

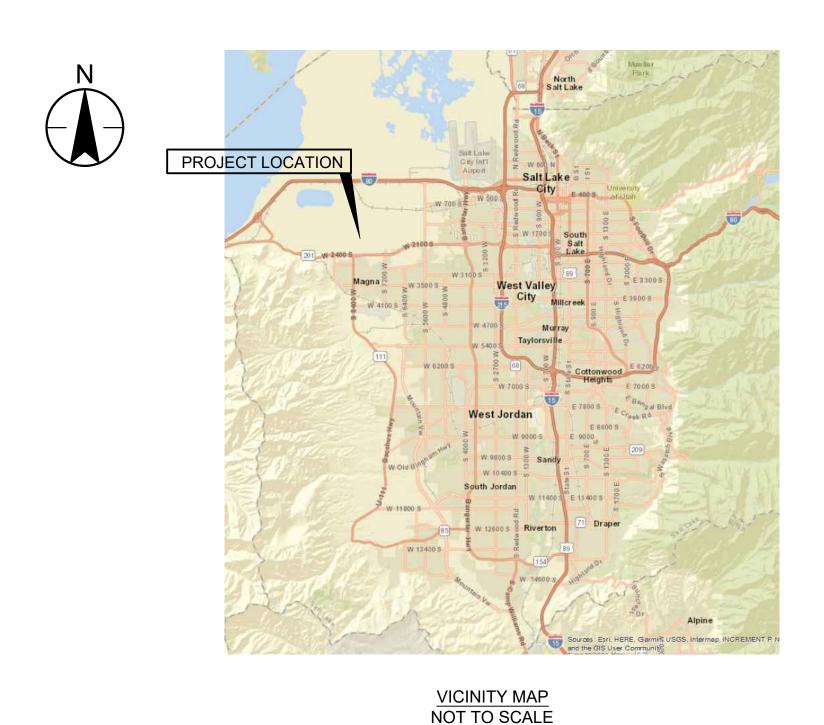




MAGNA WESTSIDE COLLECTION SYSTEM PROJECT 1B VOLUME II OF II

ISSUED FOR BID SEPTEMBER 2024





MAGNA WATER DISTRICT KEY PERSONNEL

DISTRICT MANAGER
DISTRICT ENGINEER
WASTEWATER MANAGER

CLINT DILLEY
TREVOR ANDRA
DALLAS HENLINE

TRUSTEES

MICK SUDBURY - CHAIR JEFF WHITE DANNY STEWART

STANTEC PROJECT NUMBER: 181301797

LOCATION MAP NOT TO SCALE

DRAWING INDEX

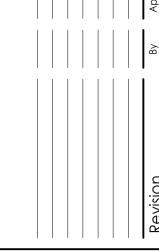
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE
1	G-1	COVER SHEET
2	G-2	DRAWING INDEX AND LOCATION MAP
3	G-3	ABBREVIATIONS, SYMBOLS AND NOTES
4	GC-1	STANDARD CIVIL DETAILS
5	C-1	PIPELINE KEY PLAN AND HORIZONTAL CONTROL POINTS
6	C-2	PLAN AND PROFILE - I STA 10+00 TO STA 14+67
7	C-3	PLAN AND PROFILE - II STA 14+67 TO STA 19+34
8	C-4	PLAN AND PROFILE - III STA 19+34 TO STA 24+00
9	C-5	PLAN AND PROFILE - IV STA 24+00 TO STA 28+68
10	C-6	PLAN AND PROFILE - V STA 28+68 TO STA 33+75
11	C-7	PLAN AND PROFILE - VI STA 33+75 TO STA 39+15
12	C-8	PLAN AND PROFILE TRENCHLESS DESIGN
13	C-9	TRENCHLESS DETAILS
14	I-1	TRENCHLESS INSTRUMENTATION PLAN
15	I-2	TRENCHLESS INSTRUMENTATION DETAILS
16	I-3	CATHODIC PROTECTION DETAILS

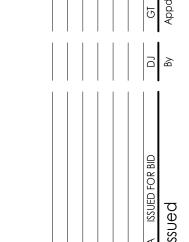
Know what's **below.**Call before you dig. BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC.
www.bluestakes.org
1-800-662-4111











Permit/Seal



Project No.: 181301797 File Name: 01797G-2_DRAWING INDEX AND LOCATION MAP

Scale: NOT TO SCALE

EKS DJ GT 2024.09.10

Dwn. Dsgn. Chkd. YYYY.MM.DD

DRAWING INDEX AND LOCATION MAP

Revision: Sheet: 2 of 16
Drawing No.

G-2

CIVIL GENERAL NOTES **GENERAL**

- 1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE SPECIFICATION PROVIDED HEREIN. ANY CHANGES TO THE WORK AS SPECIFIED REQUIRE ENGINEER APPROVAL PRIOR TO IMPLEMENTING CHANGE.
- 2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCING WORK
- 3. THE CONTRACTOR SHALL IDENTIFY AND LOCATE ALL EXISTING UTILITIES ON AND ADJACENT TO THE SITE PRIOR TO COMMENCING WORK. ANY DAMAGES TO EXISTING UTILITIES AND RESULTING REPAIRS AS A RESULT OF THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. LOCATIONS OF EXISTING UTILITIES IF AND WHERE SHOWN ARE APPROXIMATE ONLY. DRAWINGS MAY NOT INDICATE ALL UTILITIES.
- 4. THE CONTRACTOR SHALL PERFORM WORK AND INCORPORATE APPROPRIATE MEASURES TO MINIMIZE DUST. NOTWITHSTANDING THE EXTENT OF FILLING OR EXCAVATION WORK SHOWN ON THE DRAWINGS, NOTED IN SPECIFICATIONS OF OTHER CONTRACT DOCUMENTS, THE EXTENT OF THE WORK IS TO BE CONFIRMED WITH THE ENGINEER PRIOR TO COMMENCEMENT OF WORK.
- 5. THE CONTRACTOR SHALL MAINTAIN THE SITE FREE OF GARBAGE. AND EXCESS MATERIAL AND SHALL STACK AND/OR STOCKPILE MATERIALS IN A SUITABLE MANNER AS APPLICABLE FOR EACH INDIVIDUAL MATERIAL TYPE.
- 6. THE CONTRACTOR SHALL FOLLOW STATE TRENCH SHORING RULES AND SUBMIT A TRENCH SHORING PROTECTIVE SYSTEM PLAN SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF UTAH.
- 7. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO SALT LAKE COUNTY PUBLIC WORKS ENGINEERING DEPARTMENT. TEMPORARY TRAFFIC CONTROL MUST BE IN ACCORDANCE WITH THE MUTCD, APPROVED BY THE TRAFFIC ENGINEER OR EXCAVATION INSPECTOR BEFORE COMMENCEMENT OF WORK. FULL ROAD CLOSURES IS GENERALLY NOT ALLOWED: WHEN NECESSARY, 72 HOURS NOTICE IS REQUIRED AND THE TRAFFIC ENGINEER MUST APPROVE THE TRAFFIC CONTROL PLAN. BARRICADE PLANS SHOULD BE SENT TO MICHELLE McCABE AT MMCCABE@SLCO.ORG. TRAFFIC CONTROL PLAN REQUIREMENTS CAN BE FOUND ON:

HTTPS://SLCO.ORG/ENGINEERING/HIGHWAY/EXCAVATION/

- 8. THE CONTRACTOR SHALL SUBMIT AN EXCAVATION PERMIT TO THE SALT LAKE COUNTY PUBLIC WORKS ENGINEERING DEPARTMENT, TO APPLY FOR AN EXCAVATION PERMIT, CALL THE PERMIT SPECIALIST AT 385-468-6600.
- 9. TO ALLOW FOR SCHEDULING, 48 HOUR NOTICES IS REQUIRED BEFORE THE COMMENCEMENT OF WORK WITHIN ANY METRO TOWNSHIP OR UNINCORPORATED RIGHT-OF-WAY. TO WORK WITHIN THE RIGHT-OF-WAY OF ANY METRO TOWNSHIP OR SALT LAKE COUNTY UNINCORPORATED AREAS. THE MINIMUM BOND AMOUNT IS \$10,000.00, GUARANTEEING THE JOB SITE FOR THREE YEARS FROM DATE OF COMPLETION. SALT LAKE COUNTY MUST BE LISTED AS AN ADDITIONAL INSURED ON THE CONTRACTORS LIABILITY INSURANCE. MINIMUM LIMITS ARE \$1.000.000.00.

UTILITIES

- 1. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE NOTED.
- 2. LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS WERE OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL CONTACT BLUE STAKES OF UTAH 811 AND VERIFY ALL LOCATIONS AND ELEVATIONS AND SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT UTILITY LINES WHETHER SHOWN OR NOT SHOWN.
- 3. PRIOR TO ANY EXCAVATION IN THE VICINITY OF ANY EXISTING UNDERGROUND FACILITIES, INCLUDING ALL WATER, SEWER, STORM DRAIN, GAS, PETROLEUM PRODUCTS, OR OTHER PIPELINES; ALL BURIED ELECTRIC POWER, COMMUNICATIONS, OR TELEVISION CABLES; ALL TRAFFIC SIGNAL AND STREET LIGHTING FACILITIES; AND ALL ROADWAY, STATE HIGHWAY. AND RAILROAD RIGHTS-OF-WAY, THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE AUTHORITIES REPRESENTING THE OWNERS OR AGENCIES RESPONSIBLE FOR SUCH FACILITIES NOT LESS THAN 3 DAYS NOR MORE THAN 7 DAYS PRIOR TO **EXCAVATION SO THAT A REPRESENTATIVE OF SAID OWNERS** OR AGENCIES CAN BE PRESENT DURING SUCH WORK IF THEY SO DESIRE. IN THE CASE OF THE UNDERGROUND UTILITY SERVICE ALERT CENTER. THIS NOTICE WILL GIVE THEM TIME TO MARK THE LOCATION OF THE UTILITIES. THE CONTRACTOR SHALL ALSO NOTIFY THE REGIONAL OR LOCAL UNDERGROUND SERVICE ALERT COMPANY AT LEAST 3 DAYS, BUT NO MORE THAN 7 DAYS, PRIOR TO SUCH EXCAVATION.
- 4. CONTRACTOR SHALL PROVIDE REDLINE AS-BUILT DRAWINGS FOR SUBMISSION TO THE OWNER AND ENGINEER WITHIN ONE WEEK FOLLOWING CONSTRUCTION COMPLETION.

SEDIMENT CONTROL

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN. INSTALLATION. AND MAINTENANCE OF ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES / MEASURES, INCLUDING CUT OFF DRAINS AND BUNDS, REQUIRED DURING THE COURSE OF THE WORK

CIVIL GENERAL NOTES - CONTINUED

- 2. A STORMWATER POLLUTION PREVENTION PLAN SHALL BE SUBMITTED TO THE ENGINEER AND OWNER PRIOR TO THE COMMENCEMENT OF WORK.
- 3. THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL DEVICES / MEASURES FOR DAMAGE FOLLOWING EACH RAINFALL EVENT. DAMAGED DEVICES / MEASURES SHALL BE REMOVED AND REPLACED. SEDIMENT SHALL BE REMOVED AND ALL ERODED AREAS REPAIRED.
- 4. ALL EROSION AND SEDIMENT CONTROL DEVICES / MEASURES SHALL BE CLEANED OUT PRIOR TO SEDIMENT VOLUME REACHING 50% OF THE CONTROL DEVICE / MEASURE CAPACITY.

SITE PROTECTION AND RESTORATION

- 1. CONTRACTOR SHALL PROTECT EXISTING SURFACE IMPROVEMENTS OUTSIDE THE AREAS OF EXCAVATION. TREES AND VEGETATION LOCATED IN THE CONTRACTOR STAGING AND WASTE CONTAINER STORAGE AREAS SHALL BE PROTECTED UNLESS APPROVED BY OWNER. TRACKED **EQUIPMENT SHALL USE RUBBER CLEATS WHEN OPERATING** ON OR CROSSING PAVED SURFACES. EXISTING SUBSURFACE AND OVERHEAD UTILITIES SHALL BE PROTECTED.
- 2. DISTURBANCES SHALL BE LIMITED TO EXCAVATION AREAS. PAVEMENT, SIDEWALK, CURB AND GUTTER, ETC. SHALL BE SAWCUT VERTICALLY ALONG EXCAVATION LIMITS. WASTE MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED AT AN APPROPRIATE WASTE DISPOSAL FACILITY.
- 3. CONTRACTOR SHALL RESTORE ALL FENCING, PAVEMENTS. CONCRETE CURBING AND WALKWAYS, LAWN AND ASSOCIATED IRRIGATION SYSTEM COMPONENTS, UTILITY LINES/CONNECTIONS, AND ANY OTHER SURFACE IMPROVEMENTS DISTURBED DURING CONSTRUCTION. FINAL BACKFILL FOR LAWN AREA SHALL BE IMPORTED TOPSOIL TO 4" IN DEPTH. SOD SHALL BE USED TO RESTORE DISTURBED LAWN.
- 4. SURFACE IMPROVEMENTS SHALL BE RESTORED IN ACCORDANCE WITH UDOT, UTAH APWA STANDARD SPECIFICATIONS, AND THIS PROJECT'S CONTRACT DOCUMENT SPECIFICATION 32 11 13 - A.C. PAVEMENT AND BASE.

GRADING

- 1. THE CONTRACTOR SHALL PROVIDE GRADED FINISHED GROUND SURFACES SIMILAR TO PRE-CONSTRUCTION GRADE.
- 2. THE CONTRACTOR SHALL IMPORT FILL MATERIAL AND REMOVE AND CONTAINERIZE EXCESS CUT MATERIAL AS REQUIRED TO PROVIDE SATISFACTORY FINISHED GRADING.

SURVEY NOTES

EASTING=1481672.711

ELEVATION= 4230.296

ELEVATION=4231.095

1. THIS PROJECT CONSISTS OF TWO SURVEYS COMBINED INTO ONE BASE:

THE FIRST SURVEY WAS COMPLETED BY EPIC ENGINEERING, P.C. THE FOLLOWING ARE BENCHMARK NOTES ASSOCIATED WITH THE EPIC ENGINEERING, P.C. PORTION OF THE SURVEY, WHICH INCLUDES ALL AREAS OUTSIDE OF HIGHWAY-201 RIGHT-OF-WAY:

THE BENCHMARK FOR THIS PROJECT IS THE NORTH QUARTER CORNER SECTION 21 TOWNSHIP 1 SOUTH. RANGE 2 WEST NORTHING=7433547.454

THE NORTHWEST CORNER SECTION 21 TOWNSHIP 1 SOUTH, RANGE 2 WEST IN THE INTERSECTION OF 2100 SOUTH 8000 WEST NORTHING= 7433563.430 EASTING= 1479022.852

THE BEARING BETWEEN THESE MONUMENTS IS N 89°39'16" W 2649.90 FEET.

THE SECOND SURVEY WAS COMPLETED BY CRS ENGINEERING AND SURVEYING. THE FOLLOWING ARE DATUM AND CONTROL NOTES ASSOCIATED WITH THE CRS ENGINEERING AND SURVEYING PORTION OF THE

SURVEY, WHICH INCLUDES THE AREAS WITHIN HIGHWAY-201 RIGHT-OF-WAY:

HORIZONTAL DATUM IS REFERENCED TO NAD83. UTAH STATE PLANE CENTRAL ZONE (UT873-CF) CONTOUR INTERVAL - 1', VERTICAL DATUM IS NAVD 88 (GEOID 12B). CONTROL POINTS AND MONUMENTS INFORMATION CAN BE SEEN ON SHEET C-1.

CIVIL GENERAL NOTES - CONTINUED

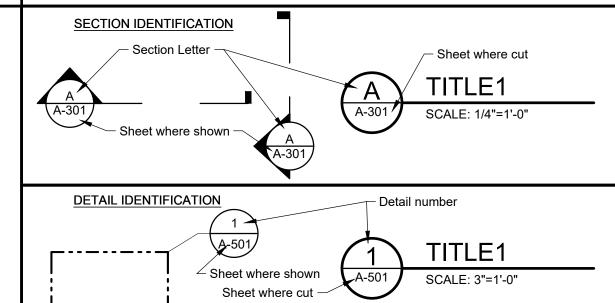
2. THE SECOND SURVEY BY CRS HAD TO BE ADJUSTED HORIZONTALLY TO ALIGN WITH THE ORIGINAL SURVEY COMPLETED BY EPIC. THE HORIZONTAL ADJUSTMENT IS AS FOLLOWS: X = 540.8270

NEW CONSTRUCTION

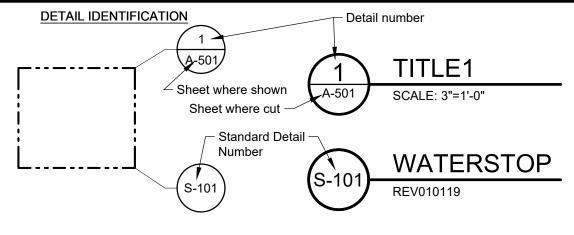
GENERAL SYMBOLOGY

EXISTING (SCREENED)

FUTURE PROJECT CONSTRUCTION



REFERENCE SYMBOLS





Y = -91.4712

Z = 0.000

ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS BLVD **BOULEVARD CAST IRON** CI CLR CLEAR DR **DIMENSION RATIO EAST** EL **ELEVATION** ΕW **EACH WAY** EX **EXISTING**

G HDPE ID INV MDD MWD

INVERT LINEAR FEET MAXIMUM DRY DENSITY MAGNA WATER DISTRICT MAX MAXIMUM MIN MINIMUM MUTCD MANUAL ON UNIFORM TRAFFIC CONTROL **DEVICES** NORTH ND

PVC RCP REQ'D ROW SPEC STA SSMH TEL TYP

UBC

UDOT

W

W

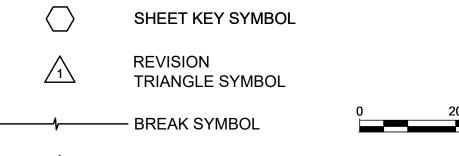
NOMINAL DIAMETER POLYVINYL CHLORIDE REINFORCED CONCRETE PIPE REQUIRED **RIGHT-OF-WAY** SOUTH **SPECIFICATION** SANITARY SEWER STATION SANITARY SEWER MANHOLE **TELECOMMUNICATIONS TYPICAL** UNTREATED BASE COURSE UTAH DEPARTMENT OF TRANSPORTATION WEST

HIGH DENSITY POLYETHYLENE

INNER DIAMETER

WATER

MISCELLANEOUS

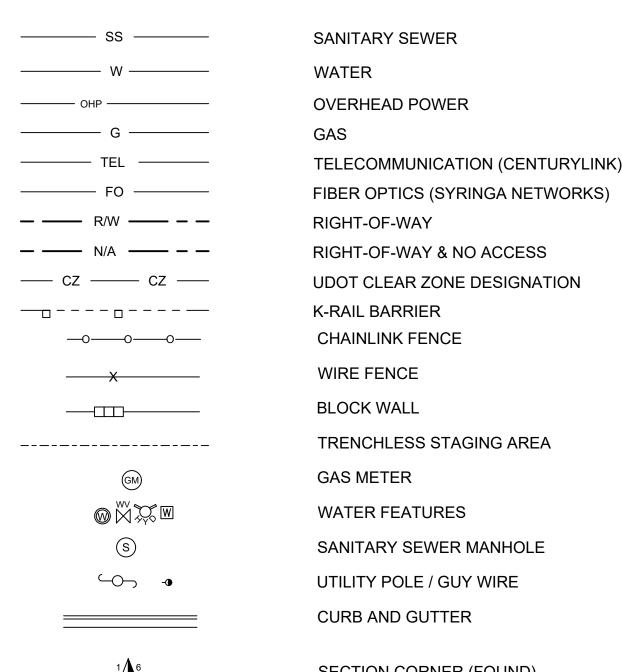


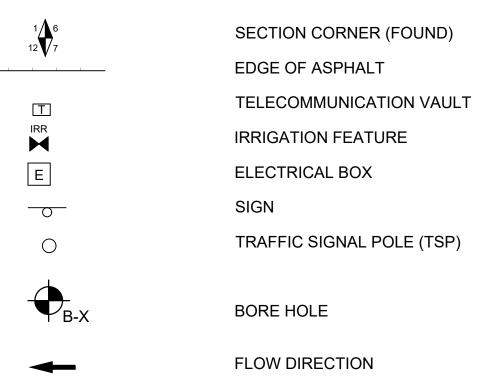
ANGLE SYMBOL CENTERLINE SYMBOL DIAMETER SYMBOL

MAPPING SYMBOLOGY

NORTH ARROW

SYMBOLS





CONTROL POINT

Know what's **below.** Call before you dig. BLUE STAKES OF UTAH www.bluestakes.org 1-800-662-4111

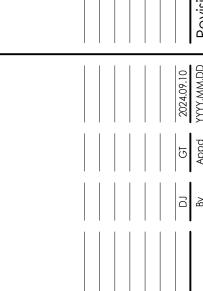
7



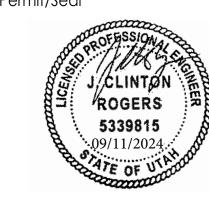


CIVIL UNIT SCALE





Permit/Seal



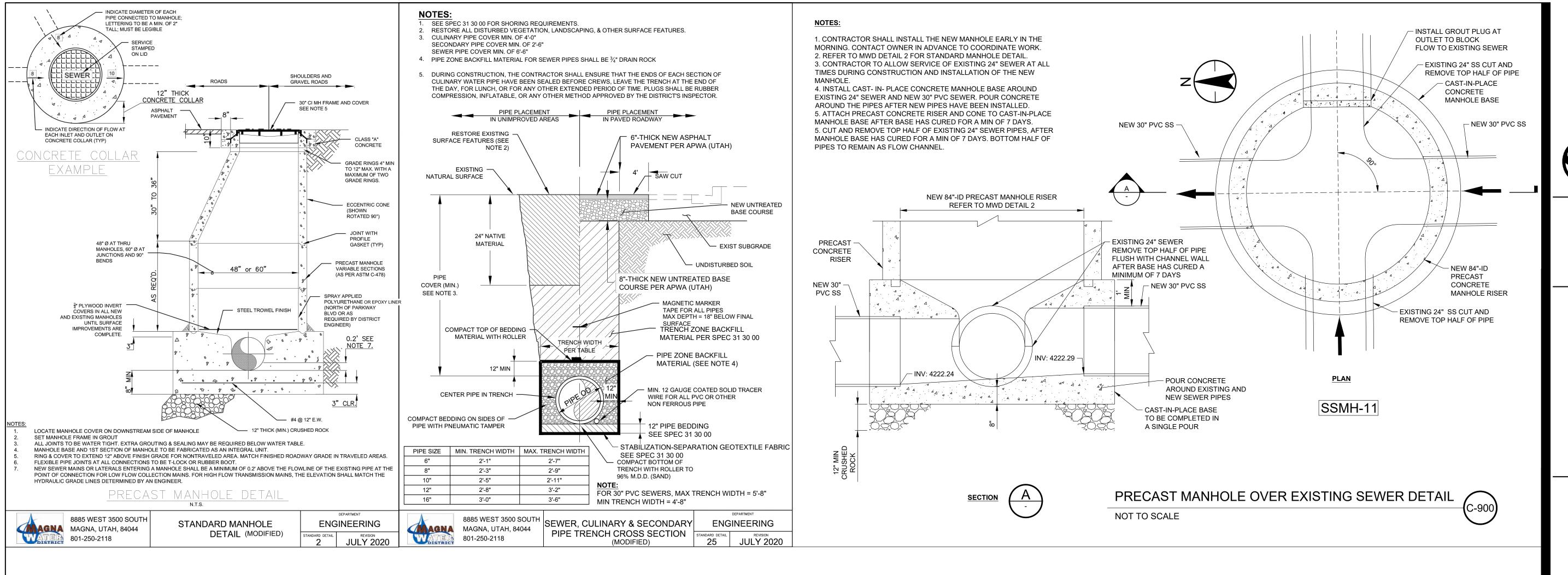
MAGNA WESTSIDE COLLECTION SYSTEA IMPROVEMENTS

Project No.: 181301797 e Name: 01797G-3 ABBR, SYMBOLS, & NOTES Scale: NOT TO SCALE EKS DJ GT 2024.09.10
Dwn. Dsgn. Chkd. YYYY.MM.DD

ABBREVIATIONS. SYMBOLS AND NOTES

Revision: Sheet: 3 of 16 Drawing No.

G-3



Know what's below.

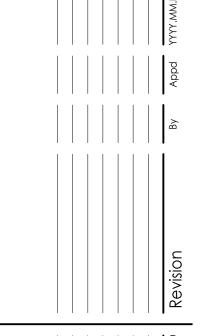
Call before you dig.

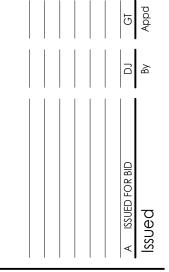
BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC.
www.bluestakes.org

Stanted









Permit/Seal



Client/Project
MAGNA WATER DISTRICT
AGNA WESTSIDE
COLLECTION SYSTEM
IMPROVEMENTS

File Name: 01797GC-1_STANDARD CIVIL DETAILS

SCAIE: AS SHOWN

DJ DJ GT 2024.09.10

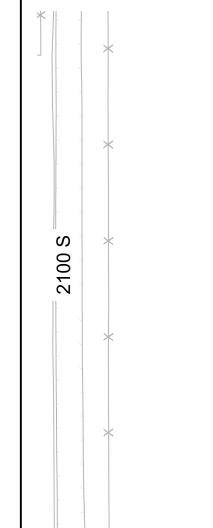
Dwn. Dsgn. Chkd. YYYY.MM.DD

Dwn. D

STANDARD CIVIL DETAILS

Revision: Sheet: 4 of 16 Drawing No.

GC-1



- NW CORNER S21 T1S R2W & WC-150N -NOTES:

1. SEE SHEET G-3 FOR SURVEYING NOTES

2. EPIC ENGINEERING, P.C. CONTROL POINTS

THE BENCHMARK FOR THIS PROJECT IS THE NORTH QUARTER CORNER SECTION 21

TOWNSHIP 1 SOUTH, RANGE 2 WEST

NORTHING=7433547.454 EASTING=1481672.711

ELEVATION=4231.095

THE NORTHWEST CORNER SECTION 21 TOWNSHIP 1 SOUTH, RANGE 2 WEST IN THE

INTERSECTION OF 2100 SOUTH 8000 WEST

NORTHING= 7433563.430

EASTING= 1479022.852

ELEVATION= 4230.296

THE BEARING BETWEEN THESE MONUMENTS IS N 89°39'16" W 2649.90 FEET.

3. CRS ENGINEERING AND SURVEYING CONTROL POINTS

CONTROL POINTS WITHIN PROJECT 1B AREA:

POINT	NORTH	EAST	ELEV	DESC
100	7431042.36	1479001.58	4236.19	WC-150N WITNESS CORNER
102	7433547.46	1479018.63	4230.39	1S2W1701 SECTION CORNER
CONTRO	L POINTS OUTSIE	DE PROJECT 1B A	REA:	
POINT	NORTH	EAST	ELEV	DESC
101	7430692.42	1478999.22	4236.9	WC-200S WITNESS CORNER
103	7433515.4	1484300.22	4230.59	1S2W1601 SECTION CORNER
104	7433531.7	1481667.94	4231.2	1S2WE1602 SECTION CORNER

4. DISPLAYED BOREHOLES CAN BE REFERENCED IN THE JULY 15, 2022 GEOTECHNICAL REPORT TITLED:

GEOTECHNICAL INVESTIGATION MWD SEWER INFLUENT LINE PROJECT 1B MAGNA, UTAH IGES JOB NO. 00599-015

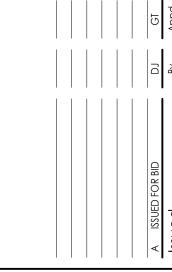












Permit/Seal



Project No.: 181301797 File Name: 01797C-1 Scale: 1" = 100' EKS DJ JH 2024.09.10
Dwn. Dsgn. Chkd. YYYY.MM.DD

PIPELINE KEYPLAN AND HORIZONTAL CONTROL POINTS

Revision: Sheet: 5 of 16 Drawing No.

Stantec







A ISSUED FOR BID

A ISSUED FOR BID

BN Apped

Permit/Seal



MAGNA WAIER DISTRICT MAGNA WESTSIDE SOLLECTION SYSTEM

Project No.: 181301797

File Name: 01797C-2-7

Scale: H: 1"=20' V: 1" = 5'

DJ DJ GT 2024.09.10
Dwn. Dsgn. Chkd. YYYY.MM.DD

PLAN AND PROFILE - I STA 10+00 TO STA 14+67

Revision: Sheet: 6 of 16

Drawing No.

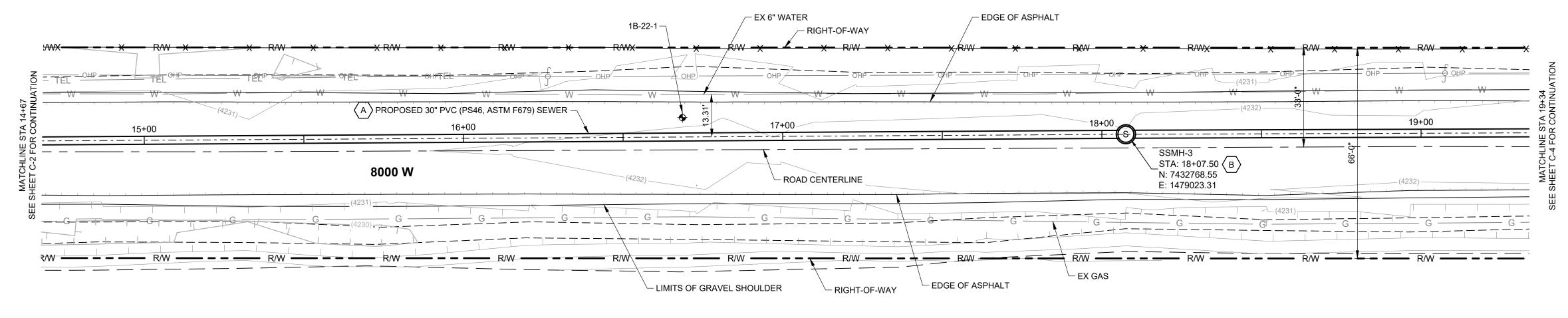
Drawing No.

ORIGINAL SHEET - ANSI D

before you dig.

BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC.

www.bluestakes.org
1-800-662-4111



GENERAL SHEET NOTES:

1. ALL UTILITIES DEPICTED THROUGHOUT DRAWINGS ARE APPROXIMATE ONLY AND ALL UTILITIES MAY NOT BE SHOWN.
CONTRACTOR MUST VERIFY AND PERFORM POTHOLES OF ALL UTILITIES SHOWN OR MARKED IN THE FIELD, PRIOR TO CONSTRUCTION.

5. AS SHOWN IN THE DRAWINGS THE SEWER LINE SHALL BE LOCATED IN

THE EAST LANE OF 8000 W. CARE SHALL BE TAKEN TO LIMIT TRENCH WIDTH AND PROTECT EXISTING ASPHALT. FOR BIDDING PURPOSES, THE

CONTRACTOR SHALL ASSUME REPLACEMENT OF THE ENTIRE EAST LANE

OF ASPHALT INCLUDING PAVING MARKINGS, ALONG THE SEWER LINE

ACCORDANCE WITH PROVISIONS IN THE SPECIFICATIONS INCLUDING

CONTRACTOR SHALL CREDIT MONIES BACK TO THE OWNER IN

PAVING MARKINGS MUST CONFORM WITH SALT LAKE COUNTY

REQUIREMENTS.

ALIGNMENT. SHOULD LESS ASPHALT REPLACEMENT BE REQUIRED THE

PROJECT MEASUREMENTS, UNIT COST PRICING, AND CHANGE ORDERS.

2. ALL UTILITIES SHALL BE PROTECTED IN PLACE UNLESS SHOWN OTHERWISE.

3. ALL UTILITY CROSSING ELEVATIONS ARE APPROXIMATE ONLY. UTILITY DIAMETERS ARE NOT KNOWN UNLESS SHOWN.

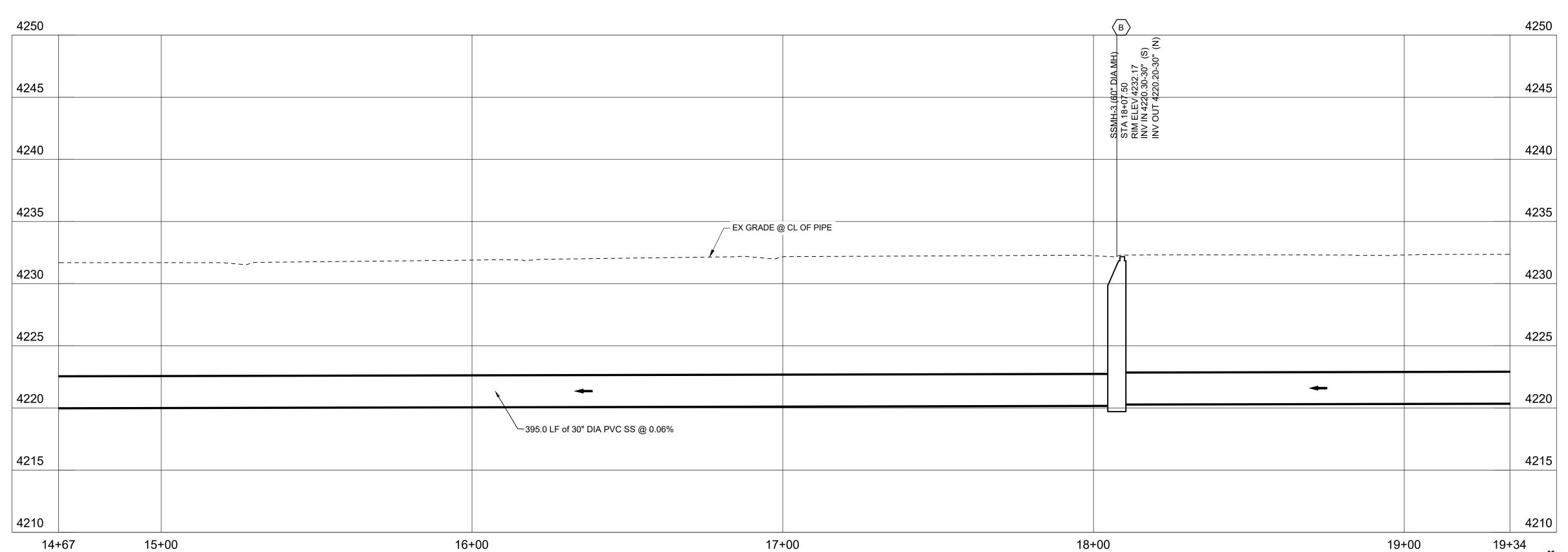
4. MANHOLE ORIENTATIONS SHOWN IN PROFILE VIEWS ARE INDICATIVE ONLY. ORIENT MANHOLES PER MWD STANDARD DETAIL 2 NOTE 1 ON SHEET GC-1.

PLAN

SHEET KEYNOTES:

A. INSTALL NEW 30" PVC (PS46, ASTM F679) SEWER PIPELINE IN THE EASTERN LANE OF 8000 W. SEE MWD STANDARD DETAIL 25 ON GC-1 FOR TRENCH CROSS SECTION.

B. INSTALL NEW PRECAST ECCENTRIC SANITARY SEWER MANHOLE PER MWD STANDARD DETAIL 2 ON GC-1. SPRAY MANHOLE INTERIOR, INCLUDING BENCH AND FLOW LINE, WITH PROTECTIVE COATING PER SPECIFICATION 33 01 29 .



PROFILE

Know what's **below.** Call 🕮 before you dig. BLUE STAKES OF UTAH 1-800-662-4111

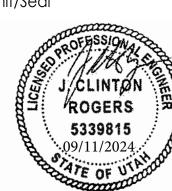








Permit/Seal



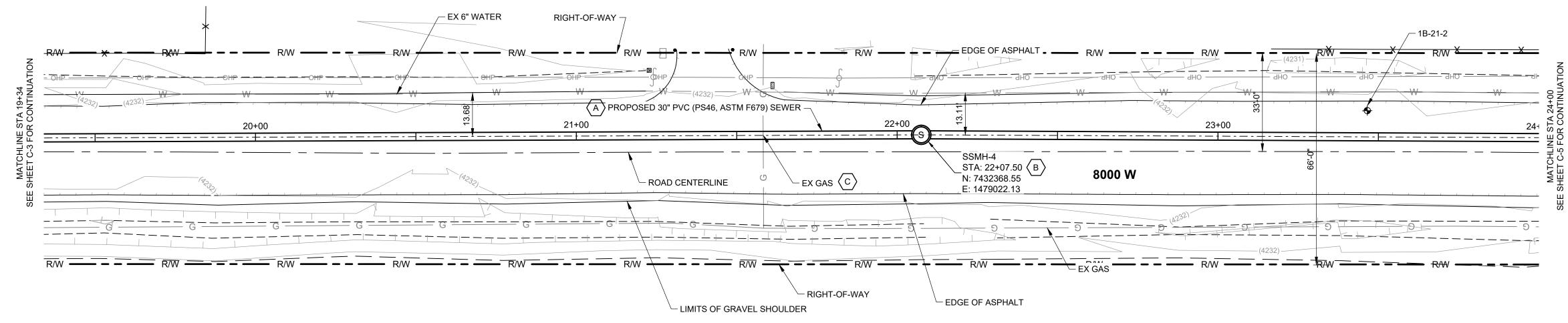
Project No.: 181301797 Scale:H: 1"=20' V: 1" = 5'

DJ DJ GT 2024.09.10

Dwn. Dsgn. Chkd. YYYY.MM.DD

PLAN AND PROFILE - II STA 14+67 TO STA 19+34

Revision: Sheet: 7 of 16 Drawing No.



GENERAL SHEET NOTES:

DETAIL 2 NOTE 1 ON SHEET GC-1.

1. ALL UTILITIES DEPICTED THROUGHOUT DRAWINGS ARE APPROXIMATE ONLY AND ALL UTILITIES MAY NOT BE SHOWN. CONTRACTOR MUST VERIFY AND PERFORM POTHOLES OF ALL UTILITIES SHOWN OR MARKED IN THE FIELD, PRIOR TO CONSTRUCTION.

2. ALL UTILITIES SHALL BE PROTECTED IN PLACE UNLESS SHOWN OTHERWISE. 3. ALL UTILITY CROSSING ELEVATIONS ARE APPROXIMATE ONLY.

UTILITY DIAMETERS ARE NOT KNOWN UNLESS SHOWN. 4. MANHOLE ORIENTATIONS SHOWN IN PROFILE VIEWS ARE INDICATIVE ONLY. ORIENT MANHOLES PER MWD STANDARD

5. AS SHOWN IN THE DRAWINGS THE SEWER LINE SHALL BE LOCATED IN THE EAST LANE OF 8000 W. CARE SHALL BE TAKEN TO LIMIT TRENCH WIDTH AND PROTECT EXISTING ASPHALT. FOR BIDDING PURPOSES, THE CONTRACTOR SHALL ASSUME REPLACEMENT OF THE ENTIRE EAST LANE OF ASPHALT INCLUDING PAVING MARKINGS, ALONG THE SEWER LINE ALIGNMENT. SHOULD LESS ASPHALT REPLACEMENT BE REQUIRED THE CONTRACTOR SHALL CREDIT MONIES BACK TO THE OWNER IN ACCORDANCE WITH PROVISIONS IN THE SPECIFICATIONS INCLUDING PROJECT MEASUREMENTS, UNIT COST PRICING, AND CHANGE ORDERS. PAVING MARKINGS MUST CONFORM WITH SALT LAKE COUNTY REQUIREMENTS.

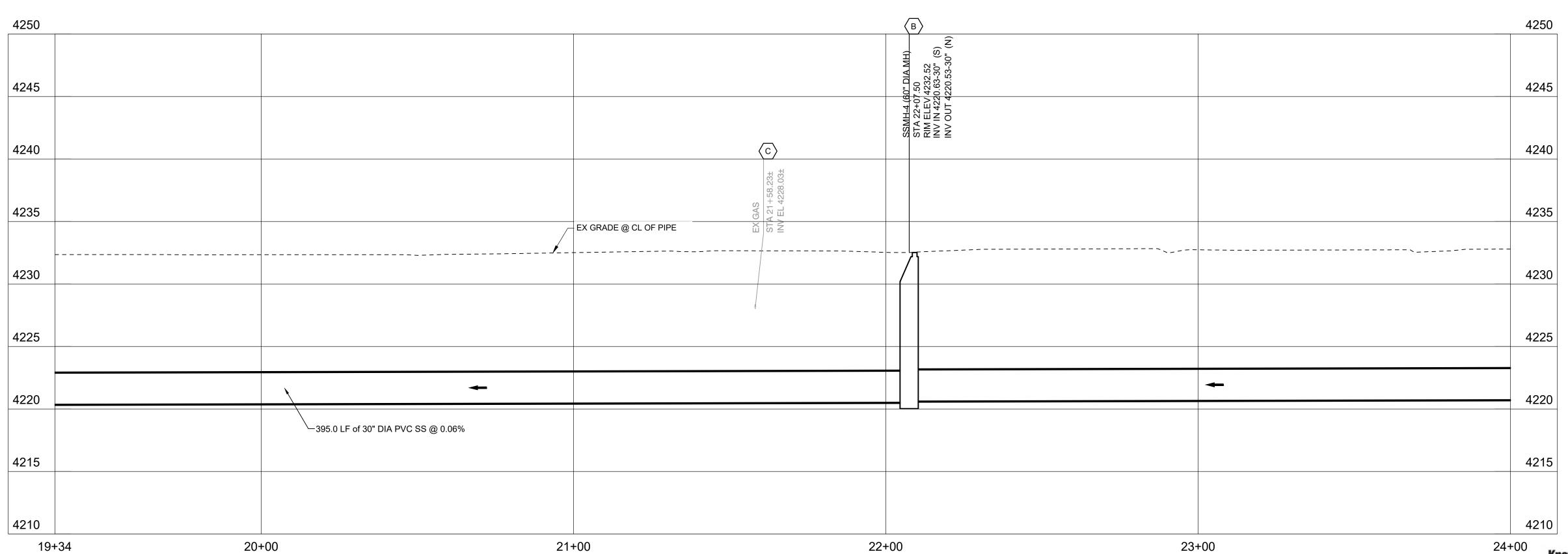
PLAN

SHEET KEYNOTES:

A. INSTALL NEW 30" PVC (PS46, ASTM F679) SEWER PIPELINE IN THE EASTERN LANE OF 8000 W. SEE MWD STANDARD DETAIL 25 ON GC-1 FOR TRENCH CROSS SECTION.

B. INSTALL NEW PRECAST ECCENTRIC SANITARY SEWER MANHOLE PER MWD STANDARD DETAIL 2 ON GC-1. SPRAY MANHOLE INTERIOR, INCLUDING BENCH AND FLOW LINE, WITH PROTECTIVE COATING PER SPECIFICATION 33 01 29 .

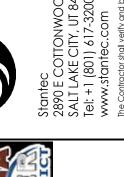
C. CAUTION: EXISTING GAS LINE CROSSING. HAND DIG WITHIN 2-FT TO LOCATE. PROTECT IN PLACE. IF PROPER COMPACTION IS NOT POSSIBLE AT CROSSING, BACKFILL PER SPECIFICATION 31 30 00 2.1.F.



PROFILE

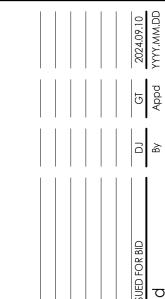




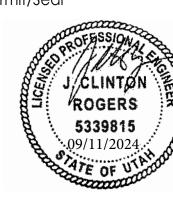




				ļ≿
				Appd
				By
				Revision



Permit/Seal



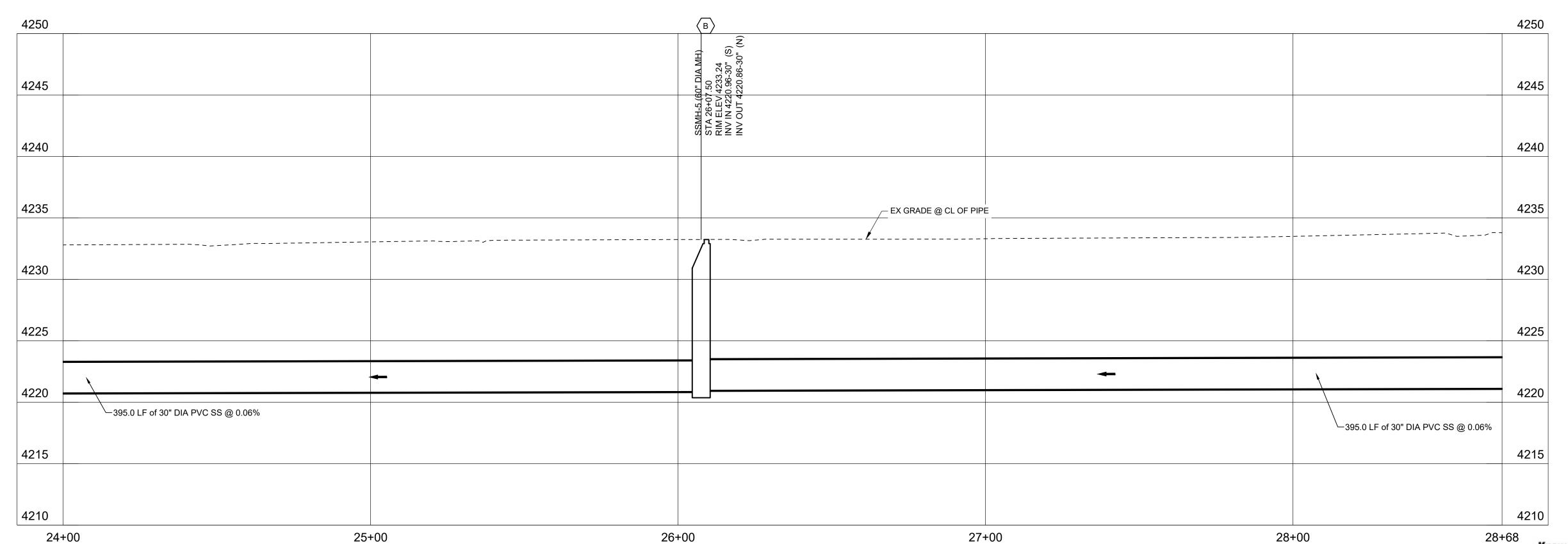
Project No.: 181301797

 DJ
 GT
 2024.09.10

 Dwn.
 Dsgn.
 Chkd.
 YYYY.MM.DD

PLAN AND PROFILE - III STA 19+34 TO STA 24+00

Revision: Sheet: 8 of 16 Drawing No.



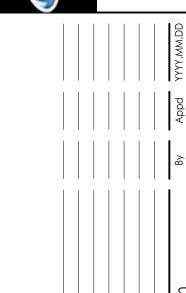
PROFILE

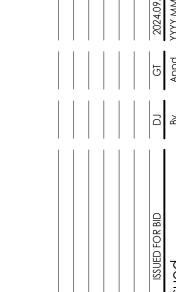
28+00

Know what's **below.** Call 🕮 before you dig. **BLUE STAKES OF UTAH** www.bluestakes.org 1-800-662-4111

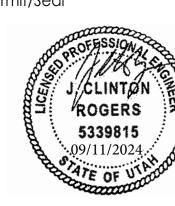








Permit/Seal



Project No.: 181301797

Scale:H: 1"=20' V: 1" = 5' Dwn. Dsgn. Chkd. YYYY.MM.DD

PLAN AND PROFILE - IV STA 24+00 TO STA 28+68

Revision: Sheet: 9 of 16 Drawing No.

24+00







Project No.: 181301797

Scale:H: 1"=20' V: 1" = 5' Dwn. Dsgn. Chkd. YYYY.MM.DD

PLAN AND PROFILE - V STA 28+68 TO STA 33+75

Revision: Sheet: 10 of 16 Drawing No.

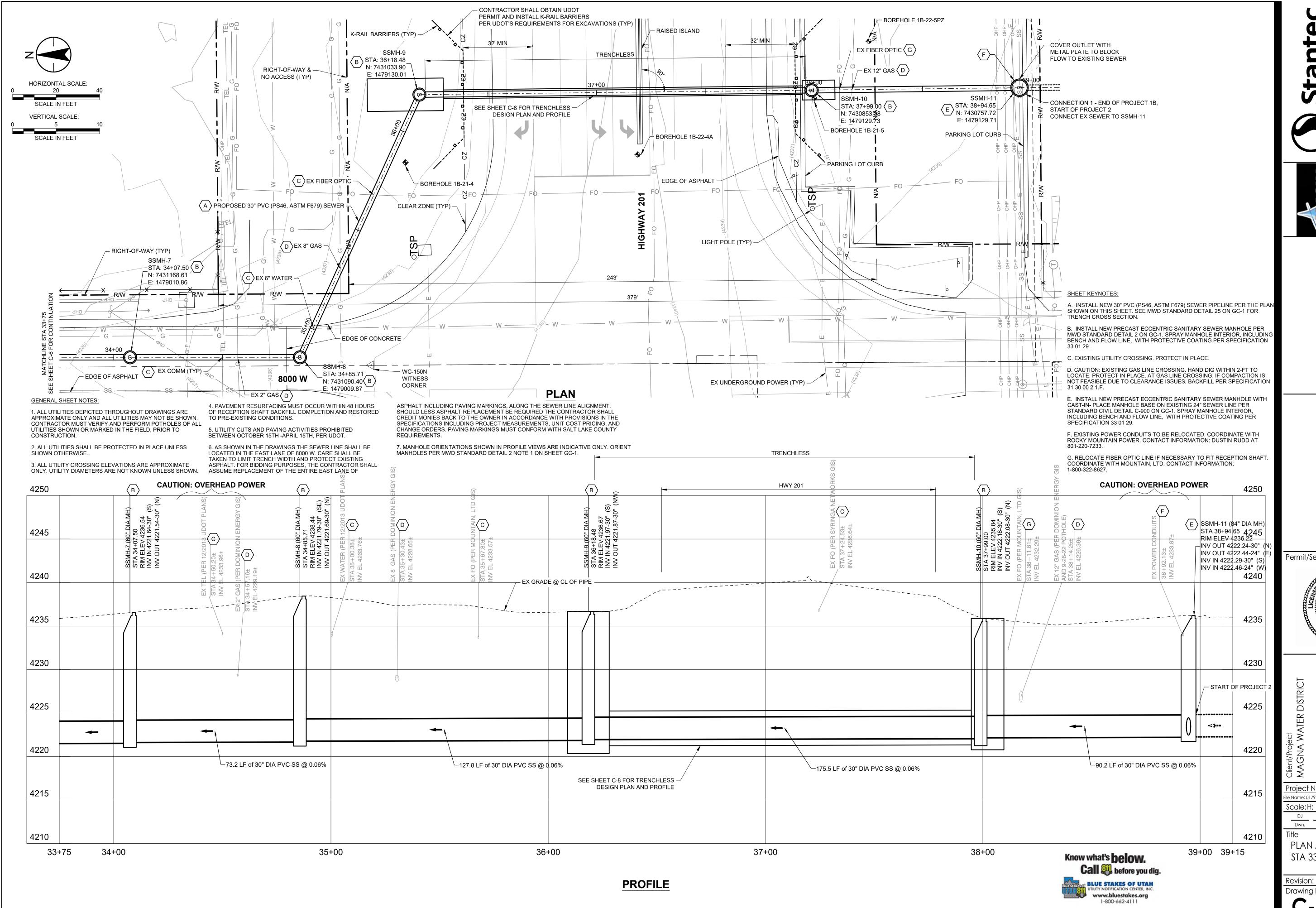
Know what's **below.**Call W before you dig.

BLUE STAKES OF UTAH

1-800-662-4111

ORIGINAL SHEET - ANSI D

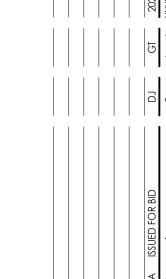
PROFILE











Permit/Seal



Project No.: 181301797 Scale:H: 1"=20' V: 1" = 5' DJ DJ GT 2024.09.10
Dwn. Dsgn. Chkd. YYYY.MM.DD

PLAN AND PROFILE - VI STA 33+75 TO STA 39+15

Revision: Sheet: 11 of 16 Drawing No.

GENERAL SHEET NOTES:

1. ALL UTILITIES DEPICTED THROUGHOUT DRAWINGS ARE APPROXIMATE ONLY AND ALL UTILITIES MAY NOT BE SHOWN. CONTRACTOR MUST CALL 811 FOR UTILITY LOCATES, VERIFY, AND POTHOLE ALL UTILITIES SHOWN OR MARKED IN THE FIELD, PRIOR TO CONSTRUCTION.

2. ALL UTILITIES SHALL BE PROTECTED IN PLACE UNLESS SHOWN OTHERWISE.

3. UNLESS POTHOLE INDICATED, ALL UTILITY CROSSING ELEVATIONS ARE APPROXIMATE ONLY. UTILITY DIAMETERS ARE NOT KNOWN UNLESS SHOWN.

4. PAVEMENT RESURFACING MUST OCCUR WITHIN 48 HOURS OF RECEPTION SHAFT BACKFILL COMPLETION AND RESTORED TO PRE-EXISTING CONDITIONS.

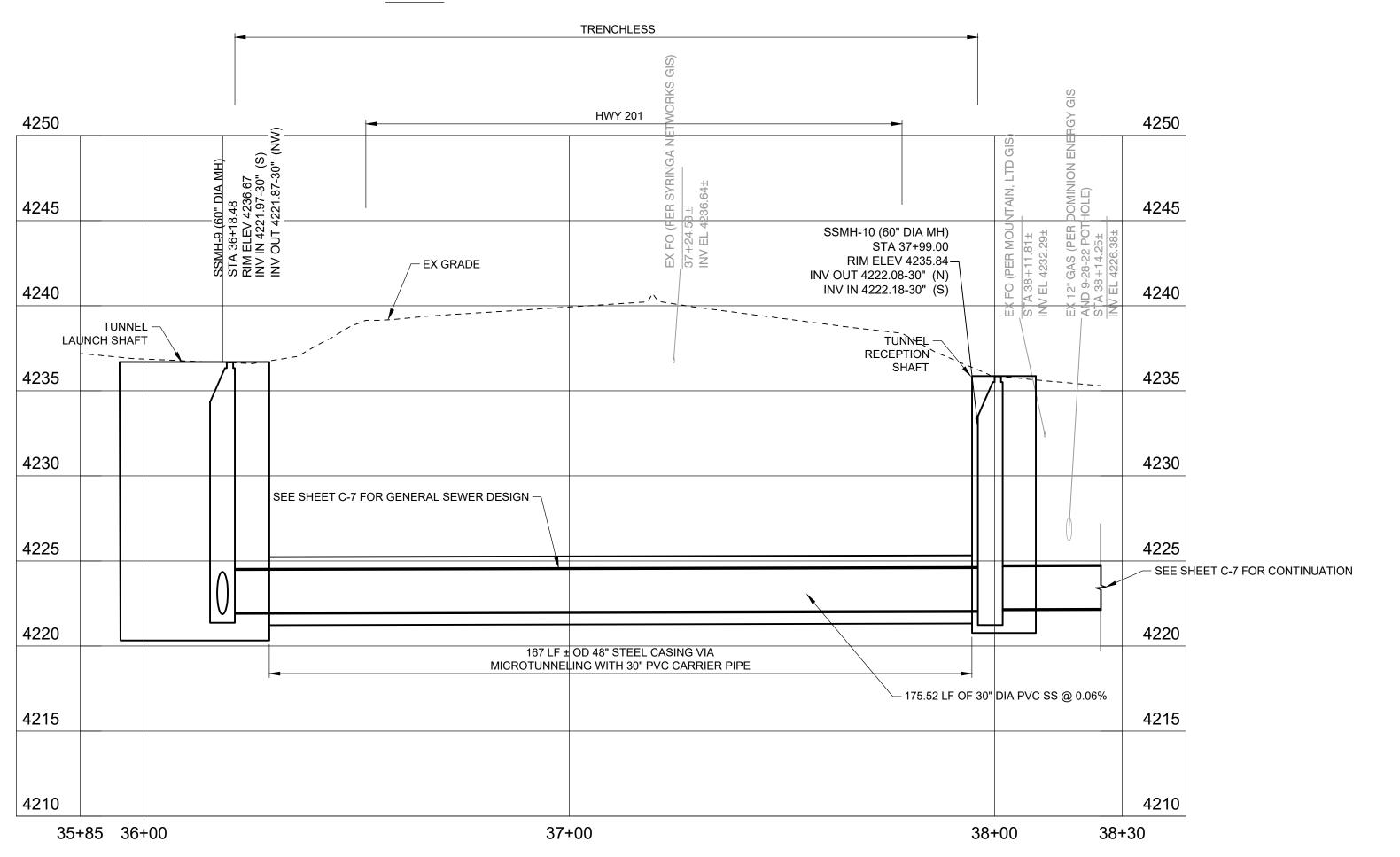
5. UTILITY CUTS AND PAVING ACTIVITIES PROHIBITED BETWEEN OCTOBER 15TH -APRIL 15TH, PER UDOT.

6. CONTRACTOR TO SIZE AND LOCATE LAUNCH AND RECEPTION SHAFTS. SIZES, DEPTHS, AND APPROXIMATE LOCATIONS SHOWN ARE INDICATIVE. SEE SPECIFICATION SECTION 33 05

7. CONTRACTOR TO NOTIFY GAS UTILITY OWNERS OF EXCAVATION ACTIVITY PRIOR TO BEGINNING WORK AND COORDINATE ANY REQUIREMENTS FOR THE WORK WITH THE UTILITY INCLUDING FIELD OVERSIGHT BY UTILITY PERSONNEL.

8. SEE SHEET C-9 FOR TRENCHLESS DETAILS AND SHEET I-1 AND I-2 FOR INSTRUMENTATION PLAN AND DETAILS.

9. SEE SHEET I-3 FOR CATHODIC PROTECTION DETAILS.



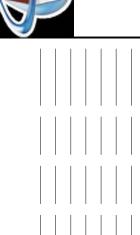
PROFILE (ALIGNMENT 90° TO HIGHWAY-201 EXTENDING PAST EITHER SIDE OF SHAFTS FOR CLARITY)

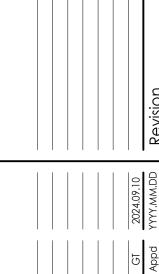






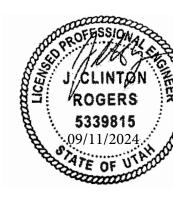












Project No.: 181301797

Scale:H: 1"=20' V: 1" = 5' EKS JP LA 2024.09.10
Dwn. Dsgn. Chkd. YYYY.MM.DD

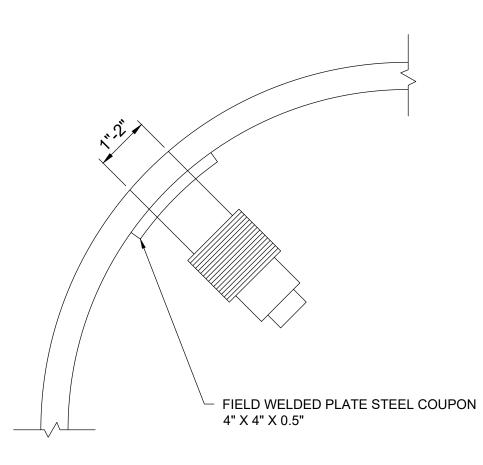
PLAN AND PROFILE TRENCHLESS DESIGN

Revision: Sheet: 12 of 16 Drawing No.

SHAFT-SECTION SCHEMATIC

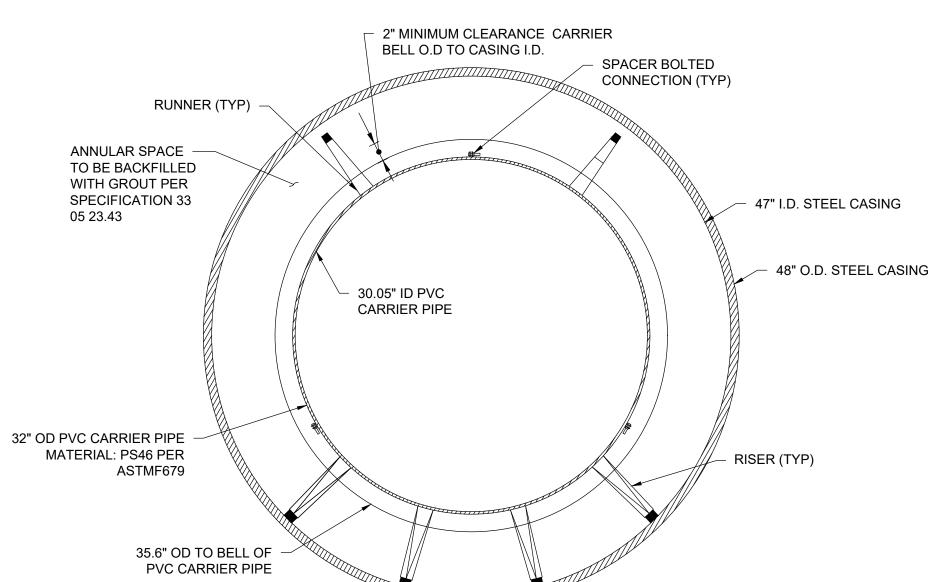
NOTES:

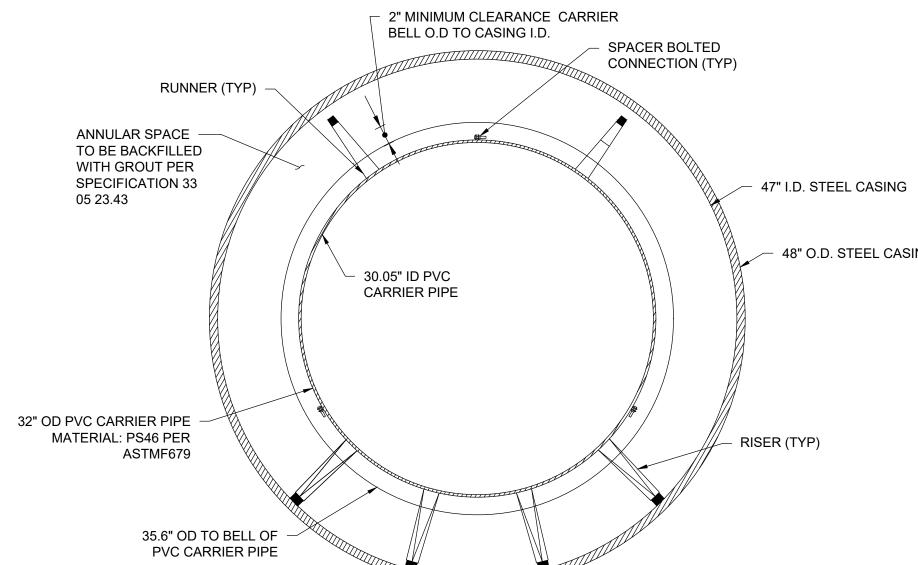
- 1. NO STEEL REBAR TO BE USED AT TUNNEL EYE.
- 2. CONTRACTOR SHALL SELECT, DESIGN, INSTALL AND MAINTAIN AN EXCAVATION SUPPORT SYSTEM UNTIL THE PIPELINE IS PLACED AND THE SHAFT IS BACKFILLED AS SPECIFIED AND SHOWN ON THE PLANS AND SPECIFICATIONS. THE EXCAVATION SUPPORT SYSTEM SHALL BE COMPATIBLE WITH SURFACE AND SUBSURFACE CONDITIONS IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S TEMPORARY SHORING DESIGN SHALL BE SIGNED AND STAMPED BY A PE REGISTERED IN UTAH.
- 3. USE MECHANICAL TUNNEL EYE SEAL. CONTRACTOR TO DESIGN TUNNEL EYE SEAL BASED ON SELECTED EQUIPMENT SIZE, GROUNDWATER LEVEL, LUBRICATION AND GROUT PRESSURES. CONTRACTOR SHALL PROVIDE A REPLACEMENT SEAL SYSTEM ONSITE AT ALL TIMES DURING TUNNELING OPERATIONS.
- 4. CONTRACTOR SHALL GROUT OR BACKFILL BEHIND EXCAVATION SUPPORT SYSTEM AS NECESSARY TO MINIMIZE GROUND MOVEMENT AND MAINTAIN CONTACT BETWEEN GROUND AND EXCAVATION SUPPORT SYSTEM.
- 5. NO DEWATERING IS PERMITTED FOR SHAFT CONSTRUCTION OR DURING TUNNELING OPERATION. ONLY LOCAL SUMP PUMPING IS ALLOWED. DEWATERING TO BE COMPLETED PER SPECIFICATION 31 23 19.
- 6. SUMP PUMPING WITHIN SHAFT IS REQUIRED TO HANDLE INFILTRATION DURING SHAFT OPERATION.
- 7. PROVIDE ADDITIONAL SUPPORT AS REQUIRED AROUND TUNNEL EYE.
- 8. WHEN REMOVAL IS PRACTICAL AND APPROVED BY THE ENGINEER, THE REMOVAL OF SUPPORT SYSTEM SHALL BE IN A MANNER THAT DOES NOT DAMAGE THE PIPELINE, CAUSE SETTLEMENT OR HEAVE OF THE GROUND SURFACE, NOR PRODUCE CONSTRUCTION VIBRATIONS THAT CAUSE DAMAGE TO ADJACENT UTILITIES OR STRUCTURES.



- 1. FITTING SHOWN IS SCHEDULE 40 BLACK WELDED STEEL. 2. CONTRACTOR CAN ADJUST FITTING CONFIGURATION TO MEET
- MEANS AND METHODS PLANNED.
- STEEL PLATE COUPON SHALL BE ASTM A36 STEEL.
- 4. FIELD WELDING SHALL BE COMPLETED BY CERTIFIED WELDER (CWB OR AWS).
- GROUT PORTS TO BE INSTALLED ALTERNATING AT 10 O'CLOCK, 12 O'CLOCK AND 2 O'CLOCK POSITIONS WITH A MINIMUM OF 3 GROUT PORTS EVENLY SPACED PER 20-FT OF LONGITUDINAL CASING LENGTH SUCH THAT THE SPACING ALONG THE CASING IS 6'-8"

GROUT (LUBRICATION) PORT - STEEL CASING

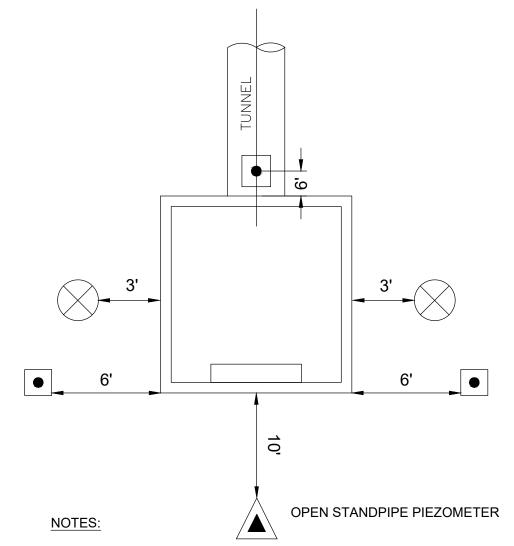




30" CARRIER PIPE IN 48" STEEL CASING DETAIL

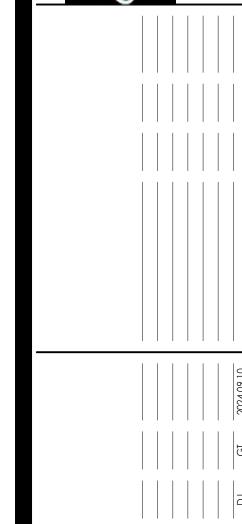
- 1. SEE DETAIL THIS SHEET FOR GROUT PORT DETAILS.
- 2. CENTRALIZER LOCATIONS INCLUDING RISER AND RUNNER POSITIONS ARE APPROXIMATE AND SCHEMATIC. CONTRACTOR TO BE RESPONSIBLE FOR FINAL CENTRALIZER DESIGN PER SPECIFICATIONS
- 3. CASING THICKNESS SHOWN IS MINIMUM. CONTRACTOR IS TO ESTABLISH CASING THICKNESS IS SUFFICIENT VIA ITS DESIGN IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS

Know what's **below.** Call Ubefore you dig. BLUE STAKES OF UTAH www.bluestakes.org 1-800-662-4111



- 1. SHAFT DESIGN IS SCHEMATIC ONLY, SHAFT SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
- 2. A MINIMUM OF THREE (3) GROUND SETTLEMENT DEFORMATION MONITORING POINTS SHALL BE INSTALLED AT A DISTANCE OF 6' FROM THE OUTSIDE OF THE SHAFT. AN SDMP SHALL BE PLACED ABOVE THE CENTERLINE OF EACH TUNNEL. THE REMAINING SDMP'S SHALL BE SPACED EVENLY AROUND THE SHAFT.
- 3. INSTALL OPEN STANDPIPE PIEZOMETER TO A DEPTH OF 10FT BELOW SHAFT
- 4. SEE SHEET I-2 FOR INSTRUMENTATION DETAILS.
- 5. EXISTING OPEN-STANDPIPE PIEZOMETER 1B-21-5PZ MAY BE MONITORED IN LIEU OF NEW PIEZOMETER AT RECEPTION SHAFT.
- 6. INSTALL INCLINOMETERS AS SHOWN.
- 7. CONTRACTOR MAY SUBMIT ALTERNATE LOCATIONS AND OFFSET DISTANCES FROM SHAFT SHOWN AS REQUIRED TO AVOID UTILITIES AND

SHAFT DETAIL AND INSTRUMENTATION ARRAY



Permit/Seal

Project No.: 181301797 le Name: 01797C-8-9 Scale: AS SHOWN

 EKS
 JP
 LA
 2024.09.10

 Dwn.
 Dsgn.
 Chkd.
 YYYY.MM.DD

TRENCHLESS DETAILS

Revision: Sheet: 13 of 16 Drawing No.

SOIL DEFORMATION MONITORING POINT (SDMP) - TOTAL COUNT: 15 (5 SINGLE SDMPs AND 10 FOR MPAs)

AUTOMATED TOTAL STATION (ATS) - TOTAL COUNT: 1

MONITORING POINT ARRAY (MPA) - TOTAL COUNT: 2

REFLECTORLESS MONITORING POINT - TOTAL COUNT: 15

INCLINOMETERS - TOTAL COUNT: 4

PIEZOMETERS - TOTAL COUNT: 1

INSTRUMENTATION LEGEND

GENERAL SHEET NOTES:

1. ALL UTILITIES DEPICTED THROUGHOUT DRAWINGS ARE APPROXIMATE ONLY AND ALL UTILITIES MAY NOT BE SHOWN. CONTRACTOR MUST CALL 811 FOR UTILITY LOCATES, VERIFY, AND POTHOLE ALL UTILITIES SHOWN OR MARKED IN THE FIELD, PRIOR TO CONSTRUCTION.

2. ALL UTILITIES SHALL BE PROTECTED IN PLACE UNLESS SHOWN OTHERWISE.

OPTICAL SURVEY TARGET - TOTAL COUNT: 4

3. UNLESS POTHOLE INDICATED, ALL UTILITY CROSSING ELEVATIONS ARE APPROXIMATE ONLY. UTILITY DIAMETERS ARE NOT KNOWN UNLESS SHOWN.

4. PAVEMENT RESURFACING MUST OCCUR WITHIN 48 HOURS OF RECEPTION SHAFT BACKFILL COMPLETION AND RESTORED TO PRE-EXISTING CONDITIONS.

5. UTILITY CUTS AND PAVING ACTIVITIES PROHIBITED BETWEEN OCTOBER 15TH -APRIL 15TH, PER UDOT.

6. CONTRACTOR TO SIZE AND LOCATE LAUNCH AND RECEPTION SHAFTS. SIZES, DEPTHS, AND APPROXIMATE LOCATIONS SHOWN ARE INDICATIVE.

7. CONTRACTOR TO NOTIFY GAS UTILITY OWNERS OF EXCAVATION ACTIVITY PRIOR TO BEGINNING WORK AND COORDINATE ANY REQUIREMENTS FOR THE WORK WITH THE UTILITY INCLUDING FIELD OVERSIGHT BY UTILITY PERSONNEL.

8. SEE SHEET C-9 FOR TRENCHLESS DETAILS AND SHEET I-1 AND I-2 FOR INSTRUMENTATION PLAN AND DETAILS.

9. SEE SHEET I-3 FOR CATHODIC PROTECTION DETAILS.

PLAN

Permit/Seal Project No.: 181301797 File Name: 017971-1-3 Scale: AS SHOWN
 EKS
 JP
 LA
 2024.09.10

 Dwn.
 Dsgn.
 Chkd.
 YYYY.MM.DD

c:\users\rpinna\onedrive - stantec\desktop\projects\utah\magna\magna\magna Ib\rebid\final plot\dra 2024.09.10 4:55:33 PM

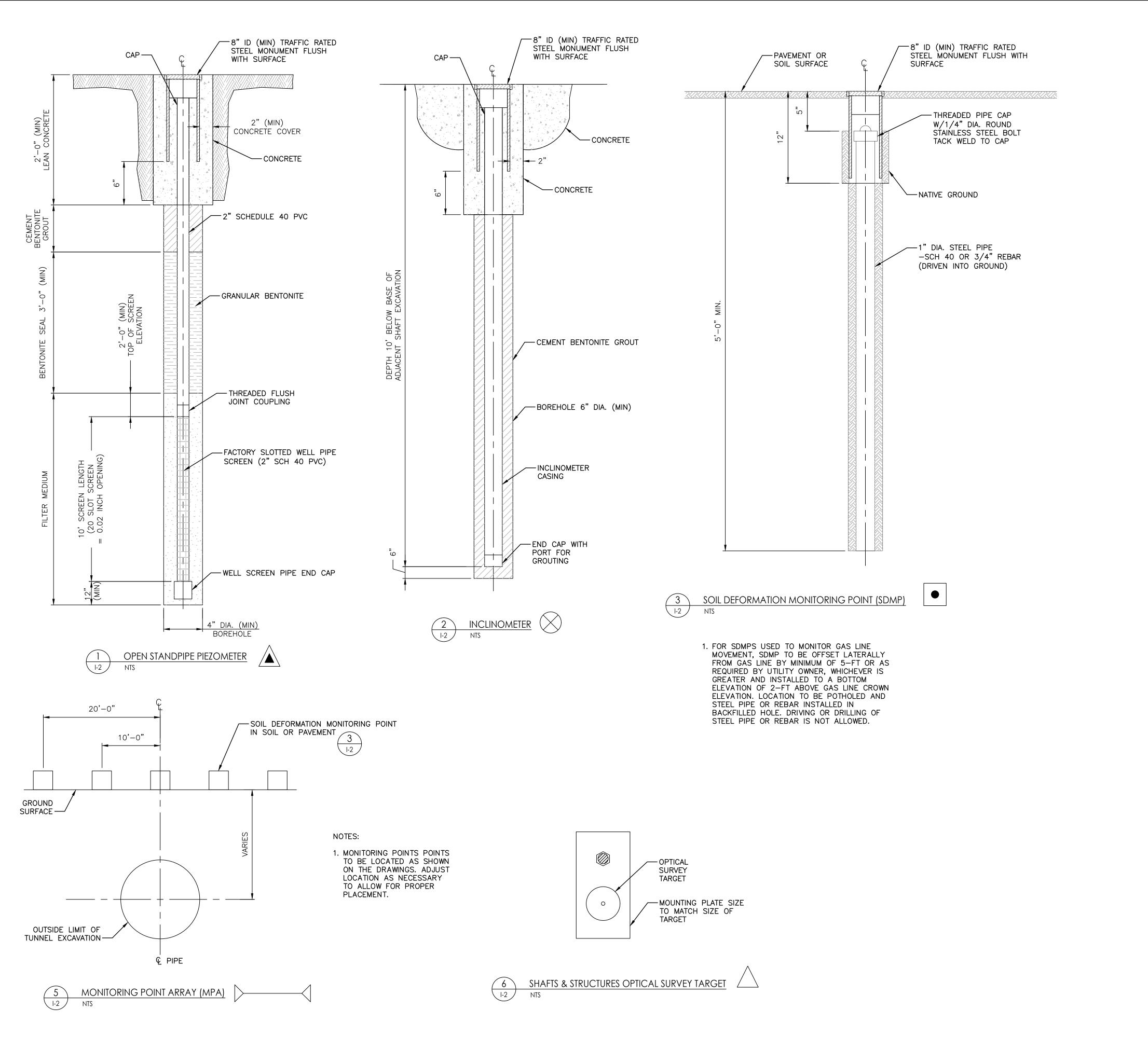
ORIGINAL SHEET - ANSI D

Drawing No.

TRENCHLESS

INSTRUMENTATION PLAN

Revision: Sheet: 14 of 16



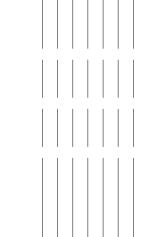
GENERAL SHEET NOTES

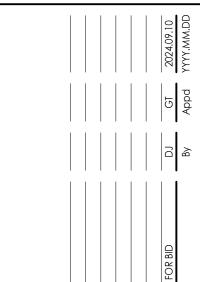
REFER TO SPECIFICATION SECTION 33 05 23.45 - SETTLEMENT MONITORING FOR TRENCHLESS UTILITY INSTALLATIONS FOR ABANDONMENT REQUIREMENTS

nte Sta











Project No.: 181301797 File Name: 017971-1-3

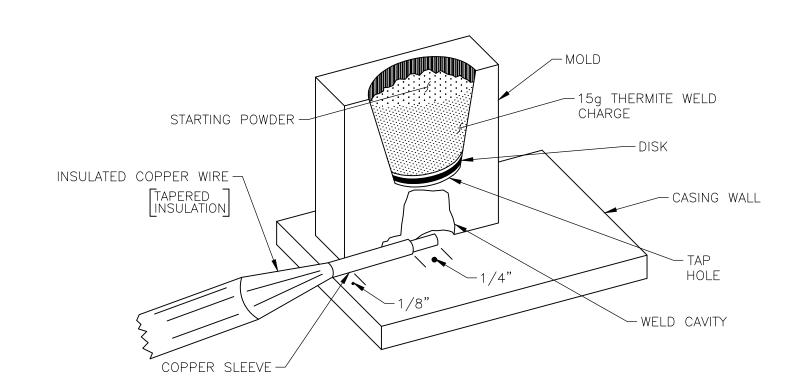
Scale: AS SHOWN

EKS JP LA 2024.09.10
Dwn. Dsgn. Chkd. YYYY.MM.DD

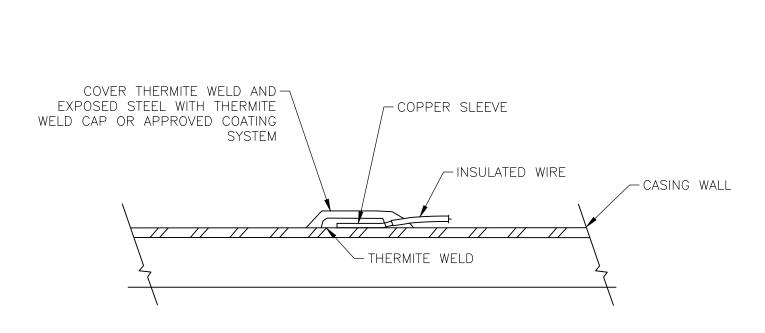
TRENCHLESS INSTRUMENTATION DETAILS

Revision: Sheet: 15 of 16 Drawing No.

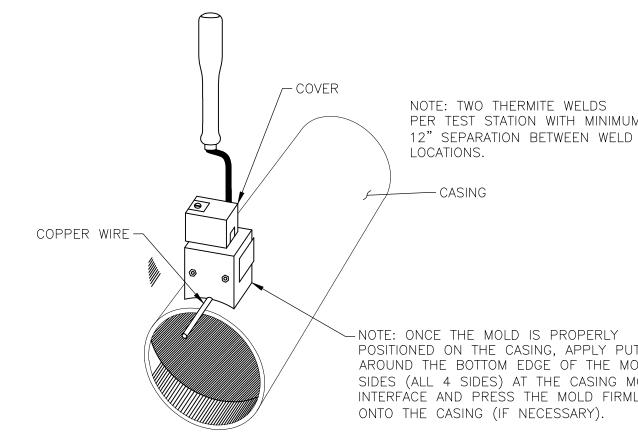
MATERIALS LIST FOR TEST STATIONS						
ITEM No.	QTY	DESCRIPTIONS				
(1)	2	FLUSH MOUNT TEST STATION, 5 LOCATION TERMINAL BOARD, C.P. TEST AND VALVE PRODUCTS (MODEL NM) OR HANDLEY INDUSTRIES INC (MODEL T451Q).				
2	2	12" METER BOX WITH OPTIONAL EXTENSION, COMPLETE WITH CONCRETE SURROUND.				
3	A/R	#8 AWG, RWU, 7 STRAND, COPPER CABLE, ORANGE				
4	A/R	#12 AWG, RWU, 7 STRAND, COPPER CABLE, ORANGE				



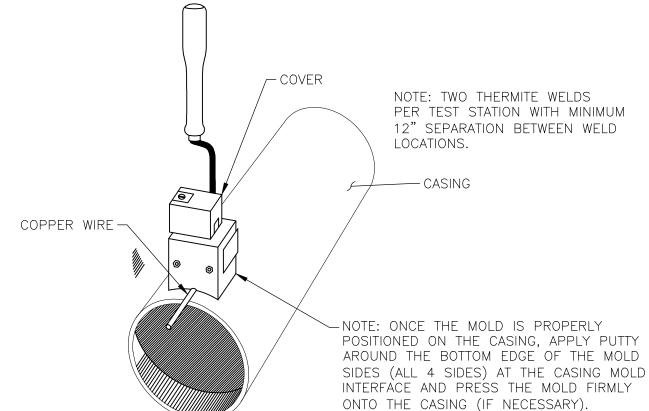
THERMITE WELD MOLD AND CHARGE SECTIONAL VIEW



THERMITE WELD COATING



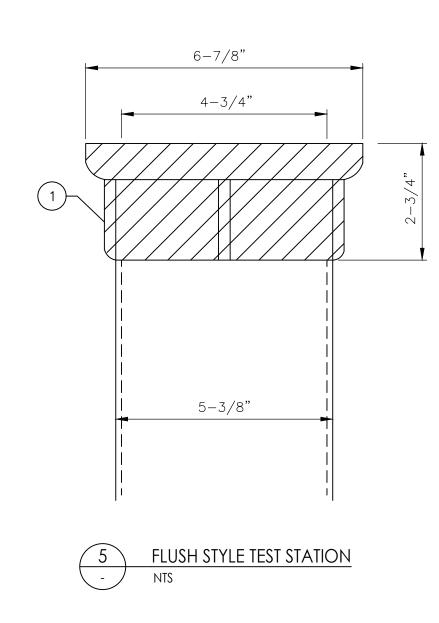
TYPICAL THERMITE WELD MOLD ORIENTATION



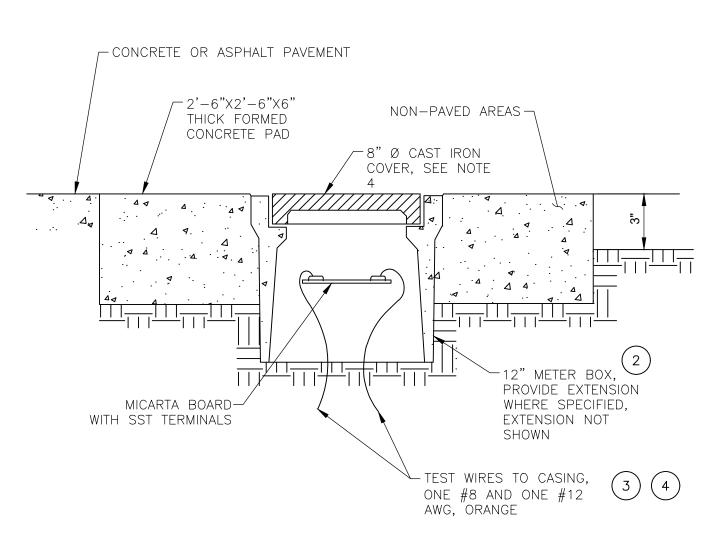
- STEPS:
 1. CLEAN AND FILE CASING TO BRIGHT
- 2. STRIP INSULATION FROM WIRE SUFFICIENT TO CLEAR WELD MOLD, INSTALL COPPER SLEEVE AS REQUIRED.
- 3. HOLD MOLD FIRMLY WITH OPENING AWAY FROM OPERATOR, IGNITE POWDER.

 4. REMOVE SLAG FROM CONNECTION, TEST
- WELD WITH SHARP HAMMER BLOW. 5. COVER EXPOSED METALS AS REQUIRED.

SEE DETAIL (5,6) FINISHED GRADE SEE NOTE 4 1 OR 2 TEST STATION-_ STEEL CASING MIN 18" COIL FOR EACH— WIRE AT TEST STATION BASE (TYP) DETAIL PVC CARRIER — PIPING



NOTE: OPTIONAL CONCRETE SURROUND NOT SHOWN



FLUSH STYLE TEST BOX WITH CONCRETE

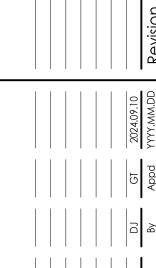
- 1. TERMINALS SHALL BE 1/4" STAINLESS STEEL WITH LOCKING WASHER, TWO FLAT WASHERS,
- AND DOUBLE NUTS.

 2. ALL WIRE CONNECTIONS TO BE WITH RING EYELET COMPRESSION TERMINALS SUITABLE FOR CABLE SIZE.
- 3. CONNECT EACH TEST WIRE TO A SEPARATE TERMINAL.
- 4. CHOICE OF EITHER ITEM 1 OR 2 DEPENDANT ON PROJECT REQUIREMENTS.
- 5. TERMINAL CONNECTIONS SHALL BE COATED IN CORROSION RESISTANT COATING, SUCH AS GLYPTAL.

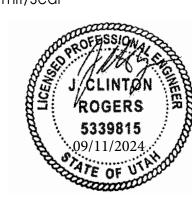








Permit/Seal



WATER DISTRICT

Project No.: 181301797 File Name: 017971-1-3

Scale: AS SHOWN EKS CM JS 2024.09.10
Dwn. Dsgn. Chkd. YYYY.MM.DD

CATHODIC PROTECTION DETAILS

Sheet: 16 of 16 Revision: Drawing No.