



# CITY OF CANNON BEACH

## **WATER RESILIENCY PHASE 1 – SEISMIC IMPROVEMENTS**

### **ADDENDUM TO ITB - 2**

DATE: August 22, 2023

TO: Potential Bidders

The following change is hereby added to and made part of ITB for the Water Resiliency Phase 1: Seismic Improvements Project.

Questions, Answers, Clarifications and Revisions:

1. Please see revisions to Drawings C100 and C101 (attached within revised plan set) which remove any piping work from the Main Reservoir.
2. Please see revisions to the timeline in Spec Section 00 01 20 (attached) to accommodate lead time for actuators.
3. Please see revisions to the Instructions to Bidders in Spec Section 00 21 13 (attached).
4. Q: What permits will be required by the City and the associated permit fees for this work?

A: A Type 2 Development Permit is required for work at the Main Reservoir, the South Reservoir and the Isolation Valve 4 at Hemlock and Fernwood streets. No City permit is required for work at the North Reservoir. The three sites requiring permits will be combined into one permit application for a fee of \$100.

5. Q: Do the quantity tables shown on the drawing sheets have any bearing on bid quantities or measurement of actual work performed? Or are they just for reference?

A: Quantities listed on the plan sheet tables are engineer's estimated quantities and are for reference only.

6. Q: Please clarify that the owner has the 1200-C/CA permit application in process and will be transferred to the contractor upon award. Is there an ETA for permit finalization?

A: No 1200C permit is necessary for this project as disturbed area is less than an acre at each site. All county permits have been applied for.

7. Q: Please clarify the intended testing sequence and durations to perform service interruptions/disconnects/reconnects within the 4-hour work window from 12am-4am and still meet the 24-hour testing criteria as laid out in Section 33 05 05.31.

A: 1. Testing will be visual.  
i. Clean all parts prior to installation.

- ii. Turn the system on to verify there are no leaks at connection points and fittings.
- iii. The 24-hour testing criteria will not be applicable.

8. Q: Is there a size reference available for the Business Oregon signs?

A: There are two posters Business Oregon provided: one 11"x17", and an 8.5"x11". These could be placed on a job bulletin board. The Invest in America sign is 48"x72".

- a. <https://www.whitehouse.gov/wp-content/uploads/2023/02/Investing-in-America-Brand-Guide.pdf>
- b. <https://www.epa.gov/invest/investing-america-signage>

9. Q: Are the gate valves for fire hydrants required to be installed in the locations shown on the drawings, or can they be relocated to simplify installation?

A: They can be moved to where they make the most sense.

10. Q: Can you specify the approved fittings/adaptors required for connecting the existing Asbestos pipe to the new HDPE pipe on Drawings C100 (Main Reservoir) and C106 (Isolation Valve 4)?

A: Romac or similar repair clamp stainless steel. Contractor to verify OD and coordinate with supplier.

11. Q: In reference to the replacement gate valves at the North Reservoir (Drawing C103), can one of the clarifications be provided? 1.) The Brand and Model of existing valves, 2.) A measurement of the valve width from flange to flange, or 3.) Validation that the approved valve manufacturers and models can be installed within the existing space between flange connections without significant alteration to the connecting pipes and flanges?

A: 1. Outlet valve

- i. Pratt Groundhog, 8" rubber seat butterfly
- ii. Manufacture date: 1995; Serial number: 1 7588-2
- iii. Dimension flange to flange is 7.5", overall including check valve is 33"

2. Inlet valve

- i. Label is missing; appears to be Pratt Groundhog (same as outlet)
- ii. Manufacture date: 1998; Number on gear drive: MDT-25; Number on valve body: 1230733
- iii. Dimension flange to flange is 7.5", overall including altitude valve is 32"

3. Contractor to verify all information and to verify gate valve they are providing will work in the space provided

12. Q: Per Drawings C002 and C102 (North Reservoir), the existing chain link fence seems to conflict with the underground work area. Is it acceptable for the fence to be partially demolished as needed for access? If so, may the existing materials be re-installed, or would new fencing be required?

A: Yes, salvage and reinstallation of the fence is acceptable. Rerouting of the wires will also be acceptable. There is an existing trench repair in the concrete that can be used if this makes sense.

13. Q: What is the approved procedure for the water supply from each reservoir to be isolated/shut off during replacement of the existing valves and flex joints? There do not appear to be any shutoff apparatuses between the reservoir and the pipework areas in any of the work locations.

- A:
1. North Reservoir
    - i. Allow for an 8-hour shutdown between 10:00 pm – 6:00 am
    - ii. Drain the tank to be able to work in the dry
      1. Contractor to follow all state laws and regulations for dewatering
    - iii. Work with City staff to drain and shut off water
  2. South Reservoir
    - i. Allow for an 8-hour shutdown between 10:00 pm – 6:00 am
    - ii. Work with City staff to drain and/or plug water
      1. Hot tap gate valves could also be an option
      2. Similar to a Hydra-Stop Insertion Valve
      3. Contractor to follow all state laws and regulations for dewatering
  3. Main Reservoir pipe work has been removed from the project
  4. Isolation Valve 4
    - i. Allow for a 4-hour shutdown between 12:00 am – 4:00 am
    - ii. Work with City staff to shut off water

14. Q: If any costs are incurred by Nuveen/Lewis & Clark Timber for access through their gate or road, will those costs be covered by the Owner or by the Contractor?

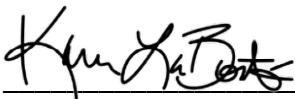
A: City (Owner) will coordinate with Nuveen/L&C Tree Farms for access. Cost to allow access will be covered by the Owner. The cost for access repair will be covered by the contractor.

15. Q: On plan sheet C106 there is a 12” Gate Valve which appears to have an electric motor actuator. Is this a standard gate valve or a knife gate?

- A:
1. This is a standard gate valve.
  2. The 8-inch Gate Valves would be sized with **Rotork IQD10 Mk3 Intelligent actuators**, 48 rpm Output Speed with **IB4 gearbox**, 4:1 ratio, 3.4 MA, 160 second stroke time. See attached data sheet. This sizing is based around an 8-in. Mueller Class 150# Gate Valve.
  3. The 12-inch Gate Valves would also be sized with **Rotork IQD10 Mk3 Intelligent actuator**, 24 rpm Output Speed with **IB5 gearbox**, 6:1 ratio, 5:1 MA, 720 second stroke time. See attached data sheet. This sizing is based around a 12-in. Mueller Class 150# Gate Valve.

16. Q: On sheet C100 there are 8” and 12” DI PIPE SLIP JOINTS – What are those?

A: American Flow Control AWWA C153 – COMPACT Sleeves or similar.



Karen La Bonte  
Public Works Director



# ENGINEERING PLANS

## FOR

# WATER RESILIENCY PROJECT

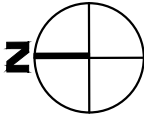
## PHASE 1 - SEISMIC IMPROVEMENTS

CITY OF CANNON BEACH, OR 97110

PREPARED FOR:  
**CITY OF CANNON BEACH**  
163 E. GOWER, PO BOX 368  
CANNON BEACH, OREGON 97110  
CONTACT: KAREN LA BONTE  
PHONE: (503) 436-8068  
EMAIL: LABONTE@CI.CANNON-BEACH.OR.COM



VICINITY MAP  
NOT TO SCALE



PREPARED BY:



Vancouver, WA  
Duluth + Minneapolis, MN  
www.windsorengineers.com

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PROJECT NUMBER: 20198.3



CONTACT: TRAVIS TORMANEN  
PHONE: (360) 903-9281  
EMAIL: TTORMANEN@WINDSORENGINEERS.COM



LOCATION MAP  
NOT TO SCALE

### SHEET INDEX

- G001 COVER SHEET
- G002 CIVIL NOTES AND ABBREVIATIONS
- G003 LEGENDS
- G004 KEY PLAN - NORTH
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- G006 KEY PLAN - SOUTH
- C000 EXISTING CONDITIONS AND DEMOLITION PLAN - MAIN RESERVOIR
- C001 EXISTING DETAILS - MAIN RESERVOIR
- C002 EXISTING CONDITIONS AND DEMOLITION PLAN - NORTH RESERVOIR
- C003 EXISTING DETAILS - NORTH RESERVOIR
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- E601 RESERVOIR ONE-LINE DIAGRAM
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- E701 TYPICAL CONTROL PANEL ELEVATIONS
- E801 SCADA NETWORK DIAGRAM

CITY OF CANNON BEACH	
BY _____	DATE _____
PUBLIC WORKS DIRECTOR	
BY _____	DATE _____
CITY ENGINEER	
BY _____	DATE _____
COMMUNITY DEVELOPMENT DIRECTOR	
BY _____	DATE _____
FIRE MARSHAL	

### REVISIONS:

1	8/24/2023	ADDENDUM #1



PLOT DATE: 9/22/2023 4:34 PM - FILE: C:\Users\TJadm\OneDrive - Windsor Engineers\CS - Projects\2020\20198.3 Cannon Beach Seismic Values\02\_Drawings\01\_Working\04\_Final Sheets\20198.3\_000ss.dwg

PROJECT NOTES

UTILITY IMPROVEMENTS TO THE CITY'S WATERMAIN. IMPROVEMENTS WILL BE SITE SPECIFIC AND LIMITED TO A SMALL AREA OVER THE WATERMAIN TO ADD SEISMIC VALVES AND POWER TO OPERATE THE VALVES. THE WORK WILL ENTAIL PLACING A VAULT OR MANHOLE STRUCTURE OVER THE EXISTING WATERMAIN TO BE ABLE TO HOUSE AND ADD THE NEEDED SEISMIC VALVES TO THE SYSTEM. IN ADDITION TO THE VAULTS AND MANHOLES ROUGHLY 20' OF PIPE WILL BE REPLACED. THERE ARE A COUPLE PLACES WHERE ASBESTOS CONCRETE PIPE WILL BE REMOVED AND REPLACED WITH A PLASTIC C900 PIPE.

PARCEL NO.(S): VARIES - CITY OF CANNON BEACH

SITE ADDRESS: VARIES - CITY OF CANNON BEACH

QUARTER SECTION: VARIES - CITY OF CANNON BEACH

COUNTY: CLATSOP

CRITICAL AREAS:

1. NO CRITICAL AREAS ARE WITHIN THE CONSTRUCTION LIMITS OF THE PROJECT.

CONTACT INFORMATION

APPLICANT / PROPERTY OWNER  
CITY OF CANNON BEACH  
CONTACT:  
TREVOR MOUNT (503) 436-8066  
MOUNT@CI.CANNON-BEACH.OR.US

SURVEYOR  
ONION PEAK  
CONTACT:  
ERICK WHITE (503) 440-4403  
ERICK.OPD@GMAIL.COM

GEOTECHNICAL ENGINEER  
PALI CONSULTING  
CONTACT:  
TOM BLACKWOOD (503) 502-0820  
TIM@PALI-CONSULTING.COM

REPRESENTATIVE / CONTACT  
WINDSOR ENGINEERS, LLC  
27300 NE 10TH AVE.  
RIDGEFIELD, WA 98642  
CONTACT:  
TRAVIS TORMANEN (320) 903-9281  
TTORMANEN@WINDSORENGINEERS.COM

GENERAL ABBREVIATIONS

(E)	EXISTING
C	CONCRETE
CB	CATCH BASIN
CL	CENTERLINE
CNS	COMPACTED NATIVE SOIL
CO	CLEAN OUT
CR	CURB RETURN
D	DIRT / DRAINAGE
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FM	FORCE MAIN
G	NATURAL GAS (LOW PRESSURE)
GB	GRADE BREAK
HP	HIGH POINT
LF	LINEAR FOOT
LP	LOW POINT
MG	NATURAL GAS (MEDIUM PRESSURE)
MG	MATCH EXISTING GRADE
MH	MANHOLE
NS	NATIVE SOIL
NTS	NOT TO SCALE
P	PAVEMENT
PC	POINT OF CURVATURE
POC	POINT OF CONNECTION
POS	POINT OF SERVICE
PP	POWER POLE
PT	POINT OF TANGENCY
R	RADIUS
ROW	RIGHT OF WAY
S	SLOPE / SANITARY
SAN	SEWER SEWER
SSMH	SANITARY MANHOLE
STA	STATION
STM	STORM DRAIN
STMH	STORM MANHOLE
TBD	TO BE DETERMINED
TBL	TO BE RELOCATED BY RESPECTIVE UTILITY
TBR	TO BE REMOVED BY CONTRACTOR
TC	TOP OF CURB
TOE	TOE OF BANK
TOP	TOP OF BANK
TP	TELEPHONE POLE
U	UNDERGROUND
VIP	VERIFY IN FIELD PRIOR TO CONSTRUCTION
W	WATER MAIN
XFMR	TRANSFORMER

GENERAL PLAN NOTES

1. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION. A MINIMUM OF TWO FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL CALL 811 (UTILITY NOTIFICATION CENTER) FOR LOCATION MARK-UP OF EXISTING UTILITIES
2. ALL CONSTRUCTION, MATERIALS, AND WORKMANSHIP SHALL CONFORM TO THE LATEST STANDARDS AND PRACTICES OF CLATSOP COUNTY AND THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" PREPARED BY OSDOT
3. IN CASE OF A CONFLICT BETWEEN THE REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.
4. ANY CHANGES TO THE DESIGN AND/OR CONSTRUCTION SHALL BE APPROVED BY THE OWNER OR ENGINEER.
5. APPROVAL OF THESE PLANS DOES NOT CONSTITUTE AN APPROVAL OF ANY OTHER CONSTRUCTION NOT SPECIFICALLY SHOWN ON THE PLANS. PLANS FOR STRUCTURES SUCH AS BRIDGES, BUILDINGS, TANKS, VAULTS, ROCKERIES, AND RETAINING WALLS MAY REQUIRE A SEPARATE REVIEW AND APPROVAL BY THE BUILDING DEPARTMENT PRIOR TO CONSTRUCTION.
6. A COPY OF THESE APPROVED PLANS SHALL BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL CONSTRUCTION EASEMENTS AND PERMITS NECESSARY TO PERFORM THE WORK.
8. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION STAKING.
9. PUBLIC AND PRIVATE DRAINAGEWAYS SHALL BE PROTECTED FROM POLLUTION. NO MATERIAL IS TO BE DISCHARGED TO OR DEPOSITED IN STORMWATER SYSTEMS THAT MAY RESULT IN VIOLATION OF STATE OR FEDERAL WATER QUALITY STANDARDS.
10. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL HAVE AN APPROVED PUBLIC RIGHT-OF-WAY WORK PERMIT PRIOR TO ANY CONSTRUCTION ACTIVITY WITHIN THE RIGHT-OF-WAY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION. TWO-WAY TRAFFIC MUST BE MAINTAINED AT ALL TIMES ON THE ADJACENT PUBLIC STREETS.
12. ANY PUBLIC OR PRIVATE CURB, GUTTER, SIDEWALK, OR ASPHALT DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO CITY/COUNTY STANDARDS AND PRACTICES.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ADJACENT UTILITIES WHICH MAY INCLUDE, BUT ARE NOT LIMITED TO, WATER, SANITARY SEWER, STORMWATER, POWER, TELEPHONE, CABLE TV, GAS, IRRIGATION, AND STREET LIGHTING. THE CONTRACTOR SHALL NOTIFY RESIDENTS AND BUSINESSES 48 HOURS IN ADVANCE OF ANY WORK AFFECTING ACCESS OR SERVICE AND SHALL MINIMIZE INTERRUPTIONS TO DRIVEWAYS FOR RESIDENTS AND BUSINESSES ADJACENT TO THE PROJECT.
14. ALL LAWN AND VEGETATED AREAS DISTURBED WILL BE RESTORED TO ORIGINAL CONDITION. ANY DISURBANCE OR DAMAGE TO OTHER PROPERTY ON ADJACENT PARCELS OR IN THE PUBLIC RIGHT OF WAY SHALL ALSO BE REPAIRED OR RESTORED TO ORIGINAL CONDITION.
15. ALL MATERIALS AND METHODS OF CONSTRUCTION AND INSTALLATION FOR WATER, SANITARY SEWER, AND STORM FACILITIES SHALL CONFORM TO THE CITY OF CANNON BEACH DESIGN GUIDELINES. CONSTRUCTION SHALL BE AS PER THE MOST CURRENT STANDARD DETAIL CONTAINED THEREIN.
16. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES AS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS, AND DEPTHS OF UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES. THE CONTRACTOR SHALL VERIFY THE LOCATION OF AND PROVIDE PROTECTION FOR ALL UTILITIES AND STRUCTURES.
17. EXISTING UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR OR BY THE UTILITY.
18. WHERE THE CONTRACTOR MUST RELOCATE WATER AND GAS UTILITIES, SHUTDOWN SHALL ONLY BE ACCOMPLISHED BY THE CITY OR UTILITY PURVEYOR.
19. ALL OPEN TRENCHES THAT IMPACT PUBLIC ACCESS OR OTHER PROJECT WORK ACCESS OUTSIDE OF THIS PROJECTS SITE, MUST BE STEEL PLATED OR BACKFILLED AND PAVED WITH AT LEAST 2" OF COLD MIX TO ADJACENT EXISTING GRADE AT THE END OF EACH WORKDAY.
20. NOTIFY ADJACENT RESIDENCES AT LEAST ONE DAY PRIOR TO COMMENCING WORK ADJACENT TO THEIR RESIDENCES.
21. SAWCUT ALL PAVEMENT JOINT LINES, WHERE THERE IS A PREVIOUS PAVING EDGE OR CRACK WITHIN 5' OF THE SAWCUT EDGE, REMOVE THE PAVEMENT TO THE PREVIOUS PAVING EDGE.
22. THE CONTRACTOR SHALL COMPLY WITH OREGON REQUIREMENTS FOR TRENCH SAFETY.
23. THE CONTRACTOR SHALL REPLACE ALL SURVEY MONUMENTS THAT ARE DESTROYED BY THE CONSTRUCTION.
24. ALL WATER PIPING SHALL BE CONSTRUCTED WITH 3' MINIMUM COVER, 1' VERTICAL SEPARATION BETWEEN UTILITIES, AND A MINIMUM OF 10' HORIZONTAL SEPARATION AND 18" ABOVE SEWER LINES, UNLESS OTHERWISE NOTED.
25. THE CONTRACTOR SHALL RESTORE PAVEMENT AND LANDSCAPING DISTURBED BY THE CONSTRUCTION TO THE PREVIOUSLY UNDISTURBED CONDITION.
26. CONTRACTOR TO DISPOSE OF TREES, SHRUBS, SOD AND OTHER DEBRIS IN A PROPER MANNER OF THE CONTRACTOR'S CHOOSING.
27. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ROADS, SIDEWALK, AND TRAILS CLEAN AND CLEAR FROM CONSTRUCTION MATERIAL AND DEBRIS.

GENERAL CIVIL NOTES

SURVEY  
TOPOGRAPHIC SURVEY BY: ONION PEAK  
HORIZONTAL DATUM: OREGON STATE PLANES NORTH ZONE  
ELEVATION DATUM: NAD 83

STORM DRAINAGE:  
ON-SITE STORM SEWER IMPROVEMENTS SHALL CONFORM TO THE LATEST VERSION OF THE DEQ, AND CONFORM TO ODOT SPECIFICATIONS WHERE NOTED.

THE CONTRACTOR SHALL MAINTAIN 6" MINIMUM VERTICAL AND 3' MINIMUM HORIZONTAL CLEARANCE (OUTSIDE SURFACES) BETWEEN STORM DRAIN PIPES AND OTHER UTILITY PIPES AND CONDUITS. FOR CROSSINGS OF SANITARY SEWER LINES, THE OREGON HEALTH AUTHORITY CRITERIA APPLY.

STORM DRAIN PIPE, BENDS, AND FITTINGS SHALL BE PVC, ASTM D 3034, SDR 35, OR SMOOTH INTERIOR, HIGH DENSITY POLYETHYLENE CORRUGATED PIPE AASHTO M252 OR M284, TYPE S AS PRODUCED AND SPECIFIED BY ADS, PRODUCT NAME N12, OR APPROVED EQUAL. ALL STORM SEWER FITTINGS AND PIPE JOINTS SHALL BE GASKETED.

PERFORATED PIPE SHALL BE ADS SINGLE WALL PERFORATED PIPE WITH SOCK OR APPROVED EQUAL.

ALL STORM SEWER PIPE SHALL HAVE A MINIMUM 12" DIAMETER WITHIN ROADWAY

ALL ON-SITE STORMWATER FACILITIES SHALL BE PRIVATELY MAINTAINED BY THE CURRENT OR FUTURE PROPERTY OWNER(S).

ALL VAULT, UTILITY BOX, INLET, MANHOLE AND CLEANOUT RIMS SHALL BE ADJUSTED TO FINISH GRADE UNLESS OTHERWISE NOTED.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND MAINTAIN ANY STORM SYSTEM PIPING TO EXISTING DRAINAGE APPURTENANCES TO REMAIN.

SANITARY SEWER:  
ON-SITE (PRIVATE) SANITARY SEWER IMPROVEMENTS SHALL CONFORM TO THE LATEST VERSION OF THE DEQ, AND ODOT SPECIFICATIONS WHERE NOTED AND THE CITY OF CANNON BEACH GENERAL REQUIREMENTS.

SANITARY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC) AND CONFORM TO ASTM D3034, SDR35.

CONTRACTOR SHALL COORDINATE ALL BUILDING SANITARY CONNECTIONS WITH PLUMBING PLAN PRIOR TO CONSTRUCTION.

CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND INSPECTIONS.

WATER:  
ALL WATERMAIN INSTALLATION, DISINFECTION AND TESTING SHALL COMPLY WITH ODOT STANDARD SPECIFICATIONS, UNIFORM PLUMBING CODE, AND CITY OF CANNON BEACH WATER DESIGN AND CONSTRUCTION STANDARDS.

STANDARD DETAIL STATEMENT  
ALL MATERIALS AND METHODS OF CONSTRUCTION AND INSTALLATION FOR WATER, SEWER, STORM WATER FACILITIES, AND EROSION CONTROL MEASURES, SHALL CONFORM TO CITY OF CANNON BEACH ENGINEERING SERVICES "TOLEDO DEVELOPMENT GUIDELINES." CONSTRUCTION SHALL BE AS PER THE MOST CURRENT STANDARD DETAIL CONTAINED THEREIN.

GRADING & EROSION CONTROL NOTES

NO GRADING WITHIN 2' OF ADJACENT PARCELS PER IBC.

STRIP ORGANICS PER GEOTECH REPORT. RE-DEPOSIT ABOVE COMPACTED FILL TO A MAX DEPTH OF 6" (12" IN LANDSCAPE AREAS).

FINISH GRADE CONTOURS ARE TO TOP OF FINISHED SURFACE IN IMPERVIOUS AREAS AND TOP OF REPLACED STRIPPINGS IN PERVIOUS AREAS.

STRIPPINGS TO REMAIN ON SITE AND BE RE-DISTRIBUTED OVER LANDSCAPE AREAS AFTER ALL GRADING ACTIVITIES ARE COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE FOR HAUL-OFF OF EXCESS MATERIAL.

CUT AND FILL QUANTITIES ARE BASED ON GENERAL SITE GRADING ESTABLISHED FROM THE STRIPPED GRADE TO THE FINISHED PROPOSED SUBGRADE AND TRENCH SPOILS. THESE VOLUMES DO NOT TAKE INTO ACCOUNT ANY UNKNOWN SOIL DEPOSITS OR OVER-EXCAVATION OF NON-ORGANIC MATERIALS THAT ARE DISCOVERED ON SITE, NOR WET WEATHER CONDITIONS. CONTRACTOR SHALL BE RESPONSIBLE TO PRODUCE INDEPENDENT GRADING VOLUMES AS WELL AS ACCOUNT FOR OBSERVATION OF MEASURES DIRECTED WITHIN THE GEOTECHNICAL REPORT OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER DURING THE COURSE OF CONSTRUCTION.

PRIOR TO ACCEPTANCE OF THE COMPACTED SUB-GRADE, THE CONTRACTOR SHALL PROVIDE A TEST ROLL IN THE PRESENCE OF OWNER / CITY REPRESENTATIVE UNLESS OTHERWISE APPROVED BY THE GEOTECHNICAL ENGINEER.

AMERICANS WITH DISABILITIES ACT (ADA) NOTES

1. CONTRACTORS SHALL EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ADA ACCESSIBLE COMPONENTS ON THE PROJECT. THE ADA COMPONENTS MUST COMPLY WITH ALL LOCAL, STATE, AND FEDERAL ACCESSIBILITY RULES, CODES, AND REGULATIONS.
2. FINISHED SURFACES ALONG THE ACCESSIBLE PATH OF TRAVEL FROM PARKING STALLS, PUBLIC TRANSPORTATION, AND PEDESTRIAN ACCESS WAYS TO THE POINT(S) OF ACCESSIBLE BUILDING INGRESS AND EGRESS SHALL COMPLY WITH ADA CODE REQUIREMENTS.
3. PARKING SPACE AND AISLE SLOPE SHALL NOT EXCEED 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.
4. CURB RAMP SLOPE SHALL NOT EXCEED 1:12 (8.3%) AND RAMP LENGTH IS LIMITED TO 15 FEET.
5. LANDINGS SHALL BE PROVIDED AT EACH END OF RAMPS, SHALL HAVE POSITIVE DRAINAGE, AND SHALL NOT EXCEED 1:48 (1/4"PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.
6. PATH OF TRAVEL ALONG ACCESSIBLE ROUTE SHALL PROVIDE A MINIMUM OF 36 INCH UNOBSTRUCTED WIDTH OF TRAVEL. SLOPE SHALL BE NO GREATER THAN 1:20 (5.0% OR 5/8" PER FOOT) IN THE DIRECTION OF TRAVEL, AND SHALL NOT EXCEED 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) IN CROSS SLOPE. WHERE PATH OF TRAVEL BE GREATER THAN 1:20 (5.0%), AN ACCESSIBLE RAMP WITH A MAXIMUM SLOPE OF 1:12 (8.3%) FOR A MAXIMUM DISTANCE OF 30 FEET SHALL BE PROVIDED INCLUDING HANDRAILS. THE RAMP SHALL HAVE ACCESSIBLE HAND RAILS AND LANDINGS ON EACH END WITH A SLOPE IN ANY DIRECTION NOT EXCEEDING 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%).
7. DOORWAYS SHALL HAVE A LANDING AREA ON THE EXTERIOR SIDE OF THE DOOR THAT IS SLOPED NO MORE THAN 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA SHALL BE NO LESS THAN 60 INCHES (5 FEET) LONG, EXCEPT HERE OTHERWISE PERMITTED BY ACCESSIBILITY STANDARDS FOR ALTERNATIVE DOORWAY OPENING CONDITIONS AND APPROVED BY THE OWNER'S REPRESENTATIVE.
8. WHERE PEDESTRIAN ACCESS ROUTES ARE CONTAINED WITHIN A STREET OR HIGHWAY RIGHT-OF-WAY, THE GRADE OF THE PEDESTRIAN ACCESS ROUTE IS PERMITTED TO EQUAL THE GENERAL GRADE ESTABLISHED FOR THE ADJACENT STREET OR HIGHWAY, EXCEPT THAT WHERE PEDESTRIAN ACCESS ROUTES ARE CONTAINED WITHIN PEDESTRIAN STREET CROSSINGS A MAXIMUM GRADE OF 5 PERCENT IS REQUIRED. (EXCEPT FROM PROWAG)
- GENERAL FIRE NOTES
1. GENERAL FIRE SAFETY PRECAUTIONS SHALL BE MAINTAINED, IN ACCORDANCE WITH CHAPTER 33 OF THE INTERNATIONAL FIRE CODE; FIRE SAFETY DURING CONSTRUCTION
2. ALL WORK SUBJECT TO FIELD INSPECTION AND CORRECTION(S) AS IDENTIFIED AT THE TIME OF THE ON-SITE INSPECTION; ALL WORK SHALL BE COMPLIANT WITH THE APPLICABLE STANDARDS AND CODES; TO INCLUDE THE ADOPTED EDITION OF THE INTERNATIONAL FIRE CODE AND THE CITY'S MUNICIPAL CODE.
3. ALL FIRE ALARM AND FIRE SPRINKLERS SHALL BE SUBMITTED SEPARATELY AND DIRECTLY TO THE FIRE MARSHAL.
4. MODIFICATIONS FOR FUTURE TENANT IMPROVEMENT(S) MAY REQUIRE AN ALTERNATE PLANS RE-SUBMITTAL.
5. APPENDIX D FOR FIRE APPARATUS ACCESS ROADSALL ON-SITE PRIVATE UNDERGROUND FIRE SUPPRESSION WATER SUPPLY SHALL BE SUBMITTED TO THE FIRE MARSHAL (THIS INLCUDES PRIVATE HYDRANTS, UNDERGROUND FOR FDC'S AND FIRE SPRINKLER UNDERGROUND CONNECTIONS).
6. IFC APPENDIX D FIRE APPARATUS ACCESS ROADS. WHERE HYDRANTS ARE ON A FIRE APPARATUS ACCESS ROAD, THE MINIMUM WITH OF THE ROAD SHALL BE 26 FEET FOR A DISTANCE OF 20 FEET; 10 FEET IN EITHER DIRECTION.
7. IFC 503.3 MARKING WHERE REQUIRED BY THE FIRE CODE OFFICIAL, APPROVED SIGNS OR OTHER APPROVED NOTICES OR MARKINGS THAT INCLUDE THE WORDS NO PARKING FIRE LANE SHALL BE PROVIDED FOR FIRE APPARATUS ACCESS ROADS TO IDENTIFY SUCH ROADS OR PROHIBIT THE OBSTRUCTION THEREOF. THE MEANS BY WHICH FIRE LANES ARE DESIGNATED SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION AT ALL TIMES AND BE REPLACED OR REPAIRED WHEN NECESSARY TO PROVIDE ADEQUATE VISIBILITY.
8. IFC D103.6 FIRE APPARATUS ACCESS PARKING RESTRICTIONS--SIGNS; REQUIRED ROADWAYS MUST HAVE SIGNAGE FOR PARKING RESTRICTIONS AS FOLLOWS. SIGNS FOR NO-PARKING--FIRE LANE SHALL COMPLY WITH A MINIMUM DIMENSION OF 12 INCHES WIDE BY 18 INCHES HIGH AND HAVE RED LETTERS ON A WHITE REFLECTIVE BACKGROUND. SIGNS SHALL BE PROVIDED ON BOTH SIDES OF ALL STREETS THAT ARE LESS THAN 26 IN WIDTH IN ACCORDANCE WITH LOCAL STANDARDS FOR ACCESS AND FUTURE ENFORCEMENT; SIGNS FOR NO-PARKING MUST BE PROVIDED ON ONE SIDE OF ALL STREETS THAT ARE BETWEEN 26 AND 32 IN WIDTH ACCORDANCE WITH LOCAL STANDARDS FOR ACCESS AND FUTURE ENFORCEMENT.
9. IFC 506 WHERE REQUIRED ACCESS IS RESTRICTED WITH A GATE, AN APPROVED PADLOCK OR KEY SWITCH (FOR ELECTRONIC/AUTOMATED GATES) SHALL BE PROVIDED TO ALLOW FIRE DEPARTMENT ACCESS.
10. IFC 503.1.1 / D102 / D103 ROADWAYS TO ACCESS STRUCTURES: THE PERIMETER OF ALL STRUCTURES MUST BE WITHIN 150 FEET OF AN APPROVED ACCESS ROAD WITH A MINIMUM CLEAR WIDTH OF 20 FEET (26 FEET WHERE A HYDRANT IS LOCATED). BUILDING SHALL BE INSTALLED WITH AUTOMATIC FIRE SPRINKLERS AS AN ALTERNATIVE TO DISTANCE FROM A FIRE ACCESS ROAD.
11. IFC 507.5.4 FIRE PROTECTION WATER SUPPLY: UNOBSTRUCTED ACCESS TO FIRE HYDRANTS SHALL BE MAINTAINED AT ALL TIMES. THE FIRE DEPARTMENT SHALL NOT BE DETERRED OR HINDERED FROM GAINING IMMEDIATE ACCESS TO FIRE PROTECTION EQUIPMENT OR FIRE HYDRANTS REQUIRED ACCESS ROADWAYS AND HYDRANTS SHALL BE SERVICEABLE AND UNOBSTRUCTED PRIOR TO COMBUSTIBLE CONSTRUCTION.



Know what's below.  
Call before you dig.

CALL 2 BUSINESS DAYS BEFORE YOU DIG.  
CAUTION UTILITY INFORMATION IS APPROXIMATE.  
VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

Revisions:



1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL  
SCALE DRAWING



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EXPIRES: 06-30-24

WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN

Issue Date: 8/22/2023

Project Manager TWT  
Drawn by TJM  
Checked by MRL

CIVIL NOTES AND ABBREVIATIONS

G002







PLOT DATE: 8/22/2023 4:34 PM - FILE: C:\Users\TJ\OneDrive - Windsor Engineers\05\_Projects\2020\20198.3 Cannon Beach Seismic Valves\02\_Drawings\01\_Working\04\_Final Streets\20198.3\_KEY.dwg



KEY MAP  
Scale: NTS



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1	8/24/2023	ADDENDUM #1

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**WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS**  
CITY OF CANNON BEACH, OR 97110

**ENGINEERING PLAN**  
Issue Date: 8/22/2023

Project Manager TWT  
Drawn by TJM  
Checked by MRL

KEY PLAN - NORTH

**G004**

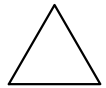


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WATER RESILIENCY PROJECT  
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CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN  
Issue Date: 8/22/2023

Project Manager TWT  
Drawn by TJM  
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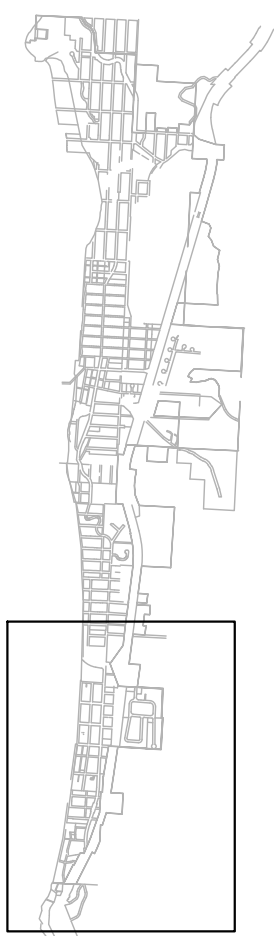
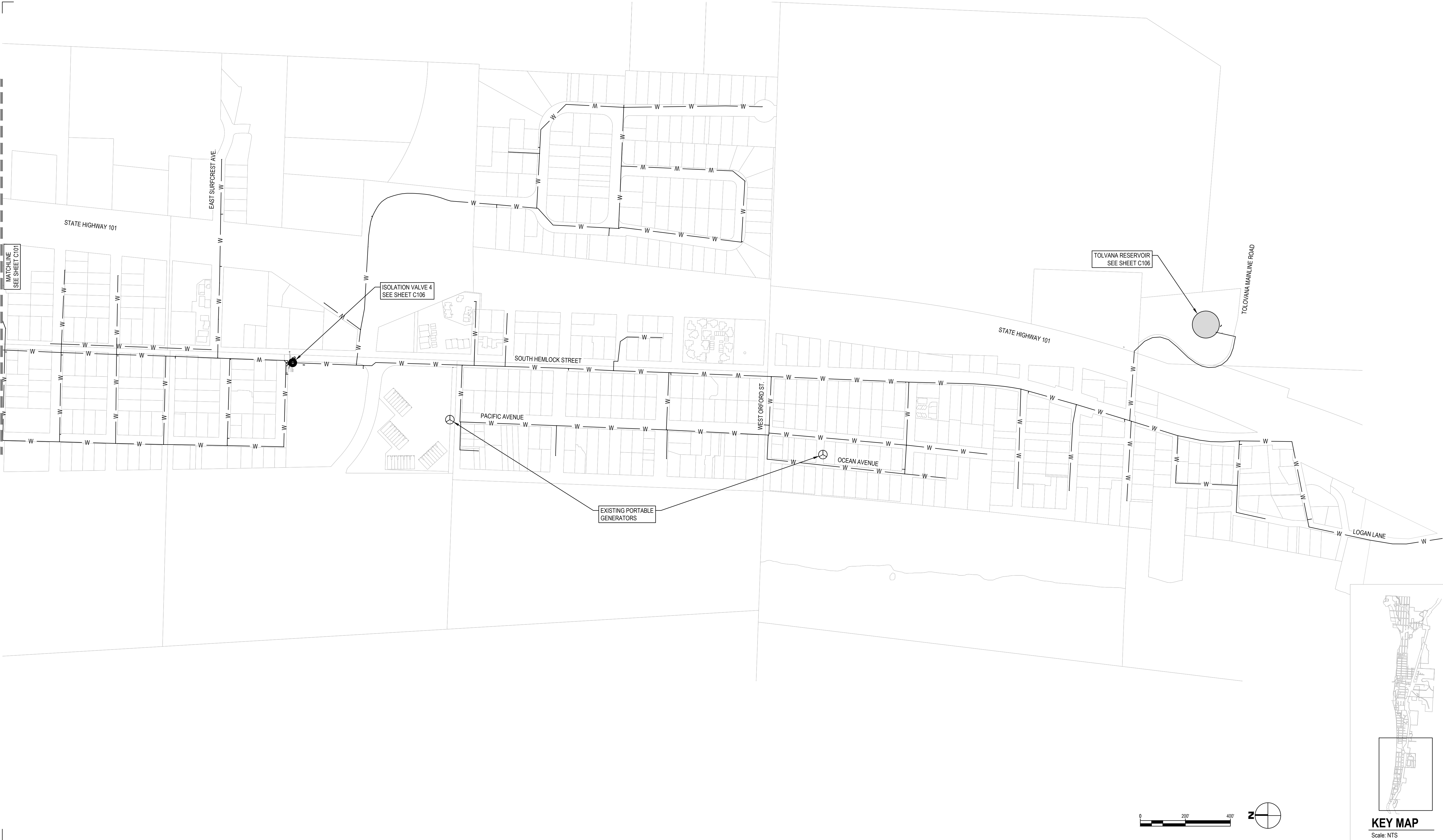
KEY PLAN - CENTER

G005

KEY MAP  
Scale: NTS



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KEY MAP  
Scale: NTS



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Revisions:



1	8/24/2023	ADDENDUM #1

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WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN

Issue Date: 8/22/2023

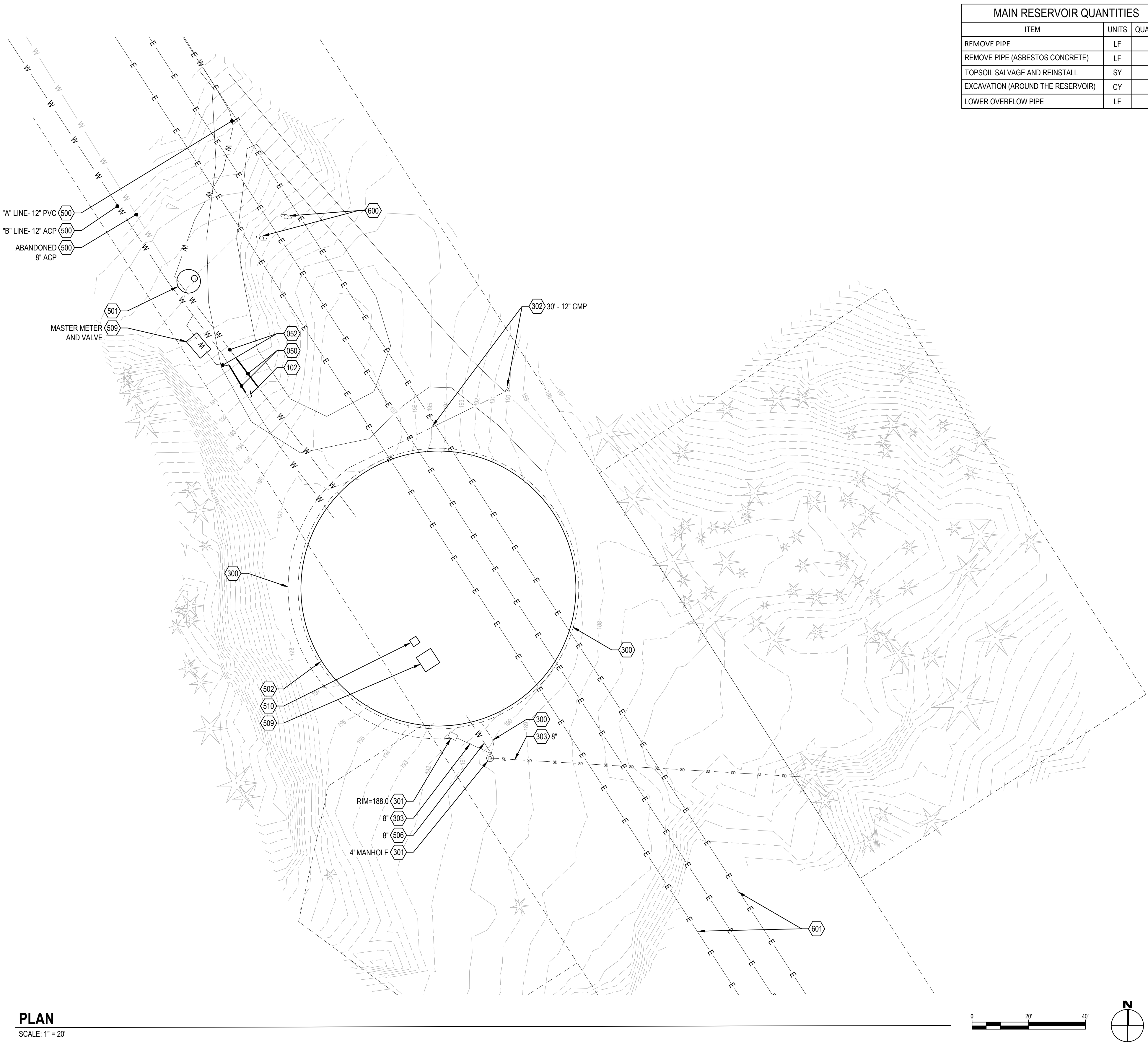
Project Manager TWT  
Drawn by TJM  
Checked by MRL

KEY PLAN - SOUTH

G006



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MAIN RESERVOIR QUANTITIES		
ITEM	UNITS	QUANTITY
REMOVE PIPE	LF	0
REMOVE PIPE (ASBESTOS CONCRETE)	LF	40
TOPSOIL SALVAGE AND REINSTALL	SY	1050
EXCAVATION (AROUND THE RESERVOIR)	CY	20
LOWER OVERFLOW PIPE	LF	3

- 050 DEMOLITION
- 050 REMOVE PIPE AS NEEDED TO INSTALL NEW VAULTS, FITTINGS AND VALVES. SEE SITE PLANS AND DETAILS FOR PROPOSED EQUIPMENT.
  - 051 SAWCUT FULL DEPTH AND REMOVE PAVING
  - 052 POTHOLE TO LOCATE EXISTING PIPES PRIOR TO BEGINNING CONSTRUCTION- SHOWN LOCATIONS ARE BASED ON RECORD PLANS AND FIELD LOCATES
  - 053 REMOVE EXISTING VAULT, VALVES, METERS, FITTINGS AND PIPE.
  - 054 CLEARING AND GRUBBING AS NEEDED FOR NEW POWER

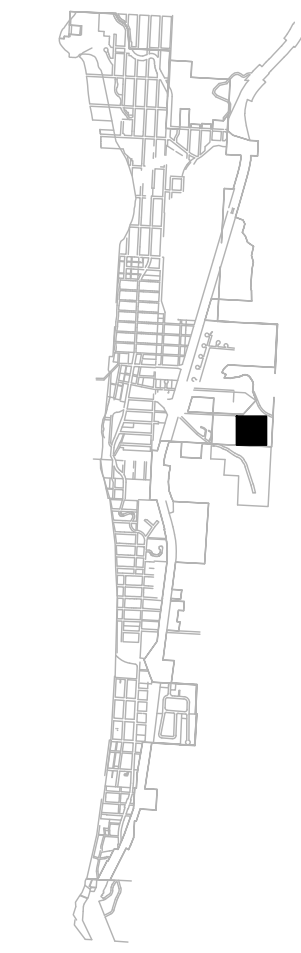
- 100 SITE PLAN NOTES
- 100 EXISTING CHAIN LINK FENCE
  - 101 GRAVEL EDGE
  - 102 SALVAGE TOPSOIL IN ALL AREAS OF EXCAVATION AND GRADING

- 300 STORMWATER
- 300 EXISTING 6" UNDERDRAIN
  - 301 EXISTING STORM STRUCTURE
  - 302 EXISTING DAYLIGHT PIPE - INLET = 187.5 OUTLET = 186.5
  - 303 EXISTING CONCRETE PIPE
  - 304 EXISTING HDPE PIPE

- 500 WATER
- 500 EXISTING WATER TRUNK LINE
  - 501 EXISTING ALTITUDE CONTROL VALVE AND VAULT
  - 502 EXISTING RESERVOIR TANK
  - 503 EXISTING PUMP HOUSE
  - 504 EXISTING FIRE HYDRANT
  - 505 EXISTING DI OVERFLOW PIPE
  - 506 EXISTING DI WATER PIPE
  - 507 EXISTING PVC WATER LINE
  - 508 EXISTING ASBESTOS CONCRETE WATER LINE
  - 509 EXISTING VAULT
  - 510 EXISTING ROOF HATCH
  - 511 EXISTING ROOF VENT

- 600 DRY UTILITIES
- 600 EXISTING OVERHEAD POWER POLE
  - 601 EXISTING OVERHEAD POWER
  - 602 EXISTING CELLULAR CONTROL BOX
  - 603 EXISTING UTILITY BOX
  - 604 UNDERGROUND POWER AND COMMUNICATIONS TO US101

GENERAL SHEET NOTES:  
1. ALL ASBESTOS CONCRETE PIPE REMOVED NEEDS TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH OREGON DEQ RULES 340, DIVISION 248. AS WELL AS ANY LOCAL REQUIREMENTS INCLUDING OREGON OSHA AND CONSTRUCTION CONTRACTORS BOARD.



KEY MAP  
SCALE: NTS

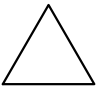
PLAN  
SCALE: 1" = 20'



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Revisions:



NO.	DATE	DESCRIPTION
1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL  
SCALE DRAWING



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WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

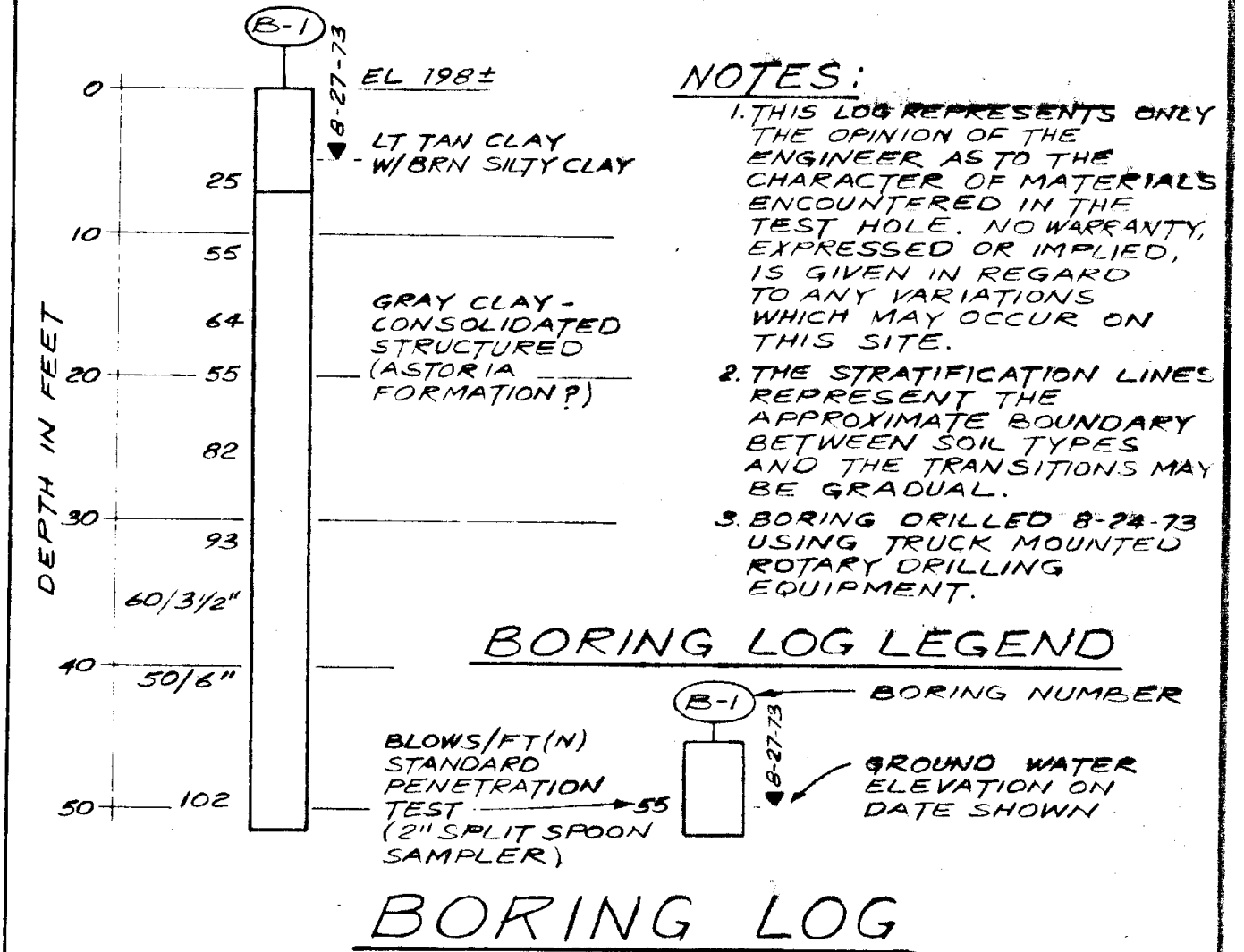
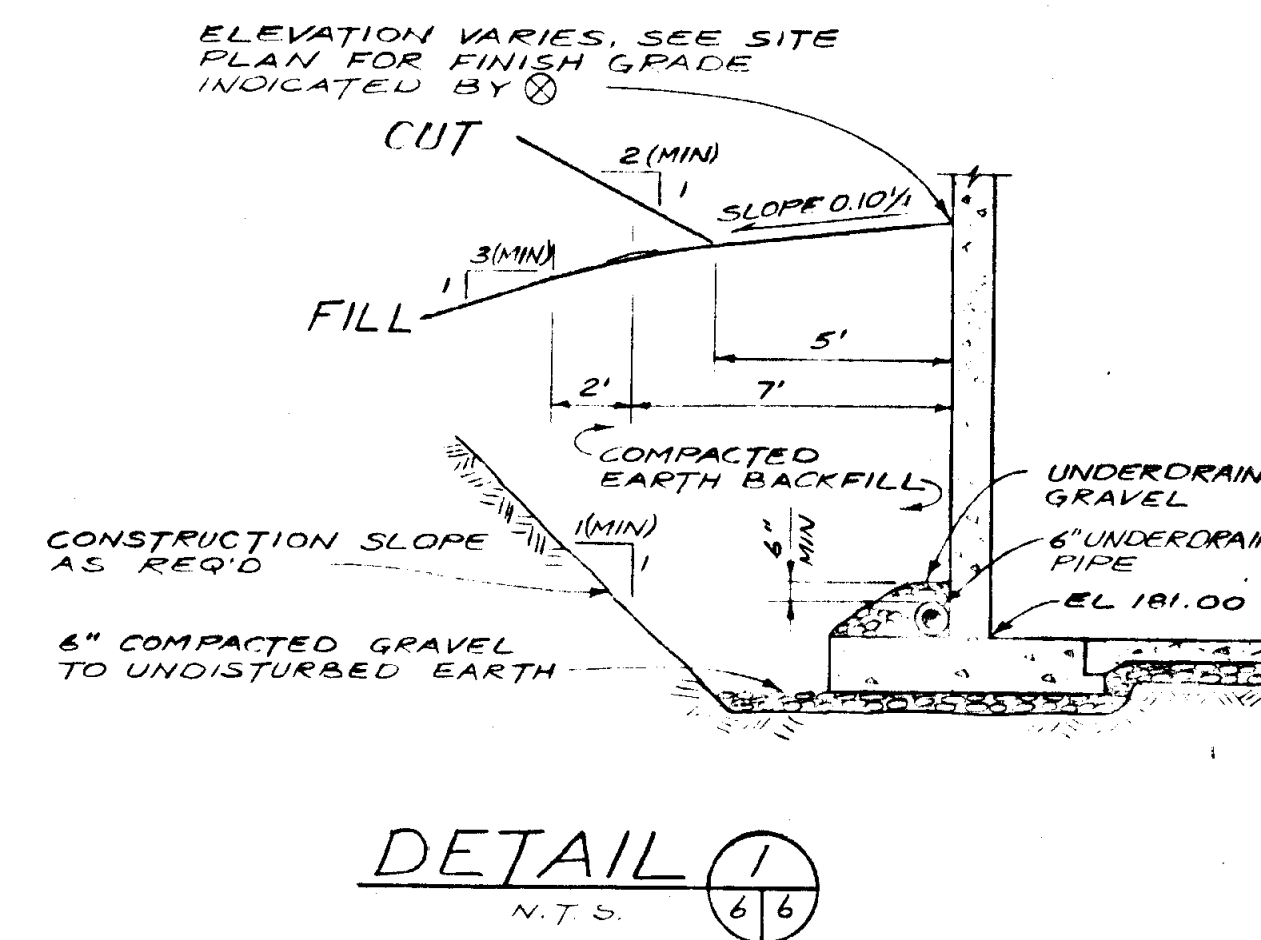
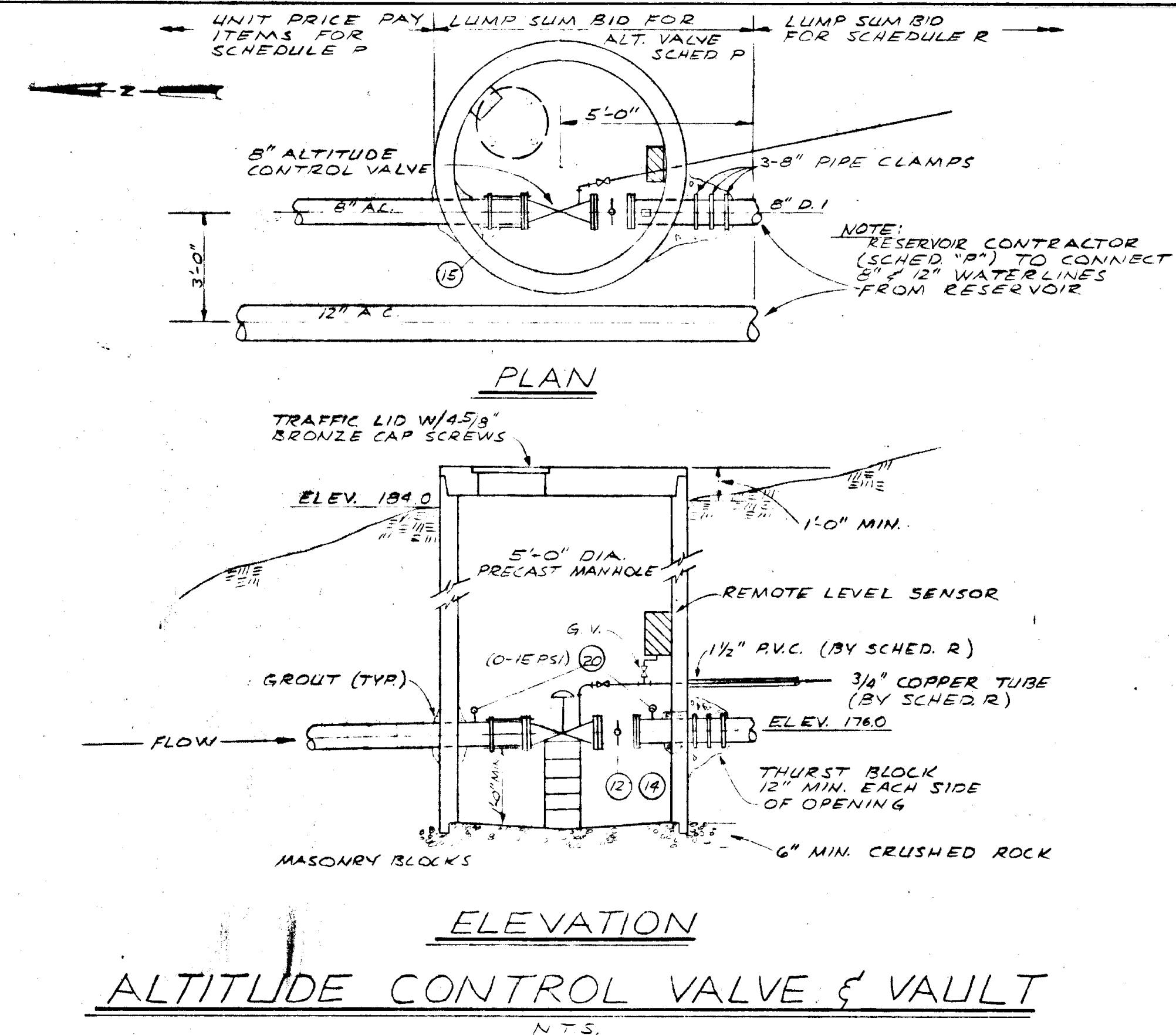
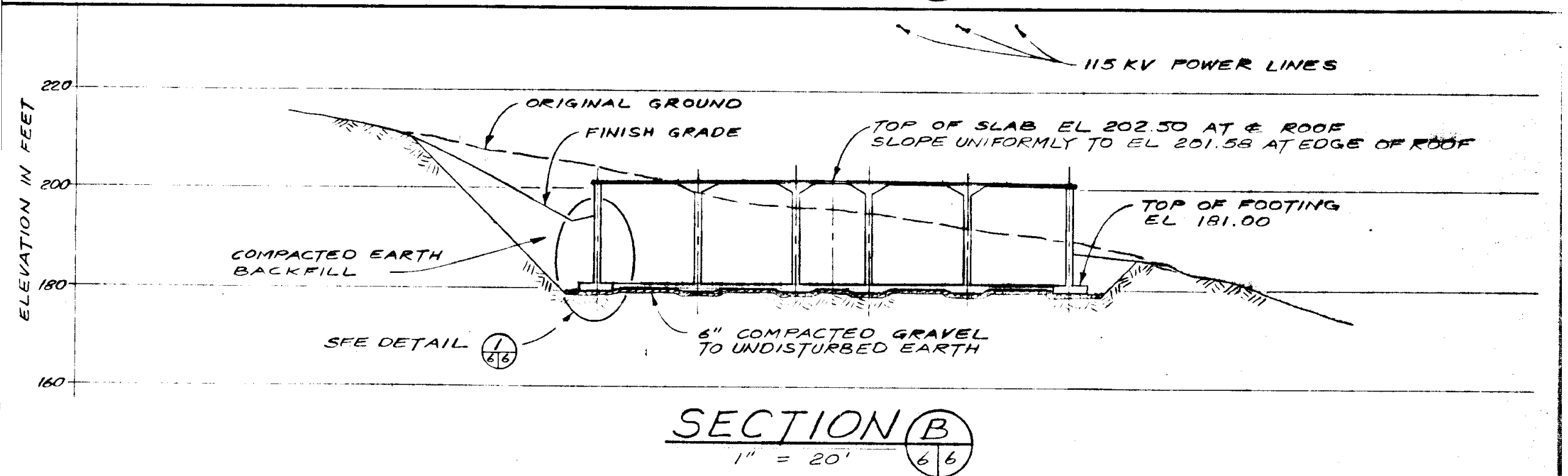
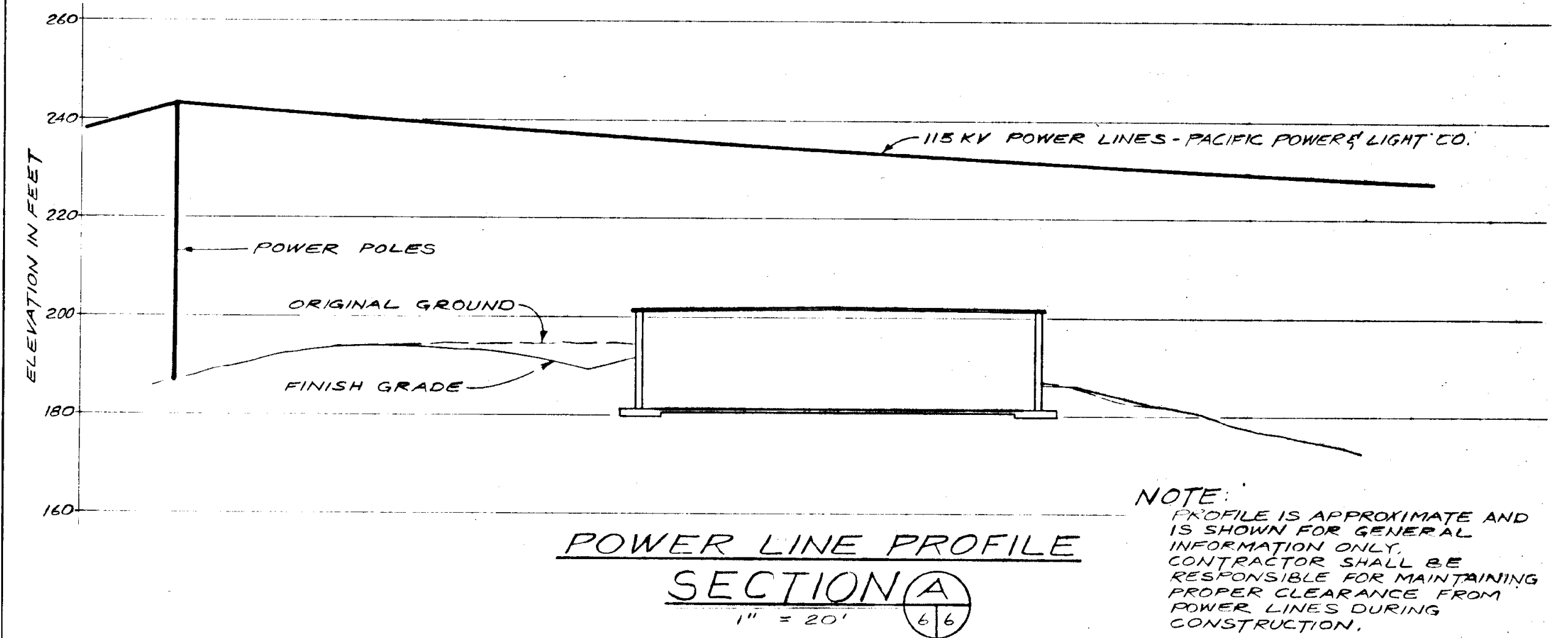
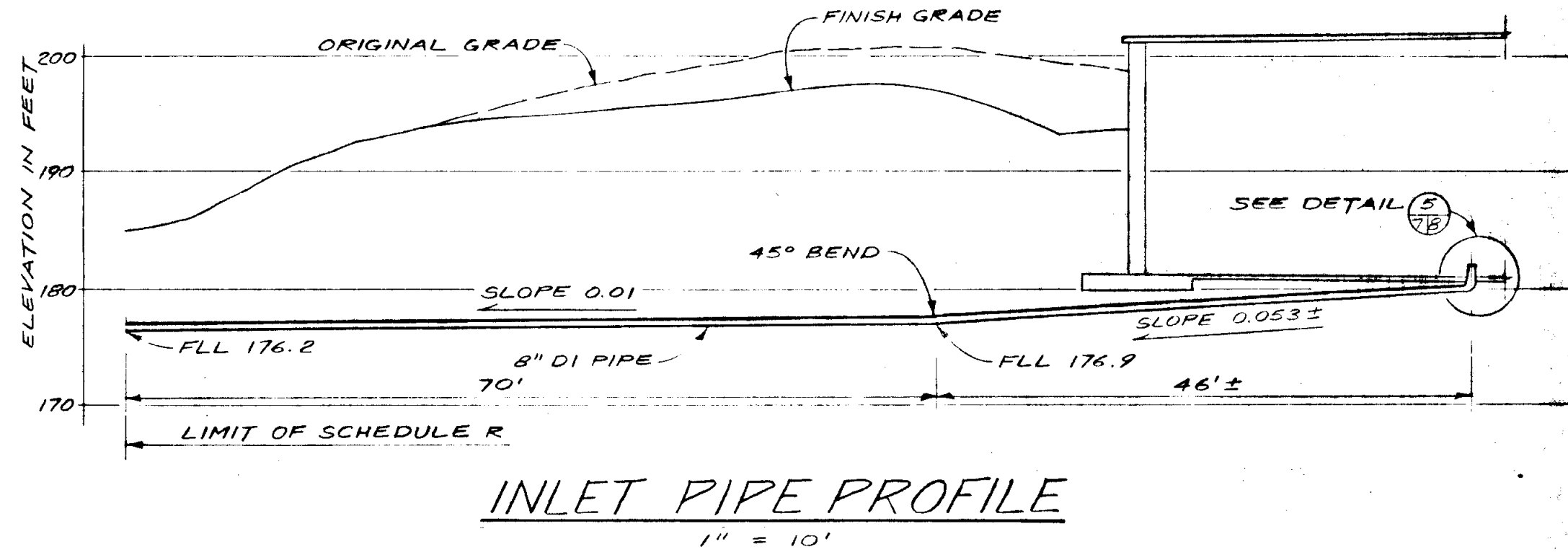
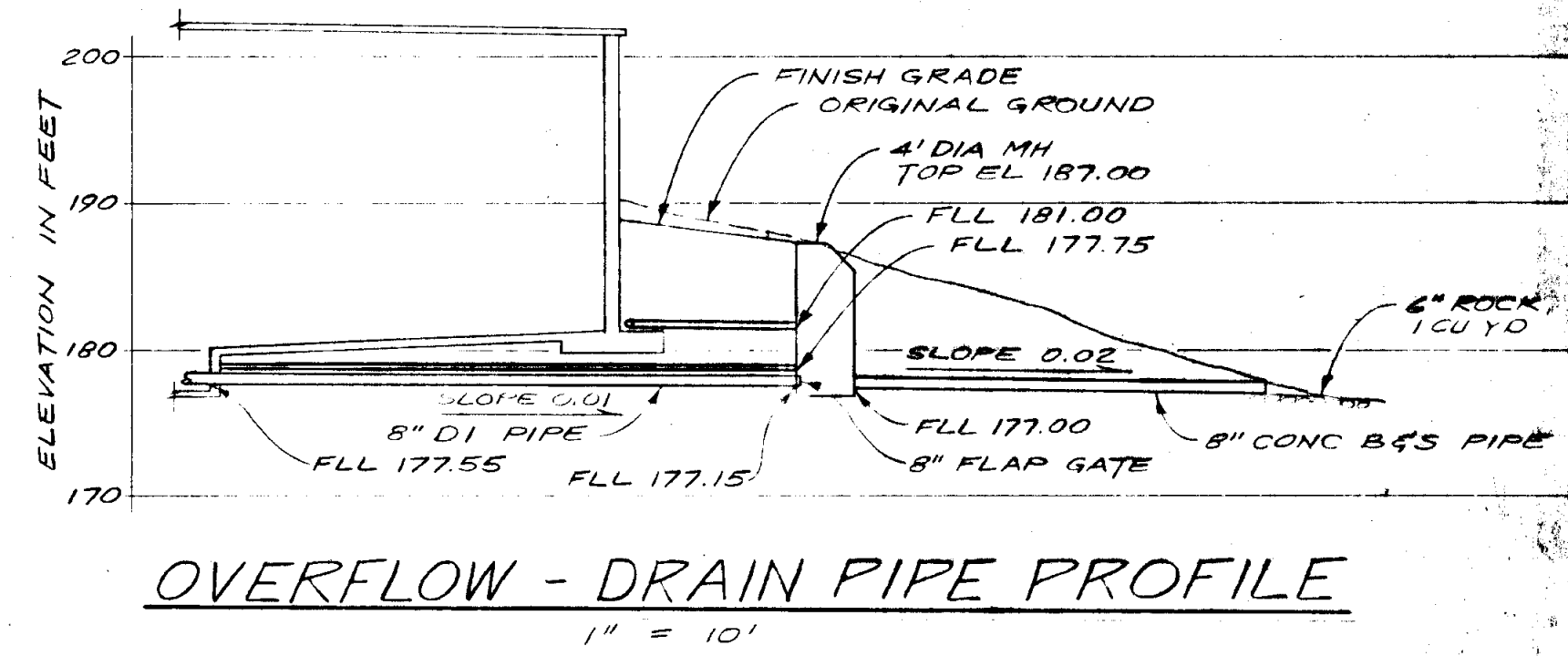
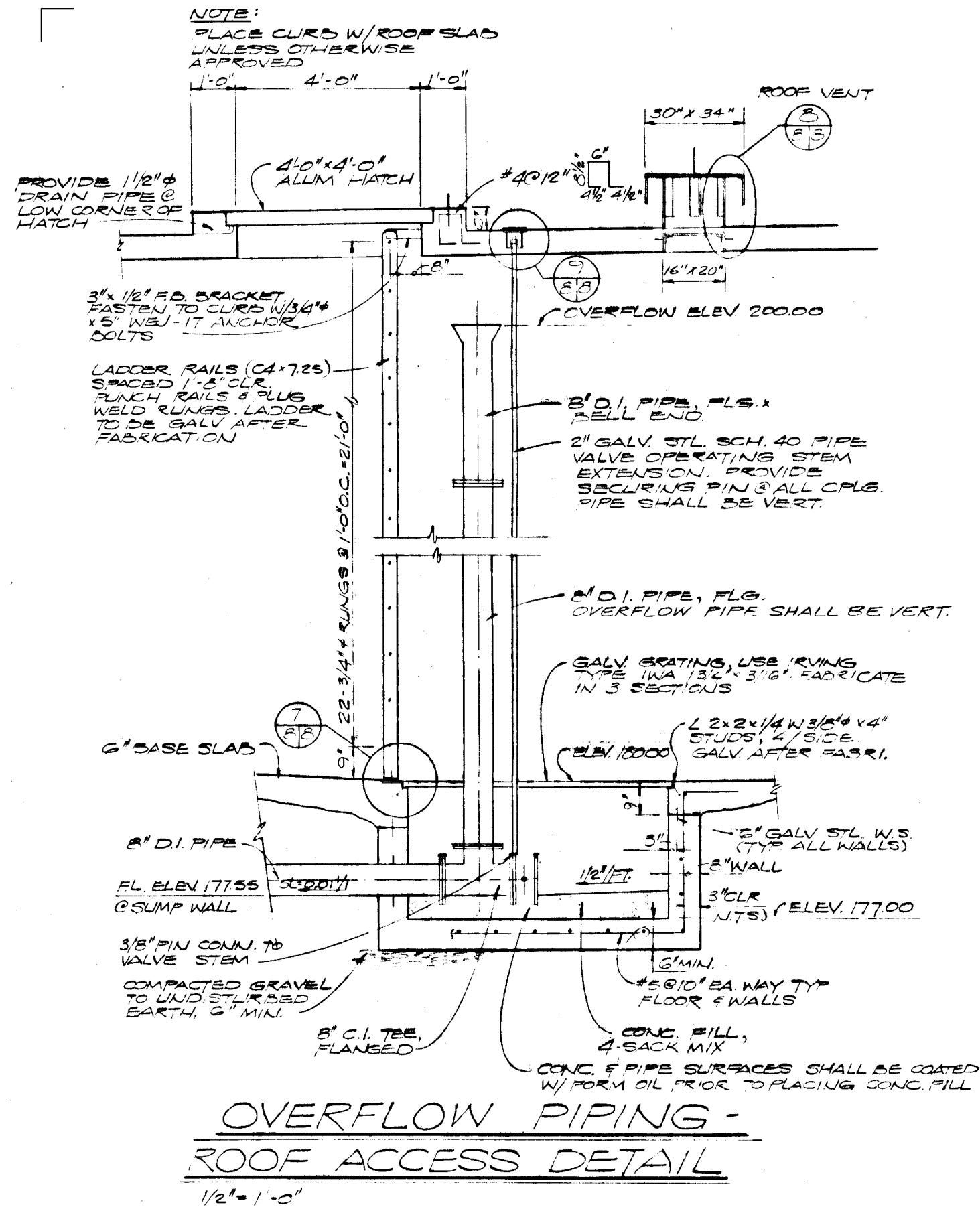
ENGINEERING PLAN  
Issue Date: 8/22/2023

Project Manager: TWT  
Drawn by: TJM  
Checked by: MRL

EXISTING CONDITIONS AND DEMOLITION PLAN  
- MAIN RESERVOIR

C000





- LEGEND**
- 4" G.I. PIPE
  - 4"x3" G.I. REDUCER
  - GATE VALVE
  - 3" PRESSURE RELIEF VALVE
  - FLOOD DRAIN
  - CHLORINE INJECTOR
  - A.C. HUBXFLG. ADAPTER
  - FLG.XFLG. D.I. PIPE
  - 90° FLG. ELL.
  - 8"x4" FLG. TEE
  - 8"x6" FLG. REDUCER
  - FLG. B.V. W/HAND WHEEL
  - CHECK VALVE
  - FLG.XP.E. D.I. PIPE
  - FLG. COUPLING ADAPTER
  - 6"x4" FLG. TEE W/1/4" TAP
  - 6" TURBO-METER
  - 1/2" AIR RELIEF VALVE W/B.V.
  - 6" FLG.XFLG. D.I. PIPE TAPPED FOR CHLORINE DIFFUSER
  - PRESSURE GAUGE W/CORP. STOP (0-100 PSI)



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NORTH RESERVOIR QUANTITIES		
ITEM	UNITS	QUANTITY
REMOVE PIPE	LF	20
REMOVE PIPE (ASBESTOS CONCRETE)	LF	0
TOPSOIL SALVAGE AND REINSTALL	SY	40
REMOVE VALVES	EA	3
SAWCUT CONCRETE	LF	50
REMOVE CONCRETE SURFACING	SY	400

- 050 DEMOLITION
- 050 REMOVE PIPE AS NEEDED TO INSTALL NEW VAULTS, FITTINGS AND VALVES. SEE SITE PLANS AND DETAILS FOR PROPOSED EQUIPMENT.
- 051 SAWCUT FULL DEPTH AND REMOVE PAVING
- 052 POTHOLE TO LOCATE EXISTING PIPES PRIOR TO BEGINNING CONSTRUCTION- SHOWN LOCATIONS ARE BASED ON RECORD PLANS AND FIELD LOCATES
- 053 REMOVE EXISTING VAULT, VALVES, METERS, FITTINGS AND PIPE.
- 054 CEARING AND GRUBBING AS NEEDED FOR NEW POWER

- 100 SITE PLAN NOTES
- 100 EXISTING CHAIN LINK FENCE
- 101 GRAVEL EDGE
- 102 SALVAGE TOPSOIL IN ALL AREAS OF EXCAVATION AND GRADING

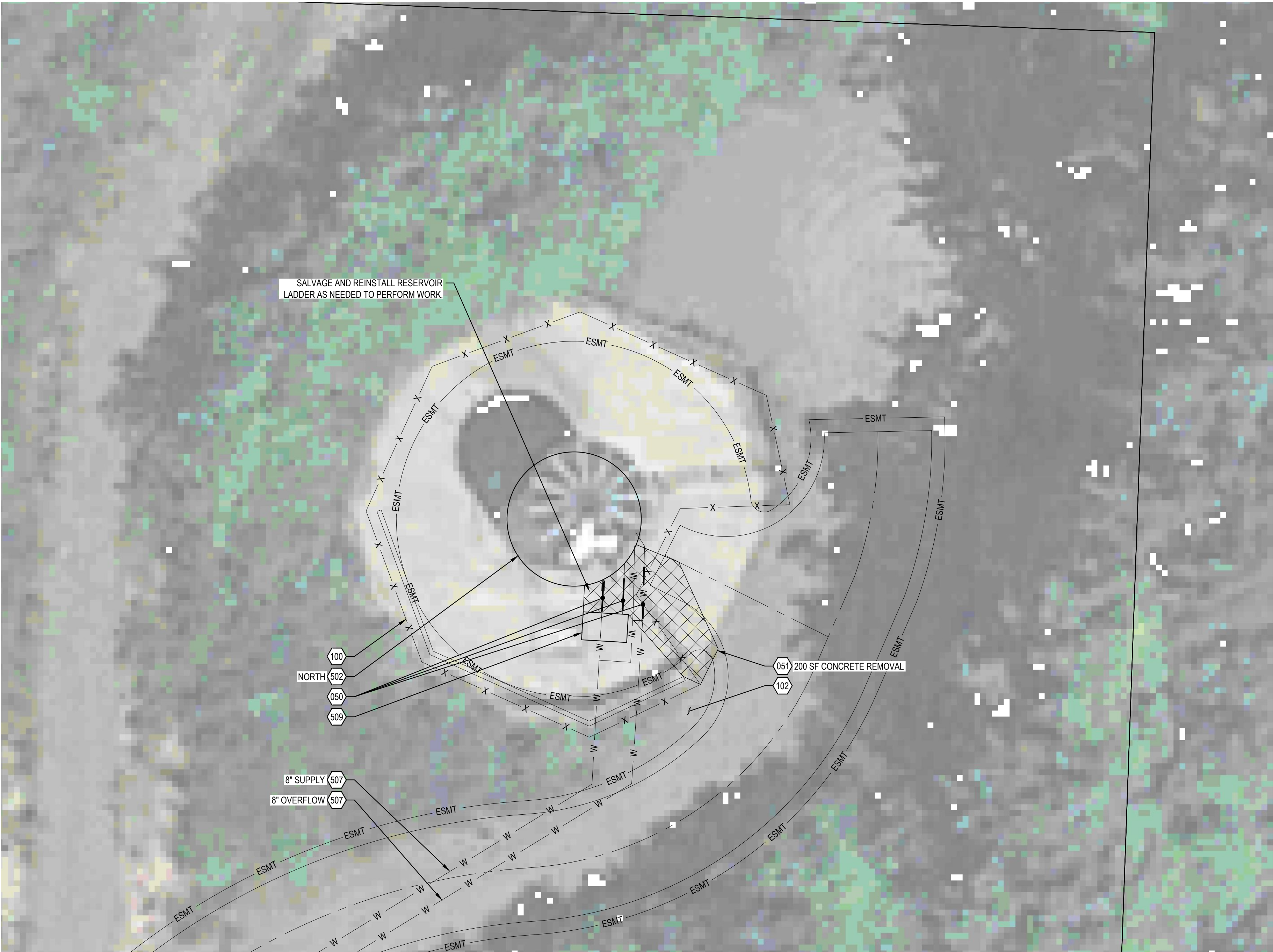
- 300 STORMWATER
- 300 EXISTING 6" UNDERDRAIN
- 301 EXISTING STORM STRUCTURE
- 302 EXISTING DAYLIGHT PIPE - INLET = 187.5 OUTLET = 186.5
- 303 EXISTING CONCRETE PIPE
- 304 EXISTING HDPE PIPE

- 500 WATER
- 500 EXISTING WATER TRUNK LINE
- 501 EXISTING ALTITUDE CONTROL VALVE AND VAULT
- 502 EXISTING RESERVOIR TANK
- 503 EXISTING PUMP HOUSE
- 504 EXISTING FIRE HYDRANT
- 505 EXISTING DI OVERFLOW PIPE
- 506 EXISTING DI WATER PIPE
- 507 EXISTING PVC WATER LINE
- 508 EXISTING ASBESTOUS CONCRETE WATER LINE
- 509 EXISTING VAULT
- 510 EXISTING ROOF HATCH
- 511 EXISTING ROOF VENT

- 600 DRY UTILITIES
- 600 EXISTING OVERHEAD POWER POLE
- 601 EXISTING OVERHEAD POWER
- 602 EXISTING CELLULAR CONTROL BOX
- 603 EXISTING UTILITY BOX
- 604 UNDERGROUND POWER AND COMMUNICATIONS TO US101

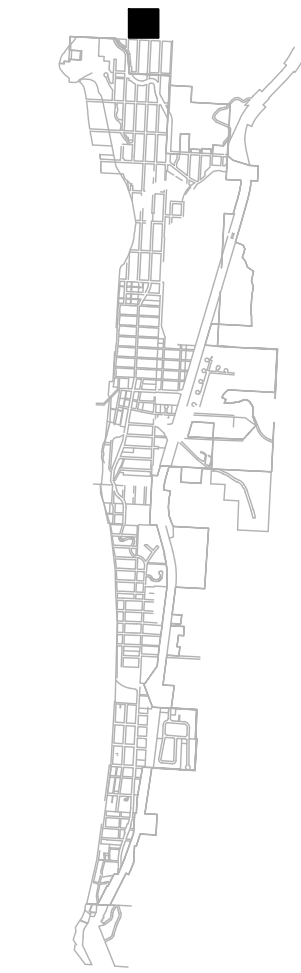
GENERAL SHEET NOTES:

1. ALL ASBESTOS CONCRETE PIPE REMOVED NEEDS TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH OREGON DEQ RULES 340, DIVISION 248. AS WELL AS ANY LOCAL REQUIREMENTS INCLUDING OREGON OSHA AND CONSTRUCTION CONTRACTORS BOARD.



PLAN

SCALE: 1" = 10'



KEY MAP

SCALE: NTS



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VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

Revisions:		
1	8/24/2023	ADDENDUM #1

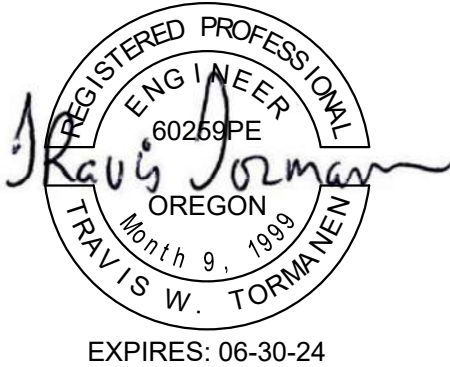
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SCALE DRAWING



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**WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS**  
CITY OF CANNON BEACH, OR 97110

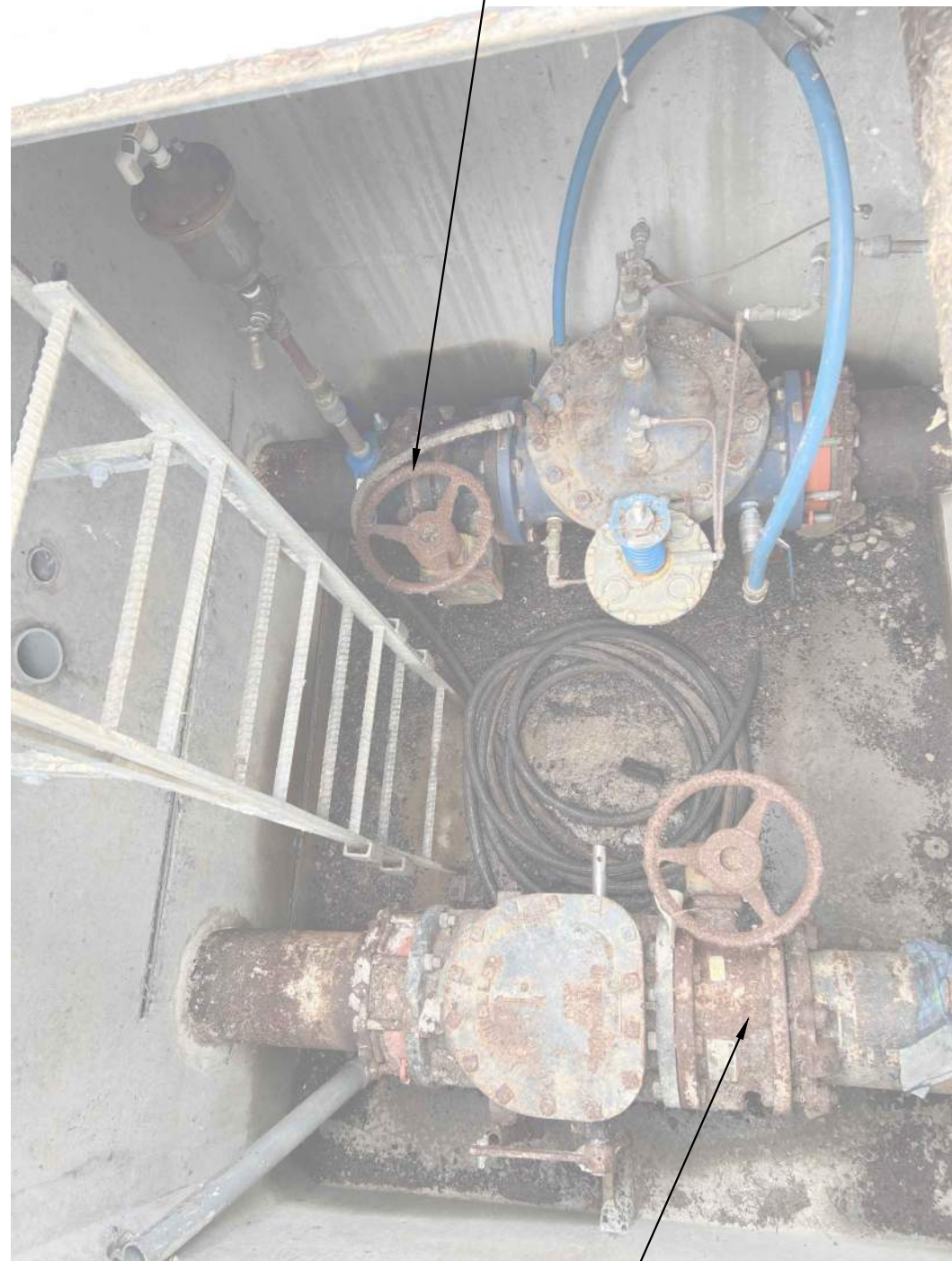
**ENGINEERING PLAN**  
Issue Date: 8/22/2023

Project Manager TWT  
Drawn by TJM  
Checked by MRL

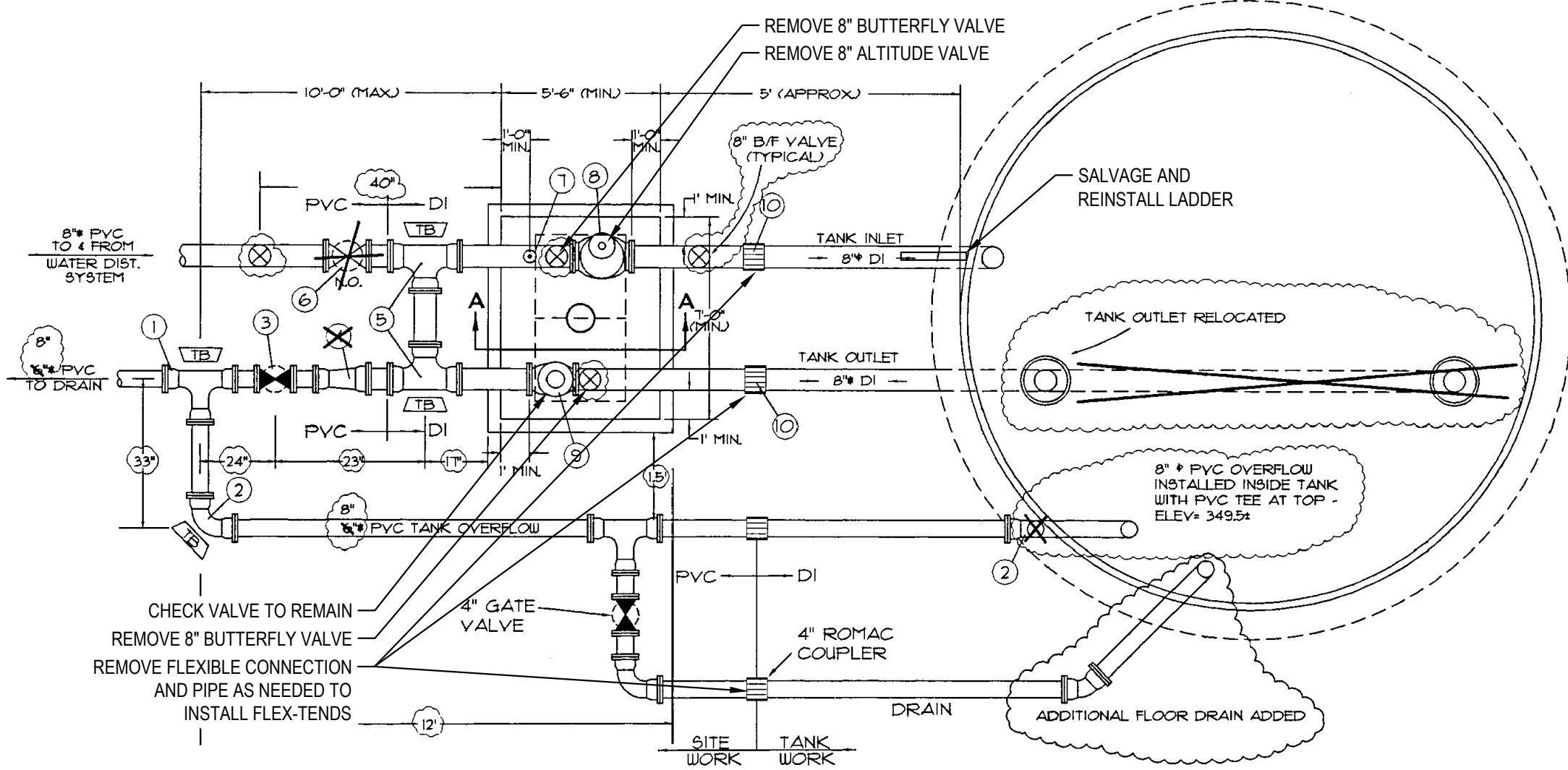
**EXISTING CONDITONS AND DEMOLITION PLAN  
- NORTH RESERVOIR**

**C002**



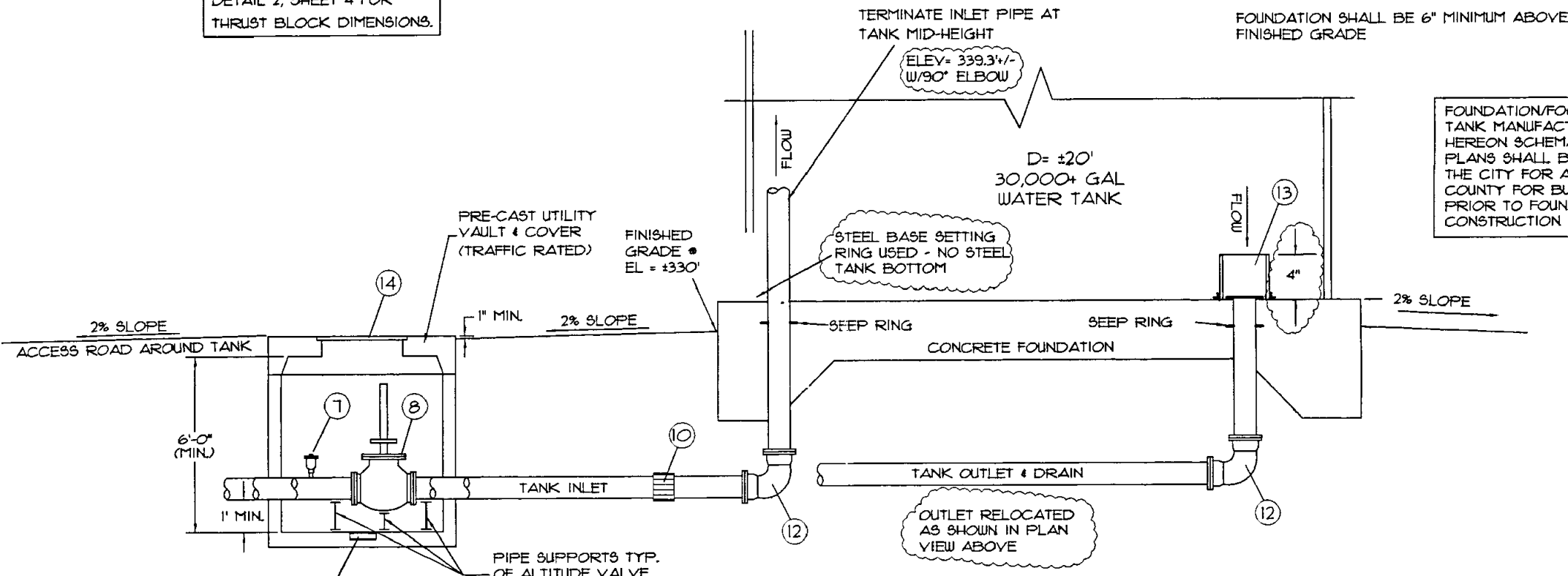


OUTLET VALVE - PRATT GROUNDHOG, 8" RUBBER SEAT BUTTERFLY. MANUFACTURE DATE - 1995, SERIAL NUMBER - 1 7588-2. DIMENSION FLANGE TO FLANGE IS 7 1/2", OVERALL INCLUDING CHECK VALVE IS 33"



NOTE: "TB" = THRUST BLOCK, SEE DETAIL 2, SHEET 4 FOR THRUST BLOCK DIMENSIONS.

TANK PIPING LAYOUT - PLAN VIEW  
SCALE: 1/4" = 1'



TANK PIPING LAYOUT - SECTION A-A  
SCALE: 1/4" = 1'

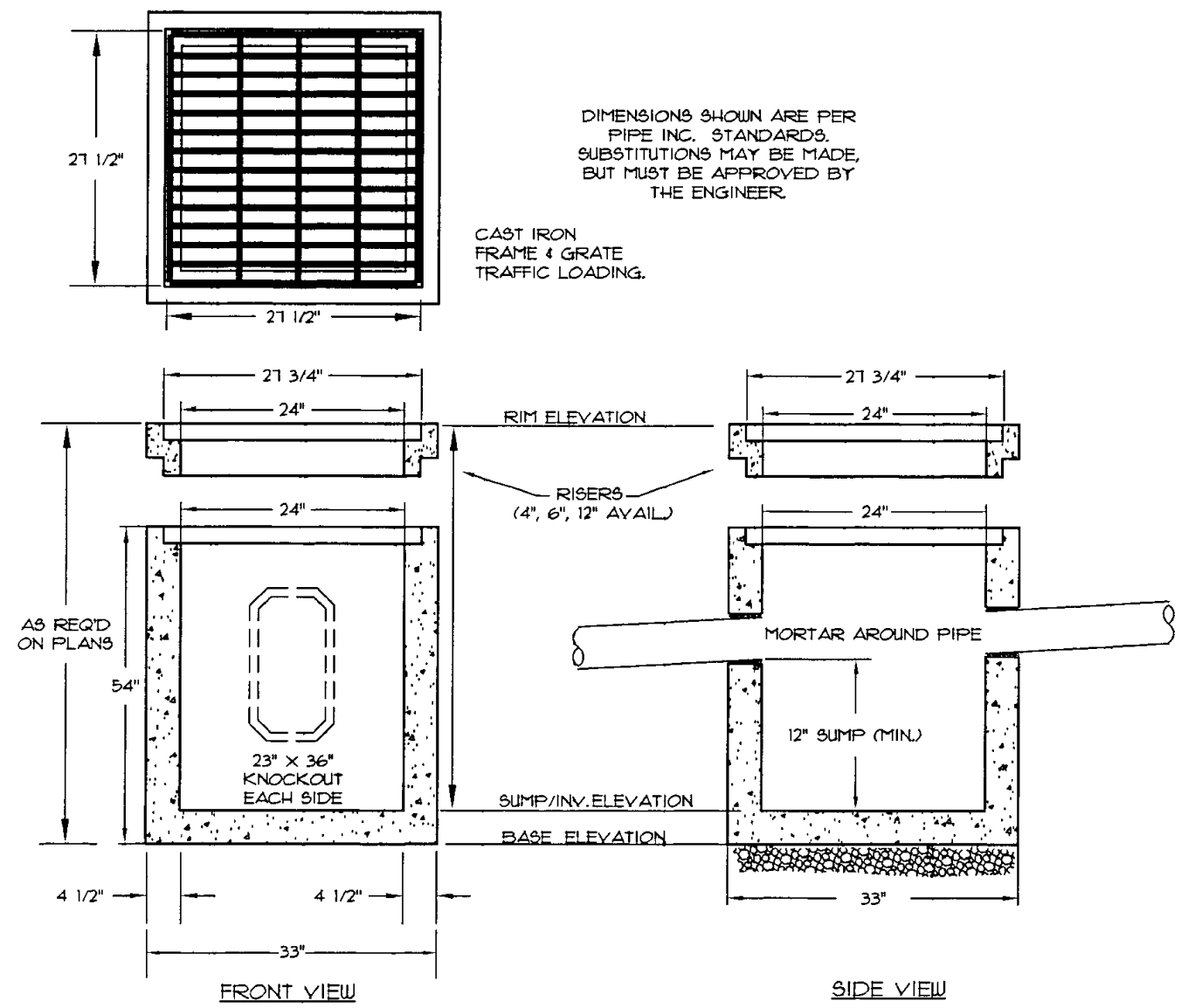
PIPING COMPONENT TABLE

COMPONENT NUMBER	DESCRIPTION
1	6"x6"x6" MUXMUXM DI TEE
2	6" MUXM DI 90° STD. ELBOW
3	6" GATE VALVE (NORMALLY CLOSED), WITH VALVE BOX
4	8"x6" MUXM DI REDUCER
5	8"x8"x8" MUXMUXM DI TEE
6	8" GATE VALVE (NORMALLY OPEN), WITH VALVE BOX
7	AIR RELEASE VALVE
8	8" ALTITUDE VALVE
9	8" SPRING-ACTUATED CHECK VALVE
10	8" FLEXIBLE CONNECTION
11	6" FLEXIBLE CONNECTION
12	6" MUXM DI 90° STD. ELBOW
13	REMOVABLE SILT STOP (NOT USED - ADDITIONAL DEPRESSED DRAIN INSTALLED IN FLOOR)
14	2 DOOR GALV. STEEL ACCESS HATCH (TRAFFIC RATED)
15	VAULT SUMP (WITH 2" DRAIN PIPE WITH SCREENED END TO DAYLIGHT ON SLOPE - STATION 3+25.47 LT)

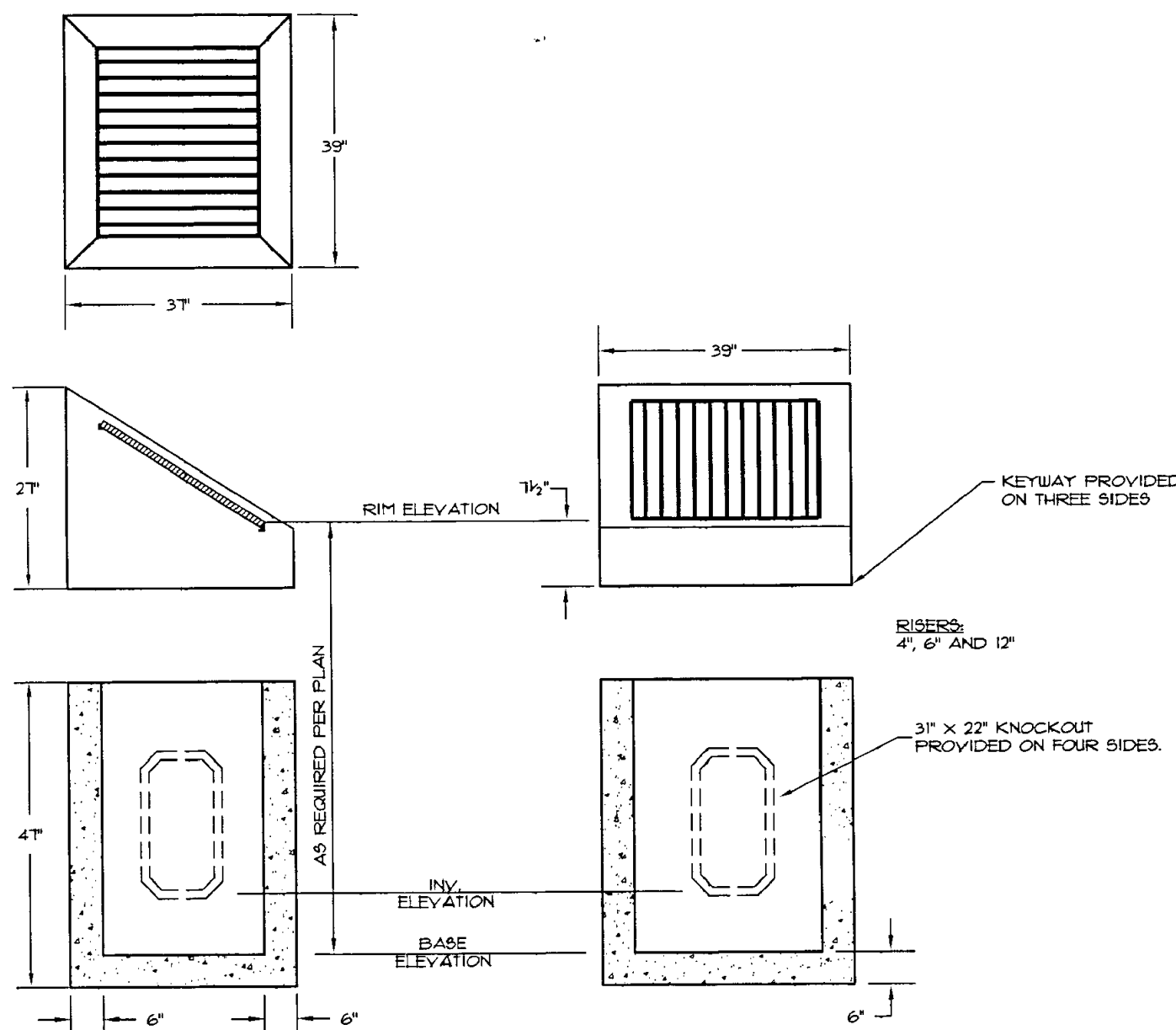
TANK DATA

TYPE: GLASS-FUSED-TO-STEEL  
MANUFACTURER: FUSION TANKS & SILOS, ENGLAND  
CONSTRUCTED BY: DUNNIRE ASSOCIATES, INC. 1007 PIONEER RD, DALLAS, OR 97338  
FLOOR: CONCRETE SLAB WITH STEEL BASE-SETTING RING  
TANK BASE ELEVATION: 330' (NGVD '29' DATUM)  
HEIGHT: 21.7' (INCLUDING ROOF) 20.3' TO BRIM  
DIAMETER: 16.8' NOMINAL  
CAPACITY: 30,211 US GALLONS-BRIMFULL  
SIDE ACCESS HATCH: DIAMETER = 31" (GALVANIZED)  
ROOF INSPECTION HATCH: DIAMETER = 24"  
ROOF: 17' LIGHT DUTY ROOF ASSEMBLY (TAPERED BEAM ROOF TYPE) (WEIGHT = 1900LB.)  
TANK COLOR: FOREST GREEN  
SNOW LOAD: 25 PSF, WIND LOAD: 100 MPH, SEISMIC LOADING: ZONE 4  
CATHODIC TANK PROTECTION: NOT REQUIRED

OVERFLOW ELEVATION?



TYPE 24-A CATCH BASIN  
NOT TO SCALE



TYPE G-2 DITCH INLET  
NOT TO SCALE

EROSION PREVENTION MATTING DETAIL  
NOT TO SCALE

NOTES:  
1. ASBUILT DRAWINGS OBTAINED FROM CITY OF CANNON BEACH 2002 HLB RECORD PLAN SET.  
2. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION.



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Revisions:

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SCALE DRAWING



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WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN  
Issue Date: 8/22/2023

Project Manager: TWT  
Drawn by: TJM  
Checked by: MRL

EXISTING DETAILS - NORTH RESERVOIR

C003

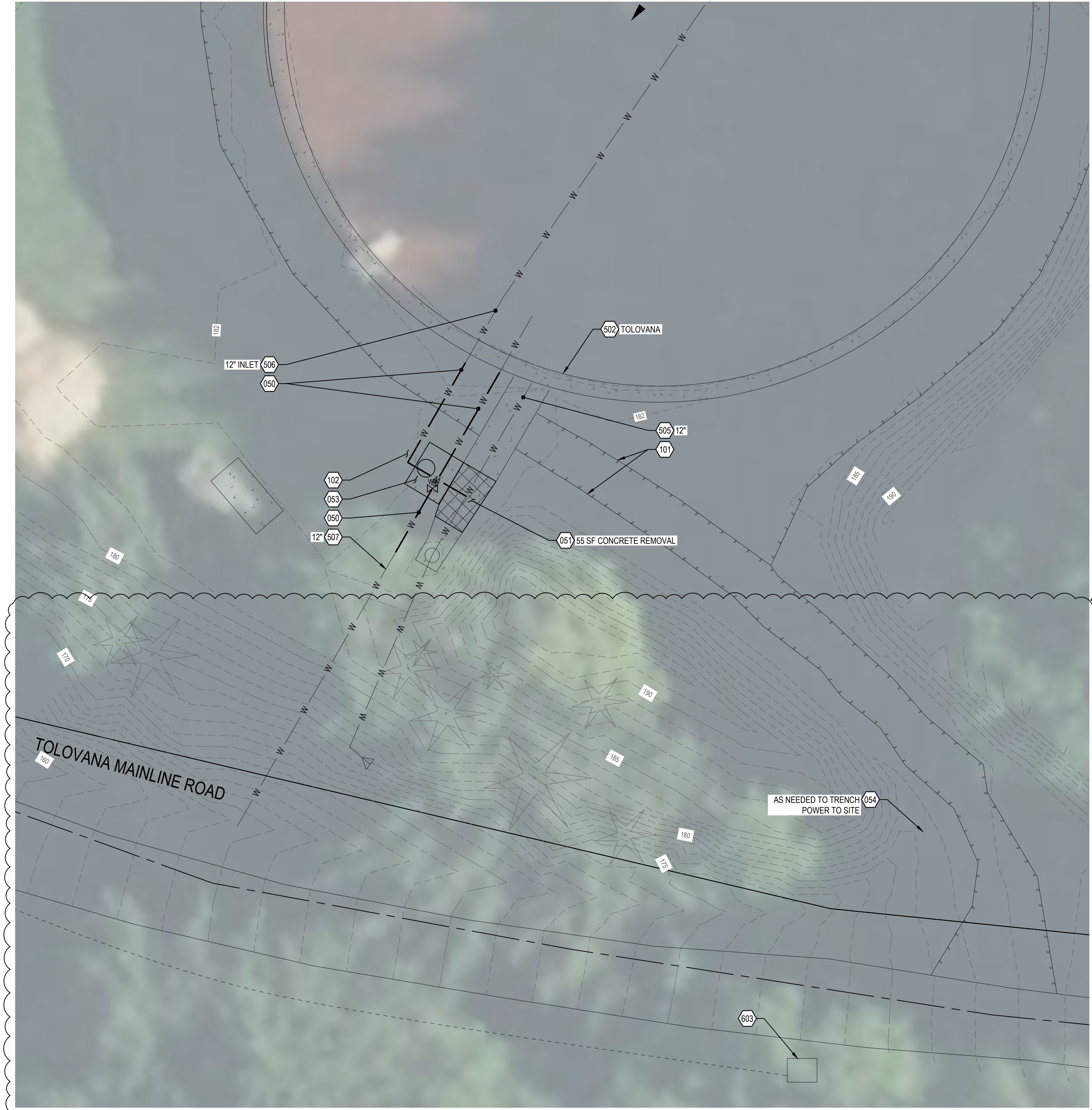
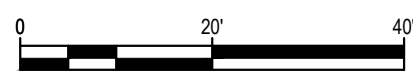


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SOUTH RESERVOIR QUANTITIES		
ITEM	UNITS	QUANTITY
REMOVE PIPE	LF	80
REMOVE PIPE (ASBESTOS CONCRETE)	LF	0
GRAVEL SALVAGE AND REINSTALL	SY	30
TOPSOIL SALVAGE AND REINSTALL	SY	35
REMOVE VALVES	EA	5
SAWCUT CONCRETE	LF	10
SAWCUT ASPHALT PAVEMENT	LF	50
REMOVE CONCRETE SURFACING	SY	55
REMOVE ASPHALT PAVEMENT	SY	15
REMOVAL OF STRUCTURES AND OBSTRUCTIONS	EA	1
CLEARING AND GRUBBING (AS NEEDED)	SY	30

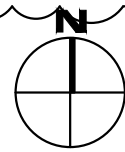
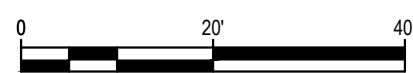


PLAN  
SCALE: 1" = 20'



PLAN

SCALE: 1" = 20'



#### 050 DEMOLITION

- 050 REMOVE PIPE AS NEEDED TO INSTALL NEW VAULTS, FITTINGS AND VALVES. SEE SITE PLANS AND DETAILS FOR PROPOSED EQUIPMENT.
- 051 SAWCUT FULL DEPTH AND REMOVE PAVING
- 052 POTHOLE TO LOCATE EXISTING PIPES PRIOR TO BEGINNING CONSTRUCTION- SHOWN LOCATIONS ARE BASED ON RECORD PLANS AND FIELD LOCATES
- 053 REMOVE EXISTING VAULT, VALVES, METERS, FITTINGS AND PIPE.
- 054 CLEARING AND GRUBBING AS NEEDED FOR NEW POWER

#### 100 SITE PLAN NOTES

- 100 EXISTING CHAIN LINK FENCE
- 101 GRAVEL EDGE
- 102 SALVAGE TOPSOIL IN ALL AREAS OF EXCAVATION AND GRADING

#### 300 STORMWATER

- 300 EXISTING 6" UNDERDRAIN
- 301 EXISTING STORM STRUCTURE
- 302 EXISTING DAYLIGHT PIPE - INLET = 187.5 OUTLET = 186.5
- 303 EXISTING CONCRETE PIPE
- 304 EXISTING HDPE PIPE

#### 500 WATER

- 500 EXISTING WATER TRUNK LINE
- 501 EXISTING ALTITUDE CONTROL VALVE AND VAULT
- 502 EXISTING RESERVOIR TANK
- 503 EXISTING PUMP HOUSE
- 504 EXISTING FIRE HYDRANT
- 505 EXISTING DI OVERFLOW PIPE
- 506 EXISTING DI WATER PIPE
- 507 EXISTING PVC WATER LINE
- 508 EXISTING ASBESTOS CONCRETE WATER LINE
- 509 EXISTING VAULT
- 510 EXISTING ROOF HATCH
- 511 EXISTING ROOF VENT

#### 600 DRY UTILITIES

- 600 EXISTING OVERHEAD POWER POLE
- 601 EXISTING OVERHEAD POWER
- 602 EXISTING CELLULAR CONTROL BOX
- 603 EXISTING UTILITY BOX
- 604 UNDERGROUND POWER AND COMMUNICATIONS TO US101

#### GENERAL SHEET NOTES:

1. ALL ASBESTOS CONCRETE PIPE REMOVED NEEDS TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH OREGON DEQ RULES 340, DIVISION 248. AS WELL AS ANY LOCAL REQUIREMENTS INCLUDING OREGON OSHA AND CONSTRUCTION CONTRACTORS BOARD.



KEY MAP  
SCALE: NTS



Know what's below.  
Call before you dig.

CALL 2 BUSINESS DAYS BEFORE YOU DIG.  
CAUTION: UTILITY INFORMATION IS APPROXIMATE.  
VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

#### Revisions:



NO.	DATE	DESCRIPTION
1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL  
SCALE DRAWING



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EXPIRES: 06-30-24

WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

#### ENGINEERING PLAN

Issue Date: 8/22/2023

Project Manager: TWT  
Drawn by: TJM  
Checked by: MRL

EXISTING CONDITIONS AND DEMOLITION  
PLAN- TOLOVANA RESERVOIR

C004





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811

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Revisions:				LINE IS 1" ON FULL SCALE DRAWING
1	8/24/2023	ADDENDUM #1		

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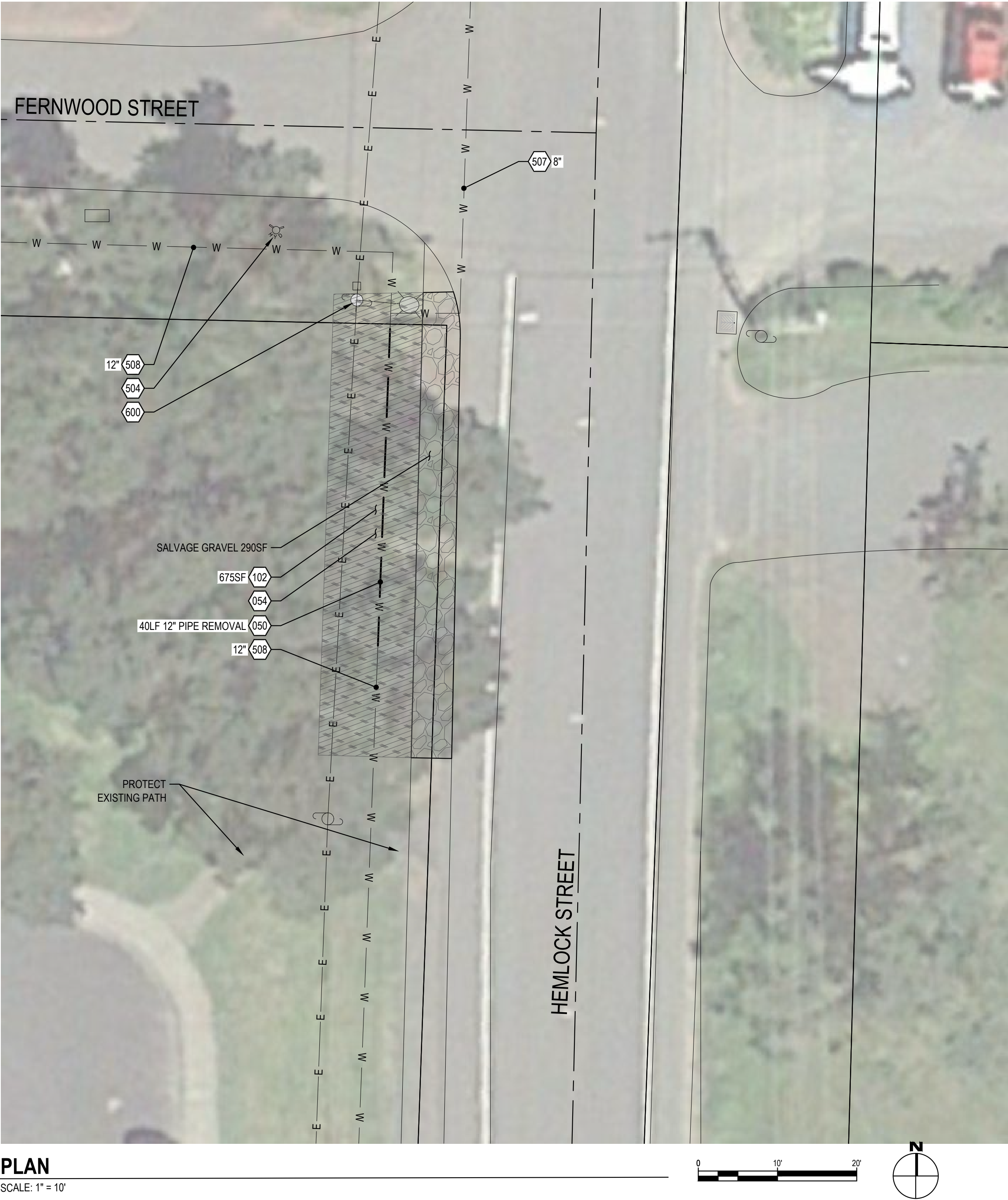
WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN  
Issue Date: 8/22/2023

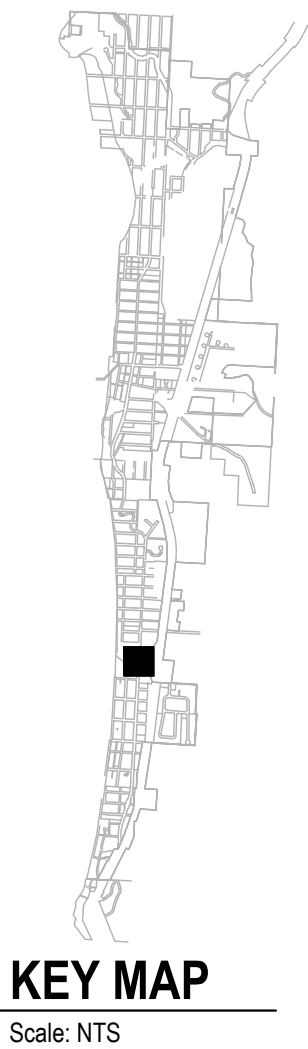
Project Manager TWT  
Drawn by TJM  
Checked by MRL

EXISTING CONDITIONS - ISOLATION VALVE 4

C006



PLAN  
SCALE: 1" = 10'



ISOLATION VALVE 4 QUANTITIES		
ITEM	UNITS	QUANTITY
REMOVE PIPE	LF	0
REMOVE PIPE (ASBESTOS CONCRETE)	LF	40
GRAVEL SALVAGE AND REINSTALL	SY	35
TOPSOIL SALVAGE AND REINSTALL	SY	75
CLEARING AND GRUBBING (AS NEEDED)	SY	10

- 050 DEMOLITION
- 050 REMOVE PIPE AS NEEDED TO INSTALL NEW VAULTS, FITTINGS AND VALVES. SEE SITE PLANS AND DETAILS FOR PROPOSED EQUIPMENT.
  - 051 SAWCUT FULL DEPTH AND REMOVE PAVING
  - 052 POTHOLE TO LOCATE EXISTING PIPES PRIOR TO BEGINNING CONSTRUCTION- SHOWN LOCATIONS ARE BASED ON RECORD PLANS AND FIELD LOCATES
  - 053 REMOVE EXISTING VAULT, VALVES, METERS, FITTINGS AND PIPE.
  - 054 CLEARING AND GRUBBING AS NEEDED FOR NEW POWER

- 100 SITE PLAN NOTES
- 100 EXISTING CHAIN LINK FENCE
  - 101 GRAVEL EDGE
  - 102 SALVAGE TOPSOIL IN ALL AREAS OF EXCAVATION AND GRADING

- 300 STORMWATER
- 300 EXISTING 6" UNDERDRAIN
  - 301 EXISTING STORM STRUCTURE
  - 302 EXISTING DAYLIGHT PIPE - INLET = 187.5 OUTLET = 186.5
  - 303 EXISTING CONCRETE PIPE
  - 304 EXISTING HDPE PIPE

- 500 WATER
- 500 EXISTING WATER TRUNK LINE
  - 501 EXISTING ALTITUDE CONTROL VALVE AND VAULT
  - 502 EXISTING RESERVOIR TANK
  - 503 EXISTING PUMP HOUSE
  - 504 EXISTING FIRE HYDRANT
  - 505 EXISTING DI OVERFLOW PIPE
  - 506 EXISTING DI WATER PIPE
  - 507 EXISTING PVC WATER LINE
  - 508 EXISTING ASBESTOS CONCRETE WATER LINE
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  - 511 EXISTING ROOF VENT

- 600 DRY UTILITIES
- 600 EXISTING OVERHEAD POWER POLE
  - 601 EXISTING OVERHEAD POWER
  - 602 EXISTING CELLULAR CONTROL BOX
  - 603 EXISTING UTILITY BOX
  - 604 UNDERGROUND POWER AND COMMUNICATIONS TO US101

GENERAL SHEET NOTES:

1. ALL ASBESTOS CONCRETE PIPE REMOVED NEEDS TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH OREGON DEQ RULES 340, DIVISION 248, AS WELL AS ANY LOCAL REQUIREMENTS INCLUDING OREGON OSHA AND CONSTRUCTION CONTRACTORS BOARD.

2. PLACE ISOLATION VALVE TO REDUCE IMPACT TO NEARBY TREES. PROTECT TREES TO THE MAXIMUM EXTENT POSSIBLE.



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Revisions:

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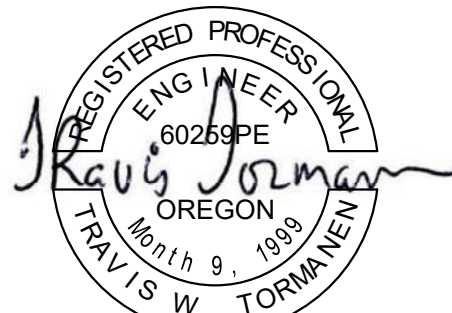
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SCALE DRAWING



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PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

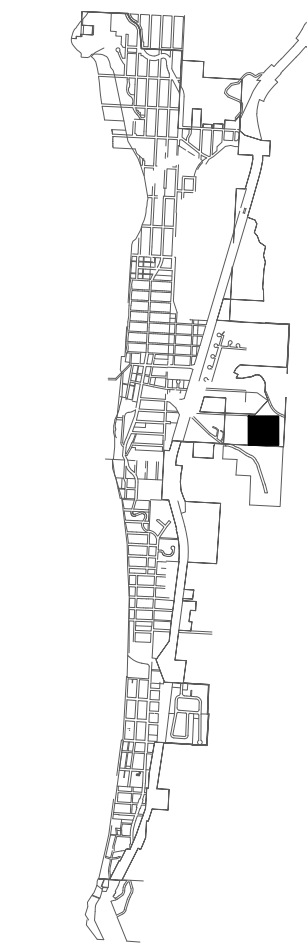
ENGINEERING PLAN

Issue Date: 8/22/2023

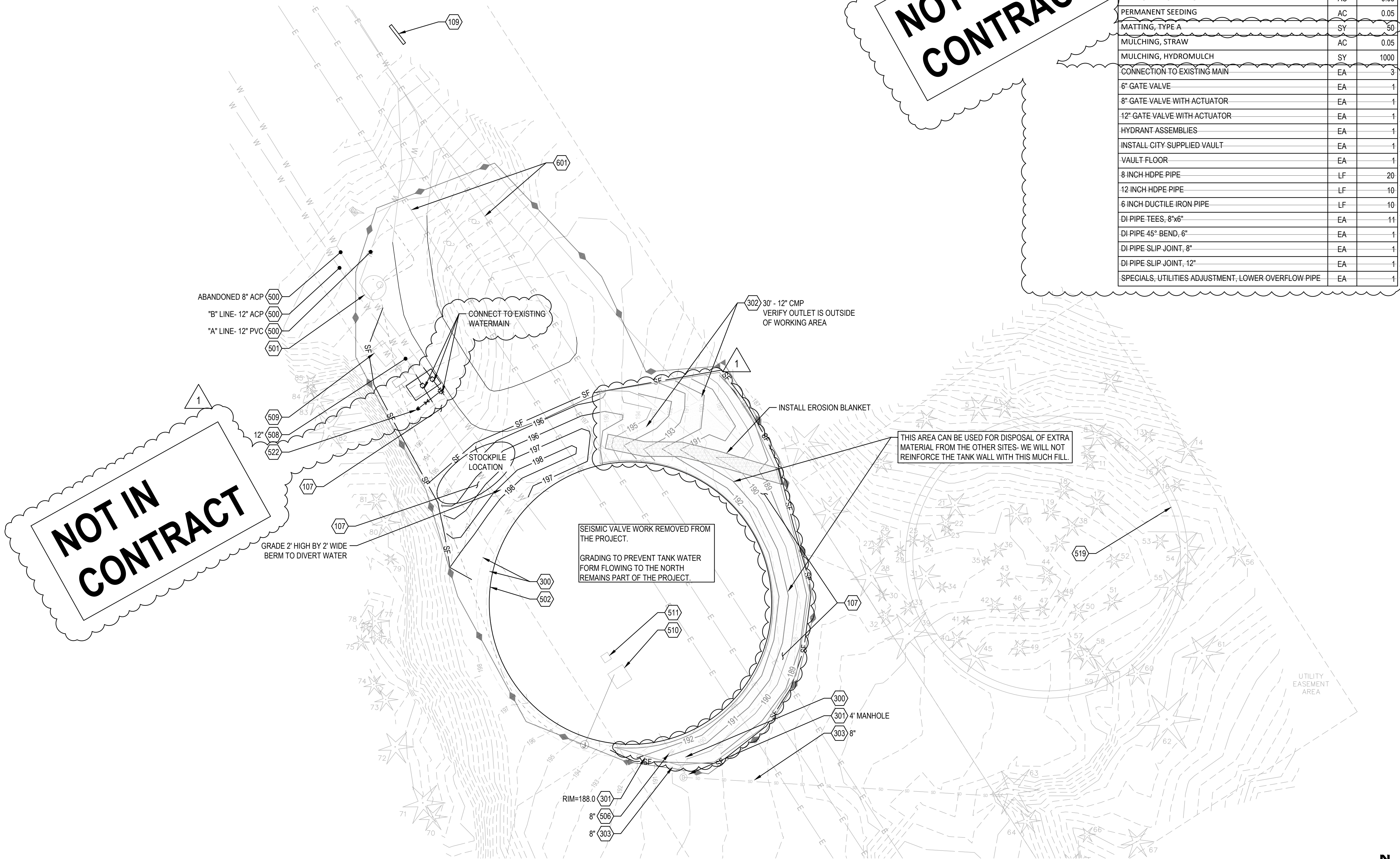
SITE & EROSION CONTROL PLAN -  
MAIN RESERVOIR

C100

Project Manager: TWT  
Drawn by: TJM  
Checked by: MRL



KEY MAP  
Scale: NTS



PLAN

SCALE: 1" = 20'



- RESERVOIR IMPROVEMENTS:
1. LOWER OPERATING LEVEL OF THE TANK
  2. REINFORCE WALLS BY ADDING FILL AROUND THE EAST AND SOUTH SIDES.

MAIN RESERVOIR QUANTITIES		
ITEM	UNITS	QUANTITY
TEMPORARY SIGNS	EA	1
GENERAL EXCAVATION	CY	120
EXTRA FOR SELECTED TOPSOIL MATERIAL	CY	10
SEDIMENT FENCE	LF	400
SEDIMENT BARRIER, TYPE 3	LF	50
SEEDING MOBILIZATION	LS	1
TEMPORARY SEEDING	AC	0.05
PERMANENT SEEDING	AC	0.05
MATTING, TYPE A	SY	50
MULCHING, STRAW	AC	0.05
MULCHING, HYDROMULCH	SY	1000
CONNECTION TO EXISTING MAIN	EA	3
6" GATE VALVE	EA	1
8" GATE VALVE WITH ACTUATOR	EA	1
12" GATE VALVE WITH ACTUATOR	EA	1
HYDRANT ASSEMBLIES	EA	1
INSTALL CITY SUPPLIED VAULT	EA	1
VAULT FLOOR	EA	1
8 INCH HDPE PIPE	LF	20
12 INCH HDPE PIPE	LF	10
6 INCH DUCTILE IRON PIPE	LF	10
DI PIPE TEES, 8"x6"	EA	11
DI PIPE 45° BEND, 6"	EA	1
DI PIPE SLIP JOINT, 8"	EA	1
DI PIPE SLIP JOINT, 12"	EA	1
SPECIALS, UTILITIES ADJUSTMENT, LOWER OVERFLOW PIPE	EA	1

100 SITE PLAN NOTES

- 100 EXISTING CHAIN LINK FENCE
- 101 GRAVEL EDGE
- 102 SALVAGE TOPSOIL IN ALL AREAS OF EXCAVATION AND GRADING
- 103 SIDEWALK / SHOULDER CLOSED SIGNAGE
- 104 CONSTRUCTION FENCE
- 105 BARRELS
- 106 REPAIR TO MATCH ORIGINAL MATERIALS
- 107 SEED AND BLANKET SWALE BOTTOM AND SEED AND MULCH REMAINDER OF DISTURBED AREAS. USE OREGON COAST RANGE ECO-REGION SEED MIX
- 108 SALVAGE AND REINSTALL SIGN IF NEEDED
- 109 BUSINESS OREGON AND OTHER CONSTRUCTION RELATED SIGNS.

110 EROSION CONTROL / OVERALL GRADING

- 110 INSTALL SILT FENCE
- 111 INSTALL SEDIMENT BARRIER

300 STORMWATER

- 300 EXISTING 6" UNDERDRAIN
- 301 EXISTING STORM STRUCTURE
- 302 EXISTING DAYLIGHT PIPE - INLET = 187.5 OUTLET = 186.5
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- 304 EXISTING HDPE PIPE

500 WATER

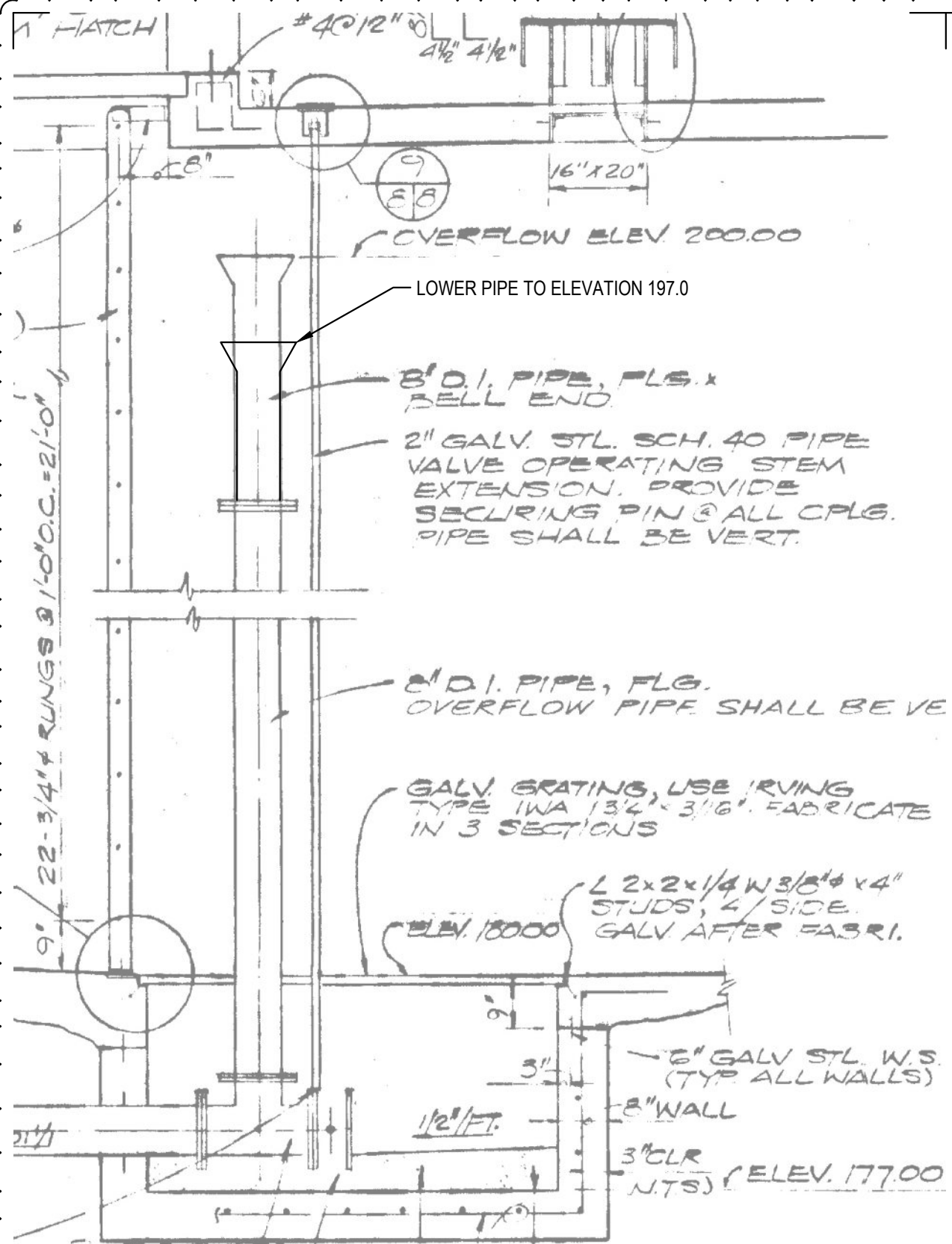
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- 501 EXISTING ALTITUDE CONTROL VALVE AND VAULT
- 502 EXISTING RESERVOIR TANK
- 503 EXISTING PUMP HOUSE
- 504 EXISTING FIRE HYDRANT
- 505 EXISTING DI OVERFLOW PIPE
- 506 EXISTING DI WATER PIPE
- 507 EXISTING PVC WATER LINE
- 508 EXISTING ASBESTOUS CONCRETE WATER LINE
- 509 EXISTING VAULT
- 510 EXISTING ROOF HATCH
- 511 EXISTING ROOF VENT
- 512 SEISMIC VALVE VAULT
- 513 SEISMIC VALVE CONTROL PANEL
- 514 FLEX-TEND WITH 12" EXTEND ABILITY
- 515 FLEX-TEND WITH 4" EXTEND ABILITY
- 516 WATER SERVICE AND GATE VALVE
- 517 MANHOLE, ISOLATION VALVE AND VALVE CONTROLS PLACE MANHOLE CASTING OUTSIDE OF TRAVEL LANES
- 518 WATERLINE. CONNECT TO EXISTING
- 519 FUTURE RESERVOIR
- 520 WATER PIPE
- 521 BLOW OFF HYDRANT
- 522 FIRE HYDRANT - WATER FILL STATION

600 DRY UTILITIES

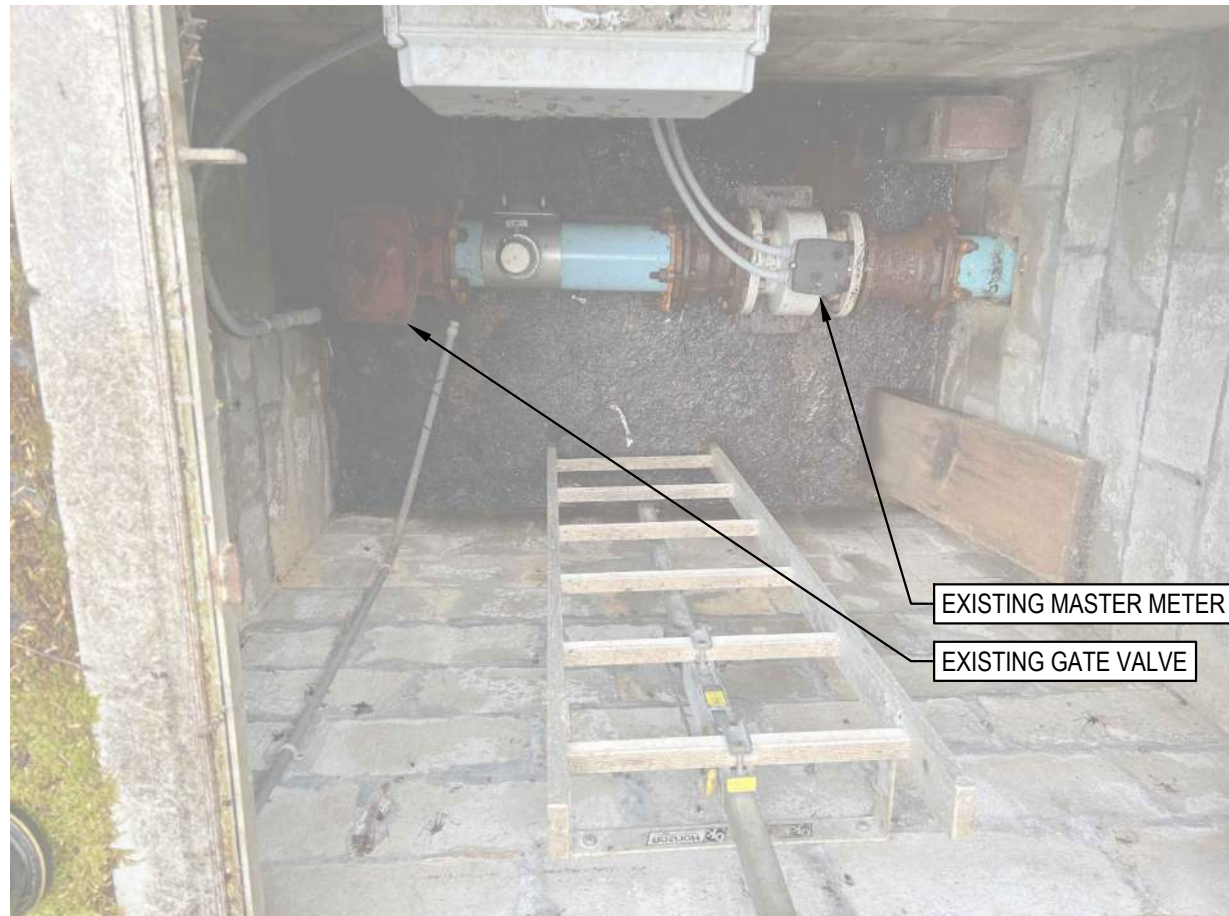
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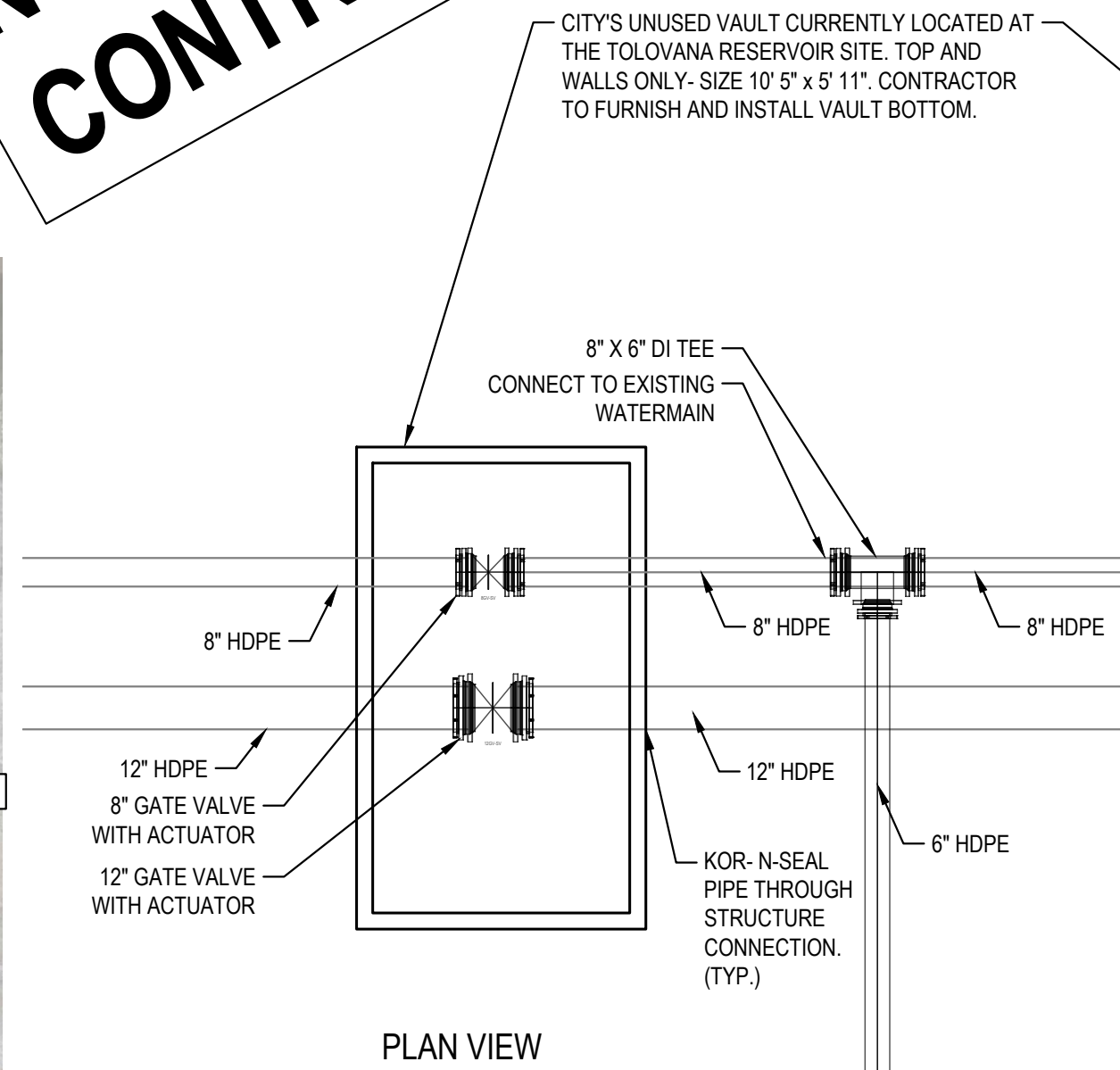


1 LOWERING RISER PIPE DETAIL  
SCALE: 1/2" = 1'



2 PHOTO - EXISTING  
SCALE: NTS

NOT IN CONTRACT



3 VAULT DETAIL  
SCALE: NTS



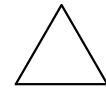
4 EXISTING VAULT PHOTO  
SCALE: NTS



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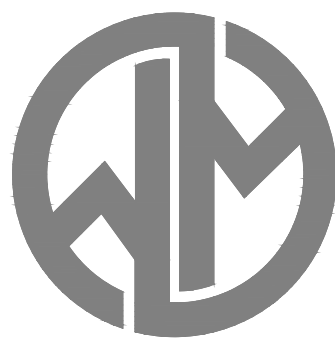
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Revisions:



1	8/24/2023	ADDENDUM #1

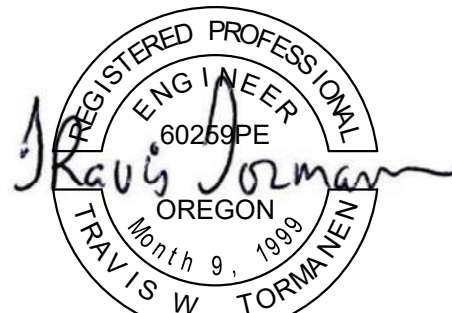
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EXPIRES: 06-30-24

WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN  
Issue Date: 8/22/2023

Project Manager TWT  
Drawn by TJM  
Checked by MRL

VAULT AND VALVE DETAILS -  
MAIN RESERVOIR

C101







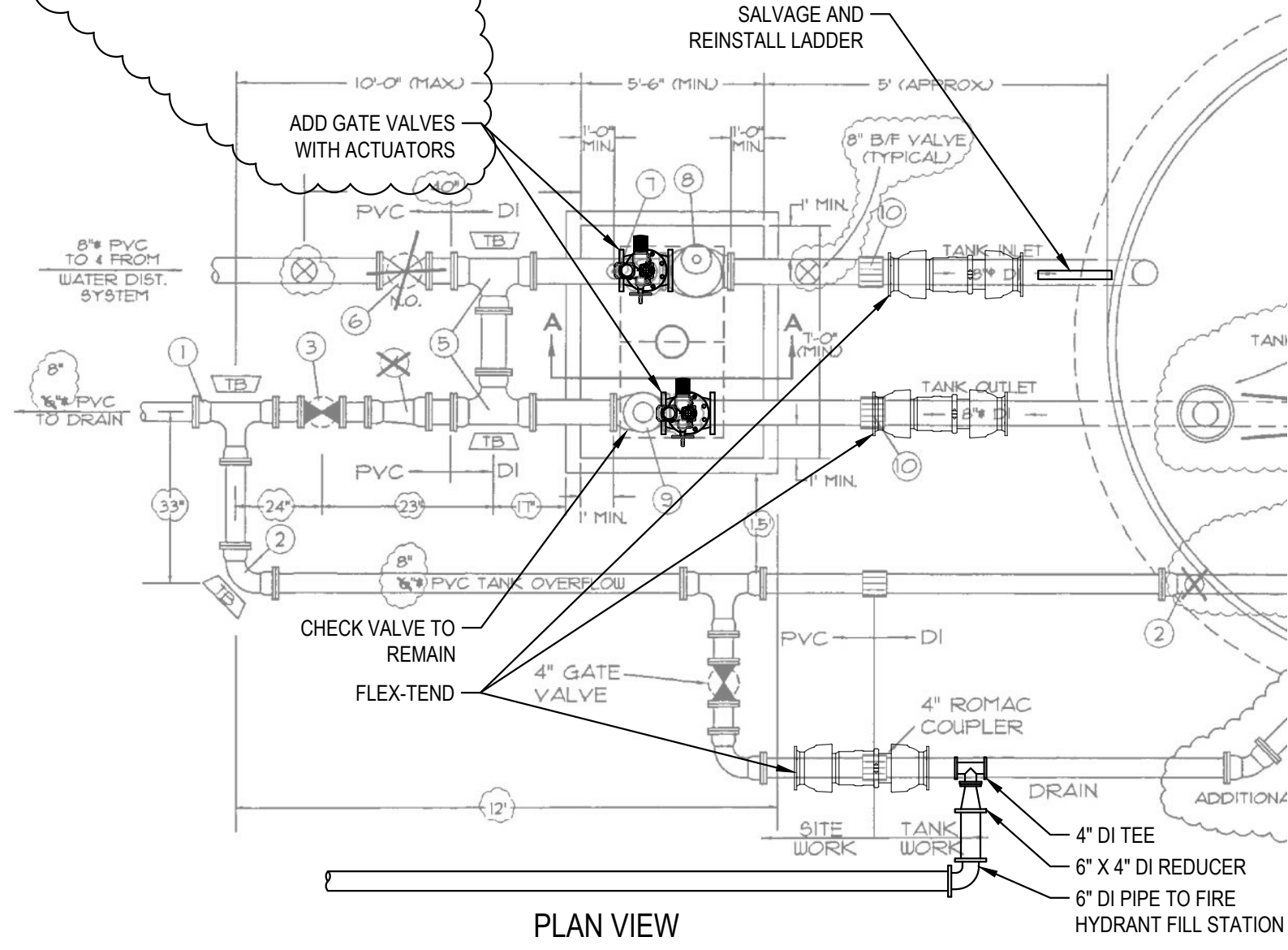
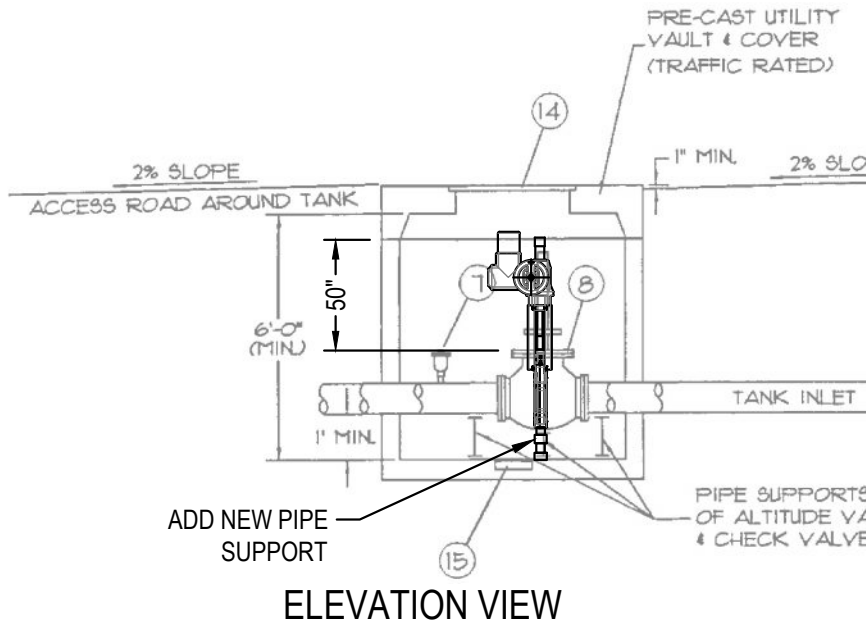


FLEX-TEND Double Ball Submittal Reference Drawing - M.J. by M.J.

<div><div><div>Total Length</div><div>Laying Length</div><div>A</div><div>Deflection in degrees per ball</div></div><div><div>Ball Joint</div><div>Expansion Contraction Joint</div><div>CL</div><div>S (Offset)</div><div>Weight</div><div>Assembly</div></div></div> <div><div>11</div><div>The expansion values listed represent the total movement for the particular size and configuration. Unless otherwise specified, FLEX-TEND assemblies are pre-set at factory to reserve 50% of total movement for expansion and 50% for contraction. *Laying, Total, and CL* lengths reflects the standard 50% / 50% pre-set condition. Modifying the pre-set ratio requires a corresponding modification of these lengths.</div></div>											
Nominal Pipe Size	OD	Deflection (Degrees)	A	Expansion†	Total Length	Laying Length	CL	S (Offset)	Weight (lbs)	Assembly	
3	9.20	20	3.88	4	35.80 (±2.0)	30.80 (±2.0)	21.30 (±2.0)	7.75	176	403M20	
				8	51.00 (±4.0)	46.00 (±4.0)	36.50 (±4.0)	13.28	221	403M21	
				12	66.30 (±6.0)	61.30 (±6.0)	51.75 (±6.0)	18.84	265	403M22	
4	10.85	20	3.99	4	34.99 (±2.0)	29.99 (±2.0)	22.81 (±2.0)	8.49	152	404M20	
				8	50.24 (±4.0)	45.24 (±4.0)	38.06 (±4.0)	14.39	203	404M21	
				12	65.49 (±6.0)	60.49 (±6.0)	53.31 (±6.0)	20.29	248	404M22	
6	12.28	20	4.20	4	37.11 (±2.0)	32.11 (±2.0)	23.70 (±2.0)	8.79	213	406M20	
				8	51.39 (±4.0)	46.39 (±4.0)	37.98 (±4.0)	14.36	274	406M21	
				12	65.67 (±6.0)	60.67 (±6.0)	52.26 (±6.0)	19.93	335	406M22	
8	14.82	20	4.91	4	41.41 (±2.0)	36.41 (±2.0)	26.59 (±2.0)	9.78	311	408M20	
				8	58.51 (±4.0)	53.51 (±4.0)	43.69 (±4.0)	16.31	404	408M21	
				12	75.61 (±6.0)	70.61 (±6.0)	60.79 (±6.0)	22.84	497	408M22	
10	18.03	20	6.18	4	45.74 (±2.0)	40.74 (±2.0)	28.58 (±2.0)	10.39	475	410M20	
				8	65.34 (±4.0)	60.34 (±4.0)	44.18 (±4.0)	16.48	612	410M21	
				12	77.34 (±6.0)	72.34 (±6.0)	59.98 (±6.0)	22.57	750	410M22	
12	20.69	20	6.84	4	48.91 (±2.0)	43.91 (±2.0)	30.24 (±2.0)	11.03	587	412M20	
				8	64.86 (±4.0)	59.86 (±4.0)	46.19 (±4.0)	17.17	735	412M21	
				12	80.81 (±6.0)	75.81 (±6.0)	62.14 (±6.0)	23.31	882	412M22	
14	25.00	15	7.00	8	65.10 (±4.0)	58.10 (±4.0)	44.00 (±4.0)	11.79	1222	414M20	
				16	91.50 (±8.0)	84.50 (±8.0)	70.50 (±8.0)	18.89	1510	414M21	
				24	117.90 (±12)	110.90 (±12)	96.90 (±12)	25.96	1798	414M22	
16	25.00	15	10.30	8	74.00 (±4.0)	67.00 (±4.0)	46.30 (±4.0)	12.41	1133	416M20	
				16	101.50 (±8.0)	94.50 (±8.0)	74.20 (±8.0)	19.88	1465	416M21	
				24	129.50 (±12)	122.50 (±12)	102.10 (±12)	27.36	1797	416M22	
18	30.50	15	12.60	8	71.90 (±4.0)	65.30 (±4.0)	47.10 (±4.0)	12.62	1760	418M20	
				16	99.20 (±8.0)	92.10 (±8.0)	74.10 (±8.0)	19.86	2153	418M21	
				24	126.20 (±12)	119.20 (±12)	101.10 (±12)	27.09	2546	418M22	
20	30.50	15	10.40	8	73.50 (±4.0)	66.50 (±4.0)	45.90 (±4.0)	12.30	1874	420M20	
				16	101.00 (±8.0)	94.00 (±8.0)	73.20 (±8.0)	19.61	2298	420M21	
				24	128.00 (±12)	121.00 (±12)	100.40 (±12)	26.90	2721	420M22	
24	37.30	15	13.80	8	87.00 (±4.0)	80.00 (±4.0)	52.20 (±4.0)	13.99	3183	424M20	
				16	114.00 (±8.0)	107.00 (±8.0)	79.50 (±8.0)	21.30	3902	424M21	
				24	141.50 (±12)	134.00 (±12)	106.80 (±12)	28.62	4555	424M22	
30	44.00	15	12.03	8	98.20 (±5)	90.20 (±5)	66.30 (±5)	17.50	4985	430M20	
				16	132.50 (±10)	124.50 (±10)	99.00 (±10)	26.53	5976	430M21	
				24	166.80 (±15)	158.80 (±15)	132.00 (±15)	35.37	6856	430M22	

NOTE: All dimensions listed in brochure are in inches and subject to change without notice.

THE 8-INCH GATE VALVES (SERIES 2500 NRS RESILIENT WEDGE GATE VALVE BY AMERICAN FLOW CONTROL OR APPROVED EQUAL) WOULD BE SIZED WITH ROTORK IQD10 MK3 INTELLIGENT ACTUATORS, 48 RPM OUTPUT SPEED WITH IB4 GEARBOX, 4:1 RATIO, 3.4 MA, 160 SECOND STROKE TIME. SEE ATTACHED DATA SHEET. THIS SIZING IS BASED AROUND AN 8-IN. MUELLER CLASS 150# GATE VALVE.



## PHOTO- EXISTING

SCALE: NTS

## FLEX-TEND DETAIL

SCALE: NTS

## VAULT DETAIL

SCALE: NTS

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### Sizing Guide Search

Seating Torque

62.37 Nm 46 lbf-ft

Seating Thrust

6kN 1360 lbf

Coupling Type

Standard

Coupling Dimension

mm in

Number of Turns

32 Turns

Stroke Time

0 Secs

Stroke Time Tolerance

50 % ± 50 %

Power Supply

DC 24V

Options

☐ Hazardous Area

☒ Watertight

☐ Fail-safe

☐ Low Cycle

Output Flange

Any

Range

☒ DEFAULT ☒ IQD3

☒ IQ3 ☒ IQS3

Reset Search

### Output Performance

Combination	Rated Torque Nm lbf-ft	Rated Thrust kN lbf	Resultant Thrust kN lbf	Stroke Time Secs (90 Hg)
IQD10IB4	52 68	53.00 12000	0.00 0	160.0
Available Output Flanges (800x16" & MSS SP-102 "4")				
F10FA10		Hazardous Yes	Watertight Yes	Fail Safe No

### Couplings

Coupling name	Coupling Type	Standard Dimension mm in	Max Dimension mm in	Min Dimension mm in
IB IS HOB	Thrust Base - Threaded	45 1.75	45 1.75	0 0.00

### Actuator Performance

Size	Rated Torque Nm lbf-ft	Output RPM RPM (RPM)	Rating Starts / Hour	Weight Kg Lbs
IQD10	27 20	48.00	60	80
Available for power supply				
1-Phase AC	3-Phase AC	DC	Hazardous	Watertight
No	No	DC 24V DC 48V DC 110V	Yes	Yes
Handwheel				
Type	Ratio	Turns (per stroke)	Repeats N	Load Lbf
Standard	Direct	1.0	128	28
Option 1	Geared	5.0	640	87

### Gearbox Performance

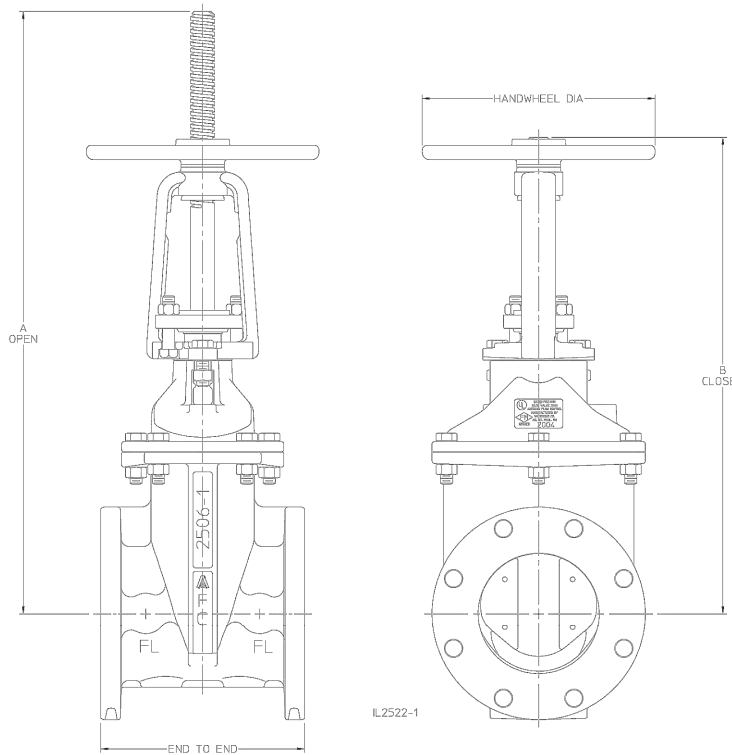
Size	Rated Torque Nm lbf-ft	Ratio (1)	MA	Weight Kg Lbs
IB4	678 500	4	3.4	15.89 35

Enter your specific requirements and click 'Add to enquiry'

\* Fields marked with an are required.

Go Back

### SERIES 2500 - OS & Y DIMENSIONS, 2"-24" SIZES



Dimensions	Valve Size													
	Series 2500 / Series 2500-1													
A (Valve Open) +/- 1/4	13.28	16.78	18.46	23.47	30.97	38.16	48.41	53.66	66.13	72.00	81.25	87.50	105.25	
B (Valve Closed) +/- 1/4	11.06	14.12	15.07	19.12	24.59	29.91	38.16	41.78	51.75	55.25	62.63	66.81	79.88	
Handwheel Diameter	7.00	8.00	8.00	10.00	12.00	14.00	16.00	16.00	20.00	20.00	20.00	28.00	28.00	
End to End - FL/FL (Class 125)	7.00	7.50	8.00	9.00	10.50	11.50	13.00	14.00	15.00	16.00	17.00	18.00	20.00	
No. of Turns to Open	9	11	13	14	20	25	31	38	44	50	56	62	76	
End to End - FL/FL (Class 250)	N/A	N/A	N/A	12.00	15.88	16.50	18.00	19.75	18.50	21.00	22.00	24.00	28.38	

### NOTES:

- Valves meet or exceed requirements of ANSI/AWWA C515 in applicable sizes and rated to 250 psig working pressure.
- UL rated to 250 psig working pressure in applicable configurations 2 in. - 16 in., 20 in. sizes. UL rated to 200 psig working pressure in applicable configurations 18 in. and 24 in. sizes.
- FM rated to 250 psig working pressure in applicable configurations 2 in. - 24 in.
- Fusion bonded epoxy coating meets or exceeds requirements of ANSI/AWWA C550.
- Bolt patterns of Class 125 flanged ends are in accordance with ANSI/AWWA C110/A21.10 (ASME B16.1 Class 125).
- Class 250 flanged ends are in accordance with ASME B16.1, Class 250 for cast iron flanges.
- 2 in.-24 in. valves are Certified to NSF/ANSI/CAN 61 and NSF/ANSI/CAN 372.

AMERICAN Flow Control

Page 3A-7

Series 2500 Resilient Wedge Gate Valve



Know what's below.  
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CAUTION: UTILITY INFORMATION IS APPROXIMATE.  
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### Revisions:

1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL  
SCALE DRAWING

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WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN  
Issue Date: 8/22/2023

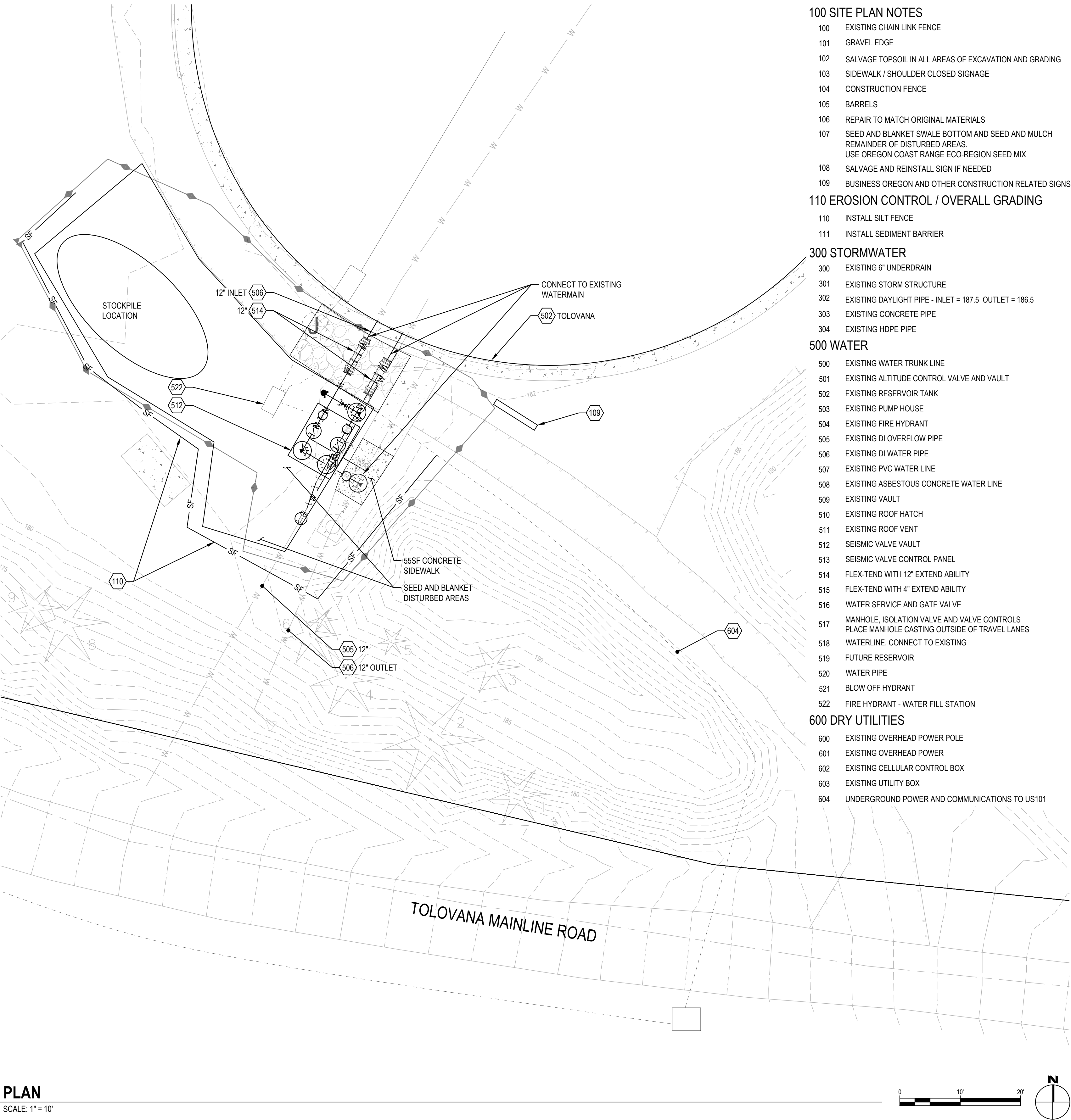
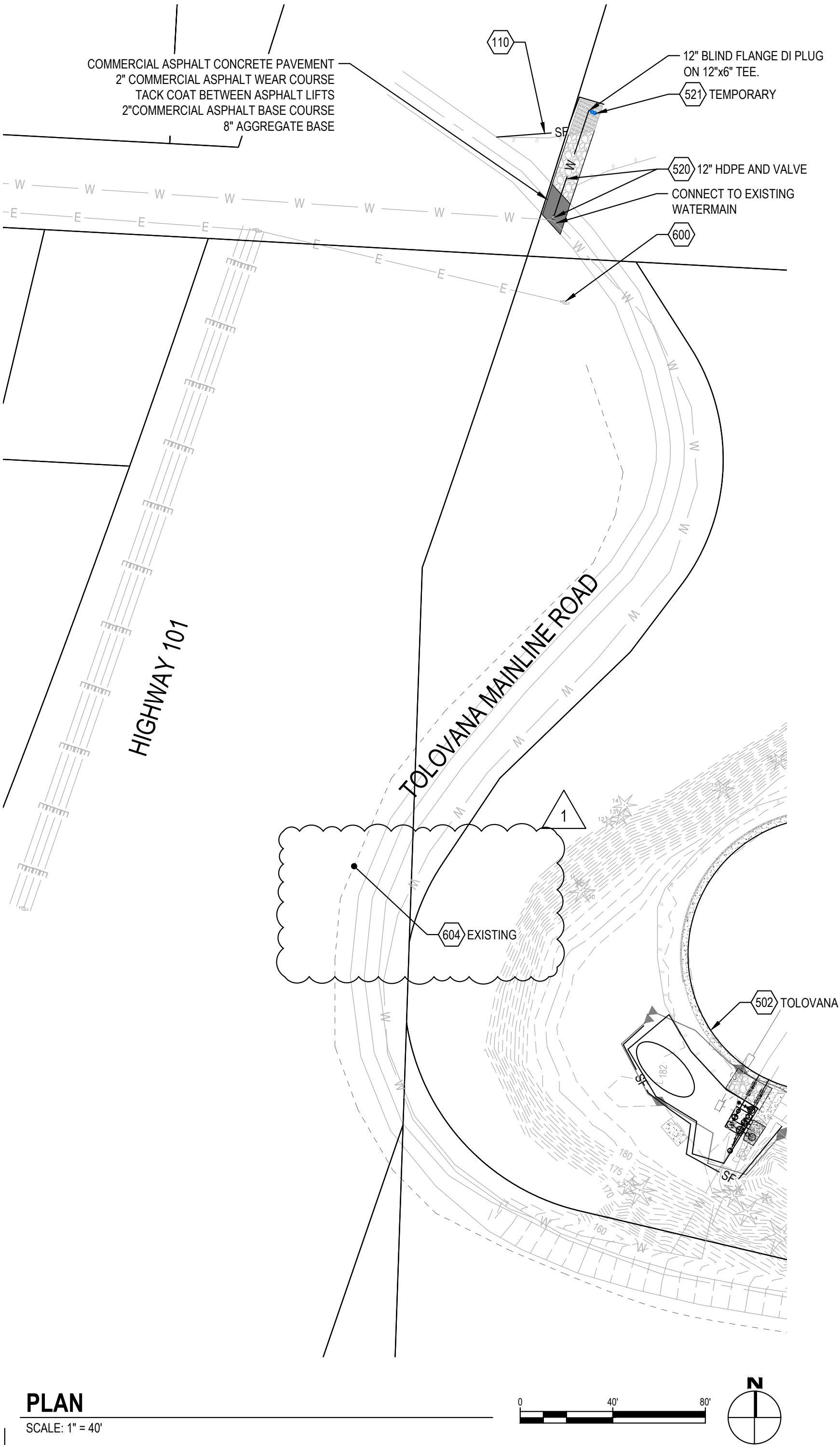
Project Manager TWT  
Drawn by TJM  
Checked by MRL

VAULT AND VALVE DETAILS - NORTH  
RESERVOIR

C103



PLOT DATE: 8/22/2023 4:35 PM - FILE: C:\Users\TJ\OneDrive - Windsor Engineers\OneDrive - Windsor Engineers\05\_Projects\2020\20198.3 Cannon Beach Seismic Valves\02\_Drawings\01\_Working\04\_Final Sheets\20198.3\_Site.dwg



100 SITE PLAN NOTES

- 100 EXISTING CHAIN LINK FENCE
- 101 GRAVEL EDGE
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- 520 WATER PIPE
- 521 BLOW OFF HYDRANT
- 522 FIRE HYDRANT - WATER FILL STATION

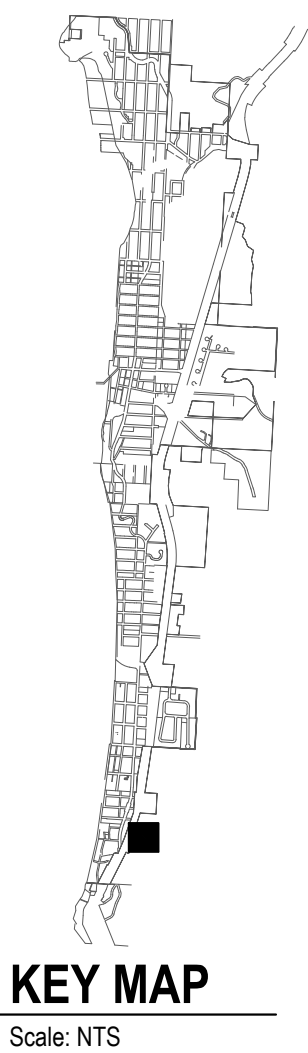
600 DRY UTILITIES

- 600 EXISTING OVERHEAD POWER POLE
- 601 EXISTING OVERHEAD POWER
- 602 EXISTING CELLULAR CONTROL BOX
- 603 EXISTING UTILITY BOX
- 604 UNDERGROUND POWER AND COMMUNICATIONS TO US101

GENERAL SHEET NOTES:

- 1. EXISTING VAULT TO BE REPLACED WITH NEW GATE VALVES AND ACTUATOR
- 2. FLEX-TENDS TO BE INSTALLED BETWEEN RESERVOIR AND VAULT
- 3. 6" DI HYDRANT ASSEMBLY TO BE INSTALLED BETWEEN FLEX-TENDS AND GATE VALVE VAULT
- 4. ELECTRIC CONTROL PANEL AND POWER TO BE INSTALLED

SOUTH RESERVOIR QUANTITIES		
ITEM	UNITS	QUANTITY
TRAFFIC CONTROL	LS	1
TEMPORARY SIGNS	EA	1
EXTRA FOR SELECTED TOPSOIL MATERIAL (IF NEEDED)	CY	180
SEDIMENT FENCE	LF	100
SEDIMENT BARRIER, TYPE 3	LF	1
SEEDING MOBILIZATION	LS	1
TEMPORARY SEEDING	AC	0
PERMANENT SEEDING	AC	0
MATTING, TYPE A	SY	10
MULCHING, STRAW	AC	0
MULCHING, HYDROMULCH	SY	1000
AGGREGATE BASE	TN	15
COMMERCIAL ASPHALT CONCRETE PAVEMENT	TN	5
6 INCH CONCRETE SURFACING	SY	10
CONNECTION TO EXISTING MAIN	EA	4
6" GATE VALVE	EA	11
12" GATE VALVE	EA	2
12" CHECK VALVE	EA	
12" GATE VALVE WITH ACTUATOR	EA	2
12" FLEXITEND	EA	2
HYDRANT ASSEMBLIES	EA	1
10' x 8' VAULT	EA	1
12 INCH HDPE PIPE	LF	40
6 INCH DUCTILE IRON PIPE	LF	10
12 INCH DUCTILE IRON PIPE	LF	80
DI PIPE TEES, 12"x6"	EA	2
DI PIPE TEES, 12"x12"	EA	1
DI PIPE CROSS, 12"	EA	1
DI PIPE 45° BEND, 12"	EA	2
DI PIPE 90° BEND, 12"	EA	1
DI PIPE SLIP JOINT, 12"	EA	2
12" PLUG	EA	1
BLOWOFF ASSEMBLY, 2"	EA	1



**811**  
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Revisions:		
1	8/24/2023	ADDENDUM #1

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**WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS**  
CITY OF CANNON BEACH, OR 97110

**ENGINEERING PLAN**  
Issue Date: 8/22/2023

Project Manager: TWT  
Drawn by: TJM  
Checked by: MRL

**SITE & EROSION CONTROL PLAN -  
TOLOVANA RESERVOIR**

**C104**







PLOT DATE: 8/22/2023 4:35 PM - FILE: C:\Users\TJMD\OneDrive - Windsor Engineers\05\_Projects\2020\20198.3 Cannon Beach Seismic Valves\02\_Drawings\01\_Working\04\_Final Sheets\20198.3\_Site.dwg



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1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL  
SCALE DRAWING



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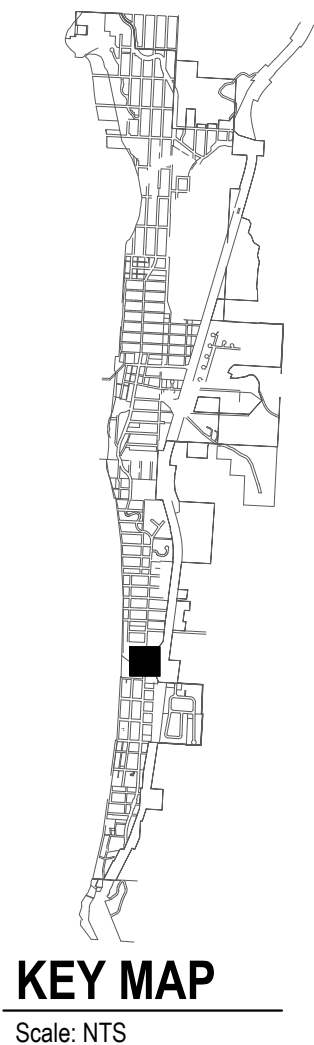
WATER RESILIENCY PROJECT  
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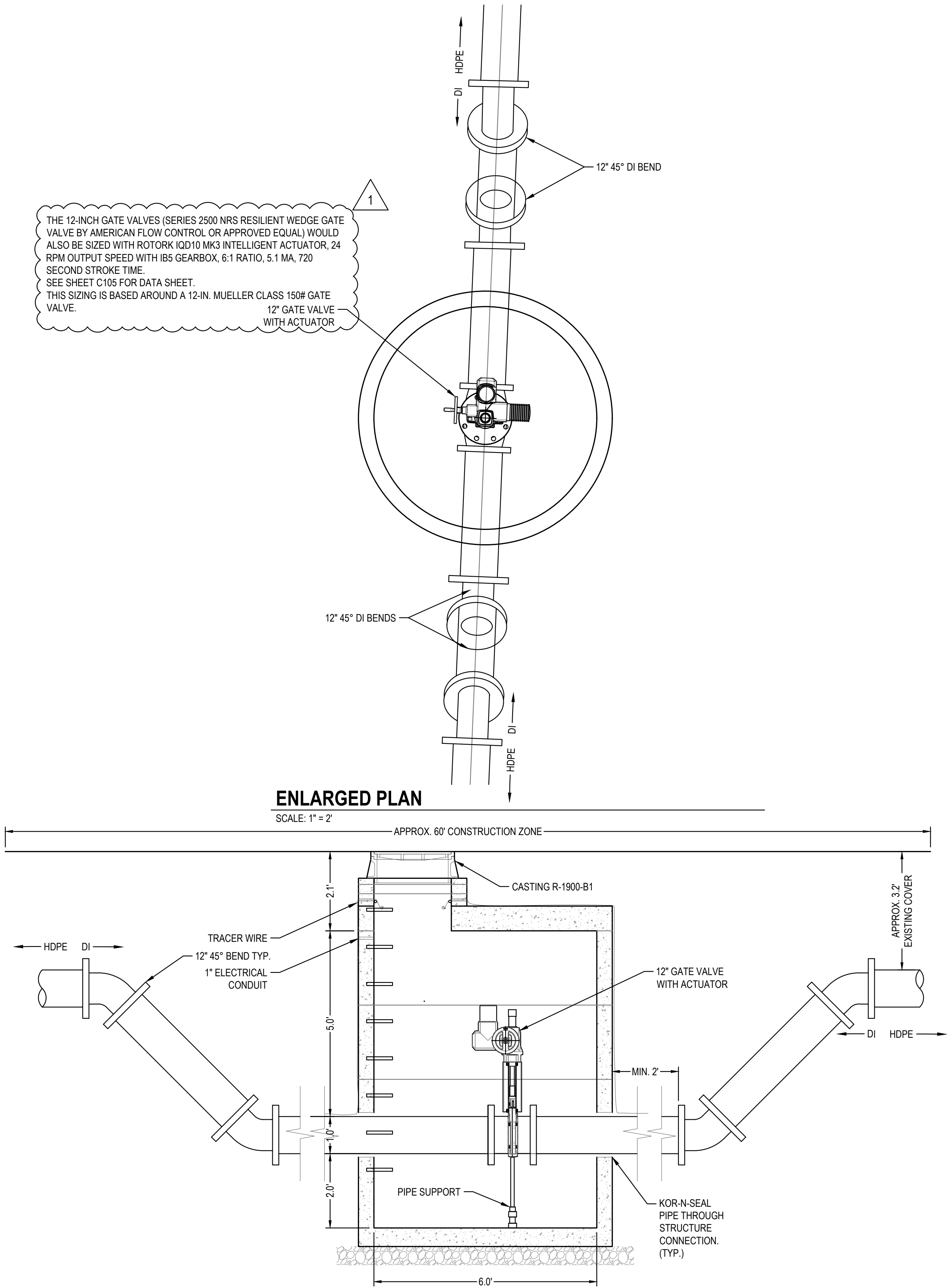
Project Manager: TWT  
Drawn by: TJM  
Checked by: MRL

SITE & EROSION CONTROL PLAN -  
ISOLATION VALVE 4

C106

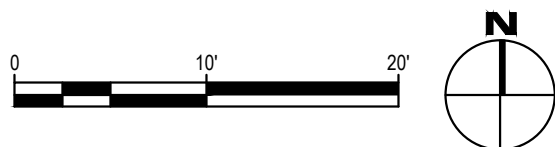
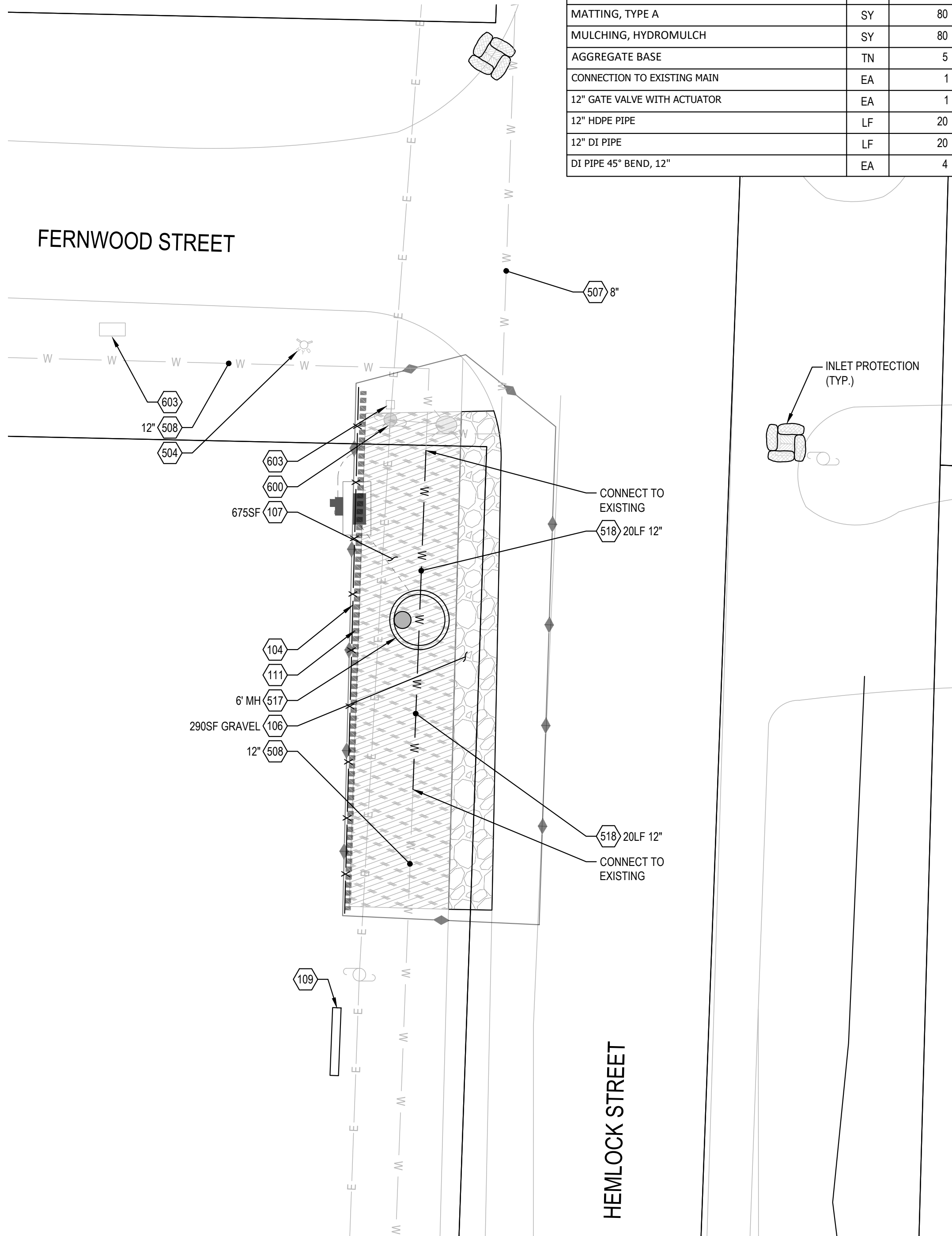


KEY MAP  
Scale: NTS



ELEVATION  
SCALE: 1" = 2'

PLAN  
SCALE: 1" = 10'



ISOLATION VALVE 4 QUANTITIES		
ITEM	UNITS	QUANTITY
TRAFFIC CONTROL	LS	1
TEMPORARY SIGNS	EA	1
EXTRA FOR SELECTED TOPSOIL MATERIAL (IF NEEDED)	CY	5
SEDIMENT FENCE	LF	60
SEDIMENT BARRIER, TYPE 3	LF	60
INLET PROTECTION, TYPE 3	EA	4
SEEDING MOBILIZATION	LS	1
TEMPORARY SEEDING	AC	0.02
PERMANENT SEEDING	AC	0.02
MATting, TYPE A	SY	80
MULCHING, HYDROMULCH	SY	80
AGGREGATE BASE	TN	5
CONNECTION TO EXISTING MAIN	EA	1
12" GATE VALVE WITH ACTUATOR	EA	1
12" HDPE PIPE	LF	20
12" DI PIPE	LF	20
DI PIPE 45° BEND, 12"	EA	4

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Revisions:

1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL  
SCALE DRAWING



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WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

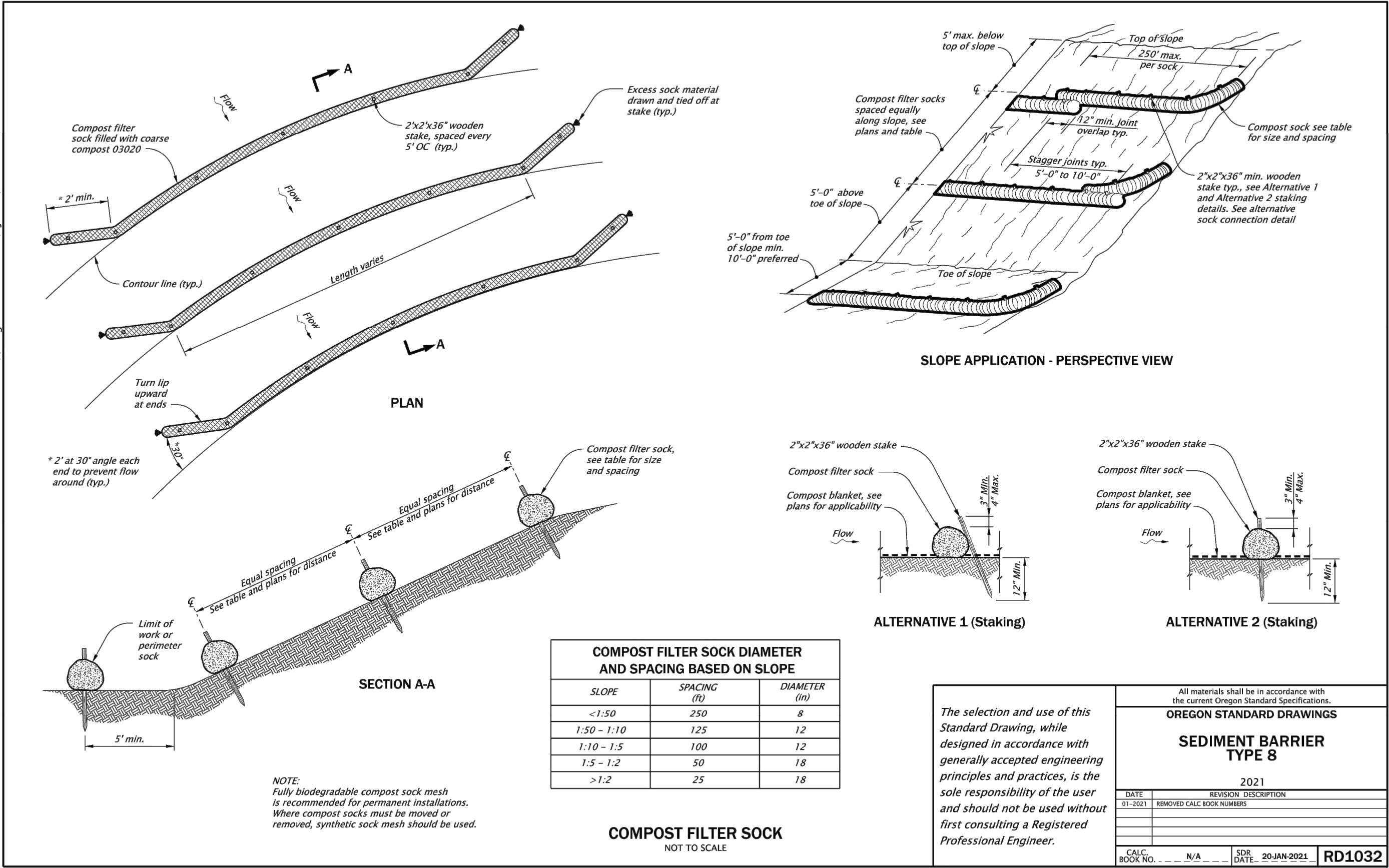
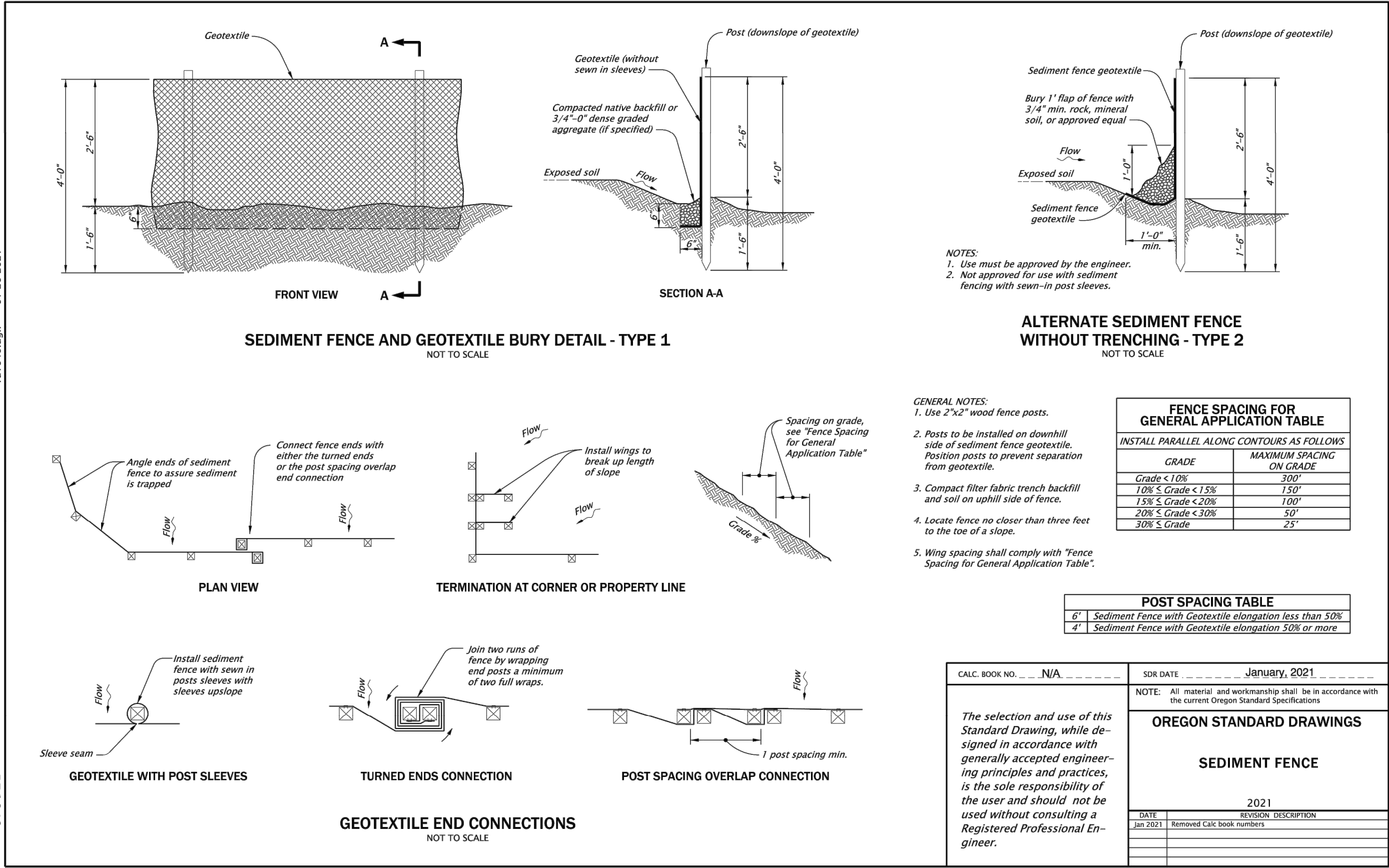
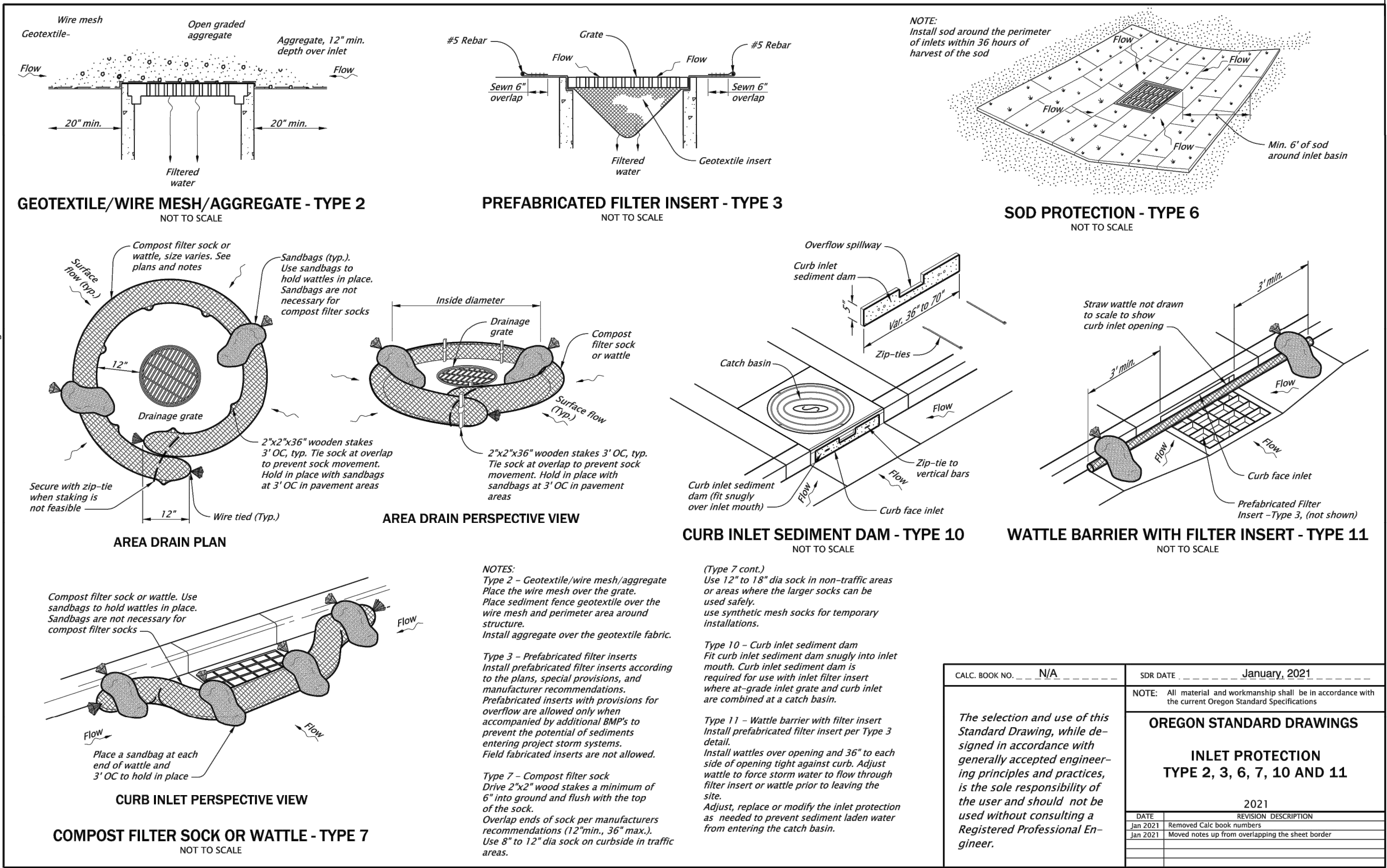
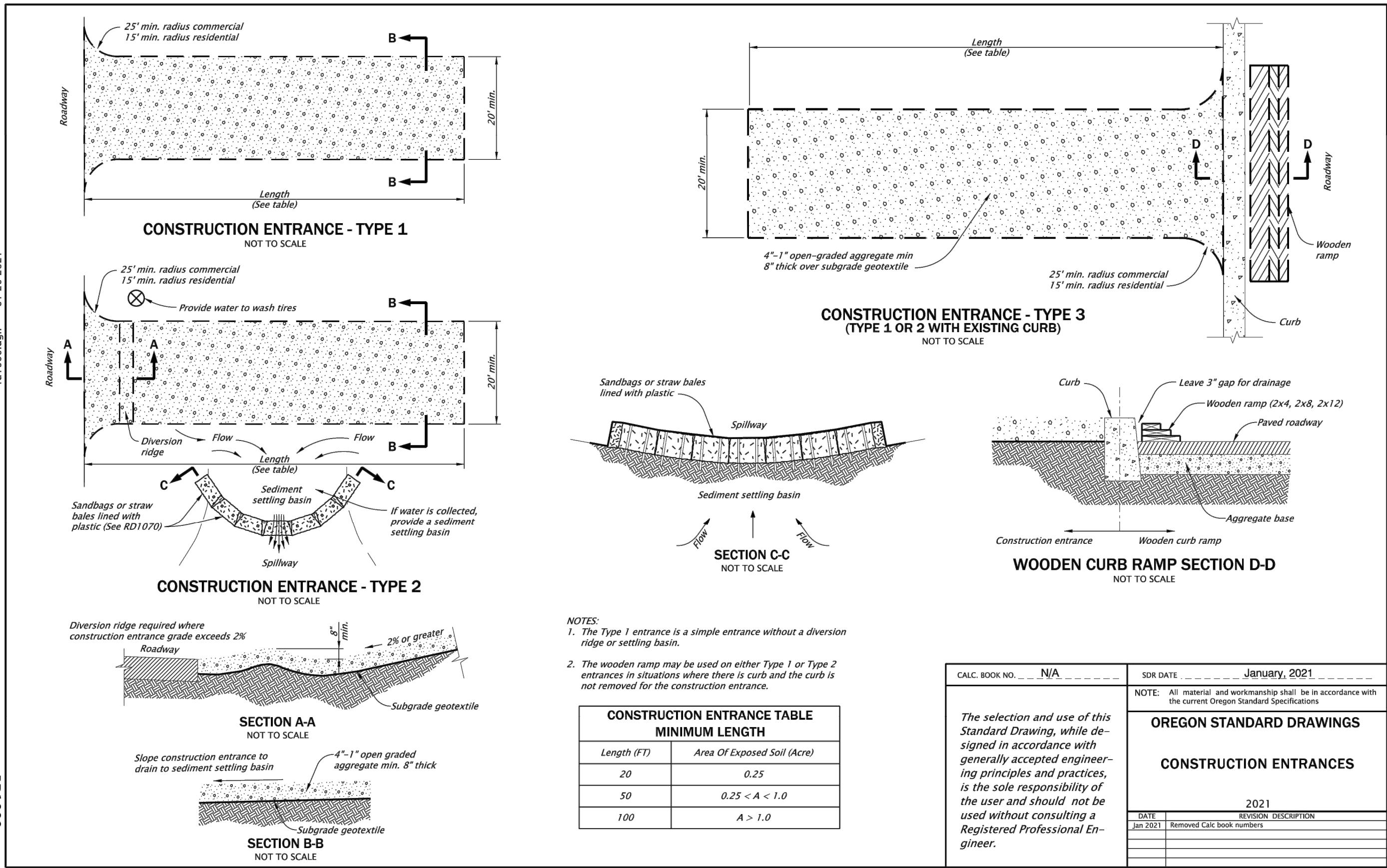
ENGINEERING PLAN

Issue Date: 8/22/2023

Project Manager: TWT  
Drawn by: TJM  
Checked by: MRL

SITE DETAILS

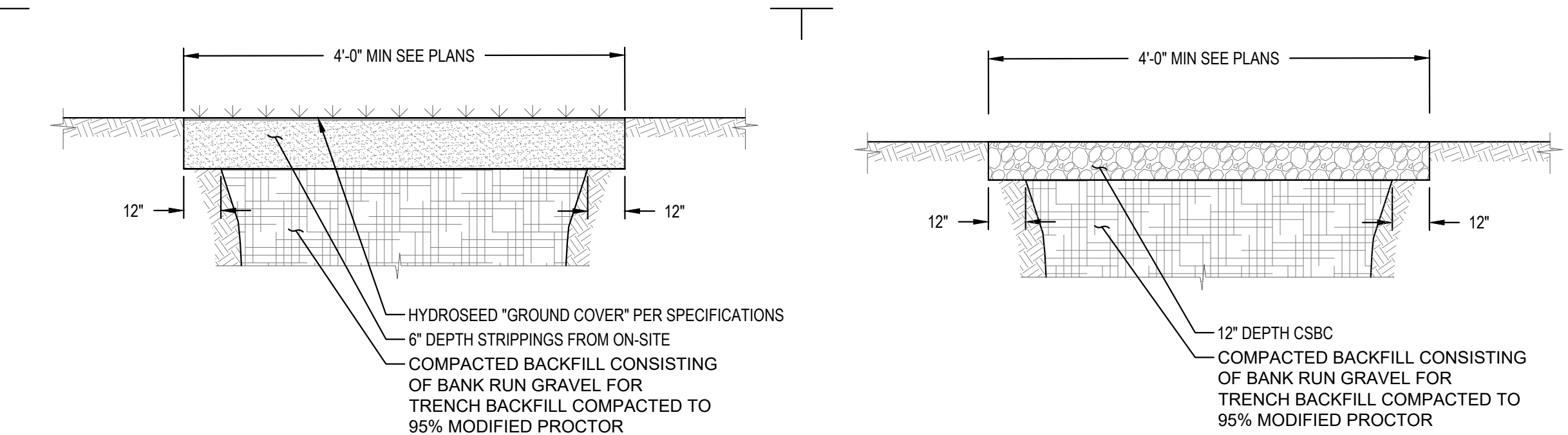
C190



BID PLAN SET - ADDENDUM #1

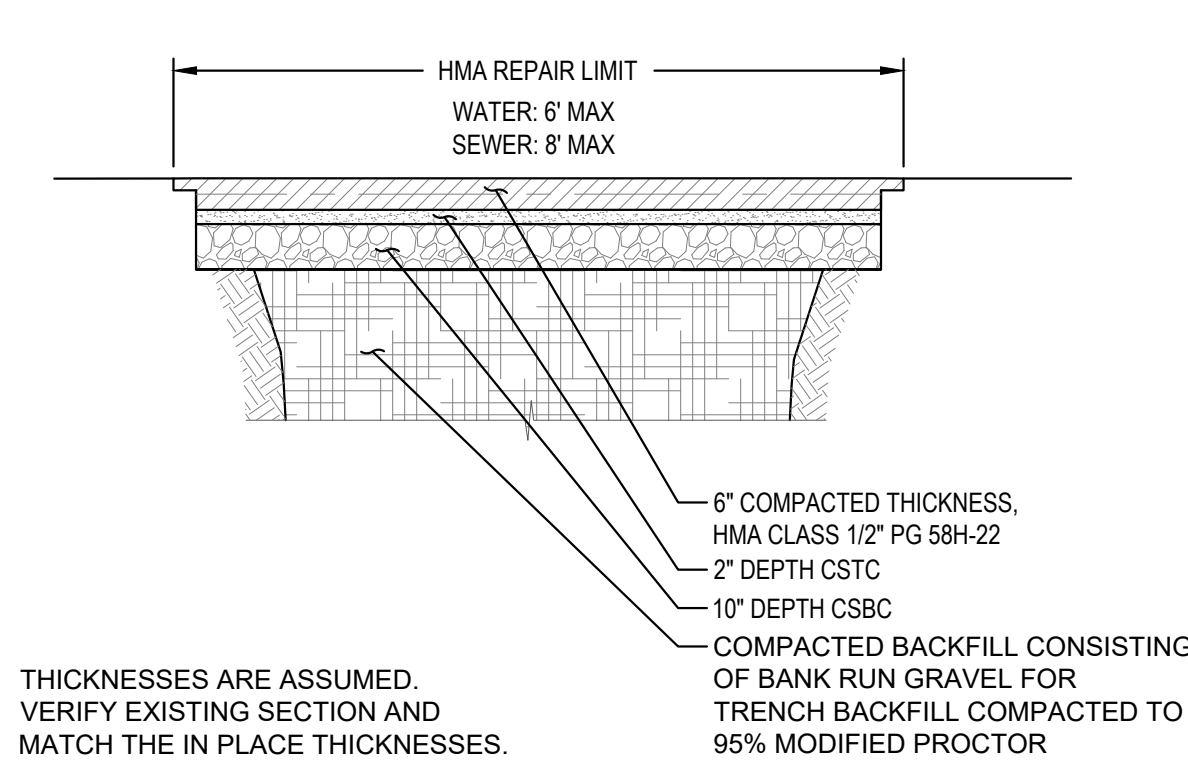


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## 1 HYDROSEED REPAIR

NOT TO SCALE

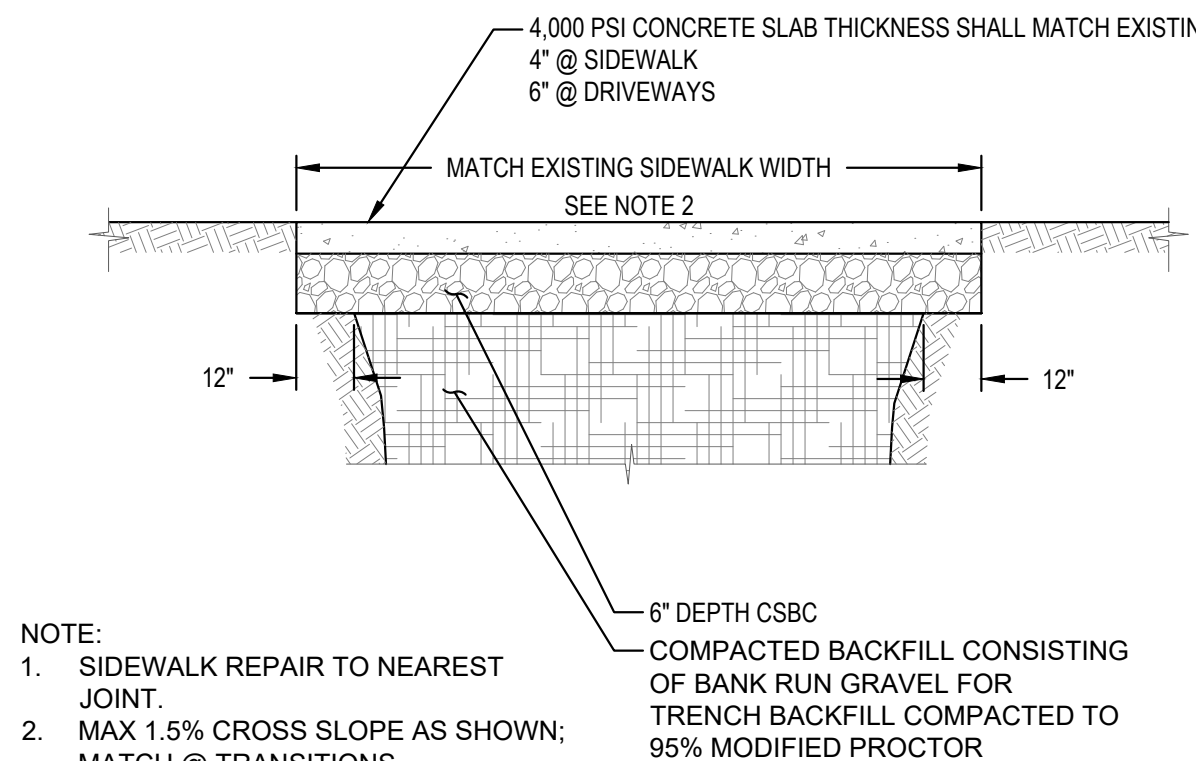


## 2 HMA REPAIR

NOT TO SCALE

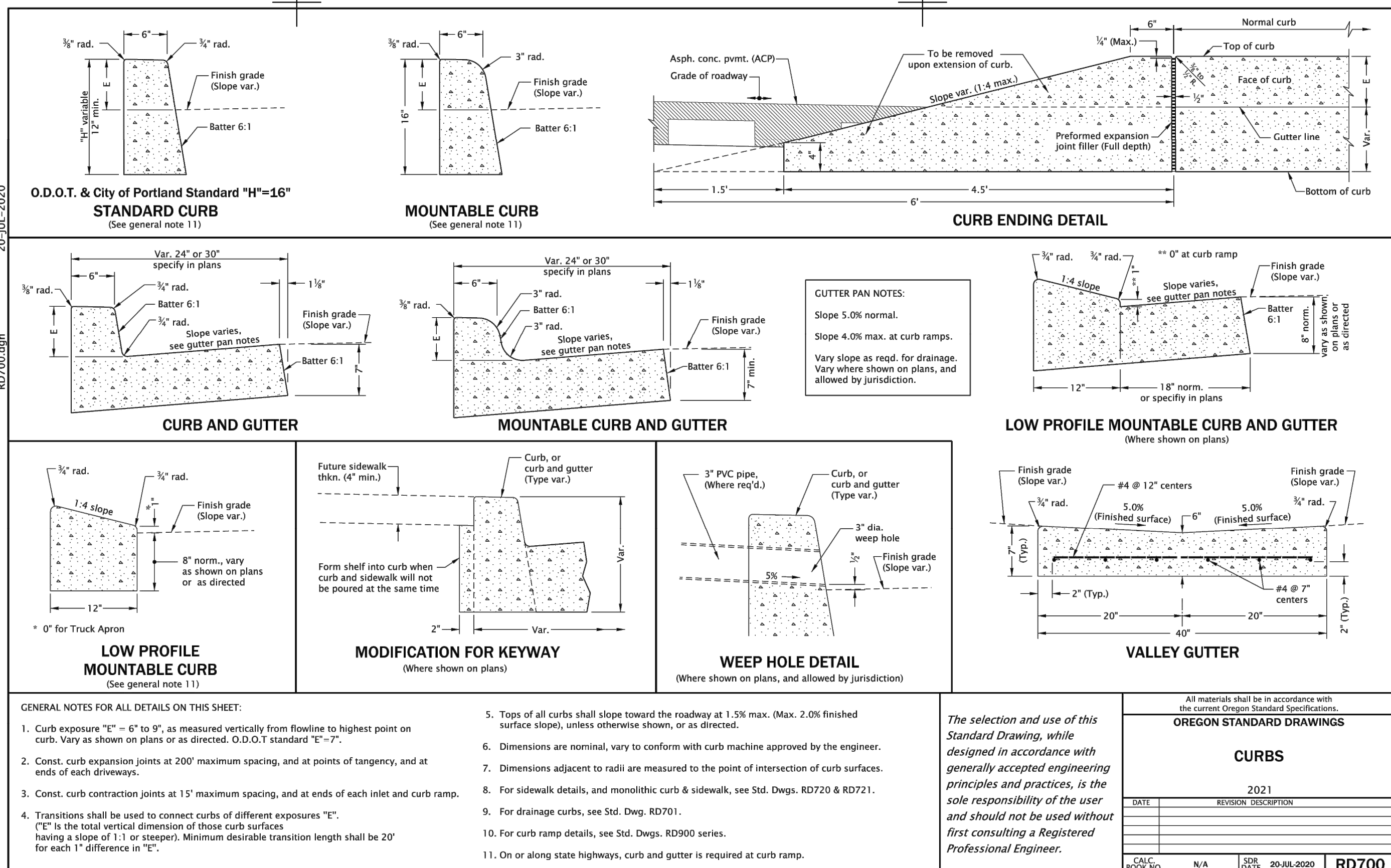
## 3 GRAVEL REPAIR

NOT TO SCALE



## 4 CONCRETE SIDEWALK REPAIR

NOT TO SCALE



All materials shall be in accordance with the current Oregon Standard Specifications.	
OREGON STANDARD DRAWINGS	
CURBS	
DATE	REVISION DESCRIPTION
2021	
CALC. BOOK NO.	SDR DATE
N/A	20-JUL-2020
	RD700

Effective Date: June 1, 2023 – November 30, 2023

## NATIVE GRASS SEED MIXTURE FOR MAINTENANCE USE

### OREGON COAST RANGE (CR) ECO-REGION

ELEVATION RANGE: 450-750 METERS (1,200 M PEAKS); MOISTURE RANGE: 65-100+ CM. / YEAR

SPECIES (SCI NAME)	SPECIES (COMMON NAME)	NATIVE HABIT (Y/N)	NOXIOUS (Y/N)	WILDLIFE VALUE (COVER/FORAGE)	MATURE HEIGHT (CM)	LIFE CYCLE	# PURE LIVE SEEDS/m2	SEEDING RATE GRAMS PLS/ha	SEEDING RATE LBS. PLS/ACRE
FESTUCA RUBRA	RED FESCUE	Y	N	C/F	30-60	P	125	1298	1.15 (45.8 OZ.)
ELYMUS GLAUCUS	WILD RYE	Y	N	C/F	60+	P	125	4730	4.22 (16.7 OZ.)
BROMUS CARINATUS	CALIFORNIA BROME	Y	N	C	30-60	P	75	5325	4.75 (188 OZ.)
AGROSTIS EXARATA	SPIKE GRASS	Y	N	C	30-50	P	100	113	0.10 (4.0 OZ.)
GLYCERIA OCCIDENTALIS	MANNAGRASS	Y	N	C/F	30-60	P	75	1332	1.2 (47.0 OZ.)
							500 SEEDS/m2 COVERAGE	12,800 GRAMS PLS/ha	11.4 LBS PLS/AC

NOMENCLATURE USE FOR SPECIES IS CONSISTENT WITH HITCHCOCK AND CRANQUIST 1973 AND/OR NAME USED IN SEED CATALOGUES.

RECOMMENDED SEEDING RATE: 12.8 KG/KA (11.4 LBS/ACRE)

### SUGGESTED SITE PREPARATION AND APPLICATION:

ON GRADES GREATER THAN 40% MAY BE APPLIED IN COMBINATION WITH SOIL-GUARD™ OR CELLULOSE MULCH WITH TACKIFIER THEN APPLY @ 200% OF RECOMMENDED SEEDING RATE. USE OF FERTILIZER IS NOT RECOMMENDED WITH THIS MIXTURE.

### TEMPORARY SEEDING DATES:

WEST OF THE CASCADES - YEAR ROUND

EAST OF THE CASCADES - OCTOBER 1 THROUGH APRIL 30

WITHIN TEMPORARY SEEDING DATES, USE TEMPORARY SEEDING TO TEMPORARILY STABILIZE DISTURBED SOILS AND SLOPES NOT AT FINISHED GRADE, WHICH WILL BE EXPOSED FOR 2 MONTHS OR LONGER BEFORE BEING RE-DISTURBED. AREAS NOT REQUIRING TEMPORARY SEEDING OR TEMPORARY MULCHING INCLUDE EMBANKMENT SUB-GRADE OR AREAS WHERE PAVEMENT WILL BE PLACED.

### PERMANENT SEEDING DATES:

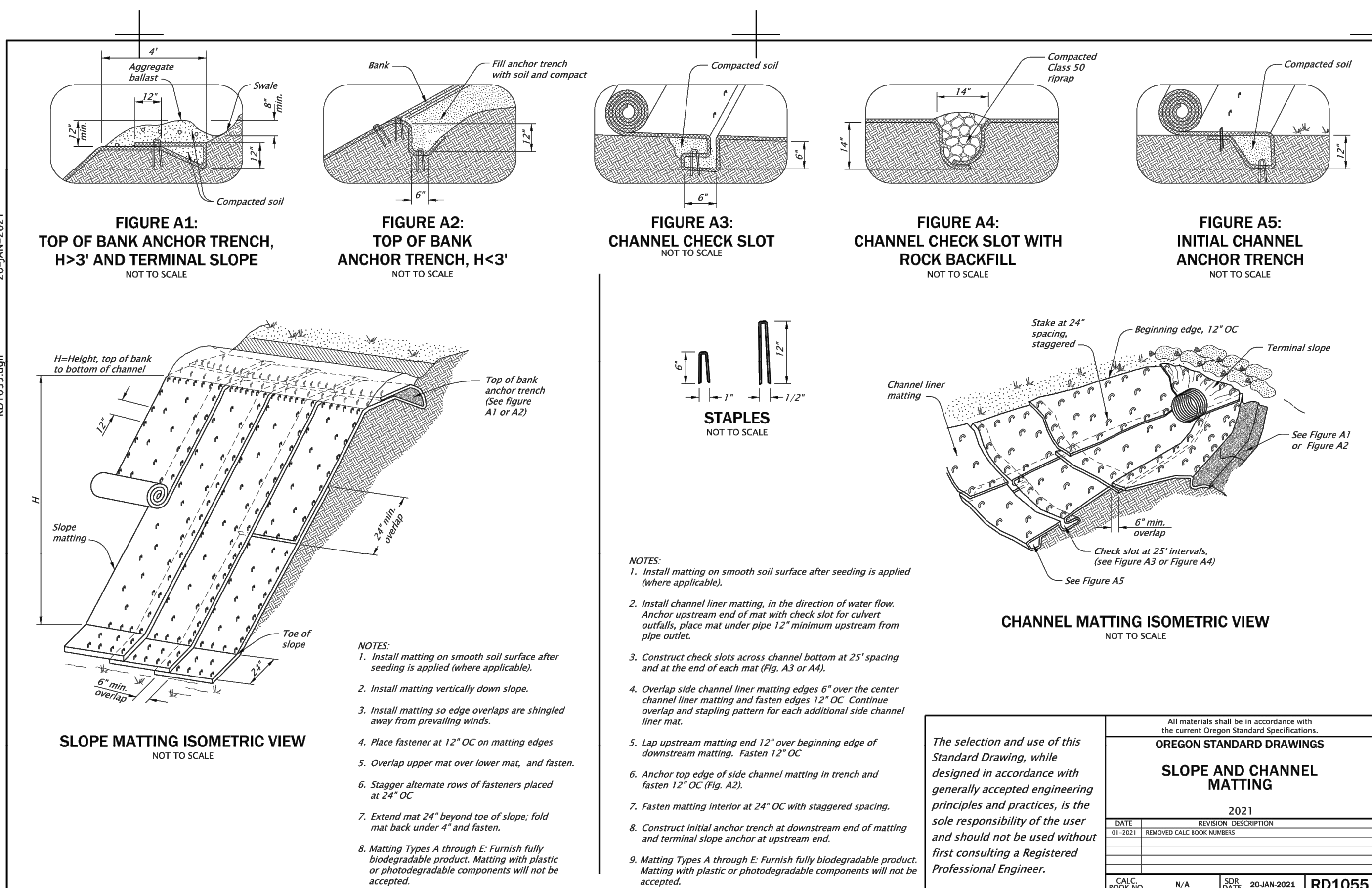
WEST OF THE CASCADES - AUGUST 1 THROUGH SEPTEMBER 15 AND FEBRUARY 1 THROUGH APRIL 30

EAST OF THE CASCADES - OCTOBER 1 THROUGH JANUARY 31

PERMANENT SEEDING WORK DONE OUTSIDE THE PERMANENT SEEDING DATES IN CONJUNCTION WITH PERMANENT MULCHING TO STABILIZE EXPOSED SOILS COMPLETED TO FINISHED GRADE SHALL BE CONSIDERED TEMPORARY UNTIL THREE WEEKS INTO THE NEXT PERMANENT SEEDING DATE. AT THAT TIME THE SEEDING WILL BE CONSIDERED PERMANENT IF AN ACCEPTABLE STAND OF GRASS, PROVIDING A UNIFORM COVERAGE AT 70% DENSITY OF THE SURROUNDING EXISTING GRASS AREAS, IS ACHIEVED. IF EARLY GERMINATION OCCURRED AND THE GRASS DIED, OR AN ACCEPTABLE STAND OF GRASS IS NOT ACHIEVED, RE-SEED AND FERTILIZE THE AREA ACCORDING TO THE PERMANENT SEEDING REQUIREMENTS.

### COMPATIBLE TEMPORARY\* EROSION CONTROL

CELLULOSE FIBER WITH TACKIFIER APPLIED WITH HYDRO-SEEDER.



- NOTES:
1. Install matting on smooth soil surface after seeding is applied (where applicable).
  2. Install channel liner matting, in the direction of water flow. Anchor upstream end of mat with check slot for culvert outfalls, place mat under pipe 12" minimum upstream from pipe outlet.
  3. Construct check slots across channel bottom at 25' spacing and at the end of each mat (Fig. A3 or A4).
  4. Overlap side channel liner matting edges 6" over the center channel liner matting and fasten edges 12" OC. Continue overlap and stapling pattern for each additional side channel liner mat.
  5. Lap upstream matting end 12" over beginning edge of downstream matting. Fasten 12" OC.
  6. Anchor top edge of side channel matting in trench and fasten 12" OC (Fig. A2).
  7. Fasten matting interior at 24" OC with staggered spacing.
  8. Construct initial anchor trench at downstream end of matting and terminal slope anchor at upstream end.
  9. Matting Types A through E: Furnish fully biodegradable product. Matting with plastic or photodegradable components will not be accepted.

All materials shall be in accordance with the current Oregon Standard Specifications.	
OREGON STANDARD DRAWINGS	
SLOPE AND CHANNEL MATTING	
DATE	REVISION DESCRIPTION
01-2021	
CALC. BOOK NO.	SDR DATE
N/A	20-JAN-2021
	RD1055

Effective Date: June 1, 2023 – November 30, 2023

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Revisions:

1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL SCALE DRAWING

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REGISTERED PROFESSIONAL ENGINEER  
60269PE  
OREGON  
March 9, 1993  
TRAVIS W. TORMANN  
EXPIRES: 06-30-24

**WATER RESILIENCY PROJECT**  
**PHASE 1 - SEISMIC IMPROVEMENTS**  
CITY OF CANNON BEACH, OR 97110

**ENGINEERING PLAN**  
Issue Date: 8/22/2023

Project Manager: TWT  
Drawn by: TJM  
Checked by: MRL

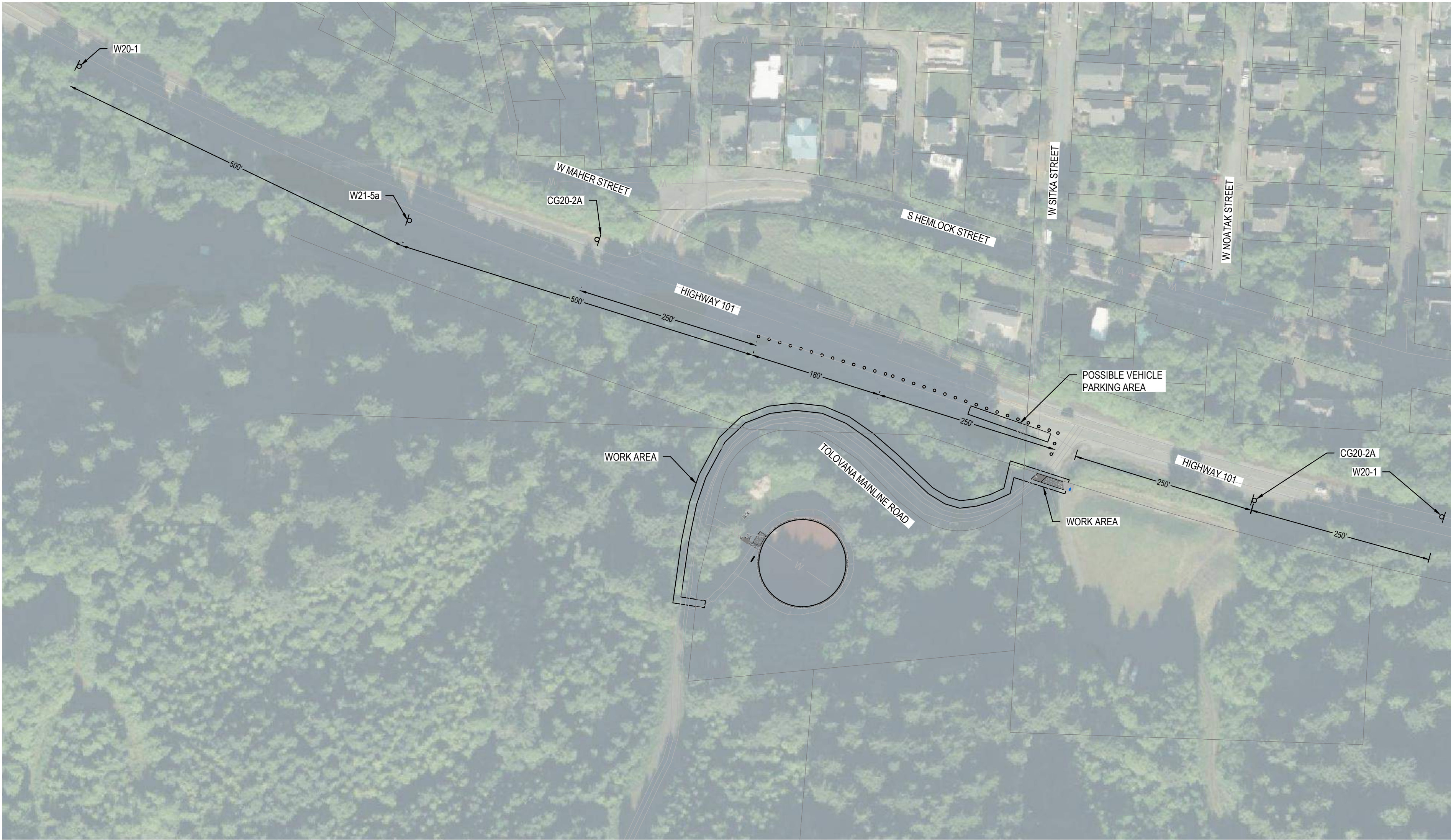
**SITE DETAILS**

**C191**

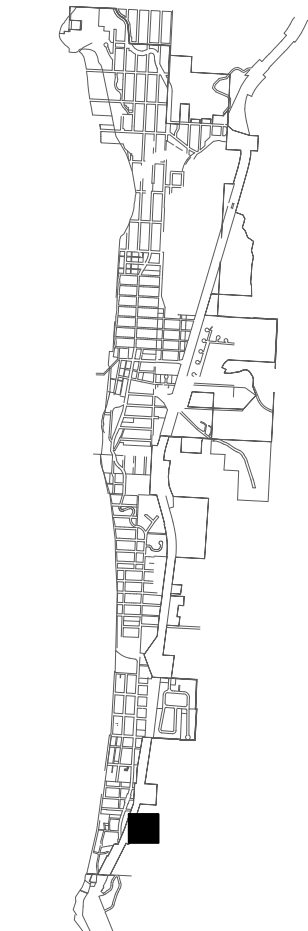
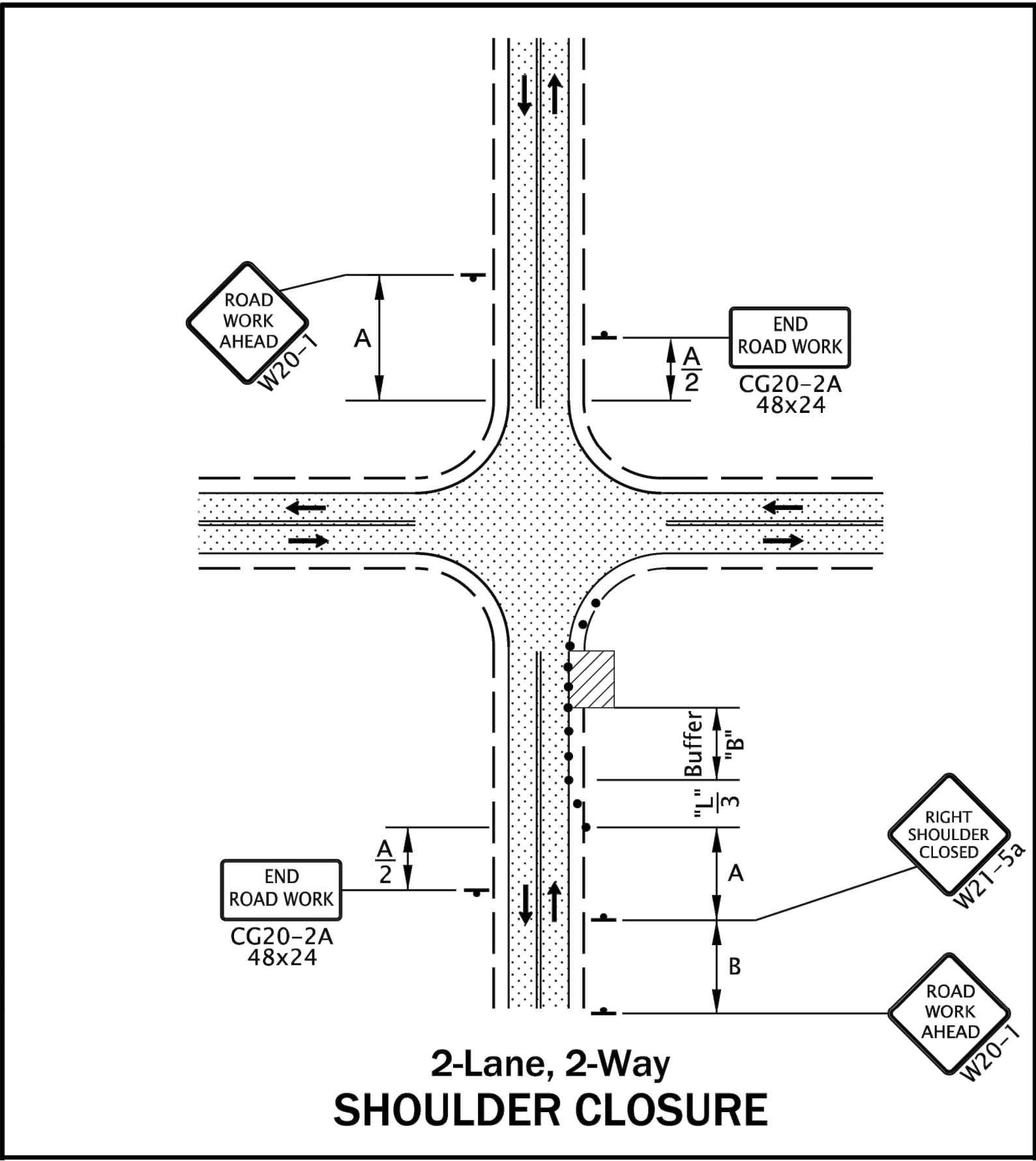
BID PLAN SET - ADDENDUM #1



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PLAN  
 SCALE: 1" = 100'



KEY MAP  
 Scale: NTS

Know what's **below**.  
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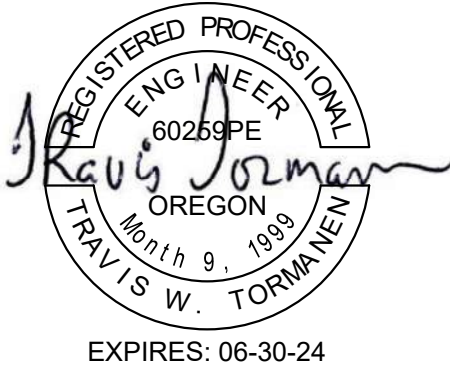
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Revisions:		
1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL  
 SCALE DRAWING

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WATER RESILIENCY PROJECT  
 PHASE 1 - SEISMIC IMPROVEMENTS  
 CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN  
 Issue Date: 8/22/2023

Project Manager TWT  
 Drawn by TJM  
 Checked by MRL

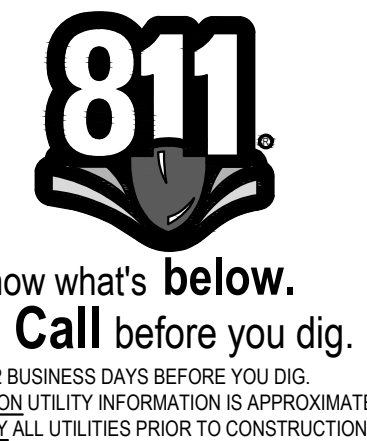
TRAFFIC CONTROL - TOLOVANA RESERVOIR

C290

- GENERAL NOTE:
- CONTRACTOR TO FOLLOW ALL REQUIREMENTS IN THE ODOT WORK ZONE TRAFFIC CONTROL GUIDELINES FOR MAINTENANCE OPERATIONS IN THE ODOT TRAFFIC CONTROL PLANS DESIGN MANUAL.
  - USE 3.5.1 20-MINUTE STOP OR HOLD ONLY WHEN CONSTRUCTION EQUIPMENT NEEDS TO BLOCK TRAFFIC TO TIE ROAD MATERIAL INTO EXISTING STREETS. THIS WILL BE CONSIDERED A TRAFFIC HOLD AND SHALL NOT LAST LONGER THEN 20 MINUTES.
  - ROADWAY DROP OFF GREATER THEN 2" ONLY ALLOWED FOR SHORT DURATION AND SHALL BE FILLED TO MEET TM800 AS SOON AS POSSIBLE FOR PUBLIC SAFETY.
  - CHANNELIZING DEVICES AND FLAGGING STATION TO BE REMOVED FROM DRIVE LANES DURING WEEKENDS, AFTER WEEK DAY WORKING HOURS, AND ANY PERIODS OF CONSTRUCTION WHERE NO WORK IS BEING DONE IN CITY, COUNTY, AND STATE.
  - SEE SHEETS C292 -C294 FOR TRAFFIC DETAILS.
  - HIGHWAY 101 SPEED LIMIT = 55 MPH.




PLOT DATE: 8/22/2023 4:37 PM - FILE: C:\Users\TJML\OneDrive - Windsor Engineers\G:\Projects\2020\20198.3 Cannon Beach Seismic Valves\02 Drawings\01 Working\04\_Final Streets\20198.3 Traffic.dwg



Revisions:		
1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL SCALE DRAWING



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**WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS**  
CITY OF CANNON BEACH, OR 97110

**ENGINEERING PLAN**  
Issue Date: 8/22/2023

Project Manager TJM  
Drawn by TJM  
Checked by MRL

**TRAFFIC CONTROL - ISOLATION VALVE 4**

**C291**

04-JAN-2022  
TM844.dgn

**Within Roadway  
SIDEWALK DIVERSION**

NOTES:

- Place or construct temp. sidewalk ramp, as needed.
- For roadways with a pre-construction posted speed of 40 mph or less.
- See inset "A" for Temp. Sidewalk Ramp details.
- "W" = 60", or, where 60" width cannot be maintained through the entire route, provide 48" min. width with 60" x 60" passing spaces every 200 ft.
- Use temporary ADA compliant surfaces to cross planter strips or other non-traversable surfaces.

INSET "A"  
(Temp. Sidewalk Ramp)

Place 4" (min.) of PCD along each side of existing sidewalk.

Additional Right of Way  
SIDEWALK DIVERSION

**SIDEWALK CLOSURE, MIDBLOCK**

GENERAL NOTES FOR ALL DETAILS:

- When closing or relocating crosswalks or other pedestrian facilities provide ADA compliant facilities. Include accessibility features consistent with existing pedestrian facilities by providing adequate slope transitions and surfacing.
- Provide non-slip, 60 inch minimum wide surface through entire pedestrian route. If not possible, provide 48" min. width with 60" x 60" passing spaces every 200 feet along the route.
- Only TCD for pedestrians are shown. Other devices may be necessary to control vehicular traffic.
- Stage work, as necessary, to provide a temporary pedestrian access route at all times. For roadways with no available detours, maintain one open sidewalk at all times.
- Minimize pedestrian out-of-direction travel.
- To be accompanied by Dwg. Nos. TM820 & TM821.

UNDER PEDESTRIAN TRAFFIC  
UNDER CONSTRUCTION  
PEDESTRIAN CHANNELIZING DEVICE (PCD)

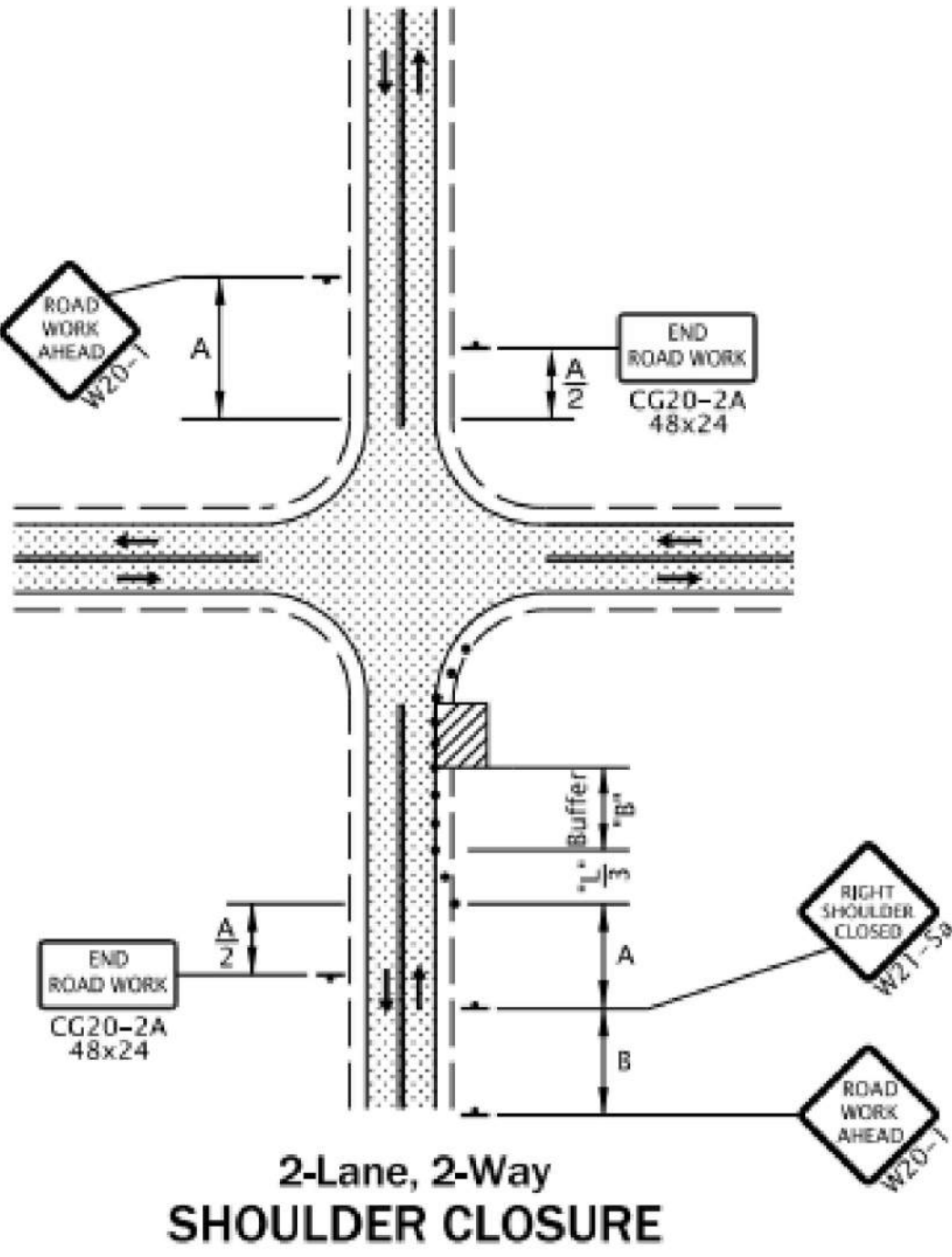
**SIDEWALK CLOSURE, CORNER**

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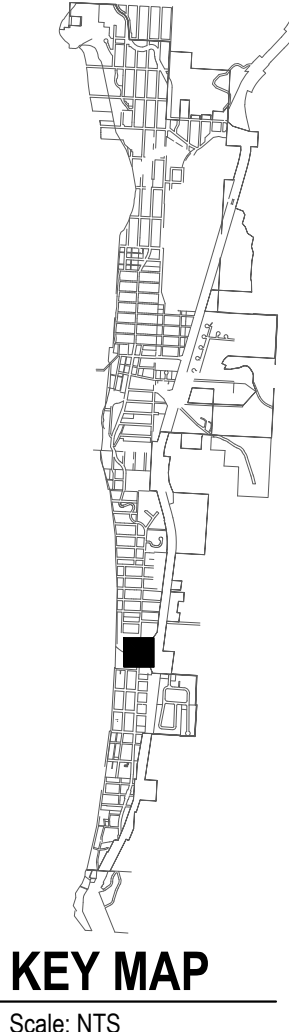
All materials shall be in accordance with the current Oregon Standard Specifications.		
OREGON STANDARD DRAWINGS		
TEMPORARY PEDESTRIAN ACCESSIBLE ROUTES		
2021		
DATE	REVISION	DESCRIPTION
01-2022		Revised notes for temporary sidewalk ramp.
CALC. BOOK NO.	N/A	SDR DATE: 04-JAN-2022
		<b>TM844</b>

NOTE:

- Limit work to one corner at a time to minimize pedestrian disruption and detour length.



- GENERAL NOTE:
- CONTRACTOR TO FOLLOW ALL REQUIREMENTS IN THE ODOT WORK ZONE TRAFFIC CONTROL GUIDELINES FOR MAINTENANCE OPERATIONS IN THE ODOT TRAFFIC CONTROL PLANS DESIGN MANUAL.
  - USE 3.5.1 20-MINUTE STOP OR HOLD ONLY WHEN CONSTRUCTION EQUIPMENT NEEDS TO BLOCK TRAFFIC TO TIE ROAD MATERIAL INTO EXISTING STREETS. THIS WILL BE CONSIDERED A TRAFFIC HOLD AND SHALL NOT LAST LONGER THEN 20 MINUTES.
  - ROADWAY DROP OFF GREATER THEN 2" ONLY ALLOWED FOR SHORT DURATION AND SHALL BE FILLED TO MEET TM800 AS SOON AS POSSIBLE FOR PUBLIC SAFETY.
  - CHANNELIZING DEVICES AND FLAGGING STATION TO BE REMOVED FROM DRIVE LANES DURING WEEKENDS, AFTER WEEK DAY WORKING HOURS, AND ANY PERIODS OF CONSTRUCTION WHERE NO WORK IS BEING DONE IN CITY, COUNTY, AND STATE.
  - SEE SHEETS C292 -C294 FOR TRAFFIC DETAILS.
  - STREET SPEED LIMIT = 30 MPH.













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811

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Revisions:

1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL  
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WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN  
Issue Date: 8/22/2023

Project Manager TWT  
Drawn by TJM  
Checked by MRL

TRAFFIC CONTROL DETAILS

C294

13-JAN-2023  
TM855.dgn

NOTES:

- Place Advance Flagger and additional signing when traffic queues extend beyond initial warning signing OR when sight distance is restricted.
- Relocate initial "ROAD WORK AHEAD" (W20-1) sign in advance of additional "BE PREPARED TO STOP" (W3-4) and Flagger Ahead (CW23-2) signs, as shown.
- Place additional Tubular Markers for Flagger and Advance Flagger Stations according to FLAGGER STATION DELINEATION detail.

ADVANCE FLAGGER FOR EXTENDED TRAFFIC QUEUES

NOTE:

- When using pilot cars with flaggers to control traffic during paving operations, the Tubular Marker spacing along centerline may be increased to 200' within the Activity Area, as shown or as directed.
- Include "WAIT FOR FLAGGER" (CR4-23) signs mounted on Type II Barricade located approx. 50' before each Flagger.
- Coordinate and control pedestrians movements through the TPAR using Flaggers, other TCM, or as directed. When the existing shoulder is greater than or equal to 4' wide, provide a minimum of 4' of width for the TPAR.

2-Lane, 2-Way Roadway  
ONE LANE CLOSURE

GENERAL NOTES FOR ALL DETAILS:

- This drawing is only intended to be used where an Automated Flagger Assistance Device (AFAD) cannot be utilized.
- The "FLAGGER" (CW23-2) symbol sign shall be used only in conjunction with the "BE PREPARED TO STOP" (W3-4) sign.
- Cover existing passing zone signing, as directed.
- Install temporary striping as required.
- To determine Taper Length ("L") and Buffer Length ("B"), use the "MINIMUM LENGTHS TABLE" shown on Dwg. No. TM800.
- To determine sign spacing A, B, and C, use "TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE" on Dwg. No. TM800.
- Install a "BICYCLES ON ROADWAY" (CW11-1) sign in advance of the closure when a bike lane is closed, or when the shoulder is closed and bikes are expected.
- At night, flagger stations shall be illuminated according to the FLAGGER STATION LIGHTING DELINEATION detail on Dwg No. TM800.
- To be accompanied by Dwg. Nos. TM820 & TM821.

\*\*\*\*\* 28" Tubular Markers on 10' max. spacing around intersection radii.

• • • • • 28" Tubular Markers on 20' max. spacing for flagger tapers and stations

• • • 28" Tubular Markers See TCD Spacing Table on TM800 for max. spacing.

UNDER TRAFFIC

UNDER CONSTRUCTION

NOTE:

- Additional Traffic Control Measures (TCM) may be required for all legs of the intersection

2-Lane, 2-Way Roadway  
ONE LANE CLOSURE, INTERSECTION

NOTE:

- Use a minimum of 3 tubular markers in shoulder taper on 10' spacing for flagger station delineation.

FLAGGER STATION DELINEATION

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All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

2-LANE, 2-WAY ROADWAYS

2021

DATE	REVISION DESCRIPTION

CALC. BOOK NO. N/A

SDR DATE 13-JAN-2023

TM855

Effective Date: June 1, 2023 – November 30, 2023

BID PLAN SET - ADDENDUM #1



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20-JUL-2020

RD250.dgn

THRUST BLOCKING

CONCRETE THRUST BLOCKING (HORIZONTAL)						
PIPE DIA.	Table Pressure PSI	Thrust (T) at fittings in Pounds				
		A	B	C	D	E
4"	250	3035	4320	2315	1215	610
6"	250	6860	9735	5215	2720	1375
8"	250	12185	17310	9265	4835	2430
10"	250	19045	27045	14480	7560	3800
12"	250	27405	38940	20840	10880	5465
14"	250	37320	53010	28370	14815	7445
16"	250	48740	69245	37050	19360	9735

Soil Type	Soil Bearing Capacity (B) in PSF
Muck, peat, etc.	0
Soft Clay	1000
Sand	2000
Sand and gravel	3000
Sand and gravel cemented with clay	4000
Hard shale	10,000

THRUST BLOCK BEARING AREA EQUATION

NOTE: WHEN THRUST BLOCK BEARING AREA IS NOT SPECIFIED ON THE PLANS OR DETERMINED BY THE ENGINEER, USE THE FOLLOWING PROCEDURE TO DETERMINE REQUIRED BEARING AREA.

1. Determine thrust (T) for type of fitting or joint and size of pipe from Table A.

2. Determine Design (Test) Pressure from Standard Specifications or Special Provisions.

3. Determine Table Pressure from Table A.

4. Determine Soil Bearing Capacity (B) of soil from Table B.

5. Determine required bearing area (A) in sq. ft. as follows:

Thrust Block Bearing Area

$$A = \left( \frac{T}{B} \right) \left( \frac{\text{Design (Test) Pressure}}{\text{Table Pressure}} \right)$$

Example: Design (Test) Pressure = 150 PSI  
Pipe = 14"  
Fitting = Tee  
Soil = Sand

From Table A, T = 37320  
From Table B, B = 2000

$$A = \left( \frac{37320}{2000} \right) \left( \frac{150}{250} \right) = 11.2 \text{ sq.ft.}$$

TABLE C

CONCRETE BLOCKING FOR CONVEX VERTICAL BENDS

DIMENSION TABLE							
PIPE DIA. in.	Table Pressure PSI	Bend Angle (deg)	Concrete Volume (cy)	Cube Size (ft)	Stirrup Dia. (in)	Stirrup Embmt. (in)	Stirrup Bar #
4"	250	11.25	0.21	1.8	⅜	17	5
		22.5	0.43	2.3			
		45	0.77	2.8			
6"	250	11.25	0.48	2.4	⅜	17	5
		22.5	0.95	3.0			
		45	1.79	3.6			
8"	250	11.25	0.86	2.9	⅜	17	5
		22.5	1.65	3.5			
		45	3.22	4.4			
10"	250	11.25	1.39	3.3	⅜	17	5
		22.5	2.62	4.1			
		45	4.97	4.1			
12"	250	11.25	1.94	3.7	⅜	17	5
		22.5	3.91	4.7			
		45	6.89	5.7			
14"	250	11.25	2.62	4.1	⅜	17	5
		22.5	5.26	5.2			
		45	9.70	6.4			
16"	250	11.25	3.44	4.5	⅜	17	5
		22.5	6.89	5.7			
		45	12.63	7.0			

TEE

CROSS

STRADDLE

BEND

CROSS

TEE

CONVEX VERTICAL BEND (See Table C)

WYE

Stirrup (Typ.)

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

THRUST BLOCKING

2021

DATE

REVISION DESCRIPTION

CALC. BOOK NO. N/A

SDR DATE 28-JUL-2017

RD250

Effective Date: June 1, 2023 – November 30, 2023

20-JUL-2020

RD254.dgn

HYDRANT ASSEMBLY

Diagram showing a hydrant assembly with labels: Valve box (Install valve box extension & operator extension, as reqd.), Sidewalk, Breakaway flange, Wrap hydrant barrel with 2 layers of polyethylene film where in contact with concrete, 2"-8" above concrete pad or surrounding datum, Depth of bury as reqd., Concrete thrust block, 6" gate valve mechanical joint to flange, 6" HDPE PIPE TO HYDRANT, Mechanical joint x flange hydrant tee or tapping sleeve, Min. ½ cubic yard drain rock to 6" above drain hole. Optional: wrap drain rock in geotextile fabric.

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. When pipe is shorter than 18', no joints allowed. Use mechanical joint retainer glands. Two ½" galvanized tie rods may be used in lieu of thrust blocks for installations less than 18' long. Coat the rods with two coats of coal tar epoxy.

2. When pipe is longer than 18' retainer glands not required.

3. There shall be a minimum of 18" horizontal clearance around hydrant.

4. When placed adjacent to curb, hydrant port shall be 24" from face of curb.

5. Concrete thrust blocks shall be constructed as per thrust blocking Std. Dwg. RD250. Do not block drain holes.

6. Extensions required for hydrant systems shall be installed to the manufacturer's specifications.

7. Hydrants shall be placed to provide a minimum of 5' clearance from driveways, poles, and other obstructions.

8. Hydrant pumper port shall face direction of access.

9. Set hydrant plumb in all directions.

10. See project plans for details not shown.

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All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

HYDRANT INSTALLATION

2021

DATE

REVISION DESCRIPTION

CALC. BOOK NO. N/A

SDR DATE 28-JUL-2017

RD254

Effective Date: June 1, 2023 – November 30, 2023

20-JUL-2020

RD258.dgn

COVER PLAN

Diagram showing a cover plan with labels: Wrought iron rod, WATER.

VALVE BOX ASSEMBLY DETAIL

Diagram showing a valve box assembly detail with labels: Finish grade, Sliding type cast iron valve box and cover, Pavement or ground, PVC valve box extension, Operator extension (See detail this sheet), ¾"-0 compacted aggregate base (4" thick) or conc. block, (See general note 4).

VALVE BOX EXTENSION SECTION

Diagram showing a valve box extension section with labels: Cast iron cover, Raised lettering, Finish grade, Cast iron valve box (6" dia. min.), PVC valve box extension, 2" square operator nut welded to pipe shaft, Operator extension 1½" Schedule 80 pipe shaft, Rock guard, ½" steel plate welded to pipe shaft diameter - valve box extension inside diameter minus ½", Flat bar 2½"x2½"x½", ¾"x¾" square head cupped capscrews, 3"x3"x½"x2" long steel square tube welded all around to flat bar, Gravel bedding.

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. Valve box not to rest on operating assembly.

2. Operator extension required when valve nut is deeper than 4" from finish grade.

3. Center valve box on axis of operator nut.

4. Valves 12" and smaller shall be provided with compacted aggr. base on undisturbed ground. Valves greater than 12" shall be installed on precast concrete block, (4" thick).

5. Welds shall be minimum ¼" all around.

6. Hot dip galvanize operator extension after fabrication.

7. Casting shall meet H20 load requirement.

8. Provide concrete or asphalt pad (24" square, 4" thick), when required.

9. See project plans for details not shown.

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OREGON STANDARD DRAWINGS

VALVE BOX AND OPERATOR EXTENSION

2021

DATE

REVISION DESCRIPTION

CALC. BOOK NO. N/A

SDR DATE 28-JUL-2017

RD258

Effective Date: June 1, 2023 – November 30, 2023

20-JUL-2020

RD262.dgn

TYPICAL MAIN DEAD-END BLOWOFF ASSEMBLY

Diagram showing a typical main dead-end blowoff assembly with labels: Valve box (Typical), 2" iron body screwed gate valve with 2" standard operating nut, Gravel bedding (Typ.), Notch PVC riser, 2" galvanized steel riser, 2" galvanized steel pipe, 2" malleable 90 deg. elbow with two ½" dia. drain holes and 1 cubic ft. of drain rock, Plug or cap with 2" I.P.T. tap, for eccentric tapped plugs, locate tap at lowest point of pipe, Water main, Thrust block.

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. Wrap main and fittings in thrust block zone with two layers of polyethylene film to facilitate future removal.

2. In lieu of concrete thrust block, restrain pipe or pour concrete straddle block.

3. See project plans for details not shown.

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All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

TYPICAL MAIN DEAD-END BLOWOFF ASSEMBLY

2021

DATE

REVISION DESCRIPTION

CALC. BOOK NO. N/A

SDR DATE 28-JUL-2017

RD262

Effective Date: June 1, 2023 – November 30, 2023

811

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Revisions:		
1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL SCALE DRAWING

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WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN  
Issue Date: 8/22/2023

Project Manager TWT  
Drawn by TJM  
Checked by MRL

WATER DETAILS

C590

BID PLAN SET - ADDENDUM #1



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Revisions:



1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL  
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WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN

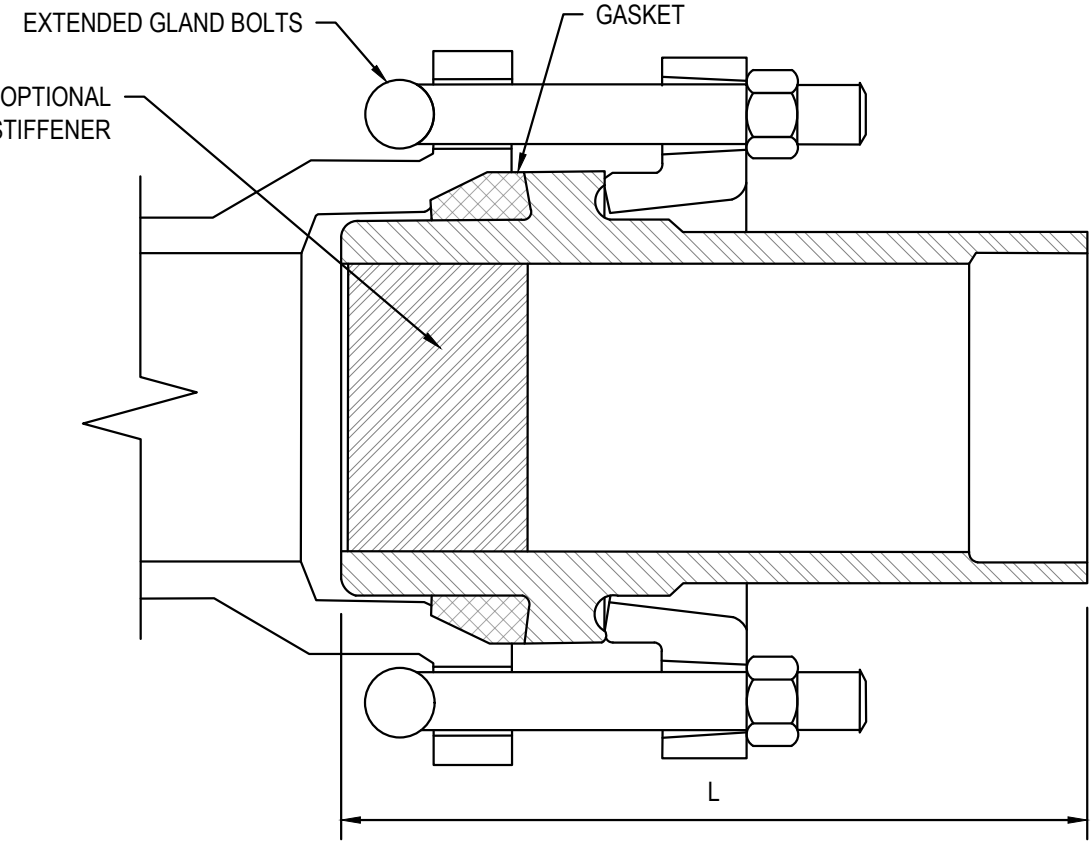
Issue Date: 8/22/2023

Project Manager TWT  
Drawn by TJM  
Checked by MRL

WATER DETAILS

C591

1 MJ ADAPTER DETAIL  
NOT TO SCALE

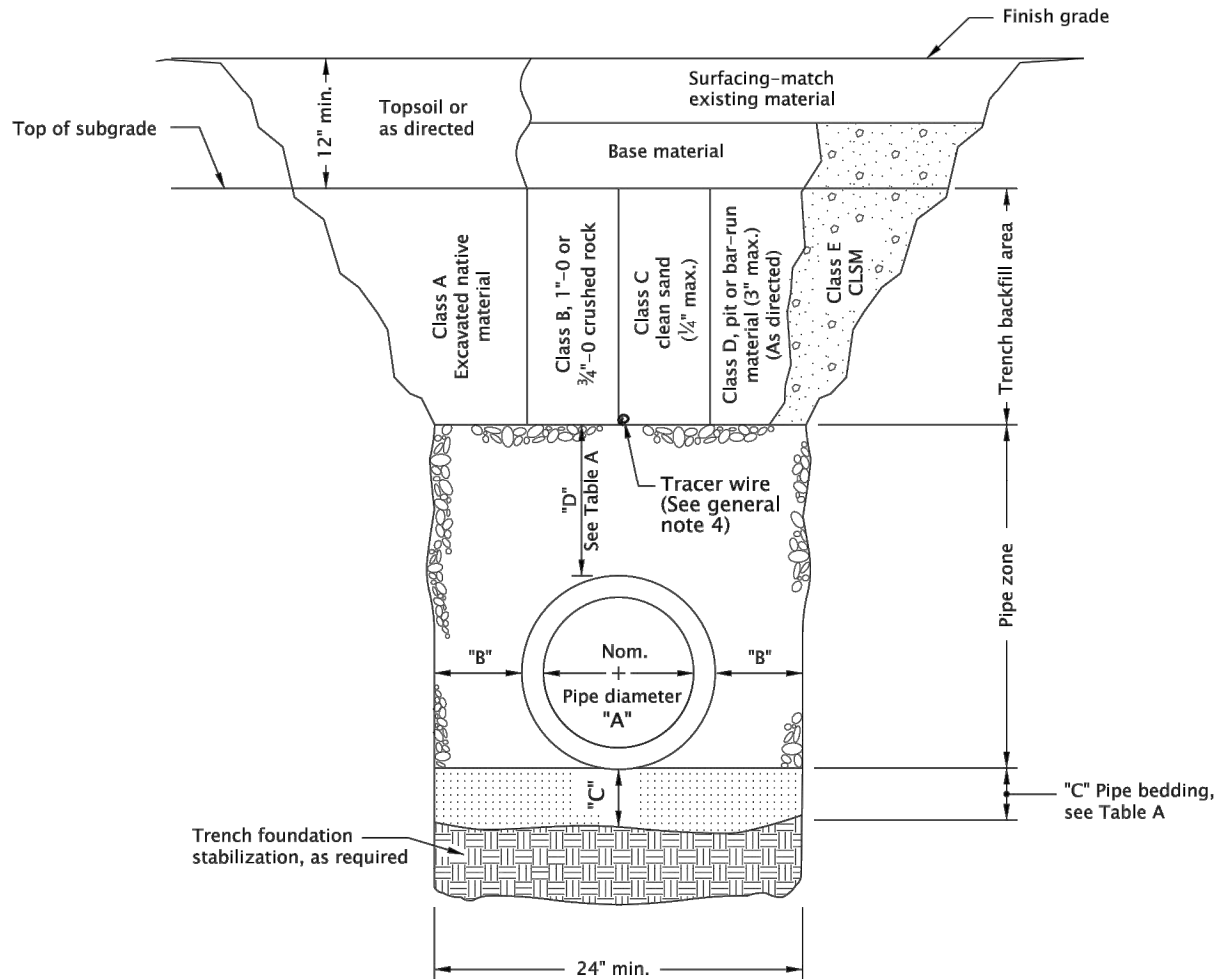


RD300.dgn 20-JUL-2020

TABLE A

"A" (in)	"B" (in)	"C" (in)	"D" (in)
4	10	4	8
6	10	4	8
8	10	6	10
10	10	6	10
12	12	6	10
15	12	6	10
18	16	6	12
21	16	6	12
24	18	6	12
30	18	6	12
36	24	6	14
42	24	6	14
48	24	6	14
54	24	6	14
60	24	6	14
66	24	6	14
72	24	6	14

For pipes over 72" diameter,  
see general note 3.



MULTIPLE INSTALLATIONS	
DIAMETER	MIN. SPACE BETWEEN PIPES
Up to 48"	24"
48" to 72"	One half (1/2) dia. of pipe

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

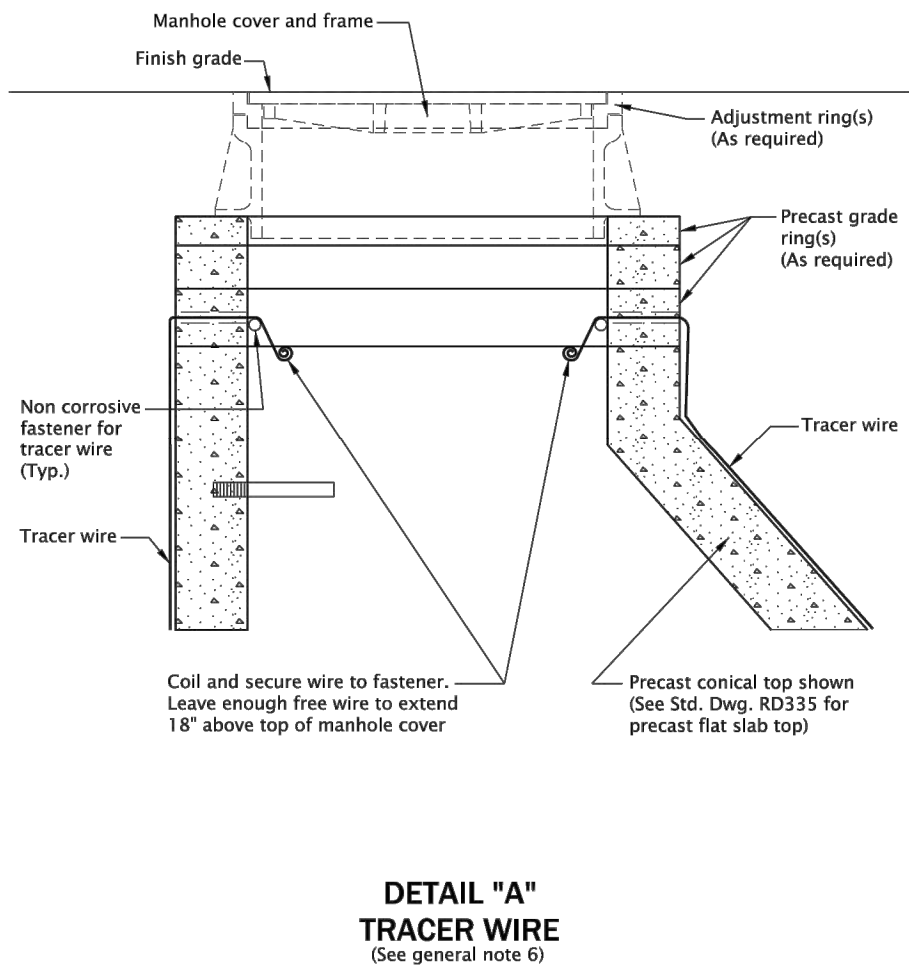
1. Surfacing of paved areas shall comply with street cut Std. Dwg. RD302.
2. For pipe installation in embankment areas where the trench method will not be used and the pipe is  $\geq 36"$  diameter, increase dimension "B" to nominal pipe diameter.
3. Pipes over 72" diameter are structures, and are not applicable to this drawing.
4. See Std. Dwg. RD336 for tracer wire details TRACER WIRE REQUIRED

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

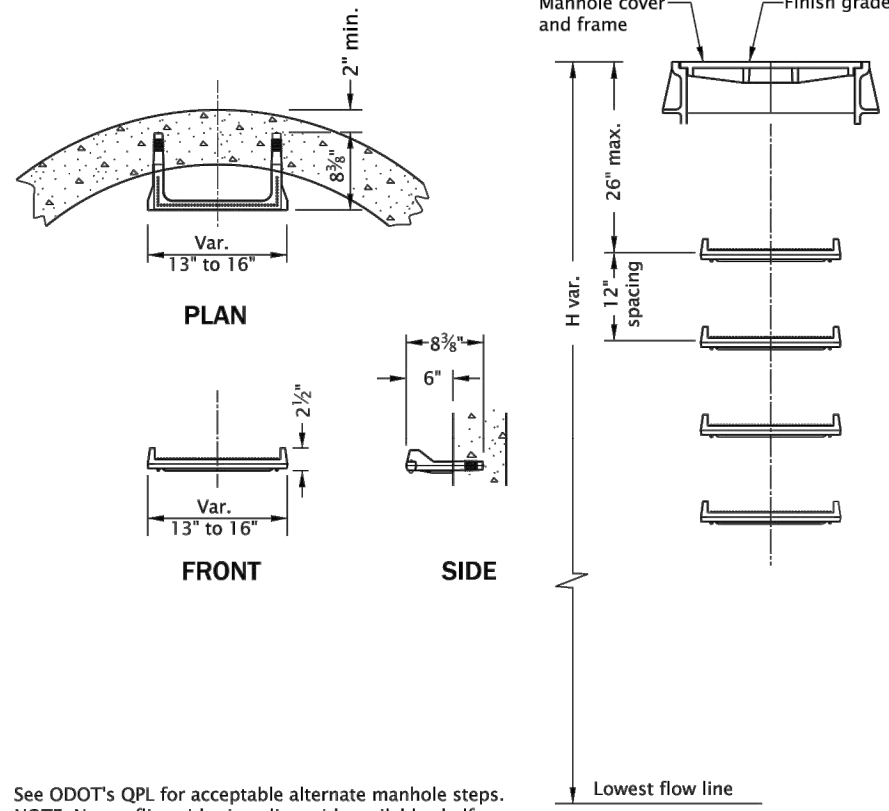
All materials shall be in accordance with the current Oregon Standard Specifications.	
OREGON STANDARD DRAWINGS	
TRENCH BACKFILL, BEDDING, PIPE ZONE AND MULTIPLE INSTALLATIONS	
2021	
DATE	REVISION DESCRIPTION
CALC. BOOK NO. N/A	SDR DATE 14-JUL-2014
	RD300

Effective Date: June 1, 2023 – November 30, 2023

20-JUL-2020 RD300.dgn



DETAIL "A"  
TRACER WIRE  
(See general note 6)



DETAIL "B"  
MANHOLE STEPS  
(See general note 7)

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. All precast products shall conform to requirements of ASTM C478. When H=42" or less omit steps. See Detail "C" for alignment of steps, and manhole cover and frame.
2. Standard precast manhole section diameter shall be 48". Use 42" if specified by the Engineer.
3. See Std. Dwg. RD345 for pipe to manhole connections.
4. See Std. Dwg. RD344 for manhole base section.
5. Adjust 24" maximum.
6. All connecting pipes shall have a tracer wire, or approved alternate. Place tracer wire directly over pipe centerline and on top of the pipe zone material.

7. Steps shall conform to requirements of ASTM C478. When H=42" or less omit steps. See Detail "C" for alignment of steps, and manhole cover and frame.
8. See Std. Dwg. RD335 for details not shown.
9. See Std. Dwg. RD356 for manhole covers and frames, manhole adjustment rings, etc.
10. Max. pipe diameter varies with pipe material.
11. See Std. Dwg. RD342 for shallow manholes.
12. See project plans for details not shown.

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.	
OREGON STANDARD DRAWINGS	
STANDARD MANHOLE DETAILS	
2021	
DATE	REVISION DESCRIPTION
CALC. BOOK NO. N/A	SDR DATE 16-JAN-2019
	RD336

Effective Date: June 1, 2023 – November 30, 2023

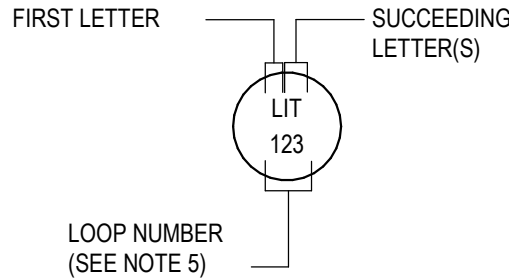
BID PLAN SET - ADDENDUM #1



PLOT DATE: 11/16/2021 9:53 AM - FILE: C:\Users\jld@OneDrive - Windsor Engineers\20198.3\_Cannon Beach Seismic Valves\02\_Drawings\00\_BIM\360 files\CAD Lines\20198-3\_BRDR.dwg

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INSTRUMENT CALLOUTS AND TAG SCHEMATIC



**TYPICAL TAG FORMAT**  
LIT-123 INSTRUMENT TAG NUMBER  
LIT FUNCTIONAL IDENTIFICATION  
L FIRST LETTER  
IT SUCCEEDING LETTER(S)  
123 LOOP NUMBER

**EXPANDED TAG FORMAT**  
20LIT-123A INSTRUMENT TAG NUMBER  
20 AREA NUMBER  
LIT FUNCTIONAL IDENTIFICATION  
L FIRST LETTER  
IT SUCCEEDING LETTER(S)  
123 LOOP NUMBER  
A OPTIONAL SUFFIX

FIRST LETTER (1)		SUCCEEDING LETTERS (15)			
MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER	
A ANALYSIS (2)(3)(4)		ALARM			
B BURNER, COMBUSTION (2)		USER'S CHOICE (5)	USER'S CHOICE (5)	USER'S CHOICE (5)	
C USER'S CHOICE (3a)(5)			CONTROL (23a)(23e)	CLOSED (27b)	
D DENSITY	DIFFERENTIAL	DAMPER			
E VOLTAGE (2)		SENSOR (PRIMARY ELEMENT)			
F FLOW, FLOW RATE (2)	RATIO (FRACTION) (2b)				
G USER'S CHOICE		GLASS, VIEWING DEVICE (16)			
H HAND (2)				HIGH (27A)(28A)(29)	
I CURRENT (ELECTRICAL)(2)		INDICATE (17)			
J POWER (2)		SCAN (18)			
K TIME, TIME SCHEDULE (2)	TIME RATE OF CHANGE (12c)(13)		CONTROL STATION (24)		
L LEVEL (2)		LIGHT (19)		LOW (27b)(28)(29)	
M MOISTURE	MOMENTARY			MIDDLE, INTERMEDIATE	
N USER'S CHOICE (5)		USER'S CHOICE (5)	USER'S CHOICE (5)	USER'S CHOICE (5)	
O USER'S CHOICE (5)		ORIFICE, RESTRICTION		OPEN (27a)	
P PRESSURE, VACUUM (2)		POINT (TEST) CONNECTION			
Q QUANTITY (2)	INTEGRATE, TOTALIZE	INTEGRATE, TOTALIZE			
R RADIATION (2)		RECORD (20)		RUN	
S SPEED, FREQUENCY (2)	SAFETY (14)		SWITCH (23b)	STOP	
T TEMPERATURE (2)			TRANSMIT		
U MULTI VARIABLE (2)(6)		MULTIFUNCTION (21)	MULTIFUNCTION (21)	MULTIFUNCTION (21)	
V VIBRATION, MECHANICAL ANALYSIS (2)(4)(7)			VALVE, DAMPER, OR LOUVER (23c)(23e)		
W WEIGHT, FORCE (2)		WELL, PROBE			
X UNCLASSIFIED (8)	X AXIS (11c)	ACCESSORY DEVICES (22) UNCLASSIFIED (8)	UNCLASSIFIED (8)	UNCLASSIFIED (8)	
Y EVENT, STATE, PRESENCE (2)(9)	Y AXIS (11c)		RELAY, COMPUTE, CONVERT		
Z POSITION, DIMENSION (2)	Z AXIS (11c), SAFETY INSTRUMENT SYSTEM (30)		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT		

NOTE: NUMBERS IN PARANTHESES REFER TO EXPLANATORY NOTES IN ANSI/ISA-5.1-2009, SECTION 4.2

FUNCTION DESIGNATIONS

SWITCHES

A/M AUTO-MANUAL  
ESTOP EMERGENCY STOP  
F-R FORWARD-REVERSE  
H/A HAND-OFF-AUTO  
H/R HAND-OFF-REMOTE  
L/R LOCAL-REMOTE  
LOR LOCAL-OFF-REMOTE  
O/C OPEN-CLOSE  
OCA OPEN-CLOSE-AUTO  
O-O ON-OFF  
OSC OPEN-STOP-CLOSE  
POT POTENTIOMETER  
RST RESET  
S-S START-STOP

ANALYTICAL INSTRUMENTS

ALK ALKALINITY  
CL2 CHLORINE CONCENTRATION  
COMB COMBUSTIBLE GAS  
COND CONDUCTIVITY  
DO DISSOLVED OXYGEN  
H2S HYDROGEN SULFIDE  
LEL LOWER EXPLOSIVE LIMIT  
NO3 NITRATE  
O2 OXYGEN CONCENTRATION  
O3 OZONE  
ORP OXIDATION REDUCTION POTENTIAL  
PH HYDROGEN ION CONCENTRATION  
SO2 SULFUR DIOXIDE  
TH TOTAL HARDNESS  
TURB TURBIDITY  
UV ULTRAVIOLET TRANSMITTANCE  
OR INTENSITY  
\* NOTED AS TOTAL OR FREE

NOTES

- SEE THE GENERAL AND ELECTRICAL DISCIPLINE DRAWINGS FOR ADDITIONAL SYMBOLS AND ABBREVIATIONS.
- SEE THE GENERAL DISCIPLINE DRAWINGS FOR EQUIPMENT DESIGNATIONS AND PROCESS IDENTIFICATION CODES.
- THIS IS A GENERALIZED LEGEND SHEET. SEE ALSO ISA S5.1, S5.3 AND S7.3.
- FOR INSTRUMENT AIR QUALITY STANDARDS, REFER TO ISA RP7.7.
- SEE SPECIFICATION 40 FOR COMPLETE DETAILS OF LOOP DRAWING AND INTERCONNECTION DRAWING SUBMITTAL REQUIREMENTS.
- POWER SUPPLIES FOR INSTRUMENT LOOPS OR SYSTEMS SHALL BE PROVIDED BY THE INSTRUMENTATION SUPPLIER TO MEET THE VOLTAGE AND CURRENT REQUIREMENTS OF THE COMPONENTS IN EACH LOOP OR SYSTEM.
- FIELD SWITCHES FOR ELECTRICAL MOTOR OPERATION SHALL BE SUPPLIED BY THE ELECTRICAL CONTRACTOR UNLESS THEY ARE PART OF A VENDOR PACKAGE.

LINE SYMBOLOGY

— O — — O — — O — — O — — DATA LINK (SOFTWARE) CONNECTION

↑ DISCRETE INPUT

▽ DISCRETE OUTPUT

↑ ANALOG INPUT

▽ ANALOG OUTPUT

RECEPTACLE SYMBOLS LEGEND

- ⌀ SINGLE RECEPTACLE
- ⌀ DUPLEX RECEPTACLE
- ⌀ DOUBLE DUPLEX RECEPTACLE
- ⌀ DUPLEX RECEPTACLE ABOVE COUNTER
- ⌀ DOUBLE DUPLEX RECEPTACLE ABOVE COUNTER
- ⌀ DUPLEX RECEPTACLE W/ GFCI
- ⌀ DOUBLE DUPLEX RECEPTACLE W/ GFCI
- ⌀ DUPLEX RECEPTACLE W/ GFCI ABOVE COUNTER
- ⌀ DOUBLE DUPLEX RECEPTACLE W/ GFCI ABOVE COUNTER
- ⌀ DUPLEX RECEPTACLE ON CEILING
- ⌀ DOUBLE DUPLEX RECEPTACLE ON CEILING
- ⌀ DUPLEX RECEPTACLE, HALF SWITCHED
- ⌀ DUPLEX RECEPTACLE, FULL SWITCHED
- ⌀ SPECIAL PURPOSE RECEPTACLE. VERIFY NEMA CONFIGURATION
- ⌀ SPECIAL PURPOSE RECEPTACLE ON CEILING, VERIFY NEMA CONFIGURATION
- ⌀ RECEPTACLE W/ CEILING CORD DROP
- ⌀ FLOORBOX W/ DUPLEX RECEPTACLE
- ⌀ FLOORBOX W/ DOUBLE DUPLEX RECEPTACLE
- ⌀ COMBINATION FLOORBOX W/ POWER AND LOW VOLTAGE

CONNECTIONS/EQUIPMENT SYMBOLS LEGEND

- ⌀ EQUIPMENT ELECTRICAL CONNECTION
- ⌀ MOTOR CONNECTION
- ⌀ MOTOR RATED SWITCH W/ THERMAL OVERLOAD
- ⌀ DISCONNECT SWITCH
- [F] FUSED DISCONNECT SWITCH
- (J) JUNCTION BOX
- (T) LINE VOLTAGE THERMOSTAT
- ⌀ UTILITY METER
- ⌀ EQUIPMENT CABINET AS NOTED
- ⌀ ELECTRIC WALL HEATER
- ⌀ BRANCH PANEL RECESSED
- ⌀ BRANCH PANEL SURFACE
- T TRANSFORMER
- ⌀ SWITCHBOARD

ONE-LINE SYMBOLS LEGEND

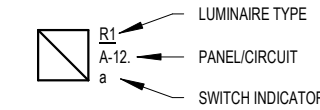
- ⌀ CIRCUIT BREAKER
- ⌀ BUS DUCT PLUG-IN CIRCUIT BREAKER
- ⌀ FUSED SWITCH
- ⌀ CURRENT TRANSFORMERS
- ⌀ GROUND CONNECTION
- ⌀ CONDUIT CONTINUATION
- ⌀ CONDUIT CAP
- ⌀ FEEDER CALLOUT
- ⌀ SURGE PROTECTIVE DEVICE
- ⌀ AUTOMATIC TRANSFER SWITCH
- ⌀ TRANSFORMER
- ⌀ ELECTRICITY METER
- ⌀ GENERATOR

LIGHTING SYMBOLS LEGEND

NOTE: SHADEN LUMINAIRE INDICATES EMERGENCY POWER

- ⌀ RECESSED DOWNLIGHT - ROUND/SQUARE
- ⌀ SURFACE DOWNLIGHT - ROUND/SQUARE
- ⌀ PENDANT OR FLUSH MOUNT LUMINAIRE
- ⌀ LINEAR RECESSED LUMINAIRE
- ⌀ LINEAR SURFACE LUMINAIRE
- ⌀ LINEAR PENDANT LUMINAIRE
- ⌀ LINEAR WALL LUMINAIRE
- ⌀ LINEAR STRIP LUMINAIRE
- ⌀ CONTINUOUS TAPE OR UNDERCABINET LUMINAIRE
- ⌀ RECESSED HEAT LAMP
- ⌀ RECESSED 2x2 LUMINAIRE
- ⌀ RECESSED 2x4 LUMINAIRE
- ⌀ SURFACE OR PENDANT 2x2 LUMINAIRE
- ⌀ SURFACE OR PENDANT 2x4 LUMINAIRE
- ⌀ WALL MOUNTED LUMINAIRE
- ⌀ RECESSED STEP LIGHT
- ⌀ GROUND MOUNT FLOOD
- ⌀ POLE MOUNTED AREA LUMINAIRE
- ⌀ BOLLARD OR POST TOP LUMINAIRE
- ⌀ EMERGENCY BUGEYE
- ⌀ EXIT SIGN, SHADING INDICATES FACES, ARROWS PER PLAN

TYPICAL LUMINAIRE LABELING



LIGHTING CONTROLS SYMBOLS LEGEND

NOTE: ANY COMBINATION OF LETTERS MAY APPLY TO A SWITCH FOR MULTIPLE FUNCTIONS

- \$ STANDARD SWITCH
- \$\* STANDARD SWITCH W/ SWITCHING SUBSCRIPT
- \$3 3-WAY SWITCH
- \$4 4-WAY SWITCH
- \$L LOW VOLTAGE SWITCH
- \$L\* LOW VOLTAGE SWITCH PER SCHEDULE
- \$O OCCUPANCY SENSOR SWITCH
- \$K KEYED SWITCH
- \$D DIMMER SWITCH
- \$T TIMER SWITCH
- ⌀ OCCUPANCY SENSOR CEILING MOUNT
- ⌀ PHOTOCELL CEILING MOUNT
- ⌀ OCCUPANCY SENSOR WALL MOUNT
- ⌀ PHOTOCELL WALL MOUNT

GENERAL SYMBOLS LEGEND

- XX-XX MECHANICAL EQUIPMENT TAG
- XX-XX KITCHEN EQUIPMENT TAG
- XXX DWELLING UNIT CIRCUIT TAG
- X KEYNOTE
- X REVISION TAG
- X REVISION CLOUD
- X XXX DETAIL/PLAN CALLOUT
- N NORTH ARROW
- MATCHLINE
- UNIT XX DP12-XX DWELLING UNIT CALLOUT TAG W/ UNIT TYPE AND CIRCUIT NUMBER

ABBREVIATIONS

- A AMPERES
- AFCI ARC FAULT CIRCUIT INTERRUPTER
- AFF ABOVE FINISHED FLOOR
- AIC AMPERE INTERRUPTING CAPACITY
- AL ALUMINUM
- ATS AUTOMATIC TRANSFER SWITCH
- AWG AMERICAN WIRE GAUGE
- A/V AUDIO VISUAL
- BKR BREAKER
- C CONDUIT
- CKT CIRCUIT
- CO COND. ONLY
- CU COPPER
- CLG CEILING
- CT CURRENT TRANSFORMER
- DAS DISTRIBUTED ANTENNA SYSTEM
- DIA DIAMETER
- (E) EXISTING
- EGC EQUIPMENT GROUNDING CONDUCTOR
- ERRCS EMERGENCY RESPONDER RADIO COVERAGE
- F FUSE
- FACP FIRE ALARM CONTROL PANEL
- FC FOOT CANDLE
- FLA FULL LOAD AMPERES
- FSD FIRE SMOKE DAMPER
- GEC GROUNDING ELECTRODE CONDUCTOR
- GFCI GROUND FAULT CIRCUIT INTERRUPTER
- GFPE GROUND FAULT PROTECTION OF EQUIPMENT
- HP HORSEPOWER
- IDF INTERMEDIATE DISTRIBUTION FRAME
- IG ISOLATED GROUND
- KMIL THOUSAND CIRCULAR MIL
- KVA KILOVOLT-AMP
- KW KILOWATT
- LTG LIGHTING
- MCA MINIMUM CIRCUIT AMPERES
- MCB MAIN CIRCUIT BREAKER
- MCC MOTOR CONTROL CENTER
- MDF MAIN DISTRIBUTION FRAME
- MDP MAIN DISTRIBUTION PANEL
- MDU MEDIA DISTRIBUTION UNIT
- MIN MINIMUM
- MLO MAIN LUG ONLY
- MOCP MAXIMUM OVERCURRENT PROTECTION
- MTS MANUAL TRANSFER SWITCH
- (N) NEW
- NAC NOTIFICATION APPLIANCE CIRCUIT
- OC ON CENTER
- P POLE
- PH PHASE
- PNL PANEL
- PWR POWER
- (R) RELOCATE
- ROW RIGHT-OF-WAY
- S SWITCH
- SDP SUB-DISTRIBUTION PANEL
- SIM SIMILAR
- SPD SURGE PROTECTIVE DEVICE
- TR TAMPER RESISTANT
- TYP TYPICAL
- UNO UNLESS NOTED OTHERWISE
- UPS UNINTERRUPTIBLE POWER SUPPLY
- V VOLTS
- VA VOLT-AMPERES
- VFD VARIABLE FREQUENCY DRIVE
- W WIRE
- WP WEATHERPROOF
- (X) DEMOLISH
- XFMR TRANSFORMER

TYPICAL DEVICE MOUNTING HEIGHTS

- RECEPTACLES +18" AFF
- RECEPTACLES, ABOVE COUNTER +6" ABOVE COUNTER, +46" AFF MAX. COORDINATE WITH CASEWORK
- PHONE/DATA/CATV OUTLET +18" AFF
- SWITCHES +46" AFF
- THERMOSTATS +46" AFF
- CARD READERS +46" AFF
- PANELBOARDS +72" TO TOP OR PER NEC 404.8
- RESIDENTIAL PANEL +48" TO HIGHEST OPERABLE CONTROL
- CONTROL PANELS +72" TO TOP

NOTES:

- MEASUREMENTS ARE TYPICAL UNO ON PLANS
- MEASUREMENTS ARE TO CENTER OF BOX UNO
- COMPLY WITH ALL ADA ACCESSIBILITY GUIDELINES

GENERAL PROJECT NOTES

- COMPLETED INSTALLATION SHALL COMPLY WITH NEC AND ALL LOCAL LAWS, ORDINANCES, AND REGULATIONS.
- ALL NEW ELECTRICAL SERVICE INSTALLATIONS SHALL COMPLY WITH PACIFICORP'S 2022 ELECTRICAL SERVICE REQUIREMENTS MANUAL.
- CODE BASIS OF DESIGN: 2020 NATIONAL ELECTRICAL CODE WITH OREGON STATE MODIFICATIONS (NFPA 70), 2018 INTERNATIONAL BUILDING CODE, 2018 OREGON STATE ENERGY CODE.
- PLANS ARE DIAGRAMMATIC IN NATURE TO COMMUNICATE SCOPE OF WORK AND GENERAL INTENT. CONTRACTOR SHALL PROVIDE ALL FITTINGS, BOXES, AND APPURTENANCES NECESSARY FOR A COMPLETE AND OPERABLE ELECTRICAL SYSTEM.
- DEVICE LOCATIONS ON PLANS MAY NOT BE EXACT. REFER TO ARCHITECTURAL PLANS FOR MORE DETAILED INFORMATION REGARDING DIMENSIONS AND LAYOUTS. COORDINATE ALL DEVICE AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL AND OTHER TRADES.
- EQUIPMENT FOR OTHER DISCIPLINES MAY BE SHOWN FOR REFERENCE ONLY. REFER TO OTHER DISCIPLINES' DRAWINGS FOR MORE DETAIL REGARDING EQUIPMENT SPECIFICATIONS AND INFORMATION.
- PLANS SHALL GOVERN IN MATTERS OF QUANTITY. SPECIFICATIONS SHALL GOVERN IN MATTERS OF QUALITY. IN CASE OF DISCREPANCY BETWEEN DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN. PLANS ARE TO BE TIED TO SPECIFICATIONS FOR A COMPLETE DESIGN PACKAGE.
- ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH.
- WIRE SIZE AND QUANTITIES ARE NOT GENERALLY INDICATED ON PLANS. FOR A TYPICAL 20A/1P CIRCUIT BREAKER, PROVIDE (3) #12 CU CONDUCTORS (PHASE, NEUTRAL, GROUND). FOR A TYPICAL 20A/2P CIRCUIT BREAKER, PROVIDE (3) #12 CU CONDUCTORS (PHASE, PHASE, GROUND). FOR A TYPICAL 20A/3P CIRCUIT BREAKER, PROVIDE (4) #12 CU CONDUCTORS (THREE PHASES PLUS GROUND).
- TO COMPENSATE FOR VOLTAGE DROP, ON 20A, 120V CIRCUITS: OVER 100 FEET, PROVIDE #10 AWG, OVER 150 FEET, PROVIDE #8 AWG. ON 20A, 277V CIRCUITS: OVER 250 FEET, PROVIDE #10 AWG.
- CIRCUIT NUMBERS ARE GENERALLY INDICATED AS XX-##, WHERE (XX) INDICATES PANEL NAME AND (##) INDICATES THE CIRCUIT NUMBER. IN SOME CASES THE PANEL MAY BE COMMON TO A LARGE AREA, AND THE CIRCUIT NUMBER ONLY MAY BE CALLED OUT ON THE PLANS.
- MAINTAIN AT LEAST 12" SEPARATION BETWEEN POWER AND COMMUNICATIONS WIRING ROUTED PARALLEL. SMALLER SEPARATION MAY BE ALLOWED WHEN CROSSING.
- ELECTRICAL EQUIPMENT IS DESIGNED BASED ON A SPECIFIC MANUFACTURER. VERIFY FINAL CLEARANCES AND SPACE REQUIREMENTS WITH EQUIPMENT SUBMITTALS. THE CONTRACTOR IS RESPONSIBLE FOR ANY REDESIGN OR RELOCATION OF EQUIPMENT IF APPROVED EQUIPMENT DOES NOT MATCH BASIS OF DESIGN.
- PROVIDE 4" HIGH CONCRETE "HOUSEKEEPING PADS" FOR FREE STANDING AND FLOOR MOUNTED ELECTRICAL EQUIPMENT.
- ALL CONDUIT ROUTING SHALL FOLLOW BUILDING LINES WHERE POSSIBLE. COORDINATE ROUTING WITH ARCHITECTURAL ELEMENTS. ALL ROUTING OF EXPOSED CONDUITS SHALL BE APPROVED BY THE ARCHITECT.
- COORDINATE UNDERGROUND CONDUIT ROUTING WITH CIVIL AND STRUCTURAL PLANS.
- CONSULT STRUCTURAL ENGINEER OF RECORD FOR ALL STRUCTURAL PENETRATIONS.

ELECTRICAL SHEET INDEX

- E001 COVER SHEET - ELECTRICAL
- E101 SITE PLAN - MAIN RESERVOIR
- E102 SITE PLAN - SOUTH/TOLOVANA RESERVOIR
- E103 SITE PLAN - NORTH RESERVOIR
- E204 SITE PLAN ISOLATION VALVE 4
- E501 DETAILS - ELECTRICAL
- E502 DETAILS - ELECTRICAL
- E601 RESERVOIR ONE-LINE DIAGRAM
- E602 ISOLATION VALVE ONE-LINE DIAGRAM
- E701 TYPICAL CONTROL PANEL ELEVATIONS
- E801 SCADA NETWORK DIAGRAM

\*NOTE\*

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.



Know what's below.  
Call before you dig.

CALL 2 BUSINESS DAYS BEFORE YOU DIG.  
CAUTION: UTILITY INFORMATION IS APPROXIMATE.  
VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

Revisions:

1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL SCALE DRAWING



WINDSOR ENGINEERS

Ridgefield, WA  
Duluth + Minneapolis, MN  
www.windsorengineers.com  
Project No: 20198.3

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EXPIRES: 06/30/24

WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN

Issue Date: 7/14/2023

Project Manager: TWT  
Drawn by: JRB  
Checked by: SEW

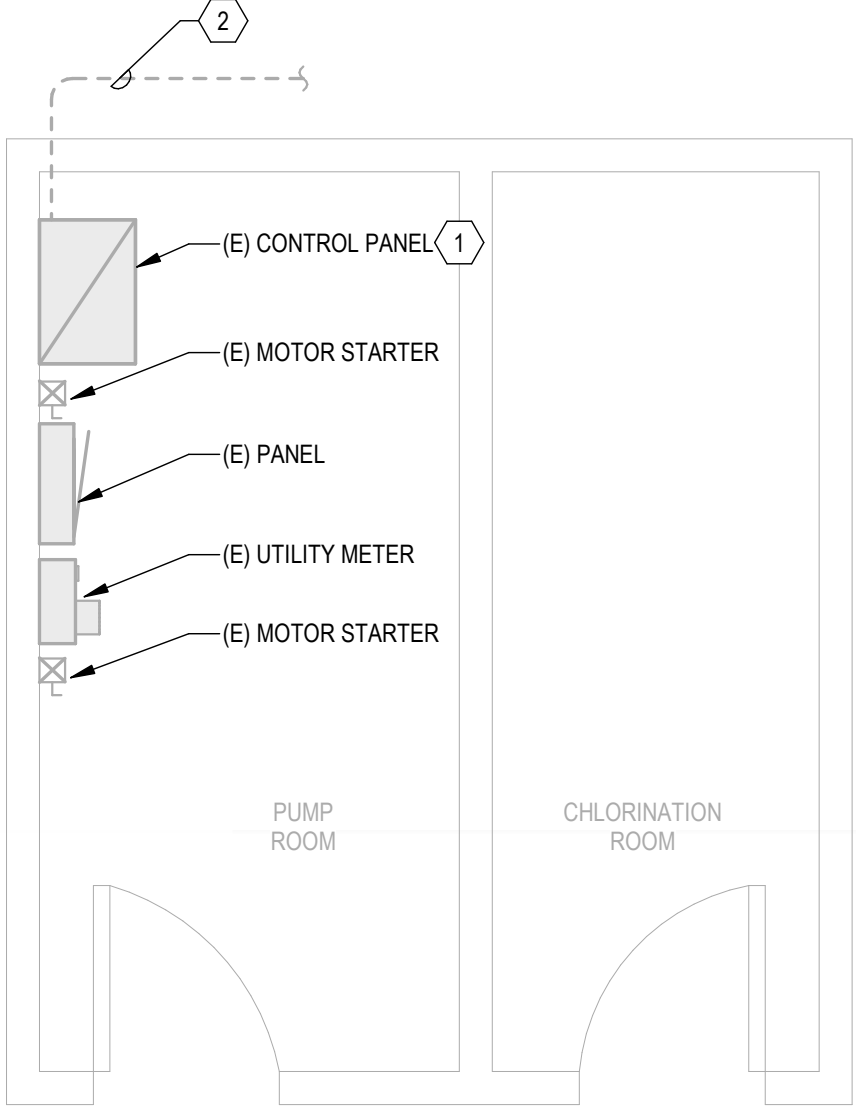
COVER SHEET -  
ELECTRICAL

E001

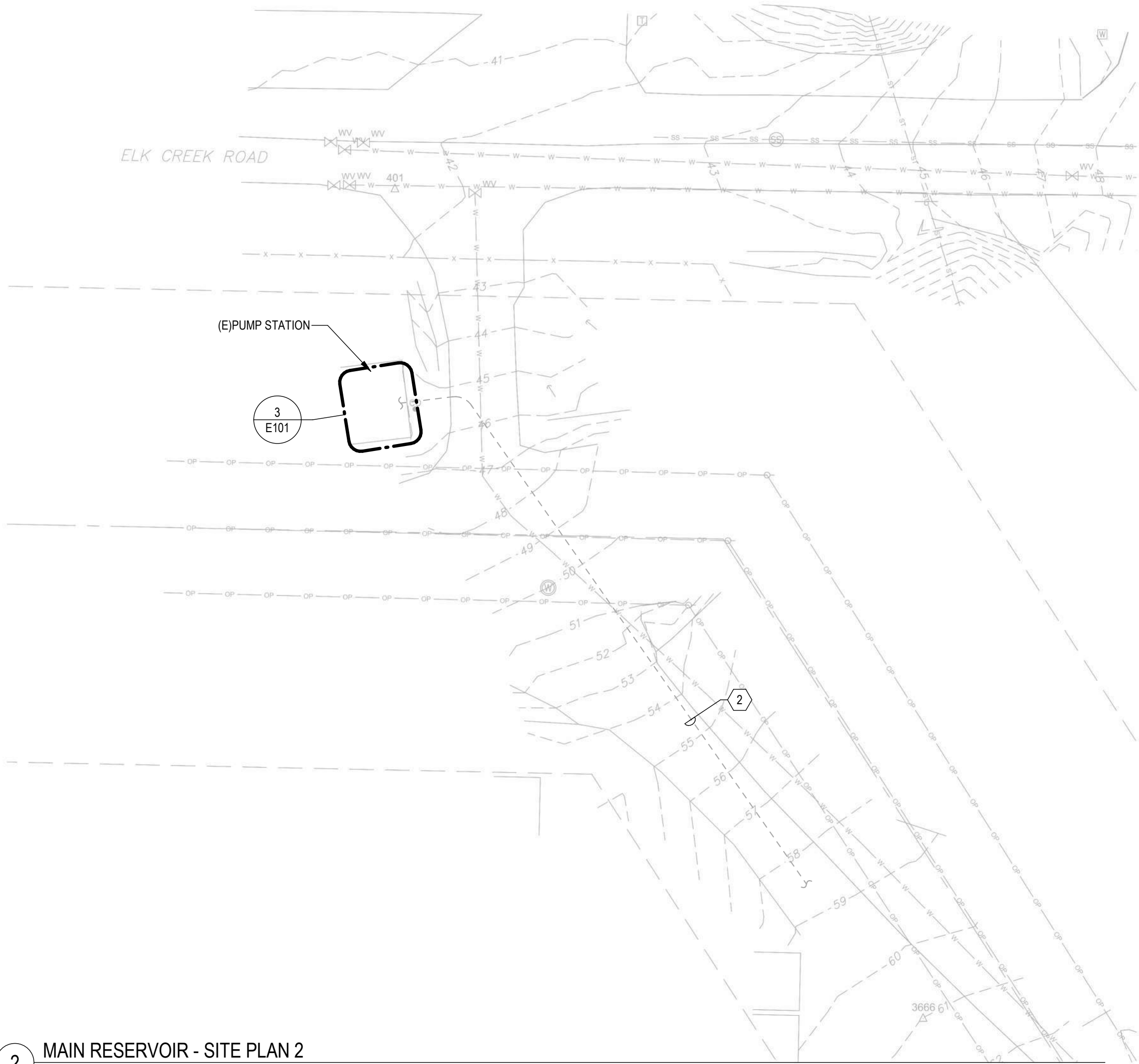


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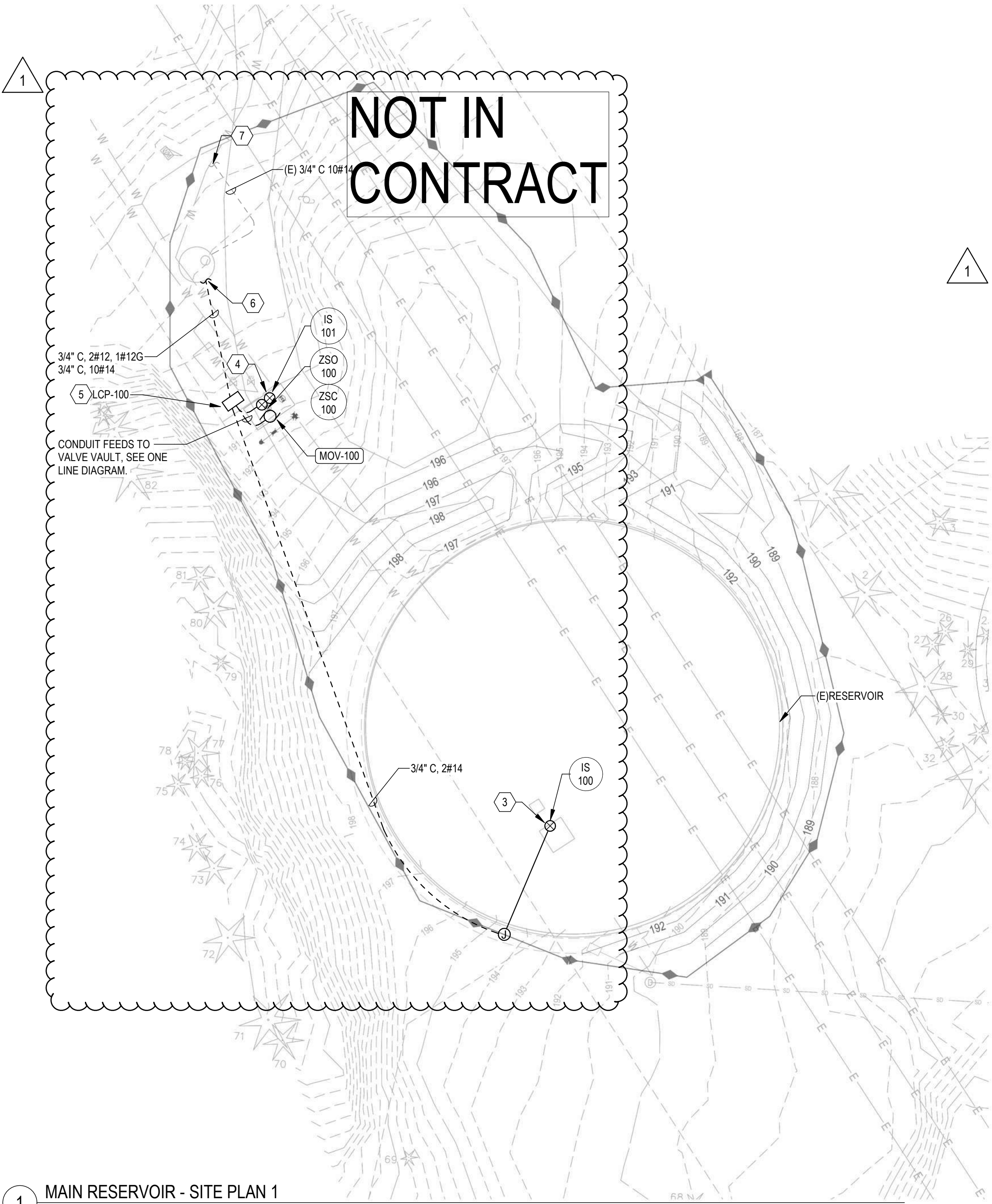
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3 MAIN RESERVOIR - PUMP STATION  
SCALE: 3/8" = 1'-0"



2 MAIN RESERVOIR - SITE PLAN 2  
SCALE: 1" = 20'-0"



1 MAIN RESERVOIR - SITE PLAN 1  
SCALE: 1" = 20'-0"

#### GENERAL SHEET NOTES

- EXISTING ELECTRICAL AND INSTRUMENTATION EQUIPMENT IS APPROXIMATE. CONTRACTOR TO VERIFY EXACT LOCATIONS.
- REFER TO GENERAL SHEET DRAWINGS G004, G005, AND G006 FOR SITE LOCATIONS AND KEY PLANS.
- ALL UNDERGROUND CONDUITS SHALL BE A MINIMUM OF 24" BELOW GRADE.
- ALL CONDUIT SHALL HAVE MINIMUM 12" OF SEPARATION FROM ANY OTHER COMMUNICATION OR GAS FACILITIES AND SHALL BE MINIMUM OF 36" FROM ANY WATER OR SEWER LINES.
- GRAY LINES INDICATE EXISTING TO REMAIN. BOLD LINES INDICATE NEW SCOPE.
- DASHED CONDUIT LINETYPE INDICATES UNDERGROUND ROUTING. COORDINATE NEW UNDERGROUND CONDUITS WITH EXISTING CONDITIONS.

#### KEYNOTES

- EXISTING SCADA RTU IS MISSION MYDRO 850. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS TO ACCOMMODATE ADDITIONAL INPUTS AND OUTPUTS. SCADA AND VALVE PROGRAMMING BY CONTRACTOR.
- EXISTING 3/4" CONDUIT TO ALTITUDE CONTROL VALVE VAULT LOCATED NEAR RESERVOIR.
- PROVIDE RESERVOIR INTRUSION SWITCH. SEE INSTALLATION DETAIL ON SHEET E501. INTRUSION SWITCH SHALL BE WIRED TO EXISTING MISSION SCADA RTU LOCATED IN PUMP HOUSE TO MONITOR SWITCH STATUS.
- PROVIDE VAULT INTRUSION SWITCH. SEE INSTALLATION DETAIL ON SHEET E501. INTRUSION SWITCH SHALL BE WIRED TO EXISTING MISSION SCADA RTU LOCATED IN PUMP HOUSE TO MONITOR SWITCH STATUS.
- SEE DETAIL SHEET E501. FIELD COORDINATE EXACT LOCATION.
- PROVIDE 20A/120V CIRCUIT FROM EXISTING PANEL IN VALVE VAULT TO LOCAL CONTROL PANEL.
- PULL NEW CONTROL WIRE THROUGH EXISTING 3/4" SPARE CONDUIT BACK TO RTU IN PUMP HOUSE. SEE ONE-LINE DIAGRAM SHEET E601.

MAIN RESERVOIR QUANTITIES		
ITEM	UNITS	QUANTITY
SHAKE ALARM CONTROL	EA	1
MODIFY EXISTING SCADA IMISSION RTU	EA	1
MISSION RTU RADIO BACKUP	EA	1
CONNECT TO METER	EA	1
EQUIPMENT STAND	EA	1
3/4" CONDUIT	LF	200
1" CONDUIT	LF	1300
#14 WIRE	LF	16000
POWER SUPPLY WITH ELECTRICAL BOX	LF	0
INTRUSION SWITCHES	EA	2

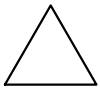
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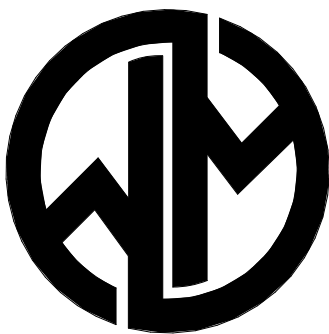
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#### Revisions:



1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL  
SCALE DRAWING



#### WINDSOR ENGINEERS

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EXPIRES: 06/30/24

WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

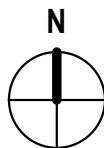
#### ENGINEERING PLAN

Issue Date: 7/14/2023

Project Manager: TWT  
Drawn by: JRB  
Checked by: SEW

SITE PLAN - MAIN  
RESERVOIR

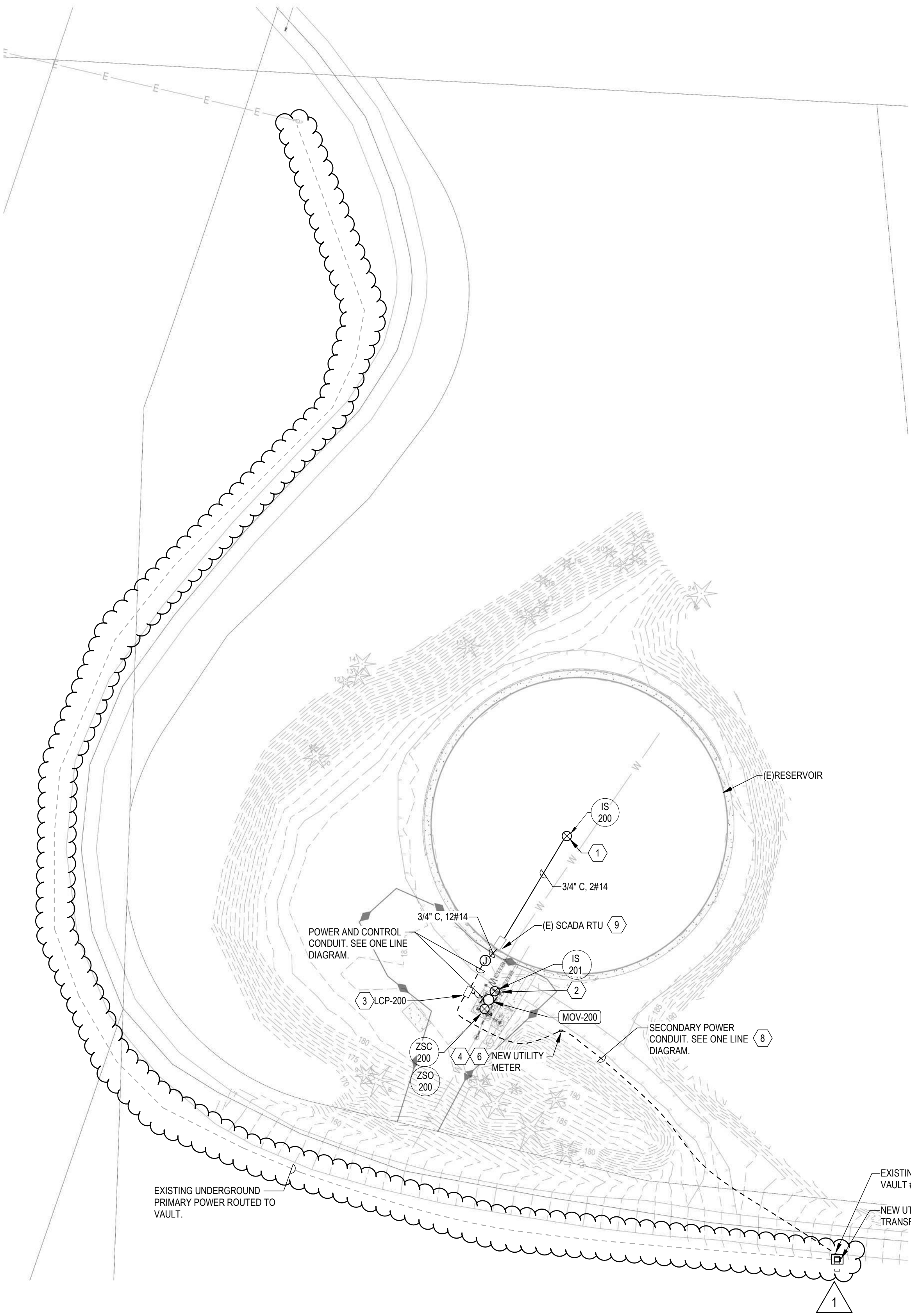
E101



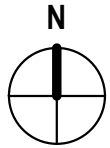


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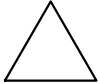


1 SOUTH/TOLOVANA RESERVOIR SITE PLAN  
SCALE: 1/32" = 1'-0"



Know what's **below.**  
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CALL 2 BUSINESS DAYS BEFORE YOU DIG.  
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Revisions:



1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL  
SCALE DRAWING



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WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN

Issue Date: 7/14/2023

Project Manager TWT  
Drawn by JRB  
Checked by SEW

SITE PLAN -  
SOUTH/TOLOVANA  
RESERVOIR

E102

GENERAL SHEET NOTES

- EXISTING ELECTRICAL AND INSTRUMENTATION EQUIPMENT IS APPROXIMATE. CONTRACTOR TO VERIFY EXACT LOCATIONS.
- REFER TO GENERAL SHEET DRAWINGS G004, G005, AND G006 FOR SITE LOCATIONS AND KEY PLANS.
- ALL UNDERGROUND CONDUITS SHALL BE A MINIMUM OF 24" BELOW GRADE.
- ALL CONDUIT SHALL HAVE MINIMUM 12" OF SEPARATION FROM ANY OTHER COMMUNICATION OR GAS FACILITIES AND SHALL BE MINIMUM OF 36" FROM ANY WATER OR SEWER LINES.
- GRAY LINES INDICATE EXISTING TO REMAIN. BOLD LINES INDICATE NEW SCOPE.
- DASHED CONDUIT LINETYPE INDICATES UNDERGROUND ROUTING. COORDINATE NEW UNDERGROUND CONDUITS WITH EXISTING CONDITIONS.

KEYNOTES

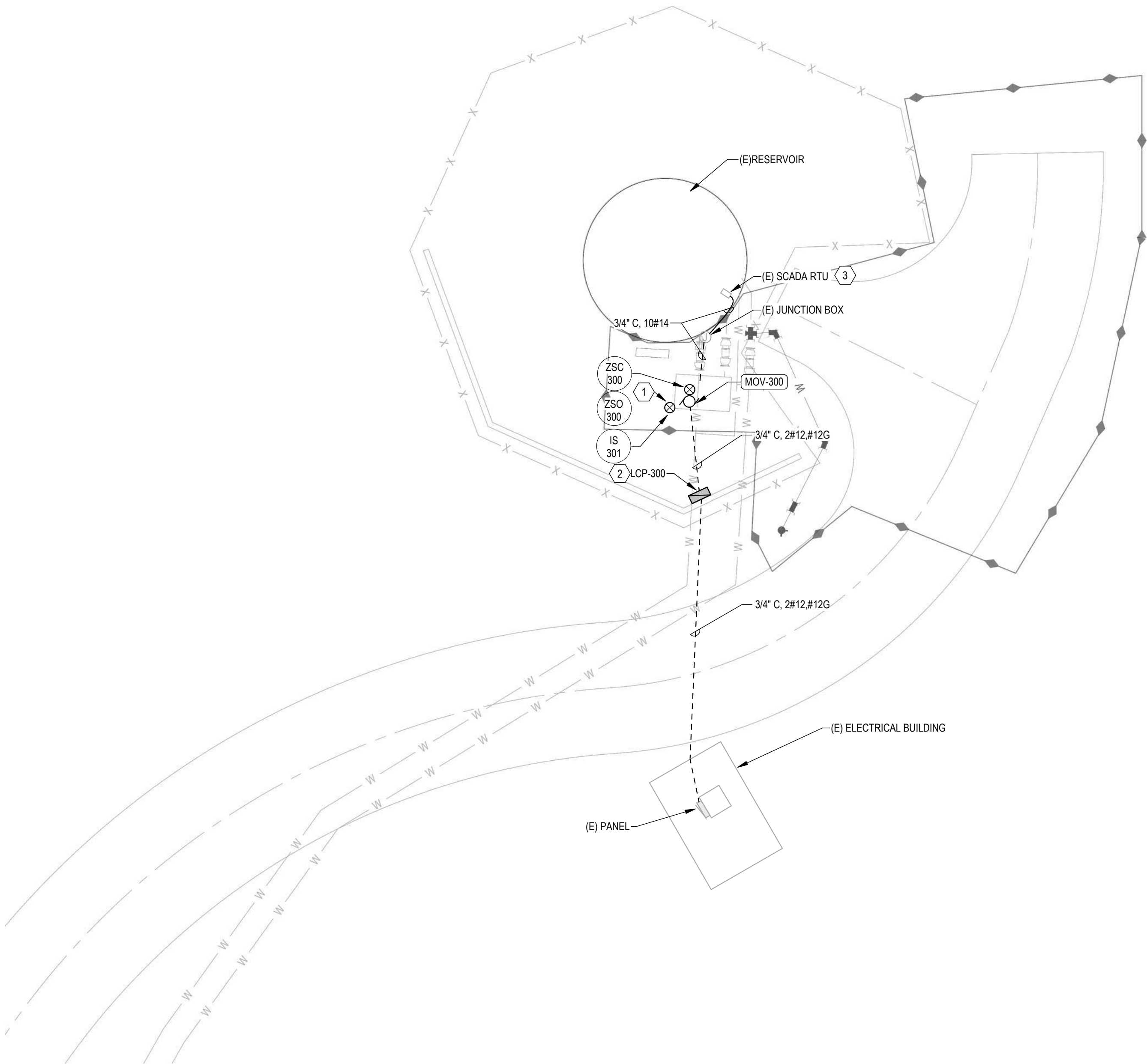
- PROVIDE RESERVOIR INTRUSION SWITCH. SEE INSTALLATION DETAIL ON SHEET E501. INTRUSION SWITCH SHALL BE WIRED TO EXISTING MISSION SCADA RTU TO MONITOR SWITCH STATUS.
- PROVIDE VAULT INTRUSION SWITCH. SEE INSTALLATION DETAIL ON SHEET E501. INTRUSION SWITCH SHALL BE WIRED TO EXISTING MISSION SCADA RTU TO MONITOR SWITCH STATUS.
- SEE DETAIL SHEET E501. FIELD COORDINATE EXACT LOCATION.
- INSTALL UTILITY METER PER PACIFICORP REQUIREMENTS. SEE DETAIL ON SHEET E502.
- SEE SHEET E601 FOR DIVISION OF RESPONSIBILITY MATRIX.
- FIELD COORDINATE EXACT LOCATION WITH CITY AND PACIFICORP.
- CONNECT TO EXISTING PULL BOX PER PACIFICORP REQUIREMENTS. FURNISH NEW TRANSFORMER VAULT LID PER REQUIREMENTS ON SHEET E502. STORE NEW LID ON SITE NEAR VAULT TO BE INSTALLED BY PACIFICORP.
- COORDINATE FINAL CONDUIT AND TRENCHING ROUTING WITH CITY OF CANNON BEACH WATER DEPARTMENT PRIOR TO INSTALLATION.
- EXISTING SCADA RTU IS MISSION MYDRO 850. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS TO ACCOMMODATE ADDITIONAL INPUTS AND OUTPUTS. SCADA AND VALVE PROGRAMMING BY CONTRACTOR.

SOUTH RESERVOIR QUANTITIES		
ITEM	UNITS	QUANTITY
SHAKE ALARM CONTROL	EA	0
MODIFY EXISTING SCADA IMISSION RTU	EA	1
MISSION RTU RADIO BACKUP	EA	1
CONNECT TO METER	EA	1
EQUIPMENT STAND	EA	1
3/4" CONDUIT	LF	180
1" CONDUIT	LF	40
#14 WIRE	LF	500
POWER SUPPLY WITH ELECTRICAL BOX	LF	700
INTRUSION SWITCHES	EA	3



PLOT DATE: 11/16/2021 9:53 AM - FILE: C:\Users\joe\OneDrive - Windsor Engineers\20198.3 Cannon Beach Seismic Valves\02\_Drawings\00\_BIM 360 files\CAD Units\20198.3\_BRDR.dwg

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1 NORTH RESERVOIR SITE PLAN  
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

- A. EXISTING ELECTRICAL AND INSTRUMENTATION EQUIPMENT IS APPROXIMATE. CONTRACTOR TO VERIFY EXACT LOCATIONS.
- B. REFER TO GENERAL SHEET DRAWINGS G004, G005, AND G006 FOR SITE LOCATIONS AND KEY PLANS.
- C. ALL UNDERGROUND CONDUITS SHALL BE A MINIMUM OF 24" BELOW GRADE.
- D. ALL CONDUIT SHALL HAVE MINIMUM 12" OF SEPARATION FROM ANY OTHER COMMUNICATION OR GAS FACILITIES AND SHALL BE MINIMUM OF 36" FROM ANY WATER OR SEWER LINES.
- E. GRAY LINES INDICATE EXISTING TO REMAIN. BOLD LINES INDICATE NEW SCOPE.
- F. DASHED CONDUIT LINETYPE INDICATES UNDERGROUND ROUTING. COORDINATE NEW UNDERGROUND CONDUITS WITH EXISTING CONDITIONS.

KEYNOTES

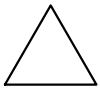
1. PROVIDE VAULT INTRUSION SWITCH. SEE INSTALLATION DETAIL ON SHEET E501. INTRUSION SWITCH SHALL BE WIRED TO EXISTING MISSION SCADA RTU TO MONITOR SWITCH STATUS.
2. CONTROL PANEL MOUNTED TO EXISTING CONCRETE WALL. FINAL CONTROL PANEL LOCATION TO BE APPROVED BY OWNER/ENGINEER. PROVIDE 20A, 120V CIRCUIT TO LOCAL CONTROL PANEL FROM EXISTING PANEL.
3. EXISTING SCADA RTU IS MISSION MYDRO 850. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS TO ACCOMMODATE ADDITIONAL INPUTS AND OUTPUTS. SCADA AND VALVE PROGRAMMING BY CONTRACTOR.

NORTH RESERVOIR QUANTITIES		
ITEM	UNITS	QUANTITY
SHAKE ALARM CONTROL	EA	0
MODIFY EXISTING SCADA MISSION RTU	EA	1
MISSION RTU RADIO BACKUP	EA	1
CONNECT TO METER	EA	1
EQUIPMENT STAND	EA	1
3/4" CONDUIT	LF	120
1" CONDUIT	LF	80
#14 WIRE	LF	1000
POWER SUPPLY WITH ELECTRICAL BOX	LF	0
INTRUSION SWITCHES	EA	3



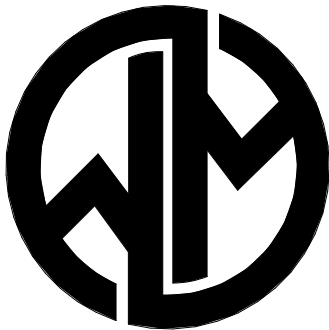
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Revisions:



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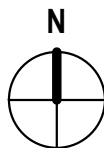
WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN  
Issue Date: 7/14/2023

Project Manager: TWT  
Drawn by: JRB  
Checked by: SEW

SITE PLAN - NORTH  
RESERVOIR

E103





1

The supply for location 3339 S Hemlock St.:

- Looks like the proposed SW corner of S Hemlock & Fernwood St. my map is showing existing underground secondary voltage facilities but I will need to verify what's available to use and exact location. Worst case we have a pole on that corner and also a pole to the West that would work. We would bill you for (1) service riser for this location or any modification's needed to existing underground facilities.
- **We will install a 2" riser on pole#319405 to your metered location.**
- **We will need 3 Flaggers at this location.**

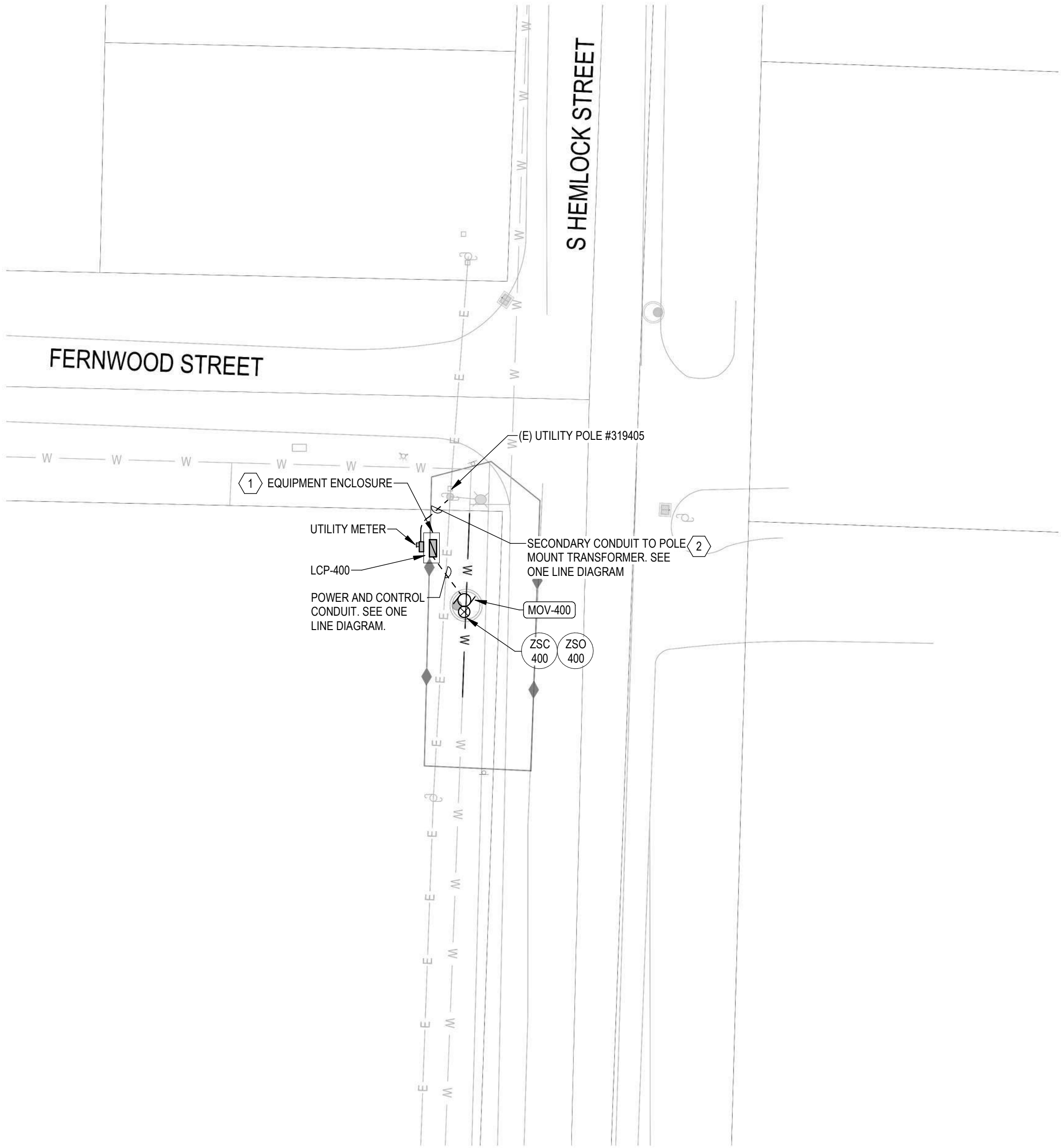
GENERAL SHEET NOTES

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- E. GRAY LINES INDICATE EXISTING TO REMAIN. BOLD LINES INDICATE NEW SCOPE.
- F. DASHED CONDUIT LINETYPE INDICATES UNDERGROUND ROUTING. COORDINATE NEW UNDERGROUND CONDUITS WITH EXISTING CONDITIONS.

KEYNOTES

- 1 SEE DETAIL SHEET E501. COORDINATE EXACT LOCATION WITH UTILITY AND CITY OF CANNON BEACH.
- 2 SEE SHEET E601 FOR DIVISION OF RESPONSIBILITY MATRIX AND SHEET E501 FOR INSTALLATION DETAIL. INSTALL SWEEP 7-1/2" FROM POLE. RED CAUTION TAPE SHALL BE INSTALLED 12 TO 18 INCHES ABOVE ALL ELECTRICAL CONDUITS. 3M SCOTCH #368 OR EQUIVELENT.

ISOLATION VALVE 4 QUANTITIES		
ITEM	UNITS	QUANTITY
CONNECT TO METER	EA	1
CONTROL PANEL	EA	1
CABINET	EA	1
1" CONDUIT	LF	40
3" - 20' POLE	EA	1
#14 WIRE	LF	320



1 ISOLATION VALVE 4  
SCALE: 3/32" = 1'-0"



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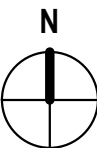
WATER RESILIENCY PROJECT  
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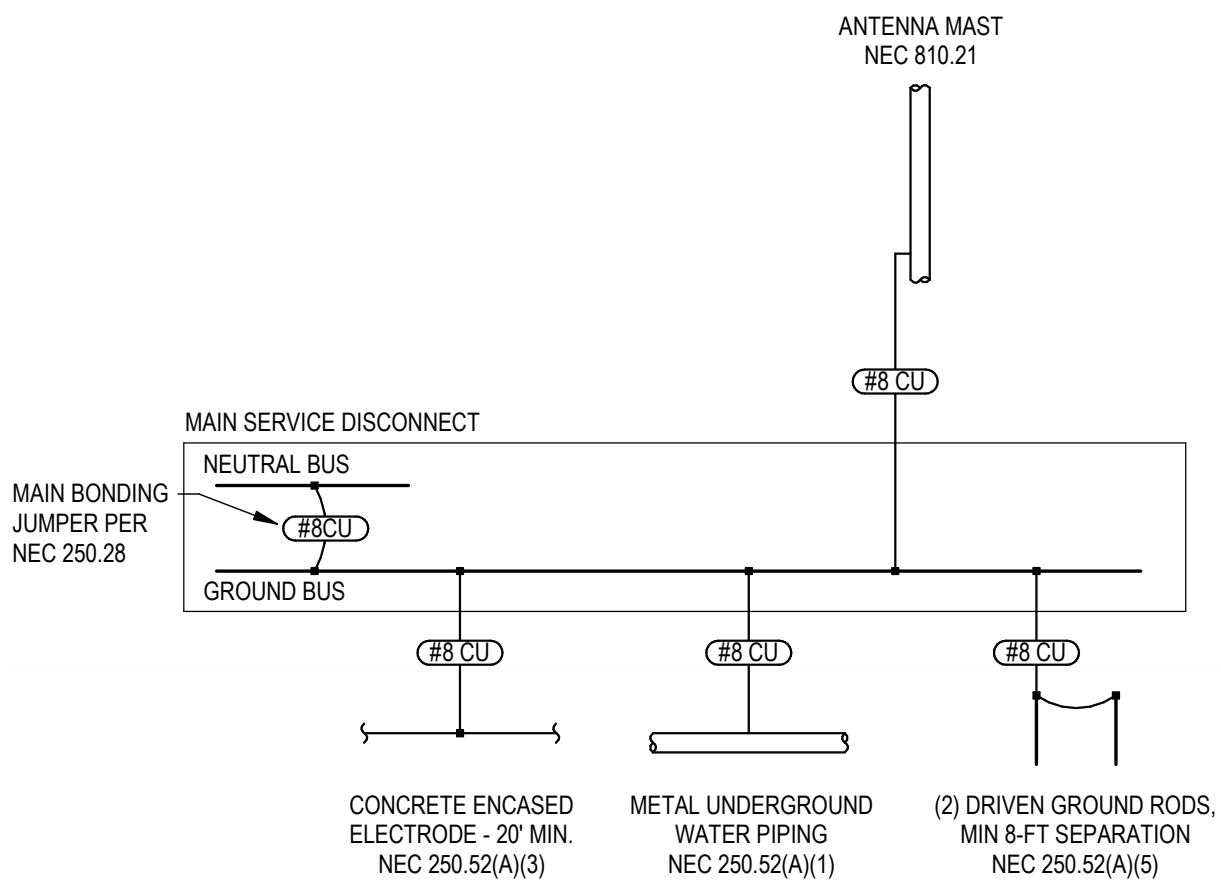
Project Manager TWT  
Drawn by JRB  
Checked by SEW

SITE PLAN ISOLATION  
VALVE 4

E204

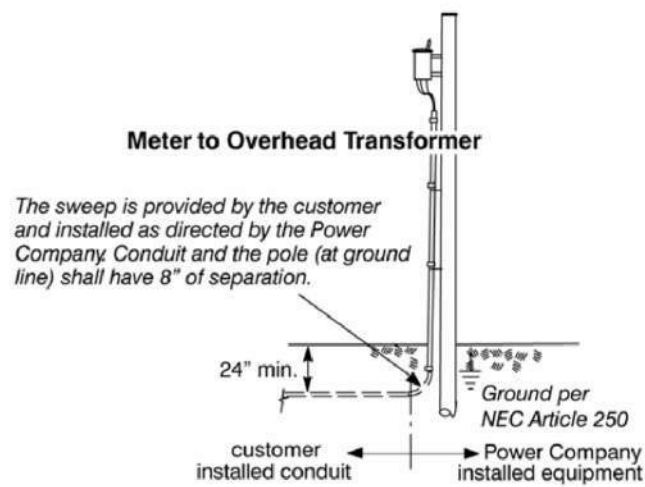






6 GROUNDING DIAGRAM  
NOT TO SCALE

Figure 24—Underground Service to Dwellings with Permanent Foundations

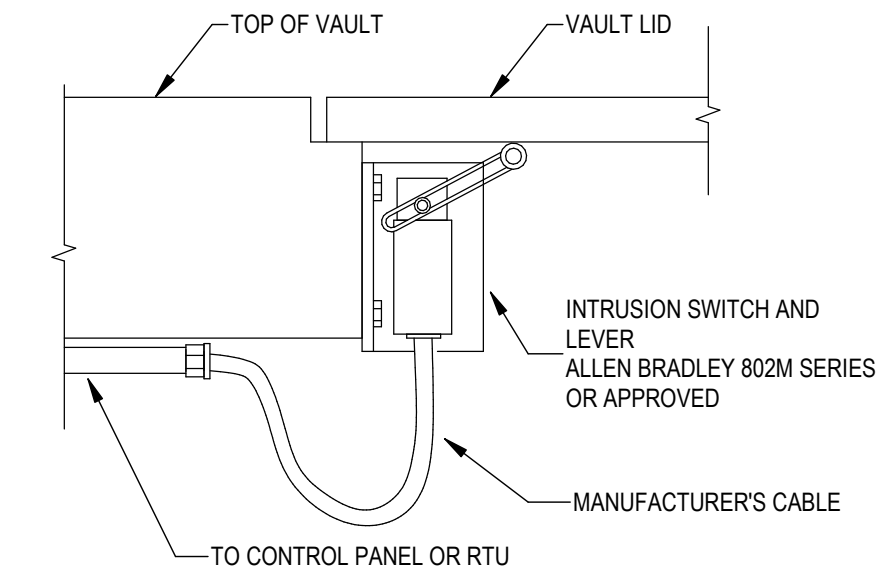
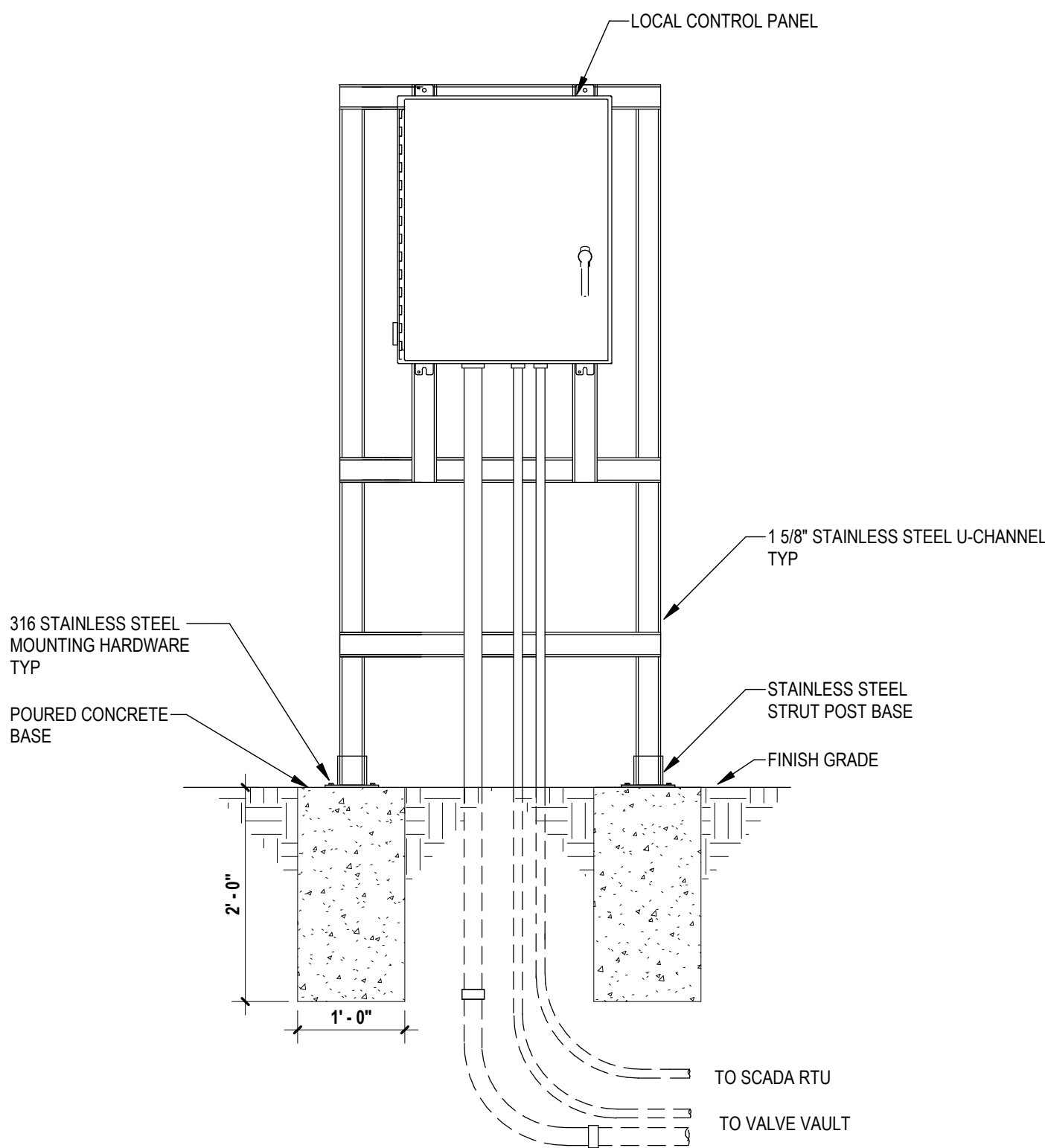


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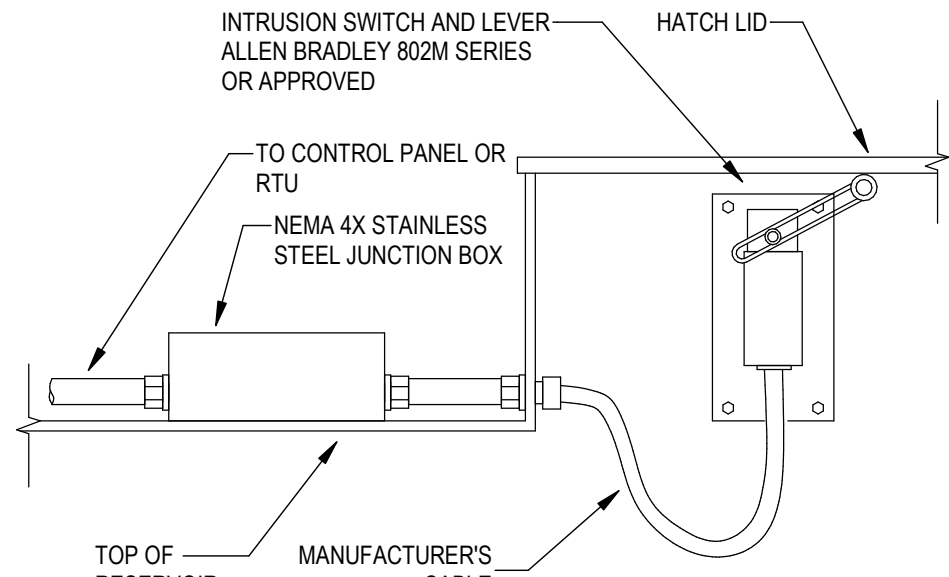
55

5 POLE CONDUIT INSTALLATION DETAIL  
NOT TO SCALE

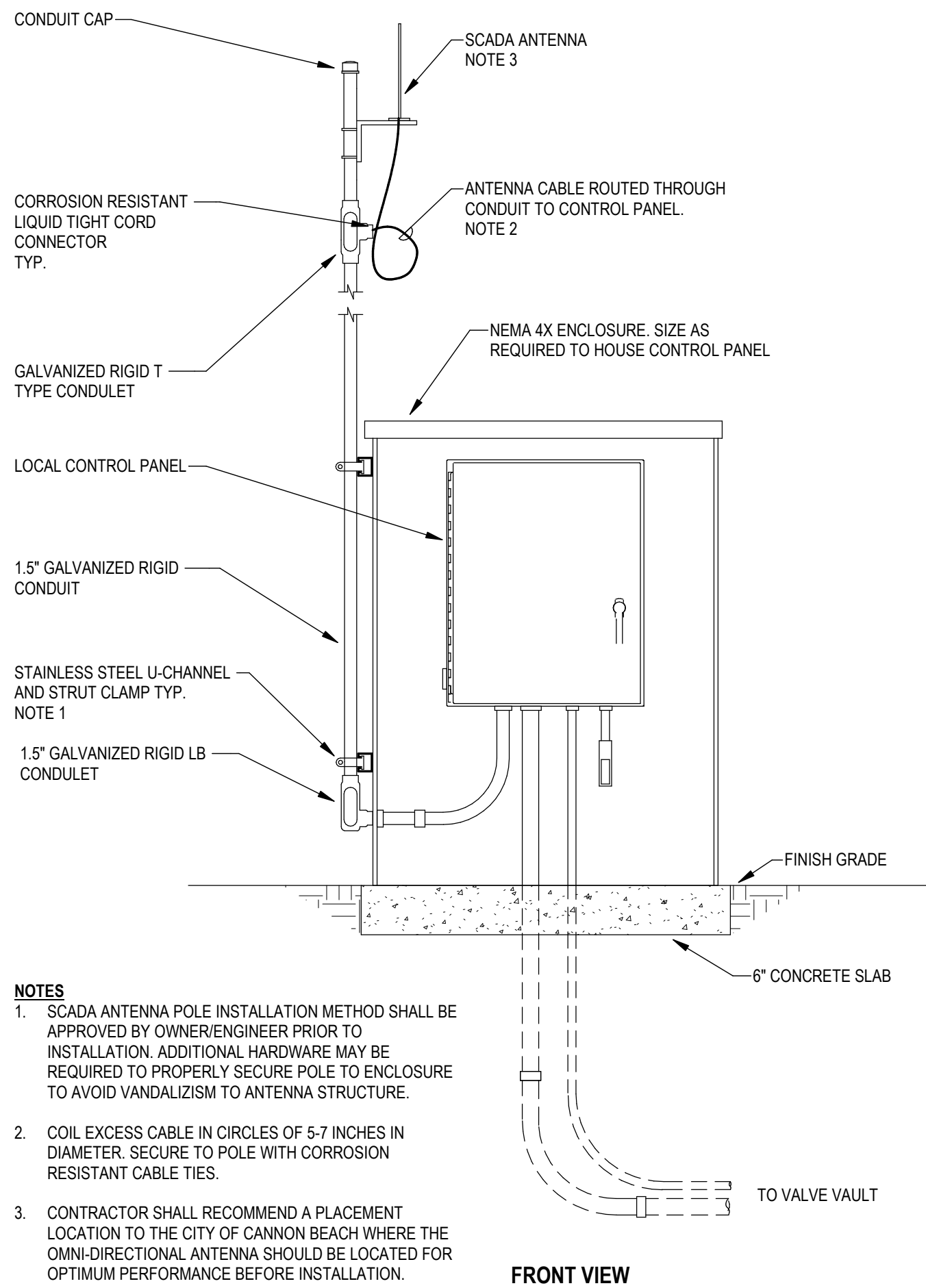
2 LOCAL CONTROL PANEL INSTALLATION  
NOT TO SCALE



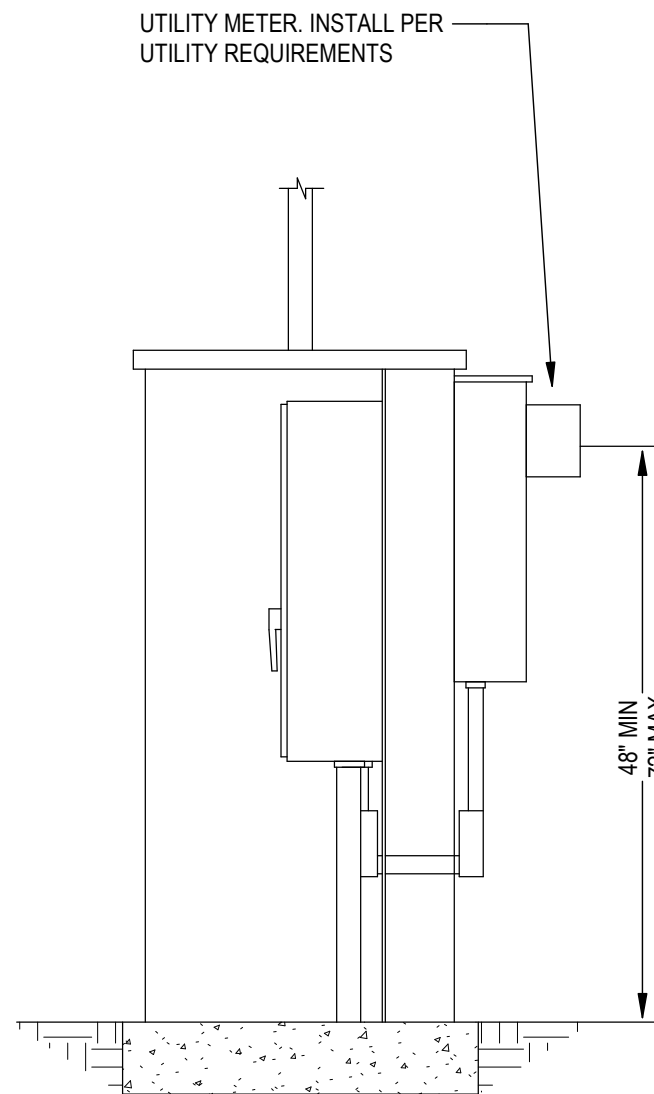
4 VAULT INTRUSION SWITCH INSTALLATION  
NOT TO SCALE



3 RESERVOIR INTRUSION SWITCH INSTALLATION  
NOT TO SCALE



- NOTES**
- SCADA ANTENNA POLE INSTALLATION METHOD SHALL BE APPROVED BY OWNER/ENGINEER PRIOR TO INSTALLATION. ADDITIONAL HARDWARE MAY BE REQUIRED TO PROPERLY SECURE POLE TO ENCLOSURE TO AVOID VANDALISM TO ANTENNA STRUCTURE.
  - COIL EXCESS CABLE IN CIRCLES OF 5-7 INCHES IN DIAMETER. SECURE TO POLE WITH CORROSION RESISTANT CABLE TIES.
  - CONTRACTOR SHALL RECOMMEND A PLACEMENT LOCATION TO THE CITY OF CANNON BEACH WHERE THE OMNI-DIRECTIONAL ANTENNA SHOULD BE LOCATED FOR OPTIMUM PERFORMANCE BEFORE INSTALLATION.



1 ISOLATION VALVE EQUIPMENT ENCLOSURE  
NOT TO SCALE



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**WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS**  
CITY OF CANNON BEACH, OR 97110

**ENGINEERING PLAN**  
Issue Date: 7/14/2023

Project Manager TWT  
Drawn by JBB  
Checked by SEW

DETAILS - ELECTRICAL

**E501**







GENERAL SHEET NOTES

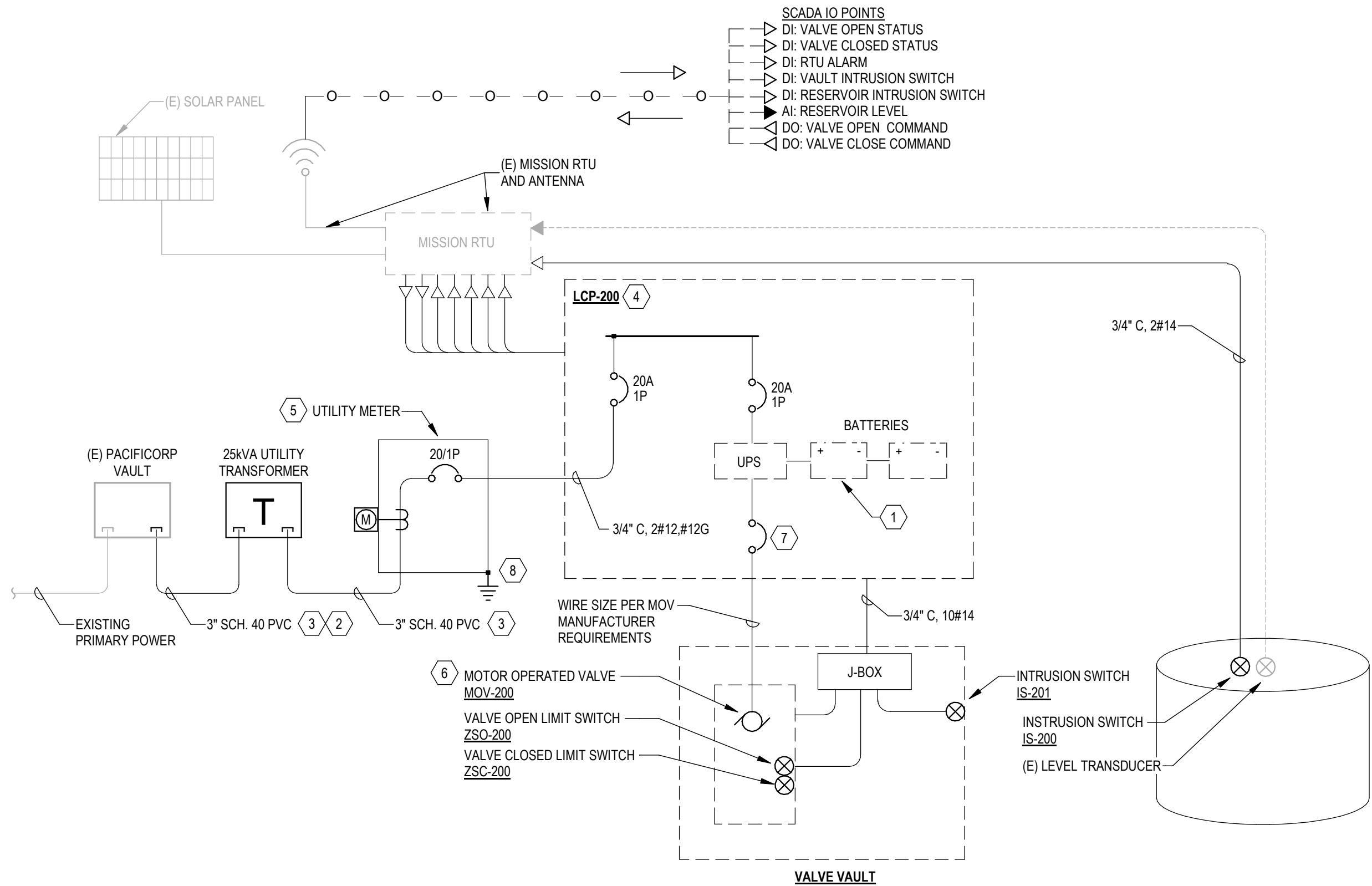
- A. GRAY LINES INDICATE EXISTING TO REMAIN. BOLD LINES INDICATE NEW SCOPE.
- B. DASHED CONDUIT LINE TYPE INDICATES UNDERGROUND ROUTING. COORDINATE NEW UNDERGROUND CONDUITS WITH EXISTING CONDITIONS.
- C. NEW SCADA AND VALVE PROGRAMMING BY CONTRACTOR.

KEYNOTES

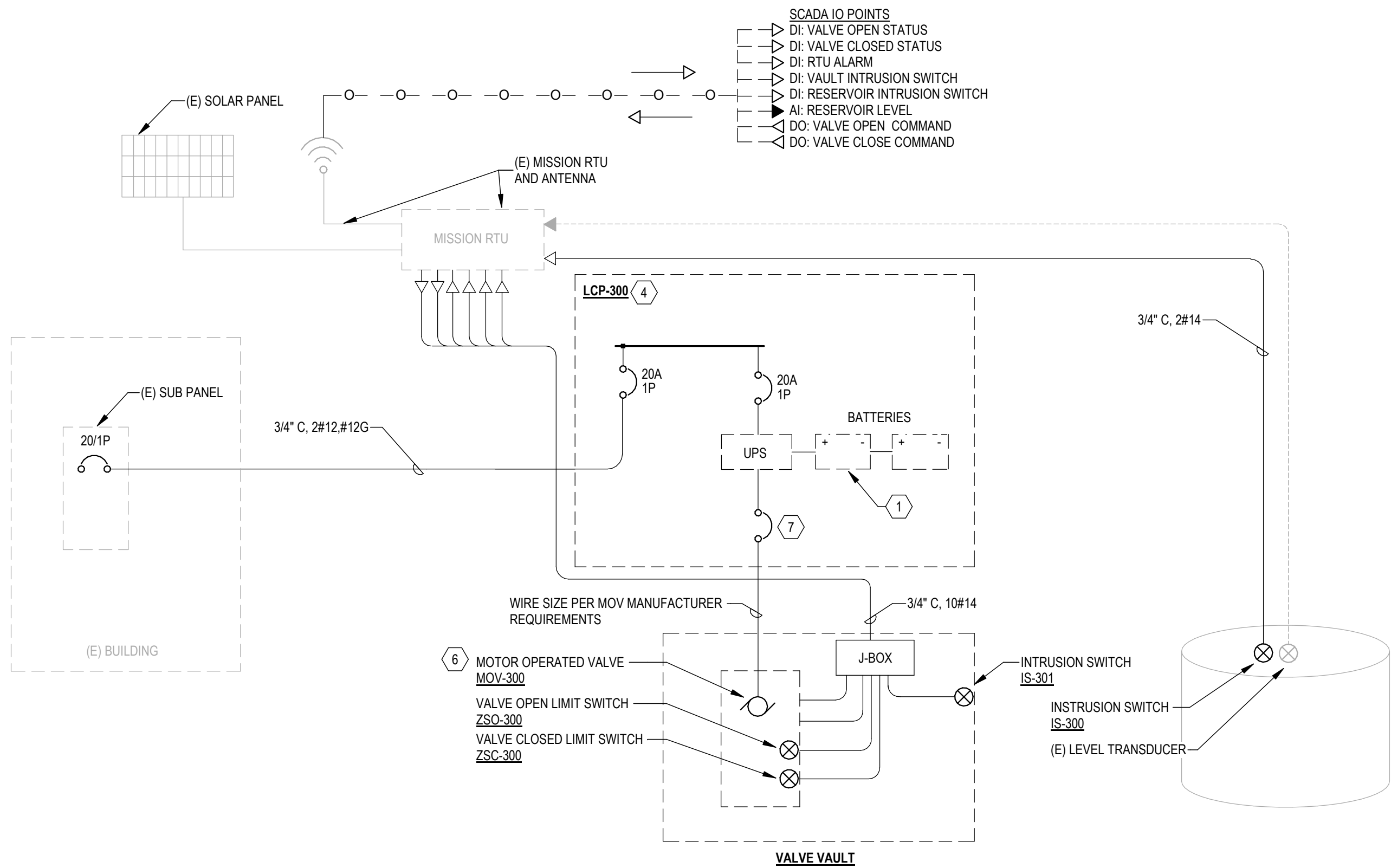
1. PROVIDE BATTERY BACKUP. BATTERY SHALL HAVE CAPACITY TO COMPLETE A MINIMUM OF (2) CLOSE/OPEN CYCLES IN THE EVENT OF A POWER OUTAGE.SEE SPECIFICATION FOR MORE INFORMATION.
2. PRIMARY CONDUIT SHALL BE 36" BELOW GRADE.
3. PRIMARY AND SECONDARY CONDUITS PER PACIFICORP ELECTRIC SERVICE REQUIREMENTS. TRENCHING SHALL BE INSPECTED AND APPROVED BY PACIFICORP BEFORE BACKFILL.
4. PROVIDE NECESSARY RELAYS, TERMINAL BLOCKS, CIRCUIT BREAKERS, ETC. REQUIRED TO ENSURE COMPLETE CONTROL AND SCADA INTEGRATION TO THE MOTOR OPERATED VALVE. SUBMIT CONTROL SYSTEM SCHEMATICS FOR APPROVAL PRIOR TO INSTALLATION. SEE TYPICAL PANEL LAYOUT DRAWING
5. PROVIDE STAINLESS STEEL METERMAIN COMBO, 120V/240V, 1PH, 3W, MIN. 100A RATED, 22KAIC, NEMA 3R. PROVIDE 100A/2P MAIN BREAKER AND (1) 20A/1P OUTPUT BREAKER. SEE INSTALLATION DETAIL ON SHEET E501. ACCEPTABLE METER SOCKETS SHALL BE PER PACIFIC POWER REQUIREMENTS AND APPROVE
6. ROTORK AUTOMATIC ELECTRIC ACTUATOR, FULL CLOSE, NON-THROTLING, N.O. PILOT. VALVE CLOSING ON EARTHQUAKE ALERT, (24 VDC APPLIED TO CONTROL ASSEMBLY) AND OPENS AFTER RESET (0 VDC APPLIED TO CONTROL ASSEMBLY) SEE SPECIFICATIONS FOR FURTHER INFORMATION.
7. PROVIDE CIRCUIT PROTECTION AND WIRE SIZE PER MOTOR ACTUATED VALVE MANUFACTURER REQUIREMENTS.
8. REFER TO GROUNDING DIAGRAM ON SHEET E501.

SCOPE ITEM	ELEC. CONTRACTOR	UTILITY CO.
TRENCHING - EXCAVATING, BACKFILL, PAVING/RESTORATION	X	
METER BASE	X	
UNDERGROUND VAULTS EXCAVATION	X	
UNDERGROUND VAULTS INSTALLATION	X	
CONDUIT AND INSTALLATION	X	
CONDUCTORS (WIRE) INSTALLATION		X
TRANSMISSION LINE INSTALLATION		X
RISER INSTALLATION		X
TRANSFORMER INSTALLATION		X

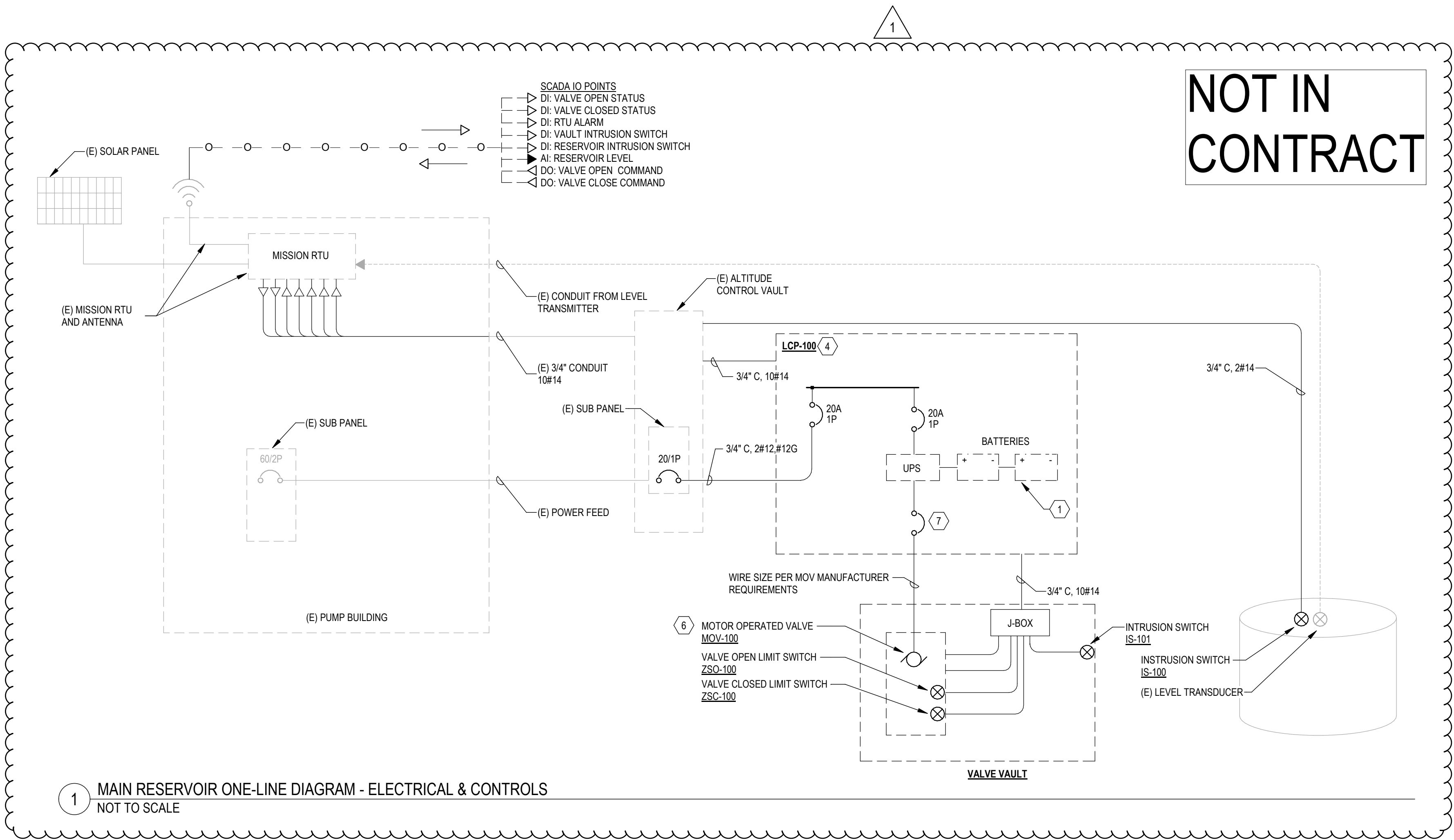
UTILITY CONTACT  
BRET DORSEY  
Bret.Dorsey@PacifiCorp.com  
503-861-6010.



2 TOLOVANA RESERVOIR ONE-LINE DIAGRAM - ELECTRICAL & CONTROLS  
NOT TO SCALE



3 NORTH RESERVOIR ONE-LINE DIAGRAM - ELECTRICAL & CONTROLS  
NOT TO SCALE



1 MAIN RESERVOIR ONE-LINE DIAGRAM - ELECTRICAL & CONTROLS  
NOT TO SCALE



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RESERVOIR ONE-LINE  
DIAGRAM

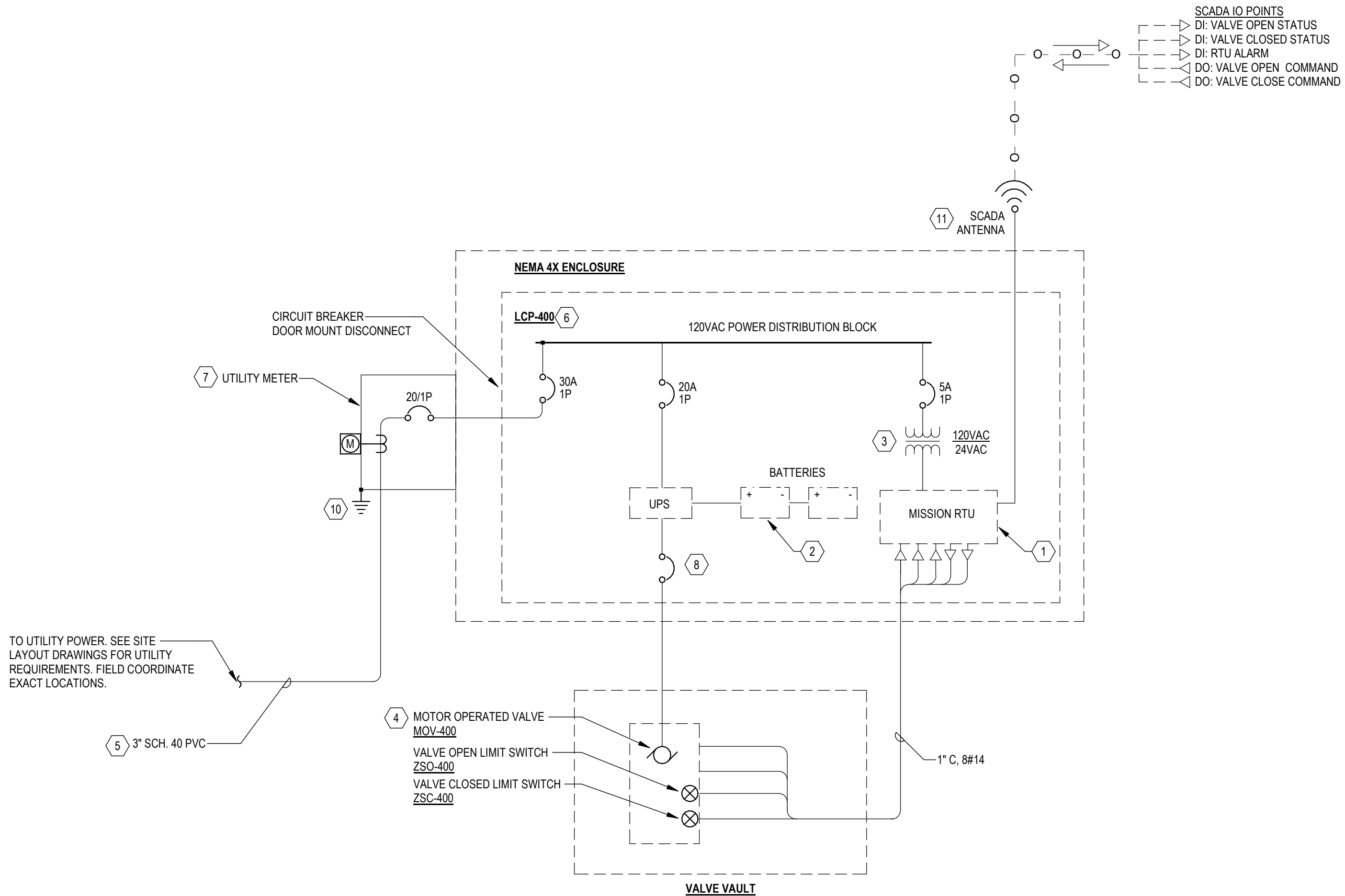
E601

Project Manager: TWT  
Drawn by: JBB  
Checked by: SEW



PLOT DATE: 11/16/2021 9:53 AM - FILE: C:\Users\jld@OneDrive - Windsor Engineers\20198.3 Cannon Beach Seismic Valves\02\_Drawings\00\_BIM 360 files\CAD Links\20198.3\_BRDR.dwg

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1 ISOLATION VALVE 4 SITE ONE-LINE DIAGRAM - ELECTRICAL & CONTROLS  
NOT TO SCALE

GENERAL SHEET NOTES

- A. ALL UNDERGROUND CONDUITS SHALL BE A MINIMUM OF 24" BELOW GRADE.
- B. ALL CONDUIT SHALL HAVE MINIMUM 12" OF SEPARATION FROM ANY OTHER COMMUNICATION OR GAS FACILITIES AND SHALL BE MINIMUM OF 36" FROM ANY WATER OR SEWER LINES.
- C. NEW SCADA AND VALVE PROGRAMMING BY CONTRACTOR.

KEYNOTES

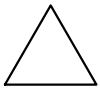
- 1 FURNISH AND INSTALL MISSION MYDRO 850.
- 2 PROVIDE BATTERY BACKUP. BATTERY SHALL HAVE CAPACITY TO COMPLETE A MINIMUM OF (2) CLOSE/OPEN CYCLES IN THE EVENT OF A POWER OUTAGE.SEE SPECIFICATION FOR MORE INFORMATION.
- 3 PROVIDE 120VAC TO 12 VAC, 1.2A POWER SUPPLY TO POWER RTU PER MISSION RTU REQUIREMENTS.
- 4 ROTORK AUTOMATIC ELECTRIC ACTUATOR, FULL CLOSE, NON-THROTTLING, N.O. PILOT, VALVE CLOSSES ON EARTHQUAKE ALERT, (24 VDC APPLIED TO CONTROL ASSEMBLY) AND OPENS AFTER RESET (0 VDC APPLIED TO CONTROL ASSEMBLY) SEE SPECIFICATIONS FOR FURTHER INFORMATION.
- 5 SEE SHEET E601 FOR DIVISION OF RESPONSIBILITY MATRIX.
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- 7 PROVIDE STAINLESS STEEL METER/MAIN COMBO, 120V/240V, 1PH, 3W, MIN. 100A RATED, 22KAIC, NEMA 3R. PROVIDE 100A/2P MAIN BREAKER AND (1) 20A/1P OUTPUT BREAKER. SEE INSTALLATION DETAIL ON SHEET E501. ACCEPTABLE METER SOCKETS SHALL BE PER PACIFIC POWER REQUIREMENTS AND APPROVED MANUFACTURER LIST.
- 8 PROVIDE CIRCUIT PROTECTION AND WIRE SIZE PER MOTOR ACTUATED VALVE MANUFACTURER REQUIREMENTS.
- 9 SHAKEALARM UNIT EQUIPMENT PROVIDED BY VARIUS INC. INSTALLATION, WIRING AND CONDUIT BY ELECTRICAL CONTRACTOR. MOUNT NEW SHAKEALARM UNIT ADJACENT TO EXISTING MISSION CONTROLS SCADA MASTER. SEE SPECIFICATIONS FOR INFORMATION AND REQUIREMENTS.
- 10 REFER TO GROUNDING DIAGRAM ON SHEET E501.
- 11 CONTRACTOR SHALL RECOMMEND A PLACEMENT LOCATION TO THE CITY OF CANNON BEACH WHERE THE OMNI-DIRECTIONAL ANTENNA SHOULD BE LOCATED FOR OPTIMUM PERFORMANCE BEFORE INSTALLATION.



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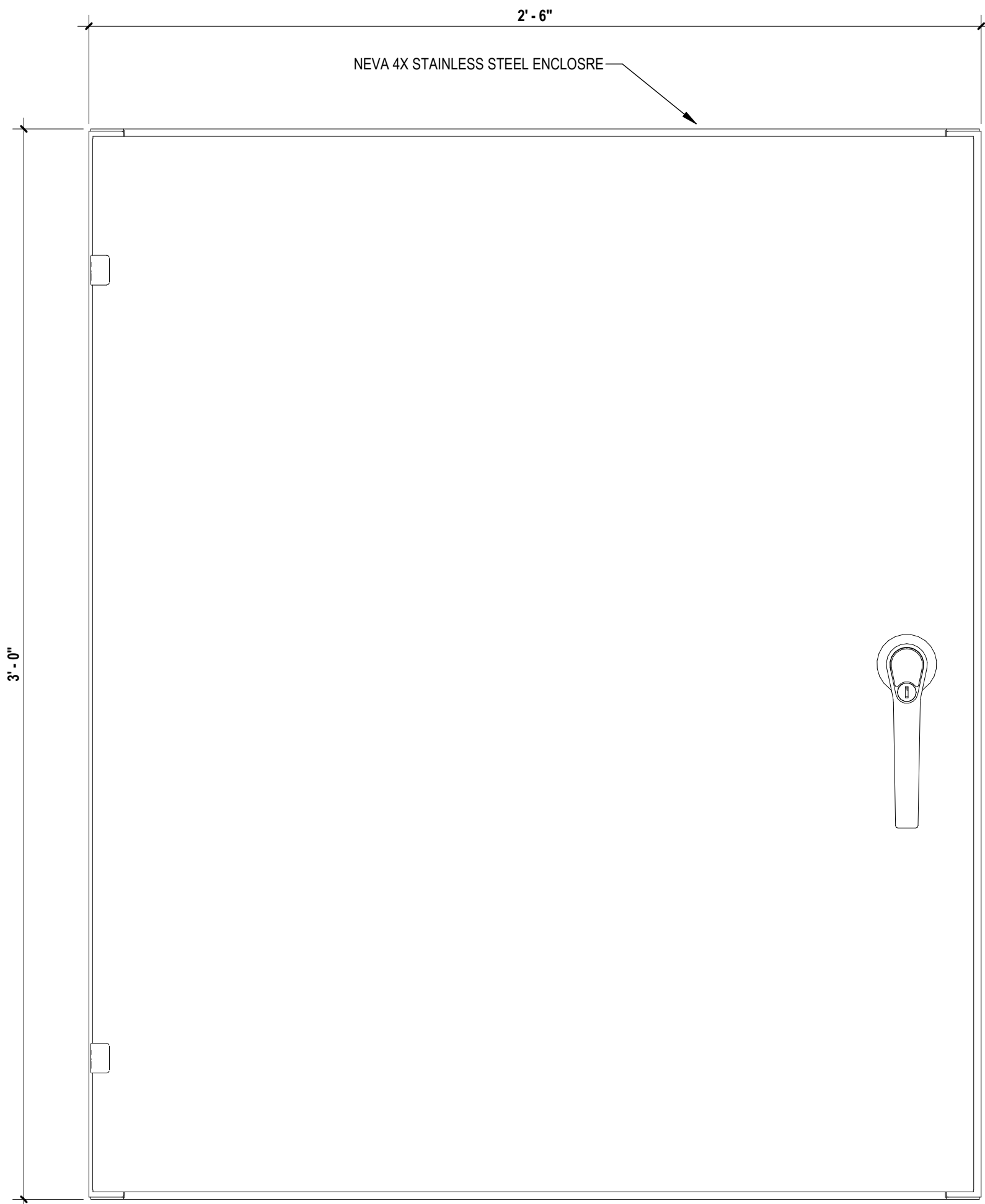
ISOLATION VALVE  
ONE-LINE DIAGRAM

E602

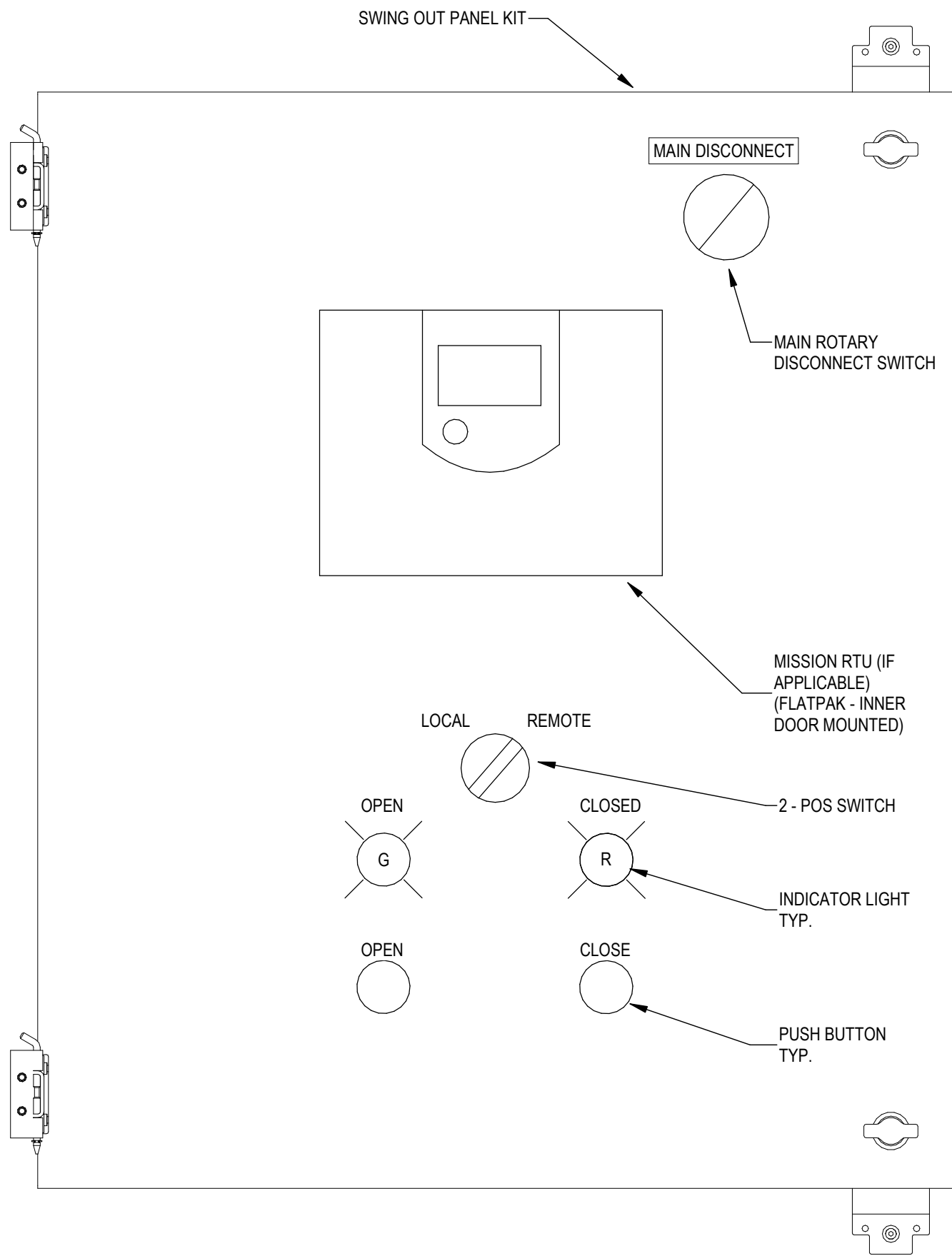


GENERAL SHEET NOTES

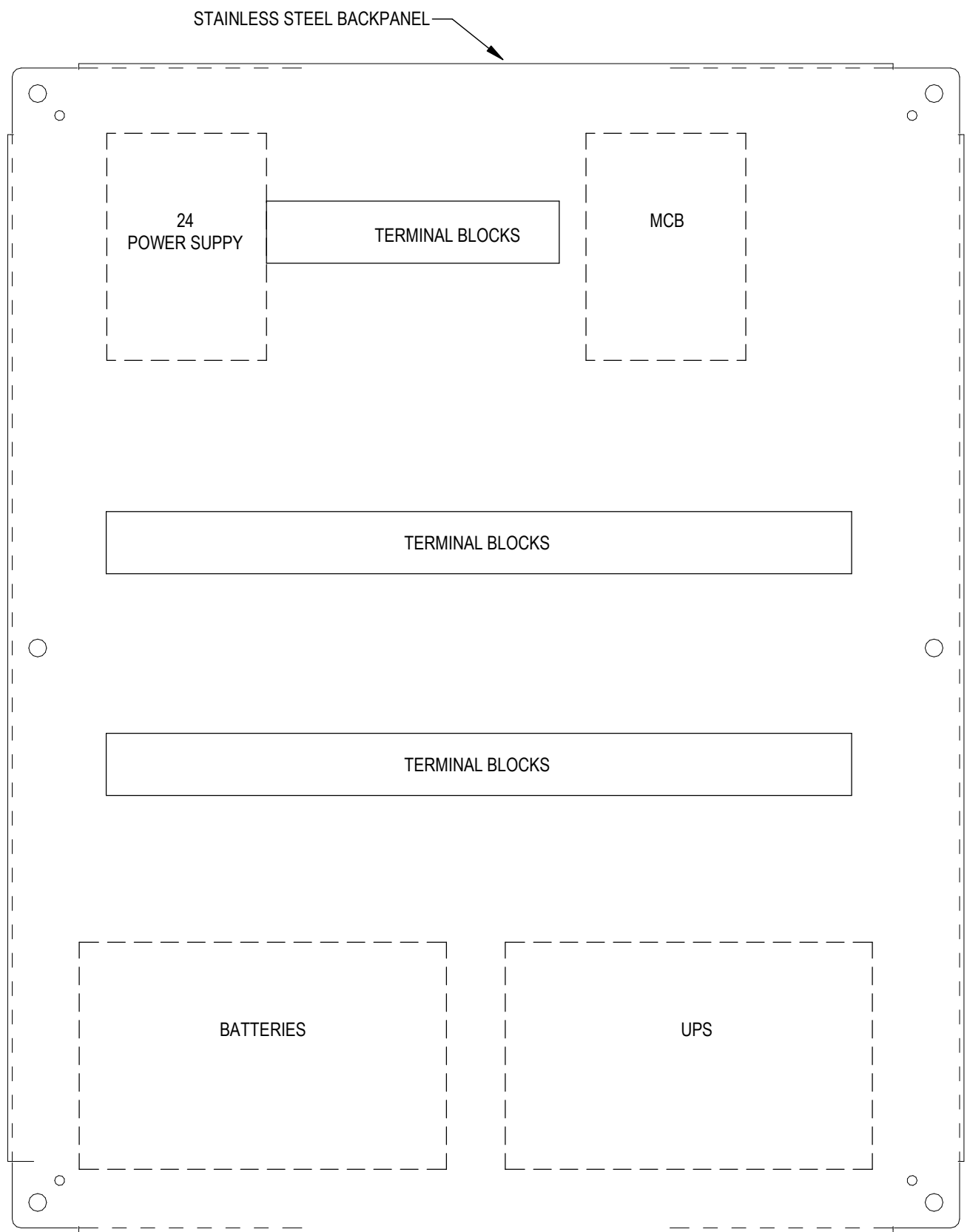
- A. THIS PANEL ELEVATION IS A GENERAL ARRANGEMENT DRAWING AND SHOWS MAJOR COMPONENTS ONLY. NOT ALL MATERIALS NECESSARY FOR FABRICATION. SEE WIRING DIAGRAMS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.



ENCLOSURE EXTERIOR



SWING OUT PANEL

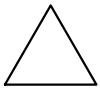


BACK PANEL



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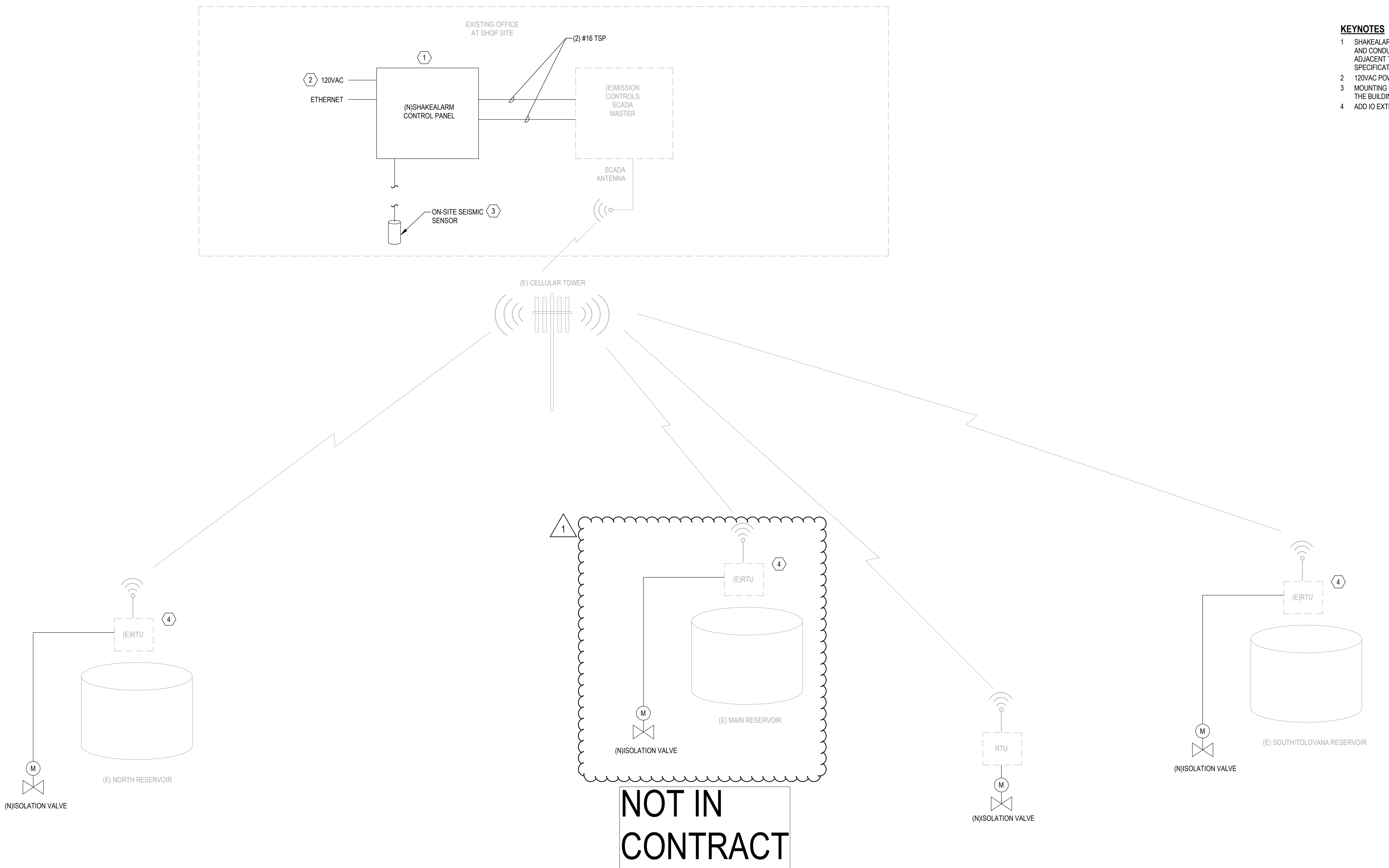
ENGINEERING PLAN  
Issue Date: 7/14/2023

Project Manager TWT  
Drawn by JRB  
Checked by SEW

TYPICAL CONTROL  
PANEL ELEVATIONS

E701





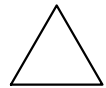
- KEYNOTES**
- 1 SHAKEALARM UNIT EQUIPMENT PROVIDED BY VARIUS INC. INSTALLATION, WIRING AND CONDUIT BY ELECTRICAL CONTRACTOR. MOUNT NEW SHAKEALARM UNIT ADJACENT TO EXISTING MISSION CONTROLS SCADA MASTER. SEE SPECIFICATIONS FOR FURTHER INFORMATION AND REQUIREMENTS.
  - 2 120VAC POWER FROM NEAREST AVAILABLE CIRCUIT.
  - 3 MOUNTING OF ON-SITE SEISMIC SENSOR SHALL BE INSTALLED ON AN ELEMENT OF THE BUILDING APPROVED BY ENGINEER.
  - 4 ADD IO EXTENTION CARDS IF EXISTING RTUS DO NOT HAVE SUFFICIENT SPARES.

2 OVERALL NETWORK DIAGRAM  
NOT TO SCALE



Know what's **below.**  
**Call** before you dig.  
CALL 2 BUSINESS DAYS BEFORE YOU DIG.  
CAUTION: UTILITY INFORMATION IS APPROXIMATE.  
VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

Revisions:



1	8/24/2023	ADDENDUM #1

LINE IS 1" ON FULL  
SCALE DRAWING



WINDSOR ENGINEERS

Ridgefield, WA  
Duluth + Minneapolis, MN  
www.windsorengineers.com  
Project No: 20198.3

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WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS  
CITY OF CANNON BEACH, OR 97110

ENGINEERING PLAN  
Issue Date: 7/14/2023

Project Manager TWT  
Drawn by JRB  
Checked by SEW

SCADA NETWORK  
DIAGRAM

E801



**SECTION 00 01 20  
SCHEDULES AND CHECKLIST**

ITEMS	DATE
SUBMITTAL AND REVIEW BY BUSINESS OREGON	FRIDAY JULY 14, 2023
INVITATION TO BID (ITB) ISSUED	<b>WEDNESDAY JULY 26, 2023</b>
<b>MANDATORY PRE-BID MEETING</b>	<b>THURSDAY AUGUST 10, 2023 10:00 AM</b>
REQUEST DEADLINE FOR: SUBSTITUTION, CLARIFICATION, OR CHANGE AND SOLICITATION PROTEST DEADLINE	WEDNESDAY AUGUST 16, 2023
LAST ADDENDA ISSUED	TUESDAY AUGUST 22, 2023
<b>BIDS DUE/ BID OPENING</b>	<b>WEDNESDAY AUGUST 30, 2023 2:00 PM</b>
<b>FIRST-TIER SUBCONTRACTOR DISCLOSURE</b>	<b>WEDNESDAY AUGUST 30, 2023 4:00 PM</b>
NOTICE OF INTENT TO AWARD (ESTIMATED)	FRIDAY SEPTEMBER 1, 2023
CITY COUNCIL APPROVAL OF AWARD (ESTIMATED)	TUESDAY SEPTEMBER 12, 2023
NOTICE OF AWARD (ESTIMATED)	SEPTEMBER 14, 2023
ANTICIPATED CONTRACT START / NOTICE TO PROCEED (ESTIMATED)	SEPTEMBER 18, 2023
ANTICIPATED SUBSTANTIAL COMPLETION	JANUARY 19, 2024
ANTICIPATED FINAL COMPLETION (ESTIMATED)	MARCH 29, 2024

**NOTE:** The City of Cannon Beach reserves the right to deviate from this schedule. With current supply chain issues, the project timeline may need to be adjusted accordingly.



## BID REQUIREMENTS CHECKLIST

The following is a listing of bid submission components.

SECTION	SECTION NAME	SUBMIT TIME
00 41 00	SIGNED BID FORM – ALL PAGES	SUBMIT WITH BID
	CONSTRUCTION CONTRACTORS BOARD LICENSE	SUBMIT WITH BID
00 41 10	BIDDER RESPONSIBILITY INFORMATION FORM – ALL PAGES	SUBMIT WITH BID
00 41 20	BID BOND	SUBMIT WITH BID
00 41 30	BIDDERS WARRANTY	SUBMIT WITH BID
00 41 40	BIDDERS CERTIFICATIONS	SUBMIT WITH BID
00 41 50	FIRST-TIER SUBCONTRACTOR DISCLOSURE	SUBMIT WITH BID OR WITHIN 2 HOURS AFTER
00 41 60	CERTIFICATE OF NON-COLLUSION	SUBMIT WITH BID
00 41 70	CONTRACTOR'S CERTIFICATION REGARDING DRUG TESTING PROGRAM	SUBMIT WITH BID
00 41 80	PUBLIC IMPROVEMENT CONTRACT	SUBMIT WITH BID
00 72 30	OREGON STATUTORY PUBLIC WORKS BOND	SUBMIT WITH BID
00 72 40	CERTIFICATION OF WORKERS COMPENSATION COVERAGE	SUBMIT WITH BID
00 73 00	ANY ADDITIONAL ITEMS SPECIFIED IN SUPPLEMENTARY INSTRUCTIONS TO BIDDERS	SUBMIT WITH BID

The bid requirements checklist is provided for the bidder's convenience. Bidder is advised to thoroughly review the Invitation to Bid documents to be certain that it has met all requirements and included all required documents, forms and information in its bid. In the event of a conflict between the bid requirements checklist and other Invitation to Bid documents, other Invitation to Bid documents shall take precedence.

**END OF SECTION**



**SECTION 00 21 13  
INSTRUCTIONS TO BIDDERS**

**1. THE PROJECT: CANNON BEACH WATER RESILIENCY PROJECT  
PHASE 1 - SEISMIC IMPROVEMENTS**

IN GENERAL, THE ELEMENTS OF WORK INCLUDE, BUT ARE NOT LIMITED TO:

- Removals of roadway materials and watermain structures, valves and piping.
- Site Grading
- Watermain
- Reservoir Improvements
- Isolation Valve Installation
- Electrical Controls Installation
- Shake Alarm System Installation

**2. ADDENDA AND INTERPRETATIONS:**

No interpretation of the meaning of the plans, specifications or other prebid documents will be made to any bidder orally.

Every request for such interpretation should be in writing and either addressed or emailed to City of Cannon Beach Public Works Department, Attn: Tessa Schutt, PO Box 368, Cannon Beach, OR 97110, EMAIL [schutt@ci.cannon-beach.or.us](mailto:schutt@ci.cannon-beach.or.us) and to be given consideration must be received at least ten days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be delivered via email or facsimile transmission to all prospective bidders not later than 72 hours prior to the bid opening, at the respective addresses furnished for such purposes.

Failure of any bidder to receive any such addendum of interpretation shall not relieve such bidder from any obligation under the bidder's bid as submitted. All addenda so issued shall become part of the contract documents.

If a Bidder believes that this solicitation is contrary to law, or that the solicitation document is unnecessarily restrictive, is legally flawed or improperly specifies a brand name they may file a solicitation protest within ten (10) days of the closing date. If a Bidder fails to file the protest within ten days of the closing date, the Bidder may not challenge the contract on grounds under this subsection in any future administrative or legal proceeding.

A solicitation protest must be filed in writing with the City Manager and Public Works Director and contain the information required by ORS 279B.405(4).

If the protest is timely filed and meets the requirements listed above, the Owner shall consider the protest and issue a decision in writing within ten (10) days after receipt. Otherwise, the Owner shall promptly notify the Bidder that the protest fails to meet the requirements of this subsection and give the reasons for the failure.

A. REQUEST FOR APPROVAL OF AN "APPROVED SUBSTITUTION": Bidders shall provide the named product unless another is approved through a substitution request, or a product exemption has been issued (ORS 279C.345). Other brands of quality, merit and utility will be considered upon proper submittal of the request with appropriate documentation:



- 1). Requests must provide all of the information necessary for the City to determine product acceptability.
- 2). Failure to provide sufficient information with the request will cause the request to be rejected.
- 3). Any product subsequently approved for substitution will be listed on an Addenda issued by the City.
- 4). Bidders are advised to use the "Substitution Request" form for such requests (Section 00 21 13.10).

B. REQUEST FOR CLARIFICATION: Any Bidder who finds discrepancies in, or omissions from, any provision of the Information to Bidders (ITB), Plans, Specifications, or Contract Documents, or has doubt as to the meaning, shall make a request for clarification in writing, to the contact listed on Page 2 of the ITB. To be considered, the request for clarification must be received by the Request Deadline as specified in 1.06 B.

C. REQUEST FOR CHANGES TO CONTRACTUAL TERMS OR SPECIFICATIONS OR PLANS: Any Bidder may submit a request for changes to contractual terms, Plans, or Specifications, in writing, to the contact listed on Page 2 of the ITB. To be considered, the request for changes must be received by the Request Deadline specified in 1.07 B. above. The request must include the specific changes requested, and the reason for requested changes supported by factual documentation, and any proposed changes.

D. PROTEST OF CONTRACT TERMS AND CONDITIONS OR SPECIFICATIONS: Any Bidder may submit a protest of solicitation terms and conditions, in writing, in accordance with OAR 137-049-0260 to the contact listed on Page 2 of the ITB. To be considered, the protest must be received by the deadline specified in 1.07 B. above. The protest shall include the legal and factual grounds for the protest, a description of the resulting prejudice to the Bidder if the protest is not granted, and a statement of the relief or changes proposed.

E. RESPONSE TO REQUESTS FOR CLARIFICATION: Clarifications, whether verbal, or in writing, or included in an addendum as "*clarification*", do not change Plans, Specifications, contractual terms, or procurement requirements of an ITB. If a request for clarification raises an issue that the City determines should be handled by formally amending the ITB, the City will do so only by announcing such a change in an Addendum, not through information identified as a "clarification."

F. RESPONSE TO REQUESTS FOR BRAND APPROVAL, REQUESTS FOR SUBSTITUTION, REQUESTS FOR CHANGE, AND PROTESTS: The City shall promptly respond to each properly-submitted written request for brand approval, request for substitution, request for change, and protest. Where appropriate, the City will issue ITB revisions via email.

Failure to protest solicitation terms and conditions, Contract terms and conditions or Specifications, as indicated in this section, precludes appeal or protest of a decision to award based upon such solicitation terms and conditions, Contract terms and conditions, or Specifications.

G. PROTEST OF ADDENDUM: Requests for clarification, requests for change and protests of Addendum must be received by the time and date specified in the Addendum or they will not be considered.



### 3. TIME OF COMPLETION:

The work to be performed under this contract shall be completed within the timeframe below, after the date of written Notice to Proceed by the Owner to the Contractor with such extensions of time as provided for in the General Conditions.

PROJECT COMPLETION IS SCHEDULED FOR: **MARCH 29, 2024**

### 4. QUALIFICATIONS OF BIDDER AND SUBCONTRACTOR:

Bid security in the amount of not less than 5% of the bid must accompany each bid in accordance with the Instructions to Bidders. The Owner reserves the right to reject any bid not in compliance with all prescribed public bidding procedures and requirements, may reject a bid that does not comply with requirement to demonstrate bidder's responsibility under ORS 279C.375(3)(b), and may reject, for good cause, any or all bids upon a finding of the Owner that it is in the public interest to do so in accordance with ORS 279C.395. The Owner reserves the right to waive any bid irregularities or informalities. No bidder may withdraw or modify the bidder's bid after the hour set for the opening thereof, until after the lapse of 30 days from the bid opening.

Each bid must contain a statement as to whether the bidder is a resident bidder, as defined in ORS 279A.120. Contractors submitting bids are required to be registered with the Construction Contractor's Board. All Subcontractors performing work described in ORS 701.005(2) (i.e., construction work) are required to be registered with the Construction Contractors Board or licensed by the State Landscape Contractors Board in accordance with ORS 701.026 to 701.035 before the Subcontractors commence work under the contract. Contractors or Subcontractors need not be licensed under ORS 468A.720 [asbestos abatement].

The Contractor and every Subcontractor shall each have a public works bond filed with the Construction Contractors Board before starting work on the project, unless exempt under ORS 279C.836(7) and (8).

Each Bidder shall submit a completed Bidder's Responsibility Information Form along with its Bid. The Bidder's Responsibility Information Form will be used to evaluate the qualifications of any Bidder whose Bid is under consideration for Contract Award.

Prior to award and execution of a contract, the City will evaluate whether the apparent successful Bidder meets the applicable standards of responsibility identified in ORS 279C.375. In doing so, the City may investigate Bidder and request information in addition to that already required in this document, when the City, in its sole discretion, considers it necessary or advisable. Submission of a signed Bid shall constitute approval for the City to obtain any information that the City deems necessary to conduct the evaluation.

The contract is to be awarded by competitive bid, the City of Cannon Beach shall award the contract to the contractor whose bid will best serve the interests of the City taking into account price as well as any other applicable factor(s) such as, but not limited to: experience, specific expertise, availability, project understanding, contractor capacity and responsibility that is not otherwise disqualified.

The City may postpone the award of the Contract after announcement of the apparent successful Bidder in order to complete its investigation and evaluation. Failure of the apparent successful Bidder to demonstrate responsibility shall render the Bidder non-responsive and shall constitute grounds for Bid rejection.

Any Bidder who fails to submit a complete Bidder Responsibility Information Form will be deemed to be non-responsive and will not be considered for Award of Contract.



If a Bidder is found not to be responsible, documentation of the reasoning will be sent to the Oregon Construction Contractor's Board (OCCB). Such documentation will be based upon the criteria set forth in ORS 279C.375(3).

The City may reject a bid that does not comply with applicable public contracting procedures and requirements, including the requirement to demonstrate the bidder's responsibility under ORS 279C.375 (3)(b).

#### **5. CONDITIONS OF WORK:**

Each bidder must investigate and be fully informed of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of the bidder's obligation to furnish all material and labor necessary to carry out the provisions of this contract. Insofar as possible the Contractor, in carrying out the Contractor's work, must employ such methods or means as will not cause any interruption of work.

#### **6. BIDDER'S REPRESENTATION:**

Each bidder is responsible for inspecting the site and for reading and being thoroughly familiar with the Contract Documents. The failure or omission of any bidder to do any of the foregoing shall in no way relieve the bidder from any obligation in respect to the bidder's bid. Each bidder, by submitting a bid, represents that:

A. The bidder has read and understands the Bidding Documents and the bidder's bid is made in accordance therewith.

B. The bidder has inspected the site(s), has become familiarized with the site conditions under which the work is to be performed, and has correlated the bidder's observations with the requirements of the proposed Contract Documents.

C. The bidder's bid is based upon the products, systems, and equipment described in the bidding documents without exception.

#### **7. PREBID MEETING:**

A mandatory pre-bid conference will be held **Thursday, August 10 at 8:00 am** starting at the public works yard site located at 365 Elk Creek Road, Cannon Beach, OR 97110.

#### **8. DISCLOSURE OF FIRST-TIER SUBCONTRACTORS:**

In accordance with ORS 279C.370, each bidder must submit in a separate sealed envelope, a completed First-Tier Subcontractor Disclosure Form within two working hours after the date and time of the bid opening. The separate envelope must be clearly labeled "FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM" and shall be marked with the bidder's name, address and project title. The list shall identify any first-tier subcontractors that will be furnishing labor or furnishing labor and materials meeting the minimum amount specified in ORS 279C.370. A bidder shall submit the required disclosure form either with its bid submission or within two working hours after the date and time of the bid closing deadline.

Failure to submit a completed disclosure form in a separate sealed envelope by the disclosure deadline of two working hours after the bid opening time will result in a nonresponsive bid. A nonresponsive bid will not be considered by the Owner for award. The Owner will consider for contract award only those bids for which the required disclosure form has been submitted.



The bidder is specifically advised that any person, firm or party to whom it is proposed to award a subcontract under this contract must be acceptable to the Owner. Substitution of affected first-tier subcontractors shall be made only in accordance with ORS 279C.585. The Contractor shall notify the Owner in writing of all proposed changes in subcontractors prior to making any changes in subcontractors. No subcontractor doing work in excess of 5% of the total amount of the bid, but at least \$15,000, and who is not listed on the disclosure form shall be used without the written approval of the Owner.

## **INSTRUCTIONS FOR FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM**

Bidders are required to disclose information about certain first-tier subcontractors when the contract value for a Public Improvement project is greater than \$100,000 (see ORS 279C.370). Specifically, when the contract amount of a first-tier subcontractor furnishing labor or furnishing labor and materials on the contract, if awarded, whose subcontract value would be greater than or equal to:

- (i) 5% of the total project bid, but at least \$15,000; or
- (ii) \$350,000 regardless of the percentage of the total project bid;

the bidder must disclose on the disclosure form and submit the following information about the first-tier subcontractors either with the bid submission or within two working hours after bid closing:

- 1) the subcontractor's name,
- 2) the dollar value of the subcontract, and
- 3) the category of work that the subcontractor would be performing.

If the bidder will not be using any subcontractors that are subject to the above disclosure requirements, the bidder is required to indicate "NONE" on the disclosure form.

## **9. PREPARATION OF BIDS:**

Bids shall be submitted on the attached Bid Form. All blanks must be appropriately filled in. Where so indicated by the make up of the Bid Form, sums shall be expressed in both words and figures, and in case of discrepancy between the two, the amount in words shall govern. Bidders shall make no additional stipulations on the Bid Form nor qualify any bid in any manner. Only one copy of the Bid Form is required.

## **10. BID SECURITY:**

Each bid must be accompanied by a cashier's check, a certified check of the bidder, an irrevocable letter of credit issued by an institution as defined in ORS 279C.380, or a bid bond prepared on the form of the bid bond attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of 5% of the bid. Such bid security will be returned to all except the three bidders whose bid best serves the interests of the City, consistent with the criteria set out in ORS 279C.414 within seven days after the opening of bids. The remaining bid security will be returned promptly after the Owner and the accepted bidder has executed the contract. If no award has been made within 30 days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as the bidder has not been notified of the acceptance of the bidder's bid, the bid shall be returned. The bid security of the successful bidder will be retained until the Performance Bond and Payment Bond have been executed and approved, after which it will be returned.



## **11. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT:**

The successful bidder, upon the bidder's failure or refusal to execute and deliver the contract and bonds required within 10 days after the bidder has received notice of the acceptance of the bidder's bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with the bidder's bid.

Consequently, the contractor agrees to pay the city the sum of \$200 per day, not as a penalty but as liquidated damages, for each day elapsed beyond the substantial completion date set forth in the bid document. The total liquidated damages shall be deducted from the final payment due the contractor. The city may waive its right to claim part or all of the liquidated damages due under this provision, but such full or partial waiver shall not negate or abridge any other right of action the city may have to enforce the provisions of this contract. Contractor will not contest such sums as being other than a reasonable measure of delay damages in the event those damages become payable under these provisions.

## **12. SUBMISSION OF BIDS:**

EACH BID MUST BE SUBMITTED IN A SEALED ENVELOPE MARKED:

"BID ENCLOSED"

## **PROJECT NAME: CANNON BEACH WATER RESILIENCY PROJECT PHASE 1 – SEISMIC IMPROVEMENTS**

and bearing on the outside the name and address of the bidder. For mailed bids, this sealed envelope may be enclosed in a mailing envelope addressed to the Owner. Bids shall be submitted at the designated location prior to the time and date for receipt of bids indicated in the Advertisement for Bids or any extension thereof made by Addendum. Bids received after the time and date for receipt of bids (the bid closing deadline) will be returned unopened. Oral, telephonic, faxed, or telegraphic submissions of bids are invalid and will not receive consideration. THE OFFICIAL TIME WILL BE ESTABLISHED BY THE CLOCK AT THE BID RECEIPT DESK.

## **13. MODIFICATION OR WITHDRAWAL OF BID:**

The Contractor may withdraw the Contractor's bid by submitting a written request to withdraw the bid prior to the time of the bid opening. Withdrawn bids may be resubmitted up to the time designated for the receipt of bids provided that they are then fully in conformance with these Instructions to Bidders. Bid Security shall be in an amount sufficient for the bid as modified or resubmitted. A bid may not be withdrawn, modified or canceled by the bidder for 30 days following the time and date designated for the receipt of bids. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the Owner and the Bidder. Per OAR-137-047-0440



#### **14. UNBALANCED BIDS:**

A materially unbalanced bid is defined as, "a bid which generates a reasonable doubt that award to the bidder submitting a mathematically unbalanced bid will result in the lowest ultimate cost to the Owner."

A bid will be considered irregular and may be rejected if the Owner determines that any of the unit prices are significantly or materially unbalanced to the potential detriment of the Owner. The Owner will place specific emphasis on its review of bids that appear to be unbalanced, as it may be to the detriment of the Owner, and other bidders who choose not to unbalance their bids. If the Owner finds that a bid is a detriment to the Owner or not in the best interest of the public, the Owner will act by rejecting all such unbalanced bids.

#### **15. CONSIDERATION OF BIDS AND PROTEST OF INTENT TO AWARD:**

The Owner shall have the right to reject any or all bids and to reject a bid not accompanied by the required Bid Security or data required by the Bidding Documents, or to reject a bid, which is in any way incomplete or irregular. The Owner shall have the right to waive any informality or irregularity in any bid received and to accept the bid which, in its judgement, is in its own best interest. All work of this project will be awarded as a single general contract to one Contractor. The contract will be awarded to the contractor whose bid best serves the interests of the City, consistent with the criteria set out in ORS 279C.414." The Owner shall consider all bids immediately after the bid opening.

The Notice of Intent to Award shall serve as notice to all Bidders that the Owner intends to award the contract.

Adversely affected or aggrieved Bidders shall have seven (7) calendar days from the date of the Notice of Intent to Award within which to file a written protest of award. Protests received after that date will not be considered. Protests must specify the grounds upon which the protest is based.

A. Protests must be emailed to Bruce St. Denis - [stdenis@ci.cannon-beach.or.us](mailto:stdenis@ci.cannon-beach.or.us) and Karen La Bonte at [labonte@ci.cannon-beach.or.us](mailto:labonte@ci.cannon-beach.or.us). Protests must comply with CBMC 2.08.160.

B. In order to be an adversely affected or aggrieved Bidder, the Bidder must claim to be eligible for award of the contract as the responsive Bidder that best serves the interests of the City, consistent with the criteria set out in ORS 279C.414 and that any and all lower Bids are ineligible to receive contract award.

C. An actual Bidder who is adversely affected or aggrieved by the award of the contract to another Bidder may protest award, in writing, within the timeline established. The written protest shall state the grounds upon which the protest is based and comply with CBMC 2.08.160(A)(2) No protest of award shall be considered after the deadline.

D. Pursuant to OAR 137-049-0260, no protest against award shall be considered because of the content of Bid Specifications, Plans, or contract Terms after the deadline established for submitting protests of Bid Specifications, Plans or Contract Terms.

The City will respond in writing to intent-to-award protests submitted by adversely-affected or aggrieved Bidders within ten (10) days. The City may also respond to intent-to-award protests submitted by other Bidders for purposes of clarification. However, any response provided by the City is not intended to, and shall not in and of itself constitute, confirmation that the bidder is, in fact, adversely affected or aggrieved, and therefore entitled to protest an intent to award, or that the protest was timely filed.



After expiration of the intent-to-award protest period, and resolution of all protests, the City will proceed with final award. (If the City receives only one Bid, the City may dispense with the intent-to-award protest period and proceed with award of a Contract).

#### **16. SECURITY FOR FAITHFUL PERFORMANCE AND PAYMENT:**

Simultaneously with delivery of the executed contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract, as specified in the General Conditions included herein. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner.

#### **17. POWER OF ATTORNEY:**

Attorneys in fact who sign bid bonds or contract bonds must file with each bond a certified and effective dated copy of their power of attorney.

#### **18. LAWS AND REGULATIONS:**

The bidder's attention is directed to the fact that all federal, state and local laws, ordinances, rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the same as though herein written out in full. All bidders shall comply with the provisions of ORS 279C.840 (Prevailing Wage Rates).

On federally funded projects, all bidders shall comply with the provisions of the Davis-Bacon Act (40 U.S.C. 276a). No bid will be considered by the Owner unless the bid contains a statement by the bidder that the provisions of ORS 279C.840 or 40 U.S.C. 276a are to be complied with. The public agency shall pay a fee to the Oregon Bureau of Labor and Industries (BOLI) in the amount of one-tenth of 1% of the contract price; however, there is a minimum fee of \$250 and a maximum fee of \$7,500.

#### **19. BID DURATION**

The contractor shall provide and maintain their bid prices for 90 days after bid opening. The Bidder agrees that this bid shall be good and may not be withdrawn for a period of 90 calendar days after the scheduled closing date for receiving bids.

#### **20 EXECUTION OF CONTRACT:**

The party to whom the contract is awarded will be required to execute the Contract and obtain the performance bond, payment bond and required insurance within 10 calendar days from the date when Notice of Award is delivered to the bidder. The Notice of Award shall be accompanied by the necessary Contract and bond forms. In case of failure of the bidder to execute the Contract, the Owner may at the Owner's option consider the bidder in default, in which case the Bid Security accompanying the bid shall become the property of the Owner. The Owner within 10 days of receipt of acceptable performance bond, payment bond and Contract signed by the party to whom the Contract was awarded shall sign the Contract and return to such party an executed duplicate of the Contract and a written Notice to Proceed. Should the Owner not execute the Contract and issue a written Notice to Proceed within such period, the bidder may by written notice withdraw the bidders signed Contract. Such notice of withdrawal shall be effective upon receipt of the notice by the Owner.



The notice to proceed shall be issued within 10 days of the execution of the contract by the owner. Should there be reasons why the notice to proceed cannot be issued within such period, the time may be extended by mutual agreement between the owner and contractor. If the notice to proceed has not been issued within the 10-day period or within the period mutually agreed upon, the contractor may terminate the contract without further liability on the part of either party.

For state funded projects, the durations for contracting may be extended in order to meet the requirements for agency reviews.

**END OF SECTION**