



Purchasing Division

Invitation for Bid

IFB-4602-19-DH
2019 Sewer Interceptor Repair and Replacements

Responses Due:

February 27, 2019 prior to 3:30pm

Accepting Electronic Responses Only

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

<https://www.rockymountainbidssystem.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 for the 2019 Sewer Interceptor Repair and Replacement Project. The project generally consists of, but may not be limited to, 1,605.71 LF of 12 inch cured in place pipe (CIPP); 878 LF of 15 inch CIPP; 2894 LF of 18 inch CIPP; 5,943 LF of 24 inch CIPP, 5535 LF of 30 CIPP. the coating of 37 sanitary sewer manholes (approximately 240 VLF), and bypass pumping necessary to complete said work. 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 February 12, 2019 at 10:00am.** 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 **\$750.00** is reasonable and necessary to pay for the actual damages resulting from such delay. The parties agree that the real costs and injury to the City for such delay include hard to quantify items such as: additional engineering, inspection and oversight by the City and its agents; additional contract administration; inability to apply the efforts of those employees to the other work of the City; perceived inefficiency of the City; citizens having to deal with the construction and the Work, rather than having the benefit of a completed Work, on time; inconvenience to the public; loss of reputation and community standing for the City during times when such things are very important and very difficult to maintain.

The Contractor must complete the Work and achieve final completion included under the Bid Schedule in the number of consecutive calendar days after the City gives is written Notice to Proceed. When the Contractor considers the entire Work ready for its intended use, Contractor shall certify in writing that the Work is 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 perform sanitary sewer interceptor repair and replacement and all other work for the 2019 Sewer Interceptor Repair and Replacement Project. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

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: The project generally consists of, but may not be limited to, 1,605.71 LF of 12 inch cured in place pipe (CIPP); 878 LF of 15 inch CIPP; 2894 LF of 18 inch CIPP; 5,943 LF of 24 inch CIPP, 5535 LF if 30 CIPP. the coating of 37 sanitary sewer manholes (approximately 240 VLF), and bypass pumping necessary to complete said work.

3.3. SPECIAL CONDITIONS & PROVISIONS:

3.3.1 Mandatory Pre-Bid Meeting: Prospective bidders are required to attend a mandatory pre-bid meeting on February 12, 2019 at 10:00am. 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).

3.3.2 QUESTIONS REGARDING SOLICIATION PROCESS/SCOPE OF WORK:

Duane Hoff Jr., Senior Buyer
City of Grand Junction
duaneh@gjcity.org

3.3.3 Project Manager: The Project Manager for the Project is Brendan Hines, 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 West Ave., 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 120 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:

- It is anticipated that work will consist of days, nights, weekdays and weekends. City Holidays will be observed.

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

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:

All process water that contains chemicals required for the CIPP work shall be treated prior to being discharged. A chemical makeup of the water and associated Material Safety Data Sheets shall be submitted to the City prior to starting the CIPP work. A Request to Discharge Industrial Process Wastewater Permit from the Industrial Pretreatment Division will be required. These Permits include effluent limitations, sampling, and reporting requirements needing approval prior to the discharge of process water. The Contractor shall supply the City with a detailed operational procedure for disposal of process water. The above mention Permits have been supplied in Appendix C.

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

- Door-hangers

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

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

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

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

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

3.3.17 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.

The following guidelines and limitations shall apply to all traffic control:

1. The Contractor's operations shall cause no unnecessary inconvenience. The access rights of the public shall be considered at all times.
2. The CIPP Contractor will be responsible for all traffic control necessary to maintain one lane of traffic in each direction. If, in limited areas, it is necessary to have two-way traffic share one lane through the work zone, the Contractor shall request approval from the Engineer. If vehicles must cross bypass piping, a suitable road crossing device will be required.
3. Access to driveways and cross streets, shall be maintained at all times unless approved by Engineer. If necessary, traffic control flagging will be required during setup/teardown of bypass pumping equipment, or while the work zone progresses past the driveway or cross street. If vehicles must cross bypass piping, a suitable road crossing device will be required.

A suitable road crossing device is one that accommodates two-way traffic of all vehicle types including passenger vehicles and semi-truck tractor trailer combinations at a traveling speed of 10 mph.

3.3.18 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.

3.3.19 Quality Control Testing: The Contractor shall perform QA/QC on CIPP per Section 10 of Appendix D, Cured-In-Place-Pipe (CIPP) Specification.

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

1. Construction Schedule submitted at the pre-construction meeting and updated bi-weekly to reflect actual conditions.
2. Traffic Control Plan(s) necessary to conduct the Work submitted at the pre-construction meeting for approval by the City.
3. Product and material descriptive literature, including certification of conformance with the referenced specifications and shop drawings submitted prior to material delivery.
4. CIPP thickness design calculations.
5. Plan for bypass pumping of sewage as discussed under Appendix B, Bypass Pumping Specification.
6. Spill response plan as discussed under Appendix B, Bypass Pumping

Specification.

7. Manhole rehabilitation coating.

- 3.3.21 Uranium Mill Tailings:** It is anticipated that radioactive mill tailings will not be encountered on this Project.
- 3.3.22 Fugitive Petroleum or Other Contamination:** It is anticipated that soil contamination from fugitive petroleum or other contaminants will not be encountered with the Project.
- 3.3.23 Excess Material:** All excess materials shall be disposed in accordance with General Contract Condition Section 50.
- 3.3.24 Existing Utilities and Structures:** Utilities were not potholed during design of this project with the exception of gas and phone at the G Road and River Road intersection. 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.
- 3.3.25 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.
- 3.3.26 Work to be Performed by the City (Prior to Construction):** N/A
- 3.3.27 Existing Concrete Sidewalks, Pans, Fillets, Curbs and Gutters:** The existing sidewalks, pans, fillets, curb and gutter and asphalt are in good serviceable condition. The Contractor will need to protect all concrete/asphalt adjacent to construction. If the concrete/asphalt 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.
- 3.3.28 Verification of Active Taps:** It is the Contractors responsibility to verify all existing sewer taps to determine active vs inactive by smoke testing, use of dye, inserting a snake through a clean-out or roof vent and tracing to sewer main, etc. and only connect the active taps. There will be no separate measurement or payment for this work which will be considered incidental. Any damage to property or costs associated by failing to open active taps shall be the responsibility of the Contractor.
- 3.3.29 Staging Area:** Staging shall take place at 333 West Ave. The Contractor shall coordinate with the engineer to determine the location of equipment and materials to be stored at this site. Any rutting due to heavy equipment shall be addressed following the Project. If tracking becomes an issue the Contractor will be required to construct tracking pads. All costs associated for this work shall be considered incidental to the Project. All stockpiling of materials and equipment shall be in accordance with General Contract Condition Section 51.

- 3.3.30 Interruption of Utilities and Services:** The Contractor shall notify all property owners affected by the interruption of utilities and other services caused by the Contractor's operations associated with this Project. Such notice shall be given at least 24 hours prior to the interruption. Notice shall be given for, but not limited to the interruption of domestic water, sanitary sewer, trash pickup, mail delivery and changes in access to the property. Notice can be given via the Project Newsletter. When an interruption will occur but was not stated in the Project Newsletter, the Contractor shall, at a minimum, provide written notice and deliver to the resident/occupant; when the resident/occupant is not home at delivery time, the notice shall be attached to the door. Such notices shall provide contact information for the Contractor, the City Inspector and the City Project Engineer.
- 3.3.31 Stormwater Requirements:** In accordance with the City of Grand Junction Storm Water Ordinance, Section 16-141 through 16-144, there shall be no discharge or cause to be discharged to the storm drainage system any wastewater other than storm runoff. Specifically, the discharge of any contaminated storm water due to construction, process or CIPP Project wastewaters to the storm sewer is prohibited. Proper Best Management Practices shall be in place to protect the stormwater system, including the containment of construction-related storm waters on the project to ensure that sewage or project construction-related stormwater runoff does not enter the storm drainage system.
- 3.3.32 Sanitary Sewer Service Locations:** The location of sewer services shown on the construction drawings are based on TV video of the existing sanitary sewer main. Due to poor condition of the existing sewer main line, some services **may not have been located**. During close circuit television inspection, the Contractor shall pay close attention to the existing main in an effort to identify services that may not have been located. **When multiple or newly identified services exist for a single property, the Contractor, in consultation with the Inspector and/or Engineer, shall determine which services are active and which are inactive by using dye, tracing the line with a snake and locator, or smoking the service.** The Contractor shall notify the property owner prior to placing dye or smoke in the service. When using smoke, the Grand Junction Fire Department shall also be notified prior to smoking the service.
- 3.3.33 Water Fill Station:** The Contractor along with the Project Engineer shall coordinate with the City Water Department for location and costs of water supply. As of January 2019 the price per 1000 gallons is \$6.60. The Contractor will be supplied a pin for refill stations and will be billed accordingly.
- 3.3.34 Drying Beds for Waste:** The Contractor along with the Project Engineer shall coordinate with the Persigo Plant for location of drying bed to be utilized during the cleaning of the sanitary sewer lines.
- 3.3.35 Bypass Pumping:** Bypass pumping has been identified as a lump sum quantity. For all bypass pumping, the Contractor shall be responsible for estimating flows and providing sufficient pumping capacity to handle all flows (See Appendix B). The Contractor is advised that flows vary widely throughout the day and throughout the week. Bypass pumping plans, including spill-containment plans, are required for all

bypass pumping that is included in the Bid Schedule or used at the Contractor's discretion.

3.3.36 Work to be performed within Union Pacific Railroad Right of Way: The Contractor shall contact Justin Cordova, Manager of Track Maintenance (970-628-6019) following Notice to Award. All work within UPRR right of way and adjacent to crossings shall be coordinated with Mr. Cordova.

3.3.37 Process Wastewater: See Special Provisions, SP-2 for specifications.

3.3.38 PreVideo: The City did video the sanitary sewer line in 2018 and will supply to the Contractor upon request.

3.3.39 Cleaning of Host Pipe: Per the prevideo performed by the City it was evident that portions of Line A and Line B contain a considerable amount of debris material in areas. The cleaning of the host lines shall be considered incidental to CIPP installation and will not be paid for separately. All material generated from the cleaning of the host pipe shall be delivered to Persigo and placed in designated drying bed.

3.3.40 Confined Space Entry: The Contractor is responsible for providing any and all confined space entry safety equipment; including, but not limited to; air testing equipment, fresh air blowers, tripods, harnesses, and SCBA equipment. The Contractor's air monitoring devices shall be calibrated and certified. The cost for all confined space entry equipment shall be incidental to the project cost, and will not be paid for separately.

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 250 – ENVIORMENTAL, HEALTH AND SAFETY MANAGEMENT

Section 250 of the Standard Specifications is hereby revised for this project as follows:

Subsection 250.01, Description, shall include the following:

Process Wastewater

All process wastewater generated from CIPP installation shall be captured, filtered, sampled and tested prior to being discharged back into the sanitary sewer system. A representative from the Persigo Industrial Pretreatment Division shall be present to observe sampling. The level of Styrene must be below 750 µg/l prior to discharge to the sanitary sewer system. All test results shall be reviewed and approved by a Persigo Industrial Pretreatment representative prior to discharge back into the system.

A chemical makeup of the water and associated Material Safety Data Sheets shall be submitted to the City prior to starting the CIPP work. A **Request to Discharge Industrial Process Wastewater Application** from the Industrial Pretreatment Division will be required. There will be effluent limitations, sampling, and reporting requirements needing approval prior to the discharge of process water. The Contractor shall supply the City with a detailed operational procedure for treatment and release of process water. The above mentioned Permit has been supplied in **Appendix C**.

Contact Stephen Stortz at (970) 256-4164 for further information.

Subsection 250.09, Method of Measurement, shall include the following:

Treatment of wastewater shall be considered incidental to the installation of the CIPP and will not be measured or paid for separately.

STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WATER LINES, SANITARY SEWERS, STORM DRAINS, UNDERDRAINS AND IRRIGATION SYSTEMS

The City of Grand Junction *Standard Specifications for Construction of Water Lines, Sanitary Sewers, Storm Drains, Underdrains and Irrigation Systems* are hereby modified for this Project as follows:

Add the following:

SP-2 SECTION 108.5 – MANHOLES

Section 108.5 of the Standard Specifications is hereby revised for this project as follows:

SP-3 SECTION 102.11/102.14/108.2 – MANHOLES FOR SANITARY SEWERS AND STORM DRAINS

Sections 102.11/102.14/108.2 of the Standard Specifications is hereby revised for this project as follows:

Manhole Coating

The interior surface of all manholes shall be coated in accordance with section 102.11 of the City's Standard Specifications for Construction of Underground Utilities unless otherwise approved by the Project Engineer. The completed system will provide a corrosion resistant liner that restores the surface profile and eliminates water infiltration and exfiltration.

Performance Specification for Manhole Rehabilitation

Reconditioning shall occur after CIPP lining of the pipe to ensure all pipe to manhole interface is sealed. Any bypass pumping shall be incidental. Holiday Testing as per 102.11 required.

REFERENCES:

- A. ASTM D7234 - Adhesion
- B. ASTM D412 - Tensile Strength (PSI)
- C. ASTM D412 - Elongation (%)

- D. ASTM D624 - Tear Strength (PLI)
- E. ASTM D2240 - Hardness
- F. ASTM D522 - Flexibility (1/8" mandrel)
- G. ASTM D4060 - Taber Abrasion (mg loss)

SUBMITTALS

All materials and procedures required to establish compliance with the specifications shall be submitted upon request to the owner/engineer for review/approval. Submittals shall include at least the following:

1. Technical Data Sheet on each product used.
2. Safety Data Sheet (SDS) for each product used.
3. Manufacturer's Certification of Applicator.
4. Certified Applicator Minimum Qualifications (Section 1.04 D).
5. Descriptive literature, bulletins and or catalogs of materials.
6. Work procedures including flow diversion plan, method of repair, etc.
7. Material and method for repair of leaks or cracks in the structure.
8. Applicator and Manufacturer warranty forms (Section 4.01)

QUALITY ASSURANCE

- A. The manufacturer of the lining system for wastewater structures shall be a company that specializes in the design and manufacture of corrosion protection materials / systems for wastewater structures.
- B. The applicator (company performing the installation) shall be completely trained in leak repair, surface preparation and application of the lining system.
- C. The materials/products shall be suitable for installation in a wastewater environment without any deterioration of the liner.
- D. The applicator shall be trained and provide a letter of certification from the manufacturer for the handling, mixing, application, and inspection of the liner system as described herein.
- E. To ensure total unit responsibility, all materials and installation thereof shall be furnished and coordinated by manufacturer/certified applicator.

PRODUCTS

MATERIALS AND EQUIPMENT

- A. The materials to be utilized in the lining of wastewater structures shall be designed and manufactured to withstand the severe effects a wastewater environment. The manufacturer of the corrosion protection products shall have at least 10 years of experience in the production of the lining products utilized, and the products shall have satisfactory installation record.
- B. Equipment for installation of lining materials shall be of high quality and as recommended by the manufacturer.
- C. The lining system to be utilized for wastewater structures shall be a multi-

layer 'stress skin panel' liner system as described below:

1. Liner:

<u>Layer</u>	<u>Material</u>
Moisture barrier	Polyurea
Surfacer	Polyurethane/Polymeric blend foam
Final corrosion barrier	Polyurea

2. The Modified polymer (silicone modified polyuria) shall be sprayable, solvent free, two-component polymeric, moisture/chemical barrier specifically developed for the corrosive wastewater environment.

3. The Polyurethane Rigid Structure Foam, shall be low viscosity two-component, containing flame retardants.

4. Total thickness of multi-layer liner system shall be a minimum of 500 mills.

D. The product shall be SPECTRASHIELD, manufactured by CCI Spectrum, Inc or approved equal. Approved vendors/applicators: SpectraShield – Dan Sundvick (303)-378-1101
dsundvick@spectrashield.com

EXECUTION

INITIAL INSPECTION

- A. Applicator shall take appropriate action to comply with all local, state, and federal regulations including those set forth by OSHA, EPA, the Owner and any other applicable authorities.
- B. Prior to conducting any work, an initial inspection of the structure shall be performed to determine need for protection against hazardous gases or oxygen depleted atmosphere and the need for flow control or flow diversion.
- C. If required, submit a plan for flow control or bypass to the owner/engineer for approval prior to conducting the work.
- D. New Portland cement structures shall have endured a minimum of 28 days since manufacture prior to commencing installation of the liner system.

SURFACE PREPARATION

- A. The surface preparation program will include checking the atmosphere for hydrogen sulfide, methane, low oxygen, or other gases, approved flow control equipment, and surface preparation equipment.
- B. Surface preparation for standard manhole structures shall be in accordance with the manufacturer's recommendations, and may include high pressure water cleaning and shall provide a surface compatible for installation of the liner system.
- C. Surface preparation and methods for other structures shall be in accordance with the manufacturer's recommendations, and may include high pressure water cleaning, hydro blasting, abrasive blasting, grinding, or detergent water cleaning,

and shall be suited to provide a surface compatible for installation of the liner system.

- D. The surface preparation method shall produce a cleaned, abraded and sound surface with no evidence of laitance, loose concrete, loose brick, loose mortar, contaminants or debris, and shall display a surface profile suitable for application of the liner system in accordance with the manufacturer's recommendations.
- E. After completion of surface preparation, perform the seven point check list, inspecting for:
 - 1. Leaks
 - 2. Cracks
 - 3. Holes
 - 4. Exposed Rebar
 - 5. Ring and Cover condition
 - 6. Invert Condition
 - 7. Inlet and Outlet Pipe Condition
- F. After the defects in the structure are identified, repair all leaks and severe cracks with Spectra-Grout, or other methods approved by the manufacturer.
- G. Upon completion of leak and crack repair, the surface shall be primed in accordance with the manufacturer's recommendations.

MATERIAL INSTALLATION

- A. Application procedures shall conform to recommendations of the manufacturer, including materials handling, mixing, environmental controls during application, safety and spray equipment.
- B. Spray equipment shall be specifically designed to accurately ratio and apply the liner system.
- C. Application of multi-component liner system shall be in strict accordance with manufacturer's recommendation. Final installation minimum total thickness shall be 500 mils. A permanent identification and date of work performed shall be affixed to the structure in a readily visible location.
- D. If requested a final written report may be provided to the owner/engineer detailing the location, date of work and description of the work.

FINAL INSPECTION

- A. Final liner system shall be completely free of pinholes or voids. Liner thickness shall be the minimum value as described herein.
- B. Visual inspection may be made by the Owner/Engineer. Any deficiencies in the finished liner system shall be marked and repaired according to the procedures set forth by the manufacturer.

WARRANTY

Applicator and Manufacturer must warrant the liner system installation against failure for a period of 10 years from the installation date. Applicator shall correct failures any time prior to 10 years after the installation date. Failure will be deemed to have occurred if the protective liner fails to: (a) prevent the internal corrosion of the structure or (b) prevent groundwater infiltration. Failure does not include damage resulting from mechanical force or the presence of chemical substances not customarily present or

used in Wastewater Structures, defects in the workmanship or devices of others upon which the Wastewater Structure functions or act of God. The liner must be installed in accordance with Manufacturer's instructions by Applicators certified by Manufacturer. Executed 10-year Applicator and Manufacturer warranties are to be provided upon completion of work.

108.2 Method Measurement

Add the following paragraph:

Coating of manhole will be paid by vertical lineal foot. Depth of manhole was measured from center of manhole at rim to the top of bench. Work shall also include coating of bench. Work shall take place following lining processes to ensure the interface of the CIPP is coated properly.

108.5 Basis of Payment

Add the following items to the table:

Pay Item	Pay Unit
Manhole Coating (48" Manhole) to include manhole bench, upper exposed section of box structure to CIPP interface.	VLF

3.5. Attachments:

- Appendix A: Project Submittal Form
- Appendix B: Bypass Pumping
- Appendix C: Request to Discharge Industrial Process Wastewater
- Appendix D: Cured-In-Place (CIPP) Specification
- Appendix E: Construction Drawings

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	January 31, 2019
Mandatory Pre-Bid Meeting	February 12, 2019
Inquiry deadline, no questions after this date	February 18, 2019
Addendum Posted	February 22, 2019
Submittal deadline for proposals	February 27, 2019
City Council or Board of Commissioners Approval	March 20, 2019
Notice of Award & Contract execution	March 21, 2019
Bonding & Insurance Cert due	March 28, 2019
Preconstruction meeting	TBD
Work begins no later than	TBD
Final Completion	120 Calendar Days from Notice to Proceed
Holidays:	City observed holidays

4. Contractor's Bid Form

Bid Date: _____

Project: IFB-4602-19-DH "2019 Sewer Interceptor Repair and Replacements"

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: _____

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.

Bid Schedule: 2019 Sewer Interceptor Repair and Replacement Project

Contractor: _____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	626	Portable Sanitary Facility	1.	Lump	\$ _____	\$ _____
2	630	Mobilization	1.	Lump	\$ _____	\$ _____
3	630	Traffic Control (Complete In Place) to Include Flagging	1.	Lump	\$ _____	\$ _____
4	630	Traffic Control Plan	1.	Lump	\$ _____	\$ _____
5	SP	Bypass Pumping per City Specifications. See Appendix B in Bid Documents.	1.	Lump	\$ _____	\$ _____
6	SP	Weekly Newsletter- See Bid Documents SC 3.3.12	1.	Lump	\$ _____	\$ _____
7	SP	12 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	1,606.	LF	\$ _____	\$ _____
8	SP	15 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	878.	LF	\$ _____	\$ _____
9	SP	18 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	2,894.	LF	\$ _____	\$ _____
10	SP	24Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	5,942.	LF	\$ _____	\$ _____
11	SP	30 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	5,535.	LF	\$ _____	\$ _____
12	SP	Coat Manhole (48' I.D.) See SP - 7 for Specifications.	240.	VF	\$ _____	\$ _____
MCR		Minor Contract Revisions	---	---	---	\$ 80,000.00
Bid Amount:					\$	
Bid Amount:						dollars

APPENDIX A
PROJECT SUBMITTAL FORM

PROJECT SUBMITTAL FORM

PROJECT: **2019 Sewer Interceptor Repair and Replacements**

CONTRACTOR: _____

PROJECT ENGINEER: _____

Description	Date Received	Resubmittal Requested	Resubmittal Received	Date Accepted
-------------	---------------	-----------------------	----------------------	---------------

SEWER CONSTRUCTION

CIPP				
Manhole Coating				

EROSION CONTROL / STORMWATER MANAGEMENT

Best Management Plan				
Process Water Treatment Plan (Wet Out Installation)				
PERMITS, PLANS, OTHER				
Traffic Control Plan				
PWWTP Discharge Permits- Appendix C				
Bypass Pumping Plan				

APPENDIX B
BYPASS PUMPING

BYPASS PUMPING SPECIFICATION

PART 1 – GENERAL

1.1 DESCRIPTION

A. The work covered under this section of the Specifications includes furnishing all plans, labor, equipment, permits, and materials necessary to implement a temporary pumping system for the purpose of diverting existing sewer flow around a work area for the duration of the project.

B. Contractor shall be required to field verify bypass pumping flow and sizing requirements prior to submission of shop drawings. Bypass pumping plan shall be submitted to Project Engineer for approval prior to implementation.

C. The bypass system shall provide provisions for maintaining vehicular and pedestrian access, avoiding damage to public and private property, preventing leakage from hoses and minimizing noise from pumps. Sound attenuation will be necessary as many of the sewer lines are adjacent to residences.

D. It shall be the responsibility of the Contractor to provide protection for the entire bypass system including but not limited to piping, piping connections, pumps and ancillary equipment. Materials utilized for bypass pumping shall be appropriate for use for the intended operation and service. Protection for the bypass piping shall be performed through positive protection means. The Contractor shall be responsible for any damage caused by the Contractor's failure to provide adequate protection to the bypass system.

E. The Contractor shall conduct field surveys prior to any bypass operations to determine if there are any storm drains, waterways, or other similar areas that could be negatively affected in the event of a spill. Any potential hazards will be described in a narrative and on a bypass map. This narrative and map will be included with the bypass plan that will be submitted to the Engineer for review. The Contractor shall prepare an emergency response plan to be followed in the event of a spill or release of sanitary sewage during the WORK. This plan shall be developed to minimize the impacts of the spill or release and include containment, cleanup and rinsate collection. The Contractor shall indicate the availability of the required materials and equipment for emergency response.

1.2 SUBMITTALS

A. For the flow bypassing method(s) utilized during pipe inspection, rehabilitation or reconstruction, the Contractor shall submit the following information specific for each bypass setup 10 days prior to construction:

1. A detailed plan and description outlining all provisions and precautions to be taken by the Contractor regarding the handling of existing pipeline flows. This plan should include schedules, locations, capacities of equipment, materials, sizing and selection data, location of nearby waterways, reinstatement procedures, manufacturer catalog cut sheets and calculations,

and all other incidental items necessary and/or required to insure the proper protection of these facilities, including protection of the access and bypass pumping locations from damage due to discharge flows. Drawings indicating the location of the equipment, piping layouts and pumping and discharge manholes shall be included.

2. Copy of all permits required to perform the work.
3. Certification of workmen trained for welding and installing HDPE pipe.
4. Record of measurement or verification of sanitary sewer flow rates.
5. Emergency spill or release plan including site specific requirements.

1.3 DESIGN REQUIREMENTS

A. The City does not have any flow data for any of the project locations. It shall be the Contractor's responsibility to verify the estimated flows by measuring flows prior to the work and designing the pumping system accordingly. Bypass pumping systems shall have sufficient capacity to pump **50% more than the maximum measured flow**.

The Contractor shall provide all pipeline plugs, pumps of adequate size to handle peak flow, and temporary discharge piping to ensure that the total flow of the sewer can be safely diverted around the WORK. Bypass pumping systems shall be manned at all times while operating.

B. The Contractor shall have adequate standby equipment available and ready for immediate operation and use in the event of emergency or breakdown. Pumps will be selected per the results of the flow calculations and per site requirements. All bypass systems shall have a fully-operational back-up pump available in the event that a primary pump fails. This information shall be specified in the bypass plans.

C. The bypass pumping system shall be capable of bypassing the flow around the work area and of returning any amount of flow up to full available flow into City's sanitary sewer system as necessary for satisfactory performances of the work.

D. The bypass system shall adhere to all local, state and federal codes and regulations as required by the regulatory agencies having jurisdiction.

E. The Contractor shall maintain sewer flows around the work area in a manner that will protect and not cause surcharging of sewers, drains, damage or flooding to public and private property.

F. The Contractor shall protect water resources, wetlands and other natural resources during the WORK.

1.4 RESPONSIBILITY FOR OVERFLOWS OR SPILLS

A. It shall be the responsibility of the Contractor to schedule and perform the WORK in a manner that does not cause or contribute to incidence of overflows, releases or spills of sewage from the sanitary sewer system or the bypass operation.

B. The Contractor shall develop a site-specific spill response plan in the event that a spill involving sewage should occur. This plan shall include the following:

1. Emergency contact information for the spill response team.

2. Plan for immediately containing the leak or spill.
3. Plan for immediately addressing the source of the leak or spill.
4. Plan for immediately preventing public exposure to the leak or spill, including procedures for diverting pedestrian and automobile traffic away from the impacted area.
5. Contact information for vactor truck services.
6. Contact information for a laboratory certified to test water samples for the presence of fecal coliform.
7. Procedures for collecting water quality samples to assess the magnitude and range of impact of any leak or spill.
8. Procedures for washing down all affected areas with chlorinated potable water, including a requirement that all wastewater generated from this process be collected and disposed of in accordance with the applicable law.
9. Procedures for removing and replacing affected soils.
10. Plans for conducting an investigation to determine the causes of the leak or spill and a review of the results of the implementation of the spill response plan.

A copy of the spill response plan shall be provided to the Engineer for review and comment prior to the commencement of any work. The Contractor shall submit to the Engineer a list of contact information for all supervisory personnel working on the project, including a list of emergency contact numbers available for 24-hour assistance. The Contractor shall also coordinate with the Engineer and City to develop a list of individuals and agencies that must be contacted immediately in the event of a spill. Included on the list shall be the Colorado Department of Public Health and Environment Release and incident Reporting line: 1-877-518-5608. In the event of a spill, the Contractor shall report the spill to CDPHE and conform to all requirements of CDPHE Policy No. WQE-10.

C. In the event that the Contractor's work activities contribute to overflows, releases or spills, the Contractor shall immediately take the appropriate action to contain and stop the overflow, and notify the City of Grand Junction Wastewater Services at 970-256-4180 from 7:30 am to 4:30 pm, at 970-256-8333 after hours and holidays; if that line is busy, call non-emergency police dispatch at 970-242-6707; and as a last resort call police dispatch at 911. Clean up shall include rinsate collection and disinfection of the area affected by the spill to the satisfaction of the Engineer. Site-specific materials shall be used to retain and divert solids and divert flow from environmentally sensitive areas. Storm drains shall be covered to ensure that sewage does not reach the storm water system. Emergency response spill kits and other site-specific spill containment material shall be available on site at all times. An incident report including but not limited to cause of the release or spill, actions taken to mitigate the event and cleanup activities performed shall be submitted to the Engineer by the Contractor within 24 hours of completion of the cleanup activities.

PART 2 – MATERIALS

2.1 MATERIALS

A. Discharge piping will be selected according to flow calculations and system operating calculations. Suction piping will be selected according to pump size, flow calculations, and manhole depth based on manufacturer's specifications and recommendations.

B. Flexible hoses and associated couplings and connectors shall be abrasion resistant, suitable for the intended service, and shall be rated for the external and internal loads anticipated including test pressures. External loading design shall incorporate all anticipated traffic loadings, including traffic impact loading.

1. At a minimum, hose subject to traffic loading shall be composed of a system, such as traffic ramps or covers, but not limited to, capable of withstanding H-20 loading criteria. System shall be installed and maintained to meet H-20 loading requirements while in use or as directed by the Engineer.

C. Valves and fittings will be selected according to flow calculations, the pump sizes previously determined, and system operating pressures.

D. Plugs will be selected and installed according to the size of the line to be plugged, pipe and manhole configurations, and on a site-specific basis. All bypass systems will have additional plugs in the event one plug fails. All plugs will be inspected prior to every use for defects which may lead to failure.

2.2 DELIVERY, STORAGE, AND HANDLING

A. Transportation, handling, and storage of the piping, fittings, pumps and ancillary equipment and materials shall be as recommended by manufacturer.

B. If new materials or equipment become damaged before or during installation, it shall be repaired by the Contractor as recommended by the manufacturer or replaced as required by the Engineer at the Contractor's expense, prior to initiating the WORK.

C. The Contractor shall deliver, store and handle other materials as required to prevent damage. Damaged materials shall be replaced by the Contractor at no additional cost to the City.

D. The Contractor shall inspect all materials and equipment for proper operation prior to initiating the WORK. Any equipment or materials identified by the Engineer which is indicated unsuitable for use by the Contractor for use on this project shall be replaced by the Contractor at no additional cost to the City.

PART 3 – EXECUTION

3.1 PREPARATION

A. The Contractor is responsible for locating any existing utilities in the area that the Contractor selects to locate bypass pipelines. The Contractor shall locate bypass pipelines to minimize any disturbance to existing utilities and shall obtain approval of the pipeline locations from the City. The Contractor is responsible for all costs associated with relocating utilities and obtaining permits.

B. The Contractor shall protect existing facilities from damage during pumping activities.

3.2 INSTALLATION

A. General

1. Plugging or blocking of flows in the line segments to be bypassed shall incorporate a primary and secondary plugging device. When plugging is no longer required for performance of the work, it is to be removed in a manner that permits flows to slowly return to normal without surge, surcharge or other major disturbance.
2. The bypass piping shall be located off streets and sidewalks as required. Where bypass piping crosses, or is installed in driveways, sidewalks and/or other public or private ways, the Contractor shall provide and maintain facilities to permit normal pedestrian and vehicular traffic reasonable access to concourses in accordance with the Contractor's approved traffic control plan from the jurisdictional or governing authority.
3. Upon completion of the bypass pumping operations, the Contractor shall remove all piping and complete restoration, restoring all property to preconstruction condition including but not limited to pavement. The Contractor is responsible for obtaining any permits and/or permission for placement of the temporary pipeline within public and private properties.
4. Contractor shall not divert flow to new sewer or manhole prior to completion of the work as identified in the Contract Documents and as approved by the Engineer.

B. Piping

1. The pipe shall be assembled and joined at the site using couplings or flanges to provide a leak proof joint in strict accordance with the manufacturer's instructions and ASTM D 2657. Threaded or solvent cement joints and connections are not permitted.
2. All equipment and procedures used shall be used in strict compliance with the manufacturer's instructions and recommendations.
3. All joints shall be subject to acceptance by the Engineer prior to insertion.
4. Any section of the pipe having other defects of manufacturing or handling as determined by the Engineer shall be discarded and not used.

C. Cleanup and system removal

1. The Contractor shall restore bypass pump areas to pre bypass condition including any cleanup measures necessary due to fuel, coolant, oil, and sewage leaks. The Contractor shall document any cleanup measures that were necessary. The Contractor's bypass plan and methods shall ensure that all sewage in the bypass pipes, pumps, and fittings has been emptied into the sanitary sewer and flushed with potable water or scrubbed with a "pig" device before system removal.

PART 4 – MEASUREMENT AND PAYMENT

1. MEASUREMENT

A. Measurement shall be by the lump sum to include all locations.

2. PAYMENT

A. Payment shall be by the lump sum and shall include payment for all design costs of bypass pumping system, pumping equipment, pipes, labor, valves, spill prevention plan and equipment, labor, mobilization, fuel, potable water for hydrostatic testing of bypass lines, road crossing devices, costs to restore area to existing condition and all other items necessary to conduct bypass pumping.

APPENDIX C

REQUEST TO DISCHARGE INDUSTRIAL PROCESS WASTEWATER



**REQUEST TO DISCHARGE INDUSTRIAL
PROCESS WASTEWATER**

This form shall be used by a non-permitted industrial, commercial or institutional facility proposing to discharge directly to the City/County Sewer System. The application must be received and approved by the Grand Junction Industrial Pretreatment Program at least 24 hours prior to the proposed discharge date.

FACILITY INFORMATION

NAME: _____

ADDRESS: _____

CONTACT (name and title): _____

PHONE: _____ FAX: _____ E-MAIL: _____

WASTEWATER INFORMATION

DESCRIBE TYPE OF WASTEWATER: _____

DESCRIBE SPECIFIC LOCATION OF DISCHARGE: _____

VOLUME OF WASTEWATER TO BE DISCHARGED IS _____ GALLONS

DISCHARGE RATE OF WASTEWATER: _____ GALLONS PER MINUTE

REQUEST TO DISCHARGE ON: (dates) _____ BETWEEN THE HOURS OF _____ and _____

**IMPORTANT! ATTACH MATERIAL SAFETY DATA SHEET and/or LAB ANALYSIS RESULTS
FOR ALL PARAMETERS REQUESTED TO BE DISCHARGED**

CERTIFICATION STATEMENT

I certify under penalty of law that I have personally examined and am familiar with the information herein and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I certify that, to the best of my knowledge and belief, no dumping of concentrated Toxic Organics or other Toxic Materials into the wastewater has occurred.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

Send/fax application to: Industrial Pretreatment Program
Persigo Wastewater Treatment Plant
2145 River Road
Grand Junction, CO 81505

Phone: (970) 256-4180
Fax: (970) 245-8620

APPENDIX D

Cured-In-Place Pipe (CIPP) Specification

CURED -IN-PLACE PIPE (CIPP) SPECIFICATION

1. INTENT

1.1 It is the intent of this specification to provide for the reconstruction of pipelines and conduits by the installation of a resin-impregnated flexible tube, which is formed to the original conduit by use of a hydrostatic head. The resin is cured using hot water under hydrostatic pressure within the tube. The Cured-In-Place Pipe (CIPP) will be continuous and tight fitting. The CIPP must be designed for a “Fully Deteriorated Condition” with a safety factor of 2.0. The following requirements apply generally to the CIPP portion of the work with additional specifications as provided below:

- The subcontractor performing the CIPP work must be prequalified to work for the City of Grand Junction.
- The Subcontractor performing the CIPP work must be identified on the Bid Form and shall not be changed after bid opening without specific written approval from the Project Engineer.
- The Subcontractor shall verify host pipe diameter prior to design and fabrication of liner.
- Prior to installation of the CIPP, a design report shall be submitted to the Project Engineer, showing all assumptions, design calculations, test data and other pertinent information. **The design report must be stamped by the Licensed Professional Engineer that prepared it.** The design report is incidental to the lump sum pay item for installation of the CIPP.

2. REFERENCED DOCUMENTS

2.1 This specification references and incorporates ASTM F1216 (Rehabilitation of pipelines by the inversion and curing of a resin-impregnated tube), ASTM F1743 (Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the pull in and inflate curing of a resin-impregnated tube), and ASTM D790 (Test methods for flexural properties of non-reinforced plastics) which are made a part hereof by such reference and shall be the latest edition and revision thereof. In case of conflicting requirements between this specification and these referenced documents, this specification will govern.

3. PRODUCT, MANUFACTURER/INSTALLER QUALIFICATION REQUIREMENTS

3.1 Since sewer products are intended to have a 50 year design life, and in order to minimize the Owner’s risk, only proven products with substantial successful long term track records will be approved. All trenchless rehabilitation products and installers must be pre-approved prior to the formal opening of proposals.

Products and Installing Companies seeking approval must supply information verifying that they meet all of the following criteria to be deemed Commercially Acceptable:

3.1.1 For a Product (materials, process, and workmanship) to be considered Commercially Proven, a minimum of 1,000,000 linear feet or 4,000 manhole-to-manhole line sections of successful wastewater/storm water collection system installations in the U.S. must be documented to the satisfaction of the Owner to assure commercial viability. In addition, at least 50,000 linear feet of the product shall have been in successful service within the State for a minimum of five years.

- 3.1.2 For an Installer to be considered as Commercially Proven, the Installer must satisfy all insurance, financial, and bonding requirements of the City, and must have had at least 3 (three) years active experience in the commercial installation of the product bid. In addition, the Installer must have successfully installed at least 3,000 feet of the product bid in wastewater, stormwater, or irrigation water systems. Acceptable documentation of these minimum installations must be included with the bid package as described in the Instructions to Bidders.

Subcontractors that propose to perform CIPP work must be prequalified specifically for CIPP work by the City of Grand Junction. Contact the Project Engineer for information regarding prequalified CIPP subcontractors or to make arrangements for prequalification. Note that the prequalification process can be time consuming. Subcontractors interested in prequalifying should begin the process as soon as possible.

- 3.1.3 Both the rehabilitation manufacturing and installation processes shall operate under a quality management system which is third-party certified to ISO 9000 or other internationally recognized organization standards. Proof of certification shall be required for approval of the CIPP sub-contractor.
- 3.1.4 The owner authorizes the use of proven materials that serve to enhance the pipe performance specified herein. Proven materials have passed independent laboratory testing, not excluding long-term (10,000 hour) structural behavior testing, and have been successfully installed to repair failing host pipes in the U. S. for at least 4 years. In addition to the aforementioned, the owner may require that the contractor demonstrate that the enhancements proposed exceed the specifications herein, prior to the installation of the enhanced material systems. This section in no way shall be interpreted as authorization to deviate from the minimum standard practices set forth herein.
- 3.1.5 **The CIPP subcontractor shall provide resumes of experience for the site supervisor (superintendent) to the City, demonstrating a minimum of 2 years of CIPP installation experience using the methods stipulated for this project.**

4. MATERIALS

- 4.1 Tube - The sewn Tube shall consist of one or more layers of absorbent non-woven felt fabric and meet the requirements of ASTM F1216, Section 5. The tube shall be constructed to withstand installation pressures, have sufficient strength to bridge missing pipe, and stretch to fit irregular pipe sections.
- 4.1.1 The wet out Tube shall have a uniform thickness that when compressed at installation pressures will meet or exceed the Design thickness.
- 4.1.2 The Tube shall be sewn to a size that when installed will tightly fit the internal circumference and length of the original pipe. Allowance should be made for circumferential stretching during inversion. Overlapped layers of felt in longitudinal seams that cause lumps in the final product shall not be utilized.

- 4.1.3 The outside layer of the Tube (before wet out) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate monitoring of resin saturation during the resin impregnation (wet out) procedure.
- 4.1.4 The Tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material shall be included in the Tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.
- 4.1.5 The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.
- 4.1.6 Seams in the Tube shall be stronger than the non-seamed felt.
- 4.1.7 The outside of the Tube shall be marked for distance at regular intervals along its entire length, not to exceed 5 ft. Such markings shall include the Manufacturers name or identifying symbol. The tubes must be manufactured in the USA.
- 4.2 Resin - The resin system shall be a corrosion resistant polyester, vinyl ester, or epoxy and catalyst system that when properly cured within the tube composite meets the requirements of ASTM F1216, ASTM F1743, the physical properties herein, and those which are to be utilized in the Design of the CIPP for this project. The resin shall produce CIPP which will comply with the structural and chemical resistance requirements of this specification.
- 5. STRUCTURAL REQUIREMENTS
 - 5.1 The CIPP shall be designed as per ASTM F1216, Appendix X.1. The CIPP design shall assume no bonding to the original pipe wall. The CIPP shall be designed for a fully deteriorated host pipe condition.
 - 5.2 The Contractor must have performed long-term testing for flexural creep of the CIPP pipe material installed by his Company. Such testing results are to be used to determine the Long-term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (Tube and Resin) and general workmanship of the installation and curing. A percentage of the instantaneous flexural modulus value (as measured by ASTM D-790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. Values in excess of 50% will not be applied unless substantiated by qualified third party test data. The materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in Design.
 - 5.3 The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If separation of the layers occur during testing of field samples, new samples will be cut from the work. Any reoccurrence may cause rejection of the work.

5.4 The cured pipe material (CIPP) shall conform to the structural properties, as listed below.

MINIMUM PHYSICAL PROPERTIES

<u>Property</u>	<u>Test Method</u>	<u>Cured Composite min. per ASTM F1216</u>	<u>Cured Composite (400,000 psi Resin)</u>
Modulus of Elasticity	ASTM D-790 (short term)	250,000 psi	400,000 psi
Flexural Stress	ASTM D-790	4,500 psi	4,500 psi

The required structural CIPP wall thickness shall be based as a minimum, on the physical properties in the table above and in accordance with the Design Equations in the appendix of ASTM F 1216. All calculations shall be submitted to the Project Engineer prior to ordering of the pipe. The submittal shall show ALL information used in the calculations, including original equations, parameters, variables, definitions, values assigned, and intermediate results as well as final results. The purpose of this submittal is to allow the Project Engineer to examine all aspects of the design calculations. Submittal of governing equations and final results shall not be sufficient. Delays in proper submittal of a complete design package will not constitute a valid reason for schedule extension.

5.6 Any layers of the tube that are not saturated with resin prior to insertion into the existing pipe shall not be included in the structural CIPP wall thickness computation.

6. TESTING REQUIREMENTS

6.1 Chemical Resistance - The CIPP shall meet the chemical resistance requirements of ASTM F1216, Appendix X2. CIPP samples for testing shall be of tube and resin system similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meet these chemical testing requirements.

6.2 Hydraulic Capacity - Overall, the hydraulic profile shall be maintained as large as possible. The CIPP shall have a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.

6.3 CIPP Field Samples – The Contractor shall submit test results from field installations in the USA of the same resin system and tube materials as proposed for the actual installation. These test results must verify that the CIPP physical properties specified in Section 5.5 have been achieved in previous field applications. Samples for this project shall be made and tested as described in Section 10.1.

6.4 Installed CIPP Testing – The Contractor shall provide samples for testing to the City from the actual installed CIPP. Samples shall be provided at a minimum for one location per 1000 feet of installed CIPP. The sample shall be cut from a section of cured CIPP that has been pulled through a like diameter pipe which has been held in place by a suitable heat sink, such as sandbags. All curing, cutting, and identification of samples shall be witnessed by the City.

7. INSTALLATION RESPONSIBILITIES FOR INCIDENTAL ITEMS

- 7.1 The Contractor/subcontractor shall be responsible for reopening connections to all laterals shown on the drawings. This work shall be incidental to the CIPP pay item.
- 7.2 Cleaning of Host Line - The Contractor, when required, shall remove all internal debris out of the line that will interfere with the installation of CIPP. All debris removed from the sewer line shall be taken to the Persigo Wash Wastewater Treatment Plant located at 2145 River Road. Any hazardous waste material encountered during this project will be considered as a changed condition. The cleaning of the host lines shall be considered incidental to CIPP installation and will not be paid for separately.
- 7.3 Inspection of Pipelines - Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by close circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation of CIPP into the pipelines, and it shall be noted so that these conditions can be corrected. A video tape and suitable log shall be kept for later reference by the Owner.
- 7.4 Line Obstructions - It shall be the responsibility of the Contractor to clear the line of obstructions such as solids, roots, projecting service pipes, mineral deposits, and other obstructions that will prevent the insertion of CIPP. If pre-installation inspection reveals an obstruction such as a protruding service connection, dropped joint, or a collapse that will prevent the inversion process, that was not evident on the pre-bid video and it cannot be removed by conventional sewer cleaning equipment, then the Contractor shall make a point repair excavation to uncover and remove or repair the obstruction. Such excavation shall be approved in writing by the Owner's representative prior to the commencement of the work and shall be considered as a separate pay item.

8. INSTALLATION

- 8.1 Installation of the CIPP shall conform with Traffic Control specifications and Special Conditions stipulated elsewhere in the Contract Documents. CIPP installation shall be in accordance with ASTM F1743 with the following modifications:
 - 8.1.1 Resin Impregnation - The quantity of resin used for tube impregnation shall be sufficient to fill the volume of air voids in the tube with additional allowances for polymerization shrinkage and the loss of resin through cracks and irregularities in the original pipe wall. A vacuum impregnation process shall be used. To insure thorough resin saturation throughout the length of the felt tube, the point of vacuum shall be no further than 25 feet from the point of initial resin introduction.

After vacuum in the tube is established, a vacuum point shall be no further than 75 feet from the leading edge of the resin. The leading edge of the resin slug shall be as near to perpendicular as possible. A roller system shall be used to uniformly distribute the resin throughout the tube. If the Installer uses an alternate method of resin impregnation, the method must produce the same results. Any alternate resin impregnation method must be proven.

- 8.1.2 Tube Insertion – The wet out tube shall be positioned in the pipeline using the pull-through or inversion method.
- 8.1.3 Temperature gauges shall be placed inside the tube at the invert level of each end to monitor the temperatures during the cure cycle.
- 8.1.4 Curing shall be accomplished by utilizing steam pressure in accordance with the manufacturer’s recommended cure schedule.
- 8.1.5 Cooling shall be performed using chilled air.
- 8.1.6 Reinstatement of Services– Sanitary Service connections (taps) at the main be reopened without excavation, utilizing a remotely controlled cutting device, monitored by a video TV camera. The Contractor shall certify that he has a minimum of two complete working units plus spare key components on site before each inversion. No additional payment will be made for excavations for the purpose of reopening connections (unless noted otherwise on the Construction Drawings) and the Contractor will be responsible for all costs and liability associated with such excavation and restoration work. Any damage to the CIPP or service lateral resulting from removing the coupon of CIPP material at the service tap shall be repaired at the Contractor’s expense by open-cut excavation and installation of repair coupling and service tap as directed by the Engineer.

10. INSPECTION

- 10.1 CIPP samples shall be prepared and physical properties tested in accordance with ASTM, F1216 Section 8, using either method proposed. The flexural properties must meet or exceed the values listed in Table 1 of the applicable ASTM.
- 10.2 Wall thickness of samples shall be determined as described in ASTM F1216. The minimum wall thickness at any point shall not be less than 87½% of the design thickness as specified in this appendix.
- 10.3 Visual inspection of the CIPP shall be in accordance with ASTM F1216 and F1743. The Contractor shall provide a TV-log of the installation after all work is complete and prior to placing the sewer back in service.

11. CLEAN-UP

- 11.1 Upon acceptance of the installation work and testing, the Contractor shall restore the project area affected by the operations to a condition at least equal to that existing prior to the work.

12. PAYMENT

- 12.1 Payment for the CIPP installation shall be per lineal foot of CIPP installed, measured from end of pipe to end of pipe and shall include all aspects of the work described herein and on the Construction Drawings. This shall include the capture and treatment of all process water.

Payment for trenchless connection of services shall be made separately.

Add the following to **104.2.b Installation/Opening of Sewer Service Lines:**

Verification of Active Taps

It is the Contractors responsibility to verify all existing sewer taps to determine active vs inactive by smoke testing, use of dye, inserting a snake through a clean-out or roof vent and tracing to sewer main, etc. and only connect the active taps. There will be no separate measurement or payment for this work which will be considered incidental. Any damage to property or costs associated by failing to open active taps shall be the responsibility of the Contractor.

SECTION 105 – PIPELINE TESTING

Delete Section 105.2. The City of Grand Junction will not require the new sanitary sewer main to be pressure or leakage tested.

APPENDIX E

Construction Drawings

2019 SEWER INTERCEPTOR REHABILITATIONS JANUARY, 2019

1—Cover Sheet	13—Line B Plan & Profile Sta 0+00 — 5+00	25—4th St Plan & Profile Sta 20+00 — 24+00
2—Standard Abbreviations, Legend and Symbols	14—Line B Plan & Profile Sta 5+00 — 10+00	26—7th St Plan & Profile Sta 0+00 — 4+00
3—Summary of Approximate Quantities	15—Line B Plan & Profile Sta 10+00 — 20+00	27—7th St Plan & Profile Sta 4+00 — 8+00
4—Project Location Map	16—Line B Plan & Profile Sta 20+00 — 30+00	28—9th St Plan & Profile Sta 0+00 — 4+00
5—Keymap Sewer Interceptor Line A	17—Line B Plan & Profile Sta 30+00 — 40+00	29—9th St Plan & Profile Sta 4+00 — 8+00
6—Line A Plan & Profile Sta 0+00 — 10+00	18—Line B Plan & Profile Sta 40+00 — 50+00	30—9th St Plan & Profile Sta 8+00 — 12+00
7—Line A Plan & Profile Sta 10+00 — 20+00	19—Line B Plan & Profile Sta 50+00 — 60+00	31—12th St Plan & Profile Sta 0+00 — 4+00
8—Line A Plan & Profile Sta 20+00 — 30+00	20—4th St Plan & Profile Sta 0+00 — 4+00	32—12th St Plan & Profile Sta 4+00 — 8+00
9—Line A Plan & Profile Sta 30+00 — 40+00	21—4th St Plan & Profile Sta 4+00 — 8+00	33—12th St Plan & Profile Sta 8+00 — 12+00
10—Line A Plan & Profile Sta 40+00 — 50+00	22—4th St Plan & Profile Sta 8+00 — 12+00	34—12th St Plan & Profile Sta 12+00 — 16+00
11—Line A Plan & Profile Sta 50+00 — 57+00	23—4th St Plan & Profile Sta 12+00 — 16+00	35—12th St Plan & Profile Sta 16+00 — 21+00
12—Keymap Sewer Interceptor Line B	24—4th St Plan & Profile Sta 16+00 — 20+00	

UTILITIES AND AGENCIES								
AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE-WK	FAX
CITY OF GRAND JUNCTION	BRENDAN HINES	PROJECT ENGINEER	PROJECT ENGINEER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256-4038	(970) 256-4022
CITY OF GRAND JUNCTION	LEE COOPER	PROJECT ENGINEER	SANITARY SEWER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256-4155	(970) 256-4022
GRAND VALLEY IRRIGATION CO.	PHIL BERTRAND	MANAGER	IRRIGATION	688 26 RD	688 26 RD	GRAND JCT., CO 81506	(970) 242-2762	
SPECTRUM	JEFF VALDEZ	MANAGER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 245-8750	(970) 245-6803
CENTURYLINK	CHRIS JOHNSON	ENGINEER	TELEPHONE	2524 BLICHMANN AVE	2524 BLICHMANN AVE	GRAND JCT., CO 81504	(970) 244-4311	(970) 240-4349
UTE WATER	JUSTIN BATES	SUPERVISOR	WATER	PO BOX 460	2190 H 1/4 RD	GRAND JCT., CO 81502	(970) 242-7491	(970) 242-9189
XCEL	STEVE PIBURN	UNIT MANAGER	ELECTRIC	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244-2664	(970) 244-2664
XCEL	SARAH BARRICAU	UNIT MANAGER	GAS	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244-2656	(970) 244-2656

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE COVER SHEET WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

DESCRIPTION	DATE
REVISION △ _____	_____



Know what's below.
Call before you dig.

DRAWING STATUS:	
<input checked="" type="radio"/> PROGRESS	
<input type="radio"/> FINAL CONSTRUCTION DRAWINGS	
<input type="radio"/> ASBUILT	
DESIGNED BY:	
BRENDAN HINES, PROJECT ENGINEER	2019
REVIEWED BY:	
TRENT C. PRALL, PUBLIC WORKS DIRECTOR	2019
AUTHORIZED FOR CONSTRUCTION	
TRENT C. PRALL, PUBLIC WORKS DIRECTOR	2019
ACCEPTED AS CONSTRUCTED	
BRENDAN HINES, PROJECT ENGINEER	2019

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABC	AGGREGATE BASE COURSE
AC	ASBESTOS CEMENT
AP	ANGLE POINT
ASB	ANCHORED STRAW BALES
ASB	ALUMINIZED STEEL PIPE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BUTTERFLY VALVE
BOW	BACK OF WALK
BCR	BEGIN CURB RETURN
BOT	BOTTOM
BSWMP	BETTER STORM WATER MANAGEMENT PRACTICES CHORD
CAP	CORRUGATED ALUMINUM PIPE
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CI	CAST IRON
C,G,& SW	CURB, GUTTER & SIDEWALK
C	CENTER LINE
CL	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COMB	COMBINATION (AS IN STORM SEWER AND SANITARY SEWER)
CONC	CONCRETE
CSM	CITY SURVEY MONUMENT
CSP	CORRUGATED STEEL PIPE
CU	COPPER
DI	DUCTILE IRON
DWY	DRIVEWAY
E	ELECTRIC
ECR	END CURB RETURN
EG	EDGE OF GUTTER
EL	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FB	FULL BODY
FC	FACE OF CURB
FG	FINISHED GRADE
F	FLOW LINE
FL	FLANGE
FM	FORCE MAIN
FO	FIBER OPTICS
FS	FAR SIDE
FTG	FOOTING
G	GAS
GB	GRADE BREAK
GM	GAS METER
GV	GATE VALVE
HBP	HOT BITUMINOUS PAVEMENT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
IRR	IRRIGATION
L	LENGTH OF ARC
LC	LONG CHORD
LF	LINEAR FEET
LL	LONG ARC
LS	SHORT ARC
LT	LEFT
MB	MAILBOX
MCSM	MESA COUNTY SURVEY MONUMENT
MH	MANHOLE
MJ	MECHANICAL JOINT
MW	MILL WRAP
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOP	NO ONE PERSON
NRCP	NON-REINFORCED CONCRETE PIPE
NS	NEAR SIDE
NTS	NOT TO SCALE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PE	POLYETHYLENE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PIP	PLASTIC IRRIGATION PIPE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RG	RESTRAINED GLANDS
RL	LONG RADIUS
ROW	RIGHT OF WAY
RP	RADIUS POINT
RR	RAIL ROAD
RS	SHORT RADIUS
RT	RIGHT
S	SLOPE
SAN	SANITARY
SC	SHORT CHORD
SCD	STANDARD CONTRACT DOCUMENTS
SCH	SCHEDULE
SF	SILT FENCE
SL	SECTION LINE
SSRB	STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION
SSUU	STANDARD SPECIFICATIONS FOR CONSTRUCTION OF UNDERGROUND UTILITIES
STA	STATION
STL	STEEL
STM	STORM
T	TELEPHONE
TAN	LENGTH OF TANGENT
TC	TOP OF CURB
TH	TEST HOLE
TV	TELEVISION
(TYP)	TYPICAL
UU	UNDERGROUND UTILITIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPCC	VERTICAL POINT OF COMPOUND CURVATURE
VPRC	VERTICAL POINT OF REVERSE CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WATER
Δ	DELTA ANGLE

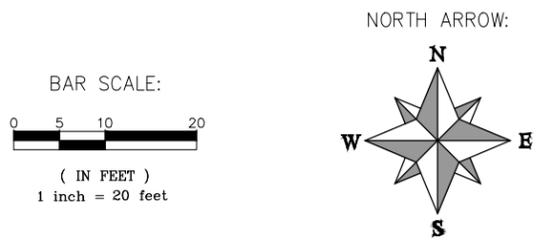
LEGEND

BSWMP	BSWMP
DRAINAGE BASIN BOUNDARY	---
BSWMP ANCHORED STRAW BALES	ASB ASB ASB ASB ASB ASB ASB ASB
BSWMP SILT FENCE	SF SF SF SF SF SF SF SF
BUILDING	[Hatched Box]
CONCRETE CURB AND GUTTER	2" CURB AND GUTTER
CONCRETE CURB, GUTTER, & SIDEWALK	7" C, G, & SW
CONCRETE DITCH	CONCRETE
CONCRETE SIDEWALK	4" SW
CULVERT	18" RCP
EARTH DITCH	EARTH . . . EARTH . . . EARTH . . .
EDGE OF GRAVEL	---
EDGE OF PAVEMENT	---
FENCE (BARBED WIRE)	---
FENCE (CHAIN LINK)	---
FENCE (IRON)	---
FENCE (PLASTIC)	---
FENCE (WOOD)	---
FENCE (WOVEN WIRE)	---
GUARD RAIL	---
HATCHING: INDICATES ASPHALT REMOVAL	[Dotted Hatching]
HATCHING: INDICATES CONCRETE REMOVAL	[Diagonal Hatching]
HATCHING: STAGING AREA	[Cross-hatched Area]
LINE (CENTER OF IMPROVEMENTS)	CENTERLINE
LINE (CITY LIMITS)	CITY LIMITS
LINE (CONTROL)	CONTROL LINE
LINE (EASEMENT)	---
LINE (MONUMENT/SECTION)	MONUMENT/SECTION LINE
LINE (PROPERTY)	---
LINE (RIGHT OF WAY)	---
MATCH LINE	MATCH LINE SEE SHEET NO ?
PIPE (IRRIGATION)	4" IRR
PIPE (SIPHON)	4" SIPHON

PROPOSED CONCRETE CURB AND GUTTER	=====
PROPOSED CONCRETE CURB, GUTTER, & SIDEWALK	=====
PROPOSED CONCRETE SIDEWALK	=====
PROPOSED "WET" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN)	8" PVC SANITARY SEWER
ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE	
RAIL ROAD	[Railroad Symbol]
RETAINING WALL	1" RETAINING WALL
STRIPING (CONTINUOUS WHITE)	WHITE
STRIPING (DASHED WHITE)	WHITE
STRIPING (CONTINUOUS YELLOW)	YELLOW
STRIPING (DASHED YELLOW)	YELLOW
TOP OF SLOPE	4570 4580
CONTOUR LINES (SHOWN BETWEEN TOP & TOE)	
TOE OF SLOPE	4570
TRAFFIC DETECTOR LOOP	[Loop Symbol]
UTILITY LINE (ABANDON) (THIS CASE A WATER LINE)	W (ABANDON) 8" W
UTILITY LINE (CABLE TV)	TV TV
UTILITY LINE (ELECTRIC)	E E
UTILITY LINE (FIBER OPTIC)	FO OPT FIBER FO
UTILITY LINE (GAS)	G 1 1/4" M.W. G
UTILITY LINE (HIGH VOLTAGE OVERHEAD POWER)	HV OHP
UTILITY LINE (OVERHEAD POWER)	OHP
UTILITY LINE (OVERHEAD TELEPHONE)	OHT
UTILITY LINE (SANITARY SEWER)	8" SAN
UTILITY LINE (SANITARY SEWER FORCE MAIN)	8" SFM
UTILITY LINE (SANITARY SEWER SERVICE)	8" SSM
UTILITY LINE (STORM SEWER)	8" STM
UTILITY LINE (STORM SEWER, PERFORATED)	6" PERF
UTILITY LINE (STORM/SANITARY SEWER SEWER COMBINATION)	18" COMB
UTILITY LINE (TELEPHONE)	T T
UTILITY LINE (WATER)	W 8" W

SYMBOLS

BENCH MARK	Ⓐ
CATCH BASIN	⊞
CLEAN OUT	⊞
CURB STOP	⊞
FIRE HYDRANT	⊞
GUY WIRE ANCHOR	→
HEADGATE	⊞
IRRIGATION PUMP	⊞
MAILBOX	⊞
MANHOLE (ELECTRIC)	⊞
MANHOLE (GAS)	⊞
MANHOLE (SANITARY/STORM)	⊞
MANHOLE (TELEPHONE)	⊞
MANHOLE (TV)	⊞
MANHOLE (WATER)	⊞
METER (GAS)	⊞
METER (WATER)	⊞
PEDESTAL (TELEPHONE)	⊞
PEDESTAL (TV)	⊞
PROPERTY PIN	•
PULL BOX	⊞
REDUCER FITTING	⊞
SIGN OR POST (SIGN TYPE NOTED)	⊞
SPRINKLER HEAD	⊞
STREET LIGHT	⊞
SURVEY MONUMENT (CITY)	⊞
SURVEY MONUMENT (TYPE NOTED)	⊞
TEST HOLE	⊞
TRAFFIC PAINT MARKING	→
TRAFFIC SIGNAL POLE AND MAST ARM	⊞
UTILITY POLE	⊞
VALVE (GAS)	⊞
VALVE (IRRIGATION)	⊞
VALVE (WATER)	⊞
VEGETATION (HEDGE OR BUSH)	⊞
VEGETATION (TREE STUMP)	⊞
VEGETATION (TREE) (CALIPER SIZE NOTED)	⊞
WATER HYDRANT	⊞
WEIR	⊞
YARD LIGHT	⊞



N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\01-04_Cover-Quant.dwg, 02_1/24/2019 2:42:27 PM

REVISION Δ	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION Δ			DESIGNED BY	DATE
REVISION Δ			CHECKED BY	DATE
REVISION Δ			APPROVED BY	DATE

SCALES: PLAN & PROFILE

HORIZONTAL: 1" = _____

VERTICAL: 1" = _____



PUBLIC WORKS ENGINEERING DIVISION

CITY OF GRAND JUNCTION STANDARD ABBREVIATIONS, LEGEND, AND SYMBOLS

Bid Schedule: 2019 Sewer Interceptor Repair and Replacement Project

Item No.	CDOT, City Ref.	Description	Quantity	Units
1	626	Portable Sanitary Facility	1.	Lump
2	630	Mobilization	1.	Lump
3	630	Traffic Control (Complete In Place) to Include Flagging	1.	Lump
4	630	Traffic Control Plan	1.	Lump
5	SP	Bypass Pumping per City Specifications. See Appendix B in Bid Documents.	1.	Lump
6	SP	Weekly Newsletter- See Bid Documents SC 3.3.12	1.	Lump
7	SP	12 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	1,605.71	LF
8	SP	15 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	877.7	LF
9	SP	18 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	2,893.8	LF
10	SP	24Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	5,942.31	LF
11	SP	30 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	5,534.79	LF
12	SP	Coat Manhole (48' I.D.) See SP - 7 for Specifications.	239.25	VF

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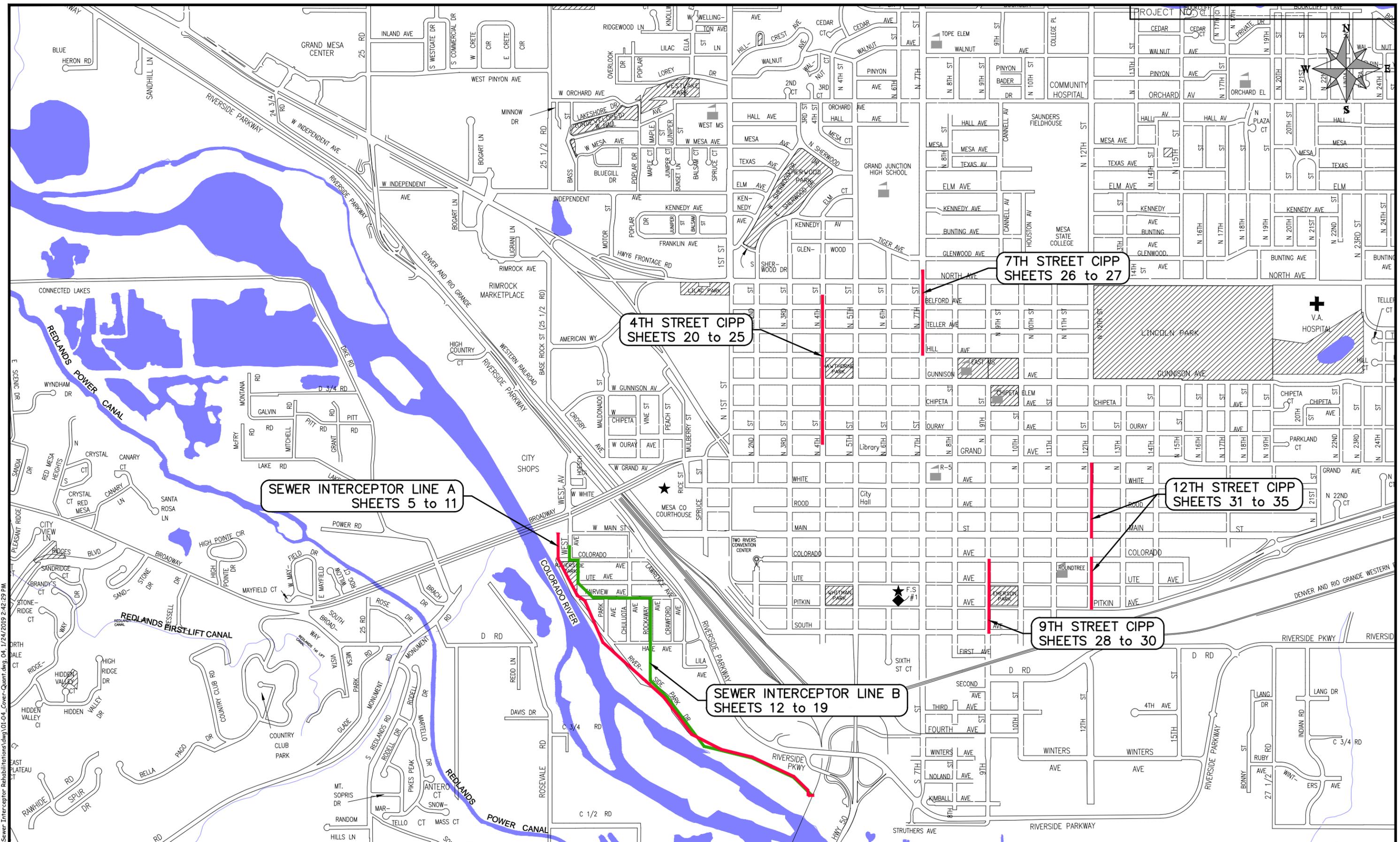
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<small>REVISION</small> △ _____	_____	_____	<small>DESIGNED BY</small> _____	<small>DATE</small> _____
<small>REVISION</small> △ _____	_____	_____	<small>CHECKED BY</small> _____	<small>DATE</small> _____
<small>REVISION</small> △ _____	_____	_____	<small>APPROVED BY</small> _____	<small>DATE</small> _____

SCALES: PLAN & PROFILE
 HORIZONTAL: 1" = _____
 VERTICAL: 1" = _____



PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
SUMMARY OF APPROXIMATE QUANTITIES



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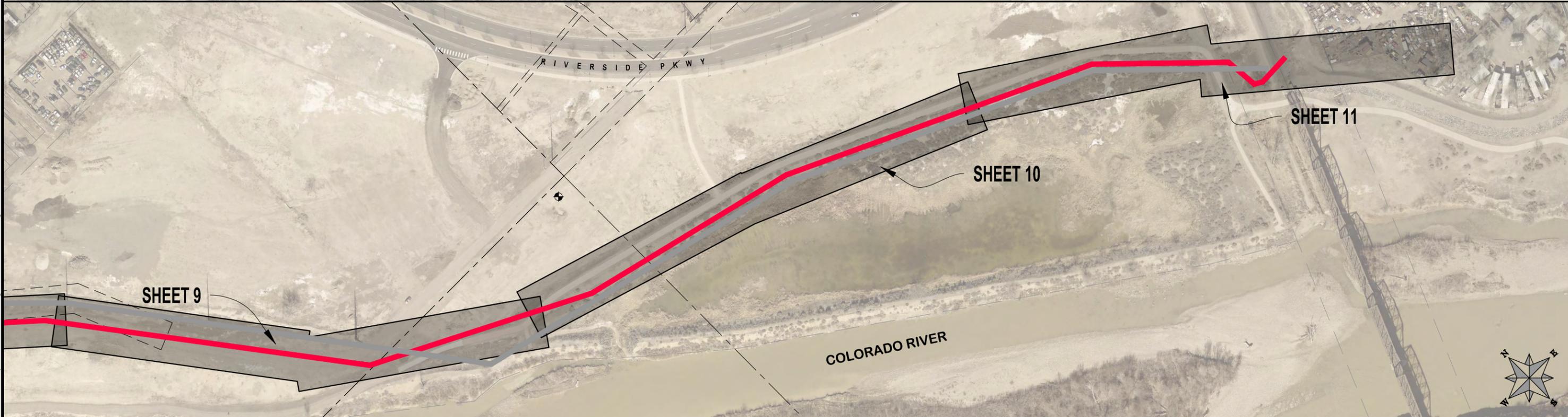
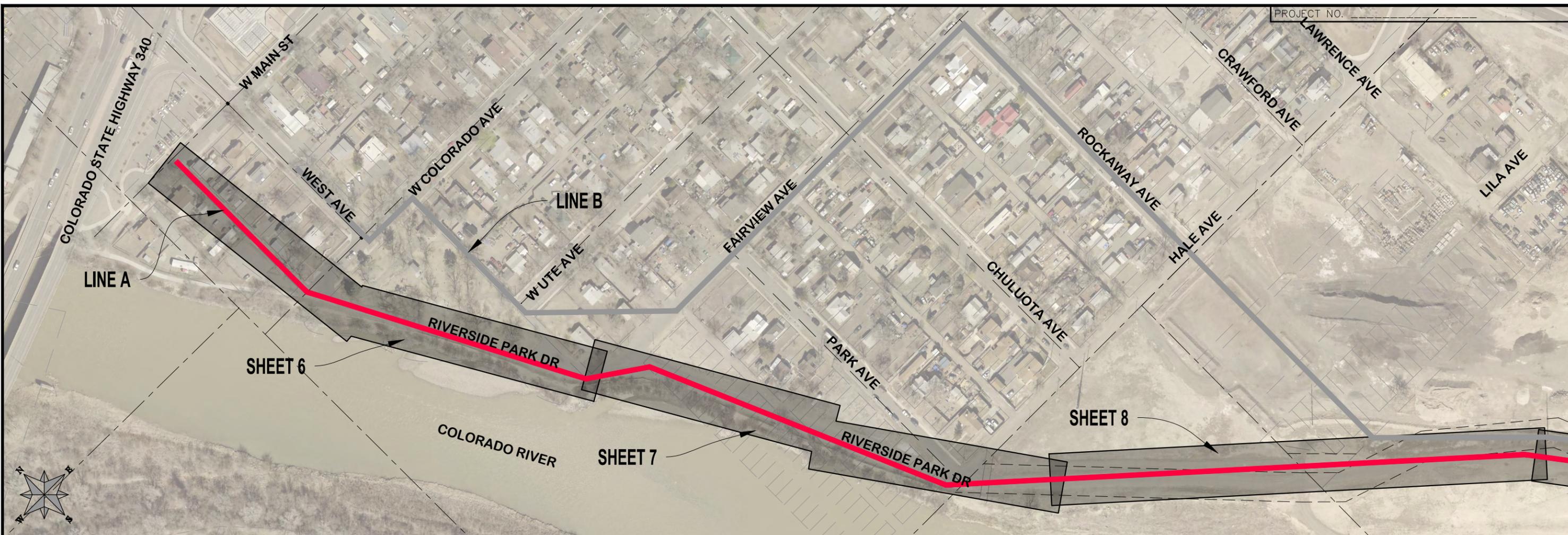
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REVISION			CHECKED BY		DATE	
REVISION			APPROVED BY		DATE	

SCALES: PLAN & PROFILE	
HORIZONTAL: 1" = 1250'	
0 312.5 625 1250'	
VERTICAL: 1" =	



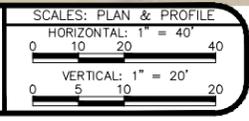
**PUBLIC WORKS
ENGINEERING DIVISION**

**2019 SEWER INTERCEPTOR REHABILITATIONS
PROJECT LOCATION MAP**



REVISION	DESCRIPTION	DATE	DRAWN BY	HMC	DATE	2018
REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE	
HORIZONTAL:	1" = 40'
VERTICAL:	1" = 20'



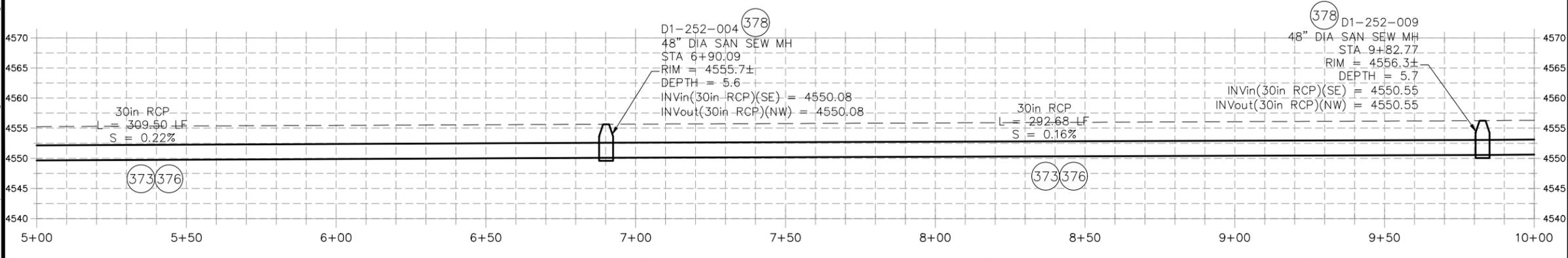
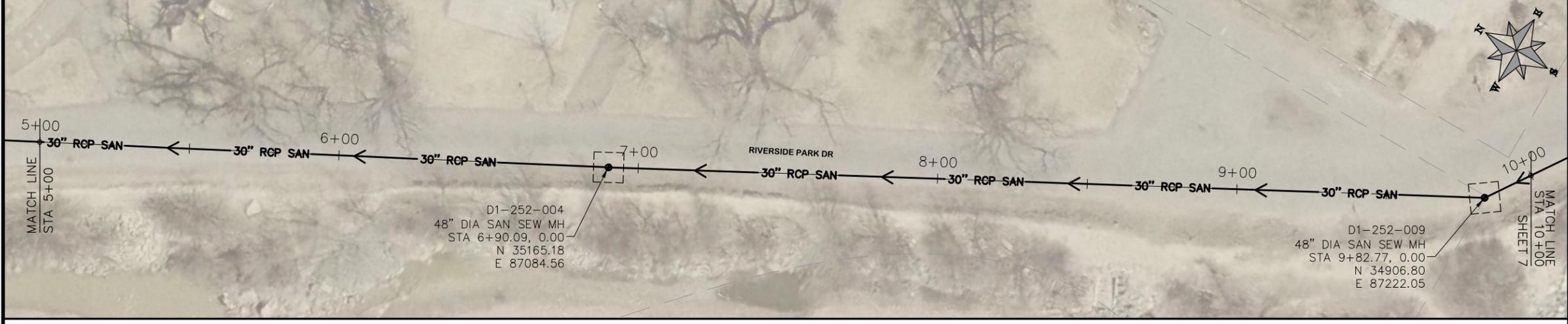
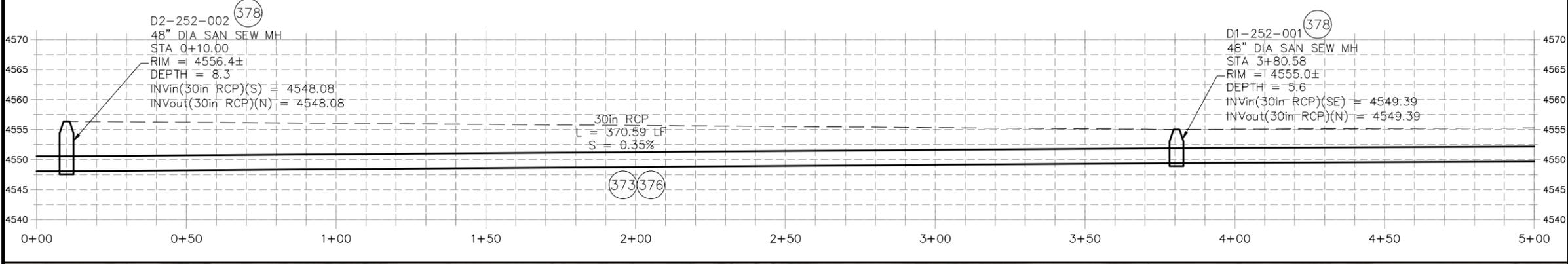
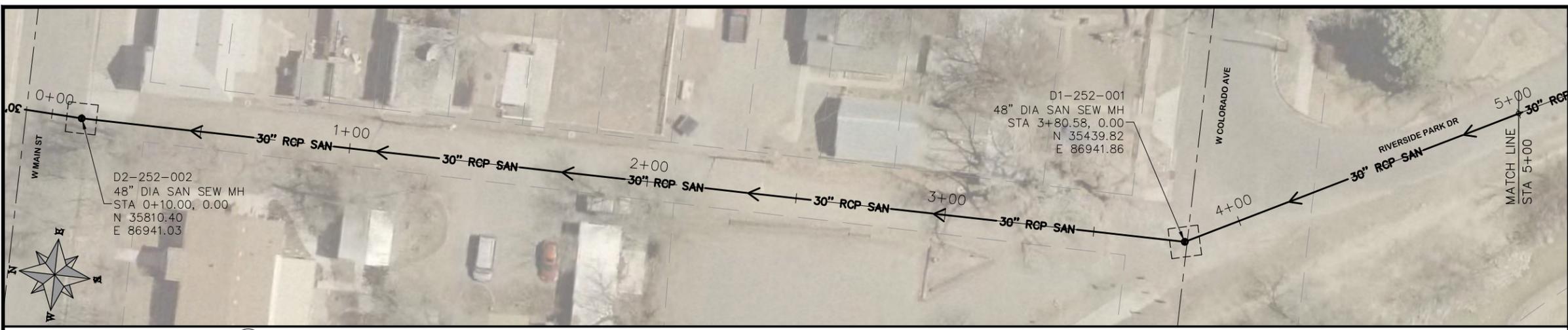
**PUBLIC WORKS
ENGINEERING DIVISION**

**2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A KEYMAP
STA 0+00 TO STA 57+00**

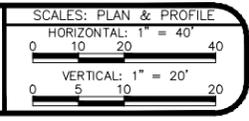
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CONSTRUCTION NOTES

- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)
- (378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)



REVISION	DESCRIPTION	DATE	DRAWN BY	HMC	DATE	2018
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REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018



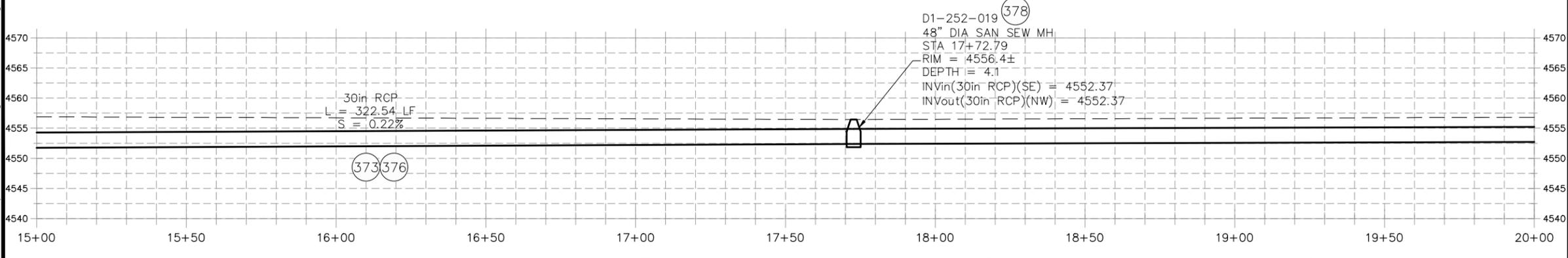
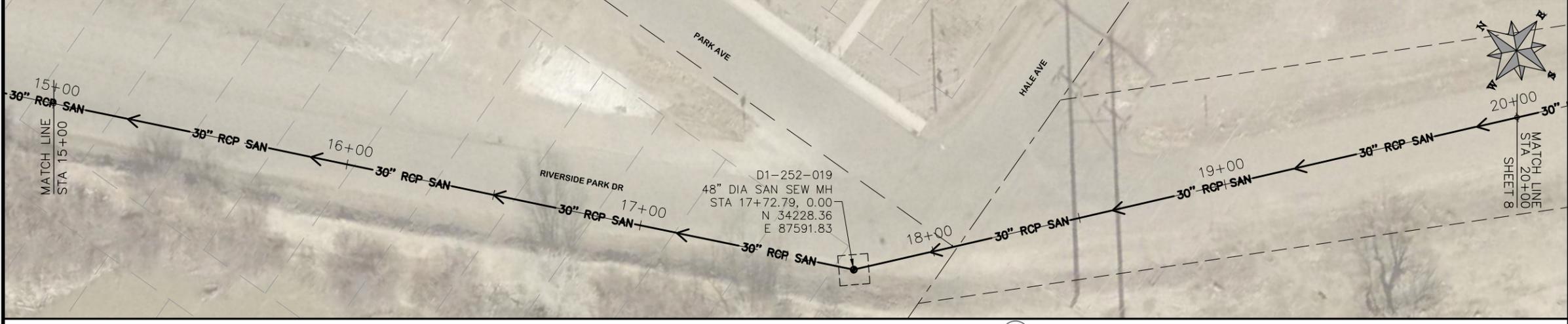
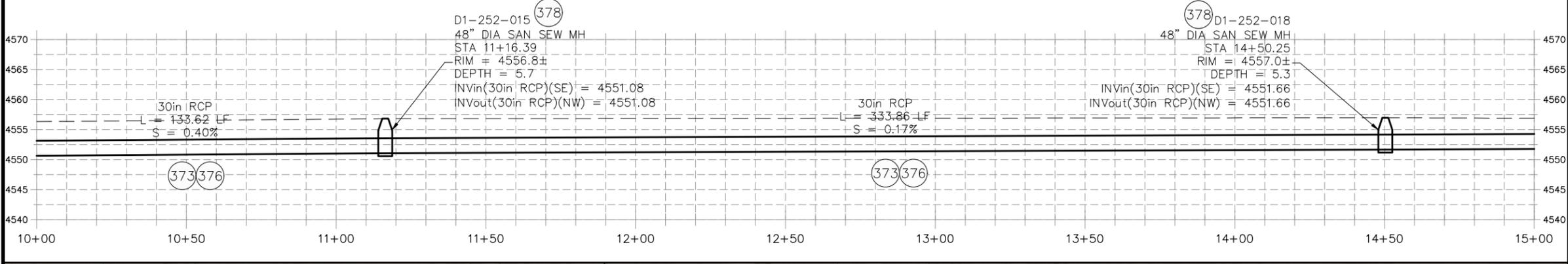
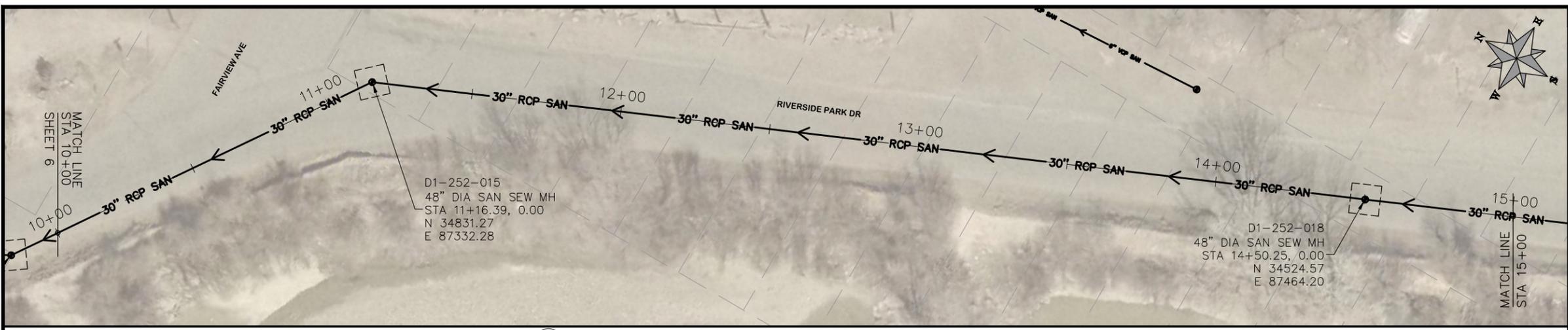
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 0+00 TO STA 10+00

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CONSTRUCTION NOTES

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REVISION	DESCRIPTION	DATE	DRAWN BY	HMC	DATE	2018
REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE

HORIZONTAL: 1" = 40'

VERTICAL: 1" = 20'



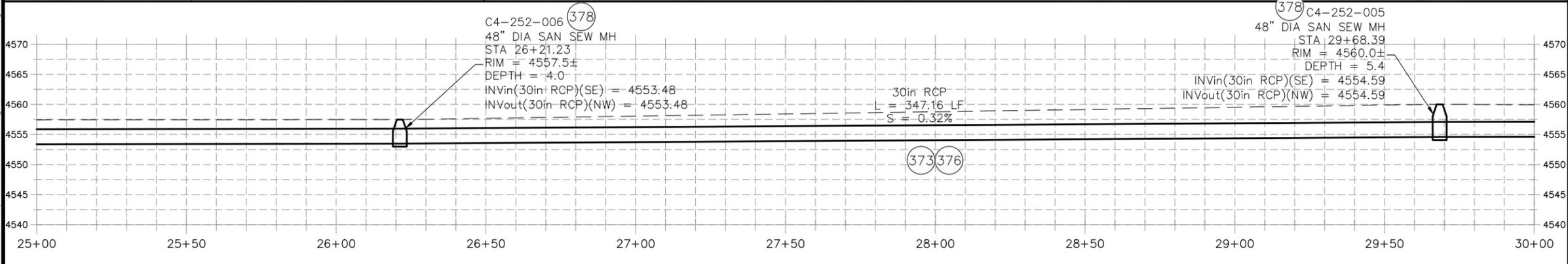
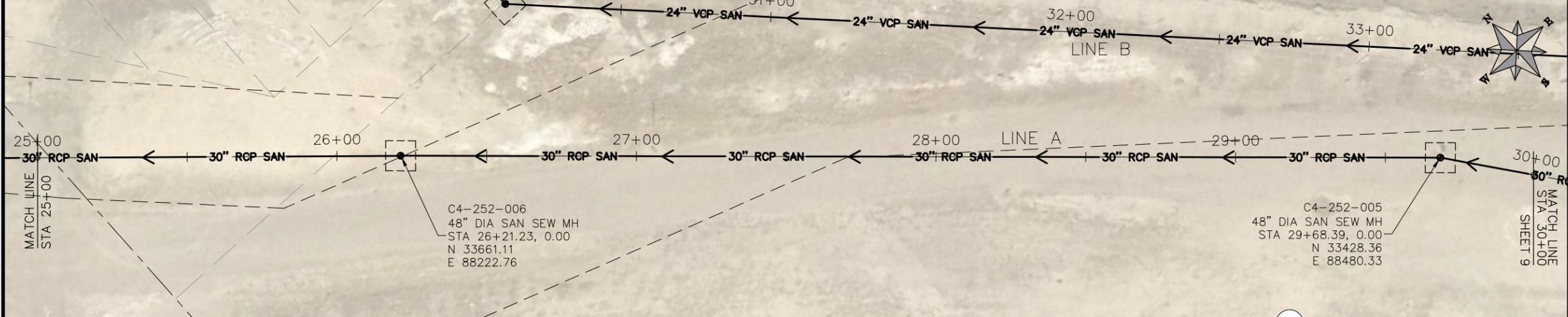
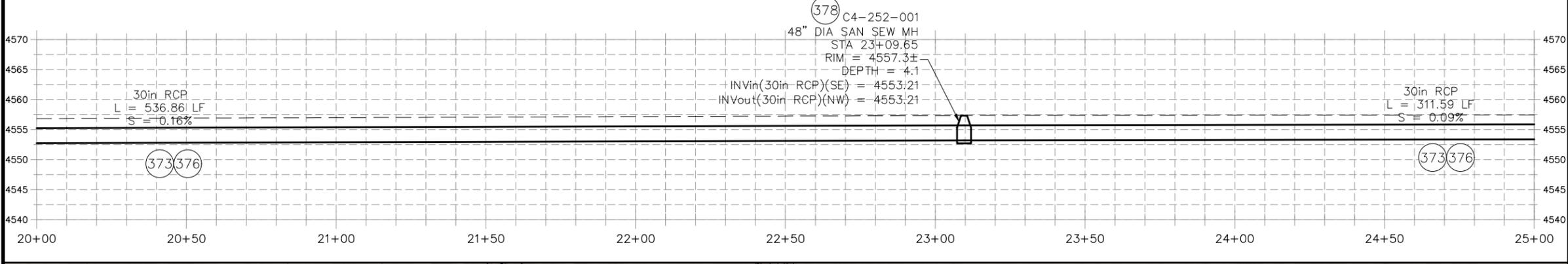
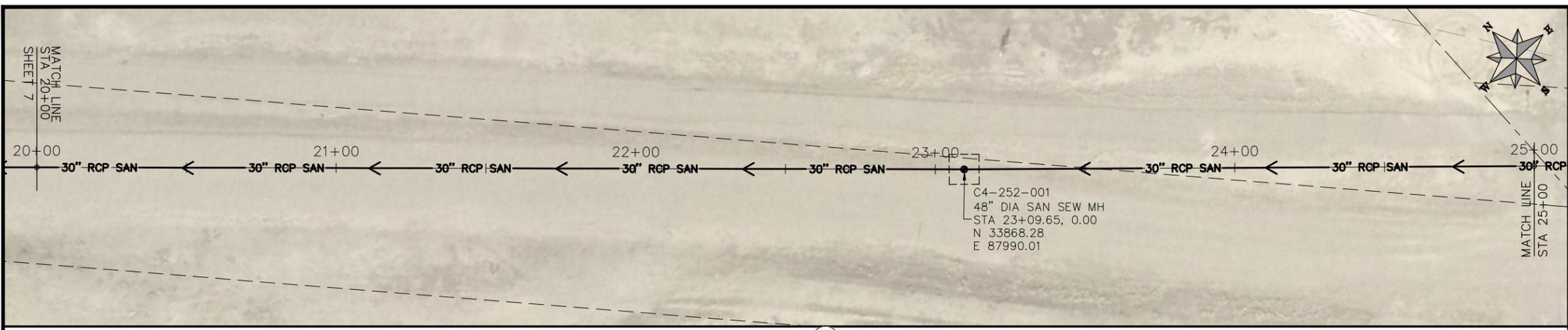
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 10+00 TO STA 20+00

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CONSTRUCTION NOTES

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REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE

HORIZONTAL: 1" = 40'

VERTICAL: 1" = 20'



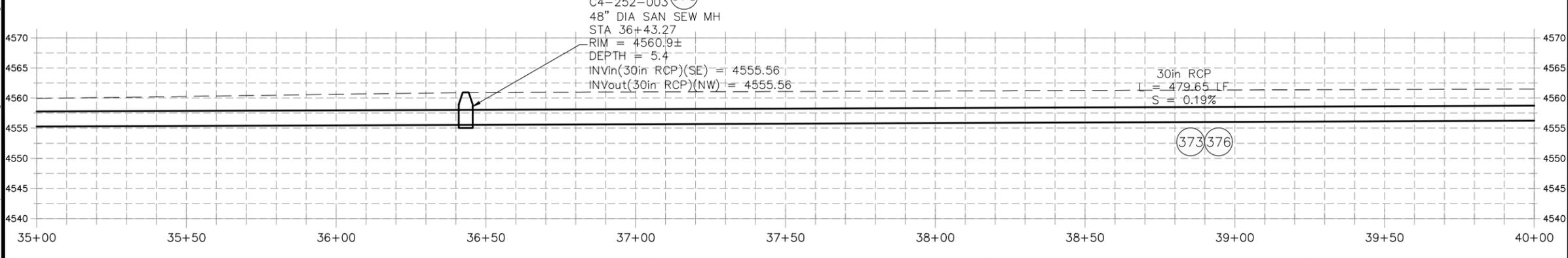
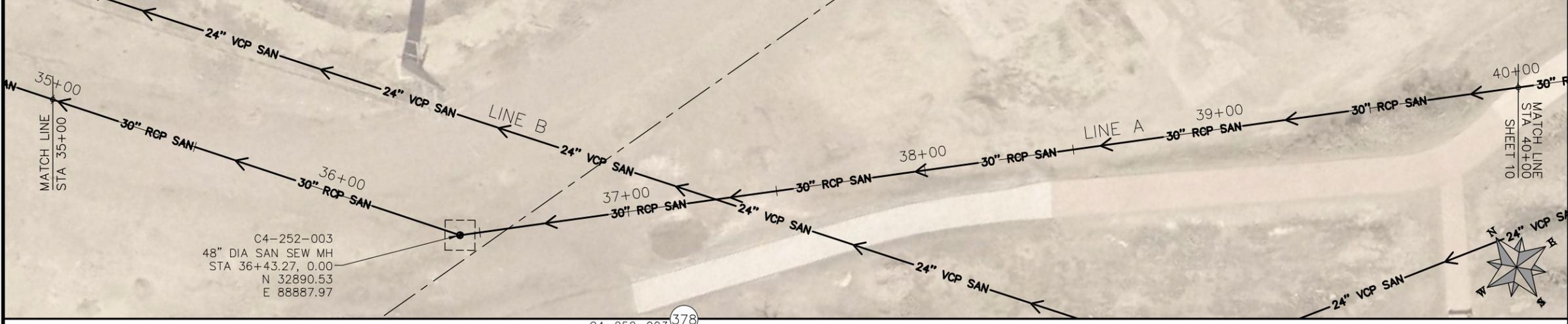
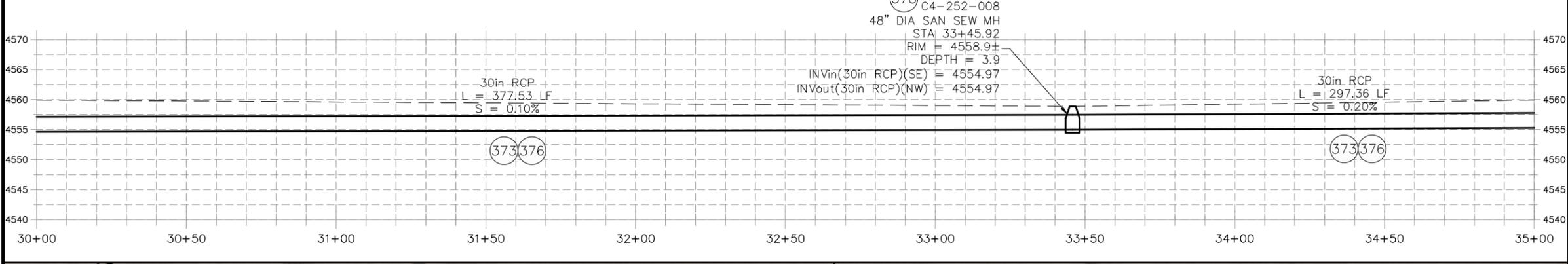
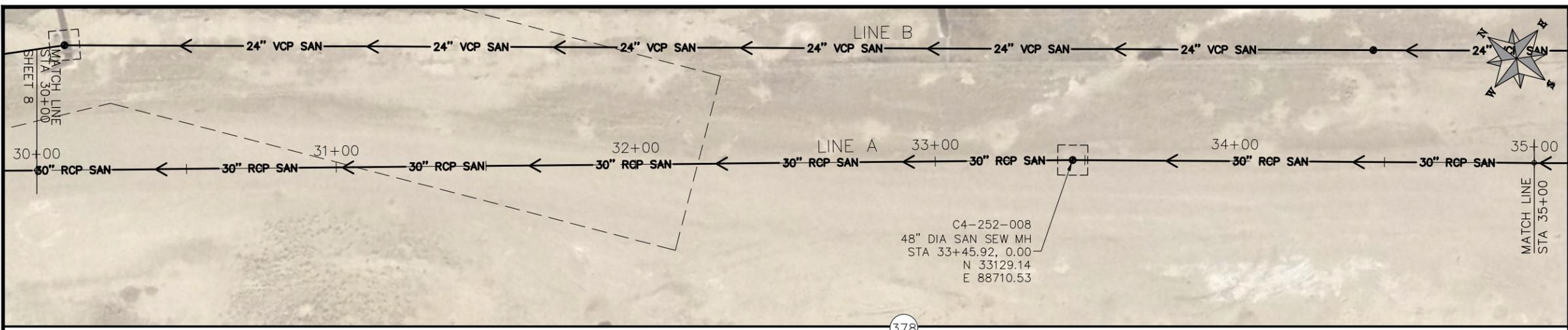
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 20+00 TO STA 30+00

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CONSTRUCTION NOTES

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SCALES: PLAN & PROFILE

HORIZONTAL: 1" = 40'

VERTICAL: 1" = 20'



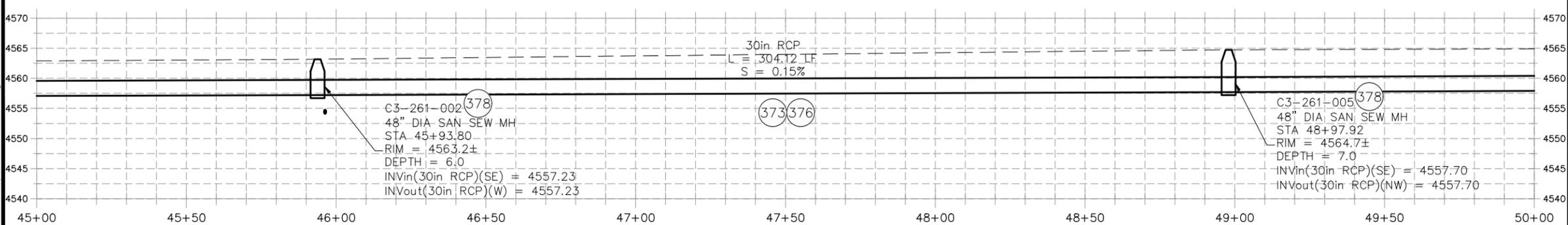
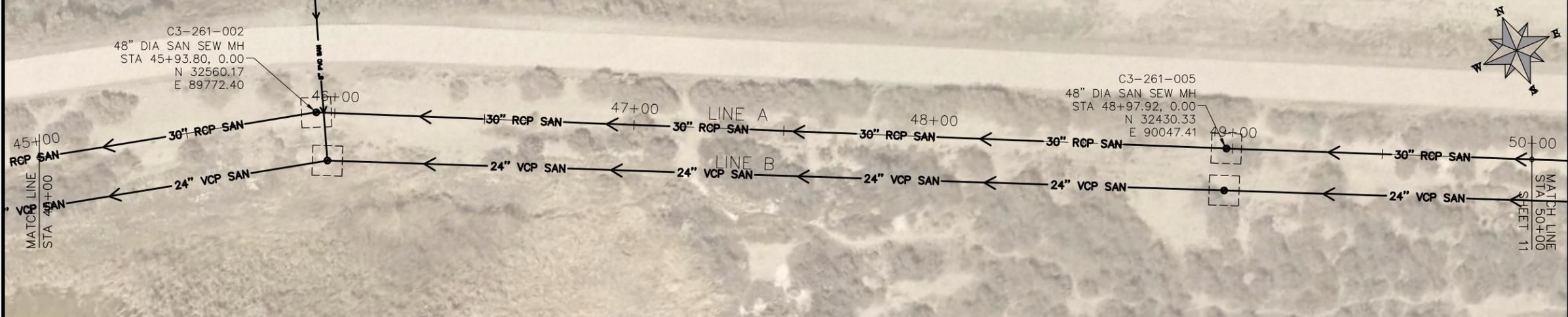
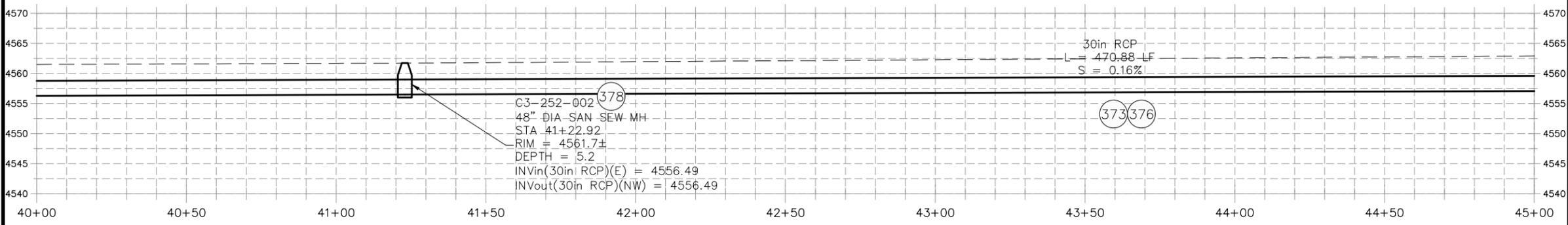
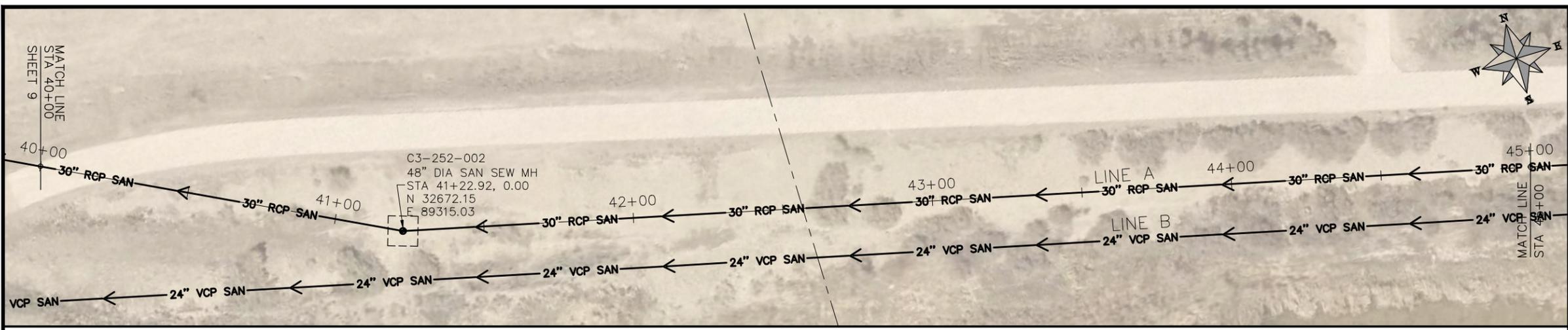
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 30+00 TO STA 40+00

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CONSTRUCTION NOTES

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SCALES: PLAN & PROFILE

HORIZONTAL: 1" = 40'

VERTICAL: 1" = 20'



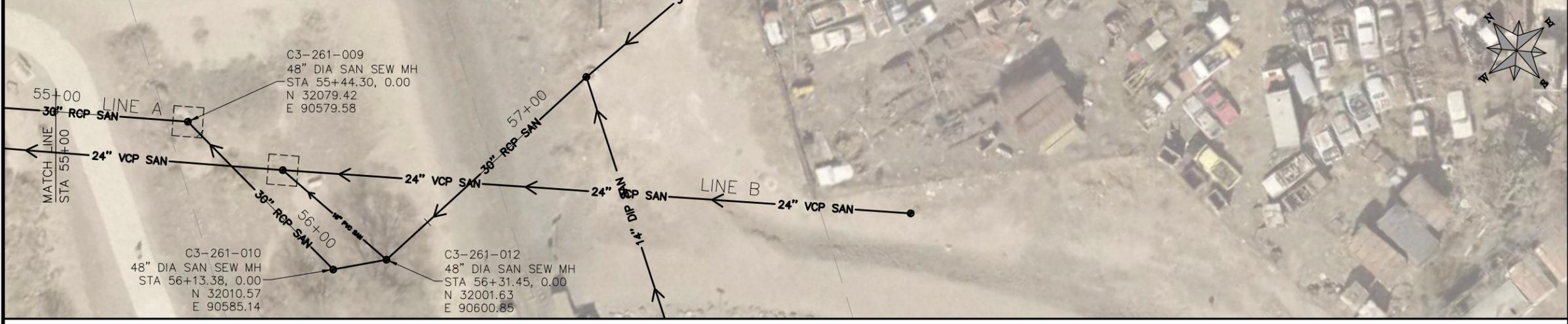
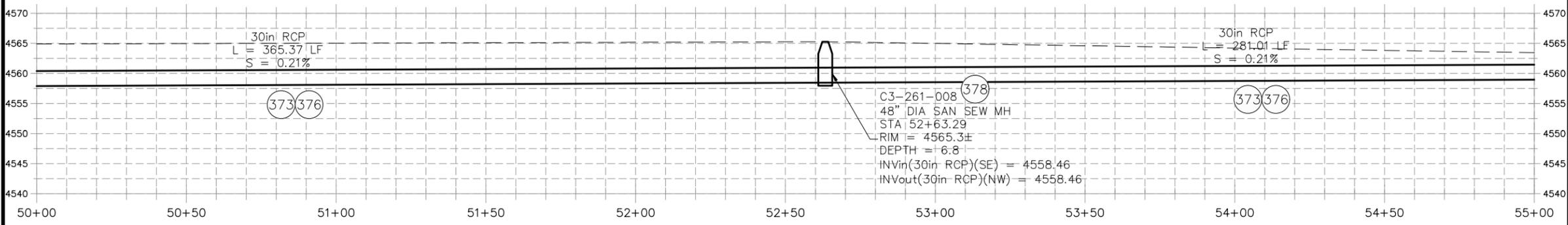
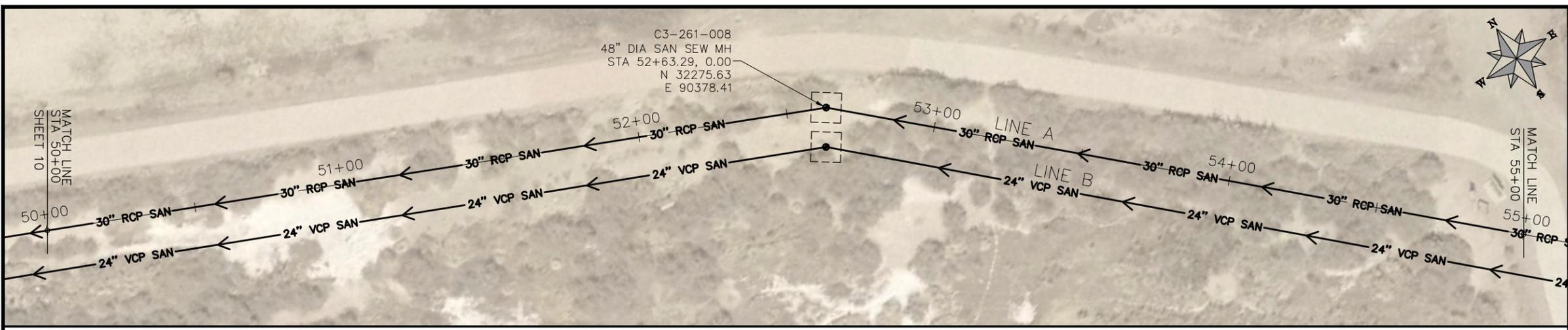
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 40+00 TO STA 50+00

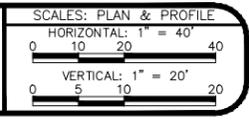
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CONSTRUCTION NOTES

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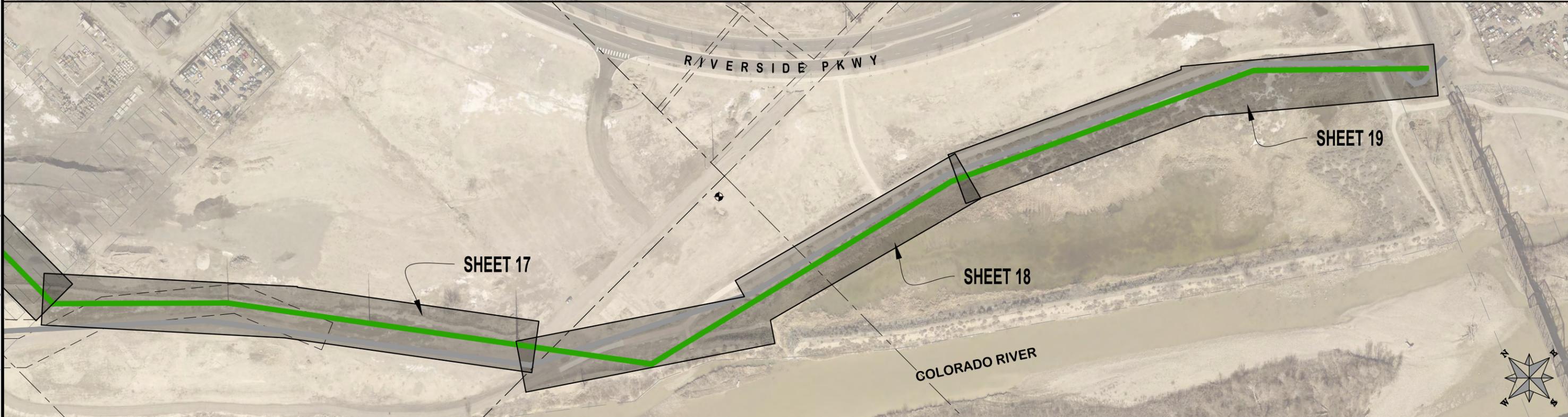
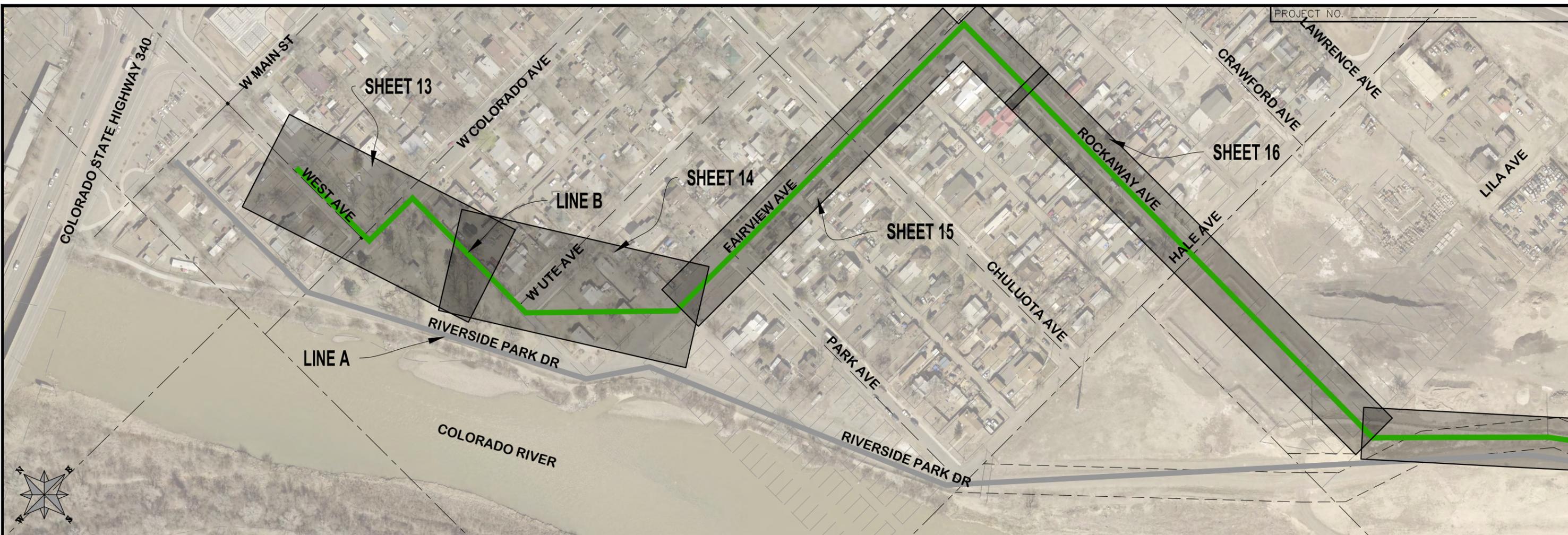
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PUBLIC WORKS
ENGINEERING DIVISION

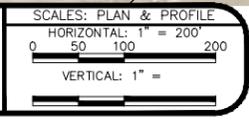
2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 50+00 TO STA 57+00

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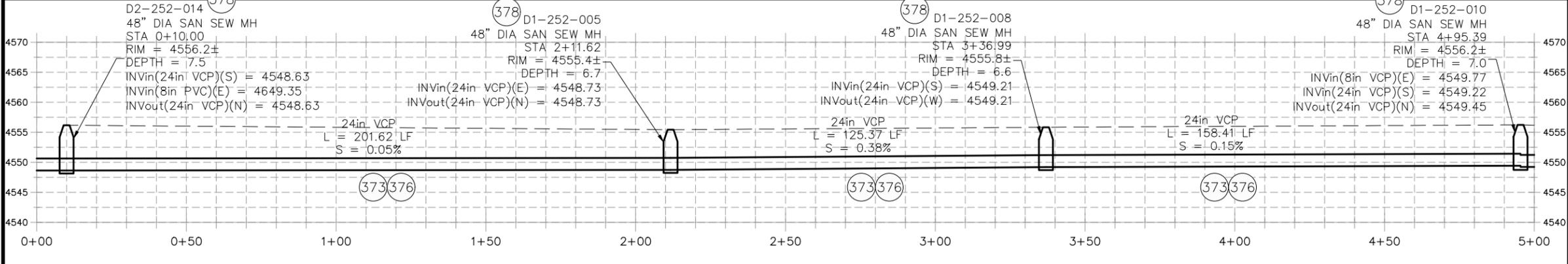


PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B KEYMAP
STA 0+00 TO STA 60+00

CONSTRUCTION NOTES

- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
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REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE

HORIZONTAL: 1" = 40'

VERTICAL: 1" = 20'

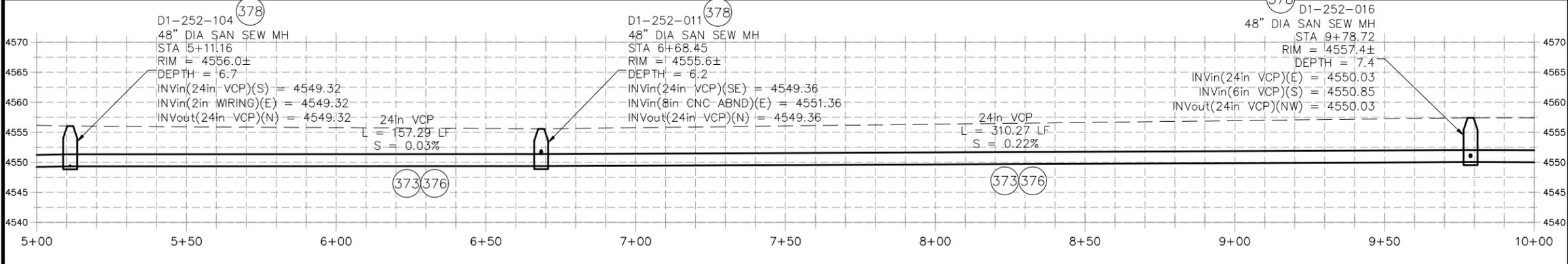
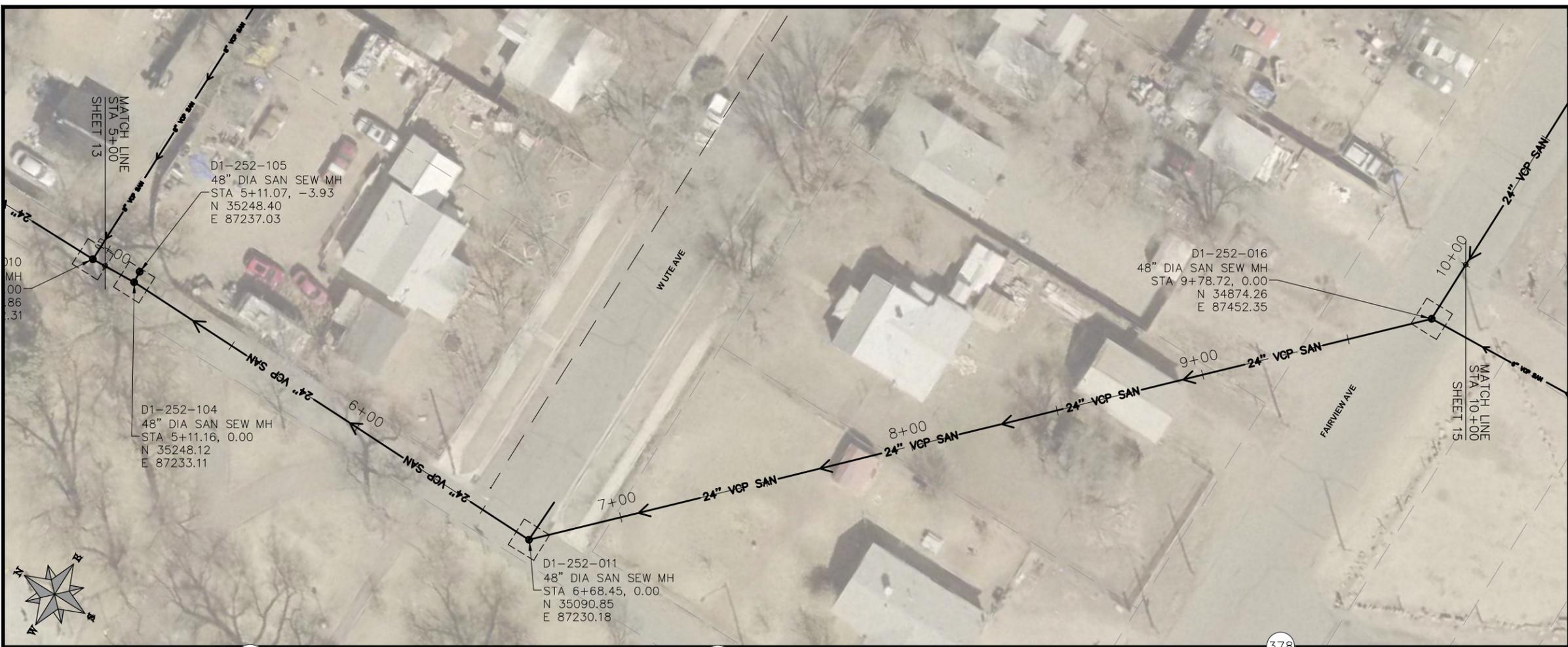


PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 0+00 TO STA 5+00

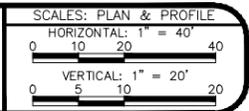
CONSTRUCTION NOTES

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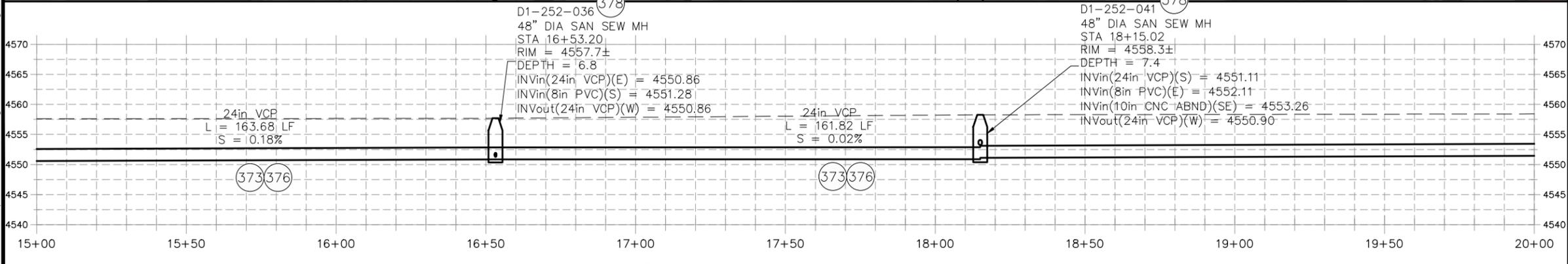
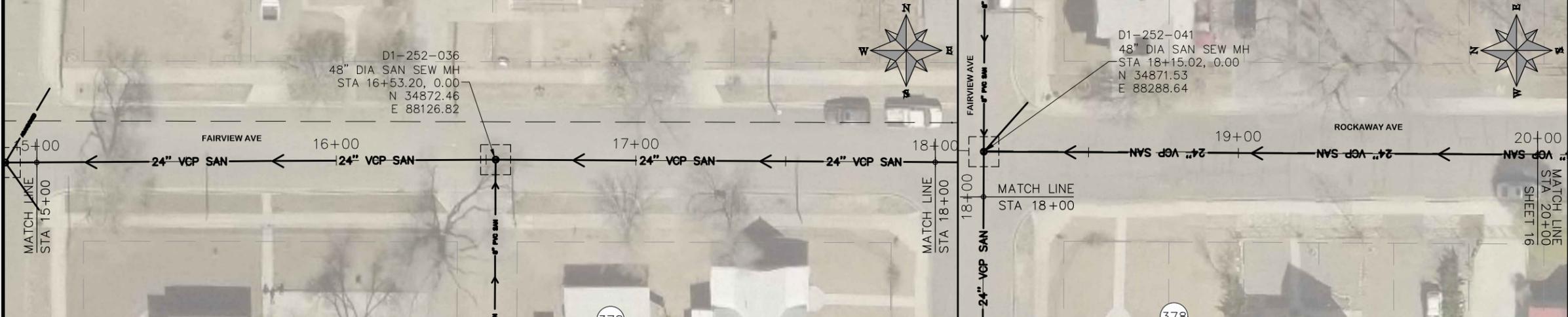
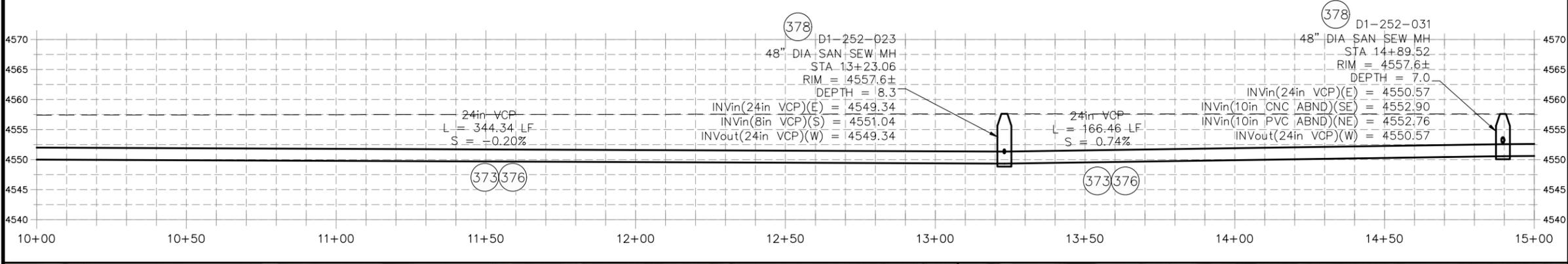
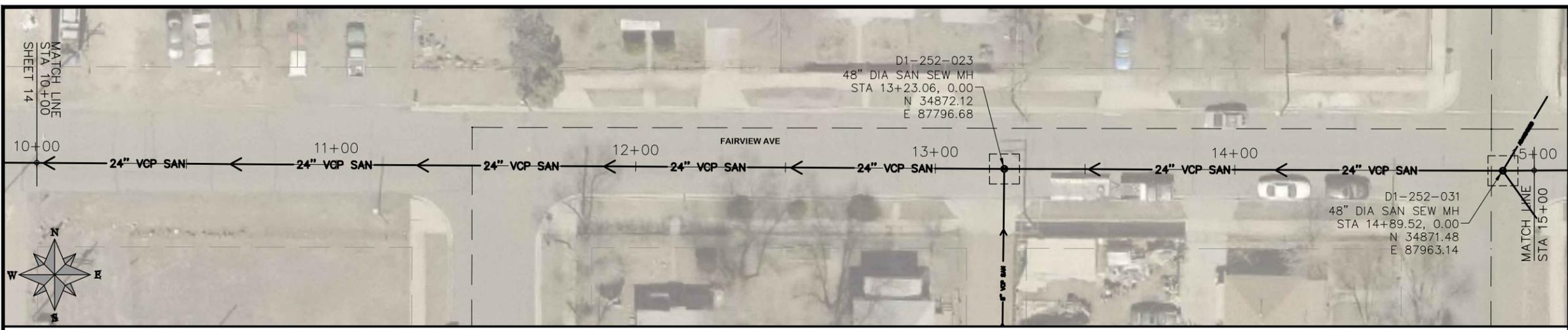


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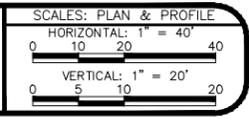
2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 5+00 TO STA 10+00

CONSTRUCTION NOTES

- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)
- (378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)



REVISION	DESCRIPTION	DATE	DRAWN BY	HMC	DATE	2018
REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018



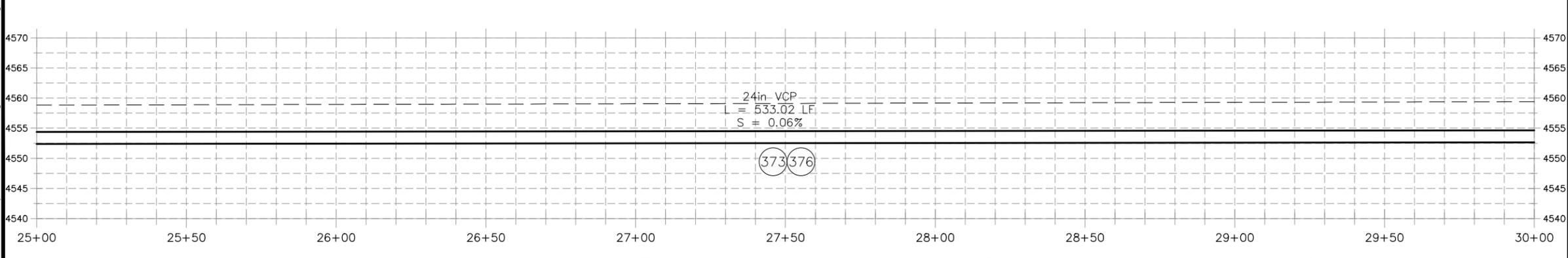
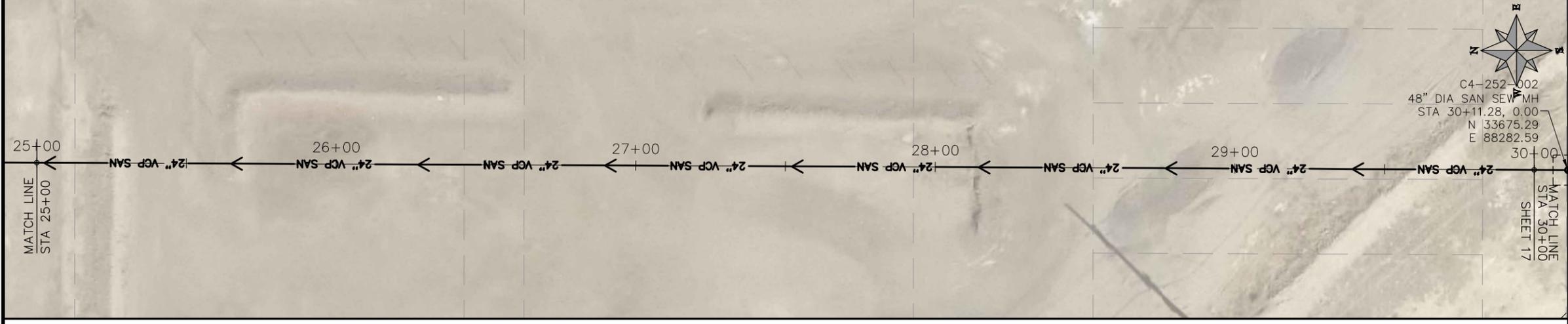
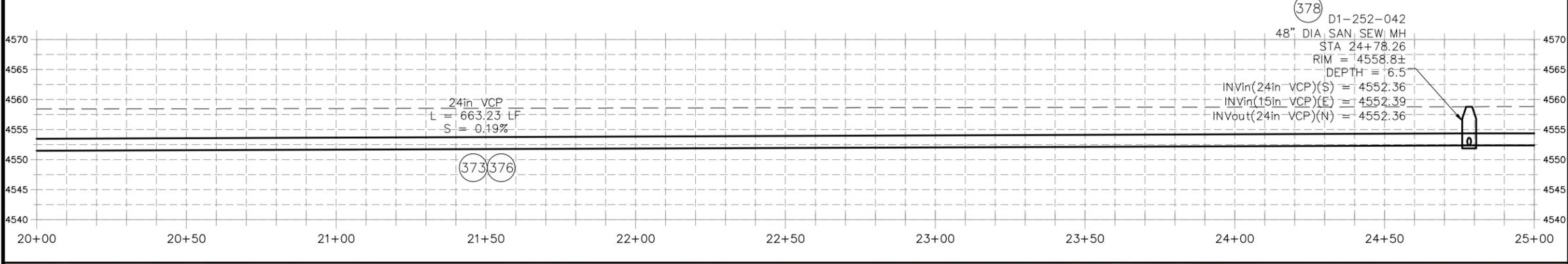
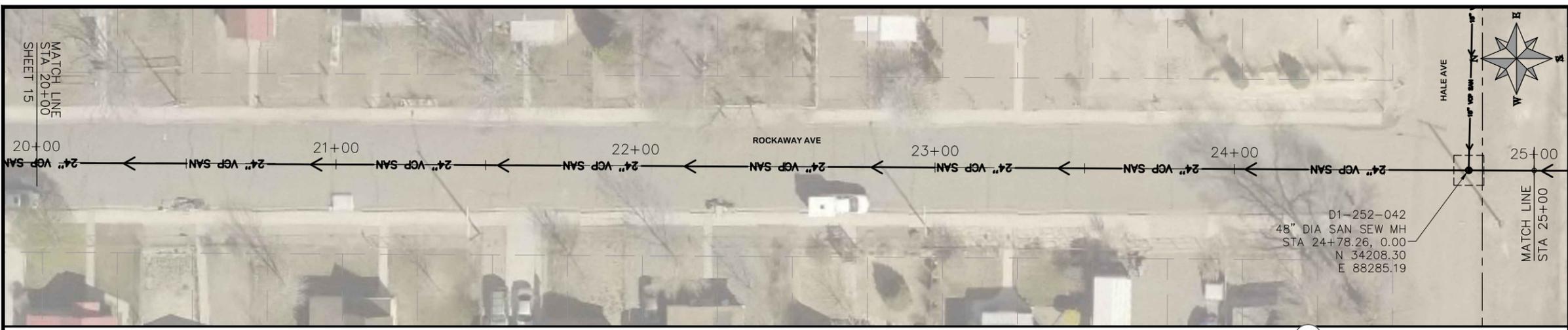
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 10+00 TO STA 20+00

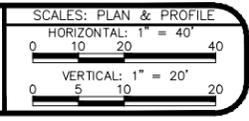
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CONSTRUCTION NOTES

- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
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REVISION	DESCRIPTION	DATE	DRAWN BY	HMC	DATE	2018
REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018



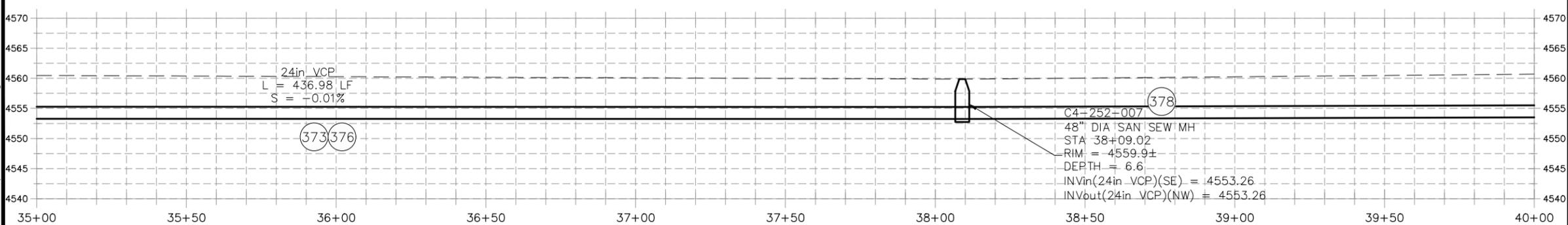
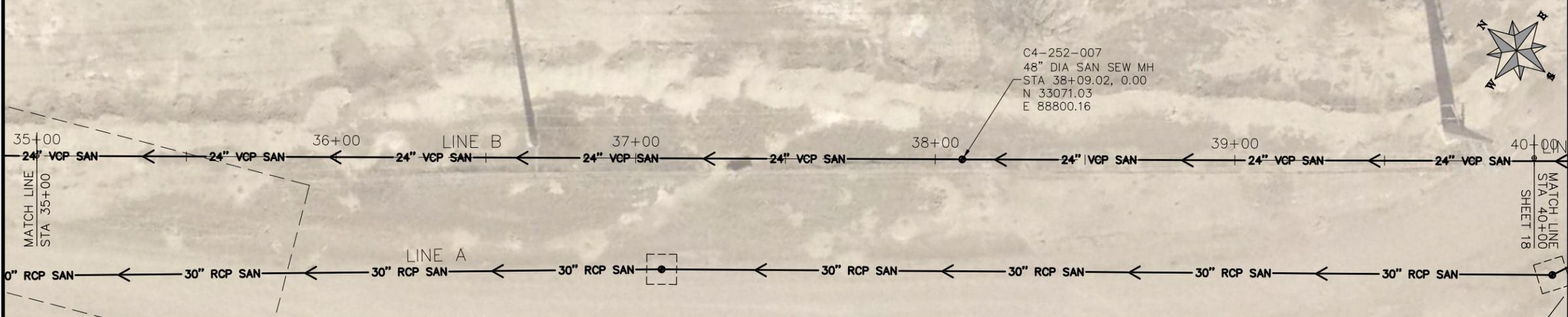
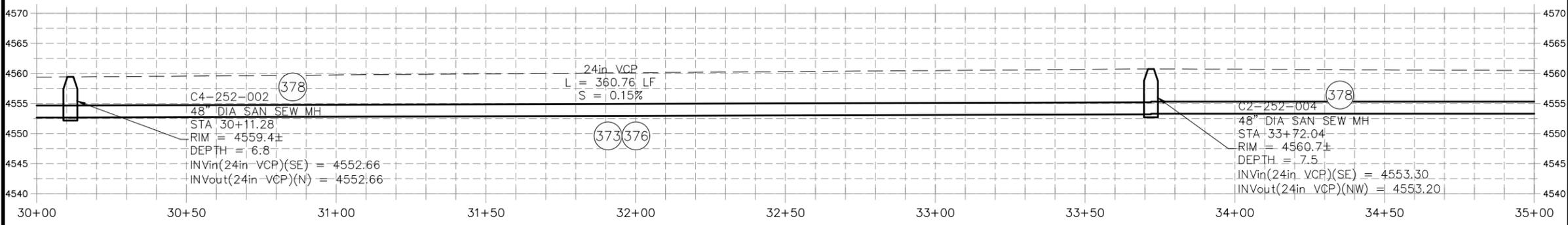
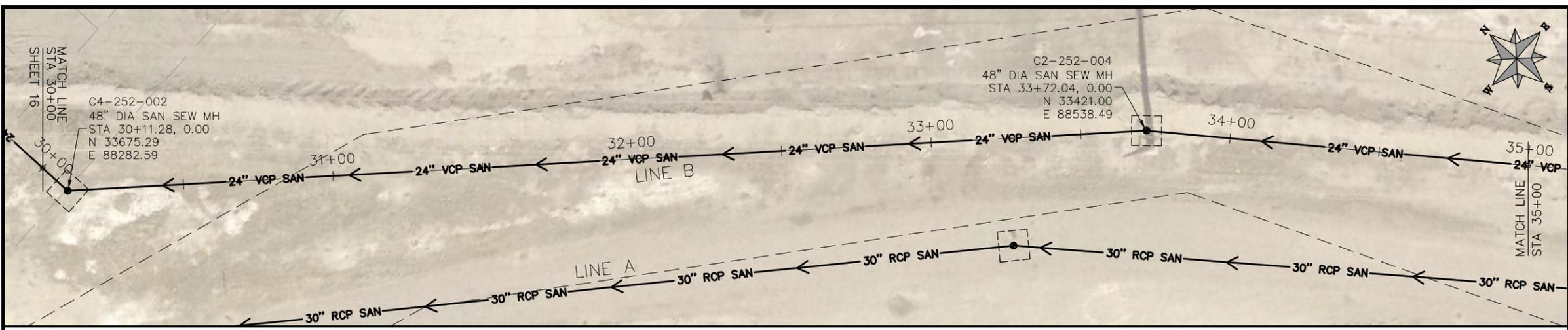
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 20+00 TO STA 30+00

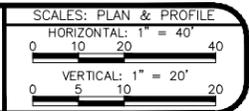
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CONSTRUCTION NOTES

- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
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- (378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)



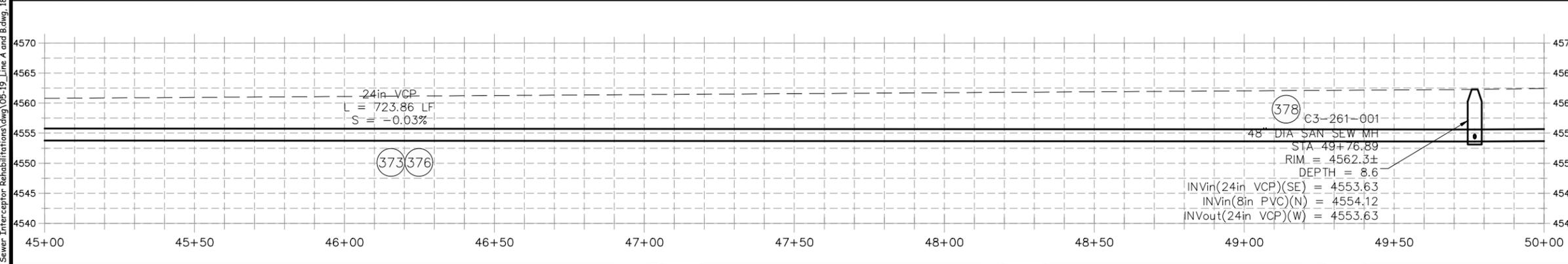
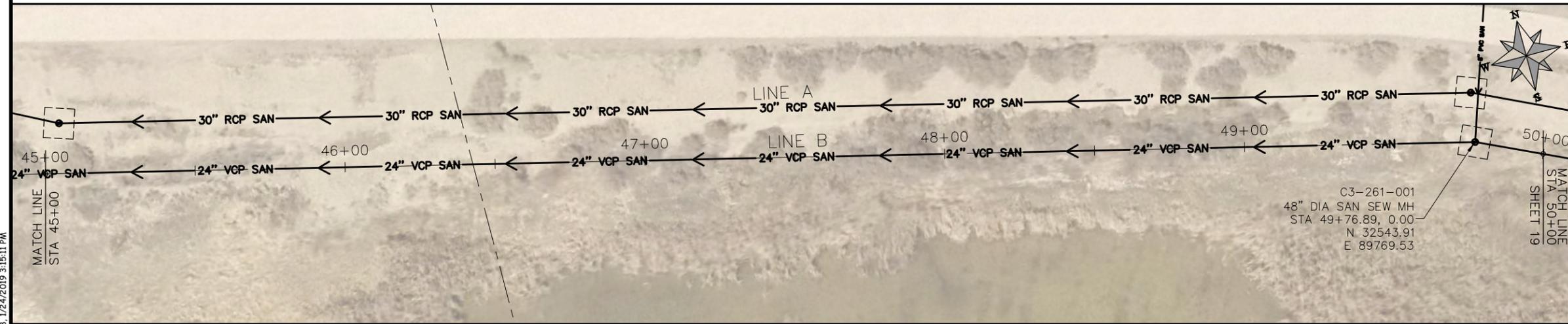
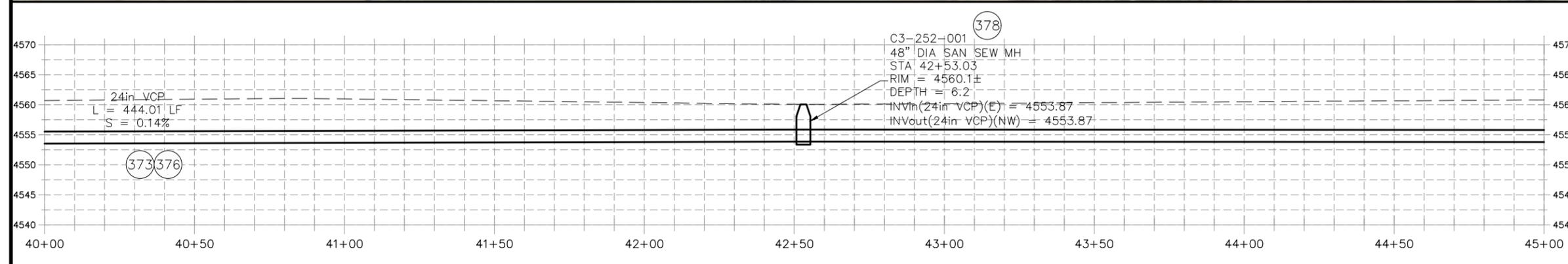
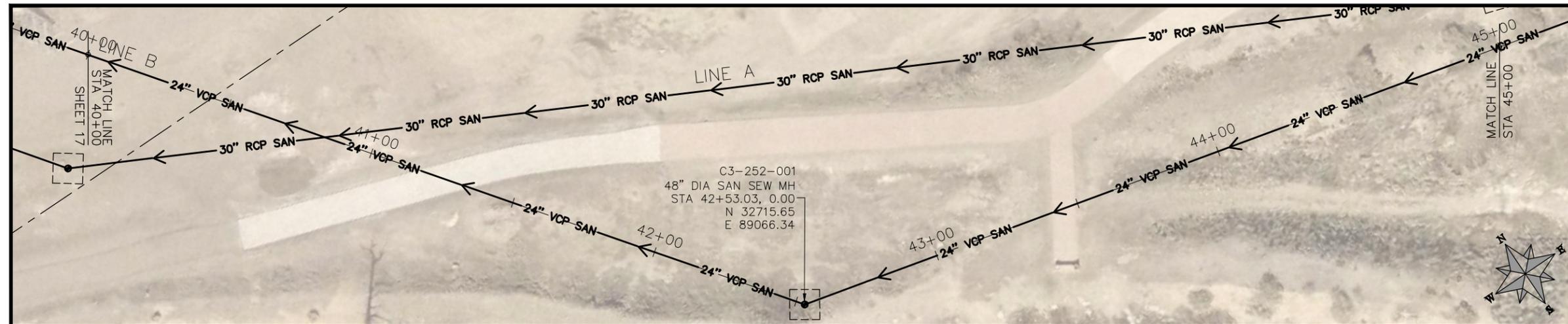
REVISION	DESCRIPTION	DATE	DRAWN BY	HMC	DATE	2018
REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018



PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 30+00 TO STA 40+00

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PROJECT NO. _____
CONSTRUCTION NOTES

- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
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- (378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)



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REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE
 HORIZONTAL: 1" = 40'
 0 10 20 40
 VERTICAL: 1" = 20'
 0 5 10 20

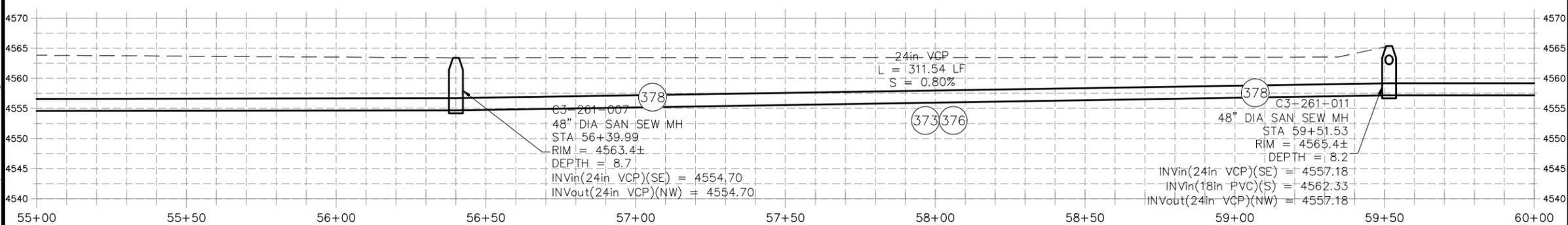
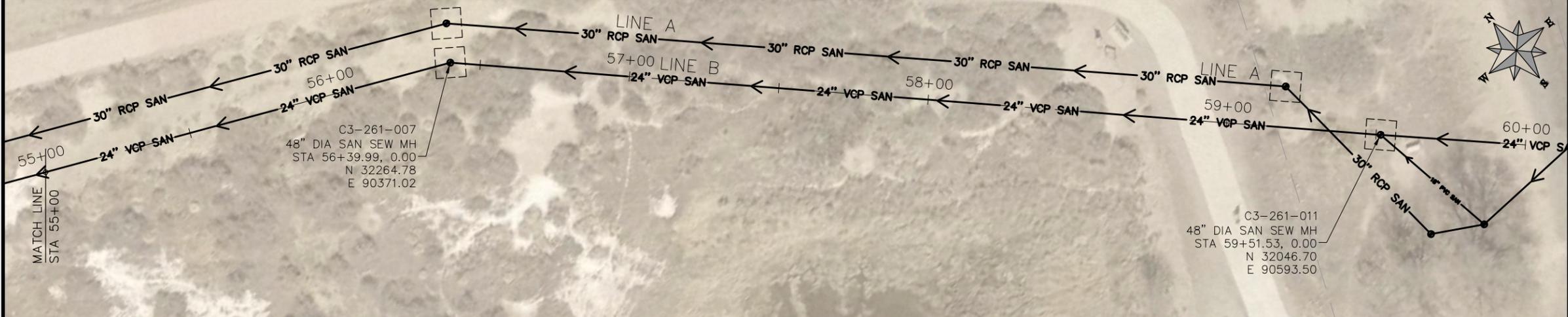
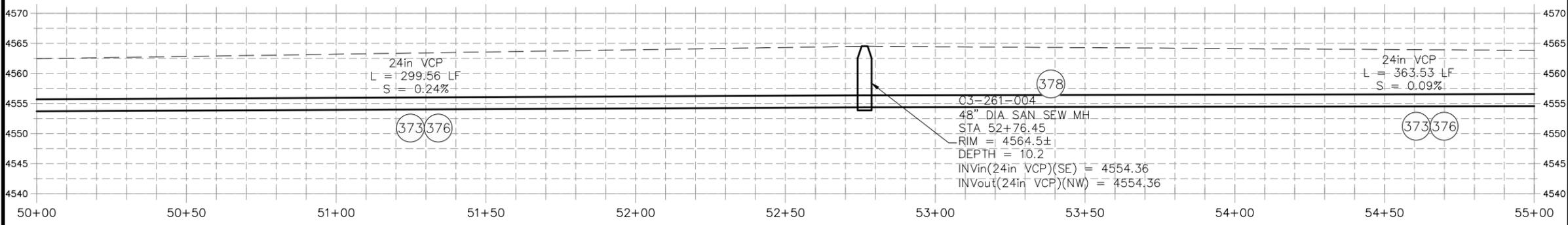
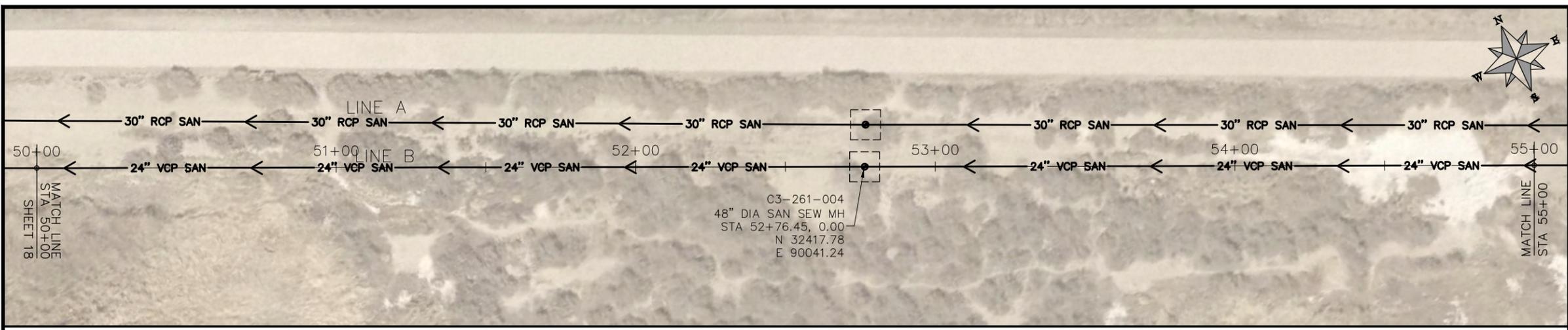


**PUBLIC WORKS
 ENGINEERING DIVISION**

**2019 SEWER INTERCEPTOR REHABILITATIONS
 LINE B PLAN AND PROFILE
 STA 40+00 TO STA 50+00**

CONSTRUCTION NOTES

- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
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- (378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)



REVISION	DESCRIPTION	DATE	DRAWN BY	HMC	DATE	2018
REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE

HORIZONTAL: 1" = 40'

VERTICAL: 1" = 20'



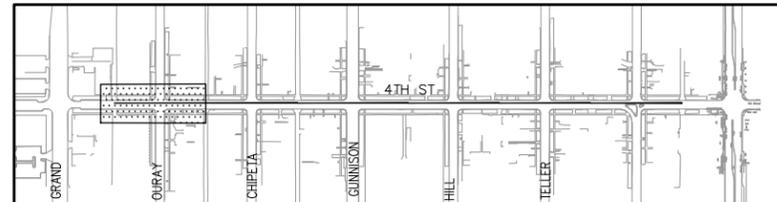
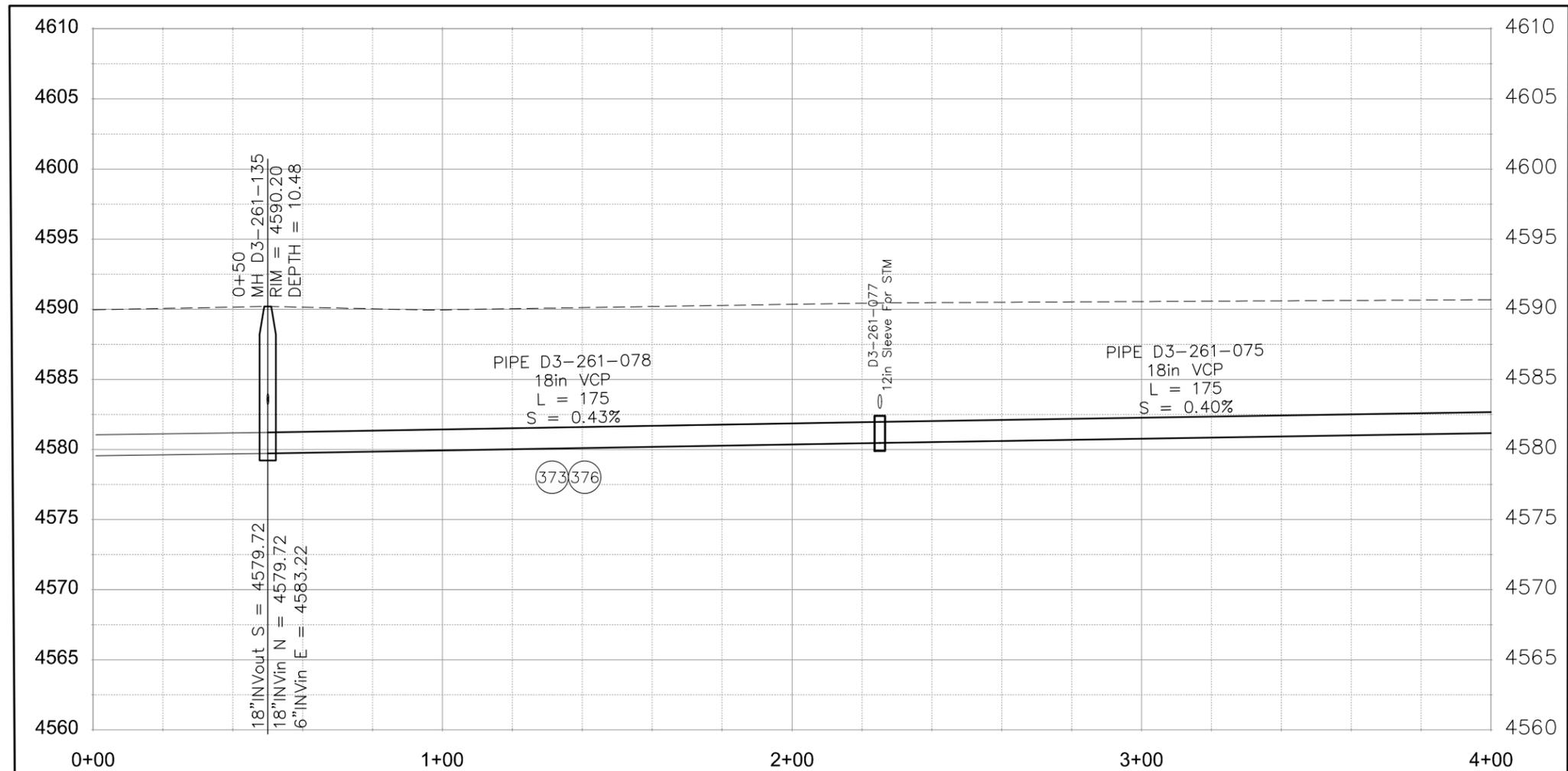
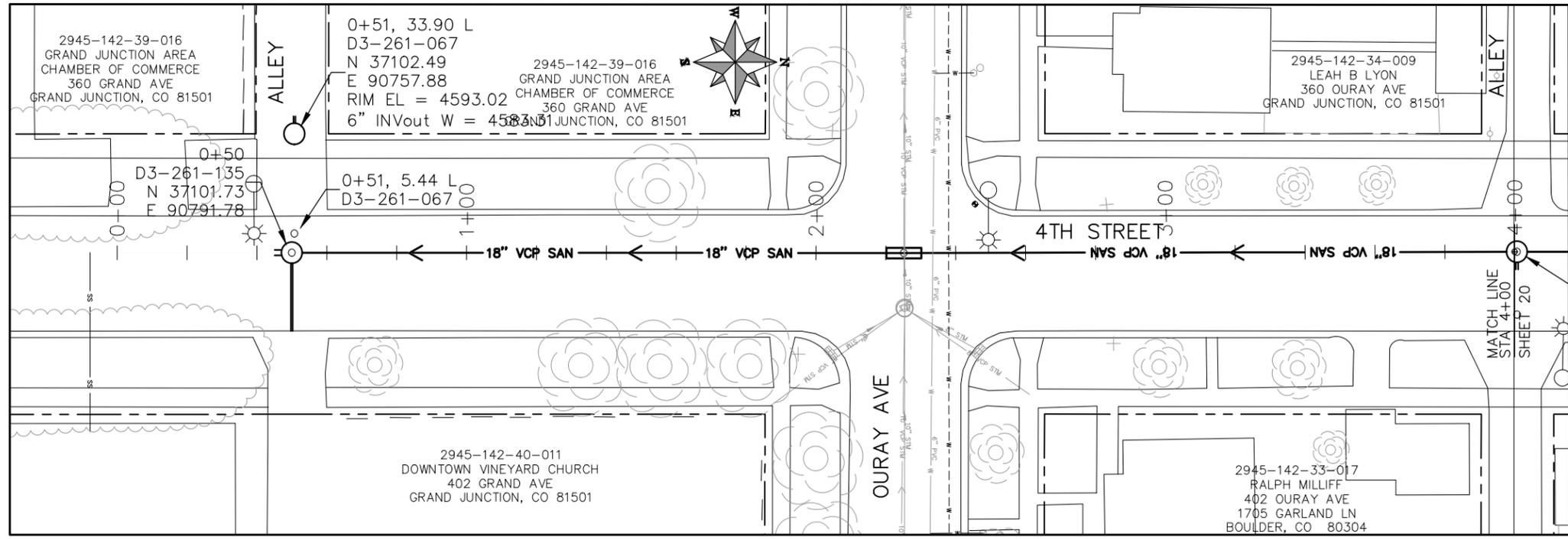
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 50+00 TO STA 60+00

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CONSTRUCTION NOTES

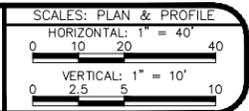
- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

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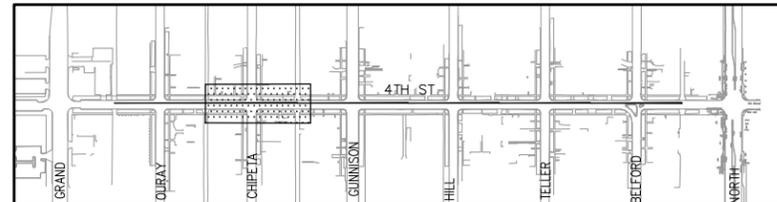
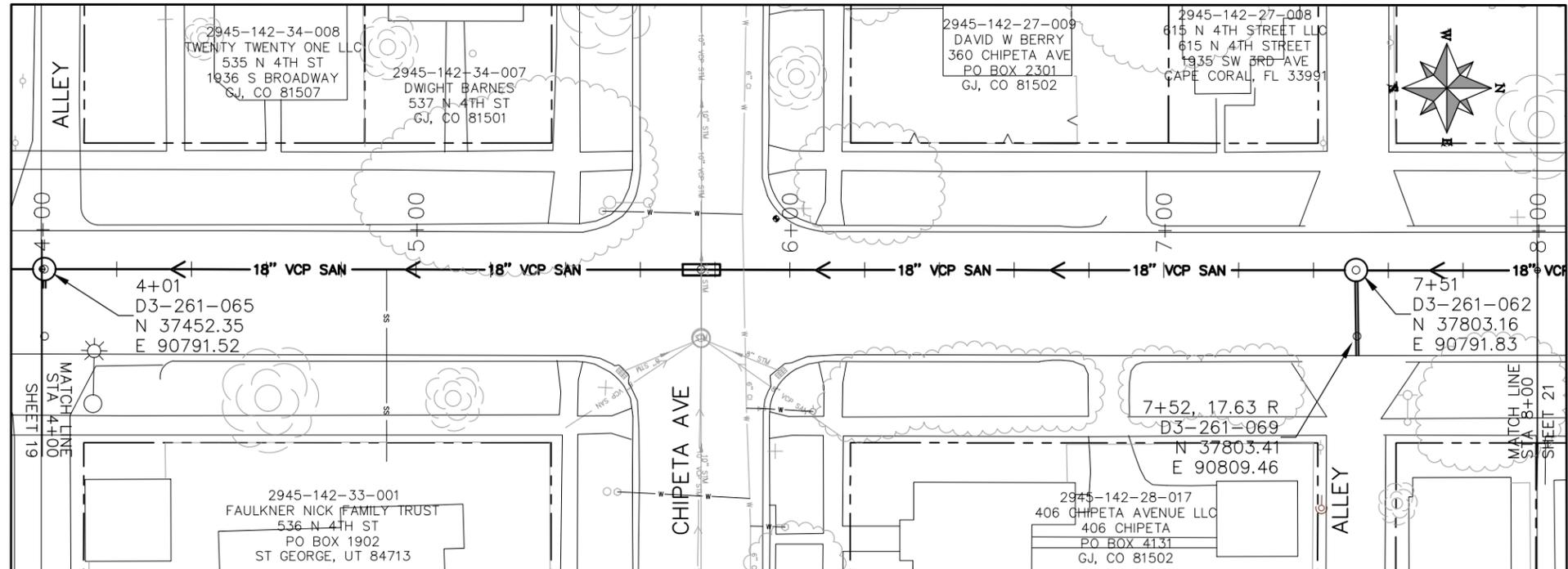
REVISION	DESCRIPTION	DATE	DRAWN BY	HMC	DATE	2018
REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018



PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 0+00 TO STA 4+00

- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

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REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE

HORIZONTAL: 1" = 40'

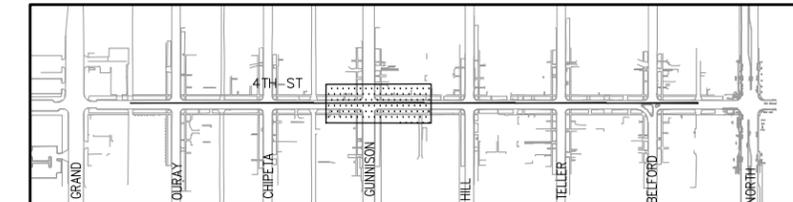
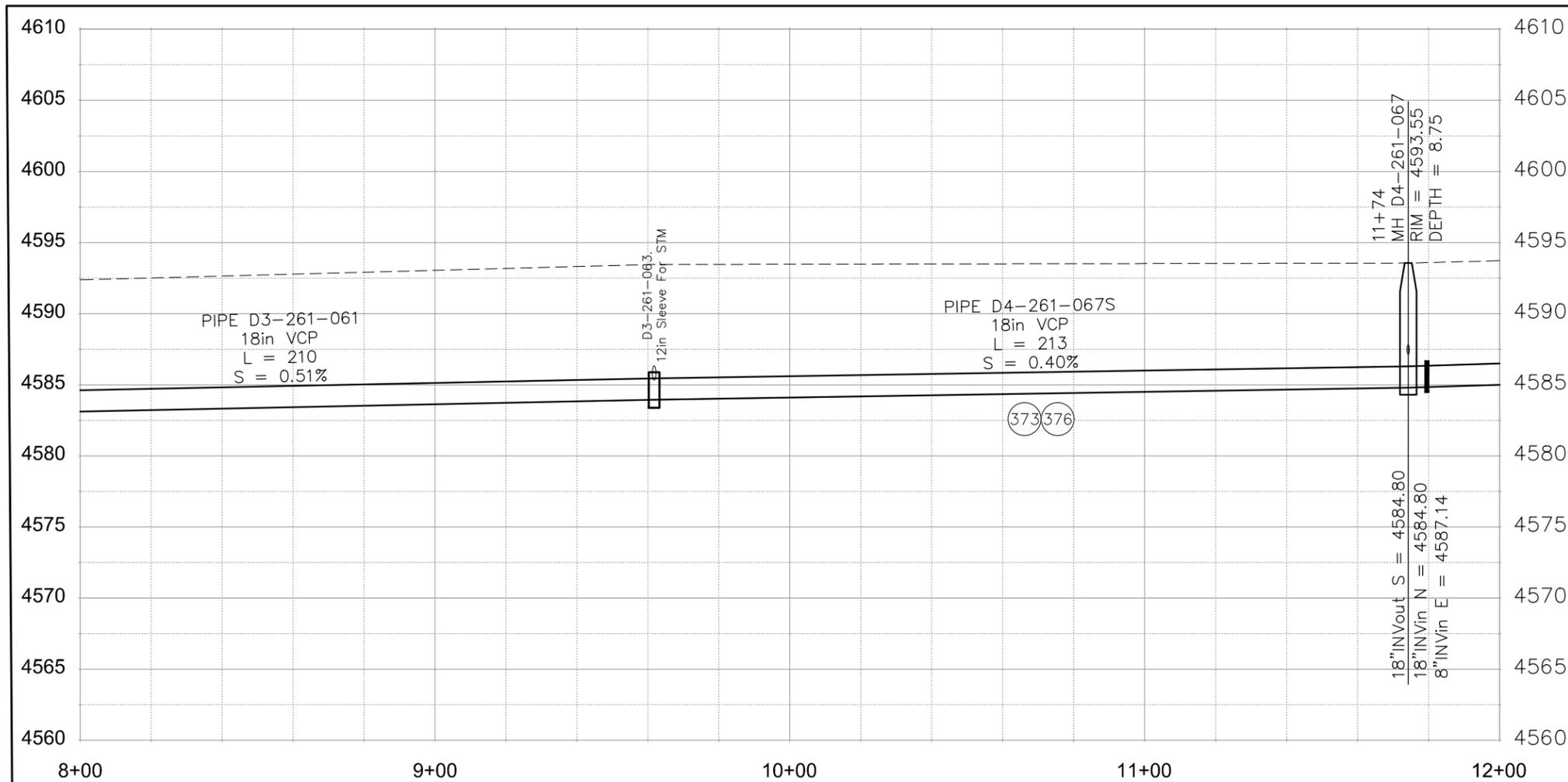
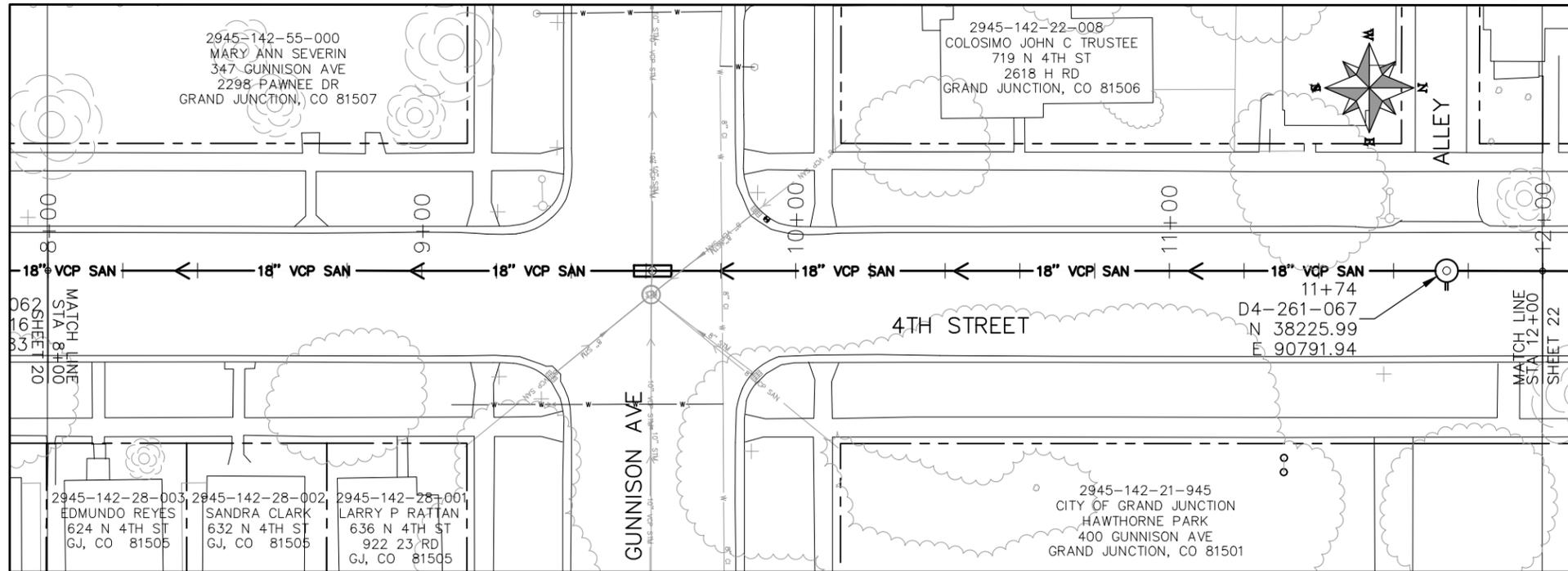
VERTICAL: 1" = 10'



PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 4+00 TO STA 8+00

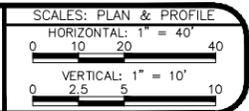
- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\20-25_4th Street.dwg, 22, 1/24/2019 2:45:47 PM

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REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018

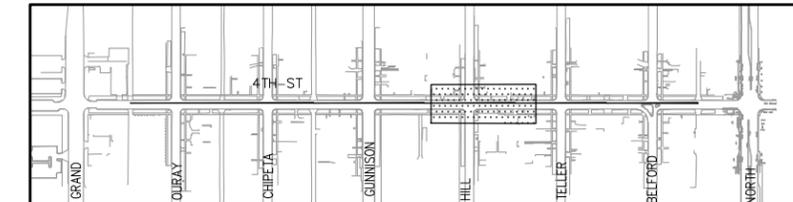
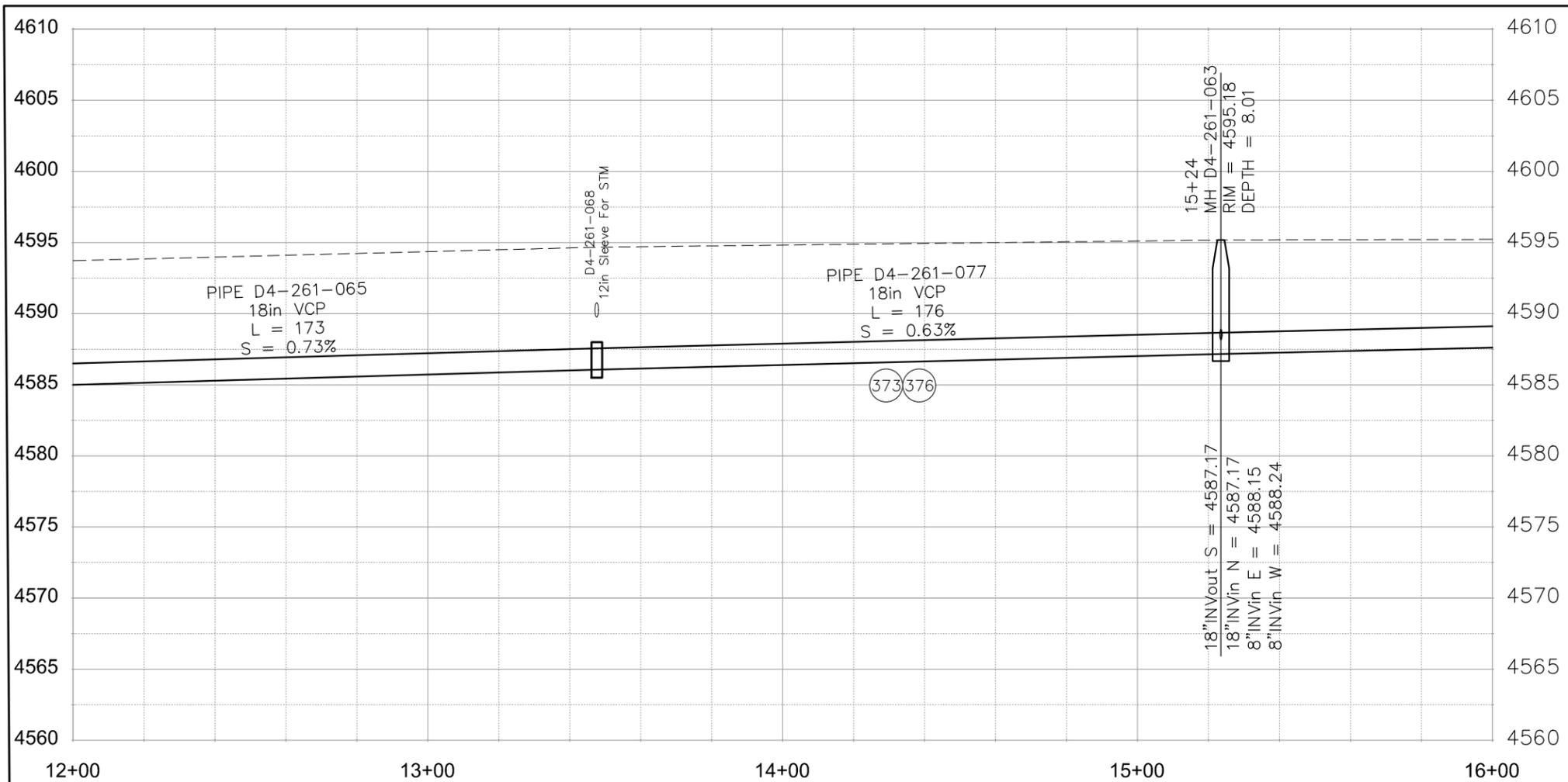
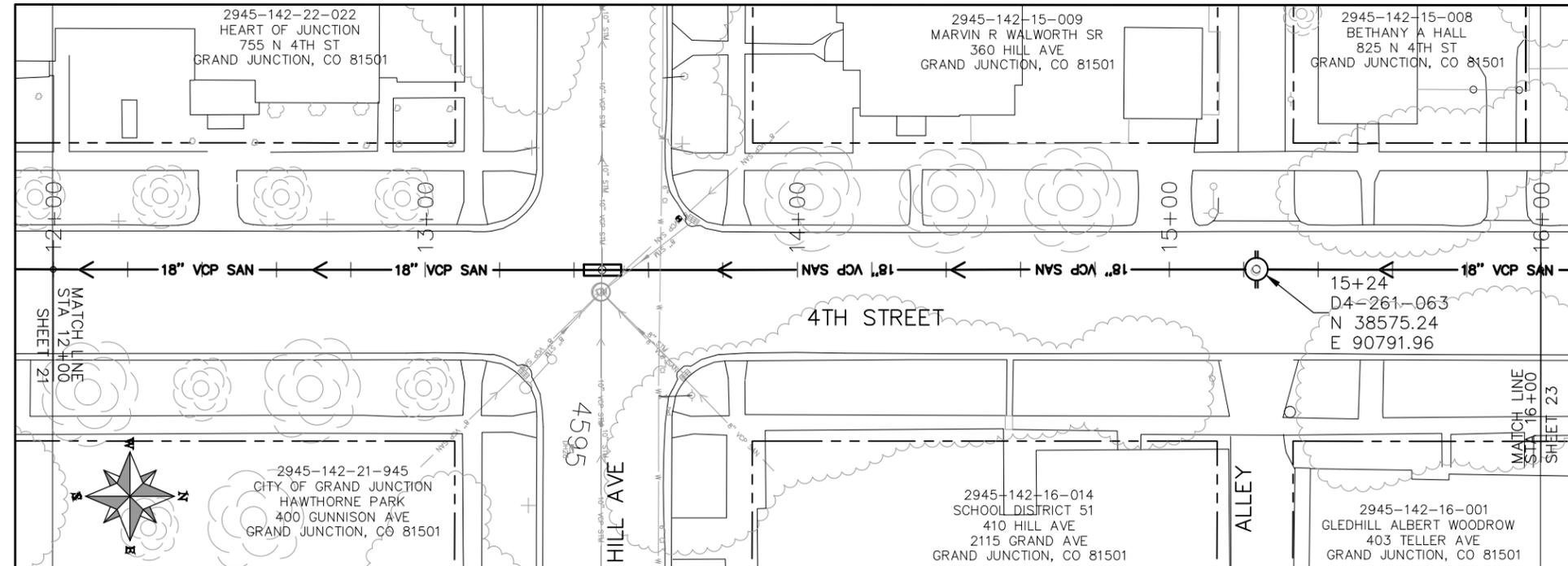


PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 8+00 TO STA 12+00

CONSTRUCTION NOTES

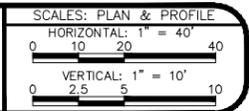
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- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

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REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018

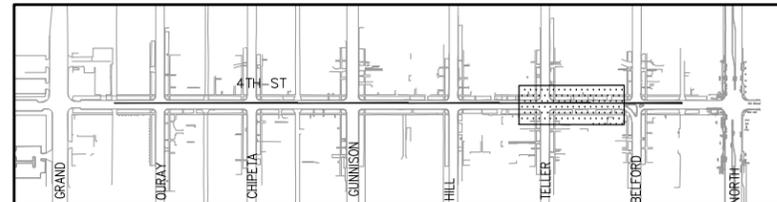
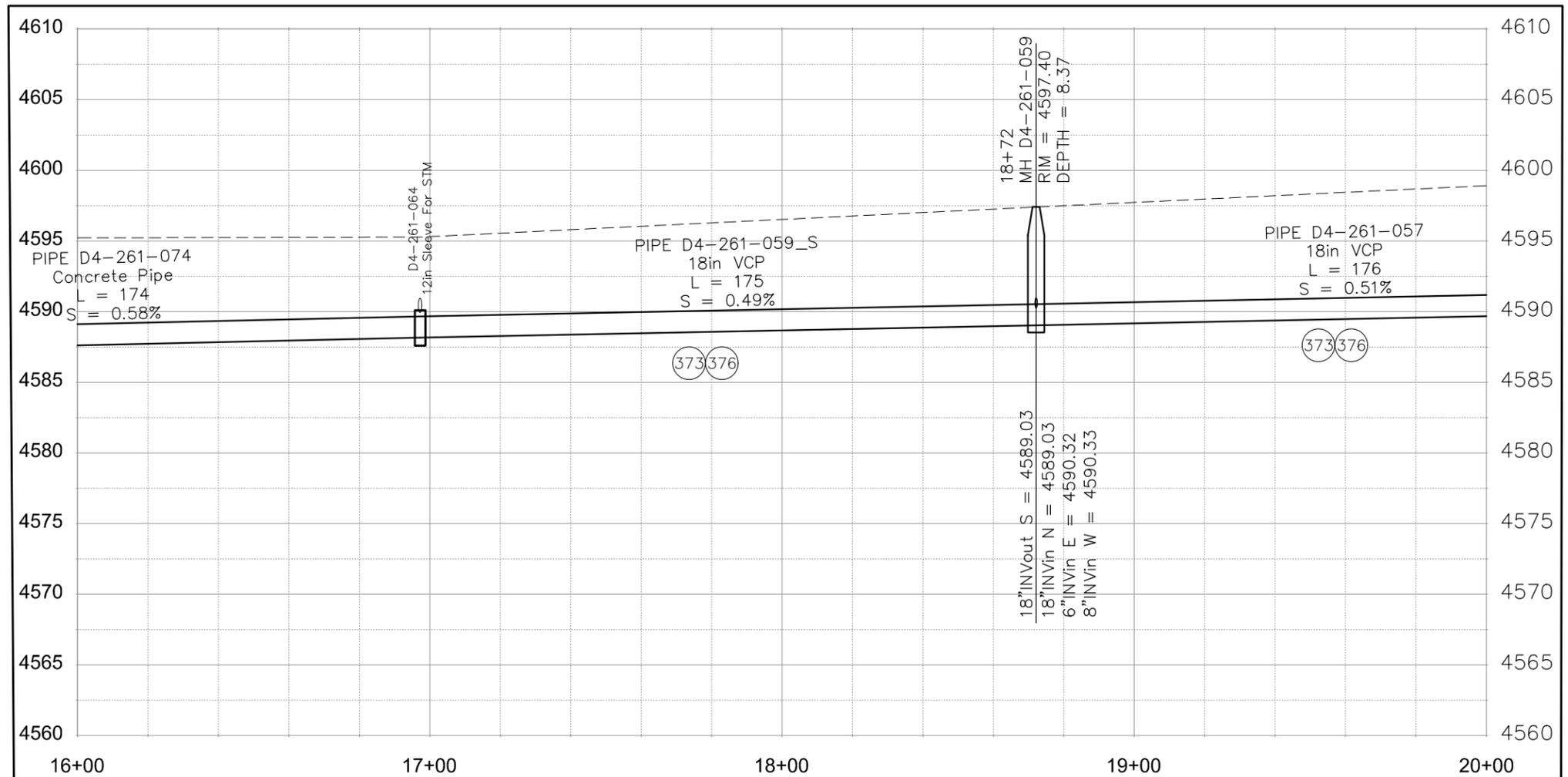
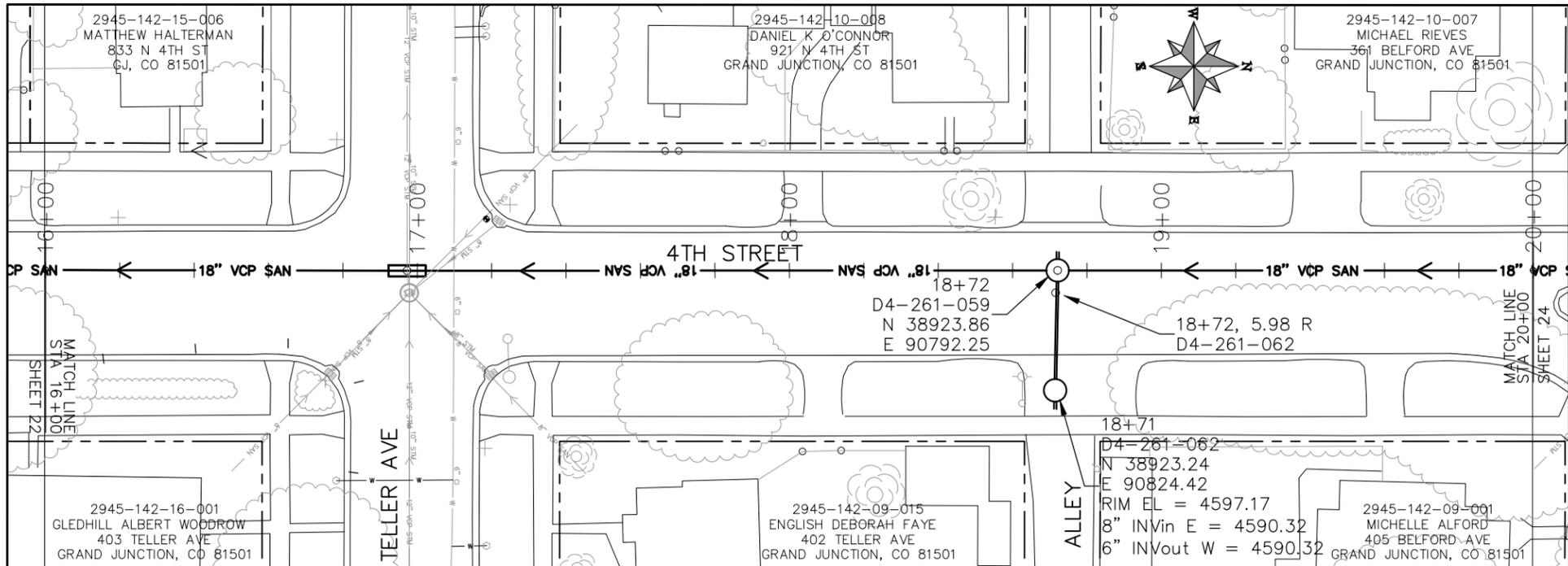


**PUBLIC WORKS
ENGINEERING DIVISION**

**2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 12+00 TO STA 16+00**

CONSTRUCTION NOTES

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- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\20-25_4th Street.dwg, 24, 1/24/2019 2:45:53 PM

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REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE

HORIZONTAL: 1" = 40'

VERTICAL: 1" = 10'

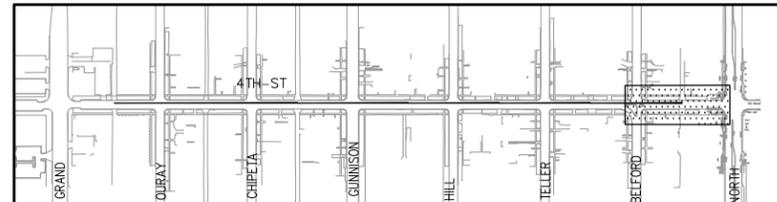
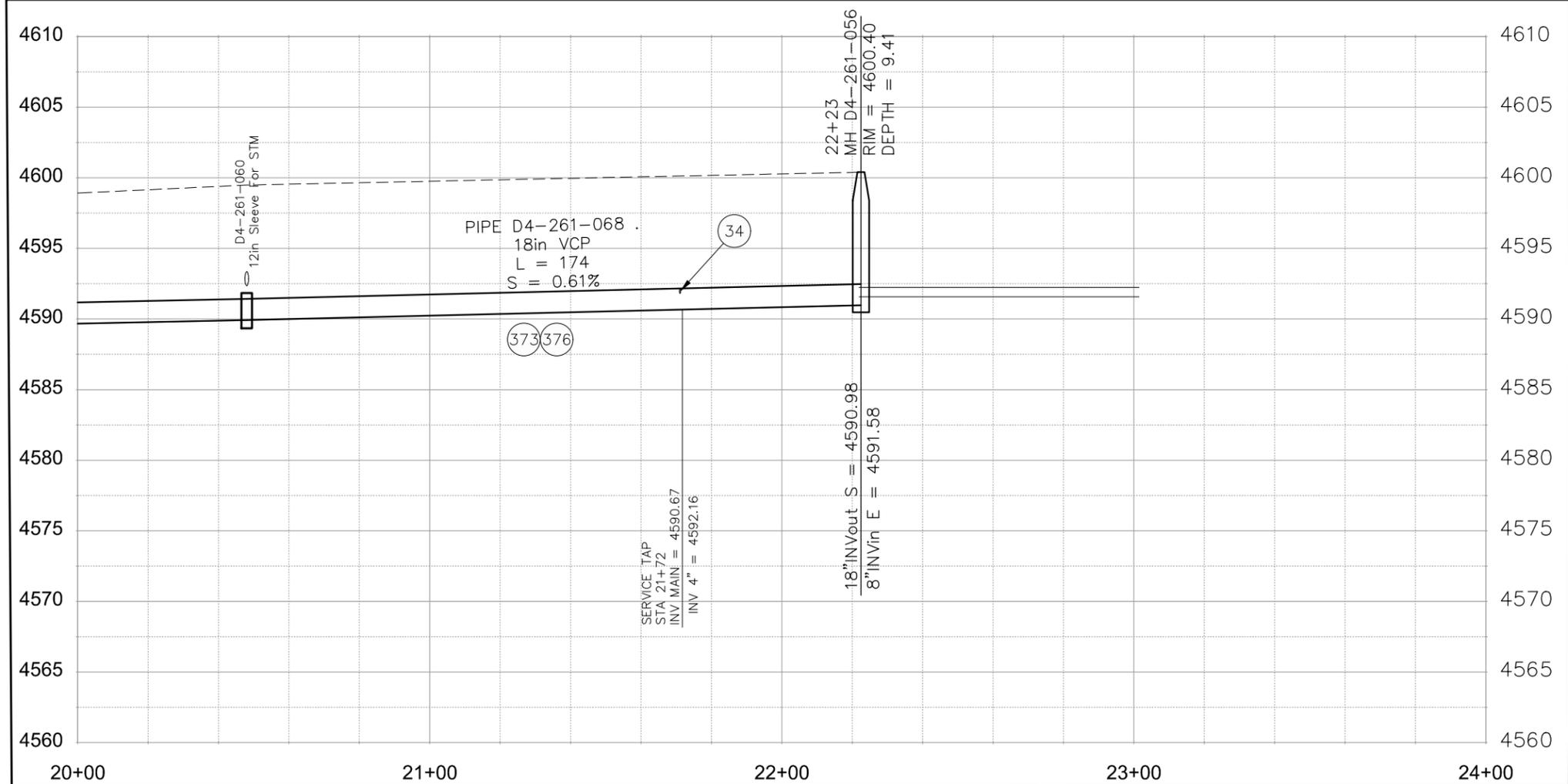
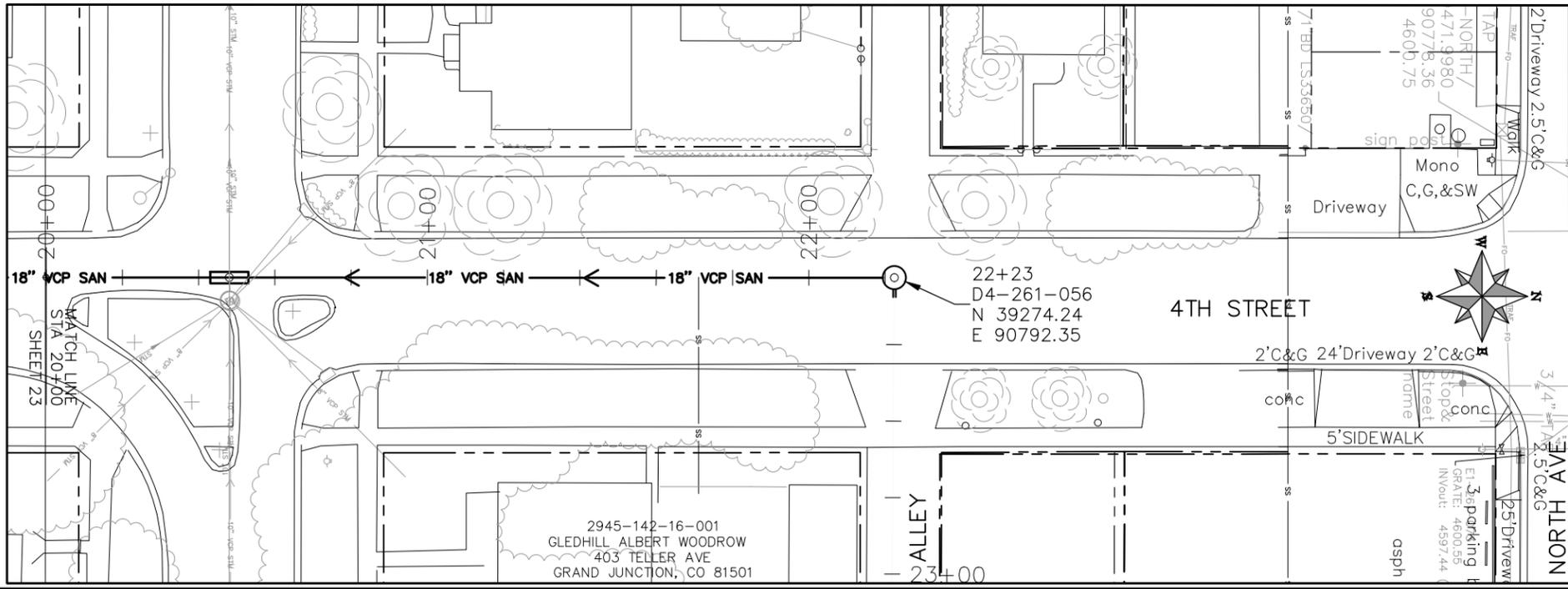


PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 16+00 TO STA 20+00

CONSTRUCTION NOTES

- (34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLE SHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.
- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

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REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE

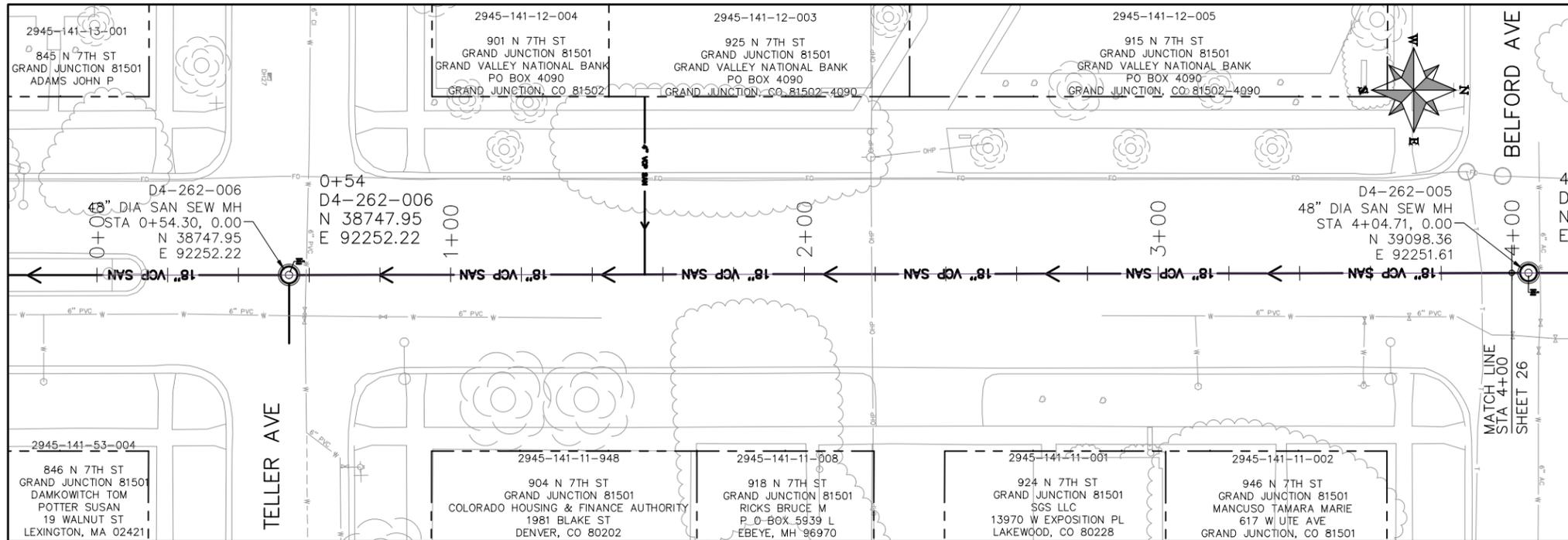
HORIZONTAL: 1" = 40'

VERTICAL: 1" = 10'

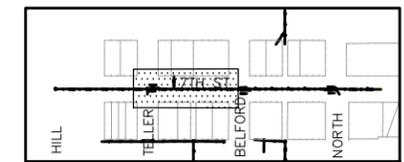
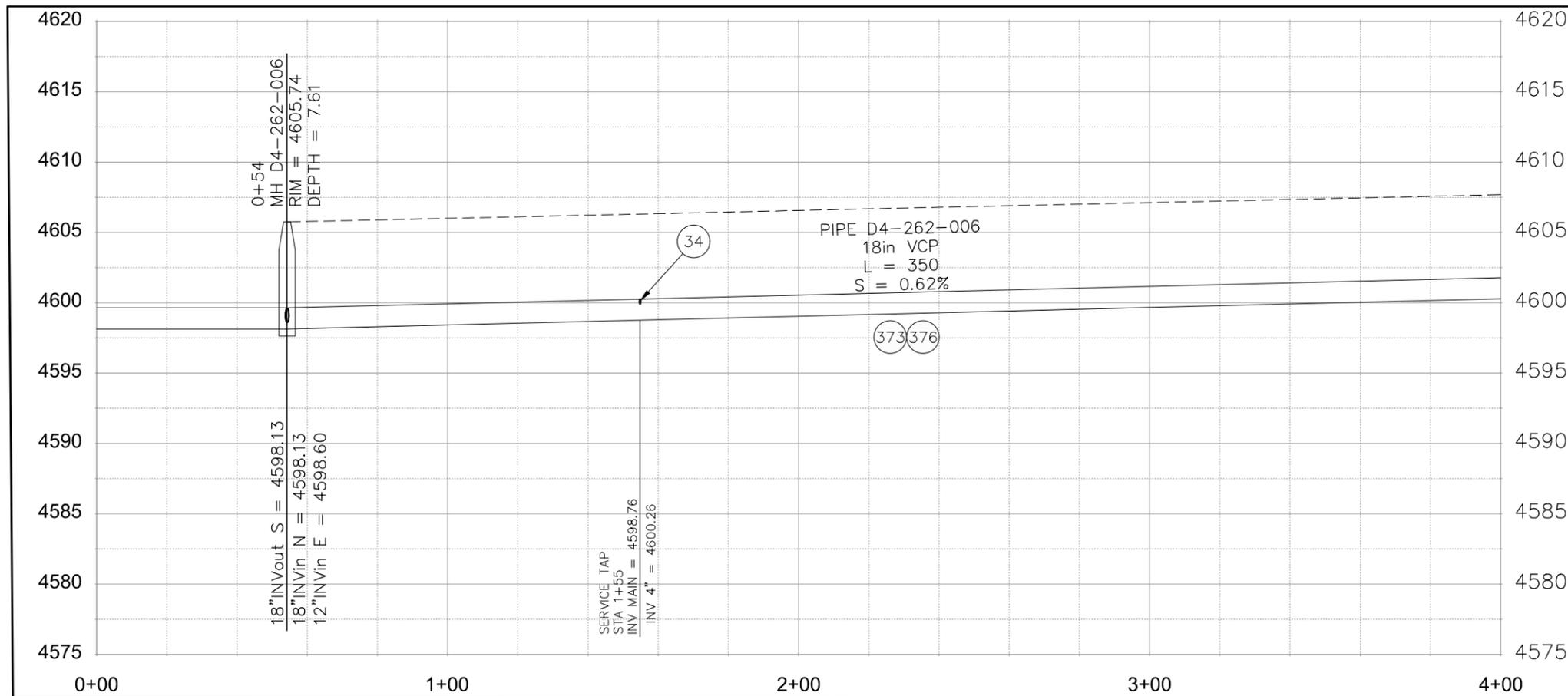


PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 20+00 TO STA 24+00



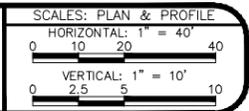
- (34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLES SHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.
- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\26-27_7th Street.dwg, 26, 1/24/2019 2:46:16 PM

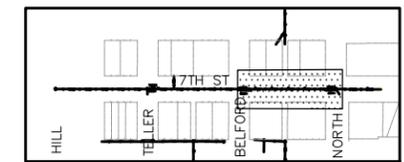
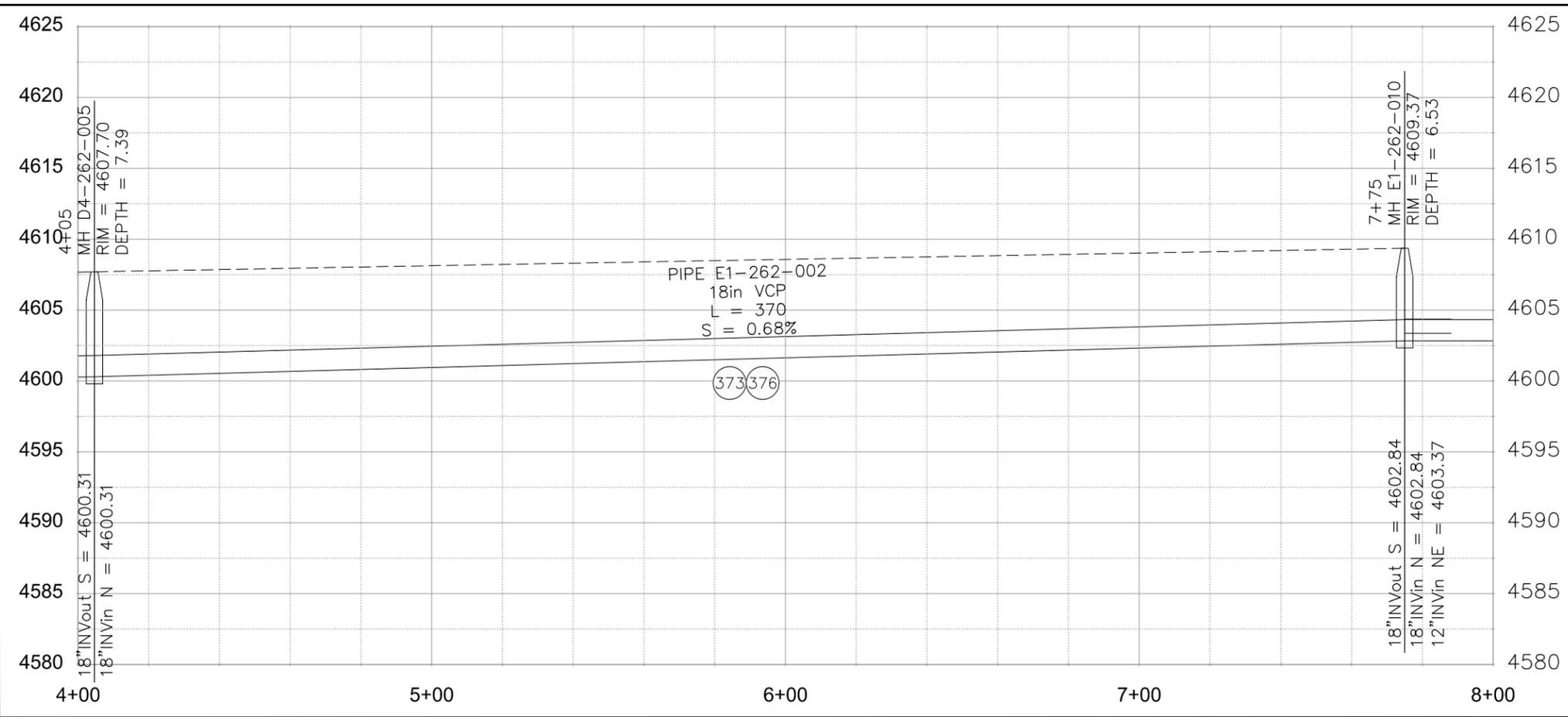
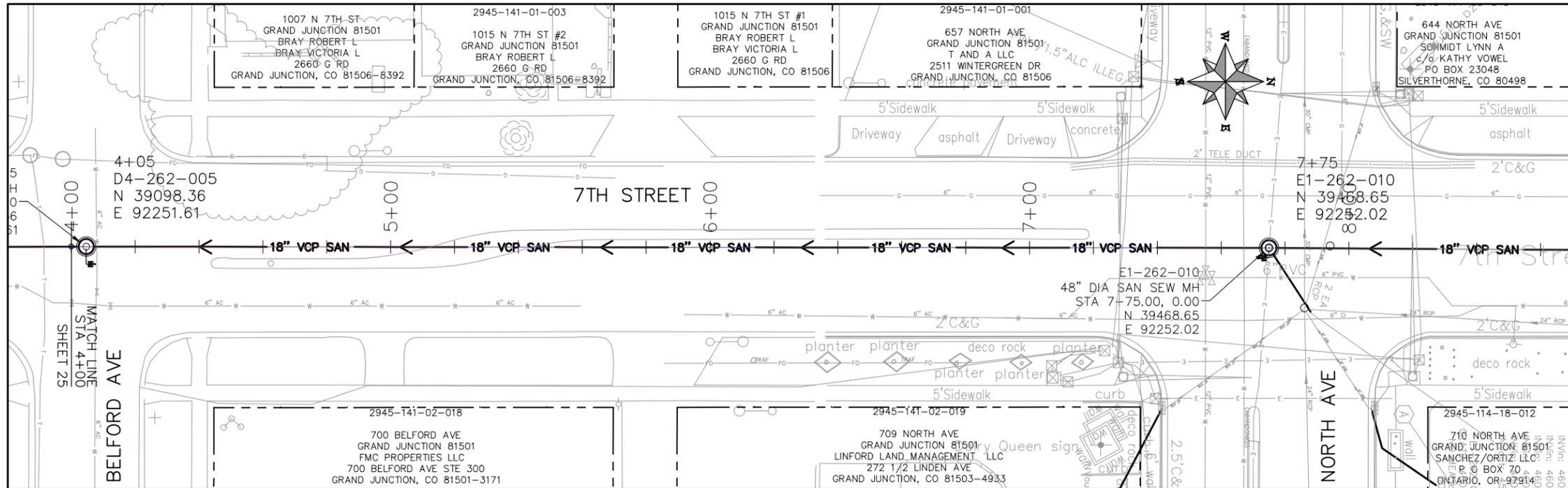
REVISION	DESCRIPTION	DATE	DRAWN BY	HMC	DATE	2018
REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018



PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
7TH STREET CIPP
STA 0+00 TO STA 4+00

- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

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REVISION			DESIGNED BY	JKT	DATE	2018
REVISION			CHECKED BY	JKT	DATE	2018
REVISION			APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE

HORIZONTAL: 1" = 40'

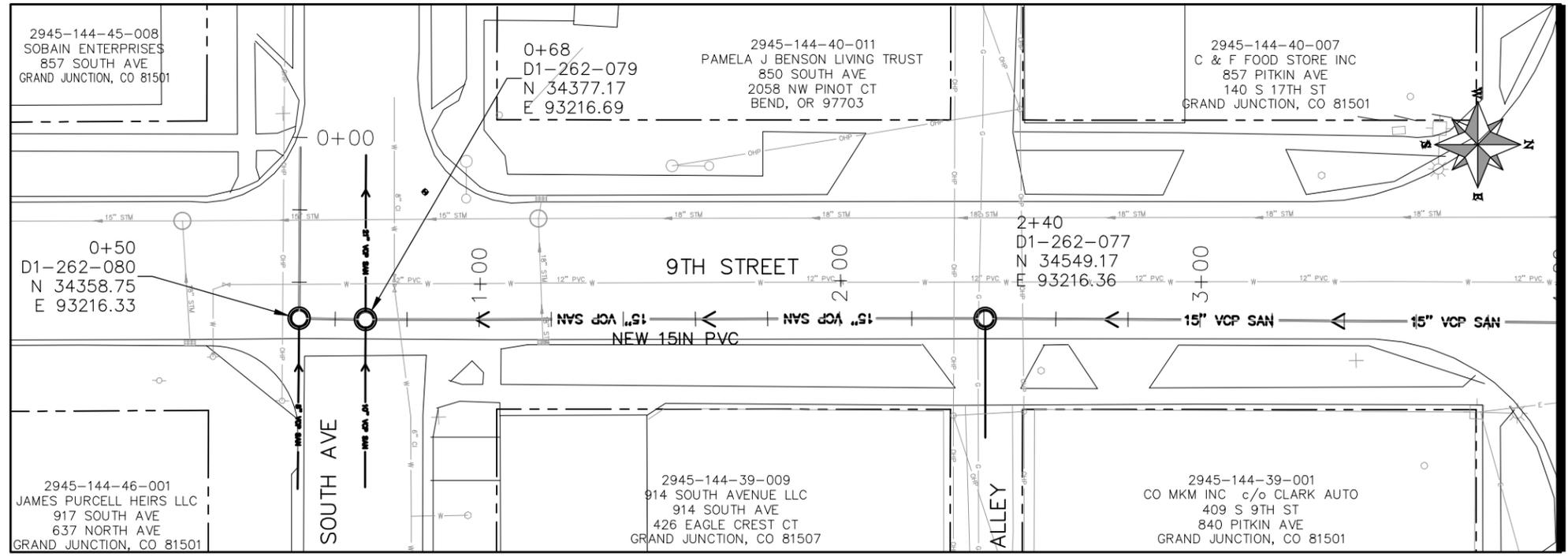
VERTICAL: 1" = 10'



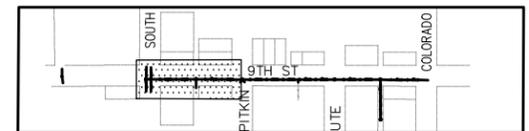
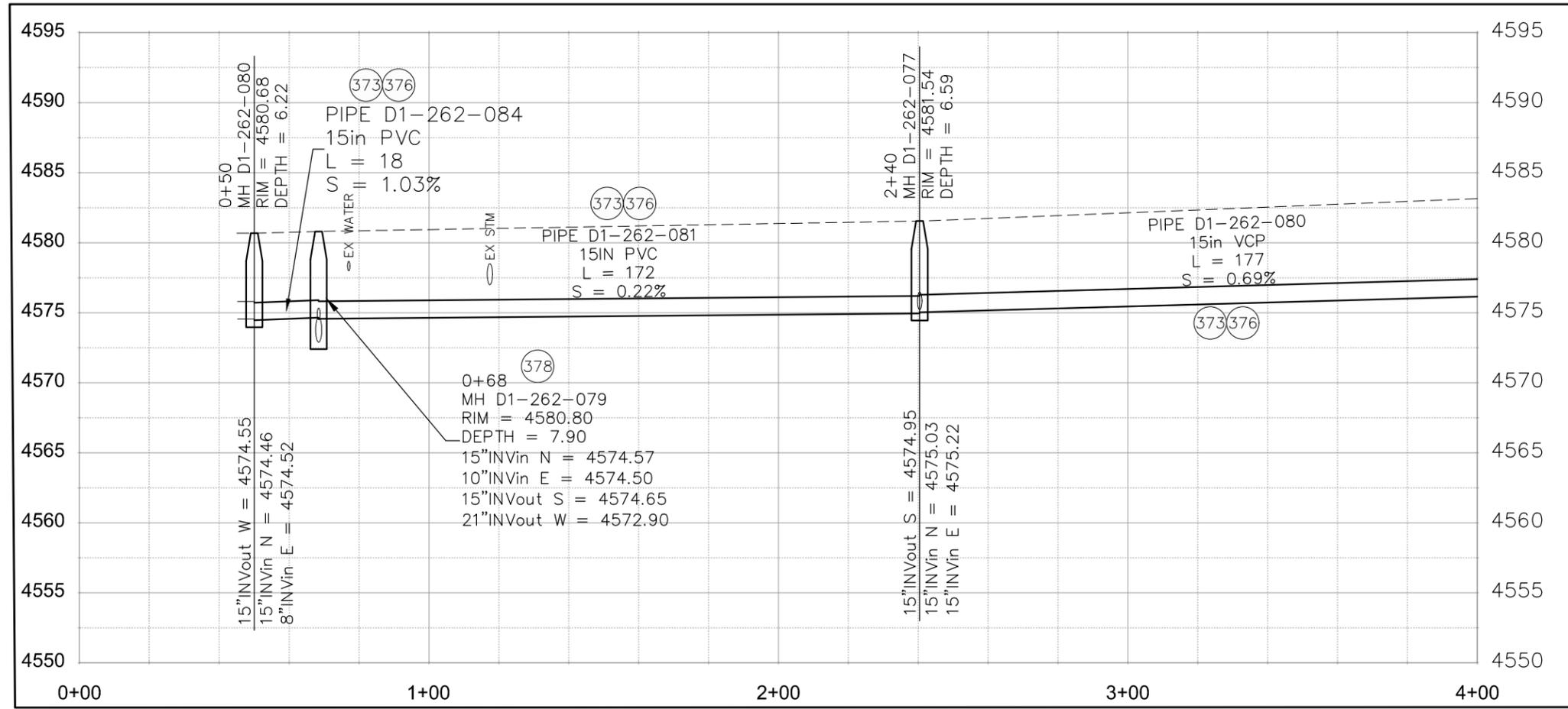
PUBLIC WORKS
 ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
 7TH STREET CIPP
 STA 4+00 TO STA 8+00

- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



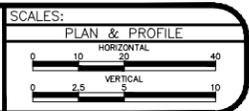
MATCH LINE STA 4+00



KEYMAP

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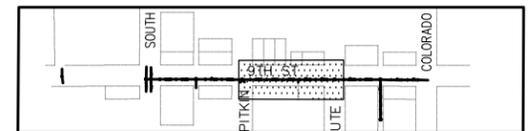
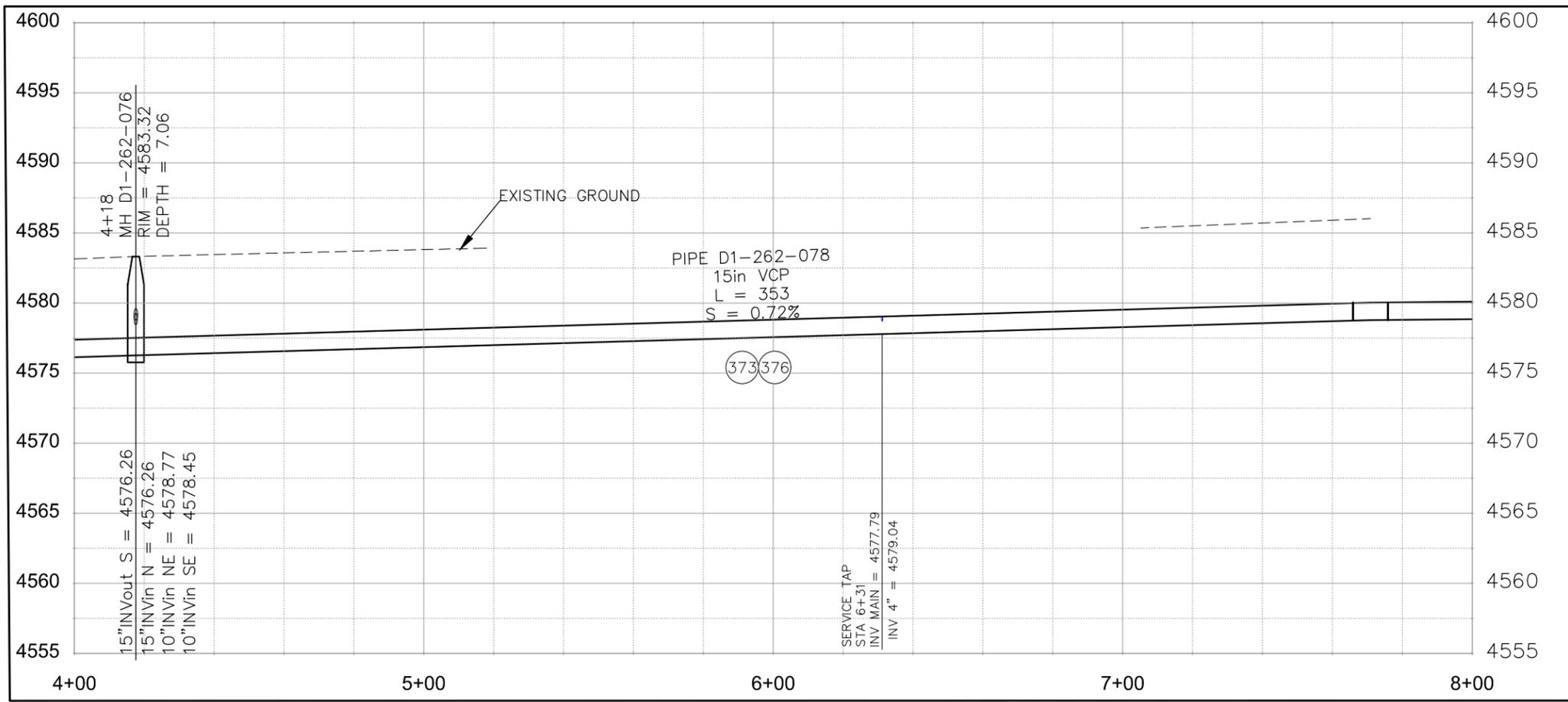
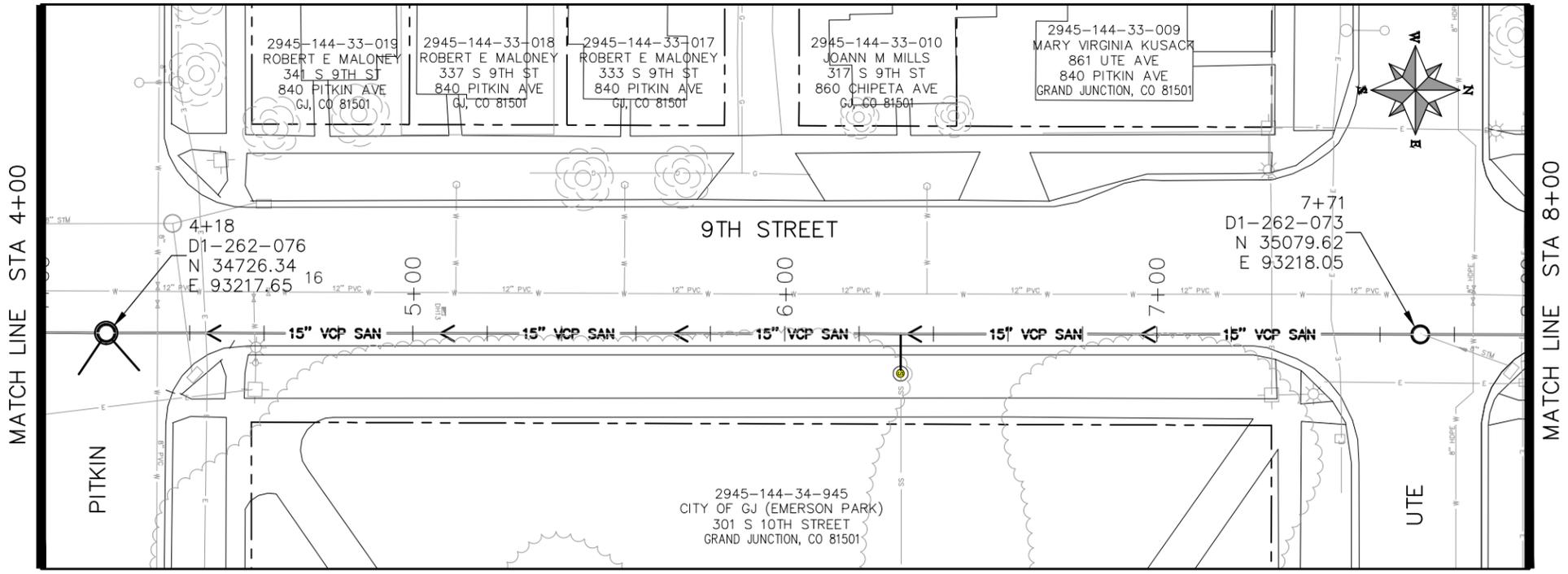
REVISION	DESCRIPTION	DATE	DRAWN BY	HMC/JCS	DATE	2016
REVISION			DESIGNED BY	JUV	DATE	2016
REVISION			CHECKED BY	TCP	DATE	2016
REVISION			APPROVED BY	HMC/JCS	DATE	2016



**PUBLIC WORKS
ENGINEERING DIVISION**

**2019 SEWER INTERCEPTOR REHABILITATIONS
9TH STREET CIPP
STA 0+00 TO STA 4+00**

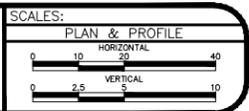
- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

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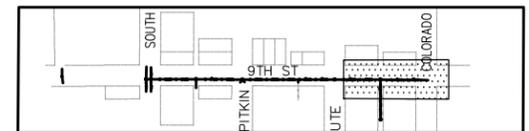
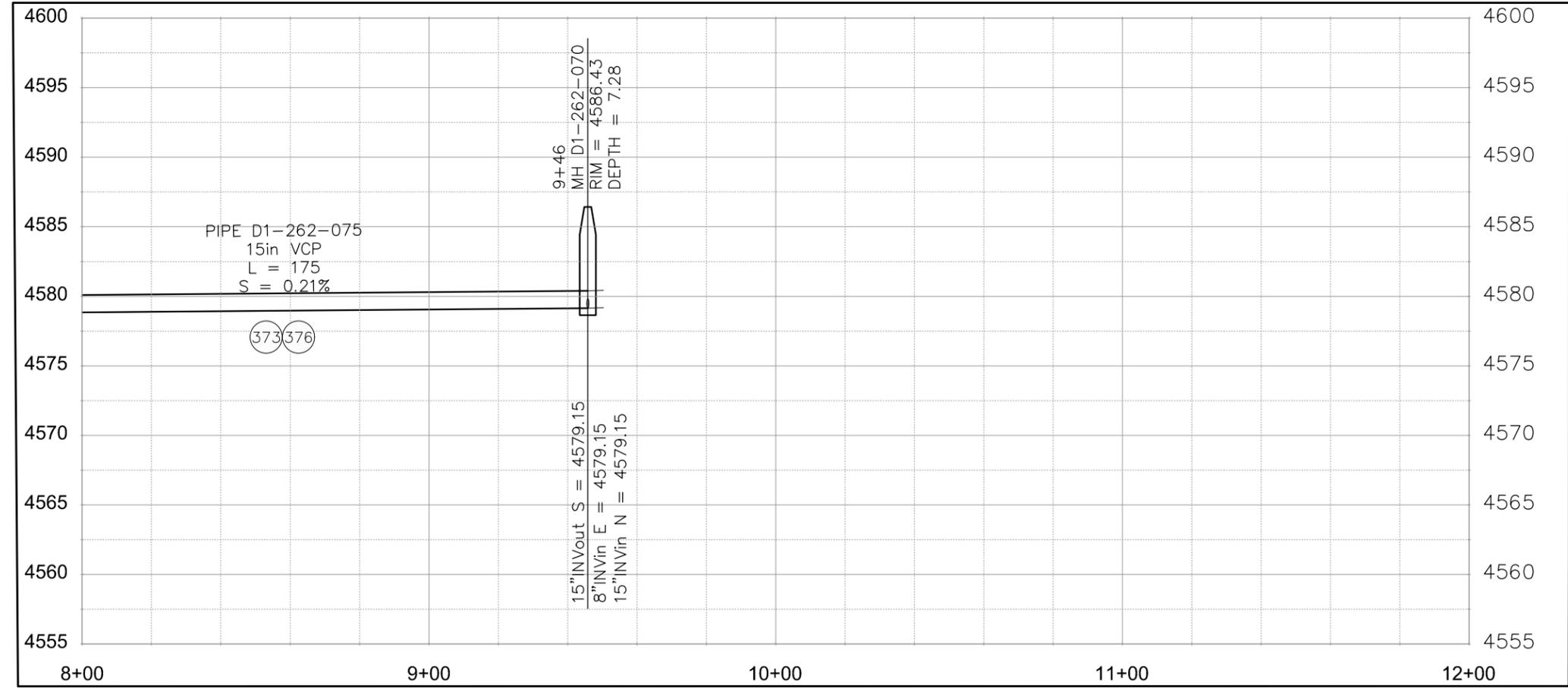
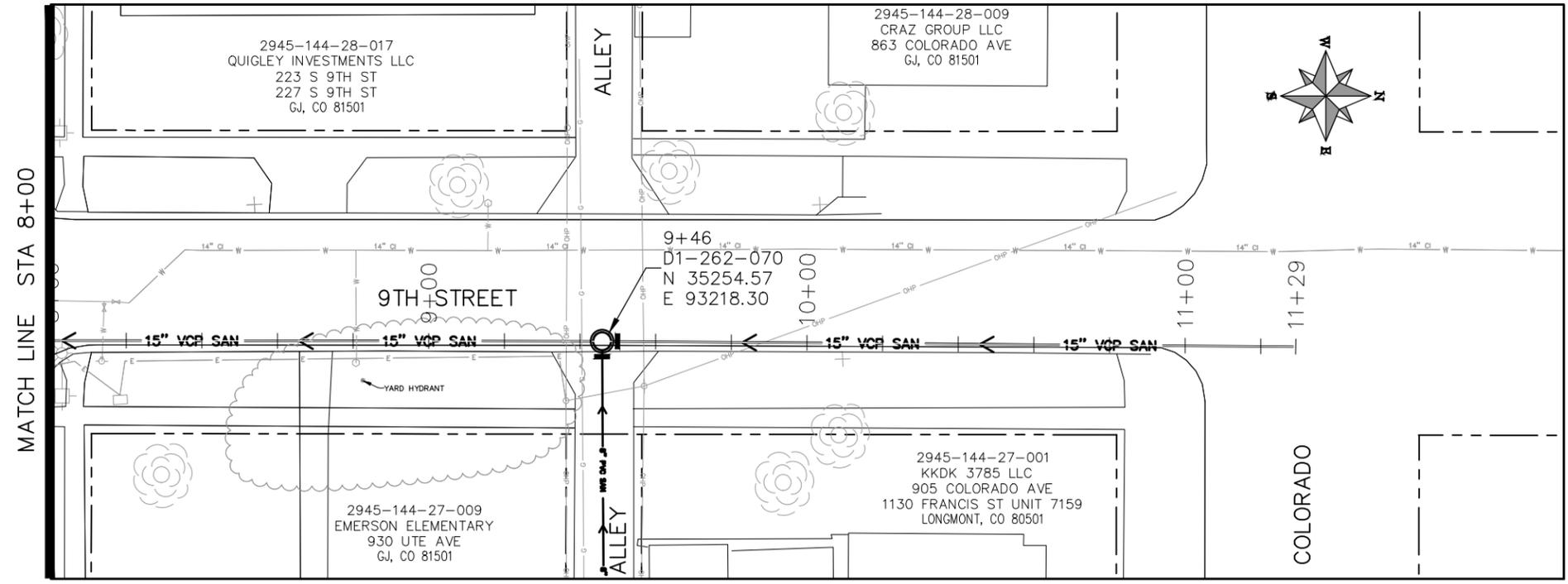
REVISION	DESCRIPTION	DATE	DRAWN BY	HMC/JCS	DATE	2016
REVISION			DESIGNED BY	JJV	DATE	2016
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REVISION			APPROVED BY	HMC/JCS	DATE	2016



PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
9TH STREET CIPP
STA 4+00 TO STA 8+00

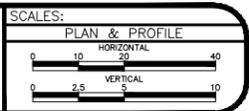
- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

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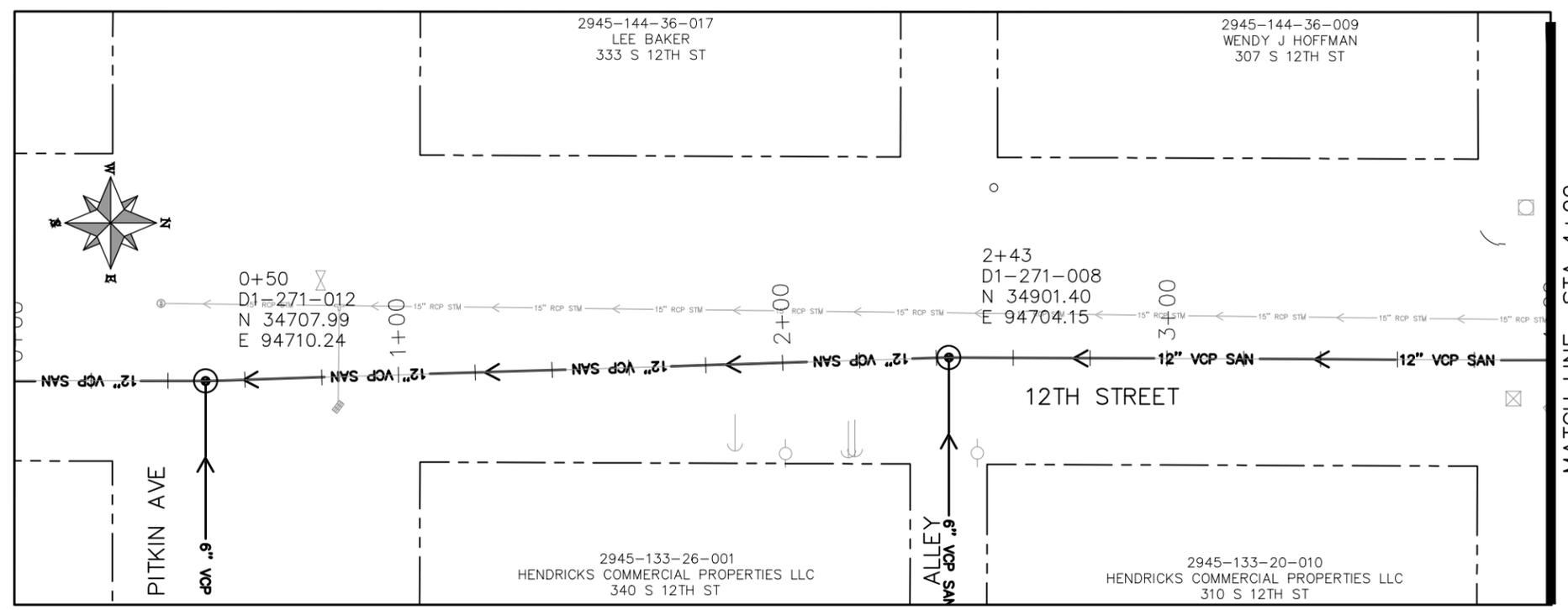
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REVISION			APPROVED BY	HMC/JCS	DATE	2016



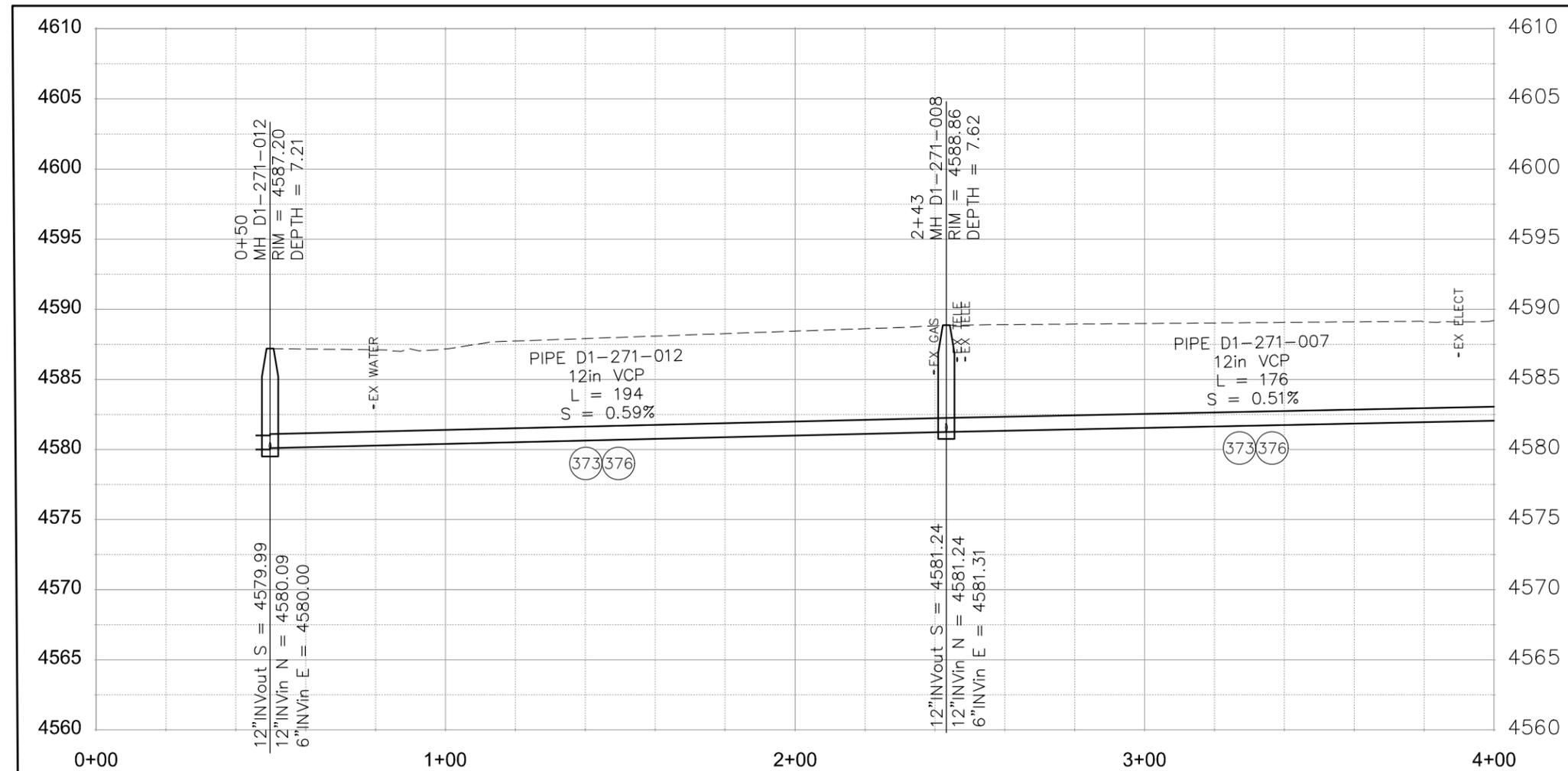
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
9TH STREET CIPP
STA 8+00 TO STA 12+00

- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



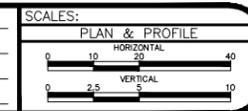
MATCH LINE STA 4+00



KEYMAP

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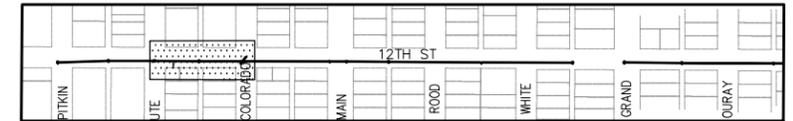
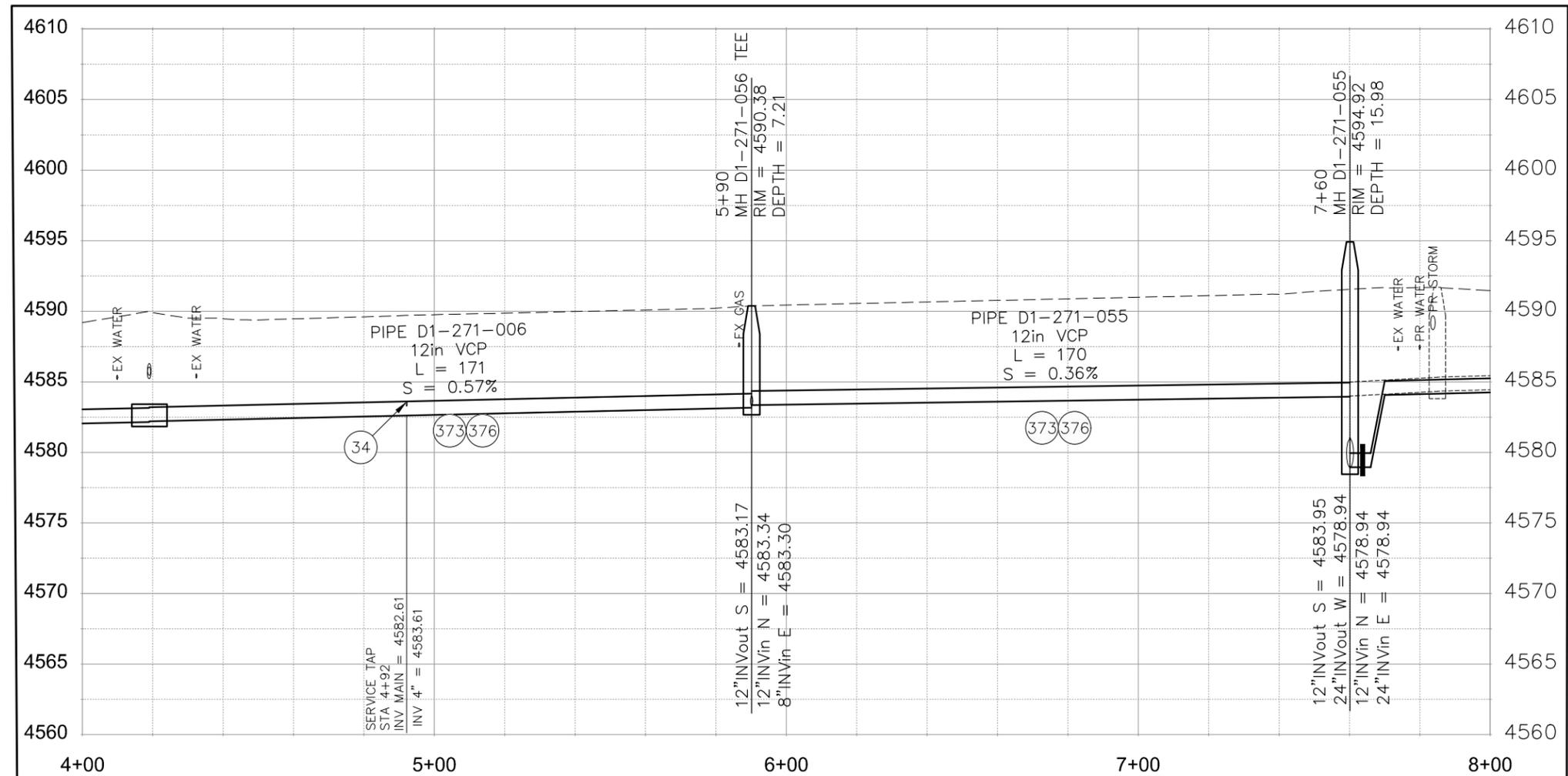
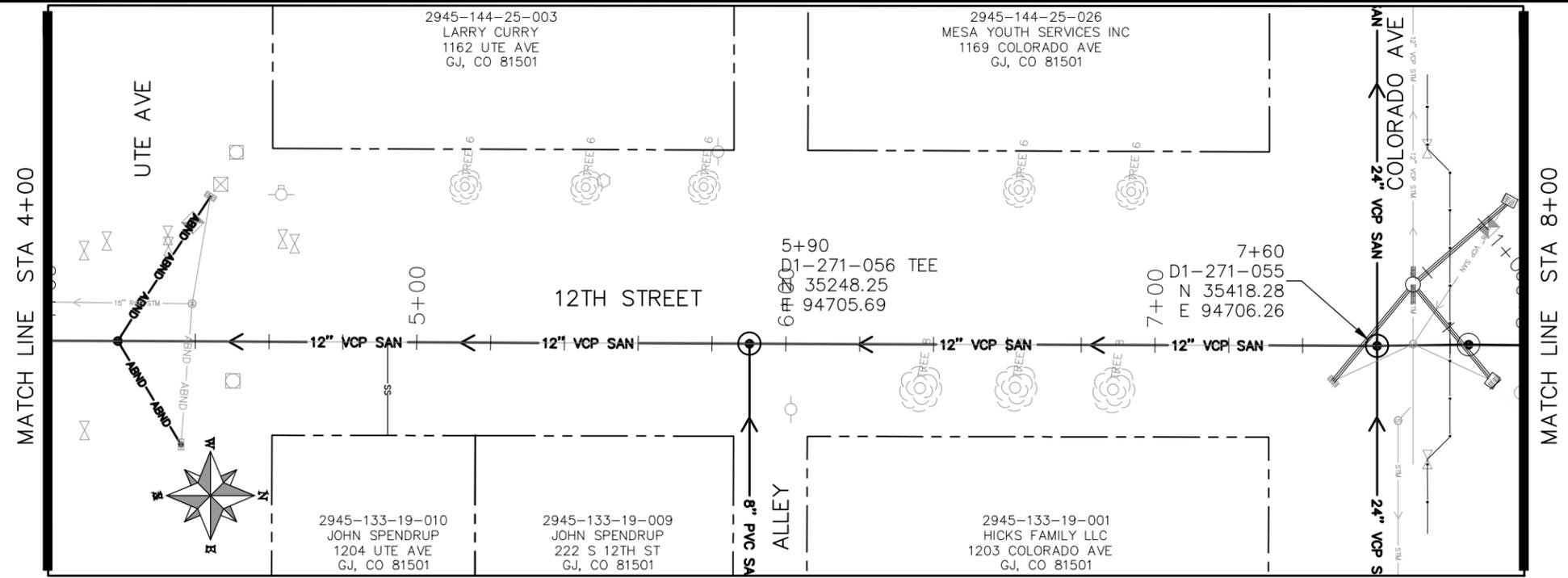
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REVISION			DESIGNED BY	JJV	DATE	2016
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REVISION			APPROVED BY	HMC/JCS	DATE	2016



**PUBLIC WORKS
ENGINEERING DIVISION**

**2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 0+00 TO STA 4+00**

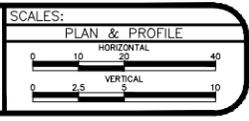
- 34 REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLE SHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.
- 373 10URED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE)
- 376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

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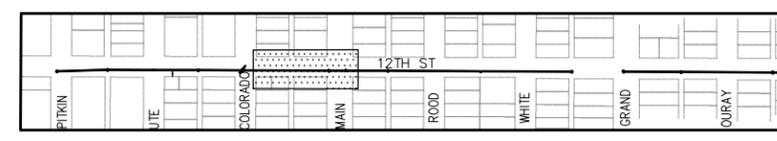
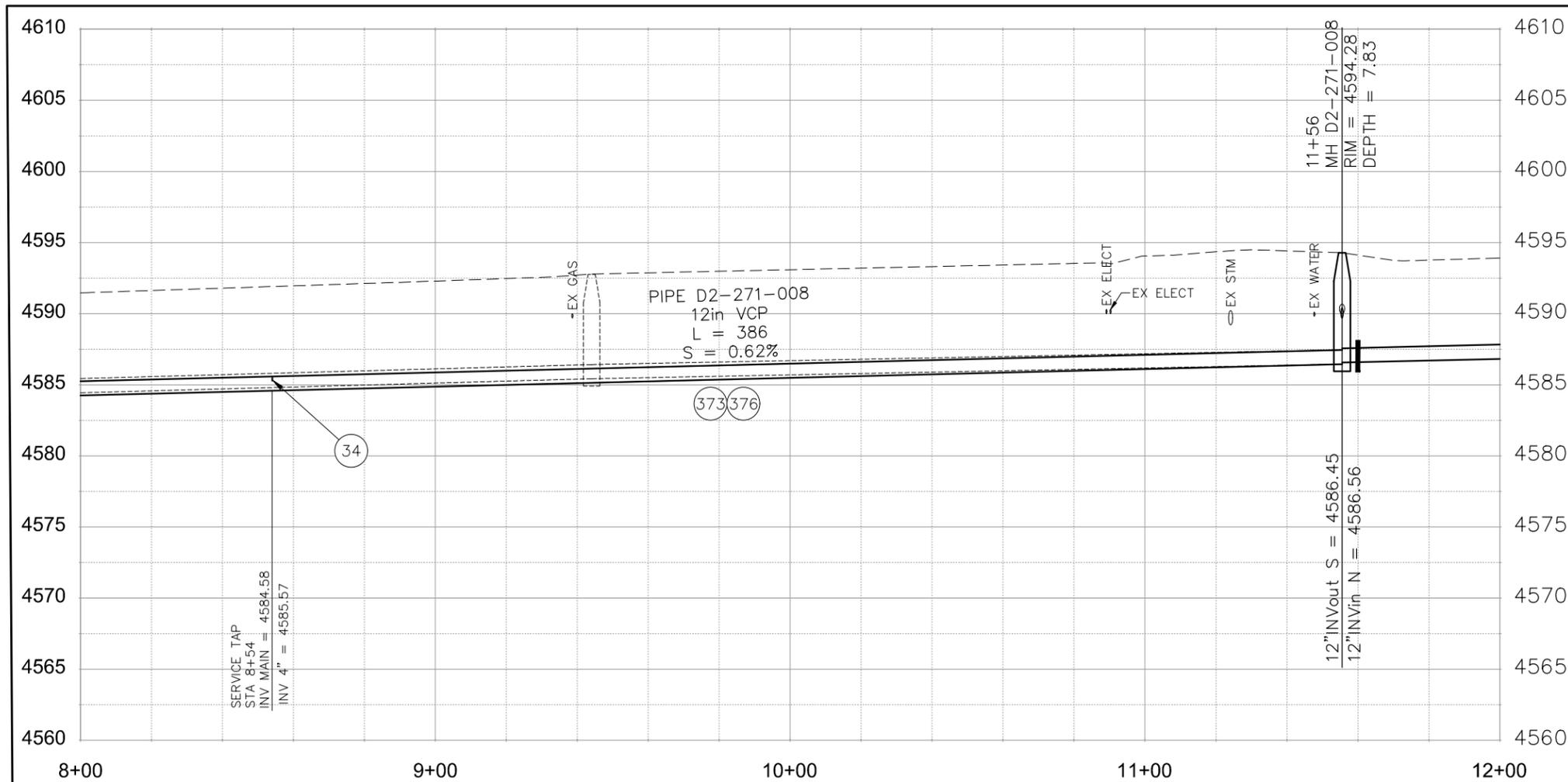
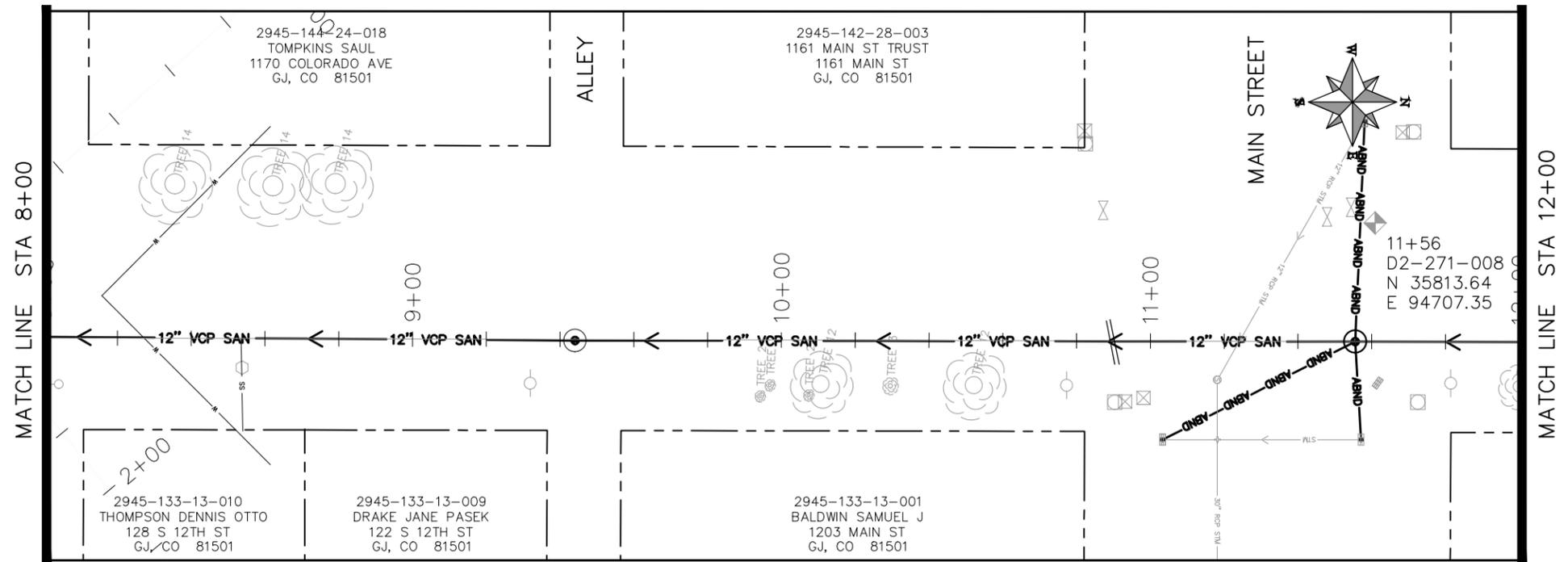
REVISION	DESCRIPTION	DATE	DRAWN BY	HMC/JCS	DATE	2016
			DESIGNED BY	JJV	DATE	2016
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			APPROVED BY	HMC/JCS	DATE	2016



PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 4+00 TO STA 8+00

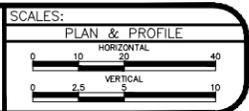
- 34 REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLE SHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.
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- 376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

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REVISION			CHECKED BY	TCP	DATE	2016
REVISION			APPROVED BY	HMC/JCS	DATE	2016

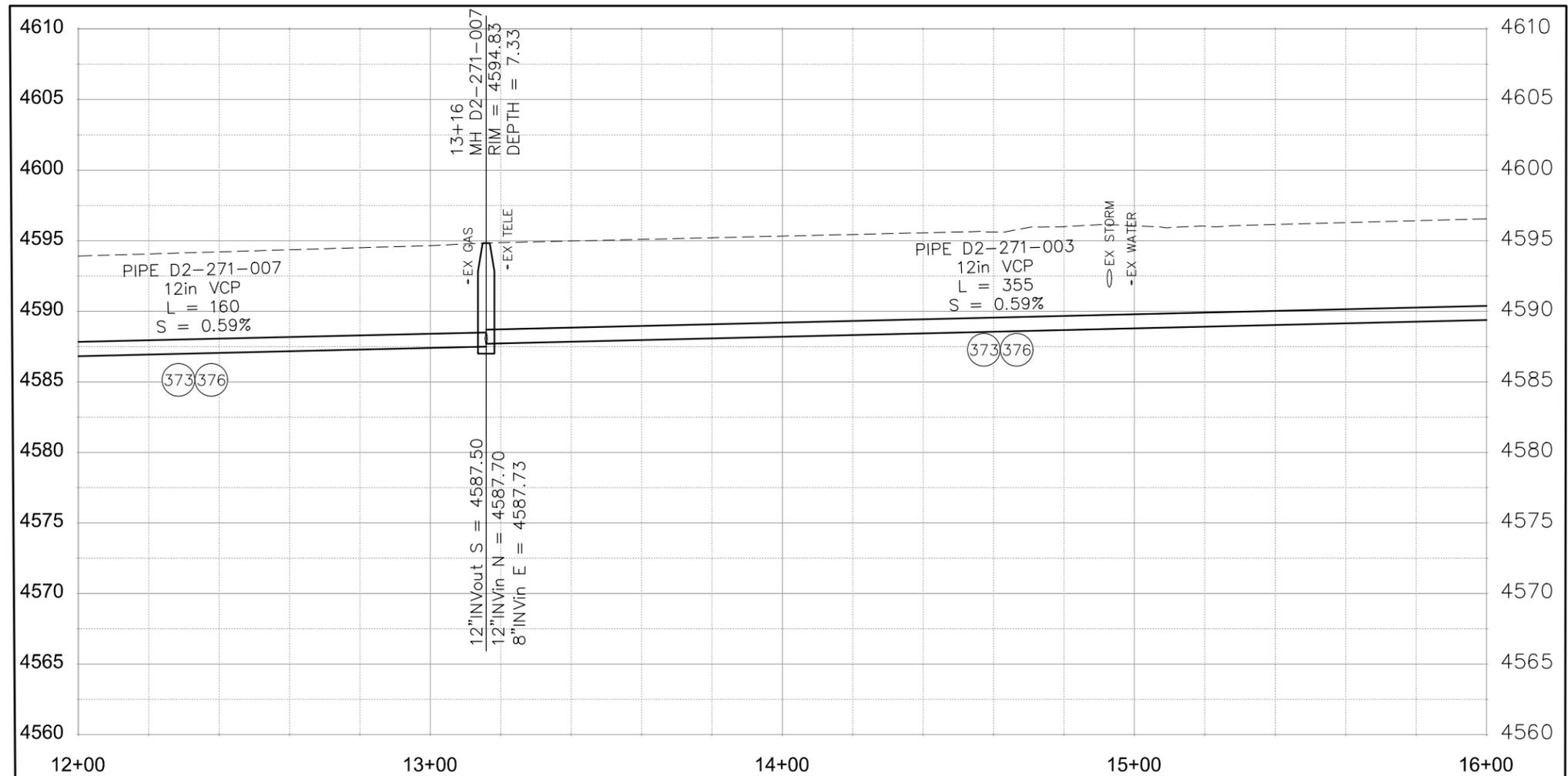
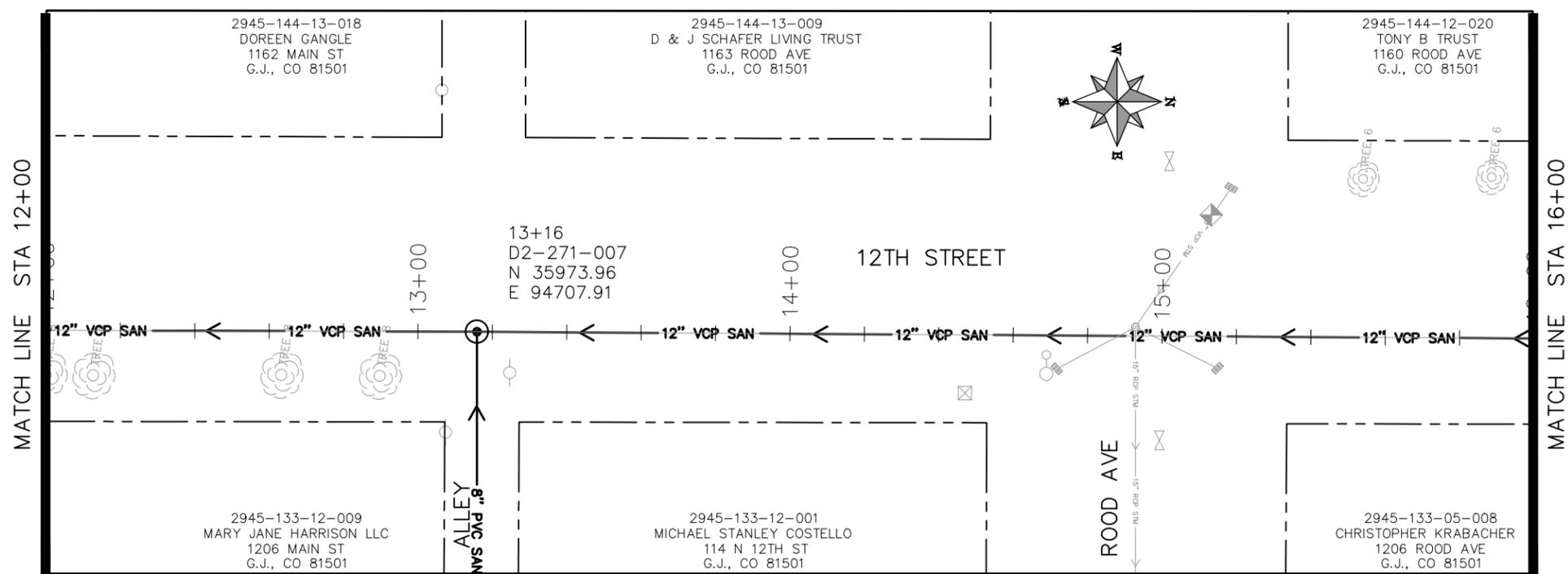


PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 8+00 TO STA 12+00

CONSTRUCTION NOTES

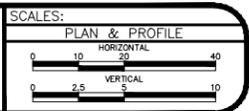
- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

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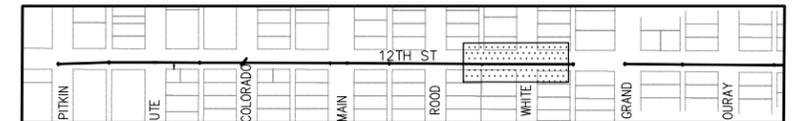
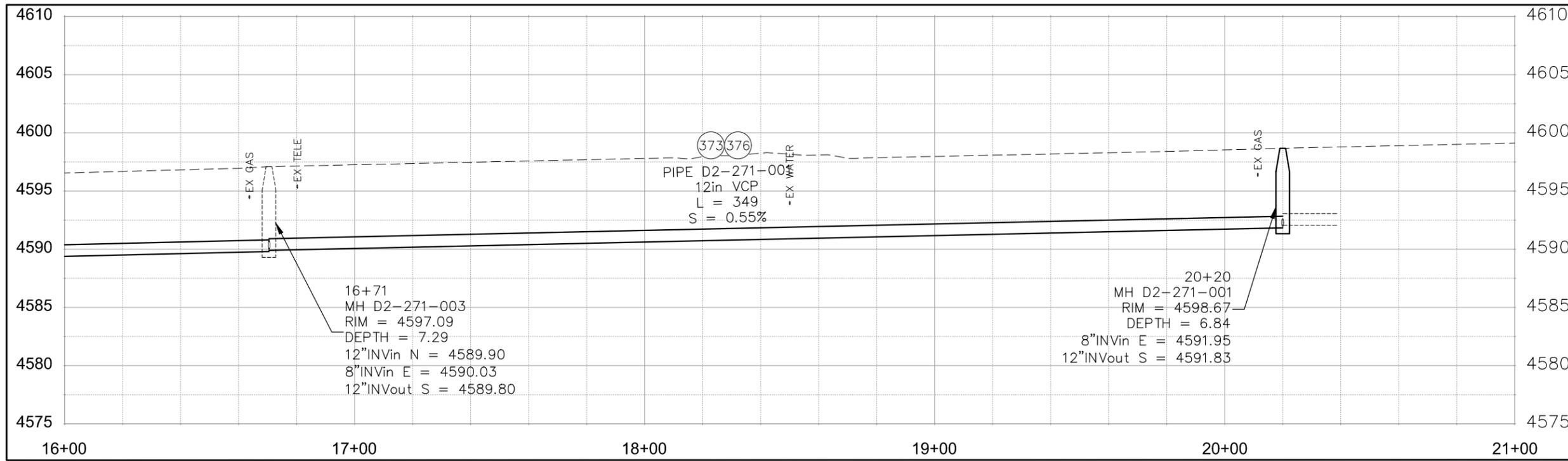
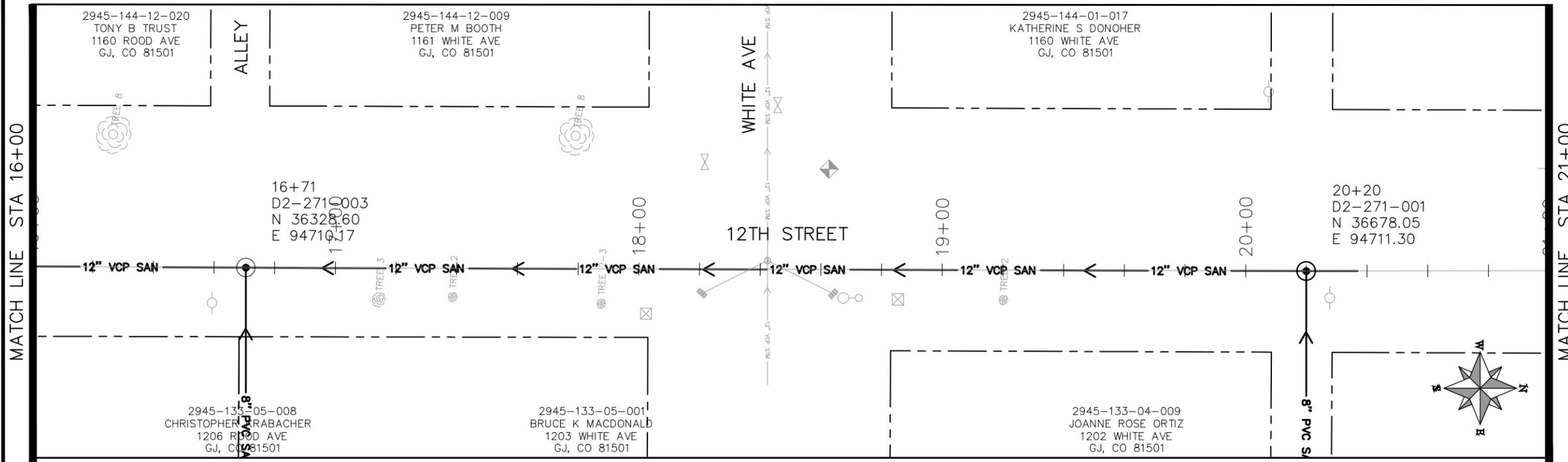
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REVISION			DESIGNED BY	JJV	DATE	2016
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PUBLIC WORKS
ENGINEERING DIVISION

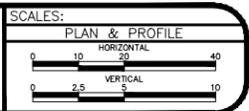
2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 12+00 TO STA 16+00

- (373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).
- (376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

REVISION	DESCRIPTION	DATE	DRAWN BY	HMC/JCS	DATE	2016
REVISION			DESIGNED BY	JJV	DATE	2016
REVISION			CHECKED BY	TCP	DATE	2016
REVISION			APPROVED BY	HMC/JCS	DATE	2016



PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 16+00 TO STA 21+00

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