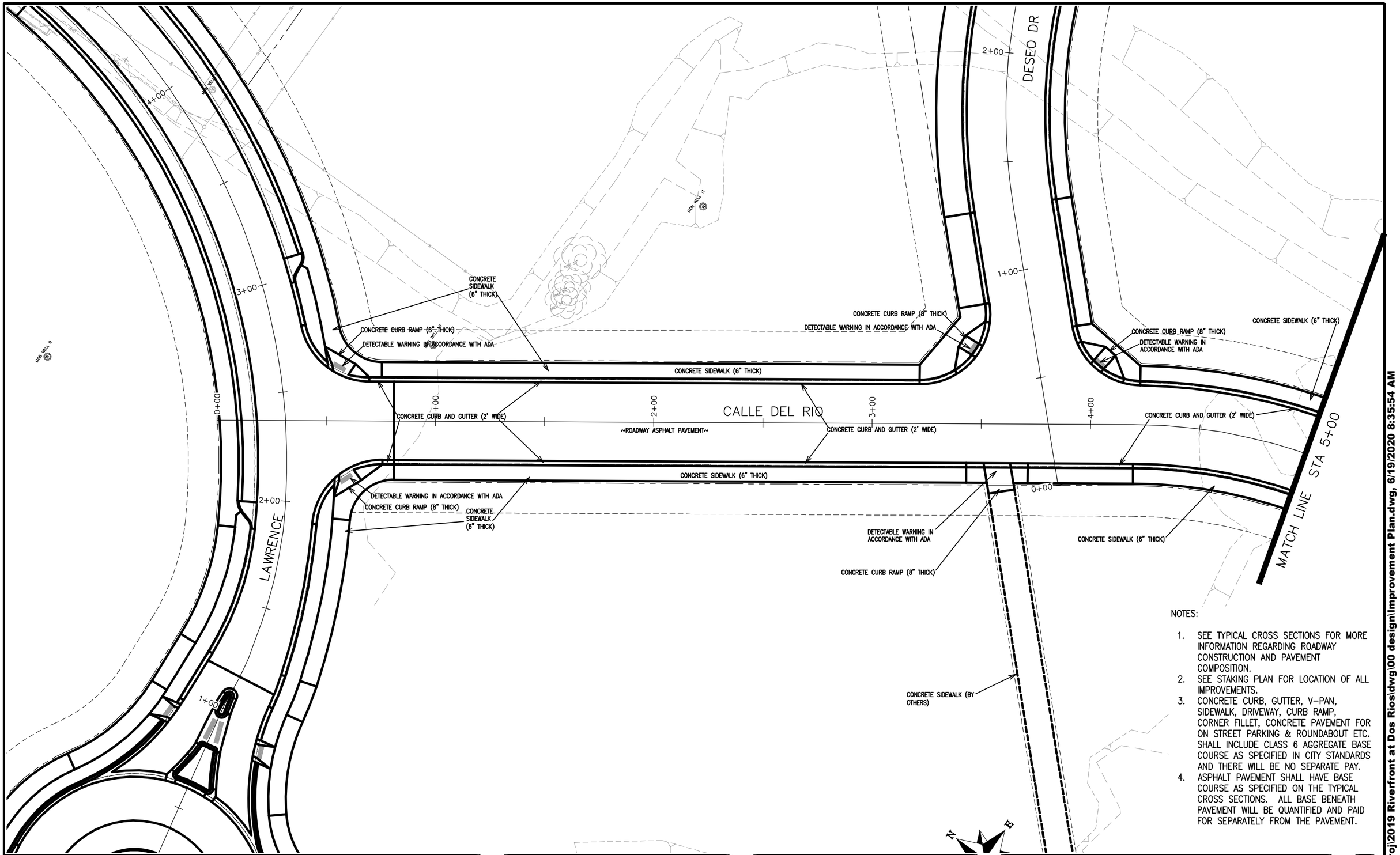

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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–10
June 19, 2020

120

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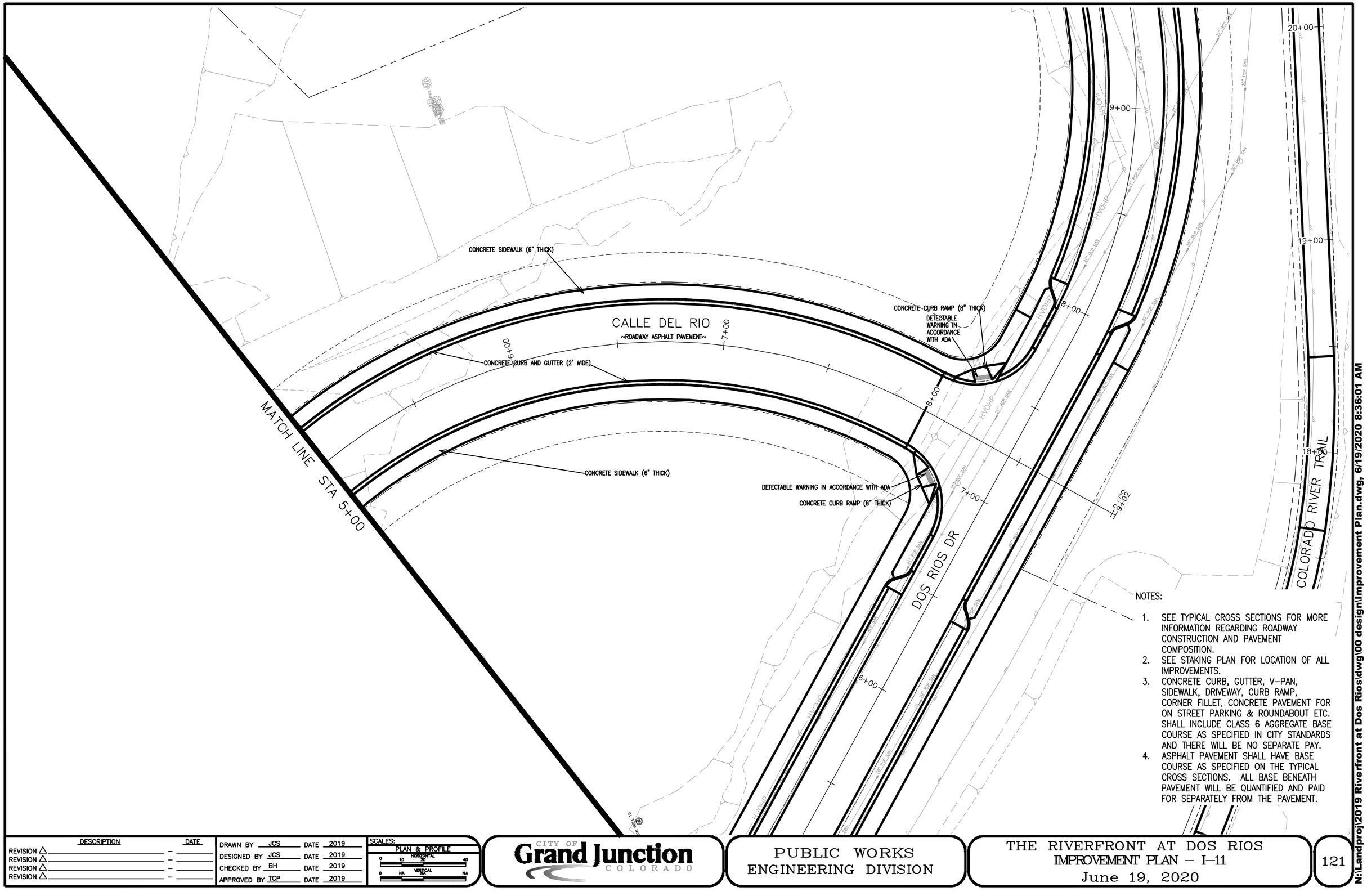

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REVISION △	–
REVISION △	–

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–11
June 19, 2020

121

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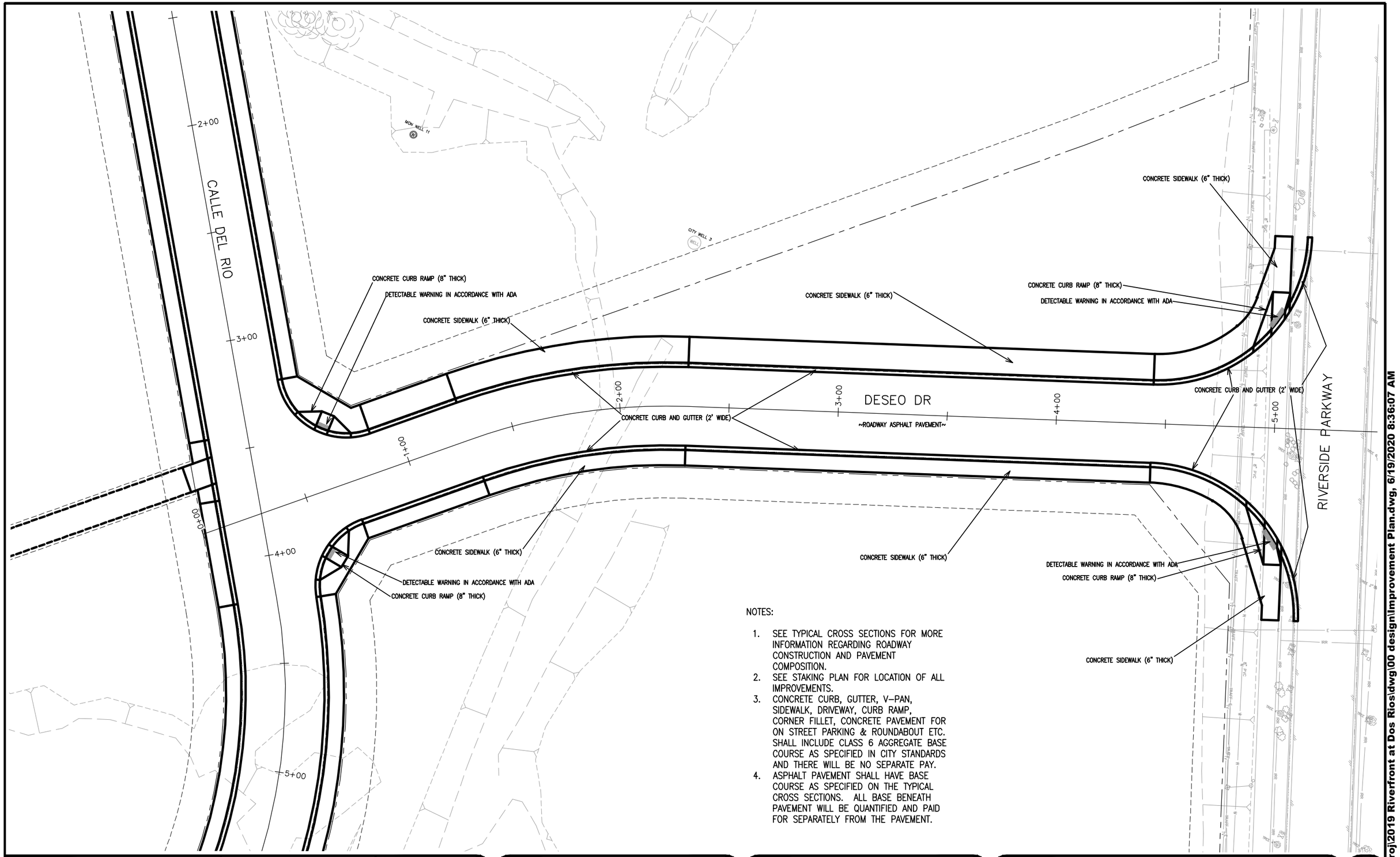

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DESIGNED BY JCS DATE 2019
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APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–12
June 19, 2020

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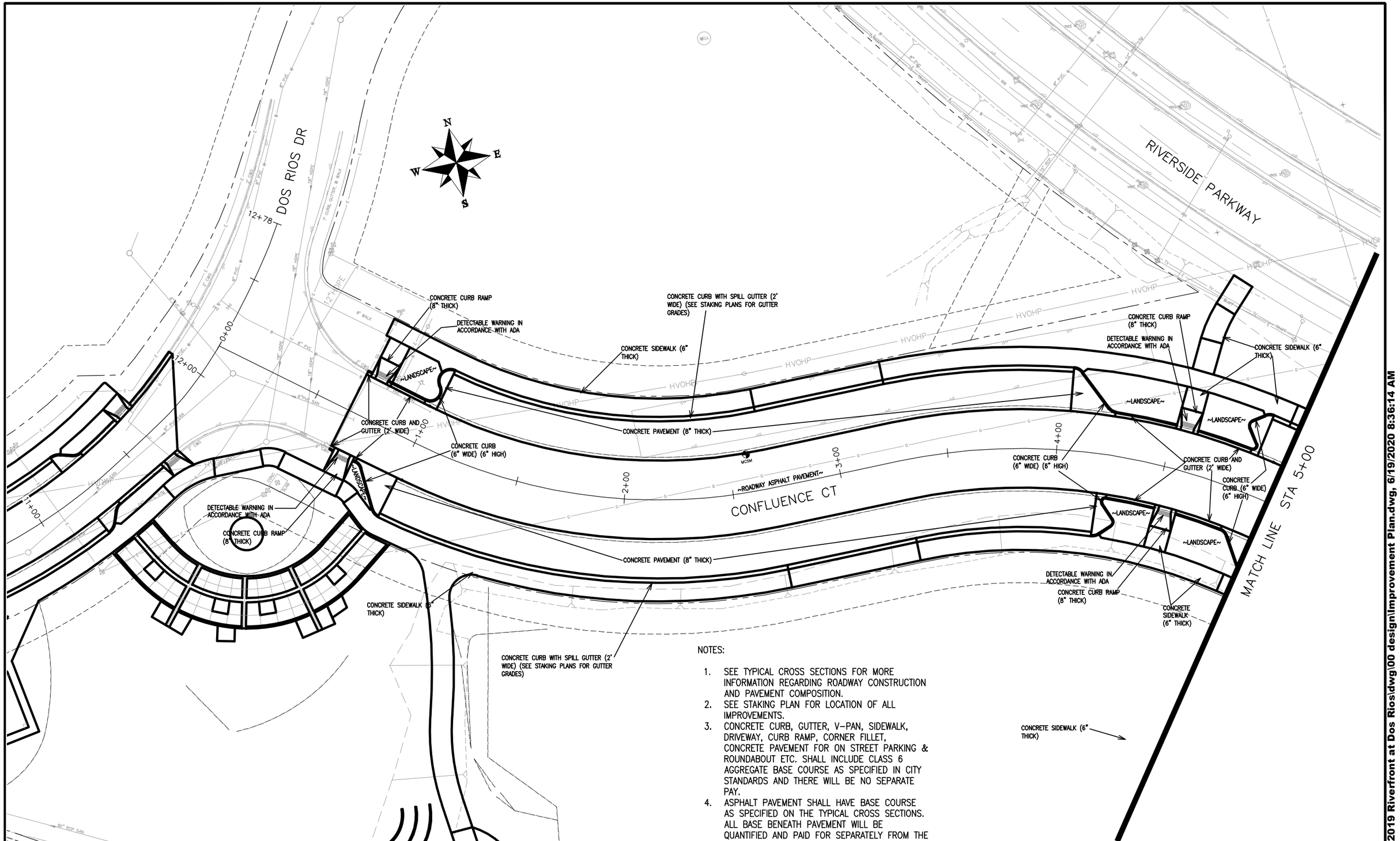

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–13
June 19, 2020

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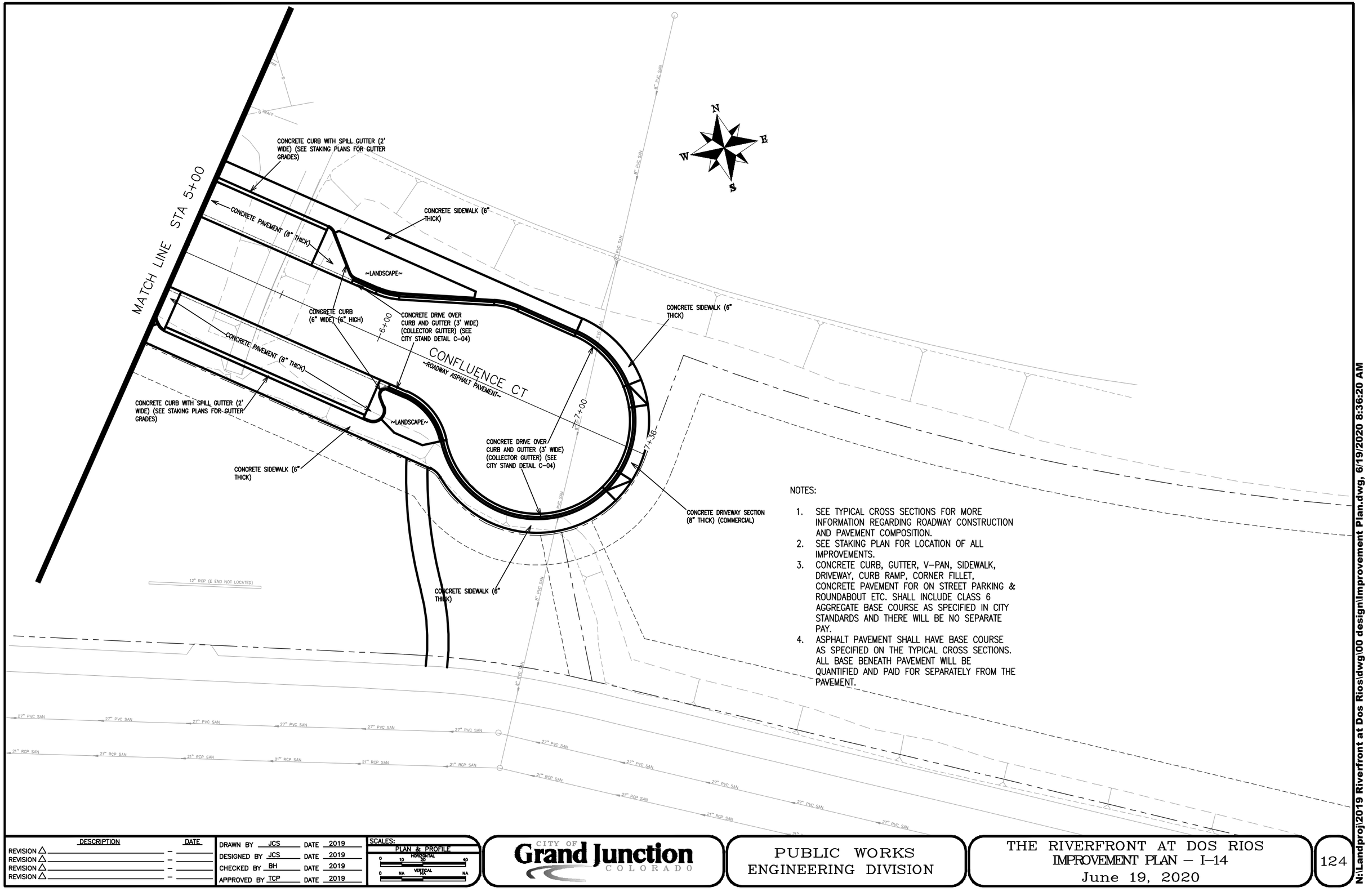

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REVISION △	–

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APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I-14
June 19, 2020

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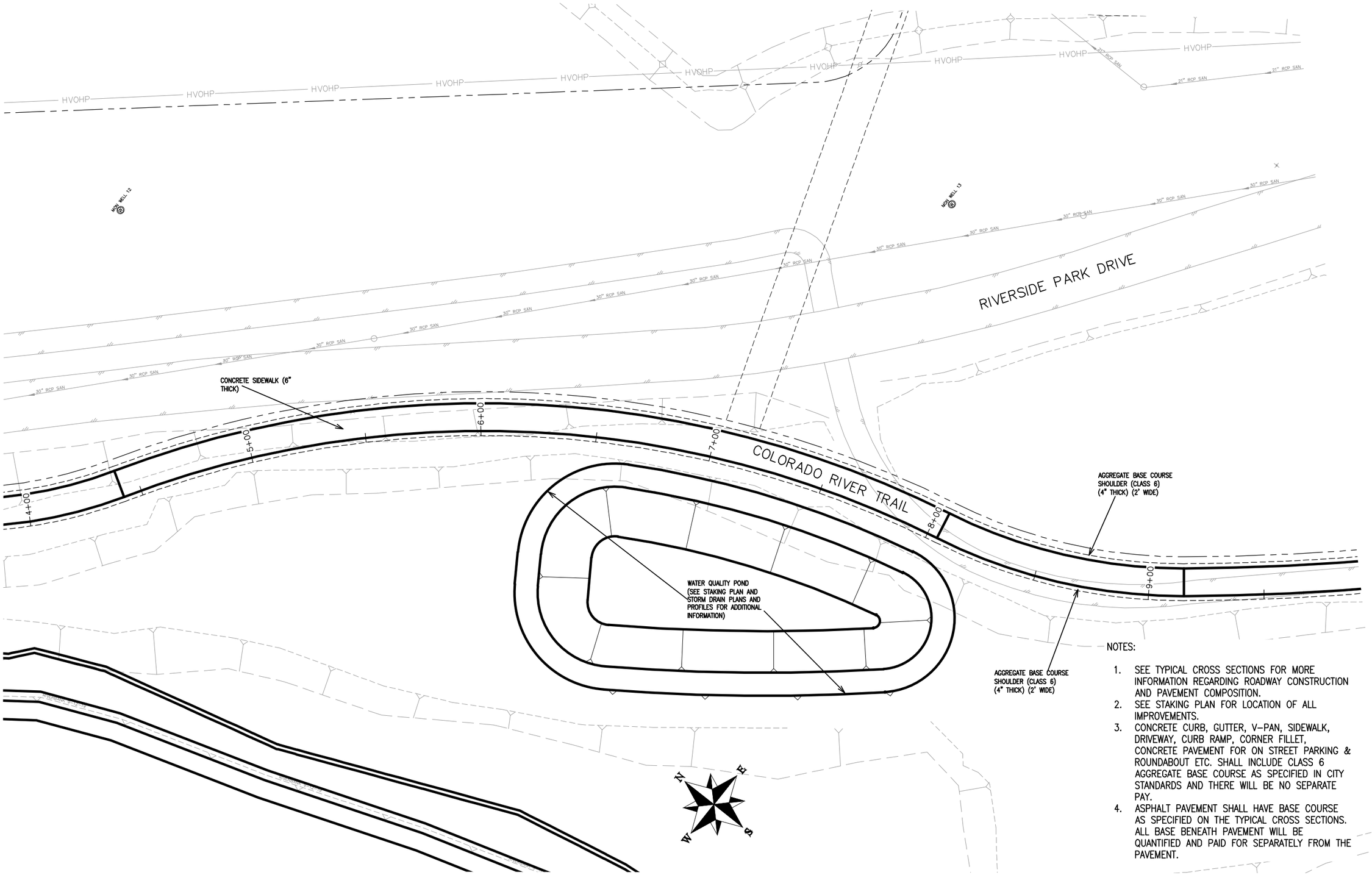

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REVISION △	–

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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
IMPROVEMENT PLAN – I–15
June 19, 2020

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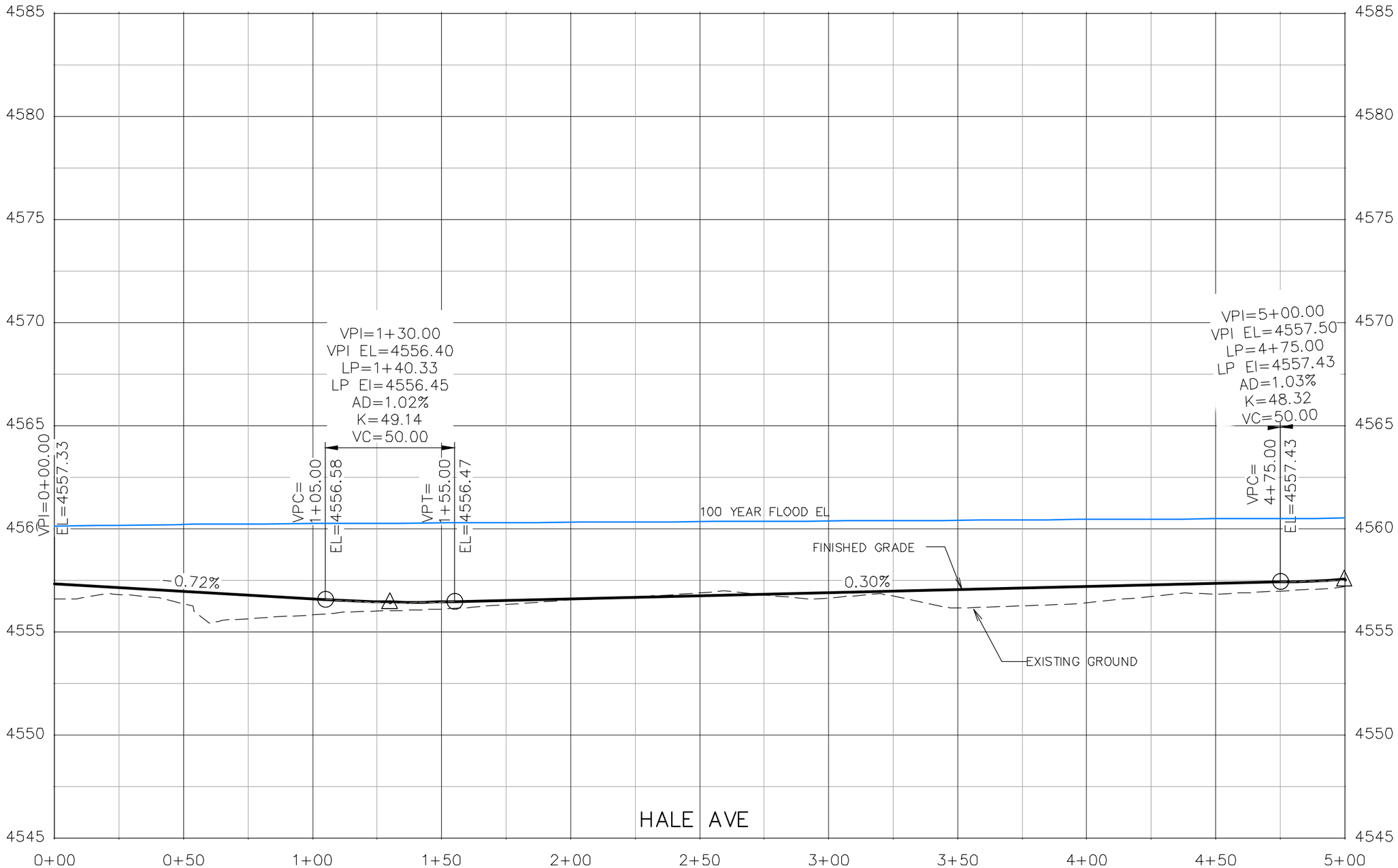

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REVISION △	–
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REVISION △	–

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 20 40
VERTICAL 0 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (1)
June 19, 2020

126

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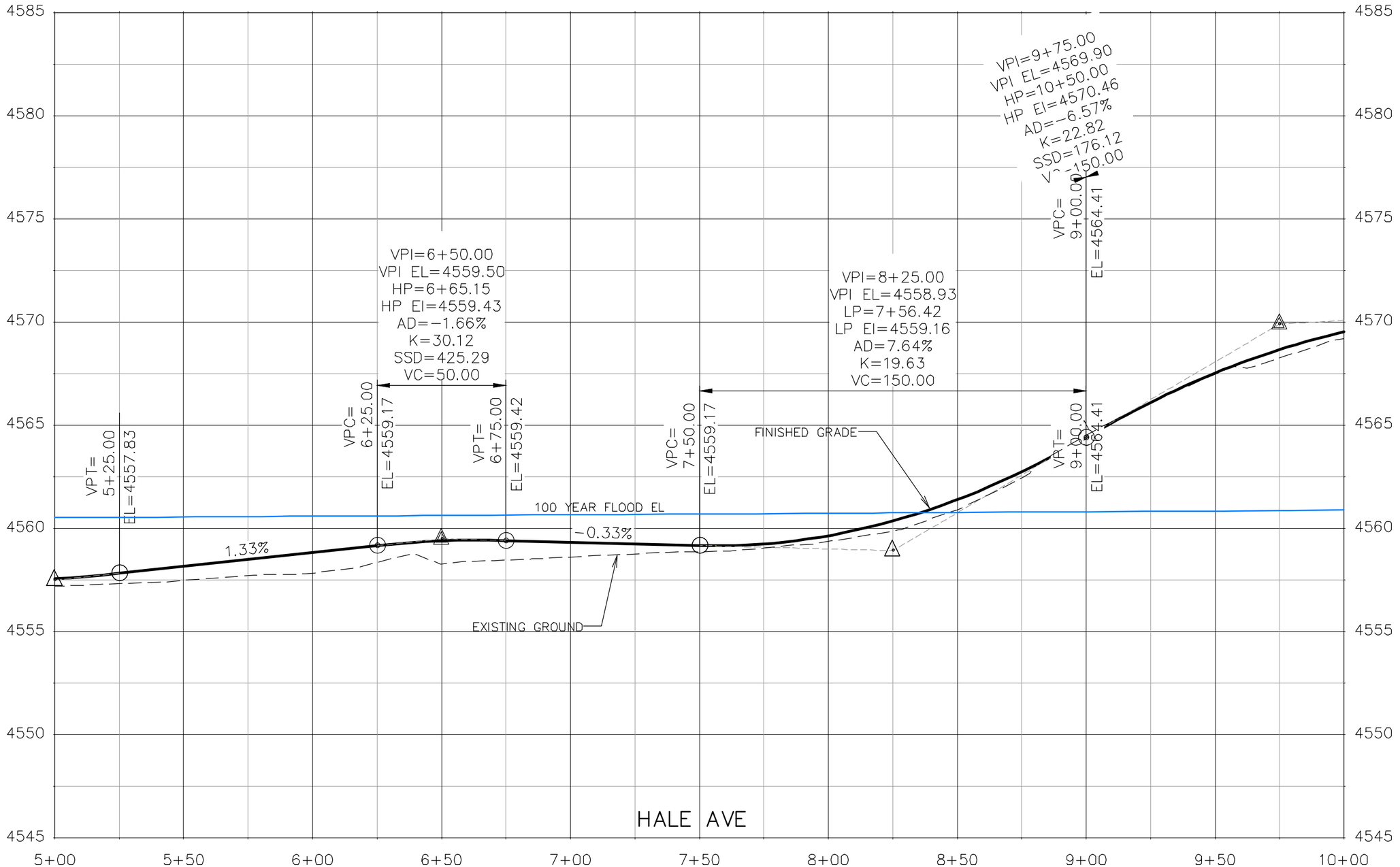

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SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (2)
June 19, 2020

127

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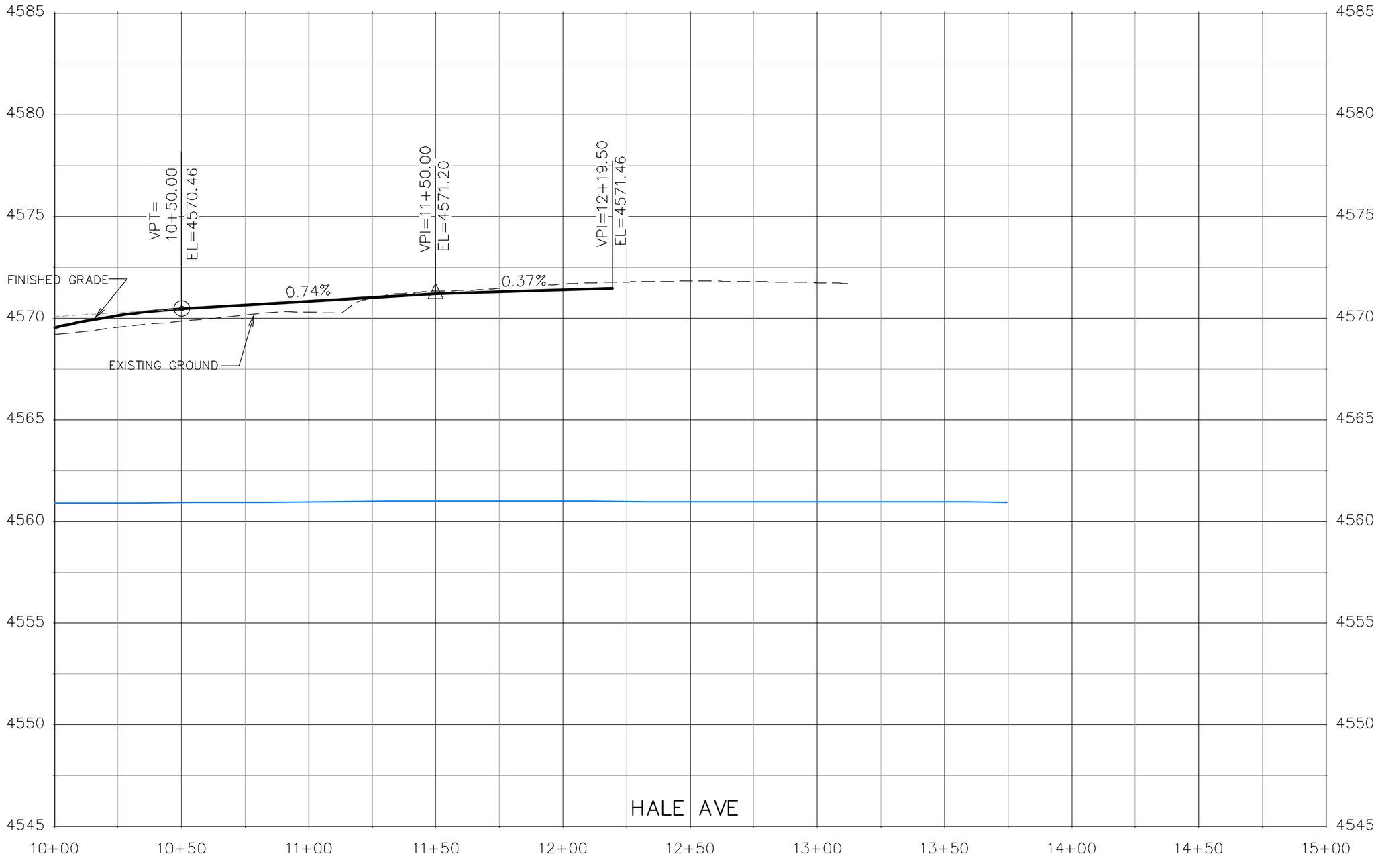

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (3)
June 19, 2020

128

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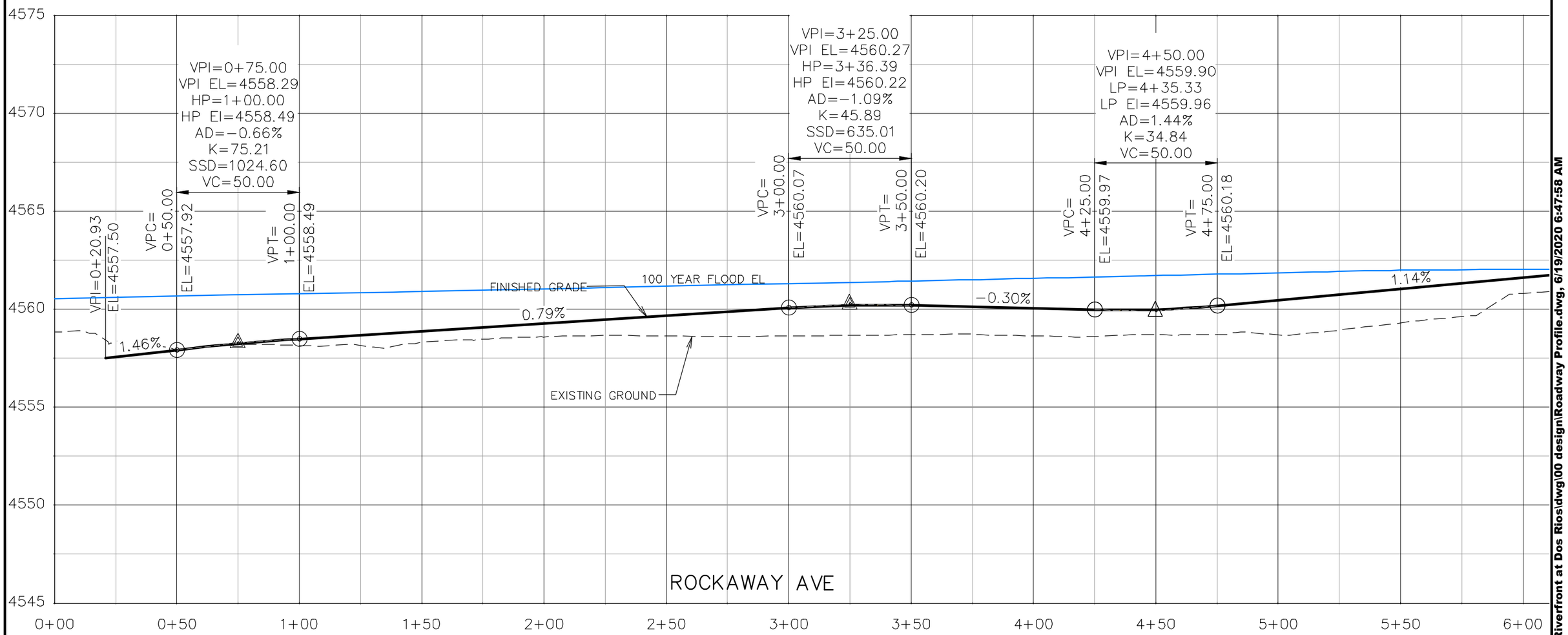

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REVISION △	–
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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (4)
June 19, 2020

129

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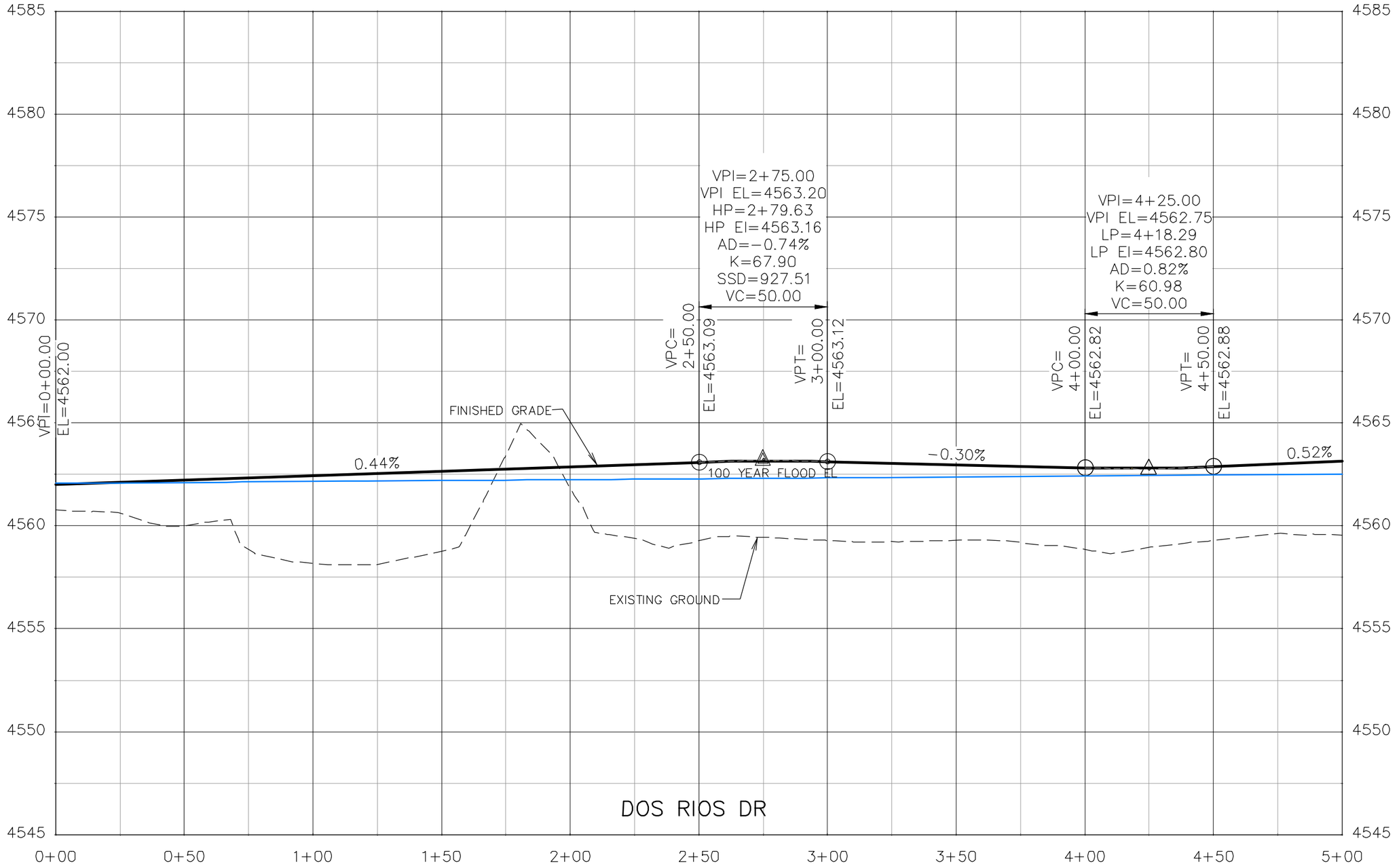

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REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (5)
June 19, 2020

130

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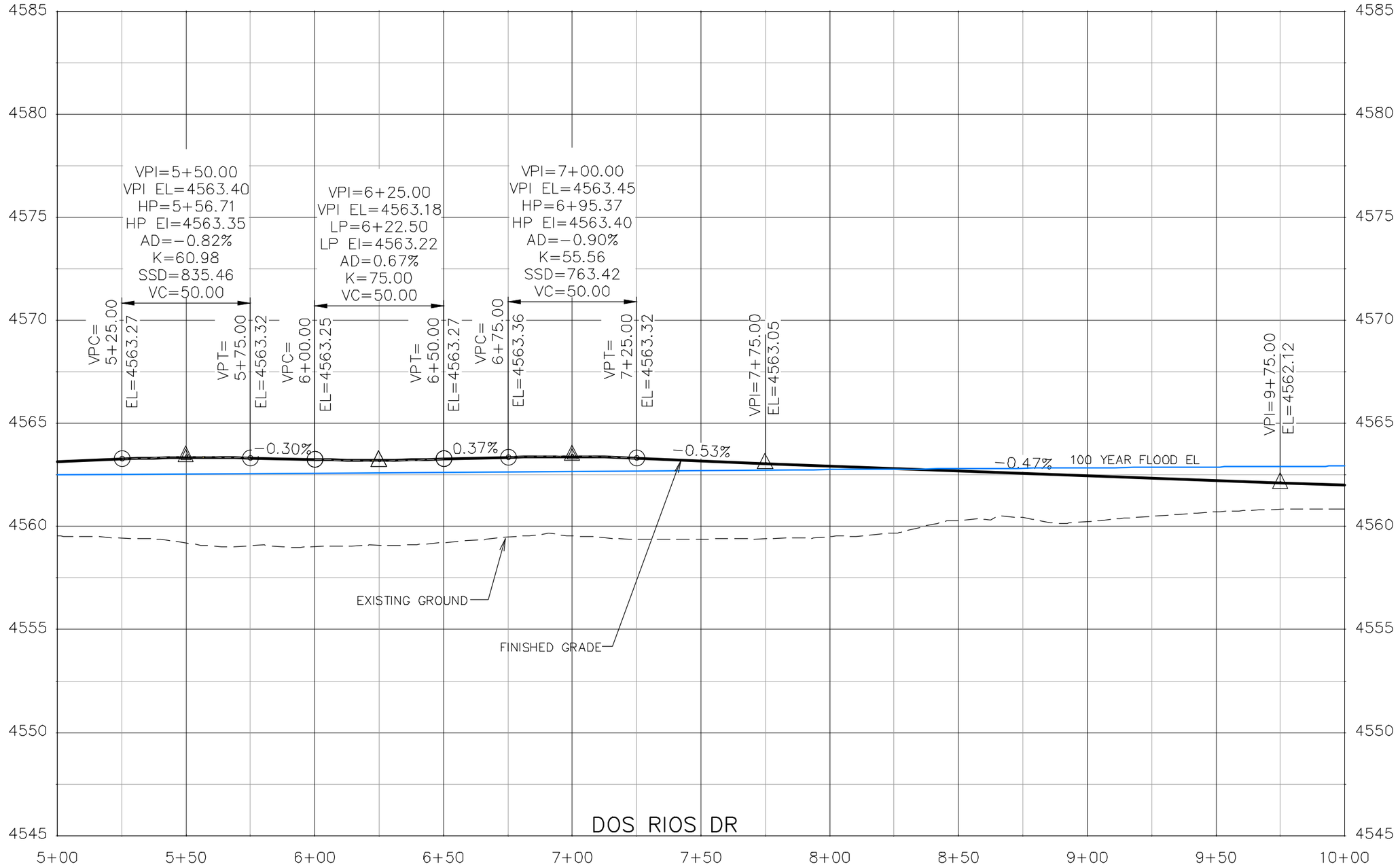

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REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (6)
June 19, 2020

131

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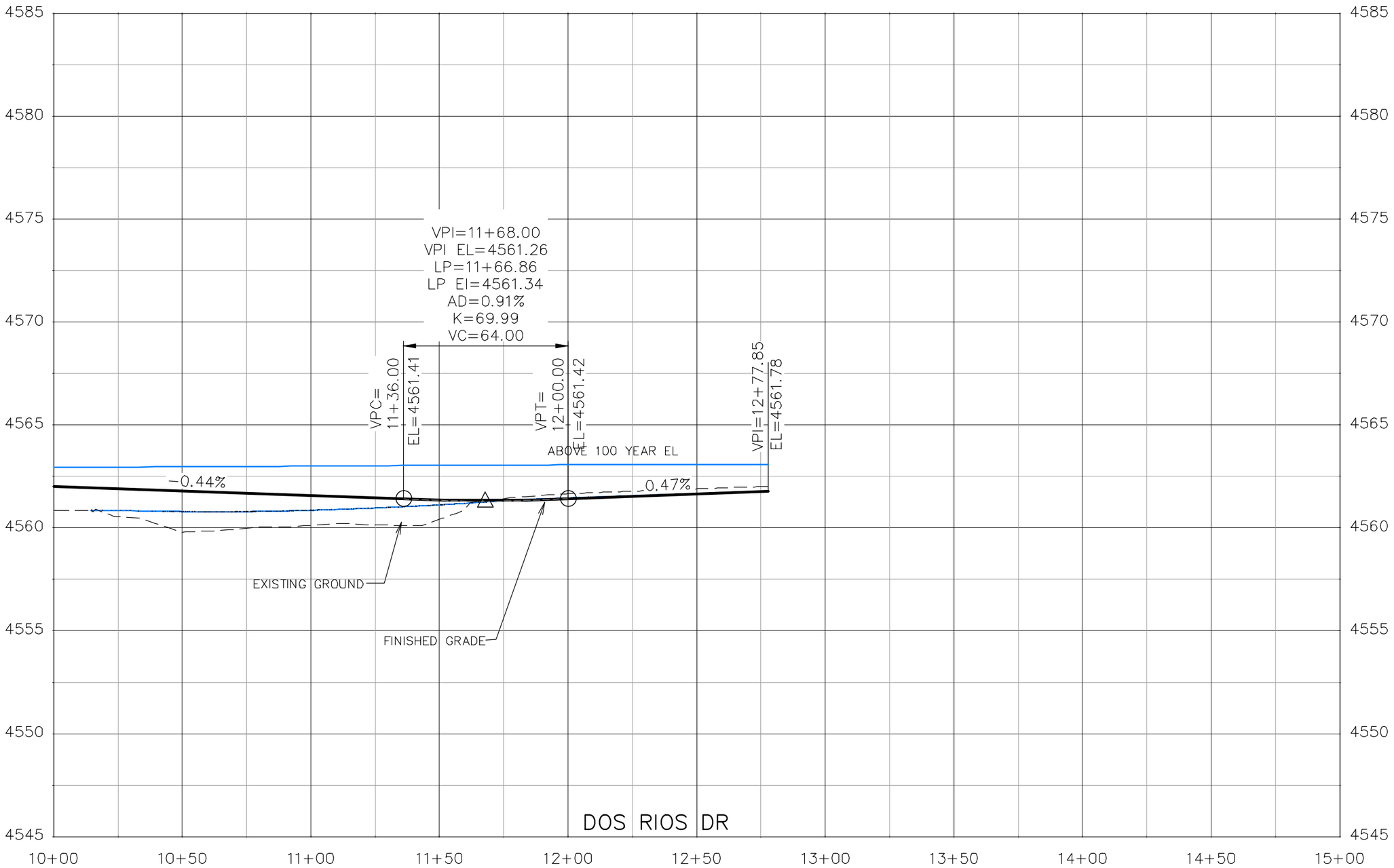

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REVISION △	–
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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (7)
June 19, 2020

132

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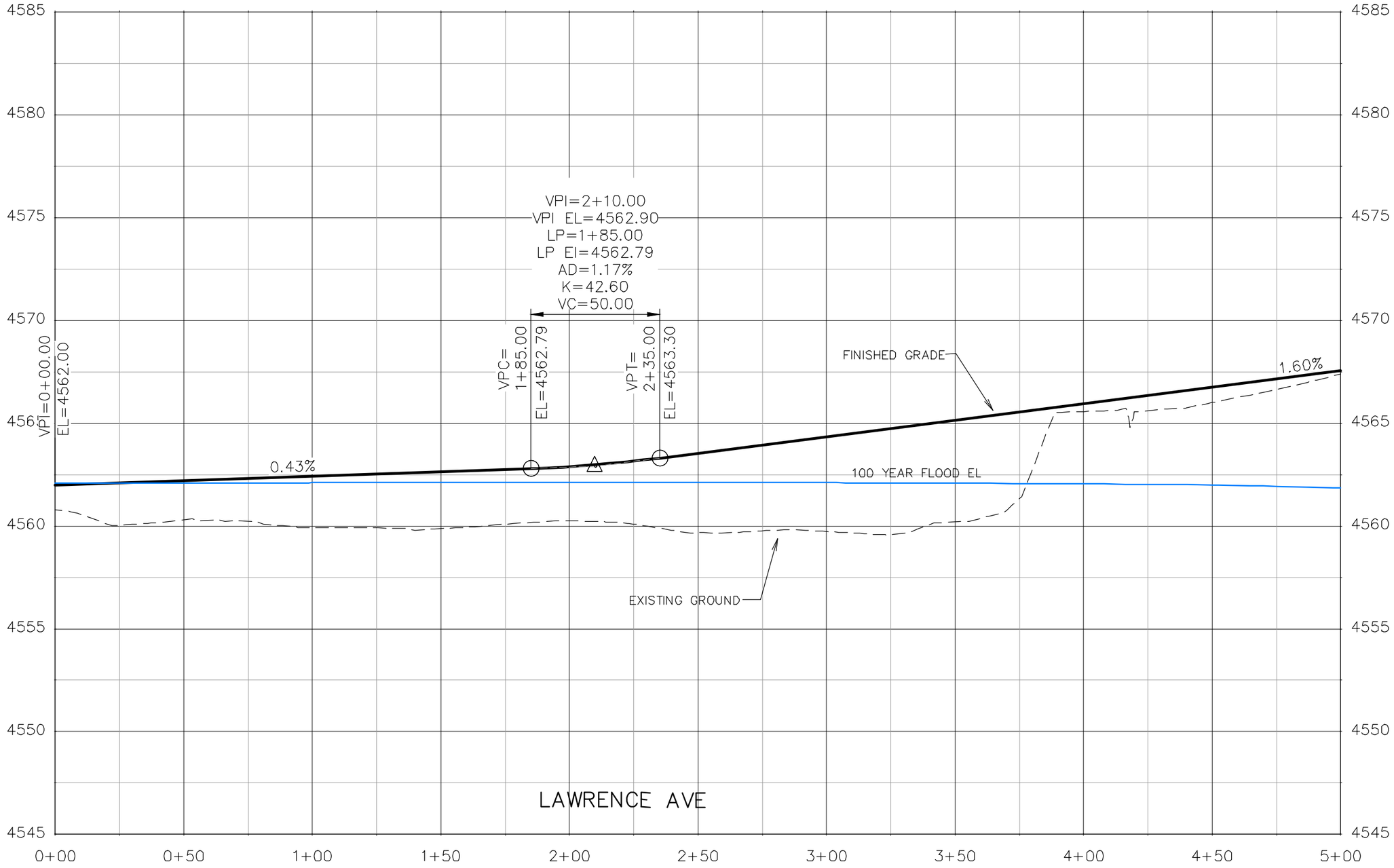

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (8)
June 19, 2020

133

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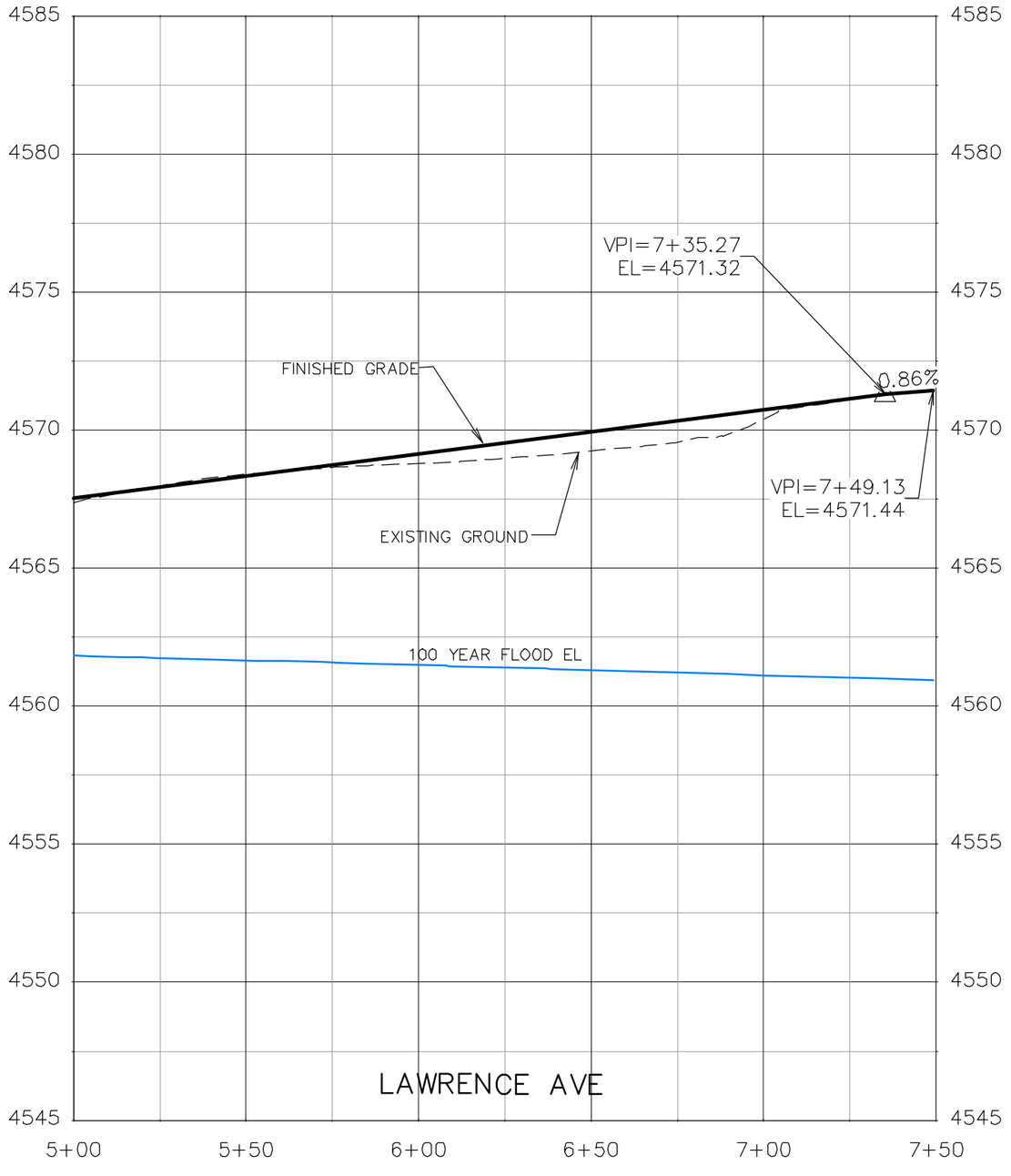

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (9)
June 19, 2020

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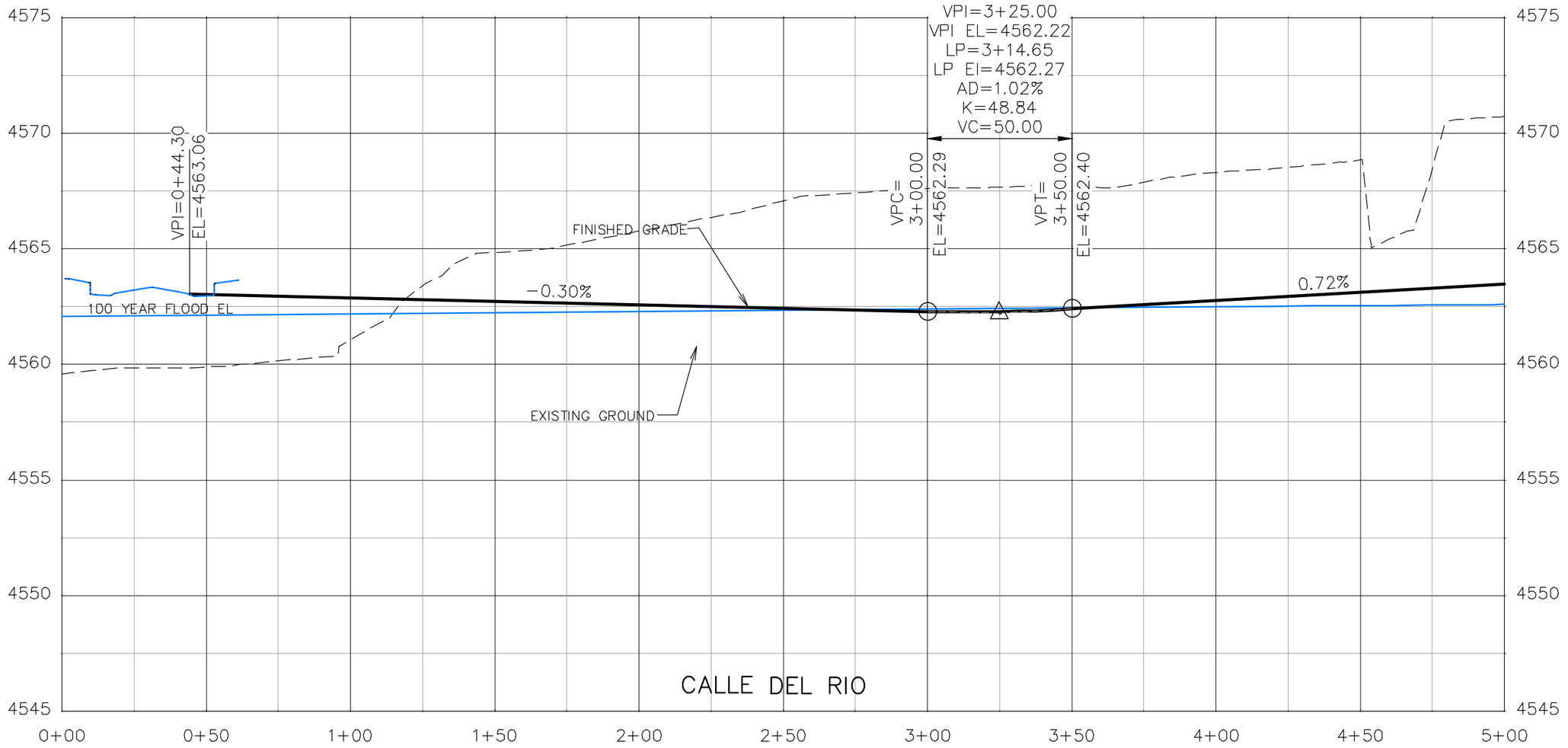

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (10)
June 19, 2020

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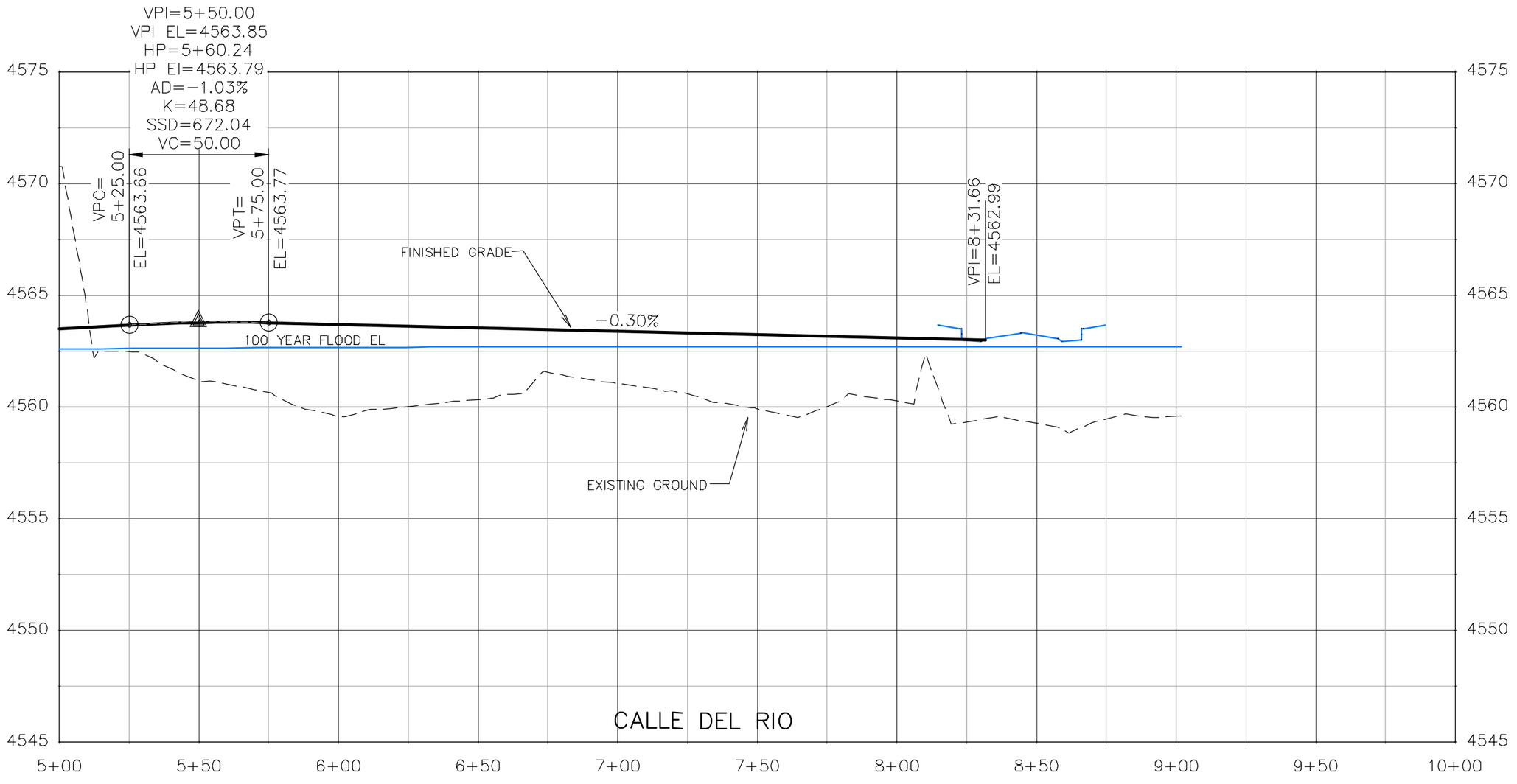

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (11)
June 19, 2020

136

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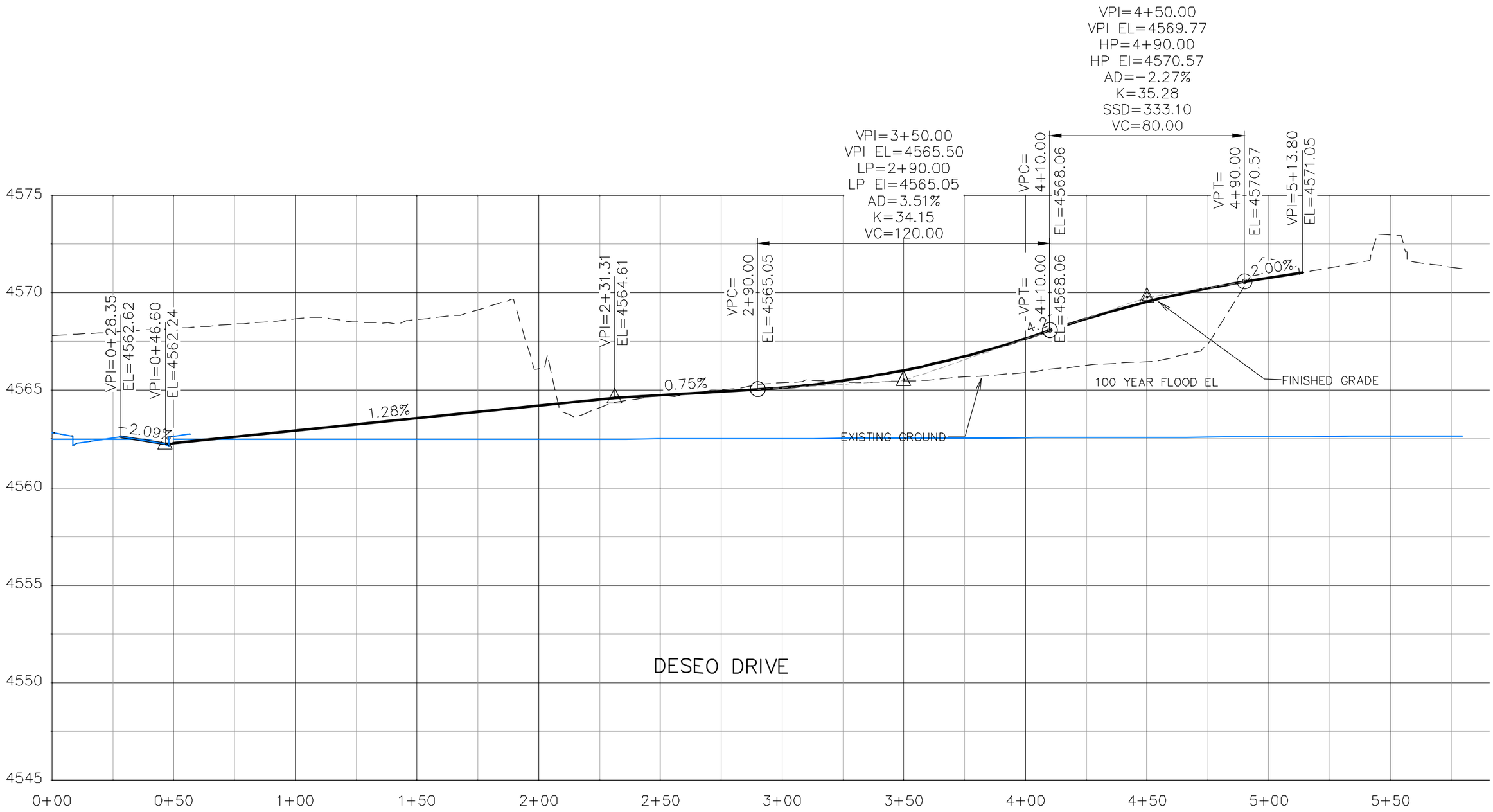

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (12)
June 19, 2020

137

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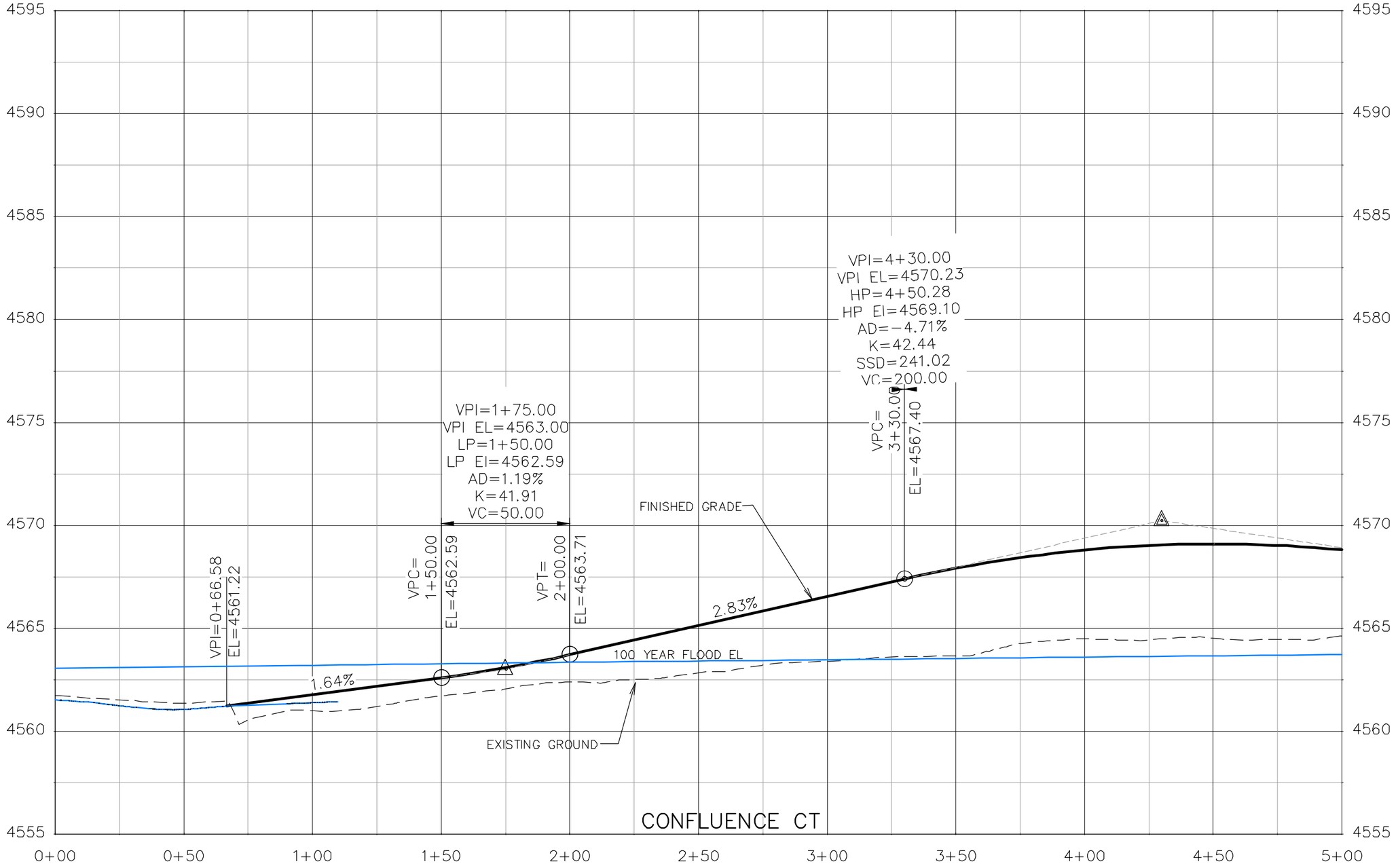

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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (13)
June 19, 2020

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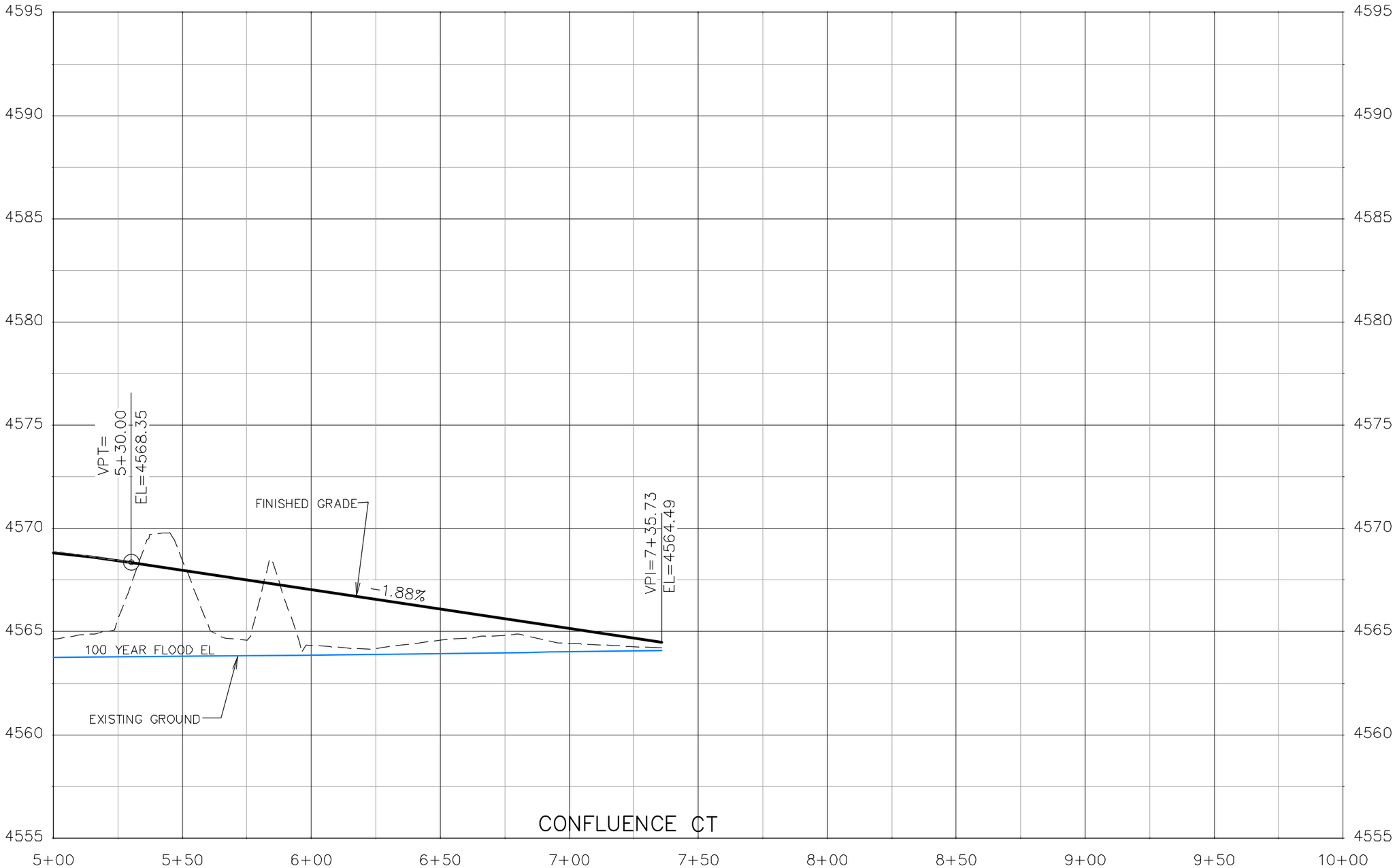

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CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 20 40
VERTICAL 0 1.25 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (14)
June 19, 2020

139

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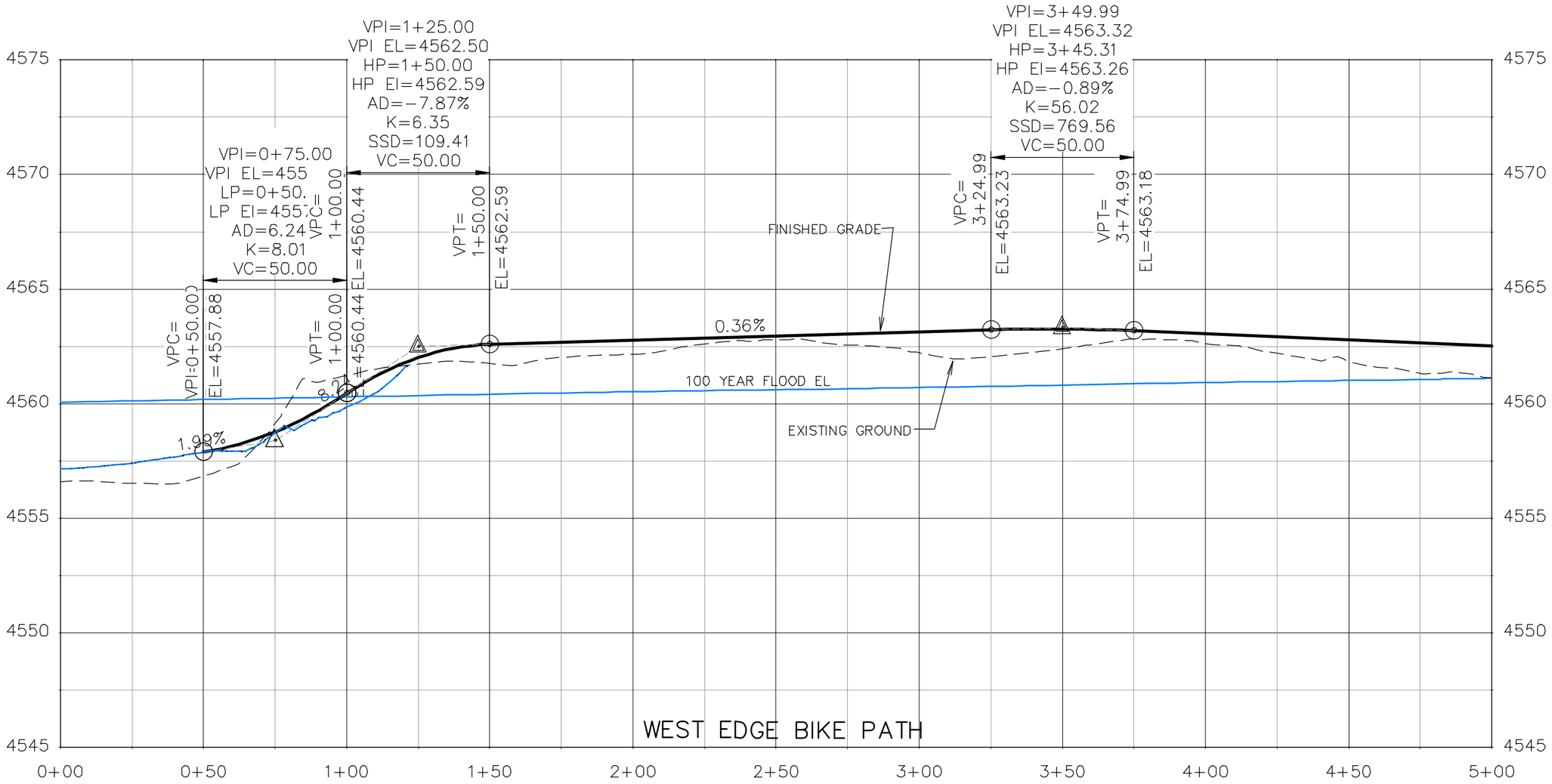

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REVISION △	–
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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (15)
June 19, 2020

140

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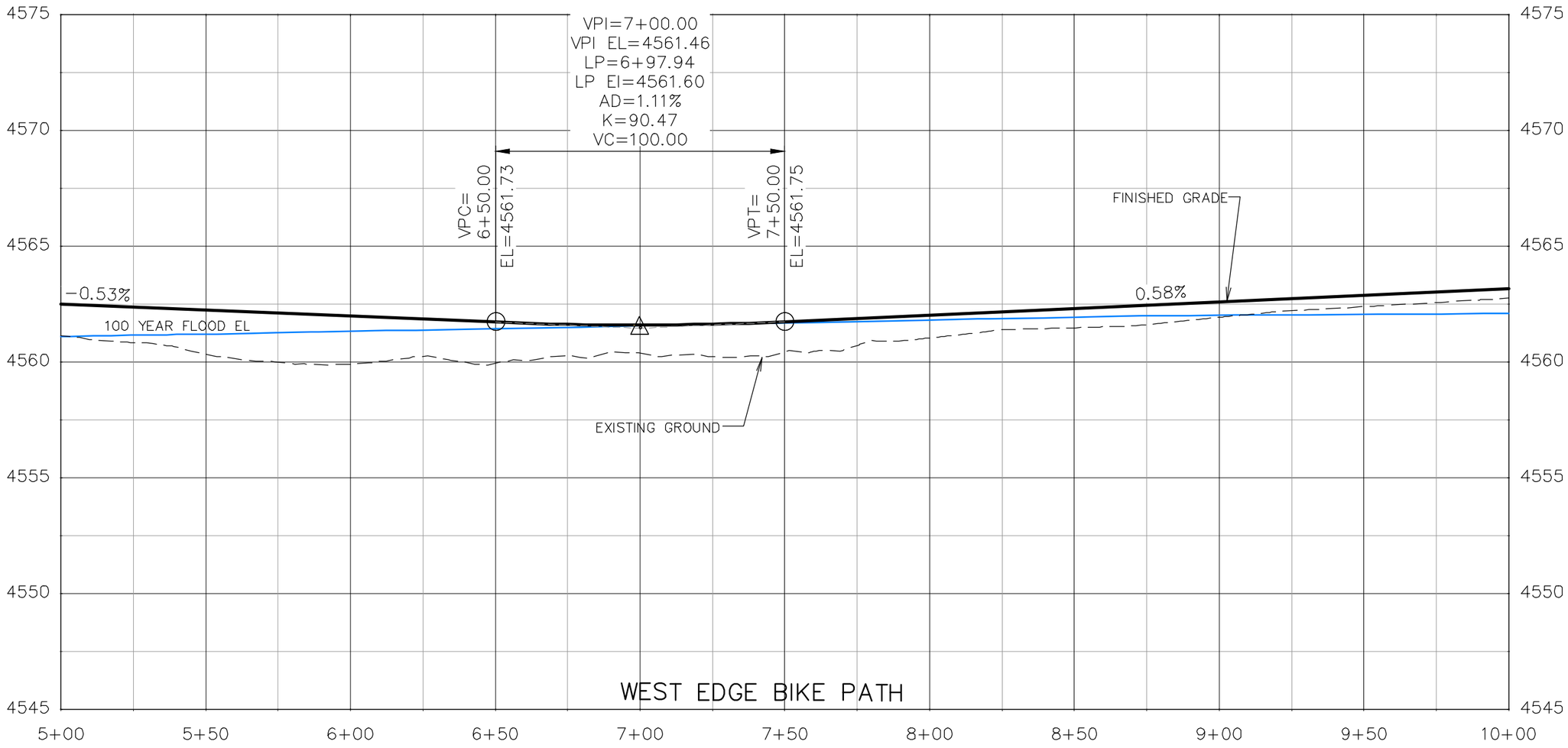

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (16)
June 19, 2020

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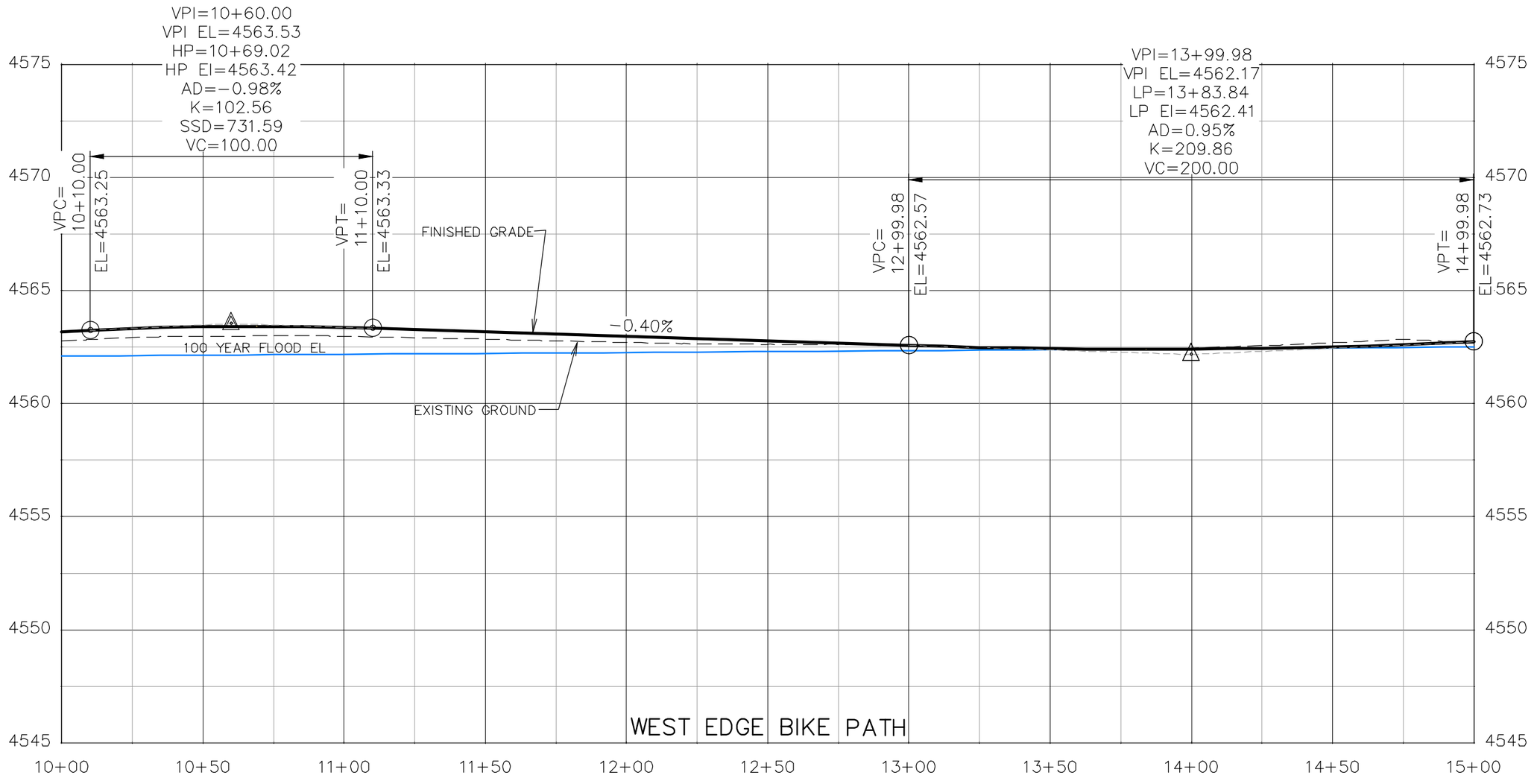

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (17)
June 19, 2020

142

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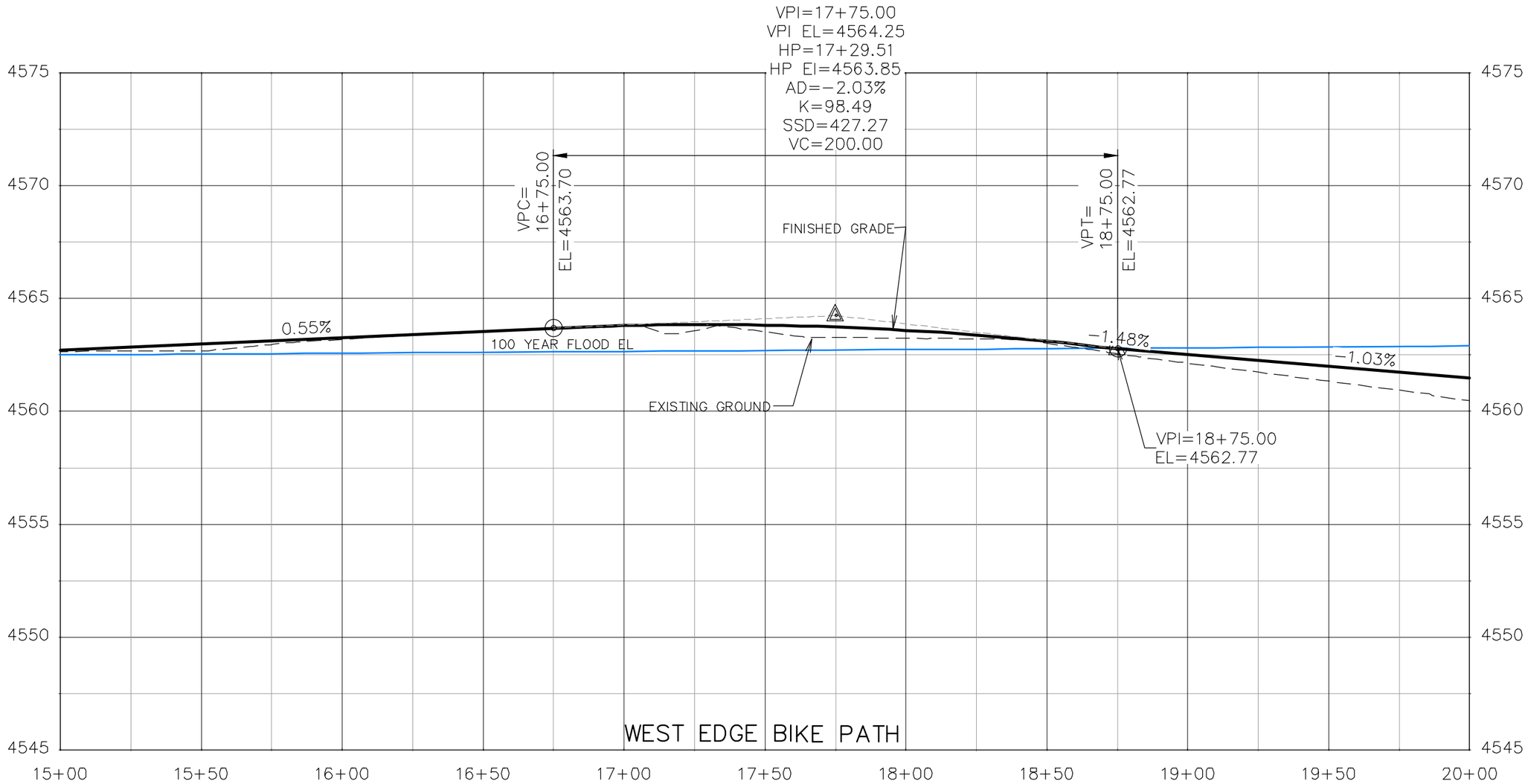

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (18)
June 19, 2020

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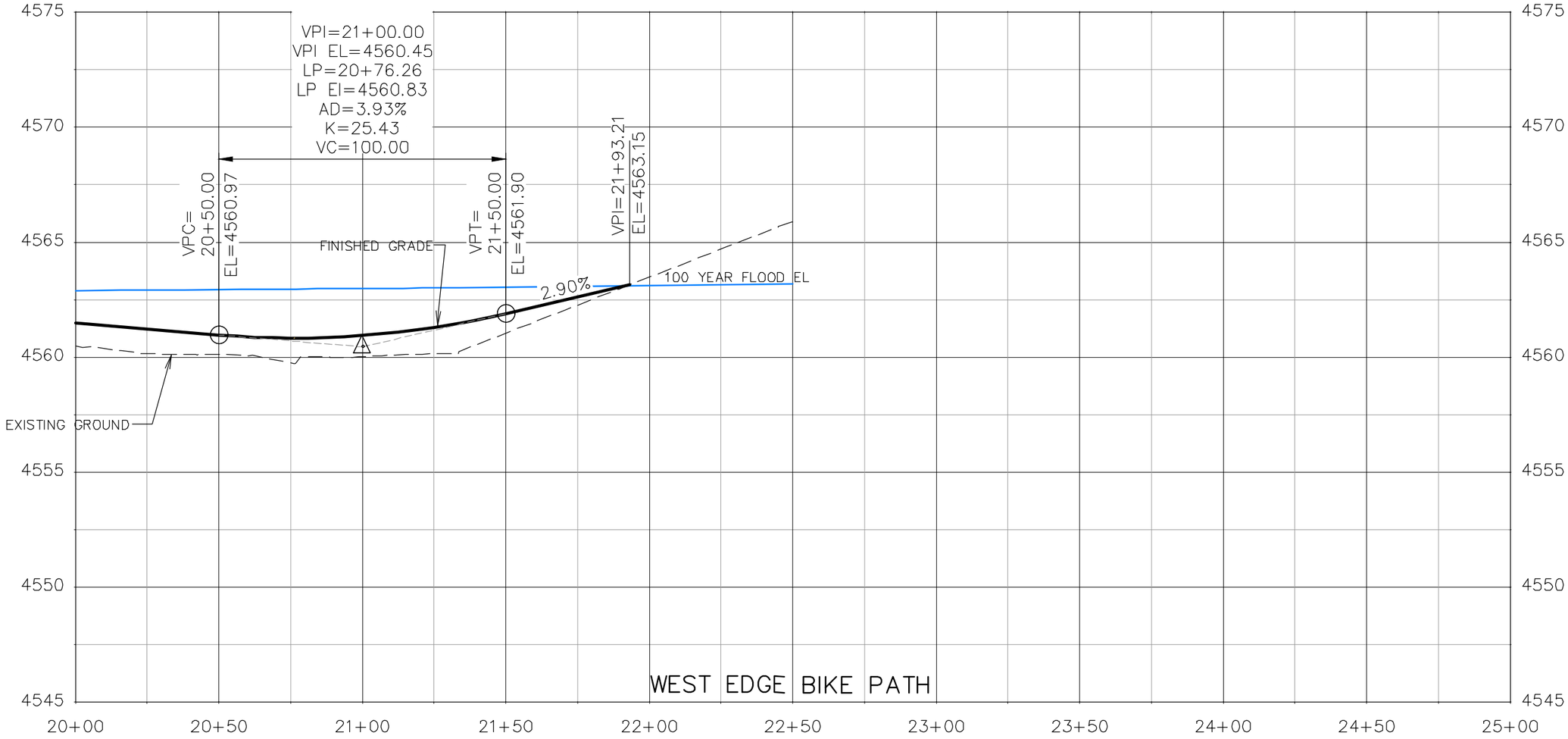

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROADWAY PROFILE – (19)
June 19, 2020

144

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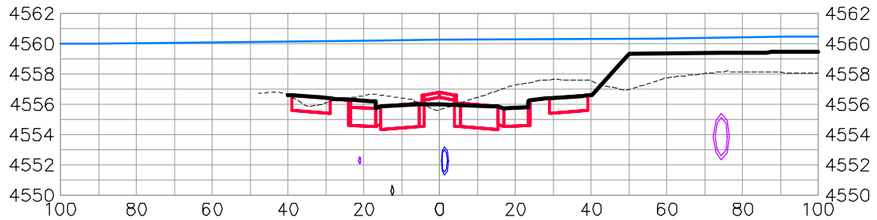

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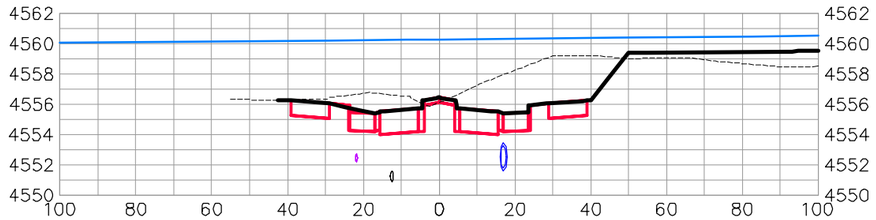

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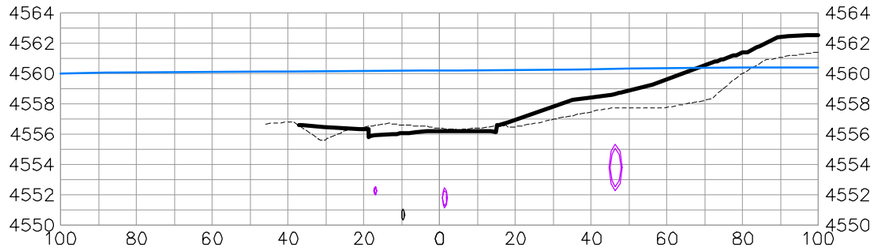

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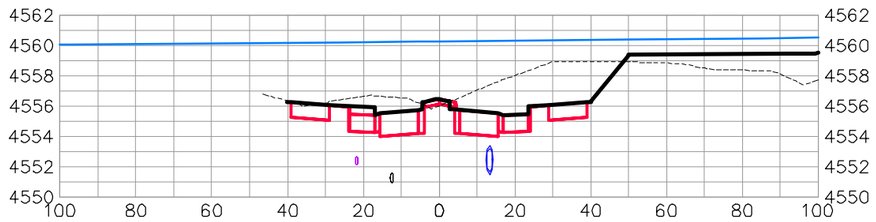

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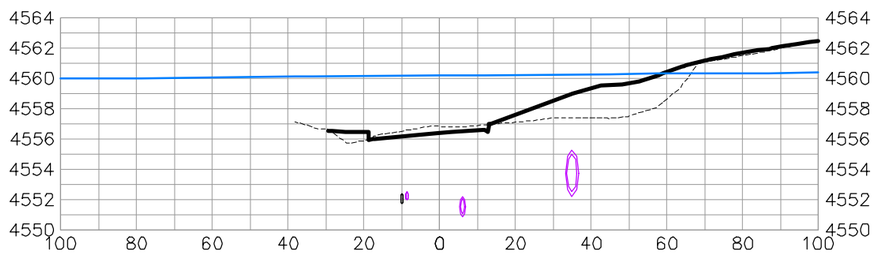

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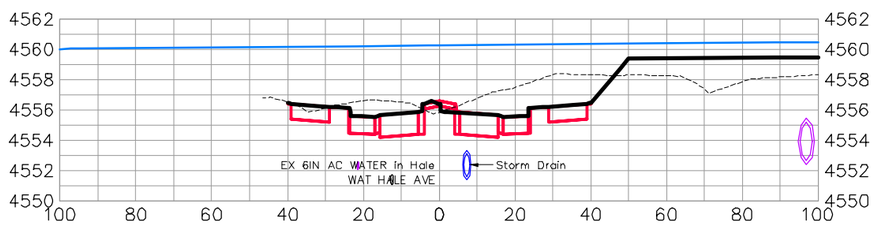

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (1)
June 19, 2020

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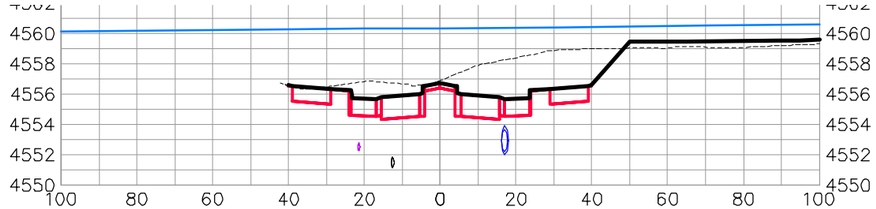

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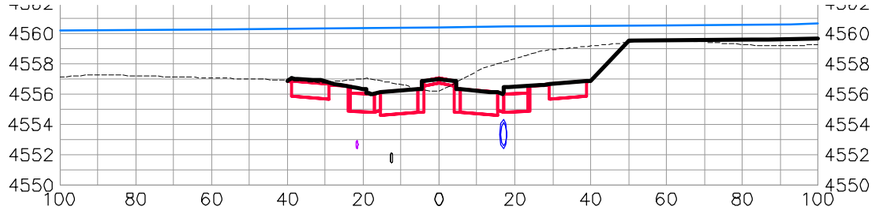

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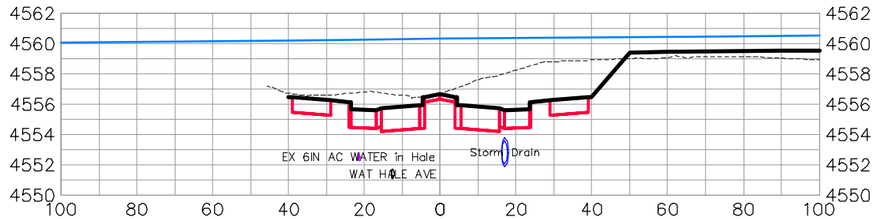

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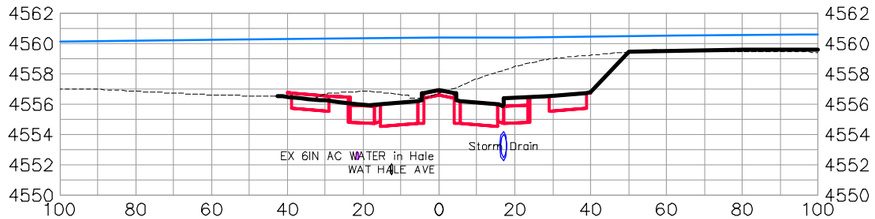

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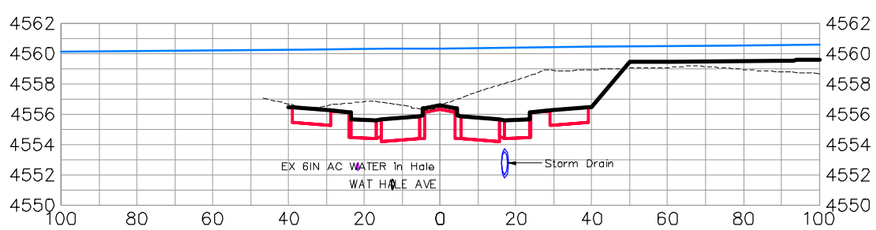

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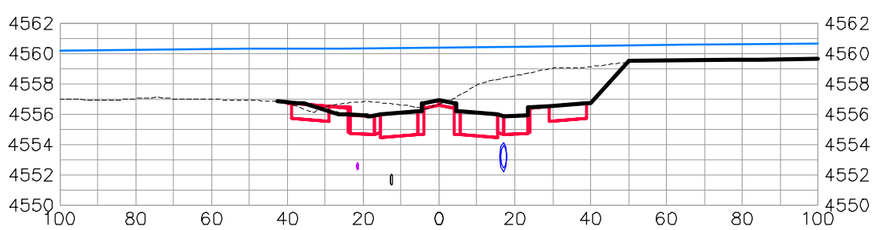

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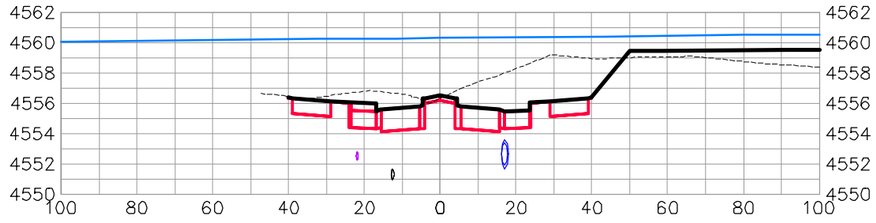

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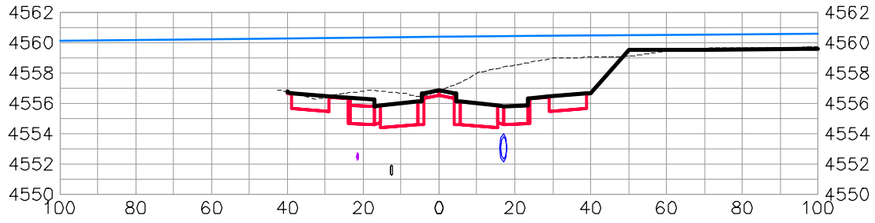

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HALE AVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (2)
June 19, 2020

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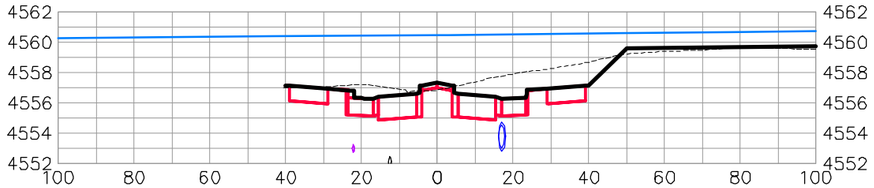

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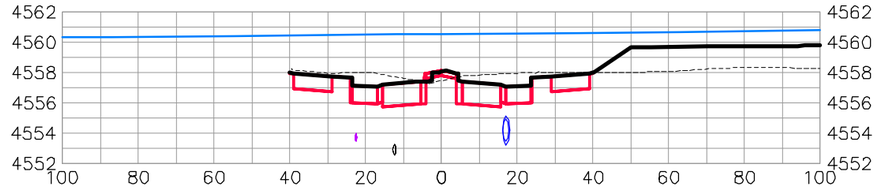

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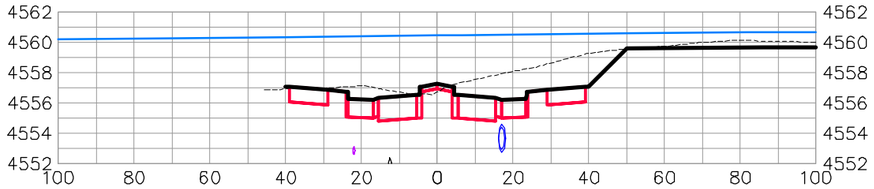

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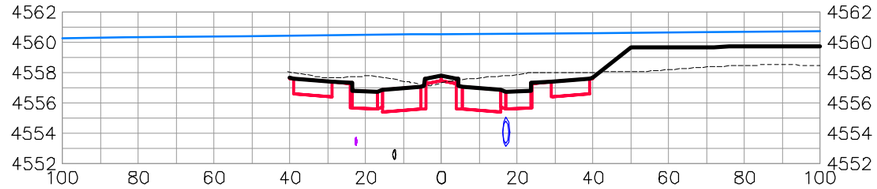

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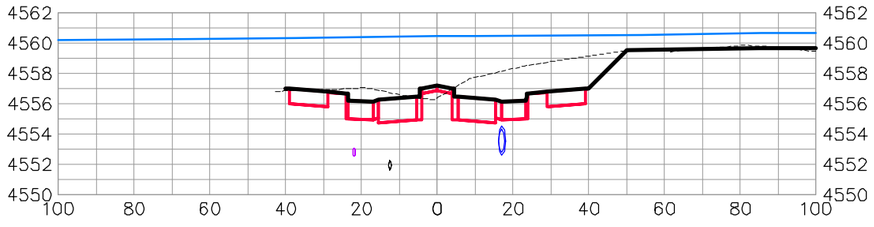

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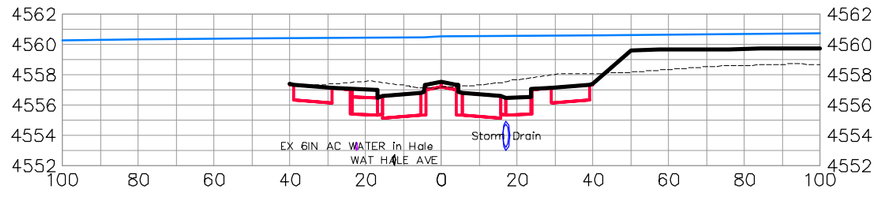

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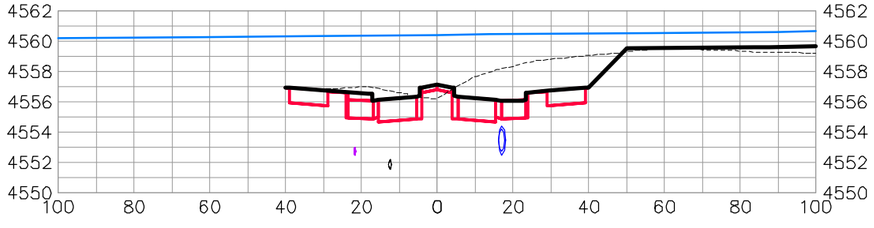

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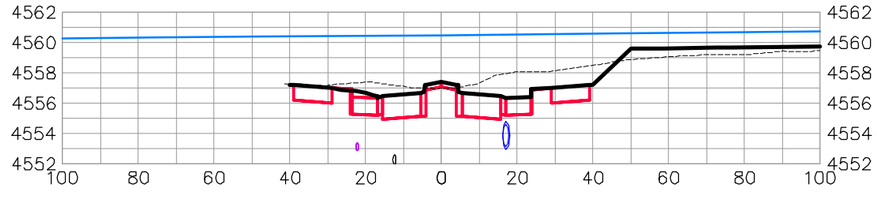

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HALE AVE

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (3)
June 19, 2020

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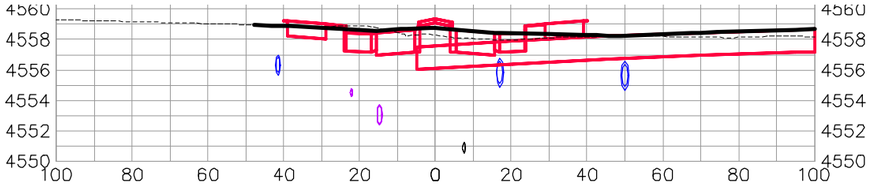

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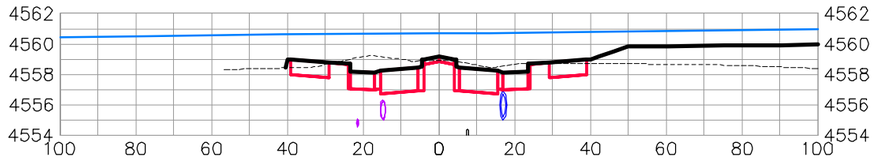

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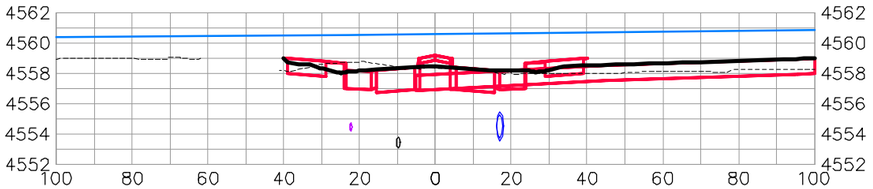

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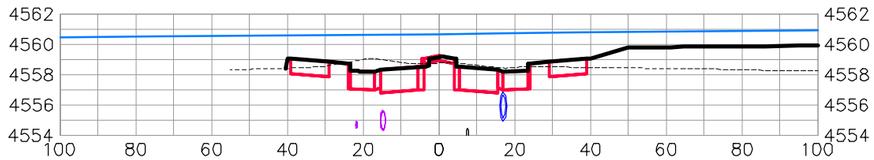

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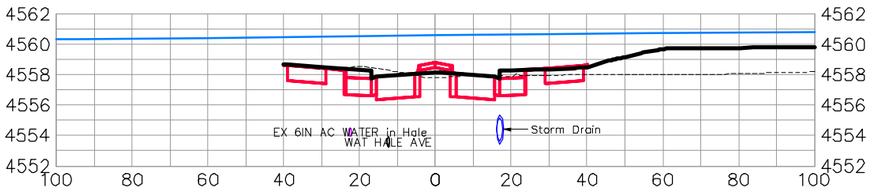

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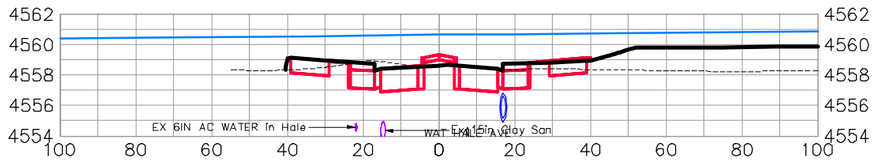

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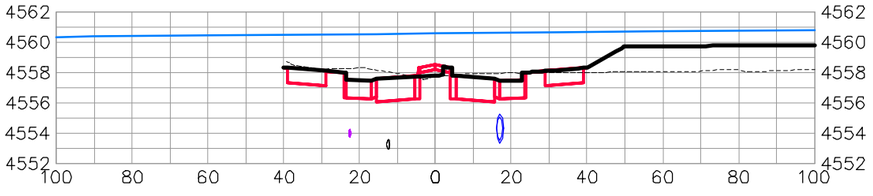

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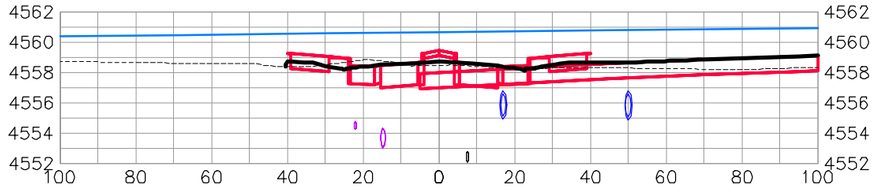

6+75.00

HALE AVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (4)
June 19, 2020

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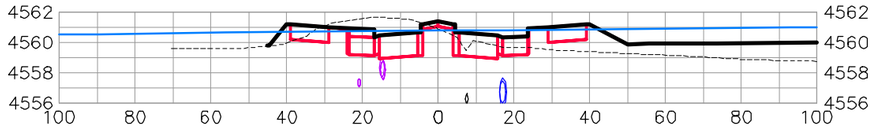

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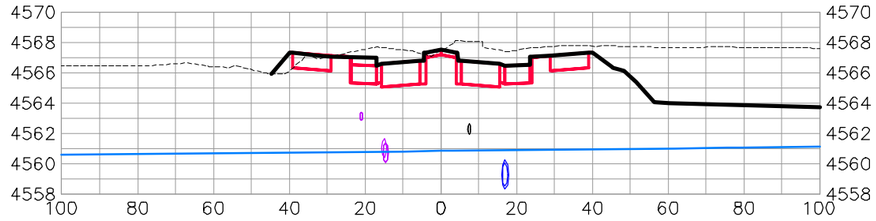

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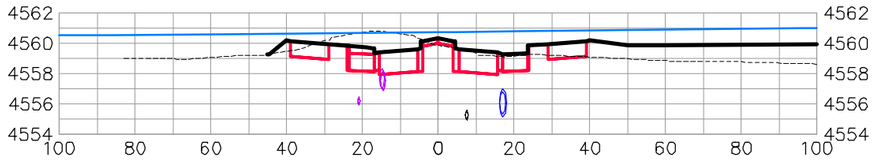

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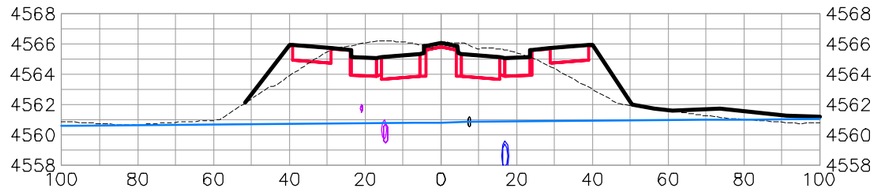

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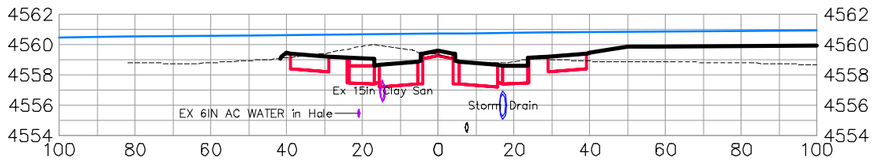

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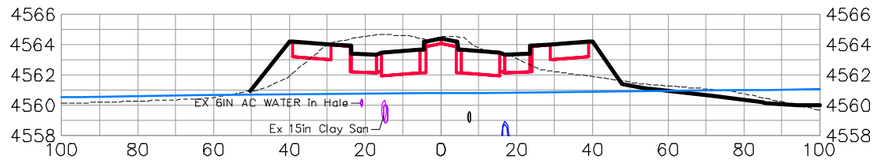

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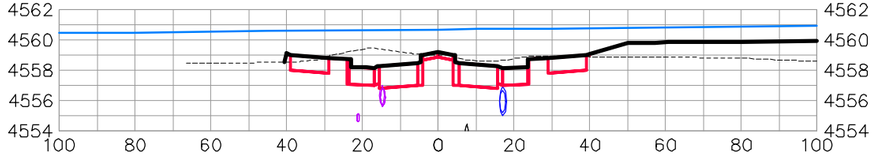

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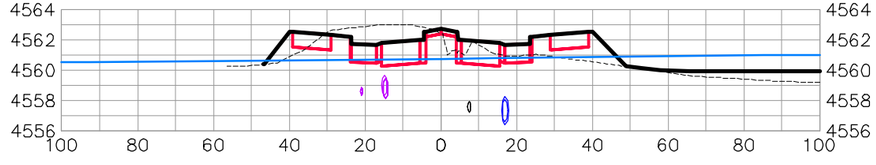

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HALE AVE

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (5)
June 19, 2020

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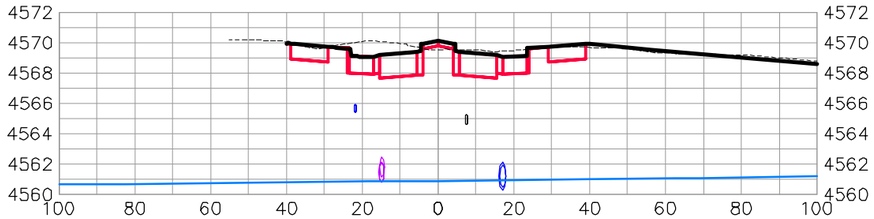

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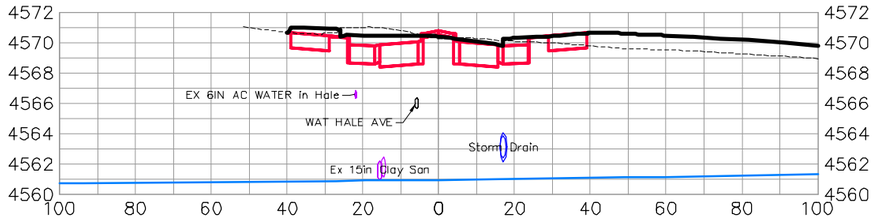

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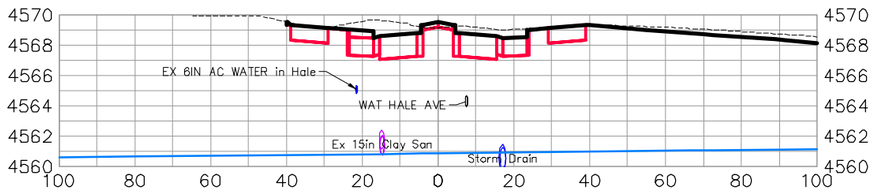

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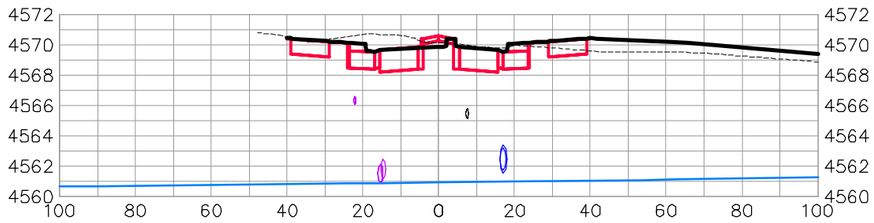

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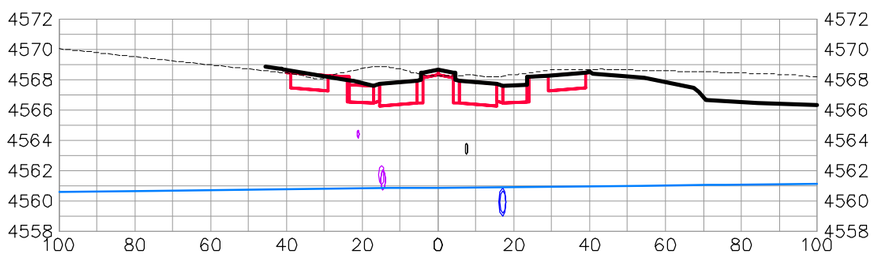

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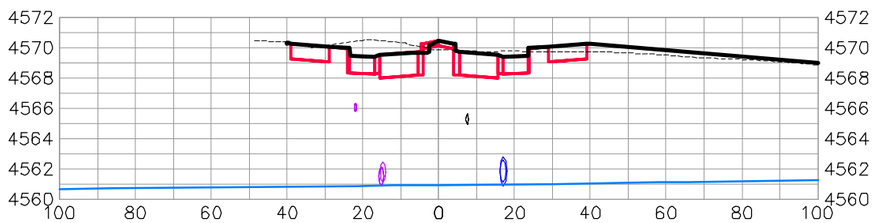

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HALE AVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (6)
June 19, 2020

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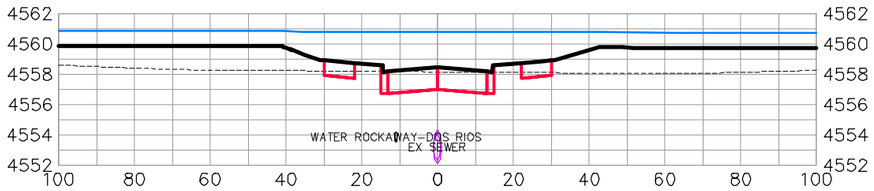

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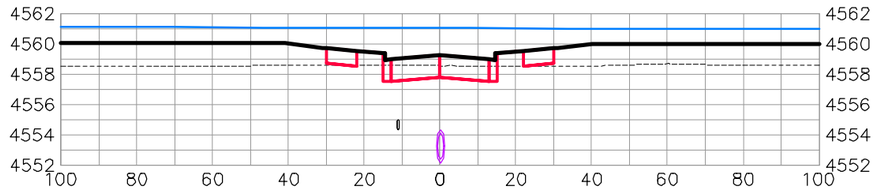

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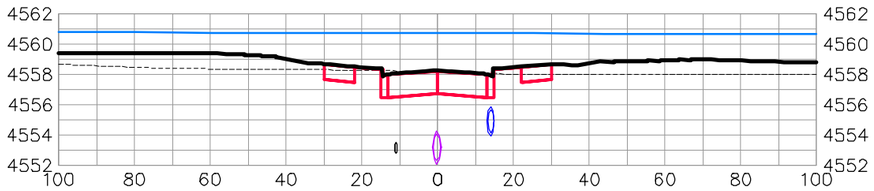

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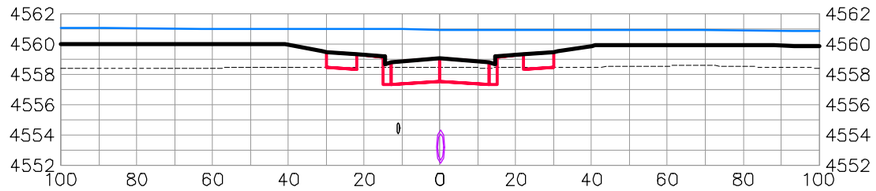

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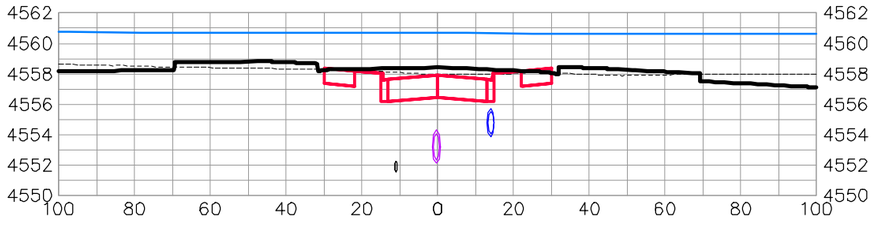

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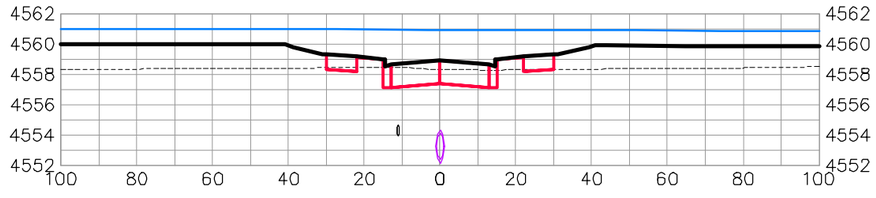

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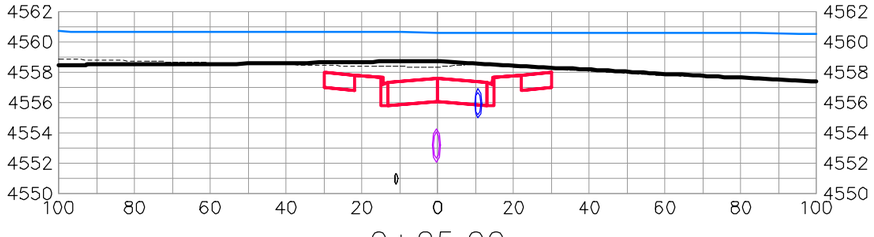

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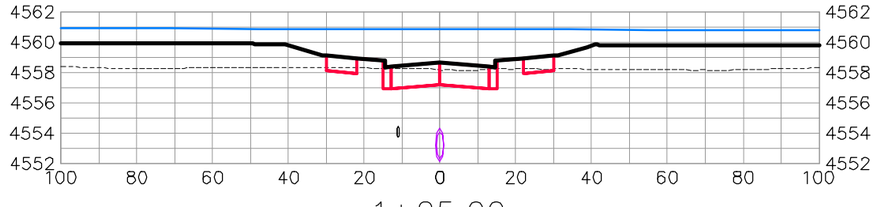

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ROCKAWAY AVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (7)
June 19, 2020

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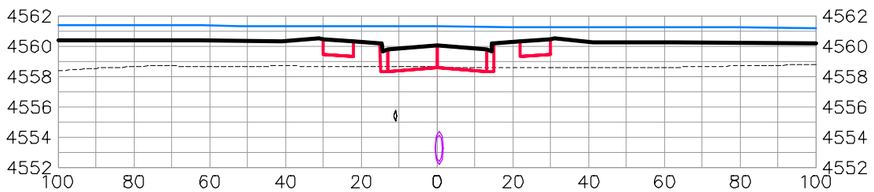

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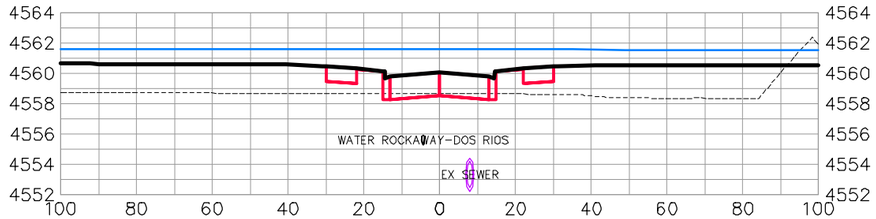

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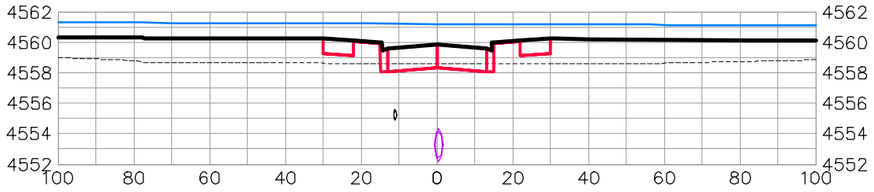

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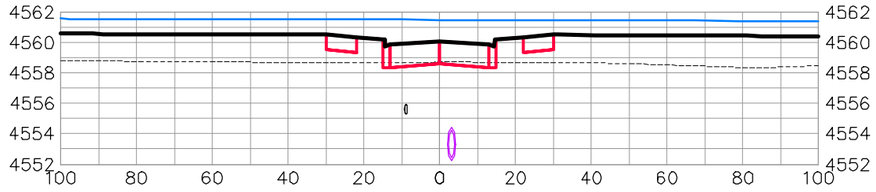

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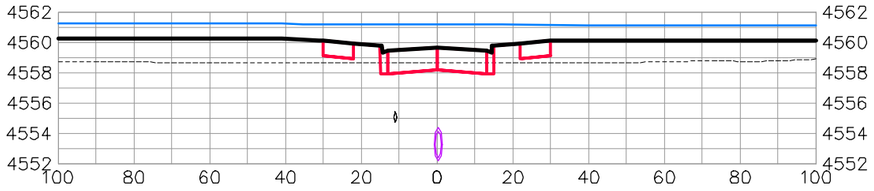

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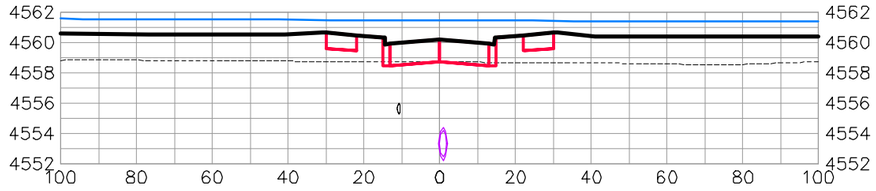

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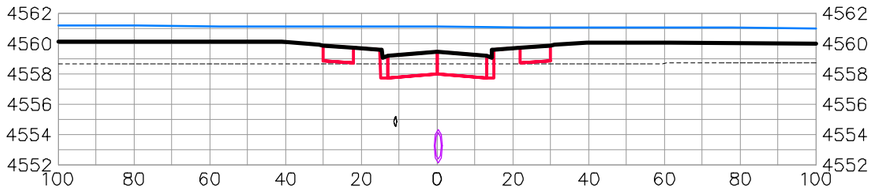

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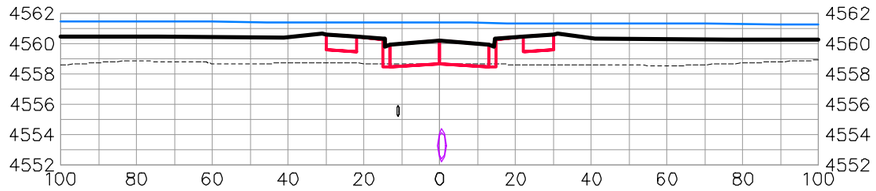

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ROCKAWAY AVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (8)
June 19, 2020

152

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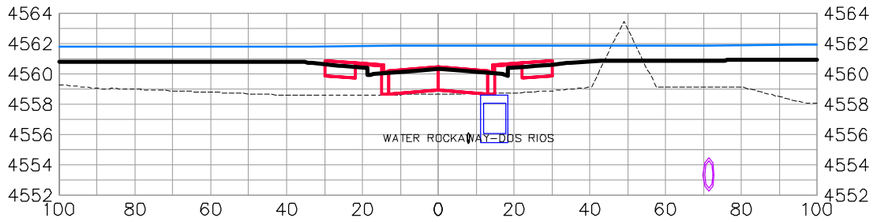

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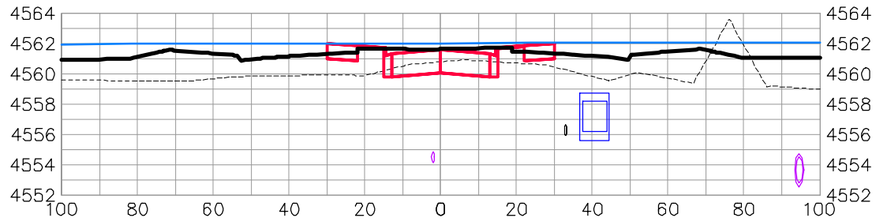

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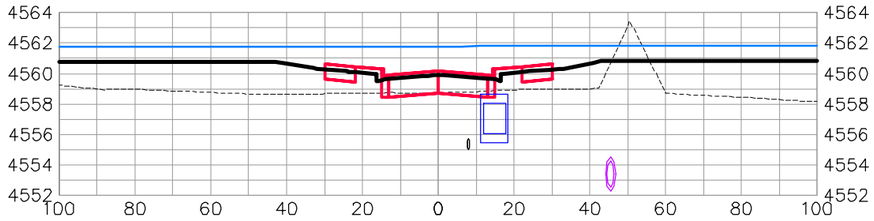

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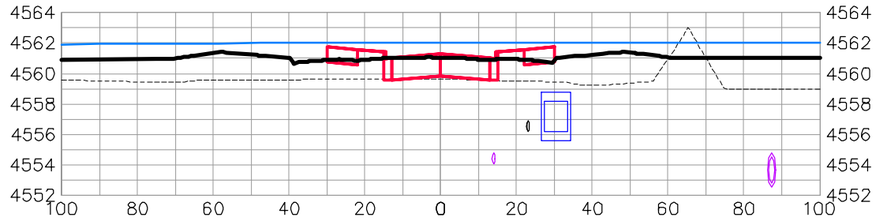

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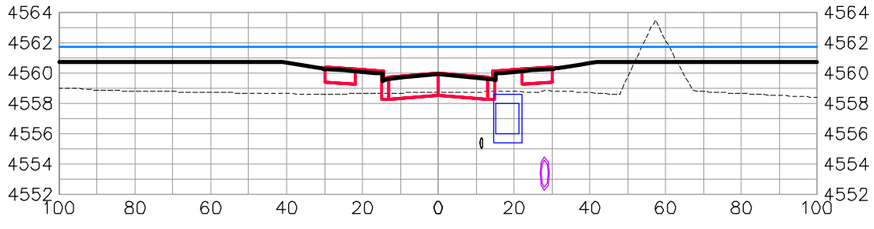

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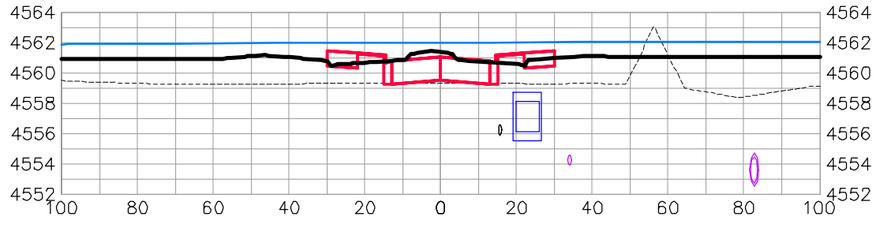

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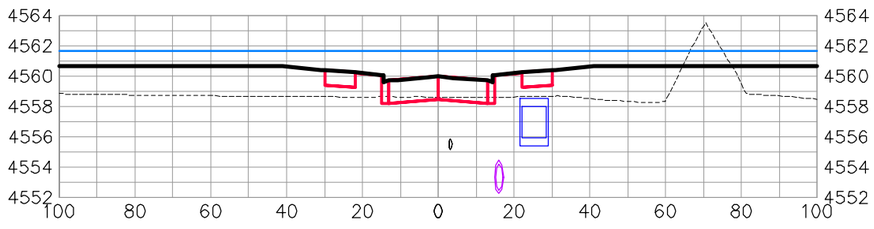

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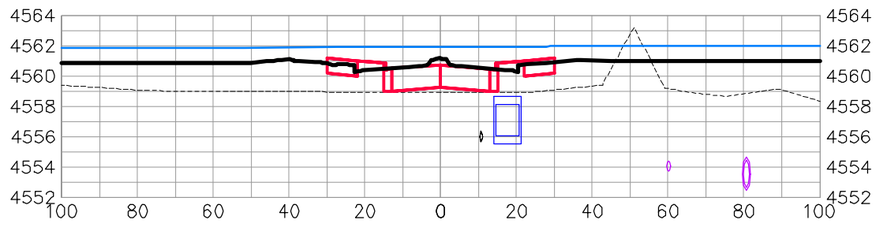

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ROCKAWAY AVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (9)
June 19, 2020

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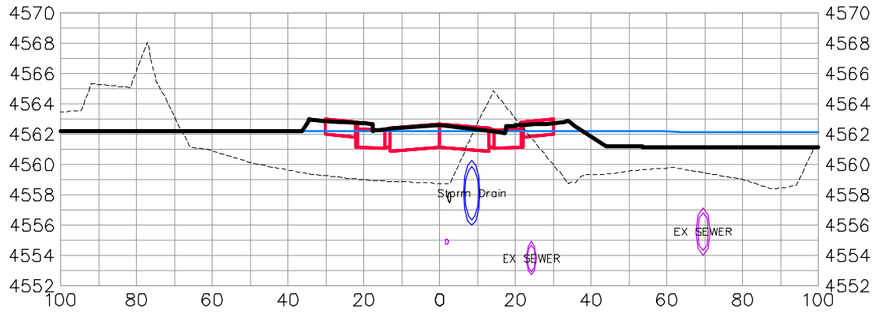

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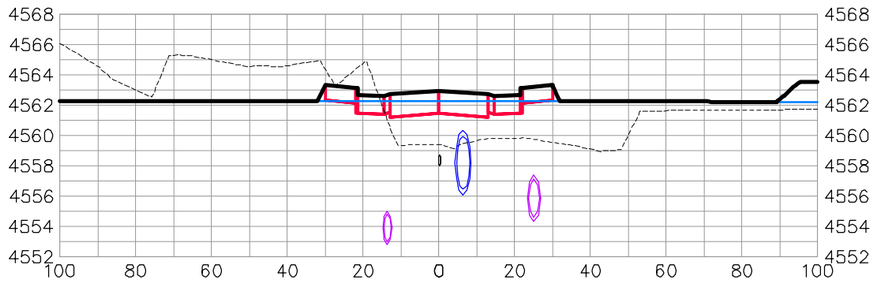

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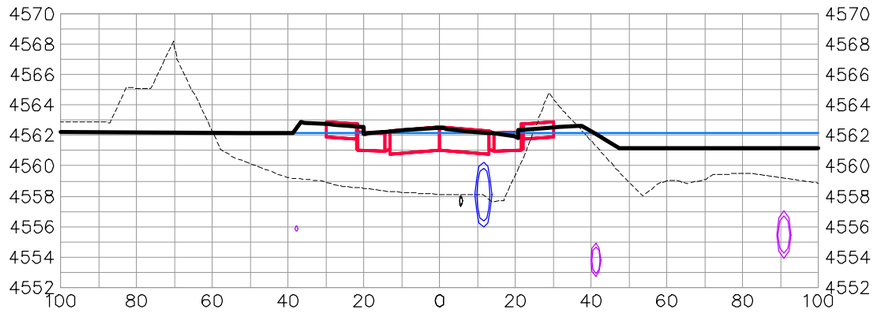

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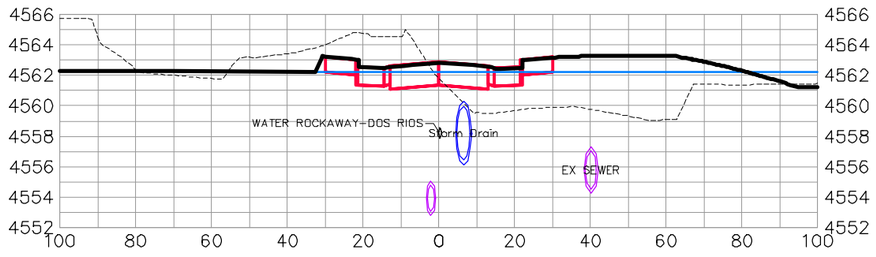

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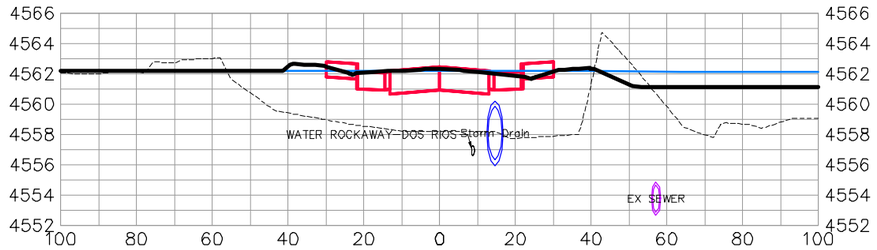

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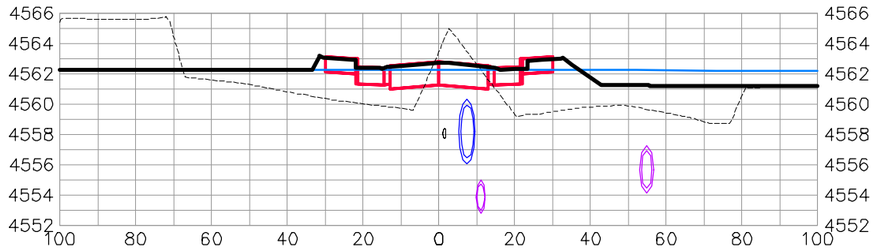

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (10)
June 19, 2020

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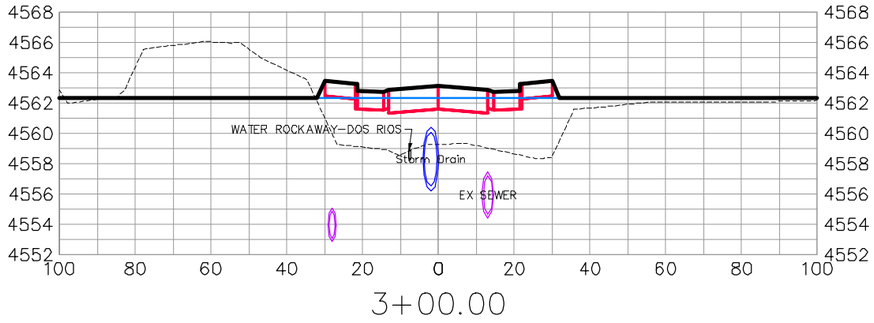

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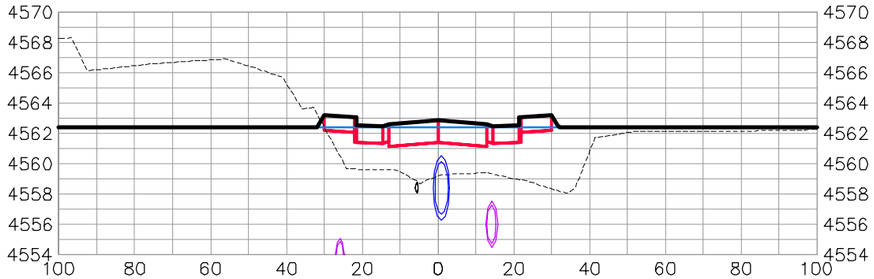

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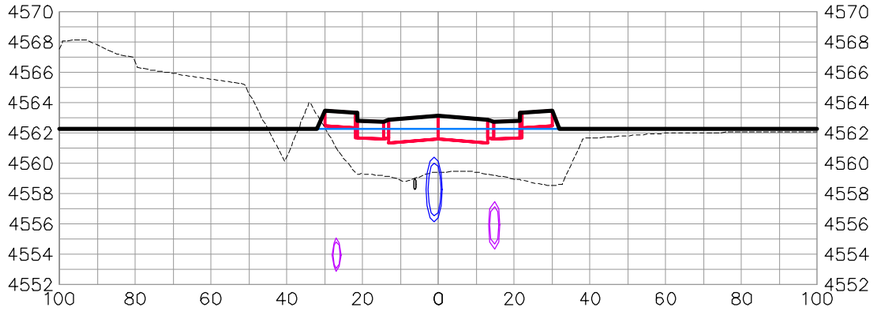

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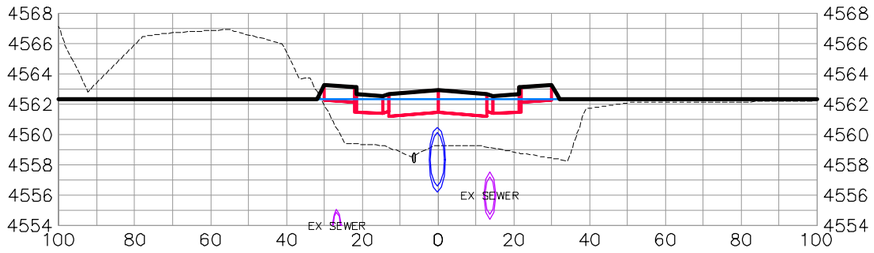

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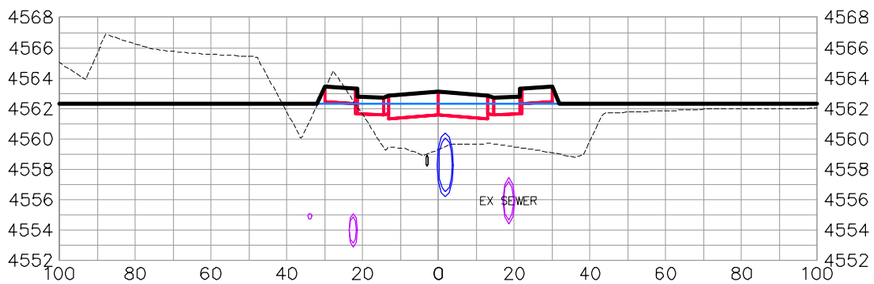

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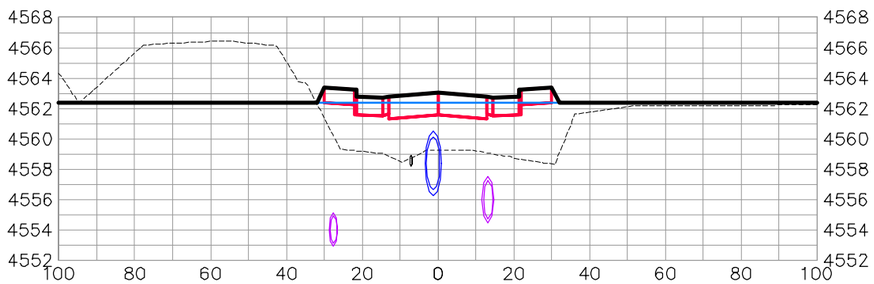

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (11)
June 19, 2020

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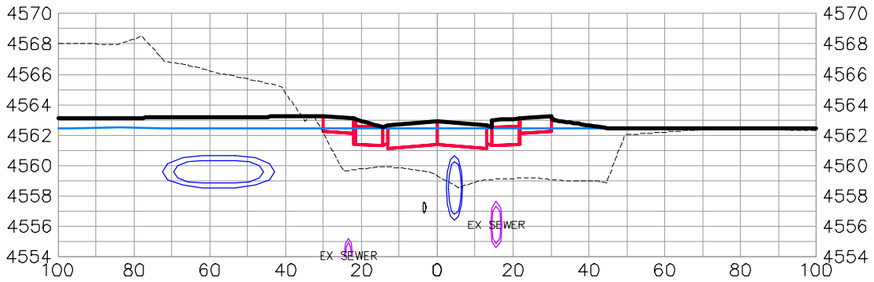

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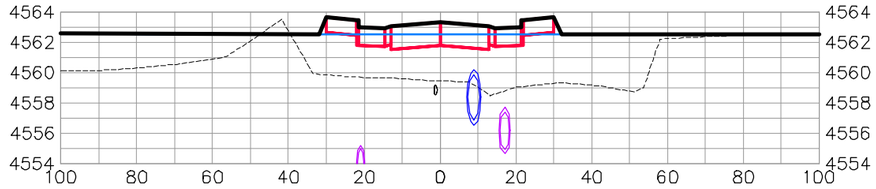

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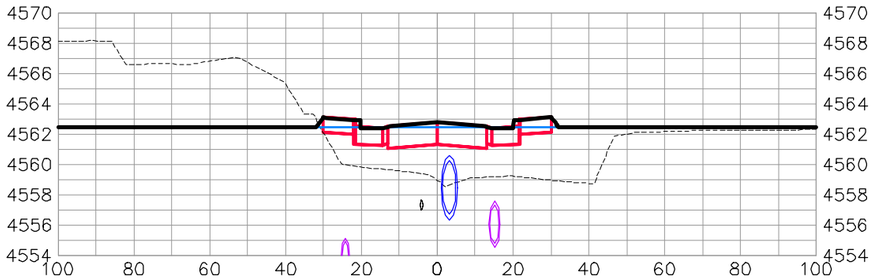

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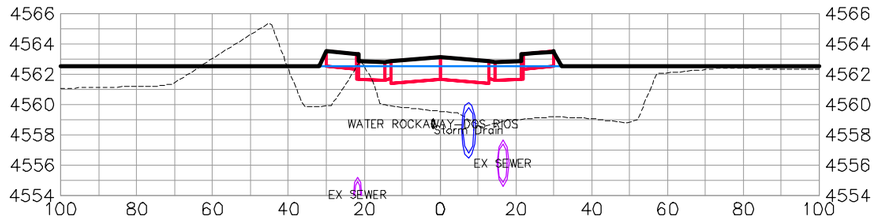

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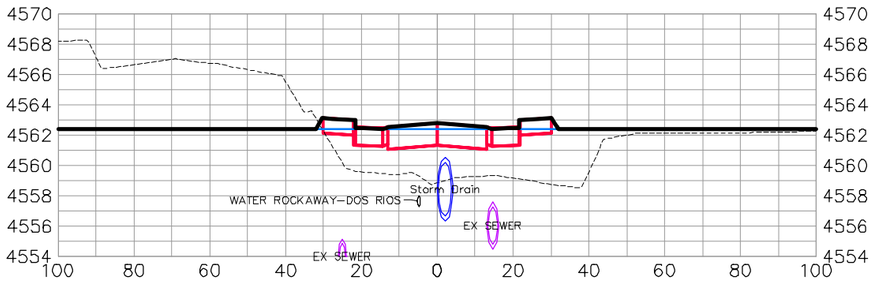

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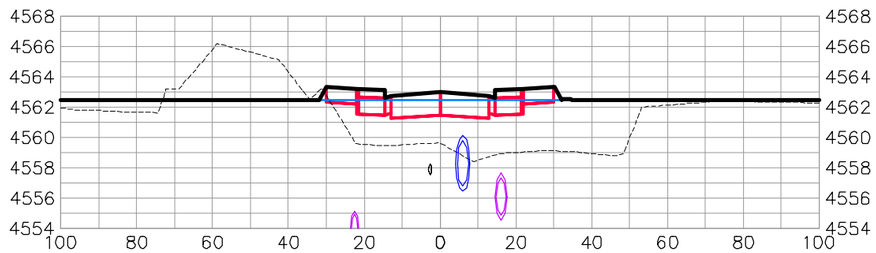

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (12)
June 19, 2020

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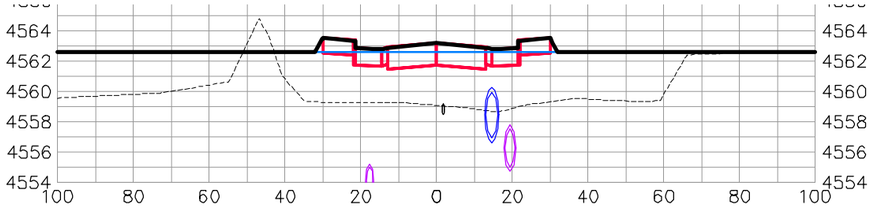

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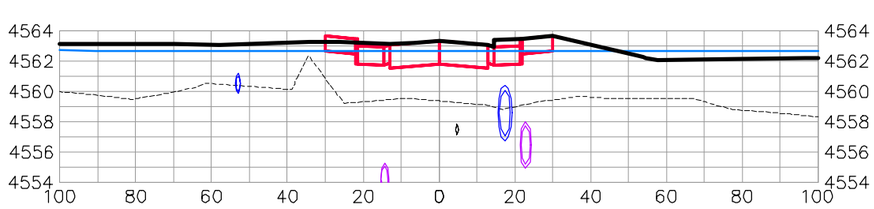

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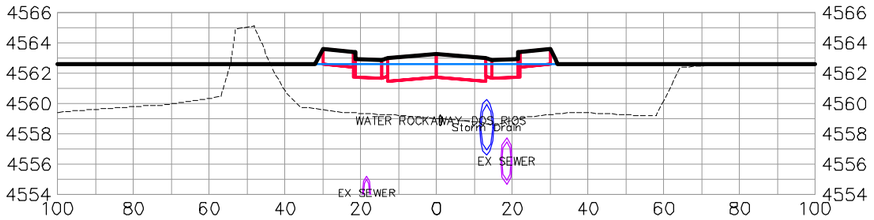

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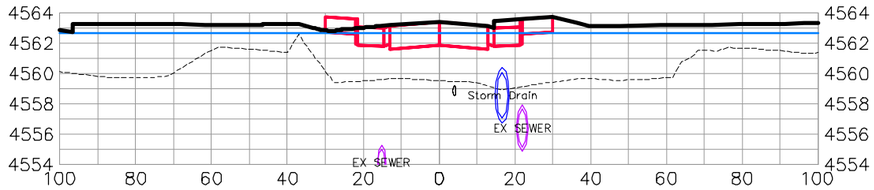

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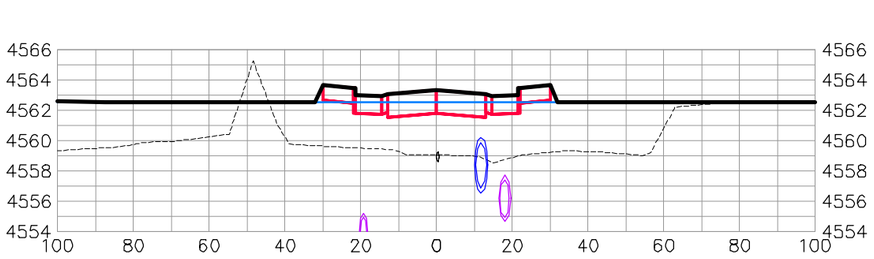

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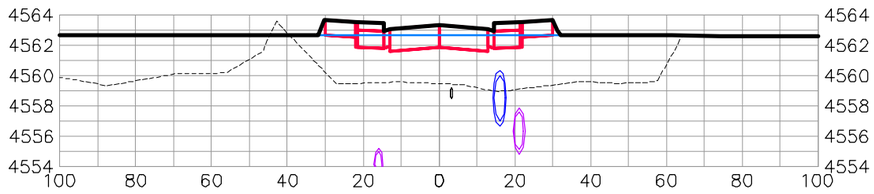

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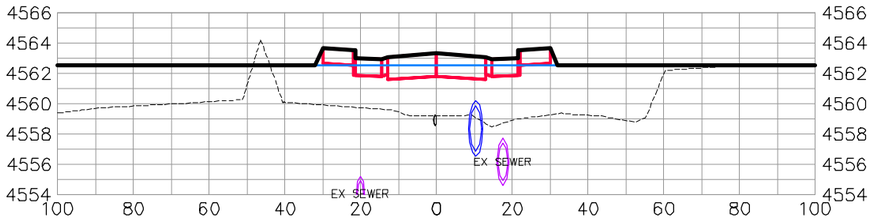

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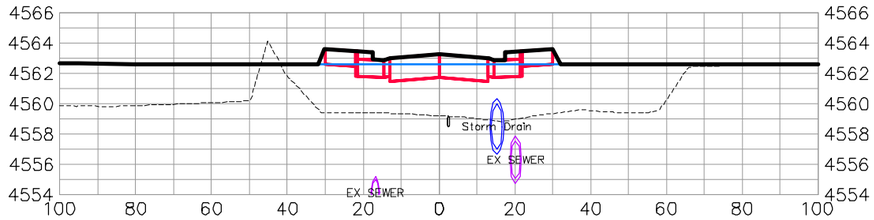

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (13)
June 19, 2020

157

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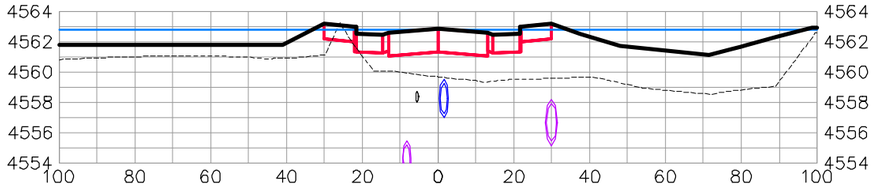

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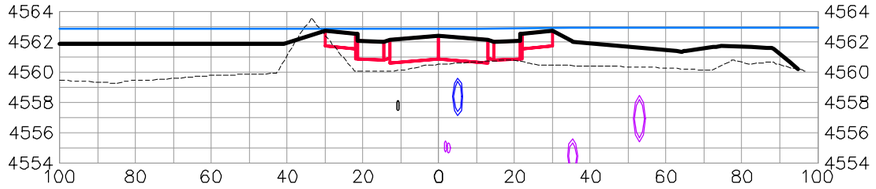

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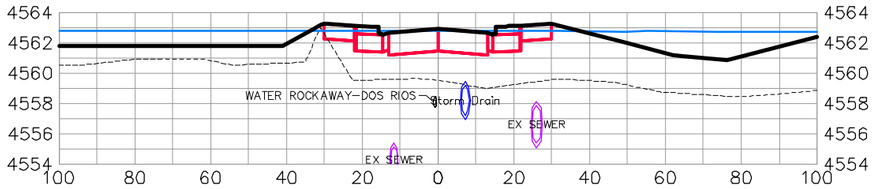

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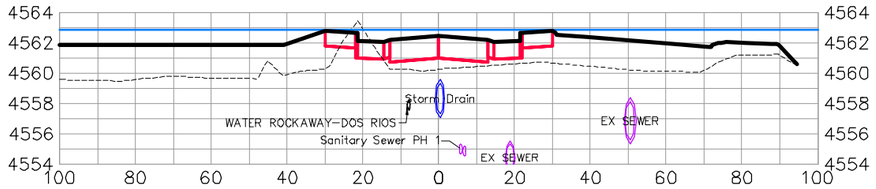

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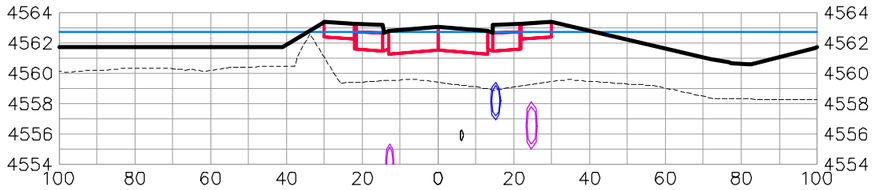

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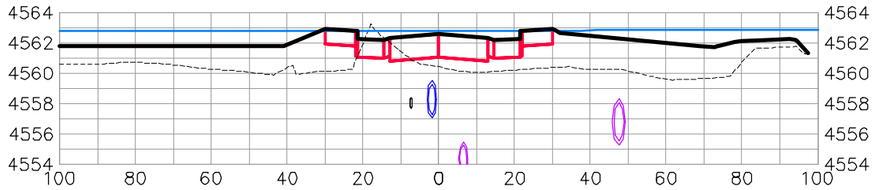

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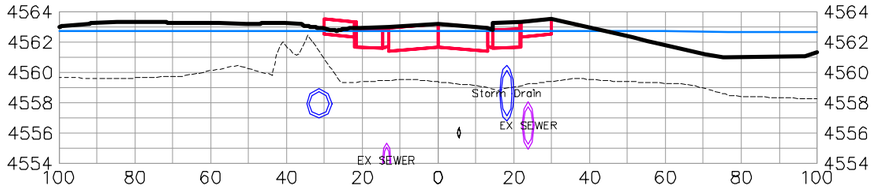

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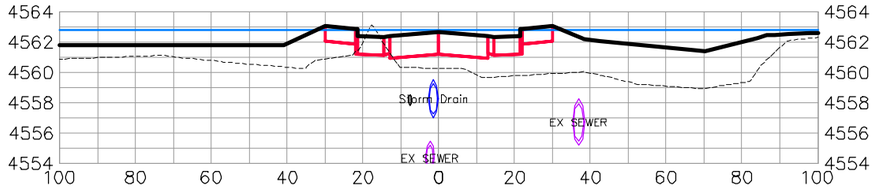

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (14)
June 19, 2020

158

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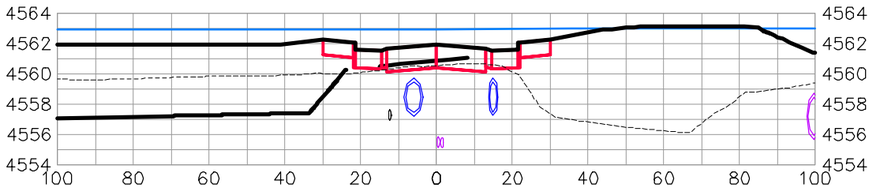

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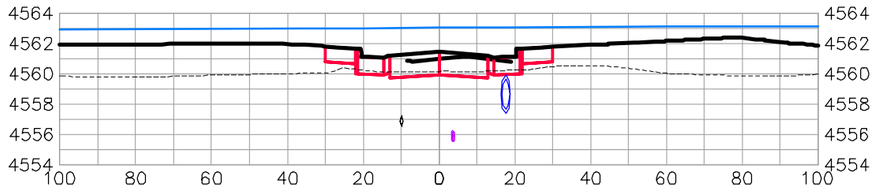

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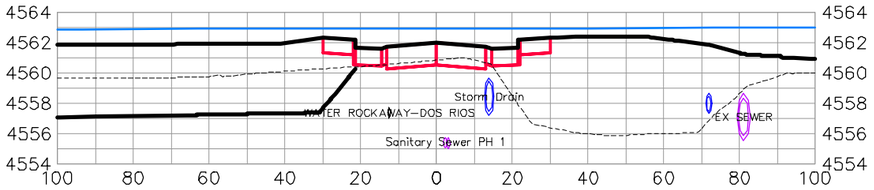

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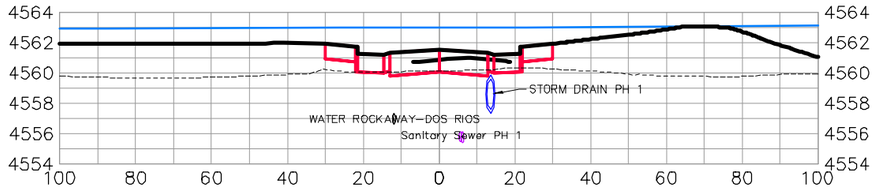

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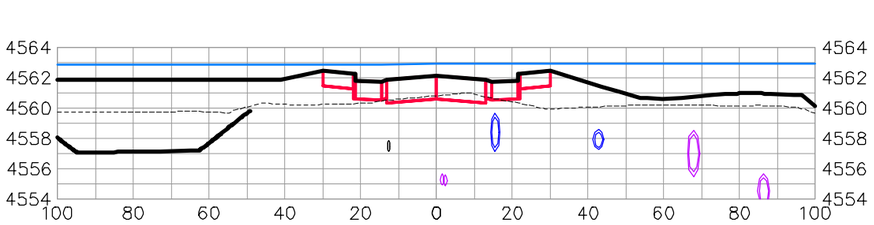

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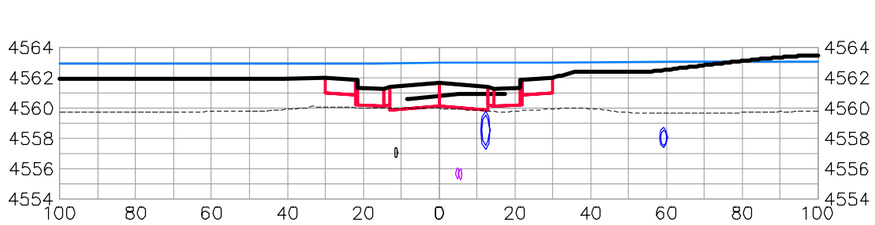

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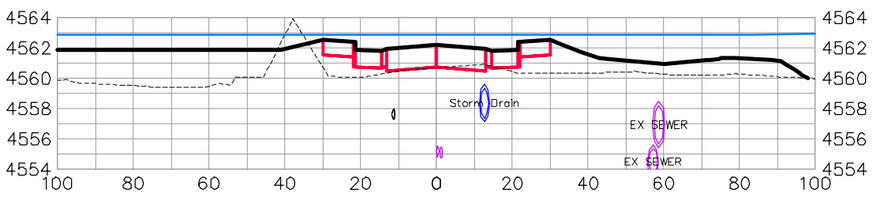

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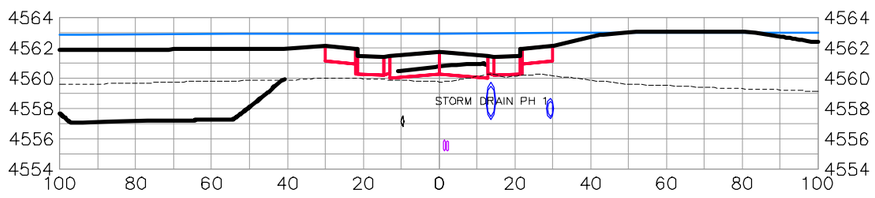

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (15)
June 19, 2020

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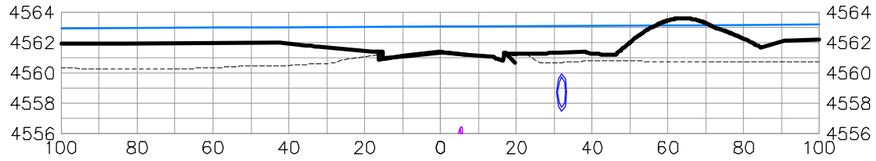

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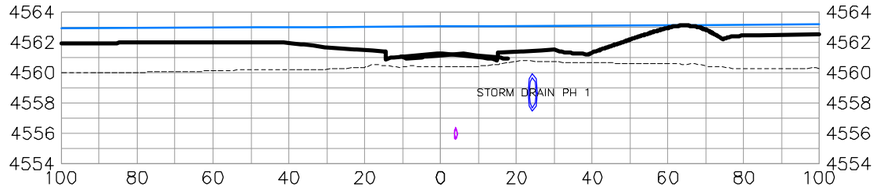

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (16)
June 19, 2020

160

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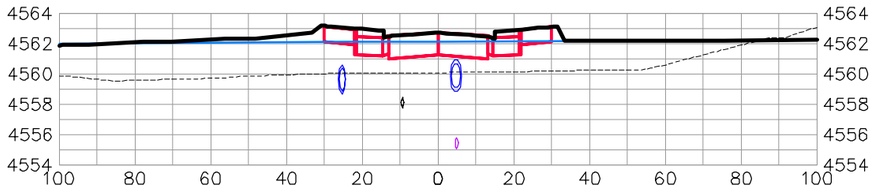

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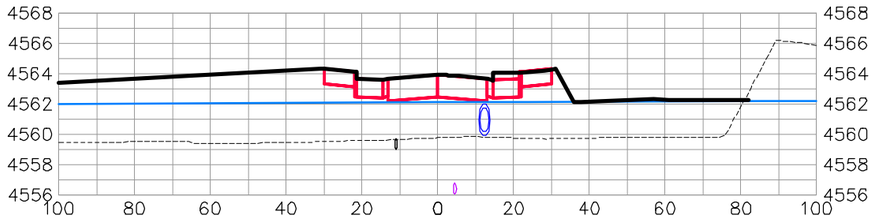

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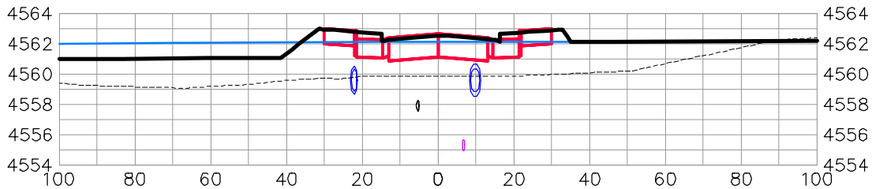

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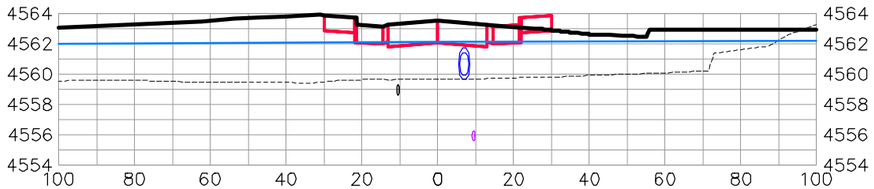

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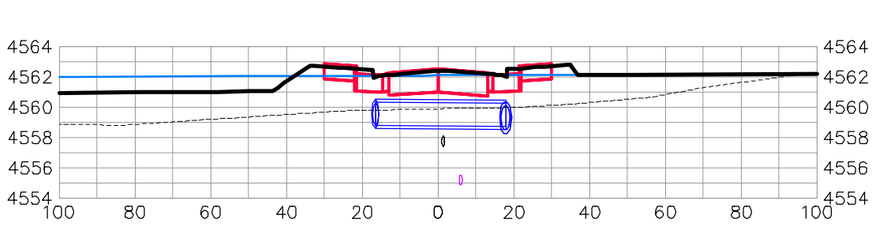

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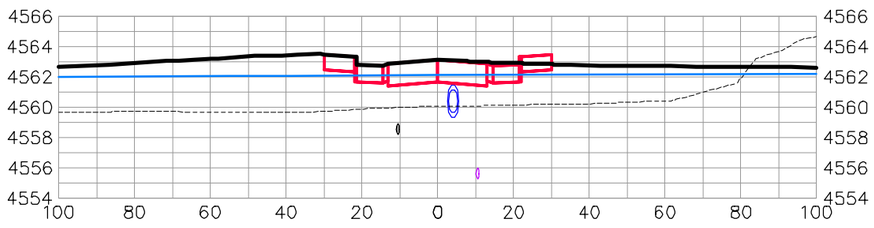

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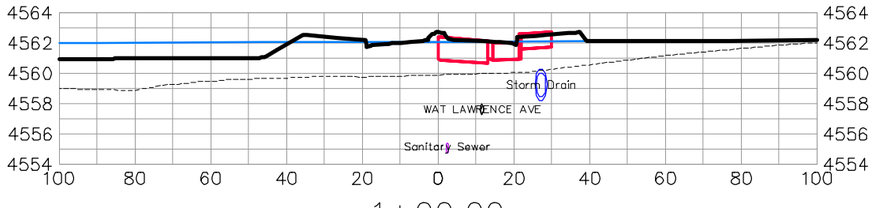

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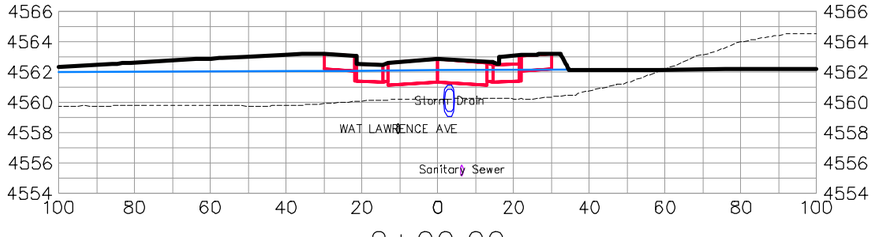

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LAWRENCE AVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (17)
June 19, 2020

161

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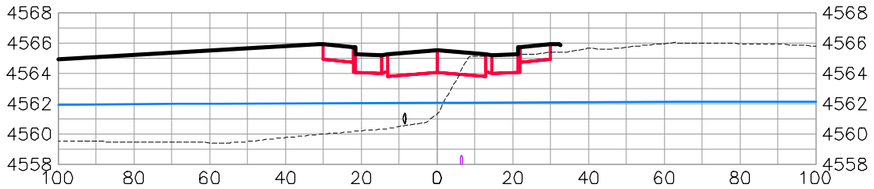

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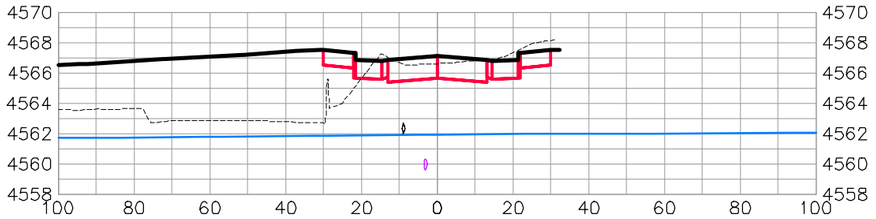

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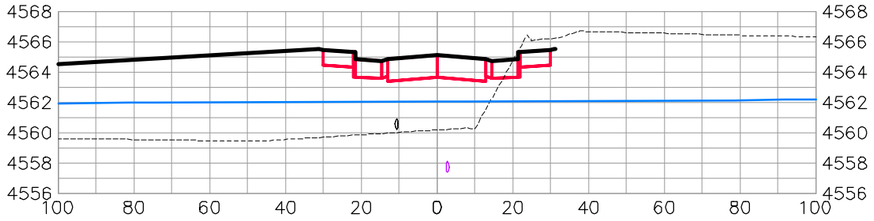

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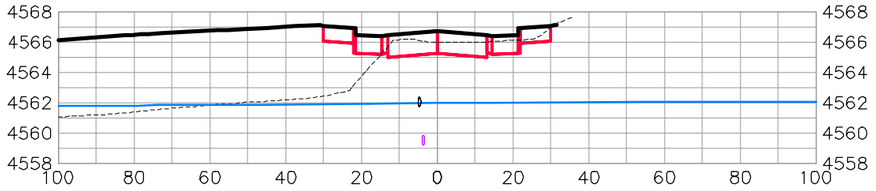

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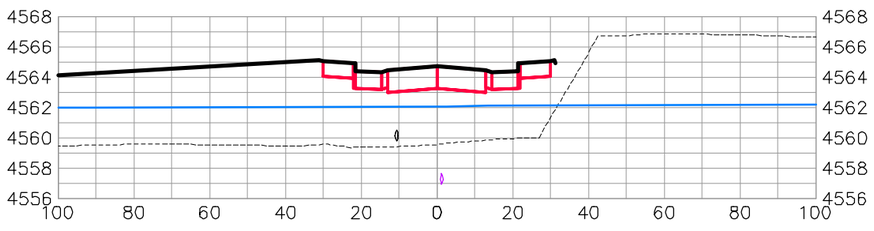

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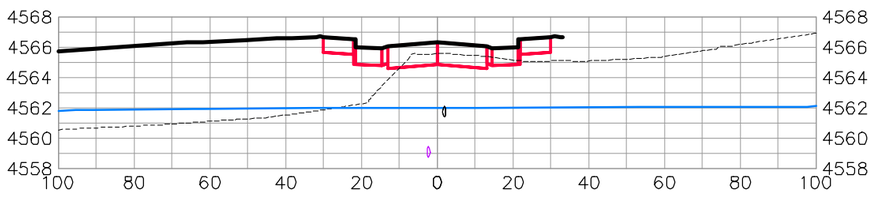

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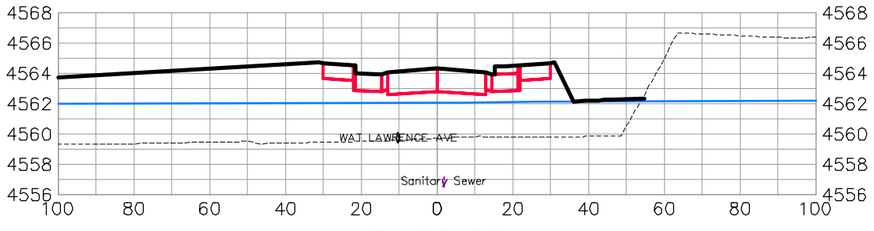

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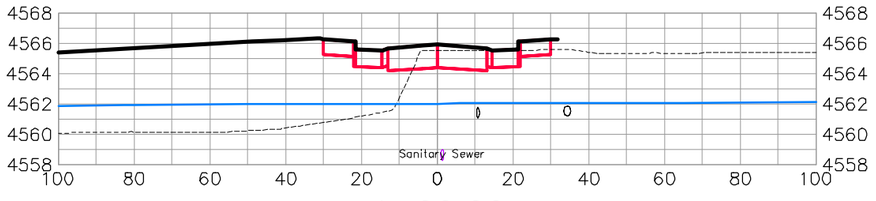

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LAWRENCE AVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (18)
June 19, 2020

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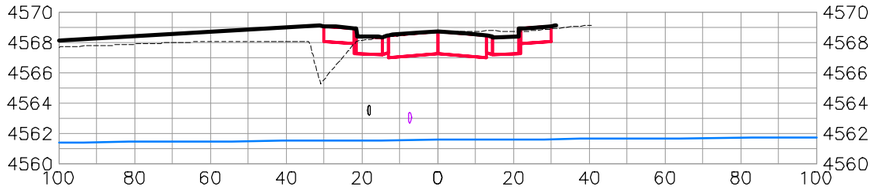

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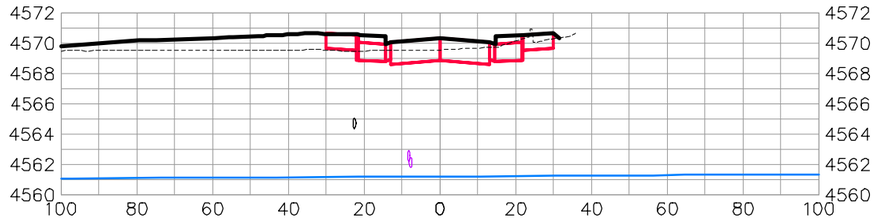

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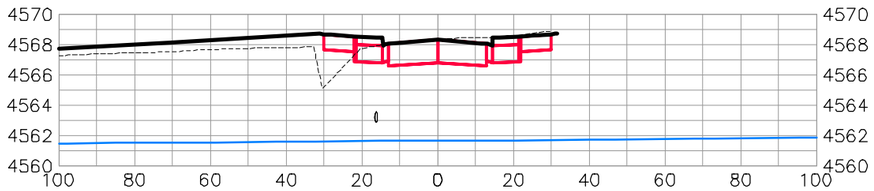

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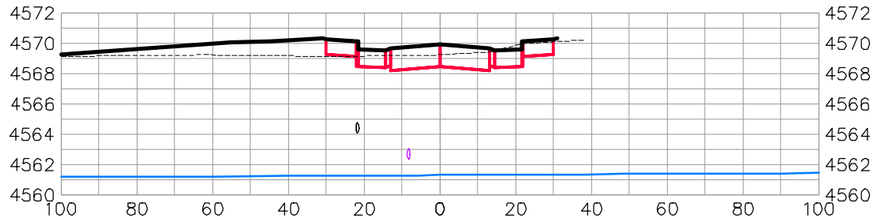

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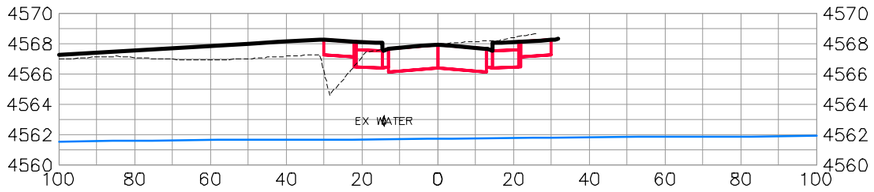

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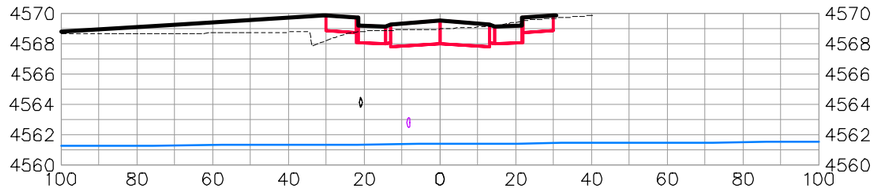

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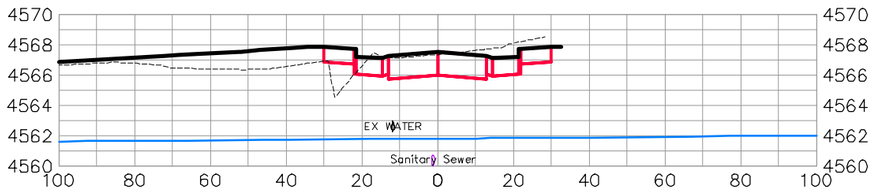

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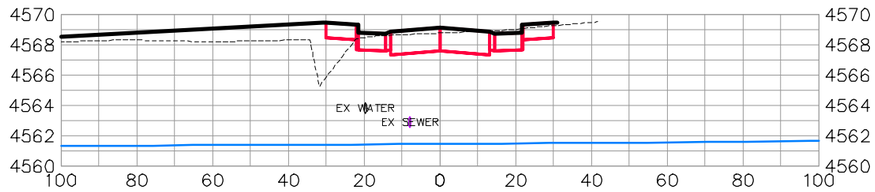

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LAWRENCE AVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (19)
June 19, 2020

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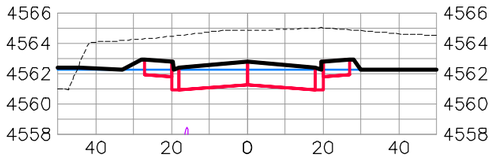

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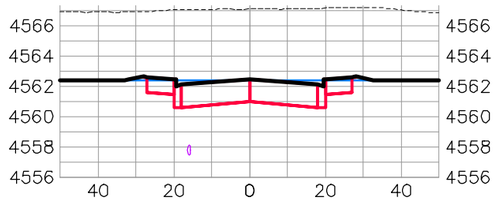

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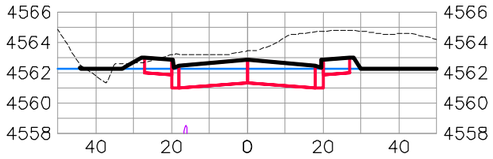

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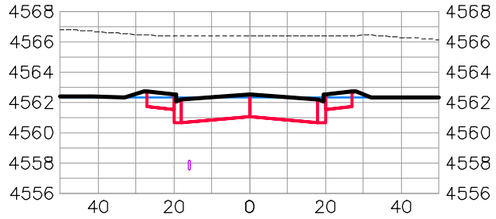

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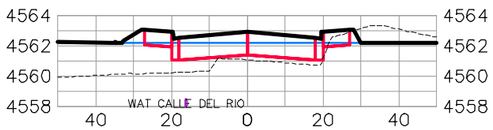

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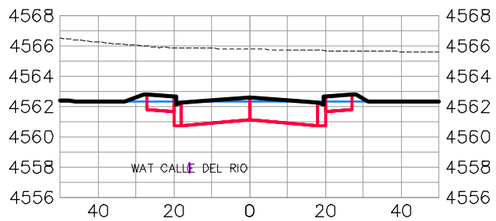

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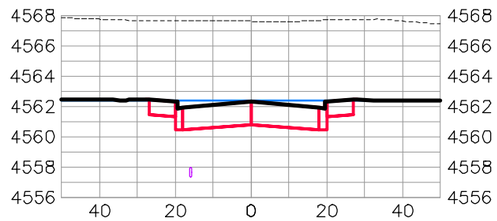

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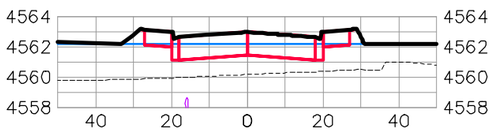

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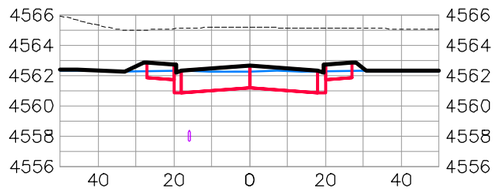

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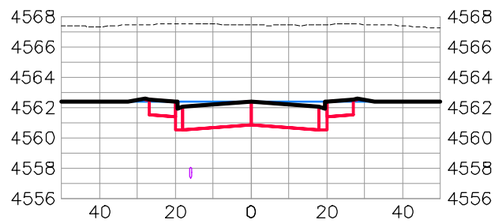

2+75.00

CALLE DEL RIO

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (20)
June 19, 2020

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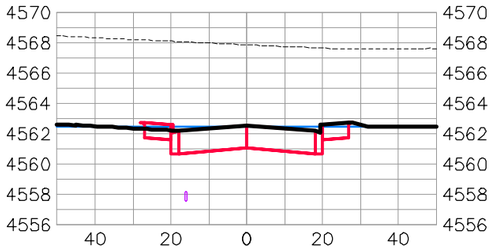

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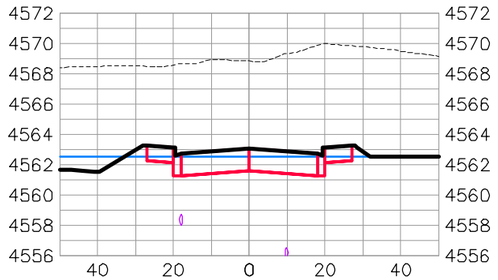

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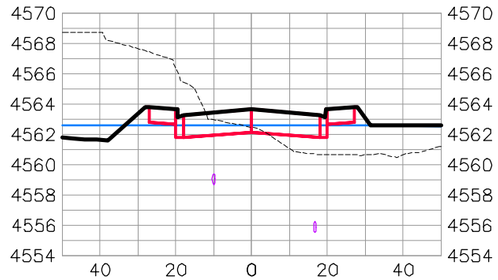

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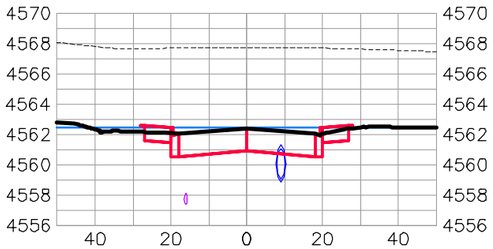

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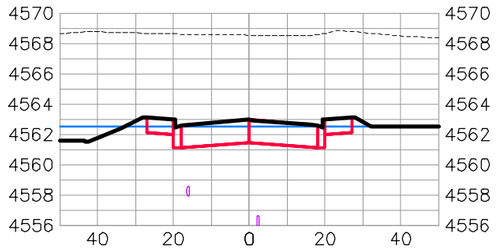

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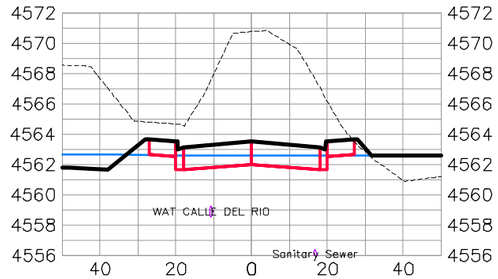

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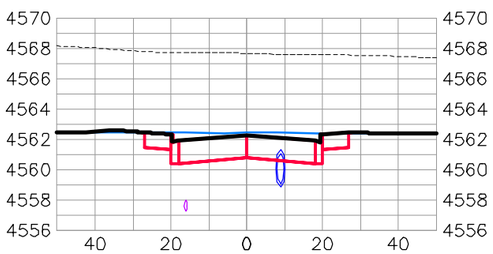

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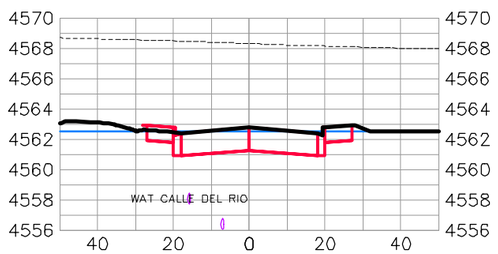

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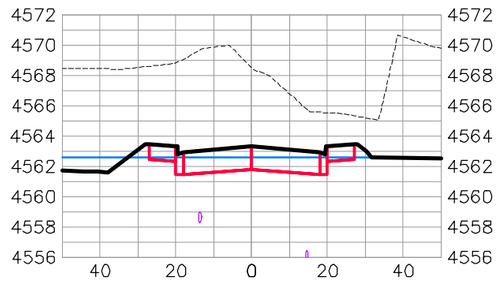

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CALLE DEL RIO

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (21)
June 19, 2020

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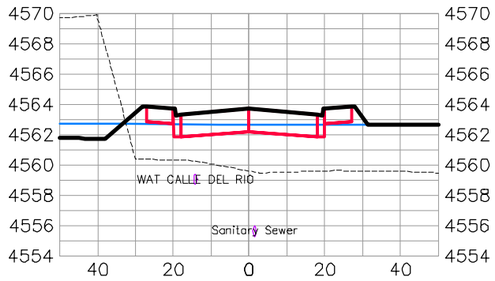

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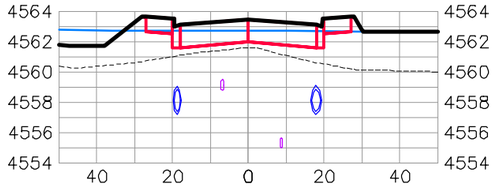

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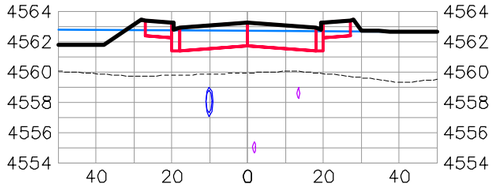

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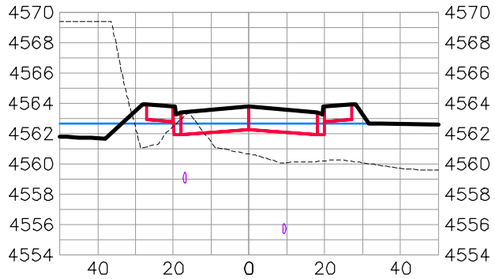

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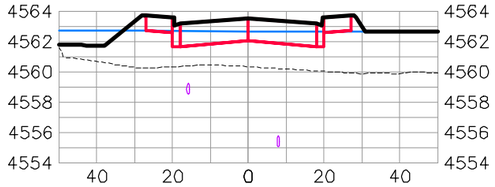

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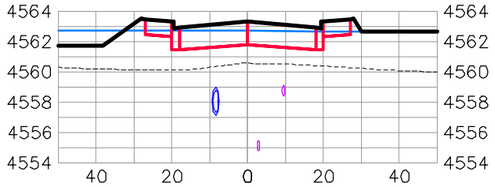

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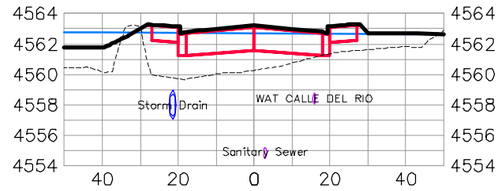

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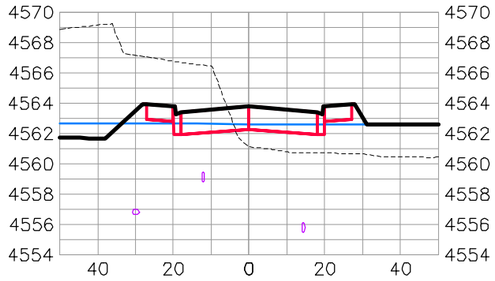

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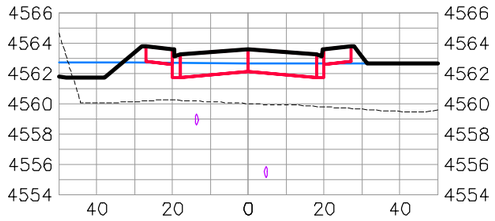

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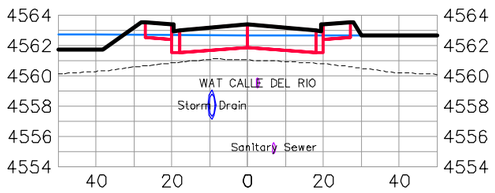

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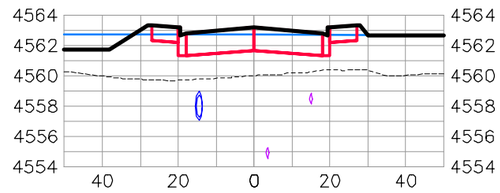

7+75.00

CALLE DEL RIO

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (22)
June 19, 2020

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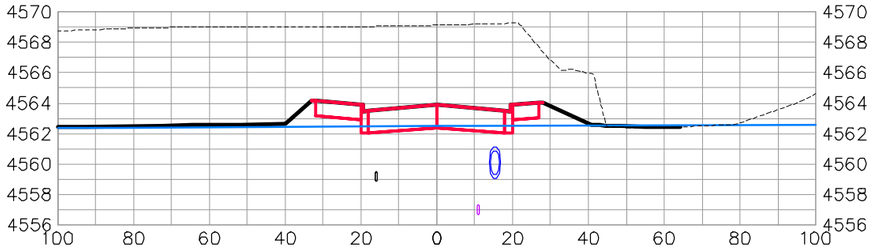

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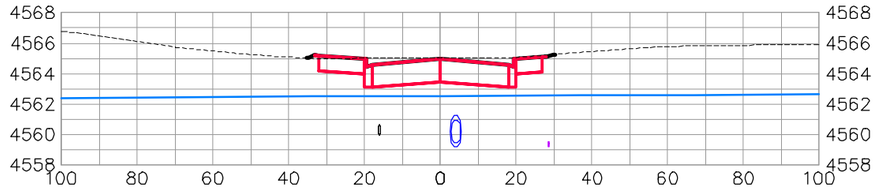

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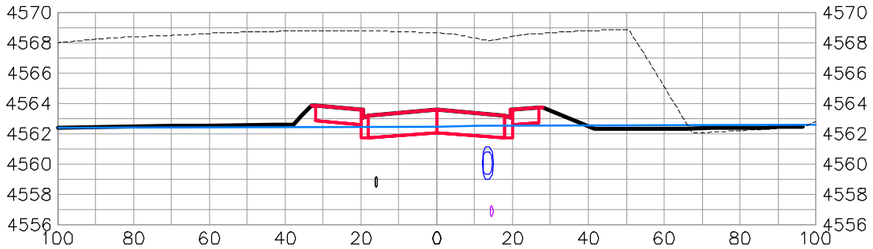

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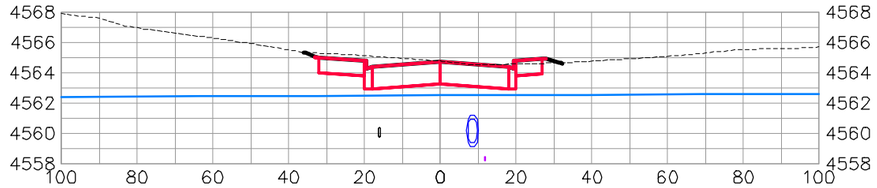

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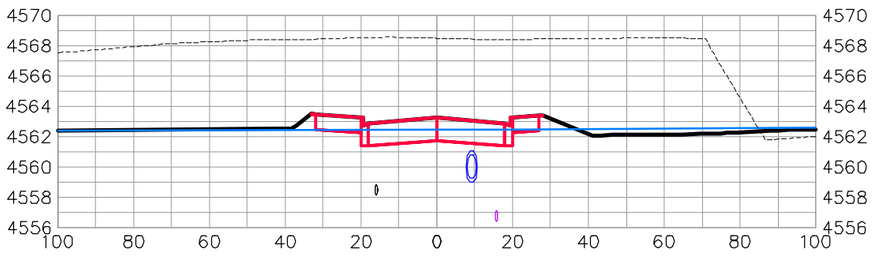

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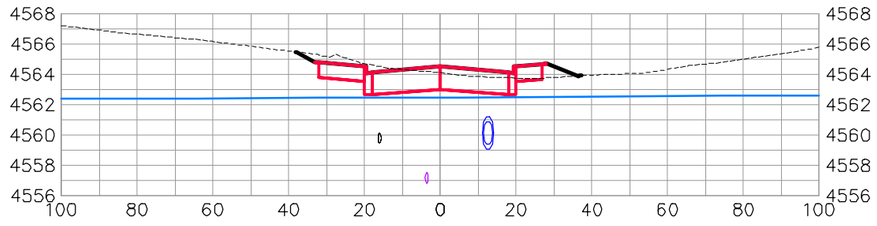

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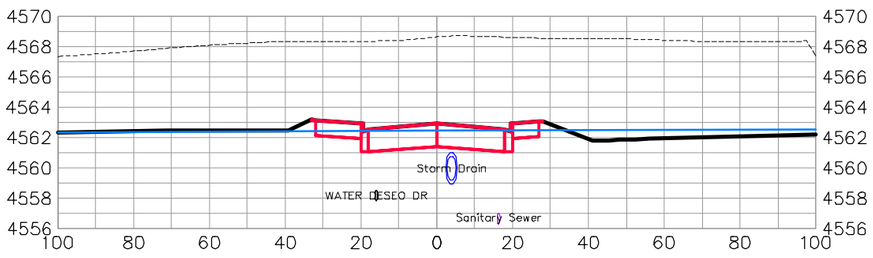

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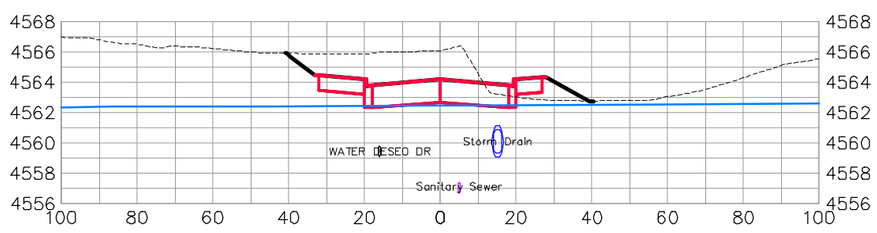

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DESEO DRIVE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (23)
June 19, 2020

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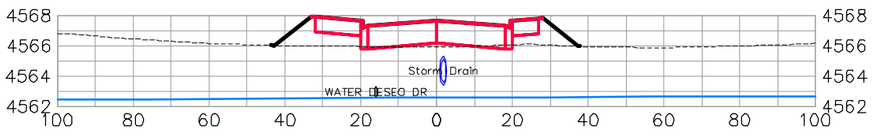

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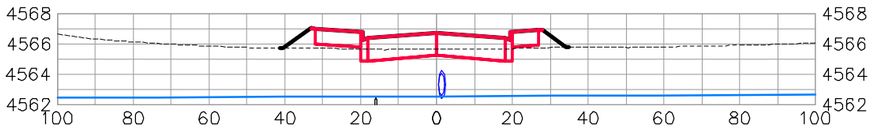

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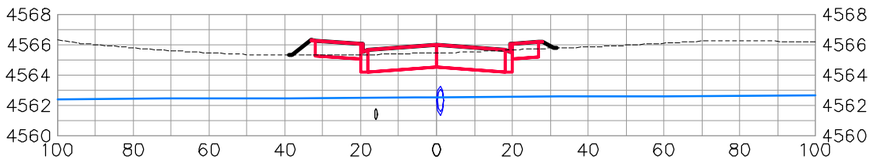

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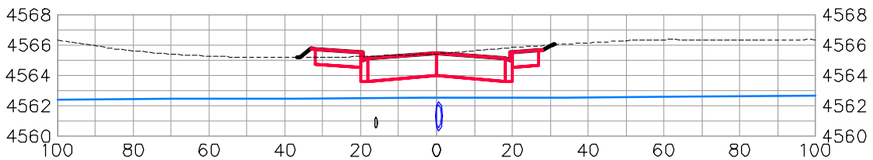

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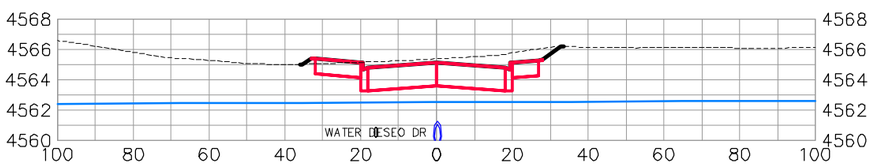

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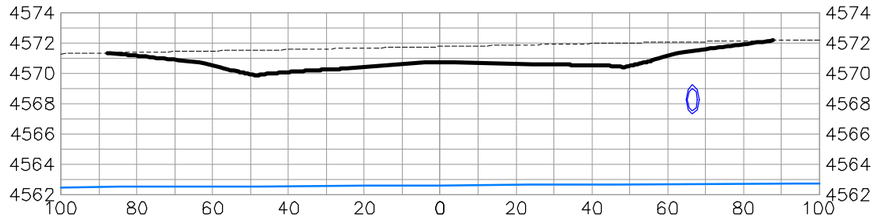

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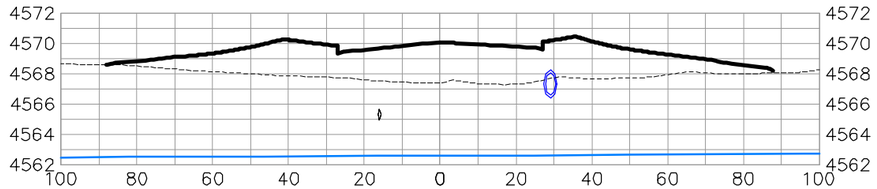

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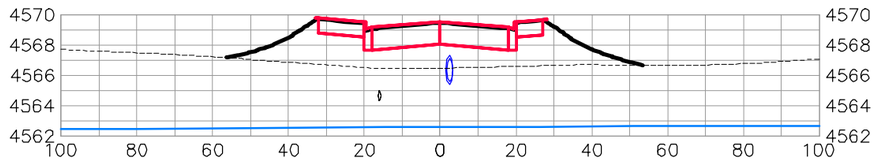

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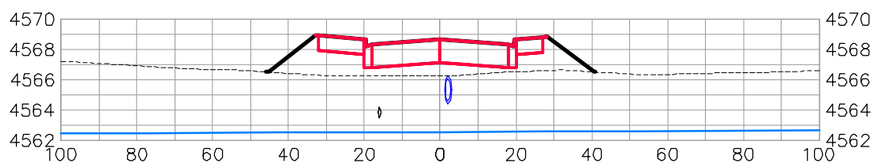

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DESEO DRIVE

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (24)
June 19, 2020

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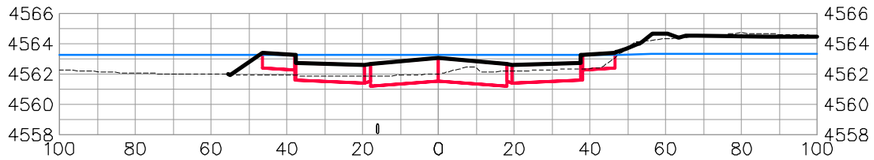

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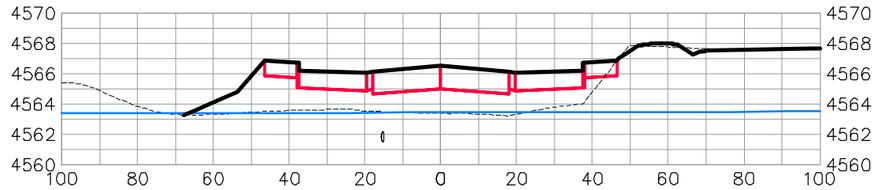

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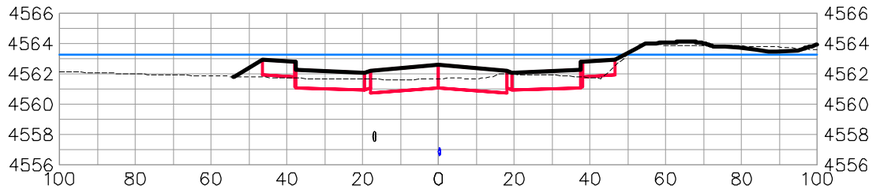

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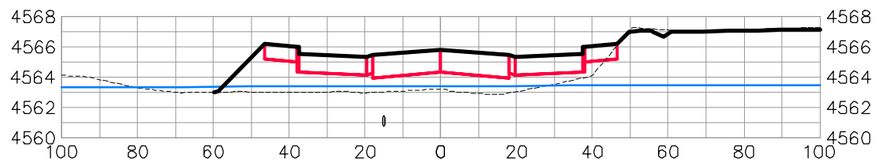

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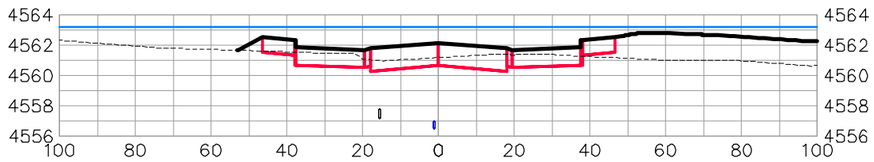

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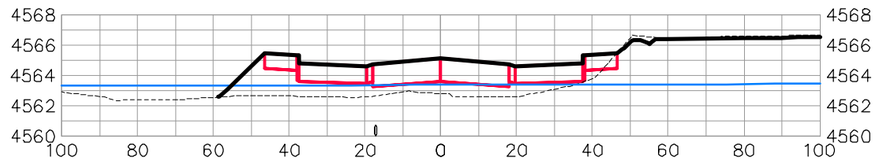

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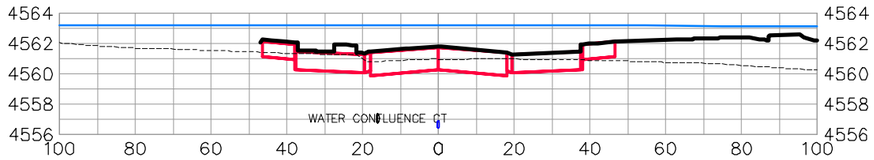

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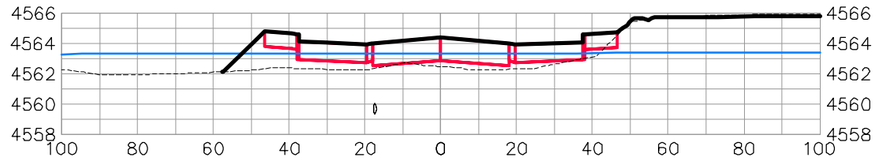

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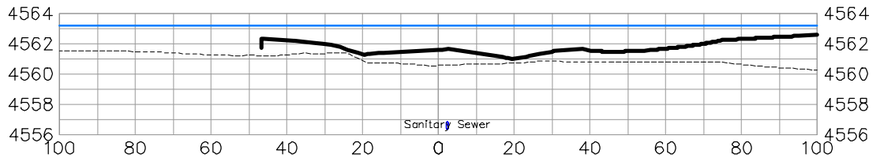

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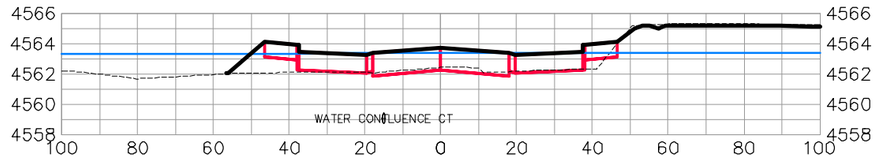

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CONFLUENCE CT

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (25)
June 19, 2020

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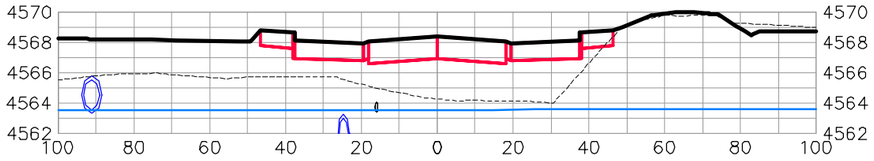

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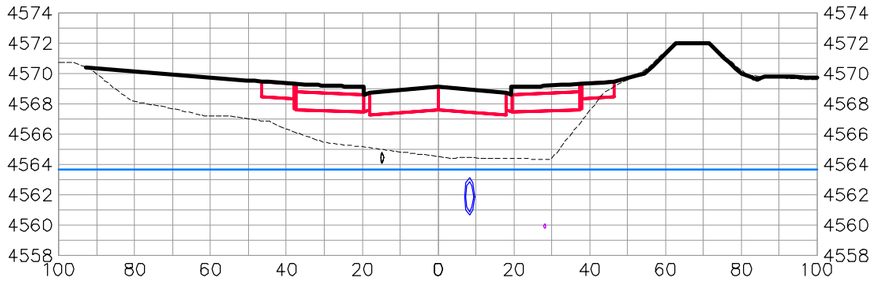

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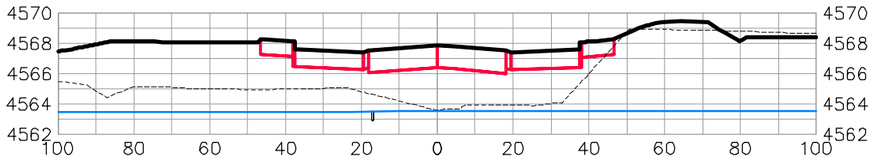

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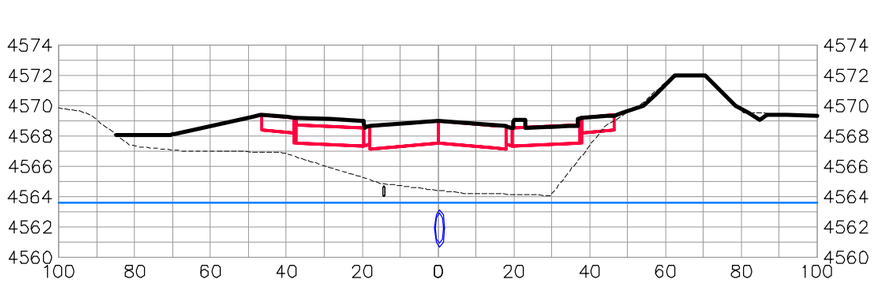

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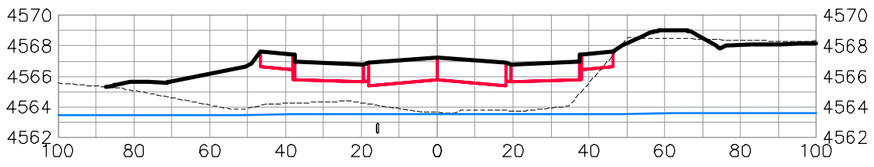

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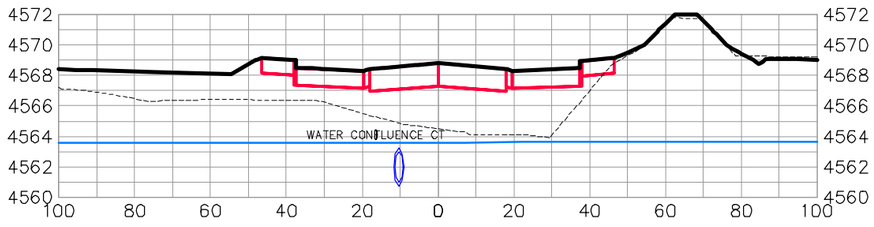

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CONFLUENCE CT

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (26)
June 19, 2020

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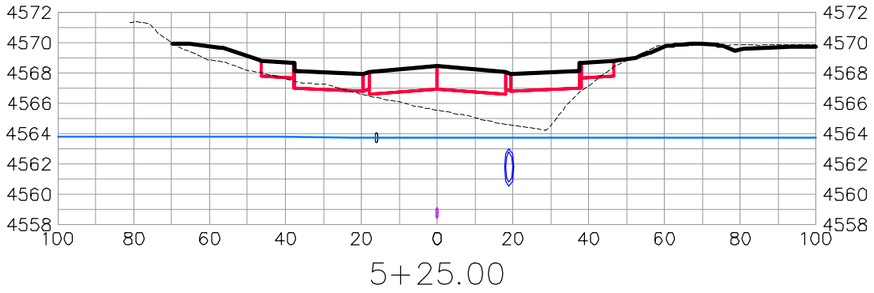

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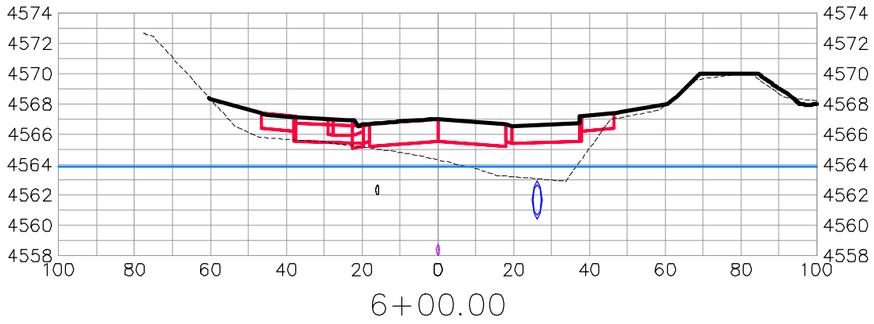

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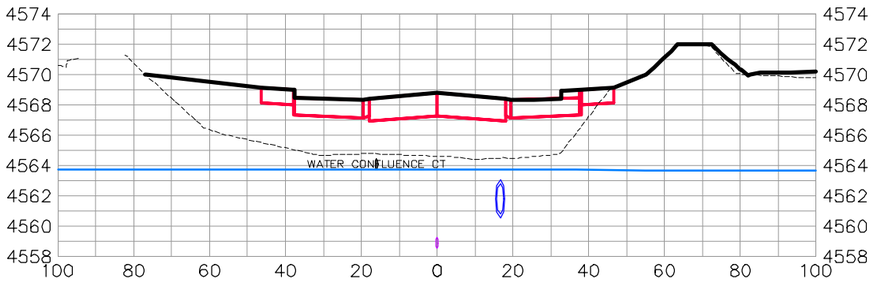

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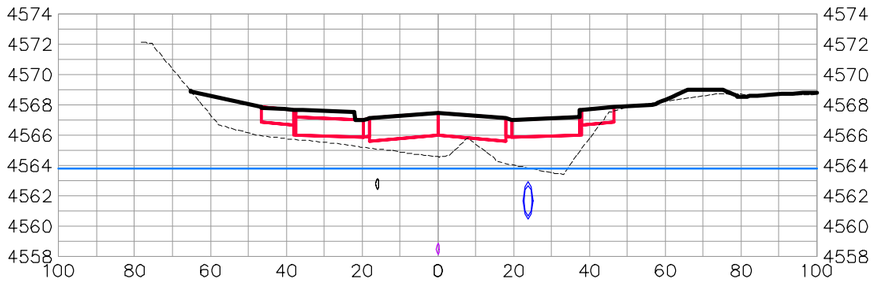

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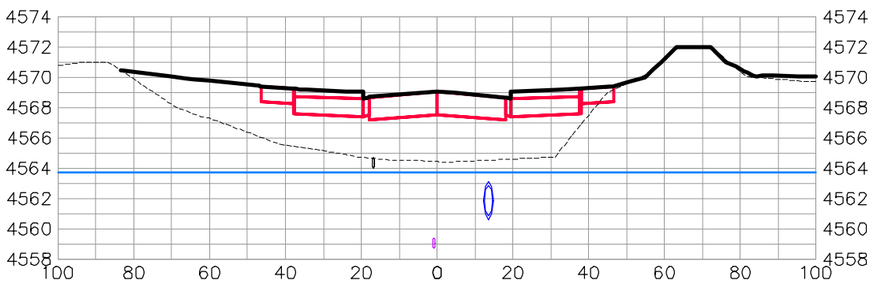

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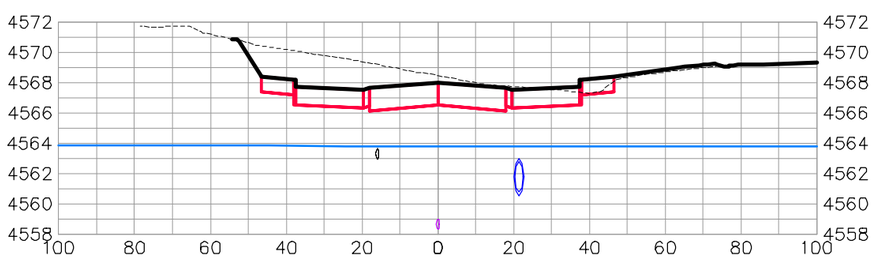

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CONFLUENCE CT

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (27)
June 19, 2020

171

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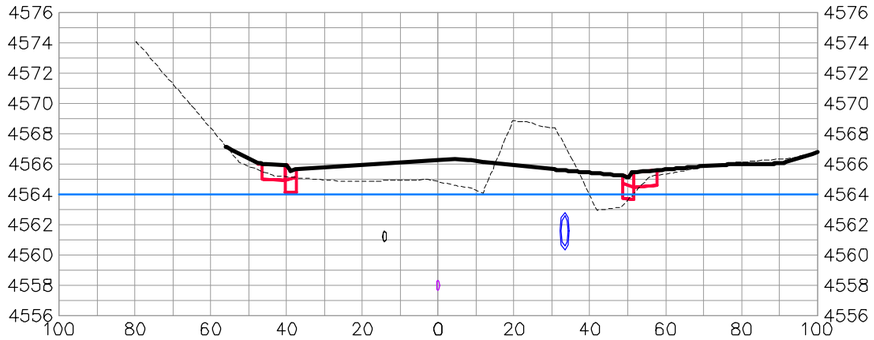

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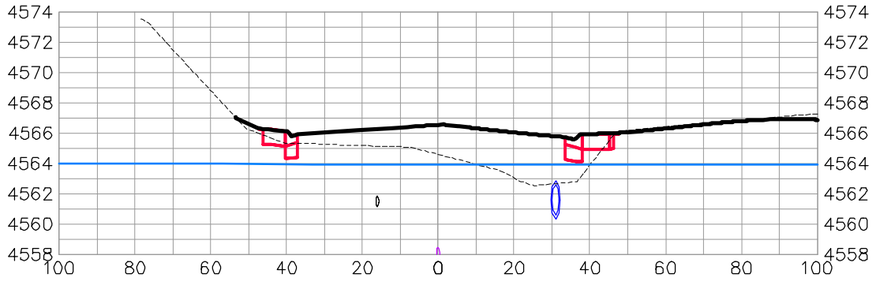

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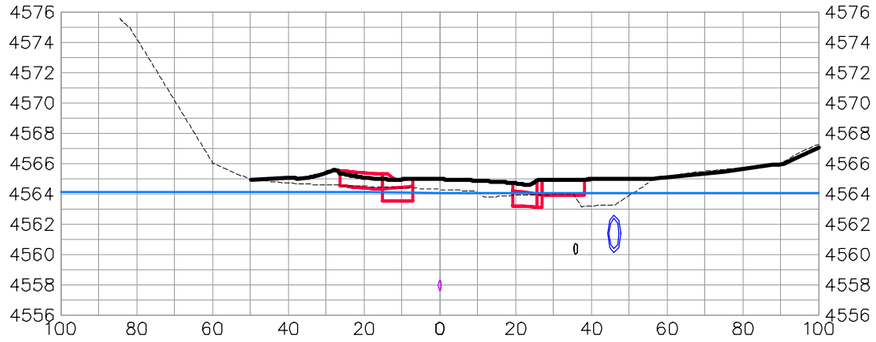

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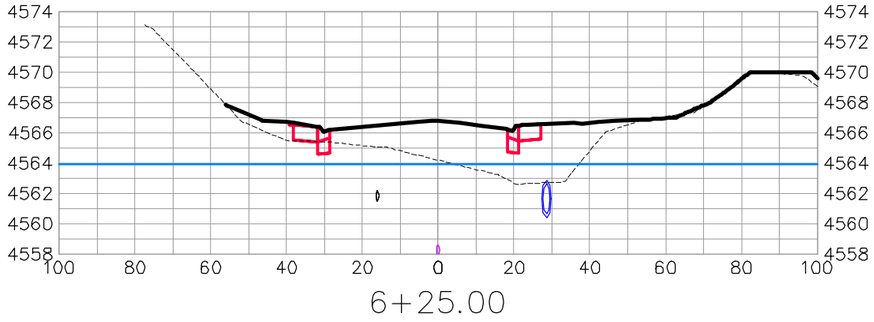

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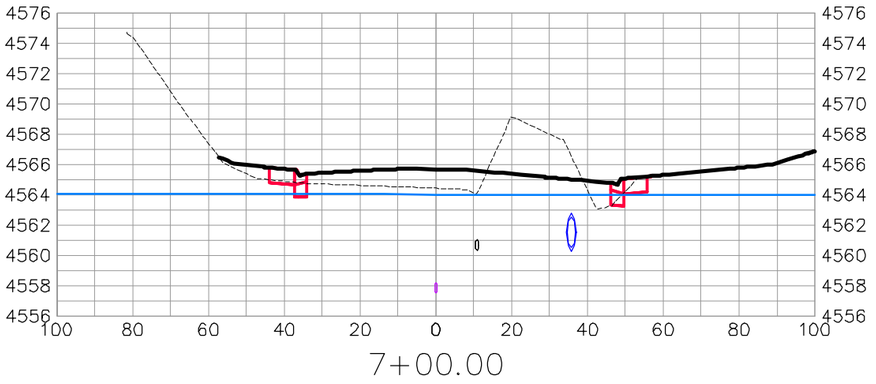

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CONFLUENCE CT

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (28)
June 19, 2020

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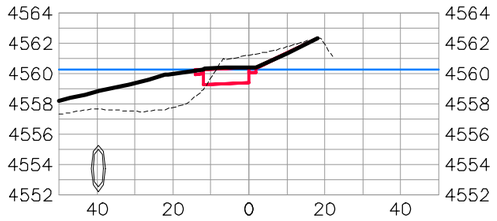

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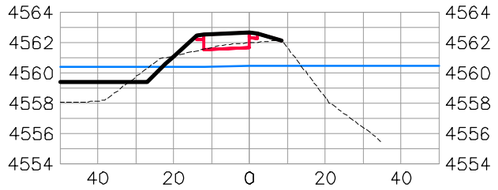

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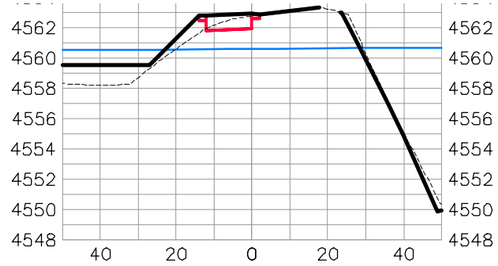

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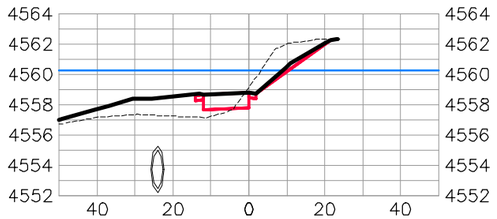

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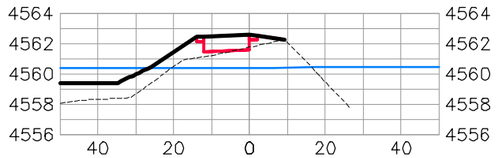

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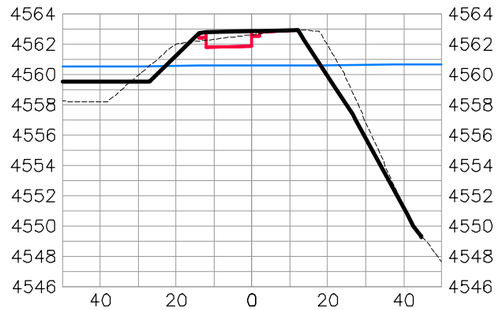

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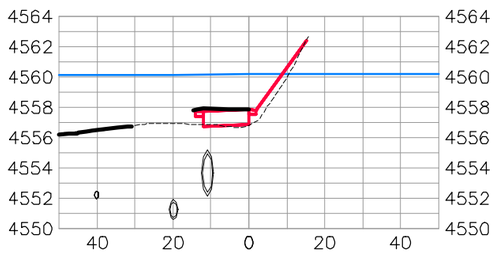

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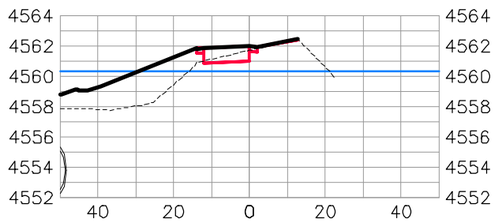

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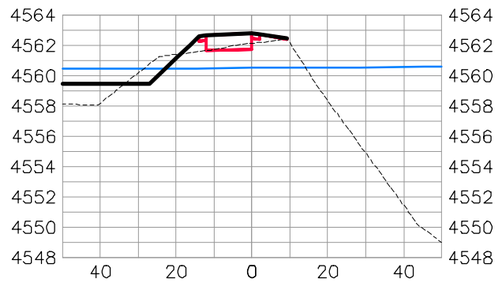

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BIKE PATH

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (29)
June 19, 2020

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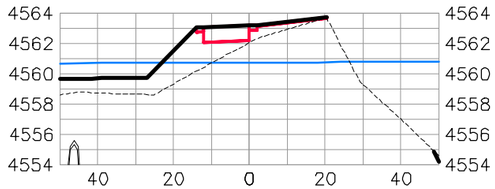

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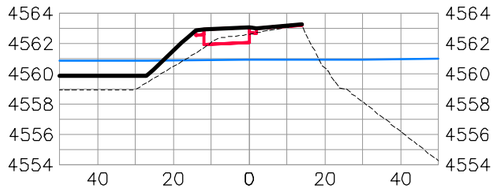

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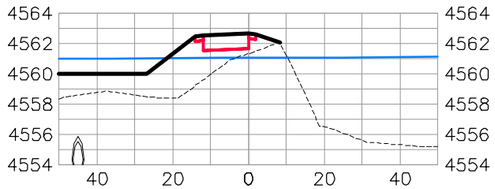

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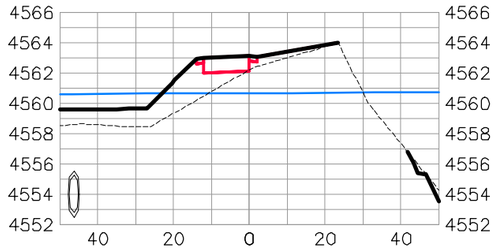

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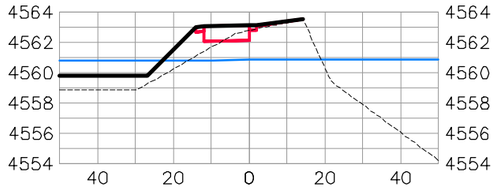

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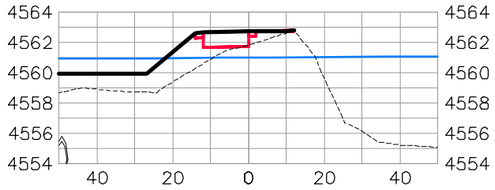

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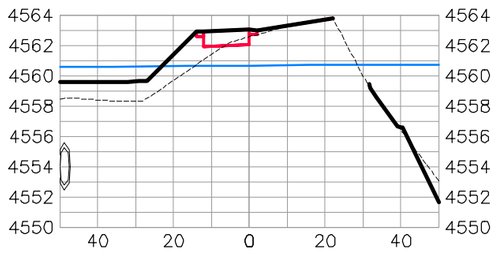

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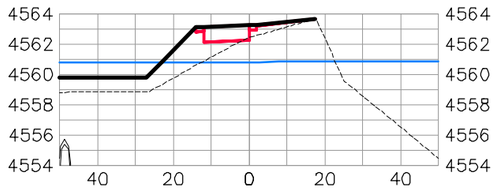

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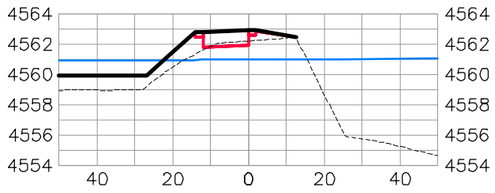

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BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (30)
June 19, 2020

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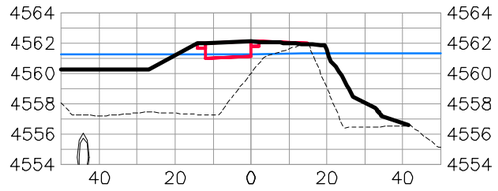

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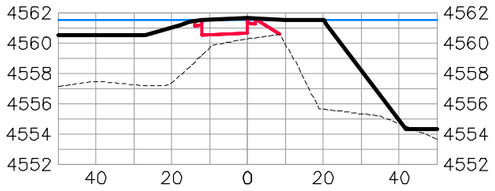

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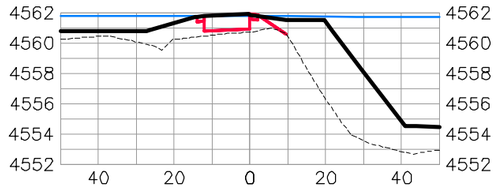

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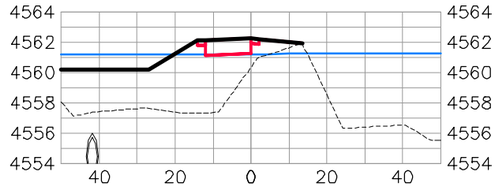

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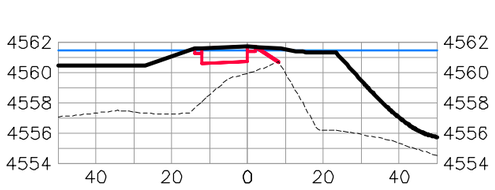

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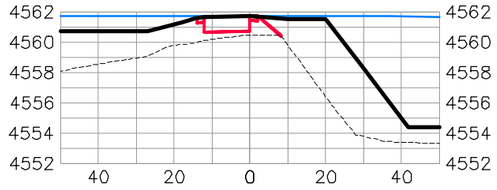

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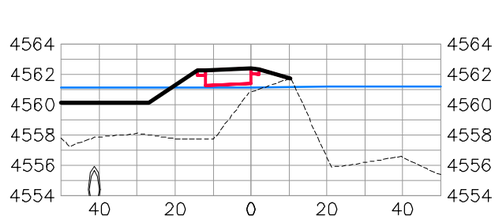

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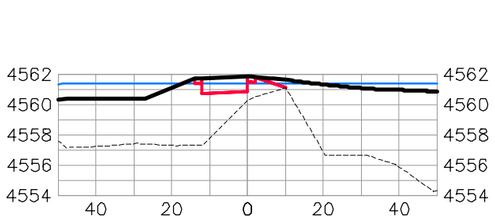

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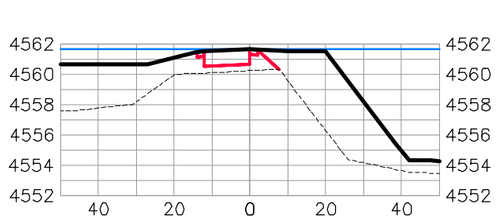

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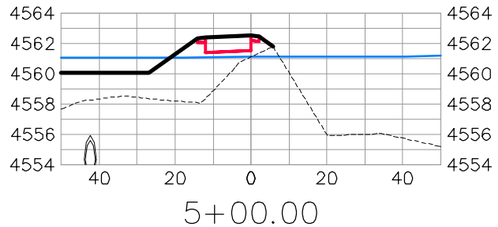

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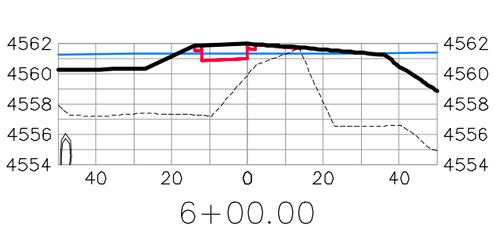

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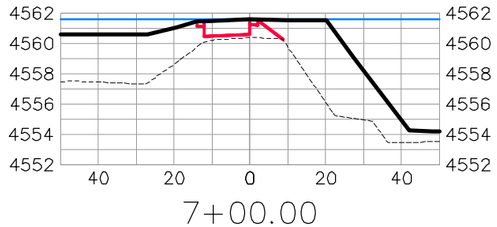

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BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
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APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (31)
June 19, 2020

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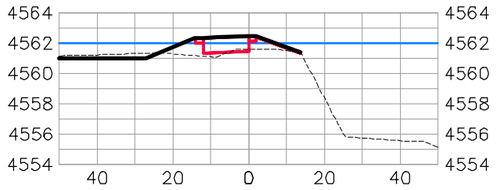

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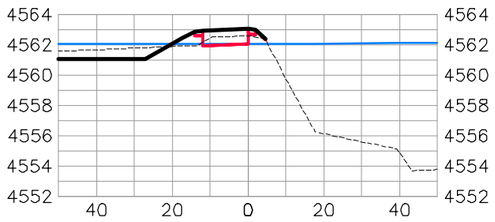

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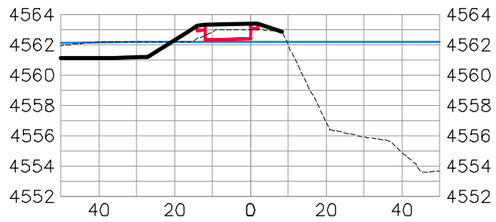

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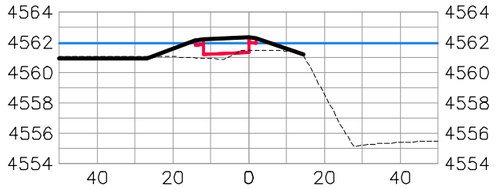

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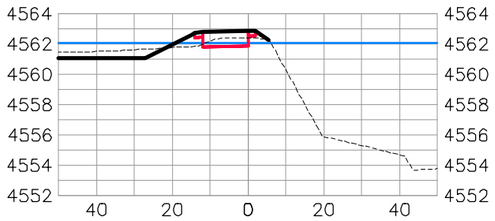

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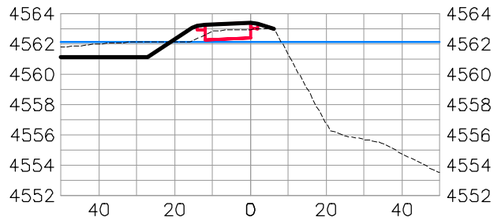

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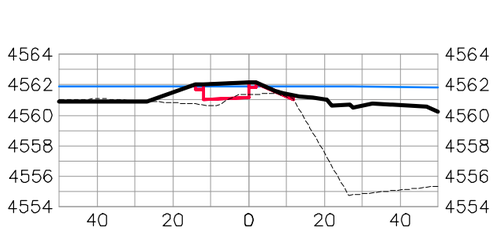

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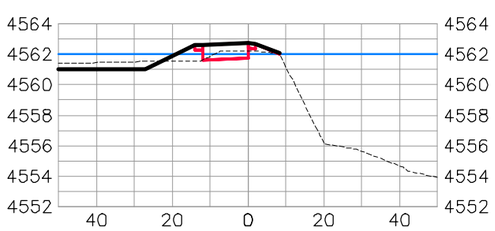

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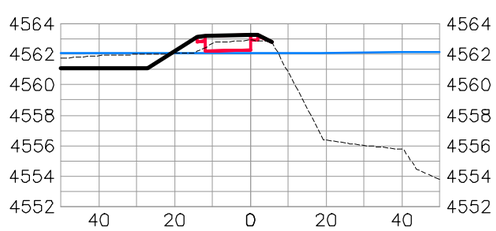

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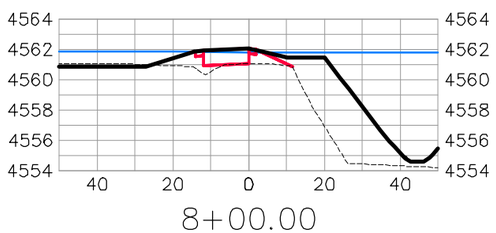

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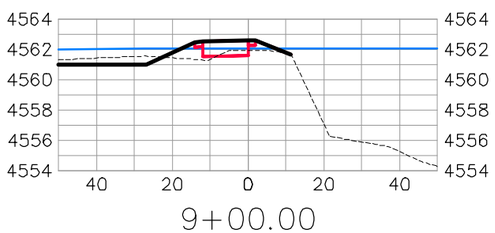

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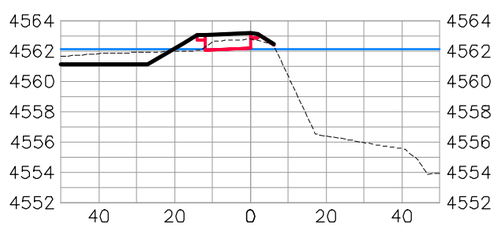

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BIKE PATH

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (32)
June 19, 2020

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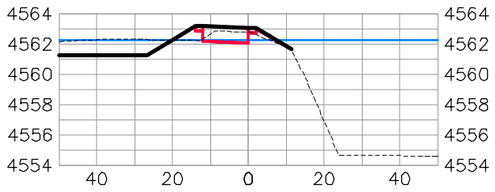

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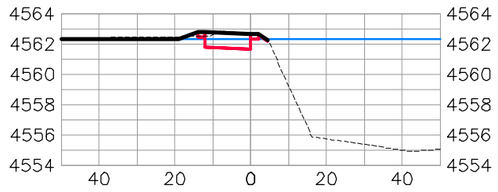

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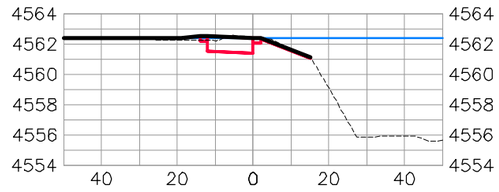

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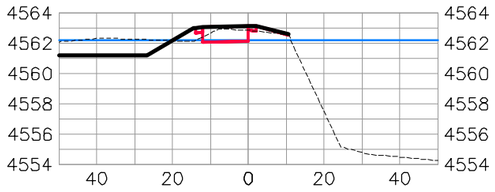

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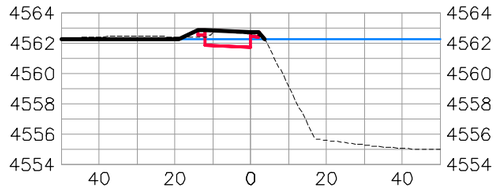

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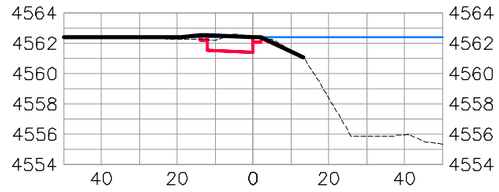

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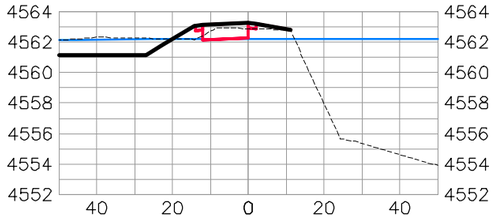

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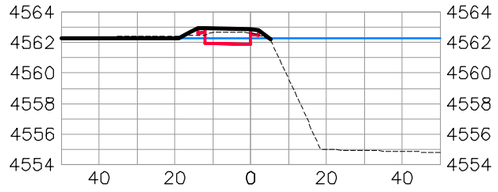

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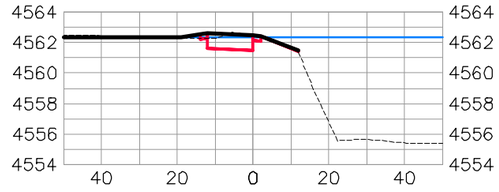

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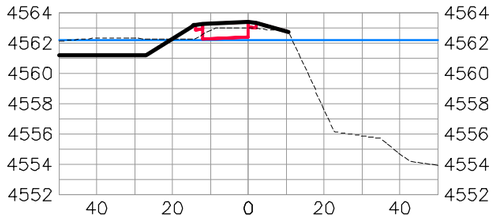

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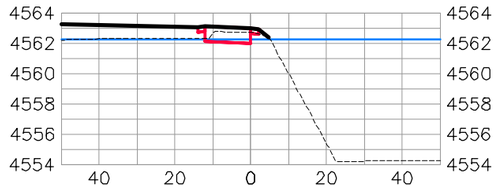

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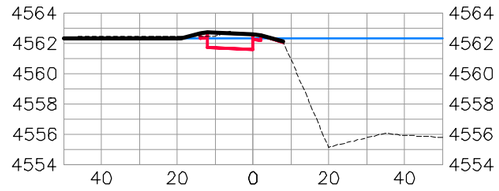

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BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (33)
June 19, 2020

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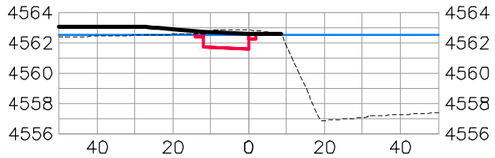

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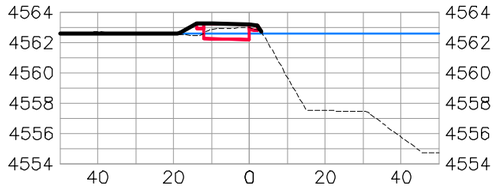

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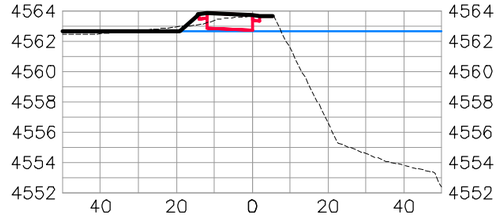

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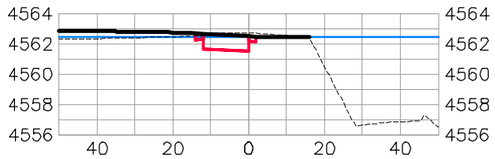

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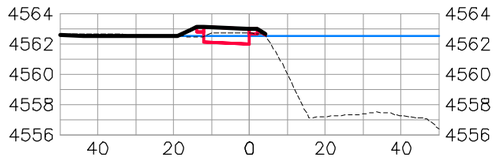

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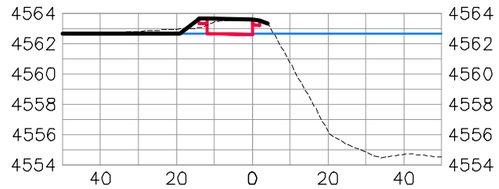

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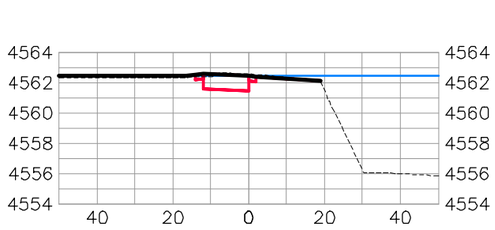

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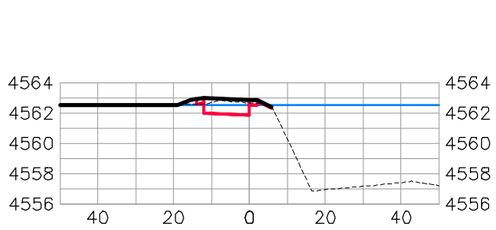

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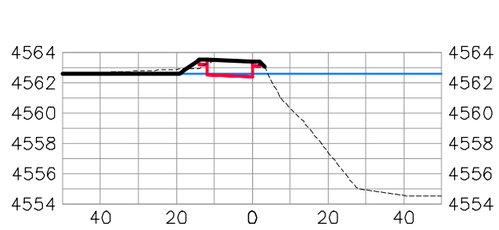

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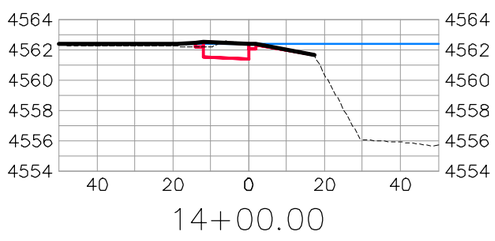

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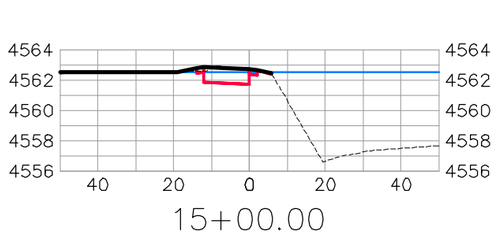

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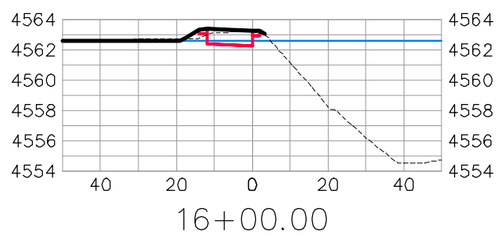

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BIKE PATH

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REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (34)
June 19, 2020

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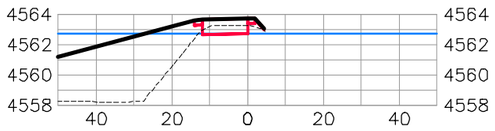

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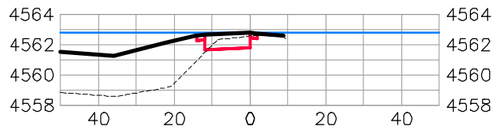

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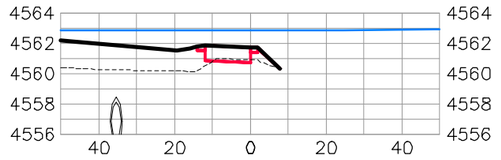

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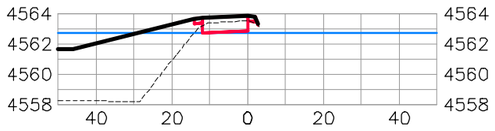

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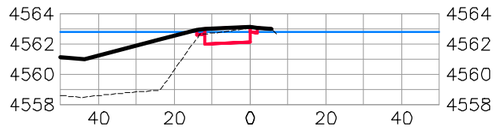

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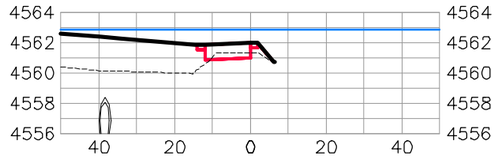

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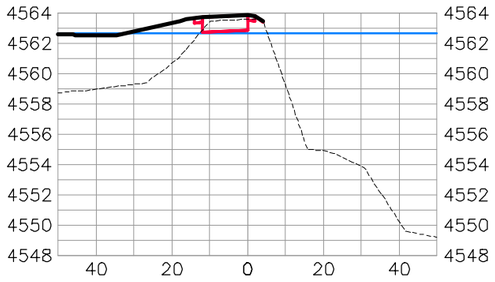

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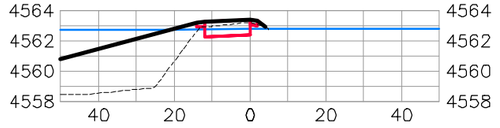

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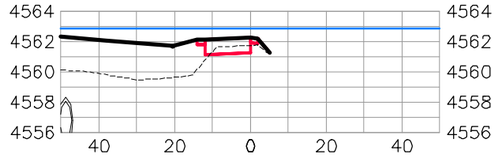

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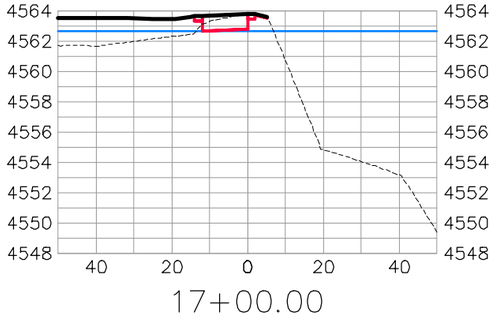

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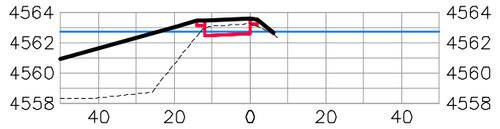

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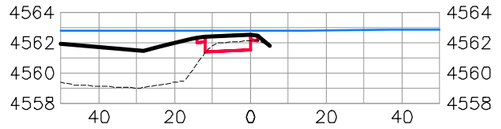

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BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (35)
June 19, 2020

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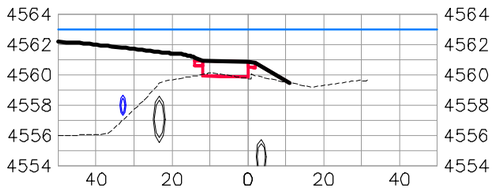

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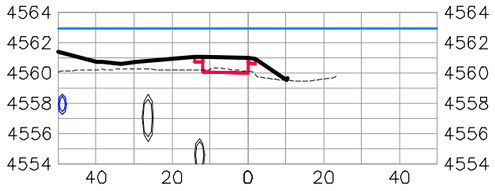

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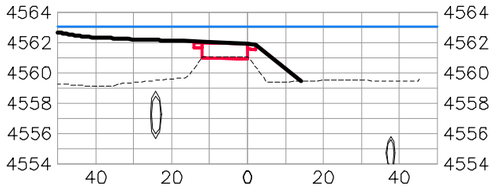

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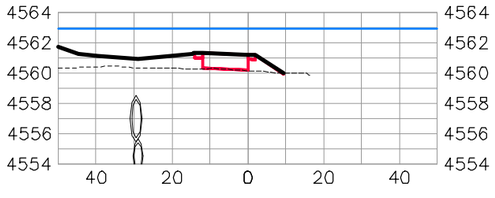

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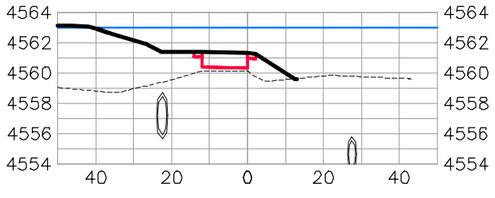

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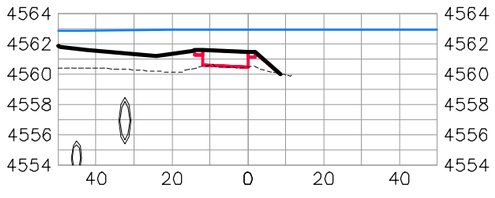

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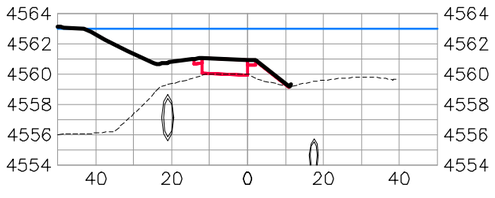

21+00.00

BIKE PATH

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS – (36)
June 19, 2020

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN SHEET INDEX
June 19, 2020

181

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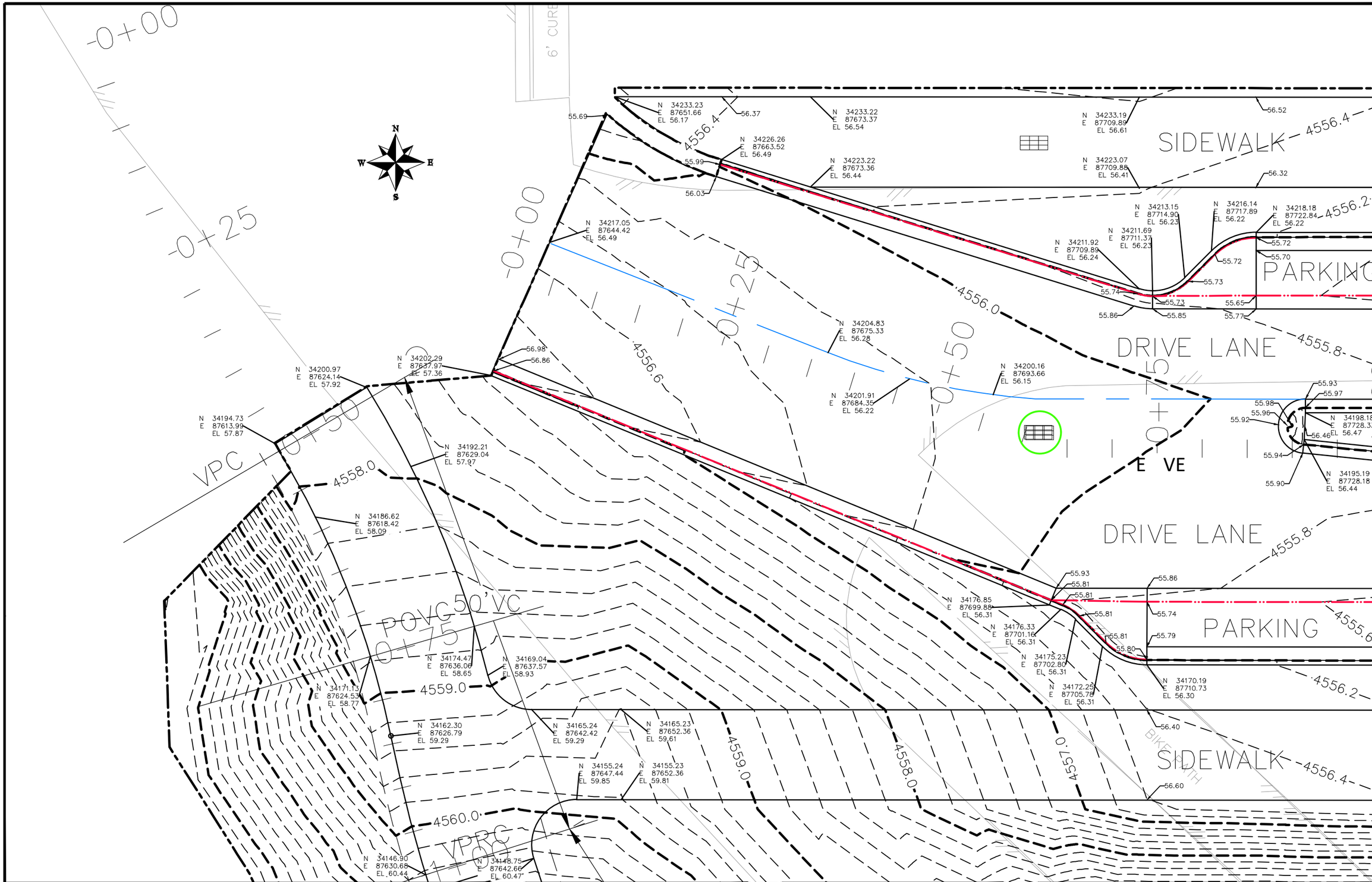

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-1
June 19, 2020

182

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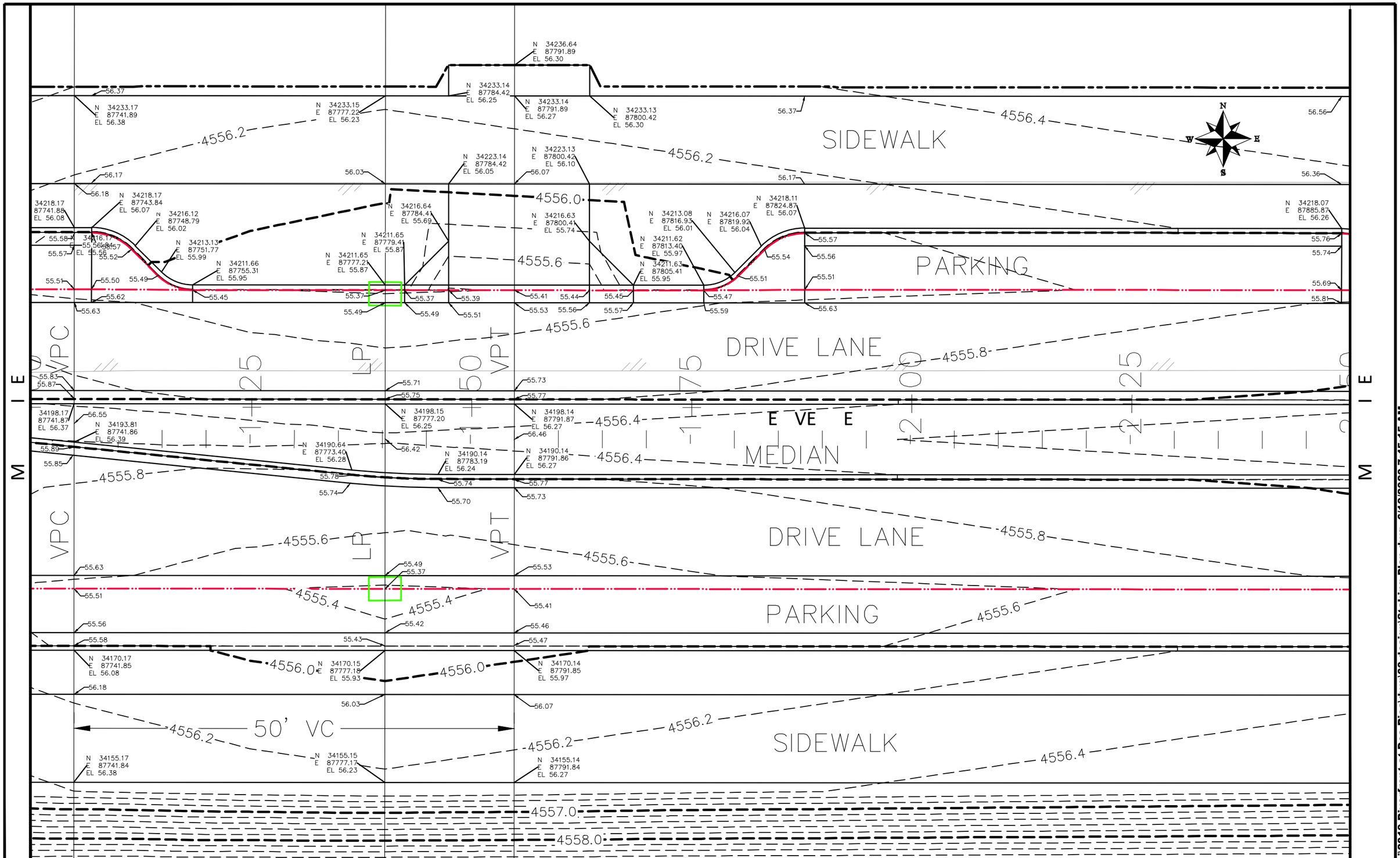

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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-2
June 19, 2020

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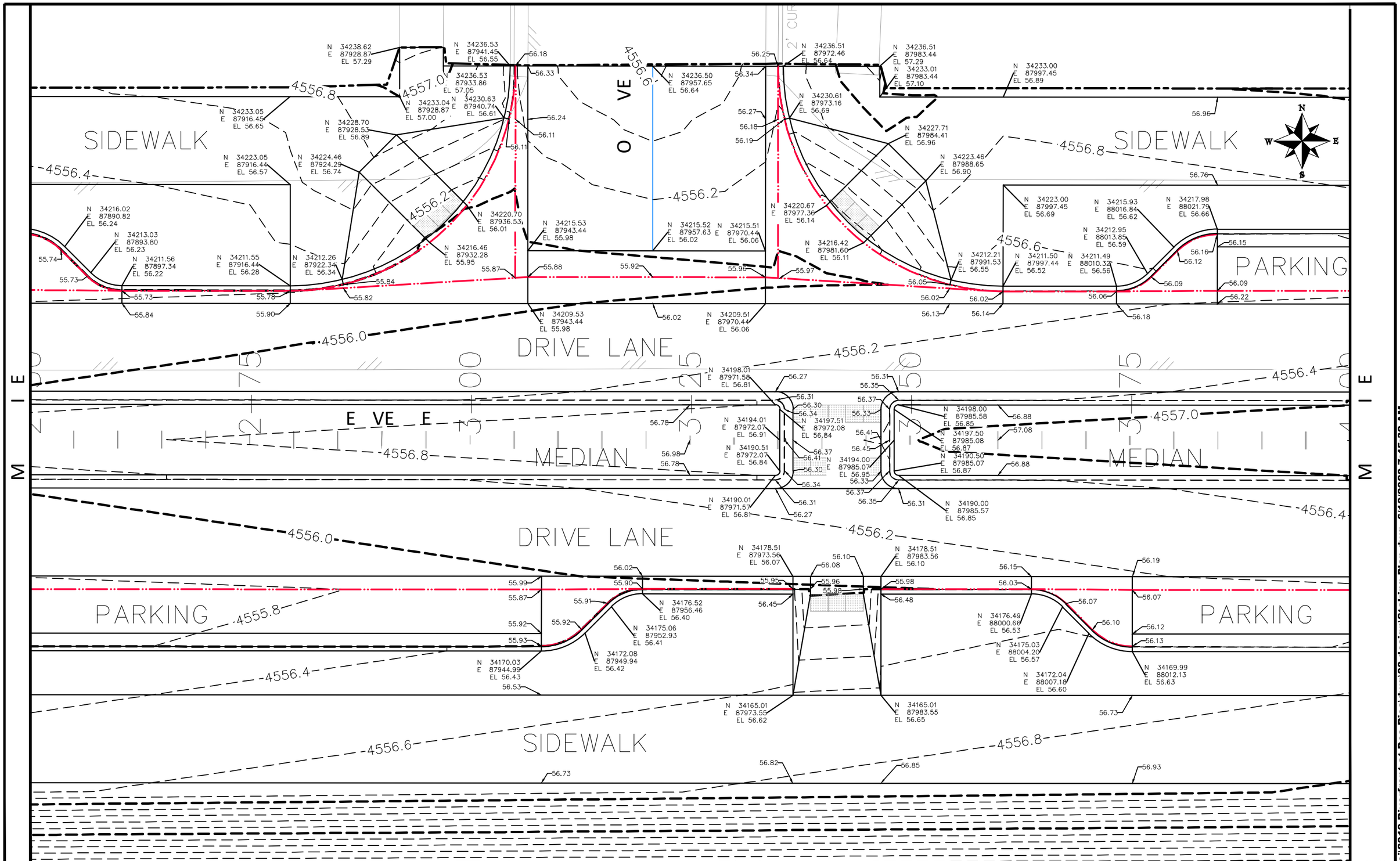

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-3
June 19, 2020

184

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 7:45:32 AM

WALK

SIDEWALK

PARKING

DRIVE LANE

MEDIAN

DRIVE LANE

PARKING

SIDEWALK

50' VC

VPC

POVC

VPT

4557.0

4556.8

4556.6

4556.4

4556.2

4557.2

4557.4

4557.6

4557.8

4558.0

4559.0

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N 34237.91 E 88129.45 EL 57.45

N 34232.92 E 88111.89 EL 57.23

N 34232.92 E 88113.46 EL 57.24

N 34232.91 E 88129.43 EL 57.33

N 34232.90 E 88136.89 EL 57.37

N 34232.90 E 88138.12 EL 57.38

N 34232.88 E 88161.90 EL 57.64

N 34222.92 E 88113.41 EL 57.04

N 34222.91 E 88129.39 EL 57.13

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N 34212.85 E 88152.02 EL 57.19

N 34215.75 E 88154.92 EL 57.24

N 34217.79 E 88159.86 EL 57.31

N 34217.79 E 88161.89 EL 57.34

N 34211.43 E 88094.26 EL 56.81

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N 34197.92 E 88111.87 EL 57.23

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N 34197.90 E 88136.87 EL 57.36

N 34189.90 E 88136.86 EL 57.36

N 34197.88 E 88161.87 EL 57.63

N 34189.88 E 88161.86 EL 57.63

N 34197.87 E 88171.59 EL 57.76

N 34197.07 E 88180.31 EL 57.89

N 34169.90 E 88136.85 EL 57.07

N 34169.92 E 88111.85 EL 56.93

N 34169.88 E 88161.84 EL 57.34

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DESCRIPTION	DATE
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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA 5 NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-4
June 19, 2020

185

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 7:45:51 AM

SIDEWALK
PARKING
DRIVE LANE
MEDIAN
DRIVE LANE
PARKING
SIDEWALK
RO K W Y VE
E VE E
0+00
0+25
0+50
0+75
4557.4
4557.6
4557.8
4558.0
4558.2
4558.4
4558.6
4559.0
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N 34234.10 E 88266.34 EL 58.71
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N 34229.26 E 88268.82 EL 58.63
N 34226.53 E 88260.25 EL 58.55
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N 34191.33 E 88219.77 EL 57.94
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N 34173.52 E 88317.22 EL 58.68
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N 34164.72 E 88329.65 EL 58.86
N 34160.79 E 88310.85 EL 58.60
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N E S W

DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-5
June 19, 2020

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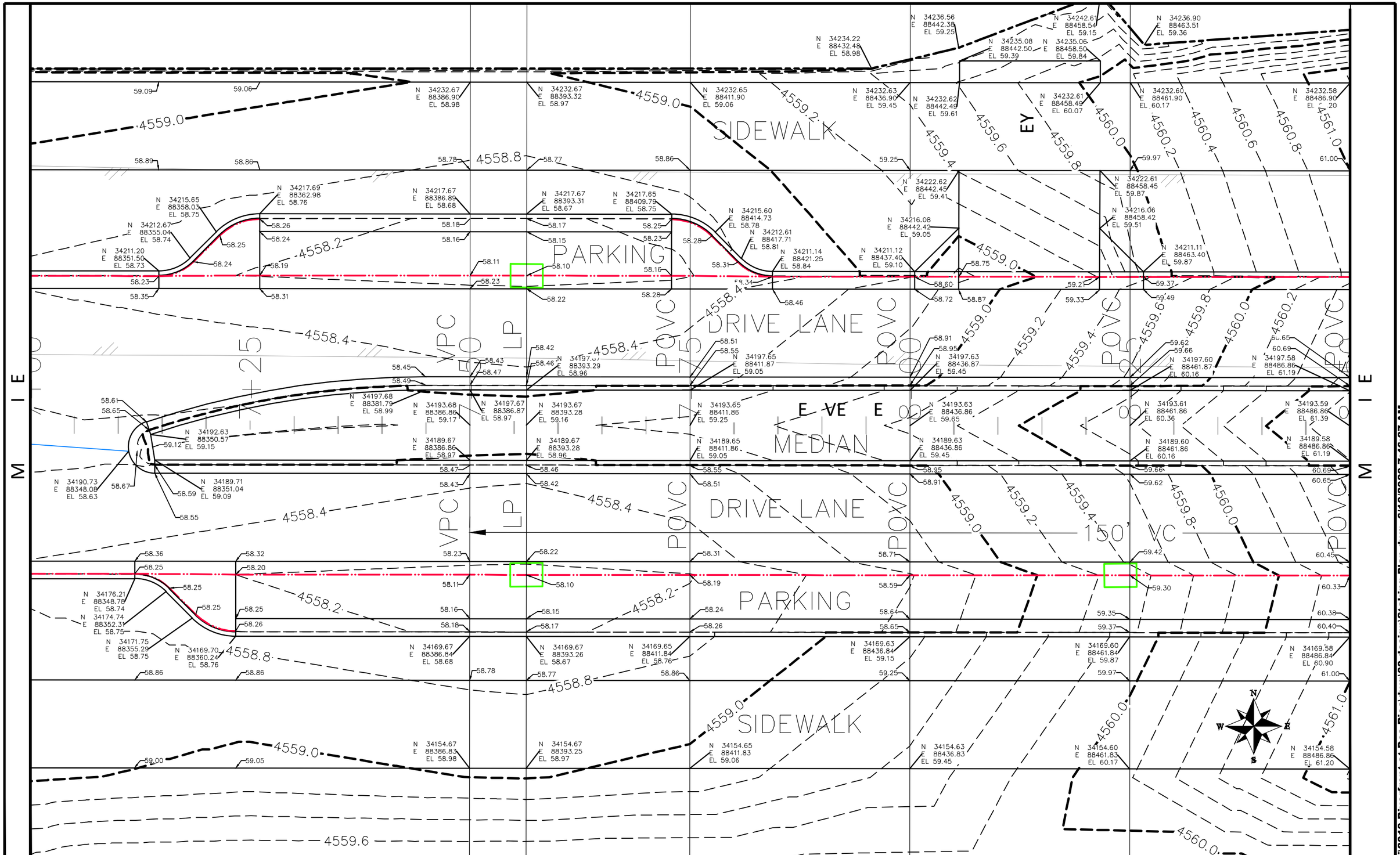

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-6
June 19, 2020

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 7:46:27 AM

SIDEWALK

PARKING

DRIVE LANE

DRIVE LANE

PARKING

SIDEWALK

RIVERFRONT DRIVE

150' VC

15" RCP STM

15" RCP STM

15" RCP STM

SIDEWALK
PARKING
DRIVE LANE
MEDIAN
DRIVE LANE
PARKING
SIDEWALK
ASPHALT
2' CURB & GUTTER
15" RCP STM
24" RCP STM
8" PVC
8" VPT
WRE
7+49
7+25
7+00
4571.0
4571.2
4570.8
4570.6
4570.4
4570.2
4570.0
4569.8
4569.6
4569.4
4569.0
4568.8
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N 34232.40 E 88686.90 EL 70.26
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N 34225.27 E 88762.74 EL 71.27
N 34222.35 E 88742.17 EL 71.08
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N 34217.38 E 88704.90 EL 70.09
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N E W S

DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-8
June 19, 2020

189

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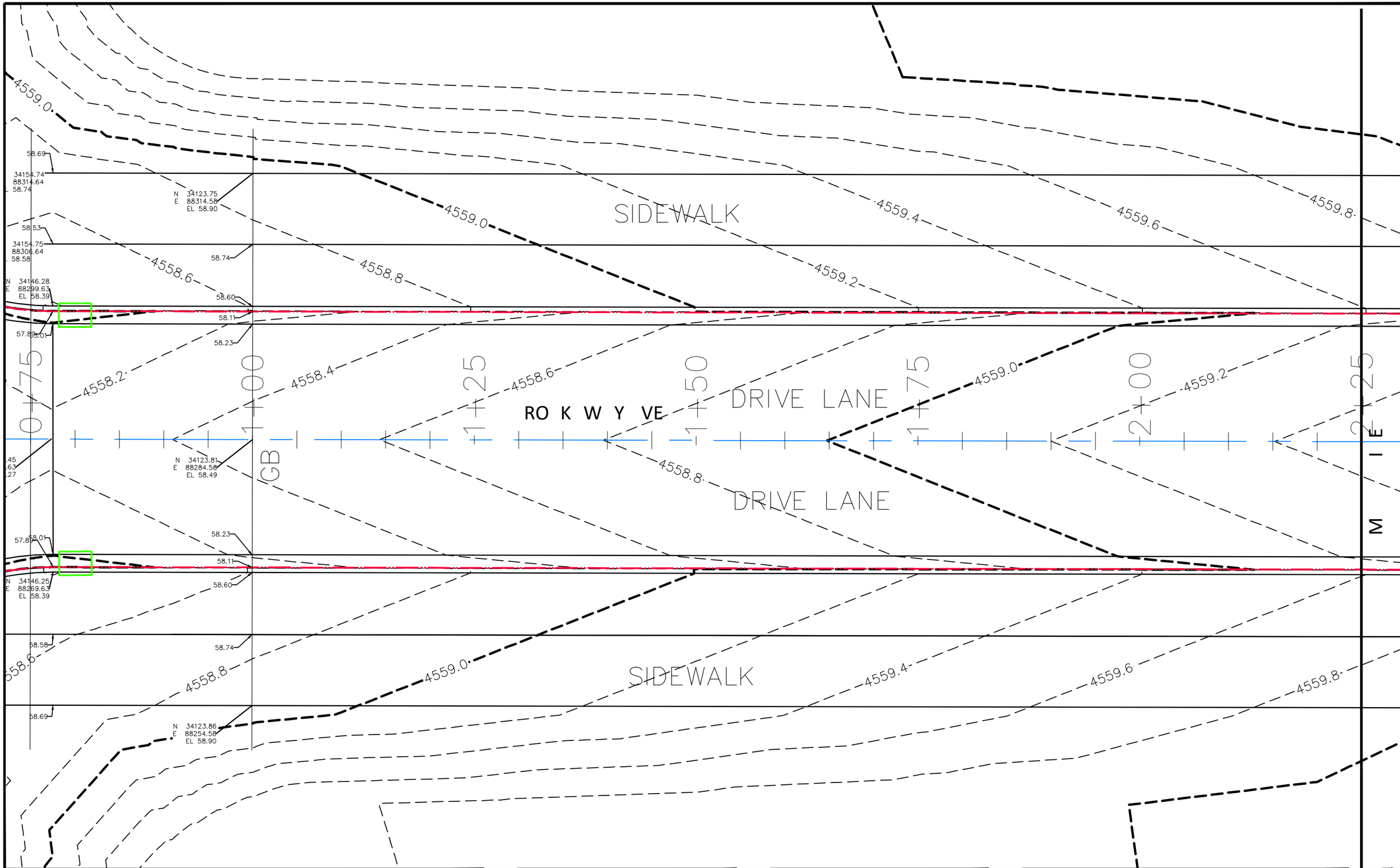

DESCRIPTION	DATE
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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-9
June 19, 2020

190

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 7:47:23 AM

RO K W Y VE

SIDEWALK

DRIVE LANE

DRIVE LANE

SIDEWALK

50' VC

VPC

POVC

HP

VPT

2+25

2+50

2+75

3+00

3+25

3+50

3+75

4559.4

4559.6

4559.8

4560.0

4560.2

4560.4

4560.6

N 33923.75
E 88314.20
EL 60.49

N 33898.75
E 88314.15
EL 60.62

N 33887.36
E 88314.13
EL 60.64

N 33882.78
E 88314.12
EL 60.63

N 33874.43
E 88314.26
EL 60.61

N 33923.81
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EL 60.07

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EL 60.20

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EL 60.22

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E 88284.12
EL 60.21

N 33873.81
E 88284.31
EL 60.20

N 33923.87
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EL 60.49

N 33898.87
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EL 60.62

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E 88254.13
EL 60.64

N 33882.90
E 88254.12
EL 60.63

N 33873.18
E 88254.27
EL 60.62

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-10
June 19, 2020

191

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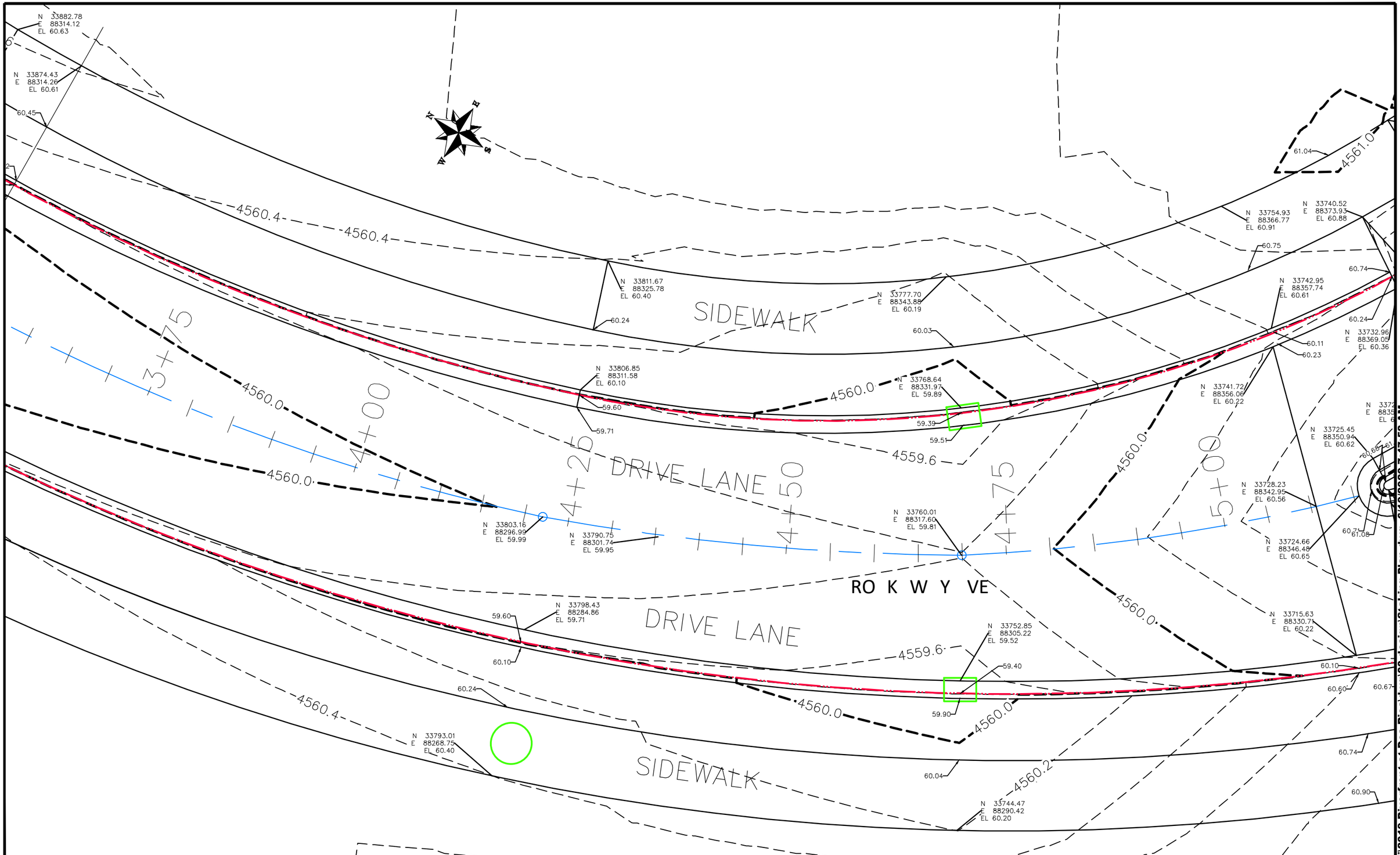

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REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-11
June 19, 2020

192

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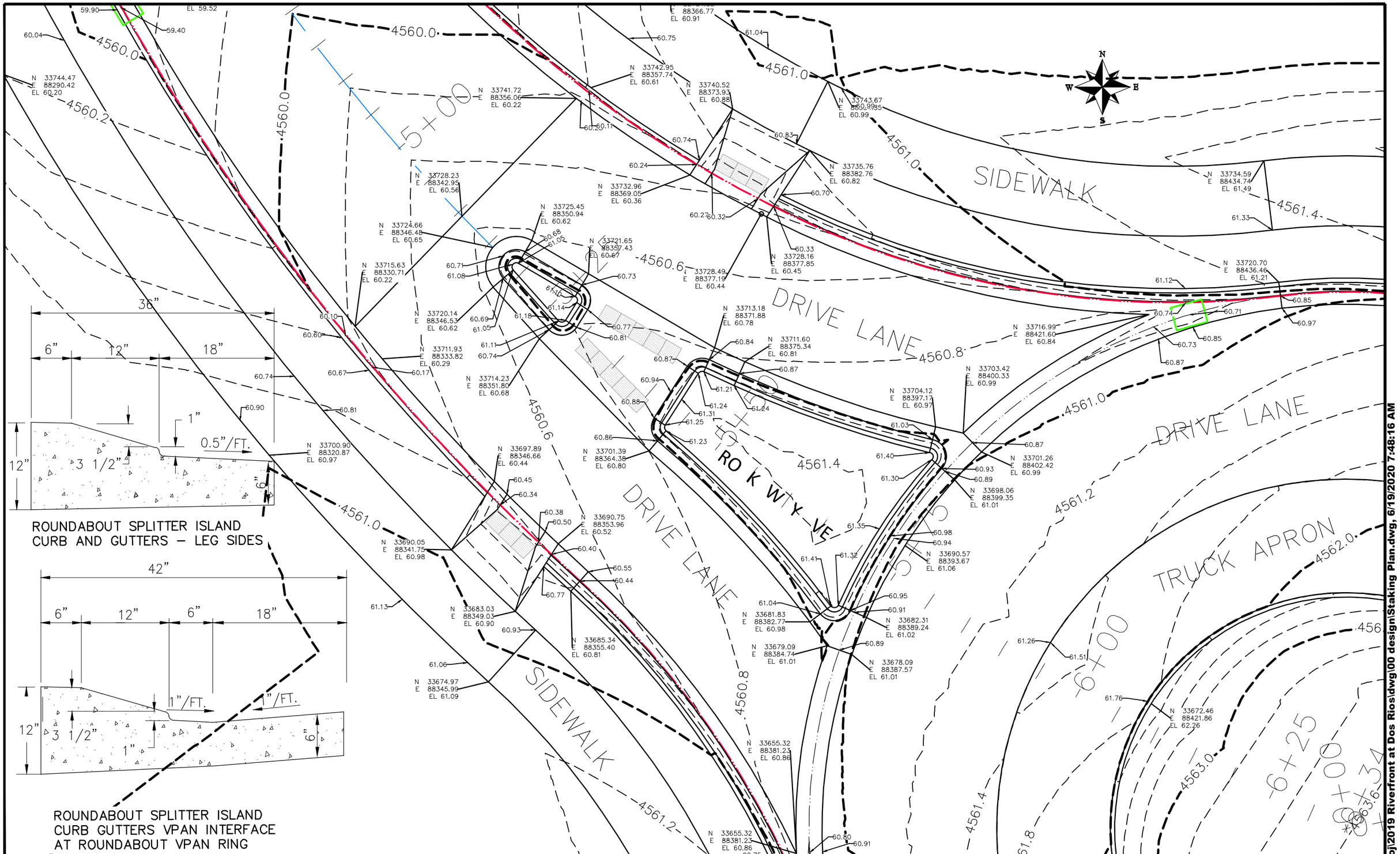

36”
6” 12” 18”
1”
0.5”/FT.
12”
3 1/2”
6”

ROUNDABOUT SPLITTER ISLAND
CURB AND GUTTERS – LEG SIDES

42”
6” 12” 6” 18”
1”/FT.
1”/FT.
12”
3 1/2”
1”
6”

ROUNDABOUT SPLITTER ISLAND
CURB GUTTERS VPAN INTERFACE
AT ROUNDABOUT VPAN RING

DESCRIPTION	DATE
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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–12
June 19, 2020

193

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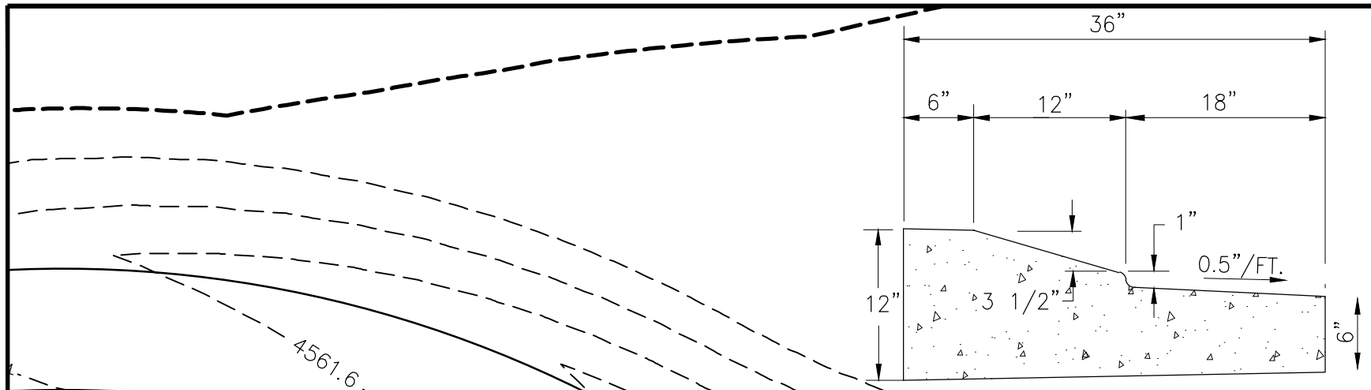

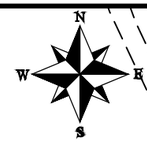

ROUNDABOUT SPLITTER ISLAND
CURB AND GUTTERS – LEG SIDES

ROUNDABOUT SPLITTER ISLAND
CURB GUTTERS VPAN INTERFACE
AT ROUNDABOUT VPAN RING

SIDEWALK

DRIVE LANE

TRUCK APRON

WRE E VE

DRIVE LANE

DRIVE LANE

LS 50 + 50

LS 50 + 00

LS 50 + 34

LS 50 + 00

4561.4
4561.6
4561.8
4562.0
4562.2
4562.4
4562.6
4562.8
4563.0

N 33723.96
E 88484.17
EL 61.84

N 33712.00
E 88476.90
EL 61.56

N 33703.91
E 88520.62
EL 62.08

N 33703.62
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REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL NA 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-13
June 19, 2020

194

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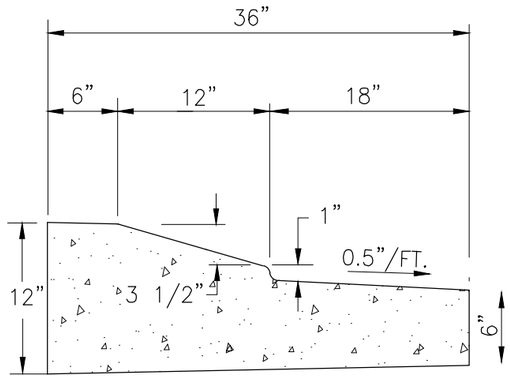
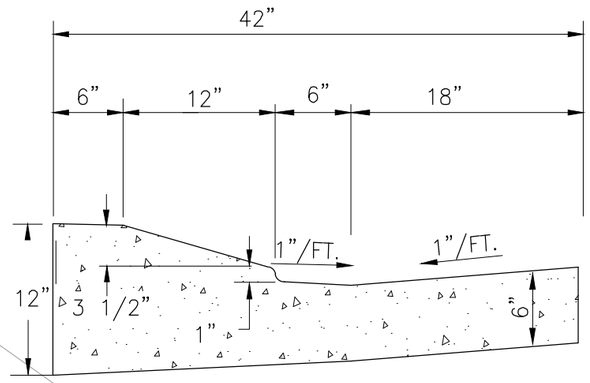
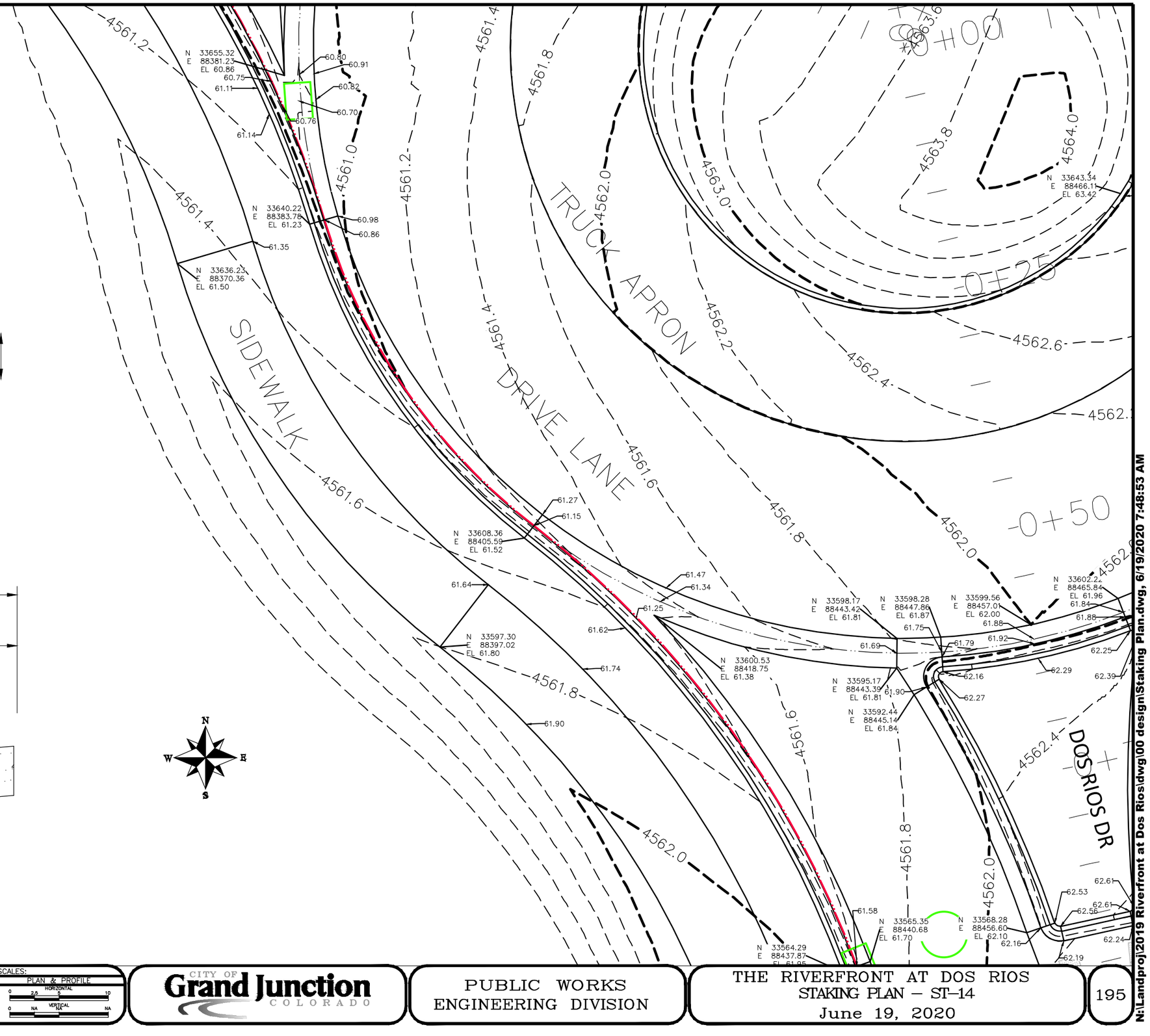


ROUNDABOUT SPLITTER ISLAND
CURB AND GUTTERS – LEG SIDES



ROUNDABOUT SPLITTER ISLAND
CURB GUTTERS VPAN INTERFACE
AT ROUNDABOUT VPAN RING



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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-14
June 19, 2020

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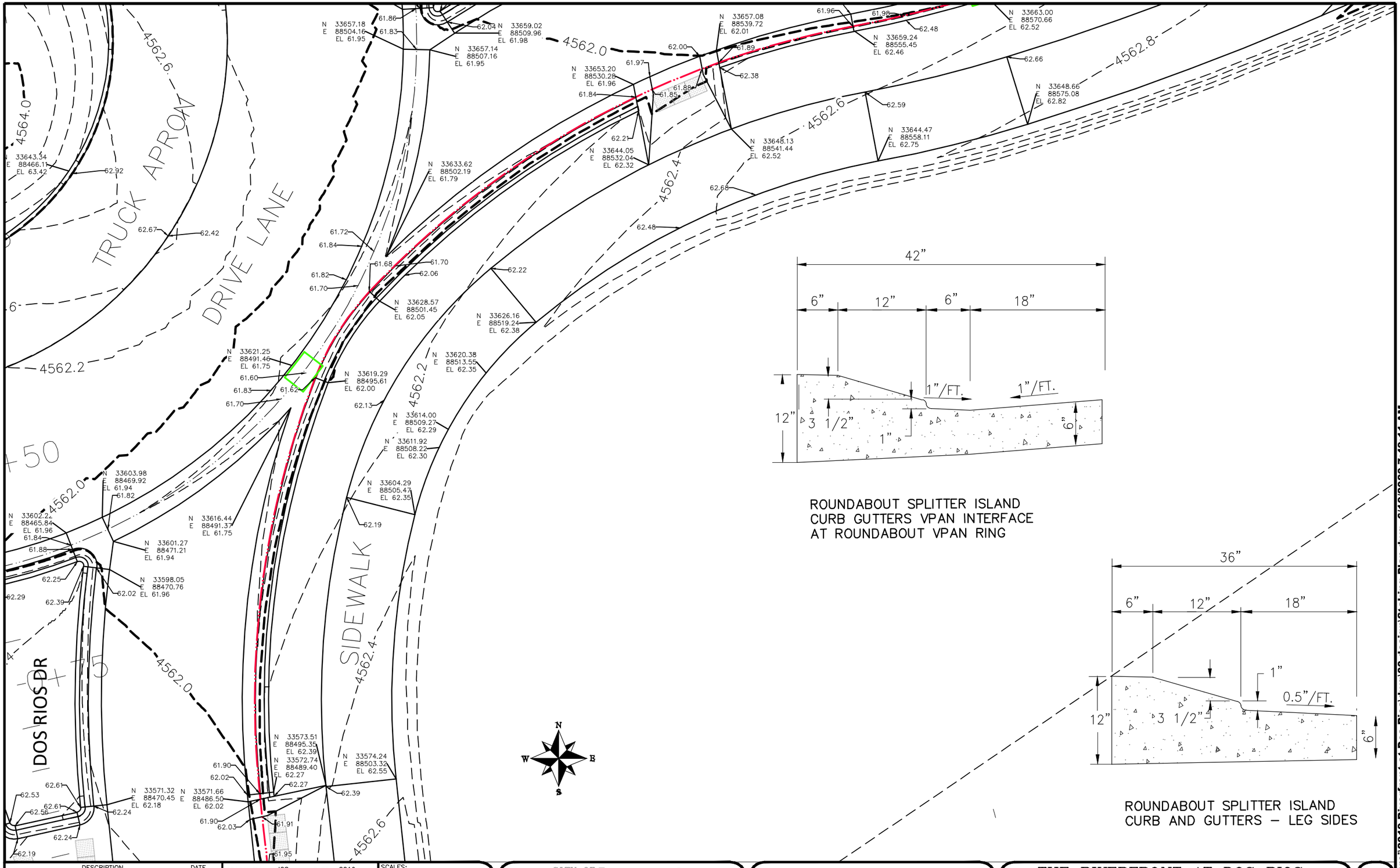

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-15
June 19, 2020

196

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DOS RIOS DR

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA N/A NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-16
June 19, 2020

197

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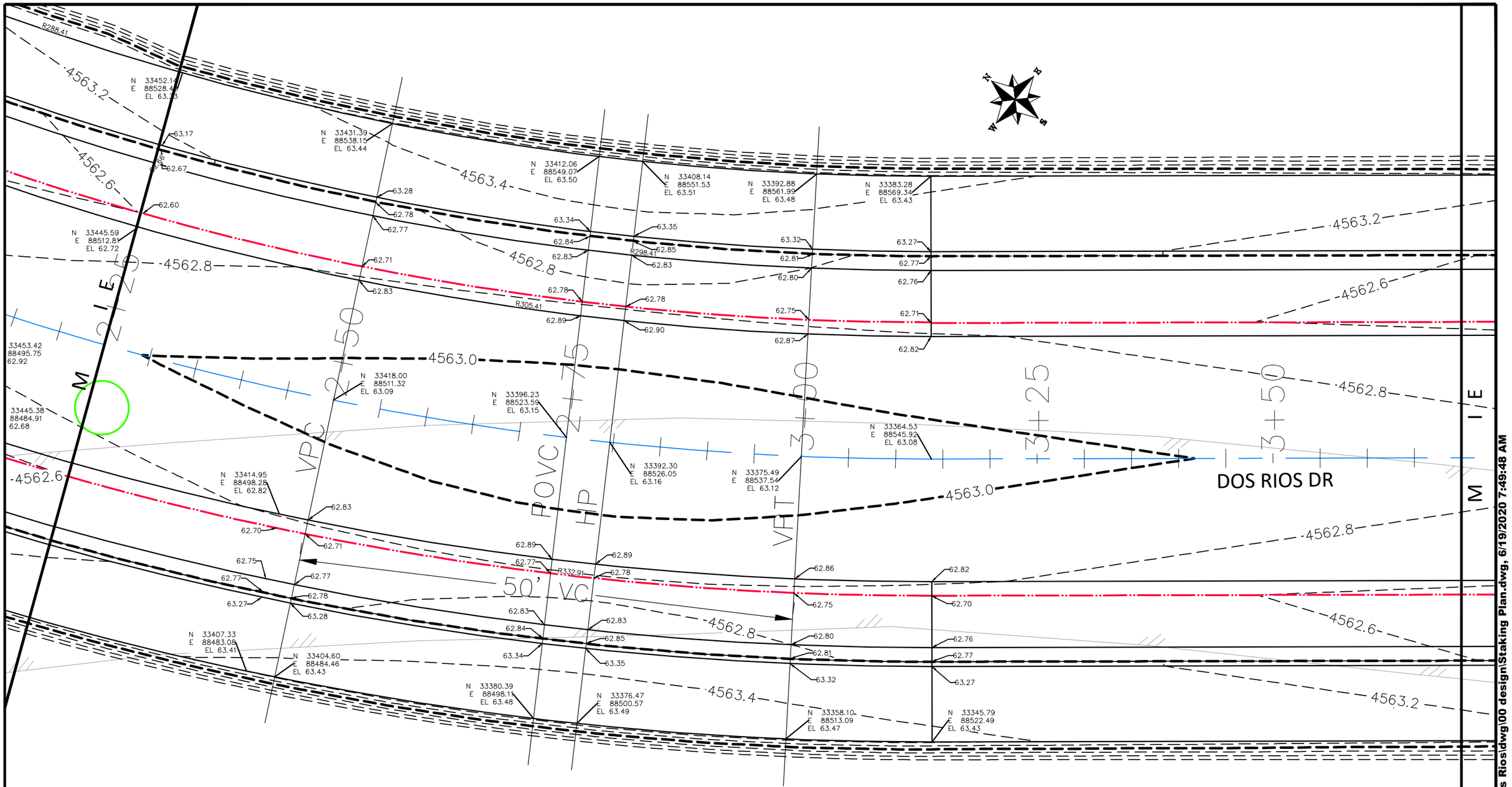

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–17
June 19, 2020

198

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CURB, GUTTER, ETC
GRADED INDEPENDENT
OF VERTICAL CURB

50'+VC

DOS RIOS DR

3+75

4+00

4+25

4+50

4+75

5+00

M/ I E

VPC

LP

PC

PVC

VP

PVC

4563.2

4562.8

4562.6

4563.0

4563.4

R6.42

R6.42

R6.42

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-18
June 19, 2020

199

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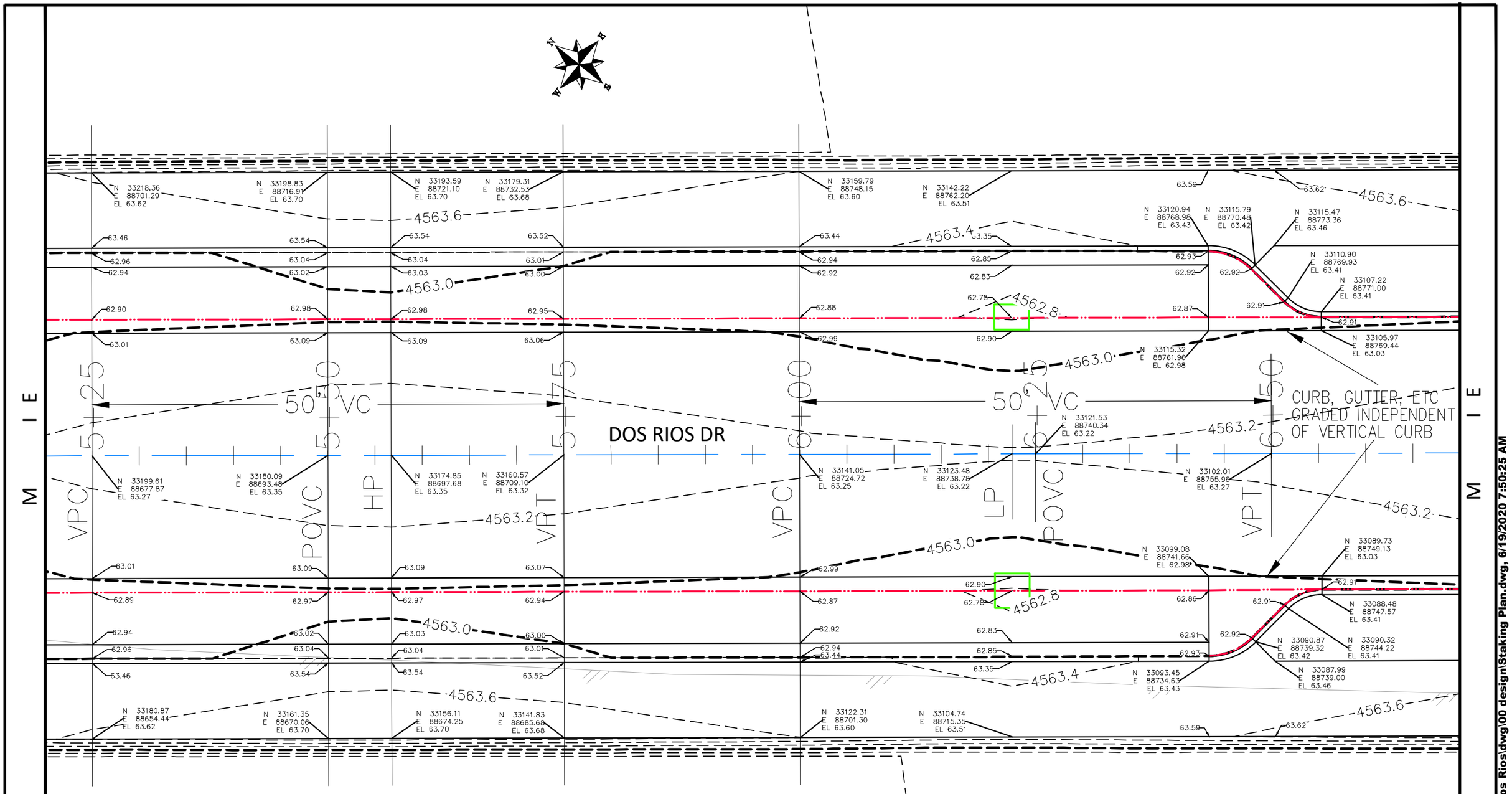

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA 1" NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-19
June 19, 2020

200

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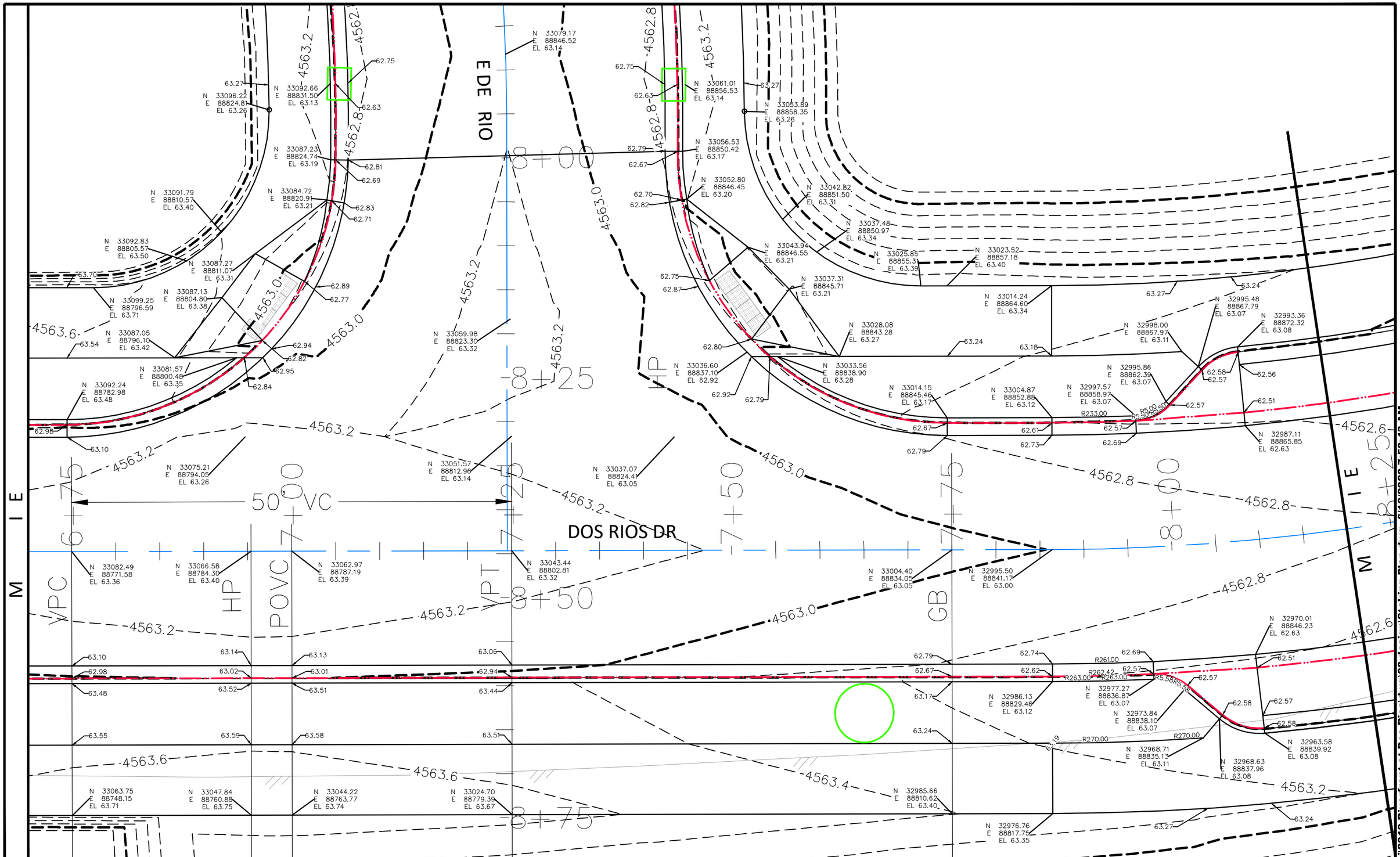

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REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-20
June 19, 2020

201

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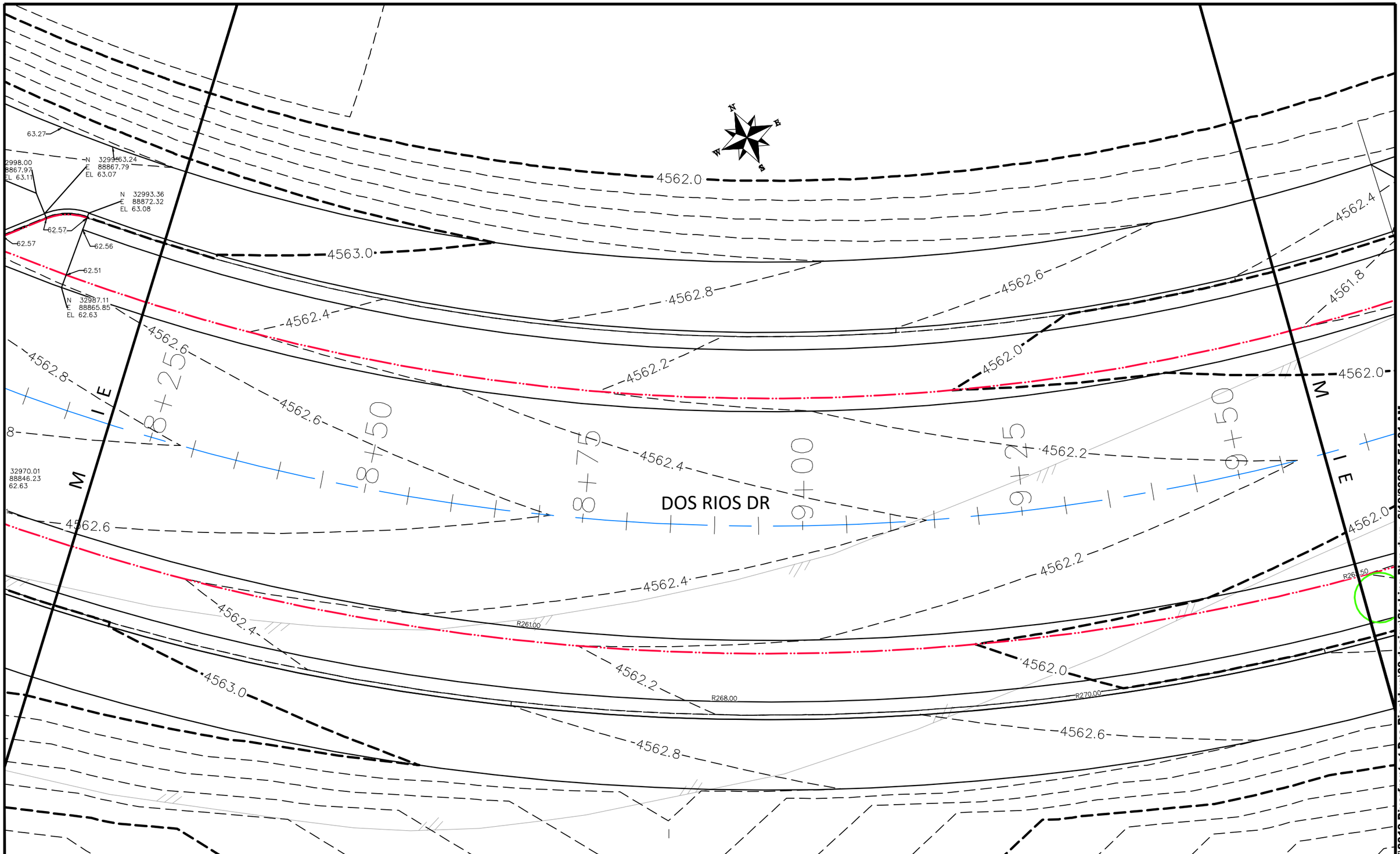

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-21
June 19, 2020

202

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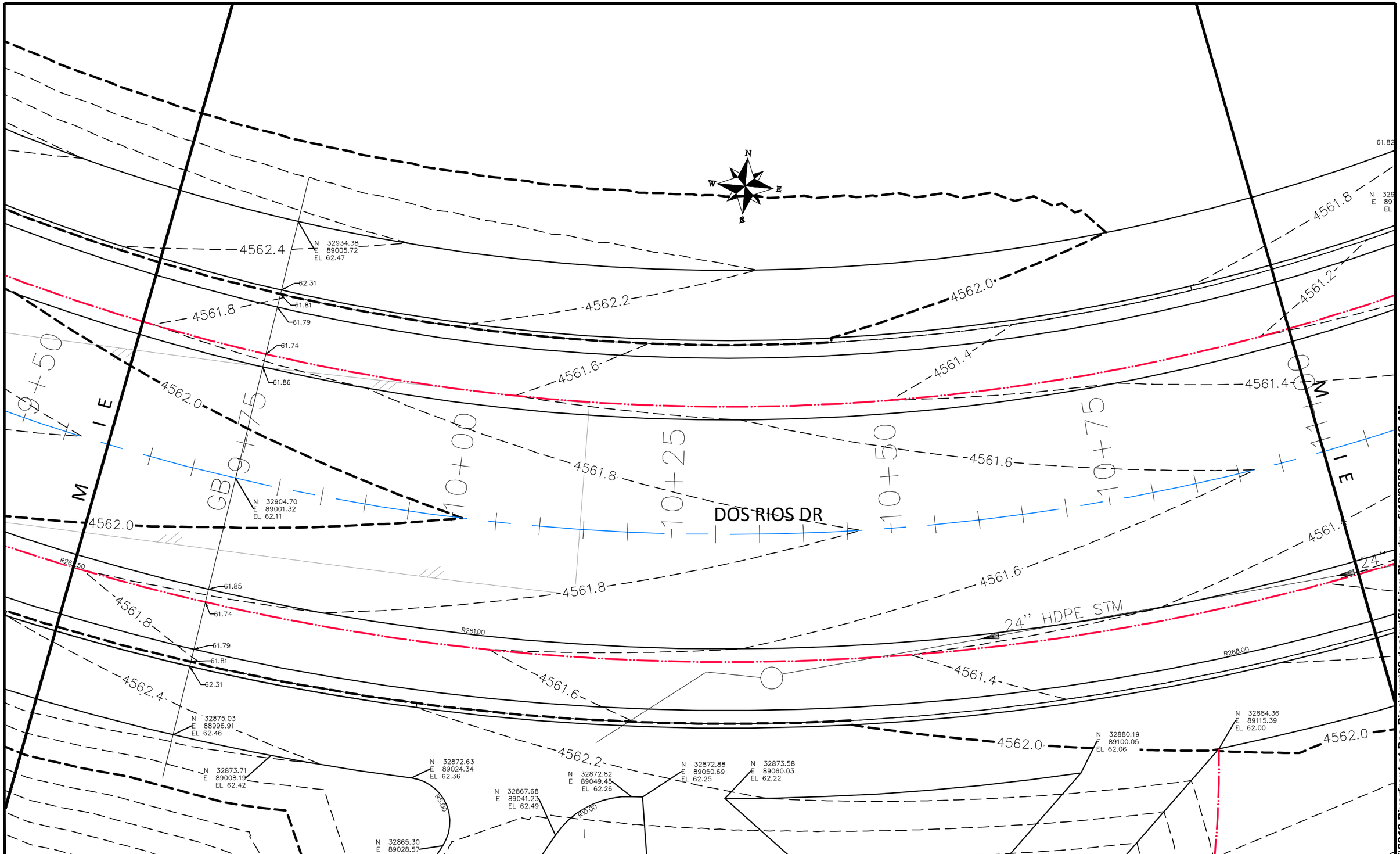

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-22
June 19, 2020

203

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 7:51:19 AM

DOS RIOS DR

24" HDPE STM

18" HDPE

2' C&G

CONC

FLOWLINE

GB

LP

I E

4561.8

4561.2

4562.0

4563.0

12+50

12+00

11+75

11+25

0+50

0+25

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DESCRIPTION	DATE
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REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–23
June 19, 2020

204

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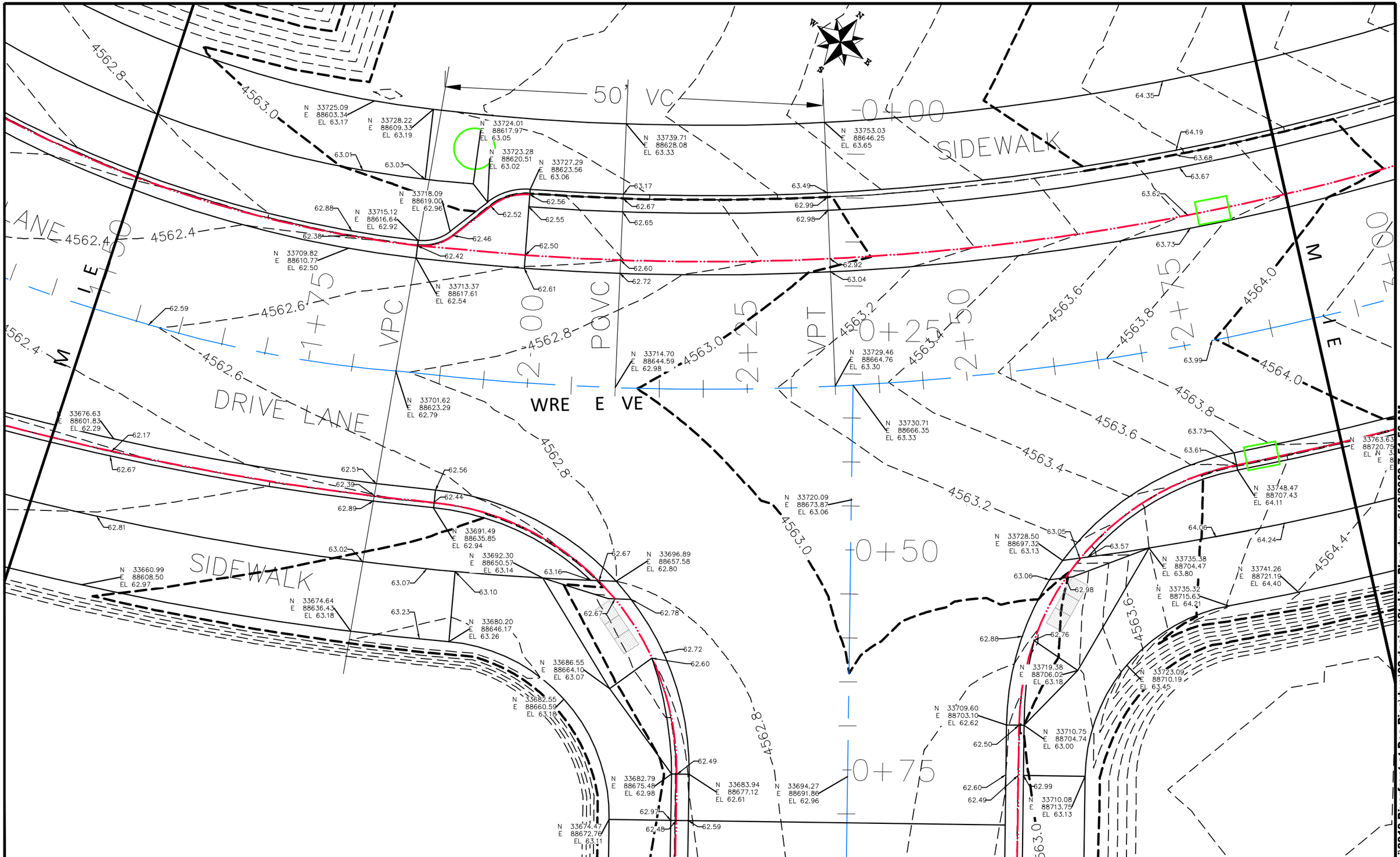

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-24
June 19, 2020

205

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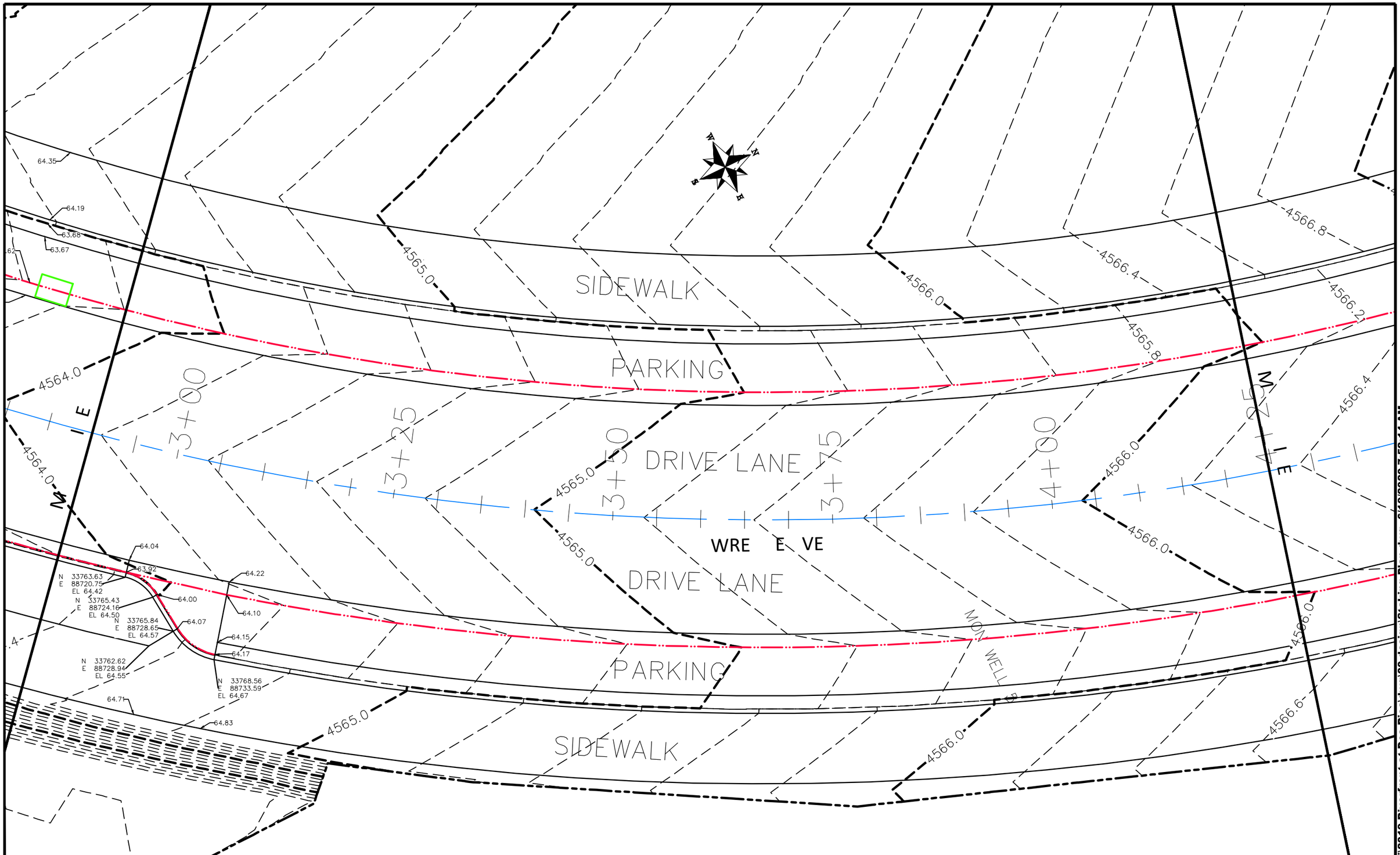

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-25
June 19, 2020

206

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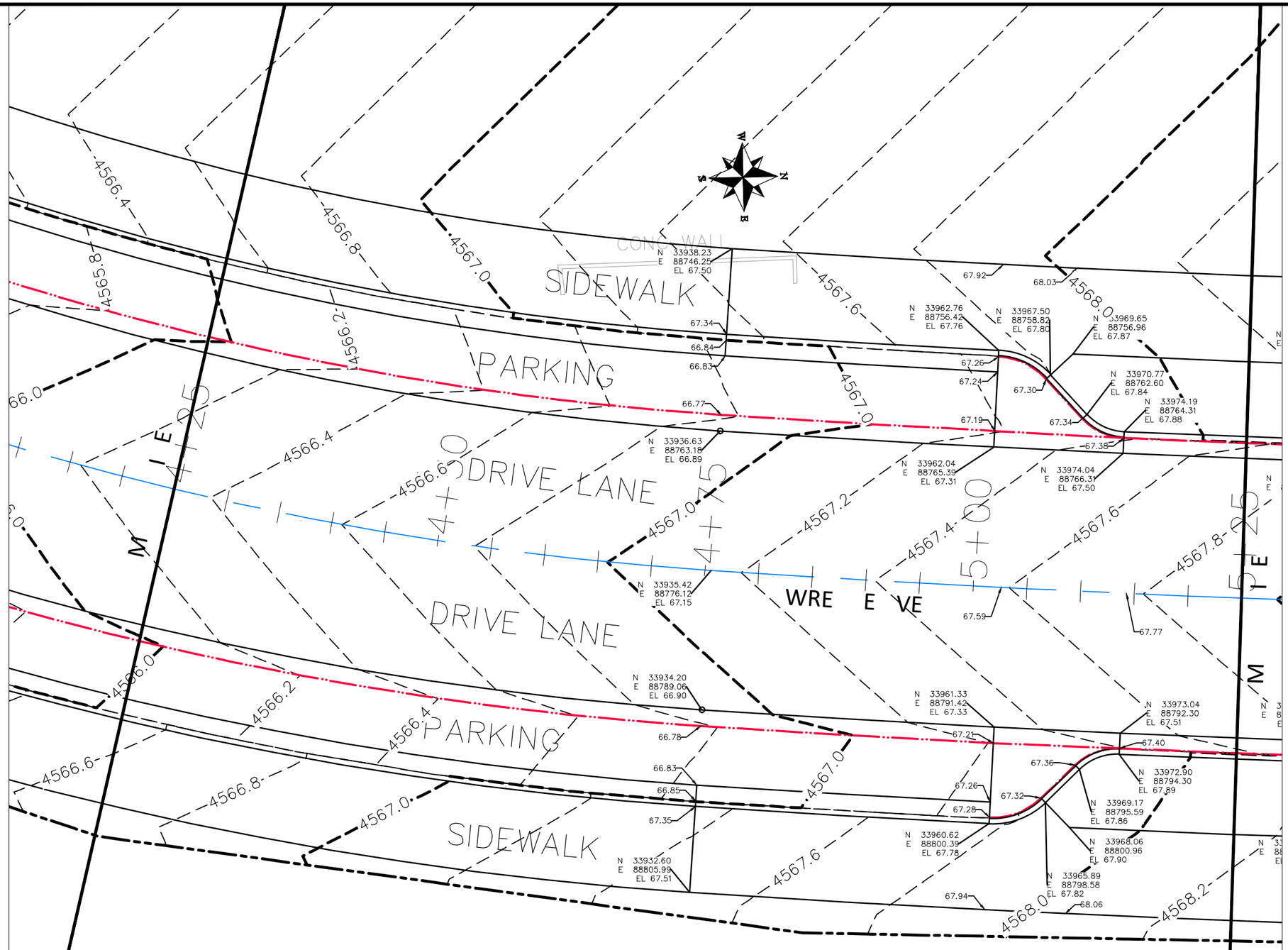

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–26
June 19, 2020

207

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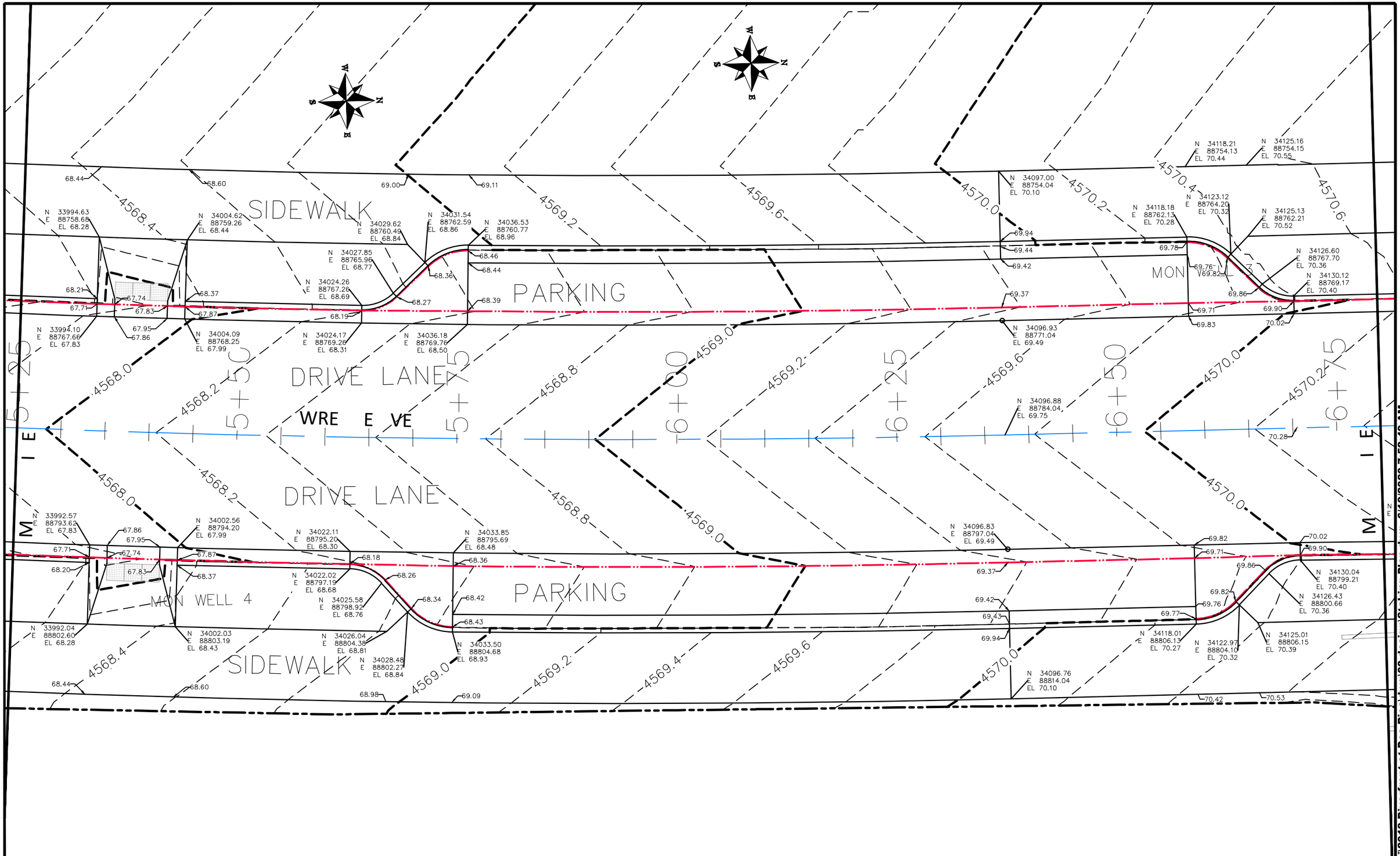

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-27
June 19, 2020

208

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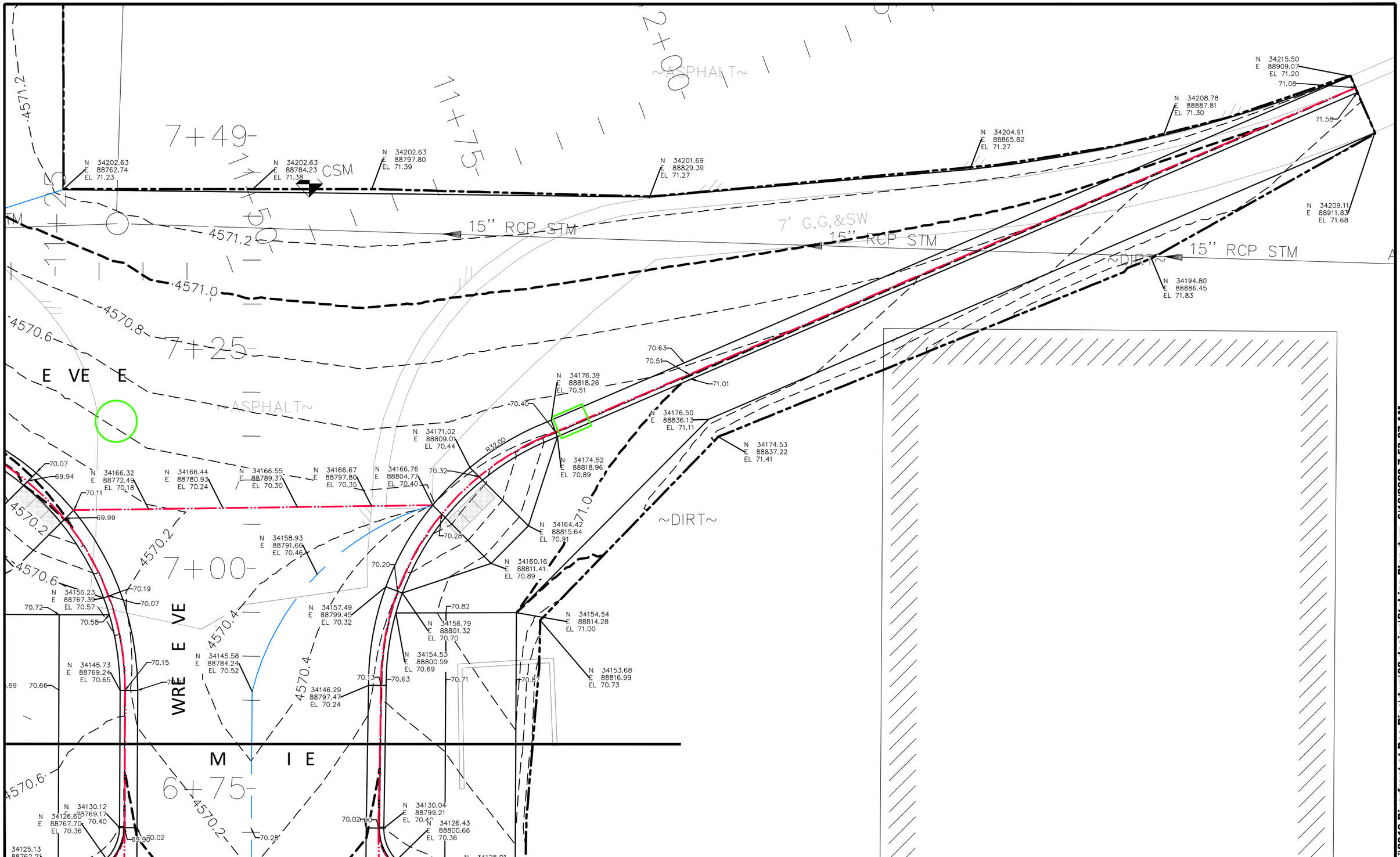

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-28
June 19, 2020

209

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 7:53:07 AM

MON WELL 10

N 33710.08
E 88713.75
EL 63.13

75
74
62.99
4563.0
4562.8
62.49
62.60
4562.6
4562.4
4562.8
1+00
1+25
1+50
1+75
2+00
M I E
E DE RIO
M I E
N 33694.27
E 88691.86
EL 62.96
4562.8
4562.6
4562.4
N 33683.94
E 88677.12
EL 62.61
62.59
N 33682.78
E 88675.48
EL 62.98
62.48
4563.0
4562.8
4562.6
N 33674.47
E 88672.76
EL 63.11

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–29
June 19, 2020

210

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 7:53:25 AM

E DE RIO

CURB, GUTTER, WALK
GRADED INDEPENDENT
OF VERTICAL CURB

DESEO DR

VPC

POVC

VPT

N 33526.06
E 88842.58
EL 62.45

N 33514.05
E 88850.98
EL 62.40

N 33508.32
E 88854.99
EL 62.44

N 33505.68
E 88883.40
EL 62.98

N 33495.18
E 88888.22
EL 62.70

N 33498.89
E 88878.02
EL 62.74

N 33498.58
E 88872.02
EL 62.62

N 33493.84
E 88862.26
EL 62.45

N 33503.16
E 88847.62
EL 61.91

N 33461.59
E 88876.69
EL 62.20

N 33510.57
E 88820.46
EL 62.29

N 33498.57
E 88828.86
EL 62.27

N 33490.09
E 88834.80
EL 62.28

N 33469.61
E 88849.14
EL 62.40

N 33495.08
E 88798.35
EL 62.45

N 33483.08
E 88806.75
EL 62.40

N 33464.90
E 88830.46
EL 62.01

N 33458.36
E 88835.04
EL 62.05

N 33459.74
E 88823.09
EL 62.52

N 33448.39
E 88842.02
EL 62.13

N 33441.80
E 88846.63
EL 62.19

N 33451.98
E 88828.52
EL 62.33

N 33436.64
E 88839.26
EL 62.71

N 33442.01
E 88835.50
EL 62.48

N 33439.89
E 88833.32
EL 62.67

N 33448.46
E 88824.93
EL 62.59

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–30
June 19, 2020

211

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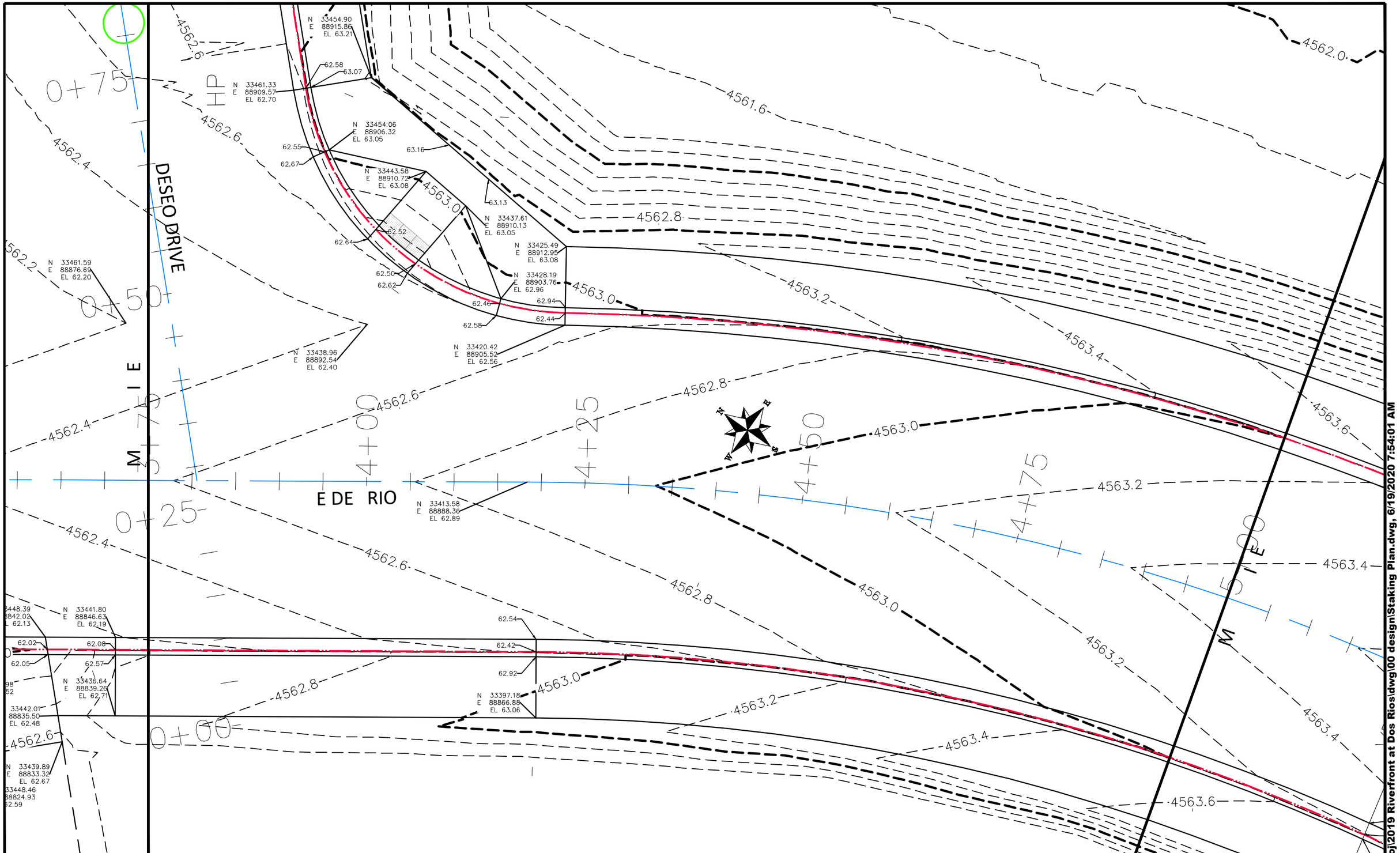

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REVISION △	

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-31
June 19, 2020

212

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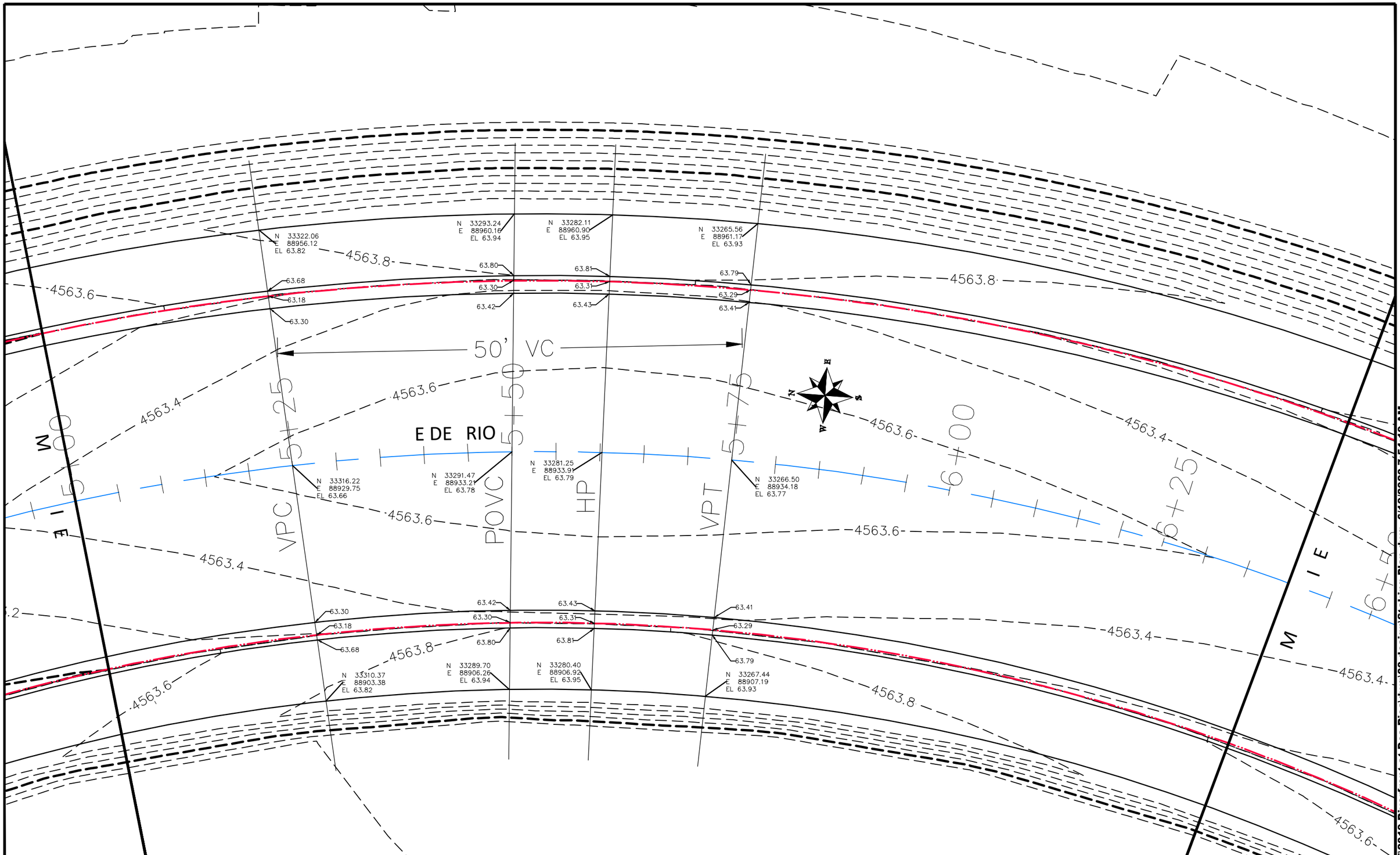

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REVISION △	
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REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-32
June 19, 2020

213

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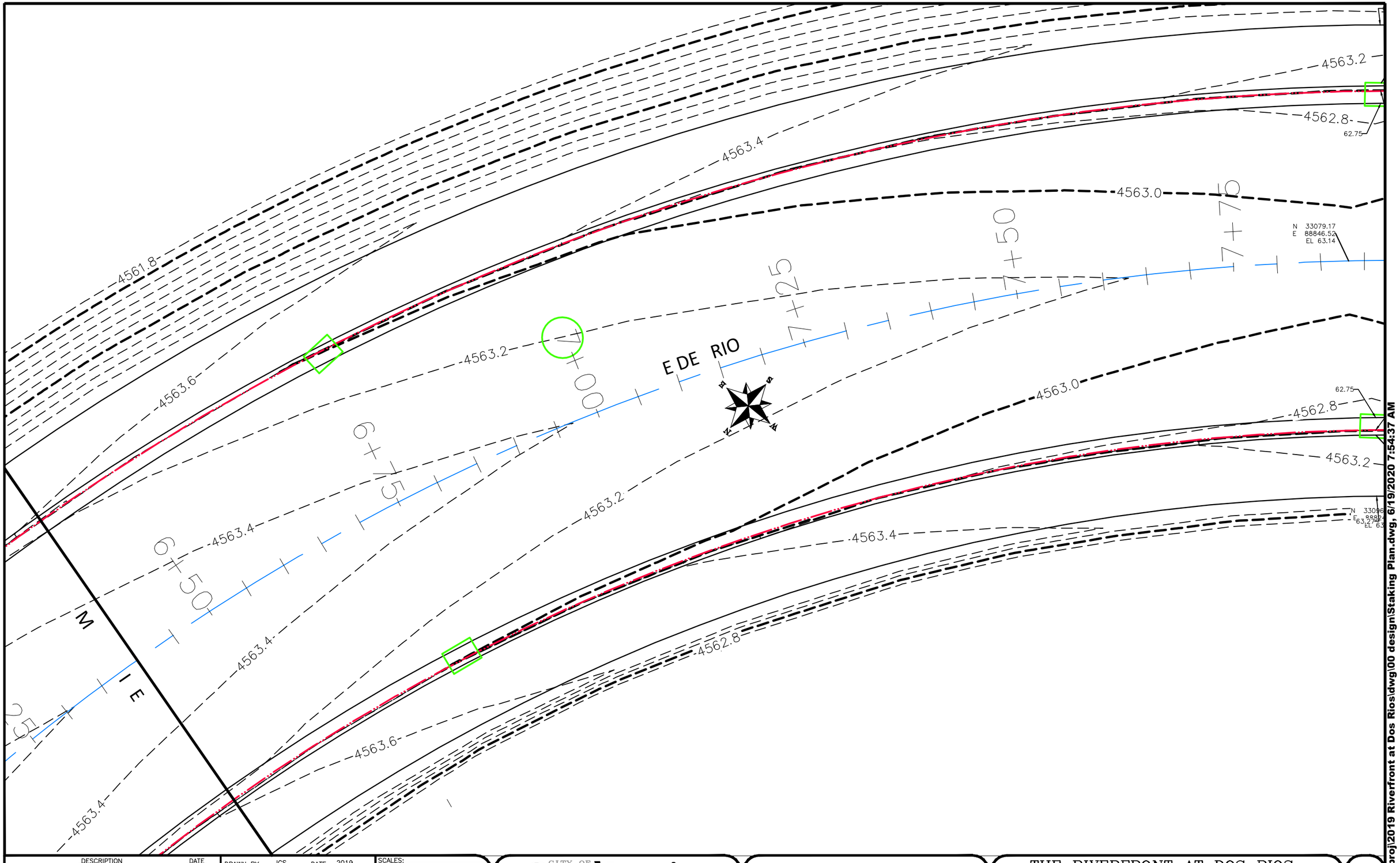

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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-33
June 19, 2020

214

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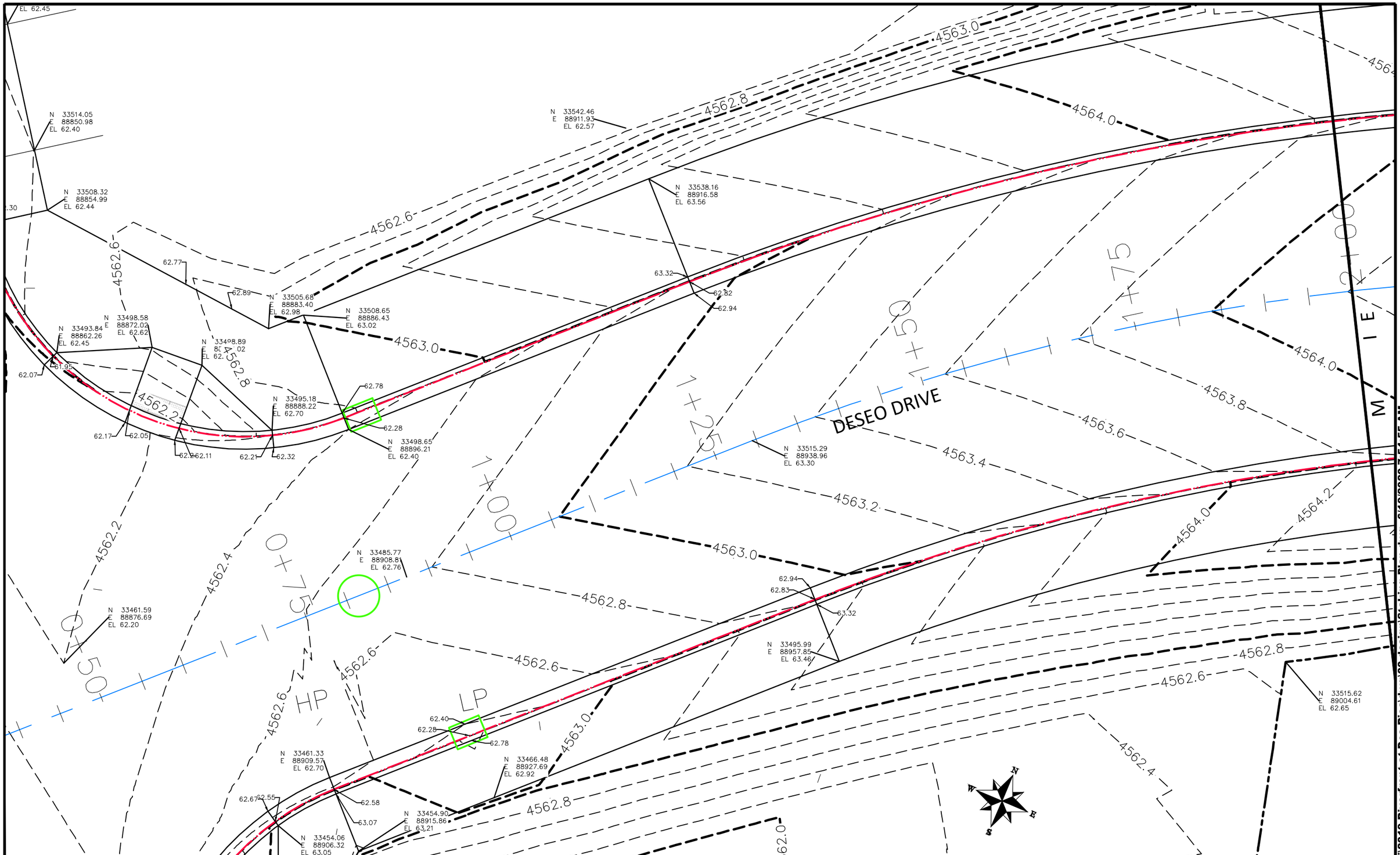

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-34
June 19, 2020

215

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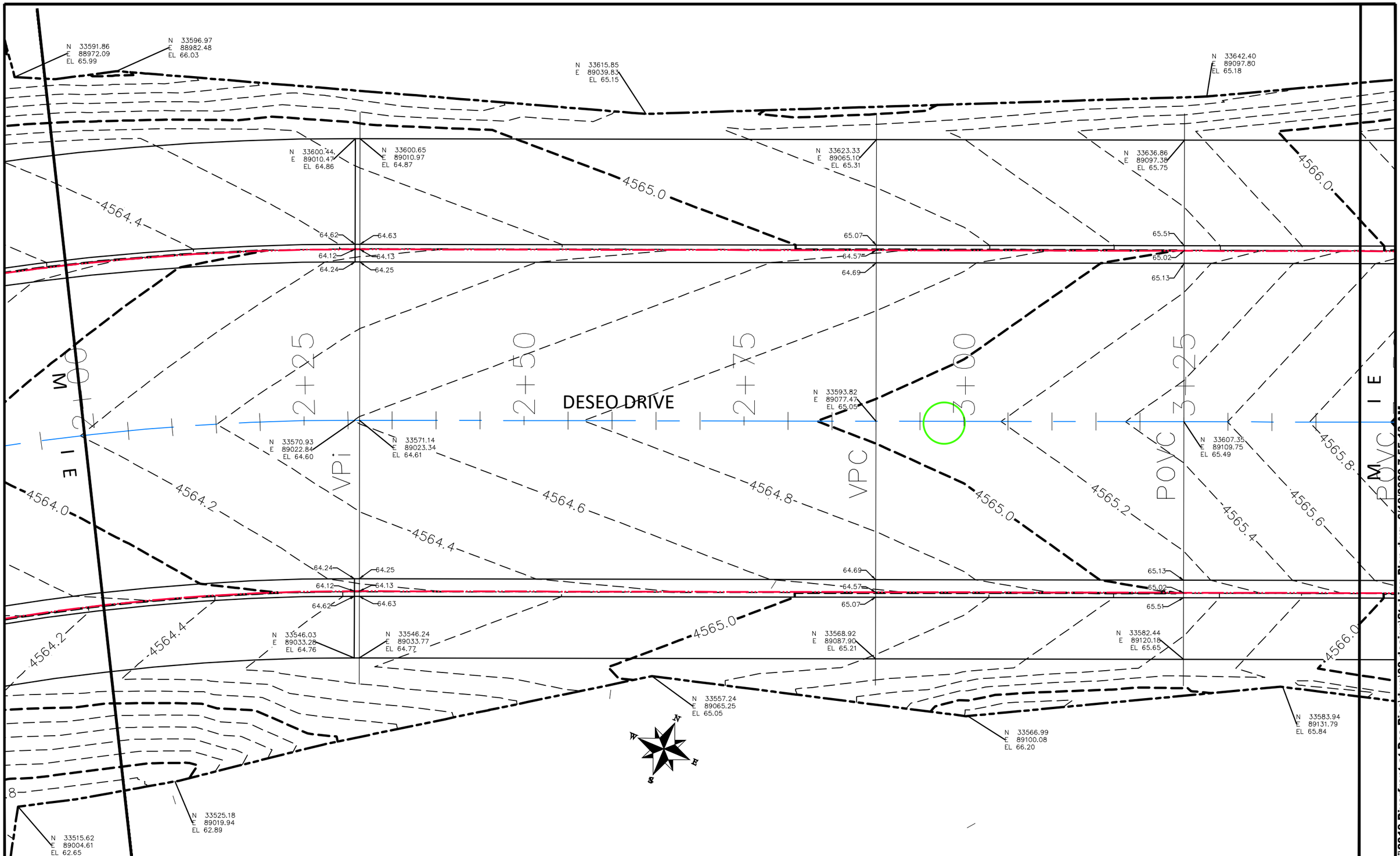

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REVISION △	
REVISION △	

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CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES: PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-35
June 19, 2020

216

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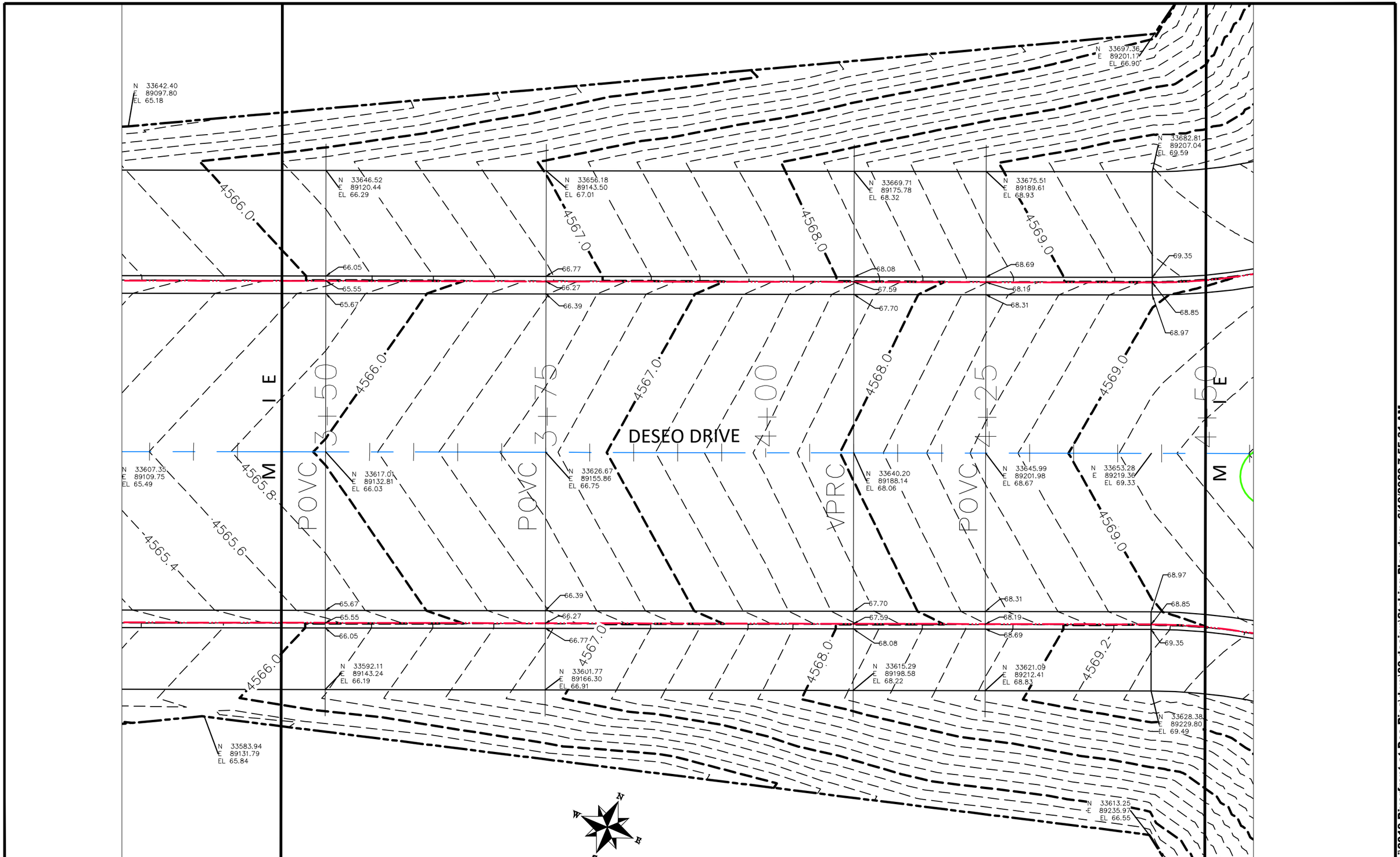

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-36
June 19, 2020

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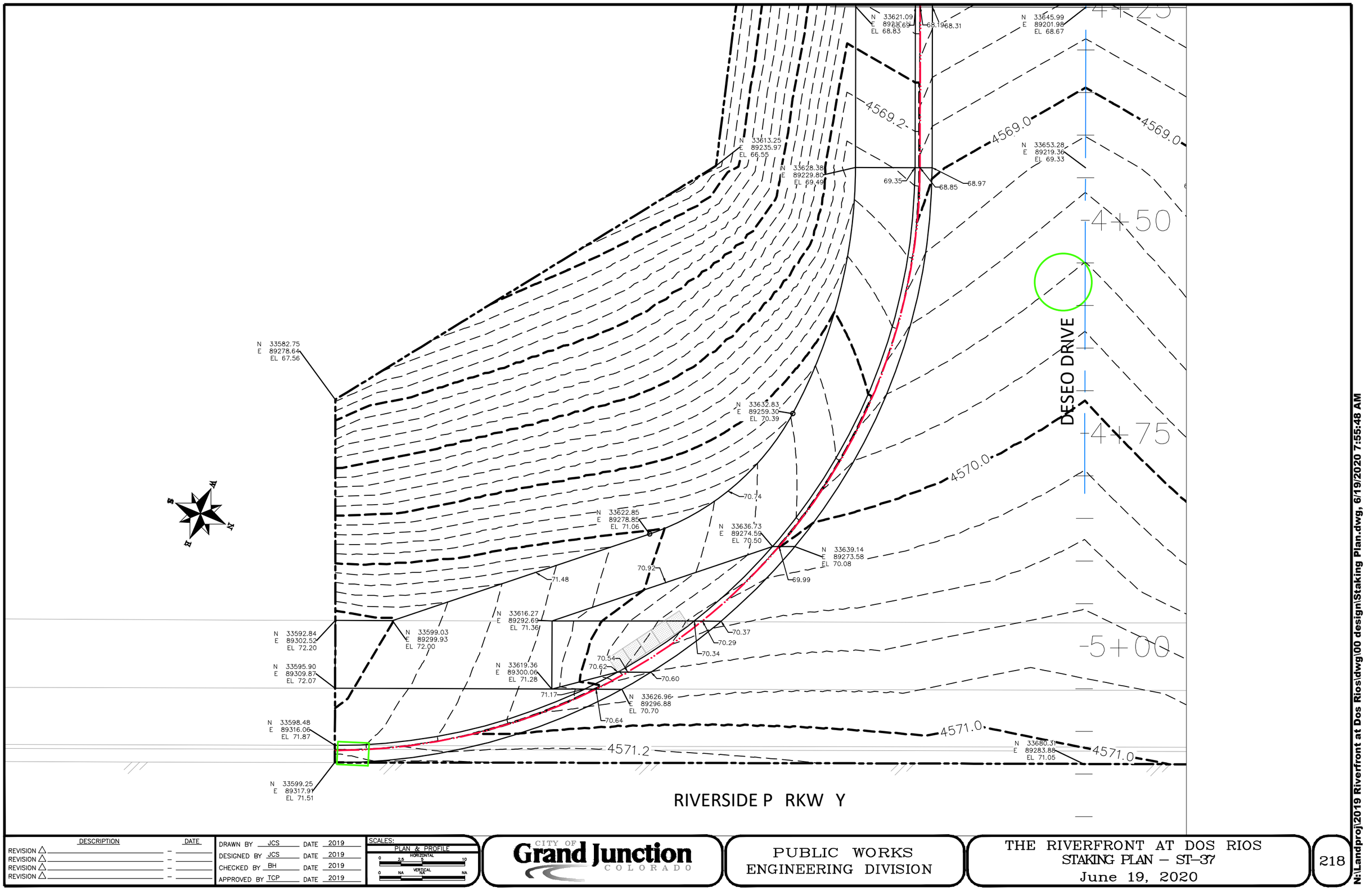

DESCRIPTION	DATE
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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-37
June 19, 2020

218

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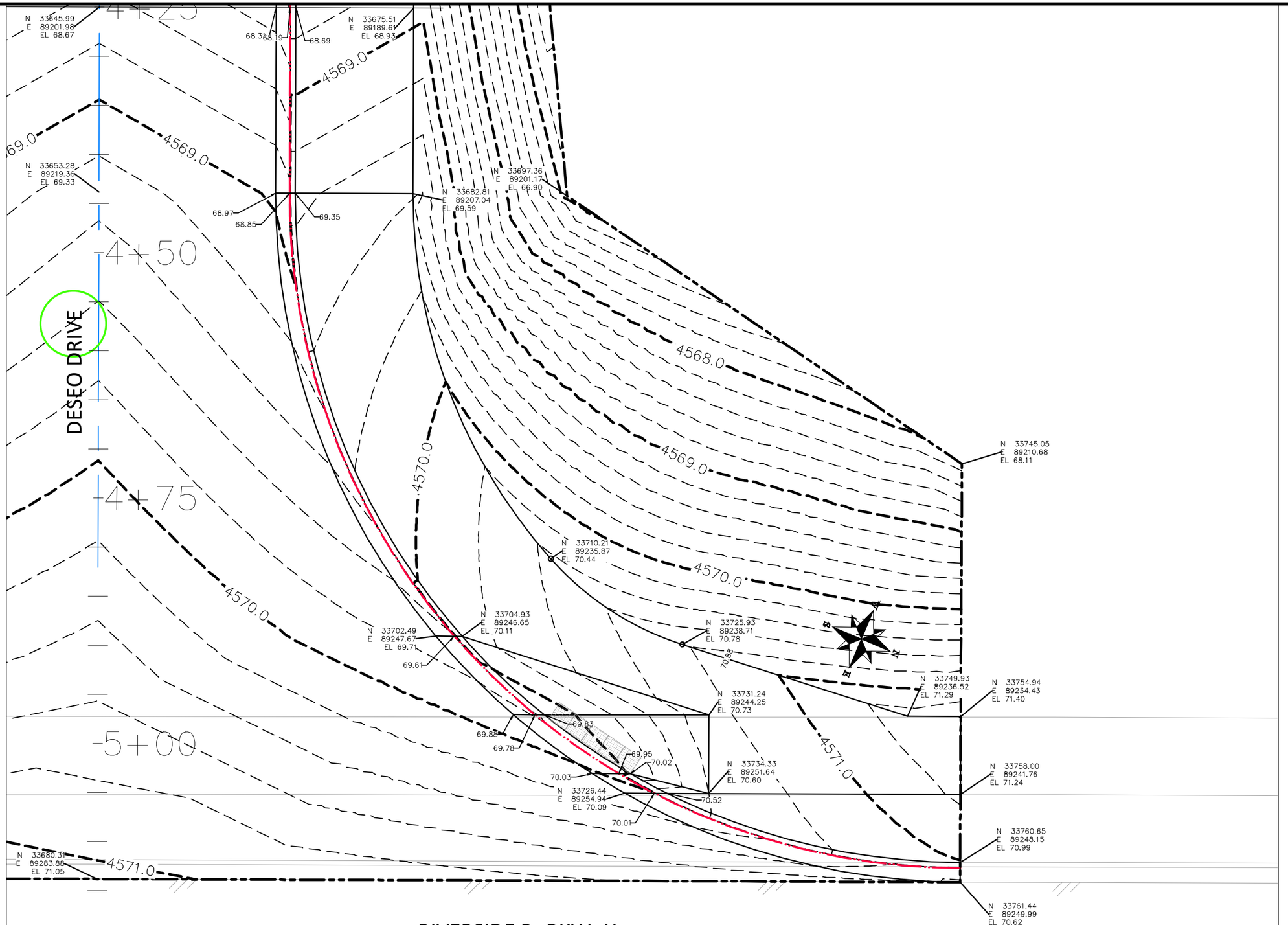

DESCRIPTION	DATE
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REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–38
June 19, 2020

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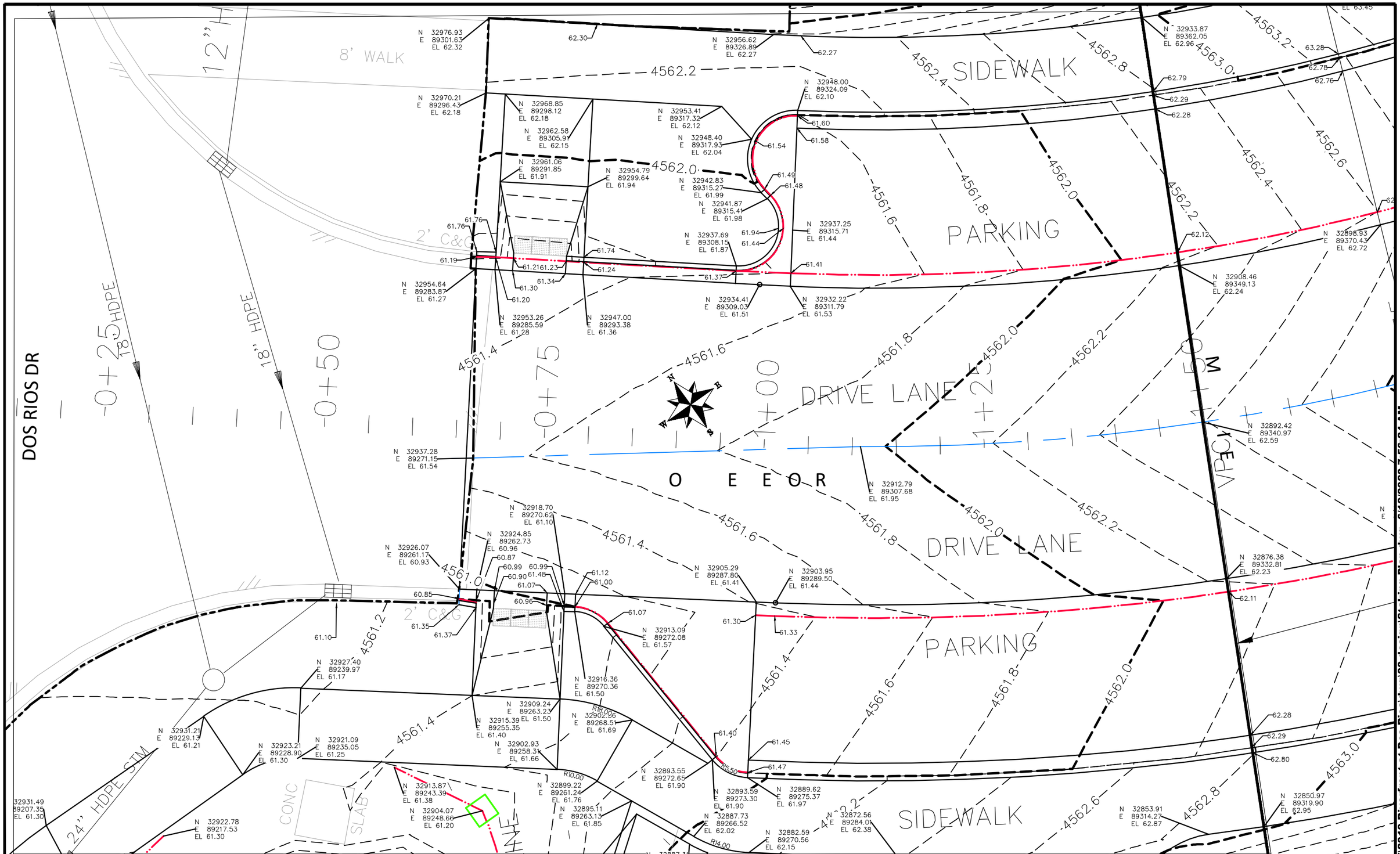

DESCRIPTION	DATE
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REVISION △	
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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-39
June 19, 2020

220

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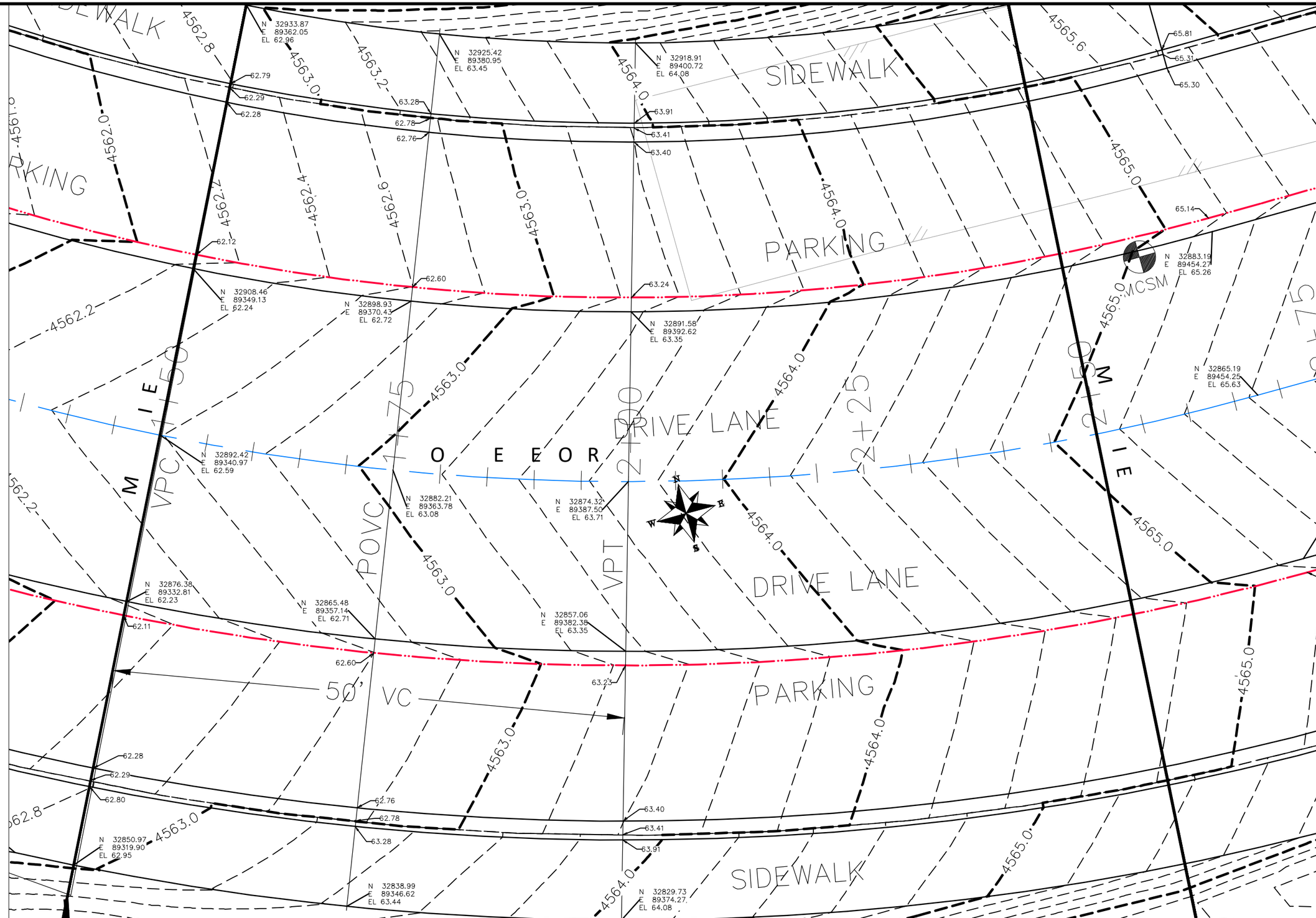

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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-40
June 19, 2020

221

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 7:56:42 AM

SIDEWALK

PARKING

DRIVE LANE

PARKING

SIDEWALK

MCSM

N 32911.69
E 89454.29
EL 65.98

N 32911.63
E 89517.66
EL 67.75

N 32910.48
E 89541.44
EL 68.30

N 32906.61
E 89570.38
EL 68.79

N 32883.19
E 89454.27
EL 65.26

N 32883.14
E 89517.06
EL 67.03

N 32882.13
E 89538.51
EL 67.56

N 32878.64
E 89564.90
EL 68.07

N 32865.19
E 89454.25
EL 65.63

N 32865.14
E 89516.68
EL 67.40

N 32864.22
E 89536.65
EL 67.92

N 32860.97
E 89561.43
EL 68.43

N 32847.19
E 89454.24
EL 65.27

N 32847.14
E 89516.30
EL 67.04

N 32846.31
E 89534.80
EL 67.55

N 32843.31
E 89557.97
EL 68.07

N 32818.69
E 89454.22
EL 66.01

N 32818.65
E 89515.69
EL 67.77

N 32817.95
E 89531.87
EL 68.26

N 32815.34
E 89552.49
EL 68.80

200' VC

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-41
June 19, 2020

222

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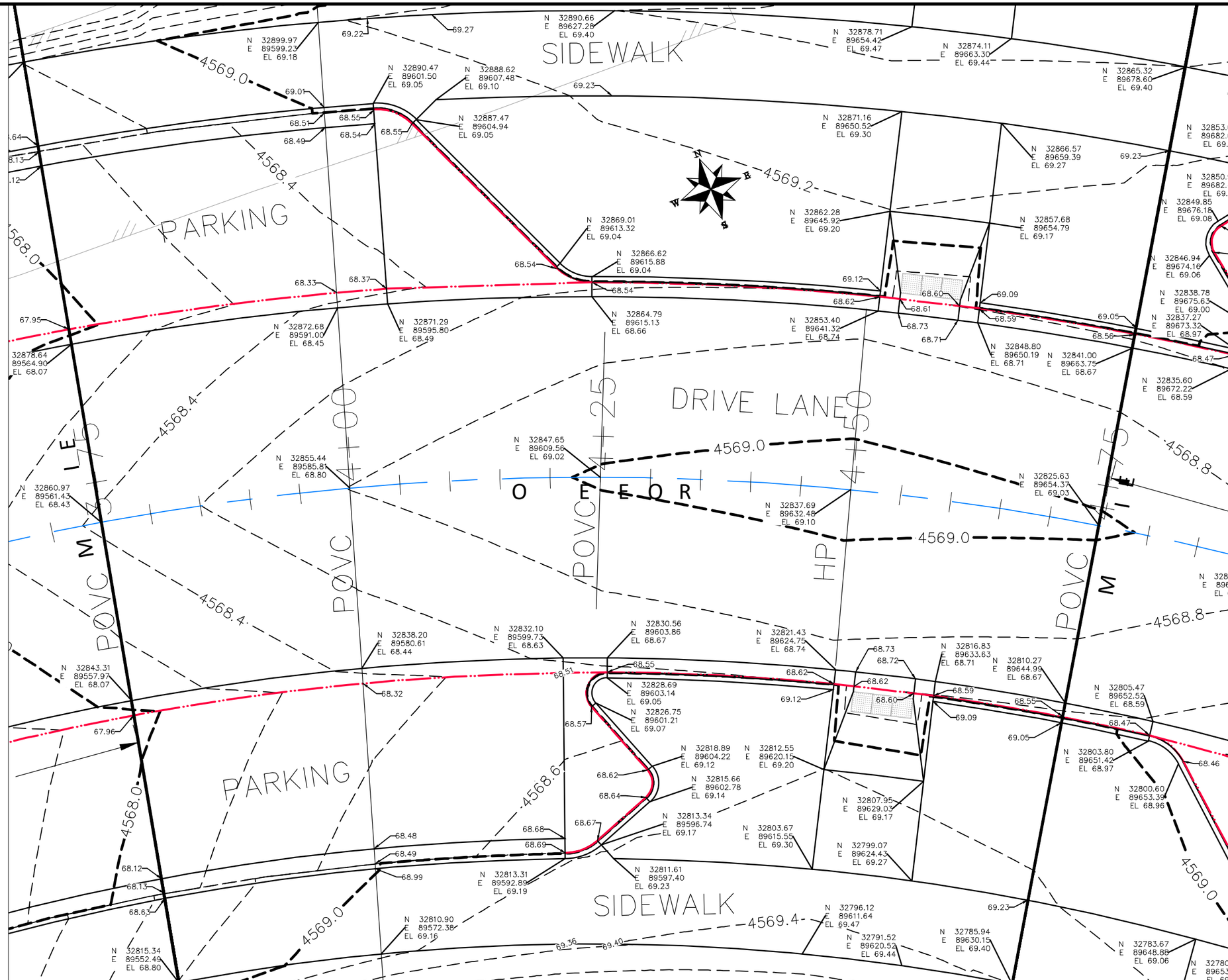

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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-42
June 19, 2020

223

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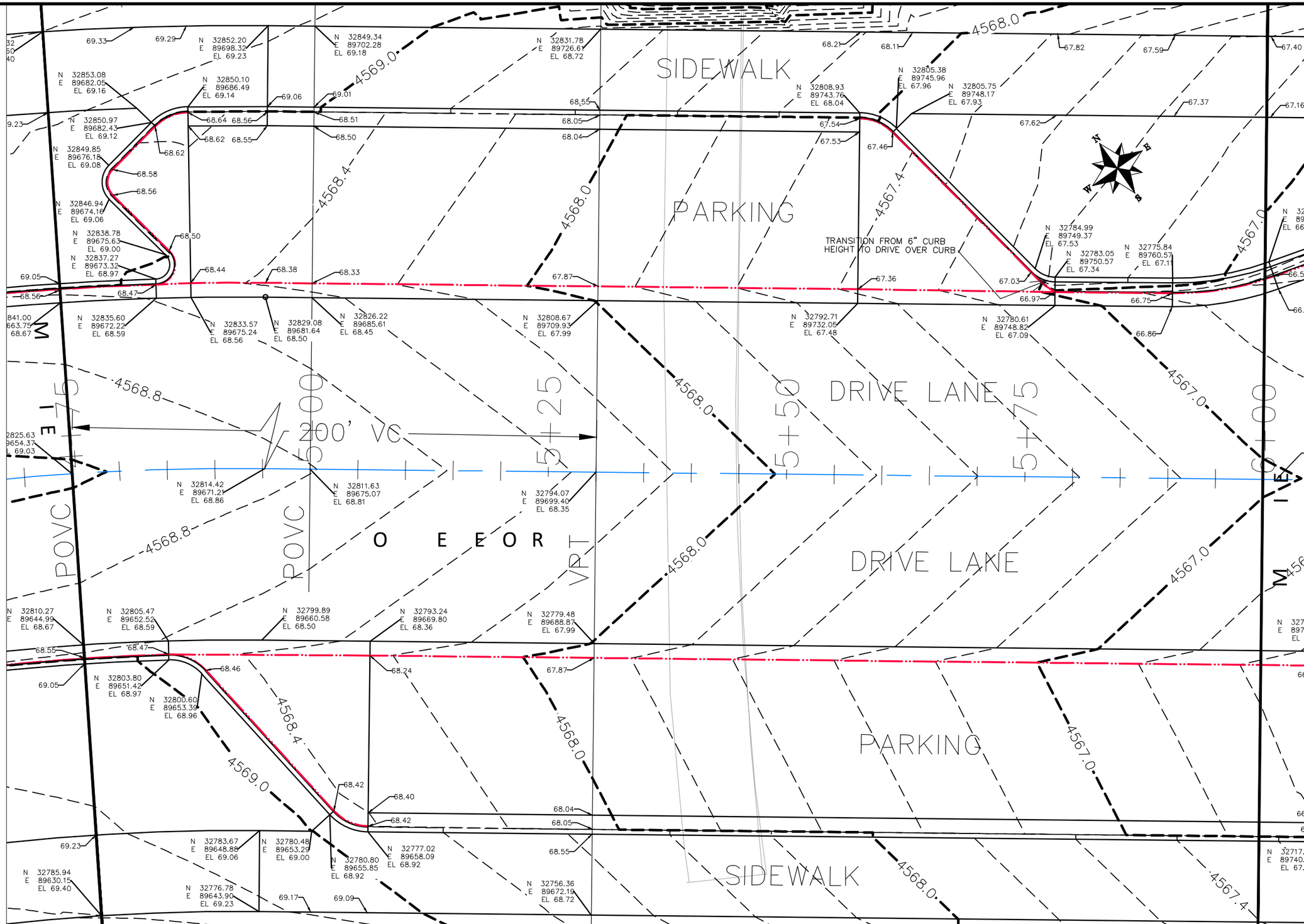

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REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-43
June 19, 2020

224

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 7:57:36 AM

SIDEWALK

DRIVE SURFACE

67.40
66.65
67.16
66.53
66.65
67.02
66.07
65.95
65.97
65.85
65.86
65.73
65.56
65.43
66.28
66.30
66.16
66.40
65.09
65.21
64.98
65.10
64.67
64.79

N 32761.66
E 89823.80
EL 66.27

N 32764.76
E 89804.97
EL 66.50

N 32759.03
E 89812.65
EL 66.22

N 32762.04
E 89803.67
EL 66.32

N 32753.76
E 89823.64
EL 66.11

N 32741.93
E 89851.15
EL 65.93

N 32736.66
E 89847.34
EL 65.81

N 32771.40
E 89769.81
EL 66.90

N 32736.43
E 89779.29
EL 66.77

N 32718.63
E 89800.53
EL 66.50

N 32699.35
E 89820.44
EL 66.24

N 32733.50
E 89752.60
EL 66.52

N 32730.57
E 89756.65
EL 66.42

N 32708.24
E 89872.18
EL 65.58

N 32707.14
E 89865.77
EL 65.46

N 32696.11
E 89872.83
EL 65.13

N 32662.96
E 89858.28
EL 64.95

4567.0
4566.8
4566.0
4565.0
4564.8

6+00
6+25
6+50
6+75
7+00
7+25
7+50

TRANSITION FROM 6" CURB HEIGHT TO DRIVE OVER CURB

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-44
June 19, 2020

225

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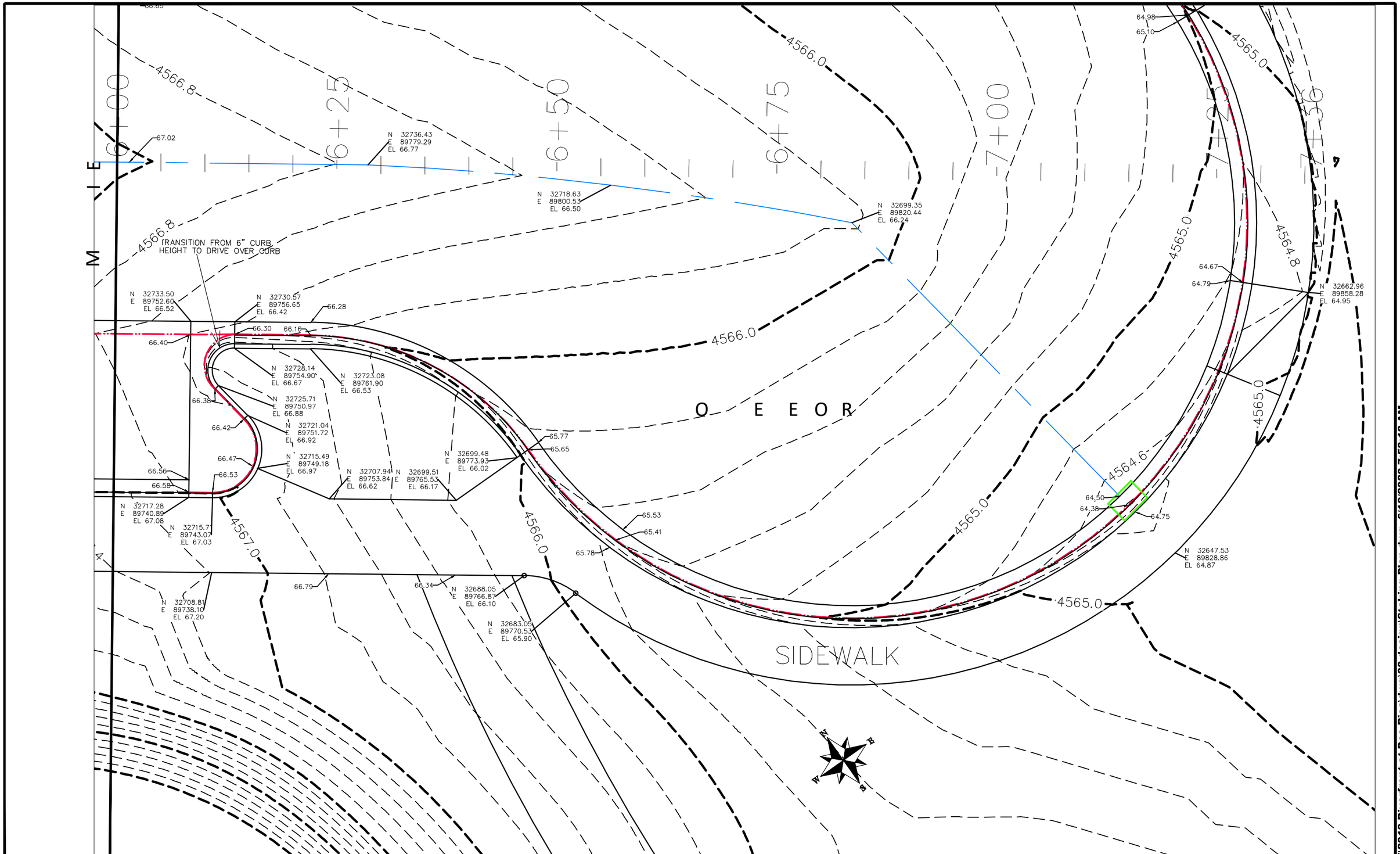

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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 2.5 5 10 VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-45
June 19, 2020

226

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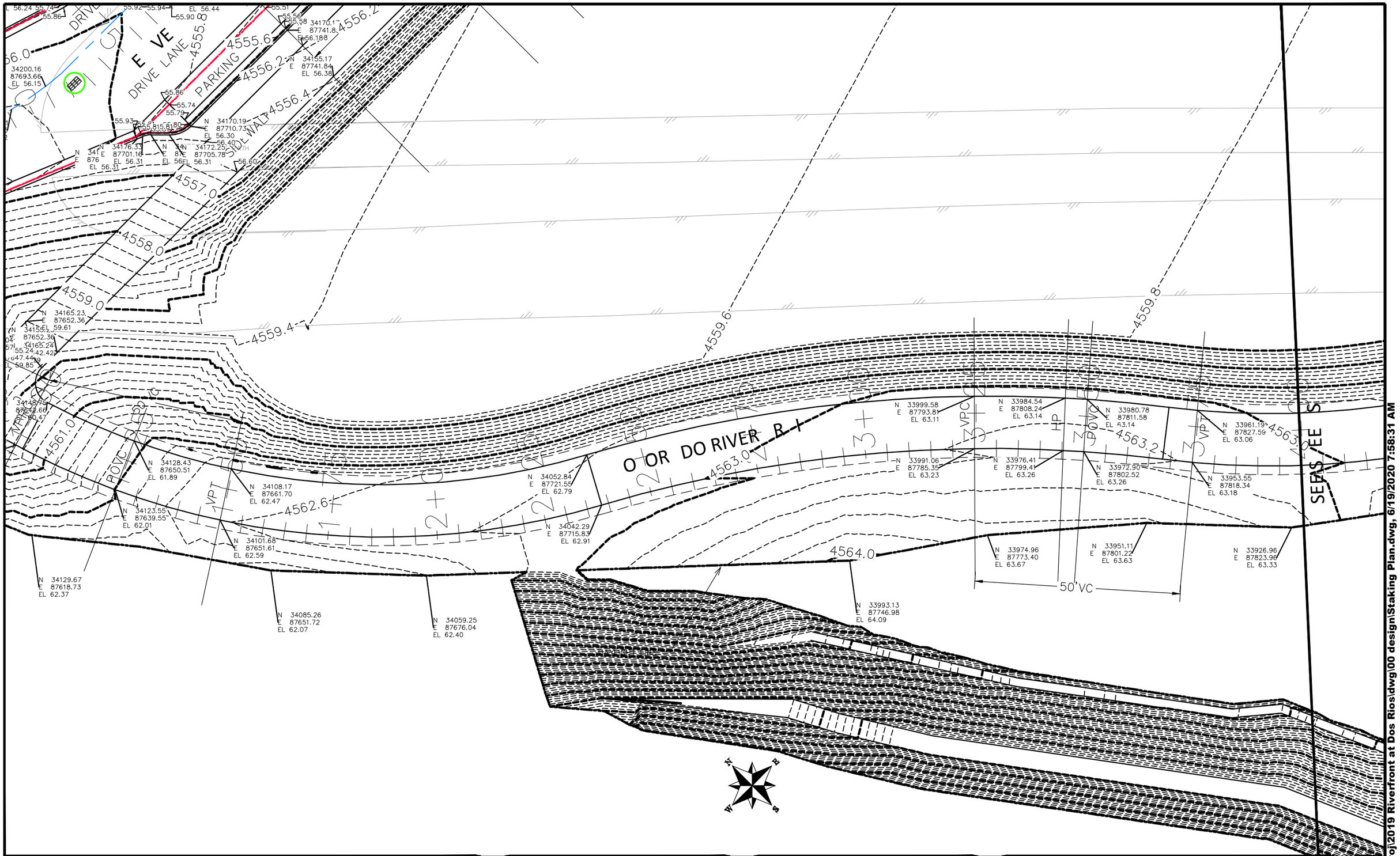

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REVISION △	–
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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-46
June 19, 2020

227

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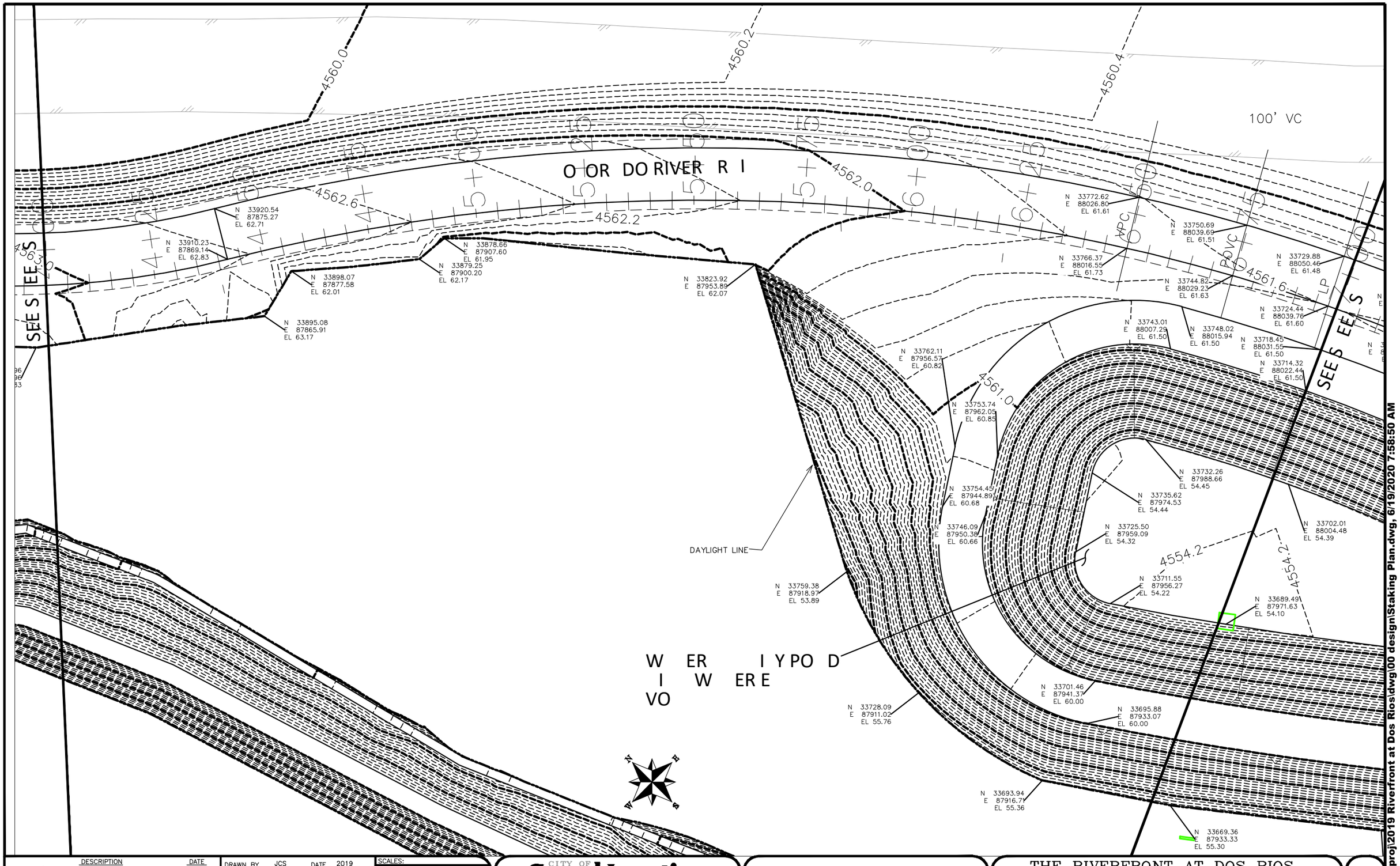

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REVISION △	–
REVISION △	–
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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-47
June 19, 2020

228

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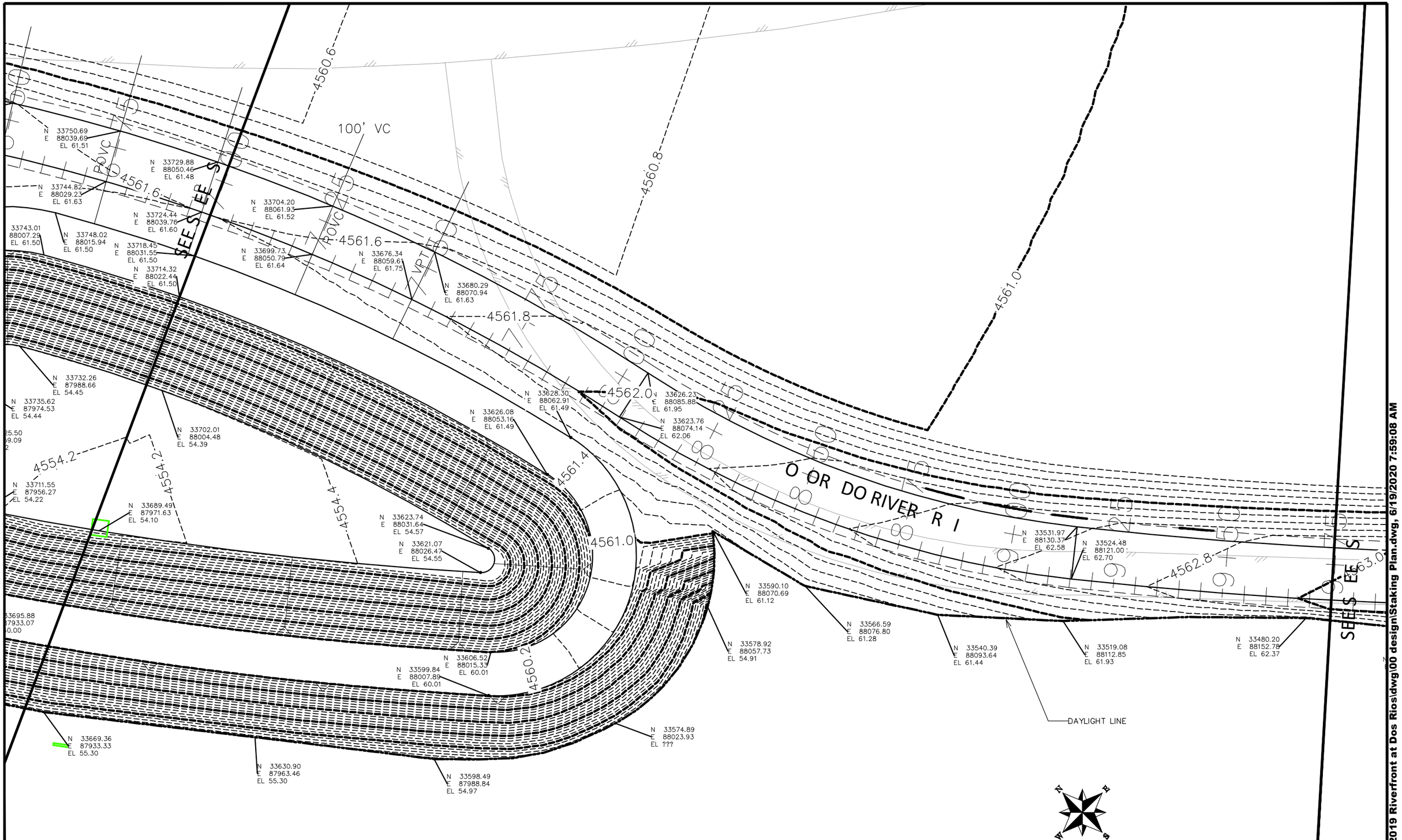

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REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-48
June 19, 2020

229

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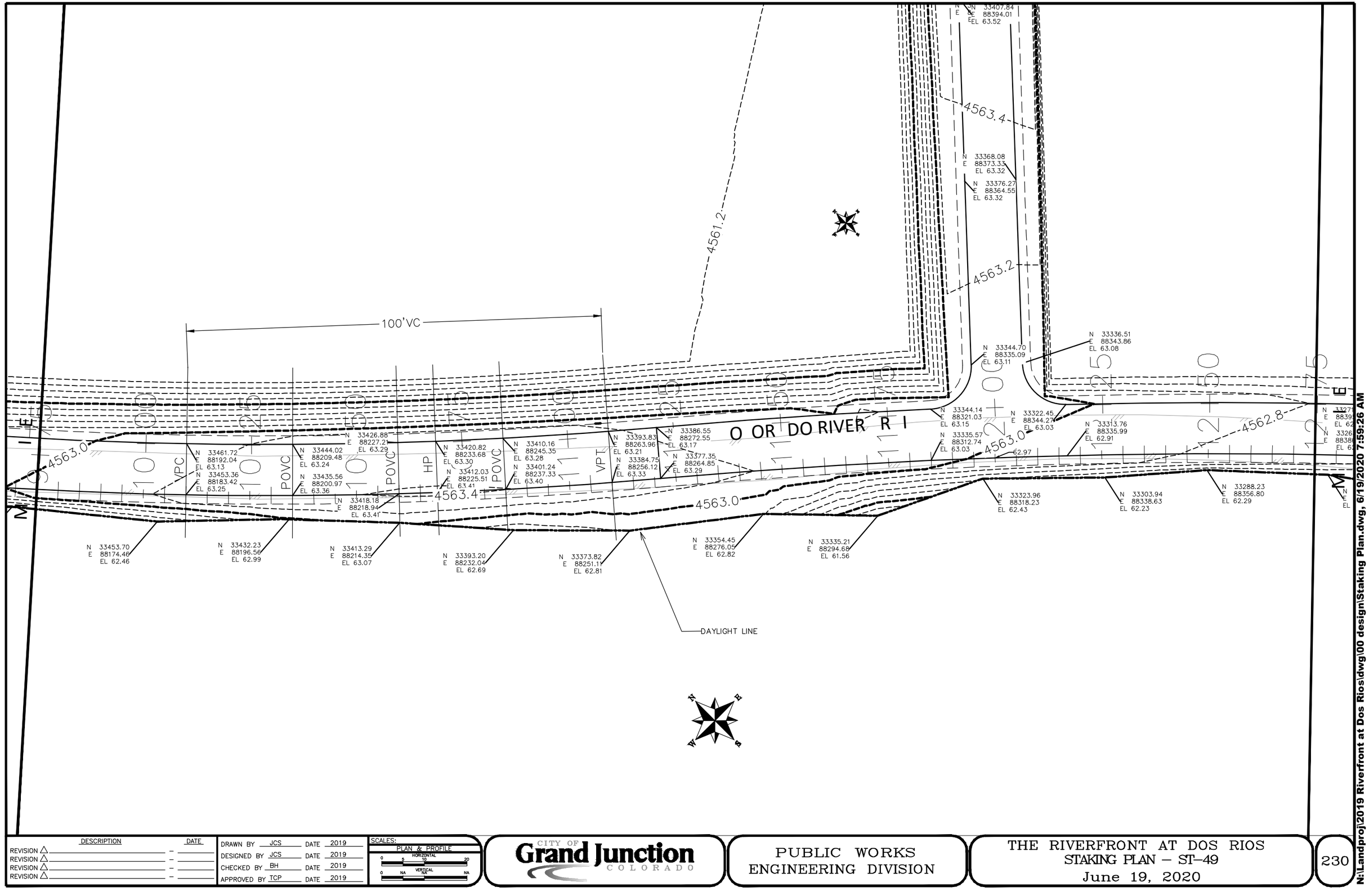

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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–49
June 19, 2020

230

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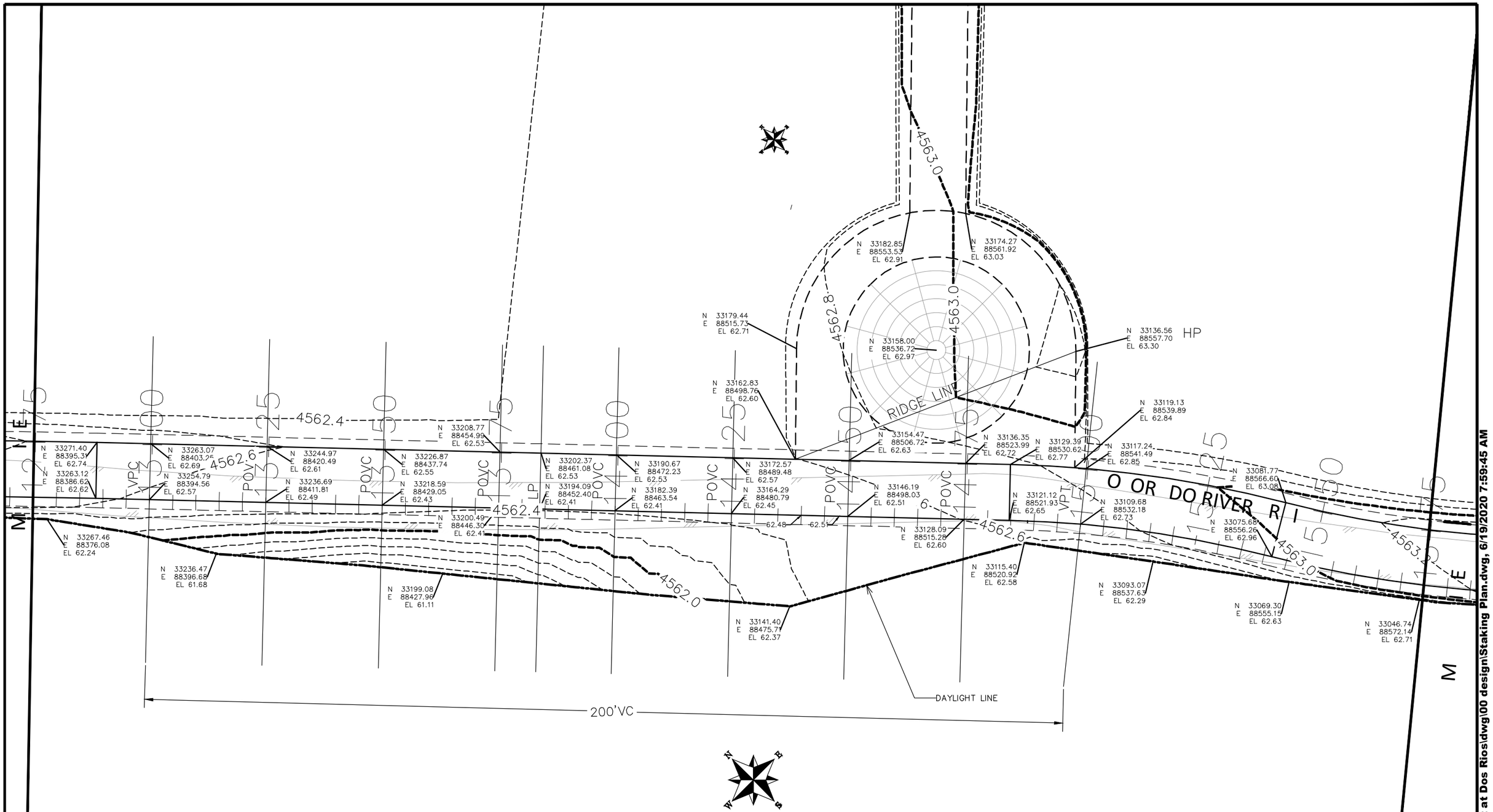

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA N/A NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–50
June 19, 2020

231

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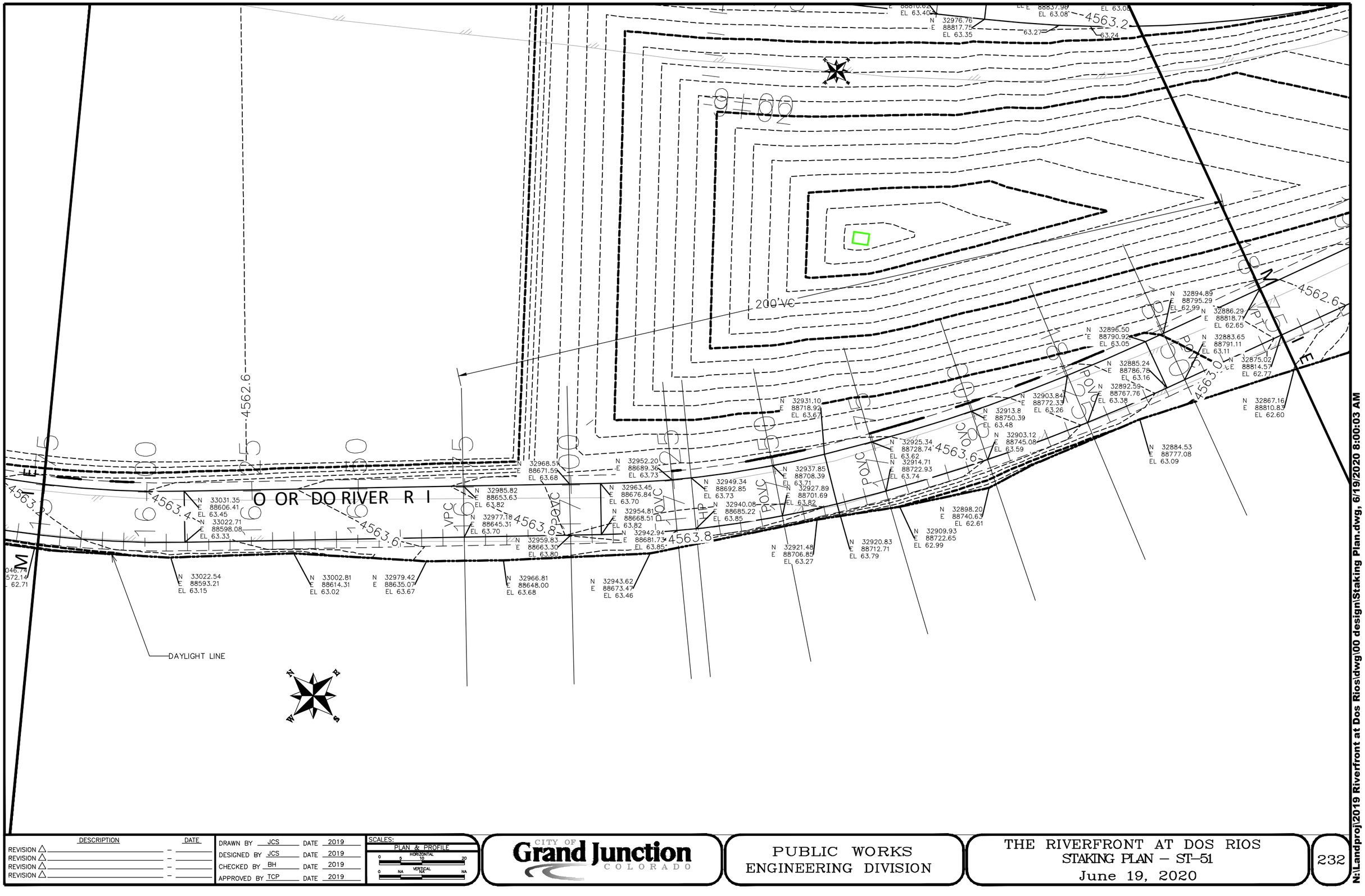

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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–51
June 19, 2020

232

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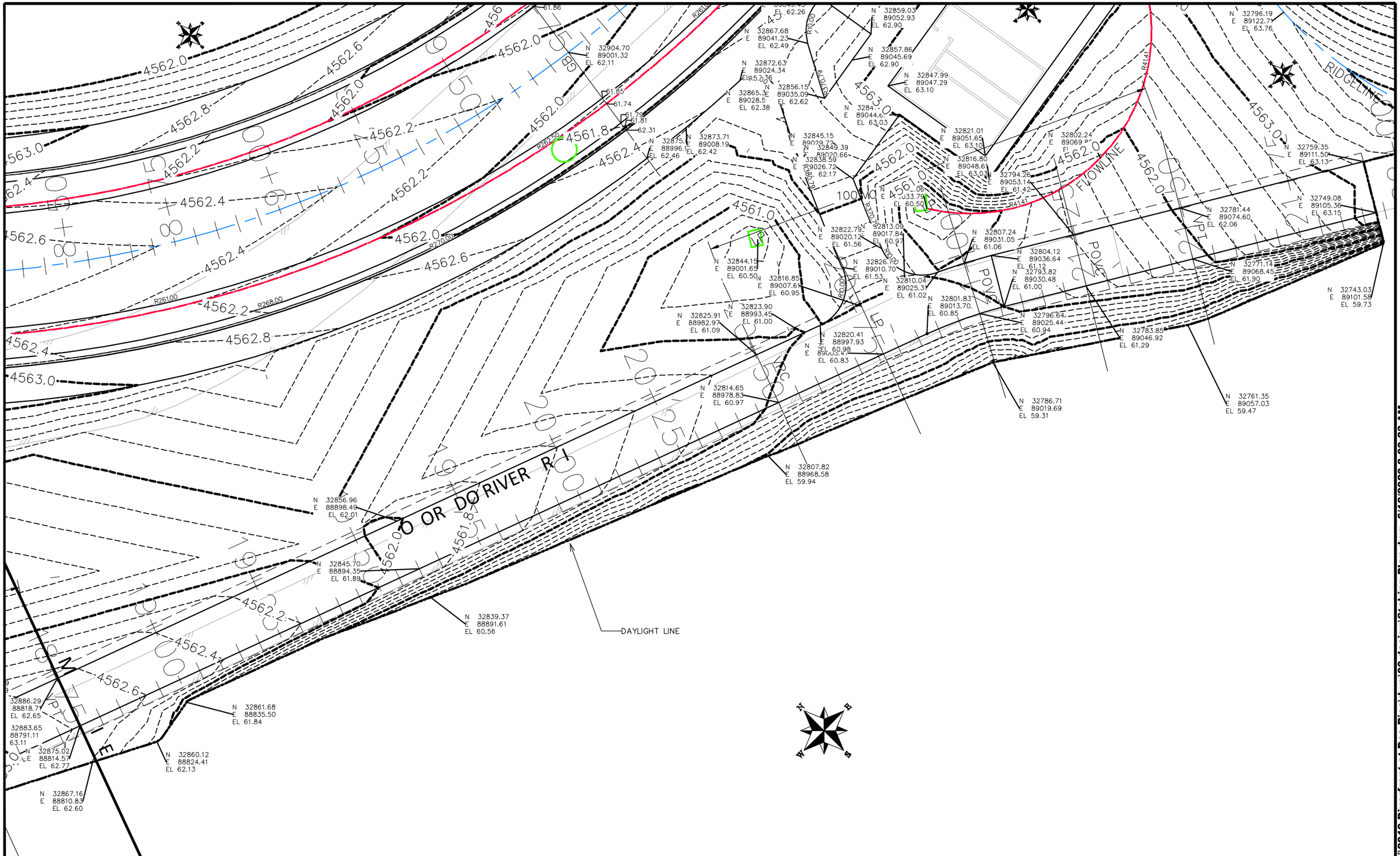

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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-52
June 19, 2020

233

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 8:00:23 AM

N 33335.21
E 88294.68
EL 61.56

11+75

N 33335.57
E 88312.74
EL 63.03

12+00

N 33323.96
E 88318.23
EL 62.43

4563.0

62.97

N 33344.70
E 88335.09
EL 63.11

N 33376.27
E 88364.55
EL 63.32

4563.2

4563.4

N 33407.84
E 88394.01
EL 63.52

N 33368.08
E 88373.33
EL 63.32

N 33399.66
E 88402.79
EL 63.58

N 33322.45
E 88344.27
EL 63.03

N 33313.76
E 88335.99
EL 62.91

12+25

N 33336.51
E 88343.86
EL 63.08

N 33303.94
E 88338.63
EL 62.23

O OR DO RIVER R I

DESCRIPTION	DATE
REVISION △	–
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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–53
June 19, 2020

234

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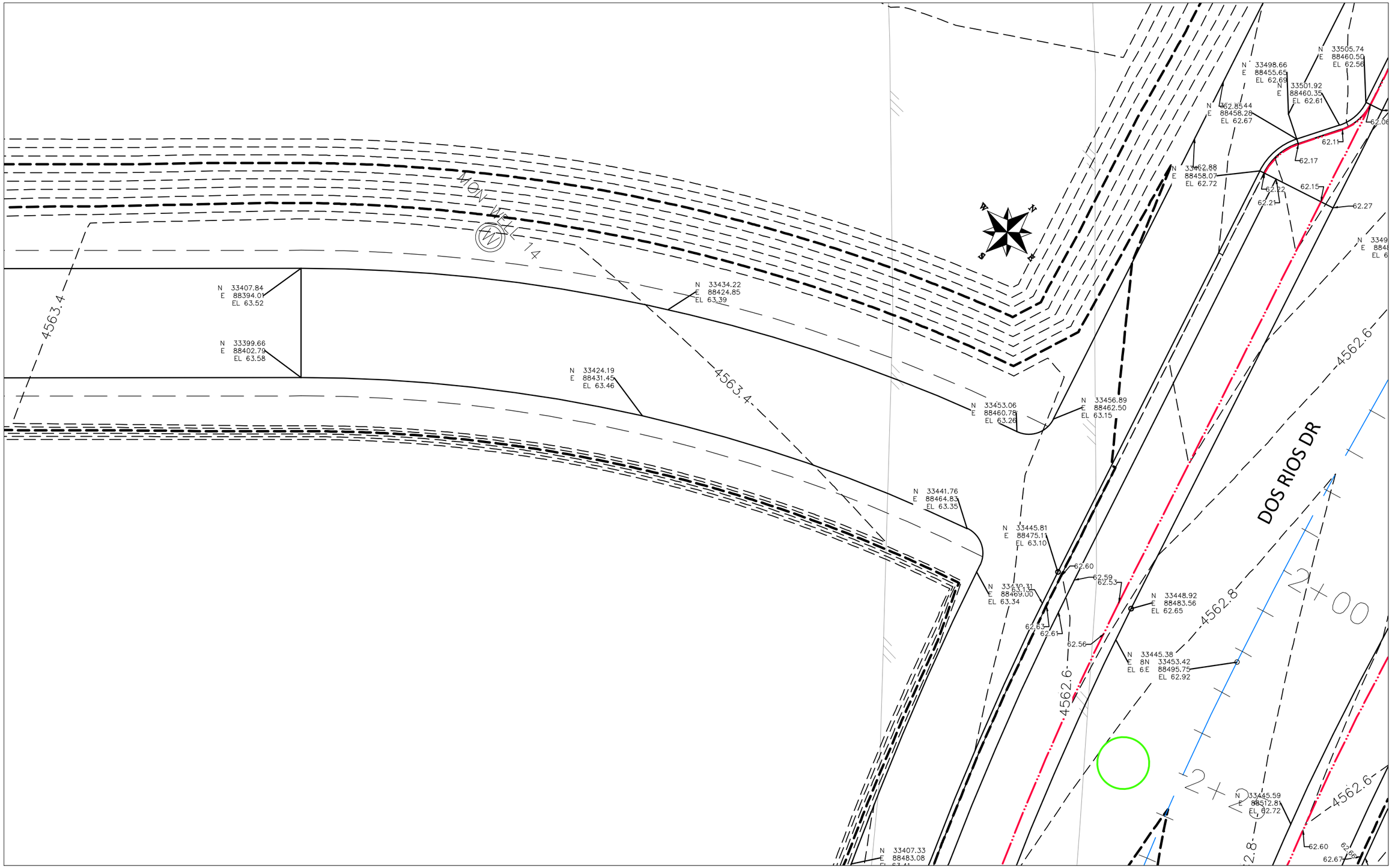

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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-54
June 19, 2020

235

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 8:01:00 AM

N 33164.29
E 33172.57
E 88489.48
EL 62.57

N 33162.83
E 88498.76
EL 62.60

N 33179.44
E 88515.73
EL 62.71

14+25

POVC

14+00

O OR D RIVER R I

4562.6

4562.8

N 33154.47
E 88506.72
EL 62.63

RIDGE LINE

N 33158.00
E 88536.72
EL 62.97

N 33182.85
E 88553.53
EL 62.91

4563.0

4563.0

POVC

14+75

N 33136.35
E 88523.99
EL 62.72

N 33174.27
E 88561.92
EL 63.03

N 33121.12
E 88521.93
EL 62.65

N 33129.39
E 88530.62
EL 62.77

VPT

5+00

N 33109.68
E 88532.18
EL 62.73

N 33117.24
E 88541.49
EL 62.85

N 33119.13
E 88539.89
EL 62.84

N 33136.56
E 88557.70
EL 63.30

N 33264.
E 88567.
EL 63.08

N 33267.00
E 88595.78
EL 63.0892

N 363.1254 N 3326
E 88600.15 E 8860
EL 62.96 FLN
E

N 33239.44
E 88607.59
EL 63.23

N 33242.99
E 88614.98
EL 63.08

N 33237.37
E 88609.24
EL 63.24

4563.2

N 33227.95
E 88616.77
EL 63.31

4563.2

N 33233.58
E 88622.52
EL 63.14

N 33222.58
E 88638.40
EL 63.19

3226.26
3637.34
EL 63.15

N 33218.00
E 88634.98
EL 63.25

63.41

N 33217.68
E 88637.86
EL 63.24

62.74

N 33212.54
E 88639.35
EL 63.28

62.78 62.77 62.71

4563.4

DOS RIOS DR

562.8

M I E

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DESCRIPTION	DATE
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REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–55
June 19, 2020

62.40
62.42
62.92
N 33301.68
E 88634.63
EL 63.08
62.40
62.42
N 33294.49
E 88630.13
EL 62.92
63.08
62.42
62.41
N 33284.45
E 88631.08
EL 62.91
N 33289.34
E 88631.62
EL 62.92
N 33280.77
E 88632.15
EL 62.91
N 33289.02
E 88634.51
EL 62.96
33273.92
88646.59
62.99 63.06
N 33279.55
E 88652.33
EL 63.22
62.54
63.07 3276.92
E 88654.44
EL 63.23
4563.2
4563.0
4.51
4.12
3.12
N 33270.13
E 88659.87
EL 63.28
DOS RIOS DR
00
76
3243.15
8664.12
3.19
N 33245.49
E 88669.34
EL 63.25
63.41
N 33242.61
E 88669.02
EL 63.24
N 33240.03
E 886763.44
EL 63.28
4563.4
MON WELL 15
M I E

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–56
June 19, 2020

237

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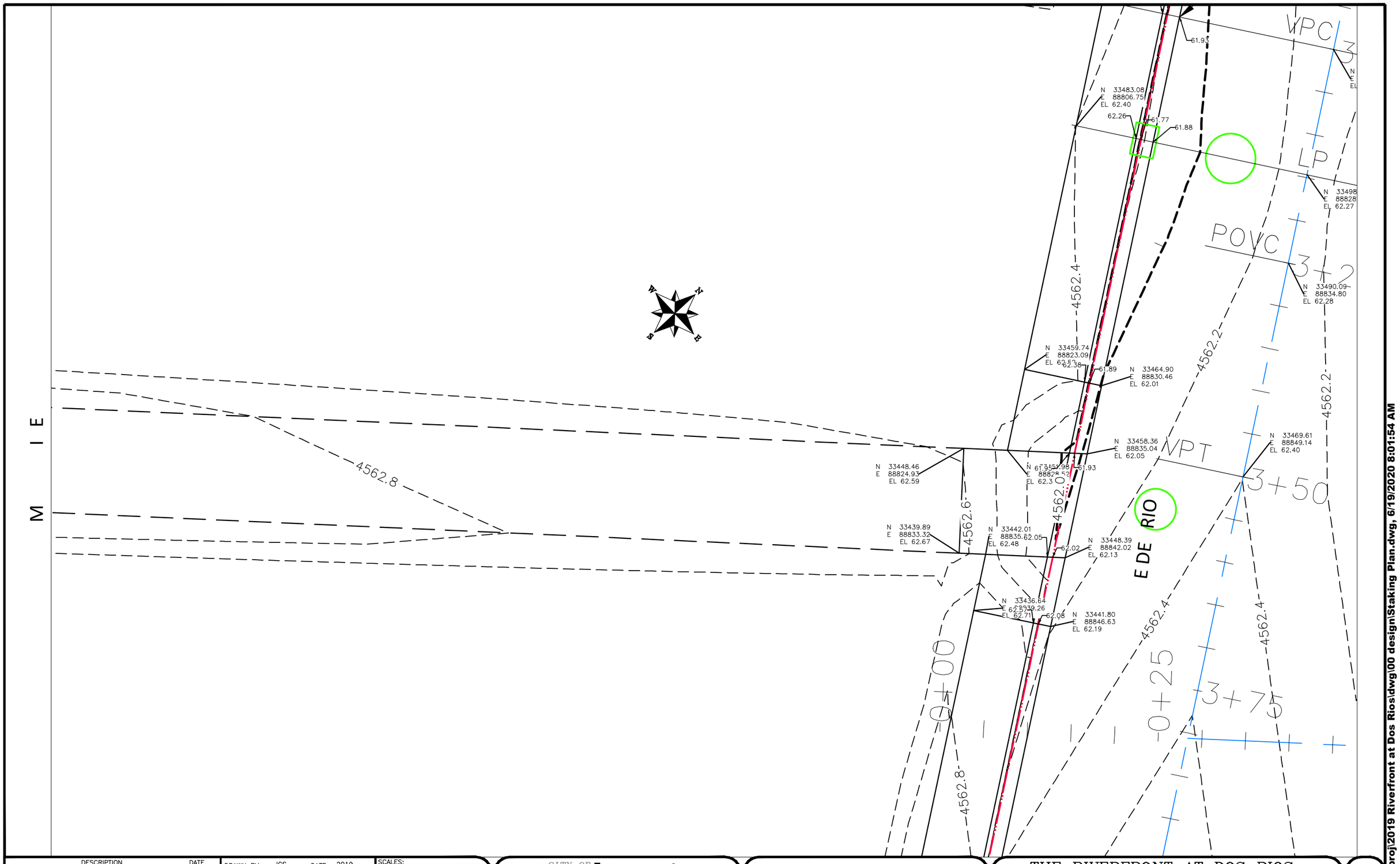

DESCRIPTION	DATE
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REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–57
June 19, 2020

238

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DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-58
June 19, 2020

239

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 8:02:12 AM

DOS RIOS DR

R261.00

4561.8

4561.4

4561.6

4562.0

4562.4

4562.2

61.74

61.79

61.81

62.31

N 32875.03
E 88996.91
EL 62.46

N 32873.71
E 89008.19
EL 62.42

N 32872.63
E 89024.34
EL 62.36

N 32867.68
E 89041.23
EL 62.49

N 32872.82
E 89049.45
EL 62.26

N 32872.88
E 89050.69
EL 62.25

N 32873.58
E 89060.03
EL 62.22

N 32880.19
E 89100.05
EL 62.06

N 32884.36
E 89115.39
EL 62.00

R5.00

R10.00

R370.79

R15.41

N 32865.30
E 89028.57
EL 62.38

N 32856.15
E 89035.09
EL 62.62

N 32859.03
E 89052.93
EL 62.90

N 32862.58
E 89074.87
EL 62.90

N 32864.86
E 89088.98
EL 62.90

N 32867.11
E 89102.94
EL 62.90

N 32857.86
E 89045.69
EL 62.90

N 32859.85
E 89097.70
EL 63.03

N 32853.14
E 89114.47
EL 62.50

FLOWLINE

4561.0

4563.0

N 32849.39
E 89020.66
EL 62.43

N 32845.15
E 89029.72
EL 62.43

N 32838.59
E 89026.72
EL 62.17

N 32841.48
E 89044.62
EL 63.03

N 32847.99
E 89047.29
EL 63.10

N 32855.65
E 89094.66
EL 63.10

N 32844.15
E 89001.65
EL 60.50

N 32825.91
E 88982.97
EL 61.09

N 32823.90
E 88993.45
EL 61.00

N 32816.85
E 89007.61
EL 60.95

N 32822.79
E 89020.12
EL 61.56

N 32826.16
E 89010.70
EL 61.53

N 32822.06
E 89033.79
EL 60.50

N 32813.09
E 89017.84
EL 60.97

N 32821.01
E 89051.65
EL 63.10

N 32816.80
E 89048.61
EL 63.03

N 32828.67
E 89099.02
EL 63.10

N 32825.63
E 89103.23
EL 63.03

N 32823.32
E 89105.21
EL 63.00

R87.06

RIDGELINE

HP

N 32820.41
E 88997.93
EL 60.98

N 32805.59
E 89003.47
EL 60.83

N 32810.04
E 89025.31
EL 61.02

N 32801.83
E 89013.70
EL 60.85

N 32807.24
E 89031.05
EL 61.06

N 32794.26
E 89053.14
EL 61.42

N 32802.24
E 89069.86
EL 61.75

N 32804.12
E 89036.64
EL 61.12

N 32793.82
E 89030.48
EL 61.00

N 32816.86
E 89126.37
EL 63.50

N 32796.19
E 89122.71
EL 63.76

R414.1

4562.0

4563.0

4563.6

100 YR

20+50

20+75

POWER

RIVER

N
W
E
S

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–59
June 19, 2020

240

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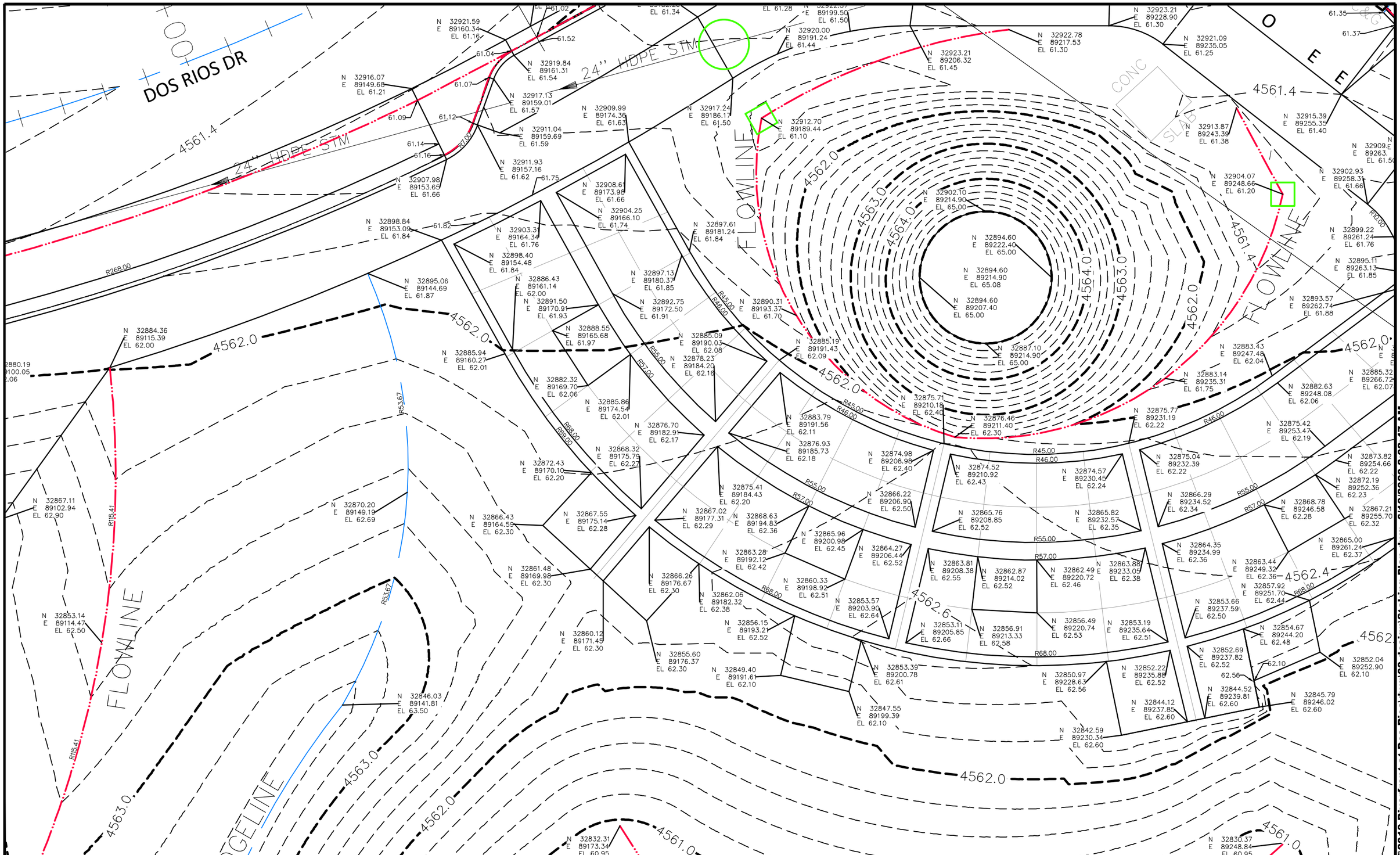

DESCRIPTION	DATE
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REVISION △	

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-60
June 19, 2020

241

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 8:02:47 AM

FLOWLINE
DRIVE LANE
PARKING
SIDEWALK
FLOWLINE
BERM
FLOWLINE
VPC
POVC
50' VC
THIS AREA GRADED BY OTHERS
FALL 2020

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-61
June 19, 2020

242

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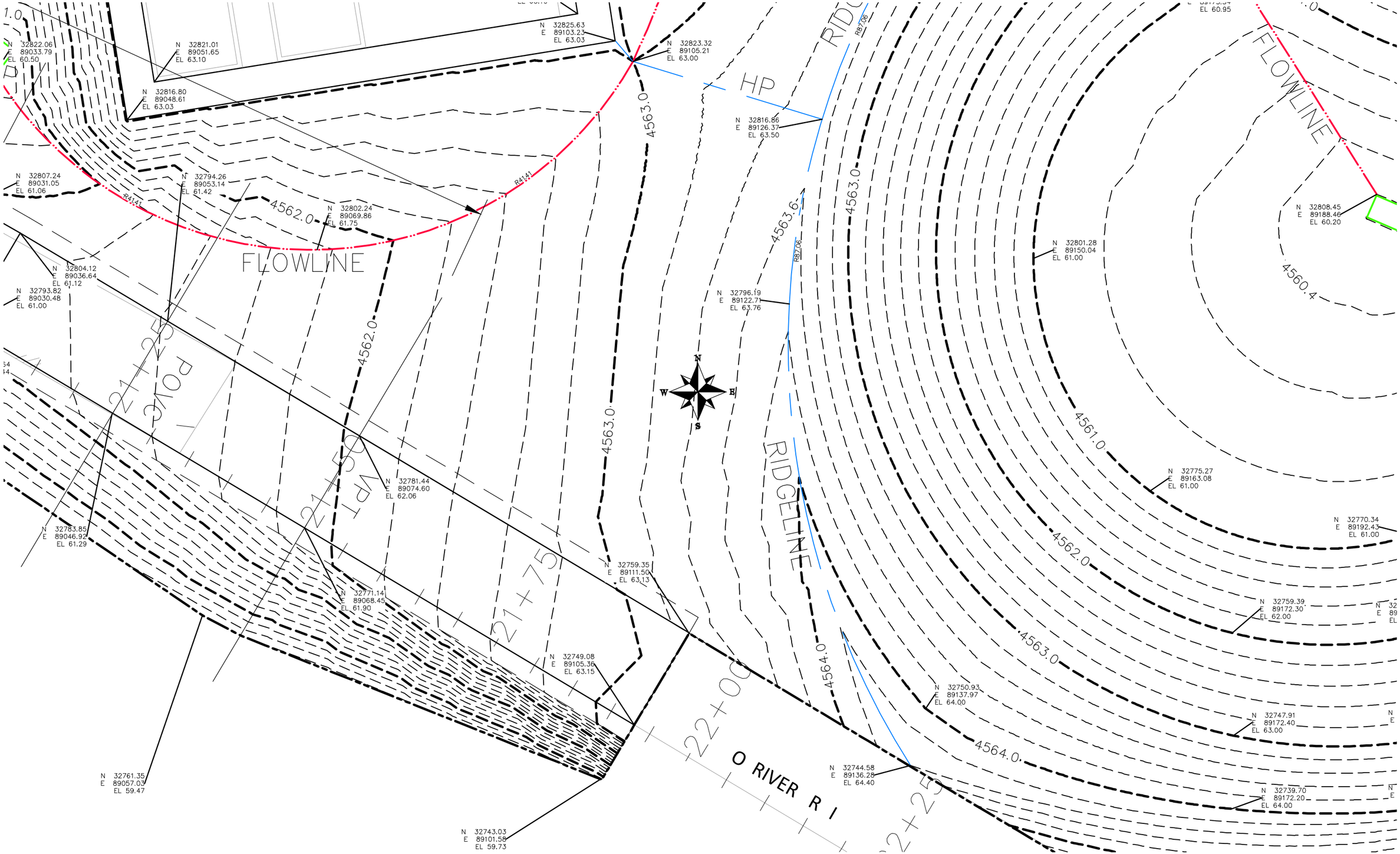

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REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

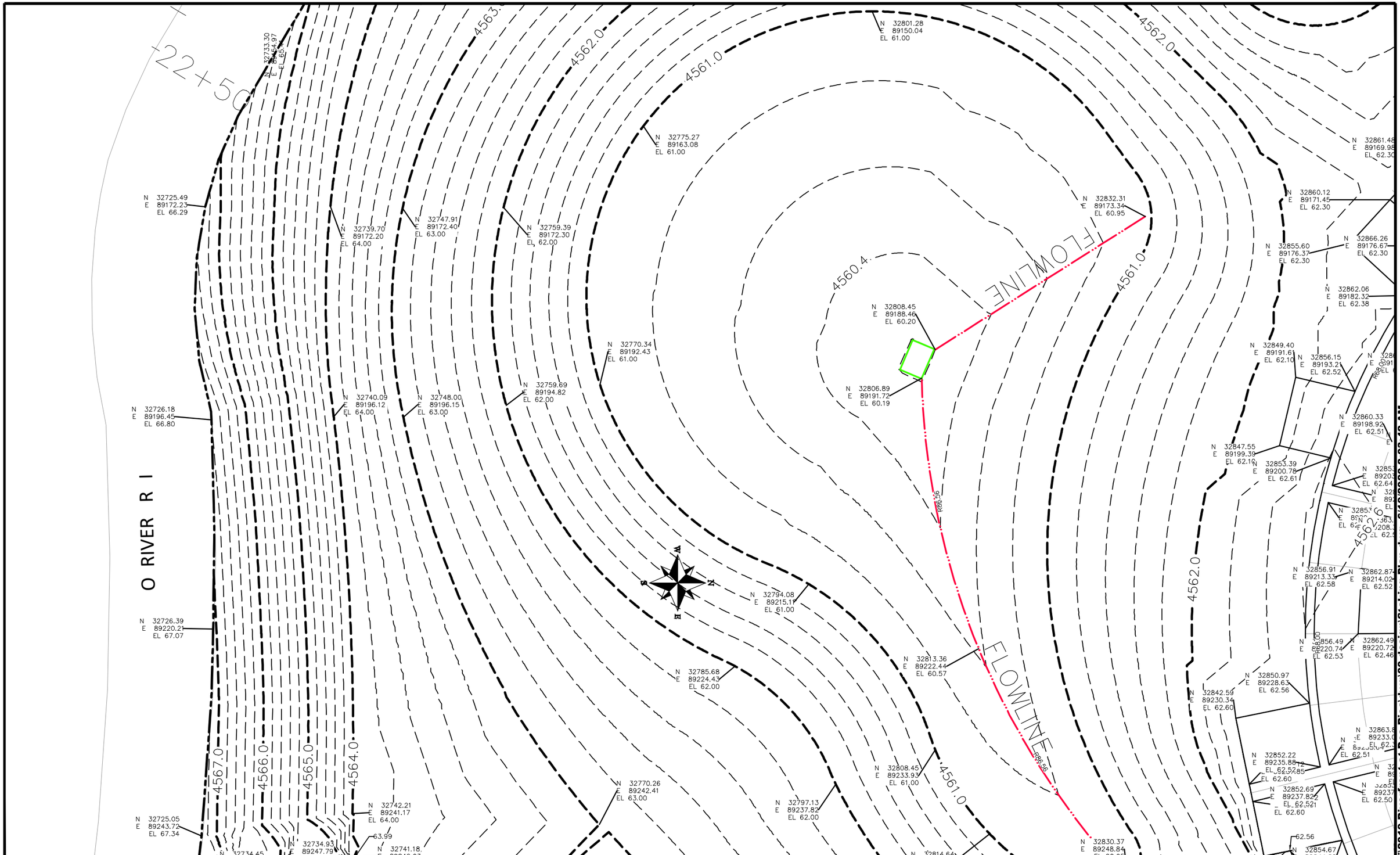
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST–62
June 19, 2020

243

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Staking Plan.dwg, 6/19/2020 8:03:24 AM



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DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 2.5 5 10
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN – ST-63
June 19, 2020

244

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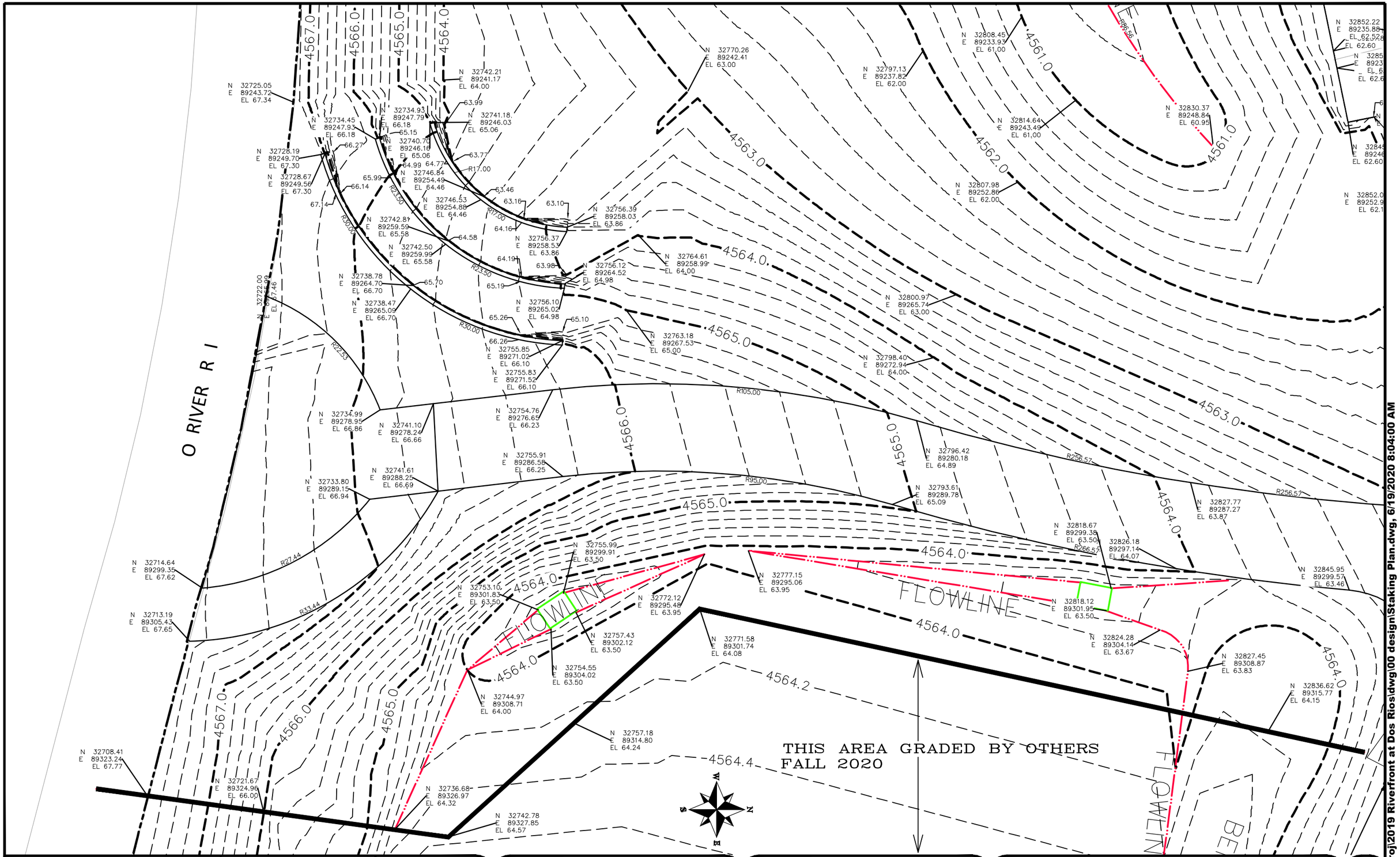
4567.0
4566.0
4565.0
4564.0
4563.0
4562.0
4561.0
4564.0
4565.0
4566.0
4567.0
4564.2
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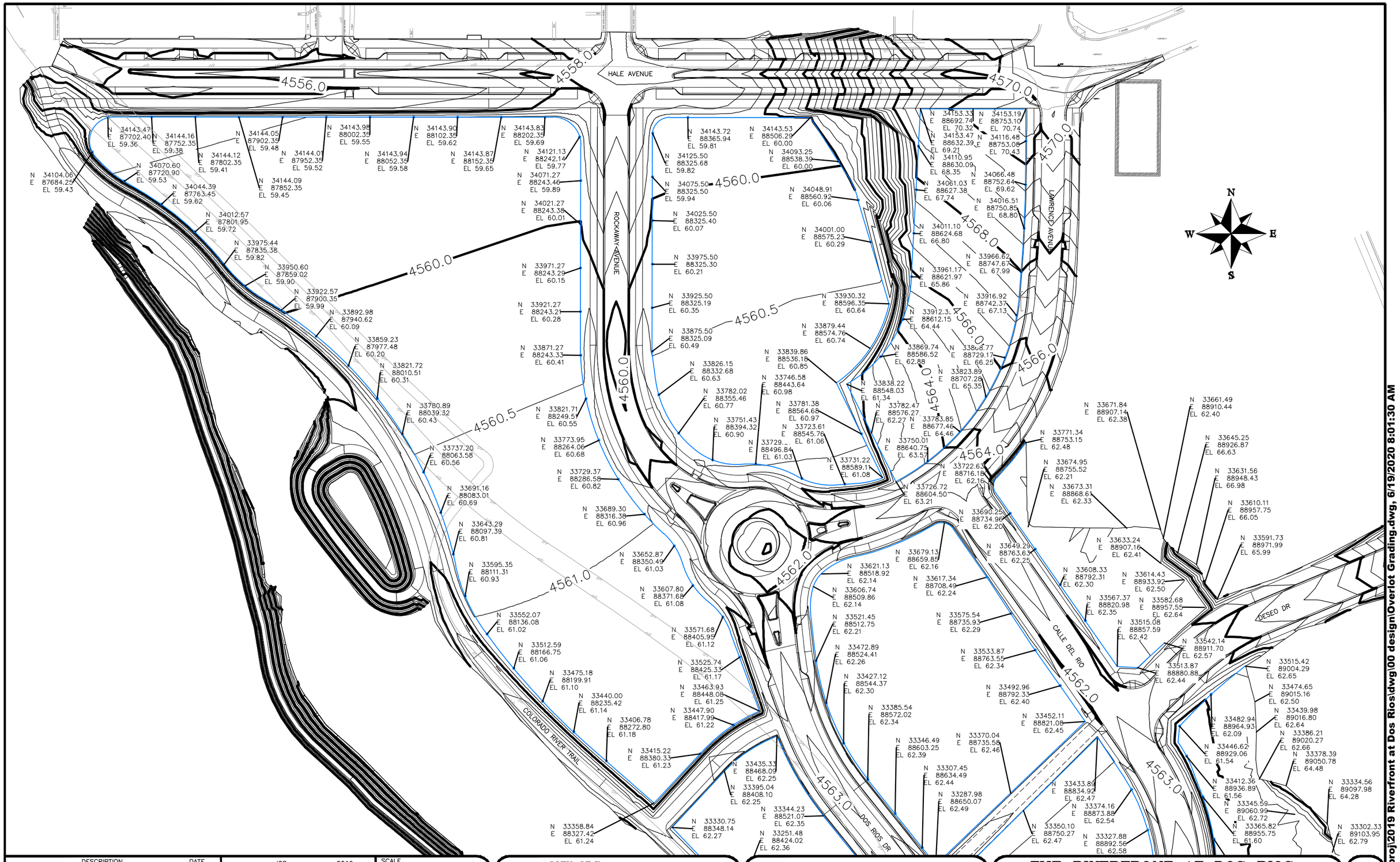
4559.0
4565.0
4563.0
4564.0
4565.0
4564.0
4564.0
4564



DESCRIPTION	DATE
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REVISION △	–
REVISION △	–

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DESIGNED BY JCS DATE 2019
CHECKED BY BCH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 25 50 100

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
OVERLOT GRADING – 1
June 19, 2020

246

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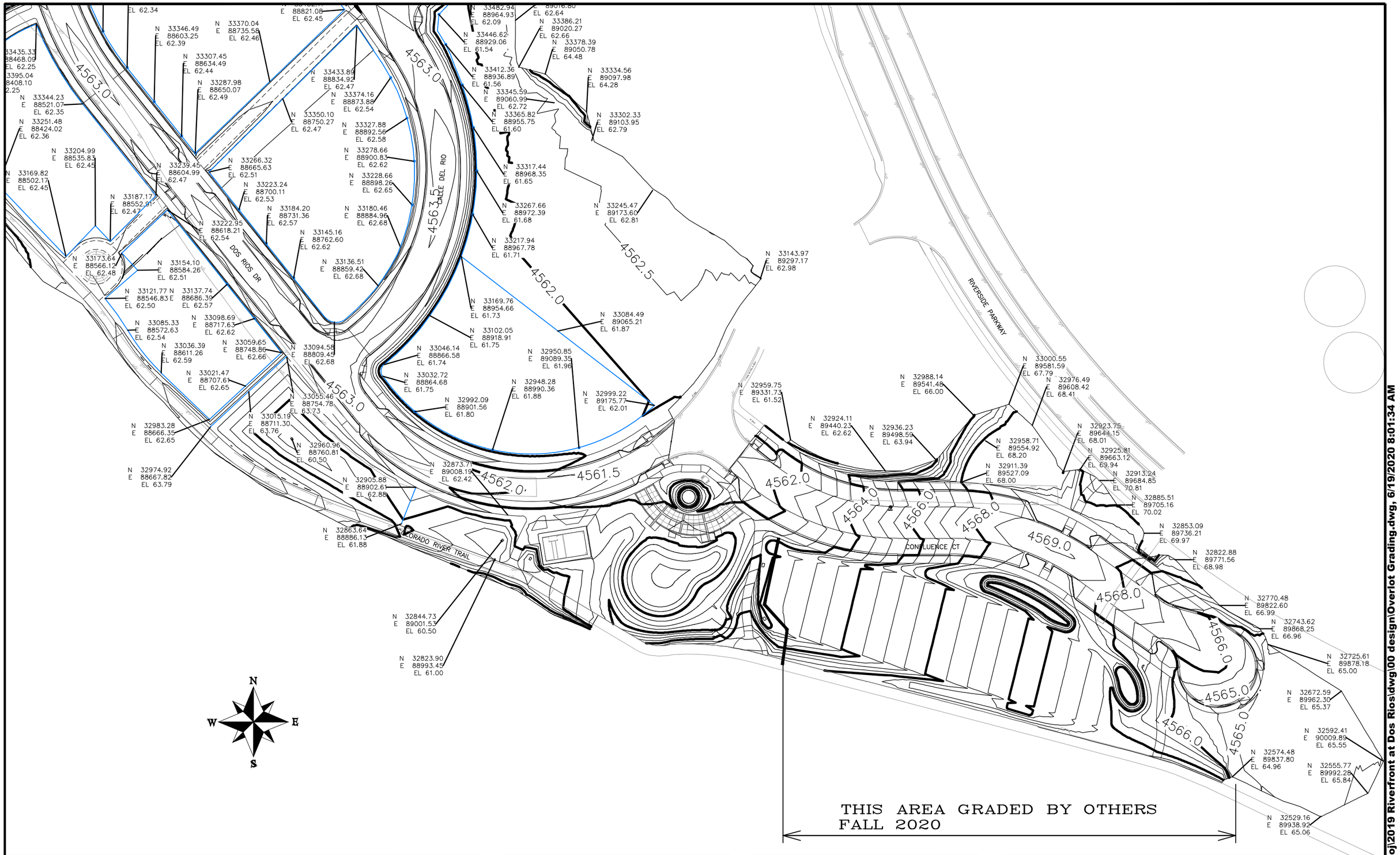

DESCRIPTION	DATE
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REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BCH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 25 50 100

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
OVERLOT GRADING – 2
June 19, 2020

247

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DESCRIPTION	DATE
REVISION △	–
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DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 50 100 200

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN INDEX – 1
June 19, 2020

248

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PARK AVE

CHULUOTA AVE

HALE I AVE

MATCH LINE STA 5+00

NEIGHBORHOOD
R2-5BP (BY CITY)

SPEED LIMIT 25
R2-1 (BY CITY)

UNLESS OTHERWISE POSTED
R2-5P (BY CITY)

1 SPACE

3 SPACES

Hale Ave
STOP
PROTECT EXISTING SIGNS IN PLACE

0+00

1+00

2+00

3+00

4+00

NO DUMPING
REMOVE SIGN

EPOXY PAINT PAVEMENT MARKING (BY CITY) (4" DOUBLE YELLOW SOLID)

R4-7C (BY CITY)

25 MPH

30 MPH

REMOVE SIGN

11 SPACES

10 SPACES

W11-2 (BY CITY)

W16-7P (BY CITY)

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE CROSSWALK LINES 2'X10'(TYPICAL)

PREFORMED THERMOPLASTIC PAVEMENT MARKING (4" WHITE SOLID) (TYPICAL) (INCLUDES BLACK CONTRAST THERMOPLASTIC PAVEMENT MARKING)

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-1
June 19, 2020

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MATCH LINE STA 5+00

MATCH LINE STA 10+00

ROCKAWAY AVE

CRAWFORD AVE

HALE AVE

3 SPACES

2 SPACES

3 SPACES

10 SPACES

17 SPACES

0+00

1+00

6+00

7+00

8+00

9+00

D3-1
(SPECIAL)
(BY CITY)
Hale Ave

R1-1
(BY CITY)
STOP

REMOVE SIGN

R4-7C
(BY CITY)

PREFORMED THERMOPLASTIC
PAVEMENT MARKING
WHITE STOP BAR 2' WIDE
(TYPICAL)

PREFORMED THERMOPLASTIC PAVEMENT MARKING
WHITE CROSSWALK LINES 2'X10'(TYPICAL)

PREFORMED THERMOPLASTIC PAVEMENT MARKING (4" WHITE SOLID) (TYPICAL)
(INCLUDES BLACK CONTRAST THERMOPLASTIC PAVEMENT MARKING)

N
W
E
S

Hale Ave
STOP

PROTECT EXISTING
SIGNS IN PLACE

STOP
ST NAME

R4-7C
(BY CITY)

D3-1
(SPECIAL)
(BY CITY)
Hale Ave

R1-1
(BY CITY)
STOP

ANY NEEDED COORDINATES/GEOMETRY
WILL BE SUPPLIED TO CONTRACTOR
PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
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REVISION △	–
REVISION △	–

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
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HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-2
June 19, 2020

250

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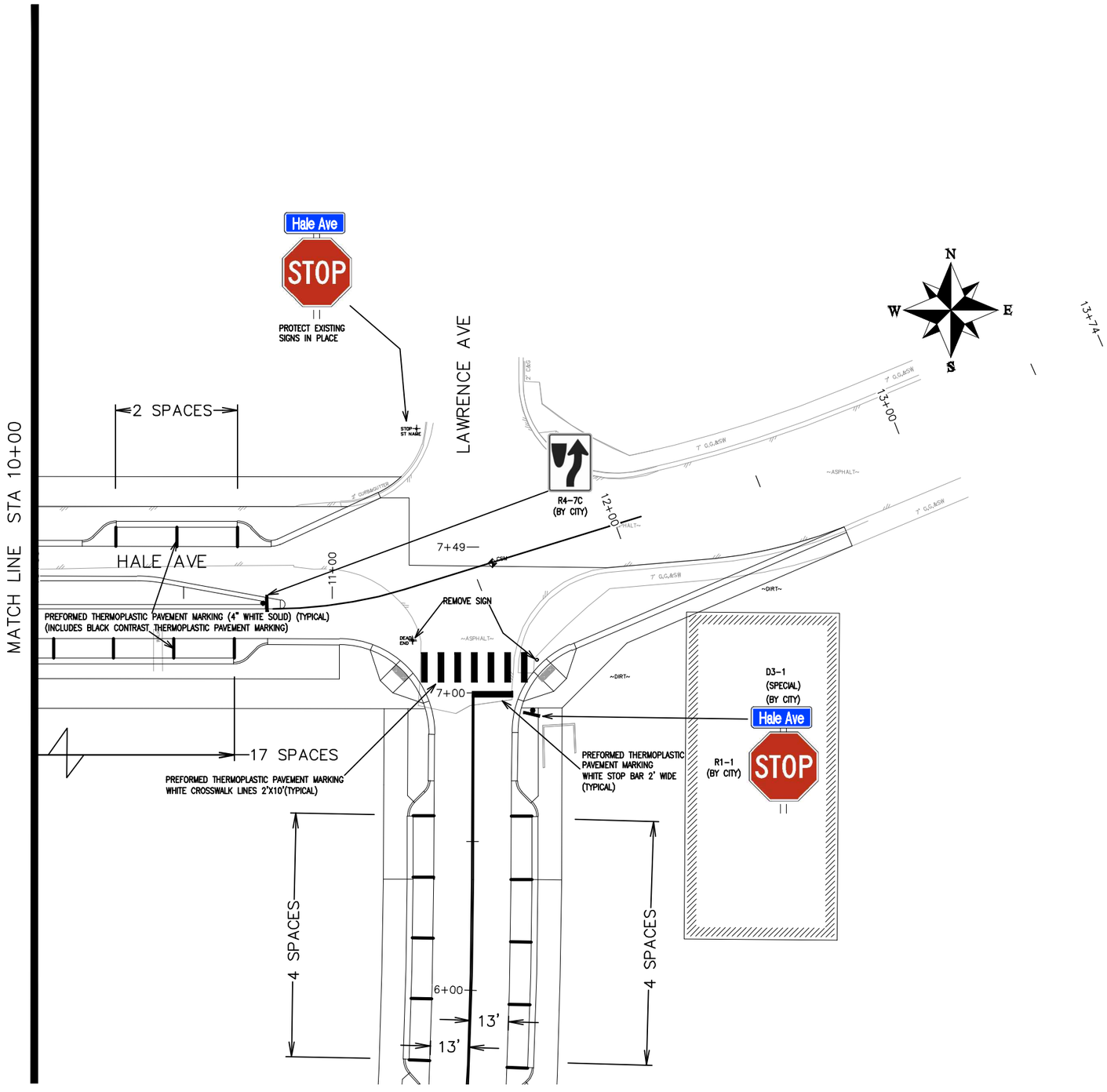

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
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REVISION △	–

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 NA 1in NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-3
June 19, 2020

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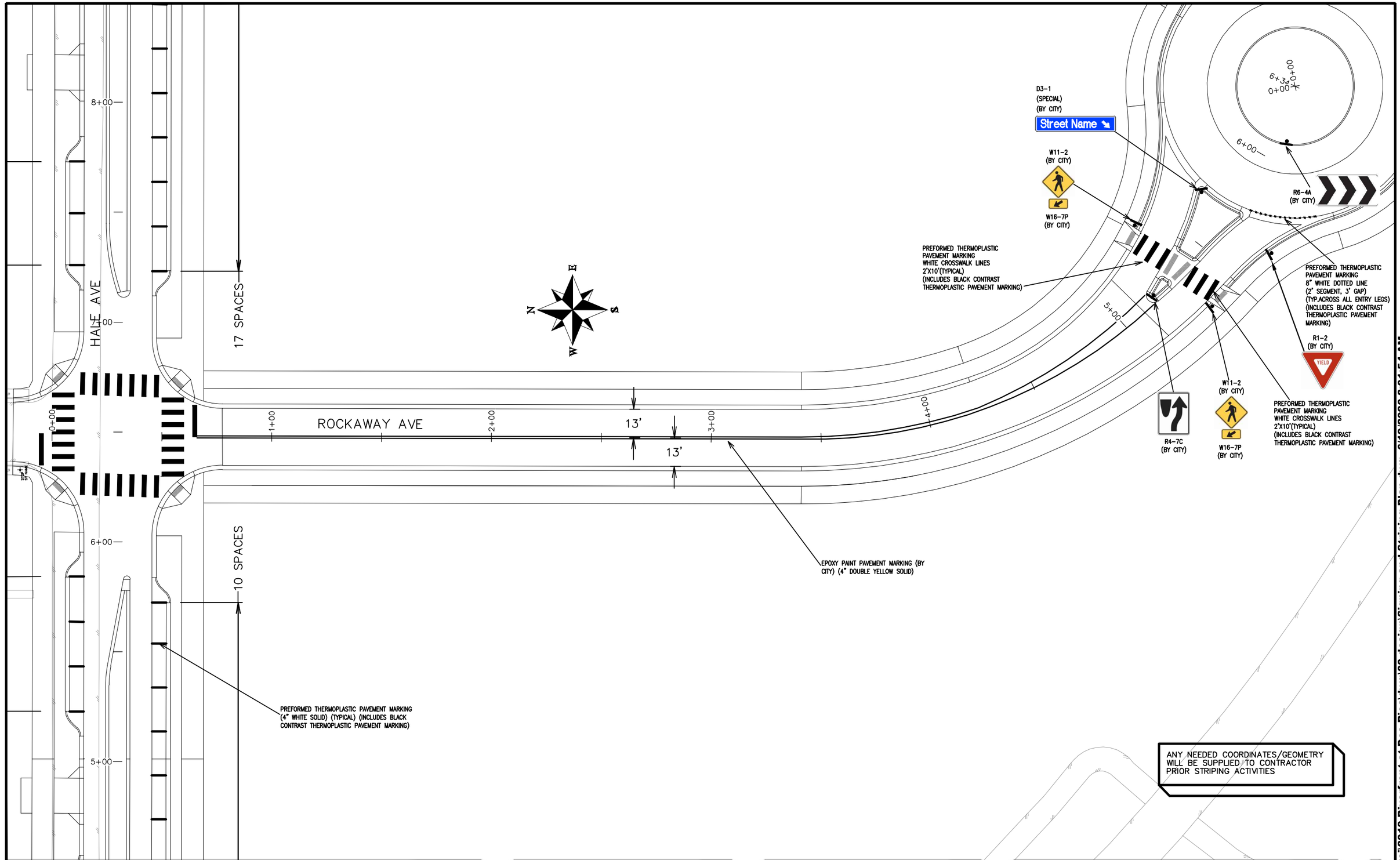

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REVISION △	–

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA 1" NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-4
June 19, 2020

252

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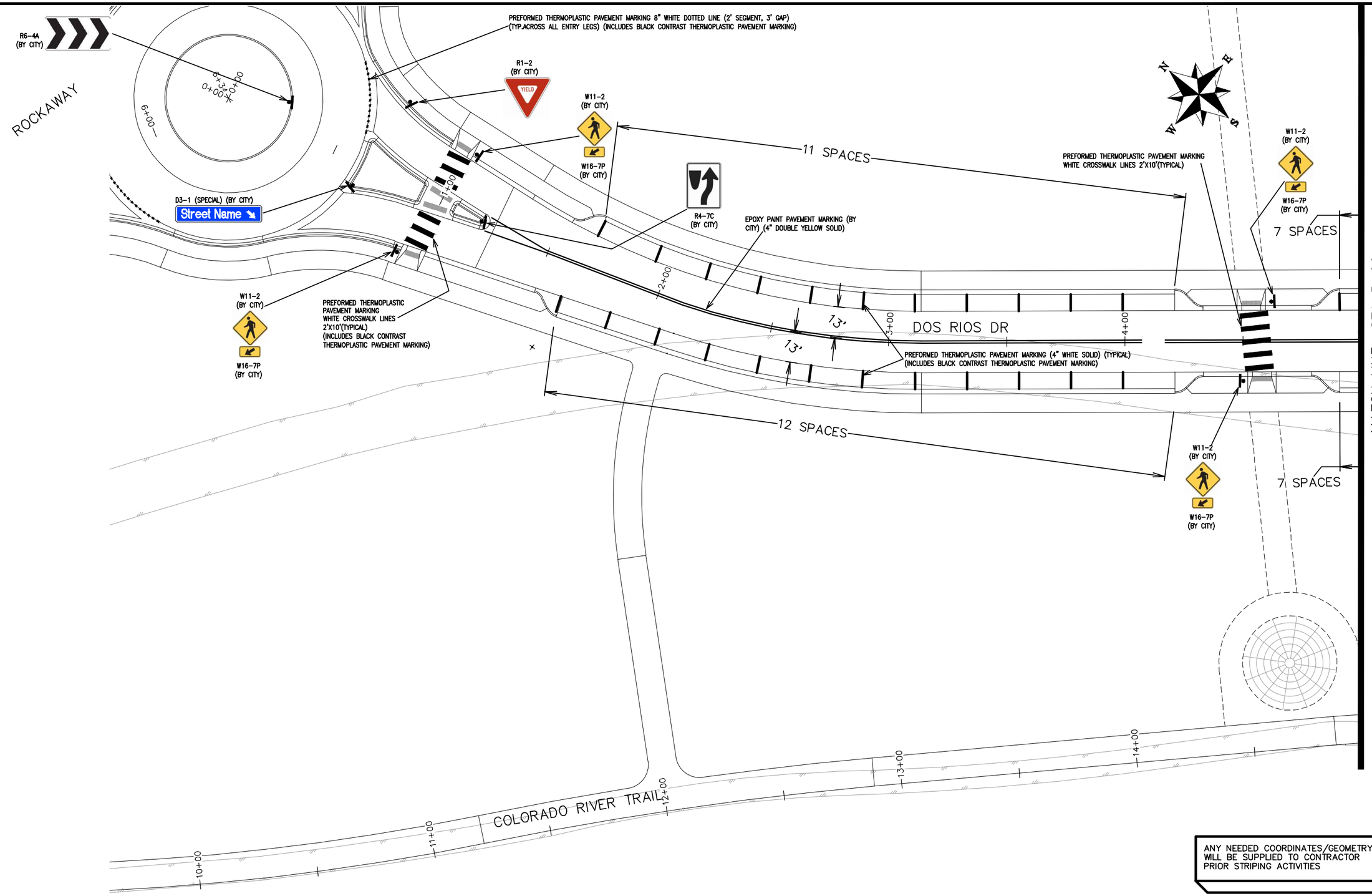

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

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REVISION △	–
REVISION △	–
REVISION △	–

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DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-5
June 19, 2020

253

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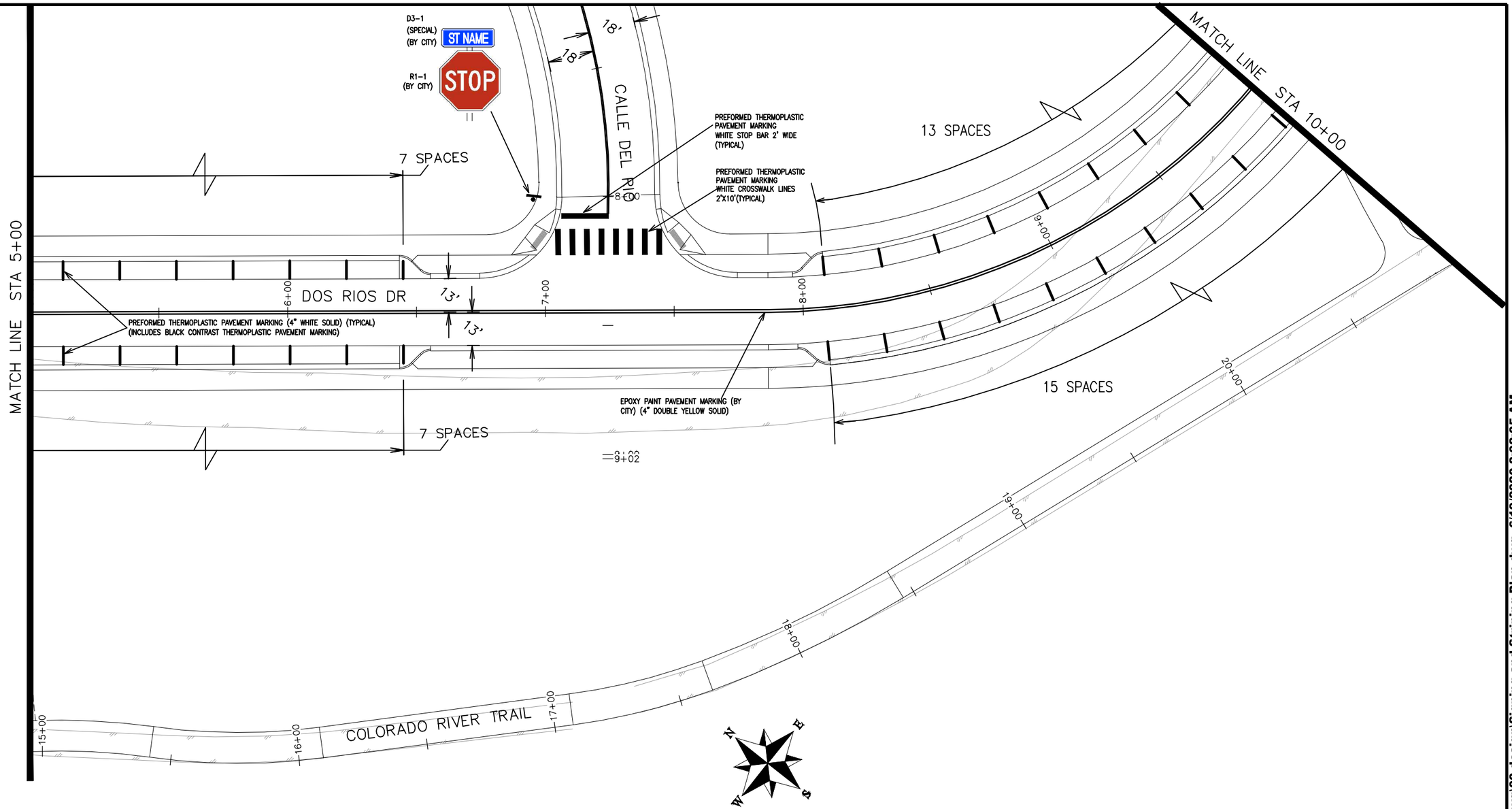

ANY NEEDED COORDINATES/GEOMETRY
WILL BE SUPPLIED TO CONTRACTOR
PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA 1" NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-6
June 19, 2020

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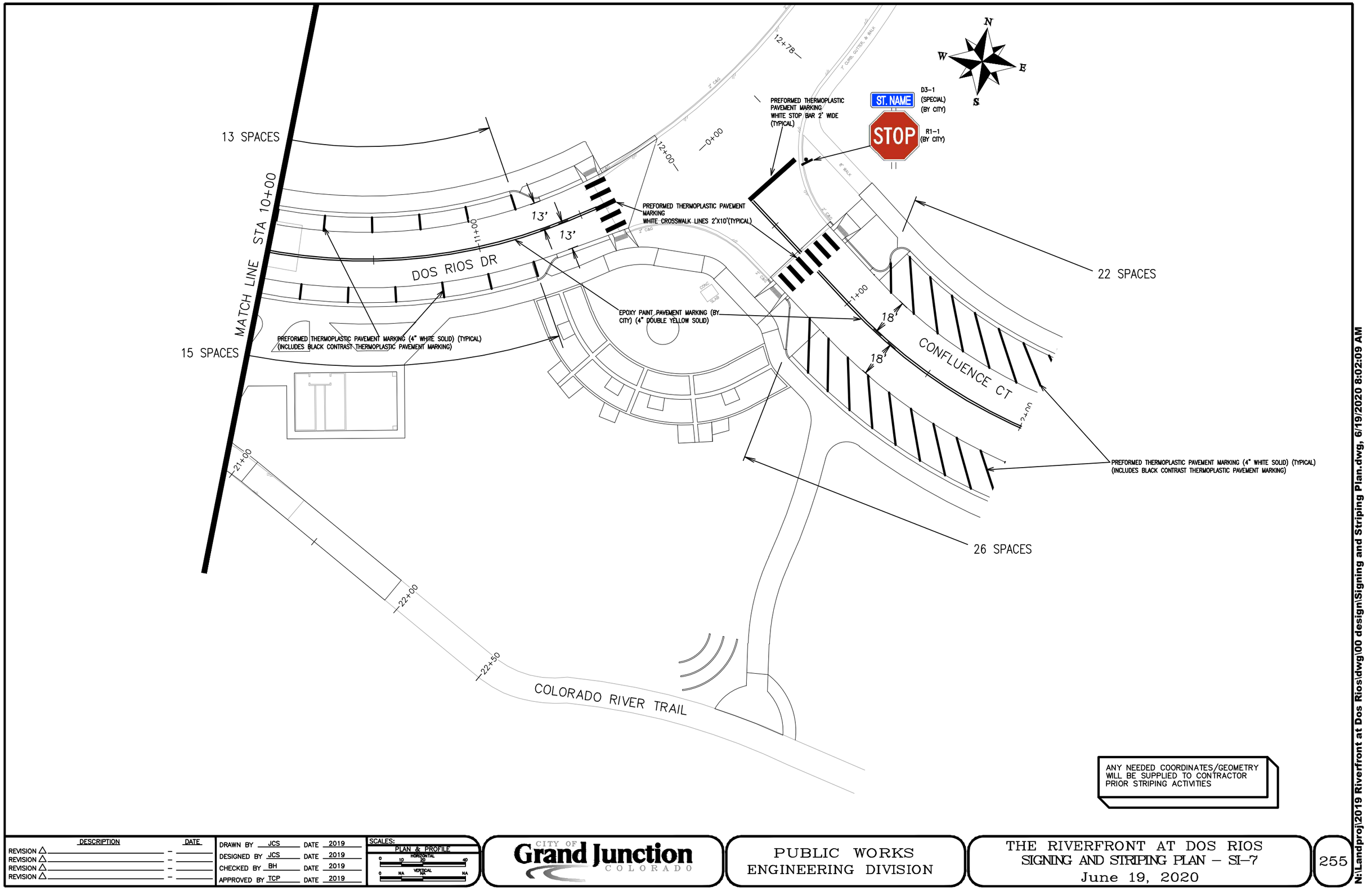

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI–7
June 19, 2020

255

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MATCH LINE STA 5+00

PREFORMED THERMOPLASTIC PAVEMENT MARKING 8" WHITE DOTTED LINE (2' SEGMENT, 3' GAP) (TYP.ACROSS ALL ENTRY LEGS) (INCLUDES BLACK CONTRAST THERMOPLASTIC PAVEMENT MARKING)

R1-2 (BY CITY)

YIELD

W11-2 (BY CITY)

W16-7P (BY CITY)

R6-4A (BY CITY)

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE CROSSWALK LINES 2'X10'(TYPICAL) (INCLUDES BLACK CONTRAST THERMOPLASTIC PAVEMENT MARKING)

14 SPACES

10 SPACES

LAWRENCE AVE

0+00

1+00

2+00

3+00

4+00

13'

13'

EPOXY PAINT PAVEMENT MARKING (BY CITY) (4" DOUBLE YELLOW SOLID)

PREFORMED THERMOPLASTIC PAVEMENT MARKING (4" WHITE SOLID) (TYPICAL) (INCLUDES BLACK CONTRAST THERMOPLASTIC PAVEMENT MARKING)

D3-1 (SPECIAL) (BY CITY)

Street Name

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE CROSSWALK LINES 2'X10'(TYPICAL)

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE STOP BAR 2' WIDE (TYPICAL)

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE CROSSWALK LINES 2'X10'(TYPICAL) (INCLUDES BLACK CONTRAST THERMOPLASTIC PAVEMENT MARKING)

R4-7C (BY CITY)

D3-1 (SPECIAL) (BY CITY)

ST NAME

R1-1 (BY CITY)

STOP

W11-2 (BY CITY)

W16-7P (BY CITY)

DOS RIOS DR

CALLE DEL RIO

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-8
June 19, 2020

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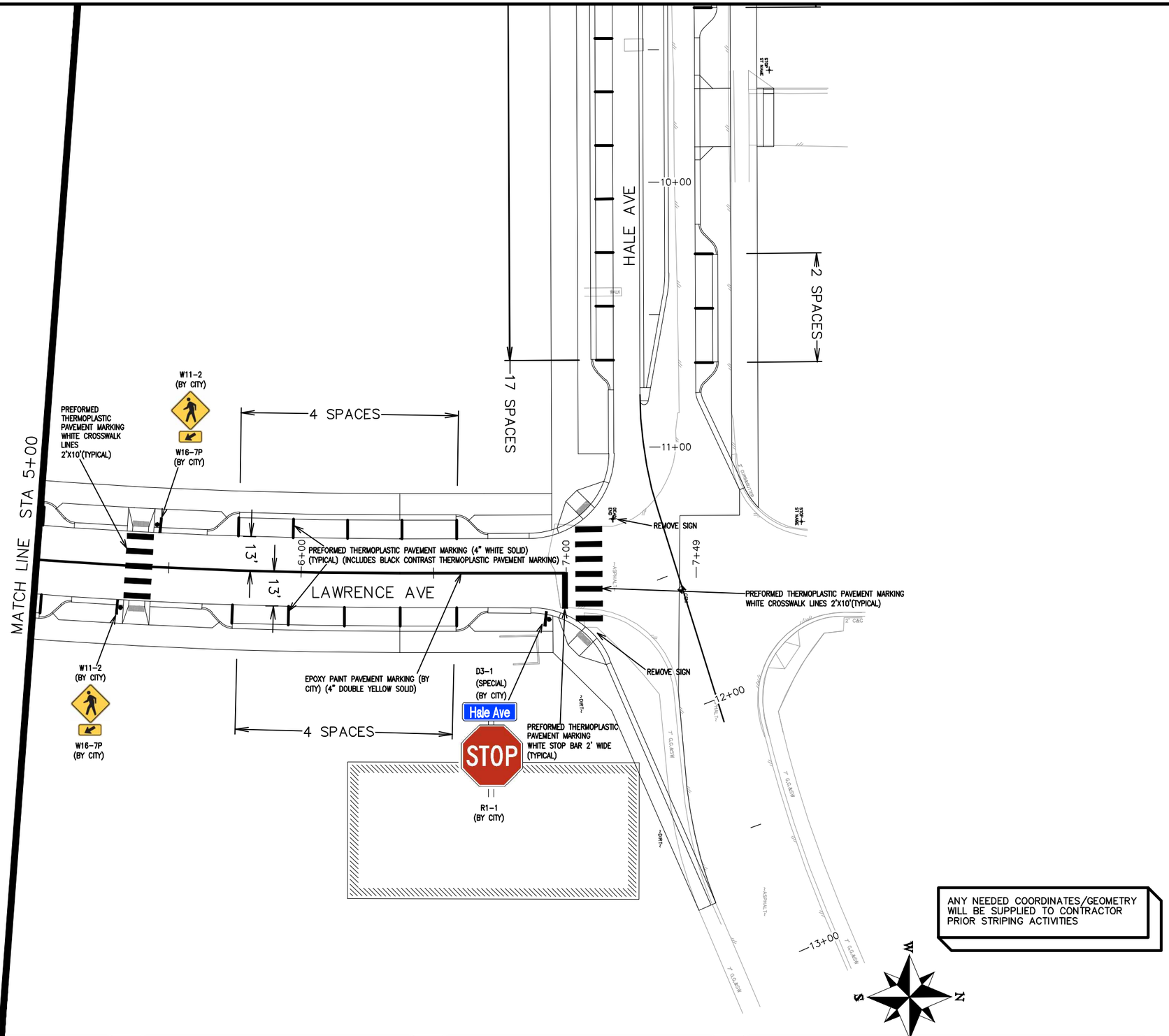

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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-9
June 19, 2020

257

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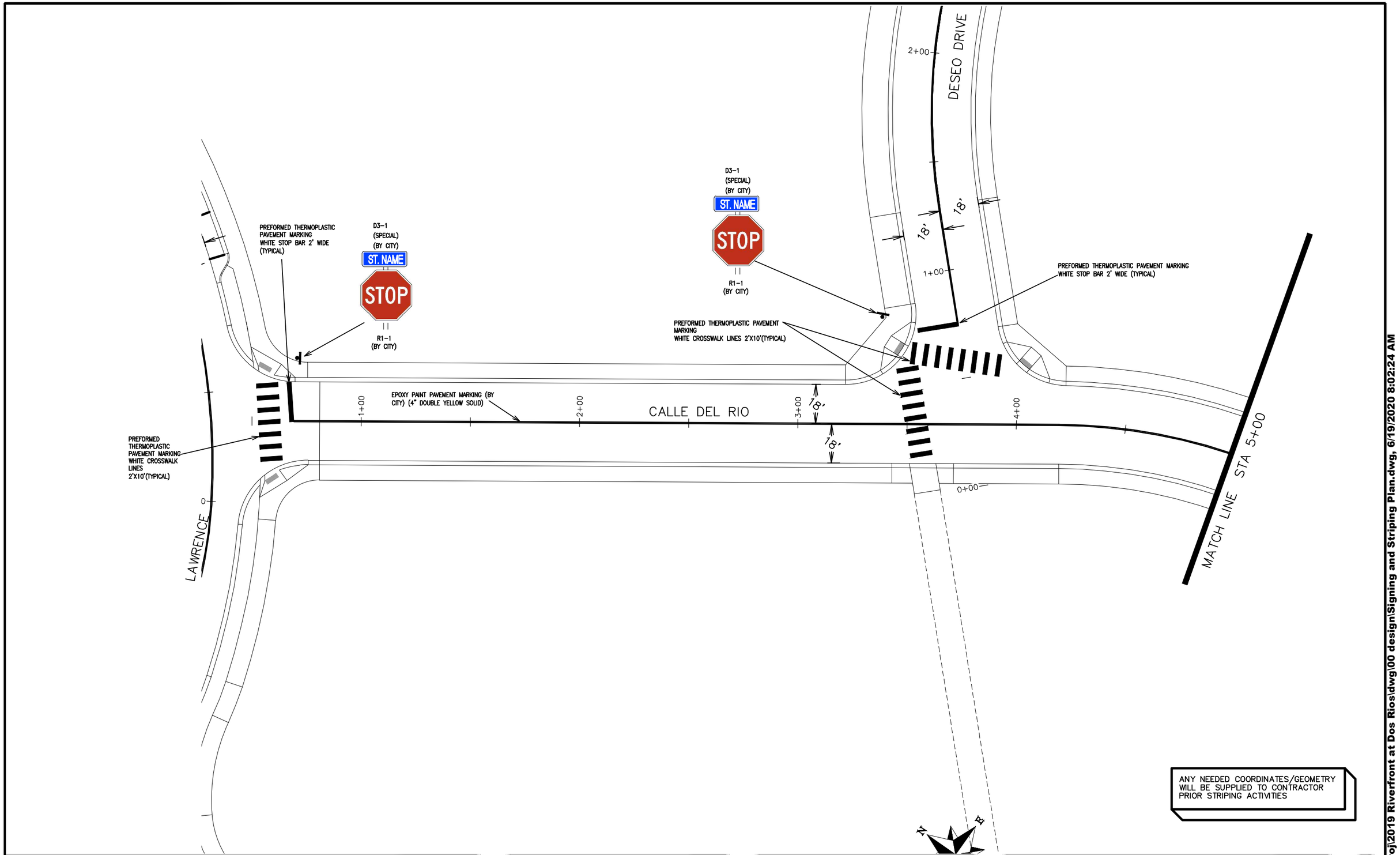

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REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA 1" NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-10
June 19, 2020

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CALLE DEL RIO

MATCH LINE STA 5+00

6+00

7+00

8+00

9+00

18'

18'

EPOXY PAINT PAVEMENT MARKING (BY CITY) (4" DOUBLE YELLOW SOLID)

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE STOP BAR 2' WIDE (TYPICAL)

D3-1
(SPECIAL)
(BY CITY)

ST. NAME

STOP

R1-1
(BY CITY)

7 SPACES

DOS RIOS DR

13'

7 SPACES

PREFORMED THERMOPLASTIC PAVEMENT MARKING (4" WHITE SOLID) (TYPICAL)

PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE CROSSWALK LINES 2'X10'(TYPICAL)

9'-6"

EPOXY PAINT PAVEMENT MARKING (BY CITY) (4" DOUBLE YELLOW SOLID)

7+00

6+00

17+00

18+00

19+00

20+00

COLORADO RIVER TRAIL

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
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REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-11
June 19, 2020

259

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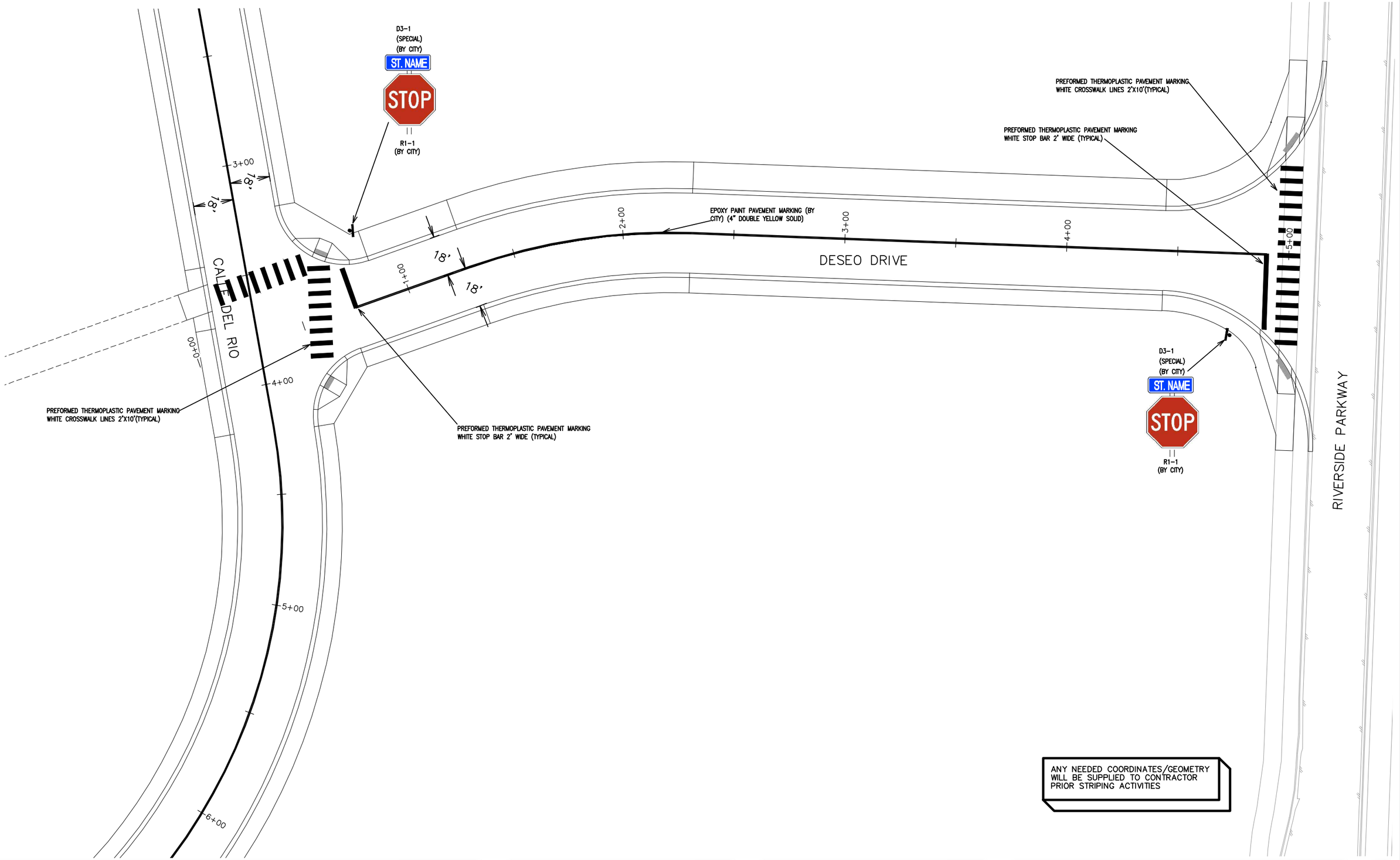

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
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REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-12
June 19, 2020

260

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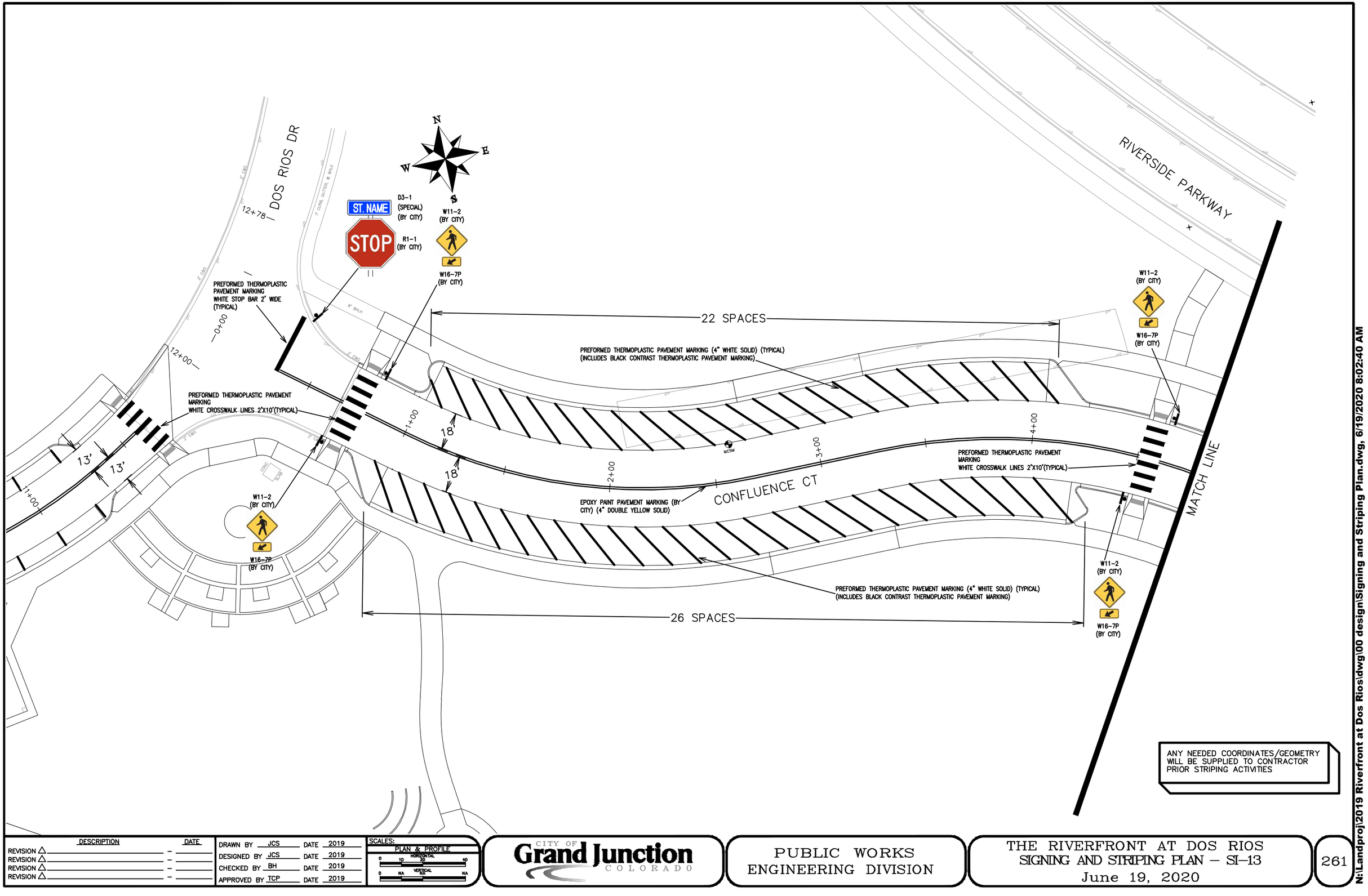

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DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI-13
June 19, 2020

261

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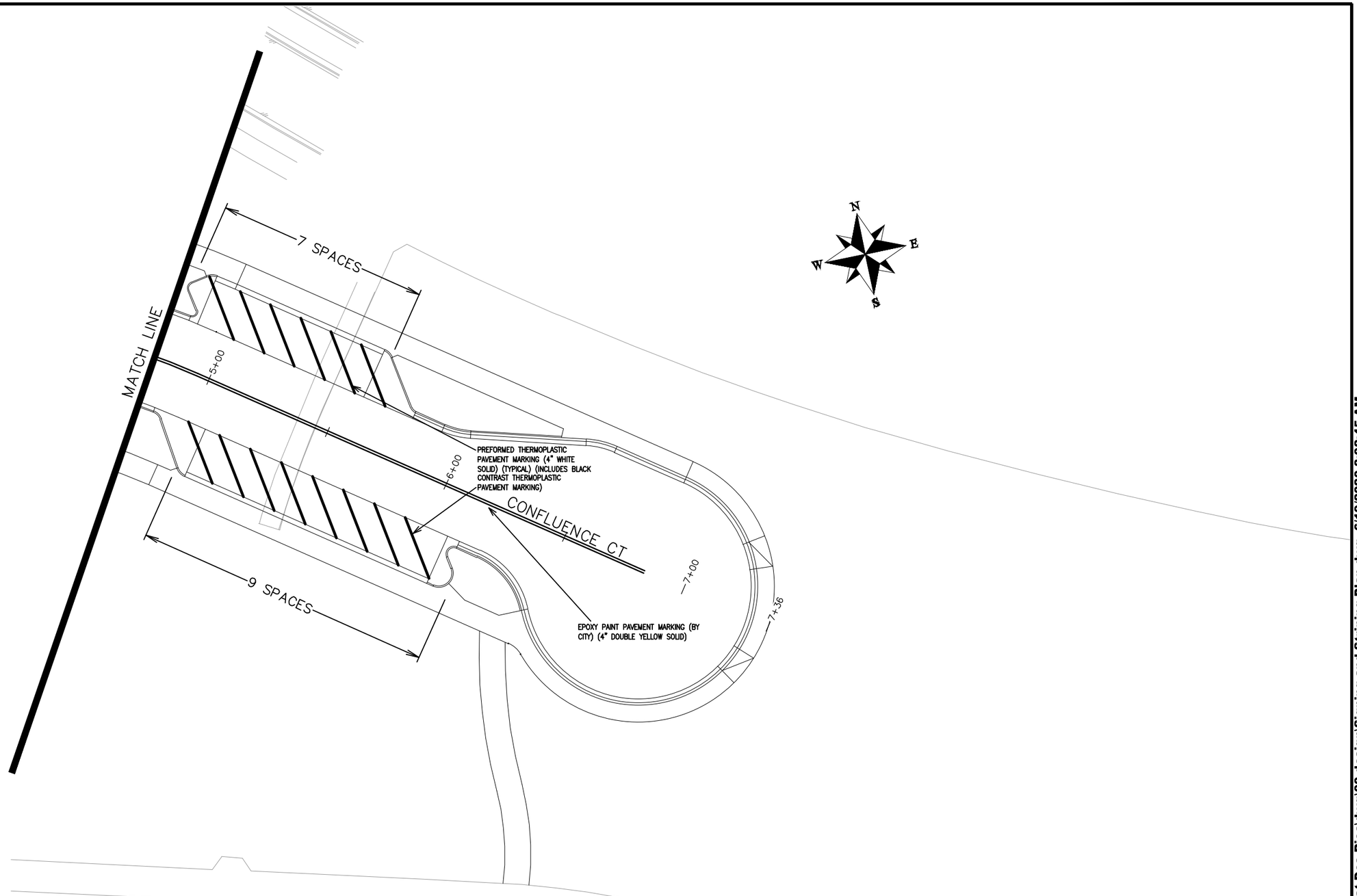

ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

DESCRIPTION	DATE
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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SIGNING AND STRIPING PLAN – SI–14
June 19, 2020

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EROSION CONTROL MEASURES

Contractor to update the SWMP according to specific construction phasing and stormwater management practices for current construction activity when warranted.

Site Description

1. The site has a total disturbance area of 40± acres with the majority of disturbance being caused by the development of The Riverfront at Dos Rios Business Park.
2. Stormwater leaves the central portion and majority of the site through a 48" RCP installed as a part of improvements as the outlet works for a permanent water quality basin where it drains directly to the Colorado River. Stormwater leaves the east portion of the site through a 36" RCP that discharges into the existing water quality basin that in turn drains to the Colorado River via an existing outlet works system. Stormwater leaves the improvements to be made to Hale Ave through an existing storm drain system at the west end of Hale Ave. that drains directly to the Colorado River.
3. Proposed utilities for this project include: storm drain, sanitary sewer, potable water, gas, electricity, telephone, cable television, and broadband infrastucture.

EROSION CONTROL MEASURES

Performance Standards

The general requirements for erosion control work shall be as follows:

1. Any grading shall be conducted in such a manner so as to effectively reduce accelerated soil erosion and resulting sedimentation.
2. All grading shall be designed, constructed and completed in such a manner so that exposed area of any disturbed land shall be limited to the shortest time period.
3. Sediment caused by accelerated soil erosion shall be removed from runoff water before leaving the site.
4. The contractor shall try to minimize the amount of disturbance necessary for the construction project by preserving established vegetation to act as a BMP.

During Construction (Temporary Measures)

1. Anchored Straw Bales (ASB): The use of hay bales is proposed as a culvert outlet trap at the 48" RCP outlet from the new permanent water quality basin and at the 36" RCP outlet that discharges to the existing water quality basin on the east end of the site to stop any sediment produced from stormwater runoff from continueing to the Colorado River.
2. Erosion Logs: The use of erosion logs is proposed at the toe of cut and fill slopes and other areas where sediment from upstream flows may spill to existing drainage ways. Other locations are shown on the plan. Installation shall be in accordance with the detail as shown on the plans.
3. Inlet Protection: The use of inlet protection is proposed at all inlets to trap sediment before entering the storm drain system.

After Construction (Permanent Measures)

1. Rip-Rap: The use of rip-rap per construction drawings is proposed for around the outlet of several pipes as noted and shown.

1. Reseeding: the majority of the site will be seeded with grass or other plantings as shown in the landscape plans. All disturbed areas will be seeded if otherwise not proposed to be paved.

Maintenance

1. The contractor or his designated representative shall make routine checks on all erosion control measures to determine if repairs or sediment removal is necessary.
2. After each rainfall or moderate snow melt, erosion control measures are to be checked. If repairs are needed, they shall be completed immediately.
3. Silt and sediment shall be removed when they reach a height of one-half of the barrier (erosion log or anchored straw bale).
4. When temporary measures are to be removed, any silt and sediment deposits shall be removed and spread evenly in fill areas.

General Notes

1. The SWMP establishes the minimum acceptable requirements for stormwater pollution prevention on site. The Contractor may supplement these requirements as appropriate for specific construction activites. Any changes to the practices shown on this plan must be reviewed by Project Inspector/Engineer prior to implementation.
2. At all times during construction, erosion and sediment control shall be maintained by the contractor or his designated representative.
3. Erosion control systems shall be installed as grading progresses.
4. The Contractor shall provide and maintain a portable concrete washout facilty.
5. Details shown are schematic only. Adjust as necessary to fit field conditions.
6. Erosion bales shall be placed to avoid runoff flowing between, around or under bales. Bales shall be anchored with 2" x 2" x 4' wooden stakes or #4 reinforcing bars, two per bale (see details for further instructions).
7. Negative impacts to downstream areas (or receiving waters) caused by the slope grading to be monitored and corrected by the contractor.
8. Construction traffic entrances shall be cleaned on a continual basis during slope grading.
9. A copy of the SWMP and construction plans shall be maintained on site at all times.

DESCRIPTION	DATE
REVISION △	–
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REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE NTS

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM WATER MANAGEMENT PLAN – SHT 1
June 19, 2020

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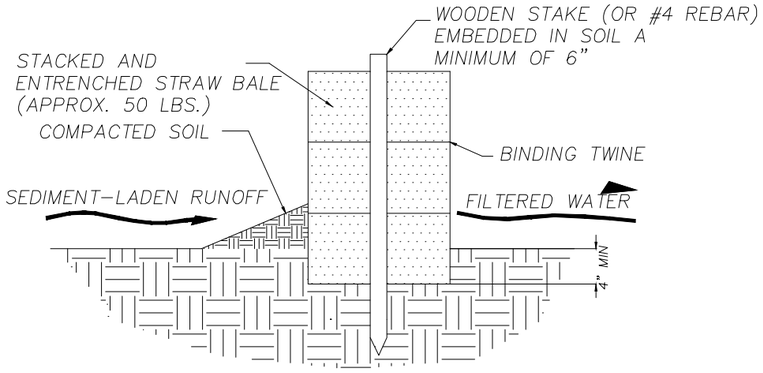
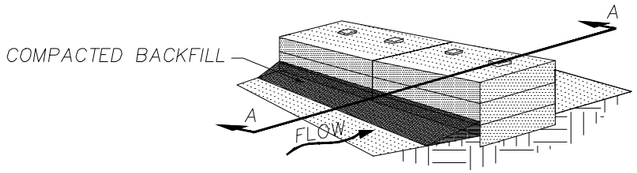
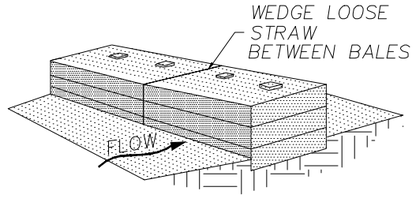


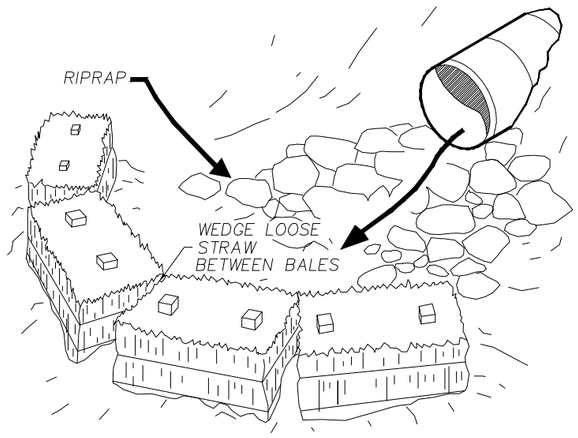
SECTION A–A



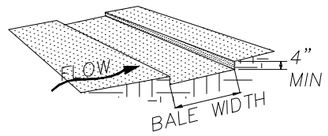
STEP 3. PLACE COMPACTED BACKFILL AGAINST THE UPSTREAM FACE.



STEP 2. PLACE BALE IN TRENCH, STAKE IN PLACE

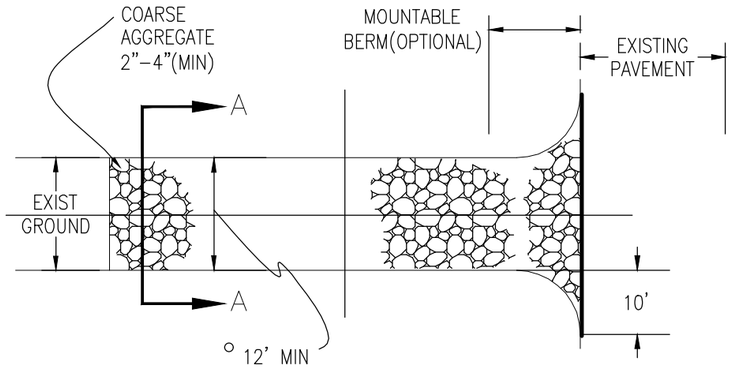


CULVERT OUTLET TRAP
N.T.S.
ANCHORED STRAW BALE (A.S.B.)



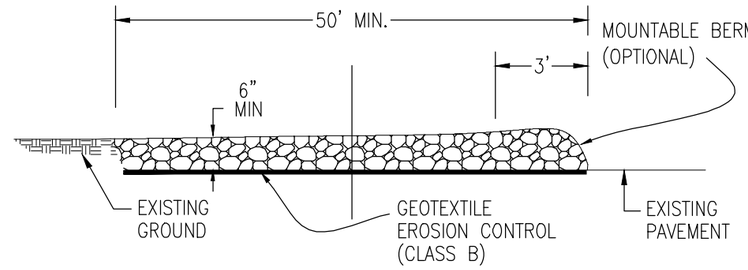
STEP 1. EXCAVATE TRENCH FOR BALES

BALE INSTALLATION PROCEDURE

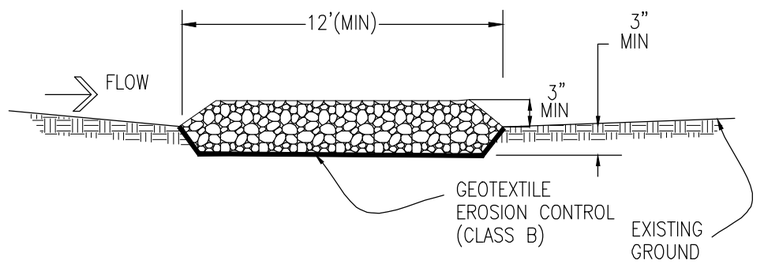


PLAN VIEW

○ MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION.



SIDE ELEVATION



SECTION A–A

STABILIZED CONSTRUCTION ENTRANCE

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE NTS

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM WATER MANAGEMENT PLAN – SHT 2
June 19, 2020

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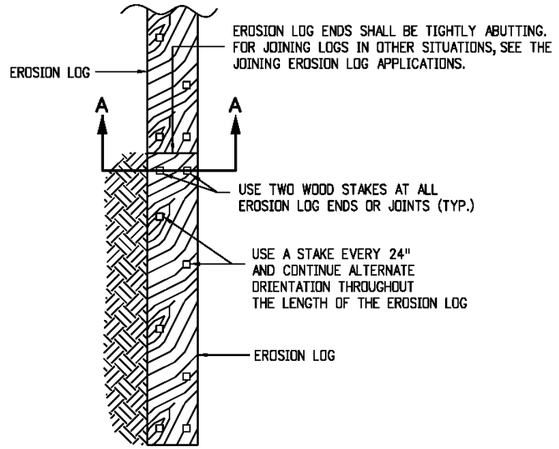
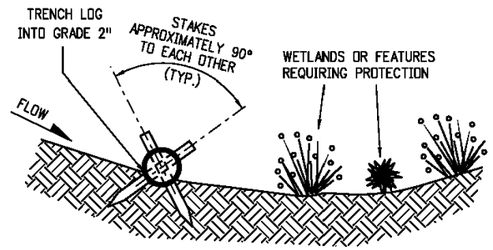
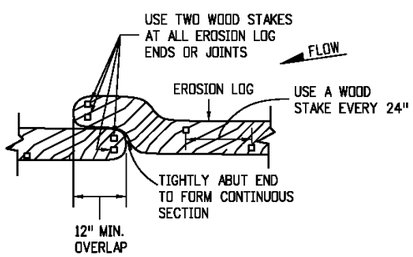


PLAN VIEW

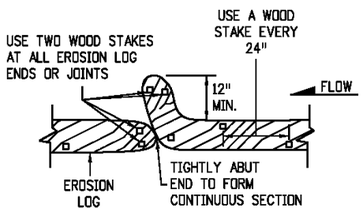


SECTION A-A

TYPICAL STAKE INSTALLATION

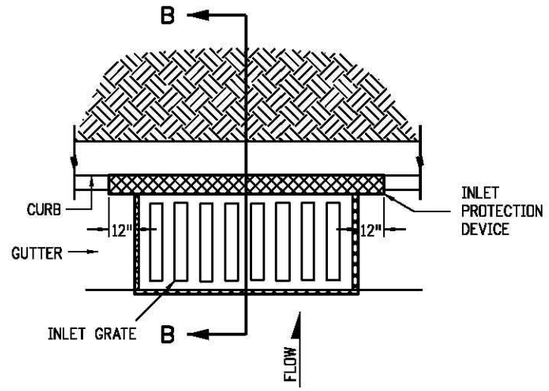


OVERLAP JOINING DETAIL

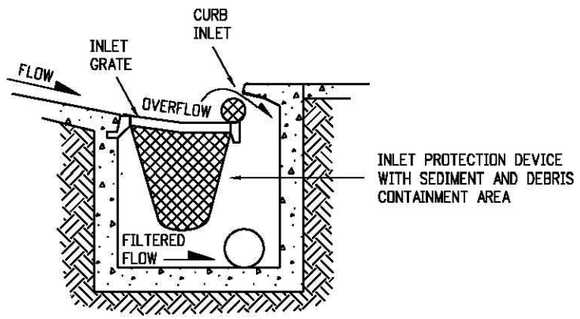


J-HOOK JOINING DETAIL

JOINING EROSION LOG APPLICATIONS



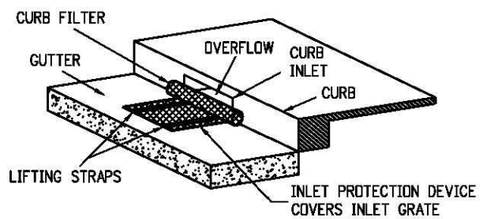
PLAN VIEW



SECTION B-B

OPTION A

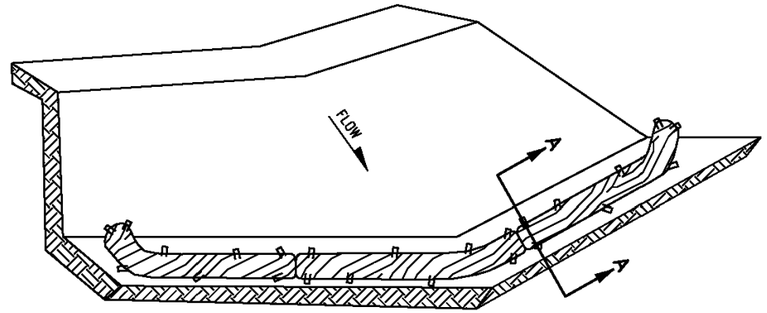
STORM DRAIN INLET PROTECTION (TYPE II)



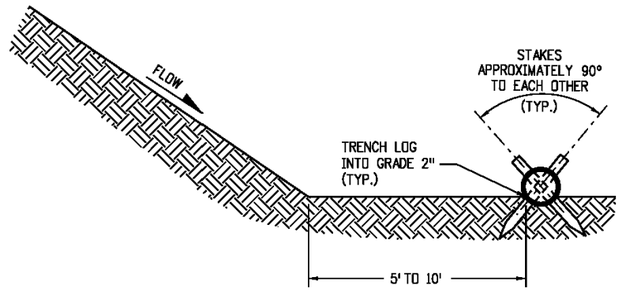
ISOMETRIC VIEW

OPTION B

STORM DRAIN INLET PROTECTION (TYPE II)



ISOMETRIC VIEW



SECTION A-A

NOTES:

1. EROSION LOGS USED AT TOE OF SLOPE SHALL BE PLACED 5 TO 10 FEET BEYOND TOE OF SLOPE TO PROVIDE STORAGE CAPACITY.
2. EROSION LOGS SHALL BE PLACED ON THE CONTOUR WITH ENDS FLARED UP SLOPE.
3. SEE SHEET 2 OF 11 FOR JOINING LOGS DETAIL.

EROSION LOGS PAY ITEMS	
NUMBER	DESCRIPTION
208-00012	TYPE 1 (9")
208-00002	TYPE 1 (12")
208-00013	TYPE 1 (20")
208-00007	TYPE 2 (8")
208-00008	TYPE 2 (12")
208-00009	TYPE 2 (18")

EROSION LOG TOE OF SLOPE PROTECTION

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALE NTS

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THE RIVERFRONT AT DOS RIOS
STORM WATER MANAGEMENT PLAN – SHT 3
June 19, 2020

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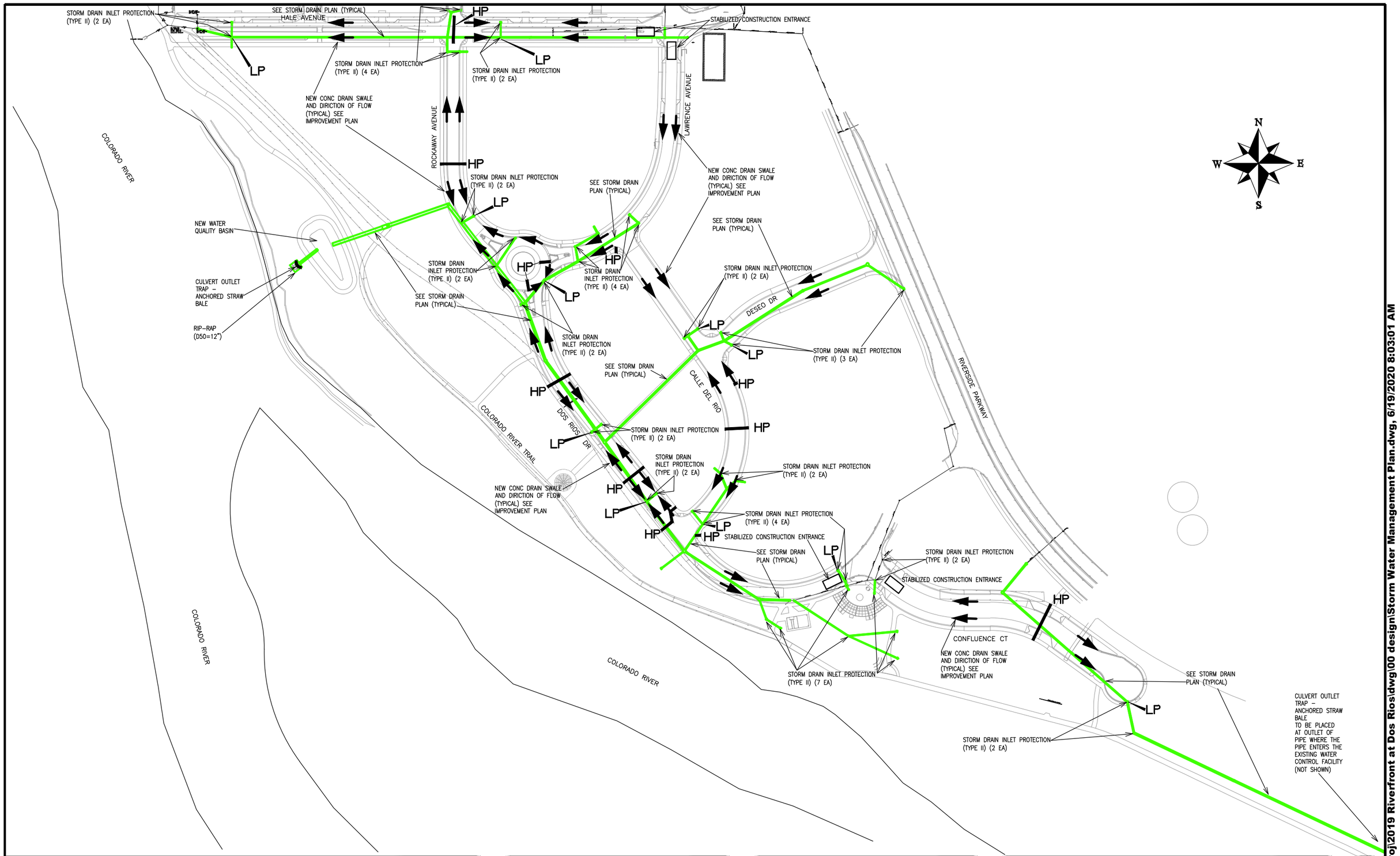

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REVISION △	–

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	BH	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALE 0 50 100 200

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THE RIVERFRONT AT DOS RIOS
STORM WATER MANAGEMENT PLAN – SHT 4
June 19, 2020

266

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SUMMARY OF EARTHWORK QUANTITIES

INDEX Book	INDEX Page	INDEX Sheet		PROJECT TOTAL CU. YD.	PROJECT TOTAL *As Const.*
			203-00010 UNCLASSIFIED EXCAVATION (CIP)	**CU. YD.**	*As Const.*
			ROADWAY (QUANTITY CALCULATED FROM CIVIL3D TIN VOL. COMPARE)		
			Riverside Parkway Left Turn into Dos Rios	250	
			ADDITION OF CONCRETE AND PAVING PRISM	292	
			REMOVAL OF PAVEMENT REMOVAL PAY ITEMS	-105	
			SUBTOTAL:	437	
			TOTAL FOR PAY QUANTITIES	**437**	
			EMBANKMENT MATERIAL (CIP) (FOR INFORMATION ONLY)	**CU. YD.**	
			QUANTITY CALCULATED FROM CIVIL3D		
			Riverside Parkway Left Turn into Dos Rios	0	
			TOTAL	**0**	

INDEX Book	INDEX Page	INDEX Sheet	**ROADWAY QUANTITIES BALANCE (FOR INFORMATION ONLY)**	PROJECT TOTAL CU. YD.	PROJECT TOTAL *As Const.*
				CU. YD.	*As Const.*
			Total Unclassified Excavation	437	
			Total Embankment (net)	0	
			EMBANKMENT TIMES FACTOR 1.2	0	
			Haul Material (Material to be Hauled Away by Contractor)	437	

DESCRIPTION	DATE
REVISION 1	–
REVISION 2	–
REVISION 3	–
REVISION 4	–

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

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CITY OF Grand Junction COLORADO

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ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
SUMMARY OF EARTHWORK – 1
June 19, 2020

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E 89540.04
EL 4570.37

CP /PK 16/
N 33422.4800
E 89353.57
EL 4572.79

CP /PK /
N 33454.4410
E 89360.56
EL 4572.76

RIVERSIDE P RKW Y

CP /PK /
N 32987.1080
E 89615.49
EL 4570.40

CP /BOLT/
N 33201.8110
E 89426.11
EL 4569.68

DOS RIOS DR

DESCRIPTION	DATE
REVISION 1	–
REVISION 2	–
REVISION 3	–
REVISION 4	–

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CITY OF Grand Junction COLORADO

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RIVERSIDE PARKWAY LEFT TURN LANE
SURVEY CONTROL – 1
June 19, 2020

268

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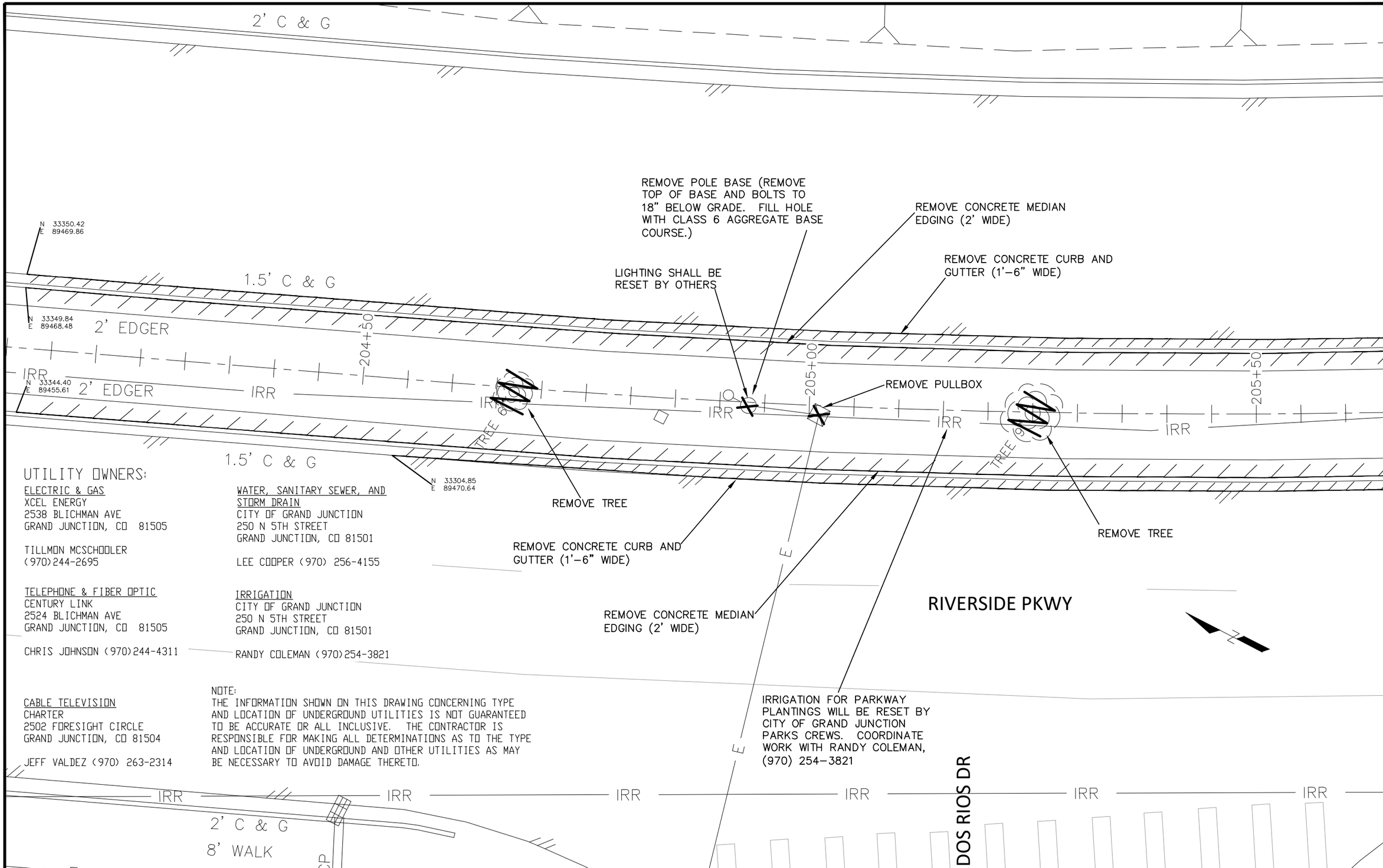

UTILITY OWNERS:

ELECTRIC & GAS
XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMON MCSCHOOLER
(970)244-2695

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

IRRIGATION
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

RANDY COLEMAN (970)254-3821

NOTE:
THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

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DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
EXISTING CONDITION PLAN – 1
June 19, 2020

269

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UTILITY OWNERS:

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XCEL ENERGY
2538 BLICHMAN AVE
GRAND JUNCTION, CO 81505

TILLMON MCSCHOOLER
(970)244-2695

WATER, SANITARY SEWER, AND STORM DRAIN
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

LEE COOPER (970) 256-4155

TELEPHONE & FIBER OPTIC
CENTURY LINK
2524 BLICHMAN AVE
GRAND JUNCTION, CO 81505

CHRIS JOHNSON (970)244-4311

IRRIGATION
CITY OF GRAND JUNCTION
250 N 5TH STREET
GRAND JUNCTION, CO 81501

RANDY COLEMAN (970)254-3821

CABLE TELEVISION
CHARTER
2502 FORESIGHT CIRCLE
GRAND JUNCTION, CO 81504

JEFF VALDEZ (970) 263-2314

NOTE:
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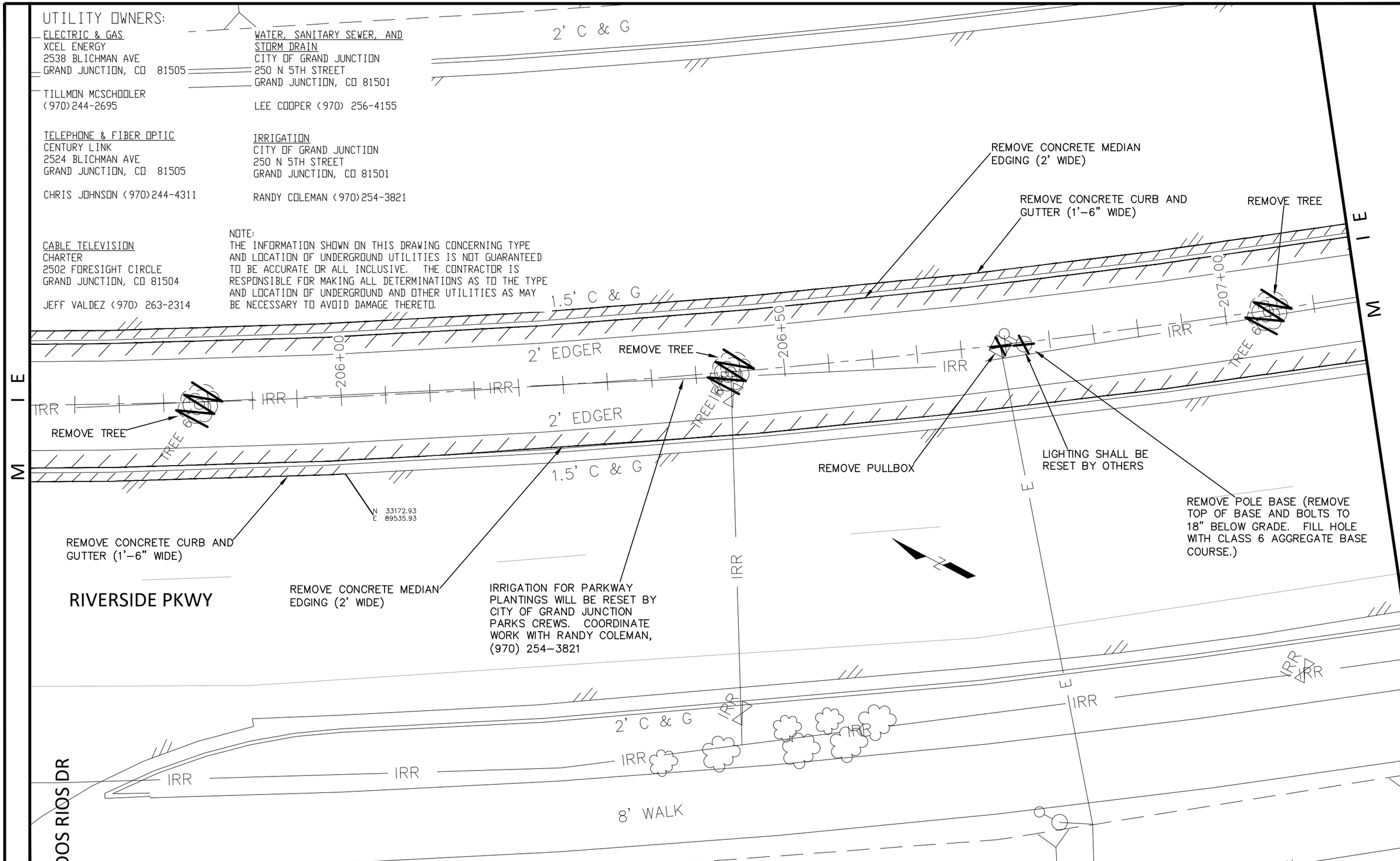

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REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
EXISTING CONDITION PLAN – 2
June 19, 2020

270

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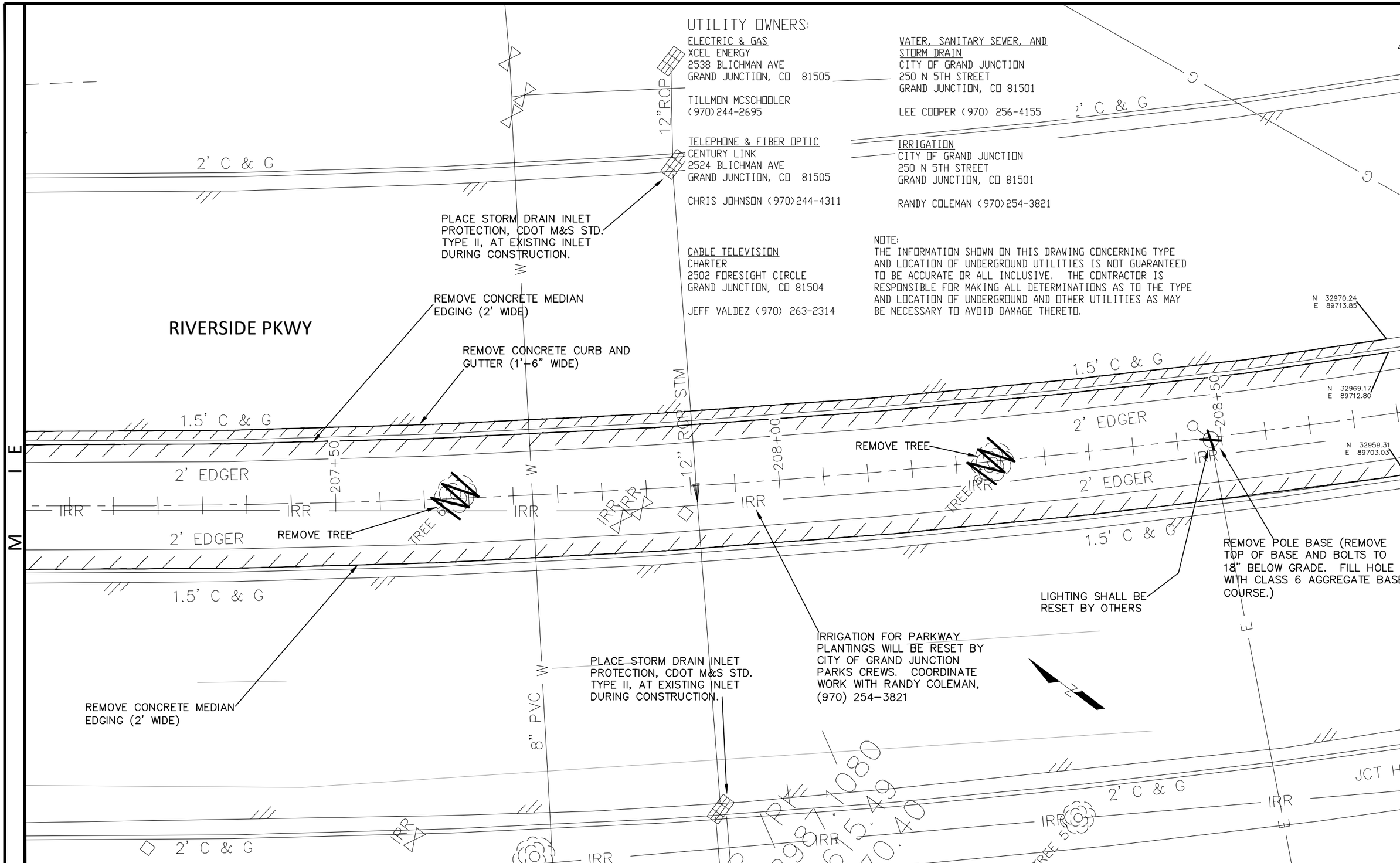

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REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
EXISTING CONDITION PLAN – 3
June 19, 2020

271

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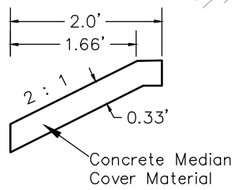


Concrete Median Edging

CONCRETE MEDIAN COVER MATERIAL (COLORED CONC.,DAVIS COLORS SUNSET ROSE) (4" THICK)

CONCRETE MEDIAN EDGING (SEE DETAIL) (COLORED CONC.,DAVIS COLORS SUNSET ROSE) (4" THICK) (2' WIDE)

CONCRETE CURB AND GUTTER (1'–6" WIDE) (SPILL GUTTER)

EDGE OF GUTTER ALIGNMENT (PROFILE REFERENCE)

HOT BITUMINOUS PAVEMENT PATCHING: HOT BITUMINOUS PAVEMENT (6" THICK) (GRADING SX, BINDER GRADE PG 64–22) (THREE 2" LIFTS) – OVER – 8" A.B.C. (Class 6)

2+50

3+00

3+50

204+50

205+00

205+50

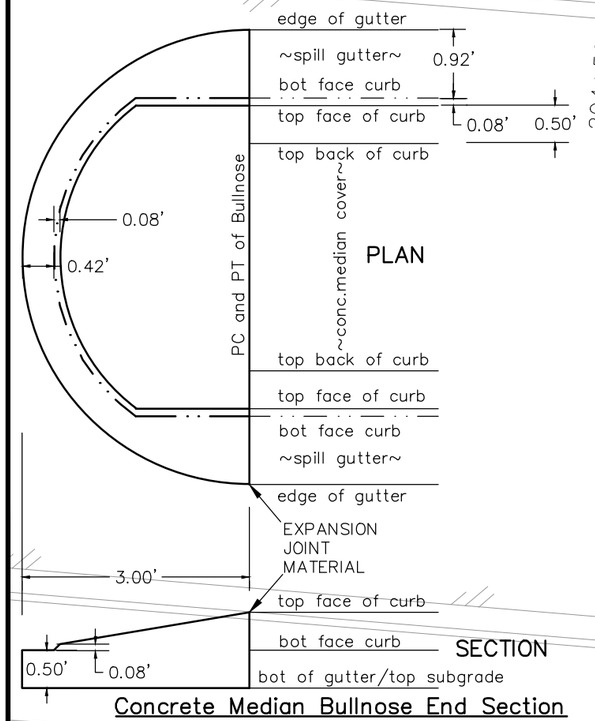
CENTERLINE OF PKWY ALIGNMENT (CROSS SECTION REFERENCE)

CONCRETE MEDIAN BULLNOSE SECTION (SEE DETAIL)

PROTECT EXISTING CURB AND GUTTER IN PLACE UP TO BULLNOSE SECTION

RIVERSIDE PKWY

DOS RIOS DR



Concrete Median Bullnose End Section

SEE STAKING PLANS FOR PAY ITEM LOCATION

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
IMPROVEMENT PLAN – 1
June 19, 2020

272

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SEE STAKING PLANS
FOR PAY ITEM LOCATION

HOT BITUMINOUS PAVEMENT PATCHING: HOT BITUMINOUS PAVEMENT (6" THICK) (GRADING SX, BINDER GRADE PG 64–22) (THREE 2" LIFTS)
– OVER –
8" A.B.C. (Class 6)

CONCRETE MEDIAN COVER MATERIAL (COLORED CONC.,DAVIS COLORS SUNSET ROSE) (4" THICK)

CONCRETE CURB AND GUTTER (1'–6" WIDE) (SPILL GUTTER)

EDGE OF GUTTER ALIGNMENT (PROFILE REFERENCE)

4+00

4+50

5+00

206+00

206+50

207+00

CENTERLINE OF PKWY ALIGNMENT (CROSS SECTION REFERENCE)

CONCRETE MEDIAN BULLNOSE SECTION (SEE DETAIL)

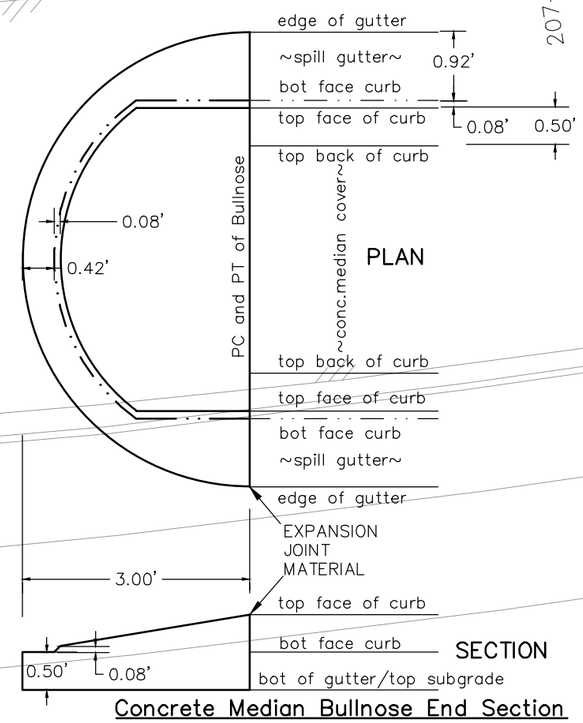
PROTECT EXISTING CURB AND GUTTER IN PLACE FROM BULLNOSE SECTION

RIVERSIDE PKWY

DOS RIOS DR

M I E

M I E



Concrete Median Bullnose End Section

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
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APPROVED BY TCP DATE 2020

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
IMPROVEMENT PLAN – 2
June 19, 2020

273

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RIVERSIDE PKWY

HOT BITUMINOUS PAVEMENT PATCHING: HOT BITUMINOUS PAVEMENT (6" THICK) (GRADING SX, BINDER GRADE PG 64–22) (THREE 2" LIFTS)
– OVER –
8" A.B.C. (Class 6)

CONCRETE CURB AND GUTTER (1'–6" WIDE) (SPILL GUTTER)

EDGE OF GUTTER ALIGNMENT (PROFILE REFERENCE)

CENTERLINE OF PKWY ALIGNMENT (CROSS SECTION REFERENCE)

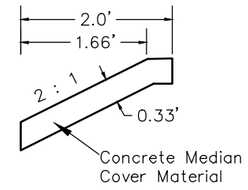
207+50

208+00

209+50

CONCRETE MEDIAN COVER MATERIAL (COLORED CONC.,DAVIS COLORS SUNSET ROSE) (4" THICK)

CONCRETE MEDIAN EDGING (SEE DETAIL) (COLORED CONC.,DAVIS COLORS SUNSET ROSE) (4" THICK) (2' WIDE)



Concrete Median Edging

PROTECT EXISTING CURB AND GUTTER IN PLACE FROM BULLNOSE SECTION

SEE STAKING PLANS FOR PAY ITEM LOCATION

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
IMPROVEMENT PLAN – 3
June 19, 2020

274

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4600
4595
4590
4585
4580
4575
4570
4565
4560
4555

VPI=2+00.00
EL=4572.16

VPI=6+00.00
VPI EL=4570.40
LP=6+06.28
LP EI=4570.44
AD=0.70%
K=71.01
VC=50.00

VPC=
5+75.00
EL=4570.51

VPT=
6+25.00
EL=4570.47

VPI=6+71.83
EL=4570.59

VPI=7+00.00
EL=4570.78

−0.44%

0.26%

0.66%

SEE STAKING PLANS
FOR STAKING DATA

1+50 2+00 2+50 3+00 3+50 4+00 4+50 5+00 5+50 6+00 6+50 7+00 7+50

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE
SEE PROFILE FOR REFERENCE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
EDGE OF GUTTER PROFILE – 1
June 19, 2020

275

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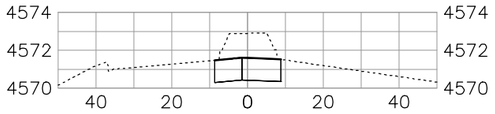

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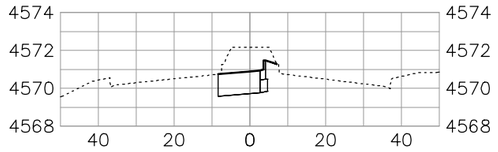

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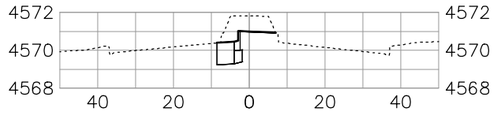

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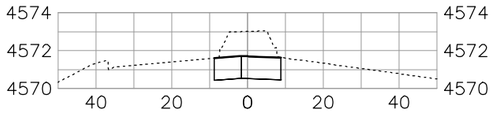

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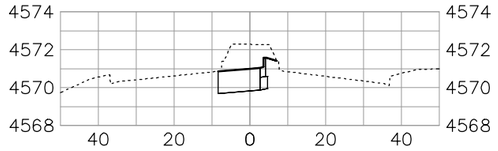

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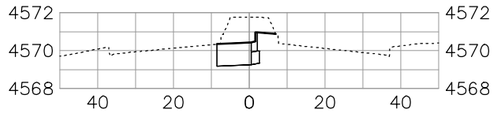

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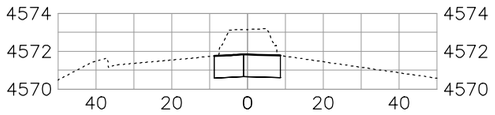

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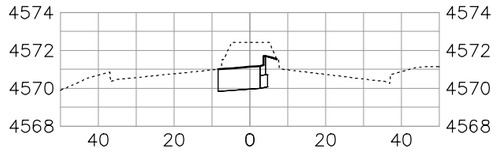

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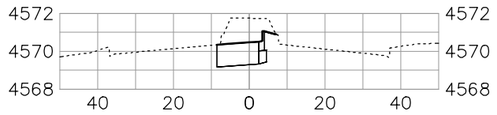

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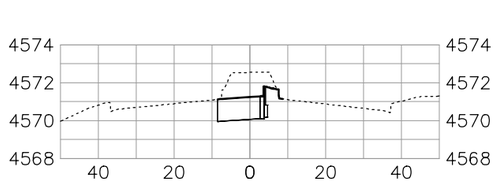

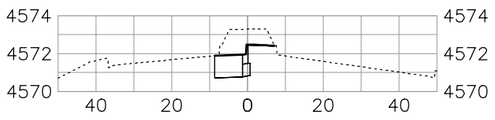

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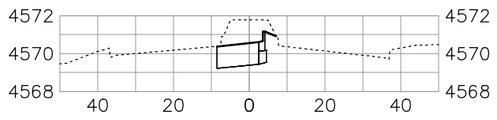

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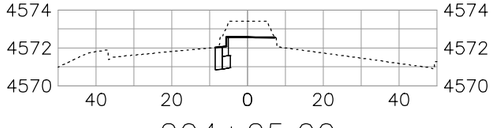
SEE STAKING PLANS
FOR STAKING DATA



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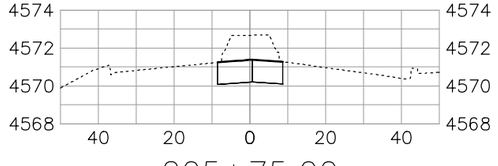

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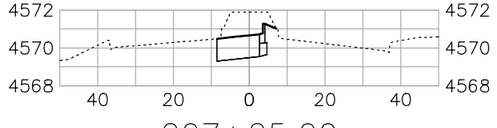

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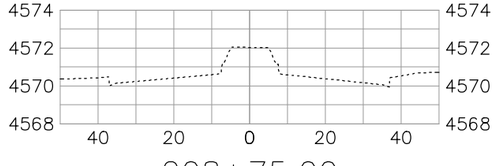

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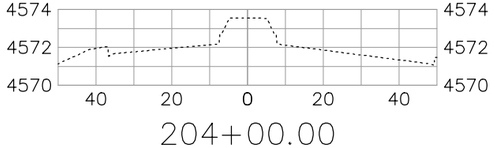

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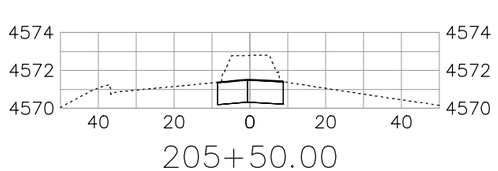

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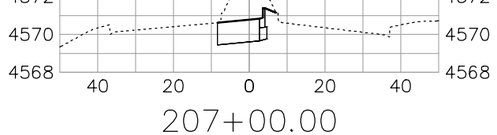

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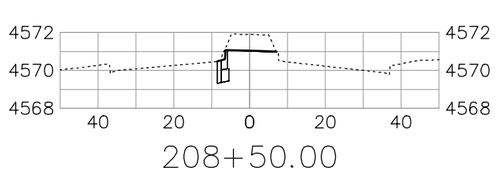

208+50.00

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE
SEE SECTIONS FOR REFERENCE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
PARKWAY CROSS SECTIONS – 1
June 19, 2020

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E 89469.86
EL 72.11

72.15

R52.00

N 33340.20
E 89472.93
EL 72.06

72.10

72.67

73.48

72.60

73.43

72.60

73.45

R4.98

R6.98

4572.5

N 33344.41
E 89455.64
EL 72.61

204+50

2+50

N 33307.44
E 89479.20
EL 71.92

71.84

71.96

71.90

72.46

R4.50

72.40

71.88

72.34

71.93

71.89

71.86

4571.8

205+00

N 33267.32
E 89498.09
EL 71.72

71.61

4571.7

71.65

4571.6

3+50

N 33222.08
E 89519.39
EL 71.50

71.36

4571.5

4571.4

71.40

205+50

4571.0

RIVERSIDE PKWY

4571.0

DOS RIOS DR

N

M I E

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\2020 Riverside Parkway Left Turn Lane into Dos RiosISTAKING PLAN.dwg, 6/19/2020 8:08:26 AM

DESCRIPTION	DATE
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REVISION 3	–
REVISION 4	–

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

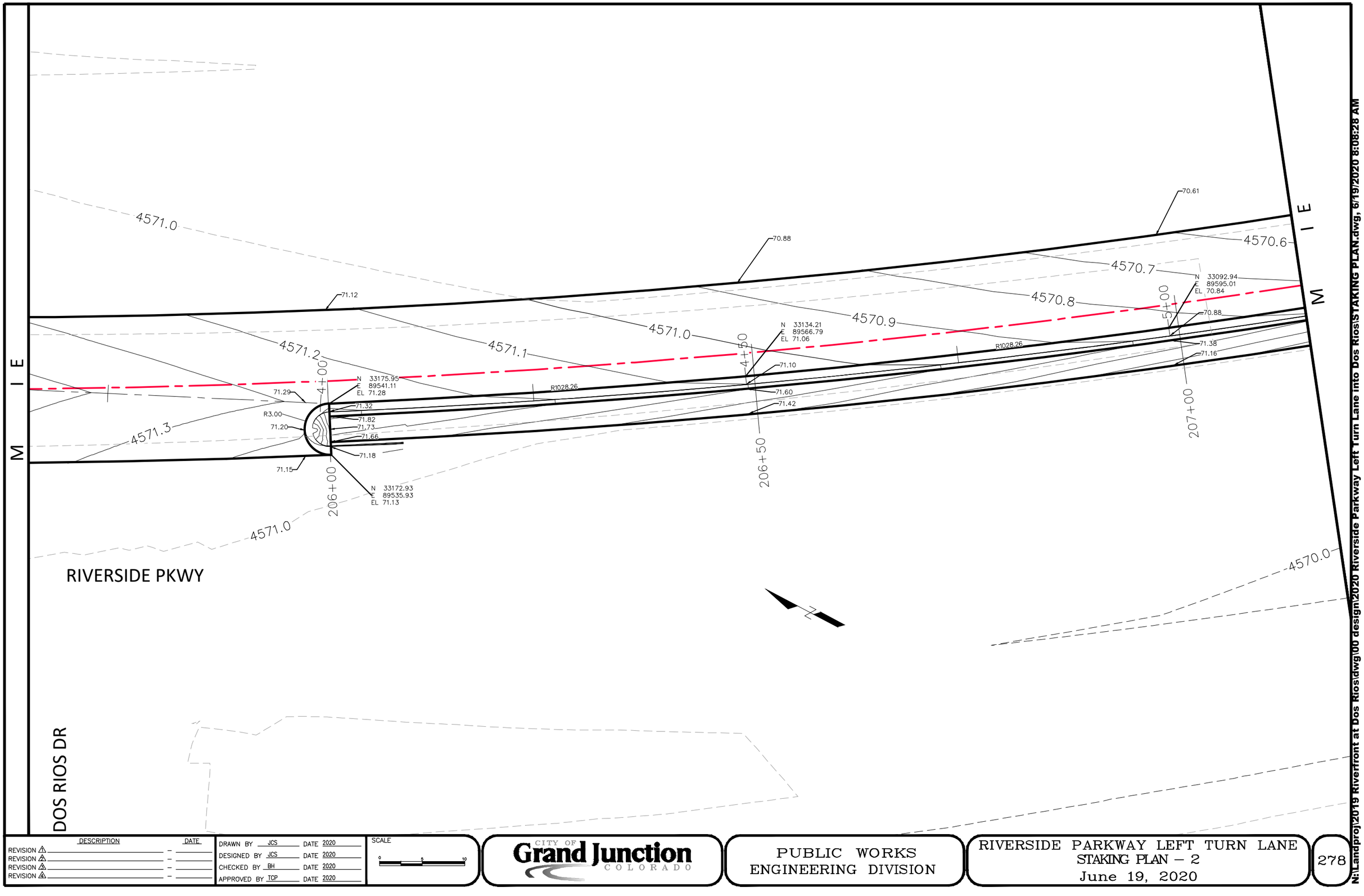
SCALE 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
STAKING PLAN – 1
June 19, 2020

277



DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
STAKING PLAN – 2
June 19, 2020

278

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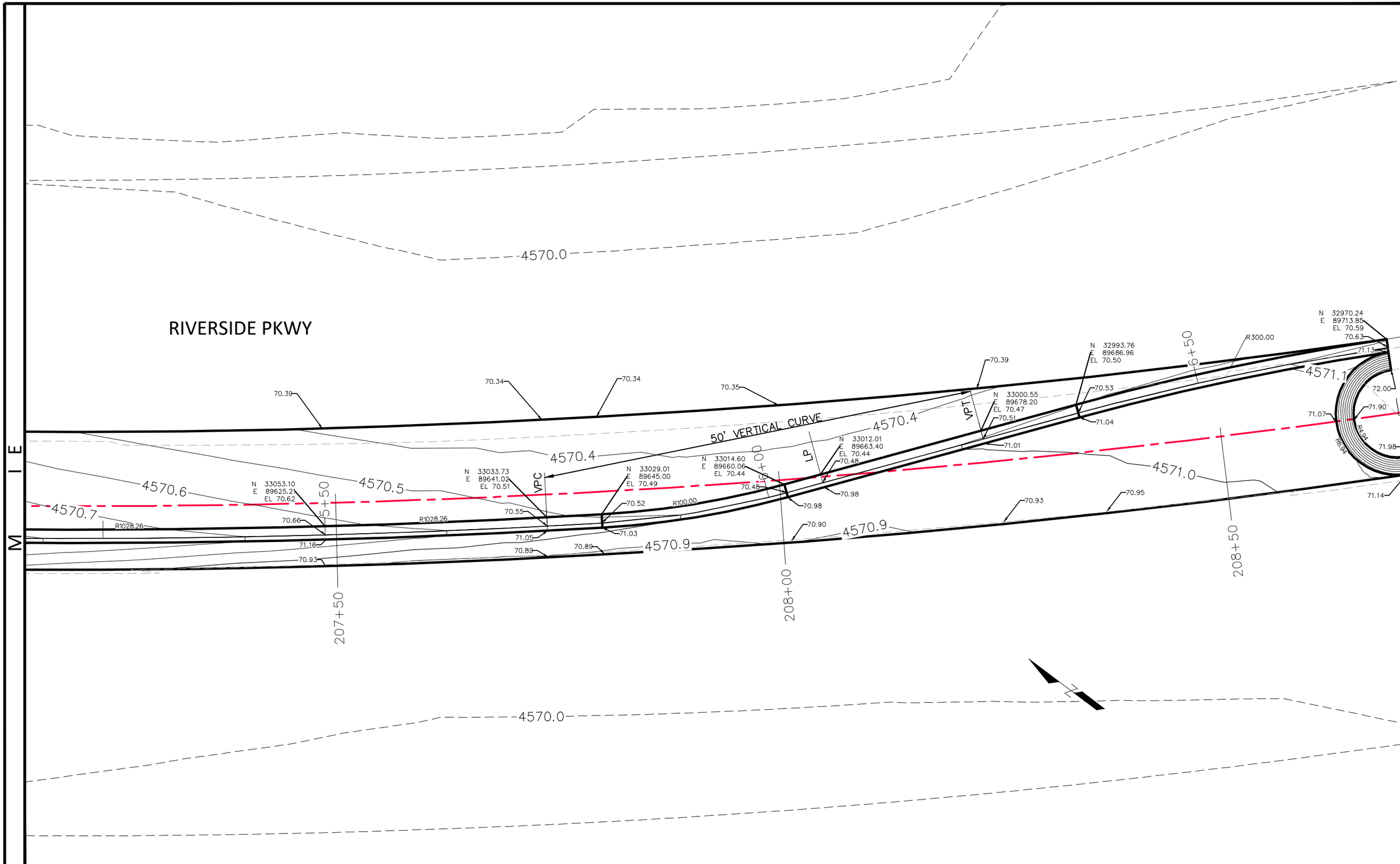

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
STAKING PLAN – 3
June 19, 2020

279

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\2020 Riverside Parkway Left Turn Lane into Dos Rios\STAKING PLAN.dwg, 6/19/2020 8:08:30 AM

EPOXY PAINT PAVEMENT MARKING
(BY CITY) (8" WHITE SOLID)

SAFE HIT FLEXIBLE
DELINEATOR
SH248GP3--WS 09
TO INCLUDE 4" PVC
SLEEVE. 2 EACH -
ONE AT EACH
BULLNOSE.

206+00
Northing=33181.49
Easting=89550.61

207+80
Northing=33036.12
Easting=89653.40

PREFORMED THERMOPLASTIC
PAVEMENT MARKING (LEFT
TURN SYMBOL)

PREFORMED THERMOPLASTIC
PAVEMENT MARKING (LEFT
TURN SYMBOL)

206+00

206+50

207+00

207+50

208+00

208+50

RIVERSIDE PKWY

DOS RIOS DR

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE 0 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

RIVERSIDE PARKWAY LEFT TURN LANE
STRIPING PLAN - .
June 19, 2020

280

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SUMMARY OF EARTHWORK QUANTITIES

INDEX Book	INDEX Page	INDEX Sheet		PROJECT TOTAL CU. YD.	PROJECT TOTAL *As Const.*
			203-00010 UNCLASSIFIED EXCAVATION (CIP)		
			ON SITE (QUANTITY CALCULATED FROM CIVIL3D - TIN SUBTRACTION)		
			UNCLASSIFIED EXCAVATION	1370	
			ADDITION OF RIPRAP PRISM	2370	
			TOTAL FOR PAY QUANTITIES	**3740**	
			EMBANKMENT MATERIAL (CIP) (FOR INFORMATION ONLY)	**CU. YD.**	
			QUANTITY CALCULATED FROM CIVIL3D - TIN SUBTRACTION		
			UNCLASSIFIED EMBANKMENT	576	
			TOTAL	**576**	

INDEX Book	INDEX Page	INDEX Sheet	**EARTHWORK QUANTITIES BALANCE (FOR INFORMATION ONLY)**	PROJECT TOTAL CU. YD.	PROJECT TOTAL *As Const.*
			Total Unclassified Excavation	3740	
			Total Embankment (net)	576	
			EMBANKMENT TIMES FACTOR 1.3	749	
			Excess Material leftover (Material to be spoiled on site by Contractor)	2991	

NOTES:

TOP 4 INCHES OF ALL EMBANKMENT SHALL BE FREE OF DEBRIS AND ROCKS OR CLODS GREATER THAN 3 INCHES IN DIAMETER, AND SHALL BE SUITABLE AS NATIVE TOPSOIL.

ALL IMPORTED EMBANKMENT MATERIAL SHALL MEET A MINIMUM OF R-VALUE = 40.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JCS DATE 2020
DESIGNED BY JCS DATE 2020
CHECKED BY BH DATE 2020
APPROVED BY TCP DATE 2020

SCALE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
SUMMARY OF EARTHWORK – 1
June 19, 2020

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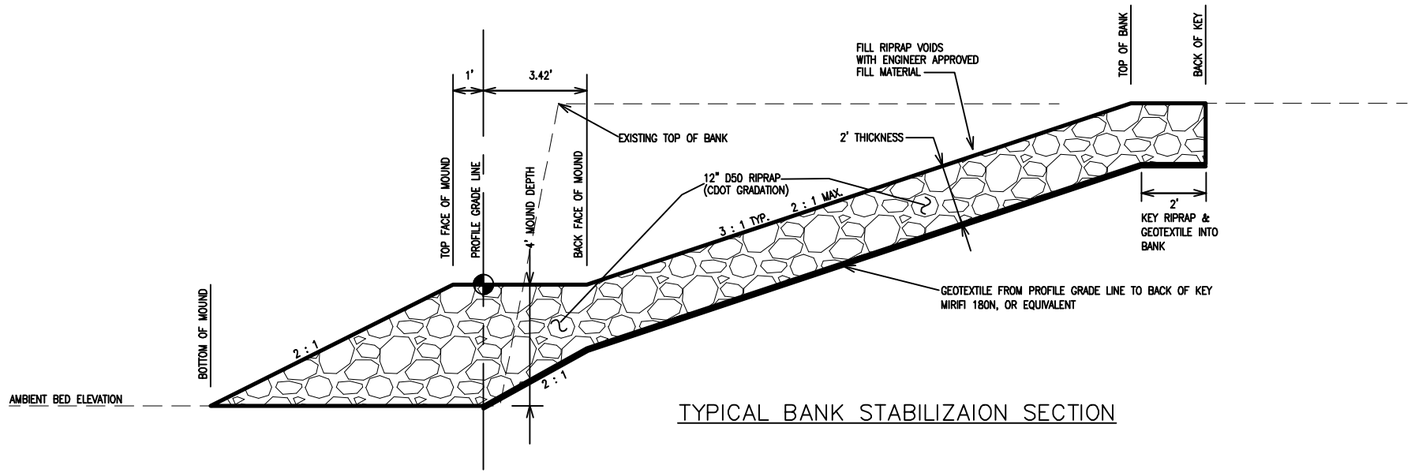
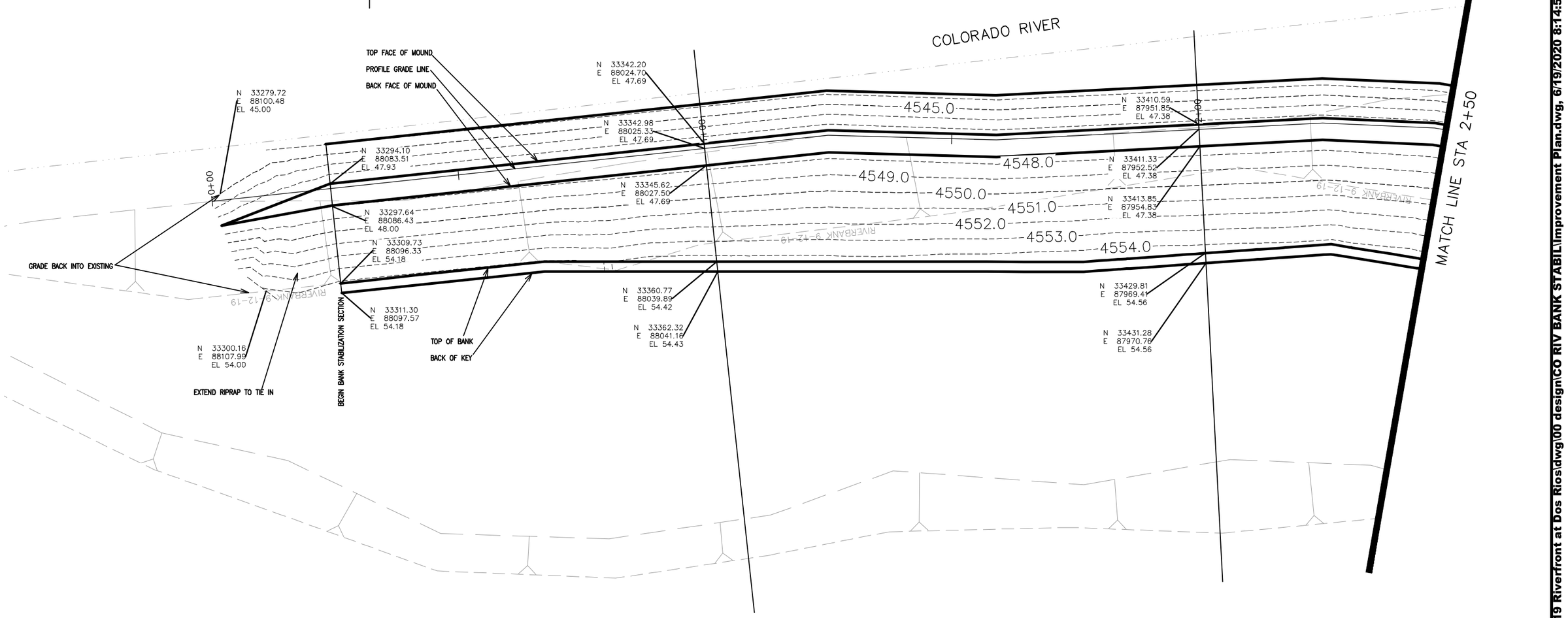


TYPICAL BANK STABILIZAION SECTION



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REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
IMPROVEMENT PLAN – I–1
June 19, 2020

282

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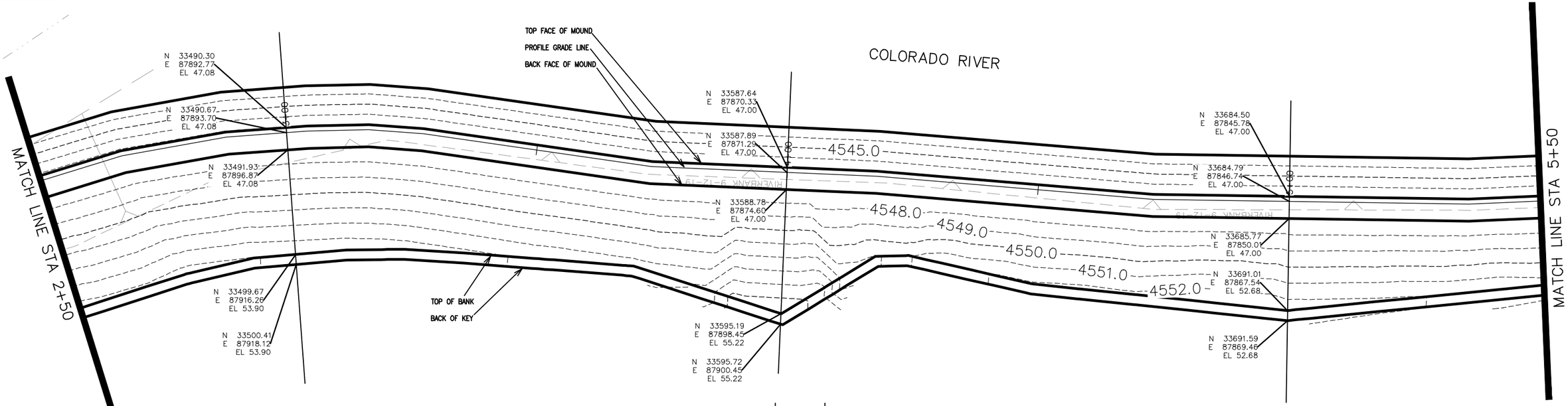
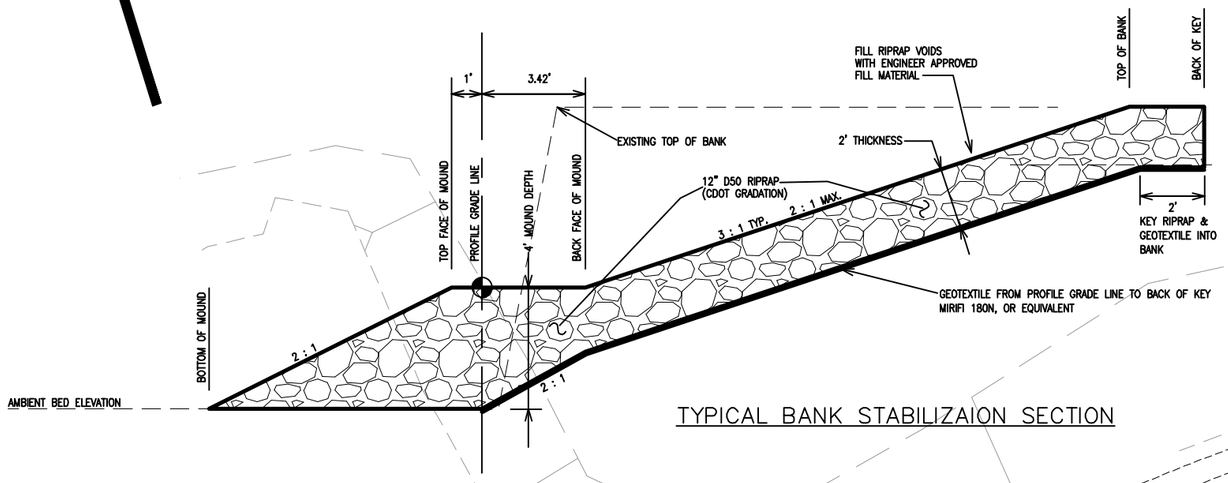




TYPICAL BANK STABILIZAION SECTION

WATER QUALITY POND

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
IMPROVEMENT PLAN – I–2
June 19, 2020

283

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\CO RIV BANK STABIL\Improvement Plan.dwg, 6/19/2020 8:15:00 AM

COLORADO RIVER

MATCH LINE STA 5+50

MATCH LINE STA 7+50

TOP FACE OF MOUND
PROFILE GRADE LINE
BACK FACE OF MOUND

N 33779.09
E 87813.63
EL 47.00

N 33779.43
E 87814.57
EL 47.00

N 33780.60
E 87817.79
EL 47.00

N 33784.16
E 87827.61
EL 50.40

N 33784.85
E 87829.50
EL 50.40

N 33873.53
E 87781.23
EL 47.00

N 33873.93
E 87782.15
EL 47.00

N 33875.28
E 87785.29
EL 47.00

N 33881.48
E 87799.70
EL 52.12

N 33882.28
E 87801.53
EL 52.12

4545.0

4548.0

4549.0

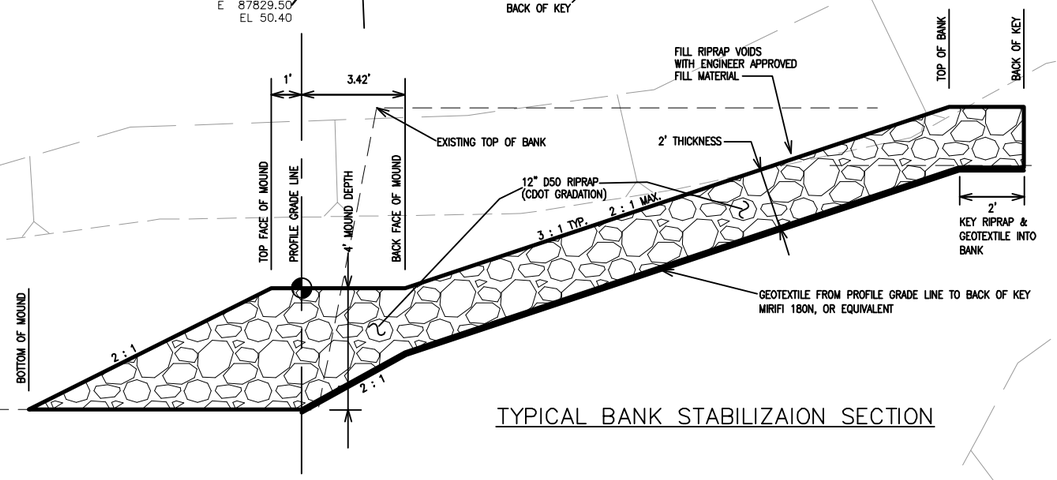
4550.0

4551.0

TOP OF BANK

BACK OF KEY

RIVERBANK 9-12-19



TYPICAL BANK STABILIZAION SECTION

WATER QUALITY POND

4+00

5+00

COLORADO RIVER TRAIL

30" RCP SAN

30" RCP SAN

30" RCP

SAN

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
IMPROVEMENT PLAN – I–3
June 19, 2020

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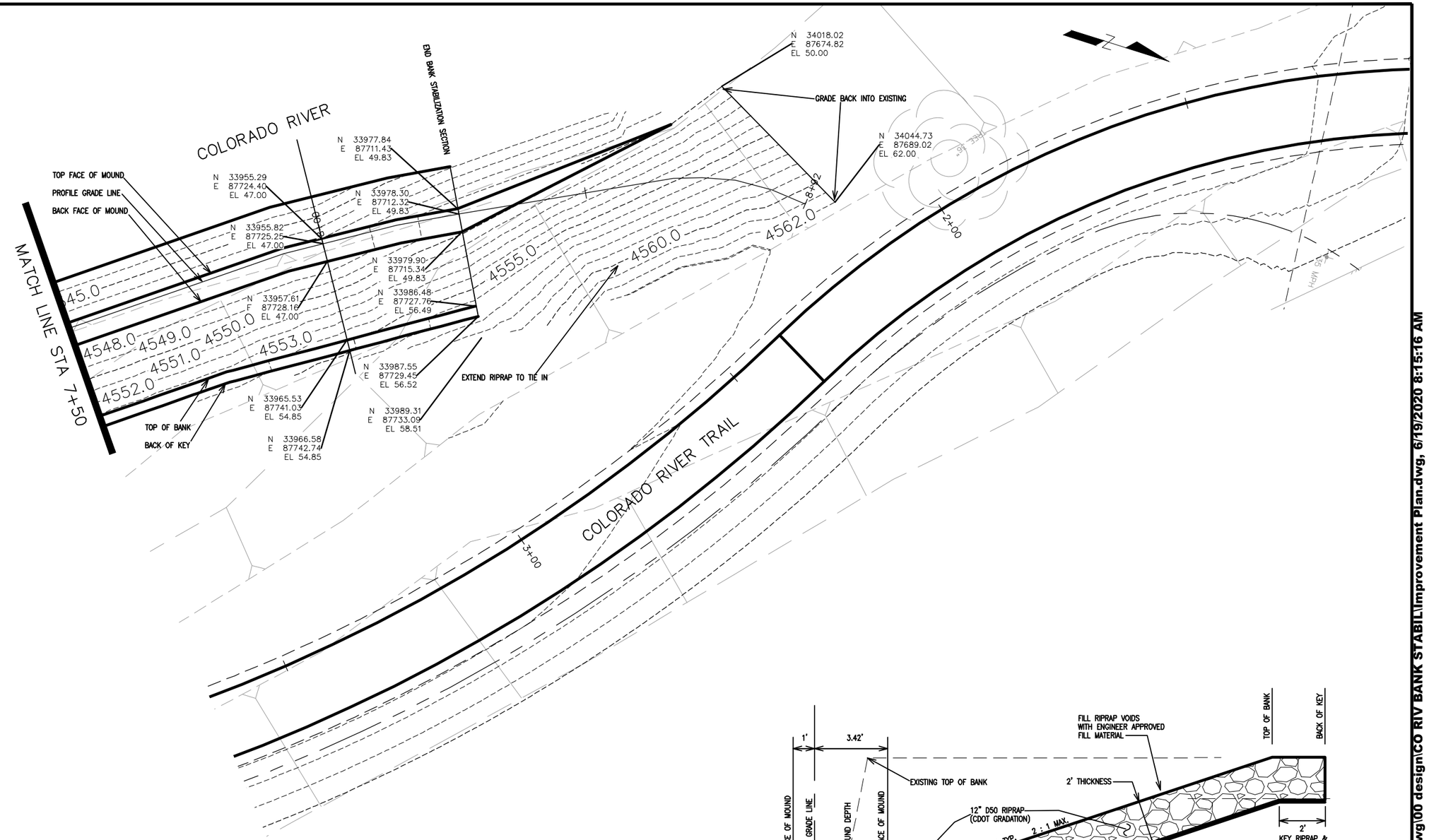

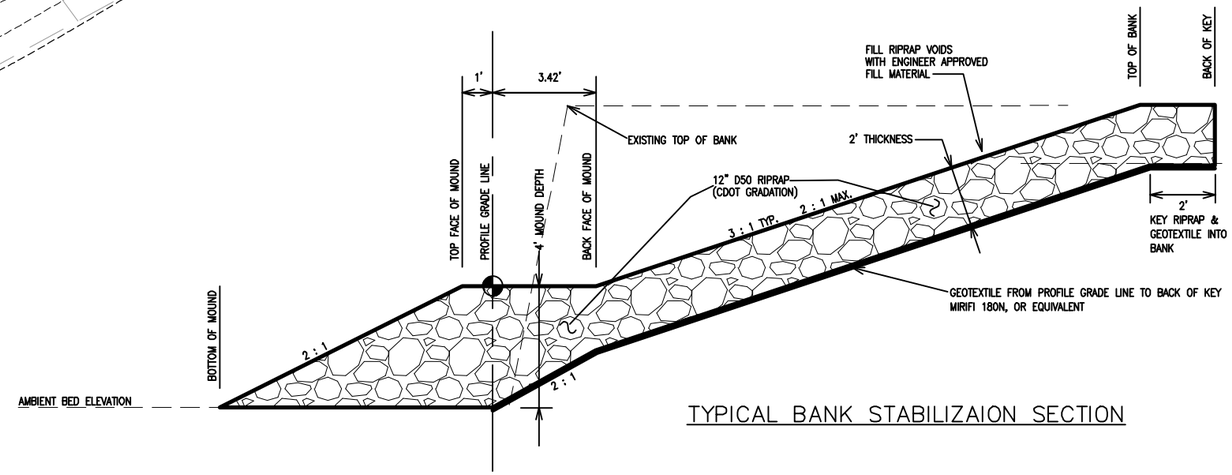

TYPICAL BANK STABILIZAION SECTION

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 NA NA NA

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
IMPROVEMENT PLAN – I–4
June 19, 2020

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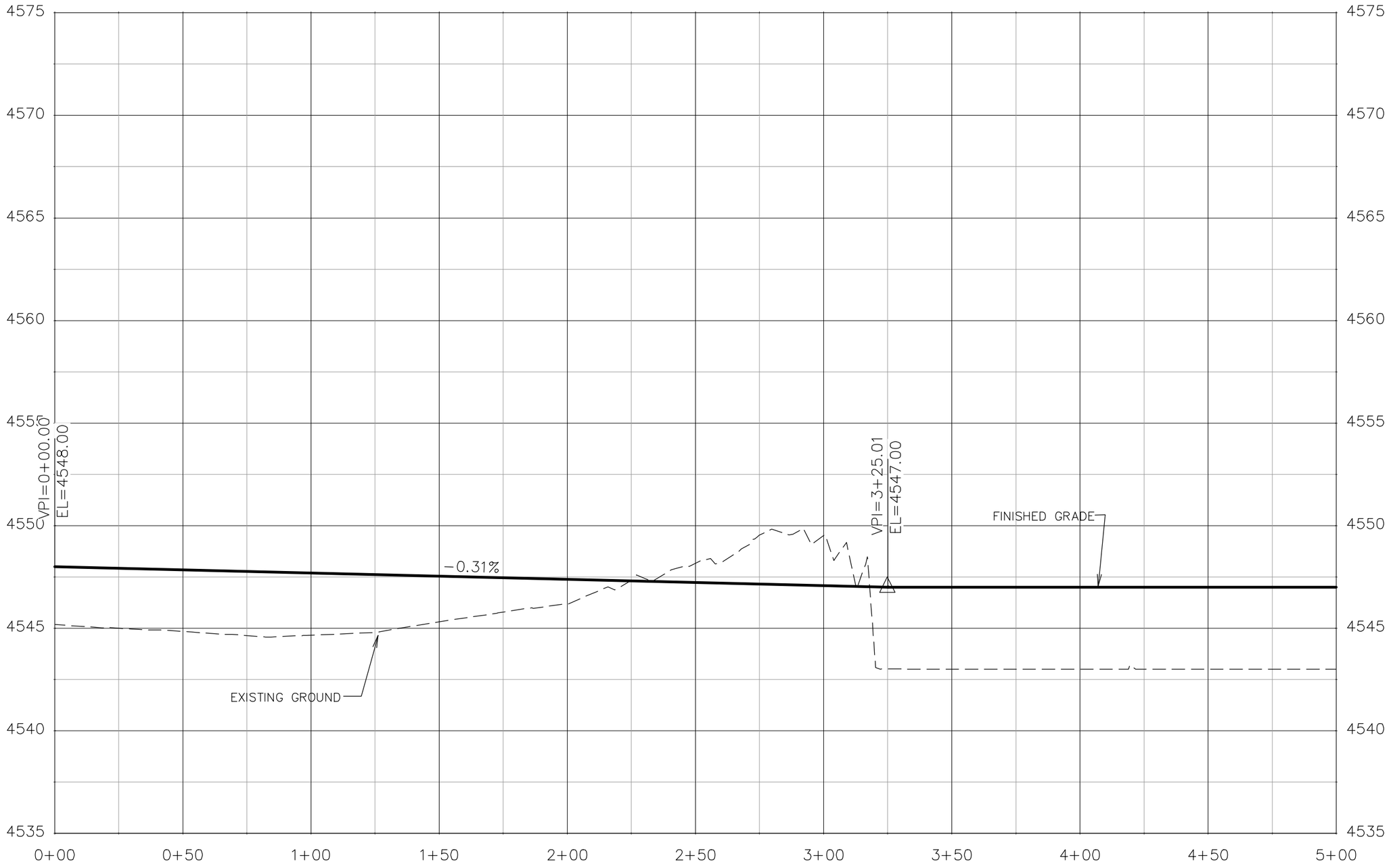

PROFILE GRADE LINE BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATON PROFILE – 1
June 19, 2020

286

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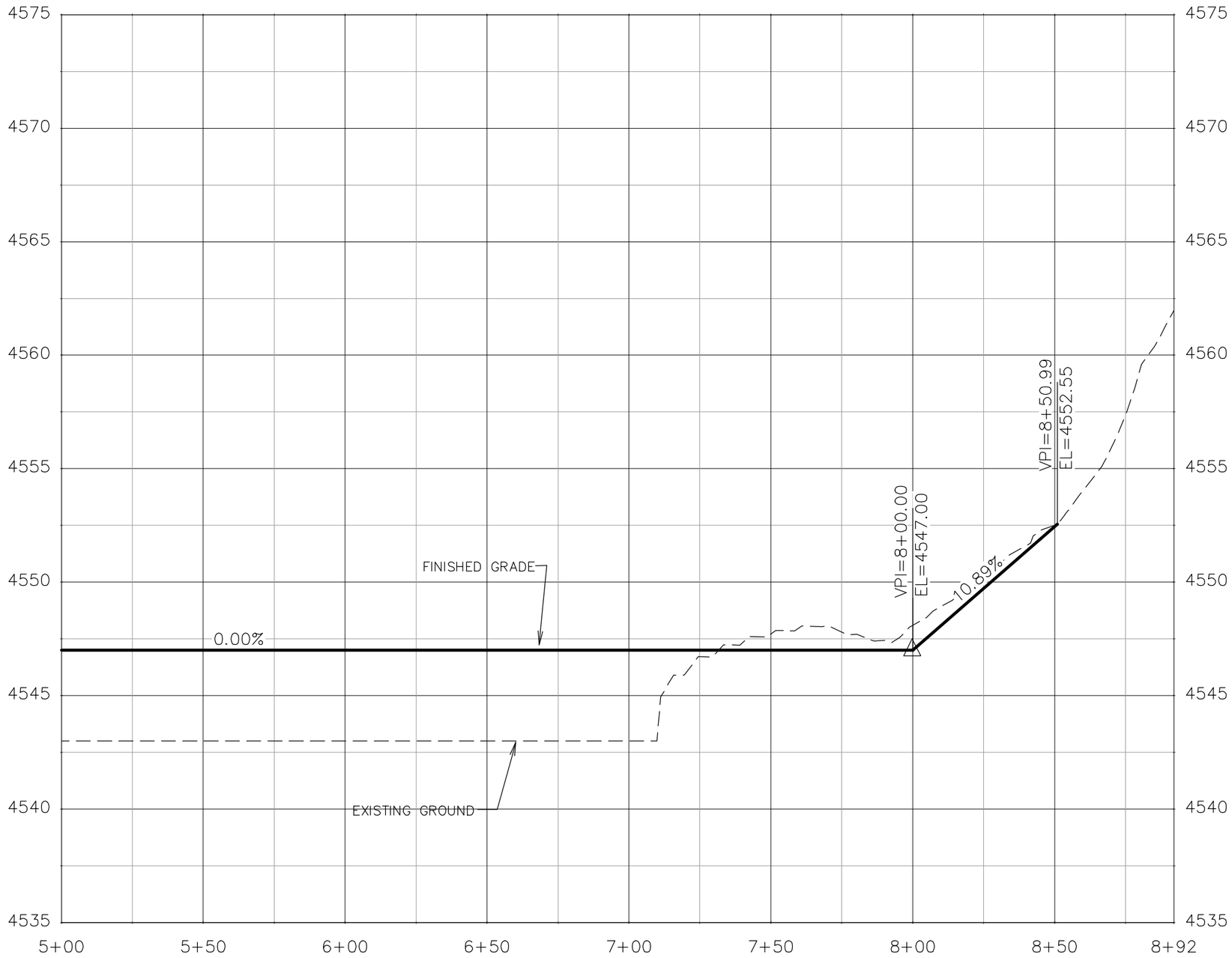

PROFILE GRADE LINE BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 1.25 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATON PROFILE – 2
June 19, 2020

287

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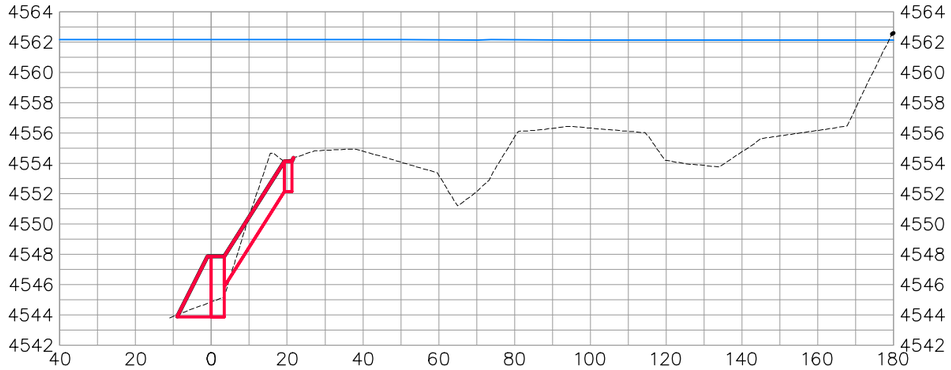

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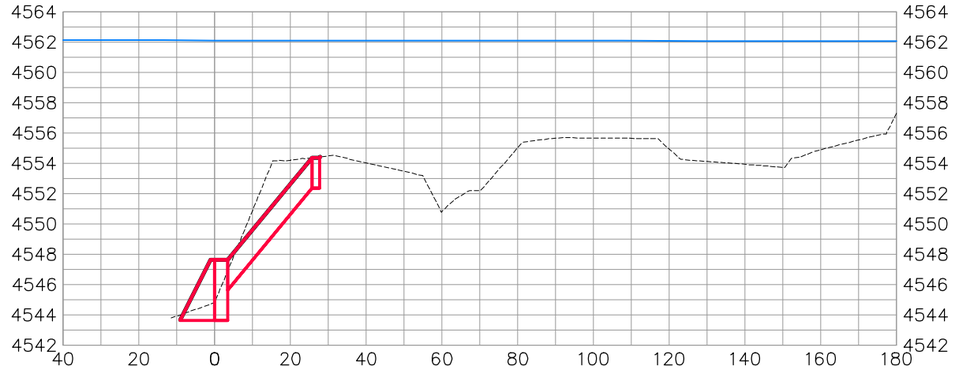

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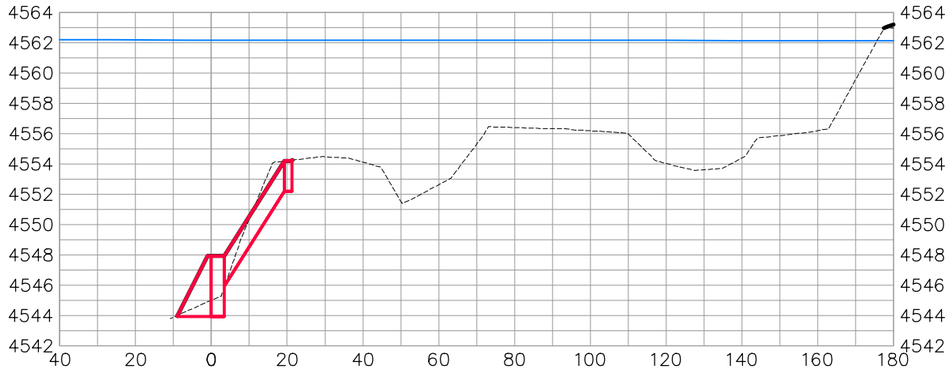

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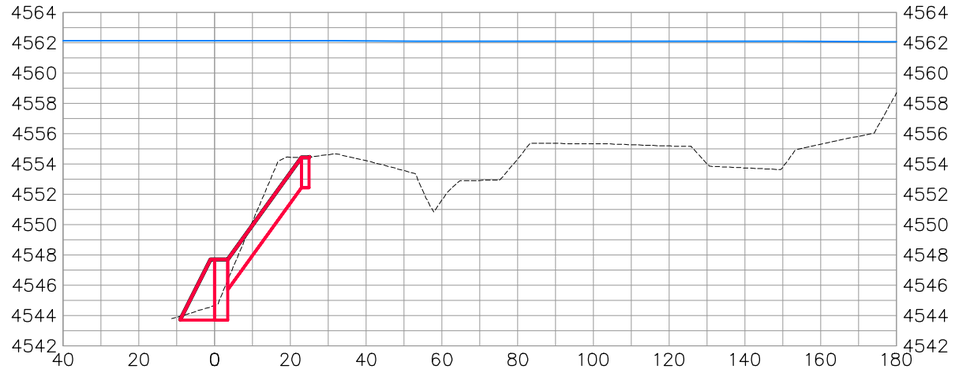

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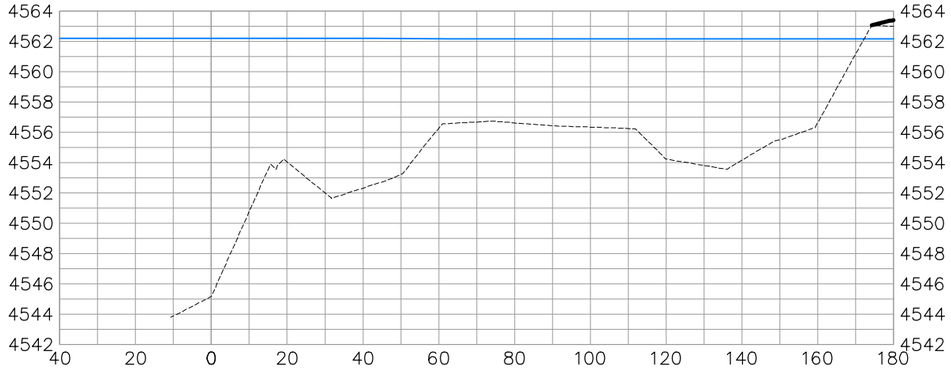

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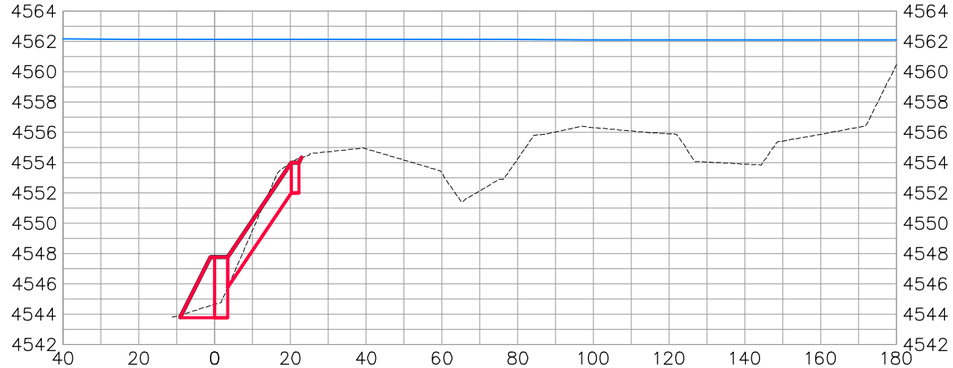

0+75.00

BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATION SECTIONS–1
June 19, 2020

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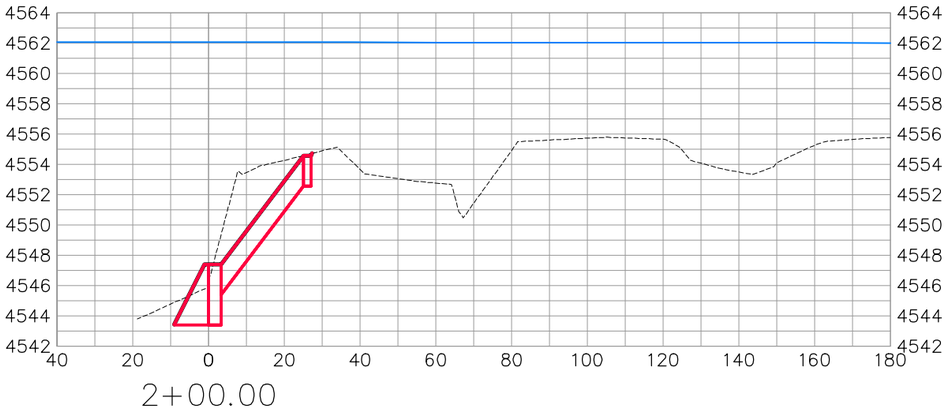

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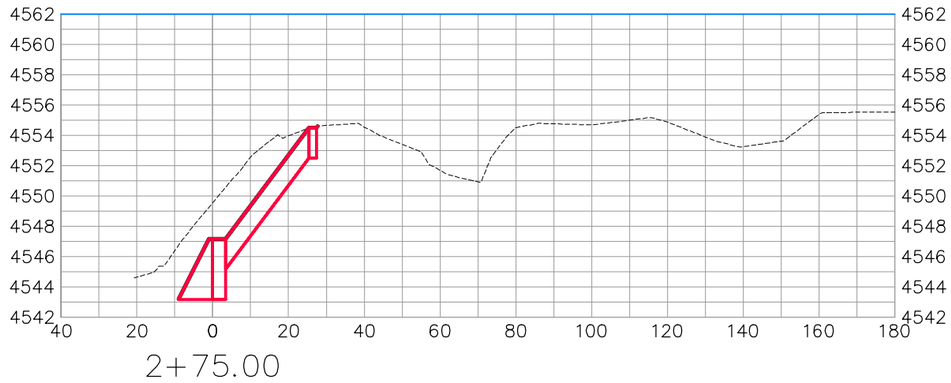

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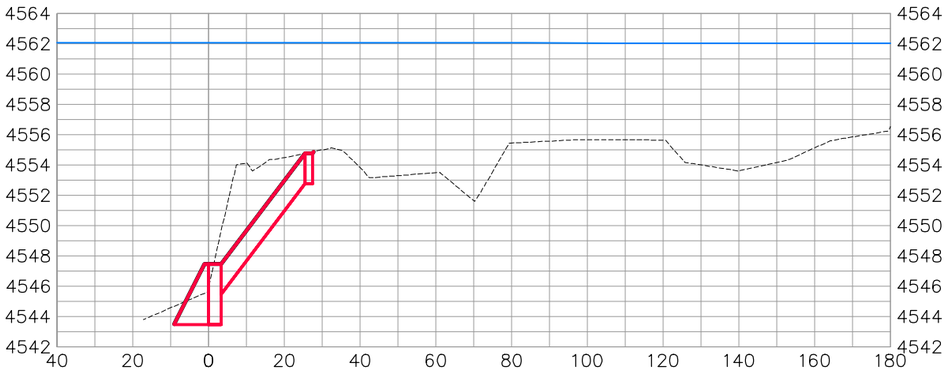

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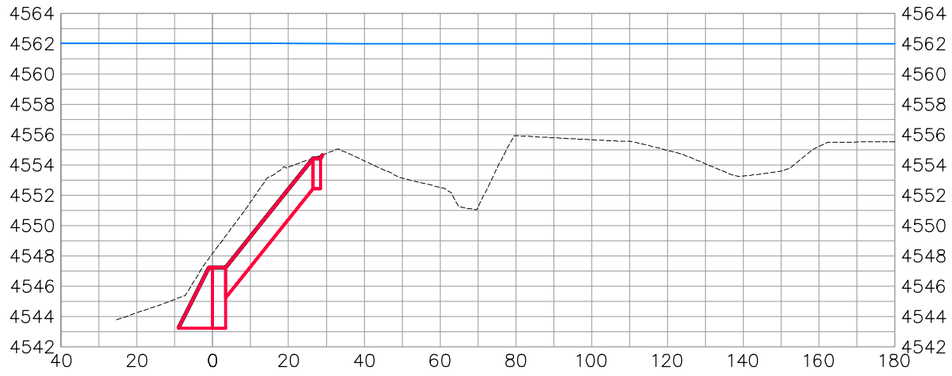

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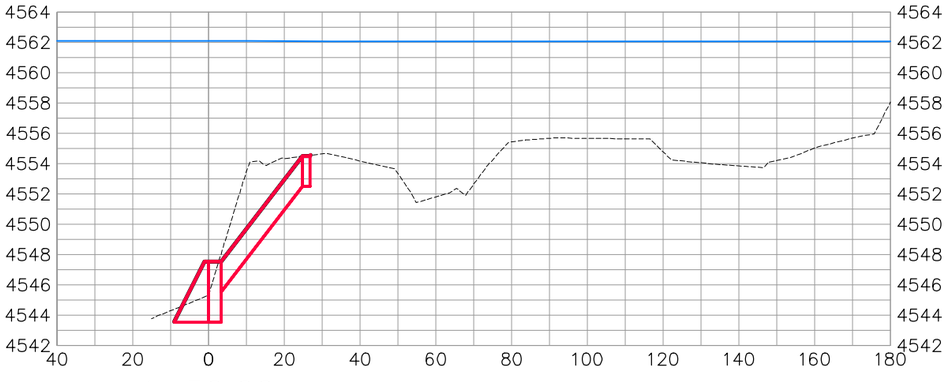

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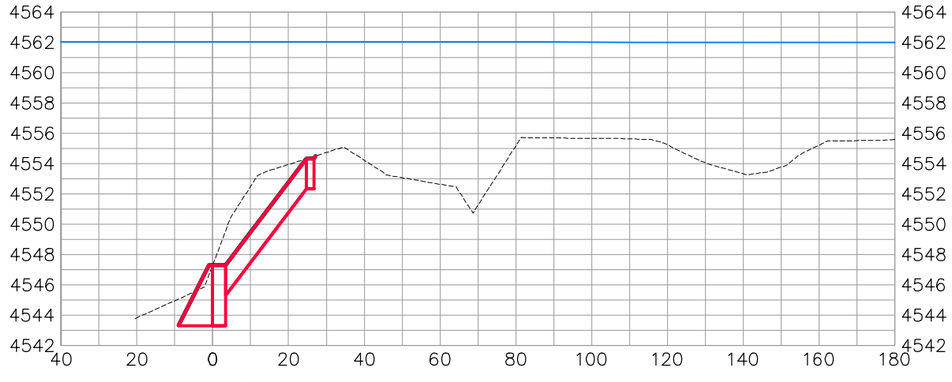

2+25.00

BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATION SECTIONS–2
June 19, 2020

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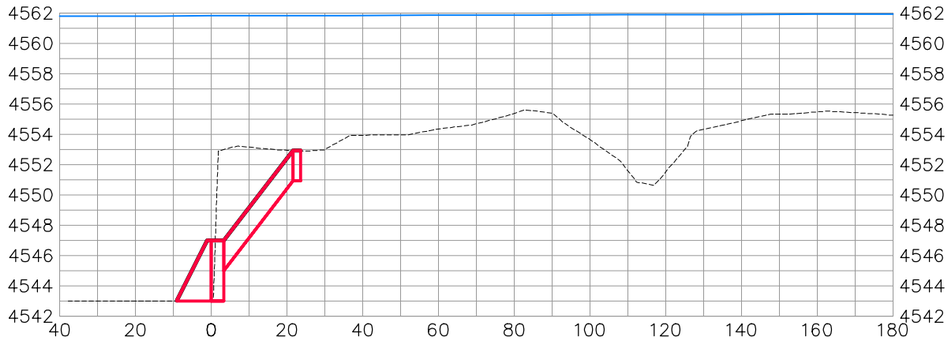

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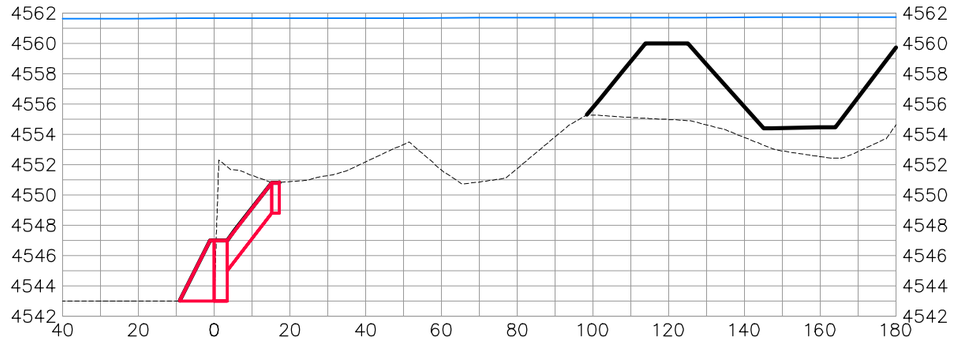

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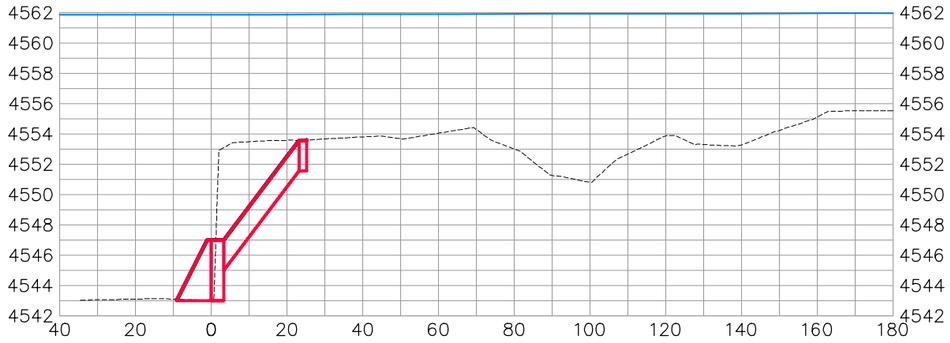

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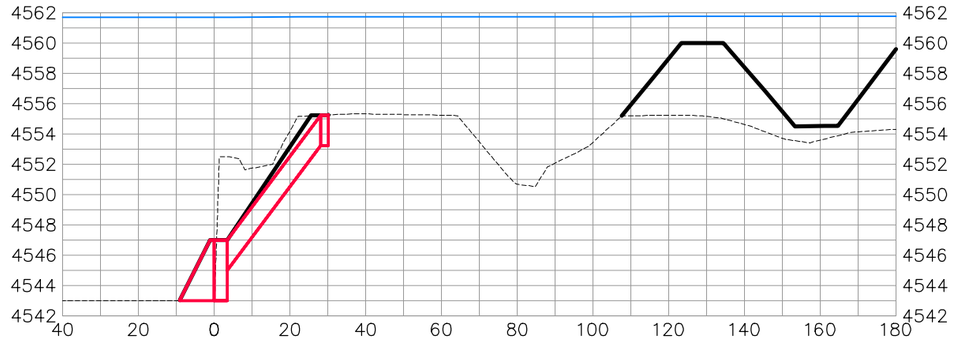

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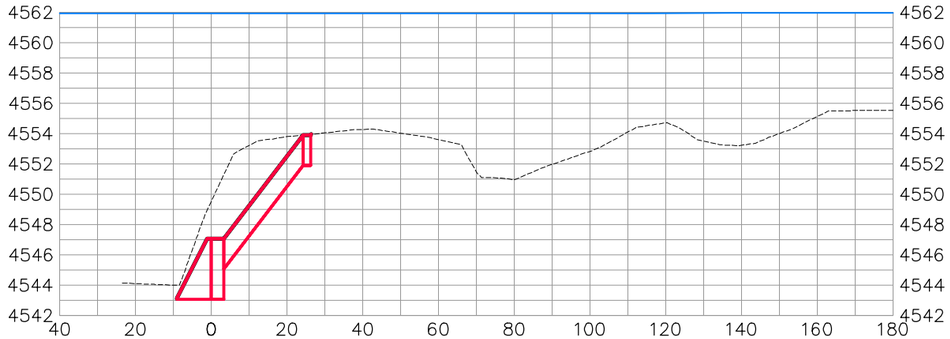

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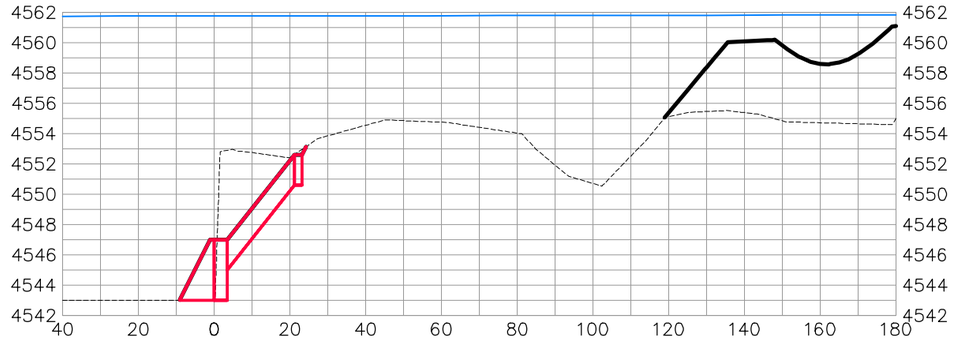

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BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATION SECTIONS–3
June 19, 2020

290

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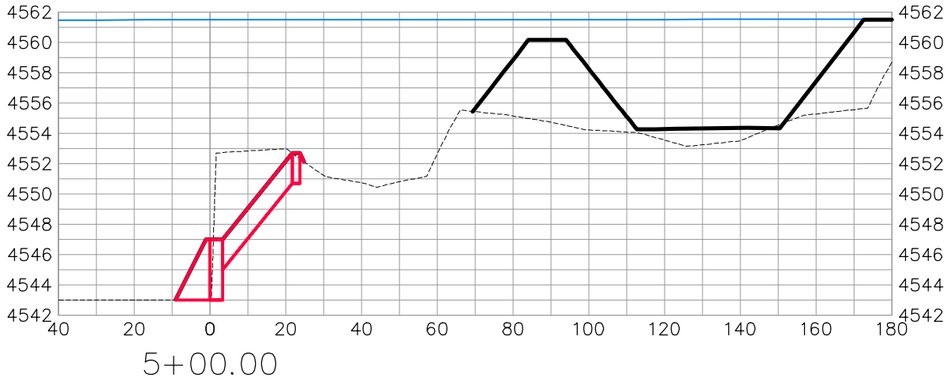

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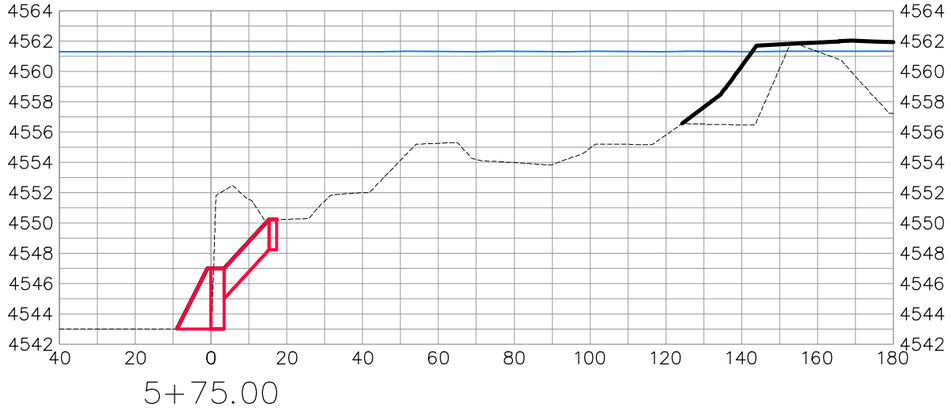

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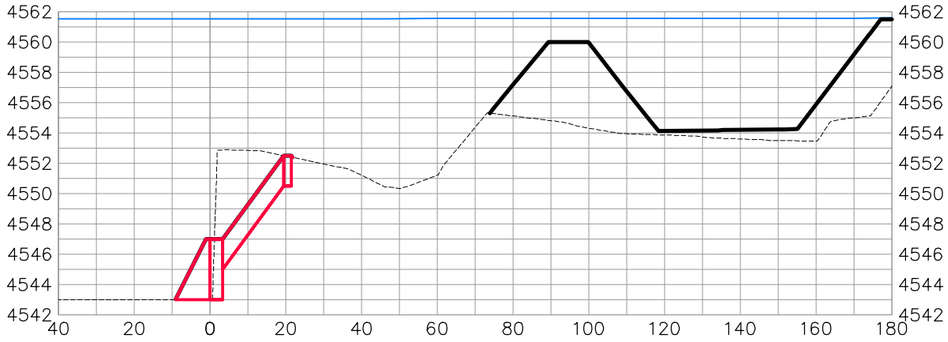

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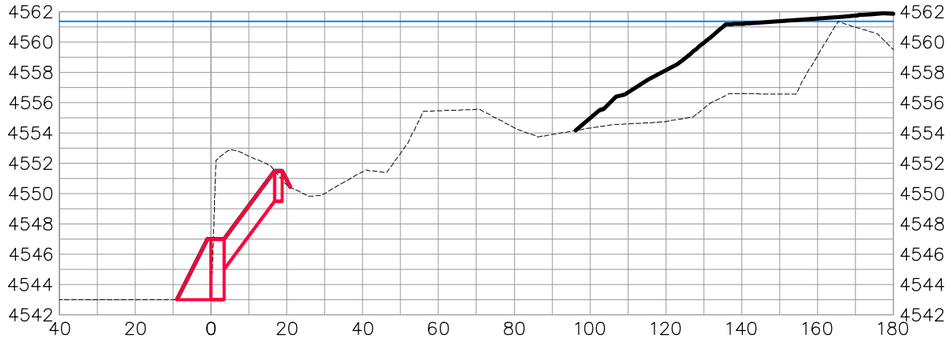

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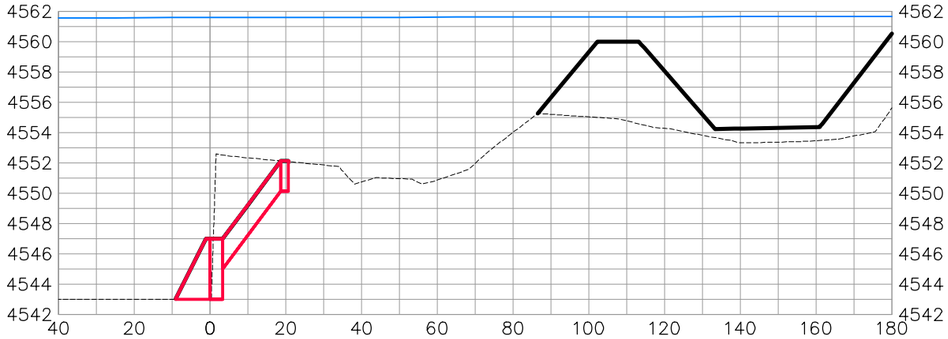

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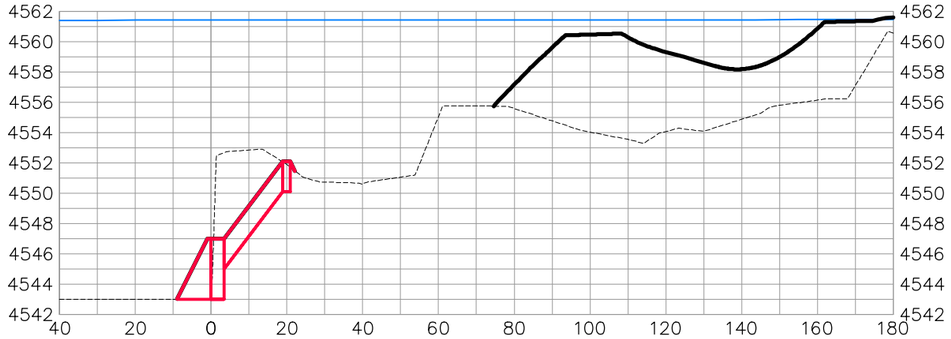

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BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATION SECTIONS–4
June 19, 2020

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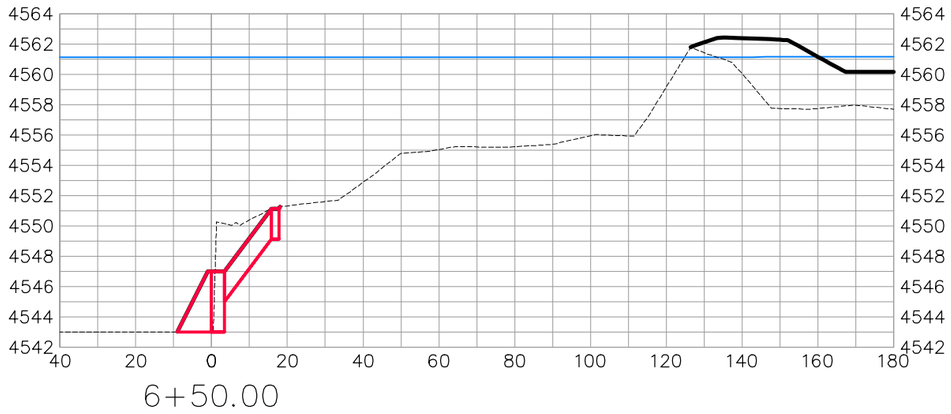

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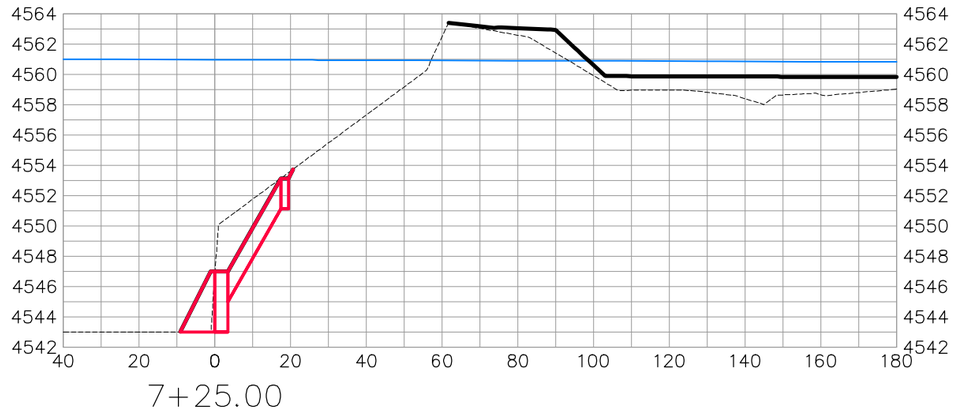

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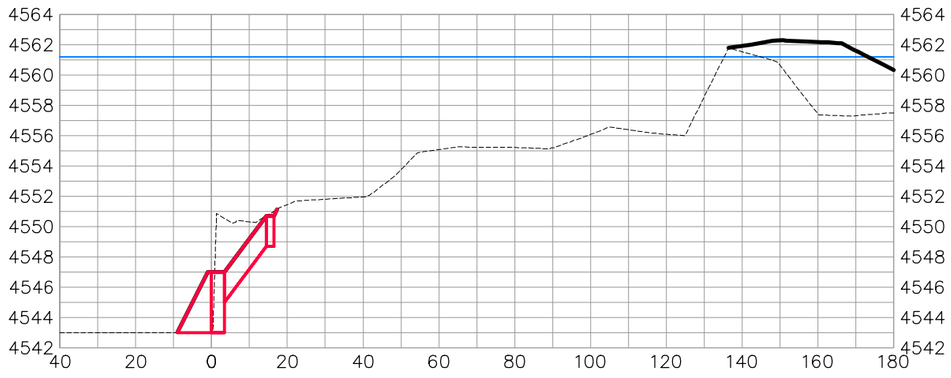

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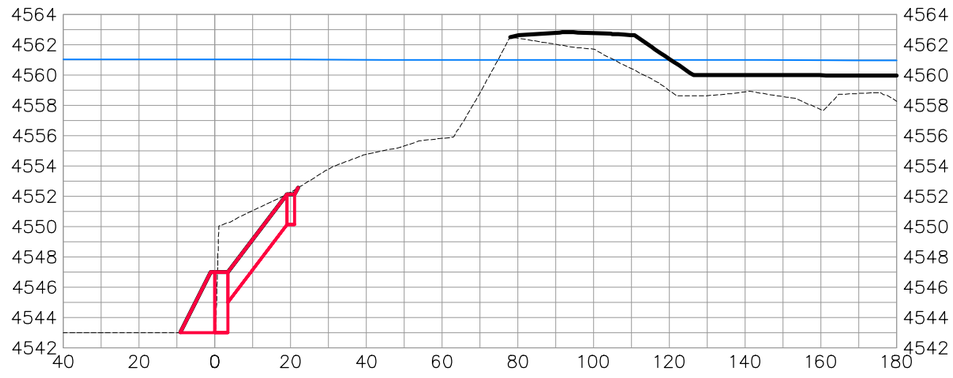

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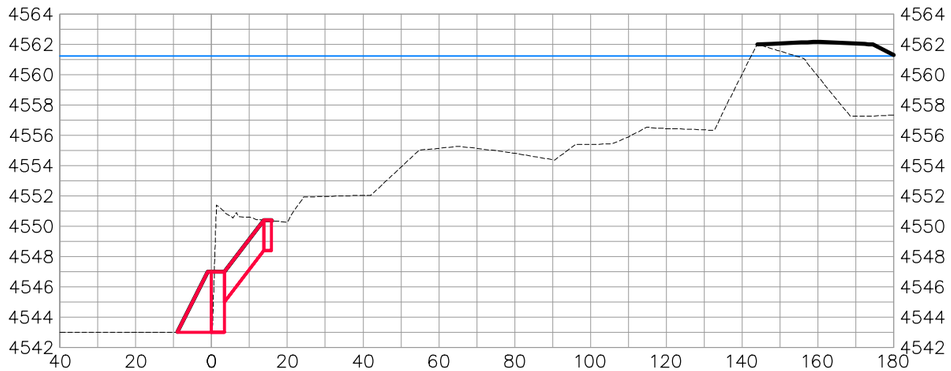

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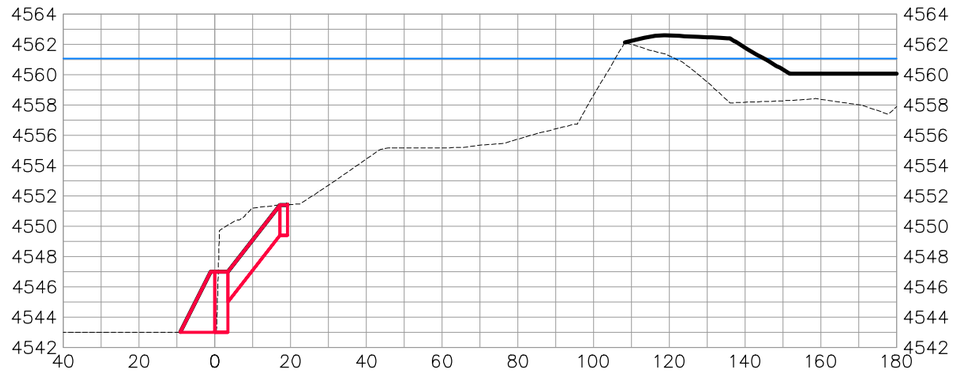

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BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATION SECTIONS–5
June 19, 2020

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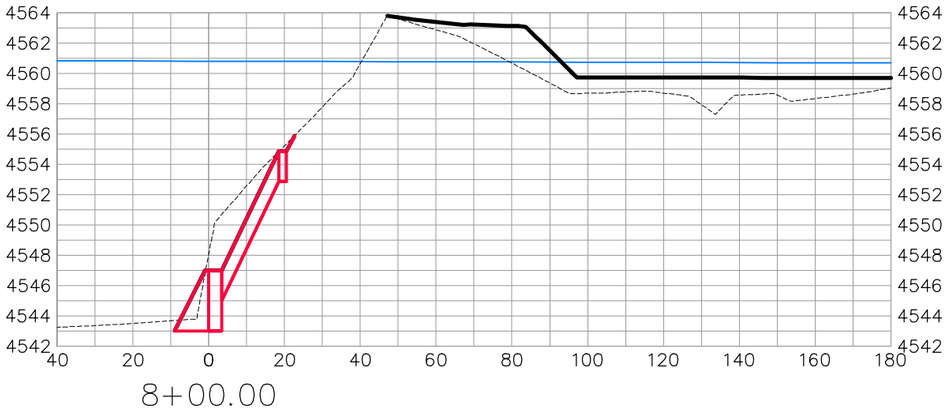

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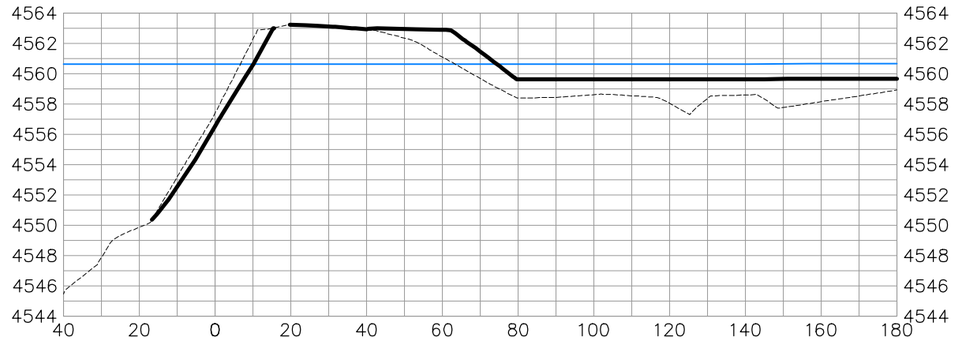

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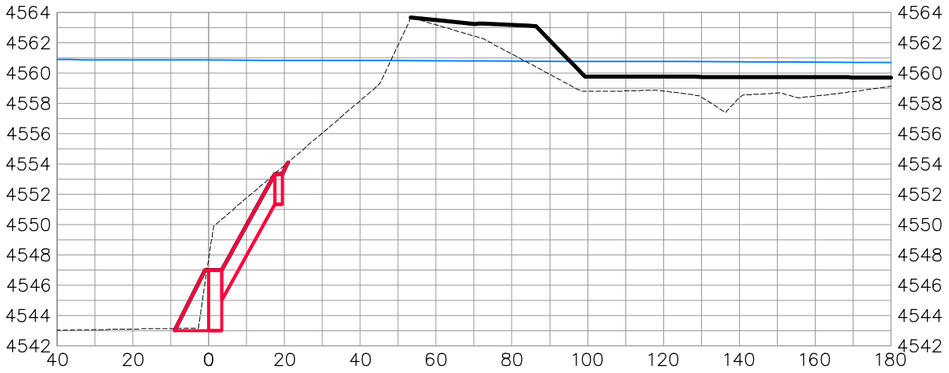

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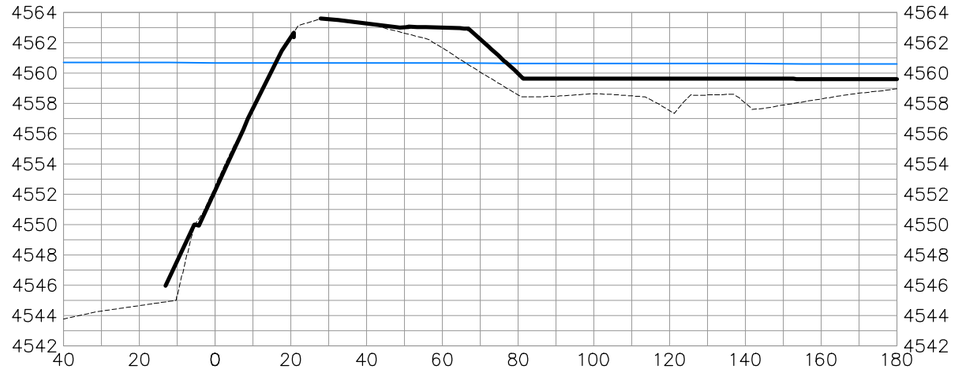

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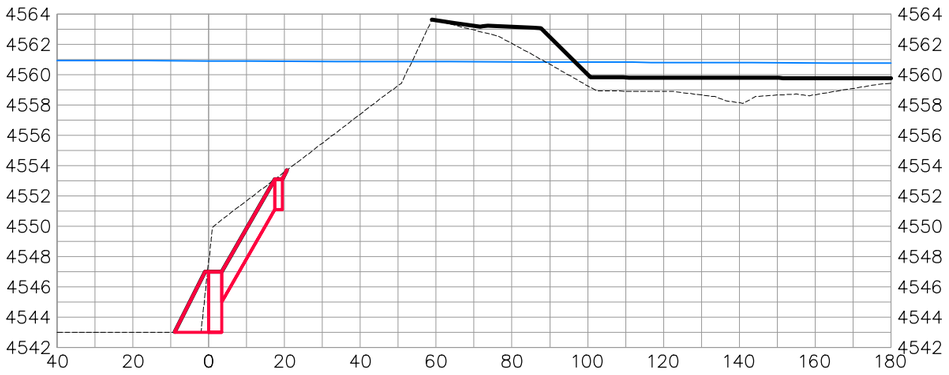

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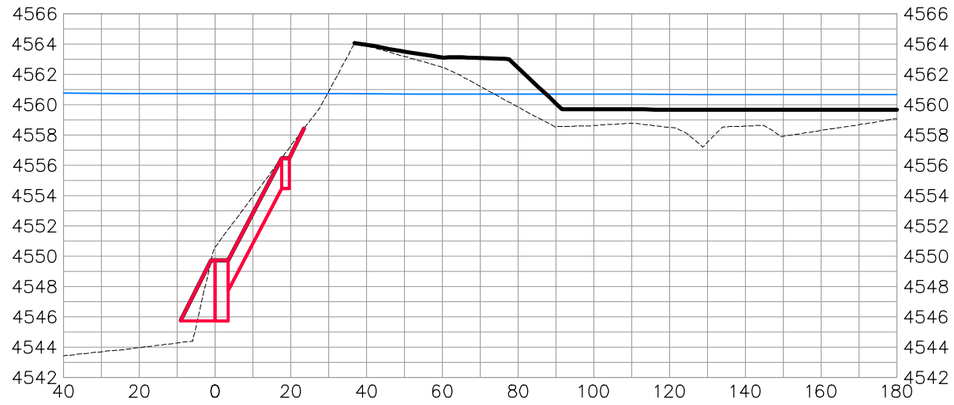

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BANK STABILIZATION

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BH DATE 2019
APPROVED BY TCP DATE 2019

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

COLORADO RIVER BANK STABILIZATION
BANK STABILIZATION SECTIONS–6
June 19, 2020

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\Road Cross Sections.dwg, 6/19/2020 8:17:22 AM

HALE AVENUE
ROCKAWAY AVENUE
LAWRENCE AVENUE
CALLE DEL RIO
DESEO DR
DOS RIOS DR
COLORADO RIVER TRAIL
N
S
E
W

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BCH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 25 50 100

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
EXISTING GROUND CONTOUR PLAN – 1
June 18, 2020

EGC1

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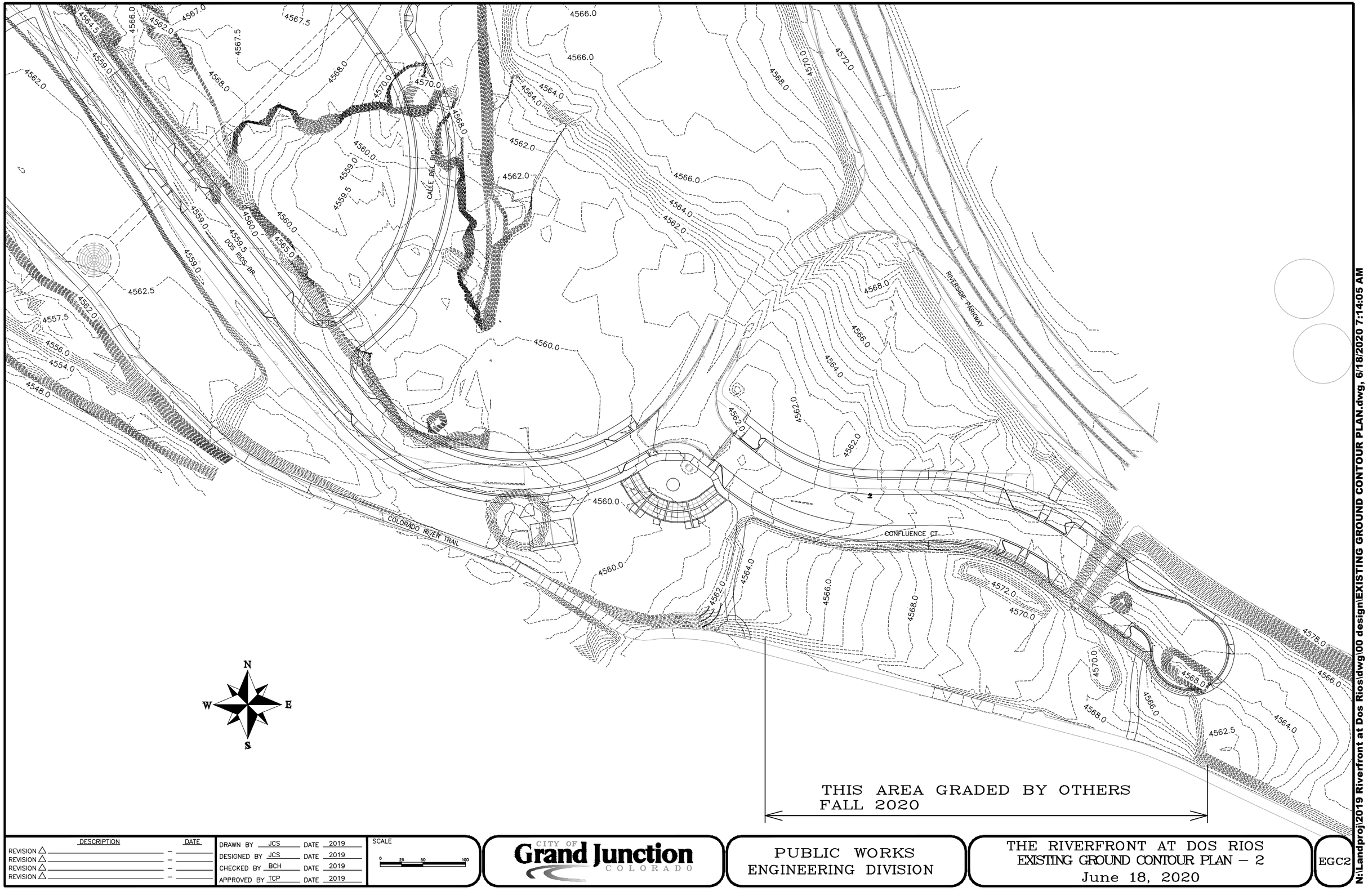


DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY JCS DATE 2019
DESIGNED BY JCS DATE 2019
CHECKED BY BCH DATE 2019
APPROVED BY TCP DATE 2019

SCALE 0 25 50 100

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
EXISTING GROUND CONTOUR PLAN – 2
June 18, 2020

EGC2

N:\Landproj\2019 Riverfront at Dos Rios\dwg\00 design\EXISTING GROUND CONTOUR PLAN.dwg, 6/18/2020 7:14:05 AM

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

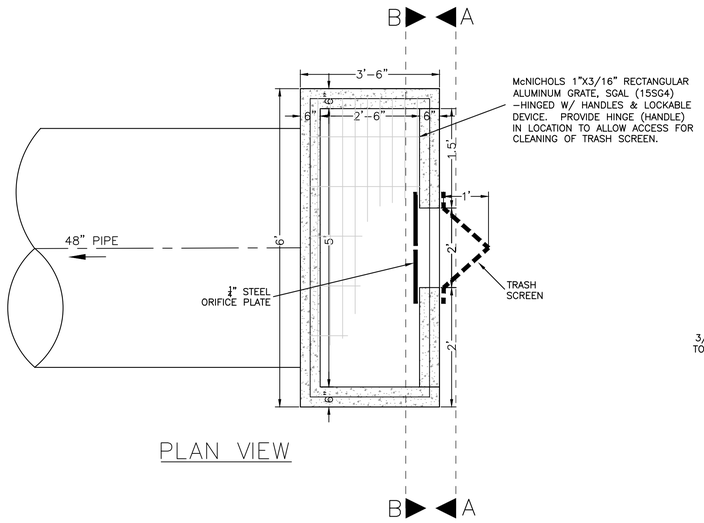
SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET
ADJUST SCALES ACCORDINGLY

REVISIONS			
NO.	DESCRIPTION	DATE	BY

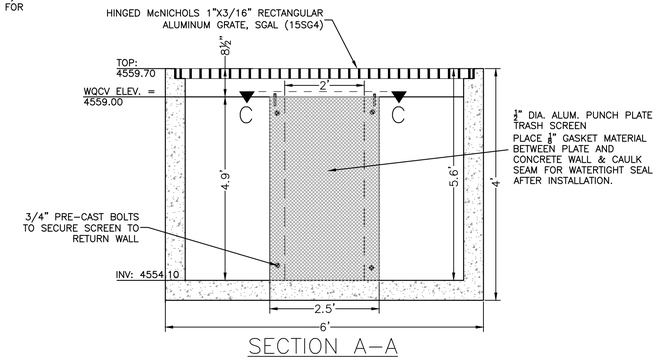
A • C • G
AUSTIN CIVIL GROUP, INC
Land Planning • Civil Engineering • Development Services
123 N 7th Street, Suite 300 • Grand Junction, Colorado 81501
(970) 242-7540

JARVIS PROPERTY
TEST PIT & TRENCH LOCATIONS
prepared for
CITY OF GRAND JUNCTION

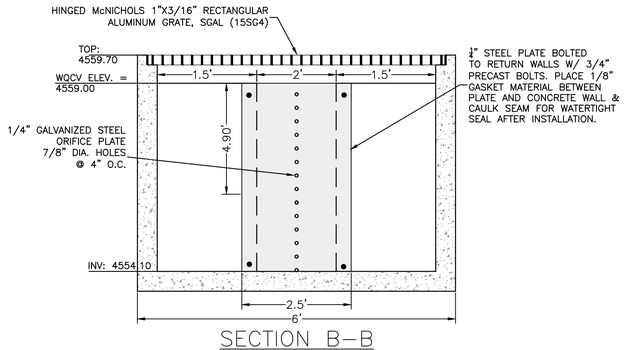
DRAWN BY:	JOS
DESIGNED BY:	JOS
CHECKED BY:	MRA
APPROVED BY:	MRA
JOB NUMBER:	1024.006
DATE:	5/23/17
SCALE:	1"= 100'
SHEET NO:	C-1



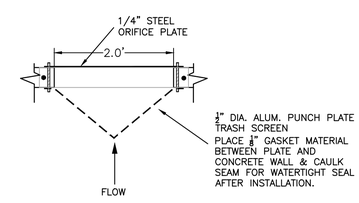
PLAN VIEW



SECTION A–A



SECTION B–B



SECTION C–C

WATER QUALITY OUTLET STRUCTURE

STORM STRUCTURE

NTS

COLORADO LICENSED
CAROLINE L. MORRISON
0056388
PROFESSIONAL ENGINEER

ACCEPTANCE BLOCK

THE CITY OF GRAND JUNCTION REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE CITY'S DEVELOPMENT STANDARDS, SUBJECT TO THESE PLANS BEING SEALED, SIGNED, AND DATED BY THE PROFESSIONAL OF RECORD. REVIEW BY THE CITY DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN. THE CITY NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL OF RECORD.

CONSTRUCTION MUST COMMENCE WITHIN ONE YEAR FROM THE DATE OF PLAN SIGNATURE.

CITY DEVELOPMENT ENGINEER DATE

CITY PLANNER DATE

811 Know what's below. Call before you dig.

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

REVISIONS

NO.	DESCRIPTION	DATE	BY

A · C · G
AUSTIN CIVIL GROUP, INC.
Land Planning ▪ Civil Engineering ▪ Development Services
123 North 7th Street, Suite 300 ▪ Grand Junction, Colorado 81501
(970) 242-7540

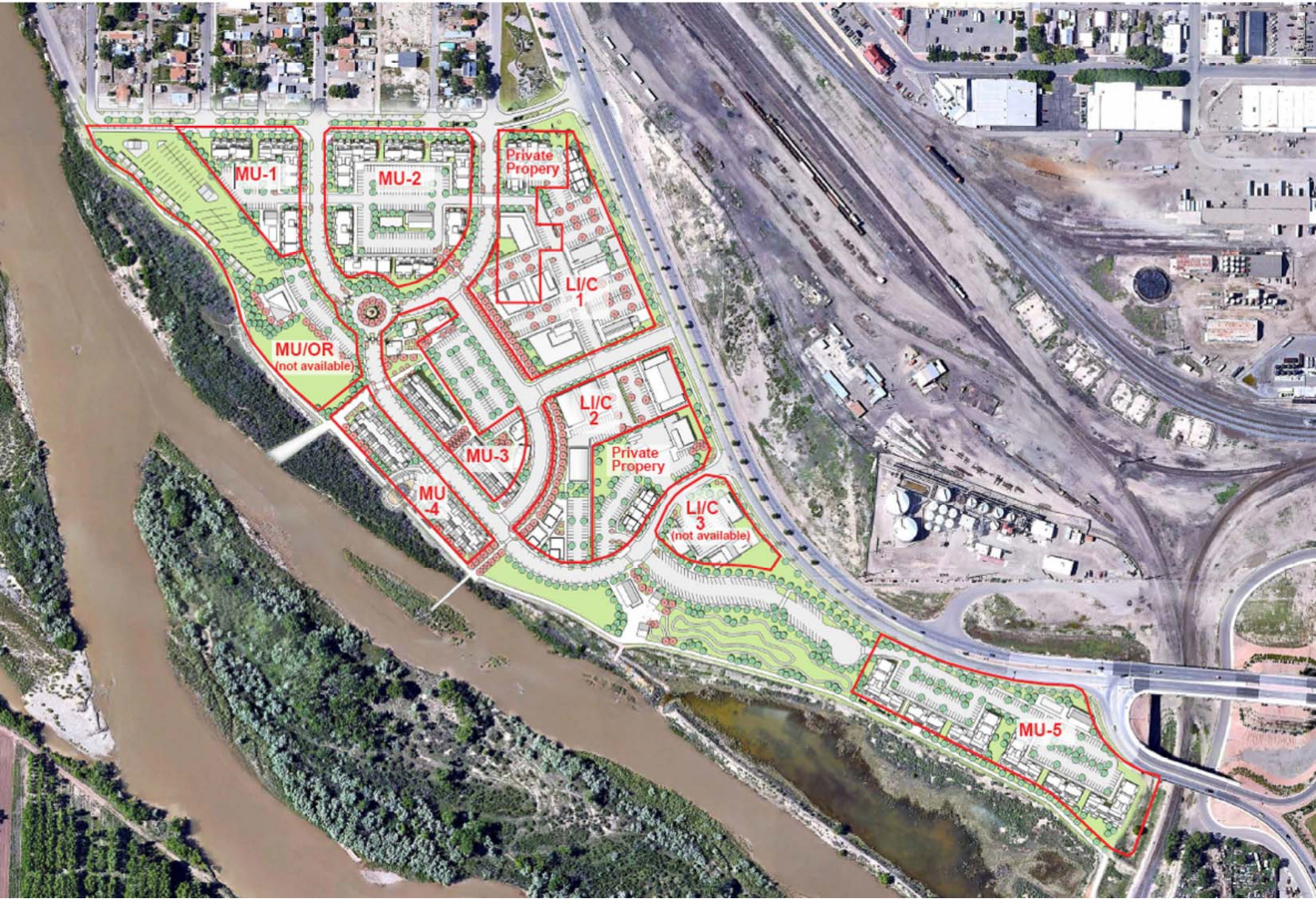
THE RIVERFRONT AT DOS RIOS

description
WQ OUTLET STRUCTURE
2581 RIVERSIDE PARKWAY

prepared for
CITY OF GRAND JUNCTION

DRAWN BY: CIM
DESIGNED BY: CIM
CHECKED BY:
APPROVED BY: MRA

JOB NUMBER: 1024.0008
DATE: 11/6/19
SCALE: NTS
SHEET NO: C-1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MU-2
Private Propery
LI/C 1
MU/OR (not available)
LI/C 2
MU-3
Private Propery
MU -4
LI/C 3 (not available)
MU-5

CITY OF Grand Junction COLORADO

Purchasing Division

ADDENDUM NO. 5

DATE: June 26, 2020
FROM: City of Grand Junction Purchasing Division
TO: All Offerors
RE: Riverfront at Dos Rios Phase II Construction IFB-4799-20-DH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

1. An error in the Price Bid Schedule was brought to our attention for Line Item #117 Remove Asphalt Mat, where the Quantity inadvertently was deleted. This has been corrected. **Contractor shall utilize the attached Addendum 5 Price Bid Schedule when submitting their bid responses.**

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,

Duane Hoff Jr., Senior Buyer
City of Grand Junction, Colorado

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	626	Mobilization	1.	Lump Sum	$ _____	$ _____
2	626	Construction Surveying	1.	Lump Sum	$ _____	$ _____
3	620	Sanitary Facility	1.	EA	$ _____	$ _____
4	209	Dust Abatement	500.	DAYS	$ _____	$ _____
5	208	Stabilized Construction Entrance	5.	EA	$ _____	$ _____
6	208	Erosion Control (Complete in Place)	1.	Lump Sum	$ _____	$ _____
7		Potholing	1.	Lump Sum	$ _____	$ _____
8	108.2	4" Sewer Service Pipe (SDR 35)	786.	LF	$ _____	$ _____
9	108.2	6" Sewer Service Pipe (SDR 35)	93.	LF	$ _____	$ _____
10	108.2	8" Gravity Sewer Pipe (SDR 35)	1,682.	LF	$ _____	$ _____
11	108.2	Import Trench Backfill	4,000.	CY	$ _____	$ _____
12	108.3	4" Sewer Service Tap to Existing Main	18.	EA	$ _____	$ _____
13	108.3	4" Sewer Service Tap to New Main	8.	EA	$ _____	$ _____
14	108.3	8" End Cap/Plug Sewer	1.	EA	$ _____	$ _____
15	108.3	Sanitary Sewer Cleanout (2-way) to Include Appurtenances per City Standard Detail SS-07.	26.	EA	$ _____	$ _____
16	108.5	Sanitary Sewer Basic Manhole Placed on Existing Line (60" I.D.) (Complete in Place).	2.	EA	$ _____	$ _____
17	108.5	Sanitary Sewer Basic Manhole Placed on Existing Line (48" I.D.) (Complete in Place).	1.	EA	$ _____	$ _____
18	108.5	Sanitary Sewer Basic Manhole (48" I.D.) (Complete in Place).	12.	EA	$ _____	$ _____
19	108.5	Sanitary Manhole Barrel Section (D>5') (60" I.D.).	6.	VLF	$ _____	$ _____
20	108.5	Sanitary Manhole Barrel Section (D>5') (48" I.D.).	33.6	VLF	$ _____	$ _____
21	108.5	Connect to Existing Manhole or Sewer Main	3.	EA	$ _____	$ _____
22	210	Adjust Sewer Manhole to Finished Grade.	15.	EA	$ _____	$ _____
23	104.4	Fully Encased Sewer in Concrete per City Standard Detail GU-04. See Plan Sheet 6.	11.	EA	$ _____	$ _____
24	104.4	Cap Top Half of Sewer in Concrete per City Standard Detail GU-04.	12.	EA	$ _____	$ _____
25	108.2	6" Water Pipe (C-900 PVC).	632.	LF	$ _____	$ _____
26	108.2	8" Water Pipe (C-900 PVC).	5,230.	LF	$ _____	$ _____
27	108.3	6" Gate Valve	17.	EA	$ _____	$ _____
28	108.3	8" Gate Valve	22.	EA	$ _____	$ _____
29	108.3	8" X 6" Tee	14.	EA	$ _____	$ _____
30	108.3	8" X 8" Tee	5.	EA	$ _____	$ _____
31	108.3	8" X 6" Cross	1.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
32	108.3	8" Cross	1.	EA	$ _____	$ _____
33	108.3	8", 22.5° Elbow	10.	EA	$ _____	$ _____
34	108.3	8", 45° Elbow	9.	EA	$ _____	$ _____
35	108.3	8", 11.25° Elbow	14.	EA	$ _____	$ _____
36	108.3	6", 45° Elbow	3.	EA	$ _____	$ _____
37	108.3	8" X 6" Reducer	4.	EA	$ _____	$ _____
38	108.3	8" X 4" Reducer	1.	EA	$ _____	$ _____
39	108.3	6" End Cap/Plug Water	4.	EA	$ _____	$ _____
40	108.3	Fire Hydrant Assembly	12.	EA	$ _____	$ _____
41	108.3	2" Tapping Saddle	27.	EA	$ _____	$ _____
42	108.3	2" Corporation Stop	27.	EA	$ _____	$ _____
43	108.3	Potable Water - 8" Tapping Sleeve	1.	EA	$ _____	$ _____
44	108.4	Water Service Line (2") (HDPE)	1,130.	LF	$ _____	$ _____
45	108.4	2" Water Service Assembly	27.	EA	$ _____	$ _____
46	202	Remove Water Valve	3.	EA	$ _____	$ _____
47	202	Remove Fire Hydrant	1.	EA	$ _____	$ _____
48	202	Abandon Water Valve	2.	EA	$ _____	$ _____
49	202	Abandon Water Pipe (Plug Remaining Ends with Concrete).	4.	EA	$ _____	$ _____
50	202	Remove Water Meter	2.	EA	$ _____	$ _____
51	210	Adjust Water Valve to Finished Grade	4.	EA	$ _____	$ _____
52	210	Adjust Water Meter to Finished Grade	2.	EA	$ _____	$ _____
53	210	Adjust Fire Hydrant to Finished Grade	1.	EA	$ _____	$ _____
54	108.2	Storm Drain Pipe - 72" x 24" Concrete Box Culvert	557.	LF	$ _____	$ _____
55	108.2	Storm Drain Pipe - 29" x 18" Concrete Horizontal Elliptical Arch Pipe.	895.	LF	$ _____	$ _____
56	108.2	Storm Drain Pipe - 48" Concrete Pipe	50.	LF	$ _____	$ _____
57	108.2	Storm Drain Pipe - 42" Concrete Pipe	363.	LF	$ _____	$ _____
58	108.2	Storm Drain Pipe - 36" Concrete Pipe	1,092.	LF	$ _____	$ _____
59	108.2	Storm Drain Pipe - 24" Concrete Pipe	853.	LF	$ _____	$ _____
60	108.2	Storm Drain Pipe - 18" Concrete Pipe	2,252.	LF	$ _____	$ _____
61	108.2	Storm Drain Pipe - 12" Concrete Pipe	703.	LF	$ _____	$ _____
62	108.2	Storm Drain Pipe - 8" PVC Pipe (C-900)	68.	LF	$ _____	$ _____
63	108.5	Storm Drain Manhole (48" I.D.)	6.	EA	$ _____	$ _____
64	108.5	Storm Drain Manhole (60" I.D.)	4.	EA	$ _____	$ _____
65	108.5	Storm Drain Manhole (60" I.D.) with Flat Top Lid	5.	EA	$ _____	$ _____
66	108.5	Storm Drain Manhole (72" I.D.)	1.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
67	108.6	Storm Drain - Outlet Structure - See "Water Quality Outlet Structure" to Include All Appurtenances (Complete in Place).	1.	EA	$ _____	$ _____
68	108.6	Storm Drain Inlet with Vertical Curb Opening (24" x 36")	20.	EA	$ _____	$ _____
69	108.6	Storm Drain Inlet with Drive Over Curb Opening (24" x 36")	2.	EA	$ _____	$ _____
70	108.6	Storm Drain - Large Area Inlet (24" x 36")	14.	EA	$ _____	$ _____
71	108.5	Storm Drain - Concrete Headwall (8'-9" wide x 9'-10" height) per CDOT M&S Standard Plan M-601-10 and 48" Flap	1.	EA	$ _____	$ _____
72	108.5	Storm Drain - Conflict Structure	1.	EA	$ _____	$ _____
73	108.5	Storm Drain - Access Manhole	3.	EA	$ _____	$ _____
74	108.5	Storm Drain - Access Inlet (24" x 36" I.D.) Vertical Curb Opening	1.	EA	$ _____	$ _____
75	108.6	Storm Drain - Access Inlet (24" x 36" I.D.) Area Inlet Opening	1.	EA	$ _____	$ _____
76	108.6	Storm Drain - 42" x 48" Tee Manhole	2.	EA	$ _____	$ _____
77	108.6	Storm Drain - 42" x 48" x 36" Tee Manhole	1.	EA	$ _____	$ _____
78	108.5	Storm Drain - 36" x (24" x 36" Box Leg) Tee Inlet Area Inlet Frame and Grate (24" x 36" Opening)	1.	EA	$ _____	$ _____
79	108.5	Storm Drain - 72" x 24" Prefabricated Pipe Elbow	2.	EA	$ _____	$ _____
80	108.5	Storm Drain - Inlet Over MH (Vertical Curb Opening) (24" x 36" I.D.)	2.	EA	$ _____	$ _____
81	108.5	Storm Drain - Inlet Over MH (Large Area Inlet Opening) (24" x 36" I.D.)	4.	EA	$ _____	$ _____
82	108.5	Storm Drain - Prefab Pipe Transition per Plan	1.	EA	$ _____	$ _____
83	108.6	Storm Drain - Manhole Barrel Section (D>5')(72" I.D.)	5.1	VLF	$ _____	$ _____
84	108.5	Storm Drain - Manhole Barrel Section (D>5')(60" I.D.)	2.2	VLF	$ _____	$ _____
85	108.5	Storm Drain - Manhole Barrel Section (D>5')(48" I.D.)	5.23	VLF	$ _____	$ _____
86	108.5	Core and Connect New 18" Storm Pipe to New Box Culvert	4.	EA	$ _____	$ _____
87	108.7	Granular Stabilization Material (Type B)	2,300.	TON	$ _____	$ _____
88	202	Remove Storm Drain Inlet	1.	EA	$ _____	$ _____
89	202	Remove 15" Flared End Section	1.	EA	$ _____	$ _____
90	202	Remove 15" Storm Pipe	90.	LF	$ _____	$ _____
91	202	Abandon Storm Pipe	1.	EA	$ _____	$ _____
92	210	Reset Storm Drain Inlet D1-252-099	1.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
93	210	Connect to and Adjust to Finished Grade Storm MH C4-252-017	1.	EA	$ _____	$ _____
94	210	Adjust Storm Manhole to Finished Grade	1.	EA	$ _____	$ _____
95	420	Geosynthetics - Mirifi RS580i or Approved Equal	5,600.	SY	$ _____	$ _____
96	506	Riprap (d50=12" to Include Geogrid)	40.	SY	$ _____	$ _____
97	203	Unclassified Excavation	43,790.	CY	$ _____	$ _____
98	203	Unclassified Embankment	67,341.	CY	$ _____	$ _____
99	203	Debris Processing and Removal	12,000.	CY	$ _____	$ _____
100	203	Colorado River Bank Stabilization	900.	LF	$ _____	$ _____
101	203	Import and Place Clean Fill	43,753.	CY	$ _____	$ _____
102	210	Adjust Pull Box to Finished Grade	9.	EA	$ _____	$ _____
103	210	Adjust Light Pole and Foundation to Finished Grade	2.	EA	$ _____	$ _____
104	613	Joint Trench with Broad Band (Site Electrical - Street LT Circuits (2)-2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	32,600.	LF	$ _____	$ _____
105	613	Joint Trench with Site Electrical (Broad Band (3)-2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	48,900.	LF	$ _____	$ _____
106	613	Joint Trench with XCEL Energy and Charter who provides and places their materials (Century Link - 4" Schedule 80 PVC conduit). Refer to Utility Trench Detail	16,300.	LF	$ _____	$ _____
107	613	Joint Trench with XCEL Energy and Charter who provides and places their materials (Century Link - 2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	16,300.	LF	$ _____	$ _____
108	613	Large Splice Box (Quasite) (3' - 2 5/8" x 2'-2") Broadband Logo.	32.	EA	$ _____	$ _____
109	613	Splice Box (Provided by Others - Century Link)	20.	EA	$ _____	$ _____
110	613	Type One Pull Box	184.	EA	$ _____	$ _____
111	Elec	Wiring (Complete in Place)	1.	Lump Sum	$ _____	$ _____
112	Elec	Light Standard and Luminaire (Pedestrian)	150.	EA	$ _____	$ _____
113	Elec	Light Standard and Luminaire (Street)	15.	EA	$ _____	$ _____
114	Elec	Light Standard Foundation (Pedestrian)	150.	EA	$ _____	$ _____
115	Elec	Light Standard Foundation (Street)	15.	EA	$ _____	$ _____
116	Elec	Lighting Control Center PWR Pedestal (Special) (Complete in Place) to include Appurtenances	2.	EA	$ _____	$ _____
117	202	Remove Asphalt Mat	11,800.	SY	$ _____	$ _____
118	202	Remove Concrete	400.	SY	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
119	202	Romove Ground Sign	10.	EA	$ _____	$ _____
120	202	Remove High Voltage Overhead Power Pole Foundations	2.	EA	$ _____	$ _____
121	202	Remove Tree	10.	EA	$ _____	$ _____
122	202	Remove Property Pin (No Reference or Reset)	4.	EA	$ _____	$ _____
123	202	Remove Fencing (Includes All Gates and Associated Appurtenances.)	2,000.	LF	$ _____	$ _____
124	202	Remove Mail Box	1.	EA	$ _____	$ _____
125	202	Clearing and Grubbing	1.	Lump Sum	$ _____	$ _____
126	210	Reference/Reset Survey Monument	6.	EA	$ _____	$ _____
127	210	Reset Ground Sign	2.	EA	$ _____	$ _____
128	304	Aggregate Base Course (Class 6) (4" Thick)(Co. River Trail Shoulder)	1,015.	SY	$ _____	$ _____
129	304	Subgrade Stabilization - Aggregate Base Course (Class 3)(12" Thick)	5,600.	SY	$ _____	$ _____
130	304	Aggregate Base Course (Class 6) (13" Thick)	18,200.	SY	$ _____	$ _____
131	304	Aggregate Base Course (Class 6) (6" Thick)	30.	SY	$ _____	$ _____
132	306	Reconditioning (12" Deep)	25,000.	SY	$ _____	$ _____
133	401	Hot Mix Asphalt (5" Thick) (Grading SX 75, Binder Grade 64-22) (Roadways)	5,000.	TON	$ _____	$ _____
134	401	Hot Mix Asphalt (3" Thick) (Grading SX 75, Binder Grade 64-22) (Driveways)	5.	TON	$ _____	$ _____
135	627	Preformed Thermoplastic Pavement Marking (Handicap Symbol)	4.	EA	$ _____	$ _____
136	627	Preformed Thermoplastic Pavement Marking (X-walk) (2' x 10' TYP.)	131.	EA	$ _____	$ _____
137	627	Preformed Thermoplastic Pavement Marking (8" White Dotted Line, 2' Segment, 3' Gap)	100.	LF	$ _____	$ _____
138	627	Preformed Thermoplastic Pavement Marking (4" White Solid)	2,750.	LF	$ _____	$ _____
139	627	Preformed Thermoplastic Pavement Marking (2' White Solid)	170.	LF	$ _____	$ _____
140	630	Traffic Control (Complete In Place)	1.	Lump Sum	$ _____	$ _____
141	630	Trafic Control Plan	1.	Lump Sum	$ _____	$ _____
142	202	Remove Asphalt Mat	40.	SY	$ _____	$ _____
143	202	Remove Concrete	313.	SY	$ _____	$ _____
144	202	Remove Pull Box	2.	EA	$ _____	$ _____
145	202	Remove Concrete Pole Box	3.	EA	$ _____	$ _____
146	202	Remove Tree	7.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
147	203	Unclassified Excavation	437.	CY	$ _____	$ _____
148	208	Erosion Control (Complete in Place)	1.	Lump Sum	$ _____	$ _____
149	304	Aggregate Base Course (Class 6) (8" Thick) (Left Turn Lane)	565.	SY	$ _____	$ _____
150	401	Hot Mix Asphalt (6" Thick) (Grading SX, Binder Grade 64-22) (Left Turn Lane)	187.	TON	$ _____	$ _____
151	608	Concrete Bullnose End Section (8" Thick) to include 6" of Class 6 Aggregate Base Course	5.	SY	$ _____	$ _____
152	608	Concrete Curb and Spill Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	320.	LF	$ _____	$ _____
153	608	Concrete Median Edging (2' Wide) (Colored Concrete) (Davis Colors Sunset Rose) to include 6" of Class 6 Aggregate Base Course	40.	LF	$ _____	$ _____
154	608	Concrete Cover Material (Colored Concrete) (Davis Colors Sunset Rose) (4" Thick) to include 6" of Class 6 Aggregate Base Course	185.	SY	$ _____	$ _____
155	627	Preformed Thermoplastic Pavement Marking (Left Turn Symbol)	2.	EA	$ _____	$ _____
156	630	Traffic Control (Complete In Place)	1.	Lump Sum	$ _____	$ _____
157	630	Traffic Control Plan	1.	Lump Sum	$ _____	$ _____
158	SP	Safe Hit Flexible Delineator (SH248GP3--WS 09) to include 4" PVC Sleeve	2.	EA	$ _____	$ _____
159	608	Concrete Pavement (Roundabout) (10" Thick) to include 6" Class 6 Aggregate Base Course	1,415.	SY	$ _____	$ _____
160	608	Concrete Curb and Spill Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	1,705.	LF	$ _____	$ _____
161	608	Concrete Truck Apron (Roundabout) (10" Thick) to include 6" of Class 6 Aggregate Base Course	310.	SY	$ _____	$ _____
162	608	Concrete Curb (6" Wide) (6" High) to include 6" of Class 6 Aggregate Base Course.	975.	LF	$ _____	$ _____
163	608	Concrete Curb and Gutter (2' Wide) (Both Collector and Spill Gutters) to include 6" of Class 6 Aggregate Base Course.	9,500.	LF	$ _____	$ _____
164	608	Concrete Drive-Over Curb and Gutter both 3' and 3.5' Wide and Both Collector and Spill Gutter to include 6" of Class 6 Aggregate Base Course.	1,075.	LF	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
165	608	Concrete Sidewalk (6" Thick) to include 6" of Class 6 Aggregate Base Course	13,875.	SY	$ _____	$ _____
166	608	Concrete Pavement (Parking & Plain Color Paving Bike Park Plaza) (8" Thick) to include 6" of Class 6 Aggregate Base Course.	4,725.	SY	$ _____	$ _____
167	608	Concrete Sculpture Pad (Bike Park Plaza) (8" Thick) to include 6" of Class 6 Aggregate Base Course and Reinforcement as Specified.	20.	SY	$ _____	$ _____
168	608	Concrete Pavement Band (Bike Park Plaza) (8" Thick) (Color Landscape per Landscape Plans) to include 6" of Class 6 Aggregate Base Course.	80.	SY	$ _____	$ _____
169	608	Concrete Drainage Pan (3' Wide) to include 6" of Class 6 Aggregate Base	307.	LF	$ _____	$ _____
170	608	Concrete Drainage Pan (6' Wide) to include 6" of Class 6 Aggregate Base	27.	LF	$ _____	$ _____
171	608	Concrete Intersection Corner (8" Thick) to include 6" of Class 6 Aggregate Base Course. Includes All Items Labeled as Concrete Bullnose End Section and Concrete Corner Fillet on the Plans.	85.	SY	$ _____	$ _____
172	608	Concrete Curb Ramp to include 6" of Class 6 Aggregate Base Course.	600.	SY	$ _____	$ _____
173	608	Concrete Driveway Section (8" Thick) (Commercial) to include 6" Class 6 Aggregate Base Course.	190.	SY	$ _____	$ _____
174	608	Detectable Warning (Cast Iron, Wet Set (2'x2')	150.	EA	$ _____	$ _____
175	RAW 108.2	4" Raw Water Pipe (C-900 PVC)	255.	LF	$ _____	$ _____
176	RAW 108.2	8" Raw Water Pipe (C-900 PVC)	2,585.	LF	$ _____	$ _____
177	RAW 108.2	10" Raw Water Pipe (C-900 PVC)	2,500.	LF	$ _____	$ _____
178	RAW 108.3	Raw Water - 4" Gate Valve	5.	EA	$ _____	$ _____
179	RAW 108.3	Raw Water - 8" Butterfly Valve	7.	EA	$ _____	$ _____
180	RAW 108.3	Raw Water - 10" Butterfly Valve	3.	EA	$ _____	$ _____
181	RAW 108.3	Raw Water - Combination Air Valve and Vault Assembly. Complete in Place	8.	EA	$ _____	$ _____
182	RAW 108.3	Raw Water - 8" x 4" Tee	3.	EA	$ _____	$ _____
183	RAW 108.3	Raw Water - 8" x 8" Tee	2.	EA	$ _____	$ _____
184	RAW 108.3	Raw Water - 8" Cross	1.	EA	$ _____	$ _____
185	RAW 108.3	Raw Water - 10" x 4" Tee	2.	EA	$ _____	$ _____
186	RAW 108.3	Raw Water - 10" x 10" Tee	1.	EA	$ _____	$ _____
187	RAW 108.3	Raw Water - 4", 11.25° Elbow	5.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
188	RAW 108.3	Raw Water - 4", 22.5° Elbow	5.	EA	$ _____	$ _____
189	RAW 108.3	Raw Water - 8", 11.25° Elbow	6.	EA	$ _____	$ _____
190	RAW 108.3	Raw Water - 8", 22.5° Elbow	14.	EA	$ _____	$ _____
191	RAW 108.3	Raw Water - 8", 45° Elbow	10.	EA	$ _____	$ _____
192	RAW 108.3	Raw Water - 8", 90° Elbow	1.	EA	$ _____	$ _____
193	RAW 108.3	Raw Water - 10", 11.25° Elbow	11.	EA	$ _____	$ _____
194	RAW 108.3	Raw Water - 10", 22.5° Elbow	16.	EA	$ _____	$ _____
195	RAW 108.3	Raw Water - 10", 45° Elbow	6.	EA	$ _____	$ _____
196	RAW 108.3	Raw Water - 8" x 4" Reducer	4.	EA	$ _____	$ _____
197	RAW 108.3	Raw Water - 10" x 8" Reducer	1.	EA	$ _____	$ _____
198	RAW 108.3	Raw Water - 10" x 4" Reducer	1.	EA	$ _____	$ _____
199	RAW 108.3	Raw Water - 8" End Cap/Plug	1.	EA	$ _____	$ _____
200	RAW 108.3	Raw Water - 4" End Cap/Plug	10.	EA	$ _____	$ _____
201	RAW 202	Remove Raw Water Blow off Assembly	1.	EA	$ _____	$ _____
202	LSC in ROW	Soil Amendment, Delivered, Tilled, Spread	41,265.	SF	$ _____	$ _____
203	LSC in ROW	Shrub Bed - Fine Grade, Rock Mulch	41,265.	SF	$ _____	$ _____
204	LSC in ROW	Riparian Restoration	108,900.	SF	$ _____	$ _____
205	LSC in ROW	Irrigation System	1.	Lump Sum	$ _____	$ _____
206	LSC in ROW	Trees, 2" Deciduous	70.	EA	$ _____	$ _____
207	LSC in ROW	Trees, 1-1/2" Deciduous	66.	EA	$ _____	$ _____
208	LSC in ROW	Evergreen Trees, 6 FT	12.	EA	$ _____	$ _____
209	LSC in ROW	Shrubs	1,021.	EA	$ _____	$ _____
210	LSC in ROW	Perennials	45.	EA	$ _____	$ _____
211	LSC in ROW	Boulders, 3'X2'	43.	EA	$ _____	$ _____
212	LSC in ROW	Additional Sleeving - 6" PVC CL 200	1,700.	LF	$ _____	$ _____
213	LSC in Park	Restroom Shelter	1.	EA	$ _____	$ _____
214	LSC in Park	Small Shelters	1.	Lump Sum	$ _____	$ _____
215	LSC in Park	Modular Block Walls (Versa-Lok)(Park Plaza Amphitheater)	424.	FF	$ _____	$ _____
216	LSC in Park	Concrete Landscape Edger	45.	LF	$ _____	$ _____
217	LSC in Park	Play Area Barrier Curb	290.	LF	$ _____	$ _____
218	LSC in Park	Engineered Wood Fiber Play Material	319.	CY	$ _____	$ _____
219	LSC in Park	Play Area ADA Ramp	2.	EA	$ _____	$ _____
220	LSC in Park	Concrete Stain Treatment	741.	SF	$ _____	$ _____
221	LSC in Park	Benches	10.	EA	$ _____	$ _____
222	LSC in Park	Bike Racks - (Inverted "U") Style	5.	EA	$ _____	$ _____
223	LSC in Park	Trees, 2" Deciduous	59.	EA	$ _____	$ _____
224	LSC in Park	Trees, 1-1/2" Deciduous	5.	EA	$ _____	$ _____
225	LSC in Park	Shrubs	128.	EA	$ _____	$ _____
226	LSC in Park	Perennials	24.	EA	$ _____	$ _____

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
227	LSC in Park	Boulders, 3' x 2'	10.	EA	$ _____	$ _____
228	LSC in Park	Boulders, 3' x 5'	14.	EA	$ _____	$ _____
229	LSC in Park	Lawn Fine Grade, Seed	45,683.	SF	$ _____	$ _____
230	LSC in Park	Irrigation System	1.	Lump Sum	$ _____	$ _____
231	LSC in Park	Soil Amendment, Delivered, Tilled, Spread	50,383.	SF	$ _____	$ _____
232	LSC in Park	Shrub Bed - Fine Grade, Rock Mulch	4,700.	SF	$ _____	$ _____
233	LSC Bike Prk	Lawn Fine Grade, Seed	25,500.	SF	$ _____	$ _____
234	LSC Bike Prk	Lawn Irrigation	25,500.	SF	$ _____	$ _____
235	LSC Bike Prk	Irrigation Controls	1.	Lump Sum	$ _____	$ _____
236	LSC Bike Prk	Soil Amendment, Delivered, Tilled, Spread	25,000.	SF	$ _____	$ _____
237	LSC Bike Prk	Split 2-Rail Fence, Cedar, Not incl. Future Track or Pump Park	965.	LF	$ _____	$ _____
238	LSC Bike Prk	Concrete Landscape Edger, Not incl. Future Track or Pump Park	968.	LF	$ _____	$ _____
239	LSC Bike Prk	Trees, 2" Deciduous	26.	EA	$ _____	$ _____
240	LSC Bike Prk	Trees, 1-1/2" Deciduous	8.	EA	$ _____	$ _____
241	LSC Bike Prk	Rock Type 1 (Smaller), not incl. Future Track or Pump Park, no Fabric or Soil Prep	11,291.	SF	$ _____	$ _____
242	LSC Bike Prk	Rock Type 2 (Larger), not incl. Future Track or Pump Park, no Fabric or Soil Prep	17,106.	SF	$ _____	$ _____
243	Amenities	Trash Recepticals	5.	EA	$ _____	$ _____
244	Amenities	Drinking Fountains	1.	EA	$ _____	$ _____
245	Amenities	Concrete for Bike/Racks Bollards (8 ft x 8 ft)	5.	EA	$ _____	$ _____
246	Amenities	Picnic Tables Associated with Restrooms/Shelters	8.	EA	$ _____	$ _____
MCR		Minor Contract Revisions	---	---	---	$ 320,000.00

Bid Amount: **$** _____

Bid Amount:

_____ **dollars**

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor:_____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price

Contractor Name:
Contractor Address:
Contractor Phone #:

BID BOND

KNOW ALL MEN BY THESE PRESENTS,

that we, M.A. Concrete Construction, Inc. (____ an individual, ___ a partnership, X a corporation incorporated in the State of CO) as Principal, and Western Surety Company (incorporated in the State of SD) as Surety, are held and firmly bound unto the City of Grand Junction, Colorado, (hereinafter called "City") in the penal sum of Five Percent of Amount Bid dollars ($ 5%), lawful money of the United States, for the payment of which sum we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that WHEREAS the Principal has submitted the accompanying Bid dated June 29, 2020 for construction of Riverfront at Dos Rios Phase 2 Construction - IFB-4799-20-DH (the Project) for the City and

WHEREAS, the City has required as a condition for receiving said Bid that the Principal deposit with the City either a cashier's check or a certified check equivalent to not less than five percent of the amount of said Bid or in lieu thereof furnish a Bid Bond for said amount conditioned that in event of a failure to execute the proposed Contract for such construction and to provide the required Performance and Payment Bonds and Insurance Certificates if the Contract be awarded to the Bidder, that said sum be paid immediately to the City as Liquidated Damages and not as a penalty for the Principal's failure to perform.

NOW, THEREFORE, if the Principal shall, within the period specified therefore, on the attached prescribed forms presented to the Bidder for signature, enter into a written Contract with the City in accordance with said Bid as accepted, and give Performance and Payment Bonds with good and sufficient Surety, or Sureties, as may be required upon the forms prescribed by the City, for the faithful performance and the proper fulfillment of said Contract, provide Certificates of Insurance as required by said Contract, and provide all other information and documentation required by the Contract Documents, then this obligation shall be void and of no effect, otherwise to remain in full force and effect. In the event suit is brought upon this bond by the City and the City prevails, the principal and surety shall pay all costs incurred by the City in such suit, including reasonable attorneys' fees and costs to be fixed by the Court.

IN WITNESS WHEREOF, the above bound parties have executed this instrument under their several seals the name and corporate seal of each corporate party being hereto affixed and duly signed by its undersigned representative pursuant to authority of its governing board.

Dated this 29th day of June, 2020.

Principal: M.A. Concrete Construction, Inc.

Address: 2323 River Road

Grand Junction, CO 81505

Signed: By: [signature] (seal)

Title: President

Surety: Western Surety Company

Address: 151 N. Franklin Street

Chicago, IL 60606

Signed: By: Tina M. Post (seal)

Title: Tina Marie Post Attorney-in-Fact

INSTRUCTIONS FOR COMPLETING BID BOND

1. The full legal name and residence of each individual executing this Bond as Principal must be inserted in the first paragraph.

2. If the Principal is a partnership, the full name of the partnership and all individuals must be inserted in the first paragraph which must recite that individuals are partners composing the partnership, and all partners must execute the Bond as individuals.

3. The State of incorporation of each corporate Principal or Surety to the Bond must be inserted in the first paragraph and the Bond must be executed under the corporate seal of said party attested by its secretary or other appropriate officer.

4. Attach a copy of the power-of-attorney for the Surety's agent.

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Jody L Anderson, Evan E Moody, Karen A Feggestad, Bradley J Moody, Tina Marie Post, Elizabeth Ostblom, Individually

of Denver, CO, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 28th day of March, 2020.

WESTERN SURETY COMPANY

Paul T. Bruflat, Vice President

State of South Dakota
County of Minnehaha } ss

On this 28th day of March, 2020, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires

June 23, 2021

J. MOHR
NOTARY PUBLIC
SOUTH DAKOTA

J. Mohr, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 29th day of June, 2020.

WESTERN SURETY COMPANY

L. Nelson, Assistant Secretary

Form F4280-7-2012

Go to www.cnasurety.com > Owner / Obligee Services > Validate Bond Coverage, if you want to verify bond authenticity.

Authorizing By-Law

ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 06/17/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Moody-Valley Insurance Agency
760 Horizon Drive, Suite 302
Grand Junction CO 81506

CONTACT NAME: Tina Post
PHONE (A/C, No, Ext): (970) 248-8300 FAX (A/C, No): (970) 242-1894
E-MAIL ADDRESS: tina.post@moodyins.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : BITCO National Insurance Company	20109
INSURER B : BITCO General Insurance Corporation	20095
INSURER C : Pinnacol Assurance	41190
INSURER D : Continental Insurance Company	35289
INSURER E :	
INSURER F :	

INSURED
M. A. Concrete Construction, Inc.
P. O. Box 1968
Grand Junction CO 81502

COVERAGES **CERTIFICATE NUMBER:** 19/20 Master **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:			CLP3688584	12/01/2019	12/01/2020	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Employee Benefits	$ 1,000,000 $ 300,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $ 1,000,000
B	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY			CAP3688584	12/01/2019	12/01/2020	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Medical payments	$ 1,000,000 $ $ $ $ 5,000
B	[X] UMBRELLA LIAB [X] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [X] RETENTION $ 10,000			CUP2817942	12/01/2019	12/01/2020	EACH OCCURRENCE AGGREGATE	$ 2,000,000 $ 2,000,000 $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: Y If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		4195192	09/01/2019	09/01/2020	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
D	Excess Liability			6045636010	12/01/2019	12/01/2020	Limit	3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Bid Bond: IFB-4799-20-DH Riverfront at Dos Rios Phase 2 Construction

CERTIFICATE HOLDER
City of Grand Junction
250 N 5th Street
Grand Junction CO 81501

CANCELLATION
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Moody-Valley Insurance Agency

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AGENCY CUSTOMER ID: 00022370

LOC #:

ADDITIONAL REMARKS SCHEDULE

Page ____ of ____

AGENCY	NAMED INSURED
Moody-Valley Insurance Agency	M. A. Concrete Construction, Inc.
POLICY NUMBER	
CARRIER / NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 **FORM TITLE:** Certificate of Liability Insurance: Notes

CONTRACTUAL LIABILITY APPLIES PER POLICY TERMS AND CONDITIONS

General Liability:
Blanket Additional Insured status applies only to the extent provided in form GL3085 09/11 when required by written contract.
Blanket Waiver of Subrogation applies only to the extent provided in form GL3085 09/11 when required by written contract.
Primary and Non-Contributory status only to the extent provided in form GL3085 09/11 when required by written contract.
Designated Project General Aggregate applies only to the extent provided in form GL3085 09/11 when required by written contract.

Auto Liability:
Blanket Additional Insured status applies only to the extent provided in form AP0401 10/17 when required by written contract.
Blanket Waiver of Subrogation applies only to the extent provided in form AP0401 10/17 when required by written contract.
Primary and Non-Contributory status only to the extent provided in form AP0401 10/17 when required by written contract.

Umbrella Liability:
Excess Liability policy is on a follow form basis for the following underlying insurance coverages: General Liability, Automobile Liability, and Employers Liability. Additional insured status will follow when required by written contract.

Excess Liability:
Excess Liability policy is on a follow form basis for the following underlying insurance coverages: Umbrella Liability. Additional insured status will follow when required by written contract.

Worker's Compensation:
359-B From Attached Includes Blanket Waiver of Subrogation. Status applies when required by written contract.

IMPORTANT:
The policy forms referenced will be sent via email only. To obtain copies, please send your request with the email address to certrequestgj@moodyins.com

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Contractor's Bid Form

Bid Date: 6-29-20

Project: IFB-4799-20-DH "Riverfront at Dos Rios Phase II Construction"

Bidding Company: MA CONCRETE CONST INC

Name of Authorized Agent: JEFF NIMON

Email MACONCRETENIMON@BRESNAN.NET

Telephone 243-3221 **Address** PO 1968

City GJ **State** CO **Zip** 81506

The undersigned Bidder, in compliance with the Invitation for Bids, having examined the Instruction to Bidders, General Contract Conditions, Statement of Work, Specifications, and any and all Addenda thereto, having investigated the location of, and conditions affecting the proposed work, hereby proposes to furnish all labor, materials and supplies, and to perform all work for the Project in accordance with Contract Documents, within the time set forth and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this Contractor's Bid Form is a part.

The undersigned Contractor does hereby declare and stipulate that this offer is made in good faith without collusion or connection to any person(s) providing an offer for the same work, and that it is made in pursuance of, and subject to, all terms and conditions of the Instructions to Bidders, the Specifications, and all other Solicitation Documents, all of which have been examined by the undersigned.

The Contractor also agrees that if awarded the Contract, to provide insurance certificates within ten (10) working days of the date of Notification of Award. Submittal of this offer will be taken by the Owner as a binding covenant that the Contractor will be prepared to complete the project in its entirety.

The Owner reserves the right to make the award on the basis of the offer deemed most favorable, to waive any formalities or technicalities and to reject any or all offers. It is further agreed that this offer may not be withdrawn for a period of sixty (60) calendar days after closing time. Submission of clarifications and revised offers automatically establish a new thirty day (30) period.

Prices in the bid proposal have not knowingly been disclosed with another provider and will not be prior to award.

- Prices in this bid proposal have been arrived at independently, without consultation, communication or agreement for the purpose of restricting competition.
- No attempt has been made nor will be to induce any other person or firm to submit a bid proposal for the purpose of restricting competition.
- The individual signing this bid proposal certifies they are a legal agent of the offeror, authorized to represent the offeror and is legally responsible for the offer with regard to supporting documentation and prices provided.
- Direct purchases by the City of Grand Junction are tax exempt from Colorado Sales or Use Tax. Tax exempt No. 98-903544. The undersigned certifies that no Federal, State, County or Municipal tax will be added to the above quoted prices.
- City of Grand Junction payment terms shall be Net 30 days.
- Prompt payment discount of N/A percent of the net dollar will be offered to the Owner if the invoice is paid within N/A days after the receipt of the invoice. The Owner reserves the right to take into account any such discounts when determining the bid award.

RECEIPT OF ADDENDA: the undersigned Contractor acknowledges receipt of Addenda to the Solicitation, Specifications, and other Contract Documents.

State number of Addenda received: 12345.

It is the responsibility of the Bidder to ensure all Addenda have been received and acknowledged.

By signing below, the Undersigned agree to comply with all terms and conditions contained herein.

Company: MA CONCRETE CONST IN

Authorized Signature: Mont Pruger

Title: PRESIDENT

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor: MA CONCRETE COAST

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	626	Mobilization	1.	Lump Sum	$ 103,500.00	$ 103,500.00
2	626	Construction Surveying	1.	Lump Sum	$ 6,000.00	$ 6,000.00
3	620	Sanitary Facility	1.	EA	$ 3,000.00	$ 3,000.00
4	209	Dust Abatement	500.	DAYS	$ 20.00	$ 10,000.00
5	208	Stabilized Construction Entrance	5.	EA	$ 1000.00	$ 5,000.00
6	208	Erosion Control (Complete in Place)	1.	Lump Sum	$ 15,000.00	$ 15,000.00
7		Potholing	1.	Lump Sum	$ 3500.00	$ 3500.00
8	108.2	4" Sewer Service Pipe (SDR 35)	786.	LF	$ 61.00	$ 47,946.00
9	108.2	6" Sewer Service Pipe (SDR 35)	93.	LF	$ 34.00	$ 3162.00
10	108.2	8" Gravity Sewer Pipe (SDR 35)	1,682.	LF	$ 20.00	$ 33640.00
11	108.2	Import Trench Backfill	4,000.	CY	$ 17.00	$ 68,000.00
12	108.3	4" Sewer Service Tap to Existing Main	18.	EA	$ 736.00	$ 13,248.00
13	108.3	4" Sewer Service Tap to New Main	8.	EA	$ 101.00	$ 808.00
14	108.3	8" End Cap/Plug Sewer	1.	EA	$ 226.00	$ 226.00
15	108.3	Sanitary Sewer Cleanout (2-way) to Include Appurtenances per City Standard Detail SS-07.	26.	EA	$ 490.00	$ 12,740.00
16	108.5	Sanitary Sewer Basic Manhole Placed on Existing Line (60" I.D.) (Complete in Place).	2.	EA	$ 4155.00	$ 8,316.00
17	108.5	Sanitary Sewer Basic Manhole Placed on Existing Line (48" I.D.) (Complete in Place).	1.	EA	$ 3094.00	$ 3094.00
18	108.5	Sanitary Sewer Basic Manhole (48" I.D.) (Complete in Place).	12.	EA	$ 2994.00	$ 35,928.00
19	108.5	Sanitary Manhole Barrel Section (D>5') (60" I.D.).	6.	VLF	$ 175.00	$ 1050.00
20	108.5	Sanitary Manhole Barrel Section (D>5') (48" I.D.).	33.6	VLF	$ 116.00	$ 3896.00
21	108.5	Connect to Existing Manhole or Sewer Main	3.	EA	$ 334.00	$ 1002.00
22	210	Adjust Sewer Manhole to Finished Grade.	15.	EA	$ 906.00	$ 13,560.00
23	104.4	Fully Encased Sewer in Concrete per City Standard Detail GU-04. See Plan Sheet 6.	11.	EA	$ 2788.00	$ 30,668.00
24	104.4	Cap Top Half of Sewer in Concrete per City Standard Detail GU-04.	12.	EA	$ 2128.00	$ 25,536.00
25	108.2	6" Water Pipe (C-900 PVC).	632.	LF	$ 22.00	$ 13,904.00
26	108.2	8" Water Pipe (C-900 PVC).	5,230.	LF	$ 23.00	$ 120,290.00
27	108.3	6" Gate Valve	17.	EA	$ 976.00	$ 16,592.00
28	108.3	8" Gate Valve	22.	EA	$ 1276.00	$ 28,072.00
29	108.3	8" X 6" Tee	14.	EA	$ 576.00	$ 8064.00
30	108.3	8" X 8" Tee	5.	EA	$ 676.00	$ 3380.00
31	108.3	8" X 6" Cross	1.	EA	$ 677.00	$ 677.00

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor: MA Concrete

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
32	108.3	8" Cross	1.	EA	$ 752.00	$ 752.00
33	108.3	8", 22.5° Elbow	10.	EA	$ 386.00	$ 3860.00
34	108.3	8", 45° Elbow	9.	EA	$ 386.00	$ 3474.00
35	108.3	8", 11.25° Elbow	14.	EA	$ 386.00	$ 5404.00
36	108.3	6", 45° Elbow	3.	EA	$ 366.00	$ 1098.00
37	108.3	8" X 6" Reducer	4.	EA	$ 356.00	$ 1424.00
38	108.3	8" X 4" Reducer	1.	EA	$ 326.00	$ 326.00
39	108.3	6" End Cap/Plug Water	4.	EA	$ 236.00	$ 944.00
40	108.3	Fire Hydrant Assembly	12.	EA	$ 3484.00	$ 41808.00
41	108.3	2" Tapping Saddle	27.	EA	$ 251.00	$ 6777.00
42	108.3	2" Corporation Stop	27.	EA	$ 266.00	$ 7182.00
43	108.3	Potable Water - 8" Tapping Sleeve	1.	EA	$ 1768.00	$ 1768.00
44	108.4	Water Service Line (2") (HDPE)	1,130.	LF	$ 54.00	$ 61,020.00
45	108.4	2" Water Service Assembly	27.	EA	$ 592.00	$ 15,984.00
46	202	Remove Water Valve	3.	EA	$ 167.00	$ 501.00
47	202	Remove Fire Hydrant	1.	EA	$ 835.00	$ 835.00
48	202	Abandon Water Valve	2.	EA	$ 791.00	$ 1582.00
49	202	Abandon Water Pipe (Plug Remaining Ends with Concrete).	4.	EA	$ 191.00	$ 764.00
50	202	Remove Water Meter	2.	EA	$ 282.00	$ 564.00
51	210	Adjust Water Valve to Finished Grade	4.	EA	$ 125.00	$ 500.00
52	210	Adjust Water Meter to Finished Grade	2.	EA	$ 175.00	$ 350.00
53	210	Adjust Fire Hydrant to Finished Grade	1.	EA	$ 992.00	$ 992.00
54	108.2	Storm Drain Pipe - 72" x 24" Concrete Box Culvert	557.	LF	$ 497.00	$ 276,829.00
55	108.2	Storm Drain Pipe - 29" x 18" Concrete Horizontal Elliptical Arch Pipe.	895.	LF	$ 94.00	$ 84,130.00
56	108.2	Storm Drain Pipe - 48" Concrete Pipe	50.	LF	$ 195.00	$ 9750.00
57	108.2	Storm Drain Pipe - 42" Concrete Pipe	363.	LF	$ 128.00	$ 46,464.00
58	108.2	Storm Drain Pipe - 36" Concrete Pipe	1,092.	LF	$ 97.00	$ 105,924.00
59	108.2	Storm Drain Pipe - 24" Concrete Pipe	853.	LF	$ 60.00	$ 51,180.00
60	108.2	Storm Drain Pipe - 18" Concrete Pipe	2,252.	LF	$ 51.00	$ 114,852.00
61	108.2	Storm Drain Pipe - 12" Concrete Pipe	703.	LF	$ 52.00	$ 36,556.00
62	108.2	Storm Drain Pipe - 8" PVC Pipe (C-900)	68.	LF	$ 43.00	$ 2924.00
63	108.5	Storm Drain Manhole (48" I.D.)	6.	EA	$ 2894.00	$ 17,364.00
64	108.5	Storm Drain Manhole (60" I.D.)	4.	EA	$ 3594.00	$ 14,376.00
65	108.5	Storm Drain Manhole (60" I.D.) with Flat Top Lid	5.	EA	$ 3594.00	$ 17,970.00
66	108.5	Storm Drain Manhole (72" I.D.)	1.	EA	$ 5188.00	$ 5188.00

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor: MA CONCRETE

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
67	108.6	Storm Drain - Outlet Structure - See "Water Quality Outlet Structure" to Include All Appurtenances (Complete in Place).	1.	EA	$ 15,116.00	$ 15,116.00
68	108.6	Storm Drain Inlet with Vertical Curb Opening (24" x 36")	20.	EA	$ 2994.00	$ 59880.00
69	108.6	Storm Drain Inlet with Drive Over Curb Opening (24" x 36")	2.	EA	$ 3094.00	$ 6188.00
70	108.6	Storm Drain - Large Area Inlet (24" x 36")	14.	EA	$ 3094.00	$ 43316.00
71	108.5	Storm Drain - Concrete Headwall (8'-9" wide x 9'-10" height) per CDOT M&S Standard Plan M-601-10 and 48" Flap	1.	EA	$ 26,470.00	$ 26,470.00
72	108.5	Storm Drain - Conflict Structure	1.	EA	$ 38,000.00	$ 38,000.00
73	108.5	Storm Drain - Access Manhole	3.	EA	$ 2883.00	$ 8649.00
74	108.5	Storm Drain - Access Inlet (24" x 36" I.D.) Vertical Curb Opening	1.	EA	$ 2883.00	$ 2883.00
75	108.6	Storm Drain - Access Inlet (24" x 36" I.D.) Area Inlet Opening	1.	EA	$ 3083.00	$ 3083.00
76	108.6	Storm Drain - 42" x 48" Tee Manhole	2.	EA	$ 5494.00	$ 10,988.00
77	108.6	Storm Drain - 42" x 48" x 36" Tee Manhole	1.	EA	$ 6144.00	$ 6144.00
78	108.5	Storm Drain - 36" x (24" x 36" Box Leg) Tee Inlet Area Inlet Frame and Grate (24" x 36" Opening)	1.	EA	$ 7888.00	$ 7888.00
79	108.5	Storm Drain - 72" x 24" Prefabricated Pipe Elbow	2.	EA	$ 8044.00	$ ~~8044~~ 16,088.00
80	108.5	Storm Drain - Inlet Over MH (Vertical Curb Opening) (24" x 36" I.D.)	2.	EA	$ 2994.00	$ 5988.00
81	108.5	Storm Drain - Inlet Over MH (Large Area Inlet Opening) (24" x 36" I.D.)	4.	EA	$ 3294.00	$ 13,176.00
82	108.5	Storm Drain - Prefab Pipe Transition per Plan	1.	EA	$ 8944.00	$ 8944.00
83	108.6	Storm Drain - Manhole Barrel Section (D>5')(72" I.D.)	5.1	VLF	$ 250.00	$ 1275.00
84	108.5	Storm Drain - Manhole Barrel Section (D>5')(60" I.D.)	2.2	VLF	$ 225.00	$ 495.00
85	108.5	Storm Drain - Manhole Barrel Section (D>5')(48" I.D.)	5.23	VLF	$ 125.00	$ 653.75
86	108.5	Core and Connect New 18" Storm Pipe to New Box Culvert	4.	EA	$ 1000.00	$ 4000.00
87	108.7	Granular Stabilization Material (Type B)	2,300.	TON	$ 13.00	$ 29,900.00
88	202	Remove Storm Drain Inlet	1.	EA	$ 282.00	$ 282.00
89	202	Remove 15" Flared End Section	1.	EA	$ 141.00	$ 141.00
90	202	Remove 15" Storm Pipe	90.	LF	$ 9.00	$ 810.00
91	202	Abandon Storm Pipe	1.	EA	$ 777.00	$ 777.00
92	210	Reset Storm Drain Inlet D1-252-099	1.	EA	$ 2416.00	$ 2416.00

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor: MA Concrete

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
93	210	Connect to and Adjust to Finished Grade Storm MH C4-252-017	1.	EA	$ 1272.00	$ 1272.00
94	210	Adjust Storm Manhole to Finished Grade	1.	EA	$ 600.00	$ 600.00
95	420	Geosynthetics - Mirifi RS580i or Approved Equal	5,600.	SY	$ 5.60	$ 31,360.00
96	506	Riprap (d50=12" to Include Geogrid)	40.	SY	$ 89.60	$ 3584.00
97	203	Unclassified Excavation	43,790.	CY	$ 4.00	$ 175,160.00
98	203	Unclassified Embankment	67,341.	CY	$ 2.00	$ 134,682.00
99	203	Debris Processing and Removal	12,000.	CY	$ 6.00	$ 72,000.00
100	203	Colorado River Bank Stabilization	900.	LF	$ 180.00	$ 162,000.00
101	203	Import and Place Clean Fill	43,753.	CY	$ 10.00	$ 437,530.00
102	210	Adjust Pull Box to Finished Grade	9.	EA	$ 350.00	$ 3150.00
103	210	Adjust Light Pole and Foundation to Finished Grade	2.	EA	$ 850.00	$ 1700.00
104	613	Joint Trench with Broad Band (Site Electrical - Street LT Circuits (2)-2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	32,600.	LF	$ 4.40	$ 143,440.00
105	613	Joint Trench with Site Electrical (Broad Band (3)-2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	48,900.	LF	$ 4.00	$ 195,600.00
106	613	Joint Trench with XCEL Energy and Charter who provides and places their materials (Century Link - 4" Schedule 80 PVC conduit). Refer to Utility Trench Detail	16,300.	LF	$ 8.80	$ 143,440.00
107	613	Joint Trench with XCEL Energy and Charter who provides and places their materials (Century Link - 2" Schedule 80 PVC conduit). Refer to Utility Trench Detail	16,300.	LF	$ 5.80	$ 94,540.00
108	613	Large Splice Box (Quasite) (3' - 2 5/8" x 2'-2") Broadband Logo.	32.	EA	$ 550.00	$ 17,600.00
109	613	Splice Box (Provided by Others - Century Link)	20.	EA	$ 125.00	$ 2500.00
110	613	Type One Pull Box	184.	EA	$ 220.00	$ 40,480.00
111	Elec	Wiring (Complete in Place)	1.	Lump Sum	$ 120,000.00	$ 120,000.00
112	Elec	Light Standard and Luminaire (Pedestrian)	150.	EA	$ 2500.00	$ 375,000.00
113	Elec	Light Standard and Luminaire (Street)	15.	EA	$ 3500.00	$ 52,500.00
114	Elec	Light Standard Foundation (Pedestrian)	150.	EA	$ 800.00	$ 120,000.00
115	Elec	Light Standard Foundation (Street)	15.	EA	$ 800.00	$ 12,000.00
116	Elec	Lighting Control Center PWR Pedestal (Special) (Complete in Place) to include Appurtenances	2.	EA	$ 7500.00	$ 15,000.00
117	202	Remove Asphalt Mat	11,800.	SY	$ 2.05	$ 24,190.00
118	202	Remove Concrete	400.	SY	$ 9.00	$ 3600.00

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor: MA Concrete

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
119	202	Romove Ground Sign	10.	EA	$ 150.00	$ 1500.00
120	202	Remove High Voltage Overhead Power Pole Foundations	2.	EA	$ 2162.00	$ 4324.00
121	202	Remove Tree	10.	EA	$ 300.00	$ 3000.00
122	202	Remove Property Pin (No Reference or Reset)	4.	EA	$ 100.00	$ 400.00
123	202	Remove Fencing (Includes All Gates and Associated Appurtenances.)	2,000.	LF	$ 2.00	$ 4000.00
124	202	Remove Mail Box	1.	EA	$ 150.00	$ 150.00
125	202	Clearing and Grubbing	1.	Lump Sum	$ 15,000.00	$ 15000.00
126	210	Reference/Reset Survey Monument	6.	EA	$ 200.00	$ 1200.00
127	210	Reset Ground Sign	2.	EA	$ 250.00	$ 500.00
128	304	Aggregate Base Course (Class 6) (4" Thick)(Co. River Trail Shoulder)	1,015.	SY	$ 7.10	$ 7206.50
129	304	Subgrade Stabilization - Aggregate Base Course (Class 3)(12" Thick)	5,600.	SY	$ 8.00	$ 44800.00
130	304	Aggregate Base Course (Class 6) (13" Thick)	18,200.	SY	$ 12.35	$ 224,770.00
131	304	Aggregate Base Course (Class 6) (6" Thick)	30.	SY	$ 17.00	$ 510.00
132	306	Reconditioning (12" Deep)	25,000.	SY	$ 1.00	$ 25,000.00
133	401	Hot Mix Asphalt (5" Thick) (Grading SX 75, Binder Grade 64-22) (Roadways)	5,000.	TON	$ 90.00	$ 450,000.00
134	401	Hot Mix Asphalt (3" Thick) (Grading SX 75, Binder Grade 64-22) (Driveways)	5.	TON	$ 300.00	$ 1500.00
135	627	Preformed Thermoplastic Pavement Marking (Handicap Symbol)	4.	EA	$ 250.00	$ 1000.00
136	627	Preformed Thermoplastic Pavement Marking (X-walk) (2' x 10' TYP.)	131.	EA	$ 185.00	$ 24,235.00
137	627	Preformed Thermoplastic Pavement Marking (8" White Dotted Line, 2' Segment, 3' Gap)	100.	LF	$ 12.00	$ 1200.00
138	627	Preformed Thermoplastic Pavement Marking (4" White Solid)	2,750.	LF	$ 4.00	$ 11,000.00
139	627	Preformed Thermoplastic Pavement Marking (2' White Solid)	170.	LF	$ 23.00	$ 3910.00
140	630	Traffic Control (Complete In Place)	1.	Lump Sum	$ 38,000.00	$ 38,000.00
141	630	Trafic Control Plan	1.	Lump Sum	$ 1000.00	$ 1000.00
142	202	Remove Asphalt Mat	40.	SY	$ 30.70	$ 1228.00
143	202	Remove Concrete	313.	SY	$ 12.25	$ 3834.25
144	202	Remove Pull Box	2.	EA	$ 150.00	$ 300.00
145	202	Remove Concrete Pole Box	3.	EA	$ 450.00	$ 1350.00
146	202	Remove Tree	7.	EA	$ 150.00	$ 1050.00

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor: MA Concrete

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
147	203	Unclassified Excavation	437.	CY	$ 18.00	$ 7866.00
148	208	Erosion Control (Complete in Place)	1.	Lump Sum	$ 6000.00	$ 6000.00
149	304	Aggregate Base Course (Class 6) (8" Thick) (Left Turn Lane)	565.	SY	$ 10.50	$ 5932.50
150	401	Hot Mix Asphalt (6" Thick) (Grading SX, Binder Grade 64-22) (Left Turn Lane)	187.	TON	$ 185.00	$ 34,595.00
151	608	Concrete Bullnose End Section (8" Thick) to include 6" of Class 6 Aggregate Base Course	5.	SY	$ 156.00	$ 780.00
152	608	Concrete Curb and Spill Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	320.	LF	$ 30.84	$ 9868.80
153	608	Concrete Median Edging (2' Wide) (Colored Concrete) (Davis Colors Sunset Rose) to include 6" of Class 6 Aggregate Base Course	40.	LF	$ 45.02	$ 1800.80
154	608	Concrete Cover Material (Colored Concrete) (Davis Colors Sunset Rose) (4" Thick) to include 6" of Class 6 Aggregate Base Course	185.	SY	$ 62.01	$ 11471.85
155	627	Preformed Thermoplastic Pavement Marking (Left Turn Symbol)	2.	EA	$ 300.00	$ 600.00
156	630	Traffic Control (Complete In Place)	1.	Lump Sum	$ 6250.00	$ 6250.00
157	630	Traffic Control Plan	1.	Lump Sum	$ 200.00	$ 200.00
158	SP	Safe Hit Flexible Delineator (SH248GP3--WS 09) to include 4" PVC Sleeve	2.	EA	$ 200.00	$ 400.00
159	608	Concrete Pavement (Roundabout) (10" Thick) to include 6" Class 6 Aggregate Base Course	1,415.	SY	$ 80.00	$ 113,200.00
160	608	Concrete Curb and Spill Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	1,705.	LF	$ 15.15	$ 25830.75
161	608	Concrete Truck Apron (Roundabout) (10" Thick) to include 6" of Class 6 Aggregate Base Course	310.	SY	$ 91.71	$ 28,430.10
162	608	Concrete Curb (6" Wide) (6" High) to include 6" of Class 6 Aggregate Base Course.	975.	LF	$ 24.76	$ 24,141.00
163	608	Concrete Curb and Gutter (2' Wide) (Both Collector and Spill Gutters) to include 6" of Class 6 Aggregate Base Course.	9,500.	LF	$ 16.50	$ 156,750.00
164	608	Concrete Drive-Over Curb and Gutter both 3' and 3.5' Wide and Both Collector and Spill Gutter to include 6" of Class 6 Aggregate Base Course.	1,075.	LF	$ 33.02	$ 35491.50

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor: M.A CONCRETE

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
165	608	Concrete Sidewalk (6" Thick) to include 6" of Class 6 Aggregate Base Course	13,875.	SY	$ 47.00	$ 652,125.00
166	608	Concrete Pavement (Parking & Plain Color Paving Bike Park Plaza) (8" Thick) to include 6" of Class 6 Aggregate Base Course.	4,725.	SY	$ 59.53	$ 281,279.25
167	608	Concrete Sculpture Pad (Bike Park Plaza) (8" Thick) to include 6" of Class 6 Aggregate Base Course and Reinforcement as Specified.	20.	SY	$ 163.00	$ 3260.00
168	608	Concrete Pavement Band (Bike Park Plaza) (8" Thick) (Color Landscape per Landscape Plans) to include 6" of Class 6 Aggregate Base Course.	80.	SY	$ 188.62	$ 15,089.60
169	608	Concrete Drainage Pan (3' Wide) to include 6" of Class 6 Aggregate Base	307.	LF	$ 34.53	$ 10,600.11
170	608	Concrete Drainage Pan (6' Wide) to include 6" of Class 6 Aggregate Base	27.	LF	$ 70.44	$ 1907.82
171	608	Concrete Intersection Corner (8" Thick) to include 6" of Class 6 Aggregate Base Course. Includes All Items Labeled as Concrete Bullnose End Section and Concrete Corner Fillet on the Plans.	85.	SY	$ 86.45	$ 7348.25
172	608	Concrete Curb Ramp to include 6" of Class 6 Aggregate Base Course.	600.	SY	$ 68.15	$ 40,890.00
173	608	Concrete Driveway Section (8" Thick) (Commercial) to include 6" Class 6 Aggregate Base Course.	190.	SY	$ 64.66	$ 12,285.40
174	608	Detectable Warning (Cast Iron, Wet Set (2'x2')	150.	EA	$ 120.00	$ 18,000.00
175	RAW 108.2	4" Raw Water Pipe (C-900 PVC)	255.	LF	$ 61.11	$ 15,583.05
176	RAW 108.2	8" Raw Water Pipe (C-900 PVC)	2,585.	LF	$ 24.12	$ 62,350.20
177	RAW 108.2	10" Raw Water Pipe (C-900 PVC)	2,500.	LF	$ 35.16	$ 87900.00
178	RAW 108.3	Raw Water - 4" Gate Valve	5.	EA	$ 736.00	$ 3680.00
179	RAW 108.3	Raw Water - 8" Butterfly Valve	7.	EA	$ 1126.00	$ 7882.00
180	RAW 108.3	Raw Water - 10" Butterfly Valve	3.	EA	$ 1652.00	$ 4956.00
181	RAW 108.3	Raw Water - Combination Air Valve and Vault Assembly. Complete in Place	8.	EA	$ 10685.50	$ 85,484.00
182	RAW 108.3	Raw Water - 8" x 4" Tee	3.	EA	$ 476.00	$ 1428.00
183	RAW 108.3	Raw Water - 8" x 8" Tee	2.	EA	$ 576.00	$ 1152.00
184	RAW 108.3	Raw Water - 8" Cross	1.	EA	$ 626.00	$ 626.00
185	RAW 108.3	Raw Water - 10" x 4" Tee	2.	EA	$ 586.00	$ 1172.00
186	RAW 108.3	Raw Water - 10" x 10" Tee	1.	EA	$ 826.00	$ 826.00
187	RAW 108.3	Raw Water - 4", 11.25° Elbow	5.	EA	$ 276.00	$ 1380.00

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor: Mat Concrete

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
188	RAW 108.3	Raw Water - 4", 22.5° Elbow	5.	EA	$ 276.00	$ 1380.00
189	RAW 108.3	Raw Water - 8", 11.25° Elbow	6.	EA	$ 376.00	$ 2256.00
190	RAW 108.3	Raw Water - 8", 22.5° Elbow	14.	EA	$ 401.00	$ 5614.00
191	RAW 108.3	Raw Water - 8", 45° Elbow	10.	EA	$ 386.00	$ 3860.00
192	RAW 108.3	Raw Water - 8", 90° Elbow	1.	EA	$ 416.00	$ 416.00
193	RAW 108.3	Raw Water - 10", 11.25° Elbow	11.	EA	$ 576.00	$ 6336.00
194	RAW 108.3	Raw Water - 10", 22.5° Elbow	16.	EA	$ 576.00	$ 9216.00
195	RAW 108.3	Raw Water - 10", 45° Elbow	6.	EA	$ 576.00	$ 3456.00
196	RAW 108.3	Raw Water - 8" x 4" Reducer	4.	EA	$ 326.00	$ 1304.00
197	RAW 108.3	Raw Water - 10" x 8" Reducer	1.	EA	$ 626.00	$ 626.00
198	RAW 108.3	Raw Water - 10" x 4" Reducer	1.	EA	$ 576.00	$ 576.00
199	RAW 108.3	Raw Water - 8" End Cap/Plug	1.	EA	$ 276.00	$ 276.00
200	RAW 108.3	Raw Water - 4" End Cap/Plug	10.	EA	$ 226.00	$ 2260.00
201	RAW 202	Remove Raw Water Blow off Assembly	1.	EA	$ 524.00	$ 524.00
202	LSC in ROW	Soil Amendment, Delivered, Tilled, Spread	41,265.	SF	$ 0.60	$ 24,759.00
203	LSC in ROW	Shrub Bed - Fine Grade, Rock Mulch	41,265.	SF	$ 1.50	$ 61,897.50
204	LSC in ROW	Riparian Restoration	108,900.	SF	$ 0.67	$ 72,963.00
205	LSC in ROW	Irrigation System	1.	Lump Sum	$ 35,000.00	$ 35,000.00
206	LSC in ROW	Trees, 2" Deciduous	70.	EA	$ 400.00	$ 28,000.00
207	LSC in ROW	Trees, 1-1/2" Deciduous	66.	EA	$ 400.00	$ 26,400.00
208	LSC in ROW	Evergreen Trees, 6 FT	12.	EA	$ 500.00	$ 6,000.00
209	LSC in ROW	Shrubs	1,021.	EA	$ 42.00	$ 42,882.00
210	LSC in ROW	Perennials	45.	EA	$ 50.00	$ 2250.00
211	LSC in ROW	Boulders, 3'X2'	43.	EA	$ 320.00	$ 13,760.00
212	LSC in ROW	Additional Sleeving - 6" PVC CL 200	1,700.	LF	$ 12.00	$ 20,400.00
213	LSC in Park	Restroom Shelter	1.	EA	$ 394,346.00	$ 394,346.00
214	LSC in Park	Small Shelters	1.	Lump Sum	$ 67,776.00	$ 67,776.00
215	LSC in Park	Modular Block Walls (Versa-Lok)(Park Plaza Amphitheater)	424.	FF	$ 40.00	$ 16,960.00
216	LSC in Park	Concrete Landscape Edger	45.	LF	$ 8.00	$ 360.00
217	LSC in Park	Play Area Barrier Curb	290.	LF	$ 31.00	$ 8990.00
218	LSC in Park	Engineered Wood Fiber Play Material	319.	CY	$ 37.00	$ 11,803.00
219	LSC in Park	Play Area ADA Ramp	2.	EA	$ 350.00	$ 700.00
220	LSC in Park	Concrete Stain Treatment	741.	SF	$ 6.00	$ 4,446.00
221	LSC in Park	Benches	10.	EA	$ 1400.00	$ 14,000.00
222	LSC in Park	Bike Racks - (Inverted "U") Style	5.	EA	$ 1160.00	$ 5800.00
223	LSC in Park	Trees, 2" Deciduous	59.	EA	$ 400.00	$ 23,600.00
224	LSC in Park	Trees, 1-1/2" Deciduous	5.	EA	$ 400.00	$ 2000.00
225	LSC in Park	Shrubs	128.	EA	$ 42.00	$ 5376.00
226	LSC in Park	Perennials	24.	EA	$ 26.00	$ 624.00

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor: MA CONCRETE

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
227	LSC in Park	Boulders, 3' x 2'	10.	EA	$ 320.00	$ 3200.00
228	LSC in Park	Boulders, 3' x 5'	14.	EA	$ 900.00	$ 12,600.00
229	LSC in Park	Lawn Fine Grade, Seed	45,683.	SF	$ 0.40	$ 18273.20
230	LSC in Park	Irrigation System	1.	Lump Sum	$ 15,000.00	$ 15,000.00
231	LSC in Park	Soil Amendment, Delivered, Tilled, Spread	50,383.	SF	$ 0.50	$ 25,191.50
232	LSC in Park	Shrub Bed - Fine Grade, Rock Mulch	4,700.	SF	$ 1.50	$ 7050.00
233	LSC Bike Prk	Lawn Fine Grade, Seed	25,500.	SF	$ 0.35	$ 8925.00
234	LSC Bike Prk	Lawn Irrigation	25,500.	SF	$ 1.00	$ 25,500.00
235	LSC Bike Prk	Irrigation Controls	1.	Lump Sum	$ 9200.00	$ 9200.00
236	LSC Bike Prk	Soil Amendment, Delivered, Tilled, Spread	25,000.	SF	$ 0.50	$ 12,500.00
237	LSC Bike Prk	Split 2-Rail Fence, Cedar, Not incl. Future Track or Pump Park	965.	LF	$ 11.00	$ 10615.00
238	LSC Bike Prk	Concrete Landscape Edger, Not incl. Future Track or Pump Park	968.	LF	$ 5.00	$ 4840.00
239	LSC Bike Prk	Trees, 2" Deciduous	26.	EA	$ 300.00	$ 7800.00
240	LSC Bike Prk	Trees, 1-1/2" Deciduous	8.	EA	$ 250.00	$ 2000.00
241	LSC Bike Prk	Rock Type 1 (Smaller), not incl. Future Track or Pump Park, no Fabric or Soil Prep	11,291.	SF	$ 1.25	$ 13,549.20
242	LSC Bike Prk	Rock Type 2 (Larger), not incl. Future Track or Pump Park, no Fabric or Soil Prep	17,106.	SF	$ 1.20	$ 20527.20
243	Amenities	Trash Recepticals	5.	EA	$ 700.00	$ 3500.00
244	Amenities	Drinking Fountains	1.	EA	$ 1200.00	$ 1200.00
245	Amenities	Concrete for Bike/Racks Bollards (8 ft x 8 ft)	5.	EA	$ 1160.00	$ 5800.00
246	Amenities	Picnic Tables Associated with Restrooms/Shelters	8.	EA	$ 1300.00	$ 10400.00
MCR		Minor Contract Revisions	---	---	---	$ 320,000.00

Bid Amount: $ 8,457,117.68

Bid Amount: EIGHT MILLION FOUR HUNDRED FIFTY SEVEN THOUSAND ONE HUNDRED SEVENTEEN 7 68/100 **dollars**

Bid Schedule: 2019 Riverfront at Dos Rios (PH2) - Addendum #5

Contractor: MA CONCRETE

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price

Contractor Name:	MA CONCRETE CONSTRUC INC
Contractor Address:	PO 1968 GJ CO 81506
Contractor Phone #:	970.243-3221

The undersigned Bidder proposes to subcontract the following portion of Work:

Name & address of Sub-Contractor	Description of work to be performed	% of Contract
BARNES ELECTRIC GJ, CO	ELECTRICAL	13%
MAYS CONCRETE GJ CO	CONCRETE	13%
ELAM CONST GJ CO	ASPHALT	6%
REED CREEK GJ CO	LANDSCAPE	7%
TY STRIPING GJ CO	STRIPING	1%
PNCI GJ CO	SHELTERS	12%

The undersigned Bidder acknowledges the right of the City to reject any and all Bids submitted and to waive informalities and irregularities therein in the City's sole discretion.

By submission of the Bid, each Bidder certifies, and in the case of a joint Bid each party thereto certifies as to his own organization, that this Bid has been arrived at independently, without collusion, consultation, communication, or agreement as to any matter relating to this Bid with any other Bidder or with any competitor.

MA CONCRETE CONSTRUCTION, INC

2323 RIVER ROAD, PO BOX 1968
GRAND JUNCTION, COLORADO 81502
PHONE (970)243-3221, FAX (970)243-9757
maconcretenimon@bresnan.net

Monday, June 29, 2020

City of Grand Junction
250 North 5th Street
Grand Junction, CO 81502

SUBJECT: REFERENCES FOR DOS RIOS PROJECT

TRENT PRALL	CITY OF GRAND JUNCTION	trentonp@gjcity.org	201-6384
DAVE PRISKE	UTE WATER	dpriske@uterwater.org	242-7491
KEN HALEY	CITY OF FRUITA	khaley@fruita.org	858-8377
LAURA PAGE	MESA COUNTY	laura.page@mesacounty.us	244-1765
ELI JENNINGS	CLIFTION SANITATION	ejennings@cliftonsanitation.com	434-7422

Bond #30104491

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned M.A. Concrete Construction, Inc., a Corporation organized under the laws of the State of CO, hereinafter referred to as the "Contractor" and Western Surety Company, a corporation organized under the laws of the State of SD, and authorized and licensed to transact business in the State of Colorado, hereinafter referred to as the "Surety," are held and firmly bound unto the City of Grand Junction, Colorado, hereinafter referred to as the "City", in the penal sum of Two Million Dollars and 00/100 dollars ($2,000,000.00), lawful money of the United States of America, for the payment of which sum the Contractor and Surety bind themselves and their heirs, executors, administrators, successors and assigns, jointly and severally by these presents.

WHEREAS, the above Contractor has on the 16th day of July, 2020, entered into a written contract with the City for furnishing all labor, materials, equipment, tools, superintendence, and other facilities and accessories for the construction of Riverfront at Dos Rios Phase II Construction (the "Project") and Contract No. IFB-4799-20-DH, if appropriate, in accordance with the Contract, Special Conditions, Special Provisions, General Contract Conditions, Contract Drawings, Specifications and all other Contract Documents therefor which are incorporated herein by reference and made a part hereof, and are herein referred to as the "Contract".

NOW, THEREFORE, the conditions of this performance bond are such that if the Contractor:

1. Promptly and faithfully observes, abides by and performs each and every covenant, condition and part of said Contract, including, but not limited to, its warranty provisions, in the time and manner prescribed in the Contract, and

2. Pays the City all losses, damages (liquidated or actual, including, but not limited to, damages caused by delays in performance of the Contract), expenses, costs and attorneys' fees, that the City sustains resulting from
3. any breach or default by the Contractor under the Contract,

then this bond is void; otherwise, it shall remain in full force and effect.

IN ADDITION, if said Contractor fails to duly pay for any labor, materials, team hire, sustenance, provisions, provender, or any other supplies used or consumed by said Contractor or its subcontractors in its performance of the Work contracted to be done or fails to pay any person who supplies rental machinery, tools, or equipment, all amounts due as the result of the use of such machinery, tools or equipment in the prosecution of the work, the Surety shall pay the same in an amount not exceeding the amount of this obligation, together with interest at the rate of eight percent per annum.

PROVIDED FURTHER, that the said Surety, for value received, hereby stipulates and agrees that any and all changes in the Contract or compliance or noncompliance with the formalities in the Contract for making such changes shall not affect the Surety's obligations under this bond and the Surety hereby waives notice of any such changes. Further, Contractor and Surety acknowledge that the penal sum of this bond shall increase in accordance with approved changes to the Contract Documents without obtaining the Surety's consent up to a maximum of 20 percent of the penal sum. Any additional increases in the penal sum shall require the Surety's consent.

IN WITNESS WHEREOF, said Contractor and said Surety have executed these presents as of this 17th day of July, 2020.

CONTRACTOR: M.A. Concrete Construction, Inc.

By: _____

Title: PRESIDENT

ATTEST: Donna Zarraga
Secretary

SURETY: Western Surety Company

By: Tina Marie Post

Title: Tina Marie Post Attorney-in-Fact

(Accompany this Bond with the attorney-in-fact's authority from the surety to execute this Bond, certified to include the date of the Bond.)

Bond #30104491

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned M.A. Concrete Construction, Inc., a Corporation organized under the laws of the State of CO, hereinafter referred to as the "Contractor" and Western Surety Company, a corporation organized under the laws of the State of SD, and authorized and licensed to transact business in the State of Colorado, hereinafter referred to as the "Surety," are held and firmly bound unto the City of Grand Junction, Colorado, hereinafter referred to as the "City," In the penal sum of Two Million Dollars and 00/100 dollars ($2,000,000.00), lawful money of the United States of America, for the payment of which sum the Contractor and Surety bind themselves and their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above Contractor has on the 16th day of July, 2020, entered into a written contract with the City for furnishing all labor, materials, equipment, tools, superintendence, and other facilities and accessories for the construction of Riverfront at Dos Rios Phase II Construction (the "Project") and Contract No. IFB-4799-20-DH, if appropriate, in accordance with the Contract, Special Conditions, Special Provisions, General Contract Conditions, Contract Drawings, Specifications and all other Contract Documents therefor which are incorporated herein by reference and made a part hereof, and are herein referred to as the "Contract".

NOW, THEREFORE, the condition of this payment bond obligation is such that if the Contractor shall at all times promptly make payments of all amounts lawfully due to all persons supplying or furnishing it or its subcontractors with labor, materials, rental machinery, tools or equipment, used or performed in the prosecution of work provided for in the above Contract and shall indemnify and save harmless the City to the extent of any and all payments in connection with the carrying our of such Contract which the City may be required to make under the law, and for all losses, damages, expenses, costs, and attorneys' fees incurred by the City resulting from the failure of the Contractor to make the payments discussed above, then this obligation shall be null and void, otherwise, it shall remain in full force and effect.

PROVIDE FURTHER, that the said Surety, for value received, hereby stipulates and agrees that any and all changes in the Contract Documents, or compliance or noncompliance with the formalities in the Contract for making such changes shall not affect the Surety's obligations under this bond and the Surety hereby waives notice of any such changes. Further, Contractor and Surety acknowledge that the penal sum of this bond shall increase or decrease in accordance with approved changes to the Contract Documents without obtaining the Surety's consent up to a maximum of 20 percent of the penal sum. Any additional increases in the penal sum shall require the Surety's consent.

IN WITNESS WHEREOF, said Contractor and said Surety have executed these presents as of this 17th day of July, 2020.

CONTRACTOR: M.A. Concrete Construction, Inc.

By: _____ ATTEST: _____
Secretary

Title: PRESIDENT

SURETY: Western Surety Company

By: _____

Title: Tina Marie Post Attorney-in-Fact

(Accompany this Bond with the attorney-in-fact's authority from the surety to execute this Bond, certified to include the date of the Bond.)

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Jody L Anderson, Evan E Moody, Karen A Feggestad, Bradley J Moody, Tina Marie Post, Elizabeth Ostblom, Individually

of Denver, CO, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 28th day of March, 2020.

WESTERN SURETY COMPANY

Paul T. Bruflat, Vice President

State of South Dakota
County of Minnehaha } ss

On this 28th day of March, 2020, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires
June 23, 2021

J. MOHR
NOTARY PUBLIC
SOUTH DAKOTA

J. Mohr, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 17th day of July, 2020.

WESTERN SURETY COMPANY

L. Nelson, Assistant Secretary

Form F4280-7-2012

Go to www.cnasurety.com > Owner / Obligee Services > Validate Bond Coverage, if you want to verify bond authenticity.

Authorizing By-Law

ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

INCREASE PENALTY RIDER

BOND AMOUNT $2,000,000.00 BOND NO. 30104491

To be attached and form a part of Bond No. 30104491 dated the 17th day of July, 2020, executed by Western Surety Company as surety, on behalf of M.A. Concrete Construction, Inc. as current principal of record, and in favor of City of Grand Junction, as Obligee, and in the amount of Two Million Dollars and 00/100 ($2,000,000.00).

In consideration of the agreed premium charged for this bond, it is understood and agreed that Western Surety Company hereby consents that effective from the 9th day of October, 2020, said bond shall be amended as follows:

THE BOND PENALTY SHALL BE INCREASED:

FROM: Two Million Dollars and 00/100 ($2,000,000.00)

TO: Eight Million Four Hundred Fifty-Seven Thousand One Hundred Seventeen Dollars and 68/100 ($8,457,117.68)

The Increase of said bond penalty shall be effective as of the 9th day of October, 2020, and does hereby agree that the continuity of protection under said bond subject to changes in penalty shall not be impaired hereby, provided that the aggregate liability of the above mentioned bond shall not exceed the amount of liability assumed by it at the time the act and/or acts of default were committed and in no event shall such liability be cumulative.

Signed, sealed and dated this 9th day of October, 2020.

M.A. Concrete Construction, Inc.
PRINCIPAL

BY: Mark Cruz Pres

Western Surety Company
SURETY

BY: Tina Marie Post
Tina Marie Post, ATTORNEY-IN-FACT

THE ABOVE BOND IS HEREBY AGREED TO AND ACCEPTED BY:

City of Grand Junction
OBLIGEE

BY: Duane Hoff Jr. Senior Buyer
TITLE

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Jody L Anderson, Evan E Moody, Karen A Feggestad, Bradley J Moody, Tina Marie Post, Elizabeth Ostblom, Individually

of Denver, CO, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 28th day of March, 2020.

WESTERN SURETY COMPANY

Paul T. Bruflat, Vice President

State of South Dakota
County of Minnehaha } ss

On this 28th day of March, 2020, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires
June 23, 2021

J. MOHR
NOTARY PUBLIC
SOUTH DAKOTA

J. Mohr, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 9th day of October, 2020.

WESTERN SURETY COMPANY

L. Nelson, Assistant Secretary

Form F4280-7-2012

Go to www.cnasurety.com > Owner / Obligee Services > Validate Bond Coverage, if you want to verify bond authenticity.

Authorizing By-Law

ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 07/17/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	**CONTACT NAME:** Tina Post
Moody-Valley Insurance Agency	**PHONE (A/C, No, Ext):** (970) 248-8300 **FAX (A/C, No):** (970) 242-1894
760 Horizon Drive, Suite 302	**E-MAIL ADDRESS:** tina.post@moodyins.com
Grand Junction CO 81506	
INSURED	
M. A. Concrete Construction, Inc.	
P. O. Box 1968	
Grand Junction CO 81502	

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A :	BITCO National Insurance Company	20109
INSURER B :	BITCO General Insurance Corporation	20095
INSURER C :	Pinnacol Assurance	41190
INSURER D :	Continental Insurance Company	35289
INSURER E :		
INSURER F :		

COVERAGES **CERTIFICATE NUMBER:** 19/20 Master **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:	Y		CLP3688584	12/01/2019	12/01/2020	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Employee Benefits	$ 1,000,000 $ 300,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $ 1,000,000
B	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY			CAP3688584	12/01/2019	12/01/2020	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Medical payments	$ 1,000,000 $ $ $ $ 5,000
B	[X] UMBRELLA LIAB [X] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [X] RETENTION $ 10,000			CUP2817942	12/01/2019	12/01/2020	EACH OCCURRENCE AGGREGATE	$ 2,000,000 $ 2,000,000 $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: Y If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		4195192	09/01/2019	09/01/2020	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
D	Excess Liability			6045636010	12/01/2019	12/01/2020	Limit	3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE Project: IFB-4799-20-DH Riverfront at Dos Rios Phase 2 Construction

CERTIFICATE HOLDER

City of Grand Junction
250 N 5th Street
Grand Junction CO 81501

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Moody-Valley Insurance Agency

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AGENCY CUSTOMER ID: 00022370

LOC #:

ADDITIONAL REMARKS SCHEDULE

Page ____ of ____

AGENCY		NAMED INSURED
Moody-Valley Insurance Agency		M. A. Concrete Construction, Inc.
POLICY NUMBER		
CARRIER	NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 **FORM TITLE:** Certificate of Liability Insurance: Notes

CONTRACTUAL LIABILITY APPLIES PER POLICY TERMS AND CONDITIONS

General Liability:
Blanket Additional Insured status applies only to the extent provided in form GL3085 09/11 when required by written contract.
Blanket Waiver of Subrogation applies only to the extent provided in form GL3085 09/11 when required by written contract.
Primary and Non-Contributory status only to the extent provided in form GL3085 09/11 when required by written contract.
Designated Project General Aggregate applies only to the extent provided in form GL3085 09/11 when required by written contract.

Auto Liability:
Blanket Additional Insured status applies only to the extent provided in form AP0401 10/17 when required by written contract.
Blanket Waiver of Subrogation applies only to the extent provided in form AP0401 10/17 when required by written contract.
Primary and Non-Contributory status only to the extent provided in form AP0401 10/17 when required by written contract.

Umbrella Liability:
Excess Liability policy is on a follow form basis for the following underlying insurance coverages: General Liability, Automobile Liability, and Employers Liability. Additional insured status will follow when required by written contract.

Excess Liability:
Excess Liability policy is on a follow form basis for the following underlying insurance coverages: Umbrella Liability. Additional insured status will follow when required by written contract.

Worker's Compensation:
359-B From Attached Includes Blanket Waiver of Subrogation. Status applies when required by written contract.

IMPORTANT:
The policy forms referenced will be sent via email only. To obtain copies, please send your request with the email address to certrequestgj@moodyins.com

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CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 11/30/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Tina Post	
Moody-Valley Insurance Agency, Inc. 760 Horizon Drive, Suite 302 Grand Junction CO 81506	PHONE (A/C, No, Ext): (970) 248-8300	FAX (A/C, No): (970) 242-1894
	E-MAIL ADDRESS: tina.post@moodyins.com	

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
M. A. Concrete Construction, Inc. P. O. Box 1968 Grand Junction CO 81502	INSURER A : BITCO National Insurance Company	20109
	INSURER B : BITCO General Insurance Corporation	20095
	INSURER C : Pinnacol Assurance	41190
	INSURER D : Continental Insurance Company	35289
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** 20/21 Master **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [X] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:	Y		CLP3700397	12/01/2020	12/01/2021	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Employee Benefits	$ 1,000,000 $ 300,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $ 1,000,000
B	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY			CAP3700398	12/01/2020	12/01/2021	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Medical payments	$ 1,000,000 $ $ $ $ 5,000
B	[X] UMBRELLA LIAB [X] OCCUR EXCESS LIAB [ ] CLAIMS-MADE DED [X] RETENTION $ 10,000			CUP2820350	12/01/2020	12/01/2021	EACH OCCURRENCE AGGREGATE 	$ 2,000,000 $ 2,000,000 $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: Y If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		4195192	09/01/2020	09/01/2021	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
D	Excess Liability			6045636010	12/01/2020	12/01/2021	Limit	3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

City of Grand Junction
PO Box 20,000
Grand Junction CO 81502

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Moody-Valley Insurance Agency

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AGENCY CUSTOMER ID: 00022370

LOC #:

ADDITIONAL REMARKS SCHEDULE

Page ____ of ____

AGENCY	NAMED INSURED
Moody-Valley Insurance Agency, Inc.	M. A. Concrete Construction, Inc.
POLICY NUMBER	
CARRIER / NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 **FORM TITLE:** Certificate of Liability Insurance: Notes

CONTRACTUAL LIABILITY APPLIES PER POLICY TERMS AND CONDITIONS

General Liability:
Blanket Additional Insured status applies only to the extent provided in form GL3085 09/11 when required by written contract.
Blanket Waiver of Subrogation applies only to the extent provided in form GL3085 09/11 when required by written contract.
Primary and Non-Contributory status only to the extent provided in form GL3085 09/11 when required by written contract.
Designated Project General Aggregate applies only to the extent provided in form GL3085 09/11 when required by written contract.

Auto Liability:
Blanket Additional Insured status applies only to the extent provided in form AP0401 10/17 when required by written contract.
Blanket Waiver of Subrogation applies only to the extent provided in form AP0401 10/17 when required by written contract.
Primary and Non-Contributory status only to the extent provided in form AP0401 10/17 when required by written contract.

Umbrella Liability:
Excess Liability policy is on a follow form basis for the following underlying insurance coverages: General Liability, Automobile Liability, and Employers Liability. Additional insured status will follow when required by written contract.

Excess Liability:
Excess Liability policy is on a follow form basis for the following underlying insurance coverages: Umbrella Liability. Additional insured status will follow when required by written contract.

Worker's Compensation:
359-B From Attached Includes Blanket Waiver of Subrogation. Status applies when required by written contract.

IMPORTANT:
The policy forms referenced will be sent via email only. To obtain copies, please send your request with the email address to certrequestgj@moodyins.com

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insurance is available to you for "your work" in connection with your interest in such partnership or joint venture.

B. CONTRACTORS AUTOMATIC ADDITIONAL INSURED COVERAGE – ONGOING OPERATIONS

SECTION II – WHO IS AN INSURED is amended to include as an additional insured any person or organization who is required by written contract to be an additional insured on your policy, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or

2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the project(s) designated in the written contract.

With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or

2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

This insurance is excess of all other insurance available to the additional insured, whether primary, excess, contingent or on any other basis, unless the written contract requires this insurance to be primary. In that event, this insurance will be primary relative to insurance policy(s) which designate the additional insured as a Named Insured in the Declarations and we will not require contribution from such insurance if the written contract also requires that this insurance be non-contributory. But with respect to all other insurance under which the additional insured qualifies as an insured or additional insured, this insurance will be excess.

C. AUTOMATIC WAIVER OF SUBROGATION

Item **8.** of **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS**, is deleted and replaced with the following:

8. Transfer of Rights of Recovery Against Others to Us and Automatic Waiver of Subrogation.

a. If the insured has rights to recover all or part of any payment we have made under this Coverage Form, those rights are transferred to us. The insured must do nothing after loss to impair those rights. At our request, the insured will bring "suit" or transfer those rights to us and help us enforce them.

b. If required by a written contract executed prior to loss, we waive any right of recovery we may have against any person or organization because of payments we make for injury or damage arising out of "your work" for that person or organization.

D. EXTENDED NOTICE OF CANCELLATION, NONRENEWAL

Item **A.2.b.** of the **COMMON POLICY CONDITIONS**, is deleted and replaced with the following:

A.2.b. 60 days before the effective date of the cancellation if we cancel for any other reason.

Item **9.** of **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS** , is deleted and replaced with the following:

9. WHEN WE DO NOT RENEW

a. If we choose to nonrenew this policy, we will mail or deliver to the first Named Insured shown in the Declarations written notice of the nonrenewal not less than 60 days before the expiration date.

b. If we do not give notice of our intent to nonrenew as prescribed in **a.** above, it is agreed that you may extend the period of this policy for a maximum additional sixty(60) days from its scheduled expiration date. Where not otherwise prohibited by law, the existing terms, conditions and rates will remain in effect during that extension period. It is further agreed that so long as it is not otherwise prohibited by law, this one time sixty day extension is the sole remedy and liquidated damages available to the insured as a result of our failure to give the notice as prescribed in **9. a.** above.

E. UNINTENTIONAL FAILURE TO DISCLOSE HAZARDS

Although we relied on your representations as to existing and past hazards, if unintentionally you should fail to disclose all such hazards at the inception date of your policy, we will not deny coverage under this Coverage Form because of such failure.

F. BROADENED MOBILE EQUIPMENT

Item **12.b.** of **SECTION V - DEFINITIONS** , is deleted and replaced with the following:

12.b. Vehicles maintained for use solely on or next to premises, sites or locations you own, rent or occupy.

G. PERSONAL AND ADVERTISING INJURY - CONTRACTUAL COVERAGE

Exclusion 2.e. of **SECTION I, COVERAGE B** is deleted.

H. NONEMPLOYMENT DISCRIMINATION

Unless "personal and advertising injury" is excluded from this policy:

Item **14.** of **SECTION V - DEFINITIONS** , is amended to include:

"Personal and advertising injury" also means embarrassment or humiliation, mental or emotional distress, physical illness, physical impairment, loss of earning capacity or monetary loss, which is caused by "discrimination."

SECTION V - DEFINITIONS , is amended to include:

"Discrimination" means the unlawful treatment of individuals based on race, color, ethnic origin, age, gender or religion.

Item **2. Exclusions** of **SECTION I, COVERAGE B** , is amended to include:

"Personal and advertising injury" arising out of "discrimination" directly or indirectly related to the past employment, employment or prospective employment of any person or class of persons by any insured;

"Personal and advertising injury" arising out of "discrimination" by or at your, your agents or your "employees" direction or with your, your agents or your "employees" knowledge or consent;

"Personal and advertising injury" arising out of "discrimination" directly or indirectly related to the sale, rental, lease or sub-lease or prospective sale, rental, lease or sub-lease of any dwelling, permanent lodging or premises by or at the direction of any insured; or

Fines, penalties, specific performance or injunctions levied or imposed by a governmental entity, or governmental code, law, or statute because of "discrimination."

I. LIQUOR LIABILITY

Exclusion 2.c. of **SECTION I, COVERAGE A** , is deleted.

J. BROADENED CONDITIONS

Items **2.a.** and **2.b.** of **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS** , are deleted and replaced with the following:

2. Duties In The Event Of Occurrence, Offense, Claim Or Suit:

a. You must see to it that we are notified of an "occurrence" or an offense which may result in a claim as soon as practicable after the "occurrence" has been reported to you, one of your officers or an "employee" designated to give notice to us. Notice should include:

(1) How, when and where the "occurrence" or offense took place;

(2) The names and addresses of any injured persons and witnesses; and

(3) The nature and location of any injury or damage arising out of the "occurrence" or offense.

b. If a claim is made or "suit" is brought against any insured, you must:

(1) Record the specifics of the claim or "suit" and the date received as soon as you, one of your officers, or an "employee" designated to record such information is notified of it; and

(2) Notify us in writing as soon as practicable after you, one of your officers, your legal department or an "employee" you designate to give us such notice learns of the claims or "suit."

Item **2.e.** is added to **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS** :

2.e. If you report an "occurrence" to your workers compensation insurer which develops into a liability claim for which coverage is provided by the Coverage Form, failure to report such "occurrence" to us at the time of "occurrence" shall not be deemed in violation of paragraphs **2.a., 2.b., and 2.c**. However, you shall give written notice of this "occurrence" to us as soon as you are made aware of the fact that this "occurrence" may be a liability claim rather than a workers compensation claim.

K. AUTOMATIC ADDITIONAL INSUREDS - EQUIPMENT LEASES

SECTION II - WHO IS AN INSURED is amended to include any person or organization with whom you agree in a written equipment lease or rental agreement to name as an additional insured with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, at least in part, by your maintenance, operation, or use by you of the equipment leased to you by such person or organization, subject to the following additional exclusions.

The insurance provided to the additional insured does not apply to:

1. "Bodily injury" or "property damage" occurring after you cease leasing the equipment.

2. "Bodily injury" or "property damage" arising out of the sole negligence of the additional insured.

3. "Property damage" to:

   a. Property owned, used or occupied by or rented to the additional insured; or

   b. Property in the care, custody or control of the additional insured or over which the additional insured is for any purpose exercising physical control.

This insurance is excess of all other insurance available to the additional insured, whether primary, excess, contingent or on any other basis, unless the written contract requires this insurance to be primary. In that event, this insurance will be primary relative to insurance policy(s) which designate the additional insured as a Named Insured in the Declarations and we will not require contribution from such insurance if the written contract also requires that this insurance be non-contributory. But with respect to all other insurance under which the additional insured qualifies as an insured or additional insured, this insurance will be excess.

L. INSURED CONTRACT EXTENSION - RAILROAD PROPERTY AND CONSTRUCTION CONTRACTS

Item **9.** of **SECTION V - DEFINITIONS** , is deleted and replaced with the following.

9. "Insured Contract" means:

   a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by fire to premises while rented to you or temporarily occupied by you with permission of the owner is not an "insured contract";

   b. A sidetrack agreement;

   c. Any easement or license agreement;

   d. An obligation, as required by ordinance, to indemnify a municipality, except in connection with work for a municipality;

   e. An elevator maintenance agreement;

   f. That part of any other contract or agreement pertaining to your business (including an indemnification of a municipality in connection with work performed for a municipality) under which you assume the tort liability of another party to pay for "bodily injury" or "property damage" to a third person or organization. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.

      Paragraph **f.** does not include that part of any contract or agreement:

      (1) That indemnifies an architect, engineer or surveyor for injury or damage arising out of:

         (a) Preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or

         (b) Giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage; or

      (2) Under which the insured, if an architect, engineer or surveyor, assumes liability for an injury or damage arising out of the insured's rendering or failure to render professional services, including those listed in (1) above and supervisory, inspection, architectural or engineering activities.

M. CONSTRUCTION PROJECT GENERAL AGGREGATE LIMITS

This modifies **SECTION III - LIMITS OF INSURANCE** .

A. For all sums which can be attributed only to ongoing operations at a single construction project for which the insured becomes legally obligated to pay as damages caused by an "occurrence" under **SECTION I - COVERAGE A**, and for all medical expenses caused by accidents under **SECTION I - COVERAGE C** :

1. A separate Construction Project General Aggregate Limit applies to each construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.

2. The Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under **COVERAGE A**, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard," and for medical expenses under **COVERAGE C** regardless of the number of:

a. Insureds;

b. Claims made or "suits" brought; or

c. Persons or organizations making claims or bringing "suits."

3. Any payments made under **COVERAGE A** for damages or under **COVERAGE C** for medical expenses shall reduce the Construction Project General Aggregate Limit for that construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Construction Project General Aggregate Limit for any other construction project.

4. The limits shown in the Declarations for Each Occurrence, Fire Damage and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Construction Project General Aggregate Limit.

B. For all sums which cannot be attributed only to ongoing operations at a single construction project for which the insured becomes legally obligated to pay as damages caused by an "occurrence" under **SECTION I - COVERAGE A**, and for all medical expenses caused by accidents under **SECTION I - COVERAGE C** :

1. Any payments made under **COVERAGE A** for damages or under **COVERAGE C** for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-Completed Operations Aggregate Limit, whichever is applicable; and

2. Such payments shall not reduce any Construction Project General Aggregate Limit.

C. Payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-Completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Construction Project General Aggregate Limit.

D. If a construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.

E. The provisions of **SECTION III - LIMITS OF INSURANCE** not otherwise modified by this endorsement shall continue to be applicable.

N. FELLOW EMPLOYEE COVERAGE

Exclusion 2.e. Employers Liability of **SECTION I, COVERAGE A**, is deleted and replaced with the following:

2.e. "Bodily injury" to

(1) An "employee" of the insured arising out of and in the course of:

(a) Employment by the insured; or

(b) Performing duties related to the conduct of the insured's business; or

(2) The spouse, child, parent, brother or sister of that "employee" as a consequence of paragraph **(1)** above.

This exclusion applies:

(1) Whether the insured may be liable as an employer or in any other capacity; and

(2) To any obligation to share damages with or repay someone else who must pay damages because of the injury.

This exclusion does not apply to:

(1) Liability assumed by the insured under an "insured contract"; or

(2) Liability arising from any action or omission of a co-"employee" while that co-"employee" is either in the course of his or her employment or performing duties related to the conduct of your business.

Item **2.a. (1)(a)** of **SECTION II - WHO IS AN INSURED** , is deleted and replaced with the following:

2.a. (1)(a) To you, to your partners or members (if you are a partnership or joint venture) or to your members (if you are a limited liability company), or to your "volunteer workers" while performing duties related to the conduct of your business.

O. PROPERTY DAMAGE TO THE NAMED INSURED'S WORK

Exclusion l of **SECTION I, COVERAGE A** . is deleted and replaced with the following:

l. Damage to Your Work

"Property damage" to "your work" arising out of it or any part of it and included in the "products completed operation hazard."

This exclusion applies only to that portion of any loss in excess of $50,000 per occurrence if the damaged work and the work out of which the damage arises was performed by you.

This exclusion does not apply if the damaged work or the work out of which the damage arises was performed on your behalf by a subcontractor.

P. CARE, CUSTODY OR CONTROL

Exclusion 2.j.4 of **SECTION I, COVERAGE A.** is deleted and replaced with the following:

2.j.4 Personal property in the care, custody or control of the insured. However, for personal property in the care, custody or control of you or your "employees," this exclusion applies only to that portion of any loss in excess of $25,000 per occurrence, subject to the following terms and conditions;

(a) The most that we will pay under this provision as an annual aggregate is $100,000, regardless of the number of occurrences.

(b) This provision does not apply to "employee" owned property or any property that is missing where there is not physical evidence to show what happened to the property.

(c) The aggregate limit for this coverage provision is part of the General Aggregate Limit and **SECTION III - LIMITS OF INSURANCE** is changed accordingly.

(d) In the event of damage to or destruction of property covered by this exception, you shall, if requested by us, replace the property or furnish the labor and materials necessary for repairs thereto, at actual cost to you, exclusive of prospective profit or overhead charges of any nature.

(e) $2,500 shall be deducted from the total amount of all sums you became obligated to pay as damages on account of damage to or destruction of all property of each person or organization, including the loss of use of that property, as a result of each "occurrence." Our limit of liability under the endorsement as being applicable to each "occurrence" shall be reduced by the amount of the deductible indicated above; however, our aggregate limit of liability under this provision shall not be reduced by the amount of such deductible. The conditions of the policy, including those with respect to duties in the event of "occurrence," claims or "suit" apply irrespective of the application of the deductible amount. We may pay any part or all of the deductible amount to effect settlement of any claim or "suit" and, upon notification of the action taken, you shall promptly reimburse us for such part of the deductible amount as has been paid by us.

Q. ELECTRONIC DATA LIABILITY COVERAGE

1. **Exclusion 2.p. Electronic Data of SECTION I, COVERAGE A,** is deleted and replaced with the following:

   2.p. Damages arising out of the loss of, loss of use of, damage to, corruption of, inability to access, or inability to manipulate "electronic data" that does not result from physical injury to tangible property.

2. The following definition is added to **SECTION V – DEFINITIONS:**

   "Electronic data" means information, facts or programs stored as or on, created or used on, or transmitted to or from computer software (including systems and applications software), hard or floppy disks, CD-ROMS, tapes, drives, cells, data processing devices or any other media which are used with electronically controlled equipment.

3. For the purposes of this coverage, the definition of "property damage" in **SECTION V – DEFINITIONS** is replaced by the following:

   "Property damage" means:

   a. Physical injury to tangible property, including all resulting loss of use of that property. All such loss of use shall be deemed to occur at the time of the physical injury that caused it;

   b. Loss of use of tangible property that is not physically injured. All such loss of use shall be deemed to occur at the time of the "occurrence" that caused it; or

   c. Loss of, loss of use of, damage to, corruption of, inability to access, or inability to properly manipulate "electronic data", resulting from physical injury to tangible property. All such loss of "electronic data" shall be deemed to occur at the time of the "occurrence" that caused it.

For the purposes of this insurance, "electronic data" is not tangible property.

R. CONSOLIDATED INSURANCE PROGRAM RESIDUAL LIABILITY COVERAGE

With respect to "bodily injury", "property damage", or 'personal and advertising injury" arising out of your ongoing operations; or operations included within the "products-completed operations hazard", the policy to which this coverage is attached shall apply as excess insurance over coverage available to "you" under a Consolidated Insurance Program (such as an Owner Controlled Insurance Program or Contractors Controlled Insurance Program).

Coverage afforded by this endorsement does not apply to any Consolidated Insurance Program involving a "residential project" or any deductible or insured retention, specified in the Consolidated Insurance Program.

The following is added to **Section V – Definitions**

"Residential project" means any project where 30% or more of the total square foot area of the structures on the project is used or is intended to be used for human residency. This includes but is not limited to single or multifamily housing, apartments, condominiums, townhouses, co-operatives or planned unit developments and appurtenant structures (including pools, hot tubs, detached garages, guest houses or any similar structures). A "residential project" does not include military owned housing, college/university owned housing or dormitories, long term care facilities, hotels, motels, hospitals or prisons.

All other terms, provisions, exclusions and limitations of this policy apply.

S. AUTOMATIC ADDITIONAL INSUREDS - MANAGERS OR LESSORS OR PREMISES

SECTION II – WHO IS AN INSURED is amended to include:

Any person or organization with whom you agree in a written contract or written agreement to name as an additional insured but only with respect to liability arising out of the ownership, maintenance or use of that part of the premises, designated in the written contract or written agreement, that is leased to you and subject to the following additional exclusions:

This insurance does not apply to:

1. Any "occurrence" which takes place after you cease to be a tenant in that premises.

2. Structural alterations, new construction or demolition operations performed by or on behalf of the additional insured listed in the written contract or written agreement.

This insurance is excess of all other insurance available to the additional insured, whether primary, excess, contingent or on any other basis, unless the written contract requires this insurance to be primary. In that event, this insurance will be primary relative to insurance policy(s) which designate the additional insured as a Named Insured in the Declarations and we will not require contribution from such insurance if the written contract also requires that this insurance be non-contributory. But with respect to all other insurance under which the additional insured qualifies as an insured or additional insured, this insurance will be excess.

T. AUTOMATIC ADDITIONAL INSUREDS – STATE OR GOVERNMENTAL AGENCY OR POLITICAL SUBDIVISIONS – PERMITS OR AUTHORIZATIONS

SECTION II – WHO IS AN INSURED is amended to include any state or governmental agency or subdivision or political subdivision with whom you are required by written contract, ordinance, law or building code to name as an additional insured subject to the following provisions:

This insurance applies only with respect to operations performed by you or on your behalf for which the state or governmental agency or subdivision or political subdivision has issued a permit or authorization.

This insurance does not apply to:

1. "Bodily injury", "property damage" or "personal and advertising injury" arising out of operations performed for the federal government, state or municipality; or

2. "Bodily injury" or "property damage" included within the "products-completed operations hazard".

This insurance is excess of all other insurance available to the additional insured, whether primary, excess, contingent or on any other basis, unless the written contract requires this insurance to be primary. In that event, this insurance will be primary relative to insurance policy(s) which designate the additional insured as a Named Insured in the Declarations and we will not require contribution from such insurance if the written contract also requires that this insurance be non-contributory. But with respect to all other insurance under which the additional insured qualifies as an insured or additional insured, this insurance will be excess.

U. CONTRACTORS AUTOMATIC ADDITIONAL INSURED COVERAGE – COMPLETED OPERATIONS

SECTION II – WHO IS AN INSURED is amended to include as an additional insured any person or organization who is required by written contract to be an additional insured on your policy for completed operations, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the project designated in the contract, performed for that additional insured and included in the "products-completed operations hazard".

This insurance is excess of all other insurance available to the additional insured, whether primary, excess, contingent or on any other basis, unless the written contract requires this insurance to be primary. In that event, this insurance will be primary relative to insurance policy(s) which designate the additional insured as a Named Insured in the Declarations and we will not require contribution from such insurance if the written contract also requires that this insurance be non-contributory. But with respect to all other insurance under which the additional insured qualifies as an insured or additional insured, this insurance will be excess.

V. ADDITIONAL INSURED – ENGINEERS, ARCHITECTS OR SURVEYORS

SECTION II – WHO IS AN INSURED is amended to include as an additional insured any architect, engineer or surveyor who is required by written contract to be an additional insured on your policy, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or

2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations performed by you or on your behalf.

This includes such architect, engineer or surveyor, who may not be engaged by you, but is contractually required to be added as an additional insured to your policy.

With respect to the insurance afforded to these additional insureds, the following additional exclusion applies:

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of or the failure to render any professional services, including:

1. The preparing, approving, or failing to prepare or approve maps, drawings, opinions, reports, surveys, change orders, designs or specifications; or

2. Supervisory, inspection or engineering services.

This insurance is excess of all other insurance available to the additional insured, whether primary, excess, contingent or on any other basis, unless the written contract requires this insurance to be primary. In that event, this insurance will be primary relative to insurance policy(s) which designate the additional insured as a Named Insured in the Declarations and we will not require contribution from such insurance if the written contract also requires that this insurance be non-contributory. But with respect to all other insurance under which the additional insured qualifies as an insured or additional insured, this insurance will be excess.

NAMED INSURED: M.A. CONCRETE CONSTRUCTION, INC. END. #

POLICY NO. CLP 3 675 728 EFFECTIVE DATE OF ENDORSEMENT: 12-01-18

[ ] BITCO General Insurance Corporation [ ] BITCO National Insurance Company

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

THIS ENDORSEMENT MODIFIES INSURANCE PROVIDED UNDER THE FOLLOWING:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM

OWNERS AND CONTRACTORS PROTECTIVE LIABILITY COVERAGE FORM

PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE FORM

EXCLUSION
(Asbestos)

It is agreed that the insurance does not apply to "bodily injury" or "property damage" arising out of or alleged to have arisen out of the manufacture, production, use, installation, removal, encapsulation, enclosing or disposal of asbestos or any materials containing asbestos.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BROADENED COVERAGE - AUTOMOBILES

The following modifies insurance provided under:

BUSINESS AUTO COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

1 - Broad Form Named Insured
2 - Automatic Waiver of Subrogation
3 - Automatic Additional Insured
4 - Primary and Noncontributory - Other Insurance Condition
5 - Unintentional Failure to Disclose Hazards
6 - Extended Notice of Cancellation, Non-Renewal
7 - When We Do Not Renew
8 - Notice of Knowledge of Accident or Loss
9 - Employees as Insured
10 - Employee Hired Autos
11 - Bodily Injury Extension
12 - Hired Auto Physical Damage
13 - Enhanced Supplementary Payments
14 - Fellow Employee Coverage for Designated Positions
15 - Physical Damage – Transportation Expenses
16 - Rental Reimbursement Coverage
17 - Loan/Lease Gap Coverage
18 - Accidental Air Bag Discharge Coverage
19 - Glass Repair – Waiver of Deductible

1. BROAD FORM NAMED INSURED

SECTION II. A. 1. -WHO IS AN INSURED - Paragraph **d.** is added:

d. Any organization you newly acquire or form, except for a partnership, joint venture or limited liability company, and over which you maintain majority ownership or interest (51% or more) or for which you have assumed the active management, will qualify as a Named Insured if there is no other similar insurance available to that organization. However, coverage under this provision is only afforded until the end of the policy period or the 12-month anniversary of the policy inception date, whichever is earlier.

2. AUTOMATIC WAIVER OF SUBROGATION

Section IV – Business Auto Conditions, **Paragraph A.5., Transfer of Rights of Recovery Against Others to Us**, is deleted and replaced with the following:

a. If the insured has rights to recover all or part of any payment we have made under this Coverage Form, those rights are transferred to us. The insured must do nothing after loss to impair those rights. At our request, the insured will bring "suit" or transfer those rights to us and help us enforce them.

b. If required by a written contract executed prior to loss, we waive any right of recovery we may have against any person or organization because of payments we make for damages under this coverage form.

3. AUTOMATIC ADDITIONAL INSURED

SECTION II – WHO IS AN INSURED, Paragraph A.1, is amended to include as an "insured" any person or organization who is required by written contract or agreement to be an additional insured on your policy, but only with respect to liability arising out of operations performed by you or on your behalf for the additional insured.

4. PRIMARY AND NONCONTRIBUTORY - OTHER INSURANCE CONDITION

The following is added to the Other Insurance Condition in the Business Auto Coverage Form and the Other Insurance - Primary And Excess Insurance Provisions in the Motor Carrier Coverage Form and supersedes any provision to the contrary:

This Coverage Form's Covered Autos Liability Coverage is primary to and will not seek contribution from any other insurance available to an "insured" under your policy provided that:

1. Such "insured" is a Named Insured under such other insurance; and

2. You have agreed in writing in a contract or agreement that this insurance would be primary and would not seek contribution from any other insurance available to such "insured".

5. UNINTENTIONAL FAILURE TO DISCLOSE HAZARDS

Although we relied on your representations as to existing and past hazards, if unintentionally you should fail to disclose all such hazards at the inception date of your policy, we will not deny coverage under this Coverage Form because of such failure.

6. EXTENDED NOTICE OF CANCELLATION, NON-RENEWAL

The **COMMON POLICY CONDITIONS** , Item **A.2.b.** is deleted and replaced with the following:

A.2.b. 60 days before the effective date of the cancellation if we cancel for any other reason.

7. WHEN WE DO NOT RENEW

SECTION IV – BUSINESS AUTO CONDITIONS , is amended to add Item **B.9.**:

a. If we choose to nonrenew this policy, we will mail or deliver to the first Named Insured shown in the Declarations written notice of the nonrenewal not less than 60 days before the expiration date.

b. If we do not give notice of our intent to nonrenew as prescribed in **a.** above, it is agreed that you may extend the period of this policy for a maximum additional sixty (60) days from its scheduled expiration date. Where not otherwise prohibited by law, the existing terms, conditions and rates will remain in effect during that extension period. It is further agreed that so long as it is not otherwise prohibited by law, this one-time sixty-day extension is the sole remedy and liquidated damages available to the insured as a result of our failure to give the notice as prescribed in **9. a.** above.

8. NOTICE OF KNOWLEDGE OF ACCIDENT OR LOSS

SECTION IV - BUSINESS AUTO CONDITIONS , Item **A.2.a.** is deleted and replaced with the following:

2. Duties in the Event of Accident, Claim Suit or Loss:

a. You must see to it that we are notified of an "accident", "claim", "suit" or "loss" which may result in a claim as soon as practicable after the "occurrence" has been reported to you, a partner, a member, an officer, or an employee designated to give notice to us. Notice should include:

(1) How, when and where the "accident" or "loss" occurred;

(2) The "insured's" name and address; and

(3) To the extent possible, the names and addresses of any injured persons and witnesses.

9. EMPLOYEES AS INSURED

The following is added to the **Section II - Covered Autos Liability Coverage,** Paragraph **A.1. Who Is An Insured** provision:

Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow in your business or your personal affairs.

10. EMPLOYEE HIRED AUTOS

A. Changes In Covered Autos Liability Coverage

The following is added to the **Who Is An Insured** Provision:

An "employee" of yours is an "insured" while operating an "auto" hired or rented under a contract or agreement in an "employee's" name, with your permission, while performing duties related to the conduct of your business.

B. Changes In General Conditions

Paragraph **5.b.** of the **Other Insurance** Condition in the Business Auto Coverage Form and Paragraph **5.f.** of the **Other Insurance - Primary And Excess Insurance Provisions** Condition in the Motor Carrier Coverage Form are replaced by the following:

For Hired Auto Physical Damage Coverage, the following are deemed to be covered "autos" you own:

1. Any covered "auto" you lease, hire, rent or borrow; and

2. Any covered "auto" hired or rented by your "employee" under a contract in an "employee's" name, with your permission, while performing duties related to the conduct of your business.

However, any "auto" that is leased, hired, rented or borrowed with a driver is not a covered "auto".

11. BODILY INJURY EXTENSION

SECTION V - DEFINITIONS , Paragraph **C.** is deleted and replaced by the following:

C. "Bodily injury" means bodily injury, sickness or disease sustained by a person, including mental anguish or death resulting from any of these, at any time. Mental anguish means any type of mental or emotional illness or disease.

12. HIRED AUTO PHYSICAL DAMAGE

SECTION III.A.4. - Coverage Extensions - Paragraph **c.** is added:

c. Hired Auto Physical Damage

If Comprehensive, Specified Causes of Loss or Collision coverage is provided under this policy, then Hired Auto Physical Damage is provided for that coverage part subject to the following:

(1) The most we will pay for any one "accident" or "loss" under this Hired Auto Physical Damage Coverage is the lesser of:

(a) The any one "Accident" or "Loss" amount of $100,000;

(b) The actual cash value; or

(c) Cost of repair.

Our obligation to pay for a loss in c.(1) above will be reduced by a deductible. The deductible will be equal to the largest deductible applicable to any owned "auto" for that coverage. The deductible will be waived for "loss" caused by fire or lightning.

(2) Subject to paragraph c.(1). above, we will provide coverage equal to the broadest physical damage coverage applicable to any covered "auto" shown in the declarations.

(3) When you are required by written contract to indemnify a lessor for actual financial loss because of loss of use of a hired "auto" resulting from a covered "accident" or "loss", we will cover that financial loss subject to the limit specified in paragraph c.(1).

13. ENHANCED SUPPLEMENTARY PAYMENTS

SECTION II.A.2.a. COVERAGE EXTENSIONS, Supplementary Payments **(2)** and **(4)** are replaced by the following:

(2) Up to $2,500 for the cost of bail bonds (including bonds for related traffic laws violations) required because of an "accident" we cover. We do not have to furnish these bonds.

(4) All reasonable expenses incurred by the "insured" at our request, including actual loss of earnings up to $350 a day because of time off from work.

14. FELLOW EMPLOYEE COVERAGE FOR DESIGNATED POSITIONS

The **Fellow Employee Exclusion contained in Section II.B.5**. does not apply to the following positions or job titles: foreman, supervisor, manager, officer, partner or other senior level "employee". Coverage is excess over all other collectible insurance.

15. PHYSICAL DAMAGE - TRANSPORTATION EXPENSES

SECTION III.A.4.a. Transportation Expenses is replaced by the following:

a. Transportation Expenses

We will pay up to $50 per day to a maximum of $1,500 for temporary transportation expense incurred by you because of the total theft of a covered "auto". We will pay only for those covered "autos" for which you carry either Comprehensive or Specified Cause of Loss Coverage. We will pay for temporary transportation expenses incurred during the period beginning 48 hours after the theft and ending, regardless of the policy's expirations, when the covered "auto" is returned to use or we pay for its "loss".

For autos provided with temporary transportation expense, the following physical damage coverage will apply:

(1) The most we will pay for any one "accident" or "loss" under the temporary transportation expense physical damage coverage is the lessor of:

(a) The any one "Accident" or "Loss" amount of $100,000;

(b) The actual cash value; or

(c) Cost of repair.

Our obligation to pay for a loss in a.(1) above will be reduced by a deductible. The deductible will be equal to the largest deductible applicable to any owned "auto" for that coverage. The deductible will be waived for "loss" caused by fire or lightning.

(2) Subject to paragraph a.(1). above, we will provide coverage equal to the broadest physical damage coverage applicable to any covered "auto" shown in the declarations.

(3) When you are required by written contract to indemnify a lessor for actual financial loss because of loss of use of a hired "auto" resulting from a covered "accident" or "loss", we will cover that financial loss subject to the limit specified in paragraph a.(1).

16. RENTAL REIMBURSEMENT COVERAGE

SECTION III.A.4. - Coverage Extensions - Paragraph **d.** is added.

d. If you carry Comprehensive, Specified Causes of Loss or Collision coverage for the damaged covered "auto" as provided under this policy, then Rental Reimbursement Coverage is provided for that coverage part subject to the following:

1. We will pay for rental reimbursement expenses incurred by you for the rental of an "auto" because of "loss" other than theft, to a covered "auto". Payment applies in addition to the otherwise applicable amount of each coverage you have on a covered "auto". No deductibles apply to this coverage.

2. We will only pay for those expenses incurred during the policy period beginning 24 hours after the "loss" and ending, regardless of the policy's expiration, with the lesser of the following number of days:

(a) The number of days reasonably required to repair or replace the covered "auto"; or,

(b) 30 days.

(c) Our payment is limited to the lesser of the following amounts:

(1) Necessary and actual expenses incurred; or

(2) $50 per day.

17. LOAN/LEASE GAP COVERAGE

Physical Damage Coverage is amended by the addition of the following:

In the event of a total "loss" to a covered "auto", we will pay your additional legal obligation for any difference between the actual cash value of the "auto" at the time of the loss and the "outstanding balance" of the loan/lease, not to exceed $2,500 for any one vehicle or $25,000 annually in aggregate.

For the purposes of this endorsement, "outstanding balance" means the amount you owe on the loan/lease at the time of loss less any amounts representing taxes, overdue payments, penalties, interest or charges resulting from overdue payments, additional mileage charges, excess wear and tear charges or lease termination fees, costs for extended warranties, credit Life Insurance; Health, Accident or Disability Insurance purchased with the loan or lease; and carry-over balances from previous loans or leases.

18. ACCIDENTAL AIR BAG DISCHARGE COVERAGE

SECTION III.B.3.a - Exclusions . This exclusion does not apply to the accidental discharge of an air bag.

19. GLASS REPAIR - WAIVER OF DEDUCTIBLE

SECTION III.D - Deductible is replaced with the following:

For each covered "auto", our obligation to pay for, repair, return or replace damaged or stolen property will be reduced by the applicable deductible shown in the Declarations. Any Comprehensive Coverage deductible shown in the Declarations does not apply to "loss" caused by fire or lightning. The deductible does not apply to glass damage if the glass is repaired rather than replaced.

PINNACOL
ASSURANCE

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(970) 243-3421

ENDORSEMENT: Blanket Waiver of Subrogation

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

SCHEDULE

To any person or organization when agreed to under a written contract or agreement, as defined above and with the insured, which is in effect and executed prior to any loss.

Effective Date:September 1, 2020 Expires on: September 1, 2021
Pinnacol Assurance has issued this endorsement September 1, 2020