



Purchasing Division

Invitation for Bid

IFB-4616-19-DH
The Riverfront at Dos Rios Business Park
Phase I

Responses Due:

April 2, 2019 prior to 3:30 pm

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

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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 construct Phase 1 of the Riverfront at Dos Rios Business Park. 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

- 1.2. **Mandatory Pre-Bid Meeting:** **Prospective bidders are required to attend a mandatory pre-bid meeting on March 14, 2019 at 10:00 am.** 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).
- 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. **Submission:** **Each bid shall be submitted in electronic format only, and only through the Rocky Mountain E-Purchasing website (<https://www.rockymountainbidssystem.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**)
- 1.5. **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.
- 1.6. **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.

- 1.7. **Exclusions:** No oral, telephonic, emailed, or facsimile bid will be considered
- 1.8. **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/> .
- 1.9. **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.
- 1.10. **Definitions and Terms:** See Article I, Section 3 of the General Contract Conditions in the *Standard Contract Documents for Capital Improvements Construction*.
- 1.11. **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 Engineer of all conflicts, errors, ambiguities or discrepancies in or among the *Contract Documents*

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.

1.12. 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 response time.

1.13. 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.

- 1.14. **Taxes:** The Owner is exempt from State retail and Federal tax. The bid price must be net, exclusive of taxes.
- 1.15. **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.
- 1.16. **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.
- 1.17. **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.
- 1.18. **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.
- 1.19. **Public Disclosure Record:** If the bidder has knowledge of their employee(s) or sub-contractors having an immediate family relationship with a City/County 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/County.

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/County, shall constitute a contract equally binding between the City/County 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 in not less than triplicate by the Owner (City/County) and Contractor. City/County 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/County are, and shall remain, City/County 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 Substantial Completion of the work or designated portions thereof is the date certified by the Owner when construction is sufficiently complete, 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 Contract is awarded, the apparent successful bidder has ten calendar days to enter into a contract in the form prescribed and to furnish the bonds with a legally responsible and approved surety. Failure to do so will result in 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 signed 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 **\$800.00** 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 its 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 substantially complete. In addition to the Work being substantially 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 Substantial or 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 completed. 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.
- 2.30. 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.
- 2.31. 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.
- 2.32. 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.
- 2.33. 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.

- 2.34. Conflict of Interest:** No public official and/or City/County employee shall have interest in any contract resulting from this IFB.
- 2.35. 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.
- 2.36. Employment Discrimination:** During the performance of any services per agreement with the Owner, the Contractor, by submitting a Bid, agrees to the following conditions:
- 2.36.1.** 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.
- 2.36.2.** 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.
- 2.36.3.** 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.
- 2.37. 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.
- 2.38. 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).
- 2.39. 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.
- 2.40. 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.
- 2.41. 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.

- 2.42. 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.
- 2.43. 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.
- 2.44. 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:

- a. Submission of the Bid on forms other than those supplied by the City;
- b. Alteration, interlineation, erasure, or partial detachment of any part of the forms which are supplied herein;
- c. 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;
- d. Failure to acknowledge receipt of any or all issued Addenda;
- e. 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;
- f. Failure to list the names of Subcontractors used in the Bid preparation as may be required in the Solicitation Documents;
- g. 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;
- h. Tying of the Bid with any other bid or contract; and

- i. Failure to calculate Bid prices as described herein.

2.45. Evaluation of Bids and Offers: The Owner reserves the right to:

- reject any and all Bids,
- waive any and all informalities,
- negotiate final terms with the Successful Bidder, 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.

2.46. 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.

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

2.48. 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.

2.49. 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.

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

2.51. 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.

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

2.53. 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.

2.54. 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.

2.55. 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.

2.56. 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).

2.56.1. "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 construct Phase 1 of the Riverfront at Dos Rios Business Park. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

***Site electrical plan set, specifications and bid schedule will be issued in Addendum No. 1. This work shall include, but may not be limited to approximately 5 street light poles and bases, vendor power 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.**

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 Set)

3.3. SPECIAL CONDITIONS & PROVISIONS:

3.3.1 Mandatory Pre-Bid Meeting: Prospective bidders are required to attend a mandatory pre-bid meeting on March 14, 2019 at 10:00 am. Meeting location shall be in the City Hall Auditorium, located at 250 North 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).

3.3.2 QUESTIONS REGARDING SOLICIATION PROCESS/SCOPE OF WORK:

Duane Hoff Jr., Senior Buyer
City of Grand Junction
(970) 244-1545
duaneh@gjcity.org

3.3.3 Project Manager: Brendan Hines, Project Manager, 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
333 W. Avenue, Building C
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 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.

3.3.8 Time of Completion: The scheduled time of Completion for the Project is 90 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.

- 3.3.9 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 Monday-Friday between the hours of 7:00 AM to 5:00 PM.
- 3.3.10 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.
- 3.3.11 Permits:** The following permits is required for the Project and will be obtained by the City at no cost to the Contractor.
None.
- The following permits are required for the Project and shall be obtained and paid for by the Contractor, with the costs included in the total bid price for the Project.
None.
- 3.3.12 Project Sign:** Project signs, if any, will be furnished and installed by the City.
- 3.3.13 Authorized Representatives of the City:** Those authorized to represent the City shall include Purchasing Agent, Engineers, and Inspectors employed by the City and may include an independent 3rd party testing firm.
- 3.3.14 Stockpiling Materials and Equipment:** N/A
- 3.3.15 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.
- 3.3.16 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.
- 3.3.17 Schedule of Submittals:** Contractor shall deliver these submittals at least two days prior to the pre-construction meeting:
- See Appendix A
- 3.3.18 Fugitive Petroleum or Other Contamination:** It is anticipated that soil contamination from fugitive petroleum or other contaminants will not be encountered with the Project.
- 3.3.19 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.

3.3.20 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.

3.3.21 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.

3.3.22 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 Engineering Manager.

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 Quality Control Testing: The Contractor, at their own discretion, may elect to forgo the soils Quality Control (QC) field testing (in-place soils density) for placement of Overlot, Embankment, and Trench backfill. Quality Assurance (QA) testing for these items will be performed by the City, and laboratory testing 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 its 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.

3.3.25 Work by Others: Xcel Energy and Charter will be providing and placing conduit and installing utilities in Joint Trench. The trench is to be excavated by the Contractor per plans and specifications. Along with said work the Contractor will also be responsible for providing and installing conduit in the trench for Century Link. Coordination with Xcel, Charter and Century Link will be required by the Contractor. The Contractor will be responsible for bedding, haunching and backfill of the trench. See Special Provisions 1 (SP – 1) for more information.

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

3.3.26 Uranium Mill Tailings: Radioactive mill tailings are not anticipated to be encountered on this Project but in accordance with deed restrictions and the history

of the site the Contractor shall adhere to the Uranium Mill Tailings Management Plan throughout all phases of 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 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-3 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-4 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 7' in width shall be saw cut longitudinally at w/2.

SP-5 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 are 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, biphex 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 prelubricated, 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 1/2" 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 3/4" 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 1/2" 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" SCHED. 80 PVC – Contractor Provide and Place
- Electrical Conduit (Extra)
 - 2" SCHED. 80 PVC – Contractor Provide and Place
- Broadband Infrastructure
 - 2" SCHED. 80 PVC – Contractor Provide and Place
- CATV (Charter)
 - 2" SCHED. 80 PVC – Charter Provide and Place
- Communications Cable (Century Link)
 - 2" SCHED. 80 PVC – Contractor Provide and Place
 - 4" SCHED. 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" SCHED. 80 PVC – Xcel Provide and Place
 - 6" SCHED. 80 PVC (Extra) – Xcel Provide and Place
- Single Phase Power (Xcel)
 - 2" SCHED. 80 PVC – Xcel Provide and Place
- Three Phase Power (Xcel)
 - 4" SCHED. 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" SCHED 80 PVC	LF
2" SCHED 80PVC	LF

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

3.5. Attachments:

- Appendix A: Project Submittal Form
- Appendix B: Geotechnical Report
- Appendix C: Construction Plans/Drawings/Specifications

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	March 5, 2019
Mandatory Pre-Bid Meeting	March 14, 2019
Inquiry deadline, no questions after this date	March 20, 2019
Addendum Posted	March 25, 2019
Submittal deadline for bids	April 2, 2019
City Council Approval	April 17, 2019
Notice of Award & Contract execution	April 18, 2019
Bonding & Insurance Cert due	April 25, 2019
Preconstruction meeting	April 29, 2019
Work begins no later than	May 1, 2019
Final Completion	90 Calendar Days from Notice to Proceed
Holidays:	May 27, 2019 July 4, 2019

4. Contractor's Bid Form

Bid Date: _____

Project: IFB-4616-19-DH "Riverfront at Dos Rios Business Park Phase 1"

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.

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: River Front at Dos Rios - Phase 1

Contractor: _____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	104.4	Cap top half of sewer in concrete per City Standard Detail GU-04	2.	EA	\$ _____	\$ _____
2	108.2	6" Irrigation Conduit (Schedule 80 PVC)	525.	LF	\$ _____	\$ _____
3	108.2	6" Water Pipe (C-900 PVC)	20.	LF	\$ _____	\$ _____
4	108.2	8" Water Pipe (C-900 PVC)	500.	LF	\$ _____	\$ _____
5	108.2	12" Water Pipe (C-900 PVC)		LF		
6	108.2	4" Sewer Service Pipe (SDR 35)	60.	LF	\$ _____	\$ _____
7	108.2	6" Sewer Service Pipe (SDR 35)	75.	LF	\$ _____	\$ _____
8	108.2	8" Gravity Sewer Pipe (SDR 35)	400.	LF	\$ _____	\$ _____
9	108.2	12" Storm Drain Pipe (RCP)	32.	LF	\$ _____	\$ _____
10	108.2	15" Storm Drain Pipe (RCP)		LF		
11	108.2	18" Storm Drain Pipe (RCP)	500.	LF	\$ _____	\$ _____
12	108.2	24" Storm Drain Pipe (RCP)	230.	LF	\$ _____	\$ _____
13	108.2	3' x 7' Reinforced Concrete Box Culvert - Cost to include connection to existing. See SP - 2.		LF		
14	108.2	24" Heavy Duty Flap Gate-HYDRO Gate or approved equal.		EA		
15	108.2	Import Trench Backfill	35.	CY	\$ _____	\$ _____
16	108.3	6" Gate Valve	2.	EA	\$ _____	\$ _____
17	108.3	8" Gate Valve	2.	EA	\$ _____	\$ _____
18	108.3	12" Gate Valve		EA		
19	108.3	6" x 6" Tee		EA		
20	108.3	8" x 6" Tee	2.	EA	\$ _____	\$ _____
21	108.3	8" x 8" Tee	1.	EA	\$ _____	\$ _____
22	108.3	12" x 12" Cross		EA		
23	108.3	8", 11.25° Elbow	2.	EA	\$ _____	\$ _____
24	108.3	12", 11.25° Elbow		EA		
25	108.3	8", 22.5° Elbow	3.	EA	\$ _____	\$ _____
26	108.3	12", 45° Elbow		EA		
27	108.3	6" End Cap/Plug		EA		
28	108.3	8" End Cap/Plug	2.	EA	\$ _____	\$ _____
29	108.3	12" End Cap/Plug		EA		
30	108.3	Fire Hydrant	2.	EA	\$ _____	\$ _____
31	108.3	12" x 8" Reducer		EA		
32	108.3	8" x 4" Sewer Service Tap	1.	EA	\$ _____	\$ _____
33	108.3	Sanitary Sewer Cleanout (2-way) to include appurtenances per City Standard Detail SS - 07.	1.	EA	\$ _____	\$ _____
34	108.4	1" Water Service Line (Copper)	50.	LF	\$ _____	\$ _____
35	108.4	1" Water Service Assembly	2.	EA	\$ _____	\$ _____

Bid Schedule: River Front at Dos Rios - Phase 1

Contractor: _____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
36	108.5	Sanitary Sewer Basic Manhole (48" I.D.)	5.	EA	\$ _____	\$ _____
37	108.5	Manhole Barrel Section (D>5')(48" I.D.)	12.	VLF	\$ _____	\$ _____
38	108.5	Storm Sewer Basic Manhole (48" I.D.)	3.	EA	\$ _____	\$ _____
39	108.5	Irrigation Basic Manhole (30" I.D.)		EA		
40	108.5	Storm Sewer Basic Manhole (60" I.D.)	2.	EA	\$ _____	\$ _____
41	108.5	Connect to Existing Manhole (8" Pipe)		EA		
42	108.7	Granular Stabilization Material (Type B)	40.	TONS	\$ _____	\$ _____
43	108.6	Single Storm Drain Inlet (Vertical Curb)	2.	EA	\$ _____	\$ _____
44	202	Remove Asphalt	1,700.	SY	\$ _____	\$ _____
45	202	Remove Concrete	15.	SY	\$ _____	\$ _____
46	203	Excavation and Embankment - See SP - 4.	1,925.	CY	\$ _____	\$ _____
47	207	Topsoil (6" Thick)	700.	SY	\$ _____	\$ _____
48						
49	208	Erosion Control (Complete in Place)	1.	Lump	\$ _____	\$ _____
50	208	Stabilized Construction Entrance	2.	EA	\$ _____	\$ _____
51	209	Dust Abatement	30.	DAYS	\$ _____	\$ _____
52						
53	304	Subgrade Stabilization - Aggregate Base Course (Class 3) (12" Thick)		SY		
54	304	Aggregate Base Course (Class 6) (13" Thick)	2,250.	SY	\$ _____	\$ _____
55	306	Reconditioning (12" Deep)	2,250.	SY	\$ _____	\$ _____
56	401	Hot Mix Asphalt (5" thick) (Grading SX 75, Binder Grade 64-22)	615.	TON	\$ _____	\$ _____
57	420	Geosynthetics - Mirafi RS580i or approved equal	200.	SY	\$ _____	\$ _____
58						
59						
60						
61	506	Riprap (d50=12" to include geogrid)		SY		
62	608	Concrete Curb (6" Wide, 14" High) to include 6" of Class 6 Aggregate Base Course.	10.	LF	\$ _____	\$ _____
63	608	Concrete Curb and Gutter (2' Wide) to include 6" of Class 6 Aggregate Base Course.	780.	LF	\$ _____	\$ _____

Bid Schedule: River Front at Dos Rios - Phase 1

Contractor: _____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
64	608	Concrete Curb and Spill Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.		LF		
65	608	Concrete Sidewalk (6" Thick) to include 6" of Class 6 Aggregate Base Course.	215.	SY	\$ _____	\$ _____
66	608	Concrete Pavement (Parking) (8" Thick) to include 6" of Class 6 Aggregate Base Course.		SY		
67	608	Concrete Pavement (Crosswalk) (8" Thick) to include 6" of Class 6 Aggregate Base Course.		SY		
68	608	Concrete Drainage Pan (6' Wide) to include 6" of Class 6 Aggregate Base Course.		LF		
69	608	Concrete Corner Fillet to include 6" of Class 6 Aggregate Base Course.		SY		
70	608	Concrete Curb Ramp to include 6" of Class 6 Aggregate Base Course.		SY		
71	608	Detectable Warning (Cast Iron, Wet Set)(2'x2' - 3 per Ramp)		EA		
72	613	Joint Trench with Broad Band (Site Electrical - street lt circuits-(2)) 2" Schedule 80 PVC. Refer to Utility Detail	2,230.	LF	\$ _____	\$ _____
73	613	Joint Trench with Site Electrical - street lt circuits (Broad Band-(3)) 2" Schedule 80 PVC. Refer to Utility Detail	3,345.	LF	\$ _____	\$ _____
74	613	Joint Trench with XCEL energy and Charter who provides and places their materials (Century Link) 4" Schedule	1,115.	LF	\$ _____	\$ _____
75	613	Joint Trench with XCEL energy and Charter who provides and places their materials (Century Link) 2" Schedule 80 PVC. Refer to Utility Detail and SP -5 for details.	1,115.	LF	\$ _____	\$ _____
76	613	Large Splice Box (Quasite) (3' - 2 5/8" x 2'-2") (Broad Band)	2.	ea	\$ _____	\$ _____
77	613	Splice Box (Provided by Others-Century Link)	2.	EA	\$ _____	\$ _____
78	620	Sanitary Facility	1.	EA	\$ _____	\$ _____
79	625	Construction Surveying	1.	Lump	\$ _____	\$ _____

Bid Schedule: River Front at Dos Rios - Phase 1

Contractor: _____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
80	626	Mobilization	1.	Lump	\$ _____	\$ _____
81	627	Preformed Thermoplastic Pavement		Lump		
82	627	Preformed Thermoplastic Pavement		EA		
83	627	Preformed Plastic Pavement Marking (8" White Solid)		LF		
84	627	Preformed Thermoplastic Pavement Marking (4" White Solid)		LF		
85	627	Preformed Plastic Pavement Marking (24" White Solid)		LF		
86	630	Traffic Control (Complete In Place)	1.	Lump	\$ _____	\$ _____
87	630	Traffic Control Plan	1.	Lump	\$ _____	\$ _____
88	712	Geomembrane (40 Mil) - See SP - 9.		SQ. FT.		
89						
90						
91	Electrical	Luminaire LED (Pedestrian) to include foundation.		EA		
92	Electrical	Luminaire LED (Street) to include foundation.	5.	EA	\$ _____	\$ _____
93	Electrical	Electrical Pull Box (Type I)(11" x 18" x 12")	7.	EA	\$ _____	\$ _____
94	Electrical	2 Plex Receptacle (Complete in Place) to include appurtenances.	1.	EA	\$ _____	\$ _____
95	Electrical	Wiring (Complete in Place)	1.	LUMP	\$ _____	\$ _____
MCR		Minor Contract Revisions	---	---	---	\$ 15,000.00

Bid Amount: \$ _____

Bid Amount: _____ dollars

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

<u>Name & address of Sub-Contractor</u>	<u>Description of work to be performed</u>	<u>% of Contract</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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 1

CONTRACTOR: _____

PROJECT MANAGER: Brendan Hines

Description	Date Received	Resubmittal Requested	Resubmittal Received	Date Accepted
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STREET CONSTRUCTION

Pavement mix design				
Base course gradation, Proctor curve				
Sub-base course gradation, Proctor curve				
Concrete mix design, Class D				
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
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SEWER CONSTRUCTION

Pipe				
Connectors				
Bedding gradation				
Backfill gradation, Proctor curve, plasticity index (PI)				
48" 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
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EROSION CONTROL / STORMWATER MANAGEMENT

5-2-1 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				
Geotextile (Pond Liner) (40 mil)				
Batten Bar				
Construction Schedule				
Thermoplastic				
Large Splice Box (Quasite)				
Irrigation Pull Box (Large)				
Detectable Warning				
Geosynthetics – Mirafi or equivalent				
Topsoil				
Import Fill				
Reinforcing Steel (epoxy coated)				
Steel Hand Rail				
6' Black Vinyl Coated Chain Link				
EPDM (Pour In Place)				

Appendix B

Geotechnical Report



Huddleston-Berry
Engineering & Testing, LLC

640 White Avenue
Grand Junction, Colorado 81501
Phone: 970-255-8005
Fax: 970-255-6818
Info@huddlestonberry.com

January 23, 2019
Project#00208-0093

City of Grand Junction
Department of Public Works
333 West Avenue, Building C
Grand Junction, Colorado 81501

Attention: Mr. Eric Mocko

Subject: Dos Rios Way
Grand Junction, Colorado

Dear Mr. Mocko,

At your request, Huddleston-Berry Engineering and Testing, LLC (HBET) prepared this report regarding Dos Rios Way in Grand Junction, Colorado. The site location is shown on Figure 1 – Site Location Map. HBET understands that Dos Rios Way is proposed to be extended. The purpose of our work was to evaluate the subsurface conditions at the site with regard to developing new pavement recommendations for the roadway.

Subsurface Investigation

In order to evaluate the subsurface conditions at the site, HBET excavated three test pits at the site. The test pit locations are shown on Figure 2 – Site Plan. The test pits were excavated to depths of between 6.0 and 8.0 feet below the existing ground surface. Typed test pit logs are included in Appendix A.

As indicated on the logs, the subsurface conditions at the site were variable. Test Pit TP-1, conducted in the northern portion of the project area, encountered 1.0 foot of topsoil above brown, moist, stiff lean clay soils to a depth of 4.5 feet. The clay was underlain by brown, moist, loose silty sand soils to the bottom of the excavation. Groundwater was not encountered in TP-1 at the time of the investigation.

Test Pit TP-2, conducted in the south-central portion of the project area, encountered 1.0 foot of topsoil above brown, moist, loose silty sand to a depth of 4.5 feet. The sand was underlain by brown, moist, medium dense to dense gravel, cobbles, and boulders in a silty sand matrix to the bottom of the excavation. Groundwater was not encountered in TP-2 at the time of the investigation.

Test Pit TP-3, conducted in the south-western portion of the project area, encountered 1.0 foot of topsoil above municipal solid waste materials to the bottom of the excavation. Groundwater was not encountered in TP-3 at the time of the investigation.

Laboratory Testing

Laboratory testing was conducted on samples of the native soils collected from the test pits. The testing included grain-size analysis, Atterberg limits determination, natural moisture content determination, water soluble sulfates content determination, California Bearing Ratio (CBR), and maximum dry density/optimum moisture (Proctor) determination. The laboratory testing results are included in Appendix B.

The laboratory testing results indicate that the native clay soils are moderately plastic. In addition, the CBR results indicate that the native clay soils are slightly expansive when compacted and introduced to excess moisture with up to approximately 1.6% expansion measured in the laboratory. Water soluble sulfates were detected in the clay soils in a concentration of 0.2%.

The native sand soils were indicated to be non-plastic. Based upon our experience with similar soils in the vicinity of the subject site, the native sand soils are anticipated to be slightly collapsible.

Pavement Recommendations

As discussed previously, the pavement subgrade materials include lean clay, silty sand, and trash. However, the trash will need to be removed and replaced with structural fill. Therefore, the native clay soils will be critical for the pavement section design. The CBR of the native clayey sand 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 pavement design.

Based upon information provided to HBET, Dos Rios Way will eventually connect to other roads as part of development of the area into a commercial/industrial business park. As a result, HBET assumed an ESAL value of 500,000 for a light industrial roadway. Based upon the subgrade conditions and anticipated traffic loading, flexible and rigid pavement section alternatives were developed in accordance with AASHTO design methodologies. The following minimum pavement section alternatives are recommended:

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

In order to reduce the thickness of base course and/or subbase course, geotextile reinforcement could be used in the pavement section. The following pavement section alternatives are recommended for geotextile reinforcement consisting of Mirafi RS580i:

ALTERNATIVE	PAVEMENT SECTION (Inches)				
	Hot-Mix Asphalt Pavement	CDOT Class 6 Base Course	CDOT Class 3 Subbase Course	Mirafi RS580i Geotextile	TOTAL
A	4.0	8.0		Below Base	12.0
B	5.0	6.0		Below Base	11.0
C	4.0	6.0	6.0	Below Base	16.0

Prior to pavement placement, areas to be paved should be stripped of topsoil. In addition, municipal solid waste materials should be completely removed from below paved areas and replaced with CDOT Class 1 Structural fill or alternative approved by the Engineer.

Prior to placement of structural fill or pavement section materials, it is recommended that the subgrade soils be scarified to a depth of 12-inches; moisture conditioned, and recompact to a minimum of 95% of the standard Proctor maximum dry density, within $\pm 2\%$ of optimum moisture content as determined by AASHTO T-99. 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 $\pm 2\%$ of the optimum moisture content as determined in accordance with ASTM D698 and D1557, respectively. The finished subgrade elevation should be proofrolled to identify any soft or weak materials.

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, the base course should be proofrolled to confirm 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. 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.

General Notes

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.

We are 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

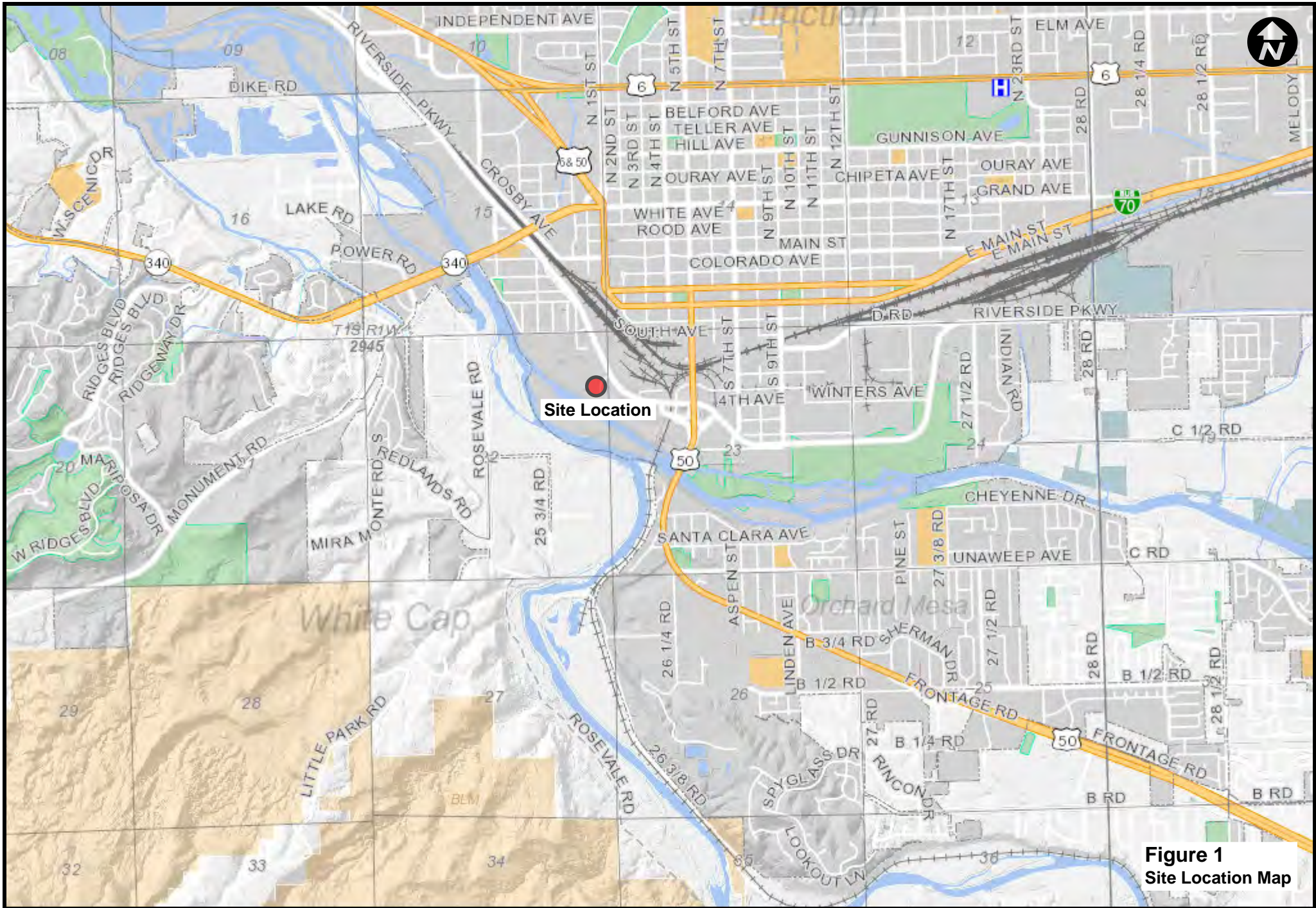
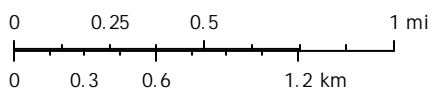


Figure 1
Site Location Map

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 Records office or the courts. In addition, the representations of location in this GIS cannot be substituted 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.



Print Date: January 15, 2019



Mesa County, Colorado

GIS/IT Department
gis.mesacounty.us

City of Grand Junction

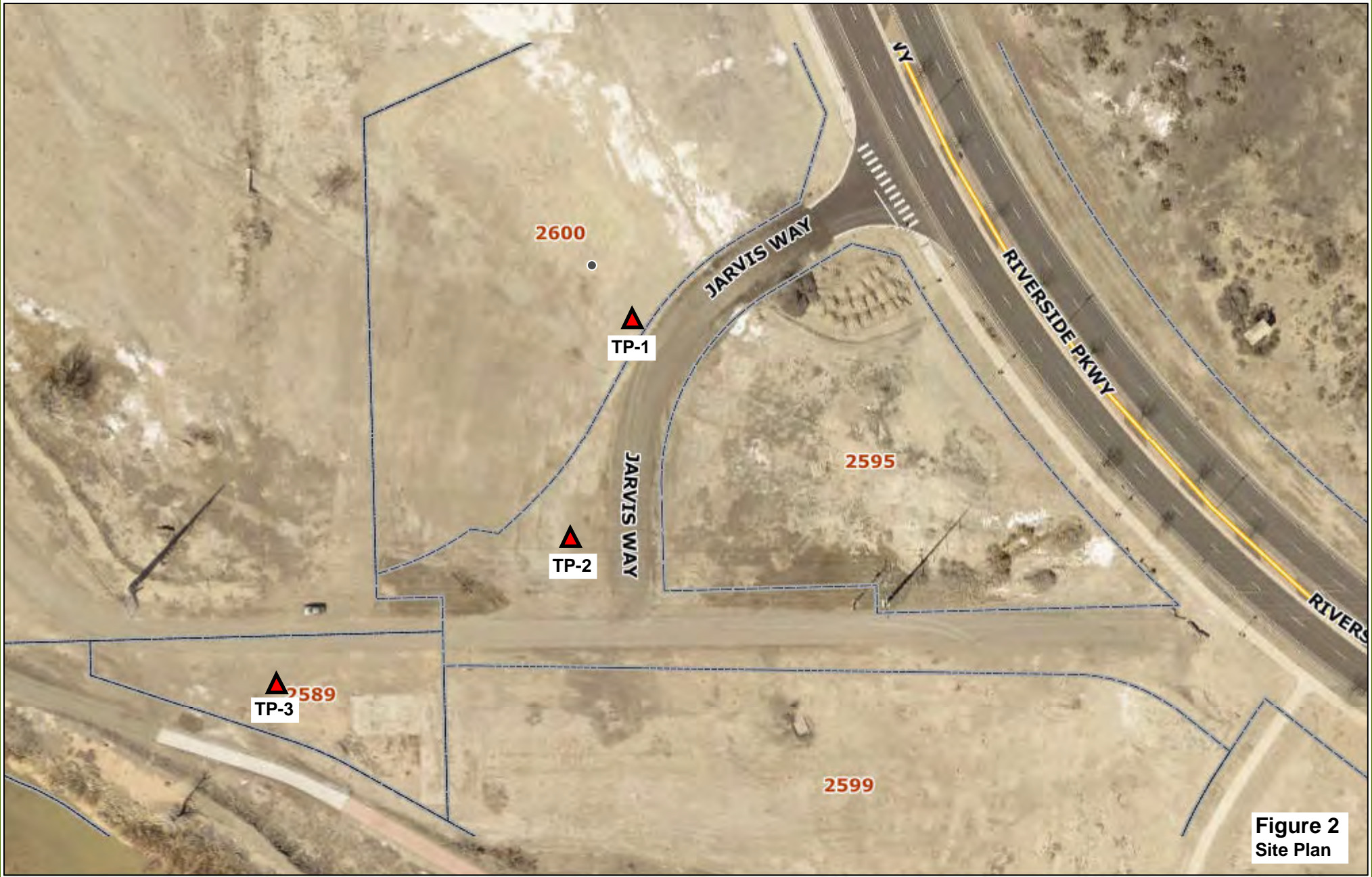
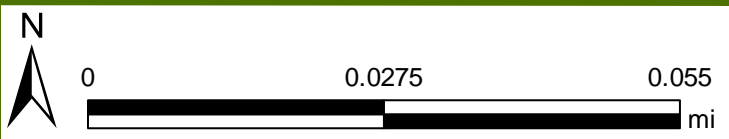


Figure 2
Site Plan



Printed: 1/15/2019

1 inch = 94 feet

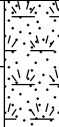



APPENDIX A
Typed Test Pit Logs



Huddlestone-Berry Engineering & Testing, LLC
 640 White Avenue, Unit B
 Grand Junction, CO 81501
 970-255-8005
 970-255-6818

TEST PIT NUMBER TP-1

CLIENT City of Grand Junction **PROJECT NAME** Dos Rios Way
PROJECT NUMBER 00208-0093 **PROJECT LOCATION** Grand Junction, CO
DATE STARTED 12/19/19 **COMPLETED** 12/19/19 **GROUND ELEVATION** _____ **TEST PIT SIZE** _____
EXCAVATION CONTRACTOR Hi-River **GROUND WATER LEVELS:**
EXCAVATION METHOD Mini-Excavator **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			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		Lean CLAY with Organics (TOPSOIL)										
2.5		Lean CLAY (CL), brown, moist, stiff										
		***Lab Classified GB1	 GB 1					19	42	21	21	94
5.0		Silty SAND (SM), brown, moist, loose										
		***Lab Classified GB2	 GB 2					12	NP	NP	NP	24
7.5		Bottom of test pit at 8.0 feet.										

GEOTECH BH COLUMNS 00208-0093 DOS RIOS WAY.GPJ GINT US LAB.GDT 1/23/19



Huddlestone-Berry Engineering & Testing, LLC
 640 White Avenue, Unit B
 Grand Junction, CO 81501
 970-255-8005
 970-255-6818

TEST PIT NUMBER TP-2

CLIENT City of Grand Junction **PROJECT NAME** Dos Rios Way

PROJECT NUMBER 00208-0093 **PROJECT LOCATION** Grand Junction, CO

DATE STARTED 12/19/19 **COMPLETED** 12/19/19 **GROUND ELEVATION** _____ **TEST PIT SIZE** _____

EXCAVATION CONTRACTOR Hi-River **GROUND WATER LEVELS:**

EXCAVATION METHOD Mini-Excavator **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			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		Lean CLAY with Organics (TOPSOIL)										
2.5		Silty SAND (SM), brown, moist, loose										
5.0		Gravel, Cobbles, and Boulders in a Silty SAND Matix, brown, moist, medium dense to dense ***Lab Classified GB1	GB 1					14	NP	NP	NP	35
7.5		Bottom of test pit at 8.0 feet.										

GEOTECH BH COLUMNS 00208-0093 DOS RIOS WAY.GPJ GINT US LAB.GDT 1/23/19



Huddlestone-Berry Engineering & Testing, LLC
 640 White Avenue, Unit B
 Grand Junction, CO 81501
 970-255-8005
 970-255-6818

TEST PIT NUMBER TP-3

CLIENT City of Grand Junction **PROJECT NAME** Dos Rios Way

PROJECT NUMBER 00208-0093 **PROJECT LOCATION** Grand Junction, CO

DATE STARTED 12/19/19 **COMPLETED** 12/19/19 **GROUND ELEVATION** _____ **TEST PIT SIZE** _____

EXCAVATION CONTRACTOR Hi-River **GROUND WATER LEVELS:**

EXCAVATION METHOD Mini-Excavator **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			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		Lean CLAY with Organics (TOPSOIL)										
2.5		Municipal Solid Waste										
5.0		Bottom of test pit at 6.0 feet.										

GEOTECH BH COLUMNS 00208-0093 DOS RIOS WAY.GPJ GINT US LAB.GDT 1/23/19

APPENDIX B
Laboratory Testing Results



Huddlestone-Berry Engineering & Testing, LLC
 640 White Avenue, Unit B
 Grand Junction, CO 81501
 970-255-8005
 970-255-6818

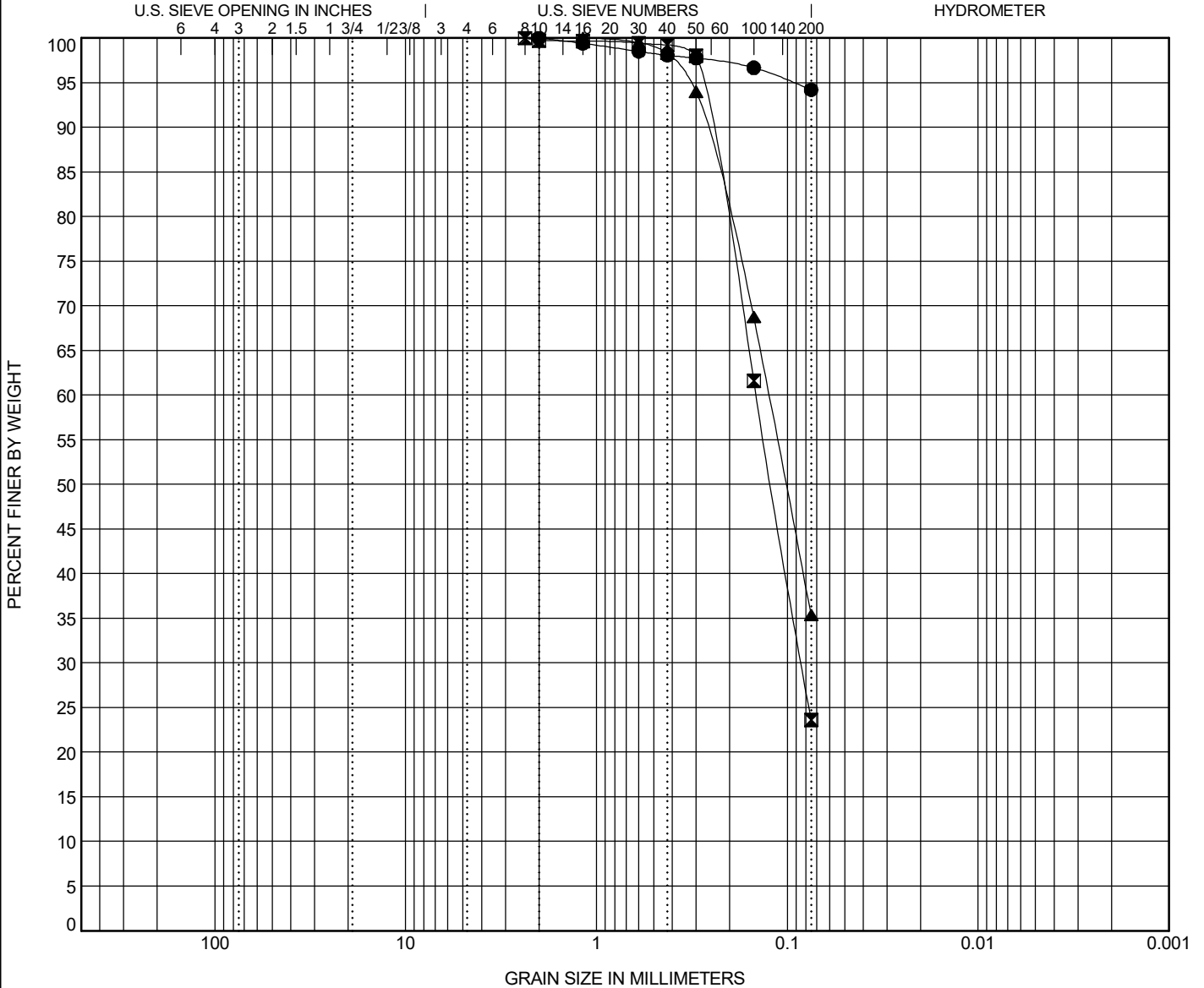
GRAIN SIZE DISTRIBUTION

CLIENT City of Grand Junction

PROJECT NAME Dos Rios Way

PROJECT NUMBER 00208-0093

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, GB-1 12/2019	LEAN CLAY(CL)	42	21	21		
☒ TP-1, GB-2 12/2019	SILTY SAND(SM)	NP	NP	NP		
▲ TP-2, GB-1 12/2019	SILTY SAND(SM)	NP	NP	NP		

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● TP-1, GB-1 12/2019	2				0.0	5.8	94.2	
☒ TP-1, GB-2 12/2019	2.36	0.146	0.084		0.0	76.4	23.6	
▲ TP-2, GB-1 12/2019	1.18	0.125			0.0	64.6	35.4	

GRAIN SIZE 00208-0093 DOS RIOS WAY.GPJ GINT US LAB.GDT 1/15/19



Huddlestone-Berry Engineering & Testing, LLC
640 White Avenue, Unit B
Grand Junction, CO 81501
970-255-8005
970-255-6818

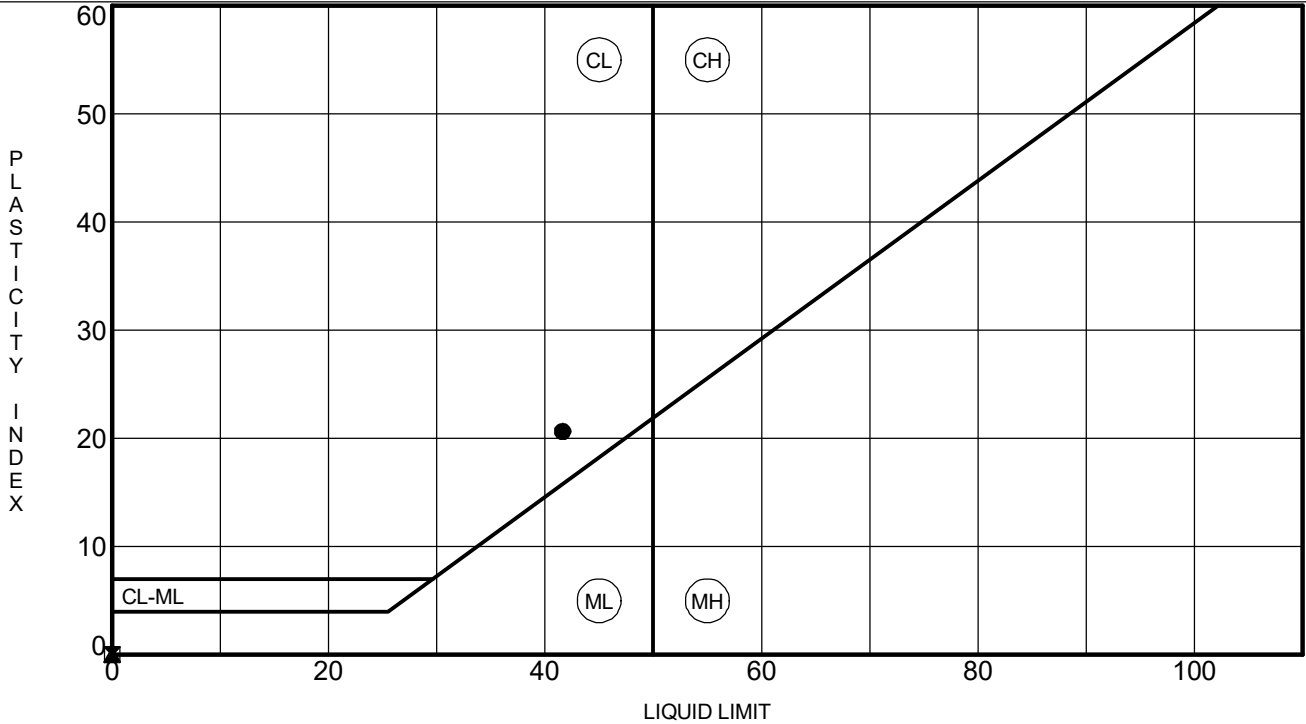
ATTERBERG LIMITS' RESULTS

CLIENT City of Grand junction

PROJECT NAME Dos Rios Way

PROJECT NUMBER 00208-0093

PROJECT LOCATION Grand Junction, CO



Specimen Identification	LL	PL	PI	#200	Classification
● TP-1, GB-1 12/2019	42	21	21	94	LEAN CLAY(CL)
▣ TP-1, GB-2 12/2019	NP	NP	NP	24	SILTY SAND(SM)
▲ TP-2, GB-1 12/2019	NP	NP	NP	35	SILTY SAND(SM)



Huddlestone-Berry Engineering & Testing, LLC
 640 White Avenue, Unit B
 Grand Junction, CO 81501
 970-255-8005
 970-255-6818

MOISTURE-DENSITY RELATIONSHIP

CLIENT City of Grand Junction

PROJECT NAME Dos Rios Way

PROJECT NUMBER 00208-0093

PROJECT LOCATION Grand Junction, CO

Sample Date: 12/19/2019
 Sample No.: 18-0939
 Source of Material: TP-1
 Description of Material: LEAN CLAY(CL)
 Test Method: ASTM D698A

TEST RESULTS

Maximum Dry Density 102.5 PCF
 Optimum Water Content 19.5 %

GRADATION RESULTS (% PASSING)

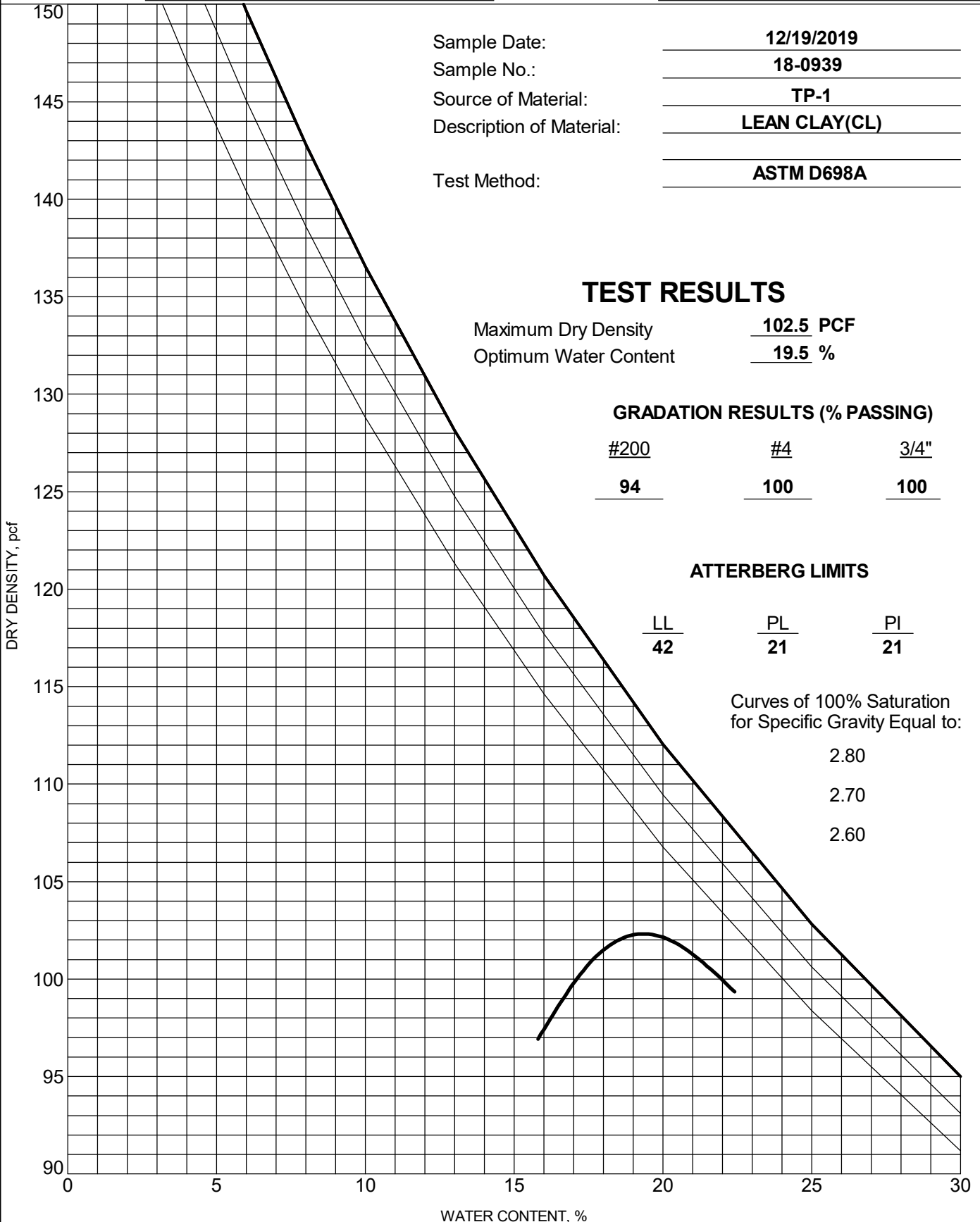
#200	#4	3/4"
<u>94</u>	<u>100</u>	<u>100</u>

ATTERBERG LIMITS

LL	PL	PI
<u>42</u>	<u>21</u>	<u>21</u>

Curves of 100% Saturation
 for Specific Gravity Equal to:

2.80
 2.70
 2.60





Project No.: 00208-0093
Project Name: Dos Rios Way
Client Name: City of Grand Junction
Sample Number: 18-0939 **Location:** TP1, GB1

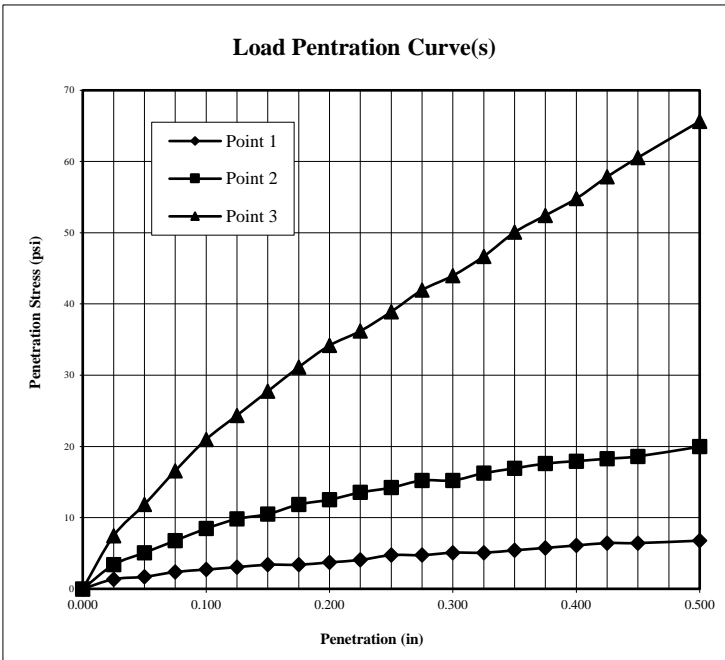
Authorized By: Client **Date:** 12/19/18
Sampled By: SD **Date:** 12/19/18
Submitted By: SD **Date:** 01/15/19
Reviewed By: MAB **Date:** 01/23/19

Compaction Method ASTM D698, Method A

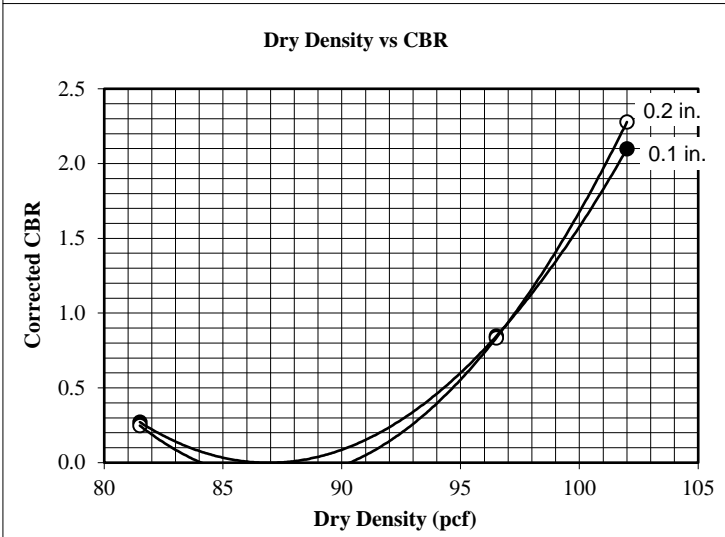
Maximum Dry Density (pcf): 102.5
Opt. Moisture Content (%): 19.5
Sample Condition: Soaked
Remarks:

Blows per Compacted Lift:		15	25	56
Surcharge Weight (lbs):		10.0	10.0	10.0
Dry Density Before Soak (pcf):		81.5	96.5	102.0
Dry Density After Soak (pcf):		81.2	95.0	100.4
Moisture Content (%)	Bottom Pre-Test	19.4	19.4	19.6
	Top Pre-Test	19.8	19.7	19.6
	Top 1" After Test	38.7	32.6	29.0
	Average After Soak:	33.3	32.4	23.9
Percent Swell After Soak:		0.4	1.6	1.6

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):			81.5			96.5			102.0		
Dry Density After Soak (pcf):			81.2			95.0			100.4		
Moisture Content (%)	Bottom Pre-Test		19.4		19.4		19.6				
	Top Pre-Test		19.8		19.7		19.6				
	Top 1" After Test		38.7		32.6		29.0				
	Average After Soak:		33.3		32.4		23.9				
Percent Swell After Soak:			0.4			1.6			1.6		



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	4	1	0.025	10	3	0.025	22	7
0.050	5	2	0.050	15	5	0.050	35	12
0.075	7	2	0.075	20	7	0.075	49	17
0.100	8	3	0.100	25	8	0.100	62	21
0.125	9	3	0.125	29	10	0.125	72	24
0.150	10	3	0.150	31	10	0.150	82	28
0.175	10	3	0.175	35	12	0.175	92	31
0.200	11	4	0.200	37	13	0.200	101	34
0.225	12	4	0.225	40	14	0.225	107	36
0.250	14	5	0.250	42	14	0.250	115	39
0.275	14	5	0.275	45	15	0.275	124	42
0.300	15	5	0.300	45	15	0.300	130	44
0.325	15	5	0.325	48	16	0.325	138	47
0.350	16	5	0.350	50	17	0.350	148	50
0.375	17	6	0.375	52	18	0.375	155	52
0.400	18	6	0.400	53	18	0.400	162	55
0.425	19	6	0.425	54	18	0.425	171	58
0.450	19	6	0.450	55	19	0.450	179	61
0.500	20	7	0.500	59	20	0.500	194	66



Corrected CBR @ 0.1"		
0.3	0.8	2.1
Corrected CBR @ 0.2"		
0.2	0.8	2.3

Penetration Distance Correction (in)		
0.000	0.000	0.000

Figure: _____

Appendix C

Construction Plans/Drawings/Specifications

THE RIVERFRONT AT DOS RIOS PHASE 1 IMPROVEMENTS - FINAL DESIGN SET

OCTOBER 4, 2018

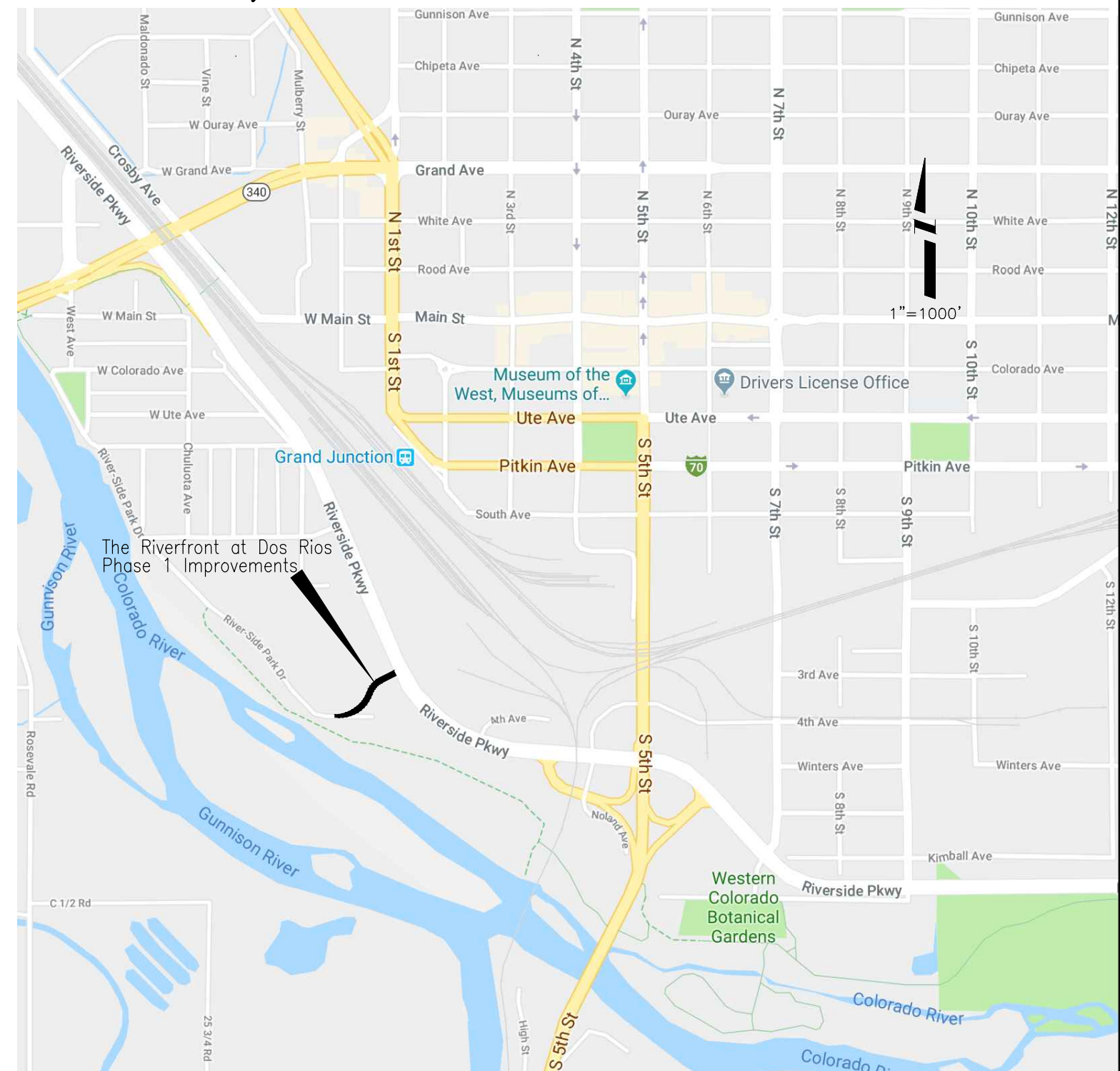
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- 1 Cover Sheet
- 2 Control Plan
- 4 Removal Plan
- 4 Typical Cross Section
- 5 Composite Utility Plan
- 6-7 Sanitary Sewer Plan and Profile
- 8-9 Water Line Plan and Profile
- 10-11 Storm Drain Plan and Profile
- 12 Road Plan and Profile
- 13-14 Road Cross Sections
- 15-17 Tenth Foot Contour Plan
- 18 Staking Plan Key Map
- 19-24 Staking Plan
- 25 Signing and Striping Plan
- 26-27 Storm Water Management Plan



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.



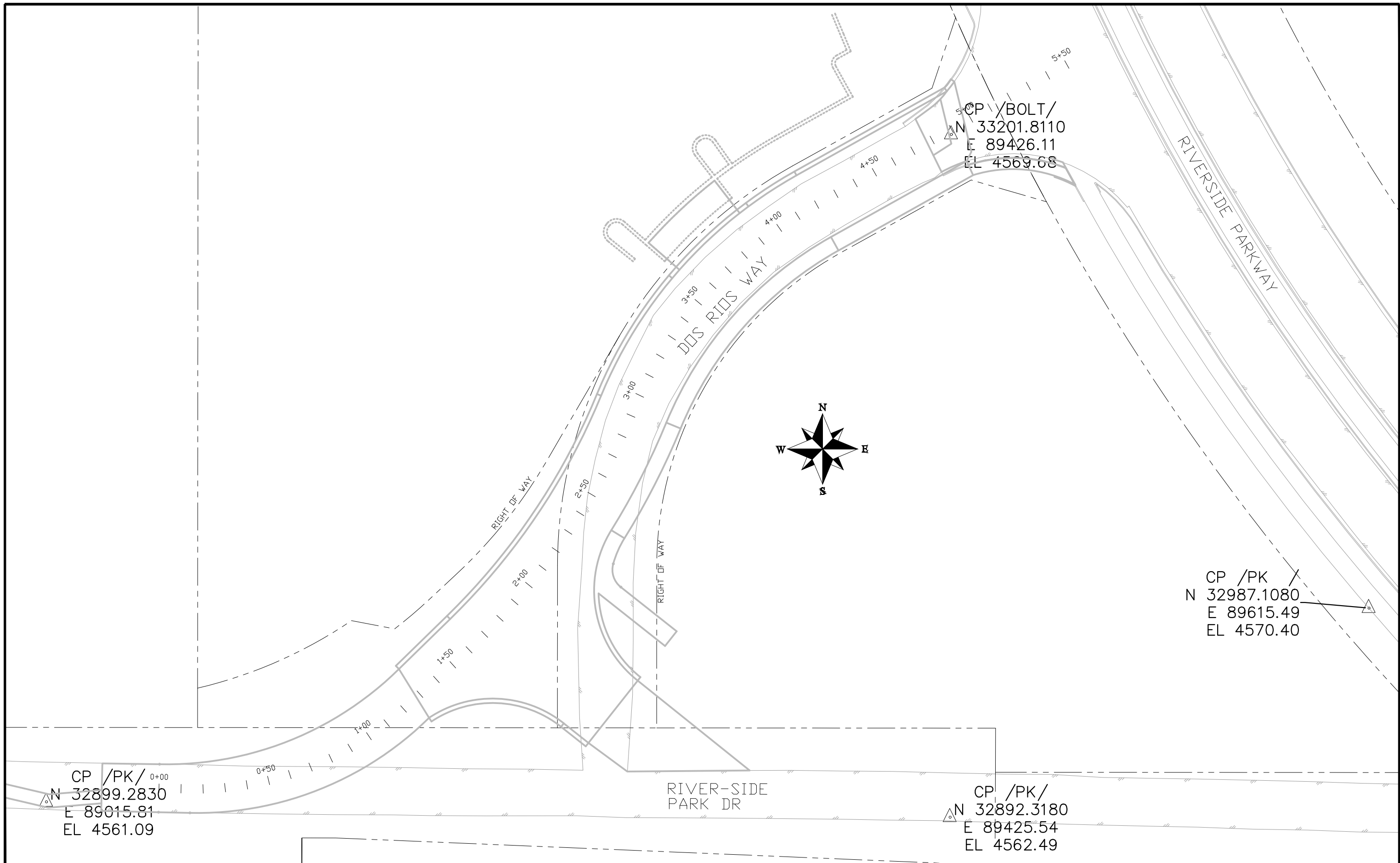
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REVISION			TCP	2018	0 NA VERTICAL NA
REVISION			TCP	2018	



PUBLIC WORKS
ENGINEERING DIVISION

COVER SHEET

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△		
△		
△		
△		

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DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

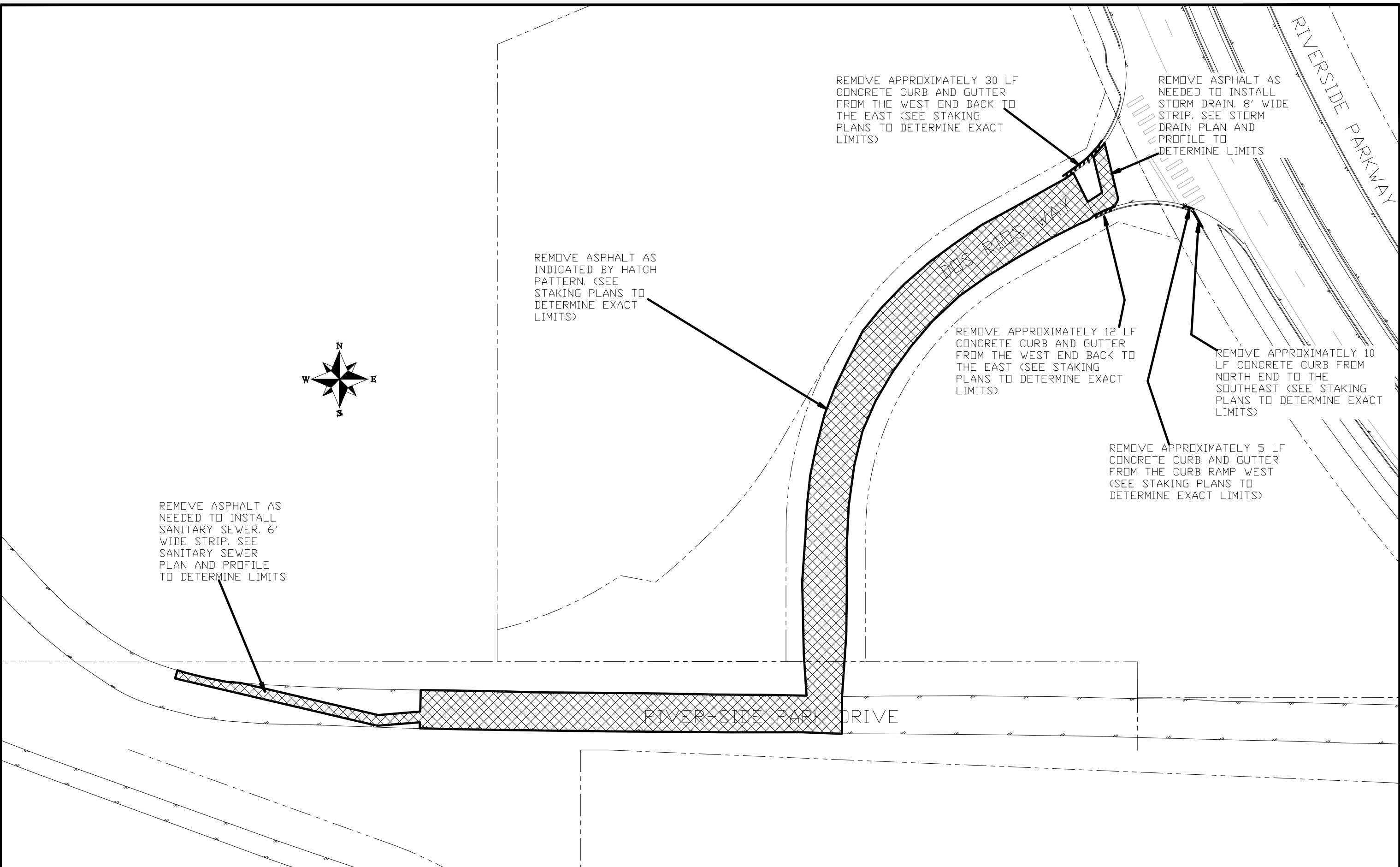
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PLAN & PROFILE	
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0 NA NA	VERTICAL



**PUBLIC WORKS
ENGINEERING DIVISION**

**THE RIVERFRONT AT DOS RIOS
CONTROL PLAN**

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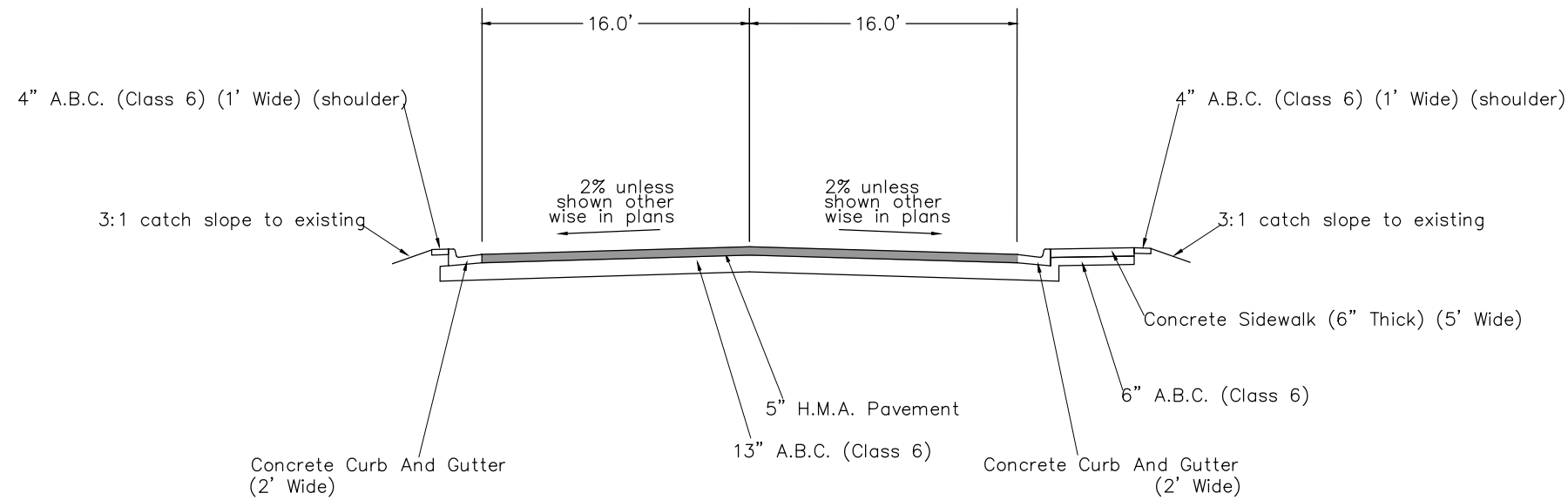
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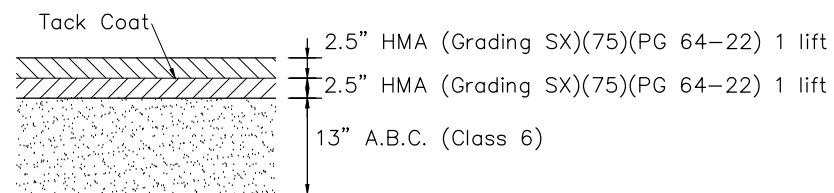


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THE RIVERFRONT AT DOS RIOS
REMOVAL PLAN



DOS RIOS WAY



ROADWAY ASPHALT PAVEMENT DETAIL

Note:

- Extend Full Pavement Base Section 6" Beyond Back Of Curbs (Typical)

TYPICAL SECTION NOTES

P.C.C.P. ~ Portland Cement Concrete Pavement
 H.M.A. ~ Hot Mix Asphalt
 A.B.C. ~ Aggregate Base Course

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
△			JCS	2018
△			JCS	2018
△			TCP	2018
△			TCP	2018

SCALES:	
PLAN & PROFILE	0 5 10 20
VERTICAL	0 NA NA



PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
Typical Cross Section

N:\Landproj\2018 Riverfront at Dos Rios (Jarvis Property)\dwg\00 design drawings\Composite Utility Plan.dwg, Layout1, 10/4/2018 4:52:11 PM

UTILITY OWNERS:

ELECTRIC & GAS
 XCEL ENERGY
 2538 BLICHMAN AVE
 GRAND JUNCTION, CO 81505
 TILLMAN McSHOOLER
 (970)244-2693

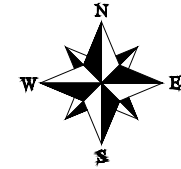
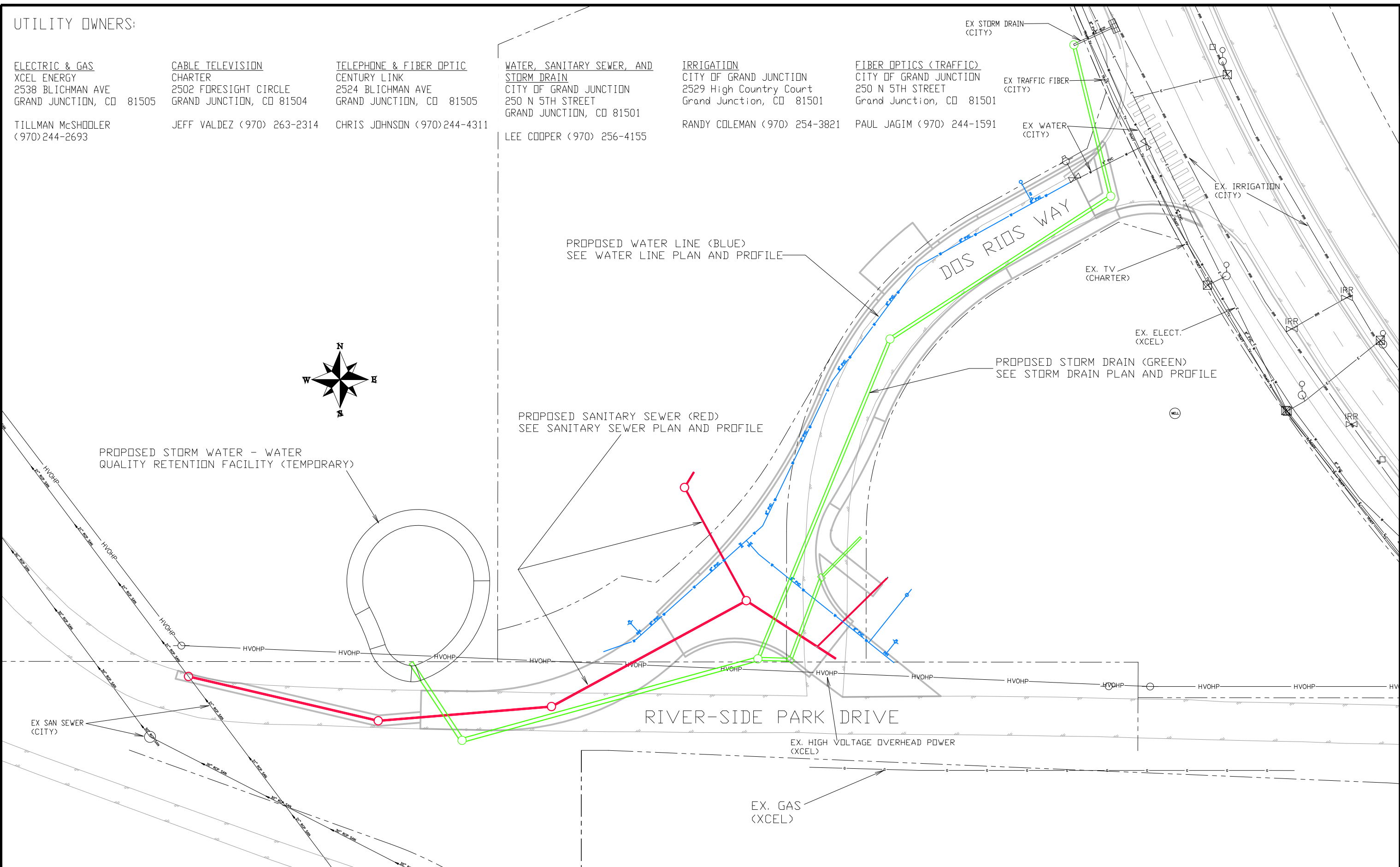
CABLE TELEVISION
 CHARTER
 2502 FORESIGHT CIRCLE
 GRAND JUNCTION, CO 81504
 JEFF VALDEZ (970) 263-2314

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
 PAUL JAGIM (970) 244-1591

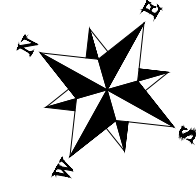


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REVISION			JCS	2018	0 12.5 HORIZONTAL 25 50
REVISION			TCP	2018	NA NA VERTICAL NA
REVISION			TCP	2018	



**PUBLIC WORKS
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**THE RIVERFRONT AT DOS RIOS
 COMPOSITE UTILITY PLAN**



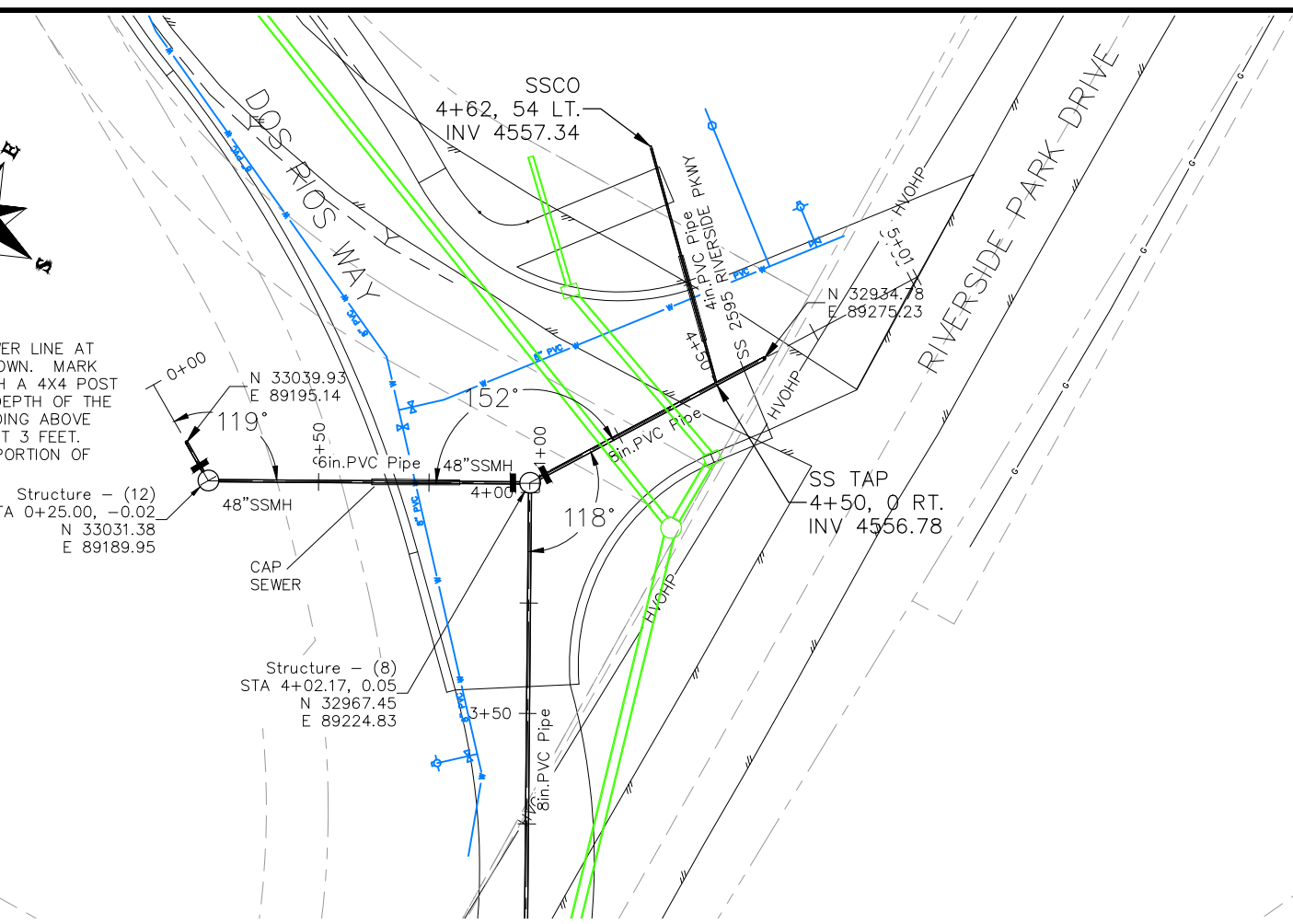
CAP END OF SEWER LINE AT LOCATION AS SHOWN. MARK END OF LINE WITH A 4X4 POST BURIED TO THE DEPTH OF THE PIPE AND EXTENDING ABOVE GROUND AT LEAST 3 FEET. PAINT EXPOSED PORTION OF 4X4 GREEN.

Structure - (12)
STA 0+25.00, -0.02
N 33031.38
E 89189.95

Structure - (8)
STA 4+02.17, 0.05
N 32967.45
E 89224.83

SSCO
4+62, 54 LT.
INV 4557.34

SS TAP
4+50, 0 RT.
INV 4556.78



NOTES:

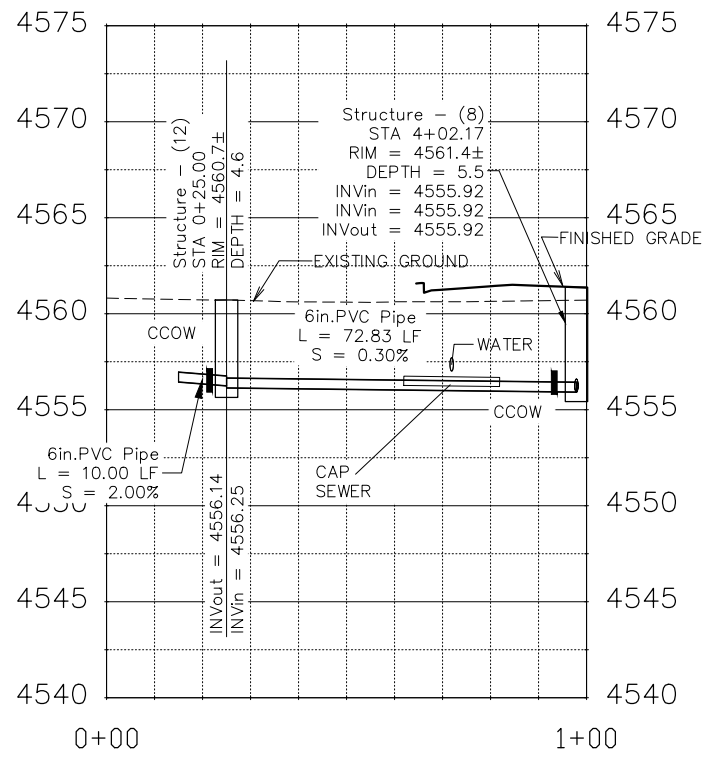
ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE SIZED AS NOTED INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

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 6" SDR-35 PVC

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)



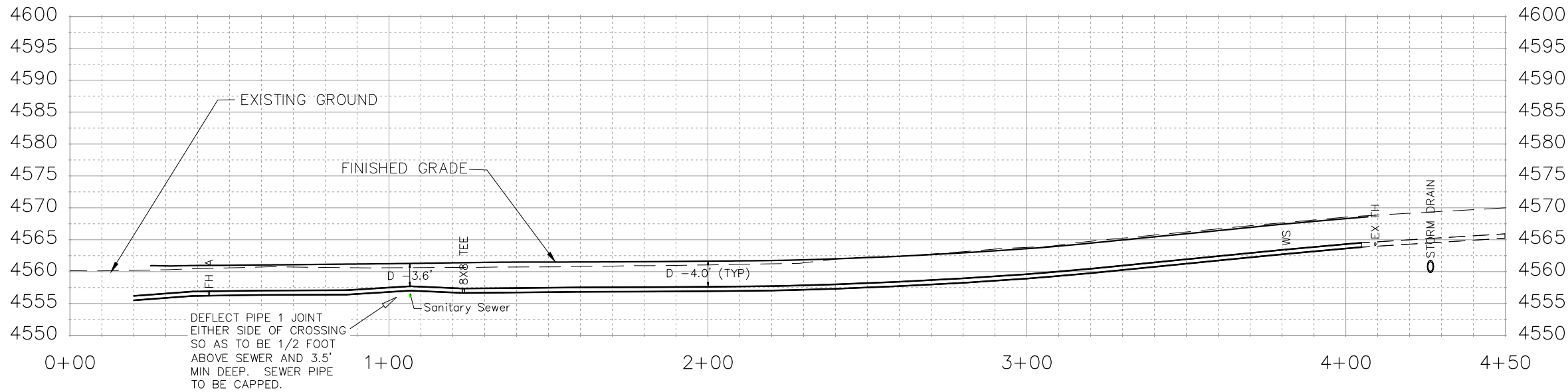
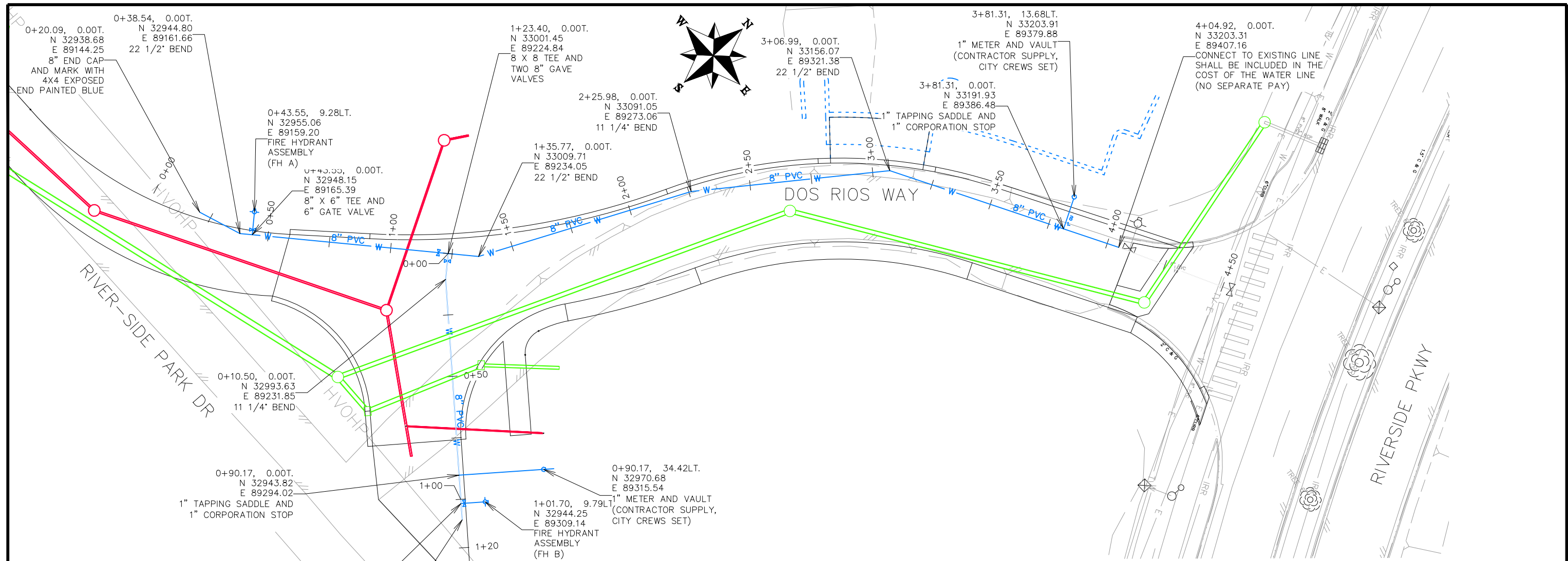
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REVISION			JCS	2018
REVISION			TCP	2018
REVISION			TCP	2018

SCALES:
PLAN & PROFILE
0 10 20 40 HORIZONTAL
0 2.5 10 VERTICAL



PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
SANITARY SEWER PLAN AND PROFILE



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)

REVISION	DESCRIPTION	DATE
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REVISION Δ		

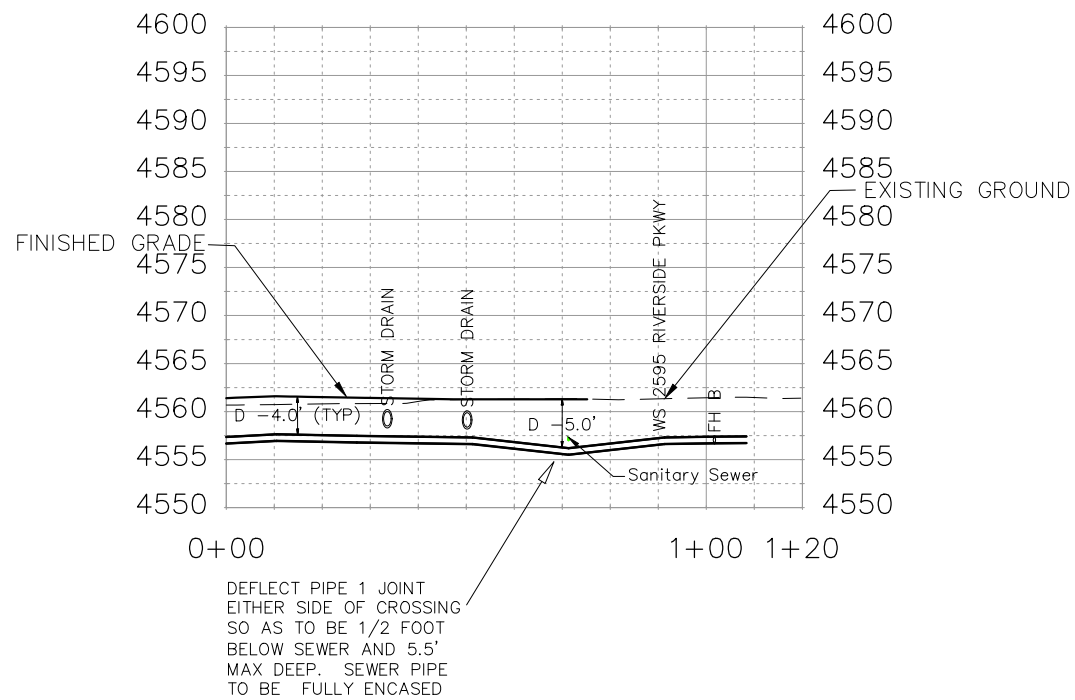
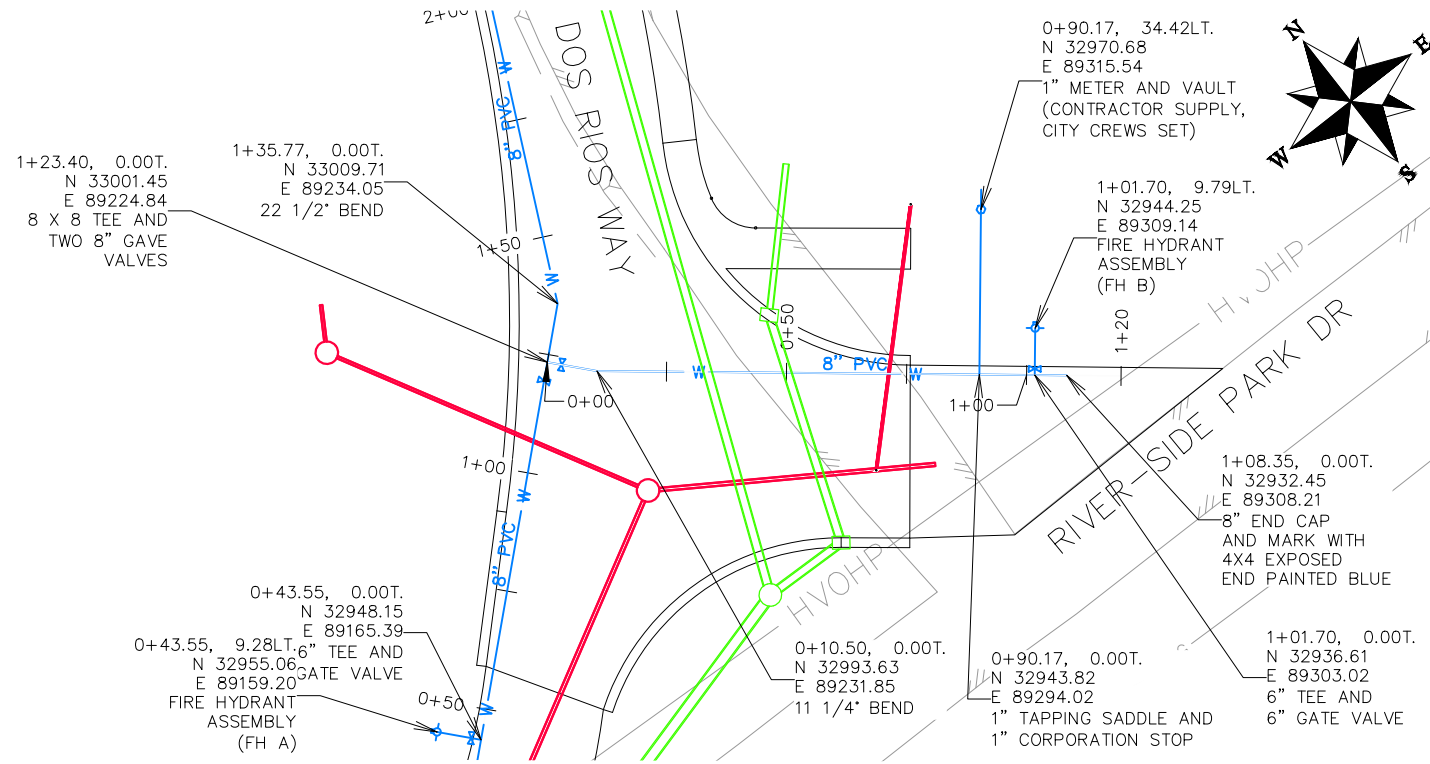
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APPROVED BY	TCP	DATE	2018

SCALES:	
0	40
HORIZONTAL	
0	10
VERTICAL	



PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATERLINE PLAN AND PROFILE



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)

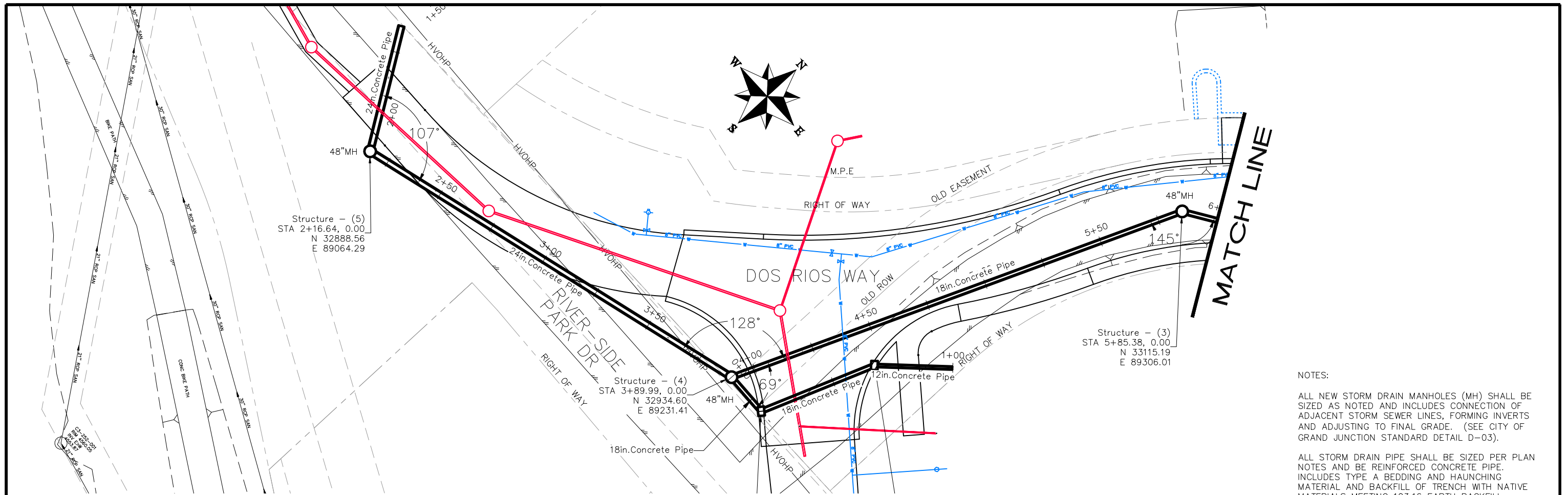
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SCALES:
PLAN & PROFILE
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0 2.5 10 VERTICAL

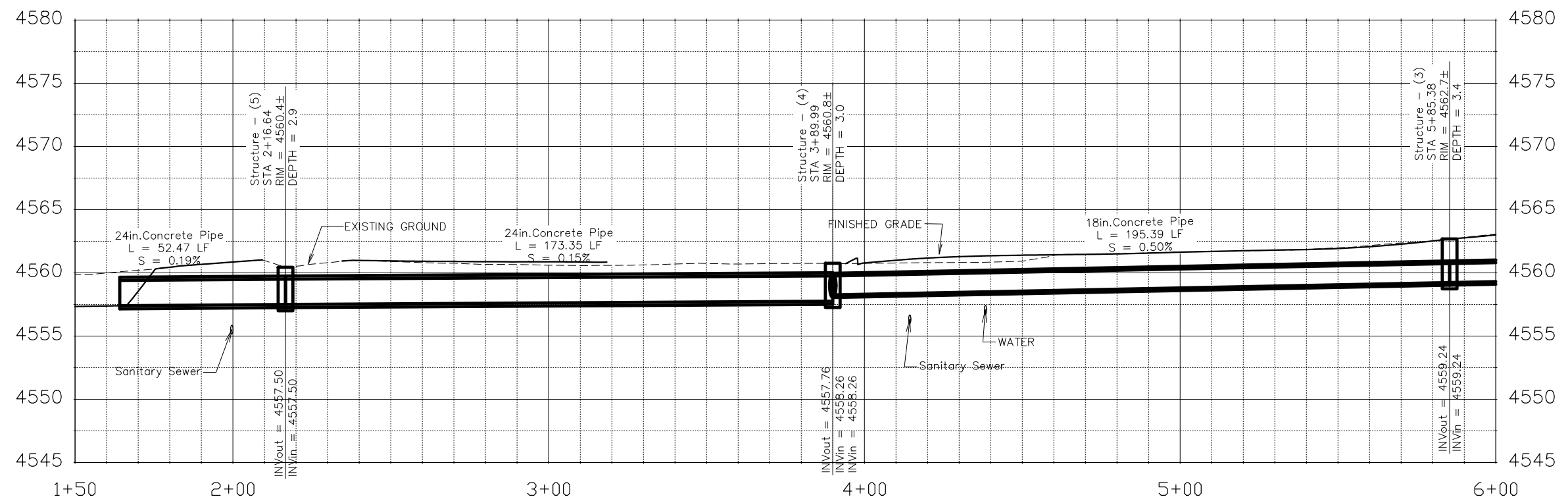


PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
WATERLINE PLAN AND PROFILE



NOTES:
 ALL NEW STORM DRAIN MANHOLES (MH) 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. INCLUDES TYPE A BEDDING AND HAUNCHING WITH MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



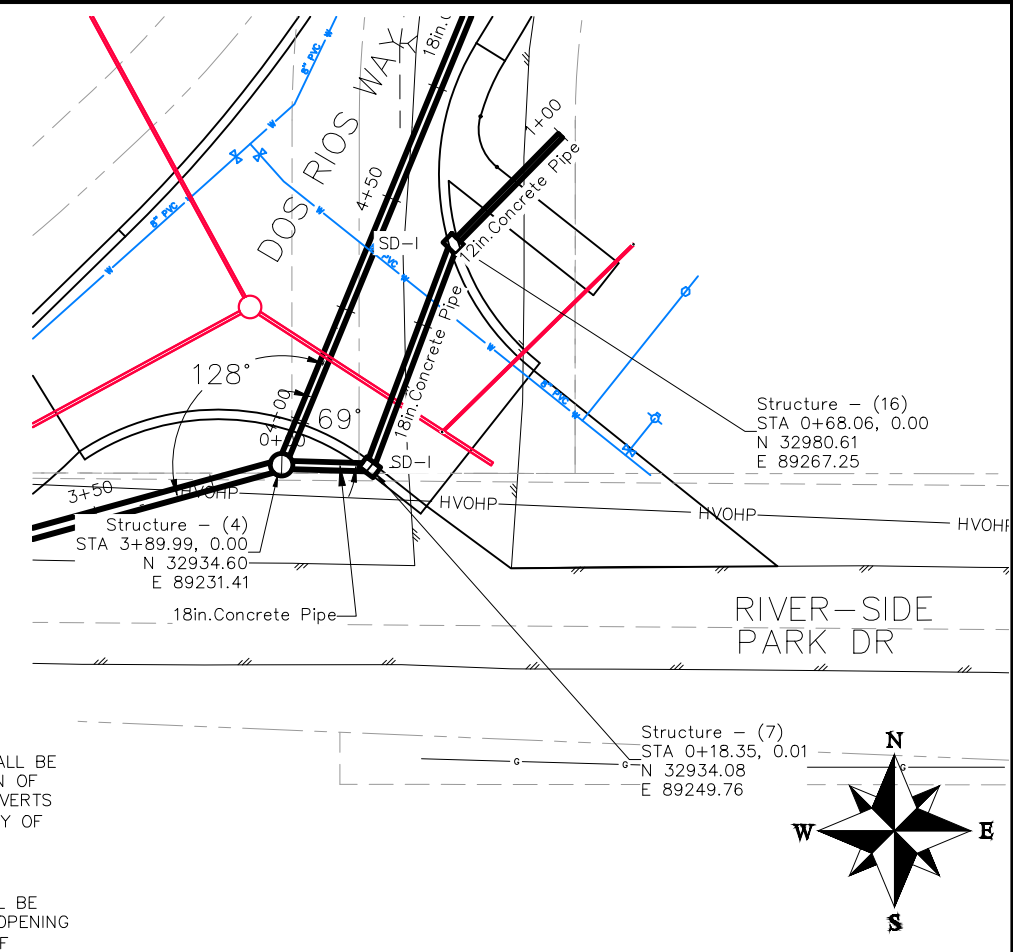
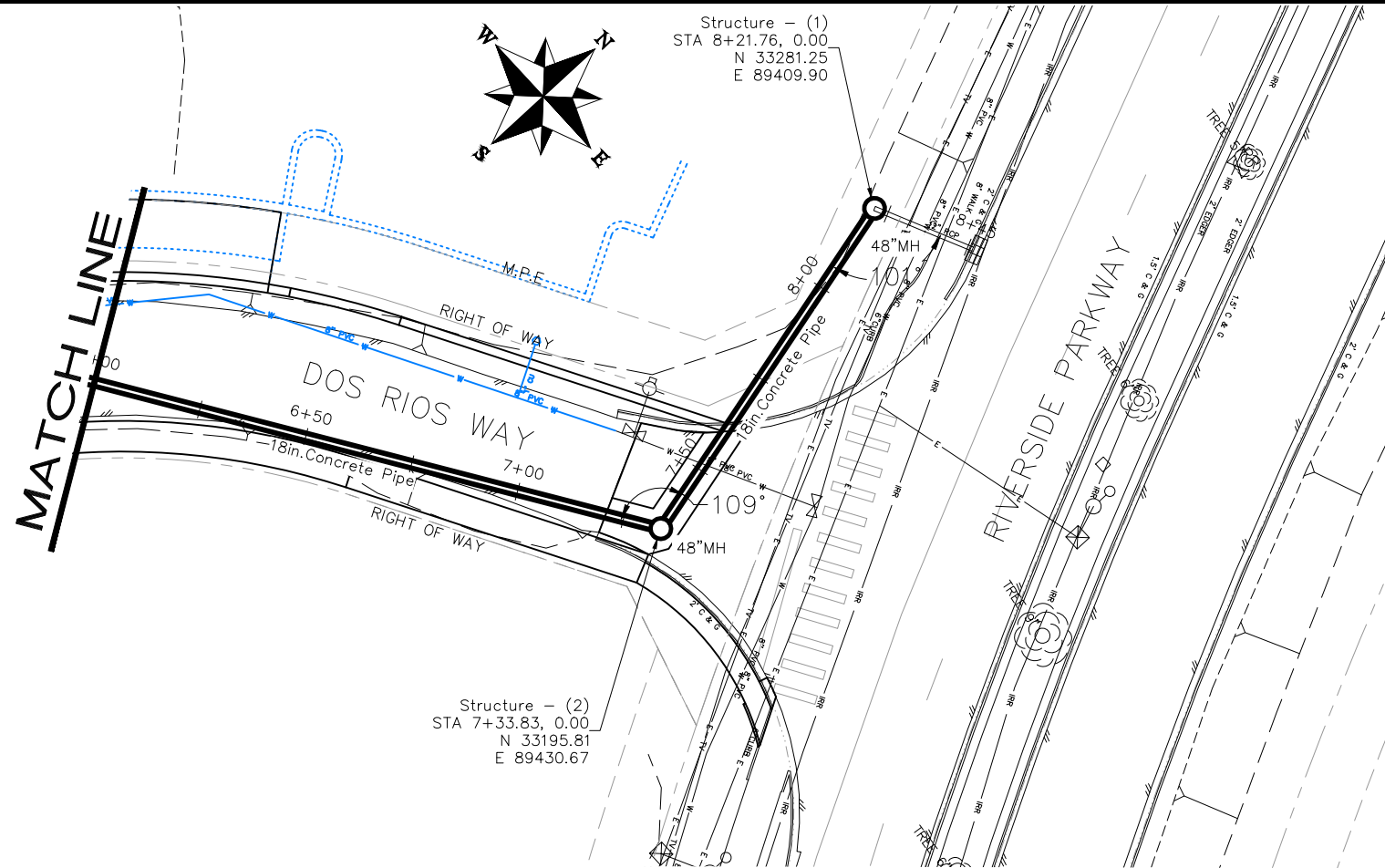
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REVISION			JCS	2017
REVISION			TCP	2017
REVISION			TCP	2017

SCALES:
 PLAN & PROFILE
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 0 2.5 10 VERTICAL



PUBLIC WORKS
 ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
 STORM DRAIN PLAN AND PROFILE

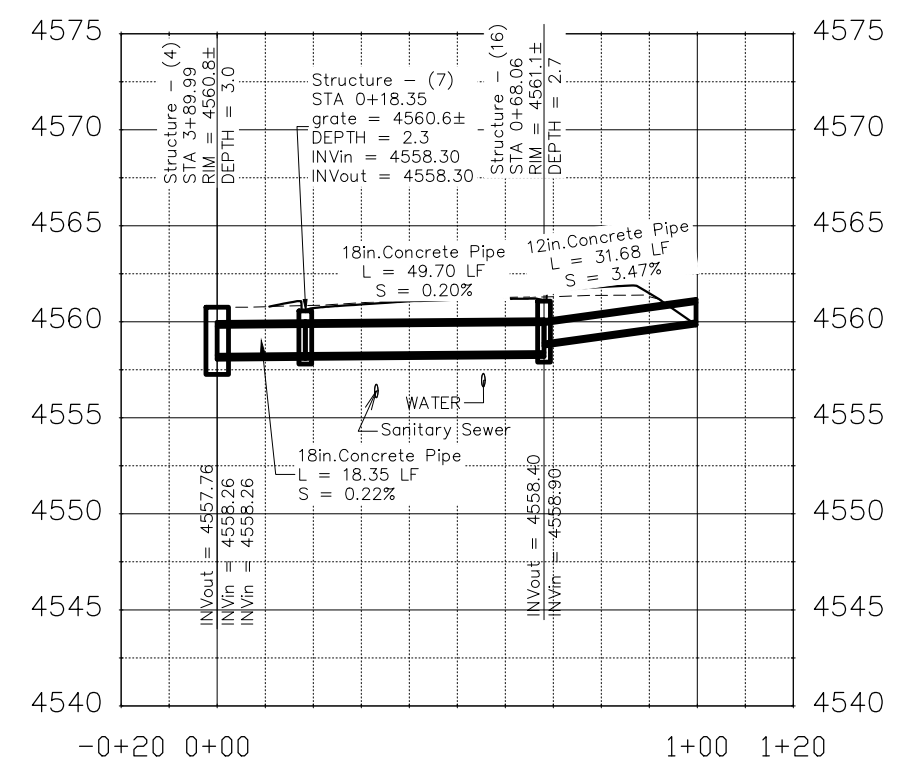
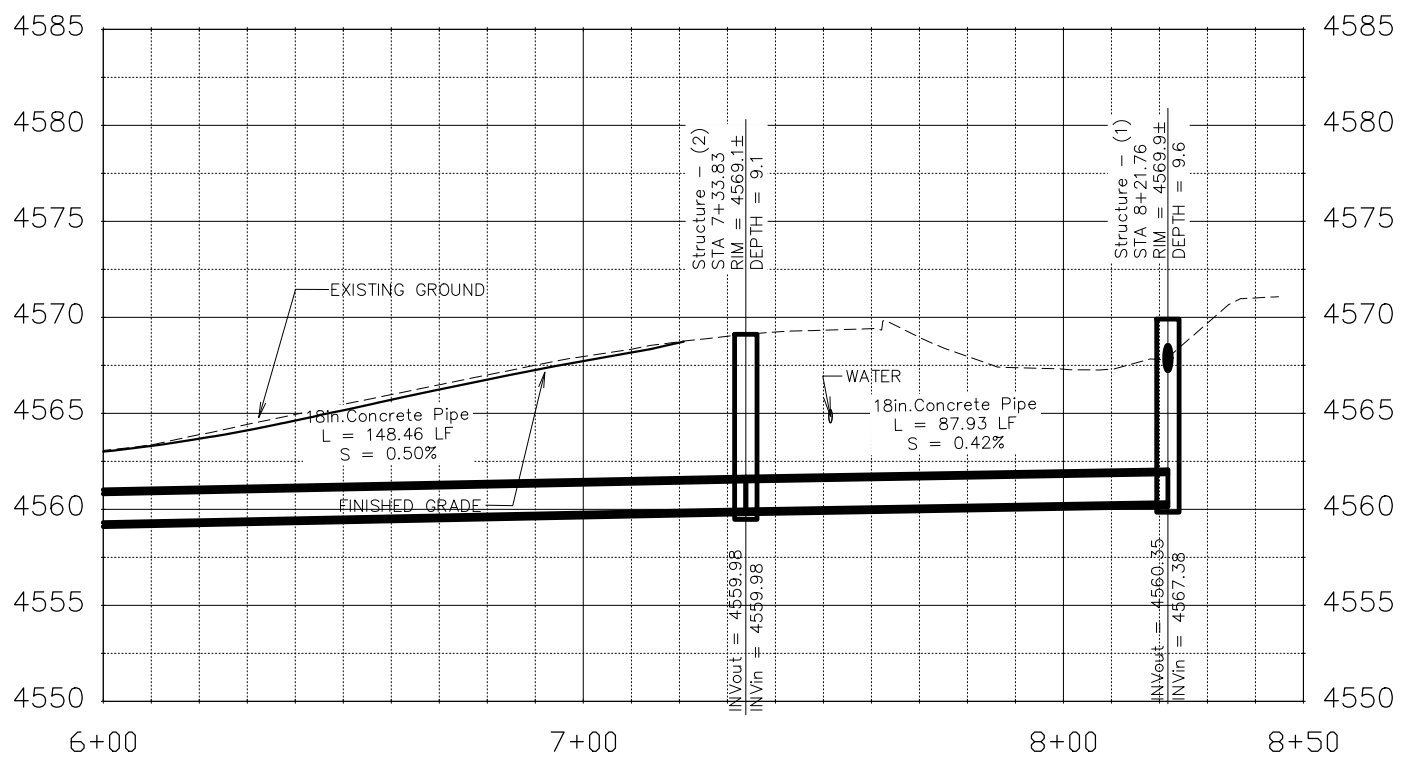


NOTES:

ALL NEW STORM DRAIN MANHOLES (MH) 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 NEW STORM DRAIN INLETS (SD-I) SHALL BE STORM DRAIN INLETS WITH VERTICAL CURB OPENING (SINGLE BOX) AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-07).

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION			JCS	2017
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REVISION			TCP	2017

SCALES:

PLAN & PROFILE

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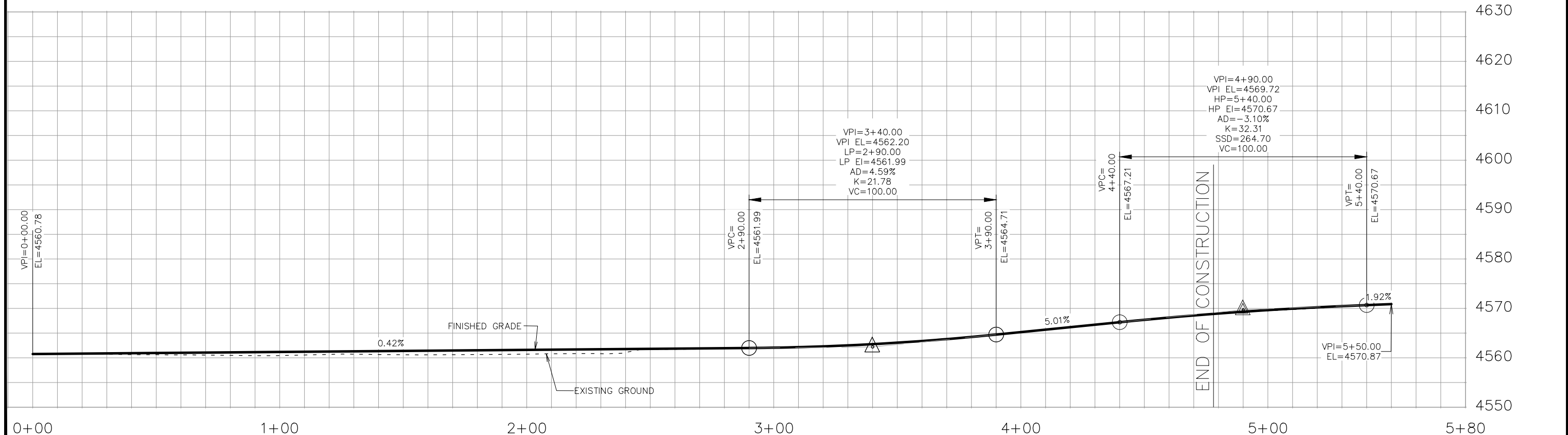
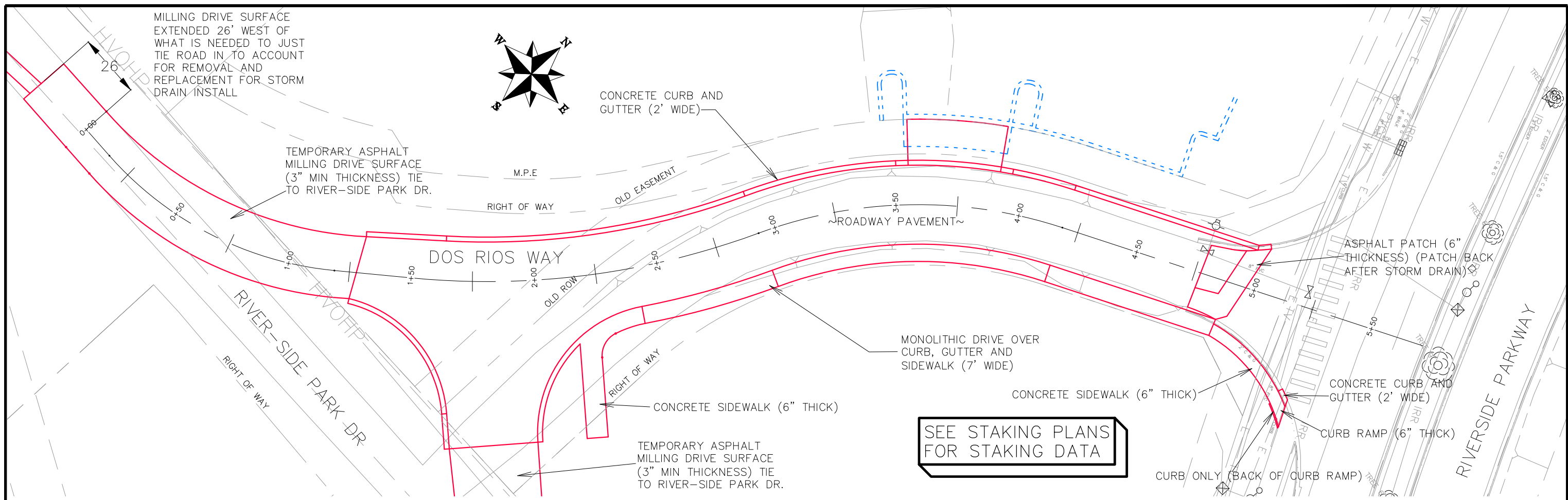
0 2.5 10 VERTICAL



PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STORM DRAIN PLAN AND PROFILE

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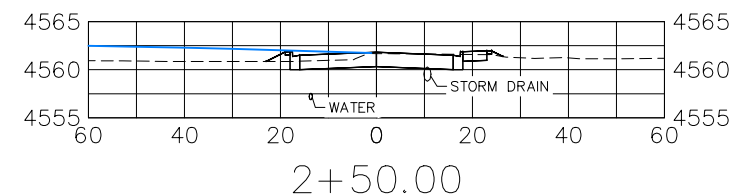
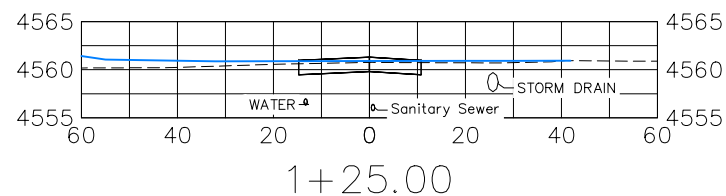
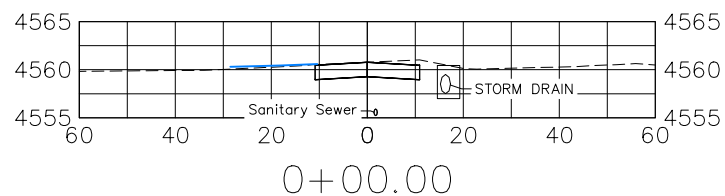
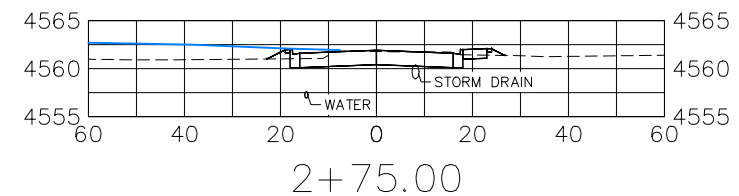
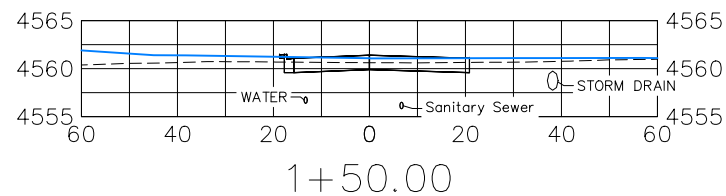
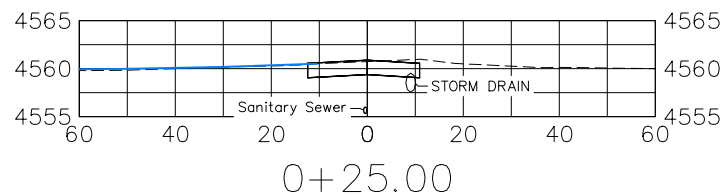
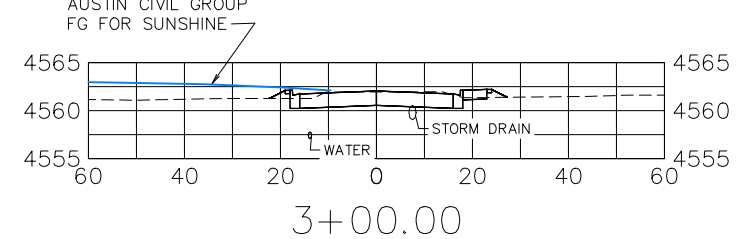
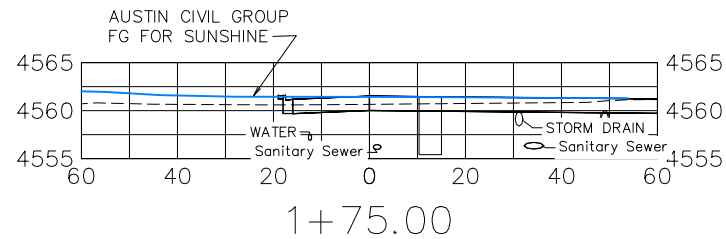
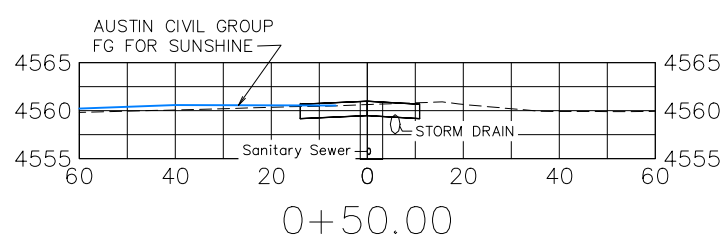
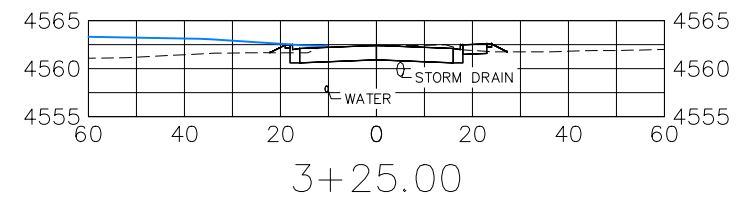
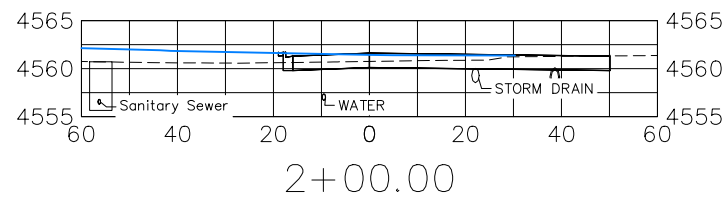
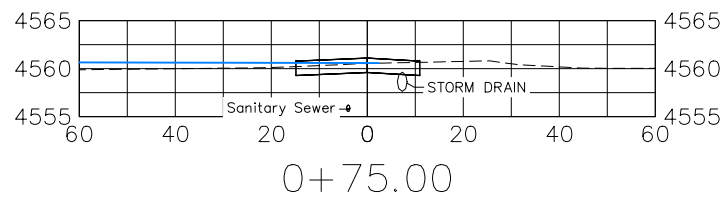
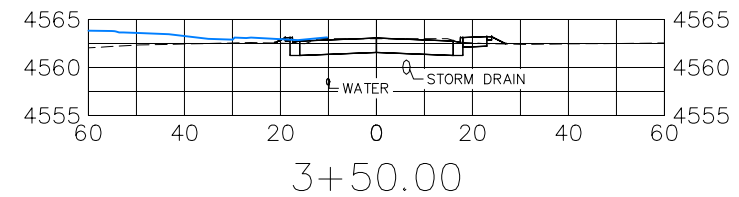
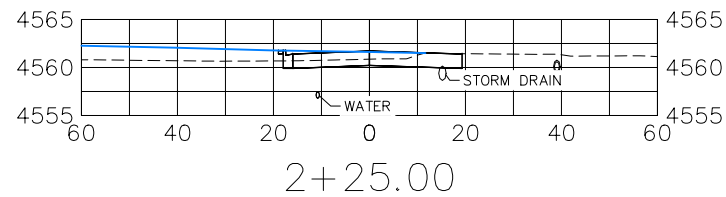
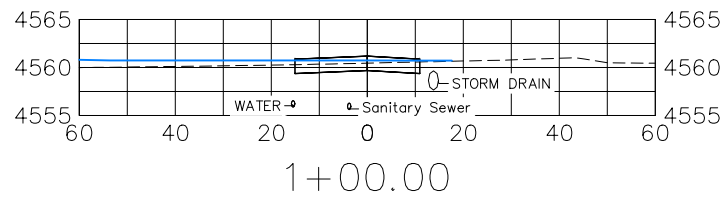
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REVISION			JCS	2018
REVISION			TCP	2018
REVISION			TCP	2018

SCALES:
PLAN & PROFILE
0 10 20 40 HORIZONTAL
0 5 20 VERTICAL



**PUBLIC WORKS
ENGINEERING DIVISION**

**THE RIVERFRONT AT DOS RIOS
ROAD PLAN AND PROFILE**

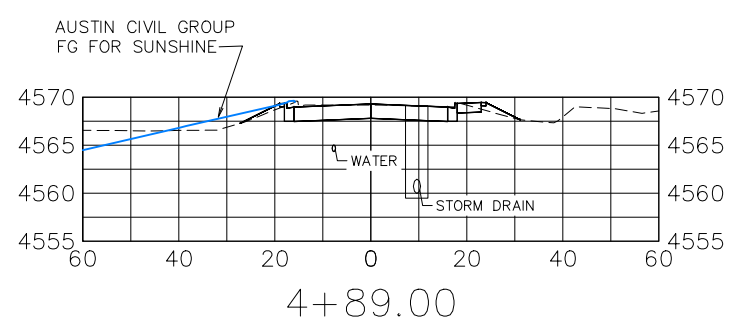
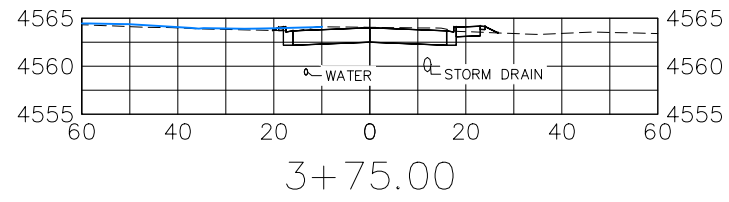
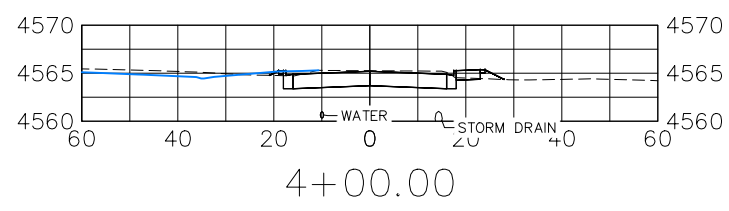
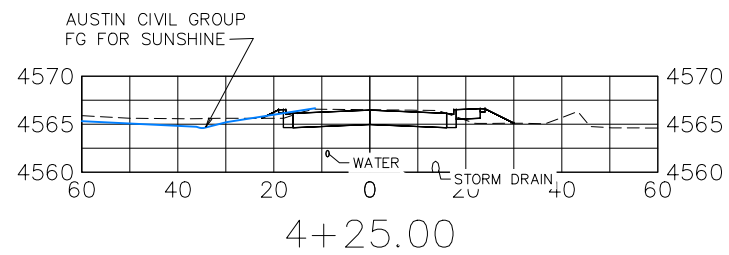
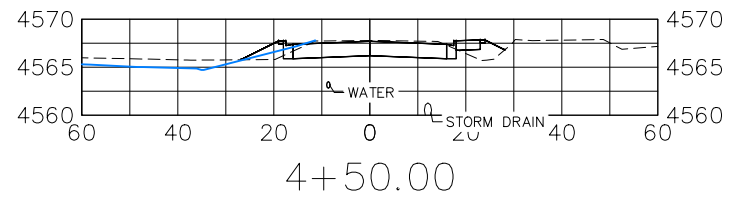
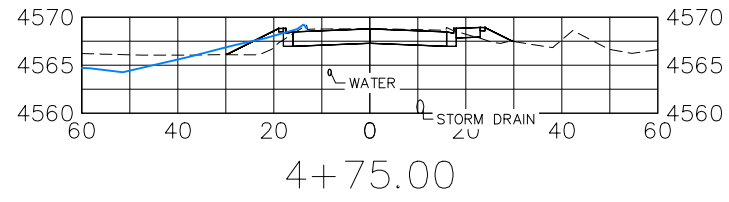


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PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS

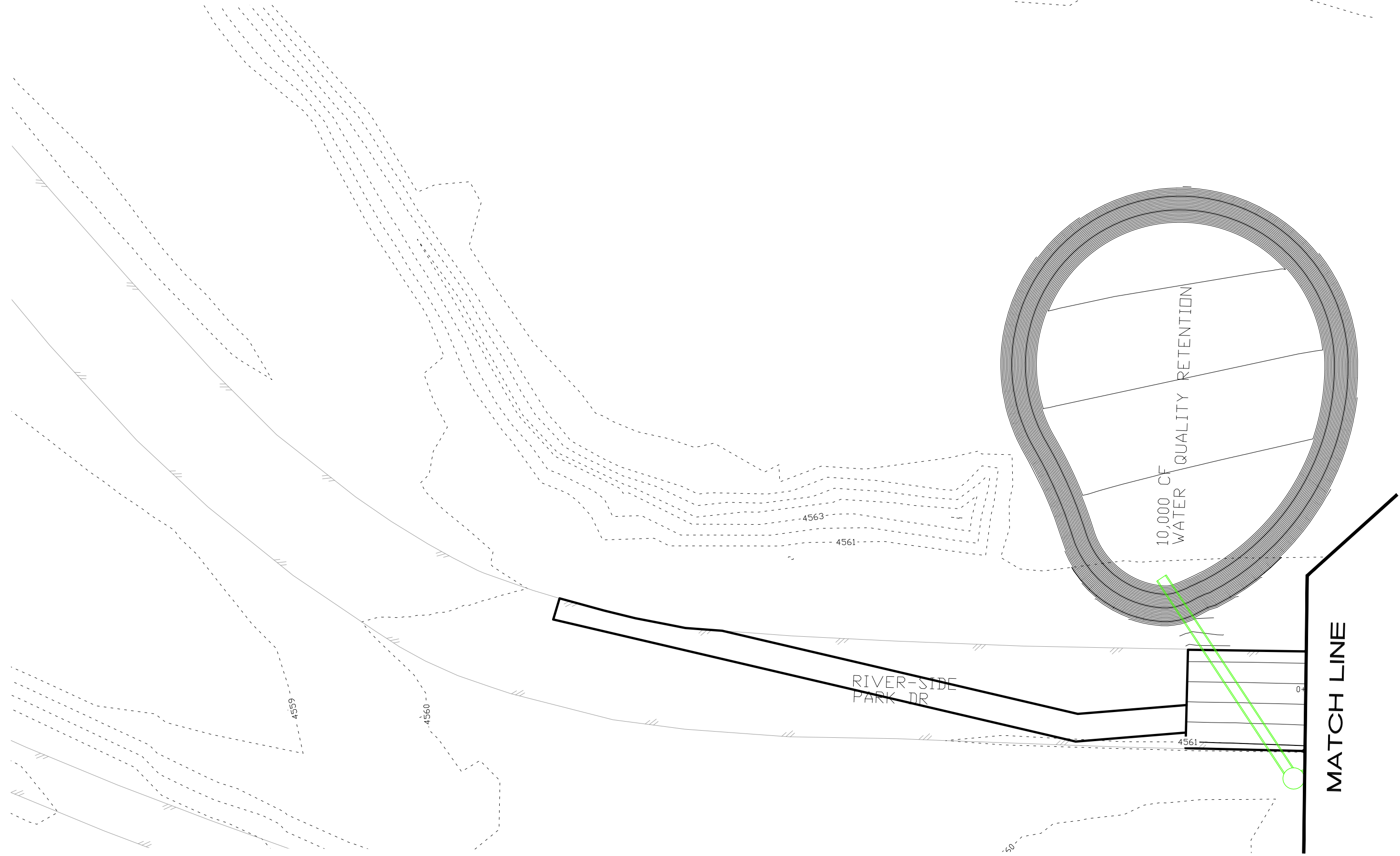


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PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
ROAD CROSS SECTIONS



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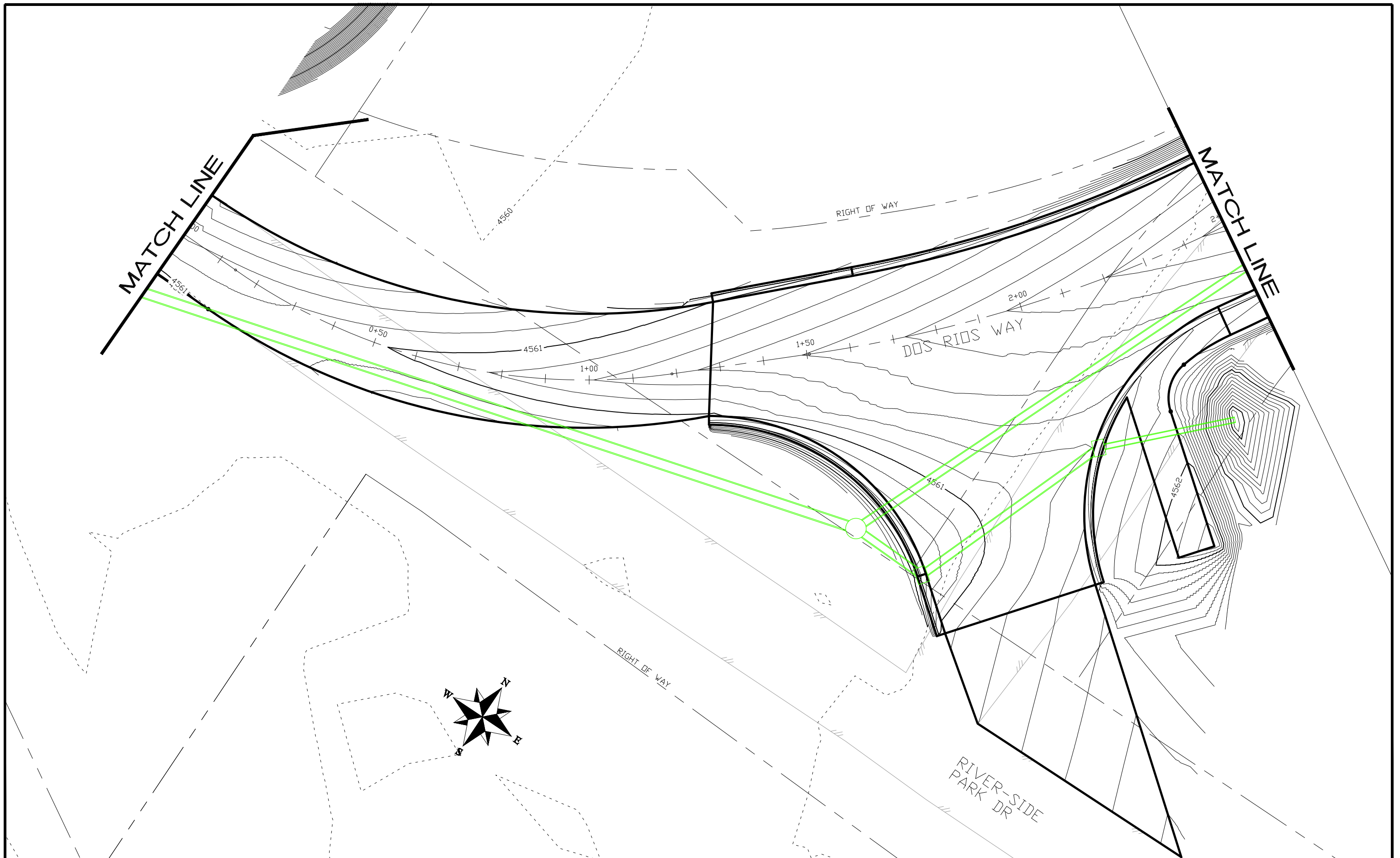
SCALES:	
PLAN & PROFILE	
HORIZONTAL	1" = 20'
VERTICAL	1" = 10'



PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
TENTH FOOT CONTOUR PLAN

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REVISION	DESCRIPTION	DATE
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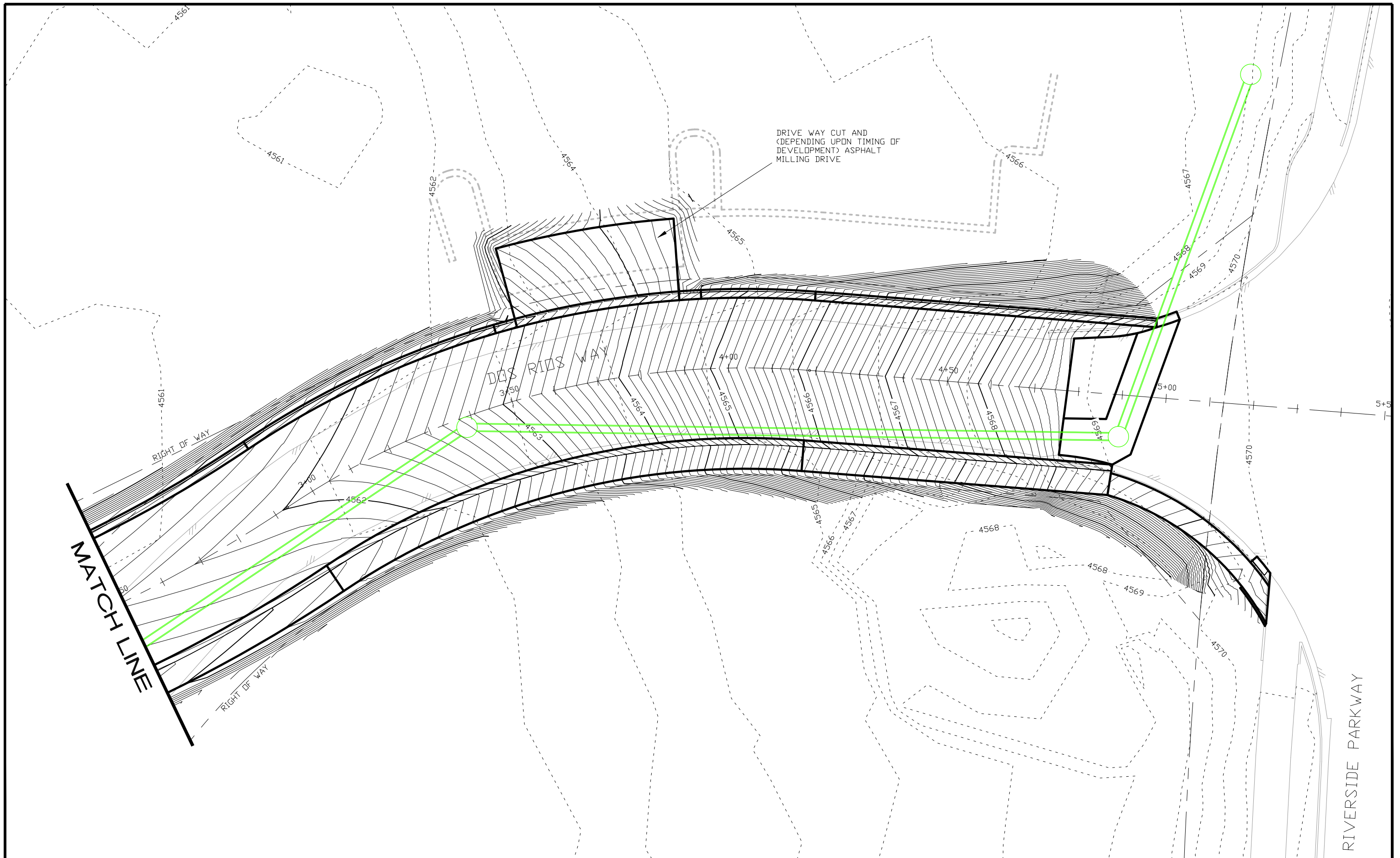
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APPROVED BY	TCP	DATE	2018

SCALES:	
PLAN & PROFILE	
HORIZONTAL	1" = 20'
VERTICAL	1" = 10'



**PUBLIC WORKS
ENGINEERING DIVISION**

**THE RIVERFRONT AT DOS RIOS
TENTH FOOT CONTOUR PLAN**

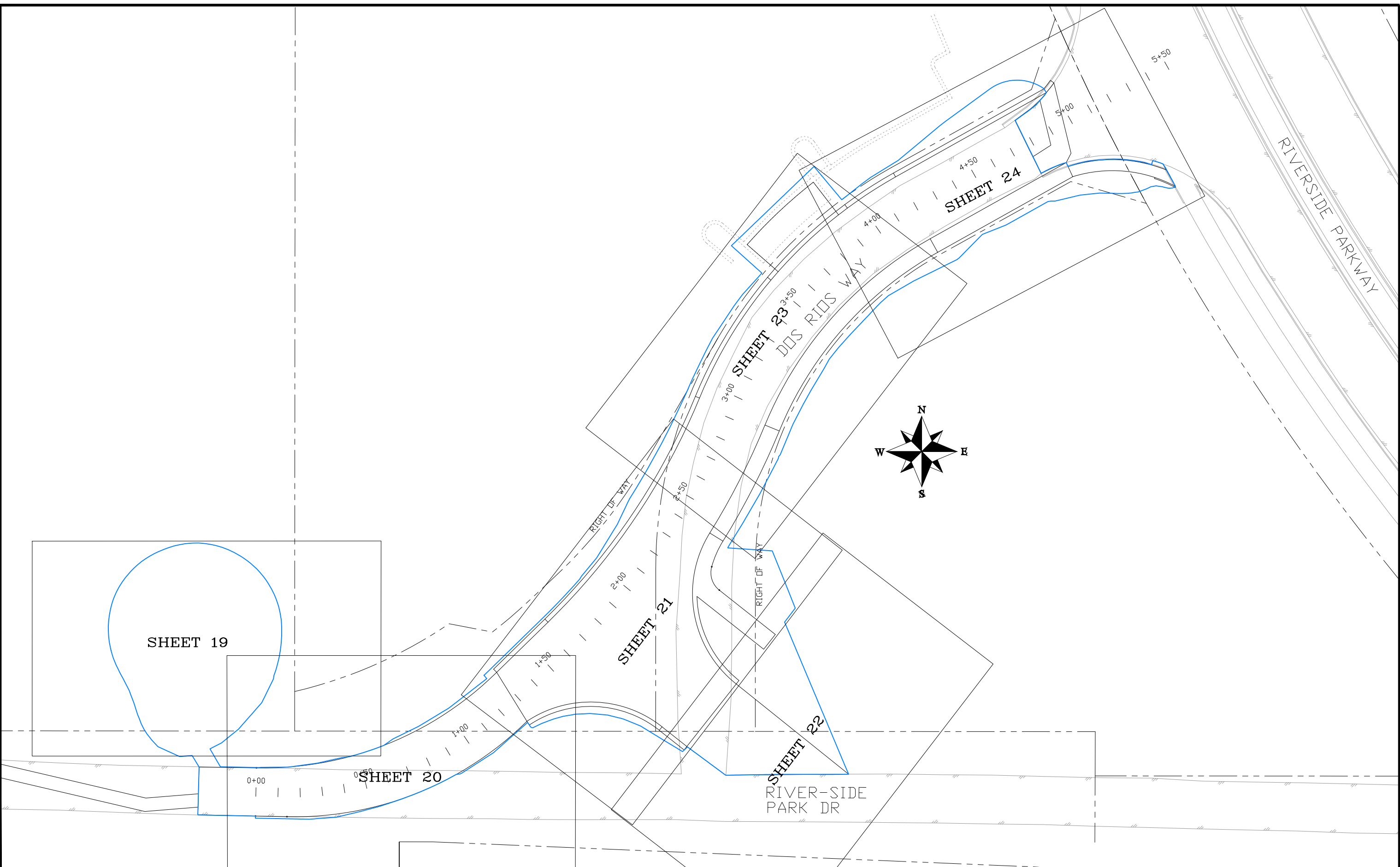


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**PUBLIC WORKS
ENGINEERING DIVISION**

**THE RIVERFRONT AT DOS RIOS
TENTH FOOT CONTOUR PLAN**



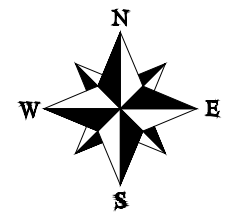
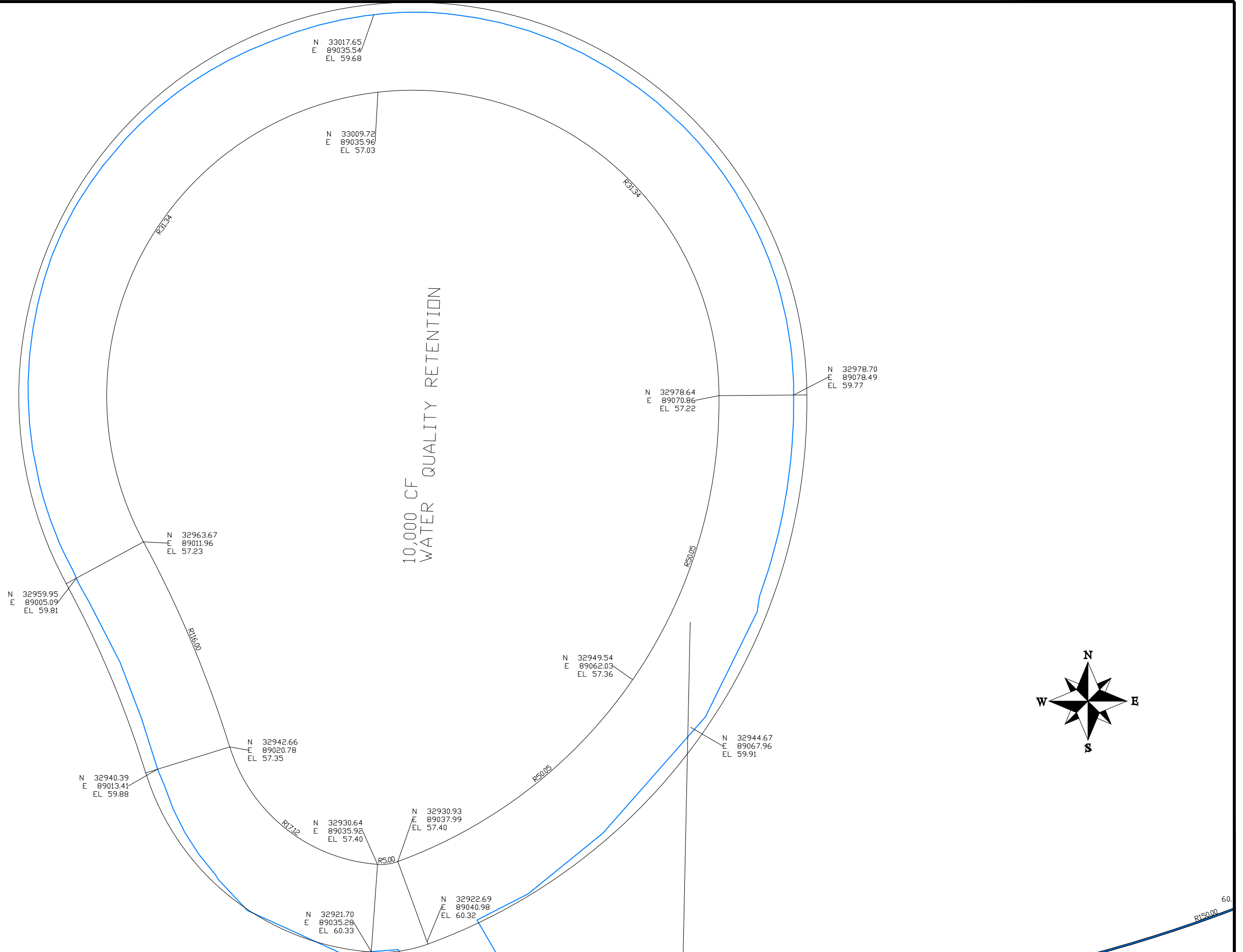
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△			TCP	2018
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SCALES:	
0	40
0	40
0	NA
0	NA



**PUBLIC WORKS
ENGINEERING DIVISION**

**THE RIVERFRONT AT DOS RIOS
STAKING PLAN KEY MAP**



REVISION	DESCRIPTION	DATE
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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:

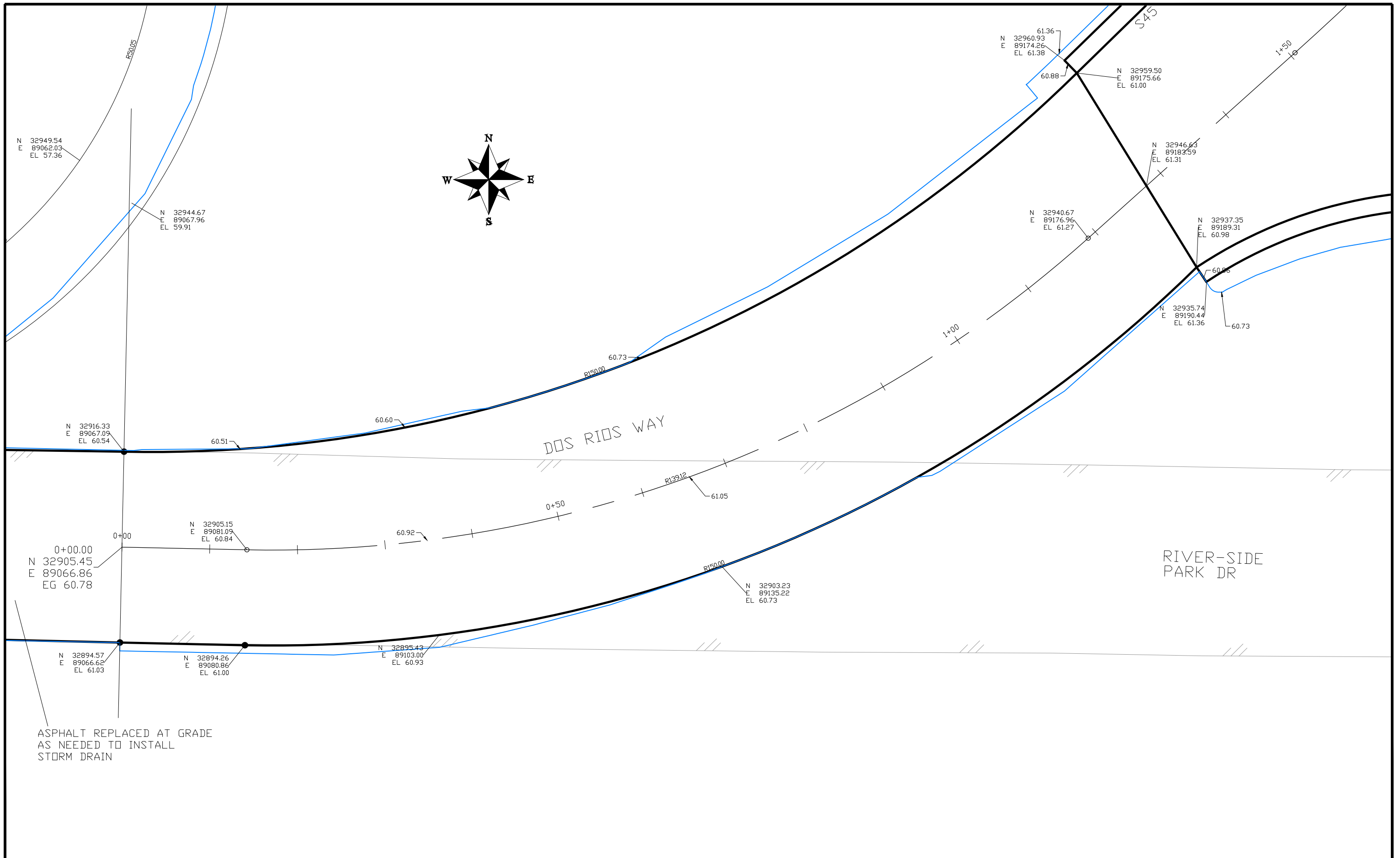
0	2.5	5	10
HORIZONTAL			
0	NA	NA	NA
VERTICAL			



PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN

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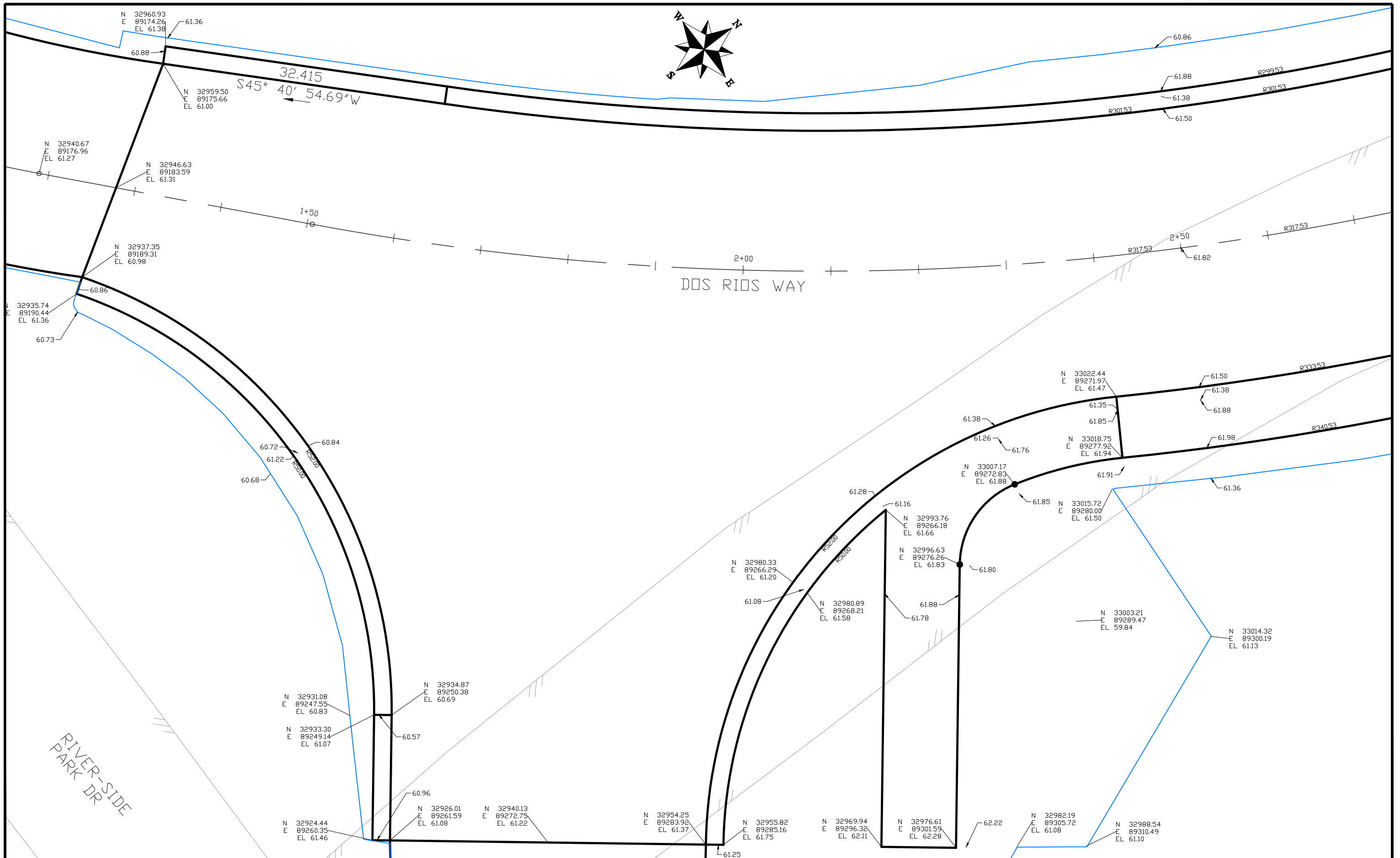
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REVISION			TCP	2018	0 NA VERTICAL NA
REVISION			TCP	2018	



PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN

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REVISION	DESCRIPTION	DATE
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REVISION		

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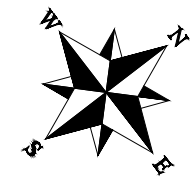
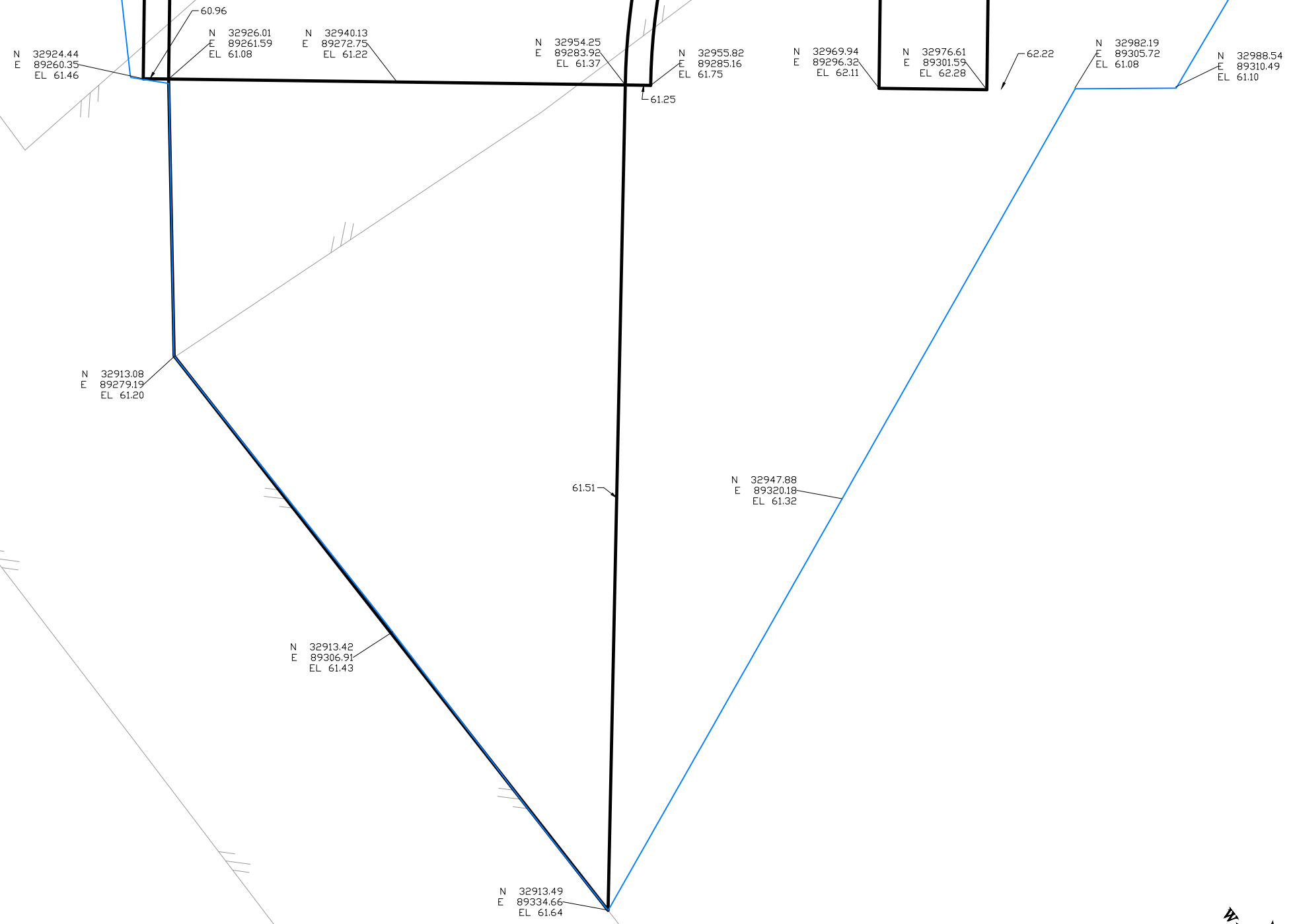
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PLAN & PROFILE
0 2.5 HORIZONTAL 10
0 NA VERTICAL NA



PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN



RIVER-SIDE
PARK DR

REVISION	DESCRIPTION	DATE
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DRAWN BY JCS DATE 2018
 DESIGNED BY JCS DATE 2018
 CHECKED BY TCP DATE 2018
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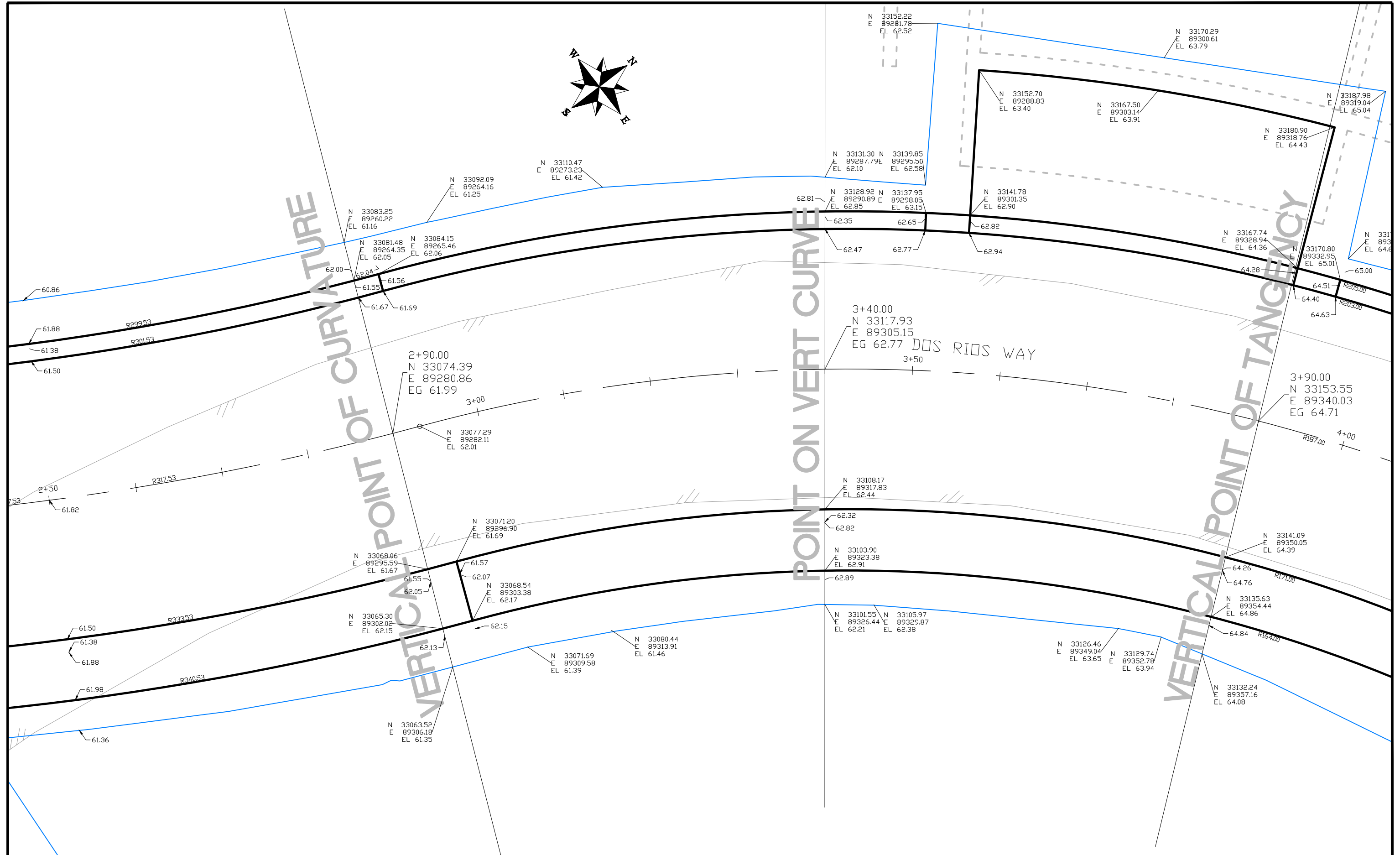
SCALES:

PLAN & PROFILE	
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PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN

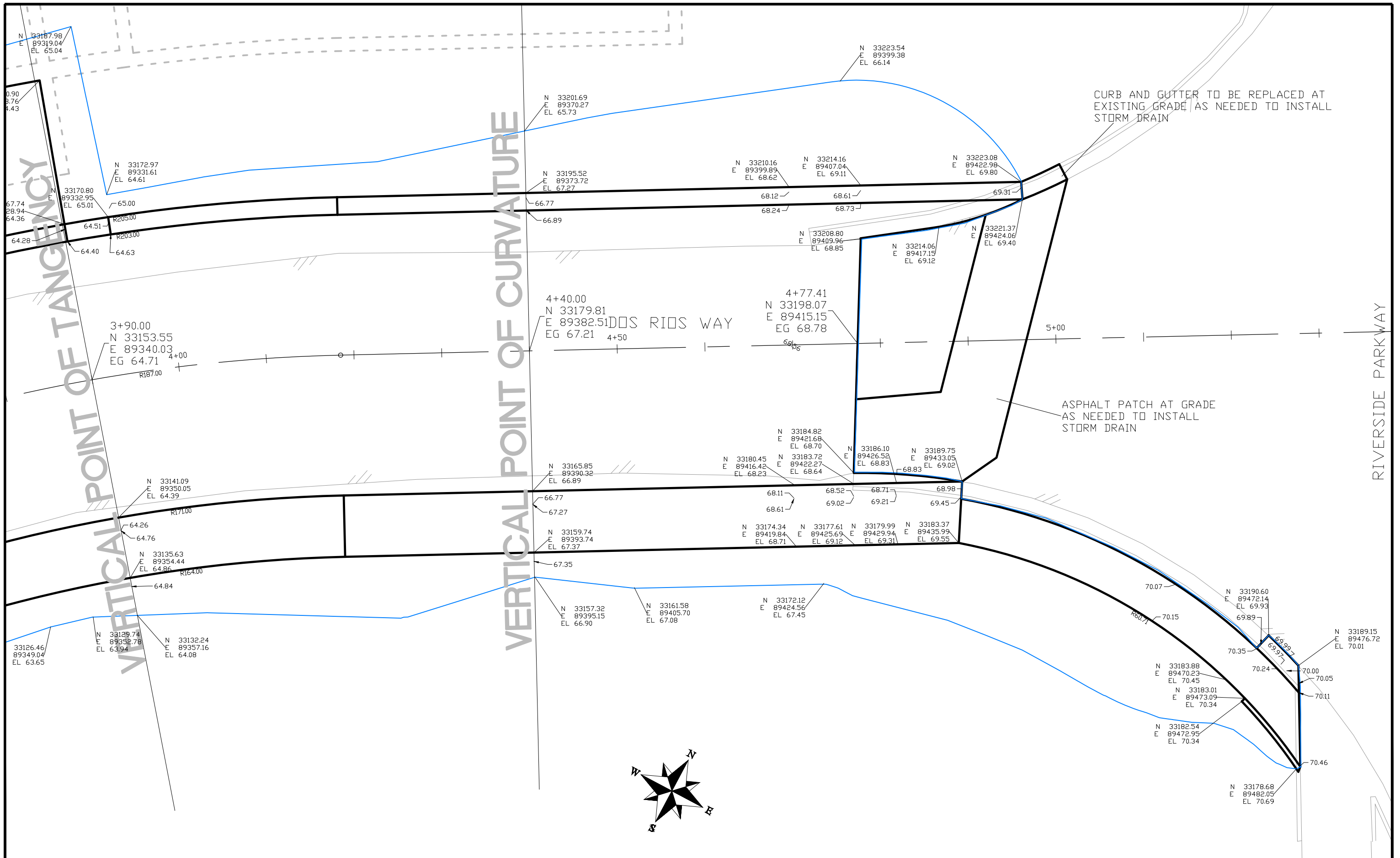


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REVISION			TCP	2018	0 NA VERTICAL NA
REVISION			TCP	2018	



PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

DRAWN BY	JCS	DATE	2018
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APPROVED BY	TCP	DATE	2018

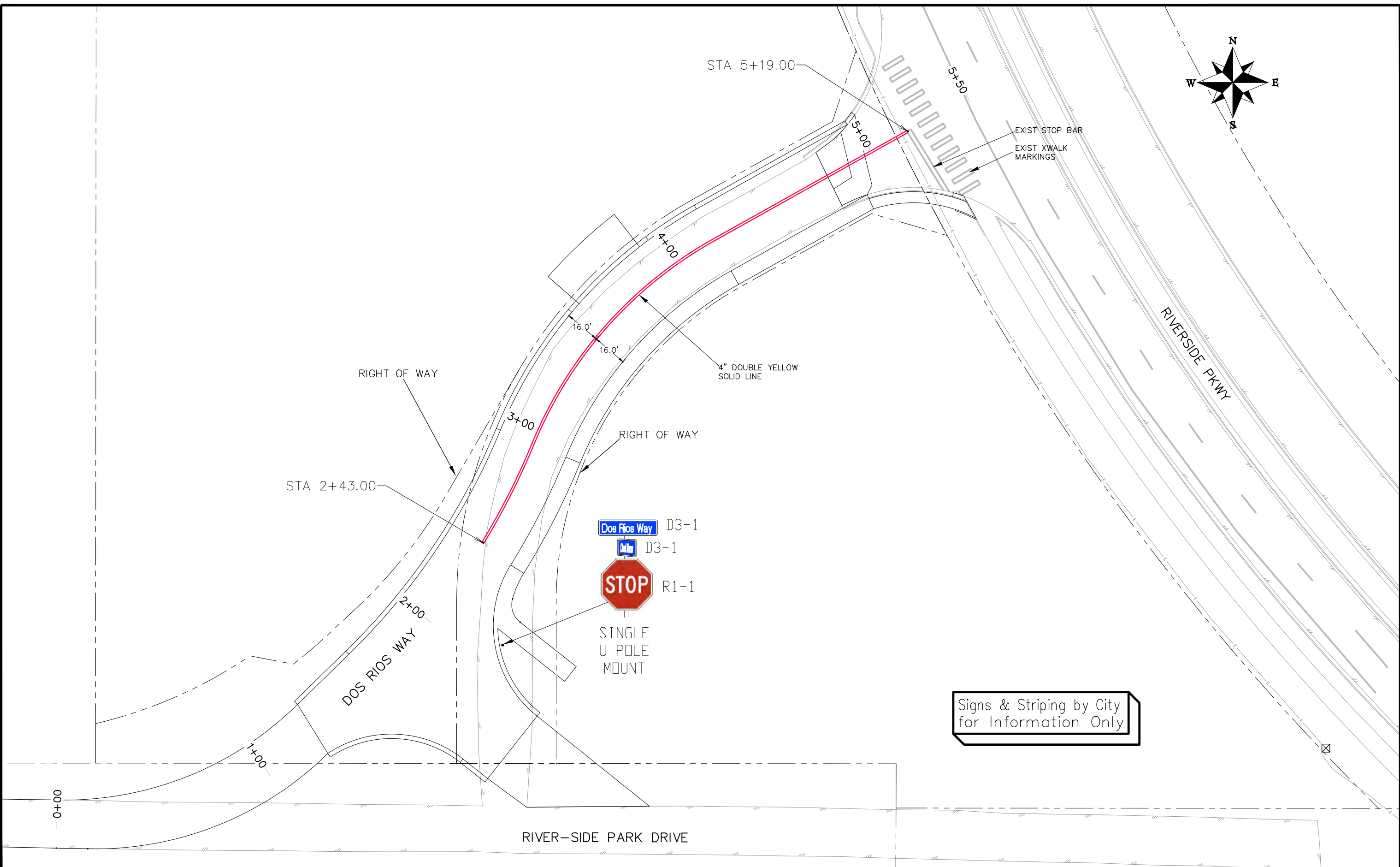
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PLAN & PROFILE	
0 2.5 HORIZONTAL 10	
0 NA VERTICAL NA	



PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STAKING PLAN

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REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	SCALES:
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△			TCP	2017	



PUBLIC WORKS
ENGINEERING DIVISION

THE RIVERFRONT AT DOS RIOS
STRIPING PLAN

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 0.80 acres with the majority of disturbance being caused by the Construction of Dos Rios Way.
2. Stormwater leaves the site for this phase through a 24" RCP installed into a storm water - water quality retention facility (temporary). In future phases a permanent water quality detention facility will be constructed and stormwater discharges from that facility will go directly into the Colorado River
3. Proposed utilities for this project include: storm drain, sanitary sewer, potable water, gas, electricity, telephone, cable television, and broadband infrastructure.

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. 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 CDOT details as shown in the CDOT standard plan M-208-1.
2. Storm Drain Inlet Protection (Silt Sacks): The use of Storm Drain Inlet Protection is proposed at new inlets installed as a part of construction where sediment from upstream construction activities may enter the new Storm Drain System.
3. Storm Water - Water Quality Retention Facility (temporary). The use of a Water Quality Retention Facility is proposed downstream of the construction activities to capture contaminants that may enter the Storm Drain System and to a lesser extent sediment that may get by other upstream BMP measures. In future phases a permanent water quality detention facility will be constructed.

After Construction (Permanent Measures)

1. Reseeding: Native seed mix will be applied to all disturbed areas and protected with a bonded fiber matrix for soil protection and stability.

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

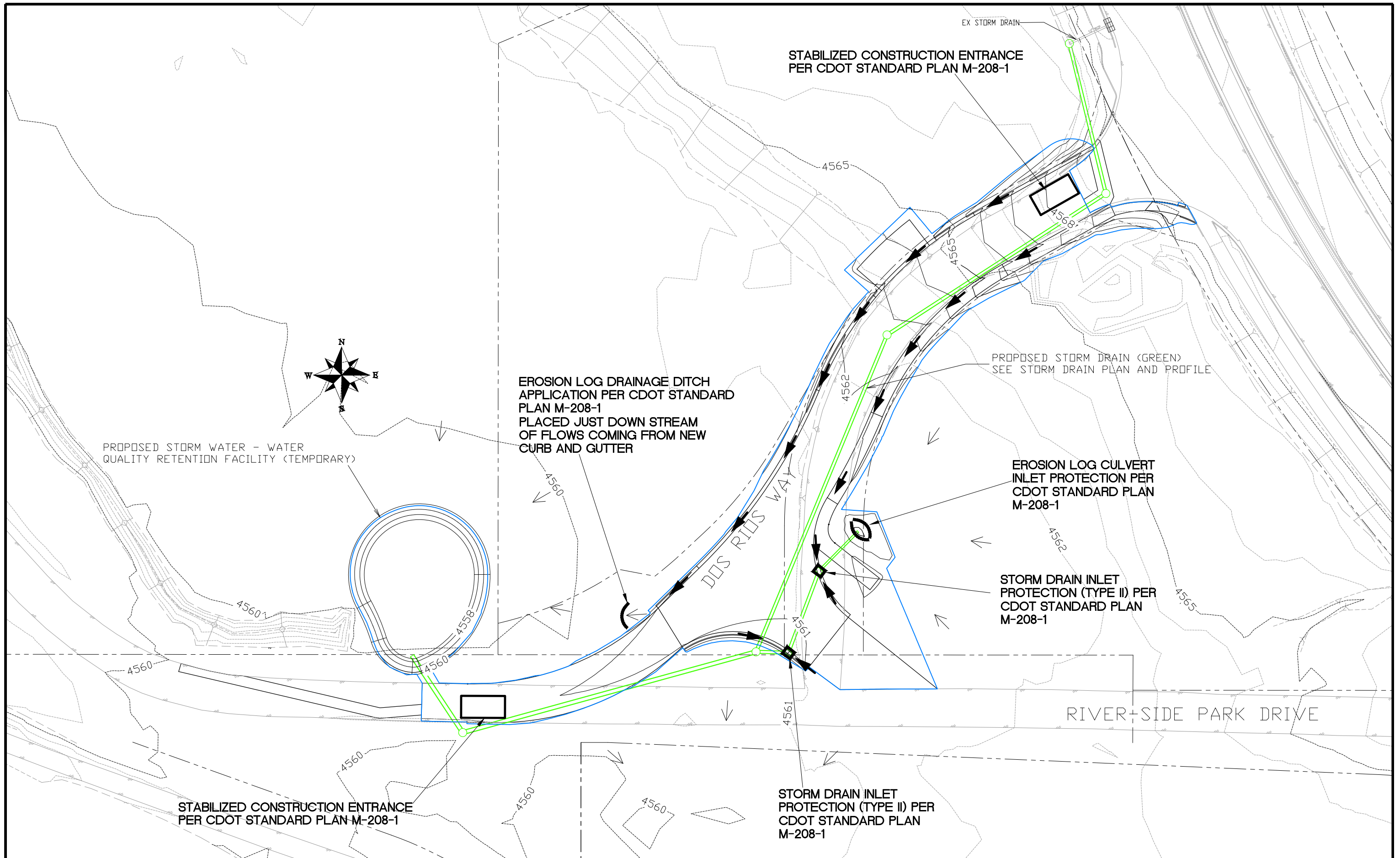
1. The SWMP establishes the minimum acceptable requirements for stormwater pollution prevention on site. The Contractor may supplement these requirements as appropriate for specific construction activities. Any changes to the practices shown on this plan must be reviewed by Project Inspector/Engineer 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 facility.
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.

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	SCALE
REVISION			JCS	2018	PLAN & PROFILE
REVISION			JCS	2018	0 NA HORIZONTAL NA
REVISION			TCP	2018	NA NA VERTICAL NA
REVISION			TCP	2018	



PUBLIC WORKS
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THE RIVERFRONT AT DOS RIOS
STORM WATER MANAGEMENT PLAN



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SCALES:
 PLAN & PROFILE
 0 12.5 25 50
 HORIZONTAL
 NA NA VERTICAL NA

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