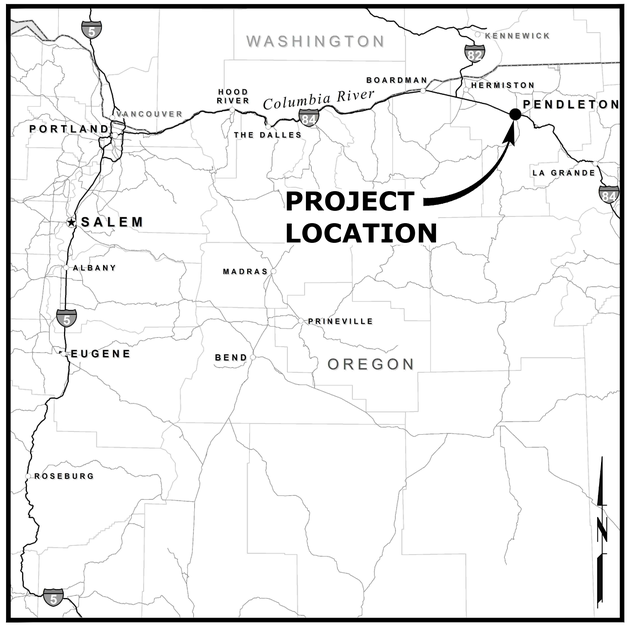
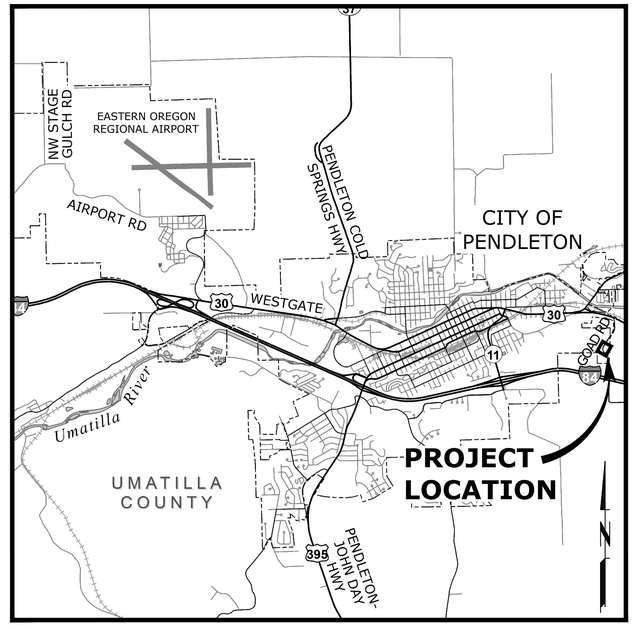
EAST END BOOSTER PUMP STATION

JANUARY 2023



LOCATION MAP
SCALE: 1" = 30 MILES

INDEX OF DRAWINGS



VICINITY MAP
SCALE: 1"=3,500'

consor
345 BOBWHITE COURT, SUITE 230
BOISE, IDAHO 83706
P 208.947.9033

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.)

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

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		VALVE NUMBER
		BUTTERFLY VALVE	V-100
		BALL VALVE	V-200
		PLUG VALVE (TOP)	V-300
		PLUG VALVE (SIDE)	V-300
		SWING CHECK VALVE	V-400
		BALL CHECK	V-401
		GATE VALVE	V-500
	K	KNIFE GATE VALVE	V-501
		NEEDLE VALVE	V-600
		GLOBE VALVE	V-700
		RELIEF VALVE	V-800
		BACKFLOW PREVENTER	V-900
		HOSE VALVE	V-1000
		PRESSURE REDUCING VALVE	V-1100
		SOLENOID VALVE	V-1200
		HOSE BIBB	

EXAMPLE PIPE CALL OUT

PIPE SIZE — FLOW STREAM MATERIAL

8"-LPA-DI

EXAMPLE VALVE CALL OUT

VALVE SIZE — VALVE NUMBER

8" V-100

FLOW STREAM ABBREVIATIONS

W	POTABLE WATER
SD	STORM DRAIN
D	BUILDING DRAIN

EQUIPMENT CALL OUT

CORRESPONDS TO P&ID

MIX-542

PIPE MATERIAL TRANSITION

PIPE MATERIAL THIS SIDE — SS / PE — PIPE MATERIAL THIS SIDE

PICTURE DETAILS

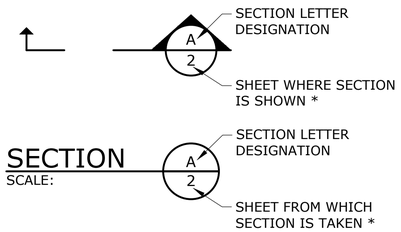
X — DENOTES PICTURE NUMBER AND DIRECTION OF PHOTO.

TOPOGRAPHIC LEGEND

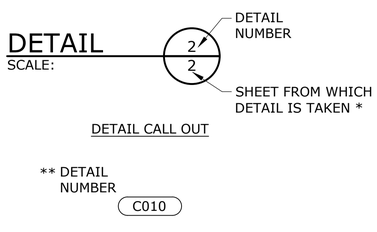
	EXIST	PROPOSED
WATERLINE	10"W	12"DI W
ELECTRICITY	E	E
GAS	4"G	4"G
TELEPHONE/TELEMETRY	T	T
CABLE TELEVISION	CATV	CATV
SANITARY SEWER LINE	8"SS	8"SS
SANITARY SEWER FORCE MAIN	6"FM	6"FM
STORM DRAIN	8"SD	8"SD
CULVERT	18"D	18"D
OVERHEAD ELECTRICITY	OVHD E	
ABANDON PIPE		
DRAINAGE DITCH		
BARBWIRE FENCE	X X X	X X X
CHAIN LINK FENCE		
TEMPORARY SILT FENCE		
GUARDRAIL		
TREE/BUSH LINE		
CENTERLINE		
EASEMENT/PROPERTY LINE		
RIGHT-OF-WAY		
EDGE OF PAVEMENT/AC		
EDGE OF GRAVEL		
CURB		
SIDEWALK	S/W	
STRUCTURE OR FACILITY		
CONTOUR MINOR		
CONTOUR MAJOR	200	200
RIPRAP		
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		
TEST PIT		
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.
** NOTE: STANDARD DETAILS ARE ON DETAIL SHEETS.

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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

HKP DESIGNED

DKH DRAWN

KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 15, 2015 KRIST OF OR R. SNIDER RENEWS 6-30-24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

GENERAL

SYMBOLS AND LEGEND

SHEET G-2

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

I:\boi_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-G.dwg G-2 2/22/2023 7:57 AM JUSTIN.DEUEL 23.0s (LMS Tech)

@	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
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS
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
BLDG	BUILDING
BLK	BLOCK
BLVD	BOULEVARD
BM	BENCHMARK / BEAM
BMP	BEST MANAGEMENT PRACTICES
BO	BLOWOFF
BOC	BACK OF CURB
BOT	BOTTOM
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
CJ	CONSTRUCTION JOINT
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
EA	EACH
ECC	ECCENTRIC
EF	EACH FACE
EL	ELEVATION
ELB	ELBOW
ELEC	ELECTRICAL
ENCL	ENCLOSURE
EOP	EDGE OF PAVEMENT
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EW	EACH WAY
EXC	EXCAVATE
EXIST	EXIST
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	FINISHED FLOOR / FAR FACE
FGL	FIBERGLASS
FH	FIRE HYDRANT
FIN	FINISH(ED)
FIPT	FEMALE IRON PIPE THREAD
FITP	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
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
HNDRL	HAND RAIL
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
HORIZ	HORIZ
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	MAX
MCC	MOTOR CONTROL CENTER
MCP	MASTER CONTROL PANEL
MECH	MECHANICAL
MET	METAL
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MIN
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
POT	POINT OF TANGENCY
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PRCST	PRECAST
PREP	PREPARATION
PRESS	PRESSURE
PRKG	PARKING
PROP	PROPOSED / PROPERTY
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
REF	REFERENCE
REINF	REINFORCE(D)(ING)(MENT)
REQ'D	REQUIRED
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 BENCH MARK
TC	TOP OF CONCRETE / TOP OF CURB
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE / TEMPORARY
T&G	TONGUE & GROOVE
THK	THICKNESS
THRD	THREAD (ED)

THRU	THROUGH
TP	TEST PIT
TRANS	TRANSITION
TSP	TRI-SODIUM PHOSPHATE
TST	TOP OF STEEL
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
UGB	URBAN GROWTH BOUNDARY
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/O	W/O
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

NOTICE

0 ½ 1

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

HKP DESIGNED

DKH DRAWN

KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 16, 2018 KRISTOFOR R. SNIDER

RENEWS 6-30-24

consor

CITY OF PENDLETON OREGON INCORPORATED 1880

EAST END BOOSTER PUMP STATION

GENERAL

ABBREVIATIONS

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET G-3

I:\boi_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-G.dwg G-3 2/22/2023 7:57 AM JUSTIN.DEUEL 23.0s (LMS Tech)

GENERAL NOTES

1. THE CONTRACTOR SHALL POTHOLE AND VERIFY LOCATIONS, ELEVATIONS, TYPES AND SIZES OF ALL EXIST UTILITIES PRIOR TO CONSTRUCTING NEW PIPING FAR ENOUGH IN ADVANCE TO ALLOW NECESSARY ADJUSTMENTS IN GRADE AND SHALL NOTIFY ENGINEER OF NEED TO ADJUST PIPING INSTALLATION ACCORDINGLY. POTHOLING SHALL SUFFICIENTLY PRECEDE LAYING OF PIPE TO ALLOW REQ'D ELEVATION ADJUSTMENTS TO BE ACCOMPLISHED W/O REWORK. ELEVATION ADJUSTMENTS SHALL BE EXPECTED AND ARE INCIDENTAL TO THE WORK. DEFLECT PIPE AS REQ'D TO AVOID EXIST UTILITIES AND COMPLETE TIE-INS, MAXIMUM ALLOWABLE DEFLECTION SHALL NOT EXCEED ONE-HALF (1/2) THE MAXIMUM INSTALLED DEFLECTION ALLOWED BY MANUFACTURER.

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

3. CONTRACTOR SHALL PROVIDE OWNER'S REPRESENTATIVE WITH MIN 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 EXIST 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. 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 EXIST 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.

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

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

9. THE CONTRACTOR SHALL DISPOSE OF ALL REMOVED OR REPLACED MATERIAL AND EQUIPMENT IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

10. CONTRACTOR TO LEAVE ALL AREAS OF PROJECT FREE OF DEBRIS AND UNUSED CONSTRUCTION MATERIAL UPON COMPLETION.

11. 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.

12. PRIOR TO BACKFILLING ANY UTILITY CONTRACTOR SHALL NOTIFY CITY STAFF TO OBTAIN GIS INFORMATION ON ALL FITTINGS, CAPS, VALVES, METERS, AND CHANGES OF DIRECTION. NOTIFICATION SHALL BE GIVEN ONE WEEK PRIOR TO BACKFILLING.

TOPOGRAPHIC SURVEY NOTES

1. TOPOGRAPHIC SURVEY WAS COMPLETED BY ANDERSON PERRY & ASSOCIATES, INC. HORIZONTAL COORDINATES ARE ON THE OCRS PENDLETON ZONE NAD 83, VERTICAL DATUM IS BASED ON NAVD 88.

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 HEREON COMPRISE ALL POSSIBLE UTILITIES IN THE AREA NOR WARRANTS THAT UTILITIES ARE IN THE EXACT LOCATIONS INDICATED.

3. TOPOGRAPHIC SURVEY INFORMATION IS PROVIDED ONLY. BOUNDARY, RIGHT OF WAY AND PARCEL LINE INFORMATION ARE APPROXIMATE.

WATER NOTES

1. RESTRAIN ALL PIPING VALVES 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. ALL COATINGS AND MATERIALS SPECIFIED HEREIN THAT COME IN CONTACT WITH POTABLE WATER SHALL BE NATIONAL SANITATION FOUNDATION (NSF 61) APPROVED.

4. 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.

5. 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.

6. 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.

7. 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.

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:
CONSOR ENGINEERS, LLC.
345 BOBWHITE COURT,SUITE 230, BOISE, ID, 83706
CONTACT: KRISTOFOR SNIDER, P.E..
E: TOFOR.SNIDER@CONSORENG.COM
P: 208-947-9033

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:
ANDERSON PERRY & ASSOCIATES, INC
1901 N FIR STREET
PO BOX 1107
LA GRANDE, OR 97850
CONTACT:GRANT BANISTER
E: GBANISTER@ANDERSONPERRY.COM
P: 541-963-8309

NO.	DATE	BY	REVISION

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

HKP DESIGNED
DKH DRAWN
KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 16, 2018 KRISTOFOR R. SNIDER
RENEWS 6-30-24

consor

CITY OF PENDLETON OREGON INCORPORATED 1880

EAST END BOOSTER PUMP STATION

GENERAL

GENERAL NOTES

SHEET G-4

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

ZONING CODE INFO

R1-LOW DENSITY RESIDENTIAL, USE PERMITTED BY CONDITIONAL USE

BUILDING SETBACKS FRONT 15', SIDE 5', REAR 5'

BUILDING CODE INFO

APPLICABLE CODES

2022 OREGON STRUCTURAL SPECIALTY CODE (OSSC)
2021 OREGON ENERGY EFFICIENCY CODE (OEESC)
2021 OREGON ELECTRICAL SPECIALTY CODE (OESC)

HEIGHTS AND AREAS PERMISSIBLE OSSC

FOR U OCCUPANCY, TYPE V-B CONSTRUCTION, NON-SPRINKLERED
PER TABLE 504.3, 40-FT HEIGHT
PER TABLE 504.4, 1-STORY ALLOWED
PER TABLE 506.2, 5,500 SQFT
PER TABLE 601, FIRE RESISTANCE RATING 0 HOURS

BUILDING SUMMARY

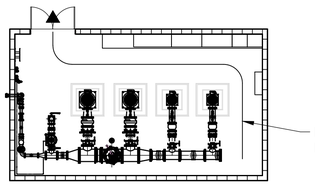
BUILDING	OVERALL DIMENSIONS	GROSS AREA	OCCUPANCY	CONSTRUCTION TYPE
PUMP STATION	34'-0" x 20'-0"	680 SQFT	UTILITY (U)	V-B

FIRE PROTECTION AND LIFE SAFETY SYSTEM

NOT REQUIRED FOR U OCCUPANCY AND BUILDING IS LESS THAN 1,500 SQFT

OCCUPANT LOAD

SPACE/ROOM	OCC CLASS	SF/OCC	AREA	OCCS
PUMP STATION	U	300	680	3



THERMAL ENVELOP AND OEESC

SEMIHEATED SPACE (HEATING OUTPUT >3.4 BTU/H-FT2 BUT <12 BTU/H-FT2)

ROOF INSULATION ENTIRELY ABOVE DECK R-15 REQUIRED, PROVIDING R-24

WALLS ABOVE GRADE MASS R-5.7C.I. REQUIRED, PROVIDING 8-INCH CMU W/ UNREINFORCED CELLS INSULATED RU 6.62 TO 5.32 PER ASHRAE 90.1-2019 TABLE A3.1-3

SLAB ON GRADE UNHEATED INSULATION NOT REQUIRED

WINDOW: MAX U 0.5

ENTRANCE DOOR: MAX U 0.77

DESIGN CRITERIA SUMMARY

HYDRAULIC GRADE LINE CITY DATUM
SUCTION: 1,328 TO 1,275 FEET
DISCHARGE (CEMETERY ZONE): 1,471 FEET

FLOW DEMANDS EAST CEMETERY ZONE

EXISTING AVG DAY:	145 GPM
EXISTING MAX DAY:	362 GPM
EXISTING PEAK HOUR:	616 GPM
BUILDOUT AVG DAY:	595 GPM
BUILDOUT MAX DAY:	1,488 GPM
BUILDOUT PEAK HOUR:	2,503 GPM
FIRE FLOW NON-RESIDENTIAL:	3,000 GPM
FIRE FLOW RESIDENTIAL:	1,500 GPM

STATION CAPACITY @ TDH OF 196'

CURRENT FIRM:	2,000 GPM
CURRENT TOTAL:	3,600 GPM
FUTURE FIRM:	2,700 GPM
FUTURE TOTAL:	4,250 GPM

THE CITY'S WATER SYSTEM MODEL IN 2021 SHOWED THAT THE CEMETERY PS (WEST CEMETERY ZONE) WILL PROVIDE APPROX 1,300 GPM THROUGH THE 16" EAST/WEST TRANSMISSION MAIN TO THE EAST CEMETERY ZONE DURING FIRE FLOW SCENARIOS.

COATING SCHEDULE:

General Description	Material	Coating System
Man Doors	Metal, Steel	09 90 00, Coating System 101
Interior Walls	CMU	09 90 00, Paint System 302
Exterior Walls	CMU	09 90 00, Paint System 305
Roofing	Metal	Factory Coating
Gutters, Fascia, & Streel Architectural Features	Metal, Steel	Factory Coating
Blockout Soffit & Trim		Factory Coating
Interior Ceiling	Gypsum	09 90 00, Coating System 302
Concrete Floors	Concrete	Saline Sealer Containing 40% Solids
Piping	Varies	See pipe schedule

PIPE SCHEDULE:

Pipe System or Material	Label	Location	Joint1	Industrial Coating
Ductile Iron - Cement Lined	DI	exposed	FL	Sys 101, Dark Blue
Ductile Iron - Cement Lined	DI	buried	BSJ, RMJ	Factory Applied Asphaltic
Stainless Steel 304 - Schedule 40	SST	exposed	THRD	none
ABS Drain Waste Vent	PVC1		SW	none
PVC Pipe - C900/905	PVC3	buried	BSJ	none
Corrugated Double Wall HDPE	HDPE	buried	BSJ	none
COPPER	COP	buried / exposed	Soldered, THRD, Compression	none

1. Joint type to be as specified unless shown different on the drawings. FL=Flange, BSJ=Bell & Spigot, RMJ= Restrained Mechanical Joint, THRD=Threaded, SW=Solvent Weld

2. All exposed pipe to have flow arrows and flow stream label every 10' or flow direction change.

DOOR SCHEDULE:

NO.	DOOR SIZE	OPEN	HARDWARE	FRAME	
				HEAD	JAMB
1	Active 2'-8"x7'-10" Inactive 2'-8"x7'-10"	Active Leaf LHR	GROUP 1	2"	4"

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NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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HKP DESIGNED
DKH DRAWN
KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 16, 2018 KRISTOFOR R. SNIDER
RENEWS: 6-30-24

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CITY OF PENDLETON INCORPORATED 1880 OREGON

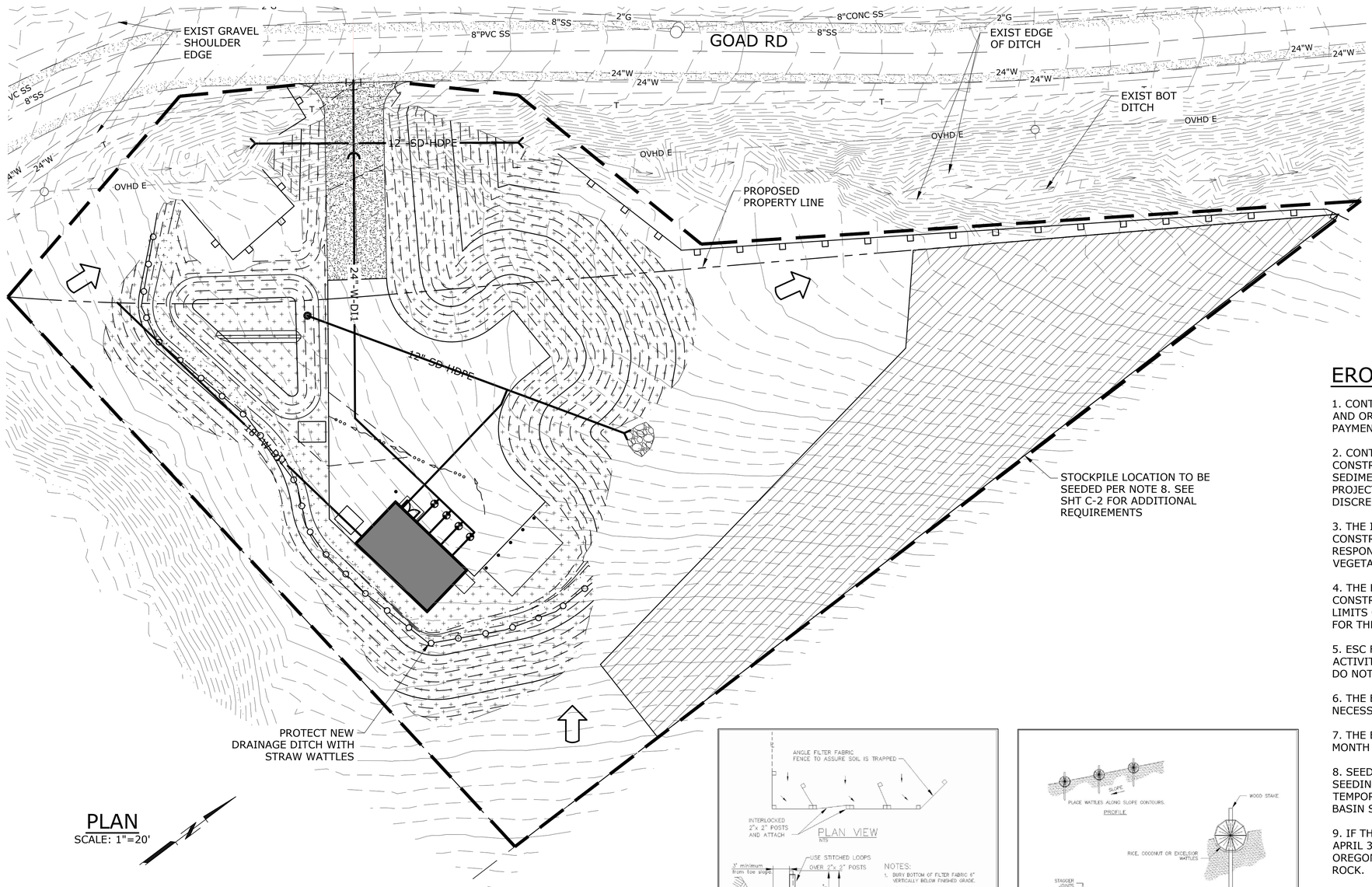
EAST END BOOSTER PUMP STATION

GENERAL

DESIGN CRITERIA AND SCHEDULES

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET G-5



PLAN
SCALE: 1"=20'

LEGEND

- WORK AREA BOUNDARY/PROJECT LIMITS & CONSTRUCTION FENCING OUTSIDE OF ROW
- CONSTRUCTION STOCKPILING LIMITS
- PERMANENT SEEDING, SEE NOTE 8 AND 14
- SEDIMENT FENCE, PER DETAIL, THIS SHEET
- DRAINAGE FLOW DIRECTION
- PROTECTIVE APRON, SEE SHEET C-3
- STRAW WATTLES PER DETAIL, THIS SHEET

EROSION CONTROL NOTES:

1. CONTRACTOR SHALL PREPARE, SUBMIT, AND ACQUIRE ANY REQUIRED PERMITS FROM THE CITY AND OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ). CONTRACTOR SHALL PROVIDE PAYMENT FOR ALL PERMIT FEES.

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. THE IMPLEMENTATION OF EROSION/SEDIMENTATION CONTROL (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 IS ESTABLISHED.

4. THE BOUNDARIES OF THE LIMITS OF WORK 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.

5. ESC FACILITIES 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.

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

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

8. SEEDING SHALL BE PERFORMED PER OREGON DEQ. SEED USED FOR TEMPORARY OR PERMANENT SEEDING SHALL ADHERE TO THE SPECIFICATIONS UNLESS OTHERWISE AUTHORIZED. SEED USED FOR TEMPORARY OR PERMANENT SEEDING SHALL BE COMPOSED OF THE FOLLOWING MIXTURE: COLUMBIA BASIN SEED MIX.

9. IF THERE ARE EXPOSED SOILS OR SOILS NOT FULLY STABILIZED FROM NOVEMBER 1 THROUGH APRIL 30, THE WET WEATHER EROSION CONTROL MEASURES WILL BE IN EFFECT ACCORDING TO THE OREGON DEQ TECHNICAL GUIDANCE HANDBOOK. SEE NOTE 5 ON SHEET C-1 REGARDING CRUSHED ROCK.

10. ESC MEASURES SHALL BE REMOVED BY THE CONTRACTOR WHEN VEGETATION IS FULLY ESTABLISHED.

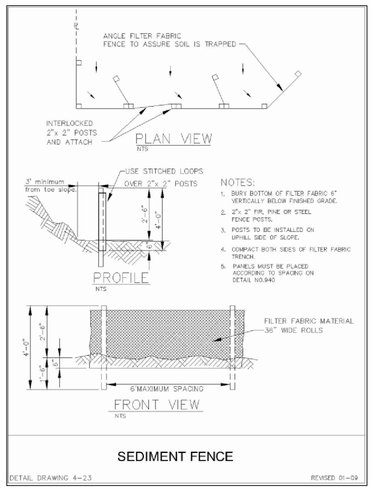
11. CONTRACTOR TO CONFIRM/IDENTIFY CONSTRUCTION STAGING AND STOCKPILING AREA PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

12. COMPLY WITH APPLICABLE OREGON DEQ DUST RULES (DIVISION 208) DURING EXCAVATION AND/OR DEMOLITION WORK.

https://secure.sos.state.or.us./oard/displayDivisionRules.action?selectedDivision=1533

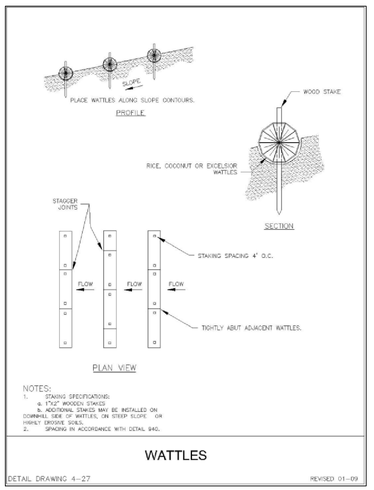
13. 14. THE ESC MEASURES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THE MEASURES MUST BE UPGRADED AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEIMENT CONTROL REGULATIONS.

15. SLOPES TO BE PROTECTED UNTIL SEEDING HAS BEEN ESTABLISHED with BONDED FIBER MATRIX MULCH OR STRAW MATTS.



SEDIMENT FENCE

DETAIL DRAWING 4-23 REVISED 01-09



WATTLES

DETAIL DRAWING 4-27 REVISED 01-09

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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HKP DESIGNED
DKH DRAWN
KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 75589 OREGON DENNIS M. J. GALINATO MARCH 8, 2005
Dennis M Galinato 2023.02.22 07:21:22 -08'00'
RENEWS 6-30-23

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

EROSION AND SEDIMENT CONTROL PLAN

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET ESC-2

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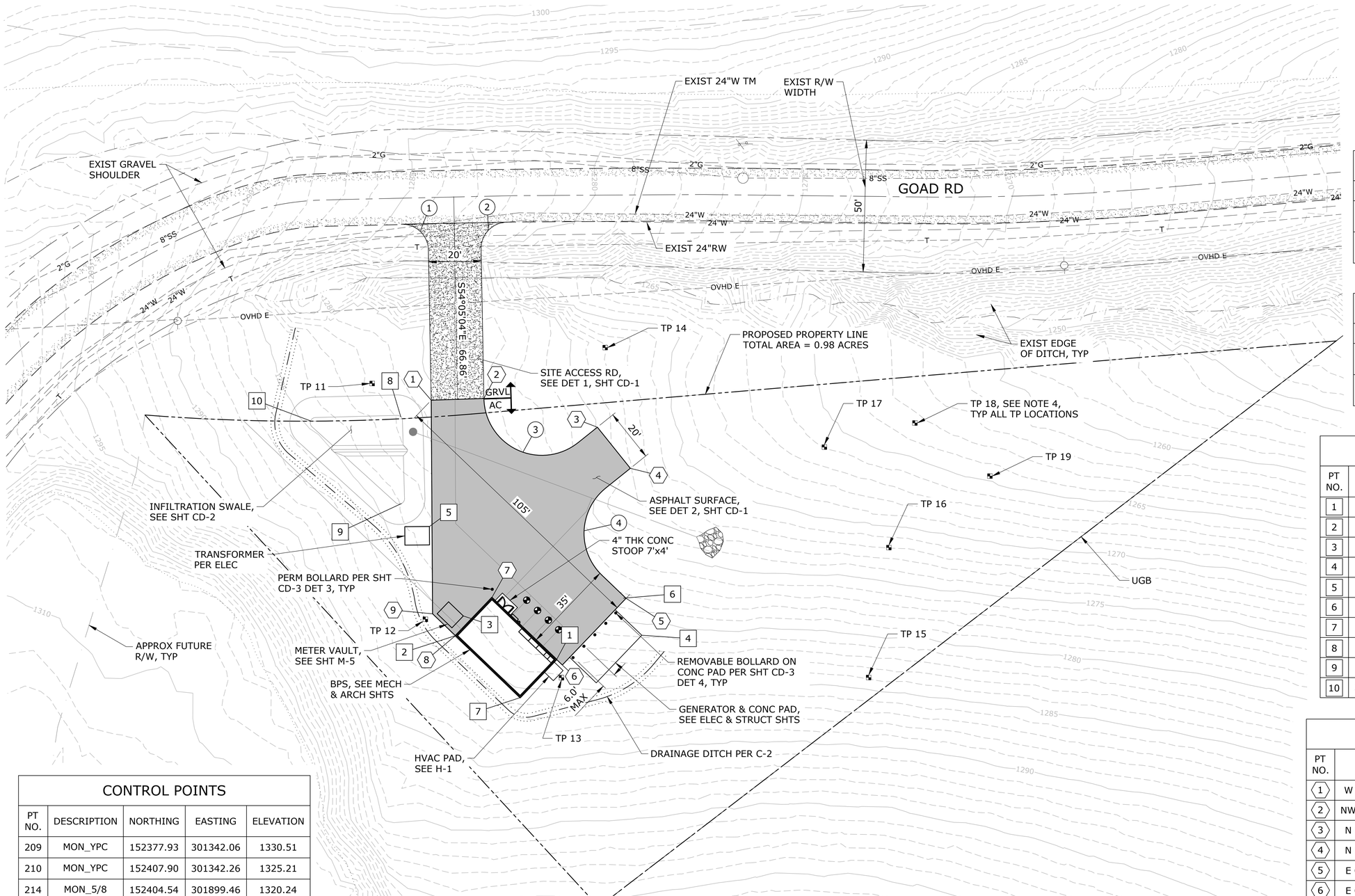

PLAN
SCALE: 1"=20'

NOTES:

1. FOR SITE GRADING PLAN, SEE SHEET C-2.
2. FOR SITE PIPING PLAN, SEE SHEET C-3.
3. FOR SITE ESC AND PROJECT BOUNDARY SEE SHEET ESC-1.
4. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL TEST PIT (TP) INFORMATION.
5. THE CITY WILL PLACE CRUSHED ROCK ON DISTURBED AREAS WHERE FINAL SURFACING IS NOT SPECIFIED.

EDGE OF GRAVEL CURVE DATA

CURVE	PC LOCATION	PT LOCATION	RADIUS	LENGTH
1	N152708.37 E301707.38	N152707.09 E301691.95	10	17.58
2	N152739.64 E301715.49	N152725.61 E301717.68	10	15.79

EDGE OF PAVEMENT CURVE DATA

CURVE	PC LOCATION	PT LOCATION	RADIUS	LENGTH
3	N152692.32 E301763.63	N152710.81 E301798.52	22	49.01
4	N152708.78 E301818.59	N152687.74 E301844.10	22	37.42

FACILITY LAYOUT POINTS

PT NO.	DESCRIPTION	NORTHING	EASTING
1	N CORNER OF BPS	152654.76	301859.33
2	S CORNER OF BPS	152629.54	301828.99
3	N CORNER OF VAULT	152636.43	301824.82
4	N CORNER OF GEN PAD	152686.12	301871.43
5	N CORNER OF TRANS PAD	152646.57	301789.97
6	LUMINAIRE PER ELEC SHEETS	152689.78	301856.65
7	SE CORNER BPS	152635.02	301862.55
8	N CORNER OF INFILTRATION SWALE	152662.95	301750.21
9	E CORNER OF INFILTRATION SWALE	152643.31	301776.63
10	SW CORNER OF INFILTRATION SWALE	152634.68	301730.85

CONTROL POINTS

PT NO.	DESCRIPTION	NORTHING	EASTING	ELEVATION
209	MON_YPC	152377.93	301342.06	1330.51
210	MON_YPC	152407.90	301342.26	1325.21
214	MON_5/8	152404.54	301899.46	1320.24
502	APA_H+MAG	152377.55	301815.42	1321.66

NOTES:

1. CONTROL POINTS NOT SHOWN ON PAGE.

PAVEMENT LAYOUT POINTS

PT NO.	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	W CORNER OF ASPHALT	152675.96	301752.12	1283.44
2	NW CORNER OF ASPHALT	152692.32	301763.63	1283.84
3	N CORNER OF ASPHALT	152720.16	301798.24	1284.00
4	N CORNER OF ASPHALT	152720.76	301818.23	1284.00
5	E CORNER OF ASPHALT	152689.78	301856.65	1284.00
6	E CORNER OF ASPHALT	152655.24	301862.29	1283.50
7	NW CORNER OF BPS	152649.28	301825.77	1283.40
8	S CORNER OF ASPHALT	152629.54	301828.99	1284.33
9	SW CORNER OF ASPHALT	152627.61	301817.15	1285.20

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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HKP DESIGNED
DKH DRAWN
KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 75589 OREGON DENNIS M. J. GALINATO MARCH 8, 2005
Dennis M Galinato 2023.02.22 16:09:21 07'00'
RENEWS 6-30-23

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CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

CIVIL

SITE LAYOUT AND HORIZONTAL CONTROL PLAN

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET C-1

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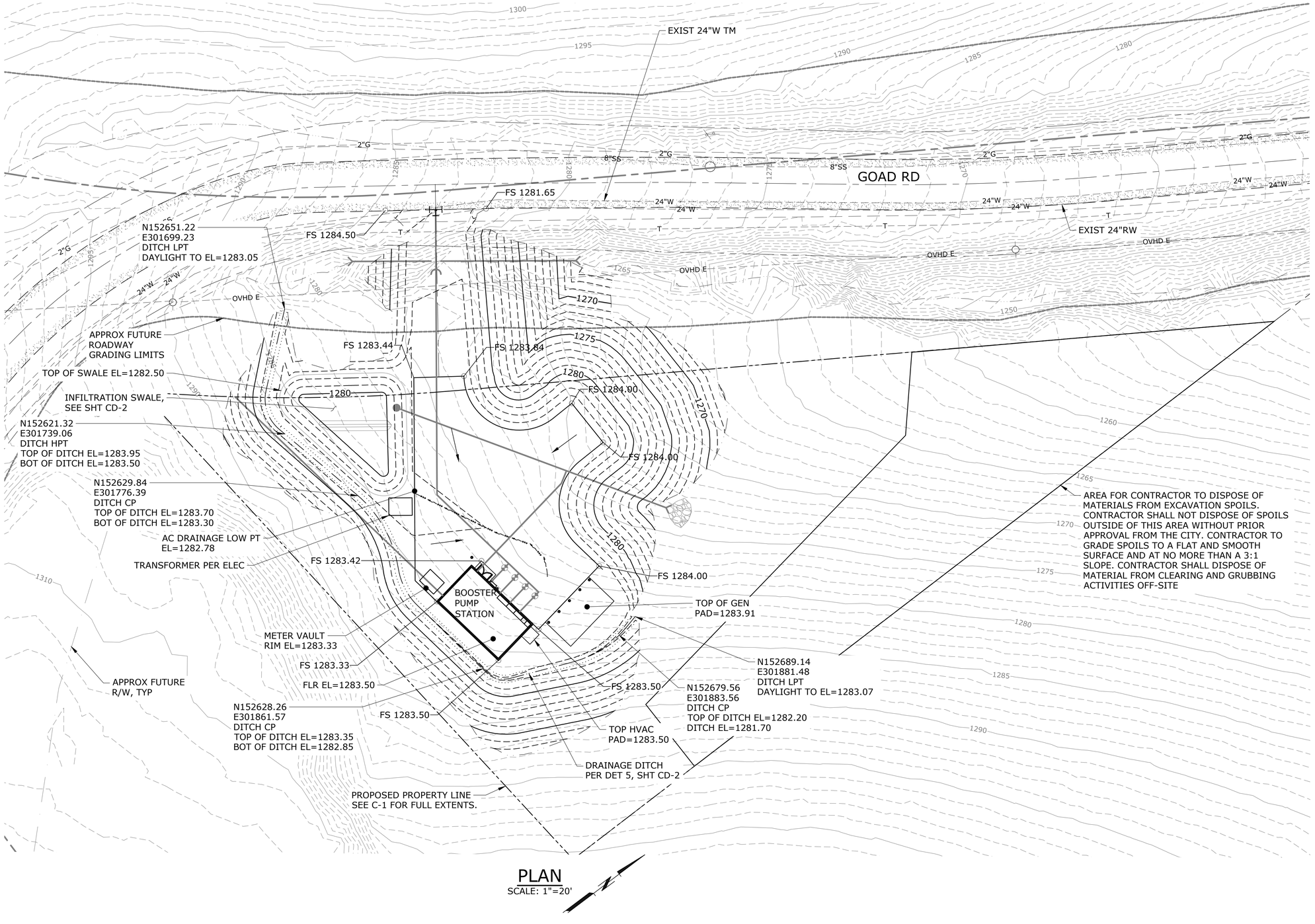

PLAN
SCALE: 1"=20'

NOTES:

1. ANY FILL ON EXISTING SLOPES GREATER THAN 5:1, REFER TO DETAIL 4 ON SHEET CD-1 AND SPECIFICATION SECTION 31 23 23 - FILL

2. STRIP AND GRUB ALL AREAS TO BE EXCAVATED OR THAT WILL RECEIVE FILL AS PART OF THIS PROJECT.

3. FINAL FILL AND CUT SLOPES SHALL NOT EXCEED 3:1.

4. MASS EXCAVATION OF THE ENTIRE BUILDING FOOTPRINT IS REQUIRED TO REMOVE UNSUITABLE SOILS. EXISTING SOILS MUST BE REMOVED TO DEPTH OF 9 FEET BELOW THE EXISTING SITE GRADE. SEE DET 3, SHT CD-1.

4A. BOTTOM OF THE BUILDING EXCAVATION SHALL EXTEND LATERALLY AT LEAST 10 FEET BEYOND THE BUILDING PERIMETER. SEE DET 3, SHT CD-1.

5. GEOTEXTILE FABRIC MEETING ODOT CRITERIA FOR "EMBANKMENT GEOTEXTILE" I REQUIRED ON TOP OF UNDISTURBED SITE SOIL SUPPORTING PAVEMENT AND ACCESS AREAS BEFORE PLACING STRUCTURAL FILL.

6. SEE SPECIFICATION 31 23 23 - FILL FOR ADDITIONAL REQUIREMENTS FOR SUBGRADE PREPARATION AND FILL PLACEMENT.

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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HKP DESIGNED
DKH DRAWN
KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 75589 OREGON MARCH 8, 2005 DENNIS M. J. GALINATO
Dennis M Galinato 2023.02.22 10:35:49 -08'00'
RENEWS 6-30-23

consor

CITY OF PENDLETON OREGON INCORPORATED 1880

EAST END BOOSTER PUMP STATION

CIVIL

SITE GRADING PLAN

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET C-2

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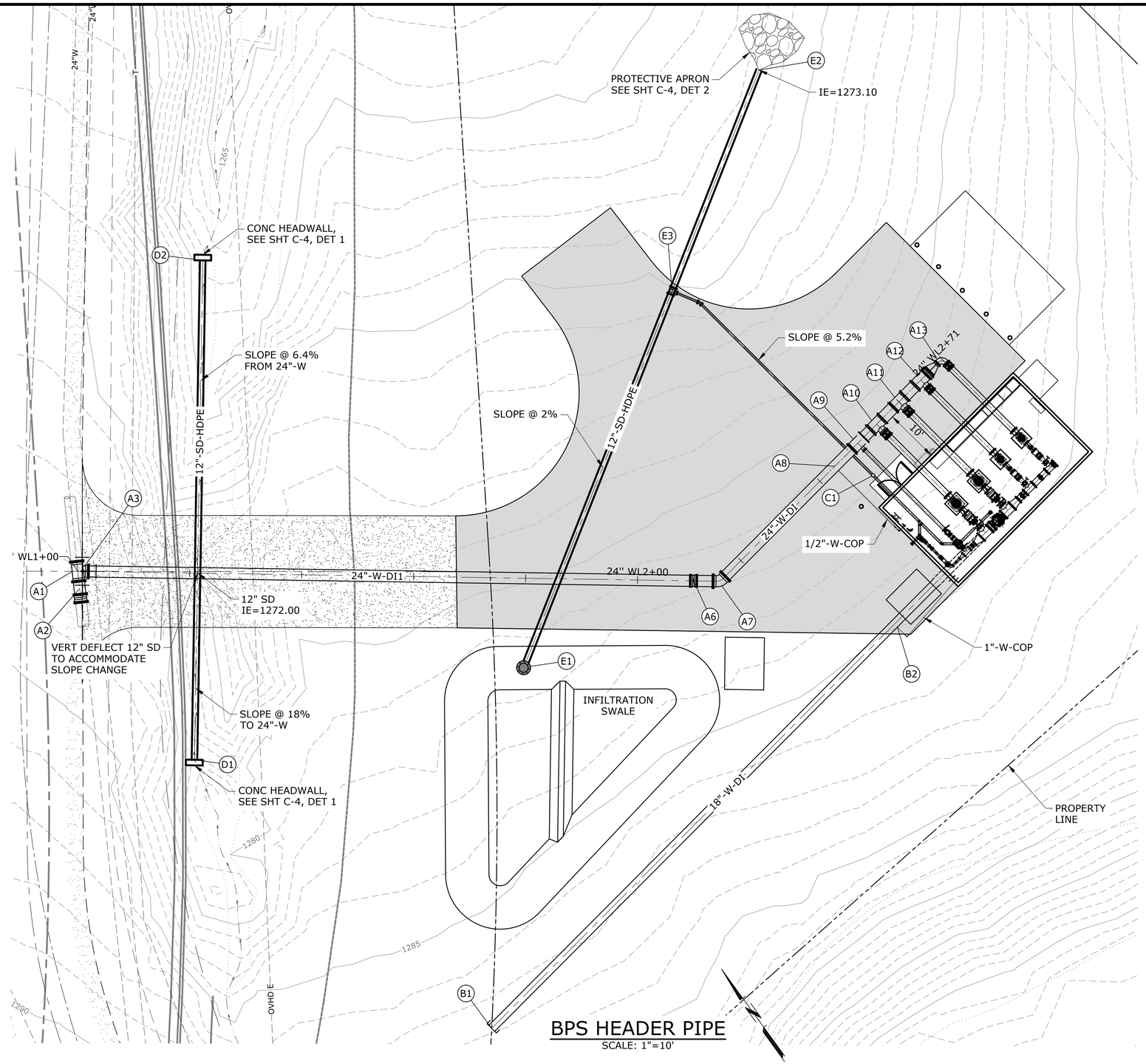


BPS HEADER PIPE
SCALE: 1"=10'

GENERAL NOTES

1. MAX INVERT ELEVATION ON EXISTING 24-INCH WATERLINE ALLOWED IS 1278.5'. CONTRACTOR TO VERIFY ACTUAL PIPE INVERT PRIOR TO MAKING CONNECTION. NOTIFY OWNERS REPRESENTATIVE IF IT IS ABOVE MAX ELEVATION.

2. IF CONNECTOR ROAD WATERLINE IS INSTALLED, CONTRACTOR TO CONNECT TO WATERLINE AND NOT INSTALL CAP AND BLOWOFF ASSEMBLY.

KEY NOTES

- (A1) N152723.78, E301703.15
  24" TEE, MJ, ROTATED DN
  SEE NOTE 1
- (A2) N152722.19, E301702.00
  24" LONG SLEEVE, MJ
- (A3) 24" 90° BEND, MJxPE
- (A4) NOT USED
- (A5) NOT USED
- (A6) N152657.70, E301791.72
  BFV, MJ, OWNER PROVIDED
- (A7) N152655.19, E301795.08
  24" 45° BEND, MJ, HORIZONTAL
- (A8) N152659.26, E301819.98
  1/2" TAPPING SADDLE
  1/2" CORP STOP
- (A9) N152660.80, E301829.41
  24"x6" TEE, MJ
- (A10) N152661.59, E301834.26
  24"x14" TEE, MJ
  14" V500 MJ
  14" FOSTER ADAPTER
- (A11) N152662.49, E301839.74
  24"x14" TEE, MJ
  14" V500 MJ
  14" FOSTER ADAPTER
- (A12) N152663.51, E301846.02
  24"x12" TEE, MJ
  12" V500 MJ
  12" FOSTER ADAPATER
- (A13) N152663.71, E301850.06
  24"x12" RDCR, FLxFL
  24" FOSTER ADAPTER
  12" 90° BEND, MJ
  12" V500 MJ
  2-12" FOSTER ADAPTER
- (B1) N152614.35, E301715.24
  BLOW-OFF ASSEMBLY
  PER DET 2, SHT CD-3
  SEE NOTE 2
- (B2) N152629.98, E301815.94
  1" TAPPING SADDLE
  1" CORP STOP
- (C1) N152654.53, E3301828.29
  IE=1277.00
  4" CLEAN OUT
- (D1) N152684.31, E301700.27
  IE=1278.18
  24" CULVERT ENTRANCE
- (D2) N152755.77, E301753.69
  IE=1268.40
  24" CULVERT EXIT
- (E1) N152663.23, E301757.56
  30" CATCH BASIN
  PER DET 4, SHT C-3
- (E2) N152725.15, E301854.14
  DRAIN TO DAYLIGHT
  STORM PIPE OUTFALL,
  INSTALL 12" HINGED FLAP GATE,
  STANDARD FLAP GATE GALV, FOR
  CORRUGATED PLASTIC TUBING AS
  MANUFACTURED BY AGRI DRAIN
  CORP, OR EQ
- (E3) N152702.27, E301818.46
  IE=1273.9
  12x4 TEE

NO.	DATE	BY	REVISION

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

HKP DESIGNED
DKH DRAWN
KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 16, 2015 KRISTOFOR R. SNIDER
RENEWS 6-30-24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

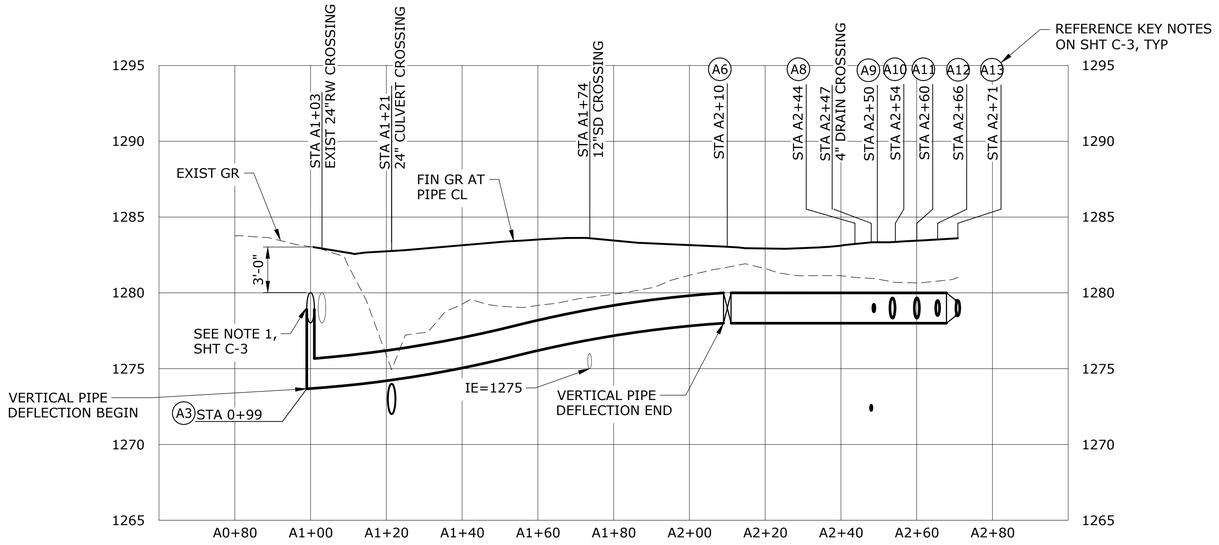
CIVIL

SITE PIPING PLAN

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

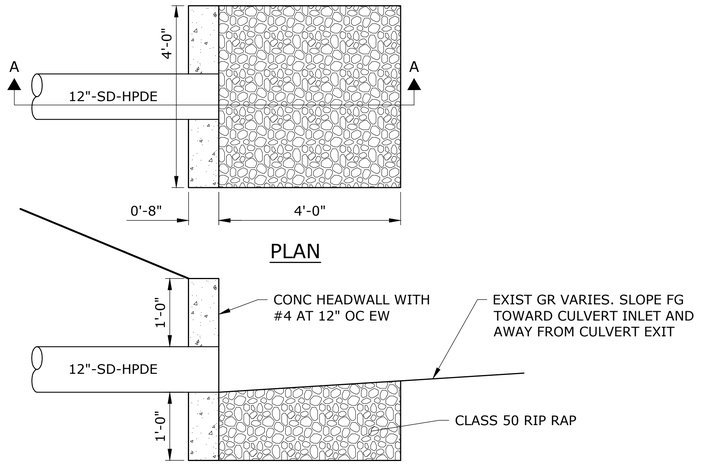
SHEET C-3

I:\bol_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-C-PIPE.dwg C-3 2/21/2023 3:53 PM JUSTIN.DEUEL 23.0s (LMS Tech)



BPS SUCTION HEADER

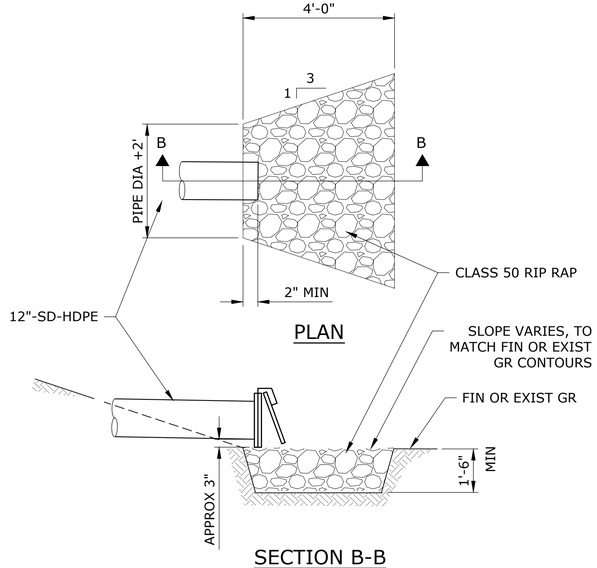
SCALE: 1"=20' HORIZ, 1"=5' VERT



CULVERT INLET/EXIT HEADWALL DETAIL

SCALE: NTS

1 / C-3



PROTECTIVE APRON DETAIL

SCALE: NTS

2 / C-3

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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

HKP DESIGNED

DKH DRAWN

KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 16, 2015 KRISTOFOR R. SNIDER RENEWS 6-30-24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

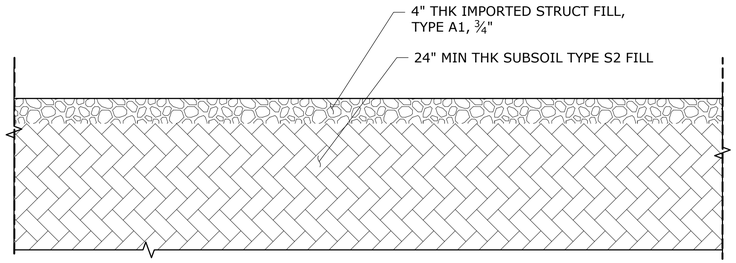
CIVIL

BPS SUCTION PROFILE & PIPE DETAILS

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET C-4

I:\boi_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-C-PIPE.dwg C-4 2/21/2023 3:53 PM JUSTIN.DEUEL 23.0s (LMS Tech)

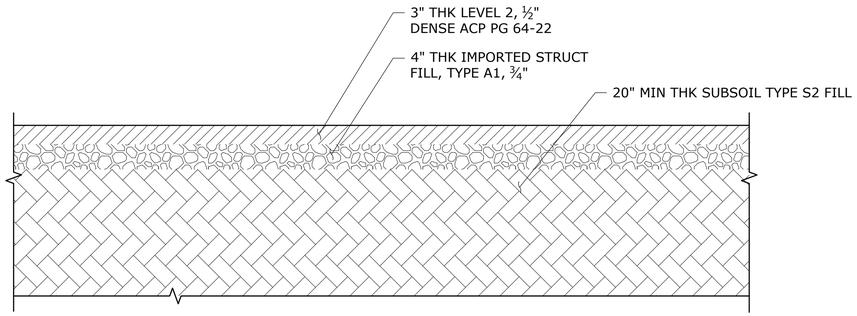


1. SEE NOTES ON SHEET C2 AND DETAIL 4, THIS SHEET AND SPECIFICATION 31 23 23 - FILL FOR REQUIREMENTS FOR SUBGRADE PREPARATION AND FILL PLACEMENT.

TYPICAL ACCESS ROAD SECTION

SCALE: NTS

1 / C-1

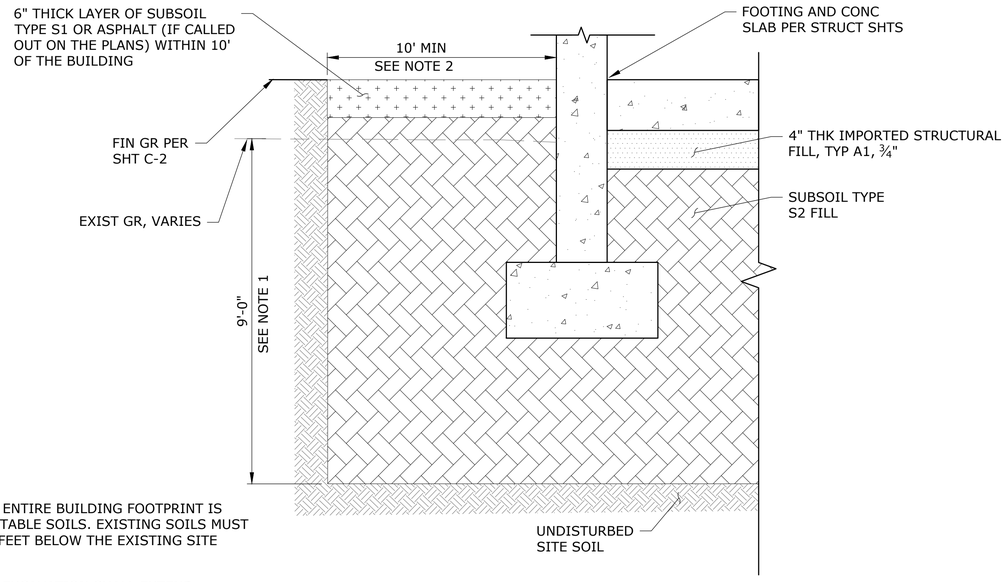


1. SEE NOTES ON SHEET C2 AND DETAIL 4, THIS SHEET AND SPECIFICATION 31 23 23 - FILL FOR REQUIREMENTS FOR SUBGRADE PREPARATION AND FILL PLACEMENT.

TYPICAL ASPHALT SURFACE

SCALE: NTS

2 / C-1



1. MASS EXCAVATION OF THE ENTIRE BUILDING FOOTPRINT IS REQUIRED TO REMOVE UNSUITABLE SOILS. EXISTING SOILS MUST BE REMOVED TO DEPTH OF 9 FEET BELOW THE EXISTING SITE GRADE.

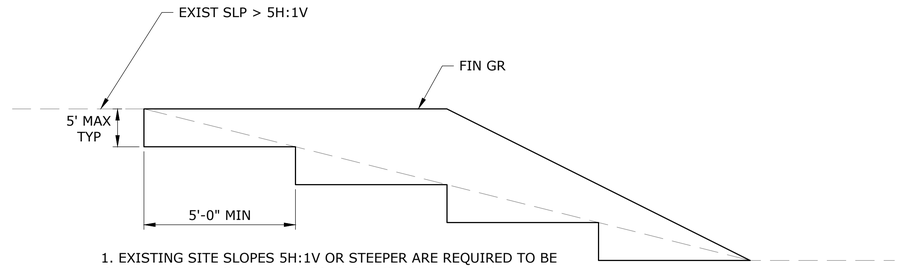
2. BOTTOM OF THE BUILDING EXCAVATION SHALL EXTEND LATERALLY AT LAST 10 FEET BEYOND THE BUILDING PERIMETER.

3. SEE NOTES ON SHEET C2 AND DETAIL 4, THIS SHEET, AND SPECIFICATION 31 23 23 - FILL FOR REQUIREMENTS FOR SUBGRADE PREPARATION AND FILL PLACEMENT.

BUILDING FOUNDATION DETAIL

SCALE: NTS

3 / C-2



1. EXISTING SITE SLOPES 5H:1V OR STEEPER ARE REQUIRED TO BE BENCHED PER THIS DETAIL IN PREPARATION OF FILL PLACEMENT. BENCHES SHOULD PENETRATE THE EXISTING SLOPE AT LEAST 5 FEET AND SHALL NOT BE MORE THAN 5 FEET TALL.

FILL SLOPE BENCH

SCALE: NTS

4 / C-1

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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

HKP DESIGNED

DKH DRAWN

KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 75589 OREGON MARCH 8, 2005 DENNIS M. J. GALINATO

Dennis M Galinato 2023.02.22 16:11:39-07'0

RENEWS 6-30-23

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

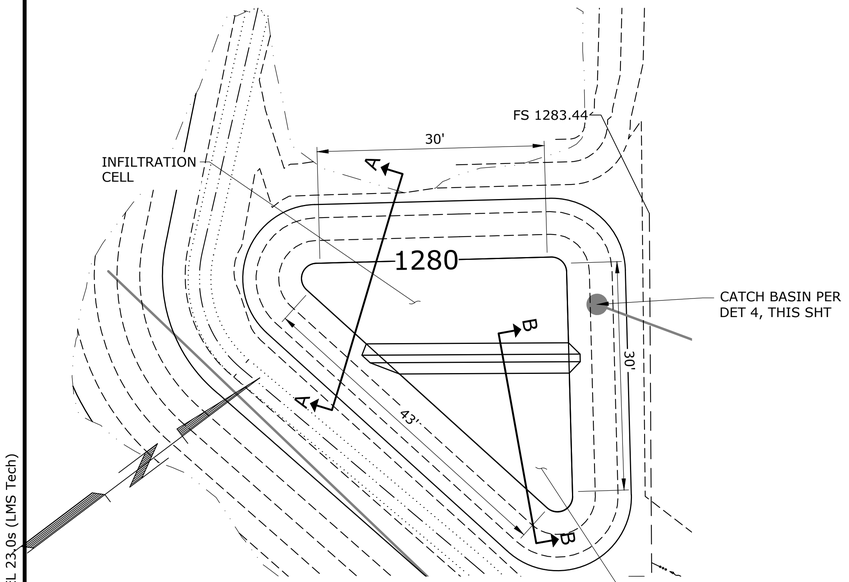
CIVIL

CIVIL DETAILS - 1

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET CD-1

I:\boi_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-C DETS.dwg CD-1 2/21/2023 11:31 AM JUSTIN.DEUEL 23.0s (LMS Tech)

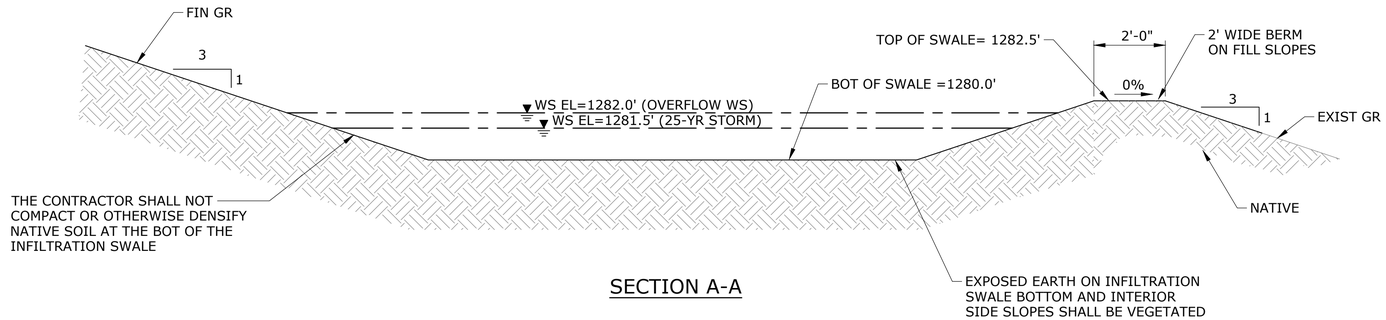


PLAN

INFILTRATION SWALE DETAIL

SCALE: 1"=20'

1 / C-1 C-2

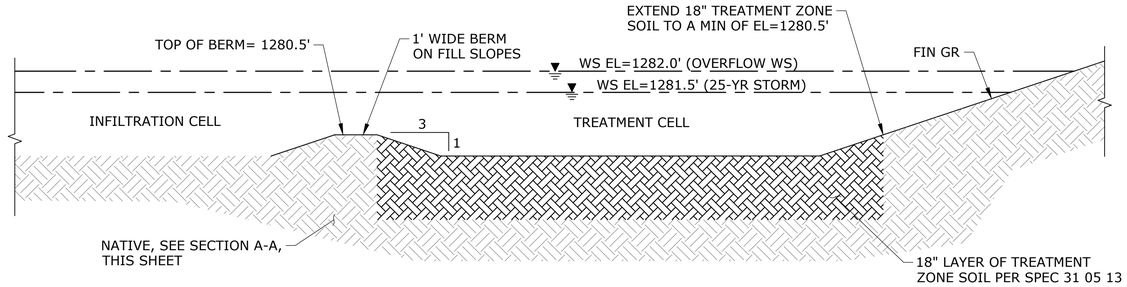


SECTION A-A

INFILTRATION SWALE SECTION

SCALE: NTS

2 / -

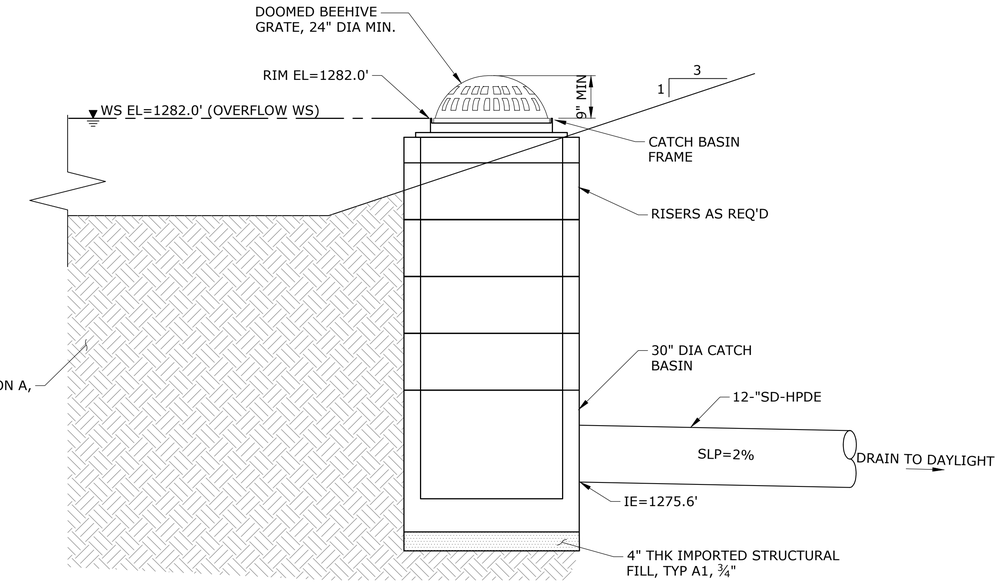


SECTION B-B

INFILTRATION SWALE BERM SECTION

SCALE: NTS

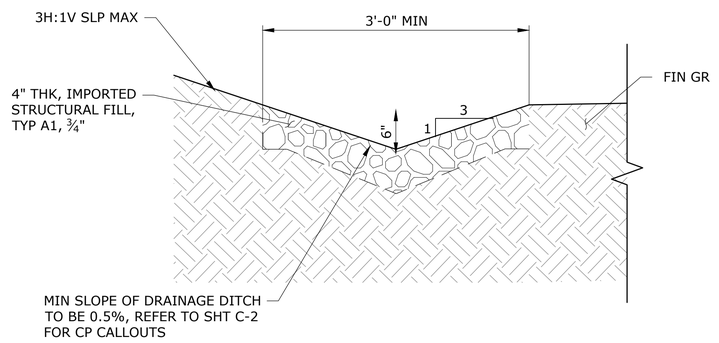
3 / -



CATCH BASIN DETAIL

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

4 / C-3



DRAINAGE DITCH

SCALE: NTS

5 / C-2

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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

HKP DESIGNED

DKH DRAWN

KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 75589 — Dennis M Galinato 2023.02.22 16:12:59-07'07' — OREGON — MARCH 8, 2005 — DENNIS M. J. GALINATO — RENEWS 6-30-23

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

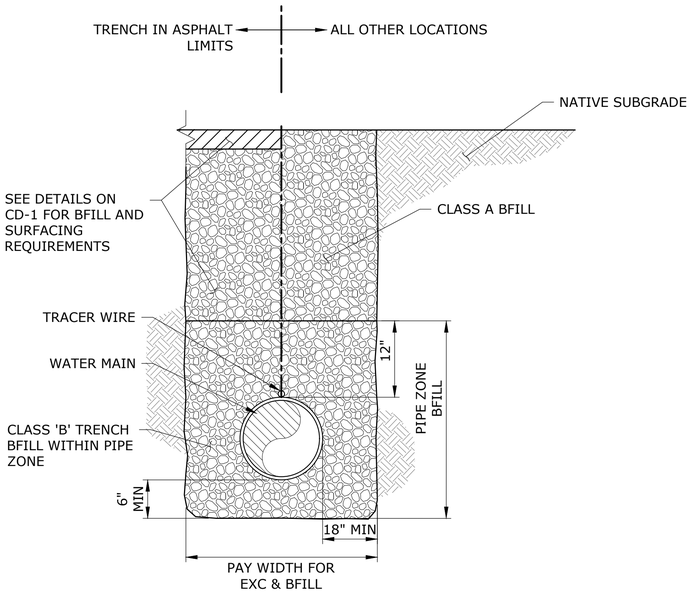
CIVIL

INFILTRATION SWALE & DRAINAGE DITCH SECTIONS

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET CD-2

I:\boi_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-C-GRAD.dwg CD-2 2/21/2023 3:42 PM JUSTIN.DEUEL 23.0s (LMS Tech)



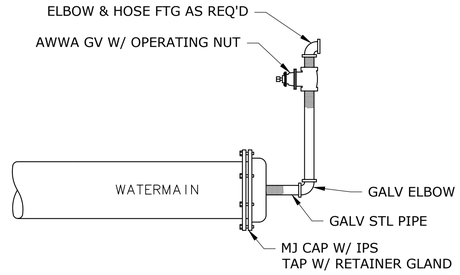
NOTES:

1. COMPACTION SHALL BE PERFORMED PER SPECIFICATION 31 23 17, FILL.

TYPICAL TRENCH DETAIL

SCALE: NTS

1 / -



NOTES:

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

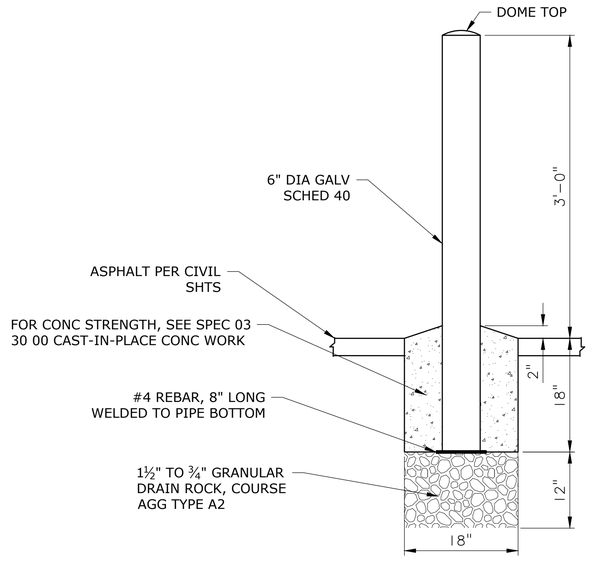
2. SEE SPECIFICATION 33 13 00 TESTING AND DISINFECTION OF WATER UTILITY PIPING REGARDING DISPOSAL/DECHLORINATION FOR SUPERCHLORINATED WATER.

3. PROVIDE PIPING TO ACHIEVE 2.5 FT/S IN WATERMAIN FOR FLUSHING, 2" MINIMUM.

TEMPORARY BLOW-OFF ASSEMBLY

SCALE: NTS

2 / C-3



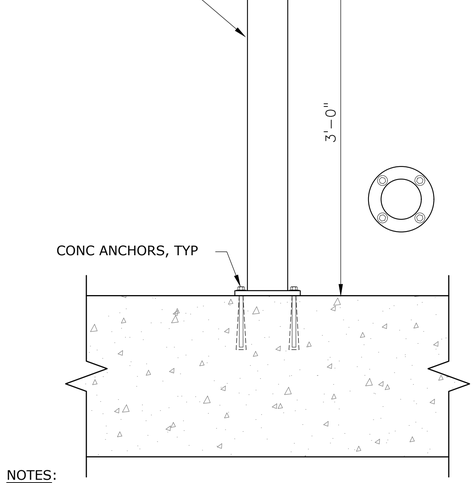
NOTES:

1. BOLLARD TO BE PAINTED SAFETY YELLOW.

PERMANENT BOLLARD DETAIL

SCALE: NTS

3 / C-1



NOTES:

1. BOLLARD TO BE PAINTED SAFETY YELLOW.

REMOVABLE BOLLARD DETAIL

SCALE: NTS

4 / C-1

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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

HKP DESIGNED

DKH DRAWN

KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 19, 2010 KRISTOFOR R. SNIDER

RENEWS 6–30–24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

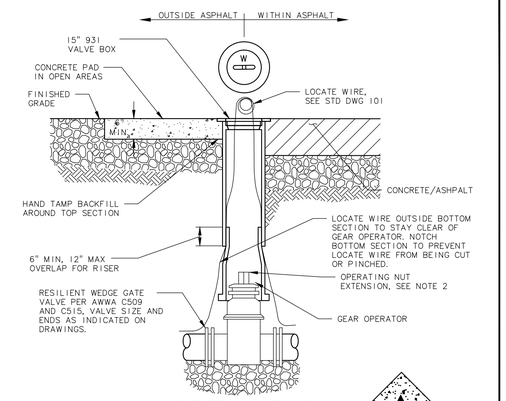
CIVIL

MISCELLANEOUS CIVIL DETAILS

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

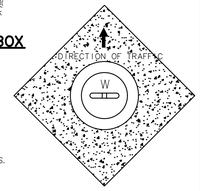
SHEET CD-3

I:\boi_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-G.dwg CD-3 2/22/2023 7:57 AM JUSTIN.DEUEL 23.0s (LMS Tech)



BURIED VALVE BOX

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.



CONCRETE/ASPHALT PAD

ENGINEERING DEPARTMENT
500 S.W. DORION AVENUE PENDLETON, OREGON 97801
VOICE: (541) 966-0253
FAX: (541) 966-0251

APPROVED BY
FEBRUARY 2019
APPROVAL DATE
REVISED DATE

BURIED VALVE AND BOX

NO SCALE
DWG NO.
402

NO.	DATE	BY	REVISION

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

HKP DESIGNED
DKH DRAWN
KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 16, 2018 KRISTOFOR R. SWIDER
RENEWS: 6-30-24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

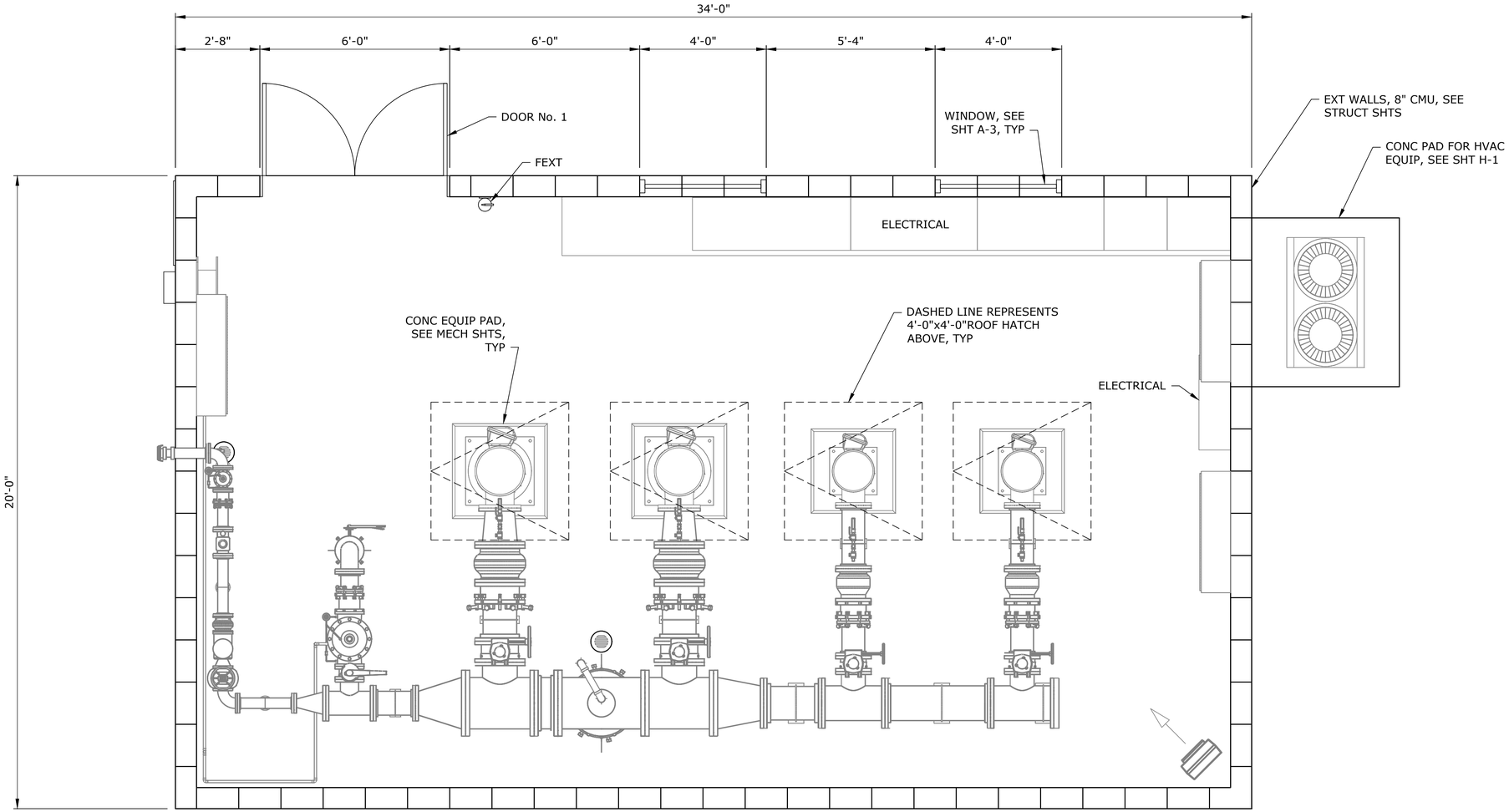
CIVIL

CITY OF PENDLETON STANDARD DETAILS

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET
CD-4

I:\boi_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-G.dwg CD-4 2/22/2023 7:57 AM JUSTIN.DEUEL 23.0s (LMS Tech)



PLAN

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

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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

HKP DESIGNED

TMB DRAWN

KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 19, 2010 KRISTOFOR R. SNIDER RENEWS 6-30-24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

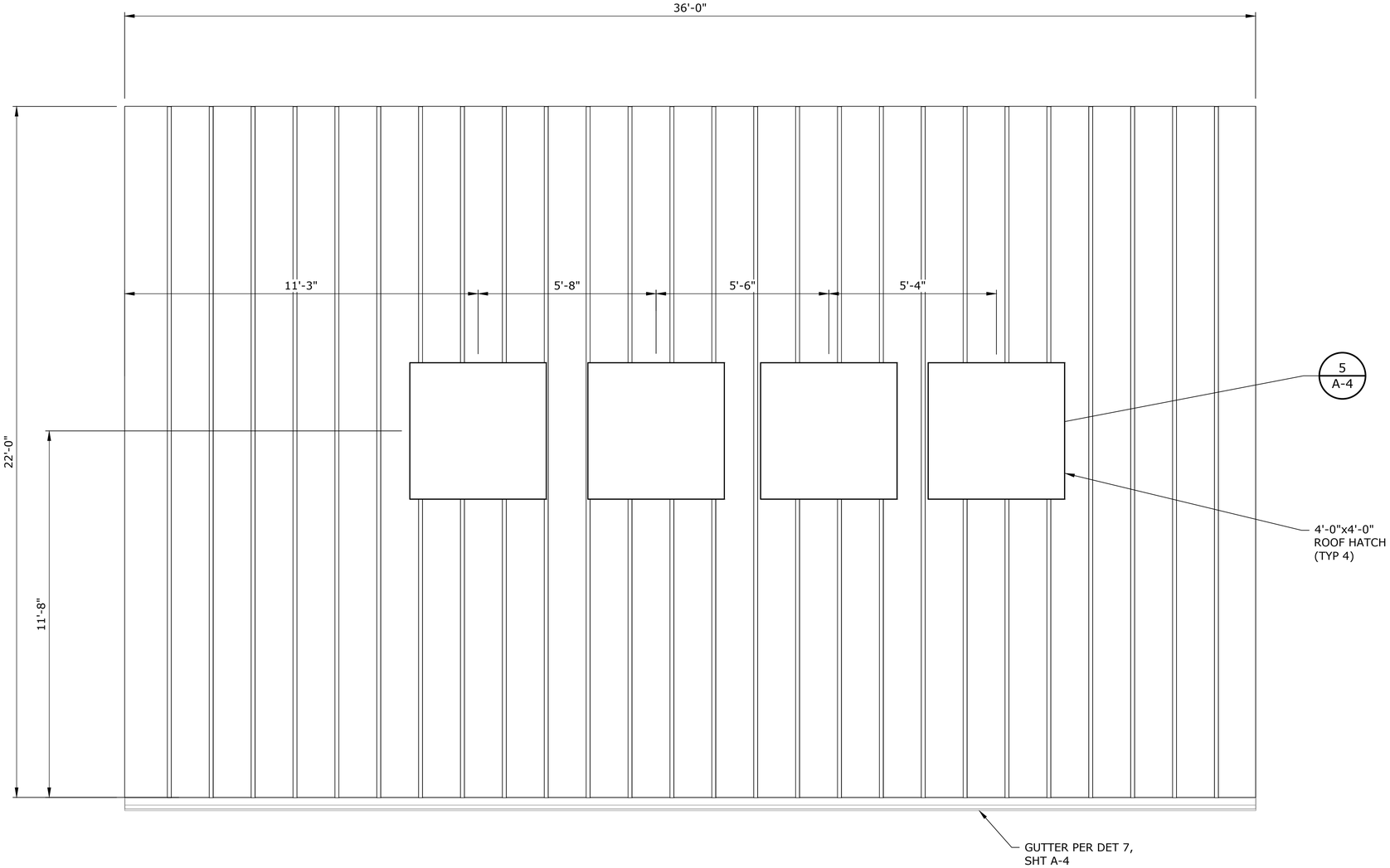
ARCHITECTURAL

FLOOR PLAN

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET A-1

I:\boi_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-A.dwg A-1 JUSTIN.DEUEL 23.0s (LMS Tech)



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

NO.	DATE	BY	REVISION

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

HKP DESIGNED
TMB DRAWN
KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 19, 2010 KRISTOFOR R. SNIDER
RENEWS 6-30-24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

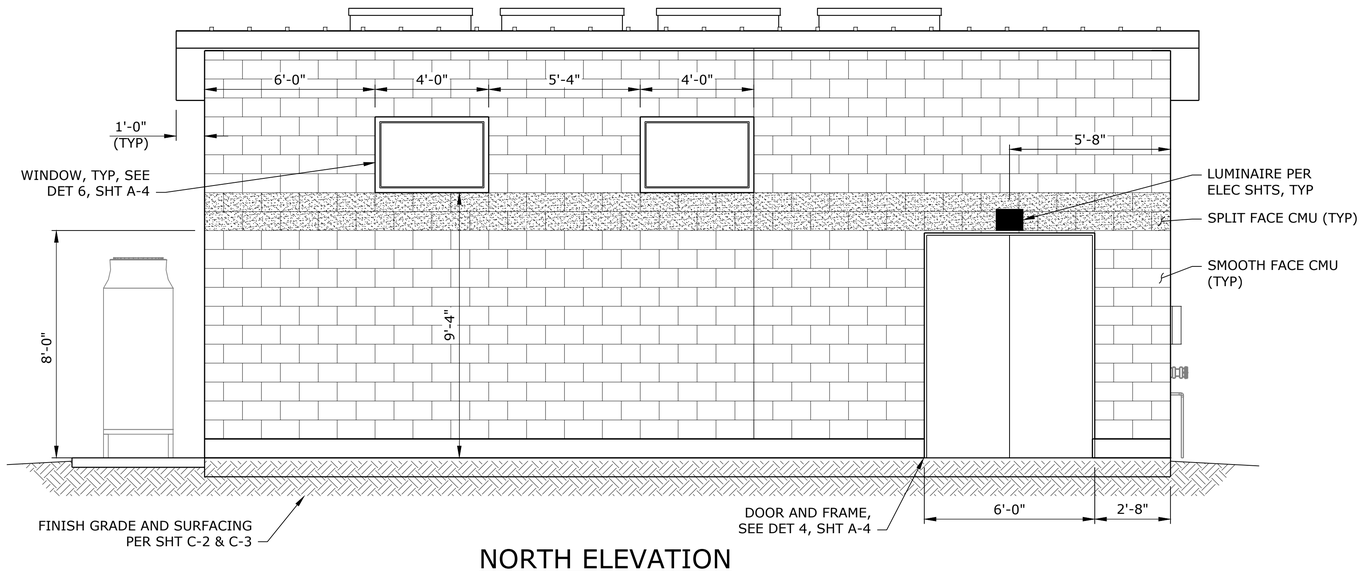
ARCHITECTURAL

ROOF PLAN

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

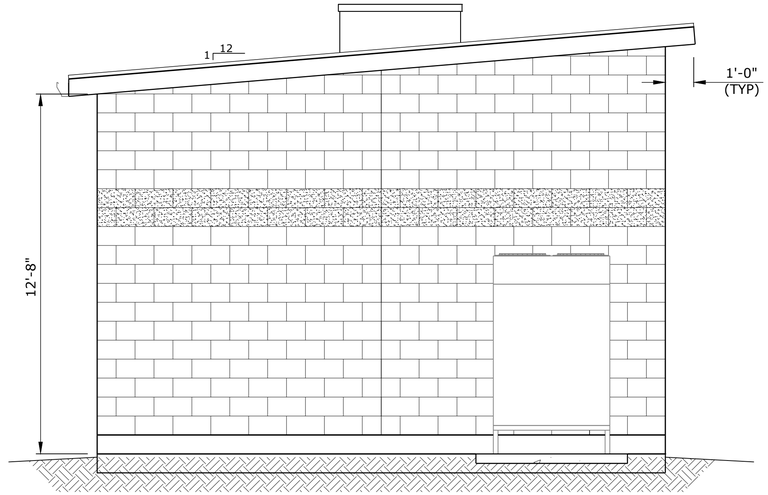
SHEET A-2

I:\boi_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-A.dwg A-2 JUSTIN.DEUEL 23.0s (LMS Tech)



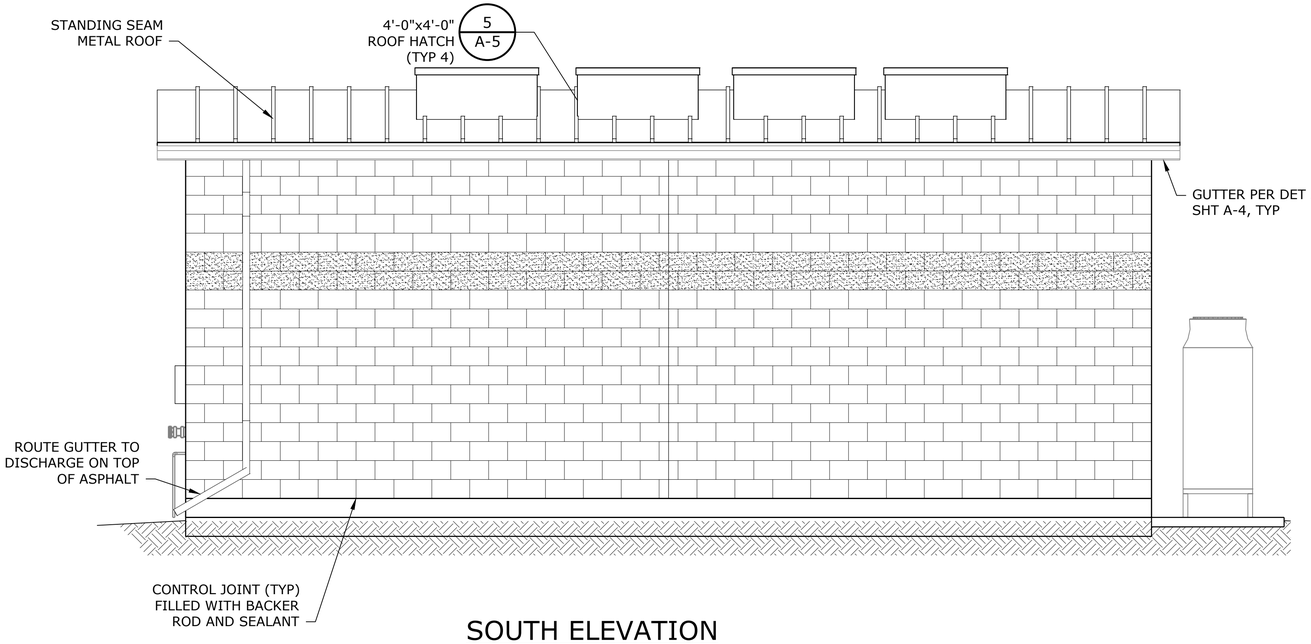
NORTH ELEVATION

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



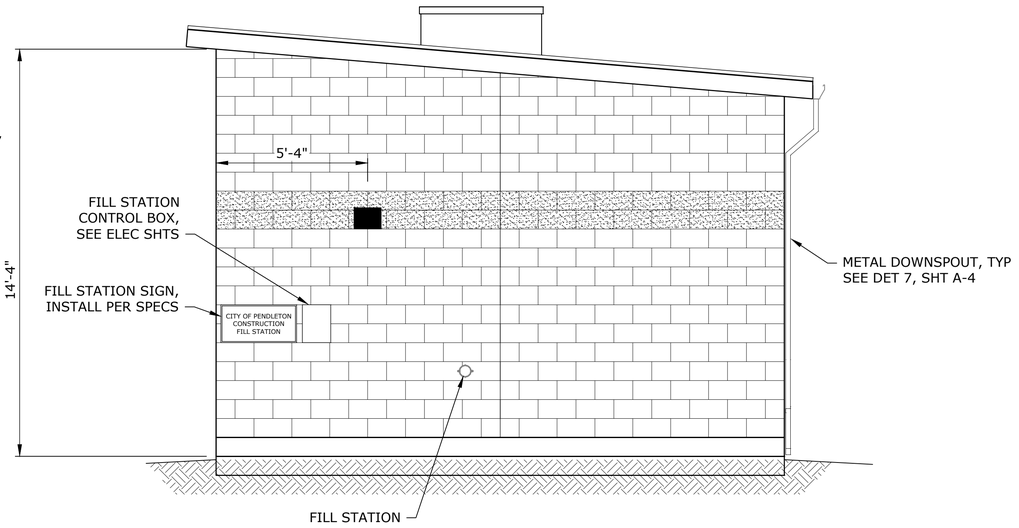
EAST ELEVATION

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



SOUTH ELEVATION

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



WEST ELEVATION

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

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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

HKP DESIGNED

TMB DRAWN

KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 19, 2010 KRISTOFOR R. SNIDER RENEWS 6-30-24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

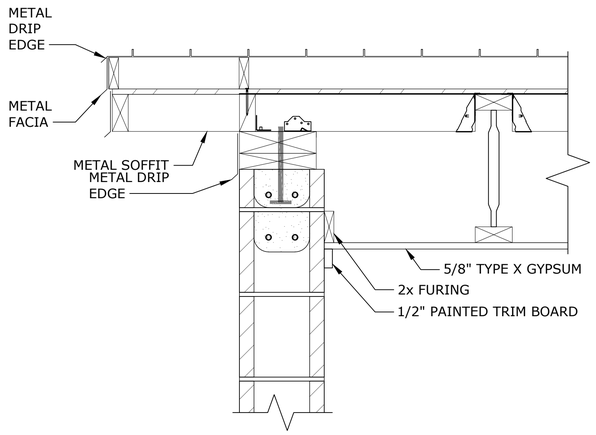
ARCHITECTURAL

EXTERIOR ELEVATIONS

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET A-3

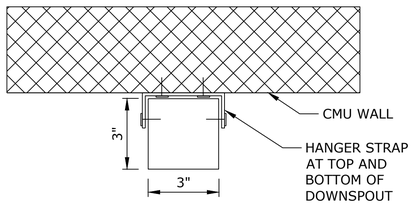
I:\boi_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-A.dwg A-3 JUSTIN.DEUEL 23.0s (LMS Tech)



TYP RAKE SECTION

SCALE: NTS

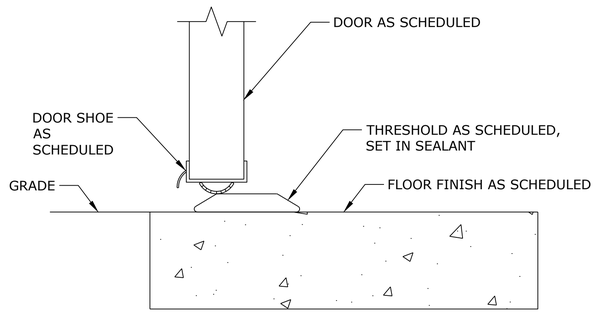
1 / -



DOWNSPOUT

SCALE: NTS

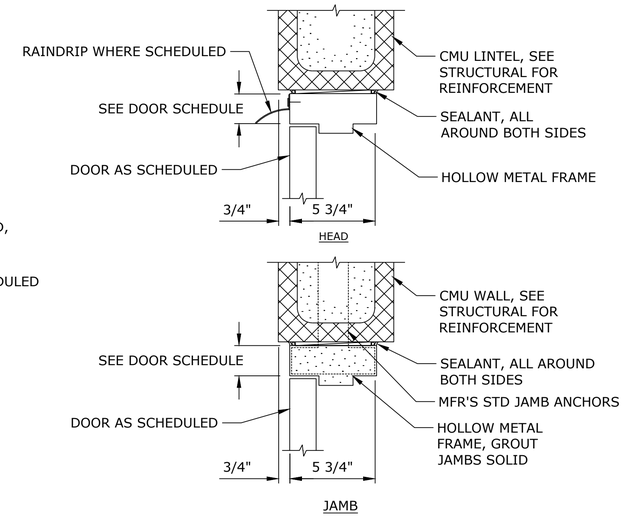
2 / A-3



DOOR SILL

SCALE: NTS

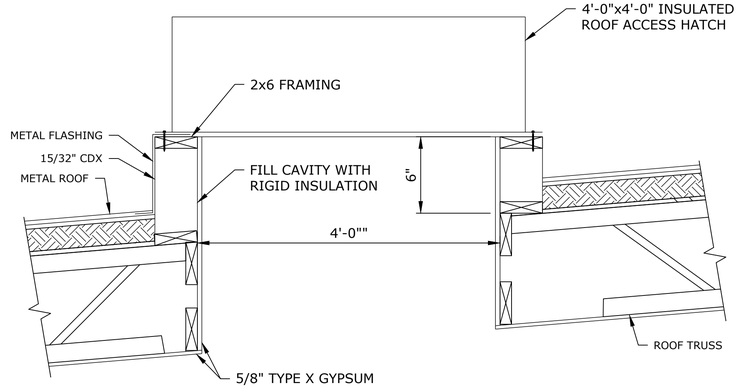
3 / -



DOOR HEAD AND JAMB

SCALE: NTS

4 / A-3



PUMP ACCESS ROOF HATCH

SCALE: NTS

5 / A-2 A-3

WINDOW JAMB & SILL

SCALE: NTS

6 / -

TYP EAVE SECTION

SCALE: NTS

7 / -

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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

HKP DESIGNED

TMB DRAWN

KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 18, 2005 KRISTOFOR R. SNIDER RENEWS 6-30-24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

ARCHITECTURAL

DETAILS

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET A-4

I:\boi_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-A.dwg A-4 JUSTIN.DEUEL 23.0s (LMS Tech)

STRUCTURAL SHEETS:

S-1 PUMP STATION GENERAL STRUCTURAL NOTES
S-2 PUMP STATION QUALITY CONTROL PLAN & NOTES
S-3 PUMP STATION QUALITY CONTROL PLAN & NOTES 2
S-4 PUMP STATION FOUNDATION PLAN, CMU WALL PLAN & ROOF FRAMING PLAN
S-5 PUMP STATION BUILDING SECTIONS
S-6 PUMP STATION CMU WALL DETAILS
S-7 PUMP STATION STRUCTURAL DETAILS
S-8 PUMP STATION GENERATOR FOUNDATION PLAN & SECTION

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 2018 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY 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 THE 2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE STATE OF OREGON.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS BEFORE CONSTRUCTION. THE ARCHITECT AND 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 STRUCTURAL 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 2018 IBC, & 2019 OSSC

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

1603.1.3 – SNOW LOADS:
- GROUND SNOW LOAD, Pg ..... 23 PSF
- FLAT-ROOF SNOW LOAD, Pf ..... 29 PSF MIN. (2019 OSSC)
- SNOW EXPOSURE FACTOR, Ce 0.9
- SNOW LOAD IMPORTANCE FACTOR, Is ..... 1.2, CATEGORY IV
- THERMAL FACTOR, Ct 1.0

1603.1.4 – WIND DESIGN CRITERIA:
- ULTIMATE DESIGN WIND SPEED, V ..... 113 MPH
- RISK CATEGORY IV
- WIND EXPOSURE ..... EXPOSURE C
- INTERNAL PRESSURE COEFFICIENT ..... SIMPLIFIED METHOD PER IBC, 1609.6

1603.1.5 – EARTHQUAKE DESIGN CRITERIA:
- RISK CATEGORY IV
- SEISMIC IMPORTANCE FACTOR, I_E 1.50
- SPECTRAL ACCELERATION, S_s ..... 0.363 g
- SPECTRAL ACCELERATION, S_1 ..... 0.136 g
- SITE CLASS ..... D-DEFAULT
- SPECTRAL RESPONSE COEFFICIENT, S_{DS} ..... 0.365 g
- SPECTRAL RESPONSE COEFFICIENT, S_{D1} ..... 0.211 g
- SEISMIC DESIGN CATEGORY ..... CATEGORY D
- SEISMIC FORCE RESISTING SYSTEM(S) ..... SPECIAL REINFORCED MASONRY SHEAR WALL
- RESPONSE MODIFICATION FACTORS(S), R 5.0
- ANALYSIS PROCEDURE ..... GENERAL PROCEDURE, PER ASCE-7

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:

CONCRETE MIX CLASS	CLASS C
MINIMUM COMPRESSIVE STRENGTH	4,500 PSI
% AIR ENTRAINMENT (±1%)	6%
MAXIMUM WATER CONTENT (GALLON PER 94LB. SACK OF CEMENT)	4.5 GALLONS
MIN. CEMENT CONTENT (94LB. SACK OF CEMENT PER CUBIC YARD OF SOLID CONCRETE)	6.5 GALLONS
MAXIMUM AGGREGATE SIZE (** SEE 1 1/2" GRADING SCHEDULE IN SPECIFICATIONS)	3/4"
INSTALLATION LOCATION(S)	FOOTINGS, SLABS

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. GEOTECHNICAL REPORT WAS PREPARED BY GEOENGINEERS OF SPOKANE, WA. PHONE: (503) 363-3125, DATED JANUARY 19, 2023 (THEIR FILE No. 8946-003-06). THE CONTRACTOR SHALL BE FAMILIAR WITH THAT SUPPLEMENTAL REPORT INFORMATION AND THE RECOMMENDATIONS CONTAINED THEREIN.
2. ALL FOUNDATIONS TO BEAR ON UNDISTURBED NATIVE MATERIAL, OR GRANULAR COMPACTED ENGINEERED FILL, PER THE PROJECT CONTRACT DOCUMENTS. THE CONTRACTOR IS DIRECTED TO THE GEOTECHNICAL REPORT IN THE PROJECT SUPPLEMENTAL INFORMATION FOR ADDITIONAL INFORMATION. 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 – 2,500 PSF
   - 3.2. ⅓ INCREASE ALLOWED PRESUMED CAPACITIES FOR SHORT TERM LOADS
   - 3.3. SOIL PROFILE – D
   - 3.4. FRICTION COEFFICIENT – 0.45

MANUFACTURED ROOF TRUSSES:

1. MANUFACTURED ROOF TRUSSES SHALL BE AT 24" CENTERS, AND SHALL BE PARALLEL CHORD OPEN WEB JOIST 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.
5. ROOF TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOADS:
   - 5.1. DISTRIBUTED DEAD LOAD IN TOP CHORD = 15 PSF
   - 5.2. DISTRIBUTED DEAD LOAD IN BOTTOM CHORD = 5 PSF
   - 5.3. DISTRIBUTED LIVE LOAD = 20 PSF
   - 5.4. DISTRIBUTED SNOW LOAD = 29 PSF
   - 5.5. AXIAL SEISMIC LOAD IN TOP CHORD = 454 LB (ULTIMATE)
   - 5.6. AXIAL WIND LOAD IN TOP CHORD = 503 LB (ULTIMATE)
   - 5.7. POINT DEAD LOAD IN TOP CHORD = 300 LB (WORST LOCATION)

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.

SOLID SAWN LUMBER:

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

   STRUCTURAL JOISTS & PLANKS – #2

3. DOUBLE JOISTS BENEATH ALL PARALLEL WALLS AND/OR PARTITIONS.
4. NOTCHING IS NOT PERMITTED IN JOISTS, RAFTERS, BEAMS, LINTELS, COLUMNS, TRUSSES, AND BRACING MEMBERS.
5. 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
ABOVE GROUND	0.25	0.10
GROUND CONTACT	0.40	0.21
FRESH WATER IMMERSION	0.40	0.21
IN GROUND (STRUCTURAL)	0.60	0.31
SILL PLATES	0.25	0.10

6. ALL LUMBER IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED WITH ACZA TO A MINIMUM RETENTION OF 0.25 POUNDS PER CUBIC FOOT BY ASSAY.
7. NAILING SHALL BE IN CONFORMANCE WITH THE 2018 IBC AS AMENDED BY THE OSSC 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.
8. 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.

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 318-14 SECTION 17.1.2, 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 318-14 SECTION 17.8.2.2, 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 318-14 SECTION 17.8.2.2. 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 318-14 SECTION 17.8.2.2.

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 = 2,000 PSI.
6. MASONRY SHALL BE LAID IN RUNNING BOND.

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.
4. ALL HARDWARE SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS, UNLESS NOTED OTHERWISE.

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PSE Project #: 2001-0201

Date: 02/14/2023

NO.	DATE	BY	REVISION

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

KTK DESIGNED
KTK DRAWN
RAH CHECKED

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 63186PE OREGON NOV. 9, 2004 TRAVIS GREGORY MATTERN
EXPIRES 12/31/24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

GOAD ROAD BOOSTER PUMP STATION

PUMP STATION GENERAL STRUCTURAL NOTES

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET S-1

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QUALITY ASSURANCE PLAN:

SHOP DRAWINGS & SUBMITTALS:

SHOP DRAWINGS, 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 MIX DESIGN AND PROPOSED ADMIXTURES
2. CONCRETE & CMU REINFORCING SHOP DRAWINGS
3. GROUT MIX DESIGN & MORTAR MIX DESIGN
4. MANUFACTURED ROOF TRUSS SHOP DRAWINGS AND CALCULATIONS
5. CMU BLOCK MATERIAL SUBMITTAL

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 CHOSEN 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 INSPECTION MAY BE PERFORMED.

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 INTERNATIONAL BUILDING CODE.

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 INTERNATIONAL BUILDING CODE.

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. FORMING AND REINFORCING OF THE FOUNDATION AND SLAB ON GRADE
   - 5.2. CMU WALL CONSTRUCTION AND REINFORCING PRIOR TO THE FIRST GROUT POUR
   - 5.3. CONSTRUCTION OF CMU LINTEL PRIOR TO GROUT POUR
   - 5.4. FOLLOWING INSTALLATION OF ROOF FRAMING PRIOR TO INSTALLATION OF WATERPROOFING AND ROOFING MATERIALS
   - 5.5. FOLLOWING THE COMPLETION OF ALL STRUCTURAL ELEMENTS CONTAINED HEREIN

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.

GENERAL - SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
FABRICATORS	1705.10 1704.2.5				SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP. SPECIAL INSPECTIONS SHALL BE PERFORMED DURING FABRICATION. PERFORMING SPECIAL INSPECTIONS IS NOT REQUIRED, WHERE FABRICATOR HAS BEEN APPROVED AS AN APPROVED FABRICATOR, PER SECTION 1704.2.5.1.
DEFERRED SUBMITTALS				X	SPECIAL INSPECTION REQUIREMENTS FOR DEFERRED SUBMITTAL ITEMS, INCLUDING REQUIREMENTS FOR DESIGNATED SEISMIC SYSTEMS IN ACCORDANCE WITH OSSC SECTION 1705.12.4 IF APPLICABLE, TO BE SPECIFIED BY THE SYSTEM ENGINEER AND INCLUDED WITH DEFERRED SUBMITTAL DOCUMENTS.
SUBMITTALS TO THE BUILDING OFFICIAL	1704.5			X	CERTIFICATES OF COMPLIANCE, REPORTS OF PRE-CONSTRUCTION TESTS, OR REPORTS OF MATERIAL PROPERTIES SHALL BE SUBMITTED TO THE BUILDING OFFICIAL.
PRE-ENGINEERED STRUCTURES	1705.1.1	MBMA	X	X	REFER TO DEFERRED SUBMITTALS AND FABRICATORS REQUIREMENTS

CONCRETE - SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
GENERAL	1705.3 1901.6	ACI 318: 26.13			SPECIAL INSPECTIONS OF CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1705.3 OF THE IBC AND SECTION 26.13 OF ACI 318.
REINFORCING STEEL PLACEMENT	1901.5.2	ACI 318: CH. 20, 25.2, 25.3, 26.6.1-26.6.3, 26.13.3.3		X	REINFORCING TO COMPLY WITH ALL CODE PROTECTION, SPACING AND TOLERANCE LIMITS.
INSPECT ANCHORS/BOLTS CAST IN CONCRETE	-	ACI 318: 17.8.2		X	ALL CAST-IN-PLACE ANCHORS/BOLTS SHALL BE VISUALLY INSPECTED. REFERENCE STEEL INSPECTIONS FOR ADDITIONAL INSTALLATION, MATERIAL AND WELDING INSPECTIONS OF STEEL ITEMS EMBEDDED IN CONCRETE (HEADED STUDS, DBA's, ETC.)
VERIFYING USE OF REQUIRED MIX DESIGN(S)	1904.1 1904.2	ACI 318: CH. 19, 26.4.3, 26.4.4		X	
CONCRETE SPECIMENS FOR TESTING		ASTM C172 ASTM C31 ACI 318: 26.5, 26.12	X		PRIOR TO CONCRETE PLACEMENT, FABRICATE CONCRETE SPECIMENS FOR TESTING. SEE THE CONCRETE TESTING TABLE FOR ADDITIONAL INFORMATION.
CONCRETE PLACEMENT		ACI 318: 26.5, 26.13.3.2(a)	X		
CONCRETE CURING		ACI 318: 26.5.3 - 26.5.5, 26.13.3.3		X	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURES AND TECHNIQUES
VERIFICATION OF FORMWORK		ACI 318: 26.11.1.2(b), 26.13.3.3		X	SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED

CONCRETE - TESTING

SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)	REMARKS
CONCRETE STRENGTH	1705.3 ASTM C172 ASTM C 31 ACI 318 26.12, ACI 318 26.5	ASTM C39	EACH 150 CY NOR LESS THAN EACH 5000 SF OF SLAB OR WALL PLACED EACH SHIFT	FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED
CONCRETE SLUMP		ASTM C143		
CONCRETE AIR CONTENT		ASTM C231		
CONCRETE TEMPERATURE		ASTM C1064		

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STRUCTURAL ENGINEER REGISTERED PROFESSIONAL 83186PE OREGON NOV. 9, 2004 TREVIS GREGORY MAYEFSKY
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CITY OF PENDLETON INCORPORATED 1880 OREGON

GOAD ROAD BOOSTER PUMP STATION

PUMP STATION QUALITY CONTROL PLAN & NOTES

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET S-2

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MASONRY MINIMUM VERIFICATION REQUIREMENTS

MINIMUM VERIFICATION	REQUIRED FOR	CODE REFERENCE	REMARKS
	QUALITY ASSURANCE LEVEL 3	TMS 602-16 Table 3 (S-25)	
PRIOR TO CONSTRUCTION, VERIFICATION OF COMPLIANCE OF SUBMITTALS.	R	ART. 1.5	
PRIOR TO CONSTRUCTION VERIFICATION OF f'm AND f'AAC, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THE CODE.	R	ART. 1.4 B	
DURING CONSTRUCTION, VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) WHEN SELF-CONSOLIDATING GROUT IS DELIVERED TO THE PROJECT SITE.	R	ART. 1.5 & 1.6.3	
DURING CONSTRUCTION, VERIFICATION OF f'm AND f'AAC FOR EVERY 5,000 SQ. FT.	R	ART 1.4 B	
DURING CONSTRUCTION, VERIFICATION OF PROPORTIONS OF MATERIALS AS DELIVERED TO THE PROJECT SITE FOR PREMIXED OR PREBLENDED MORTAR, PRESTRESSING GROUT, AND GROUT OTHER THAN SELF-CONSOLIDATING GROUT.	R	ART 1.4 B	

NOTE: R=REQUIRED, NR=NOT REQUIRED (SEE NOTE 6)

MASONRY- REQUIRED TESTING

SYSTEM OR MATERIAL	IBC CODE REFERENCE OR REFERENCED STANDARD	REMARKS
UNIT STRENGTH METHOD-MASONRY UNIT	IBC 1705.4 , TMS 602 1.4.B, TMS 602.2.3, TMS 602 2.3 E, ASTM REFERENCES PER REMARKS	CONCRETE MASONRY (ASTM C90) CONCRETE MASONRY UNIT MATERIALS TO CONFORM TO ASTM C55, C73, C90, C129, C744, OR C1634 AS SPECIFIED.
UNIT STRENGTH METHOD-COMPRESSIVE STRENGTH OF MORTAR	IBC 1705.4, TMS 602 2.1 , ASTM C270	MORTAR SHALL COMPLY WITH ASTM C270 .
UNIT STRENGTH METHOD-COMPRESSIVE STRENGTH OF GROUT	IBC 1705.4, TMS 602 2.2, ASTM C476	GROUT SHALL COMPLY WITH ASTM C476. WHEN f'm EXCEEDS 2,000 PSI PROVIDE COMPRESSIVE STRENGTH THAT EQUALS OR EXCEEDS f'm. DETERMINE COMPRESSIVE STRENGTH OF GROUT IN ACCORDANCE WITH ASTM C1019. DO NOT USE ADMIXTURES UNLESS ACCEPTABLE. FIELD ADDITION OF ADMIXTURES IS NOT PERMITTED IN SELF-CONSOLIDATING GROUT.
PRISM TEST METHOD*	IBC 1705.4, TMS 602 1.4 B.2.3, 1.4 B.4, ASTM C1314	FOR BOTH CLAY AND CONCRETE MASONRY, TEST IN ACCORDANCE WITH ASTM C1314. DETERMINE LENGTH, WIDTH AND HEIGHT DIMENSIONS OF THE PRISM AND TEST PRISMS WHEN AT LEAST 28 DAYS OLD IN ACCORDANCE WITH ASTM C1314.
TESTING PRISMS FROM CONSTRUCTED MASONRY*	IBC 1705.4, TMS 602 1.4 B 4.a, 1.4 B 4.b, 1.4 B 4.c, ASTM C1532	PRISM SAMPLING AND REMOVAL- FOR EACH 5000 SQUARE FEET OF WALL AREA IN QUESTION, SAW-CUT A MINIMUM OF THREE PRISMS FROM COMPLETED MASONRY. SELECT, REMOVE, AND TRANSPORT PRISMS PER ASTM C1532/C1532M.

General Notes:
*1.4 B.1 or 1.4 B.2 Either the Unit Strength Method or the Prism Test Method may be chosen to satisfy special inspections compressive strength for each wythe.

MASONRY MINIMUM SPECIAL INSPECTION REQUIREMENTS

INSPECTION TASK	FREQUENCY	CODE REFERENCE		REMARKS
	QUALITY ASSURANCE LEVEL 3	TMS 402-16	TMS 602-16 Table 4 (S-26)	
1. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
A. PROPORTIONS OF SITE-PREPARED MORTAR	P		ART. 2.1, 2.6 A, & 2.6 C	
C. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS	P			
F. SAMPLE PANEL CONSTRUCTION	C		ART. 1.6 D	
2. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
A. GROUT SPACE	C		ART. 3.2 D & 3.2 F	
C. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	C	SEC. 6.1, 6.3.1, 6.3.6 &6.3.7	ART. 3.2 E & 3.4	
D. PROPORTIONS OF SITE-PREPARED GROUT	P		ART. 2.6 B & 2.4 G.1.b	
3. VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION:				
A. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	P		ART. 1.5	
B. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	P		ART. 3.3 B	
C. SIZE AND LOCATION OF STRUCTURAL MEMBERS	P		ART. 3.3 F	
D. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	C	SEC. 1.2.1 (e), 6.2.1 & 6.3.1		
F. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40 F) OR HOT WEATHER (TEMPERATURE ABOVE 90 F)	P		ART. 1.8 C & 1.8 D	
I. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	C		ART. 3.3 B.9 & 3.3 F.1.b	CONTINUOUS INSPECTION REQUIRED FOR THE FIRST 5000 SQUARE FEET OF AAC MASONRY, PERIODIC INSPECTION AFTER THE FIRST 5000 SQUARE FEET OF AAC MASONRY
4. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/ OR PRISMS	C		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	

NOTE: R=REQUIRED, NR=NOT REQUIRED, P=PERIODIC, C=CONTINUOUS (NOTE 6)

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Date: 02/14/2023

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KTK DRAWN
RAH CHECKED

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CITY OF PENDLETON OREGON INCORPORATED 1880

GOAD ROAD BOOSTER PUMP STATION

PUMP STATION QUALITY CONTROL PLAN & NOTES 2

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET S-3

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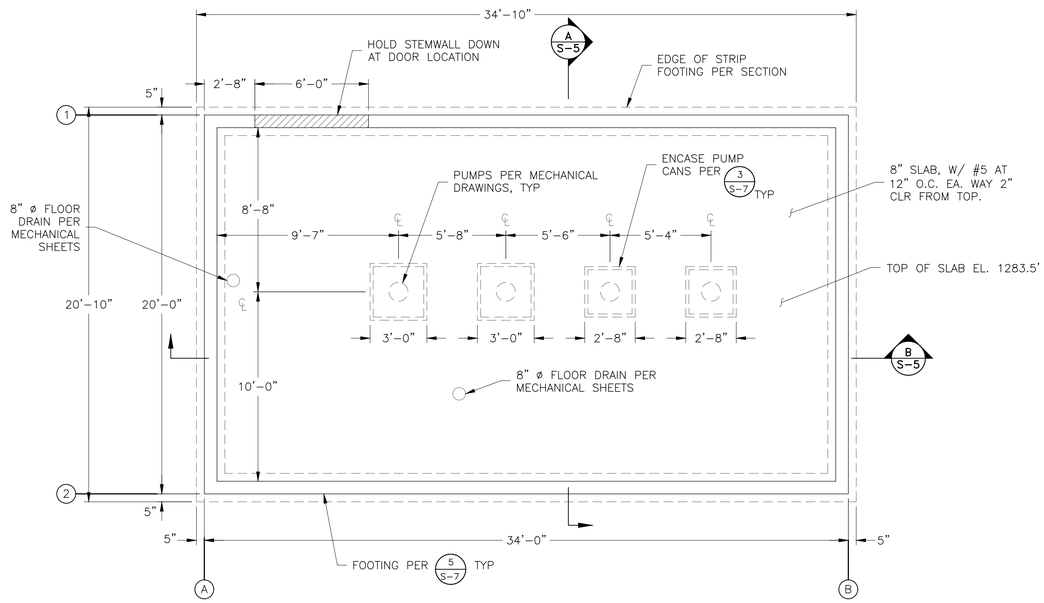
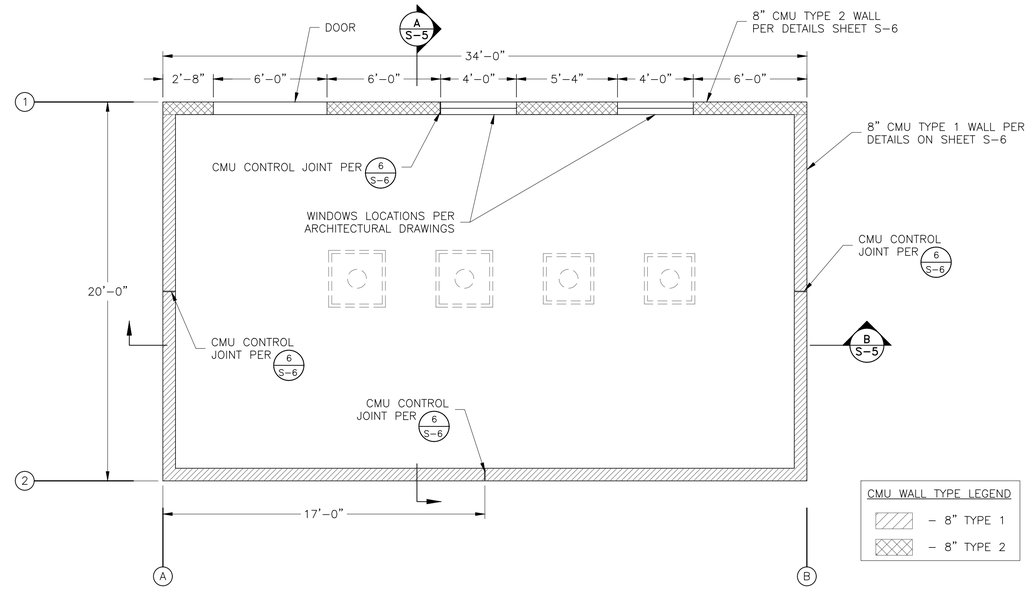


FOUNDATION PLAN

1/4" = 1'-0"

1 –

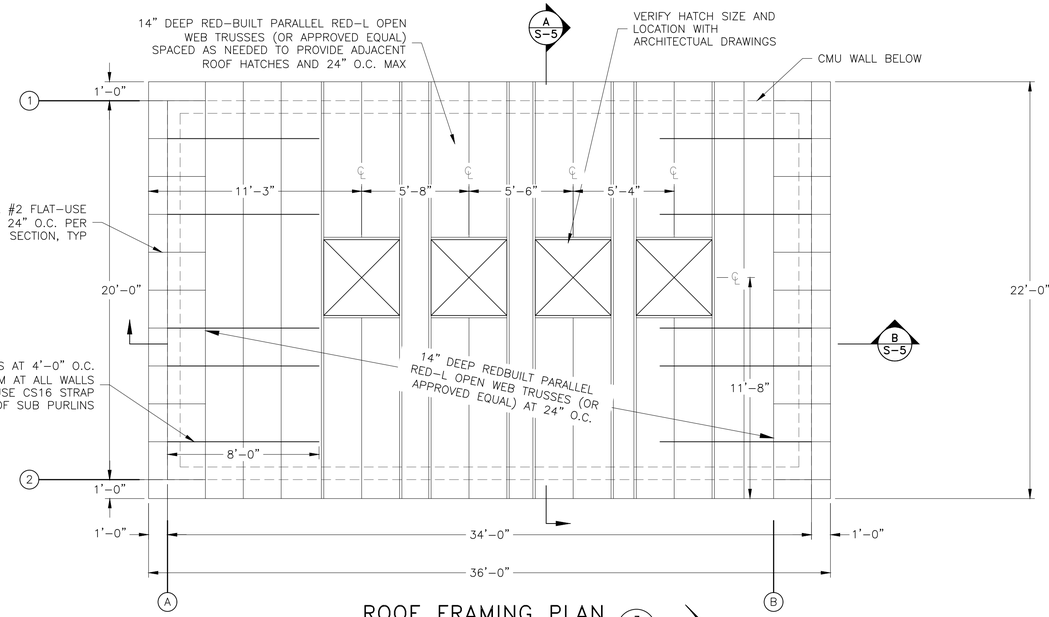


CMU WALL PLAN

1/4" = 1'-0"

2 –

NOTE: PIPING NOT SHOWN FOR CLARIFY SEE CIVIL SHEETS.



ROOF FRAMING PLAN

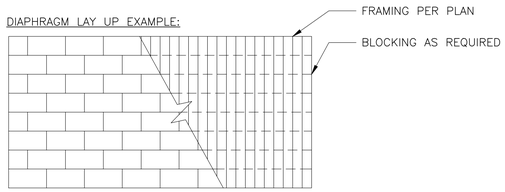
1/4" = 1'-0"

3 –

ROOF SHEATHING: 15/32" CDX APA RATED SHEATHING W/ 8d NAILS @ 6" O.C. EDGES & 12" O.C. FIELD

DIAPHRAGM NOTES:
1. FIELD NAILING TO BE AT 12" O.C.
2. SHEATHING TO BE SUPPORTED BY FRAMING 24" O.C. MAX.
3. NAILS TO BE COMMON OR GALVANIZED BOX NAILS. GALVANIZED NAILS SHALL BE HOT DIPPED OR TUMBLED. NAILS TO BE 3/8" FROM PANEL EDGE.
4. PANELS TO BE PLACED PER LAY UP EXAMPLE BELOW.

DIAPHRAGM LAY UP EXAMPLE:



ROOF TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOADS:
1.1. DISTRIBUTED DEAD LOAD IN TOP CHORD = 15 PSF
1.2. DISTRIBUTED DEAD LOAD IN BOTTOM CHORD = 5 PSF
1.3. DISTRIBUTED LIVE LOAD = 20 PSF
1.4. DISTRIBUTED SNOW LOAD = 29 PSF
1.5. AXIAL SEISMIC LOAD IN TOP CHORD = 454 LB (ULTIMATE)
1.6. AXIAL WIND LOAD IN TOP CHORD = 503 LB (ULTIMATE)
1.7. POINT DEAD LOAD IN TOP CHORD = 300 LB (WORST LOCATION)

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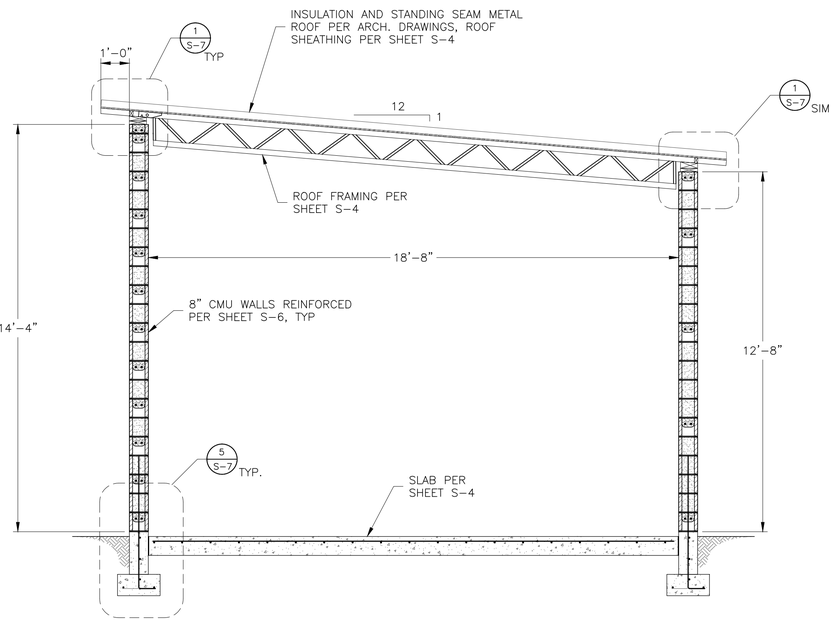
GOAD ROAD BOOSTER PUMP STATION

PUMP STATION FOUNDATION PLAN, CMU WALL PLAN & ROOF FRAMING PLAN

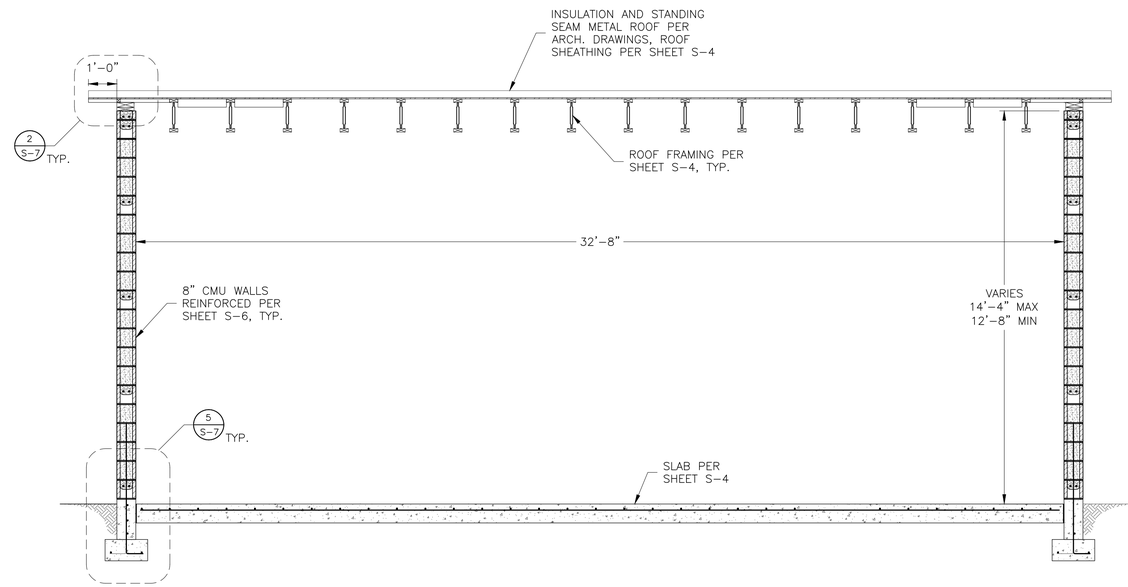
PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET S-4



TRANSVERSE SECTION (A S-4)

3/8" = 1'-0"



LONGITUDINAL SECTION (B S-4)

3/8" = 1'-0"

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Date: 02/14/2023

NO.	DATE	BY	REVISION

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KTK DRAWN
RAH CHECKED

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CITY OF PENDLETON INCORPORATED 1880 OREGON

GOAD ROAD BOOSTER PUMP STATION

PUMP STATION BUILDING SECTIONS

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SHEET S-5

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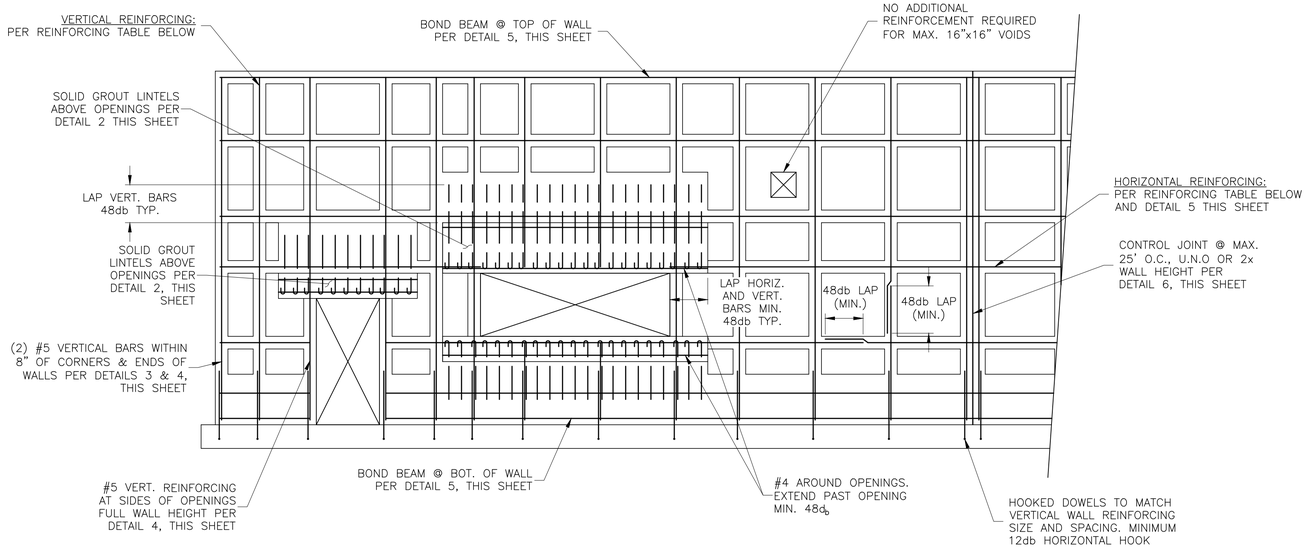
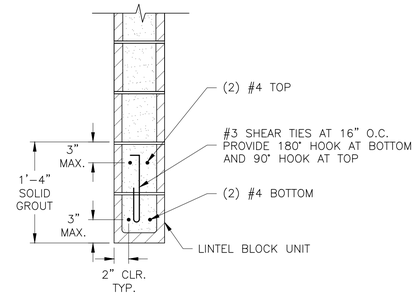


TYPICAL CMU WALL DETAIL (1/S-4)

1/4" = 1'-0"

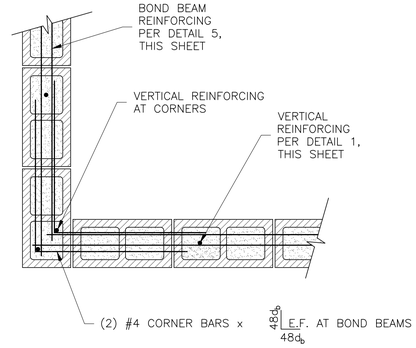
CMU REINFORCING TABLE		
	VERT.	HORIZ.
TYPE 1	#5 @ 48" O.C.	(2) #4 @ 48" O.C.
TYPE 2	#5 @ 16" O.C.	(2) #4 @ 16" O.C.

CMU NOTES:
1. WALLS ARE TO BE SOLID GROUTED UNLESS NOTED OTHERWISE. ALL CELLS WITH REINFORCEMENT SHALL BE 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



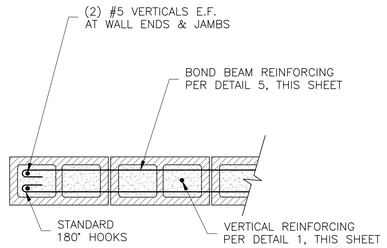
CMU LINTEL DETAIL (2/-)

1" = 1'-0"



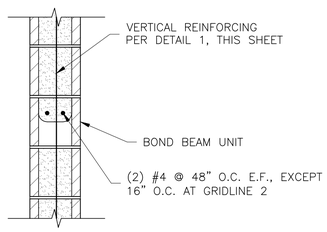
CMU WALL CORNER DETAIL (3/-)

1" = 1'-0"



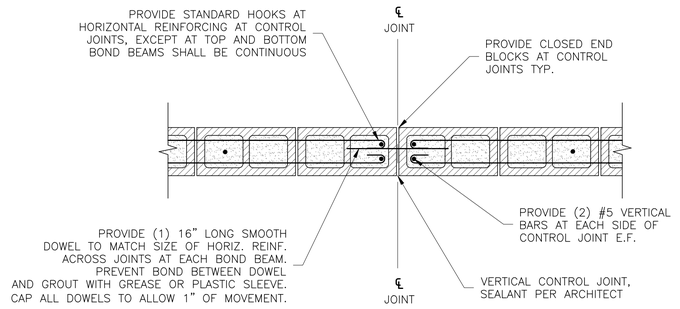
JAMB OR END OF WALL DETAIL (4/-)

1" = 1'-0"



BOND BEAM DETAIL (5/-)

1" = 1'-0"



NOTE:
PROVIDE VERTICAL CONTROL JOINTS AT INTERVALS NOT TO EXCEED 25'-0", UNLESS SPECIFICALLY NOTED OTHERWISE. CONTRACTOR SHALL COORDINATE LOCATION OF JOINT WITH ARCHITECT AND STRUCTURAL ENGINEER

CMU VERTICAL CONTROL JOINT (6/S-4)

1" = 1'-0"

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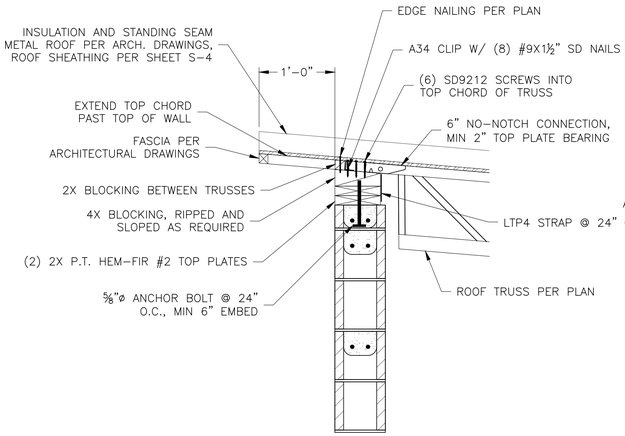
CITY OF PENDLETON INCORPORATED 1880 OREGON

GOAD ROAD BOOSTER PUMP STATION

PUMP STATION CMU WALL DETAILS

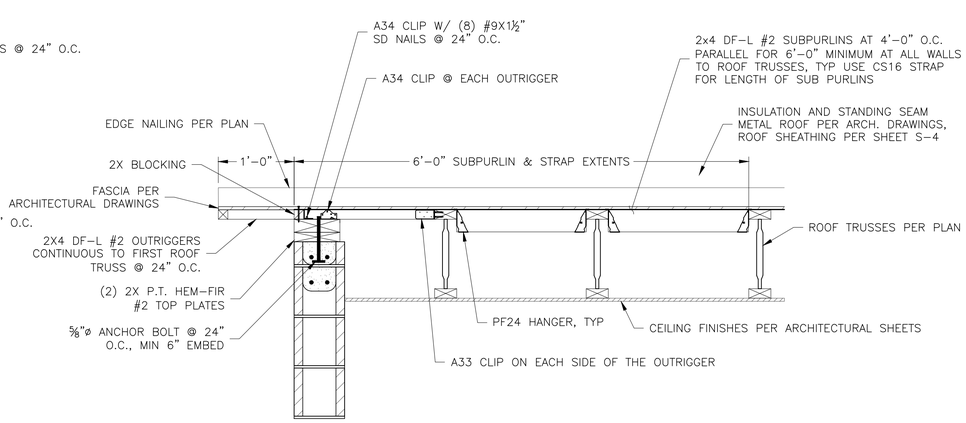
PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET S-6



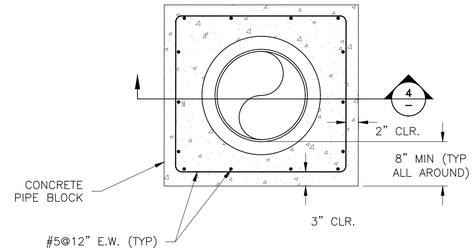
TOP OF WALL DETAIL 1/S-5

1" = 1'-0"



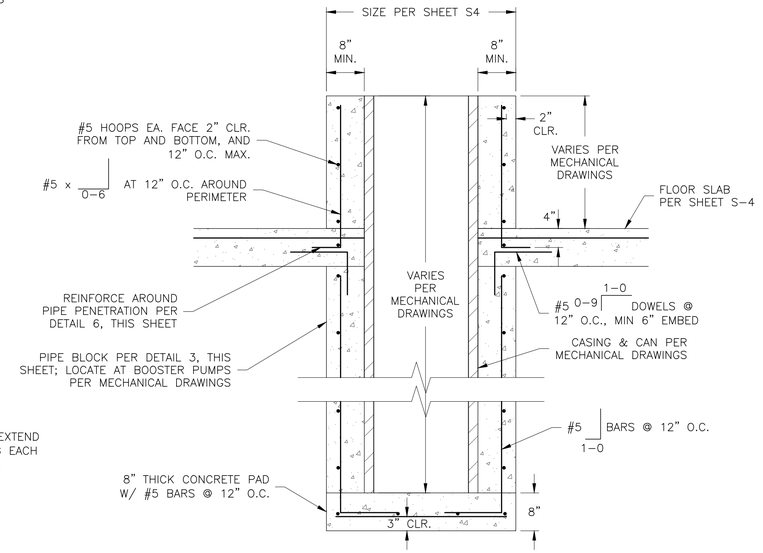
TOP OF WALL DETAIL 2/S-5

1" = 1'-0"



TYPICAL PUMP PAD SECTION 3/S-4

3/4" = 1'-0"



TYPICAL PUMP BLOCK SECTION 4/-

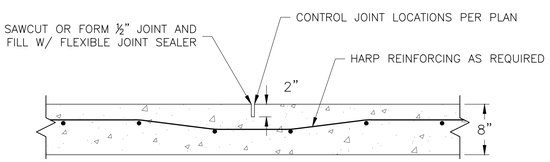
3/4" = 1'-0"

TYPICAL FOOTING 5/S-4

1" = 1'-0"

SLAB PENETRATION REINFORCING DETAIL 6/S-4

N.T.S.



CONTROL JOINT DETAIL 7/S-4

1" = 1'-0"

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GOAD ROAD BOOSTER PUMP STATION

PUMP STATION STRUCTURAL DETAILS

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SHEET S-7

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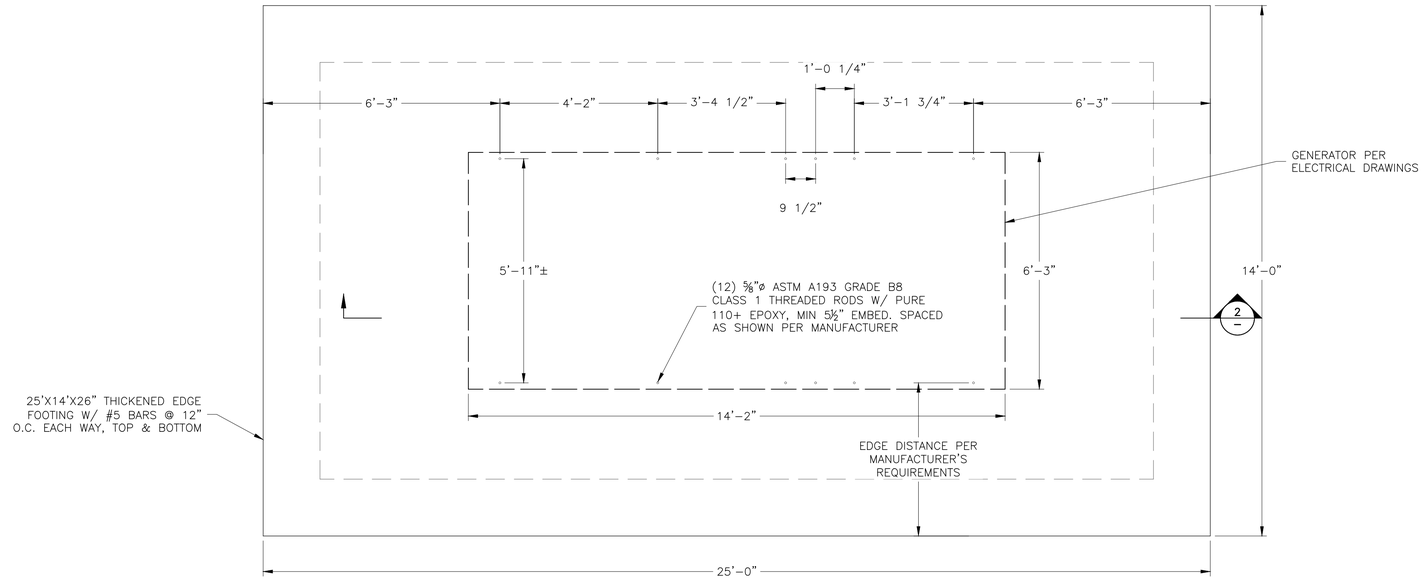
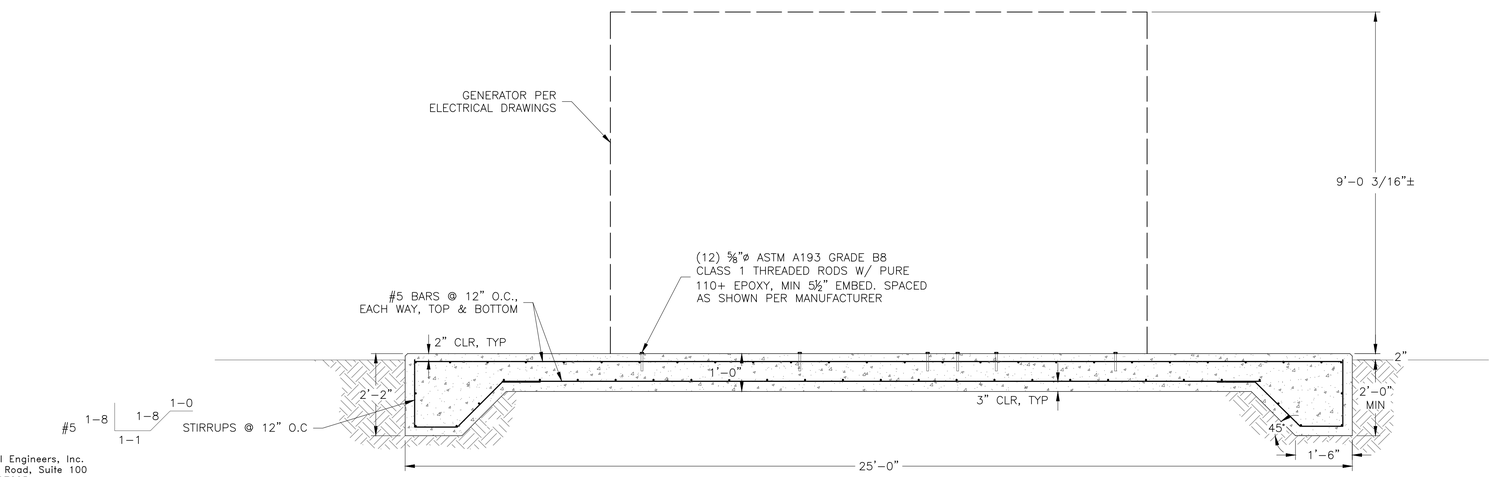


GENERATOR PLAN (1/–)

1/2" = 1'-0"

NOTE: VERIFY ALL DIMENSIONS AND ANCHORAGE LOCATIONS WITH GENERATOR SUBMITTAL PRIOR TO CONSTRUCTION



GENERATOR SECTION (2/–)

1/2" = 1'-0"

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GOAD ROAD BOOSTER PUMP STATION

PUMP STATION GENERATOR FOUNDATION PLAN & SECTION

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SHEET S-8

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PERSPECTIVE

SCALE: NTS

NOTE:
PERSPECTIVE VIEW ARE FOR GENERAL REFERENCE ONLY. DO NOT USE FOR CONSTRUCTION. NOT ALL WORK ELEMENTS SHOWN.

NO.	DATE	BY	REVISION

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

HKP DESIGNED
TMB DRAWN
KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 19, 2010 KRISTOFOR R. SNIDER
RENEWS 6-30-24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

MECHANICAL

PERSPECTIVE

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET M-1

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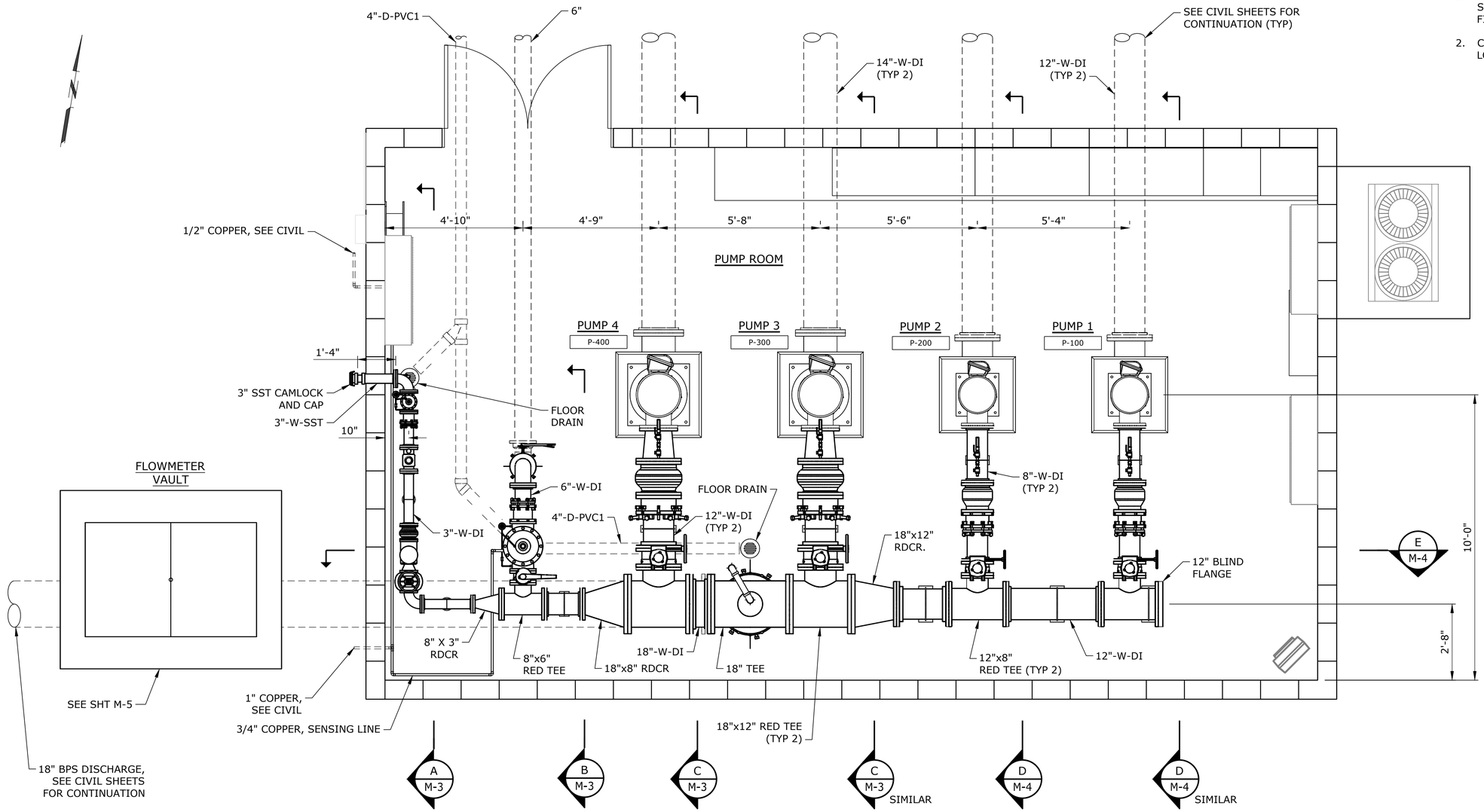
SHEET NOTES:

1. FITTINGS AND PIPE OUTSIDE BUILDING ENVELOPE SHOWN FOR REFERENCE ONLY. SEE CIVIL SHEETS FOR FITTING, PIPE, AND DETAIL CALLOUTS.
2. COORDINATE WITH ELECTRICAL DRAWINGS FOR LOCATION OF MOTOR TERMINAL BOX LOCATIONS.



PLAN

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

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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

HKP DESIGNED

TMB DRAWN

KRS CHECKED

REGISTERED PROFESSIONAL ENGINEER 89885 OREGON JANUARY 19, 2010 KRISTOFOR R. SNIDER RENEWS 6-30-24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

MECHANICAL

PLAN

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET M-2

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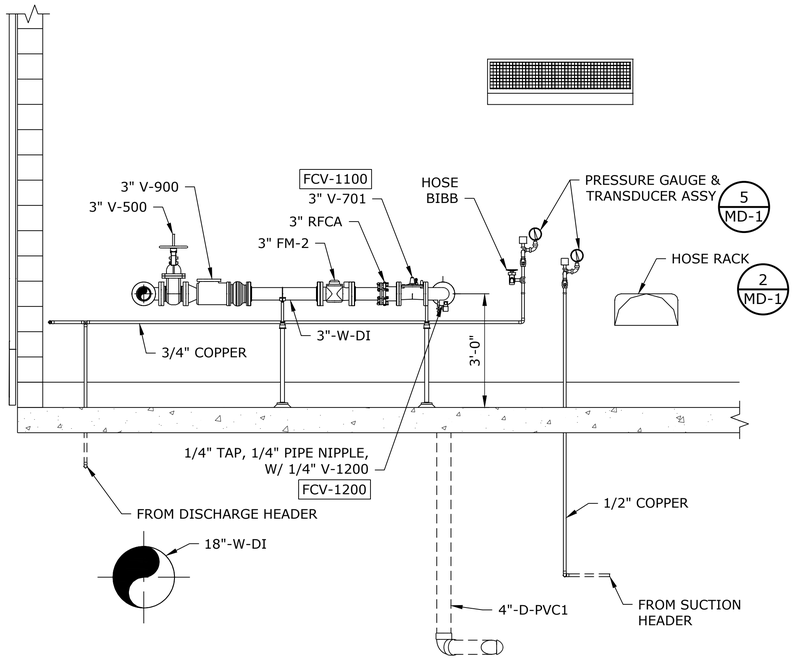
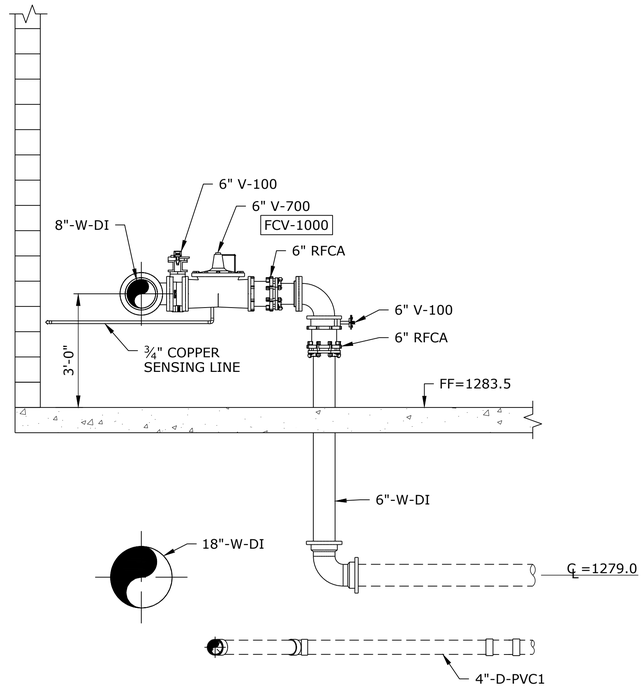
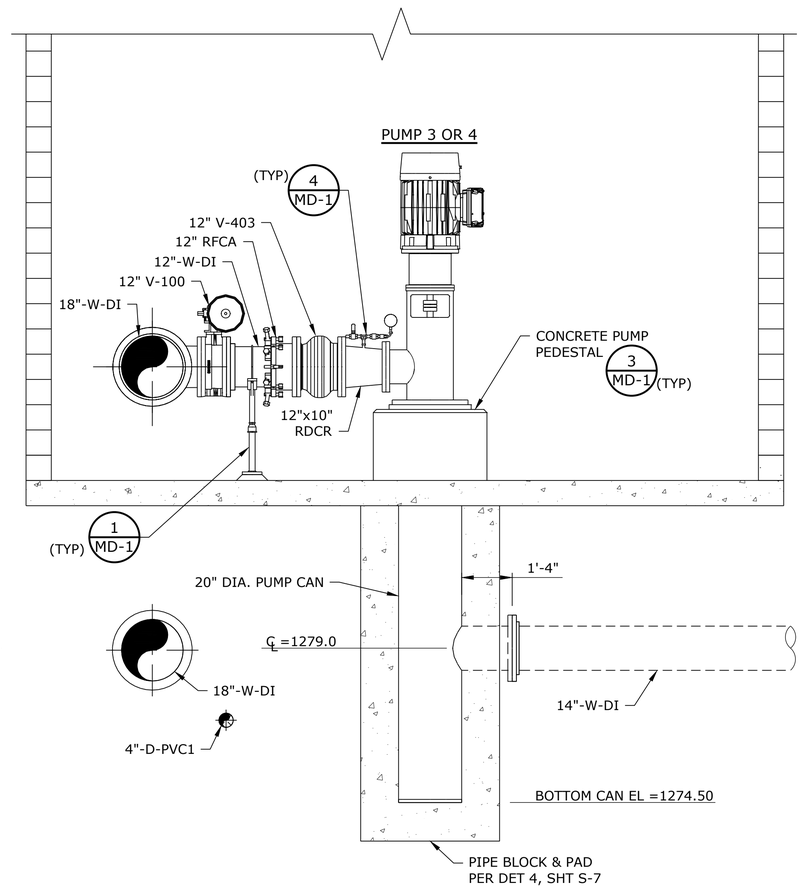


SECTION
SCALE: 1/2" = 1'-0"
A
M-2



SECTION
SCALE: 1/2" = 1'-0"
B
M-2



SECTION
SCALE: 1/2" = 1'-0"
C
M-2

I:\bol_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-M-3.dwg M-3 JUSTIN.DEUEL 23.0s (LMS Tech)

NO.	DATE	BY	REVISION

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

HKP DESIGNED
TMB DRAWN
KRS CHECKED

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consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

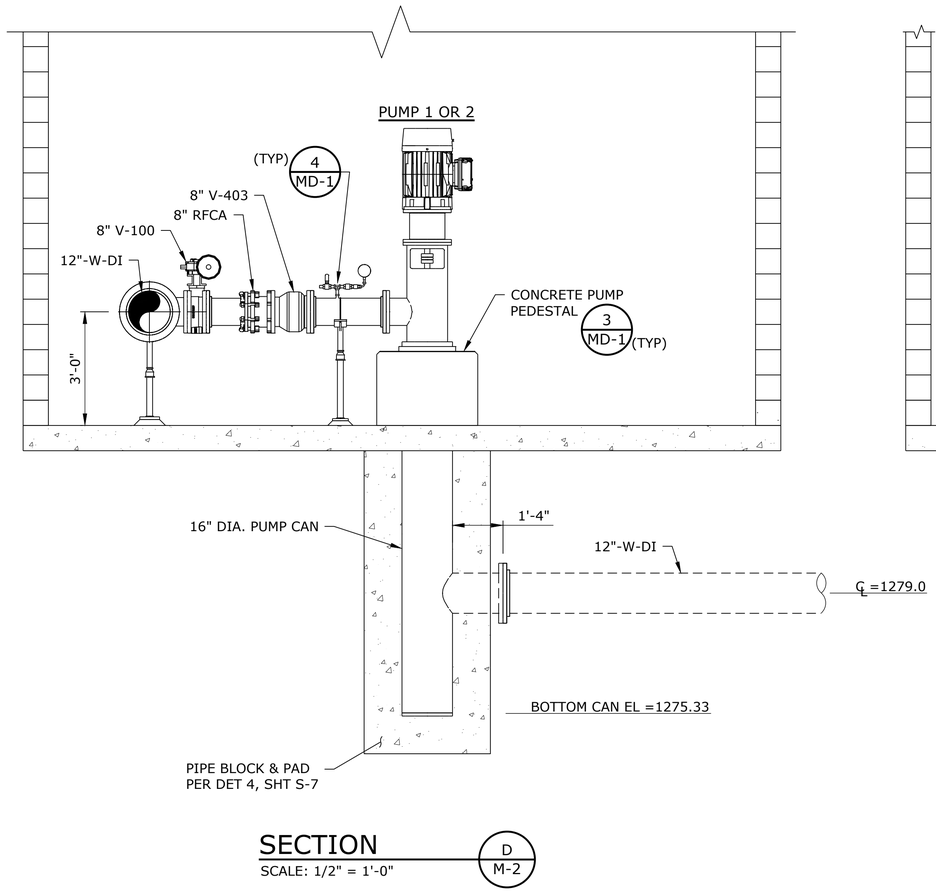
EAST END BOOSTER PUMP STATION

MECHANICAL

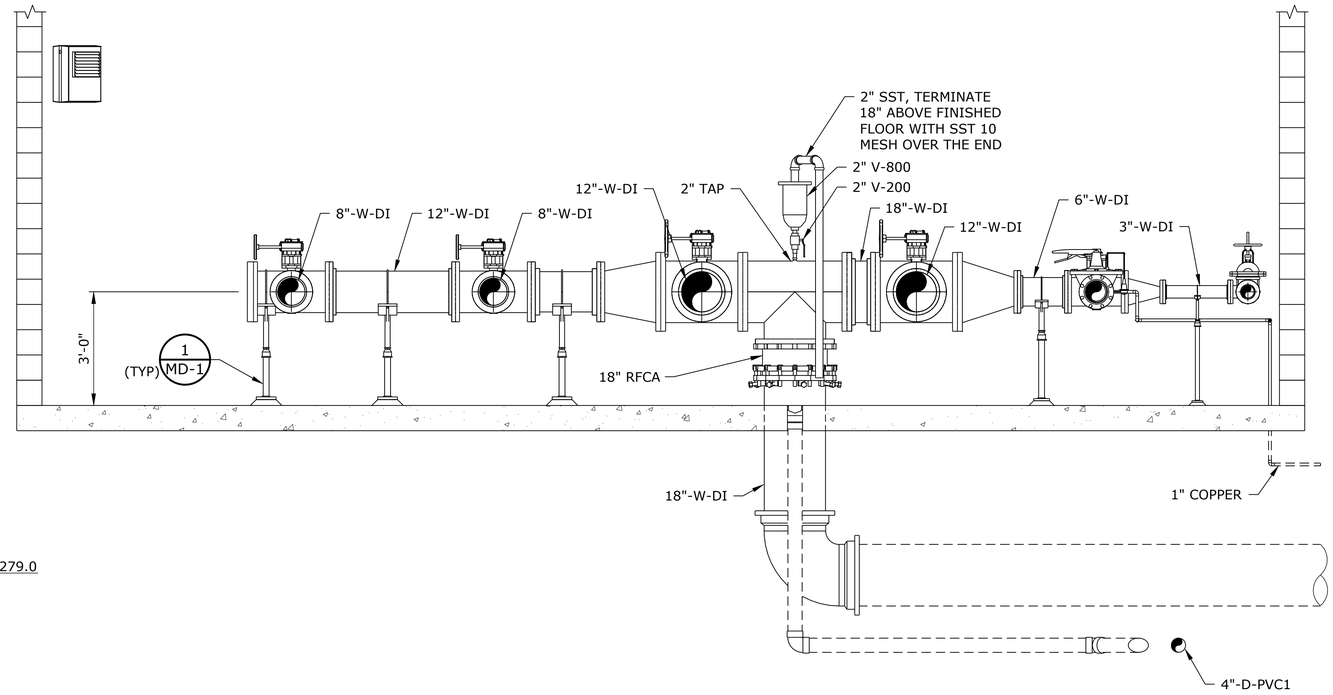
SECTIONS - 1

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET
M-3



SECTION D M-2
SCALE: 1/2" = 1'-0"



SECTION E M-2
SCALE: 1/2" = 1'-0"

NO.	DATE	BY	REVISION

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TMB DRAWN
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RENEWS: 6-30-24

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CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

MECHANICAL

SECTIONS - 2

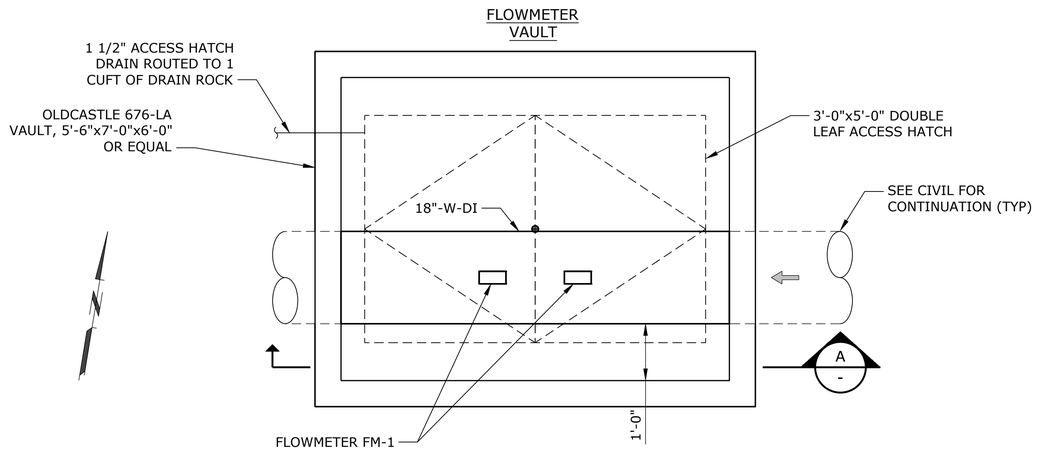
PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET M-4

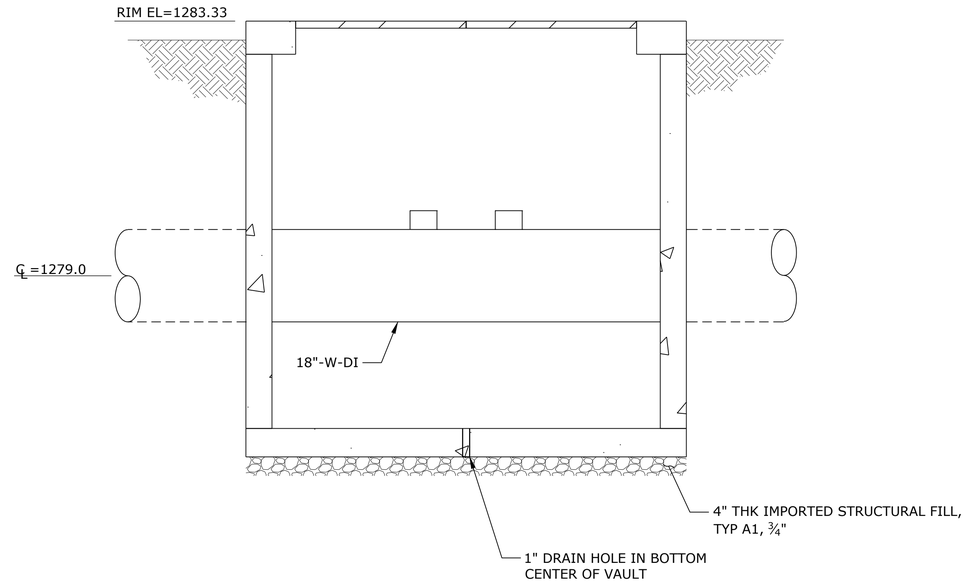
I:\boi_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-M-4.dwg M-4 JUSTIN.DEUEL 23.0s (LMS Tech)

SHEET NOTES:

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



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



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

A
-

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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TMB DRAWN
KRS CHECKED

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RENEWS 6-30-24

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EAST END BOOSTER PUMP STATION

MECHANICAL

FLOWMETER VAULT PLAN AND SECTION

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET M-5

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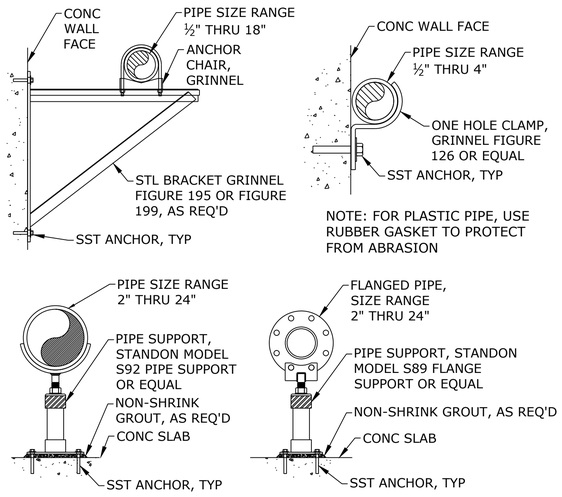
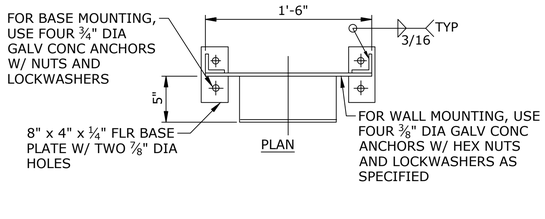
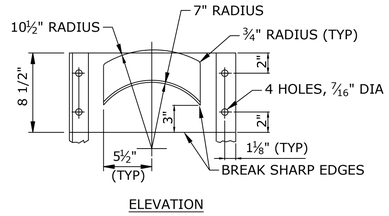


STANDON S92 STANDON S89

PIPE SUPPORTS AND HANGERS

SCALE: NTS — 1 / M-3, M-4





ELEVATION

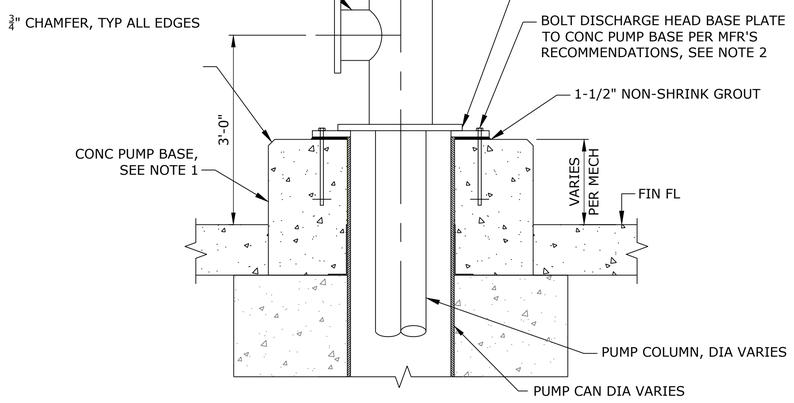
NOTES:

1. WHERE HOSE RACK IS FREE-STANDING, PROVIDE TWO STEEL ANGLES 2x2x1/4 WITH 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

SCALE: NTS — 2 / M-3

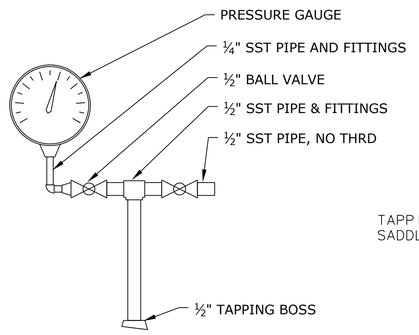


NOTES:
1. SEE STRUCTURAL DESIGN OF CONCRETE PUMP BASE.

2. DISCHARGE HEAD BASE PLATE BOLTS TO BE HEX HEAD BOLTS WITH LOCK WASHER, LENGTH AND EMBED PER MANUFACTURER REQUIREMENTS.

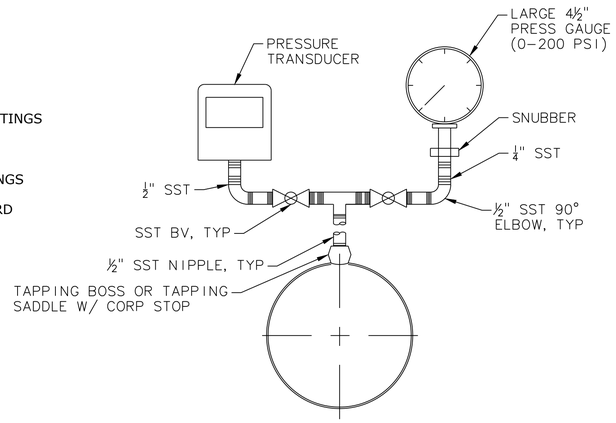
CONCRETE PUMP PEDASTAL

SCALE: NTS — 3 / M-2, M-4



PRESSURE GAUGE AND AIR RELEASE VALVE DETAIL

SCALE: NTS — 4 / M-2, M-4



PRESSURE GAUGE AND TRANSMITTER DETAIL

SCALE: NTS — 5 / M-3

NO.	DATE	BY	REVISION

NOTICE
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CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

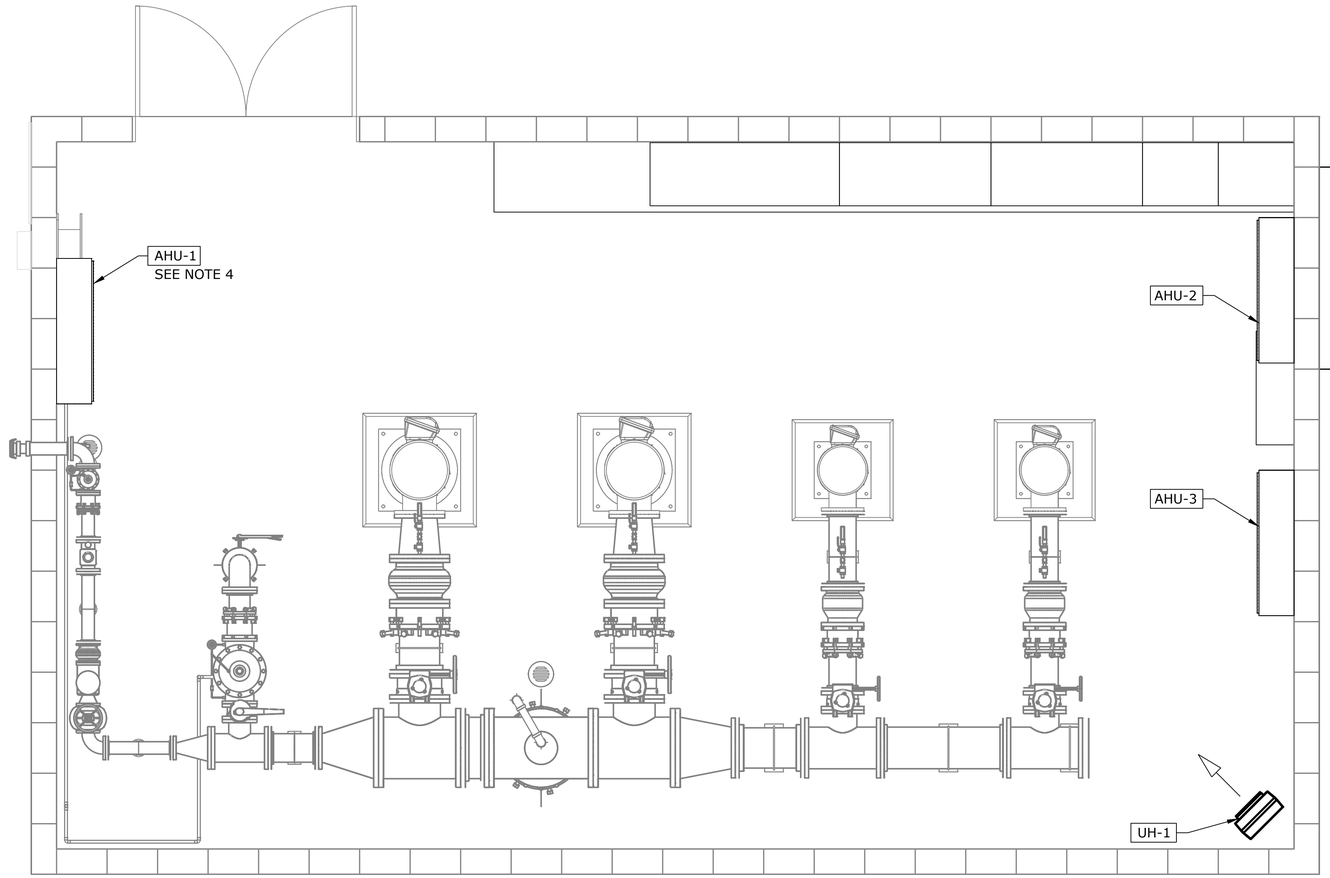
MECHANICAL

DETAILS

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET MD-1

I:\boi_projects\20\2995 - Goad Road Booster Station\CAD\Sheets\goad Rd Bs\20-2995-OR-MD-1.dwg MD-1 JUSTIN.DEUEL 23.0s (LMS Tech)



SHEET NOTES:

1. ALL DIFFUSERS/GRILLES SHALL INCLUDE AN ADJUSTABLE MANUAL DAMPER TO CONTROL AIR FLOW.
2. INSTALL REFRIGERANT PIPING IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.
3. HP-1 SHALL BE MOUNTED PER MANUFACTURER RECOMMENDATIONS ON A 4" THICK CONCRETE PAD, EITHER CAST IN PLACE OR PRECAST SLAB.
4. ALL AHU SHALL BE MOUNTED ON THE WALL USING THE MANUFACTURER PROVIDED WALL MOUNTING SYSTEM, INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

HVAC EQUIPMENT SCHEDULE

NO.	DESCRIPTION	COOLING CAPACITY (BTU/HR)	HEATING CAPACITY	AIRFLOW (CFM)	POWER REQUIREMENT (VOLTAGE/HERTZ/ PHASE)
AHU-1	SPLIT-TYPE, HEAT PUMP AIR CONDITIONER	30,000	34,000 BTU/HR	920	208/60/1
AHU-2	SPLIT-TYPE, HEAT PUMP AIR CONDITIONER	30,000	34,000 BTU/HR	920	208/60/1
AHU-3	SPLIT-TYPE, HEAT PUMP AIR CONDITIONER	30,000	34,000 BTU/HR	920	208/60/1
HP-1	HEAT PUMP	96,000	108,000 BTU/HR	7,400	460/60/3
UH-1	UNIT HEATER	-	7.5 KW	850	480/60/3

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

NO.	DATE	BY	REVISION

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REGISTERED PROFESSIONAL ENGINEER 89985 OREGON JANUARY 15, 2010 KRISTOFOR R. SNIDER RENEWS 6-30-24

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CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

HVAC

FLOOR PLAN AND SCHEDULES

PROJECT NO.: 20-2995 | SCALE: | DATE: JANUARY 2023

SHEET H-1

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#: 20.99.01

NO.	DATE	BY	REVISION

NOTICE
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MWA DESIGNED
JLB DRAWN
MWA CHECKED

REGISTERED PROFESSIONAL ENGINEER 88305PE OREGON MAY 14, 2019 MICHAEL E. WALLIS
EXPIRES: 6/30/24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

ELECTRICAL

GENERAL NOTES AND ABBREVIATIONS

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET E-1

ELECTRICAL PLAN SYMBOLS

- CONDUIT UP
- CONDUIT DOWN
- CONDUIT UP FROM UNDERGROUND RACEWAY
- CONDUIT STUB
- FLEXIBLE CONDUIT OR MFR CONDUIT
- SURFACE RACEWAY
- UNDERGROUND RACEWAY
- HOME RUN, ELECTRICAL PANEL DESTINATION SHOWN (XXX)
- POWER POLE WITH GUY WIRE
- CONDUIT SEAL
- SPECIAL EQUIPMENT CONNECTION AS SHOWN
- JUNCTION BOX (J)
- MOTOR CONNECTION, HORSEPOWER INDICATED (HP)
- MANUAL MOTOR STARTER
- COMBINATION MOTOR STARTER
- DISCONNECT SWITCH, AMPERAGE RATING SHOWN (20A)
- FUSED DISCONNECT SWITCH (F)
- METER BASE
- GENERATOR (G)
- WIFI ACCESS POINT
- TRANSFORMER (T)
- THERMOSTAT (T)
- ELECTRICAL CIRCUIT IDENTIFICATION (P1)
- MULTIPLE ELECTRICAL CIRCUITS, SEPARATE CONDUITS (P1, P2, C1, C2)
- MULTIPLE ELECTRICAL CIRCUITS, COMMON CONDUIT (SIZE SHOWN) (1"C — P1, P2, P3, P4)

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PROJECT#: 20.99.01

ONE-LINE SYMBOLS

- PANEL WIRING
- FIELD WIRING
- TWISTED SHIELDED PAIR SHIELD WIRING
- TWISTED SHIELDED TRIAD SHIELD WIRING
- CONNECTING LINES
- NON-CONNECTING LINES
- CONDUIT SEAL-OFF
- GROUND CONNECTION PER NEC ARTICLE 250
- METERBASE W/UTILITY METER (M)
- DISCONNECT RECEPTACLE AND PLUG
- MOTOR CONNECTION, HORSEPOWER INDICATED (HP)
- FUSE, SIZE SHOWN (5A)
- THERMAL MAGNETIC CIRCUIT BREAKER
- MAGNETIC ONLY CIRCUIT BREAKER (MOTOR CIRCUITS ONLY) CONTINUOUS CURRENT RATING AND TRIP SETTINGS SHOWN (30AC 150AT)
- MOTOR STARTER, SIZE SHOWN (1, 2, 123)
- FUSED TERMINAL BLOCK FUSE SIZE SHOWN (XXA, XXX)
- CONTROL PANEL TERMINAL BLOCK
- COMPONENT TERMINAL BLOCK
- ADJUSTABLE SPEED DRIVE (ASD)
- VARIABLE FREQUENCY DRIVE (VFD)
- SOFT START REDUCED VOLTAGE (SSRV)
- LINE OR LOAD REACTOR, IMPEDENCE SHOWN
- 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
- POWER MONITOR (M)
- TIME DELAY RELAY (TDR)
- PHASE MONITOR RELAY (PMR)
- ALTERNATOR RELAY (ALT)
- 120V CONTROL RELAY, DPDT MINIMUM (CR5)
- 24VDC CONTROL RELAY, DPDT MINIMUM (CR5)
- RELAY CONTACT - NO, NC
- PUSHBUTTON OR SWITCH CONTACT BLOCK - NO, NC
- THREE POSITION SELECTOR SWITCH (OFF, HAND, AUTO)
- TWO POSITION SELECTOR SWITCH
- PUSH-TO-TEST LED PILOT LIGHT
- INDICATOR LIGHT
  W - WHITE A - AMBER
  R - RED G - GREEN
- FLOAT SWITCH - NO, NC
- TEMPERATURE SWITCH - NO, NC
- LIMIT SWITCH - NO, NC
- TIME DELAY CONTACTS, NORMALLY OPEN TIMED CLOSED NORMALLY CLOSED TIMED OPEN
- FLOW SWITCH - NO, NC
- PRESSURE SWITCH - NO, NC
- SPEED POTENTIOMETER
- ELAPSED TIME METER (ETM)
- COUNTER (CNT)
- TRANSFER SWITCH
- SOLENOID VALVE
- CURRENT TRANSFORMER
- DISCONNECT SWITCH, AMPERAGE RATING SHOWN (30A)
- FUSED DISCONNECT
- TEST POINT TERMINAL (XXX)
- SINGLE POINT GROUND
- EOL - END OF LINE RESISTOR
- EMERGENCY STANDBY ENGINE GENERATOR, RATING AS INDICATED ON ONE-LINE DIAGRAM

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

- HORN
- BATTERY
- RECEPTACLE
- HEATER
- SCADA/YAGI ANTENNA
- IP CAMERA (PTZ OR OTHER)
- NEW ELECTRICAL EQUIPMENT
- EXISTING ELECTRICAL EQUIPMENT
- EQUIPMENT TO BE DEMO'D OR REMOVED
- DRAWING NOTE (1)
- BILL OF MATERIAL ITEM NUMBER (1)

DETAIL OR SECTION TITLE (1 / -)
SCALE:

NOTE: NOT ALL SYMBOLS OR ABBREVIATIONS USED.

LIGHTING PLAN SYMBOLS

- FLOOD LIGHT
- ALARM HORN
- WALL SWITCH STANDARD TOGGLE, DESIGNATOR ($, $3)
  2=DOUBLE POLE LV=LOW VOLTAGE PROOF
  3 = 3-WAY 4=FOUR WAY TH=THERMAL
  D = DIMMER K=KEY OPERATED SWITCH
  T = TIMER WP=WEATHER
- SURFACE MOUNTED LED LUMINAIRE *
- RECESSED MOUNTED LED LUMINAIRE *
- WALL MOUNTED LED LUMINAIRE *
  *SHADED LUMINAIRE INDICATES BATTERY BACKED UNIT
- DUPLEX, QUADPLEX RECEPTACLE, W/DESIGNATOR (GFI)
  GFI = GROUND FAULT INTERRUPTING
  WP = WEATHERPROOF
  +48 = HEIGHT AFF.
- EXIT SIGN - WALL MOUNTED
- EXIT SIGN - 2 SIDED CEILING MOUNTED
- PHOTOCELL (P)
- MOTION SENSOR (M)
- FLOOD LIGHT
- STANCHION FIXTURE - POLE MOUNT
- STANCHION FIXTURE - WALL MOUNT

NO.	DATE	BY	REVISION

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MWA DESIGNED
JLB DRAWN
MWA CHECKED

REGISTERED PROFESSIONAL ENGINEER 88305PE OREGON MAY 14, 2019 MICHAEL E. WALLIS
EXPIRES: 6/30/24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

ELECTRICAL

SYMBOLS AND LEGEND AND STANDARD DETAILS

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET E-2

P:\Projects\20.99.01_MSA_Pendleton_Goad_Road\DWG\E-2.dwg E-2 1/31/2023 8:54 AM AVIB 23.1s (LMS Tech)

LOAD SUMMARY				
	Voltage	480	3 Phase	3 Wire
QTY.	DESCRIPTION	LOAD KVA	LOAD HP	Amperes @ 480 VAC
	PUMP MOTOR NO. 1	46.20	50.0	65.0
	PUMP MOTOR NO. 2	46.20	50.0	65.0
	PUMP MOTOR NO. 3	92.40	100.0	124.0
	PUMP MOTOR NO. 4	92.40	100.0	124.0
	SPARE MOTOR NO. 5	0.00	0.0	0.0
	HEAT PUMP HP-1			20.0
	DISTRIBUTION TRANSFORMER	30		36.1
	SUBTOTAL		**300.0**	**434.1**
	LARGEST MOTOR X 25%			31.0
	NON-MOTOR LOADS X 25%			9.0
	SPARE CAPACITY (25%)			108.5
	TOTAL		**300.0**	**582.7**

LOAD SUMMARY

SCALE: NTS

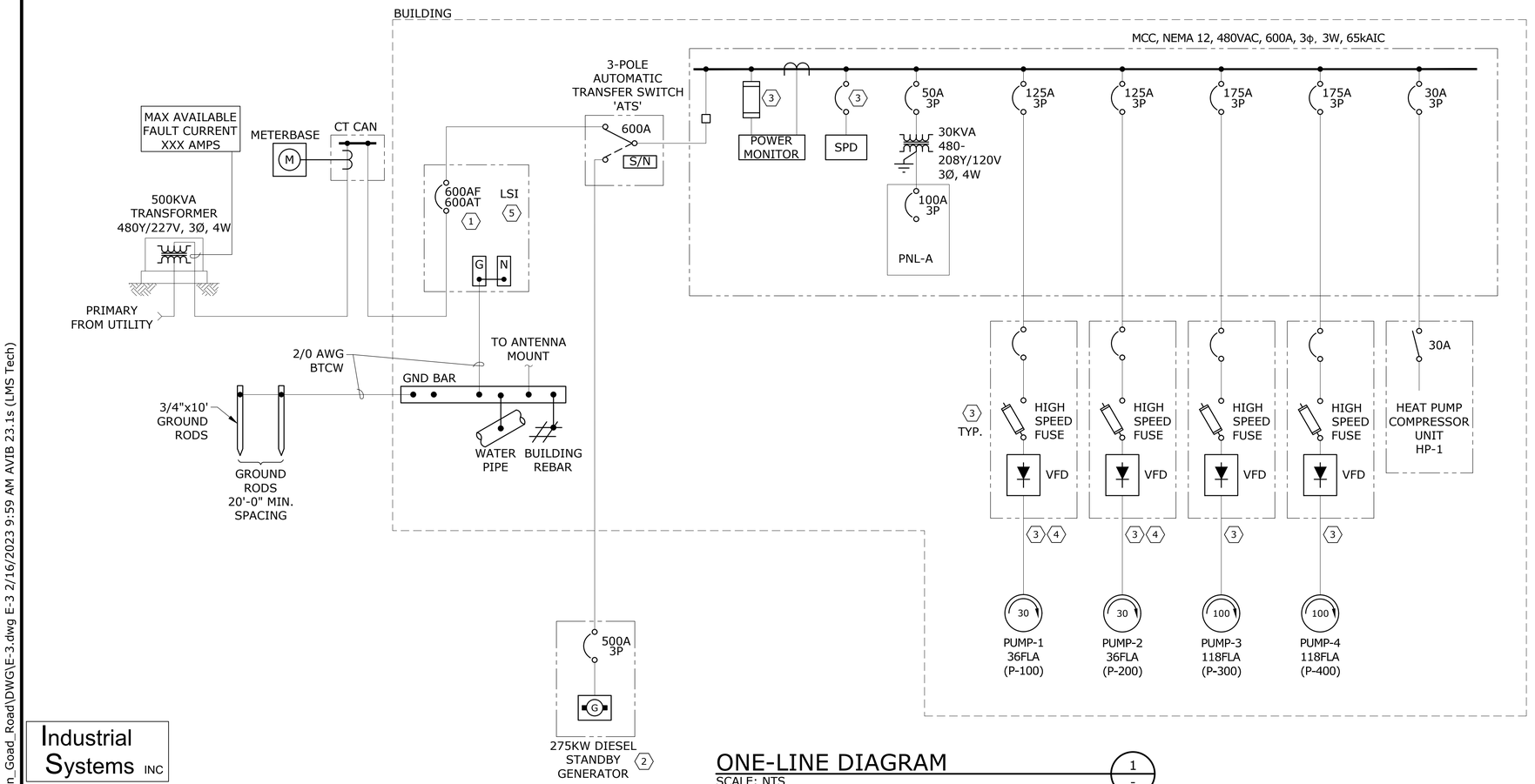
3
-

GENERAL NOTES

1. ALL GROUNDING TO BE PER NEC ARTICLE 250.
2. 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
3. VFD'S SHALL BE ACTIVE FRONT END LOW HARMONIC DRIVE. HIGH SPEED FUSES SHALL BE SIZED PER MANUFACTURER RECOMMENDATIONS.

KEY NOTES

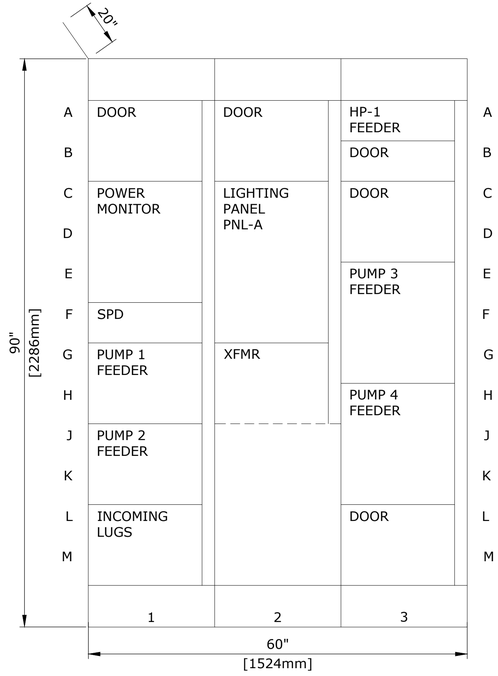
1. PROVIDE WARNING SIGN READING "UTILITY SERVICE DISCONNECT DOES NOT DISCONNECT GENERATOR".
2. REMOVE NEUTRAL/GROUND BOND FROM GENSET. SYSTEM IS SOLIDLY GROUNDED THROUGH ATS AND IS NOT A SEPARATELY DERIVED SYSTEM.
3. OVERCURRENT DEVICE AND SIZE FOR EQUIPMENT TO BE PROVIDED PER MFR. RECOMMENDATIONS.
4. VFD'S, WIRE, AND CONDUIT SIZED FOR 50HP TO ALLOW FOR FUTURE UPGRADE.
5. CIRCUIT BREAKER WITH SOLID-STATE ELECTRONIC TRIP. ELECTRONIC TRIP TO HAVE L,S, AND I ADJUSTMENTS.



ONE-LINE DIAGRAM

SCALE: NTS

1
-



MCC ELEVATION

SCALE: NTS

2
-

Industrial Systems INC
12119 NE 99th Street
Suite #2090
Vancouver, Washington 98682
Phone: (360) 718-7267
Fax: (360) 952-8958
e-mail: is@industrialsystems-inc.com
OR CCB #196597 WA #INDUSSI880K9
AK #1018436
PROJECT#: 20.99.01

NO.	DATE	BY	REVISION

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

MWA DESIGNED
JLB DRAWN
MWA CHECKED

REGISTERED PROFESSIONAL ENGINEER 88305PE OREGON MAY 14, 2019 MICHAEL E. WALLIS
EXPIRES: 6 / 30 / 24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

ELECTRICAL

ONE LINE DIAGRAM

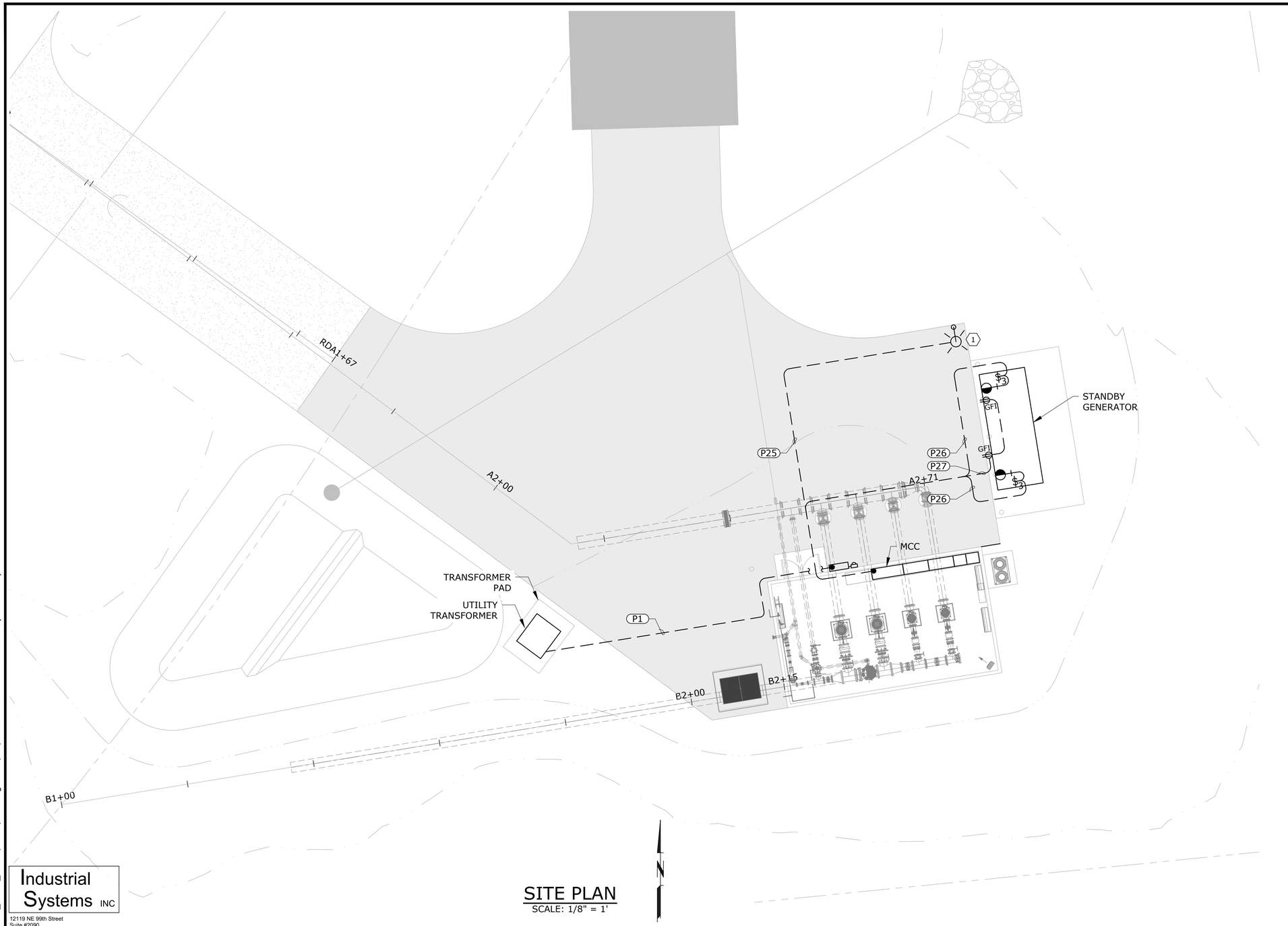
PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET
E-3

P:\Projects\20.99.01_MSA_Pendleton_Goad_Road\DWG\E-3.dwg E-3 2/16/2023 9:59 AM AVIB 23.1s (LMS Tech)

KEY NOTES:

1 SEE SHEET E-6 FOR LUMINAIRE SCHEDULE.



SITE PLAN

SCALE: 1/8" = 1'

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CITY OF PENDLETON
INCORPORATED 1880
OREGON

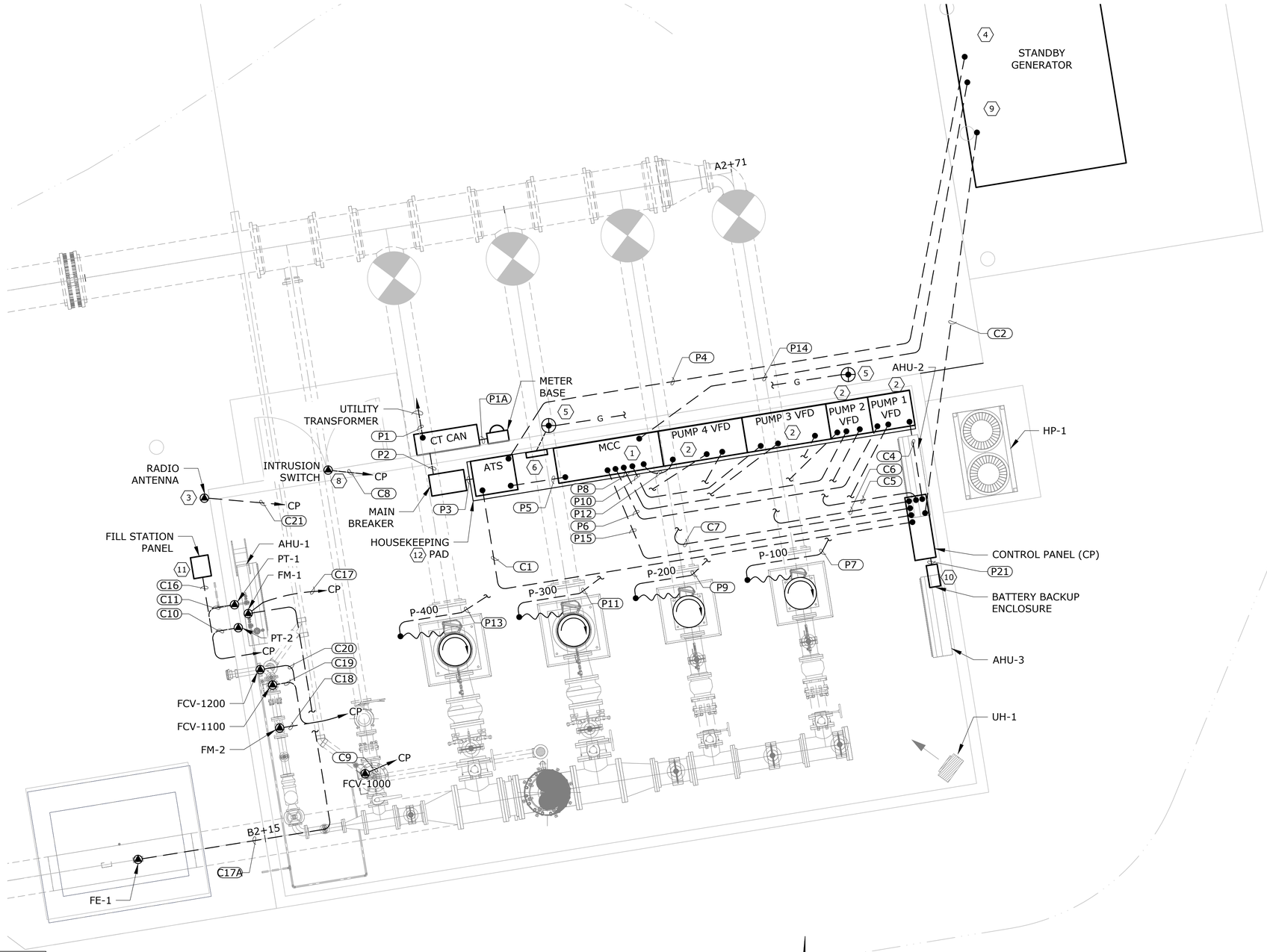
EAST END BOOSTER PUMP STATION

ELECTRICAL

SITE PLAN

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET E-4



GENERAL NOTES

1. ALL CONDUITS TO BE ROUTED UNDERGROUND, IN-SLAB, OR CONCEALED WHEREVER POSSIBLE OR PRACTICAL.

KEY NOTES

1. MOTOR CONTROL CENTER (MCC), SEE SHEET E-3.
2. VARIABLE FREQUENCY DRIVE, SEE SHEET E-9.
3. MOUNT ANTENNA ON 2" MAST ON TOP OF BOOSTER PUMP STATION BUILDING, MINIMUM 6 FEET TALL. ORIENT ANTENNA PER INTEGRATOR'S INSTRUCTION. WEATHERPROOF ALL CONNECTIONS PER MANUFACTURER RECOMMENDATIONS.
4. SEE SHEET E-4 FOR ADDITIONAL CIRCUITS TO GENERATOR.
5. GROUNDING TEST WELL, SEE SHEET E-8.
6. 2"x12" COPPER GROUND BAR WITH INSULATED STAND-OFFS. HARGER OR SIMILAR. CONNECT TO SERVICE GROUNDING AND REBAR PIGTAIL.
7. FLOWMETER ELECTRONICS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
8. HEAVY DUTY, COMPACT, DOOR INTRUSION LIMIT SWITCH, ALLEN-BRADLEY 802B OR AS APPROVED. CONTRACTOR TO SELECT ACTUATOR LEVER ARM AS NEEDED FOR INSTALLATION.
9. COORDINATE STUB-UP LOCATION WITH GENERATOR PROVIDED.
10. INSTALL 12VDC BATTERIES IN SEALED ENCLOSURE BELOW PLC CABINET. INSTALL WALL MOUNTED SHELF BELOW PLC CABINET TO HOLD BATTERY ENCLOSURE.
11. FILL STATION CONTROL PANEL, SEE SHEET E-10.
12. HOUSEKEEPING PAD TO BE 3.5" IN HEIGHT AND EXTEND 2" BEYOND EDGE OF EQUIPMENT. EXTEND HOUSEKEEPING PAD AS NEEDED FOR ANTICIPATED FUTURE EQUIPMENT.

BUILDING PLAN

SCALE: 3/8"= 1'

N

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OREGON
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MICHAEL E. WALLIS
EXPIRES: 6 / 30 / 24

consor

CITY OF PENDLETON
INCORPORATED 1880
OREGON

EAST END BOOSTER PUMP STATION

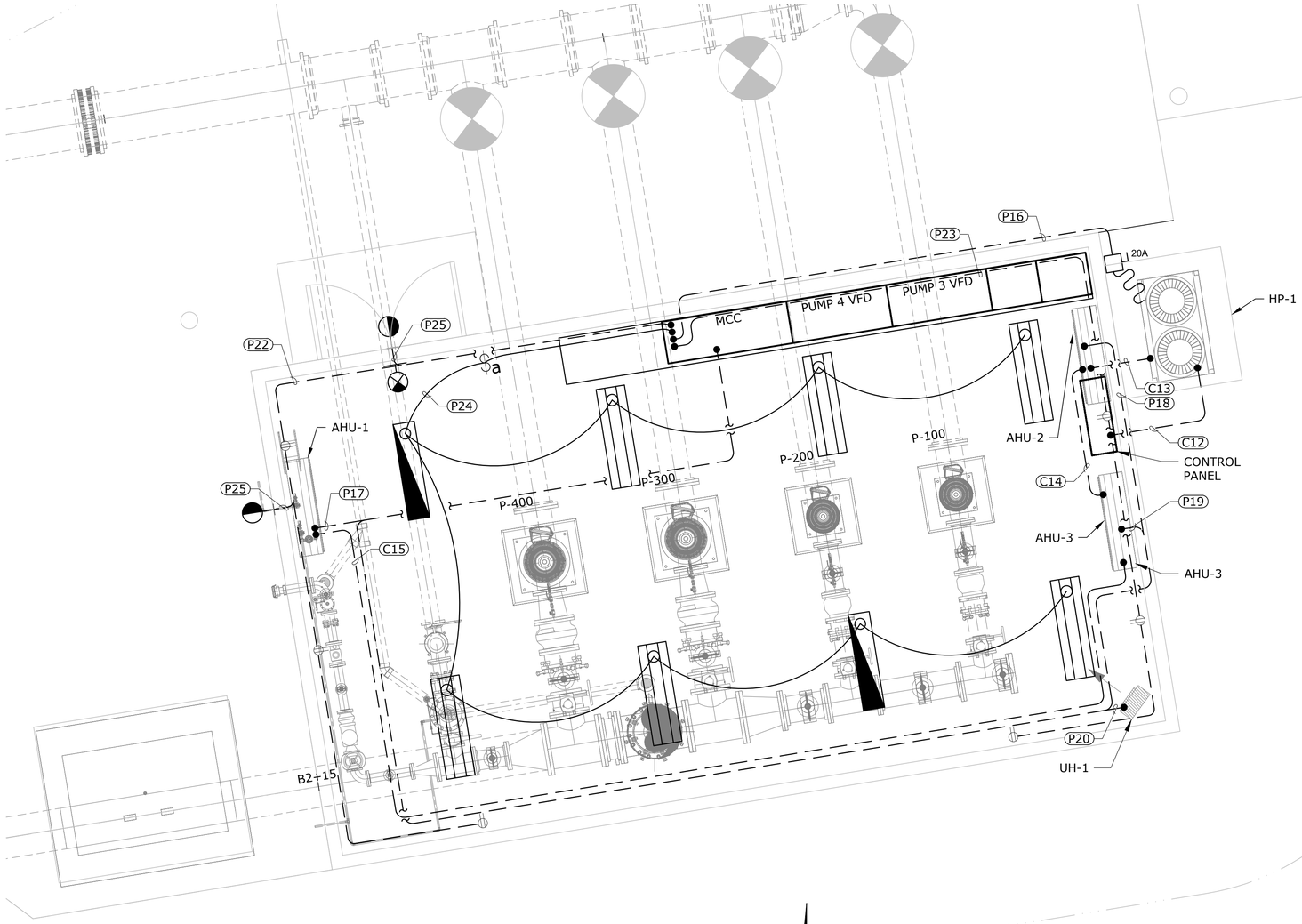
ELECTRICAL

BUILDING ELECTRICAL PLAN

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET E-5

LIGHT FIXTURE , LUMINAIRE AND RECEPTACLE SCHEDULE				
DEVICE/LOCATION/USE	DESCRIPTION	VOLTS	WATTS	SUGGESTED MANUFACTURER & CATALOG NUMBER
BUILDING INTERIOR LIGHT	6000 LUMEN LED LUMINAIRE FEM SERIES 48"	120V	37.5	LITHONIA FEM L48 6000LM LPACL MD 120 GZ10 40K 80CRI OR EQUAL
BUILDING INTERIOR LIGHT, BATTERY BACKED	6000 LUMEN LED LUMINAIRE FEM SERIES 48" WITH BUILT IN BATTERY BACKUP	120V	37.5	LITHONIA FEM L48 6000LM LPACL MD 120 GZ10 40K 80CRI BE6WCP OR EQUAL
WALL MOUNT LUMINAIRE LED TYPE INTERIOR/EXTERIOR	3,132 LUMEN LED LUMINAIRE WALL PACK DESIGN	120V	18	LITHONIA WDGE2 LED P3 40K 80CRI T2M 120 SRM PE E10WH DBLXD OR EQUAL
POLE MOUNT LUMINAIRE LED TYPE EXTERIOR	22,400 LUMEN POLE MOUNT LUMINAIRE	120-240V	155	HOLOPHANE MGLEDM P3 40K MVOLT AG VH GRSD POC2 OR EQUAL
WALL MOUNTED EXIT SIGN	SELF-CONTAINED BATTERY EMERGENCY EXIT LIGHT FIXTURE RED EXIT SIGN WALL MOUNT	120V	1.0	LITHONIA EXR LED EL M6 OR EQUAL
GFCI RECEPTACLE	RECEPTACLE, 20A, 120V, MOUNTED IN UL LISTED HOUSING	120V	-	HUBBELL STD RECEPTACLE HBL5362W OR EQUAL HUBBELL GFCI RECEPTACLE GFR5362SGW OR EQUAL WHEATHERPROOF HOUSING HUBBELL MX-3200 OR EQUAL
$a ON/OFF DIMMING SWITCH	NLIGHT ON/OFF RAISE/LOWER 3-WAY CAPABLE LIGHT SWITCH.	-	-	NLIGHT nPODMA DX



BUILDING PLAN
SCALE: 3/8"= 1'

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JLB DRAWN
MWA CHECKED

REGISTERED PROFESSIONAL ENGINEER 88305PE OREGON MAY 14, 2019 MICHAEL E. WALLIS
EXPIRES: 6/30/24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

ELECTRICAL

BUILDING LIGHTING PLAN

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET E-6

ALL CIRCUITS ARE IDENTIFIED ON THE PLANS WITH THE ELLIPSE 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, TSP - FOR TWISTED SHIELDED PAIR, TST - TWISTED SHIELDED TRIAD AND SP - FOR SPARE CONDUCTORS.

CIRCUITS REVISED SINCE LAST ISSUE ARE INDICATED BY AN ASTERISK(*).

CIRCUIT NUMBER	FROM	TO	CONDUCTORS	RACEWAY	NOTES
P1	UTILITY TRANSFORMER	CT CAN	(6) 350 KCMIL, P (2) 350 KCMIL, N	(2) 3"	PARALLEL FEEDER
P1A	CT CAN	METERBASE (UTILITY METER)	PULL CORD	1 1/4"	CONDUCTORS AND CONNECTION OF CT'S BY UTLITY
P2	CT CAN	MAIN CB	(6) 350 KCMIL, P (2) 350 KCMIL, N	(2) 3"	PARALLEL FEEDER
P3	MAIN CB	AUTOMATIC TRANSFER SWITCH (ATS)	(6) 350 KCMIL, P (2) 350 KCMIL, N (2) 1 AWG, G	(2) 3"	PARALLEL FEEDER
P4	AUTOMATIC TRANSFER SWITCH (ATS)	GENERATOR	(6) 350 KCMIL, P (2) 350 KCMIL, N (2) 1 AWG, G	(2) 3"	
P5	AUTOMATIC TRANSFER SWITCH (ATS)	MOTOR CONTROL CENTER (MCC)	(6) 350 KCMIL, P (2) 1 AWG, G	(2) 3"	
P6	MOTOR CONTROL CENTER (MCC)	PUMP1 VFD	(3) 4 AWG, P (1) 6 AWG, G	1"	WIRE SIZED FOR FUTURE 50 HP
P7	PUMP1 VFD	PUMP 1 (P-100)	4 AWG VFD CABLE	2"	WIRE SIZED FOR FUTURE 50 HP
P8	MOTOR CONTROL CENTER (MCC)	PUMP 2 VFD	(3) 4 AWG, P (1) 6 AWG, G	1"	WIRE SIZED FOR FUTURE 50 HP
P9	PUMP2 VFD	PUMP 2 (P-200)	4 AWG VFD CABLE	2"	WIRE SIZED FOR FUTURE 50 HP
P10	MOTOR CONTROL CENTER (MCC)	PUMP 3 VFD	(3) 2/0 AWG, P (1) 6 AWG, G	2"	
P11	PUMP 3 VFD	PUMP 3 (P-300)	2/0 AWG VFD CABLE	2"	
P12	MOTOR CONTROL CENTER (MCC)	PUMP 4 VFD	(3) 2/0 AWG, P (1) 6 AWG, G	2"	
P13	PUMP 4 VFD	PUMP 4 (P-400)	2/0 AWG VFD CABLE	2"	
P14	PANEL 'PNL-A' IN MCC	GENERATOR	(2) 12 AWG, P (2) 12 AWG, N (1) 12 AWG, G	1"	GENERATOR BLOCK HEATER & BATTERY CHARGER CKTS
P15	MOTOR CONTROL CENTER (MCC)	CONTROL PANEL "PLC-01"	(1) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	3/4"	
P16	MOTOR CONTROL CENTER (MCC)	OUTDOOR HEAT PUMP "HP-1"	(1) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	3/4"	
P17	PANEL 'PNL-A' IN MCC	SPLIT SYSTEM NO. 1 "AHU-1"	(1) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	3/4"	
P18	PANEL 'PNL-A' IN MCC	SPLIT SYSTEM NO. 2 "AHU-2"	(1) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	3/4"	
P19	PANEL 'PNL-A' IN MCC	SPLIT SYSTEM NO. 3 "AHU-3"	(1) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	3/4"	
P20	PANEL 'PNL-A' IN MCC	ELECTRIC UNIT HEATER "UH-1"	(3) 10 AWG, P (1) 10 AWG, G	3/4"	
P21	24 VDC BATTERY PACK	CONTROL PANEL "PLC-01"	(2) 12 AWG, P	3/4"	
P22	PANEL 'PNL-A' IN MCC	RECEPTACLES - WEST	(1) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	3/4"	
P23	PANEL 'PNL-A' IN MCC	RECEPTACLES - EAST	(1) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	3/4"	
P24	PANEL 'PNL-A' IN MCC	LIGHTING - PROCESS AREA	(1) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	3/4"	
P25	PANEL 'PNL-A' IN MCC	LIGHTING - EXTERIOR	(1) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	3/4"	
P26	PANEL 'PNL-A' IN MCC	LIGHTING - GENERATOR	(1) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	3/4"	
P27	PANEL 'PNL-A' IN MCC	RECEPTACLES - GENERATOR	(1) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	3/4"	

CIRCUIT NUMBER	FROM	TO	CONDUCTORS	RACEWAY	NOTES
C1	AUTOMATIC TRANSFER SWITCH (ATS)	CONTROL PANEL "PLC-01"	(6) 14 AWG, C (2) 14 AWG, SP (1) 14 AWG, G	3/4"	AUTOMATIC TRANSFER SWITCH (ATS) STATUS
C2	GENERATOR	CONTROL PANEL "PLC-01"	(11) 14 AWG, C (3) 14 AWG, SP (1) 14 AWG, G	1"	GENERATOR STATUS & ALARM
C3	NOT USED				
C4	PUMP1 VFD	CONTROL PANEL "PLC-01"	(8) 14 AWG, C (2) 14 AWG, SP (1) 14 AWG, G (1) 2-PAIR 18 AWG, TSP (1) CAT 6	1"	STATUS, CONTROL & COMMUNICATIONS
C5	PUMP2 VFD	CONTROL PANEL "PLC-01"	(8) 14 AWG, C (2) 14 AWG, SP (1) 14 AWG, G (1) 2-PAIR 18 AWG, TSP (1) CAT 6	1"	STATUS, CONTROL & COMMUNICATIONS
C6	PUMP3 VFD	CONTROL PANEL "PLC-01"	(8) 14 AWG, C (2) 14 AWG, SP (1) 14 AWG, G (1) 2-PAIR 18 AWG, TSP (1) CAT 6	1"	STATUS, CONTROL & COMMUNICATIONS
C7	PUMP4 VFD	CONTROL PANEL "PLC-01"	(8) 14 AWG, C (2) 14 AWG, SP (1) 14 AWG, G (1) 2-PAIR 18 AWG, TSP (1) CAT 6	1"	STATUS, CONTROL & COMMUNICATIONS
C8	DOOR INTRUSION SWITCH	CONTROL PANEL "PLC-01"	(2) 14 AWG, C (1) 14 AWG, G	3/4"	
C9	PRV / SURGE ANTICIPATOR LIMIT SWITCH FCV-1000	CONTROL PANEL "PLC-01"	(1) 14 AWG, C (1) 14 AWG, G	3/4"	
C10	DISCHARGE PRESSURE TRANSDUCER	CONTROL PANEL "PLC-01"	(1) 18 AWG, TSP	3/4"	
C11	SUCTION PRESSURE TRANSDUCER	CONTROL PANEL "PLC-01"	(1) 18 AWG, TSP	3/4"	
C12	OUTDOOR HEAT PUMP "HP-1"	CONTROL PANEL "PLC-01"	(2) 14 AWG, SP (1) 14 AWG, G	3/4"	
C13	SPLIT SYSTEM NO. 1 "AHU-2"	OUTDOOR HEAT PUMP "HP-1"	(2) 14 AWG, SP (1) 14 AWG, G	3/4"	

CIRCUIT NUMBER	FROM	TO	CONDUCTORS	RACEWAY	NOTES
C14	SPLIT SYSTEM NO. 2 "AHU-3"	SPLIT SYSTEM NO. 1 "AHU-2"	(2) 14 AWG, SP (1) 14 AWG, G	3/4"	
C15	SPLIT SYSTEM NO. 3 "AHU-1"	SPLIT SYSTEM NO. 2 "AHU-3"	(2) 14 AWG, SP (1) 14 AWG, G	3/4"	
C16	FILL STATION PANEL	CONTROL PANEL "PLC-01"	(2) 14 AWG, P (6) 14 AWG, C (2) 14 AWG, SP (1) CAT 6 (1) 14 AWG, G	1"	24VDC POWER AND COMMUNICATIONS
C17	STATION EFFLUENT FLOW METER FM-1	CONTROL PANEL "PLC-01"	(2) 14 AWG, P (1) 18 AWG, TSP (1) 14 AWG, G	3/4"	24VDC POWER AND COMMUNICATIONS
C17A	STRAP ON FLOW ELEMENT FE-1	FILL STATION FLOW METER FM-1	MFR. CABLE	1"	
C18	FILL STATION FLOW METER FM-2	CONTROL PANEL "PLC-01"	(1) 18 AWG, TSP	3/4"	
C19	FCV LIMIT SWITCH FCV-1100	CONTROL PANEL PLC-01	(4) 14 AWG, C (1) 14 AWG, G	3/4"	LIMIT SWITCH & SOLENOID VALVE
C20	DRAIN PORT SOLENOID VALVE FCV-1200	CONTROL PANEL PLC-01	(2) 14 AWG, C (1) 14 AWG, G	3/4"	
C21	RADIO ANTENNA	CONTROL PANEL "PLC-01"	COAX	1"	

PANEL A (PNL-A)	VOLTAGE: 208/120, 3PH, 4 WIRE	MOUNTING: MCC SECTION MOUNTED
LOCATION: I PENDLETON GOAD ROAD PUMP STATION	BUS: 225A COPPER	AIC: 10,000
FEEDER: MOTOR CONTROL CENTER	MAIN: 100A	

CKT NO	CIRCUIT DESCRIPTION	BREAKER POLES	AMPS	LOAD VA	PHASE	LOAD VA	BREAKER POLES	AMPS	CIRCUIT DESCRIPTION	CKT NO
1	LIGHTING - PROCESS ROOM	1	20	120	A	35	2	15	SPLIT SYSTEM - AHU-1	2
3	RECEPTACLES - WEST	1	20	900	B	35	"	"	"	4
5	RECEPTACLES - EAST	1	20	900	C	35	2	15	SPLIT SYSTEM - AHU-2	6
7	UNIT HEATER - UH-1	3	30	2500	A	35	"	"	"	8
9	"	"	"	2500	B	35	2	15	SPLIT SYSTEM - AHU-3	10
11	"	"	"	2500	C	35	"	"	"	12
13	LIGHTING - GENERATOR	1	20	18	A	1000	1	20	GENERATOR COOLANT HEATER	14
15	LIGHTING - EXTERIOR	1	20	54	B	720	1	20	GENERATOR BATTERY CHARGER	16
17					C	360	1	20	GENERATOR RECEPTACLES	18
19					A					20
21					B					22
23					C					24
25					A					26
27					B					28
29					C					30
31					A					32
33					B					34
35					C					36
37					A					38
39					B					40
41					C					42

KVA PER PHASE		
PHASE A	3.708	KVA
PHASE B	4.244	KVA
PHASE C	3.830	KVA

AMPS PER PHASE	
PHASE A	30.9 AMPS
PHASE B	35.367 AMPS
PHASE C	31.917 AMPS

TOTAL LOAD	11.8	KVA

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PROJECT#: 20.99.01

CIRCUIT SCHEDULE (1)
SCALE: NTS

PANEL SCHEDULE - PNL-A IN MCC (2)
SCALE: NTS

NO.	DATE	BY	REVISION

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JLB DRAWN
MWA CHECKED

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consor

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EAST END BOOSTER PUMP STATION

ELECTRICAL

PANEL AND CIRCUIT SCHEDULES

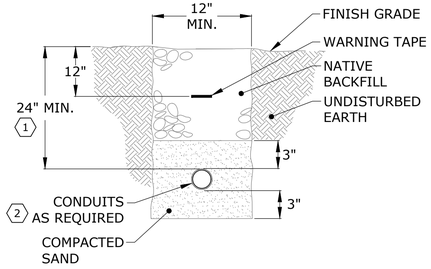
PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET E-7

P:\Projects\20.99.01_MSA_Pendleton_Goad_Road\DWG\E-7.dwg E-7 1/31/2023 11:01 AM AVIB 23.1s (LMS Tech)

DETAIL NOTES

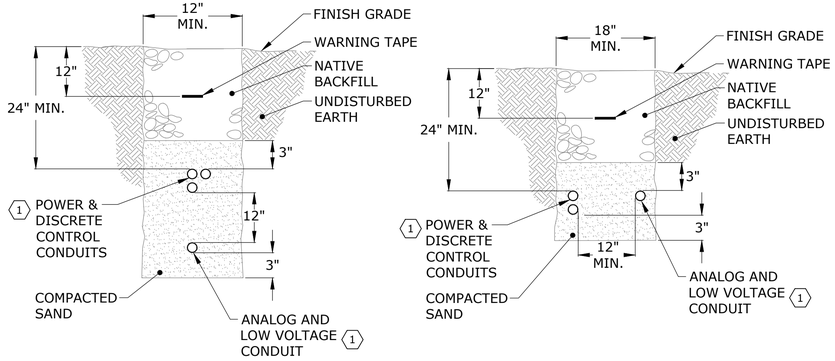
1. VERIFY TRENCH DEPTH AND COVERING FOR INCOMING SERVICE CONDUIT WITH LOCAL UTLITY.
2. COORDINATE WITH CIVIL DISCIPLINE FOR INTERSECTING PIPES.



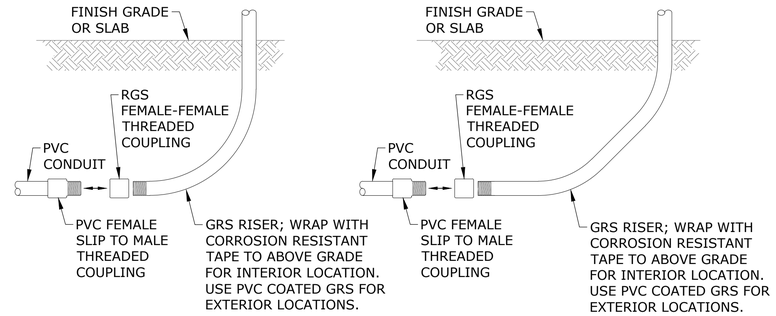
TYP. CONDUIT TRENCH 1
SCALE: NONE

DETAIL NOTES

1. COORDINATE WITH CIVIL DISCIPLINE FOR INTERSECTING PIPES.



MIXED CONDUIT TRENCHES 2
SCALE: NONE



CONDUIT TRANSITION 3
SCALE: NONE

GROUND ROD TEST WELL 4
SCALE: NONE

REBAR GROUNDING 5
SCALE: NONE

ITEM	QTY	DESCRIPTION
1	1	1IN - 2IN COPPER GROUND PIPE CLAMP
2	A/R	WIRE, GND. INSULATED STRANDED COPPER, #2 AWG

ANTENNA MAST GROUNDING 6
SCALE: NONE

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

ELECTRICAL ENCLOSURE GROUNDING 7
SCALE: NONE

Industrial Systems INC
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e-mail: is@industrialsystems-inc.com
OR CCB #196597 WA #INDUSSI880K9
AK #1018436
PROJECT#: 20.99.01

NO.	DATE	BY	REVISION

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

MWA DESIGNED
JLB DRAWN
MWA CHECKED

REGISTERED PROFESSIONAL ENGINEER 88305PE OREGON MAY 14, 2019 MICHAEL E. WALLIS EXPIRES: 6/30/24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

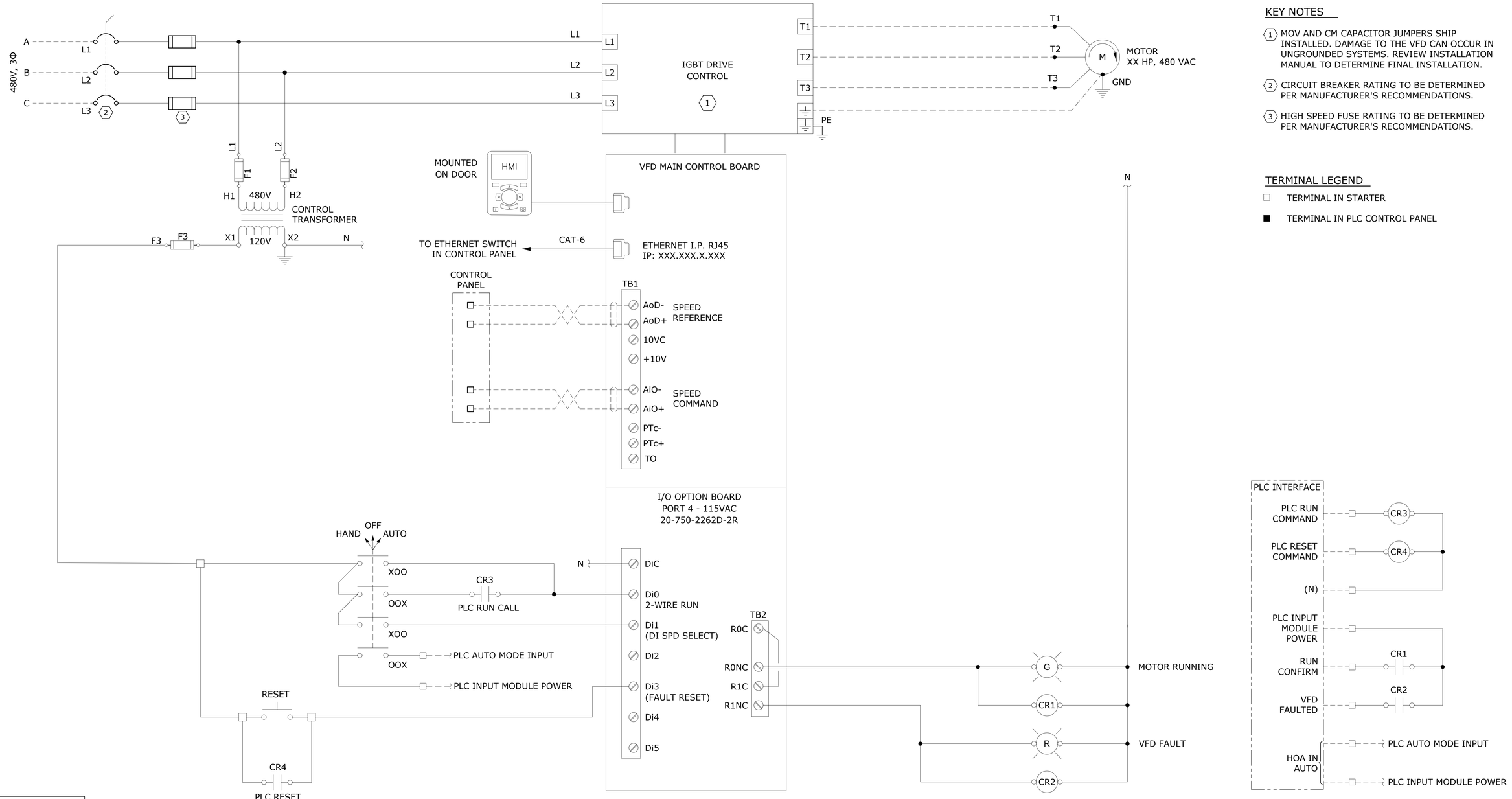
ELECTRICAL

GROUNDING AND ELECTRICAL DETAILS

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET E-8

P:\Projects\20.99.01_MSA_Pendleton_Goad_Road\DWG\E-8.dwg E-8 10/17/2022 9:37 AM AVIB 23.1s (LMS Tech)



KEY NOTES

1. MOV AND CM CAPACITOR JUMPERS SHIP INSTALLED. DAMAGE TO THE VFD CAN OCCUR IN UNGROUNDED SYSTEMS. REVIEW INSTALLATION MANUAL TO DETERMINE FINAL INSTALLATION.
2. CIRCUIT BREAKER RATING TO BE DETERMINED PER MANUFACTURER'S RECOMMENDATIONS.
3. HIGH SPEED FUSE RATING TO BE DETERMINED PER MANUFACTURER'S RECOMMENDATIONS.

TERMINAL LEGEND

- □ TERMINAL IN STARTER
- ■ TERMINAL IN PLC CONTROL PANEL

VFD WIRING DIAGRAM - ALLEN BRADLEY POWERFLEX 755TL

SCALE: NTS

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OREGON
MAY 14, 2019
MICHAEL E. WALLIS
EXPIRES: 6/30/24

consor

CITY OF PENDLETON
INCORPORATED 1880
OREGON

EAST END BOOSTER PUMP STATION

ELECTRICAL

VFD TYPICAL WIRING DIAGRAM

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

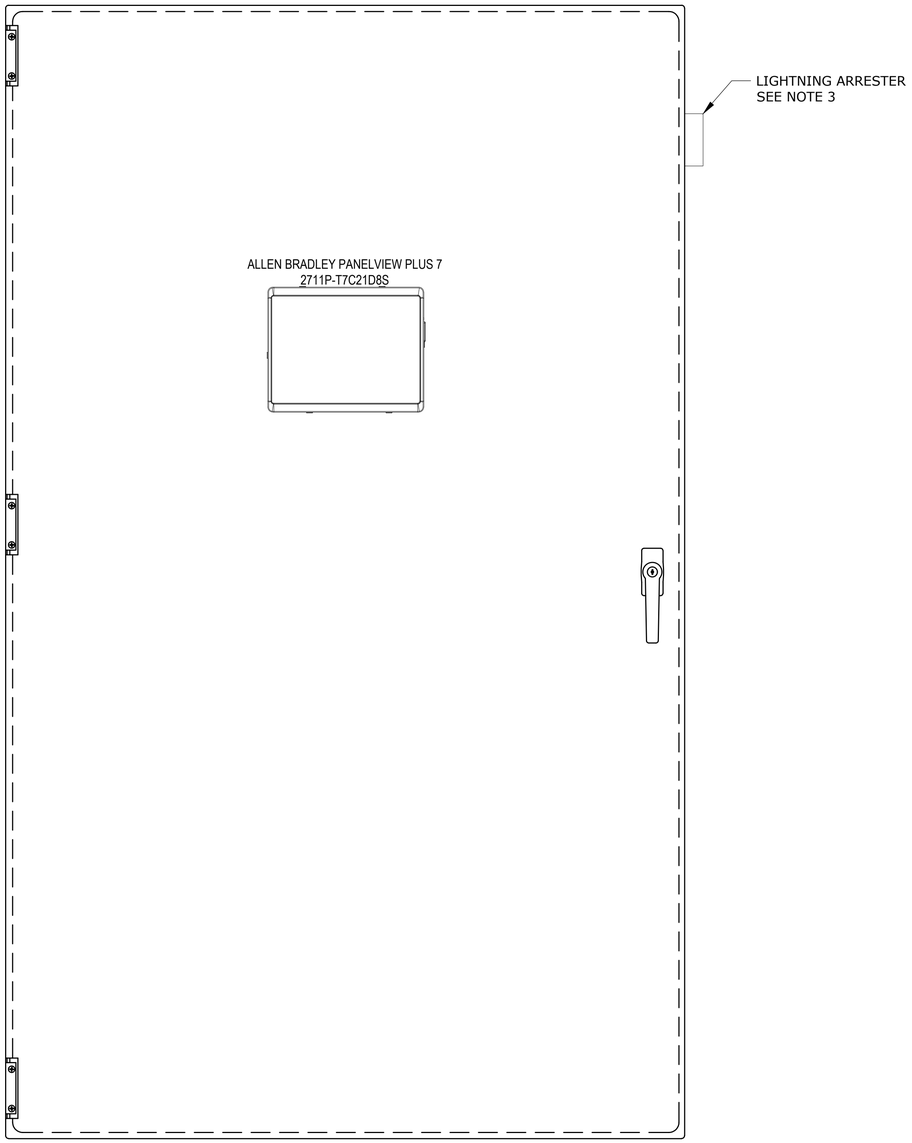
SHEET E-9

CONTROL PANEL NOTES:

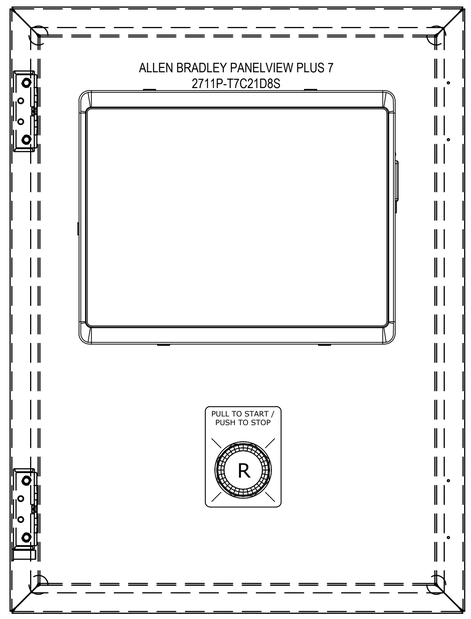
1. PANEL ENCLOSURE SHALL BE MIN 60"H X 36"W X 12"D, NEMA 12 CARBON STEEL ENCLOSURE AND MEET THE SPECIFICATION REQUIREMENTS.
2. PANEL SHALL HAVE A LIGHT WITH EITHER MANUAL SWITCH OR MOTION DETECTOR.
3. MOUNT LIGHTING ARRESTOR FOR RADIO ON SIDE OF PANEL INTERIOR.

FILL STATION PANEL NOTES:

1. PANEL ENCLOSURE SHALL BE MIN 16"H X 12"W X 10"D, NEMA 12 CARBON STEEL ENCLOSURE AND MEET THE SPECIFICATION REQUIREMENTS.
2. PANEL DESIGN SHALL INCLUDE A LOCKABLE DOOR WITH SWING OUT PANEL FOR INSTALLATION OF PANELVIEW AND EMERGENCY STOP. DOOR IS SHOWN OPEN FOR CLARITY.



CONTROL PANEL ELEVATION VIEW (1)
SCALE: 3" = 1'-0"



FILL STATION PANEL ELEVATION VIEW (2)
SCALE: 6" = 1'-0"

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MWA CHECKED

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OREGON
MAY 14, 2019
MICHAEL E. WALLIS
EXPIRES: 6 / 30 / 24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

ELECTRICAL

PLC CONTROL PANEL LAYOUT & BOM

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET E-10

GENERAL INSTRUMENT SYMBOLS

LOCATION/ACCESSIBILITY	DISCRETE INSTRUMENTS	SHARED DISPLAY AND CONTROL (DCS)	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.	⊖	⊟	◈	

ABBREVIATIONS

AG	ABOVE GROUND	LO	LOCKED OPEN
ATM	ATMOSPHERE	LP	LOW PRESSURE
BYP	BYPASS	LPT	LOW POINT
CC	CHEMICAL CLEANOUT	MTL	MATERIAL
CL	CENTERLINE	MAX	MAXIMUM
CO	CLEANOUT	MCC	MOTOR CONTROL CENTER
CONN	CONNECTION	MCP	MAIN CONTROL PANEL
CVLS	CHECK VALVE LIMIT SWITCH	MIN	MINIMUM
CTR	CENTER	MOV	MOTOR OPERATED VALVE
DCS	DISTRIBUTED CONTROL SYSTEM	MW	MANWAY
DES	DESIGN	NC	NORMALLY CLOSED
DIA	DIAMETER	NNF	NORMALLY NO FLOW
DP	DESIGN PRESSURE	NO	NORMALLY OPEN
D/P	DIFFERENTIAL PRESSURE	NOZ	NOZZLE
DRN	DRAIN	O/C	OPEN/CLOSE
DT	DESIGN TEMPERATURE	O/O	ON/OFF
DWG	DRAWING	OIT	OPERATOR INTERFACE TERMINAL
(E)	EXISTING	OP	OUTPUT
EL	ELEVATION	OVHD	OVERHEAD
ESD	EMERGENCY SHUTDOWN	PLC	PROGRAMMABLE LOGIC CONTROLLER
FOF	FACE OF FLANGE	PRESS	PRESSURE
(F)	FURNISHED	PV	PROCESS VARIABLE
FC	FAIL CLOSED	(R)	RELOCATED
FI	FAIL INDETERMINATE	REQD	REQUIRED
FL	FAIL LOCKED (LAST POSITION)	RIO	REMOTE I/O PANEL
FLG	FLANGE	RTD	RESISTANCE TEMPERATURE DETECTOR
FO	FAIL OPEN	SC	SAMPLE CONNECTION
FP	FULL PORT	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
FV	FULL VACUUM	SCH	SCHEDULE
GO	GEAR OPERATED	SD	SHUTDOWN
GR	GRADE	SG	SPECIFIC GRAVITY
HC	HOSE CONNECTION	SIS	SAFETY INSTRUMENTED SYSTEM
HDR	HEADER	SO	STEAM OUT
HH	HAND HOLE	SP	SET POINT
HOA	HAND/OFF/AUTOMATIC	SS	STAINLESS STEEL S/S or START/STOP
HP	HIGH PRESSURE	STD	STANDARD
HPT	HIGH POINT	T/C	THERMOCOUPLE
IAS	INSTRUMENT AIR SUPPLY	TDH	TOTAL DIFFERENTIAL HEAD
LC	LOCKED CLOSED	TEMP	TEMPERATURE
LCP	LOCAL CONTROL PANEL	THRD	THREADED
		TSO	TIGHT SHUT-OFF
		TYP	TYPICAL
		UG	UNDERGROUND
		VNT	VENT
		VAC	VACUUM
		VB	VORTEX BREAKER
		VFD	VARIABLE FREQUENCY DRIVE
		W/	WITH
		W/O	WITHOUT

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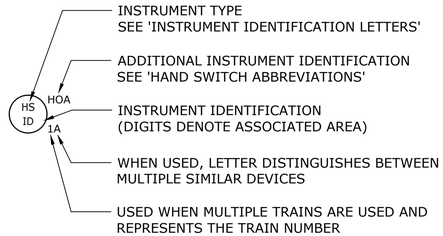
INSTRUMENT IDENTIFICATION LETTERS

	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, COMMAND	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, TORQUE		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	LOS = LOCKOUT/STOP
AM = AUTO/MANUAL	LA = LOCAL/AUTO
CM = COMPUTER/MANUAL	LR = LOCAL/REMOTE
CL = COMPUTER LOCAL	OC = OPEN/CLOSE
ES = EMERGENCY STOP	OCA = OPEN/CLOSE/AUTO
FR = FORWARD/REVERSE	OO = ON/OFF
FOR = FORWARD/OFF/REVERSE	OOA = ON/OFF/AUTO
FS = FAST/SLOW	OSC = OPEN/STOP/CLOSE
FOS = FAST/OFF/SLOW	RES = RESET
HA = HAND/AUTO	RF = RUN/FAULT
HIM = HUMAN INTERFACE MODULE	RSL = RAISE/STOP/LOWER
HOA = HAND/OFF/AUTOMATIC	SS = START/STOP
LLS = LEAD/LAG/STANDBY	SOR = START/OFF/RESET
LOC = LOCAL/OFF/COMPUTER	V/B = VFD/BYPASS
LOR = LOCAL/OFF/REMOTE	

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 (ANALOG)

ELECTRIC SIGNAL (DISCRETE)

HYDRAULIC SIGNAL

CAPILLARY TUBE

ELECTROMAGNETIC, SONIC, OPTICAL, OR NUCLEAR SIGNAL

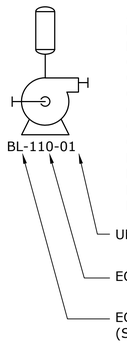
SOFTWARE OR DATA LINK

MECHANICAL LINK

FLOW STREAM IDENTIFIERS

ABE = AERATION BASIN EFFLUENT	PI = PRIMARY INFLUENT
BD = BASIN DRAIN	PLE = PLANT EFFLUENT
CS = COMBINED SLUDGE	PS = PRIMARY SLUDGE
CAS = CAUSTIC SODA	RAS = RETURN ACTIVATED SLUDGE
DR = DRAIN	RS = RAW SEWAGE
DS = DIGESTER SOLIDS	SSL = SECONDARY SLUDGE
FBW = FILTER BACKWASH	SCM = SCUM
FE = FINAL EFFLUENT	SSCM = SECONDARY SCUM
GR = GRIT	SCRN = SCREENINGS
ICE = INTERMEDIATE CLARIFIER EFFLUENT	SE = SECONDARY EFFLUENT
LPA = LOW PRESSURE AIR	TE = TERTIARY EFFLUENT
ML = MIXED LIQUOR	TWAS = THICKENED WASTE ACTIVATED SLUDGE
NPW = NON POTABLE WATER	UW = UTILITY WATER
PE = PRIMARY EFFLUENT	WAS = WASTE ACTIVATED SLUDGE

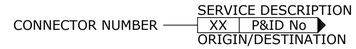
TYPICAL EQUIPMENT TAG NUMBERS & DESIGNATION



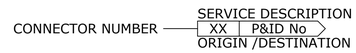
AER = AERATOR	FLT = FILTER
BIN = BIN	HEX = HEAT EXCHANGER
BL = BLOWER	MIX = MIXER
CEL = CELL	PMP = PUMP
CLA = CLARIFIER	PRS = PRESS
CLS = CLASSIFIER	SCN = SCREEN
CND = CONDENSATE TRAP	SDG = SLIDE GATE
CON = CONVEYOR	SL = SLUICE GATE
CMP = COMPRESSOR	SMP = SUMP
DIF = DIFFUSER	THK = THICKENER
DIG = DIGESTER	TNK = TANK
DIS = DISINFECTION UNIT	WEL = WET WELL
FED = FEEDER	

OFF-PAGE CONNECTORS AND TIE-IN SYMBOL

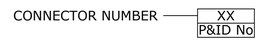
A. OFF-PLOT CONNECTOR



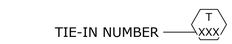
B. PRIMARY/SECONDARY LINES AND INSTRUMENT SIGNAL CONNECTOR



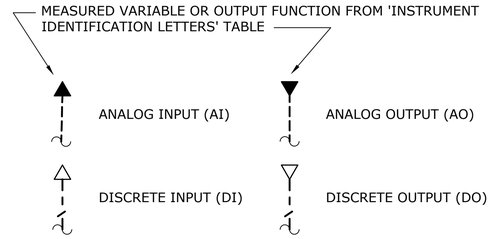
C. UTILITY CONNECTOR



D. TIE-IN SYMBOL

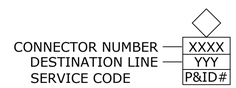


INPUT / OUTPUT SIGNALS

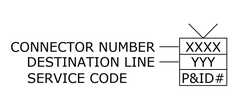


DRAIN CONNECTORS

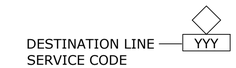
CLOSED DRAIN



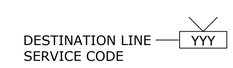
OPEN DRAIN



CLOSED DRAIN (NO P&ID)



OPEN DRAIN (NO P&ID)



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MICHAEL E. WALLIS
EXPIRES: 6 / 30 / 24

consor

CITY OF PENDLETON OREGON INCORPORATED 1880

EAST END BOOSTER PUMP STATION

P&ID

LEGEND 1 OF 2

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET PID-1

PRIMARY ELEMENT SYMBOLS

XX — GENERAL SYMBOL IN-LINE ELEMENT XX = FS, FG, FE, FT

FIT (XXXX) — IN-LINE FLOW ELEMENT WITH INTEGRAL INDICATING TRANSMITTER XXXX = MASS, CORIOLIS, THERMAL, INT. ORIFICE ...

FIT / FE (XXXX) — IN-LINE FLOW ELEMENT WITH SEPARATE INDICATING TRANSMITTER XXXX = MASS, CORIOLIS, THERMAL...

ORIFICE

M — MAGNETIC

TURBINE OR PROPELLER

ULTRASONIC

VORTEX

PITOT TUBE

AVERAGING PITOT TUBE

FLOW NOZZLE

VENTURI

WEDGE METER

LE — RADAR (NON-CONTACT)

LE — ULTRASONIC LEVEL SENSOR

LE — RADAR (GUIDED)

LS* — FLOAT SWITCH
FLOAT SWITCH
* = L/LL/H/HH

FS* — FLOW SWITCH
* = H/L

FG — FLOW GLASS

FLOW CONDITIONING DEVICES (e.g., STRAIGHTENING VANES)

FO — RESTRICTION ORIFICE

AE X — ANALYZER ELEMENT
X INDICATES TYPE
pH = HYDROGEN POTENTIAL
DO = DISSOLVED OXYGEN
H2S = HYDROGEN SULFIDE
LEL = LOWER EXPLOSIVE LIMIT
O2 = OXYGEN
ORP = OXYGEN REDUCTION POTENTIAL
TUR = TURBIDITY

ROTAMETER

FI — ROTAMETER WITH INTEGRAL VALVE (SHOWN WITH OPTIONAL INTEGRAL VALVE)

FLUME

WEIR

POSITIVE DISPLACEMENT

ORIFICE IN QUICK CHANGE FITTING

TARGET

ANNULAR SEAL

VALVE SYMBOLS (N.C. WHEN SHADED)

GATE VALVE
CHECK VALVE
STOP CHECK VALVE
GLOBE VALVE
BUTTERFLY VALVE
NEEDLE VALVE
BALL VALVE
BALANCING VALVE
PLUG VALVE
DIAPHRAGM VALVE
3-WAY VALVE
4-WAY VALVE
PINCH VALVE
ANGLE VALVE
KNIFE VALVE
SLUICE OR SLIDE GATE
AIR RELEASE VALVE

PIPING FITTINGS

FLANGE
WELDED CONNECTION
CONCENTRIC REDUCER
ECCENTRIC REDUCER
SPACER
BLANK
OPEN FIGURE 8 BLIND
CLOSED FIGURE 8 BLIND
PLUG
BLIND FLANGE
HOSE CONNECTION
CAP

PIPING SPECIALTY ITEMS

Y-TYPE STRAINER
CONE STRAINER
T-TYPE STRAINER
DUPLEX STRAINER
BASKET STRAINER
TEMPORARY STRAINER
FILTER
D — DETONATION ARRESTOR
F — FLAME ARRESTOR
T — STEAM TRAP
EXHAUST HEAD
S — IN-LINE SILENCER
VENT SILENCER
MECHANICAL COUPLING
EJECTOR
RS — REMOVABLE SPOOL
DS — DESUPERHEATER
FLEXIBLE HOSE
EXPANSION JOINT
DAMPER
BREATHER
VENT COVER
IN-LINE MIXER
DIVERTER VALVE
ROTARY VALVE
EXCESS FLOW VALVE
PULSATION DAMPENER
INJECTION SPOOL

PROCESS EQUIPMENT

HORIZONTAL CENTRIFUGAL PUMP
VERTICAL INLINE PUMP
SUBMERSIBLE PUMP
PROPELLER PUMP
PROGRESSIVE CAVITY PUMP
MULTI-RAKE
ROTARY SCREW AIR COMPRESSOR
POSITIVE DISPLACEMENT PUMP
LIQUID RING VACUUM PUMP
VERTICAL CAN PUMP
SCREW PUMP
MANUAL BAR SCREEN
SUBMERSIBLE MIXER
POSITIVE DISPLACEMENT BLOWER
CENTRIFUGAL BLOWER
CENTRIFUGAL COMPRESSOR
RECIPROCATING COMPRESSOR
SCREW COMPRESSOR
GRIT CHAMBER
FLOCCULATION TANK
DOME ROOF TANK
CLOSED TOP TANK
OPEN TOP TANK / WET WELL/ CHANNEL
CLARIFIER
GRIT CLASSIFIER
WASH PRESS
CLOTH FILTER
DRAFT TUBE PUMP
SCREW CONVEYOR
OUTFALL DIFFUSER
ROTARY SCREEN THICKENER
AERATION DIFFUSER
SPIRAL HEAT EXCHANGER
SCREW PRESS

CONTROL VALVE ACTUATOR SYMBOLS

MANUAL OPERATOR
DIAPHRAGM
PRESSURE BALANCED DIAPHRAGM
HANDWHEEL WITH ACTUATOR
CYLINDER - PISTON
M — MOTOR OPERATED - CONSTANT SPEED
E/P — ELECTRO-PNEUMATIC
S — SINGLE SOLENOID
S R — SINGLE SOLENOID - MANUAL RESET
S R — SINGLE SOLENOID - REMOTE RESET

MISCELLANEOUS INSTRUMENT SYMBOLS

CHEMICAL SEAL- DIAPHRAGM
LEVEL SENSOR
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

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
P — 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

Industrial Systems INC
12119 NE 99th Street
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Vancouver, Washington 98682
Phone: (360) 718-7267
Fax: (360) 952-8958
e-mail: is@industrialsystems-inc.com
OR CCB #196597 WA #INDUSSI880K9
AK #1018436
PROJECT#: 20.99.01

NO.	DATE	BY	REVISION

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

MWA DESIGNED
AAB DRAWN
MWA CHECKED

REGISTERED PROFESSIONAL ENGINEER 88305PE OREGON MAY 14, 2019 MICHAEL E. WALLIS
EXPIRES: 6/30/24

consor

CITY OF PENDLETON INCORPORATED 1880 OREGON

EAST END BOOSTER PUMP STATION

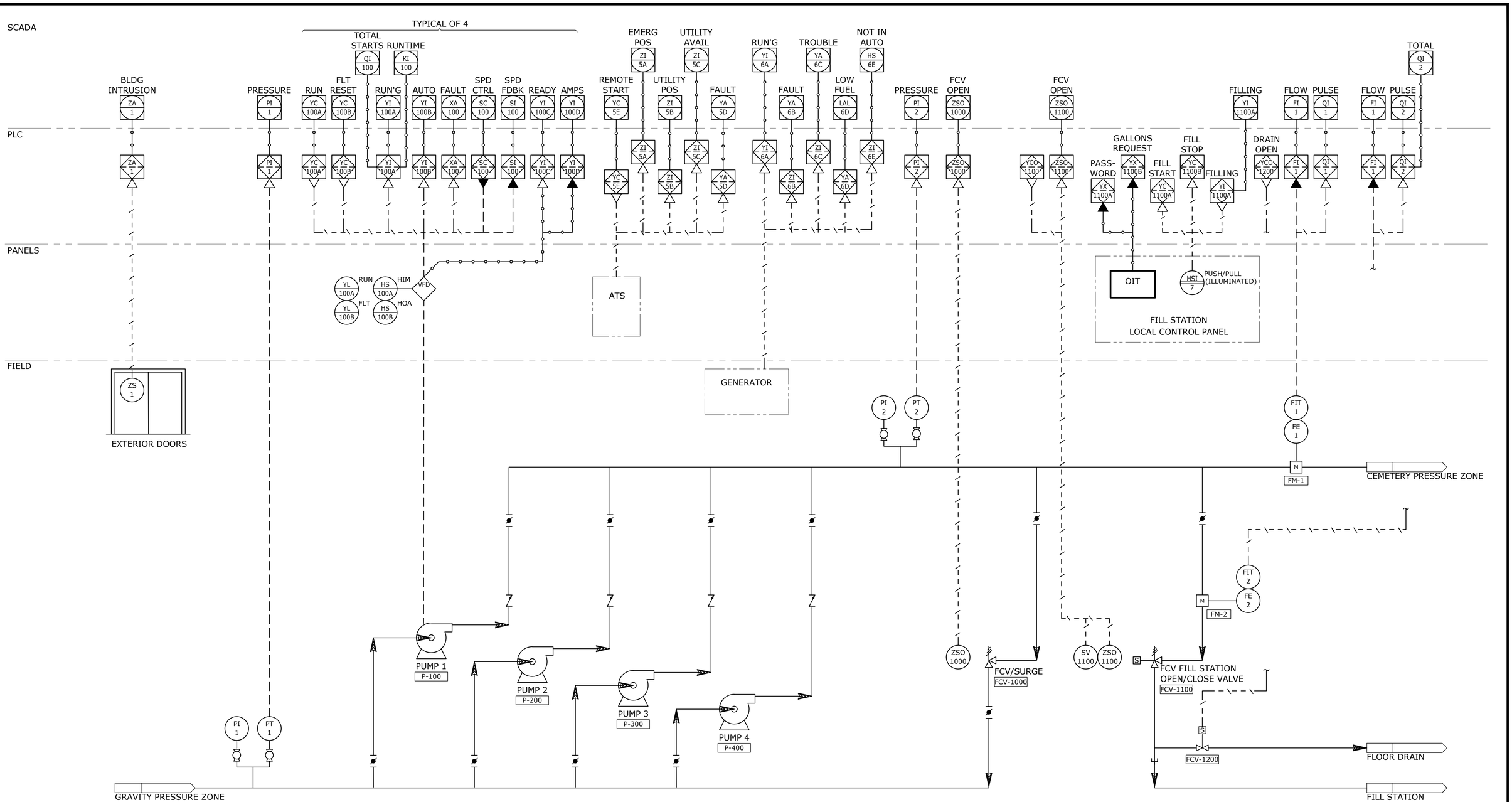
P&ID

LEGEND 2 OF 2

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET PID-2

P:\Projects\20.99.01_MSA_Pendleton_Goad_Road\DWG\PID-2.dwg PID-2 3/7/2022 8:45 AM AVIB 23.1s (LMS Tech)



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EAST END BOOSTER PUMP STATION

P&ID

PUMP STATION PROCESS FLOW DIAGRAM

PROJECT NO.: 20-2995 | SCALE: AS SHOWN | DATE: FEBRUARY 2023

SHEET
PID-3

P:\Projects\20.99.01_MSA_Pendleton_Goad_Road\DWG\PID-3.dwg PID-3 1/24/2023 8:34 AM AVIB 23.1s (LMS Tech)