

**SANTA FE COUNTY
PUBLIC WORKS DEPARTMENT**

INVITATION FOR BID



SANTA FE COUNTY

IFB# 2021-0114-PW/APS

**RANCHO VIEJO WATER SERVICE
IMPROVEMENTS**

**NM COMMODITY CODES:
91360**

APRIL 2021

SANTA FE COUNTY

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**ADVERTISEMENT
INVITATION FOR BIDS
RANCHO VIEJO WATER SERVICE IMPROVEMENTS
IFB# 2021-0114-PW/APS**

The Santa Fe County Public Works Department requests bids for the purpose of procuring a licensed construction company to install a new Pressure Release Valve (PRV) vault and 16-inch by-pass waterline. Bids may be held for ninety (90) days subject to all action by the County. Santa Fe County reserves the right to reject any and all bids in part or in whole.

A completed bid package must be submitted in a sealed container indicating the bid title and number along with the bidding firm's name and address clearly marked on the outside of the container. **All bids must be received by 2:00 PM on Tuesday, April 27, 2021 at the Santa Fe County Purchasing Division located at 102 Grant Avenue, Santa Fe, NM 87501.** By submitting a bid for the requested materials and/or services each firm is certifying that their bid is in compliance with the regulations and requirements stated within this IFB.

Santa Fe County has taken preventative measures to insure the safety of its staff and the public. In an effort to combat the spread of the recent COVID-19 Pandemic, the Bid Opening will be held via **WebEx by using link below or by calling (408) 418-9388 meeting number: 187 828 0852.** If a bidder submitting a bid chooses to stay for the bid opening, only ONE (1) person representing the firm may be in the conference room. Social distancing will be maintained during the opening and hand sanitizer will be available, all surfaces will be wiped down with disinfectant. If you plan on attending in person please email apatterson-sanchez@santafecountynm.gov.

<https://sfco.webex.com/sfco/j.php?MTID=mc4136d80f40f5eccdb832cff86969510>

A Pre-Bid Conference will be held on Tuesday, April 13, 2021 at 9:00AM online via WebEx using link below or by calling (408) 418-9388 meeting number: 187 562 0408. Attendance is not mandatory but strongly recommended.

<https://sfco.webex.com/sfco/j.php?MTID=m52e0a3c1ae74be324818ca086b3ffde9>

EQUAL OPPORTUNITY EMPLOYMENT: All qualified bidders will receive consideration of contract(s) without regard to race, color, religion, sex, national origin, ancestry, age, physical and mental handicap, serious mental condition, disability, spousal affiliation, sexual orientation or gender identity.

Information on Invitation for Bid Documents will be available by visiting the Santa Fe County website at http://www.santafecountynm.gov/asd/current_bid_solicitations or by contacting Amanda Patterson-Sanchez, Santa Fe County Purchasing, by telephone at (505) 992-6753, email at apatterson-sanchez@santafecountynm.gov.

BIDS RECEIVED AFTER THE DATE AND TIME SPECIFIED ABOVE WILL NOT BE ACCEPTED.

Santa Fe County
Public Works Department
Publish: April 4 & 5, 2021

BID INSTRUCTIONS

Bids are requested by Santa Fe County for construction services for the Rancho Viejo Water Service Improvements, located in Santa Fe, NM, in accordance with the plans and specifications prepared by HDR Engineering, Inc. and other contract documents prepared by Santa Fe County.

The bids shall be based upon the material descriptions, units, and estimated quantities shown on the attached bid sheets. Final payment will be made upon quantities completed in accordance with the specifications, measured and accepted by the County, paid at the unit prices contained in the bid.

The Contractor shall supply all labor, materials and equipment necessary to complete the work in accordance with the construction plans and specifications. The bid shall include all permits, fees, tie-in fees for all utilities, overhead and profit, and incidental costs in the bid amounts. All applicable taxes **shall not** be included in the bid amounts.

All applicable laws and ordinances and the rules and regulations of all authorities having jurisdiction over the project shall apply to the Contractor and all agreements between the Contractor and the County.

1. LOCATION AND DESCRIPTION OF WORK:

The work to be completed is located in the Rancho Viejo area within Santa Fe County, New Mexico. A modification to the existing waterline to redirect Santa Fe County Source Water into the Rancho Viejo area so the connections from the City of Santa Fe can be shut off. The work includes but is not limited to the following:

- A. Installation of a new PRV vault and 16-inch by-pass waterline with one (1) butterfly valve at a location approximately 100-feet north of the intersection on NM 599/NM14 on the west side of NM 599. PRV vault to include a 4-inch PRV, 10-inch PRV, piping valves, pressure gauges, and other appurtenances within an 8'-4" X 13'-0" pre-cast concrete vault with traffic rated floor doors.
- B. Installation of approximately 80 LF of 16-inch ductile waterline, two (2) butterfly valves and one (1) 16-inch check valve within a 4-ft diameter pre-cast concrete MH vault with traffic rated floor door at the existing Avenida del Sur/A-Van-Nu-Po PRV located at the intersection of Avenida de Sur/A-Van-Nu-Po.
- C. Installation of twenty-two (22) ¾-inch or 1-inch PRV's at individual customer meters at various locations.
- D. Trenching, backfilling, compaction and surface restoration.

2. TIME AND PLACE OF RECEIVING AND OPENING BIDS: This information will be found in the "Advertisement of Bid" form attached hereto. A bid received after the specified time will not be considered and will be returned to the bidder unopened.

3. SPECIFICATIONS: The construction of this project will be in accordance with the plans and specification prepared for this project by HDR Engineering, Inc., and other

contract documents prepared by Santa Fe County, except as otherwise specified herein or in the contract.

4. **CONTRACT TIME:** The number of days for the completion of work (the contract time) from the Notice to Proceed is forty-five (45) days. The number of days for the completion of work is weather working calendar days, where “calendar days” are defined as consecutive business days.
5. **COPIES OF BIDDING DOCUMENTS:** The Invitation for Bid Documents will be available by visiting the Santa Fe County website at http://www.santafecountynm.gov/asd/current_bid_solicitations or by contacting Amanda Patterson-Sanchez, Santa Fe County Purchasing, by telephone at (505) 992-6753, email at apatterson-sanchez@santafecountynm.gov.

Bidders shall use complete sets of Bidding Documents in preparing bids; neither the owner nor engineer assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

6. **PRE-BID CONFERENCE:** A Pre-Bid Conference will be held on **Tuesday, April 13, 2021 at 9:00AM via WebEx using link below or by calling (408) 418-9388 meeting number 187 562 0408. Attendance is not mandatory but strongly recommended.**

<https://sfco.webex.com/sfco/j.php?MTID=m52e0a3c1ae74be324818ca086b3ffde9>

7. **BIDDER’S REPRESENTATION:** By submitting a bid the bidder represents that: a) the bidder has read and understands the Bid Documents and Contract Documents; b) the bid is made in compliance with the Bid Documents and Contract Documents; c) The bidder has visited the site and has become familiar with local conditions under which the Work is to be performed, and has correlated the bidder’s personal observations with the requirements of the proposed Contract Documents; d) the bidder has familiarized itself with federal, state and local laws, ordinances, rules, and regulations affecting performance of the Work; and e) the bid is based upon the materials, equipment and systems required by the Bid Documents without exception; and f) the County shall rely on these representations.
8. **INTERPRETATIONS/ADDENDA:** All questions about the meaning or intent of the contract documents shall be submitted to the Procurement Manager in writing.

Replies will be issued by written addenda mailed or delivered to all parties recorded by the Procurement Manager, as having received the bidding documents at least seven (7) calendar days before the scheduled bid opening date. Questions received less than seven (7) calendar days prior to the date for opening of bids will not be answered. Only questions answered by formal written addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. Written questions or inquiries in relation to the Invitation for Bid will be directed to:

Amanda Patterson-Sanchez, Procurement Specialist Senior
Santa Fe County Purchasing Division
102 Grant Avenue
Santa Fe, NM 87501
Ph. (505) 992-6753
Fax (505) 989-3243
Email – apatterson-sanchez@santafecountynm.gov

Addenda will be transmitted to all bidders that are listed on the Bid Holder's List at the printer(s) who have received a complete set of Bid Documents.

Copies of addenda will be made available for inspection wherever Bid Documents are on file for that purpose. Each addendum shall be part of the contract documents as specified in the written contract, attached to these specifications.

Addenda will be issued no later than five (5) working days prior to the date for receipt of bids except an addendum withdrawing the request for bids or one which includes postponement of the date for receipt of bids.

Each bidder shall ascertain prior to submitting a bid that the bidder has received all addenda and the bidder shall acknowledge receipt in the bid.

9. **RESIDENT PREFERENCE:** If a bidder wishes to be given preference in this procurement, it is required to submit its certificate or certificate number issued by the State Purchasing Agent with the bid prior to the bid submittal time and date deadline. Preference will not be given to a bidder who does not submit its certificate or certificate number that can be verified with the State Purchasing Office. The certificate must be under the bidder's business name as represented in its bid. The bidder's certificate must indicate whether the bidder is certified as a resident business. Application of preference by the County shall be provided as described at Section 13-1-21 (A)-(L) and Section 13-1-21.2 NMSA 1978, of State Procurement Code.
10. **SUBCONTRACTORS, SUPPLIERS AND OTHERS:** The contractor shall be required to fully comply with the Subcontractors Fair Practices Act, NMSA 1978, 13-4-31 to 13-4-42.
 - A. The contractor, in the bid documents, must identify in writing to the County those portions of the work that it proposes to subcontract and after the Notice of Award, may only subcontract other portions of the work with the County's written consent.
 - B. Any subcontractor who will be providing more than \$5,000 or one-half of one percent of the architect's or engineer's estimate of the total project cost (not including alternates) whichever is greater for any service, must be listed on the Subcontractor Listing form.
 - C. A subcontractor who submits a bid valued at more than sixty thousand dollars (\$60,000) for a County project is subject to the Public Works Minimum Wage Act (13-4-10 NMSA 1978). The registration number shall be provided in the bid submitted by the Contractor in the space provided for subcontracts with work

proposed. After the bid opening, the registration numbers will be verified by the County and the bid will be determined to be non-responsive and disqualified if the registration number(s) appear to be non-valid and the subcontractor does not provide proof of the required registration for itself or its subcontractors for work proposed over the sixty thousand dollars (60,000).

D. The Contractor will not be required to employ any other subcontractor, other person or organization against whom he has reasonable objection.

11. SUBSTITUTIONS: The materials, products, and equipment described in the Bid Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. **No substitution will be considered prior to receipt of bids.**

12. WAGE RATES/REGISTRATION WITH THE LABOR AND INDUSTRIAL DIVISION OF THE LABOR DEPARTMENT: The contractor shall be required to fully comply with the Public Works Minimum Wage Act, NMSA 1978, 13-4-11 thru 13-4-17. If the minimum wage rate determination for the project is not included in the initial Bid Documents, it will be furnished in an addendum.

A contractor or subcontractors who submit a bid valued at more than sixty thousand dollars (\$60,000) for a public works project that is subject to the Public Works Minimum Wage Act must be registered with the New Mexico Workforce Solutions at the time of the bid opening. The registration number shall be provided in the bid submitted by the contractor in the space provided for subcontracts with work proposed. After the bid opening, the registration numbers will be verified by the County and the bid will be determined to be non-responsive and disqualified if the registration numbers are *“inactive”* and the contractor does not provide proof of the required registration for itself or its subcontractors for work proposed over sixty thousand dollars (\$60,000).

For a public works contract whose value is \$60,000 or more, the NM Public Works Minimum Wage Act, 13-4-11 NMSA 1978, also requires all tiers of subcontractors to submit certified weekly payroll records to the general contractor and the County biweekly. If this provision applies, the contractor shall, and shall require all tiers of subcontractors, to submit certified weekly payroll records to the contractor and the County’s Project Manager for this project.

13. BID FORM:

- A. The bid forms are included in the bidding documents; additional copies may be obtained from the Santa Fe County Purchasing Division.
- B. Bid forms must be completed in either ink or typewritten. The bid price of each item on the form must be stated in numerals and written words; in case of an error in extensions in the unit price schedule, the unit price shown in written words shall govern.
- C. Bids by corporations must be executed in the corporate name by the president or a vice president (or other corporate office accompanied by evidence of authority to

sign) and the corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

- D. Bids by partnerships must be executed in the partnership name and signed by a partner, their title must appear under their signature and the official address of the partnership must be shown below the signature.
- E. All names must be typed or printed below the signature.
- F. The bid shall contain an acknowledgment of receipt of all addenda (the numbers of which shall be filled in on the bid form).

- 14. BID SECURITY:** Each individual bid shall be accompanied by bid security equal to 5% of the amount of the bid. Such bid security shall be in the form of a certified or cashier's check made payable to the County or a surety bond issued by a surety authorized to conduct business in the State of New Mexico and who is approved in federal circular 570 as published by the U.S. Treasury Department.

By submitting the bid and providing the bid security, the bidder pledges to enter into a binding contract with the County and will furnish bonds covering the faithful performance of the contract and payment of all obligations arising hereunder.

The County will have the right to retain the bid security of bidders to whom an award is being considered until either the contract has been executed and bonds, if required, have been furnished or the specified time has elapsed so that bids may be withdrawn or all bids have been rejected.

- 15. POWER OF ATTORNEY:** Attorneys in fact who sign bonds must attach certified effective copies of their Power of Attorney to all bonds.
- 16. QUALIFICATION OF BIDS:** All contractors and subcontractors must have a valid New Mexico license appropriate to the work herein specified at the time the bid is submitted.
- 17. SUBMISSION OF BIDS:** Bids shall be submitted at the time and place indicated in the "Advertisement for Bids" on page 3 of this IFB and shall be enclosed in an opaque sealed envelope, marked with the project title, name and address of the bidder, N.M. License Number, and accompanied by the list of subcontractors and other required documents. All blanks must be filled in. Conditional bids will not be considered. The envelope shall be addressed to:

Amanda Patterson-Sanchez, Procurement Specialist Senior
Santa Fe County Purchasing Division
102 Grant Avenue
Santa Fe, NM 87501

- 18. MODIFICATION AND WITHDRAWAL OF BIDS:** A bid may not be modified, withdrawn or canceled by the bidder following the time and date designated for the receipt of bids, and each bidder so agrees to these conditions by submitting a bid.

Prior to the time and date designated for receipt of bids, a bid submitted may be modified or withdrawn by notice to the County at the address designated for receipt of bids. Such notice shall be in writing and signed by the bidder.

Upon receipt such written confirmation shall be date and time stamped by the County on or before the date and time set for receipt of bids. A modification of a bid shall be worded as not to reveal the amount of the original bid.

- 19. GROSS RECEIPTS TAXES:** The amount of the bid shall exclude applicable New Mexico Gross Receipts Taxes or applicable local option taxes. The applicable gross receipts tax or applicable local option taxes shall be computed and shown as a separate amount on each request for payment made under the contract.

- 20. CONSIDERATION OF BIDS:** Bids received on time will be opened publicly and will be read aloud, and an abstract of the amounts of the base bids and alternates or bid items, if any, will be made available to the bidders. Each bid shall be open to public inspection.

- 21. BID OPENING PROCEDURE:** Santa Fe County has taken preventative measures to insure the safety of its staff and the public. In an effort to combat the spread of the recent COVID-19 Pandemic, the Bid Opening will be held via **WebEx by using link below or by calling (408) 419-9388 meeting number 187 828 0852**. If a bidder submitting a bid chooses to stay for the bid opening, only ONE (1) person representing the firm may be in the conference room. Social distancing will be maintained during the opening and hand sanitizer will be available, all surfaces will be wiped down with disinfectant.

<https://sfco.webex.com/sfco/j.php?MTID=mc4136d80f40f5eccdb832cff86969510>

The person or persons opening the bids shall verify that the requirements of the Instruction to Bidders have been fulfilled, and shall read aloud the name of each apparently responsive bidder and the bid amount(s). If any requirements have not been met, the bid shall be deemed non-responsive and disqualified. Each bid shall be reviewed for the following:

- A. Bid Proposal – Include name of bidder, type of organization, contractor’s license number and DOL registration number and all required signatures.
- B. Bid Form- Include acknowledgement of all addenda, if applicable, bidder’s name, title, address, telephone number, contractor’s license number and type, United States Treasury number, resident preference certificate, if applicable, and all required signatures.
- C. Bid Sheet-Include best price offered, excluding GRT.

- D. Non-Collusion Affidavit for Prime Bidder Form-Include all required notarized signatures.
- E. Certification of Non-Segregated Facilities Form-Include all required notarized signatures.
- F. Certification of Bidder Regarding Equal Employment Opportunity Form-Include all required signatures.
- G. Bid Bond-Include all required notarized signatures.
- H. Bid Security- Shall be in the form of a certified or cashier's check made payable to the County or a surety bond issued by a surety.
- I. Subcontractor's Listing Form-List of all subcontractors performing work over \$5,000.00, include name, address, telephone number, license number and **active** NM Department of Workforce Solutions Registration Number.
- J. Campaign Contribution Disclosure Form-Include all required signatures.
- K. Valid certificate of resident business or resident contractor.

IF ANY OF THESE REQUIREMENTS HAVE NOT BEEN MET, THE BID MAY BE DISQUALIFIED AND CONSIDERED NON-RESPONSIVE.

- 22. **BIDS TO REMAIN OPEN:** All bids shall remain open for ninety (90) days after the day of the bid opening.
- 23. **AWARD OF CONTRACT:**
 - A. The County reserves the right to reject any and all bids and waive any and all informalities or technicalities and the right to disregard all nonconforming or conditional bids or counter proposals.
 - B. If a contract is to be awarded, it will be awarded to the lowest responsible bidder submitting a bid that is either: (i) the lowest base bid; or (ii) the lowest bid including the base bid and bid alternate(s); or (iii) the lowest bid including the base bid and any combination of bid alternates.
 - C. If the lowest responsible bidder has otherwise qualified, the lowest bidder may negotiate with the County for a lower bid if the lowest bid is within **ten percent** over budgeted project funds in order to prevent all bids from being rejected. No change in the original scope and/or terms and conditions will be allowed. Negotiations may be permitted with product, materials, and equipment alternatives as determined to be in the best interest of the County.
 - D. Alternates may be accepted and awarded in any manner or order based on available budget. The County reserves the right not to award any particular alternate.
 - E. **The awarded contractor must register all active subcontractors on the State of New Mexico Workforce Solutions website upon approval of Notice of Award entered by Santa Fe County.**
- 24. **LIQUIDATED DAMAGES:** Liquidated damages in the amount of five hundred dollars (\$500.00) per each calendar day shall be assessed after the completion date (as adjusted

by change orders) until the issuance of a Certificate of Substantial Completion for the entire project.

25. **PREFERENCES IN EQUIPMENT AND MATERIAL:** In the construction of this project, the County has no preference for any process, type of equipment, or kind of material, but will consider all processes, types of equipment or kinds of material offered on a usual competitive basis if they are in fact equal to that specified and will accomplish the purpose intended. The County reserves the right to be the sole judge as to whether or not a different process, type of equipment or kind of material offered is in fact equal to that specified.
26. **LICENSE OR ROYALTY FEES:** Licenses and/or royalty fees for products or for processes must be paid for directly by the contractor.
27. **PERMITS:** It is the responsibility of the contractor and each subcontractor to obtain permits and inspections required by the County and/or the State of New Mexico or any other entity that may have jurisdiction over the construction.
28. **COLLUSION:** No bidder shall be interested in more than one bid. Collusion among bidders or the submission of more than one bid under different names by any firms or individual shall be cause for rejection of all bids in question without consideration.
29. **QUANTITIES:** The quantities set forth in the bid proposal are estimated quantities on which bids will be compared and which will be the basis for award of contract. Payment will be made for work actually performed.
30. **PROTEST PROCEDURE:** Any bidder who is aggrieved in connection with procurement may protest to the County Purchasing Manager as set forth in Resolution No. 2006-60 by the Board of County Commissioners. A copy of Resolution No. 2006-60 is available upon request. The protest must be in writing and be submitted within fifteen (15) days after the facts or occurrences. The complete procedures and requirements regarding protests and resolution of protests are available from the Santa Fe County Purchasing Division upon request.
31. **CONTRACTOR'S QUALIFICATION STATEMENT:** A bidder to whom award of a contract is under consideration shall submit, upon request, information and data to prove that its financial resources, production or service facilities, personnel, and service reputation and experience are adequate to make satisfactory delivery of the services, construction, or items of personal property described in the Bidding Documents.
32. **BOND REQUIREMENTS – PERFORMANCE BOND AND PAYMENT BOND:** If awarded the contract, a bidder shall furnish bonds covering the faithful performance of the contract and payment of all obligations arising thereunder. The amount of the bonds, performance and payment, shall each be equal to 100% of the contract sum. Bonds shall be issued by a surety authorized to conduct business in the State of New Mexico and

who is approved in federal circular 570 as published by the U.S. Treasury Department. The cost of the bonds shall be included in the bid.

- 33. TIME OF DELIVERY AND FORM OF BONDS:** The bidder shall deliver the required bonds to the County no later than seven (7) days following the date of execution of the contract. If the Work is to be commenced prior thereto in response to a letter of intent, the bidder shall, prior to commencement of the Work, submit evidence satisfactory to the County that such bonds will be furnished and delivered in accordance with this section.

The bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

- 34. WARRANTY:** The contractor shall furnish a written warranty of workmanship to the Procurement Manager for a period of one (1) year following the completion date in addition to all other warranties required by the Contract Documents.
- 35. NOTICE OF AWARD:** A written Notice of Award shall be issued by the County after review and approval of the bid and related documents.
- 36. IDENTICAL BIDS:** If two or more identical low bids are received, the County will apply the process described at Section 13.1.110 NMSA 1978, of the State Procurement Code.
- 37. CANCELLATION OF AWARD:** When in the best interest of the public, the County may cancel the award of any contract at any time before the execution of said contract by all parties without any liability against the County.
- 38. NOTICE TO PROCEED:** The County will issue a written Notice to Proceed and a purchase order to the contractor stipulating the date from which contract time will be charged and the date contract time is to expire.
- 39. FAILURE TO EXECUTE CONTRACT:** Failure to return the signed contract with acceptable contract bonds and certificate of insurance within ten (10) calendar days after the date of the Notice of Award shall be just cause for the cancellation of the award. The award may then be made to the next lowest responsible bidder, or the work may be re-advertised and constructed under contract or otherwise, as the owner may decide.
- 40. INSURANCE REQUIREMENTS:** At a minimum upon execution of the Agreement between the County and the contractor, the contractor shall furnish to the County, Certificates of Insurance naming Santa Fe County as an additional insured for the insurance coverage as specified in the sample contract and the County's supplementary conditions attached hereto.
- 41. CLARIFICATION OF NON-COLLUSION AFFIDAVIT OF SUBCONTRACTOR, AND CERTIFICATION OF SUBCONTRACTOR REGARDING EQUAL**

EMPLOYMENT OPPORTUNITY: The general contractor is not required to present completed “Non-Collusion Affidavit of Subcontractor” and “Certification of Subcontractor Regarding Equal Employment Opportunity” forms from their subcontractors at the time of bid submittal; however, once the contract is awarded, the general contractor is responsible for providing these forms along with the bonds and certificate of insurance.

- 42. **SUBCONTRACTOR PERFORMANCE AND PAYMENT BOND:** A subcontractor whose work to be performed on a public works building project is one hundred twenty-five thousand dollars (\$125,000) or more shall submit a performance and payment bond in the amount of the work they are to perform on the project. These bonds will be submitted within the stated (10) calendar days after the date of the Notice to Award.
- 43. **OPERATIONS AND MAINTENANCE MANUALS:** At the completion of the project but prior to the Substantial Completion certificate approved by the engineer, the contractor shall submit to the Project Manager two (2) copies of a three ring binder with all maintenance and operations instructions for all systems and items within this phase of construction, if applicable.
- 44. **NOTICE:** The Procurement Code, Sections 13-1-28 through 13-1-199 NMSA 1978, imposes civil and misdemeanor criminal penalties for its violation. In addition, the New Mexico criminal statutes impose felony penalties for bribes, gratuities, and kick backs.
- 45. **SUFFICIENT APPROPRIATION:** Any contract awarded as a result of this IFB process may be terminated if sufficient appropriations or authorizations do not exist. Such termination will be effected by sending written notice to the contractor. The County’s decision as to whether sufficient appropriations and authorizations are available will be accepted by the contractor as final.
- 46. **NUMBER OF BIDS ACCEPTED:** Bidders shall submit only one (1) bid in response to this IFB.
- 47. **LIVING WAGE:** Contractor shall comply with the requirements of the Santa Fe County Ordinance 2014-1 (Establishing a Living Wage).
- 48. **DOUBLE SIDED DOCUMENTS:** All submitted bids/proposal documents shall be double-sided, pursuant to Santa Fe County Resolution 2013-7, Adopting Sustainable Resource Management Principles, Section 2. A. Waste Reduction and Reuse...”all documents are to be double-sided, including those that are generated by outside entities using County funds and by consultants and contractors doing business with the County”.

BID PROPOSAL
IFB# 2021-0114-PW/APS
RANCHO VIEJO WATER SERVICE IMPROVEMENTS

To Santa Fe County, State of New Mexico, Owner:

In compliance with the Information for Bidders and in strict conformance with the Contract Documents, _____, hereinafter called the Bidder, organized and existing under the laws of the State of New Mexico as a _____ (type of business or legal entity), hereby proposes to perform all the WORK required for the construction services for the Rancho Viejo Water Service Improvements located in Santa Fe County, New Mexico.

The undersigned declares that it is the only person or parties interested in the proposal as principals are those named herein; that the proposal is made without collusion with any person, firm or corporation; that it has carefully examined the specifications, including special provisions, if any, and that it has made a personal examination of the site of the work, that it is to furnish all the necessary machinery, tools, apparatus and other means of construction and do all the work and furnish all the materials specified in the manner and the time prescribed; that it understands that the quantities are approximate only and subject to increase or decrease, and that it is willing to perform any increased or decreased quantities of work at unit price bid.

The undersigned hereby agrees to execute and deliver the Construction Agreement within ten (10) days, or such further time as may be allowed in writing by Santa Fe County after receiving notification of the acceptance of this proposal, and it is hereby mutually understood and agreed that in case we do not, Santa Fe County may proceed to award the contract to others.

We hereby agree to commence the work within fifteen (15) days, or such further time as may be allowed in writing by Santa Fe County after notification to proceed.

The undersigned proposes to guarantee all work performed under these plans, specifications and contract for one year after acceptance by the County and repair and maintain same until the date of acceptance by Santa Fe County.

Signature-Title

(Corporate Seal)

Corporate Name

Address

City, State, Zip Code

Names of individual members of firms or names and titles of all officers of Corporation.

Corporation organized under the Laws of the State of

New Mexico Contractor's License No.

NM Department of Workforce Solutions,
Public Works Labor Enforcement Fund
Registration Number:

**SANTA FE COUNTY
BID FORM**

FROM: _____

_____ hereinafter called "Bidder".

TO: Santa Fe County
102 Grant Avenue
Santa Fe, New Mexico 87501

hereinafter called "CONTRACTING AGENCY",

BID FOR: IFB# 2021-0114-PW/APS
PROJECT: RANCHO VIEJO WATER SERVICE IMPROVEMENTS

Purchasing Division:

The bidder has familiarized itself with the existing conditions on the project area affecting the cost of the work and with the contract documents which includes:

- A. Advertisement for Bids
- B. Instructions for Bidders
- C. Bid Proposal and other required bid forms as listed herein
- D. Form of Agreement
- E. Form of Performance Bond
- F. Form of Labor and Material Payment Bond
- G. Technical Specifications
- H. All information provided in the Project Manual and Drawings

Therefore, the Bidder hereby proposes to furnish all supervision, technical personnel, labor, materials, tools appurtenances, equipment, and services (including all utility and transportation services) required to complete the construction services for the Rancho Viejo Water Service Improvements in accordance with the above listed documents.

(Amounts are to be shown in both words and figures. In case of discrepancy, the amount shown in words will govern). Bidder has provided unit prices for the scope of work.

In submitting this bid, the Bidder understands that the right is reserved by Santa Fe County to reject any irregular or all bids, waive any technicalities in the bids, and accept the bid deemed to be in the best interest of the public and that Santa Fe County intends to award one contract (if at all) for the items bid. If written notice of the acceptance of this bid is mailed, telegraphed or otherwise delivered to the undersigned within ninety (90) days after the opening thereof or at any time thereafter before this bid is withdrawn, the undersigned agrees to execute and deliver the agreement in the prescribed form within ten (10) days after the agreement is presented to it for signature.

All Addenda pertaining to this Project shall be acknowledged by the Bidder in the spaces provided below:

Addendum No.	Date	Acknowledged by Bidder or Its Authorized Representative	Date Acknowledged
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Failure to acknowledge receipt, as provided above, may be considered sufficient grounds for disqualification of the bidder and rejection of his proposal. It shall be the bidder's responsibility to become fully advised of all Addenda prior to submitting his bid.

The Bidder agrees to commence work under this Contract within fifteen (15) days after, a date to be specified in a written "Notice to Proceed" from Santa Fe County or its authorized agents. Bidder further agrees to pay liquidated damages as provided in the Contract Documents.

This Bid Proposal contains the following:

- A. Bid Proposal
- B. Bid Form
- C. Bid Sheet
- D. Non-Collusion Affidavit for Prime Bidder
- E. Certification of Non-Segregated Facilities
- F. Certification of Bidder Regarding Equal Employment Opportunity
- G. Bid Bond
- H. Subcontractors Listing (as included in this packet)
- I. Campaign Contribution Disclosure Form
- J. Preference Certificate(s)

Failure to include any of the above listed documents in the bid submittal may be considered sufficient grounds for disqualification of the bidder and rejection of its bid.

Respectfully submitted:

Name of Bidder:

Official Address:

By: _____
(Signature)

Title: _____

Date: _____

Telephone No.: _____

Email: _____

*New Mexico Contractor's License Number and Types: _____

United States Treasury Number: _____

Resident Preference Certificate Number: _____

BID SHEETS

**IFB# 2021-0114-PW/APS
RANCHO VIEJO WATER SERVICE IMPROVEMENTS**

Bid Item No.	Description	Estimated Quantity	Unit	Unit Price	Extended Price
1	Mobilization/Demobilization, Bonds and Permits	1	LS		
2	PRV Station (Std. Det. Dwg 2354), incl 10" PRV, all pipe and fittings, valves, appurtenances, pre-cast concrete vault, protective coatings, excavation and compacted backfill, and surface restoration, CIP	1	LS		
3	16" DI Waterline incl. fittings, joint restraint, trenching & compacted backfill, and dewatering, CIP	225	LF		
4	16" Check Valve and 6-ft Diameter Pre-Concrete Manhole incl. all pipe and fittings, valves, appurtenances, pre-cast concrete vault, protective coatings, excavation and compacted backfill, and surface restoration, CIP	1	EA		
5	16" Butterfly Valve and Valve Box, CIP	5	EA		
6	Connection to Existing Waterline, incl. excavation and compacted backfill, all fittings and joint restraint, CIP	6	EA		
7	¾", 1" or 2" PRV at Water Service Connection, CIP	22	EA		
8	Traffic Control & Barricading, incl. Temporary Striping, Permanent Striping, Flagman, and All Other Equipment and Labor Required, CIP	1	LS		
Subtotal Bid Items 1 through 8					
Allowances					
	<i>Vacuum Excavation/Potholing</i>				\$5,000
	<i>Utility Relocation</i>				\$10,000
	<i>Testing</i>				\$5,000
Total Base Bid + Allowances written in numbers		_____ Dollars & Cents			
Total Base Bid + Allowances written in words					

ALL BID ITEMS MUST BE EXCLUSIVE OF NMGR

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

STATE OF NEW MEXICO

COUNTY OF _____

_____ being first duly sworn, deposes and says that:

(1) They are the _____ of _____ the Bidder that has submitted the attached Bid Proposal;

(2) They are fully informed respecting the preparation and contents of the attached Bid Proposal and of all pertinent circumstances respecting such bid;

(3) Such bid is genuine and is not a collusive or sham bid;

(4) Neither the said bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other bidder, firm or person to submit a collusive or sham bid in connection with the contract for which the attached bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communications or conference with any other bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Contracting Agency or any person interested in the proposed contract; and

(5) The price or prices quoted in the attached bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(SIGNED) _____

TITLE _____

SUBSCRIBED AND SWORN to before me this ____ day of _____ 2021.

NOTARY PUBLIC

My Commission Expires _____

NON-COLLUSION AFFIDAVIT OF SUBCONTRACTOR

STATE OF NEW MEXICO

COUNTY OF _____

_____ being first duly sworn, deposes and says that:

- (1) It is the _____ of _____, hereinafter referred to as the "Subcontractor".
- (2) It is fully informed respecting the preparation and contents of the Subcontractor's proposal submitted by the Subcontractor to _____, the Contractor, for certain work in connection with the _____ contract pertaining to the _____ project in _____.
- (3) Such Subcontractors proposal is genuine and is not a collusive or sham proposal.
- (4) Neither the Subcontractor nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other bidder, firm or person to submit a collusive or sham bid in connection with the contract for which the attached bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communications or conference with any other bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Contracting Agency or any person interested in the proposed contract; and
- (5) The price or prices quoted in the Subcontractor's proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(SIGNED) _____

TITLE _____

SUBSCRIBED AND SWORN to before me this _____ day of _____ 2021.

Notary Public

My Commission Expires: _____

SUBCONTRACTS

- A. The contractor shall not execute an agreement with any subcontractor or permit any subcontractor to perform any work included in this contract until it has submitted a Non-Collusion Affidavit from the subcontractor, is substantially the form shown below, and has received written approval of such subcontractor from Santa Fe County.
- B. No proposed subcontractor shall be disapproved by Santa Fe County except for cause.

- C. The contractor shall be as fully responsible to Santa Fe County for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by them, as it is for the acts and omissions of persons directly employed by them.
- D. The contractor shall cause appropriate provision to be inserted in all subcontracts relative to the work to require compliance by each subcontractor with the applicable provisions of the contract for the improvements embraced.
- E. Nothing contained in the contract shall create any contractual relation between any subcontractor and Santa Fe County.

CERTIFICATION OF NON-SEGREGATED FACILITIES

(Applicable to construction contracts and related subcontracts exceeding \$10,000, which are not exempt from the Equal Opportunity Clause).

The construction contractor certifies that it does not maintain or provide for its employees any segregated facility at any of its establishments, and that it does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The construction contractor certifies further that it will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it will not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract. As used in this certification, the term "segregated facilities" means any waiting room, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clock, locker rooms and other storage or dressing areas, parking lots, drinking foundations, recreating or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. The construction contractor agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will obtain identical certifications from proposed SUBCONTRACTORS prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that it will retain such certifications in its files.

SIGNED: _____

TITLE: _____

SUBSCRIBED AND SWORN to before me this ____ day of _____, 2021.

NOTARY PUBLIC

My Commission Expires: _____

**CERTIFICATION OF BIDDER REGARDING
EQUAL EMPLOYMENT OPPORTUNITY**

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246 (30 F. R. 12319-25). The implementing rules and regulations provide that any bidder or perspective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract or subcontract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after bid opening. No contract shall be awarded unless such report is submitted.

CERTIFICATION OF BIDDER

Bidder's Name: _____

Address: _____

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.
Yes ___ No ___

2. Compliance reports were required to be filed in connection with such contract or subcontract.
Yes ___ No ___

Certification -- The information above is true and complete to the best of my knowledge and belief.

NAME AND TITLE OF SIGNER (PLEASE TYPE)

SIGNATURE

DATE

**CERTIFICATION OF SUBCONTRACTOR REGARDING
EQUAL EMPLOYMENT OPPORTUNITY**

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246 (30 F. R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract or subcontract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after bid opening. No contract shall be awarded unless such report is submitted.

CERTIFICATION OF SUBCONTRACTOR

Subcontractor's Name: _____

Address: _____

1. Subcontractor has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.

Yes ___ No ___

2. Compliance reports were required to be filed in connection with such contract or subcontract.

Yes ___ No ___

Certification -- The information above is true and complete to the best of my knowledge and belief.

NAME AND TITLE OF SIGNER (PLEASE TYPE)

SIGNATURE

DATE

BID BOND

A. KNOW ALL MEN BY THESE PRESENT, THAT WE _____
_____ hereinafter called the PRINCIPAL, as PRINCIPAL and the
_____, of _____ a Corporation
duly organized under the laws of the State of _____, and authorized to do business
in the State of New Mexico, hereinafter called the SURETY, as SURETY are held and firmly bound unto
Santa Fe County, a Municipal Corporation, hereinafter called the OBLIGEE, in the sum of

DOLLARS (\$_____) for the payment of which sum well and truly to be made, the said
Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors, and assigns,
jointly and severally, firmly be these presents.

WHEREAS, the Principal has submitted the accompanying bid, dated _____, 2021, for the
Rancho Viejo Water Service Improvements.

B. NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter
into a contract with the Obligee in accordance with the terms of such bid, and give such bond of bonds as
may be specified in the bidding of Contract Documents with good and sufficient surety for the faithful
performance of such contract and for the prompt payment of labor and material furnished in the
prosecution thereof of in the event of the failure of the Principal to enter such contract and give such bond
or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between
the amount specified in said bid and such larger amount for which the Obligee may in good faith contract
with another party of perform the work covered by said bid, then this obligation shall be null and void,
otherwise to remain in full force and effect.

C. SIGNED AND SEALED THIS _____ DAY OF _____, 2021.

BIDDER

By: _____
PRINCIPAL

(SEAL)

WITNESS

By: _____
SURETY

WITNESS

Title: _____

PERFORMANCE BOND

A. KNOW ALL MEN BY THESE PRESENT, THAT WE _____, as PRINCIPAL hereinafter called the “CONTRACTOR” and _____, as SURETY hereinafter called the “SURETY”, are held and firmly bound unto OBLIGEE Santa Fe County, a Political Subdivision of the State of New Mexico, hereinafter called the “COUNTY”, in the sum of _____ (\$ _____) dollars for the payment whereof CONTRACTOR and SURETY bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

B. WHEREAS, the CONTRACTOR has a written contract dated _____, 2021, with the COUNTY for the Rancho Viejo Water Service Improvements, in accordance with drawings and specifications which contract is referenced made part hereof, and is hereinafter referred to as the “Contract.”

C. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if CONTRACTOR shall promptly and faithfully perform said Contract (including any amendment thereto), then this obligation shall be null and void; otherwise it shall remain in full force and effect until the COUNTY shall by written instrument notify the SURETY that the obligation is discharged, except that the obligation shall continue for at least three (3) months following the expiration of the term of the Contract.

1. The SURETY hereby waives notice of any alteration or extension of the Contract time made by the COUNTY.
2. Whenever CONTRACTOR shall be, and is declared by the COUNTY to be in default under the Contract, the COUNTY having performed the COUNTY’S obligations thereunder, the SURETY must promptly remedy the default and shall promptly:
 - (1) Complete the Contract in accordance with its terms and conditions, or
 - (2) Obtain a bid or bids for submission to the COUNTY for completing the Contract in accordance with its terms and conditions, and upon determination by the COUNTY and SURETY of the lowest responsible bidder, arrange for a contract between such bidder and Santa Fe County, and make available as work progresses (even though there should be a default or a secession of defaults under the Contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract price, but not exceeding, including other costs and damages for which the SURETY may be liable hereunder, the amount set forth in the first paragraph hereof. The term “balance of the Contract price” as used in this paragraph, shall mean the total amount payable by the COUNTY to CONTRACTOR under the Contract and any amendments thereto, less the amount properly paid by the COUNTY to CONTRACTOR.

D. No right of action shall accrue on this Performance Bond to or for the use of any person or corporation other than Santa Fe County named herein or the heirs, executors, administrators, or successors of Santa Fe County.

E. This Bond shall be enforceable without the need to have recourse to any judicial or arbitral proceedings.

SIGNED AND SEALED THIS _____ DAY OF _____, 2021.

CONTRACTOR – PRINCIPAL (signature)

By: _____
(Printed name and title)

NOTARY PUBLIC (seal)

My Commission expires: _____

SURETY (signature)

(Printed name and title)

NOTARY PUBLIC (seal)

My Commission expires: _____

SURETY’S Authorized New Mexico Agent

LABOR AND MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENT, THAT WE _____
_____ as PRINCIPAL hereinafter called the “PRINCIPAL and
_____ as SURETY hereinafter called the “SURETY”, are held and
firmly bound unto Santa Fe County, a Political Subdivision of the State of New Mexico as OBLIGEE
hereinafter called the “COUNTY”, for the use and benefit of any claimants as herein below defined, in
the amount of _____(\$.) dollars for the payment whereof
PRINCIPAL and SURETY bind themselves, their heirs, executors, administrators, successors, and
assigns, jointly and severally, firmly by these presents.

WHEREAS, the PRINCIPAL has a written contract dated _____, 2021, with the
COUNTY for the Rancho Viejo Water Service Improvements, which must be constructed in accordance
with drawings and specifications which contract is referenced and made a part hereof, and is hereinafter
referred to as the “Contract.”

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if PRINCIPAL shall
promptly make payment to all claimants as hereinafter defined, for all labor and material used or
reasonably required for use in the performance of the Contract, then this obligation shall be void;
otherwise, it shall remain in full force and effect, subject to the following conditions:

1. A claimant is defined as one having a direct contract with the PRINCIPAL or with a
subcontractor of the PRINCIPAL for labor, material, or both, used or reasonably required for
use in the performance of the Contract, labor and material being construed to include but not
be limited to that part of water, gas, power, light, heat, oil, gasoline, telephone services or
rental of equipment directly applicable to the Contract.
2. The above named PRINCIPAL and SURETY hereby jointly and severally agree with the
COUNTY that every claimant as herein defined, who has not been paid in full before the
expiration of a period of ninety (90) days after the date on which the last of such claimant’s
work or labor was done or performed, or materials were furnished by such claimant,
prosecute a suit to final judgment for such sum or sums as may be justly due claimant, and
have execution thereof. The COUNTY shall not be liable for payment of any cost or
expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant:
 - a. Unless claimant, or other than one having a direct contract with the PRINCIPAL,
shall have written notice in the form of a sworn statement to the COUNTY and any
one or both of the following: the PRINCIPAL or SURETY above named, within
ninety (90) days after such said claim is made or suit filed, stating with substantial
accuracy the amount claimed and the name of the party to whom the materials were
furnished, or for whom the work or labor was done or performed.
 - b. Such notice shall be served by mailing the same by registered mail or certified mail,
postage prepaid, in an envelope addressed to the COUNTY, PRINCIPAL or
SURETY, at any place where an office is regularly maintained by said COUNTY,
PRINCIPAL or SURETY for the transaction of business, or served in any manner in
which legal process may be served in the State in which the aforesaid project is
located, save that such service need not be made by a public officer.

- 4. Any suit under this Labor and Material Bond must be instituted in accordance with the statute of limitation under Section 37-1-3 NMSA 1978.
- 5. No right of action shall accrue on this Bond to or for the use of any person or corporation other than subcontractors or sub-subcontractors of the said Contract between PRINCIPAL and Santa Fe County named herein.

SIGNED AND SEALED THIS _____ DAY OF _____, 2021.

CONTRACTOR – PRINCIPAL (signature)

By: _____
(Printed name and title)

NOTARY PUBLIC (seal)

My Commission expires: _____

SURETY (signature)

(Printed name and title)

NOTARY PUBLIC (seal)

My Commission expires: _____

SURETY’S Authorized New Mexico Agent

SUBCONTRACTOR LISTING

1. To be fully executed and included with Bid as a condition of the Bid (13-4-31 through 13-4-42 NMSA 1978).
2. For the purposes of this Project all subcontractors, regardless of contract amount, must be listed on the subcontractor list.
3. **The Bidder shall list the Subcontractor’s Name, the City or County of the Place of Business and the Category of Work that will be done by each Subcontractor.**
4. For *all trades* that are listed *“only one bid received”* or *“no bid received”* the Contractor must list the names and telephone numbers of all businesses contacted for a quote.

Trade:	Name of Subcontractor:	
Address:		
Telephone No:	License No:	NM Dept. of Workplace Solutions Registration No.
Signature of Subcontractor (To be obtained after award of contract):		
If “no bid received” or “only one bid received” list name and telephone number of businesses contacted: 1. 2. 3.		
Trade:	Name of Subcontractor:	
Address:		
Telephone No:	License No:	NM Dept. of Workplace Solutions Registration No.
If “no bid received” or “only one bid received” list name and telephone number of businesses contacted: 1. 2. 3.		
Signature of Subcontractor (To be obtained after award of contract):		
Trade:	Name of Subcontractor:	
Address:		
Telephone No:	License No:	NM Dept. of Workplace Solutions Registration No.
Signature of Subcontractor (To be obtained after award of contract):		
If “no bid received” or “only one bid received” list name and telephone number of businesses contacted: 1. 2. 3.		

Trade:	Name of Subcontractor:	
Address:		
Telephone No:	License No:	NM Dept. of Workplace Solutions Registration No.
Signature of Subcontractor (To be obtained after award of contract):		
If "no bid received" or "only one bid received" list name and telephone number of businesses contacted: 1. 2. 3.		
Trade:	Name of Subcontractor:	
Address:		
Telephone No:	License No:	NM Dept. of Workplace Solutions Registration No.
If "no bid received" or "only one bid received" list name and telephone number of businesses contacted: 1. 2. 3.		
Signature of Subcontractor (To be obtained after award of contract):		
Trade:	Name of Subcontractor:	
Address:		
Telephone No:	License No:	NM Dept. of Workplace Solutions Registration No.
Signature of Subcontractor (To be obtained after award of contract):		
If "no bid received" or "only one bid received" list name and telephone number of businesses contacted: 1. 2. 3.		
Trade:	Name of Subcontractor:	
Address:		
Telephone No:	License No:	NM Dept. of Workplace Solutions Registration No.
Signature of Subcontractor (To be obtained after award of contract):		

If “no bid received” or “only one bid received” list name and telephone number of businesses contacted: 1. 2. 3.		
Trade:	Name of Subcontractor:	
Address:		
Telephone No:	License No:	NM Dept. of Workplace Solutions Registration No.
If “no bid received” or “only one bid received” list name and telephone number of businesses contacted: 1. 2. 3.		
Signature of Subcontractor (To be obtained after award of contract):		
Trade:	Name of Subcontractor:	
Address:		
Telephone No:	License No:	NM Dept. of Workplace Solutions Registration No.
Signature of Subcontractor (To be obtained after award of contract):		
If “no bid received” or “only one bid received” list name and telephone number of businesses contacted: 1. 2. 3.		
Trade:	Name of Subcontractor:	
Address:		
Telephone No:	License No:	NM Dept. of Workplace Solutions Registration No.
Signature of Subcontractor (To be obtained after award of contract):		
If “no bid received” or “only one bid received” list name and telephone number of businesses contacted: 1. 2. 3.		
Trade:	Name of Subcontractor:	
Address:		
Telephone No:	License No:	NM Dept. of Workplace Solutions Registration No.
Signature of Subcontractor (To be obtained after award of contract):		

If “no bid received” or “only one bid received” list name and telephone number of businesses contacted: 1. 2. 3.		
Trade:	Name of Subcontractor:	
Address:		
Telephone No:	License No:	NM Dept. of Workplace Solutions Registration No.
Signature of Subcontractor (To be obtained after award of contract):		
If “no bid received” or “only one bid received” list name and telephone number of businesses contacted: 1. 2. 3.		
Trade:	Name of Subcontractor:	
Address:		
Telephone No:	License No:	NM Dept. of Workplace Solutions Registration No.
Signature of Subcontractor (To be obtained after award of contract):		
If “no bid received” or “only one bid received” list name and telephone number of businesses contacted: 1. 2. 3.		

APPENDIX A

**ACKNOWLEDGEMENT OF RECEIPT OF INVITATION FOR BIDS FORM
RANCHO VIEJO WATER SERVICE IMPROVEMENTS
IFB# 2021-0114-PW/APS**

In acknowledgement of receipt of the Invitation for Bid the undersigned agrees that he/she has received a complete copy, beginning with the title page and table of contents, and ending with Appendix.

The acknowledgement of receipt should be signed and returned to the Procurement Specialist Senior no later than close of business on *April 13, 2021*. Only potential offerors who elect to return this form completed with the indicated intention of submitting a bid will receive copies of all Offeror written questions and the County's written responses to those questions as well as Invitation for Bid addendums, if any are issued.

FIRM: _____

REPRESENTED BY: _____

TITLE: _____ PHONE NO.: _____

E-MAIL: _____ FAX NO.: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

SIGNATURE: _____ DATE: _____

This name and address will be used for all correspondence related to the Invitation for Bids.

Firm does/does not (**circle one**) intend to respond to this Invitation for Bid.

Amanda Patterson-Sanchez
Santa Fe County
Purchasing Division
102 Grant Avenue
Santa Fe, NM 87504
Phone: (505) 992-6753 Fax: (505) 989-3243
E-mail: apatterson-sanchez@santafecountynm.gov

APPENDIX B

CAMPAIGN CONTRIBUTION DISCLOSURE

Pursuant to the Procurement Code, Sections 13-1-28, et seq., NMSA 1978 and NMSA 1978, § 13-1-191.1 (2006), as amended by Laws of 2007, Chapter 234, any prospective contractor seeking to enter into a contract with any state agency or local public body **for professional services, a design and build project delivery system, or the design and installation of measures the primary purpose of which is to conserve natural resources** must file this form with that state agency or local public body. This form must be filed even if the contract qualifies as a small purchase or a sole source contract. The prospective contractor must disclose whether they, a family member or a representative of the prospective contractor has made a campaign contribution to an applicable public official of the state or a local public body during the two years prior to the date on which the contractor submits a proposal or, in the case of a sole source or small purchase contract, the two years prior to the date the contractor signs the contract, if the aggregate total of contributions given by the prospective contractor, a family member or a representative of the prospective contractor to the public official exceeds two hundred and fifty dollars (\$250) over the two year period.

Furthermore, the state agency or local public body may cancel a solicitation or proposed award for a proposed contract pursuant to Section 13-1-181 NMSA 1978 or a contract that is executed may be ratified or terminated pursuant to Section 13-1-182 NMSA 1978 of the Procurement Code if: 1) a prospective contractor, a family member of the prospective contractor, or a representative of the prospective contractor gives a campaign contribution or other thing of value to an applicable public official or the applicable public official's employees during the pendency of the procurement process or 2) a prospective contractor fails to submit a fully completed disclosure statement pursuant to the law.

The state agency or local public body that procures the services or items of tangible personal property shall indicate on the form the name or names of every applicable public official, if any, for which disclosure is required by a prospective contractor.

THIS FORM MUST BE INCLUDED IN THE REQUEST FOR PROPOSALS AND MUST BE FILED BY ANY PROSPECTIVE CONTRACTOR WHETHER OR NOT THEY, THEIR FAMILY MEMBER, OR THEIR REPRESENTATIVE HAS MADE ANY CONTRIBUTIONS SUBJECT TO DISCLOSURE.

The following definitions apply:

“Applicable public official” means a person elected to an office or a person appointed to complete a term of an elected office, who has the authority to award or influence the award of the contract for which the prospective contractor is submitting a competitive sealed proposal or who has the authority to negotiate a sole source or small purchase contract that may be awarded without submission of a sealed competitive proposal.

“Campaign Contribution” means a gift, subscription, loan, advance or deposit of money or other thing of value, including the estimated value of an in-kind contribution, that is made to or received by an applicable public official or any person authorized to raise, collect or expend contributions on that official’s behalf for the purpose of electing the official to statewide or local office. “Campaign Contribution” includes the payment of a debt incurred in an election campaign, but does not include the value of services provided without compensation or unreimbursed travel or other personal expenses of individuals who volunteer a portion or all of their time on behalf of a candidate or political committee, nor does it include the administrative or solicitation expenses of a political committee that are paid by an organization that sponsors the committee.

“Family member” means spouse, father, mother, child, father-in-law, mother-in-law, daughter-in-law or son-in-law of (a) a prospective contractor, if the prospective contractor is a natural person; or (b) an owner of a prospective contractor.

“Pendency of the procurement process” means the time period commencing with the public notice of the request for proposals and ending with the award of the contract or the cancellation of the request for proposals.

“Prospective contractor” means a person or business that is subject to the competitive sealed proposal process set forth in the Procurement Code or is not required to submit a competitive sealed proposal because that person or business qualifies for a sole source or a small purchase contract.

“Representative of a prospective contractor” means an officer or director of a corporation, a member or manager of a limited liability corporation, a partner of a partnership or a trustee of a trust of the prospective contractor.

Name(s) of Applicable Public Official(s) if any: _____
(Completed by State Agency or Local Public Body)

DISCLOSURE OF CONTRIBUTIONS BY PROSPECTIVE CONTRACTOR:

Contribution Made By: _____

Relation to Prospective Contractor: _____

Date Contribution(s) Made: _____

Amount(s) of Contribution(s) _____

Nature of Contribution(s) _____

Purpose of Contribution(s) _____

(Attach extra pages if necessary)

Signature Date

Title (position)

--OR--

NO CONTRIBUTIONS IN THE AGGREGATE TOTAL OVER TWO HUNDRED FIFTY DOLLARS (\$250) WERE MADE to an applicable public official by me, a family member or representative.

Signature Date

Title (Position)

APPENDIX C

Resident Veterans Preference Certification

_____ (NAME OF CONTRACTOR) hereby certifies the following in regard to application of the resident veterans' preference to this procurement.

Please check one box only:

I declare under penalty of perjury that my business prior year revenue starting January 1 ending December 31 is less than \$1M allowing me the 10% preference discount on this solicitation. I understand that knowingly giving false or misleading information about this fact constitutes a crime.

I declare under penalty of perjury that my business prior year revenue starting January 1 ending December 31 is more than \$1M but less than \$5M allowing me the 8% preference discount on this solicitation. I understand that knowingly giving false or misleading information about this fact constitutes a crime.

I declare under penalty of perjury that my business prior year revenue starting January 1 ending December 31 is more than \$5M allowing me the 7% preference discount on this solicitation. I understand that knowingly giving false or misleading information about this fact constitutes a crime.

“I agree to submit a report or reports to the State Purchasing Division of the General Services Department declaring under penalty of perjury that during the last calendar year starting January 1 and ending on December 31, the following to be true and accurate:

“In conjunction with this procurement and the requirements of this business application for a Resident Veteran Business Preference/Resident Veteran Contractor Preference under Sections 13-1-21 or 13-1-22 NMSA 1978, which awarded a contract which was on the basis of having such veteran's preference, I agree to report to the State Purchasing Division of the General Services Department the awarded amount involved. I will indicate in the report the award amount as a purchase from a public body or as a public works contract from a public body as the case may be.”

“I understand that knowingly giving false or misleading information on this report constitutes a crime”.

I declare under penalty of perjury that this statement is true to the best of my knowledge. I understand that giving false or misleading statements about material fact regarding this matter constitutes a crime.

(Signature of Business Representative)*

(Date)

*Must be an authorized signatory of the Business.

The representations made in checking the boxes constitutes a material representation by the business that is subject to protest and may result in denial of an award or un-award of the procurement involved if the statements are proven to be incorrect.

SIGNED AND SEALED THIS _____ DAY OF _____, 2021.

NOTARY PUBLIC

My Commission Expires:

APPENDIX D

N.M. WAGE DETERMINATION



LABOR RELATIONS DIVISION
 121 Tijeras Ave NE, Suite 3000
 Albuquerque, NM 87102
 Phone: 505-841-4400
 Fax: 505-841-4424

WWW.DWS.STATE.NM.US

PUBLIC WORKS PROJECT REQUIREMENTS

As a participant in a Public Works project valued at more than \$60,000 in the state of New Mexico, the following list addresses many of the responsibilities that are defined by statute or regulation to each project stakeholder.

Contracting Agency

- Ensure that all contractors wishing to bid on a Public Works project when the project is \$60,000 or more are actively registered with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> (Contractor Registration) prior to bidding.
- Please submit Notice of Award (NOA) and Subcontractor List(s) to the PWAA website promptly after the project is awarded.
- Please update the Subcontractor List(s) on the PWAA website whenever changes occur.
- All sub-contractors and tiers (excluding professional services) regardless of contract amount must be listed on the Subcontractor List and must adhere to the Public Works Minimum Wage Act.
- Ninety days after project completion please go into the PWAA system and close the project. Only contracting agencies are allowed to close the project. Agents or contractors are not allowed to close projects.

General Contractor

- Provide a complete Subcontractor List and Statements of Intent (SOI) to Pay Prevailing Wages for all contractors, regardless of amount of work, to the contracting agency within 3 (three) days of award.
- Ensure that all subcontractors wishing to bid on a Public Works project have an active Contractor Registration with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> prior to bidding when their bid will exceed \$60,000.
- Make certain the Public Works Apprentice and Training Act contributions are paid either to an approved Apprenticeship Program or to the Public Works Apprentice and Training Fund.
- Confirm the Wage Rate poster, provided in PWAA, is displayed at the job site in an easily accessible place.
- When the project has been completed, make sure the Affidavits of Wages Paid (AWP) are sent to the contracting agency.
- All subcontractors and tiers (excluding professional services) regardless of contract amount must pay prevailing wages, be listed on the Subcontractor List, and adhere to the Public Works Minimum Wage Act.



LABOR RELATIONS DIVISION
121 Tijeras Ave NE, Suite 3000
Albuquerque, NM 87102
Phone: 505-841-4400
Fax: 505-841-4424

WWW.DWS.STATE.NM.US

Subcontractor

- Ensure that all subcontractors wishing to bid on a Public Works project have an active Contractor Registration with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> prior to bidding when their bid will exceed \$60,000.
- Make certain the Public Works Apprentice and Training Act contributions are paid either to an approved Apprenticeship Program or to the Public Works Apprentice and Training Fund.
- All subcontractors and tiers (excluding professional services) regardless of contract amount must pay prevailing wages, be listed on the Subcontractor List, and adhere to the Public Works Minimum Wage Act.

Additional Information

Reference material and forms may be found in the New Mexico Department of Workforce Solutions Public Works web pages at: <https://www.dws.state.nm.us/Labor-Relations/Labor-Information/Public-Works>.

CONTACT INFORMATION

Contact the Labor Relations Division for any questions relating to Public Works projects by email at public-works@state.nm.us or call (505) 841-4400.

Wage Decision: SF-21-0563-A

**TYPE "A" - STREET, HIGHWAY, UTILITY & LIGHT ENGINEERING**

Effective January 1, 2021

Trade Classification	Base Rate	Fringe Rate
Bricklayer/Block layer/Stonemason	24.46	8.81
Carpenter/Lather	25.63	11.74
Carpenter- Los Alamos County	28.37	13.44
Cement Mason	17.42	6.81
Ironworker	27.35	17.49
Painter- Commercial	17.25	7.75
Plumber/Pipefitter	31.52	12.90
Electricians- Outside Classifications: Zone 1		
Ground man	23.74	13.16
Equipment Operator	34.06	15.94
Lineman/ Technician	40.07	17.57
Cable Splicer	44.08	18.65
Electricians-Outside Classifications: Zone 2		
Ground man	23.74	13.16
Equipment Operator	34.06	15.94
Lineman/ Technician	40.07	17.57
Cable Splicer	44.08	18.65
Electricians-Outside Classifications: Los Alamos		
Ground man	24.42	13.34
Equipment Operator	35.04	16.21
Lineman/ Technician	41.22	17.88
Cable Splicer	45.34	18.99
Laborers		
Group I- Unskilled	12.26	6.22
Group II- Semi-Skilled	12.56	6.22
Group III- Skilled	12.96	6.22
Group IV- Specialty	13.21	6.22
Operators		



Group I	19.15	6.54
Group II	20.11	6.54
Group III	20.21	6.54
Group IV	20.33	6.54
Group V	20.43	6.54
Group VI	20.62	6.54
Group VII	20.78	6.54
Group VIII	21.08	6.54
Group IX	28.80	6.54
Group X	32.15	6.54
Truck Drivers		
Group I-IX	16.67	8.27

NOTE: All contractors are required to pay SUBSISTENCE, ZONE AND INCENTIVE PAY according to the particular trade. Details are located in a PDF attachment at WWW.DWS.STATE.NM.US. Search Labor Relations/Labor Information/Public Works/Prevailing Wage Rates.

For more information about the Subsistence, Zone, and Incentive Pay rates, or to file a wage claim, contact the Labor Relations Division at (505) 841-4400 or visit us online at www.dws.state.nm.us.

APPENDIX E

SAMPLE CONSTRUCTION CONTRACT

**AGREEMENT BETWEEN SANTA FE COUNTY AND CONTRACTOR
FOR CONSTRUCTION SERVICES FOR THE
RANCHO VIEJO WATER SERVICE IMPROVEMENTS**



**SANTA FE COUNTY
PURCHASING DIVISION
2014 EDITION**

[Changes, additions, deletions and/or any modifications other than those agreed upon by the parties upon execution of this contract, without the written consent of Santa Fe County shall render this document null and void.]

Hereafter "County":

Katherine Miller, County Manager
Santa Fe County
PO Box 276
Santa Fe, New Mexico 87504-0276
TELEPHONE: 505-986-6200
FAX: 505-995-2740

Hereafter "Contractor":

TELEPHONE: _____
E-MAIL ADDRESS: _____

ARCHITECT [or ENGINEER]

NAME: _____
ADDRESS: _____

TELEPHONE: _____
E-MAIL ADDRESS: _____

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RECITALS

WHEREAS, in accordance with Section 13-1-103 through Section 13-1-110 NMSA 1978, the County issued Invitation for Bid (IFB) No. 2021-0114-PW/APS for construction services for the Rancho Viejo Water Service Improvements; and

WHEREAS, the Contractor submitted its bid, dated April 20, 2021 in response to IFB No. 2021-0114-PW/APS; and

WHEREAS, the County is authorized to enter into a contract for the Project pursuant to Sections 13-1-100, NMSA 1978; and

WHEREAS, the Contractor hereby represents that it is a licensed contractor of the State of New Mexico pursuant to Chapter 60, Article 13 NMSA 1978; and

WHEREAS, the Owner agrees to hire the Contractor, and the Contractor agrees to provide Construction Services as required herein for the Project in accordance with the terms and conditions set forth in this Agreement; and

WHEREAS, the County requires the services of the Contractor, and the Contractor is willing to provide these services and both parties wish to enter into this Agreement.

**ARTICLE 1
THE CONTRACT DOCUMENTS**

1.1 DOCUMENTS

The contract documents consist of the following:

- Agreement between County and Contractor
- General Conditions of the Construction Contract
- Conditions of the Work of the Construction Contract
- Bid Sheet Attachment A
- Addenda and Modifications issued Attachment B
- before and after execution of this Contract

1.2 CERTIFICATES AND DOCUMENTATION

The following certificates and documentation are hereby attached as exhibits as follows:

- Project Manual Exhibit A
- Technical Specifications as listed in Plan Set Exhibit B
- Labor and Material Payment Bond Exhibit C
- Performance Bond Exhibit D
- Assignment of Antitrust Claims Exhibit E
- Certificate of Insurance Exhibit F
- Notice of Award Exhibit G
- Notice to Proceed Exhibit H
- Change Order Exhibit I
- Certificate of Substantial Completion Exhibit J

**ARTICLE 2
THE WORK**

2.1 THE WORK

The Contractor shall perform all the Work required by the Contract Documents for the following:

Insert description of work

**ARTICLE 3
EFFECTIVE DATE, TIME OF COMMENCEMENT,
SUBSTANTIAL COMPLETION AND AMENDMENTS**

3.1 EFFECTIVE DATE

The Effective Date of this Agreement is the date of signature by the County.

3.2 TIME OF COMMENCEMENT

The work to be performed under this Contract shall be commenced no later than ten (10) consecutive calendar days after the date of written Notice to Proceed issued by the County, hereto attached as Exhibit H.

3.3 SUBSTANTIAL COMPLETION

The Contractor shall achieve Substantial Completion of the entire work no later than 180 calendar days from the date of the Notice to Proceed, except as hereafter extended by valid written Change Order. A Certificate of Substantial Completion, attached hereto as Exhibit J, will be issued by the County to the Contractor, as adjusted by any Change Order, attached hereto as Exhibit I.

3.4 TIME FOR COMPLETION AND LIQUIDATED DAMAGES

Should the Contractor neglect, refuse, or otherwise fail to complete the Work within the time specified in this Article, the Contractor agrees that Liquidated Damages in the amount of \$500.00 shall be assessed per each calendar day that expires after the date of substantial completion, as adjusted by any change order, and until issuance by the County of a certificate of Substantial Completion in accordance with Paragraph 7 (Effective Date and Term) of the General Conditions.

- A. It is hereby understood and mutually agreed, by and between the Contractor and the County, that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are *essential conditions* of this contract and it is further mutually understood and agreed that the work outlined in this contract shall be commenced on a date to be specified in the "Notice to Proceed."
- B. The Contractor agrees that work shall be prosecuted regularly, diligently and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the County, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.
- C. If the Contractor shall neglect, fail or refuse to complete the work within the time herein specified or any proper extension thereof granted by the County, then the Contractor does hereby agree, as a part consideration for the awarding of this contract, to pay to the County the amount specified in the contract, not as a penalty but as liquidated damages for such breach of contract as herein set forth, for each and every calendar day that the contract shall be in default after the time stipulated in the contract for completing the work.
- D. The amount is fixed and agreed upon by and between the Contractor and the County because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the County would in such event sustain, and the amount is agreed to be the amount of damages which the County would sustain and the amount shall be retained from time to time by the County from current periodical estimates.
- E. It is agreed that time is of the essence of each and every portion of this contract and of the specifications wherein a definite and certain length of time is fixed for the

performance of any act whatsoever and where under the contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this contract. Provided that the Contractor shall not be charged with liquidated damages or any excess cost when the County determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the County. Provided that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due:

1. To any preference, priority or allocation order duly issued by the County;
2. To unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, or of the public enemy, acts of the County, acts of another contractor in the performance of a contract with the County, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather;
3. To any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections above.

F. Provided further, that the Contractor shall, within ten days from the beginning of such delay, unless the County shall grant a further period of time prior to the date of final settlement of the contract, notify the County in writing of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

3.5 AMENDMENTS

This Agreement may be amended by mutual agreement by both parties upon issuance of a Change Order by the County to the Contractor. Any such amendment shall be in accordance with Paragraph 10 (Amendments – Change Orders) of the General Conditions. Unless otherwise agreed to by the parties, an amendment shall not affect any outstanding Purchase Order(s) issued by the County prior to the effective date of the amendment.

**ARTICLE 4
CONTRACT SUM**

4.1 CONTRACT SUM

The County shall pay the Contractor in current funds for the performance of the Work, subject to additions and deductions by Change Order as provided in the Contract Documents, an agreed upon Lump Sum of (enter dollar amount in words) Dollars (\$0.00 enter dollar amount), exclusive of New Mexico gross receipts tax.

4.2 CONTRACT AMOUNT

The Contract sum is determined as follows: (insert data from bid form concerning base bid, alternates, etc.)

Base Bid	\$	
List Alternates, if applicable	\$	
	\$	
	\$	
Total Contract Amount	\$, exclusive of NM grt

**ARTICLE 5
PROGRESS PAYMENTS**

5.1 PROGRESS PAYMENTS

Based upon an Application for Payment submitted to the County by the Contractor and Certificates for Payment issued by the County, the County shall make progress payments on account of the Contract sum to the Contractor as provided in the Contract documents for the period ending the last day of the month as follows:

- A. No later than 21 working days following receipt by the County of an undisputed Application for Payment, one hundred percent (100%) of the portion of the Contract Sum properly allocable to labor, materials, and equipment incorporated in the Work and one hundred percent (100%) of the portion of the Contract Sum properly allocable to materials and equipment suitably stored at the site or some other location agreed upon in writing for the period covered by the Application for Payment, less the aggregate of previous payments made by the County; less such amounts as the Architect/ Engineer shall determine for all incomplete Work and unsettled claims as provided in the Contract Documents (Section 57-28-5, NMSA 1978).
- B. When making payments, the County, Contractor or subcontractor shall not retain, withhold, hold back or in any other manner not pay amounts owed for work performed. For additional information regarding retainage and the Prompt Payment Act (refer to Section 57-28-5, NMSA 1978).
- C. Contractors and subcontractors shall make prompt payment to their subcontractors and suppliers for amounts owed for work performed on the construction project within 21 days after receipt of payment from the County, contractor or subcontractor. If the contractor or subcontractor fails to pay its subcontractor and suppliers by first-class mail or hand delivery within twenty-one days after receipt of an undisputed request for payment, the contractor or subcontractor shall pay interest to its subcontractors and suppliers beginning on the 22nd day after payment was due, computed at one and one-half percent of the undisputed amount per month or fraction of a month until payment is issued. These payment provisions apply to all tiers of contractors, subcontractors and suppliers (Section 57-28-1 et. seq. NMSA 1978).
- D. In preparing estimates the material delivered on the site and preparatory work done may be taken into consideration.

- E. All material and work covered by partial payments made shall thereupon become the sole property of the County, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the right of the County to require the fulfillment of all of the terms of the contract.

- F. County's right to withhold certain amounts and make application thereof. The Contractor agrees that it will indemnify and hold the County harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, material men, and furnisher of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this contract. The Contractor shall, at the County's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If the Contractor fails so to do, then the County may, after having served written notice on the said Contractor, either pay unpaid bills, of which the County has written notice, direct, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed, in accordance with the terms of this contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon the County to either the Contractor or its Surety. In paying any unpaid bills of the Contractor, the County shall be deemed the agent of the Contractor, and any payment so made by the County shall be considered as a payment made under the contract by the County to the Contractor and the County shall not be liable to the Contractor for any such payments made in good faith.

**ARTICLE 6
FINAL PAYMENT**

6.1 FINAL PAYMENT

The entire unpaid balance of the Contract Sum, shall be paid by the County to the Contractor within 30 calendar days after notification of the County by the Architect/Engineer that all incomplete and unacceptable work that was noted during the Substantial Completion Inspection and listed on the attachment to the Certificate of Substantial Completion has been corrected, and provided the Contract has been fully performed and a final Certificate for Payment has been issued by the Architect/Engineer. In addition, the Contractor shall provide to the County a certified statement of Release of Liens and Consent of Surety.

6.2 ACCEPTANCE OF FINAL PAYMENT CONTITUTES RELEASE

The acceptance by the Contractor of final payment shall be and shall operate as a release to the County of all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the County and others relating to or

arising out of this work. No payment, however, final or otherwise, shall operate to release the Contractor or its sureties from any obligations under this contract or the Performance and Payment Bond.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first written above.

SANTA FE COUNTY

Henry P. Roybal, Chair
Santa Fe County Board of County Commissioners

ATTESTATION

Katharine E. Clark
Santa Fe County Clerk

Date

Approved as to form:

Gregory S. Shaffer
Santa Fe County Attorney

Date

Finance Division:

Yvonne S. Herrera
Finance Director

Date

CONTRACTOR:

Signature

Date

Print name and title

APPENDIX F
SPECIFICATIONS AND PLANS

TABLE OF CONTENTS

All work to be completed as a part of this project is to be in conformance with the New Mexico Standard Specifications for Public Works Construction (NMSSPWC) available at:

<http://newmexico.apwa.net>

Supplemental Specifications as provided herein are to provide additional project requirements for equipment and/or materials not specifically detailed in the New Mexico Standard Specifications for Public Works Construction.

DIVISION 01 — GENERAL REQUIREMENTS

- 01 11 00 - SUMMARY OF WORK
- 01 25 13 - PRODUCT SUBSTITUTIONS
- 01 26 13 - REQUESTS FOR INFORMATION (RFI)
- 01 30 00 - SPECIAL CONDITIONS
- 01 31 19 - PROJECT MEETINGS
- 01 32 17 - CONSTRUCTION PROGRESS SCHEDULE
- 01 33 00 - SUBMITTALS
- 01 33 04 - OPERATION AND MAINTENANCE MANUALS
- 01 35 05 - ENVIRONMENTAL PROTECTION AND SPECIAL CONTROLS
- 01 65 50 - PRODUCT DELIVERY, STORAGE, AND HANDLING
- 01 71 14 - MOBILIZATION AND DEMOBILIZATION
- 01 74 13 - CLEANING

DIVISION 31 — EARTHWORK

- 31 23 33 - TRENCHING, BACKFILLING, AND COMPACTING FOR UTILITIES

DIVISION 33 — UTILITIES

- 33 11 13 - WATER MAIN CONSTRUCTION

DIVISION 40 — PROCESS INTERCONNECTIONS

- 40 05 51 - VALVES - BASIC REQUIREMENTS
- 40 05 52 - MISCELLANEOUS VALVES
- 40 05 61 - GATE VALVES
- 40 05 64 - BUTTERFLY VALVES
- 40 05 66 - CHECK VALVES

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Engineer's Certification

I, Gabriel Alvarado, certify that I am a licensed Professional Engineer in the State of New Mexico (PE #17297) and that these contract documents were prepared by me or under my direction.



Gabriel Alvarado 6/16/2020

Gabriel Alvarado

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SECTION 01 11 00
SUMMARY OF WORK

PART 1 - GENERAL

1.1 DESCRIPTION

- A. General:
1. Furnish all labor, materials, tools, equipment and services as indicated in accordance with provisions of Contract Documents.
 2. It is the intent of the Contract Documents to describe a functionally complete project. Furnish and install all supplementary or miscellaneous items, appurtenances, and devices incidental to or necessary for a sound, secure, complete, and functional installation.

1.2 WORK COVERED BY CONTRACT

- A. The Work of this Contract under the Base Bid generally includes the following:
1. Base Bid:
 - a. Installation of a new PRV vault and 16-inch by-pass waterline with one (1) butterfly valve at a location approximately 100-feet north of the intersection of NM 599 / NM 14 on the west side of NM 599. PRV vault to include a 4-inch PRV, 10-inch PRV, piping, valves, pressure gauges, and other appurtenances within an 8'-4" x 13'-0" pre-cast concrete vault with traffic rated floor doors.
 - b. Installation of approximately 80 LF of 16-inch ductile waterline, two (2) butterfly valves and one (1) 16-inch check valve within a 4-ft diameter pre-cast concrete MH vault with traffic rated floor door at the existing Avenida del Sur / A-Van-Nu-Po PRV located at the intersection of Avenida del Sur / A-Van-Nu-Po .
 - c. Installation of twenty-two (22) ¾-inch or 1-inch PRV's at individual customer meters at various locations.
 - d. Trenching, backfilling, compaction and surface restoration.

1.3 WORK SEQUENCE

- A. Organize and plan the construction activities to assure the safety and reliability of and to minimize the interruption to the electric system and all other utilities.
- B. The proposed Work sequence shall be submitted to the Engineer in the Schedule of Construction.

1.4 OWNER OCCUPANCY

- A. Owner will occupy the premises during the entire period of construction for the conduct of his normal operations. Coordinate with Owner in all construction operations to minimize conflicts and to facilitate Owner usage.

1.5 OUTAGES

- A. Organize and plan the construction activities so that the number and length of any required outages shall be minimized.
- B. An outage to any customer shall require specific approval of the Owner. The Owner reserves the right to reject any request for an outage.
- C. In some cases it may be necessary, at Contractor's expense, to either install temporary facilities for service or schedule the Work during a period when the outage would have minimal impact on the customer.
- D. Provide the Owner at least 48 HRS notice, excluding weekends, in advance of any requested outage so that the Owner may advise and coordinate the outage with the customers.

1.6 CONTRACTOR-FURNISHED PRODUCTS

- A. Furnish all products, other than Owner-furnished products (if designated).
- B. Components required to be supplied in quantity within a specification section shall all be the same and shall be interchangeable.
- C. Unless otherwise indicated in the Contract Documents, provide materials and equipment that:
 - 1. is produced by reputable manufacturers having adequate experience in the manufacture of these items; and
 - 2. Is designed for the service intended; and
 - 3. have not been previously been incorporated into another project or facility; and
 - 4. have not changed ownership since their initial production or fabrication and shipment from the manufacturer’s factory or facility; and
 - 5. if stored since their manufacture or fabrication, have, while in storage, been properly maintained and serviced in accordance with the manufacturer’s recommendations for long-term storage; submit documentation under the relevant technical section that such maintenance and service has been performed; and
 - 6. have not been subject to degradation or deterioration since manufacture; and
 - 7. are the current model(s) or type(s) furnished by the Supplier and only modified as necessary to comply with the design.

1.7 PERMITS AND LICENSES

- A. The Owner has applied for and obtained, at Owner's expense, the following permits and approvals for the Work:
 - 1. NMDOT Utility Installation Permit
- B. Contractor shall obtain, at his expense, all other permits and licenses necessary for the construction of the Work.

1.8 PHASING

- A. Contractor shall be responsible for determining phasing of the existing system and insuring that the phasing of the new system is correct.

1.9 FENCES

- A. All fences affected by the Work shall be maintained by the Contractor until completion of the Work. Fences disturbed by the construction shall be restored by the Contractor to their original or better condition and to their original location unless otherwise indicated.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION - (NOT USED)

END OF SECTION

SECTION 01 25 13
PRODUCT SUBSTITUTIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. The procedure for requesting the approval of substitution of a product that is not equivalent to a product which is specified by descriptive or performance criteria or defined by reference to one or more of the following:
 - a. Name of manufacturer.
 - b. Name of vendor.
 - c. Trade name.
 - d. Catalog number.
 - 2. Substitutions are not "or-equals."
 - 3. This Specification Section does not address substitutions for major equipment.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.
- C. Request for Substitution - General:
 - 1. Base all bids on materials, equipment, and procedures specified.
 - 2. Certain types of equipment and kinds of material are described in specifications by means of references to names of manufacturers and vendors, trade names, or catalog numbers.
 - a. When this method of specifying is used, it is not intended to exclude from consideration other products bearing other manufacturer's or vendor's names, trade names, or catalog numbers, provided said products are "or-equals," as determined by Engineer.
 - 3. Other types of equipment and kinds of material may be acceptable substitutions under the following conditions:
 - a. Or-equals are unavailable due to strike, discontinued production of products meeting specified requirements, or other factors beyond control of Contractor; or,
 - b. Contractor proposes a cost and/or time reduction incentive to the Owner.

1.2 QUALITY ASSURANCE

- A. In making request for substitution or in using an approved product, Contractor represents they:
 - 1. Have investigated proposed product, and have determined that it is adequate or superior in all respects to that specified, and that it will perform function for which it is intended.
 - 2. Will provide same guarantee for substitute item as for product specified.
 - 3. Will coordinate installation of accepted substitution into Work, to include building modifications if necessary, making such changes as may be required for Work to be complete in all respects.
 - 4. Waives all claims for additional costs related to substitution which subsequently arise.

1.3 DEFINITIONS

- A. Product: Manufactured material or equipment.

1.4 PROCEDURE FOR REQUESTING SUBSTITUTION AFTER AWARD OF CONTRACT

- A. Substitution will only be considered under the conditions stated herein.
- B. Written request through Contractor only.
- C. Transmittal Mechanics:
 - 1. Follow the transmittal mechanics prescribed for Shop Drawings in Specification Section 01 33 00.

- a. Product substitution will be treated in a manner similar to "deviations," as described in Specification Section 01 33 00.
 - b. List the letter describing the deviation and justifications on the transmittal form in the space provided under the column with the heading DESCRIPTION.
 - 1) Include in the transmittal letter, either directly or as a clearly marked attachment, the items listed in Paragraph D below.
- D. Transmittal Contents:
- 1. Product identification:
 - a. Manufacturer's name.
 - b. Telephone number and representative contact name.
 - c. Specification Section or Drawing reference of originally specified product, including discrete name or tag number assigned to original product in the Contract Documents.
 - 2. Manufacturer's literature clearly marked to show compliance of proposed product with Contract Documents.
 - 3. Itemized comparison of original and proposed product addressing product characteristics including but not necessarily limited to:
 - a. Size.
 - b. Composition or materials of construction.
 - c. Weight.
 - d. Electrical or mechanical requirements.
 - 4. Product experience:
 - a. Location of past projects utilizing product.
 - b. Name and telephone number of persons associated with referenced projects knowledgeable concerning proposed product.
 - c. Available field data and reports associated with proposed product.
 - 5. Data relating to changes in construction schedule.
 - 6. Data relating to changes in cost.
 - 7. Samples:
 - a. At request of Engineer.
 - b. Full size if requested by Engineer.
 - c. Held until substantial completion.
 - d. Engineer not responsible for loss or damage to samples.

1.5 APPROVAL OR REJECTION

- A. Written approval or rejection of substitution given by the Engineer.
- B. Engineer reserves the right to require proposed product to comply with color and pattern of specified product if necessary to secure design intent.
- C. In the event the substitution is approved, the resulting cost and/or time reduction will be documented by Change Order in accordance with the General Conditions.
- D. Substitution will be rejected if:
 - 1. Submittal is not through the Contractor with his stamp of approval.
 - 2. Request is not made in accordance with this Specification Section.
 - 3. In the Engineer's opinion, acceptance will require substantial revision of the original design.
 - 4. In the Engineer's opinion, substitution will not perform adequately the function consistent with the design intent.
- E. Reimburse Owner for the cost of Engineer's evaluation whether or not substitution is approved.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION - (NOT USED)

END OF SECTION



EXHIBIT A **Substitution Request Form**
(One Item per each Form)

Project:		Date:
Substitution Requestor:		
Contractor:		
Specification Section No:	Paragraph No. (i.e. 2.1.A.1.c):	Specified Item:
Proposed Substitution:		
Provide Product Data Sheets, Manufacturer's written installation instructions, drawings, diagrams, or any other information as an attached to this Form that will demonstrate the proposed substitution is an Approved Equal.		
In the lines provided state differences between proposed substitutions and specified item. Differences include but are not limited to interrelationship with other items; materials, equipment, function, utility, life cycle costs, applied finished, appearances, and quality.		
<p>_____</p> <p>_____</p> <p>_____</p>		
In the lines provided demonstrate how the proposed substitution is compatible with or modifies other systems, parts, equipment or components of the Project and Work under the Contract:		
<p>_____</p> <p>_____</p> <p>_____</p>		
In the lines provided, describe what effect the proposed substitution has on dimensions indicated on the Drawings and previously reviewed Shop Drawings?		
<p>_____</p> <p>_____</p> <p>_____</p>		
In the lines provided, describe what effect the proposed substitution has on the Construction Schedule and Contract Time.		
<p>_____</p> <p>_____</p> <p>_____</p>		
In the lines provided, describe what effect the proposed substitution has on the Contract Price. This includes all direct, indirect, impact and delay costs.		
<p>_____</p> <p>_____</p> <p>_____</p>		
Manufacturer's guarantees of the proposed and specified items are:		
<input type="checkbox"/> Same <input type="checkbox"/> Different (explain on attachment)		
The undersigned state that the function, utility, life cycle costs, applied finishes, appearance and quality of the proposed substitution are equal or superior to those of the specified item.		
For use by Project Representative:		
<input type="checkbox"/> Accepted <input type="checkbox"/> Accepted as Noted	_____	
<input type="checkbox"/> Not Accepted <input type="checkbox"/> Received Too Late	_____	
_____	_____	
(Date)	(Contractor's Signature)	
_____	_____	
(Telephone)	(Contractor's Firm)	

	(Firms Address)	

Comments:

SECTION 01 26 13
REQUESTS FOR INFORMATION (RFI)

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section defines the process for handling Requests for Information (RFI).
- B. RFIs are intended to provide clarifications and interpretations of the Contract Documents and maintain progress of Work.
- C. RFIs are not intended for general communication, requesting substitutions, requesting proposed changes, resolution of nonconforming work, or coordination between contractors.

1.2 REQUIREMENTS OF THE CONTRACT DOCUMENTS:

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation-RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise.
 - 1. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents.
 - 1. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation.
 - 1. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in the General Conditions.

1.3 RFI SUBMITTAL PROCEDURE

- A. All RFIs shall be submitted on the form included with this Section, or on mutually agreeable forms.
- B. When needed, the RFI shall include backup information to clarify the request.
 - 1. Backup information can include verified field measurements, quantities, dimensions, photos showing existing conditions, and any other information that will assist the Engineer or Owner in reviewing and responding to the RFI.
- C. Within ten (10) working days of receipt of RFI, Engineer will return a response to the RFI, request additional information, or will provide a schedule of when a response will be issued.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION

3.1 REQUESTS FOR INFORMATION

- A. Review of Contract Documents and Field Conditions:
 - 1. Before starting each portion of Work, carefully study and compare drawings, specifications and other contract documents, coordination drawings, shop drawings, prior correspondence or documentation relative to that portion of Work, and any other information furnished by Engineer and Owner.
 - 2. Evaluate field conditions and take field measurements related to that portion of Work.
 - 3. Any inconsistencies discovered in the above review of the contract documents and field conditions should be submitted to the Engineer in an RFI.

- B. Contractor's Responsibilities:
 - 1. When interpretation, clarification or explanation of portion of Construction Documents is needed by Contractor or its Subcontractor, Vendor or Supplier, the request shall be processed through the Contractor.
 - a. Review the RFI for completeness, quality, proper referencing drawings, specification or other contract documents.
 - b. When submitting RFI's generated from subcontractors, suppliers, and others, make every attempt to validate, resolve or respond to RFI by thoroughly researching and reviewing Contract Documents and field conditions before transmitting to the Engineer.
 - c. If the RFI is not clear, concise, complete and easily understood, do not submit the RFI to Engineer for response.
 - 2. Follow these procedures in developing an RFI:
 - a. List relevant Contract Documents when seeking information being requested.
 - 1) Reference all applicable Contract Drawings by sheet number.
 - 2) Specifications by section and paragraph number
 - 3) Reference any other relevant documents.
 - b. Clearly state any additional information needed so request can be fully understood, including sketches, photos or other reference material.
 - c. Suggest any reasonable solutions and recommendations which will aid in determining a solution or response.
 - d. Any critical RFI's requiring a rapid response shall clearly indicate such with an explanation as to why RFI is critical.
 - e. Priority for responses shall be indicated when multiple RFI's are submitted within short period of time.
 - 3. A response to RFI shall not be considered a notice to proceed with a change that may revise the Contract Sum or Contract Time, unless authorized by Owner in writing.
 - 4. If response to RFI is determined incomplete, it shall be resubmitted with reason response is unacceptable and any necessary additional information within five (5) days of time of receipt of response to RFI.
 - 5. RFI Submittal Format:
 - a. Request for information shall be submitted to Engineer on RFI form provided at end of this section, or form provided by Engineer in electronic format, or in similar format acceptable to Engineer.
 - b. RFI form shall be electronically completed and emailed to Engineer's designated representative in electronic format. Attachments shall be in electronic text or PDF file format. Photo attachments may be in JPG format.

- C. RFI Submittal Numbering:
 - 1. RFI's shall be assigned unique numbers in sequential order (1, 2, 3, 4, etc.).

2. A resubmitted RFI or a previously answered RFI requiring revising or further clarification shall be submitted using original RFI number proceeded by ".1 IN to indicate revision one of RFI (i.e.: RFI No. 34.1 for revision 1 to RFI No. 34).

D. Invalid RFI:

1. Engineer may return RFI without response for following reasons:
 - a. Request is unclear or incomplete.
 - b. Request was answered in a previous RFI.
 - c. Requested information is readily available in the Construction Documents.
 - d. Request is related to construction means, methods or techniques.
 - e. Request is related to health or safety measures.
 - f. Request is due to Contractor's lack of adequate coordination.
 - g. Issue relates to coordination between Subcontractors.
 - h. Request is a "Substitution Request."
 - i. Request is a "Contractor Proposed Change."
 - j. Request is due to non-conformance.
2. Should the invalid RFIs continue to be provided, the Owner may deduct the cost of the Engineer's time to process, review and return the RFI's.

END OF SECTION



EXHIBIT A

Request for Information Form

Contractor's RFI No. _____ Engineer's RFI No. _____

Contract: _____

Contractor: _____

Owner: _____ Owner's Contract No. _____

Engineer **HDR Engineering, Inc.** _____ Engineer's Contract No. _____

THIS REQUEST BY: _____ cc to: _____
(Name of the Contractor's Representative)

REFERENCE: DIVISION _____ SECTION _____ PLAN SHEET NO. _____

ATTACHMENTS _____

INTERPRETATION BY: _____ Date: _____
_____, 20_____
(Name of the Engineer's Representative)

ATTACHMENTS _____

The General Conditions (GCs) specify that once the Engineer provides a response to a Contractor's RFI, that determination shall be final and binding on the Contractor unless the Contractor delivers to the Owner written notice of a change in the work within a certain period of time of receipt of that determination. See the GCs for further clarification.

cc to: _____

SECTION 01 30 00
SPECIAL CONDITIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Administrative and procedural requirements for:
 - a. Preconstruction Conference.
 - b. Project signs.
 - c. Temporary sanitary facilities
 - d. Drawings and Contract Documents for Contractor use.
 - e. Project meetings.
 - f. Special considerations related to adjacent properties and facilities.
 - g. Historical and archaeological finds.
 - h. Administrative procedures.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. Building code:
 - a. International Code Council (ICC):
 - 1) International Building Code and associated standards, 2015 Edition including all amendments, referred to herein as Building Code.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 - 2. Project Sign Layout and mounting design.

1.4 PRECONSTRUCTION CONFERENCE

- A. See Section 01 31 19 - Project Meetings.

1.5 PROJECT SIGNS

- A. Within 10 days after receipt of Notice to Proceed, furnish, install, and maintain a Project Sign as defined herein. No other signs will be allowed on the project unless approved in writing by the Owner.
- B. Project Sign Materials:
 - 1. The Project Sign will be produced by an experienced professional sign company.
 - 2. The Project Sign shall be structurally adequate and suitable for exterior application. Project Sign panels shall be constructed using a 4 FT and 8 FT, 3/4 IN new A-B Grade, exterior type, APA MDO plywood both sides.
 - 3. The Project Sign paint shall be exterior quality, as specified in Division 09 or as a minimum, primer and finish coat: exterior, semi-gloss, enamel. Colors for the sign and structure, framing, sign surfaces, and graphics shall be as shown on the Drawings or as selected by the Engineer.
 - 4. Prior to producing the sign, submit a layout of the sign to the Engineer for review and approval. The layout shall include content, lettering style and color and background colors.

- C. Information to be included on the Project Sign will include:
 - 1. Project Name.
 - 2. Owner's Name.
 - 3. Engineer.
 - 4. Contractor.
 - 5. Construction Manager.
 - 6. Funding Agencies [if required by the funding agreement].
 - 7. Construction dollar amount if required by the funding agency and/or client.
 - 8. Company and Agency Logos if approved by the Owner.
 - a. Coordinate Project Sign layout with the Owner prior to installation.
- D. Installation of the Project Sign:
 - 1. The Project Sign shall be constructed with new materials and kept clean throughout the project duration.
 - a. Coordinate Project Sign location(s) and mounting with the Owner prior to installation.
 - 2. The Project Sign shall be mounted to resist wind loads as required by authorities having jurisdiction but not less than wind velocity of 50 MPH.
 - 3. Prior to installing the sign, submit mounting design to the Engineer for review and approval.
 - 4. The Project Sign shall be erected level and plumb.
 - 5. Use 4 IN x 4 IN treated lumber post s for mounting the sign. Sink posts 3 to 4 FT below grade and stabilize posts to minimize lateral motion. Leave a minimum of 8 FT of post above existing grade for mounting of sign.
- E. Remove signs, framing, supports, and foundations to a depth of at least 2 FT upon completion of Project. Restore area to a condition equal to or better than before construction.

1.6 TEMPORARY SANITARY FACILITIES

- A. Provide temporary sanitary facilities for use of construction workers during construction, remodeling or demolition activities.
- B. Do not use existing toilet facilities in occupied areas or new toilet facilities in construction area without Owner's written consent.
- C. Provide facilities complying with local, State and Federal sanitary laws and regulations.
- D. Follow facility provider's minimum maintenance frequency or service more frequently to keep in clean and sanitary condition.
- E. Provide adequate supplies of toilet paper, cleaning supplies, and other required items.

1.7 DRAWINGS AND CONTRACT DOCUMENTS FOR CONTRACTOR USE

- A. Refer to General Conditions.
- B. Pick up all "no-charge" documents within 10 days from date of Notice to Proceed.
- C. Additional documents after "no-charge" documents will be furnished to Contractor at cost.

1.8 PROJECT MEETINGS

- A. See Section 01 31 19 - Project Meetings.

1.9 SPECIAL CONSIDERATIONS RELATED TO ADJACENT PROPERTIES AND FACILITIES

- A. Contractor shall be responsible for negotiations of any waivers or alternate arrangements required to enable transportation of materials to the site.
- B. Access, Traffic Control, and Parking:
 - 1. Maintain conditions of access road to site such that access is not hindered as the result of construction related deterioration.

2. Do not permit driving across or transporting materials or equipment across areas outside the construction limits shown on the Drawings.
3. Provide traffic control devices and personnel necessary to ensure a safe interface of construction traffic with business traffic to and from adjacent sites.
4. Provide access routes for emergency vehicles at all times.
5. Provide daily sweeping of hard-surface roadways to remove soils tracked onto roadway.
6. Provide on-site parking for all staff to limit interference with adjacent properties and businesses.

1.10 HISTORICAL AND ARCHAEOLOGICAL

- A. If during the course of construction, evidence of deposits of historical or archeological interest is found, cease operations affecting the find and shall notify Owner.
 1. No further disturbance of the deposits shall ensue until the Contractor has been notified by Owner that Contractor may proceed.
 2. Owner will issue a notice to proceed after appropriate authorities have surveyed the find and made a determination to Owner.
 3. Compensation to the Contractor, if any, for lost time or changes in construction resulting from the find, shall be determined in accordance with changed or extra work provisions of the Contract Documents.
 4. The site has been previously investigated and has no known history of historical or archaeological finds.

1.11 ADMINISTRATIVE PROCEDURES

- A. Unless otherwise specified, or agreed to in the Pre-Construction Conference, use the following EJCDC standard forms for Work Change Directives, Change Orders, and Field Orders:
 1. C-940 Work Change Directive 2013.
 2. C-941 Change Order 2013.
 3. C-942 Field Order 2013.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION - (NOT USED)

END OF SECTION

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SECTION 01 31 19
PROJECT MEETINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Preconstruction, progress and other project meetings.
- B. Related Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.

1.2 PRECONSTRUCTION MEETING

- A. Meet with the Owner and Engineer for a pre-construction conference at a time mutually agreed upon after the contract is awarded, but before any work is performed,
- B. The Engineer will schedule a meeting of the Owner, Contractor, Contractor's Subcontractors, and their respective representatives.
 - 1. The purpose of the meeting will be to clarify construction contract administration procedures, to establish lines of authority and communication and identify duties and responsibilities of the parties.
- C. The Engineer will schedule the pre-construction conference after receipt of the Contractor's draft proposed schedule.
- D. The agenda for the meeting shall cover at least the following items:
 - 1. Use of site and special concerns regarding adjacent properties.
 - 2. Organization of the Contractor's forces and personnel, including all subcontractors, and materials suppliers.
 - 3. Channels and procedures for communication.
 - 4. Contractor's construction schedule, including sequence of critical work.
 - 5. Contract documents, including distribution of required copies and revisions.
 - 6. Processing of shop drawings and other data.
 - 7. Processing of Requests for Information (RFI), Construction Change Directives (CCD) and Change Orders and distribution of related forms.
 - 8. Rules and regulations applicable to the performance of the work, such as quality control, testing and startup.
 - 9. Contractor's site safety and security protocols.
 - 10. Procedures for quality control, housekeeping and related matters.
- E. The Engineer will compile meeting minutes from the transcribed record of the meeting and electronically distribute copies to all participants.
- F. Pre-construction conference submittals:
 - 1. The names and telephone numbers of Contractor's Superintendent and Office Manager.
 - 2. List of personnel authorized to sign change orders and receive progress payments.
 - 3. The name, address and telephone numbers of two or more persons employed by the Contractor who can be reached at any time of the day or night to handle emergency matters.
 - 4. A list of all subcontractors that will work on the project, a description of work they will perform, and a contact list for each subcontractor with phone numbers and address.
 - 5. A draft proposed Construction Schedule.
 - 6. Material Safety Data Sheets for all hazardous chemical products to be used by the Contractor on this project.
 - 7. Temporary Erosion and Sediment Controls Plan.
 - 8. Traffic Control Plan.

1.3 PROGRESS MEETINGS

- A. Bi-weekly progress meetings will be held a location determined by the Engineer, unless otherwise arranged.
- B. Attendees will include the Owner, Engineer, Contractor, subcontractors, and suppliers' representatives as may be needed, other Contractors working at the site, and other interested or affected parties.
- C. The specific purpose of the weekly meetings is to coordinate the efforts of all concerned so that the project progresses without delay to completion, with the least inconvenience.
- D. Bring a three week look ahead schedule to each weekly meeting, including the following items:
 - 1. Work completed last week.
 - 2. Work anticipated for the next two weeks ("Look Ahead").
 - 3. Subcontractors on site the prior week.
 - 4. Subcontractors scheduled on site for the next two weeks.
 - 5. Contract document deficiencies or questions noted during prior week.
 - 6. Anything that could impede the progress of the work or affect the critical path on the project schedule.
 - 7. Corrective measures and procedures planned to regain planned schedule, cost or quality assurance, if necessary.
 - 8. Report of any accidents, and any site safety issues that need to be addressed.
- E. Other Agenda items to be discussed:
 - 1. Review and revise as necessary and approve minutes of previous meetings.
 - 2. Status of submittals of equipment and shop drawings.
 - 3. Identify problems that impede planned progress.
 - 4. Other current business.
- F. Revision of Minutes:
 - 1. Unless published minutes are challenged in writing prior to the next regularly scheduled progress meeting, they will be accepted as properly stating the activities and decisions of the meeting.
 - 2. Persons challenging published minutes shall reproduce and distribute copies of the challenge to all indicated recipients of the particular set of minutes.
 - 3. Challenge to minutes shall be settled as priority item of "old business" at the next regularly scheduled meeting.
- G. Minutes of Meeting:
 - 1. The Engineer will compile minutes of each project meeting and will furnish electronic copies to the Contractor.

1.4 OTHER MEETINGS

- A. Other meetings will be required to facilitate progress of the Work. These include, but are not limited to the following:
 - 1. Pre-Installation Conferences:
 - a. Coordinate and schedule with Engineer for each material, product or system specified.
 - 1) Conferences to be held prior to initiating installation, but not more than two weeks before scheduled initiation of installation.
 - 2) Conferences may be combined if installation schedule of multiple components occurs within the same two week interval.
 - 3) Review manufacturers recommendations and Contract Documents Specification Sections.
 - 2. Facility Startup Planning and Coordination Meeting.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION - (NOT USED)

END OF SECTION

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SECTION 01 32 17
CONSTRUCTION PROGRESS SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Specific requirements for the preparation, submittal, updating, and status reporting of the construction Progress Schedule.
- B. Related Specification Sections include, but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.
- C. Review of the CPM Schedule:
 - 1. In so far as the Contractor is solely responsible for its means and methods and the CPM schedule represents in part its means and methods, the review of the CPM schedules (preliminary, baseline, updates, revisions, etc.) is for compliance with the requirements as defined in the contract documents.
 - 2. The review of the CPM schedule is not intended to be complete or exhaustive or check every activity and its relation to the work.
 - 3. The Engineer/Owner will provide comments on the CPM schedule compliance with those contract requirements and anomalies that might appear to the Engineer/Owner.
 - 4. If the Contractor fails to include contract requirements (e.g. specified cure times, commissioning periods) in the CPM schedule, or the Engineer/Owner fails to notify the Contractor of anomalies the Contractor is not relieved of the contract requirements.
 - 5. Acceptance of the CPM schedule does not imply that the Owner has approved or accepted the Contractor's means and methods or sequence for performing the work to construct the project.
 - 6. If the Contractor has questions or concerns about comments, the Contractor and Engineer/Owner shall meet to resolve those issues prior to issuance of future updates or revisions.

1.2 DEFINITIONS

- A. The following definitions shall apply to this Specification Section:
 - 1. Execution Of The Contract: The date the contract is signed by the last party, either the Owner or the Contractor.
 - 2. Working Days: Monday through Friday except holidays as directed by the Owner.
 - 3. Preliminary Schedule: A schedule showing detailed activity for the first 90 days of the Project, and a general work plan for construction activity from the 91st day until the Contractual Completion Date.
 - 4. Baseline Schedule: The initial detailed Progress Schedule prepared by the Contractor defining its plan for constructing the Project in accordance with the Contract Documents.
 - 5. Schedule Update: The initially accepted Baseline Schedule, or subsequently approved Revised Baseline Schedules, updated each month to reflect actual start and finish dates of each schedule activity and the remaining duration of activities that began during the period.
 - 6. Current Schedule: The current schedule is either the Baseline Schedule or Revised Baseline Schedule including and incorporating Schedule Updates.
 - 7. Revised Baseline Schedule: The initially accepted Baseline Schedule revised to reflect approved contract change orders and modifications.
 - 8. Recovery Schedule:
 - a. A schedule indicating the Contractor's plan for recovering lost time.

- b. A recovery schedule will be requested when the Contractor is forecasting at least 10 working days or more delays in meeting a contract milestone or the contract completion date.
- 9. Short Interval Schedule:
 - a. Schedule prepared by the Contractor reflecting the work planned for the coming weeks.
 - b. This is also known as a Look-Ahead Schedule.

1.3 SUBMITTALS

A. Preliminary Schedule:

- 1. Submittal and review:
 - a. Submit within 7 days after Execution of the Contract or the effective date of the contract, whichever is earlier.
 - b. The Engineer/Owner will review and provide comments to the Contractor within 10 working days after receipt of the schedule.
 - c. The Contractor will review and modify the preliminary schedule and return the schedule within 5 working days. If there are concerns about the comments provided, the Engineer/Owner and Contractor will meet to review and resolve those concerns.
- 2. Submittal package:
 - a. Provide a detailed plan for the first 90 days of the project and summary activities of the work to achieve the project milestones.
 - b. CPM time-scaled network diagram:
 - 1) A printed logic diagram and PDF that include the following information:
 - a) Unique activity number/identifier; numeric, alpha or combination of numeric/alpha.
 - b) Activity description.
 - c) Activity duration.
 - d) Early start and early finish for each activity.
 - e) Late start and late finish for each activity.
 - f) Total float (TF) for each activity.
 - g) Predecessor activities.
 - h) Successor activities.
 - i) Bar showing the early start and completion dates of each activity.
 - 2) The activities will be sorted by area, trades, and subcontractors as agreed on with the Engineer/Owner.
 - 3) Print the CPM time-scaled network diagram on minimum sheet size of 11 IN x 17 IN.

B. Baseline Schedule:

- 1. Submittal and review:
 - a. Submit within 30 days after Execution of the Contract or the effective date of the contract, whichever is earlier.
 - b. The Engineer/Owner shall review the baseline schedule and provide comments to the Contractor within 20 working days after receipt of the schedule.
 - c. After receiving comments, the Contractor and Engineer/Owner shall meet to review the comments within five working days.
 - d. After the meeting, the Contractor will modify the schedule as agreed and resubmit the baseline schedule within 5 working days.
 - e. After the Engineer/Owner confirms that the Contractor has made the changes as agreed, the schedule will become the baseline schedule.
- 2. Submittal package:
 - a. CPM time-scaled network diagram:
 - 1) A printed logic diagram and PDF that include the following information:
 - a) Unique activity number/identifier; numeric, alpha or combination of numeric/alpha.
 - b) Activity description.

- c) Activity duration.
 - d) Early start and early finish for each activity.
 - e) Late start and late finish for each activity.
 - f) Total float (TF) for each activity.
 - g) Predecessor activities.
 - h) Successor activities.
 - i) Cost/budget to complete the work in the activity.
 - j) Resources needed to complete the activity.
 - k) Bar showing the early start and completion dates of each activity.
- 2) The activities will be sorted by area, trades, and subcontractors as agreed on with the Engineer/Owner.
 - 3) Print the CPM time-scaled network diagram on minimum sheet size of 11 IN x 17 IN.

C. Schedule Updates:

1. Submittal and Review:
 - a. Provide a Schedule Update on the 4th of each month after the Baseline Schedule is completed.
 - b. The Engineer/Owner shall provide comments to the Contractor on the Schedule Update.
 - c. Incorporate the Engineer/Owner comments into the next Schedule Update.
2. CPM time-scaled network diagram as described for the Baseline Schedule:
 - a. Do not change the description of an activity number.
 - 1) Any activity added to the schedule shall have a new unique activity number and description.
 - 2) If activities are deleted, the deleted activity number(s) will not be used again.

D. Recovery Schedule:

1. When the activities on the critical path or the completion milestones appear to be 15 working days beyond the contract time, the Engineer/Owner may request and provide a Recovery Schedule demonstrating how the Contractor will recover the lost time so that the Work will be completed within the Contract Time.
2. Provide the Recovery schedule within 10 working days after requested by the Engineer/Owner.
3. Activities will be added or the durations modified to reflect the changes to the work.
4. The Engineer/Owner will review and provide comments to the Contractor on the Recovery Schedule within five working days.
5. Incorporate the Engineer/Owner comments into the Recovery Schedule.
6. After acceptance by the Engineer/Owner, the Recovery Schedule use for future Schedule Updates.
7. CPM time-scaled network diagram as described for the Baseline Schedule:
 - a. Do not change the description of an activity number.
 - 1) Any activity added to the schedule shall have a new activity number and description.
 - 2) If activities are deleted, the deleted activity number(s) will not be used again.
8. Provide a narrative with an explanation of the changes in logic and/or activity durations.

E. Short Interval Schedule:

1. Provide a two-week schedule each week during the Contract Time. This schedule can be reviewed at each progress meeting.
 - a. Provide an accurate representation of the work performed the previous week and work planned for the current week and subsequent two weeks.
2. Provide in a tabular format with bars or other graphic representing work duration.
 - a. Reference activity ID numbers on the Baseline, Revised Baseline, or Updated Schedule, which ever is being currently used.
 - b. Note by color, highlight or underscore all activities on the critical path.

3. Identify inspection hold points including special inspections needed before the Contractor can move forward with the work.
4. Identify the day materials provided by the Owner or others needed on site.
5. Identify utility tie-ins and traffic changes including road and/or lane closures.

1.4 GENERAL REQUIREMENTS

- A. Prepare and submit construction progress schedules as specified herein.
 1. Develop and maintain Baseline, Updates and Recovery schedules using Microsoft Project or equal as approved by the Engineer/Owner.
 2. Include the following information:
 - a. Construction start dates (Award date, Notice(s) to Proceed date).
 - b. Procurement activities.
 - c. Preparation of key submittals for materials and equipment.
 - d. Engineers review and approval of key submittals.
 - e. Material and equipment fabrication lead times.
 - f. Material and equipment deliveries for Contractor, Owner and third parties.
 - g. Water curing of concrete after placement for all structures.
 - h. Shutdowns.
 - i. Utility tie-ins.
 - j. Plant tie-ins.
 - k. Traffic changes and closures.
 - l. Inspections and hold points.
 - m. Start-up of equipment.
 - n. Testing of equipment and systems.
 - o. Training
 - p. Commissioning.
 - q. Contract milestones:
 - 1) Intermediate milestones.
 - 2) Substantial Completion Date.
 - 3) Physical Completion Date.
 3. The following CPM schedule outputs will be rejected without further review:
 - a. Schedules indicating the start of the critical path at a date point or activity beyond the date of Notice to Proceed, or schedules indicating a discontinuous critical path from Notice to Proceed to Contract completion.
 - b. Schedules defining critical activities as those on a path or paths having some minimum value of float.
 - c. Schedules with multiple critical paths.
 - d. Schedules indicating a completion date beyond the contractual completion date.
- B. The number of activities shall be sufficient to assure adequate planning of the project, to permit monitoring and evaluation of progress, and to do an analysis of time impacts.
 1. Work activities shall not exceed durations of 10 days or two weeks.
 - a. Procurement and fabrication activity durations may exceed 10 days or two weeks.
 2. Schedule activities shall include the following:
 - a. A clear and legible description.
 - b. At least one predecessor and one successor activity, except for project start and finish milestones.
- C. Early Completion Schedule:
 1. Contractor may show early completion time on any schedule provided that the requirements of the contract are met.
 2. Contractor may increase early completion time by improving production, reallocating resources to be more efficient, performing sequential activities concurrently or by completing activities earlier than planned.
 3. Any time between the Contractor's early completion and the Contract Time will be considered float.

- D. Plan working durations to incorporate the effects of normal weather impacts.
- E. Float:
 - 1. The project owns the float, therefore neither the Owner nor the Contractor has exclusive use of the float; the float can be used by either party.
 - 2. Once float is used, liability for delay of the project completion date rests with the party actually causing delay to the project completion date.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION - (NOT USED)

END OF SECTION

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SECTION 01 33 00
SUBMITTALS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Mechanics and administration of the submittal process for:
 - a. Shop Drawings.
 - b. Samples.
 - c. Informational submittals.
 - 2. General content requirements for Shop Drawings.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.
 - 3. Construction Progress Schedule submittal requirements are specified in Specification Section 01 32 17.
 - 4. Operations and Maintenance Manual submittal requirements are specified in Specification Section 01 33 04.
 - 5. Technical Specification Sections identifying required submittals.

1.2 DEFINITIONS

- A. Shop Drawings:
 - 1. See General Conditions.
 - 2. Product data and samples are Shop Drawing information.
- B. Informational Submittals:
 - 1. Submittals other than Shop Drawings and samples required by the Contract Documents that do not require review and/or approval by the Engineer.
 - 2. Representative types of informational submittal items include but are not limited to:
 - a. Concrete compressive strength and in-place moisture density soil test reports.
 - b. Installed equipment and systems performance test reports.
 - c. Manufacturer's installation certification letters.
 - d. Warranties.
 - e. Service agreements.
 - f. Construction photographs.
 - g. Survey data.
 - h. Health and safety plans.
 - i. Work plans.
 - j. Delegated designs per performance specification requirements
 - 3. For-Information-Only submittals upon which the Engineer is not expected to conduct review or take responsive action may be so identified in the Contract Documents.

1.3 SUBMITTAL SCHEDULE

- A. Schedule of Shop Drawings:
 - 1. Submitted and approved within 15 days of receipt of Notice to Proceed.
 - 2. Account for multiple transmittals under any specification section where partial submittals will be transmitted.
- B. Shop Drawings: Submittal and approval prior to 30 PCT completion of project.
- C. Informational Submittals:
 - 1. Reports and installation certifications submitted within 5 days of conducting testing, installation, or examination.

2. Submittals showing compliance with required qualifications submitted 15 days prior to any work beginning using the subject qualifications.

D. The submittal schedule shall include the following columns as a minimum:

Submittal Section	Submittal Description	Planned Submittal Date	Submittal Need Date	Actual Submittal Date	Actual Return Date	Disposition

1.4 PREPARATION OF SUBMITTALS

A. General:

1. All submittals and all pages of all copies of a submittal shall be completely legible.
2. Submittals which, in the Engineer's sole opinion, are illegible will be returned without review.
3. Minimize extraneous information for equipment and products not relevant to the submittal.
4. Contractors or vendors written comments on the submittal drawings shall be in green

B. Shop Drawings, Product Data, and Samples:

1. Scope of any submittal and letter of transmittal:
 - a. Limited to one Specification Section.
 - b. Submittals with more than one Specification section included will be rejected.
 - c. Do not submit under any Specification Section entitled (in part) "Basic Requirements" unless the product or material submitted is specified, in total, in a "Basic Requirements" Specification Section.
2. Numbering letter of transmittal:
 - a. Include as prefix the Specification Section number followed by a series number, "-xx", beginning with "01" and increasing sequentially with each additional transmittal for that Specification Section.
 - b. If more than one submittal under any Specification Section, assign consecutive series numbers to subsequent transmittal letters.
3. Describing transmittal contents:
 - a. Provide listing of each component or item in submittal capable of receiving an independent review action.
 - b. Identify for each item:
 - 1) Manufacturer and Manufacturer's Drawing or data number.
 - 2) Specification Section Article/Paragraph number if appropriate.
 - 3) Unique page numbers for each page of each separate item.
 - c. When submitting "or-equal" items that are not the products of named manufacturers, include the words "or-equal" in the item description.
4. Contractor certification of review and approval:
 - a. Execute Exhibit AA, Contractor's Submittal Certification form, to indicate Contractor has reviewed and approved the submittal contents.
 - 1) Clearly identify the person who reviewed the submittal and the date it was reviewed."
 - b. Submittals containing multiple independent items shall be prepared with each item listed on the letter of transmittal or on an index sheet for all items listing the discrete page numbers for each page of each item, which shall be stamped with the Contractor's review and approval stamp.
 - 1) Each independent item shall have a cover sheet with the transmittal number and item number recorded.
 - a) Provide clear space of 3 IN SQ for Engineer stamping.

- 2) Individual pages or sheets of independent items shall be numbered in a manner that permits the entire contents of a particular item to be readily recognized and associated with Contractor's certification.
5. Resubmittals:
 - a. Number with original Specification Section and series number with a suffix letter starting with "A" on a (new) duplicate transmittal form.
 - b. Do not increase the scope of any prior transmittal.
 - c. Provide cover letter indicating how each "B", "C", or "D" Action from previous submittal was addressed and where the correction is found in the resubmittal.
 - d. Account for all components of prior transmittal.
 - 1) If items in prior transmittal received "A" or "B" Action code, list them and indicate "A" or "B" as appropriate.
 - a) Do not include submittal information for items listed with prior "A" or "B" Action in resubmittal.
 - 2) Indicate "Outstanding-To Be Resubmitted At a Later Date" for any prior "C" or "D" Action item not included in resubmittal.
 - a) Obtain Engineer's approval to exclude items.
6. Do not use red color for marks on transmittals.
 - a. Duplicate all marks on all copies transmitted, and ensure marks are photocopy reproducible.
 - b. Engineer will use red marks or enclose marks in a cloud.
7. Transmittal contents:
 - a. Coordinate and identify Shop Drawing contents so that all items can be easily verified by the Engineer.
 - b. Provide submittal information or marks defining specific equipment or materials utilized on the Project.
 - 1) Generalized product information, not clearly defining specific equipment or materials to be provided, will be rejected.
 - c. Identify equipment or material project use, tag number, Drawing detail reference, weight, and other Project specific information.
 - d. Provide sufficient information together with technical cuts and technical data to allow an evaluation to be made to determine that the item submitted is in compliance with the Contract Documents.
 - e. Do not modify the manufacturer's documentation or data except as specified herein.
 - f. Submit items such as equipment brochures, cuts of fixtures, product data sheets or catalog sheets not exceeding 11 x 17 IN pages.
 - 1) Indicate exact item or model and all options proposed by arrow and leader.
 - g. When a Shop Drawing submittal is called for in any Specification Section, include as appropriate, scaled details, sizes, dimensions, performance characteristics, capacities, test data, anchoring details, installation instructions, storage and handling instructions, color charts, layout Drawings, rough-in diagrams, wiring diagrams, controls, weights and other pertinent data in addition to information specifically stipulated in the Specification Section.
 - 1) Arrange data and performance information in format similar to that provided in Contract Documents.
 - 2) Provide, at minimum, the detail specified in the Contract Documents.
 - h. If proposed equipment or materials deviate from the Contract Drawings or Specifications in any way, clearly note the deviation and justify the said deviation in detail in a separate letter immediately following transmittal sheet. Any deviation from plans or specifications not depicted in the submittal or included but not clearly noted by the Contractor may not have been reviewed. Review by the Engineer shall not serve to relieve the Contractor of the contractual responsibility for any error or deviation from contract requirements.
8. Samples:
 - a. Identification:

- 1) Identify sample as to transmittal number, manufacturer, item, use, type, project designation, tag number, Specification Section or Drawing detail reference, color, range, texture, finish and other pertinent data.
 - 2) If identifying information cannot be marked directly on sample without defacing or adversely altering samples, provide a durable tag with identifying information securely attached to the sample.
- b. Include application specific brochures, and installation instructions.
 - c. Provide Contractor's review and approval certification stamp or Contractor's Submittal Certification form as indication of Contractor's checking and verification of dimensions and coordination with interrelated work.
 - d. Resubmit revised samples of rejected items.
- C. Informational Submittals:
1. Prepare in the format and detail specified in Specification requiring the informational submittal.

1.5 TRANSMITTAL OF SUBMITTALS

- A. Shop Drawings and Samples:
1. Transmit all submittals to:

HDR
 2155 Louisiana Blvd NE, Suite 9500
 Albuquerque, NM 87110
 Attn: Gabriel Alvarado
gabriel.alvarado@hdrinc.com

2. Utilize two copies of attached Exhibit A to transmit all Shop Drawings and samples.
3. All submittals must be from Contractor.
 - a. Submittals will not be received from or returned to subcontractors.

- B. Informational Submittals:

1. Transmit under Contractor's standard letter of transmittal or letterhead.
2. Submit in triplicate or as specified in individual Specification Section.
3. Transmit to:

HDR
 2155 Louisiana Blvd NE, Suite 9500
 Albuquerque, NM 87110
 Attn: Gabriel Alvarado
gabriel.alvarado@hdrinc.com

- C. Electronic Transmission of Submittals:

1. Transmittals shall be made electronically.
 - a. Protocols and processes will be determined at the Pre-Construction Conference.
2. Provide documents in Adobe Acrobat Portable Document Format (PDF), latest version.
3. Do not password protect or lock the PDF document.
4. Drawings or other graphics must be converted to PDF file format from the original drawing file format and made part of the PDF document.
 - a. Scanning of drawings is to be used only where actual file conversion is not possible and drawings must be scanned at a resolution of 300 DPI or greater.
 - b. Required signatures may be applied prior to scanning for transmittal.
5. Electronic drawings shall be formatted to be at full-scale (or half-scale when printed to 11x17).
 - a. Do not reduce drawings by more than 50 PCT in size.

- b. Reduced drawings shall be clearly marked "HALF-SIZE" and shall scale accurately at that size.
- 6. Rotate sheets that are normally viewed in landscape mode so that when the PDF file is opened the sheet is in the appropriate position for viewing.
- 7. Create bookmarks in the bookmarks panel for the cover, the Table of Contents, and each major section of the document.
- 8. Using Adobe Acrobat Standard or Adobe Acrobat Professional, set the PDF document properties, initial view as follows:
 - a. Select File → Properties → Initial View.
 - b. Select the Navigation tab: Bookmarks Panel and Page.
 - c. Select the Page layout: Single Page.
 - d. Select the Magnification: Fit Page.
 - e. Select Open to page: 1.
 - f. Set the file to open to the cover page with bookmarks to the left, and the first bookmark linked to the cover page.
- 9. Set the PDF file "Fast Web View" option to open the first several pages of the document while the rest of the document continues to load.
 - a. To do this:
 - 1) Select Edit → Preferences → Documents → Save Settings.
 - 2) Check the Save As optimizes for Fast Web View box.
- 10. File naming conventions:
 - a. File names shall use the convention (XXXXXX-YY-Z.PDF) where XXXXXX is the Specification Section number, YY is the Shop Drawing Root number and Z is an ID number used to designate the associated volume.
- 11. Labeling:
 - a. As a minimum, include the following labeling on all electronic media:
 - 1) Project Name.
 - 2) Equipment Name and Project Tag Number.
 - 3) Project Specification Section.
 - 4) Manufacturer Name.
 - 5) Vendor Name.
- 12. Binding:
 - a. Include labeled electronic media in a protective case.
 - 1) Bind protective case in three-ring binder, inserted at the front of the Final paper copy submittal.
 - 2) Protective case(s) to have means for securing electronic media to prevent loss (e.g., zip case, flap and strap, or equivalent).

1.6 ENGINEER'S REVIEW ACTION

- A. Shop Drawings and Samples:
 - 1. Items within transmittals will be reviewed for overall design intent and will receive one of the following actions:
 - a. A - FURNISH AS SUBMITTED.
 - b. B - FURNISH AS NOTED (BY ENGINEER).
 - c. C - REVISE AND RESUBMIT.
 - d. D - REJECTED.
 - e. E - ENGINEER'S REVIEW NOT REQUIRED.
 - 2. Submittals received will be initially reviewed to ascertain inclusion of Contractor's approval stamp.
 - a. Submittals not stamped by the Contractor or stamped with a stamp containing language other than that specified herein will not be reviewed for technical content and will be returned rejected.
 - 3. In relying on the representation on the Contractor's review and approval stamp, Owner and Engineer reserve the right to review and process poorly organized and poorly described submittals as follows:

- a. Submittals transmitted with a description identifying a single item and found to contain multiple independent items:
 - 1) Review and approval will be limited to the single item described on the transmittal letter.
 - 2) Other items identified in the submittal will:
 - a) Not be logged as received by the Engineer.
 - b) Be removed from the submittal package and returned without review and comment to the Contractor for coordination, description and stamping.
 - c) Be submitted by the Contractor as a new series number, not as a re-submittal number.
 - b. Engineer, at Engineer's discretion, may revise the transmittal letter item list and descriptions, and conduct review.
 - 1) Unless Contractor notifies Engineer in writing that the Engineer's revision of the transmittal letter item list and descriptions was in error, Contractor's review and approval stamp will be deemed to have applied to the entire contents of the submittal package.
4. Submittals returned with Action "A" or "B" are considered ready for fabrication and installation.
 - a. If for any reason a submittal that has an "A" or "B" Action is resubmitted, it must be accompanied by a letter defining the changes that have been made and the reason for the resubmittal.
 - b. Destroy or conspicuously mark "SUPERSEDED" all documents having previously received "A" or "B" Action that are superseded by a resubmittal.
 5. Submittals with Action "A" or "B" combined with Action "C" (Revise and Resubmit) or "D" (Rejected) will be individually analyzed giving consideration as follows:
 - a. The portion of the submittal given "C" or "D" will not be distributed (unless previously agreed to otherwise at the Preconstruction Conference).
 - 1) One copy or the one transparency of the "C" or "D" Drawings will be marked up and returned to the Contractor.
 - a) Correct and resubmit items so marked.
 - b. Items marked "A" or "B" will be fully distributed.
 - c. If a portion of the items or system proposed are acceptable, however, the major part of the individual Drawings or documents are incomplete or require revision, the entire submittal may be given "C" or "D" Action.
 - 1) This is at the sole discretion of the Engineer.
 - 2) In this case, some Drawings may contain relatively few or no comments or the statement, "Resubmit to maintain a complete package."
 - 3) Distribution to the Owner and field will not be made (unless previously agreed to otherwise).
 6. Failure to include any specific information specified under the submittal paragraphs of the Specifications will result in the submittal being returned to the Contractor with "C" or "D" Action.
 7. Calculations required in individual Specification Sections will be received for information purposes only, as evidence calculations have been stamped by the professional as defined in the specifications and for limited purpose of checking conformance with given performance and design criteria. The Engineer is not responsible for checking the accuracy of the calculations and the calculations will be returned stamped "E. Engineer's Review Not Required" to acknowledge receipt.
 8. Furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than 3 submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.

9. Transmittals of submittals which the Engineer considers as "Not Required" submittal information, which is supplemental to but not essential to prior submitted information, or items of information in a transmittal which have been reviewed and received "A" or "B" action in a prior submittal, will be returned with action "E. Engineer's Review Not Required."
10. Samples may be retained for comparison purposes.
 - a. Remove samples when directed.
 - b. Include in bid all costs of furnishing and removing samples.
11. Approved samples submitted or constructed, constitute criteria for judging completed work.
 - a. Finished work or items not equal to samples will be rejected.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION - (NOT USED)

END OF SECTION

EXHIBIT A Shop Drawing Transmittal No.

(Spec Section) (Series)

Project Name:		Date Received:
Project Owner:		Checked By:
Contractor:	HDR Engineering, Inc.	Log Page:
Address:	Address:	HDR No.:
		Spec Section:
		Drawing/Detail No.:
Attn:	Attn:	1st. Sub ReSub.
Date Transmitted:	Previous Transmittal Date:	

Item No.	No. Copies	Description	Manufacturer	Mfr/Vendor Dwg or Data No.	Action Taken*

Remarks:

* The Action designated above is in accordance with the following legend:

<p>A - Furnish as Submitted</p> <p>B - Furnish as Noted</p> <p>C - Revise and Submit</p> <ol style="list-style-type: none"> 1. Not enough information for review. 2. No reproducibles submitted. 3. Copies illegible. 4. Not enough copies submitted. 5. Wrong sequence number. 6. Wrong resubmittal number. 7. Wrong spec. section. 8. Wrong form used. 9. See comments. <p>D - Rejected</p>	<p>E - Engineer's review not required</p> <ol style="list-style-type: none"> 1. Submittal not required. 2. Supplemental Information. Submittal retained for informational purposes only. 3. Information reviewed and approved on prior submittal. 4. See comments. 5. Delegated Design - Submittal received as requested by the Contract Documents. The Engineer did not review the engineering or technical content of the submittal. <p>Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Any deviation from plans or specifications not depicted in the submittal or included but not clearly noted by the Contractor may not have been reviewed. Review by the Engineer shall not serve to relieve the Contractor of the contractual responsibility for any error or deviation from contract requirements.</p>
--	---

Comments:

	By	Date
--	----	------

Distribution: Contractor | File | Field | Owner | Other |

Contractor's Submittal Certification

Shop Drawing Transmittal No.: _____

Contract/Project Name: _____

Company Name: _____

has

1. reviewed and coordinated this Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
2. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
3. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
4. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

This Submittal **does not** contain any variations from the requirements of the Contract Documents.

This Submittal **does** contain variations from the requirements of the Contract Documents. A separate description of said variations and a justification for them is provided in an attachment hereto identified as:

"Shop Drawing Transmittal No. _____ Variation and Justification Documentation"

Insert picture file or electronic signature of Authorized Representative

Authorized Representative

Date

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SECTION 01 33 04
OPERATION AND MAINTENANCE MANUALS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Administration of the submittal process for Operation and Maintenance Manuals.
 - 2. Content requirements for Operation and Maintenance Manuals.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.
 - 3. General submittal requirements are specified in Specification Section 01 33 00 - Submittals.
 - 4. Technical Specification Sections identifying required Operation and Maintenance Manual submittals.

1.2 DEFINITIONS

- A. Equipment Operation and Maintenance Manuals:
 - 1. Contain the technical information required for proper installation, operation and maintenance of process, electrical and mechanical equipment and systems.
- B. Building Materials and Finishes Operation and Maintenance Manuals:
 - 1. Contain the information required for proper installation and maintenance of building materials and finishes.

1.3 SUBMITTALS

- A. List of all the Operation and Maintenance Manuals required by the Contract as identified in the Technical Specification Sections. These may be referred to as "Operation and Maintenance Data" submittals.
- B. Operation and Maintenance Manuals:
 - 1. Draft and final electronic copies.
 - 2. Final paper copies: One.

1.4 SUBMITTAL SCHEDULE

- A. List of Required Operation and Maintenance Manuals:
 - 1. Submit list with Specification Section number and title within [90] days after Notice to Proceed.
- B. Draft Operation and Maintenance Manuals:
 - 1. Submit approvable draft manuals in electronic format (PDF) within 15 days following approval of the respective Shop Drawing.
 - a. Include placeholders or fly sheet pages where information is not final or is missing from the draft manual.
 - 2. All Draft Operation and Maintenance Manuals shall be received by no later than 50 PCT project completion.
- C. Final Operation and Maintenance Manuals:
 - 1. Final approval of Operation and Maintenance Manuals in electronic format (PDF) must be obtained [45] days prior to equipment start-up.
 - 2. Provide paper copies and CD-ROMs of approved final Operation and Maintenance Manuals in electronic format (PDF), a minimum of 15 days prior to equipment start-up.
 - 3. Issue addenda to Final Approved Operation and Maintenance Manual to include:

- a. Equipment data that requires collection after start-up, for example but not limited to HVAC balancing reports, electrical switchgear, automatic transfer switch and circuit breaker settings.
- b. Equipment field testing data.
- c. Equipment start-up reports.

1.5 PREPARATION OF SUBMITTALS

A. General:

- 1. All pages of the Operation and Maintenance Manual submittal shall be legible.
 - a. Submittals which, in the Engineer's sole opinion, are illegible will be rejected without review.
- 2. Identify each equipment item in a manner consistent with names and identification numbers used in the Contract Documents, not the manufacturer's catalog numbers.
- 3. Neatly type any data not furnished in printed form.
- 4. Operation and Maintenance Manuals are provided for Owner's use, to be reproduced and distributed as training and reference materials within Owner's organization.
 - a. This requirement is:
 - 1) Applicable to both paper copy and electronic files.
 - 2) Applicable to materials containing copyright notice as well as those with no copyright notice.
- 5. Notify supplier and/or manufacturer of the intended use of Operations and Maintenance Manuals provided under the Contract.

B. Operation and Maintenance Manual Format and Delivery:

- 1. Draft electronic submittals:
 - a. Provide manual in Adobe Acrobat Portable Document Format (PDF), latest version.
 - b. Create one (1) PDF file for each equipment Operation and Maintenance Manual.
 - c. Do not password protect or lock the PDF document.
 - d. Scanned images of paper documents are not acceptable. Create the Operation and Maintenance Manual PDF file from the original source document.
 - e. Drawings or other graphics must be converted to PDF file format from the original drawing file format and made part of the PDF document.
 - f. Scanning of drawings is to be used only where actual file conversion is not possible and drawings must be scanned at a resolution of 300 DPI or greater.
 - g. Rotate sheets that are normally viewed in landscape mode so that when the PDF file is opened the sheet is in the appropriate position for viewing.
 - h. Create bookmarks in the bookmarks panel for the Operation and Maintenance Manual cover, the Table of Contents and each major section of the Table of Contents.
 - i. Using Adobe Acrobat Standard or Adobe Acrobat Professional, set the PDF document properties, initial view as follows:
 - 1) Select File → Properties → Initial View.
 - 2) Select the Navigation tab: Bookmarks Panel and Page.
 - 3) Select the Page layout: Single Page Continuous.
 - 4) Select the Magnification: Fit Page.
 - 5) Select Open to page: 1.
 - 6) Set the file to open to the cover page of the manual with bookmarks to the left, and the first bookmark linked to the cover page.
 - 7) Window Options: Check the "Resize window to initial page" box.
 - j. Set the PDF file "Fast Web View" option to open the first several pages of the document while the rest of the document continues to load.
 - 1) To do this:
 - a) Select Edit → Preferences → Documents → Save Settings.
 - b) Check the "Save As optimizes for Fast Web View" box.
 - k. PDF file naming convention:

- 1) Use the Specification Section number, the manufacturer's name and the equipment description, separated by underscores.
 - 2) Example: 46 51 21_Sanitaire_Coarse_Bubble_Diffusers.pdf.
 - 3) Do not put spaces in the file name.
2. Final electronic submittals:
 - a. Submit two copies in PDF file format on two USB flash drives or on two CD-ROM discs (one copy per electronic media), each secured in a protective case.
 - b. Labeling:
 - 1) Provide the following printed labeling on all electronic media:
 - a) Project name.
 - b) Specification Section.
 - c) Equipment names and summary of tag(s) covered.
 - d) Manufacturer name.
 - e) Date (month, year).
 - c. Binding:
 - 1) Include labeled electronic media in a protective case.
 - a) Bind protective case in three-ring binder, inserted at the front of the Final paper copy submittal.
 - b) Protective case(s) to have means for securing electronic media to prevent loss (e.g., zip case, flap and strap, or equivalent).
 3. Final paper copy submittals:
 - a. Quantity: Provide two copies.
 - b. Paper: 8.5 x 11 IN or 11 x 17 IN bright white, 20 LB paper with standard three-hole punching.
 - c. 3-Ring Binder:
 - 1) Provide D-ring binder with clear vinyl sleeves (i.e. view binder) on front and spine.
 - 2) Insert binder title sheet with the following information under the front and spine sleeves:
 - a) Project name.
 - b) Specification Section.
 - c) Equipment names and summary of tag(s) covered.
 - d) Manufacturer name.
 - e) Date (month, year).
 - 3) Provide plastic sheet lifters prior to first page and following last page.
 - d. Drawings:
 - 1) Provide all drawings at 11 x 17 IN size, triple folded and three-hole punched for insertion into manual.
 - 2) Where reduction is not practical to ensure readability, fold larger drawings separately and place in three-hole punched vinyl envelopes inserted into the binder.
 - 3) Identify vinyl envelopes with drawing numbers.
 - e. Use plastic coated dividers to tab each section of each manual in accordance with the Table of Contents.
- C. Equipment Operation and Maintenance Manual Content:
1. Provide a cover page as the first page of each manual with the following information:
 - a. Manufacturer(s) Name and Contact Information.
 - b. Vendor's Name and Contact Information.
 - c. Date (month, year).
 - d. Project Owner and Project Name.
 - e. Specification Section.
 - f. Project Equipment Tag Numbers.
 - g. Model Numbers.
 - h. Engineer's Name.
 - i. Contractor's Name.
 2. Provide a Table of Contents for each manual.

3. Provide Equipment Record sheets as follows:
 - a. Printed copies of the Equipment Record (Exhibits B1, B2 and B3), as the first tab following the Table of Contents.
 - 1) For Instrumentation and Control equipment, International Society of Automation (ISA) Data Sheets will be acceptable in lieu of the Equipment Record sheets.
 - b. Exhibits B1-B3 are available as Fillable PDF Form documents from the Engineer.
 - c. Each section of the Equipment Record must be completed in detail; simply referencing the related equipment Operation and Maintenance Manual sections for nameplate, maintenance, spare parts or lubricant information is not acceptable.
 - d. For equipment involving separate components (for example, a motor and gearbox), a fully completed Equipment Record is required for each component.
 - e. Submittals that do not include the Equipment Record(s) will be rejected without further content review.
 4. Provide the following detailed information, as applicable:
 - a. Use equipment tag numbers from the Contract Documents to identify equipment and system components.
 - b. Equipment function, normal and limiting operating characteristics.
 - c. Instructions for assembly, disassembly, installation, alignment, adjustment, and inspection.
 - d. Operating instructions for start-up, normal operation, control, shutdown, and emergency conditions.
 - e. Maintenance instructions, including lubrication instructions if applicable
 - f. Troubleshooting guide.
 - g. Mark each sheet to clearly identify specific products and component parts and data applicable to the installation for the Project; delete or cross out information that does not specifically apply to the Project.
 - h. Parts lists:
 - 1) A parts list and identification number of each component part of the equipment.
 - 2) Exploded view or plan and section views of the equipment with a detailed parts callout matching the parts list.
 - 3) A list of recommended spare parts.
 - 4) List of spare parts provided as specified in the associated Specification Section.
 - 5) A list of any special storage precautions which may be required for all spare parts.
 - i. General arrangement, cross-section, and assembly drawings.
 - j. Electrical diagrams, including elementary diagrams, wiring diagrams, connection diagrams, and interconnection diagrams.
 - k. Factory and field test data and performance curves (if applicable).
 - l. As-constructed fabrication or layout drawings and wiring diagrams.
 - m. Copy of the equipment manufacturer's warranty meeting the requirements of the Contract.
 - n. Copy of any service contracts provided for the specific piece of equipment as part of the Contract.
 5. Additional information as required in the associated equipment or system Specification Section.
 6. Include in Submittal the final, configured control setpoints and similar configurable parameters provided in the equipment.
- D. Building Materials and Finishes Operation and Maintenance Manual Content:
1. Provide a cover page as the first page of each manual with the following information:
 - a. Manufacturer(s) Name and Contact Information.
 - b. Vendor's Name and Contact Information.
 - c. Date (month, year).
 - d. Project Owner and Project Name.
 - e. Specification Section.
 - f. Model Numbers.

- g. Engineer's Name.
 - h. Contractor's Name.
 - 2. Provide a Table of Contents for each manual.
 - 3. Building products, applied materials and finishes:
 - a. Include product data, with catalog number, size, composition and color and texture designations.
 - b. Provide information for ordering custom manufactured products.
 - 4. Necessary precautions:
 - a. Include product MSDS for each approved product.
 - b. Include any precautionary application and storage guidelines.
 - 5. Instructions for care and maintenance:
 - a. Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods and recommended schedule for cleaning and maintenance.
 - 6. Moisture protection and weather exposed products:
 - a. Include product data listing, applicable reference standards, chemical composition, and details of installation.
 - b. Provide recommendations for inspections, maintenance and repair.
 - 7. Additional requirements as specified in individual product specifications.
- E. National Fire Protection Association 70 (National Electrical Code) Documentation:
- 1. Assemble documented calculations of Arc-Fault Current, Equipment Available Fault Current and Short Circuit Current Rating (SCCR) provided as part of equipment submittals into one O&M manual volume.

1.6 TRANSMITTAL OF SUBMITTALS

- A. Operation and Maintenance Manuals.
- 1. Transmit all submittals to:
 - a. The address specified in Specification Section 01 33 00 - SUBMITTALS.
 - 2. Transmittal form: Use Operation and Maintenance Manual Transmittal, Exhibit A.
 - 3. Transmittal numbering:
 - a. Number each submittal with the Specification Section number followed by a series number beginning with "-01" and increasing sequentially with each additional transmittal, followed by "-OM" (for example: 43 23 14-01-OM).
 - 4. Submit draft and final Operation and Maintenance Manual in electronic format (PDF) to Engineer, until manual is approved.

1.7 ENGINEER'S REVIEW ACTION

- A. Draft Electronic (PDF) Submittals:
- 1. Engineer will review and indicate one of the following review actions:
 - a. A - ACCEPTABLE
 - b. B - FURNISH AS NOTED
 - c. C - REVISE AND RESUBMIT
 - d. D - REJECTED
 - 2. Submittals marked as Acceptable or Furnish As Noted will be retained; however, the transmittal form will be returned with a request for the final paper and electronic documents to be submitted.
 - 3. Copies of submittals marked as Revise and Resubmit or Rejected will be returned with the transmittal form marked to indicate deficient areas.
 - 4. Resubmit until approved.
- B. Final Paper Copy Submittals:
- 1. Engineer will review and indicate one of the following review actions:
 - a. A - ACCEPTABLE
 - b. D - REJECTED

2. Submittals marked as Acceptable will be retained with the transmittal form returned as noted.
3. Submittals marked as Rejected will be returned with the transmittal form marked to indicate deficient areas.
4. Resubmit until approved.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION - (NOT USED)

END OF SECTION



**EXHIBIT A Operation and Maintenance Manual
Transmittal _____ - _____ - OM
(Spec Section) (Series)**

Project Name:		Date Received:
Project Owner:		Checked By:
Contractor:	Owner:	Log Page:
Address:	Address:	HDR No.:
Attn:	Attn:	1st. Sub. ReSub.

Date Transmitted:	Previous Transmittal Date:
-------------------	----------------------------

No. Copies	Description of Item	Manufacturer	Dwg. or Data No.	Action Taken*

Remarks:

To:	From: <i>HDR Engineering, Inc.</i>
Date:	

- * The Action designated above is in accordance with the following legend:
- | | |
|---|--|
| <p>A - Acceptable, provide one (1) additional paper copy and two (2) electronic copies on CD-ROM for final review.</p> <p>B - Furnish as Noted</p> <p>C - Revise and Resubmit
This Operation and Maintenance Manual Submittal is deficient in the following area:</p> <ol style="list-style-type: none"> 1. Equipment Records. 2. Functional description. 3. Assembly, disassembly, installation, alignment, adjustment & checkout instructions. 4. Operating instructions. | <ol style="list-style-type: none"> 5. Lubrication & maintenance instructions. 6. Troubleshooting guide. 7. Parts list and ordering instructions. 8. Organization (binder, binder titles, index & tabbing). 9. Wiring diagrams & schematics specific to installation. 10. Outline, cross section & assembly diagrams. 11. Test data & performance curves. 12. Tag or equipment identification numbers. 13. Inclusion of all components & subcomponents. 14. Other - see comments. <p>D - Rejected</p> |
|---|--|

Comments:

By	Date			
Distribution: Contractor	File	Field	Owner	Other

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Equipment Data and Spare Parts Summary

Project Name	Specification Section:
Equipment Name	Year Installed:

Project Equipment Tag No(s).

Equipment Manufacturer

Address

Fax

Web Site

E-mail

Project/Order No.

Phone

Local Vendor/Service Center

Address

Fax

Web Site

E-mail

Phone

MECHANICAL NAMEPLATE DATA				
Equip.				Serial No.
Make				Model No.
ID No.	Frame No.	HP	RPM	Cap.
Size	TDH	Imp. Sz.	CFM	PSI
Other:				

ELECTRICAL NAMEPLATE DATA								
Equip.					Serial No.			
Make					Model No.			
ID No.	Frame No.	HP	V.	Amp.	HZ	PH	RPM	SF
Duty	Code	Ins. Cl.	Type	NEMA	C Amb.	Temp. Rise	Rating	
Other:								

SPARE PARTS PROVIDED PER CONTRACT		
Part No.	Part Name	Quantity

RECOMMENDED SPARE PARTS		
Part No.	Part Name	Quantity

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Recommended Maintenance Summary

Equipment Description	Project Equip. Tag No(s).
-----------------------	---------------------------

RECOMMENDED BREAK-IN MAINTENANCE (FIRST OIL CHANGES, ETC.)	INITIAL COMPLETION * FOLLOWING START-UP							
	D	W	M	Q	S	A	RT	Hours

RECOMMENDED PREVENTIVE MAINTENANCE	PM TASK INTERVAL *							
	D	W	M	Q	S	A	RT	Hours

* D = Daily W = Weekly M = Monthly Q = Quarterly S = Semiannual A = Annual Hours = Run Time Interval
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Lubrication Summary

Equipment Description	Project Equip. Tag No(s).
-----------------------	---------------------------

Lubricant Point						
Lubricant Type	Manufacturer		Product	AGMA #	SAE #	ISO
	1					
	2					
	3					
	4					
	5					
Lubricant Point						
Lubricant Type	Manufacturer		Product	AGMA #	SAE #	ISO
	1					
	2					
	3					
	4					
	5					
Lubricant Point						
Lubricant Type	Manufacturer		Product	AGMA #	SAE #	ISO
	1					
	2					
	3					
	4					
	5					
Lubricant Point						
Lubricant Type	Manufacturer		Product	AGMA #	SAE #	ISO
	1					
	2					
	3					
	4					
	5					
Lubricant Point						
Lubricant Type	Manufacturer		Product	AGMA #	SAE #	ISO
	1					
	2					
	3					
	4					
	5					
Lubricant Point						
Lubricant Type	Manufacturer		Product	AGMA #	SAE #	ISO
	1					
	2					
	3					
	4					
	5					

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SECTION 01 35 05
ENVIRONMENTAL PROTECTION AND SPECIAL CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Minimizing the pollution of air, water, or land; control of noise, the disposal of solid waste materials, and protection of deposits of historical or archaeological interest.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.

1.2 SUBMITTALS

- A. Shop Drawings:
 - 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 - 2. Prior to the start of any construction activities submit:
 - a. A detailed proposal of all methods of control and preventive measures to be utilized for environmental protection.
 - b. A drawing of the work area, haul routes, storage areas, access routes and current land conditions including trees and vegetation.
 - c. A copy of the NPDES permit for storm water discharges from construction activities.
 - d. A copy of the approved pollution prevention plan.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Employ and utilize environmental protection methods, obtain all necessary permits, and fully observe all local, state, and federal regulations.
- B. Land Protection:
 - 1. Except for any work or storage area and access routes specifically assigned for the use of the Contractor, the land areas outside the limits of construction shall be preserved in their present condition.
 - a. Confine construction activities to areas defined for work within the Contract Documents.
 - 2. Manage and control all borrow areas, work or storage areas, access routes and embankments to prevent sediment from entering nearby water or land adjacent to the work site.
 - 3. Restore all disturbed areas including borrow and haul areas and establish permanent type of locally adaptable vegetative cover.
 - 4. Unless earthwork is immediately paved or surfaced, protect all side slopes and backslopes immediately upon completion of final grading.
 - 5. Plan and execute earthwork in a manner to minimize duration of exposure of unprotected soils.
 - 6. Except for areas designated by the Contract Documents to be cleared and grubbed, do not deface, injure or destroy trees and vegetation, nor remove, cut, or disturb them without approval of the Engineer.

- a. Any damage caused by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition at no additional cost to the Owner.
- C. Surface Water Protection:
- 1. Utilize, as necessary, erosion control methods to protect side and backslopes, minimize and the discharge of sediment to the surface water leaving the construction site as soon as rough grading is complete.
 - a. These controls shall be maintained until the site is ready for final grading and landscaping or until they are no longer warranted and concurrence is received from the Engineer.
 - b. Physically retard the rate and volume of run-on and runoff by:
 - 1) Implementing structural practices such as diversion swales, terraces, straw bales, silt fences, berms, storm drain inlet protection, rockered outlet protection, sediment traps and temporary basins.
 - 2) Implementing vegetative practices such as temporary seeding, permanent seeding, mulching, sod stabilization, vegetative buffers, hydroseeding, anchored erosion control blankets, sodding, vegetated swales or a combination of these methods.
 - 3) Providing Construction sites with graveled or rockered access entrance and exit drives and parking areas to reduce the tracking of sediment onto public or private roads.
 - 2. Discharges from the construction site shall not contain pollutants at concentrations that produce objectionable films, colors, turbidity, deposits or noxious odors in the receiving stream or waterway.
- D. Solid Waste Disposal:
- 1. Collect solid waste on a daily basis.
 - 2. Provide disposal of degradable solid waste to an approved solid waste disposal site.
 - 3. Provide disposal of nondegradable solid waste to an approved solid waste disposal site or in an alternate manner approved by Engineer and regulatory agencies.
 - 4. No building materials wastes or unused building materials shall be buried, dumped, or disposed of on the site.
- E. Fuel and Chemical Handling:
- 1. Store and dispose of chemical wastes in a manner approved by regulatory agencies.
 - 2. Take special measures to prevent chemicals, fuels, oils, greases, herbicides, and insecticides from entering drainage ways.
 - 3. Do not allow water used in onsite material processing, concrete curing, cleanup, and other waste waters to enter a drainage way(s) or stream.
 - 4. Provide containment around fueling and chemical storage areas to ensure that spills in these areas do not reach waters of the state.
- F. Control of Dust:
- 1. The control of dust shall mean that no construction activity shall take place without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne so that it remains visible beyond the limits of construction.
 - a. Reasonable measures may include paving, frequent road cleaning, planting vegetative groundcover, application of water or application of chemical dust suppressants.
 - b. The use of chemical agents such as calcium chloride must be approved by the State of New Mexico DOT.
 - 2. Utilize methods and practices of construction to eliminate dust in full observance of agency regulations.
 - 3. The Engineer will determine the effectiveness of the dust control program and may request the Contractor to provide additional measures, at no additional cost to Owner.
- G. Burning:
- 1. Do not burn material on the site.

2. If the Contractor elects to dispose of waste materials by burning, make arrangements for an off-site burning area and conform to all agency regulations.
- H. Control of Noise:
1. Control noise by fitting equipment with appropriate mufflers.
- I. Completion of Work:
1. Upon completion of work, leave area in a clean, natural looking condition.
 2. Ensure all signs of temporary construction and activities incidental to construction of required permanent work are removed.
 3. Grade, fill and seed all disturbed areas.

END OF SECTION

This page intentionally left blank.

SECTION 01 65 50
PRODUCT DELIVERY, STORAGE, AND HANDLING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Scheduling of product delivery.
 - 2. Packaging of products for delivery.
 - 3. Protection of products against damage from:
 - a. Handling.
 - b. Exposure to elements or harsh environments.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.
- C. Payment:
 - 1. No payment will be made to Contractor for equipment or materials not properly stored and insured or without approved Shop Drawings.
 - a. Previous payments for items will be deducted from subsequent progress estimate(s) if proper storage procedures are not observed.

1.2 DELIVERY

- A. Scheduling: Schedule delivery of products or equipment as required to allow timely installation and to avoid prolonged storage.
- B. Packaging: Deliver products or equipment in manufacturer's original unbroken cartons or other containers designed and constructed to protect the contents from physical or environmental damage.
- C. Identification: Clearly and fully mark and identify as to manufacturer, item, and installation location.
- D. Protection and Handling: Provide manufacturer's instructions for storage and handling.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION

3.1 PROTECTION, STORAGE AND HANDLING

- A. Manufacturer's Instruction:
 - 1. Protect all products or equipment in accordance with manufacturer's written directions.
 - a. Store products or equipment in location to avoid physical damage to items while in storage.
 - b. Handle products or equipment in accordance with manufacturer's recommendations and instructions.
 - 2. Protect equipment from exposure to elements and keep thoroughly dry.

3.2 FIELD QUALITY CONTROL

- A. Inspect Deliveries:
 - 1. Inspect all products or equipment delivered to the site prior to unloading.
 - a. Reject all products or equipment that are damaged, used, or in any other way unsatisfactory for use on Project.

- B. Monitor Storage Area: Monitor storage area to ensure suitable temperature and moisture conditions are maintained as required by manufacturer or as appropriate for particular items.

END OF SECTION

SECTION 01 71 14
MOBILIZATION AND DEMOBILIZATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Project mobilization and demobilization.
- B. Related Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.

1.2 GENERAL

- A. Mobilization work shall consist of preparatory work and operations necessary to be ready to perform the Work required under the Contract, and for other work and operations which must be performed, or costs incurred prior to the beginning of the Work.
- B. Demobilization work shall consist of all activities and costs for transportation of personnel, equipment, and supplies necessary to demobilize the contractor from the site.
- C. Mobilization and Demobilization shall not include mobilization or demobilization for specific items of work for which payment is provided elsewhere in the Contract.
- D. When the Contract or proposed Schedule of Values includes a separate item for mobilization or demobilization, payment will include full compensation for the furnishings of all labor, materials, tools, equipment, administrative costs, and incidentals to mobilization or demobilization.
- E. If additional mobilization and demobilization activities and costs are required during the performance of the Contract as a result of the changed, deleted, or added items of work for which the Contractor is entitled to an adjustment in Contract price, compensation for such costs shall be included in the price adjustment for the item of Work changed or added.
- F. In Unit Price Contracts, the cost of Bonds and insurance are recoverable as part of the Contractor's Mobilization costs if the Contract Documents or an approved Schedule of Values provide for a separate payment for Mobilization. Otherwise, no separate payment is made for such costs.

1.3 ITEMS INCLUDED

- A. Mobilization costs shall be limited to the following items:
 - 1. Obtaining bonds and insurance.
 - 2. Obtaining required permits and licenses.
 - 3. Developing Project Work Schedule.
 - 4. Attending Preconstruction Conference.
 - 5. Processing Permits.
 - 6. Furnishing and installing signs.
 - 7. Any work that is necessary to provide access to the site, including, but not limited to, grading and clearing.
 - 8. Installing temporary construction power wiring.
 - 9. Necessary assembly and testing required prior to start of the Work.
 - 10. Establishment of all and other facilities necessary for the Work, including utilities and specified field offices.
 - 11. Providing for and establishing Contractor's work and storage yard.
 - 12. Movement of personnel, major equipment, supplies, and incidentals to the site.

13. Cost incurred prior to the start of the Work which must be performed, such as a down payment on a long lead item.
- B. Demobilization costs shall be limited to the following items:
1. Disassembly, removal and site cleanup/repair of offices, buildings, and other facilities assembled on the site for the Contract.
 2. Costs for final site cleanup, packaging of miscellaneous items for return to the yard and other project closeout related expenses.
 3. Cost for final payment documents, and provision of Acknowledgement Certification Request, Bond, and Certificate of Completion.
- C. The Owner will pay all costs for the Mobilization and Demobilization of all of the Contractor's personnel, equipment, supplies, and incidentals at the contract lump sum price as follows:
1. The Owner will pay no greater than 5 PCT of the original Contract Amount as a separate pay item for mobilization.
 2. The Owner will pay no greater than 1/2 PCT of the original Contract Amount as a separate pay item for demobilization.
 3. Owner will pay 50 PCT of the Mobilization lump sum price when 5 PCT of the original Contract Amount is earned.
 4. Owner will pay the remaining 50 PCT of the Mobilization lump sum price when 10 PCT of the original Contract Amount is earned.
 5. Owner will pay 100 PCT of the Demobilization lump sum price when all closeout activities and documents are completed.
 6. Furnish cost data and documentation to justify this portion of the bid if Owner believes that the percentages in this paragraph do not bear a reasonable relation to the cost of the work in this contract.
 7. Failure to justify such price to the satisfaction of the Owner will result in payment as determined by the Owner, of:
 - a. Actual mobilization costs at completion of mobilization.
 - b. Actual demobilization costs at completion of demobilization; and.
 - c. The remainder of this item in the final payment under this contract.
 8. The Owner's determination of the actual costs in this paragraph is not subject to appeal.
 9. This schedule of mobilization progress payments will not limit or preclude progress payments otherwise provided by the Contract.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION - (NOT USED)

END OF SECTION

SECTION 01 74 13

CLEANING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Intermediate and final cleaning of Work not including special cleaning of closed systems specified elsewhere.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.

1.2 STORAGE AND HANDLING

- A. Store cleaning products and cleaning wastes in containers specifically designed for those materials.

1.3 SCHEDULING

- A. Schedule cleaning operations so that dust and other contaminants disturbed by cleaning process will not fall on newly painted surfaces.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents:
 - 1. Compatible with surface being cleaned.
 - 2. New and uncontaminated.
 - 3. For Manufactured Surfaces: Material recommended by manufacturer.

PART 3 - EXECUTION

3.1 CLEANING - GENERAL

- A. Prevent accumulation of wastes that create hazardous conditions.
- B. Conduct cleaning and disposal operations to comply with laws and safety orders of governing authorities.
- C. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains or sewers.
- D. Dispose of degradable debris at an approved solid waste disposal site.
- E. Dispose of nondegradable debris at an approved solid waste disposal site or in an alternate manner approved by Engineer and regulatory agencies.
- F. Handle materials in a controlled manner with as few handlings as possible.
- G. Do not drop or throw materials from heights greater than 4 FT or less than 4 FT if conditions warrant greater care.
- H. On completion of work, leave area in a clean, natural looking condition.
 - 1. Remove all signs of temporary construction and activities incidental to construction of required permanent Work.
- I. Do not burn on-site.

3.2 EXTERIOR (SITE) CLEANING

A. Cleaning During Construction:

1. Construction debris:
 - a. Confine in strategically located container(s):
 - 1) Cover to prevent blowing by wind.
 - 2) Haul from site minimum once a week.
 - b. Remove from work area to container daily.
2. Vegetation: Keep weeds and other vegetation trimmed to 3 IN maximum height.
3. Soils, sand, and gravel deposited on paved areas and walks:
 - a. Remove as required to prevent muddy or dusty conditions.
 - b. Do not flush into storm sewer system.

B. Final Cleaning:

1. Remove trash and debris containers from site.
 - a. Re-seed areas disturbed by location of trash and debris containers.
2. Clean paved roadways.

3.3 FIELD QUALITY CONTROL

- #### **A. Immediately prior to Demonstration Period, conduct an inspection with Engineer to verify condition of all work areas.**

END OF SECTION

SECTION 31 23 33

TRENCHING, BACKFILLING, AND COMPACTING FOR UTILITIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Excavation, trenching, backfilling and compacting for all underground utilities.
 - 2. Water piping (potable, plant, process and nonpotable).
 - 3. Relocation of existing piping.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. ASTM International (ASTM):
 - a. C33/C33M, Standard Specification for Concrete Aggregates.
 - b. D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 FT-LBF/FT³ (600 kN-M/M³)).
 - c. D2321, Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
 - d. D4253, Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.
 - e. D4254, Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.
- B. Qualifications: Hire an independent soils laboratory to conduct in-place moisture-density tests for backfilling to assure that all work complies with this Specification Section.
 - 1. Registered professional engineer licensed in New Mexico for design of trench shoring systems or other trench safety plans.

1.3 DEFINITIONS

- A. Excavation: All excavation will be defined as unclassified.

1.4 SUBMITTALS

- A. Shop Drawings:
 - 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 - 2. Product technical data including:
 - a. Acknowledgement that products submitted meet requirements of standards referenced.
 - b. Manufacturer's installation instructions.
 - 3. Submit respective pipe or conduit manufacturer's data regarding bedding methods of installation and general recommendations.
 - 4. Submit sieve analysis reports on all granular materials.
- B. Informational Submittals:
 - 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 - 2. Trench shield (trench box) certification if employed:
 - a. Specific to Project conditions.
 - b. Re-certified if members become distressed.

- c. Certification by registered professional structural engineer, registered in the state where the Project is located.
- d. Engineer is not responsible to, and will not, review and approve.
- 3. Trench Safety Plan and/or trench shoring drawing:
 - a. Trench Safety Plan and/or trench shoring drawings submittal is required only as evidence that plans and drawings have been prepared if required by Authorities Having Jurisdiction.
 - 1) Engineer is not responsible to, and will not, review and approve.
- 4. Submit test reports and fully document each with specific location or stationing information, date, and other pertinent information.

1.5 SITE CONDITIONS

- A. Avoid overloading or surcharge a sufficient distance back from edge of excavation to prevent slides or caving.
 - 1. Maintain and trim excavated materials in such manner to be as little inconvenience as possible to public and adjoining property owners.
- B. Provide full access to public and private premises and fire hydrants, at street crossings, sidewalks and other points as designated by Owner to prevent serious interruption of travel.
- C. Protect and maintain bench marks, monuments or other established points and reference points and if disturbed or destroyed, replace items to full satisfaction of Owner and controlling agency.
- D. Verify location of existing underground utilities
 - 1. Obtain Global Positioning System (GPS) x/y/z coordinates where exposed and where crossed by Work of this Project.
 - a. Record on Record Documents

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Bedding and Backfill Material:
 - 1. As approved by Geotechnical Engineer.
 - a. Free of rock cobbles, roots, sod or other organic matter, and frozen material.
 - b. Moisture content at time of placement: ± 3 PCT of optimum moisture content as specified in accordance with ASTM D698.
 - 2. Clean on-site materials meeting requirements for Class I, II or III soil as specified in NMSSPWC Section 701.13.
 - 3. Imported soils conforming to low volume change materials as defined below:

Sieve Size	6 IN	3 IN	No. 4	No. 20
Percent Passing by Weight	100	70 to 100	50 to 100	20 Max

- B. Subgrade Stabilization Materials: As approved by the Geotechnical Engineer.
 - a.
 - 2. Flowable fill:
 - a. Description: Flowable fill shall be a mixture of cement, fly ash, fine sand, water, and air having a consistency which will flow under a very low head.
 - b. Material characteristics:
 - 1) The approximate quantities of each component per cubic yard of mixed material shall be as follows:
 - a) Cement (Type I or II): 50 LBS.
 - b) Fly ash: 200 LBS.
 - c) Fine sand: 2,700 LBS.

- d) Water: 420 LBS.
- e) Air content: 10 PCT.
- 2) Actual quantities shall be adjusted to provide a yield of 1 cubic yard with the materials used.
- 3) Approximate compressive strength should be 85 to 175 PSI.
- 4) Fine sand shall be an evenly graded material having not less than 95 PCT passing the No. 4 sieve and not more than 5 PCT passing the No. 200 sieve.
- 5) Mixing and handling of the material shall be in accordance with Specification Section 03 31 31.

PART 3 - EXECUTION

3.1 GENERAL

- A. Remove and dispose of unsuitable materials as directed by Geotechnical Engineer to site provided by Contractor.

3.2 EXCAVATION

- A. Unclassified Excavation: Remove rock excavation, clay, silt, gravel, hard pan, loose shale, and loose stone as directed by Geotechnical Engineer.
- B. Excavation for Appurtenances:
 - 1. 12 IN (minimum) clear distance between outer surface and embankment.
- C. Groundwater Dewatering:
 - 1. Where groundwater is, or is expected to be, encountered during excavation, install a dewatering system to prevent softening and disturbance of subgrade to allow subgrade stabilization, pipe, bedding and backfill material to be placed in the dry, and to maintain a stable trench wall or side slope.
 - 2. Groundwater shall be drawn down and maintained at least 3 FT below the bottom of any trench or manhole excavation prior to excavation.
 - 3. Review soils investigation before beginning excavation and determine where groundwater is likely to be encountered during excavation.
 - a. Employ dewatering specialist for selecting and operating dewatering system.
 - 4. Keep dewatering system in operation until dead load of pipe, structure and backfill exceeds possible buoyant uplift force on pipe or structure.
 - 5. Dispose of groundwater to an area which will not interfere with construction operations or damage existing construction.
 - 6. Install groundwater monitoring wells as necessary.
 - 7. Shut off dewatering system at such a rate to prevent a quick upsurge of water that might weaken the subgrade.
 - 8. Cost of groundwater dewatering shall be included in the lineal foot unit price of the pipe installation.
- D. Trench Excavation:
 - 1. Excavate trenches by open cut method to depth shown on Drawings and necessary to accommodate work.
 - a. Support existing utility lines where proposed work crosses at a lower elevation.
 - 1) Stabilize excavation to prevent undermining of existing utility.
 - 2. Open trench outside buildings, units, and structures:
 - a. No more than the distance between two manholes, structures, units, or 300 LF, whichever is less.
 - b. Field adjust limitations as weather conditions dictate.
 - 3. Trenching within buildings, units, or structures:
 - a. No more than 100 LF at any one time.

4. Any trench or portion of trench, which is opened and remains idle for 7 calendar days, or longer, as determined by the Owner, may be directed to be immediately refilled, without completion of work, at no additional cost to Owner.
 - a. Said trench may not be reopened until Owner is satisfied that work associated with trench will be prosecuted with dispatch.
5. Observe following trenching criteria:
 - a. Trench size:
 - 1) Excavate width to accommodate free working space.
 - 2) Maximum trench width at top of pipe or conduit may not exceed outside diameter of utility service by more than the following dimensions:

OVERALL DIAMETER OF UTILITY SERVICE	EXCESS DIMENSION
33 IN and less	18 IN
more than 33 IN	24 IN

- 3) Cut trench walls vertically from bottom of trench to 1 FT above top of pipe, conduit, or utility service.
- 4) Keep trenches free of surface water runoff.
 - a) Include cost in Bid.
 - b) No separate payment for surface water runoff pumping will be made.

E. Trenching for Electrical Installations:

1. Observe the preceding Trench Excavation paragraph in PART 3 of this Specification Section.
2. Modify for electrical installations as follows:
 - a. Open no more than 600 LF of trench in exterior locations for trenches more than 12 IN but not more than 30 IN wide.
 - b. Any length of trench may be opened in exterior locations for trenches which are 12 IN wide or less.
 - c. Do not over excavate trench.
 - d. Cut trenches for electrical runs with minimum 30 IN cover, unless otherwise specified or shown on Drawings.
 - e. See Division 26 for additional requirements.

F. Flowable Fill:

1. Flowable fill shall be:
 - a. Discharged from a mixer by any means acceptable to the Engineer into the area to be filled.
 - b. Placed in 4 FT maximum lifts to the elevations indicated.
 - 1) Allow 12 HR set-up time before placing next lift or as approved by the Engineer.
 - 2) Place flowable fill lifts in such a manner as to prevent flotation of the pipe.
2. Flowable fill shall not be placed on frozen ground.
3. Subgrade on which flowable fill is placed shall be free of disturbed or softened material and water.
4. Flowable fill batching, mixing, and placing may be started if weather conditions are favorable, and the air temperature is 34 DEGF and rising.
5. At the time of placement, flowable fill must have a temperature of at least 40 DEGF.
6. Mixing and placing shall stop when the air temperature is 38 DEGF or less and falling.
7. Each filling stage shall be as continuous an operation as is practicable.
8. Prevent traffic contact with flowable fill for at least 24 HRS after placement or until flowable fill is hard enough to prevent rutting by construction equipment.
9. Flowable fill shall not be placed until water has been controlled or groundwater level has been lowered in conformance with the requirements of the preceding Groundwater Dewatering paragraph in PART 3 of this Specification Section.

3.3 PREPARATION OF FOUNDATION FOR PIPE LAYING

- A. Over-Excavation:
 - 1. Backfill and compact to 90 PCT of maximum dry density per ASTM D698.
 - 2. Backfill with granular bedding material as option.
- B. Rock Excavation:
 - 1. Excavate minimum of 6 IN below bottom exterior surface of the pipe or conduit.
 - 2. Backfill to grade with suitable earth or granular material.
 - 3. Form bell holes in trench bottom.
- C. Subgrade Stabilization:
 - 1. Stabilize the subgrade when directed by the Owner.
 - 2. Observe the following requirements when unstable trench bottom materials are encountered.
 - a. Notify Owner when unstable materials are encountered.
 - 1) Define by drawing station locations and limits.
 - b. Remove unstable trench bottom caused by Contractor failure to dewater, rainfall, or Contractor operations.
 - 1) Replace with subgrade stabilization with no additional compensation.

3.4 BACKFILLING METHODS

- A. Do not backfill until tests to be performed on system show system is in full compliance with specified requirements.
- B. Carefully Compacted Backfill:
 - 1. Furnish where indicated on Drawings, specified for trench embedment conditions and for compacted backfill conditions up to 12 IN above top of pipe or conduit.
 - 2. Comply with the following:
 - a. Place backfill in lifts not exceeding 8 IN (loose thickness).
 - b. Hand place, shovel slice, and pneumatically tamp all carefully compacted backfill.
 - c. Observe specific manufacturer's recommendations regarding backfilling and compaction.
 - d. Compact each lift to specified requirements.
- C. Common Trench Backfill:
 - 1. Perform in accordance with the following:
 - a. Place backfill in lift thicknesses capable of being compacted to densities specified.
 - b. Observe specific manufacturer's recommendations regarding backfilling and compaction.
 - c. Avoid displacing joints and appurtenances or causing any horizontal or vertical misalignment, separation, or distortion.
- D. Water flushing for consolidation is not permitted.
- E. Backfilling for Electrical Installations:
 - 1. Observe the preceding Carefully Compacted Backfill paragraph or Common Trench Backfill paragraph in PART 3 of this Specification Section or when approved by the Engineer.
 - 2. Modify for electrical installation as follows:
 - a. Observe notes and details on electrical drawings for fill in immediate vicinity of direct burial cables.

3.5 COMPACTION

- A. General:
 - 1. Place and assure bedding, backfill, and fill materials achieve an equal or higher degree of compaction than undisturbed materials adjacent to the work.
 - 2. In no case shall degree of compaction below minimum compactions specified be accepted.
- B. Compaction Requirements:

1. Unless noted otherwise on Drawings or more stringently by other Specification Sections, comply with following minimum trench compaction criteria.
 - a. Bedding material:

LOCATION	SOIL TYPE	COMPACTION DENSITY
All locations	Cohesionless soils	75 PCT relative density by ASTM D4253 and ASTM D4254

- b. Carefully compacted backfill:

LOCATION	SOIL TYPE	COMPACTION DENSITY
All applicable areas	Cohesive soils	95 PCT of maximum dry density by ASTM D698
	Cohesionless soils	75 PCT relative density by ASTM D4253 and ASTM D4254

- c. Toe drain bedding and backfill:

LOCATION	SOIL TYPE	COMPACTION DENSITY
All locations	Cohesionless soils	60 PCT relative density by ASTM D4253 and ASTM D4254

- d. Common trench backfill:

LOCATION	SOIL TYPE	COMPACTION DENSITY
Under pavements, roadways, surfaces within highway right-of-ways	Cohesive soils	95 PCT of maximum dry density by ASTM D698
	Cohesionless soils	60 PCT of relative density by ASTM D4253 and ASTM D4254
Under turf, sodded, plant seeded, nontraffic areas	Cohesive soils	85 PCT of maximum dry density by ATM D698
	Cohesionless soils	40 PCT of relative density by ASTM D4253 and ASTM D4254

3.6 FIELD QUALITY CONTROL

A. Testing:

1. Perform in-place moisture-density tests as directed by the Owner.
2. Perform tests through recognized testing laboratory approved by Owner.
3. Costs of "Passing" tests paid by Owner.
4. Perform additional tests as directed until compaction meets or exceeds requirements.
5. Cost associated with "Failing" tests shall be paid by Contractor.
6. Reference to Engineer in this Specification Section will imply Geotechnical Engineer when employed by Owner and directed by Engineer to undertake necessary inspections as approvals as necessary.
7. Assure Owner has immediate access for testing of all soils related work.
8. Ensure excavations are safe for testing personnel.

- B. Prior to backfilling, obtain Global Positioning System (GPS) x/y/z coordinates at each change of direction and change of elevation for pipelines, conduits and ductbanks constructed for this Project.

1. Record on Record Documents.

END OF SECTION

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SECTION 33 11 13
WATER MAIN CONSTRUCTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Coordination and interface with existing facilities and utilities.
 - 2. Connections to existing water mains.
 - 3. Testing, flushing and disinfection.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.
 - 3. Section 31 23 33 - Trenching, Backfilling, and Compacting for Utilities.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. American Water Work Association (AWWA):
 - a. B300, Standard for Hypochlorites.
 - b. B301, Standard for Liquid Chlorine.
 - c. C651, Standard for Disinfecting Water Mains.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 - 2. Product technical data including:
 - a. Acknowledgement that products submitted meet requirements of standards referenced.
 - b. Manufacturer's installation instructions.
 - 3. Fabrication and/or layout drawings.
 - 4. Certifications.
 - 5. Test reports.
- B. Submit results of the leakage tests, identifying the specific length of pipe tested, the test pressure, the duration of test and the amount of leakage.
- C. Submit satisfactory bacteriological test reports on disinfection requirements.
- D. Contract Closeout Information:
 - 1. Operation and Maintenance Data:
 - a. See Specification Section 01 33 04 for requirements for the mechanics, administration, and the content of Operation and Maintenance Manual submittals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Pipe: Refer to NMSSPWC Section 129.
- B. In-Line Valves:
 - 1. Refer to NMSSPWC Section 801.
 - 2. Provide adjustable valve boxes.
 - a. Include price of valve boxes in price of valve installed complete.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install water main to the line and grade on the Drawings.
- C. Field verify depth of utilities that will be crossed.
 - 1. Adjust water main elevation as required during construction.
 - 2. No separate payment will be made for field verification or adjustment of main depths as required.
- D. Contractor will restore all existing structures or services damaged by Contractor's operations at no cost to Owner.

3.2 INTERRUPTION OF SERVICE

- A. Interruption of service to water users shall not exceed 4 HRS.
 - 1. Notify property owners of interruption a minimum of 24 HRS, excluding weekends, in advance.

3.3 UNDERGROUND SERVICES

- A. Notify utility representative prior to construction to obtain available information on location of existing utilities.
 - 1. Contractor shall be responsible for locating all utilities.
- B. Existing water services are to be connected to the new water mains.
 - 1. Damage to existing water service to be repaired, using copper pipe and union the same size as existing service.

3.4 GRAVEL SURFACED DRIVES AND ROADWAYS

- A. Restore all damaged gravel surfaced drives and roadways to a condition equal to or better than original.

3.5 PROTECTION OF EXISTING UTILITIES

- A. Contractor to verify the location of all underground utilities.
 - 1. Omission from, or the inclusion of utility locations on the plans is not to be considered as the nonexistence of or a definite location of existing underground utilities.
- B. A representative of the underground utilities shall be notified 24 HRS in advance of crossings.

3.6 CONNECTIONS TO EXISTING WATER MAINS

- A. Make connections to existing water mains as shown on Drawings, by attaching to existing or changed fitting.
 - 1. Cost for making connections shall include cost of all fittings including flexible couplings, and shall be included in the bid unit price.
- B. Where the connection is made to an existing water main which can be adequately isolated from the distribution system, it shall be termed a "dry connection."
- C. Contractor is responsible for controlling and disposing of water in the trench at no additional cost to the Owner.

3.7 SEWER CROSSINGS

- A. Water mains crossing house sewers, storm sewers or sanitary sewers shall be laid to provide a vertical separation of at least 18 IN between the bottom of the water main and the top of the sewer, whenever possible.
 - 1. A water main may be laid closer than 10 FT if the crown of the sewer is at least 18 IN below the water main invert.

2. In the event 18 IN of vertical separation cannot be provided at a sewer crossing, the sewer shall be removed for a distance of 10 FT on each side of the water main and replaced with one 20 FT length of ductile iron pipe of the same size.
- B. Concrete collars shall be provided at each end of the ductile iron pipe to connect to the existing sewer pipe as shown on the Drawings.
- C. Payment for crossings shall be included in the bid unit price of the water main.

3.8 TREES

- A. Do not remove trees without written instructions from the Engineer unless tree removal is shown on drawings.
1. No separate payment will be made for tree removal and the cost shall be included in the bid unit price for transmission main.

3.9 FENCES, SIGNS, MAILBOXES, ETC.

- A. Restore all damaged fences, signs, mailboxes, etc., to their original conditions.
1. No separate payment will be made for these items.

3.10 FIELD QUALITY CONTROL

- A. Hydrostatic Testing:
1. All valves, hydrants, pipe and fittings shall be hydrostatically tested.
 2. Furnish all necessary apparatus to run hydrostatic test, including necessary taps into the pipe.
 3. Prior to pressure testing, expel air from the pipe.
 4. Install corporation cocks at all high points in water main to allow air to be expelled.
 5. After pipe has been laid and backfilled, slowly fill each valved section of pipe with water and apply a test pressure of 150 PSI.
 6. After air has been expelled, close corporation cocks and apply test pressure.
 7. The duration of each hydrostatic test to be a minimum of 2 HRS.
 8. Measure leakage from water main while test pressure is applied.
 9. Leakage is defined as the quantity of water that must be supplied into the pipe to maintain the specified leakage test pressure within 5 PSI of the initial 150 PSI test pressure.
 10. No pipe installation will be accepted if leakage is greater than the following:

PIPE SIZE	MAXIMUM ALLOWABLE LEAKAGE
6 IN	0.55 GAL per hour per 1000 FT
8 IN	0.74 GAL per hour per 1000 FT
10 IN	0.92 GAL per hour per 1000 FT
12 IN	1.10 GAL per hour per 1000 FT
24 IN	2.21 GAL per hour per 1000 FT
30 IN	2.76 GAL per hour per 1000 FT
36 IN	3.31 GAL per hour per 1000 FT

11. For pipe with 20 FT nominal length, multiply the leakage calculated from above table by 0.9.
 - a. If pipe under test contains sections of various diameters, the allowable leakage will be the sum of the computed leakage for each size.
12. If the leakage is greater than the maximum allowable, at his own expense locate and repair the defective joints until leakage is within the specified allowances.
 - a. No separate payment will be made for this item.

B. Sealing, Flushing, and Disinfection of Potable Water Systems:

1. Maintain interior of all pipes, fittings and other accessories free from dirt and foreign material at all times.
 - a. If, in the opinion of the Engineer, the pipe contains dirt that will not be removed by flushing, the pipe interior shall be cleaned and swabbed with bactericidal solution.
 - b. At close of day's work or whenever workmen are absent from jobsite, plug, cap or otherwise provide watertight seal from open ends of pipe to prevent ingress of foreign material.
 - c. If water is in trench, seal shall remain in place until trench is pumped dry.
2. After favorable performance of pressure test and prior to final acceptance, thoroughly flush the entire potable water piping system and perform disinfection as prescribed.
 - a. Perform all work including preventative measures during construction in full compliance to AWWA C651.
3. Flush each segment of the system to provide a flushing velocity of not less than 2.5 FT per second.
4. Drain flushing water to location approved by the Owner.
5. Perform disinfection using one of the following forms:
 - a. Application of chlorine gas-water mixture by means of solution-feed chlorinating device.
 - 1) Liquid chlorine shall comply with AWWA B301.
 - b. Application of calcium hypochlorite, or sodium hypochlorite.
 - 1) Chlorine compounds shall comply with AWWA B300.
6. Disinfect pipe with chlorinated water as per AWWA C651.
 - a. Method of application of chlorine shall be by continuous feed method or slug method.
 - b. During disinfection procedure, ensure that initial and residual chlorine concentrations meet AWWA C651 requirements by testing by an approved method as directed by the Owner.
 - c. Cost of testing shall be included in the Bid Unit Price for water mains and no separate payment will be made for this item.
7. Tag the system during the disinfection procedure.
8. Following disinfection for required contact period, neutralize chlorine residual in water by treating with reducing agent.
 - a. Refer to AWWA C651.
 - b. Flush all treated water from pipeline at its extremities until replacement water throughout pipe, upon test is proved comparable in quality to water in existing system.
 - c. Take two samples to test for bacteriological quality as directed by Engineer.
 - d. Repeat disinfection procedure until two satisfactory results are obtained.
 - e. Quality of water delivered by the new water main to remain satisfactory for a minimum period of two days.
9. Secure satisfactory bacteriological reports on samples from the system.
 - a. Ensure all sampling and testing procedures are in full compliance to AWWA C651, and applicable requirements of the State of New Mexico.
 - 1) No separate payment will be made for this item.
10. The Owner will provide the water required to fill the main initially and will pay for the water required to flush the main once.
 - a. Filling and flushing shall be performed during periods of low usage, between the hours of midnight and 4:00 AM.
 - b. Flushing water will be based on a maximum of 8 HRS total.
 - c. Any additional refilling or reflushing to be at the Contractor's expense at the City's commercial water rates.

END OF SECTION

SECTION 40 05 51
VALVES - BASIC REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Valving, actuators, and valving appurtenances.
- B. Related Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.
 - 3. Section 40 05 00 - Pipe and Pipe Fittings - Basic Requirements.
 - 4. Section 40 05 52 - Miscellaneous Valves.
 - 5. Section 40 05 61 - Gate Valves.
 - 6. Section 40 05 64 - Butterfly Valves.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. American Society of Mechanical Engineers (ASME):
 - a. B1.20.1, Pipe Threads, General Purpose.
 - b. B16.1, Gray Iron Pipe Flanges and Flanged Fittings: Classes 25, 125, and 250.
 - c. B16.18, Cast Copper Alloy Solder Joint Pressure Fittings.
 - 2. ASTM International (ASTM):
 - a. A126, Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
 - b. D256, Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics.
 - c. D638, Standard Test Method for Tensile Properties of Plastics.
 - d. D648, Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position.
 - e. D695, Standard Test Method for Compressive Properties of Rigid Plastics.
 - f. D2240, Standard Test Method for Rubber Property-Durometer Hardness.
 - 3. American Water Works Association (AWWA):
 - a. C207, Standard for Steel Pipe Flanges for Waterworks Service - Sizes 4 IN through 144 IN.
 - b. C500, Standard for Metal-Seated Gate Valves for Water Supply Service.
 - c. C504, Standard for Rubber-Seated Butterfly Valves.
 - d. C509, Standard for Resilient-Seated Gate Valves for Water Supply Service.
 - e. C550, Standard for Protective Coatings for Valves and Hydrants.
 - f. C606, Standard for Grooved and Shouldered Joints.
 - 4. American Water Works Association/American National Standards Institute (AWWA/ANSI):
 - a. C111/A21.11, Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
 - 5. National Fire Protection Association (NFPA):
 - a. 70, National Electrical Code (NEC).

1.3 DEFINITIONS

- A. The following are definitions of abbreviations used in this Specification Section or one of the individual valve sections:
 - 1. CWP: Cold water working pressure.
 - 2. SWP: Steam working pressure.

3. WOG: Water, oil, gas working pressure.
4. WWP: Water working pressure.

1.4 SUBMITTALS

- A. Shop Drawings:
 1. See Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 2. Product technical data including:
 - a. Acknowledgement that products submitted meet requirements of standards referenced.
 - b. Manufacturer's installation instructions.
 - c. Valve pressure and temperature rating.
 - d. Valve material of construction.
 - e. Special linings.
 - f. Valve dimensions and weight.
 - g. Valve flow coefficient.
 3. Test reports.
- B. Contract Closeout Information:
 1. Operation and Maintenance Data:
 - a. See Section 01 33 04 for requirements for the mechanics, administration, and the content of Operation and Maintenance Manual submittals.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with the Contract Documents, refer to individual valve Specification Sections for acceptable manufacturers.

2.2 MATERIALS

- A. Refer to individual valve Specification Sections.

2.3 VALVE ACTUATORS

- A. Valve Actuators - General:
 1. Provide actuators as shown on Drawings or specified.
 2. Counter clockwise opening as viewed from the top.
 3. Direction of opening and the word OPEN to be cast in handwheel or valve bonnet.
 4. Size actuator to produce required torque with a maximum pull of 80 LB at the maximum pressure rating of the valve provided and withstand without damage a pull of 200 LB on handwheel or chainwheel or 300 FT-pounds torque on the operating nut.
 5. Unless otherwise specified, actuators for valves to be buried, submerged or installed in vaults or manholes shall be sealed to withstand at least 20 FT of submergence.
 6. Extension stem:
 - a. Install where shown or specified.
 - b. Solid steel with actuator key and nut, diameter not less than stem of valve actuator shaft.
 - c. Pin all stem connections.
 - d. Center in valve box or grating opening band with guide bushing.
- B. Buried Valve Actuators:
 1. Provide screw or slide type adjustable cast iron valve box, 5 IN minimum diameter, 3/16 IN minimum thickness, and identifying cast iron cover rated for traffic load.
 2. Box base to enclose buried valve gear box or bonnet.
 3. Provide 2 IN standard actuator nuts complying with AWWA C500, Section 3.16.
 4. Provide at least two tee handle keys for actuator nuts, with 5 FT extension between key and handle.

5. Extension stem:
 - a. Provide for buried valves greater than 4 FT below finish grade.
 - b. Extend to within 6 IN of finish grade.
6. Provide concrete pad encasement of valve box as shown for all buried valves unless shown otherwise.

2.4 FABRICATION

- A. End Connections:
 1. Provide the type of end connections for valves as required in the Piping Schedules presented in Section 40 05 00 or as shown on the Drawings.
 2. Comply with the following standards:
 - a. Threaded: ASME B1.20.1.
 - b. Flanged: ASME B16.1, Class 125 unless otherwise noted or AWWA C207.
 - c. Bell and spigot or mechanical (gland) type: AWWA/ANSI C111/A21.11.
 - d. Soldered: ASME B16.18.
 - e. Grooved: Rigid joints per Table 5 of AWWA C606.
- B. Refer to individual valve Specification Sections for specifications of each type of valve used on Project.
- C. Nuts, Bolts, and Washers:
 1. Wetted or internal to be bronze or stainless steel.
 - a. Exposed to be zinc or cadmium plated.
- D. On Insulated Piping: Provide valves with extended stems to permit proper insulation application without interference from handle.
- E. Epoxy Interior Coating: Provide epoxy interior coating for all ferrous surfaces in accordance with AWWA C550.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Coating Requirements: Comply with Section 09 96 00 for High Performance Industrial Coatings.
- C. Setting Buried Valves:
 1. Locate valves installed in pipe trenches where buried pipe indicated on Drawings.
 2. Set valves and valve boxes plumb.
 3. Place valve boxes directly over valves with top of box being brought to surface of finished grade.
 4. Install in closed position.
 5. Place valve on firm footing in trench to prevent settling and excessive strain on connection to pipe.
 6. After installation, backfill up to top of box for a minimum distance of 4 FT on each side of box.
- D. Support exposed valves and piping adjacent to valves independently to eliminate pipe loads being transferred to valve and valve loads being transferred to the piping.
- E. For grooved coupling valves, install rigid type couplings [or provide separate support to prevent rotation of valve from installed position].
- F. For threaded valves, provide union on one side within 2 FT of valve to allow valve removal.
- G. Install valves accessible for operation, inspection, and maintenance.

3.2 ADJUSTMENT

- A. Adjust valves, actuators and appurtenant equipment to comply with Section 01 75 00.
 - 1. Operate valve, open and close at system pressures.

END OF SECTION

SECTION 40 05 52
MISCELLANEOUS VALVES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Automatic control valves:
 - a. Pressure-reducing valves.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.
 - 3. Section 40 05 51 - Valves - Basic Requirements.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. American Society of Mechanical Engineers (ASME):
 - a. B16.1, Gray Iron Pipe Flanges and Flanged Fittings: Classes 25, 125, and 250.
 - 2. American Water Works Association (AWWA):
 - a. C550, Standard for Protective Interior Coatings for Valves and Hydrants.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 - 2. See Specification Section 40 05 51.
- B. Contract Closeout Information:
 - 1. Operation and Maintenance Data:
 - a. See Specification Section 01 33 04 for requirements for the mechanics, administration, and the content of Operation and Maintenance Manual submittals.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the manufacturers listed in the applicable Articles below are acceptable.
- B. Submit request for substitution in accordance with Specification Section 01 25 13.

2.2 AUTOMATIC CONTROL VALVES FOR WATER SERVICE

- A. Basic Valve:
 - 1. Type:
 - a. Diaphragm-actuated hydraulically operated.
 - 1) Acceptable manufacturers (Model as shown for specific valve):
 - a) Cla-val.
 - b) Singer.
 - 2) Materials:
 - a) Body: Ductile iron.
 - b) Seat insert: Stainless steel.
 - c) Disc: Buna-N.
 - d) Diaphragm: Nylon fabric bonded with synthetic rubber.

- 3) Design requirements: Do not use diaphragm as seating surface.
- 2. Design requirements:
 - a. Size: 4 IN.
 - b. Operating pressure:
 - 1) Maximum 250 PSI.
 - c. Flow range:
 - 1) Normal maximum 800 GPM.
 - 2) Normal minimum 4 GPM.
 - d. Size: 10 IN.
 - e. Operating pressure:
 - 1) Maximum 250 PSI.
 - f. Flow range:
 - 1) Normal maximum 4,900 GPM.
 - 2) Normal minimum 35 GPM.
- B. Control:
 - 1. Type:
 - a. Pressure-reducing control:
 - 1) Acceptable manufacturers:
 - a) Cla-val, Model 90-01.
 - b) GA Industries, Figure 4500D.
 - c) Watts ACV 115 Series.
 - d) Singer 106-PR.
 - 2) Design requirements: Modulate basic valve to maintain a uniform downstream pressure as set on control pilots.

2.3 ACCESSORIES

- A. Furnish any accessories required to provide a completely operable valve.

2.4 FABRICATION

- A. Completely shop assemble unit including any interconnecting piping, speed control valves, control isolation valves and electrical components.
- B. Provide internal epoxy coating suitable for potable water for all iron body valves in accordance with AWWA C550.

2.5 SOURCE QUALITY CONTROL

- A. Shop hydrostatically test to piping system test pressure.

2.6 MAINTENANCE MATERIALS

- A. Provide one set of any special tools or wrenches required for operation or maintenance for each type valve.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: See Specification Section 40 05 51.

3.2 FIELD QUALITY CONTROL

- A. Clean, inspect, and operate valve to ensure all parts are operable and valve seats properly.
- B. Check and adjust valves and accessories in accordance with manufacturer's instructions and place into operation.

END OF SECTION

SECTION 40 05 61
GATE VALVES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Gate valves.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.
 - 3. Section 40 05 51 - Valves - Basic Requirements.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. ASTM International (ASTM):
 - a. A126, Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
 - 2. American Water Works Association (AWWA):
 - a. C500, Standard for Metal-Seated Gate Valves for Water Supply Service.
 - b. C504, Standard for Rubber-Seated Butterfly Valves.
 - c. C509, Standard for Resilient-Seated Gate Valves for Water Supply Service.
 - d. C515, Standards for Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Systems.
 - e. C550, Standard for Protective Epoxy Interior Coatings for Valves and Hydrants.
 - 3. Manufacturers Standardization Society of the Valve and Fittings Industry Inc. (MSS):
 - a. SP-9, Spot Facing for Bronze, Iron and Steel Flanges.
 - b. SP-70, Cast Iron Gate Valves, Flanged and Threaded Ends.
 - c. SP-80, Bronze Gate, Globe, Angle and Check Valves.
 - 4. NSF International (NSF):
 - a. 61, Drinking Water System Components - Health Effects.

1.3 DEFINITIONS

- A. OS&Y: Outside Screw and Yoke.
- B. NRS: Non-rising Stem.
- C. RS: Rising Stem.

1.4 SUBMITTALS

- A. Shop Drawings:
 - 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 - 2. See Specification Section 40 05 51.
- B. Contract Closeout Information:
 - 1. Operation and Maintenance Data:
 - a. See Specification Section 01 33 04 for requirements for the mechanics, administration, and the content of Operation and Maintenance Manual submittals.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the manufacturers listed in the applicable Articles below are acceptable.
- B. Submit request for substitution in accordance with Specification Section 01 25 13.

2.2 VALVES: WATER (HOT, COLD, HEATING, COOLING, SERVICE, PROCESS, POTABLE, NON-POTABLE, AND WASTEWATER)

- A. Resilient Wedge Gate Valves, 2 to 48 IN (Water Application):
 - 1. Comply with AWWA C509 or AWWA C515.
 - 2. Materials:
 - a. Stem and stem nut: Bronze.
 - 1) Wetted bronze parts in low zinc bronze.
 - 2) Aluminum bronze components: Heat treated per AWWA C504.
 - b. Body, gate: Ductile iron.
 - c. Resilient wedge: Fully encapsulated rubber wedge. Styrene Butadiene Rubber (SBR).
 - 3. Design requirements:
 - a. Minimum 200 PSIG working pressure.
 - b. Buried: NRS, O-ring stem seal, 2 IN square operating nut.
 - c. Exposed: NRS, O-ring, stem seal, handwheel.
 - d. Counter clockwise open rotation.
 - e. Fusion bonded epoxy coating interior and exterior except stainless steel and bearing surfaces.
 - 1) Comply with AWWA C550.
 - 2) Comply with NSF 61.
 - 3) Wetted bronze parts in low zinc bronze.
 - 4) Aluminum bronze components: Heat treated per AWWA C504.
 - 4. Acceptable manufacturers:
 - a. Clow.
 - b. Mueller.
 - c. American Flow Control.
 - d. M & H.

2.3 ACCESSORIES

- A. Refer to Drawings and valve schedule for type of actuators.
 - 1. Furnish actuator integral with valve.
- B. Refer to Specification Section 40 05 51 for actuator requirements.

2.4 FABRICATION

- A. General:
 - 1. Provide valves with clear waterways the full diameter of the valve.
- B. Spot valves in accordance with MSS SP-9.

2.5 SOURCE QUALITY CONTROL

- A. Perform following tests, in accordance with AWWA C509 or AWWA C515, on valves constructed in accordance with AWWA C509 or AWWA C515:
 - 1. Operation test.
 - 2. Shell test.
 - 3. Seal test.
 - 4. Hydrostatic test.
 - 5. Torque test.
 - 6. Leakage test.

7. Pressure test.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. See Specification Section 40 05 51.
- B. Where larger buried valves utilize smaller bypass valves, provide a second valve box installed over the bypass valve operating nut.
- C. Do not install gate valves inverted or with the stems sloped more than 45 DEG from the upright unless the valve was ordered and manufactured specifically for this orientation.

END OF SECTION

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SECTION 40 05 64
BUTTERFLY VALVES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Butterfly valves.
- B. Related Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.
 - 3. Section 40 05 51 - Valves - Basic Requirements.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. American Society of Mechanical Engineers (ASME):
 - a. B16.5, Pipe Flanges and Flanged Fittings - NPS 1/2 Through NPS 24.
 - 2. ASTM International (ASTM):
 - a. A48, Standard Specification for Gray Iron Castings.
 - b. A126, Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
 - c. A276, Standard Specification for Stainless Steel Bars and Shapes.
 - d. A395, Standard Specification for Ferritic Ductile Iron Pressure-Retaining Castings for Use at Elevated Temperatures.
 - e. A436, Standard Specification for Austenitic Gray Iron Castings.
 - f. A536, Standard Specification for Ductile Iron Castings.
 - 3. American Water Works Association (AWWA):
 - a. C504, Standard for Rubber-Seated Butterfly Valves.
 - 4. Manufacturers Standardization Society of the Valve and Fittings Industry Inc. (MSS):
 - a. SP-67, Butterfly Valves.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 - 2. See Specification Section 40 05 51.
 - 3. For valves 8 IN and larger, furnish "Affidavit of Compliance" with Owner in accordance with AWWA C504.
- B. Contract Closeout Information:
 - 1. Operation and Maintenance Data:
 - a. See Specification Section 01 33 04 for requirements for the mechanics, administration, and the content of Operation and Maintenance Manual submittals.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
 - 1. DeZurik.
 - 2. Clow.
 - 3. Mueller/Linseal.

4. Pratt a Mueller Water Company.
5. Bray.
6. Pentair/Keystone.

B. Submit request for substitution in accordance with Specification Section 01 25 13.

2.2 GENERAL USE BUTTERFLY VALVES

A. Comply only with AWWA C504, as noted in this Specification Section.

B. Materials:

1. Valve bodies:
 - a. ASTM A126, Class B or ASTM A536 Grade 65-45-12 ductile iron.
 - b. Wafer valves may be constructed of ASTM A48, Class 40 cast iron.
2. Valve shafts:
 - a. One-piece stainless steel, Type 304.
 - b. Pins: 304 stainless steel.
 - c. Bushings/Packing/O-rings: EPDM, RTFE or TFE.
 - d. Bearings: Reinforced TFE or equal.
3. Valve discs:
 - a. Cast iron with welded nickel edge or 304 Stainless Steel disk.
4. Valve seats: EPDM or Hycar.
5. Shaft bearing: Bronze, TFE-coated stainless steel or reinforced TFE.
6. Shaft seal in addition to any sealing provided by seat: Suitable synthetic rubber rings or PTFE V-ring suitable for operating conditions.

C. Design Requirements:

1. Seat type: Resilient.
2. Body type:
 - a. Wafer Lug (laying length may vary from AWWA C504).
 - b. Equip wafer type with fully tapped anchor lugs drilled per ASME B16.5.
3. Direct buried valves:
 - a. All valves: Working pressure rated for 150 PSI (Class 150B per AWWA C504).
4. Shaft diameter: One-piece constant diameter.

2.3 ACCESSORIES

A. Refer to Drawings and/or valve schedule for type of actuators.

1. Furnish actuator integral with valve.

B. Refer to Section 40 05 51 for actuator requirements.

PART 3 - EXECUTION

3.1 INSTALLATION

A. See Section 40 05 51.

END OF SECTION

SECTION 40 05 66
CHECK VALVES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Check valves.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 - Procurement and Contracting Requirements.
 - 2. Division 01 - General Requirements.
 - 3. Section 40 05 51 - Valves - Basic Requirements.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. American Society of Mechanical Engineers (ASME):
 - a. B16.1, Gray Iron Pipe Flanges and Flanged Fittings: Classes 25, 125, and 250.
 - 2. American Water Works Association (AWWA):
 - a. C508, Standard for Swing-Check Valves for Waterworks Service, 2 IN through 24 IN NPS.
 - 3. Manufacturers Standardization Society of the Valve and Fittings Industry Inc. (MSS):
 - a. SP-71, Cast Iron Swing Check Valves, Flanged and Threaded Ends.
 - b. SP-80, Bronze Gate, Globe, Angle and Check Valves.

1.3 DEFINITIONS

- A. PVDF: Polyvinylidene fluoride.

1.4 SUBMITTALS

- A. Shop Drawings:
 - 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 - 2. See Specification Section 40 05 51.
- B. Contract Closeout Information:
 - 1. Operation and Maintenance Data:
 - a. See Specification Section 01 33 04 for requirements for the mechanics, administration, and the content of Operation and Maintenance Manual submittals.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with the Contract Documents, manufacturers listed under the valve with types are acceptable.
- B. Submit request for substitution in accordance with Specification Section 01 25 13.

2.2 CUSHIONED SWING CHECK VALVES: 2 IN TO 24 IN

- A. Class 250.
- B. Comply with AWWA C508.
- C. Manufacturers:
 - 1. Oil:

- a. APCO Series 6000B.
- b. Golden Anderson Figure 25-DXH.

D. Materials:

1. Body, cover, disc, levers: Cast iron or cast steel.
2. Seat: Bronze or stainless steel.
3. Seat ring: Bronze or rubber (Buna-N).
4. Hinge: Stainless steel.
5. Cushion cylinder: Metallic corrosion resistant material.

E. Design Requirements:

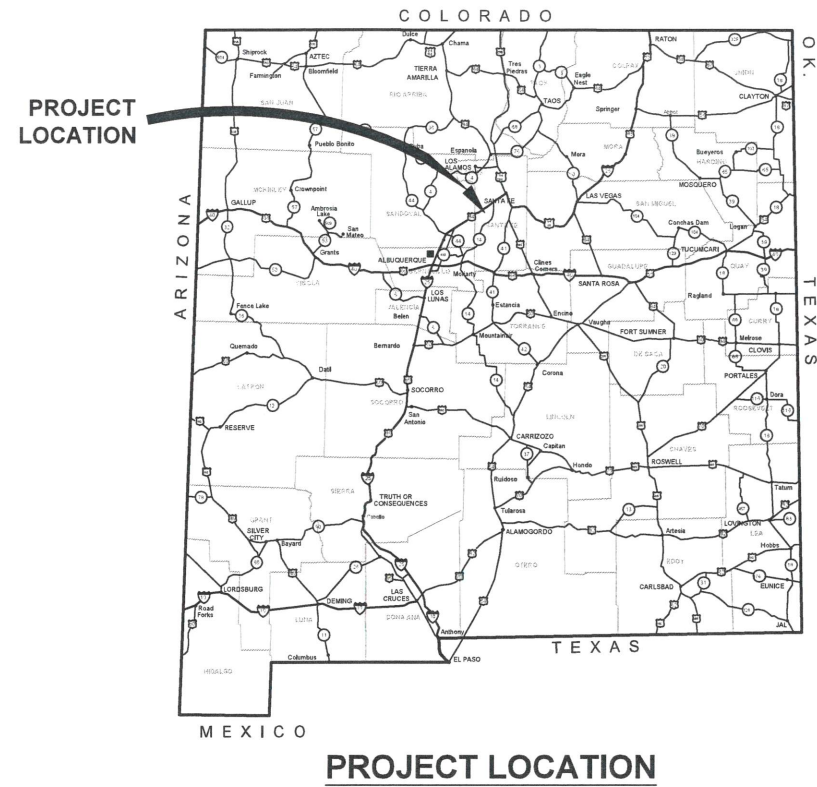
1. Seat ring: Replaceable.
2. Hinge: Extend out both sides with lever and weight.
3. Cushion: Oil type with bottom mounted closure control device for adjustable speed control.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. See Specification Section 40 05 51.
- B. Install in accordance with manufacturer's instructions.

END OF SECTION



Contract Drawings For

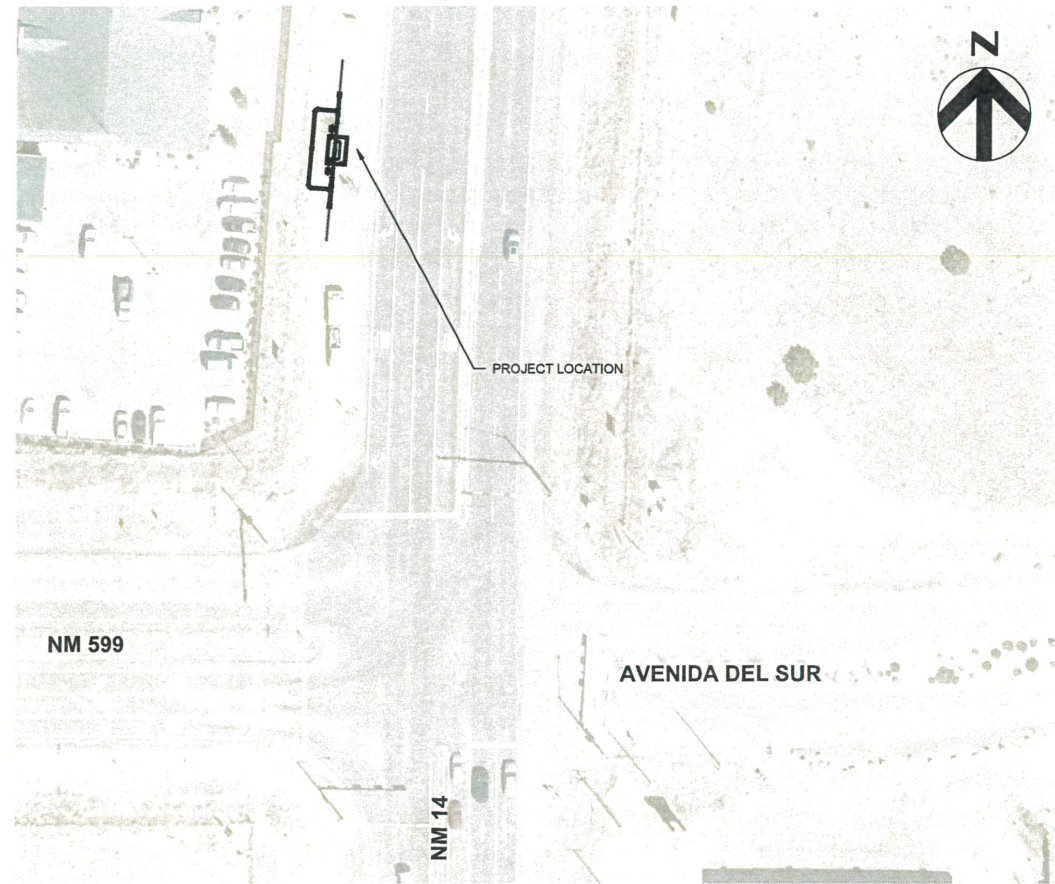
Santa Fe County

Rancho Viejo Water Service Improvements Design

Project No. 2019-0029-PW/CW

HDR Project No.
10162165

Santa Fe County, NM
June 2020



VICINITY MAP



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UTILITY CONTACTS

UTILITY	NAME	CONTACT	PHONE	ADDRESS
WATER/SEWER/ STORM/SWPPP	SANTA FE COUNTY UTILITIES	DAVID MADRID LEROY ALVARADO	PHONE: (505) 470-3441 PHONE: (505) 490-0038	SANTA FE COUNTY PUBLIC WORKS - UTILITIES PO BOX 276 SANTA FE, NM 87504
ELECTRIC	PNM	DON FERRIS	PHONE: (505) 473-3279	PNM ELECTRIC 4645 STATE HWY 14 SANTA FE, NM 87508
GAS	NM GAS CO.	FRANK ARAGON	PHONE: (505) 470-0668	NEW MEXICO GAS COMPANY 6 FOREST LANE SANTA FE, NM 87508
CABLE TV	COMCAST	DAVE AIKIN	PHONE: (505) 761-6252	COMCAST 2534 CAMINO ENTRADA SANTA FE, NM 87507
TELECOMMUNICATIONS	CENTURY LINK	LORENZO LUJAN	PHONE: (505) 425-9345	CENTURY LINK 2701 SAWMILL ROAD SANTA FE, NM 87505

GENERAL NOTES:

GENERAL CONSTRUCTION NOTES:

- ALL CONSTRUCTION TO BE PERFORMED UNDER THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SANTA FE COUNTY TECHNICAL SPECIFICATIONS & CONSTRUCTION STANDARDS, LATEST EDITION ALONG WITH THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION AND THE SPECIFIC NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, LATEST EDITION, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREIN.
- THIS SET OF PLANS HAS BEEN REVIEWED FOR COMPLIANCE WITH COUNTY REQUIREMENTS PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS. HOWEVER, SUCH REVIEW SHALL NOT PREVENT THE COUNTY FROM REQUIRING CORRECTIONS OF ERRORS IN THE PLANS FOUND TO BE IN VIOLATION OF ANY LAW OR ORDINANCE.
- THE ENGINEER SHALL BE NOTIFIED 24 HOURS PRIOR TO ANY CONSTRUCTION WORK. CONSTRUCTION WORK PERFORMED WITHOUT NOTIFICATION TO THE OWNER'S REPRESENTATIVE SHALL BE SUBJECT TO EXPOSURE, INSPECTION, AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL COORDINATE WORK SCHEDULES WITH THE OWNER'S REPRESENTATIVE SO AS TO PREVENT ANY CONFLICTING WORK CONDITIONS.
- THE CONTRACTOR SHALL NOT INSTALL ANY ITEMS SHOWN ON THESE PLANS WHEN FIELD CONDITIONS ARE DIFFERENT THAN SHOWN IN THE PLANS. SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN A TIMELY MANNER. IN THE EVENT THE CONTRACTOR DOES NOT NOTIFY THE ENGINEER IN A TIMELY MANNER, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY AND EXPENSE FOR ANY REVISIONS NECESSARY, INCLUDING ENGINEERING DESIGN FEES.
- THE TERM "REMOVE" USED IN THIS PLAN SET INCLUDES THE REMOVAL AND DISPOSAL OF SAID MATERIAL IN ACCORDANCE WITH APPLICABLE REGULATIONS.
- THE CONTRACTOR SHALL PROVIDE INGRESS AND EGRESS TO LOCAL BUSINESSES AND RESIDENCES FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL ADVISE OF AND SCHEDULE ACCESS CLOSURES, AT LEAST 48 HOURS IN ADVANCE, WITH PROPERTY OWNERS AND THE ENGINEER.
- THE CONTRACTOR SHALL MAINTAIN AN UP TO DATE SET OF REDLINE AS-BUILT MARKUPS FOR THE PROJECT, PROMPTLY RECORDING DATA, INCLUDING THE HORIZONTAL AND VERTICAL (X, Y, AND Z) LOCATION WITH SURVEY GRADE ACCURACY REFERENCED HORIZONTALLY TO PERMANENT SURFACE IMPROVEMENTS AND VERTICALLY BY THE DEPTH BELOW FINISHED GRADE. FOR ALL UTILITY LINES, VALVES, FITTINGS, BENDS AND ACCESSORIES, EXISTING OR NEW, AS REQUIRED BY THE SANTA FE COUNTY FOR THE PREPARATION OF RECORD DRAWINGS BY THE ENGINEER. CONTRACTOR SHALL NOT COVER UTILITY LINES, VALVES, FITTINGS, BENDS AND/OR ACCESSORIES UNTIL ALL DATA HAS BEEN RECORDED. THE REDLINE AS-BUILT MARKUPS SHALL BE KEPT CURRENT AND AT THE PROJECT SITE AT ALL TIMES AND SHALL BE AVAILABLE TO THE OWNER AND ENGINEER AT ANY TIME DURING CONSTRUCTION AND WILL BE CHECKED BY THE ENGINEER FOR ACCURACY AND COMPLETENESS AT LEAST ONCE EVERY 30-DAYS. THE REDLINE AS-BUILT MARK-UPS SHALL BE SUBMITTED TO THE SANTA FE COUNTY PROJECT MANAGER PRIOR TO FINAL PAYMENT. IMPROVEMENTS SHALL NOT BE ACCEPTED UNTIL THE CONTRACTOR'S REDLINE AS-BUILT PLAN MARKUPS HAVE BEEN SUBMITTED TO THE COUNTY AND APPROVED BY THE COUNTY IN WRITING.

DESIGN SURVEY:

- SURVEY DATA FOR THIS PROJECT WAS OBTAINED BY COBB, FENDLEY & ASSOCIATES, INC., 3820 ACADEMY PARKWAY NORTH NE, ALBUQUERQUE, NM 87109, (505) 508-0786 AND SUPPLEMENTED BY AERIAL ORTHOPHOTOGRAPHY AND LIDAR TOPOGRAPHIC DATA PROVIDED BY SANTA FE COUNTY THAT WAS OBTAINED BY OTHERS.
- ALL COORDINATES AND ELEVATIONS PROVIDED HEREIN ARE BASED ON THE FIELD SURVEY AND REFERENCED TO THE SURVEY CONTROL COMPLETED BY COBB FENDLEY AND ASSOCIATES, INC. UNLESS NOTED OTHERWISE. COORDINATES PROVIDED ARE MODIFIED STATE PLANE COORDINATES BASED ON HORIZONTAL DATUM NAD83. ELEVATIONS ARE BASED ON VERTICAL DATUM NAVD88.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AS NECESSARY PRIOR TO CONSTRUCTION. ANY DISCREPANCIES BETWEEN THE DESIGN AND SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PROJECT AND NO ADDITIONAL PAYMENT SHALL BE MADE THEREFOR.
- ALL CONSTRUCTION STAKING, I.E. PIPELINE HORIZONTAL BENDS, FITTINGS, VALVES AND/OR VERTICAL ELEVATIONS, ETC., IS THE RESPONSIBILITY OF THE CONTRACTOR.

DIMENSIONS:

- ALL STATIONING AND ELEVATIONS SHOWN ARE TO THE CENTERLINE OF THE PIPE, UNLESS OTHERWISE NOTED.
- ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.

CONSTRUCTION LIMITS:

- CONTRACTOR SHALL WORK WITHIN THE CONSTRUCTION LIMITS AS SHOWN ON THE PLANS. EQUIPMENT TRAFFIC OUTSIDE THESE LIMITS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION OF THE ENGINEER.
- PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES WITHIN ADJACENT RIGHT-OF-WAYS OR WITHIN PROPERTY NOT OWNED BY THE OWNER OF THE PROJECT SITE, THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND PERMISSIONS IN WRITING.
- OVERNIGHT PARKING OF CONSTRUCTION VEHICLES ON PRIVATE PROPERTY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL PARK EQUIPMENT AND VEHICLES SO AS NOT TO INTERFERE WITH NORMAL ACTIVITIES OF RESIDENTS OR OTHER CONTRACTORS ON SITE.

SAFETY:

- CONTRACTOR SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, LOCAL, LAWS, ORDINANCES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- ONLY THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY OF ALL WORK. ALL WORK, INCLUDING WORK WITHIN TRENCHES, SHALL BE IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
- CONTRACTOR SHALL TAKE NECESSARY SAFETY PRECAUTIONS AS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES TO PROTECT PEDESTRIAN AND VEHICULAR TRAFFIC IN THE CONSTRUCTION AREA WHICH INCLUDE BUT ARE NOT LIMITED TO: MAINTAINING ADEQUATE WARNING SIGNS, BARRICADES, LIGHTS, GUARD FENCES, WALKS AND BRIDGES.
- THE CONTRACTOR SHALL BARRICADE CONSTRUCTION SITES AT ALL TIMES PER THE MUTCD, CURRENT EDITION. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED FOR APPROVAL A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNAGE AT ALL TIMES AND SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE BEGINNING AND END OF EACH DAY.
- ALL EXCAVATION, TRENCHING, AND SHORING ACTIVITIES SHALL BE CARRIED OUT IN ACCORDANCE WITH OSHA 29 CFR 1926.650 SUBPART P AS A MINIMUM STANDARD.
- IF A PAVEMENT DROP-OFF IS CREATED DURING CONSTRUCTION, THE CONTRACTOR SHALL INITIATE PROTECTIVE ACTION IN ACCORDANCE WITH THE NMDOT'S CURRENT "DROP-OFF GUIDELINE". THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COMPLETION OF THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE.

INSPECTION AND TESTING:

- THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A REGISTERED, LICENSED GEOTECHNICAL ENGINEER TO OBSERVE AND TEST ALL CONTROLLED EARTHWORK. THE GEOTECHNICAL ENGINEER SHALL PROVIDE ON-SITE OBSERVATION DURING CONSTRUCTION OF CONTROLLED EARTHWORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST TWO (2) WORKING DAYS IN ADVANCE OF ANY FIELD OPERATIONS OF CONTROLLED EARTHWORK OR OF ANY RESUMPTION OF OPERATIONS AFTER STOPPAGE. TESTS OF FILL MATERIALS AND EMBANKMENTS SHALL BE MADE IN ACCORDANCE WITH NM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SECTION 701.
- CONTRACTOR SHALL INSPECT ALL TRENCH EXCAVATIONS DAILY AND WHENEVER A CHANGE OF CONDITIONS OCCURS IN ACCORDANCE WITH OSHA GUIDELINES. AT MINIMUM, INSPECTION OF TRENCH EXCAVATIONS SHALL INCLUDE BUT NOT BE LIMITED TO:
 - INSPECTION OF THE SIDE OF THE OPENED EXCAVATION AND SUBSURFACE AREA ADJACENT TO THE EXCAVATION FOR THE OCCURRENCE OF TENSION CRACKS, SOIL SPALL, OR OTHER EVIDENCE OF SOIL MOVEMENT.
 - INSPECTION OF THE AREA AROUND THE EXCAVATION AND THE EXCAVATION ITSELF FOR EVIDENCE OF EXISTING UTILITIES AND PREVIOUSLY DISTURBED SOILS.
 - INSPECTION OF THE EXCAVATION AND AREAS ADJACENT TO THE EXCAVATION FOR THE PRESENCE OF WATER SEEPING INTO THE EXCAVATION, SURFACE WATER AND THE LEVEL OF THE EXISTING WATER TABLE.

SURVEY MONUMENTS, PROPERTY CORNERS, AND BENCHMARKS:

- CONTRACTOR SHALL NOTIFY THE OWNER AT LEAST SEVEN (7) DAYS BEFORE BEGINNING ANY CONSTRUCTION ACTIVITY THAT COULD DAMAGE OR DISPLACE SURVEY MONUMENTS, PROPERTY CORNERS, OR PROJECT BENCHMARKS IN ORDER THAT THE COUNTY SURVEYOR MAY TAKE NECESSARY MEASURES TO ENSURE THE PRESERVATION OF THESE ITEMS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE COUNTY SURVEYOR AND SHALL NOTIFY THE COUNTY SURVEYOR AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE COUNTY SURVEYOR. REFER TO SECTION 4 OF GENERAL CONDITIONS.

PERMITTING:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING NPDES PERMITS AND ANY CONSTRUCTION RELATED PERMITS AS REQUIRED BY APPLICABLE CITY, STATE, AND FEDERAL REGULATIONS.

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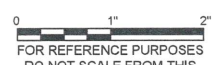
ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER	
G. ALVARADO	
DESIGNER	A. SHOKROLLAHI
DESIGNER	
DESIGNER	
CHECKER	C. ABRAMS
DRAWN BY	A. SHOKROLLAHI
HDR PROJECT NO.	10162165



SANTA FE COUNTY
PROJECT NO. 2019-0029-PW/CW
RANCHO VIEJO
WATER SERVICE
IMPROVEMENT DESIGN

GENERAL INDEX OF SHEETS & GENERAL NOTES



FILENAME | G-01.dwg
 SCALE | NONE

SHEET
G-01

GENERAL UTILITIES:

1. THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES SHOWN ON THE PLANS IS APPROXIMATE BASED ON THE BEST INFORMATION AVAILABLE WHICH WAS PROVIDED TO THE ENGINEER BY OTHERS. THE INFORMATION MAY BE INACCURATE OR INCOMPLETE. OTHER UNDERGROUND LINES MAY EXIST THAT ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, ELEVATIONS, AND DIMENSIONS OF ALL UTILITY LINES, PIPELINES, AND UNDERGROUND UTILITY LINES WHICH PERTAIN TO AND AFFECT THE CONSTRUCTION OF THIS PROJECT PRIOR TO COMMENCING WITH CONSTRUCTION. ANY DAMAGE TO UTILITIES OR COLLATERAL DAMAGE CAUSED BY THE CONTRACTOR SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL CONFLICTING UTILITIES. THE CONTRACTOR SHALL COMPLETE VACUUM EXCAVATION TO IDENTIFY AND LOCATE EXISTING UTILITIES AHEAD OF HIS CONSTRUCTION TO ALLOW FOR ANY NECESSARY ADJUSTMENTS AND/OR REALIGNMENTS AND TO VERIFY THE EXISTING SIZE AND PIPE MATERIAL TYPE AT ALL POINTS OF CONNECTION TO EXISTING WATER LINES FOR ORDERING PROPER TRANSITION AND/OR TIE-IN FITTINGS WHICH MAY BE REQUIRED PRIOR TO MAKING THE CONNECTION. SHOULD A CONFLICT EXIST BETWEEN THE FIELD INFORMATION AND THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THE CONFLICT CAN BE RESOLVED WITH MINIMUM DELAY. THE COST OF VACUUM EXCAVATION SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL PAYMENT SHALL BE MADE THEREFOR.
3. ANY DATA ON THESE PLANS PERTAINING TO THE DEPTH OF EXISTING UTILITIES IS FOR INFORMATION ONLY AND DOES NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY TO CONDUCT VACUUM EXCAVATION IN ADVANCE OF CONSTRUCTION.
4. CONTRACTOR SHALL CONTACT THE STATEWIDE UTILITY LOCATOR SERVICE AT 800-321-2537 AT LEAST TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION. AFTER THE UTILITIES ARE SPOTTED, THE CONTRACTOR SHALL EXPOSE ALL PERTINENT UTILITIES TO VERIFY THEIR VERTICAL AND HORIZONTAL LOCATION. IF A CONFLICT EXISTS BETWEEN EXISTING UTILITIES AND PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMAL DELAY.
5. CONTRACTOR SHALL EXERCISE DUE CARE TO AVOID DISTURBING ANY EXISTING UTILITIES, ABOVE OR BELOW GROUND. UTILITIES THAT ARE DAMAGED BY CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. ANY ADJUSTMENT OR RELOCATION OF EXISTING UTILITIES (UNDERGROUND, SURFACE, OR OVERHEAD) SHALL BE COORDINATED WITH THE OWNER OF THE AFFECTED UTILITY AT LEAST 48 HOURS PRIOR TO CONSTRUCTION TO PREVENT DISRUPTION TO SERVICE.
6. ALL UTILITY LINES NOT SPECIFICALLY DESIGNATED TO BE REMOVED AND REPLACED ON THE PLANS, SHALL BE MAINTAINED IN SERVICE. SHORING, SHEETING AND OTHER MEANS OF SUPPORT SHALL BE EMPLOYED BY THE CONTRACTOR TO PREVENT DAMAGE OR LOSS OF THESE EXISTING UTILITIES. BEAM AND CABLE OR OTHER ADEQUATE SUPPORTS SHALL BE USED FOR TEMPORARY SUPPORT OF ALL UTILITY LINES AS NECESSARY. THE COSTS ASSOCIATED WITH PROTECTING EXISTING UTILITIES IN PLACE SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
7. CONTRACTOR SHALL PROVIDE A UTILITY SUPPORT DESIGN FOR ALL LARGE AND/OR CRITICAL SERVICES (E.G. COMMUNICATIONS AND ELECTRIC DUCT BANKS, EXPOSED GRAVITY LINE JOINTS, PRESSURIZED WATER LINES, SEWER FORCE MAINS, ETC.), SUPPORT FOR THESE CRITICAL SERVICES SHALL BE DESIGNED AND SEALED BY REGISTERED PROFESSIONAL ENGINEER AND SUBMITTED TO OWNER FOR APPROVAL. THE DESIGN AND INSTALLATION OF BOTH CRITICAL AND NON CRITICAL SUPPORTS SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE. ANY DAMAGE TO EXISTING UTILITIES SHALL PROMPTLY BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY SIGNIFICANT DEVIATION OF EXPOSED UTILITIES FROM THE LOCATIONS SHOWN ON THE PLANS SO THAT CONFLICTS CAN BE RESOLVED IN A TIMELY MANNER.
8. CONTRACTOR SHALL COORDINATE WITH PERTINENT UTILITY COMPANIES OF ALL EXISTING UTILITY LINES AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK CREWS. THE CONTRACTOR SHALL RESCHEDULE HIS ACTIVITIES AS NECESSARY TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.
9. ALL INTERFERING PORTIONS OF ABANDONED UTILITY LINES WHICH ARE EXPOSED AS A RESULT OF CONSTRUCTION SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
10. CONTRACTOR SHALL COORDINATE ANY REQUIRED UTILITY INTERRUPTIONS WITH THE AFFECTED UTILITY COMPANY A MINIMUM OF 48 HOURS BEFORE THE INTERRUPTION. UTILITIES SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF EXCAVATION, DISCONNECTION, CONNECTION, OR REMOVAL OF ANY PIPE, CONDUIT, OR POWER SUPPLY IN ORDER FOR THE AFFECTED UTILITY TO HAVE A REPRESENTATIVE AT THE PROJECT SITE.
11. EXISTING VALVES SHALL ONLY BE OPERATED BY THE APPROPRIATE UTILITY COMPANY. CONTRACTOR SHALL NOTIFY THE UTILITY A MINIMUM OF SEVEN (7) WORKING DAYS BEFORE ANY VALVE, NEW OR EXISTING, NEEDS TO BE OPERATED.
12. ANY DAMAGE TO THE EXISTING FACILITIES (CURB & GUTTER, PAVEMENT, CONDUITS, LANDSCAPING, UTILITY LINES, ETC.) DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS' EXPENSE.
13. THE CONTRACTOR SHALL PROVIDE DIELECTRIC INSULATING FLANGE KITS WHERE ANY DISSIMILAR PIPE MATERIALS COME IN CONTACT WITH ONE ANOTHER. DISSIMILAR PIPE MATERIAL CONNECTIONS INCLUDE BUT ARE NOT LIMITED TO STEEL FLANGE TO CAST/DUCTILE IRON PIPE OR VALVES.

WATER SYSTEM:

1. THE CONTRACTOR SHALL NOTIFY THE SANTA FE COUNTY PUBLIC WORKS UTILITIES DEPT. AT LEAST SEVEN (7) WORKING DAYS IN ADVANCE OF ANY WORK WHICH MAY AFFECT THE EXISTING PUBLIC WATER UTILITIES. CONTRACTOR SHALL CONTACT THE UTILITIES DEPT. AT LEAST SEVEN (7) WORKING DAYS PRIOR TO NEEDING VALVES OPENED OR CLOSED. REFER TO SECTIONS 700 AND 800 OF THE NM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
2. CONTRACTOR SHALL ADJUST ALL WATER VALVE BOXES, VAULT LIDS AND OTHER APPURTENANCES IMPACTED BY CONSTRUCTION TO FINISH GRADE. ADJUSTMENTS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. CONTRACTOR SHALL MAKE ALL WATER VALVES AND VAULT LIDS ACCESSIBLE TO THE OWNER AT ALL TIMES.
4. IF A WATER SERVICE LINE IS DAMAGED, CONTRACTOR SHALL COMPLETE REPLACEMENT FROM THE MAIN TO THE METER BOX WITHOUT SPLICING AT NO ADDITIONAL COST TO THE OWNER.
5. THE UNLAWFUL REMOVAL OF WATER FROM A FIRE HYDRANT IS A VIOLATION OF THE MUNICIPAL CODE AND IS PUNISHABLE BY FINE AND/OR IMPRISONMENT. CONSTRUCTION WATER IS AVAILABLE FROM THE OWNER. THE CONTRACTOR SHALL OBTAIN A FIRE HYDRANT METER FOR CONSTRUCTION WATER FROM THE SANTA FE COUNTY PUBLIC WORKS UTILITIES DEPT. A DEPOSIT IS REQUIRED FOR A HYDRANT METER. THE COST FOR OBTAINING WATER FOR CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL PAYMENT SHALL BE MADE.

SANITARY SEWER SYSTEM:

1. THE CONTRACTOR SHALL NOTIFY THE OWNER AT LEAST SEVEN (7) WORKING DAYS IN ADVANCE OF ANY WORK WHICH MAY AFFECT THE EXISTING PUBLIC SEWER UTILITIES. REFER TO SECTIONS 700 AND 900 OF THE NM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
2. ALL DISTURBED SANITARY SEWER MANHOLES SHALL BE ADJUSTED TO FINISH GRADE.

ELECTRICAL:

1. ALL ELECTRICAL MANHOLES, PEDESTALS, POLES AND OTHER APPURTENANCES SHALL BE ADJUSTED TO GRADE BY THE APPROPRIATE UTILITY COMPANY IF REQUIRED FOR CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY COMPANY.

GAS:

1. ALL GAS VALVES AND GAS MANHOLES, SHALL BE ADJUSTED TO GRADE BY THE APPROPRIATE UTILITY COMPANY IF REQUIRED FOR CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY COMPANY.

TELECOMMUNICATIONS:

1. ALL TELEPHONE MANHOLES, PEDESTALS, POLES AND OTHER APPURTENANCES SHALL BE ADJUSTED TO GRADE BY THE APPROPRIATE UTILITY COMPANY IF REQUIRED BY CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY COMPANY.
2. CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING OR WORKING ADJACENT TO FIBER OPTIC LINES. CONTRACTOR SHALL SUPPORT EXPOSED FIBER OPTIC LINES AS NECESSARY, AND AS APPROVED BY APPROPRIATE UTILITY COMPANY.

EXCAVATION, BACKFILL & EARTHWORK:

1. ALL EXCAVATION SHALL BE GOVERNED BY FEDERAL, STATE AND LOCAL LAWS, RULES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
2. FOR PIPE TRENCH EXCAVATION, CONTRACTOR SHALL COMPLY WITH THE OSHA REGULATIONS STANDARD 29 CFR 1926. TRENCH SUPPORT AND TEMPORARY SHORING SHALL BE REQUIRED FOR PROTECTION OF LIFE AND LIMB DURING PIPE CONSTRUCTION TO SATISFY CONSTRAINTS IDENTIFIED IN THE DRAWINGS FOR LIMITS OF DISTURBANCE, PROTECTION OF EXISTING UTILITIES, TRAFFIC CONTROL, ETC. AND SHALL BE DESIGNED BY CONTRACTOR IN ACCORDANCE WITH OSHA STANDARDS.
3. DESIGN AND CONSTRUCTION OF ALL FORMS, SHORING, AND TEMPORARY BRACING SHALL COMPLY WITH 29 CFR 1926 AND THESE COSTS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
4. FOR TRENCH DEPTHS EXCEEDING 20-FEET, CONTRACTOR SHALL SUBMIT VERIFICATION TO ENGINEER THAT TRENCH SUPPORT IS DESIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
5. CONTRACTOR SHALL CONSTRUCT SAFETY/SECURITY FENCING AROUND ALL OPEN EXCAVATIONS OR REFILL PORTION OF OPEN TRENCH AT NO ADDITIONAL COST TO OWNER.
6. ALL EXCAVATED MATERIAL THAT IS NOT REQUIRED TO BE REUSED SHALL BE REMOVED FROM THE PROJECT AREA IN A TIMELY MANNER AS APPROVED BY THE ENGINEER AND/OR OWNER. SPOIL PILES WILL BE ALLOWED ONLY AS DIRECTED BY THE ENGINEER AND/OR OWNER.
7. CONTRACTOR SHALL UTILIZE FLOWABLE FILL WHEREVER BACKFILL MATERIAL CANNOT BE PLACED AND COMPACTED BETWEEN NEW PIPE LINES AND EXISTING UTILITIES OR IF THE VERTICAL SEPARATION BETWEEN NEW PIPE LINES AND EXISTING UTILITY IS LESS THAN 12-INCHES. THIS COST IS INCIDENTAL TO BACKFILL COSTS.
8. CONTRACTOR SHALL USE CAUTION NEAR ALL EXISTING STRUCTURES INCLUDING MASONRY WALLS, BUILDINGS, ETC. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO STRUCTURES CAUSED BY CONTRACTOR'S OPERATIONS.
9. CONTRACTOR SHALL RETURN ALL GRADES TO EXISTING ELEVATIONS AND CONDITIONS AFTER CONSTRUCTION, UNLESS OTHERWISE INDICATED.
10. IF BORROW IS REQUIRED, CONTRACTOR SHALL BE RESPONSIBLE FOR:
 - IDENTIFYING A SOURCE THAT MEETS PROJECT REQUIREMENTS.
 - ALL COSTS ASSOCIATED WITH OBTAINING AND TRANSPORTING BORROW MATERIAL.

EROSION CONTROL AND ENVIRONMENTAL PROTECTION:

1. THE CONTRACTOR SHALL CONFORM TO ALL OWNER AND FEDERAL DUST AND EROSION CONTROL REGULATIONS. THE CONTRACTOR SHALL PREPARE AND OBTAIN ANY DUST CONTROL OR EROSION CONTROL PERMITS FROM THE REGULATORY AGENCIES.
2. THE CONTRACTOR SHALL SECURE NPDES PERMITS REQUIRED BY APPLICABLE CITY, COUNTY, STATE, AND FEDERAL REGULATIONS.
3. THE CONTRACTOR SHALL PROMPTLY REMOVE ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY OR ADJACENT PROPERTY TO KEEP IT FROM WASHING OFF THE PROJECT SITE.
4. THE CONTRACTOR SHALL INSTALL ANY TEMPORARY DRAINAGE CONTROL MEASURES NECESSARY TO SAFELY CONVEY STORM WATER RUNOFF TO EXISTING OUTFALLS. CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY BY CONSTRUCTION OF TEMPORARY EROSION CONTROL BERMS OR INSTALLING SILT FENCES AT THE PROPERTY LINES (OR LIMITS OF CONSTRUCTION IF DESIGNATED) AND WETTING SOIL TO PREVENT IT FROM BLOWING. ANY DAMAGE TO PRIVATE PROPERTY OR IMPROVEMENTS CONSTRUCTED BY THE CONTRACTOR RESULTING FROM STORM WATER FLOWS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING SURFACE AND UNDERGROUND WATER. CONTACT WITH SURFACE WATER BY CONSTRUCTION EQUIPMENT AND PERSONNEL SHALL BE MINIMIZED. EQUIPMENT MAINTENANCE AND REFUELING OPERATIONS SHALL BE PERFORMED IN AN ENVIRONMENTALLY SAFE MANNER IN COMPLIANCE WITH GOVERNMENT AND OWNER REGULATIONS.
6. WATERING, AS REQUIRED FOR CONSTRUCTION DUST CONTROL, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE. CONSTRUCTION AREAS SHALL BE WATERED FOR DUST CONTROL IN COMPLIANCE WITH GOVERNMENT ORDINANCES. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR WATER AVAILABILITY AND USE. THE CONTRACTOR SHALL SUPPLY ALL EQUIPMENT AND MATERIALS NECESSARY FOR PROVIDING WATER.
7. ANY AREAS DISTURBED BY CONSTRUCTION AND NOT IDENTIFIED FOR SPECIFIC PERMANENT TREATMENT BY THE PROJECT LANDSCAPING PLAN OR IMPERVIOUS SURFACES ON THE SITE PLAN SHALL BE REVEGETATED WITH GRASS SOD IF PREVIOUSLY GRASSED OR RECLAMATION SEEDING IF AREA WAS NATIVE BEFORE CONSTRUCTION STARTED. CONTRACTOR SHALL COORDINATE SPECIFIC TREATMENT WITH THE ENGINEER.
8. ALL WASTE PRODUCTS FROM THE CONSTRUCTION SITE, INCLUDING ITEMS DESIGNED FOR REMOVAL, CONSTRUCTION WASTE, CONSTRUCTION EQUIPMENT WASTE PRODUCTS (OIL, GAS, TIRES, ETC.), GARBAGE, GRUBBING, EXCESS CUT MATERIAL, VEGETATIVE DEBRIS, ETC. SHALL BE APPROPRIATELY DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF ALL DEBRIS AND OTHER SUCH WASTE MATERIAL AT DISPOSAL SITES APPROVED BY GOVERNMENTAL AGENCIES REGULATING THE DISPOSAL OF SUCH MATERIALS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR HAULING AND DISPOSAL OF WASTE PRODUCTS, AND TO ENSURE THAT THE WASTE DISPOSAL SITE COMPLIES WITH GOVERNMENT REGULATIONS REGARDING THE ENVIRONMENT, ENDANGERED SPECIES, AND ARCHAEOLOGICAL RESOURCES.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANUP AND REPORTING OF SPILLS OF HAZARDOUS MATERIALS ASSOCIATED WITH THE CONSTRUCTION SITE. HAZARDOUS MATERIALS, INCLUDES GASOLINE, DIESEL FUEL, MOTOR OIL, SOLVENTS, CHEMICALS, PAINT, ETC. WHICH MAY BE A THREAT TO THE ENVIRONMENT. THE CONTRACTOR SHALL REPORT THE DISCOVERY OF PAST OR PRESENT SPILLS TO THE NEW MEXICO EMERGENCY RESPONSE AT (505) 476-9635 AND THE NEW MEXICO ENVIRONMENT DEPT. AT (505) 827-9329.
11. THE CONTRACTOR SHALL PROPERLY HANDLE AND DISPOSE OF ALL ASPHALT REMOVED ON THE PROJECT BY HAULING TO AN APPROVED DISPOSAL SITE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEW MEXICO SOLID WASTE ACT.
12. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING CONSTRUCTION NOISE AND HOURS OF OPERATION AS STATED IN THE SPECIFICATIONS.
13. CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY AND ALL GRAFFITI FROM EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.

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ISSUE	DATE	DESCRIPTION
0	JUNE 2020	CONTRACT DRAWINGS

PROJECT MANAGER G. ALVARADO	
DESIGNER	A. SHOKROLLAHI
DESIGNER	
DESIGNER	
CHECKER	C. ABRAMS
DRAWN BY	A. SHOKROLLAHI
HDR PROJECT NO.	10162165



SANTA FE COUNTY
PROJECT NO. 2019-0029-PW/CW
RANCHO VIEJO
WATER SERVICE
IMPROVEMENT DESIGN

GENERAL
GENERAL NOTES

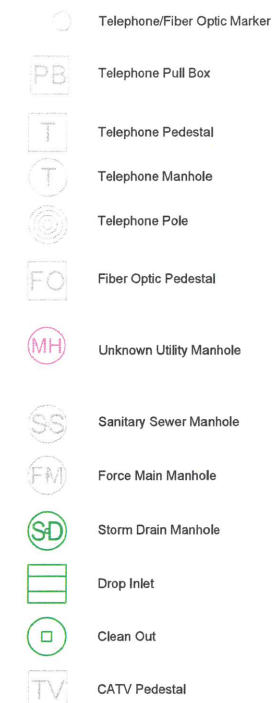
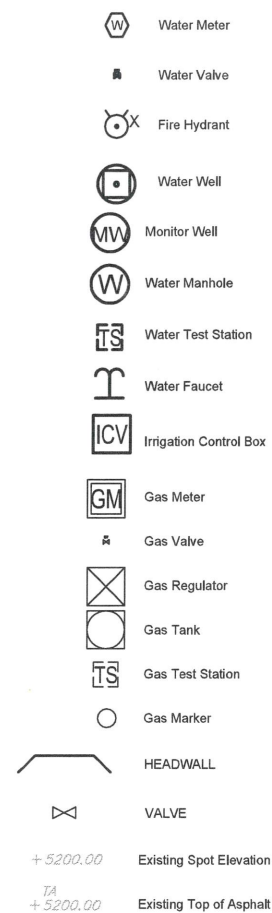
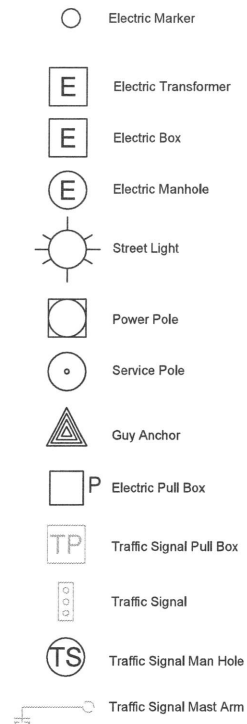
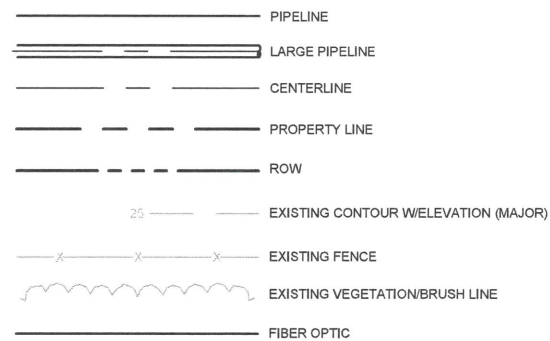
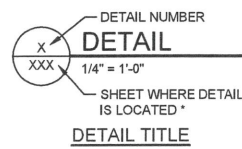
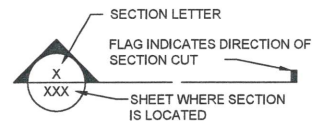
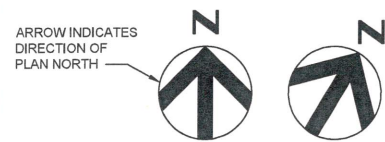
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 FOR REFERENCE PURPOSES
 DO NOT SCALE FROM THIS

FILENAME | G-02.dwg
 SCALE | NONE

SHEET
G-02

GENERAL SYMBOLOGY

UTILITY/CIVIL LINE SYMBOLOGY



GENERAL NOTES:

1. THIS IS A STANDARD SHEET SHOWING COMMON SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATERWORK ASSOCIATION
CFR	CODE OF FEDERAL REGULATIONS
DEPT	DEPARTMENT
DI	DUCTILE IRON
DOT	DEPARTMENT OF TRANSPORTATION
DWG	DRAWING
E	EASTING
ETC	ETCETERA
EW	EACH WAY
EXST	EXISTING
FT	FEET
HORIZ	HORIZONTAL
MIN	MINIMUM
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTHING
NM	NEW MEXICO
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NTS	NOT TO SCALE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ACT
PRV	PRESSURE REDUCING VALVE
SQ	SQUARE
SSPWC	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
STD	STANDARD
TYP	TYPICAL
W/	WITH

File Path: C:\pwworking\aesd\11631163-03.dwg, LT, G-03, Date: June 18, 2020



0	JUNE 2020	CONTRACT DRAWINGS
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER G. ALVARADO	
DESIGNER	A. SHOKROLLAHI
DESIGNER	
DESIGNER	
CHECKER	C. ABRAMS
DRAWN BY	A. SHOKROLLAHI
HDR PROJECT NO.	10162165



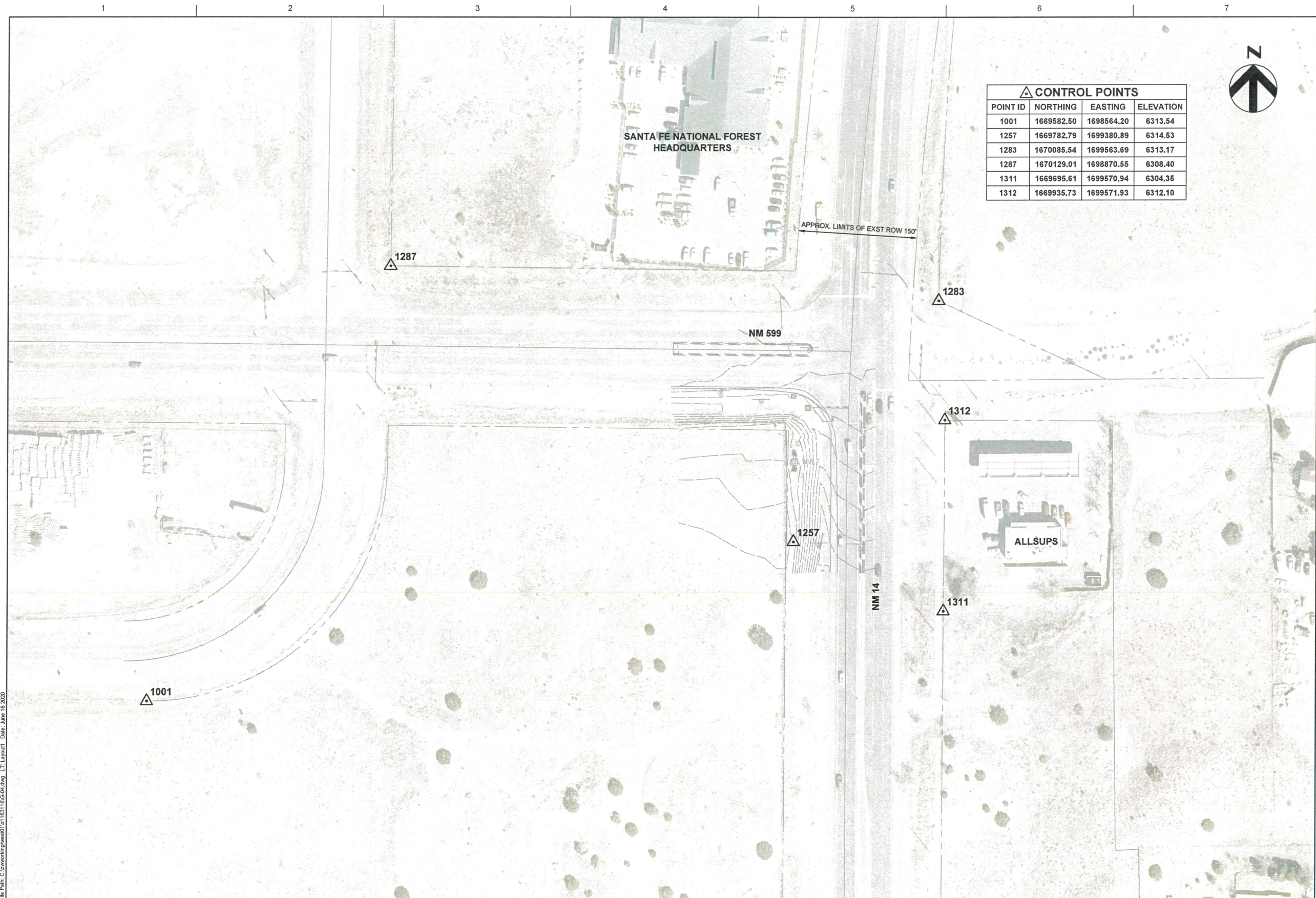
SANTA FE COUNTY
PROJECT NO. 2019-0029-PW/CW
RANCHO VIEJO
WATER SERVICE
IMPROVEMENT DESIGN

0 1" 2"
FOR REFERENCE PURPOSES
DO NOT SCALE FROM THIS

GENERAL
LEGEND AND ABBREVIATIONS

FILENAME | G-03.dwg
SCALE | NONE

SHEET
G-03



△ CONTROL POINTS			
POINT ID	NORTHING	EASTING	ELEVATION
1001	1669582.50	1698564.20	6313.54
1257	1669782.79	1699380.89	6314.53
1283	1670085.54	1699563.69	6313.17
1287	1670129.01	1698870.55	6308.40
1311	1669695.61	1699570.94	6304.35
1312	1669935.73	1699571.93	6312.10

GENERAL NOTES

1. BEARINGS ARE BASED UPON NEW MEXICO STATE PLANE GRID BEARINGS (NAD 83 - CENTRAL ZONE). THE COORDINATES SHOWN HEREON ARE MODIFIED N.M. STATE PLANE COORDINATES AND WERE SCALED BY THE PROJECT COMBINED FACTOR OF 1.00038974 AROUND THE ORIGIN OF 0,0.
2. ELEVATIONS ARE BASED UPON THE NAVD 88 DATUM, AND ARE REFERRED TO THE SURVEY CONTROL DESCRIBED ABOVE.
3. THE COORDINATE AND ELEVATIONS SHOWN HEREON ARE EXPRESSED IN U.S. SURVEY FEET.
4. FIELD SURVEYS WERE CONDUCTED ON APRIL 8, 2019.

File Path: C:\pwworking\west01\103116\G-04.dwg, LT, Layout1, Date: June 18 2020



ISSUE	DATE	DESCRIPTION
0	JUNE 2020	CONTRACT DRAWINGS

PROJECT MANAGER G. ALVARADO	
DESIGNER	A. SHOKROLLAHI
DESIGNER	
CHECKER	C. ABRAMS
DRAWN BY	A. SHOKROLLAHI
HDR PROJECT NO.	10162165



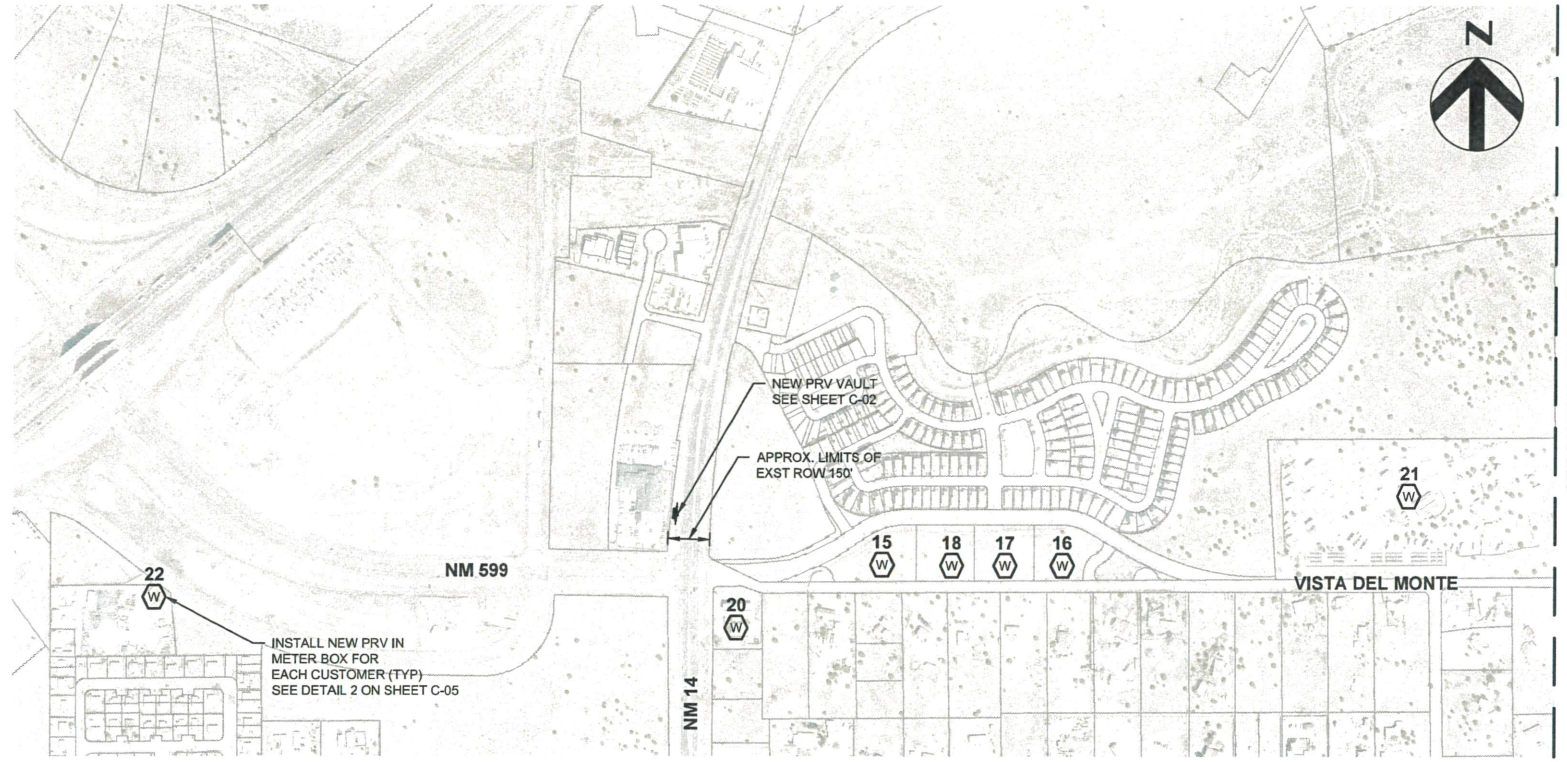
SANTA FE COUNTY
PROJECT NO. 2019-0029-PW/CW
RANCHO VIEJO
WATER SERVICE
IMPROVEMENT DESIGN



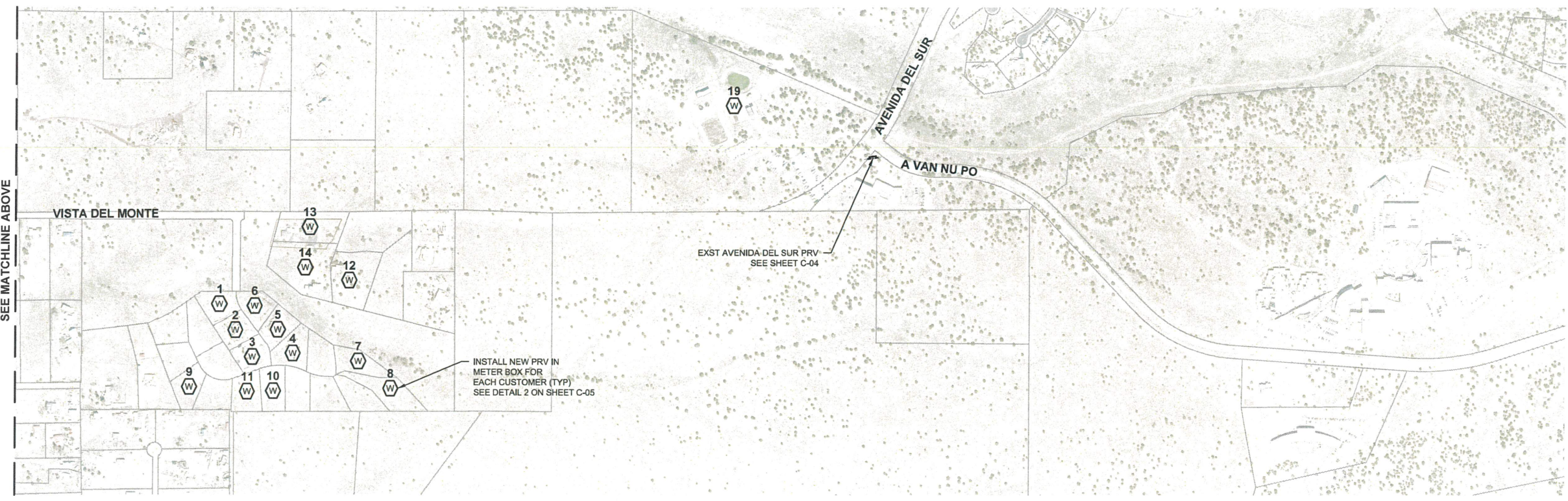
GENERAL SURVEY CONTROL

FILENAME | G-04.dwg
 SCALE | 1"=40'-0"

SHEET
G-04



WATER SERVICE SCHEDULE				
PT NO.	CUSTOMER ACCT. NO.	ADDRESS	METER SIZE	NOTES
1	9050	11 SERENA RD	5/8"	PRIVATE RESIDENCE
2	9051	13 SERENA RD	5/8"	PRIVATE RESIDENCE
3	9052	17 SERENA RD	5/8"	PRIVATE RESIDENCE
4	9053	18 SERENA RD	5/8"	PRIVATE RESIDENCE
5	9054	16 SERENA RD	5/8"	PRIVATE RESIDENCE
6	9055	14 SERENA RD	5/8"	PRIVATE RESIDENCE
7	9057	9 EAST SERENA LANE	5/8"	PRIVATE RESIDENCE
8	9058	12 EAST SERENA LANE	5/8"	PRIVATE RESIDENCE
9	9059	10 WEST SERENA LANE	5/8"	PRIVATE RESIDENCE
10	9062	2 WEST SERENA LANE	5/8"	PRIVATE RESIDENCE
11	9063	6 WEST SERENA LANE	5/8"	PRIVATE RESIDENCE
12	9070	06 LEWIS LANE	5/8"	PRIVATE RESIDENCE
13	9071	106 VISTA DEL MONTE	5/8"	PRIVATE RESIDENCE
14	9072	04 LEWIS LANE	5/8"	PRIVATE RESIDENCE
15	9075	15 VISTA DEL MONTE	5/8"	PRIVATE RESIDENCE
16	9076	29 VISTA DEL MONTE	5/8"	PRIVATE RESIDENCE
17	9077	25 VISTA DEL MONTE	5/8"	PRIVATE RESIDENCE
18	9078	21 VISTA DEL MONTE	5/8"	PRIVATE RESIDENCE
19	10391	181 AVENIDA DEL SUR	5/8"	RANCHO VIEJO WWTP
20	10754	2 VISTA DEL MONTE	1"	ALLSUP'S CONVENIENCE STORE
21	10755	14 BROWNCastle RANCH	2"	SANTA FE SKIES RV PARK
22	316	27572C E FRONTAGE RD	5/8"	PRIVATE RESIDENCE



File Path: C:\pwworking\wast01\103116\C-01.dwg LT: Layout1 Date: June 18 2020

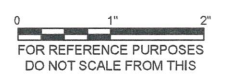


ISSUE	DATE	DESCRIPTION
0	JUNE 2020	CONTRACT DRAWINGS

PROJECT MANAGER	G. ALVARADO
DESIGNER	A. SHOKROLLAHI
DESIGNER	
DESIGNER	
CHECKER	C. ABRAMS
DRAWN BY	A. SHOKROLLAHI
HDR PROJECT NO.	10162165



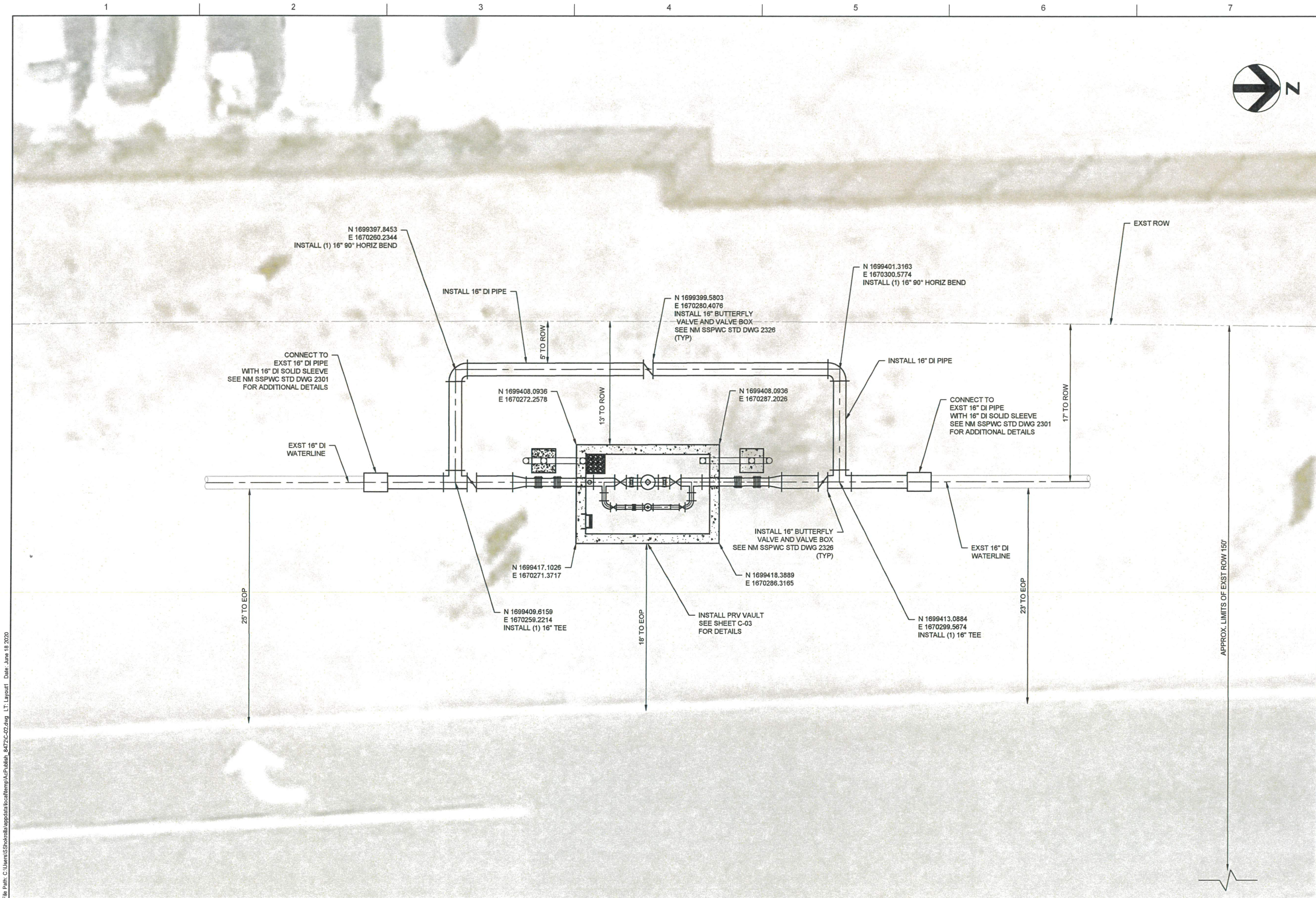
SANTA FE COUNTY
PROJECT NO. 2019-0029-PW/CW
RANCHO VIEJO
WATER SERVICE
IMPROVEMENT DESIGN



CIVIL
OVERALL SITE PLAN

FILENAME | C-01.dwg
 SCALE | 1"=400'-0"

SHEET
C-01



GENERAL NOTES

1. THE LOCATION OF ALL EXISTING WATERLINES AND UTILITIES SHOWN IS APPROXIMATE. THE LOCATION OF THE EXISTING 16-INCH WATERLINE WAS DETERMINED BASED ON RECORD DRAWING INFORMATION AND NO FIELD SURVEYING WAS COMPLETED TO CONFIRM THE LOCATION. PRIOR TO CONSTRUCTION AND/OR EXCAVATION ACTIVITIES, THE CONTRACTOR SHALL COMPLETE VACUUM EXCAVATION/POTHOLING TO VERIFY THE LOCATION OF THE EXISTING 16-INCH DUCTILE IRON WATERLINE AND OTHER EXISTING UTILITIES IN THE PROJECT AREA THAT MAY IMPACT THE LOCATION FOR THE PRV VAULT AND CONNECTIONS TO THE EXISTING 16-INCH WATERLINE. CONTRACTOR MAY BE REQUIRED TO ADJUST THE LOCATION FOR THE PROPOSED PRV VAULT AND 16-INCH WATERLINE BASED ON THE RESULTS OF THE VACUUM EXCAVATION/POTHOLING ACTIVITIES. THE FINAL LOCATION FOR THE PRV VAULT SHALL BE DETERMINED IN COORDINATION WITH THE ENGINEER AND OWNER.
2. ALL NEW WATERLINES SHALL BE AWWA C151 PRESSURE CLASS 250 DUCTILE IRON UNLESS OTHERWISE SPECIFIED.
3. CONTRACTOR TO MAINTAIN MINIMUM COVER OF 4 FEET OVER TOP OF WATERLINE.
4. MAINTAIN MINIMUM HORIZONTAL CLEARANCE OF 1 FT AND VERTICAL CLEARANCE OF 1 FT ON ALL UTILITY CROSSINGS UNLESS NOTED OTHERWISE.
5. DEFLECT PIPE JOINTS HORIZONTALLY AND/OR VERTICALLY AS NECESSARY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS TO MAINTAIN ALIGNMENT OF WATERLINE.
6. ALL PIPE JOINTS AND FITTINGS TO BE FULLY RESTRAINED.
7. ALL BURIED DUCTILE IRON PIPING TO BE FURNISHED WITH POLYETHYLENE ENCASEMENT, BLUE COLOR.
8. FOR TYPICAL TRENCH DETAIL SEE SHEET C-05.

File Path: C:\Users\Shokrollah\appdata\local\temp\publish_8472c2d2.dwg LT: Layout1 Date: June 18 2020



ISSUE	DATE	DESCRIPTION
0	JUNE 2020	CONTRACT DRAWINGS

PROJECT MANAGER	G. ALVARADO
DESIGNER	A. SHOKROLLAHI
CHECKER	C. ABRAMS
DRAWN BY	A. SHOKROLLAHI
HDR PROJECT NO.	10162165



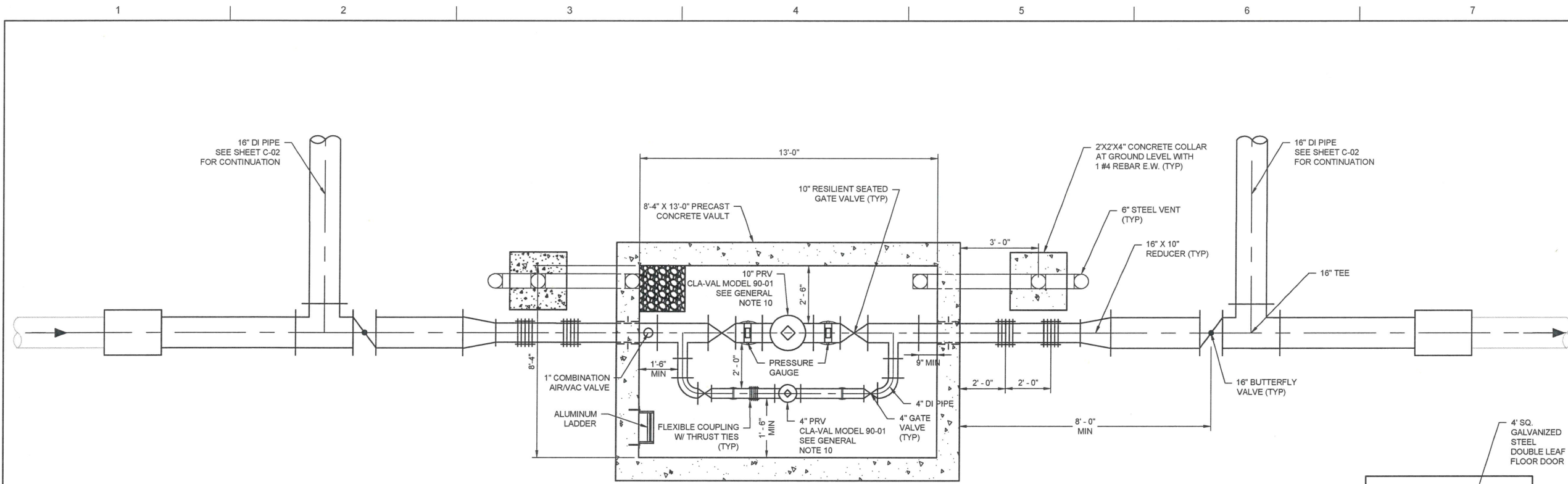
SANTA FE COUNTY
PROJECT NO. 2019-0029-PW/CW
RANCHO VIEJO
WATER SERVICE
IMPROVEMENT DESIGN



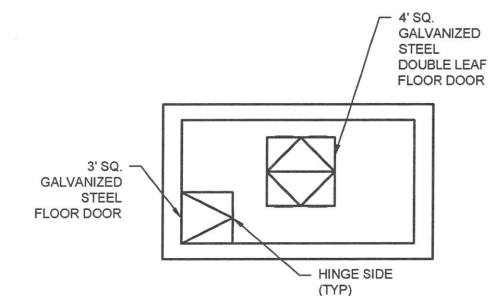
CIVIL
NM 599 / NM 14
PRV VAULT SITE PLAN

FILENAME | C-02.dwg
SCALE | 1" = 5'

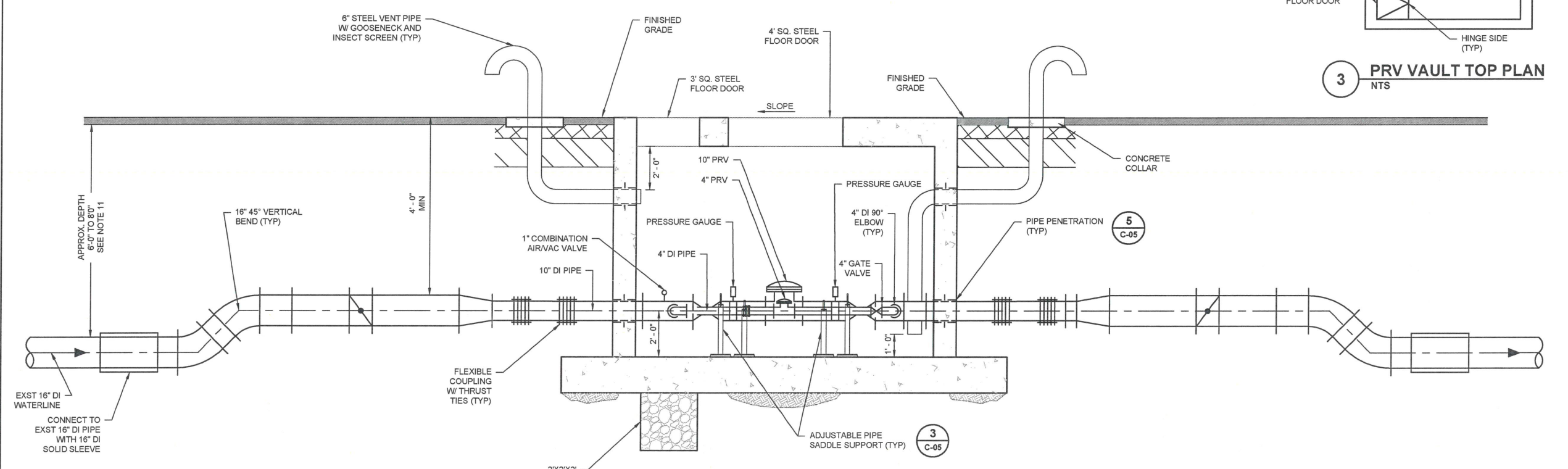
SHEET
C-02



1 PRV VAULT PLAN
NTS



3 PRV VAULT TOP PLAN
NTS



2 PRV VAULT SECTION
NTS

- GENERAL NOTES**
1. THE PLAN AND SECTION FOR THE PRV VAULT SHOWN ON THIS SHEET IS INTENDED TO PROVIDE A GENERAL FLOOR PLAN LAYOUT AND DIMENSIONS FOR THE VAULT BUT DOES NOT DETAIL ALL DESIGN REQUIREMENTS. THE PLAN AND SECTION IS ALSO INTENDED TO IDENTIFY MAJOR COMPONENTS AND PIPING FOR THE VAULT BUT DOES NOT REFLECT ALL PARTS AND COMPONENTS TO BE PROVIDED BY THE CONTRACTOR.
 2. FOR ALL DESIGN REQUIREMENTS AND INFORMATION REGARDING REQUIRED PIPING, VALVES, AND APPURTENANCES SEE NM SSPWC STD DETAIL DWG 2354 AND OTHER APPLICABLE DETAILS REFERENCED.
 3. FOR STRUCTURAL DETAILS AND REQUIRED REINFORCING SEE NM SSPWC STD DWG 2357 AND OTHER APPLICABLE DETAILS REFERENCED.
 4. GALVANIZED STEEL FLOOR DOORS AND FRAMES SHALL BE DESIGNED TO WITHSTAND AN AASHTO H-20 LIVE LOAD LEVEL 6 PER ASTM C1802-14 AND SHALL BE FLUSH WITH TOP OF VAULT.
 5. GALVANIZED STEEL FLOOR DOORS SHALL BE BILCO TYPE JD-H20, USF FABRICATION MODEL DT-93 AHD OR ENGINEER APPROVED EQUAL.
 6. GALVANIZED STEEL FLOOR DOORS SHALL INCLUDE HORIZONTAL SPRINGS FOR EASY OPENING, A RECESSED HASP COVERED BY A HINGED LID FLUSH WITH TOP SURFACE AND FIBERGLASS INSULATION UNDER THE COVER. ALL HARDWARE, HINGES, ATTACHMENT NUTS, WASHERS, ANCHORS AND ACCESSORIES SHALL BE TYPE 304 STAINLESS STEEL.
 7. THE 4'X6' FLOOR DOOR SHALL BE CENTERED OVER BOTH PRV'S.
 8. AREAS OF FLOOR DOOR FRAME IN CONTACT WITH CONCRETE SHALL BE COATED WITH BITUMINOUS COATING.
 9. 6" VENT PIPING SHALL BE ROUTED SUCH THAT THE ABOVE GROUND GOOSENECK AND INSECT SCREEN ARE LOCATED OUT OF VEHICULAR OR PEDESTRIAN TRAFFIC AREAS. EXTEND INTAKE VENT TO 1 FT ABOVE VAULT FLOOR AND TERMINATE EXHAUST VENT AT INTERIOR OF VAULT WALL.
 10. PRV'S SHALL BE CLA-VAL MODEL 90-01 OR ENGINEER APPROVED EQUAL. SEE SPEC SECTION 40 05 52 - MISCELLANEOUS VALVES FOR ADDITIONAL PRV REQUIREMENTS.
 11. CONTRACTOR TO COMPLETE VACUUM EXCAVATION/POTHOLING AND CONFIRM DEPTH OF EXISTING 16" WATERLINE.

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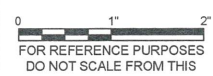


ISSUE	DATE	DESCRIPTION
0	JUNE 2020	CONTRACT DRAWINGS

PROJECT MANAGER G. ALVARADO	
DESIGNER	A. SHOKROLLAHI
DESIGNER	
CHECKER	C. ABRAMS
DRAWN BY	A. SHOKROLLAHI
HDR PROJECT NO. 10162165	



SANTA FE COUNTY
PROJECT NO. 2019-0029-PW/CW
RANCHO VIEJO
WATER SERVICE
IMPROVEMENT DESIGN

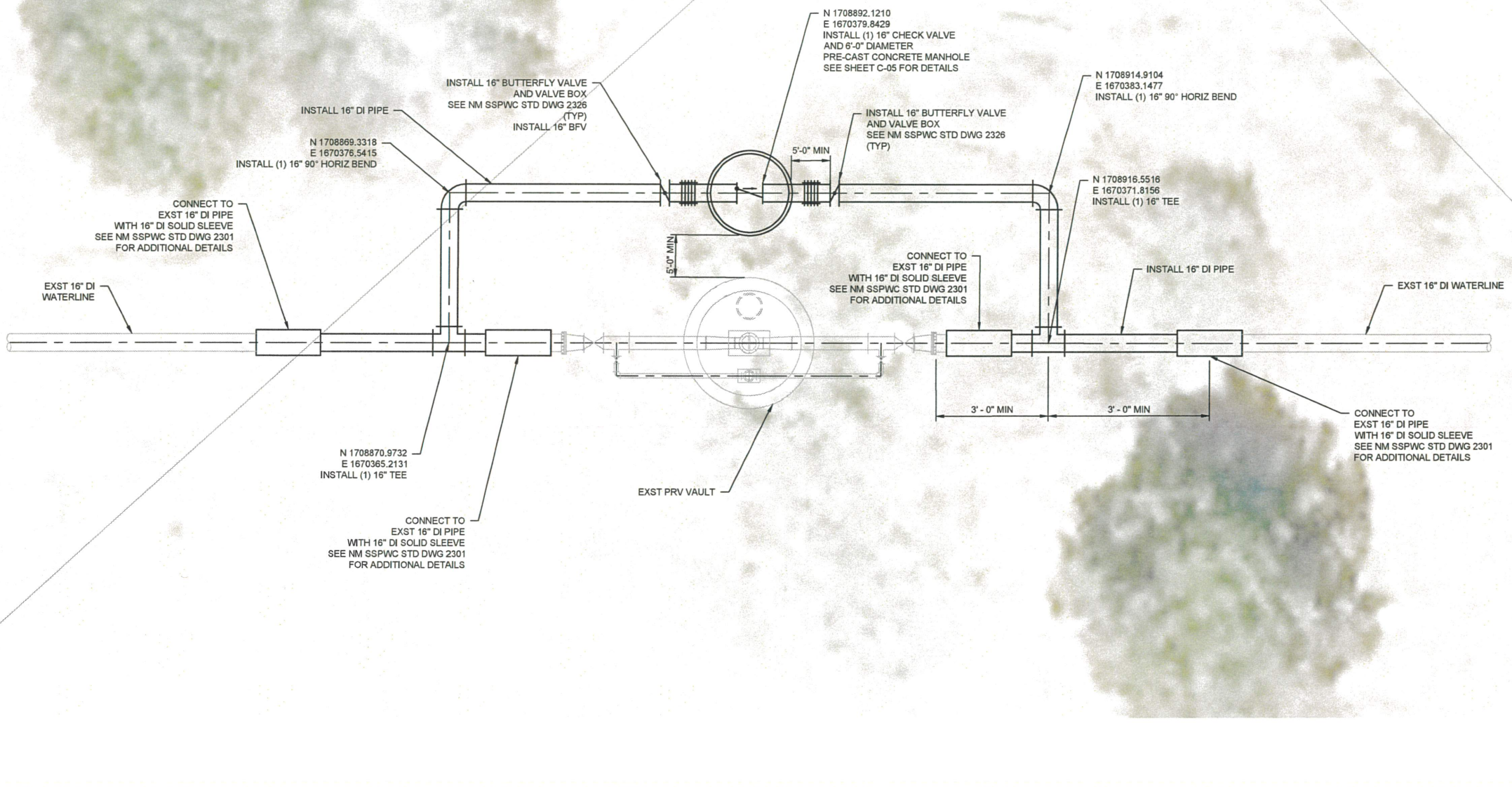


FILENAME C-03.dwg
SCALE XX" = XX'-XX"

SHEET
C-03

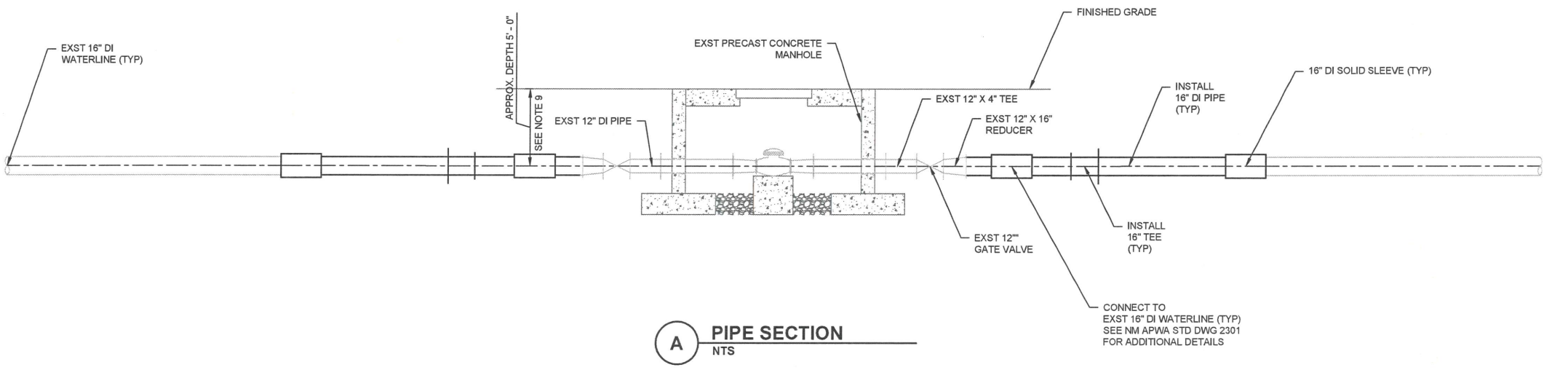
CIVIL
NM 599 / NM 14
PRV VAULT PLAN AND SECTION

1 2 3 4 5 6 7 8



GENERAL NOTES

1. THE LOCATION OF ALL EXISTING WATERLINES AND UTILITIES SHOWN IS APPROXIMATE. THE LOCATION OF THE EXISTING 16-INCH WATERLINE WAS DETERMINED BASED ON RECORD DRAWING INFORMATION AND NO FIELD SURVEYING WAS COMPLETED TO CONFIRM THE LOCATION. PRIOR TO CONSTRUCTION AND/OR EXCAVATION ACTIVITIES, THE CONTRACTOR SHALL COMPLETE VACUUM EXCAVATION/POTHOLING IN THE FIELD TO VERIFY THE LOCATION OF THE EXISTING 16-INCH DUCTILE IRON WATERLINE AND OTHER EXISTING UTILITIES IN THE PROJECT AREA THAT MAY IMPACT THE LOCATION FOR THE PRV VAULT AND CONNECTIONS TO THE EXISTING 16-INCH WATERLINE. CONTRACTOR MAY BE REQUIRED TO ADJUST THE LOCATION FOR THE PROPOSED PRV VAULT AND 16-INCH WATERLINE BASED ON THE RESULTS OF THE VACUUM EXCAVATION/POTHOLING ACTIVITIES. THE FINAL LOCATION FOR THE PRV VAULT SHALL BE DETERMINED IN COORDINATION WITH THE ENGINEER AND OWNER.
2. ALL NEW WATERLINES SHALL BE AWWA C151 PRESSURE CLASS 250 DUCTILE IRON UNLESS OTHERWISE SPECIFIED.
3. CONTRACTOR TO MAINTAIN MINIMUM COVER OF 4 FEET OVER TOP OF WATERLINE.
4. MAINTAIN MINIMUM HORIZONTAL CLEARANCE OF 1 FT AND VERTICAL CLEARANCE OF 1 FT ON ALL UTILITY CROSSINGS UNLESS NOTED OTHERWISE.
5. DEFLECT PIPE JOINTS HORIZONTALLY AND/OR VERTICALLY AS NECESSARY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS TO MAINTAIN ALIGNMENT OF WATERLINE.
6. ALL PIPE JOINTS AND FITTINGS TO BE FULLY RESTRAINED.
7. ALL BURIED DUCTILE IRON PIPING TO BE FURNISHED WITH POLYETHYLENE ENCASEMENT. POLYETHYLENE ENCASEMENT TO BE BLUE COLOR.
8. FOR TYPICAL TRENCH DETAIL SEE SHEET C-05.
9. CONTRACTOR TO COMPLETE VACUUM EXCAVATION/POTHOLING AND CONFIRM DEPTH OF EXISTING 12" WATERLINE.



A PIPE SECTION
NTS

File Path: C:\pwworking\wea01\163116\C-04.dwg LT: Layout Date: June 18 2020



ISSUE	DATE	DESCRIPTION
0	JUNE 2020	CONTRACT DRAWINGS

PROJECT MANAGER	G. ALVARADO
DESIGNER	A. SHOKROLLAHI
DESIGNER	
CHECKER	C. ABRAMS
DRAWN BY	A. SHOKROLLAHI
HDR PROJECT NO.	10162165



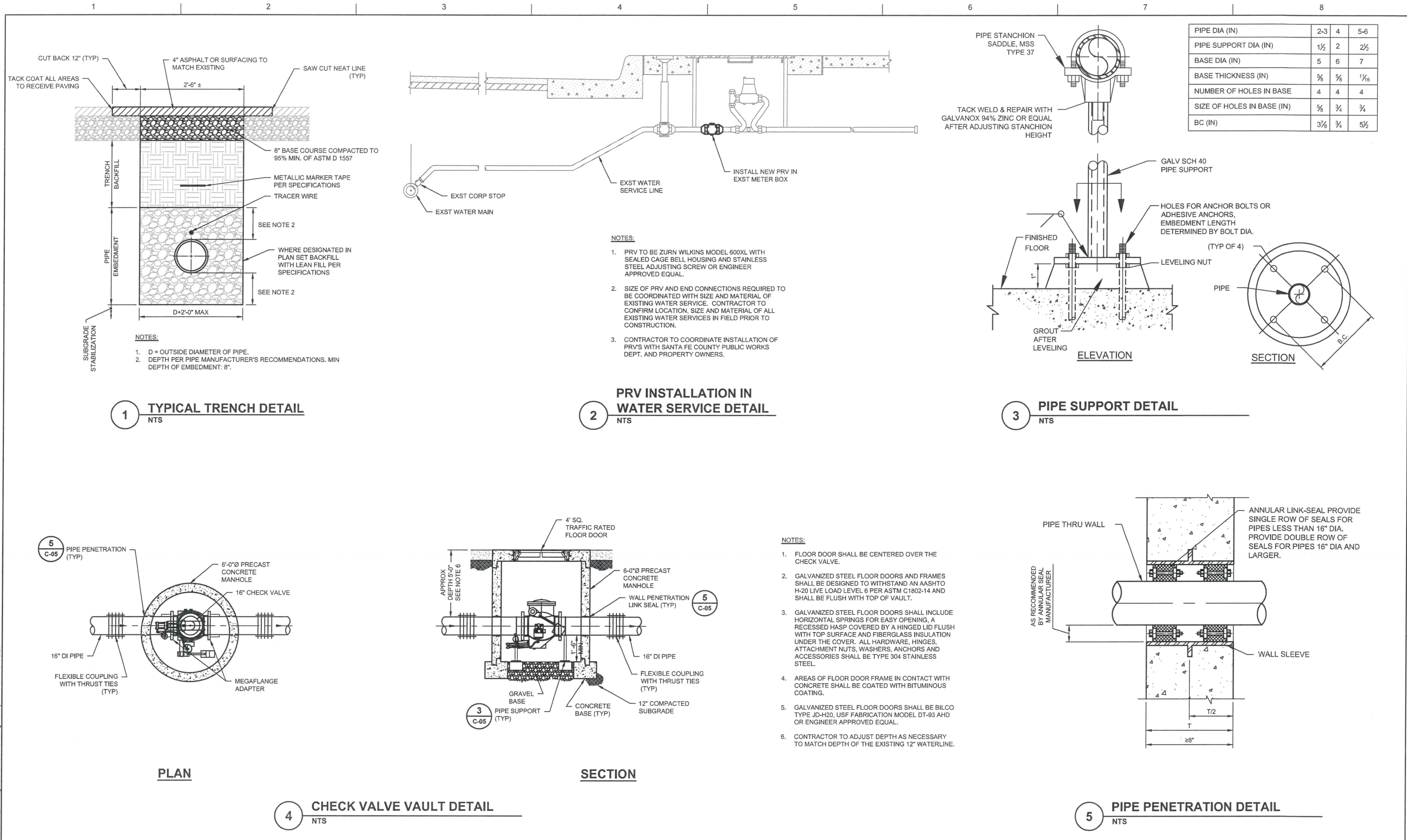
SANTA FE COUNTY
PROJECT NO. 2019-0029-PW/CW
RANCHO VIEJO
WATER SERVICE
IMPROVEMENT DESIGN



CIVIL
AVENIDA DEL SUR
PRV BYPASS WATERLINE

FILENAME | C-04.dwg
SCALE | 1" = 5'

SHEET
C-04



File Path: C:\pwworking\west01\1031181\181C-C-05.dwg LT: Layout Date: June 19, 2020

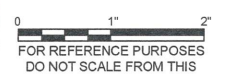


ISSUE	DATE	DESCRIPTION
0	JUNE 2020	CONTRACT DRAWINGS

PROJECT MANAGER	
G. ALVARADO	
DESIGNER	A. SHOKROLLAHI
DESIGNER	
DESIGNER	
CHECKER	C. ABRAMS
DRAWN BY	A. SHOKROLLAHI
HDR PROJECT NO.	10162165



SANTA FE COUNTY
PROJECT NO. 2019-0029-PW/CW
RANCHO VIEJO
WATER SERVICE
IMPROVEMENT DESIGN



FILENAME: C-05.dwg
SCALE: AS SHOWN

SHEET
C-05

CIVIL
MISCELLANEOUS DETAILS

PRIOR TO CONSTRUCTION:

1. TWO WEEKS PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL ERECT PROJECT SIGNS AND PLACE PORTABLE VARIABLE MESSAGE SIGNS. THE NMDOT DISTRICT 1 PUBLIC INFORMATION OFFICER SHALL BE NOTIFIED OF WHEN CONSTRUCTION WILL BEGIN.
2. ALL ADVANCE CONSTRUCTION SIGNING, TEMPORARY EROSION SEDIMENT CONTROL DEVICES AND INCIDENT MANAGEMENT PLAN SHALL BE IN PLACE PRIOR TO CONSTRUCTION COMMENCING IN EACH STAGE AND PHASE. NO WORK SHALL BE PERFORMED UNTIL ALL DEVICES AND INCIDENT MANAGEMENT PLANS ARE IN PLACE AND OPERATIONAL.
3. REFER TO ALL TRAFFIC CONTROL NOTES IN THIS PLAN SET, NMDOT STANDARD DRAWINGS, NMDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, CURRENT EDITION, ANY OR ALL SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIAL PROVISIONS CURRENT EDITIONS AND THE MUTCD CURRENT EDITION.

TRAFFIC CONTROL SUMMARY OF QUANTITIES, ESTIMATED				
ITEM NUMBER	DESCRIPTION	UNIT	SUBTOTAL	USE
606610	TCWB RETAINED BY THE CONTRACTOR (10')	LIN.FT.	292	300
720060	VEHICULAR IMPACT ATTENUATOR UNIT – WORK ZONES	EACH	1	1
702000	CONSTRUCTION SIGNING	SQ.FT.	22.5	25
702100	POSTS FOR CONSTRUCTION SIGNING	L.F.	34	35
702525	CHANNELIZATION DEVICES TYPE DRUM	EACH	7	7

File Path: C:\pwworking\wast01\1163116\TC-01.dwg LT_Layout1 Date: June 16 2020



ISSUE	DATE	DESCRIPTION
0	JUNE 2020	CONTRACT DRAWINGS

PROJECT MANAGER	G. ALVARADO
DESIGNER	M. SUNDBLOM
DESIGNER	
DESIGNER	
CHECKER	R. YPARRAGUIRRE
DRAWN BY	M. SUNDBLOM
HDR PROJECT NO.	10162165



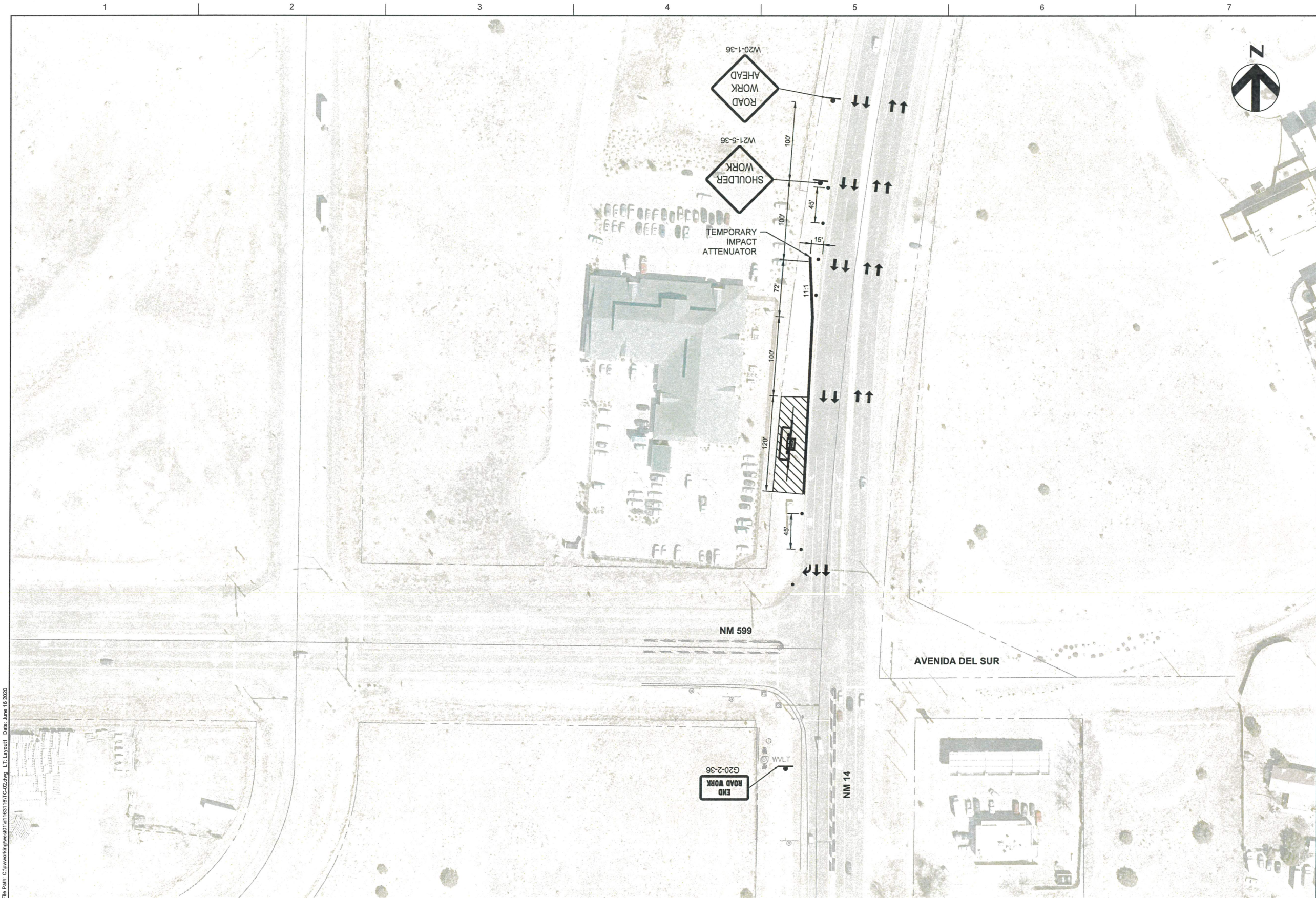
SANTA FE COUNTY
PROJECT NO. 2019-0029-PW/CW
RANCHO VIEJO
WATER SERVICE
IMPROVEMENT DESIGN



FILENAME | TC-01.dwg
 SCALE |

SHEET
TC-01

TRAFFIC CONTROL QUANTITIES



LEGEND:

- WORK ZONE
- TRAFFIC FLOW
- DRUMS
- CONSTRUCTION SIGNS
- TEMPORARY IMPACT ATTENUATOR
- TEMPORARY CONCRETE WALL BARRIER(TCWB)

KEYED NOTES:

- (A) COVER ALL EXISTING SIGNS IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL.

File Path: C:\pwworking\west\161163116\TC-02.dwg LT Layout Date: June 18 2020



ISSUE	DATE	DESCRIPTION
0	JUNE 2020	CONTRACT DRAWINGS

PROJECT MANAGER G. ALVARADO	
DESIGNER	M. SUNDBLOM
DESIGNER	
CHECKER	R. YPARRAGUIRRE
DRAWN BY	M. SUNDBLOM
HDR PROJECT NO. 10162165	



SANTA FE COUNTY
PROJECT NO. 2019-0029-PW/CW
RANCHO VIEJO
WATER SERVICE
IMPROVEMENT DESIGN



FILENAME TC-02.dwg
 SCALE 1"=40'-0"

TRAFFIC CONTROL PLAN

SHEET
TC-02

TRAFFIC CONTROL GENERAL NOTES:

1. **Traffic Control:** All Temporary Traffic Control (TTC) shall be placed in accordance with the NMDOT Standard Specifications for Highway and Bridge Construction (latest edition) and the Manual on Uniform Traffic Control Devices (latest edition) and current revisions with the following constraints:
 - a. No substitutions will be allowed for channelization devices type drum unless otherwise noted in the plans.
 - b. Temporary portable sign stands are an unnecessary hazard when not in use. Unused temporary sign stands shall be removed from the roadway. If temporary sign stands are staged for future use (approved by the project manager) they shall be folded up and stored away from the paved shoulder.
 - c. Use of Type I or II barricades on roadways with speed limit greater than 40 mph is strictly prohibited.
 - d. The work zone shall comply with, but not limited to, NCHRP 476 Guidelines for Design and Operation of Nighttime Traffic Control.
2. **BOP and EOP Signing:** BOP and EOP signing in accordance with Standard Drawing 702-03-1/1 shall be placed at the project limits prior to construction operations commencing and shall remain in place throughout the duration of the project or as directed by the project manager. Advance warning signs shall be placed at all side streets.
3. **FLAGGING:** Flagging shall be provided for safety per the plan or as directed by the project manager and shall conform to the MUTCD latest edition. The flaggers, applicable signs and other related items shall be considered incidental to the completion of the project and no separate measurement or payment will be made.
 - a. All flaggers shall be certified and shall have their certification available for review at all times when on duty.
 - b. Flagging operations shall adhere to NCHRP 476 Guidelines for Design and Operation of Nighttime Traffic Control; Flaggers shall wear high-visibility safety apparel that meets Performance Class 2 or 3
4. **INGRESS AND EGRESS:** The contractor shall provide ingress and egress to local residences and businesses for the duration of the project. If access closure is required, the contractor shall request the closure through the project manager. Upon approval, the contractor shall coordinate such closure with the property owners and the project manager at least 48 hours in advance. All work associated with this shall be considered incidental to the completion of the project and no separate payment or measurement will be made.
5. **PORTABLE CHANGEABLE MESSAGE SIGNS:** The contractor shall supply Portable Changeable Message signs, which will be retained by the contractor. The message boards shall be utilized to convey messages, expected delays, and detours to motorists as required. Messages should be determined by the contractor and approved by the project manager. Two Weeks prior to start of construction name locations, and number of message signs to be placed.
6. **TRAFFIC CONTROL PLANS:** This traffic control plan (TCP) represents a suggested method for traffic control during construction. Adjustments to the details of this TCP and requirements within the plan may be necessary due to construction activities, or as directed by the project manager. If the contractor elects to make any changes to the TCP or sequence of construction, the contractor shall submit four (4) 11" X 17" copies of the proposed TCP to the project manager at least two (2) weeks prior to implementation. The TCP shall conform to the current editions of the MUTCD, NMDOT Standard Specifications and AASHTO Roadside Design Guide. The TCP shall be in computer drafted format and shall be designed, stamped, and revised as necessary by a current New Mexico Licensed professional engineer and submitted to the Project Manager for approval. All costs associated with developing the TCP and any additional devices associated with the TCP shall be incidental to Item No. 618000, "Traffic Control Management," and no separate measurement or payment will be made, unless otherwise noted in the contract.
7. **PUBLIC INFORMATION:** The Contractor / TCP firm shall contact the District Public Information Officer, through the district office, to confirm the actual start dates of the construction and the contractor's schedule a minimum of 48 hours before any work listed in the TCP is performed.
8. **REMOVAL OF CONSTRUCTION SIGNING:** All temporary traffic control signs, sign posts and post bases installed with the construction project shall be REMOVED by the contractor at the completion of the project. Removal shall consist of complete extraction of the bases from the ground. This work shall be incidental to the completion of the project and no separate measurement or payment will be made.
9. **CONFLICTING SIGNS:** All Conflicting Signs within or in advance of the work zone shall be covered completely with an opaque non-light transmitting material so as not to damage the sign. The contractor is to use an approved method of covering existing signs so as not to damage/distort the sign sheeting or markings. The Contractor shall not place tape directly on the face of the sign. Failure to adhere to this requirement will result in the Contractor replacing the sign at no cost to the NMDOT.
10. **TEMPORARY STRIPING:** The use of black paint to cover existing lane lines or symbols is strictly prohibited. All temporary striping shall be placed before opening any work zone or portion of a work zone in accordance with the MUTCD and the approved traffic control plan. This work shall be included in Item No. 704100, "Removable Marking Tape" and no separate measurement or payment will be made, unless otherwise noted in the contract.

11. CONSTRUCTION SIGNING: All construction signing shall meet retroreflectivity requirements listed in section 702.2.1 "Construction Signing" of the NMDOT Standard Specifications.

- a. All construction signing on the interstate and on high speed (greater or equal to 45 MPH) multi-lane divided facilities shall be double indicated (left and right shoulders).
- b. All signs that are part of work zone that are in place for more than 3 days shall be placed on breakaway posts. If there are physical restrictions at the site that prohibit the sign from being placed on posts, the contractor shall notify the District Traffic Engineer and obtain a waiver.
- c. All warning and regulatory signs shall meet the following size requirements:
 Interstate: Warning sign 48"x48" Regulatory 48"x60"
 Non-Interstate: Warning sign 36"x36" Regulatory 36"x42"
- d. The following reflectivity material shall be used on all construction signing placed on NMDOT roadways.

SIGN	SIGN CODE	COLOR	LETTER SHEETING	BACKGROUND SHEETING
APPROACH SIGNS	W20-XX	BLK/FLUORESCENT ORANGE	-----	TYPE VI, IX, XI
CHEVRONS	W1-8	BLK/FLUORESCENT ORANGE	-----	TYPE VI, IX, XI
CURVES	W1-2	BLK/FLUORESCENT ORANGE	-----	TYPE VI, IX, XI
REVERSE CURVE	W1-4	BLK/FLUORESCENT ORANGE	-----	TYPE VI, IX, XI
MERGE	W4-1	BLK/FLUORESCENT ORANGE	-----	TYPE VI, IX, XI
NO PASSING ZONE	W14-3	BLK/FLUORESCENT ORANGE	-----	TYPE VI, IX, XI
FLAGGER PADDLE	-----	BLK/FLUORESCENT ORANGE on Side 1 with RED on Side 2	-----	TYPE VI, IX, XI Type IV White
ALL DRUMS	-----	WHITE/ FLUORESCENT ORANGE	-----	TYPE VIII, IX, XI Type IV white
All Other Const. Signs	-----	BLK/FLUORESCENT ORANGE	-----	TYPE VII, IX, XI

12. **REMOVAL OF TEMPORARY STRIPING:** All relevant temporary striping shall be removed upon completion of each phase of construction. The only approved method of stripe removal is water blasting. The contractor is to ensure that there is no conflicting striping through the work zone or through detours. This work shall be included in Item No. 618000, "Traffic Control Management," and no separate measurement or payment will be made, unless otherwise noted in the contract.
13. **SATISFACTORY WORKING CONDITION:** All traffic control devices used on this project shall be in satisfactory working condition and shall function equivalent to new equipment in accordance with the MUTCD (latest edition). Traffic Control work zone shall comply with requirements of FHWA 23CFR 630 Subpart K for traffic control devices. At the beginning of the project 100% of signs/devices shall be in acceptable condition (new or like new). After 2 weeks at no time shall less than 75% of devices be in acceptable condition. All traffic devices shall be kept clean throughout the duration of the project. Any sign that is tagged by graffiti shall be cleaned (as long as it does not affect the reflective sheeting) within 24 hours or removed and replaced.
14. **TRAFFIC CONTROL FIELD ADJUSTMENTS:** Location of device spacing shall be field verified to account for existing roadway features which may obstruct placement and/or view of devices. Any changes to the traffic control plan should be approved by the District Traffic Engineer or his/her designee. All field adjustments of signs should be approved by the District Traffic Engineer. This work shall be considered incidental to Item No. 618000 "Traffic Control Management" and no additional measurement or payment will be made, unless noted in the contract.
15. **PEDESTRIANS:** Routes/paths shall not be closed without providing a detour. ADA requirements shall be adhered to; ADA compliant devices shall be used for channelization.
16. **BICYCLES:** Shall be accommodated or rerouted per MUTCD recommendations.

NO	DATE	REV. BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)			
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING			
TEMPORARY TRAFFIC CONTROL GENERAL NOTES			
APPROVED	DESIGNED BY		DATE
<i>Ashin Dey</i>	<i>Ashin Dey</i>		12/10/15
DESIGNED BY	DRAWN BY	CHECKED BY	
702-01-1/5			



TRAFFIC CONTROL GENERAL NOTES (CONTINUED):

17. **TEMPORARY CONCRETE WALL BARRIER (CWB):** When flaring the leading end of a Temporary Wall Barrier (CWB) within a construction work zone, the flare rate shall be done in accordance with the rates shown in the table below: (NMDOT Standard Drawing 606-20-5/5)

Roadway Speed Limit	Minimum Taper/ Flare Rate	Desirable Taper/ Flare Rate
Less than 45 MPH	8:1	18:1
Between 45 MPH and 55 MPH	10:1	24:1
Greater than 55 MPH	15:1	30:1

a. When temporary wall barrier is placed in a construction work zone, a 5' clear area is required between the CWB and the work zone to accommodate barrier deflection. When a 5' clear area is not attainable, CWB shall be anchored to the pavement surface.

b. Temporary CWB shall be provided with reflective barrier delineators as indicated in NMDOT standard drawing 606-21-1/1.

18. **CRASH ATTENUATORS:** The crash cushion attenuators shall be designed as per the District Traffic Engineer's recommendations. The District may elect to either utilize the pre-construction posted speed, or the 85% speed in the layout of the crash cushion attenuators within the work zone.

19. **DROP OFF POLICY:** In the areas of pavement operations or other activities within the traveled way and adjacent to the existing traveled lane, the contractor shall assure that no pavement drop-offs are left exposed during non-working hours. The contractor shall initiate corrective means as per "the New Mexico Department of Transportation Pavement Drop-off Guideline" to achieve a minimum 6:1 slope between traveled lanes and a minimum 3:1 slope adjacent to the existing traveled lane with two 11foot driving lanes as shown in the detail below. (AD241)



20. **Lane Closures:** The Contractor/TCP firm shall not place a lane closure taper along a horizontal curve. The taper shall be placed in advance of the horizontal curve so that it is visible to all oncoming traffic. On crest vertical curves, the Contractor/TCP firm shall place lane closures in advance of, or at the beginning of the curve to enhance visibility of the lane closure to oncoming traffic.

21. **Sequential Arrow Display:** Placement of the sequential arrow shall be at or near the beginning of the lane closure taper. In areas of insufficient pavement width, the sequential arrow may be placed within the taper, but not to exceed 1/2 the taper length. In all cases, the sequential arrow shall be placed behind the channelization devices. The shoulder shall be closed in advance of the merging taper to direct vehicular traffic to remain within the traveled way. (MUTCD 6F.61)

22. **ADDITIONAL SIGNS:** "BUMP", "LOOSE GRAVEL", "LANE DROP-OFF SIGN" sign placement: The contractor shall place W8-1 sign ("BUMP" - B/FO), W8-7 sign ("LOOSE GRAVEL" - B/FO) and/or W8-17 signs ("SHOULDER DROP-OFF" - B/FO) in advance of bridge approaches or other locations during cold milling and overlay operations as needed or as directed by the project manager.

23. **CLEAR ZONE:** All stationary objects within clear zone shall be properly shielded and outlined with drums mounted with Type "A" warning lights. Use of vertically mounted retro-reflective material in lieu of a Type A warning light is strictly prohibited.

- a. Equipment, materials, or vehicles stored within Right -of-way (ROW) shall be outside of clear zone (based on existing posted speed).
- b. Equipment, material or vehicles stored within clear zone shall be properly shielded.
- c. Materials, work activities, equipment, and vehicles shall not be stored within the established buffer space of the project work zone.
- d. All construction equipment, vehicles and materials shall remain behind traffic control devices.

24. **TRAFFIC CONTROL MANAGEMENT:** The contractor or the traffic Control Subcontractor shall provide a Traffic Control Supervisor on site during working hours for response within 1 hour to traffic control issues/concerns.



25. **INCIDENT MANAGEMENT:** Contractor is required to comply with requirements of FHWA CFR 630 Subpart J for Work Zone Safety and Mobility which shall include an Incident Management Plan to be utilized for the entire duration of the project. The Incident Management Plan shall contain a method to address traffic flow through the work zone during incidents. The Incident Management Plan must be reviewed and approved by the District Traffic Engineer. The plan shall contain the following as a minimum:

- a. Contacts for the contractor, local enforcement, safety agencies, municipal agencies, public information officer and NMDOT
- b. Steps to be followed during incidents
- c. Method of recording and reporting incidents

26. **LIST OF INCIDENTALS - No Additional Payment Associated**

LIST OF INCIDENTALS for Temporary Traffic Control
 LIST OF INCIDENTALS for Temporary Traffic Control
 MAINTENANCE OF TEMPORARY PAVEMENT MARKINGS FOR PROJECT DURATION

	LIST OF INCIDENTALS for Temporary Traffic Control
A.	MAINTENANCE OF TEMPORARY PAVEMENT MARKINGS FOR PROJECT DURATION

NO.	DATE	REV BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)			
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING			
TEMPORARY TRAFFIC CONTROL GENERAL NOTES			
APPROVED:	<i>Afshin</i>		DATE: 12/10/15
DESIGNED BY:	DRAWN BY:	CHECKED BY:	
702-01-2/5			

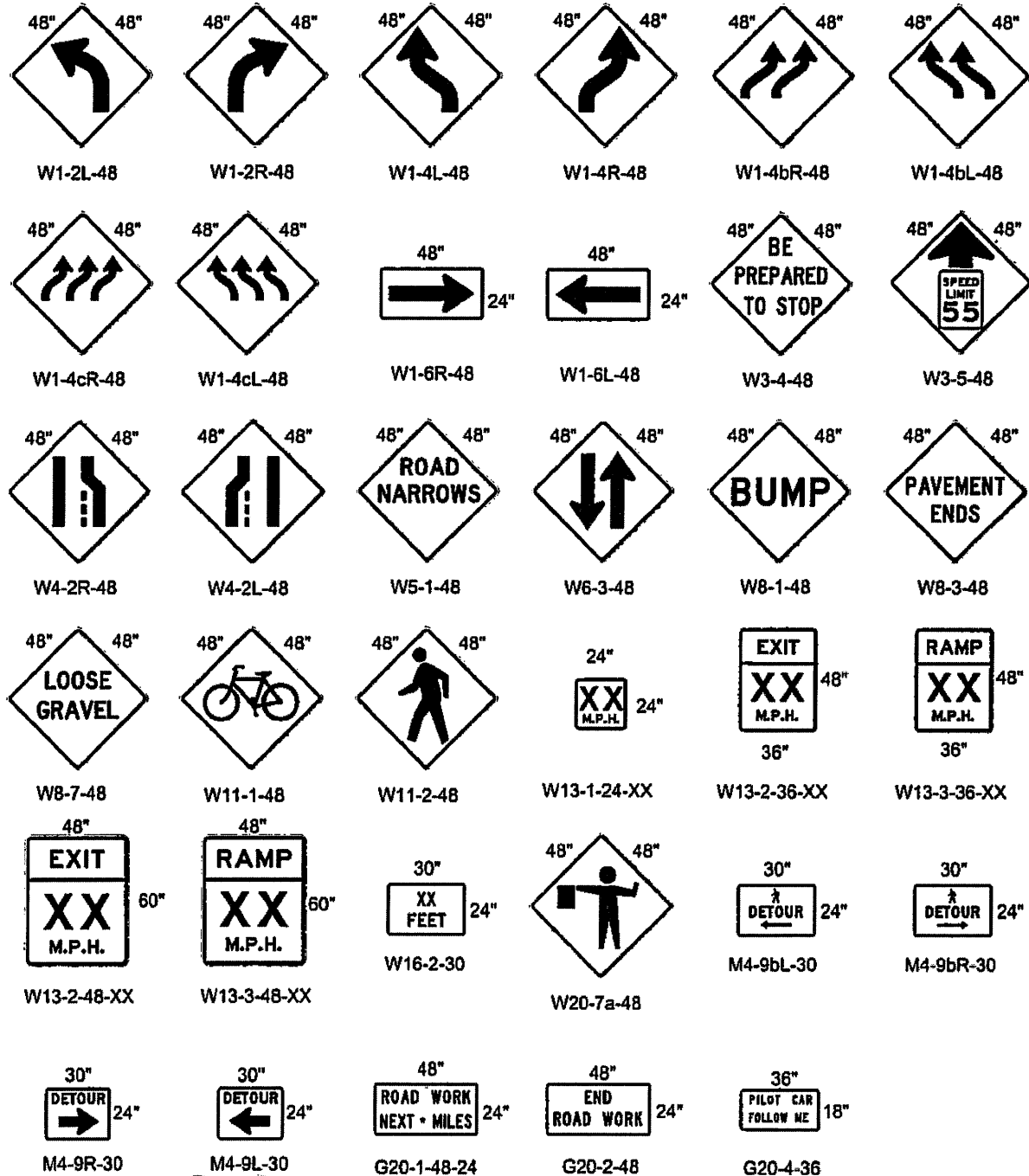
SIGN FACE DETAILS

FOR CONSTRUCTION / MAINTENANCE

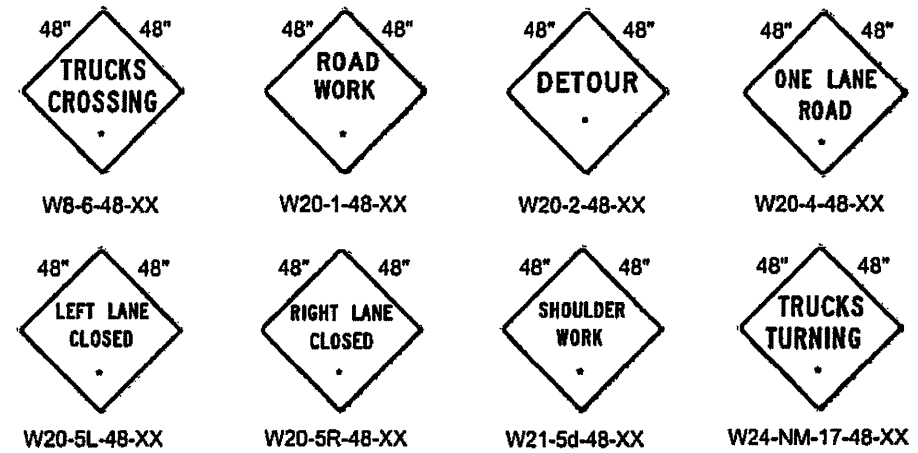
1. SIGNS SHALL MEET SPECIFICATIONS IN THE STANDARD HIGHWAY SIGNS MANUAL AND CURRENT EDITION OF THE MUTCD.
2. SEE CURRENT EDITION OF MUTCD FOR ADDITIONAL SIGNS.
3. ALL SIGNS SHALL COMPLY WITH SHEETING REQUIREMENTS AS SPECIFIED IN STANDARD DRAWING 702-01-3/3.
4. SIGN SIZES MAY BE ADJUSTED PER MUTCD RECOMMENDATIONS.

WARNING SIGNS:

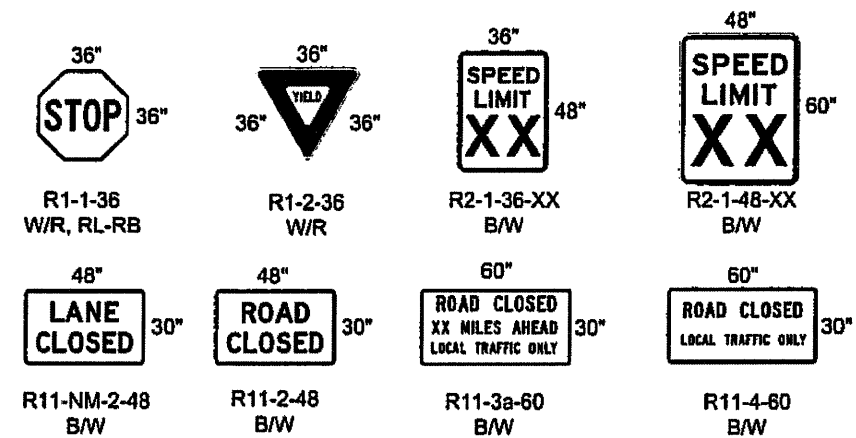
ALL WARNING SIGNS ARE BLACK/FLUORESCENT ORANGE UNLESS OTHERWISE SPECIFIED.



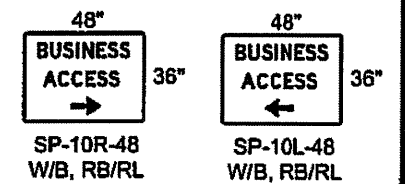
* THESE SIGNS REQUIRE APPROPRIATE DISTANCE INDICATION
(1/2 MILE, 1 MILE, 1500 FT., 750 FT., 500 FT., 350 FT.)



REGULATORY SIGNS:

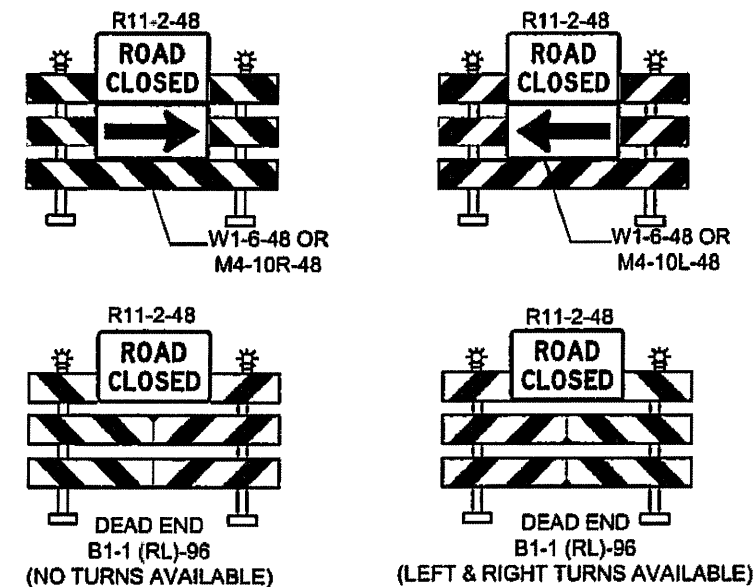


SPECIAL SIGNS:

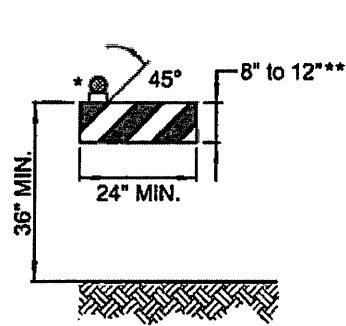


8 FT. TYPE III BARRICADES

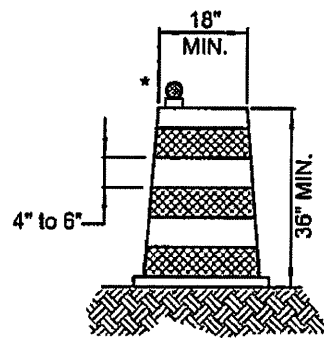
BARRICADE SYMBOL



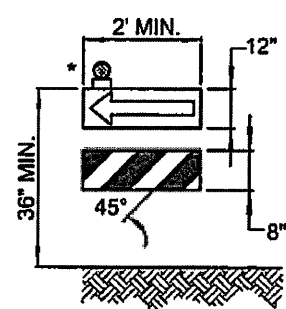
NO.	DATE	REV BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)			
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING			
CONSTRUCTION & MAINTENANCE SIGN FACE DETAILS			
APPROVED:	<i>A. Shin</i>		12/10/15
DESIGNED BY:	DRAWN BY:	CHECKED BY:	
702-01-3/5			



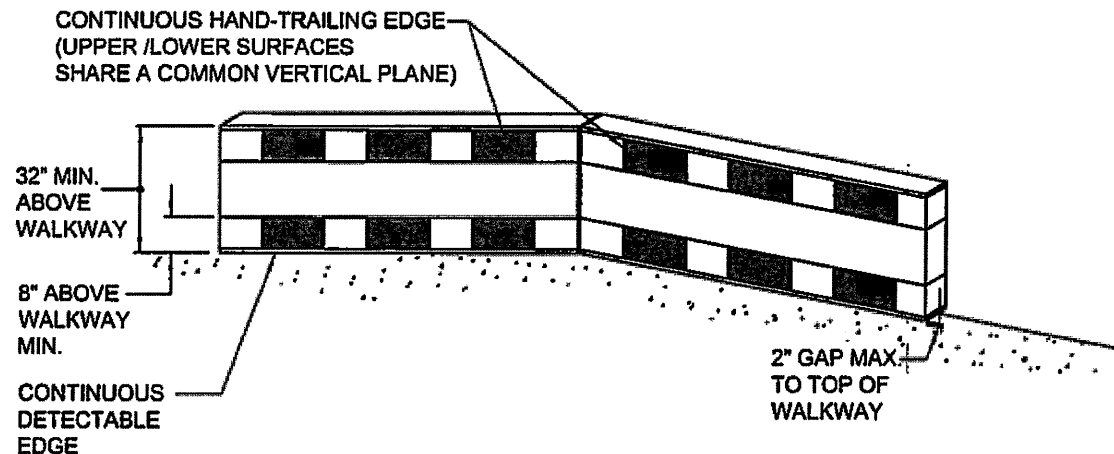
TYPE I BARRICADE :..
LOW SPEED ROADWAY (≤ 40 MPH)



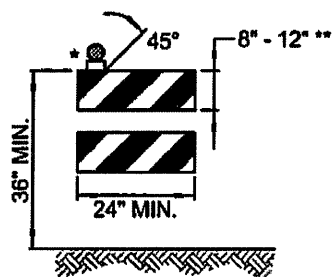
DRUM*



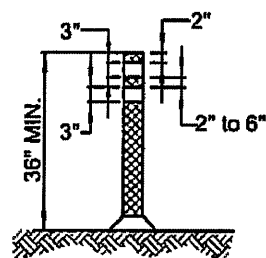
DIRECTION INDICATOR BARRICADE :..



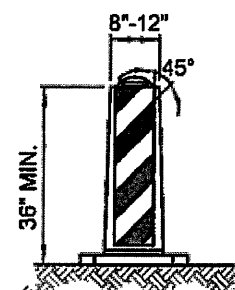
PEDESTRIAN CHANNELIZATION DEVICE (PCD)



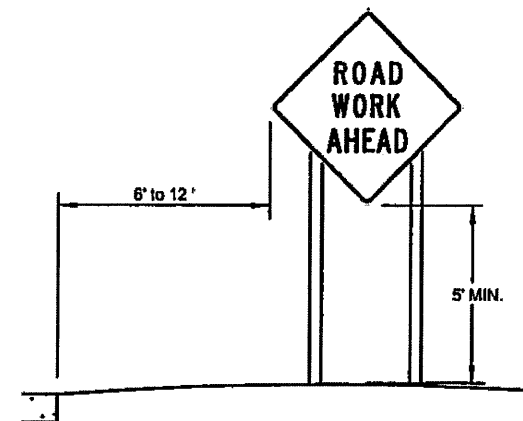
TYPE II BARRICADE ***
LOW SPEED ROADWAY (≤ 40 MPH)



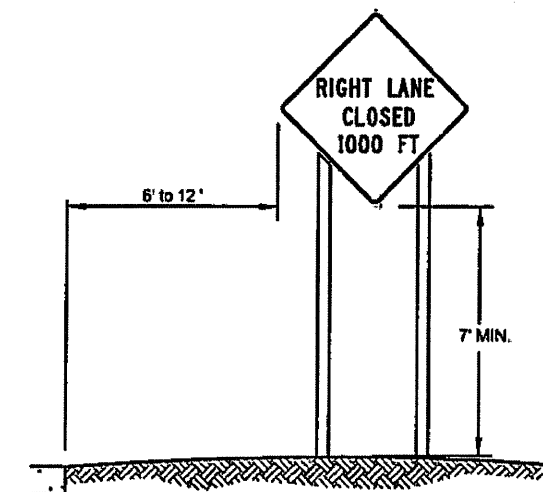
TUBULAR MARKERS



VERTICAL PANEL ***

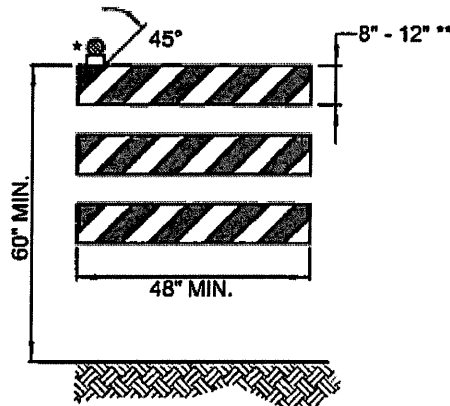


RURAL AREA

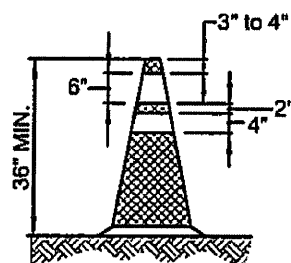


BUSINESS, COMMERCIAL, OR RESIDENTIAL AREA (WITHOUT CURB)

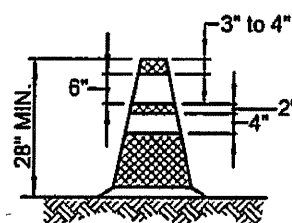
HEIGHT AND LATERAL LOCATIONS OF SIGNS - TYPICAL INSTALLATIONS



TYPE III BARRICADE :..



NIGHT AND/OR FREEWAY HIGH SPEED ROADWAY (≥ 45 MPH)



DAY AND LOW SPEED ROADWAY (≤ 40 MPH)

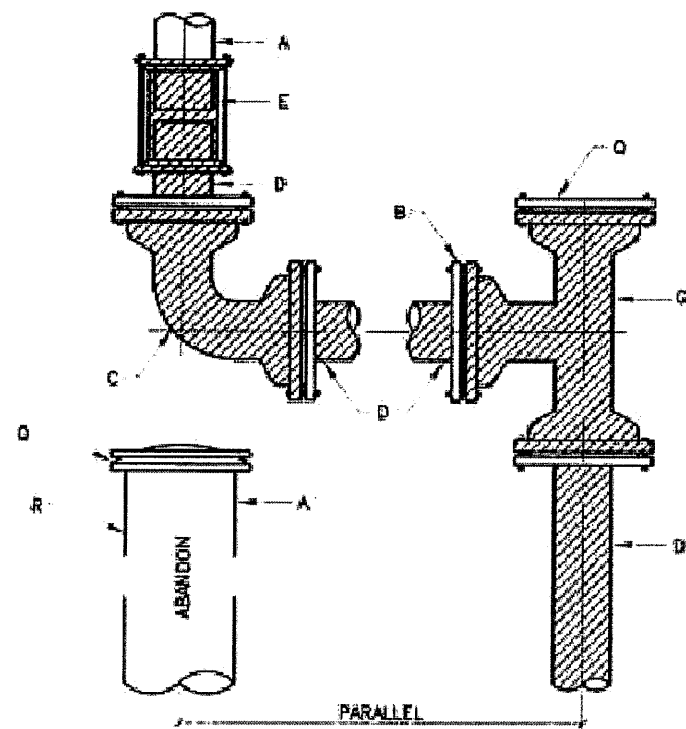
CONES

NOTE:
ALL DEVICES USED ON NMDOT ROADWAYS SHALL BE ON THE APPROVED PRODUCTS LIST.

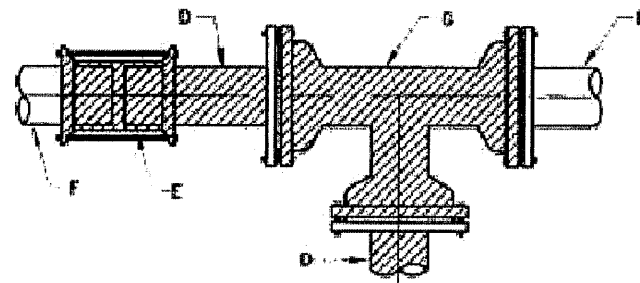
- * WARNING LIGHT (OPTIONAL)
- ** NOMINAL LUMBER DIMENSIONS ARE SATISFACTORY FOR BARRICADE RAIL WIDTH DIMENSIONS.
- *** RAIL STRIPE WIDTHS SHALL BE 6 INCHES. EXCEPTION: WHERE RAIL LENGTHS ARE LESS THAN 36 INCHES. THEN 4 INCH WIDE STRIPES MAY BE USED.

THE SIDES OF BARRICADES FACING TRAFFIC SHALL HAVE RETROREFLECTIVE RAIL FACES. VERTICAL PANELS AND BARRICADES USED ON HIGH-SPEED ROADWAYS, EXPRESSWAYS, AND FREEWAYS SHALL HAVE A MINIMUM OF 270 SQUARE INCHES OF RETROREFLECTIVE AREA FACING TRAFFIC.

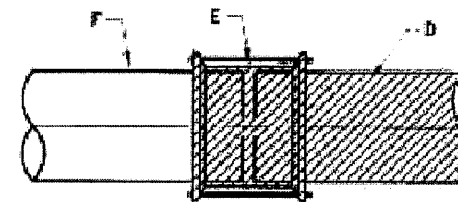
DATE	REV. BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)		
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING		
CHANNELIZATION DEVICES FOR CONSTRUCTION, MAINTENANCE, UTILITY & INCIDENT MANAGEMENT OPERATIONS		
APPROVED:	<i>A. Shins</i>	11/3/15
DESIGNED BY:	DRAWN BY:	CHECKED BY:
702-01-4/5		



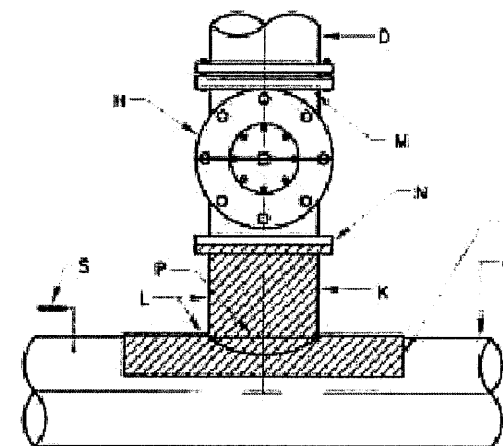
REPLACEMENT OF STEEL LINES 4"-12"
CONNECTION DETAILS



TEE INSERTION D.I., P.V.C. OR A.C. PIPE



TRANSITION COUPLING
FROM D.I. OR P.V.C. TO A.C. PIPE



CONNECTION TO EXISTING STEEL PIPE

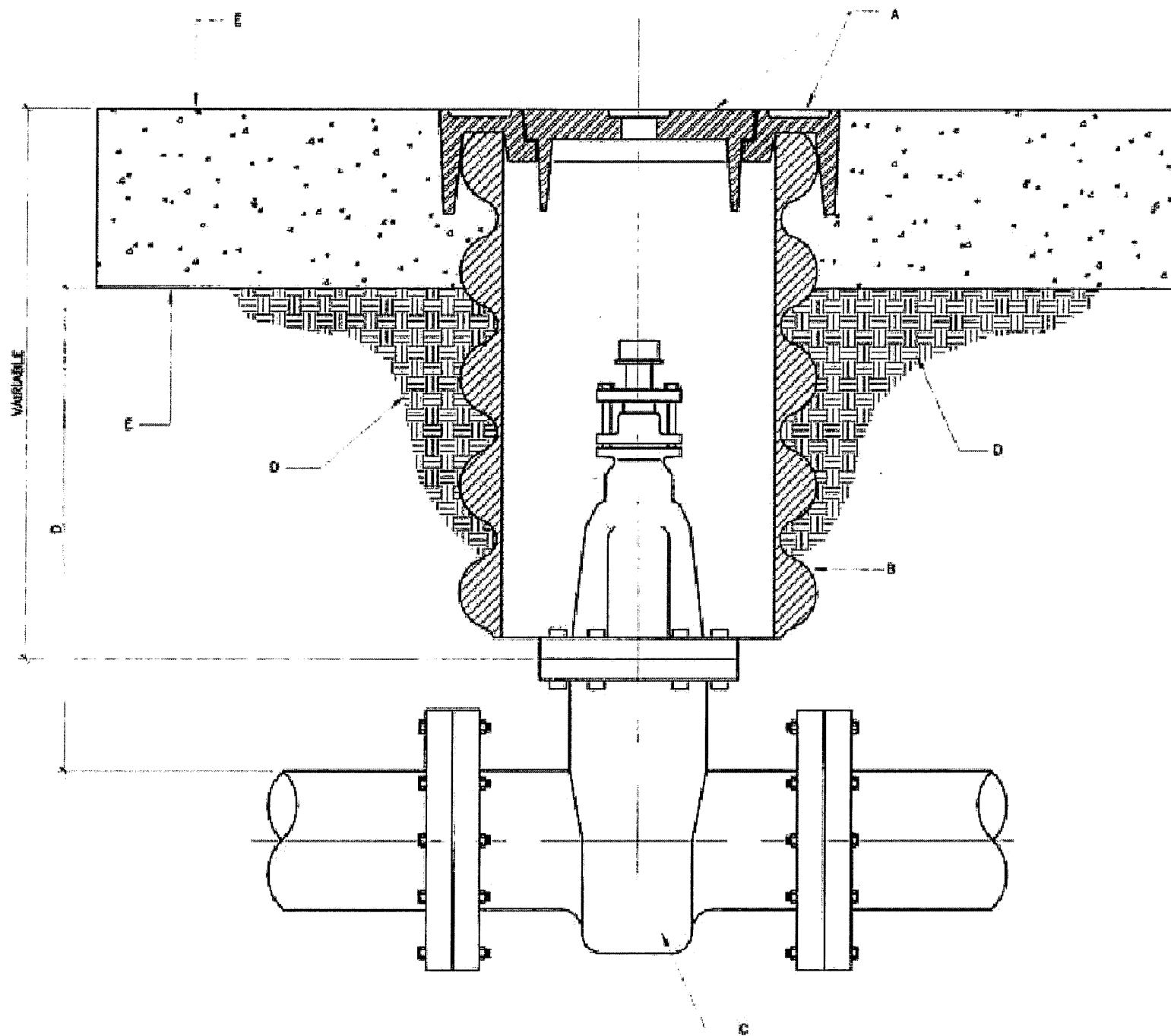
GENERAL NOTES:

- 1 ALL NEW PIPE AND FITTINGS SHALL BE PROVIDED WITH THRUST CONTROL.
- 2 THRUST CONTROL SHALL BE BY RESTRAINED JOINTS ONLY UNLESS DIRECTED OTHERWISE BY ENGINEER.

CONSTRUCTION NOTES:

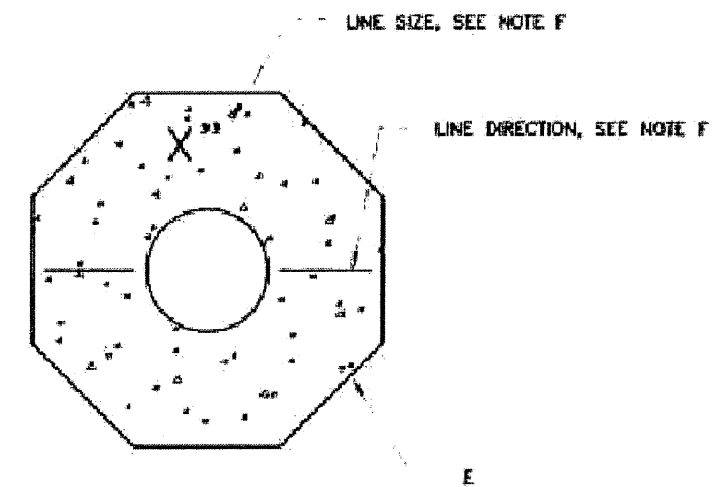
- A EXISTING STEEL PIPE.
- B REDUCE AT TEE, IF EXISTING LINE IS SMALLER THAN NEW LINE.
- C M.J., C.I. ELBOW WITH JOINT RESTRAINT.
- D NEW D.I. OR P.V.C., WITH VALVE AS DIRECTED.
- E RESTRAINED TRANSITION COUPLING FOR A.C. RESTRAINED SOLID SLEEVE FOR D.I., C.I. AND PVC.
- F EXISTING D.I. OR C.I. OR P.V.C. IF A.C., USE PAD ADAPTER.
- G M.J. C.I. TEE WITH JOINT RESTRAINT.
- H GATE VALVE FL.—M.J. WITH JOINT RESTRAINT.
- J WELDING COLLAR.
- K STEEL WELDING NECK FL.
- L TAR COAT COLLAR, NECK AND DAMAGED PIPE COATING.
- M M.J. FLANGE.
- N FLANGE.
- P PRESSURIZED CONNECTION.
- Q M.J., C.I. PLUG OR CAP WITH JOINT RESTRAINT.
- R REMOVE AT LEAST 10' OF PIPE TO BE ABANDONED AND CAP OR PLUG.
- S TAC-WELD SACRIFICIAL ANODE TO STEEL PIPE.

REVISIONS	NM APWA
	WATER
	WATERLINE CONNECTION DETAILS
	DWG. 2301 FEB. 2006



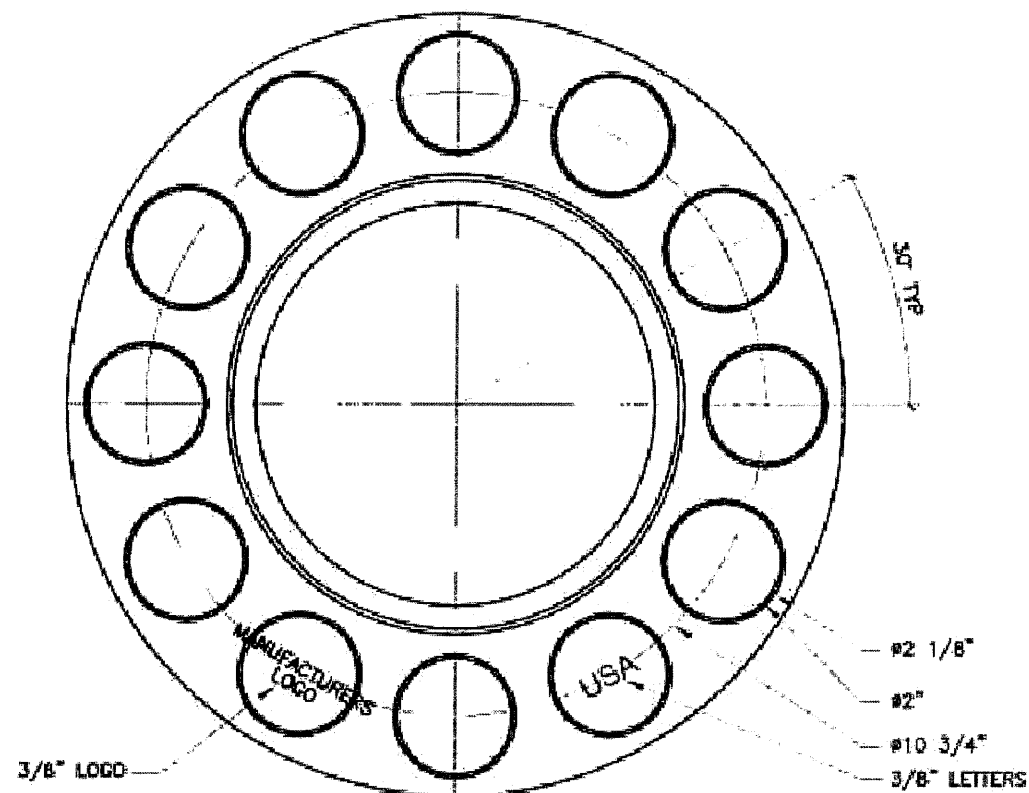
GENERAL NOTES:

- A VALVE BOX RING AND COVER PER STD. DWG. 232B.
- B 10" DIAMETER RIBBED OR CORRUGATED PVC OR PE PIPE WITH SMOOTH INTERIOR (C-900).
- C NEW OR EXISTING VALVE.
- D COMPACTED BACKFILL, SOIL OR BASE COURSE MATERIAL (95% COMPACTION), SEE SECTION 701.
- E CONCRETE COLLAR PER STD. DWG. 2461.
- F TOP OF CONCRETE COLLAR SHALL BE STAMPED WITH LINE SIZE AND DIRECTION. MINIMUM LETTER SIZE SHALL BE 3" IN HEIGHT.
- G MIN. 6" OR MATCH EXISTING.

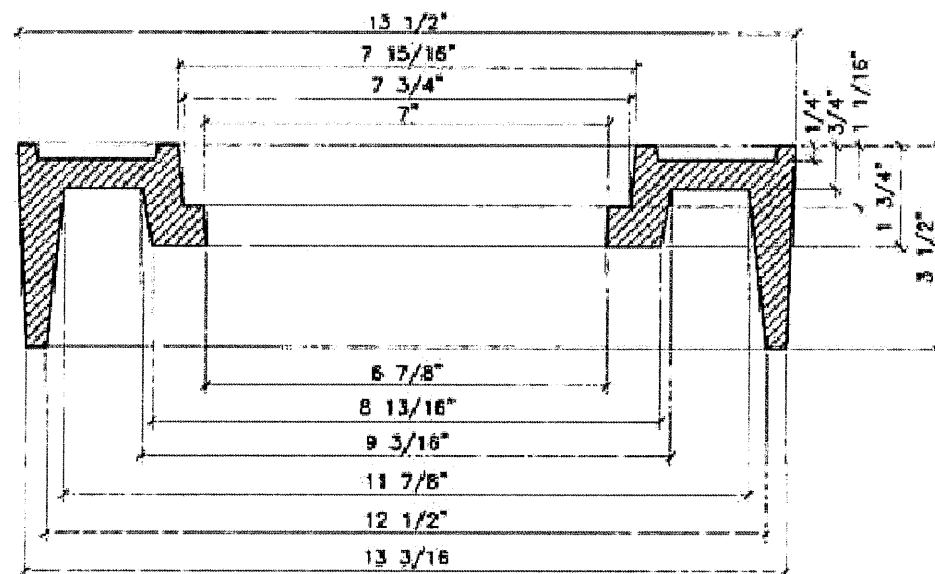


LABEL REQUIREMENTS

REVISIONS	NM APWA
	WATER VALVE BOX
	DWG: 2326 FEB. 2006

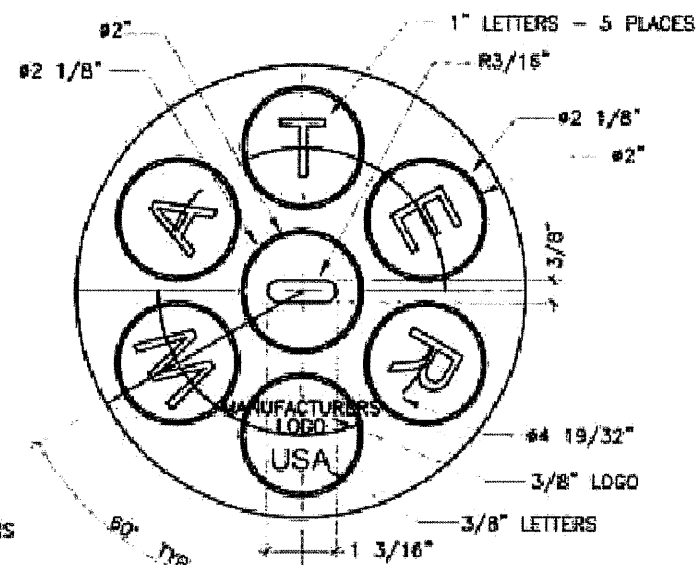


TOP VIEW

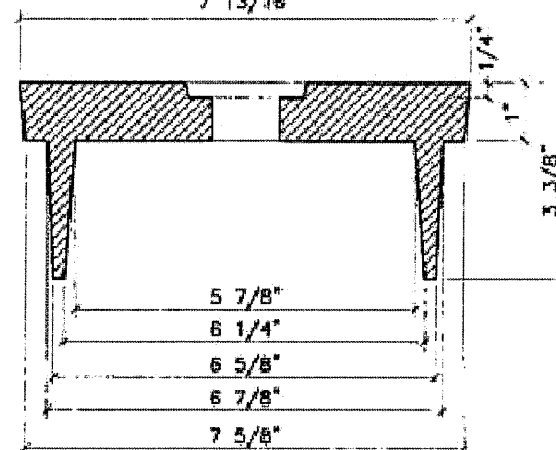


SECTION

VALVE BOX RING



TOP VIEW



SECTION

VALVE BOX COVER

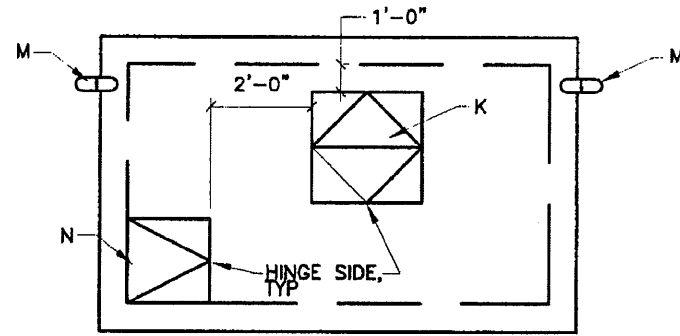
GENERAL NOTES - RING

- 1 VALVE BOX RING DESIGNED TO ACCEPT VALVE BOX COVER.
- 2 THE CASTING NUMBER, MANUFACTURER'S LOGO, DATE OF MANUFACTURE AND "USA" SHALL BE CAST IN A CONSPICUOUS LOCATION ON BOTH THE RING AND THE COVER.
- 3 FILLETS SHALL BE 1/4"R UNLESS OTHERWISE SPECIFIED.
- 4 A DRAFT ANGLE OF 3°-5° SHALL BE APPLIED UNLESS OTHERWISE SPECIFIED.
- 5 FINISH: REMOVE EXCESS IRON AND FIN.
- 6 THIS DETAIL DOES NOT APPLY FOR VALVE BOX RING AND COVER TO BE USED ON REUSE OR NON-POTABLE WATER SYSTEMS.

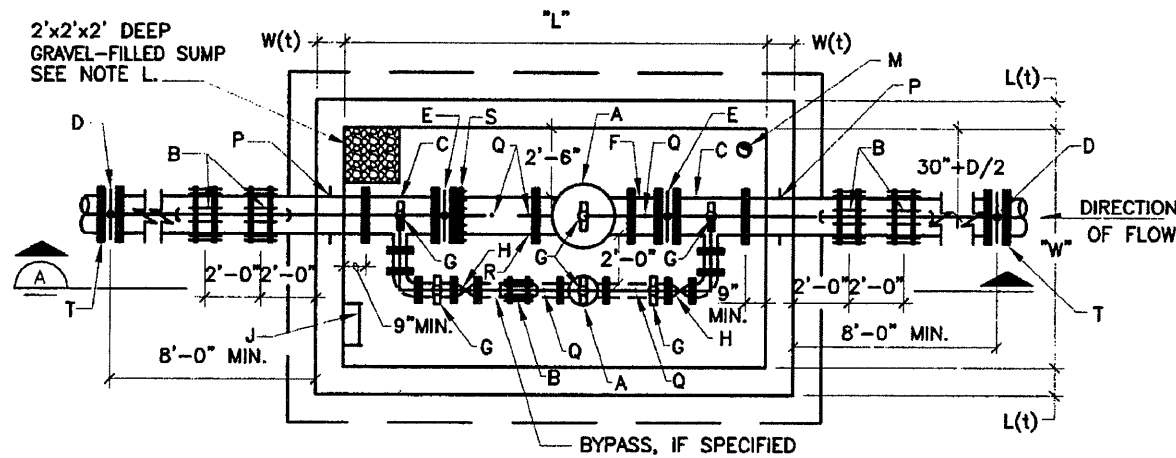
GENERAL NOTES - COVER

- 1 VALVE BOX COVER DESIGNED TO FIT INTO VALVE BOX RING.
- 2 THE CASTING NUMBER, MANUFACTURER'S LOGO, DATE OF MANUFACTURE AND "USA" SHALL BE CAST IN A CONSPICUOUS LOCATION ON BOTH THE RING AND THE COVER.
- 3 FILLETS SHALL BE 1/4"R UNLESS OTHERWISE SPECIFIED.
- 4 A DRAFT ANGLE OF 3°-5° SHALL BE APPLIED UNLESS OTHERWISE SPECIFIED.
- 5 FINISH: REMOVE EXCESS IRON AND FIN.

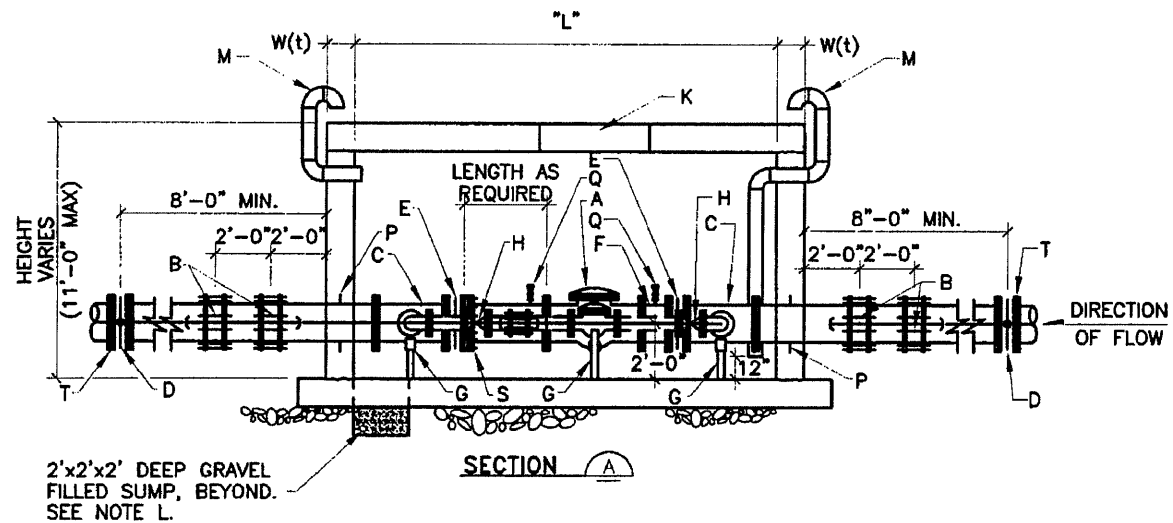
REVISIONS	NM APWA
	WATER RING AND COVER FOR VALVE BOX
	DWG. 232B FEB. 2006



TOP PLAN



INTERIOR PLAN



SECTION A

GENERAL NOTES:

- FOR STRUCTURAL DETAILS, VAULT DIMENSIONS AND REINFORCING SEE STANDARD PRV STATION STRUCTURAL DETAILS DWG. 2357.

CONSTRUCTION NOTES:

- PRV LOCATION, FINAL DESIGN AND LAYOUT SHALL BE APPROVED BY THE WATER UTILITY DIVISION TO CONFORM WITH SPECIFIC SYSTEM AND SITE REQUIREMENTS.
- PRV STATION ACCESS OPENING COVERS SHOWN ON THIS STANDARD DETAIL ARE SUITABLE FOR LOCATIONS NOT EXPOSED TO CONTINUOUS HIGH DENSITY TRAFFIC. IF PRV STATION MUST BE LOCATED IN AREAS OF CONTINUOUS HIGH DENSITY TRAFFIC THE ACCESS OPENING COVERS SHALL BE SPECIFICALLY DESIGNED TO WITHSTAND THE CONDITIONS AND LOADINGS TO BE ENCOUNTERED.
- ALUMINUM FLOOR DOORS AND FRAME FOR LOCATIONS SUBJECT TO INTERMITTENT AND LIGHT DENSITY TRAFFIC SHALL BE DESIGNED TO WITHSTAND A LIVE LOAD OF THE AASHTO H-20 DESIGNATION AND SHALL BE FLUSH WITH TOP OF VAULT.
- ALUMINUM FLOOR DOORS AND FRAMES FOR LOCATIONS OUT OF ROADWAYS AND NOT SUBJECT TO TRAFFIC LOADINGS SHALL BE DESIGNED TO WITHSTAND A LIVE LOAD OF 300 POUNDS PER SQUARE FOOT AND SHALL EXTEND 3-INCHES MINIMUM ABOVE TOP OF VAULT.
- 6-INCH VENT PIPING SHALL BE ROUTED SUCH THAT THE ABOVE GROUND GOOSENECK AND INSECT SCREEN ARE LOCATED OUT OF VEHICULAR OR PEDESTRIAN TRAFFIC AREAS.

- A PRESSURE REDUCING VALVE, AS SPECIFIED
- B FLEXIBLE COUPLING WITH THRUST TIES, SEE THRUST TIE DETAIL ON DWG. 2358
- C FLANGED TEE, REQUIRED ONLY IF BYPASS SPECIFIED
- D BURIED BUTTERFLY VALVE (GATE VALVE FOR SIZE < 14")
- E BUTTERFLY VALVE WITH HAND WHEEL OPERATOR (GATE VALVE FOR SIZE < 8"), REQUIRED ONLY WHEN BYPASS IS SPECIFIED.
- F FLANGED SPOOL, LENGTH = 1'-0"
- G ADJUSTABLE PIPE SADDLE SUPPORT, GRINNELL FIG. 264, ELCEN FIG. 50 OR EQUAL, TYPICAL
- H GATE VALVE WITH HAND WHEEL OPERATOR, REQUIRED ONLY IF BYPASS SPECIFIED
- J 1'-6" WIDE ALUMINUM LADDER W/LADDER UP SAFETY POST PER OSHA STANDARDS.
- K ALUMINUM FLOOR DOOR WITH RECESSED HASP COVERED BY A HINGED LID FLUSH WITH TOP SURFACE. DOOR SIZE SHALL BE 4'x4' DOUBLE LEAF (WITHOUT BYPASS) AND 4'x6' DOUBLE LEAF (WITH BYPASS). HARDWARE AND HINGES SHALL BE 304 STAINLESS STEEL. BILCO TYPE JD, OR EQUAL.
- L GRAVEL PER ASTM C33, NO. 57 GRAVEL.
- M 6" STEEL PIPE W/GOOSENECK AND INSECT SCREEN
- N 3'-0" SQ ALUMINUM FLOOR DOOR WITH RECESSED HASP COVERED BY A HINGED LID FLUSH WITH TOP SURFACE. HARDWARE AND HINGES SHALL BE 304 STAINLESS STEEL. BILCO TYPE J, OR EQUAL.
- P WALL PIPE WITH THRUST COLLAR, CENTER IN WALL
- Q 1/2" PIPE TAP WITH 1/2" BALL VALVE AND CAP
- R D.I. SPOOL FLG. x P.E.
- S MEGA FLANGE - FLANGE ADAPTER, AS MANUFACTURED BY EBAA IRON SALES, OR APPROVED EQUAL.
- T INSULATING FLANGE KIT.

REVISIONS	NM APWA
	WATER
	STANDARD PRV STATION
	NO METER
	DWG. 2354 FEB. 2006

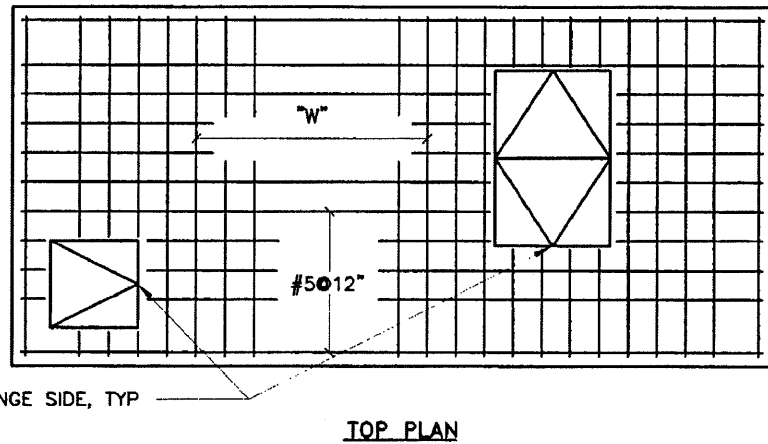
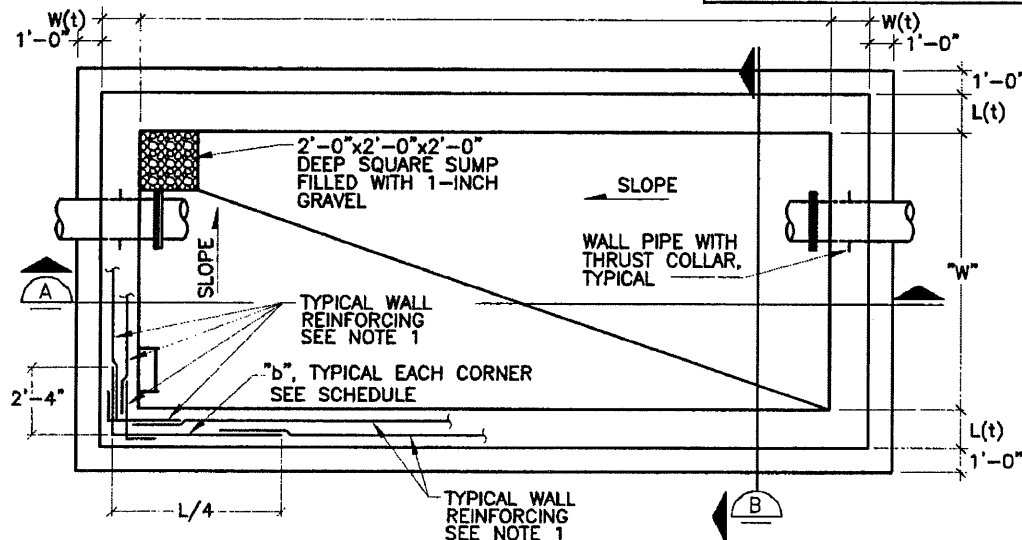
PRV VAULT DIMENSION AND REINFORCING SCHEDULE

PIPE SIZE (IN)	STANDARD PRV VAULT DIMENSIONS										WALL REINFORCING										
	STANDARD PRV NO METER, NO BYPASS		STANDARD PRV NO METER, W/BYPASS		WITH PROPELLER METER AND NO BYPASS		WITH PROPELLER METER AND BYPASS		WITH MAGNETIC FLOW METER AND BYPASS		WALL THICKNESS		TOP THICKNESS		WITHOUT BYPASS			WITH BYPASS			
	"L"	"W"	"L"	"W"	"L"	"W"	"L"	"W"	"L"	"W"	L(t)	W(t)	T(t)	T(t)	"L"	"W"	"a"	"a"	"b"	"a"	"a"
6	10'-6"	5'-6"	11'-8"	8'-0"	10'-6"	5'-6"	14'-6"	8'-0"	15'-8"	8'-6"	1'-0"	1'-0"	1'-0"	0'-8"	#6 @ 12"	TYPICAL	TYPICAL	#5 @ 6"	TYPICAL	#6 @ 12"	#6 @ 12"
8	10'-6"	5'-8"	12'-0"	8'-2"	10'-6"	5'-8"	15'-4"	8'-2"	16'-2"	8'-8"	1'-0"	1'-0"	1'-0"	0'-8"	#6 @ 12"	TYPICAL	TYPICAL	#5 @ 6"	TYPICAL	#6 @ 12"	#6 @ 12"
10	10'-6"	5'-10"	13'-0"	8'-4"	11'-4"	5'-10"	17'-4"	8'-4"	17'-4"	8'-10"	1'-0"	1'-0"	1'-0"	0'-8"	#6 @ 12"	#6 @ 12"	TYPICAL	#5 @ 6"	#6 @ 12"	#6 @ 12"	#6 @ 12"
12	10'-6"	6'-0"	13'-8"	8'-6"	12'-8"	6'-0"	19'-0"	8'-6"	18'-4"	9'-0"	1'-0"	1'-0"	1'-0"	0'-8"	#6 @ 12"	#6 @ 12"	TYPICAL	#5 @ 6"	#6 @ 12"	#6 @ 12"	#6 @ 12"
14	10'-6"	6'-2"	14'-9"	8'-8"	14'-3"	6'-2"	21'-6"	8'-8"	20'-2"	9'-2"	1'-0"	1'-2"	1'-0"	0'-8"	#5 @ 6"	#5 @ 6"	#6 @ 12"	#5 @ 6"	#5 @ 6"	#5 @ 6"	#6 @ 12"
16	10'-6"	6'-4"	15'-4"	8'-10"	16'-6"	6'-4"	24'-2"	8'-10"	21'-0"	9'-4"	1'-0"	1'-2"	1'-0"	0'-8"	#5 @ 6"	#5 @ 6"	#6 @ 12"	#5 @ 6"	#5 @ 6"	#5 @ 6"	#6 @ 12"

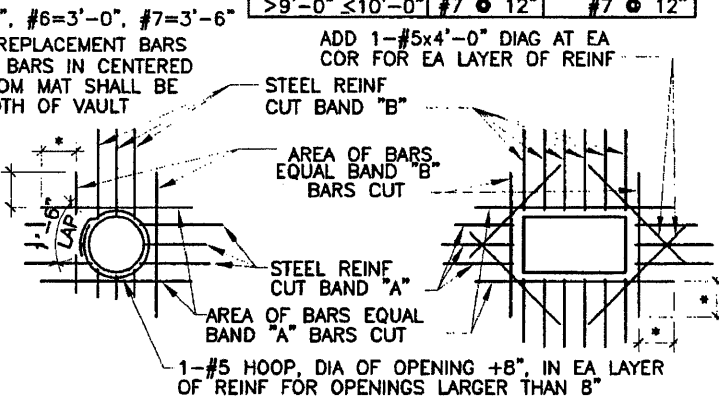
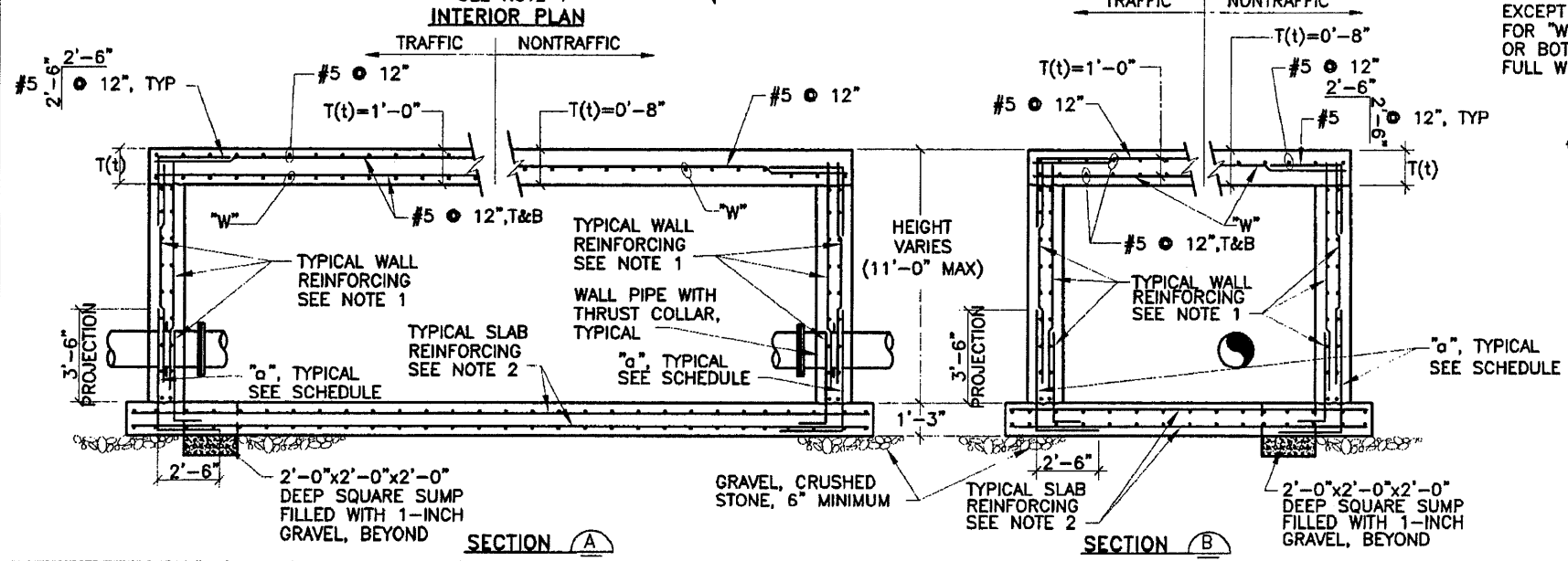
DIMENSIONAL NOTES:
 "L" = VAULT LENGTH
 "W" = VAULT WIDTH
 L(t) = WALL THICKNESS(LENGTH)
 W(t) = WALL THICKNESS(WIDTH)
 T(t) = TOP SLAB THICKNESS

WALL REINFORCING NOTES:
 1. "a" BAR DESIGNATION REPRESENTS WALL DOWELS PROTRUDING VERTICALLY FROM BASE SLAB ALONG LENGTHWISE DIMENSION "L" OR WIDTH DIMENSION "W".
 2. "b" BAR DESIGNATION REPRESENTS ADDITIONAL HORIZONTAL WALL CORNER REINFORCING.

GENERAL NOTES:
 1. TYPICAL WALL REINFORCING SHALL BE #5 @ 12" O.C., EACH WAY, EACH FACE UNLESS SHOWN OTHERWISE ON THE SCHEDULE. PROVIDE BARS AS INDICATED ON THE SCHEDULE AND LAP W/ #5 @ 12" FOR REMAINDER OF WALL HT. OR LENGTH.
 2. TYPICAL BASE SLAB REINFORCING SHALL BE #5 @ 12" EACH WAY, TOP AND BOTTOM OF SLAB.
 3. CONCRETE SHALL BE IN ACCORDANCE WITH STD SPEC SEC. 510 AND SEC. 101 FOR HYDRAULIC CONCRETE f'c=4000 psi @ 28 DAYS. ALL REINFORCING STEEL SHALL BE GRADE 60.
 4. IF THE DEPTH OF VAULT EXCEEDS THE 11'-0" MAX. DEPTH SHOWN, THE ENGINEER/CONTRACTOR SHALL DESIGN THE REINFORCEMENT, WALL & FLOOR THICKNESS TO SUIT THE SPECIFIC CONDITIONS. ALL STRUCTURAL MODIFICATIONS SHALL BE DESIGNED AND STAMPED BY A LICENSED NEW MEXICO PROFESSIONAL ENGINEER.



VAULT DIMENSION	REINFORCING	
	T(t)=0'-8" CENTERED MAT	T(t)=1'-0" BOTTOM MAT
"W" ≤ 6'-0"	#5 @ 12"	#5 @ 12"
> 6'-0" ≤ 7'-0"	#5 @ 12"	#6 @ 12"
> 7'-0" ≤ 9'-0"	#6 @ 12"	#7 @ 12"
> 9'-0" ≤ 10'-0"	#7 @ 12"	#7 @ 12"



OPENING NOTES:
 1. TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS.
 2. DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.

REVISIONS	NM APWA
	WATER
	STANDARD PRV STATION
	STRUCTURAL DETAILS
	DWG. 2357 FEB. 2006

*SEE NOTES TIE ROD SCHEDULE			
TEST PRESSURE		150 PSI	
PIPE DIA. (IN.)	MINIMUM PIPE WALL THICKNESS (IN.)*	TIE RODS	
		DIA. (IN.)	NO. REQ'D
6	3/16	5/8	2
8	3/16	5/8	2
10	3/16	5/8	2
12	3/16	5/8	2
14	3/16	3/4	2
16	3/16	7/8	2

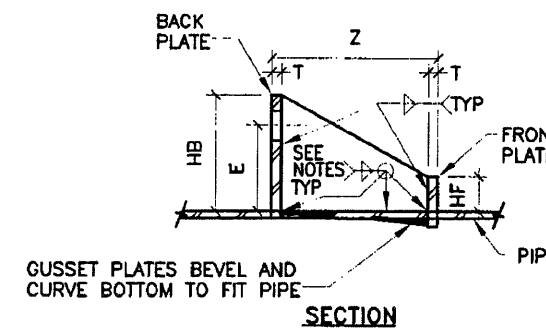
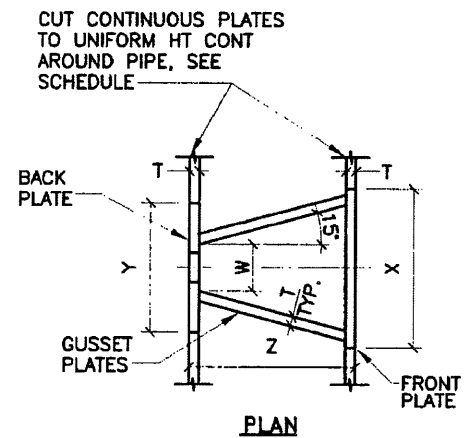
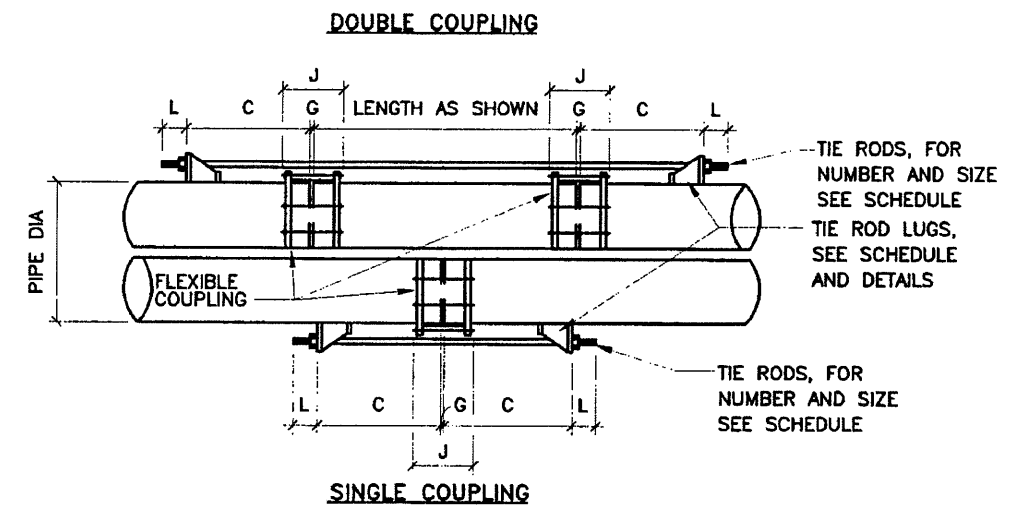
NOTES:

1. THE CONTRACTOR SHALL DETERMINE THE LENGTH "J" (COUPLING BOLT LENGTH) FROM MANUFACTURER'S CATALOGS USING THE SPECIFIED MIDDLE RING LENGTH.
2. "G" = MANUFACTURER'S RECOMMENDED SPACE BETWEEN ENDS OF PIPE.
3. "C" = J+2+1 INCH, (ROUND THIS VALUE UP TO NEXT EVEN INCH), MINIMUM. (FOR Z DIMENSIONS, SEE LUG SCHEDULE.)
4. TIE ROD LENGTH = 2L+2C+G.

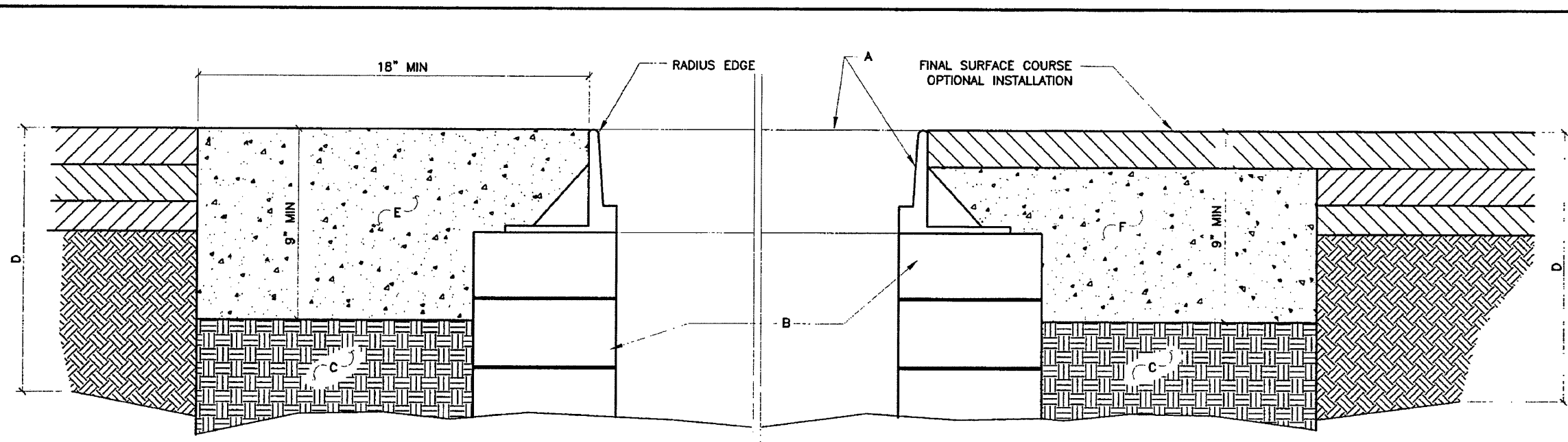
LUG SCHEDULE									
STUD DIA	T	W	X	Y	Z	HB	E	HF	L
5/8	3/8	1-3/8	4-1/16	4-1/2	3-3/8	3-7/8	3	1-3/4	3
3/4	3/8	1-1/2	5	4-1/2	5	4-1/8	3-1/8	1-3/4	3
7/8	1/2	1-5/8	5-1/2	4-1/2	5-1/8	4-1/4	3-1/8	1-3/4	4

NOTES:

1. LUG SCHEDULE DIMENSIONS IN INCHES.
2. TIE RODS SHALL CONFORM TO ASTM A193 GRADE B7.
3. NUTS SHALL CONFORM TO ASTM A194 GRADE 2H.
4. PLATE SHALL CONFORM TO ASTM A283 GRADE D.
5. TIE ROD NUTS SHALL BE TIGHTENED GRADUALLY AND EQUALLY IN STAGES TO PREVENT UNEVEN ALIGNMENT AND TO ALLOW EQUAL STRESS ON ALL TIE RODS UNDER PRESSURE. TIGHTEN UNTIL SNUG. THREADS SHALL PROTRUDE FROM NUTS. PEEN THREADS AFTER TIGHTENING NUTS.
6. TIE ROD LUGS SHALL BE SPACED EQUALLY AROUND PIPE.
7. FILLET WELDS SHALL MEET THE MINIMUM REQUIREMENTS OF THE AISC SPECIFICATION EXCEPT AS FOLLOWS: FILLET WELDS SHALL BE 1/4-INCH MINIMUM EXCEPT WHEN WELDING 3/16-INCH PLATE WHERE THEY SHALL BE 3/16-INCH.
8. TIE RODS SHALL NOT BE ATTACHED TO A PIPE WHEN THE WALL THICKNESS IS LESS THAN THE MINIMUM SHOWN ON THE TIE ROD SCHEDULE.
9. FOR ALL BURIED ASSEMBLIES, COAT ALL TIE RODS AND EXPOSED STEEL WITH 16 MILS BITUMASTIC.



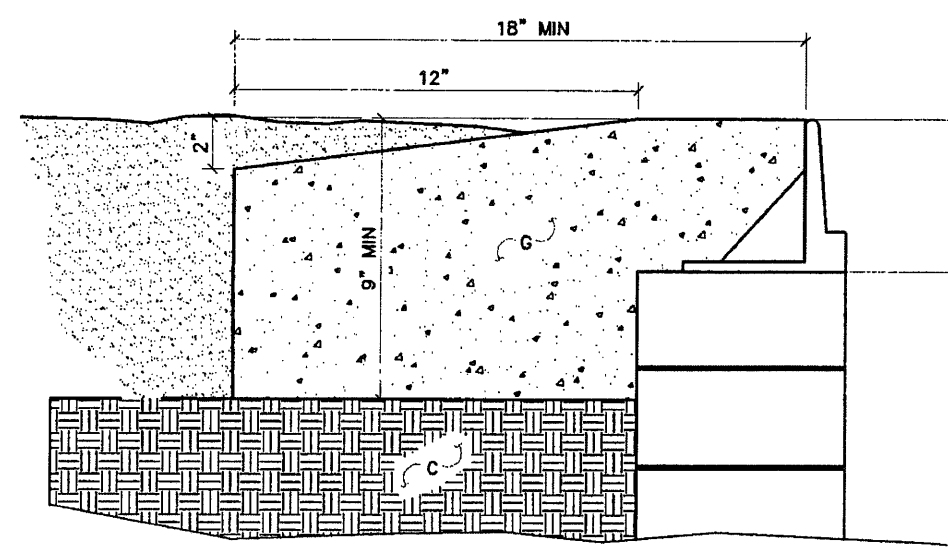
REVISIONS	NM APWA
	WATER THRUST TIE DETAIL
	DWG. 2358 FEB. 2006



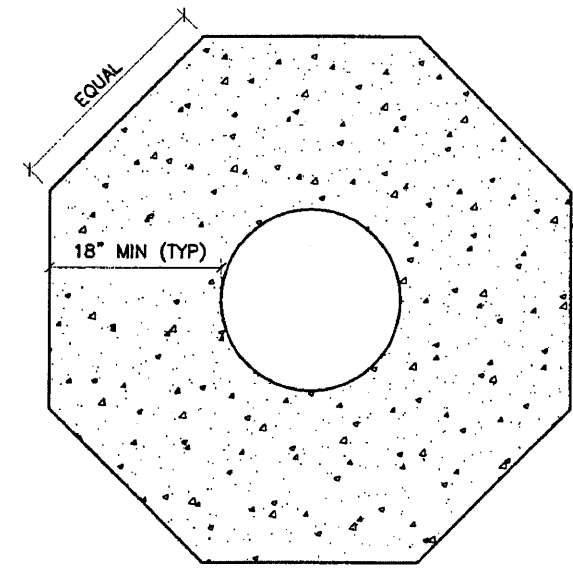
STANDARD INSTALLATION

OPTIONAL INSTALLATION

PAVED AREAS



**STANDARD INSTALLATION
DIRT AREAS**



TOP PLAN

GENERAL NOTES:

- A MANHOLE OR VALVE BOX RING AND COVER PER CITY STANDARDS.
- B MANHOLE CONE/EXTENSION OR VALVE PIPE PER STANDARDS. PIPE WITH SMOOTH INTERIOR.
- C 12" SUBGRADE, 95% COMPACTION (ASTM).
- D PAVING SECTION PER APPROVED DRAWINGS.
- E CONCRETE COLLAR IN PAVED AREAS – TYPICAL INSTALLATION.
- F CONCRETE COLLAR IN PAVED AREAS WITH ASPHALT CAP. TO BE USED WHEN CALLED FOR ON PLANS OR AS DIRECTED BY THE ENGINEER.
- G CONCRETE COLLAR IN DIRT AREAS – SET RING 1" ABOVE GRADE AND SLOPE CONCRETE DOWN AS SHOWN TO 1" BELOW GRADE.
- H WATER VALVE INSTALLATIONS SHALL HAVE SURFACE STAMPED WITH LINE INFORMATION PER STANDARD DWG 2326.

REVISIONS	NM APWA
	MANHOLE/VALVE CONCRETE COLLAR DETAIL
	DWG. 2461 FEB. 2006