NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

AUGUST 2021

INDEX OF DRAWINGS

murraysmith

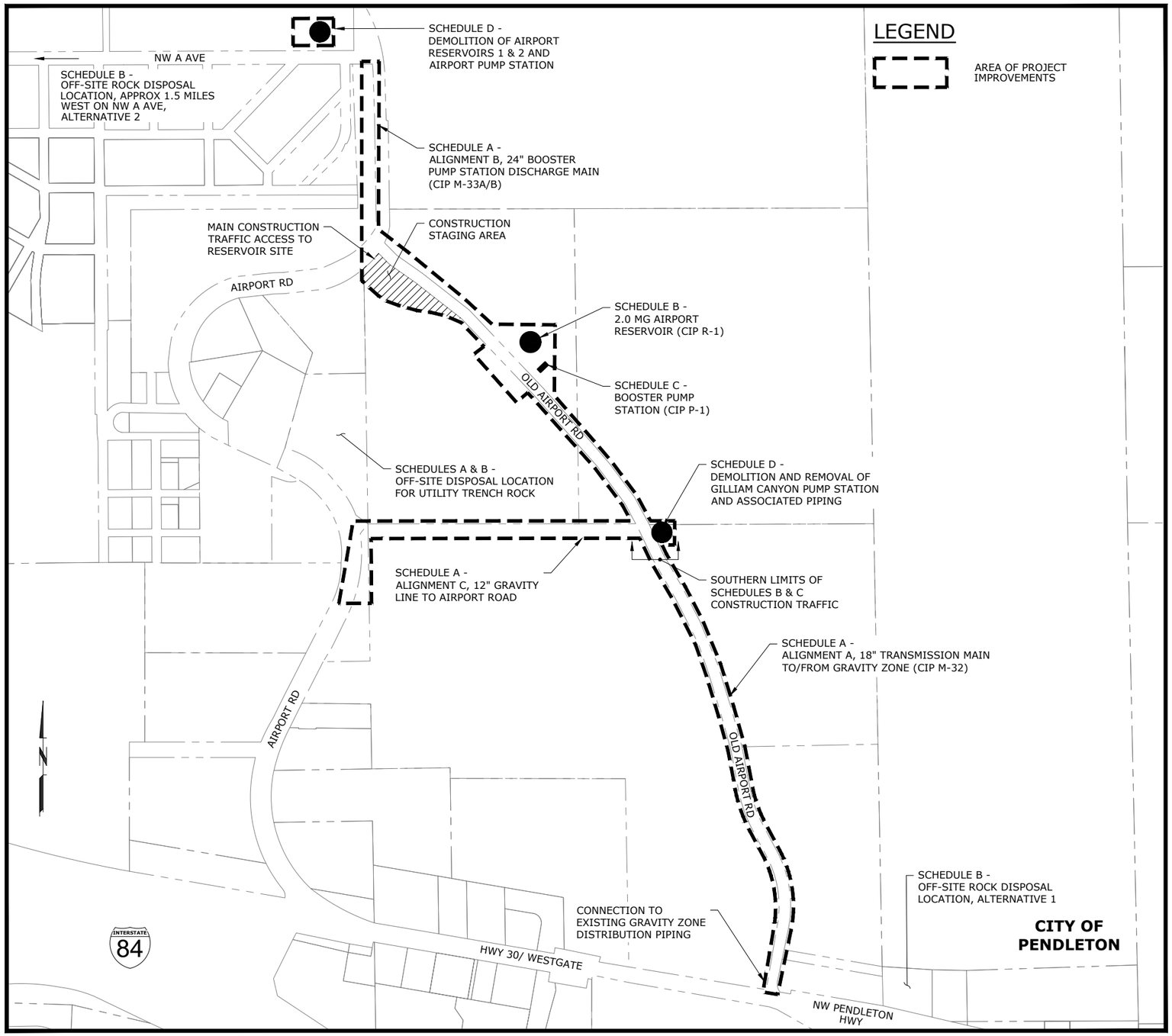
888 SW 5TH AVENUE, SUITE 1170
PORTLAND, OREGON 97204
P 503.225.9010

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

ATTENTION: OREGON LAW REQUIRES THE CONTRACTOR TO FOLLOW THE RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. THE CONTRACTOR MAY OBTAIN COPIES OF THE RULES BY CALLING THE UTILITY NOTIFICATION CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 503-246-6699.)

VICINITY MAP

SCALE: NTS



PROJECT LOCATION MAP

SCALE: 1"=300'

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS DESIGNED

TMS DRAWN

LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

VICINITY AND LOCATION MAPS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET G-2

PIPE & FITTING SYMBOLS

PLANT	SCHEMATIC	
		WELDED JOINT
		FLANGED JOINT
		GROOVED END JOINT
		MECHANICAL JOINT
		PUSH-ON JOINT (RUBBER GASKET)
		FLANGED COUPLING ADAPTER
		DOUBLE BALL FLEXIBLE EXTENSION COUPLING
		FLEXIBLE COUPLING W/ THRUST RING
		90° BEND UP
		90° BEND DOWN
		TEE UP
		TEE DOWN
		LATERAL UP
		LATERAL DOWN
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		UNION
		BLIND FLANGE
		CAP
		LONG SLEEVE
		FLEXIBLE COUPLING
		FITTING (45°)

VALVE SYMBOLS

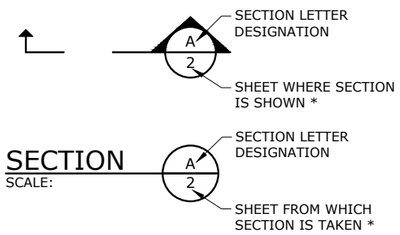
PLANT	SCHEMATIC	
		BUTTERFLY VALVE
		GATE VALVE
		GLOBE VALVE
		BALL VALVE
		BALANCING VALVE
		PLUG VALVE (TOP)
		PLUG VALVE (SIDE)
		3-WAY PLUG VALVE
		CHECK VALVE
		SWING CHECK VALVE
		DOUBLE CHECK ASSEMBLY
		BALL SWING CHECK
		SILENT CHECK VALVE
		PRESSURE REDUCING VALVE
		ALTITUDE CONTROL VALVE
		SOLENOID VALVE
		RELIEF VALVE
		NEEDLE VALVE
		HOSE VALVE
		REDUCED PRESSURE BACKFLOW PREVENTER W/ GATE VALVES
		HOSE BIBB

TOPOGRAPHIC LEGEND

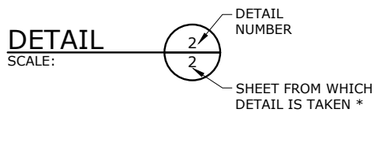
	EXISTING	PROPOSED
WATERLINE	10"W	12"DI W
ELECTRICITY	E	E
GAS	4"G	4"G
TELEPHONE/TELEMETRY	T	T
CABLE TELEVISION	CATV	CATV
SANITARY SEWER LINE	8"SS	8"SS
SANITARY SEWER FORCE MAIN	6"FM	6"FM
STORM DRAIN	8"SD	8"SD
CULVERT		18"D
ABANDON PIPE		
DRAINAGE DITCH		
BARBWIRE FENCE		
CHAIN LINK FENCE		
TEMPORARY SILT FENCE		
GUARDRAIL		
ROCK WALL		
TREE/BUSH LINE		
CENTERLINE		
EASEMENT		
RIGHT-OF-WAY/PROPERTY LINE		
EDGE OF PAVEMENT/AC		
EDGE OF GRAVEL		
CURB		
SIDEWALK	S/W	
STRUCTURE OR FACILITY		
CONTOUR MINOR		
CONTOUR MAJOR	200	200
MANHOLE		
CLEAN-OUT		
CATCH BASIN/FIELD INLET		
THRUST BLOCK		
VALVE		
AIR INJECTION ASSEMBLY		
BLOW-OFF ASSEMBLY		
AIR RELEASE ASSEMBLY		
FIRE HYDRANT ASSEMBLY		
WATER METER		
PULL BOX/JUNCTION BOX		
UTILITY POLE		
GUY WIRE		
LIGHT POST		
MAILBOX		
SIGN		
BENCHMARK		
TREE DECIDUOUS		
TREE CONIFEROUS		
TREE TO BE REMOVED		
SURFACE ELEVATION	+ 176.63	+ 176.63

SECTION AND DETAIL DESIGNATIONS

SECTION DESIGNATIONS



DETAIL DESIGNATIONS



* NOTE: IF PLAN AND SECTION FOR DETAIL CALL-OUT AND DETAIL ARE SHOWN ON THE SAME DRAWING, DRAWING NUMBER IS REPLACED WITH A DASH.

MISCELLANEOUS PIPING SYMBOLS

	STRAINER
	SIGHT GLASS
	PRESSURE GAUGE W/ COCK
	PRESSURE SWITCH W/ COCK
M	METER
SP	SLIP-ON JOINT PIPE
R	RESTRAINED JOINT PIPE

PLAN AND PROFILE SYMBOLS

COMPACTED GRANULAR TRENCH BACKFILL AND AC SURFACE RESTORATION	AC
COMPACTED NATIVE TRENCH BACKFILL AND NATIVE SURFACE RESTORATION	N
COMPACTED GRANULAR TRENCH BACKFILL AND GRANULAR SURFACE RESTORATION	GR

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SYMBOLS AND LEGEND

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SHEET G-3

@	AT
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
AB	ANCHOR BOLT
ABAN(D)	ABANDON(ED)
ABS	ACRYLONITRILE BUTADIENE STYRENE
ABV	ABOVE / ALCOHOL BY VOLUME
AC	ASPHALTIC CONCRETE
ACP	ASPHALTIC CONCRETE PAVING
ADJ	ADJUSTABLE
ADJC	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHR	ANCHOR
AL	ALUMINUM
ALT	ALTERNATE
AMP	AMPERE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
APPVD	APPROVED
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
ARCH	ARCHITECTURAL
ARV	AIR RELEASE VALVE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASSN	ASSOCIATION
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
ATM	ATMOSPHERE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
B&S	BELL & SPIGOT
BC	BOLT CIRCLE
BD	BOARD
BETW	BETWEEN
BF	BOTH FACE
BFD	BACKFLOW PREVENTION DEVICE
BFILL	BACKFILL
BFV	BUTTERFLY VALVE
BHP	BRAKE HORSEPOWER
BKGD	BACKGROUND
BLDG	BUILDING
BLK	BLOCK
BLVD	BOULEVARD
BM	BENCHMARK / BEAM
BMP	BEST MANAGEMENT PRACTICES
BO	BLOW-OFF
BOC	BACK OF CURB
BS	BOTH SIDES
BSMT	BASEMENT
BTF	BOTTOM FACE
BTU	BRITISH THERMAL UNIT
BV	BALL VALVE
BW	BOTH WAYS
C	CELSIUS
C TO C	CENTER TO CENTER
CARV	COMBINATION AIR RELEASE VALVE
CATV	CABLE TELEVISION
CB	CATCH BASIN
CCP	CONCRETE CYLINDER PIPE
CCW	COUNTER CLOCKWISE
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CHAN	CHANNEL
CHEM	CHEMICAL
CHFR	CHAMFER
CHKV	CHECK VALVE
CI	CAST IRON
CIP	CAST IRON PIPE
CIPC	CAST IN PLACE CONCRETE
CISP	CAST IRON SOIL PIPE
CJ	CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION
CL OR C/L	CENTER LINE
CL2	CHLORINE
CLG	CEILING
CLJ	CONTROL JOINT
CLR	CLEAR
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT

CND	CONDUIT
CO	CLEANOUT
COL	COLUMN
COMB	COMBINATION
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS / CONTINUATION
CONTR	CONTRACT(OR)
COORD	COORDINATE
COP	COPPER
CORP	CORPORATION
CORR	CORRUGATED
CP	CONTROL POINT
CPLG	COUPLING
CPVC	CHLORINATED POLYVINYL CHLORIDE
CR	CRUSHED ROCK
CS	COMBINED SEWER
CSP	CONCRETE SEWER PIPE
CT	COURT
CTR	CENTER
CU	CUBIC
CULV	CULVERT
CV	CONTROL VALVE
CW	CLOCKWISE / COLD WATER
CY	CUBIC YARDS
CYL	CYLINDER LOCK
D	DRAIN
DC	DIRECT CURRENT
DEFL	DEFLECTION
DET	DETAIL
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DIR	DIRECTION
DIST	DISTANCE
DN	DOWN
DR	DRIVE
DS	DOWNSPOUT
DWG	DRAWING
DWL	DOWEL
DWV	DRAIN WASTE AND VENT
DWY	DRIVEWAY
E OR ELEC	ELECTRICAL
EA	EACH
ECC	ECCENTRIC
EF	EACH FACE
EL	ELEVATION
ELB	ELBOW
ENCL	ENCLOSURE
EOP	EDGE OF PAVEMENT
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
ESMT	EASEMENT
EW	EACH WAY
EXC	EXCAVATE/EXCAVATION
EXIST	EXISTING
EXP	EXPANSION
EXP BT	EXPANSION BOLT
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
F	FAHRENHEIT
F TO F	FACE TO FACE
FAB	FABRICATE
FB	FLAT BAR
FCA	FLANGED COUPLING ADAPTER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDN	FOUNDATION
FEXT	FIRE EXTINGUISHER
FF	FAR FACE
FGL	FIBERGLASS
FH	FIRE HYDRANT
FIN	FINISH(ED)
FIN GR	FINISHED GRADE
FIPT	FEMALE IRON PIPE THREAD
FITG	FITTING
FL	FLOOR LINE
FLEX	FLEXIBLE
FLG	FLANGE
FLL	FLOW LINE
FLR	FLOOR
FM	FORCE MAIN
FO	FIBER OPTIC
FOC	FACE OF CONCRETE

FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET / FOOT
FTG	FOOTING
FUT	FUTURE
FXTR	FIXTURE
G	GAS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GROOVED COUPLING
GEN	GENERATOR / GENERAL
GFA	GROOVED FLANGE ADAPTER
GI	GALVANIZED IRON
GIP	GALVANIZED IRON PIPE
GJ	GRIP JOINT
GL	GLASS
GLV	GLOBE VALVE
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPS	GALLONS PER SECOND
GR	GRADE
GR LN	GRADE LINE
GRTG	GRATING
GV	GATE VALVE
GRVL	GRAVEL
GYP	GYPSUM
HB	HOSE BIBB
HC	HOLLOW CORE
HDPE	HIGH DENSITY POLYETHYLENE
HDR	HEADER
HDWE	HARDWARE
HGR	HANGER
HGT	HEIGHT
HH	HANDHOLD
HM	HOLLOW METAL
HMAC	HOT MIX ASPHALT CONCRETE
HNDRL	HANDRAIL
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
HORIZ	HORIZONTAL
HP	HIGH PRESSURE / HORSEPOWER
HPG	HIGH PRESSURE GAS
HPT	HIGH POINT
HR	HOUR
HSB	HIGH STRENGTH BOLT
HV	HOSE VALVE
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HWL	HIGH WATER LINE
HWY	HIGHWAY
HYD	HYDRANT
HYDR	HYDRAULIC
I&C	INSTRUMENTATION & CONTROL
IAW	IN ACCORDANCE WITH
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
IMPVT	IMPROVEMENT
IN	INCH
INCC	INCLUDE(D)(ING)
INFL	INFLUENT
INJ	INJECTION
INSTL	INSTALLATION / INSTALL
INSUL	INSULATION
INTER	INTERCEPTOR
INTR	INTERIOR
INV	INVERT
IP	IRON PIPE
IPT	IRON PIPE THREAD
IR	IRON ROD
IRRIG	IRRIGATION
JT	JOINT
JUNC	JUNCTION
KPL	KICK PLATE
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWY	KEYWAY

L	LENGTH
LAB	LABORATORY
LAV	LAVATORY
LB	POUND
LF	LINEAR FOOT
LIN	LINEAL
LN	LANE
LOC	LOCATION
LONG	LONGITUDINAL
LP	LOW PRESSURE
LPT	LOW POINT
LRG	LARGE
LS	LONG SLEEVE / LUMP SUM
LT	LEFT
LVL	LEVEL
LWL	LOW WATER LINE
MAN	MANUAL
MAT	MATERIAL
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MCP	MASTER CONTROL PANEL
MECH	MECHANICAL
MET	METAL
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM
MIPT	MALE IRON PIPE THREAD
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MON	MONUMENT / MONOLITHIC
MOT	MOTOR
MP	MILEPOST
MSL	MEAN SEAL LEVEL
MTD	MOUNTED
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NF	NEAR FACE
NIC	NOT IN CONTRACT
NO / NO.	NORMALLY OPEN / NUMBER
NOM	NOMINAL
NORM	NORMAL
NRS	NON-RISING STEM
NTS	NOT TO SCALE
O TO O	OUT TO OUT
OC	ON CENTER
OD	OUTSIDE DIAMETER
ODOT	OREGON DEPARTMENT OF TRANSPORTATION
OF	OVERFLOW / OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
OVHD	OVERHEAD
P&ID	PROCESS & INSTRUMENTATION DIAGRAM
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PCVC	POINT OF CURVATURE ON VERTICAL CURVE
PE	PLAIN END
PERF	PERFORATED
PERM	PERMANENT
PERP	PERPENDICULAR
PG	PRESSURE GAUGE
PH	PIPE HANGER
PI	POINT OF INTERSECTION
PIVC	POINT OF INTERSECTION ON VERTICAL CURVE
PL OR P/L	PROPERTY LINE / PLATE / PLASTIC
PLBG	PLUMBING
PNL	PANEL
POC	POINT OF CURVATURE
POLY	POLYETHYLENE
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PRCST	PRECAST
PREP	PREPARATION
PRESS	PRESSURE
PRKG	PARKING
PROP	PROPOSED
PRV	PRESSURE REDUCING VALVE
PS	PUMP STATION
PSIG	POUNDS PER SQUARE INCH GAUGE
PSL	PIPE SLEEVE

PSPT	PIPE SUPPORT
PT	POINT OF TANGENCY
PTVC	POINT OF TANGENCY ON VERTICAL CURVE
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWR	POWER
QTY	QUANTITY
RAD	RADIUS
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD / ROOF DRAIN
RDCR	REDUCER
RECIRC	RECIRCULATION
REF	REFERENCE
REINF	REINFORCE(D)(ING)(MENT)
REQ'D	REQUIRED
RES	RESERVOIR
RESTR	RESTRAINED
RFCA	RESTRAINED FLANGE COUPLING ADAPTER
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
R/W	RIGHT-OF-WAY
RPBPD	REDUCED PRESSURE BACKFLOW PREVENTION DEVICE
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RST	REINFORCED STEEL
RT	RIGHT
SALV	SALVAGE
SAN	SANITARY
SC	SOLID CORE
SCHED	SCHEDULE
SD	STORM DRAIN
SDL	SADDLE
SDR	STANDARD DIMENSION RATIO
SECT	SECTION
SHLDR	SHOULDER
SHT	SHEET
SIM	SIMILAR
SLP	SLOPE
SLV	SLEEVE
SOLN	SOLUTION
SP	SOIL PIPE / SEWER PIPE
SPCL	SPECIAL
SPEC(S)	SPECIFICATION(S)
SPG	SPACING
SPL	SPOOL
SPRT	SUPPORT
SQ	SQUARE
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
SS	SANITARY SEWER
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
STOR	STORAGE
STR	STRAIGHT
STRUCT	STRUCTURE / STRUCTURAL
SUBMG	SUBMERGED
SUCT	SUCTION
SV	SOLENOID VALVE
S/W	SIDEWALK
SWD	SIDEWATER DEPTH
SWGR	SWITCH GEAR
SYMM	SYMMETRICAL
SYS	SYSTEM
T OR TEL	TELEPHONE
T&B	TOP & BOTTOM
TAN	TANGENCY
TB	THRUST BLOCK
TBM	TEMPORARY BENCHMARK
TC	TOP OF CONCRETE / TOP OF CURB
TCE	TEMPORARY CONSTRUCTION EASEMENT
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE / TEMPORARY
T&G	TONGUE & GROOVE
THK	THICK / THICKNESS
THRD	THREAD (ED)

THRU	THROUGH
TP	TEST PIT / TOP OF PAVEMENT / TURNING POINT
TRANS	TRANSITION
TSP	TRI-SODIUM PHOSPHATE
TST	TOP OF STEEL
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UN	UNION
UON	UNLESS OTHERWISE NOTED
USGS	UNITED STATES GEOLOGIC SURVEY
V	VENT / VOLT
VAC	VACUUM
VB	VACUUM BREAKER
VBOX	VALVE BOX
VC	VERTICAL CURVE
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
VCP	VITRIFIED CLAY PIPE
VTR	VENT THROUGH ROOF
W	WATER
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
W/W	WALL TO WALL
WD	WOOD
WF	WIDE FLANGE
WH	WATER HEATER
WI	WROUGHT IRON
WM	WATER METER
WP	WORKING POINT / WATERPROOFING
WS	WATER SERVICE
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WT	WEIGHT
WTP	WATER TREATMENT PLANT
WTRT	WATERTIGHT
WWF	WELDED WIRE FABRIC
WWTF	WASTEWATER TREATMENT FACILITY
WWTP	WASTEWATER TREATMENT PLANT
X SECT	CROSS SECTION
XFMR	TRANSFORMER
YD	YARD DRAIN / YARD
YH	YARD HYDRANT
YR	YEAR
ZN	ZINC

NO.	DATE	BY	REVISION

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RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

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ABBREVIATIONS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET

G-4

GENERAL NOTES

1. THE CONTRACTOR SHALL POTHOLE AND VERIFY LOCATIONS, ELEVATIONS, TYPES AND SIZES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTING NEW PIPING FAR ENOUGH IN ADVANCE TO ALLOW NECESSARY ADJUSTMENTS IN GRADE AND SHALL NOTIFY OWNER'S REPRESENTATIVE OF NEED TO ADJUST PIPING INSTALLATION ACCORDINGLY. POTHOLING SHALL SUFFICIENTLY PRECEDE LAYING OF PIPE TO ALLOW REQUIRED ELEVATION ADJUSTMENTS TO BE ACCOMPLISHED WITHOUT REWORK. ELEVATION ADJUSTMENTS SHALL BE EXPECTED AND ARE INCIDENTAL TO THE WORK. DEFLECT PIPE AS REQUIRED AND WITHIN SPECIFIED TOLERANCES TO AVOID EXISTING UTILITIES AND COMPLETE TIE-INS.

2. LOCATIONS OF EXISTING UTILITIES ARE BASED ON INFORMATION SUPPLIED BY THE UTILITIES AND CONSIDERED APPROXIMATE ONLY. AS REQUIRED BY STATE LAW, THE CONTRACTOR SHALL OBTAIN UTILITY LOCATES PRIOR TO COMMENCING CONSTRUCTION.

3. CONTRACTOR SHALL PROVIDE OWNER'S REPRESENTATIVE WITH MINIMUM 24 HOURS NOTICE WHEN POTHOLING WILL BE COMPLETE. COORDINATE WITH OWNER'S REPRESENTATIVE TO REVIEW UTILITY INVESTIGATIONS AND TO MAKE APPROPRIATE ADJUSTMENTS FOR ANY ALIGNMENT CONFLICTS WHERE CONNECTING TO EXISTING UTILITIES.

4. OREGON LAW REQUIRES THE CONTRACTOR TO FOLLOW THE RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. THE CONTRACTOR MAY OBTAIN COPIES OF THE RULES BY CALLING THE UTILITY NOTIFICATION CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 503-246-6699.)

5. NUMEROUS EXISTING OVERHEAD POWER LINES OCCUR ALONG THE TRANSMISSION MAIN ALIGNMENT. CONTRACTOR TO CONFORM TO CONDITIONS IN VICINITY OF OVERHEAD LINES AND COORDINATE ALL CONSTRUCTION ACTIVITIES WITH PACIFIC LIGHT AND POWER REPRESENTATIVES.

6. PROVIDE "AS CONSTRUCTED" DRAWINGS INDICATING ALL CHANGES IN GRADE, ALIGNMENT, FITTINGS AND MATERIALS INSTALLED AND ANY OTHER UTILITIES OR OBSTACLES NOT SO INDICATED ON THESE PLANS.

7. AT THE END OF EACH WORK DAY, ALL OPEN TRENCHES SHALL BE BACKFILLED AND ALL TRENCHES SHALL EITHER BE TEMPORARILY PAVED OR FILLED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

8. CONTRACTOR SHALL PROTECT ALL PROPERTY CORNERS, SURVEY MONUMENTS, AND CONTROL SURVEY MONUMENTS. ALL ITEMS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED AT CONTRACTOR'S EXPENSE, WITH APPROPRIATE SURVEY FILED WITH COUNTY SURVEYOR.

9. CONTRACTOR SHALL SUPPORT AND PROTECT AS NECESSARY ANY PIPE OR CONDUIT EXPOSED AS PART OF THE NEW PIPE TRENCH EXCAVATION. CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES IN SERVICE AT ALL TIMES AND SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES TO MAINTAIN AND PROTECT SERVICES.

10. SUBSURFACE EXPLORATORY BORE HOLES AND TEST PITS CONDUCTED AT THE RESERVOIR SITE ARE REFERENCED IN A GEOTECHNICAL INVESTIGATION REPORT DATED JUNE 2018 WITH ADDENDUM ISSUED APRIL 2021. THE REPORT IS INCLUDED AS SUPPLEMENTARY INFORMATION FOR CONTRACTOR REFERENCE ONLY AND ARE NOT A PART OF THE CONTRACT DOCUMENTS.

11. ALL WORK SHALL BE CONFINED TO RIGHT-OF-WAY OR CITY PROPERTY, AS GENERALLY SHOWN IN THE DRAWINGS AS AREA OF PROJECT IMPROVEMENTS.

12. ALL CONCRETE SHALL BE A MINIMUM OF 3000 PSI 28 DAY COMPRESSION STRENGTH, UNLESS OTHERWISE NOTED.

13. ALL EXISTING FEATURES INCLUDING, BUT NOT LIMITED TO, ROADWAYS, STRUCTURES, LOTS, CURBS, SIDEWALKS, FENCES, WALLS, PLANTING, DITCHES, MAILBOXES, SIGNS, PIPING AND UTILITIES DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO AS GOOD OR BETTER THAN EXISTING CONDITION UNLESS OTHERWISE SPECIFIED. IF A UTILITY IS DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT OWNER OF UTILITY FOR INSPECTION OF DAMAGE PRIOR TO REPAIRS. CONTRACTOR SHALL REPAIR ALL UTILITY SERVICES DAMAGED DURING CONSTRUCTION AND SUCH REPAIR SHALL BE CONSIDERED INCIDENTAL.

14. CONTRACTOR TO OBTAIN AND COMPLY WITH APPLICABLE CITY OF PENDLETON AND UMATILLA COUNTY PERMITS AND REQUIREMENTS FOR WORK IN, AND RESTORATION OF, CITY AND COUNTY ROADWAYS.

16. DO NOT REMOVE TREES UNLESS THEY HAVE BEEN PREVIOUSLY IDENTIFIED IN THE FIELD FOR REMOVAL PER OWNER'S REPRESENTATIVE. CONTRACTOR SHALL COORDINATE REMOVAL OF IMPACTED TREES WITH ADJACENT HOMEOWNER WITH REGARDS TO TREE CUTTING, REMOVAL, FIREWOOD RETENTION AND TREE REPLACEMENT.

WATER NOTES

1. RESTRAIN ALL VALVES, TEES, BENDS, AND FITTINGS UNLESS OTHERWISE NOTED. ALL FITTINGS TO BE MECHANICAL JOINT UNLESS OTHERWISE NOTED.

2. ALL FLANGED CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF AWWA C115 AND C207, LATEST EDITION.

3. PROVIDE POLYETHYLENE ENCASEMENT FOR ALL DUCTILE IRON PIPING ACCORDING TO ANSI/AWWA C105/A21.5 AND WHEN NEW PIPING IS WITHIN 10' HORIZONTALLY OF EXISTING GAS LINES.

4. ALL COATINGS AND MATERIALS SPECIFIED HEREIN THAT COME IN CONTACT WITH POTABLE WATER SHALL BE NATIONAL SANITATION FOUNDATION (NSF) APPROVED.

5. ALL PIPING SHALL BE TESTED UNDER A HYDROSTATIC TEST PRESSURE OF 150 PERCENT OF THE DESIGN PRESSURE, BUT NOT LESS THAN 200 PSI (± 5 PSI), MEASURED FROM THE LOWEST POINT ALONG THE TEST SECTION OR AS SHOWN ON THE PLANS. SEE SPECIFICATIONS. ALL VALVES, FITTINGS, AND PIPING SHALL BE SUITABLE FOR TEST PRESSURES.

6. WHERE VERTICAL BENDS ARE NOT SHOWN, CONTRACTOR IS TO DEFLECT PIPE TO ACHIEVE VERTICAL ADJUSTMENTS AS NEEDED. THE MAXIMUM ALLOWABLE DEFLECTION SHALL NOT EXCEED ONE-HALF OF THE MAXIMUM INSTALL DEFLECTION SPECIFIED.

7. CONTRACTOR SHALL PROVIDE TEMPORARY TAPS, BLOW-OFFS, AND THRUST BLOCKING AS REQUIRED TO FACILITATE FLUSHING, TESTING, AND DISINFECTION OF WATERLINES. REMOVE TEMPORARY TEST TAPS UPON COMPLETION OF DISINFECTION, AND REPLACE WITH STERILIZED TEMPORARY PLUGS. TEMPORARY PLUGS SHALL BE REMOVED TO MAKE FINAL CONNECTIONS TO SERVICE LINES.

8. CONNECTIONS TO CITY WATERLINES MAY REQUIRE TEMPORARY SHUTDOWNS OF CITY FACILITIES. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH THE CITY AND PROVIDE A MINIMUM OF 72 HOURS ADVANCE NOTICE PRIOR TO PERFORMING WATERLINE TIE-IN WORK. CONTRACTOR TO VERIFY WITH THE CITY IF CITY WATER LINES ARE TO BE TAKEN OUT OF SERVICE PRIOR TO PERFORMING THIS WORK. OPERATION OF VALVES SHALL BE BY CITY PERSONNEL ONLY.

9. WHERE A WATERLINE CROSSES A SANITARY SEWER LINE, ONE PIPE LENGTH OF THE WATERLINE MUST BE CENTERED AT THE CROSSING.

TOPOGRAPHIC SURVEY NOTES

1. SURVEY WAS COMPLETED BY THE CITY OF PENDLETON. ELEVATIONS ARE BASED ON NGVD 1929 DATUM. HORIZONTAL COORDINATES ARE LOCAL CITY OF PENDLETON GRID SYSTEM.

2. UTILITY INFORMATION SHOWN HEREIN IS COMPILED FROM FIELD OBSERVED SURFACE FEATURES, AND FIELD LOCATED PAINT MARK "LOCATES" PERFORMED BY OTHERS. SURVEYOR MAKES NO GUARANTEE THAT UTILITIES SHOWN HEREIN COMPRISE ALL POSSIBLE UTILITIES IN THE AREA NOR WARRANTS THAT UTILITIES ARE IN THE EXACT LOCATIONS INDICATED.

3. THIS TOPOGRAPHIC SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT, AND THEREFORE DOES NOT PURPORT TO TO SHOW ALL EASEMENTS, ENCUMBRANCES, OR RESTRICTIONS OF RECORD, IF ANY.

EROSION CONTROL NOTES

1. CITY WILL OBTAIN AN OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) 1200-C EROSION CONTROL PERMIT. PRIOR TO BEGINNING ANY SITE DISTURBING ACTIVITY, PERMIT SHALL BE TRANSFERRED TO CONTRACTOR.

2. CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROL DURING CONSTRUCTION (ANY TIME OF YEAR) IN ACCORDANCE WITH THE DEQ EROSION PREVENTION AND SEDIMENT CONTROL REQUIREMENTS, THE STANDARD CONSTRUCTION SPECIFICATIONS FOR THIS PROJECT, AND THE EROSION CONTROL NOTES INCLUDED BELOW AND WITHIN THESE PLANS. IF DISCREPANCIES BETWEEN STANDARDS OCCUR, THE MORE STRINGENT REGULATION SHALL APPLY.

3. APPROVAL OF THIS EROSION AND SEDIMENT CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTIONS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC).

4. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.

5. THE BOUNDARIES OF THE LIMITS OF WORK SHOWN ON THESE PLANS SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED LIMITS OF WORK SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.

6. THE ESC FACILITIES SHOWN ON THESE PLANS MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.

7. THE ESC FACILITIES SHOWN ON THESE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.

8. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONALITY.

9. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 24 HOURS FOLLOWING A STORM EVENT.

10. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT. SEE PLANS FOR GRAVEL CONSTRUCTION ENTRANCE.

11. CONTRACTOR SHALL MAINTAIN PROPER DUST CONTROL MEASURES AT ALL TIMES. SPECIAL ATTENTION SHALL BE GIVEN TO MAINTAINING DUST CONTROL MEASURES ON OLD AIRPORT ROAD AT ALL TIMES, ESPECIALLY DURING TIMES OF HAULING EXCAVATED MATERIALS FROM THE RESERVOIR SITE SOUTH TO WESTGATE.

12. NOTIFY OWNER'S REPRESENTATIVE 24 HOURS PRIOR TO ANY WORK ON SITE.

13. CONTRACTOR SHALL PROVIDE CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL).

PROJECT CONTACTS

OWNER:
CITY OF PENDLETON, DEPT OF PUBLIC WORKS
500 SW DORIAN AVENUE
PENDLETON, OR 97801

OWNER'S REPRESENTATIVE:
BOB PATTERSON, P.E.
E: BOB.PATTERSON@CI.PENDLETON.OR.US
P: 541-966-0202
F: 541-966-0251

OWNER'S PROJECT SUPERINTENDENT:
TIM SMITH
E: TIM.SMITH@CI.PENDLETON.OR.US
P: 541-379-1195
F: 541-966-0251

CIVIL ENGINEER:
MURRAYSMITH, INC.
888 SW 5TH AVENUE, SUITE 1170
PORTLAND, OR 97204
CONTACT: LAEL ALDERMAN, P.E.
E: LAEL.ALDERMAN@MURRAYSMITH.US
P: 503-225-9010
F: 503-225-9022

GEOTECHNICAL ENGINEER:
GEOENGINEERS, INC.
523 EAST SPRAGUE AVENUE
SPOKANE, WA 99202
CONTACT: DAVE LAUDER, P.E.
E: DLAUDER@GEOENGINEERS.COM
P: 523-363-3125
F: 509-363-3126

SURVEYOR:
CITY OF PENDLETON, DEPT OF PUBLIC WORKS
500 SW DORIAN AVENUE
PENDLETON, OR 97801
CONTACT: WAYNE GREEN
E: WAYNE.GREEN@CI.PENDLETON.OR.US
P: 541-966-0243
F: 541-966-0251

NO.	DATE	BY	REVISION

NOTICE
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RENEWS 12-31-21

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

GENERAL NOTES

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
G-5
5 of 113

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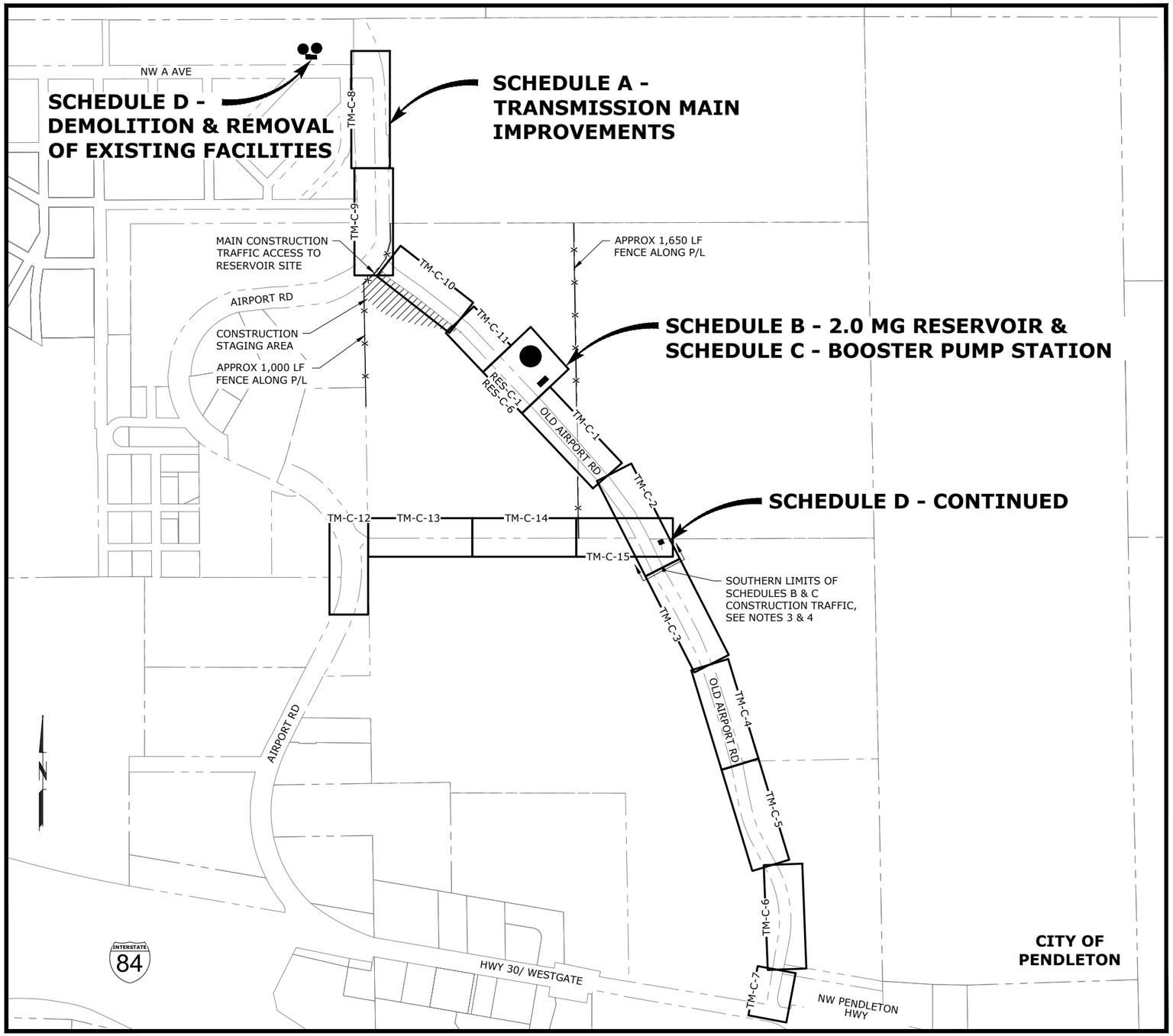

NOTES:

1. THIS SHEET FOR INFORMATIONAL PURPOSES ONLY TO PROVIDE OVERVIEW OF EXISTING ROADWAYS, EASEMENTS, AND PROPOSED RESERVOIR & PUMP STATION SITE IN RELATION TO PROJECT AREA AND DOES NOT IDENTIFY WORK OR MATERIALS REQUIRED FOR CONSTRUCTION.

2. NO CONSTRUCTION TRUCK STAGING OR PARKING SHALL BE ALLOWED ON AIRPORT ROAD.

3. ALL CONSTRUCTION TRAFFIC & MATERIAL DELIVERY ACCESS TO RESERVOIR SITE SHALL BE ROUTED FROM AIRPORT ROAD TO THE NORTH OF THE RESERVOIR SITE, SOUTH ON OLD AIRPORT ROAD. NO CONSTRUCTION-RELATED TRAFFIC TO THE RESERVOIR SITE SHALL BE ALLOWED PRIOR TO CONSTRUCTION OF OLD AIRPORT ROAD IMRPOVEMENTS.

4. CONSTRUCTION TRAFFIC, MATERIAL DELIVERY, AND HAULING OF EXCAVATED MATERIAL RELATED TO THE RESERVOIR SITE SHALL NOT BE PERMITTED ON OLD AIRPORT ROAD SOUTH OF LIMITS SHOWN WITHOUT APPROVAL FROM THE OWNER'S REPRESENTATIVE.

5. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE PROJECT SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, DURING AND IN RELATION TO PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING PROJECT CONSTRUCTION AREAS CLEAN OF DEBRIS, SAFE & SECURE AT ALL TIMES. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

NO.	DATE	BY	REVISION

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

SITE MAPPING AND GENERAL PROJECT OVERVIEW

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
GEN-C-1
6 of 113

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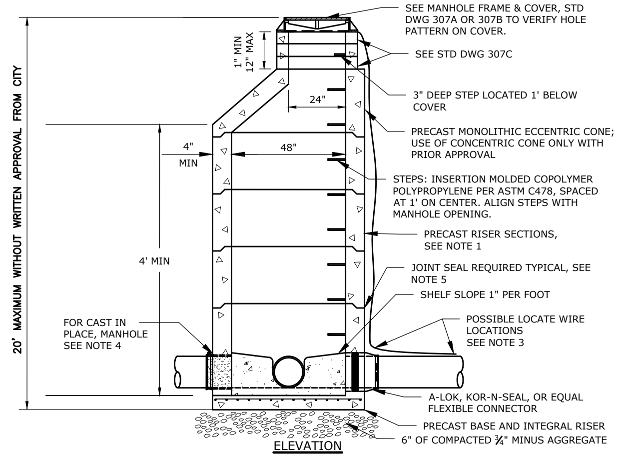
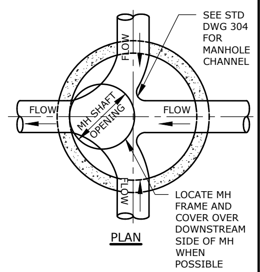
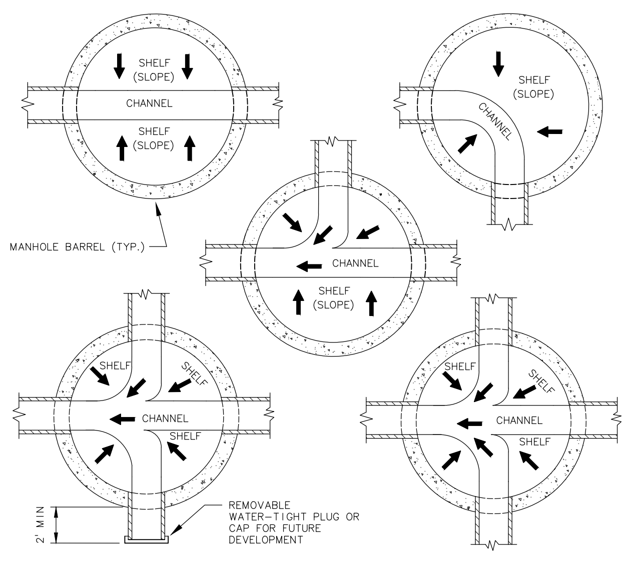
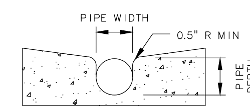


NOTES:
1. ALL MATERIAL AND WORK SHALL BE IN COMPLIANCE WITH THE CITY OF PENDLETON STANDARD SPECIFICATIONS AND INSTALLATION OF MANHOLE AS PER MANUFACTURES RECOMMENDATION AND CONDITIONS FOR LOCATION.
2. FOR 48" DIAMETER MANHOLE THE MAXIMUM PIPE SIZE IS 24". LARGER DIAMETERS SHALL BE APPROVED BY THE CITY.
3. LOCATE WIRE MUST BE ATTACHED AND ACCESSIBLE BELOW COVER WITH AN 18" TAIL SEE STD DWG 101.
4. PRECAST MANHOLE WITH FLEXIBLE CONNECTOR ON INFLOW/OUTFLOW DOES NOT REQUIRE A FLEXIBLE JOINT. CAST-IN-PLACE MANHOLES OR CUT-IN CONNECTIONS TO EXISTING MANHOLES REQUIRE A FLEXIBLE JOINT AND/OR A SAND COLLAR.
5. JOINTS SHALL BE WATER TIGHT AND COATED WITH WATERPROOF RUBBERIZED MASTIC MATERIAL BEFORE SETTING RISERS AND TOP. INSIDE JOINTS SHALL BE GROUTED.
6. MINIMUM CLEAR DISTANCE BETWEEN PIPE HOLES IS 12".
7. SEE NOTE 7, STD DWG 102.



CITY OF PENDLETON — ENGINEERING DEPARTMENT, 500 S.W. DORION AVENUE PENDLETON, OREGON 97801, VOICE: (541) 966-0203, FAX: (541) 966-0251 | APPROVED BY | FEBRUARY 2019 APPROVAL DATE | REVISED DATE | STANDARD 48" MANHOLE | NO SCALE | DWG NO. 300





NOTES:
1. SLOPE ALL SHELVES TO CHANNEL AT 1:12.
2. FOR PIPES OF DIFFERENT SIZES, THE TOP OF PIPE (CROWN) SHALL BE AT THE SAME ELEVATION.
3. PROVIDE MINIMUM 0.1 FOOT IN-OUT DROP FOR STRAIGHT RUNS AND 0.2 FOOT IN-OUT DROP FOR ALL OTHER RUNS.
4. STORM SEWER MANHOLES WILL HAVE A MINIMUM 6" DEEP SUMP AND NO CHANNELS.
5. MINIMUM CLEAR DISTANCE BETWEEN PIPE HOLES IS 12".

← = DIRECTION OF DOWNWARD SLOPE

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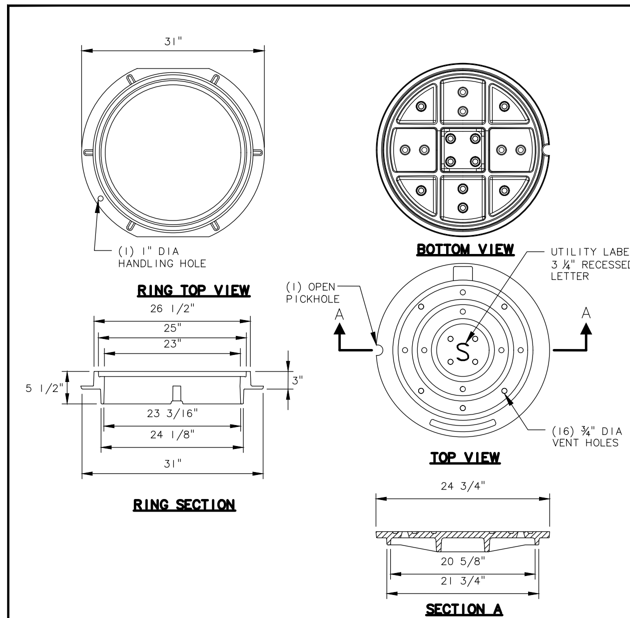
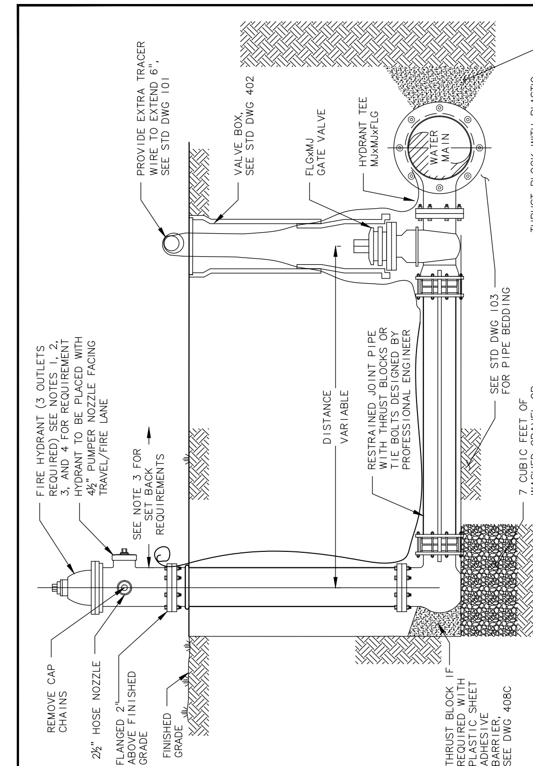


NOTES:
1. MANHOLE FRAME EJIW 2601Z AND COVER SHALL BE EJIW 2603B LID OR APPROVED EQUAL, "S" UTILITY LABEL LETTERING ON COVER.
2. COVER MATERIAL SPECIFICATION GRAY IRON (ASTM A48 CL35B).

CITY OF PENDLETON — ENGINEERING DEPARTMENT, 500 S.W. DORION AVENUE PENDLETON, OREGON 97801, VOICE: (541) 966-0203, FAX: (541) 966-0251 | APPROVED BY | FEBRUARY 2019 APPROVAL DATE | REVISED DATE | STORM MANHOLE FRAME AND COVER | NO SCALE | DWG NO. 307B



NOTES:
1. 5¼" COMPRESSION TYPE HYDRANTS, TRAFFIC MODEL (BREAK OFF FLANGE).
2. 4' BURY, 6" MJ SHOE, TWO 2½" NST DISCHARGES, ONE 4½" PUMPER NOZZLE, OPEN LEFT.
3. FIRE HYDRANT TO BE LOCATED ON PUBLIC RIGHT-OF-WAY 1' BACK OF SIDEWALK TYPICAL.
4. THE CITY WILL ACCEPT ONLY THE FOLLOWING BRAND NAME HYDRANTS: MUELLER CENTURION NO. 200, CLOW MEDALLION, WATEROUS NO. WB-67-250, OR KENNEDY NO K-81A.

CITY OF PENDLETON — ENGINEERING DEPARTMENT, 500 S.W. DORION AVENUE PENDLETON, OREGON 97801, VOICE: (541) 966-0203, FAX: (541) 966-0251 | APPROVED BY | FEBRUARY 2019 APPROVAL DATE | REVISED DATE | HYDRANT ASSEMBLY | NO SCALE | DWG NO. 400

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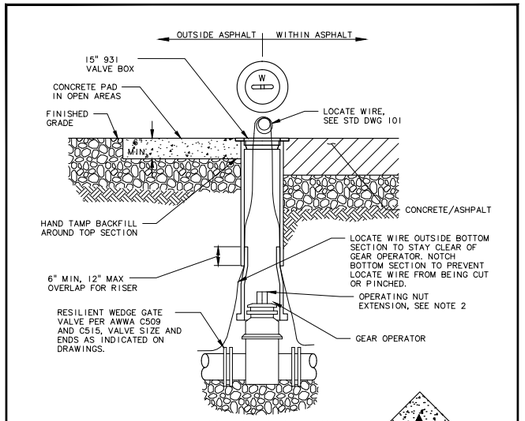
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

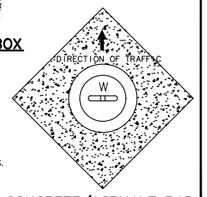
CITY OF PENDLETON
STANDARD DETAILS - 1

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET GEN-C-2



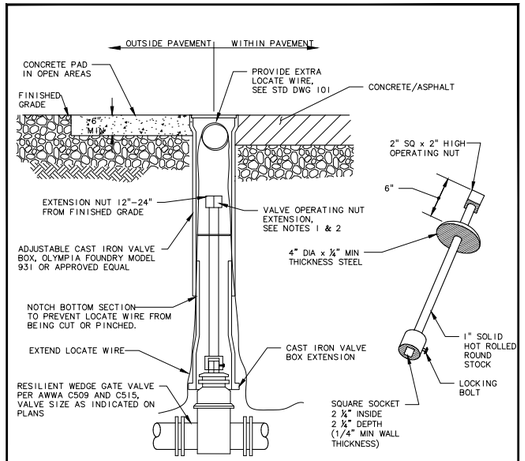
BURIED VALVE BOX



CONCRETE/ASHPALT PAD

NOTES:
1. VALVE BOX NOT TO REST ON OPERATING ASSEMBLY.
2. OPERATING NUT EXTENSION REQUIRED WHEN VALVE NUT IS DEEPER THAN 4' FROM FINISHED GRADE. SEE STD DWG 403.
3. CENTER VALVE BOX ON AXIS OF OPERATING NUT.
5. VALVE BOX PAD USED IN ROADWAY CAN BE 24" ROUND OR SQUARE, MADE OF CONCRETE 6" THICK OR OF ASPHALT TO MATCH EXISTING THICKNESS, MIN 4".
6. ORIENT GEAR OPERATOR TO CENTERLINE SIDE IN ROADWAYS.

CITY OF PENDLETON OREGON	ENGINEERING DEPARTMENT 500 S.W. DORION AVENUE PENDLETON, OREGON 97801 VOICE: (541) 966-0203 FAX: (541) 966-0251	APPROVED BY	FEBRUARY 2019 APPROVAL DATE	REVISED DATE	BURIED VALVE AND BOX	NO SCALE	DWG NO. 402

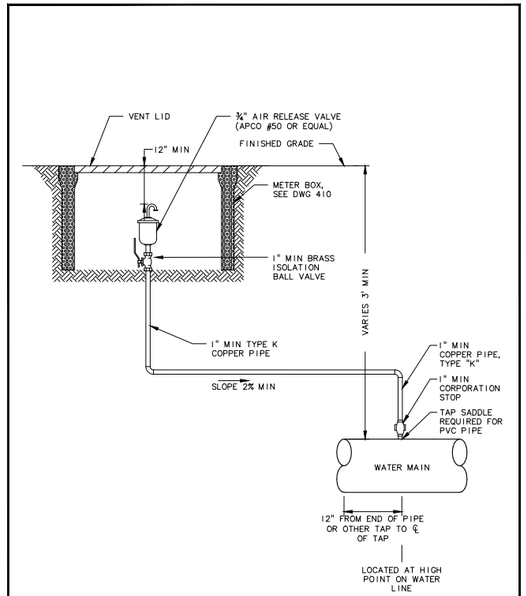


VALVE BOX AND EXTENSION

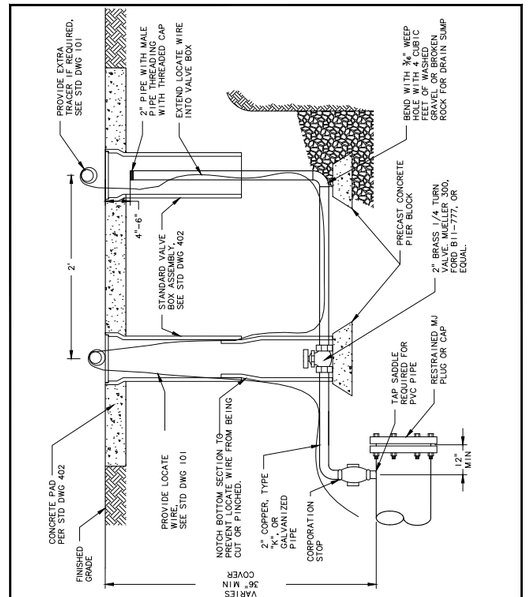
VALVE OPERATING NUT EXTENSION

NOTES:
1. VALVE OPERATING NUT EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS MORE THAN 4' BELOW FINISHED GRADE.
2. ALL VALVE OPERATING NUT EXTENSIONS ARE TO BE MADE OF STEEL, SIZED AS NOTED, AND PAINTED WITH 2 COATS OF METAL PAINT.
3. MUST CONFORM TO ALL NOTES ON STD DWG 402.

CITY OF PENDLETON OREGON	ENGINEERING DEPARTMENT 500 S.W. DORION AVENUE PENDLETON, OREGON 97801 VOICE: (541) 966-0203 FAX: (541) 966-0251	APPROVED BY	FEBRUARY 2019 APPROVAL DATE	REVISED DATE	VALVE OPERATING NUT AND EXTENSION	NO SCALE	DWG NO. 403



CITY OF PENDLETON OREGON	ENGINEERING DEPARTMENT 500 S.W. DORION AVENUE PENDLETON, OREGON 97801 VOICE: (541) 966-0203 FAX: (541) 966-0251	APPROVED BY	FEBRUARY 2019 APPROVAL DATE	REVISED DATE	TYPICAL AIR RELEASE VALVE ASSEMBLY OUT OF STREET	NO SCALE	DWG NO. 405



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NOTE:

1. SEE DETAIL 2 ON SHEET GEN-C-8 FOR CONCRETE COLLAR TO BE INSTALLED WITH BURIED VALVES IN OLD AIRPORT ROAD RIGHT-OF-WAY.

NO.	DATE	BY	REVISION

NOTICE
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TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN
RENEWS 12-31-21

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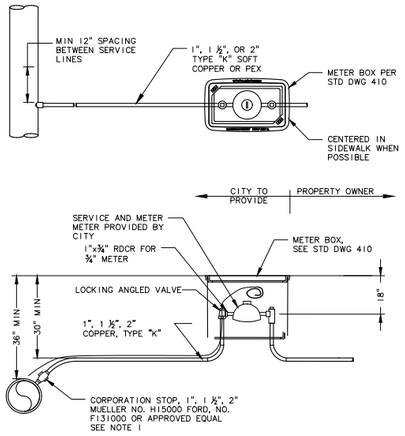
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

CITY OF PENDLETON STANDARD DETAILS - 2

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
GEN-C-3
8 of 113



TYPICAL SERVICE

NOTES:
1. SADDLE TEE SHALL BE USED ON PVC MAIN PIPE.
2. INSULATE METER WITH MIN R13 INSULATION WITH ADEQUATE WATER PROOFING.
3. METER TO BE INSTALLED IN SIDEWALK UNLESS OTHERWISE APPROVED.

DEVELOPER/CUSTOMER NOTES:
1. IF PRESSURE IS GREATER THAN 80 PSI, A PRESSURE REDUCING VALVE IS REQUIRED TO BE INSTALLED FOLLOWING THE METER.
2. PROPERTY OWNER TO PROVIDE SHUT OFF VALVE AFTER METER.
3. ALL SERVICES SUPPLYING IRRIGATION MUST HAVE AN APPROVED BACK FLOW DEVICE.
4. SUBDIVISION: CONTRACTOR IS TO PROVIDE TRENCH AND BACKFILL FOR CITY CREWS TO INSTALL SADDLE TEE, CORP. STOP, PIPING, METER, AND BOX.

CITY OF PENDLETON INCORPORATED 1880 OREGON

ENGINEERING DEPARTMENT
500 S.W. DORION
AVENUE PENDLETON, OREGON 97801
VOICE: (541) 966-0203
FAX: (541) 966-0251

APPROVED BY

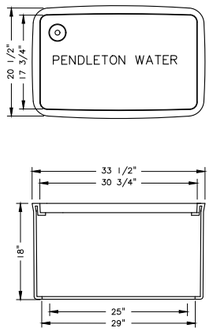
FEBRUARY 2019
APPROVAL DATE

REVISED DATE

TYPICAL SERVICE LATERAL INSTALLATION

NO SCALE

DWG NO. 409



18"x30"x18"

NOTES:
1. ALL METER BOX INSTALLATIONS SHALL BE IN SIDEWALK OR PAVED AREA UNLESS APPROVED BY CITY.
2. ALL ¾", 1", 1½", AND 2" METER BOX INSTALLATIONS SHALL BE ARMORCAST WATER AA66001640PCx18" METER BOX.
3. METER BOX SHALL HAVE AMORCAST AA60019477H LID.

CITY OF PENDLETON INCORPORATED 1880 OREGON

ENGINEERING DEPARTMENT
500 S.W. DORION
AVENUE PENDLETON, OREGON 97801
VOICE: (541) 966-0203
FAX: (541) 966-0251

APPROVED BY

FEBRUARY 2019
APPROVAL DATE

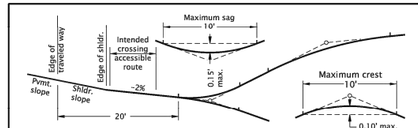
REVISED DATE

WATER METER BOX

NO SCALE

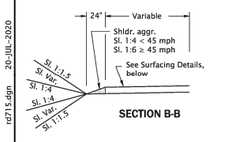
DWG NO. 410

rd715.dgn 20-JUL-2020

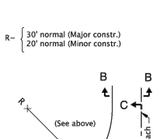


APPROACH PROFILE

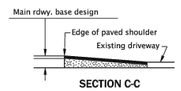
NOTE:
When grades on approaches meet without vertical curves the maximum algebraic difference on crests should be 8% and on sags 12%. Grades steeper than 15% should not be used without prior approval of the engineer of record. Any driveways with slopes exceeding 12% shall be paved.



SECTION B-B



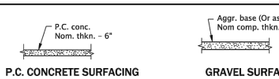
HALF PLAN



SECTION C-C

NOTE:
Normal paving limits to extend 20' (30' for public road connections) from the edge of pavement or to the right of way line, whichever is less. Approach surfacing and width to then match existing approach.

APPROACH



P.C. CONCRETE SURFACING

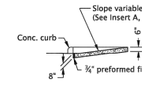
GRAVEL SURFACING

ASPHALT CONCRETE SURFACING

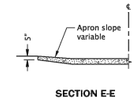
APPROACH AND DRIVEWAY CONNECTION SURFACING DETAILS

RD715

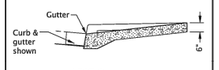
TYPE A PORTLAND CEMENT CONCRETE



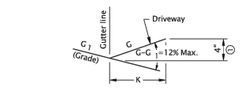
SECTION D-D



SECTION E-E



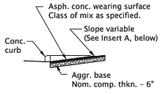
SECTION A-A FOR MONOLITHIC DRIVEWAYS



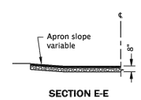
INSERT A

① Minimum allowable for drainage control on negatively sloped driveways.

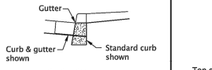
TYPE A-1 ASPHALT CONCRETE



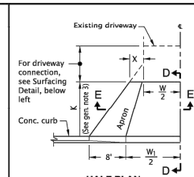
SECTION D-D



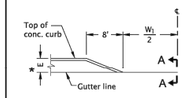
SECTION E-E



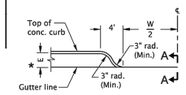
SECTION A-A FOR DRIVEWAYS



HALF PLAN



HALF ELEVATION



HALF ELEVATION (ALTERNATE APRON SLOPE)

(See General Note 5)

★ Curb exposure E – 7" normal. Vary as shown on plans or as directed.

NON-SIDEWALK DRIVEWAYS

NOTE: This driveway type shall not be used along a pedestrian route. See "Table A" for dimensions not shown.

TABLE A

W (ft)	X (ft)	K (ft) 5	6	8	10
		W1 (ft)			
12	3	15	15	15	15
14		17	17	17	17
16		19	19	19	19
18		21	21	21	21
20		23	23	23	23
22	4	27	28	29	30
24		29	30	31	32
26		31	32	33	34
28		33	34	35	36
30		35	36	37	38
32	5	41	42	44	46
34		43	44	46	48
36		45	46	48	50

Where a travel lane is constructed adjacent to the curb line, use 16' W min. for residence and 30' W min. for light commercial, add 5' to W1 for both. Do not add the 5' to W1 when 4' min. shldr. or bikeway is included in the typical.

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. Driveway details shown on this drawing are to be used on roadways where there are no existing or planned sidewalks in driveway vicinity. For driveways located in a sidewalk see Std. Dwgs. RD720, RD721, RD725 and/or RD730, RD735, RD740, RD745, RD750.
2. Width of driveway (W) as shown on plans or as directed.
3. K is the distance from back of curb to back of driveway (10' max.).
4. Where existing driveway is in good condition, construct only as much as required for satisfactory connection with new work.
5. "Alternate Apron Slope" used only where plans designate. Alternate Apron Slope may also be used at local jurisdiction's request when approved by the Project Manager.
6. Increase thickness of asphalt concrete and stone base where shown on plans.
7. For curb details, see Std. Dwgs. RD700 & RD701.
8. For expansion and contraction joint requirements, see applicable curb and sidewalk standard drawings.

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

CALC. BOOK NO. N/A

SDR DATE 21-JUN-2019

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

APPROACHES AND NON-SIDEWALK DRIVEWAYS

2021

DATE	REVISION DESCRIPTION

RD715

Effective Date: June 1, 2021 – November 30, 2021

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NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS DESIGNED
TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

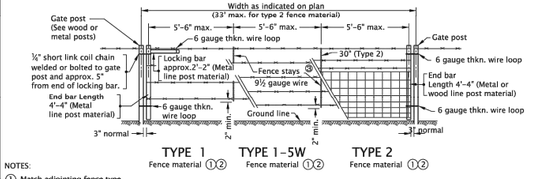
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

CITY OF PENDLETON AND ODOT STANDARD DETAILS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET GEN-C-4

9 of 113



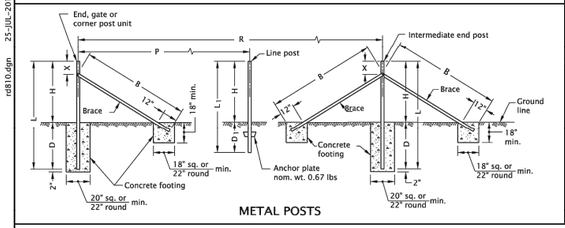
TYPE 1 Fence material ①②

TYPE 1-5W Fence material ①②

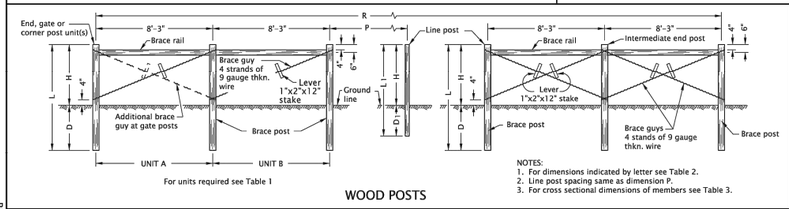
TYPE 2 Fence material ①②

NOTES:
① Match adjoining fence type.
② For details not shown see fence type.
③ For wooden stays, see Type 1 fence details.

GATEWAY

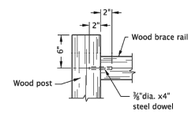


METAL POSTS



For units required see Table 1

WOOD POSTS



BRACE RAIL CONNECTION

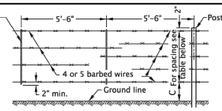
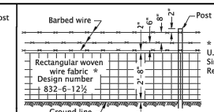


TABLE OF DIMENSIONS

FENCE	C	SPACING	NO. OF WIRES
Type 1	14"	12"	4
Type 1-5W	10"	10"	5

① NOTE:
Wooden Stays to be used in areas of heavy snowfall or snow drifts over 36". Stays to be 2"x2"x52" min. length, sound, untreated Douglas Fir, Western Hemlock or Western Pine, spaced as shown for wire stays and to rest firmly on the ground.
Horizontal wires to be stapled are: single wires and a minimum of 4 wires for woven wire fabric.

TYPES 1 , & 1-5W



② TYPE 2

* U.S. Dept. of Commerce Simplified Practice Recommendation R9-47.

② NOTE:
For wooden stays, see Type 1 fence details

TABLE 1 (For wood posts)

FENCE	R (ft)	UNITS REQUIRED
Types 1, 1-5W & 2	20 or Less	* None
	20-330	A
	Over 330	A & B

* Unit A required at gate post.
Either Unit A or Units A & B are required in existing fence line at intersection with new fence line.

TABLE 2

FENCE	R max.	P	L min.	L1 min.	H	D min.	D1 min.	B min.	X min.-max.
All Types	660'	16'-6"	7'-6"	6'-6"	4'-4"	3'-2"	2'-2"	7'-8"	9"-22"

TABLE 3

MEMBER	WOOD			METAL			
	* ROUND		SQUARE	SHAPE	WEIGHT PER (ft) nominal	SIZE nominal	
	DIAMETER OF SMALL END (in)		SIZE nominal (in)				
	min.-max.	min. avg.					
Line Post	3" to 4"	3"	† 3"x3"	Tee Channel ⓐ or U-bar	1.33 lb	ASTM A-702	
Brace or Brace Rail	3½" to 5½"	4"	4"x4"	Tubular	ⓑ	1½" +/- O.D.	
				ⓐ Angle	3.19 lb	2"x2"x¼"	
Other Post	4" to 7"	5"	† 5"x5"	Tubular	b	2⅜" O.D.	
				ⓐ Angle	4.1 lb	2½"x2½"x¼"	

* Max. taper 1":48".
† Max. allowable size 1" additional in each dimension.

ⓐ In accordance with ASTM A 702.
ⓑ In accordance with AASHTO M 181.

NOTES:
1. For dimensions indicated by letter see Table 2.
2. Line post spacing same as dimension P.
3. For cross sectional dimensions of members see Table 3.

GENERAL NOTES FOR ALL DETAILS:
1. For dimensions indicated by letter see Table 2.
2. Line post spacing same as dimension P.
3. For shapes, weights and dimensions of members see Table 3.
4. All concrete shall be commercial grade concrete.
5. See Std. Dwg. RD820 for fence gates.
6. See project plans for details not shown.

CALC. BOOK NO. N/A

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

BASELINE REPORT DATE 25-JUL-2017

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

BARBED AND WOVEN WIRE FENCES

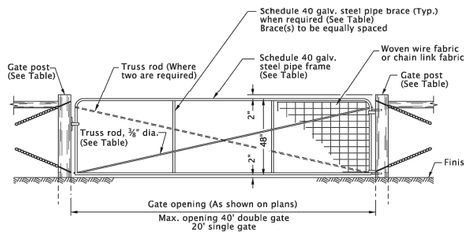
2018

DATE	REVISION DESCRIPTION

RD810

rd810.dgn 25-JUL-2017

Effective Date: December 1, 2018 - May 31, 2019 RD810



GATE COMPONENTS							GATE POSTS ①②				
							WOOD			STEEL	
GATE OPENING (ft)		SCHEDULE 40 GALV. STEEL PIPE FRAME		SCHEDULE 40 GALV. STEEL PIPE BRACE			* ROUND		SQUARE	SCHEDULE 40 GALV. STEEL PIPE	
SINGLE GATE	DOUBLE GATE	NOM. DIA. (in)	MIN. WT. (lb/ft)	NUMBER	NOM. DIA. (in)	MIN. WT. (lb/ft)	DIA. OF SMALL END (in)			NOM. SIZE (in)	NOM. DIA. (in)	MIN. WT. (lb/ft)
							Min.	Max.	Min. Avg.			
UP thru 6	UP thru 12	1	1.68	–	–	–	5	7	6	6x6	2½	5.79
7 thru 11	13 thru 22	1¼	2.27	1	1	1.68	5	7	6	6x6	3½	9.11
12 thru 16	23 thru 32	1½	2.72	2	1¼	2.27	7	9	8	8x8	6	18.97
17 thru 20	33 thru 40	2	3.65	2	1½	2.27	9	11	10	10x10	6	18.97

① Gate posts on each side of a gate opening to be the same size. At a double gate installation with unequal width gates, size of both posts to be as indicated for single gate installation of the wider gate width.

② For length, setting and bracing details see end posts, Std. Dwg. RD810.

* Max. taper 1" in 4'

GENERAL NOTES FOR ALL DETAILS:
1. Gates shown are for use with Fence Types 1, 1-5W and 2.
2. See Std. Dwg. RD810 for details not shown.
3. See project plans for details not shown.

CALC. BOOK NO. N/A

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

BASELINE REPORT DATE 25-JUL-2017

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

FENCE GATES

2018

DATE	REVISION DESCRIPTION

RD820

rd820.dgn 25-JUL-2017

Effective Date: December 1, 2018 - May 31, 2019 RD820

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NO.	DATE	BY	REVISION

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TMS DESIGNED
TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

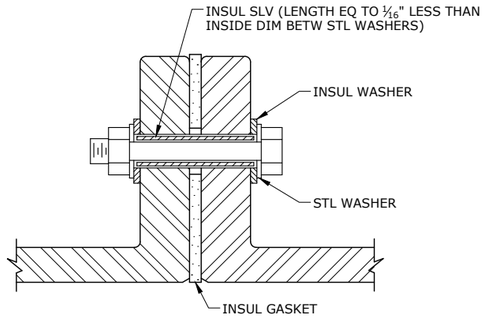
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

ODOT STANDARD DETAILS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

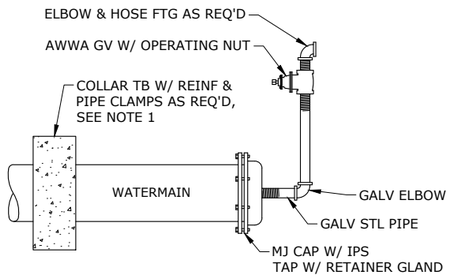
SHEET
GEN-C-5
10 of 113



INSULATED FLANGE JOINT DETAIL

SCALE: NTS

1 / -



NOTES:

1. FOR TEMPORARY BLOW-OFFS, CONTRACTOR TO PROVIDE TEMPORARY THRUST RESTRAINT AS REQUIRED.

2. SEE SPECIFICATIONS REGARDING DISPOSAL/DECHLORINATION FOR SUPERCHLORINATED WATER.

3. PROVIDE LARGER BLOW-OFF PIPING MATERIALS AT CONTRACTOR OPTION.

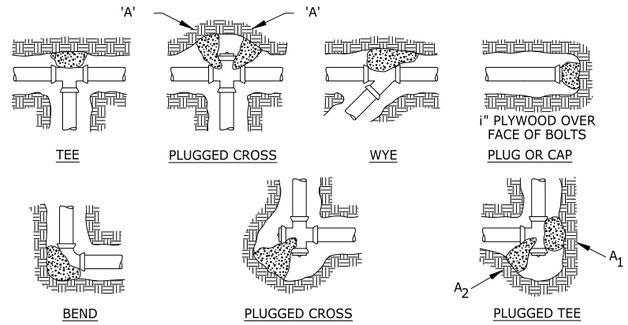
4. FOR CONCRETE CYLINDER PIPE OR STEEL PIPE, PROVIDE SIMILAR ASSEMBLY AT TEST HEADS.

5. PROVIDE PIPING TO ACHIEVE 2.5 FTS IN WATERMAIN FOR FLUSHING, 2" MINIMUM.

TEMPORARY BLOW-OFF ASSEMBLY

SCALE: NTS

2 / -



BEARING AREA, 'A', OF THRUST BLOCKS IN SQUARE FEET *							
FITTING SIZE	TEE, WYE, PLUG OR CAP	90°BEND, PLUGGED CROSS	TEE PLUGGED ON RUN		45° BEND	22 ° BEND	11¡° BEND
	A	A	A_1	A_2	A	A	A
4	1.9	2.5	3.6	2.5	1.3	-	-
6	3.7	5.3	7.5	5.3	2.8	1.5	-
8	6.4	9.1	12.8	9.1	4.9	2.5	1.2
10	9.7	13.7	19.3	13.7	7.5	3.7	1.9
12	13.7	19.3	27.2	19.3	10.5	5.3	2.7
14	18.4	26.0	36.7	26.0	14.1	7.2	3.6
16	23.7	33.6	47.3	33.6	18.1	9.3	4.7
18	29.9	42.3	59.6	42.3	22.8	11.6	5.9
20	36.7	51.9	73.1	51.9	28.0	14.3	7.2
24	52.3	74.0	104.4	74.0	40.0	20.4	10.3

*ABOVE BEARING AREAS BASED UPON TEST PRESSURE OF 200 P.S.I. AND AN ALLOWABLE SOIL BEARING STRESS OF 2000 POUNDS PER SQUARE FOOT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, USE THE FOLLOWING EQUATION: BEARING AREA=(TEST PRESSURE/200) X (2000/SOIL BEARING STRESS) X (TABLE VALUE).

NOTES:

1. CONCRETE THRUST BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH.

2. KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES. INSTALL ISOLATION MATERIAL BETWEEN PIPE AND/OR FITTINGS BEFORE POURING BLOCKING.

3. THE MINIMUM REQUIRED THRUST BEARING AREAS FOR SPECIAL CONNECTIONS ARE SHOWN ON THE PLANS; e.g. 15 SF INDICATES 15 SQUARE FEET BEARING AREA REQUIRED.

4. IF NOT SHOWN ON PLANS, REQUIRED BEARING AREAS AT FITTING SHALL BE AS INDICATED IN TABLE BELOW, ADJUSTED IF NECESSARY, TO CONFORM TO THE TEST PRESSURE(S) AND ALLOWABLE SOIL BEARING STRESS(ES) STATED IN THE SPECIFICATIONS.

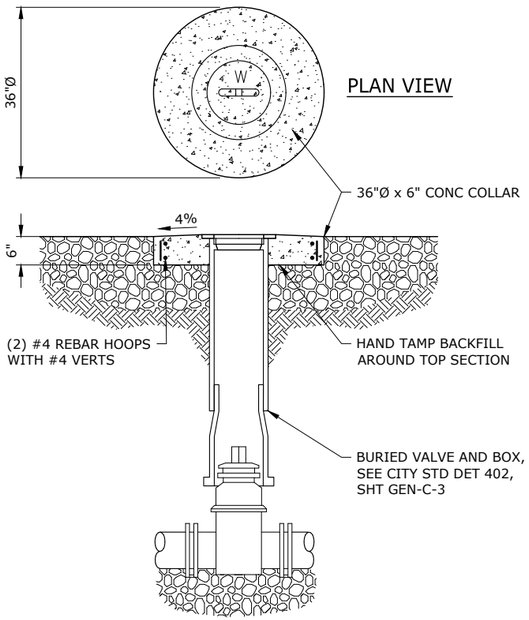
5. BEARING AREAS AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER BEARING AREAS AND BLOCKING DETAILS SHOWN ON THIS DETAIL.

6. CONCRETE SHALL BE 3000 PSI MIN. 28 DAY COMPRESSIVE STRENGTH.

STANDARD THRUST BLOCK DETAIL

SCALE: NTS

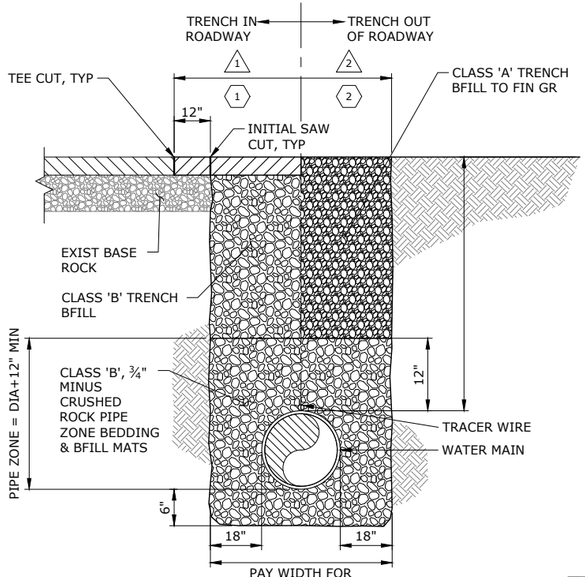
3 / -



CONCRETE COLLAR FOR VALVES IN UNPAVED R/W

SCALE: NTS

4 / -

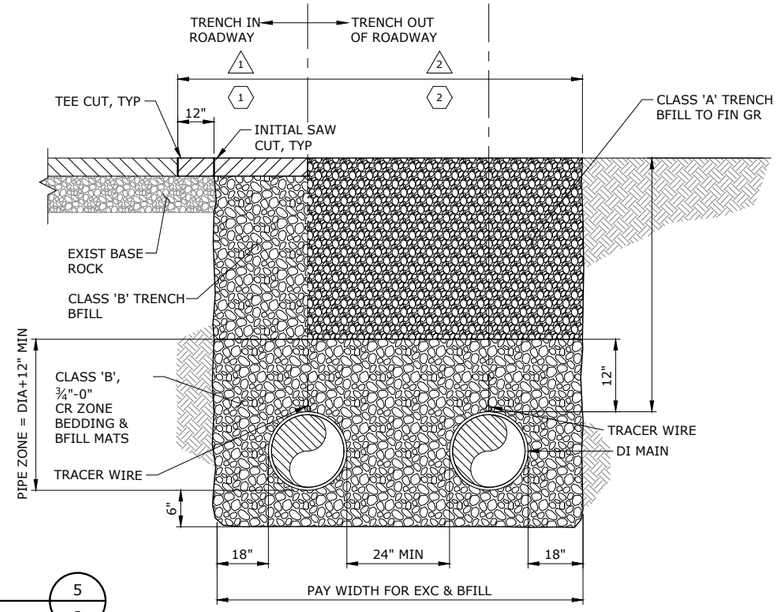


SYMBOL	SURFACE RESTORATION REQUIREMENTS
1	REPLACE REMOVED ASPHALT WITH A MINIMUM DEPTH OF 4", LEVEL 3 AC OR MATCH EXIST PAVEMENT DEPTH, WHICHEVER IS GREATER, TO A MAXIMUM DEPTH OF 6". SEE SPECIFICATIONS.
2	REPLACE TOPSOIL AND BACKFILL WITH CLASS 'A' NATIVE MATERIAL. FINISH TRENCH SURFACE TO MATCH ORIGINAL CONTOURS WITH FINAL 6" LIFT OF TOPSOIL, RESEED AS REQUIRED.

BACKFILL REQUIREMENTS

1. FURNISH AND INSTALL CLASS 'B' ¾"-0" IMPORTED GRANULAR BEDDING, PIPE ZONE AND TRENCH BACKFILL MATERIAL TO PAVEMENT BASE. COMPACT MATERIAL IN LIFTS TO ACHIEVE 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH AASHTO T-99.

2. FURNISH AND INSTALL CLASS 'B' ¾"-0" IMPORTED GRANULAR BEDDING AND PIPE ZONE BACKFILL MATERIAL COMPACTED TO 95% OF MAXIMUM DENSITY PER AASHTO T-99. FURNISH AND INSTALL CLASS 'A' NATIVE TRENCH BACKFILL TO FINISH GRADE COMPACTED TO 90% MAXIMUM DENSITY PER AASHTO T-99.



TYPICAL PIPE TRENCH DETAILS

SCALE: NTS

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NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS DESIGNED

TMS DRAWN

LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN

RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

MISCELLANEOUS CIVIL DETAILS - 1

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET

GEN-C-6

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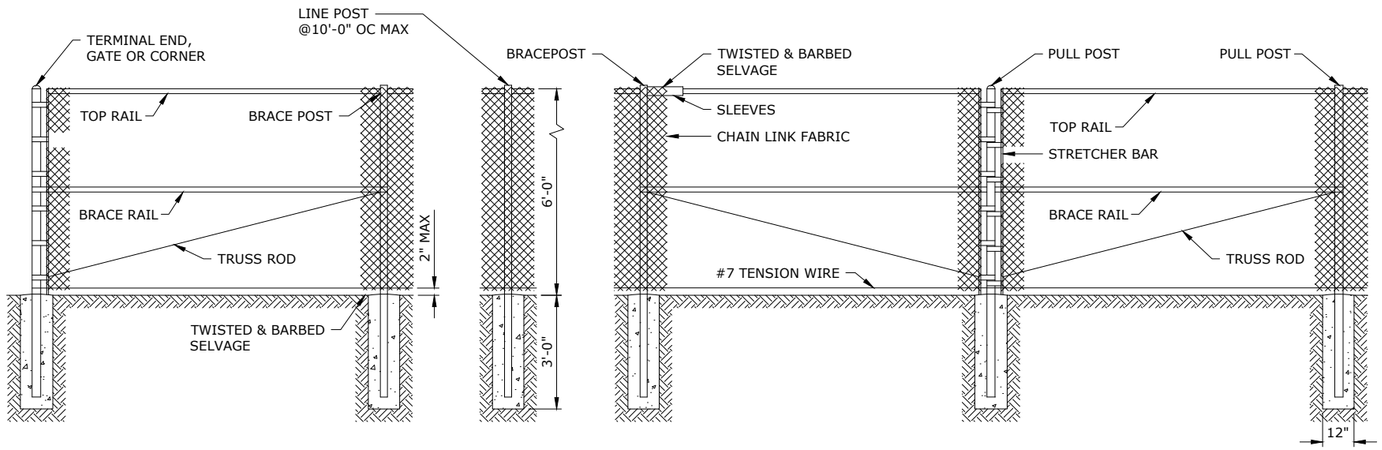
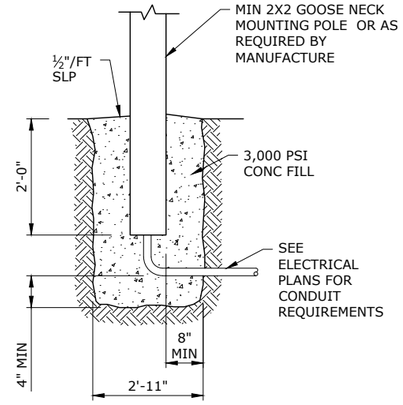
G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\GENERAL\17-2024-OR-GEN-C-2-7.dwg GEN-C-6 9/7/2021 1:01 PM TAYLOR.SPENCER 23.0s (LMS Tech)



CHAIN LINK FENCE

SCALE: NTS

1 RES-C-1



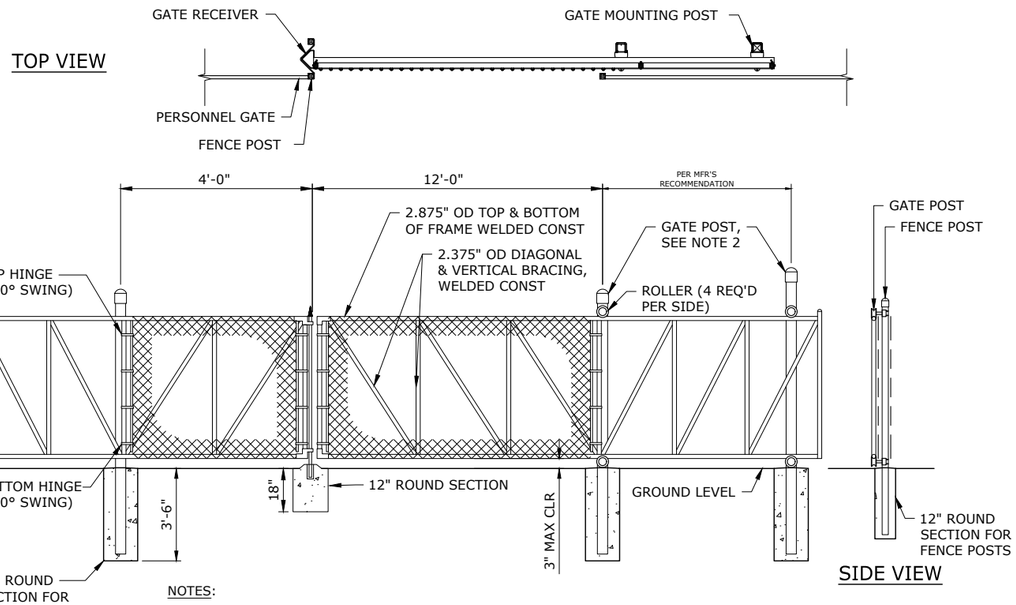
NOTE:

SEE ELECTRICAL PLANS FOR CONDUIT AND GROUND REQUIREMENTS.

FOUNDATION PAD FOR GATE KEY PAD

SCALE: NTS

2 RES-C-1



NOTES:

1. PROVIDE LOCK ASSY AND GATE STOP FOR EACH GATE, SEE SPECS.

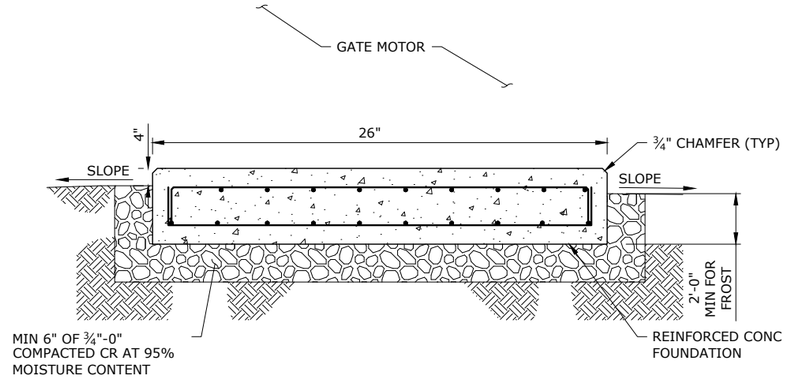
2. OD FOR GATE POSTS SHALL BE SIZED BY GATE MFR FOR THE SPECIFIED GATE OPENING WIDTH.

3. SEE DETAILS 2 AND 4, THIS SHEET, FOR FOUNDATION PAD FOR GATE KEY PAD AND GATE MOTOR FOUNDATION PAD. SEE RES-C-1 FOR LOCATIONS OF EQUIPMENT. COORDINATE LOCATIONS WITH ELECTRICAL DRAWINGS.

MOTORIZED ROLLING GATE WITH PERSONNEL SWING GATE

SCALE: NTS

3 RES-C-1



NOTES:

1. CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS. ALL CONCRETE SHALL CONTAIN 5% (±1%) AIR ENTRAINMENT. SLUMP SHALL BE 1" TO 3".

2. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. GRADE 40 MAY BE USED FOR #3 AND SMALLER TIES AND STIRRUPS. DETAIL AND PLACE ACCORDING TO ACI MANUAL SP-66. UNLESS OTHERWISE NOTED, MINIMUM COVER SHALL BE 1½" FOR #5 AND SMALLER BARS, 2" FOR #6 AND LARGER BAR, AND 3" WHEN PLACED AGAINST EARTH. UNLESS OTHERWISE NOTED, BEND ALL HORIZONTAL REINFORCING A MINIMUM OF 2'-0" AT CORNERS AND WALL INTERSECTIONS.

GATE MOTOR FOUNDATION PAD

SCALE: NTS

4 RES-C-1

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0 ½ 1

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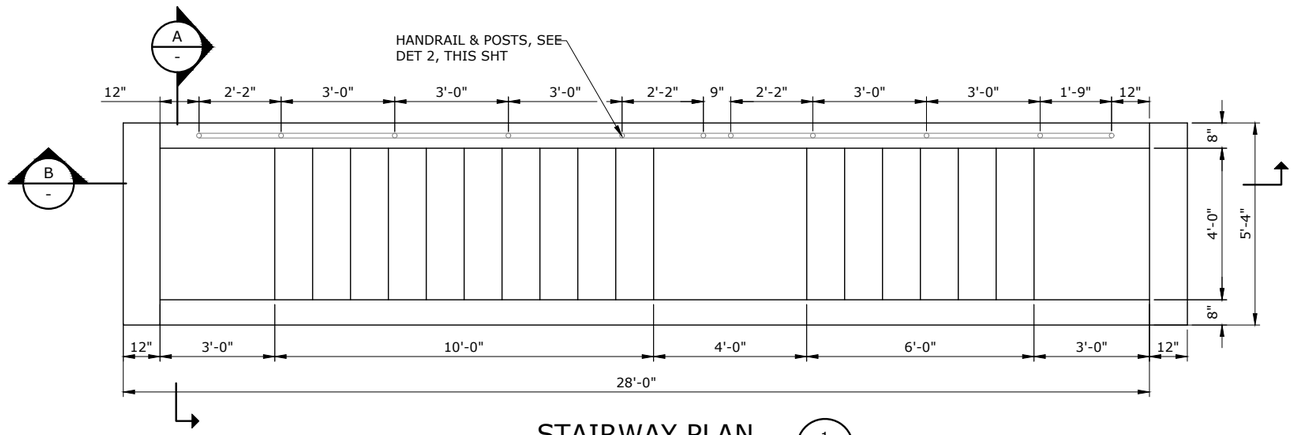
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

MISCELLANEOUS CIVIL DETAILS - 2

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

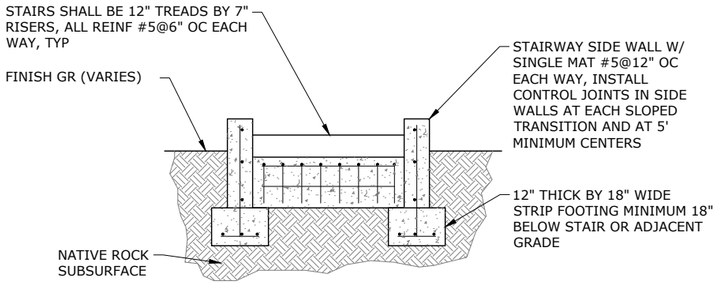
SHEET GEN-C-7



STAIRWAY PLAN

SCALE: 1/2"=1'-0"

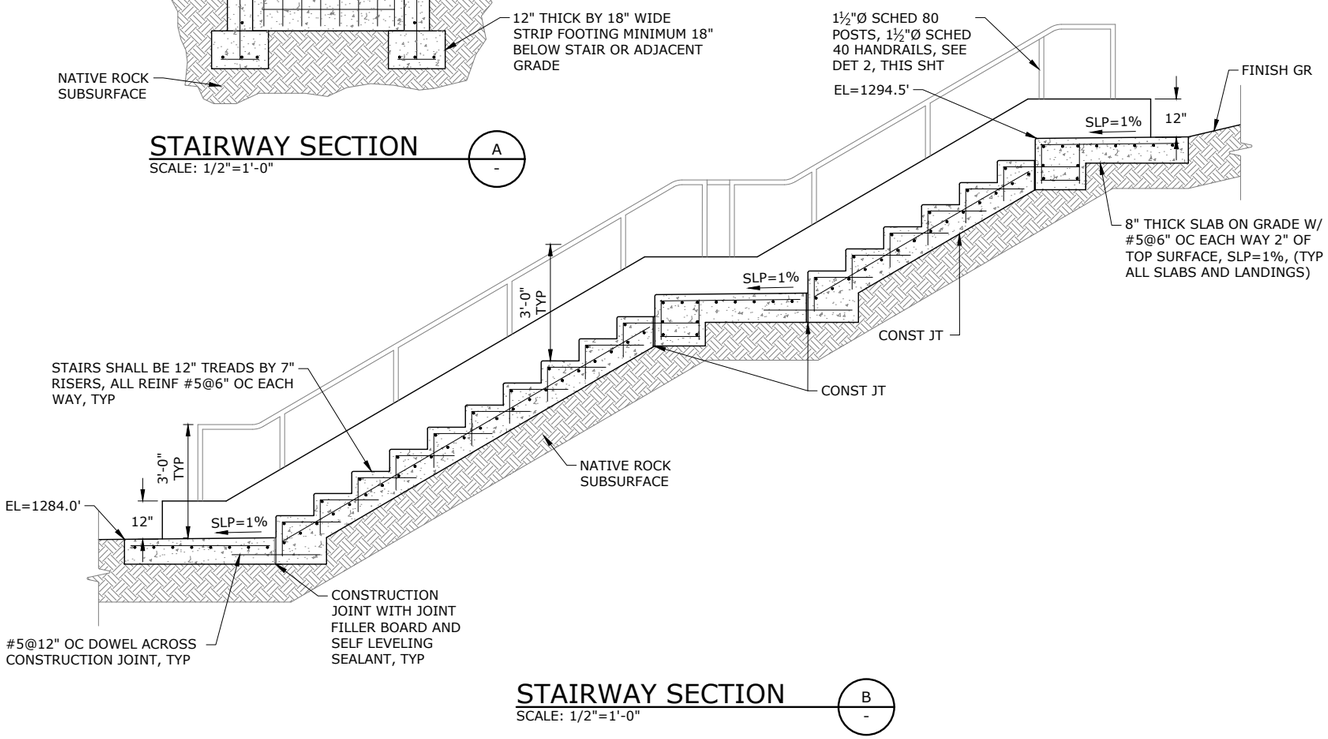
1 RES-C-1



STAIRWAY SECTION

SCALE: 1/2"=1'-0"

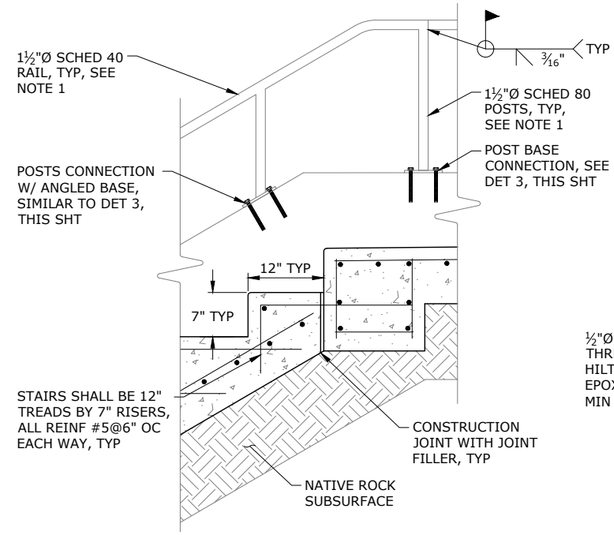
A -



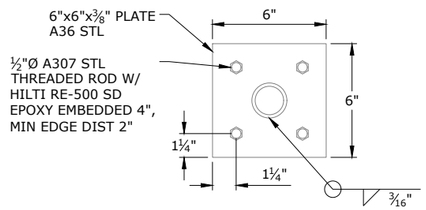
STAIRWAY SECTION

SCALE: 1/2"=1'-0"

B -



SECTION



PLAN

NOTES:

1. ALL MEMBERS SHALL BE A53 GALV STL WITH FULLY WELDED JOINTS.

2. EXTERIOR CONCRETE SLABS, LANDINGS AND STAIRS SHALL HAVE A NON-SLIP BROOM FINISH.

HANDRAIL, POST, AND STAIR DETAIL

SCALE: 1"=1'-0"

2 -

POST BASE CONNECTION

SCALE: 3"=1'-0"

3 -

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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TMS DESIGNED

TMS DRAWN

LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2005 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

MISCELLANEOUS CIVIL DETAILS - 3

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET GEN-C-8

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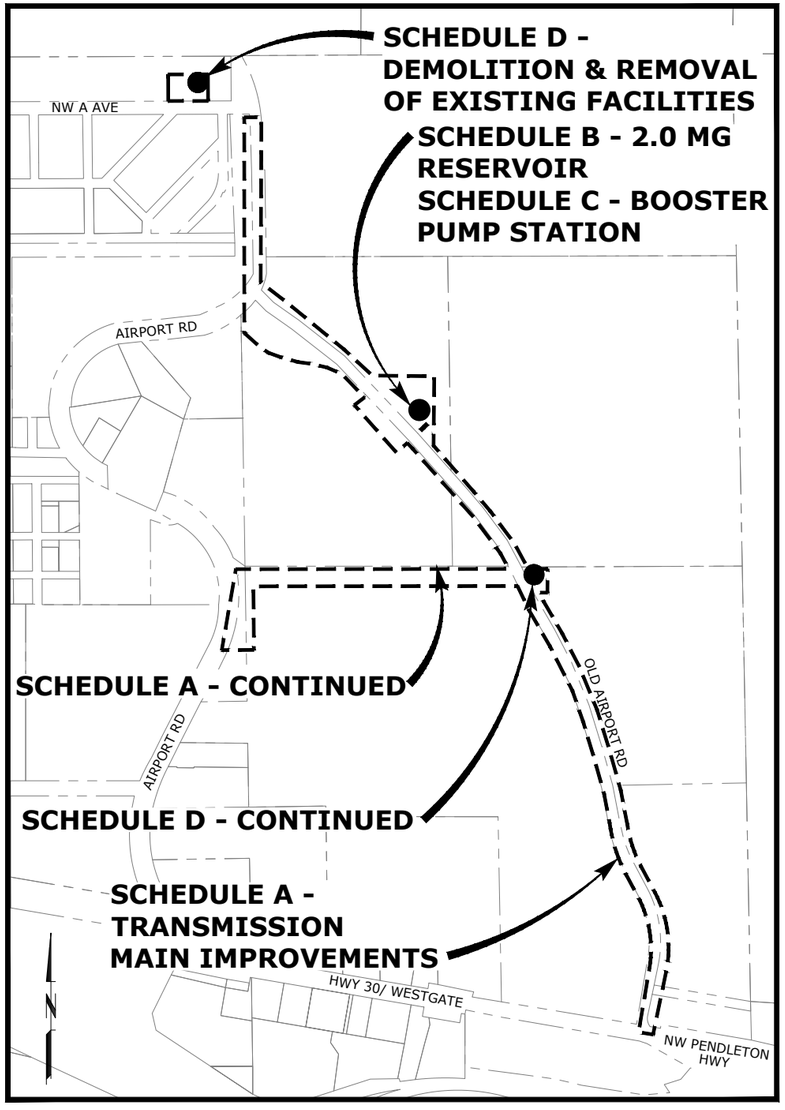
ESC PLAN FOR 1200-C SITES



VICINITY MAP

SCALE: 1"=400'

PROJECT LOCATIONS:

SCHEDULE A – TRANSMISSION MAIN – WITHIN OLD AIRPORT ROAD, WESTERLY THEN NORTH ALONG THE CITY'S UGB, AND ALONG AIRPORT ROAD TO NW A AVENUE.

SCHEDULES B & C – RESERVOIR & PUMP STATION – EAST OF OLD AIRPORT ROAD, ONE-HALF MILE NORTH OF HIGHWAY 30.

LEGEND

AREA OF PROJECT IMPROVEMENTS

PROPERTY DESCRIPTIONS:

SCHEDULE A – TRANSMISSION MAIN – WITHIN CITY OF PENDLETON ROADWAYS AND EASEMENTS IN SECTION 5 OF TOWNSHIP 2 NORTH, RANGE 32 EAST.

SCHEDULES B & C – RESERVOIR & PUMP STATION – TAXLOTS 313 AND 320 IN SECTION 5 OF TOWNSHIP 2 NORTH, RANGE 32 EAST.

SHEET INDEX

EROSION AND SEDIMENT CONTROL PLANS

OWNER / SURVEYOR:

CITY OF PENDLETON, DEPT OF PUBLIC WORKS
500 SW DORIAN AVENUE
PENDLETON, OR 97801
CONTACT: BOB PATTERSON, P.E., CITY PUBLIC WORKS MANAGER
PHONE: (541) 966-0202
FAX: (541) 966-0251

PLANNING / ENGINEERING:

MURRAYSMITH
888 SW 5TH AVENUE, SUITE 1170
PORTLAND, OR 97204
CONTACT: LAEL ALDERMAN, P.E.
PHONE: (503) 225-9010
FAX: (503) 225-9022

NARRATIVE DESCRIPTIONS:

EXISTING SITE CONDITIONS

* UNDEVELOPED SITE; CITY OF PENDLETON OWNED LIGHT INDUSTRIAL; UMATILLA COUNTY ROADWAYS AND RIGHTS-OF-WAY

DEVELOPED CONDITIONS

* WATER RESERVOIR, PUMP STATION BUILDING, ASSOCIATED UTILITIES (WATER AND STORM PIPING), AND WATER MAIN

NATURE OF CONSTRUCTION ACTIVITY AND ESTIMATED TIME TABLE

* MASS EXCAVATION AND GRADING (2/2022-3/2022)
* CONSTRUCTION OF RESERVOIR AND PUMP STATION (3/2022-12/2022)
* FINAL SITE GRADING (11/2022-12/2022)

DISTURBED AREAS = SCHEDULE A: TRANSMISSION MAIN = 3.2 ACRES
SCHEDULES B & C: RESERVOIR & PUMP STATION = 1.3 ACRES

TOTAL DISTURBED AREA = 4.5 ACRES

SITE SOIL CLASSIFICATION

PITS, GRAVEL; ANDERLY SILT LOAM, 7 TO 20 PERCENT SLOPES; WALLA WALLA SILT LOAM, 1 TO 12 PERCENT SLOPES

ATTENTION EXCAVATORS:

OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 503-246-6699.

INSPECTION FREQUENCY:

SITE CONDITION	MINIMUM FREQUENCY
1. ACTIVE PERIOD	DAILY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOWMELT, IS OCCURRING. AT LEAST ONCE EVERY TWO WEEKS, REGARDLESS OF WHETHER OR NOT RUNOFF IS OCCURRING.
2. PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY.	ONCE TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER. ANY NECESSARY MAINTENANCE AND REPAIR MUST BE MADE PRIOR TO LEAVING THE SITE.
3. INACTIVE PERIODS GREATER THAN FOURTEEN (14) CALENDAR DAYS.	ONCE EVERY TWO (2) WEEKS.
4. PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER.	IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION.

* HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS. (SCHEDULE A.8.C.i.(3))
* ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS.
* INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS.
* RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, RETAIN THE ESCP AT THE CONSTRUCTION SITE OR AT ANOTHER LOCATION. (SCHEDULE B.2.A)

STANDARD EROSION AND SEDIMENT CONTROL PLAN DRAWING NOTES:

1. ALL PERMIT REGISTRANTS MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT.
2. THE ESCP MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE MEASURES AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS.
3. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISION TO DEQ OR AGENT.
4. PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION.
5. IDENTIFY, MARK, AND PROTECT (BY FENCING OFF OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS.
6. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED.
7. EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS.
8. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK.
9. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES AND FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS.
10. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS.
11. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES.
12. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE.
13. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, LEFTOVER PAINTS, SOLVENTS, AND GLUES FROM CONSTRUCTION OPERATIONS.
14. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES.
15. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL.
16. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE.
17. IF A STORMWATER TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
18. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR.
19. AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS.
20. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND DURING WET WEATHER.
21. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL.
22. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT. AND BEFORE BMP REMOVAL.
23. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT.
24. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME.
25. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS.
26. PROVIDE PERMANENT EROSION CONTROL MEASURES ON ALL EXPOSED AREAS. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. HOWEVER, DO REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AS EXPOSED AREAS BECOME STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMPS.
28. THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE.
29. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE.

THE PERMITTEE IS REQUIRED TO MEET ALL THE CONDITIONS OF THE 1200C PERMIT. THIS ESCP AND GENERAL CONDITIONS HAVE BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200C PERMIT REQUIREMENTS. IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200C PERMIT REQUIREMENTS SUPERCEDE REQUIREMENTS OF THIS PLAN.

BMP MATRIX FOR CONSTRUCTION PHASES:

REFER TO DEQ GUIDANCE MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE BMP'S.

	CLEARING	MASS GRADING	UTILITY INSTALLATION	STREET CONSTRUCTION	FINAL STABILIZATION	WET WEATHER (OCT. 1 – MAY 31ST)
EROSION PREVENTION						
PRESERVE NATURAL VEGETATION	**X	X	X	X	X	X
GROUND COVER					X	X
PLASTIC SHEETING						X
DUST CONTROL	X	X	X	X		X
TEMPORARY/ PERMANENT SEEDING			X		X	
MATTING					X	X
SEDIMENT CONTROL						
SEDIMENT FENCE (PERIMETER)	**X	X	X	X		X
SEDIMENT FENCE (INTERIOR)			X	X		X
BIO BAGS		X	X	X		X
INLET PROTECTION	**X	X	X	X		X
DEWATERING (GENERAL)			X	X		
STRAW WATTLES			X	X	X	X
FILTER BERM	X	X	X	X		
RUN-OFF CONTROL						
CONSTRUCTION ENTRANCE	**X	X	X	X		
CHECK DAMS	**X	X	X	X	X	
OUTLET PROTECTION	X	X	X	X		
SURFACE ROUGHENING					X	
POLLUTION PREVENTION						
PROPER SIGNAGE	X	X	X	X	X	X
HAZ WASTE MGMT	X	X	X	X	X	X
SPILL KIT ON-SITE	X	X	X	X	X	X
CONCRETE WASH OUT AREA	X	X	X	X		X

** SIGNIFIES BMP THAT WILL BE INSTALLED PRIOR TO ANY GROUND DISTURBING ACTIVITY.

RATIONALE STATEMENT:

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ'S GUIDANCE MANUAL HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMP'S WERE NOT CHOSEN BECAUSE THEY WERE DETERMINED TO NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS TOPOGRAPHIC CONSTRAINTS, ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS, AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESC PLAN, AN ACTION PLAN WILL BE SUBMITTED.

CTF
INITIAL

PERMITTEE'S SITE INSPECTOR: CHRISTIAN FRENCH, CESCL ID# 80062
COMPANY/AGENCY: MURRAYSMITH
PHONE: (971) 357-2176
FAX: (971) 357-2176
E-MAIL: CHRISTIAN.FRENCH@MURRAYSMITH.US
DESCRIPTION OF EXPERIENCE: CESCL TRAINING, AND FIVE YEARS OF EXPERIENCE WITH PREPARATION OF ESC PLANS.

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

CTF DESIGNED
CTF DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2005 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

EROSION & SEDIMENT CONTROL PLAN COVER SHEET

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

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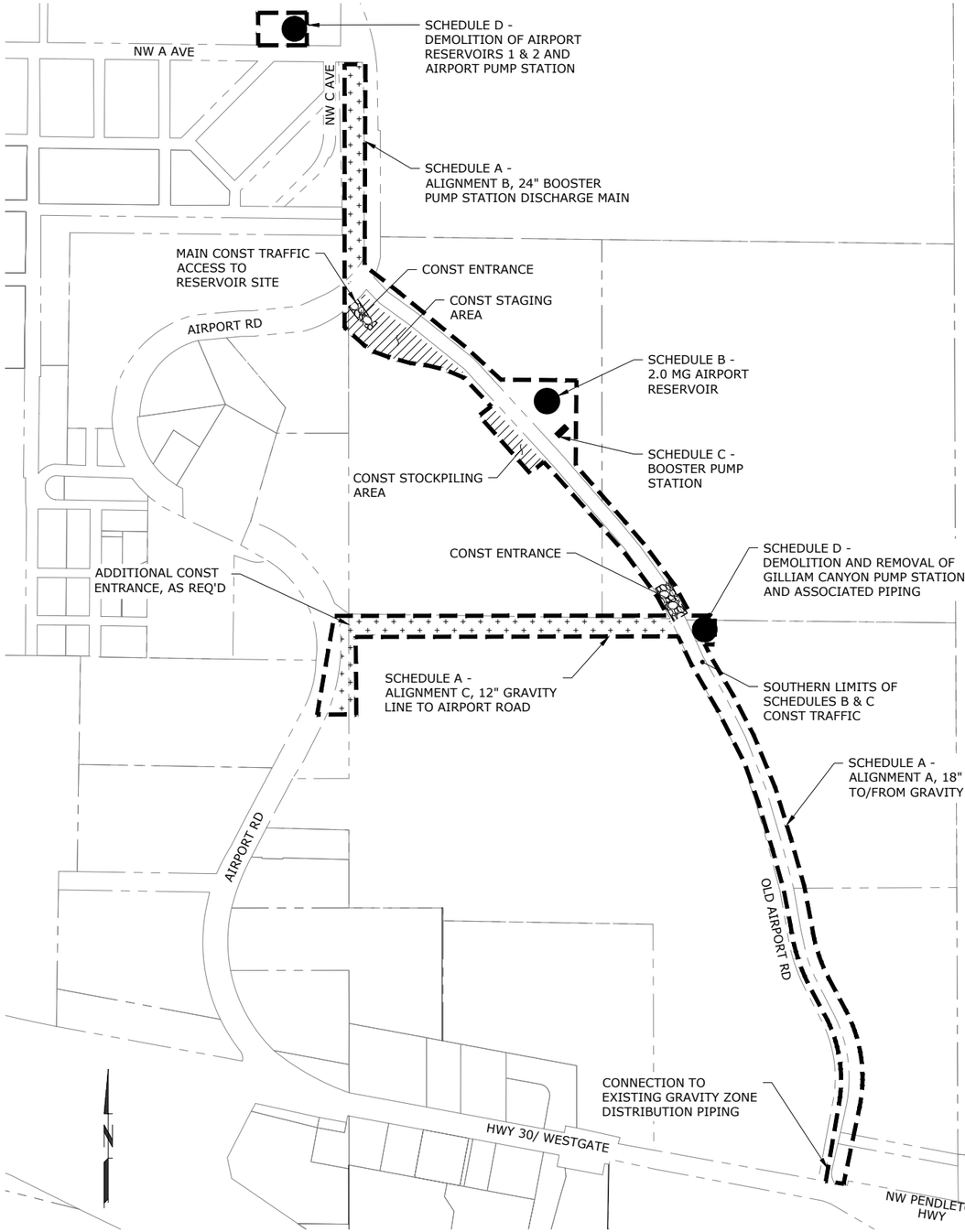


PLAN
SCALE: 1"=300'

LEGEND

- AREA OF PROJECT IMPROVEMENTS
- COMMERCIAL CONST ENTRANCE SEE DET DWG 4-13, SHT ESC-5
- CONSTRUCTION STAGING AND STOCKPILING AREA
- PRESERVE NATURAL VEGETATION AND TEMPORARY SEEDING AREA

EROSION AND SEDIMENT CONTROL BMP IMPLEMENTATION:

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC). MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

2. "STOCK PILE AREA" SHALL BE DESIGNATED PRIOR TO EXCAVATION CUT ACTIVITIES. ALL EXCAVATED MATERIALS SHALL BE HAULED OFFSITE.

3. ALL "SEDIMENT BARRIERS (TO BE INSTALLED AFTER GRADING)" SHALL BE INSTALLED IMMEDIATELY FOLLOWING ESTABLISHMENT OF FINISHED GRADE AS SHOWN ON THESE PLANS.

4. LONG TERM SLOPE STABILIZATION MEASURES "INCLUDING SEEDING, JUTE MATTING, WATTLES, AND ROCK CHECK DAMS" SHALL BE IN-PLACE OVER ALL EXPOSED SOILS BY OCTOBER 1.

5. THE STORM WATER FACILITIES SHALL BE CONSTRUCTED AND LANDSCAPED PRIOR TO THE STORM WATER SYSTEM FUNCTIONING AND SITE PAVING.

6. INLET PROTECTION SHALL BE IN-PLACE IMMEDIATELY FOLLOWING PAVING ACTIVITIES.

GRADING, UTILITY EROSION, AND SEDIMENT CONSTRUCTION NOTES:

1. SEED USED FOR TEMPORARY OR PERMANENT SEEDING SHALL BE COMPOSED OF ONE OF THE FOLLOWING MIXTURES, UNLESS OTHERWISE AUTHORIZED:
   - A. VEGETATED CORRIDOR AREAS REQUIRE NATIVE SEED MIXES. SEE RESTORATION PLAN FOR APPROPRIATE SEED MIX.
   - B. DWARF GRASS MIX (MINIMUM 100 LB/AC)
     - i. DWARF PERENNIAL RYEGRASS (80% BY WEIGHT)
     - ii. CREEPING RED FESCUE (20% BY WEIGHT)
   - C. STANDARD HEIGHT GRASS MIX (MINIMUM 100 LB/AC)
     - i. ANNUAL RYEGRASS (40% BY WEIGHT)
     - ii. TURF-TYPE FESCUE (60% BY WEIGHT)

2. SLOPES AND DISTURBED AREA TO RECEIVE TEMPORARY OR PERMANENT SEEDING SHALL HAVE THE SURFACE ROUGHENED BY MEANS OF TRACK-WALKING OR THE USE OF OTHER APPROVED IMPLEMENTS. SURFACE ROUGHENING IMPROVES SEED BEDDING AND REDUCES RUN-OFF VELOCITY.

3. LONG TERM SLOPE AND DISTURBED AREAS STABILIZATION MEASURES SHALL INCLUDE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER VIA SEEDING WITH APPROVED MIX AND APPLICATION RATE. SEE SPECIFICATIONS. IN ADDITION, ALL SLOPES OF 2:1 OR GREATER SHALL RECEIVE MATTING.

4. TEMPORARY SLOPE AND DISTURBED AREA STABILIZATION MEASURES SHALL INCLUDE: COVERING EXPOSED SOIL WITH PLASTIC SHEETING, STRAW MULCHING, WOOD CHIPS, OR OTHER APPROVED MEASURES, IN ACCORDANCE WITH SECTION 31 22 13, ROUGH GRADING.

5. STOCKPILED SOIL OR STRIPPINGS SHALL BE HAULED OFFSITE. DURING "WET WEATHER" PERIODS, STOCKPILES SHALL BE COVERED WITH PLASTIC SHEETING OR STRAW MULCH. SEDIMENT FENCE IS REQUIRED AROUND THE PERIMETER OF THE STOCKPILE.

6. EXPOSED CUT OR FILL AREAS SHALL BE STABILIZED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS OR MATS, MID-SLOPE SEDIMENT FENCES OR WATTLES, OR OTHER APPROPRIATE MEASURES. SLOPES EXCEEDING 25% MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES.

7. AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, PLASTIC SHEETING, STRAW MULCHING, OR OTHER APPROVED MEASURES.

8. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, TIRE WASHES, STREET SWEEPING, AND VACUUMING MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS IN THE VICINITY OF THE SITE USED FOR HAULING SOIL ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

9. ACTIVE INLETS TO STORM WATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.

10. SATURATED MATERIALS THAT ARE HAULED OFF-SITE MUST BE TRANSPORTED IN WATER-TIGHT TRUCKS TO ELIMINATE SPILLAGE OF SEDIMENT AND SEDIMENT-LADEN WATER.

11. AN AREA SHALL BE PROVIDED FOR THE WASHING OUT OF CONCRETE TRUCKS IN A LOCATION THAT DOES NOT PROVIDE RUN-OFF THAT CAN ENTER THE STORM WATER SYSTEM. IF THE CONCRETE WASH-OUT AREA CAN NOT BE CONSTRUCTED GREATER THAN 50' FROM ANY DISCHARGE POINT, SECONDARY MEASURES SUCH AS BERM OR TEMPORARY SETTLING PITS MAY BE REQUIRED. THE WASH-OUT SHALL BE LOCATED WITHIN SIX FEET OF TRUCK ACCESS AND BE CLEANED WHEN IT REACHES 50% OF THE CAPACITY.

12. SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE SHALL NOT BE TRANSFERRED TO THE STORM WATER SYSTEM. SWEEPINGS SHALL BE PICKED UP AND DISPOSED IN THE TRASH.

13. AVOID PAVING IN WET WEATHER WHEN PAVING CHEMICALS CAN RUN-OFF INTO THE STORM WATER SYSTEM.

14. USE BMPS SUCH AS CHECK-DAMS, BERMS, AND INLET PROTECTION TO PREVENT RUN-OFF FROM REACHING DISCHARGE POINTS.

15. COVER CATCH BASINS, MANHOLES, AND OTHER DISCHARGE POINTS WHEN APPLYING SEAL COAT, TACK COAT, ETC TO PREVENT INTRODUCING THESE MATERIALS TO THE STORM WATER SYSTEM.

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

CTF DESIGNED
CTF DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

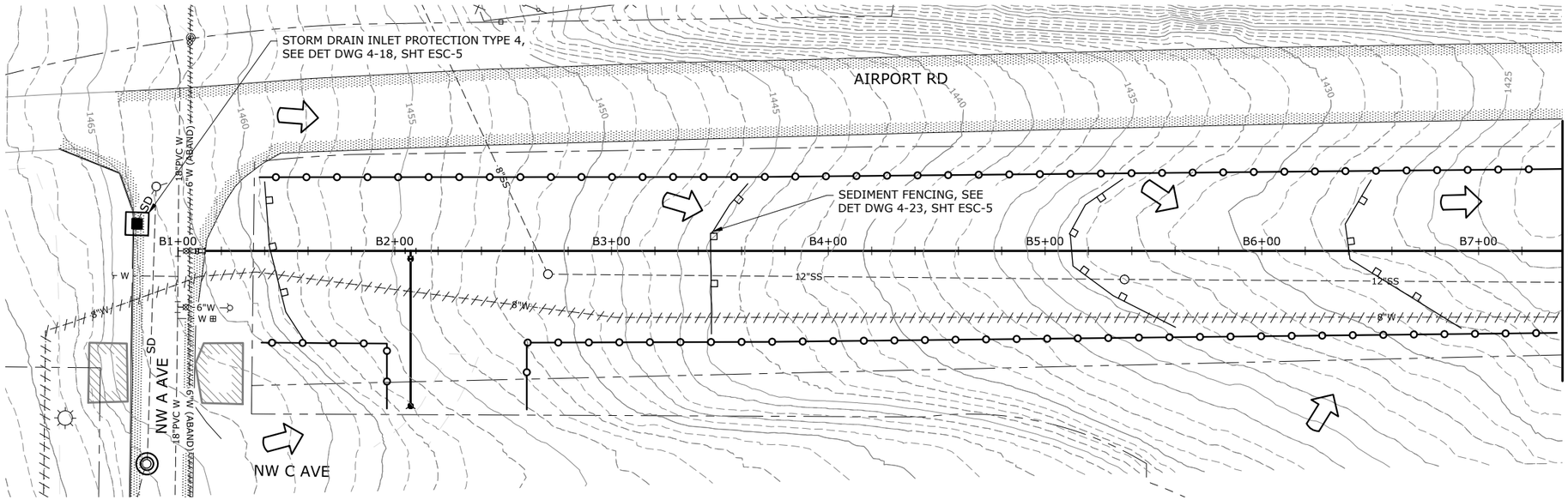
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

EROSION & SEDIMENT CONTROL PLAN
ESC PLAN OVERVIEW

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
ESC-2
15 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\ESC\17-2024-OR-ESC-2-4.dwg ESC-2 9/7/2021 1:02 PM TAYLOR.SPENCER 23.0s (LMS Tech)



TYPICAL EROSION CONTROL MEASURES FOR ALIGNMENT NEAR STREET, STA B1+00 TO STA B7+40 (SEE SHT TM-C-8 AND TM-C-9)

PLAN

SCALE: 1"=30'

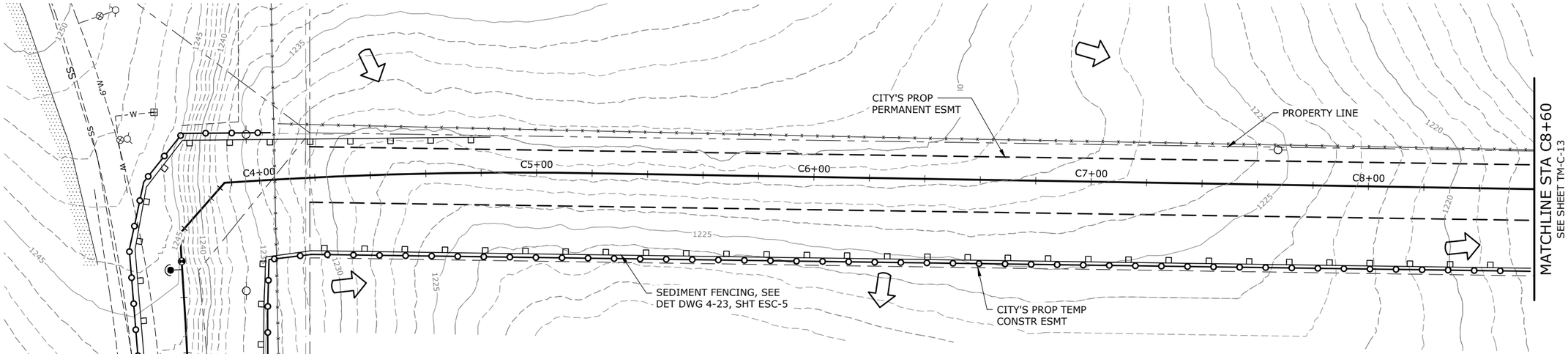
CONSTRUCTION NOTES:

1. SEED USED FOR TEMPORARY OR PERMANENT SEEDING SHALL BE COMPOSED OF ONE OF THE FOLLOWING MIXTURES, UNLESS OTHERWISE AUTHORIZED:
   - A. VEGETATED CORRIDOR AREAS REQUIRE NATIVE SEED MIXES. SEE RESTORATION PLAN FOR APPROPRIATE SEED MIX.
   - B. DWARF GRASS MIX (MINIMUM 100 LB/AC)
     - i. DWARF PERENNIAL RYEGRASS (80% BY WEIGHT)
     - ii. CREEPING RED FESCUE (20% BY WEIGHT)
   - C. STANDARD HEIGHT GRASS MIX (MINIMUM 100 LB/AC)
     - i. ANNUAL RYEGRASS (40% BY WEIGHT)
     - ii. TURF-TYPE FESCUE (60% BY WEIGHT)

2. BEST MANAGEMENT PRACTICES (BMP) SHOWN ARE THOSE OF A TYPICAL PIPE ALIGNMENT ADJACENT TO A ROADWAY. PROVIDE BMP AS NECESSARY TO SATISFY REQUIREMENTS OF THE 1200-C PERMIT.

LEGEND

- EXISTING CONTOURS (1')
- EXISTING CONTOURS (5')
- DRAINAGE FLOW DIRECTION
- SEDIMENT FENCING
- PLASTIC MESH FENCE
- CONSTRUCTION ENTRANCE



TYPICAL EROSION CONTROL MEASURES FOR CROSS-COUNTRY ALIGNMENT, STA C3+00 TO STA C8+60 (SEE SHT TM-C-12 TO TM-C-13)

PLAN

SCALE: 1"=20'

NOTES:

1. BMP SHOWN ARE THOSE OF A TYPICAL PIPE ALIGNMENT AWAY FROM DEVELOPED ROADWAYS. PROVIDE BMP AS NECESSARY TO SATISFY REQUIREMENTS OF THE 1200-C PERMIT.

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

CTF DESIGNED

CTF DRAWN

LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2005 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

EROSION & SEDIMENT CONTROL PLAN SCHEDULE A - TRANSMISSION MAIN IMPROVEMENTS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET ESC-3

LEGEND

EXISTING CONTOURS (1')	289	DRAINAGE FLOW DIRECTION	
EXISTING CONTOURS (5')	290	SEDIMENT FENCING	
PROPOSED CONTOURS (1')		PLASTIC MESH FENCE	
PROPOSED CONTOURS (5')	280		

EROSION AND SEDIMENT CONTROL BMP IMPLEMENTATION:

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC). MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

2. "STOCK PILE AREA" SHALL BE DESIGNATED PRIOR TO EXCAVATION CUT ACTIVITIES. ALL EXCAVATED MATERIALS SHALL BE HAULED OFFSITE.

3. ALL "SEDIMENT BARRIERS (TO BE INSTALLED AFTER GRADING)" SHALL BE INSTALLED IMMEDIATELY FOLLOWING ESTABLISHMENT OF FINISHED GRADE AS SHOWN ON THESE PLANS.

4. LONG TERM SLOPE STABILIZATION MEASURES "INCLUDING SEEDING, JUTE MATTING, WATTLES, AND ROCK CHECK DAMS" SHALL BE IN-PLACE OVER ALL EXPOSED SOILS BY OCTOBER 1.

5. THE STORM WATER FACILITIES SHALL BE CONSTRUCTED AND LANDSCAPED PRIOR TO THE STORM WATER SYSTEM FUNCTIONING AND SITE PAVING.

6. INLET PROTECTION SHALL BE IN-PLACE IMMEDIATELY FOLLOWING PAVING ACTIVITIES.

EROSION CONTROL NOTES

1. EMERGENCY EROSION CONTROL MATERIALS MUST BE KEPT ON SITE AT ALL TIMES.
2. INSTALL, INSPECT, CLEAN, AND MAINTAIN SEDIMENT FENCE TO PREVENT SEDIMENT LADEN WATER FROM LEAVING THE SITE THROUGHOUT CONSTRUCTION. SEDIMENT FENCE SHALL BE INSTALLED PARALLEL TO SLOPE CONTOURS. ADDITIONAL SEDIMENT FENCE MAY BE REQUIRED BASED ON SITE CONDITIONS AND MEANS AND METHODS DEVELOPED BY CONTRACTOR. OVERLAY SEDIMENT FENCE 6" MINIMUM AND TURN LAST 6 FEET OF FENCE UPSLOPE (TYPICAL).
3. INSPECT, CLEAN, AND MAINTAIN GRAVEL CONSTRUCTION ENTRANCE TO PREVENT SEDIMENT AND SEDIMENT LADEN WATER FROM LEAVING THE SITE THROUGHOUT CONSTRUCTION.
4. ADDITIONAL TRACKING CONTROL MEASURES SUCH AS A WHEEL WASH MAY BE NECESSARY IF CONSTRUCTION ENTRANCE IS NOT SUFFICIENT.
5. INSTALL SLOPE MATTING AND PLASTIC SHEETING ON ALL SLOPES 2:1 OR GREATER.
6. ON-SITE RUNOFF ACCUMULATION INTO LOW POINTS SHALL BE PUMPED BY THE CONTRACTOR TO A SUITABLE LOCATION, IF REQUIRED.

GRADING, UTILITY EROSION, AND SEDIMENT CONSTRUCTION NOTES:

1. SLOPES AND DISTURBED AREA TO RECEIVE TEMPORARY OR PERMANENT SEEDING SHALL HAVE THE SURFACE ROUGHENED BY MEANS OF TRACK-WALKING OR THE USE OF OTHER APPROVED IMPLEMENTS. SURFACE ROUGHENING IMPROVES SEED BEDDING AND REDUCES RUN-OFF VELOCITY.

2. LONG TERM SLOPE AND DISTURBED AREAS STABILIZATION MEASURES SHALL INCLUDE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER VIA SEEDING WITH APPROVED MIX AND APPLICATION RATE. SEE SPECIFICATIONS. IN ADDITION, ALL SLOPES OF 2:1 OR GREATER SHALL RECEIVE MATTING.

3. TEMPORARY SLOPE AND DISTURBED AREA STABILIZATION MEASURES SHALL INCLUDE: COVERING EXPOSED SOIL WITH PLASTIC SHEETING, STRAW MULCHING, WOOD CHIPS, OR OTHER APPROVED MEASURES, IN ACCORDANCE WITH SECTION 31 22 13, ROUGH GRADING.

4. STOCKPILED SOIL OR STRIPPINGS SHALL BE HAULED OFFSITE. DURING "WET WEATHER" PERIODS, STOCKPILES SHALL BE COVERED WITH PLASTIC SHEETING OR STRAW MULCH. SEDIMENT FENCE IS REQUIRED AROUND THE PERIMETER OF THE STOCKPILE.

5. EXPOSED CUT OR FILL AREAS SHALL BE STABILIZED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS OR MATS, MID-SLOPE SEDIMENT FENCES OR WATTLES, OR OTHER APPROPRIATE MEASURES. SLOPES EXCEEDING 25% MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES.

6. AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, PLASTIC SHEETING, STRAW MULCHING, OR OTHER APPROVED MEASURES.

7. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, TIRE WASHES, STREET SWEEPING, AND VACUUMING MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS IN THE VICINITY OF THE SITE USED FOR HAULING SOIL ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

8. ACTIVE INLETS TO STORM WATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.

9. SATURATED MATERIALS THAT ARE HAULED OFF-SITE MUST BE TRANSPORTED IN WATER-TIGHT TRUCKS TO ELIMINATE SPILLAGE OF SEDIMENT AND SEDIMENT-LADEN WATER.

10. AN AREA SHALL BE PROVIDED FOR THE WASHING OUT OF CONCRETE TRUCKS IN A LOCATION THAT DOES NOT PROVIDE RUN-OFF THAT CAN ENTER THE STORM WATER SYSTEM. IF THE CONCRETE WASH-OUT AREA CAN NOT BE CONSTRUCTED GREATER THAN 50' FROM ANY DISCHARGE POINT, SECONDARY MEASURES SUCH AS BERM OR TEMPORARY SETTLING PITS MAY BE REQUIRED. THE WASH-OUT SHALL BE LOCATED WITHIN SIX FEET OF TRUCK ACCESS AND BE CLEANED WHEN IT REACHES 50% OF THE CAPACITY.

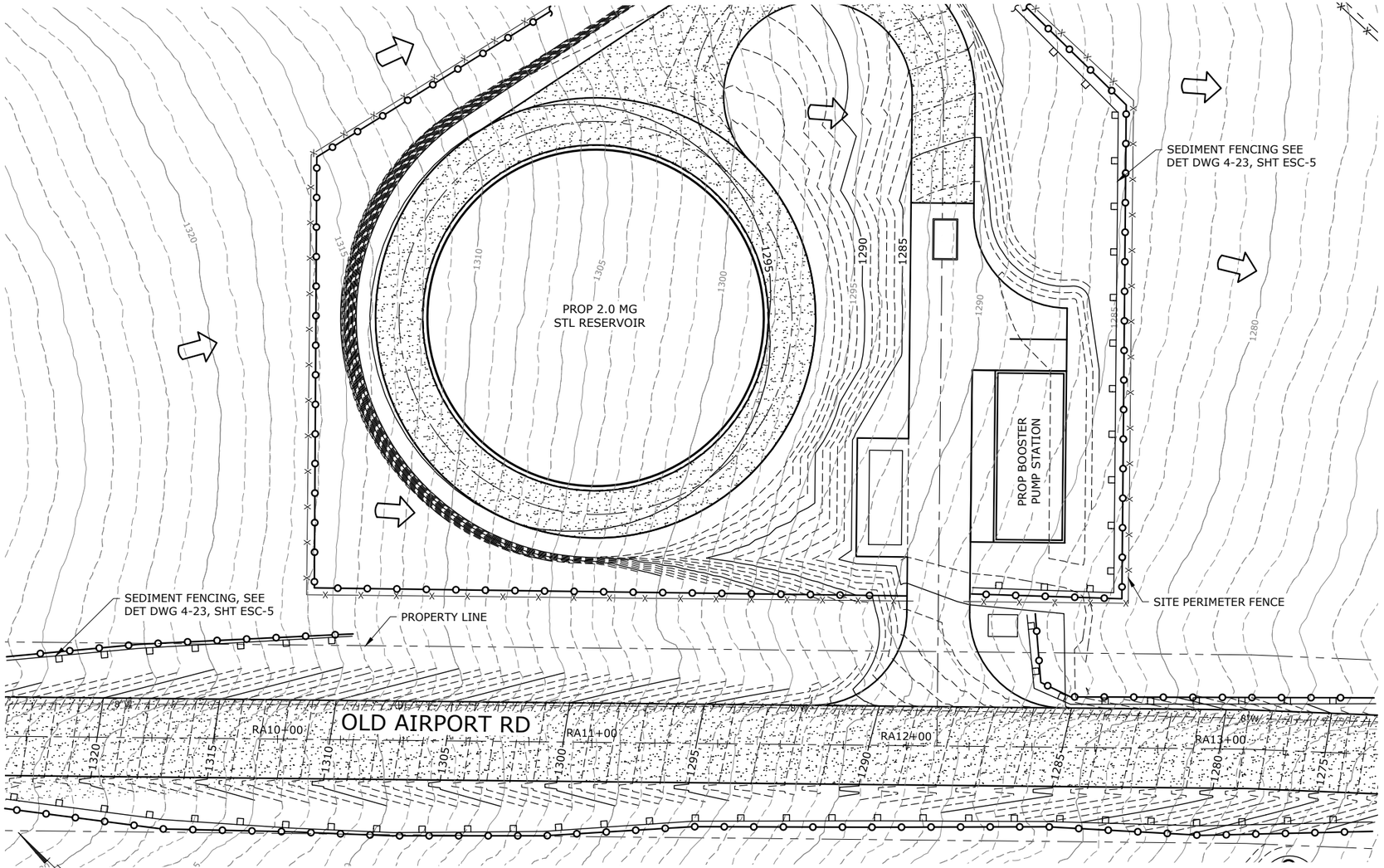
11. SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE SHALL NOT BE TRANSFERRED TO THE STORM WATER SYSTEM. SWEEPINGS SHALL BE PICKED UP AND DISPOSED IN THE TRASH.

12. AVOID PAVING IN WET WEATHER WHEN PAVING CHEMICALS CAN RUN-OFF INTO THE STORM WATER SYSTEM.

13. USE BMPS SUCH AS CHECK-DAMS, BERMS, AND INLET PROTECTION TO PREVENT RUN-OFF FROM REACHING DISCHARGE POINTS.

14. COVER CATCH BASINS, MANHOLES, AND OTHER DISCHARGE POINTS WHEN APPLYING SEAL COAT, TACK COAT, ETC TO PREVENT INTRODUCING THESE MATERIALS TO THE STORM WATER SYSTEM.

15. FOLLOWING CLEARING ACTIVITIES, CONTRACTOR SHALL COVER ENTIRE SCHEDULES B & C SITE (RESERVOIR AND BOOSTER STATION) WITH PERMANENT DEPTH OF 2 INCHES OF 3/4"-0" CRUSHED ROCK FOR WEED AND DUST CONTROL. CRUSHED ROCK SURFACING SHALL EXTEND 2 FEET BEYOND SITE PERIMETER FENCING.



TYPICAL EROSION CONTROL MEASURES FOR OLD AIRPORT RD GRVL ROADWAY IMPVTS, STA RA9+10 TO STA RA13+30 (SEE SHT RES-C-16 AND RES-C-17)

PLAN
SCALE: 1"=20'

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

CTF DESIGNED
CTF DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

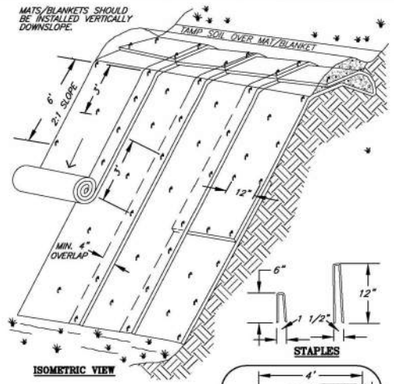
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

EROSION & SEDIMENT CONTROL PLAN SCHEDULES B & C - RESERVOIR AND BPS SITE

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
ESC-4
17 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\ESC\17-2024-OR-ESC-2-4.dwg ESC-4 9/7/2021 1:02 PM TAYLOR.SPENCER 23.0s (LMS Tech)



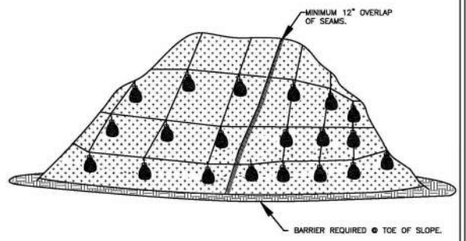
TYPICAL SLOPE SOIL STABILIZATION

NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
4. STAKING OR STAPLING LAYOUT PER MANUFACTURERS SPECIFICATIONS.

FILE: BLNKTSLP

MATTING - SLOPE INSTALLATION

DETAIL DRAWING 4–1 REVISED 01–09

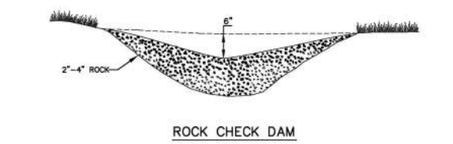


PLASTIC SHEETING

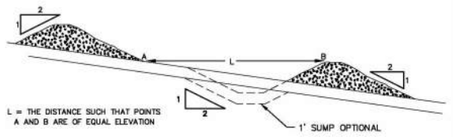
NOTES:
1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. BARRIER REQUIRED @ TOE OF STOCK PILE.
3. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.

PLASTIC SHEETING

DETAIL DRAWING 4–3 REVISED 01–09



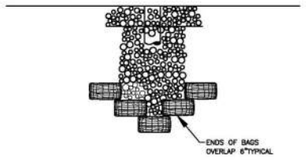
ROCK CHECK DAM



SPACING BETWEEN CHECK DAMS

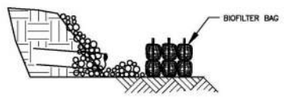
CHECK DAM - ROCK

DETAIL DRAWING 4–4 REVISED 01–09



PLAN VIEW

NTS

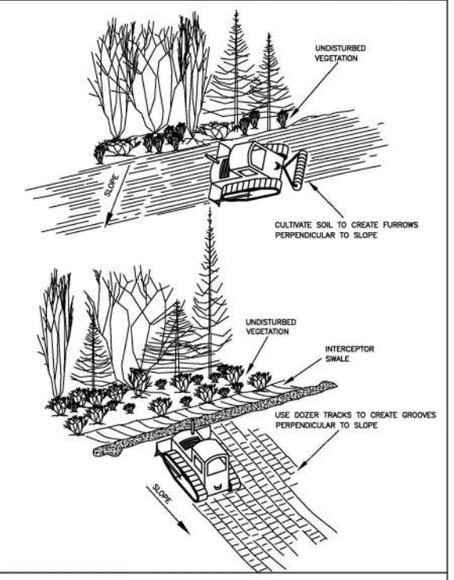


PROFILE

NOTE:
1. BIO BAGS ONLY REQUIRED WHEN DISCHARGING SEDIMENT LADEN WATER.
2. STAKING OF BAGS REQUIRED WITH EITHER METHOD USING (2) 1"x 2" WOOD STAKES OR APPROVED EQUAL PER BAG.

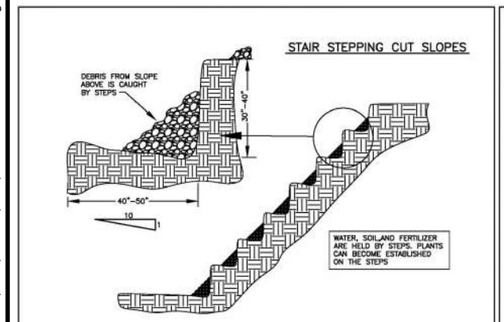
OUTLET PROTECTION - RIP RAP

DETAIL DRAWING 4–7 REVISED 01–09



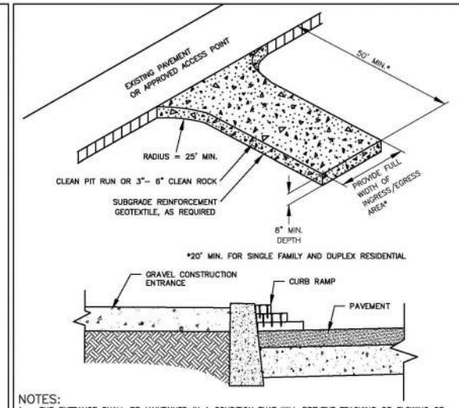
SURFACE ROUGHENING - CAT TRACKING

DETAIL DRAWING 4–10 REVISED 01–09



SURFACE ROUGHENING - STAIR STEPPING/GROOVING

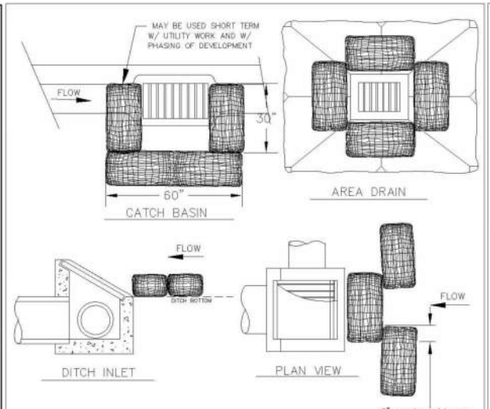
DETAIL DRAWING 4–11 REVISED 01–09



NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT–OF–WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT–OF– WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. WHERE RUNOFF CONTAINING SEDIMENT LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
5. DIMENSIONS
   SINGLE FAMILY
   20' LONG BY 20' WIDE 8" DEEP OF ¾" MINUS CLEAN ROCK.
   COMMERCIAL
   50' LONG BY 20' WIDE 3–6" CLEAN ROCK, GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB–SOIL PUMPING.

CONSTRUCTION ENTRANCE

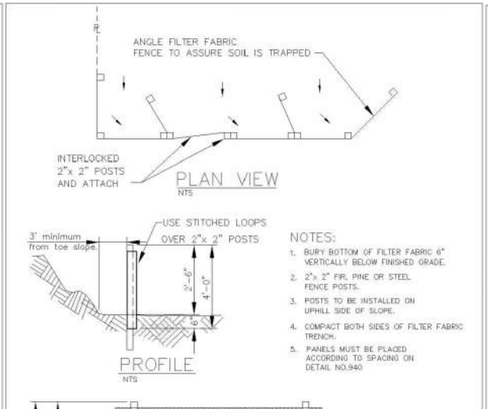
DETAIL DRAWING 4–13 REVISED 01–09



NOTES:
1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
2. BIO–FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2"WOODEN STAKES OR APPROVED EQUAL PER BAG.
3. WHEN USING 30" BIO–BAGS TO PROTECT A CATCH BASIN YOU MUST HAVE 4 BAGS AND THEY SHALL BE OVERLAPPED BY 6".

INLET PROTECTION TYPE 4

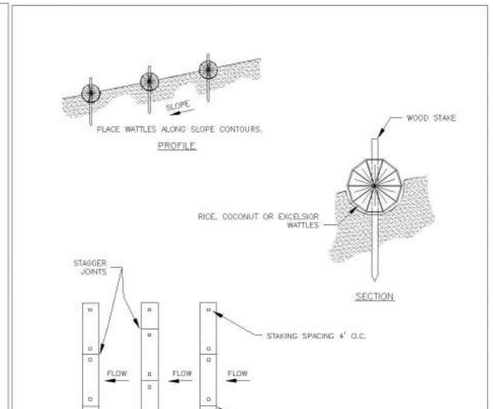
DETAIL DRAWING 4–18 REVISED 01–09



NOTES:
1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
2. 2"x 2" FIR, PINE OR STEEL FENCE POSTS.
3. POSTS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
4. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
5. PANELS MUST BE PLACED ACCORDING TO SPACING ON DETAIL NO.940

SEDIMENT FENCE

DETAIL DRAWING 4–23 REVISED 01–09



NOTES:
1. STAKING SPECIFICATIONS:
   a. 1"x2" WOODEN STAKES
   b. ADDITIONAL STAKES MAY BE INSTALLED ON DOWNHILL SIDE OF WATTLES, ON STEEP SLOPE OR HIGHLY EROSIVE SOILS.
2. SPACING IN ACCORDANCE WITH DETAIL 940.

WATTLES

DETAIL DRAWING 4–27 REVISED 01–09

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

CTF DESIGNED
CTF DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12–31–21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT

EROSION & SEDIMENT CONTROL DETAILS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
ESC-5
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G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\ESC\17-2024-OR-ESC-2-4.dwg ESC-5 9/7/2021 1:02 PM TAYLOR.SPENCER 23.0s (LMS Tech)

NOTES:

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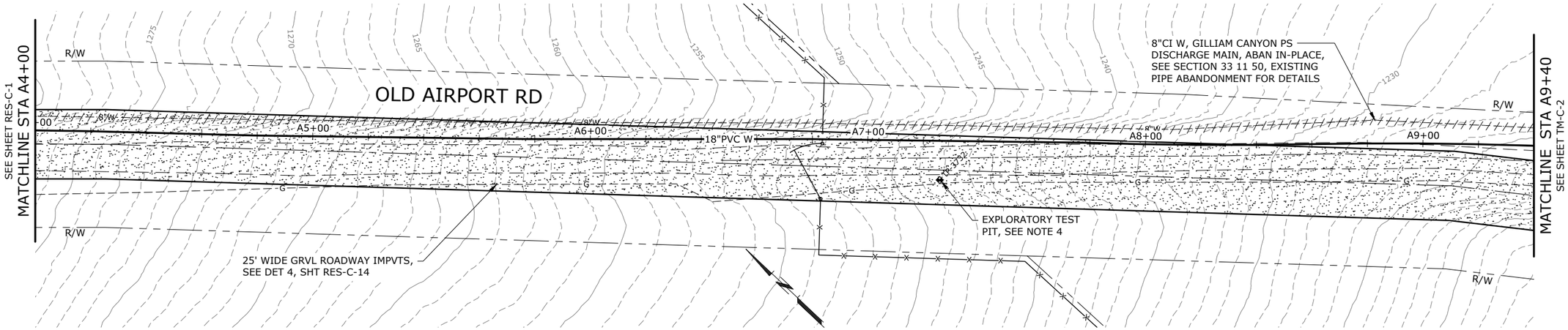
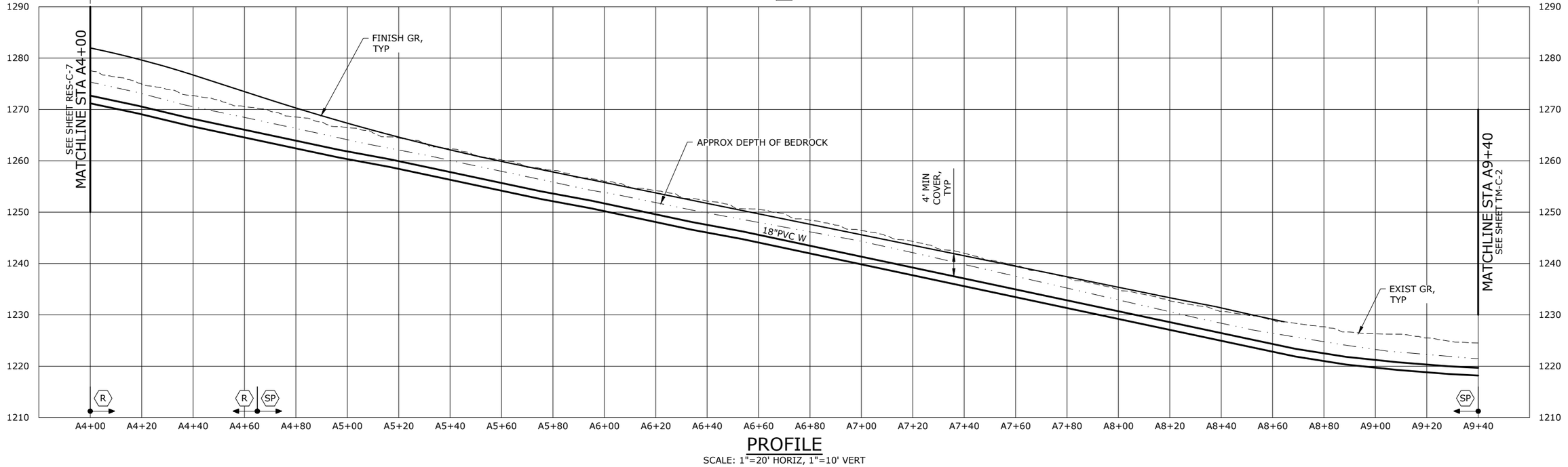
3. FUTURE SANITARY SEWER MAIN TO BE CONSTRUCTED IN WEST SIDE OF OLD AIRPORT ROAD PER 2015 SEWER COLLECTIONS MASTER PLAN.

4. TEST PITS PERFORMED BY CITY CREWS TO DEVELOP APPROXIMATE GRADE AND DEPTH OF BEDROCK ALONG TRANSMISSION MAIN ALIGNMENT.

5. CONTRACTOR SHALL MAINTAIN PROPER DUST CONTROL MEASURES AT ALL TIMES ALONG OLD AIRPORT ROAD DURING ACTIVE AND INACTIVE CONSTRUCTION PERIODS.



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

NOTICE
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TMS
DESIGNED
CTF/DKH
DRAWN
LLA
CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT A, CIP M-32
PLAN & PROFILE
STA A4+00 TO STA A9+40

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-1
19 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE A\17-2024-OR-TM-C.dwg TM-C-1 9/7/2021 12:59 PM TAYLOR.SPENCER 23.0s (LMS Tech)

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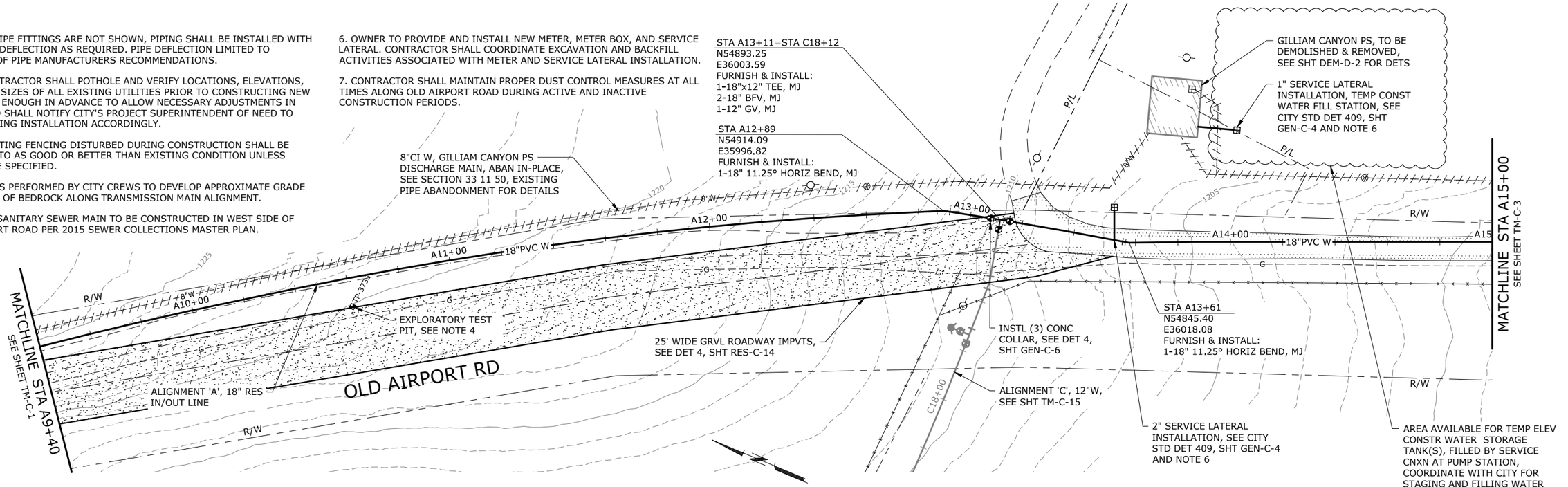
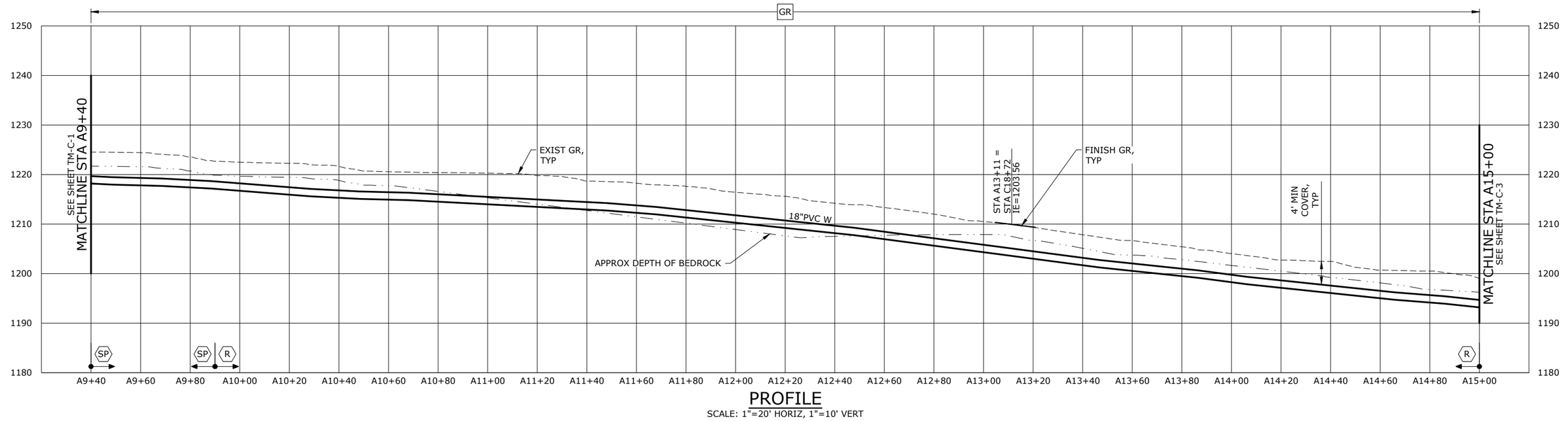


PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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TMS
DESIGNED
CTF/DKH
DRAWN
LLA
CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2005 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT A, CIP M-32
PLAN & PROFILE
STA A9+40 TO STA A15+00

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-2
20 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE A\17-2024-OR-TM-C.dwg TM-C-2 9/7/2021 12:59 PM TAYLOR.SPENCER 23.0s (LMS Tech)

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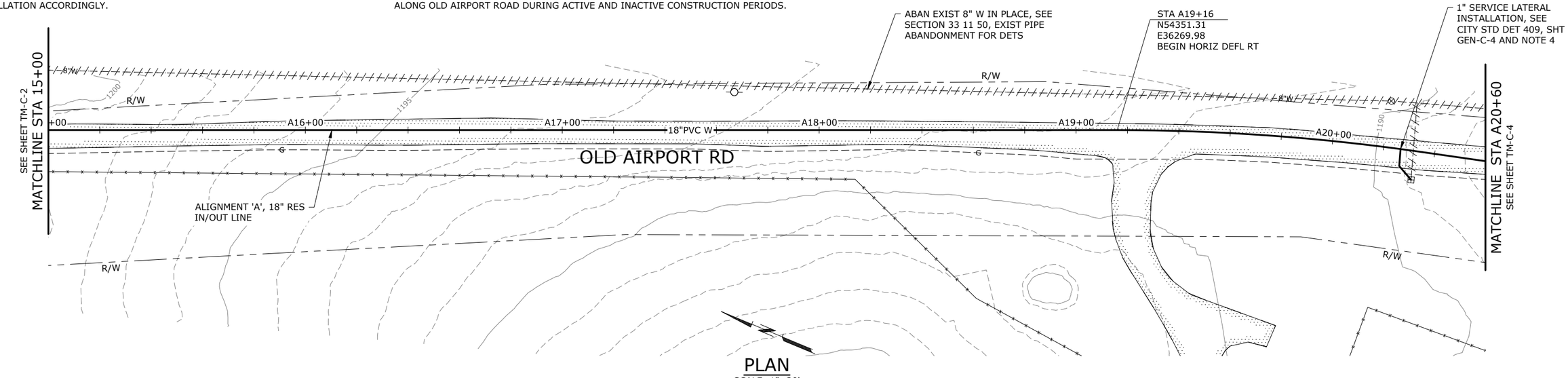

PLAN
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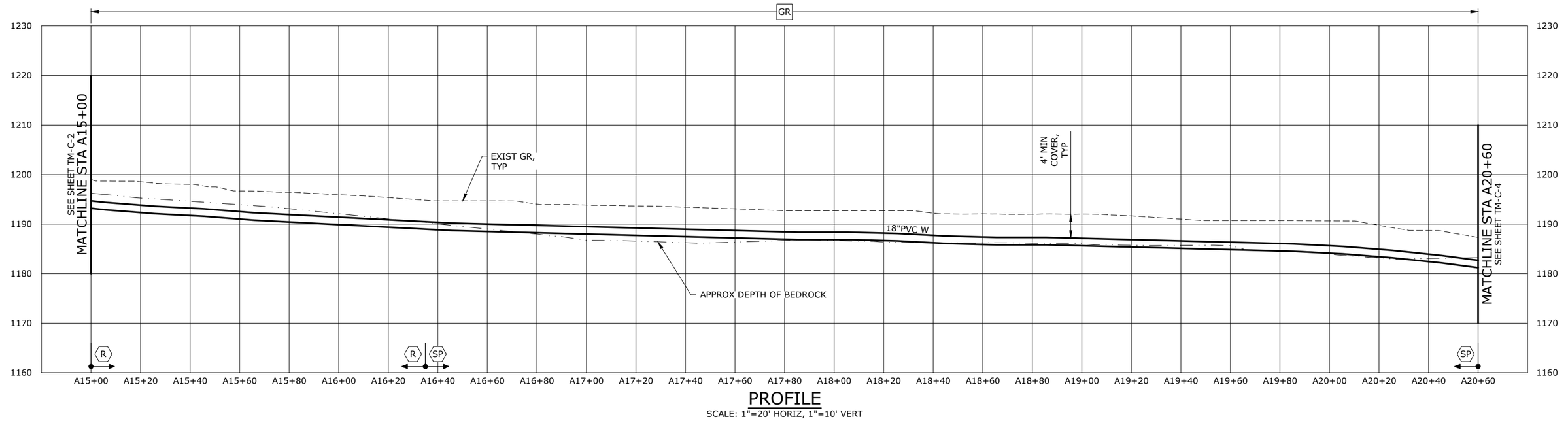

PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

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TMS
DESIGNED
CTF/DKH
DRAWN
LLA
CHECKED

REGISTERED PROFESSIONAL ENGINEER
76386
OREGON
DECEMBER 28, 2005
LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON
INCORPORATED 1880
OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT A, CIP M-32
PLAN & PROFILE
STA A15+00 TO STA A20+60

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-3
21 of 113

NOTES:

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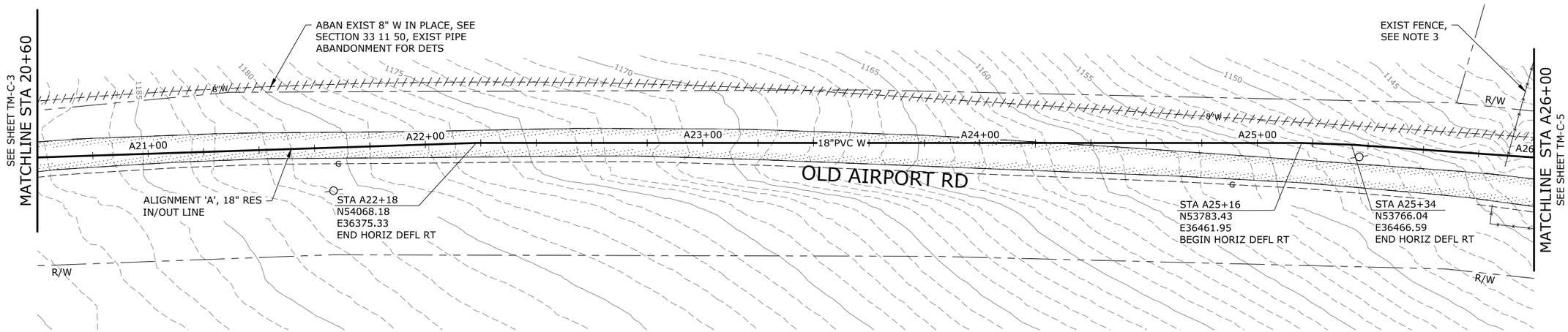

PLAN
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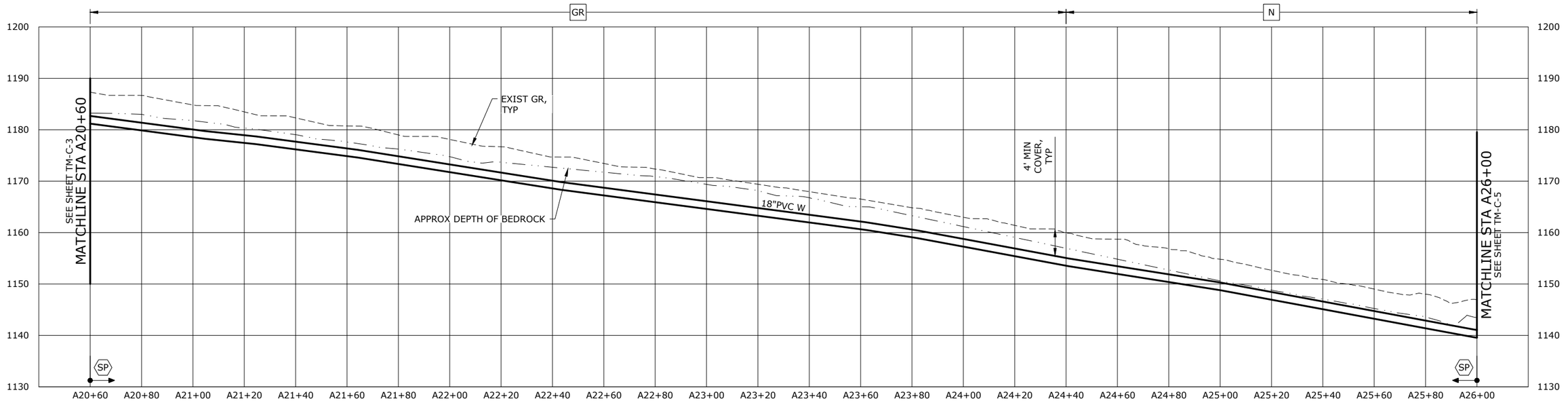

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LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2005 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT A, CIP M-32
PLAN & PROFILE
STA A20+60 TO STA A26+00

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-4
22 of 113

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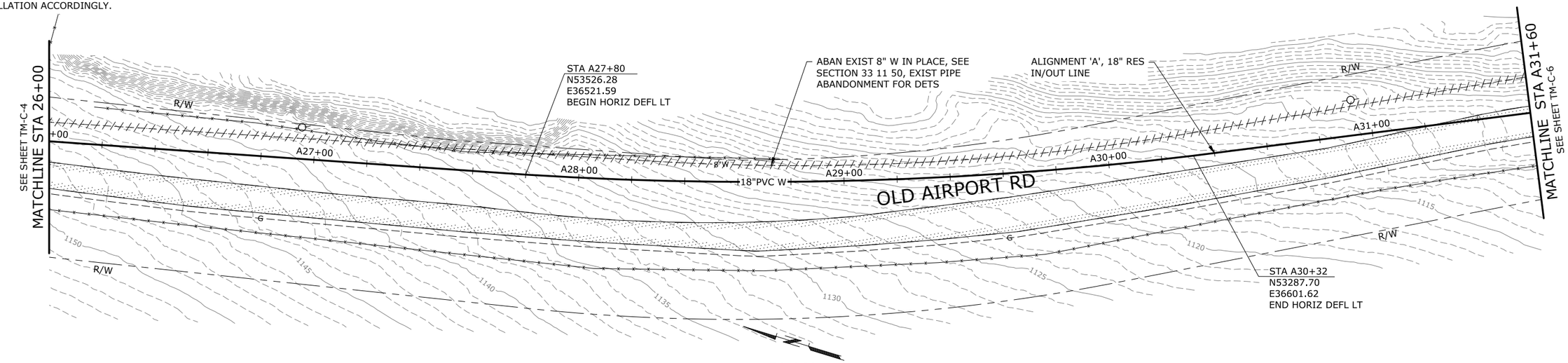
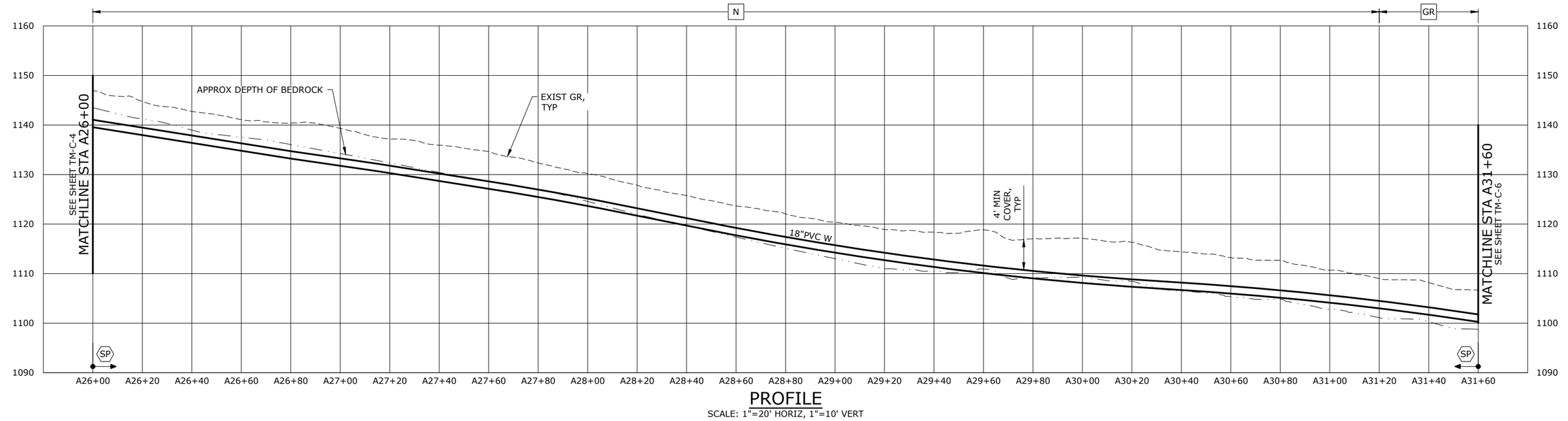


PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

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LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2005 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT A, CIP M-32
PLAN & PROFILE
STA A26+00 TO STA A31+60

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-5
23 of 113

NOTES:

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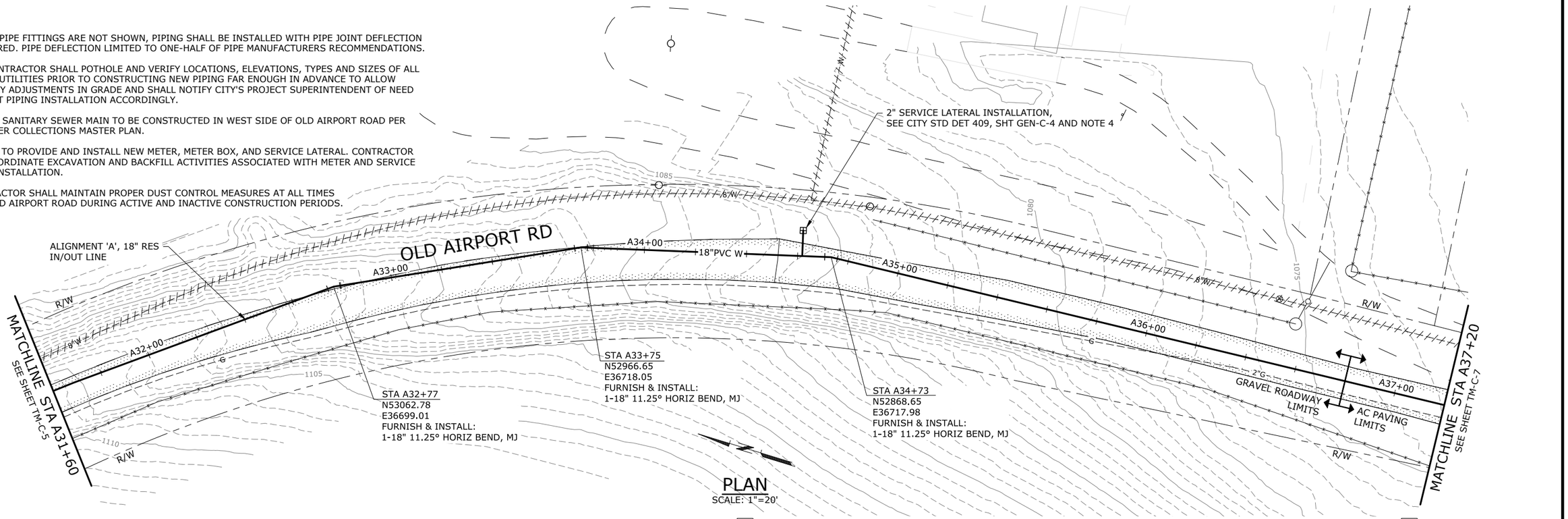

PLAN
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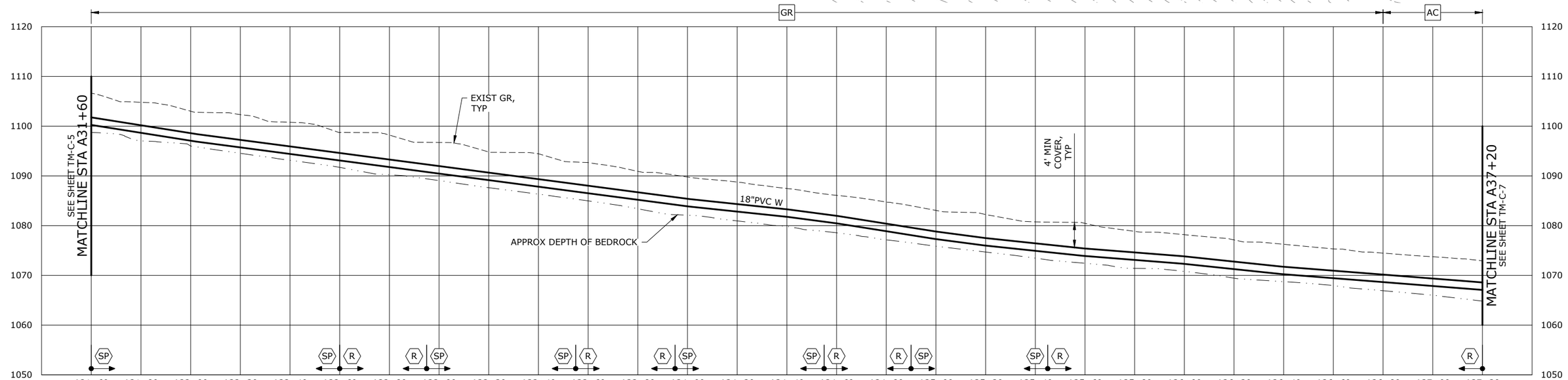

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REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT A, CIP M-32
PLAN & PROFILE
STA A31+60 TO STA A37+20

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-6

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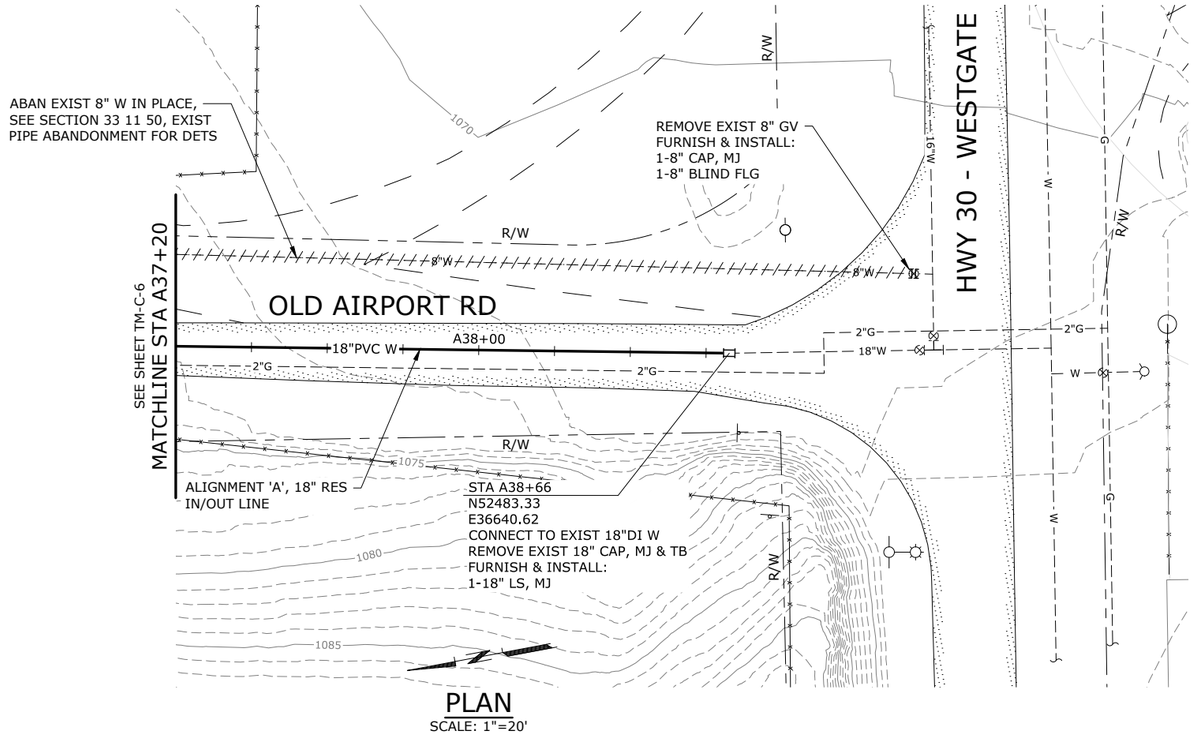
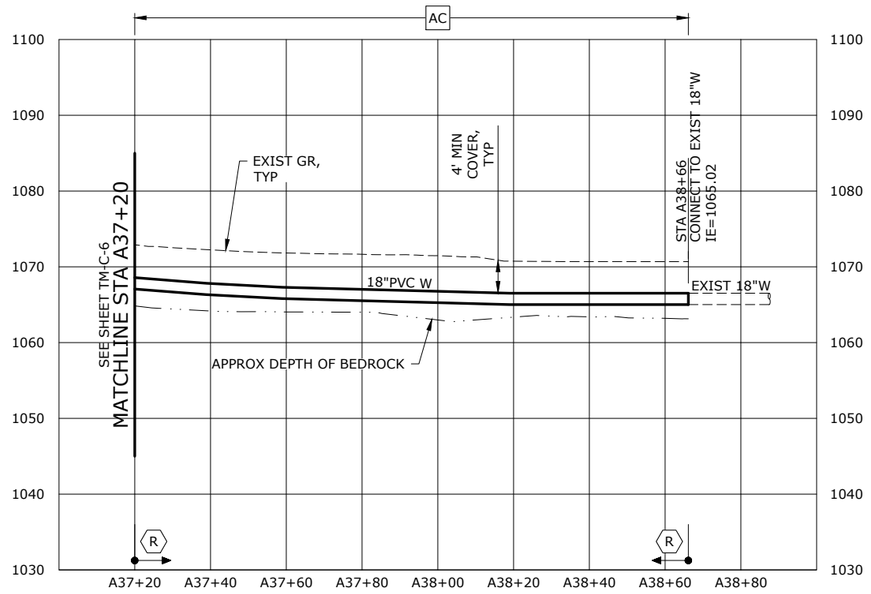


PLAN

SCALE: 1"=20'



PROFILE

SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

NOTICE

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TMS DESIGNED

CTF/DKH DRAWN

LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2009 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT A, CIP M-32

PLAN & PROFILE

STA A37+20 TO STA A38+66

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET

TM-C-7

25 of 113

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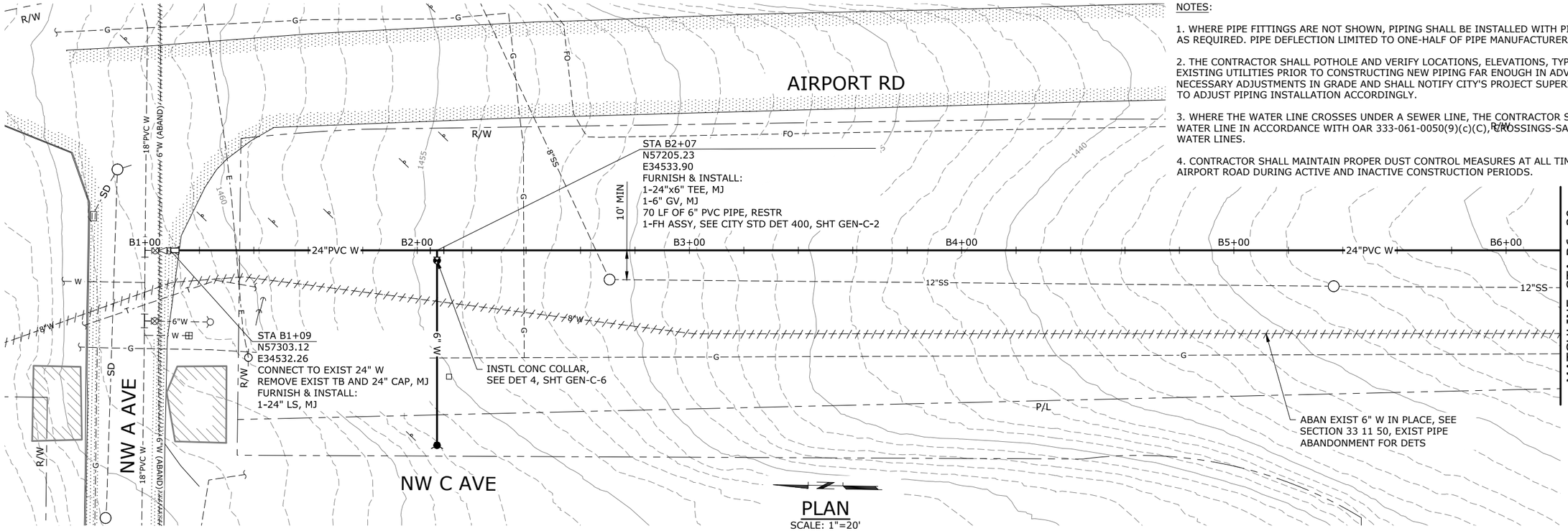

PLAN
SCALE: 1"=20'

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3. WHERE THE WATER LINE CROSSES UNDER A SEWER LINE, THE CONTRACTOR SHALL INSTALL THE WATER LINE IN ACCORDANCE WITH OAR 333-061-0050(9)(c)(C), CROSSINGS-SANITARY SEWERS AND WATER LINES.

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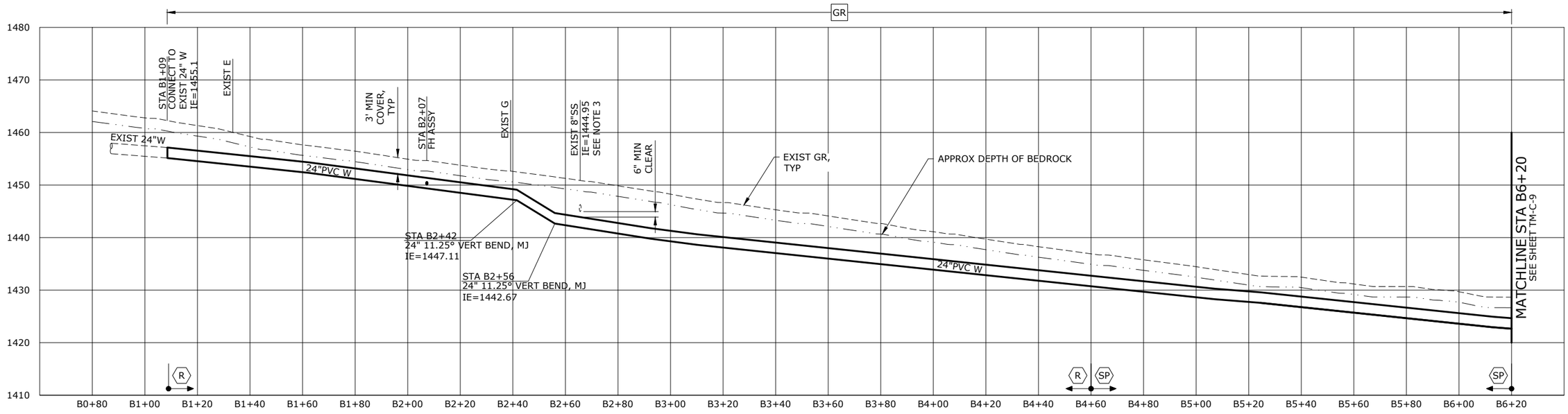

PROFILE
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NO.	DATE	BY	REVISION

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TMS
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CTF/DKH
DRAWN
LLA
CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT B, CIP M-33A/B
PLAN & PROFILE
STA B1+00 TO B6+20

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-8

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE A\17-2024-OR-TM-C.dwg TM-C-8 9/7/2021 12:59 PM TAYLOR.SPENCER 23.0s (LMS Tech)

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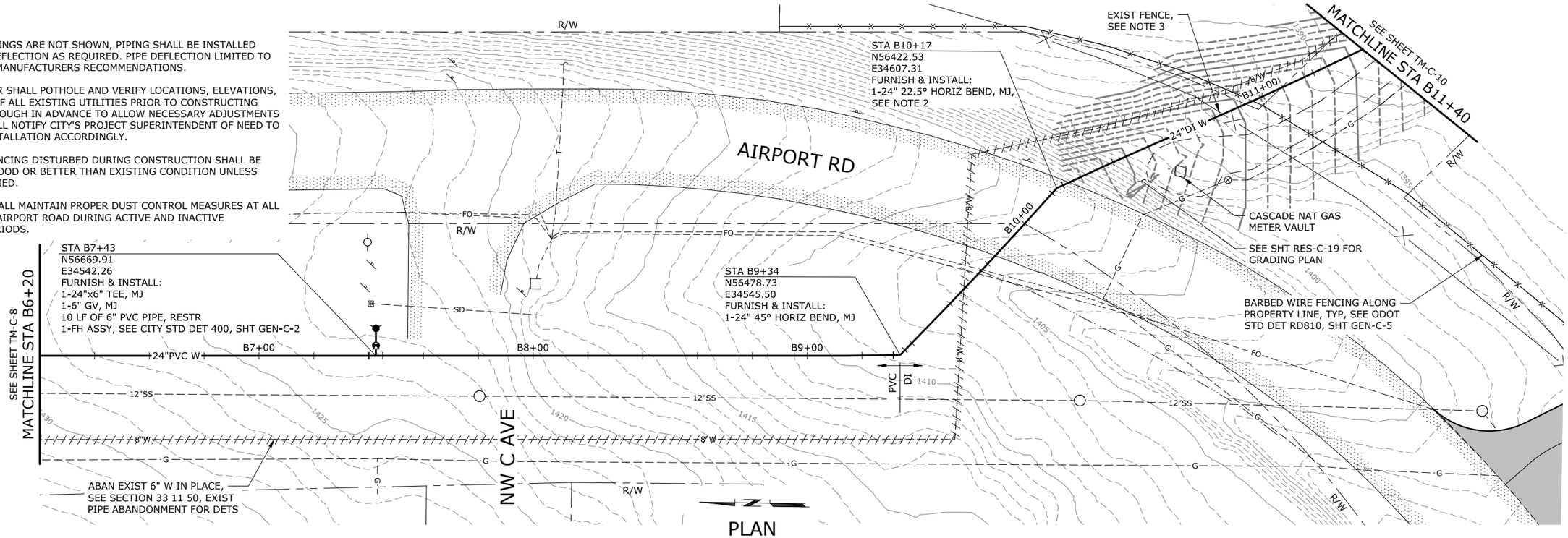
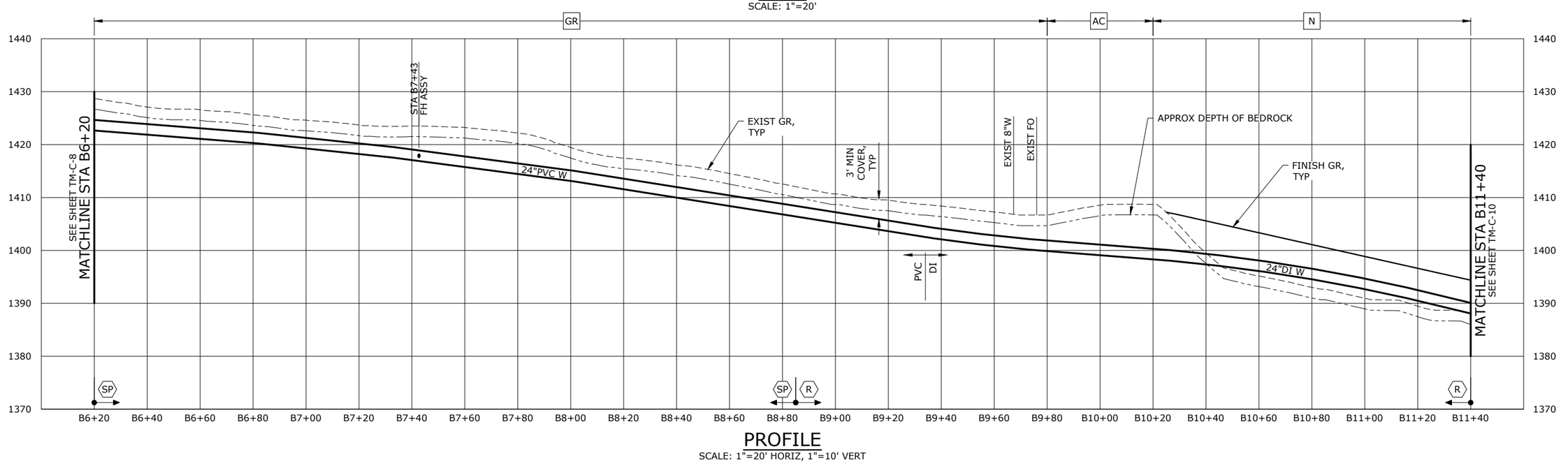


PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS DESIGNED
CTF/DKH DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76388 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT B, CIP M-33A/B
PLAN & PROFILE
STA B6+20 TO B11+40

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-9
27 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE A\17-2024-OR-TM-C-2.dwg TM-C-9 9/7/2021 1:00 PM TAYLOR.SPENCER 23.0s (LMS Tech)

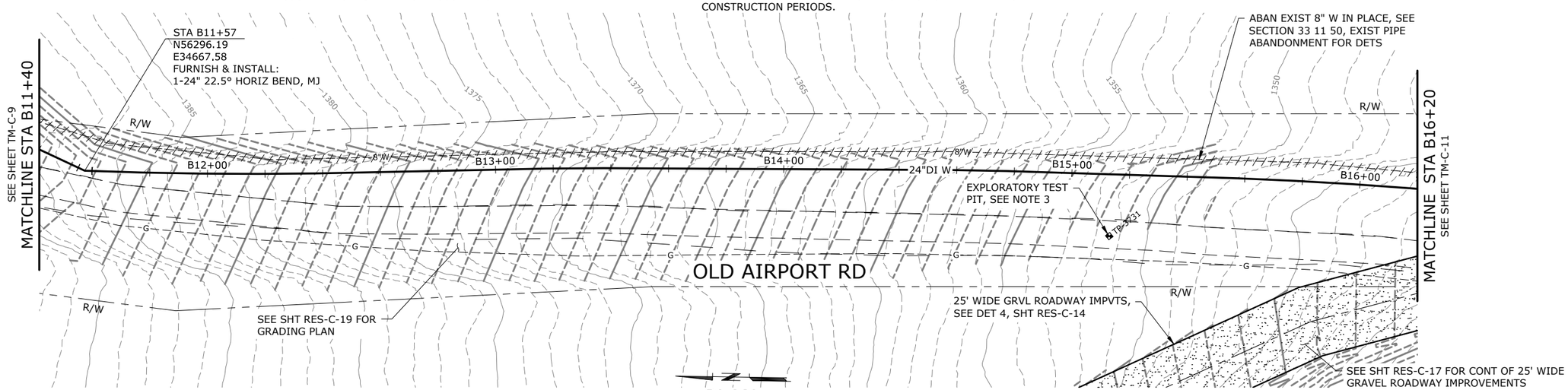
NOTES:

1. WHERE PIPE FITTINGS ARE NOT SHOWN, PIPING SHALL BE INSTALLED WITH PIPE JOINT DEFLECTION AS REQUIRED. PIPE DEFLECTION LIMITED TO ONE-HALF OF PIPE MANUFACTURERS RECOMMENDATIONS.

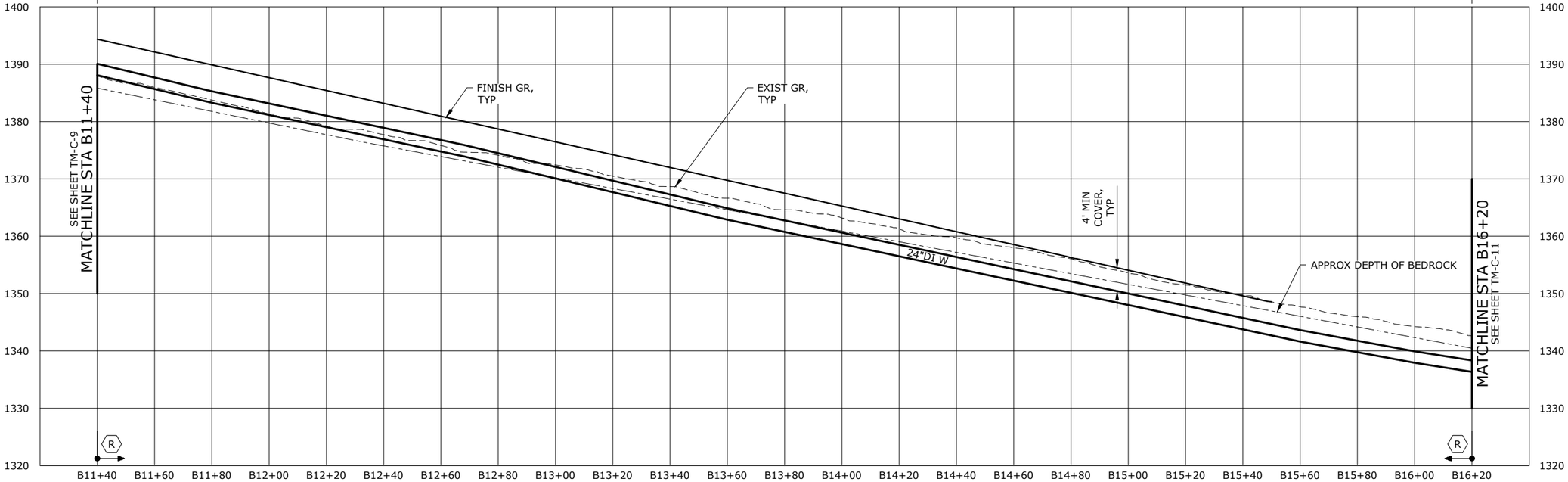
2. THE CONTRACTOR SHALL POTHOLE AND VERIFY LOCATIONS, ELEVATIONS, TYPES AND SIZES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTING NEW PIPING FAR ENOUGH IN ADVANCE TO ALLOW NECESSARY ADJUSTMENTS IN GRADE AND SHALL NOTIFY CITY'S PROJECT SUPERINTENDENT OF NEED TO ADJUST PIPING INSTALLATION ACCORDINGLY.

3. TEST PITS PERFORMED BY CITY CREWS TO DEVELOP APPROXIMATE GRADE AND DEPTH OF BEDROCK ALONG TRANSMISSION MAIN ALIGNMENT.

4. CONTRACTOR SHALL MAINTAIN PROPER DUST CONTROL MEASURES AT ALL TIMES ALONG OLD AIRPORT ROAD DURING ACTIVE AND INACTIVE CONSTRUCTION PERIODS.



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS
DESIGNED
CTF/DKH
DRAWN
LLA
CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON OREGON INCORPORATED 1880

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT B, CIP M-33A/B
PLAN & PROFILE
STA B11+40 TO B16+20

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-10
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G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE A\17-2024-OR-TM-C-2.dwg TM-C-10 9/7/2021 1:00 PM TAYLOR.SPENCER 23.0s (LMS Tech)

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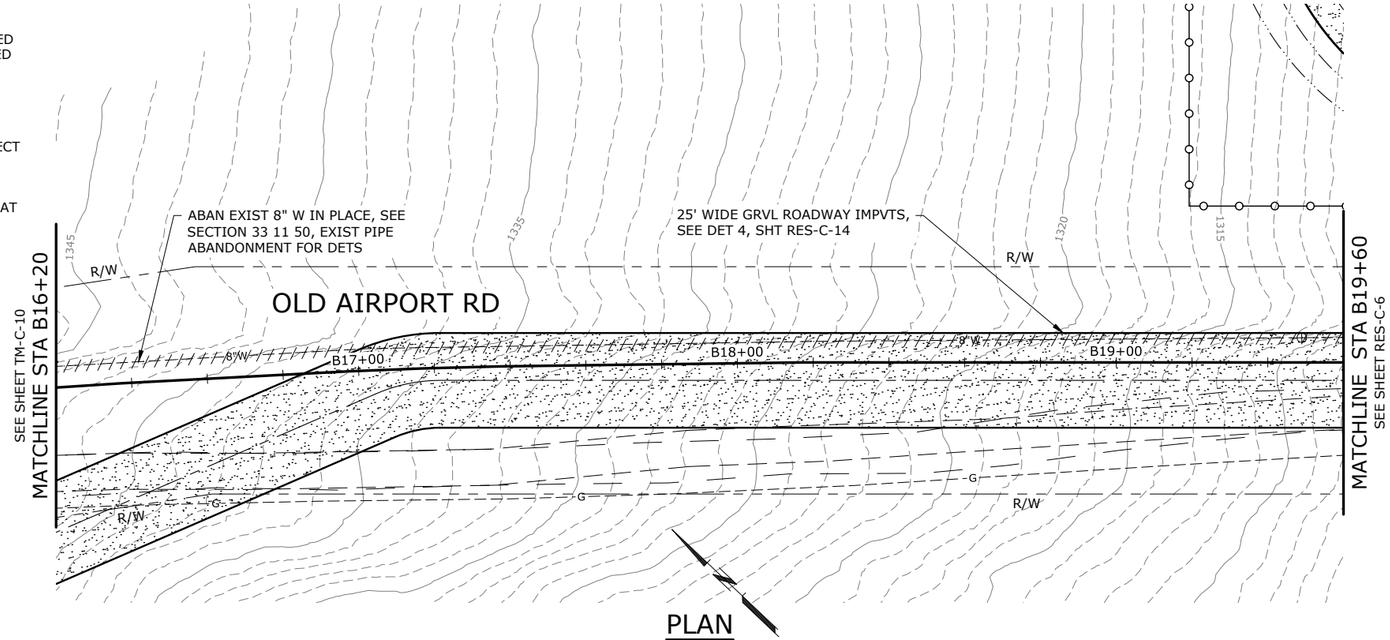
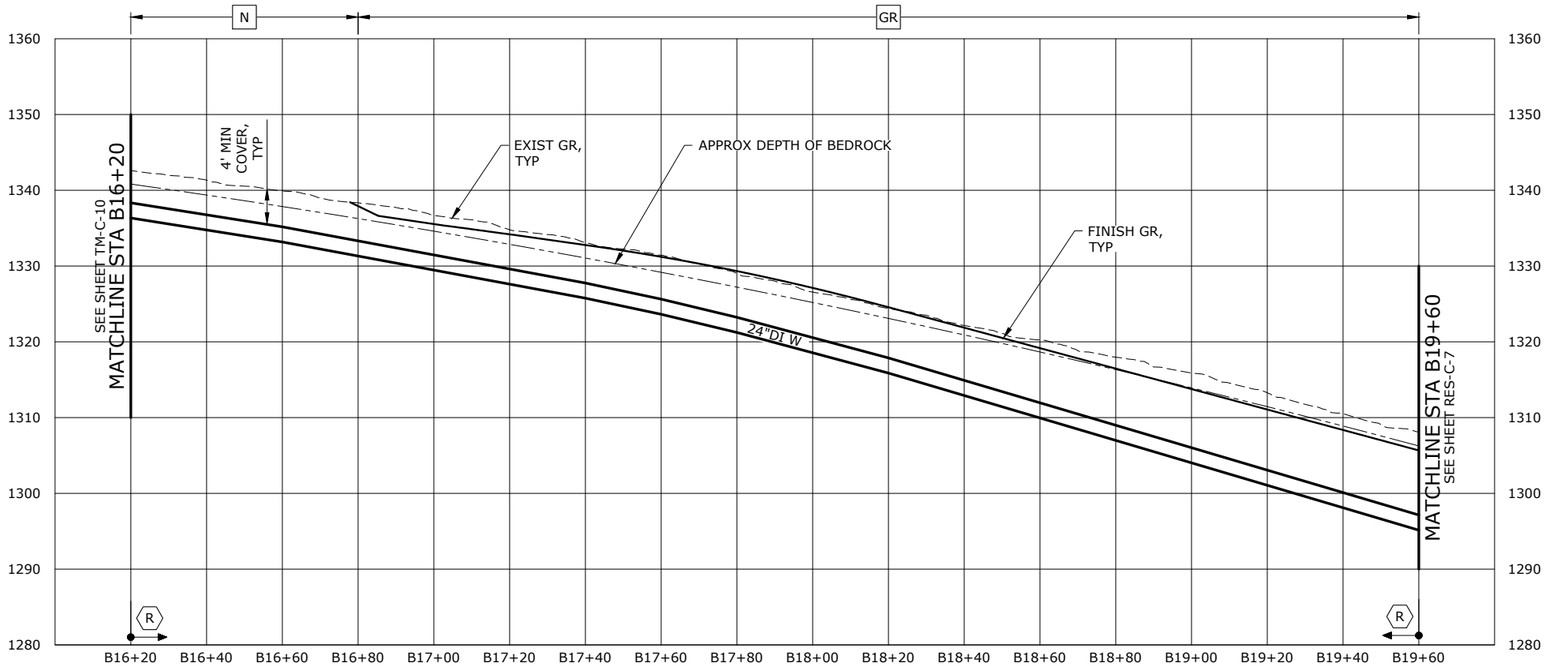


PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS DESIGNED
CTF/DKH DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2009 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

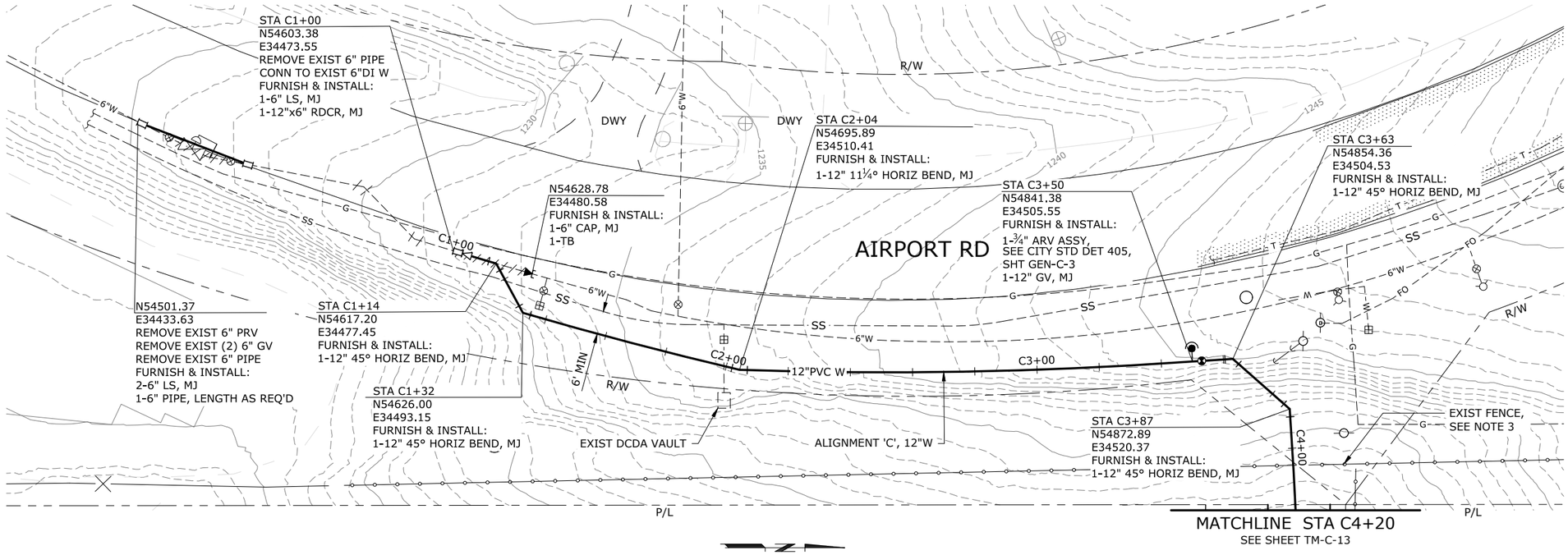
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT B, CIP M-33A/B
PLAN & PROFILE
STA B16+20 TO B19+60

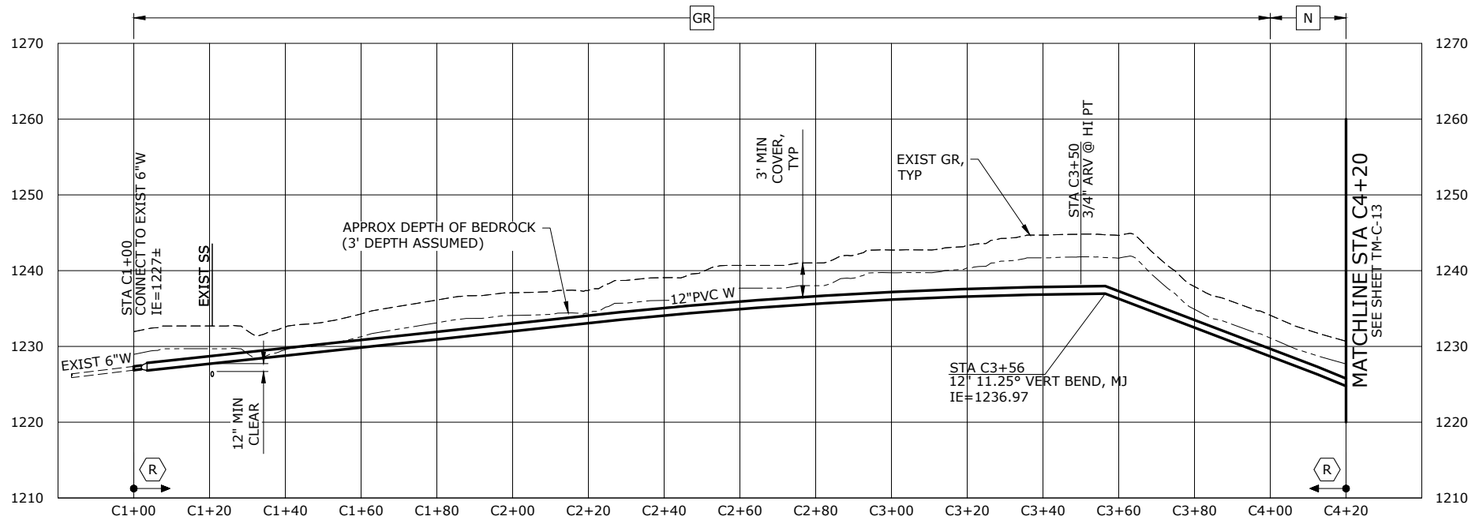
PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-11
29 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE A\17-2024-OR-TM-C-2.dwg TM-C-11 9/7/2021 1:00 PM TAYLOR.SPENCER 23.0s (LMS Tech)



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

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3. ALL EXISTING FENCING DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO AS GOOD OR BETTER THAN EXISTING CONDITION UNLESS OTHERWISE SPECIFIED AND RELOCATED PER CITY'S DIRECTION.

4. CONTRACTOR SHALL MAINTAIN PROPER DUST CONTROL MEASURES AT ALL TIMES ALONG OLD AIRPORT ROAD DURING ACTIVE AND INACTIVE CONSTRUCTION PERIODS.

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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TMS DESIGNED
CTF/DKH DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2005 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT C, CIP M-32
PLAN & PROFILE
STA C1+00 TO STA C4+20

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-12
30 of 113

NOTES:

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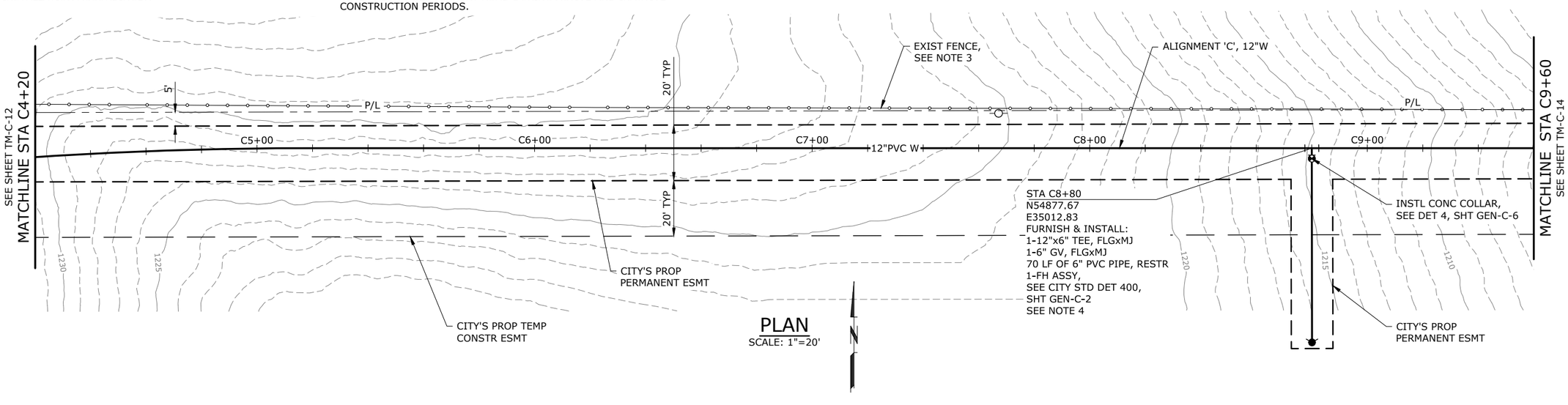
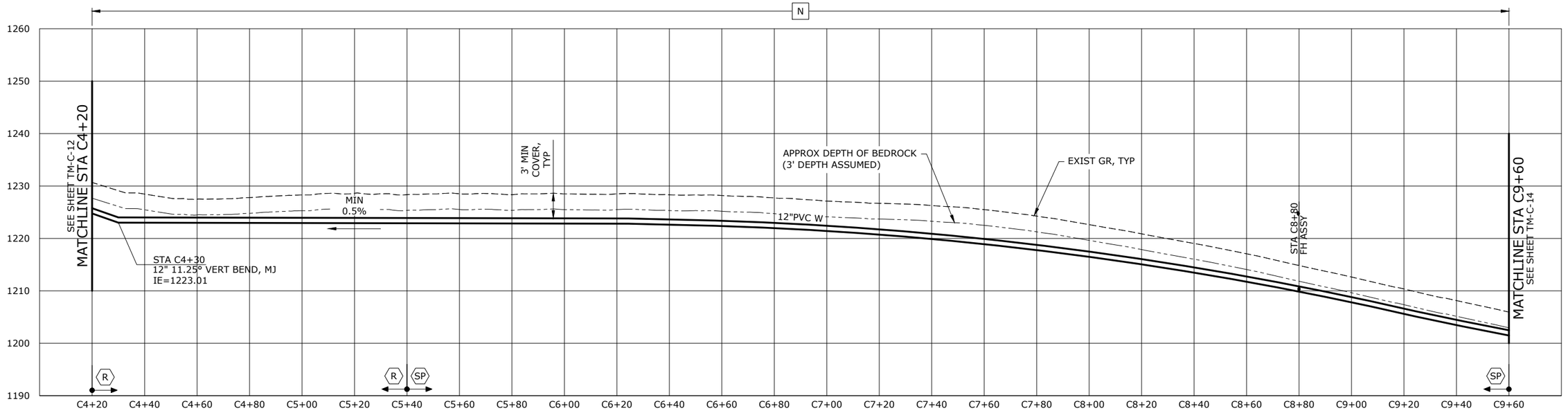
3. ALL EXISTING FENCING DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO AS GOOD OR BETTER THAN EXISTING CONDITION UNLESS OTHERWISE SPECIFIED.

4. FINAL LOCATION FOR HYDRANT TO BE COORDINATED WITH CITY'S PROJECT SUPERINTENDENT.

5. CONTRACTOR SHALL MAINTAIN PROPER DUST CONTROL MEASURES AT ALL TIMES ALONG OLD AIRPORT ROAD DURING ACTIVE AND INACTIVE CONSTRUCTION PERIODS.



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

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CTF/DKH DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76388 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT C, CIP M-32
PLAN & PROFILE
STA C4+20 TO STA C9+60

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-13
31 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE A\17-2024-OR-TM-C-2.dwg TM-C-13 9/7/2021 1:00 PM TAYLOR.SPENCER 23.0s (LMS Tech)

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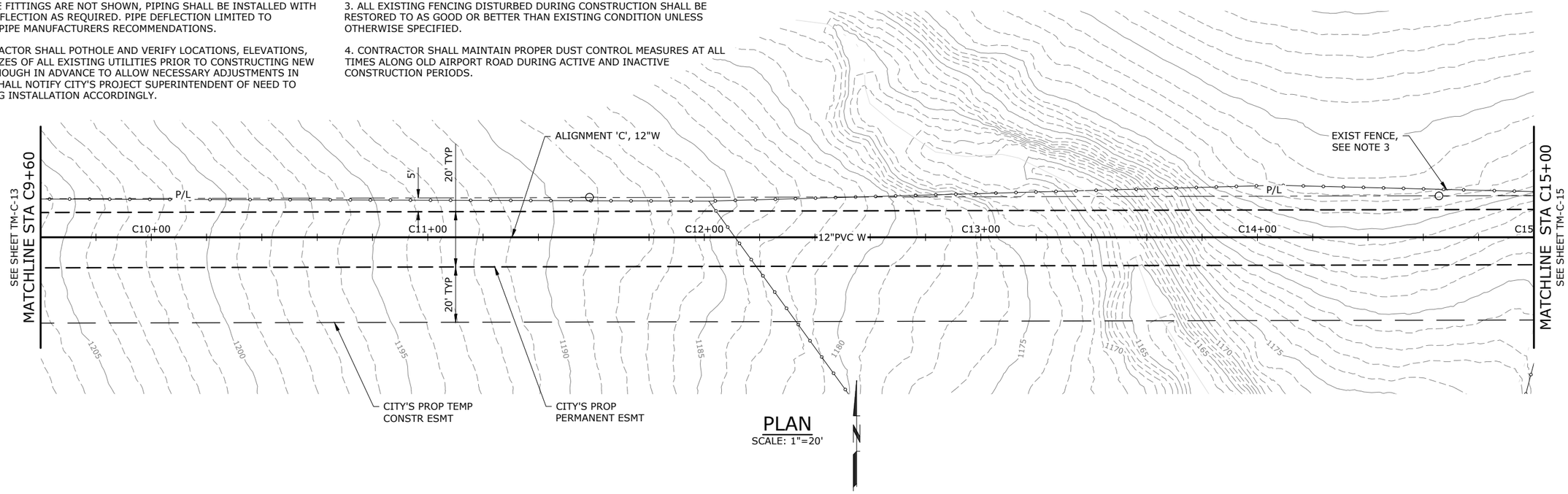
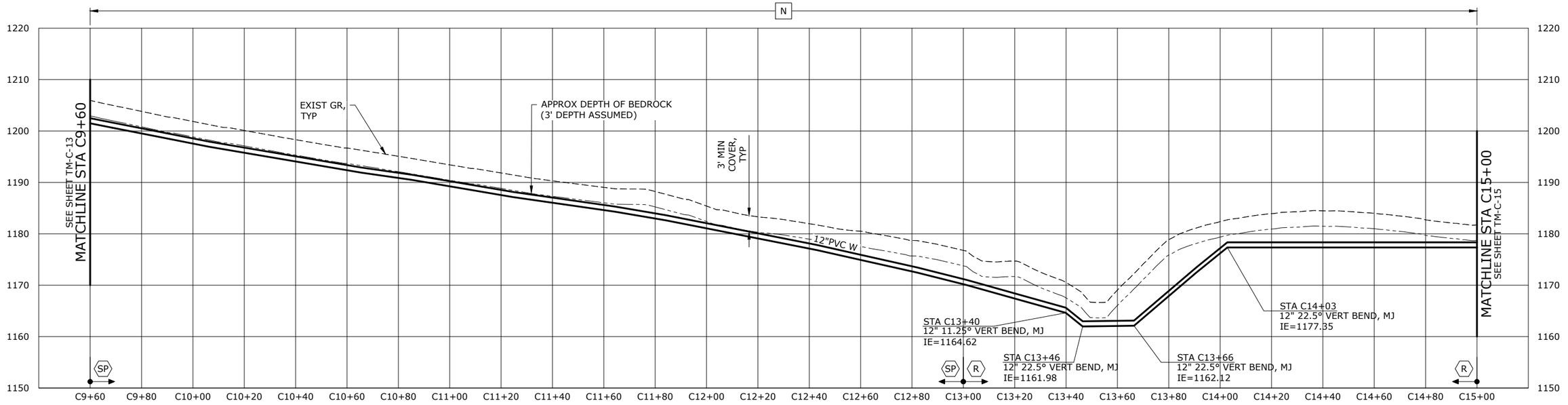


PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

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CTF/DKH DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76388 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT C, CIP M-32
PLAN & PROFILE
STA C9+60 TO STA C15+00

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-14
32 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE A\17-2024-OR-TM-C-2.dwg TM-C-14 9/7/2021 1:00 PM TAYLOR.SPENCER 23.0s (LMS Tech)

NOTES:

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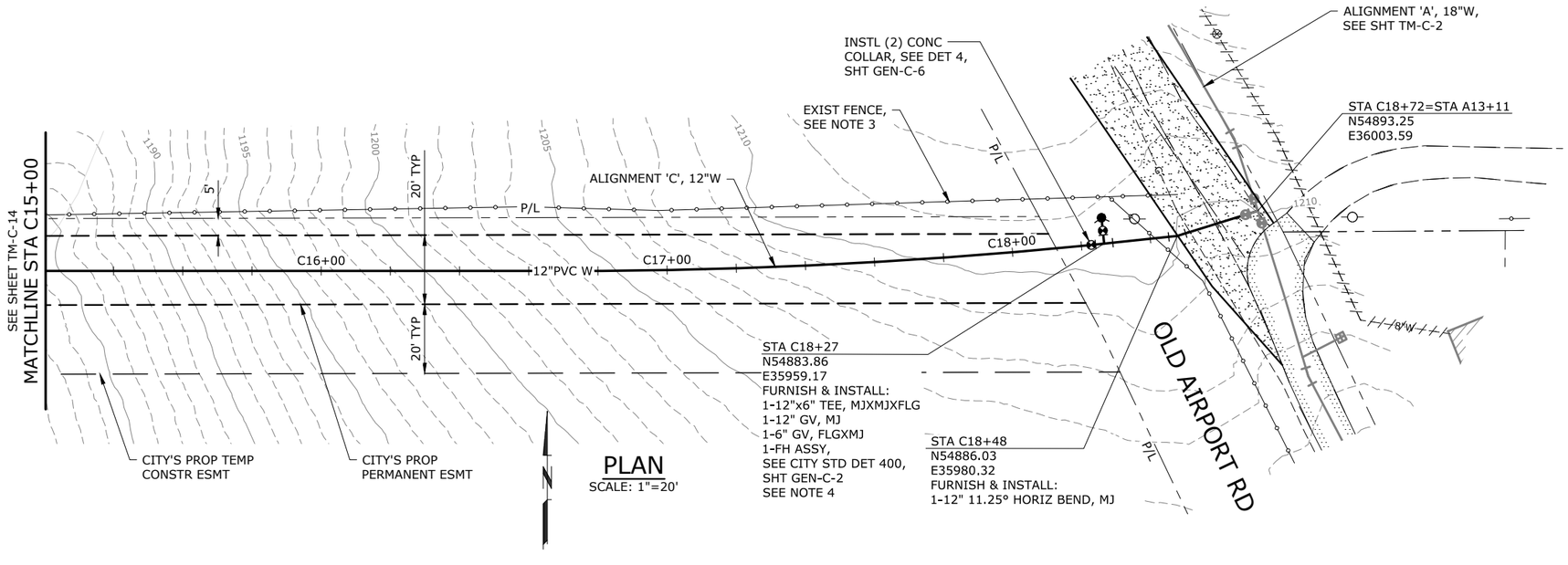
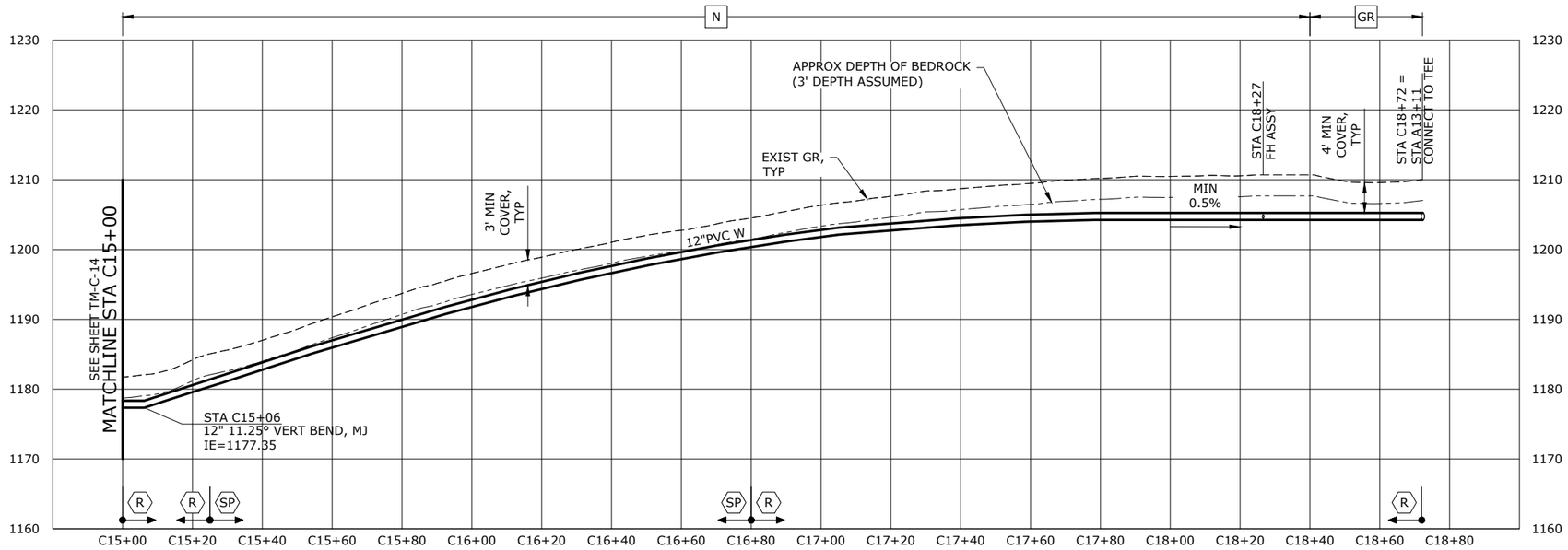


PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

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TMS DESIGNED
CTF/DKH DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76388 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

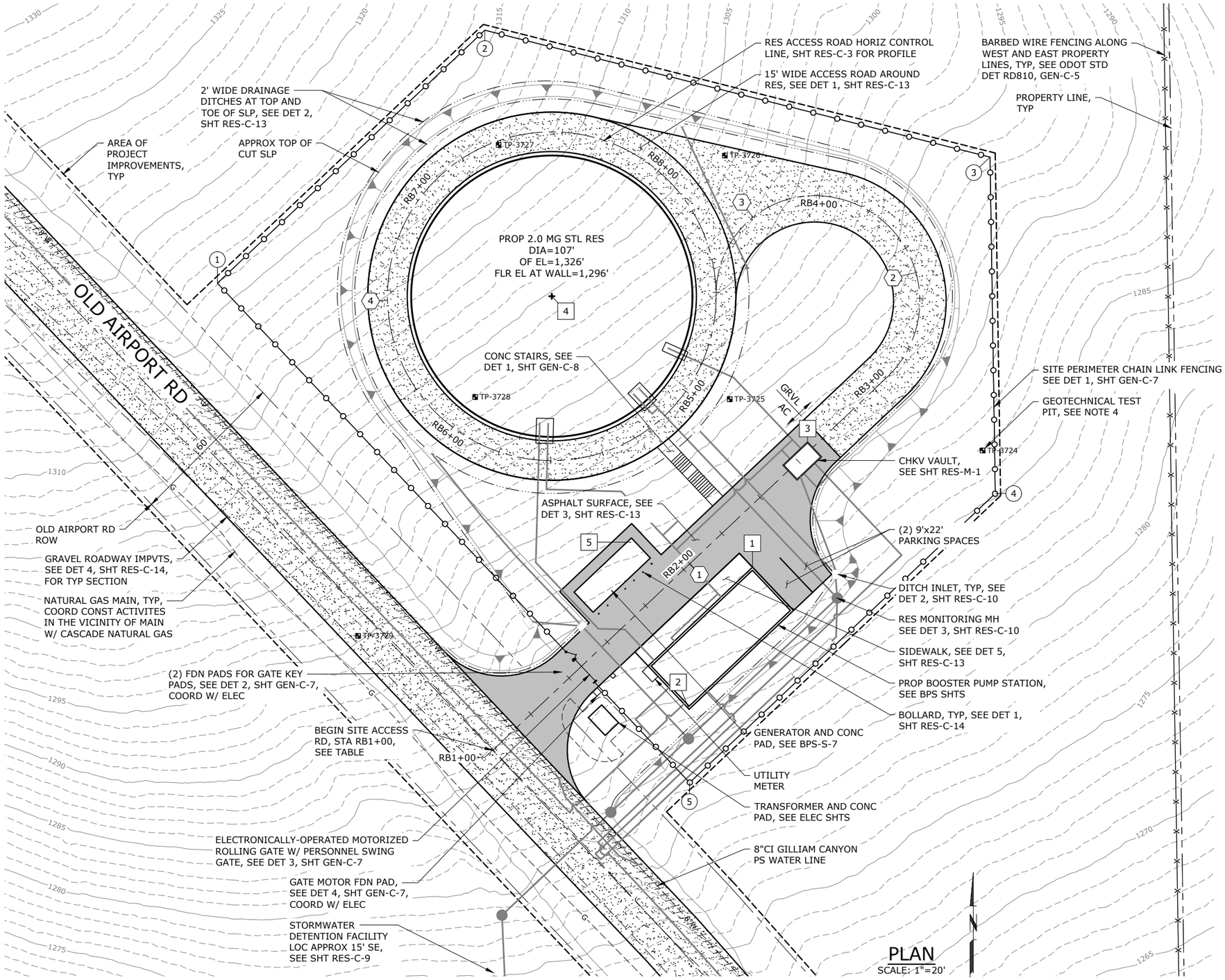
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE A TRANSMISSION MAIN IMPROVEMENTS

ALIGNMENT C, CIP M-32
PLAN & PROFILE
STA C15+00 TO STA C18+72

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
TM-C-15
33 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE A\17-2024-OR-TM-C-2.dwg TM-C-15 9/7/2021 1:00 PM TAYLOR.SPENCER 23.0s (LMS Tech)



PLAN
SCALE: 1"=20'

NOTES:

1. FOR RESERVOIR SITE GRADING PLAN, SEE SHEET RES-C-2.
2. FOR ACCESS ROAD PROFILE, SEE SHT RES-C-3.
3. FOR SITE PIPING PLAN, SEE SHEET RES-C-6.
4. SEE GEOTECHNICAL REPORTING IN THE SUPPLEMENTAL INFORMATION OF THE TECHNICAL SPECIFICATIONS REGARDING COMPLETED TEST PITS.

FACILITY LAYOUT POINTS

PT NO.	DESCRIPTION	NORTHING	EASTING
1	N CORNER OF BPS	N55713.85	E35471.70
2	S CORNER OF BPS	N55659.82	E35447.56
3	N CORNER OF VAULT	N55761.57	E35492.63
4	CENTER OF RES	N55816.90	E35395.35
5	N CORNER OF GEN PAD	N55723.38	E35425.53

FENCE LAYOUT POINTS

PT NO.	NORTHING	EASTING
1	N55821.86	E35268.16
2	N55918.06	E35369.87
3	N55869.80	E35562.03
4	N55741.87	E35564.03
5	N55631.93	E35447.78

SITE ACCESS ROAD HORIZONTAL CONTROL LINE ALIGNMENT AND CURVE TABLE

LINE/ CURVE NO.	START POINT	END POINT	LENGTH	RADIUS	BEARING/ DELTA
1	STA RB1+00 N55644.22 E35372.85	STA RB3+06 N55786.05 E35522.82	206.41'	N/A	N46°35'50"E
2	STA RB3+06 N55786.05 E35522.82	STA RB3+93 N55854.21 E35503.76	86.87'	40.00'	124°25'54"
3	STA RB3+93 N55854.21 E35503.76	STA RB4+61 N55817.38 E35457.85	67.68'	37.50'	103°24'42"
4	STA RB4+61 N55817.38 E35457.85	STA RB8+51 N55819.63 E35457.79	390.45'	62.50'	357°56'09"

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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TMS DESIGNED
TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

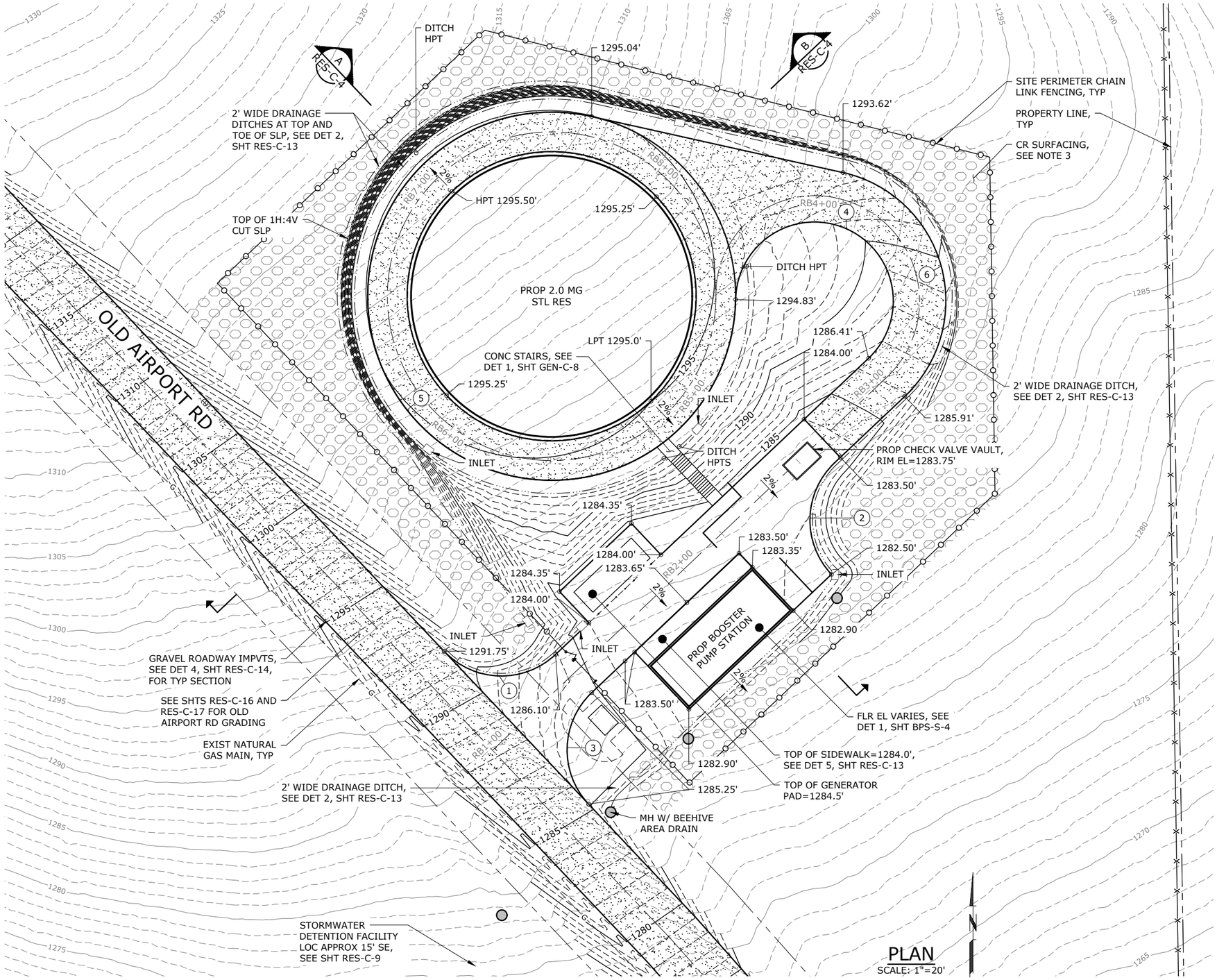
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

RESERVOIR SITE LAYOUT PLAN

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
RES-C-1
34 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE B\17-2024-OR-RES-C1.dwg RES-C-1 9/2/2021 4:46 PM TAYLOR.SPENCER 23.0s (LMS Tech)



PLAN
SCALE: 1"=20'

NOTES:

1. MAINTAIN GRAVITY DRAINAGE OF EXCAVATION FOR RESERVOIR AND PUMP STATION AT ALL TIMES.

2. ELEVATIONS SHOWN ARE BASED ON NGVD 1929 DATUM.

3. FOLLOWING CLEARING ACTIVITIES, EXCAVATION, AND MATERIAL REMOVAL, CONTRACTOR SHALL COVER ENTIRE SITE WITH PERMANENT 2-INCH DEPTH OF ¾"-0" CRUSHED ROCK. CRUSHED ROCK SURFACING SHALL EXTEND 2 FEET BEYOND SITE PERIMETER FENCING.

EDGE OF PAVEMENT CURVE DATA

CURVE	PC LOCATION	PT LOCATION	RADIUS	LENGTH	DELTA
1	N55681.87 E35354.45	N55680.68 E35396.86	30.00'	47.12'	90°00'01"
2	N55753.53 E35502.99	N55711.12 E35501.81	30.00'	47.12'	90°00'00"
3	N55666.15 E35410.60	N55623.74 E35409.42	30.00'	47.12'	90°00'00"

EDGE OF GRAVEL CURVE DATA

CURVE	PC LOCATION	PT LOCATION	RADIUS	LENGTH	DELTA
4	N55793.31 E35515.95	N55815.65 E35465.34	30.00'	118.11'	225°34'24"
5	N55815.65 E35465.34	N55885.22 E35410.57	70.00'	343.96'	281°32'13"
6	N55863.91 E35506.21	N55778.78 E35529.69	50.00'	108.24'	124°02'10"

NO.	DATE	BY	REVISION

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TMS DESIGNED
TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

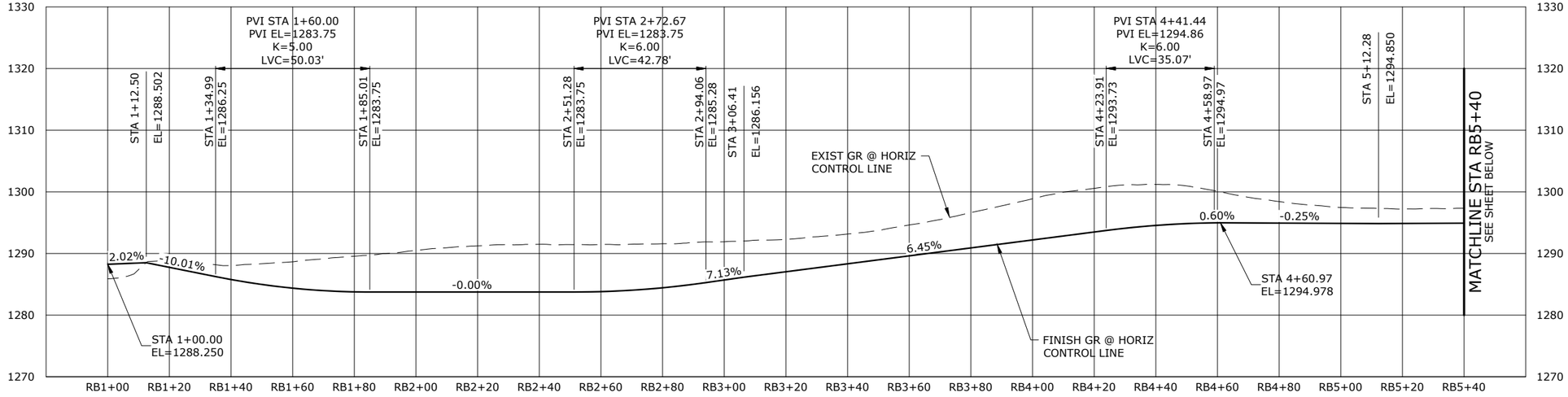
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

RESERVOIR SITE GRADING PLAN

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
RES-C-2
35 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE B\17-2024-OR-RES-C2.dwg RES-C-2 9/7/2021 12:58 PM TAYLOR.SPENCER 23.0s (LMS Tech)

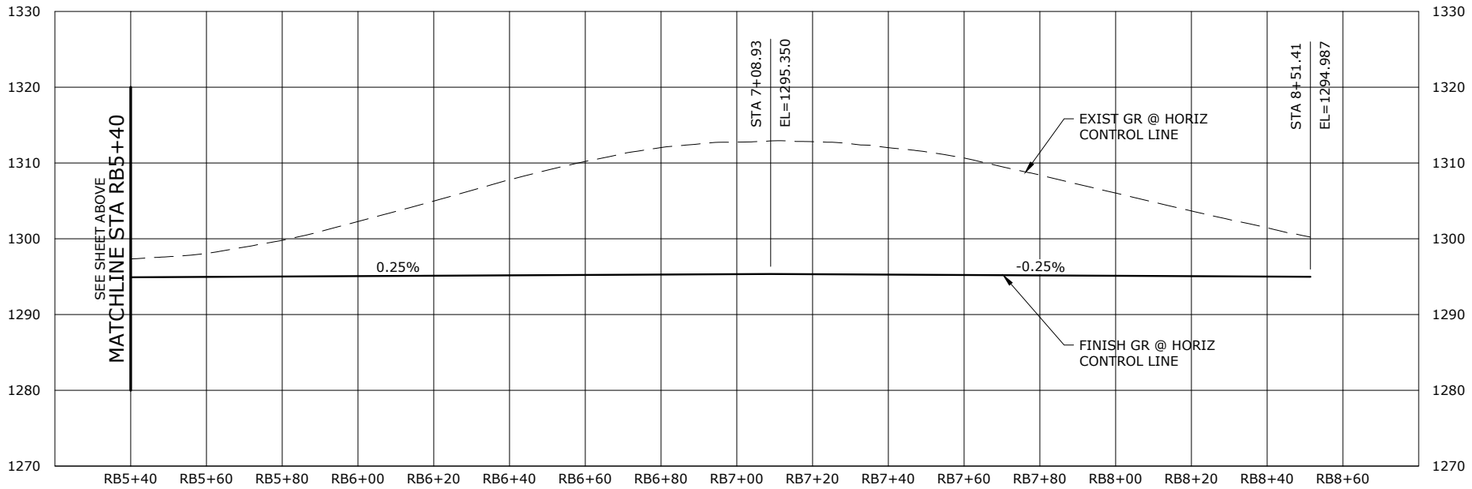


SITE ACCESS ROAD PROFILE AT HORIZONTAL CONTROL LINE

SCALE: 1"=20' HORIZ, 1"=10' VERT

NOTES:

1. FOR SITE ACCESS ROAD HORIZONTAL CONTROL LINE ALIGNMENT AND CURVE DATA, SEE SHEET RES-C-1.



SITE ACCESS ROAD PROFILE AT HORIZONTAL CONTROL LINE

SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

NOTICE

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TMS DESIGNED
TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2005 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

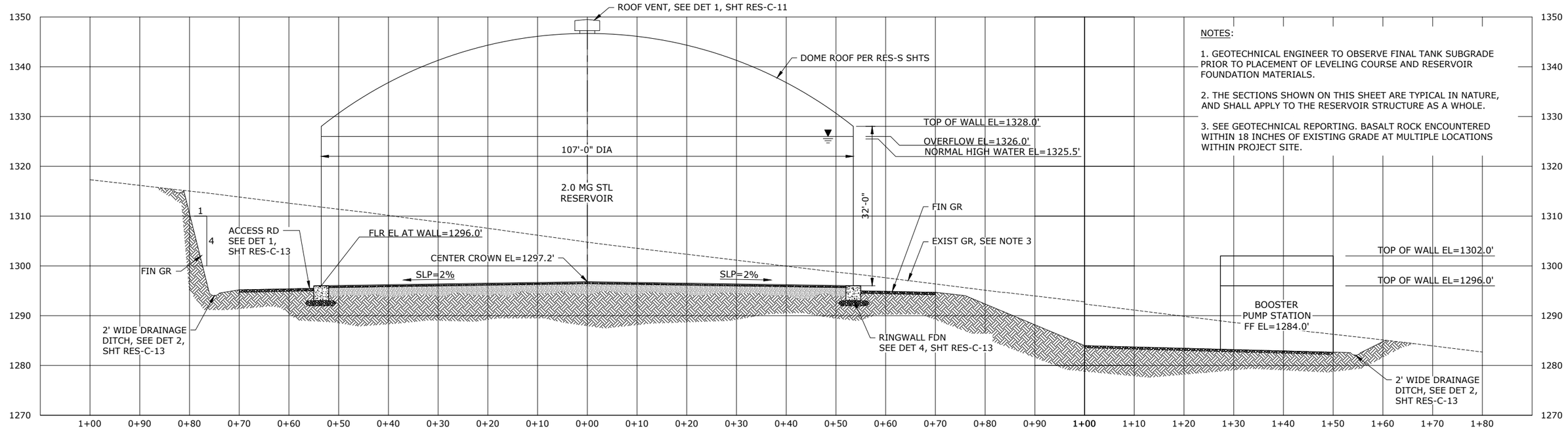
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

RESERVOIR SITE ACCESS ROAD PROFILE

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET

RES-C-3



NOTES:

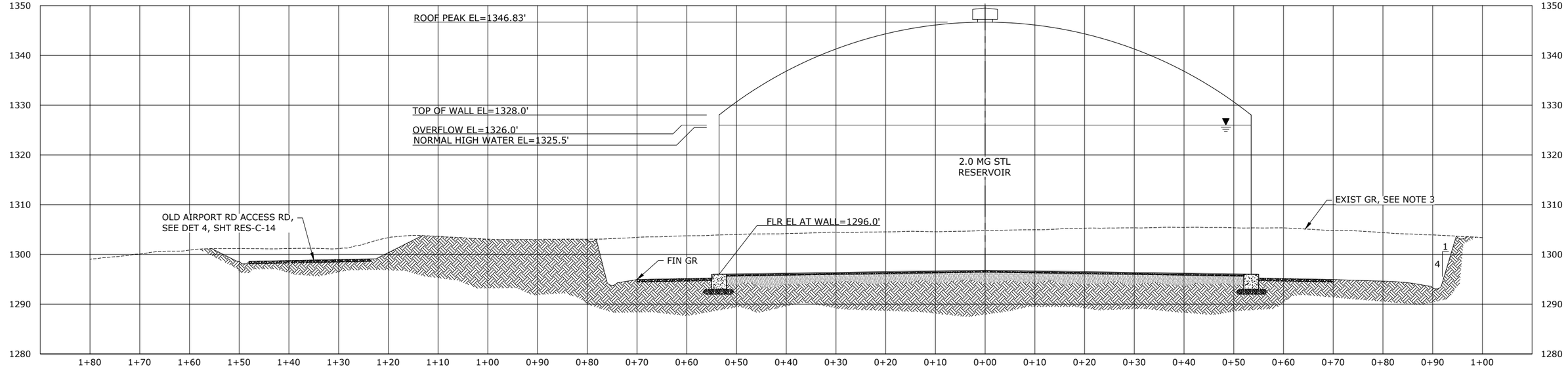
1. GEOTECHNICAL ENGINEER TO OBSERVE FINAL TANK SUBGRADE PRIOR TO PLACEMENT OF LEVELING COURSE AND RESERVOIR FOUNDATION MATERIALS.

2. THE SECTIONS SHOWN ON THIS SHEET ARE TYPICAL IN NATURE, AND SHALL APPLY TO THE RESERVOIR STRUCTURE AS A WHOLE.

3. SEE GEOTECHNICAL REPORTING. BASALT ROCK ENCOUNTERED WITHIN 18 INCHES OF EXISTING GRADE AT MULTIPLE LOCATIONS WITHIN PROJECT SITE.

SECTION A
SCALE: 1"=10'

RES-C-2



SECTION B
SCALE: 1"=10'

RES-C-2

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS DESIGNED
TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

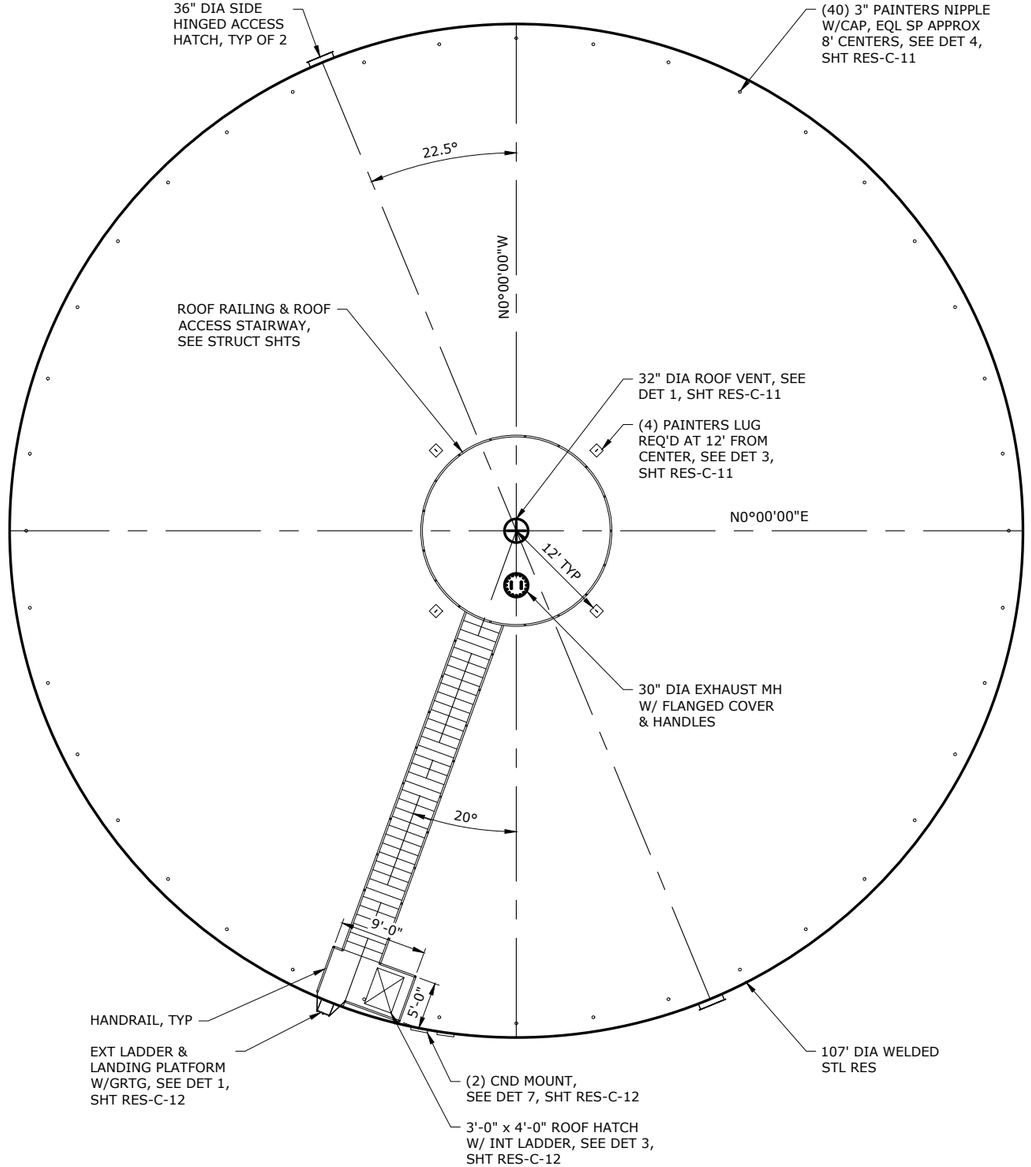
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

RESERVOIR GRADING SECTIONS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

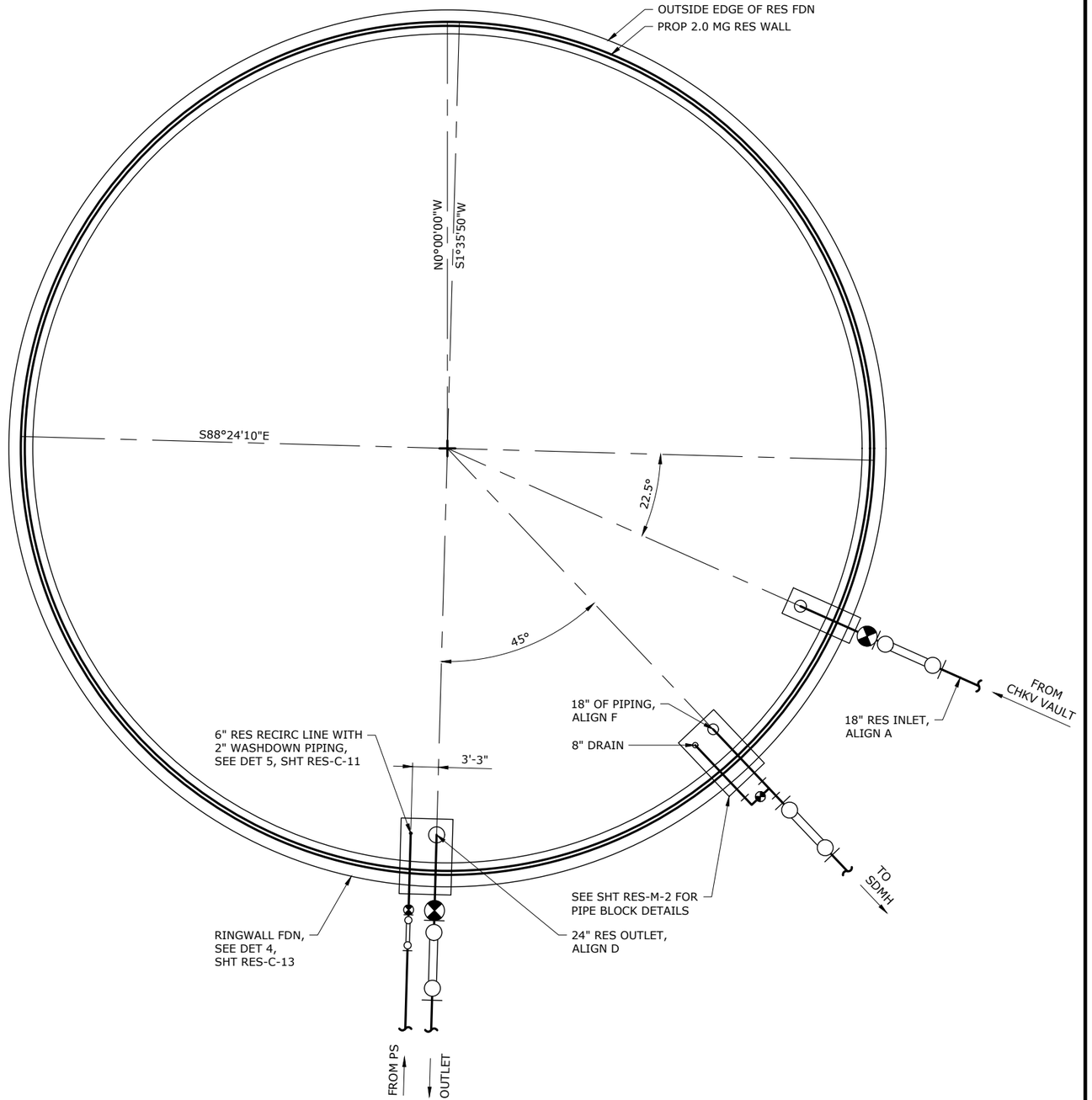
SHEET
RES-C-4
37 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE B\17-2024-OR-RES-C4.dwg RES-C-4 9/2/2021 2:02 PM TAYLOR.SPENCER 23.0s (LMS Tech)



RESERVOIR ROOF PLAN

SCALE: 1/8"=1'-0"



RESERVOIR FLOOR AND PIPING PLAN

SCALE: 1/8"=1'-0"

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS DESIGNED

TMS DRAWN

LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

RESERVOIR ROOF AND FLOOR PLANS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET

RES-C-5

NOTES:

1. FOR SITE PIPING PROFILES, SEE SHEETS RES-C-7 AND RES-C-8.

2. ALL RESERVOIR SITE PIPING (TO LIMITS SHOWN ON THIS SHEET) SHALL BE RESTRAINED JOINT, CLASS 52 DUCTILE IRON, UNLESS OTHERWISE NOTED.

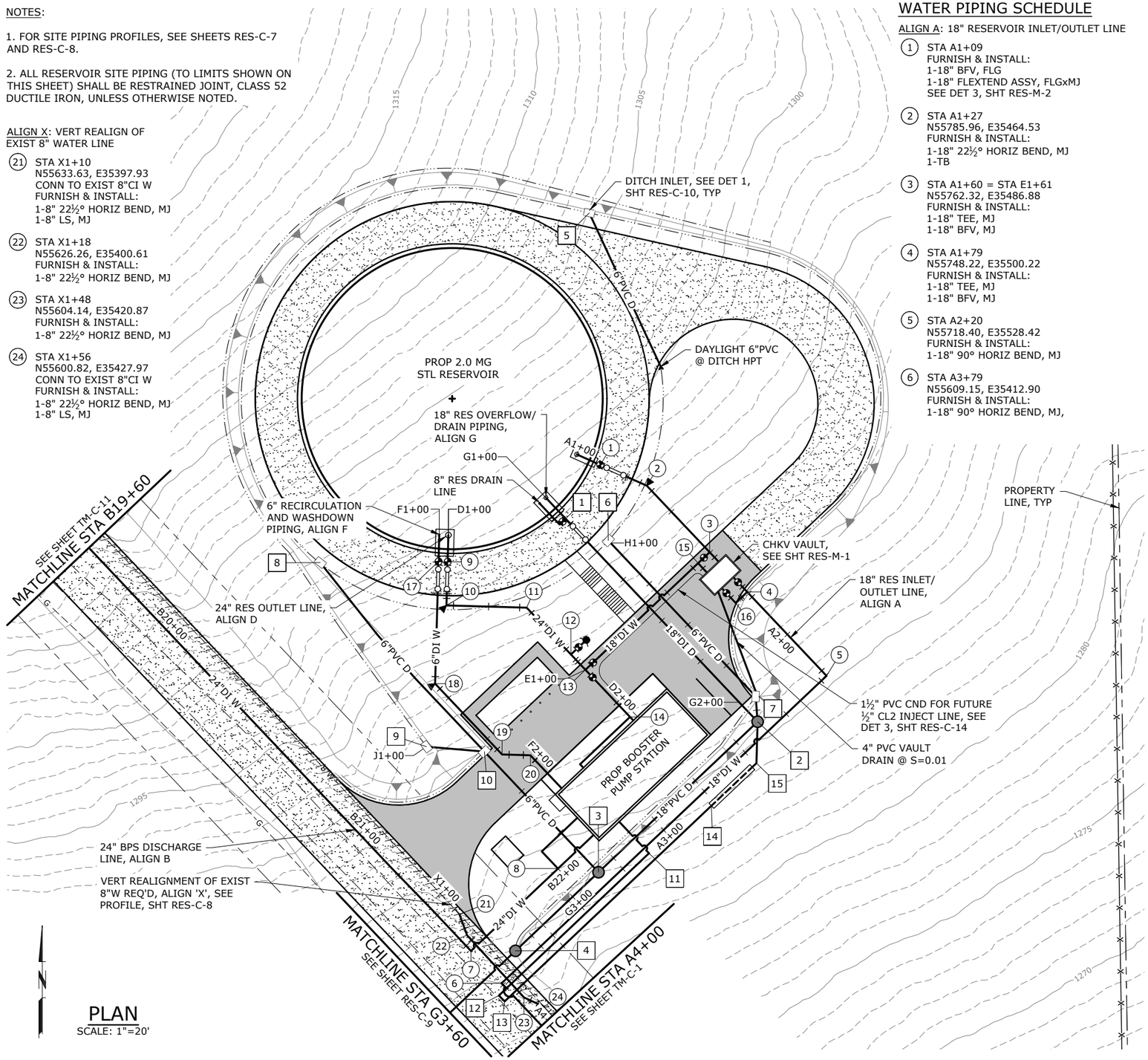
ALIGN X: VERT REALIGN OF EXIST 8" WATER LINE

(21) STA X1+10
N55633.63, E35397.93
CONN TO EXIST 8"CI W
FURNISH & INSTALL:
1-8" 22½° HORIZ BEND, MJ
1-8" LS, MJ

(22) STA X1+18
N55626.26, E35400.61
FURNISH & INSTALL:
1-8" 22½° HORIZ BEND, MJ

(23) STA X1+48
N55604.14, E35420.87
FURNISH & INSTALL:
1-8" 22½° HORIZ BEND, MJ

(24) STA X1+56
N55600.82, E35427.97
CONN TO EXIST 8"CI W
FURNISH & INSTALL:
1-8" 22½° HORIZ BEND, MJ
1-8" LS, MJ



PLAN
SCALE: 1"=20'

WATER PIPING SCHEDULE

ALIGN A: 18" RESERVOIR INLET/OUTLET LINE

(1) STA A1+09
FURNISH & INSTALL:
1-18" BFV, FLG
1-18" FLEXTEND ASSY, FLGxMJ
SEE DET 3, SHT RES-M-2

(2) STA A1+27
N55785.96, E35464.53
FURNISH & INSTALL:
1-18" 22½° HORIZ BEND, MJ
1-TB

(3) STA A1+60 = STA E1+61
N55762.32, E35486.88
FURNISH & INSTALL:
1-18" TEE, MJ
1-18" BFV, MJ

(4) STA A1+79
N55748.22, E35500.22
FURNISH & INSTALL:
1-18" TEE, MJ
1-18" BFV, MJ

(5) STA A2+20
N55718.40, E35528.42
FURNISH & INSTALL:
1-18" 90° HORIZ BEND, MJ

(6) STA A3+79
N55609.15, E35412.90
FURNISH & INSTALL:
1-18" 90° HORIZ BEND, MJ,

ALIGN B: 24" BOOSTER PUMP STATION DISCHARGE LINE

(7) STA B21+57
N55620.65, E35402.02
FURNISH & INSTALL:
1-24" 90° HORIZ BEND, MJ

(8) STA B22+00
FURNISH & INSTALL:
1-¾" SERVICE LATERAL, INSTALL W/O METER AND BOX, SEE CITY STD DET 409, SHT GEN-C-4, ROUTE TO BPS FOR WQ MONITORING

ALIGN D: 24" PUMP STATION SUCTION SUPPLY PIPING

(9) STA D1+09
FURNISH & INSTALL:
1-24" BFV, FLG
1-24" FLEXTEND ASSY, FLGxMJ
SEE DET 1, SHT RES-M-2

(10) STA D1+25
N55743.43, E35393.30
FURNISH & INSTALL:
1-24" 90° HORIZ BEND, MJ
1-TB

(11) STA D1+54
N55742.63, E35421.83
FURNISH & INSTALL:
1-24" 45° HORIZ BEND, MJ

(12) STA D1+76
N55726.00, E35437.56
FURNISH & INSTALL:
1-24"X6" TEE, MJxMJxFLG
1-6" GV, FLGxMJ
1-FH ASSY
SEE CITY STD DET 400, SHT GEN-C-2

(13) STA D1+84 = STA E1+00
N55720.55, E35442.71
FURNISH & INSTALL:
1-24"x18" TEE, MJ
1-18" BFV, MJ
1-24" BFV, MJ

(14) STA D2+07
FURNISH & INSTALL:
1-¾" SERVICE LATERAL, INSTALL W/O METER AND BOX ,
SEE CITY STD DET 409, SHT GEN-C-4

ALIGN E: 18" RESERVOIR GRAVITY OUTLET PIPING

(15) STA E1+55
N55758.43, E35482.76
FURNISH & INSTALL:
1-18" TEE, MJ

(16) STA E1+55, 19' RT
N55744.32, E35496.10
FURNISH & INSTALL:
1-18" 90° HORIZ BEND, MJ
1-18" BFV, MJ

ALIGN F: 6" RESERVOIR RECIRCULATION AND WASHDOWN LINE

(17) STA F1+10
FURNISH & INSTALL:
1-6" GV, FLG
1-6" FLEXTEND ASSY, FLGxMJ
SEE DET 1, SHT RES-M-2

(18) STA F1+53
N55715.63, E35389.27
FURNISH & INSTALL:
1-6" 45° HORIZ BEND, MJ
1-TB

(19) STA F1+88
N55690.46, E35413.07
FURNISH & INSTALL:
1-6" 45° HORIZ BEND, MJ

(20) STA F1+98
N55690.18, E35423.15
FURNISH & INSTALL:
1-6" 45° HORIZ BEND, MJ

DRAIN PIPING SCHEDULE

ALIGN G: 18" RESERVOIR OVERFLOW/DRAIN AND STORM PIPING

[1] STA G1+10
FURNISH & INSTALL:
1-18"x8" TEE, FLG
1-8" GV, FLG
1-8" 90° HORIZ BEND, FLG
1-18" FLEXTEND ASSY, FLGXMJ
SEE DET 2, SHT RES-M-2

[2] STA G2+09 = STA H1+84
N55702.10, E35503.91
FURNISH & INSTALL:
1-48" RES MONITORING MH, SDMH G1
SEE DET 3, SHT RES-C-10

[3] STA G2+87 = STA J1+80
N55648.61, E35447.35
FURNISH & INSTALL:
1-48" MH, SDMH G2

[4] STA G3+28
N55620.68, E35417.82
FURNISH & INSTALL:
1-48" MH W/ BEEHIVE AREA DRAIN TOP, SDMH G3

ALIGN H: 6" STORM PIPING

[5] N55882.88, E35444.08
FURNISH & INSTALL:
1-DITCH INLET, DITCH INLET H3
RIM EL=1294.0'
6"PVC IE OUT(SE)=1292.75'
60 LF 6"PVC @ S=0.01

[6] STA H1+00
N55765.65, E35451.64
FURNISH & INSTALL:
1-DITCH INLET, DITCH INLET H1

[7] STA H1+75
N55711.09, E35503.23
FURNISH & INSTALL:
1-DITCH INLET, DITCH INLET H2

ALIGN J: 6" STORM PIPING

[8] N55758.64, E35348.44
FURNISH & INSTALL:
1-DITCH INLET, DITCH INLET J3
RIM EL=1293.5'
6"PVC IE OUT(SE)=1289.5'
90 LF 6"PVC @ S=0.12

[9] STA J1+00
N55693.23, E35386.18
FURNISH & INSTALL:
1-DITCH INLET, DITCH INLET J1

[10] STA J1+21
N55691.48, E35406.81
FURNISH & INSTALL:
1-DITCH INLET, DITCH INLET J2

6" PVC BPS PROCESS WATER DRAIN PIPING

[11] N55655.37, E35465.30
FURNISH & INSTALL:
1-6" DI 90° HORIZ BEND, MJ
6" IE=1280.00

[12] N55604.80, E35411.94
FURNISH & INSTALL:
1-6" DI 90° HORIZ BEND, MJ
6" IE=1278.00

[13] N55602.73, E35414.01
FURNISH & INSTALL:
1-6" DI 90° HORIZ BEND, MJ
6" IE=1277.95

[14] N55672.23, E35487.49
20 LF BPS PROCESS WATER SOAKAGE TRENCH
SEE DET 2, SHT RES-C-10
6" IE=1277.00

[15] N55687.37, E35503.50
FURNISH & INSTALL:
1-6" DI 45° HORIZ BEND, MJ
6" IE=1276.75

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS/CTF DESIGNED
TMS/CTF DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

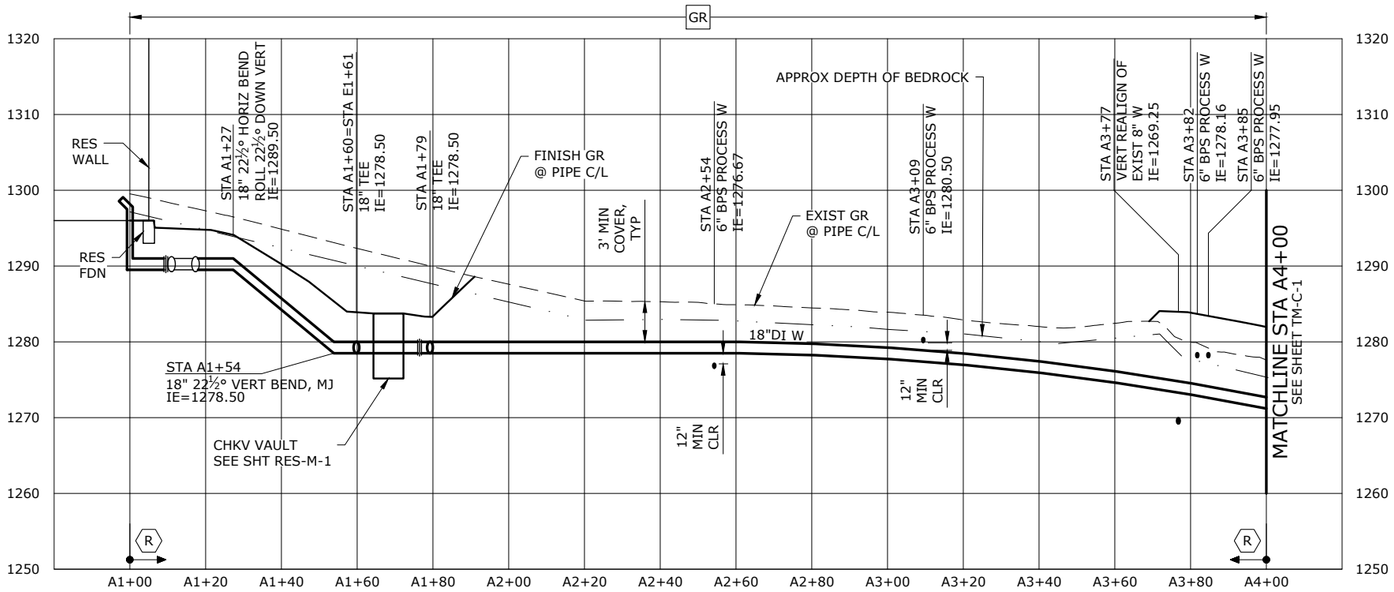
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

RESERVOIR SITE PIPING PLAN

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

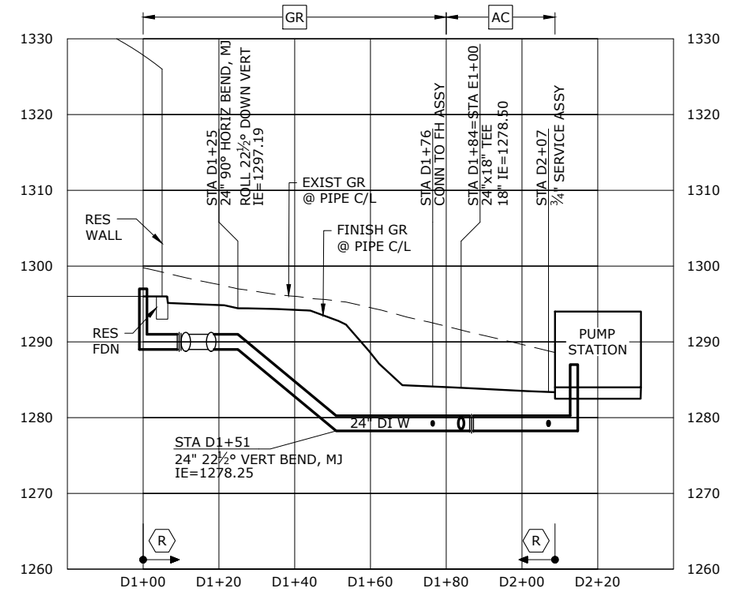
SHEET
RES-C-6
39 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE B\17-2024-OR-RES-C6.dwg RES-C-6 9/7/2021 12:57 PM TAYLOR.SPENCER 23.0s (LMS Tech)



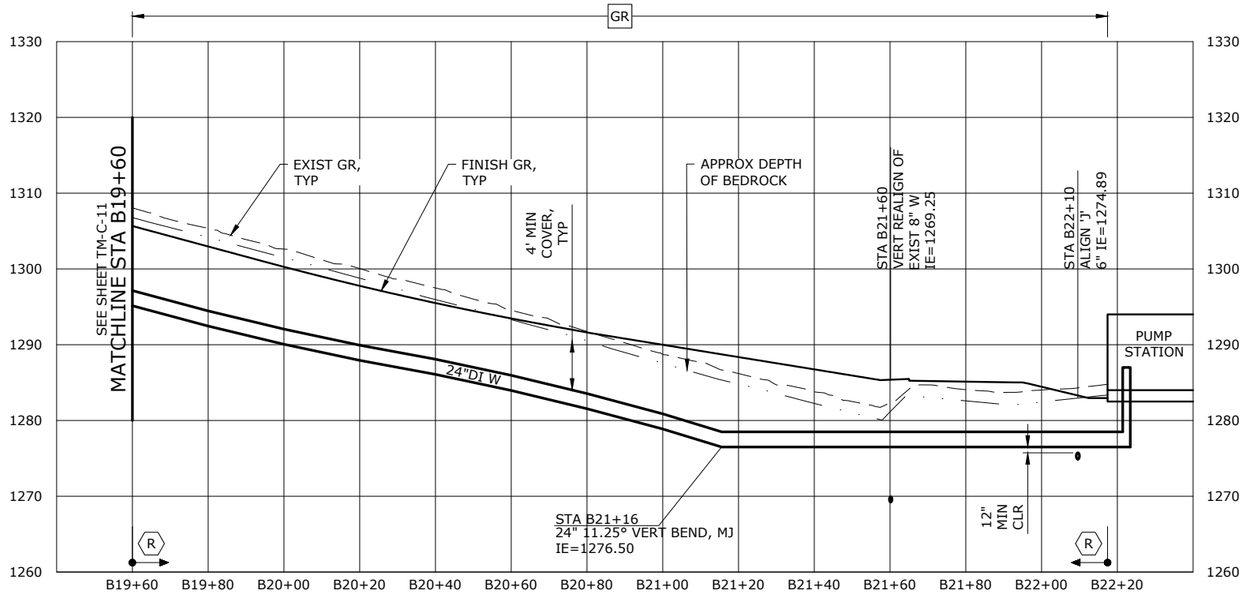
ALIGNMENT A
18" RESERVOIR INLET/OUTLET LINE PROFILE

SCALE: 1"=20' HORIZ, 1"=10' VERT



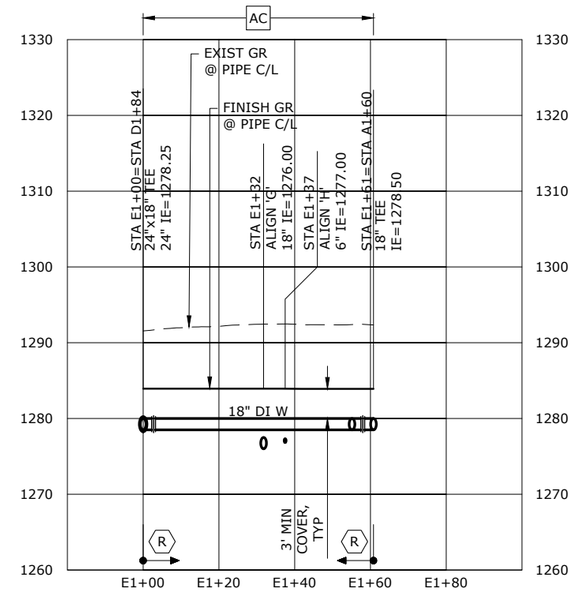
ALIGNMENT D
24" PUMP STATION SUCTION SUPPLY PIPING PROFILE

SCALE: 1"=20' HORIZ, 1"=10' VERT



ALIGNMENT B
24" BOOSTER PUMP STATION DISCHARGE LINE PROFILE

SCALE: 1"=20' HORIZ, 1"=10' VERT



ALIGNMENT E
18" RESERVOIR GRAVITY OUTLET PIPING PROFILE

SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS DESIGNED
TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

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CITY OF PENDLETON INCORPORATED 1880 OREGON

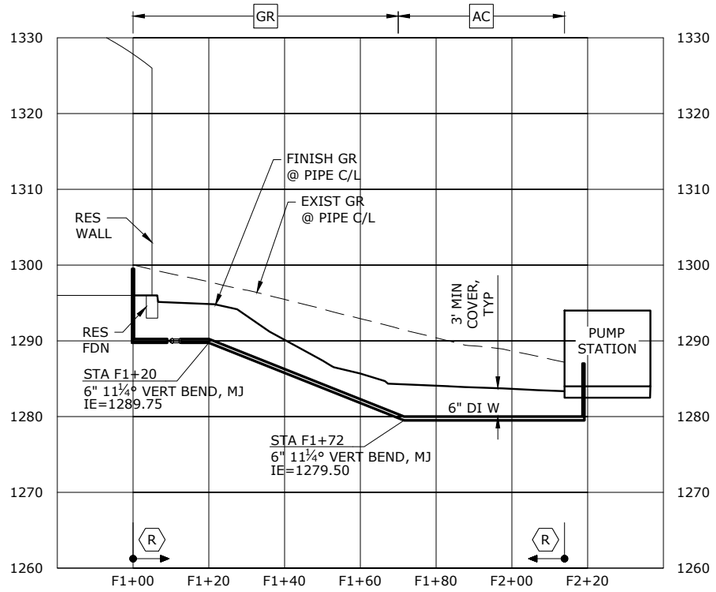
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

RESERVOIR SITE PIPING PROFILES - 1

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

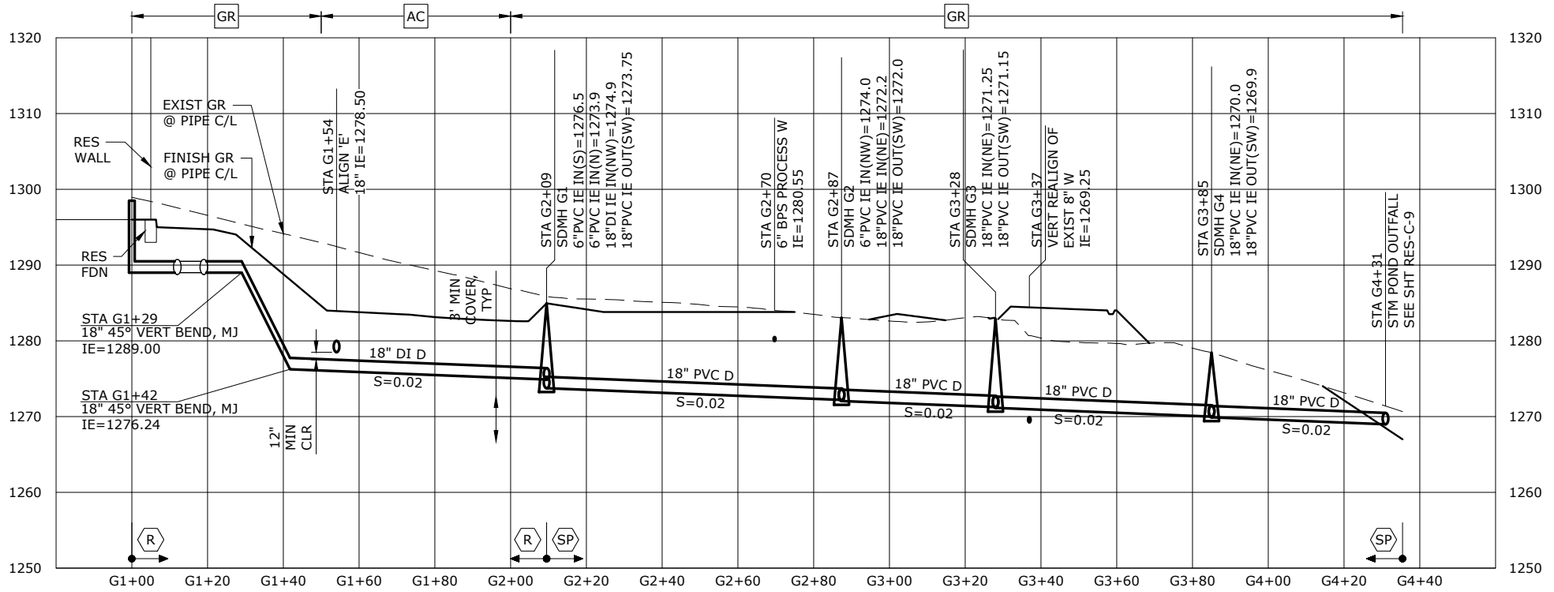
SHEET
RES-C-7
40 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE B\17-2024-OR-RES-C7-9.dwg RES-C-7 9/2/2021 7:31 AM TAYLOR.SPENCER 23.0s (LMS Tech)



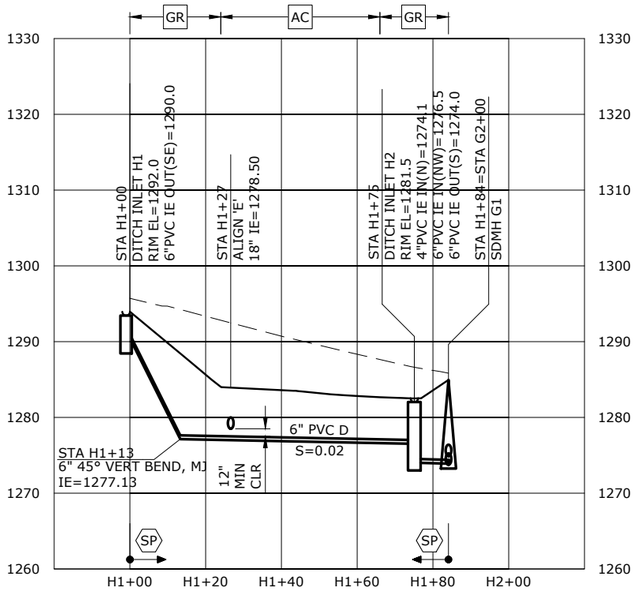
ALIGNMENT F
6" RECIRCULATION AND 2" WASHDOWN PIPING PROFILE

SCALE: 1"=20' HORIZ, 1"=10' VERT



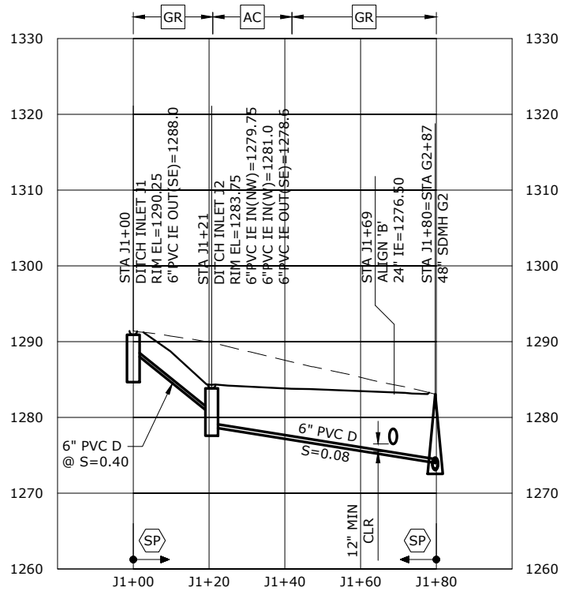
ALIGNMENT G
18" RESERVOIR OVERFLOW/DRAIN AND STORM PROFILE

SCALE: 1"=20' HORIZ, 1"=10' VERT



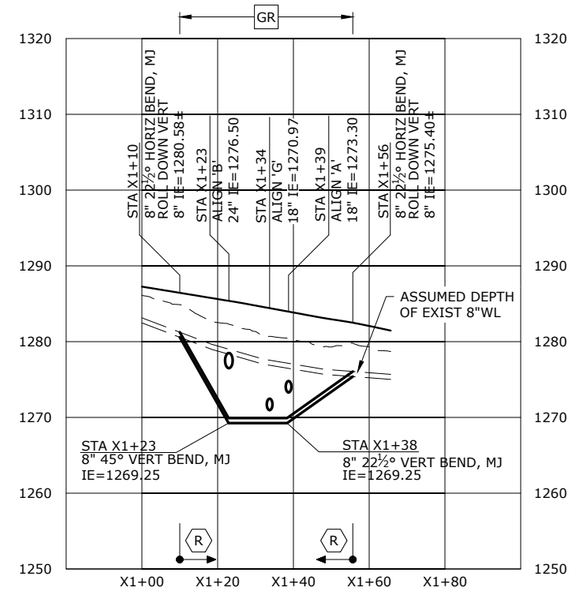
ALIGNMENT H
6" STORM PIPING PROFILE

SCALE: 1"=20' HORIZ, 1"=10' VERT



ALIGNMENT J
6" STORM PIPING PROFILE

SCALE: 1"=20' HORIZ, 1"=10' VERT



ALIGNMENT X
EXISTING 8" WATER MAIN PIPING PROFILE

SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS DESIGNED

TMS DRAWN

LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2005 LAEL L. ALDERMAN RENEWS 12-31-21

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

RESERVOIR SITE PIPING PROFILES - 2

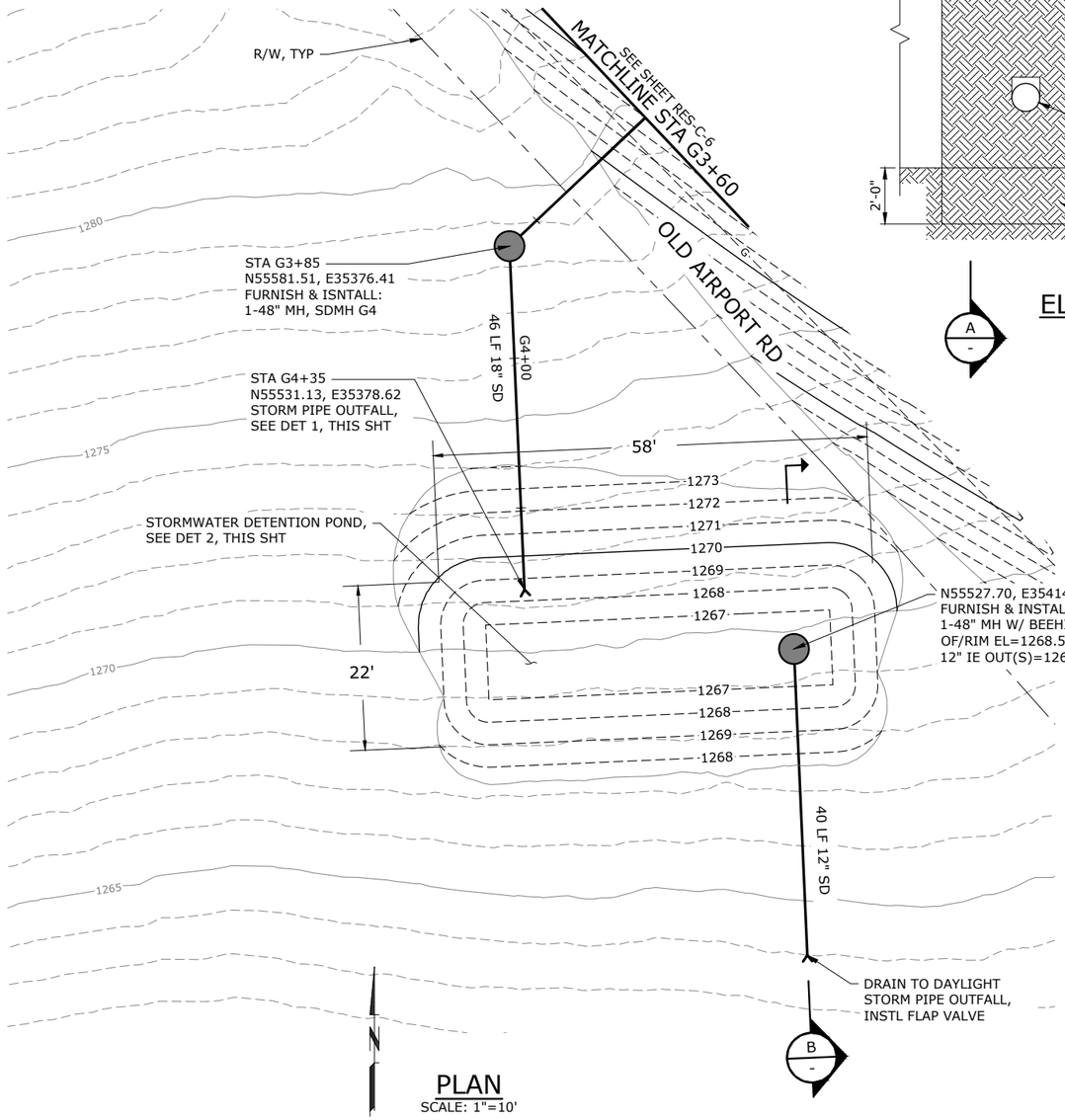
PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET

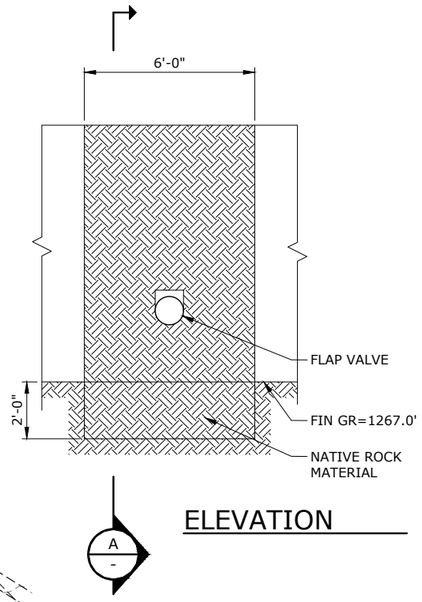
RES-C-8

NOTES:

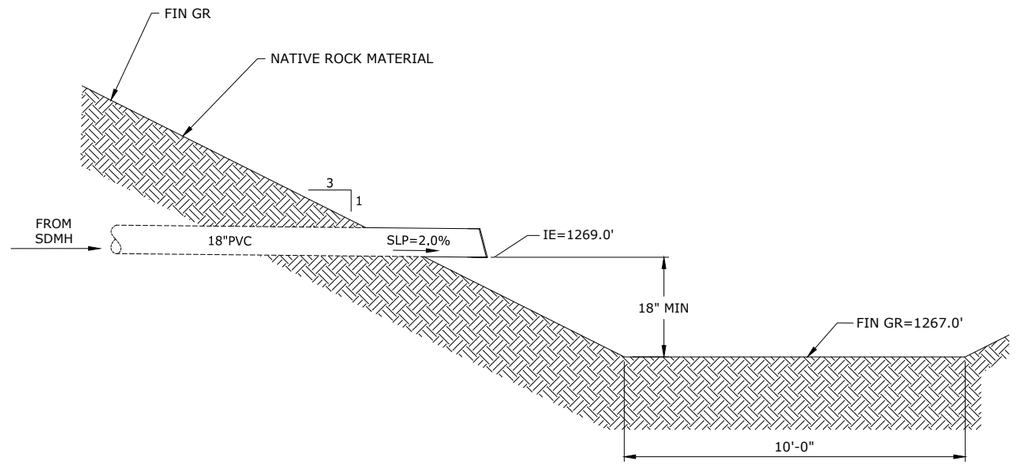
1. FOR RESERVOIR SITE PIPING PLAN, SEE SHEET RES-C-6. FOR RESERVOIR SITE PIPING PROFILES, SEE SHEETS RES-C-7 AND RES-C-8.



PLAN
SCALE: 1"=10'

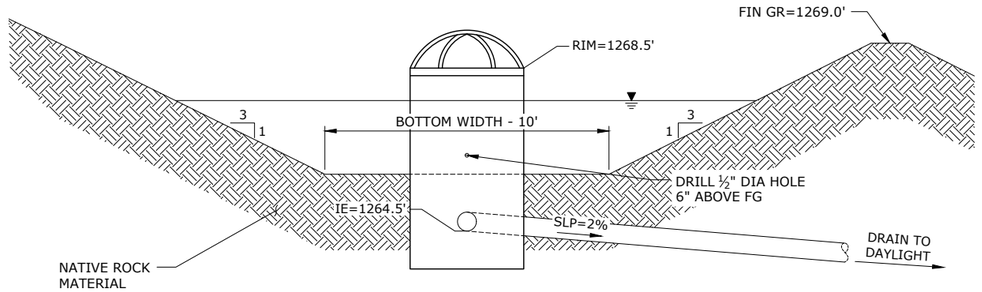


ELEVATION



SECTION
A
-

STORM PIPE OUTFALL
SCALE: NTS
1
-



SECTION
B
-

NOTES:

1. STORMWATER FACILITY GRADING PER THIS SHEET.
2. DETENTION FACILITY OUTLET AND OUTFALL PER DET 1 THIS SHT.

STORMWATER DETENTION FACILITY SECTION
SCALE: NTS
2
-

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

CTF DESIGNED
CTF DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

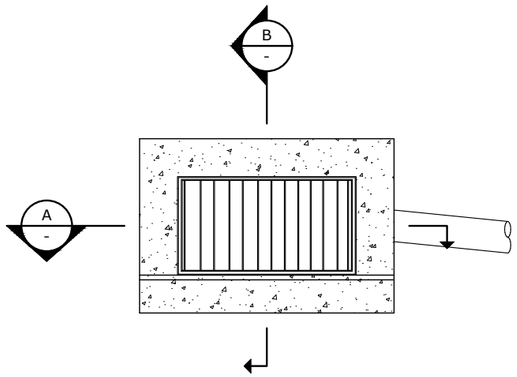
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

RESERVOIR SITE STORMWATER DETENTION POND

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
RES-C-9
42 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE B\17-2024-OR-RES-C6.dwg RES-C-9 9/7/2021 12:57 PM TAYLOR.SPENCER 23.0s (LMS Tech)



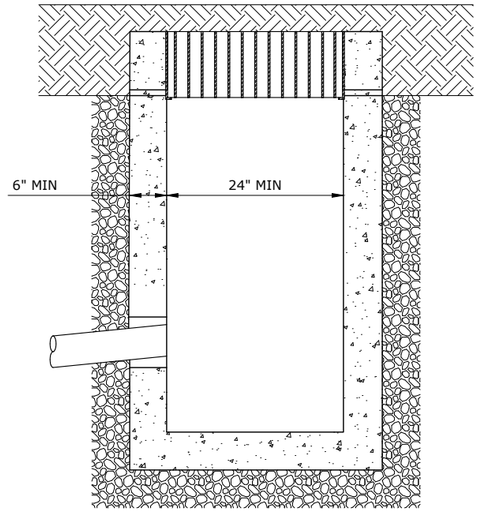
PLAN VIEW

NOTES:

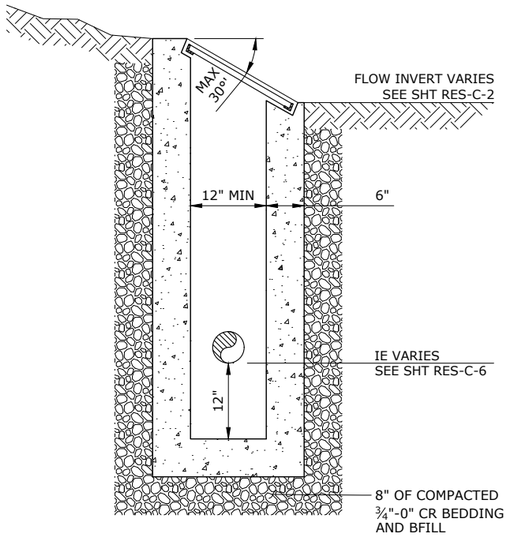
1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI, 28 DAYS AFTER PLACEMENT.

2. ALL PRECAST SECTIONS SHALL CONFORM TO REQUIREMENTS OF ASTM C-478.

3. PRECAST REINFORCEMENT SHALL BE REBAR MEETING ASTM A615 GRADE 60 OR WELDED WIRE MEETING ASTM A497.



SECTION A - -

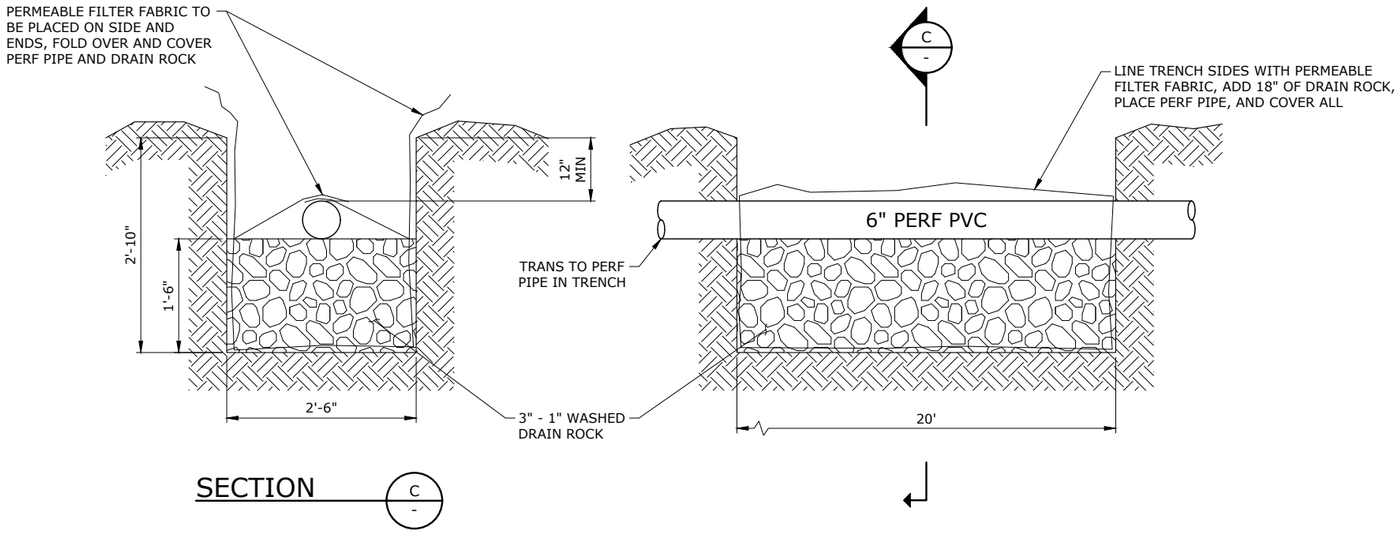


SECTION B - -

TYPICAL DITCH INLET

SCALE: 1"=1'-0"

1 RES-C-6

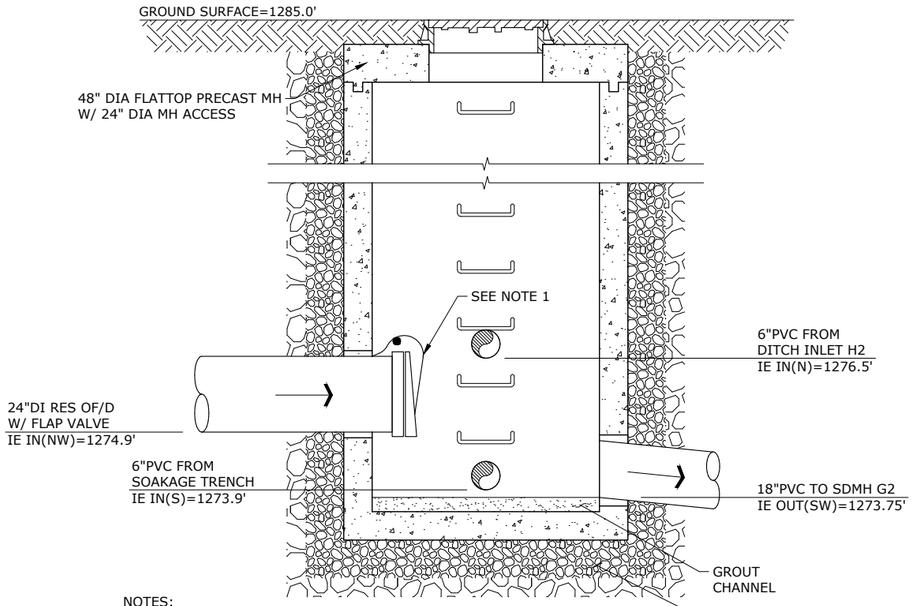


SECTION C - -

SOAKAGE TRENCH

SCALE: NTS

2 RES-C-6



NOTES:

1. PROVIDE FLAP VALVES AT MANHOLE ENTRANCES AS SHOWN. RESTRAIN FLAP VALVES TO PIPING.

RESERVOIR MONITORING MANHOLE

SCALE: 3/4"=1'-0"

3 RES-C-6

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS DESIGNED

TMS DRAWN

LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

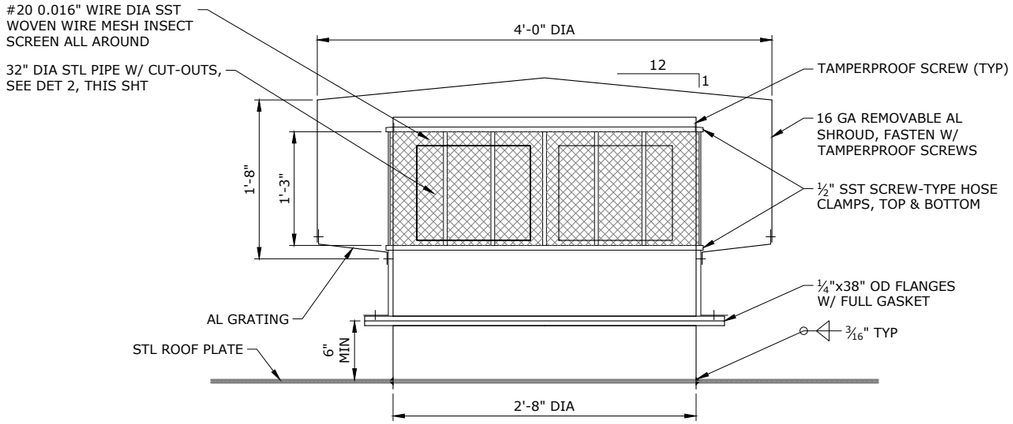
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

RESERVOIR SITE DRAINAGE, OUTFALL, AND PIPING DETAILS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET RES-C-10



ROOF VENT

SCALE: 1 1/2"=1'-0" — 1 RES-C-5

ROOF VENT NOTES:

1. ON BOTTOM OF SHROUD, PROVIDE GRATING CONSISTING OF 1" WIDE, 18 GAUGE FLAT BAR WITH 1"x1" OPENING. FABRICATE IN A WOVEN "DIAMOND" PATTERN AND PROVIDE WELDED STEEL BAND ON ALL EDGES.

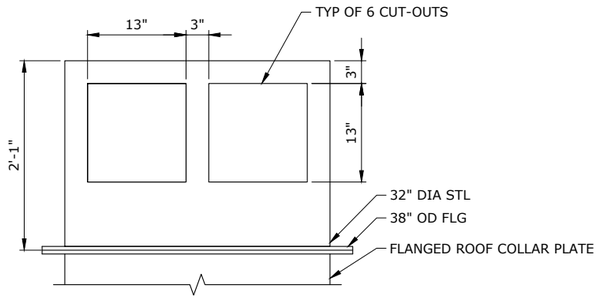
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF VENT FABRICATION DETAILS INCLUDING PROPOSED TAMPERPROOF SCREW CONFIGURATION FOR APPROVAL. SEE SPECIFICATIONS.

3. AFTER CUTTING OUT ROOF PLATE FOR NEW VENT AND PRIOR TO INSTALLING NEW VENT ASSEMBLY, SURFACE PREPARE AND COAT RAFTERS AND ALL OTHER SURFACES ACCESSIBLE FROM ROOF CUT-OUT.

4. FLANGE BOLTS SHALL BE 10 - ½" A307 BOLTS WITH TWO TAMPERPROOF STUDS AND NUTS LOCATED 180°.

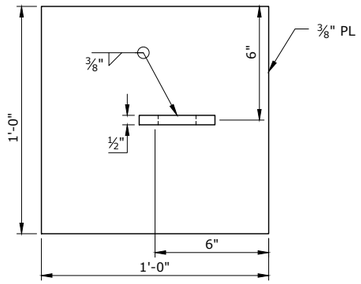
5. PROVIDE INSULATION BETWEEN DISSIMILAR METALS.

6. VACUUM BREAKER PROVIDED SEPARATELY.

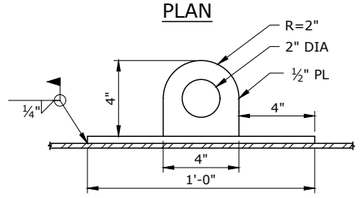


VENT OPENING DETAIL

SCALE: NTS — 2 -



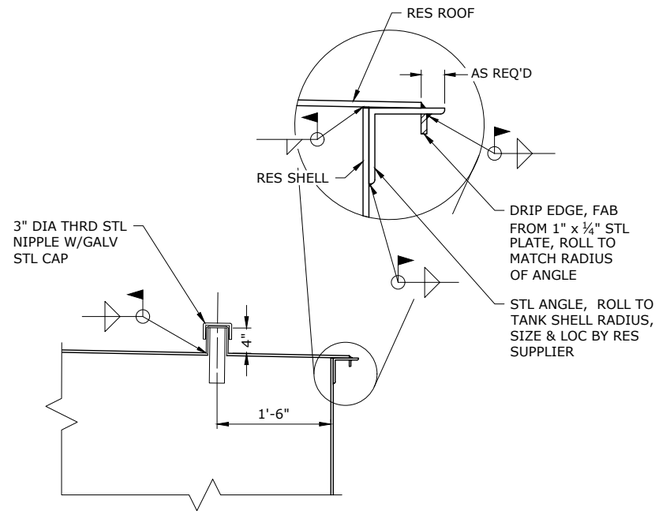
PLAN



ELEVATION

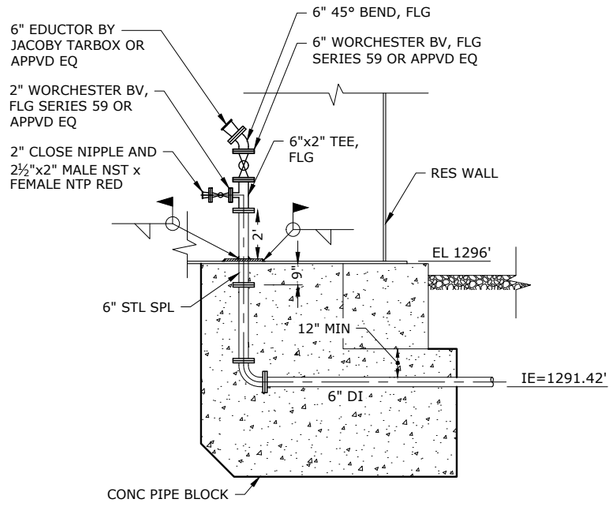
PAINTERS LUG

SCALE: 1/4"=1'-0" — 3 RES-C-5



PAINTERS NIPPLE

SCALE: 1"=1'-0" — 4 RES-C-5



WASHDOWN LINE DETAIL

SCALE: 3/8"=1'-0" — 5 RES-C-6

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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TMS DESIGNED
TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2005 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

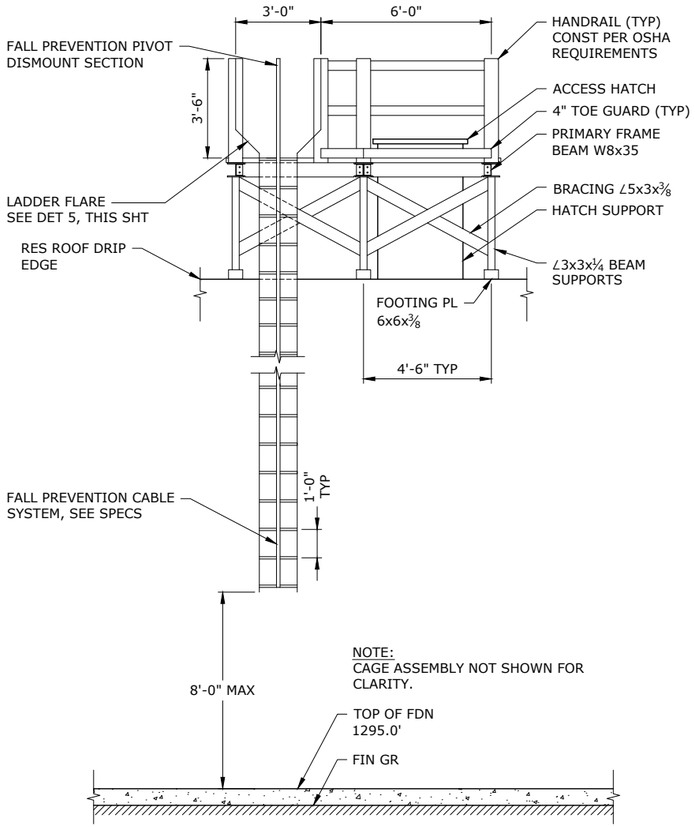
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

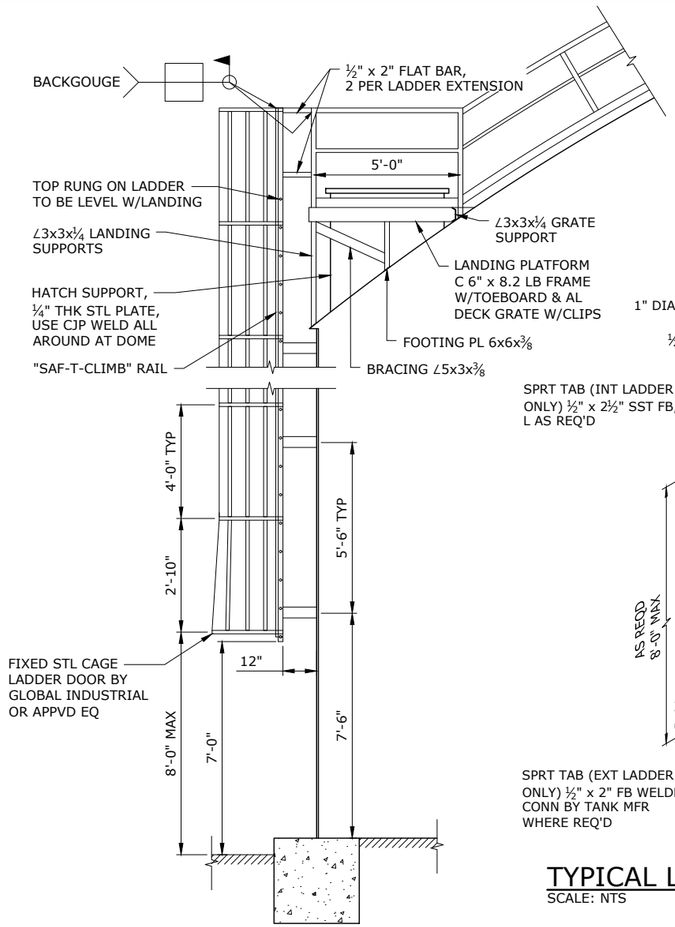
RESERVOIR MISCELLANEOUS CIVIL DETAILS - 1

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET RES-C-11



FRONT ELEVATION

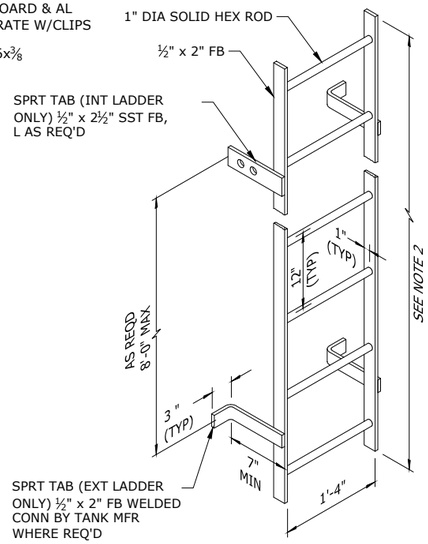


SIDE ELEVATION

EXTERIOR LADDER

SCALE: 3/8"=1'-0"

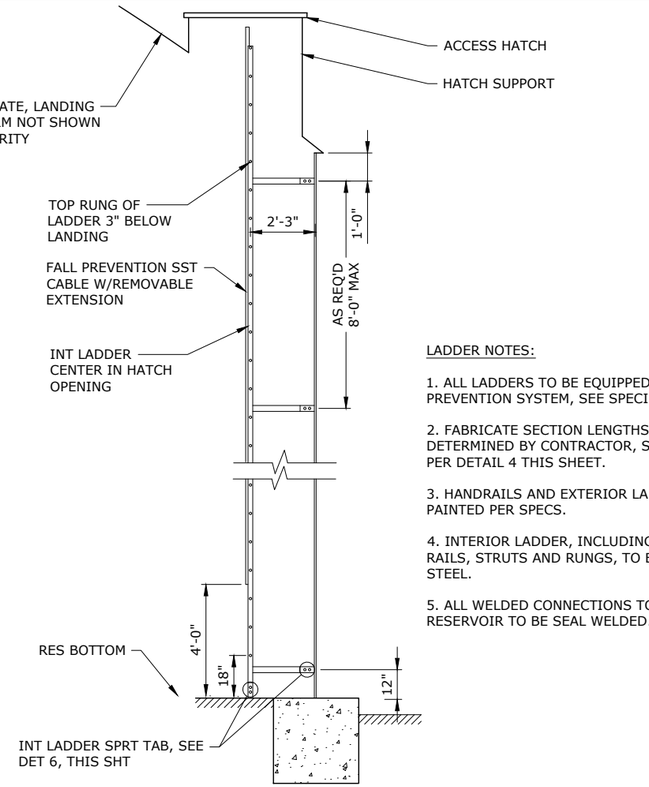
1 RES-C-5



TYPICAL LADDER

SCALE: NTS

2 -



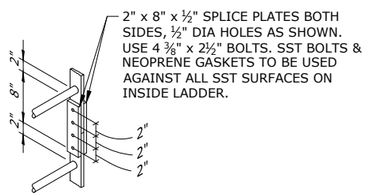
INTERIOR LADDER SECTION

SCALE: 3/8"=1'-0"

3 RES-C-5

LADDER NOTES:

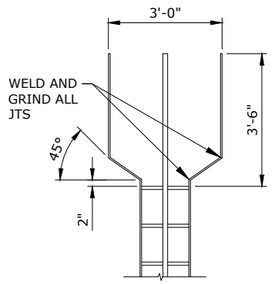
1. ALL LADDERS TO BE EQUIPPED WITH FALL PREVENTION SYSTEM, SEE SPECIFICATIONS.
2. FABRICATE SECTION LENGTHS TO BE DETERMINED BY CONTRACTOR, SPLICE AS PER DETAIL 4 THIS SHEET.
3. HANDRAILS AND EXTERIOR LADDER TO BE PAINTED PER SPECS.
4. INTERIOR LADDER, INCLUDING SPLICES, RAILS, STRUTS AND RUNGS, TO BE PAINTED STEEL.
5. ALL WELDED CONNECTIONS TO RESERVOIR TO BE SEAL WELDED.



SPLICE

SCALE: NTS

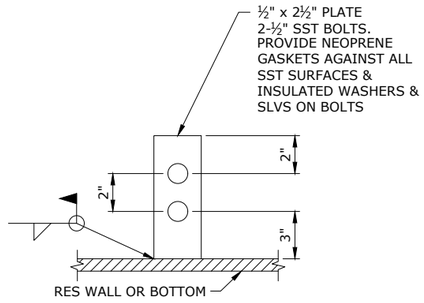
4 -



LADDER FLARE

SCALE: NTS

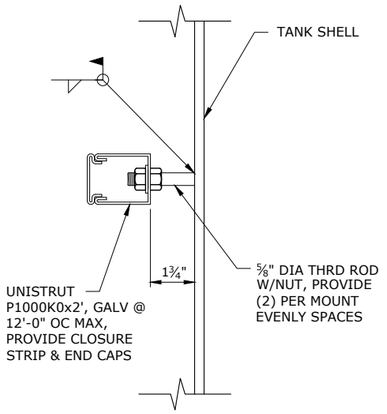
5 -



INTERIOR LADDER SUPPORT TAB

SCALE: NTS

6 -



CONDUIT MOUNTING BRACKET

SCALE: NTS

7 RES-C-5

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

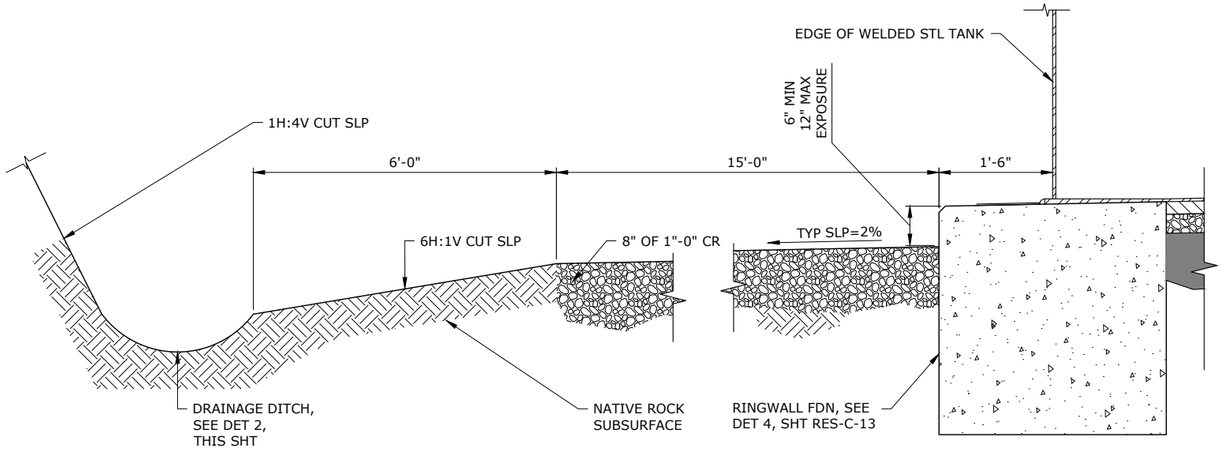
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

RESERVOIR MISCELLANEOUS CIVIL DETAILS - 2

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

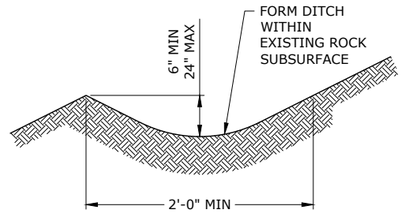
SHEET RES-C-12



TYP ROADWAY SECTION AROUND TANK

SCALE: 1"=1'-0"

1 RES-C-1



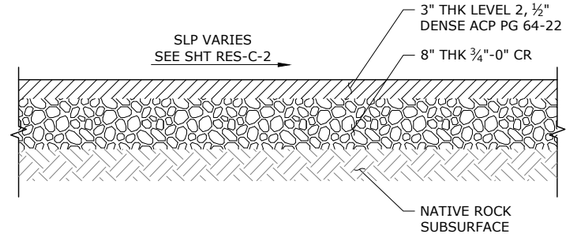
NOTE:

1. MINIMUM SLOPE OF DRAINAGE DITCH TO BE 0.5%.

DRAINAGE DITCH SECTION

SCALE: NTS

2 RES-C-1



TYPICAL ASPHALT SURFACE

SCALE: 1"=1'-0"

3 RES-C-1

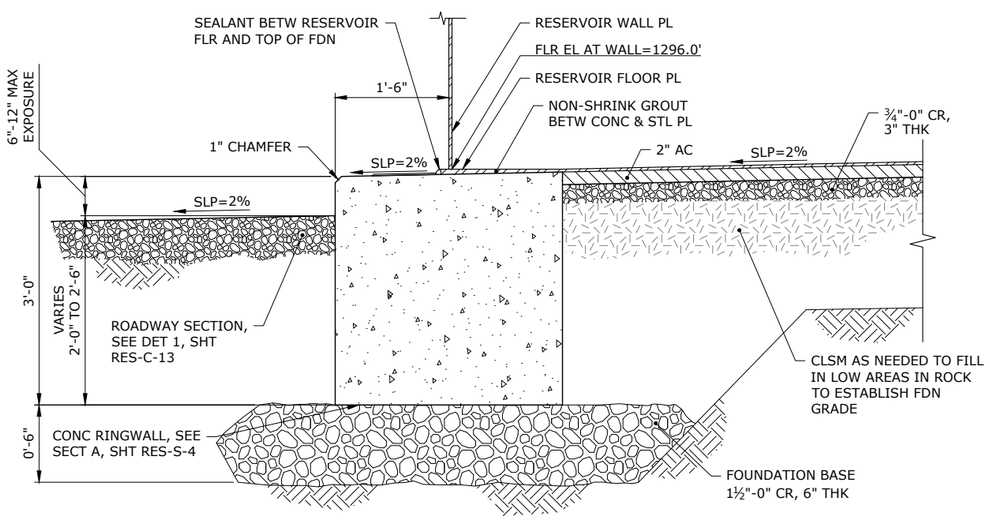
NOTES:

1. RESERVOIR INTERIOR AND EXTERIOR, INCLUDING ALL ATTACHMENTS AND APPURTENANCES, SHALL BE COATED PER SPECIFICATIONS.

2. RESERVOIR SHALL BE DISINFECTED IN ACCORDANCE WITH OF THE SPECIFICATIONS FOLLOWING COMPLETION OF ALL RESERVOIR COATING WORK.

3. THREADS ON NIPPLE TO BE COMPLETELY COVERED BY CAP. NO EXPOSED THREADS.

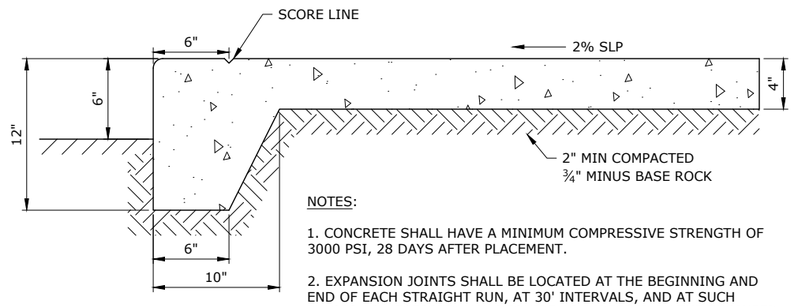
4. ALL ACCESS HOLES AND BOLT HOLES TO BE DRILLED PRIOR TO TANK COATING. ALL ROUGH EDGES TO BE GROUND SMOOTH.



RINGWALL FOUNDATION

SCALE: 1"=1'-0"

4 -



NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI, 28 DAYS AFTER PLACEMENT.

2. EXPANSION JOINTS SHALL BE LOCATED AT THE BEGINNING AND END OF EACH STRAIGHT RUN, AT 30' INTERVALS, AND AT SUCH PLACES AS NECESSITY MAY REQUIRE AS DIRECTED BY THE ENGINEER.

3. CONTRACTION JOINTS SHALL BE LOCATED AT INTERVALS NOT TO EXCEED 15' AND MAY BE OMITTED WHERE EXPANSION JOINTS ARE AT LESS THAN 25' INTERVALS.

4. BASE ROCK SHALL BE ¾" MINUS CRUSHED ROCK AND SHALL BE COMPACTED TO NOT LESS THAN 95% RELATIVE COMPACTION.

SIDEWALK SECTION

SCALE: 2"=1"-0'

5 RES-C-1

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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TMS DRAWN

LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2005 LAEL L. ALDERMAN

RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

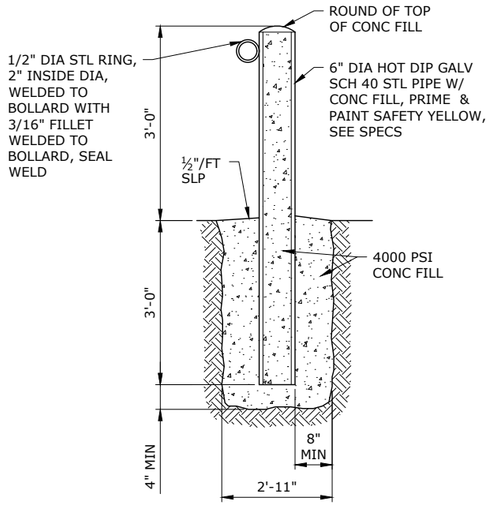
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

MISCELLANEOUS CIVIL DETAILS - 1

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET

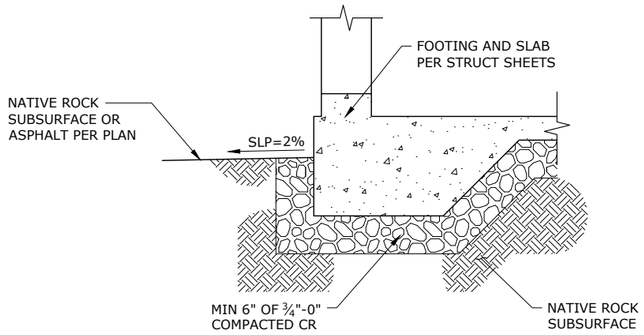
RES-C-13



BOLLARD GUARD POST

SCALE: NTS

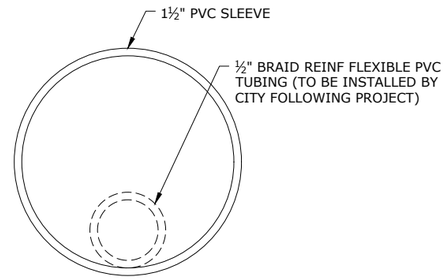
1 RES-C-1



TYPICAL BUILDING SUBGRADE PREPARATION

SCALE: NTS

2 RES-C-1



NOTE:

1. INSTALL WITH A MINIMUM BENDING RADIUS OF 10', MINIMUM 30" COVER.

2. WHERE POSSIBLE, ROUTE CHLORINE INJECTION LINES WITH 2' HORIZONTAL SEPARATION FROM NEW AND EXISTING WATER LINES.

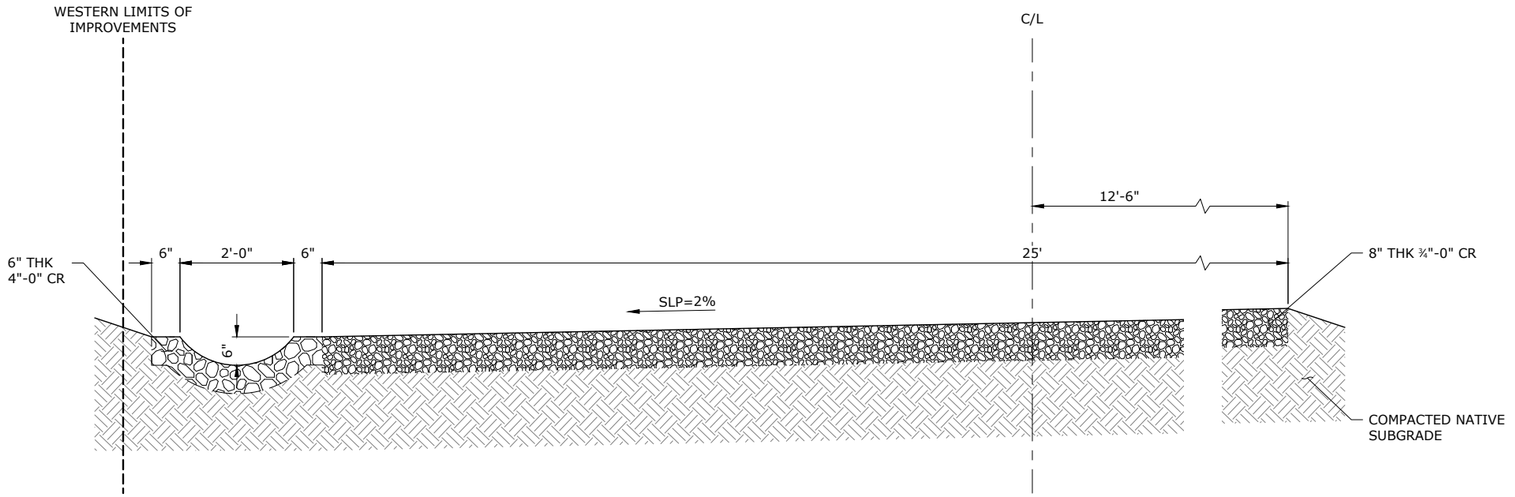
3. PROVIDE ½" TUBING IN LENGTHS OF 100'.

4. PVC SLEEVES SHALL BE JOINED BY WATERTIGHT CONNECTION.

CHLORINE INJECTION LINE DETAIL

SCALE: NTS

3 RES-C-6



NOTES:

1. MINIMUM SLOPE OF DRAINAGE DITCH TO BE 1%.

TYPICAL GRAVEL ROADWAY SECTION AT OLD AIRPORT ROAD

SCALE: 3/4"=1'-0"

4 -

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2005 LAEL L. ALDERMAN RENEWS 12-31-21

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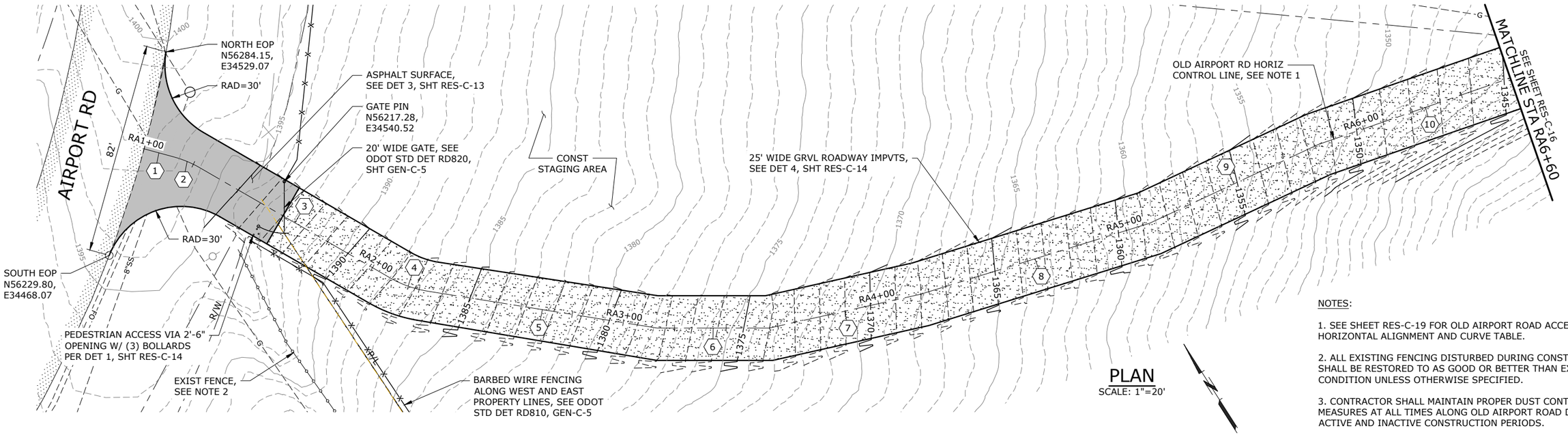
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

MISCELLANEOUS CIVIL DETAILS - 2

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET RES-C-14



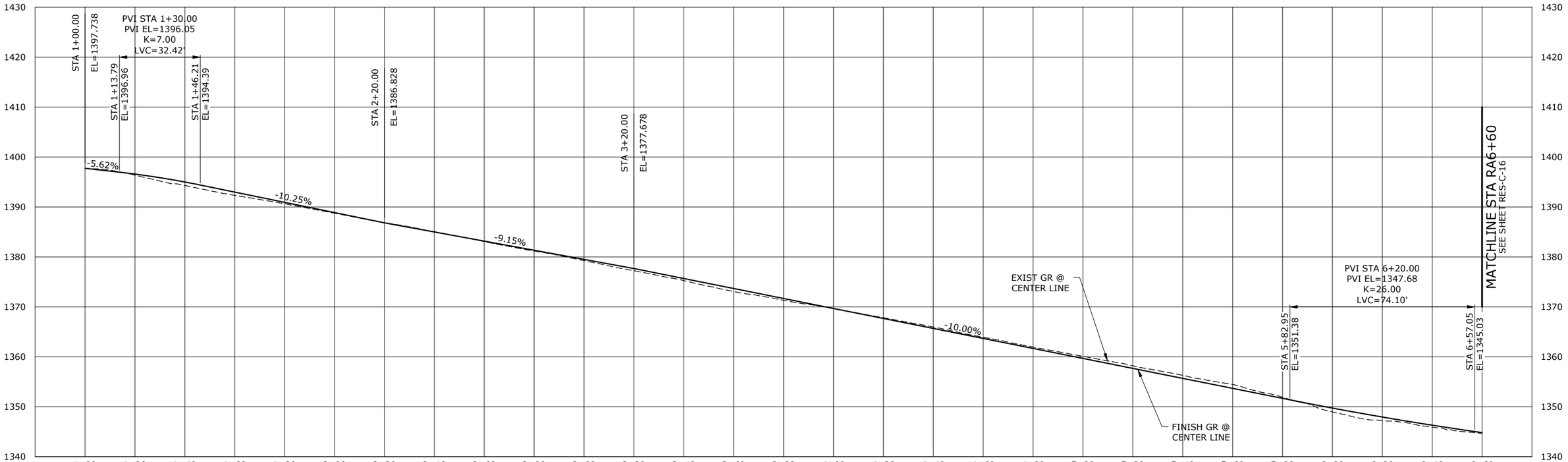
PLAN
SCALE: 1"=20'

NOTES:

1. SEE SHEET RES-C-19 FOR OLD AIRPORT ROAD ACCESS ROAD HORIZONTAL ALIGNMENT AND CURVE TABLE.

2. ALL EXISTING FENCING DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO AS GOOD OR BETTER THAN EXISTING CONDITION UNLESS OTHERWISE SPECIFIED.

3. CONTRACTOR SHALL MAINTAIN PROPER DUST CONTROL MEASURES AT ALL TIMES ALONG OLD AIRPORT ROAD DURING ACTIVE AND INACTIVE CONSTRUCTION PERIODS.



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

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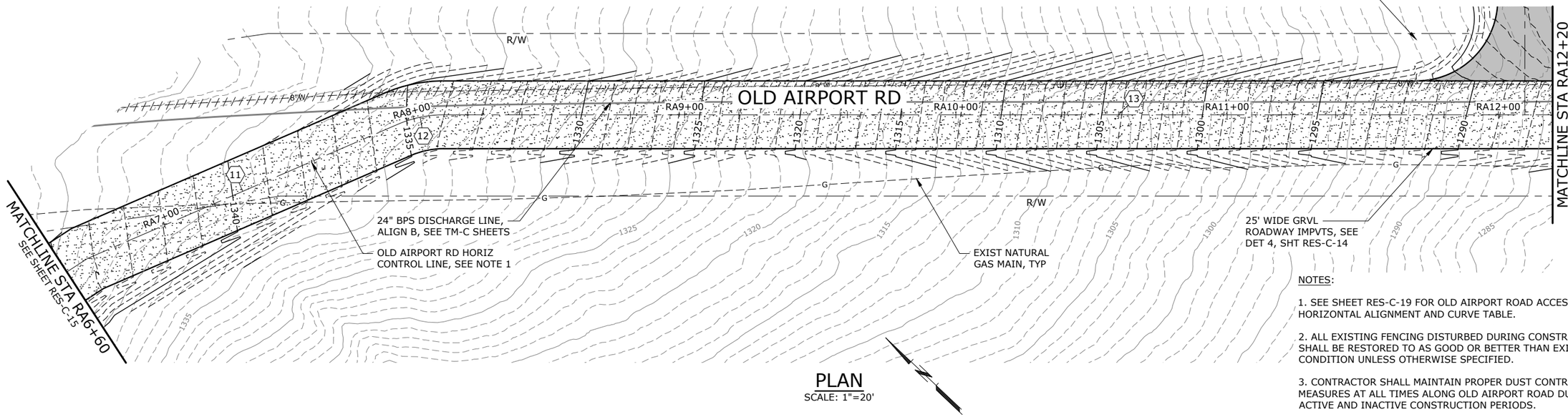
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

OLD AIRPORT ROAD ACCESS ROAD
PLAN & PROFILE
STA RA1+00 TO STA RA6+60

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
RES-C-15
48 of 113



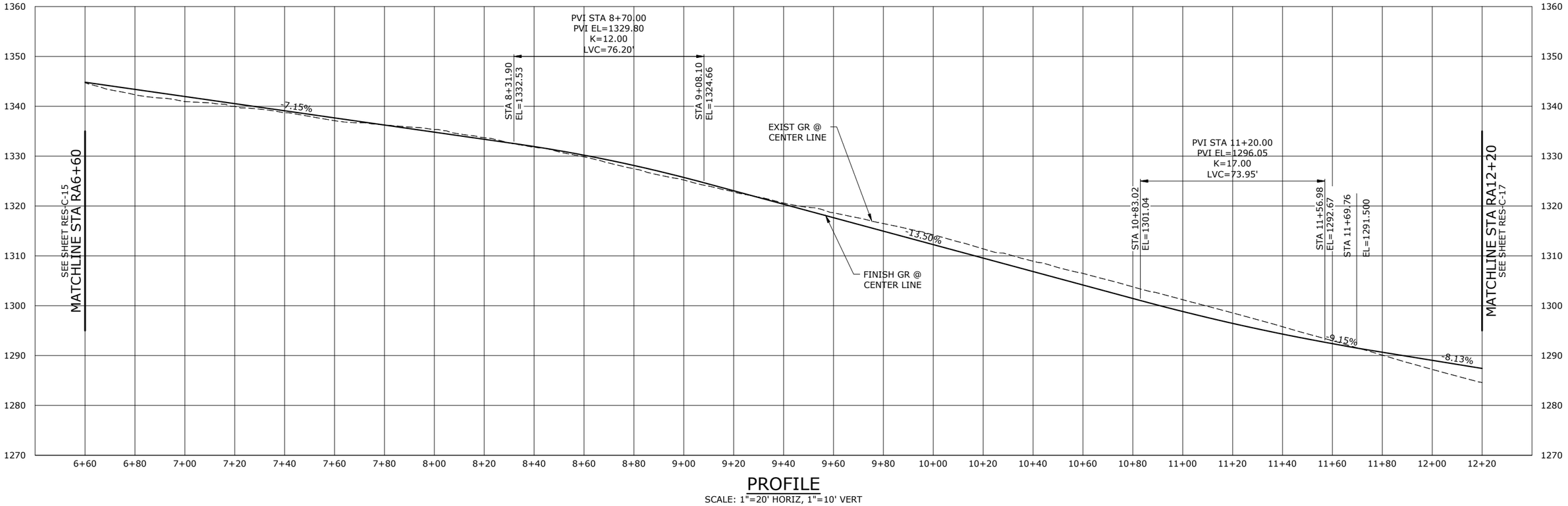
PLAN
SCALE: 1"=20'

NOTES:

1. SEE SHEET RES-C-19 FOR OLD AIRPORT ROAD ACCESS ROAD HORIZONTAL ALIGNMENT AND CURVE TABLE.

2. ALL EXISTING FENCING DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO AS GOOD OR BETTER THAN EXISTING CONDITION UNLESS OTHERWISE SPECIFIED.

3. CONTRACTOR SHALL MAINTAIN PROPER DUST CONTROL MEASURES AT ALL TIMES ALONG OLD AIRPORT ROAD DURING ACTIVE AND INACTIVE CONSTRUCTION PERIODS.



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

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0 ½ 1
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TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN
RENEWS 12-31-21

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CITY OF PENDLETON INCORPORATED 1880 OREGON

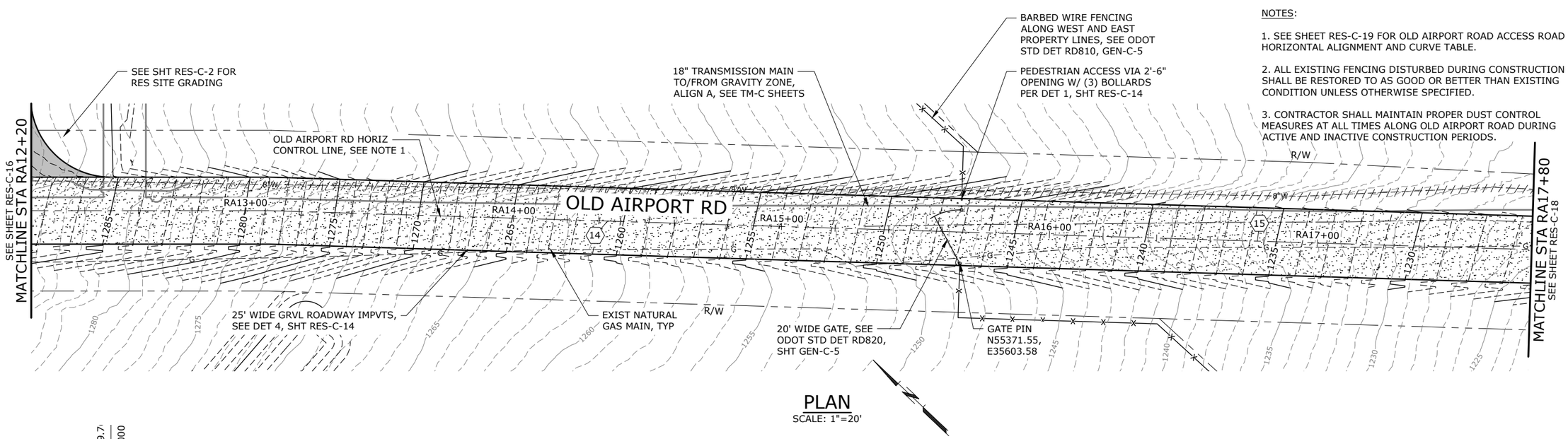
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

OLD AIRPORT ROAD ACCESS ROAD
PLAN & PROFILE
STA RA6+60 TO STA RA12+20

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
RES-C-16
49 of 113

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE B\17-2024-OR-RES-C15-19.dwg RES-C-16 9/7/2021 12:58 PM TAYLOR.SPENCER 23.0s (LMS Tech)



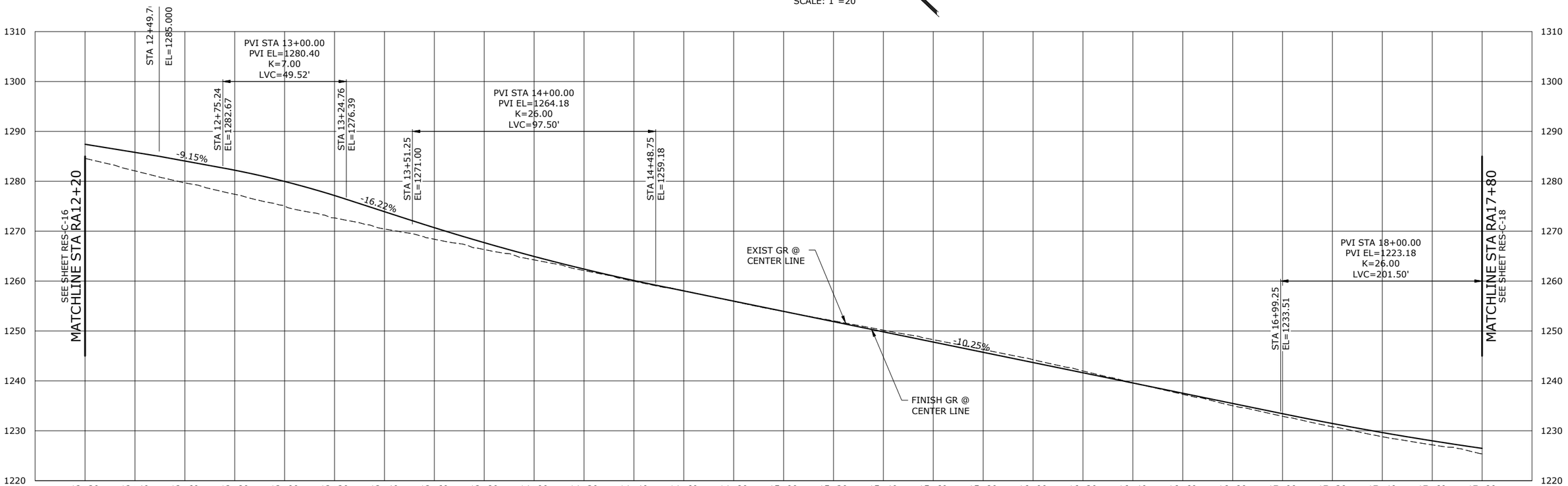
NOTES:

1. SEE SHEET RES-C-19 FOR OLD AIRPORT ROAD ACCESS ROAD HORIZONTAL ALIGNMENT AND CURVE TABLE.

2. ALL EXISTING FENCING DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO AS GOOD OR BETTER THAN EXISTING CONDITION UNLESS OTHERWISE SPECIFIED.

3. CONTRACTOR SHALL MAINTAIN PROPER DUST CONTROL MEASURES AT ALL TIMES ALONG OLD AIRPORT ROAD DURING ACTIVE AND INACTIVE CONSTRUCTION PERIODS.

PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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TMS DESIGNED
TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN RENEWS 12-31-21

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

OLD AIRPORT ROAD ACCESS ROAD PLAN & PROFILE STA RA12+20 TO STA RA17+80

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

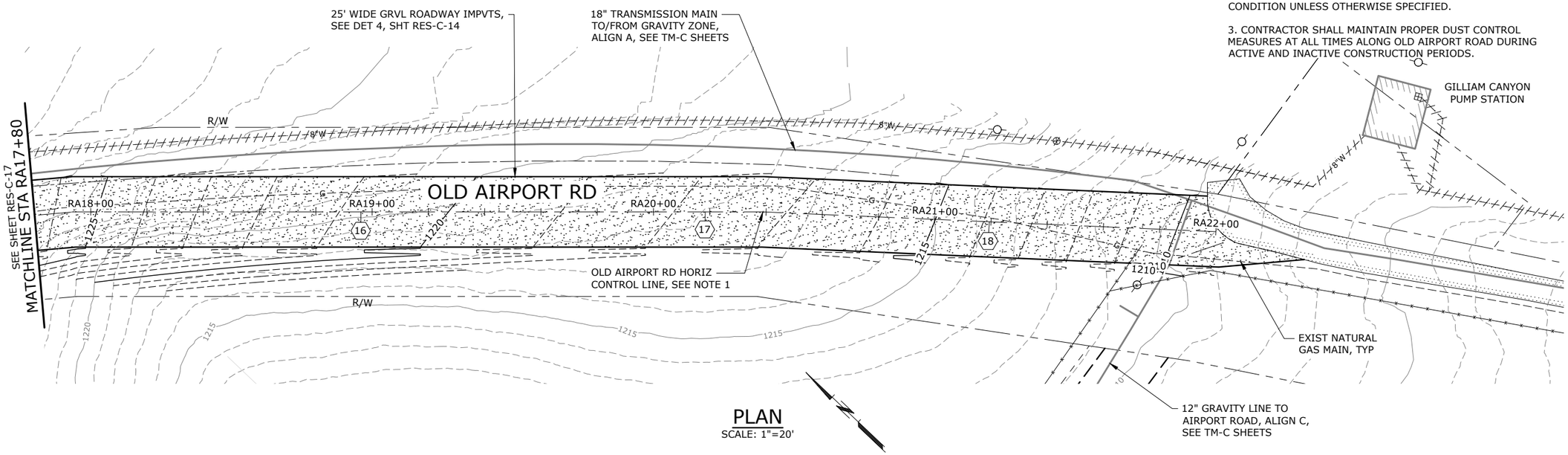
SHEET RES-C-17

NOTES:

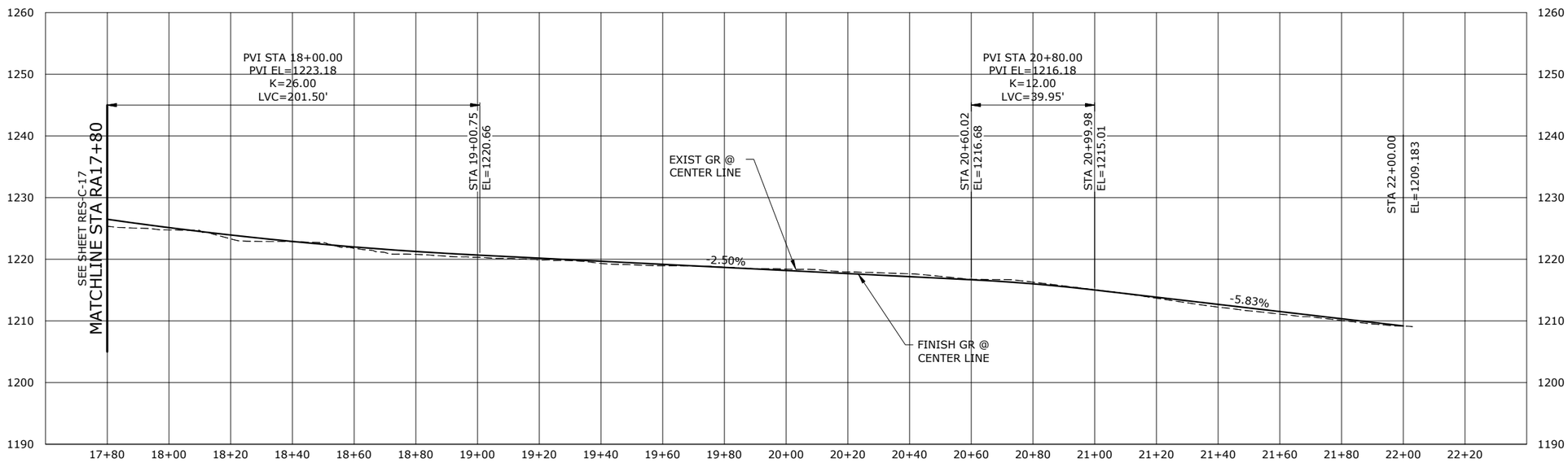
1. SEE SHEET RES-C-19 FOR OLD AIRPORT ROAD ACCESS ROAD HORIZONTAL ALIGNMENT AND CURVE TABLE.

2. ALL EXISTING FENCING DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO AS GOOD OR BETTER THAN EXISTING CONDITION UNLESS OTHERWISE SPECIFIED.

3. CONTRACTOR SHALL MAINTAIN PROPER DUST CONTROL MEASURES AT ALL TIMES ALONG OLD AIRPORT ROAD DURING ACTIVE AND INACTIVE CONSTRUCTION PERIODS.



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=10' VERT

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2005 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

OLD AIRPORT ROAD ACCESS ROAD PLAN & PROFILE STA RA17+80 TO STA RA22+00

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
RES-C-18
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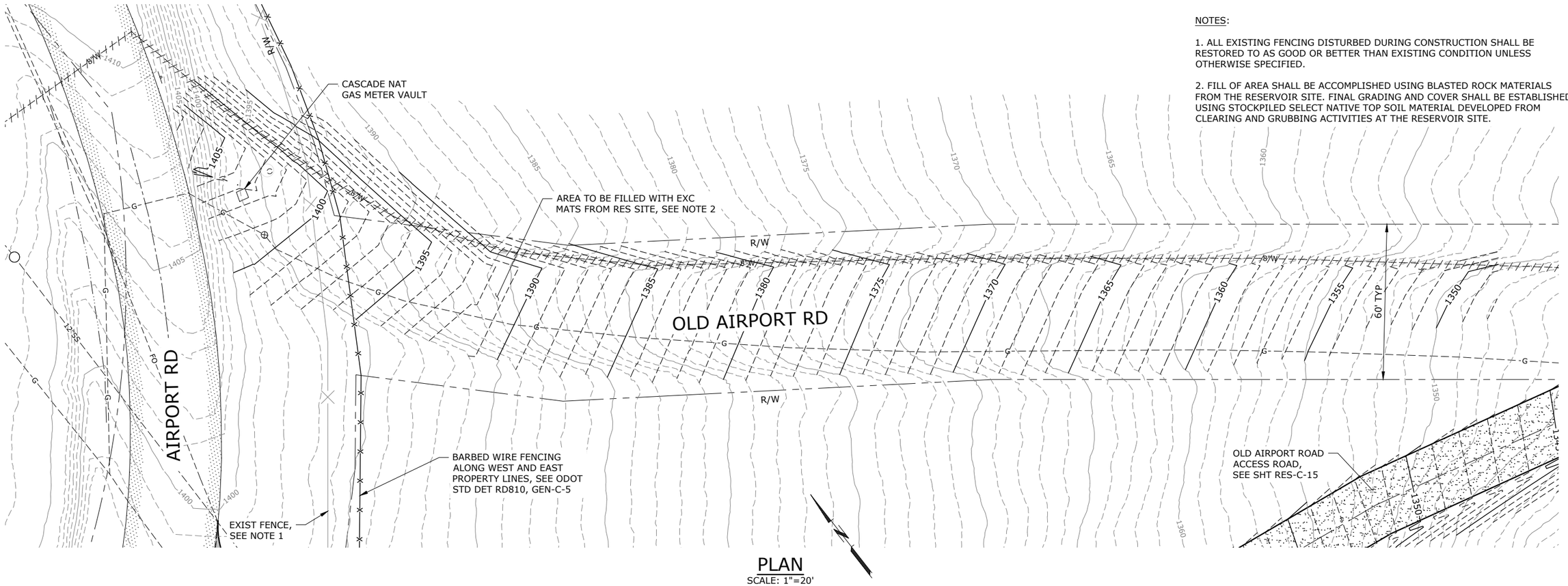
NOTE: SEE SHEETS RES-C-15, RES-C-16, RES-C-17, AND RES-C-18 FOR ALIGNMENT 'RA' OLD AIRPORT ROAD ACCESS ROAD.

OLD AIRPORT ROAD ACCESS ROAD HORIZONTAL ALIGNMENT AND CURVE TABLE					
LINE/ CURVE NO.	START POINT	END POINT	LENGTH	RADIUS	BEARING/ DELTA
1	STA RA1+00 N56257.20 E34501.68	STA RA1+12 N56248.42 E34509.63	11.85'	N/A	S42°09'43"E
2	STA RA1+12 N56248.42 E34509.63	STA RA1+23 N56239.38 E34515.89	11.03'	42.50'	14°51'49"
3	STA RA1+23 N56239.38 E34515.89	STA RA2+08 N56163.91 E34554.84	84.93'	N/A	S27°17'54"E
4	STA RA2+08 N56163.91 E34554.84	STA RA2+23 N56151.72 E34564.28	15.51'	42.50'	20°54'31"
5	STA RA2+23 N56151.72 E34564.28	STA RA3+13 N56091.71 E34631.41	90.04'	N/A	S48°12'24"E
6	STA RA3+13 N56091.71 E34631.41	STA RA3+57 N56068.36 E34667.84	43.27'	N/A	S57°19'50"E

OLD AIRPORT ROAD ACCESS ROAD HORIZONTAL ALIGNMENT AND CURVE TABLE					
LINE/ CURVE NO.	START POINT	END POINT	LENGTH	RADIUS	BEARING/ DELTA
7	STA RA3+57 N56068.36 E34667.84	STA RA4+17 N56047.75 E34724.19	60.00'	N/A	S69°54'45"E
8	STA RA4+17 N56047.75 E34724.19	STA RA5+09 N56023.02 E34813.53	92.70'	N/A	S74°31'40"E
9	STA RA5+09 N56023.02 E34813.53	STA RA5+81 N56013.40 E34885.01	72.12'	N/A	S82°20'11"E
10	STA RA5+81 N56013.40 E34885.01	STA RA6+69 N55992.79 E34970.23	87.68'	N/A	S76°24'18"E
11	STA RA6+69 N55992.79 E34970.23	STA RA7+94 N55943.73 E35084.77	124.61'	N/A	S66°48'49"E
12	STA RA7+94 N55943.73 E35084.77	STA RA8+11 N55933.86 E35098.92	17.37'	42.50'	23°24'40"

OLD AIRPORT ROAD ACCESS ROAD HORIZONTAL ALIGNMENT AND CURVE TABLE					
LINE/ CURVE NO.	START POINT	END POINT	LENGTH	RADIUS	BEARING/ DELTA
13	STA RA8+11 N55933.86 E35098.92	STA RA13+09 N55572.10 E35441.05	497.92'	N/A	S43°24'10"E
14	STA RA13+09 N55572.10 E35441.05	STA RA15+61 N55383.65 E35608.55	252.13'	N/A	S41°37'50"E
15	STA RA15+61 N55383.65 E35608.55	STA RA17+94 N55209.54 E35763.30	232.94'	N/A	S41°37'51"E
16	STA RA17+94 N55209.54 E35763.30	STA RA19+98 N55045.96 E35884.96	203.86'	N/A	S36°38'23"E
17	STA RA19+98 N55045.96 E35884.96	STA RA20+39 N55013.13 E35909.37	40.91'	N/A	S36°38'23"E
18	STA RA20+39 N55013.13 E35909.37	STA RA22+00 N54879.76 E35999.81	161.14'	N/A	S34°08'23"E



PLAN
SCALE: 1"=20'

NOTES:

1. ALL EXISTING FENCING DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO AS GOOD OR BETTER THAN EXISTING CONDITION UNLESS OTHERWISE SPECIFIED.

2. FILL OF AREA SHALL BE ACCOMPLISHED USING BLASTED ROCK MATERIALS FROM THE RESERVOIR SITE. FINAL GRADING AND COVER SHALL BE ESTABLISHED USING STOCKPILED SELECT NATIVE TOP SOIL MATERIAL DEVELOPED FROM CLEARING AND GRUBBING ACTIVITIES AT THE RESERVOIR SITE.

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS DESIGNED
TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 28, 2018 LAEL L. ALDERMAN RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

NORTHERN OLD AIRPORT ROAD GRADING PLAN

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
RES-C-19
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G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE B\17-2024-OR-RES-C15-19.dwg RES-C-19 9/7/2021 12:58 PM TAYLOR.SPENCER 23.0s (LMS Tech)

STRUCTURAL SHEETS:

GENERAL STRUCTURAL NOTES:

1. THESE NOTES ARE GENERAL IN NATURE AND ARE INTENDED TO SET MINIMUM STANDARDS FOR CONSTRUCTION. THE CONTRACTOR SHALL BE COMPLETELY FAMILIAR WITH THE CONTRACT DOCUMENTS AND HAVE A COPY OF THEM ON SITE AT ALL TIMES.
2. FOR ANY PORTION OF THE CONSTRUCTION WHICH THE CONTRACTOR IS UNABLE TO ASCERTAIN THE REQUIRED CONSTRUCTION OR WHERE CONFLICTS EXIST, IT IS THE CONTRACTOR'S RESPONSIBILITY TO REQUEST ADDITIONAL INFORMATION (RFIs) AND/OR CLARIFICATIONS BEFORE CONSTRUCTION.
3. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH THE 2019 OREGON STRUCTURAL SPECIALTY CODE (OSSC).
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS BEFORE CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
5. THE CONTRACT STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. METHODS, PROCEDURES, AND SEQUENCE OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
6. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LIVE LOAD FOR THE STRUCTURE. PROVIDE SHORING AND/OR BRACING WHERE LOADS EXCEED DESIGN CAPACITY AND WHERE STRUCTURES HAVE NOT ATTAINED DESIGN STRENGTH.
7. CIVIL, GRADING, AND PIPING ARE OUTSIDE THE SCOPE OF STRUCTURAL WORK. ANY DEPICTION OF SUCH FEATURES ON THE STRUCTURAL DRAWINGS ARE NOT INTENDED TO BE USED FOR CONSTRUCTION. REPRESENTATION OF SUCH FEATURES ON THESE DRAWINGS MAY OR MAY NOT BE ACCURATE. REFER TO CIVIL DRAWINGS AND/OR SPECIFICATIONS.

JOB SITE CONDITIONS AND SAFETY:

1. CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE ENGINEER AND IT'S REPRESENTATIVE HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FORM THE SOLE NEGLIGENCE OF THE ENGINEER.

DESIGN LOADS: PER 2019 OSSC, ASCE 7-16, AND AWWA D100-11

1603.1.2 – ROOF LOADS:

DEAD LOAD	SELF WEIGHT
LIVE LOAD-ROOF	SEE SNOW LOADS
LIVE LOAD-STAIR/LANDING	100 PSF
LIVE LOAD RAILING POINT LOAD	200 LB

1603.1.3 – SNOW LOADS:

GROUND SNOW LOAD, Pg	20 PSF
FLAT-ROOF SNOW LOAD, Pf	18 PSF, USE 25 PSF MIN. (2019 OSSC)
SNOW EXPOSURE FACTOR, Ce	1.1
SNOW LOAD IMPORTANCE FACTOR, Is	1.2, CATEGORY IV
THERMAL FACTOR, Ct	1.1

1603.1.4 – WIND DESIGN CRITERIA:

ULTIMATE DESIGN WIND SPEED, Vult	112 MPH
AWWA WIND LOAD IMPORTANCE FACTOR, Iw	1.15, AWWA CATEGORY III (ASCE 7 CAT. IV)
WIND EXPOSURE	EXPOSURE C
ANALYSIS PROCEDURE	SIMPLIFIED METHOD PER AWWA D100

1603.1.5 – EARTHQUAKE DESIGN CRITERIA:

RISK CATEGORY	CATEGORY IV
SEISMIC IMPORTANCE FACTOR, I_E	1.5
SPECTRAL ACCELERATION, S_a	0.363 g
SPECTRAL ACCELERATION, S_1	0.137 g
SITE CLASS	B
SPECTRAL RESPONSE COEFFICIENT, S_{DS}	0.218 g
SPECTRAL RESPONSE COEFFICIENT, S_{D1}	0.073 g
SEISMIC DESIGN CATEGORY	CATEGORY C
DESIGN BASE SHEAR	570 KIPS (RESERVOIR)
SEISMIC RESPONSE COEFFICIENT(S),	AI=0.09, AC=0.01, ALLOWABLE
RESPONSE MODIFICATION FACTOR(S),	RI=2.5, RC=1.5
ANALYSIS PROCEDURE	AWWA D100

CONCRETE:

1. ALL CONCRETE SHALL BE HARD ROCK CONCRETE MEETING REQUIREMENTS OF ACI-301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS". MIX PROPORTIONS SHALL BE PER ACI-301, METHOD 2 OR THE ALTERNATE PROCEDURE. SUBMIT MIX DESIGN FOR REVIEW BY STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. ALL AGGREGATE SHALL BE CRUSHED ANGULAR ROCK, NO ROUND RIVER ROCK WILL BE ACCEPTED.
2. STRUCTURAL CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS TO MEET DESIGN AND DURABILITY CRITERIA FOR FREEZE/THAW AND ENVIRONMENTAL FACTORS:

	DURABILITY REQUIREMENTS							
TYPE	FX	SX	WX	CX	F'C	SLUMP*	W/C	AIR
FOOTINGS	F2	S1	W0	C1	4,500 PSI	1-4"	0.45	6% ± 1.5%

3. ALL CONCRETE EXPOSED TO WEATHER SHALL CONTAIN 6% (±) 1.5% AIR ENTRAINMENT BY VOLUME. AIR ENTRAINMENT SHALL BE IN CONFORMANCE WITH ASTM C260 AND C494.
4. COLD WEATHER PLACEMENT SHALL CONFORM TO ACI-306. HOT WEATHER PLACEMENT SHALL CONFORM TO ACI-305. MECHANICALLY VIBRATE ALL FORMED CONCRETE. DO NOT OVER-VIBRATE. PLACE CONCRETE MONOLITHICALLY BETWEEN CONSTRUCTION OR CONTROL JOINTS. PROTECT ALL CONCRETE FROM PREMATURE DRYING.
5. CHAMFER ALL EXTERIOR CORNERS 1/2" UNLESS SHOWN OTHERWISE.
6. *SLUMP LIMITS MAY BE INCREASED BY ADDITION OF ADMIXTURES PROVIDED THAT THE WATER/CEMENT RATIO OF THE ORIGINAL MIX DESIGN IS NOT EXCEEDED. WATER REDUCING ADMIXTURE SHALL BE IN CONFORMANCE WITH ASTM494, USED IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS. SUBMIT ADMIXTURES TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
7. CEMENT SHALL BE TYPE I OR II IN CONFORMANCE WITH ASTM C150. AGGREGATES SHALL BE IN CONFORMANCE WITH ASTM C33. COARSE AGGREGATES SHALL NOT EXCEED ¾". WATER SHALL BE CLEAN AND POTABLE.
8. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. GRADE 40 MAY BE USED FOR #3 AND SMALLER TIES AND STIRRUPS. DETAIL AND PLACE ACCORDING TO ACI MANUAL SP-66.
9. UNLESS OTHERWISE NOTED, MINIMUM COVER SHALL BE 1 1/2" FOR #5 AND SMALLER BARS, 2" FOR #6 AND LARGER BARS AND 3" WHEN POURED AGAINST EARTH. SUPPORT REINFORCEMENT WITH APPROVED CHAIRS, SPACERS, OR TIES.
10. PROVIDE MINIMUM 48 BAR DIAMETERS AT SPLICES. NO MORE THAN 50% OF REINFORCING SHALL BE SPLICED AT ANY LOCATION. UNLESS OTHERWISE NOTED, BEND ALL HORIZONTAL REINFORCING A MINIMUM OF 2'-0" AT CORNERS AND FOOTING INTERSECTIONS WITH MIN. EMBEDMENT BEYOND INTERFACE PER DEVELOPMENT LENGTH SPECIFIED IN ACI 318.
11. FORMWORK SHALL BE IN ACCORDANCE WITH ACI-347 "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK". FORMS SHALL BE DESIGNED BY THE CONTRACTOR. BRACING SHALL BE PROVIDED AS REQUIRED OR UNTIL THE CONCRETE HAS REACHED ITS SPECIFIED 28-DAY STRENGTH. ALL SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. FORMWORK, SUPPORTS, AND SHORING SHALL PROVIDE FINISHED CONCRETE SURFACES AT ALL FACES: LEVEL, PLUMB, AND TRUE TO DIMENSIONS AND ELEVATIONS SHOWN IN THE DRAWINGS.

STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING GRADES, UNLESS NOTED OTHERWISE ON THE PLANS:

   SHELL PLATES – ASTM A36
   PLATES & BARS – ASTM A36
   ANCHOR RODS – ASTM A193 GR. B7, NO SUBSTITUTIONS WITHOUT APPROVAL BY ENGINEER OF RECORD
   BOLTS – ASTM F3125 GR. A325 (UNO)

2. WELD ACCORDING TO CURRENT AWS STANDARDS WITH E70XX ELECTRODES.
3. ALL STEEL EXPOSED TO WEATHER SHALL BE PAINTED OR HOT-DIP GALVANIZED, UNLESS NOTED OTHERWISE.
4. ALL STRUCTURAL CONNECTION BOLTS SHALL BE HOT-DIP GALVANIZED ASTM A325, UNLESS NOTED OTHERWISE.
5. CONTACT BETWEEN DISSIMILAR METALS SHALL BE ISOLATED USING PHENOLIC OR OTHERWISE APPROVED ISOLATION HARDWARE.

FOUNDATIONS:

1. GEOTECHNICAL REPORT WAS PREPARED BY GEOENGINEERS OF 523 EAST SECOND AVENUE, SPOKANE, WASHINGTON. PHONE: (509) 363-3125, DATED JUNE 5TH, 2018 (THEIR FILE No. 8946-003-00). SUPPLEMENTAL INFORMATION IS PROVIDED IN AN ADDENDUM LETTER DATED APRIL 2ND, 2021. THE CONTRACTOR SHALL BE FAMILIAR WITH THE REPORT AND ADDENDUM LETTER AND CONFORM TO THE RECOMMENDATIONS CONTAINED THEREIN.
2. TANK FOUNDATION TO BEAR ON UNDISTURBED ROCK OR STRUCTURAL FILL OVERLAYING ROCK, PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. EXCAVATIONS FOR FOUNDATIONS SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING OF CONCRETE FOR FOUNDATION.
3. SOIL DESIGN CRITERIA, PER GEOTECHNICAL ENGINEER:
   3.1. SOIL BEARING – 6,000 PSF – STATIC WITH A FS = 3.0
   8,000 PSF – DYNAMIC WITH A FS = 2.25
   3.2. SOIL PROFILE – B
   3.3. FRICTION COEFFICIENT – 0.40

JOB SITE CONDITIONS AND SAFETY:

1. CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE ENGINEER AND IT'S REPRESENTATIVE HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FORM THE SOLE NEGLIGENCE OF THE ENGINEER.

GRATING:

1. GRATING SHALL BE 2-INCH GALVANIZED STEEL GRATING MEETING THE REQUIREMENTS OF THE SPECIFICATIONS. THE GRATING SHALL BE ABLE TO WITHSTAND 100 PSF AREA LOAD OR A 300-LB POINT LOAD WITH A MAXIMUM DEFLECTION OF L/360. SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW AND APPROVAL.

GEOTECHNICAL GENERAL NOTES:

1. EXCAVATION:
   1.1. MATERIALS NOT DESIGNATED FOR REUSE SHALL BE BROKEN UP, LOADED, AND LEGALLY DISPOSED OF BY THE CONTRACTOR. CARE SHALL BE TAKEN WHEN REMOVING ITEMS TO ENSURE THAT DAMAGE DOES NOT OCCUR TO THE EXISTING TREES AND IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE. ALL STRUCTURAL REMOVALS SHALL BE ACCOMPLISHED BY MAKING A NEAT VERTICAL SAWCUT AT THE LIMITS OF REMOVAL. ADJACENT MATERIALS DESIGNATED TO REMAIN THAT ARE DAMAGED BY THE CONTRACTOR DURING THE WORK SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
   1.2. SPRINKLE EXCAVATED MATERIAL AND ACCESS ROADS AS NECESSARY TO LIMIT DUST TO THE LOWEST PRACTICABLE LEVEL. DO NOT USE WATER TO SUCH AN EXTENT AS TO CAUSE FLOODING, CONTAMINATED RUNOFF, OR ICING.
   1.3. IN THE EVENT THE CONTRACTOR ENCOUNTERS UTILITY LINES NOT SHOWN ON THE SITE PLAN OR OTHERWISE INDICATED TO BE SAVED, REMOVED, OR ABANDONED, THE LOCATION OF SUCH LINES SHALL BE MARKED IN FIELD AND THE OWNER'S REPRESENTATIVE NOTIFIED.
2. FILL MATERIALS:
   2.1. IF ANY FILL IS ANTICIPATED TO BE BROUGHT TO THE SITE, THE APPLICANT SHALL SUBMIT A SOURCE STATEMENT CERTIFIED BY A PROFESSIONAL ENGINEER OR GEOLOGISTS LICENSED IN THE STATE OF OREGON
   2.2. ALL MATERIAL WHICH IS PROPOSED TO BE USED AS FILL, BEDDING OR BACKFILL SHALL BE GRADED AND TESTED FOR MOISTURE CONTENT AND COMPACTABILITY. GRADATION AND TEST RESULTS SHALL BE SUBMITTED FOR REVIEW AND ACCEPTANCE BY THE OWNER'S REPRESENTATIVE PRIOR TO PLACEMENT OF FILL AND APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER AS SUITABLE FOR THE INTENDED APPLICATION.
   2.3. MATERIAL USED IN FILLING SHALL BE APPROPRIATE TO THE SITE AND THE INTENDED USE OF THAT PORTION OF THE SITE.
   2.4. TOPSOIL SHALL NOT BE USED AS A FILL MATERIAL.
   2.5. NO FROZEN OR THAWING MATERIAL SHALL BE USED IN FILL.
   2.6. STRUCTURAL FILL SHALL BE NON-ORGANIC SOIL, ACCEPTABLE TO THE OWNER'S REPRESENTATIVE, PLACE IN MAXIMUM 8-INCH LOOSE LIFTS, WITH EACH LIFT BEING COMPACTED TO AT LEAST THE MINIMUM MODIFIED PROCTOR MAXIMUM DENSITY USING ASTM: D1557 AS INDICATED IN ITEM NO. 3 BELOW. STRUCTURAL FILL SHALL BE PLACED AND COMPACTED WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT.
3. COMPACTION:
   REQUIRED COMPACTION: COMPACT FILLS AND BACKFILLS TO THE FOLLOWING MINIMUM RELATIVE COMPACTION (PERCENTAGE OF MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D1557).

LOCATIONS	REQUIRED MINIMUM RELATIVE COMPACTION
BELOW STRUCTURES:	95%
UTILITY TRENCHES:	95%
UNDER WALKS AND PAVING:	95%
AGAINST WALL:	90%
PLANTING AND LANDSCAPE AREAS:	85%
PERMEABLE PAVEMENT SUBGRADE:	90-92%
OTHER:	95%

4. FIELD QUALITY CONTROL:
   4.1. THE OWNER'S TESTING AGENCY SHALL PERFORM TESTING TO VERIFY CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS FOR QUALITY ASSURANCE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE WORK PROCESS AND MATERIALS MEET THE REQUIREMENTS OF THE SPECIFICATIONS AND THE CITY.

GEOTECHNICAL GRADING NOTES:

1. ALL WORK SHALL BE IN CONFORMANCE WITH THE GEOTECHNICAL REPORT PREPARED BY GEOENGINEERS OF 523 EAST SECOND AVENUE, SPOKANE, WASHINGTON. PHONE: (509) 363-3125, DATED JUNE 5TH, 2018 (THEIR FILE NO. 8946-003-00).
2. THE CONTRACTOR MUST NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE AT LEAST 48 HOURS BEFORE BEGINNING EARTHWORK OPERATIONS, AND ALLOW THE GEOTECHNICAL ENGINEER OF RECORD OR OWNER'S DESIGNATED REPRESENTATIVE THE OPPORTUNITY TO OBSERVE AND TEST EXCAVATIONS AND FILL AREAS, INCLUDING:
   2.1. SITE CLEARING AND STRIPPING OF ORGANIC TOPSOIL FOR AREAS TO RECEIVE STRUCTURAL FILL, PAVEMENTS, OR FOUNDATIONS.
   2.2. WORKING SUBGRADE BEFORE PLACEMENT OF STRUCTURAL FILL OR FOUNDATIONS.
   2.3. CUT SLOPES OVER FOUR FEET HIGH.
   2.4. BENCHING FOR FILL TO BE PLACED ON SLOPES.
   2.5. TESTING OF IMPORTED FILL BEFORE PLACEMENT TO CHECK CONFORMANCE TO PROJECT SPECIFICATIONS.
   2.6. STRUCTURAL FILL PLACEMENT BELOW STRUCTURES AND PACEMENT
   2.7. INSTALLATION OF SUBSURFACE DRAINAGE FACILITIES
   2.8. UTILITY TRENCH BEDDING AND BACKFILL
   2.9. ANY UNUSUAL SEEPAGE, SLOPE, OR SUBGRADE CONDITION AS DELINEATED IN THE GEOTECHNICAL REPORT OR DISCOVERED IN THE FIELD.
3. THE GEOTECHNICAL ENGINEER OF RECORD OR OWNER'S DESIGNATED REPRESENTATIVE WILL SUBMIT A FINAL SUMMARY LETTER DOCUMENTING RESULTS OF OBSERVATION AND TESTING OF ABOVE-REFERENCED EARTHWORK ACTIVITES

08/04/2021
1801-0118

PSE
PETERSON STRUCTURAL ENGINEERS
9400 SW Barnes Rd., Suite 100
Portland, Oregon 97225
(503) 292-1635

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JWW DESIGNED
JWW DRAWN
TGM CHECKED

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 63186PE OREGON NOV. 9, 2004 TRAVIS GREGORY McFERRON
EXPIRES 12/31/22

murraysmith

CITY OF PENDLETON OREGON INCORPORATED 1880

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0 MG RESERVOIR

RESERVOIR GENERAL STRUCTURAL NOTES

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

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RES-S-1
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QUALITY CONTROL:

SHOP DRAWINGS & SUBMITTALS:

SHOP DRAWINGS, CALCULATIONS, SUBMITTALS AND/OR MILL CERTIFICATES FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE OWNER AND ENGINEER OF RECORD FOR REVIEW A MINIMUM OF 21 DAYS PRIOR TO FABRICATION:

1. CONCRETE REINFORCING SHOP DRAWINGS FOR ALL ELEMENTS
2. CONCRETE MIX DESIGNS AND PROPOSED ADMIXTURES
3. ANY OTHER ITEMS OUTLINED IN THE PROJECT SPECIFICATIONS
4. GROUT MIX DESIGN
5. RESERVOIR AND STRUCTURAL STEEL SHOP DRAWINGS
6. SEISMIC ANCHORAGE AND BRACING REQUIREMENTS FOR ANCILLARY ITEMS AND EQUIPMENT
7. GRATING PRODUCT CUT SHEETS AND SHOP DRAWINGS

STRUCTURAL OBSERVATION REQUIREMENTS:

1. THE OWNER SHALL EMPLOY THE ENGINEER OF RECORD OR AN ALTERNATE OREGON LICENSED PROFESSIONAL ENGINEER, APPROVED BY THE ENGINEER OF RECORD, TO PERFORM STRUCTURAL OBSERVATIONS IN ACCORDANCE WITH SECTION 1704.6 OF THE 2019 OREGON STRUCTURAL SPECIALTY CODE (OSSC).

2. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM BY A REGISTERED DESIGN PROFESSIONAL FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR ANY OTHER INSPECTION CRITERIA, INCLUDING SPECIAL INSPECTION, AS REQUIRED BY THE BUILDING OFFICIAL OR AS INDICATED WITHIN THE OSSC.

3. DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER AND THE BUILDING OFFICIAL (AND THE ENGINEER OF RECORD IF AN ALTERNATE ENGINEER IS USED FOR STRUCTURAL OBSERVATION). AT THE CONCLUSION OF THE STRUCTURAL WORK INCLUDED WITHIN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL AND THE OWNER (AND THE ENGINEER OF RECORD IF AN ALTERNATE ENGINEER IS USED FOR STRUCTURAL OBSERVATION) A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

4. THE CONTRACTOR SHALL MAKE AVAILABLE ALL MEANS AND METHODS NECESSARY FOR THE STRUCTURAL OBSERVER TO PERFORM THE REQUIRED STRUCTURAL OBSERVATIONS. IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE OWNER AND STRUCTURAL OBSERVER A MINIMUM OF 48 HOURS BEFORE THE TIME AT WHICH THE SPECIFIED STRUCTURAL OBSERVATIONS MAY BE PERFORMED. IN ADDITION THE CONTRACTOR SHALL UPDATE THE STRUCTURAL OBSERVER OF THE CONSTRUCTION PROGRESS.

5. STRUCTURAL OBSERVATIONS SHALL BE PERFORMED FOR THE FOLLOWING AREAS OF WORK:
   - 5.1. FOLLOWING THE INSTALLATION OF ALL FOUNDATION REINFORCING AND OTHER CAST-IN ITEMS, BUT PRIOR TO THE FIRST CONCRETE/GROUT POUR.
   - 5.2. FOLLOWING THE INSTALLATION OF THE BOTTOM SHELL COURSE
   - 5.3. FOLLOWING THE ERECTION OF ALL WALLS, BUT BEFORE THE INSTALLATION OF THE ROOF.
   - 5.4. FOLLOWING THE COMPLETION OF ALL STRUCTURAL ELEMENTS CONTAINED HEREIN

QUALITY ASSURANCE PLAN:

QUALITY ASSURANCE FOR SEISMIC RESISTANCE:

QUALITY ASSURANCE FOR THE STRUCTURE'S MAIN LATERAL FORCE RESISTING SYSTEM SHALL BE PROVIDED BY SPECIAL INSPECTION AND MATERIAL TESTING OF THE FOLLOWING:

SPECIAL INSPECTIONS:

1. AN INDEPENDENT TESTING LABORATORY, SELECTED AND ENGAGED BY THE OWNER, SHALL PROVIDE SPECIAL INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE 2019 OREGON STRUCTURAL SPECIALTY CODE (OSSC) AND OF THE TYPE AND FREQUENCY OUTLINED IN THE QUALITY CONTROL SECTION OF THESE GENERAL STRUCTURAL NOTES.

2. EACH SPECIAL INSPECTION AND MATERIAL TESTING REPORT SHALL BE DISTRIBUTED TO THE OWNER, CONTRACTOR, BUILDING OFFICIAL, AND ENGINEER OF RECORD IN A TIMELY FASHION.

3. THE CONTRACTOR SHALL MAKE AVAILABLE ALL MEANS AND METHODS NECESSARY FOR THE SPECIAL INSPECTOR TO PERFORM THE REQUIRED INSPECTIONS. IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE OWNER AND SPECIAL INSPECTOR A MINIMUM OF 48 HOURS BEFORE THE TIME AT WHICH THE SPECIFIED SPECIAL INSPECTIONS MAY BE PERFORMED.

INSPECTIONS:
SPECIAL INSPECTIONS IN ACCORDANCE WITH OSSC 1704 SHALL BE PROVIDED FOR THE FOLLOWING ITEMS.

REQUIRED STRUCTURAL SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	INSPECTION		FREQUENCY		REMARKS
	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	CONTINUOUS	PERIODIC	
CONCRETE					
GENERAL	1705.3 1901.6	ACI 318 26.13			SPECIAL INSPECTIONS OF CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1705.3 OF THE OSSC AND SECTION 26.13 OF ACI 318.
REINFORCING STEEL	1901.5.2	ACI 318: CH. 20, 25.2, 25.3, 26.6.1-26.6.3, 26.13.3.3		X(a)	REINFORCING TO COMPLY WITH ALL CODE PROTECTION, SPACING AND TOLERANCE LIMITS.
VERIFYING USE OF REQUIRED MIX DESIGN(S)	1904.1 1904.2	ACI 318: CH. 19, 26.4.3, 26.4.4		X	
CONCRETE PLACEMENT	TABLE 1705.3	ACI 318: 26.5, 26.13.3.2(A)	X		
CONCRETE CURING	TABLE 1705.3	ACI 318: 26.5.3 – 26.5.5, 26.13.3.3		X(a)	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURES AND TECHNIQUES
VERIFICATION OF IN-SITU CONCRETE PRIOR TO REMOVAL OF FORMS AND SHORES	TABLE 1705.3	ACI 318: 26.11.2		X(a)	
VERIFICATION OF FORMWORK	TABLE 1705.3	ACI 318: 26.11.2		X(a)	SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED
STEEL					
FABRICATION OF STRUCTURAL ELEMENTS	1704.2.5.1	AISC 360 N2		X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS, AND WASHERS	1705.2.1.2 AISC 360 N5 TABLE 1705.2-2	AISC 360 A3.3 AISC 360 N 3.3 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS RCSC 2.1		X	APPROVAL BASED ON NATIONALLY RECOGNIZED ACCREDITING AUTHORITY MANUFACTURER'S CERTIFIED TEST REPORTS
SNUG-TIGHT JOINT HIGH-STRENGTH BOLT INSTALLATION	1705.2.1.1	RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS SECTION 9 AISC 360, SECTION M2.5		X	ALL CONNECTIONS INSPECTED AND VERIFIED SNUG
MATERIAL VERIFICATION OF STRUCTURAL STEEL	1505.2.1 2203.1 TABLE 1705.2	ASTM A6 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 N3.2 AISC 360 A3.1 AISC 360 M5.5		X	CERTIFIED MILL TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS	TABLE 1705.2	AISC 360 N3.2 AISC 360 A3.5 APPLICABLE AWS A5 DOCUMENTS		X	MANUFACTURER'S CERTIFICATION OF COMPLIANCE
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	TABLE 1705.2	AWS D1.1 CLAUSE 6	X		ALL WELDS VISUALLY INSPECTED PER AWS D1.1.6.9
MULTIPASS FILLET WELDS			X		ALL WELDS VISUALLY INSPECTED PER AWS D1.1.6.9
SINGLE PASS FILLET WELDS GREATER THAN 5/16"			X		ALL WELDS VISUALLY INSPECTED PER AWS D1.1.6.9
PLUG AND SLOT WELDS			X		ALL WELDS VISUALLY INSPECTED PER AWS D1.1.6.9
SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"				X	ALL WELDS VISUALLY INSPECTED PER AWS D1.1.6.9
MATERIAL VERIFICATION OF ANCHOR BOLTS AND THREADED RODS		AISC 360 N3.2 AISC 360 A3.4 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
VERIFYING USE OF PROPER WPS'S		AISC 360 N3.2			COPY OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER AND WELDING INSPECTOR QUALIFICATIONS		AWS D1.1		X	COPY OF QUALIFICATION CARDS

a. PERIODIC SPECIAL INSPECTION FREQUENCY AND TIMING TO BE DETERMINED BY THE REGISTERED DESIGN PROFESSIONAL
b. SELECTION TO BE MADE BY THE REGISTERED DESIGN PROFESSIONAL BASED ON BUILDING CATEGORY AND DESIGN METHODOLOGY

TESTING:
MATERIALS TESTING IN ACCORDANCE WITH OSSC 1704 SHALL BE PROVIDED FOR THE FOLLOWING ITEMS.

REQUIRED STRUCTURAL SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	INSPECTION		FREQUENCY		REMARKS
	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	CONTINUOUS	PERIODIC	
CONCRETE					
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	TABLE 1705.3	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	X		FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED ONCE EACH DAY FOR A GIVEN CLASS OF CONCRETE, OR LESS THAN ONCE FOR EACH 150 YDS OF CONCRETE, OR LESS THAN ONCE FOR EACH 5,000 FT2 OF SURFACE AREA FOR SLABS/WALLS. ONCE EACH SHIFT FORM IN-PLACE WORK OR FROM TEST PANEL AND MINIMUM ONE SPECIMEN FOR EACH 50 CUBIC YDS. "PRECONSTUCTION TESTS AS REQUIRED PER THE BUILDING OFFICIAL"
CONCRETE STRENGTH	TABLE 1705.3	ASTM C39	X		
CONCRETE SLUMP	TABLE 1705.3	ASTM C143	X		
CONCRETE AIR CONTENT		ASTM C231	X		
CONCRETE TEMPERATURE		ASTM C1064	X		
WELDED STEEL TANKS					
RADIOGRAPHIC TESTING (RT) OF WELDS		AWWA/AWS D100 11.5 & 11.6 API 650 6.1 API 620 5.15.1	AT SHELL JOINTS – NUMBER AND SPACING PER THE STANDARD		SPECIAL INSPECTIONS APPLY TO REVIEW OF THE RADIOGRAPHS AND THE ASSOCIATED REPORT INTERPRETING THE RADIOGRAPHS
GEOTECHNICAL					
GEOTECHNICAL ENGINEER TO PERFORM TESTING OF COMPACTED FILL MATERIALS	TABLE 1705.6			X(a)	TESTING PER GEOTECHNICAL REPORT
FILL IN-PLACE DENSITY OR PREPARED SUBGRADE DENSITY		VARIES: MINIMUM PER OSSC APPENDIX J107.5		X(a)	BY THE GEOTECHNICAL ENGINEER
MATERIAL VERIFICATION		VARIES: CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X(a)	BY THE GEOTECHNICAL ENGINEER
SOILS					
VERIFY MATERIALS BELOW SHALLOW FOUNDATION ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	TABLE 1705.6	GEOTECHNICAL REPORT		X	BY THE GEOTECHNICAL ENGINEER
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL				X	
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS				X	
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL			X		
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY				X	

a. PERIODIC SPECIAL INSPECTION FREQUENCY AND TIMING TO BE DETERMINED BY THE REGISTERED DESIGN PROFESSIONAL
b. SELECTION TO BE MADE BY THE REGISTERED DESIGN PROFESSIONAL BASED ON BUILDING CATEGORY AND DESIGN METHODOLOGY

08/04/2021
1801-0118

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Portland, Oregon 97225
(503) 292-1635

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JWW DESIGNED
JWW DRAWN
TGM CHECKED

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 63186PE OREGON NOV. 9, 2004 TRAVIS GREGORY MEFFORD
EXPIRES 12/31/22

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0 MG RESERVOIR

RESERVOIR QUALITY ASSURANCE PLAN AND NOTES

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
RES-S-2
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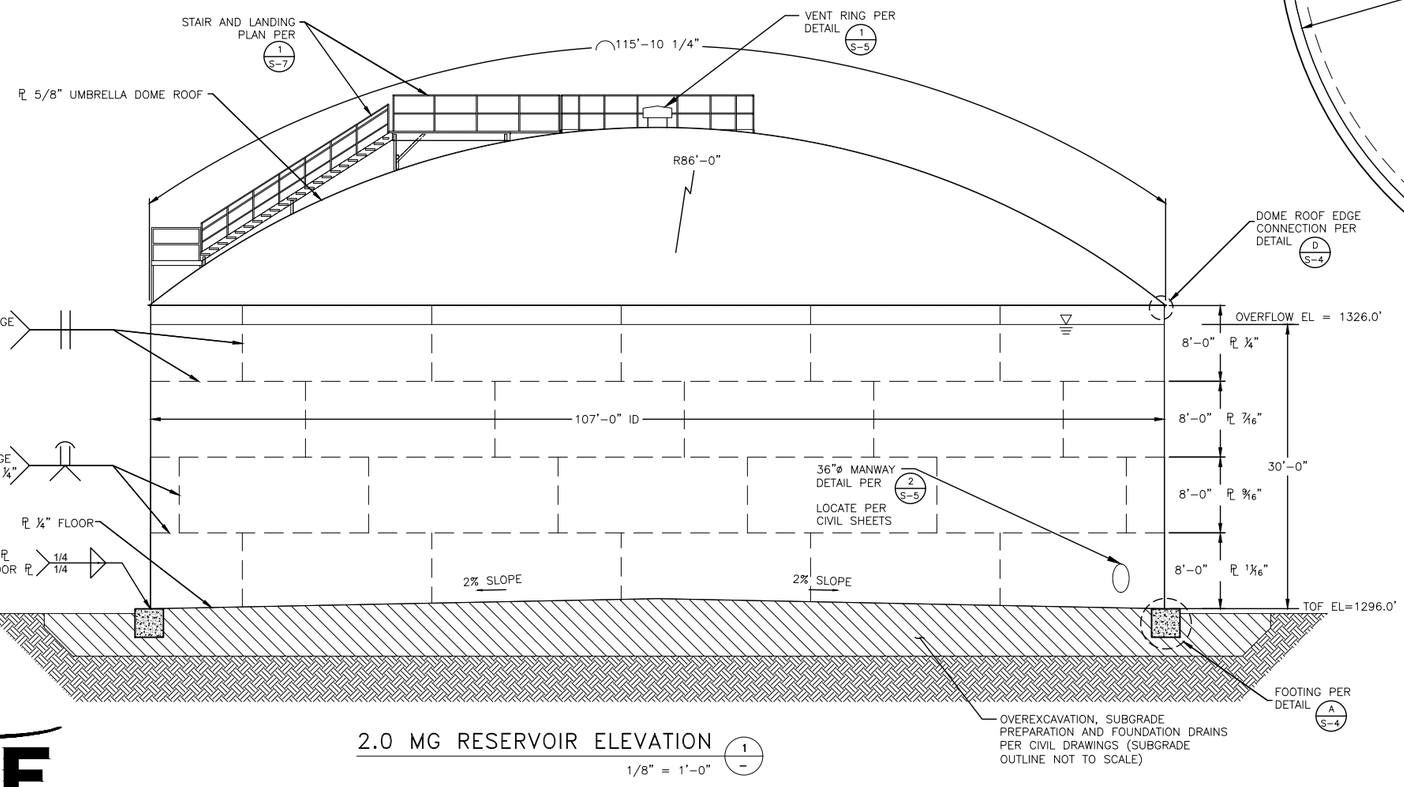
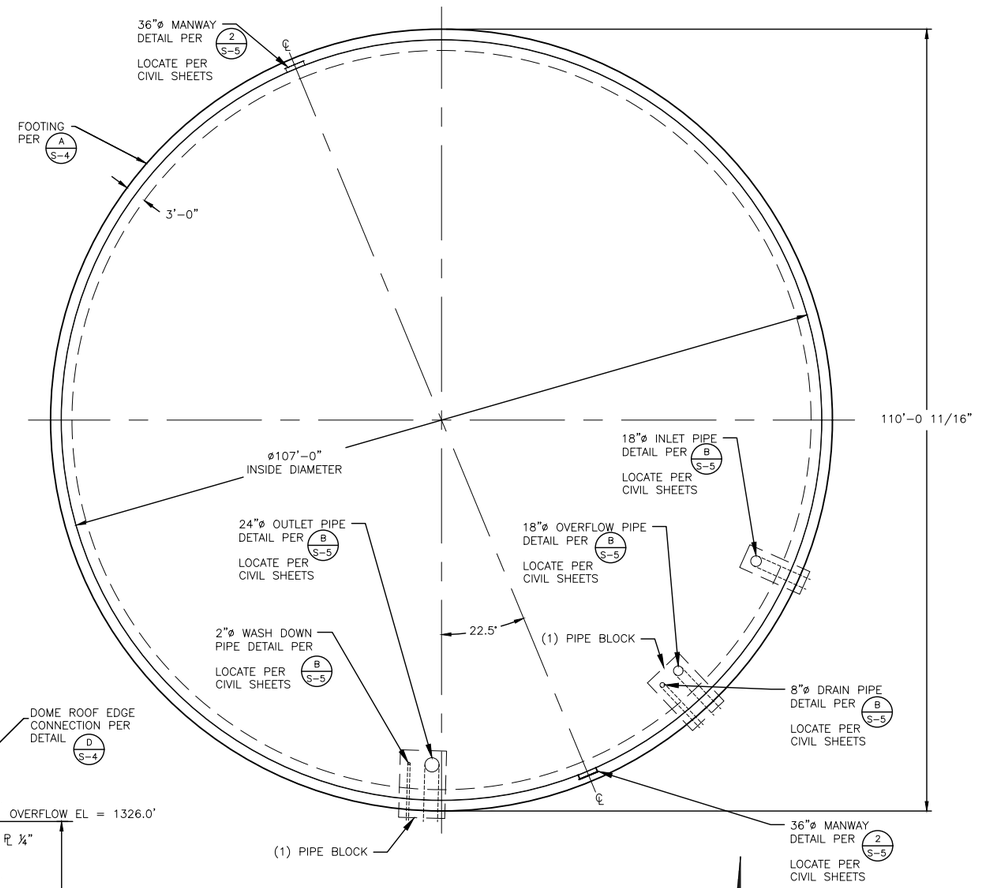
X:\2018\01-PDX\1801-0101 To 1801-0125\1801-0118\1 - Project Data Files\2 - Reservoir\Final Drawings\1801-0118 - Reservoir - 100% - 2019 OSSC.dwg RES-S-2 8/3/2021 2:36 PM ########## 24.0s (LMS Tech)



2.0 MG RESERVOIR ELEVATION 1/1 — 1/8" = 1'-0"



FOUNDATION PLAN 2/— — 3/32" = 1'-0"

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EXPIRES 12/31/22

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0 MG RESERVOIR

RESERVOIR ELEVATION AND FOUNDATION PLAN

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
RES-S-3
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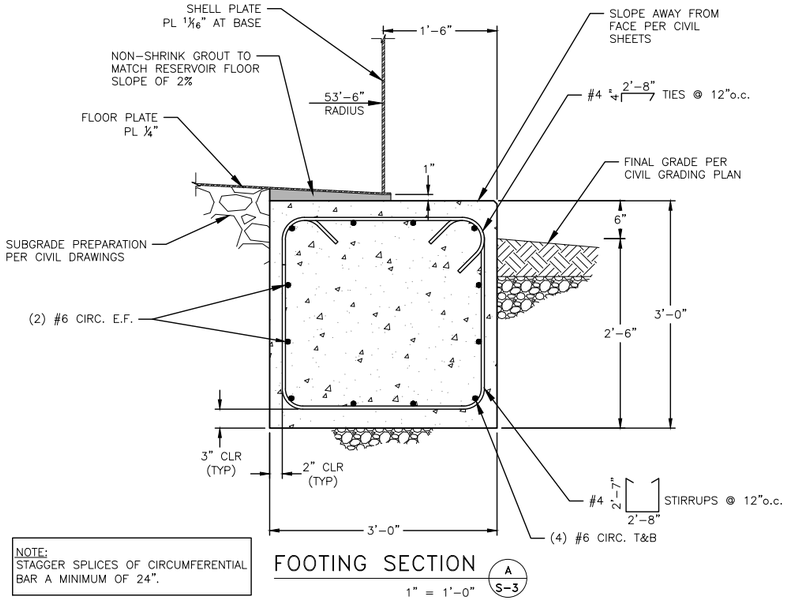


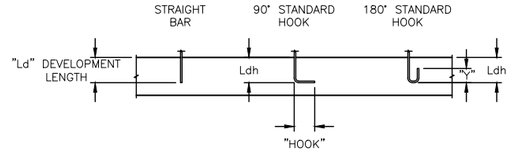
NOTE:
STAGGER SPLICES OF CIRCUMFERENTIAL BAR A MINIMUM OF 24".

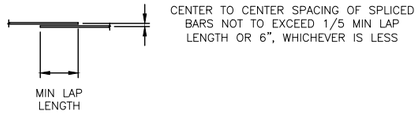
FOOTING SECTION (A / S-3)

1" = 1'-0"

f'c = 4500 psi	fy = 60,000 psi	BAR SPACING ≥ 6" MIN				
BAR SIZE	DIAMETER (db) (INCHES)	DEVELOPMENT AND CLASS B LAP SPLICES (INCHES)		90° STANDARD HOOK (INCHES)		180° STANDARD HOOK "Y"
		"TOP" BARS	OTHER	HOOK	Ldh	
		REINFORCING BARS IN TENSION				
#3	0.375	**36**	25	6	8	4
#4	0.5	41	29	8	9	5
#5	0.625	**50**	36	10	11	5
#6	.75	**60**	43	12	13	6
#7	.875	**69**	50	14	16	7
#8	1	**80**	58	16	18	8
#9	1.125	**89**	64	20	20	11
#10	1.25	**99**	71	22	22	12
#11	1.375	**108**	78	24	24	13
REINFORCING BARS IN COMPRESSION						
#3	0.375	12		HOOKED BARS SHALL NOT BE USED IN COMPRESSION		
#4	0.5	**15**				
#5	0.625	**19**				
#6	.75	**23**				
#7	.875	**27**				
#8	1	**30**				
#9	1.125	34				
#10	1.25	38				
#11	1.375	42				

f'c = 4500 psi	fy = 60,000 psi	BAR SPACING ≥ 2db MIN				
BAR SIZE	DIAMETER (db) (INCHES)	DEVELOPMENT AND CLASS B LAP SPLICES (INCHES)		90° STANDARD HOOK (INCHES)		180° STANDARD HOOK "Y"
		"TOP" BARS	OTHER	HOOK	Ldh	
		REINFORCING BARS IN TENSION				
#3	0.375	**36**	25	6	8	4
#4	0.5	41	29	8	9	5
#5	0.625	**50**	36	10	11	5
#6	.75	**60**	43	12	13	6
#7	.875	**88**	68	14	16	7
#8	1	**115**	89	16	18	8
#9	1.125	**145**	111	20	20	11
#10	1.25	**179**	137	22	22	12
#11	1.375	**215**	166	24	24	13
REINFORCING BARS IN COMPRESSION						
#3	0.375	12		HOOKED BARS SHALL NOT BE USED IN COMPRESSION		
#4	0.5	**15**				
#5	0.625	**19**				
#6	.75	**23**				
#7	.875	**27**				
#8	1	**30**				
#9	1.125	34				
#10	1.25	38				
#11	1.375	42				

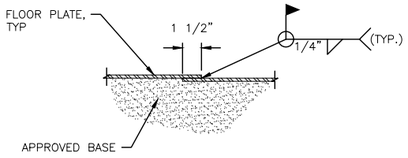




NOTE:
1. "TOP" BARS SHALL BE HORIZONTAL REINFORCEMENT PLACES SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOPMENT LENGTH OR SPLICE.
2. CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED SHALL
   2.1. NOT BE LESS THAN db, HAVE CLEAR COVER NOT LESS THAN db, AND STIRRUPS OR TIES THROUGHOUT Ldh NOT LESS THAN THE CODE MINIMUM OR;
   2.2. CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN 2db AND CLEAR COVER NOT LESS THAN db.
3. WHERE db = DIAMETER OF REINFORCING BAR AND Ldh = DEVELOPMENT LENGTH.
4. ALL LAP SPLICES SHALL BE CLASS B UNLESS NOTED OTHERWISE.
5. WHEN SPLICING BAR OF DIFFERENT SIZE, THE LENGTH OF THE LAP SHALL BE GOVERNED BY THE LARGER DIAMETER BAR.
6. SPLICES ARE TO BE MADE SO THAT THE GIVEN DISTANCES TO FACE OF CONCRETE WILL BE MAINTAINED.
7. SPLICES SHALL BE STAGGERED TO GIVE 12" CLEAR BETWEEN ENDS OF ADJACENT SPLICES, IF BARS ARE SPACED CLOSER THAN 6" OR 6 BAR DIAMETERS.

CONCRETE HOOK AND REBAR LAP SPLICES (1 / –)

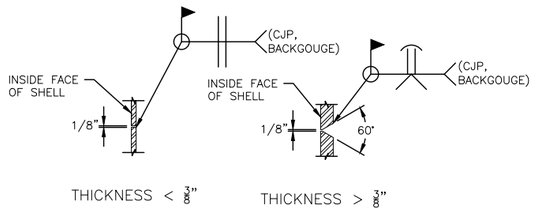
NTS



DETAIL NOTE:
BASE METAL SHALL BE PREHEATED TO A TEMPERATURE OF 100°F WITHIN A DISTANCE OF FOUR TIMES THE PLATE THICKNESS FROM THE LOCATION OF THE WELD WHEN THE BASE METAL TEMPERATURE IS BELOW 32°F

FLOOR JOINT DETAIL (B / –)

NTS

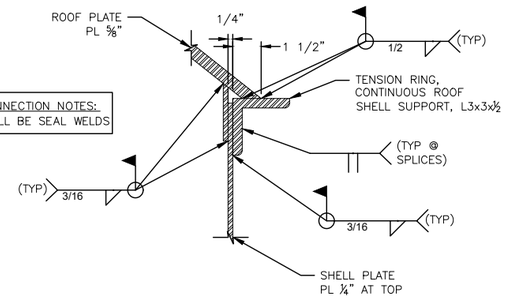


DETAIL NOTE:
BASE METAL SHALL BE PREHEATED TO A TEMPERATURE OF 100°F WITHIN A DISTANCE OF FOUR TIMES THE PLATE THICKNESS FROM THE LOCATION OF THE WELD WHEN THE BASE METAL TEMPERATURE IS BELOW 32°F

SHELL BUTT JOINTS (C / –)

NTS

DOME ROOF EDGE CONNECTION NOTES:
1. ALL WELDS SHALL BE SEAL WELDS



DOME ROOF EDGE CONNECTION DETAIL (D / S-3)

3" = 1'-0"

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STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 63186PE OREGON MAY 9, 2006 TRAVIS GREGORY MATHESON
EXPIRES 12/31/22

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0 MG RESERVOIR

RESERVOIR FOUNDATION, SHELL AND ROOF DETAILS

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

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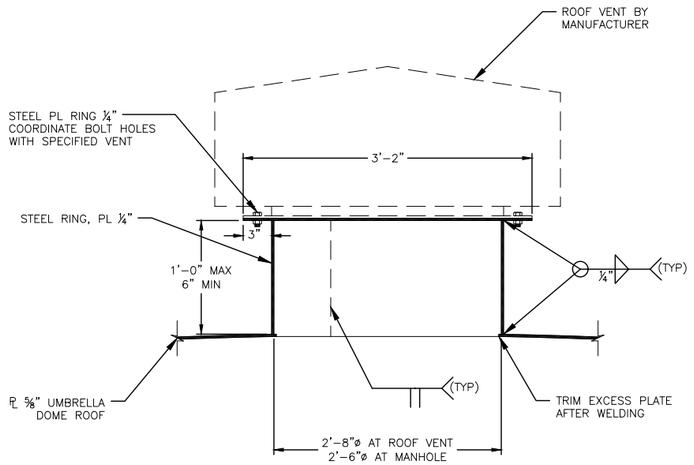
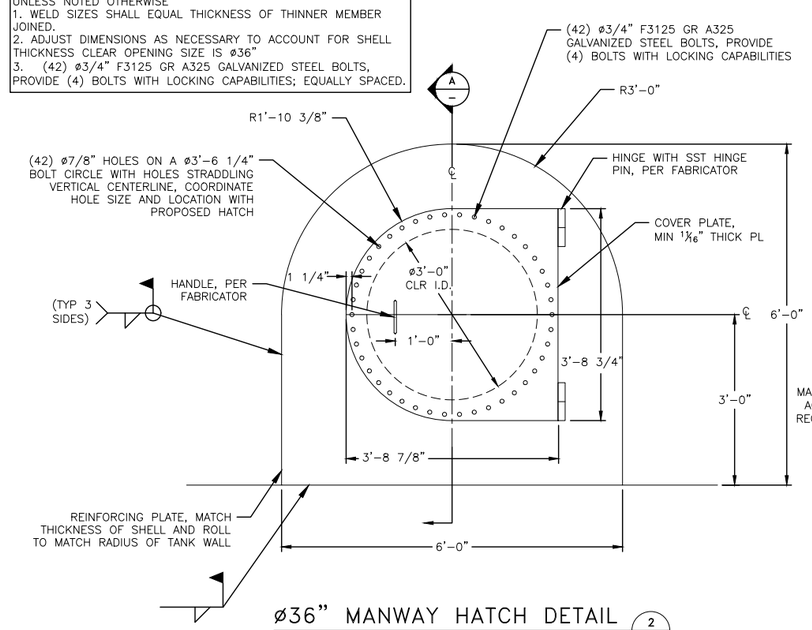


VENT RING DETAIL (1 / S-3)

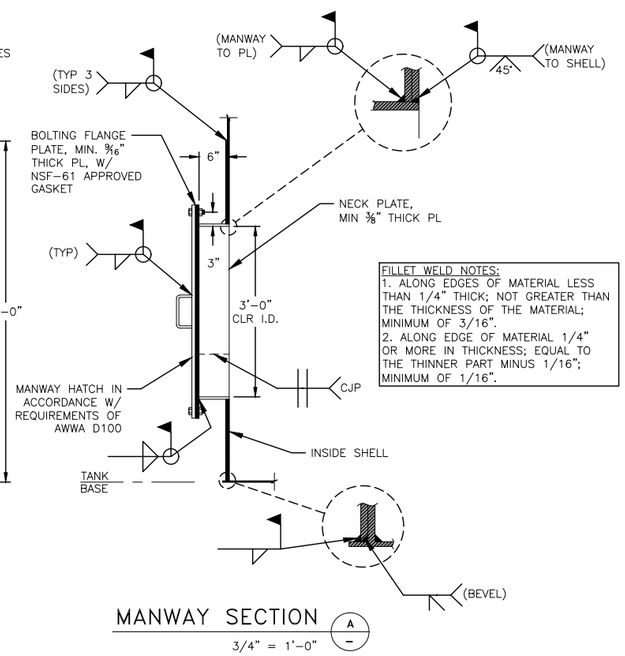
NOT TO SCALE

MANWAY NOTES:
UNLESS NOTED OTHERWISE
1. WELD SIZES SHALL EQUAL THICKNESS OF THINNER MEMBER JOINED.
2. ADJUST DIMENSIONS AS NECESSARY TO ACCOUNT FOR SHELL THICKNESS CLEAR OPENING SIZE IS ø36"
3. (42) ø3/4" F3125 GR A325 GALVANIZED STEEL BOLTS, PROVIDE (4) BOLTS WITH LOCKING CAPABILITIES; EQUALLY SPACED.



ø36" MANWAY HATCH DETAIL (2 / S-3)

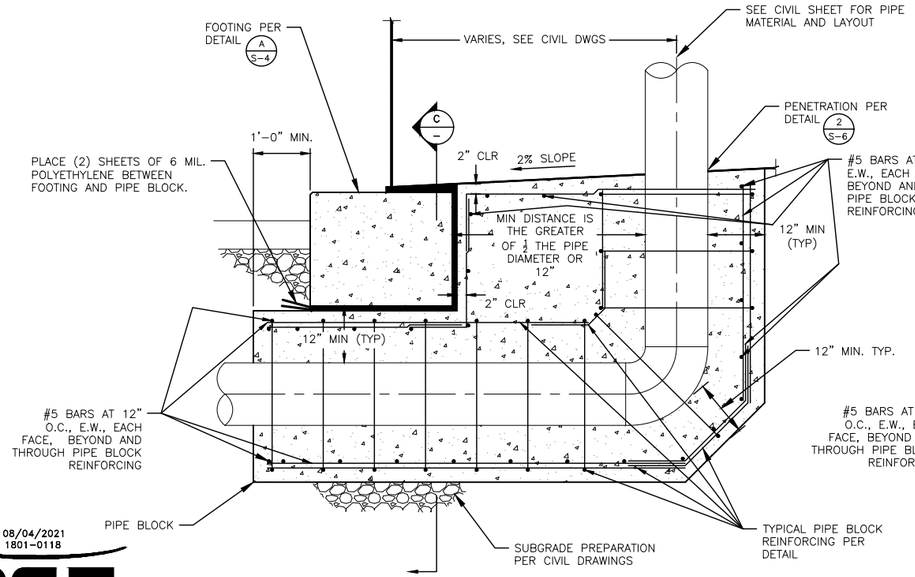
3/4" = 1'-0"



FILLET WELD NOTES:
1. ALONG EDGES OF MATERIAL LESS THAN 1/4" THICK; NOT GREATER THAN THE THICKNESS OF THE MATERIAL; MINIMUM OF 3/16".
2. ALONG EDGE OF MATERIAL 1/4" OR MORE IN THICKNESS; EQUAL TO THE THINNER PART MINUS 1/16"; MINIMUM OF 1/16".

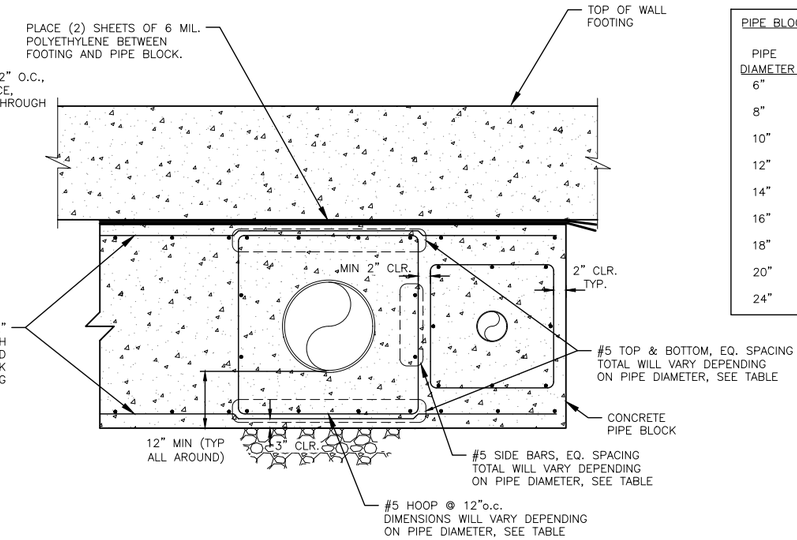
MANWAY SECTION (A / –)

3/4" = 1'-0"



TYP. PIPE BLOCK SECTION (B / S-3)

3/4" = 1'-0"



TYPICAL PIPE BLOCK SECTION (C / –)

3/4" = 1'-0"

PIPE BLOCK DETAIL NOTES:

PIPE DIAMETER	T&B BARS	SIDE FACE BARS	HOOP DIMENSIONS
6"	3	1	2'-2" X 2'-1"
8"	3	1	2'-4" X 2'-3"
10"	3	1	2'-6" X 2'-5"
12"	3	1	2'-8" X 2'-7"
14"	3	1	2'-10" X 2'-9"
16"	3	1	3'-0" X 2'-11"
18"	4	2	3'-2" X 3'-1"
20"	4	2	3'-4" X 3'-3"
24"	5	3	3'-8" X 3'-7"

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STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 63186PE OREGON NOV. 9, 2004 TRAVIS GREGORY MAFFERON
EXPIRES 12/31/22

murraysmith

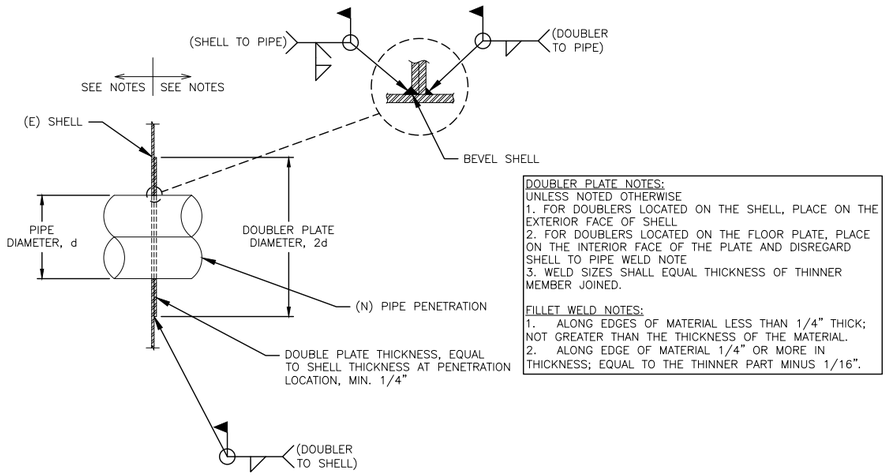
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0 MG RESERVOIR

RESERVOIR ROOF, MANWAY AND PIPE BLOCK DETAILS

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

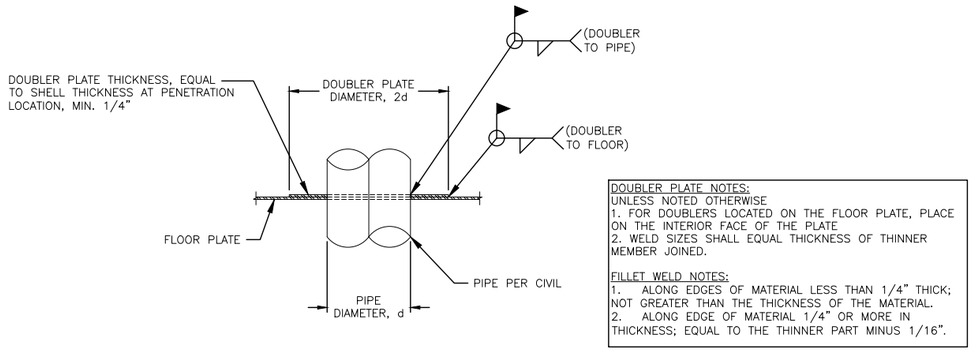
SHEET
RES-S-5



DOUBLER PLATE NOTES:
UNLESS NOTED OTHERWISE
1. FOR DOUBLERS LOCATED ON THE SHELL, PLACE ON THE EXTERIOR FACE OF SHELL
2. FOR DOUBLERS LOCATED ON THE FLOOR PLATE, PLACE ON THE INTERIOR FACE OF THE PLATE AND DISREGARD SHELL TO PIPE WELD NOTE
3. WELD SIZES SHALL EQUAL THICKNESS OF THINNER MEMBER JOINED.

FILLET WELD NOTES:
1. ALONG EDGES OF MATERIAL LESS THAN 1/4" THICK; NOT GREATER THAN THE THICKNESS OF THE MATERIAL.
2. ALONG EDGE OF MATERIAL 1/4" OR MORE IN THICKNESS; EQUAL TO THE THINNER PART MINUS 1/16".

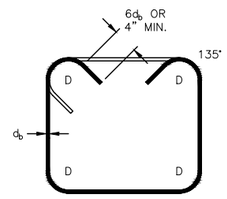
WALL PENETRATION DETAIL (1/–)
NTS



DOUBLER PLATE NOTES:
UNLESS NOTED OTHERWISE
1. FOR DOUBLERS LOCATED ON THE FLOOR PLATE, PLACE ON THE INTERIOR FACE OF THE PLATE
2. WELD SIZES SHALL EQUAL THICKNESS OF THINNER MEMBER JOINED.

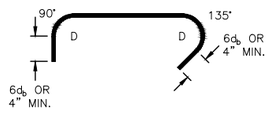
FILLET WELD NOTES:
1. ALONG EDGES OF MATERIAL LESS THAN 1/4" THICK; NOT GREATER THAN THE THICKNESS OF THE MATERIAL.
2. ALONG EDGE OF MATERIAL 1/4" OR MORE IN THICKNESS; EQUAL TO THE THINNER PART MINUS 1/16".

FLOOR PENETRATION DETAIL (2/S-5)
NTS



STIRRUP AND TIE

$D = 6d_b$ FOR #3 THRU #8



CROSS TIE

STANDARD HOOKS & BENDS (3/–)
NTS

08/04/2021
1801-0118

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Portland, Oregon 97225
(503) 292-1635

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NOTICE
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JWW DRAWN
TGM CHECKED

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0 MG RESERVOIR

RESERVOIR PENETRATION DETAILS

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
RES-S-6
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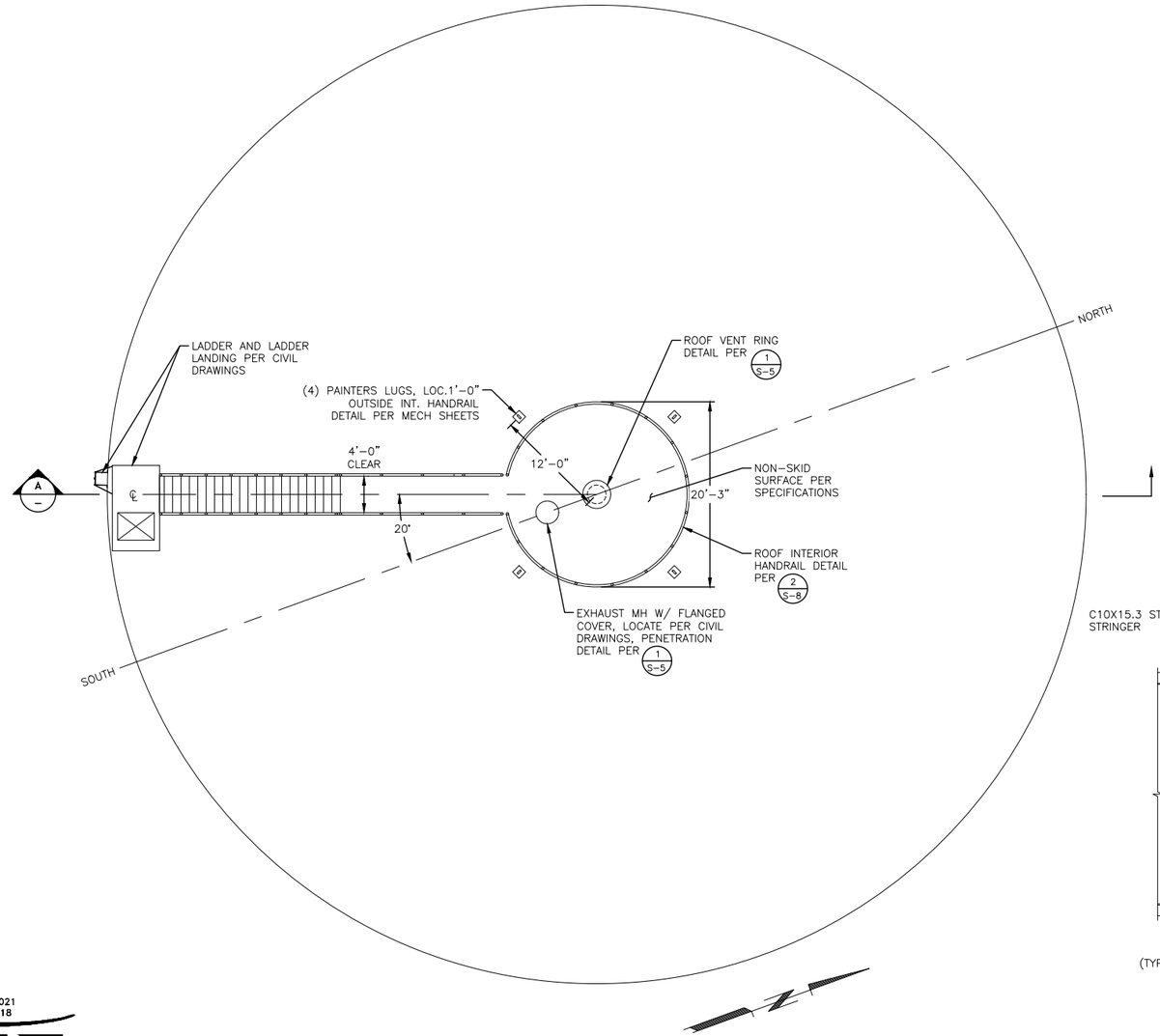
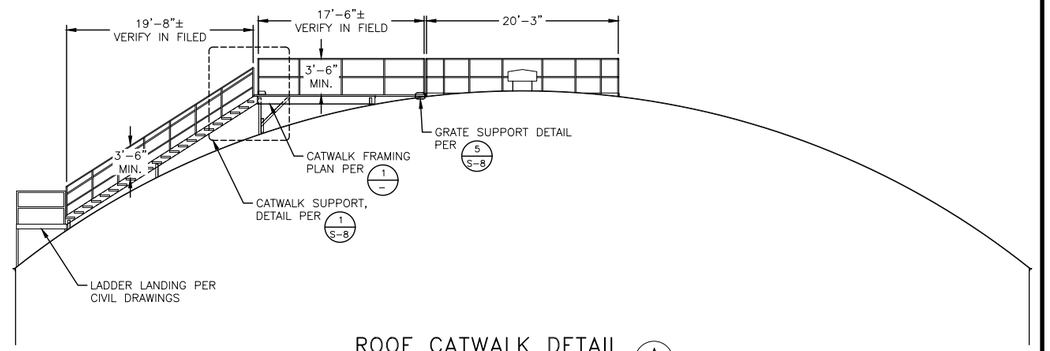
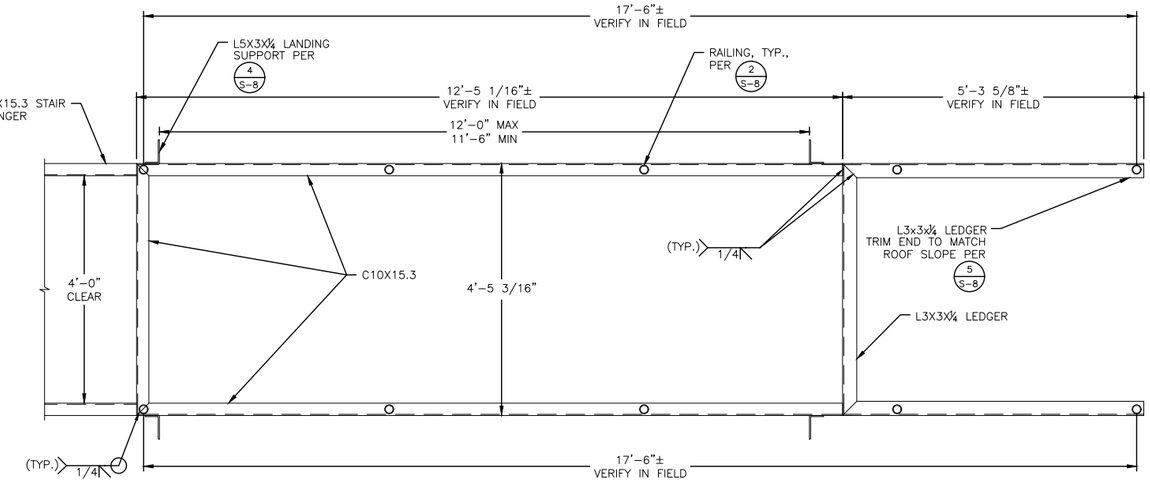
X:\2018\01-PDX\1801-0101 To 1801-0125\1801-0118\1 - Project Data Files\2 - Reservoir\Final Drawings\1801-0118 - Reservoir - 100% - 2019 OSSC.dwg RES-S-6 8/3/2021 2:36 PM ########## 24.0s (LMS Tech)



STAIR AND LANDING PLAN (1/S-3)
1/8" = 1'-0"



ROOF CATWALK DETAIL (A/-)
1/8" = 1'-0"



CATWALK FRAMING PLAN (1/-)
1" = 1'-0"

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CITY OF PENDLETON INCORPORATED 1880 OREGON

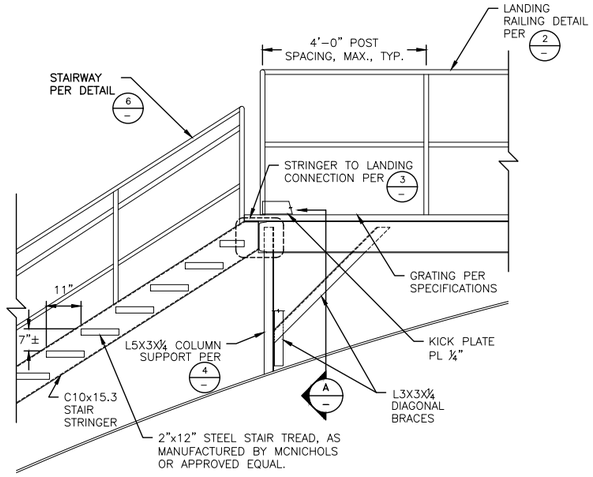
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0 MG RESERVOIR

RESERVOIR ROOF, STAIR, AND LANDING PLAN AND DETAILS

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

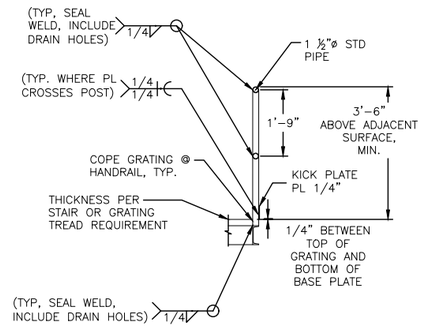
SHEET
RES-S-7
59 of 113

X:\2018\01-PDX\1801-0101 To 1801-0125\1801-0118\1 - Project Data Files\2 - Reservoir\Final Drawings\1801-0118 - Reservoir - 100% - 2019 OSSC.dwg RES-S-7 8/3/2021 2:36 PM ########## 24.0s (LMS Tech)



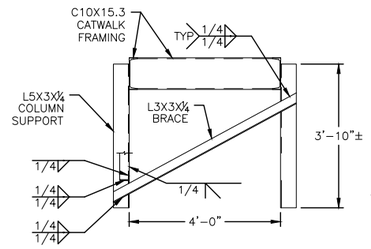
CATWALK BRACING DETAIL 1/S-7

1/2" = 1'-0"



TYP. RAILING DETAIL 2/S-7

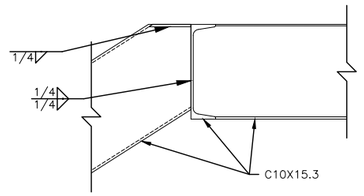
1/2" = 1'-0"



LANDING BRACING SECTION A/–

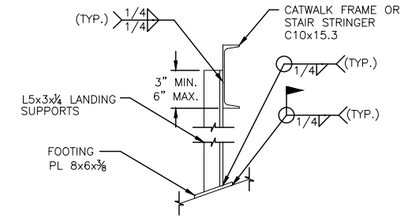
1/2" = 1'-0"

NOTE:
1. GRATING AND RAILING NOT SHOWN FOR CLARITY.
2. PROVIDE GRATING HOLD DOWN CLIPS.



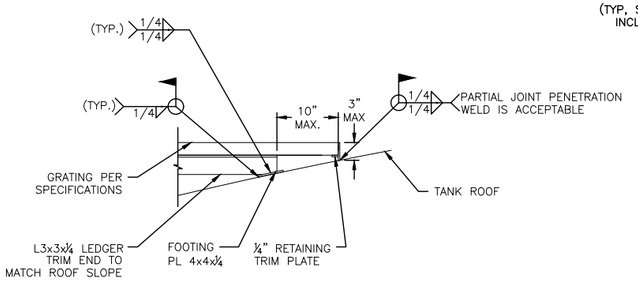
STRINGER TO CATWALK DETAIL 3/–

1 1/2" = 1'-0"



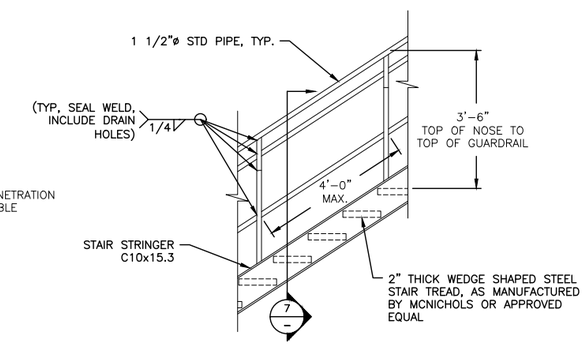
CATWALK LANDING & STRINGER SUPPORT 4/S-7

1" = 1'-0"



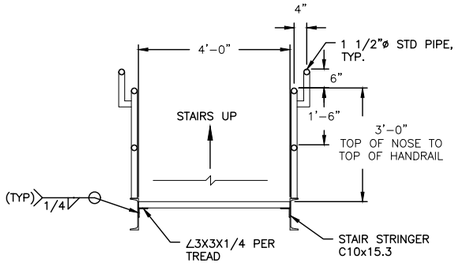
GRATE SUPPORT 5/S-7

1" = 1'-0"



STAIRWAY 6/S-7

1/2" = 1'-0"



STAIRWAY SECTION 7/S-7

1/2" = 1'-0"

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0 MG RESERVOIR

RESERVOIR ROOF, STAIR, AND LANDING DETAILS

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
RES-S-8
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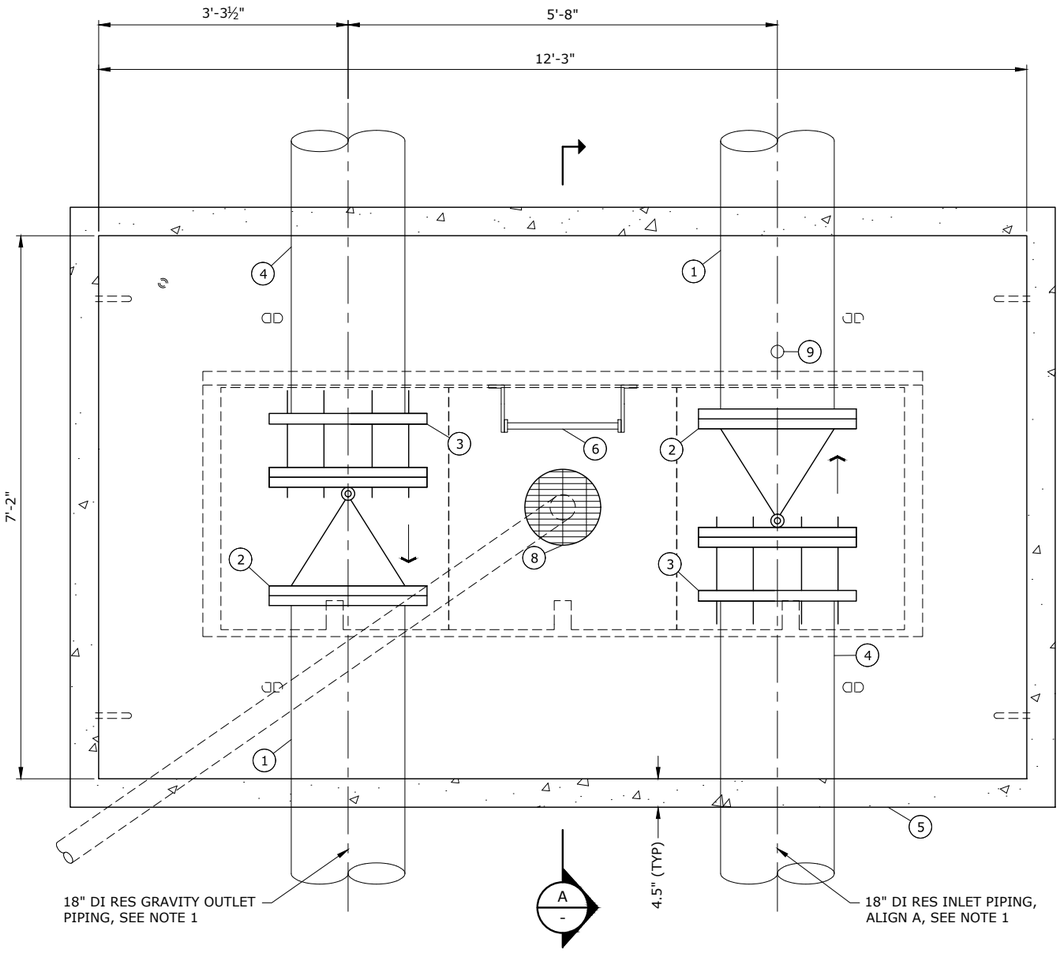
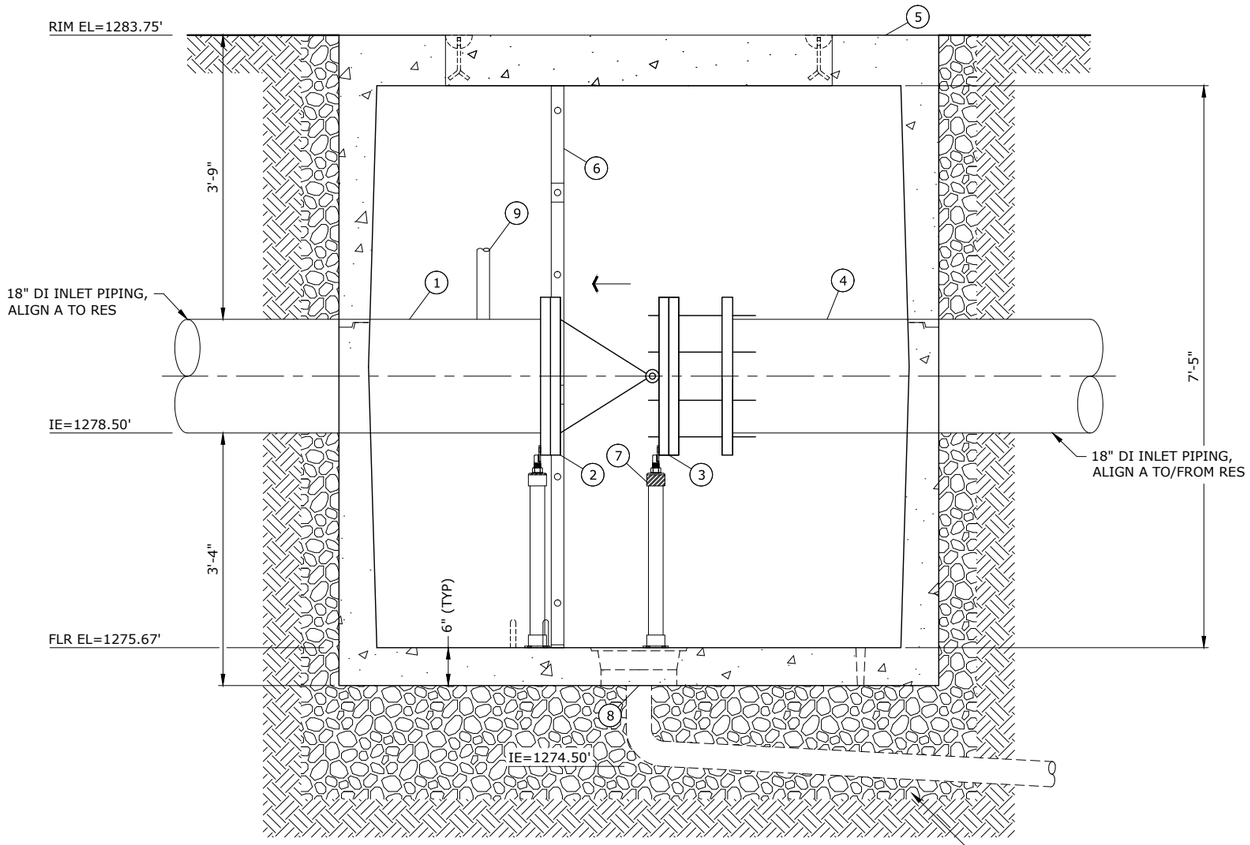


CHECK VALVE VAULT PLAN

SCALE: 1"=1'-0"



SECTION

SCALE: 1"=1'-0"

A
-

SHEET NOTES:

1. PROVIDE RESTRAINED JOINTS ON PIPING, 2' FROM OUTSIDE EDGE OF VAULTS, TYPICAL. SEE SHEET RES-C-6 FOR SITE PIPING PLAN.

2. WALL PENETRATIONS FOR PIPING TO BE PRECAST IN VAULTS, PROVIDE NON-SHRINK GROUT SEAL AROUND PIPE.

3. ANCHORS FOR SMALL PIPING SUPPORTS IN VAULT TO BE EXPANSION BOLTS AND SIZED APPROPRIATELY FOR THE SPECIFIED SUPPORT (¼" MINIMUM DIAMETER), SEE SPECIFICATIONS.

4. POSITION ACTIVE LEAF OF ACCESS DOOR OVER LADDER.

5. SUPPORT SMALL PIPING WITH UNISTRUT SUPPORTS OR APPROVED EQUAL. CHANNELS TO BE P1000 H3 MOUNTED TO CONCRETE WITH P2072 POSTBASE AND STRAP TO PIPE WITH P2038 CLAMP. CONNECT MEMBERS AS PER MANUFACTURER'S REQUIREMENTS.

6. PAINT PIPING AND SPECIALS IN VAULT. SEE SPECIFICATIONS.

7. FOR ALL FLANGES NEAR WALL PENETRATIONS FOR WHICH NO DIMENSION IS GIVEN, FLANGE FACE MUST BE 6" MINIMUM FROM WALL.

8. SPECIAL HANGERS AND SUPPORTS ARE SHOWN IN SOME LOCATIONS. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION AND NUMBER OF ALL ADDITIONAL SUPPORTS TO PROPERLY SUPPORT PIPING, VALVES AND EQUIPMENT CONNECTIONS TO PREVENT DEFLECTION AND STRESSES.

MATERIAL LIST

1. 18" DI SPL, FLGxPE, LENGTH AS REQ'D
2. 18" SILENT CHECK VALVE, FLG
3. 18" RFCA
4. 18" DI SPL, PExPE, LENGTH AS REQ'D
5. PIPING VAULT, OLDCASTLE PRECAST MODEL 712-LA W/ SPRING-ASSISTED GALVANIZED DIAMOND PLATED TRIPLE DOORS WITH H-20 LOADING & LOCKING LATCH WITH RECESSED HASP FOR PADLOCK
6. ACCESS LADDER
7. STANDON MODEL S89 FLG ADJUSTABLE PIPE SUPPORT OR APPVD EQUAL
8. VAULT FLOOR SUMP W/ GRATE AND 4" PVC DRAIN, SLOPE DRAIN @ 1% TO MONITORING MH, SEE SHT RES-C-6 FOR DRAIN ALIGNMENT
9. SODIUM HYPOCHLORITE INJECTION, SEE DET 1, SHT BPS-M-5

NO.	DATE	BY	REVISION

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

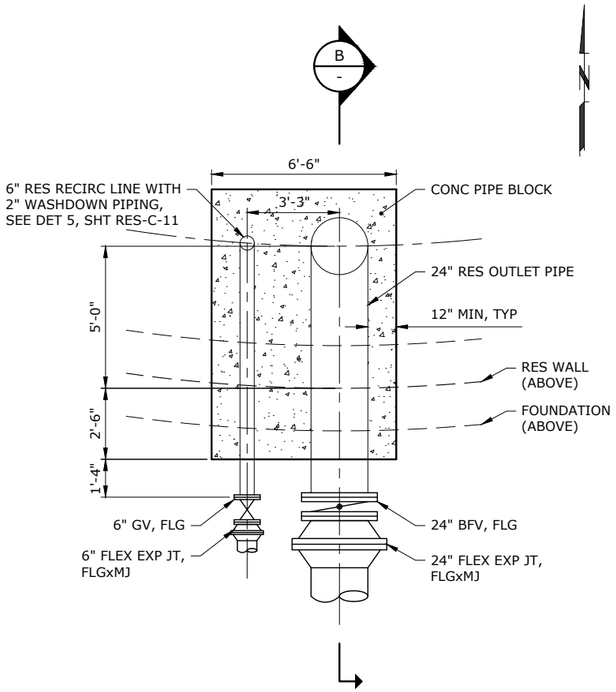
RESERVOIR CHECK VALVE VAULT PLAN, SECTION, AND DETAILS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET RES-M-1

61 of 113

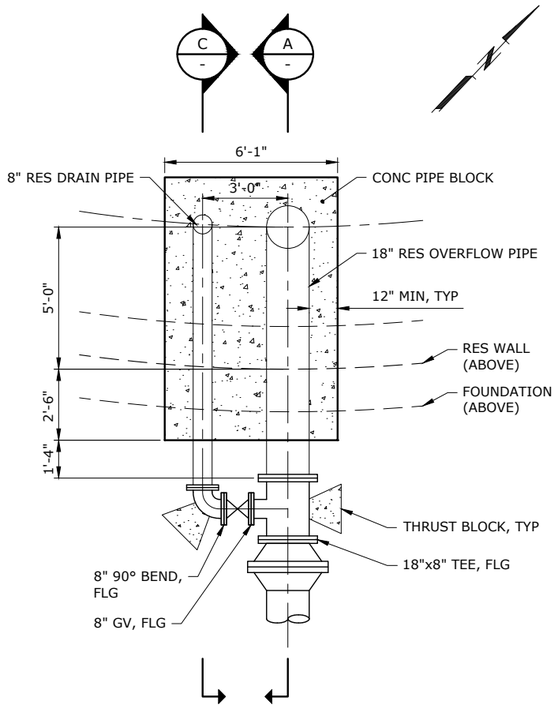
G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE B\17-2024-OR-RES-M.dwg RES-M-1 9/7/2021 12:57 PM TAYLOR.SPENCER 23.0s (LMS Tech)



24" RESERVOIR OUTLET PIPE ENTRANCE PLAN

SCALE: 3/8"=1'-0"

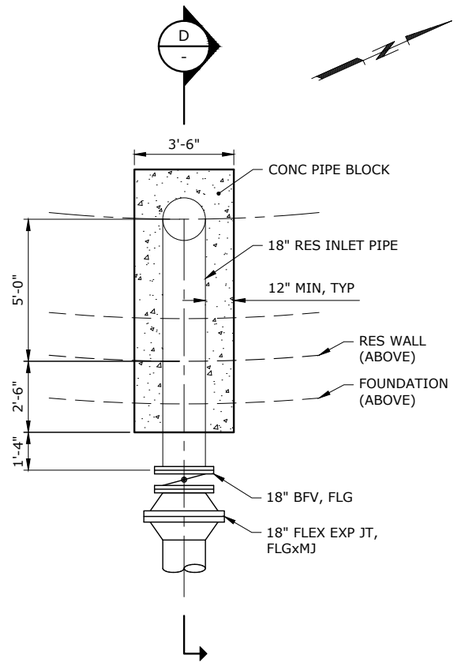
1 RES-C-6



18" RESERVOIR OVERFLOW & 8" DRAIN PIPE ENTRANCE PLAN

SCALE: 3/8"=1'-0"

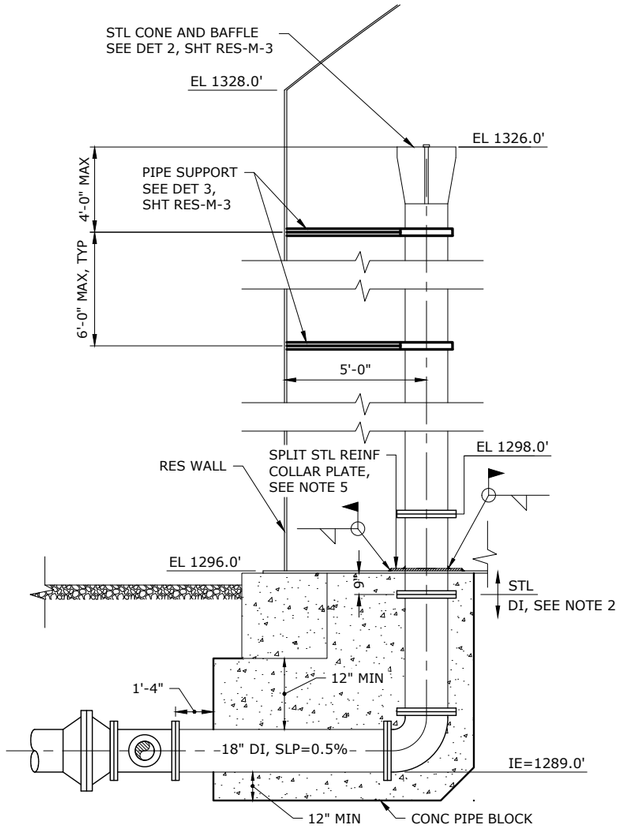
2 RES-C-6



18" RESERVOIR INLET PIPE ENTRANCE PLAN

SCALE: 3/8"=1'-0"

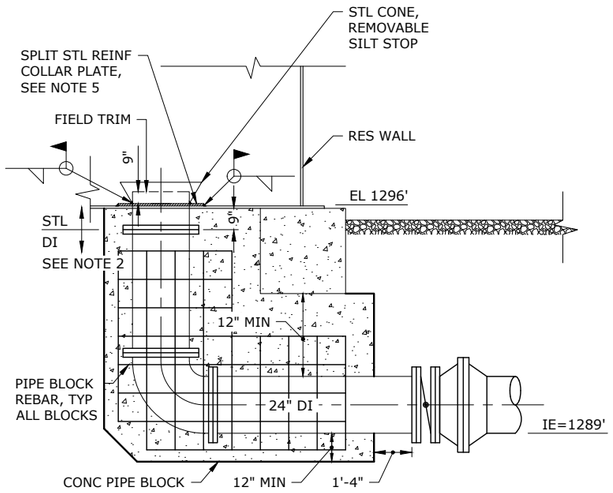
3 RES-C-6



18" OVERFLOW SECTION

SCALE: 3/8"=1'-0"

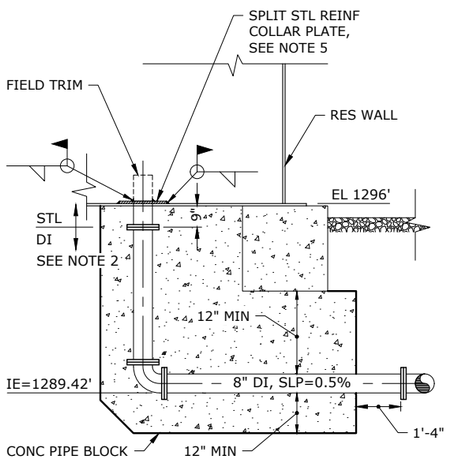
A THIS SHT



24" OUTLET SECTION

SCALE: 3/8"=1'-0"

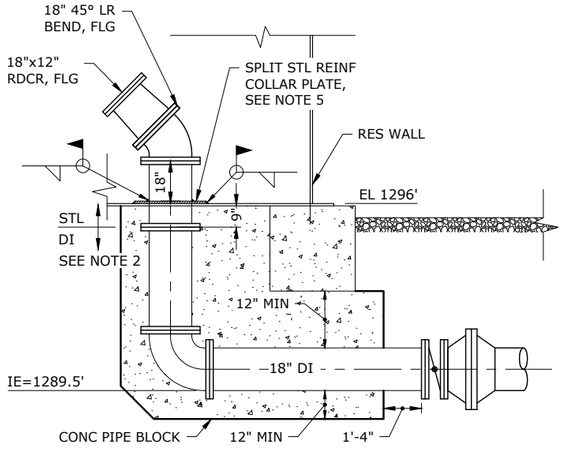
B THIS SHT



8" DRAIN SECTION

SCALE: 3/8"=1'-0"

C THIS SHT



18" INLET SECTION

SCALE: 3/8"=1'-0"

D THIS SHT

NOTES:

1. ALL EXPOSED AND BURIED STEEL PIPING AND SUPPORTS WITHIN AND UNDER RESERVOIR SHALL BE PAINT LINED AND COATED UNLESS OTHERWISE NOTED, SEE SPECIFICATIONS.

2. PROVIDE INSULATED FLANGE JOINT BETWEEN DISSIMILAR PIPE MATERIALS, SEE SPECIFICATIONS.

3. ALL STEEL PIPING SHALL BE PRIMED AND PAINTED. WELDING, DRILLING, CUTTING OF PIPE SECTIONS, OR WELDING OF APPURTENANCES TO PIPE WILL NOT BE ALLOWED FOLLOWING PAINTING.

5. REINFORCED COLLAR PLATE THICKNESS SHALL MATCH RESERVOIR BOTTOM PLATE THICKNESS.

6. ALL MISCELLANEOUS STEEL APPURTENANCES TO BE GRADE A36 UNLESS OTHERWISE NOTED.

7. SEAL WELD ALL WELDED CONNECTIONS.

8. ALL SITE WATER AND DRAINAGE PIPING SHALL BE RESTRAINED.

9. INSTALL REBAR IN ALL PIPE BLOCKS. SEE SHEET RES-S-5.

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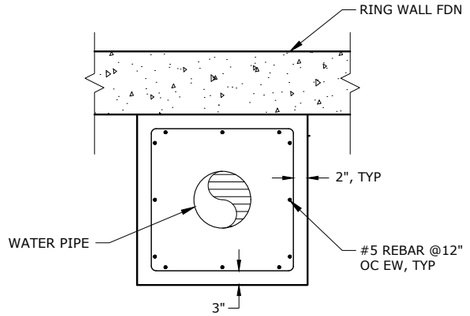
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

RESERVOIR PIPING ENTRANCE/EXIT PLAN AND DETAILS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

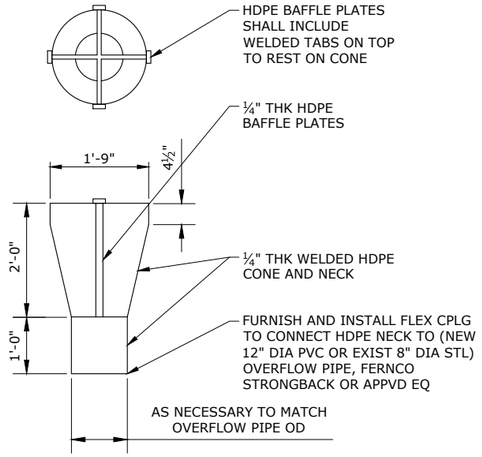
SHEET
RES-M-2
62 of 113



TYPICAL PIPE BLOCK SECTION

SCALE: NTS

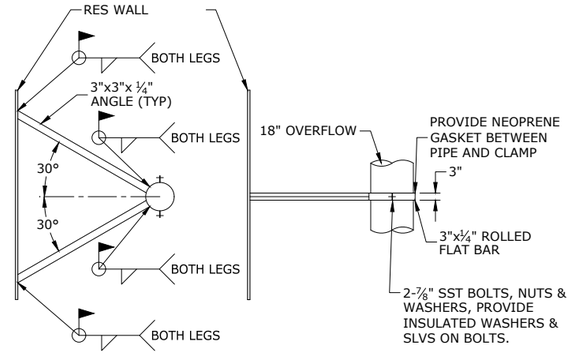
1 RES-M-2



BAFFLE DETAIL

SCALE: 3/8"=1'-0"

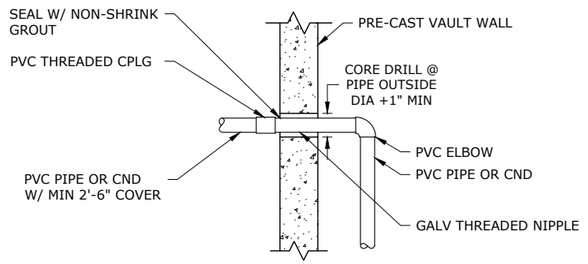
2 RES-M-2



PIPE SUPPORT DETAIL

SCALE: 3/8"=1'-0"

3 RES-M-2



CONDUIT/SMALL PIPE WALL PENETRATION

SCALE: NTS

4 RES-M-1

NO.	DATE	BY	REVISION

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RENEWS 12-31-21

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE B 2.0MG RESERVOIR

RESERVOIR MISCELLANEOUS MECHANICAL DETAILS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET

RES-M-3

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Section I - Governing Codes	
2019	
OSSC, OMSC	
OESC, OPSC, OEESC	
2021	
Section II - Building "Construction" Data	
Type of Construction	Type VB - CMU, Metal & Wood
Maximum Building Height	22 feet,
Number of Stories	1 story
Total Floor Area Provided	1113 square feet
	Pump Room = 926 square feet
	Electrical Room = 144 square feet
	Sodium Hypochlorite Room = 43 square feet
Section III - Building "Occupancy" Data	
Building Occupancy Classification Group(s)	
Occupancy Classification Group by Room	
	Pump Room = U
	Electrical Room = U
	Sodium Hypochlorite Room = H4
Total Occupant Load by Floor	1.00
Total Occupant Load for Each Room	1.00
Total Occupant Load for Each Occupancy Group	N/A
Section IV - Building Area Data "Actual" and "Allowable"	
Section IV - Building Area Data "Actual" and "Allowable"	Pump Station = 1113 square feet
Allowable Base Area (OSSC Table 503)	5,500 square feet (Type VB, Group U)
Section V - "Fire Resistive" Building Elements	
Separation of Occupancies	2 hours (U, Non-Sprinklered)
Section VI - Building "Exiting"	
Maximum Floor Area Allowance Per Occupant	N/A - Not Customarily Occupied
Exits Required in Each Room or Area	1.00
Exits Provided in Each Room or Area	1.00
Exits Required per Floor	1.00
Exits Provided per Floor	1.00
Exit Width Required per Exit	32 inches
Minimum Corridor Exit Width Required	32 inches
Exit Sign Layout Plan	EA door

Section VII - Building "Fire Detection and Suppression"	
Smoke Detection/Fire Alarm System Req'd	No
Smoke Detection/Fire Alarm System Provided	No
Type of System	N/A
Areas Protected	N/A
Sprinkler System Req'd	No, per OSSC 903.2.11 Group U
Standpipe System Req'd	No
Number of Fire Dept Vehicle Accesses	1.00
Fire Extinguisher Locations	BPS-A-2
Section IX - Energy Code Requirements	
Doors: Swinging, opaque	U-0.70 (Max)
Doors: Roll-up, opaque	U-0.50 (Max)
Roof: Insulation entirely above deck	R-42ci (Min)
Walls: Above ground-CMU	Non Grouted Cell filled with Foam Insulation
Slab-on-Grade Floors: Unheated slab	NR
Lighting Layout	BPS-E-7
Section X - Hazardous Materials	
Hazardous Materials Present	Sodium Hypochlorite 12%
Section XI - Accessibility	
Exterior Route of Travel - RES-C-3	
Facility is for equipment access only and does not require accessibility	
Section XII - Plumbing Fixture Count Requirements	
Not Applicable - this remotely monitored station is "not customarily occupied"	
Section XIII - Underground and Pad mounted Transformers	
BPS-E-8	
Section XIV - Special Inspection, Structural Observation	
Required Structural Inspection requirements are indicated on Structural Sheets and Specifications	
Structural Observation requirements are indicated on BPS-S-1 & BPS-S-2 sheets	
Deferred Submittals:	
BPS-S-1	
Section XV - Room Specific Requirements	
Not Applicable -This remotely monitored station is "not customarily occupied"	

DOOR SCHEDULE

NO.	DOOR SIZE	OPEN	HARDWARE	FRAME		REMARKS
				HEAD	JAMB	
1	10'-0"x12'-0"	OVERHEAD	NA	-	-	CHAIN ON RIGHT
2	3'-0"x7'-10"	LHR	GROUP 2	2"	2"	
3	ACTIVE 2'-8"x7'-10" INACTIVE 2'-8"x7'-10"	ACTIVE LEAF LHR	GROUP 1	2"	4"	WITH VENTELATION LOUVERS IN BOTTOM HALF OF DOOR. LOUVERS TO HAVE A SLOT ON INSIDE FOR SLIDING METAL PANEL IN TO SEAL LOUVER DURING PERIODS OF NON USE.
4	3'-0"x7'-10"	LHR	GROUP 2	2"	2"	
5	3'-0"x7'-10"	LHR	GROUP 2	2"	2"	

MATERIAL FINISH SCHEDULE

ITEM	MATERIAL	COATING SYSTEM	COLOR	REMARKS
EXTERIOR WALLS	CMU	COATING SYSTEM 300	TO BE SELECTED BY OWNER	SPLIT & SMOOTH FACE CMU BLOCK, , PER ELEVATIONS
ROOFING				
GUTTERS, FASCIA AND STEEL ARCHITECTURAL FEATURES		COATING SYSTEM 101	TO BE SELECTED BY OWNER	
BLOCKOUT SOFFIT & TRIM		COATING SYSTEM 303	TO BE SELECTED BY OWNER	
LOUVERS		COATING SYSTEM 101	TO BE SELECTED BY OWNER	FACTORY PRIME
DOORS		COATING SYSTEM 101	TO BE SELECTED BY OWNER	FACTORY PRIME
INTERIOR WALLS	CMU	COATING SYSTEM 302	TO BE SELECTED BY OWNER	
INTERIOR CEILING	GYPSUM	COATING SYSTEM 302	TO BE SELECTED BY OWNER	
CONCRETE FLOORS		COATING SYSTEM 305	NATURAL	
EXPOSED METALLIC PIPING	DUCTILE IRON,	COATING SYSTEM 101		
EXPOSED PVC PIPING	PVC	COATING SYSTEM 104		

NO.	DATE	BY	REVISION

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KRS DESIGNED
EJJ DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER — OREGON — JANUARY 19, 2010 — KRISTOFOR R. SNIDER — RENEWS 6-30-22
Digitally signed by Kristofor Snider
Date: 2021.08.04 10:51:21 -07'00'

murraysmith

CITY OF PENDLETON — INCORPORATED 1880 — OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

BOOSTER PUMP STATION ARCHITECTURAL COVER SHEET

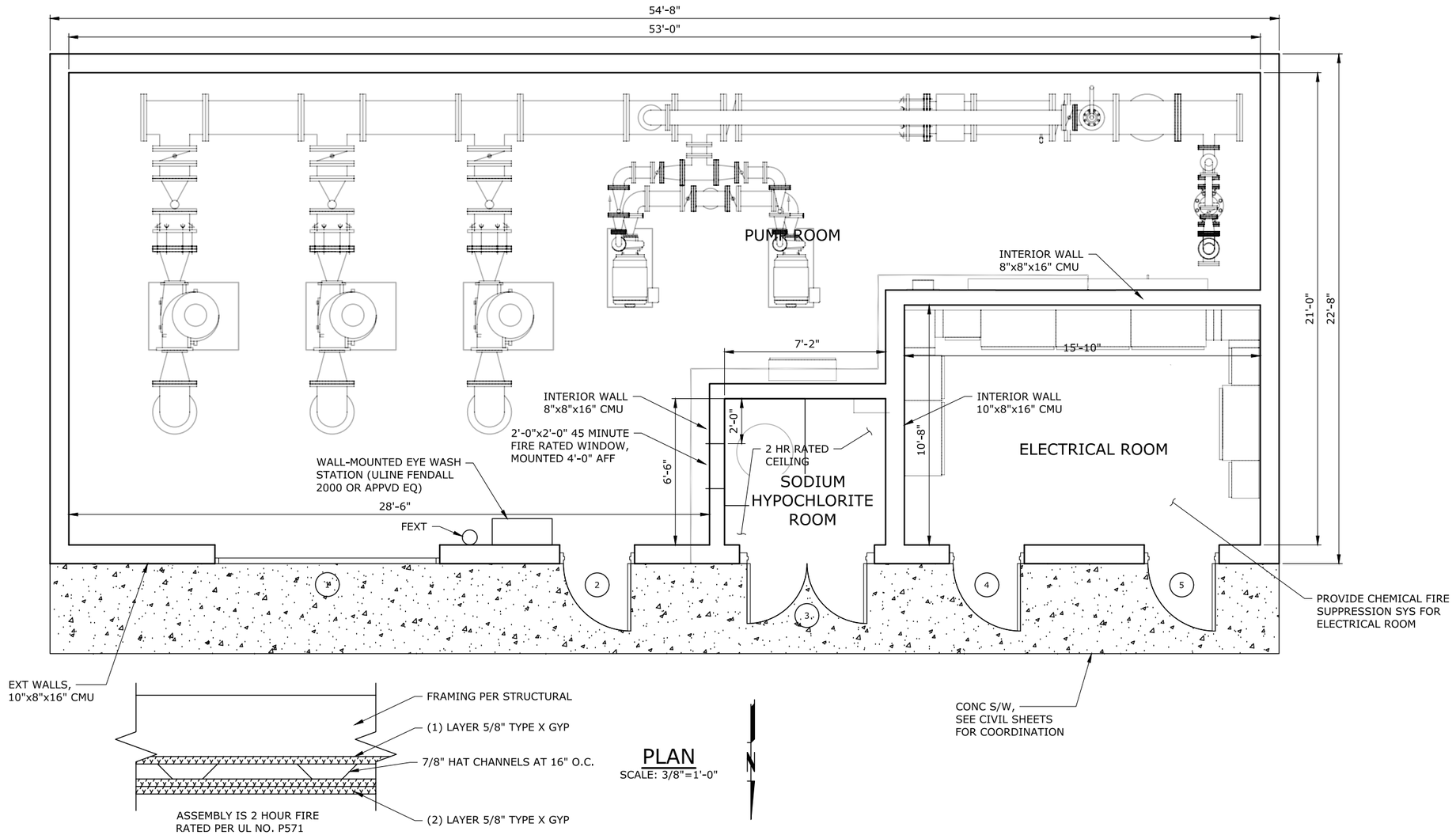
PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
BPS-A-1
64of 113

NOTES:

1. SEE DOOR SCHEDULE ON SHEET BPS-A-1 FOR ADDITIONAL DOOR INFORMATION.

2. ALL CMU CELLS NOT REQUIRED BY THE STRUCTURAL DRAWINGS TO BE GROUTED SHALL BE FILLED WITH FOAM INSULATION.



PLAN
SCALE: 3/8"=1'-0"

2HR RATED CEILING SECTION
SCALE: NTS

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

KRS DESIGNED
EJJ DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 14, 2005
KENNETH R. SNIDER
RENEWS 6-30-22

Digitally signed by Kenneth R. Snider
Date: 2021.08.04 10:53:34-06'00'

murraysmith

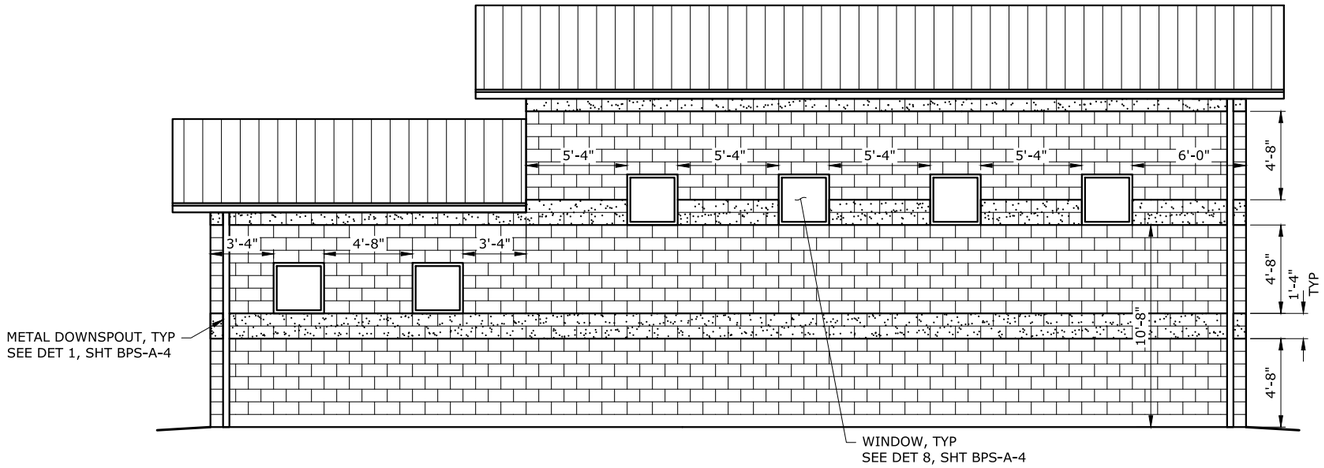
CITY OF PENDLETON
INCORPORATED 1880
OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

BOOSTER PUMP STATION ARCHITECTURAL FLOOR PLAN

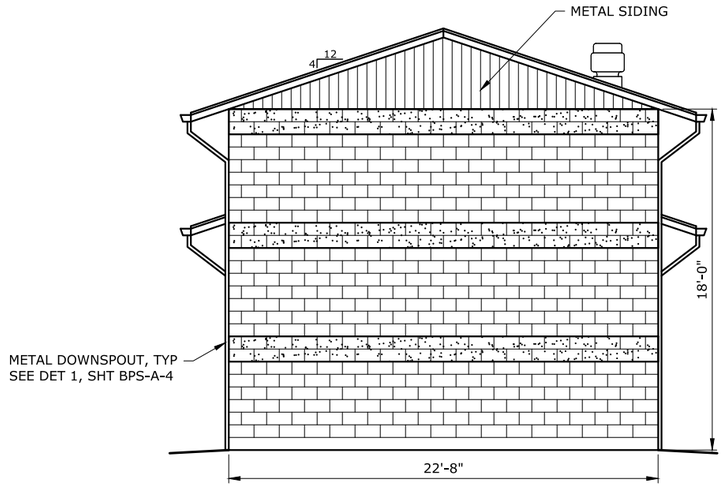
PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
BPS-A-2
65of 113



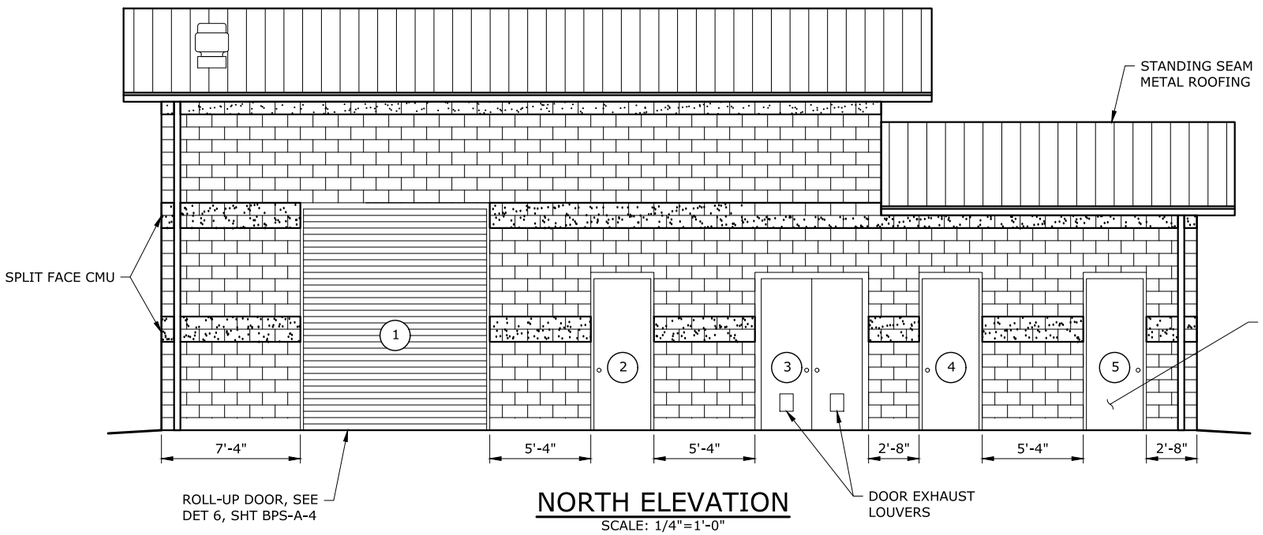
SOUTH ELEVATION

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



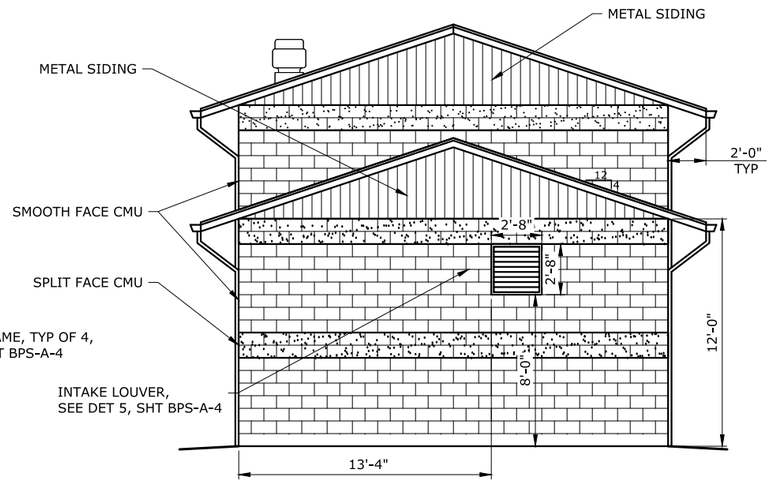
EAST ELEVATION

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



NORTH ELEVATION

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



WEST ELEVATION

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

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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KRS DESIGNED

EJJ DRAWN

LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 12, 2005
KRISTOFOR R. SNIDER
RENEWS 6-30-22

Kristofor Snider
Date: 2021.08.04

murraysmith

CITY OF PENDLETON
INCORPORATED 1880
OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

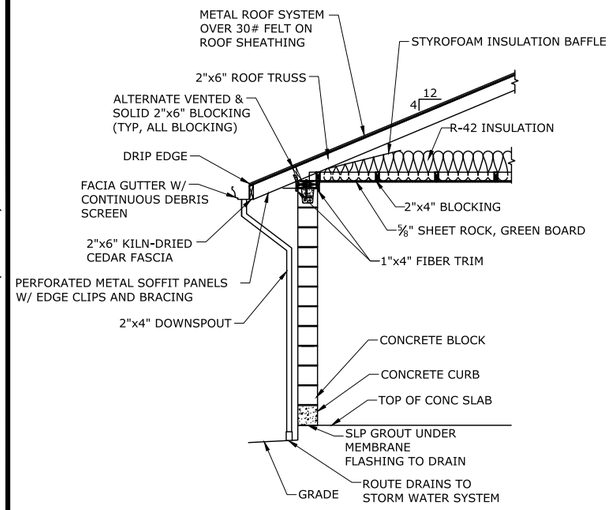
BOOSTER PUMP STATION ARCHITECTURAL EXTERIOR ELEVATIONS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

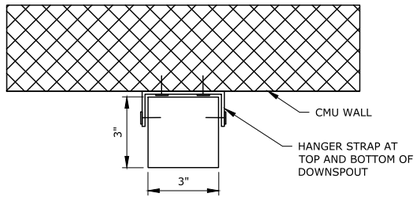
SHEET

BPS-A-3

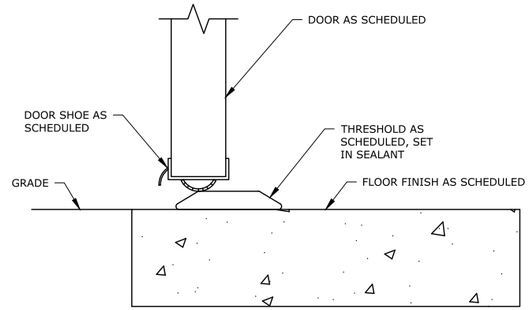
66of 113



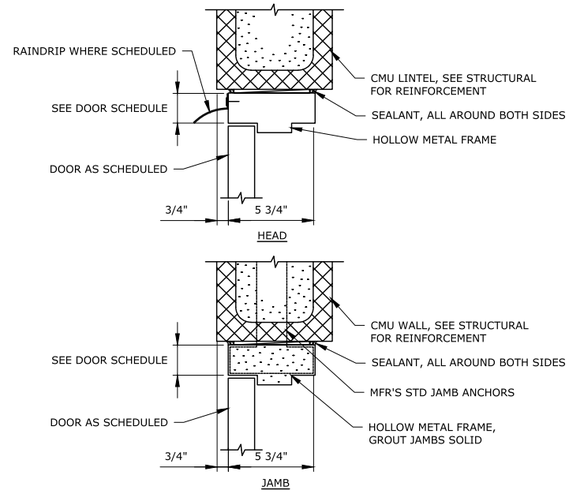
TYPICAL WALL SECTION 1/-
SCALE: NTS



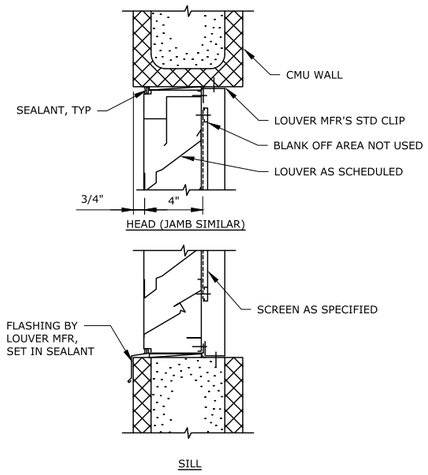
DOWNSPOUT 2/-
SCALE: NTS



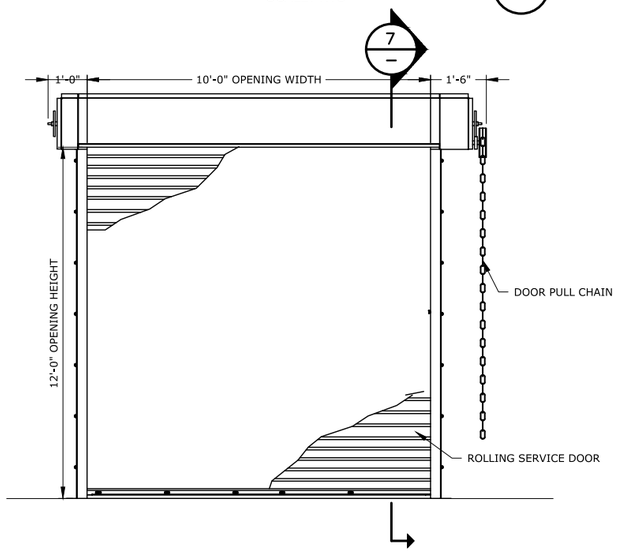
DOOR SILL 3/-
SCALE: NTS



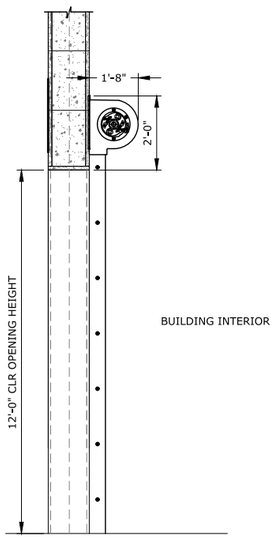
DOOR HEAD & JAMB 4/-
SCALE: NTS



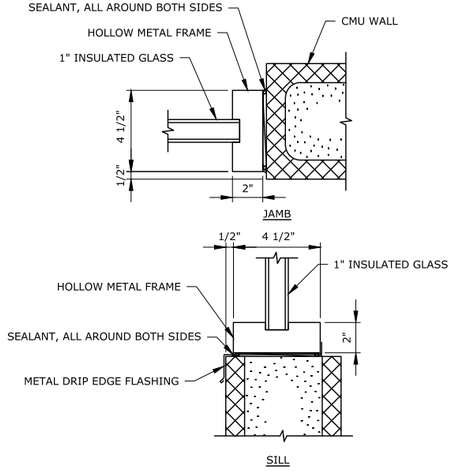
LOUVER HEAD & SILL 5/-
SCALE: NTS



OVERHEAD DOOR INTERIOR ELEVATION 6/-
SCALE: NTS



ROLL UP DOOR SECTION 7/-
SCALE: NTS



WINDOW JAMB & SILL 8/-
SCALE: NTS

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE C\17-2024-202-OR-A.dwg BPS-A-4 8/4/2021 9:25 AM ELI.JEFFERSON 23.0s (LMS Tech)

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

KRS DESIGNED
EJJ DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 89905 KRISTOFOR R. SNIDER RENEWS 6-30-22
Digitally Signed by Kristofor Snider
Date: 2021.08.04 10:56:06 -06'00'

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

BOOSTER PUMP STATION ARCHITECTURAL DETAILS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
BPS-A-4

STRUCTURAL SHEETS:

BPS-S-1 BOOSTER PUMP STATION GENERAL STRUCTURAL NOTES
BPS-S-2 BOOSTER PUMP STATION QUALITY CONTROL PLAN AND NOTES
BPS-S-3 BOOSTER PUMP STATION ROOF FRAMING PLANS AND BUILDING SECTIONS
BPS-S-4 BOOSTER PUMP STATION FOUNDATION PLAN, BUILDING SECTION, AND STRUCTURAL DETAILS
BPS-S-5 BOOSTER PUMP STATION STRUCTURAL DETAILS
BPS-S-6 BOOSTER PUMP STATION CMU WALL DETAILS
BPS-S-7 GENERATOR SLAB DETAILS

GENERAL STRUCTURAL NOTES:

1. THESE NOTES ARE GENERAL IN NATURE AND ARE INTENDED TO SET MINIMUM STANDARDS FOR CONSTRUCTION. THE CONTRACTOR SHALL BE COMPLETELY FAMILIAR WITH THE CONTRACT DOCUMENTS AND HAVE A COPY OF THEM ON SITE AT ALL TIMES.
2. FOR ANY PORTION OF THE CONSTRUCTION WHICH THE CONTRACTOR IS UNABLE TO ASCERTAIN THE REQUIRED CONSTRUCTION OR WHERE CONFLICTS EXIST, IT IS THE CONTRACTOR'S RESPONSIBILITY TO REQUEST ADDITIONAL INFORMATION (RFIs) AND/OR CLARIFICATIONS BEFORE CONSTRUCTION.
3. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH THE 2019 OREGON STRUCTURAL SPECIALTY CODE (OSSC). ALL BUILDING ELEMENTS AND COMPONENTS NOT SPECIFICALLY DETAILED IN THESE STRUCTURAL CONSTRUCTION DOCUMENTS SHALL BE FABRICATED AND CONSTRUCTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CONTAINED IN THE IBC AS AMENDED BY THE STATE OF OREGON.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS BEFORE CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
5. THE CONTRACTOR, SUBCONTRACTORS AND SUPPLIERS SHALL INSURE COORDINATION OF CONTRACTOR SUPPLIED/DESIGNED ELEMENTS AND DEFERRED SUBMITTALS WITH ALL DESIGN DISCIPLINES WITHIN THE CONSTRUCTION SET. COORDINATION SHALL IDENTIFY AND RECONCILE CONFLICTS BETWEEN THE CONTRACTOR SUPPLIED/DESIGNED ELEMENTS AND THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION AND DELIVERY TO THE PROJECT SITE. THE PROJECT ENGINEER SHALL BE NOTIFIED IF CONFLICTS EXIST.
6. THE CONTRACT STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. METHODS, PROCEDURES, AND SEQUENCE OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
7. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LIVE LOAD FOR THE STRUCTURE. PROVIDE SHORING AND/OR BRACING WHERE LOADS EXCEED DESIGN CAPACITY AND WHERE STRUCTURES HAVE NOT ATTAINED DESIGN STRENGTH.
8. CLADDING, WATERPROOFING, AND ARCHITECTURAL FEATURES ARE OUTSIDE THE STUCTURAL SCOPE OF WORK. ANY DEPICTION OF SUCH FEATURES ON THE STRUCTURAL DRAWINGS ARE NOT INTENDED TO BE USED FOR CONSTRUCTION. REPRESENTATION OF SUCH FEATURES ON THESE DRAWINGS MAY OR MAY NOT BE ACCURATE. REFER TO ARCHITECTURAL DRAWINGS AND/OR SPECIFICATIONS.

DESIGN LOADS: PER 2019 OSSC

1603.1.1 – FLOOR LOADS:
- DEAD LOAD ..... 15 PSF
- LIVE LOAD ..... 125 PSF

1603.1.2 – ROOF LOADS:
- DEAD LOAD ..... 15 PSF
- LIVE LOAD ..... SEE SNOW LOADS

1603.1.3 – SNOW LOADS:
- GROUND SNOW LOAD, Pg ..... 20 PSF
- FLAT–ROOF SNOW LOAD, Pf ..... 21 PSF, USE 25 PSF MIN. (2019 OSSC)
- SNOW EXPOSURE FACTOR, Ce 1.0
- SNOW LOAD IMPORTANCE FACTOR, Is ..... 1.2, CATEGORY IV
- THERMAL FACTOR, Ct 1.2

1603.1.4 – WIND DESIGN CRITERIA:
- ULTIMATE DESIGN WIND SPEED, Vult ..... 113 MPH
- RISK CATEGORY IV
- WIND EXPOSURE ..... EXPOSURE C

1603.1.5 – EARTHQUAKE DESIGN CRITERIA:
- RISK CATEGORY IV
- SEISMIC IMPORTANCE FACTOR, I_E 1.5
- SPECTRAL ACCELERATION, S_s ..... 0.363 g
- SPECTRAL ACCELERATION, S_1 ..... 0.137 g
- SITE CLASS ..... B (PER GEOTECHNICAL REPORT)
- SPECTRAL RESPONSE COEFFICIENT, S_{DS} ..... 0.218 g
- SPECTRAL RESPONSE COEFFICIENT, S_{D1} ..... 0.073 g
- SEISMIC DESIGN CATEGORY ..... CATEGORY C
- SEISMIC FORCE RESISTING SYSTEM(S) ..... SPECIAL REINFORCED MASONRY SHEAR WALLS
- RESPONSE MODIFICATION FACTORS(S), R 5.0
- SEISMIC RESPONSE COEFFICIENTS(S), C_S ..... 0.065, WORKING STRESS
- ANALYSIS PROCEDURE ..... ASCE 7–16

08/04/2021
1801–0118

PSE
PETERSON STRUCTURAL ENGINEERS
9400 SW Barnes Rd., Suite 100
Portland, Oregon 97225
(503) 292–1635

CONCRETE:

1. ALL CONCRETE SHALL BE HARD ROCK CONCRETE MEETING REQUIREMENTS OF ACI–301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS". MIX PROPORTIONS SHALL BE PER ACI–301, METHOD 2 OR THE ALTERNATE PROCEDURE. SUBMIT MIX DESIGN FOR REVIEW BY STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. ALL AGGREGATE SHALL BE CRUSHED ANGULAR ROCK, NO ROUND RIVER ROCK WILL BE ACCEPTED.
2. STRUCTURAL CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS:

TYPE	f'c	SLUMP	w/c	AIR
ALL	4,500 psi	1–4"	0.42	6%

3. ALL CONCRETE EXPOSED TO WEATHER SHALL CONTAIN 6% (±) 1% AIR ENTRAINMENT BY VOLUME. AIR ENTRAINMENT SHALL BE IN CONFORMANCE WITH ASTM C260 AND C494.
4. COLD WEATHER PLACEMENT SHALL CONFORM TO ACI–306. HOT WEATHER PLACEMENT SHALL CONFORM TO ACI–305. MECHANICALLY VIBRATE ALL FORMED CONCRETE. DO NOT OVER–VIBRATE. PLACE CONCRETE MONOLITHICALLY BETWEEN CONSTRUCTION OR CONTROL JOINTS. PROTECT ALL CONCRETE FROM PREMATURE DRYING.
5. CHAMFER ALL EXTERIOR CORNERS 1/2" UNLESS SHOWN OTHERWISE.
6. SLUMP LIMITS MAY BE INCREASED BY ADDITION OF ADMIXTURES PROVIDED THAT THE WATER/CEMENT RATIO OF THE ORIGINAL MIX DESIGN IS NOT EXCEEDED. WATER REDUCING ADMIXTURE SHALL BE IN CONFORMANCE WITH ASTM494, USED IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS. SUBMIT ADMIXTURES TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
7. CEMENT SHALL BY TYPE I OR II IN CONFORMANCE WITH ASTM C150. AGGREGATES SHALL BE IN CONFORMANCE WITH ASTM C33. COARSE AGGREGATES SHALL NOT EXCEED ¾". WATER SHALL BE CLEAN AND POTABLE.
8. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. GRADE 40 MAY BE USED FOR #3 AND SMALLER TIES AND STIRRUPS. DETAIL AND PLACE ACCORDING TO ACI MANUAL SP–66.
9. UNLESS OTHERWISE NOTED, MINIMUM COVER SHALL BE 1 1/2" FOR #5 AND SMALLER BARS, 2" FOR #6 AND LARGER BARS AND 3" WHEN POURED AGAINST EARTH. SUPPORT REINFORCEMENT WITH APPROVED CHAIRS, SPACERS, OR TIES.
10. PROVIDE MINIMUM 48 BAR DIAMETERS AT SPLICES. NO MORE THAN 50% OF REINFORCING SHALL BE SPLICED AT ANY LOCATION. UNLESS OTHERWISE NOTED, BEND ALL HORIZONTAL REINFORCING A MINIMUM OF 2'–0" AT CORNERS AND WALL/FOOTING INTERSECTIONS WITH MIN. EMBEDMENT BEYOND INTERFACE PER DEVELOPMENT LENGTH SPECIFIED IN ACI 318.
11. FORMWORK SHALL BE IN ACCORDANCE WITH ACI–347 "GUIDE TO FORMWORK FOR CONCRETE". FORMS SHALL BE DESIGNED BY THE CONTRACTOR. BRACING SHALL BE PROVIDED AS REQUIRED OR UNTIL THE CONCRETE HAS REACHED ITS SPECIFIED 28–DAY STRENGTH. ALL SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. FORMWORK, SUPPORTS, AND SHORING SHALL PROVIDE FINISHED CONCRETE SURFACES AT ALL FACES: LEVEL, PLUMB, AND TRUE TO DIMENSIONS AND ELEVATIONS SHOWN IN THE DRAWINGS.

FOUNDATIONS:

1. A GEOTECHNICAL REPORT WAS PREPARED BY GEOENGINEERS OF 523 EAST SECOND AVENUE, SPOKANE, WASHINGTON. PHONE: (509) 363–3125, DATED JUNE 5, 2018 (THEIR FILE No. 8946–003–00), AND AN ADDENDUM REPORT WAS PREPARED AND DATE APRIL 2, 2021 (THEIR FILE No. 8946–003–03). THE CONTRACTOR SHALL BE FAMILIAR WITH THAT REPORT AND CONFORM TO THE RECOMMENDATIONS CONTAINED THEREIN.
2. ALL FOUNDATIONS TO BEAR ON UNDISTURBED NATIVE MATERIAL, OR GRANULAR COMPACTED ENGINEERED FILL, PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. EXCAVATIONS FOR FOUNDATIONS SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING OF CONCRETE FOR FOUNDATION.
3. SOIL DESIGN CRITERIA, PER GEOTECHNICAL ENGINEER:
   3.1. SOIL BEARING – 4,000 PSF
   3.2. SOIL PROFILE – B
   3.3. FRICTION COEFFICIENT – 0.40

STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING GRADES, UNLESS NOTED OTHERWISE ON THE PLANS:

   PLATES & BARS– ASTM A36
   PIPES – ASTM A53, GRADE B
   HSS (RECTANGULAR) – ASTM A500, GRADE C (Fy = 50 ksi)
   HSS (ROUND) – ASTM A500, GRADE C (Fy = 46 ksi)
   W–SECTIONS – ASTM A992
   M/S/HP–SHAPES – ASTM A36
   CHANNELS & ANGLES – ASTM A36

2. WELD ACCORDING TO CURRENT AWS STANDARDS WITH E70XX ELECTRODES.
3. WELD SIZES SHOWN ON THE DESIGN DRAWINGS ARE CONSIDERED EFFECTIVE WELD SIZES AND SHALL BE INCREASED IN ACCORDANCE WITH AWS AS REQUIRED BY GAPS OR SKEWS BETWEEN COMPONENTS.
4. ALL STEEL EXPOSED TO WEATHER SHALL BE PAINTED OR HOT–DIP GALVANIZED, UNLESS NOTED OTHERWISE.
5. ALL STRUCTURAL CONNECTION BOLTS SHALL BE ASTM A325, UNLESS NOTED OTHERWISE. HOOKED, HEADED, THREADED, AND NUTTED ANCHOR RODS SHALL BE ASTM F1554 (Fy = 36 ksi), UNLESS NOTED OTHERWISE.

SHEATHING:

1. WOOD STRUCTURAL PANELS SHALL BE APA RATED EXPOSURE 1 PLYWOOD, AND COVERED IN DOC PS 1 AND PS 2, UNLESS NOTED OTHERWISE.
2. MINIMUM PANEL THICKNESS SHALL BE 15/32", OR AS INDICATED IN THESE PLANS. PARTICLEBOARD IS NOT PERMITTED.
3. MINIMUM NAILING IS 8d@6" AT PANEL EDGES AND 8d@12" IN THE FIELD. ALL NAILS SHALL BE COMMON OR GALVANIZED BOX NAILS. BLOCKING IS REQUIRED WHERE NOTED ON THE PLANS.

PREMANUFACTURED CONNECTION HARDWARE:

1. CONNECTION HARDWARE IS BY THE SIMPSON COMPANY OF SAN LEANDRO, CA. ALL STEEL CONNECTORS SHALL BE GALVANIZED OR BY SOME METHOD MADE CORROSION RESISTANT, UNLESS OTHERWISE INDICATED.
2. PROVIDE BOLTED OR NAILED CONNECTIONS FOR THE MAXIMUM CAPACITY UNLESS NOTED OTHERWISE.
3. CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE EITHER POST HOT–DIP GALVANIZED OR STAINLESS STEEL. FASTENERS SHALL BE OF THE SAME MATERIAL OR PROTECTIVE COATING AS THE CONNECTORS, DO NOT MIX DIFFERING METALS IN THE SAME CONNECTION.

MANUFACTURED ROOF TRUSSES:

1. MANUFACTURED ROOF TRUSSES SHALL BE AT 24" CENTERS AND SHALL HAVE A MINIMUM OF A 2x6 TOP CHORDS FOR WOOD TRUSSES.
2. TRUSSES SHALL BE DESIGNED FOR SPECIFIED ROOF LOADS. STRUCTURAL CALCULATIONS SHALL BE SEALED BY AN OREGON LICENSED PROFESSIONAL ENGINEER AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
3. MANUFACTURER SHALL PROVIDE BRACING, BLOCKING, HOLDOWNS, AND ALL ACCESSORIES REQUIRED FOR PROPER INSTALLATION.
4. SHOP DRAWINGS SHALL PROVIDE PLACING AND ERECTION DIRECTION TO INSTALLER. CALCULATIONS AND SHOP DRAWINGS SHALL USE COMMON IDENTIFYING MARKS TO FACILITATE SHOP DRAWING REVIEW.

POST–INSTALLED CONCRETE ANCHORS:

1. ADHESIVE:
   - 1.1. ADHESIVE ANCHORS SHALL BE INSTALLED BY QUALIFIED PERSONNEL TRAINED TO INSTALL ADHESIVE ANCHORS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND WITH STRICT ADHERENCE TO THE PROVISIONS WITHIN THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
   - 1.2. AT THE TIME OF ANCHOR INSTALLATION, IN ACCORDANCE WITH ACI 318–11 SECTION D.2.2, ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS.
   - 1.3. WHERE THE AUTHORITY HAVING JURISDICTION OVER THIS PROJECT REQUIRES ADHERENCE TO ACI 318–11 SECTION D.9.2.2, INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI AND IN ACCORDANCE WITH ACI 318–11 SECTION D.9.2.2. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION. NOTE: THE STATE OF OREGON DOES NOT REQUIRE ADHERENCE TO ACI 318–11 SECTION D.9.2.2.
2. MECHANICAL:
   - 2.1. MECHANICAL ANCHORS SHALL BE INSTALLED BY QUALIFIED PERSONNEL TRAINED TO INSTALL MECHANICAL ANCHORS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND WITH STRICT ADHERENCE TO THE PROVISIONS WITHIN THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.

CONCRETE MASONRY (CMU):

1. CONCRETE MASONRY UNITS SHALL BE MEDIUM WEIGHT UNITS CONFORMING TO ASTM C90. THEY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI. CONTRACTOR TO VERIFY PER UNIT STRENGTH METHOD.
2. MORTAR SHALL BE TYPE M OR S WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,800 PSI.
3. GROUT SHALL CONFORM TO ASTM C476 AND SHALL BE EQUAL TO 2,500 PSI MIN.
4. FOR GROUT LIFTS EXCEEDING FIVE (5) FEET, CLEAN OUTS SHALL BE PROVIDED AT THE BOTTOM OF EACH CELL AND AT NO MORE THAN 32" APART. GROUT SHALL ONLY BE INSTALLED IN CELLS CONTAINING REINFORCING STEEL OR AS INDICATED IN THESE PLANS. NO SOLID GROUTING UNLESS NOTED OTHERWISE.
5. UNIT STRENGTH METHOD SHALL BE USED TO VERIFY MINIMUM COMPRESSIVE STRENGTH OF MASONRY f'_m = 1,900 PSI.

SUBMITTALS:

THE CONTRACTOR SHALL PROVIDE THE ENGINEER OF RECORD AND THE BUILDING OFFICIAL SUBMITTALS FOR APPROVAL AT LEAST 21 DAYS PRIOR TO CONSTRUCTION, FOR THE FOLLOWING ITEMS:

1. STEEL FABRICATION SHOP DRAWINGS, MATERIAL CERTIFICATIONS & WELDING PROCEDURES
2. CONCRETE MIX DESIGN AND PROPOSED ADMIXTURES
3. CONCRETE & CMU REINFORCING SHOP DRAWINGS
4. GROUT MIX DESIGN
5. CMU BLOCK/MORTAR/GROUT MATERIAL SUBMITTAL FOR UNIT STRENGTH COMPLIANCE WITH f'm REQUIREMENT
6. CRANE PRODUCT DATA
7. SEISMIC ANCHORAGE AND BRACING CALCULATIONS FOR APPLICABLE ELECTRICAL & MECHANICAL EQUIPMENT & PIPING
8. ROOF TRUSS SHOP DRAWINGS AND CALCULATIONS SIGNED BY A REGISTERED OREGON PROFESSIONAL ENGINEER

SOLID SAWN LUMBER:

1. STRUCTURAL LUMBER SHALL BE DOUGLAS FIR CONFORMING TO WWPA GRADING RULES, U.N.O..
2. MINIMUM GRADES ARE, EXCEPT AS NOTED OTHERWISE:

   TOP PLATES – #2

3. PRESSURE TREATED LUMBER SHALL CONFORM TO THE AWPA AND SHALL BEAR THE QUALITY MARK OF AN ACCREDITED ALSC INSPECTION AGENCY. MINIMUM TREATING STANDARDS (RETENTION LBS./CU. FT) SHALL BE AS FOLLOWS:

APPLICATION	ACQ/ACZA	CA–B
TOP PLATES	0.25	0.10

4. ALL LUMBER IN CONTACT WITH CMU SHALL BE PRESSURE TREATED WITH ACZA TO A MINIMUM RETENTION OF 0.25 POUNDS PER CUBIC FOOT BY ASSAY.
5. NAILING SHALL BE IN CONFORMANCE WITH THE 2012 IBC UNLESS NOTED OTHERWISE. FASTENERS FOR PRESERVATIVE–TREATED WOOD SHALL BE OF HOT–DIPPED ZINC–COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. THE COATING WEIGHTS FOR ZINC–COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A–153. 5/8–INCH DIAMETER STEEL ANCHOR BOLTS & LARGER NEED NOT BE GALVANIZED, UNLESS NOTED OTHERWISE.
6. PROVIDE STANDARD 3"x3"x¼" PLATE WASHERS UNDER ALL INTERMEDIATE ANCHOR BOLT HEADS AND NUTS AT THE SILL PLATE. USE STANDARD WASHERS FOR ALL OTHER BOLT HEADS AND NUTS IN CONTACT WITH WOOD.

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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RAH DESIGNED
RAH DRAWN
TGM CHECKED

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 83198PE OREGON NOV. 9, 2004 TRAVIS GREGORY MATTESON
EXPIRES 12/31/22

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PUMP STATION GENERAL STRUCTURAL NOTES

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

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QUALITY CONTROL:

STRUCTURAL OBSERVATION REQUIREMENTS:

1. THE OWNER SHALL EMPLOY THE ENGINEER OF RECORD OR AN ALTERNATE OREGON LICENSED PROFESSIONAL ENGINEER, APPROVED BY THE ENGINEER OF RECORD, TO PERFORM STRUCTURAL OBSERVATIONS IN ACCORDANCE WITH SECTION 1704.6 OF THE 2019 OREGON STRUCTURAL SPECIALTY CODE (OSSC).

2. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM BY A REGISTERED DESIGN PROFESSIONAL FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR ANY OTHER INSPECTION CRITERIA, INCLUDING SPECIAL INSPECTION, AS REQUIRED BY THE BUILDING OFFICIAL OR AS INDICATED WITHIN THE 2019 OSSC.

3. DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER AND THE BUILDING OFFICIAL (AND THE ENGINEER OF RECORD IF AN ALTERNATE ENGINEER IS USED FOR STRUCTURAL OBSERVATION). AT THE CONCLUSION OF THE STRUCTURAL WORK INCLUDED WITHIN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL AND THE OWNER (AND THE ENGINEER OF RECORD IF AN ALTERNATE ENGINEER IS USED FOR STRUCTURAL OBSERVATION) A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

4. THE CONTRACTOR SHALL MAKE AVAILABLE ALL MEANS AND METHODS NECESSARY FOR THE STRUCTURAL OBSERVER TO PERFORM THE REQUIRED STRUCTURAL OBSERVATIONS. IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE OWNER AND STRUCTURAL OBSERVER A MINIMUM OF 48 HOURS BEFORE THE TIME AT WHICH THE SPECIFIED STRUCTURAL OBSERVATIONS MAY BE PERFORMED. IN ADDITION THE CONTRACTOR SHALL UPDATE THE STRUCTURAL OBSERVER OF THE CONSTRUCTION PROGRESS.

5. STRUCTURAL OBSERVATIONS SHALL BE PERFORMED FOR THE FOLLOWING AREAS OF WORK:
   5.1. FOLLOWING THE INSTALLATION OF THE FOOTING REINFORCING AND FORMING, PRIOR TO THE FIRST CONCRETE POUR
   5.2. FOLLOWING THE CMU WALL REINFORCING, PRIOR TO THE FIRST GROUT POUR
   5.3. FOLLOWING A REPRESENTATIVE CMU LINTEL INSTALLATIONS AND REINFORCING, PRIOR TO THE GROUT POUR
   5.4. FOLLOWING THE INSTALLATION OF ALL ROOF FRAMING AND CONNECTIONS, PRIOR TO SHEATHING INSTALLATION
   5.5. FOLLOWING THE COMPLETION OF ALL STRUCTURAL ELEMENTS CONTAINED HEREIN

SPECIAL INSPECTIONS:

1. AN INDEPENDENT TESTING LABORATORY SELECTED AND ENGAGED BY THE OWNER SHALL PROVIDE SPECIAL INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE AND OF THE TYPE AND FREQUENCY OUTLINED IN THE QUALITY CONTROL SECTION OF THESE GENERAL STRUCTURAL NOTES.

2. EACH SPECIAL INSPECTION AND MATERIAL TESTING REPORT SHALL BE DISTRIBUTED TO THE OWNER, CONTRACTOR, BUILDING OFFICIAL AND ENGINEER OF RECORD IN A TIMELY FASHION.

3. THE CONTRACTOR SHALL MAKE AVAILABLE ALL MEANS AND METHODS NECESSARY FOR THE SPECIAL INSPECTOR TO PERFORM THE REQUIRED INSPECTIONS. IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE OWNER AND SPECIAL INSPECTOR A MINIMUM OF 48 HOURS BEFORE THE TIME AT WHICH THE SPECIFIED SPECIAL INSPECTIONS MAY BE PERFORMED.

TABLE 1

REQUIRED GEOTECHNICAL SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	INSPECTION				REMARKS
	IBC CODE REF.	CODE OR STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
SOILS					
GEOTECHNICAL INVESTIGATIONS	TABLE 1705.6, 1803				GEOTECHNICAL INVESTIGATION SHALL INCLUDE ITEMS OF SPECIAL INSPECTION AND TESTING AS NOTED IN TABLE 5 OF THE GUIDELINES
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO AVHIEVE THE DESIGN BEARING CAPACITY	TABLE 1705.6		X (a)		BY THE GEOTECHNICAL ENGINEER
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	TABLE 1705.6		X		
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	TABLE 1705.6, 1803.5.1			X	TESTING OF COMPACTED FILL MATERIALS (SEE TABLE 5)
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	TABLE 1705.6		X		BY THE GEOTECHNICAL ENGINEER
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	TABLE 1705.6			X	

TABLE 2

REQUIRED STRUCTURAL SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	INSPECTION				REMARKS
	IBC CODE REF.	CODE OR STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
FABRICATORS					
FABRICATORS	1704.2.5			X	SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP.
	1704.2.5.1				THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES AND SHALL REVIEW FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENT.
	1704.2.5.2				SPECIAL INSPECTIONS REQUIRED BY SECTION 1705 ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY A NATIONALLY RECOGNIZED ACCREDITING AUTHORITY. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
CONCRETE					
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE		ACI 318: 17.8.2.4, 17.8.2		X (a)	SPECIAL INSPECTIONS APPLY TO ANCHOR PRODUCT NAME, TYPE, AND DIMENSIONS, HOLE DIMENSIONS, COMPLIANCE WITH DRILL BIT REQUIREMENTS, CLEANLINESS OF THE HOLE AND ANCHOR, ADHESIVE EXPIRATION DATE, ANCHOR/ADHESIVE INSTALLATION, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE
REINFORCING STEEL AND PRESTRESSING TENDON PLACEMENT	1908.4	ACI 318: Ch. 20, 25.2, 25.3, 26.5.1-26.5.3		X	TOLERANCES AND REINFORCING PLACEMENT PER ACI 26.6; SPACING LIMITS FOR REINFORCING ACI 25.2 PROTECTION OF REINFORCEMENT PER ACI 20.6
VERIFYING USE OF REQUIRED MIX DESIGN(S)	TABLE 1904.1, 1904.2, 1908.2, 1908.3	ACI 318: Ch. 19, 26.4.3, 26.4.4		X	
INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	TABLE 1908.6, 1908.7, 1908.8	ACI 318: 26.4.5	X		
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURES AND TECHNIQUES	1908.9	ACI 318: 26.4.7-26.4.9		X	
MASONRY LEVEL C QUALITY ASSURANCE					
TEST					
VERIFICATION OF f'_m AND f'_{AAC} IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.4 B PRIOR TO CONSTRUCTION AND FOR EVERY 5,000 SQ. FT (465 SQ. M) DURING CONSTRUCTION					
VERIFICATION OF PROPORTIONS OF MATERIALS IN PREMIXED OR PREBLENDED MORTAR, PRESTRESSING GROUT, AND GROUT OTHER THAN SELF-CONSOLIDATING GROUT, AS DELIVERED TO THE PROJECT SITE					
VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DELIVERED TO THE PROJECT SITE IN ACCORDANCE WITH ARTICLE 1.5 B.1.B.3 FOR SELF-CONSOLIDATING GROUT					
INSPECTION					
INSPECTION TASK	REFERENCE CODE OR STANDARD FOR CRITERIA		FREQUENCY		REMARKS
	TMS402/ACI 530/ASCE 5	TMS602/ACI503.1/ASCE 6	CONTINUOUS	PERIODIC	
1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS		ART 1.5		X	
2. VERIFY THAT THE FOLLOWING ARE IN COMPLIACE:					
A. PROPORTIONS OF SITE-MIXED MORTAR, GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS		ART. 2.1, 2.6 A, 2.6 B, 2.6 C, 2.4 G.1.B		X	
B. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES	SEC. 1.16	ART. 2.4, 3.4		X	
C. PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS		ART. 3.3 B		X	
D. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES	SEC. 1.16	ART. 3.2 E, 3.4, 3.6 A	X		
E. GROUT SPACE PRIOR TO GROUTING		ART. 3.2 D, 3.2 F	X		
F. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS		ART. 3.5, 3.6 C	X		
G. SIZE AND LOCATION OF STRUCTURAL ELEMENTS		ART. 3.3 F		X	
H. TYPE, SIZE, AND LOCATION OF ANCHORS INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	SEC. 1.16.4.3, 1.17.1		X		
J. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C))		ART. 1.8 C, 1.8 D		X	
3. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS		ART. 1.4 B.2.A.3, 1.4 B.2.B.3, 1.4 B.2.C.3, 1.4 B.3, 1.4 B.4	X		

TABLE 2 – CON'T

REQUIRED STRUCTURAL SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	INSPECTION				REMARKS
	IBC CODE REF.	CODE OR STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
STEEL					
FABRICATION OF STRUCTURAL ELEMENTS	1704.2.5.2	AISC 360 N2		X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS. APPROVAL BASED ON NATIONALLY RECOGNIZED ACCREDITING AUTHORITY
MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS, AND WASHERS		AISC 360 A3.3 AISC 360 N 3.2 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS RCSC 2.1		X	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF ANCHOR BOLTS AND THREADED RODS		AISC 360 N3.2 AISC 360 A3.4 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
SNUG-TIGHT JOINT HIGH-STRENGTH BOLT INSTALLATION	1705.2.1.1	RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS SECTION 9		X	ALL CONNECTIONS INSPECTED AND VERIFIED SNUG
PRETENSIONED AND SLIP-CRITICAL JOINT HIGH-STRENGTH BOLT INSTALLATION USING TURN-OF-THE-NUT METHOD WITH MATCH MARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHOD		AISC 360, SECTION M2.5		X	ALL CONNECTIONS INSPECTED. CONNECTIONS USING DIRECT TENSION INDICATORS, ALL BOLTS SHALL BE INSPECTED AFTER SNUGGING AND AFTER PRETENSIONING
MATERIAL VERIFICATION OF WELD FILLER METALS	TABLE 1705.2	AISC 360 N3.2 AISC 360 A3.5 APPLICABLE AWS A5 DOCUMENTS		X	MANUFACTURER'S CERTIFICATE OF COMPLIANCE
VERIFYING USE OF PROPER WPS'S		AISC 360 N3.2		X	COPY OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS		AWS D1.2 SECTION 5		X	COPY OF QUALIFICATION CARDS
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	TABLE 1705.2	AWS D1.1 SECTION 6	X		ALL WELDS VISUALLY INSPECTED PER AWS D1.1 6.9
MULTIPASS FILLET WELDS			X		
SINGLE PASS FILLET WELDS GREATER THAN 5/16"			X		
SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"				X	

TABLE 5

REQUIRED TESTING FOR SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	TESTING				REMARKS
	IBC CODE REF.	CODE OR STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
GEOTECHNICAL					
GEOTECHNICAL ENGINEER TO PERFORM TESTING OF COMPACTED FILL MATERIALS	1803				TESTING PER GEOTECHNICAL REPORT
MATERIAL VERIFICATION	1705.6	VARIES; CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X (a)	BY THE GEOTECHNICAL ENGINEER
CONCRETE					
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	TABLE 1705.3	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	X		FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED. ONCE EACH DAY FOR A GIVEN CLASS OF CONCRETE, OR LESS THAN ONCE FOR EACH 150 YDS OF CONCRETE, OR LESS THAN ONCE FOR EACH 5,000 FT2 OF SURFACE AREA FOR SLABS/WALLS. ONCE EACH SHIFT FROM IN-PLACE WORK OR FROM TEST PANEL AND MINIMUM ONE SPECIMEN FOR EACH 50 CUBIC YARDS. "PRECONSTRUCTION TESTS AS REQUIRED PER THE BUILDING OFFICIAL."
CONCRETE STRENGTH	TABLE 1705.3	ASTM C39	X		
CONCRETE SLUMP	TABLE 1705.3	ASTM C143	X		
CONCRETE AIR CONTENT		ASTM C231	X		
CONCRETE TEMPERATURE		ASTM C1064	X		
MASONRY					
UNIT STRENGTH METHOD	2105.2.2.1 TABLE 2105.2.2.1.1 TABLE 2105.2.2.1.2	ASTM C62 ASTM C216 ASTM C652 ASTM 1019 ASTM C55 ASTM C90 ASTM C1386	TESTING EVERY 5,000 FT² AT LEVEL C QUALITY ASSURANCE		
COMPRESSIVE STRENGTH OF MORTAR		MSJC ASTM C270			
COMPRESSIVE STRENGTH OF GROUT		MSJC ASTM C1019			

08/04/2021
1801-0118

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PETERSON STRUCTURAL ENGINEERS
9400 SW Barnes Rd., Suite 100
Portland, Oregon 97225
(503) 292-1635

NO.	DATE	BY	REVISION

NOTICE
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RAH DRAWN
TGM CHECKED

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 63186PE OREGON NOV. 9, 2004 TRAVIS GREGORY McFERRON
EXPIRES 12/31/22

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PUMP STATION QUALITY CONTROL PLAN & NOTES

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
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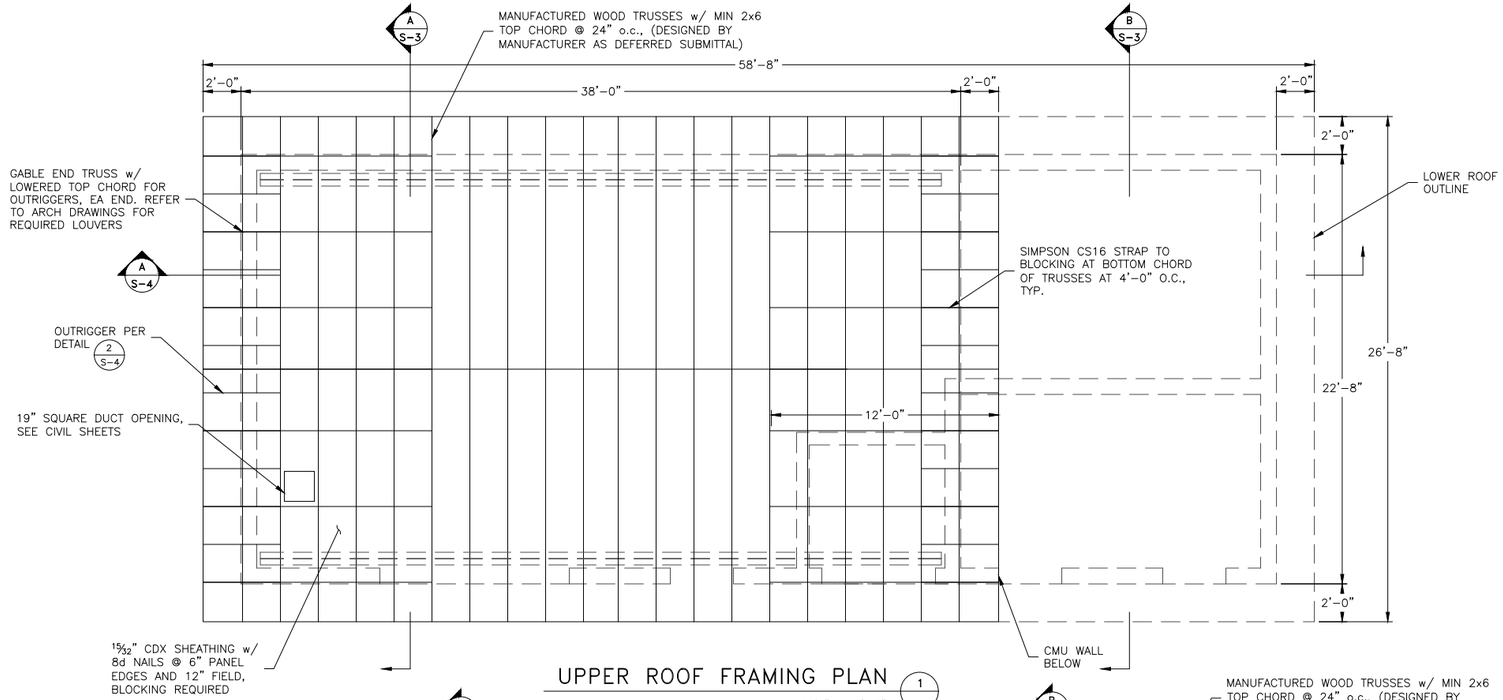
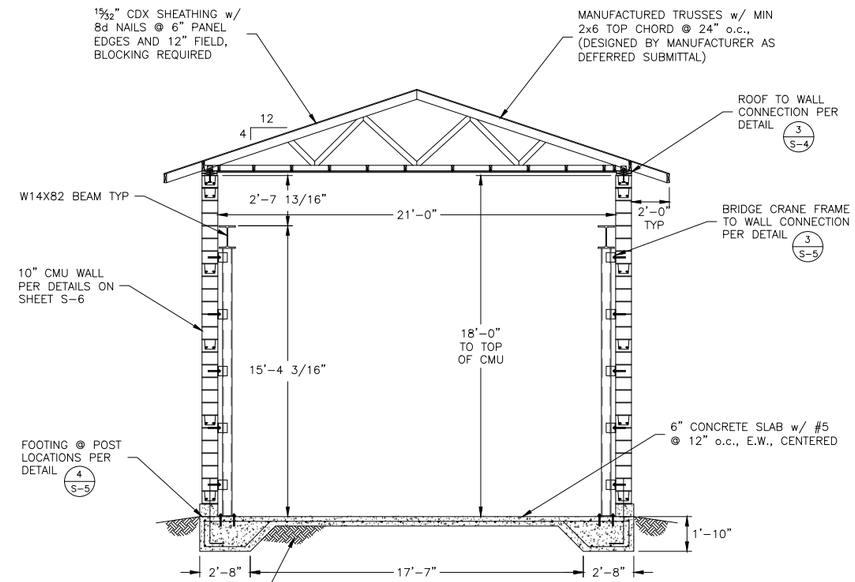


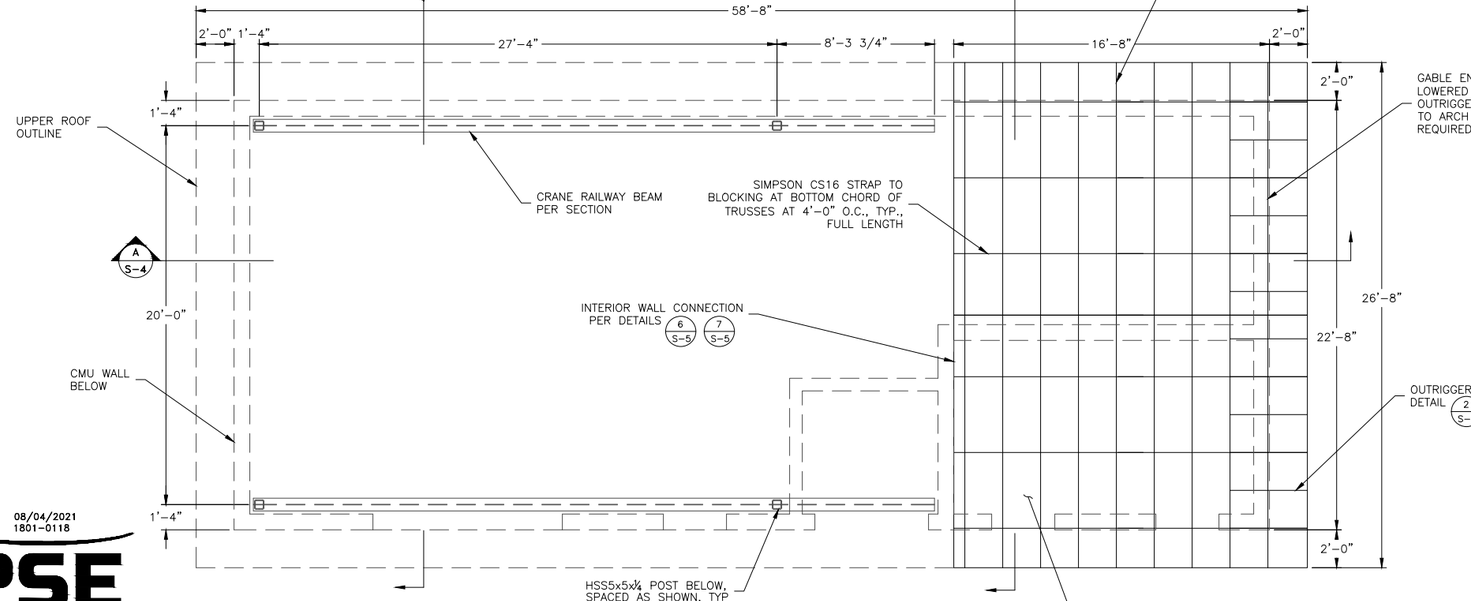
UPPER ROOF FRAMING PLAN (1/—)

1/4" = 1'-0"



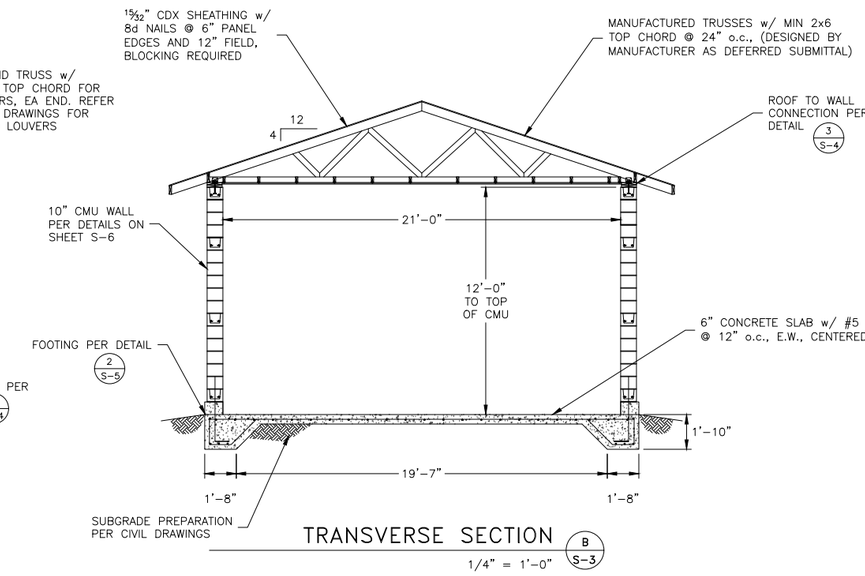
TRANSVERSE SECTION (A S-3)

1/4" = 1'-0"



LOWER ROOF FRAMING PLAN (2/—)

1/4" = 1'-0"



TRANSVERSE SECTION (B S-3)

1/4" = 1'-0"

08/04/2021
1801-0118

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STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 63186PE OREGON NOV. 9, 2004 TRAVIS GREGORY McFERRON
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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PUMP STATION ROOF FRAMING PLANS & BUILDING SECTIONS

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
BPS-S-3
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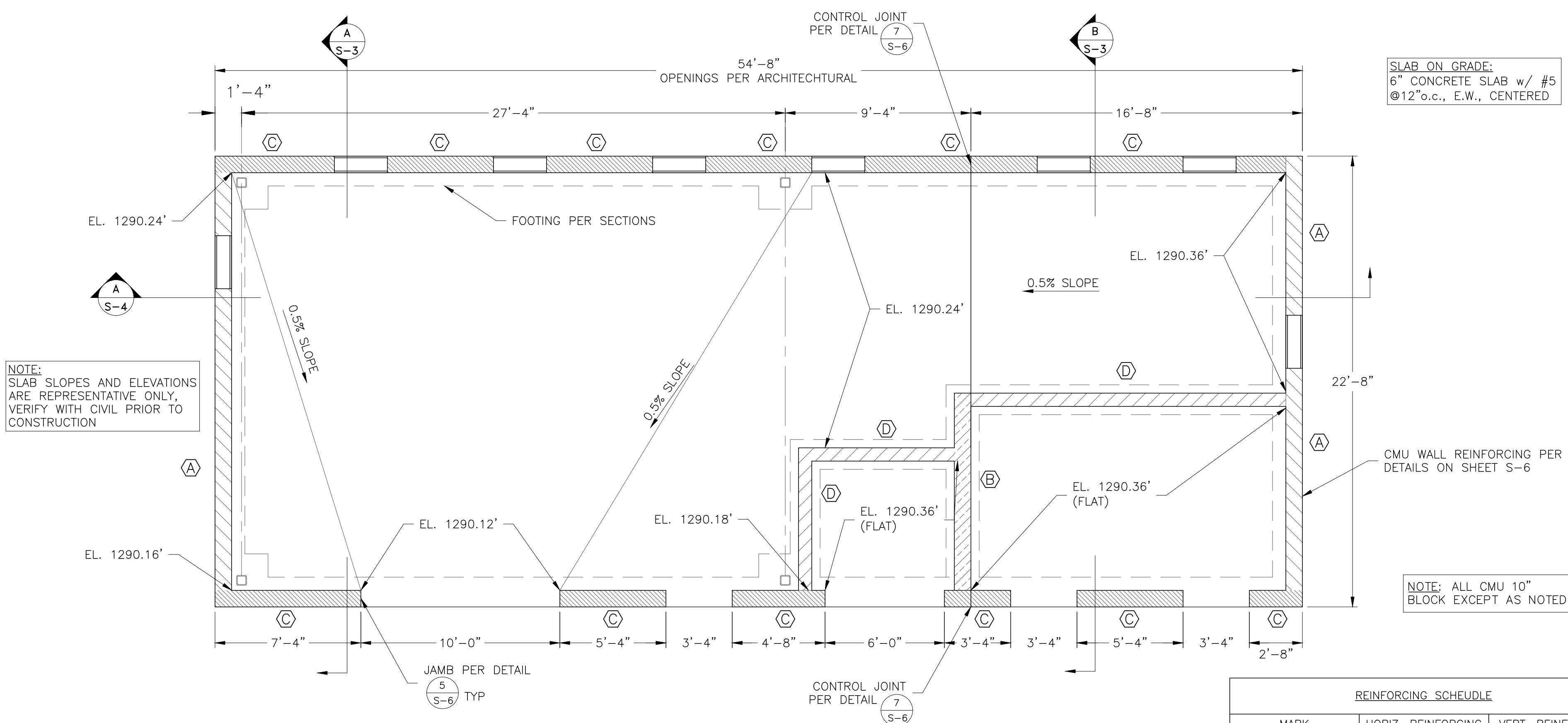
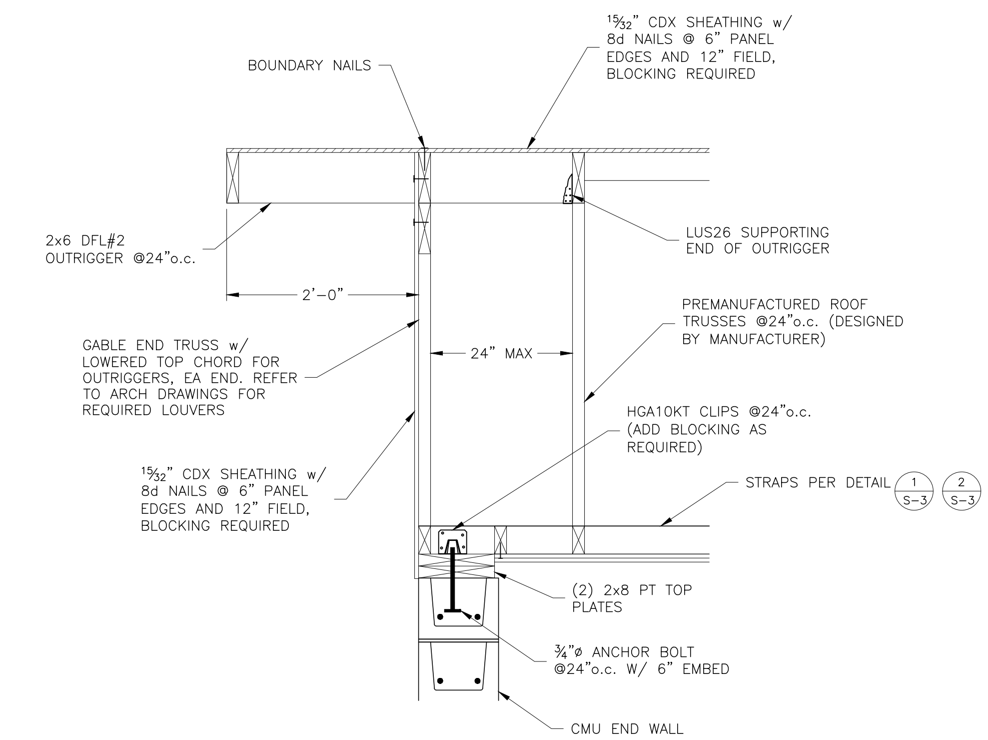
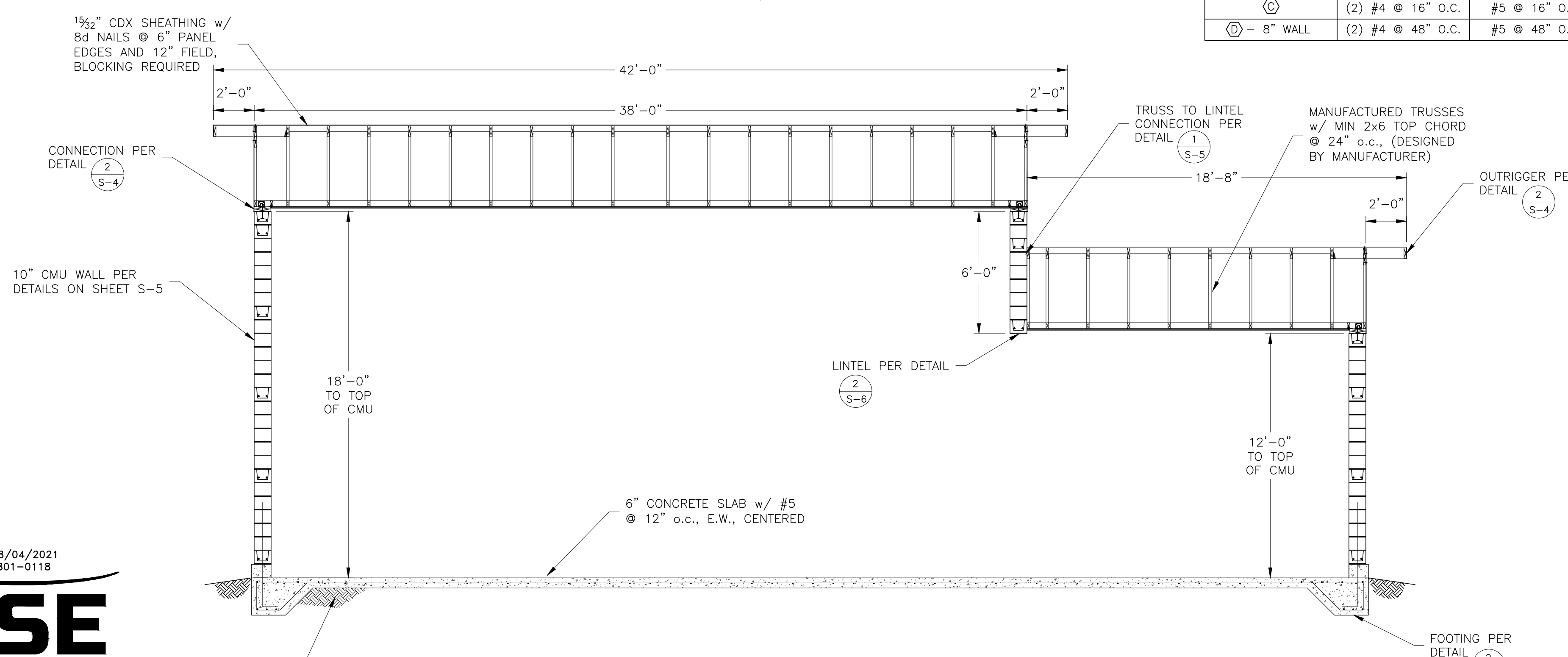


FOUNDATION PLAN 1/–
1/4" = 1'-0"

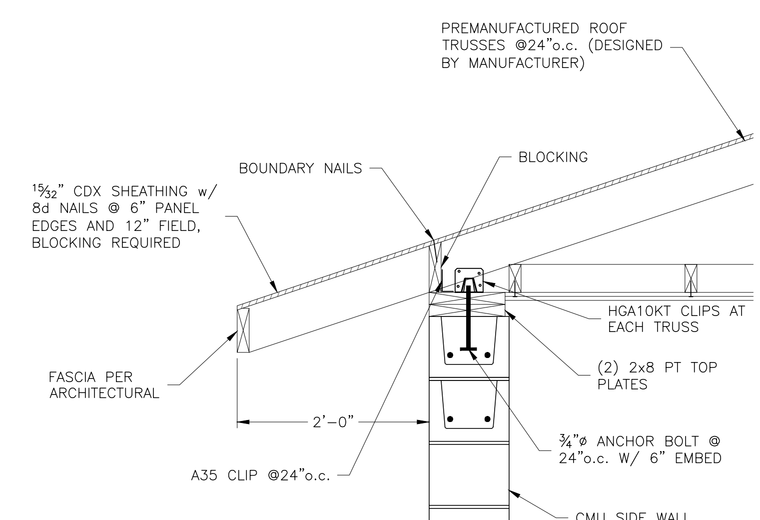
REINFORCING SCHEDULE		
MARK	HORIZ. REINFORCING	VERT. REINFORCING
Ⓐ	(2) #4 @ 40" O.C.	#5 @ 40" O.C.
Ⓑ	(2) #4 @ 32" O.C.	#5 @ 32" O.C.
Ⓒ	(2) #4 @ 16" O.C.	#5 @ 16" O.C.
Ⓓ – 8" WALL	(2) #4 @ 48" O.C.	#5 @ 48" O.C.



END WALL TOP CONNECTION DETAIL 2/S-3
1" = 1'-0"



LONGITUDINAL SECTION A/S-3
1/4" = 1'-0"



SIDE WALL TOP CONNECTION DETAIL 3/S-3
1-1/2" = 1'-0"

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murraysmith

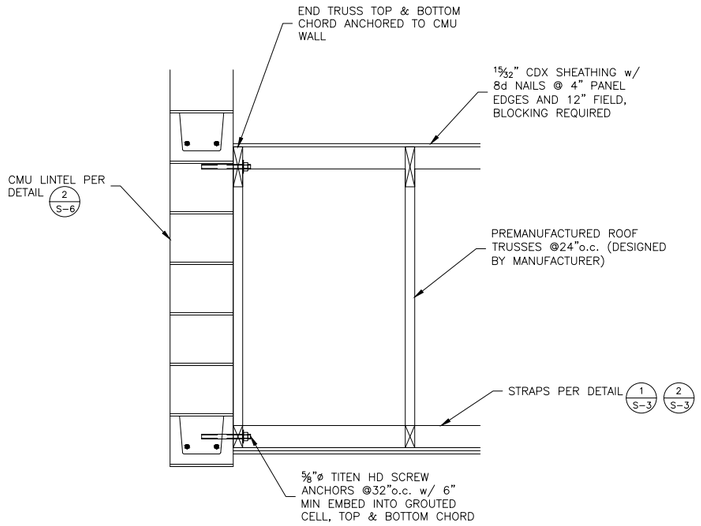
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PUMP STATION FOUNDATION PLAN, BUILDING SECTION & STRUCTURAL DETAILS

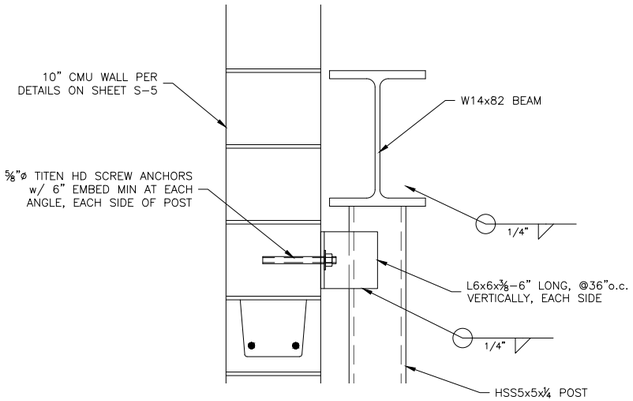
PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET BPS-S-4



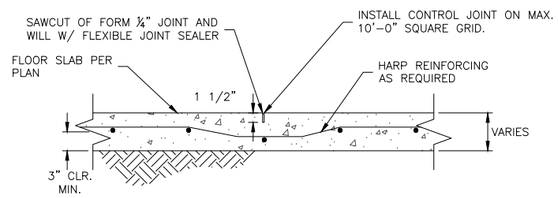
LOWER ROOF TO LINTEL CONNECTION DETAIL 1 S-4

1" = 1'-0"



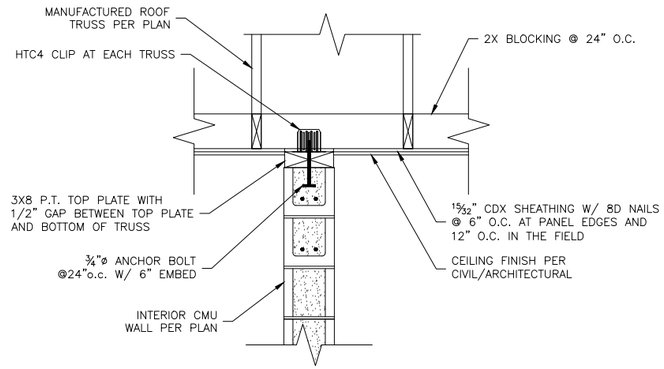
STEEL FRAME TO CMU CONNECTION DETAIL 3 S-3

1-1/2" = 1'-0"



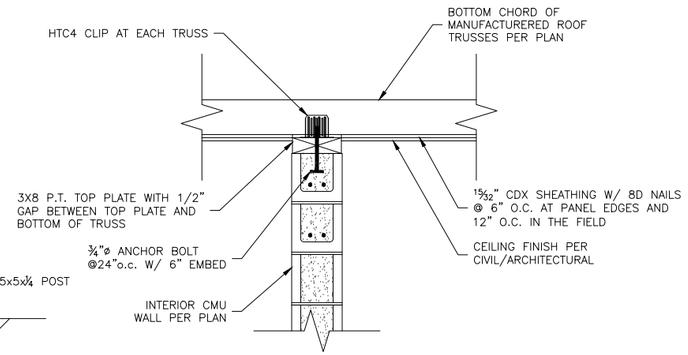
FLOOR CONTROL JOINT DETAIL 5 S-4

1" = 1'-0"



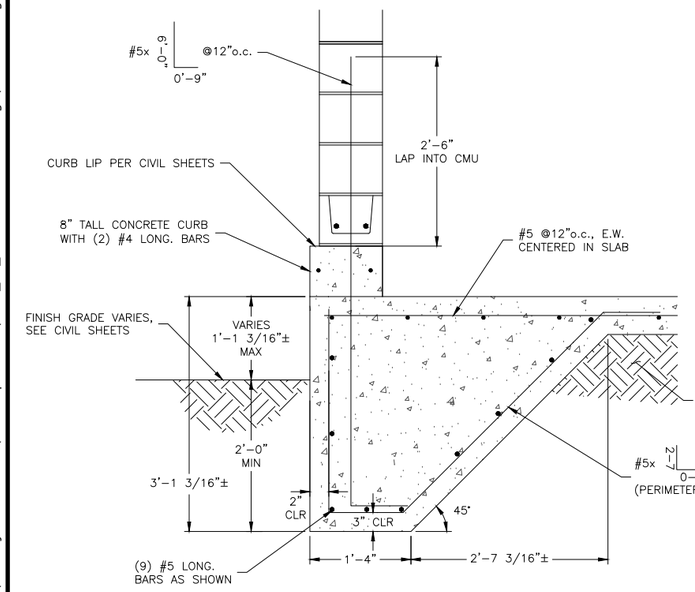
INTERIOR WALL TOP DETAIL 6 S-3

1" = 1'-0"



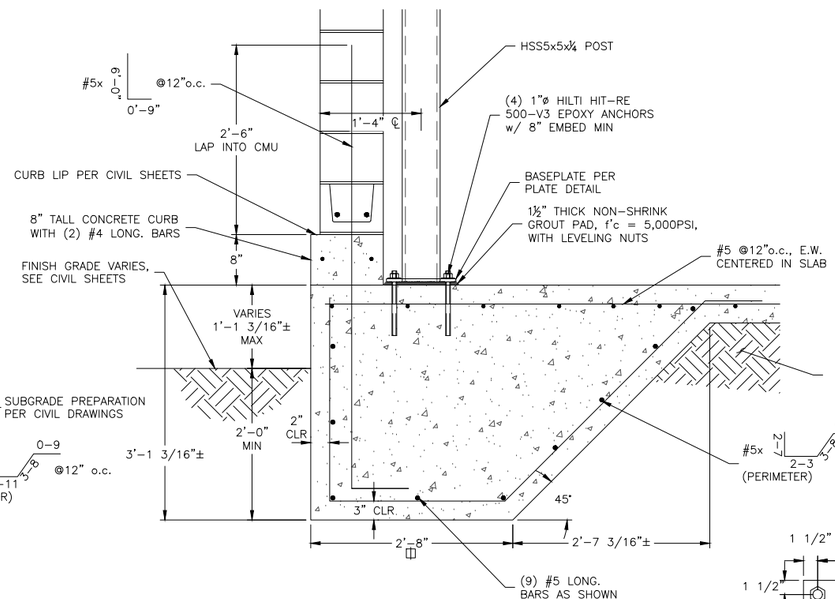
INTERIOR WALL TOP DETAIL 7 S-3

1" = 1'-0"



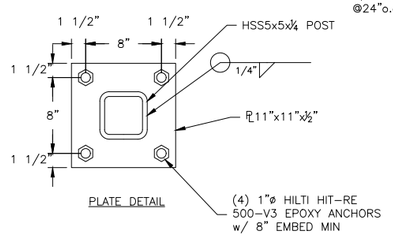
TYPICAL FOOTING DETAIL 2 S-4

1" = 1'-0"



COLUMN FOOTING DETAIL 4 S-4

1" = 1'-0"



08/04/2021
1801-0118

PSE
PETERSON STRUCTURAL ENGINEERS
9400 SW Barnes Rd., Suite 100
Portland, Oregon 97225
(503) 292-1635

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

RAH DESIGNED
RAH DRAWN
TGM CHECKED

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 63186PE OREGON NOV. 9, 2004 TRAVIS GREGORY McFERRON
EXPIRES 12/31/22

murraysmith

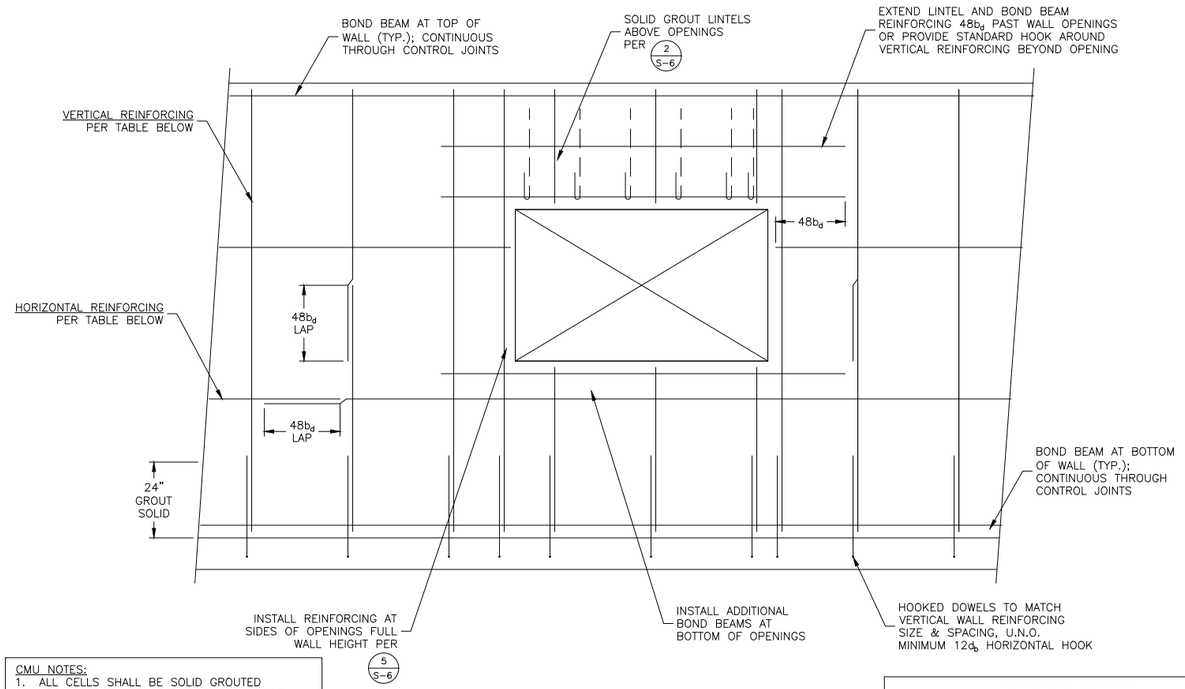
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PUMP STATION STRUCTURAL DETAILS

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
BPS-S-5



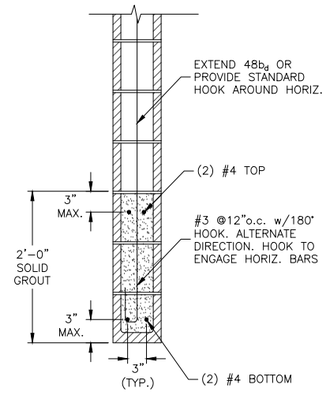
TYPICAL CMU WALL SECTION 1/S-6

NOT TO SCALE

CMU NOTES:
1. ALL CELLS SHALL BE SOLID GROUTED
2. HOOK ALL REINFORCING THAT CANNOT BE EXTENDED.
3. TYPICAL REINFORCING IS SHOWN. REFER TO DETAILS FOR SPECIFIC OR ADDITIONAL REINFORCING
4. LAP ALL REINFORCING A MINIMUM OF 48 BAR DIAMETERS
5. USE LINTEL BLOCK AT LINTELS & 48 BAR DIAMETERS PAST EACH SIDE OF LINTELS; BOND BEAM BLOCKS ARE NOT PERMITTED.
6. BOND BEAMS AT TOP OF WALL SHALL BE CONTINUOUS WITH STANDARD REINFORCING.

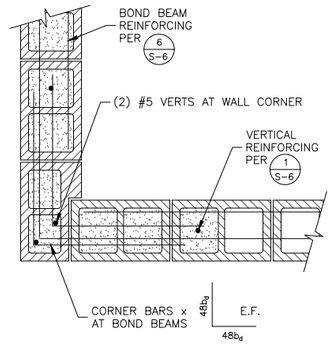
REINFORCING SCHEUDLE

MARK	HORIZ. REINFORCING	VERT. REINFORCING
Ⓐ	(2) #4 @ 40" O.C.	#5 @ 40" O.C.
Ⓑ	(2) #4 @ 32" O.C.	#5 @ 32" O.C.
Ⓒ	(2) #4 @ 16" O.C.	#5 @ 16" O.C.
Ⓓ – 8" WALL	(2) #4 @ 48" O.C.	#5 @ 48" O.C.



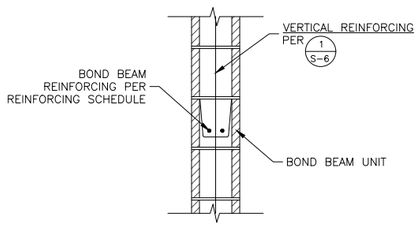
CMU LINTEL DETAIL 2/S-6

1" = 1'-0"



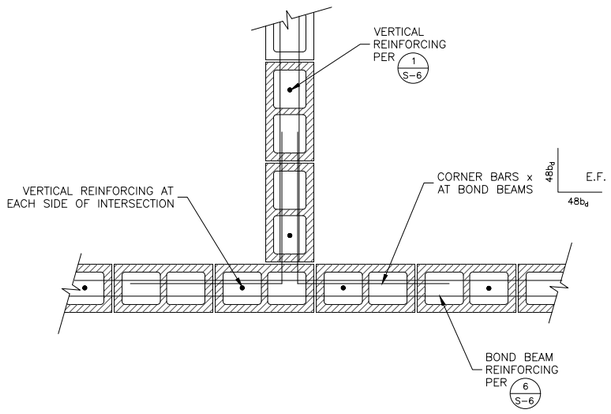
CMU WALL CORNER DETAIL 3/S-6

1" = 1'-0"



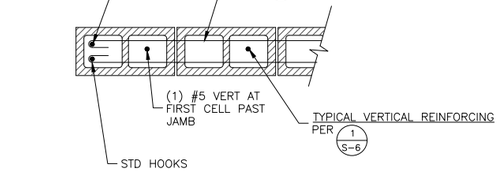
BOND BEAM DETAIL 6/S-6

1" = 1'-0"



CMU WALL INTERSECTION DETAIL 4/S-6

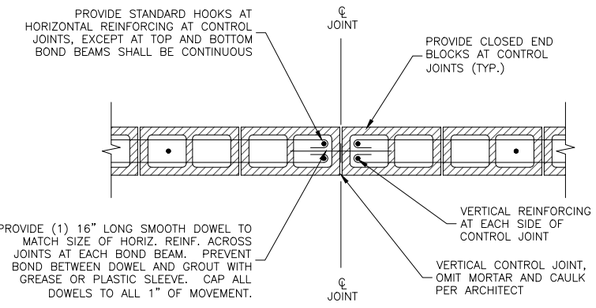
1" = 1'-0"



JAMB OR END OF WALL DETAIL 5/S-6

1" = 1'-0"

NOTE:
PROVIDE CONTROL JOINTS AT INTERVALS NOT TO EXCEED 40'-0" OR (2) TIMES THE WALL HEIGHT, UNLESS SPECIFICALLY NOTED OTHERWISE. CONTRACTOR SHALL COORDINATE LOCATION OF JOINT WITH ARCHITECT AND STRUCTURAL ENGINEER



NOTE:
PROVIDE VERTICAL CONTROL JOINT WHERE SHOWN OR AT INTERVALS NOT TO EXCEED 25'-0", UNLESS SPECIFICALLY NOTED OTHERWISE. CONTRACTOR SHALL COORDINATE LOCATION OF JOINT(S) WITH ARCHITECT AND CIVIL AND STRUCTURAL ENGINEERS.

BOND BEAMS SHALL BE CONTINUOUS AT TOP AND BOTTOM OF WALL; BOND BEAM AT TOP OF 12' WALL SECTION SHALL CONTINUE INTO TALLER WALL SECTION.

CMU CONTROL JOINT 7/S-6

1" = 1'-0"

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RAH DRAWN
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STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 6318EPE OREGON NOV. 9, 2004 TRAVIS GREGORY McFERRON
EXPIRES 12/31/22

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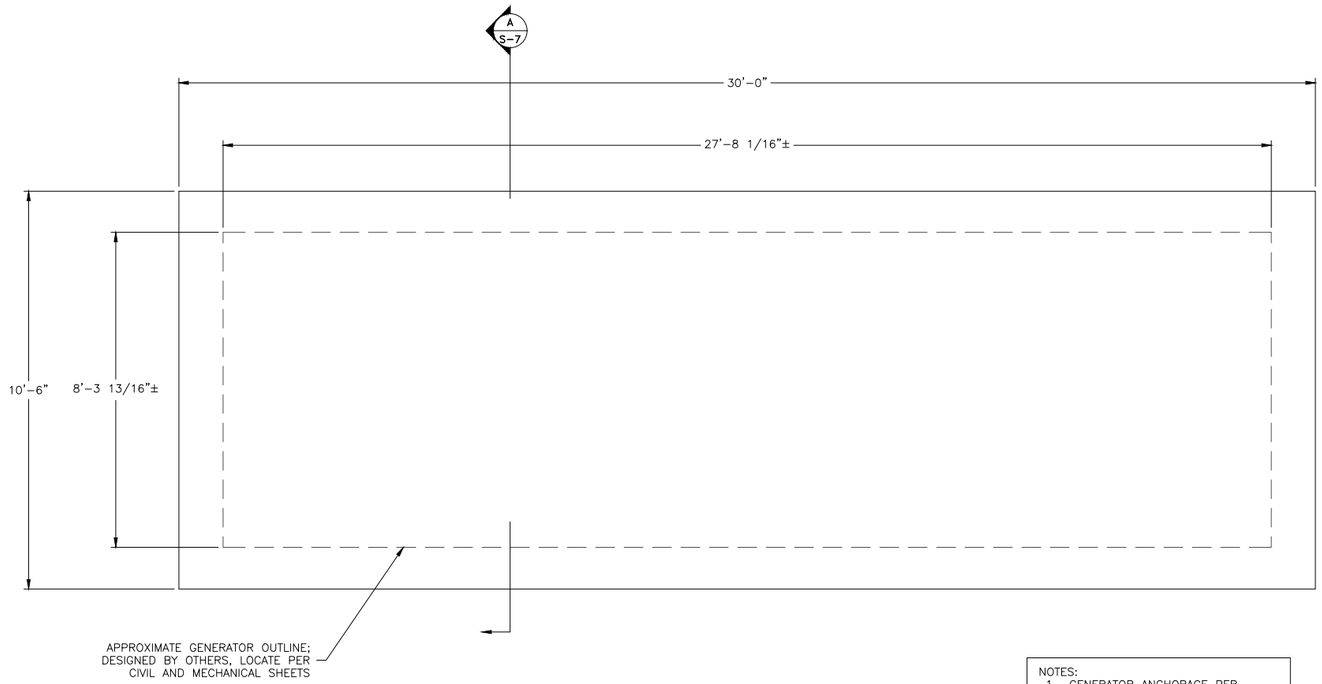
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PUMP STATION CMU WALL DETAILS

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

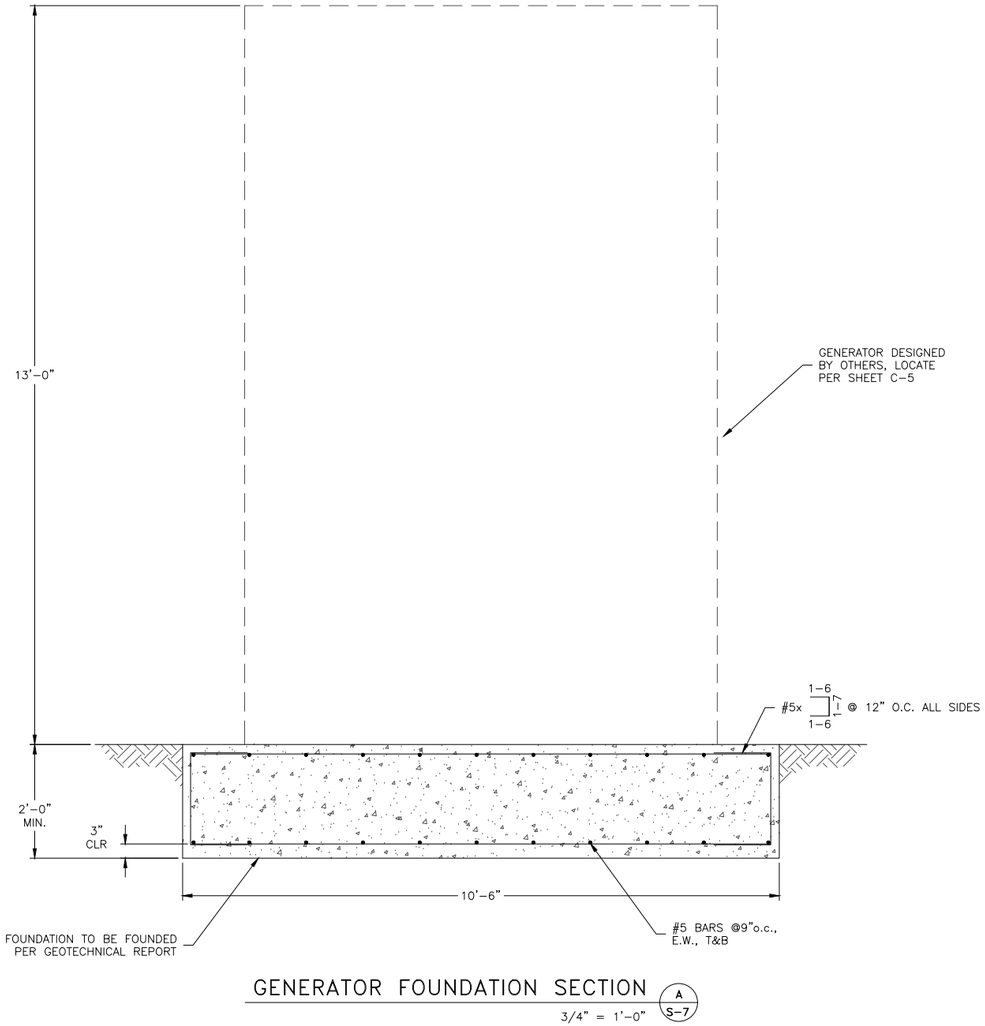
SHEET
BPS-S-6
73 of 113



GENERATOR FOUNDATION PLAN (1/S-7)

1/2" = 1'-0"

NOTES:
1. GENERATOR ANCHORAGE PER MANUFACTURER.



GENERATOR FOUNDATION SECTION (A/S-7)

3/4" = 1'-0"

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9400 SW Barnes Rd., Suite 100
Portland, Oregon 97225
(503) 292-1635

NO.	DATE	BY	REVISION

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TGM CHECKED

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

GENERATOR SLAB DETAILS

PROJECT NO.: 17-2024.201 | SCALE: AS SHOWN | DATE: AUGUST 2021

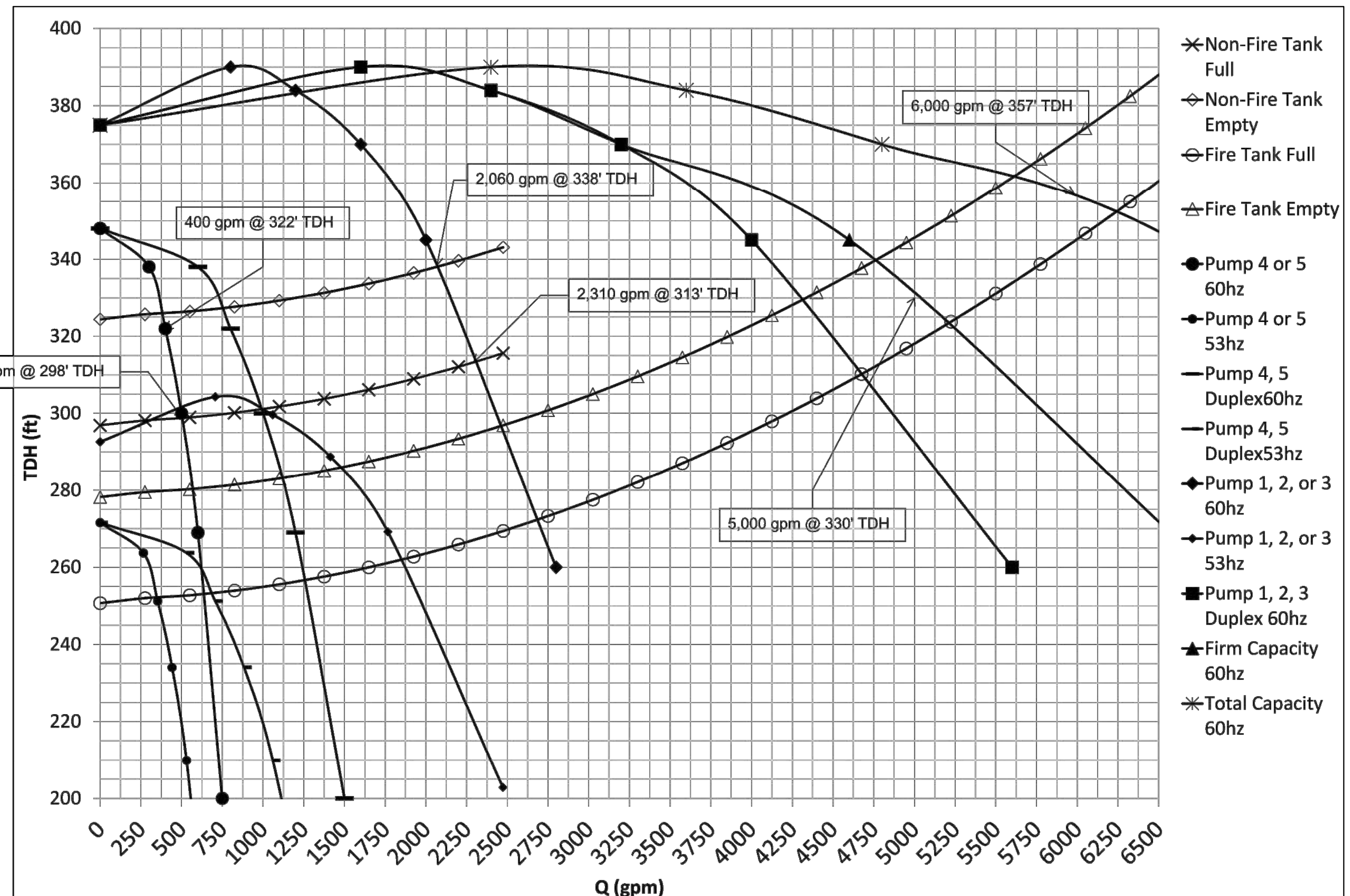
SHEET
BPS-S-7
74 of 113

X:\2018\01-PDX\1801-0101 To 1801-0125\1801-0118\1 - Project Data Files\1 - Pump Station\2021_08_04 100% Final Drawings\Final Drawings Pump Station 1801-0118.dwg BPS-S-7 8/4/2021 10:41 AM ########## 24.1s (LMS Tech)

BOOSTER PUMP STATION VALVE SCHEDULE			
VALVE NO.	VALVE TYPE	LOCATION	OPERATOR
V-100	BUTTERFLY	INTERIOR	LEVER
V-101	BUTTERFLY	INTERIOR	HANDWHEEL
V-102	ELECTRIC ACTUATED BUTTERFLY	INTERIOR	HANDWHEEL W/ ELECTRIC ACTUATOR
V-400	BALL	INTERIOR	LEVER
V-401	SODIUM HYPOCHLORITE BALL	INTERIOR	LEVER
V-800	SILENT CHECK	INTERIOR	NONE
V-1000	GLOBE PRESSURE RELIEF SURGE ANTICIPATOR	INTERIOR	NONE
V-1001	GLOBE PRESSURE REDUCING	INTERIOR	NONE
V-1900	AIR RELIEF VACUUM	INTERIOR	NONE

BOOSTER PUMP STATION PIPE SCHEDULE				
SERVICE	LOCATION	MATERIAL	JOINT TYPE	TESTING
PW	INTERIOR	DUCTILE IRON (DI)	FLANGE	WATER 200 PSI, ZERO PRESSURE LOSS IN 2 HRS, & NO VISUAL LEAKS
PW	BURIED WITHIN 4' OF BLDG ENVELOPE	DUCTILE IRON (DI)	RSTR MECHANICAL, FLANGE	WATER 200 PSI, ZERO PRESSURE LOSS IN 2 HRS
SODIUM HYPOCHLORITE	INTERIOR	PVC BRAIDED TUBING, PVC CONDUIT	BARBED TUBING, THREADED CONDUIT, GLUED	WATER 200 PSI, ZERO PRESSURE LOSS IN 2 HRS, & NO VISUAL LEAKS
PW 2" AND SMALLER	INTERIOR	BRASS	THREADED	WATER 200 PSI, ZERO PRESSURE LOSS IN 2 HRS, & NO VISUAL LEAKS
AIR	INTERIOR	BRASS	THREADED	NONE
DRAINS	BURIED	ABS	THREADED, GLUED	

AIRPORT RESERVOIR AND BOOSTER STATION SYSTEM CURVES



NO.	DATE	BY	REVISION

NOTICE

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DSN DESIGNED
CAD DRAWN
CHK CHECKED

REGISTERED PROFESSIONAL ENGINEER — KRISTOFOR R. SNIDER — RENEWS 6-30-22
Digitally signed by Kristofor Snider

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CITY OF PENDLETON, OREGON — INCORPORATED 1880

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

BOOSTER PUMP STATION DESIGN CRITERIA AND MECHANICAL SCHEDULES

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

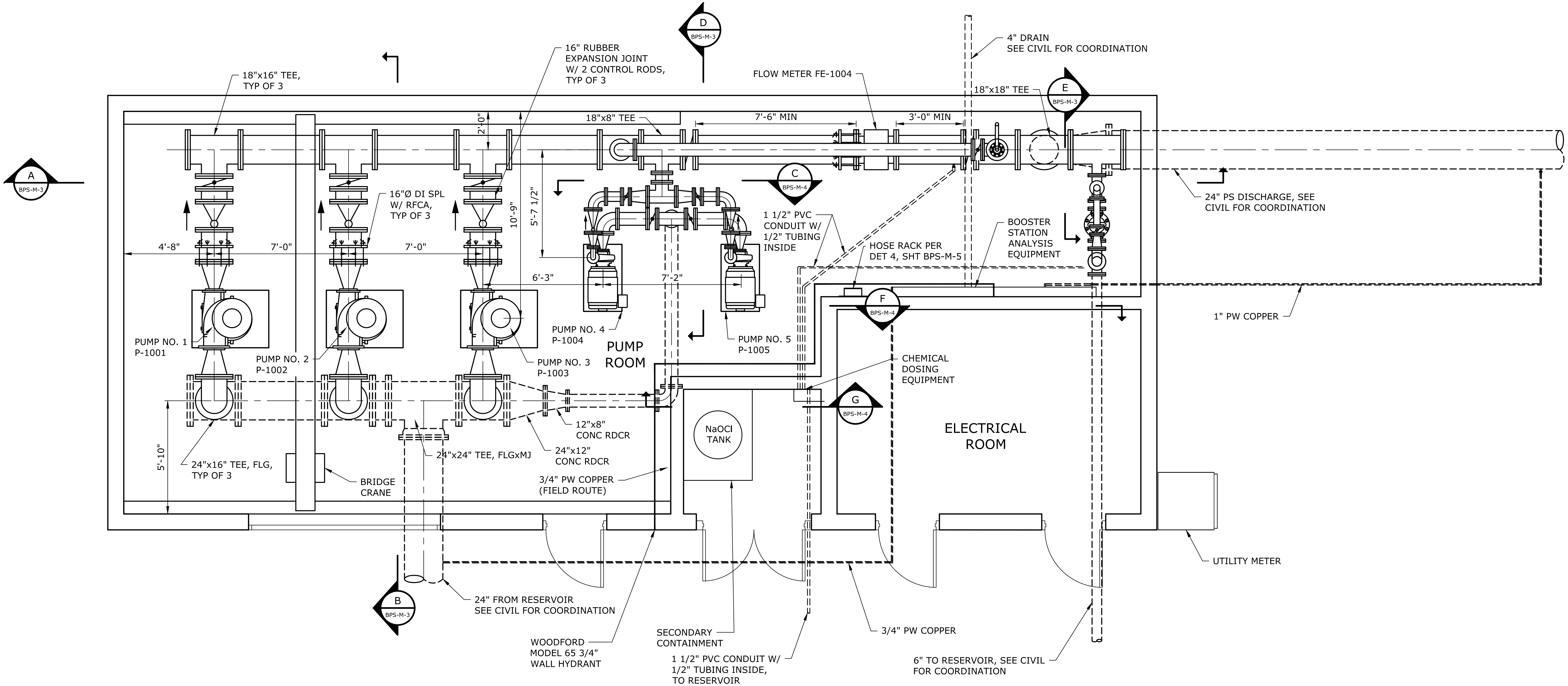
SHEET BPS-M-1

NOTES:

1. FITTINGS AND PIPE OUTSIDE BUILDING ENVELOPE SHOWN FOR REFERENCE ONLY. SEE CIVIL SHEETS FOR FITTING, PIPE, AND DETAIL CALLOUTS.

2. ALL DUCTILE IRON PIPE UNDER THE BUILDING TO BE ENCASED IN CONCRETE.

3. COORDINATE WITH ELECTRICAL DRAWINGS FOR LOCATION OF MOTOR TERMINAL BOX LOCATIONS.



PLAN
SCALE: 3/8"=1'-0"

G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE C\17-2024-202-OR-M.dwg BPS-M-2 8/2/2021 8:48 AM ELI.JEFFERSON 23.0s (LMS Tech)

NO.	DATE	BY	REVISION

NOTICE
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REGISTERED PROFESSIONAL ENGINEER 89888 OREGON KRISTOFOR R. SNIDER
RENEWS 6-30-22
Digitally Signed by Kristofor Snider Date: 2021.08.04 11:02:06-06:00

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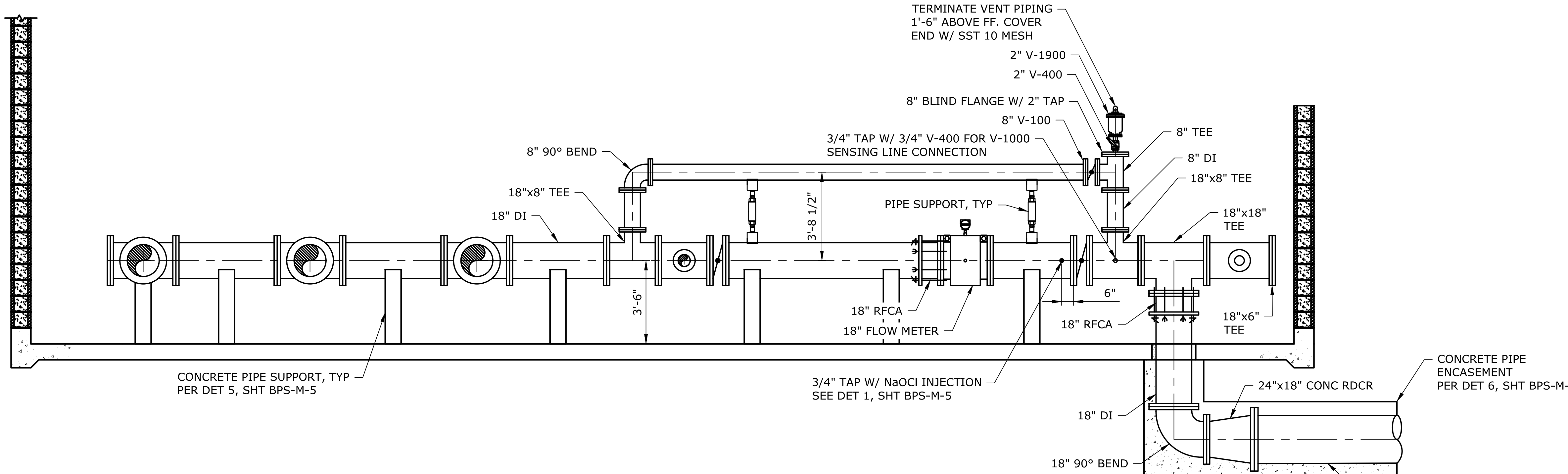
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

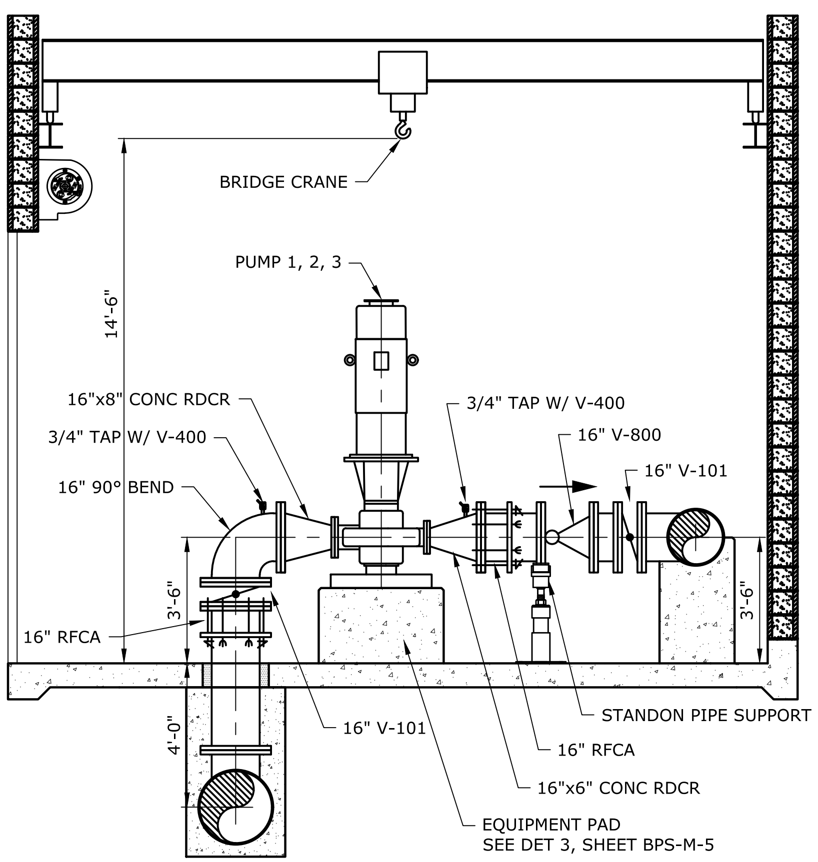
BOOSTER PUMP STATION MECHANICAL FLOOR PLAN

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

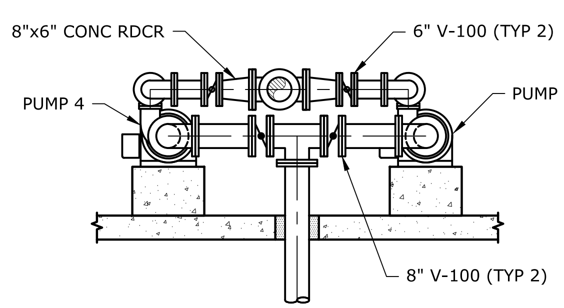
SHEET BPS-M-2



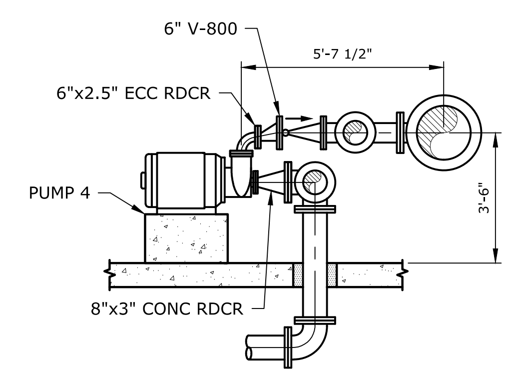
COMMON DISCHARGE HEADER SECTION (A, BPS-M-2)
SCALE: 3/8" = 1'-0"



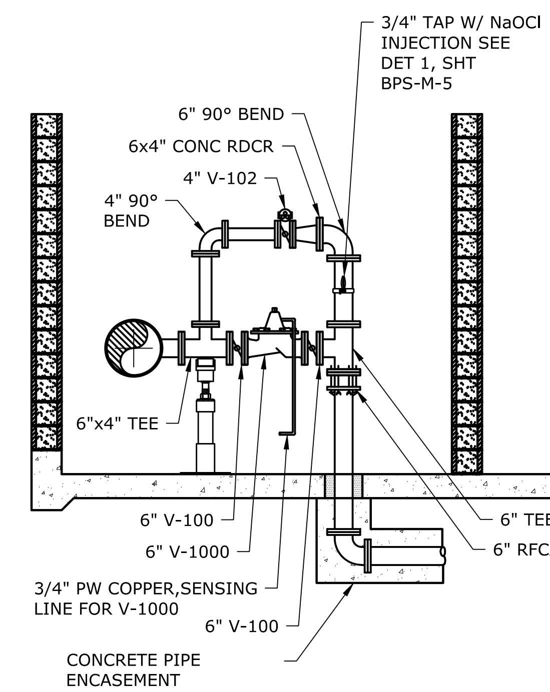
VERTICAL SPLIT CASE PUMP TYP SECTION (B, BPS-M-2)
SCALE: 3/8" = 1'-0"



PUMPS 4 AND 5 SECTION (C, BPS-M-2)
SCALE: 3/8" = 1'-0"



PUMPS 4 HORIZONTAL SECTION (D, BPS-M-2)
SCALE: 3/8" = 1'-0"



- SECTION (E, BPS-M-2)
SCALE: 3/8" = 1'-0"

NO.	DATE	BY	REVISION

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CAD DRAWN
CHK CHECKED

REGISTERED PROFESSIONAL ENGINEER 89985 OREGON KRISTOFOR R. SNIDER RENEWS 6-30-22
Digitally signed by Kristofor Snider Date: 2021.08.04 11:03:45-06'00'

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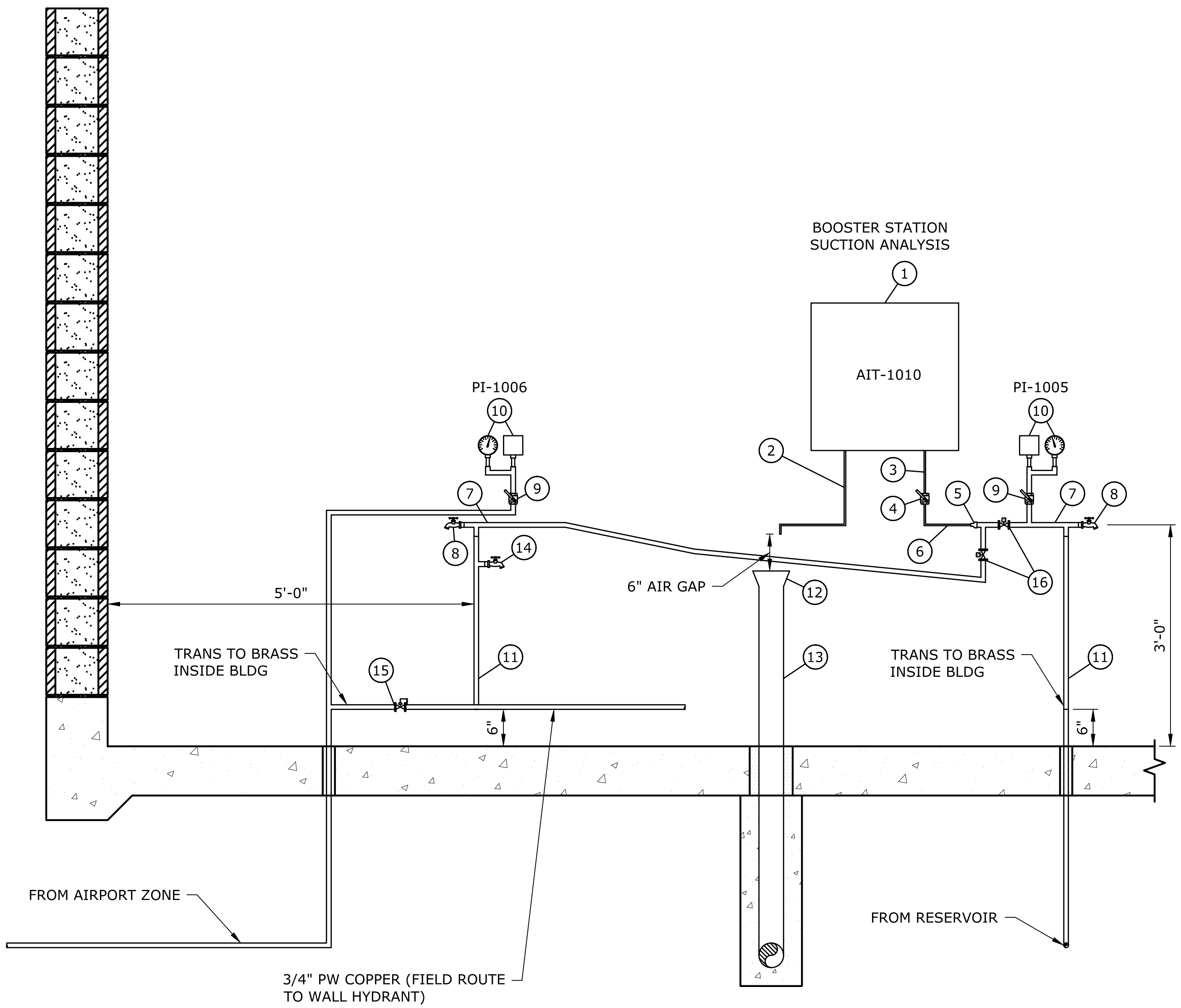
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

BOOSTER PUMP STATION MECHANICAL SECTIONS - 1

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET BPS-M-3



MATERIAL LIST

1. CL2 ANALYZER SYSTEM
2. ½" FLEX TUBING - ROUTE TO DRAIN W/ 6" AIR GAP
3. ¼" FLEX TUBING
4. ¼" V-400
5. ¼"x¾" RDCR, THRD
6. ½" PW BRASS
7. ¾" PW BRASS
8. SMOOTH NOSE SAMPLE TAP
9. ½" V-400
10. PG & TRANSDUCER ASSY
11. ¾" PW COP
12. 4"x6" RDCR
13. 4" DRAIN ABS
14. ¾" HB W/ VB
15. 1" PRV 150 PSI TO 60 PSI, CLA-VAL CRD-L OR EQUAL
16. ¾" SOLENOID

NOTES:

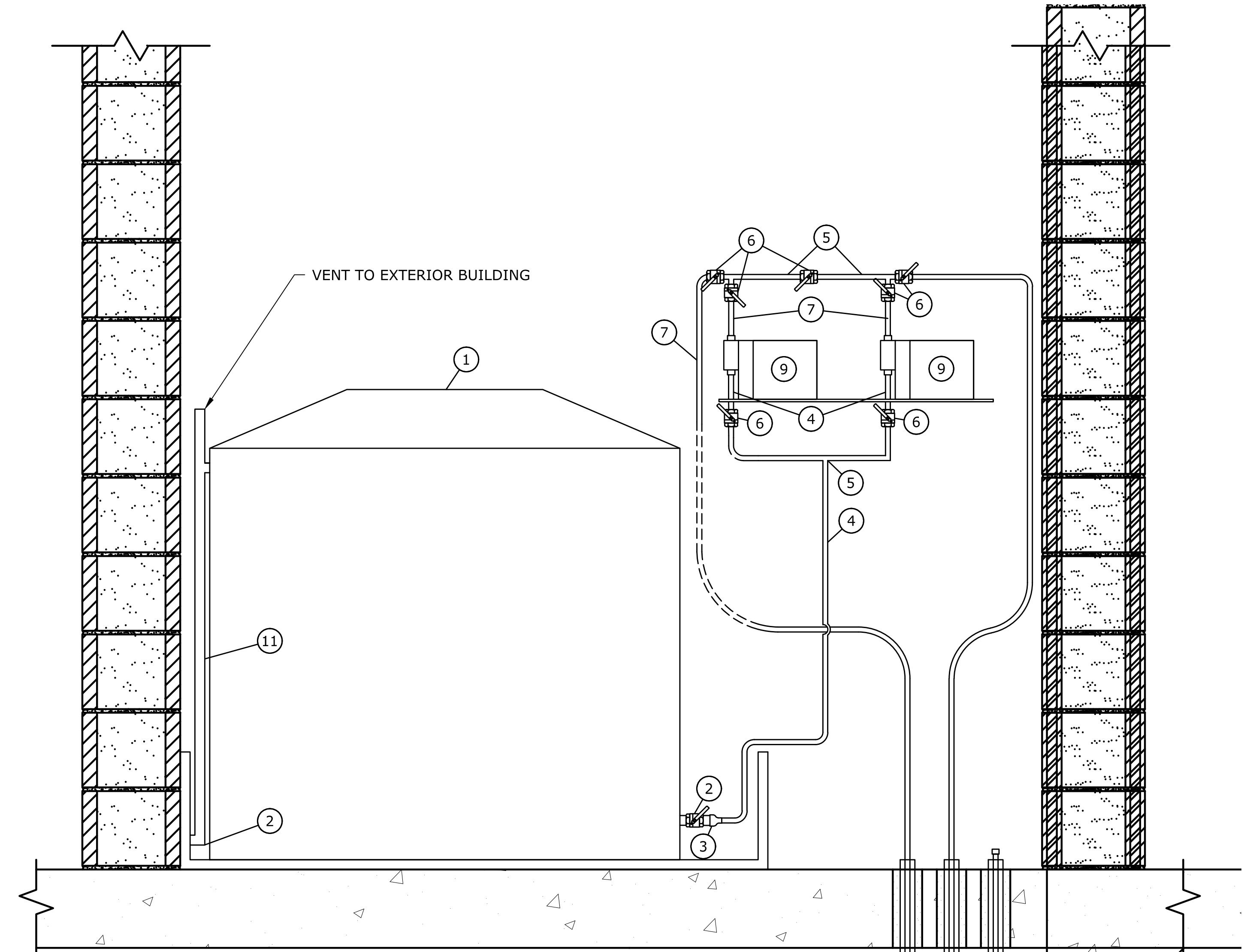
1. PIPE AND FITTINGS TO BE THREADED BRASS INSIDE BUILDING.

2. ALL FITTINGS TO MAKE SYSTEM COMPLETE ARE NOT SHOWN OR LABELED. CONTRACTOR TO FIELD ROUTE PIPE AND PROVIDE FITTINGS AS NECESSARY TO MAKE COMPLETE SYSTEM.

3. CONTRACTOR TO SUPPORT INSTRUMENTS AND PIPING WITH UNISTRUT SYSTEM.

BOOSTER STATION ANALYSIS EQUIPMENT SECTION (F / BPS-M-2)

SCALE: NTS



MATERIAL LIST

1. 12% NAOCL TANK W/ SECONDARY CONTAINMENT, SNYDER INDUSTRIES 150 GAL CHEMFEED SYSTEM OR EQUAL
2. 1" V-401
3. 1"x ½" RDCR
4. ½" SUCTION TUBING
5. ½" SCHED 80 PVC
6. ½" V-401
7. ½" DISCHARGE TUBING
8. 1½" PVC CND W/ ½" TUBING
9. NaOCL METERING PUMP; P-1006, P-1007
10. ¼" THK 316 SST PLATE - SIZE TO BE 2" LARGER IN ALL DIRECTIONS THAN PUMPS, SUPPORT W/ UNISTRUT SYSTEM
11. 1" SCHED 80 PVC, DRAIN, OVERFLOW, AND VENT FOR TANK

NOTES:

1. ALL FITTINGS TO MAKE SYSTEM COMPLETE ARE NOT SHOWN OR LABELED. CONTRACTOR TO FIELD ROUTE PIPE AND PROVIDE FITTINGS AS NECESSARY TO MAKE COMPLETE SYSTEM.

2. CONTRACTOR TO PROVIDE A STAINLESS STEEL UNISTRUT SYSTEM TO SUPPORT PIPING AND PUMPS SECURED TO WALL.

CHEMICAL DOSING EQUIPMENT SECTION (G / BPS-M-2)

SCALE: NTS

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REGISTERED PROFESSIONAL ENGINEER — OREGON — KRISTOFOR R. SNIDER — RENEWS 6-30-22

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Date: 2021.08.04

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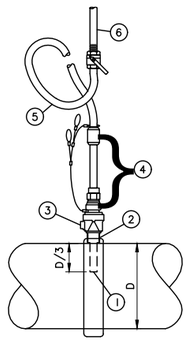
CITY OF PENDLETON, OREGON — INCORPORATED 1880

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

BOOSTER PUMP STATION MECHANICAL SECTIONS - 2

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

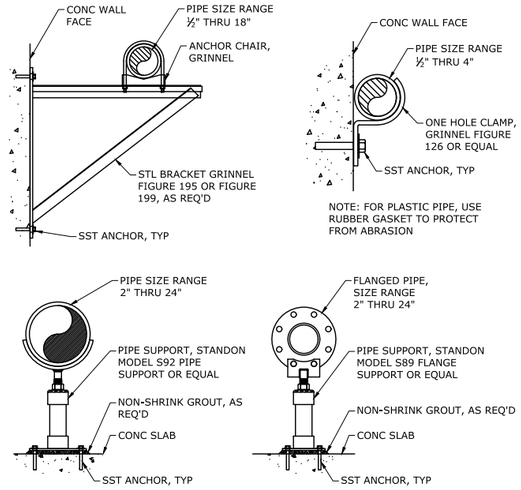
SHEET BPS-M-4



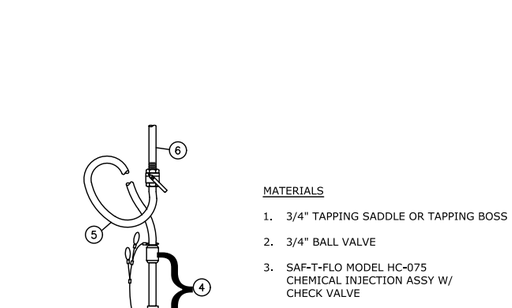
MATERIALS

1. 3/4" TAPPING SADDLE OR TAPPING BOSS
2. 3/4" BALL VALVE
3. SAF-T-FLO MODEL HC-075 CHEMICAL INJECTION ASSY W/ CHECK VALVE
4. PVC FLEXIBLE HOSE ASSY W/ BALL VALVE
5. 1/2" TUBING FROM CHLORINE ROOM W/ FITTINGS AS NEEDED

SODIUM HYPOCHLORITE INJECTION 1/-
SCALE: NTS



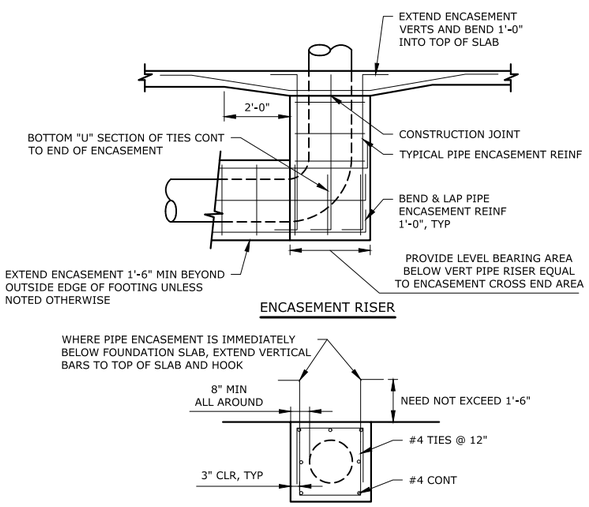
PIPE SUPPORTS AND HANGERS 2/-
SCALE: NTS



NOTE:

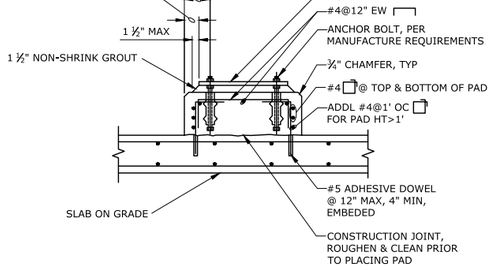
1. PIPE SUPPORTS ARE 8" LONG, TYPICAL.

CONCRETE PIPE SUPPORT 5/-
SCALE: NTS

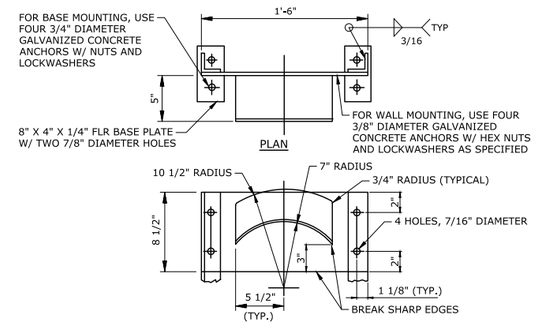


ENCASEMENT RISER

CONCRETE PIPE ENCASEMENT 6/-
SCALE: NTS



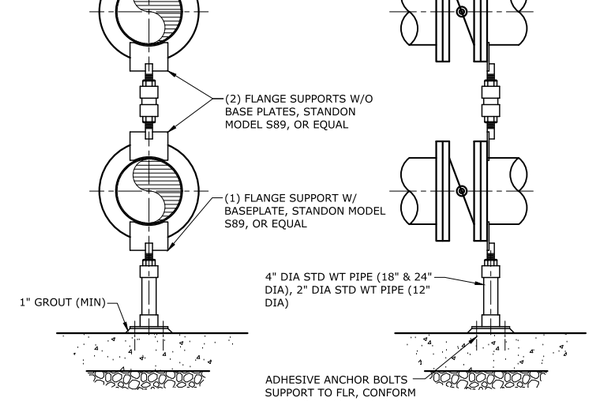
CONCRETE EQUIPMENT PAD 3/-
SCALE: NTS



NOTE:

1. WHERE HOSE RACK IS FREE-STANDING, PROVIDE TWO STEEL ANGLES 2x2x1/4 W/ BASE PLATES (OMIT BASE PLATES WHERE ANGLES CAN BE SET IN CONCRETE) ALL WELDED CONSTRUCTION.
2. 8 GAUGE STEEL SHEET GALVANIZED AFTER FABRICATION.

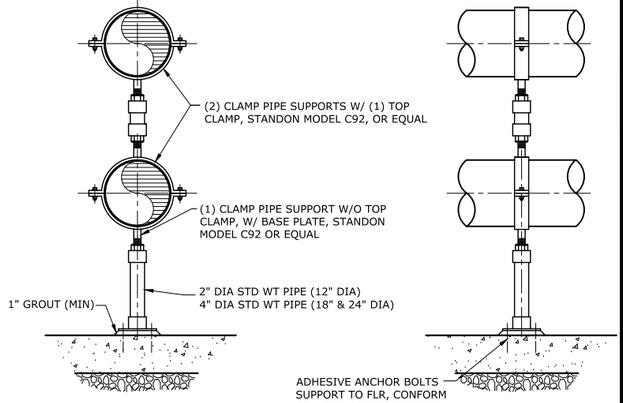
HOSE RACK 4/-
SCALE: NTS



NOTE:

1. ALL MATERIALS ASTM A36 CARBON STRUCTURAL STEEL IN UV EQUIPMENT ROOM; 304 STAINLESS STEEL IN CHEMICAL ROOM.

S89 STACKABLE PIPE SUPPORT AT FLANGE 7/-
SCALE: NTS



C92xS92 STACKABLE PIPE SUPPORT DETAIL 8/-
SCALE: NTS

NO.	DATE	BY	REVISION

NOTICE
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REGISTERED PROFESSIONAL ENGINEER — OREGON — JANUARY 15, 1988 — KRISTOFOR R. SNIDER — RENEWS 6-30-22

Digitally signed by Kristofor Snider
Date: 2021.08.04 11:36:06 -07'00'

murraysmith

CITY OF PENDLETON — INCORPORATED 1880 — OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

BOOSTER PUMP STATION MECHANICAL DETAILS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
BPS-M-5
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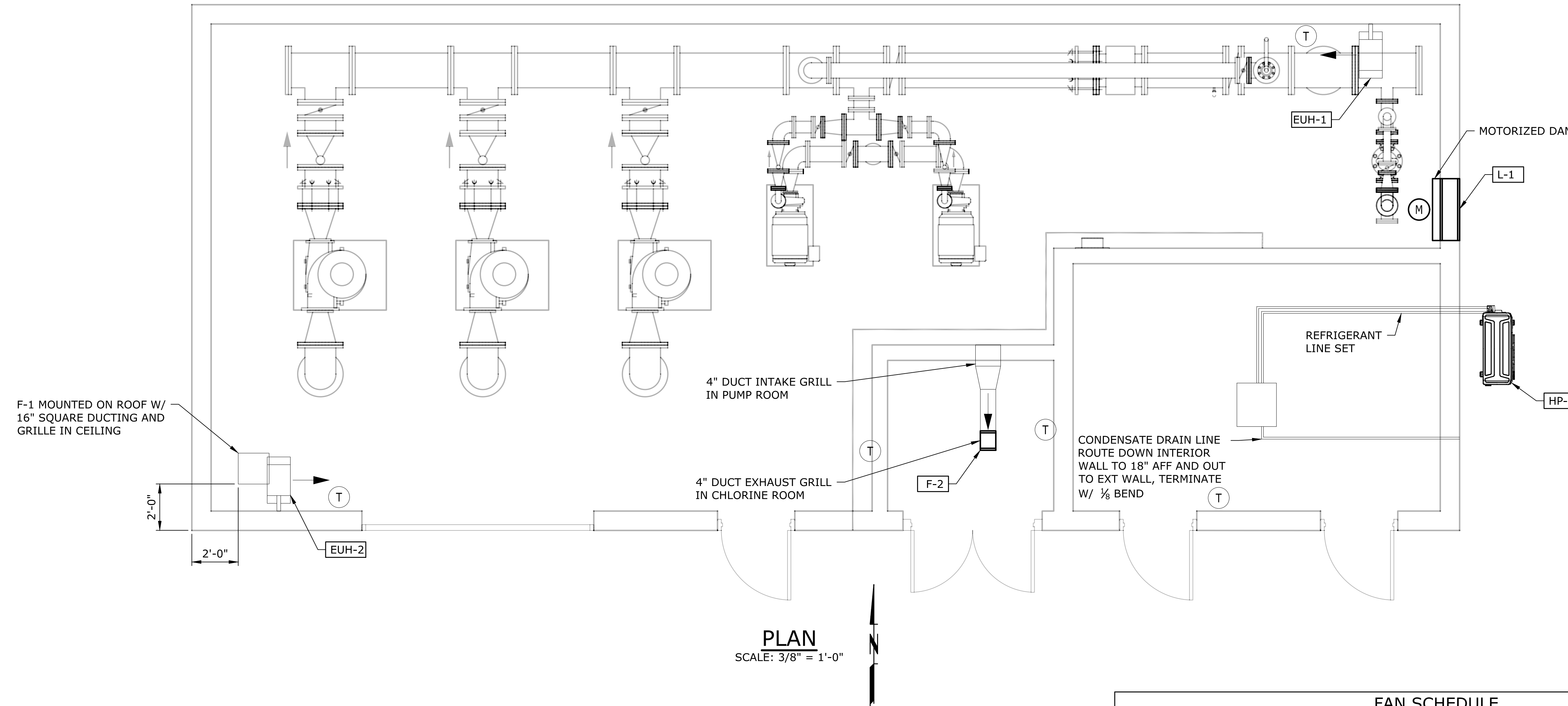
G:\PDX_Projects\17\2024 - Pendleton TO 6 Airport Area Water System Improvements\CAD\Sheets\SCHEDULE C\17-2024-202-OR-M.dwg BPS-M-5 8/2/2021 8:48 AM ELI.JEFFERSON 23.0s (LMS Tech)



PLAN
SCALE: 3/8" = 1'-0"

FAN SCHEDULE						
SYMBOL	MODEL	DRIVE TYPE	VOLUME (CFM)	FAN RPM	HP	V/C/P
F-1	GB-141	BELT	1750	1200	0.50	460/60/3
F-2	FANTECH FG 4	DIRECT	110	2886	0.10	115/60/1

LOUVER SCHEDULE						
SYMBOL	MODEL	APPLICATION	WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	VOLUME (CFM)
L-1	ESD-635	INTAKE	32	32	6	1750
L-2	ESD-202	INTAKE	8	8	2	100

HEAT & AC SCHEDULE					
SYMBOL	MODEL	COOLING (TONS)	HEATING (KW)	VOLUME (CFM)	V/C/P
HP-1	MPB036S4S-1P-M33A036S4-1P	3	12	1095/960/810	208/60/1
EUH-1	MUH-10-4	NA	10	650	480/60/3
EUH-2	MUH-10-4	NA	10	650	480/60/3

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DSN DESIGNED
CAD DRAWN
CHK CHECKED

REGISTERED PROFESSIONAL ENGINEER
OREGON
KRISTOFOR R. SNIDER
Digitally signed by Kristofor Snider
Date: 2021.08.04
RENEWS 6-30-22

murraysmith

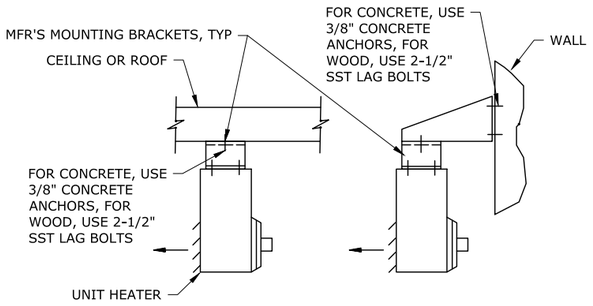
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

BOOSTER PUMP STATION HVAC FLOOR PLAN AND SCHEDULES

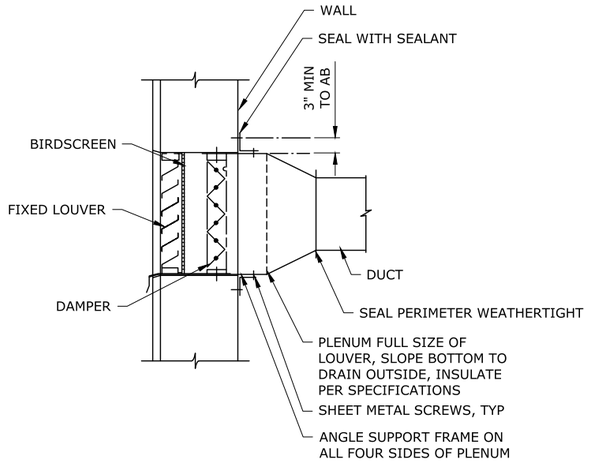
PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET BPS-H-1



NOTE: USE THREADED HANGER RODS ONLY WHERE MANUFACTURER'S MOUNTING BRACKETS ARE NOT PRACTICAL.

UNIT HEATER MOUNTING — 1
SCALE: NTS



LOUVER/PLENUM CONNECTION — 2
SCALE: NTS

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CAD DRAWN
CHK CHECKED

REGISTERED PROFESSIONAL ENGINEER 89985 OREGON JANUARY 15, 2013 KRISTOFOR R. SNIDER
RENEWS 6-30-22
Digitally signed by Kristofor Snider
Date: 2021.08.04 11:36:06 -07'00'

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

BOOSTER PUMP STATION HVAC DETAILS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
BPS-H-2
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GENERAL NOTES

1. ALL MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST NATIONAL ELECTRICAL CODE. INSTALLATION DRAWINGS, CONSTRUCTION SPECIFICATIONS AND LOCAL CODES. ALL MATERIALS SHALL BE NEW AND LISTED BY THE UNDERWRITERS' LABORATORY INC. (UL). ALL ELECTRICAL WORK SHALL BE INSTALLED IN A GOOD AND WORKMANLIKE MANNER.

2. REFER TO THE ELECTRICAL CABLE SCHEDULE FOR CIRCUITS IDENTIFICATIONS, ROUTING, WIRE SIZES, ETC.

3. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER DISCIPLINES AS REQUIRED TO MITIGATE INTERFERENCES.

4. CONDUIT MATERIAL SHOWN ON ELECTRICAL PLANS ARE SPECIFIC FOR THE LOCATION WHERE THE CONDUIT STARTS. CONTRACTOR IS RESPONSIBLE FOR TRANSITIONING TO APPROVED CONDUIT MATERIAL BASED ON LOCATION AND IN ACCORDANCE TO ELECTRICAL SPECIFICATIONS.

ABBREVIATIONS

a	CIRCUIT BREAKER AUXILARY CONTACT, CLOSED WHEN BREAKER IS CLOSED
A	AMMETER, AMPERES
AC	ALTERNATING CURRENT
A/D	ANALOG TO DIGITAL
AF	AMPERE FRAME
AFD	ADJUSTABLE FREQUENCY DRIVE
AIC	AMPERES INTERRUPTING CAPACITY
ALT	ALTERNATOR
A/M	AUTO/MANUAL CONTROLLER
ANN	ANNUNCIATOR
AS	AMMETER SWITCH
AT	AMMETER TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAGE
b	CIRCUIT BREAKER AUX. CONTACT, CLOSED WHEN BREAKER IS OPEN
B	BLACK
BCG	BARE COPPER GROUND
C	CONDUIT, CONTACTOR
CAB	CABINET
CAP	CAPACITOR
CB	CIRCUIT BREAKER
CC	CONTROL CABLE, CLOSING COIL
CHH	COMMUNICATION HANDHOLE
CKT	CIRCUIT
COND	CONDUCTOR
CPT	CONTROL POWER TRANSFORMER
CP	CONTROL PANEL
CR	CONTROL RELAY
CS	CONTROL SWITCH
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
DSC	DISCONNECT
DISTR	DISTRIBUTION
DP	DISTRIBUTION PANEL
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
E / ELEC	ELECTRICAL
EF	EXHAUST FAN
EHH	ELECTRICAL HANDHOLE
EMERG	EMERGENCY
ENCL	ENCLOSURE
EQPT	EQUIPMENT
ETM	ELAPSED TIME METER
FACP	FIRE ALARM CONTROL PANEL
FDR	FEEDER
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FO	FIBER OPTIC
FREQ	FREQUENCY
FU	FUSE
FVNR	FULL VOLTAGE, NON REVERSING
FVR	FULL VOLTAGE, REVERSING
FWD	FORWARD
GA	GAUGE
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
HMI	HUMAN MACHINE INTERFACE
HOA	HAND-OFF-AUTOMATIC
HOR	HAND-OFF-REMOTE
HP	HORSEPOWER
HTR	HEATER
HV	HIGH VOLTAGE
HZ	HERTZ (CYCLES PER SECOND)
INSTR	INSTRUMENT, INSTRUMENTATION
IP	INTERNET PROTOCOL
I/O	INPUT/OUTPUT
JB	JUNCTION BOX
KA	KILOAMPERES
KCMIL	THOUSANDS OF CIRCULAR MILS
KV	KILOVOLTS
KVA	KILOVOLT AMPERES
KVAR	KILOVOLT AMPERES REACTIVE
KVARH	KILOVOLT AMPERES REACTIVE HOURS
KW	KILOWATTS
KWH	KILOWATT HOURS
LCP	LIGHTING CONTROL PANEL
LP	LIGHTING PANEL
LTG	LIGHTING
M	MOTOR
mA	MILLIAMPERES
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR	MANUFACTURER
MOV	MOTOR OPERATED VALVE
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOC.
NEUT	NEUTRAL
NO	NORMALLY OPEN, NUMBER
OVHD	OVERHEAD
OL	THERMAL OVERLOAD RELAY
OT	OVER TEMPERATURE
P	PUMP
PB	PULLBOX, PUSHBUTTON
PE	PHOTOELECTRIC
PEC	PHOTOELECTRIC CELL
PF	POWER FACTOR
pH	MEASURE OF ACIDITY OR ALKALINITY
PH	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PM	POWER MONITOR
PNL	PANEL
PNLBD	PANELBOARD
PRI	PRIMARY
PS	PRESSURE SWITCH
PTZ	PAN TILT ZOOM
PVC	POLYVINYL CHLORIDE
PWR	POWER
RCPT	RECEPTACLE
RCT	REPEAT CYCLE TIMER
RGS	RIGID GALVANIZED STEEL
RPM	REVOLUTIONS PER MINUTE
RT	RESET TIMER
SCR	SILICON CONTROLLED RECTIFIER
SD	SMOKE DETECTOR
SDBC	SOFT-DRAWN BARE COPPER
SEC	SECONDS, SECONDARY
SF	SUPPLY FAN
SIG	SIGNAL
SN	SOLID NEUTRAL
SPECS	SPECIFICATIONS
SPD	SURGE PROTECTIVE DEVICE
SPDT	SINGLE POLE, DOUBLE THROW
SS	SOLID STATE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYNC	SYNCHRONIZING
TB	TERMINAL BLOCK
TC	TELEPHONE CABINET
TEMP	TEMPERATURE
TSP	TWISTED SHIELDED PAIR
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
UG	UNDERGROUND
UH	UNIT HEATER
UV	ULTRA VIOLET
V	VOLTS
VA	VOLT-AMPERES
VFD	VARIABLE FREQUENCY DRIVE
VAR	VOLT AMPERES REACTIVE
VH	VAR-HOUR
VS	VOLTMETER SWITCH
W	WHITE
WHM	WATTHOUR METER
WHDM	WATTHOUR DEMAND METER
WP	WEATHERPROOF
XFMR	TRANSFORMER

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OR CCB #196597 WA #INDUSSI880K9
AK #1018436
PROJECT#:20.48.01

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DCR DESIGNED
JLB DRAWN
DCR CHECKED

REGISTERED PROFESSIONAL ENGINEER 44803E OREGON JULY 9, 2002 DAVID CLIFFORD ROOT
EXPIRES: 31 DEC 22

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL GENERAL NOTES AND ABBREVIATIONS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

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ELECTRICAL PLAN SYMBOLS

- SINGLE RECEPTACLE, 240V
- 30 — NONFUSED DISCONNECT SWITCH, AMPERAGE INDICATED
- F, 40/60 — FUSED DISCONNECT SWITCH (40/60 40=FUSE AMPERAGE, 60=SWITCH AMPERAGE)
- MANUAL MOTOR STARTER
- COMBINATION MOTOR STARTER
- FLAME DETECTOR
- GAS DETECTOR
- CONDUIT TURNING DOWN FROM KEY ELEVATION
- CONDUIT TURNING UP FROM KEY ELEVATION
- CONDUIT CAP
- BELOW GRADE CONDUIT
- ABOVE GRADE CONDUIT
- CONDUIT RUN, BROKEN AND CONTINUED ON SAME SHEET OR AS NOTED
- INDICATES REMOVAL OR DEMOLITION

CONDUIT SIZE / CONDUIT CALLOUT (SEE DESC.) — XX - XXX

CONDUIT CALLOUT
RGS: RIGID GALVANIZED STEEL
PVCXX: XX INDICATES SCHEDULE
PVC RGS: PVC COATED RGS
SS RMC: STAINLESS STEEL RIGID METAL CONDUIT

CABLE CALLOUT LETTER (SEE DESC.) / ID (EQUIPMENT # ON P&ID) — X-XXXX-X — SEQUENTIAL # FOR MULTIPLE

CABLE CALLOUT
P - POWER (HV, MV, LV)
C - CONTROL (120VAC, 24VDC)
S - SIGNAL (4-20mA)
D - DATA (FIBER, COPPER, COAX/RG)

- XXXXXXX — INSTRUMENT CALLOUT
- INSTRUMENT LOCATION
- WELDING RECEPTACLE
- RECEPTACLE, 480V
- CONTROL STATION
- M OR M — MOTOR
- POWER POLE WITH GUY WIRE
- FLEXIBLE CONDUIT
- CONDUIT SEAL
- T — TRANSFORMER
- JB — JUNCTION BOX
- F — FAN (SUPPLY/EXHAUST)
- T — THERMOSTAT

ONE-LINE SYMBOLS

- 250/400 MCP — CIRCUIT BREAKER, MAGNETIC TRIP ONLY (MOTOR CIRCUIT PROTECTOR) FRAME SIZE SHOWN, 3 POLE UNLESS UNLESS INDICATED OTHERWISE
- 250 / 250/400 — CIRCUIT BREAKER, THERMAL MAGNETIC OR SOLID STATE TRIP OR TRIP/FRAME SHOWN, 3 POLE UNLESS INDICATED OTHERWISE
- 200 — FUSED DISCONNECT SWITCH, SWITCH CURRENT RATING INDICATED, 3 POLE UNLESS INDICATED OTHERWISE
- 250 — CIRCUIT BREAKER, RATING INDICATED, SOLID STATE TRIP, DRAW-OUT TYPE
- FUSED SWITCH
- 200 — FUSE, RATING INDICATED
- 30 — NON-FUSED DISCONNECT, RATING INDICATED
- VFD — VARIABLE FREQUENCY DRIVE
- SSRV — SOFT START REDUCED VOLTAGE
- XFMR NAME / KVA / VOLTAGE(120V-240V-480V-4160V-12.247V) / PHASE(1Ø/3Ø), 3W/4W / Z%=XXX / A FAULT= XXXA
- UNGROUNDED DELTA
- GROUNDED DELTA
- OPEN DELTA
- GROUNDED WYE
- PLUG
- M — POWER MONITOR
- G — EMERGENCY STANDBY ENGINE GENERATOR, RATING AS INDICATED ON ONE-LINE DIAGRAM
- X — MOTOR, X: SIZE IN HP
- PILOT LIGHT, SUBSCRIPT INDICATES COLOR
- PUSH-TO-TEST INDICATING LIGHT, SUBSCRIPT INDICATES COLOR

A=AMBER R=RED
B=BLUE N=NEON
C=CLEAR W=WHITE
G=GREEN Y=YELLOW

- EARTH GROUND
- LOAD
- CURRENT TRANSFORMER
- VOLTAGE TRANSFORMER
- N, E, L — AUTOMATIC TRANSFER SWITCH
- BP — CONTACTOR (BYPASS)

GROUNDING PLAN SYMBOLS

- GROUND ROD
- GROUND TEST WELL
- GROUND CONNECTION TO EQUIPMENT DETAIL CALLOUT SHOWN ON PLAN DWG.
- GROUND CONNECTION, DETAIL CALLOUT SHOWN ON PLAN DWG.
- GROUND CONNECTION TO REBAR, DETAIL CALLOUT SHOWN ON PLAN DWG.
- BELOW GRADE #4/0 AWG BARE COPPER FOR MAIN PLANT GROUND
- BELOW GRADE #2/0 AWG INSULATED COPPER FOR GROUND TAP.
- ABOVE GRADE #2/0 AWG INSULATED GROUND TAP
- CONDUIT STUB UP

DUCT BANK SYMBOLS

- CONDUIT
- CONDUIT DUCT BANK OUTLINE
- UTILITY EQUIPMENT CLEARANCE AREA

MISCELLANEOUS SYMBOLS

- BELL
- BUZZER
- HORN
- X — METER, SUBSCRIPT INDICATES TYPE: A=AMP V=VOLT W=WATT VAR=VOLT-AMP REACTIVE
- BATTERY
- CHASSIS GROUND
- RECEPTACLE
- PHONE OUTLET (RJ12)
- D — DATA COMPUTER (RJ45)
- HEATER
- HAND SWITCH
- R, G — GO / NO-GO / ALARM

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AK #1018436
PROJECT#:20.48.01

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JLB DRAWN
DCR CHECKED

REGISTERED PROFESSIONAL ENGINEER 44803E David Clifford Root OREGON JULY 9, 2002 DAVID CLIFFORD ROOT
EXPIRES: 31 DEC 22

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL SYMBOLS - 1

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

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SCHEMATIC SYMBOLS

CABLE WITH SHIELD

SHIELD TIED BACK

30
DISCONNECT SWITCH
CURRENT RATING INDICATED,
3 POLE UNLESS INDICATED OTHERWISE

LIMIT SWITCH, N.O.

LIMIT SWITCH, N.C.

PRESSURE SWITCH, N.O.

PRESSURE SWITCH, N.C.

TEMPERATURE SWITCH, N.O.

TEMPERATURE SWITCH, N.C.

FLOW SWITCH, N.O.

FLOW SWITCH, N.C.

LEVEL SWITCH, N.O.

LEVEL SWITCH, N.C.

N.O. CONTACT

N.C. CONTACT

TIMER, ON DELAY, N.O.-TC (DELAYED TO CLOSE)

TIMER, ON DELAY, N.C.-TO (DELAYED TO OPEN)

TIMER, OFF DELAY, N.O.-TO (DELAYED TO OPEN)

TIMER, OFF DELAY, N.C.-TC (DELAYED TO CLOSED)

2 OL
MAGNETIC STARTER, NEMA SIZE INDICATED,
W/OVERLOADS

PUSHBUTTON, N.O.

PUSHBUTTON, N.C.

MUSHROOM HEAD PUSHBUTTON, N.O.

MUSHROOM HEAD PUSHBUTTON, N.C.

X
FIXED RESISTOR

X
VARIABLE RESISTOR

X: SIZE IN OHMS

DIODE

CAPACITOR

SUP
SURGE SUPRESSOR

SOLENOID VALVE

THERMAL ELEMENT

XX
XX
CONTROL DEVICE COIL,
INSIDE SUBSCRIPT INDICATES TYPE,
OUTSIDE SUBSCRIPT DISTINGUISHES
BETWEEN DEVICES OF THE SAME TYPE SEE BELOW;

ALT=ALTERNATOR
LR=LATCH RELAY
CR=CONTROL RELAY
ISR=INTRINSICALLY SAFE RELAY
PR=PROBE RELAY
GR=GENERAL RELAY
TR=TIMING RELAY
BP=BYPASS
TD=TIME DELAY RELAY

1 2
2 POSITION SELECTOR SWITCH

H O A
XOO
OOO
OOX
3 POSITION SELECTOR SWITCH,
MAINTAINED CONTACTS
X=CLOSED CONTACT
O=OPEN CONTACT

THERMOCOUPLE
TYPE "X"

2-WIRE RTD

3-WIRE RTD

4-WIRE RTD

CPT
CONTROL POWER TRANSFORMER

RELAY COIL SURGE SUPPRESSOR

X
3 PH MOTOR X=HP

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL SYMBOLS - 2

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

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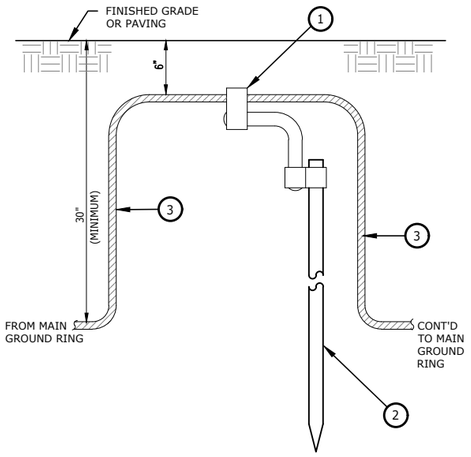
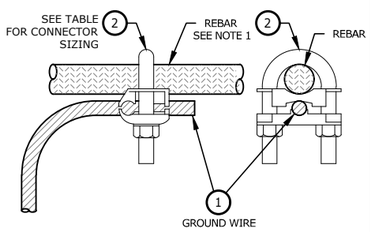


NOTES:

1. SEE SITE GROUNDING PLAN FOR GROUND ROD LOCATIONS.

ITEM	QTY.	DESCRIPTION
1	A/R	CONNECTOR, COMPRESSION TYPE, YGL34C29, (SEE DETAIL G4)
2	A/R	ROD, GND. COPPER CLAD, 3/4" x 10'
3	A/R	GROUND WIRE, SOFT DRAWN BARE COPPER (SDBC) #4/0 AWG

DETAIL G1 — GROUND ROD ASSEMBLY



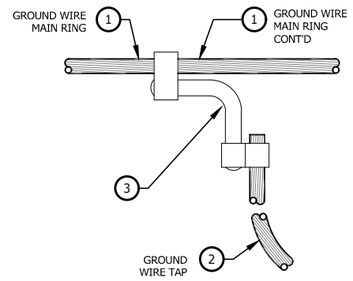
NOTES:

1. REBAR CONNECTOR TO BE LOCATED ON BOTTOM MAT OF REBAR, CONTRACTOR TO CONFIRM WITH ENGINEER MINIMUM DISTANCE FROM NEAREST EDGE FOR GROUND CONNECTION.

BURNDY CAT. NUMBER OR EQUAL	REBAR SIZE	CABLE	LOCATION
GAR1429	#8 - 1"	2/0 SOL. -250	WGS MAT

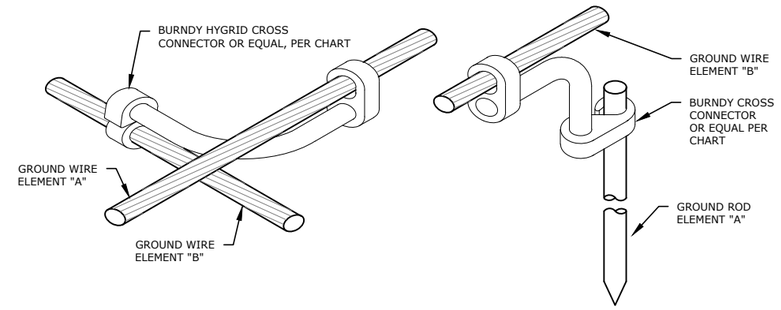
ITEM	QTY.	DESCRIPTION
1	A/R	WIRE, GND. INSULATED STRANDED COPPER, #2/0 AWG
2	A/R	BURNDY CONNECTOR - SEE TABLE ABOVE

DETAIL G2 — REBAR GROUNDING



ITEM	QTY.	DESCRIPTION
1	A/R	WIRE, GND. BARE STRANDED COPPER, #4/0 AWG
2	A/R	WIRE, GND. BARE STRANDED COPPER, #6 AWG
3	A/R	CONNECTOR, BURNDY YGL34C2 (SEE DETAIL G4)

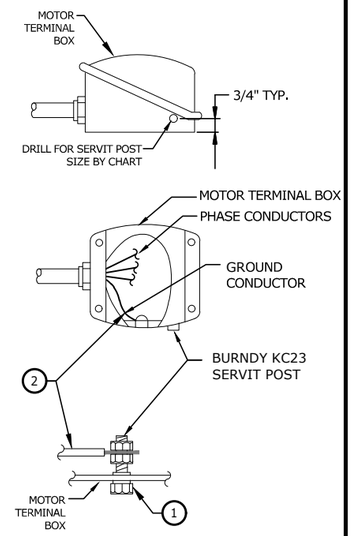
DETAIL G3 — GROUND TAP CONNECTOR



BURNDY CAT. NUMBER OR EQUAL	CABLE TO CABLE		CABLE TO GROUND ROD	
	ELEMENT "A"	ELEMENT "B"	ELEMENT "A"	ELEMENT "B"
YGL34C29	250 kcmil - 500 kcmil	#2 AWG - 250 kcmil	5/8" - 3/4" Rod	#2 AWG - 250 kcmil
YGL29C29	#2 AWG - 250 kcmil	#2 AWG - 250 kcmil	1/2" - 5/8" Rod	#2 AWG - 250 kcmil
YGL34C2	250 kcmil - 500 kcmil	#6 AWG - #2 AWG	5/8" - 3/4" Rod	#6 AWG - #2 AWG

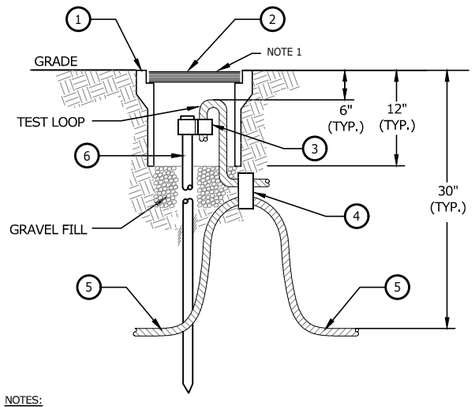
BURNDY CAT. NUMBER OR EQUAL	INSTALLATION TOOLS, DIE SET CAT. NO. (NUMBER OF CRIMPS)							
	Y750/735/Y39 HYPRESS		PAT750-18V		Y45 HYPRESS		Y46 HYPRESS	
	ELEMENT "A"	ELEMENT "B"	ELEMENT "A"	ELEMENT "B"	ELEMENT "A"	ELEMENT "B"	ELEMENT "A"	ELEMENT "B"
YGL34C2	PU998 (1)	U-0 (1)	PU998 (1)	U-0 (1)	S998 or PU998 (1)	U-0 (1)	P998 or PU998 (1)	U-0 (1)
YGL34C29	PU998 (1)	U997 (1)	PU998 (1)	U997P (1)	S998 or PU998 (1)	U997 (1)	PU998 or PU998 (1)	U997 (1)
YGL34C34	U1011 (3)	U1011 (3)	U1011 (3)	U1011 (3)	S1011 (3)	S1011 (3)	P1011 (3)	P1011 (3)
YGL29C29	U997 (1)	U997 (1)	U997P (1)	U997P (1)	U997 (1)	U997 (1)	U997 (1)	U997 (1)

DETAIL G4 — CROSS/ROD CONNECTOR



ITEM	QTY.	DESCRIPTION
1	A/R	CONNECTOR, BURNDY #KC23 OR EQUAL WITH #6 AWG TAP
2	A/R	WIRE, GND. BARE STRANDED COPPER, #6 AWG

DETAIL G5 — GROUND SERVIT POST

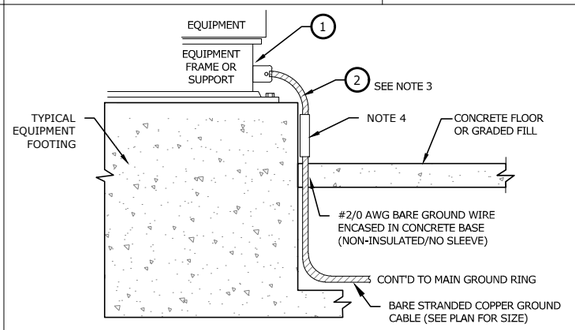


NOTES:

1. TOP OF GROUND TEST WELL TO BE FLUSH WITH FINISHED SURFACE.
2. SEE SITE GROUNDING PLAN FOR TEST WELL LOCATIONS.

ITEM	QTY.	DESCRIPTION
1	A/R	GROUND WELL, 20 1/2" x 13 1/2" x 18", QUAZITE #PG1118BA18
2	A/R	GROUND WELL COVER, QUAZITE #PG1118CA0017
3	A/R	CONNECTOR, COMPRESSION TYPE, PANDUIT PTC - 3/4 - 140
4	A/R	CONNECTOR, COMPRESSION TYPE, PANDUIT CTAP 4/0 - 4/0-X
5	A/R	WIRE, GND, #4/0 AWG, BARE STRANDED COPPER
6	A/R	ROD, GND, COPPER CLAD, 3/4" DIA x 10' LONG. SECTIONAL

DETAIL G6 — GROUND TEST WELL

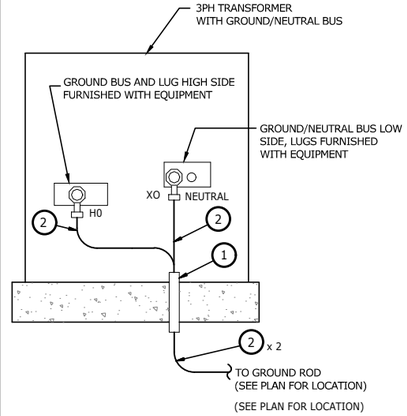


NOTES:

1. ALL CONNECTIONS SHALL BE MADE UP WRENCH TIGHT.
2. PAINT, INSULATION OR OTHER NON-CONDUCTIVE COATING SHALL BE REMOVED AT THE POINT OF CONTACT, OR A FASTENER THAT WILL PENETRATE THE COATING SHALL BE USED.
3. TO PREVENT CORROSION ALL EXPOSED COPPER GROUND CABLES SHALL BE COATED WITH AN EPOXY PAINT SUCH AS CHEMLINE 784/32 FROM ADVANCED POLYMER COATINGS OR APPROVED EQUAL.
4. PROTECT GROUND WIRE WITH PVC SLEEVE IF CONCRETE SUPPORT HEIGHT IS MORE THAN 6" ANCHOR PVC SLEEVE TO CONCRETE PEDESTAL.

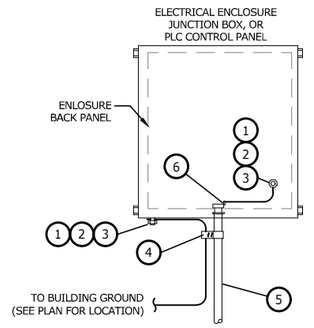
ITEM	QTY.	DESCRIPTION
1	A/R	GROUNDING PLATE BY EQUIPMENT MANUFACTURER OR CONTRACTOR TO DRILL AND TAP SERVIT POST CONNECTION
2	A/R	WIRE, GND. BARE STRANDED COPPER, #2/0 (SEE NOTE 3)

DETAIL G7 — ELECTRICAL EQUIPMENT GROUNDING



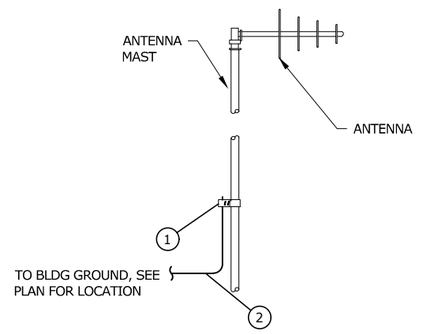
ITEM	QTY	DESCRIPTION
1	A/R	CONDUIT, 1", PVC, SCHEDULE 40, (LENGTH AS REQ)
2	A/R	WIRE, GND. BARE STRANDED COPPER, #2/0 AWG

DETAIL G8 — TRANSFORMER GROUNDING



ITEM	QTY	DESCRIPTION
1	AS REQ	SERVIT POST, #8 TO #2, BURNDY #KC23
2	1	3/8"-16 HEX HEAD NUT SILICON BRONZE
3	1	3/8" LOCKWASHER SILICON BRONZE
4	AS REQ	CONDUIT CLAMP, ONE HOLE, 1/2" IRON MAL. GALV.
5	AS REQ	RGS CONDUIT
6	AS REQ	BURNDY TYPE GC-A CONDUIT GROUND BUSHING

DETAIL G9 — ELECTRICAL ENCLOSURE GROUNDING



ITEM	QTY	DESCRIPTION
1	1	1IN - 2IN COPPER GROUND PIPE CLAMP
2	A/R	WIRE, GND. INSULATED STRANDED COPPER, #2 AWG

DETAIL G10 — ANTENNA MAST GROUNDING

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e-mail: is@industrialsystems-inc.com
OR CCB #196597 WA #INDUSSI880K9
AK #1018436
PROJECT#:20.48.01

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DCR DESIGNED
JLB DRAWN
DCR CHECKED

REGISTERED PROFESSIONAL ENGINEER 44803E David Clifford Root OREGON JULY 9, 2002 DAVID CLIFFORD ROOT
EXPIRES: 31 DEC 22

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL GROUNDING DETAILS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS-E-4
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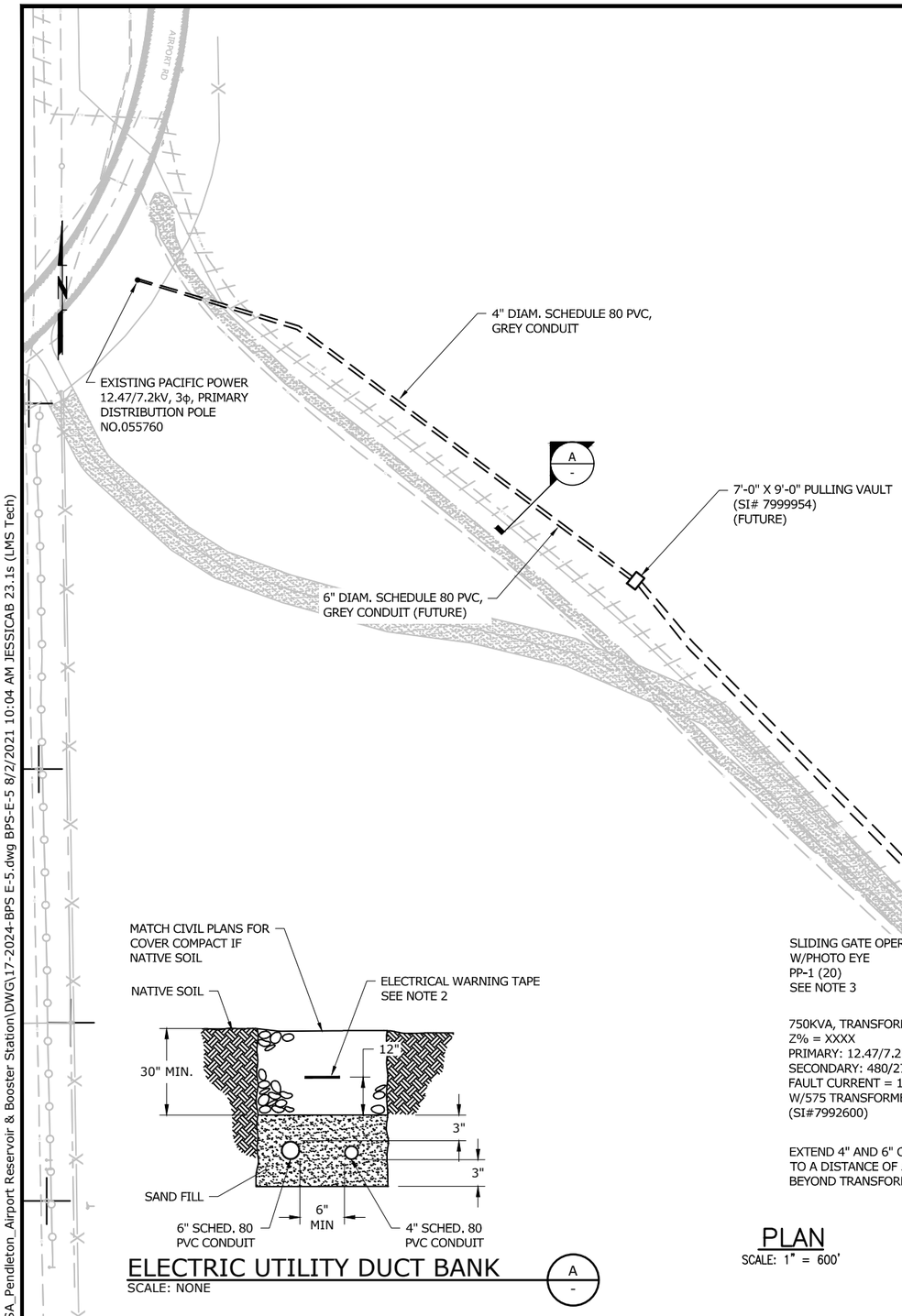
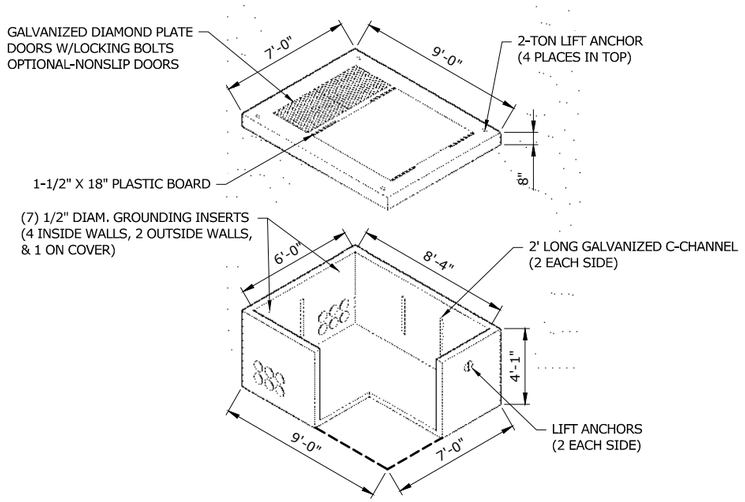


NOTES:

1. CONTRACTOR TO COMPLY WITH ALL REQUIREMENTS OF THE SERVING UTILITY, PACIFIC POWER. REFERENCE THE LATEST EDITION OF PACIFICORP'S "ELECTRIC SERVICE REQUIREMENTS MANUAL". REVIEW THIS DOCUMENT PRIOR TO BID AND INCLUDE ALL ASSOCIATED COSTS IN BID PRICE FOR A COMPLETE OPERABLE SYSTEM.
   PACIFIC POWER CONTACT:
   DOUGLAS TRIEBELHORN (541) 278-2957,
   EMAIL: Douglas.Triebelhorn@pacificorp.com
2. ALL UNDERGROUND CONDUIT DUCT BANKS SHALL HAVE RED WARNING TAPE PLACED INLINE 12" MINIMUM ABOVE CONDUITS.
3. FENCE GATE ACTUATOR - INSTALL SLIDING GATE OPERATOR AND POST MOUNTED PUSH BUTTON OPERATOR PER REQUIREMENTS OF SECTION 32 31 13 OF THE SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATIONS.



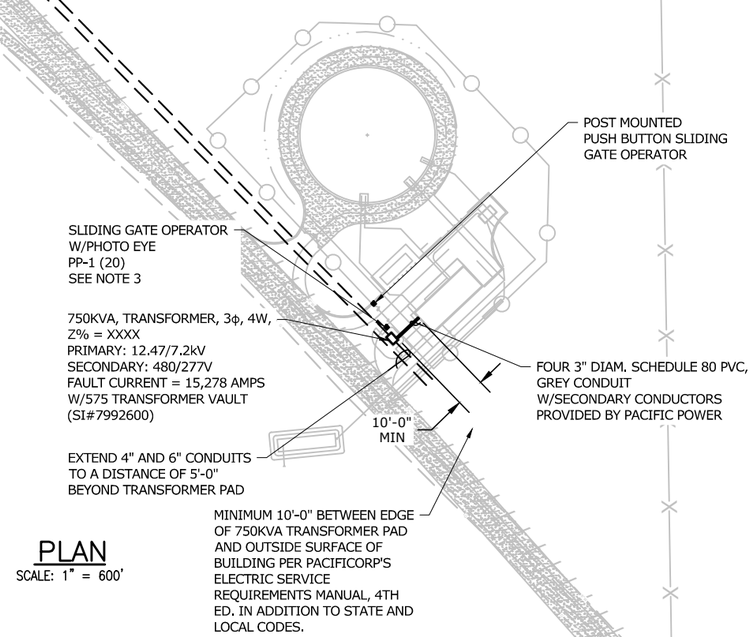
PULLING VAULT DETAIL

GV 403 PADVAULT, SWITCHGEAR, DEAD-FRONT
#7999954

ELECTRIC UTILITY DUCT BANK

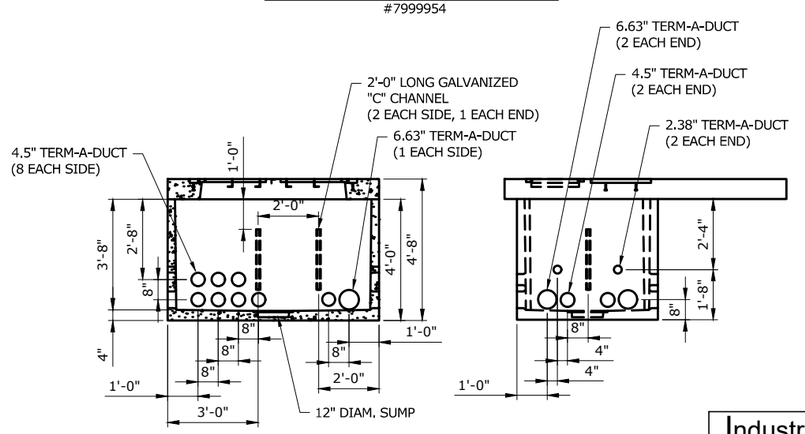
SCALE: NONE

A
-



PLAN

SCALE: 1" = 600'



FRONT VIEW SIDE VIEW

TRANSFORMER VAULT DETAIL

575-TRANS-PCORP

5' X 7', 4-25kV, 3ϕ 75-750kVA TRANSFORMER PADVAULT WITH ACCESS, #7992600

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CITY OF PENDLETON INCORPORATED 1880 OREGON

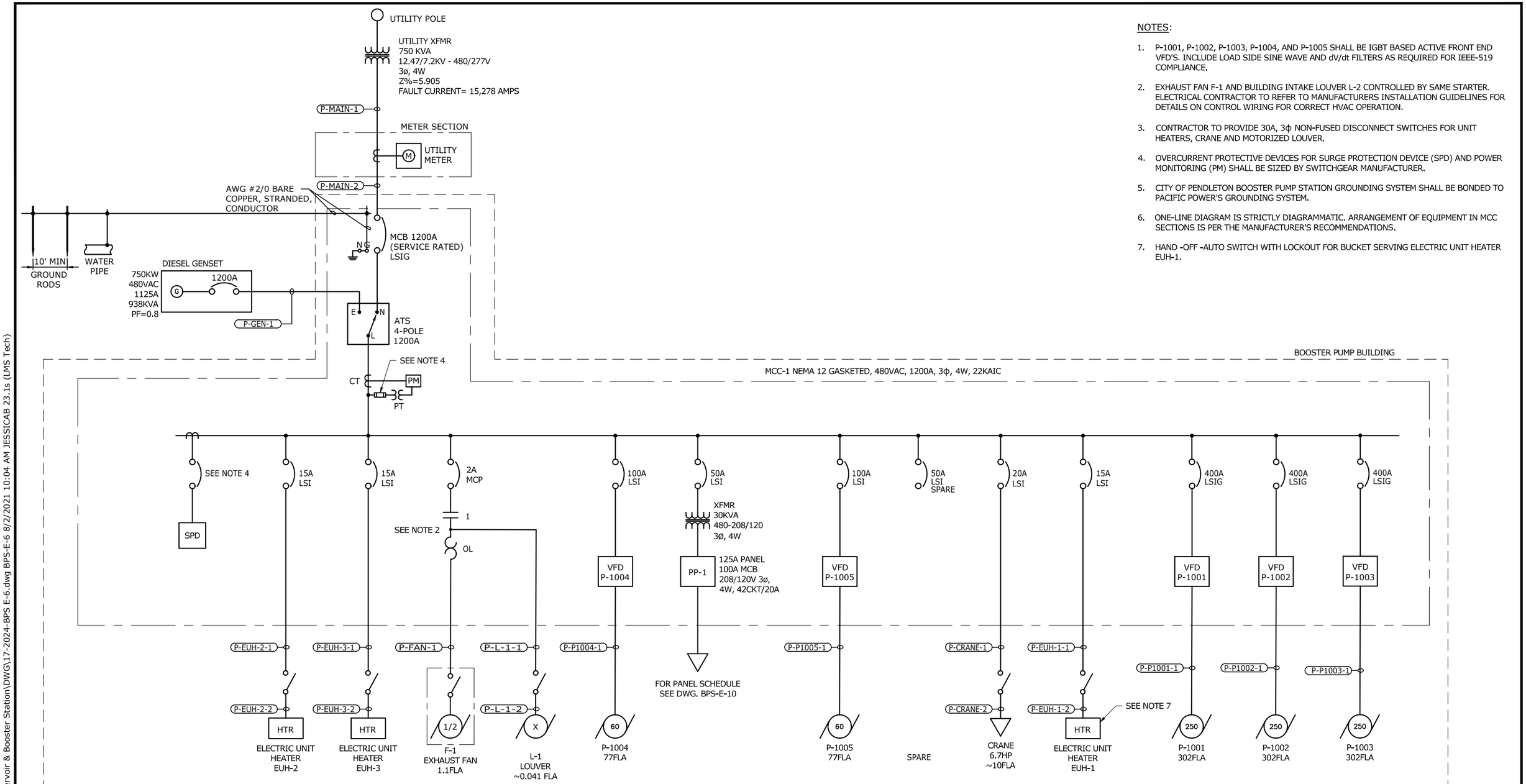
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL SITE PROXIMITY PLAN

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS-E-5

P:\Projects\20.48.01_MSA_Pendleton_Airport Reservoir & Booster Station\DWG\17-2024-BPS E-5.dwg BPS-E-5 8/2/2021 10:04 AM JESSICAB 23.1s (LMS Tech)



NOTES:

1. P-1001, P-1002, P-1003, P-1004, AND P-1005 SHALL BE IGBT BASED ACTIVE FRONT END VFD'S. INCLUDE LOAD SIDE SINE WAVE AND dV/dt FILTERS AS REQUIRED FOR IEEE-519 COMPLIANCE.
2. EXHAUST FAN F-1 AND BUILDING INTAKE LOUVER L-2 CONTROLLED BY SAME STARTER. ELECTRICAL CONTRACTOR TO REFER TO MANUFACTURERS INSTALLATION GUIDELINES FOR DETAILS ON CONTROL WIRING FOR CORRECT HVAC OPERATION.
3. CONTRACTOR TO PROVIDE 30A, 3ϕ NON-FUSED DISCONNECT SWITCHES FOR UNIT HEATERS, CRANE AND MOTORIZED LOUVER.
4. OVERCURRENT PROTECTIVE DEVICES FOR SURGE PROTECTION DEVICE (SPD) AND POWER MONITORING (PM) SHALL BE SIZED BY SWITCHGEAR MANUFACTURER.
5. CITY OF PENDLETON BOOSTER PUMP STATION GROUNDING SYSTEM SHALL BE BONDED TO PACIFIC POWER'S GROUNDING SYSTEM.
6. ONE-LINE DIAGRAM IS STRICTLY DIAGRAMMATIC. ARRANGEMENT OF EQUIPMENT IN MCC SECTIONS IS PER THE MANUFACTURER'S RECOMMENDATIONS.
7. HAND -OFF -AUTO SWITCH WITH LOCKOUT FOR BUCKET SERVING ELECTRIC UNIT HEATER EUH-1.

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CITY OF PENDLETON OREGON INCORPORATED 1880

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL ONE LINE DIAGRAM

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS-E-6
87 of 113

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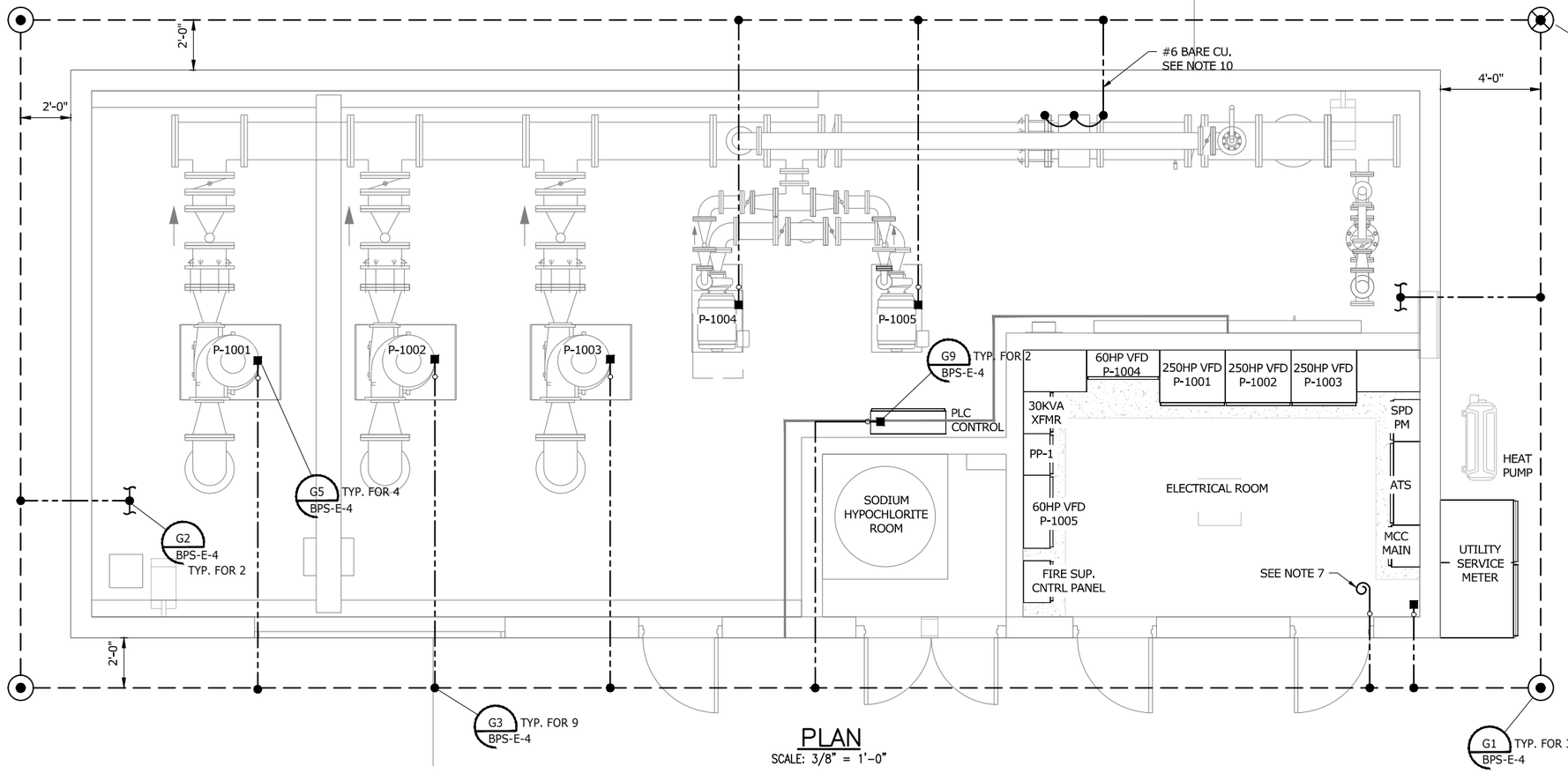
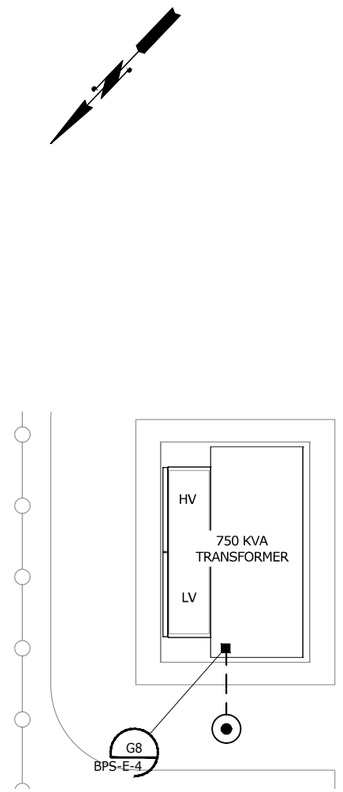
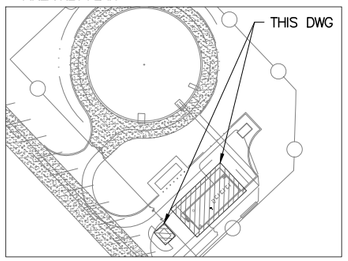


PLAN

SCALE: 3/8" = 1'-0"



AREA KEY PLAN



GROUNDING NOTES:

1. ALL GROUND CONNECTIONS SHALL BE "BURNDY" COMPRESSION TYPE CONNECTORS OR EQUAL.
2. CLEAN ALL METAL SURFACES TO BARE METAL WHEN GROUNDING DETAIL CALLS FOR GROUND LUG. COAT BARE CONTACT SURFACE WITH AN OXIDATION INHIBITING COMPOUND.
3. A #2/0 AWG THWN GREEN INSULATED GROUND CONDUCTOR SHALL BE RUN THE FULL LENGTH OF ALL CABLE TRAYS. INSTALL GROUNDING CONNECTORS ON EACH TRAY SECTION AND USE A #2 AWG THWN GREEN INSULATED CONDUCTOR TO BOND EACH TRAY SECTION TO GROUND.
4. THE COMPLETE GROUNDING SYSTEM SHALL BE TESTED TO VERIFY THAT A RECOMMENDED RESISTANCE OF 5 OHMS OR LESS IS ATTAINED. FINAL GROUNDING TEST REPORT PROVIDED TO CLIENT.
5. ALL GROUND CONDUCTORS TRANSITIONING THROUGH FOUNDATION OR CONCRETE CONTAINMENT SLAB SHALL BE INSULATED OR COATED TO PREVENT PREMATURE CORROSION. SEE DETAIL G7 ON BPS-E-4.
6. CONTRACTOR TO EXERCISE EXTREME CARE AND CONFIRM THE EXISTENCE OF ANY POTENTIAL UNDERGROUND HAZARDS WHEN EXCAVATING FOR GROUNDING.
7. LEAVE MINIMUM OF 12' OF EXTRA #2/0 AWG INSULATED PIGTAIL GROUNDING WIRE ABOVE GRADE FOR GROUNDING TO CABLE TRAY.
8. CONNECT SENSOR FLANGES, PIPE FLANGES AND TRANSMITTER GROUND TERMINALS TO GROUND ACCORDING TO FLOWMETER MANUFACTURERS RECOMMENDATIONS.

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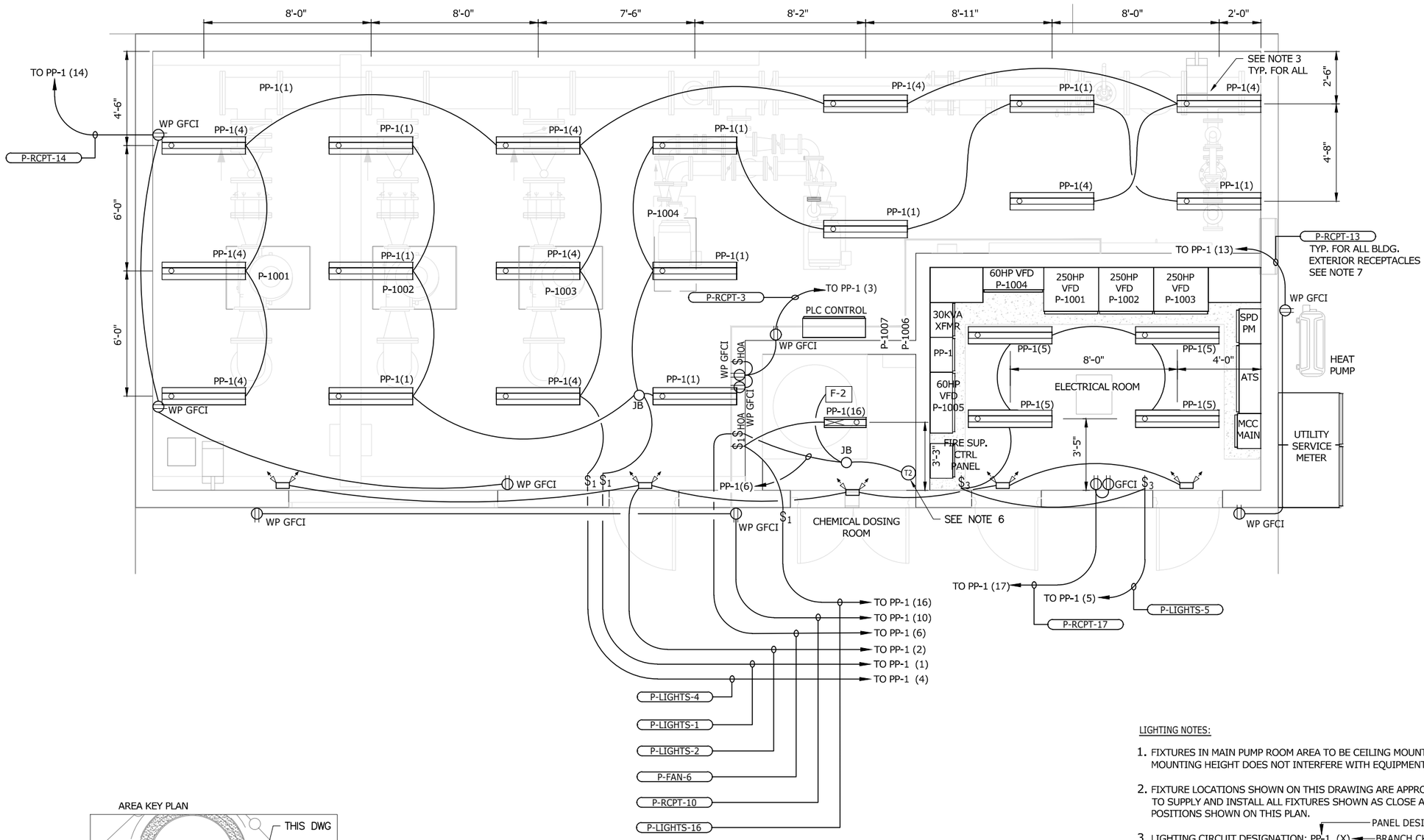
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL GROUNDING PLAN

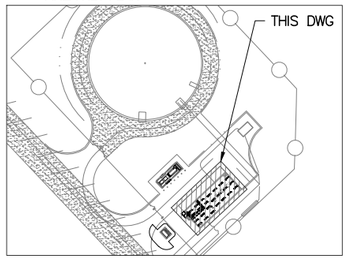
PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS-E-7



PLAN
SCALE: 3/8"=1'

AREA KEY PLAN



LIGHTING NOTES:

1. FIXTURES IN MAIN PUMP ROOM AREA TO BE CEILING MOUNTED. CONTRACTOR TO CONFIRM MOUNTING HEIGHT DOES NOT INTERFERE WITH EQUIPMENT CRANE OPERATION.
2. FIXTURE LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL ALL FIXTURES SHOWN AS CLOSE AS POSSIBLE TO THE INDICATED POSITIONS SHOWN ON THIS PLAN.
3. LIGHTING CIRCUIT DESIGNATION: PP-1, (X) — PANEL DESIGNATION; BRANCH CKT. No.
4. FOR DRAWING CLARITY NOT ALL CONDUIT RUNS, CABLING AND CIRCUIT IDENTIFICATIONS ARE SHOWN. REFER TO CABLE SCHEDULES AND PANEL DISTRIBUTION SCHEDULES FOR ADDITIONAL DETAILS.
5. FOR ADDITIONAL SITE LIGHTING SEE DRAWING BPS-E9.
6. ELECTRICAL CONTRACTOR TO WIRE IN-LINE THERMOSTAT (T2) INTO HOA SWITCH TO OPERATE EXHAUST FAN F-2. INSTALL SEPARATE SWITCH FOR LIGHT.
7. CONTRACTOR TO INSTALL ALL EXPOSED CONDUITS USING BEST PRACTICES METHOD TO AVOID OBSTRUCTING ACCESS TO SERVICEABLE EQUIPMENT.

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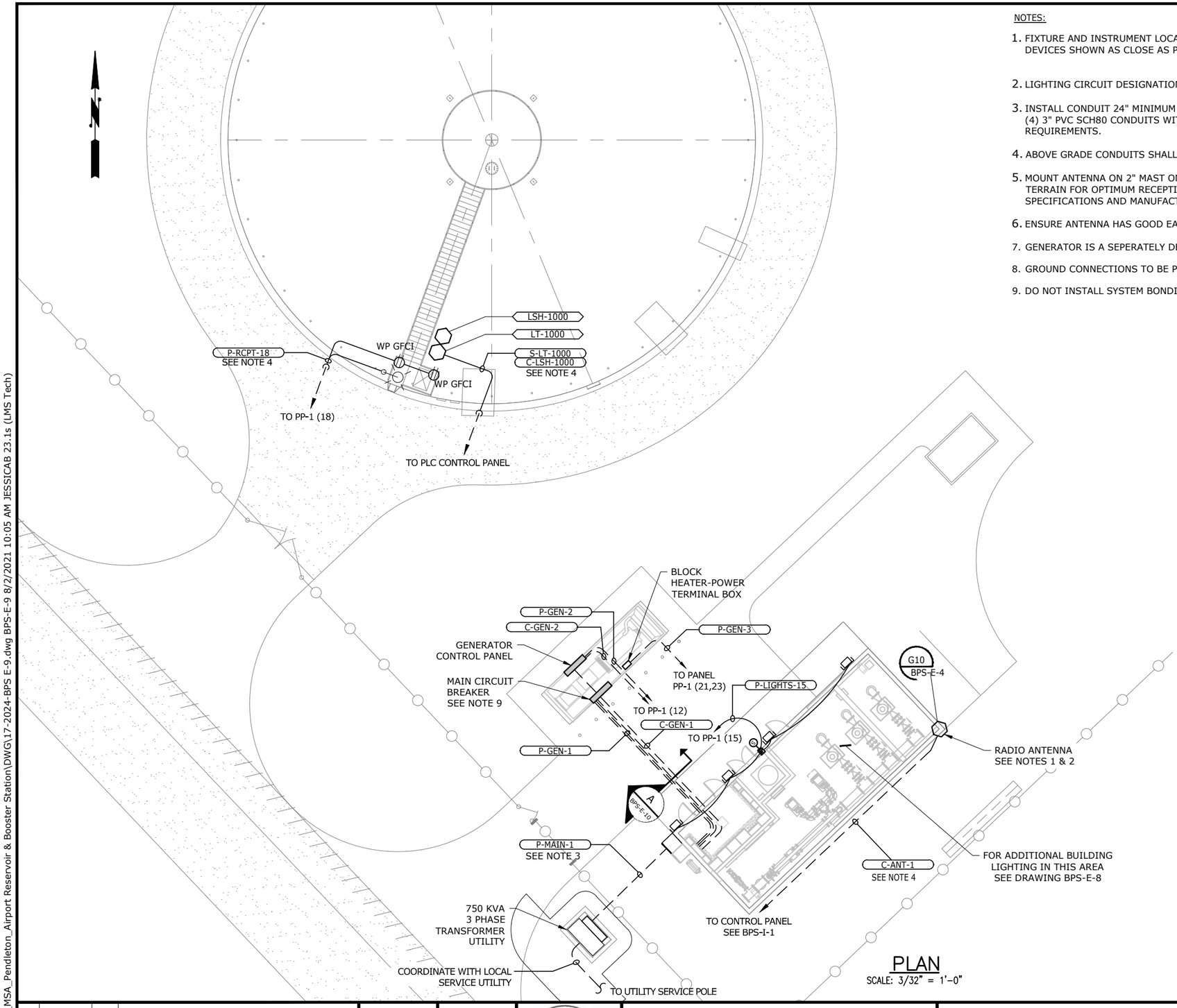
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL LIGHTING

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS-E-8
89 of 113



PLAN
SCALE: 3/32" = 1'-0"

NOTES:

1. FIXTURE AND INSTRUMENT LOCATIONS SHOWN ON DRAWINGS ARE APPROXIMATE. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL ALL DEVICES SHOWN AS CLOSE AS POSSIBLE TO THE INDICATED POSITIONS ON THE PLAN DRAWING.
2. LIGHTING CIRCUIT DESIGNATION: PP-1, (X) ← BRANCH CKT. No. ← PANEL DESIGNATION
3. INSTALL CONDUIT 24" MINIMUM BELOW GRADE. CONDUITS SHALL BE PROOFED WITH A MANDREL. INSTALL A FLAT PULL LINE OR POLY ROPE IN (4) 3" PVC SCH80 CONDUITS WITH 72" OF EXTRA LINE BEYOND EACH END OF THE CONDUITS. REFER TO LOCAL UTILITY ELECTRIC SERVICE REQUIREMENTS.
4. ABOVE GRADE CONDUITS SHALL BE RIGID GALVANIZED (RGS) AND PVC SCHEDULE 80 BELOW GRADE.
5. MOUNT ANTENNA ON 2" MAST ON TOP OF BOOSTER PUMP STATION BLDG., MINIMUM 6 FT TALL. ADJUST ANTENNA HEIGHT OF ABOVE AVERAGE TERRAIN FOR OPTIMUM RECEPTION. ORIENT ANTENNA PER INTEGRATOR'S INSTRUCTION. WEATHERPROOF ALL CONNECTIONS PER SPECIFICATIONS AND MANUFACTURER RECOMMENDATIONS.
6. ENSURE ANTENNA HAS GOOD EARTH GROUND. ATTACH GROUND TO ANTENNA MAST EVERY 2 FT.
7. GENERATOR IS A SEPERATELY DERIVED SYSTEM AND SHALL BE GROUNDED PER NEC 250, LATEST EDITION AND AHJ.
8. GROUND CONNECTIONS TO BE PER NEC AND MANUFACTURER'S INSTALLATION REQUIREMENTS.
9. DO NOT INSTALL SYSTEM BONDING JUMPER BETWEEN GENERATOR FRAME AND NEUTRAL.

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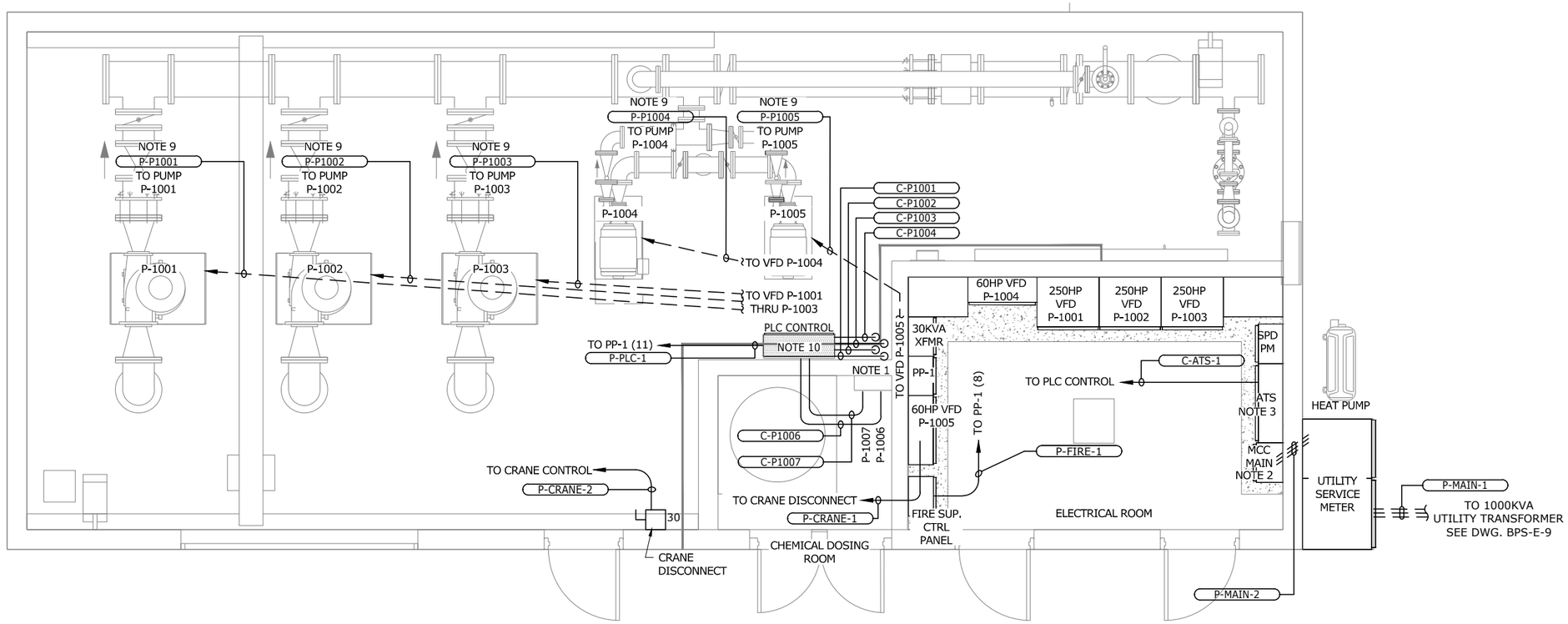
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL SITE PLAN

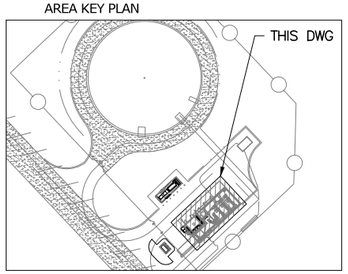
PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

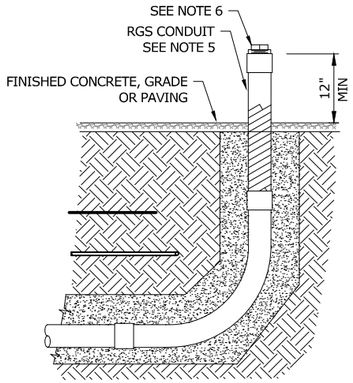
SHEET
BPS-E-9



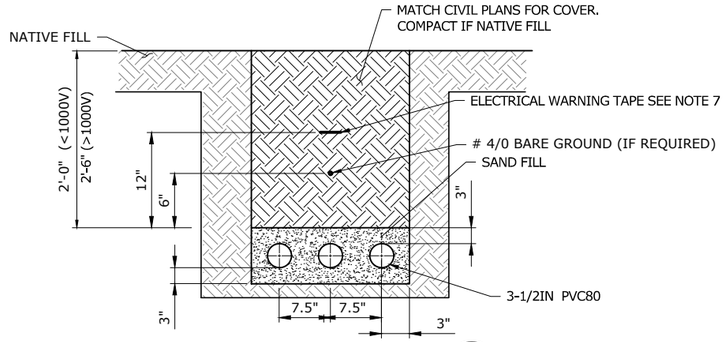
PLAN
SCALE: 3/8" = 1'-0"

AREA KEY PLAN





TYPICAL UNDERGROUND CONDUIT STUB UP (1 / -)
SCALE: NTS



SAND FILL DUCT BANK SECTION (A / -)
SCALE: NTS

NOTES:

1. HYPOCHLORITE PUMPS P-1005 & P-1006 WILL HAVE 120V AC POWER VIA RECEPTACLES INSTALLED INSIDE CHEMICAL ROOM. SEE LIGHTING PLAN DRAWING BPS-E-7.
2. BOND NEUTRAL AND GROUND AT MCC MAIN BREAKER.
3. AUTOMATIC TRANSFER SWITCH IS 4-POLE SWITCHED NEUTRAL.
4. FOR FEEDER BREAKER AND MOTOR STARTER LOCATIONS SEE MCC LAYOUT DRAWING BPS-E-13.
5. ANY RGS OR METALLIC CONDUIT COMPONENTS THAT CONTACT EARTH OR CONCRETE SURFACES SHALL BE FULLY WRAPPED WITH PIPE TAPE TO PREVENT EXTERNAL CORROSION.
6. INSTALL CONDUIT PLUG ON ALL UNUSED (SPARE) CONDUITS.
7. ALL UNDER GROUND CONDUIT DUCT BANKS SHALL HAVE RED WARNING TAPE PLACED INLINE AND 12" MINIMUM ABOVE CONDUITS.
8. SEE CONDUIT & CABLE SCHEDULE BPS-E-15 AND BPS-E-16 FOR DETAILED ROUTING INFORMATION.
9. POWER CONDUIT FOR PUMP VFD'S ARE TO BE RUN UNDERGROUND FROM WEST WALL OF ELECTRICAL ROOM SEE DETAIL 1.
10. PLC CONTROL PANEL SHALL HAVE LABEL IDENTIFYING PANEL IS FED FROM MULTIPLE SOURCES.

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL POWER AND CONTROL PLAN

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS-E-10
91 of 113

PANEL: PNL PP-1	VOLTAGE: 120/208, 3PH, 4 WIRE	MOUNTING: MCC
LOCATION:	BUS: COPPER, S/N, GND BUS	AIC: 22,000
FEEDER: TOP	MAIN: 125A	

CKT NO	CIRCUIT DESCRIPTION	BREAKER POLES	BREAKER AMPS	VA	PHASE	LOAD VA	BREAKER POLES	BREAKER AMPS	CIRCUIT DESCRIPTION
1	BOOSTER PUMP BLDG LIGHTS	1	20	261	A	25	1	20	EMERGENCY - EXIT LIGHTS
3	**(GFCI)** SODIUM HYPROCHLORITE ROOM RECEPTACLES	1	20	540	B	261	1	20	BOOSTER PUMP BLDG. LIGHTS
5	ELECTRICAL ROOM LIGHTS	1	20	116	C	340	1	20	SODIUM HYPOCHORITE ROOM THERMOSTAT & EXHAUST FAN
7	HEAT PUMP HP-1	2	50	3120	A	1500	1	20	FIRE SUPPRESSION CONTROL PANEL
9				3120	B	360	1	20	**WATERPROOF** EXTERIOR RECEPTACLES (GFCI)
11	PLC CONTROL PANEL POWER	1	20	1500	C	1920	1	20	**WATERPROOF** GENERATOR BATTERY CHARGER (GFCI)
13	**WATERPROOF** EXTERIOR RECEPTACLES (GFCI)	1	20	360	A	540	1	20	BOOSTER PUMP BLDG. RECEPTACLES SOUTH & EAST WALLS
15	BOOSTER PUMP PUMP BUILDING EXTERIOR LIGHTS	1	20	100	B	25	1	20	SODIUM HYPOCHORITE ROOM LIGHT
17	**WATERPROOF** INTERIOR ELECTRICAL ROOM RECEPTS (GFC	1	20	360	C	360	1	20	WATER TANK RECEPTACLES
19	MOV-102 VALVE POWER	1	20	500	A	1000	1	20	FENCE GATE ACTUATOR
21	BLOCK HEATER	2	25	1872	B		1	20	*SPARE*
23				1872	C		1	20	*SPARE*
25	*SPARE*	1	20		A		1	20	*SPARE*
27	*SPARE*	1	20		B		1	20	*SPARE*
29	*SPARE*	1	20		C		1	20	*SPARE*
31	*SPARE*	1	20		A		1	20	*SPARE*
33	*SPARE*	1	20		B		1	20	*SPARE*
35	*SPARE*	1	20		C		1	20	*SPARE*
37	*SPARE*	1	20		A		1	20	*SPARE*
39	*SPARE*	1	20		B		1	20	*SPARE*
41	*SPARE*	1	20		C		1	20	*SPARE*

LOAD PER PHASE

PHASE A	7.3	KVA
PHASE B	6.3	KVA
PHASE C	6.5	KVA

TOTAL LOAD	20.1	KVA

TOTAL AMPS	56	AMPS

LIGHT FIXTURE & LUMINAIRE SCHEDULE

SYMBOL	LOCATION / USE	DESCRIPTION	VOLTS	WATTS	SUGGESTED MANUFACTURER & CATALOG NUMBER
	BUILDING INTERIOR LIGHT	4,000 LUMEN LED LUMINAIRE MSL SERIES 48"	120-277V	29	LITHONIA MSL 4000LM SBL MVOLT GZ10 40K 80CRI WH OR EQUAL
	BUILDING INTERIOR LIGHT NEMA 4X	4,000 LUMEN LED LUMINAIRE DMW2 SERIES 24"	120-277V	40	LITHONIA DMW2 4000LM ACL MD MVOLT GZ1 40K 80CRI OR EQUAL
	WALL MOUNT LUMINAIRE INTERIOR/EXTERIOR LED TYPE	3,450 LUMEN LED LUMINAIRE WALL PACK DESIGN	120-277V	28	LITHONIA TWR1 LED P2 40K MVOLT DDBTXD OR EQUAL
	EMERGENCY WALL PACK ARROWS INDICATE POSITIONING	SELF-CONTAINED BATTERY EMERGENCY LIGHTING FIXTURE WITH TWO BATTERY OPERATED 1.5 WATT LED LAMP HEADS	120V	4.3	LITHONIA LHQM LED R OR EQUAL
	RECEPTACLE, DUPLEX TYPE	RECEPTACLE, 20A, 120V, MOUNTED IN WEATHERPROOF HOUSING	120V	-	HUBBEL GF5362SGW w/TAYMAC MM420C WP HOUSING OR EQUAL
$_1$	1-WAY SNAP SWITCH	20A, COMMERCIAL SPEC GRADE TOGGLE SWITCH, SINGLE GANG BOX.	120V	-	HUBBELL CSB120W OR EQUAL
$_3$	3-WAY SWITCH	20A, COMMERCIAL SPEC GRADE TOGGLE SWITCH 3-WAY, WITH SINGLE GANG BOX.	120V	-	HUBBELL CSB320W OR EQUAL
	MOTION SENSOR	MAX. CAPACITY: 800W @120VAC, SENSOR TYPE: OUTDOOR, VIEWING ANGLE: 360°, WALL BOX, HARD-WIRED, COVERAGE 2000'.	120V	-	LITHONIA SBOR 10 ODP WH 0V
	STANCHION MOUNT LIGHT	120V, LED LUMINAIRE 7195 LUMENS, TYPE 4X	120V	62	CROUSE-HINDS PVM7L OR EQUAL

$_X$ WALL SWITCH, SUBSCRIPT INDICATES TYPE

2=DOUBLE POLE
3=THREE WAY
4=FOUR WAY
D=DIMMER
TH=THERMAL SWITCH
T=TIMED SWITCH

LV=LOW VOLTAGE
P=PILOT LIGHT
K=KEY OPERATED
WP=WEATHER PROOF
M=MANUAL MOTOR STARTER SWITCH

$_X$ SINGLE RECEPTACLE, 120V
$_X$ DUPLEX RECEPTACLE, 120V
$_X$ 4-PLEX RECEPTACLE, 120V

RECEPTACLE, SUBSCRIPT INDICATES TYPE

WP =WEATHER PROOF
GFCI = GROUND FAULT CIRCUIT INTERRUPTER
IG = ISOLATED GROUND
AFC = ARC FAULT CIRCUIT INTERRUPTER
GFPE = GROUND FAULT EQUIPMENT PROTECTION

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OR CCB #196597 WA #INDUSSI880K9
AK #1018436
PROJECT#:20.48.01

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DCR DESIGNED
JLB DRAWN
DCR CHECKED

REGISTERED PROFESSIONAL ENGINEER 44803E OREGON JULY 9, 2002 DAVID CLIFFORD ROOT
EXPIRES: 31 DEC 22

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL
DISTRIBUTION PANEL 'PP-1' SCHEDULE AND FIXTURE SCHEDULE

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS-E-11
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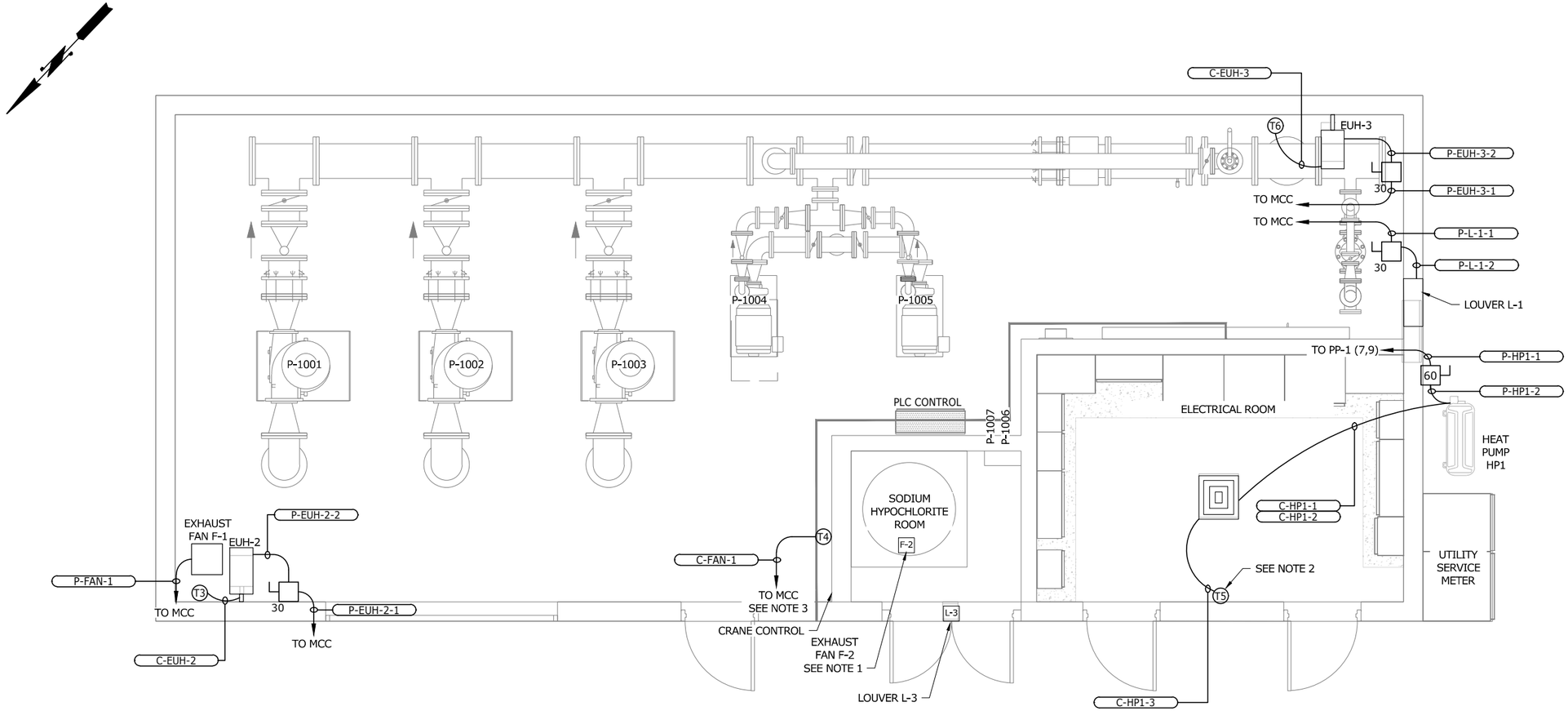
GENERAL NOTES:

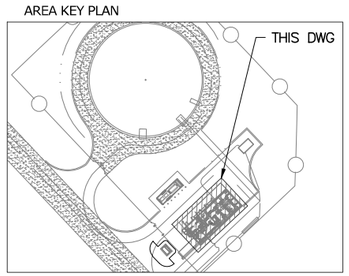
1. UNDERGROUND CONDUITS SHALL BE 1" DIAM. MINIMUM RIGID CONDUIT.



PLAN

SCALE: 3/8" = 1'-0"

AREA KEY PLAN



HVAC ELECTRICAL NOTES:

1. FOR SODIUM HYPOCHLORITE ROOM EXHAUST FAN F-2 WIRING SEE LIGHTING PLAN DRAWING BPS-E-8.
2. CONTRACTOR TO FIELD VERIFY WITH EQUIPMENT MANUFACURER INSTALLATION GUIDELINES REMOTE THERMOSTAT (T5) WIRING TO HEAT PUMP HP-1 CASSETTE. CONTRACTOR TO SUPPLY AND INSTALL ALL THERMOSTAT CONTROLLERS AND CONFIRM ELECTRICAL RATINGS MATCH HEAT PUMP EQUIPMENT SPECIFICATIONS.
3. THERMOSTAT CONTROL (T4) TO BE WIRED INTO MOTOR STARTER CONTROL CIRCUIT FOR EXHAUST FAN F-1. CONTRACTOR TO CONFIRM IN-LINE THERMOSTAT CONTACT RATINGS MATCH STARTER CONTROL VOLTAGE AND AMPERAGE RATINGS. SEE DRAWING BPS-E-12 FOR TYPICAL 3ϕ, EXHAUST FAN 120V STARTER CONTROL WIRING.
4. FOR DRAWING CLARITY NOT ALL CONDUIT RUNS, CABLING AND CIRCUIT IDENTIFICATIONS ARE SHOWN. REFER TO CABLE SCHEDULES AND PANEL DISTRIBUTION SCHEDULES FOR ADDITIONAL DETAILS.
5. SEE DRAWING BPS-E-12 FOR TYPICAL UNIT HEATER WIRING.

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EXPIRES: 31 DEC 22

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL HVAC PLAN POWER AND CONTROL

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

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BPS-E-12
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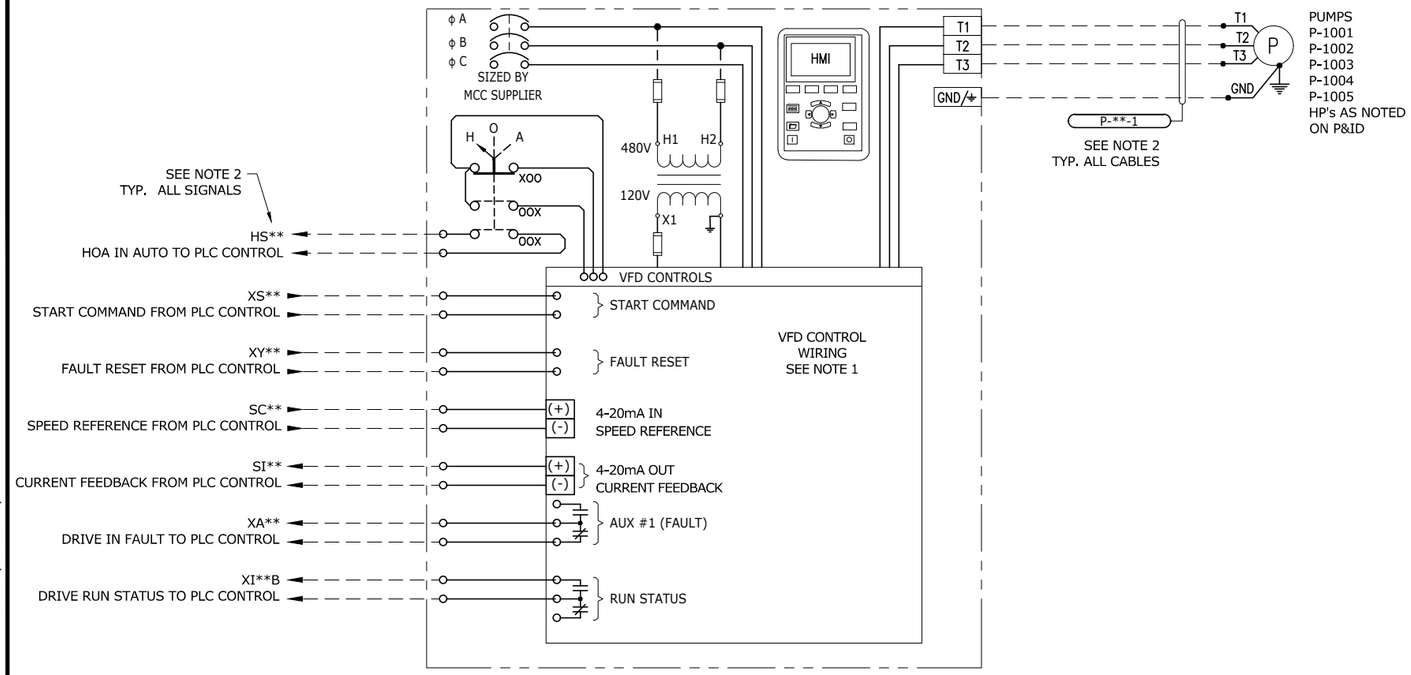
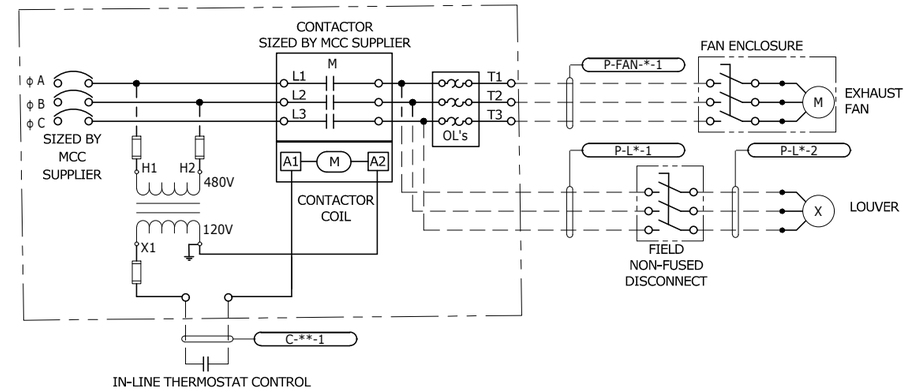
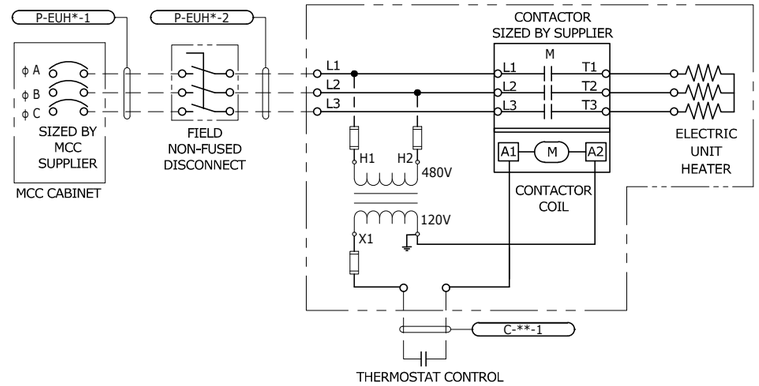


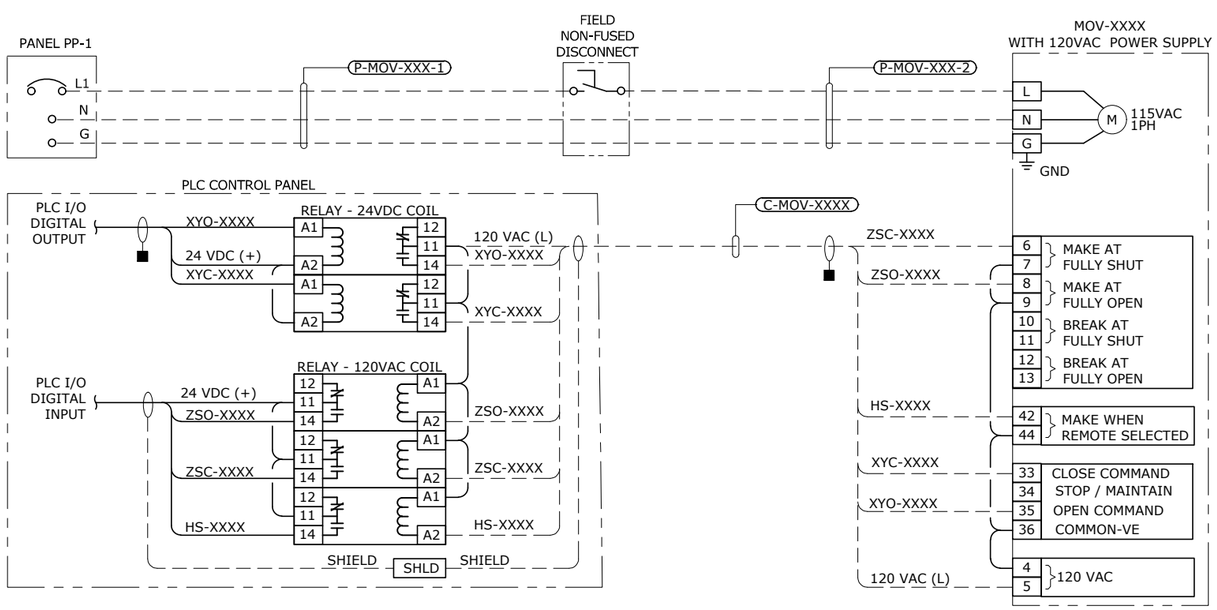
TYPICAL VFD STARTER WIRING



3ϕ, EXHAUST FAN TYPICAL CONTACTOR WIRING



3ϕ, ELECTRIC UNIT HEATER TYPICAL CONTACTOR WIRING



ELECTRICAL OPERATED VALVE (MOV) POWER AND CONTROL TYPICAL WIRING

NOTES:

1. VFD CONTROL WIRING TO BE PER MANUFACTURER INSTALLATION GUIDELINES. CONTRACTOR TO CONFIRM SIGNALS IDENTIFIED ARE PROVIDED AS A MINIMUM. ETHERNET CONNECT ALL VFD DRIVES TO PLC.
2. CABLE IDENTIFICATION TO MATCH PUMP EQUIPMENT NUMBER AS NOTED ON P&ID's AND BY ** ON THIS DRAWING.
3. HVAC EXHAUST FAN MOTOR STARTER CONTROL WIRING SHALL BE PER HVAC EQUIPMENT MANUFACTURER.

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL TYPICAL WIRING DIAGRAMS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

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BPS-E-13
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ALL CIRCUITS ARE IDENTIFIED ON THE PLANS WITH THE DIAMOND SYMBOL. CONDUCTOR SIZES ARE BASED ON COPPER CONDUCTORS. CONDUIT SIZES ARE SHOWN FOR CASES WHEN CIRCUIT CONDUCTORS ARE RUN WITHOUT OTHER CIRCUITS. MULTIPLE CIRCUITS RUN IN COMMON CONDUITS ARE SHOWN ON PLANS AND SUPERSEDE THE BASIC CONDUIT SIZE SHOWN.

RACEWAY SIZES ARE IN INCHES WITH QUANTITIES IN EXCESS OF (1) SHOWN IN ADJACENT PARENTHESIS. CONDUCTOR CONFIGURATIONS ARE CODED AS FOLLOWS: P- FOR POWER CONDUCTORS, G - FOR GROUND CONDUCTORS, N - FOR NEUTRAL CONDUCTORS, C - FOR CONTROL CONDUCTORS, AND SP - FOR SPARE CONDUCTORS.

CIRCUITS REVISED SINCE LAST ISSUE ARE INDICATED BY AN ASTERISK(*).

CIRCUIT NUMBER	FROM	TO	CONDUCTORS	RACEWAY SIZE (TYPE)	NOTES
P-MAIN-1	PACIFICORP 750KVA UTILITY TRANSFORMER	UTILITY SERVICE METER	PULL CORD	(4) 4" (PVC 80)	POWER CONDUCTORS PROVIDED BY UTILITY
P-MAIN-2	UTILITY SERVICE METER	MCC MAIN INCOMING BREAKER	(9) #600 KCMIL, P (3) #600 KCMIL, N	(3) 3-1/2" (RGS)	TYPE XHHW CONDUCTORS
P-GEN-1	750KW GENERATOR MAIN BREAKER	MCC ATS SECTIQN	(9) #600 KCMIL, P (3) #600 KCMIL, N (3) #3/0 GND	(3) 3-1/2" (PVC 80)	TYPE XHHW CONDUCTORS
P-P1001	MCC -5 250HP VFD SECTION P-1001	250HP PUMP P-1001	(3) #500KCMIL, P (1) #6 GND	4" (PVC 40)	VFD CABLE, SHIELDED
P-P1002	MCC -6 250HP VFD SECTION P-1002	250HP PUMP P-1002	(3) #500KCMIL, P (1) #6 GND	4" (PVC 40)	VFD CABLE, SHIELDED
P-P1003	MCC -7 250HP VFD SECTION P-1003	250HP PUMP P-1003	(3) #500KCMIL, P (1) #6 GND	4" (PVC 40)	VFD CABLE, SHIELDED
P-P1004	MCC -4 60HP VFD SECTION P-1004	60HP PUMP P-1004	(3) #2 AWG, P (1) #10 GND	2" (PVC 40)	VFD CABLE, SHIELDED
P-P1005	MCC -9 60HP VFD SECTION P-1005	60HP PUMP P-1005	(3) #2 AWG, P (1) #10 GND	2" (PVC 40)	VFD CABLE, SHIELDED
P-CRANE-1	MCC -2 20A BREAKER	CRANE NON-FUSED DISCONNECT PANEL	(3) #10 AWG, P (1) #12 GND	3/4" (RGS)	
P-CRANE-2	CRANE NON-FUSED DISCONNECT PANEL	EQ. CRANE CONTROL FIELD VERIFY LOCATION	(3) #10 AWG, P (1) #12 GND	3/4" (RGS)	
P-FAN-1	MCC -3 SIZE 1 FVNR STARTER	HVAC EXHAUST FAN F-1	(3) #12 AWG, P (1) #12 GND	3/4" (PVC 40)	
P-EUH-2-1	MCC -3 15A BREAKER	EUH2 3 PHASE NON-FUSED DISCONNECT	(3) #12 AWG, P (1) #12 GND	3/4" (RGS)	
P-EUH-2-2	EUH-2 3 PHASE NON-FUSED DISCONNECT	EUH2 3 PHASE HEATER	(3) #12 AWG, P (1) #12 GND	3/4" (RGS)	
P-EUH-3-1	MCC -3 15A BREAKER	EUH3 3 PHASE NON-FUSED DISCONNECT	(3) #12 AWG, P (1) #12 GND	3/4" (RGS)	
P-EUH-3-2	EUH-3 3 PHASE NON-FUSED DISCONNECT	EUH3 3 PHASE HEATER	(3) #12 AWG, P (1) #12 GND	3/4" (RGS)	
P-L-1-1	MCC -3 SIZE 1 FVNR STARTER FOR EXHAUST FAN F-1	LOUVER L-1 NON-FUSED DISCONNECT	(3) #12 AWG, P (1) #12 GND	3/4" (RGS)	
P-L-1-2	LOUVER L-1 NON-FUSED DISCONNECT	LOUVER L-1	(3) #12 AWG, P (1) #12 GND	3/4" (RGS)	
P-HP1-1	DISTRIBUTION PANEL PP-1 CKT 7,9	HEAT PUMP HP-1 FUSED DISCONNECT	(3) #8 AWG, P (1) #10 GND	1" (RGS)	
P-HP1-2	HEAT PUMP HP-1 FUSED DISCONNECT	HEAT PUMP HP-1	(3) #8 AWG, P (1) #10 GND	1" (RGS)	
P-LIGHTS-1	DISTRIBUTION PANEL PP-1 CKT 1	BOOSTER PUMP BUILDING LIGHTING	(1) #12 AWG, P (1) #12 AWG, N (1) #12 AWG, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-LIGHTS-2	DISTRIBUTION PANEL PP-1 CKT 2	BOOSTER PUMP BUILDING EMERGENCY LIGHTING	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-RCPT-3	DISTRIBUTION PANEL PP-1 CKT 3	CHEMICAL ROOM DUPLEX RECEPTACLES	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-LIGHTS-4	DISTRIBUTION PANEL PP-1 CKT 4	BOOSTER PUMP BUILDING LIGHTING	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-LIGHTS-5	DISTRIBUTION PANEL PP-1 CKT 5	ELECTRICAL ROOM LIGHTS	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-LIGHTS-6	DISTRIBUTION PANEL PP-1 CKT 6	CHEMICAL ROOM LIGHTING & EXHAUST FAN	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-RCPT-10	DISTRIBUTION PANEL PP-1 CKT 10	BOOSTER PUMP BUILDING EXTERIOR BUILDING RECEPTACLES	(1) #12 AWG, P (1) #12 AWD, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-GEN-2	DISTRIBUTION PANEL PP-1 CKT 12	750KW GENERATOR CONTROL PANEL BATTERY CHARGER	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	1" (PVC 80)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-RCPT-13	DISTRIBUTION PANEL PP-1 CKT 13	BOOSTER PUMP BUILDING EXTERIOR BUILDING RECEPTACLES	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-LIGHTS-15	DISTRIBUTION PANEL PP-1 CKT 15	BOOSTER PUMP BUILDING EXTERIOR BUILDING LIGHTS	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-PLC-1	DISTRIBUTION PANEL PP-1 CKT 11	PLC CONTROL CABINET	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-RCPT-14	DISTRIBUTION PANEL PP-1 CKT 14	BOOSTER PUMP BUILDING RECEPTACLES SOUTH & EAST WALL	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-FG-1	DISTRIBUTION PANEL PP-1 CKT 20,22	FENCE GATE ACTUATOR	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	1" (PVC 40)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-RCPT-17	DISTRIBUTION PANEL PP-1 CKT 17	ELECTRICAL ROOM RECEPTACLES	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-MOV-102-1	DISTRIBUTION PANEL PP-1 CKT 19	MOV-102 POWER NON-FUSED DISCONNECT SWITCH	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-MOV-102-2	MOV-102 POWER NON-FUSED DISCONNECT SWITCH	ELECTRICAL ACTUATED VALVE V-102	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-RCPT-18	DISTRIBUTION PANEL PP-1 CKT 18	WATER TANK RECEPTACLES	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-GEN-3	DISTRIBUTION PANEL PP-1 CKT 21/23	750KW GENERATOR BLOCK HEATER TERMINAL BOX	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	1" (PVC 80)	ALL CABLES IN CABLE TRAY MUST BE UL-TC RATED
P-FIRE-1	DISTRIBUTION PANEL PP-1 CKT 21/23	FIRE SUPPRESSION CONTROL PANEL	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4" (RGS)	

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murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

ELECTRICAL CABLE SCHEDULE - 1

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

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CIRCUITS REVISED SINCE LAST ISSUE ARE INDICATED BY AN ASTERISK(*).

CIRCUIT NUMBER	FROM	TO	CONDUCTORS	RACEWAY	NOTES
C-ATS-1	MCC ATS	PLC CONTROL CABINET	(6) #12 AWG, C (4) #12 AWG, SP (1) #12 AWG, G	1"	ATS-EMERGENCY VOLTAGE PRESENT ATS-UTILITY VOLTAGE PRESENT ATS-NORMAL POSITION (UTILITY PWR) ATS-EMERGENCY POSITION (GEN. PWR) ATS-SWITCH FAIL TO TRANSFER
C-GEN-1	750KW GENERATOR CONTROL PANEL	MCC ATS	(6) #12 AWG, C (1) #12 AWG, G	1"	START/STOP CONTROL FOR GENERATOR
C-GEN-2	750KW GENERATOR CONTROL PANEL	PLC CONTROL CABINET	(12) #12 AWG, C (4) #12 AWG, SP (1) #12 AWG, G	1"	GENERATOR RUN STATUS LOW FUEL LEVEL MAIN BREAKER TRIP LOW COOLANT LEVEL NOT IN AUTO LOW OIL PRESSURE LOW ENGINE TEMP LOW BATTERY VOLTAGE BATTERY CHARGER FAULT AC LINE FAILURE
S-LT-1000	RESERVOIR LEVEL TANK TRANSMITTER	PLC CONTROL CABINET	(1) TSP #16 AWG	3/4"	
C-LSH-1000	LEVEL SWITCH LOW LOW TRANSFER PUMP 1	PLC CONTROL CABINET	(1) 2C #14 AWG (1) #12 AWG, G	3/4"	
P-AIT-1010	CHLORINE ANALYZER AIT-1010	PLC CONTROL CABINET	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4"	
S-AIT-1010	CHLORINE ANALYZER AIT-1010	PLC CONTROL CABINET	(2) TSP #16 AWG	3/4"	
S-PIT-1005	PRESSURE TRANSMITTER PIT-1005	PLC CONTROL CABINET	(1) TSP #16 AWG	3/4"	
S-PIT-1006	PRESSURE TRANSMITTER PIT-1006	PLC CONTROL CABINET	(1) TSP #16 AWG	3/4"	
S-PIT-1007	PRESSURE TRANSMITTER PIT-1007	PLC CONTROL CABINET	(1) TSP #16 AWG	3/4"	
P-FIT-1004	FLOW METER /W TOTALIZER FIT-1004	PLC CONTROL CABINET	(1) #12 AWG, P (1) #12 AWG, N (1) #12, GND	3/4"	
S-FIT-1004	FLOW METER /W TOTALIZER FIT-1004	PLC CONTROL CABINET	(2) TSP #16 AWG	3/4"	
C-ZS-100	DOOR INTRUSION SWITCHES BOOSTER PUMP BUILDING	PLC CONTROL CABINET	(1) 2C #14 AWG (1) #12 AWG, G	3/4"	ZS-101, ZS-102, ZS-103, ZS-104
C-P1001	VFD-1001	PLC CONTROL CABINET	(5) 2C #14 AWG (2) TSP #16 AWG (1) #12 AWG, G	3/4"	
C-P1002	VFD-1002	PLC CONTROL CABINET	(5) 2C #14 AWG (2) TSP #16 AWG (1) #12 AWG, G	3/4"	
C-P1003	VFD-1003	PLC CONTROL CABINET	(5) 2C #14 AWG (2) TSP #16 AWG (1) #12 AWG, G	3/4"	
C-P1004	VFD-1004	PLC CONTROL CABINET	(5) 2C #14 AWG (2) TSP #16 AWG (1) #12 AWG, G	3/4"	
C-P1005	VFD-1005	PLC CONTROL CABINET	(5) 2C #14 AWG (2) TSP #16 AWG (1) #12 AWG, G	3/4"	
C-P1006	CHEMICAL DOSING PUMP P-1006	PLC CONTROL CABINET	(3) 2C #14 AWG (2) TSP #16 AWG (1) #12 AWG, G	3/4"	
C-P1007	CHEMICAL DOSING PUMP P-1007	PLC CONTROL CABINET	(3) 2C #14 AWG (2) TSP #16 AWG (1) #12 AWG, G	3/4"	
C-FAN-1	THERMOSTAT T4 LOCATED IN BOOSTER PUMP BLDG.	MCC SIZE 1 FVNR STARTER	(1) 2C #14 AWG (1) #12 AWG, G	3/4"	
C-HP1-1	CARTRIDGE UNIT CONTROL FOR HEAT PUMP HP1	HEAT PUMP HP1 CONTROLLER	(1) 3C #16 AWG (PWR) (1) #12 AWG, G	3/4"	
C-HP1-2	CARTRIDGE UNIT CONTROL FOR HEAT PUMP HP1	HEAT PUMP HP1 CONTROLLER	(1) 3C #22 AWG (SIG) (1) #12 AWG, G	3/4"	
C-HP1-3	THERMOSTAT T5 LOCATED IN MCC ROOM	CARTRIDGE UNIT CONTROL FOR HEAT PUMP HP1	(1) 2C #14 AWG (1) #12 AWG, G	3/4"	
C-EUH-2	THERMOSTAT T3 LOCATED IN BOOSTER PUMP ROOM	ELECTRIC UNIT HEATER EUH-2	(1) 2C #14 AWG (1) #12 AWG, G	3/4"	
C-EUH-3	THERMOSTAT T6 LOCATED IN BOOSTER PUMP ROOM	ELECTRIC UNIT HEATER EUH-3	(1) 2C #14 AWG (1) #12 AWG, G	3/4"	
C-MOV-102	ELECTRICAL ACTUATED VALVE MOV-102	PLC CONTROL CABINET	(5) 2C #14 AWG (1) #12 AWG, G	3/4"	ELECTRIC VALVE POSITION CONTROL AND POSITION FEEDBACK
C-ANT-1	RADIO ANTENNA	PLC CONTROL CABINET	HELIAX	3/4"	
C-SV-1010	SV-1010	PLC CONTROL CABINET	(1) 2C #14 AWG (1) #14 AWG, G	3/4"	
C-SV-1020	SV-1020	PLC CONTROL CABINET	(1) 2C #14 AWG (1) #14 AWG, G	3/4"	
C-FIRE-1	FIRE SUPPRESSION CONTROL PANEL	PLC CONTROL PANEL	(4) 2C #14 AWG (1) #14 AWG, G	3/4"	

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AK #1018436
PROJECT#:20.48.01

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DCR DESIGNED
JLB DRAWN
DCR CHECKED

REGISTERED PROFESSIONAL ENGINEER 44803E David Clifford Root OREGON JULY 9, 2002 DAVID CLIFFORD ROOT
EXPIRES: 31 DEC 22

murraysmith

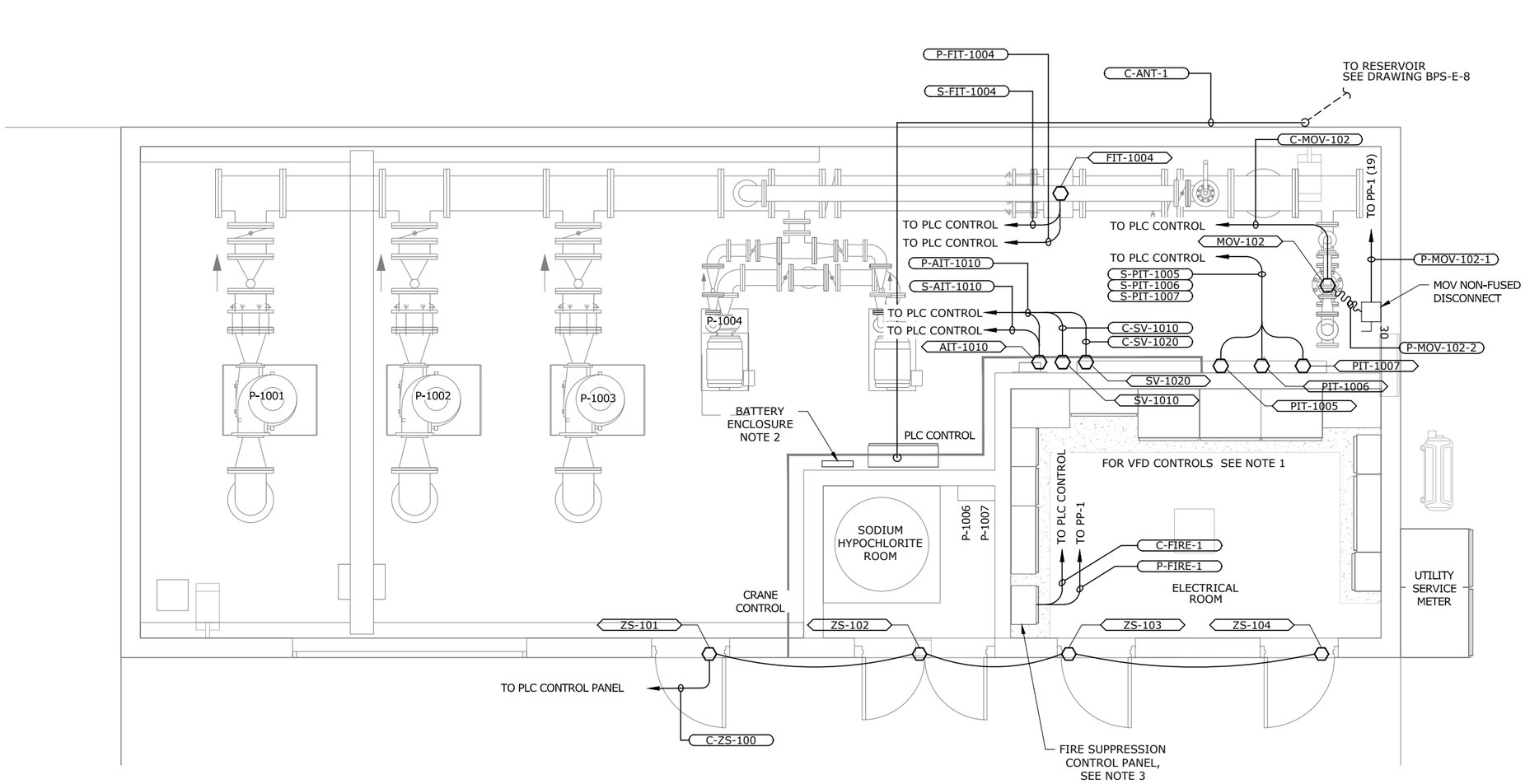
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

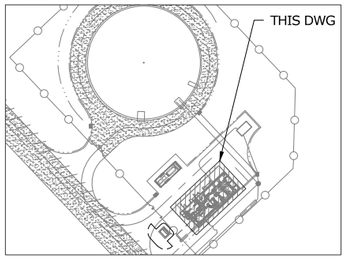
ELECTRICAL
CABLE SCHEDULE - 2

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS-E-15



AREA KEY PLAN



PLAN
SCALE: 3/8"=1'-0"

NOTES:

1. FOR VFD CONTROL WIRING TO PLC CABINET REFER TO CABLE SCHEDULE, MOTOR SCHEMATIC AND PROCESS AND INSTRUMENTATION DIAGRAM.

2. INSTALL 12VDC BATTERIES IN SEALED ENCLOSURE BELOW PLC CABINET. INSTALL WALL MOUNTED SHELF BELOW PLC CABINET TO HOLD BATTERY ENCLOSURE

3. FIRE SUPPRESSION SYSTEM IS SPECIFIED IN SECTION 21 22 00.

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JLB DRAWN
MEW CHECKED

REGISTERED PROFESSIONAL ENGINEER
88305PE
OREGON
MAY 14, 2019
MICHAEL E. WALLIS
EXPIRES: 6/30/22

murraysmith

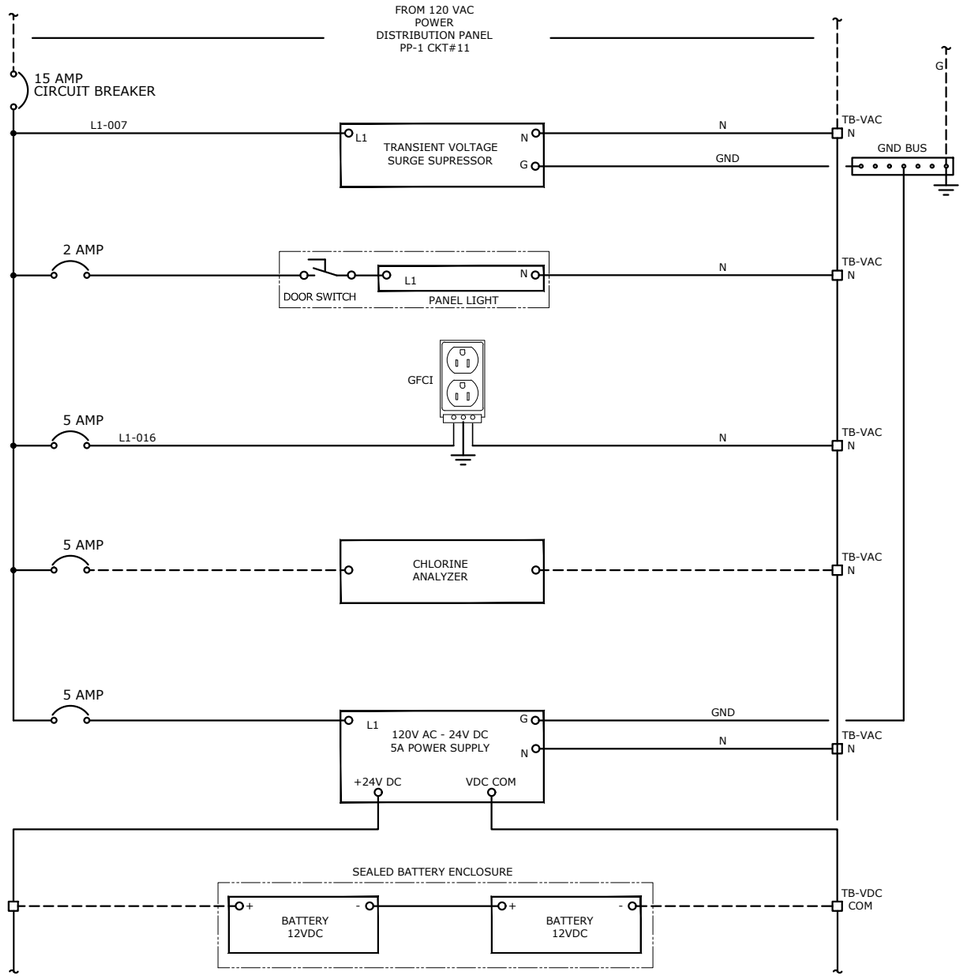
CITY OF PENDLETON INCORPORATED 1880 OREGON

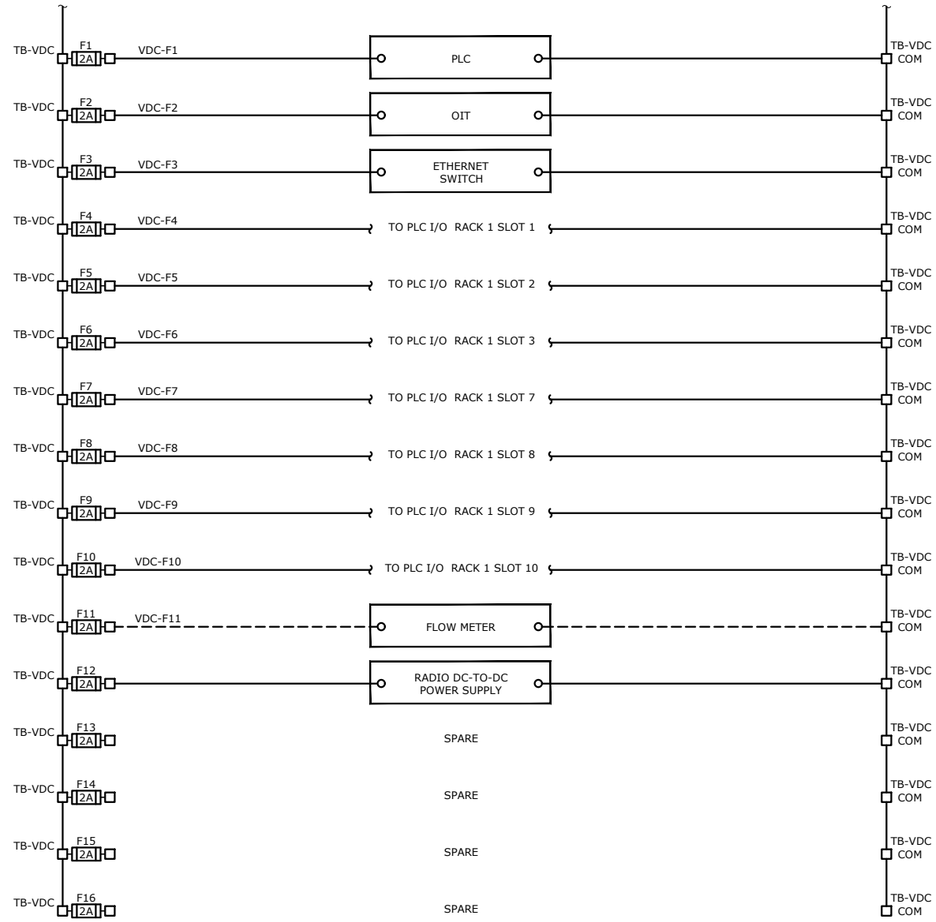
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

INSTRUMENT LOCATION PLAN

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS I-1
97 of 113





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MICHAEL E. WALLIS
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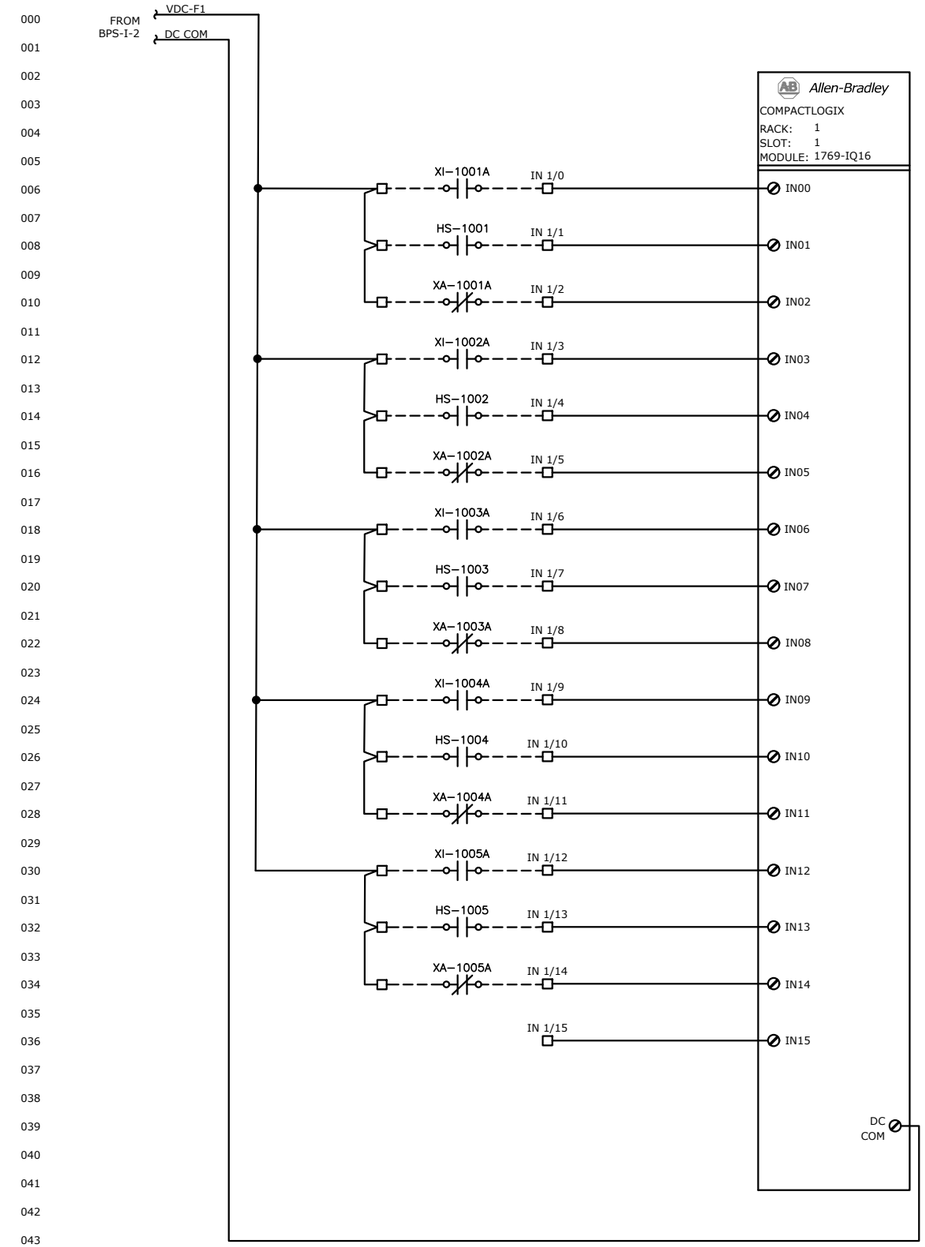
CITY OF PENDLETON INCORPORATED 1880 OREGON

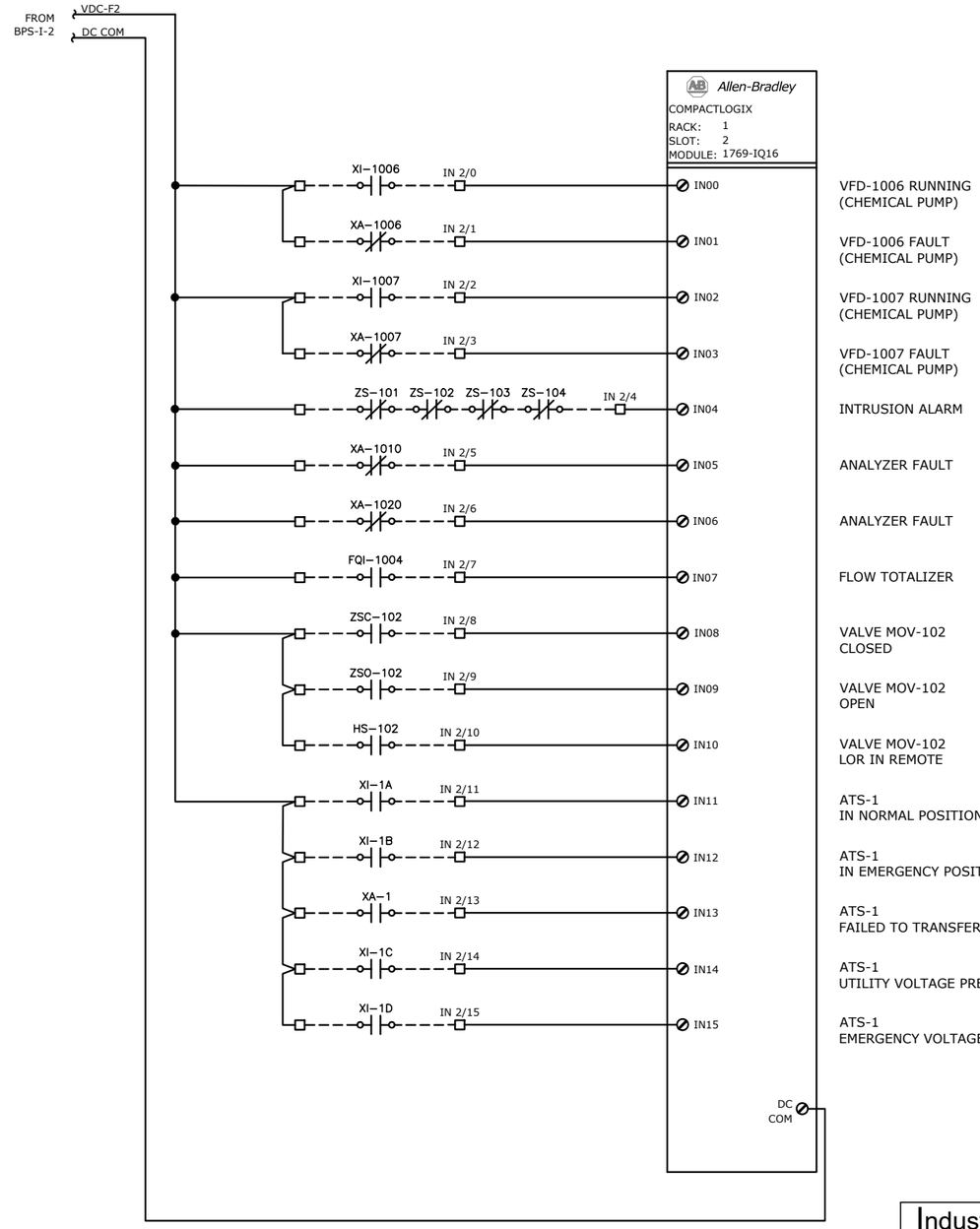
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PLC CONTROL PANEL POWER DISTRIBUTION WIRING SCHEMATIC

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS I-2
98 of 113





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JLB DRAWN
MEW CHECKED

REGISTERED PROFESSIONAL ENGINEER 88305PE OREGON MAY 14, 2019 MICHAEL E. WALLIS EXPIRES: 6/30/22

murraysmith

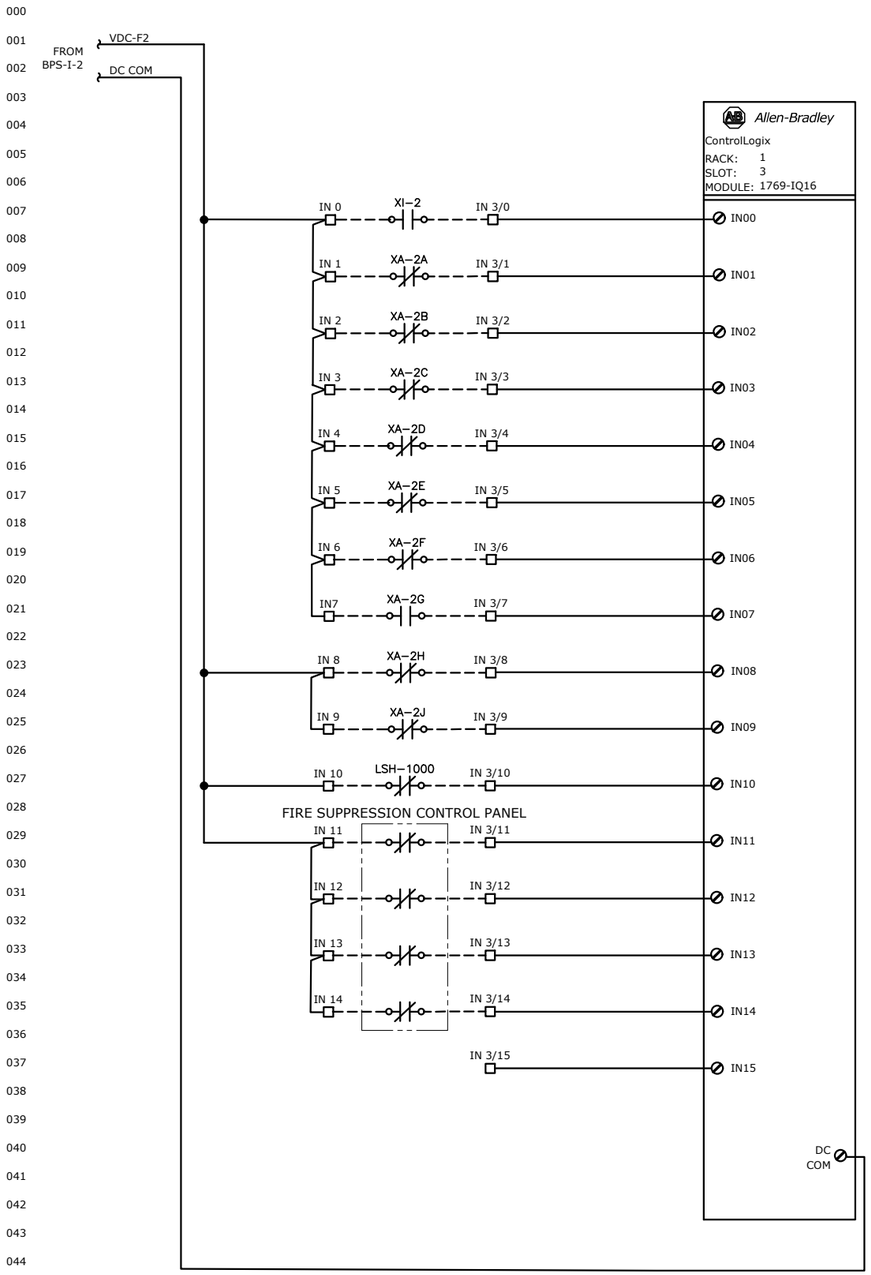
CITY OF PENDLETON INCORPORATED 1880 OREGON

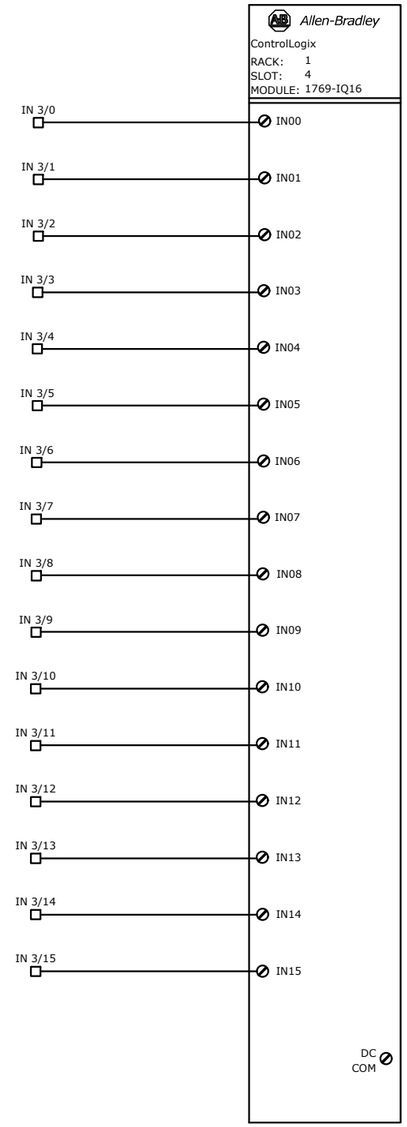
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PLC CONTROL PANEL
DISCRETE INPUT WIRING SCHEMATIC

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS I-3
99 of 113





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MICHAEL E. WALLIS
EXPIRES: 6/30/22

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PLC CONTROL PANEL DISCRETE INPUT WIRING SCHEMATIC

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS I-4
100 of 113

Allen-Bradley
ControlLogix
RACK: 1
SLOT: 5
MODULE:1769-OW8I

VAC-VDC 0	XX X	XS-1001 VFD-1001 START COMMAND
OUT 0	XX X	
VAC-VDC 1	XX X	XY-1001 VFD-1001 FAULT RESET
OUT 1	XX X	
VAC-VDC 2	XX X	XS-1002 VFD-1002 START COMMAND
OUT 2	XX X	
VAC-VDC 3	XX X	XY-1002 VFD-1002 FAULT RESET
OUT 3	XX X	
VAC-VDC 4	XX X	XS-1003 VFD-1003 START COMMAND
OUT 4	XX X	
VAC-VDC 5	XX X	XY-1003 VFD-1003 FAULT RESET
OUT 5	XX X	
VAC-VDC 6	XX X	XS-1004 VFD-1004 START COMMAND
OUT 6	XX X	
VAC-VDC 7	XX X	XY-1004 VFD-1004 FAULT RESET
OUT 7	XX X	

Allen-Bradley
ControlLogix
RACK: 1
SLOT: 6
MODULE:1769-OW8I

VAC-VDC 0	XX X	XS-1005 VFD-1005 START COMMAND
OUT 0	XX X	
VAC-VDC 1	XX X	XY-1005 VFD-1005 FAULT RESET
OUT 1	XX X	
VAC-VDC 2	XX X	XYO-102 MOV-102 VALVE OPEN
OUT 2	XX X	
VAC-VDC 3	XX X	XYC-102 MOV-102 VALVE CLOSE
OUT 3	XX X	
VAC-VDC 4	XX X	XS-1006 VFD-1006 (CHEMICAL PUMP) START COMMAND
OUT 4	XX X	
VAC-VDC 5	XX X	XS-1006 VFD-1006 (CHEMICAL PUMP) FAULT RESET
OUT 5	XX X	
VAC-VDC 6	XX X	XS-1007 VFD-1007 (CHEMICAL PUMP) START COMMAND
OUT 6	XX X	
VAC-VDC 7	XX X	XS-1007 VFD-1007 (CHEMICAL PUMP) FAULT RESET
OUT 7	XX X	

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JLB DRAWN
MEW CHECKED

REGISTERED PROFESSIONAL ENGINEER 88305PE OREGON MAY 14, 2019 MICHAEL E. WALLIS EXPIRES: 6/30/22

murraysmith

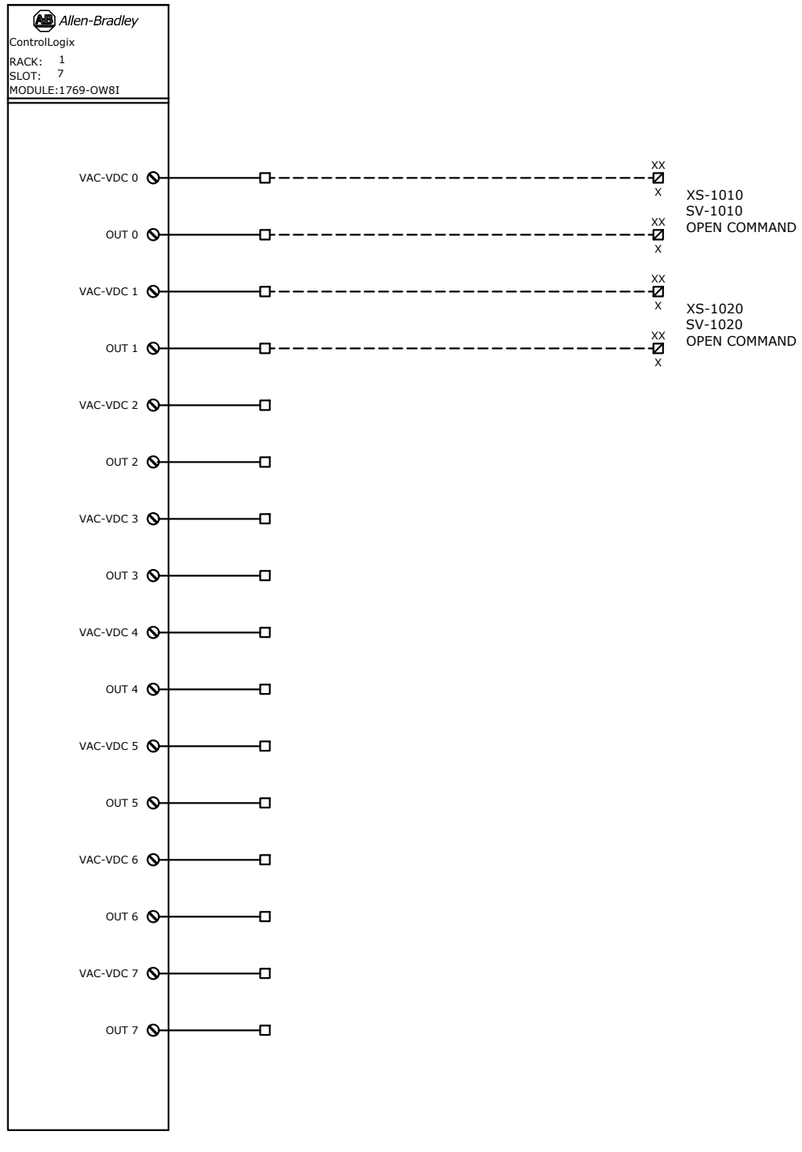
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PLC CONTROL PANEL
DISCRETE OUTPUT WIRING SCHEMATIC

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS I-5
101 of 113



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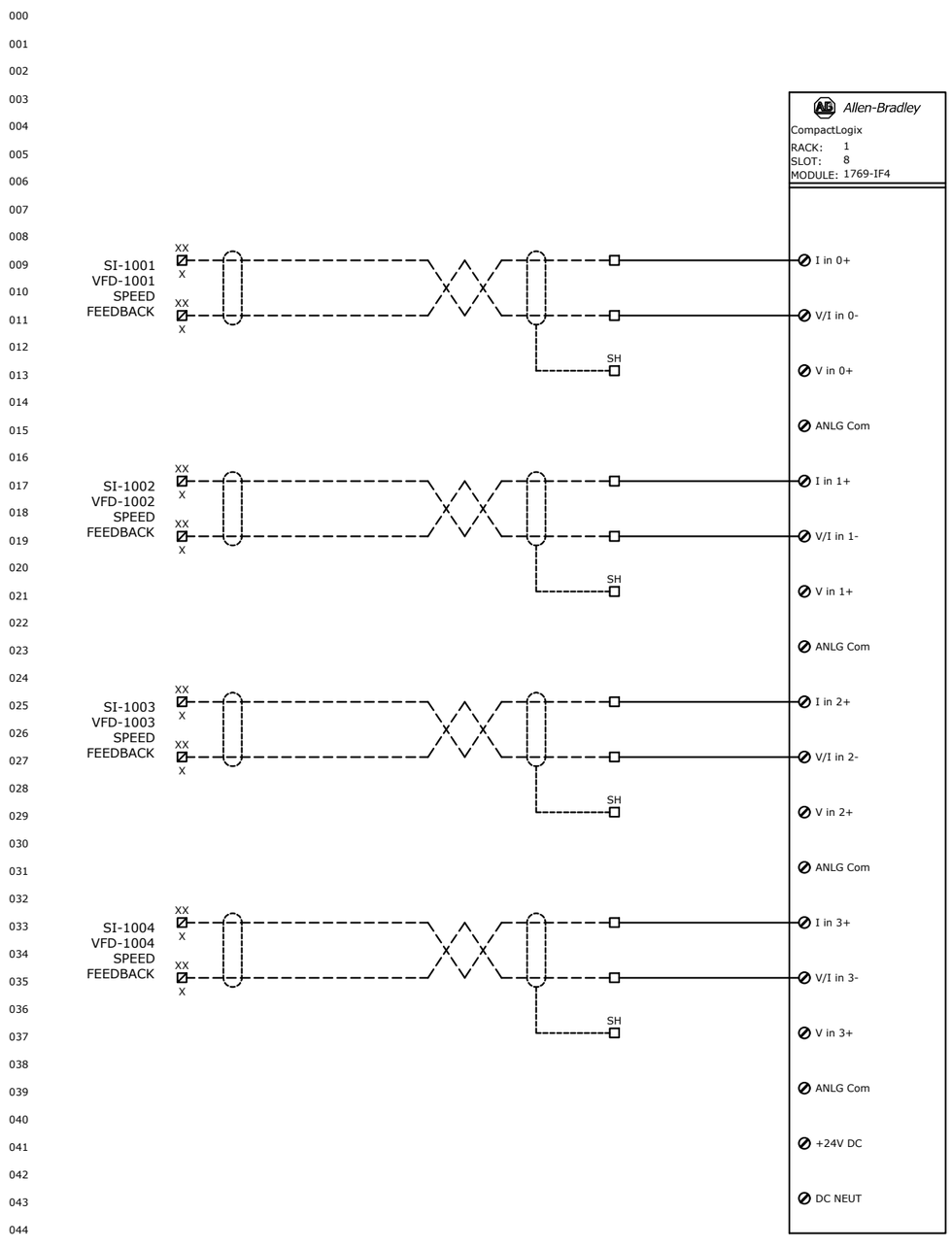
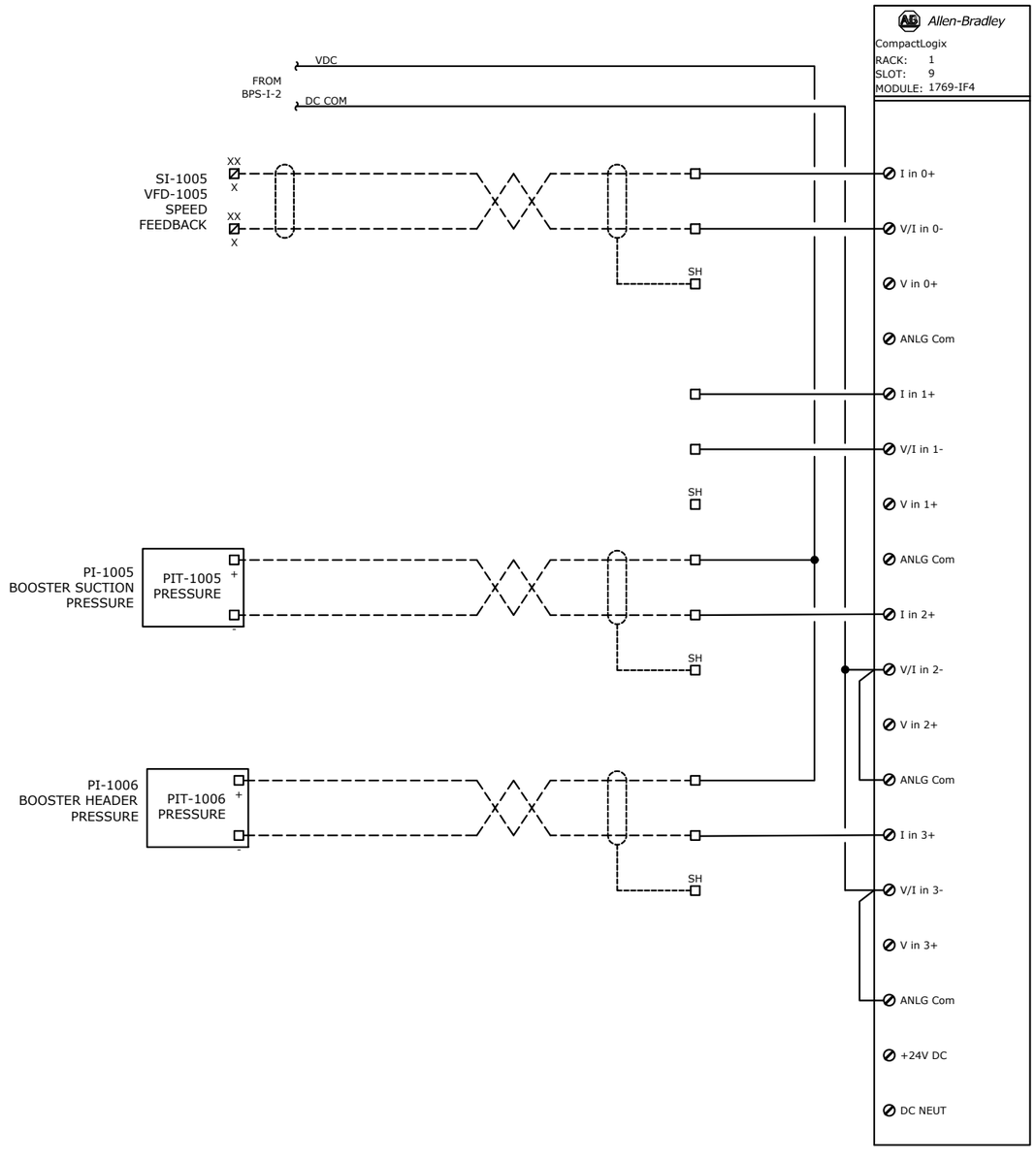
PLC CONTROL PANEL
DISCRETE OUTPUT WIRING SCHEMATIC

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS I-6





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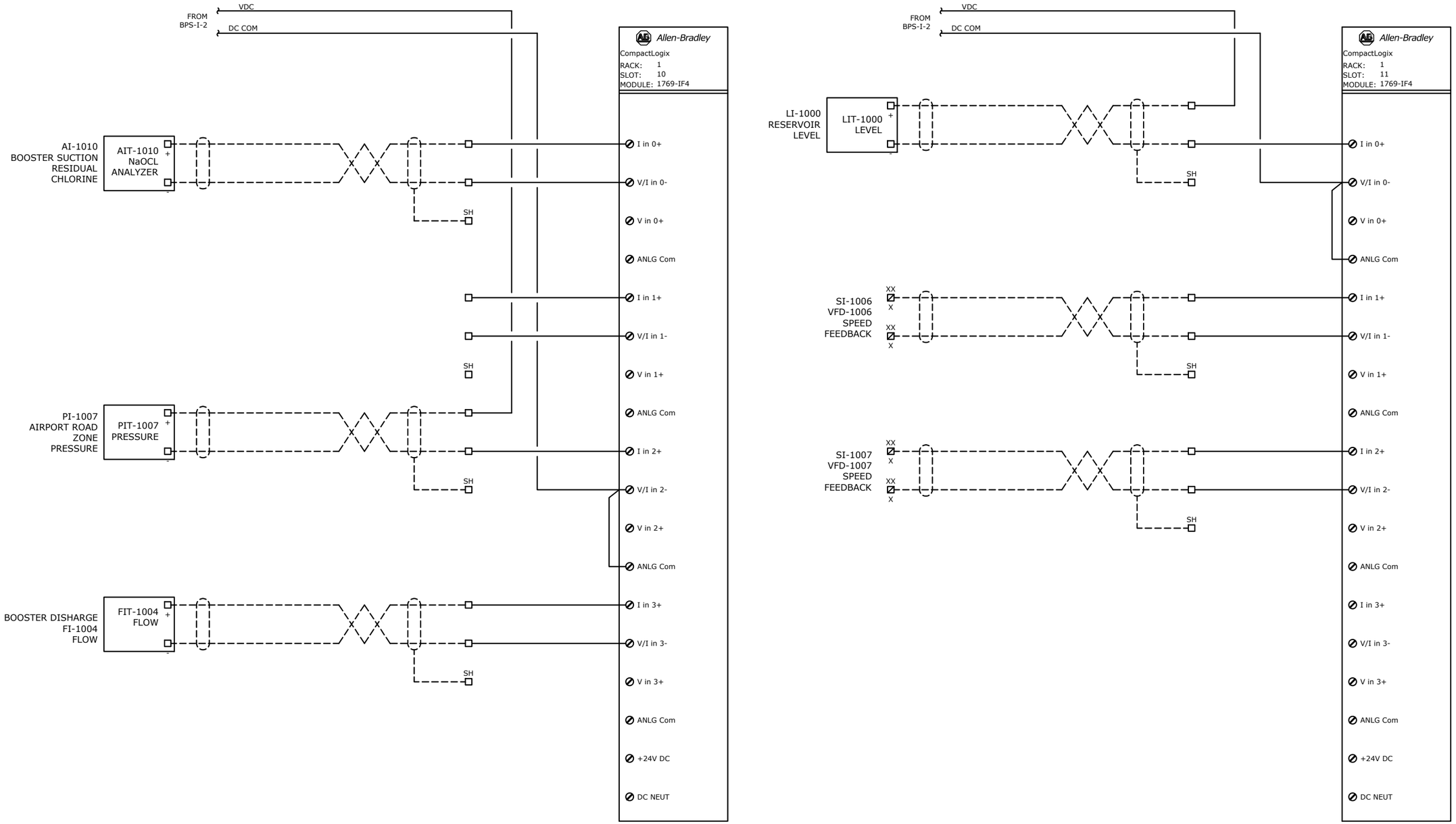
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PLC CONTROL PANEL
ANALOG INPUT WIRING SCHEMATIC

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS I-7
103 of 113



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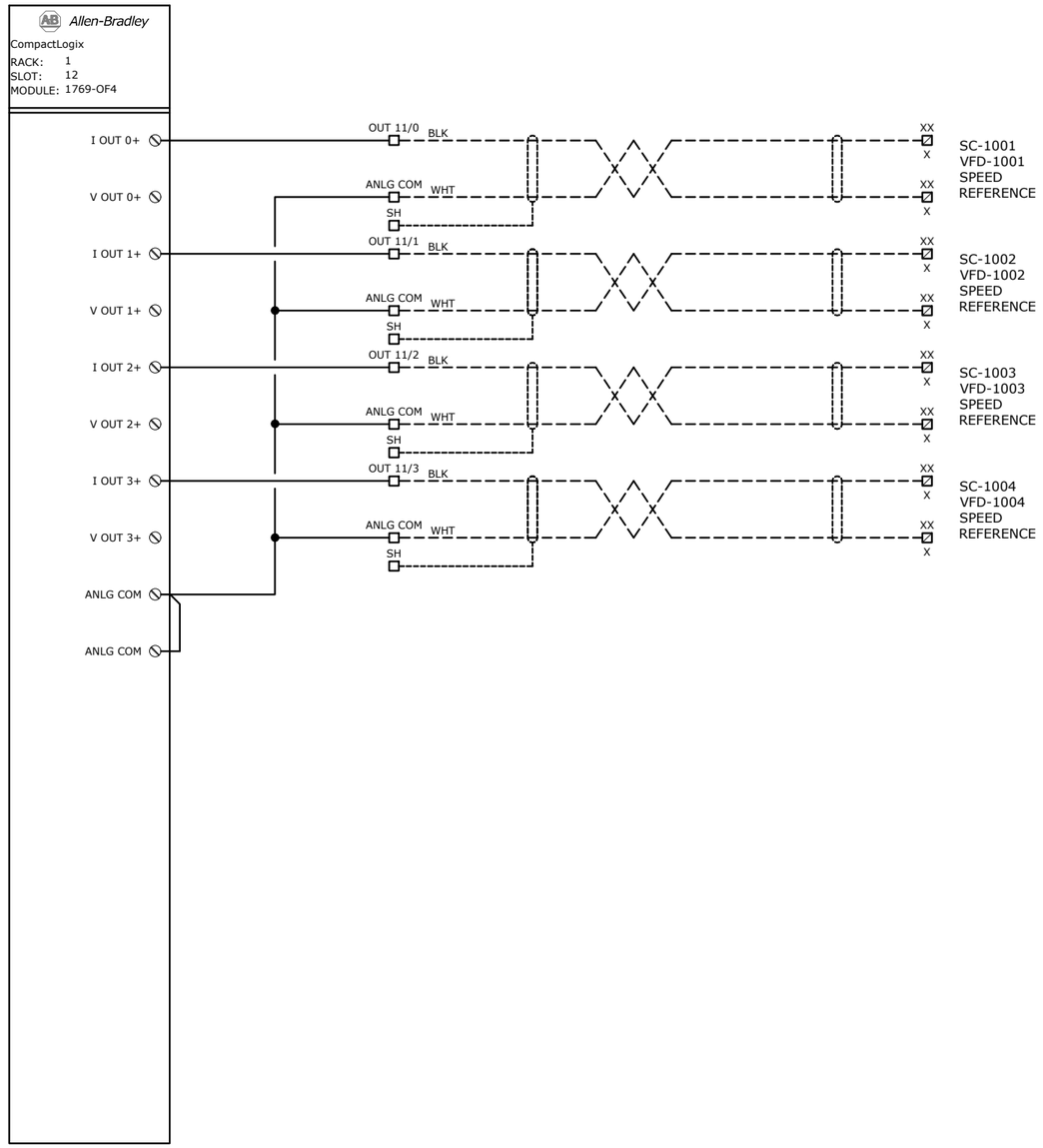
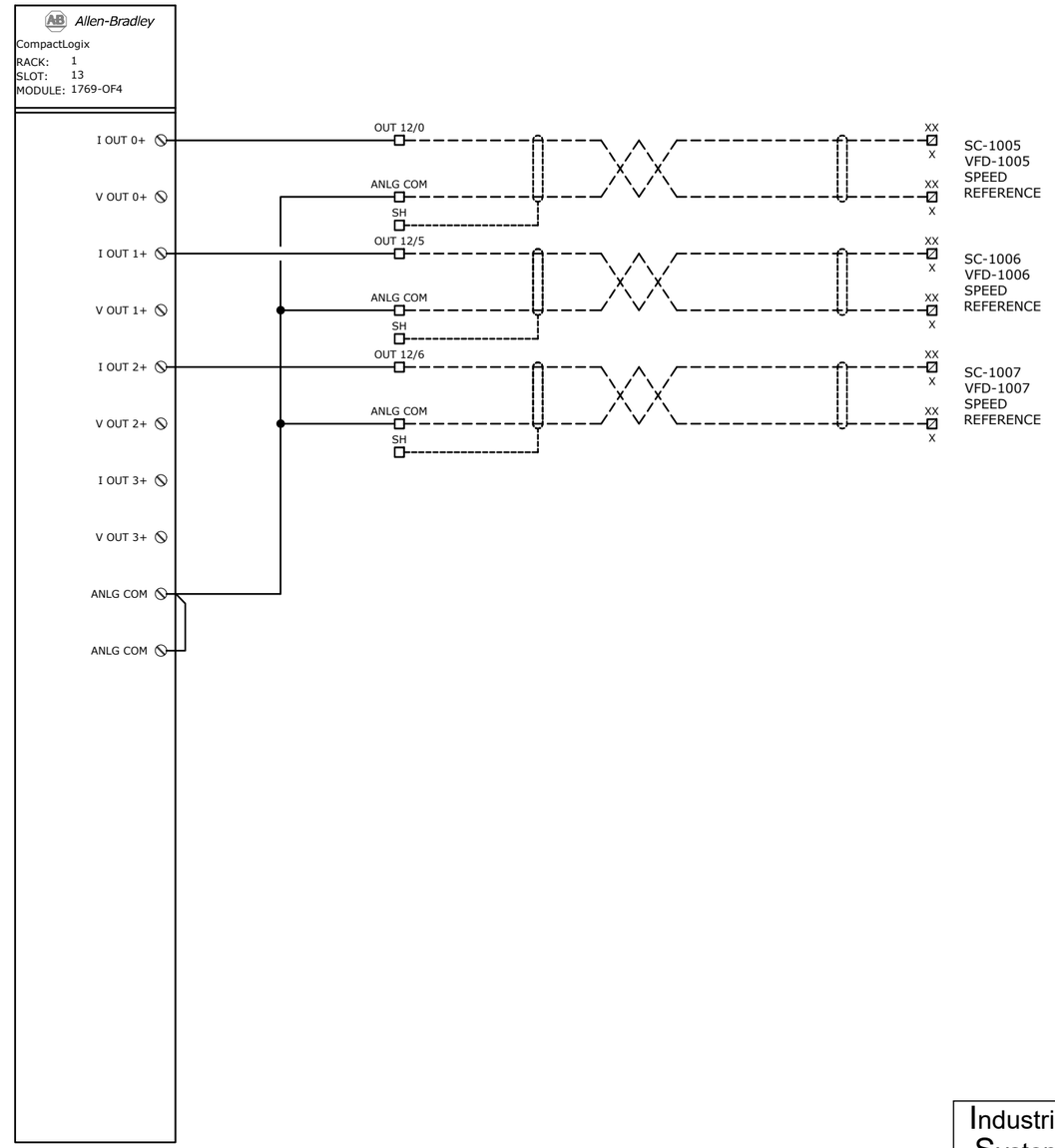
NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PLC CONTROL PANEL
ANALOG INPUT WIRING SCHEMATIC

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS I-8
104 of 113





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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

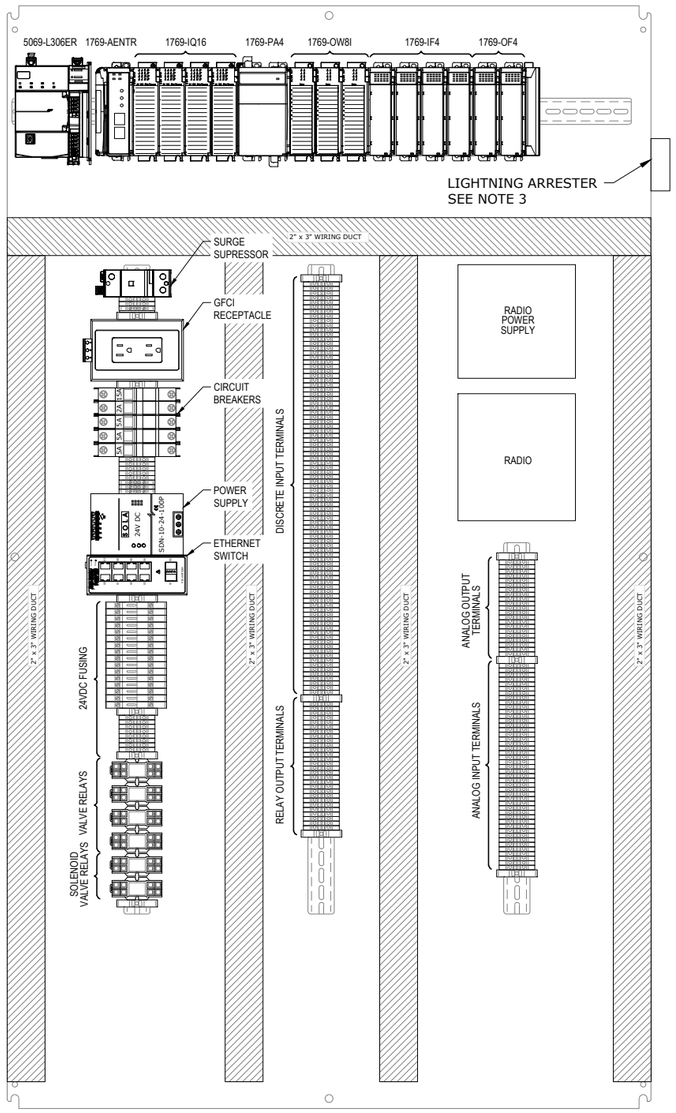
PLC CONTROL PANEL
ANALOG OUTPUT WIRING SCHEMATIC

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS I-9
105 of 113

NOTES:

1. PANEL ENCLOSURE SHALL BE MIN 60"H X 36"W X 12"D, NEMA 12 CARBON STEEL ENCLOSURE AND MEET THE SPECIFICATION REQUIREMENTS.
2. PANEL SHALL HAVE A LIGHT WITH EITHER MANUAL SWITCH OR MOTION DETECTOR.
3. MOUNT LIGHTNING ARRESTER FOR RADIO ON SIDE OF PANEL INTERIOR



CONTROL PANEL LAYOUT

3" = 1'-0"

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CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

INSTRUMENT LOCATION PLAN

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
BPS I-10
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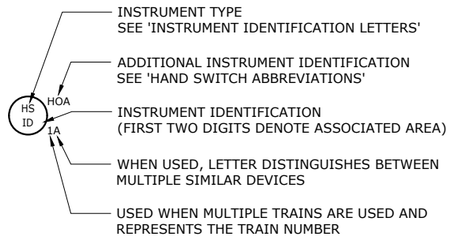
INSTRUMENT IDENTIFICATION LETTERS

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, FLAME, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE (TYPICALLY CONDUCTIVITY - ELECTRICAL)			CONTROL	CLOSED
D	USER'S CHOICE (TYPICALLY DENSITY OR SPECIFIC GRAVITY)	DIFFERENTIAL			DIVERT
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G	USER'S CHOICE OR GAUGING (DIMENSIONAL)		GLASS, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	USER'S CHOICE (TYPICALLY MOISTURE OR HUMIDITY)	MOMENTARY			MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		OPEN
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY OR HEAT DUTY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	THROUGH
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

TYPICAL INSTRUMENT TAG NUMBERS & DESIGNATION



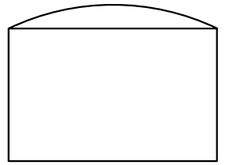
HAND SWITCH ABBREVIATIONS

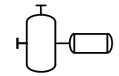
AO = AUTO/OFF
AM = AUTO/MANUAL
CM = COMPUTER/MANUAL
CL = COMPUTER LOCAL
ES = EMERGENCY STOP
FR = FORWARD/REVERSE
FOR = FORWARD/OFF/REVERSE
FS = FAST/SLOW
FOS = FAST/OFF/SLOW
HOA = HAND/OFF/AUTOMATIC
LLS = LEAD/LAG/STANDBY
LOC = LOCAL/OFF/COMPUTER
LOR = LOCAL/OFF/REMOTE
LOS = LOCKOUT/STOP
LA = LOCAL/AUTO
LR = LOCAL/REMOTE
OC = OPEN/CLOSE
OCA = OPEN/CLOSE/AUTO
OO = ON/OFF
OOA = ON/OFF/AUTO
OSC = OPEN/STOP/CLOSE
RES = RESET
RSL = RAISE/STOP/LOWER
SS = START/STOP
SOR = START/OFF/RESET
V/B = VFD/BYPASS

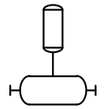
ABBREVIATIONS

AG	ABOVE GROUND
ATM	ATMOSPHERE
BL	BATTERY LIMIT
BTL	BOTTOM TANGENT LINE
BYP	BYPASS
CC	CHEMICAL CLEANOUT
CL	CENTERLINE
CO	CLEANOUT
CONN	CONNECTION
CSC	CAR SEAL CLOSED
CSO	CAR SEAL OPEN
CTR	CENTER
DCS	DISTRIBUTED CONTROL SYSTEM
DES	DESIGN
DIA	DIAMETER
DP	DESIGN PRESSURE
D/P	DIFFERENTIAL PRESSURE
DRN	DRAIN
DT	DESIGN TEMPERATURE
DWG	DRAWING
(E)	EXISTING
EL	ELEVATION
ESD	EMERGENCY SHUTDOWN
FOF	FACE OF FLANGE
(F)	FURNISHED
FC	FAIL CLOSED
FI	FAIL INDETERMINATE
FL	FAIL LOCKED (LAST POSITION)
FLG	FLANGE
FO	FAIL OPEN
FP	FULL PORT
FV	FULL VACUUM
GO	GEAR OPERATED
GR	GRADE
HC	HOSE CONNECTION
HDR	HEADER
HH	HAND HOLE
HOA	HAND/OFF/AUTOMATIC
HP	HIGH PRESSURE
HPT	HIGH POINT
IAS	INSTRUMENT AIR SUPPLY
ISBL	INSIDE BATTERY LIMITS
LC	LOCKED CLOSED
LCP	LOCAL CONTROL PANEL
LO	LOCKED OPEN
LP	LOW PRESSURE
LPT	LOW POINT
MTL	MATERIAL
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MOV	MOTOR OPERATED VALVE
MW	MANWAY
NC	NORMALLY CLOSED
NNF	NORMALLY NO FLOW
NO	NORMALLY OPEN
NOZ	NOZZLE
O/C	OPEN/CLOSE
O/O	ON/OFF
OIT	OPERATOR INTERFACE TERMINAL
OP	OUTPUT
OSBL	OUTSIDE BATTERY LIMITS
OVHD	OVERHEAD
PLC	PROGRAMMABLE LOGIC CONTROLLER
PRESS	PRESSURE
PV	PROCESS VARIABLE
(R)	RELOCATED
REQD	REQUIRED
RTD	RESISTANCE TEMPERATURE DETECTOR
SC	SAMPLE CONNECTION
SCH	SCHEDULE
SD	SHUTDOWN
SG	SPECIFIC GRAVITY
SIS	SAFETY INSTRUMENTED SYSTEM
SO	STEAM OUT
SP	SET POINT
SS	STAINLESS STEEL S/S START/STOP
STD	STANDARD
T/C	THERMOCOUPLE
TDH	TOTAL DIFFERENTIAL HEAD
TEMP	TEMPERATURE
THRD	THREADED
TL	TANGENT LINE
TSO	TIGHT SHUT-OFF
T/T	TANGENT TO TANGENT
TYP	TYPICAL
UG	UNDERGROUND
VNT	VENT
VAC	VACUUM
VB	VORTEX BREAKER
VFD	VARIABLE FREQUENCY DRIVE
W/	WITH
W/O	WITHOUT

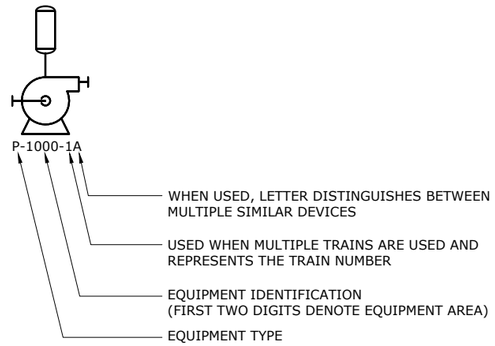
PROCESS EQUIPMENT


DOME ROOF TANK


HORIZONTAL CENTRIFUGAL PUMP


VERTICAL INLINE PUMP

TYPICAL EQUIPMENT TAG NUMBERS & DESIGNATION



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PROJECT#:20.48.01

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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TBC DESIGNED
JLB DRAWN
TBC CHECKED

REGISTERED PROFESSIONAL ENGINEER 88305PE OREGON MAY 14, 2019 MICHAEL E. WALLIS EXPIRES: 6/30/22

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PROCESS & INSTRUMENTATION DIAGRAM GENERAL NOTES AND ABBREVIATIONS

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET PID-1

GENERAL INSTRUMENT SYMBOLS

LOCATION/ACCESSIBILITY	DISCRETE INSTRUMENTS	SHARED DISPLAY AND CONTROL	PLC	DISCRETE HARDWARE INTERLOCK
FIELD MOUNTED 1. FIELD OR LOCALLY MOUNTED. 2. ACCESSIBLE TO AN OPERATOR AT DEVICE.	○	▢	◇	◇
PRIMARY LOCATION NORMALLY ACCESSIBLE TO AN OPERATOR 1. CENTRAL OR MAIN CONTROL ROOM. 2. FRONT OF MAIN PANEL OR CONSOLE MOUNTED. 3. VISIBLE ON VIDEO DISPLAY. 4. ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE.	⊖	▢	◇	
PRIMARY LOCATION NORMALLY INACCESSIBLE TO AN OPERATOR 1. CENTRAL OR MAIN CONTROL ROOM. 2. REAR OF PANEL OR CABINET MOUNTED. 3. NOT VISIBLE ON VIDEO DISPLAY. 4. NOT NORMALLY ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE.	⊖	▢	◇	
AUXILIARY LOCATION NORMALLY ACCESSIBLE TO AN OPERATOR 1. SECONDARY OR LOCAL CONTROL ROOM. 2. FIELD OR LOCAL CONTROL PANEL. 3. FRONT OF SECONDARY OR LOCAL PANEL MOUNTED. 4. VISIBLE ON VIDEO DISPLAY. 5. ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE.	⊖	▢	◇	
AUXILIARY LOCATION NORMALLY INACCESSIBLE TO AN OPERATOR 1. SECONDARY OR LOCAL CONTROL ROOM. 2. FIELD OR LOCAL CONTROL PANEL. 3. REAR OF SECONDARY OR LOCAL PANEL OR CABINET MOUNTED. 4. NOT VISIBLE ON VIDEO DISPLAY. 5. NOT NORMALLY ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE.	⊖	▢	◇	

PIPING LINE SYMBOLS

PRIMARY (AG & UG)

SECONDARY / UTILITY (AG & UG)

FUTURE OR EXISTING ON NEW P&IDs

JACKETED OR DOUBLE CONTAINMENT

INSTRUMENT LINE SYMBOLS

INSTRUMENT SUPPLY OR CONNECTION TO PROCESS

PNEUMATIC SIGNAL

ELECTRIC SIGNAL

HYDRAULIC SIGNAL

CAPILLARY TUBE

ELECTROMAGNETIC, SONIC, OPTICAL, OR NUCLEAR SIGNAL

SOFTWARE OR DATA LINK

MECHANICAL LINK

OFF-PAGE CONNECTORS AND TIE-IN SYMBOL

A. OFF-PLOT CONNECTOR

CONNECTOR NUMBER — XXXX | P&ID NO — SERVICE DESCRIPTION / ORIGIN/DESTINATION

B. PRIMARY/SECONDARY LINES AND INSTRUMENT SIGNAL CONNECTOR

CONNECTOR NUMBER — XXXX | P&ID NO — SERVICE DESCRIPTION / ORIGIN/DESTINATOIN

C. UTILITY CONNECTOR

CONNECTOR NUMBER — XXXXX / P&ID NO

D. TIE-IN SYMBOL

TIE-IN NUMBER — T / XXX

LINE DATA IDENTIFICATION

UNIT/AREA (NUMERIC)	SERVICE (ALPHA)	SEQUENCE (NUMERIC)	SIZE (NUMERIC)	LINE CLASS (NOTE 1)
XX	XXX	XXXXX	XXXX	XXXXXXXXXX

INSUL. TYPE (NOTE 2)	THICKNESS (NUMERIC)	OPTIONAL (USER DEFINED)
XXXX	XXXX	XXXX

DRAIN CONNECTORS

CLOSED DRAIN

CONNECTOR NUMBER — XXXX
DESTINATION LINE — YYY
SERVICE CODE — P&ID#

OPEN DRAIN

CONNECTOR NUMBER — XXXX
DESTINATION LINE — YYY
SERVICE CODE — P&ID#

CLOSED DRAIN (NO P&ID)

DESTINATION LINE — YYY
SERVICE CODE

OPEN DRAIN (NO P&ID)

DESTINATION LINE — YYY
SERVICE CODE

PRIMARY ELEMENT SYMBOLS (FLOW)

XX — GENERAL SYMBOL IN-LINE ELEMENT XX = FS, FG, FE, FT

FT — XXXX — IN-LINE FLOW ELEMENT WITH INTEGRAL TRANSMITTER XXXX = MASS, CORIOLIS, THERMAL, INT. ORIFICE ...

FT / FE — XXXX — IN-LINE FLOW ELEMENT WITH SEPARATE TRANSMITTER XXXX = MASS, CORIOLIS, THERMAL...

ORIFICE

M — MAGNETIC

TURBINE OR PROPELLER

ULTRASONIC

VORTEX

PITOT TUBE

AVERAGING PITOT TUBE

FLOW NOZZLE

VENTURI

WEDGE METER

LIT — RADAR (NON-CONTACT)

LE — ULTRASONIC LEVEL SENSOR

LE — FLOAT SWITCH

FI — ROTAMETER WITH INTEGRAL VALVE (SHOWN WITH OPTIONAL INTEGRAL VALVE)

FS* — FLOW SWITCH * = H/L

FG — FLOW GLASS

FLOW CONDITIONING DEVICES (e.g., STRAIGHTENING VANES)

FO — RESTRICTION ORIFICE

ROTAMETER

AE X / ID — GENERAL ANALYZER
X INDICATED TYPE
pH = HYDROGEN POTENTIAL
DO = DISSOLVED OXYGEN
H2S = HYDROGEN SULFIDE
LEL = LOWER EXPLOSIVE LIMIT
O2 = OXYGEN
ORP = OXYGEN REDUCTION POTENTIAL

FLUME

WEIR

POSITIVE DISPLACEMENT

ORIFICE IN QUICK CHANGE FITTING

TARGET

ANNULAR SEAL

FLANGE CONNECTION

MISCELLANEOUS INSTRUMENT SYMBOLS

CHEMICAL SEAL- DIAPHRAGM

X — PILOT LIGHT OR GAUGE GLASS ILLUMINATOR
X INDICATES COLOR
R = RED B = BLUE G = GREEN
A = AMBER W = WHITE

DUAL FUNCTION OR INSTRUMENTS SHARING COMMON HOUSING

I — UNDEFINED INTERLOCK LOGIC

MCC — INDICATES INTERLOCK OR LOGIC IN A MOTOR CONTROL CENTER

MS — MOTOR STARTER

SCR — SILICON CONTROLLED RECTIFIER

VFD — VARIABLE FREQUENCY DRIVE

ISR — INTRINSIC SAFE RELAY

ISB — INTRINSIC SAFE BARRIER

R — RELAY

FC 1230-99 — INSTRUMENT WITH LONG TAG NUMBER

OIT — OPERATOR INTERFACE TERMINAL

MISC. DEVICE OR PANEL PROVIDED BY VENDOR PACKAGE

INSTRUMENT FUNCTION SYMBOLS

Σ — SUMMING

AVERAGING

DIFFERENCE

X — MULTIPLYING

÷ — DIVIDING

√ — SQUARE ROOT

x^n — EXPONENTIAL

/ — CONVERSION INPUT/OUTPUT */*

> — HIGH SELECT

< — LOW SELECT

HIGH LIMIT

LOW LIMIT

± — BIAS

f(x) — UNSPECIFIED FUNCTION

USER DEFINED

A ANALOG
B BINARY
D DIGITAL
E VOLTAGE
H HYDRAULIC
I CURRENT
O ELECTROMAGNETIC, SONIC
P PNEUMATIC
R RESISTANCE (ELECTRICAL)

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NO.	DATE	BY	REVISION

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TBC DESIGNED
JLB DRAWN
TBC CHECKED

REGISTERED PROFESSIONAL ENGINEER 88305PE OREGON MAY 14, 2019 MICHAEL E. WALLIS EXPIRES: 6/30/22

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PROCESS & INSTRUMENTATION DIAGRAM SYMBOLS - 1

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET PID-2

VALVE SYMBOLS

- GATE VALVE
- CHECK VALVE
- STOP CHECK VALVE
- GLOBE VALVE
- BUTTERFLY VALVE
- NEEDLE VALVE
- BALL VALVE
- GENERIC ROTARY VALVE
- PLUG VALVE
- DIAPHRAGM VALVE
- 3-WAY VALVE
- 4-WAY VALVE
- PINCH VALVE
- ANGLE VALVE
- KNIFE VALVE

CONTROL VALVE ACTUATOR SYMBOLS

- MANUAL OPERATOR
- DIAPHRAGM
- PRESSURE BALANCED DIAPHRAGM
- HANDWHEEL WITH ACTUATOR
- CYLINDER - PISTON
- MOTOR OPERATED - CONSTANT SPEED
- MOTOR OPERATED - VARIABLE SPEED
- ELECTRO-HYDRAULIC
- SINGLE SOLENOID
- SINGLE SOLENOID - MANUAL RESET
- SINGLE SOLENOID - REMOTE RESET

PIPING FITTINGS

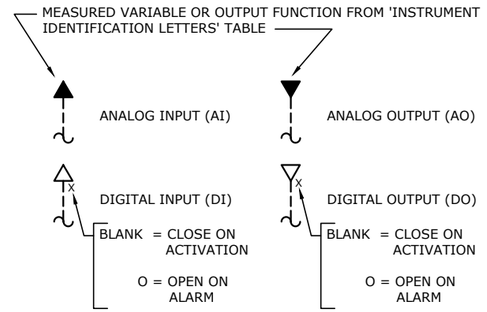
- FLANGE
- WELDED CONNECTION
- CAP
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- HOSE CONNECTION
- SPACER
- BLANK
- OPEN FIGURE 8 BLIND
- CLOSED FIGURE 8 BLIND
- PLUG
- BLIND FLANGE

ELECTRICAL / AIR SOURCES

- UPS — UPS POWER VIA PCSS PROVIDED UPS DIRECT CONNECTION
- UPS — UPS POWER VIA PCSS PROVIDED UPS LIGHTING PANEL
- ES — PCSS PROVIDED PANEL ELECTRICAL SOURCE
- ES — VENDOR SUPPLIED PANEL ELECTRICAL SOURCE
- ES — NON-PCSS SUPPLIED PANEL ELECTRICAL SOURCE
- IA — INSTRUMENT AIR SOURCE

NOTE 1: ALL POWER SOURCES ARE 230 VAC UNLESS OTHERWISE STATED ON THE DRAWINGS
NOTE 2: REFER TO UPS SPECIFICATIONS FOR POWER REQUIREMENTS OF PANEL
NOTE 3: REFER TO OTHER SPECIFICATION SECTIONS FOR POWER REQUIREMENTS OF INSTRUMENTS

INPUT / OUTPUT SIGNALS



PIPING SPECIALTY ITEMS

- Y-TYPE STRAINER
- CONE STRAINER
- T-TYPE STRAINER
- DUPLEX STRAINER
- BASKET STRAINER
- TEMPORARY STRAINER
- FILTER
- DETONATION ARRESTOR
- FLAME ARRESTOR
- STEAM TRAP
- EXHAUST HEAD
- IN-LINE SILENCER
- VENT SILENCER
- EJECTOR
- REMOVABLE SPOOL
- DESUPERHEATER
- FLEXIBLE HOSE
- EXPANSION JOINT
- DAMPER
- BREATHER
- VENT COVER
- IN-LINE MIXER
- DIVERTER VALVE
- ROTARY VALVE
- EXCESS FLOW VALVE
- PULSATION DAMPENER

SELF-ACTUATED DEVICES

- RUPTURE DISC - PRESSURE RELIEF SAFETY HEAD FOR PRESSURE RELIEF (EXPLOSION PANEL)
- RUPTURE DISC - VACUUM RELIEF SAFETY HEAD FOR VACUUM RELIEF (EXPLOSION PANEL)
- PRESSURE RELIEF - SAFETY VALVE
- VACUUM RELIEF VALVE
- PRESSURE AND VACUUM RELIEF VALVE CONSERVATION VENT
- PILOT OPERATED RELIEF VALVE WITH REMOTE SENSOR (USE APPROPRIATE RELIEF VALVE SYMBOL)
- PRESSURE REDUCING REGULATOR (SELF-CONTAINED)
- BACK PRESSURE REGULATOR (SELF-CONTAINED)
- BACK PRESSURE REGULATOR W/ EXTERNAL TAP
- PRESSURE REDUCING REGULATOR W/ EXTERNAL TAP
- DIFFERENTIAL PRESSURE REDUCING REGULATOR
- TEMPERATURE REGULATOR FILLED SYSTEM TYPE

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OR CCB #196597 WA #INDUSSI880K9
AK #1018436
PROJECT#:20.48.01

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TBC DESIGNED
JLB DRAWN
TBC CHECKED

REGISTERED PROFESSIONAL ENGINEER 88305PE OREGON MAY 14, 2019 MICHAEL E. WALLIS EXPIRES: 6/30/22

murraysmith

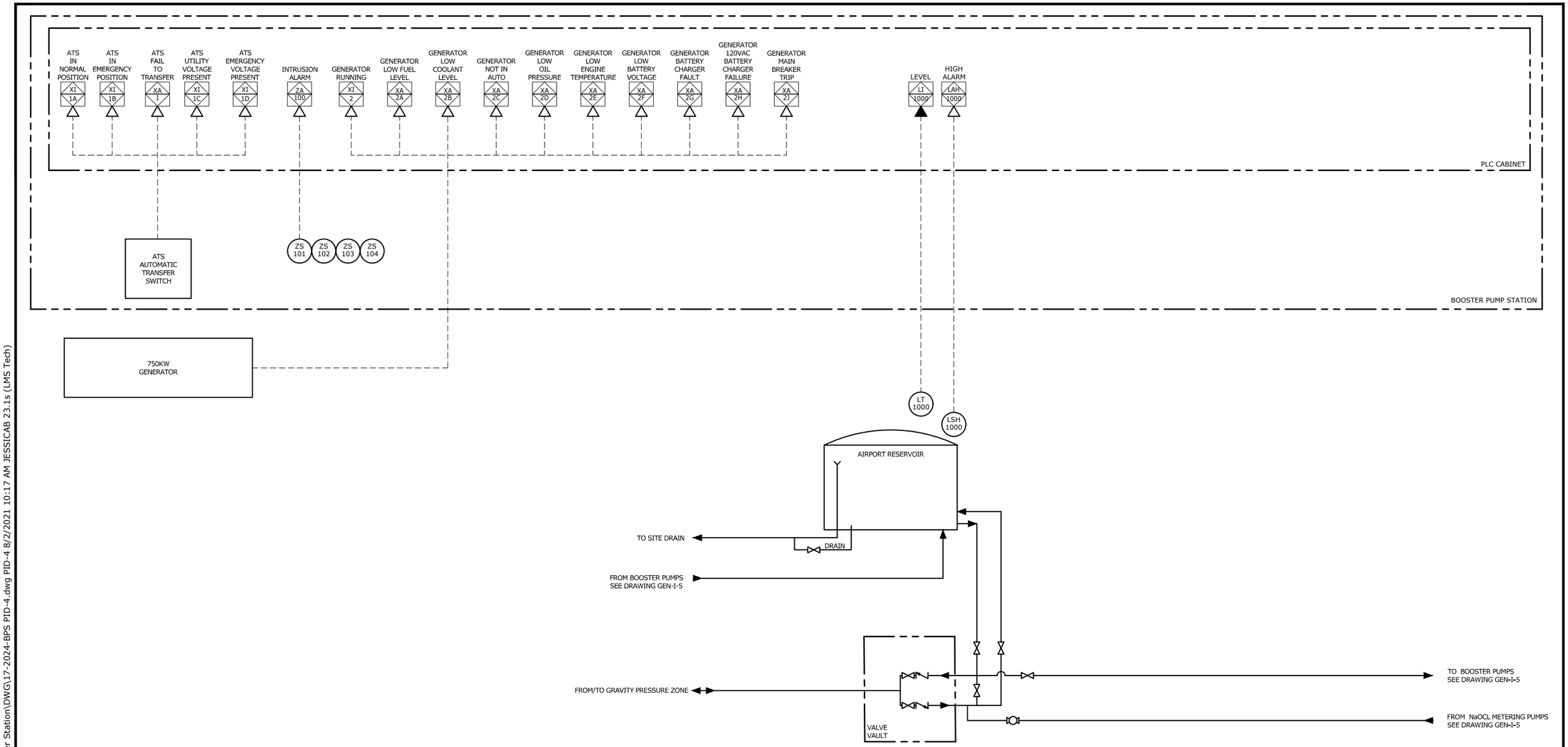
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PROCESS & INSTRUMENTATION DIAGRAM SYMBOLS - 2

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
PID-3
109 of 113



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NOTES:

1. METERING PUMPS ARE CONTROLLED BY SELF-CONTAINED VFD'S.

NO.	DATE	BY	REVISION

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JLB DRAWN
TBC CHECKED

REGISTERED PROFESSIONAL ENGINEER 68305PE OREGON MAY 14, 2019 MICHAEL E. WALLIS EXPIRES: 6/30/22

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PROCESS AND INSTRUMENTATION DIAGRAM - 1

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET
PID-4
110 of 113

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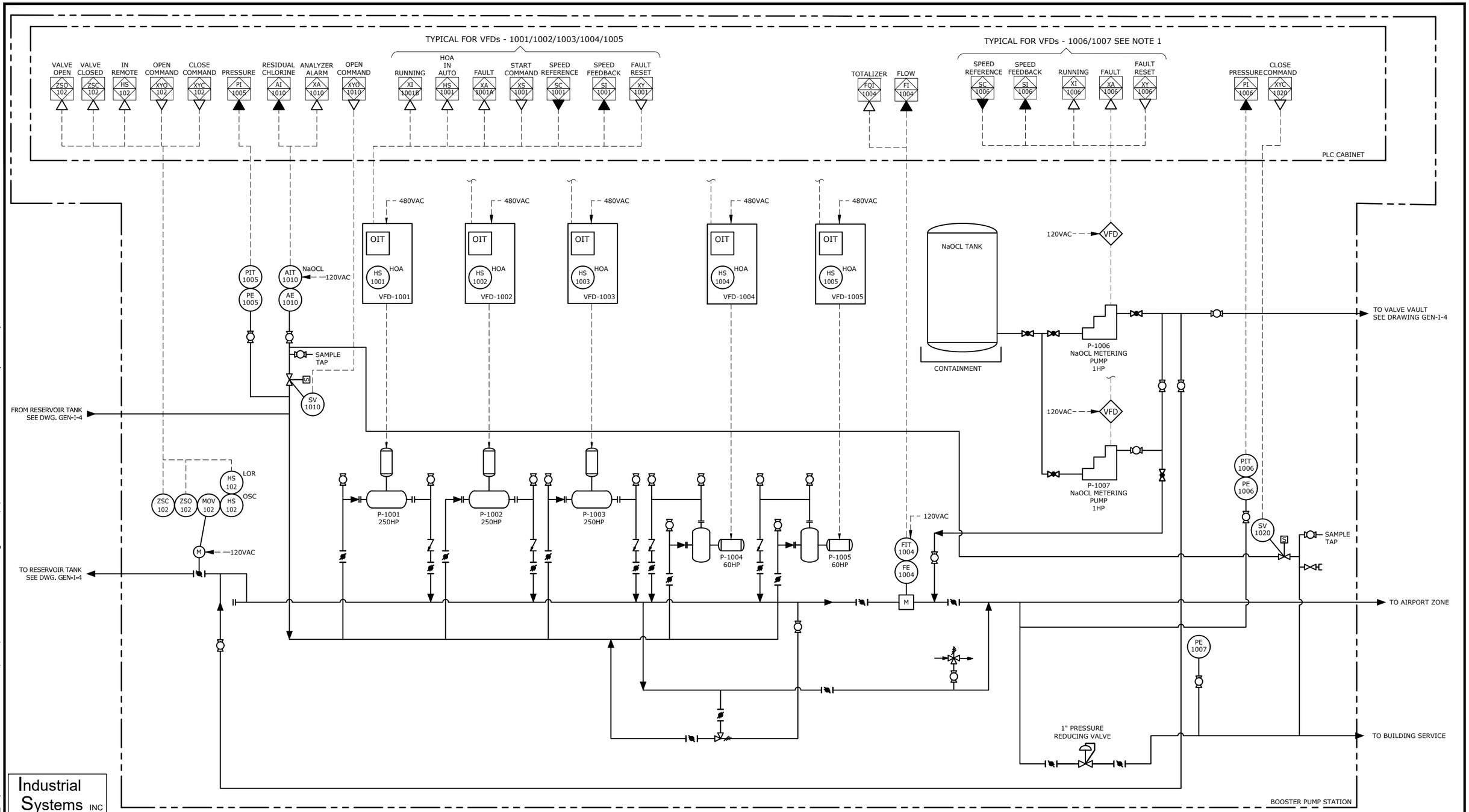

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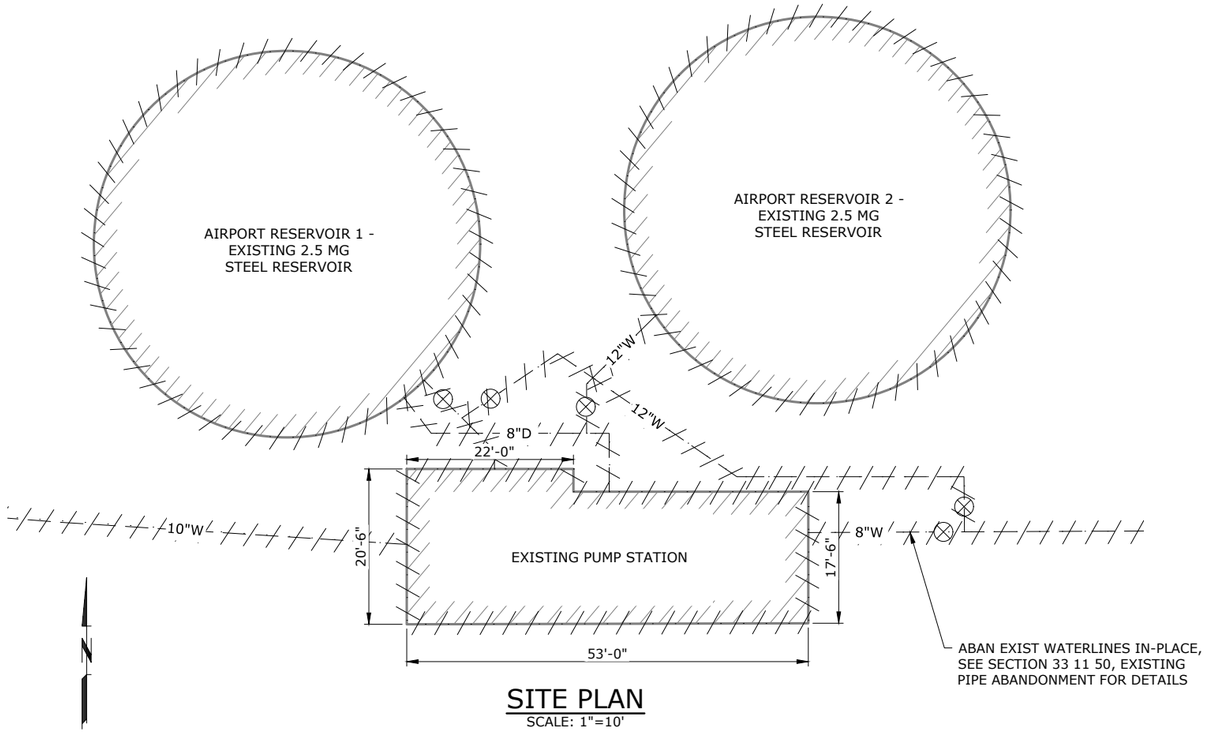
CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE C BOOSTER PUMP STATION

PROCESS AND INSTRUMENTATION DIAGRAM - 2

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: MAY 2021

SHEET PID-5



SITE PLAN
SCALE: 1"=10'

SHEET NOTES:

1. ALL EXISTING VALVE OPERATION TO BE PERFORMED BY CITY PUBLIC WORKS PERSONNEL.

2. SALVAGE PUMPS, VALVES, AND FITTINGS AND DELIVER TO CITY SHOPS. COORDINATE WITH OWNER'S REPRESENTATIVE.

3. SALVAGE EXISTING TELEMETRY PANEL AND DELIVER TO CITY SHOPS. COORDINATE WITH OWNER'S REPRESENTATIVE.

DEMOLITION SEQUENCING NOTES:

1. COORDINATE WITH CITY PUBLIC WORKS STAFF TO CLOSE VALVES ON 12-INCH DIAMETER INLET/OUTLET WATERLINES FOR BOTH RESERVOIRS.

2. COORDINATE DRAINING THE RESERVOIRS WITH CITY. CITY TO FEED INTO SUPPLY AS MUCH WATER FROM THE RESERVOIR AS POSSIBLE. REMAINING WATER TO BE DECHLORINATED AND DRAINED.

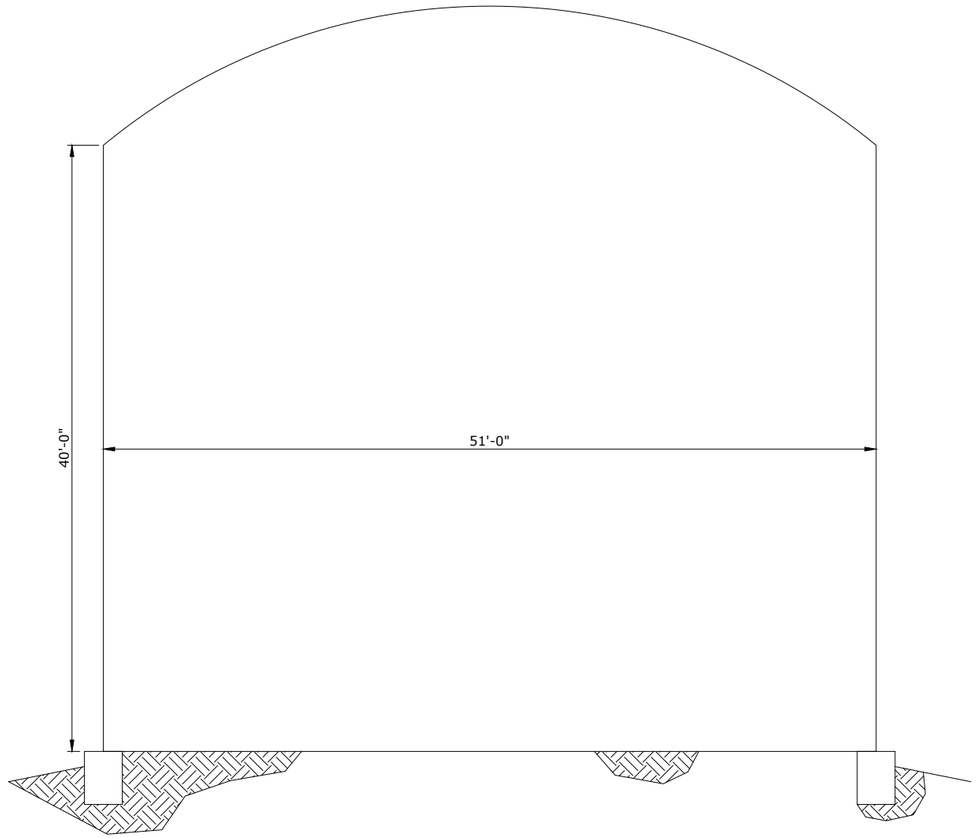
3. ABANDON ELECTRICAL AND TELEMETRY EQUIPMENT. REUSE AS NOTED IN SPECIFICATIONS. ALL DRIVES AND TELEMETRY EQUIPMENT TO BE DELIVERED TO CITY.

4. DEMOLISH AND REMOVE EXISTING AIRPORT RESERVOIRS 1 AND 2 AND FOUNDATIONS. BACKFILL AREAS WHERE STRUCTURES AND PIPING IS REMOVED WITH ¾"-0" COMPACTED CRUSHED ROCK. SEE SPECIFICATIONS.

5. ABANDON EXISTING PIPING AS NECESSARY. BACKFILL AREAS WHERE PIPING IS REMOVED WITH ¾"-0" COMPACTED CRUSHED ROCK. SEE SPECIFICATIONS.

6. DEMOLISH AND REMOVE PUMP STATION. BACKFILL AREAS WHERE STRUCTURES AND PIPING IS REMOVED WITH ¾"-0" COMPACTED CRUSHED ROCK. SEE SPECIFICATIONS.

PUMP STATION BUILDING INTERIOR
SCALE: NTS



TYP RESERVOIR ELEVATION
SCALE: NTS

NO.	DATE	BY	REVISION

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0 ½ 1
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TMS DESIGNED
TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE D DEMOLITION & REMOVAL OF EXISTING FACILITIES

DEMOLITION PLAN - AIRPORT RESERVOIRS 1 & 2, AIRPORT PUMP STATION

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
DEM-D-1
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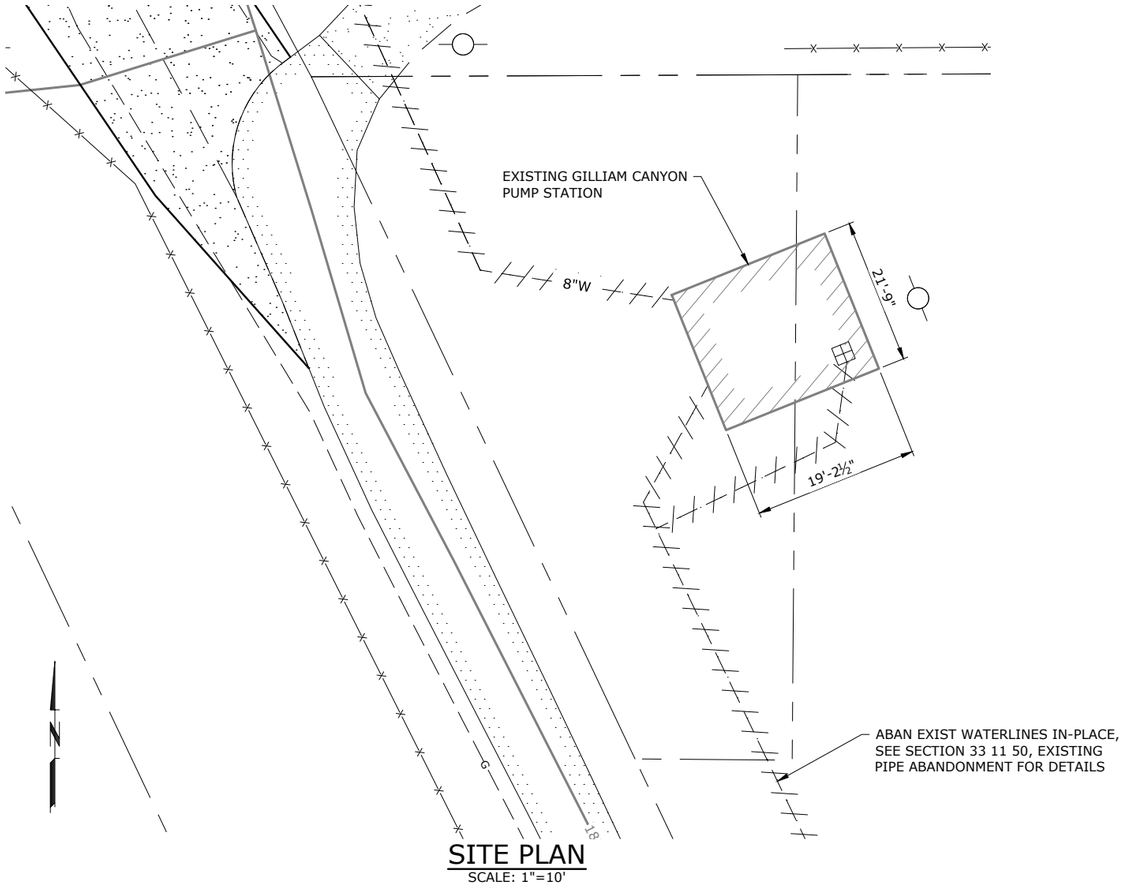

SITE PLAN
SCALE: 1"=10'

PUMP STATION BUILDING EXTERIOR ELEVATION
SCALE: NTS

PUMP STATION BUILDING INTERIOR
SCALE: NTS

SHEET NOTES:

1. ALL EXISTING VALVE OPERATION TO BE PERFORMED BY CITY PUBLIC WORKS PERSONNEL.

2. SALVAGE PUMPS, VALVES, AND FITTINGS AND DELIVER TO CITY SHOPS. COORDINATE WITH OWNER'S REPRESENTATIVE.

3. SALVAGE EXISTING TELEMETRY PANEL AND DELIVER TO CITY SHOPS. COORDINATE WITH OWNER'S REPRESENTATIVE.

DEMOLITION SEQUENCING NOTES:

1. COORDINATE WITH CITY PUBLIC WORKS STAFF TO CLOSE ANY VALVES AND CEASE OPERATION OF PUMP STATION.

2. ABANDON ELECTRICAL AND TELEMETRY EQUIPMENT. REUSE AS NOTED IN SPECIFICATIONS. ALL DRIVES AND TELEMETRY EQUIPMENT TO BE DELIVERED TO CITY.

3. ABANDON EXISTING PIPING AS NECESSARY. BACKFILL AREAS WHERE PIPING IS REMOVED WITH ¾"-0" COMPACTED CRUSHED ROCK. SEE SPECIFICATIONS.

4. DEMOLISH AND REMOVE PUMP STATION. BACKFILL AREAS WHERE STRUCTURES AND PIPING IS REMOVED WITH ¾"-0" COMPACTED CRUSHED ROCK. SEE SPECIFICATIONS.

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMS DESIGNED
TMS DRAWN
LLA CHECKED

REGISTERED PROFESSIONAL ENGINEER 76386 OREGON DECEMBER 29, 2006 LAEL L. ALDERMAN
RENEWS 12-31-21

murraysmith

CITY OF PENDLETON INCORPORATED 1880 OREGON

NEW AIRPORT RESERVOIR & BOOSTER STATION PROJECT - SCHEDULE D DEMOLITION & REMOVAL OF EXISTING FACILITIES

DEMOLITION PLAN - GILLIAM CANYON PUMP STATION

PROJECT NO.: 17-2024 | SCALE: AS SHOWN | DATE: AUGUST 2021

SHEET
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