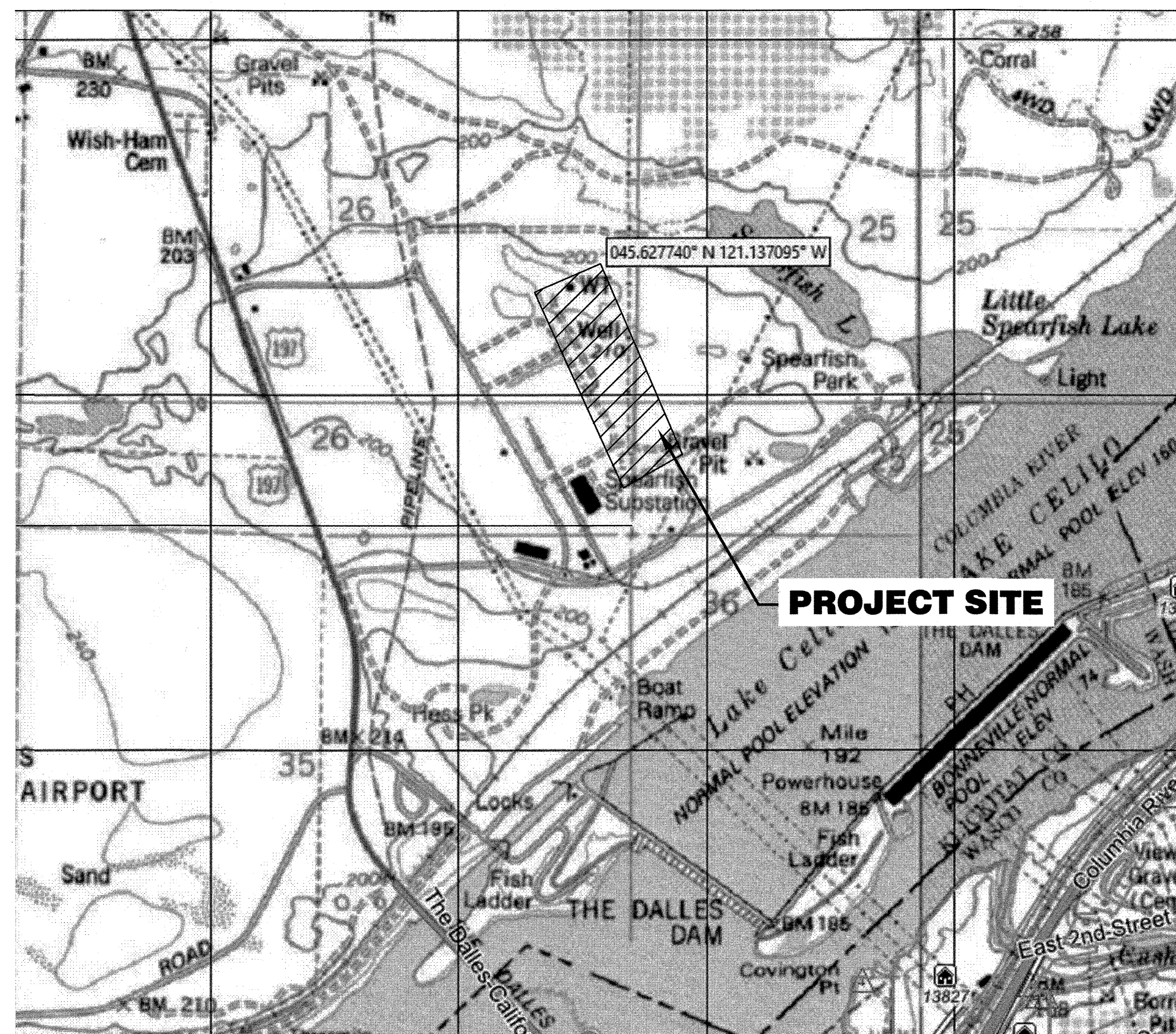


PROPOSED
P WELLS #2 DISINFECTION AND
IMPROVEMENTS PROJECT
POK PROJECT ID #2022-04
FOR THE
Klickitat County Port District No. 1
OCTOBER 2022




SHEET INDEX	
SHEET	DESCRIPTION
C-000	COVER SHEET
C-001	NOTES & LEGENDS
C-011	DETAILS
C-091	BUILDING IMAGES
C-101	OVERALL PLAN
C-102	SITE PLAN
C-103	BUILDING MODIFICATIONS



VICINITY MAP
APPROXIMATE SCALE 1"=1,000'

OWNER:
KLICKITAT COUNTY PORT DISTRICT NO. 1
154 EAST BINGEN POINT WAY, STE. A
BINGEN, WA 98605
PH: 509-493-1655
FX: 509-493-4257
MARGIE ZIEGLER, EXECUTIVE DIRECTOR

ENGINEER:
TENNESON ENGINEERING CORP.
3775 CRATES WAY
THE DALLES, OR. 97058
PH. 541-296-9177
FAX 541-296-6657



DARRIN ECKMAN, PROJECT MANAGER
MICHAEL PIKE, PROJECT DESIGNER

COVER SHEET

**FOR THE
DIP WELL #2 DISINFECTION AND
IMPROVEMENTS PROJECT
POK PROJECT ID #2022-04**


DALLESPORE, KLIKITAT COUNTY, WASHINGTON

TENNESON ENGINEERING CORP.

CONSULTING ENGINEERS
7777 ORATEC WAY

PH. 541-296-9177 FAX 541-296-

FOR BID



IF THIS BAR IS NOT ONE INCH,
THEN ADJUST SCALES ACCORDINGLY

COVER

SHEET
C-000

Work Order No.
16272

GENERAL NOTES:

- A) CONTRACTOR SHALL CONFORM TO ALL CONSTRUCTION PERMITS PROCURED BY THE OWNER.
- B) CONTRACTOR TO PAY ALL TESTING COSTS. CONTRACTOR SHALL COORDINATE AND PAY ALL COSTS ASSOCIATED WITH CONNECTING TO EXISTING WATER, SANITARY SEWER AND STORM SEWER FACILITIES.
- C) CONTRACTOR SHALL PROVIDE ALL BONDS AND INSURANCE REQUIRED BY PUBLIC AND/OR PRIVATE AGENCIES HAVING JURISDICTION.
- D) ALL MATERIALS AND WORKMANSHIP FOR FACILITIES IN STREET RIGHT-OF-WAY OR EASEMENTS SHALL CONFORM TO APPROVING AGENCIES' CONSTRUCTION SPECIFICATIONS WHEREIN EACH HAS JURISDICTION, INCLUDING BUT NOT LIMITED TO THE COUNTY, WASHINGTON DEPARTMENT OF HEALTH (DOH) AND THE WASHINGTON DEPARTMENT OF ECOLOGY (DOE).
- E) UNLESS OTHERWISE APPROVED BY THE JURISDICTION, CONSTRUCTION OF ALL PUBLIC FACILITIES SHALL BE DONE BETWEEN 7:00 AM. AND 5:00 P.M., MONDAY THROUGH FRIDAY.
- F) THE CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DRAWINGS INCLUDING SUCH INCIDENTALS AS MAY BE NECESSARY TO MEET APPLICABLE AGENCY REQUIREMENTS AND PROVIDE A COMPLETED PROJECT.
- G) THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES A MINIMUM OF 48 BUSINESS HOURS (2 BUSINESS DAYS) PRIOR TO START OF CONSTRUCTION AND COMPLY WITH ALL OTHER REQUIREMENTS OF THE SERVING UTILITIES.
- H) ANY INSPECTION BY THE OWNER OR OTHER AGENCIES SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN STRICT COMPLIANCE WITH THE CONTRACT DOCUMENTS, APPLICABLE CODES AND AGENCY REQUIREMENTS.
- I) CONTRACTOR SHALL ERECT AND MAINTAIN BARRICADES, WARNING SIGNS, TRAFFIC CONES PER LOCAL REQUIREMENTS IN ACCORDANCE WITH THE MUTCD (WASHINGTON AMENDMENTS). ACCESS TO DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES. ALL TRAFFIC CONTROL MEASURES SHALL BE APPROVED AND IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITY.
- J) CONTRACTOR SHALL BE PROPERLY LICENSED BY THE APPROPRIATE STATE AGENCY.
- K) ELEVATIONS ARE BASED ON AN ASSUMED DATUM AS SHOWN ON THE PLANS.
- L) STATIONING IS BASED ON PRIMARY ALIGNMENT SHOWN.

EXISTING UTILITIES & FACILITIES:

- A) THE CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF APPROVED DRAWINGS ON THE CONSTRUCTION SITE AT ALL TIMES WHEREON HE WILL RECORD ANY APPROVED DEVIATIONS IN CONSTRUCTION FROM THE APPROVED DRAWINGS, AS WELL AS THE STATION LOCATIONS AND DEPTHS OF ALL EXISTING UTILITIES ENCOUNTERED. THESE FIELD RECORD DRAWINGS SHALL BE KEPT UP TO DATE AT ALL TIMES AND SHALL BE AVAILABLE FOR INSPECTION BY THE OWNER UPON REQUEST. FAILURE TO CONFORM TO THIS REQUIREMENT MAY RESULT IN DELAY OF PAYMENT AND/OR FINAL ACCEPTANCE OF THE PROJECT.
- B) UPON COMPLETION OF CONSTRUCTION OF ALL NEW FACILITIES, CONTRACTOR SHALL SUBMIT A CLEAN SET OF FIELD RECORD DRAWINGS CONTAINING ALL RECORD DRAWINGS TO THE ENGINEER FOR USE IN THE PREPARATION OF RECORD DRAWINGS FOR SUBMITTAL TO THE OWNER. ALL INFORMATION SHOWN ON THE CONTRACTORS FIELD RECORD DRAWINGS SHALL BE SUBJECT TO VERIFICATION BY THE ENGINEER. IF SIGNIFICANT ERRORS OR DEVIATIONS ARE NOTED BY THE ENGINEER, AN AS-BUILT SURVEY PREPARED AND STAMPED BY A REGISTERED PROFESSIONAL LAND SURVEYOR AND/OR QUALIFIED ENGINEER SHALL BE COMPETED AT THE CONTRACTOR'S EXPENSE.
- C) THE LOCATION AND DESCRIPTIONS OF EXISTING UTILITIES SHOWN ON THE DRAWING, ARE COMPILED FROM AVAILABLE RECORDS AND/OR FIELD SURVEYS. THE ENGINEER OR UTILITY COMPANIES DO NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF SUCH RECORDS. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND SIZES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- D) THE CONTRACTOR SHALL LOCATE AND MARK ALL EXISTING PROPERTY AND STREET MONUMENTS PRIOR TO CONSTRUCTION. ANY MONUMENTS DISTURBED DURING CONSTRUCTION OF THE PROJECT SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR AT THE CONTRACTORS EXPENSE.
- E) CONTRACTOR SHALL FIELD VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES WHERE NEW FACILITIES CROSS. CONTRACTOR SHALL BE RESPONSIBLE FOR EXPOSING POTENTIAL UTILITY CONFLICTS FAR ENOUGH AHEAD OF CONSTRUCTION TO MAKE NECESSARY GRADE MODIFICATIONS WITHOUT DELAYING THE WORK. IF GRADE MODIFICATION IS NECESSARY, CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER, AND THE DESIGN ENGINEER SHALL OBTAIN APPROVAL PRIOR TO CONSTRUCTION. ALL UTILITY CROSSINGS SHALL BE POTHOLED AS NECESSARY PRIOR TO EXCAVATING OR BORING TO ALLOW THE CONTRACTOR TO PREVENT GRADE OR ALIGNMENT CONFLICTS.
- F) ALL FACILITIES SHALL BE MAINTAINED IN-PLACE BY THE CONTRACTOR UNLESS OTHERWISE SHOWN OR DIRECTED. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO SUPPORT, MAINTAIN, OR OTHERWISE PROTECT EXISTING UTILITIES AND OTHER FACILITIES AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR TO LEAVE EXISTING FACILITIES IN AN EQUAL OR BETTER-THAN-ORIGINAL CONDITION AND TO THE SATISFACTION OF THE ENGINEER.
- G) UTILITIES OR INTERFERING PORTIONS OF UTILITIES THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL PLUG THE REMAINING EXPOSED ENDS OF ABANDONED UTILITIES.
- H) CONTRACTOR SHALL REMOVE ALL EXISTING SIGNS, MAILBOXES, FENCES, LANDSCAPING, ETC., AS REQUIRED TO AVOID DAMAGE DURING CONSTRUCTION AND REPLACE THEM TO EXISTING OR BETTER CONDITION.
- I) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MANAGING CONSTRUCTION ACTIVITIES TO ENSURE THAT PUBLIC STREETS AND RIGHT-OF-WAYS ARE KEPT CLEAN OF MUD, DUST OR DEBRIS. DUST ABATEMENT SHALL BE MAINTAINED BY ADEQUATE WATERING OF THE SITE BY THE CONTRACTOR.

PIPED UTILITIES:

- A) ALL TAPPING OF EXISTING UTILITIES MUST BE DONE BY CONTRACTOR FORCES.
- B) THE END OF ALL UTILITY STUBS SHALL BE MARKED WITH A 2X4 COLOR CODED AND WIRED TO PIPE STUB.
- C) ALL NON-METALLIC WATER, SANITARY AND STORM SEWER PIPING SHALL HAVE AN ELECTRICALLY CONDUCTIVE INSULATED 14 GAUGE COPPER TRACER WIRE THE FULL LENGTH OF THE INSTALLED PIPE USING BLUE WIRE FOR WATER AND GREEN FOR STORM AND SANITARY PIPING. TRACER WIRE SHALL BE EXTENDED UP INTO ALL VALVE BOXES, AND MANHOLES AND CATCH BASINS. TRACER WIRE PENETRATIONS INTO MANHOLES SHALL BE WITHIN 18 INCHES OF THE RIM ELEVATION AND ADJACENT TO MANHOLE STEPS. THE TRACER WIRE SHALL BE TIED TO THE TOP MANHOLE STEP OR OTHERWISE SUPPORTED TO ALLOW RETRIEVAL FROM THE OUTSIDE OF THE MANHOLE. USE WATERPROOF FITTINGS AT ALL CONNECTIONS.
- D) NO TRENCHES IN ROADS OR DRIVEWAYS SHALL BE LEFT IN AN OPEN CONDITION OVERNIGHT. ALL SUCH TRENCHES SHALL BE CLOSED BEFORE THE END OF EACH WORK DAY AND NORMAL TRAFFIC FLOWS RESTORED.
- E) SANITARY SEWER LATERALS TO BE RUN TO EDGE OF R.O.W. AT 1/4" PER 12" SLOPE. LATERALS TO BE INSTALLED DOWNSTREAM OF MAINLINE CLEAN OUTS AND/OR MANHOLES. ALL CATCH BASINS TO HAVE 8" PVC. SDR-35 LATERALS. CATCH BASIN LOCATION MAY BE MODIFIED TO ACCOMMODATE LOW SPOTS CREATED DURING CONSTRUCTION. ENGINEER AND/OR CITY MAY REQUIRE ADDITIONAL CATCH BASINS TO BE PLACED AT LOW SPOTS CREATED DURING CONSTRUCTION.
- F) CONTRACTOR TO MAKE MINOR ADJUSTMENT TO SERVICE LOCATIONS, WHERE NECESSARY, TO AVOID CONFLICT. MAINTAIN 5' MINIMUM SEPARATION BETWEEN STORM AND SANITARY AND 10' MIN. SEPARATION BETWEEN SANITARY AND WATER, 1' TO MANHOLES OR CATCH BASINS AND 5' BETWEEN MANHOLES AND CATCH BASINS. MAINTAIN 1' VERTICAL AND 2' HORIZONTAL SEPARATION BETWEEN COUNTY AND PRIVATE FRANCHISE UTILITY SERVICES AND 2' HORIZONTAL SEPARATION BETWEEN COUNTY UTILITIES IN A COMMON TRENCH.
- G) ROCK EXCAVATION SHALL FOLLOW SECTION 7-09.3(7)B OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION (CURRENT EDITION) EXCEPT: ROCK EXCAVATION IS DEFINED AS "THE REMOVAL OF SOLID BEDROCK OR LEDGE ROCK, WHICH, IN THE OPINION OF THE ENGINEER, CANNOT BE EXCAVATED OR REMOVED BY A CATERPILLAR D8 DOZER WITH SINGLE-TOOTH RIPPER (80,000# CLASS) OR A CATERPILLAR 330 HYDRAULIC EXCAVATOR WITH ROCK BUCKET (75,000# CLASS), BUT WHICH REQUIRES SYSTEMATIC DRILLING AND BLASTING OR THE USE OF PNEUMATIC ROCK SPLITTERS, HAMMERS, AND/OR WEDGES." THE CONTRACTOR SHALL USE THE NECESSARY EQUIPMENT TO PERFORM THE EXCAVATION INCLUDING USING A RIPPER TOOTH, CHISEL HAMMER, EXCAVATOR BUCKET TEETH SUITABLE FOR ROCK EXCAVATION, AND OTHER ROCK EXCAVATION MEANS IN LIEU OF EXPLOSIVES. USE OF EXPLOSIVES WILL ONLY BE ALLOWED IF OTHER MEANS FOR THE EXCAVATING THE ROCK HAVE SHOWN TO BE INADEQUATE IN THE ENGINEER'S SOLE OPINION. WHEN EXPLOSIVES ARE UTILIZED, THE CONTRACTOR SHALL EXERCISE THE UTMOST CARE AND FOLLOW ALL NECESSARY SAFETY PRACTICES SO AS NOT TO ENDANGER LIFE OR PROPERTY AND COMPLY WITH GOVERNING STATE AND LOCAL LAWS AND REGULATIONS. THE BLASTING OPERATION SHALL BE DESIGNED AND ACCOMPLISHED BY AN EXPERIENCED, QUALIFIED, LICENSED BLASTING CONTRACTOR. PRIOR TO PERFORMING THE BLASTING OPERATIONS, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A DETAILED WORK PLAN OF THE BLASTING OPERATION. IF THE USE OF THE EXPLOSIVES IS ALLOWED, IT SHALL BE CONSIDERED INCIDENTAL TO THE ROCK EXCAVATION WORK.

TESTING AND INSPECTION:

- A) THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL REQUIRED OR NECESSARY INSPECTIONS ARE COMPLETED BY THE OWNER'S AUTHORIZED INSPECTORS PRIOR TO PROCEEDING WITH SUBSEQUENT WORK WHICH COVERS OR THAT IS DEPENDENT ON THE WORK TO BE INSPECTED. FAILURE TO OBTAIN NECESSARY INSPECTION(S) AND APPROVAL(S) SHALL RESULT IN THE CONTRACTOR BEING FULLY RESPONSIBLE FOR ALL PROBLEMS ARISING FROM UNINSPECTED WORK.
- B) UNLESS OTHERWISE SPECIFIED, THE FOLLOWING TABLE OUTLINES THE MINIMUM TESTING SCHEDULE FOR THE PROJECT. THIS TESTING SCHEDULE IS NOT COMPLETE, AND DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF OBTAINING ALL NECESSARY INSPECTIONS FOR ALL WORK PERFORMED, REGARDLESS OF WHO IS RESPONSIBLE FOR PAYMENT.

REQUIRED TESTING AND FREQUENCY		Party Responsible	for payment
		Contractor	Others (See note 1)
STREETS, PARKING LOTS, PADS, FILLS, ETC.			
SUBGRADE	1 TEST/4000 S.F./LIFT (2 MIN)		✓ See note 3
AGGREGATE	1 TEST/4000 S.F./LIFT		✓ See note 3
ASPHALT	1 TEST/4000 S.F./LIFT (2 MIN)		✓
PIPED UTILITIES, ALL			
TRENCH BACKFILL	1 TEST/200 FOOT TRENCH/LIFT (2 MIN)		✓
WATER			
PRESSURE	(TO BE WITNESSED BY ENGINEER OR APPROVING AGENCY)	✓	
BACTERIAL WATER TEST	PER OHD/DOH REQUIREMENTS	✓	See note 2
CHLORINE RESIDUAL TEST	PER OHD/DOH REQUIREMENTS	✓	
SANITARY SEWER			
AIR TEST	PER CITY OR ODOT/APWA WHICHEVER IS MORE STRINGENT	✓	See note 4
MANDREL	95% OF ACTUAL INSIDE DIAMETER	✓	
TV INSPECTION	LINES MUST BE CLEANED PRIOR TO TV WORK	✓	
MANHOLE	VACUUM TEST EACH MANHOLE. WITNESSED BY ENGINEER OR APPROVING AGENCY.	✓	See note 4
STORM			
MANDREL	95% OF ACTUAL INSIDE DIAMETER	✓	
TV INSPECTION	LINES MUST BE CLEANED PRIOR TO TV WORK	✓	
NOTE 1: OTHERS REFERS TO OWNER, ENGINEER OR APPROVING AGENCY AS APPLICABLE. CONTRACTOR RESPONSIBLE FOR SCHEDULING TESTING. ALL TESTING MUST BE COMPLETED PRIOR TO PERFORMING SUBSEQUENT WORK.			
NOTE 2: TESTING MUST BE PERFORMED BY AN APPROVED INDEPENDENT TESTING AGENCY.			
NOTE 3: IN ADDITION TO IN PLACE DENSITY TESTING, THE SUBGRADE AND AGGREGATE SHALL BE PROOF-ROLLED WITH A LOADED 10 YARD DUMP TRUCK PROVIDED BY THE CONTRACTOR. LOCATION AND PATTERN OF PROOF-ROLL TO BE AS DIRECTED BY THE OWNERS AUTHORIZED REPRESENTATIVE.			
NOTE 4: CONTRACTOR MAY USE HYDROSTATIC TESTING IN LIEU OF VACUUM AND AIR TESTING.			

WATER SYSTEM: (PORT OF KLIICKITAT)

- A) OWNER TO OPERATE ALL VALVES INCLUDING FIRE HYDRANTS ON EXISTING PUBLIC MAINS.
- B) ALL WATER MAINS SHALL BE PVC C-900, DR-18. DUCTILE IRON SPOOLS TO BE CEMENT LINED PC 350. ALL FITTINGS 4-INCHES THROUGH 24-INCHES IN DIAMETER SHALL BE IN CONFORMANCE WITH AWWA C-153 OR AWWA C-110. THE MINIMUM WORKING PRESSURE FOR ALL MJ CAST IRON OR DUCTILE IRON FITTINGS 4-INCHES THROUGH 24-INCH IN DIAMETER SHALL BE 350 PSI FOR MJ FITTING AND 250 PSI FOR FLANGED FITTINGS.
- C) MATERIALS THAT COME INTO CONTACT WITH POTABLE WATER SHALL MEET NATIONAL SANITATION FOUNDATION STANDARD 61, SECTION 9 REQUIREMENTS.
- D) ALL WATER MAINS TO BE INSTALLED WITH A MINIMUM 36 INCH COVER TO FINISH GRADE. UNLESS OTHERWISE NOTED OR DIRECTED, SERVICE LINE TO BE INSTALLED WITH A MINIMUM 24 INCH COVER. DEEPER DEPTHS MAY BE REQUIRED AS SHOWN ON THE DRAWINGS OR TO AVOID OBSTRUCTIONS.
- E) UNLESS OTHERWISE SHOWN OR APPROVED BY THE ENGINEER, ALL VALVES SHALL BE CONNECTED TO ADJACENT TEES OR CROSSES WITH FLANGES OR A FOSTER ADAPTOR.
- F) WATER SERVICE PIPE ON THE PUBLIC SIDE OF THE METER SHALL BE AS SHOWN IN THE WATER SERVICE DETAIL.
- G) ALL CONNECTIONS INTO EXISTING WATERLINE ARE TO BE DONE BY P.U.D. APPROVED CONTRACTOR. SUBMIT NAME, QUALIFICATIONS AND MATERIAL SPECIFICATIONS TO P.U.D. FOR REVIEW AND APPROVAL A MINIMUM OF 1 WEEK IN ADVANCE OF WORK.
- H) CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT AND MATERIALS (INCLUDING PLUGS, BLOWOFFS, VALVES, SERVICE TAPS, ETC.) REQUIRED TO FLUSH, TEST AND DISINFECT WATERLINES PER PUBLIC AGENCY REQUIREMENTS. PRESSURE TESTING SHALL BE DONE IN WITH APWA SECTION 1140.51.
- I) THE WORK SHALL BE PERFORMED IN A MANNER DESIGNATED TO MAINTAIN WATER SERVICE TO RESIDENCES SUPPLIED FROM THE EXISTING WATERLINES. IN NO CASE SHALL SERVICE TO ANY MAIN LINE OR RESIDENCES BE INTERRUPTED FOR MORE THAN FOUR (4) HOURS IN ANY ONE DAY. CONTRACTOR SHALL NOTIFY THE PUD AND ALL AFFECTED RESIDENTS AND BUSINESSES A MINIMUM OF 24 BUSINESS HOURS (1 BUSINESS DAY) PRIOR TO ANY INTERRUPTION OF SERVICE
- J) WHERE SANITARY SEWER LINES CROSS ABOVE OR WITHIN 18" INCHES VERTICAL SEPARATION BELOW A WATERLINE, SEWER MAINS AND/OR LATERALS SHALL BE REPLACED WITH C-900 PVC PIPE (DR 18) AT THE CROSSING. CENTER ONE FULL LENGTH OF C-900 PVC PIPE AT POINT OF CROSSING. CONNECT TO EXISTING SEWER LINES WITH APPROVED RUBBER COUPLING. BACKFILL WITH CDF AT CROSSINGS.

ABBREVIATIONS:

AASHTO - AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS

ABS - ACRYLONITRILE BUTADIENE STYRENE

APWA - AMERICAN PUBLIC WORKS ASSOCIATION

ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS

AWWA - AMERICAN WATER WORKS ASSOCIATION

BF - BOTTOM OF FOOTING

BSW - BACK OF SIDEWALK

BDW - BOTTOM OF WALL

CDF - CONTROLLED DENSITY FILL

CL - CLASS

CLR - CLEAR

CONT. - CONTINUOUS

COTG - CLEANOUT TO GRADE

C.Y. - CUBIC YARD

DCVA - DOUBLE CHECK VALVE ASSEMBLY

DEQ - OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

DI - DUCTILE IRON

DIA., Ø - DIAMETER

DR - DIMENSION RATIO

(E) - EXISTING

EL - ELEVATION

FDC - FIRE DEPARTMENT CONNECTION

FF - FINISH FLOOR

FG - FINISH GRADE

FL - FLANGE

FM - FORCE MAIN

FW - FIRE WATER

G.V. - GATE VALVE

H. HORIZ. - HORIZONTAL

HMAC - HOT MIX ASPHALT CONCRETE

H.S. - HIGH STRENGTH

HYD. - HYDRANT

LEN. - LENGTH

IE - INVERT ELEVATION

L.F. - LINEAL FEET

LP - LIGHT POLE

LT. - LEFT

MUTCD - MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

MV - MEDIUM VOLTAGE

N.C. - NORMALLY CLOSED

N.O. - NORMALLY OPEN

O.C., O/C - ON CENTER

ODOT - OREGON DEPARTMENT OF TRANSPORTATION

OG - ORIGINAL GROUND

OHD - OREGON HEALTH DIVISION

(P) - PROPOSED

PC - POINT OF CURVATURE

PCC - PORTLAND CEMENT CONCRETE

P.I.V. - POST INDICATOR VALVE

PO - PUSH ON

POC - POINT ON CURVE

PRC - POINT OF REVERSE CURVATURE

PSI - POUNDS PER SQUARE INCH

PT - POINT OF TANGENCY

PVC - POLYVINYL CHLORIDE

ROW - RIGHT OF WAY

RT. - RIGHT

S - SLOPE

SAN - SANITARY

SD - STORM DRAIN

SDCB - STORM DRAIN CATCH BASIN

SDCO - STORM DRAIN CLEANOUT

SDMH - STORM DRAIN MANHOLE

SDR - STANDARD DIMENSION RATIO

S.F. - SQUARE FEET

SSCO - SANITARY SEWER CLEANOUT

SSMH - SANITARY SEWER MANHOLE

SS - SANITARY SEWER

STA - STATION

STM - STORM

SW - SIDEWALK

S.Y. - SQUARE YARD

TC - TOP OF CURB

TS - TOP OF SIDEWALK OR SLAB

TF - TOP OF FOOTING

TP - TOP OF PAVEMENT

TW - TOP OF WALL

TYP. - TYPICAL

U.N.O. - UNLESS NOTED OTHERWISE

V, VERT. - VERTICAL

SDR - STANDARD DIMENSION RATIO

S.F. - SQUARE FEET

SSCO - SANITARY SEWER CLEANOUT

SSMH - SANITARY SEWER MANHOLE

SS - SANITARY SEWER

STA - STATION

STM - STORM

SW - SIDEWALK

S.Y. - SQUARE YARD

TC - TOP OF CURB

TS - TOP OF SIDEWALK OR SLAB

TF - TOP OF FOOTING

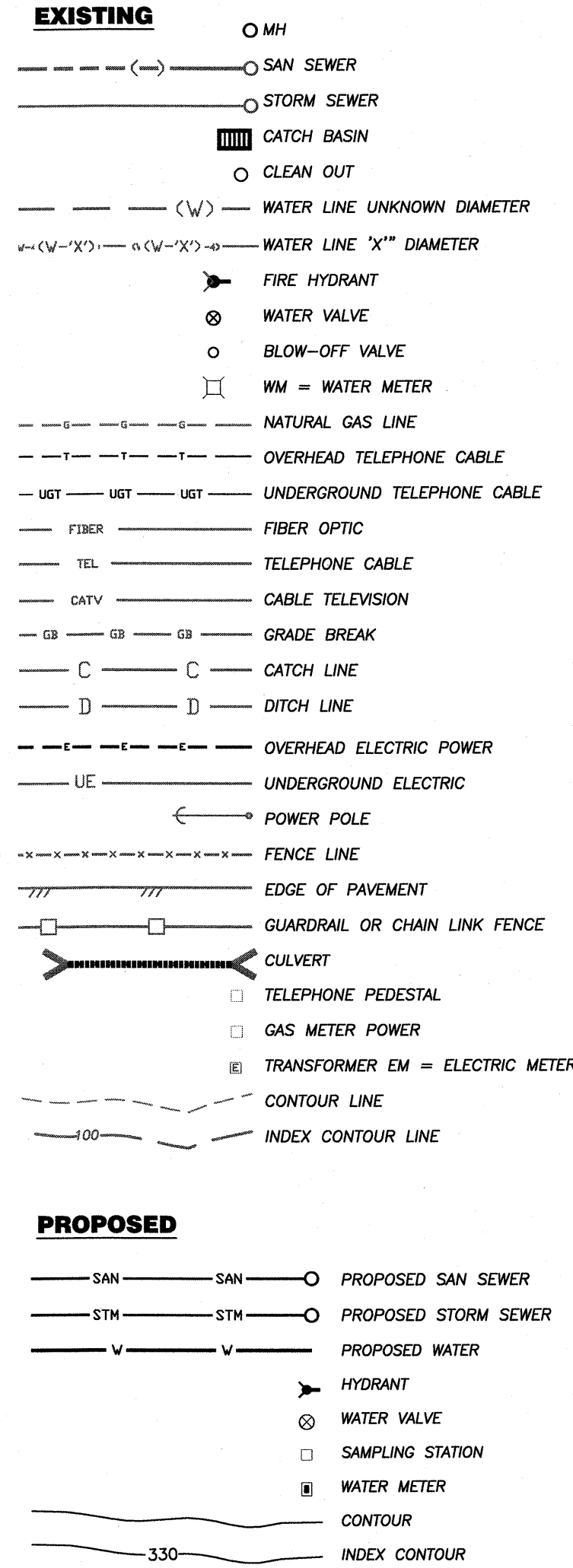
TP - TOP OF PAVEMENT

TW - TOP OF WALL

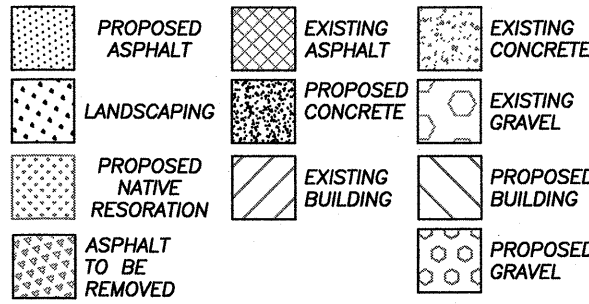
TYP. - TYPICAL

U.N.O. - UNLESS NOTED OTHERWISE

V, VERT. - VERTICAL



HATCH



DesignT.E.C.

SurveyT.E.C.

DWG. No. 16200\16272\DRAWINGS\16272 BASE.DWG

Date10/19/2022

Scale16272

GENERAL NOTES

FOR THE

DIP WELL #2 DISINFECTION AND IMPROVEMENTS PROJECT

POK PROJECT ID #2022-04

DALLESFORT, KLIICKITAT COUNTY, WASHINGTON

TENNESON ENGINEERING Corp.

CONSULTING ENGINEERS

3775 CRATES WAY

THE DALLES, OREGON 97058

PH. 541-296-9177 FAX 541-296-6657

Plot Date: 10/19/2022

FOR BID

IF THIS BAR IS NOT ONE INCH, THEN ADJUST SCALES ACCORDINGLY

DARRIN O. ECKMAN
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
37209

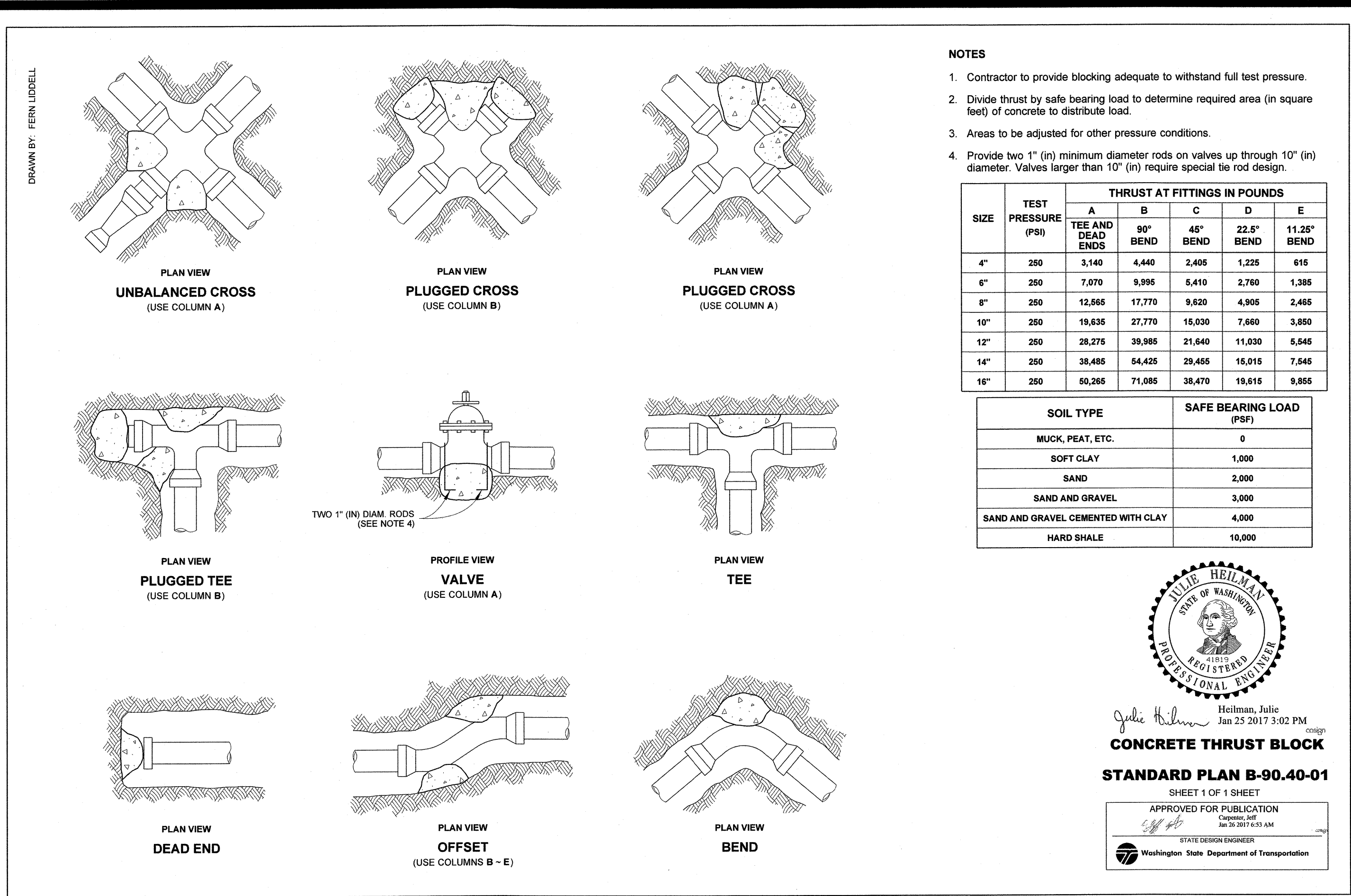
EX. DATE: 11/14/23

NOTES

SHEET

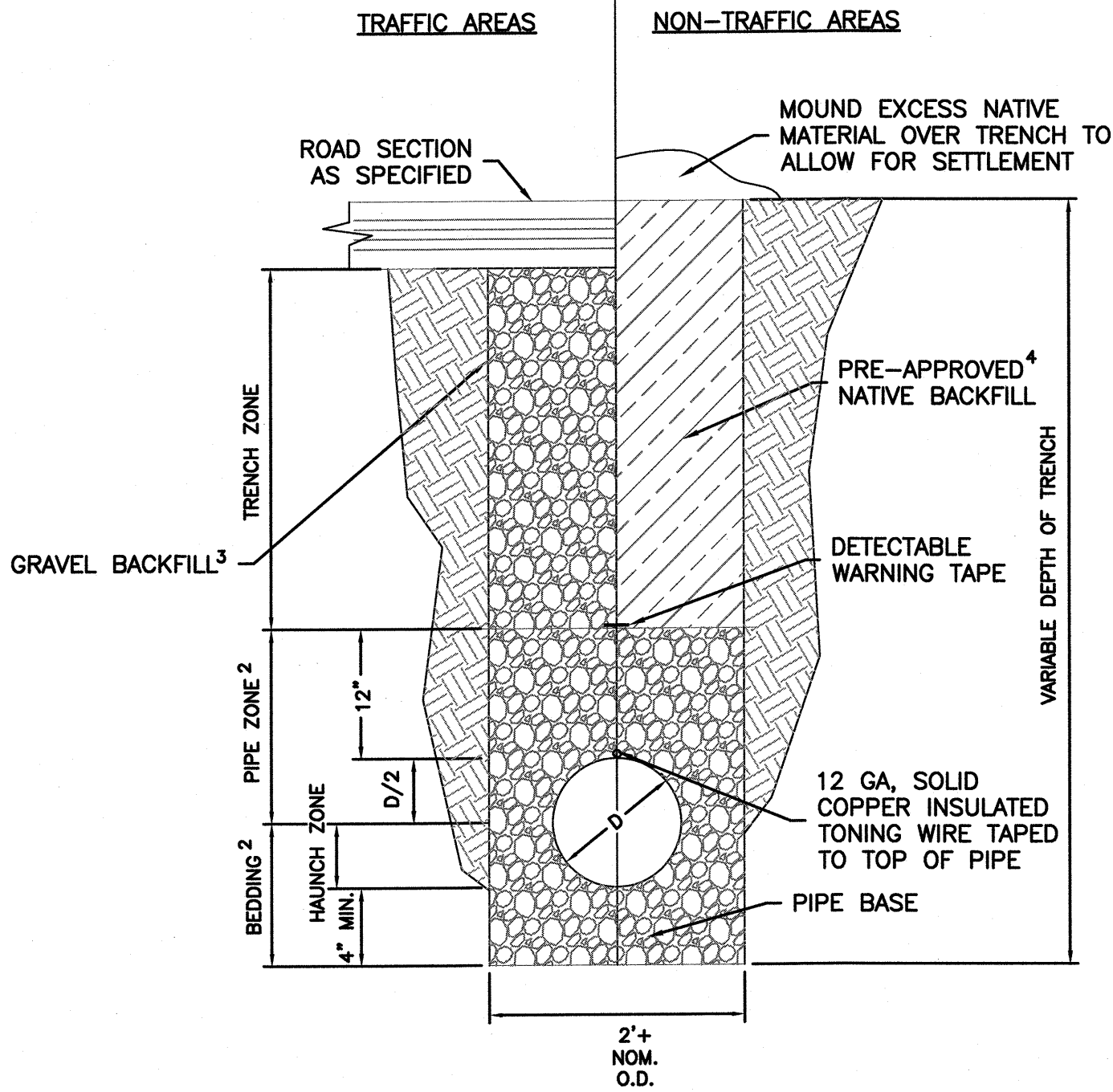
C-001

Work Order No. 16272

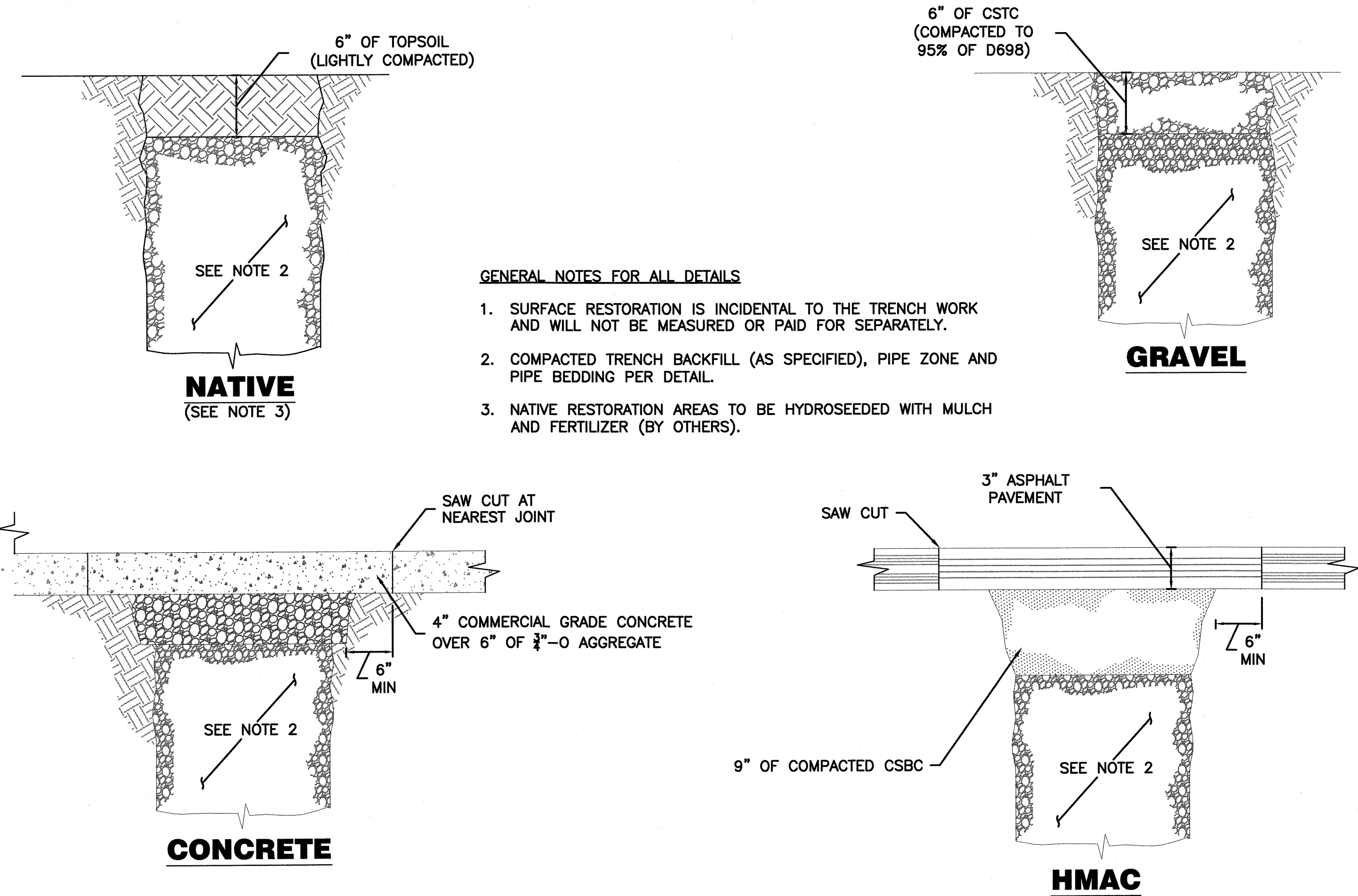


- NOTES
- Contractor to provide blocking adequate to withstand full test pressure.
 - Divide thrust by safe bearing load to determine required area (in square feet) of concrete to distribute load.
 - Areas to be adjusted for other pressure conditions.
 - Provide two 1" (in) minimum diameter rods on valves up through 10" (in) diameter. Valves larger than 10" (in) require special tie rod design.

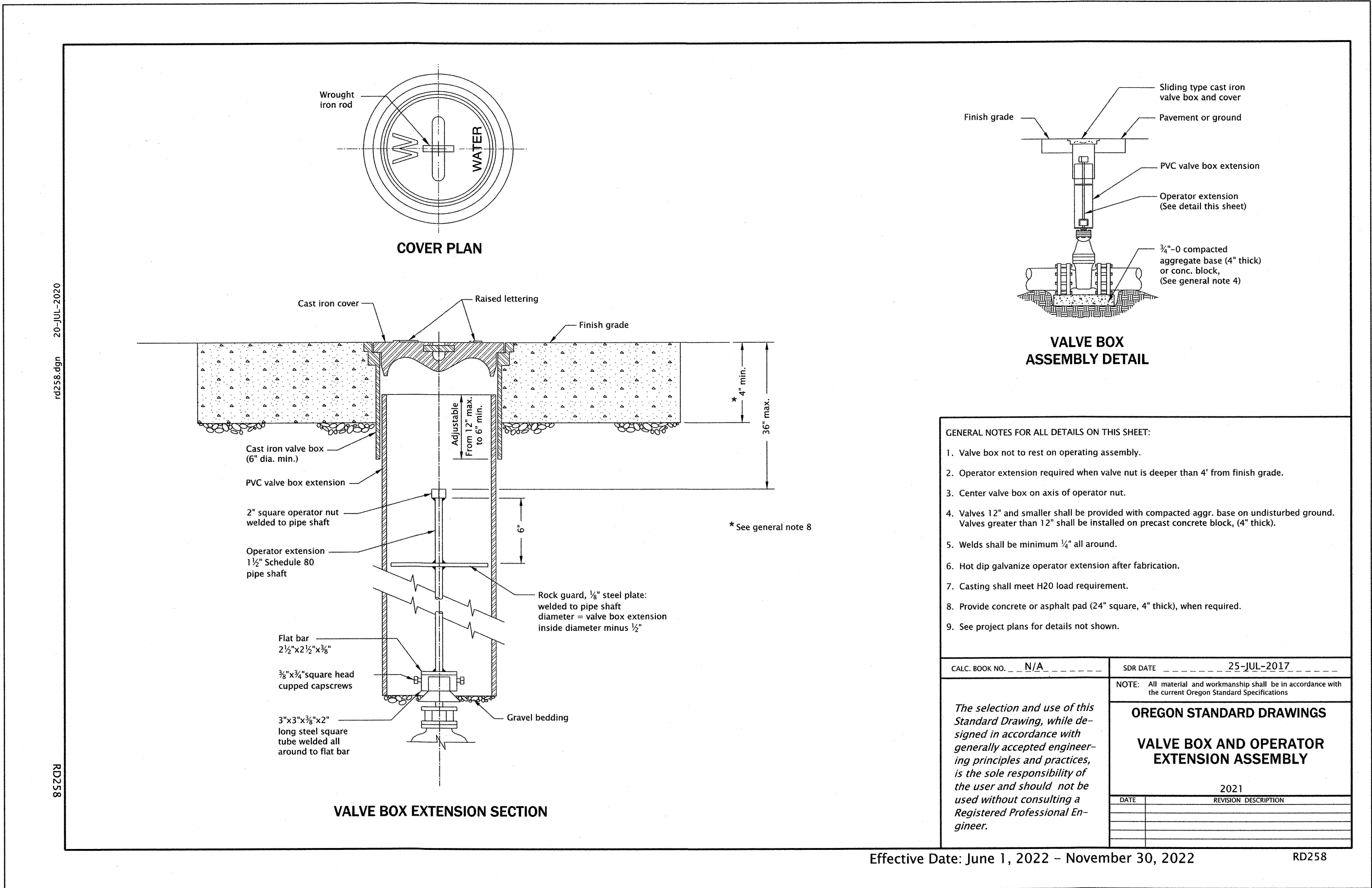
- NOTES
- WATER MAIN INSTALLATION REQUIREMENTS SHALL BE PER SECTION 7-09 OF WSDOT STANDARD SPECIFICATIONS.
 - PIPE ZONE AND BEDDING MATERIAL SHALL CONFORM TO WSDOT STANDARD SPECIFICATIONS 9-03.12(3).
 - GRAVEL BACKFILL PER WSDOT SPECIFICATIONS SECTION 9-03.19, AND COMPACTED TO 95% MAX. DENSITY (AASHTO T-99). NATIVE SOILS MAY BE USED UPON APPROVAL BY REVIEWING AUTHORITY IF TESTING SHOWS MATERIAL IS CLASSIFIED AS A-1 OR A-3 BY AASHTO.
 - OUTSIDE THE ROADWAY PRISM, SUITABLE NATIVE BACKFILL SHALL BE COMPACTED TO 90% MAX. DENSITY (AASHTO T-99).
 - ALL COMPACTION SHALL BE IN ACCORDANCE WITH THE COMPACTION CONTROL TEST OF WSDOT STANDARD SPECIFICATIONS 2-03.3(14)D.



PIPE INSTALLATION DETAIL
SCALE: NONE



TYPICAL TRENCH RESTORATION DETAILS
SCALE: NONE



Design T.E.C. Survey T.E.C.

DWG. No. 16200\16272\DRAWINGS\16272

Scale NONE

Date 10/19/2022

Drawn T.E.C.

Work Order No. 16272

DETAILS

FOR THE

DIP WELL #2 DISINFECTION AND IMPROVEMENTS PROJECT

POK PROJECT ID #2022-04

DALLESFORT, KLICKITAT COUNTY, WASHINGTON

TENNESON ENGINEERING CORP.

CONSULTING ENGINEERS

3775 CRATES WAY

THE DALLES, OREGON 97058

PH. 541-296-9177 FAX 541-296-6657

PLOT DATE: 10/19/2022

FOR BID

1"

IF THIS BAR IS NOT ONE INCH, THEN ADJUST SCALES ACCORDINGLY

DARRIN O. ECKMAN
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
37209

EX. DATE: 11/14/23

DETAILS

SHEET

C-011

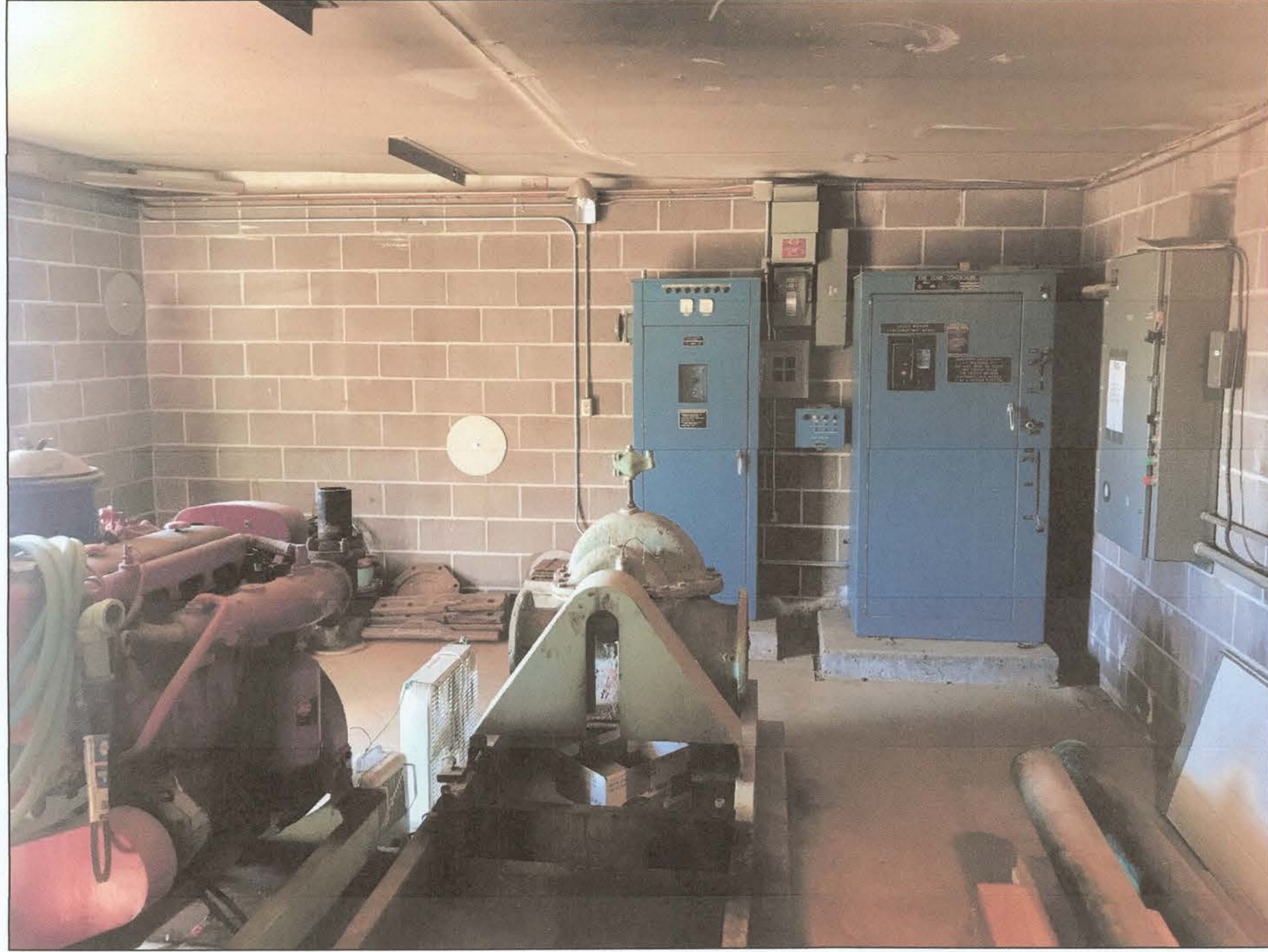
Work Order No. 16272



EAST WALL



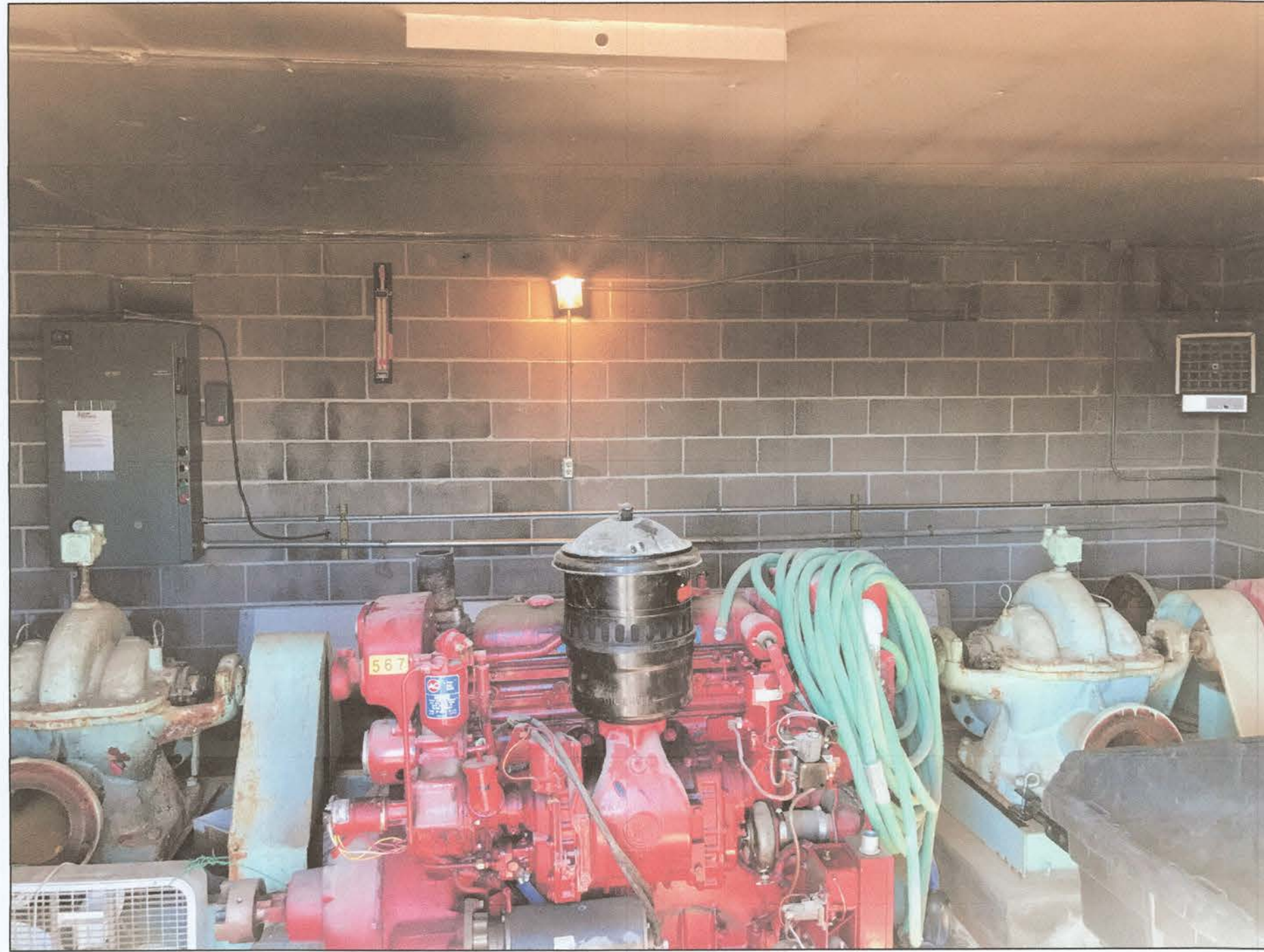
SOUTH WALL



WEST WALL



NW CORNER



NORTH WALL



NE CORNER

NOTE:
THE PUMPS, PUMP FRAMES AND ENGINE
WILL BE REMOVED BY OWNER PRIOR TO
THE CONTRACTOR STARTING WORK.

Design

T.E.C.

Survey

T.E.C.

DWG. No.

K:\WORK ORDERS\16200\16272\DRAWINGS\16272

BASE Dwg

BASE Dwg

Date

10/19/2022

Drawn

T.E.C.

Work Order No.

16272

Scale

NONE

BUILDING IMAGES

FOR THE

DIP WELL #2 DISINFECTION AND IMPROVEMENTS PROJECT

POT PROJECT ID #2022-04

DALLESFORT, KICKITAT COUNTY, WASHINGTON

TENNESON ENGINEERING CORP.


CONSULTING ENGINEERS


3775 CRATES WAY

THE DALLES, OREGON 97058


PH. 541-296-9177 FAX 541-296-6657

PLOT DATE: 10/19/2022






FOR BID



IF THIS BAR IS NOT ONE INCH, THEN ADJUST SCALES ACCORDINGLY



EX. DATE: 11/14/23

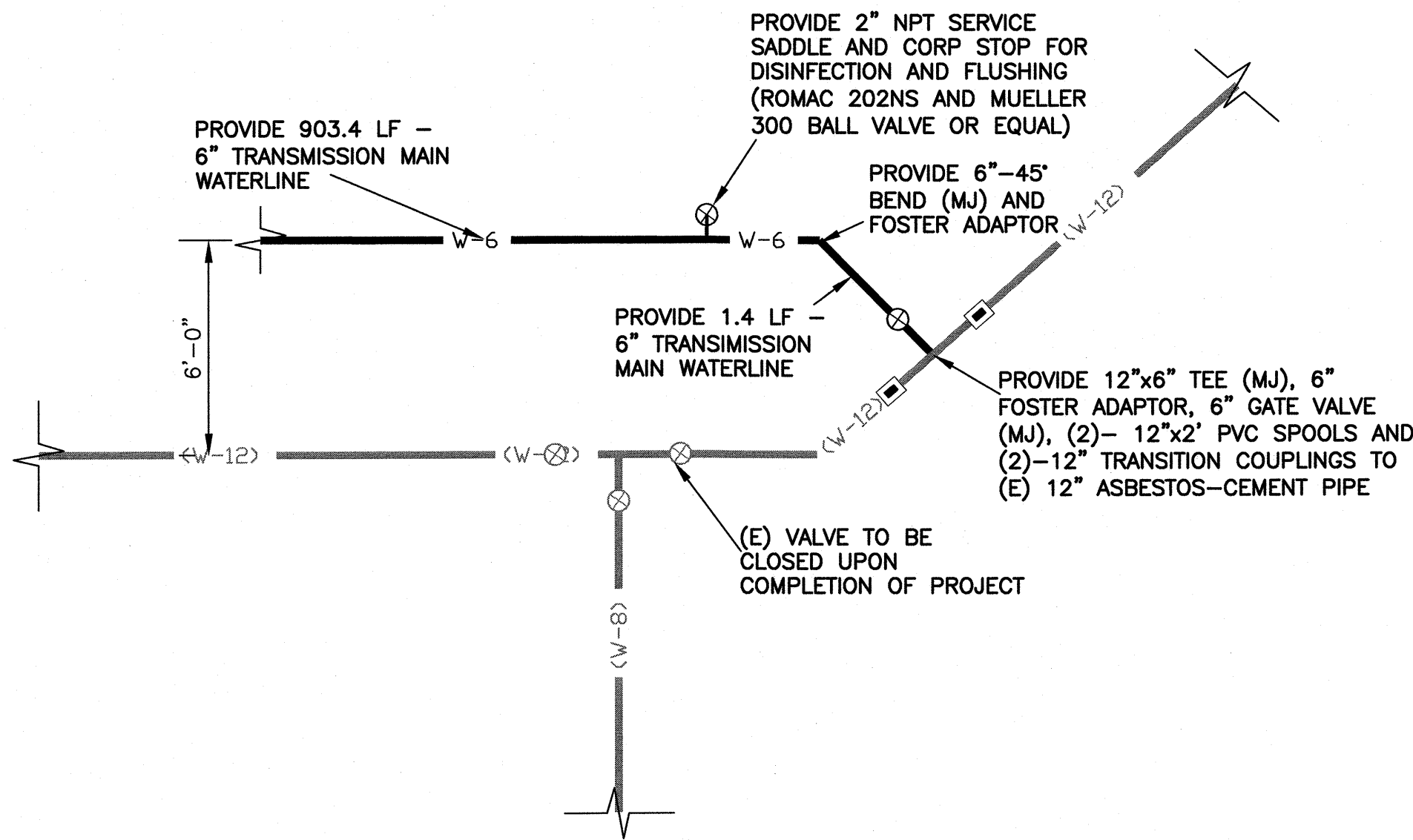
IMAGES

SHEET

C-091

Work Order No.

16272



CONNECTION DETAIL (ADDITIVE #1)

SCALE: NTS

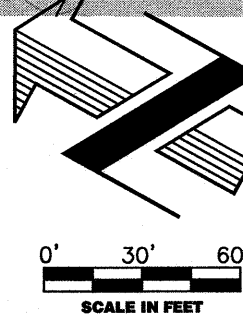
SHEET NOTES

- 1 THE EXISTING UTILITIES INFORMATION IS APPROXIMATE. THE CONTRACTOR MUST VERIFY THE SIZE, TYPE AND LOCATION, IN ADVANCE AND NOTIFY ENGINEER OF ANY CONFLICTS. NEITHER THE OWNER NOR THE ENGINEER ACCEPT ANY RESPONSIBILITY FOR THE EXISTING UTILITIES NOT BEING IN THE LOCATION SHOWN OR IDENTIFIED.
- 2 CONTRACTOR RESPONSIBLE FOR ALL SURFACE RESTORATION TO EXISTING CONDITIONS. NOT ALL RESTORATION IS IDENTIFIED.
- 3 ALL WATER MAINS TO BE PVC C900-DR18 WITH PUSH-ON JOINTS AND MINIMUM 36" COVER. ALL FITTINGS TO HAVE THRUST BLOCKS.



OVERALL PLAN

SCALE: 1" = 60'

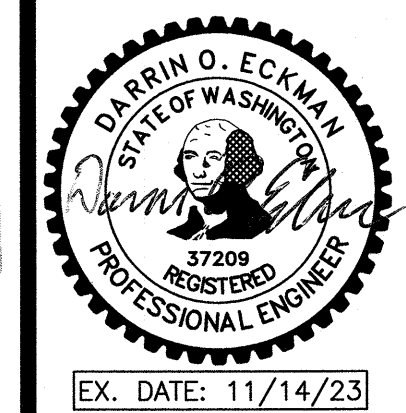


Design	T.E.C.	Survey	T.E.C.
DWG. No.	16272	Drawn	T.E.C.
DATE	10/19/2022	Work Order No.	16272

OVERALL PLAN
FOR THE
DIP WELL #2 DISINFECTION AND IMPROVEMENTS PROJECT
POK PROJECT ID #2022-04
DALLSPORT, KLICKITAT COUNTY, WASHINGTON

TENNESON ENGINEERING CORP.
CONSULTING ENGINEERS
3775 CRATES WAY
THE DALLES, OREGON 97058
PH. 541-296-9177 FAX 541-296-6657
PLOT DATE: 10/20/2022

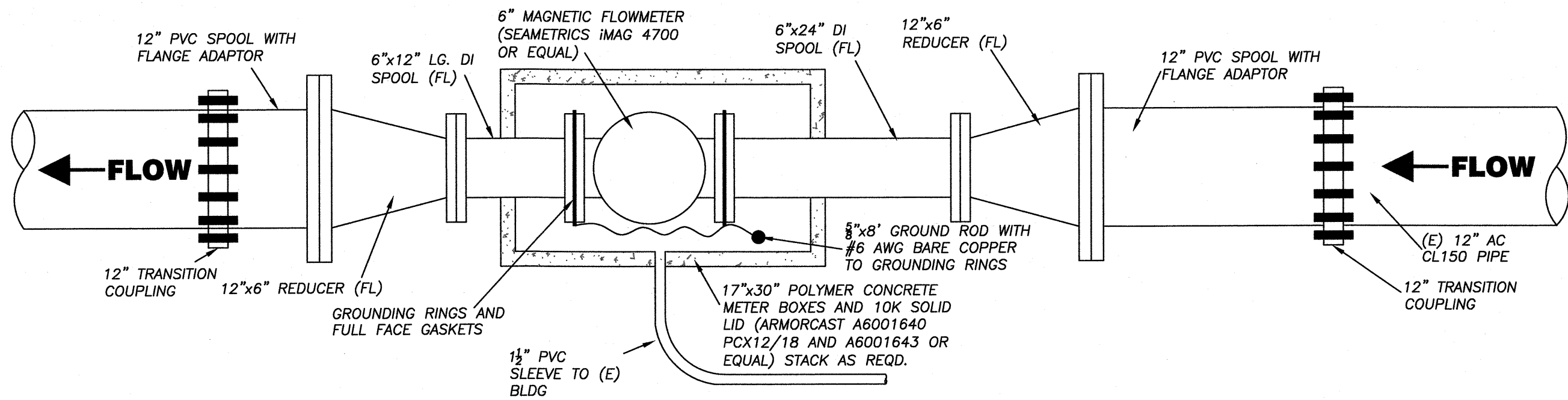
FOR BID
IF THIS BAR IS NOT ONE INCH, THEN ADJUST SCALES ACCORDINGLY



OVERALL
SHEET
C-101

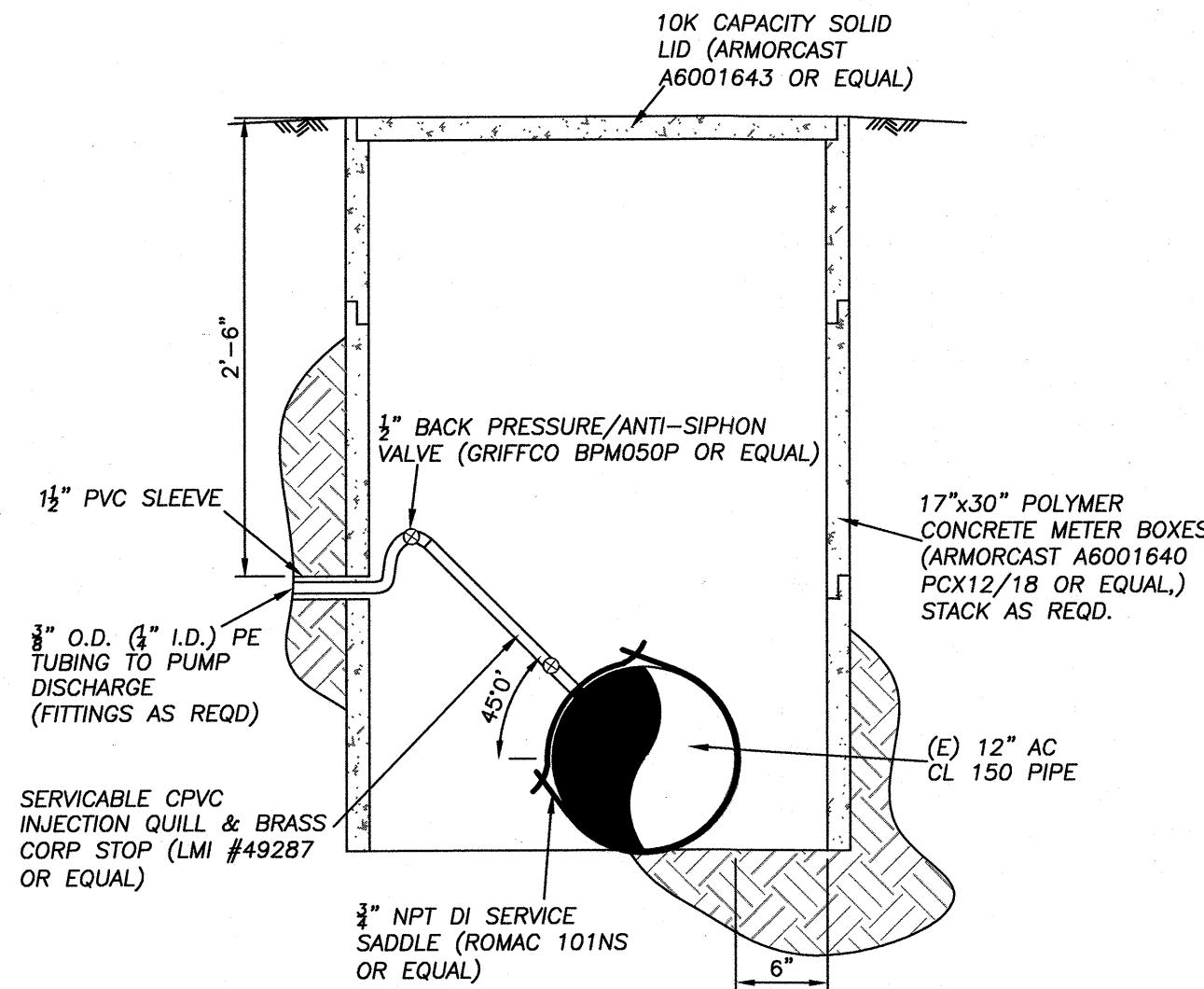
Work Order No.
16272

NOTE: SEE SHEET C-001 FOR LEGEND



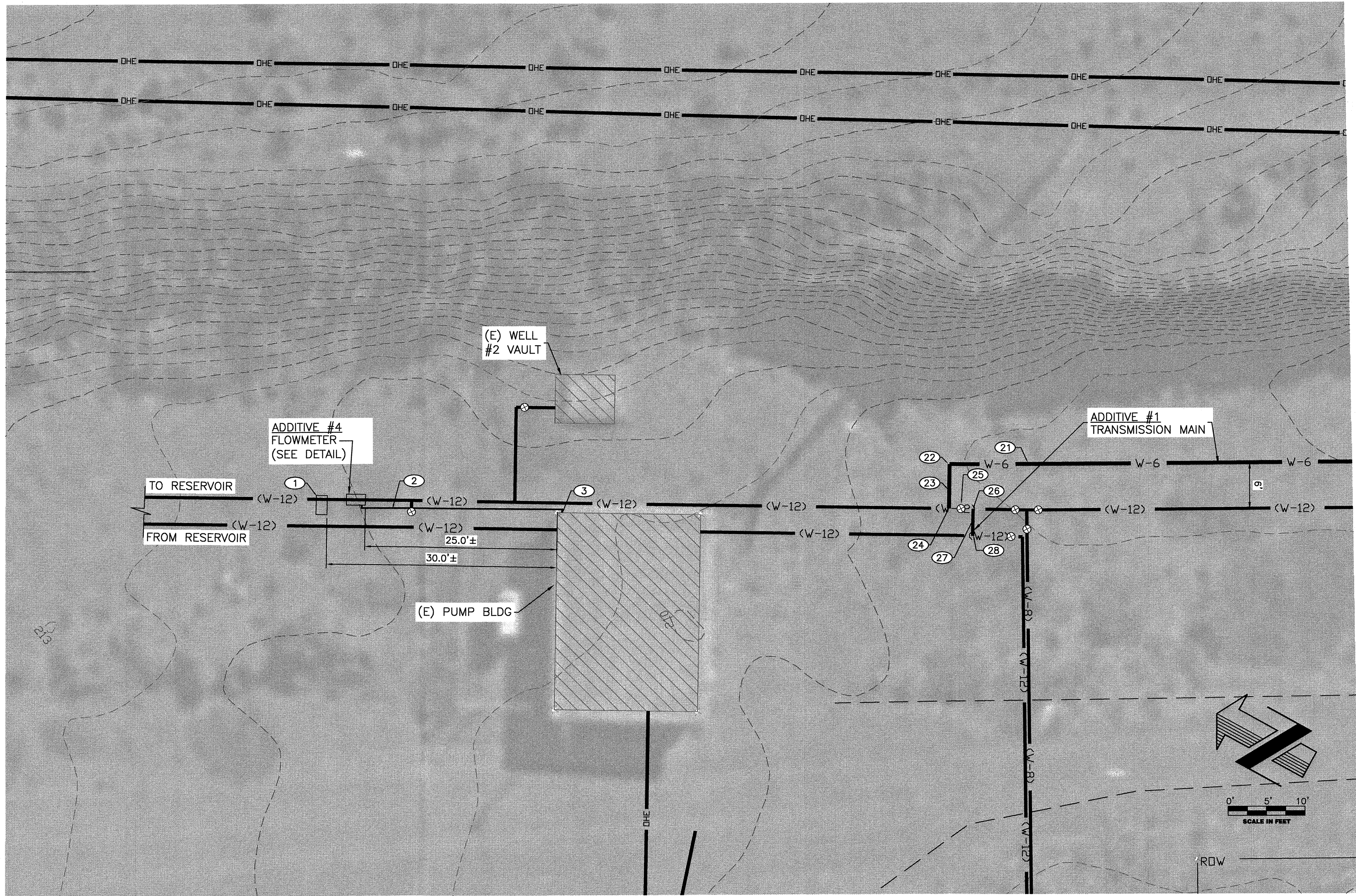
FLOWMETER DETAIL (ADDITIVE #4)

SCALE: 1" = 1'



INJECTION ASSEMBLY DETAIL (BASE BID)

SCALE: 1" = 1'



SITE PLAN

SCALE: 1" = 10'

SHEET NOTES

- THE EXISTING UTILITIES INFORMATION IS APPROXIMATE. THE CONTRACTOR MUST VERIFY THE SIZE, TYPE AND LOCATION, IN ADVANCE AND NOTIFY ENGINEER OF ANY CONFLICTS. NEITHER THE OWNER NOR THE ENGINEER ACCEPT ANY RESPONSIBILITY FOR THE EXISTING UTILITIES NOT BEING IN THE LOCATION SHOWN OR IDENTIFIED.
- CONTRACTOR RESPONSIBLE FOR ALL SURFACE RESTORATION TO EXISTING CONDITIONS. NOT ALL RESTORATION IS IDENTIFIED.
- ALL WATER MAINS TO BE PVC C900-DR18 WITH PUSH-ON JOINTS AND MINIMUM 36" COVER. ALL FITTINGS TO HAVE THRUST BLOCKS.
- SLEEVES TO BE PVC SCH 40 WITH SOLVENT-WELDED JOINTS AND MINIMUM 30" COVER.

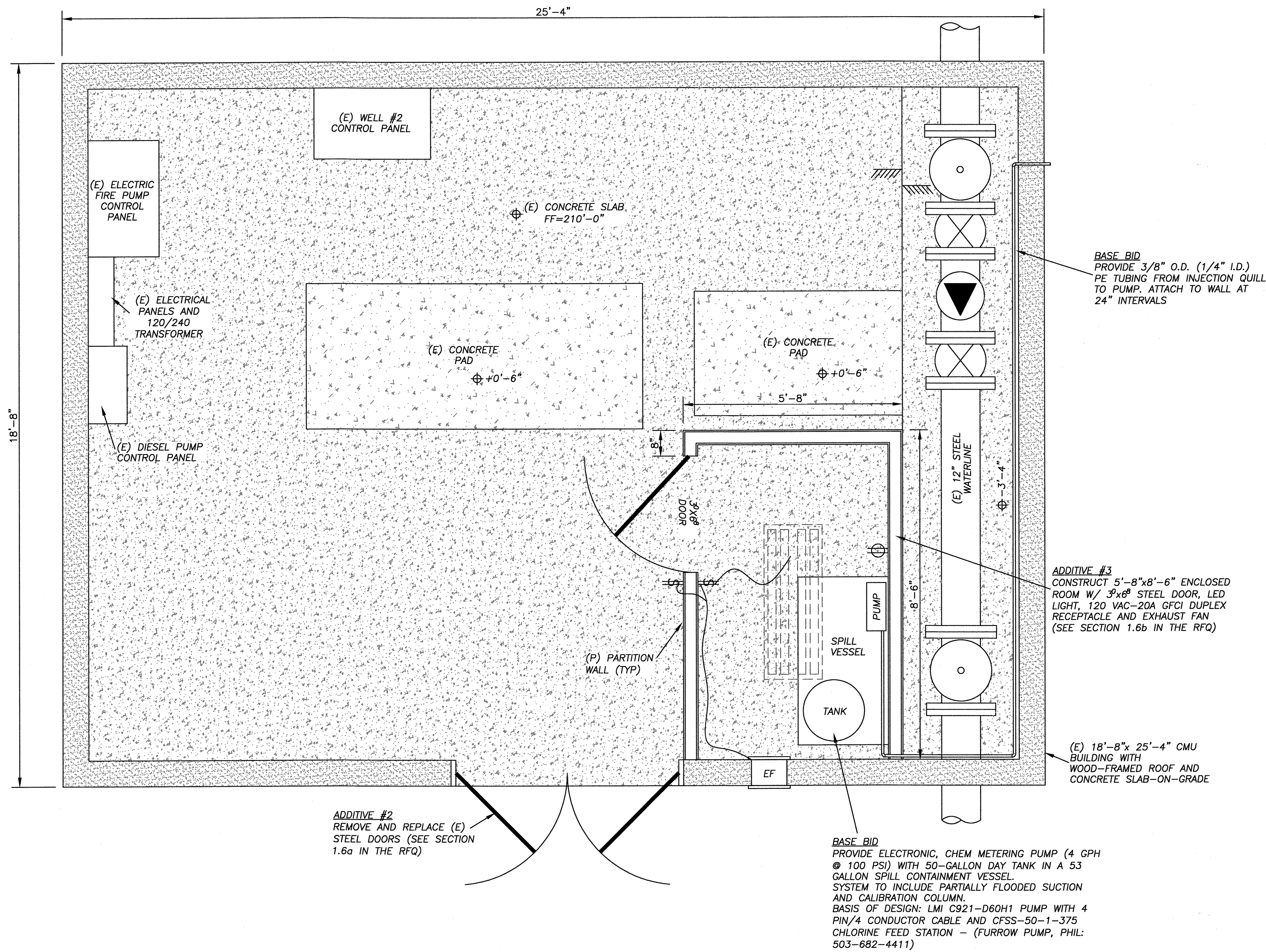
KEY NOTES (BASE BID)

- PROVIDE CHLORINE INJECTION ASSEMBLY IN 17"x30" BOXES (SEE DETAIL)
- PROVIDE (2)-1.5" PVC SCH 40 SLEEVES (~60.0 LF TOTAL) WITH 18" SWEEPS (30" COVER)
- DRILL THROUGH (E) FOUNDATION AND TERMINATE SLEEVES INSIDE

KEY NOTES (ADDITIVE #1)

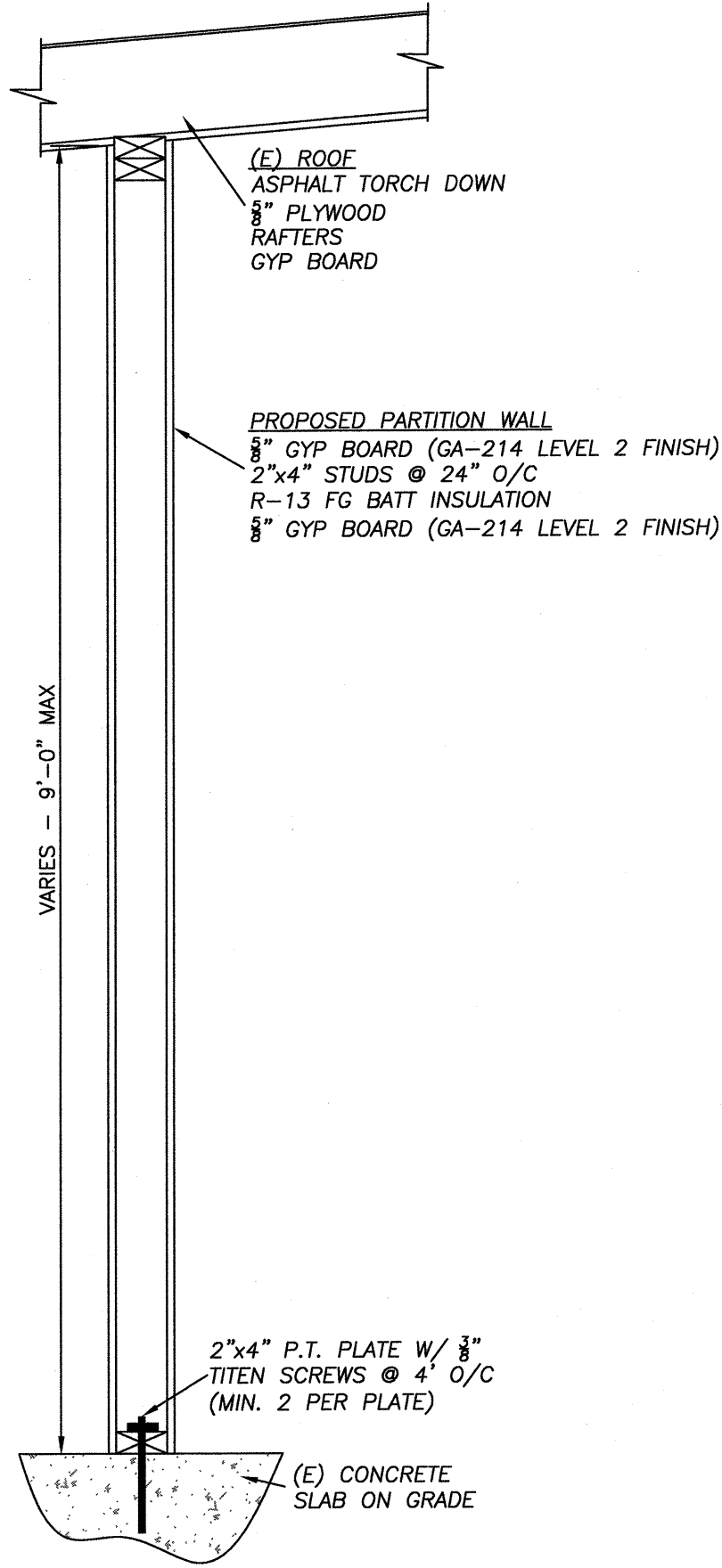
- PROVIDE 903.4 LF - 6" TRANSMISSION MAIN WATERLINE
- PROVIDE 6"-90° BEND (MJ)
- PROVIDE 5.8 LF - 6" TRANSMISSION MAIN WATERLINE
- PROVIDE 12"x6" TEE (MJ), 6" FOSTER ADAPTOR, 6" GATE VALVE (MJ), 12"x2' PVC SPOOL, AND 12" TRANSITION COUPLING
- PROVIDE 12" GATE VALVE (MJ) AND (2)- FOSTER ADAPTORS
- PROVIDE 12" TEE (MJ), 12"x2' PVC SPOOL, AND 12" TRANSITION COUPLING
- PROVIDE 4.0 LF - 12" WATERLINE
- PROVIDE 12" TEE (MJ), (2)-12"x2' PVC SPOOLS AND (2)-12" TRANSITION COUPLINGS

FOR THE DIP WELL #2 DISINFECTION AND IMPROVEMENTS PROJECT POK PROJECT ID #2022-04 DALLASPORT, KLIKITAT COUNTY, WASHINGTON	Design T.E.C. DWG. No. K:\WORK ORDERS\16200\16272\DRAWINGS\16272 BASE.DWG Date 10/19/2022 Work Order No. 16272	Survey T.E.C. Drawn T.E.C. Scale 16272
	TENNESON ENGINEERING CORP. CONSULTING ENGINEERS 3775 CRATES WAY THE DALLES, OREGON 97058 PH. 541-296-9177 FAX 541-296-6657 PLOT DATE: 10/20/2022	
FOR BID 1" IF THIS BAR IS NOT ONE INCH, THEN ADJUST SCALES ACCORDINGLY		
DARWIN O. ECKMAN STATE OF WASHINGTON 37205 REGISTERED PROFESSIONAL ENGINEER EX. DATE: 11/14/23		
SITE SHEET C-102 Work Order No. 16272		



BUILDING MODIFICATIONS

SCALE: 1/2"= 1'



PARTITION WALL SECTION

SCALE: 1"= 1'

Design	T.E.C.	Survey	T.E.C.
DWG. No.	K:\WORK ORDERS\16200\16272\DRAWINGS\16272 BASE.DWG	Date	10/19/2022
Work Order No.	16272	Drawn	T.E.C.
Scale		Scale	

BUILDING MODIFICATIONS

FOR THE
DIP WELL #2 DISINFECTION AND
IMPROVEMENTS PROJECT
POK PROJECT ID #2022-04

DALLESFORT, KICKITAT COUNTY, WASHINGTON

TENNESON ENGINEERING CORP.
CONSULTING ENGINEERS
3775 CRATES WAY
THE DALLES, OREGON 97058
PH. 541-296-9177 FAX 541-296-6657
PLOT DATE: 10/19/2022

FOR BID

IF THIS BAR IS NOT ONE INCH,
THEN ADJUST SCALES ACCORDINGLY

