



ADDENDUM #2

INVITATION TO BID NO: ITB 2022-799

PROJECT: NM173 PHASE 1 WATERLINE RELOCATION

BID DUE DATE/ TIME: Monday, February 28, 2022, 3:00 PM

NON-MANDATORY PRE-BID MEETING: Tuesday, February 22, 2022, 10:00 AM, East Aztec Pump Station, 1891 Navajo Dam Road, HWY 173, Aztec, NM 87410

LAST DAY FOR QUESTIONS: Thursday, February 24, 2022, 10:00 AM

This addendum includes:

1. Pre-Bid Meeting Summary (includes questions submitted up to Feb 23, 10:00 AM). Additional questions may continue to be submitted up to Feb 24, 10:00 am.
2. Materials list, Ferguson Waterworks #3083 quote. These materials have been delivered and are staged at the City of Aztec Wastewater Treatment Plant. Note exceptions listed in question 6 answer.
3. Revised set of drawings (includes trench sections and traffic control plan).
4. Attendance sign in sheet for pre-bid meeting held Feb 22.
5. Type "A" Wage Table.



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PRE-BID MEETING SUMMARY

The meeting began a couple of minutes after 10 AM with Steve Morse, City of Aztec Public Works Director, providing a summary of the project. This project is on a fast bid and construction track due to the planned commencement of road improvement work scheduled to begin on or around June 1, 2022 by an NMED Contractor. In anticipation of the short time frame, the City purchased as much materials as possible so that construction can commence as soon as possible after bid submission. The proposed schedule is as follows:

Bids Due:	February 28, 2022
Bid Evaluation and Apparent Low Bidder Selection:	March 3, 2022
NMED Review and Approval:	March 7, 2022
City of Aztec Commission Award of Contract:	March 8, 2022
Contract Documents Received from Contractor:	March 31, 2022
Issuance of Notice to Proceed:	April 1, 2022
Substantial Construction Completion:	May 31, 2022

The materials ordered by the City have been delivered and are in storage at the Aztec Wastewater Treatment Plant (WWTP). City personnel will move materials from the WWTP to the East Aztec Pumps Station (where the pre-bid was held) on a weekly basis. Any materials needed the remainder of that week will be the responsibility of the Contractor to load and transport to the pump station where it will be stored behind the fence.

We then traveled to the WWTP to inspect the materials delivered for this project. Steve Morse provided the list of materials ordered from the supplier and at first glance, it all appeared to be delivered, but the city will perform a detailed inventory on Wednesday to confirm it is all there. It

was noted that more restraints and gaskets may be needed to complete the project.

Several Questions were asked at the conference, which are answered below.

QUESTIONS ASKED AT THE PRE-BID MEETING:

1. The length of pipe sleeves in the bid form is higher than the length in the materials table in the drawings. Which is right?
 - a. The City purchased additional quantities of certain items to be sure we have enough for the project. The quantities purchased are the estimated quantities on the bid form, but payment will be based on quantities installed.
2. Who is providing inspection and testing?
 - a. City Public Works Crew members will be stopping by on a regular basis (at least daily) and will provide day to day oversight. The design engineer will also do periodic visits. The City will retain a testing firm to provide testing services. The City will pay for all initial testing. However if a retest is required, the retest will be at the Contractors expense. Pipeline pressure testing, pipeline disinfection and disinfection confirmation testing (bacteria testing as required by EPA) is the Contractor's responsibility.
3. Will a traffic control plan be available?
 - a. There is a traffic control plan that was approved by NMDOT just prior to advertisement. A complete set of design drawings with this approved plan and additional pipe trench details is included in Addendum #2.
4. Road crossings are designed as open cut. Will boring be permitted?
 - a. The current Utility Permit from NMDOT is for Road cut. We will explore if boring is acceptable under this permit.
5. Is this a Wage Rate project? What Wage Table should be used.
 - a. We have not received an approved wage table as of yet from PWAA. However, use Type "A" wage table (Street, Highway, Utility & Light Engineering) for pricing the work. If another table is designated by PWAA later, we will negotiate any contract cost modification with the apparent low bidder.
6. Has everything on the Furguson Waterworks material list been delivered to the WWTP? There appears to be a need for more (16?) restraints and gaskets.
 - a. Everything on the Furguson Waterworks material list except the 9 ball markers (Item 3M05113871764) has been delivered and is stored at the WWTP. We will obtain the balls. Please provide a list of additional materials you will be needing to complete this project with your bid. The City will begin procurement of those materials after bids are received and while contract negotiations and document delivery is ongoing.

QUESTIONS ASKED AFTER THE PRE-BID MEETING
UP TO ADDEMDUM POSTING:

7. What are the testing requirements for the line, test in sections? If so what length of sections? Or as a whole? Are we able to put a tap on existing line for testing purposes?
 - a. It will be up to the contractor to test the pipeline as he sees fit. Either testing in sections or as a whole is acceptable as long the entire length is tested. Testing shall be coordinated with the Aztec Operations Staff (at the Water Treatment Plant). A tap to the existing pipe is acceptable but in accordance with the contract documents, all utilities are supplied by the contractor. Therefore, water usage is to be paid by the contractor by use of a meter issued by the Aztec Utilities Department.

8. Are we able to use water from the pump station for backfill and compaction? And or water availability?
 - a. Use of water from the pump station, existing water line or the City of Aztec Bulk Water Station (located by the Water Treatment Plant near the NM 173 and US 550 intersection) is acceptable. Use from the pipeline or the pump stations shall be metered and paid as described in the answer to question 7.

9. Are there any issues with working Saturdays?
 - a. Saturday work as well as work outside of the normal work hours is acceptable, but must be coordinated in advance with the Aztec Operations Staff.

10. Can we get Survey Control Data or Coordinates?
 - a. Survey was done by SEH (the design Engineer) or their subcontractor. Control point locations and/or coordinates will be provided to the successful bidder.

11. Do you have a place for disposal of asphalt and rock removed during this project?
 - a. We dispose of small amounts of asphalt removed at the waste pile at Four Corners Materials just southwest of Aztec along NM 516. Removed rock can be placed on city property just behind the Animal Shelter and next to City Reservoir No. 2. This is accessible from NM 173 just south of the Water Treatment Plant.

18:08:01 NOV 09 2021
Reference No: B359793

Item	Description	Quantity
	PT-QUOTE-NOTES ----- =====	
	CONTRACTOR LIST =====	

DR18BPX	8 C900 DR18 PVC GJ BLUE PIPE C900 DR18 OPTION IF CALLED FOR. *PIPING TO BE VERIFIED*	8660

SPWPC8	8 SIGMA BELL REST F/ C900 *PVLOK *BID AS REQ PER REST. SCHEDULE*	2

C1230BHS500 PSD2105B52 3M05113871764	12GA 30MM 500 FT COP TRCR WIRE BLUE 2X1000 UG DET WTR BLUE 4 1403-XR BALL MRKR WTR REQUIRED FOR EVERY CHANGE OF DIRECTION - CONTRACTOR TO VERIFY QUANTITY PRIOR TO ORDERING QUOTE SUBJECT TO CHANGE	9000 9 9

	QUOTING MJ DIP FITTINGS PER ANTHONY BELOW	

MJ1LAX	8 MJ C153 11-1/4 BEND L/A	2
MJ4LAX	8 MJ C153 45 BEND L/A	4
MJ9LAX	8 MJ C153 90 BEND L/A	6
SSLCE8	8 PVC WDG REST GLND *ONELOK	24
IMJBGPX	8 MJ C153 BLT GSKT PK L/ GLAND	24

C263808301194009 SSLCE8 IMJBGPX	8 DI MJ OL GATE VLV C515 8 PVC WDG REST GLND *ONELOK 8 MJ C153 BLT GSKT PK L/ GLAND	21 42 42

MJTLAX SSLCE8 IMJBGPX	8 MJ C153 TEE L/A 8 PVC WDG REST GLND *ONELOK 8 MJ C153 BLT GSKT PK L/ GLAND	4 8 8

MJSCAPLAX SSLCE8 IMJBGPX	8 MJ C153 SLD CAP L/A 8 PVC WDG REST GLND *ONELOK 8 MJ C153 BLT GSKT PK L/ GLAND	2 2 2

GBPPEA53B16 GBPPEA53B12	16 BLK BE A53B STD .375 ERW SRL 12 BLK BE A53B STD .375 ERW SRL	210 84

MJTLAXU SSLCE8 IMJBGPX SSLCE6 IMJBGPU	8X6 MJ C153 TEE L/A 8 PVC WDG REST GLND *ONELOK 8 MJ C153 BLT GSKT PK L/ GLAND 6 PVC WDG REST GLND *ONELOK 6 MJ C153 BLT GSKT PK L/ GLAND	1 2 2 1 1

DR18BPU C263806301194009 SSLCE6 IMJBGPU	6 C900 DR18 PVC GJ BLUE PIPE 6 DI MJ OL GATE VLV C515 6 PVC WDG REST GLND *ONELOK 6 MJ C153 BLT GSKT PK L/ GLAND	120 1 2 2

16 SC VLV BX FOR SECT 16 SC VLV BX FOR SECT		
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HOW ARE WE DOING? WE WANT YOUR FEEDBACK!

Scan the QR code or use the link below to
complete a survey about your bids:

<https://survey.medallia.com/?bidsorder&fc=1931&on=11772>



FERGUSON WATERWORKS #1931
 801 CANDELARIA ROAD NE
 ALBUQUERQUE, NM 87107-2120

Phone: 505-449-4900
 Fax: 505-341-1755

Deliver To: From: Victor Gonzales Comments:

18:08:01 NOV 09 2021

FERGUSON WATERWORKS #3083

Price Quotation
 Phone: 505-449-4900
 Fax: 505-341-1755

Bid No: B359793
 Bid Date: 09/10/21
 Quoted By: SWG

Cust Phone: 505-884-1017
 Terms: NET 10TH PROX

Customer: DONNER PLUMBING & HEATING
 107 CANDELARIA RD NW
 ALBUQUERQUE, NM 87107

Ship To:

Cust PO#:

Job Name: AZTEC MATERIAL LIST

Item	Description	Quantity
	AZTEK MATERIAL LIST ALBUQUERQUE, NM QUOTE VALID UNTIL 10.9.21 QUOTED PER CUSTOMER LIST QUOTED PER COA SPECS	
PT-QUOTE-NOTES	BID NOTES FOR CUSTOMER ALL PVC, COPPER & VOLATILE COMMODITIES FOR THE TIME BEING WILL BE REPRICED AT TIME OF SHIPMENT. CURRENT PRICING SUBJECT TO CHANGE. NOTE: AT THIS TIME PVC CURRENT LEAD TIMES TO BE DETERMINED AT TIME OF ORDER. CURRENT GATE VALVE LEAD TIME APPROX 120 DAYS FROM TIME OF ORDER. 10", 14", 18", & 20" DIP ARE CURRENTLY HAVING EXTENDED LEAD TIMES OF 120 PLUS DAYS. PLEASE GET WITH YOUR SALESMAN IF YOU HAVE A JOB WITH THESE SIZES. 4", 6", 8", & 12" FASTITE DIP LEAD TIMES RUNNING 60-90 DAYS AND FLEXRING IN RUNNING 90 PLUS DAYS 16" DIP IS CURRENTLY RUNNING 120 DAYS AT TIME OF ORDER.	1

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<https://survey.medallia.com/?bidsorder&fc=1931&on=11772>

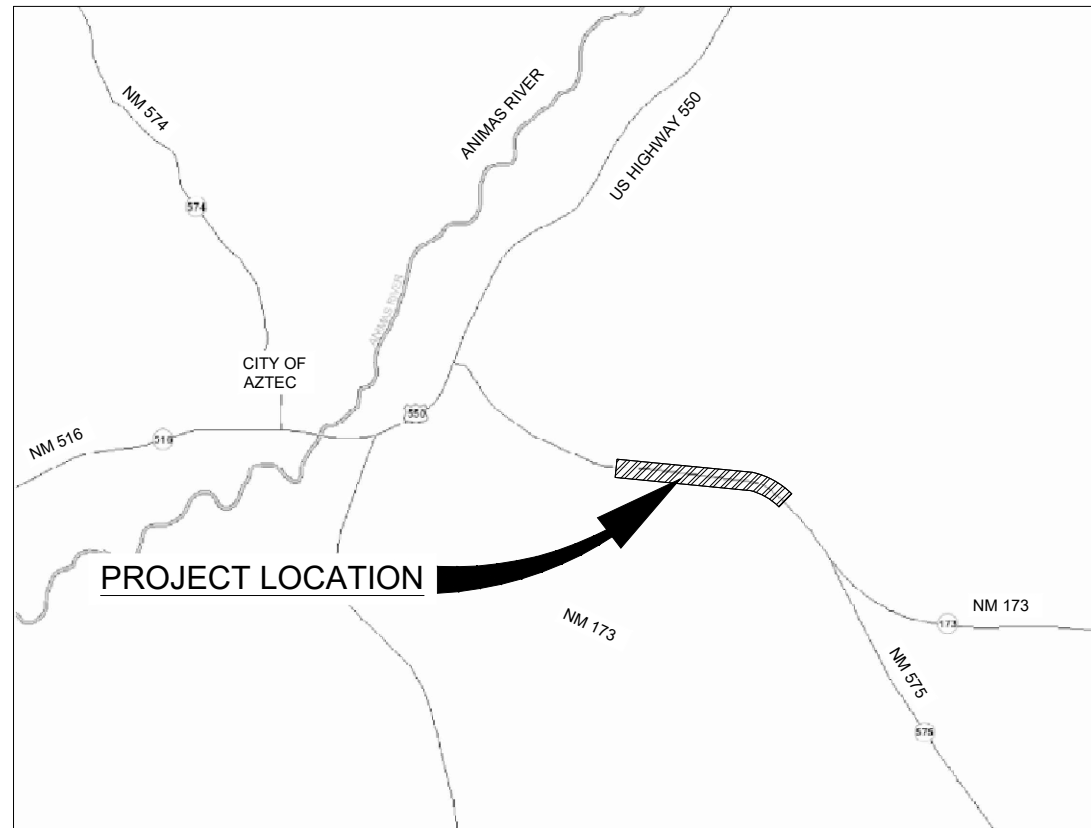


AZTEC, NEW MEXICO

NM 173 WATER LINE REPLACEMENT - PHASE 1

THE PROJECT BEGINS IN TOWNSHIP 30N, RANGE 10W, SECTION 21
THIS PROJECT ENDS IN TOWNSHIP 30N, RANGE 9W, SECTION 20

PROJECT NO. 160626



VICINITY MAP
NOT TO SCALE



GOVERNING SPECIFICATIONS
THE LATEST EDITIONS OF THE NEW MEXICO STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION AND THE NEW MEXICO DEPARTMENT OF TRANSPORTATION'S 2019 STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION SHALL GOVERN EXCEPT AS MODIFIED BY THE SPECIFICATIONS FOR THIS PROJECT.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

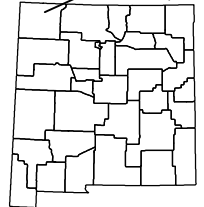
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9	WATER PLAN AND PROFILE (1)
10	WATER PLAN AND PROFILE (2)
11	WATER PLAN AND PROFILE (3)
12	WATER PLAN AND PROFILE (4)
13	WATER PLAN AND PROFILE (5)
14	WATER PLAN AND PROFILE (6)
15	WATER PLAN AND PROFILE (7)
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PROJECT LOCATION

AZTEC, SAN JUAN COUNTY



APPROVED:

CITY ENGINEER OF

DATE

SEH
PHONE: 970.385.4546
934 MAIN AVENUE
SUITE C
DURANGO, CO 81301-51
www.sehinc.com

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF NM.

FILE NO.

Signature DREW CHANDLER, PE

Date: 11/30/2021 Lic. No. 23088

1
of 33

NOTE:
THE SUBSURFACE UTILITY QUALITY INFORMATION IN THIS PLAN IS LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

THE CONTRACTOR SHALL CALL IN UTILITY LOCATES AT 811 BEFORE COMMENCING EXCAVATION.



Know what's below.
Call before you dig.

General Notes:

The contractor is responsible for obtaining all required permits prior to the commencement of any work on the project. A NMDOT right-of-way work permit is required for all work in the public right-of-way.

The contractor shall be responsible for notifying the city of any problems in conforming to the approved plans for any element of the proposed improvements prior to its construction.

The engineer shall be responsible during construction activities to resolve construction problems due to changed conditions or design errors encountered by the contractor during the progress of any portion of the proposed work. Any improvements constructed not in accordance with the approved plans or the approved revised plans, shall be removed and the improvements shall be reconstructed according to the approved plans.

Underground utilities shown on these plans are from physical evidence on the surface, survey performed, and historical maps. The contractor shall be responsible for the horizontal and vertical location of all utilities prior to construction, including potholing if necessary. The contractor shall contact the appropriate agencies for location of all underground utilities at least 72 hours prior to commencement of construction. Where potholing or excavation reveals conflicts between existing and proposed utilities, the contractor shall notify the town immediately and any revisions to the construction plans shall be approved in writing.

The contractor shall be responsible for providing a copy of "RECORD DRAWINGS" plans to the City of Aztec prior to final acceptance of work.

The contractor shall notify the Public Works Director or his representative at least 24 hours prior to desired inspection.

The contractor shall reset all Survey Monuments disturbed during construction within 60 days of project completion.

The contractor shall be solely and completely responsible for conditions at and adjacent to the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours.

The duty of the City to conduct construction review of the contractor's performance is not intended to include review of the adequacy of the contractor's safety measures in, on, or near the construction site.

Field conditions may exist that require changes to the drawings. If such conditions are encountered, standard engineering practices shall be followed.

Topographic and Boundary Survey Data for this project provided by SEH, inc.:

CONTROL STATEMENT:
Horizontal Datum—Refer to NM 173 Plans CN F100170
Units of field data and drawing are in US SURVEY FEET
NM STATE PLANE WEST ZONE (SCALED TO GROUND)
COMBINED SCALE FACTOR = 1.0003639024 Scaled Around (0,0)

Vertical Datum is NAVD 88, Static Data Collected at Point #100 Corrected using OPUS for Vertical control.

Utility Notes:

The contractor shall have in his possession at all times one (1) signed copy of plans and specifications which have been approved by the City of Aztec's Public Works Department.

The contractor shall inform the City's representative 24 hours in advance when trench will be ready for compaction tests. The City of Aztec shall provide a geotechnical testing laboratory to perform all required tests at the City's expense. The Contractor shall be responsible for and shall pay all costs in connection with retesting for work or materials found defective or unsatisfactory and all stand-by time charges from the tester due to the Contractor's failure to pave, pour, or fill on schedule for any reason except by action of the Owner's Representative.

The contractor shall excavate trenches by open cut. Conform to sheeting, shoring, and bracing requirements of regulating agency or ruling authority.

The contractor shall stockpile suitable material for backfilling a minimum of 4 feet away from trench banks. Remove and waste excavated materials not suitable or not required for backfilling.

The contractor shall provide and maintain dewatering equipment, as necessary, to ensure that all work in trenches is performed under dewatered conditions.

The contractor shall excavate trenches to provide adequate working space and pipe clearances for proper installation and jointing. Trench width at the top of the pipe shall not exceed 16 inches plus pipe width.

Structure northing / easting labels are to the center of the proposed structure

Water line to have a minimum cover of 48 inches. Tracer wire to be installed along all new water line. Bring up at all hydrants, valves, and every 500-ft and mark with carconite post.

Install blue carconite posts marked with "WATER" every 500-ft.

Street Construction Notes

With notification of the City inspector the contractor shall adjust rims of all cleanouts, manholes, valve covers and survey monuments to finish grade prior to final lift paving.

If necessary, the contractor shall provide all lights, signs, barricades, flagmen or other devices necessary to provide for public safety in accordance with the current Manual on Uniform Traffic Control Devices. The contractor shall provide a Traffic Control Plan, for each temporary traffic control scenario, to the City of Aztec Engineering Department for review and approval before commencing any work in City right-of-way or easements. The contractor shall employ a Certified Traffic Control Supervisor (CTCS) to be responsible for all methods of handling traffic (MHTs).

The contractor shall provide ingress and egress to private property adjacent to the work throughout the period of construction and prior to beginning work shall obtain written agreement from the affected property owners impacted by this access.

Prior to final placement of surface pavement, all underground utility mains shall be installed and service connections stubbed out beyond curb line when allowed by the utility. Service from public utilities, water and sanitary sewers shall be made available for each lot in such a manner that will not be necessary to disturb the street pavement, curb, gutter, and sidewalk when connections are made.

Hot Mix Asphalt (HMA) in City easements and right-of-way shall be NMDOT type SP-IV. Recycled asphalt may be incorporated into the mix up to 20-percent by weight. HMA shall meet the requirements of NMDOT's Standard Specifications for Highway and Bridge Construction, Section 423.

Concrete including, but not limited to, all sidewalks, chases, curb and gutter, curb-cuts, driveway returns, handicap ramps, cross gutters, collars and bike paths; shall be NMDOT Class A concrete per NMDOT's Standard Specifications for Highway and Bridge Construction, Section 509.

No portion of the street shall be final paved until all street lighting and / or irrigation improvements designed to serve the street and/or development have been completed.

Grading and Drainage Notes:

A water truck, if called for by the City inspector or owner's representative, will be provided to keep wind erosion in check.

Any settlement or soil accumulations beyond the property limits due to grading or erosion shall be repaired immediately by the contractor.

All compaction testing requirements shall be completed in accordance with project governing documents.

Aggregate Base Course located beneath all buildings, roadways sidewalks, plaza area, and other proposed improvements shall be NMDOT Type 1 compacted to 95% maximum dry density as measured by the Modified Proctor Test AASHTO T-180.

Any construction debris or mud tracking in the public right-of-way shall be removed immediately by the contractor. The contractor shall immediately fix any excavations or excessive pavement failures caused by the development and shall properly barricade the site until construction is complete. Failure by the contractor to correct any of the above within 48 hours of written notice by the inspecting agency shall cause the inspecting agency to issue a stop work order and/or do the work and make a claim against the letter of credit for any cost incurred by the agency.

Areas being disturbed by the grading shall be reseeded with native vegetation or as approved on the development plan.

Contractor shall immediately notify both the City and the Engineer if excavation activities unearth soils with a visible sheen, material coloration or staining, or odor.

A Storm Water Management Plan shall be created prior to construction.

A State of New Mexico stormwater discharge permit is required for all construction activity disturbing at least 1-acre of land (or is part of a common plan of development disturbing at least 1-acre of land).

Stormwater quality best management practices (BMPs) shall meet the requirements of the Denver Regional Council of Governments Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual.

All riprap on this project to be per NMDOT's Standard Specifications for Highway and Bridge Construction Section 602.



This contract allows the owner to make payment within 45 days after submission of an undisputed request for payment SAP 20-E2180-STB

BENCHMARK EL.

BENCHMARK EL.

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SEH Project	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	PT	.	.	.	.	.
Designed By	PT	.	.	.	.	.
Checked By	PO	.	.	.	.	.



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF NM.
DATE 11/30/2021
DREW CHANDLER, PE
LICENSE NO. 23088

NM 173 WATER LINE REPLACEMENT
AZTEC, NEW MEXICO

GENERAL NOTES
NM 173 WATER LINE

CITY OF AZTEC, NM
NM 173 WATER LINE REPLACEMENT - PHASE 1
 Short Elliot Hendrickson SEH®
 November 29, 2021



Item #	ITEM DESCRIPTION	UNIT	AMOUNT	UNIT COST	TOTAL AMOUNT
Demolition					
1	Clearing and Grubbing	LS	1		
2	Remove Hydrant	EACH	1		\$ -
3	Remove Existing Signs	EACH	6		\$ -
4	Sawcut and remove existing asphalt	SY	68		\$ -
Demolition Subtotal					\$ -
Water Line					
5	8-in C-900 Water Line (with tracer wire)(Install Only)	LF	8660		\$ -
6	8-in C-900 11.25° bend (with thrust blocks)(Install Only)	EACH	2		\$ -
7	8-in C-900 45° bend (with thrust blocks)(Install Only)	EACH	4		\$ -
8	8-in C-900 90° bend (with thrust blocks)(Install Only)	EACH	6		\$ -
9	8-in Gate Valves (with thrust blocks)(Install Only)	EACH	21		\$ -
10	8x8x8 Tee(Install Only)	EACH	4		\$ -
11	8-in End Caps(Install Only)	EACH	2		\$ -
12	Steel Pipe Casing	LF	132		\$ -
13	Hydrant and Assembly (Fire Hydrant, 6-in lateral, 8"x6"x8" Tee, 6-in Gate Valve)	EACH	2		\$ -
14	Hydrant Bollards	EACH	2		\$ -
15	Extend and reconnect existing service	EACH	1		\$ -
16	Tie into Existing Water Line	EACH	2		\$ -
17	Tie into Existing Water Line at tank	EACH	2		\$ -
Water Line Subtotal					\$ -
Surge Relief for Pump House					
18	Retap air relief valve	EACH	1		\$ -
19	6-in surge anticipation surge relief valve (CLA-VAL brand)	EACH	1		\$ -
20	AWWA C110 PC 250 with flanged ends	LF	10		\$ -
21	6-in AWWA C110 tee	EACH	1		\$ -
22	6-in AWWA C110 90° bend	EACH	1		\$ -
23	Core wall penetration	EACH	1		\$ -
Surge Relief for Pump House Subtotal					\$ -
Miscellaneous					
24	Asphalt patchback	SY	68		\$ -
25	Reset Existing signs	EACH	6		\$ -
26	Rock Excavation	CY	175		
27	Potholing	HR	12		
Miscellaneous Subtotal					\$ -
General Items					
26	Mobilization	LS	1		\$ -
27	Traffic Control	LS	1		\$ -
28	Construction Survey	LS	1		\$ -
29	Quality Control/Testing	LS	1		\$ -
30	Erosion Control/SWPPP	LS	1		\$ -
31	Record Drawings	LS	1		\$ -
General Items Subtotal					\$ -
Grand Total					\$ -

This contract allows the owner to make payment within 45 days after submission of an undisputed request for payment
 SAP 20-E2180-STB



BENCHMARK EL.

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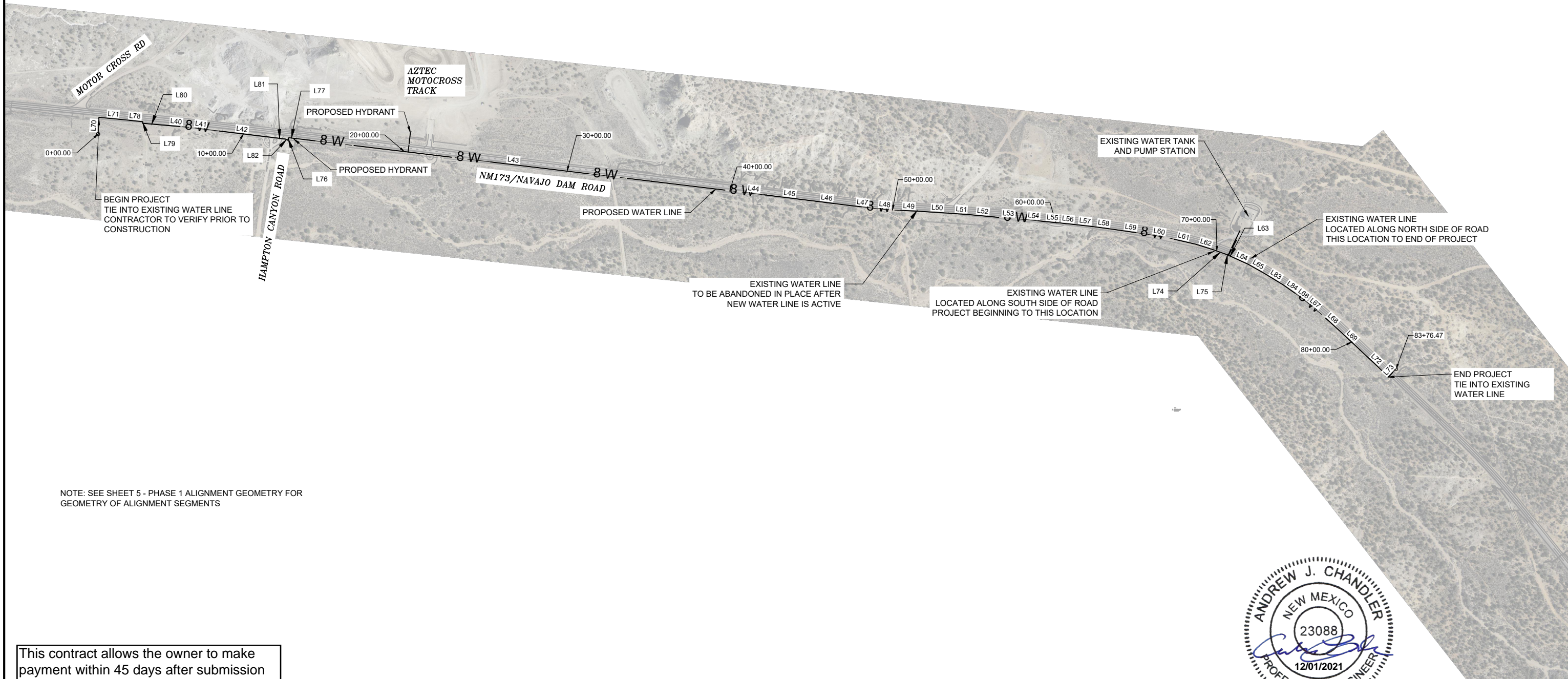
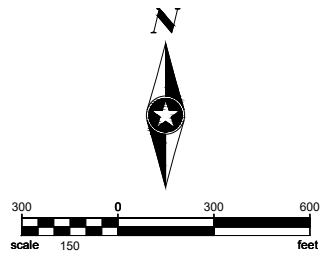
SEH Project	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
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Designed By	PT					
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NM 173 WATER LINE REPLACEMENT
 AZTEC, NEW MEXICO

NM 173 Water Line



NOTE: SEE SHEET 5 - PHASE 1 ALIGNMENT GEOMETRY FOR GEOMETRY OF ALIGNMENT SEGMENTS

This contract allows the owner to make payment within 45 days after submission of an undisputed request for payment
SAP 20-E2180-STB



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SEH Project	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	PT	.	.	.	.	.
Designed By	PT	.	.	.	.	.
Checked By	PO	.	.	.	.	.



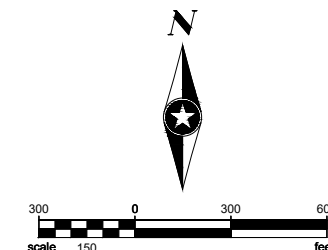
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF NM.
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LICENSE NO. 23088

NM 173 WATER LINE REPLACEMENT
AZTEC, NEW MEXICO

OVERALL SITE PLAN - PHASE 1
NM 173 WATER LINE

ALIGNMENT TABULATION - WATER ALIGN 1

POINT ID	STATION	LENGTH	NORTHING	EASTING	BEARING	START STATION	END STATION	START NORTHING	START EASTING	END NORTHING	END EASTING
L75	70+66.68	3.59	2118292.1759	2696696.6511	S 63° 45' 43" E	70+66.68	70+70.27	2118292.1759	2696696.6511	2118290.5885	2696699.8717
L79	3+70.82	10.00	2119103.2171	2690079.0553	S 06° 10' 13" W	3+70.82	3+80.82	2119103.2171	2690079.0553	2119093.2750	2690077.9804
L82	12+56.99	15.95	2118997.4573	2690948.7749	S 63° 13' 32" E	12+56.99	12+72.94	2118997.4573	2690948.7749	2118990.2724	2690963.0144
L76	12+72.94	17.08	2118990.2724	2690963.0144	N 26° 48' 19" E	12+72.94	12+90.02	2118990.2724	2690963.0144	2119005.5159	2690970.7162
L77	12+90.02	31.46	2119005.5159	2690970.7162	S 83° 09' 17" E	12+90.02	13+21.48	2119005.5159	2690970.7162	2119001.7667	2691001.9486
L63	70+70.27	33.68	2118290.5885	2696699.8717	S 64° 35' 44" E	70+70.27	71+03.95	2118290.5885	2696699.8717	2118276.1397	2696730.2950
L66	75+57.27	61.46	2118049.5999	2697121.8080	S 52° 24' 55" E	75+57.27	76+18.73	2118049.5999	2697121.8080	2118012.1142	2697170.5112
L73	83+10.00	66.47	2117546.8393	2697681.4927	N 43° 09' 22" E	83+10.00	83+76.47	2117546.8393	2697681.4927	2117595.3315	2697726.9600
L81	11+88.05	68.94	2119005.7858	2690880.3391	S 83° 03' 41" E	11+88.05	12+56.99	2119005.7858	2690880.3391	2118997.4573	2690948.7749
L74	69+77.62	89.06	2118322.0693	2696612.7591	S 70° 23' 15" E	69+77.62	70+66.68	2118322.0693	2696612.7591	2118292.1759	2696696.6511
L55	59+30.38	93.82	2118494.4173	2695581.9327	S 84° 41' 01" E	59+30.38	60+24.21	2118494.4173	2695581.9327	2118485.7243	2695675.3525
L56	60+24.21	94.39	2118485.7243	2695675.3525	S 83° 50' 06" E	60+24.21	61+18.60	2118485.7243	2695675.3525	2118475.5878	2695769.1955
L78	2+71.41	99.41	2119113.2927	2689980.1574	S 84° 10' 58" E	2+71.41	3+70.82	2119113.2927	2689980.1574	2119103.2171	2690079.0553
L70	0+00.00	102.36	2119027.5318	2689806.5787	N 02° 59' 13" E	0+00.00	1+02.36	2119027.5318	2689806.5787	2119129.7553	2689811.9128
L84	74+54.54	102.73	2118108.6612	2697037.7538	S 54° 54' 21" E	74+54.54	75+57.27	2118108.6612	2697037.7538	2118049.5999	2697121.8080
L64	71+03.95	102.80	2118276.1397	2696730.2950	S 65° 55' 31" E	71+03.95	72+06.75	2118276.1397	2696730.2950	2118234.2067	2696824.1485
L41	6+77.59	111.26	2119067.6852	2690373.6411	S 82° 56' 28" E	6+77.59	7+88.85	2119067.6852	2690373.6411	2119054.0126	2690484.0570
L58	62+34.81	111.52	2118462.3566	2695884.6497	S 82° 28' 15" E	62+34.81	63+46.32	2118462.3566	2695884.6497	2118447.7443	2695995.2056
L80	3+80.82	112.07	2119093.2750	2690077.9804	S 85° 05' 53" E	3+80.82	4+92.89	2119093.2750	2690077.9804	2119083.6989	2690189.6379
L65	72+06.75	113.25	2118234.2067	2696824.1485	S 60° 26' 46" E	72+06.75	73+19.99	2118234.2067	2696824.1485	2118178.3494	2696922.6598
L62	68+64.17	113.45	2118356.2485	2696504.5766	S 72° 28' 00" E	68+64.17	69+77.62	2118356.2485	2696504.5766	2118322.0693	2696612.7591
L57	61+18.60	116.21	2118475.5878	2695769.1955	S 83° 27' 45" E	61+18.60	62+34.81	2118475.5878	2695769.1955	2118462.3566	2695884.6497
L48	48+92.21	117.77	2118574.5776	2694547.0242	S 84° 36' 03" E	48+92.21	50+09.98	2118574.5776	2694547.0242	2118563.4959	2694664.2748
L67	76+18.73	118.69	2118012.1142	2697170.5112	S 50° 26' 48" E	76+18.73	77+37.42	2118012.1142	2697170.5112	2117936.5300	2697262.0280
L51	53+57.69	121.04	2118544.6899	2695011.4673	S 85° 33' 37" E	53+57.69	54+78.73	2118544.6899	2695011.4673	2118535.3206	2695132.1413
L60	65+67.73	129.07	2118416.0713	2696214.3341	S 80° 01' 59" E	65+67.73	66+96.80	2118416.0713	2696214.3341	2118393.7317	2696341.4564
L83	73+19.99	134.55	2118178.3494	2696922.6598	S 58° 48' 20" E	73+19.99	74+54.54	2118178.3494	2696922.6598	2118108.6612	2697037.7538
L54	57+92.80	137.58	2118507.8012	2695445.0019	S 84° 25' 03" E	57+92.80	59+30.38	2118507.8012	2695445.0019	2118494.4173	2695581.9327
L52	54+78.73	142.52	2118535.3206	2695132.1413	S 84° 41' 01" E	54+78.73	56+21.25	2118535.3206	2695132.1413	2118522.1155	2695274.0508
L69	79+02.98	149.69	2117825.7915	2697385.1031	S 46° 53' 38" E	79+02.98	80+52.68	2117825.7915	2697385.1031	2117723.5000	2697494.3911
L47	47+34.52	157.68	2118592.6489	2694390.3816	S 83° 25' 09" E	47+34.52	48+92.21	2118592.6489	2694390.3816	2118574.5776	2694547.0242
L68	77+37.42	165.56	2117936.5300	2697262.0280	S 48° 01' 13" E	77+37.42	79+02.98	2117936.5300	2697262.0280	2117825.7915	2697385.1031
L61	66+96.80	167.37	2118393.7317	2696341.4564	S 77° 03' 31" E	66+96.80	68+64.17	2118393.7317	2696341.4564	2118356.2485	2696504.5766
L71	1+02.36	169.05	2119129.7553	2689811.9128	S 84° 24' 41" E	1+02.36	2+71.41	2119129.7553	2689811.9128	2119113.2927	2689980.1574
L50	51+88.41	169.28	2118555.2178	2694842.5181	S 86° 26' 03" E	51+88.41	53+57.69	2118555.2178	2694842.5181	2118544.6899	2695011.4673
L53	56+21.25	171.55	2118522.1155	2695274.0508	S 85° 12' 49" E	56+21.25	57+92.80	2118522.1155	2695274.0508	2118507.8012	2695445.0019
L45	42+76.82	175.47	2118649.2773	2693936.1967	S 82° 48' 13" E	42+76.82	44+52.29	2118649.2773	2693936.1967	2118627.2957	2694110.2876
L49	50+09.98	178.44	2118563.4959	2694664.2748	S 87° 20' 27" E	50+09.98	51+88.41	2118563.4959	2694664.2748	2118555.2178	2694842.5181
L40	4+92.89	184.70	2119083.6989	2690189.6379	S 85° 01' 34" E	4+92.89	6+77.59	2119083.6989	2690189.6379	2119067.6852	2690373.6411
L59	63+46.32	221.41	2118447.7443	2695995.2056	S 81° 46' 31" E	63+46.32	65+67.73	2118447.7443	2695995.2056	2118416.0713	2696214.3341
L72	80+52.68	257.32	2117723.5000	2697494.3911	S 46° 38' 39" E	80+52.68	83+10.00	2117723.5000	2697494.3911	2117546.8393	2697681.4927
L44	40+11.38	265.44	2118681.1654	2693672.6788	S 83° 06' 01" E	40+11.38	42+76.82	2118681.1654	2693672.6788	2118649.2773	2693936.1967
L46	44+52.29	282.23	2118627.2957	2694110.2876	S 82° 56' 55" E	44+52.29	47+34.52	2118627.2957	2694110.2876	2118592.6489	2694390.3816
L42	7+88.85	399.21	2119054.0126	2690484.0570	S 83° 03' 41" E	7+88.85	11+88.05	2119054.0126	2690484.0570	2119005.7858	2690880.3391
L43	13+21.48	2689.90	2119001.7667	2691001.9486	S 83° 09' 17" E	13+21.48	40+11.38	2119001.7667	2691001.9486	2118681.1654	2693672.6788



This contract allows the owner to make payment within 45 days after submission of an undisputed request for payment SAP 20-E2180-STB



BENCHMARK EL.

BENCHMARK EL.

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Designed By	PT					
Checked By	PO					

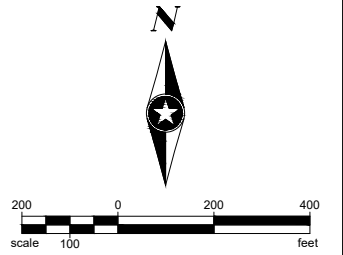


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF NM.
 DATE 11/30/2021
 DREW CHANDLER, PE
 LICENSE NO. 23088

NM 173 WATER LINE REPLACEMENT
 AZTEC, NEW MEXICO

PHASE 1 ALIGNMENT GEOMETRY
 NM 173 Water Line

NOTE: INFORMATION ON THIS PAGE IS FOR INFORMATION PURPOSES ONLY. PHASE 2 WORK IS NOT A PART OF THIS PROJECT.



This contract allows the owner to make payment within 45 days after submission of an undisputed request for payment SAP 20-E2180-STB



BENCHMARK EL.

BENCHMARK EL.

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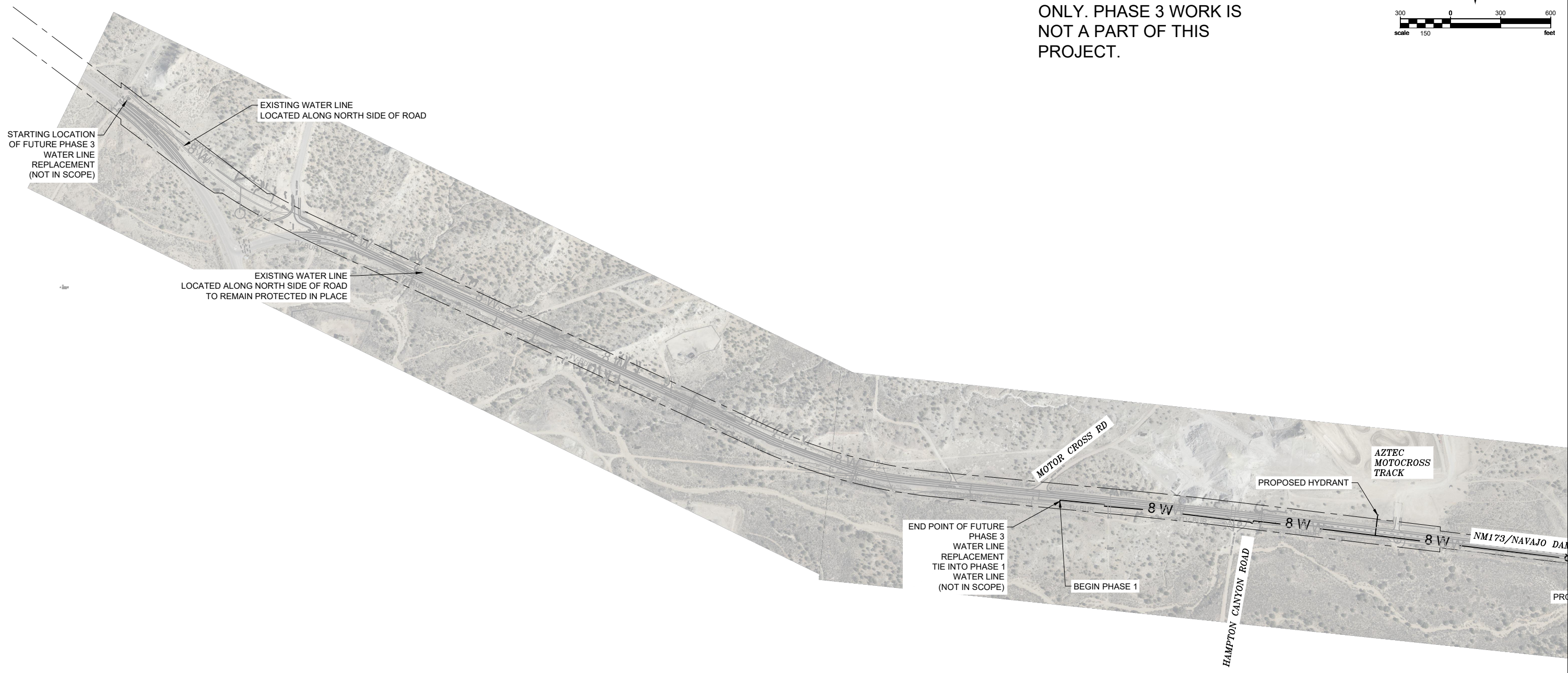
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 DATE 11/30/2021 DREW CHANDLER, PE LICENSE NO. 23088

NM 173 WATER LINE REPLACEMENT
 AZTEC, NEW MEXICO

OVERALL SITE PLAN - PHASE 2 (FUTURE)
 NM 173 Water Line



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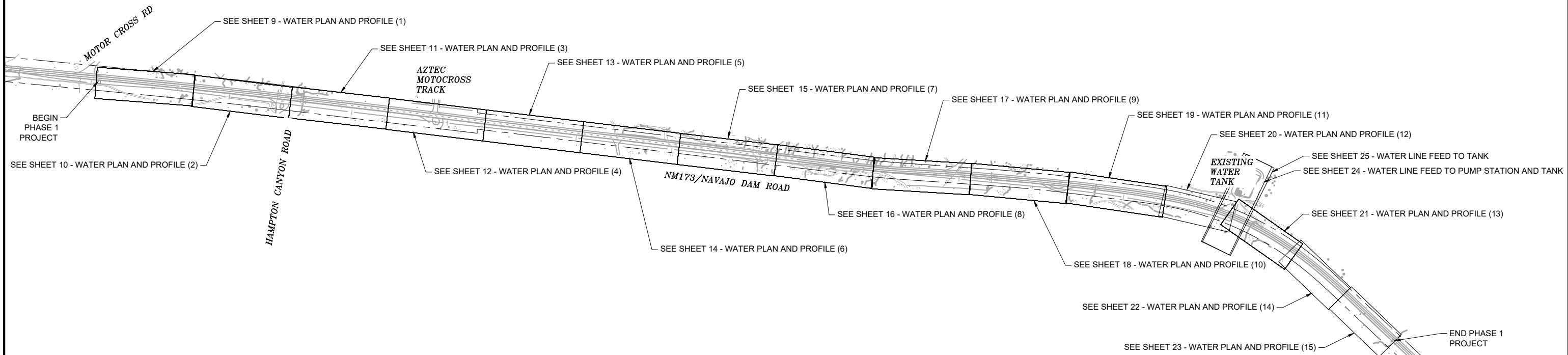
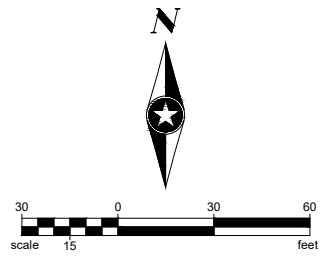
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NM 173 WATER LINE REPLACEMENT
AZTEC, NEW MEXICO

OVERALL SITE PLAN - PHASE 3
(FUTURE)
NM 173 Water Line



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NM 173 WATER LINE REPLACEMENT
AZTEC, NEW MEXICO

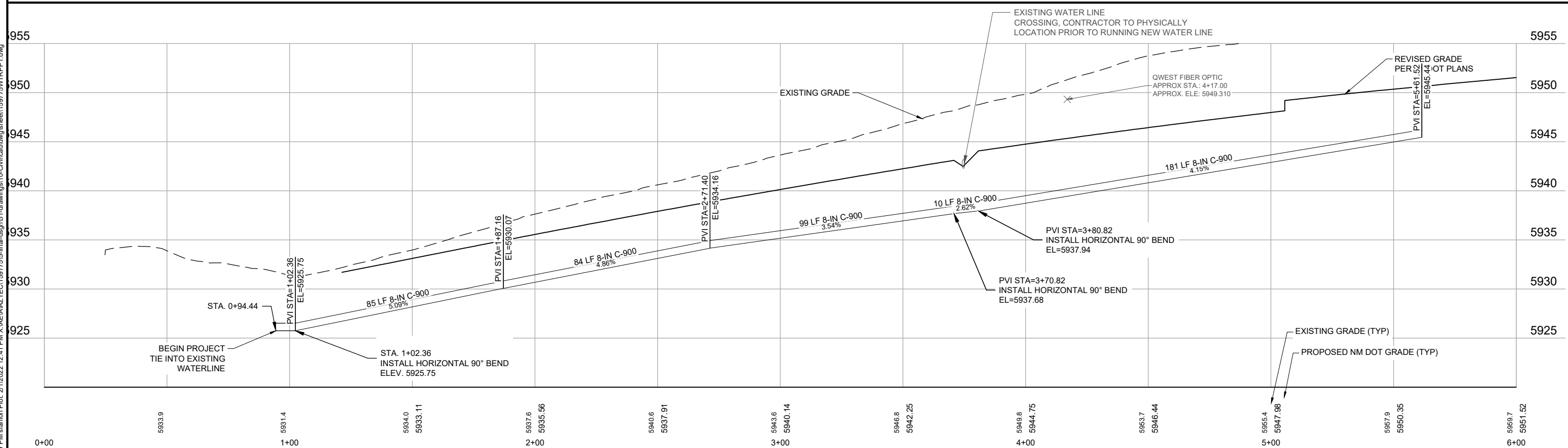
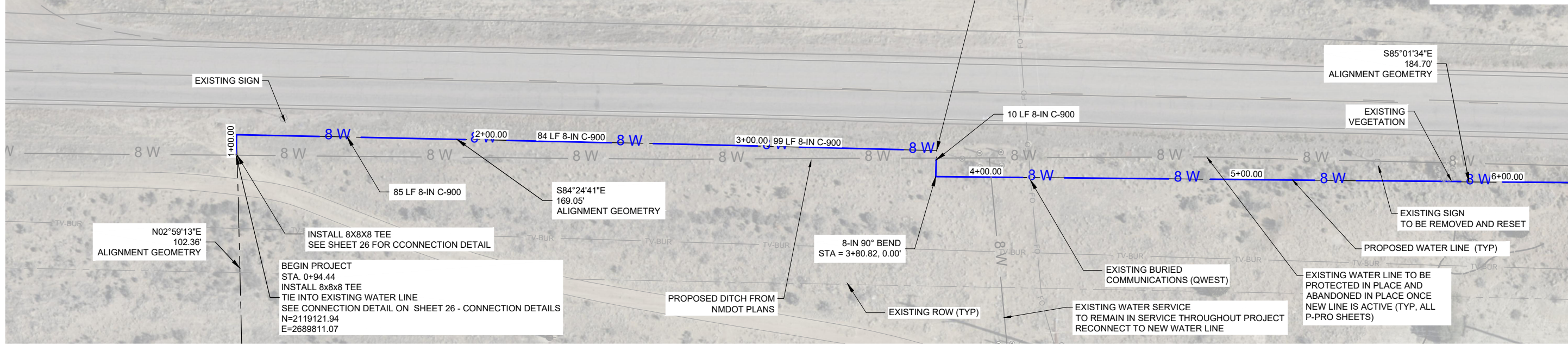
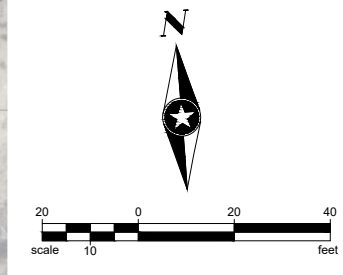
KEY PLAN
NM 173 WATER LINE

NOTE 1: DEFLECT PIPES AT JOINTS PER MANUFACTURERS SPECIFICATIONS TO MAINTAIN VERTICAL CURVATURE AND CONSISTENT BURY DEPTH OF 48-IN BELOW NM DOT PROPOSED GRADES AND EXISTING GRADES.

IN AREAS WHERE THE PROPOSED NM DOT GRADE CAUSES A FUTURE FILL CONDITION, A 36-IN BURY DEPTH BELOW EXISTING GRADE SHOULD BE MAINTAINED INSTEAD (TYP, ALL P-PRO SHEETS).

NOTE 2: CONTRACTOR TO POTHOLE EXISTING WATER LINE AND UTILITIES TO VERIFY LOCATION AND ELEVATION PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER IF CONDITIONS VARY FROM WHAT IS SHOWN ON THE PLANS.

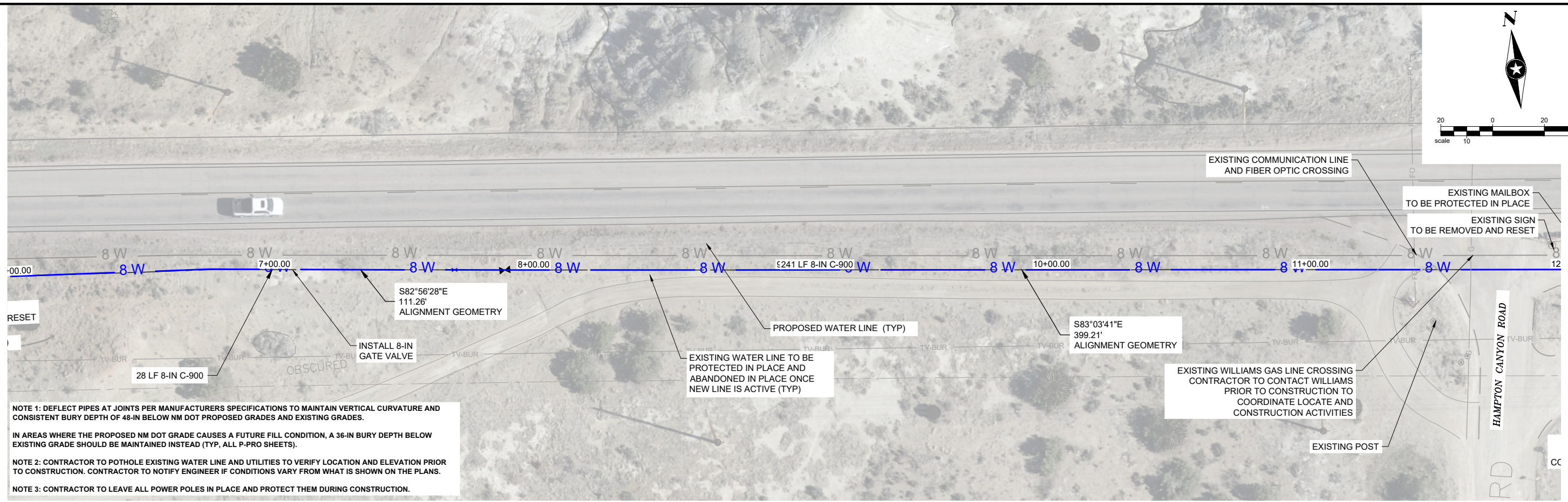
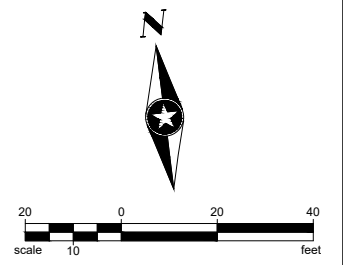
NOTE 3: CONTRACTOR TO LEAVE ALL POWER POLES IN PLACE AND PROTECT THEM DURING CONSTRUCTION.



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 DATE 11/30/2021
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 LICENSE NO. 23088



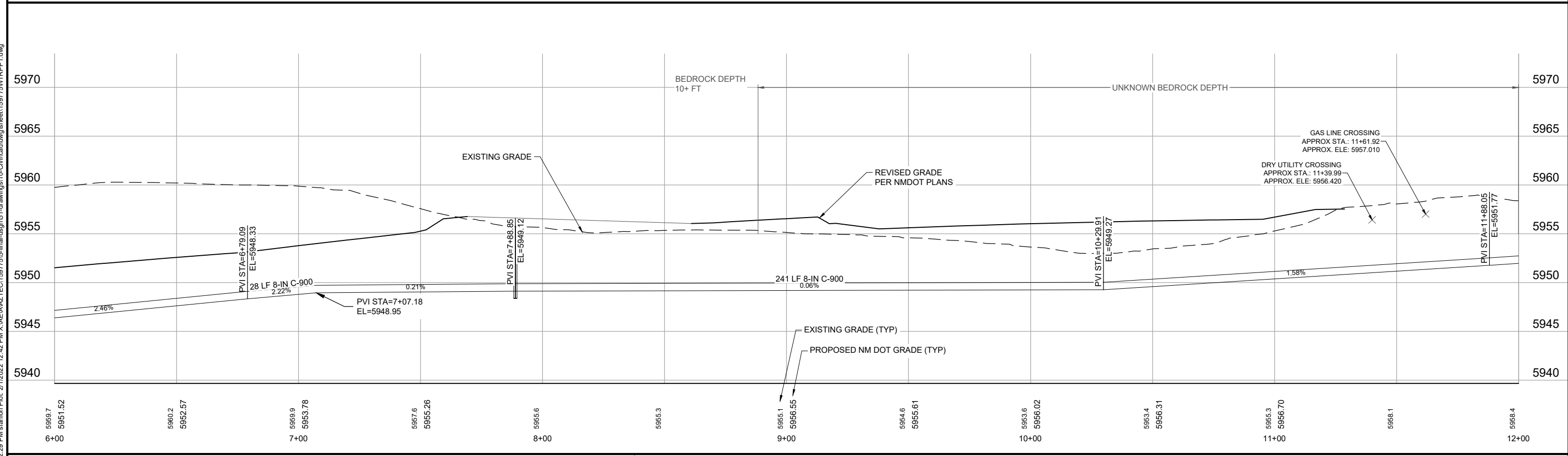
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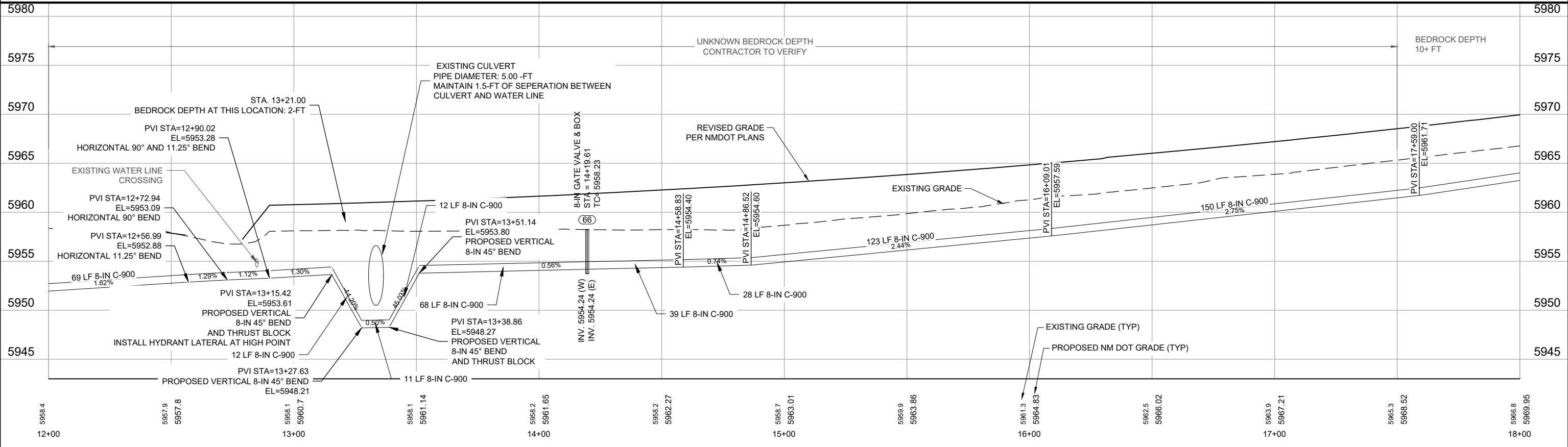
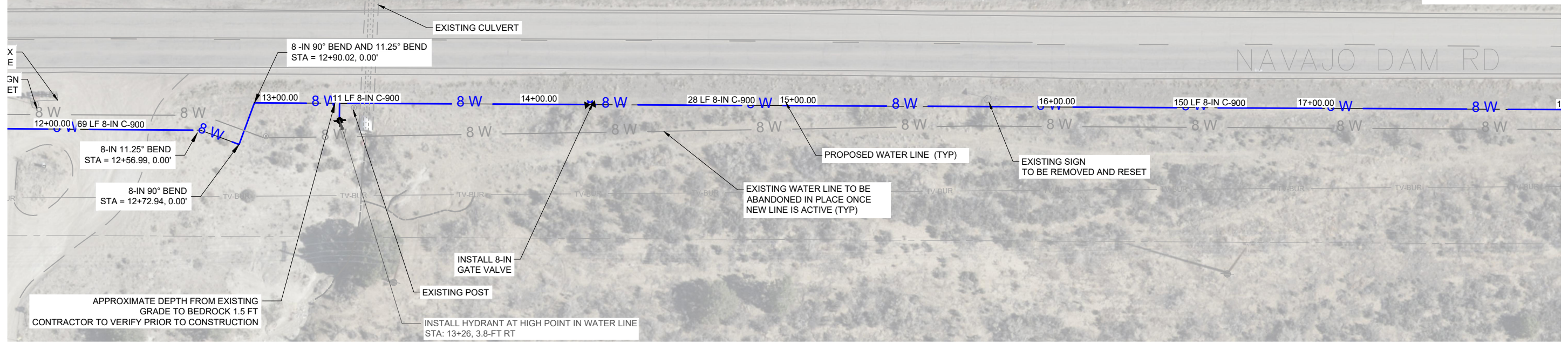
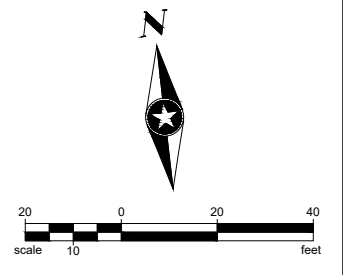

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NOTE 1: DEFLECT PIPES AT JOINTS PER MANUFACTURERS SPECIFICATIONS TO MAINTAIN VERTICAL CURVATURE AND CONSISTENT BURY DEPTH OF 48-IN BELOW NM DOT PROPOSED GRADES AND EXISTING GRADES.

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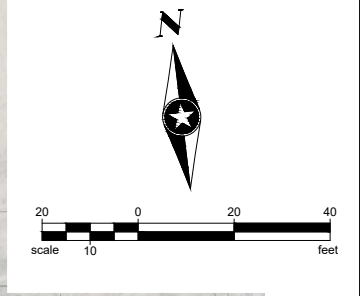
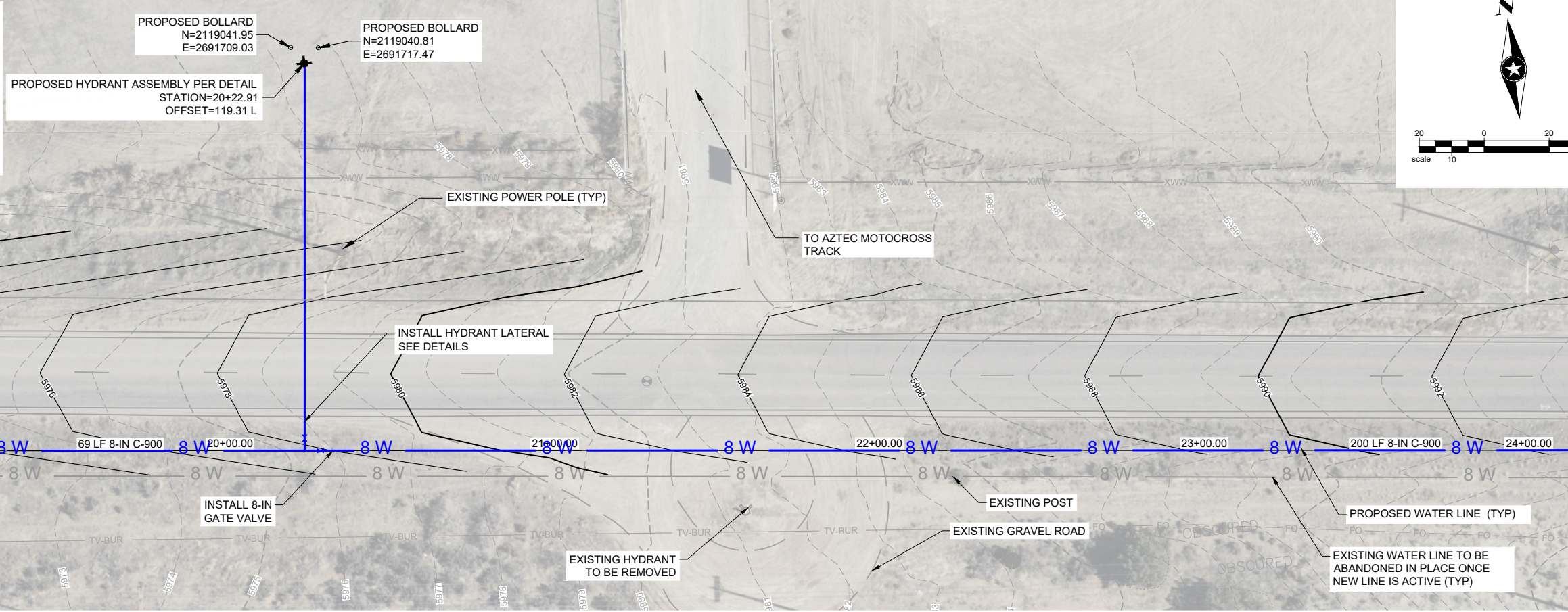
DREW CHANDLER, PE
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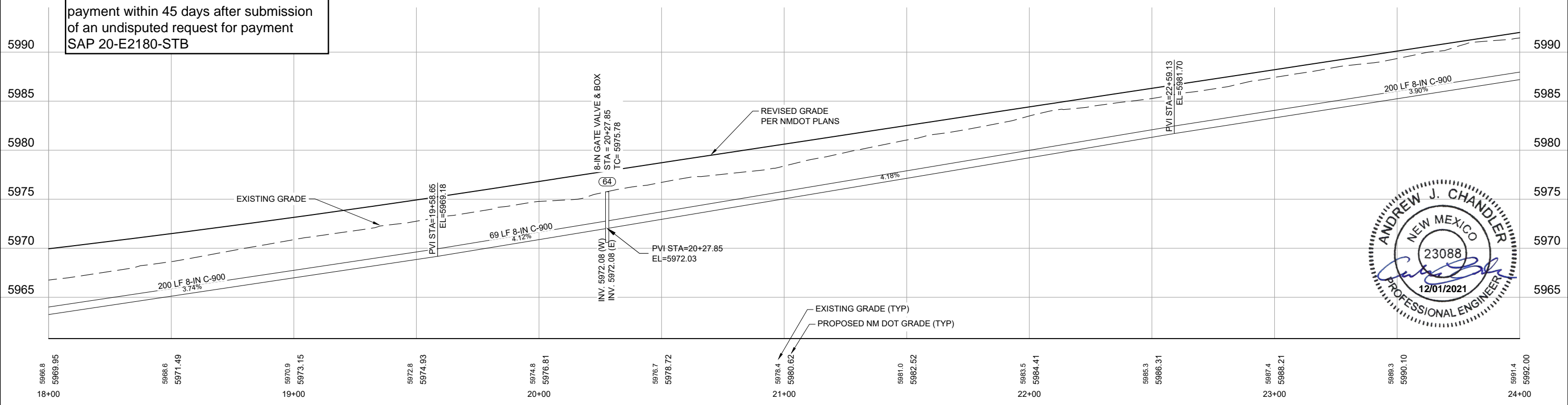
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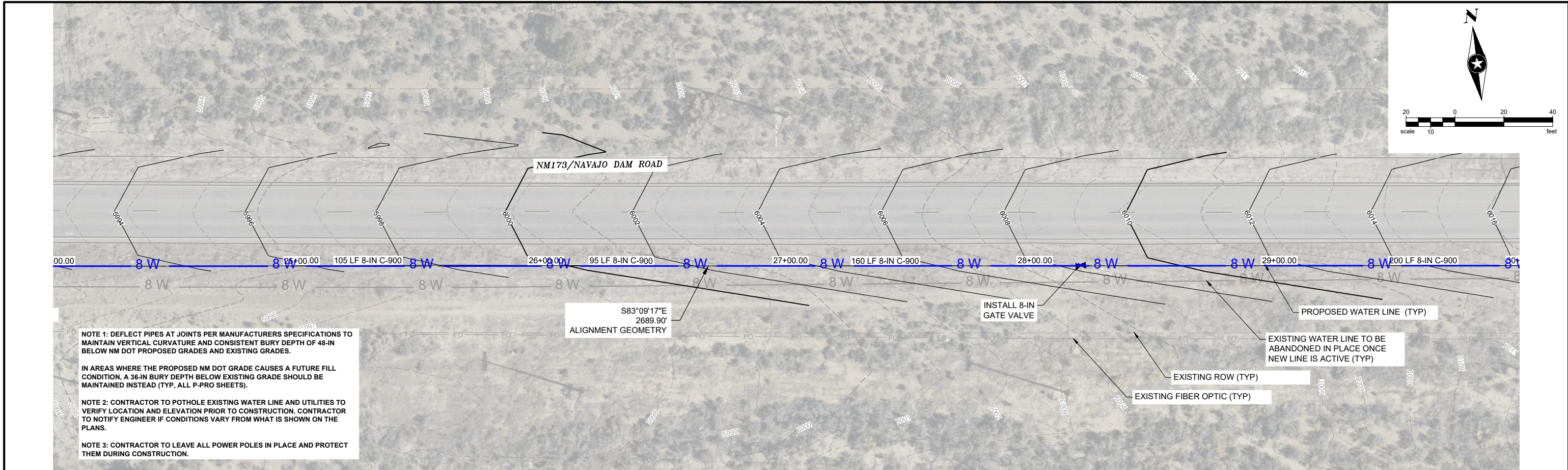
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S83°09'17"E
2689.90'
ALIGNMENT GEOMETRY

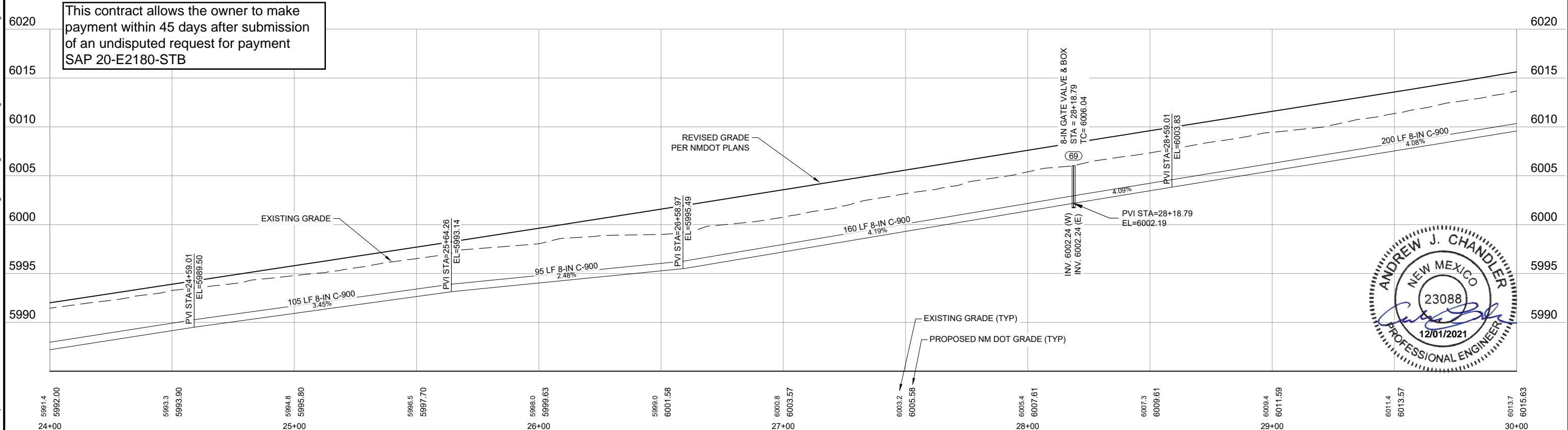
INSTALL 8-IN
GATE VALVE

EXISTING WATER LINE TO BE
ABANDONED IN PLACE ONCE
NEW LINE IS ACTIVE (TYP)

EXISTING ROW (TYP)

EXISTING FIBER OPTIC (TYP)

This contract allows the owner to make payment within 45 days after submission of an undisputed request for payment SAP 20-E2180-STB



SEH Project	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	PT					
Designed By	PT					
Checked By	PO					

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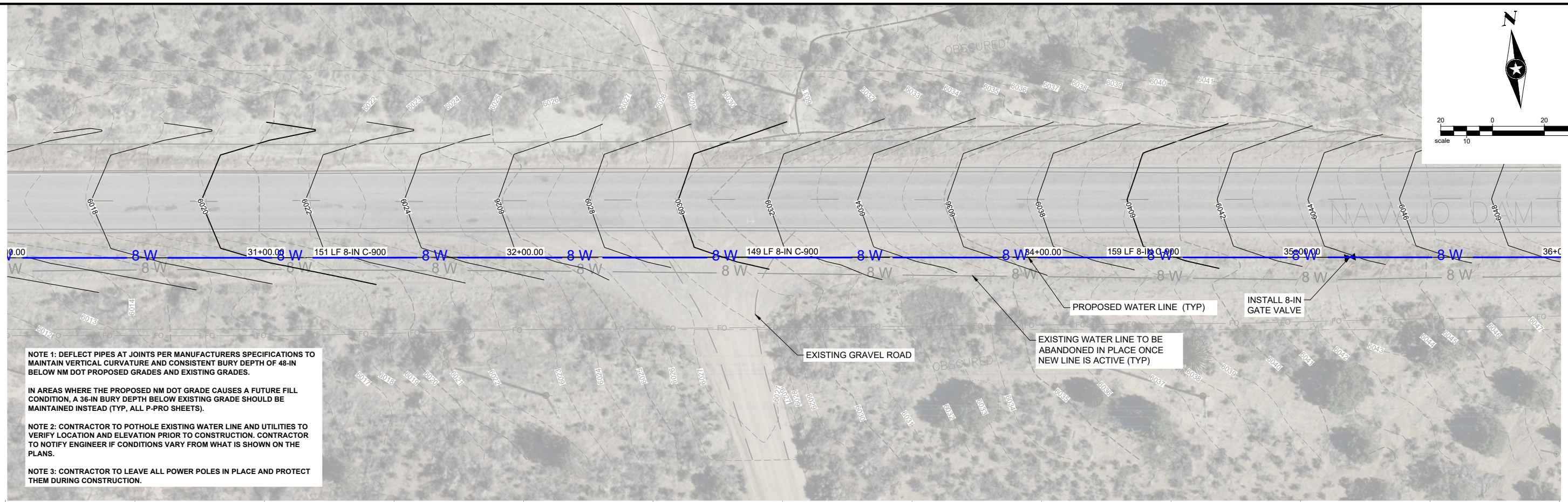
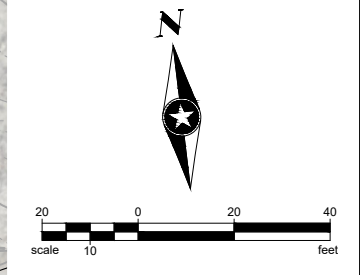
DATE 11/30/2021

DREW CHANDLER, PE
LICENSE NO. 23088

NM 173 WATER LINE REPLACEMENT
AZTEC, NEW MEXICO

WATER PLAN AND PROFILE (5)
NM 173 WATER LINE

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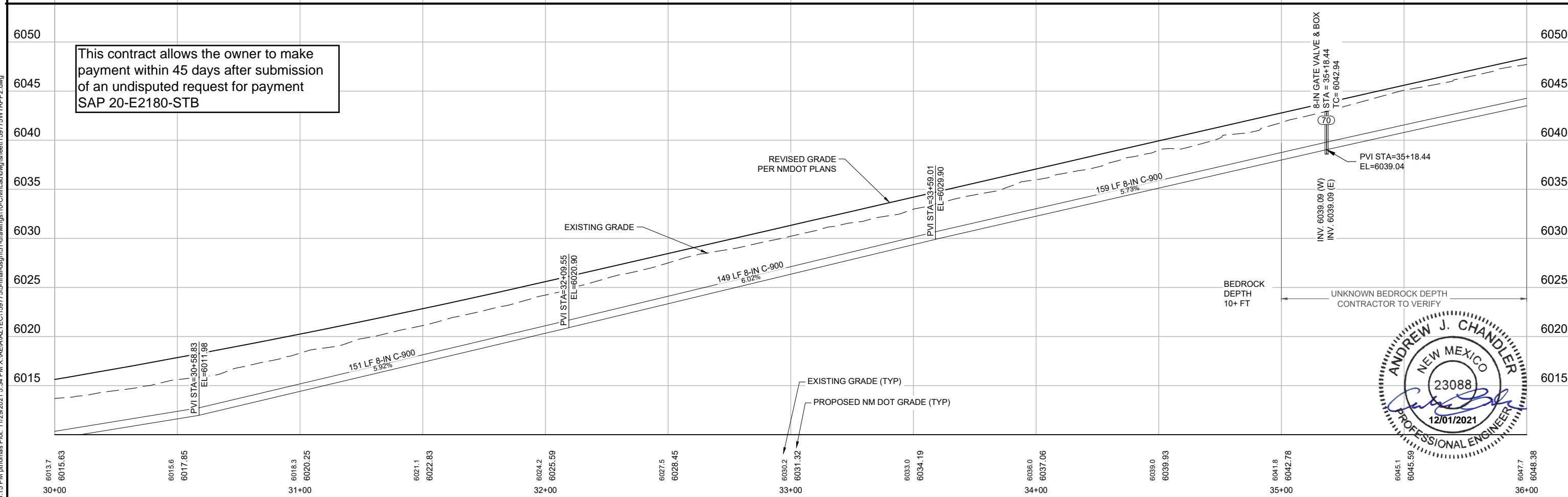
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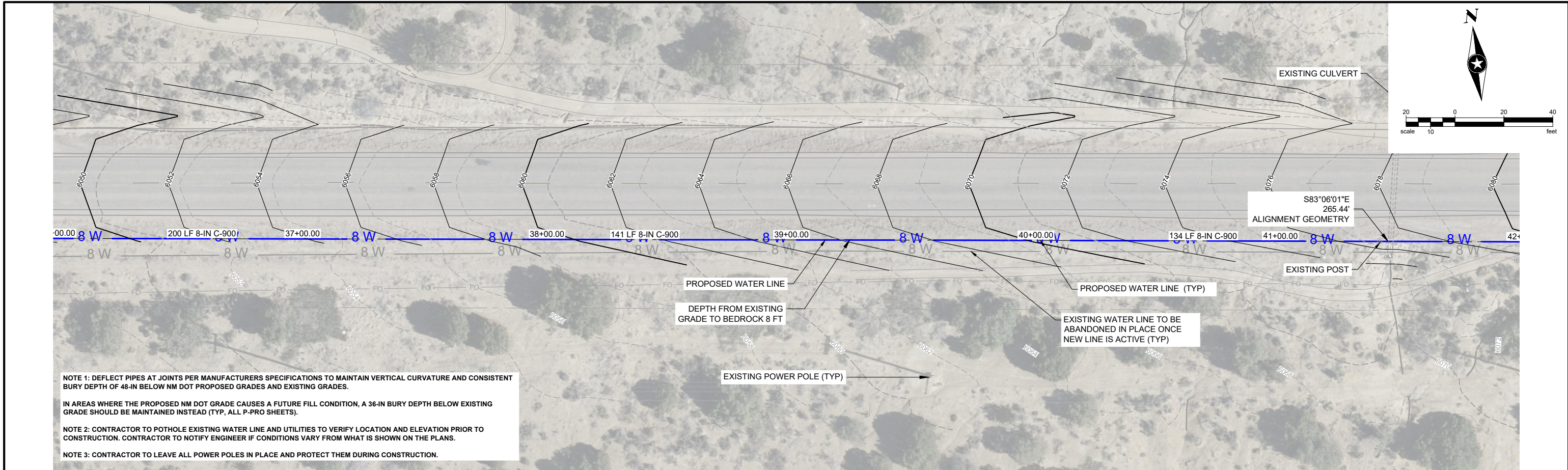
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SEH

DREW CHANDLER, PE
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DATE 11/30/2021

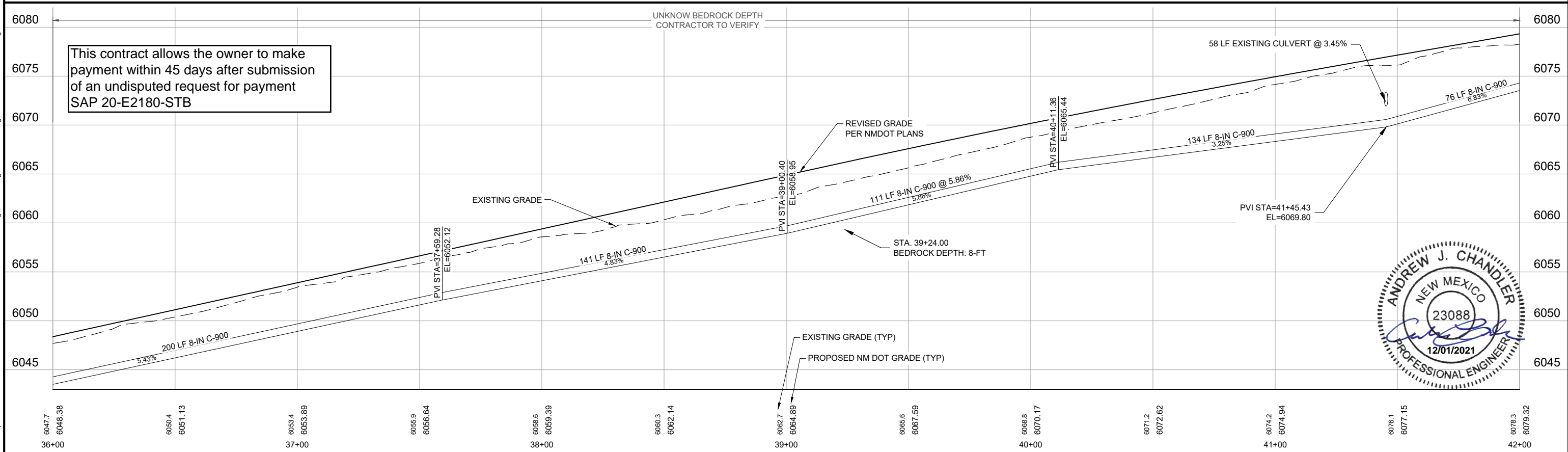


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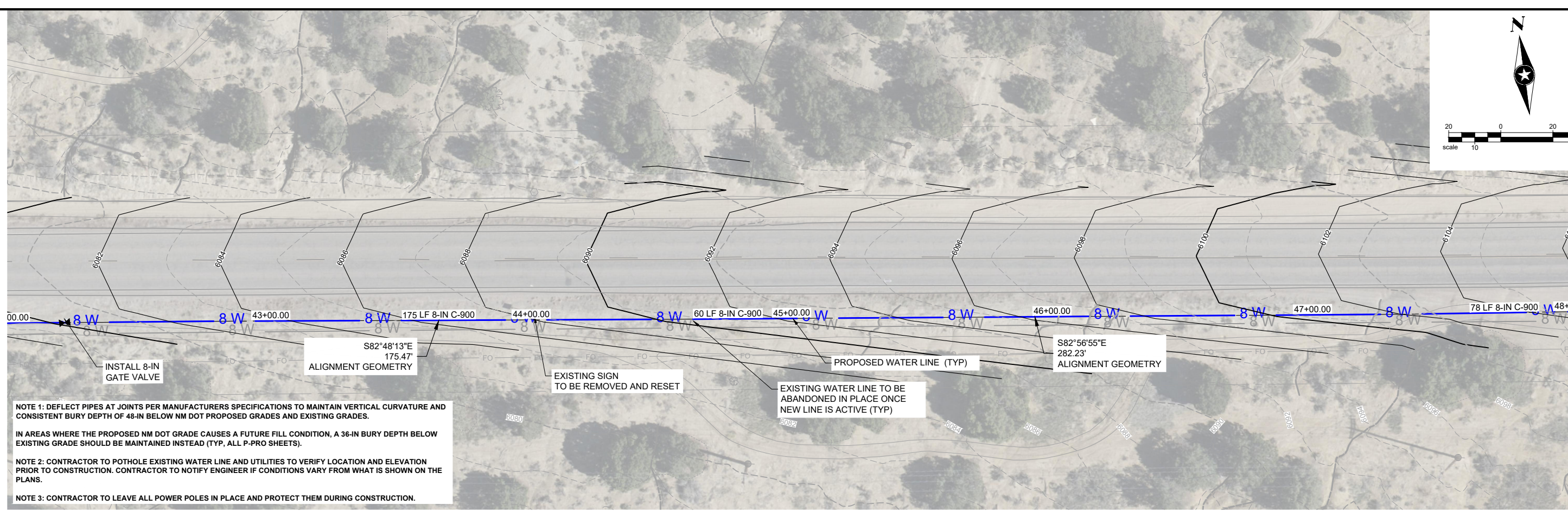
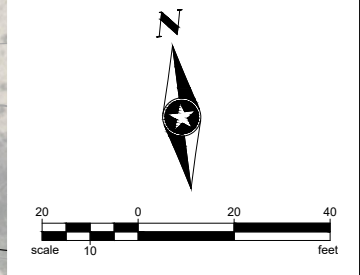
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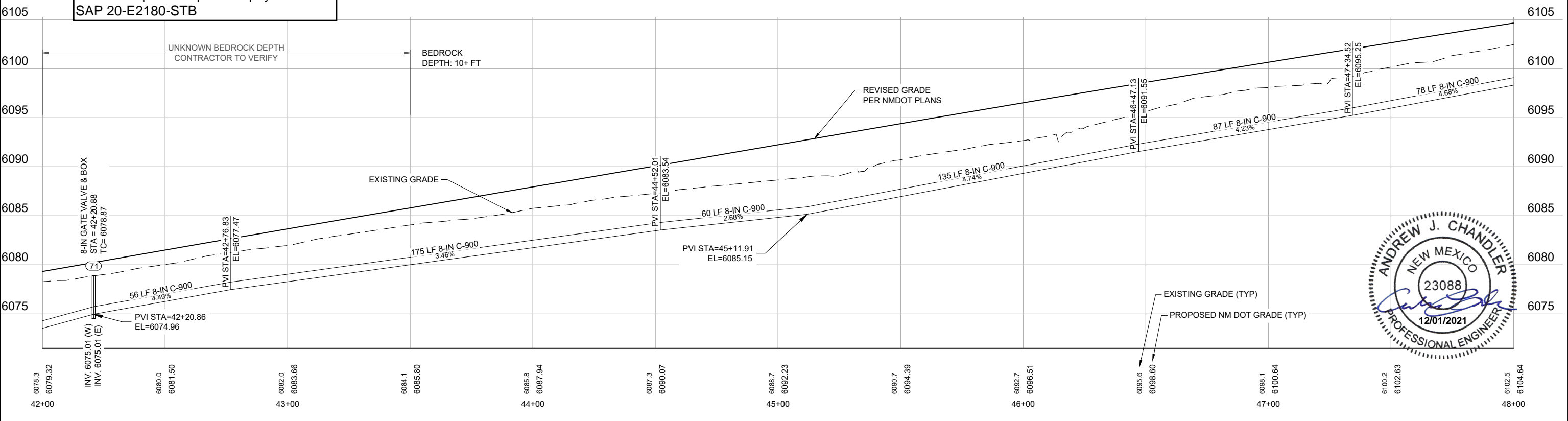
DATE 11/30/2021

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LICENSE NO. 23088



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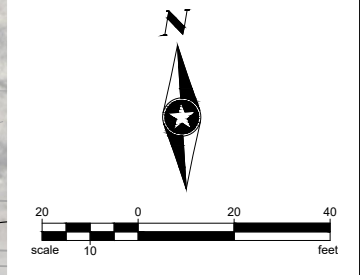
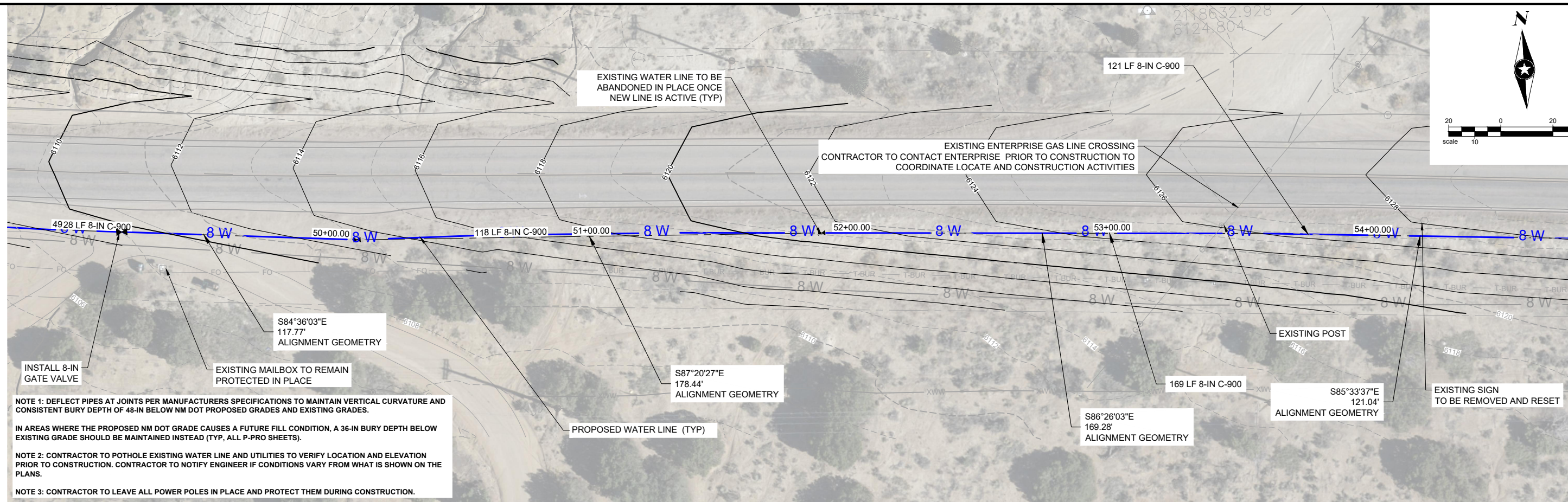


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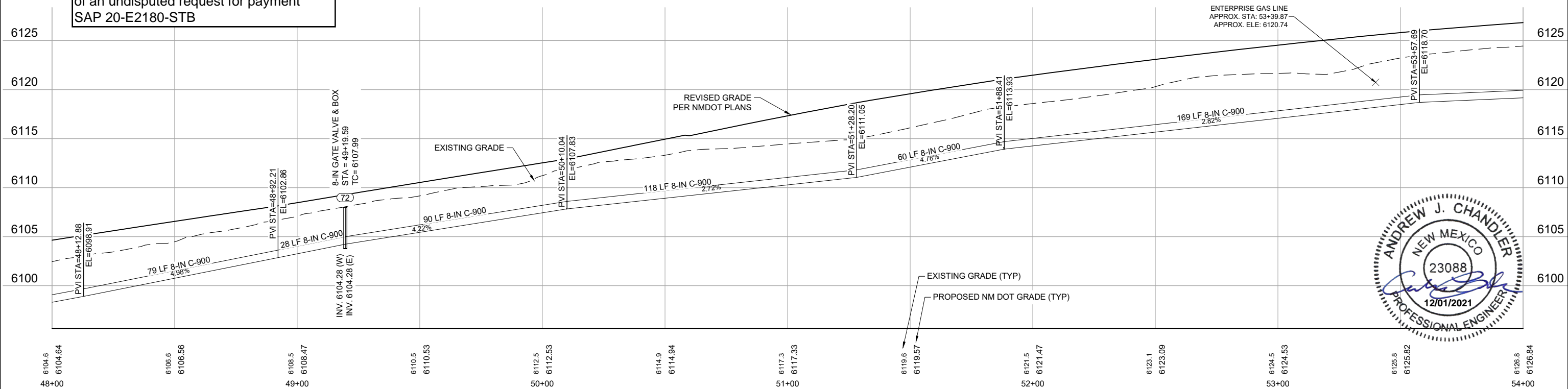
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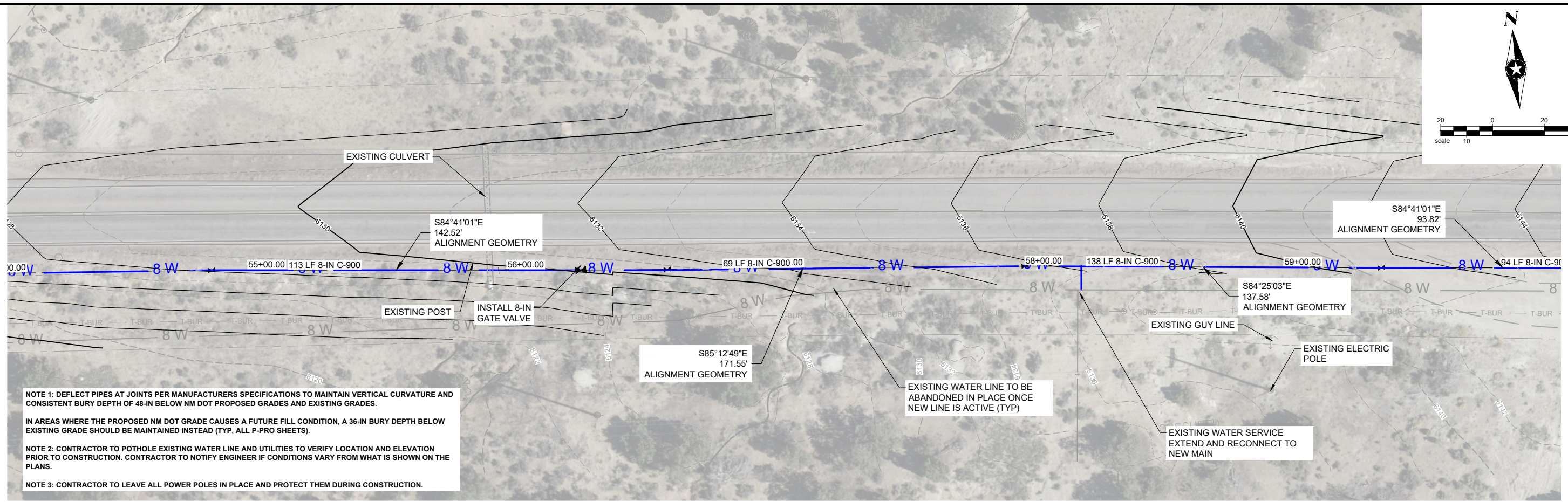
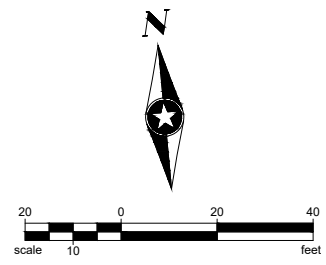
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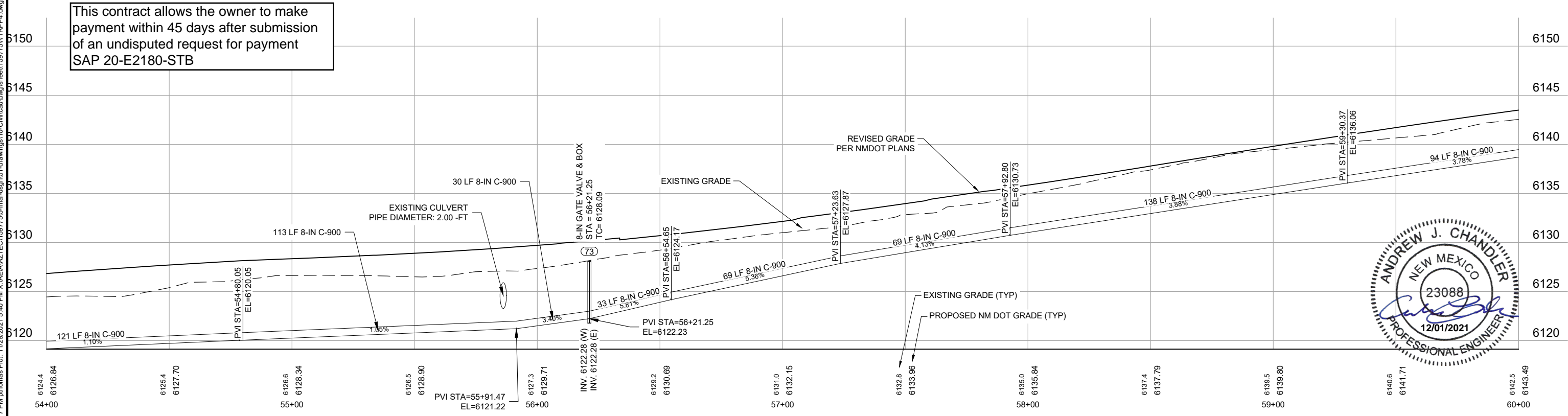
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BENCHMARK EL.

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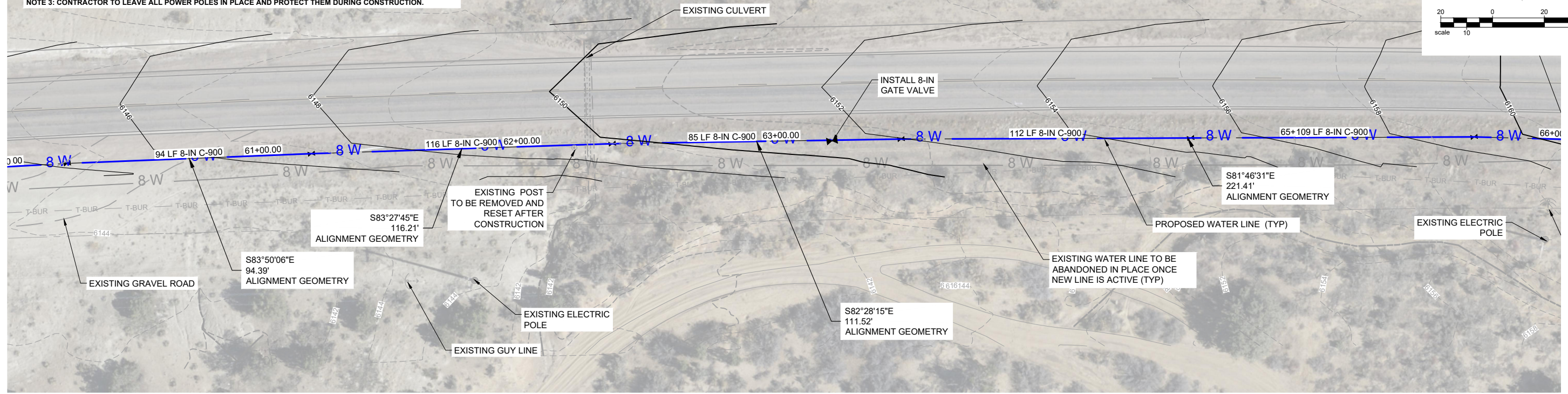
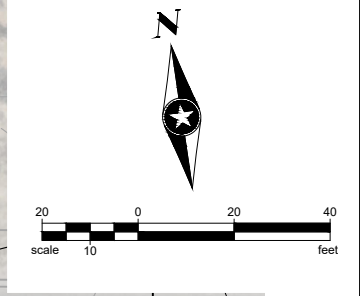
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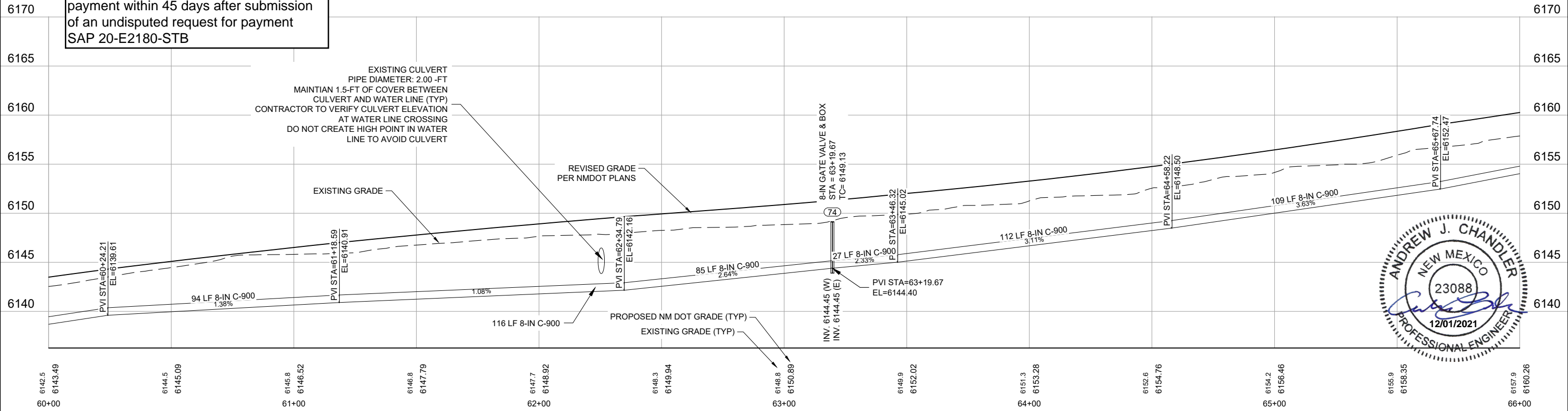
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DREW CHANDLER, PE
LICENSE NO. 23088

NM 173 WATER LINE REPLACEMENT
AZTEC, NEW MEXICO

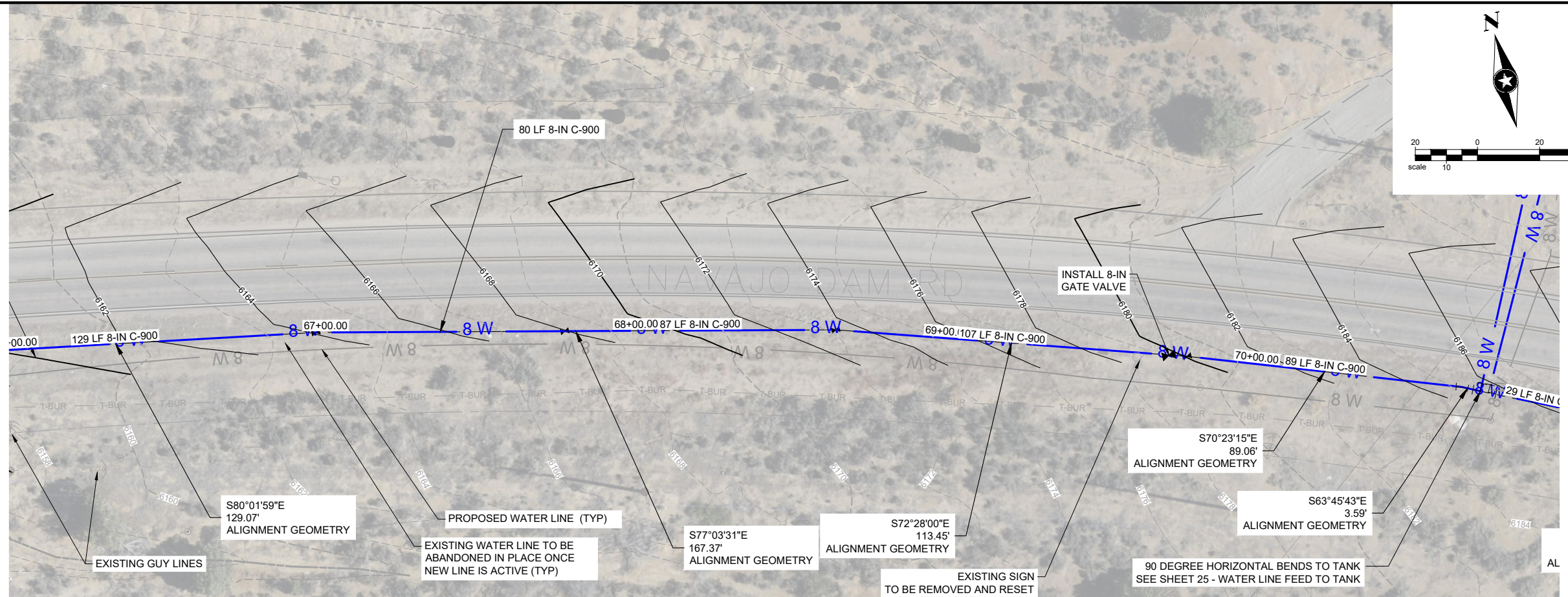
WATER PLAN AND PROFILE (11)
NM 173 WATER LINE

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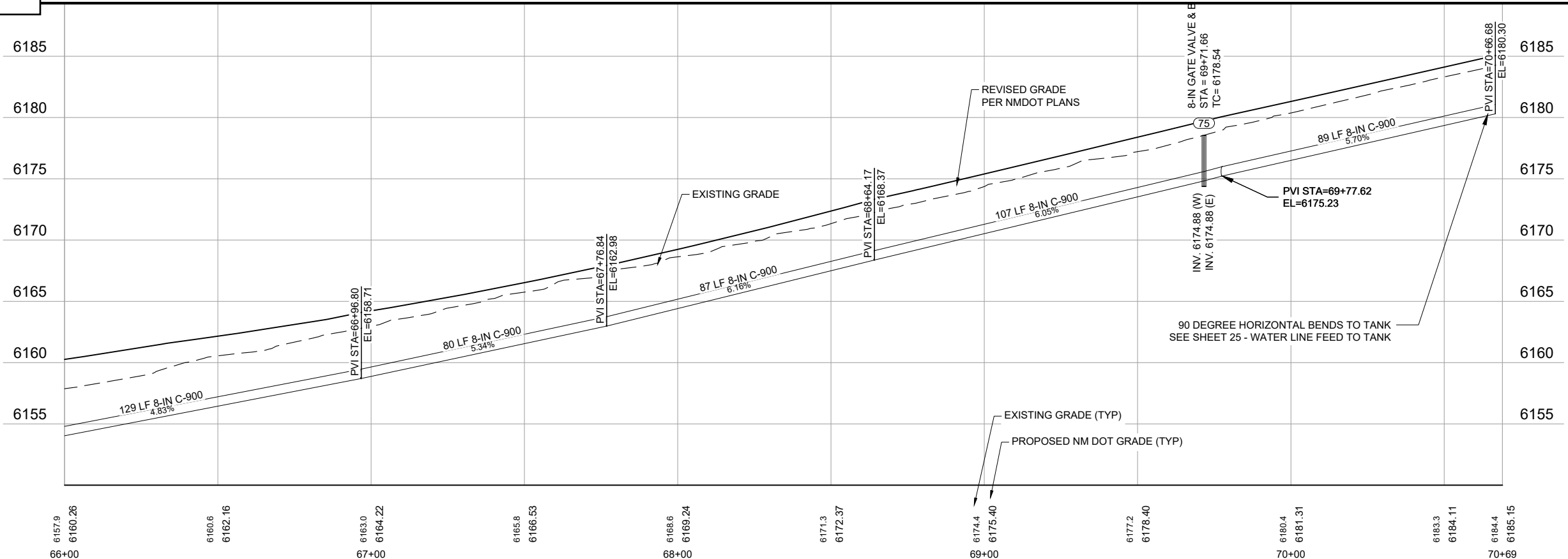
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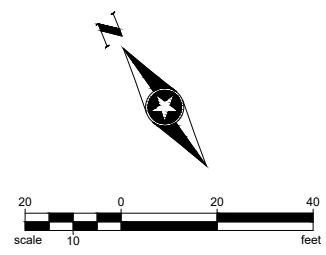
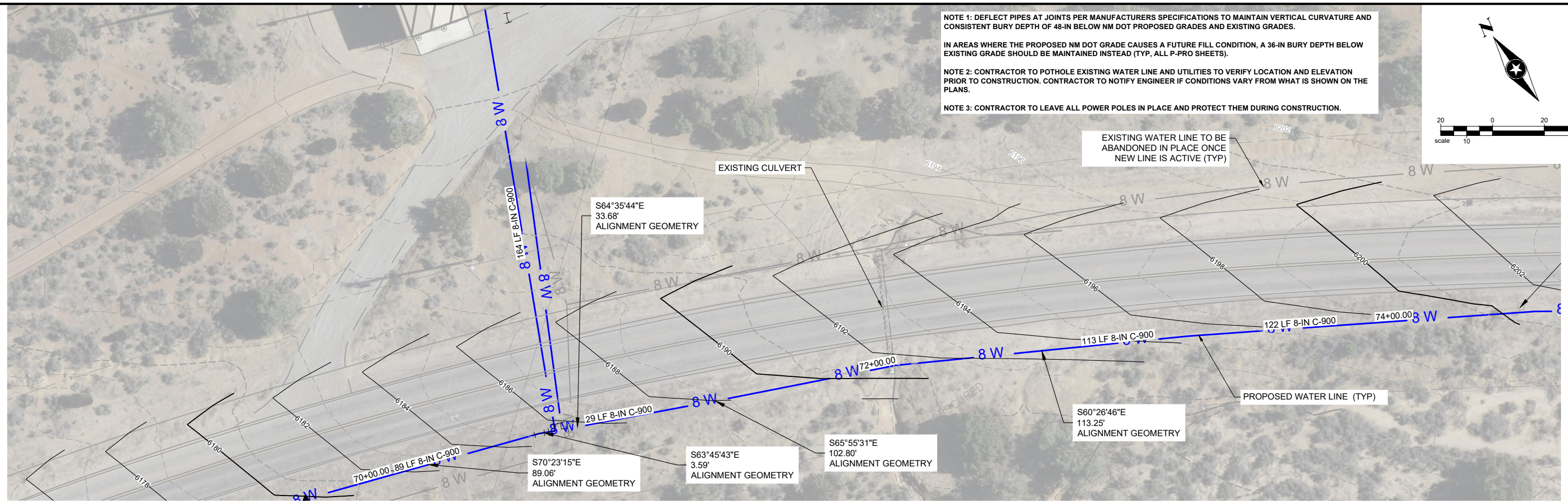
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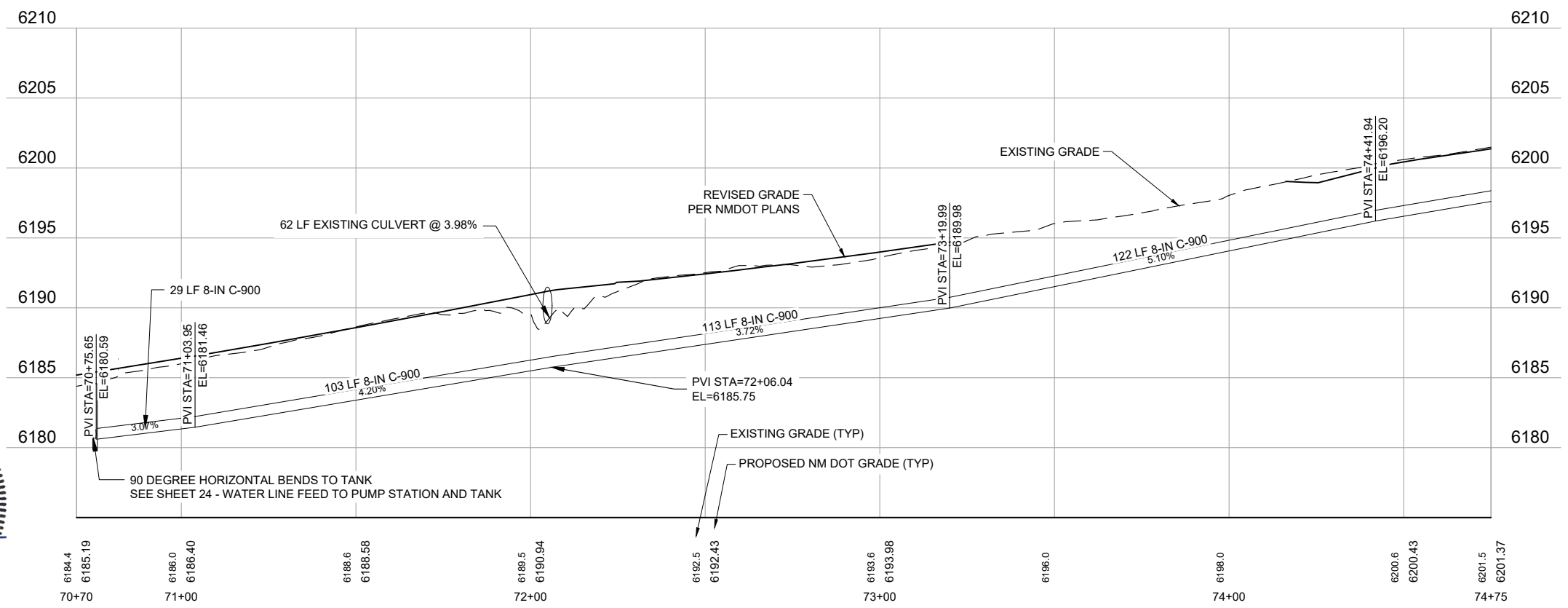
NM 173 WATER LINE REPLACEMENT
AZTEC, NEW MEXICO

WATER PLAN AND PROFILE (12)
NM 173 WATER LINE

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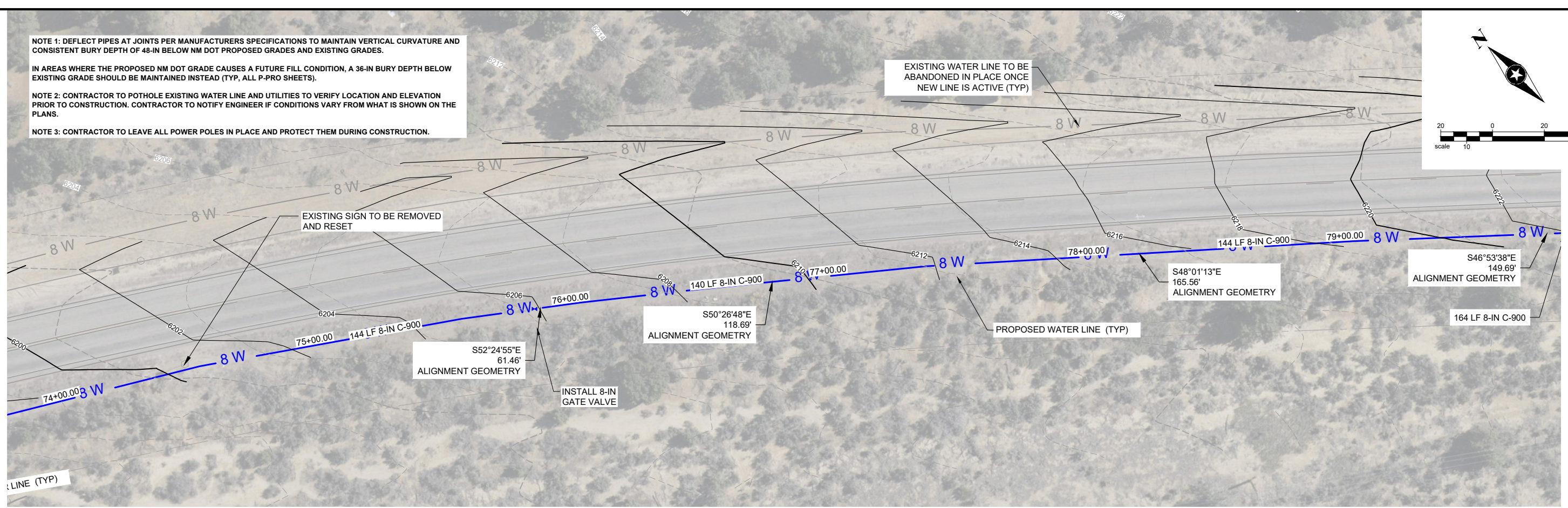
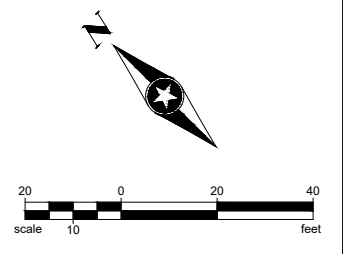
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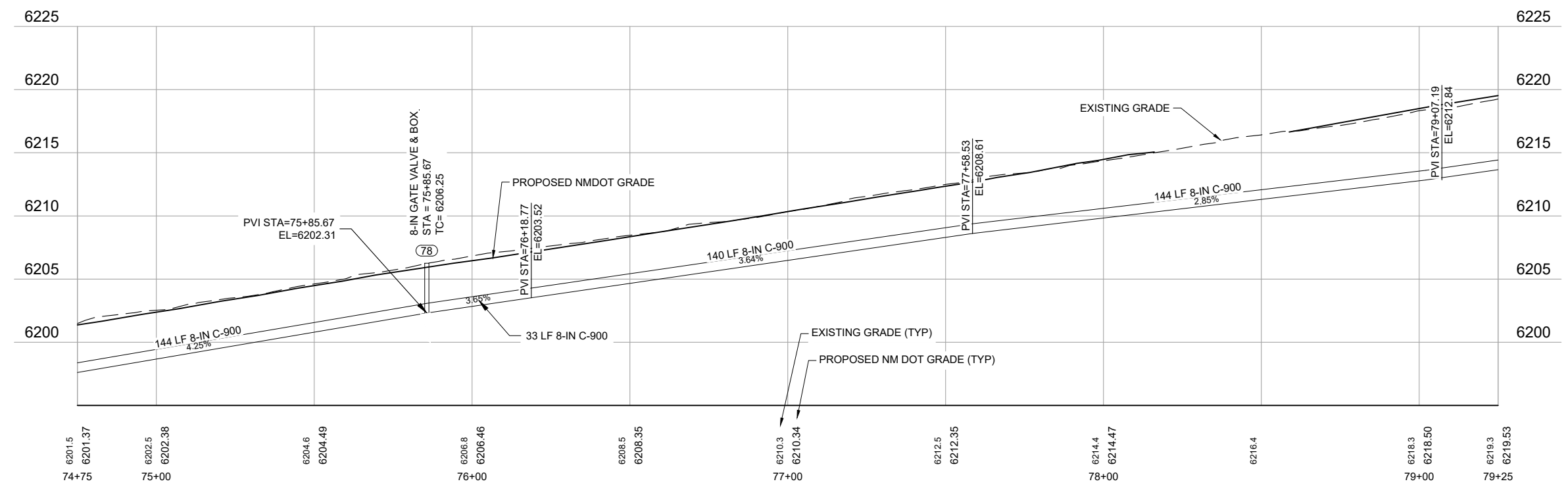
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NM 173 WATER LINE REPLACEMENT
AZTEC, NEW MEXICO

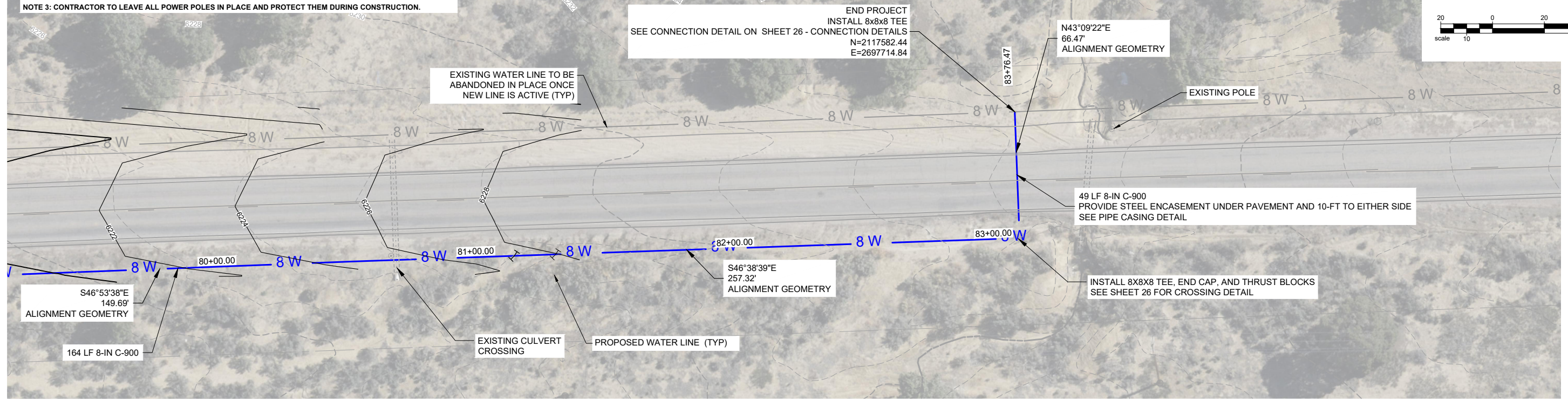
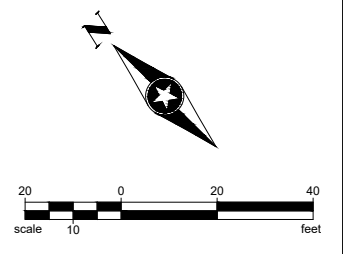
WATER PLAN AND PROFILE (14)
NM 173 WATER LINE

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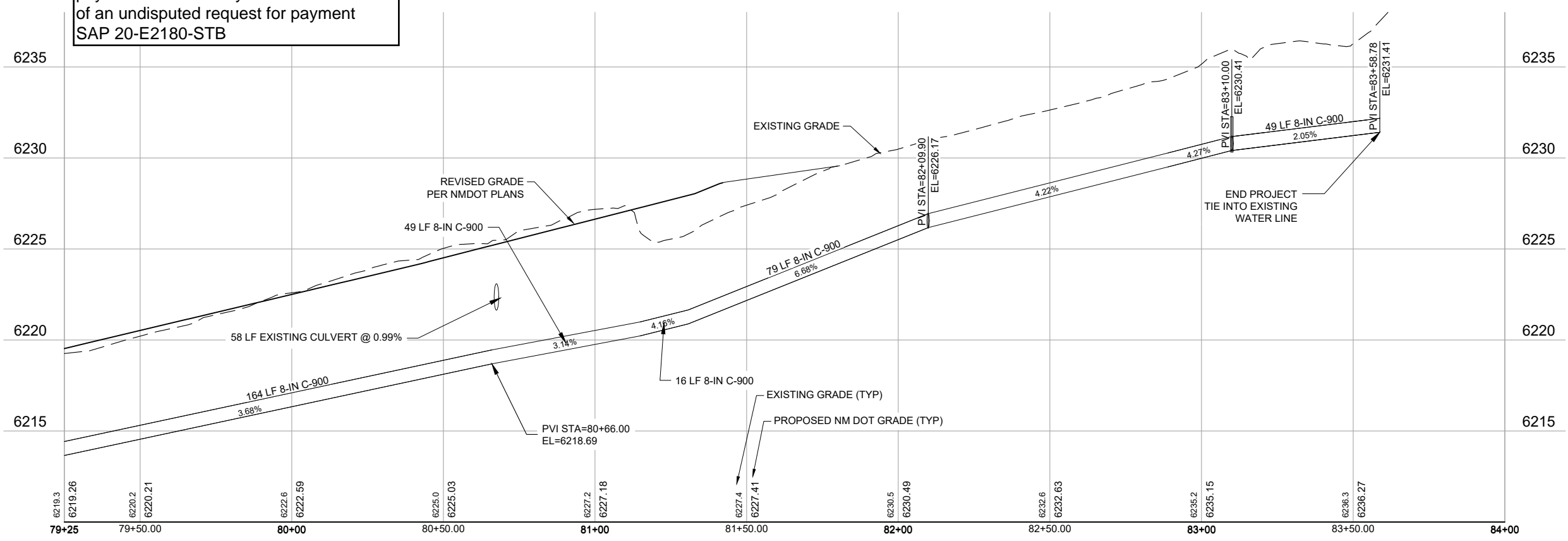
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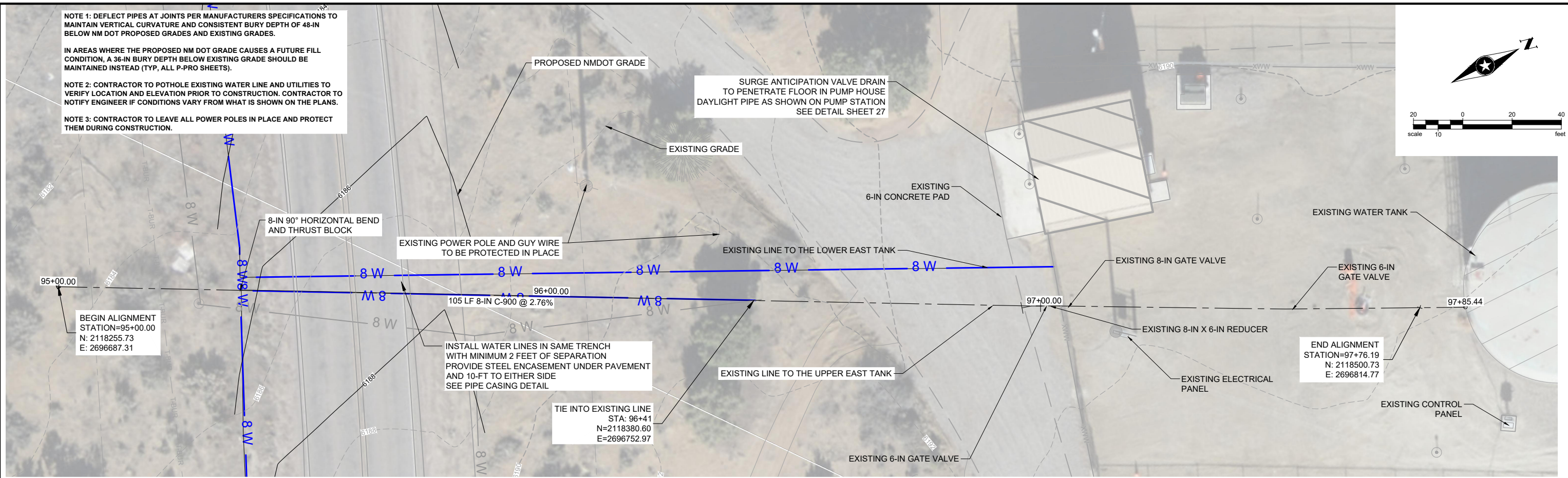
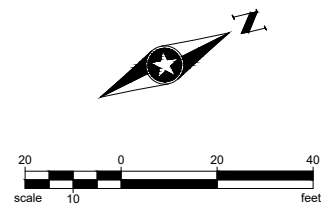
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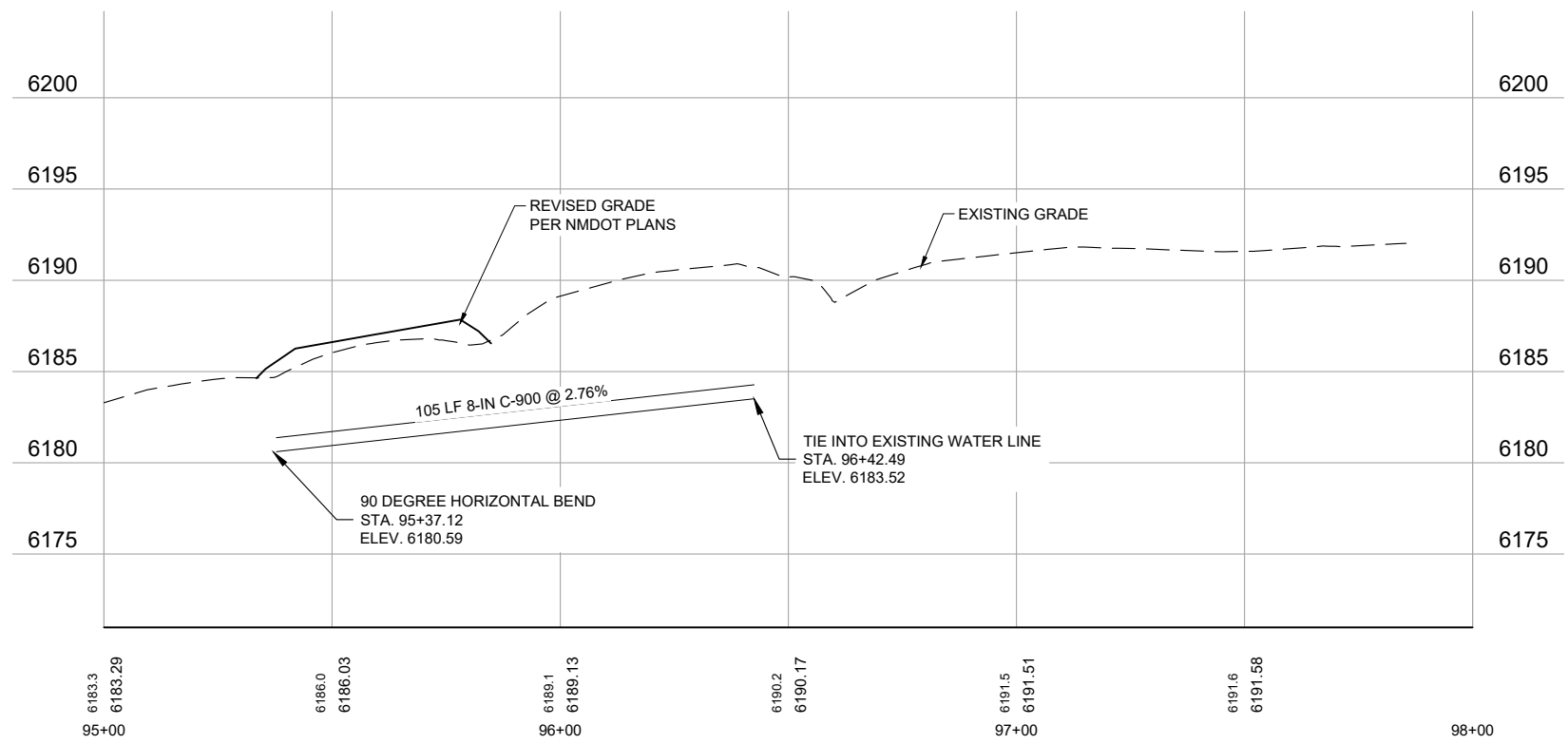
BENCHMARK EL.

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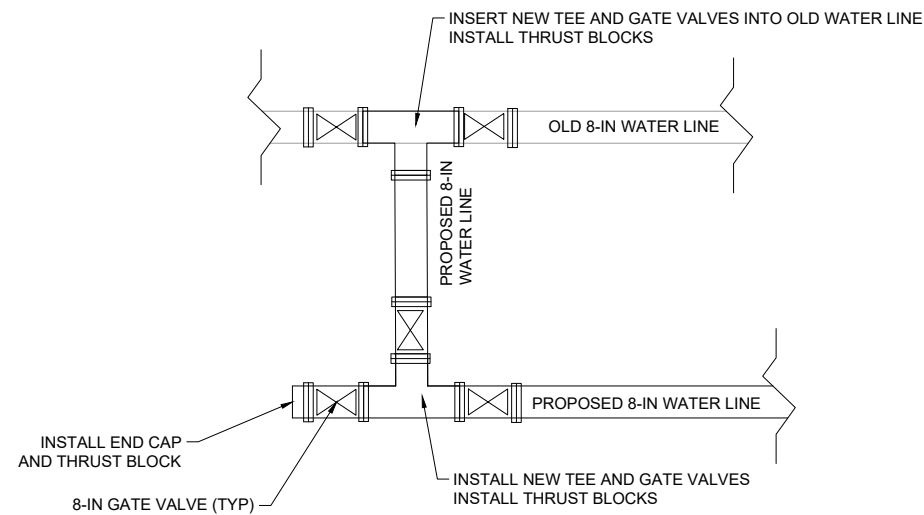
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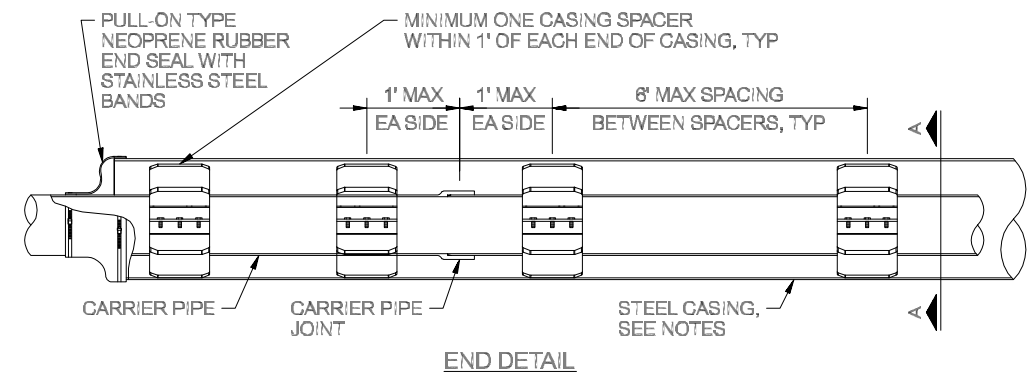
NM 173 WATER LINE REPLACEMENT
AZTEC, NEW MEXICO

WATER LINE FEED TO PUMP STATION AND TANK
NM 173 WATER LINE

24
of 33

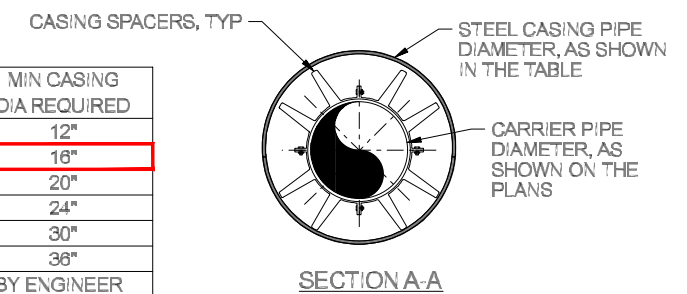


PROPOSED WATER LINE CONNECTION DETAIL
NTS



END DETAIL

CARRIER PIPE DIA	MIN CASING DIA REQUIRED
8"	12"
8"	18"
12"	20"
15"	24"
18"	30"
24"	36"
>24"	BY ENGINEER



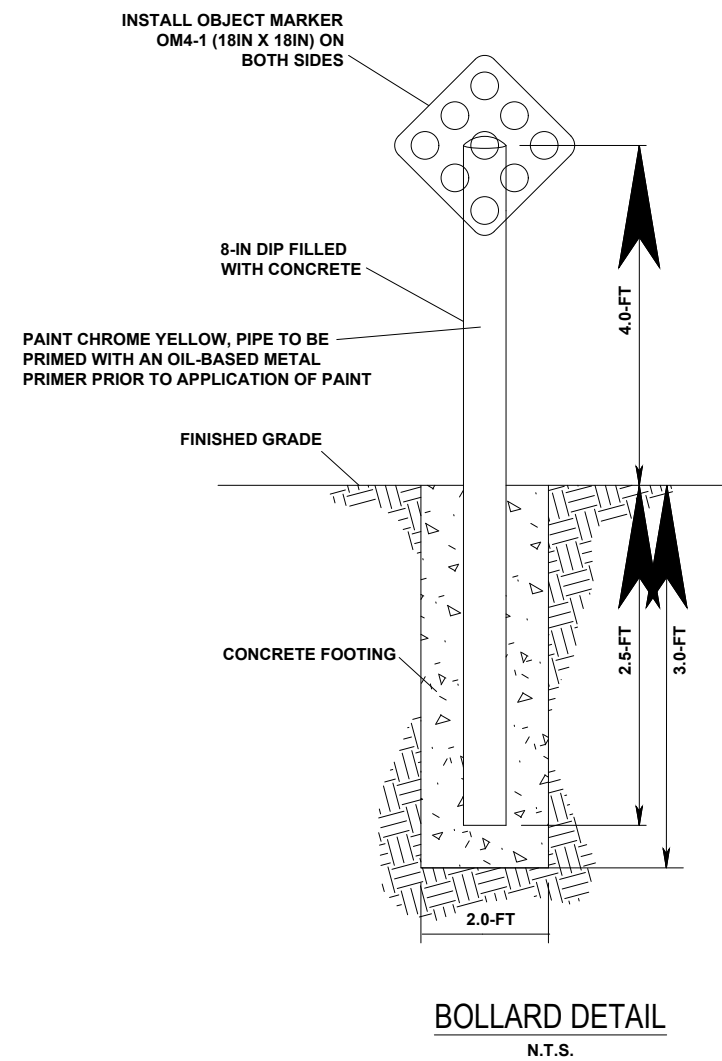
SECTION A-A

NOTES:

- BORING SHALL BE AT 90 DEGREES TO ALL CROSSINGS UNLESS OTHERWISE APPROVED.
- STEEL PIPE CASING SHALL BE SMOOTH STEEL PIPE FABRICATED IN SECTIONS IN ACCORDANCE WITH AWWA C201. LENGTHS OF CASING PIPE SHALL BE AS LONG AS PRACTICAL FOR SITE CONDITIONS.
- JOINTS SHALL CONFORM TO THE REQUIREMENTS OF AWWA C206. JOINTS BETWEEN SECTIONS SHALL BE COMPLETELY WELDED TO THE PRECEDING SECTIONS. PRIOR TO WELDING JOINTS, THE CONTRACTOR SHALL ENSURE THAT BOTH ENDS OF THE CASING SECTIONS BEING WELDED ARE SQUARE.
- STEEL PIPE CASING WALL THICKNESS SHALL BE 0.375-IN WALL. VERIFY CASING SIZES PRIOR TO ORDERING AND SIZING CASING INSULATORS.
- CASING SPACERS SHALL RESTRAINED-TYPE BOLTED SPACERS AND SHALL HAVE A MAXIMUM SPACING AS SHOWN, OR AS RECOMMENDED BY MANUFACTURER, WHICHEVER IS CLOSER. PIPE CASING SPACERS SHALL BE AS MANUFACTURED BY PIPELINE SEAL AND INSULATOR, INC., ADVANCE PRODUCTS AND SYSTEMS, INC., CALPICO, CASCADE WATER WORKS MFG, INC., OR ENGINEER APPROVED EQUAL.
- CASING END SEALS SHALL BE SYNTHETIC NEOPRENE RUBBER PULL-ON TYPE END SEALS WITH STAINLESS STEEL BANDS, AS MANUFACTURED BY THE ABOVE MANUFACTURERS, OR APPROVED EQUAL.
- CATHODIC PROTECTION SHALL BE INSTALLED FOR EACH STEEL CASING.

TYPICAL PIPE CASING DETAIL

BENCHMARK EL.



BOLLARD DETAIL
N.T.S.

This contract allows the owner to make payment within 45 days after submission of an undisputed request for payment SAP 20-E2180-STB



CONNECTION DETAILS

SEH Project	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
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Designed By	PT
Checked By	PO



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DATE 11/30/2021
DREW CHANDLER, PE
LICENSE NO. 23088

NM 173 WATER LINE REPLACEMENT
AZTEC, NEW MEXICO

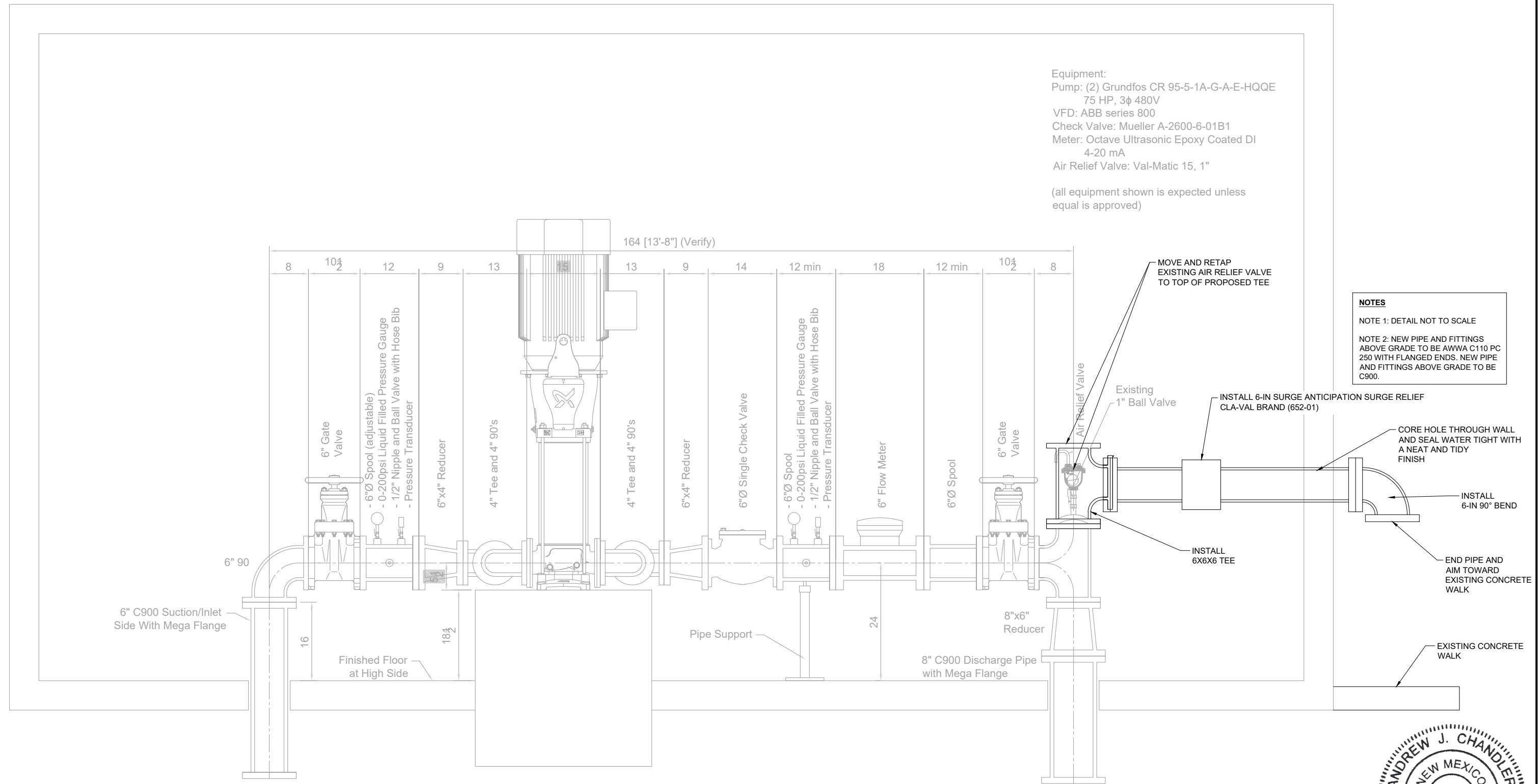
CONNECTION DETAILS
NM 173 Water Line

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Equipment:
 Pump: (2) Grundfos CR 95-5-1A-G-A-E-HQQE
 75 HP, 3φ 480V
 VFD: ABB series 800
 Check Valve: Mueller A-2600-6-01B1
 Meter: Octave Ultrasonic Epoxy Coated DI
 4-20 mA
 Air Relief Valve: Val-Matic 15, 1"

 (all equipment shown is expected unless
 equal is approved)



NOTES
 NOTE 1: DETAIL NOT TO SCALE
 NOTE 2: NEW PIPE AND FITTINGS ABOVE GRADE TO BE AWWA C110 PC 250 WITH FLANGED ENDS. NEW PIPE AND FITTINGS ABOVE GRADE TO BE C900.

MOVE AND RETAP EXISTING AIR RELIEF VALVE TO TOP OF PROPOSED TEE
 Existing 1" Ball Valve
 INSTALL 6-IN SURGE ANTICIPATION SURGE RELIEF CLA-VAL BRAND (652-01)
 CORE HOLE THROUGH WALL AND SEAL WATER TIGHT WITH A NEAT AND TIDY FINISH
 INSTALL 6-IN 90° BEND
 END PIPE AND AIM TOWARD EXISTING CONCRETE WALK
 EXISTING CONCRETE WALK
 INSTALL 6X6X6 TEE

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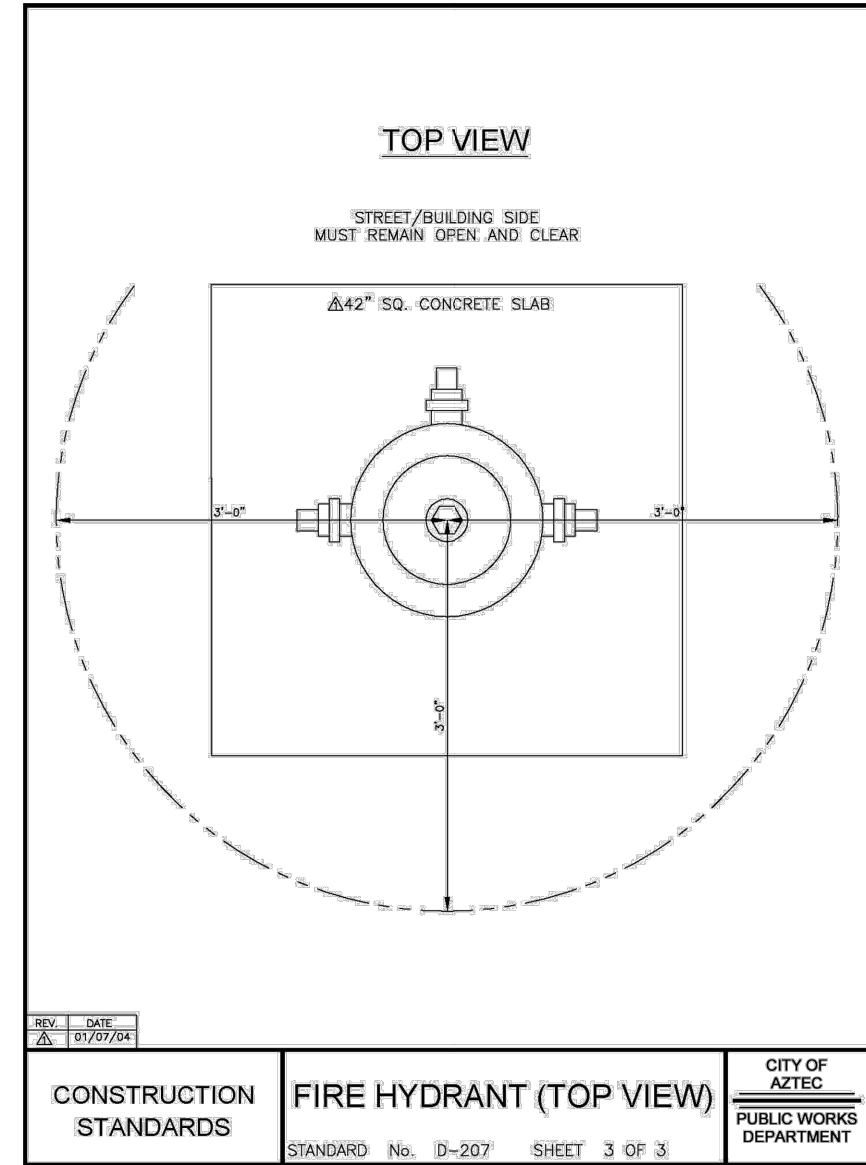
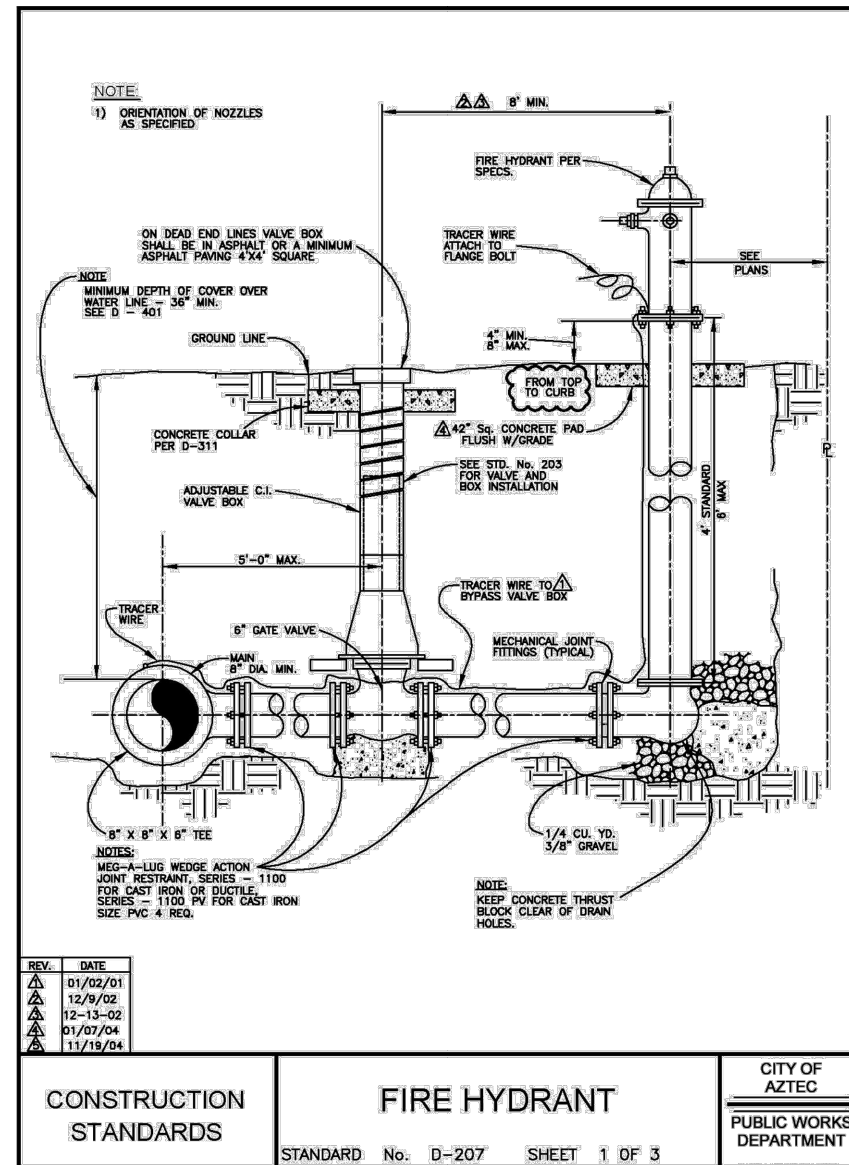
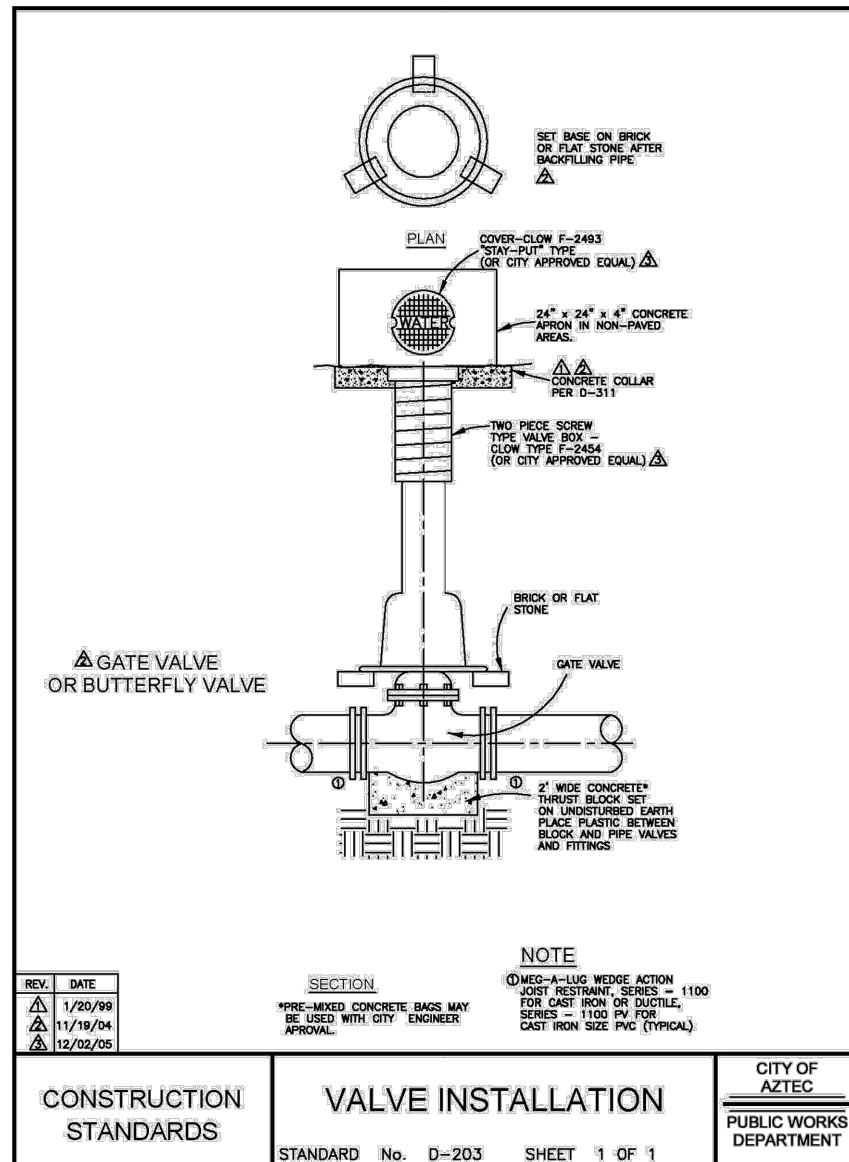
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Designed By	PT
Checked By	PO

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NM 173 WATER LINE REPLACEMENT
 AZTEC, NEW MEXICO

PUMP HOUSE PIPING DETAIL SURGE PROTECTION
 NM 173 Water Line
 27 of 33

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This contract allows the owner to make payment within 45 days after submission of an undisputed request for payment SAP 20-E2180-STB

BENCHMARK EL.

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FIBERGLASS POST DETAIL

CARSONITE CUM-375
OR APPROVED EQUAL

SECTION VIEW

FRONT VIEW

NOTE
INSTALL AT
MAXIMUM 500-FT
SPACING AND AT
HORIZONTAL BEND
FITTINGS

REV.	DATE
1	12/31/97

CONSTRUCTION STANDARDS	STATIONARY WATER LINE LOCATION MARKER	CITY OF AZTEC
	STANDARD No. D-212 SHEET 1 OF 1	PUBLIC WORKS DEPARTMENT

MEG-A-LUGS ARE REQUIRED UNLESS APPROVED BY CITY

TEE

DEAD END

**BEND HORIZONTAL OR
BOTTOM OF VERTICAL**

WYE

CROSS W/ DEAD END BRANCH

TEE W/ DEAD END BRANCH

SECTION AA

NOTES

- AT DEAD ENDS, WRAP FITTINGS WITH TAR PAPER, FELT, PLASTIC ETC., TO PROVIDE BOND BREAK BETWEEN CONCRETE AND FITTINGS.
- ALL THRUST BLOCKING SHALL BE CAST-IN-PLACE CONCRETE HAVING A MINIMUM YIELD STRENGTH OF 2000 P.S.I.
- THRUST BLOCKING SHALL BE CAST AGAINST UNDISTURBED EARTH. FORMS SHALL BE USED AS REQUIRED TO OBTAIN ADEQUATE BEARING AREA AND TO CONFINE THE CONCRETE THRUST BLOCKING SHALL BEAR ON THE FITTING OR END CAP ONLY AND SHOULD NOT BE ALLOWED TO SPILL OVER THE JOINT OR AGAINST THE PIPE.

CONSTRUCTION STANDARDS	THRUST BLOCKS	CITY OF AZTEC
	STANDARD No. D-210 SHEET 1 OF 2	PUBLIC WORKS DEPARTMENT

MEG-A-LUGS ARE REQUIRED UNLESS APPROVED BY CITY

**TABLE OF BEARING AREAS IN SQ. FT FOR CONCRETE
THRUST BLOCKING**

FOR 150 P.S.I. INTERNAL STATIC PRESSURE AND 2000 LBS. PER
SQ. FT SOIL BEARING CAPACITY.

PIPE SIZE	BENDS				TEES	PLUGS
	90°	45°	22 1/2°	11 1/4°		
4	1.50	0.75	0.50	0.0	1.00	1.00
6	3.00	1.75	1.00	0.0	2.25	2.25
8	5.50	3.00	1.50	1.00	3.75	3.75
10	8.50	4.50	2.50	1.50	6.00	6.00
12	12.00	6.50	3.50	1.75	8.50	8.50
14	16.50	9.00	4.50	2.25	11.50	11.50
16	21.50	11.50	6.00	3.00	15.00	15.00
18	27.00	14.75	7.50	3.75	19.00	19.00
20	33.50	18.00	9.25	4.75	23.50	23.50
24	48.00	26.00	13.25	6.75	34.00	34.00
30	75.25	40.75	20.75	10.50	53.00	53.00
36	108.25	58.50	30.00	15.00	76.50	76.50

AREAS GIVEN IN TABLE ARE BASED UPON AN INTERNAL STATIC PRESSURE OF 150 P.S.I. AND A SOIL BEARING CAPACITY OF 2000 LBS. PER SQ. FT. BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING THE TABULATED VALUES BY A CORRECTION FACTOR "F".

$F = \frac{\text{ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF LBS.}}{\text{ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF LBS.}}$

EXAMPLE: TO FIND BEARING AREA FOR 8" - 90° BEND WITH A STATIC INTERNAL PRESSURE OF 100 P.S.I. AND WITH A SOIL BEARING CAPACITY OF 3000 LBS. PER SQ. FT.

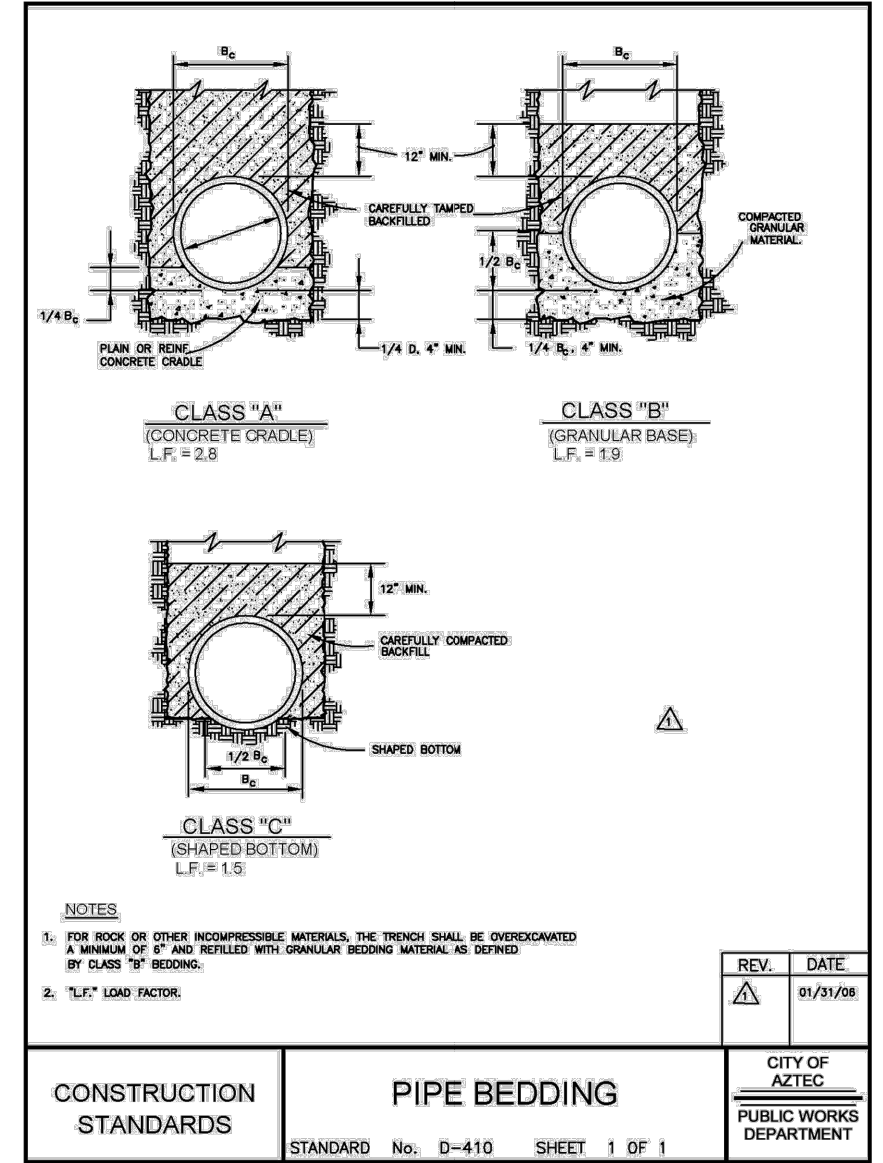
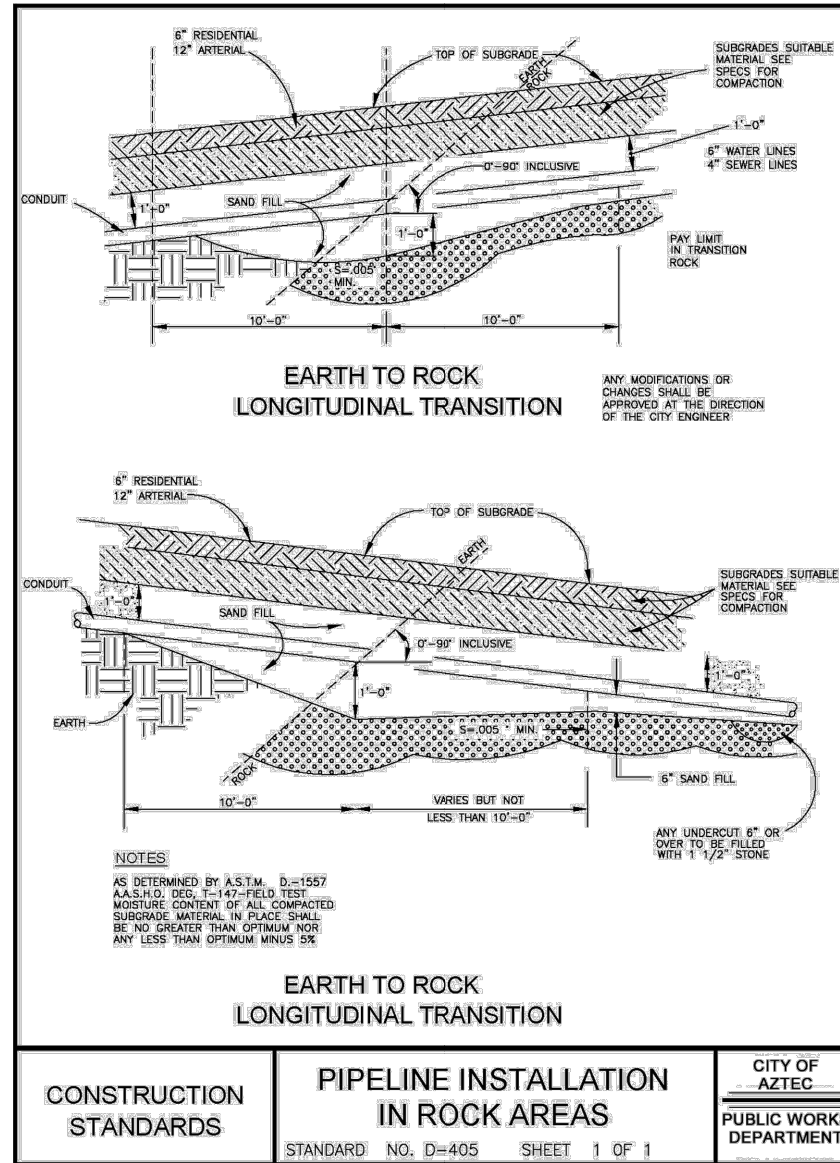
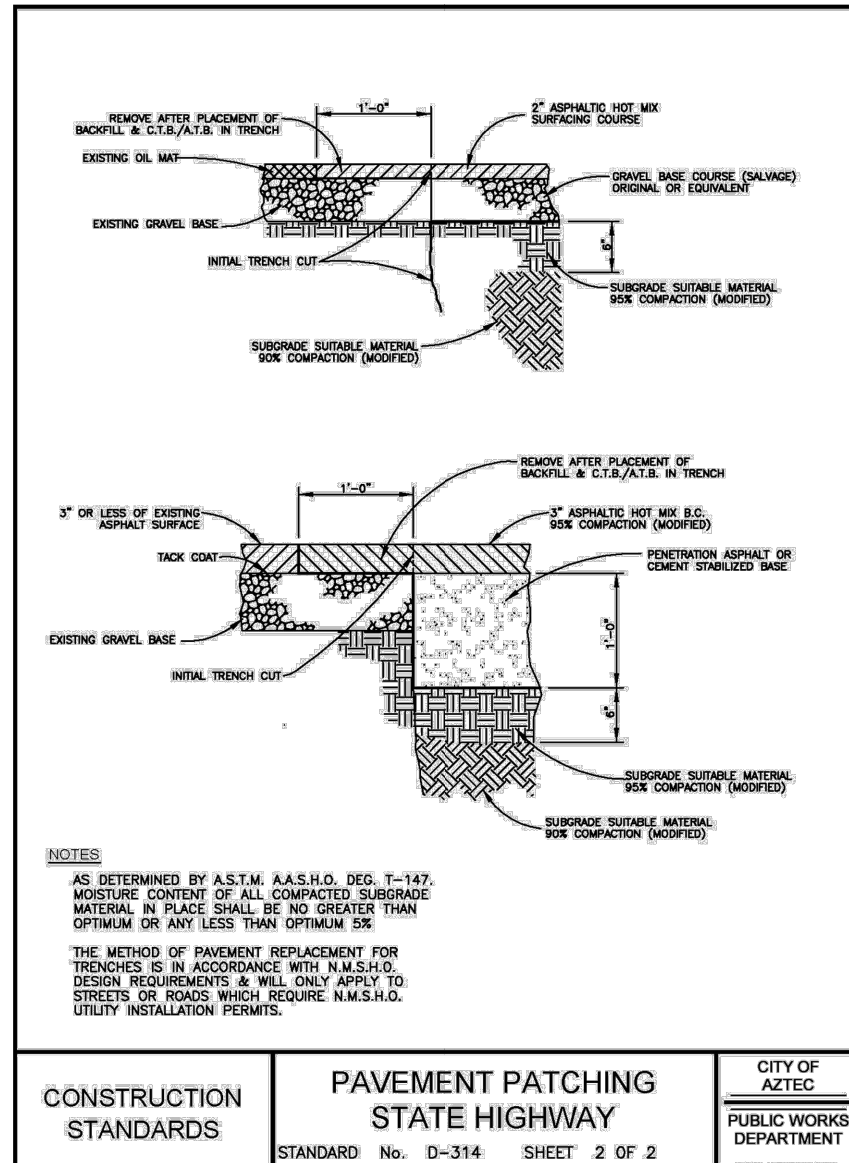
$F = 1.3 = .33$ TABULATED VALUE = 550 SQ. FT.
 $0.33 \times 550 = 1.82$ SAY 2 SQ. FT. OR 2 FT. LONG BY 1 FT. HIGH

CONSTRUCTION STANDARDS	THRUST BLOCKS	CITY OF AZTEC
	STANDARD No. D-210 SHEET 2 OF 2	PUBLIC WORKS DEPARTMENT

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BENCHMARK EL.

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BENCHMARK EL.

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Drawn By	PT					
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SEH

DREW CHANDLER, PE
LICENSE NO. 23088

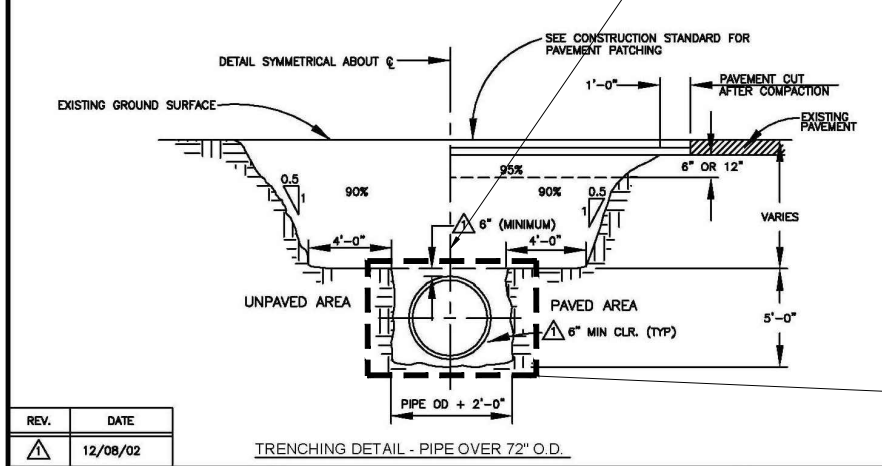
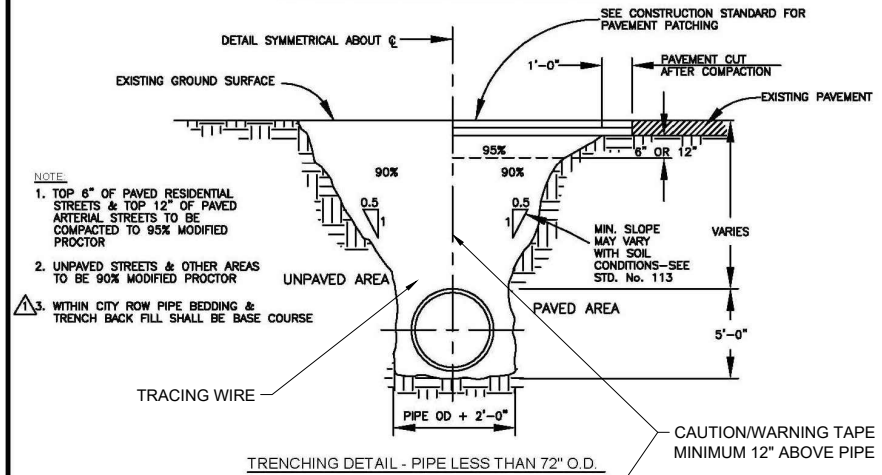
DATE 11/30/2021

NM 173 WATER LINE REPLACEMENT
AZTEC, NEW MEXICO

TYPICAL DETAILS (3)
NM 173 Water Line

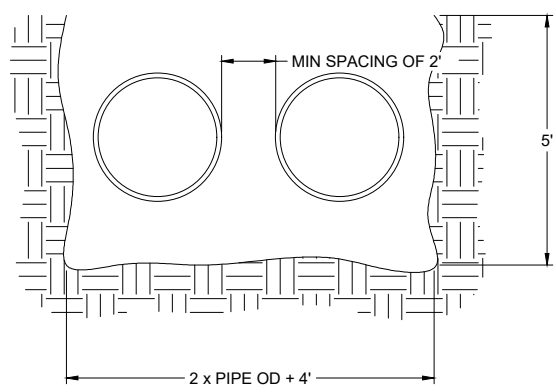
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PIPE DIA.	TRENCH WIDTH	PIPE DIA.	TRENCH WIDTH
8"	2'-6"	30"	6'-6"
10"	2'-8"	36"	7'-0"
12"	3'-0"	42"	8'-0"
15"	3'-0"	48"	8'-6"
18"	4'-0"	54"	10'-0"
21"	4'-6"	66"	13'-0"
24"	5'-6"	72"	14'-0"

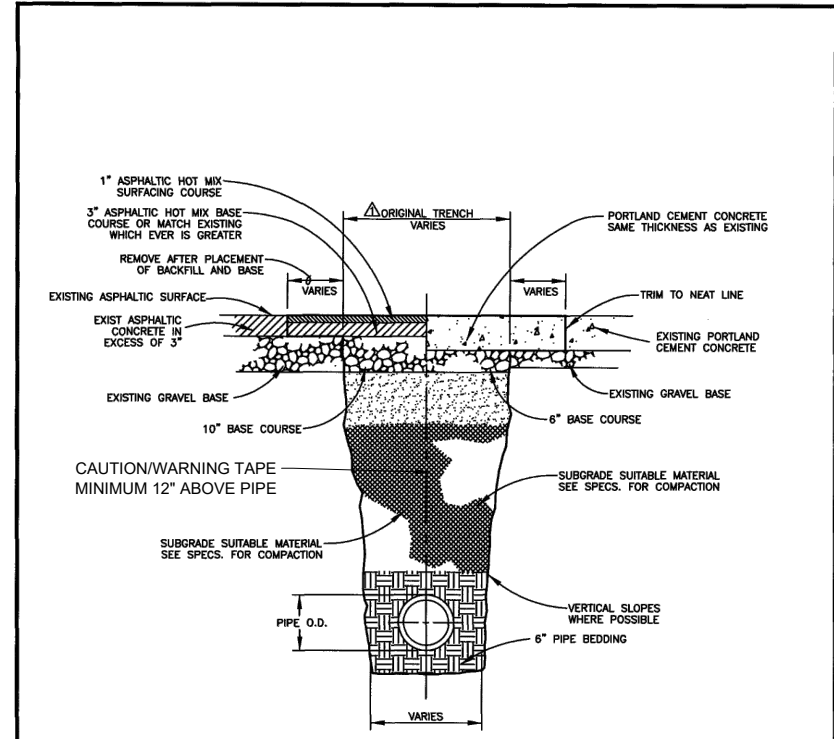


TRENCH DETAIL (TYP.). REFER TO MULTIPLE PIPE TRENCH DETAIL (THIS SHEET) FOR MULTIPLE PIPES IN ONE TRENCH.

NOTE: FOLLOW TRENCH DETAILS AND PAVEMENT PATCHING CITY STREET DETAIL FOR BACKFILL AND OTHER REQUIREMENTS.



MULTIPLE PIPES TRENCH DETAIL



NOTES

- AS DETERMINED BY A.S.T.M. D-1557 A.A.S.H.T.O. DEG M-147 MOISTURE CONTENT OF ALL COMPACTED SUBGRADE MATERIAL IN PLACE SHALL BE + OR - 3% OF OPTIMUM MOISTURE.
- ALL PAVEMENT CUT EDGES WILL BE TRIMMED TO PRESENT AN EVEN LINE PRIOR TO REPLACEMENT OF PAVING MATERIALS
- 4" MINIMUM OR MATCH EXISTING THICKNESS - WHICH EVER IS GREATER (WITH ENGINEER APPROVAL)

REV.	DATE
Δ 1	1/22/08
Δ 2	3/13/13

REV.	DATE
Δ 1	12/08/02

CONSTRUCTION STANDARDS	TRENCH DETAILS
STANDARD No. D-112 SHEET 1 OF 3	

CONSTRUCTION STANDARDS	PAVEMENT PATCHING CITY STREET	CITY OF FARMINGTON
	STANDARD No. D-306 SHEET 2 OF 2	PUBLIC WORKS DEPARTMENT

APPROVED *[Signature]* DATE 5/13/13

BENCHMARK EL.

BENCHMARK EL.

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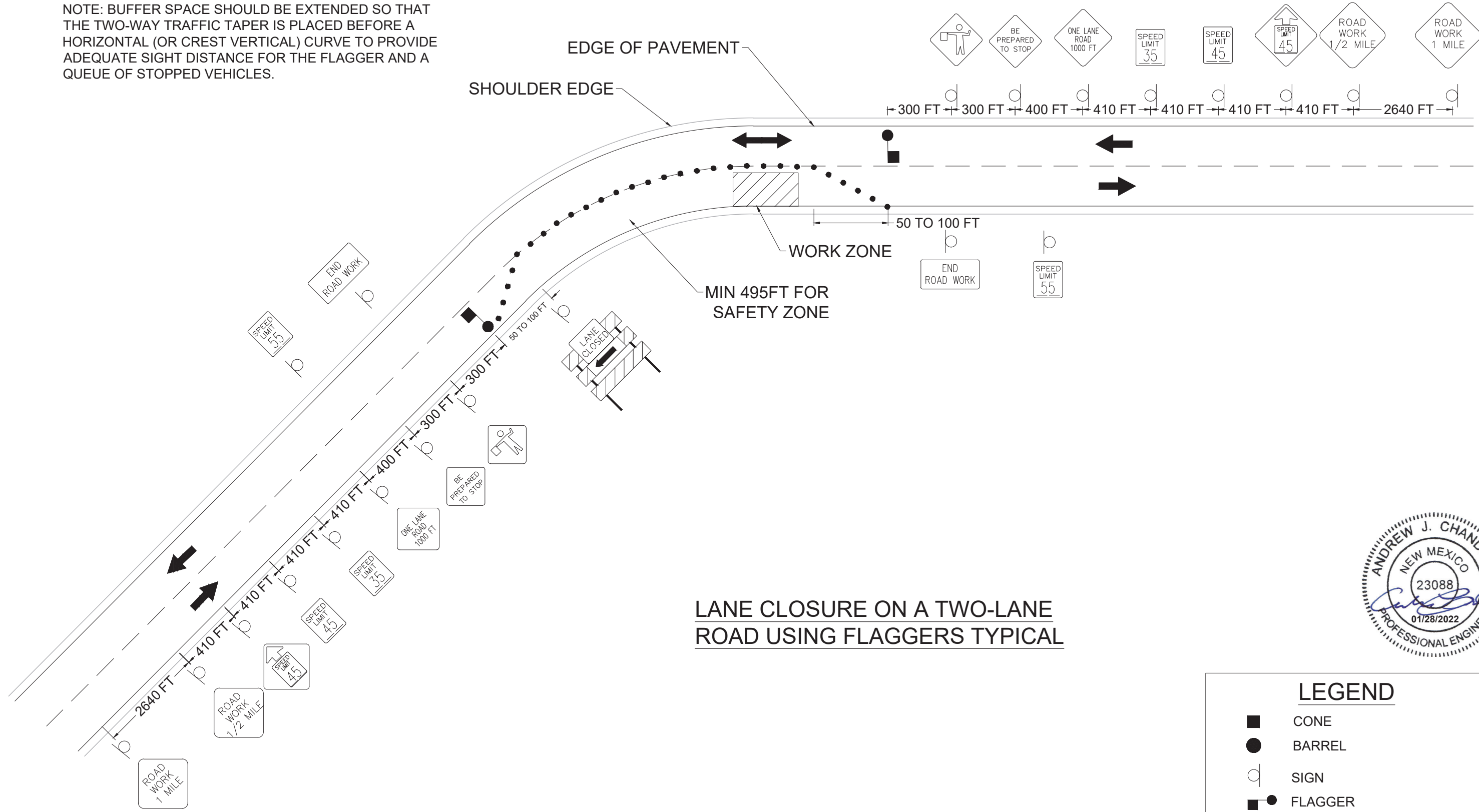
DATE 11/30/2021

DREW CHANDLER, PE
LICENSE NO. 23088

NM 173 WATER LINE REPLACEMENT
AZTEC, NEW MEXICO

NM 173 Water Line

NOTE: BUFFER SPACE SHOULD BE EXTENDED SO THAT THE TWO-WAY TRAFFIC TAPER IS PLACED BEFORE A HORIZONTAL (OR CREST VERTICAL) CURVE TO PROVIDE ADEQUATE SIGHT DISTANCE FOR THE FLAGGER AND A QUEUE OF STOPPED VEHICLES.



LANE CLOSURE ON A TWO-LANE ROAD USING FLAGGERS TYPICAL



LEGEND

- CONE
- BARREL
- SIGN
- FLAGGER

BENCHMARK EL.

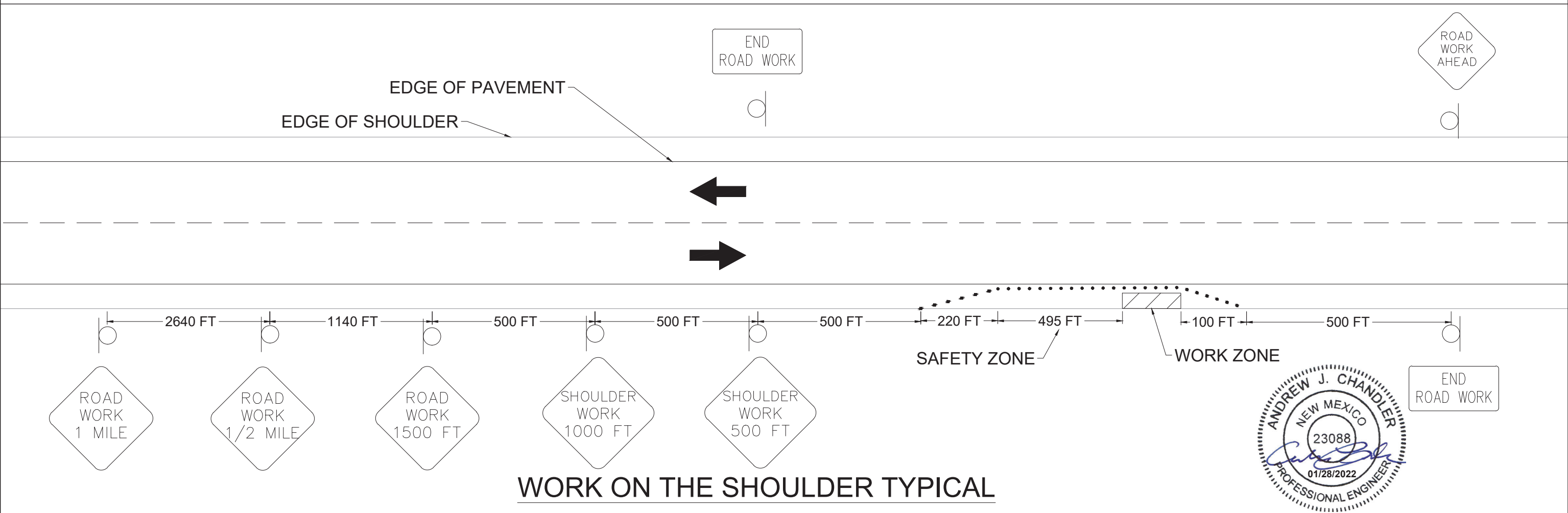
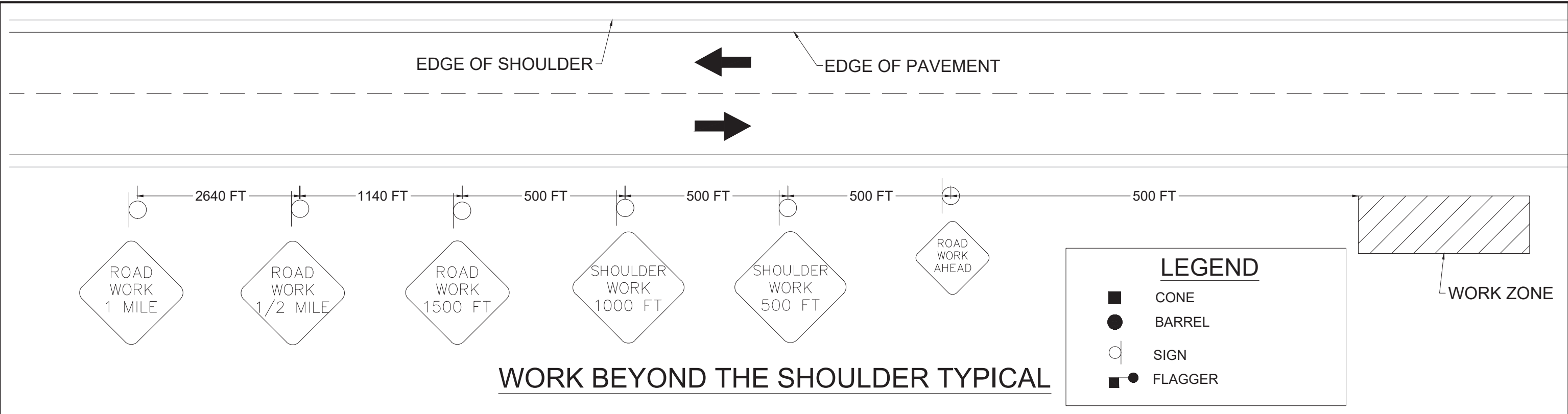
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 DREW CHANDLER, PE
 LICENSE NO. 23088

NM 173 WATER LINE REPLACEMENT
 AZTEC, NEW MEXICO



BENCHMARK EL.

BENCHMARK EL.

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SEH

DATE 11/30/2021

DREW CHANDLER, PE
LICENSE NO. 23088

NM 173 WATER LINE REPLACEMENT
AZTEC, NEW MEXICO

TRAFFIC CONTROL (2)



CITY OF AZTEC

ITB 2022-799

NM173 PHASE 1 WATERLINE RELOCATION

NON-MANDATORY PRE-BID MEETING

February 22, 2021, 10:00AM

NAME	COMPANY	PHONE #	EMAIL
Martin DeLeon	Sychar / Halo	505-439-5803	Martin.deleon@Melleuet.com
Mike Thibault	Sychar LLC	505-634-8703	mike.thibault@sychar.us
Steve Belcher	Kelly Cable of NM	505-793-3942	sbelcher@kellycorpnm.com
Edgar Trigo	J+E Utilities Service	505-620-8925	etriga@j-eutilities.com
Sam Gutierrez	File Const	505-620-1394 ok	H/D jamie cruze
Cody Cabreue	FILE CONST.	505 373-5156	N/A

1

APPENDIX D WAGE RATES



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

Please refer to the base and fringe rate columns that pertain to the date your wage decision was approved. For instance, if your wage decision was approved on April 1, 2021, you will use the rates in the first two columns. If your wage decision was approved on May 10, 2021, use the third and fourth columns.

Trade Classification	Effective January 1, 2021 Through May,4 2021		Effective May 5, 2021	
	Base Rate	Fringe Rate	Base Rate	Fringe Rate
Bricklayer/Block layer/Stonemason	24.46	8.81	24.46	8.81
Carpenter/Lather	25.63	11.74	24.63	11.24
Carpenter- Los Alamos County	28.37	13.44	27.80	13.19
Cement Mason	17.42	6.81	17.42	6.81
Ironworker	27.35	17.49	27.00	15.75
Painter- Commercial	17.25	7.75	17.00	6.88
Plumber/Pipefitter	31.52	12.90	30.76	11.62
Electricians- Outside Classifications: Zone 1				
Ground man	23.74	13.16	23.27	12.67
Equipment Operator	34.06	15.94	33.39	15.35
Lineman/ Technician	40.07	17.57	39.28	16.91
Cable Splicer	44.08	18.65	43.21	17.95
Electricians-Outside Classifications: Zone 2				
Ground man	23.74	13.16	23.27	12.67
Equipment Operator	34.06	15.94	33.39	15.35
Lineman/ Technician	40.07	17.57	39.28	16.91
Cable Splicer	44.08	18.65	43.21	17.95
Electricians-Outside Classifications: Los Alamos				
Ground man	24.42	13.34	23.94	12.85
Equipment Operator	35.04	16.21	34.35	15.60
Lineman/ Technician	41.22	17.88	40.41	17.21
Cable Splicer	45.34	18.99	44.45	18.28



Laborers				
Group I- Unskilled	12.26	6.22	12.26	6.22
Group II- Semi-Skilled	12.56	6.22	12.56	6.22
Group III- Skilled	12.96	6.22	12.96	6.22
Group IV- Specialty	13.21	6.22	13.21	6.22
Operators				
Group I	19.15	6.54	18.79	6.34
Group II	20.11	6.54	19.72	6.34
Group III	20.21	6.54	19.82	6.34
Group IV	20.33	6.54	19.93	6.34
Group V	20.43	6.54	20.03	6.34
Group VI	20.62	6.54	20.21	6.34
Group VII	20.78	6.54	20.37	6.34
Group VIII	21.08	6.54	20.66	6.34
Group IX	28.80	6.54	28.16	6.34
Group X	32.15	6.54	31.41	6.34
Truck Drivers				
Group I-IX	16.67	8.27	16.45	7.87

NOTE: All contractors are required to pay SUBSISTENCE, ZONE AND INCENTIVE PAY according to the trade. Details are 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.