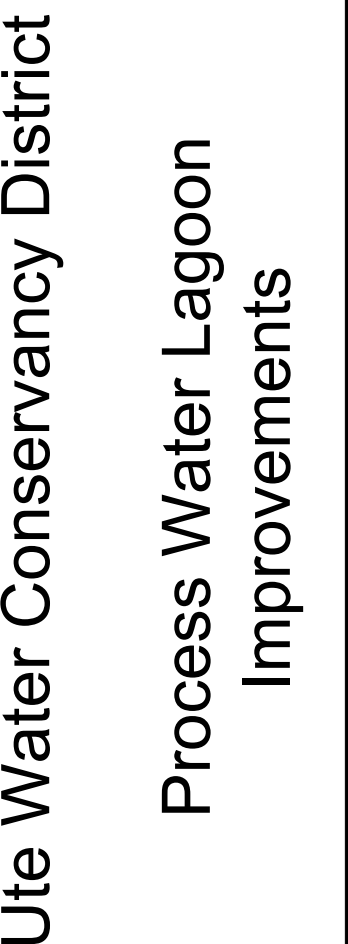


SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

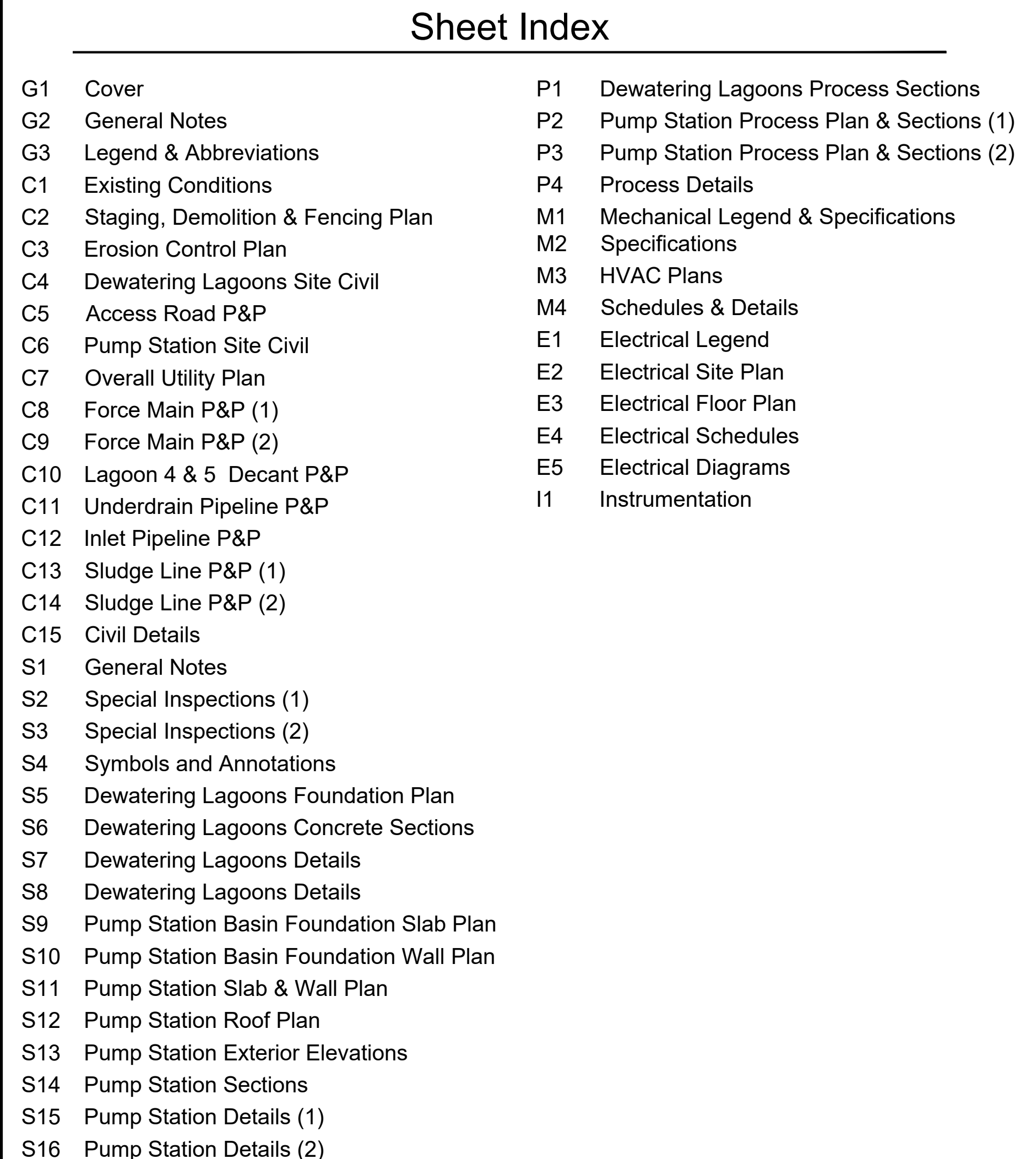
[illegible]

No.	2025-160.001		
own by:	SF		
re:	08.14.25		
WJS	PE:	SF	
UWLI-Admin			

- Cover



G1



Project Manager
Brandyn Bair, P.E. 42640

Project Engineer
M. Scott Forrester, P.E. 50652

2190 H 1/4 Road
Grand Junction, CO 81501

Dave Payne	dpayne@utewater.org	(970)260-2794
Ben Hoffman	bhoffman@utewater.org	(970)464-5563

Bid Drawings

January 2026

1. SURVEY BASE MAPPING WAS PREPARED BY SGM.

- GENERAL CIVIL NOTES:

- GENERAL UTILITY NOTES:

3. ALL AREAS DISTURBED BY BUILDING OR UTILITY CONSTRUCTION OR OVER-LOT GRADING SHALL BE REVEGETATED WITH THE MESA COUNTY SEMI-DESERT SCRUB & GRASSLAND SEED MIXTURE. PROVIDE FRESH, CLEAN, NEW-CROP SEED COMPLYING WITH TOLERANCE FOR PURITY AND GERMINATION ESTABLISHED BY OFFICIAL SEED ANALYSIS OF NORTH AMERICA. PROVIDE SEED OF GRASS SPECIES, PROPORTIONS AND MINIMUM PERCENTAGES OF PURITY, GERMINATION, AND MAXIMUM PERCENTAGE OF WEED SEED, AS SPECIFIED. SEED MIXTURE PROVIDED BELOW.
2. FOR DRYLAND SEEDED AREAS, PROVIDE FERTILIZER WITH COMMERCIAL TYPE MIXTURE OF 16-16-8 OR SIMILAR RATION, NOT LESS THAN 15 LBS PER ACRE FOR NITROGEN RATE.
3. MULCH ALL SEEDED AREAS WITH CONWEB LONG FIBER MULCH, HAY OR STRAW. MATERIAL FOR STRAW MULCHING SHALL CONSIST OF STRAW OR OATS, BARLEY, WHEAT OR RYE AND SHALL NOT CONTAIN SEED OF NOXIOUS WEEDS. CLEAN FIELD HAY MAY BE SUBSTITUTED FOR STRAW WHEN APPROVED BY THE ENGINEER. STRAW OR HAY IN SUCH AN ADVANCED STAGE OR DECOMPOSITION AS TO SMOTHER OR RETARD THE NORMAL GROWTH OF GRASS WILL NOT BE ACCEPTED. CONWEB FIBER MULCH, PREVIOUSLY SPECIFIED, SHALL BE APPLIED AT A RATE OF 1500 LBS./ACRE. HAY OR STRAW SHALL BE APPLIED IN A UNIFORM MANNER AT A RATE OF 1.5 TONS/ACRE.
4. PROVIDE EROSION CONTROL BLANKET ON ALL SLOPES OF 2:1 OR STEEPER.
5. PRIOR TO REVEGETATION, PLANTING OR TOPSOIL PLACEMENT, ALL CUT OR FILL SLOPES WILL BE CONVECTED TO BLEND WITH ADJACENT TERRAIN. VARIOUS SLOPE MOLDING TECHNIQUES WILL BE USED TO ENHANCE THE AESTHETIC QUALITY OF THE SLOPE, WHILE MAXIMIZING THE REVEGETATION POTENTIAL. ALL CUT AND FILL SLOPES ALSO BEING ROUNDED AT THE TOE TO BLEND WITH THE EXISTING TERRAIN. ADDITIONALLY, WHERE SOILS AND STEEPNESS OF SLOPES PERMIT, TERRACES WILL BE CONSTRUCTED TO AID THE REVEGETATION PROCESS.
6. SEEDING SHALL BE DONE BY HYDROSEEDING, DRILLING, OR HAND BROADCASTING. HYDROSEED SHALL BE APPLIED IN A WATER AND LIGHT MULCH SLURRY AFTER WHICH MULCH WILL BE APPLIED TO COVER THE SEED. ANY AREAS THAT CANNOT BE REACHED BY HYDROSEEDING OR DRILL SEEDING SHALL BE HAND BROADCAST. AREAS SEEDED BY HAND BROADCASTING SHALL BE LIGHTLY RAKED.
7. DRYLAND SEEDING SHALL BE PERFORMED AS SOON AS PRACTICAL AFTER COMPLETING OF CONSTRUCTION, WITHIN THE APPROPRIATE SEASON. SEEDING SHALL BE PERFORMED AFTER SPRING THAW UNTIL JUNE 30TH, OR AFTER SEPTEMBER 1 UNTIL CONSISTENT GROUND FREEZE. CONTRACTOR SHALL BE RESPONSIBLE FOR REGULAR WATERING UNTIL ESTABLISHED.

Species	Variety	Notes	PLS Rates	Broadcast PLS Mult.	Irrigation PLS Mult.	PLS/Ac to use (100%)	% in mix	Rate (PLS lb/ac)	Acres to be seeded	Total PLS
Indian ricegrass		NCB	8.0	1.0	1.0	8.0	30%	2.4	1.0	2.4
thickspike wheatgrass		NCBS	3.5	1.0	1.0	3.5	25%	0.9	1.0	0.9
Slender wheatgrass		NCB	2.0	1.0	1.0	2.0	20%	0.4	1.0	0.4
Sandberg bluegrass		NCB	5.0	1.0	1.0	5.0	10%	0.5	1.0	0.5
James' galleta		NWS	3.5	1.0	1.0	3.5	5%	0.2	1.0	0.2
Mountain brome		NCB	4.5	1.0	1.0	4.5	5%	0.2	1.0	0.2
Western wheatgrass	Arriba	NCS	8.0	1.0	1.0	8.0	5%	0.4	1.0	0.4
Totals						34.5	100%	5.0	1.0	5.0

1. UTILITY DEPICTION NOTES:

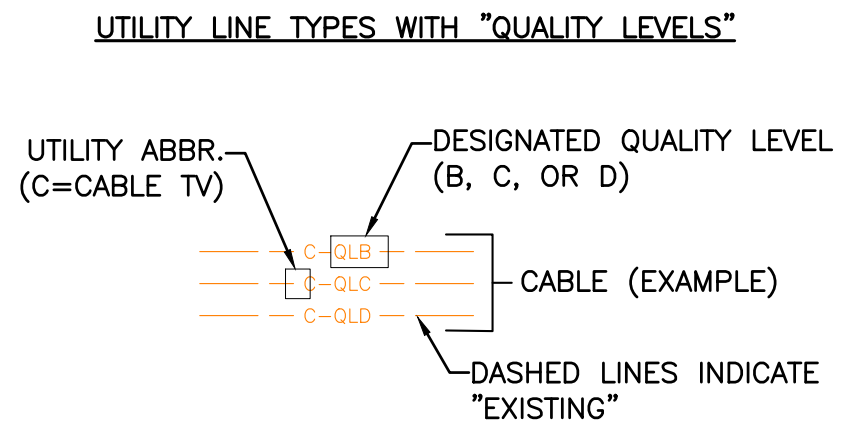
- 1.1. UNDERGROUND GAS UTILITIES WERE SURVEYED BY SGM STAFF. THE SURVEYED LOCATIONS OF UNDERGROUND UTILITIES ARE BASED ON PAINT MARKS AND PIN FLAGS ON THE GROUND LOCATED BY OTHERS.
- 1.2. OTHER EXISTING UTILITY LOCATIONS ARE BASED ON POTHOLING PERFORMED BY THE DISTRICT AND AVAILABLE AS-BUILT DOCUMENTATION.
- 1.3. EXISTING UTILITIES ARE DEPICTED ACCORDING TO THE BEST AVAILABLE INFORMATION, ARE NOT GUARANTEED TO BE ALL INCLUSIVE, AND REPRESENT CONDITIONS AT THE TIME OF DATA COLLECTION. RELIANCE UPON THIS UTILITY DATA FOR RISK MANAGEMENT PURPOSES DOES NOT RELIEVE CONTRACTOR OR UTILITY OWNER FROM FOLLOWING ALL APPLICABLE UTILITY DAMAGE PREVENTION STATUTES, POLICIES, AND/OR PROCEDURES DURING EXCAVATION. PRIOR TO EXCAVATION, CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 811 OR 800--922--1987, TO VERIFY EXISTING UTILITIES AND HAVE LOCATIONS OF UNCC REGISTERED LINES MARKED BY MEMBER COMPANIES. ADDITIONAL SURVEYING WORK MAY BE REQUIRED TO UPDATE THIS DRAWING IF ADDITIONAL UNDERGROUND UTILITY LINES ARE PRESENTED BY UTILITY OWNERS. SGM WILL NOT BE RESPONSIBLE FOR THE PROTECTION OF UNDERGROUND UTILITIES.

1. ALL PIPING AND PLUMBING SHALL BE BRACED AND SUPPORTED IN ACCORDANCE WITH SPECIFICATIONS. COORDINATE QUANTITY AND LOCATION OF PIPE SUPPORTS BETWEEN PLAN AND SECTION VIEWS.
2. ALL BOLTS, SUPPORTS, ANCHORS, AND MOUNTAIN EQUIPMENT IN CORROSIVE ENVIRONMENTS SHALL BE STAINLESS STEEL.
 - 2.1. CORROSIVE ENVIRONMENTS KNOWN AT TIME OF DESIGN INCLUDE: PUMP STATION WETWELL
3. CONTRACTOR SHALL ORIENT ALL VALVE ACTUATORS FOR PROPER ACCESS. ALL INTERIOR PIPING SHALL BE FLANGED CLASS 52 DUCTILE IRON PIPE UNLESS OTHERWISE SPECIFIED ON THE PLANS.
4. ALL ELECTRICAL PENETRATIONS SHALL BE SEALED WITH POLYURETHANE CAULKING ON BOTH THE INTERIOR AND EXTERIOR SIDE OF THE PENETRATION.
5. MEGAFLANGES/UNIFLANGES MAY BE USED TO ALLOW FOR FIELD ADJUSTMENTS, HOWEVER, A MAXIMUM OF (1) MAY BE USED IN THE TOTAL RUN IN GIVEN DIRECTION (I.E. (1) IN THE VERTICAL PLANE AND (1) IN THE HORIZONTAL PLANE). SOME LOCATIONS ARE ALREADY DEFINED IN THESE PLANS.
6. CONTRACTOR TO PROVIDE WATERSTOP ON ALL WALL PIPES.

PER COLORADO LAW, NEW UNDERGROUND FACILITIES (UTILITIES), INCLUDING LATERALS OR SERVICES UP TO THE BUILDING BEING SERVED, SHALL BE ELECTRONICALLY LOCATABLE WHEN INSTALLED. ALL NON-ENERGIZED UTILITIES SHALL HAVE TRACER WIRE PROPERLY INSTALLED WITH THE UTILITY. (UNLESS THE UTILITY IS METALLIC AND SPECIFICALLY DESIGNED TO BE LOCATED THROUGH THE PIPE MATERIAL.)

2. TRACER WIRE
 - 2.1. OPEN TRENCH INSTALLATIONS – TRACER WIRE SHALL BE #10 AWG COPPER CLAD STEEL, HIGH STRENGTH WITH MINIMUM 450 LB. BREAK LOAD, OR SOLID CU, AND WITH MINIMUM 30 MIL HDPE INSULATION THICKNESS.
 - 2.2. USE OF THNN IS STRICTLY PROHIBITED
3. CONNECTORS
 - 3.1. ALL MAINLINE TRACER WIRES MUST BE INTERCONNECTED IN INTERSECTIONS, AT MAINLINE TEES AND MAINLINE CROSSES. AT TEES, THE THREE WIRES SHALL BE JOINED USING A SINGLE 3-WAY LOCKABLE CONNECTOR (SNAKEBITE OR APPROVED EQUAL). AT CROSSES, THE FOUR WIRES SHALL BE JOINED USING A 4-WAY CONNECTOR. USE OF TWO 3-WAY CONNECTORS WITH A SHORT JUMPER WIRE BETWEEN THEM IS AN ACCEPTABLE ALTERNATIVE.
 - 3.2. DIRECT BURY WIRE CONNECTORS – SHALL INCLUDE SNAKEBITE 3-WAY LOCKABLE CONNECTORS (OR APPROVED EQUAL) AND MAINLINE TO LATERAL LUG CONNECTORS SPECIFICALLY MANUFACTURED FOR USE IN UNDERGROUND TRACER WIRE INSTALLATION. CONNECTORS SHALL BE DIELECTRIC SILICON FILLED TO SEAL OUT MOISTURE AND CORROSION AND SHALL BE INSTALLED IN A MANNER SO AS TO PREVENT ANY UNINSULATED WIRE EXPOSURE.
 - 3.3. NON-LOCKING FRICTION FIT, TWIST ON OR TAPED CONNECTORS ARE PROHIBITED.
4. TERMINATION/ACCESS
 - 4.1. ALL TRACER WIRE TERMINATION POINTS MUST UTILIZE AN APPROVED TRACER WIRE ACCESS BOX (ABOVE GROUND ACCESS BOX OR GRADE LEVEL/IN-GROUND ACCESS BOX AS APPLICABLE), SPECIFICALLY MANUFACTURED FOR THIS PURPOSE.
 - 4.2. ALL GRADE LEVEL/IN-GROUND ACCESS BOXES SHALL INCLUDE A DUAL TERMINAL SWITCHABLE LID (SNAKEBITO LD1462T-SW OR APPROVED EQUAL), BE APPROPRIATELY IDENTIFIED WITH "SEWER" CAST INTO THE CAP, AND COLOR CODED PER APWA STANDARD FOR THE SPECIFIC UTILITY BEING MARKED.
 - 4.3. A MINIMUM OF 2 FT. OF EXCESS/SLACK WIRE IS REQUIRED IN ALL TRACER WIRE ACCESS BOXES AFTER MEETING FINAL ELEVATION.
 - 4.4. ALL TRACER WIRE ACCESS BOXES MUST INCLUDE A MANUALLY INTERRUPTIBLE CONDUCTIVE/CONNECTIVE LINK BETWEEN THE TERMINAL(S) FOR THE TRACER WIRE CONNECTION AND THE TERMINAL FOR THE GROUND ROD WIRE CONNECTION.
 - 4.5. GROUND WIRE SHALL BE CONNECTED TO THE IDENTIFIED (OR BOTTOM) TERMINAL ON ALL ACCESS BOXES.
 - 4.6. SERVICE LATERALS ON PUBLIC PROPERTY – TRACER WIRE MUST TERMINATE WITH A COIL OF 6 FEET OF TRACER WIRE FOR FUTURE EXTENSION TO THE BUILDING, LOCATED AT THE EDGE OF THE ROAD RIGHT-OF-WAY, AFTER OUT OF THE ROADWAY.
 - 4.7. SERVICE LATERALS ON PRIVATE PROPERTY – TRACER WIRE MUST TERMINATE AT AN APPROVED ABOVE-GROUND TRACER WIRE ACCESS BOX, AFFIXED TO THE BUILDING EXTERIOR DIRECTLY ABOVE WHERE THE UTILITY ENTERS THE BUILDING, AT AN ELEVATION NOT GREATER THAN 5 VERTICAL FEET ABOVE FINISHED GRADE, OR TERMINATE AT AN APPROVED GRADE LEVEL/IN-GROUND TRACER WIRE ACCESS BOX, LOCATED WITHIN 2 LINEAR FEET OF THE BUILDING BEING SERVED BY THE UTILITY.
 - 4.8. LONG-RUNS, IN EXCESS OF 2,500 LINEAR FEET – TRACER WIRE ACCESS MUST BE PROVIDED UTILIZING AN APPROVED GRADE LEVEL/IN-GROUND TRACER WIRE ACCESS BOX, LOCATED AT THE EDGE OF THE ROAD RIGHT-OF-WAY AND OUT OF THE ROADWAY. THE GRADE LEVEL/IN-GROUND TRACER WIRE ACCESS BOX SHALL BE DELINEATED USING A MINIMUM 48" POLYETHYLENE MARKER POST, COLOR CODED PER APWA STANDARD FOR THE SPECIFIC UTILITY BEING MARKED OR OTHER APPROVED MARKER BY THE CITY OF PUEBLO. GROUNDING
5. GROUNDING
 - 5.1. TRACER WIRE MUST BE PROPERLY GROUNDING AT ALL DEAD ENDS/STUBS.
 - 5.2. GROUNDING OF TRACER WIRE SHALL BE ACHIEVED BY USE OF A DRIVE-IN MAGNESIUM GROUND ROD WITH A MINIMUM OF 20FT OF #12 RED HDPE INSULATED COPPER CLAD STEEL WIRE CONNECTED TO ANODE (MINIMUM 1.5 LB.) SPECIFICALLY MANUFACTURED FOR THIS PURPOSE AND BURIED AT THE SAME ELEVATION AS THE UTILITY.
 - 5.3. WHEN GROUNDING THE TRACER WIRE AT DEAD ENDS/STUBS, THE GROUND ROD SHALL BE INSTALLED IN A DIRECTION 180 DEGREES OPPOSITE OF THE TRACER WIRE, AT THE MAXIMUM POSSIBLE DISTANCE.
 - 5.4. WHEN GROUNDING THE TRACER WIRE IN AREAS WHERE THE TRACER WIRE IS CONTINUOUS AND NEITHER THE MAINLINE TRACER WIRE OR THE GROUND ROD WIRE WILL BE TERMINATED AT/ABOVE GRADE, INSTALL GROUND ROD WIRE DIRECTLY BENEATH AND IN-LINE WITH THE TRACER WIRE. DO NOT COIL EXCESS WIRE FROM GROUND ROD WIRE. IN THIS INSTALLATION METHOD, THE GROUND ROD WIRE SHALL BE TRIMMED TO AN APPROPRIATE LENGTH BEFORE CONNECTING TO TRACER WIRE WITH A MAINLINE TO LATERAL LUG CONNECTOR.
 - 5.5. WHERE THE GROUND ROD WIRE WILL BE CONNECTED TO A TRACER WIRE ACCESS BOX, A MINIMUM OF 2 FT. OF EXCESS/SLACK WIRE IS REQUIRED AFTER MEETING FINAL ELEVATION.
6. INSTALLATION
 - 6.1. TRACER WIRE SYSTEMS MUST BE INSTALLED AS A SINGLE CONTINUOUS WIRE, EXCEPT WHERE USING APPROVED CONNECTORS. NO LOOPING OR COILING OF WIRE IS ALLOWED.
 - 6.2. ANY DAMAGE OCCURRING DURING INSTALLATION OF THE TRACER WIRE MUST BE IMMEDIATELY REPAIRED BY REMOVING THE DAMAGED WIRE AND INSTALLING A NEW SECTION OF WIRE WITH APPROVED CONNECTORS. TAPING AND/OR SPRAY COATING SHALL NOT BE ALLOWED.
 - 6.3. TRACER WIRE SHALL BE INSTALLED AT THE TOP OF THE PIPE AND SECURED (TAPED/TIED) AT 5' INTERVALS
 - 6.4. MAINLINE TRACER WIRE SHALL NOT BE CONNECTED TO EXISTING CONDUCTIVE PIPES. TREAT AS A MAINLINE DEAD-END AND GROUND USING AN APPROVED WATERPROOF CONNECTION TO A GROUND ROD BURIED AT THE SAME DEPTH AS THE TRACER WIRE.
 - 6.5. ALL SERVICE LATERAL TRACER WIRES SHALL BE A SINGLE WIRE, CONNECTED TO THE MAINLINE TRACER WIRE USING AN APPROVED MAINLINE TO LATERAL LUG CONNECTOR, INSTALLED WITHOUT CUTTING/SPlicing THE MAINLINE TRACER WIRE.
 - 6.6. IN OCCURRENCES WHERE AN EXISTING TRACER WIRE IS ENCOUNTERED ON AN EXISTING UTILITY THAT IS BEING EXTENDED OR TIED INTO, THE NEW TRACER WIRE AND EXISTING TRACER WIRE SHALL BE CONNECTED USING APPROVED SPLICE CONNECTORS AND SHALL BE PROPERLY GROUNDING AT THE SPLICE LOCATION AS SPECIFIED.
7. STORM AND SANITARY SYSTEMS
 - 7.1. ALL SERVICE LATERAL TRACER WIRES MUST BE PROPERLY CONNECTED TO THE MAINLINE TRACER WIRE TO ENSURE FULL TRACING/LOCATING CAPABILITIES FROM A SINGLE CONNECTION POINT.
 - 7.2. LAY MAINLINE TRACER WIRE CONTINUOUSLY, BY-PASSING AROUND THE OUTSIDE OF MANHOLES/STRUCTURES ON THE NORTH OR EAST SIDE.
 - 7.3. TRACER WIRE ON ALL SEWER LATERALS MUST TERMINATE AT THE PROPERTY LINE WITH A COIL OF 6 FEET OF TRACER WIRE TAPED DIRECTLY TO THE SERVICE LATERAL AT THE EDGE OF THE ROAD RIGHT-OF-WAY OR AT AN APPROVED LOCATION.
8. WATER SYSTEMS
 - 8.1. A MAINLINE TRACER WIRE MUST BE INSTALLED, WITH ALL SERVICE LATERAL TRACER WIRES PROPERLY CONNECTED TO THE MAINLINE TRACER WIRE, TO PROMOTE TRACING/LOCATING CAPABILITIES FROM A SINGLE CONNECTION POINT.
 - 8.2. LAY MAINLINE TRACER WIRE CONTINUOUSLY, BY-PASSING AROUND THE OUTSIDE OF VALVES AND FITTINGS ON THE NORTH OR EAST SIDE.
 - 8.3. A SINGLE TRACER WIRE ONLY SHALL BE INSTALLED ON ALL WATER SERVICE LATERALS AND MUST TERMINATE AT AN APPROVED TRACER WIRE ACCESS POINT, COLOR CODED BLUE AND LOCATED DIRECTLY ABOVE THE SERVICE LATERAL AT THE EDGE OF ROAD RIGHT-OF-WAY.
 - 8.4. TRACER WIRE ACCESS POINTS WILL BE INSTALLED AT ALL FIRE HYDRANTS.
 - 8.5. ALL CONDUCTIVE AND NON-CONDUCTIVE SERVICE LINES SHALL INCLUDE TRACER WIRE.

Legend



— C-QLB —	CABLE COMMUNICATION
— T-QLB —	TELEPHONE
— F-QLB —	FIBER OPTIC
— TR-QLB —	TRAFFIC COMMUNICATION
— E-QLB —	ELECTRIC
— ET-QLB —	ELECTRIC TRANSMISSION
— G-QLB —	GAS
— HPG-QLB —	HIGH PRESSURE GAS
— CA-QLB —	COMPRESSED AIR
— S-QLB —	SANITARY SEWER
— DR-QLB —	DRAIN LINE (STORM SEWER)
— W-QLB —	WATER
— IRR-QLB —	IRRIGATION
— NP-QLB —	NON-POTABLE WATER
— UNK —	UNKNOWN UTILITY

SYMBOL

	MARKERS (CATV, ELEC, FIBER)
	(TELE, TRAFFIC, UNKNOWN)
	
	
	PEDESTALS (CATV, ELEC, FIBER)
	(TELE, TRAFFIC, UNKNOWN)
	
	
	MANHOLES (DRAINAGE, ELEC, FIBER,
	IRRIGATION, SANITARY, TELEPHONE,
	UNKNOWN, WATER)
	
	
	VAULTS/HANDHOLES (CATV, ELEC,
	FIBER, TELE, TRAFFIC, UNKNOWN)
	
	
	ELECTRIC TRANSFORMER,
	SWITCH CABINET
	
	
	
	VALVES (WATER, GAS, SANITARY,
	IRRIGATION)
	
	
	WATER SHUTOFF VALVE
	
	
	
	
	FIRE HYDRANT
	
	
	
	WATER SPIGOT
	
	
	
	
	VENTS(GAS,WATER,SEWER,MISC.)
	
	
	
	METERS (GAS, ELECTRIC, WATER)
	
	
	
	
	WELL (GAS, MONITOR, WATER)
	
	
	
	CLEAN-OUT
	
	
	
	
	PROPANE TANK (ABOVE-GROUND,
	UNDERGROUND)
	
	
	IRRIGATION CONTROL BOX
	
	
	
	
	IRRIGATION SPRINKLER HEAD
	
	
	
	IRRIGATION HEAD GATE
	
	
	
	
	PVC PIPE "RISER"
	
	
	
	UTILITY POLE
	
	</

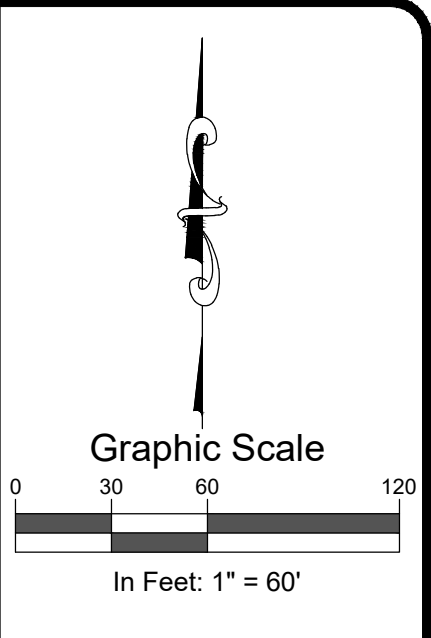
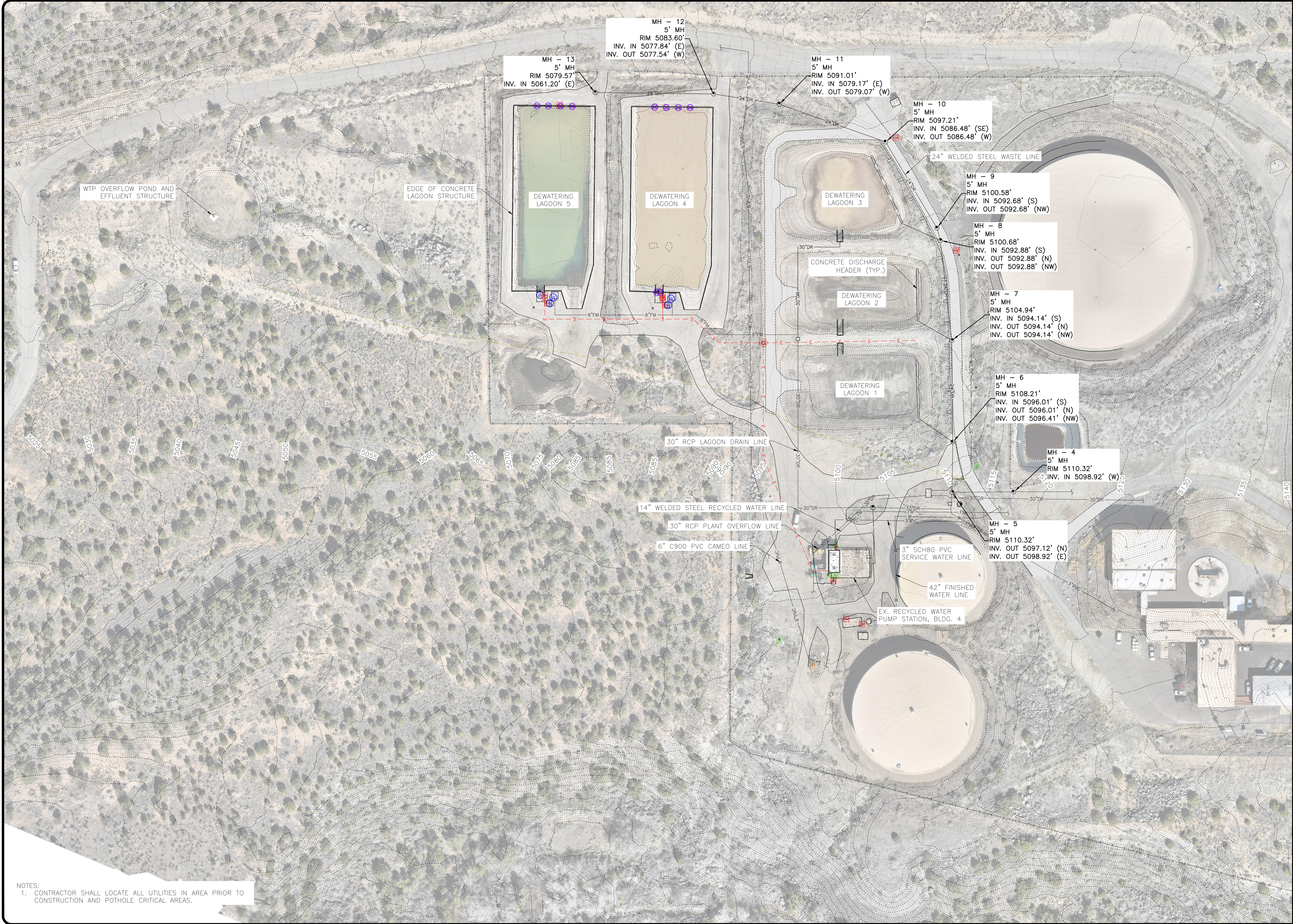
Abbreviations/Acronyms

ASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND	MAT'L	MATERIAL
	TRANSPORTATION OFFICIALS	MAX.	MAXIMUM
ABC	AGGREGATE BASE COURSE	MH	MANHOLE
ADS	ADVANCED DRAINAGE SYSTEM	MIN.	MINIMUM
ADT	AVERAGE DAILY TRAFFIC	MHT	METHOD OF HANDLING TRAFFIC
AP	ANGLE POINT	ML	MEGALUG
AS	ASPHALT	MLW	MASONRY LANDSCAPE WALL
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	MPH	MILES PER HOUR
ASPH	ASPHALT	N	NORTHING
BF	BLOCK FACING	N/A	NOT APPLICABLE
BHENBLACK	BLOCK HILLS ENERGY	NAT.	NATIVE GRASS AREA
BMP	BEST MANAGEMENT PRACTICES	NE	NORTH EAST
BOW	BACK OF SIDEWALK	NHS	NATIONAL HIGHWAY SYSTEM
BP	BEGIN PROJECT	NO.	NUMBER
BVCE	BEGIN VERTICAL CURVE ELEVATION	N.T.S.	NOT TO SCALE
BVCS	BEGIN VERTICAL CURVE STATION	NW	NORTH WEST
BW	BOTTOM WALL	OC	ON CENTER
C	CABLE TELEVISION	O/S	OFFSET
C	CURB	PC	POINT OF CURVATURE
CATV	CABLE TELEVISION	PCL	PIPE AND CABLE LOCATE
CC	CURB CUT	PERM	PERMANENT
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION	PG	PAGE
CDPHE	COLORADO DEPARTMENT OF PUBLIC HEALTH AND	PGL	PROFILE GRADE LINE
	ENVIRONMENT	PI	POINT OF INTERSECTION
CG	CURB AND GUTTER	PL	PROPERTY LINE
CL	CENTERLINE	PNT	POINT
CMCT	COMCAST	POL	POINT ON LINE
CMP	CORRUGATED METAL PIPE	PROP	PROPOSED
CNLK	CENTURYLINK (AKA LUMEN)	PT	POINT OF TANGENCY
CO	CONCRETE	PVC	POLYVINYL CHLORIDE (PLASTIC PIPE)
CONC	CONCRETE	PVI	POINT OF VERTICAL INTERSECTION
CONST	CONSTRUCTION	PVMT	PAVEMENT
CONT.	CONTINUOUS	QL	QUALITY LEVEL
COR.	CORNER	QLA	QUALITY LEVEL A
CRB	CONCRETE REACTION BLOCK	QLB	QUALITY LEVEL B
CU	CUBIC	QLC	QUALITY LEVEL C
D	DEEP	QLD	QUALITY LEVEL D
DB	DIRECT BURIED	R	RIGHT
DIP	DUCTILE IRON PIPE	R-R	REMOVE & REPLACE
DR	DRAIN	RAD.	RADIUS
DW	DRIVEWAY	RCP	REINFORCED CONCRETE PIPE
E	EASTING	REF.	REFERENCE
E	ELECTRIC	REQ.	REQUIRED
EA.	EACH	REQ.'D	REQUIRED
EG	EXISTING GRADE	REVEG	REVEGETATE
EL	ELEVATION	ROW	RIGHT-OF-WAY
ELEV	ELEVATION	RP	RADIUS POINT
EOA	EDGE OF ASPHALT	RW	RETAINING WALL
EOD	EDGE OF DRIVEWAY	SAN	SANITARY
EOP	EDGE OF PAVEMENT	SD	STORM DRAIN
EOG	EDGE OF GRAVEL	SECT.	SECTION
EOS	END OF SIGNAL (SUE)	SF	SQUARE FEET
EP	END PROJECT	SHDR	SHOULDER
ESMT	EASEMENT	SMH	SANITARY MANHOLE
EVCE	END VERTICAL CURVE ELEVATION	SOD	GRASS AREA
EVCS	END VERTICAL CURVE STATION	S.S.D.	STOPPING SIGHT DISTANCE
EX.	EXISTING	STA.	STATION
EXIST.	EXISTING	SE	SOUTH EAST
FF	FINISH FLOOR	SL	SEWER LINE
FG	FINISHED GRADE	STM	STORM
FH	FIRE HYDRANT	SUE	SUBSURFACE UTILITY ENGINEERING
FWA	FEDERAL HIGHWAY ADMINISTRATION	SW	SIDEWALK
FLW	FLOWLINE	T	TELEPHONE
FO	FIBER OPTIC	T	TREAD STAIRS
FT.	FEET	TBC	TOP BACK CURB
G	GAS	TC	TOP CURB
GB	GRADE BREAK	TELE	TELEPHONE
GPR	GROUND PENETRATING RADAR	TEMP	TEMPORARY
GR	GRAVEL	TH	TEST HOLE
GRAV.	GRAVEL	TP	TOP OF PIPE
HC	HANDICAP RAMP	TRANS.	TRANSITION
HMA	HOT MIX ASPHALT	TR.FLG.	TRAFFIC FLANGE ON FIRE HYD.
HORIZ.	HORIZONTAL	TW	TOP OF WALL
HH	HAND HOLE	TYP.	TYPICAL
HP	HIGH POINT	UTH	UTILITY TEST HOLE
HPG	HIGH PRESSURE GAS	VC	VERTICAL CURVE
HWY	HIGHWAY	V.P.	VALLEY PAN
HYD	HYDRANT	W	WATER
ICB	IRRIGATION CONTROL BOX	W	WIDE
ICV	IRRIGATION CONTROL VALVE	W/	WITH
INV.	INVERT	WL	WATER LINE
IRR	IRRIGATION	W.W.M.	WELDED WIRE MESH
L	LEFT	X-S	CROSS SLOPE
LF	LINEAL FEET		
LP	LOW POINT		
L.S.	LANDSCAPED AREA		

[illegible]

I:\2025\2025-160-ProcessWaterLagoon\H-Dwg\Civil\PS-SheetSet\UWLI-ExCon.dwg Plotted: 1/26/2026 3:14 PM By: Scott Forrester

NOTES:
1. CONTRACTOR SHALL LOCATE ALL UTILITIES IN AREA PRIOR TO CONSTRUCTION AND POTHOLE CRITICAL AREAS.



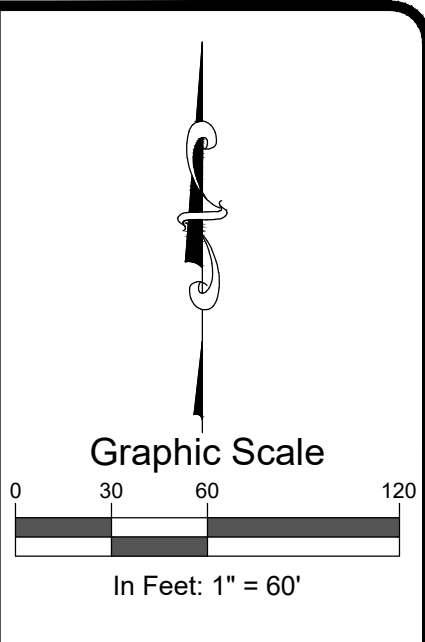
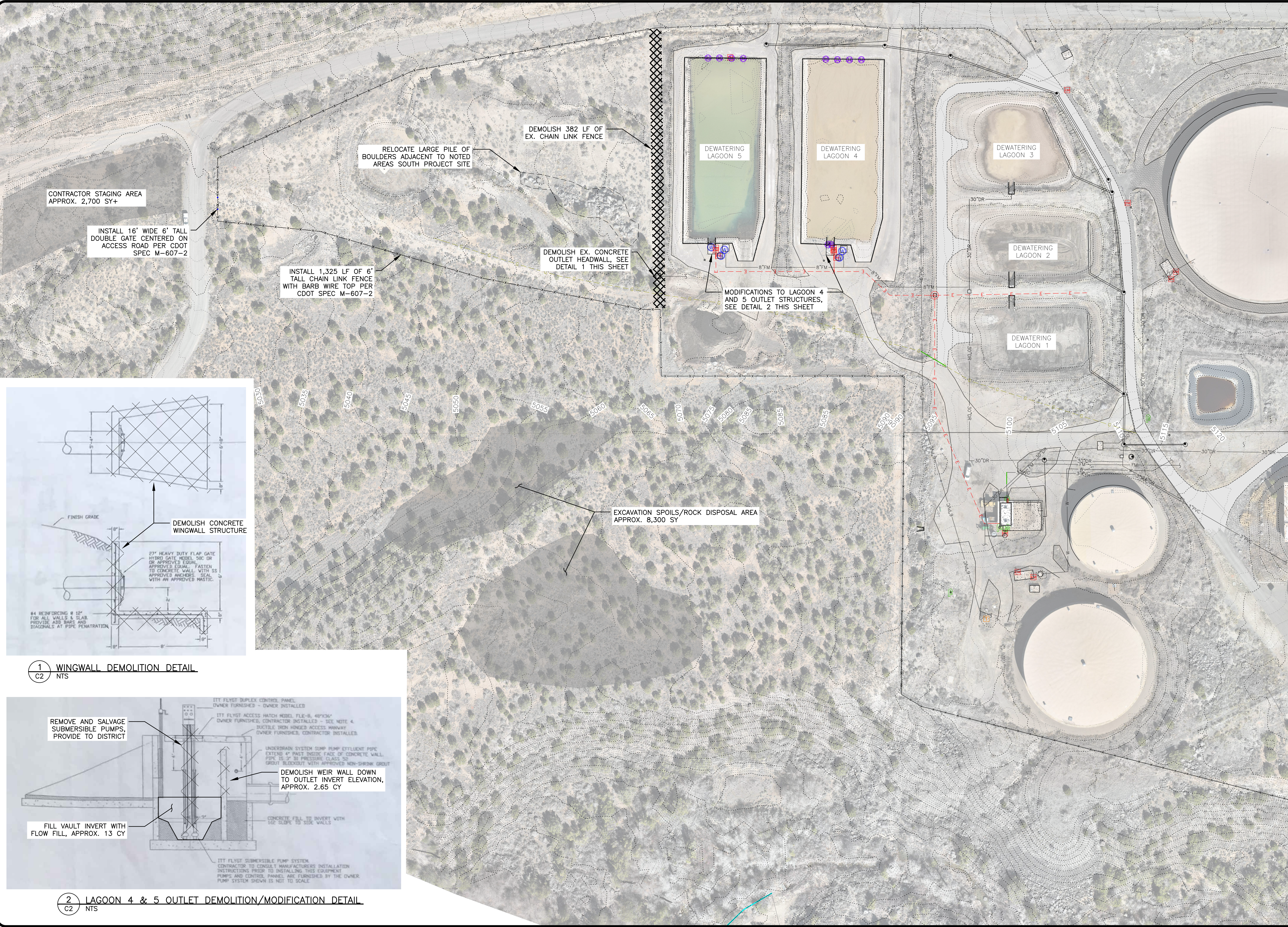
SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

Ute Water Conservancy District
Process Water Lagoon
Improvements

Revision		Date	By:
#	1		
	2		
	3		
Job No. 2025-160.001			
Drawn by: SF			
Date: 08.14.25			
QC: WJS PE: SF			
File: UWLI-ExCon			
Title:			
Existing Conditions			
Dwg No. C1			

Project Milestone: BID DRAWINGS

I:\2025\2025-160-ProcessWaterLagoon\H-Dwg\Civil\PS-SheetSet\UWL-Demo.dwg Plotted: 7/26/2026 3:15 PM By: Scott Forrester



SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

Ute Water Conservancy District
Process Water Lagoon
Improvements

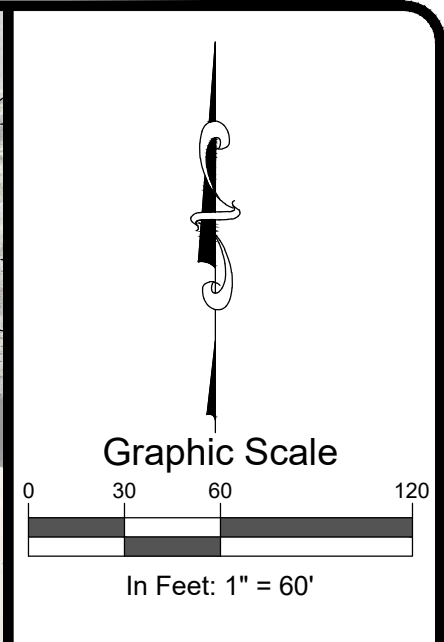
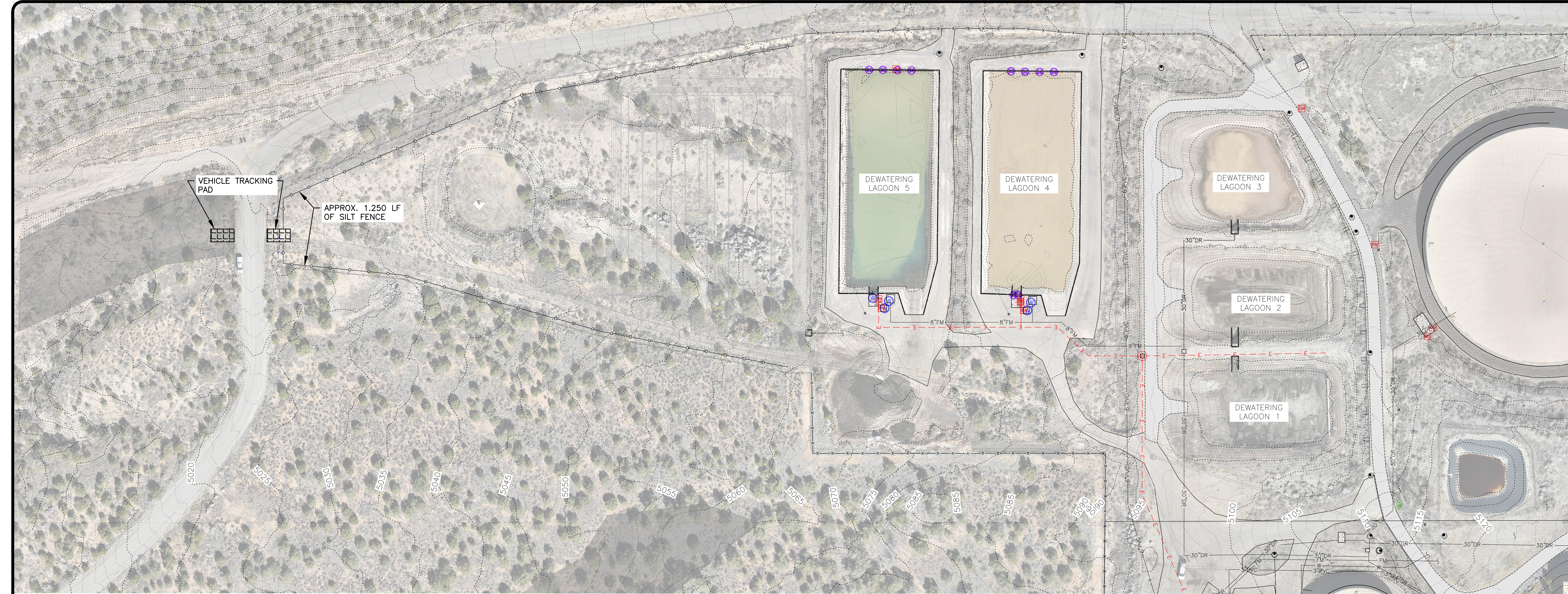
Revision	Date	By
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

Job No. 2025-160.001
Drawn by: SF
Date: 08.14.25
QC: WJS | PE: SF
File: UWL-Demo
Title:

Staging, Demolition &
Fencing Plan

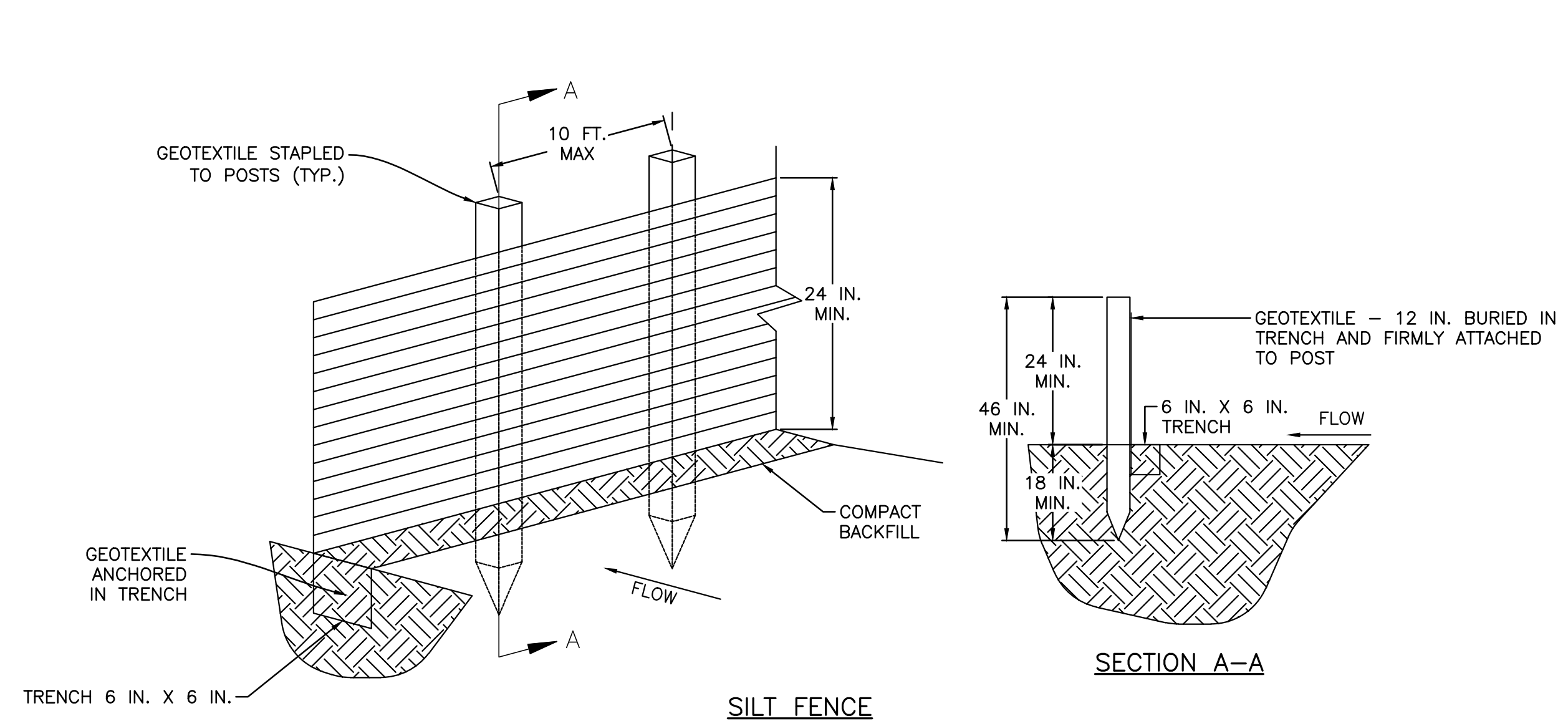
Dwg No. C2

I:\2025\2025-160-ProcessWaterLagoon\H-Dwg\Set\UWL-Demo.dwg Plotted: 1/26/2026 3:15 PM By: Scott Forrester



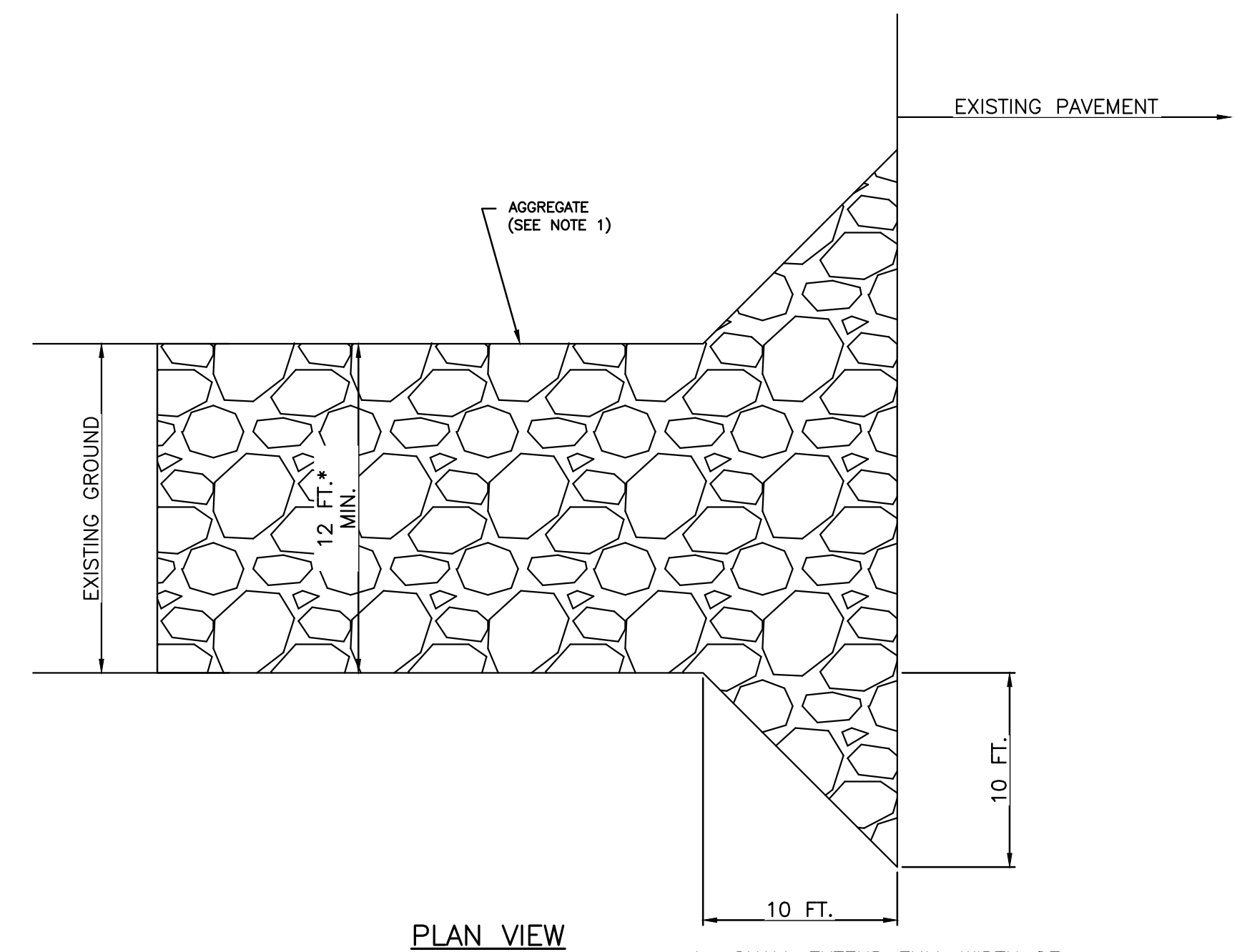
SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

Ute Water Conservancy District
Process Water Lagoon
Improvements



- NOTES:
1. GEOTEXTILE SHALL BE ATTACHED TO WOOD POSTS WITH THREE OR MORE STAPLES PER POST. STAPLES SHALL BE HEAVY DUTY WIRE AND AT LEAST 1 IN. LONG.
 2. WOOD POST SHALL BE 1 IN. X 1 IN. NOMINAL.
 3. THE PAY ITEM NUMBER FOR SILT FENCE (LF) IS 208-0020.
 4. THE SILT FENCE SHALL BE PLACED ON THE CONTOUR (AT THE SAME ELEVATION $\pm$ 6 IN.). THE ENDS SHALL BE FLARED UP SLOPE (MINIMUM ELEVATION GAIN OF 18 IN.).

1 SILT FENCE DETAIL
C3 NTS



- NOTES:
1. AGGREGATE SHALL CONFORM TO CDOT SUBSECTION 208.02 (I).
 2. ALL ATERIALS AND LABOR TO COMPLETE THE VEHICLE TRACKING PAD SHALL BE INCLUDED IN THE COST OF WORK AND NOT PAID FOR SEPARATELY.
- * SHALL EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION.

2 VEHICLE TRACKING PAD DETAIL
C3 NTS

Revision	Date	By:
1		
2		
3		

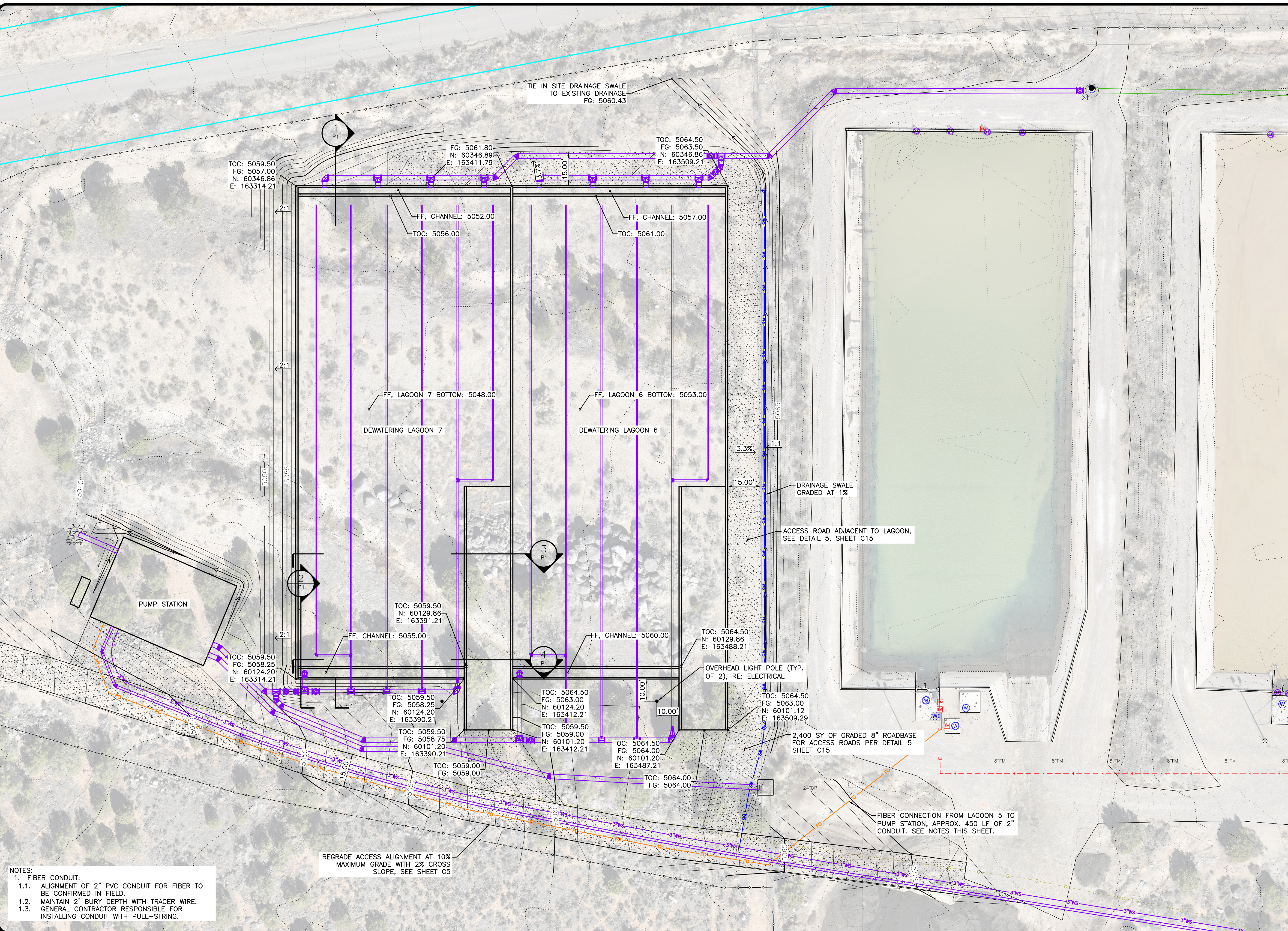
Project Milestone: BID DRAWINGS

Job No: 2025-160.001
Drawn by: SF
Date: 08.14.25
QC: WJS PE: SF
File: UWL-Demo
Title:

Erosion Control Plan

Dwg No.
C3

I:\2025\2025-160-ProcessWaterLagoon\H-Dwg\Site\UWL-PS-CivilSite.dwg Plotted: 1/26/2026 10:09 AM By: Scott Forrester



- NOTES:
- FIBER CONDUIT:
 - ALIGNMENT OF 2" PVC CONDUIT FOR FIBER TO BE CONFIRMED IN FIELD.
 - MAINTAIN 2' BURY DEPTH WITH TRACER WIRE.
 - GENERAL CONTRACTOR RESPONSIBLE FOR INSTALLING CONDUIT WITH PULL-STRING.

REGRADE ACCESS ALIGNMENT AT 10%
MAXIMUM GRADE WITH 2% CROSS
SLOPE, SEE SHEET C5

FIBER CONNECTION FROM LAGOON 5 TO
PUMP STATION, APPROX. 450 LF OF 2"
CONDUIT. SEE NOTES THIS SHEET.

2,400 SY OF GRADED 8" ROADBASE
FOR ACCESS ROADS PER DETAIL 5
SHEET C15

OVERHEAD LIGHT POLE (TYP.
OF 2), RE: ELECTRICAL

ACCESS ROAD ADJACENT TO LAGOON,
SEE DETAIL 5, SHEET C15

DRAINAGE SWALE
GRADED AT 1%

DEWATERING LAGOON 6

DEWATERING LAGOON 7

PUMP STATION

Graphic Scale
0 10 20 40
In Feet: 1" = 20'

SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

Ute Water Conservancy District
Process Water Lagoon
Improvements

Revision	Date	By
1		
2		
3		

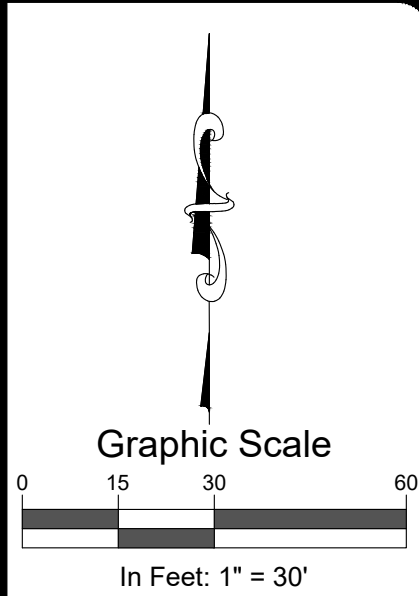
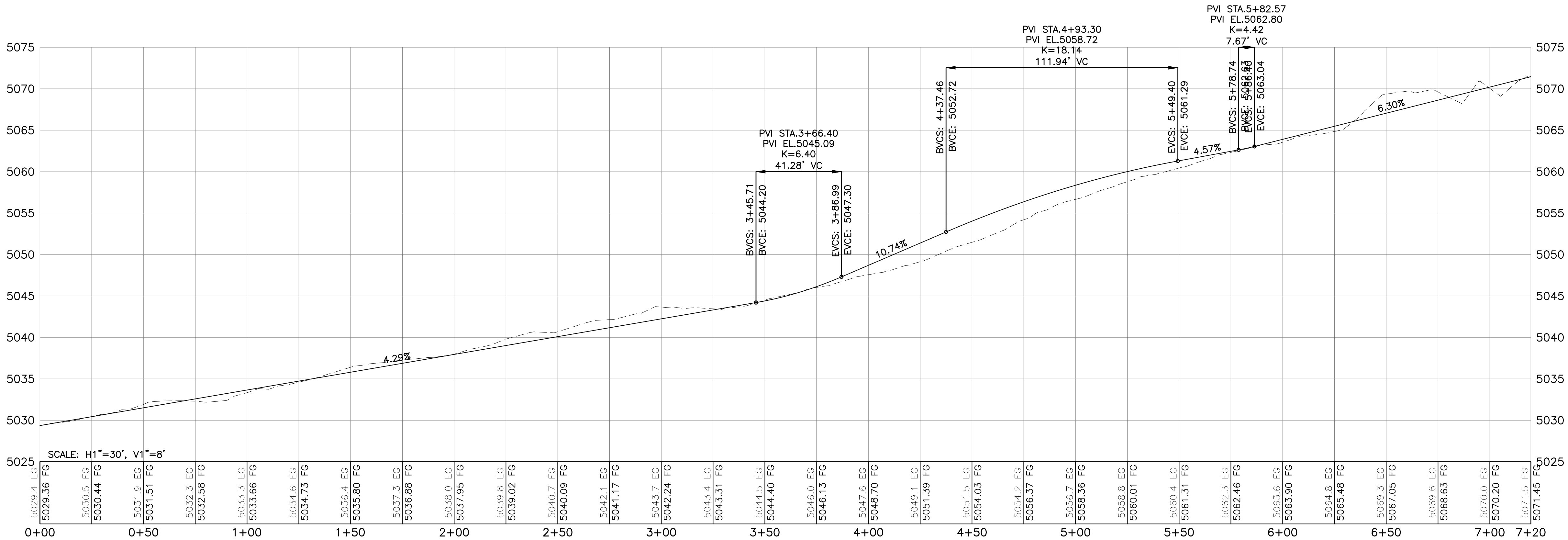
Job No: 2025-160.001
Drawn by: SF
Date: 08.14.25
QC: WJS | PE: SF
File: UWL-PS-CivilSite
Title: Dewatering Lagoons
Site Civil
Dwg No. C4

Project Milestone: BID DRAWINGS

I:\2025\2025-160-ProcessWaterLagoon\H-Dwg\Civil\PS-SheetSet\UWLI-PS-AccessRoad.dwg Plotted: 1/26/2026 10:10 AM By: Scott Forrester

LINE TABLE		
LINE #	BEARING	LENGTH
L1	S86°55'53"E	72.38
L2	S78°41'02"E	164.94
L3	S72°42'24"E	78.84
L4	S74°25'56"E	67.05
L5	S79°09'10"E	83.74
L6	S83°02'39"E	59.68
L7	S82°47'42"E	57.39

CURVE TABLE					
CURVE #	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH	DELTA ANGLE
C1	21.59	150.00	S82°48'27"E	21.57	008°14'51"
C2	15.65	150.00	S75°41'43"E	15.64	005°58'38"



SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

Ute Water Conservancy District
Process Water Lagoon
Improvements

#	Revision	Date	By:
1			
2			
3			

Project Milestone: BID DRAWINGS

Job No. 2025-160.001
Drawn by: SF
Date: 08.14.25
QC: WJS PE: SF
File: UWLI-PS-AccessRoad
Title:

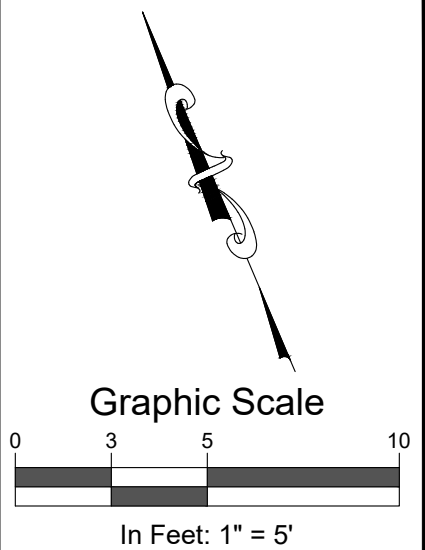
Access Road P&P

Dwg No.

C5

I:\2025\2025-160-ProcessWaterLagoon\H-Dwg\Civil\PS-SheetSet\UWL-PS-CivilSite.dwg Plotted: 1/26/2026 10:11 AM By: Scott Forrester

NOTES:
1. GENERATOR PAD SIZE AND STUB UP LOCATIONS REPRESENT A BASIS OF DESIGN PRODUCT, FOR SITE PLANNING PURPOSES. CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE LAYOUT TO COORDINATE WITH THE ACTUAL GENERATOR PRODUCT BEING SUPPLIED.



SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

Ute Water Conservancy District
Process Water Lagoon
Improvements

Revision		Date	By:
1			
2			
3			
Job No. 2025-160.001			
Drawn by: SF			
Date: 08.14.25			
QC: WJS PE: SF			
File: UWL-PS-CivilSite			
Title: Pump Station Site Civil			
Dwg No. C6			

Project Milestone: BID DRAWINGS

APPROX. 8 SY,
D50 = 18" RIPRAP

24" PS46 PVC OVERFLOW PIPE
INV. ELEV: 5042.90'
AFFIX DUCKBILL CHECK VALVE
AT END OF PIPE

19.5 LF PS46
PVC PIPE

FF: 5046.50
FG: 4046.35
N: 60168.78
E: 163221.65

FF: 5046.50
FG: 5046.31
N: 60170.50
E: 163217.67

FF: 5046.50
FG: 5046.00
N: 60158.11
E: 163212.30

GENERATOR
PAD

FF: 5046.50
FG: 5046.06
N: 60158.39
E: 163216.28

FF: 5047.00
FG: 5046.00
N: 60188.31
E: 163236.50

24" PS46 PVC OVERFLOW PIPE
INV. ELEV: 5043.00'

FF: 5047.00
FG: 5046.50
N: 60152.36
E: 163221.39

12" C900 PVC FORCE MAIN, SEE SHEETS C8 AND C9
TP ELEV: 5040.05

3" DR-11 HDPE WATER SERVICE, SEE
SHEETS C8, C9, P1, AND P2
TP ELEV: 5040.05

FF: 5047.00
FG: 5046.50
N: 60166.17
E: 163287.58

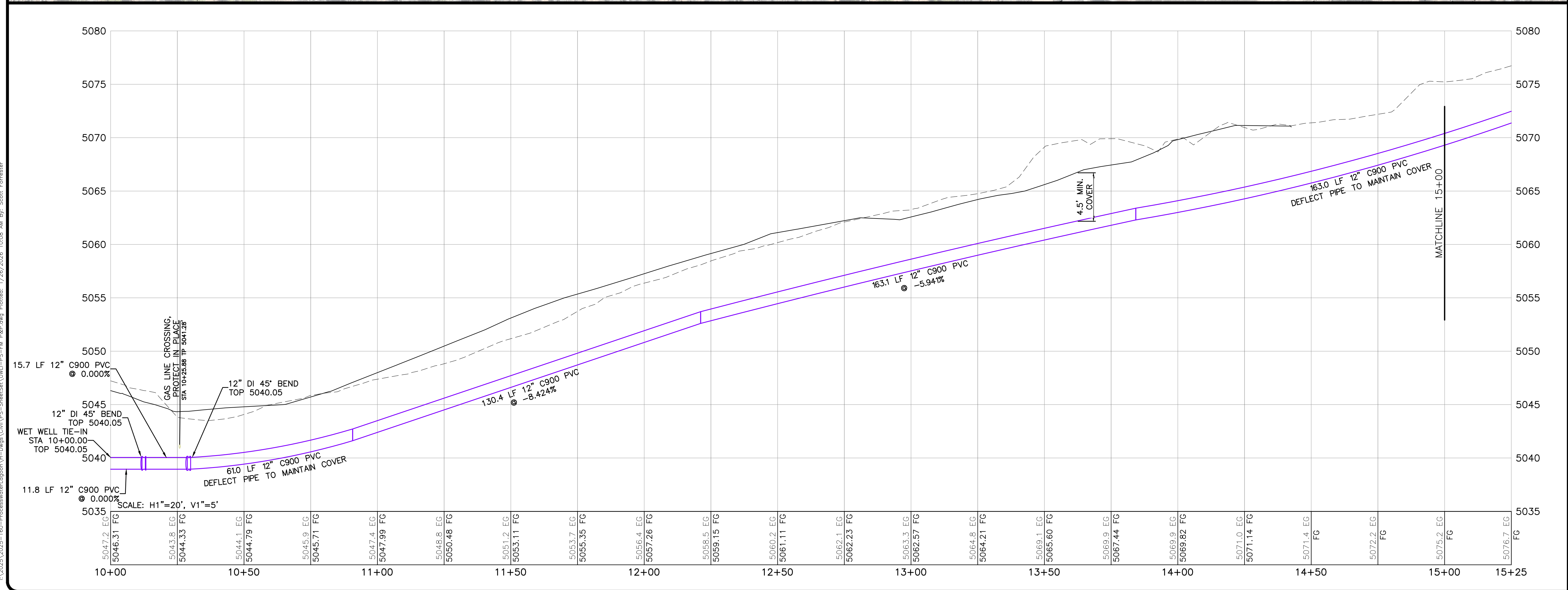
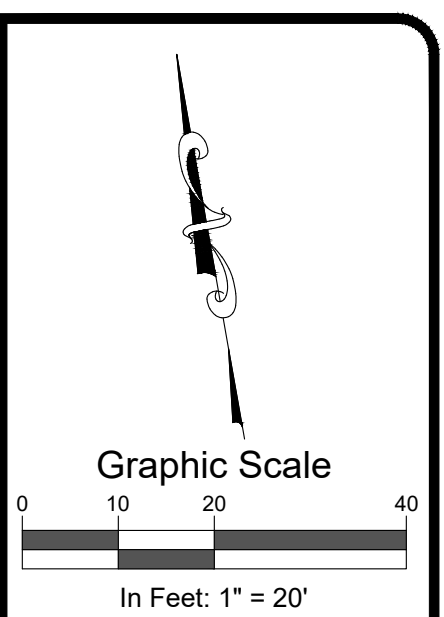
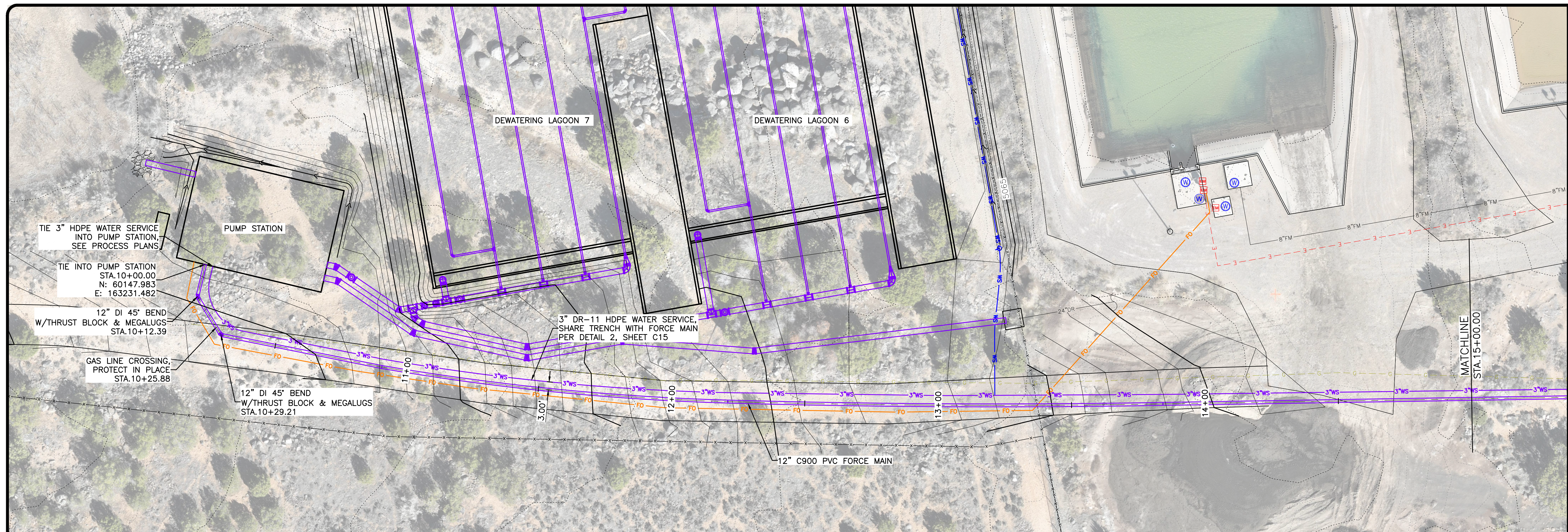
DRAINAGE SWALE GRADED @ 4%

24" PS46 PVC UNDERDRAINS,
SEE SHEETS C10 & C11
INV. ELEV: 5039.92'

FF: 5047.00
FG: 5046.50
N: 60130.21
E: 163272.47

SEE DETAIL 2, SHEET C15
FOR SHARED UTILITY TRENCH

GRADED ACCESS ROAD/PARKING
AREA, SEE DETAIL 5 SHEET C15

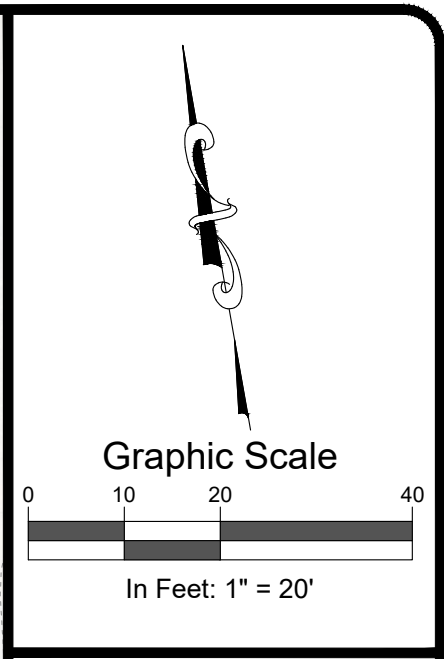
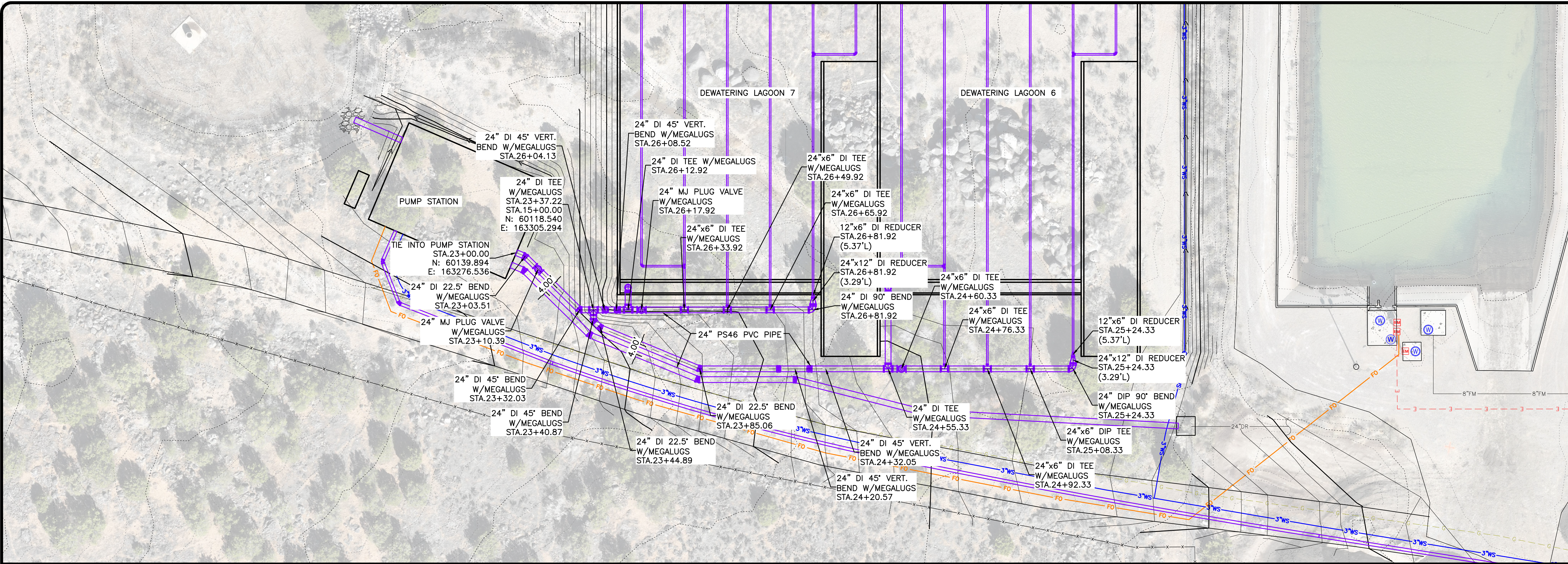


Ute Water Conservancy District

Process Water Lagoon Improvements

[illegible]

I:\2025\2025-160-ProcessWaterLagoon\H-Dwg\Civil\PS-SheetSet\UWLI-PS-Lagoon P&P.dwg, Plotted: 1/26/2026 10:04 AM By: Scott Forrester



SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

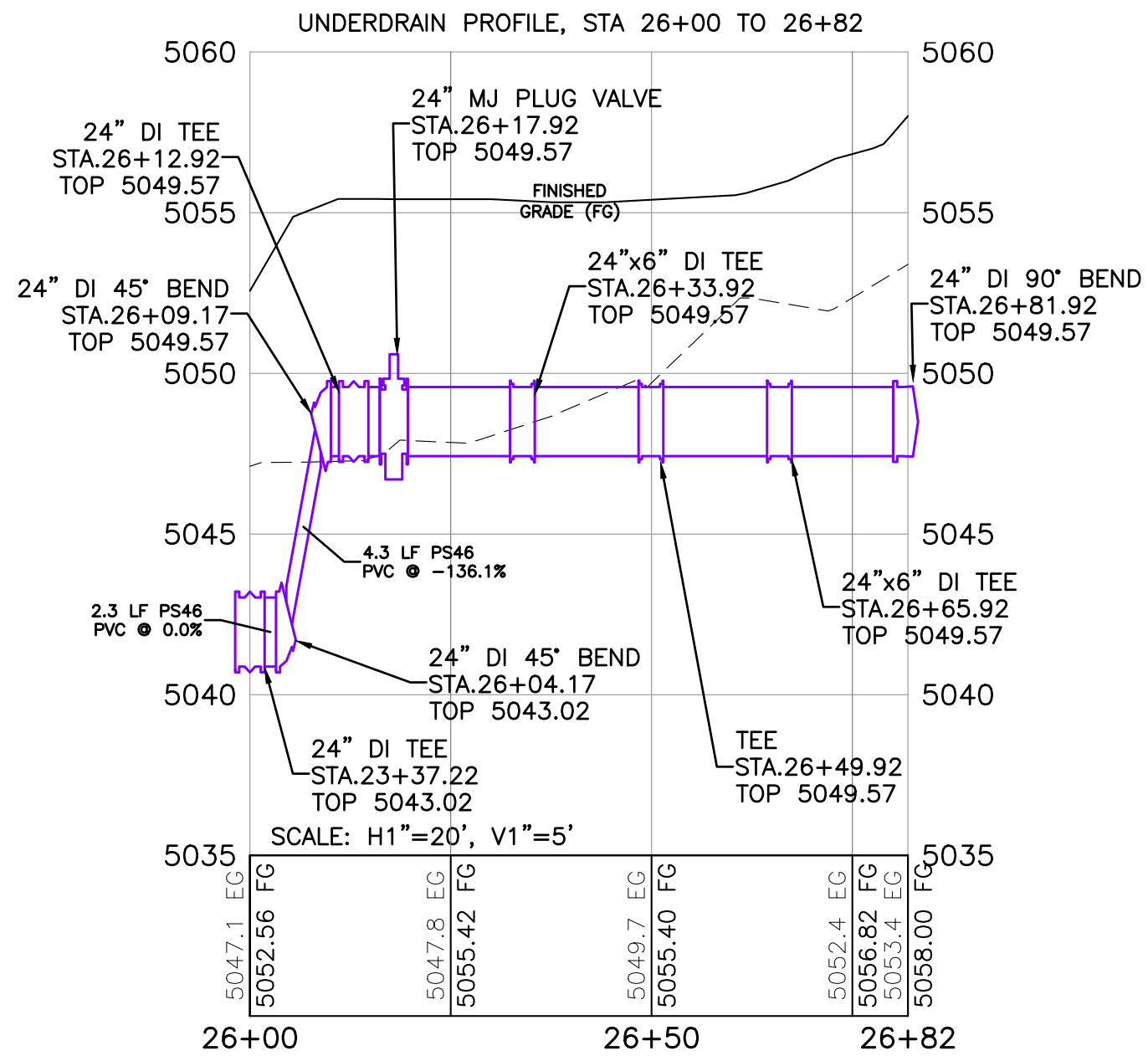
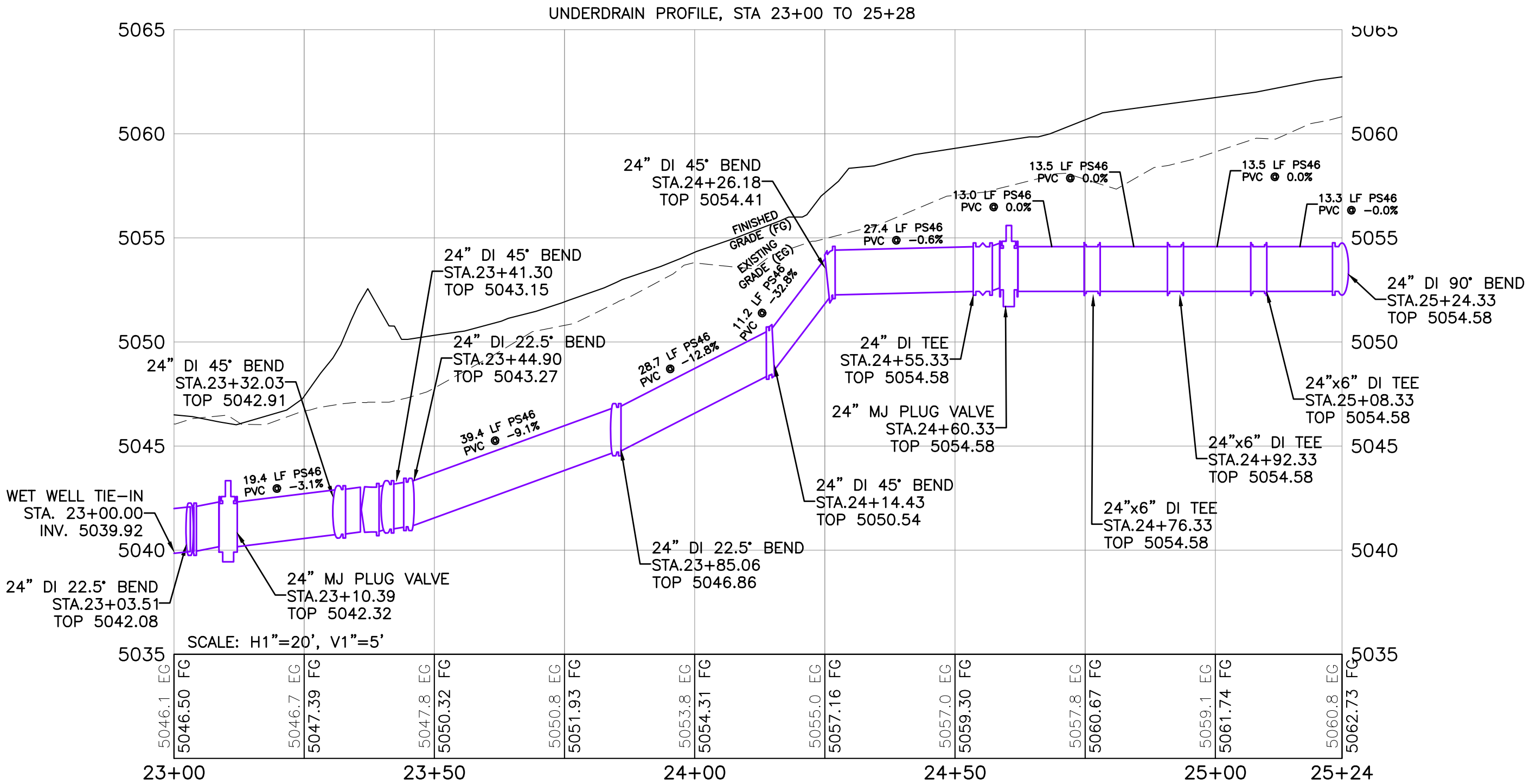
Ute Water Conservancy District
Process Water Lagoon
Improvements

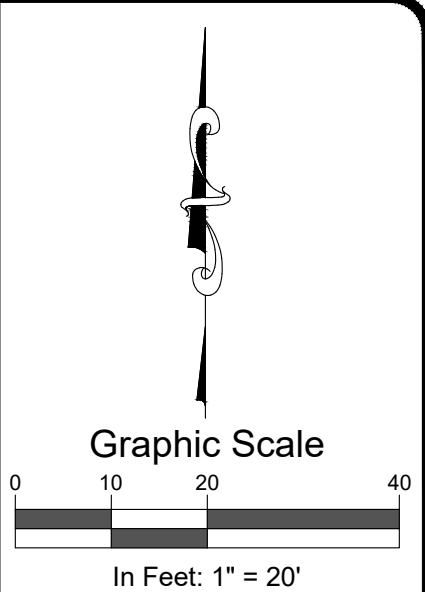
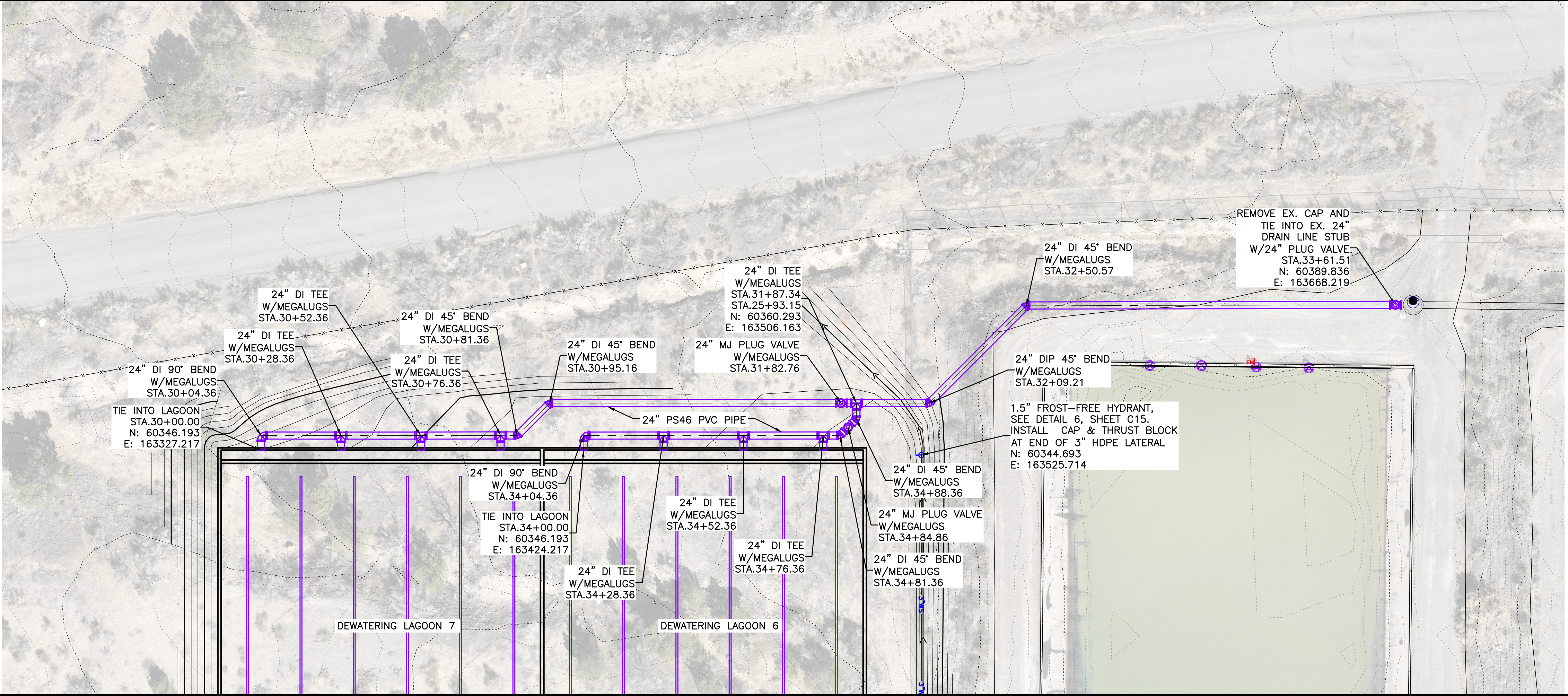
Revision		Date	By
#	1		
	2		
	3		
Project Milestone: BID DRAWINGS			

Job No: 2025-160.001
Drawn by: SF
Date: 08.14.25
QC: WJS PE: SF
File: UWLI-PS-Lagoon P&P
Title:

Underdrain Pipeline
P&P

Dwg No.
C11





SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

Ute Water Conservancy District
Process Water Lagoon
Improvements

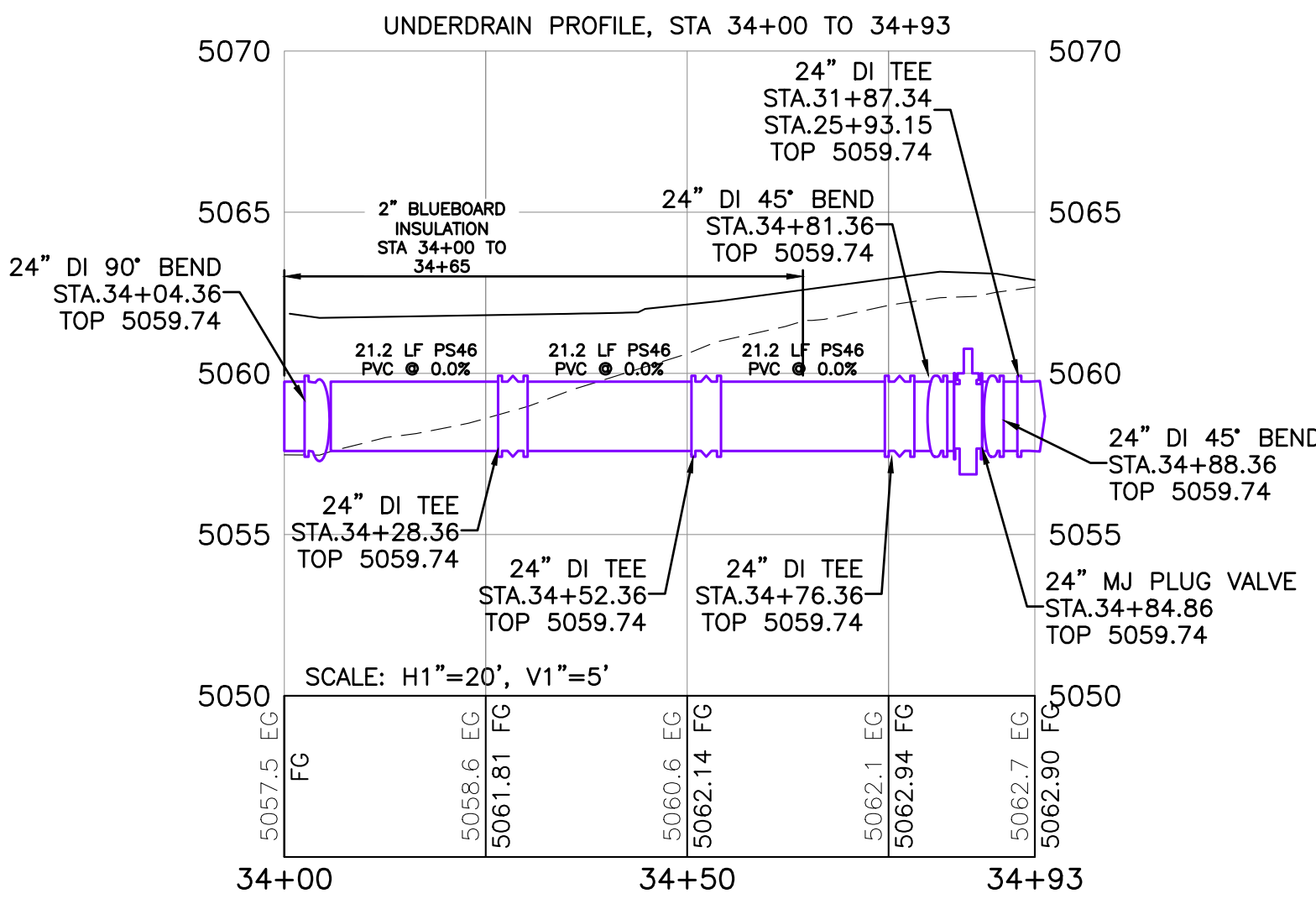
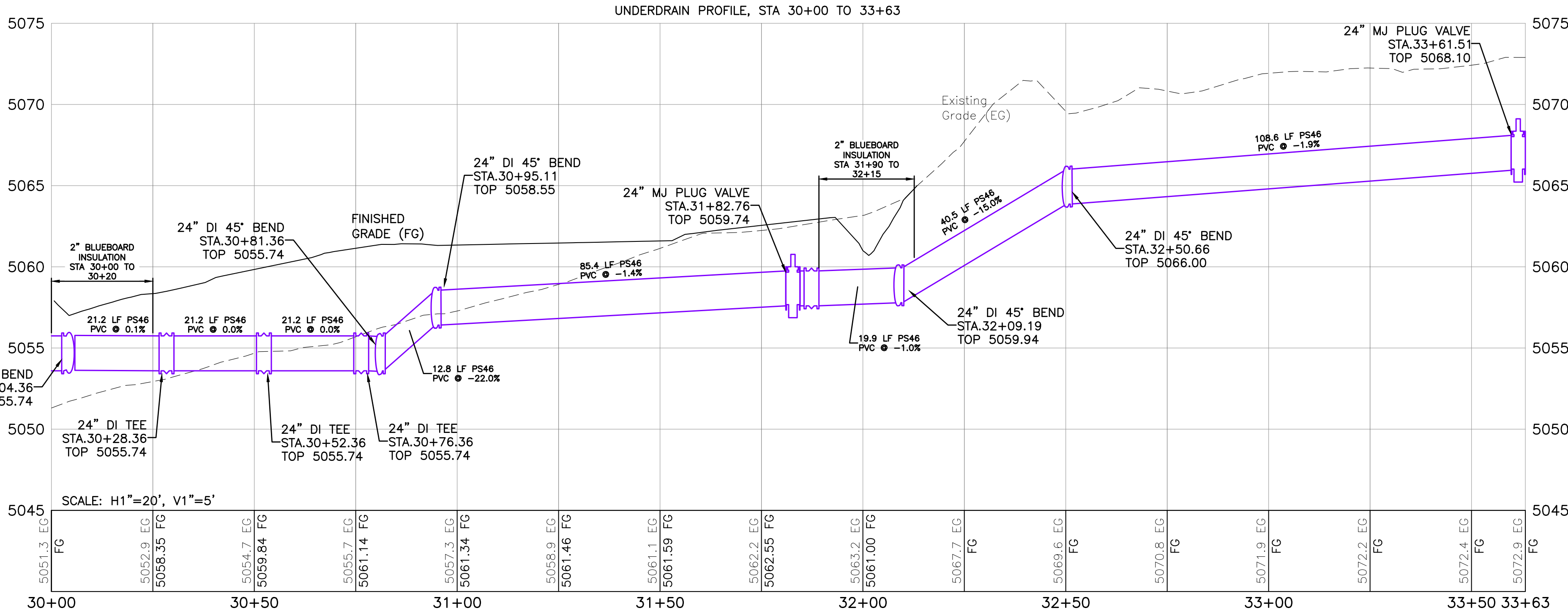
#	Revision	Date	By
1			
2			
3			

Job No. 2025-160.001
Drawn by: SF
Date: 08.14.25
QC: WJS PE: SF
File: UWLI-PS-Lagoon P&P
Title:

Inlet Pipeline P&P

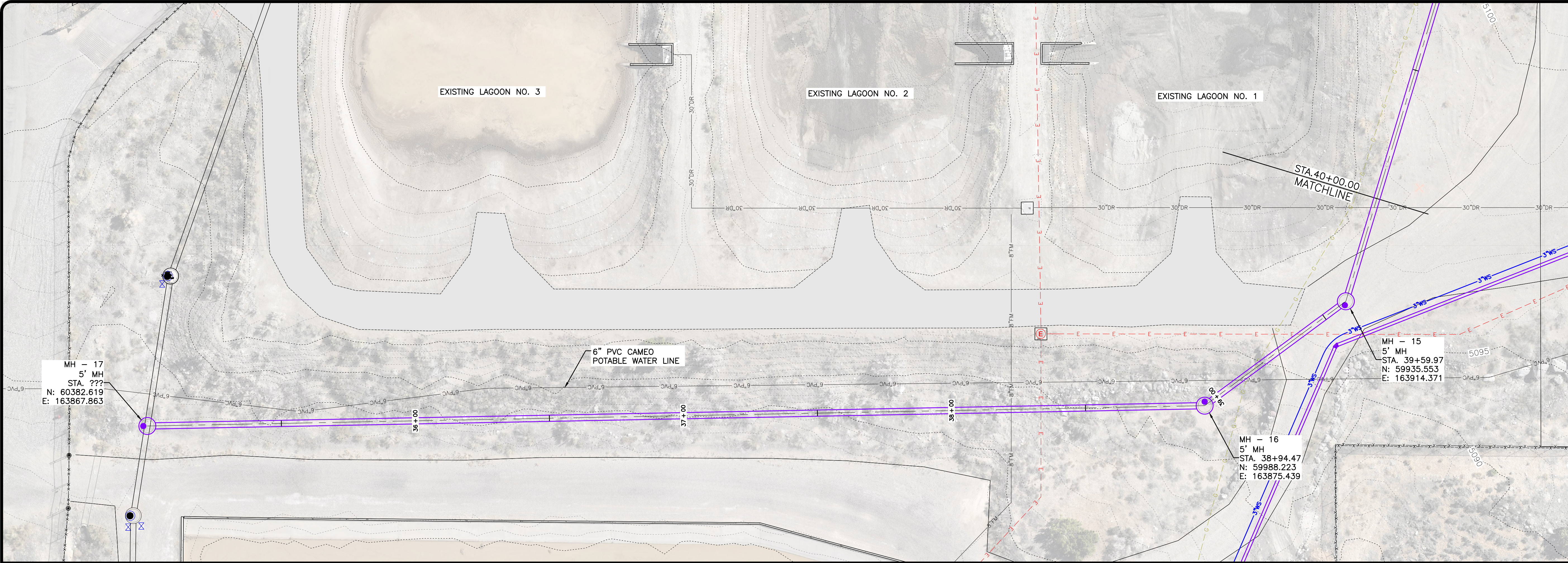
Dwg No.

C12

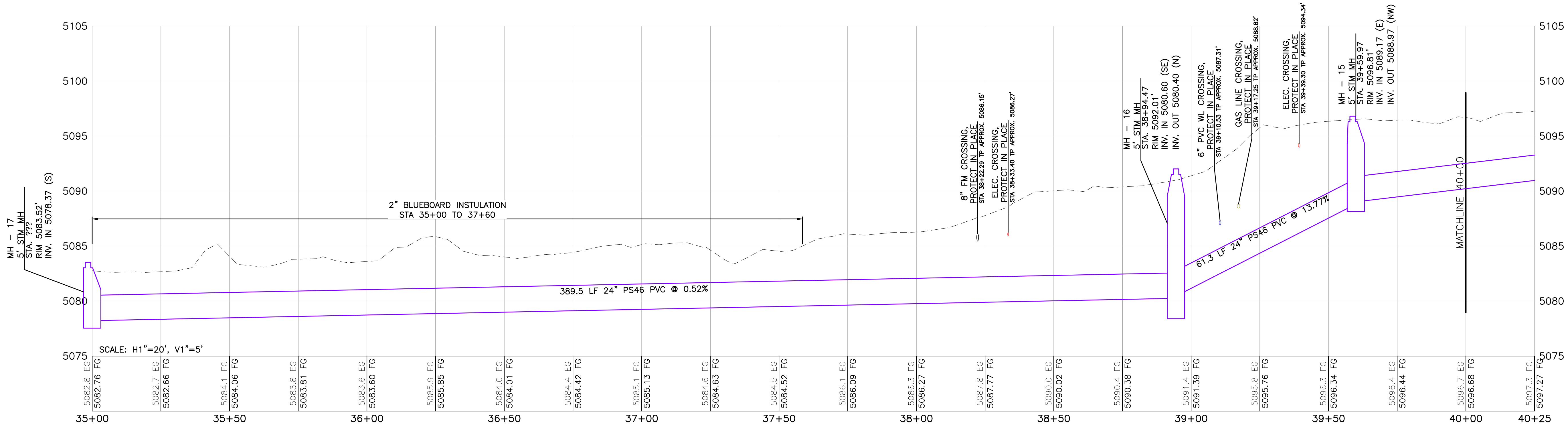


I:\2025\2025-160-ProcessWaterLagoon\H-Dwg\Civil\UWLI-PS-Lagoon P&P.dwg, Plotted: 1/26/2026 10:06 AM By: Scott Forrester

I:\2025\2025-160-ProcessWater\Lagoon\H-Dwg\Civil\PS-SheetSet\UWLI-PS-GravSewer.dwg Plotted: 1/26/2026 10:05 AM By: Scott Forrester



- NOTES:
1. EXISTING GRAVITY DRAIN LINES TO LAGOONS 4 AND 5 CAN BE ISOLATED FOR UP TO 4 WEEKS IF COORDINATED CLOSELY WITH DISTRICT.
 2. PRECAST OR POUR-IN-PLACE MANHOLE BASES ARE ACCEPTABLE FOR CUT-IN MANHOLES.



118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

Ute Water Conservancy District

Process Water Lagoon
Improvements

Revision	Date	By
1		
2		
3		

Job No. 2025-160.001

Drawn by: SF

Date: 08.14.25

QC: WJS PE: SF

File: UWLI-PS-GravSewer

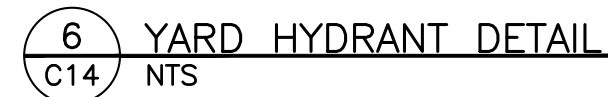
Title:

Sludge Line P&P (1)

Dwg No.

C13

Project Milestone: BID DRAWINGS



THIS STATEMENT OF SPECIAL INSPECTIONS IS PREPARED IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE SECTION 1704.3. IT IS LIMITED TO STRUCTURAL ELEMENTS AND DOES NOT INCLUDE REQUIREMENTS FOR ARCHITECTURAL COMPONENTS, PLUMBING, MECHANICAL, AND ELECTRICAL COMPONENTS, FIRE RESISTANT MATERIALS, INSULATION SYSTEMS AND SMOKE CONTROL SYSTEMS AS OUTLINED IN IBC SECTIONS 1705.14 1705.15, 1705.17, AND 1705.18. ADDITIONAL STATEMENTS MAY BE REQUIRED FROM OTHER DESIGN PROFESSIONALS.

INSPECTIONS AND TESTING SHALL BE PERFORMED BY THE JURISDICTION BUILDING OFFICIAL OR BY AN APPROVED AGENCY ENGAGED BY THE OWNER OR OWNER'S REPRESENTATIVE AND RECOGNIZED AND APPROVED BY THE BUILDING OFFICIAL IN ACCORDANCE WITH IBC SECTION 1704.

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION				
TYPE	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED	REFERENCED STANDARDa	IBC REFERENCE
1. Inspect reinforcement, including prestressing tendons, and verify placement.	—	X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	—
2. Reinforcing bar welding:				
a. Verify weldability of reinforcing bars other than ASTM A706				
b. Inspect single-pass fillet welds, maximum 5/16"; and	—	X	AWS D1.4 ACI 318: 26.6.4	—
c. Inspect all other welds	X	X		
3. Inspect anchors cast in concrete.	—	X	ACI 318: 17.8.2	—
4. Inspect anchors post-installed in hardened concrete members.b				
a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	X	—	ACI 318: 17.8.2.4	—
b. Mechanical anchors and adhesive anchors not defined in 4.a	—	X	ACI 318: 17.8.2	
5. Verify use of required design mix.	—	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2
6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	—	ASTM C31 ASTM C172 ACI 318: 26.5, 26.12	—
7. Inspect concrete and shotcrete placement for proper application techniques.	X	—	ACI 318: 26.5	—
8. Verify maintenance of specified curing temperature and techniques.	—	X	ACI 318: 26.5.3-26.5.5	—
9. Inspect prestressed concrete for:				
a. Application of prestressing forces; and	X	—		
b. Grouting of bonded prestressing tendons.	X	—	ACI 318: 26.10	—
10. Inspect erection of precast concrete members.	—	X	ACI 318: Ch. 26.9	—
11. For precast concrete diaphragm connections or reinforcement at joints classified as moderate or high deformability elements (MDE or HDE) in structures assigned to Seismic Design Category C, D, E, or F, inspect such connections and reinforcement in the field for:				
a. Installation of the embedded parts	X	—		
b. Completion of the continuity of reinforcement across joints.	X	—	ACI 318: 26.13.1.3	—
c. Completion of connections in the field.	X	—	ACI 550.5	
12. Inspect installation tolerances of precast concrete diaphragm connections for compliance with ACI 550.5.	—	X	ACI 318: 26.13.1.3	—
13. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	—	X	ACI 318: 26.11.2	—
14. Inspect formwork for shape, location and dimensions of the concrete member being formed.	—	X	ACI 318: 26.11.1.2(b)	—

For SI: 1 inch = 25.4 mm

a. Where applicable, see also Section 1705.13, Special Inspections for seismic resistance.

b. Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.

(c) Required after the first 5000 square feet (465 square meters) of AAC masonry

REQUIRED QUALITY CONTROL AND QUALITY ASSURANCE INSPECTIONS OF HIGH STRENGTH BOLTING		
Quality Control Inspections shall be performed by the fabricator's or erector's Quality Control Inspector. Quality Assurance Inspections and nondestructive testing of structural steel elements in buildings, structures, and portions thereof shall be in accordance with the quality assurance inspection requirements of AISC 360. Observation of bolting operations shall be the primary method used to confirm that the materials, procedures and workmanship incorporated in construction are in conformance with the construction documents and provisions of the RCSC Specification. (1) For snug-tight joints, pre-installation verification testing and monitoring of the installation procedures are not applicable. (2) For pretensioned joints and slip-critical joints, when the installer is using the turn-of-the-method with matchmarking techniques, the direct tension indicator method, or the twist off type tension control bolt method, QC and QA inspectors need not be present during installation. (3) For pretensioned and slip-critical joints, when the installer is using the calibrated wrench method, or turn-of-the-nut method without matchmarking, QC and QA inspectors shall be engaged in their assigned inspection duties during installation of fasteners. As a minimum, bolting inspection tasks shall be in accordance with the following tables: In these tables, the inspection tasks are as follows: O - Observe these items on a random basis. Operations need not be delayed pending these inspections. P - Perform these tasks for each welded joint or member.		
INSPECTION TASKS PRIOR TO BOLTING	QC	QA
Manufacturer's certifications available for fastener materials	O	P
Fasteners marked in accordance with ASTM requirements	O	O
Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	O	O
Proper bolting procedure selected for joint detail	O	O
Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements.	O	O
Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used.	P	O
Proper storage provided for bolts, nuts, washers, and other fastener components.	O	O
INSPECTION TASKS DURING BOLTING	QC	QA
Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required.	O	O
Joint brought to the snug-tight condition prior to the pretensioning operation.	O	O
Fastener component not turned by the wrench prevented from rotating.	O	O
Fasteners are pretensioned in accordance with the RCSC Specification, progressing systematically from the most rigid point toward the free edges.	O	O
INSPECTION TASKS AFTER BOLTING	QC	QA
Document acceptance or rejection of bolted connections	P	P

Quality Control Inspections shall be performed by the fabricator's or erector's Quality Control Inspector. Quality Assurance Inspections and nondestructive testing of structural steel elements in buildings, structures, and portions thereof shall be in accordance with the quality assurance inspection requirements of AISC 360. Observation of Welding operations and visual inspection of in-service welds shall be the primary method to confirm that the materials, procedures and workmanship are in conformance with the construction documents. As a minimum welding inspection tasks shall be in accordance with the following tables. In these tables, the inspection tasks are as follows:

- O - Observe these items on a random basis. Operations need not be delayed pending these inspections.
- P - Perform these tasks for each welded joint or member.

[a] The fabricator or erector, as applicable, shall maintain a system by which a welder who has welded a joint or member can be identified. Stamps, if used, shall be the low-stress type.

Placement and installation of steel headed stud anchors	P	P
---	---	---

[a] When welding of doubler plates, continuity plates or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3 in. (75mm) of the weld.

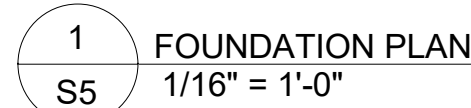
[b] After rolled heavy shapes (see Section A3.1c) and built-up heavy shapes (see Section A3.1d) are welded, visually inspect the weld access hole for cracks.



Job No.	2025-160.001		
Drawn by:	JPP		
Date:	08.11.2025		
QC:	-	PE:	MAN
File:	2025		

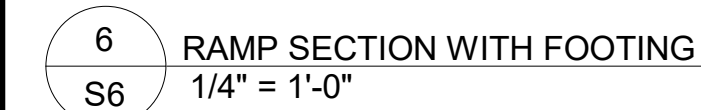
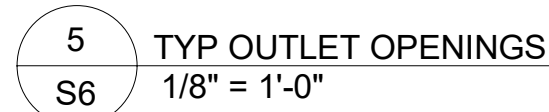
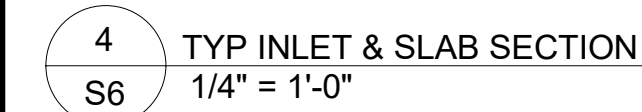
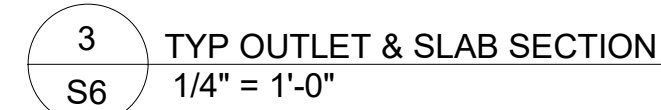
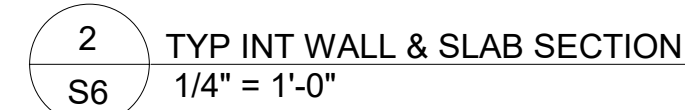
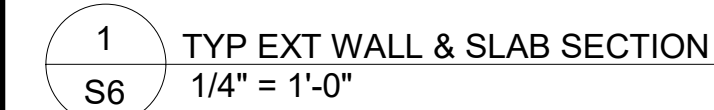
Dwg No.

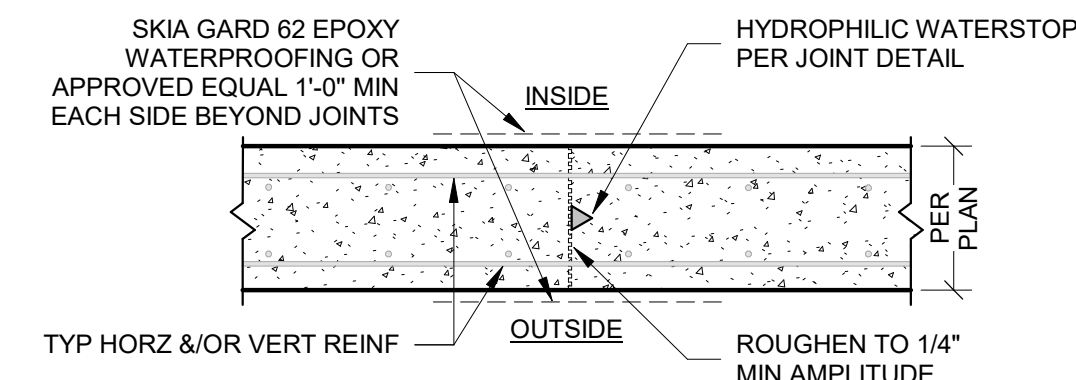
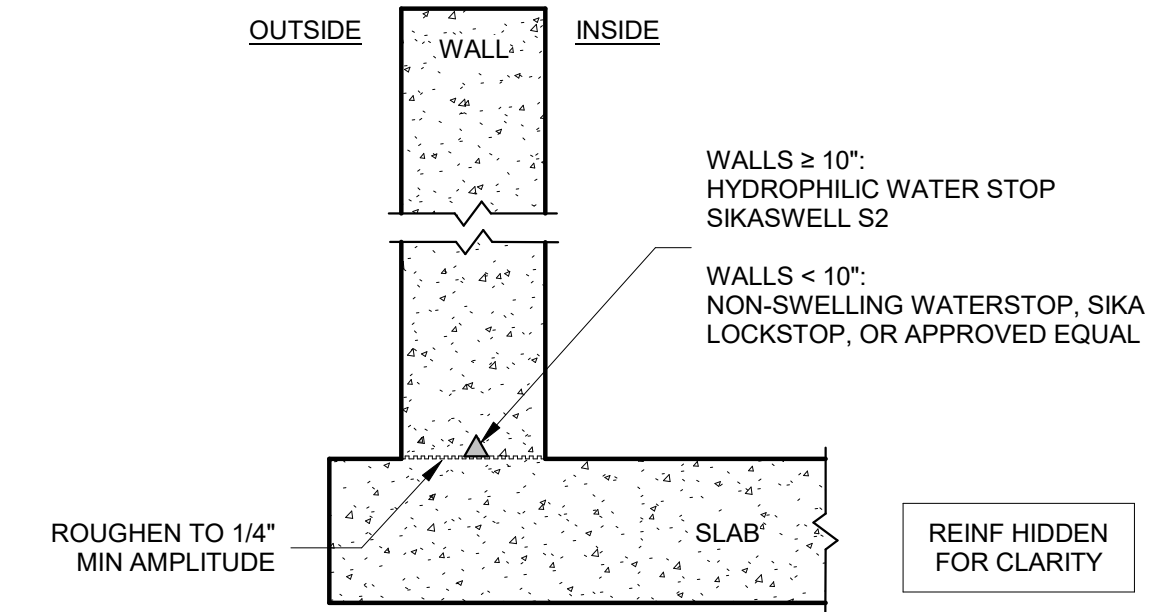
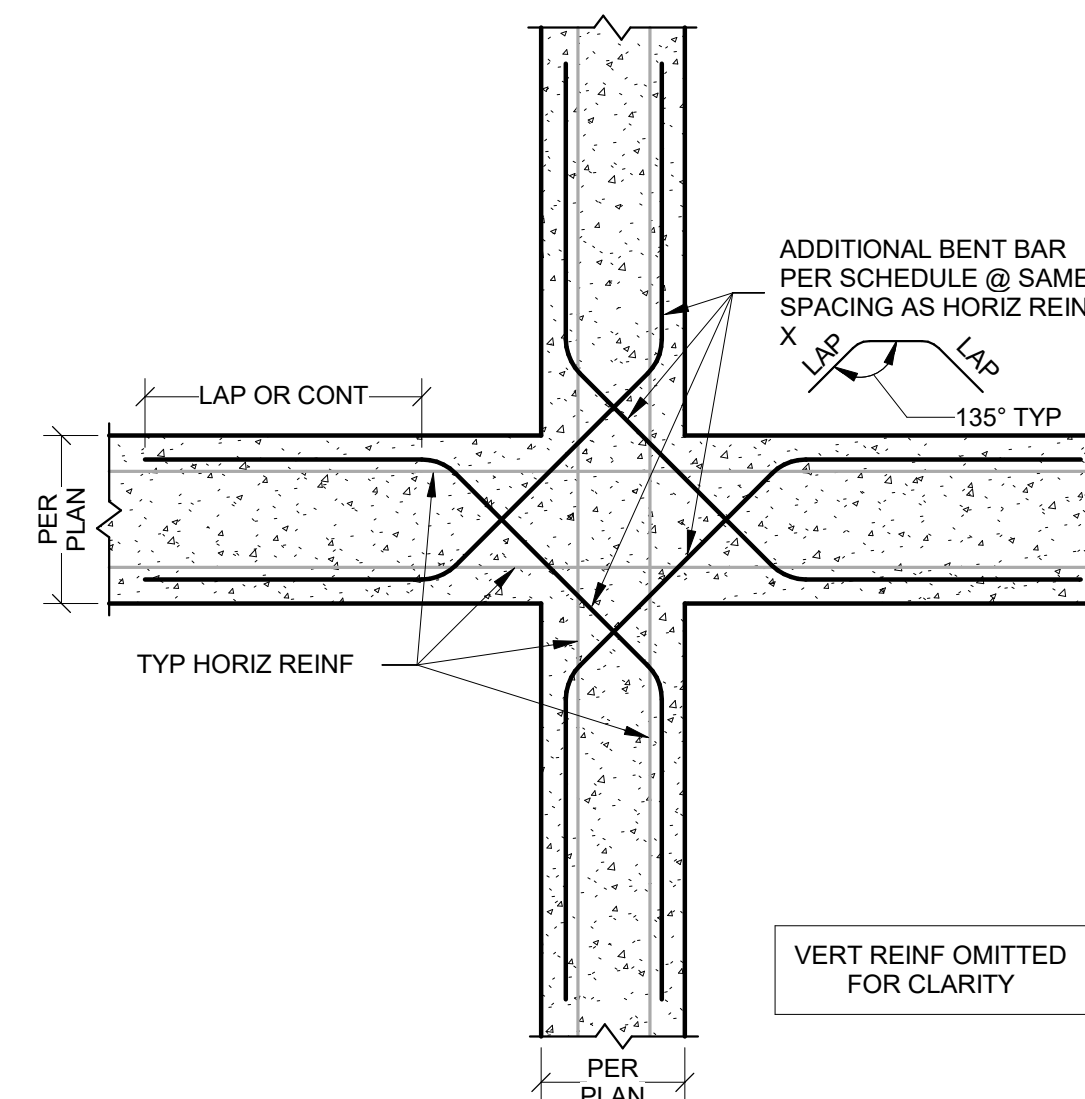
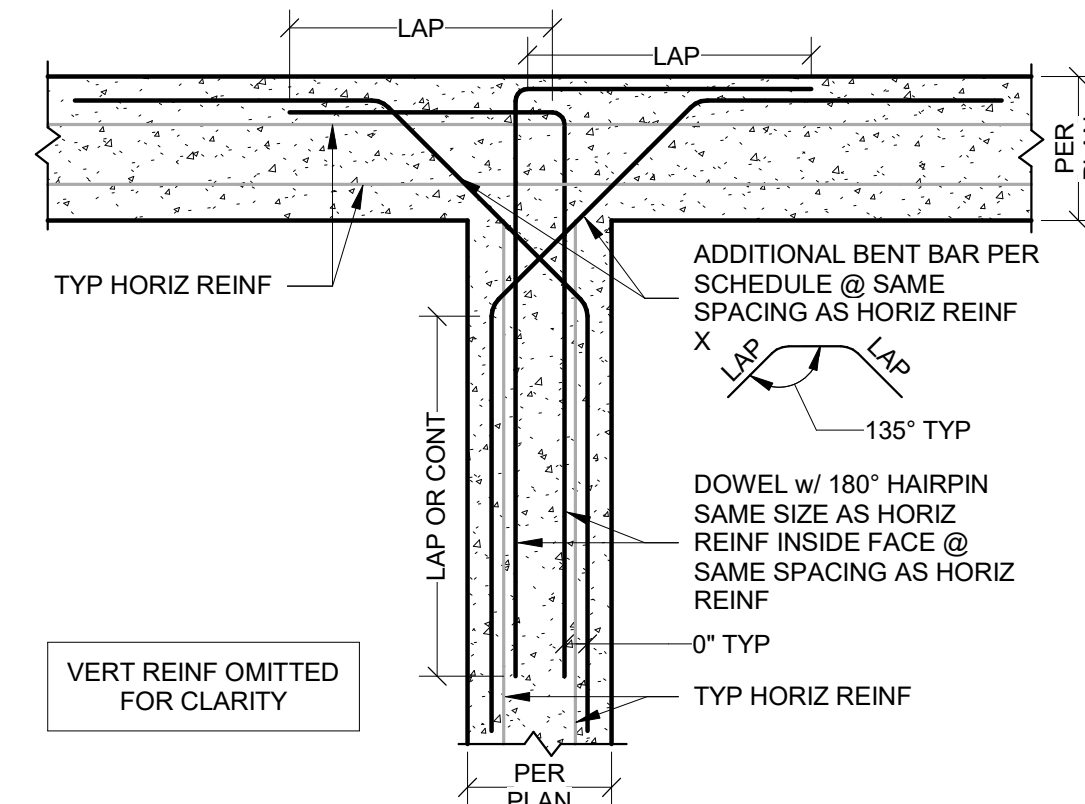
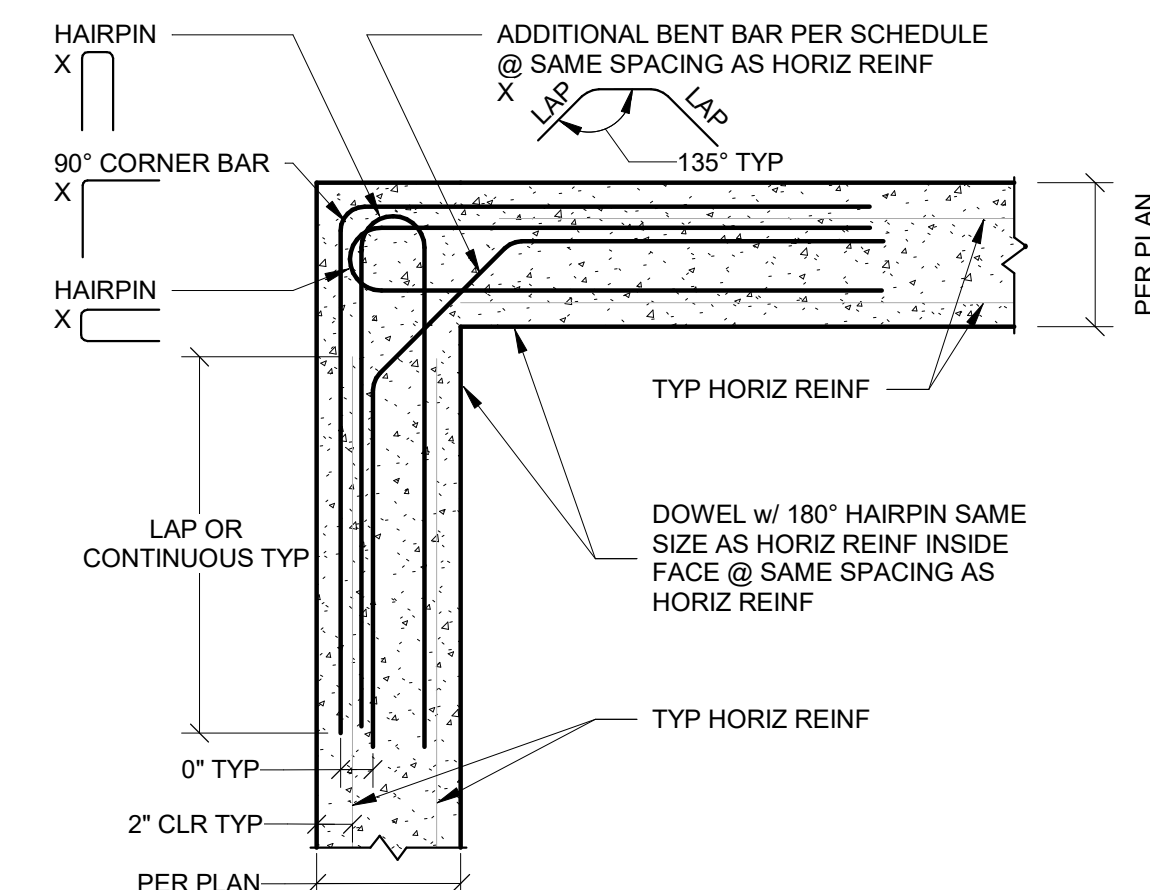
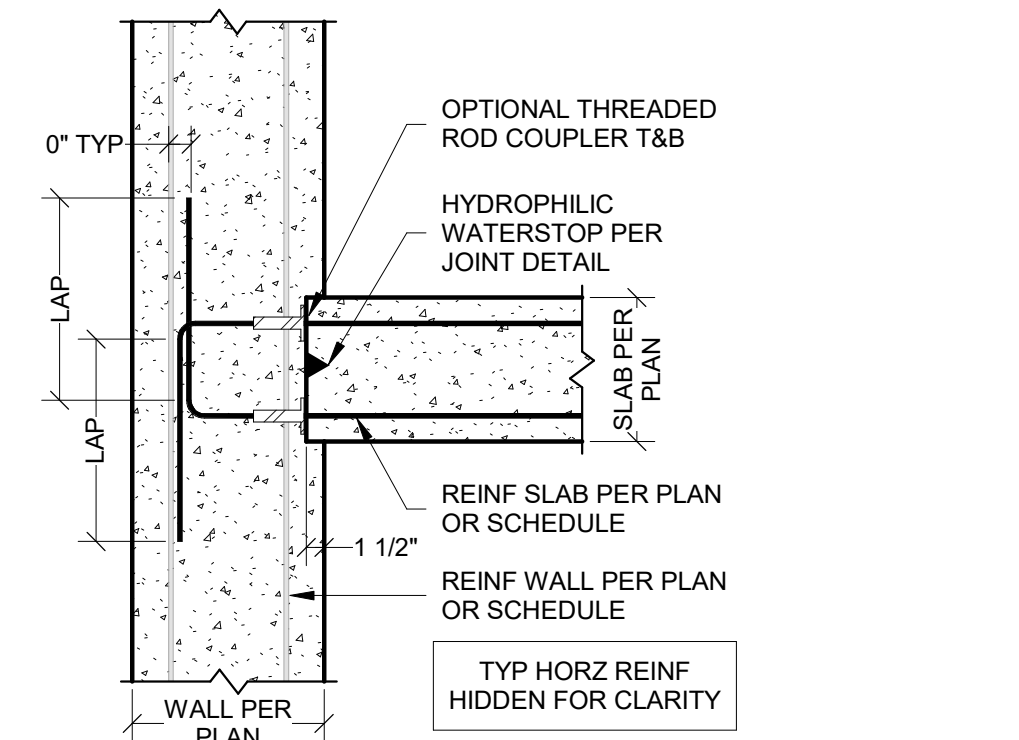
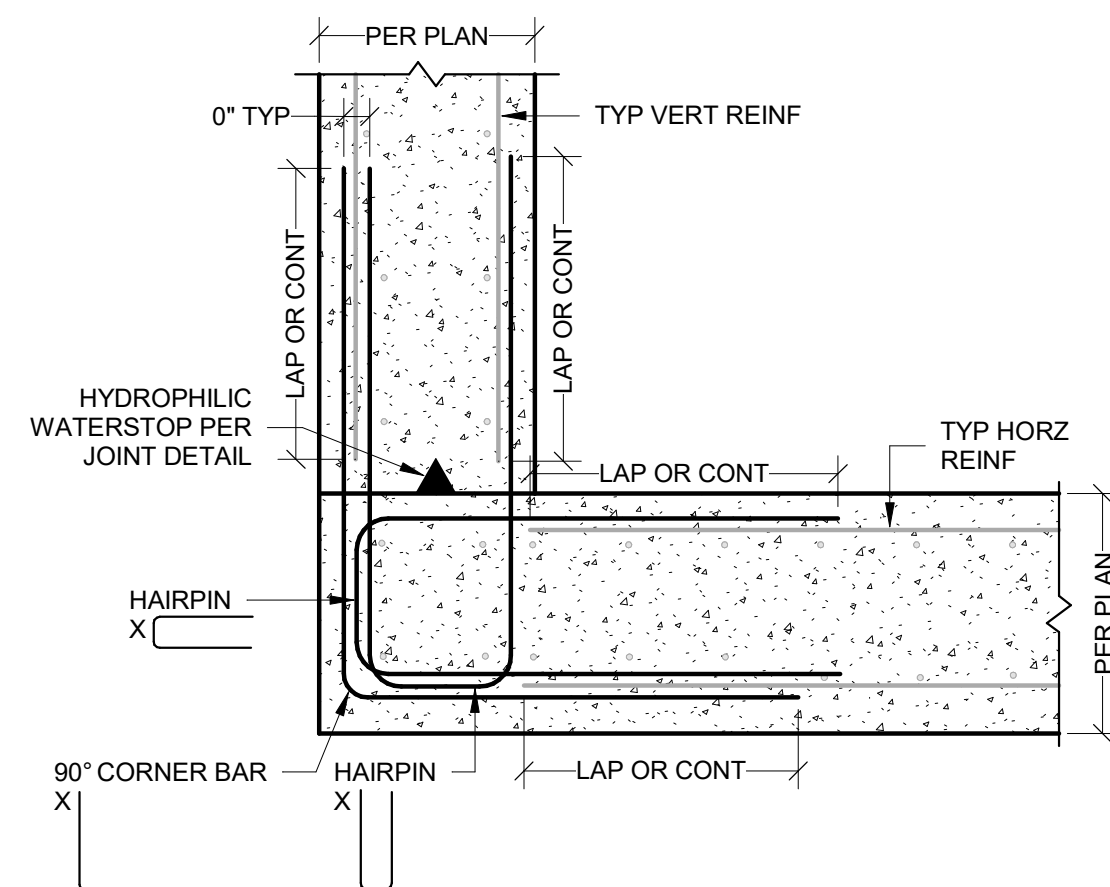
S3

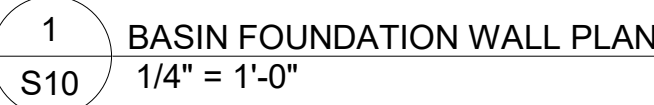


2	TYP DOUBLE MAT SLAB
S5	3/4" = 1'-0"

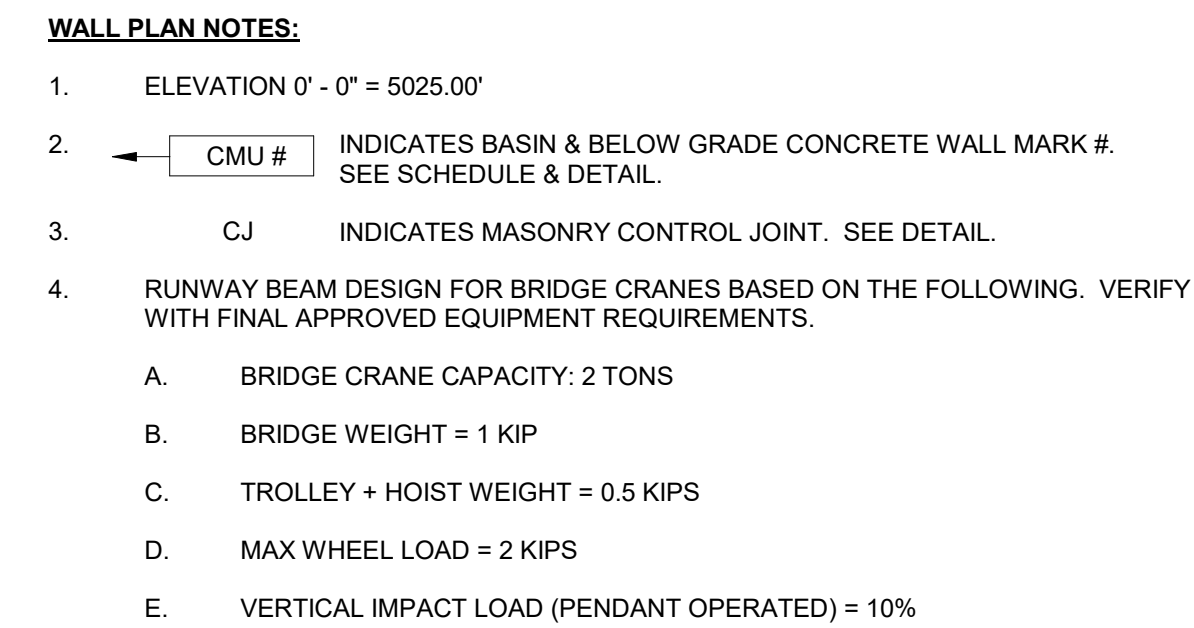
S5







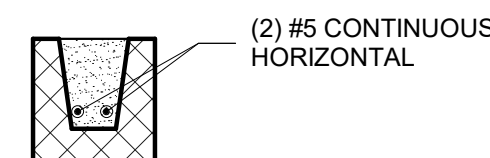
BASIN WALL SCHEDULE			
MARK	THICKNESS	HORIZONTAL REINFORCEMENT (EACH FACE)	VERTICAL REINFORCEMENT (EACH FACE)
W22	1' - 10"	#8 @ 10" o.c.	#8 @ 8" o.c.



DOOR SCHEDULE						
MARK	WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	COMMENTS
1	5' - 8"	7' - 0"	1 3/4"	CRS	PAINT	INSULATED, ENTRY HARDWARE BY OWNER
2	3' - 0"	3' - 0"		SS		

1 BASIN SLAB PLAN
S11 1/4" = 1'-0"

MASONRY WALL SCHEDULE			
MARK	WIDTH	VERTICAL REINFORCEMENT	BOND BEAM REINFORCEMENT
CMU 8	7 5/8"	#5 @ 48" o.c.	(2) #5 CONT

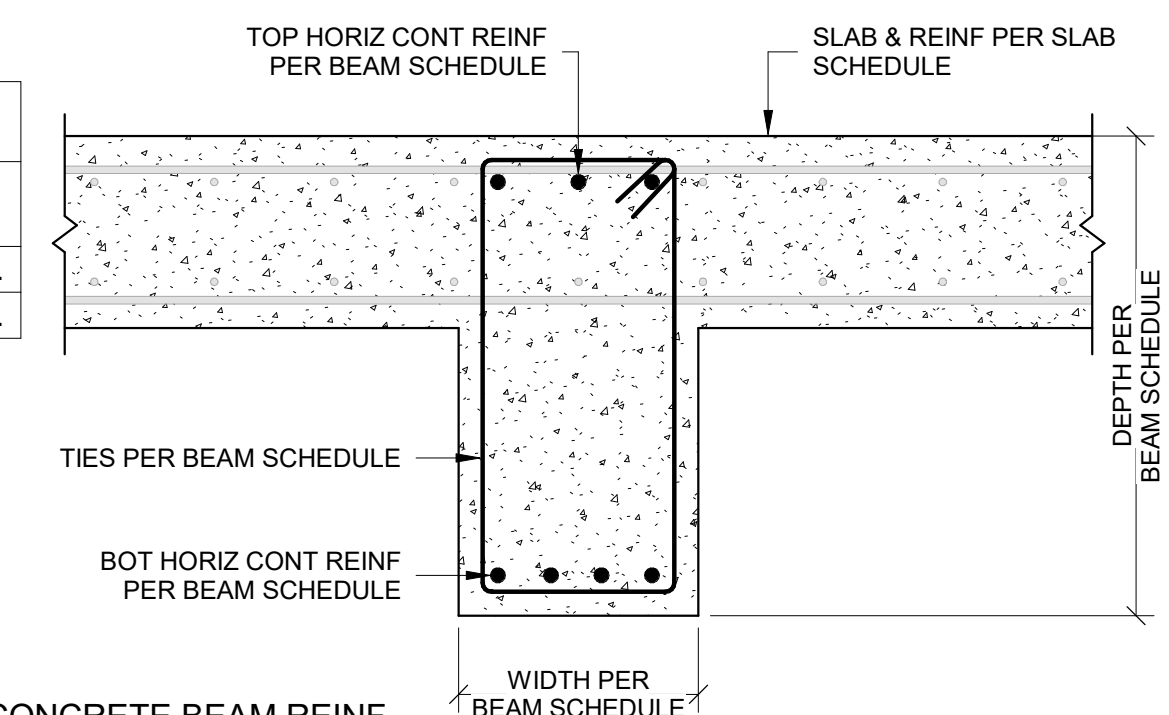


3
S11

8" MASONRY WALL REINFORCEMENT
1" = 1'-0"

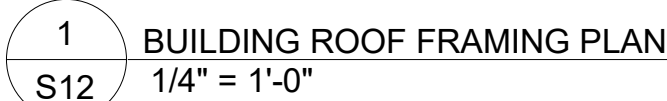
4 TYP CMU BOND BEAM
S11 1" = 1'-0"

CONCRETE BEAM SCHEDULE						
MARK	WIDTH	DEPTH	BOTTOM REINFORCEMENT	TOP REINFORCEMENT	END SPAN TIES	MID SPAN TIES
20 x 40	1' - 8"	4' - 0"	(4) #10	(3) #10	#4 @ 4" o.c.	#4 @ 12" o.c.
20 x 48	1' - 8"	3' - 4"	(4) #10	(3) #10	#4 @ 4" o.c.	#4 @ 12" o.c.



5
S11

CONCRETE BEAM REINF
3/4" = 1'-0"



1. ELEVATION 0' - 0" = 5024.00'.
2. FASTEN ROOF DECK WITH 5/8" PUDDLE WELDS 36/7 PATTERN AT SUPPORTS. (10) #10 TEK SCREWS AT SIDELAPS PER SPAN, OR APPROVED POWDER ACTUATED FASTENER ALTERNATIVE.
3. VERIFY LOCATION AND SIZE OF PENETRATIONS IN ROOF DECK FOR VENT PIPES AND EQUIPMENT WITH ARCHITECT, PROCESS MECHANICAL, AND MECHANICAL PLANS AND SPECIFICATIONS.

[illegible]

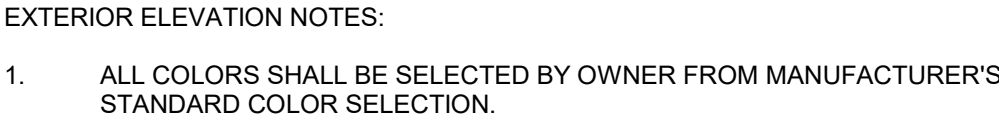
Job No.	2025-160.001		
Drawn by:	JPP		
Date:	08.11.2025		
QC:	-	PE:	MAN
File:	2025		

Title:

Pump Station Roof
Plan

Dwg No.

S12



Ute Water Conservancy District
Process Water Lagoon Improvements

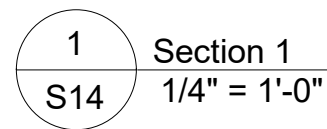
[illegible]

Job No.	2025-160.001		
Drawn by:	JPP		
Date:	08.11.2025		
QC:	-	PE:	MAN
File:	2025		

Title: Pump Station
Exterior Elevations

Dwg No.

S13



ROOF:

- MEMBRANE ROOFING (SIMILAR TO EXISTING BUILDINGS)
- 7/16" PLY ROOF NAILER & RIGID INSULATION, 4" [R-30]
- STEEL ROOF DECK PER ROOF FRAMING PLAN
- STEEL ROOF JOISTS PER ROOF FRAMING PLAN
- PAINTED STRUCTURE

SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

Ute Water Conservancy District

Process Water Lagoon Improvements

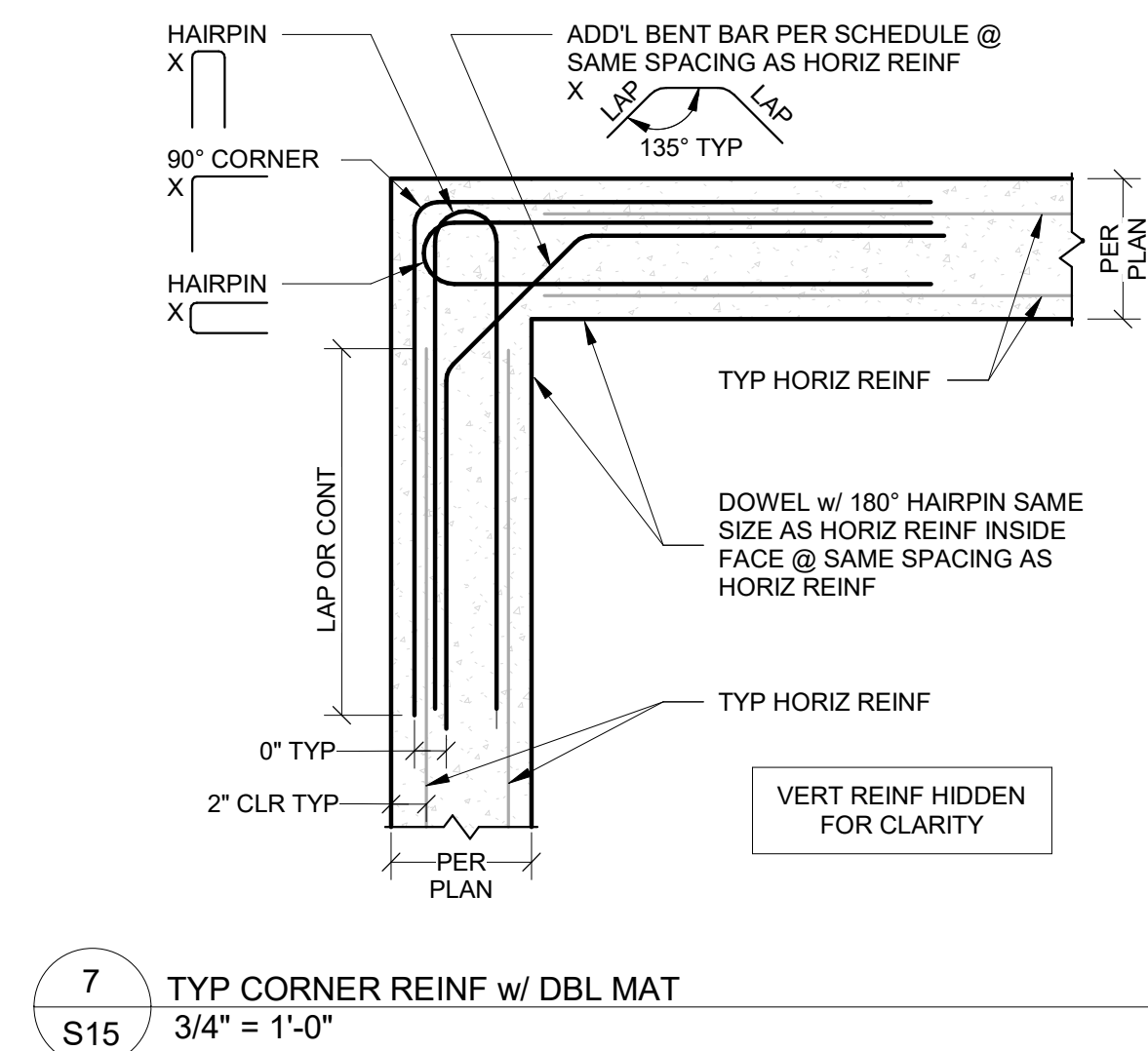
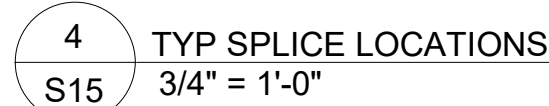
[illegible]

Job No.	2025-160.001		
Drawn by:	JPP		
Date:	08.11.2025		
QC:	-	PE:	MAN
File:	2025		

Pump Station Sections

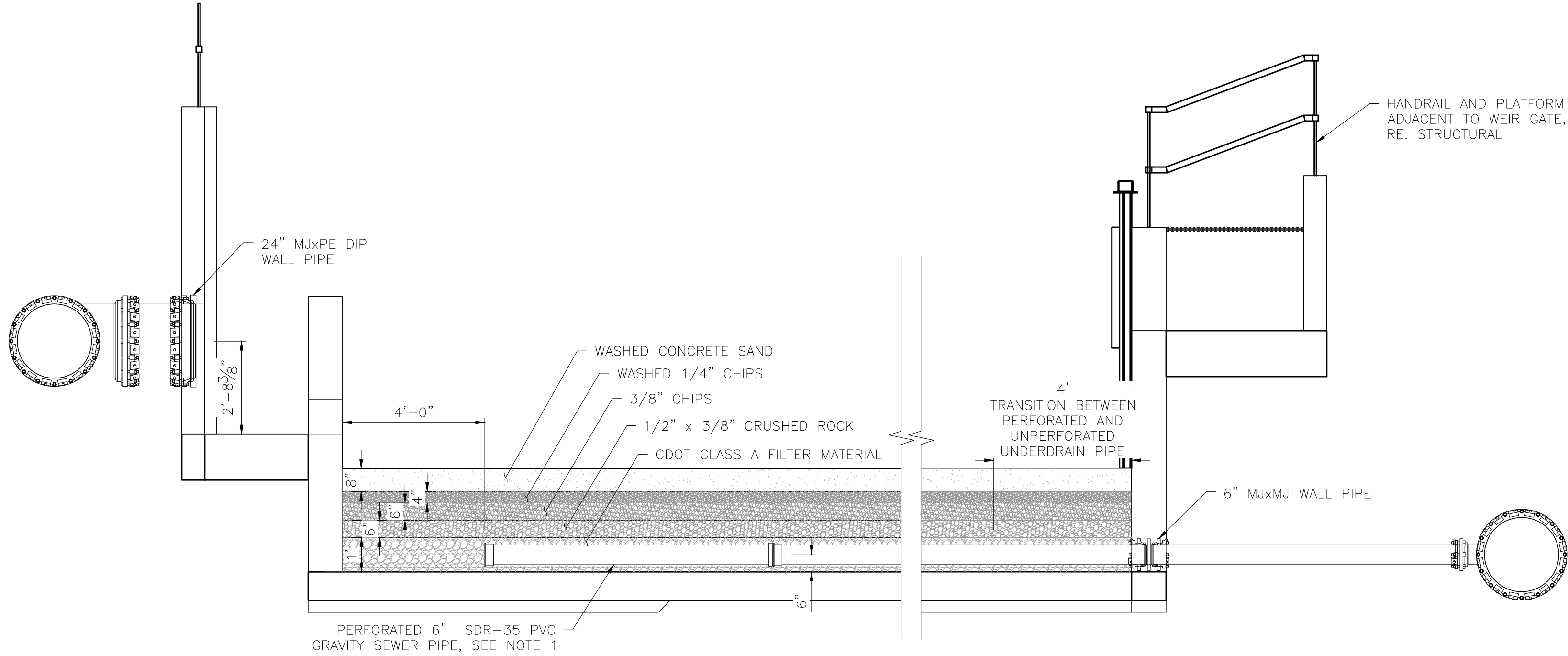
Dwg No.

S14

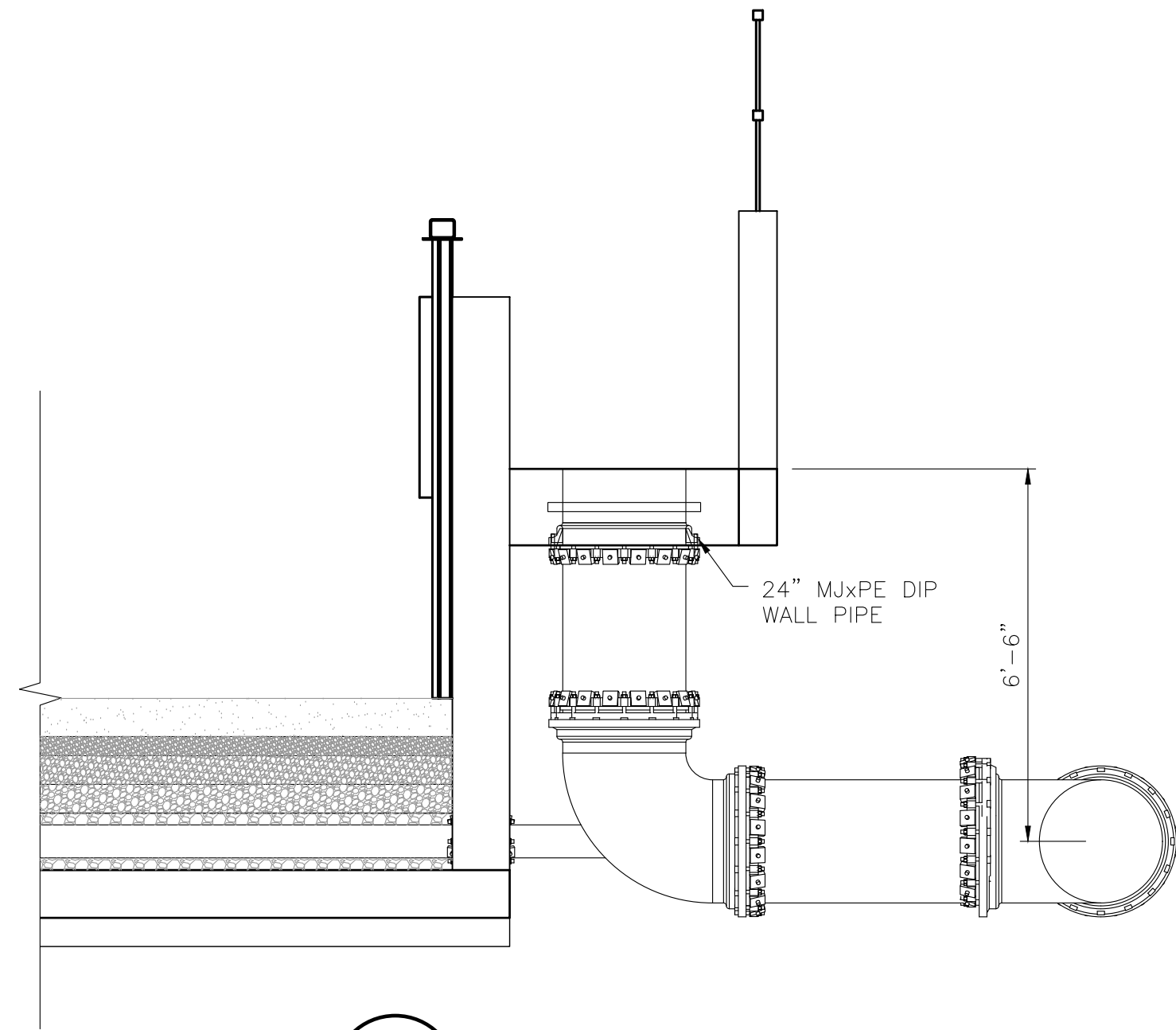


10	TYPICAL FOUNDATION SLAB CONSTRUCTION JOINT
S15	3/4" = 1'-0"

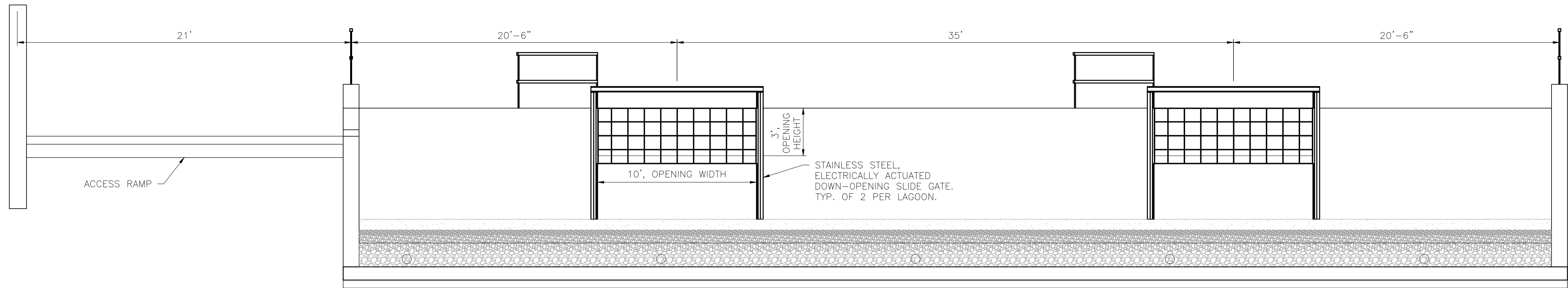
[illegible]



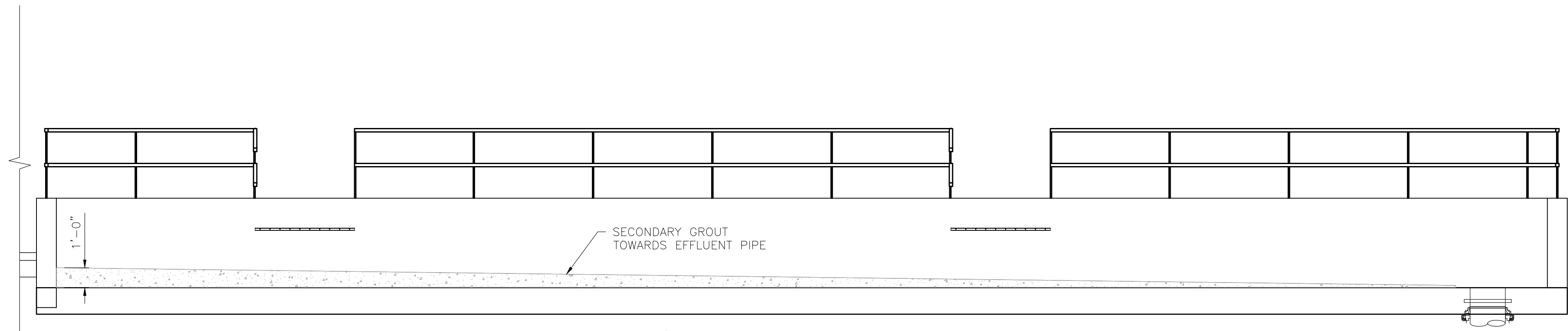
1 DEWATERING LAGOON SECTION
P1 SCALE: 3/8" = 1'-0"



2 DEWATERING LAGOON OUTLET SECTION
P1 SCALE: 3/8" = 1'-0"



3 DEWATERING LAGOON SECTION
P1 SCALE: 1/4" = 1'-0"



4 DEWATERING LAGOON SECTION
P1 SCALE: 1/4" = 1'-0"

NOTES:
1. PERFORATED UNDERDRAIN PIPE SHALL BE GRAVITY SEWER PIPE PERFORATED TO ASTM F-758 FOR UNDERDRAIN SYSTEMS AND INSTALLED ACCORDING TO PROJECT SPECIFICATIONS. PIPE SHALL TRANSITION TO UNPERFORATED 6" SDR-35 PVC PIPE 4' FROM THE SOUTHERN LAGOON WALL.

I:\2025\2025-160-ProcessWaterLagoon\160-ProcessWaterLagoon\160-ProcessWaterLagoon.impr\G:\160-ProcessWaterLagoon\160-ProcessWaterLagoon.dwg Plotted: 1/26/2025 3:22 PM By: Scott Forrester

#	Revision	Date	By
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

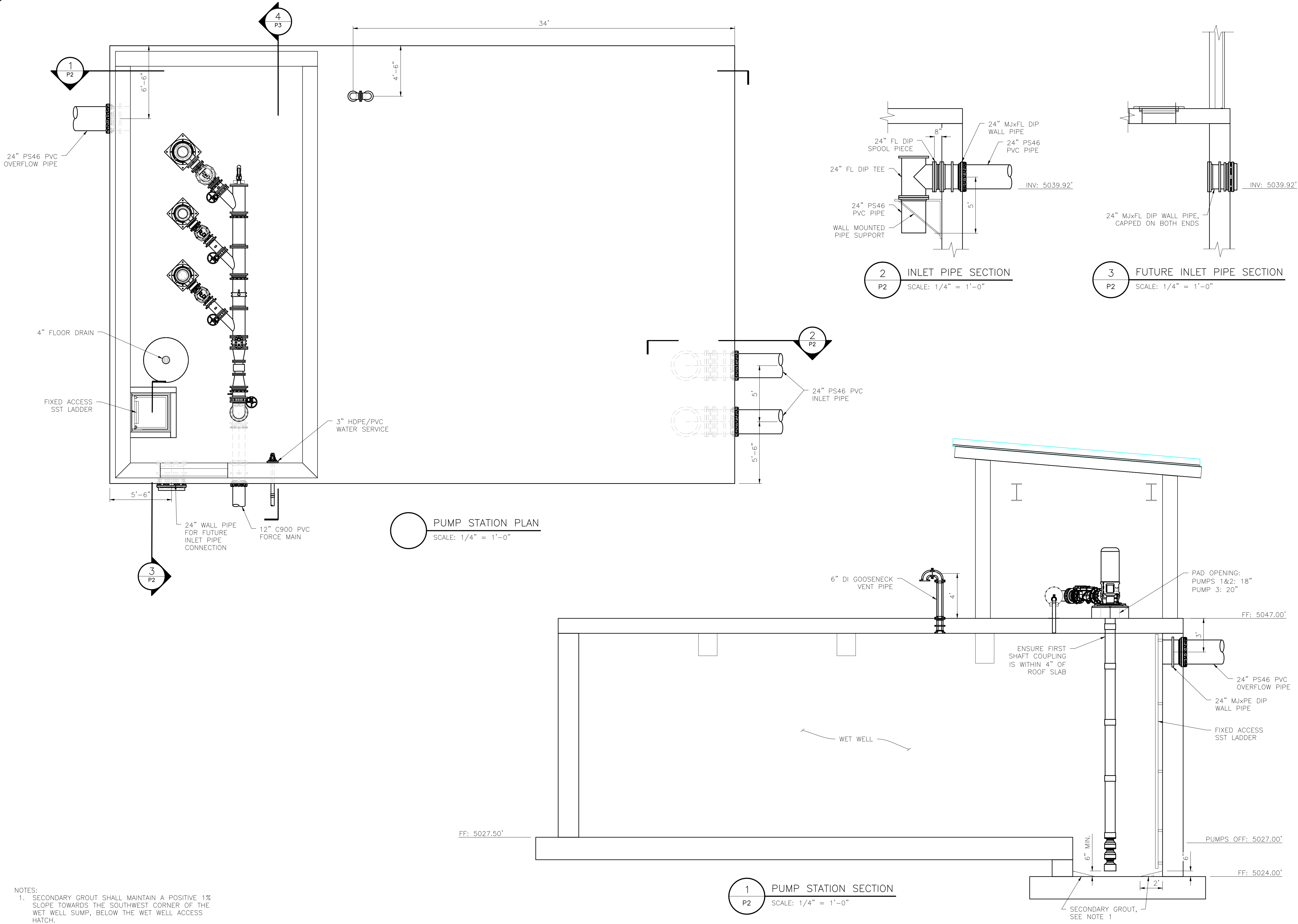
Job No. 2025-160.001
Drawn by: SF
Date: 08.14.25
QC: WJS | PE: SF
File: UWLI-PS-Lagoons

Title:
Dewatering Lagoons
Process Sections

Dwg No.
P1

I:\2025\2025-160-ProcessWaterLagoon\U-WaterLagoon\UWL-PS-PumpStation2.dwg Plotted: 1/26/2026 3:23 PM By: Scott Forester

NOTES:
1. SECONDARY GROUT SHALL MAINTAIN A POSITIVE 1% SLOPE TOWARDS THE SOUTHWEST CORNER OF THE WET WELL SUMP, BELOW THE WET WELL ACCESS HATCH.



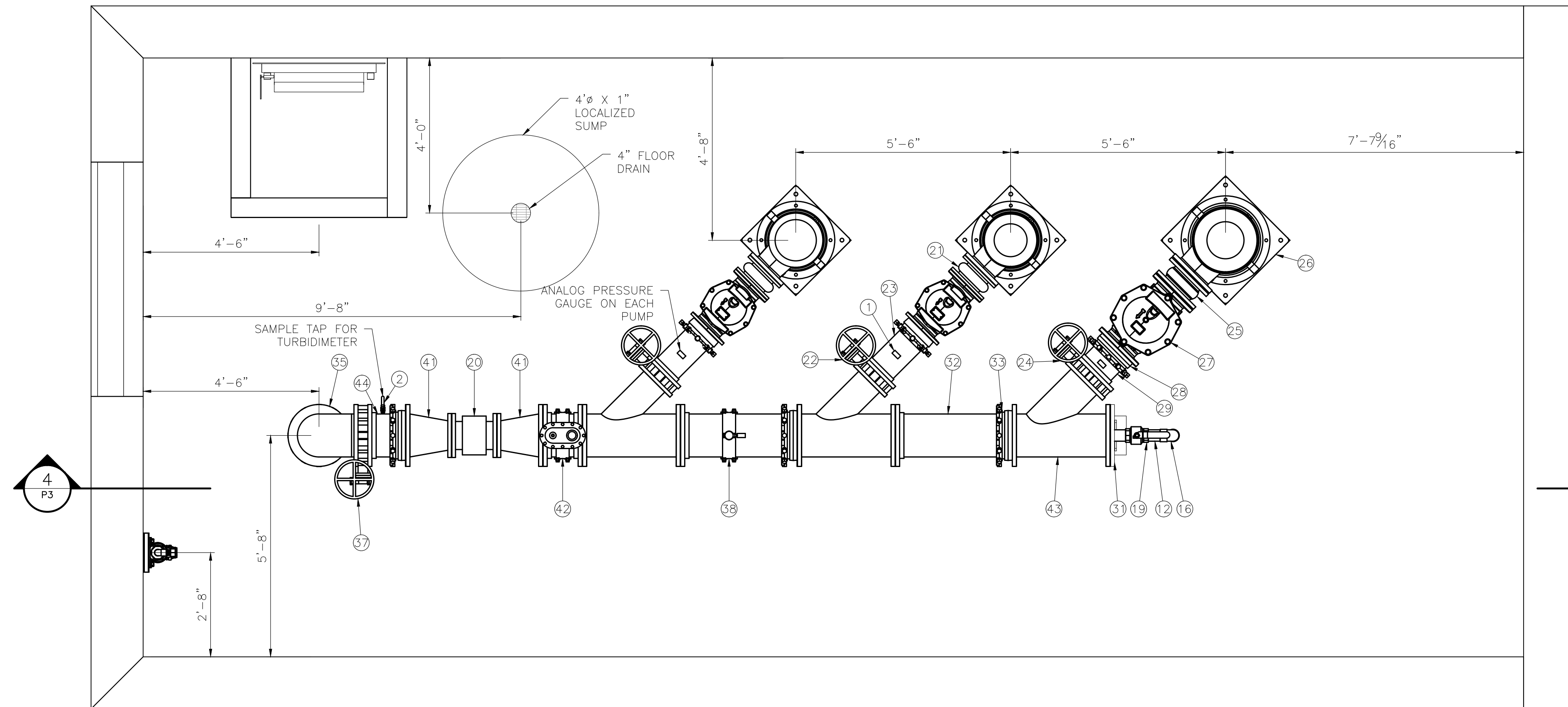
#	Revision	Date	By
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Job No. 2025-160.001
Drawn by: SF
Date: 08.14.25
QC: WJS | PE: SF
File: UWL-PS-PumpStation2

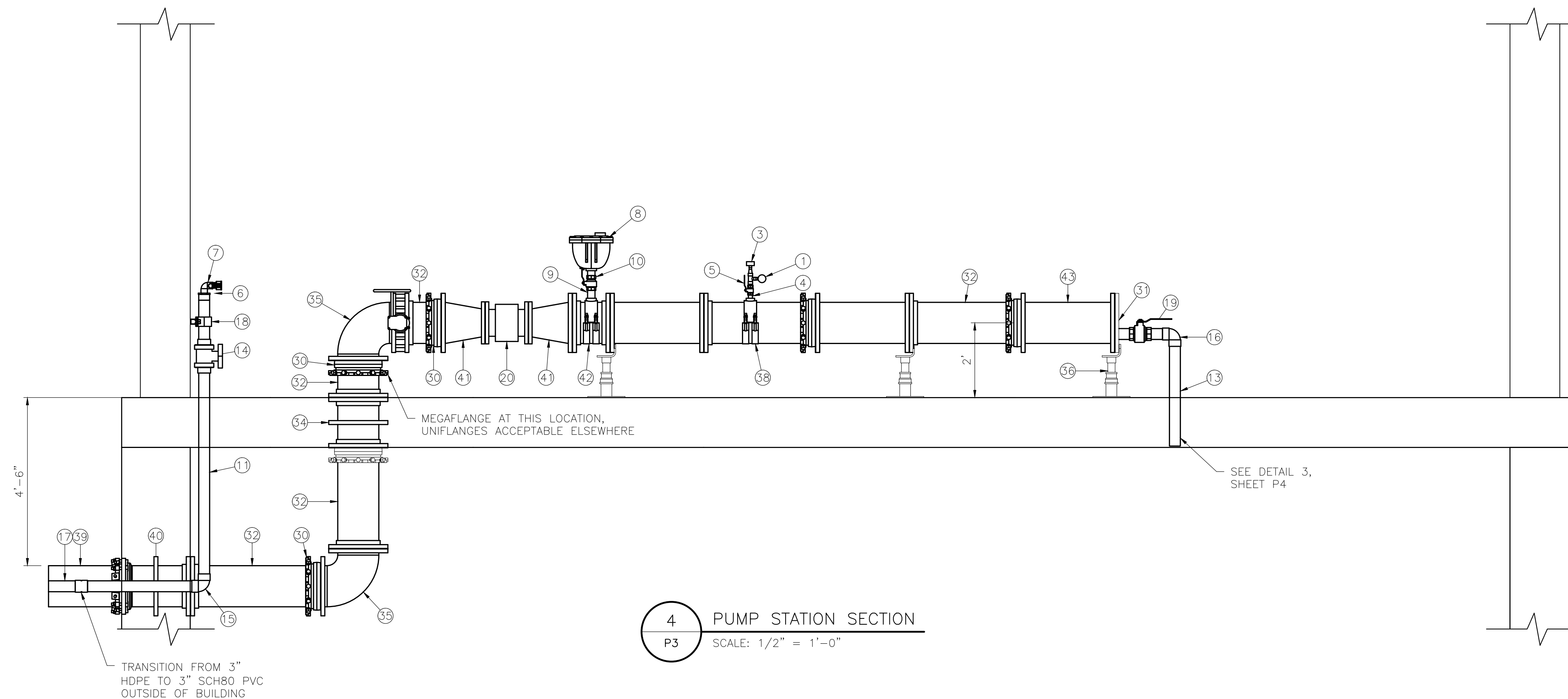
Title:
Pump Station Process
Plan & Section (1)

Dwg No.
P2

Project Milestone: BID DRAWINGS



PUMP STATION PROCESS PLAN
SCALE: 1/2" = 1'-0"



4 PUMP STATION SECTION
P3 SCALE: 1/2" = 1'-0"

- 1 2.5" PRESSURE GAUGE (1/2" MNPT)
- 2 1/2" THD BRASS BALL VALVE WITH LEVER
- 3 PRESSURE TRANSDUCER
- 4 1" BRASS PIPING
- 5 1" BALL VALVE
- 6 1 1/2"x1 1/4" PP CAMLOCK SKT X MNPT ADAPTER
- 7 1 1/2" SCH.80 PVC 90° BEND
- 8 2" COMBO AIR/VAC VALVE
- 9 2" CS PIPE
- 10 2" THD BRASS BALL VALVE WITH LEVER
- 11 PIPE, SCH 80, ND 3", PVC, PPL, SPEARS
- 12 3" CS PIPING
- 13 3" CS PIPE
- 14 3" SCH.80 PVC TRUE UNION BALL VALVE
- 15 3" SCH.80 PVC 90° BEND
- 16 3" CS 90° ELBOW
- 17 3" HDPE PIPE
- 18 3" TYPE 9 PIPE SUPPORT
- 19 3" THD BRASS BALL VALVE WITH LEVER
- 20 8" MAGNETIC FLOW METER
- 21 8" EXPANSION JOINT
- 22 8" LUG STYLE BFV
- 23 8" DIP
- 24 10" LUG STYLE BFV
- 25 10" EXPANSION JOINT
- 26 VERTICAL TURBINE PUMP
- 27 VAL-MATIC SURGEBUSTER VALVE
- 28 10" RFCA
- 29 10" DIP
- 30 12" UNI-FLANGE
- 31 12" BLIND FLANGE W/3" ECCENTRIC THD PORT
- 32 12" DIP
- 33 12" RFCA
- 34 12" FLxFL DI WALL PIPE
- 35 12" DI 90° BEND
- 36 12" TYPE 1 PIPE SUPPORT
- 37 12" LUG STYLE BFV
- 38 12"x1" TAPPING SADDLE
- 39 12" C900 PVC
- 40 12" FLxMJ DI WALL PIPE
- 41 12"x8" DI FL REDUCER
- 42 12"x2" TAPPING SADDLE
- 43 12"x10" DI RED WYE
- 44 12"x1/2" CS SOCKOLET

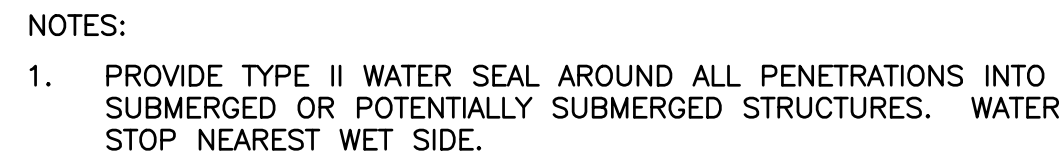
Ute Water Conservancy District Process Water Lagoon Improvements

[illegible]

Job No.	2025-160.001		
Drawn by:	SF		
Date:	08.14.25		
QC:	WJS	PE:	SF
File:	UWLI-PS-PumpStation3		

Pump Station Process Plan & Section (2)

Dwg No.



2 PIPE SUPPORT DETAIL
P4 NTS



* EATON B-LINE WAS USED AS DESIGN REFERENCE, EQUALS CAN BE SUBMITTED FOR APPROVAL

1. CALCULATION BASED ON 2024 ASHRAE STANDARDS 34 AND 15.
2. NOT ALL COMMUNICATIONS BETWEEN SPACES ARE LISTED. ONLY SPACES DEEMED CRITICAL INDICATE AN ADDITIONAL COMMUNICATION VOLUME IN ORDER TO DEMONSTRATE A PATH OF COMPLIANCE. ACTUAL SPACE AREAS AND VOLUMES MAY BE LARGER THAN INDICATED, THUS REMAINING CODE COMPLIANT.
3. HIGH PROBABILITY SYSTEMS WITH AIR CIRCULATION SHALL BE EQUIPPED WITH FACTORY INSTALLED REFRIGERANT LEAK DETECTORS IN ACCORDANCE WITH ASHRAE STANDARD 15 2024 SECTION 7.6.2.3 CAPABLE OF INITIATING MITIGATION ACTIONS.
4. SPACES WITH RESULTANT EDVVC-M REL REQUIRE ADDITIONAL REFRIGERANT LEAK MITIGATION MEASURES, SUCH AS MECHANICAL VENTILATION.

SPECIFICATION: 230719 PIPE INSULATION.								
SYSTEM	FLUID OPERATING TEMPERATURE RANGE (°F)	INSULATION THICKNESS BASED ON NOMINAL PIPE OR TUBE SIZE (IN.)					TYPE	NOTES:
		<1 (PIPE SIZE)	1 to < 1.5 (PIPE SIZE)	1.5 to < 4 (PIPE SIZE)	4 to < 8 (PIPE SIZE)	≥ 8 (PIPE SIZE)		
CARRIER SPLIT SYSTEM MBHAQ (GAS)	<200	1.5	NA	NA	NA	NA	FLEXIBLE ELASTOMERIC CELLULAR	1
CARRIER SPLIT SYSTEM MBHAQ (LIQUID)	<100	NA	NA	NA	NA	NA	FLEXIBLE ELASTOMERIC CELLULAR	1

MECHANICAL PIPING MATERIAL APPLICATION SPECIFICATION						
SPECIFICATION: 232300 REFRIGERANT PIPING.						
SYSTEM	DESCRIPTION	MATERIAL	JOINTS	FITTINGS	TEES	INSULATION (YES/NO)
REFRIGERANT PIPING	SPLIT SYSTEMS	ACR COPPER - ANNEALED	FLARED COMPRESSION FITTINGS	MANDREL BENT	NA	YES, PER SCHEDULE.
		ACR COPPER - HARD DRAWN	BRAZED	LONG RADIUS ELBOWS	NA	YES, PER SCHEDULE.

MECHANICAL HYDRONIC PIPING MATERIAL SPECIFICATION										
SPECIFICATION: 232113 HYDRONIC PIPING										
SYSTEM	DESCRIPTION	OPERATING TEMPERATURE	NOMINAL SIZE	MATERIAL	JOINTS (PIPE TO PIPE)	JOINTS (PIPE TO FITTING)	JOINTS (PIPE TO VALVE)	JOINTS (PIPE TO EQUIPMENT)	FITTINGS	INSULATION (YES/NO)
CONDENSATE DRAIN	DRAIN FROM COOLING COILS	NA	3/4" MINIMUM	COPPER ASTM B TYPE L HARD DRAWN	SOLDER	SOLDER	SOLDER	MATCH EQUIPMENT CONNECTION	WROUGHT COPPER SOLDER	NO

LOCATION	TAG	DEVICE	QUANTITY	SIZE (HP OR KVA)	UNITS	EFFICIENCY (%)	UTILIZATION FACTOR (%)
PUMP ROOM	P1	MOTOR STANDARD EFFICIENCY	1	25	HP	90%	100%
PUMP ROOM	P2	MOTOR STANDARD EFFICIENCY	1	40	HP	90%	100%
PUMP ROOM	P3	MOTOR STANDARD EFFICIENCY	1	50	HP	90%	100%
PUMP ROOM	VFD1	VFD	1	25	HP	97%	100%
PUMP ROOM	VFD2	VFD	1	40	HP	97%	100%
PUMP ROOM	VFD3	VFD	1	50	HP	97%	100%
PUMP ROOM	XFRMER	XFRMR	1	75	kVA	98%	100%

 **COMcheck Software Version COMcheckWeb**
Mechanical Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	Ute Water Conservancy
Location:	Palisade, Colorado
Climate Zone:	5b
Project Type:	New Construction

Construction Site:	Owner/Agent:	Designer/Contractor:
3971 Rapid Creek Rd	Ute Water Conservancy District	SGM
Palisade, Colorado 81526	Colorado	118 W 6th St
		Glenwood Springs, Colorado 81601

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
High Performance HVAC, 1.0 credit

Mechanical Systems List

Quantity	System Type & Description
2	HVAC System (Single Zone): Split System Heat Pump Heating Mode: Capacity = 42 kBtu/h. Proposed Efficiency = 10.70 HSPF, Required Efficiency = 9.02 HSPF Cooling Mode: Capacity = 36 kBtu/h. Proposed Efficiency = 18.10 SEER, Required Efficiency = 15.40 SEER Proposed Part Load Efficiency = 0.00, Required Part Load Efficiency = 0.00 Fan System: FCU -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: FAN 2 Supply, Constant Volume, 1365 CFM, 0.9 motor nameplate hp, 68.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency , fan exception: Fan array <= 5 total HP FAN 1 Supply, Constant Volume, 1365 CFM, 0.9 motor nameplate hp, 68.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency , fan exception: Fan array <= 5 total HP

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title	Signature	Date
--------------	-----------	------

Project Title: Ute Water Conservancy Report date: 08/07/25
Data filename: Page 5 of 15

SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

NOT FOR
CONSTRUCTION

Ute Water Conservancy District

Process Water Lagoon Improvements

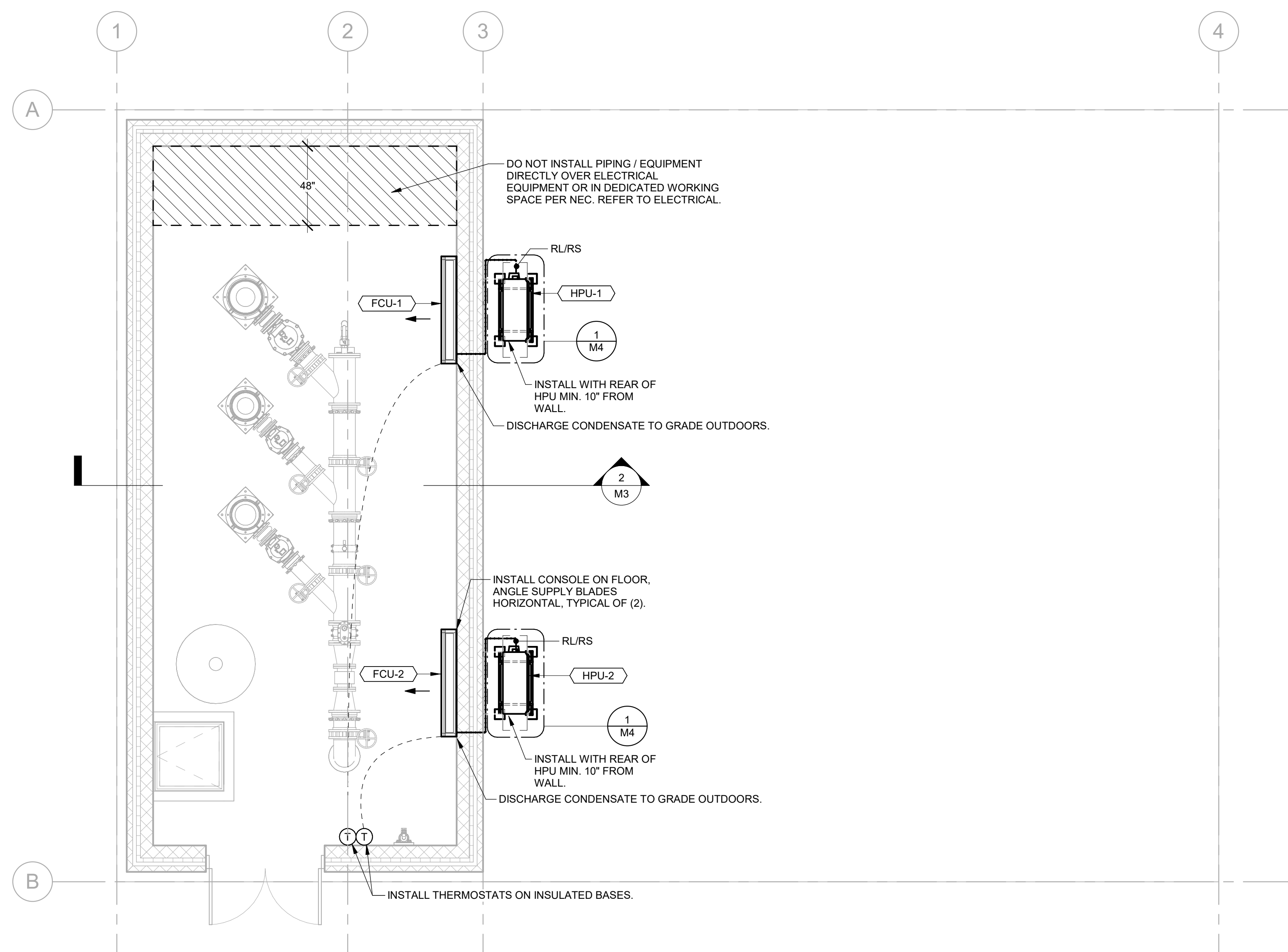
[illegible]

Job No.	2025-160		
Drawn by:	PG		
Print Date:	08.11.2025		
QC:	BC	PE:	BC
File:	UWLI MEP R25.rvt		

Title:

Dwg No.

M2

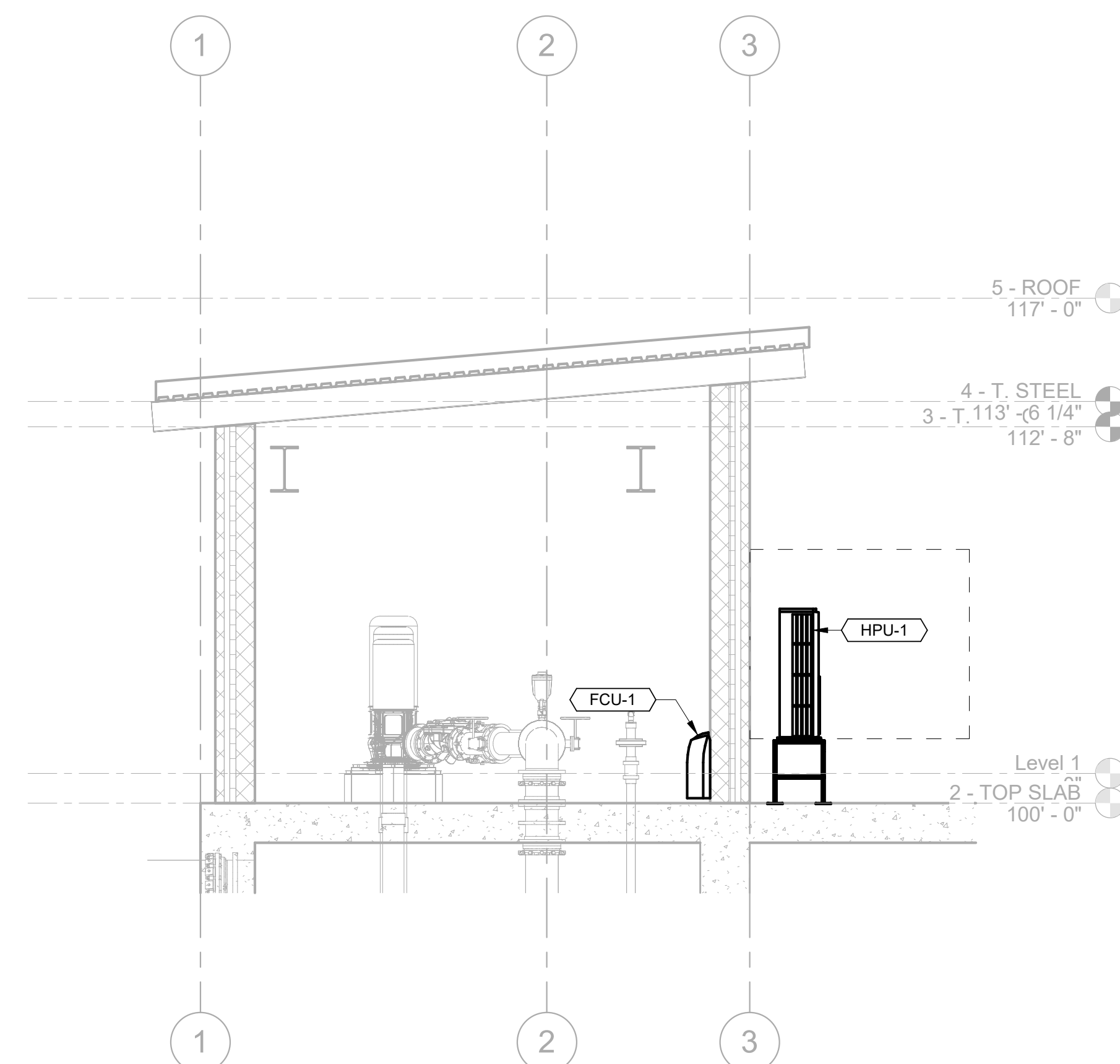


NORTH

1

MECHANICAL DUCT T.O. SLAB PLAN

SCALE: 1/4" = 1'-0"



2

MECHANICAL SECTION - NORTH

SCALE: 1/4" = 1'-0"

SEQUENCES OF OPERATION:

1. GENERAL REQUIREMENTS
 - 1.1. PROVIDE ALL THE NECESSARY CONTROLS AND COMPONENTS TO ACHIEVE THE FOLLOWING SEQUENCES HEREIN, AND IN CONJUNCTION WITH THE PROJECT DOCUMENTS. NECESSARY COMPONENTS MAY INCLUDE BUT ARE NOT LIMITED TO: WIRING, RELAYS, SENSORS, SOFTWARE, AND HARDWARE.
 - 1.2. SETPOINTS:
 - 2.1. ALL SETPOINTS AND SCHEDULES ARE INDICATED VIA UNDERLINE. ADJUSTABLE INDICATES VALUE IS USER ADJUSTABLE VIA FACTORY INTERFACE OR DDC INTERFACE (NOT HARD WIRED/CODED).
 - 2.2. SPACE AND ZONE:
 - 2.2.1. COOLING
 - 2.2.1.1. SPACE COOLING STAGE 1 TEMPERATURE = 85F (ADJUSTABLE)
 - 2.2.1.2. SPACE COOLING STAGE 2 TEMPERATURE = 2 DEGREES ABOVE SPACE COOLING STAGE 1 TEMPERATURE
 - 2.2.2. HEATING
 - 2.2.2.1. SPACE HEATING STAGE 1 TEMPERATURE = 50F (ADJUSTABLE)
 - 2.2.2.2. SPACE HEATING STAGE 2 TEMPERATURE = 2 DEGREES BELOW SPACE HEATING STAGE 1 TEMPERATURE
3. AIR SOURCE HEAT PUMP UNIT HPU-1, 2
 - 3.1. THE UNIT FUNCTIONS AS A SYSTEM IN CONJUNCTION WITH ITS DEDICATED PAIRED FAN COIL UNITS); REFER TO FAN COIL UNIT SEQUENCE.
 4. SPLIT DX FAN COIL UNIT WITH HEATING AND COOLING FCU-1
 - 4.1. PROVIDE A 7 DAY PROGRAMMABLE THERMOSTAT FOR EACH FAN COIL UNIT.
 - 4.2. THE UNIT SHALL OPERATE 24 HOURS A DAY, 7 DAYS A WEEK, YEAR ROUND.
 - 4.3. THE UNIT FUNCTIONS AS A SYSTEM IN CONJUNCTION WITH ITS DEDICATED PAIRED CONDENSING UNIT OR HEAT PUMP UNIT.
 - 4.4. THE UNIT SHALL UTILIZE INTEGRAL FACTORY CONTROLS AND MODULATE TO MAINTAIN SPACE COOLING STAGE 1 TEMPERATURE SETPOINT.
 - 4.5. THE UNIT SHALL UTILIZE INTEGRAL FACTORY CONTROLS AND MODULATE TO MAINTAIN SPACE HEATING STAGE 1 TEMPERATURE SETPOINT.
 5. SPLIT DX FAN COIL UNIT WITH HEATING AND COOLING FCU-2
 - 5.1. PROVIDE A 7 DAY PROGRAMMABLE THERMOSTAT FOR EACH FAN COIL UNIT.
 - 5.2. THE UNIT SHALL OPERATE 24 HOURS A DAY, 7 DAYS A WEEK, YEAR ROUND.
 - 5.3. THE UNIT FUNCTIONS AS A SYSTEM IN CONJUNCTION WITH ITS DEDICATED PAIRED CONDENSING UNIT OR HEAT PUMP UNIT.
 - 5.4. THE UNIT SHALL UTILIZE INTEGRAL FACTORY CONTROLS AND MODULATE TO MAINTAIN SPACE COOLING STAGE 1 TEMPERATURE SETPOINT.
 - 5.5. THE UNIT SHALL UTILIZE INTEGRAL FACTORY CONTROLS AND MODULATE TO MAINTAIN SPACE HEATING STAGE 2 TEMPERATURE SETPOINT.

NOT FOR
CONSTRUCTION

Ute Water Conservancy District

Process Water Lagoon Improvements

[illegible]

Project Milestone: BID DRAWINGS

Job No. 2025-160
 Drawn by: PG
 Print Date: 08.11.2025
 QC: BC PE: BC
 File: UWLI MEP R25.rvt
 Title:

HVAC PLANS

Dwg No.

M3

FAN COIL UNIT SCHEDULE - HEAT PUMP SOURCE

SPECIFICATION 238219: FAN COIL UNITS

UNIT TAG	MFR.	MODEL	CONFIGURATION	SERVICE	HEAT PUMP UNIT	REFRIGERANT		FAN				SOUND (DBA)	FILTER	COOLING							HEATING					ELECTRICAL DATA					DUCT CONNECTION			DIMENSIONS			APPROX WEIGHT (LBS)	REMARKS
						TYPE	CHARGE (LBS)	VOLUME @ PROJECT ALTITUDE (CFM)	S.P. @ PROJECT ALTITUDE (IN.W.G.)	S.P. @ SEA LEVEL (IN.W.G.)	FAN SPEED (T/H/M/L)			NOMINAL CAPACITY (MBH)	ACTUAL TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	SENSIBLE LOAD (MBH)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	NOMINAL CAPACITY (MBH)	ACTUAL CAPACITY (MBH)	REQUIRED CAPACITY (MBH)	EAT DB (°F)	LAT DB (°F)	VOLTS	PHASE	MCA (A)	UNIT FLA (A)	UNIT MOC (A)	SA (IN)	RA (IN)	FA (IN)	WIDTH (IN.)	HEIGHT (IN.)	DEPTH (IN.)		
FCU-1	CARRIER	45MCFQA58XA3	FLOOR CONSOLE	PUMP STATION	HPU-1	R454B	9.5	1365	NA	NA	T	55	WASHABLE	54.0	36.4	27.2	31.4	80	62	57.3	60	42	19.08	70	104	240	1	3	POWERED BY OUTDOOR	NA	NA	NA	65	26.6	9.3	95	ALL	
FCU-2	CARRIER	45MCFQA58XA3	FLOOR CONSOLE	PUMP STATION	HPU-2	R454B	9.5	1365	NA	NA	T	55	WASHABLE	54.0	36.4	27.2	31.4	80	62	57.3	60	42	19.08	70	104	240	1	3	POWERED BY OUTDOOR	NA	NA	NA	65	26.6	9.3	95	ALL	

REMARKS:

1. PERFORMANCE VALUES ARE AT PROJECT ALTITUDE UNLESS NOTED OTHERWISE.

2. FURNISH WITH THE FOLLOWING ACCESSORIES: CONDENSATE OVERFLOW SWITCH, HARD WIRED 7 DAY PROGRAMMABLE THERMOSTAT, CONDENSATE PUMP.

3. REFER TO OUTDOOR UNIT FOR ADDITIONAL CONTROLS AND ACCESSORIES.

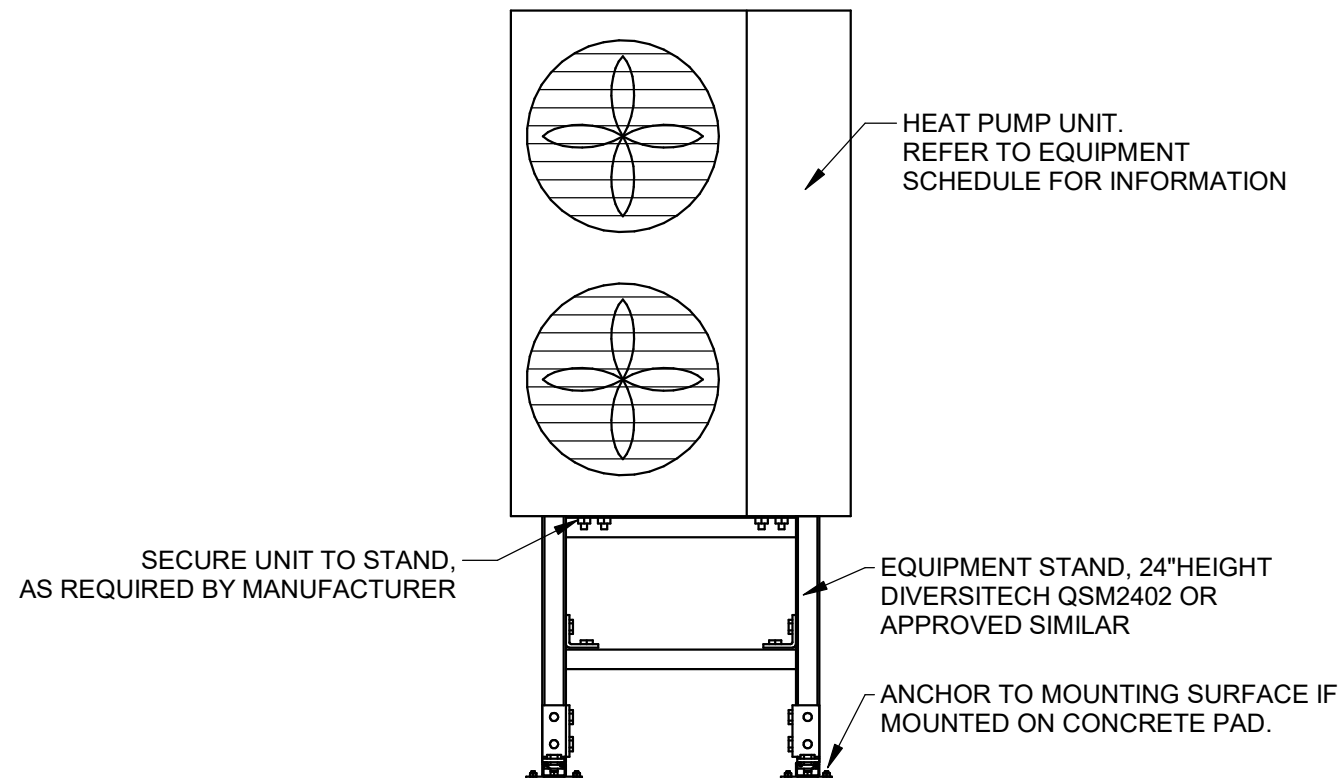
AIR SOURCE HEAT PUMP SCHEDULE

SPECIFICATION 238143: AIR-SOURCE UNITARY HEAT PUMPS

UNIT TAG	INDOOR UNIT TAG	MFR.	MODEL	REFRIGERANT TYPE	NOMINAL CAPACITY		NOMINAL SYSTEM CONNECTED CAPACITY (% OF NOM)	AMBIENT TEMP.		CORRECTED CAPACITIES		COOLING EFFICIENCY SEER2	HEATING COP @ 47F	UNIT ELECTRICAL DATA					DIMENSIONS			WEIGHT (LBS)	NOTES
					COOLING (MBH)	HEATING (MBH)		SUMMER (F)	WINTER (F)	COOLING (MBH)	HEATING (MBH)			V	PH	HZ	MCA (AMPS)	MOCP (AMPS)	LENGTH (IN)	HEIGHT (IN)	WIDTH (IN)		
HPU-1	FCU-1	CARRIER	37MBHQA58AA3	R-454B	58.0	58.0	100.00	105	-7	36.4	42.0	18.1	3.02	240	1	60	44	45	16.3	53	37.5	230	ALL
HPU-2	FCU-2	CARRIER	37MBHQA58AA3	R-454B	58.0	58.0	100.00	105	-7	36.4	42.0	18.1	3.02	240	1	60	44	45	16.3	53	37.5	230	ALL

NOTES:

1. ALL PERFORMANCE VALUES AT PROJECT ALTITUDE.
2. FURNISH WITH LOW AMBIENT HOOD KIT AND ASSOCIATED WIND BAFFLES.



1 HEAT PUMP UNIT MOUNTING DETAIL

ESGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

NOT FOR
CONSTRUCTION

Ute Water Conservancy District Process Water Lagoon Improvements

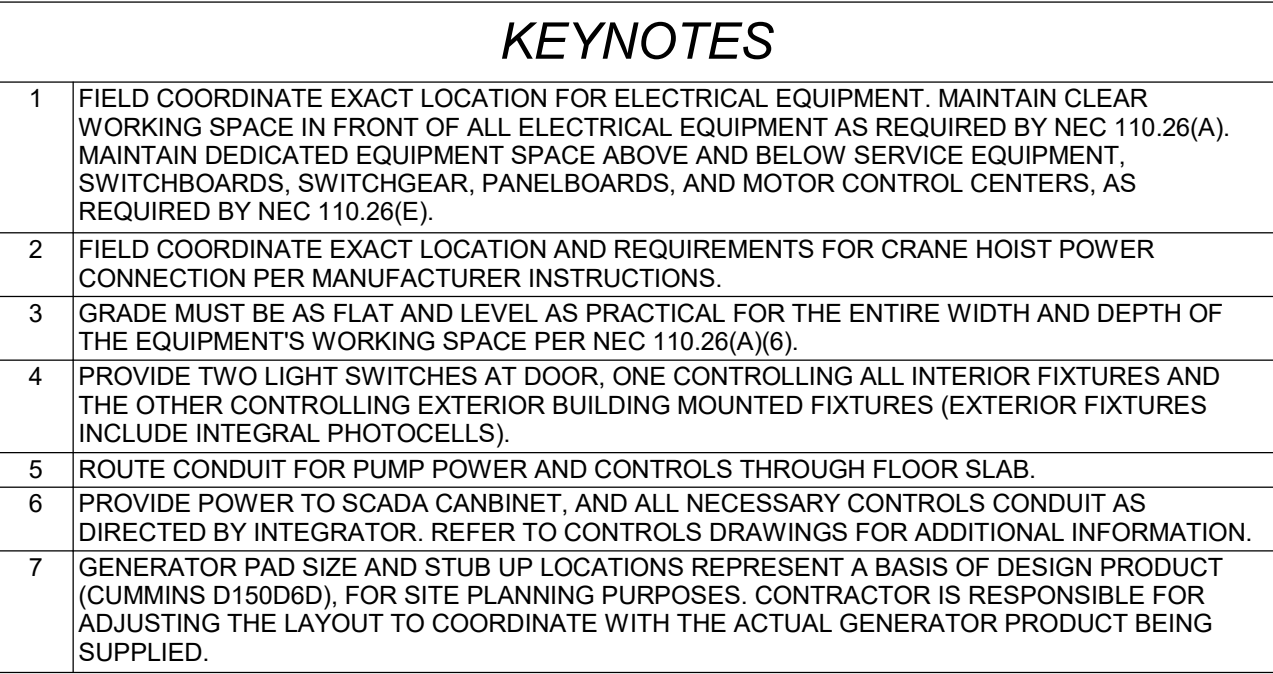
[illegible]

Job No.	2025-16
Drawn by:	PC
Print Date:	08.11.2025
QC:	BC PE: B0
File:	UWLI MEP R25.rv

SCHEDULES & DETAILS

Dwg No.

M4

[illegible]

SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

NOT FOR
CONSTRUCTION

Ute Water Conservancy District

Process Water Lagoon Improvements

[illegible]

Job No.	2025-1600		
Drawn by:	ED		
Print Date:	08.11.2025		
QC:	AH	PE:	AH
File:	UWLI MEP R25.rvt		

ELECTRICAL FLOOR PLAN

Dwg No.

E3

C:\Users\slayme\Documents\UWL_MEP_R25.phy\mes\UWL_MEP_R25.rvt

8/1/2025 1:24:38 AM

C:\Users\slayme\Documents\UWL_MEP_R25.phy\mes\UWL_MEP_R25.rvt

ELECTRICAL CONNECTION SCHEDULE									
REMARKS: 1. For equipment specification and detail, see drawing set indicated in "refer to" column. 2. Confirm neutral requirements with equipment manufacturer prior to rough-in. 3. Provide receptacle for mobile equipment already owned by the District. Coordinate exact requirements with owner's representative. 4. Coordinate exact requirements with the actual crane product being supplied.									
TAG	DESCRIPTION	REFER TO	CB SIZE	CONDUCTORS / CONDUIT	DISCONNECT	VOLTS	PHASE	VA	REMARKS
CH-1	CRANE HOIST, 1 HP	SEE REMARKS	15 A	(3) #12 AWG CU + #12 AWG CU EGC IN 0.5" PVC	CB IN SIGHT	480 V	3	1920 VA	4
EA-1	ELECTRICAL ACTUATOR, 2 HP	PROCESS PLANS	15 A	(4) #12 AWG CU + #12 AWG CU EGC IN 0.75" SCHED. 80 PVC	PROVIDE UNFUSED NEMA 3R DISC.	480 V	3	2827 VA	1
FCU-1	FAN COIL UNIT (POWERED BY OUTDOOR HEAT PUMP)	MECHANICAL PLANS	0 A	PER MANUFACTURER	CB WITHIN SIGHT	240 V	1	690 VA	1
FCU-2	FAN COIL UNIT (POWERED BY OUTDOOR HEAT PUMP)	MECHANICAL PLANS	0 A	PER MANUFACTURER	CB WITHIN SIGHT	240 V	1	690 VA	1
HPU-1	HEAT PUMP	MECHANICAL PLANS	45 A	(3) #8 AWG CU + #10 AWG CU EGC IN 0.75" PVC	PROVIDE UNFUSED NEMA 3R DISC.	240 V	1	9430 VA	1
HPU-2	HEAT PUMP	MECHANICAL PLANS	45 A	(3) #8 AWG CU + #10 AWG CU EGC IN 0.75" PVC	PROVIDE UNFUSED NEMA 3R DISC.	240 V	1	9430 VA	1
P-1	VERTICAL TURBINE PUMP, 25 HP	PROCESS PLANS	50 A	(3) #8 AWG CU + #10 AWG CU SHIELDED VFD CABLE IN 2" PVC	CB WITHIN SIGHT	480 V	3	28267 VA	1, 2
P-2	VERTICAL TURBINE PUMP, 40 HP	PROCESS PLANS	80 A	(3) #4 AWG CU + #8 AWG CU SHIELDED VFD CABLE IN 2" PVC	CB WITHIN SIGHT	480 V	3	43232 VA	1, 2
P-3	VERTICAL TURBINE PUMP, 50 HP	PROCESS PLANS	100 A	(3) #3 AWG CU + #8 AWG CU SHIELDED VFD CABLE IN 2" PVC	CB WITHIN SIGHT	480 V	3	54040 VA	1, 2
SCADA	CONTROL CABINET POWER SUPPLY	OWNER'S INTEGRATOR	20 A	(2) #12 AWG CU + #12 AWG CU EGC IN 0.5" PVC	CB WITHIN SIGHT	120 V	1	500 VA	1
TC-1	TURBIDIMETER CONTROLLER	PROCESS PLANS	15 A	(2) #12 AWG CU + #12 AWG CU EGC IN 0.5" PVC	PROVIDE RECEPTACLE	120 V	1	120 VA	1
TM-1	TURBIDIMETER (POWERED BY CONTROLLER)	PROCESS PLANS	0 A	MANUFACTURER'S CABLE	N/A	12 V	1	0 VA	1
TP-1	TRASH PUMP, 7.5 HP	SEE REMARKS	20 A	(4) #12 AWG CU + #12 AWG CU EGC IN 0.75" PVC	PROVIDE RECEPTACLE	480 V	3	9395 VA	3

ELECTRICAL EQUIPMENT SCHEDULE							
REMARKS: 1. Ensure equipment meets the requirements of the serving utility. 2. Refer to Single Line Diagram (Sheet E7.1) and schedule for details. 3. Refer to specification section for full requirements. 4. Generator size requirement is defined by load steps and starting requirements listed in specifications (not nameplate rating).							
TYPE	DESCRIPTION	AMPACITY	VOLTS	PHASE	ENCLOSURE	MOUNTING	REMARKS
ATS	SERVICE-ENTRANCE RATED TRANSFER SWITCH, 3 POLE	300 A	480 V	3	NEMA 3R	WALL	3
CT	CT ENCLOSURE	0 A	480 V	3	NEMA 3R	SURFACE	1
GEN	STANDBY DIESEL GENERATOR	250 A	480 V	3	NEMA 3R, WINTERIZED	PAD	3, 4
MCC	MOTOR CONTROL CENTER	400 A	480 V	3	NEMA 1	FLOOR	3
MET	METER SOCKET	320 A	480 V	3	NEMA 3R	WALL	1
SDT-1	SINGLE-PHASE, 25KVA STEP-DOWN TRANSFORMER 480V:240V	0 A	480 V	1	NEMA 1	MCC	
VFD-1	VARIABLE FREQUENCY DRIVE, ROCKWELL POWERFLEX 20F11ND034JA0	34 A	480 V	3	NEMA 1	MCC	3
VFD-2	VARIABLE FREQUENCY DRIVE, ROCKWELL POWERFLEX 20F11ND052JA0	52 A	480 V	3	NEMA 1	MCC	3
VFD-3	VARIABLE FREQUENCY DRIVE, ROCKWELL POWERFLEX 20F11ND065JA0	65 A	480 V	3	NEMA 1	MCC	3

LUMINAIRE SCHEDULE									
REMARKS: 1. Interior fixtures shall be 4000K, and 80 CRI minimum. 2. Exterior fixtures shall be 3000K, and 70 CRI minimum. 3. Substitution requests must be accompanied by ies files. 4. Match configuration of existing poles. Provide base per CDOT standard S-613-1 plus 24" concrete above grade.									
TAG	DESCRIPTION	ACCESSORIES	MOUNTING	MANUFACTURER	MODEL#	VOLTS	WATTS	LAMP	REMARKS
EL	EXIT SIGN WITH INTEGRAL LIGHTS AND BATTERY	-	WALL, 9' AFF	COMPASS	CCRG	120	3 VA	LED	
F	LED FLOODLIGHT, WIDE FLOOD, KNUCKLE MOUNT	HALF VISOR, INTEGRAL PHOTOCELL	POLE, 30' OVERALL, TWO FIXTURES PER POLE	BEACON	AL-D-36L-80-3K7-6X6-UNV-PCU-HV-SF3	120	80 VA	LED	2, 4
L	4" SEALED LENSED LINEAR LED LIGHT WITH DIFFUSING LENS	-	WALL, 7'-6" AFF	COLUMBIA	LXEM4-40LW-RFP-EDU	120	34 VA	LED	1
W	LED WALLPACK WITH DIFFUSING LENS	INTEGRAL PHOTOCELL	WALL, 9' AFG	HUBBELL	LNC-7L-U-3K-3-DBS-PCU	120	17 VA	LED	2

PANEL SCHEDULE: H													
Enclosure: MCC Mounting: MCC				Volts: 480/277 Wye Phases: 3 Wires: 4				A.I.C. Rating: 22,000 Mains Type: MCB Mains Rating: 60 A					
Notes:													
CKT	Circuit Description	Trip	Pole	A		B		C		Pole	Trip	Circuit Description	CKT
1	EA-1, West Actuator Lagoon 6	15 A	3	942	942					3	15 A	EA-1, West Actuator Lagoon 7	2
3	--	--	--			942	942			--	--	--	4
5	--	--	--					942	942	--	--	--	6
7	EA-1, East Actuator Lagoon 6	15 A	3	942	942					3	15 A	EA-1, East Actuator Lagoon 7	8
9	--	--	--			942	942			--	--	--	10
11	--	--	--					942	942	--	--	--	12
13	TP-1, Trash Pump Receptacle	20 A	3	3132	640					3	15 A	CH-1, Crane Hoist	14
15	--	--	--			3132	640			--	--	--	16
17	--	--	--					3132	640	--	--	--	18
19	Space	--	1	--	--					1	--	Space	20
21	Space	--	1			--	--			1	--	Space	22
23	Space	--	1					--	--	1	--	Space	24
25	Space	--	1	--	--					1	--	Space	26
27	Space	--	1			--	--			1	--	Space	28
29	Space	--	1					--	--	1	--	Space	30
Total Load:				7540 VA		7540 VA		7540 VA					
Total Amps:				27 A		27 A		27 A					
LEGEND: [EX] = EXISTING [GF] = GFCI BREAKER [AF] = AFCI BREAKER [GAF] = GFCI+AFCI BREAKER [LK] = LOCKABLE OFF [ST] = SHUNT TRIP													
Load Classification				Connected Load		Factor		Demand		Panel Totals			
Motor				22621 VA		100.00%		22621 VA					
										Total Conn. Load: 22621 VA			
										Total Demand: 22621 VA			
										Total Conn.: 27 A			
										Total Demand: 27 A			

PANEL SCHEDULE: L													
Enclosure: MCC Mounting: MCC				Volts: 120/240 Single Phases: 1 Wires: 3				A.I.C. Rating: 10,000 Mains Type: MCB Mains Rating: 125 A					
Notes: * Generator accessory circuit shown assumes a generator with an integral load center. Coordinate actual accessory branch circuit(s) needed with actual generator product being supplied.													
CKT	Circuit Description	Trip	Pole	A		B		Pole	Trip	Circuit Description	CKT		
1	Rec - Pump Station Int. [GF]	20 A	1	360	1350			2	30 A	Generator Accessories *	2		
3	Rec - Pump Station Ext. [GF]	20 A	1			360	1350	--	--	--	4		
5	Pump Station Lighting	20 A	1	306	5060			2	45 A	HPU-1,FCU-1 Heat Pump+Fan Coil	6		
7	Lagoon 6 Light, Rec	20 A	1			340	5060	--	--	--	8		
9	Lagoon 7 Light, Rec	20 A	1	340	5060			2	45 A	HPU-2,FCU-2 Heat Pump+Fan Coil	10		
11	Turbidimeter Controller [GF]	20 A	1			120	5060	--	--	--	12		
13	Spare	20 A	1	0	--			1	--	Space	14		
15	Spare	20 A	1			0	--	1	--	Space	16		
17	Spare	20 A	1	0	--			1	--	Space	18		
Total Load:				12476 VA		12290 VA							
LEGEND:				Total Amps: 104 A		102 A							
[EX] = EXISTING [GF] = GFCI BREAKER [AF] = AFCI BREAKER [GAF] = GFCI+AFCI BREAKER [LK] = LOCKABLE OFF [ST] = SHUNT TRIP													
Load Classification		Connected Load		Factor		Demand		Panel Totals					
HVAC		20240 VA		100.00%		20240 VA							
Receptacle		1080 VA		100.00%		1080 VA		Total Conn. Load: 24766 VA					
Lighting		626 VA		125.00%		783 VA		Total Demand: 24923 VA					
Generator Accessory Allowance		2700 VA		100.00%		2700 VA		Total Conn.: 103 A					
Controls Equipment		120 VA		100.00%		120 VA		Total Demand: 104 A					

SERVICE LOAD SUMMARY					
Load Classification	Connected Load	Factor	Demand	Totals	
Motor	94121 VA	100.00%	94121 VA		
HVAC	20240 VA	100.00%	20240 VA	Total Conn. Load: 172927 VA	
Receptacle	1080 VA	100.00%	1080 VA	Total Demand: 186593 VA	
Lighting	626 VA	125.00%	783 VA	Total Conn.: 208 A	
Motor - Largest	54040 VA	125.00%	67560 VA	Total Demand: 224 A	
Generator Accessory Allowance	2700 VA	100.00%	2700 VA		
Controls Equipment	120 VA	100.00%	120 VA		



NOT FOR CONSTRUCTION

Ute Water Conservancy District
Process Water Lagoon Improvements

#	Description:	Date:	By:

KEYNOTES	
1	PROVIDE NEW SERVICE GROUNDING ELECTRODE CONSISTING OF TWO 0.75" X 10' COPPER CLAD STEEL GROUND RODS SPACED AT LEAST 20' APART, BONDED TOGETHER, AND DRIVEN WITH TOPS AT LEAST 30" BELOW GRADE. BOND TO ANY OTHER AVAILABLE ELECTRODES PRESENT AT THE STRUCTURE PER CODE.
2	COORDINATE ACTUAL ACCESSORY BRANCH CIRCUIT(S) REQUIRED WITH ACTUAL GENERATOR PRODUCT BEING SUPPLIED.

SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

Ute Water Conservancy District Process Water Lagoon Improvements

[illegible]

Job No.	2025-160
Drawn by:	ED
Print Date:	08.11.2025
QC:	AH PE: AH
File:	UWLI MEP R25.rvt

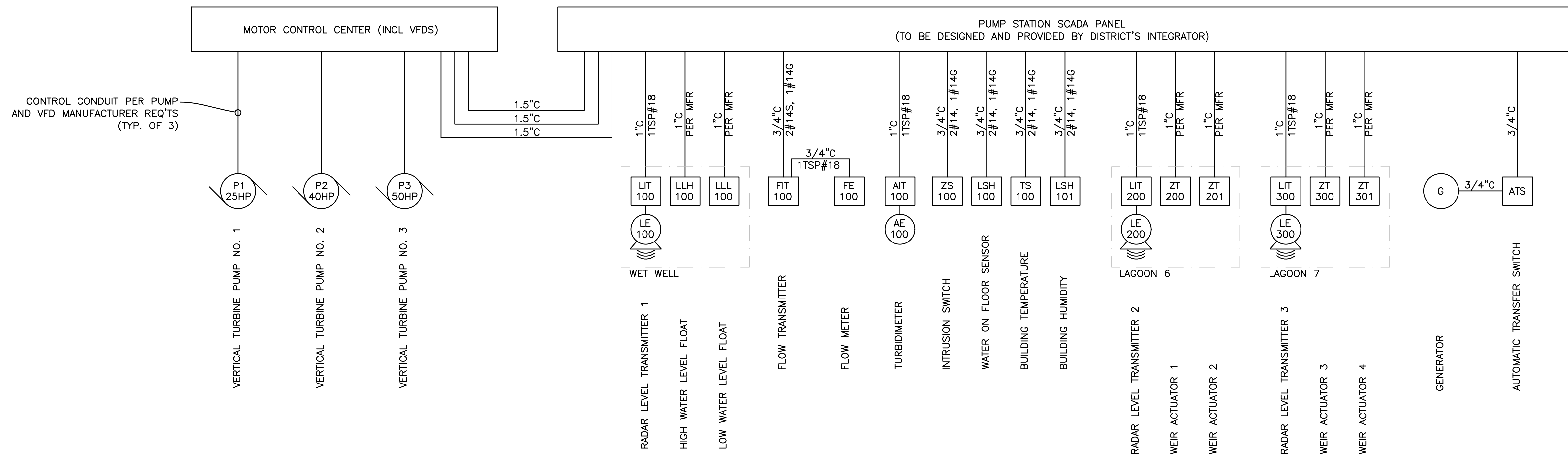
Dwg No

E5



1. THIS DIAGRAM IS SCHEMATIC, AND IS NOT INTENDED TO SPECIFY CONDUIT ROUTING OR FEED SIDE OF PANELS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE MOST EFFICIENT ROUTING OF FEEDERS AND ORDERING EQUIPMENT ACCORDINGLY.
2. REFER TO PANEL SCHEDULES FOR EQUIPMENT SIZING AND RATINGS
3. REFER TO FEEDER SCHEDULE FOR FEEDER SIZING.

1 SINGLE LINE DIAGRAM



NOTES:

1. THE DISTRICT'S INTEGRATOR WILL BUILD, PROGRAM, AND INSTALL SCADA PANEL.
2. CONTRACTOR SHALL FURNISH AND INSTALL ALL INSTRUMENTATION AND INSTALL POWER/CONTROL WIRING TO SCADA PANEL.
3. CONTROLS INTEGRATOR SHALL LAND ALL WIRING AT THE SCADA PANEL.
4. CONTRACTOR SHALL COORDINATE W/INTEGRATOR AS NEEDED TO FACILITATE CONTROLS CONNECTIONS.

I/O LIST				
COMPONENT	EQUIPMENT	I/O		
PUMP CONTROL PANEL	RADAR LEVEL TRANSMITTER 1	WATER LEVEL – WET WELL		
	FLOAT 1	HIGH LEVEL CONTACT – WET WELL		
	FLOAT 2	LOW LEVEL CONTACT– WET WELL		
	MAGNETIC FLOW METER	INSTANTANEOUS RATE OF FLOW		
MCC	PUMP 1 VFD	FAIL CONTACT		
		HOA SWITCH POSITION		
		STATUS CONTACT		
		CONTROL RELAY		
	PUMP 2 VFD	SPEED MODULATION/FEEDBACK		
		FAIL CONTACT		
		HOA SWITCH POSITION		
		STATUS CONTACT		
	PUMP 3 VFD	CONTROL RELAY		
		SPEED MODULATION/FEEDBACK		
		FAIL CONTACT		
		HOA SWITCH POSITION		
PROCESS	MAGNETIC FLOW METER	STATUS CONTACT		
		CONTROL RELAY		
	WEIR ACTUATOR 1	SPEED MODULATION/FEEDBACK		
		INSTANTANEOUS RATE OF FLOW		
		TOTALIZED FLOW		
		% OPEN/FEEDBACK		
	WEIR ACTUATOR 2	% OPEN/FEEDBACK		
		WEIR ACTUATOR 3	% OPEN/FEEDBACK	
WEIR ACTUATOR 4			% OPEN/FEEDBACK	
			BUILDING	RADAR LEVEL TRANSMITTER 2
	RADAR LEVEL TRANSMITTER 3			WATER LEVEL – LAGOON 7
	TURBIDIMETER	TURBIDITY – RECYCLED WATER		
MAN DOOR	INTRUSION CONTACT			
	LEAK DETECTION	WATER ON FLOOR CONTACT		
	HUMIDITY	BUILDING HUMIDITY CONTACT		
	TEMPERATURE	BUILDING TEMPERATURE CONTACT		
POWER	GENERATOR	FAULT CONTACT		
		LOW FUEL CONTACT		
		STATUS CONTACT		
	TRANSFER SWITCH	GENERATOR CONTACT		
UTILITY CONTACT				