

CITY OF PUYALLUP

PIERCE COUNTY

WASHINGTON



PRCNC20240061

FULL SIZED LEDGIBLE **COLOR**
PLANS ARE REQUIRED TO BE
PROVIDED BY THE PERMITTEE ON
SITE FOR ALL INSPECTIONS
(MIN. PLAN SIZE 24" X 36")

Approval of submitted plans is not an
approval of omissions or oversights by this
office or noncompliance with any applicable
regulations of local government. The
contractor is responsible for making sure that
the building complies with all applicable
codes and regulations of the local
government.

WATER POLLUTION CONTROL PLANT THIRD SECONDARY CLARIFIER INSTALLATION CIP NO. 20-018

City of Puyallup
Planning
Division
APPROVED

See permit
conditions.

NComstock
03/05/2024
11:15:07 AM



City of Puyallup
Building
ACCEPTED

JMontgomery
04/02/2024
7:11:06 AM



City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building

Planning

Engineering

Public Works

Fire

Traffic

CITY OF PUYALLUP
DEPARTMENT OF PUBLIC WORKS
1100 39TH AVENUE SE
PUYALLUP, WASHINGTON 98371

CONTACT PERSONNEL

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HANS HUNGER, P.E.	CITY ENGINEER	253-435-3640

City of Puyallup
Development
Engineering
APPROVED

See permit
for additional
requirements.

Linda Lian
03/05/2024
10:46:06 AM



Sediment control and erosion procedures shall be
practiced eliminating and preventing off site damage.
Stormwater runoff originating upgrade of exposed areas
shall be controlled to reduce erosion and sediment loss
during the period of exposure. Refer to the Stormwater
Fact Sheet and City standard details 02.03.02 & 05.02.01
for typical erosion and sedimentation control methods.
Attached in CityView

All requirements of the approved
stormwater site plan management report,
dated February 2024, will be adhered to

Prior to starting site work, request
an erosion and sediment inspection
through the CityView portal.

Call Before You Dig. It's the law.
Locate all utilities prior to starting work
Dial 811 or call 1-800-424-5555.

The applicant is responsible to
schedule all utility inspections
prior to backfilling.

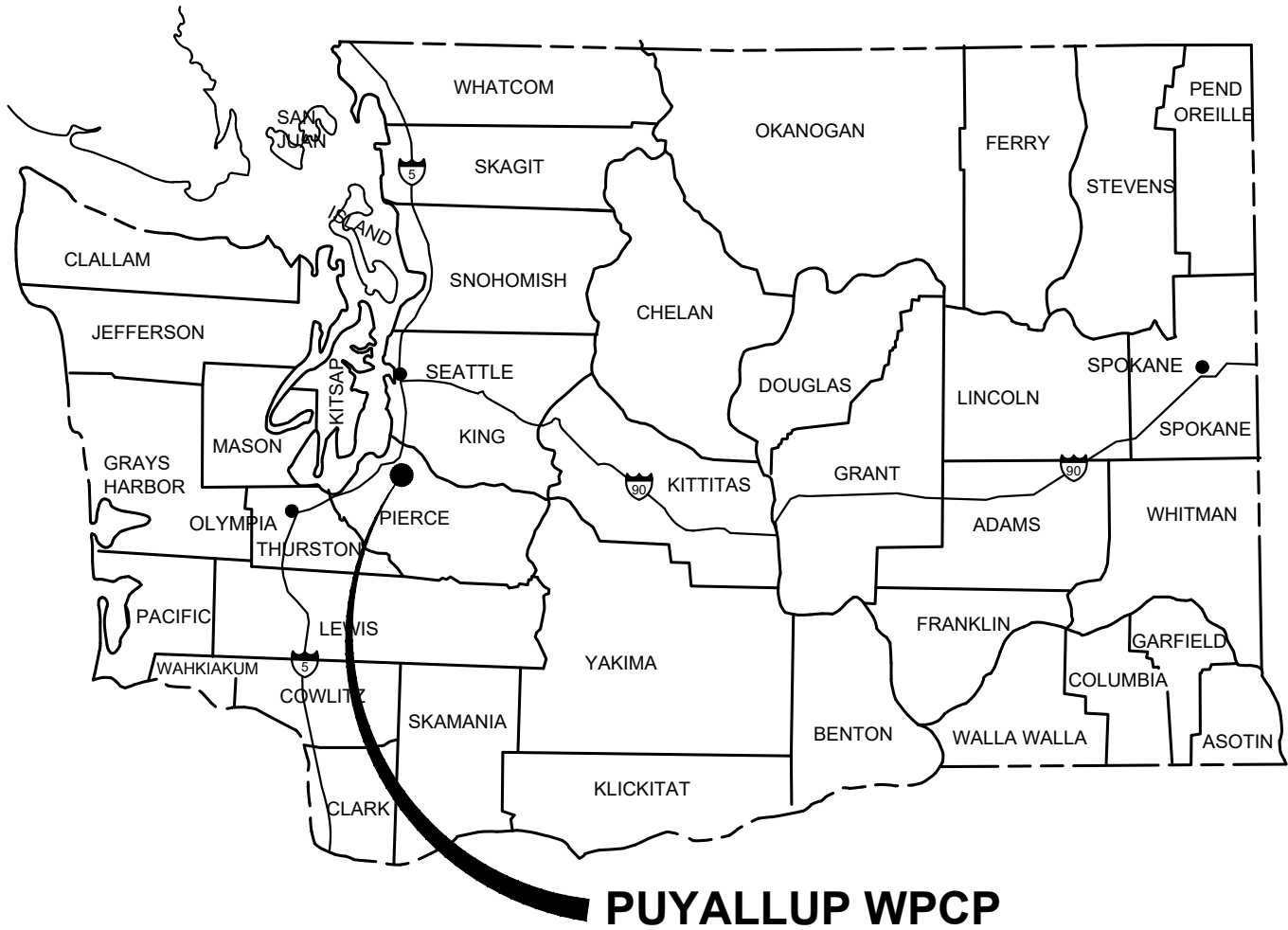


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CONSULTING ENGINEERS

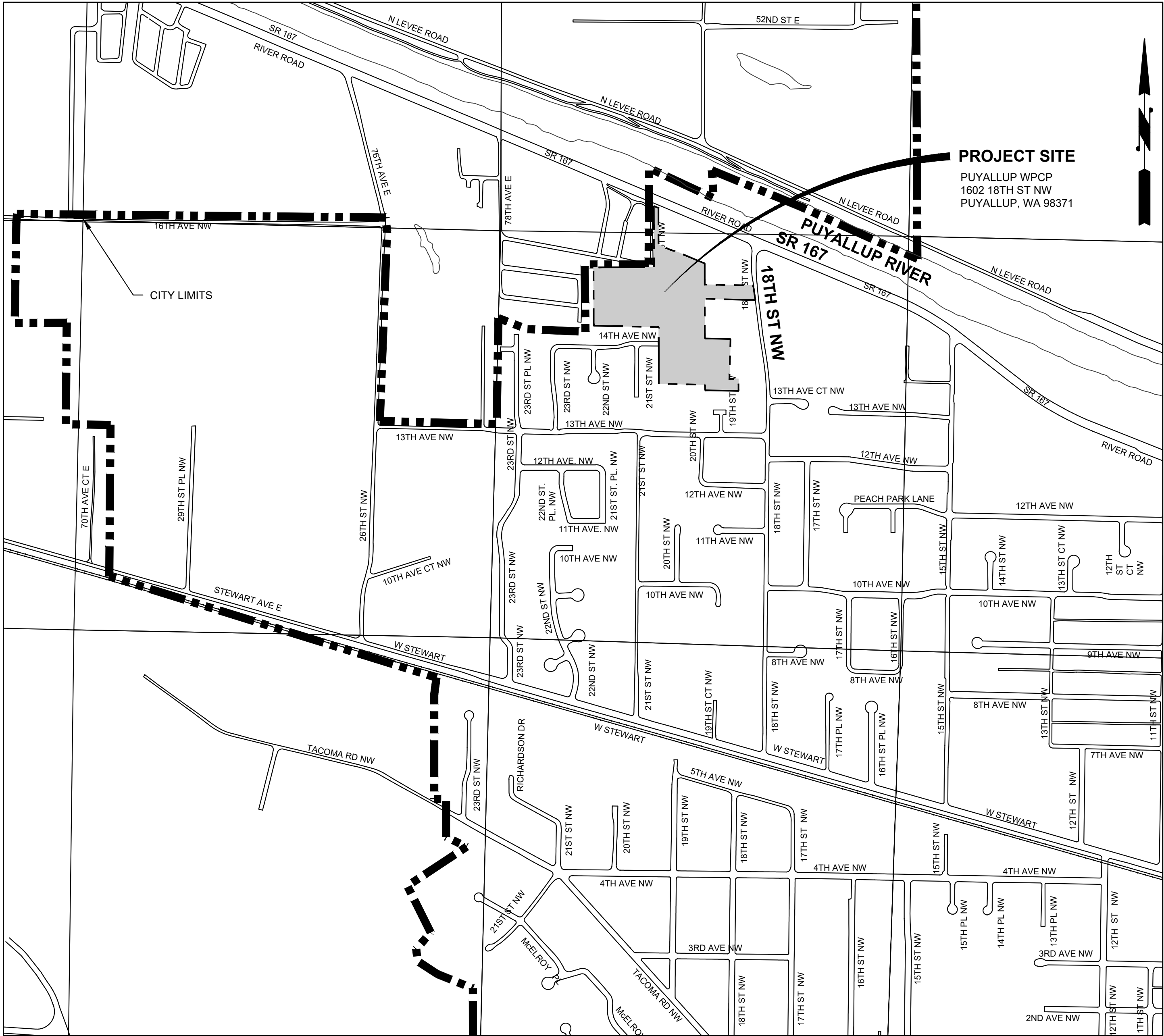
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

FEBRUARY 2024
G&O JOB #21462.00

M:\PUYALLUP\21462 WPCP 3rd Secondary Clarifier\01 Design\Plans\General\G_MAPS-INDEX.dwg, 2/28/2024 12:56 PM, CHARLEY REID



VICINITY MAP
NOT TO SCALE



LOCATION MAP
SCALE: 1"=500'-0"

SHEET INDEX

SHEET NO.	DRAWING NO.	DESCRIPTION
--	--	COVER
GENERAL		
1	G-1	VICINITY MAP, LOCATION MAP AND SHEET INDEX
3	G-3	ABBREVIATIONS, GENERAL SYMBOLS, SYMBOL LEGEND, NUMBERING SYSTEM AND GENERAL NOTES
2	G-2	PLANT DESIGN CRITERIA
4	G-4	PROCESS FLOW DIAGRAM
5	G-5	HYDRAULIC PROFILE
6	G-6	EXISTING SITE PLAN, TESC PLAN AND SITE DEMOLITION PLAN
7	G-7	MODIFIED SITE PLAN AND AREA IDENTIFICATION
8	G-8	SITE PIPING PLAN
9	G-9	PIPE PROFILES
GENERAL DETAILS		
10	GD-1	TESC NOTES AND DETAILS
11	GD-2	GENERAL DETAILS
12	GD-3	WASHWATER DETAILS
LANDSCAPING		
13	L-1	LANDSCAPING PLAN
14	L-2	LANDSCAPING AND SURFACE RESTORATION DETAILS
MECHANICAL		
15	M-1	ABBREVIATIONS, SYMBOLS AND EQUIPMENT IDENTIFICATIONS
16	M-2	PIPE DETAILS
17	M-3	MISCELLANEOUS DETAILS
18	M-4	MISCELLANEOUS DETAILS
19	M6-1	SECONDARY CLARIFIER SPLITTER BOX AND RAS/WAS PUMP STATION PLAN
19	M6-2	SECONDARY CLARIFIER SPLITTER BOX AND RAS/WAS PUMP STATION SECTIONS
21	M6-3	SECONDARY CLARIFIER SPLITTER BOX AND RAS/WAS PUMP STATION SECTIONS AND DETAILS
22	M6-4	SECONDARY CLARIFIER SPLITTER BOX AND RAS/WAS PUMP STATION SECTIONS AND DETAILS
23	M6-5	SECONDARY CLARIFIER SPLITTER BOX AND RAS/WAS PUMP STATION SECTIONS AND DETAILS
24	M7-1	SECONDARY CLARIFIER NO. 3 PLAN
25	M7-2	SECONDARY CLARIFIER NO. 3 SECTIONS
26	M7-3	SECONDARY CLARIFIER NO. 3 SECTIONS AND DETAILS
27	M7-4	EXISTING EFFLUENT FLOWMETER MANHOLE DEMOLITION PLAN
28	M7-5	SECONDARY CLARIFIER NO. 3 SCUM PUMP STATION
29	M8-1	EFFLUENT FLOW METER PLAN AND SECTION
ARCHITECTURAL		
30	A6-1	RAS/WAS PUMP STATION NOTES, DETAILS, AND PLANS
HVAC		
31	H6-1	NOTES AND ABBREVIATIONS
32	H6-2	EQUIPMENT SCHEDULES
33	H6-3	DEMOLITION AND PROPOSED PLANS
PLUMBING		
34	P6-1	PLUMBING NOTES, LEGEND AND DETAILS
35	P6-2	SECONDARY SPLITTER BOX AND RAS/WAS PUMP STATION PLAN AND DETAILS
STRUCTURAL		
36	S-1	GENERAL STRUCTURAL NOTES
37	S-2	SPECIAL INSPECTION SCHEDULE, SUPPLEMENTAL STRUCTURAL ABBREVIATIONS, STRUCTURAL LEGEND AND TYPICAL DETAILS
38	S-3	TYPICAL STRUCTURAL DETAILS
39	S7-1	AREA 7 SECONDARY CLARIFIER NO. 3 TEMPORARY SHORING/GROUND FREEZE PLAN
40	S7-2	AREA 7 SECONDARY CLARIFIER NO. 3 FOUNDATION PLAN AND DETAIL
41	S7-3	SECONDARY CLARIFIER NO. 3 UPPER PLAN
42	S7-4	SECONDARY CLARIFIER NO. 3 SECTION AND DETAILS
ELECTRICAL		
43	E-1	SYMBOL SCHEDULES AND GENERAL NOTES
44	E-2	EXISTING/DEMOLITION ELECTRICAL SITE PLAN
45	E-3	MODIFIED ELECTRICAL SITE PLAN
46	E-4	EXISTING/DEMOLITION ONE LINE DIAGRAM
47	E-5	MODIFIED ONE LINE DIAGRAM
48	E-6	MCC ELEVATIONS AND SCHEDULES
49	E-7	EXISTING VFD ELEMENTARY WIRING DIAGRAMS
50	E-8	MOTOR CONTROL CENTER ONE LINE DIAGRAMS AND ELEMENTARY WIRING DIAGRAMS
51	E-9	SCUM PUMP CONTROL PANEL NO. 2 DETAILS
52	E-10	PANEL SCHEDULES
53	E-11	ELECTRICAL DETAILS
54	E-12	PLC CONTROL SYSTEM MODIFICATIONS
55	E6-1	DEMOLITION AND MODIFIED RAS/WAS BUILDING MAIN LEVEL
56	E6-2	EXISTING/MODIFIED RAS/WAS BUILDING LOWER LEVEL
57	E7-1	ELECTRICAL PLAN EXISTING CLARIFIERS
58	E7-2	ELECTRICAL PLAN CLARIFIER NO. 3
59	E7-3	ELECTRICAL PLAN CLARIFIER NO. 3
60	E8-1	ELECTRICAL PLAN EFFLUENT FLOWMETER

APPROVED

BY:

CITY ENGINEER
CITY OF PUYALLUP

APPROVED

DATE: 2/28/2024

EXPIRATION

DATE: 12/31/2025

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BLAINE JACOBSON

STATE OF WASHINGTON

14062

REGISTERED PROFESSIONAL ENGINEER

2/28/24

DOUGLAS A. WELCH

STATE OF WASHINGTON

28743

REGISTERED PROFESSIONAL ENGINEER

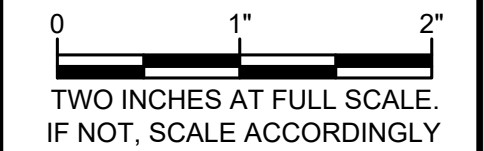
2/28/24

CITY OF PUYALLUP

STATE OF WASHINGTON

WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR:		
BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: DAW		
CHECKED BY: DAW		
DRAWN BY: CRR		
DESIGNER: BJ		
G & O JOB NO.: 21462.00		
FILE: G_MAPS-INDEX.DWG		



GENERAL

VICINITY MAP,
LOCATION MAP AND
SHEET INDEX

DRAWING: G-1 OF: 9

SHEET: 1 OF: 60

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DESIGN CRITERIA AND PLANT DATA

PLANT LOADINGS

Flow:	
Average Annual Flow	9.46 MGD
Maximum Month (Design Flow)	13.98 MGD
Peak Hour Flow	27.38 MGD
Loadings:	
5-Day Biochemical Oxygen Demand	14,525 lb/d
Chemical Oxygen Demand	37,765 lb/d
Total Suspended Solids	15,550 lb/d
Total Kjeldahl Nitrogen	3,435 lb/d

MAIN PLANT LIFT STATION (EXISTING)

Quantity	4
Pump Type	screw
Size	66-Inch
Horsepower	75
Rotational Speed	36 rpm
Capacity	7,245 gpm

INFLUENT SCREENS (EXISTING)

Quantity	2
Type	Self-Cleaning Fine Screen
Drum Size	71-Inch
Bar Spacing	4 mm
Capacity, Each	17.90 MGD
Quantity	1
Type	Manual Coarse Bar
Bar Spacing	3/4-Inch

INFLUENT FLOW MEASUREMENT (EXISTING)

Quantity	1
Type	Parshall Flume
Size	4-Feet

PRIMARY CLARIFIERS (EXISTING)

Bank No. 1:	
Quantity	4
Length	150 feet
Width	20 feet
Side Water Depth	8.5 feet
Volume (each)	205,600 gal
Surface Loading Rate @ Design Flow	717 gpd/ft ²
Surface Loading Rate @ Peak Hour Flow	1,374 gpd/ft ²
Detention Time @ Design Flow	2.6 hr
Detention Time @ Peak Hour Flow	1.3 hr
Bank No. 2 :	
Quantity	2
Length	150 feet
Width	24 feet
Side Water Depth	10 feet
Volume (each)	287,100 gal
Surface Loading Rate @ Design Flow	746 gpd/ft ²
Surface Loading Rate @ Peak Hour Flow	1,511 gpd/ft ²
Detention Time @ Design Flow	2.6 hr
Detention Time @ Peak Hour Flow	1.3 hr

GRIT REMOVAL (EXISTING)

Quantity	2
Type	Grit Classifier
Diameter	40 Inches
Capacity, Each	400 gpm

Crit Dewatering System

Quantity	1
Capacity	1 yd ³ /hr
Clarifier Size	26 ft ²
Belt Width	6 Inches
Motor Horsepower	1

AERATION (EXISTING)

Quantity	3
Side Water Depth	21 feet
Volume, Each	252,000 ft ³
Hydraulic Detention Time @ Design Flow	9.4 hr
MLSS Concentration	2,850 mg/l
Aerobic Solids Retention Time	9.5 days
Oxygen Required @ Design Flow	770lb/hr
Quantity of Selector Zones	3
Quantity of Anoxic Zones	2
Quantity of Aerobic Zones	4
Selector Zone, SAx-1:	
Total Volume, all basins	10,500 ft ³
F/M Ratio	6 lb BOD ₅ /lb MLSS
Air Required	60 scfm
Selector Zone, SAx-2:	
Total Volume, all basins	10,500 ft ³
F/M Ratio	3 lb BOD ₅ /lb MLSS
Air Required	60 scfm
Selector Zone, SAx-3:	
Total Volume, all basins	21,000 ft ³
F/M Ratio	1.5 lb BOD ₅ /lb MLSS
Air Required	120 scfm
Anoxic Zone:	
Total Volume, all basins	249,000 ft ³
Air Required	1,420 scfm
Aerobic Zone:	
Total Volume, all basins	465,000 ft ³
Hydraulic Retention Time @ Design Flow	5.7 hr
Oxygen Required @ Design Flow	770 lb/hr
Internal Recycle Pumps:	
Quantity	3
Type	Horizontal Propeller
Capacity @ TDH	17,000 gpm @ 2.3 ft
Horsepower	20
Drain Pumps:	
Quantity	1
Type	Submersible
Capacity @ TDH	1,100 gpm @ 32 ft
Horsepower	20

BLOWERS (EXISTING)

Quantity	3
Type	Multi-Stage Centrifugal
Capacity, Each	3,425 scfm
Discharge Pressure	9.5 psi
Horsepower, Each	200

SECONDARY CLARIFIERS

Quantity	3 (1 New, 2 Existing)
Diameter	110 feet
Setting Area	9,500 ft ²
Side Water Depth	16 feet
Volume Per Unit (not including bottom cone)	1,150,000 gal
Surface Loading Rate @ Design Flow	543 gpd/ft ²
Surface Loading Rate @ Peak Hour Flow	1,421 gpd/ft ²
Detention Time @ Design Flow	5.35 hr
Detention Time @ Peak Hour Flow	2.04 hr
Solids Loading Rate @ Design Flow	16.53 lb/ft ² ·d
Solids Loading Rate @ Peak Hour Flow	41.74 lb/ft ² ·d
Sludge Scraper Drive Horsepower	1

SECONDARY SCUM PUMP STATION (Clarifiers 1 and 2)

Quantity	1
Type	Submersible
Capacity @ TDH	175 gpm @ 15 ft
Horsepower	2

SECONDARY SCUM PUMP STATION (Clarifier 3)

Quantity	1
Type	Submersible
Capacity @ TDH	120 gpm @ 13 ft
Horsepower	2

EFFLUENT FLOW METER

Quantity	2
Type	Magnetic
Size (Secondary Clarifiers 1 and 2)	43"
Size (Secondary Clarifier 3)	36"

EFFLUENT DISINFECTION

Type	Ultra-Violet
UV Tube Type	Low Pressure - High Output
Number of Channels	2
Channel Width	4'-8"
Channel Depth	7'-10"
Number of Banks/Channel	2
Number of Lamps/Bank	20
UV Transmittance	62%
Effluent Disinfection Standard	100 cfu/100 ml
UV Dose (MS2)	30 mJ/cm ²

EFFLUENT PUMPS (EXISTING)

Quantity	4
Pump Type	Vertical Propeller-Wet Pit
Capacity per Pump @ TDH	8,300 gpm @ 16 ft
Horsepower	60
Pump Station Capacity @ TDH	24,900 gpm @16 ft

RETURN ACTIVATED SLUDGE PUMPS

Quantity	4 (1 New, 3 Existing)
Type	Centrifugal
Capacity @ TDH	2,250 gpm @ 14 ft
Horsepower	20

WASTE ACTIVATED SLUDGE PUMPS (EXISTING)

Quantity	2
Type	Progressing Cavity
Capacity @ TDH	200 gpm @ 30 psi
Horsepower	10

PRIMARY SLUDGE PUMPS (EXISTING)

Quantity	3
Type	Recessed Impeller Centrifugal
Capacity per Pump @ TDH	360 gpm @ 31 ft
Horsepower	15

GRAVITY THICKENER (EXISTING)

Quantity	1
Diameter	35 ft
Side Water Depth	10 ft
Overflow Rate	660 gpd/ft ²
Solids Loading @ Design Flow	12.0 lb/ft ² ·d
Drive Horsepower	1 1/2

THICKENED WASTE PRIMARY SLUDGE PUMPS (EXISTING)

Quantity	2
Type	Progressing Cavity
Capacity per Pump @ TDH	64 gpm @ 60 psi
Horsepower	5

FLOCCULATION TANK (EXISTING)

Quantity	1
Detention Time	3.0-5.0 minutes
Mixer Type	Vertical Turbine
Mixer Speed	7.7-38 rpm
Motor Size	1 hp

ROTARY DRUM THICKENER (EXISTING)

Quantity	1
Hydraulic Capacity	50 gpm
Solids Feed Concentration	~2%
Polymer Dosage	10 lbs/dry ton
Drive Horsepower	1
Flocculation Tank Mixer Horsepower	1
Solids Capture Rate	96%

POLYMER SYSTEM, THICKENING (EXISTING)

Type	2-tank
Polymer	Wet or Dry
Mixer Tank Volume	200 gal
Mixer Motor Size	2 hp
Feed Tank Volume	250 gal
Metering Pump Capacity	85 gph
Active Polymer Capacity (min required)	2.5 lbs/hr
Blower Conveyance System Capacity	90 cfm
Volumetric Feeder Motor Size	0.5 hp
Emulsion Feed Pump Motor Size	0.5 hp

POLYMER FEED PUMPS THICKENING (EXISTING)

Quantity	2
Type	Progressing Cavity
Capacity	2 gpm
TDH	30 psi
Motor Size	1 hp
Motor Speed	237 rpm

THICKENED WASTE ACTIVATED SLUDGE PUMPS (EXISTING)

Quantity	2
Type	Progressing Cavity
Pump Capacity @ TDH	50 gpm @ 90 psi
Horsepower	7.5

TEMPORARY SLUDGE STORAGE TANK (EXISTING)

Quantity	1
Diameter	75 ft
Side Water Depth	6.5 ft
Volume	215,000 gal
Air Flow Rate	550 scfm
Blowers (Existing)	
Quantity	3
Type	Multi-Stage Centrifugal
Capacity, Each	2,100 scfm
Discharge Pressure	4.0 psig
Horsepower	50

SCUM REMOVAL FACILITY (EXISTING)

Wet Well Length	18ft
Wet Well Width	8 ft
Quantity of Pumps	1
Pump Type	Rotary Lobe
Pump Capacity @ TDH	165 gpm @ 26.5 ft
Horsepower	3

ANAEROBIC DIGESTERS (EXISTING)

Primary Digesters:	
Quantity	2
Diameter	50 ft
Side Water Depth	23 ft
Volume, Each	45,000 ft ³
Hydraulic Retention Time	17.6 days
Solids Loading	0.15 lb VS/ft ² ·d
Digester Mixing:	
Type	Pumped
Quantity	3
Pump Type	Screw Centrifugal
Capacity @ TDH	2,750 gpm @ 20 ft
Horsepower	20
Turnover Time	2.2 hr
Spiral Heat Exchanger:	
Quantity	2
Required Heat, Each	0.5 MBTU/hr
Boiler:	
Quantity	1
Horsepower	1.7 MBTU/hr
Recirculation Pump:	
Type	Rotary Lobe
Quantity	16
Capacity @ TDH	200 gpm @ 15 ft
Horsepower	3
Secondary Digester:	
Quantity	1
Volume	17,800 ft ³
Diameter	35 ft
Side Water Depth	18.5 ft

DIGESTED SLUDGE PUMPS (EXISTING)

Quantity	2
Pump Type	Progressing Cavity
Capacity @ TDH	64 gpm @ 30 psi
Horsepower	5

SCREW PRESS FEED PUMP (EXISTING)

Pump Type	Progressing Cavity
Capacity	50 gpm
TDH	60 psi
Motor Size	5 hp
Max Speed	222 rpm

SLUDGE/POLYMER BLENDER (EXISTING)

Quantity	1
Type	In-Line
Design Solids Concentration	~3%
Sludge Flow Rate	10-40 gpm
Polymer Flow Rate	10-60 gph
Motor Size	5 hp

FLOCCULATION TANK (EXISTING)

Detention Time	1.5 - 3.0 Minutes
Mixer Type	Vertical Turbine
Mixer Speed	10-46 rpm
Motor Size	1 hp

SCREW PRESS (EXISTING)

Solids Loading Capacity	600 lbs/hr
Hydraulic Capacity	40 gpm
Feed Sludge Concentration	3%
Cake Sludge Concentration (Min)	20%
Solids Capture (Min)	90%
Motor Size	3 hp

POLYMER SYSTEM DEWATERING (EXISTING)

System Type	2-Tank
Polymer	Wet or Dry
Mix Tank Volume	500 Gallons
Mix Tank Motor Size	0.75 hp
Hold Tank Volume	500 Gallons
Transfer Rate	40 gpm
Active Polymer Capacity (min Req'd)	15 lbs/hr
Blower Conveyance System Capacity	90 cfm
Blower Motor Size	2.5 hp
Volume Screw Motor Size	0.5 hp
Emulsion Feed Pump Motor Size	0.5 hp

POLYMER FEED PUMPS DEWATERING (EXISTING)

Quantity	2
Type	Progressing Cavity
Capacity	6 gpm
TDH	30 psi
Motor Size	0.5 hp
Max Speed	200 rpm

DEWATERED SLUDGE CONVEYOR NO. 1 (EXISTING)

Type	Shaftless Screw
Incline	15 Degrees
Transport Rate	75 ft ³ /hr
Screw Diameter	14-Inches
Material Weight	60-65 lb/ft ³
Motor Size	5 hp

DEWATERED SLUDGE CONVEYORS NO. 2 AND 3 (EXISTING)

Type	Shaftless Screw
Incline	30 Degrees
Transport Rate	75 ft ³ /hr
Screw Diameter	14-Inches
Material Weight	60-65 lb/ft ³
Motor Size	5 hp

DEWATERED SLUDGE CONVEYOR NO. 4 (EXISTING)

Type	Shaftless Screw
Incline	0 Degrees
Transport Rate	75 ft ³ /hr
Screw Diameter	14-Inches
Material Weight	60-65 lb/ft ³
Motor Size	5 hp

DEWATERED SLUDGE STORAGE SILO (EXISTING)

Diameter	16'-4"
Total Height	22'-0"
Total Volume	4,420 ft ³
Active Volume	3,350 ft ³
Load Cell Capacity, Each	75,000 lbs

EXTRACTION CONVEYOR (EXISTING)

Type	Shafted Ribbon, Center Discharge
Transport Rate	1,730 ft ³ /hr
Screw Diameter	16-Inches
Screw Speed	30 rpm
Material Weight	60-65 lb/ft ³
Motor Size	20 hp

SLIDING FRAME HYDRAULIC POWER UNIT (EXISTING)

Reservoir Size	110 Liters
Pump Type	Constant Volume Gear Pump
Motor Size	20 hp

PLANT DRAIN PUMP STATION (EXISTING)

Quantity of Pumps	3
Type	Submersible Centrifugal
Capacity, Each	450 gpm @ 22 ft
Motor Size	5 hp

STORMWATER PUMP STATION (EXISTING)

Quantity of Pumps	3
Type	Submersible Centrifugal
Capacity, Each @ TDH	1,200 gpm @ 35 ft
Motor Size	15 hp

NON-POTABLE WATER SYSTEM (EXISTING)

Quantity of Pumps	2
Type	Vertical Split Case Centrifugal
Capacity @ TDH, Each	630 gpm @ 175 ft
Motor Size, Each	40 hp

OPERATIONS BUILDING GROUNDWATER PUMP STATION (EXISTING)

Quantity of Pumps	2
Type	Submersible Centrifugal
Capacity @ TDH, Each	1,000 gpm @ 17 ft
Motor Size, Each	7.5 hp

ODOR CONTROL SYSTEM (EXISTING)

Type	Biofilter
No. of Units	2
Design Air Rate	16,250 cfm
System Size	6,800 ft ² A
Media Depth	63 Inches
No. of Fans	2
Fan Motor Size	30 hp
Capacity @ TDH, Each	8,125 cfm

GENERATORS (EXISTING)

Quantity	4
Main Plant Lift Station	
Rating	400 KW, 277/480 V, 3-phase, 4-wire
Power Factor	0.80
Blower Building	
Rating	500 KW, 277/480 V, 3-phase, 4-wire
Power Factor	1.00
RAS/WAS Pump Station	
Rating	500 KW, 277/480 V, 3-phase, 4-wire
Power Factor	0.80
Generator/Compressor Building	
Rating	400 KW, 277/480 V, 3-phase, 4-wire
Power Factor	0.80

APPROVED

BY: 

CITY ENGINEER

CITY OF PUYALLUP

APPROVED

DATE: 2/28/2024

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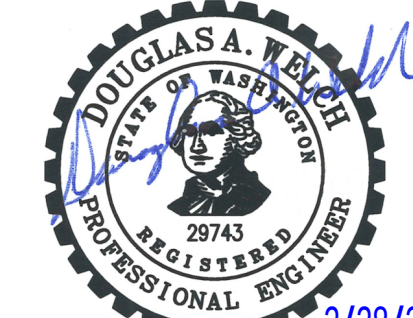
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CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018
1802 18TH ST NW,
PUYALLUP, WA 98371

AB	ANCHOR BOLT
AC	ASPHALT CONCRETE
ACP	ACOUSTIC PANEL
ADJ	ADJUSTABLE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALTR	ALTERNATE
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
ASSY	ASSEMBLY
AVE	AVENUE
AWS	AMERICAN WELDING SOCIETY
BFP	BELT FILTER PRESS
BI	BLACK IRON
BLD FLG	BLIND FLANGE
BLDG	BUILDING
BLK	BLOCK
BOD	BOTTOM OF DUCT, BIOCHEMICAL OXYGEN DEMAND
BOW	BOTTOM OF WALL
BTWN	BETWEEN
BVC	BEGIN VERTICAL CURVE

D	DRAIN
DI	DUCTILE IRON
DIA	DIAMETER
DIR	DIRECTION
DISCH	DISCHARGE
DN	DOWN
DO	DISSOLVED OXYGEN
DP	DIFFERENTIAL PRESSURE
E	EAST
EA	EACH
ECC	ECCENTRIC
EFF	EFFLUENT
EL	ELEVATION
EL	ELBOW
ELEC	ELECTRICAL
EMERG	EMERGENCY
EXIST	EXISTING
EXP	EXPANSION
EW	EACH WAY
EVC	END VERTICAL CURVE

GA	GAUGE
GALV	GALVANIZED
GEN	GENERAL
GI	GALVANIZED IRON
GOVT	GOVERNMENT
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
GRD	GRADE
GRV	GROOVED PIPE OR COUPLING
GV	GATE VALVE
GWB	GYPSUM WALL BOARD

ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INF	INFLUENT
INV	INVERT

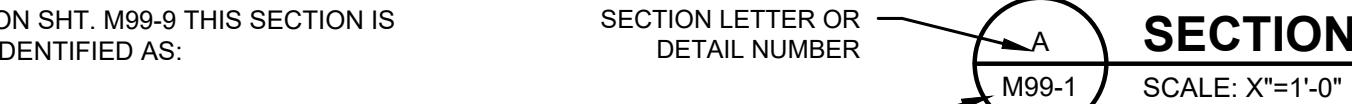
N	NORTH
No.	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OSHA	OCCUPATIONAL SAFETY AND HEALTH

QT	QUARTER
QUAD	QUADRANT
RAS	RETURN ACTIVATED SLUDGE
RD	ROOF DRAIN
RED	REDUCER
REJ	RUBBER EXPANSION JOINT
REINF	REINFORCE
REQD	REQUIRED
RESTL	REINFORCING STEEL
RM	ROOM
RO	ROUGH OPENING
RS	RAW SEWAGE
R/W	RIGHT-OF-WAY
S	SOUTH,
SC	SCUM
SCH	SCHEDULE
SF	SQUARE FEET
SHT	SHEET
SL	SLOPE
SL	SLUDGE
SOC	SOCKET
SP	STATIC PRESSURE
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
STRG	STRONG
SUC	SUSPENDED CEILING

W	WIDTH, WEST
W/	WITH
WAS	WASTE ACTIVATED SLUDGE
WD	WIDE
W/O	WITHOUT
WS	WATER SURFACE
WWM	WELDED WIRE MESH
WWF	WELDED WIRE FABRIC

1/4" FT	SLOPE 1/4" PER FOOT
	FLOW DIRECTION (AIR, WATER)
	OPENING
	GROUND
	ASPHALT SECTION
	CONCRETE SECTION
	WATER SURFACE
	ELEVATION REFERENCE POINT
	LEGEND/NOTE CALL OUTS
	PIPE SUPPORT
	ELECTRICAL MAST
	SQUARE SECTION
	PIPE SECTION
@	SPACING CENTER ON CENTER
⊗	SIZE OF DEFORMED BAR
∅	DIAMETER
	RECTANGULAR SECTION
∠	ANGLE
W	WIDE-FLANGE SHAPE
C	CHANNEL
ℙ	PLATE
⏟	CENTER LINE

FOR DETAILS, SUBSTITUTE DETAIL NUMBER FOR SECTION LETTER



GENERAL NOTES :

1. IN GENERAL, EXISTING STRUCTURES AND FACILITIES ARE NOTED AS "EXISTING" AND ARE SHOWN IN LIGHT LINE WEIGHTS OR AS SCREENED BACKGROUND. NEW CONSTRUCTION, STRUCTURES, FACILITIES, AND FEATURES ARE SHOWN IN HEAVY LINE WEIGHTS.
2. MANY OF THE SYMBOLS SHOWN ON THIS LEGEND ARE USED ONLY WHERE THEY PROVIDE CLARITY AND ARE NOT NECESSARILY USED IN ALL APPLICATIONS. SOME CONTRACT DRAWINGS MAY HAVE ADDITIONAL LEGENDS APPLICABLE FOR THAT SPECIFIC DRAWING. SYMBOLS SHOWN ON SPECIFIC DRAWINGS GOVERN.
3. THE CONTRACTOR SHALL VERIFY ALL PLANIMETRIC FEATURES AND DIMENSIONS PRIOR TO STARTING WORK AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

	ASPHALT PAVEMENT
	GRAVEL SURFACING
	CONCRETE SURFACING
	FENCE
	SITE PERIMETER FENCE
	GATE VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	PLUG VALVE
	THRUST BLOCK
	UTILITY POLE WITH GUY WIRE
	UTILITY POLE
	LUMINAIRE
	JUNCTION BOX (AS NOTED)
	MANHOLE
	FIRE HYDRANT
	TYPE 1 CATCH BASIN OR CURB INLET
	TYPE 2 CATCH BASIN
	SECTION CORNER
	1/4 CORNER
	WATER METER
	MONUMENT
	TREES
	SHRUBS
	BORING AND TEST PIT LOCATIONS
	BUILDINGS
	CONTOUR
	YARD HYDRANT
	CLEANOUT
	PIPE TO BE ABANDONED IN PLACE
	PIPE TO BE REMOVED

ASPHALT PAVEMENT		ASPHALT PAVEMENT
GRAVEL SURFACING		GRAVEL SURFACING
CONCRETE SURFACING		CONCRETE SURFACING
FENCE		FENCE
SITE PERIMETER FENCE		
GATE VALVE		GATE VALVE
BUTTERFLY VALVE		BUTTERFLY VALVE
CHECK VALVE		CHECK VALVE
PLUG VALVE		PLUG VALVE
THRUST BLOCK		THRUST BLOCK
UTILITY POLE WITH GUY WIRE		UTILITY POLE WITH GUY WIRE
UTILITY POLE		UTILITY POLE
LUMINAIRE		LUMINAIRE (SEE ALSO E
JUNCTION BOX (AS NOTED)		JUNCTION BOX (AS NOT
MANHOLE		MANHOLE
FIRE HYDRANT		FIRE HYDRANT
TYPE 1 CATCH BASIN OR CURB INLET		TYPE 1 CATCH BASIN OR
TYPE 2 CATCH BASIN		TYPE 2 CATCH BASIN

	ASPHALT PAVEMENT
	GRAVEL SURFACING
	CONCRETE SURFACING
	FENCE
	GATE VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	PLUG VALVE
	THRUSTER BLOCK
	UTILITY POLE WITH GUY WIRE
	UTILITY POLE
	LUMINAIRE (SEE ALSO ELECTRICAL)
	JUNCTION BOX (AS NOTED)
	MANHOLE
	FIRE HYDRANT
	TYPE 1 CATCH BASIN OR CURB INLET
	TYPE 2 CATCH BASIN
	WATER METER
	MONUMENT
	TREES (SEE ALSO LANDSCAPE PLAN)
	SHRUBS
	BORING AND TEST PIT LOCATIONS
	BUILDINGS
	CONTOUR
	YARD HYDRANT
	CLEANOUT

ALP	AIR LOW PRESSURE	PE	PRIMARY EFFLUENT
AHP	AIR HIGH PRESSURE	POS	POLYMER SOLUTION
CHR	CHLORINE	PS	PRIMARY SLUDGE
CP	CARRIER PIPE	PT	PRESSATE
D	DRAIN	RAS	RETURN ACTIVATED SLUDGE
DF	DIESEL FUEL	RS	RAW SEWAGE
DG	DIGESTER GAS	SAM	SAMPLE
DO	DIGESTER OVERFLOW	SC	SCUM
DS	DIGESTED SLUDGE	SD	STORM DRAIN
FE	FINAL EFFLUENT	SE	SECONDARY EFFLUENT
FM	FORCEMAIN	SHC	SODIUM HYPOCHLORITE
HW	HOT WATER	SPD	SUMP PUMP DISCHARGE
I	IRRIGATION	SS	SANITARY SEWER
ML	MIXED LIQUOR	SW	SEAL WATER
NG	NATURAL GAS	SWD	STORM WATER PUMP DISCHARGE
NPW	NON-POTABLE WATER	TO	THICKENER OVERFLOW
NPW-C	NON-POTABLE WATER - CITY	TPS	THICKENED PRIMARY SLUDGE
ODC	ODOR CONTROL DUCT	TS	THICKENED SLUDGE
OF	OVERFLOW	TWAS	THICKENED WASTE ACTIVATED SLUDGE
P	PRIMARY INFLUENT	V	VENT
PD	PROCESS DRAIN	W	POTABLE WATER
PDD	PLANT DRAIN DISCHARGE	WAS	WASTE ACTIVATED SLUDGE

APPROVED

BY: 

CITY ENGINEER
CITY OF PUYALLUP

APPROVED _____

DATE: 2/28/2024

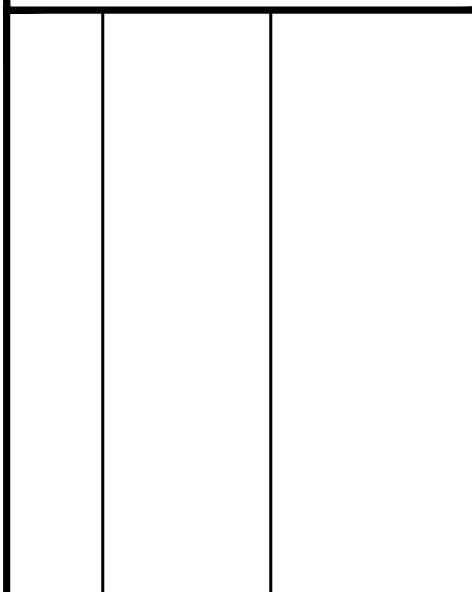
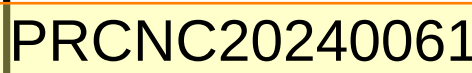
EXPIRATION _____

DATE: 12/31/2025

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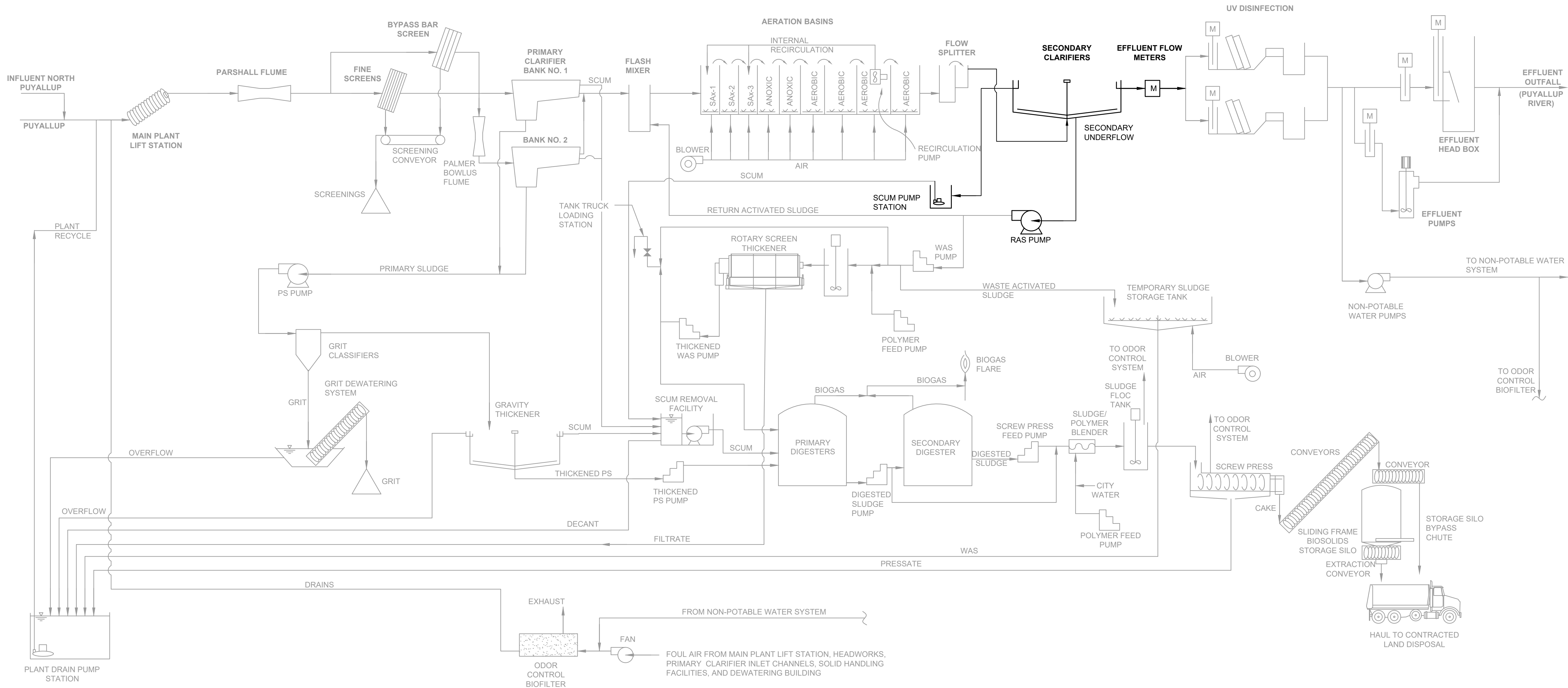


ISSUED FOR:		BID SET	
ISSUE DATE:	FEBRUARY 2024		
APPROVED BY:	DAW		
CHECKED BY:	DAW		
DRAWN BY:	CRR		
DESIGNER:	BJ		
G & O JOB NO.:	21462.00		
FILE:	SYM-GEN.DWG		

DRAWING: **G-3** OF: **9**

SHEET: **3** OF: **60**

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PROCESS FLOW DIAGRAM

PRCNC20240061



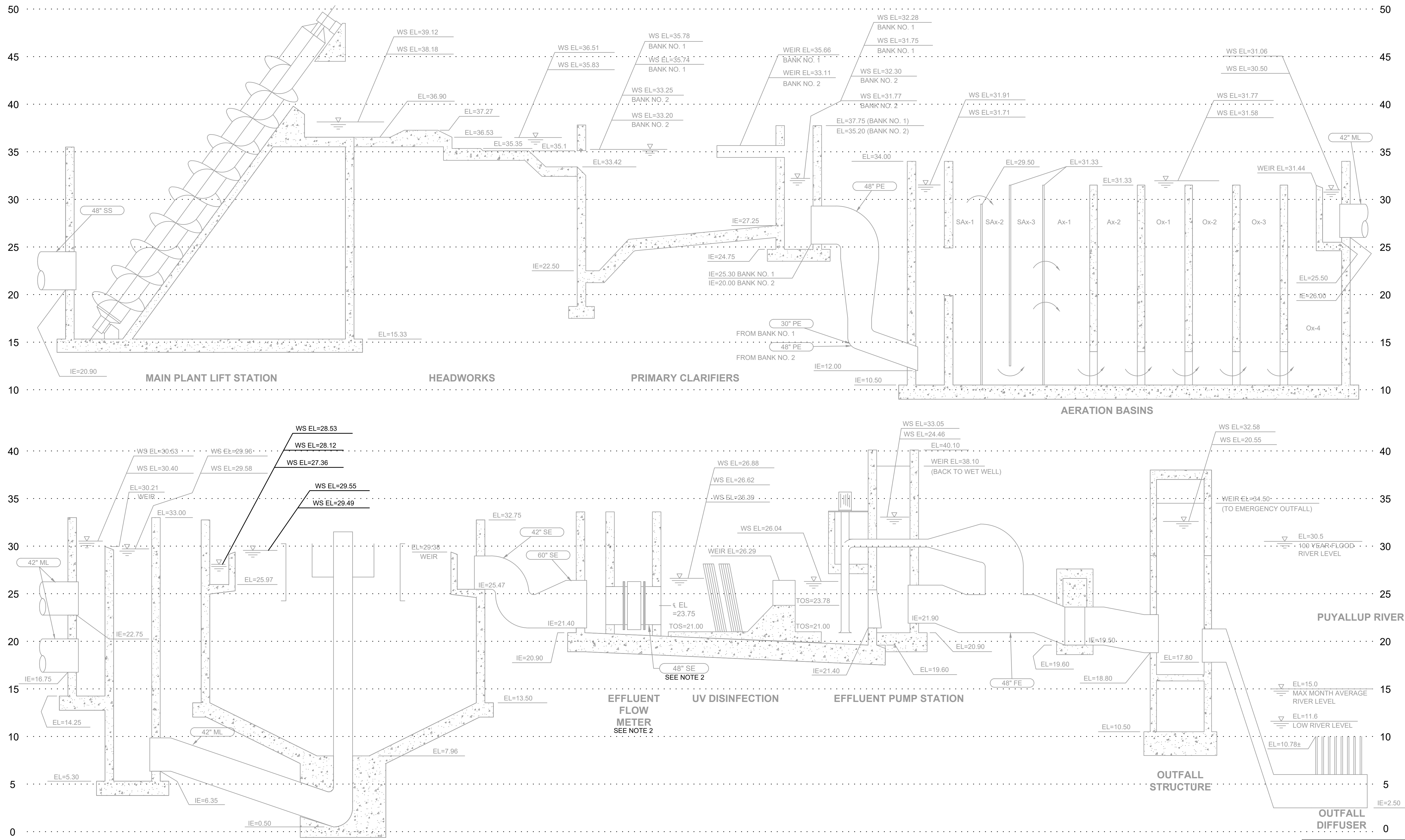
No.	DATE	REVISION
ISSUED FOR: BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: DAW		
CHECKED BY: DAW		
DRAWN BY: CRR		
DESIGNER: BJ		
G & O JOB NO.: 21462.00		
FILE: PFD.DWG		

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

GENERAL	
PROCESS FLOW DIAGRAM	
DRAWING: G-4	OF: 9
SHEET: 4	OF: 60

APPROVED
BY:
CITY ENGINEER
CITY OF PUYALLUP
APPROVED DATE: 2/28/2024
EXPIRATION DATE: 12/31/2025
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NOTES:

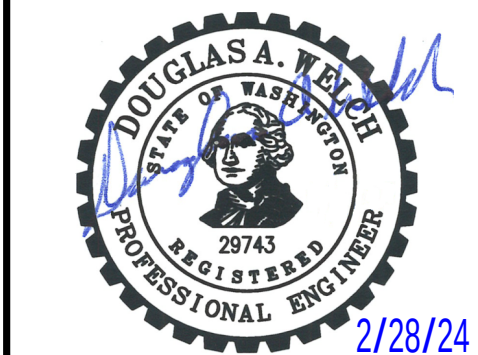
- EXISTING SECONDARY CLARIFIERS 1 AND 2 ARE SHOWN ON THIS DRAWING. THE WATER SURFACE ELEVATIONS FOR NEW SECONDARY CLARIFIER NO. 3 ARE SIMILAR.
- EXISTING 48" EFFLUENT FLOW METER SHOWN. CONFIGURATION AND HYDRAULICS ASSOCIATED WITH NEW PARALLEL 36" EFFLUENT FLOW METER AR SIMILAR.

WS EL @ PROJECT 20 YEAR PEAK HOUR FLOW (39.86 MGD +0.65 MGD NPW FLOW)
WS EL @ CURRENT PEAK HOUR FLOW (27.38 MGD +0.65 MGD NPW FLOW)
WS EL @ CURRENT MAXIMUM MONTH FLOW (13.98 MGD +0.36 MGD NPW FLOW)

HYDRAULIC PROFILE

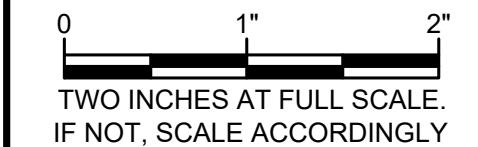
SCALE: VERTICAL 1"=5'-0"
HORIZONTAL NOT TO SCALE

PRCNC20240061



**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR: BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: DAW		
CHECKED BY: DAW		
DRAWN BY: CRR		
DESIGNER: BJ		
G & O JOB NO.: 21462.00		
FILE: G_HYD-PRO.DWG		



GENERAL

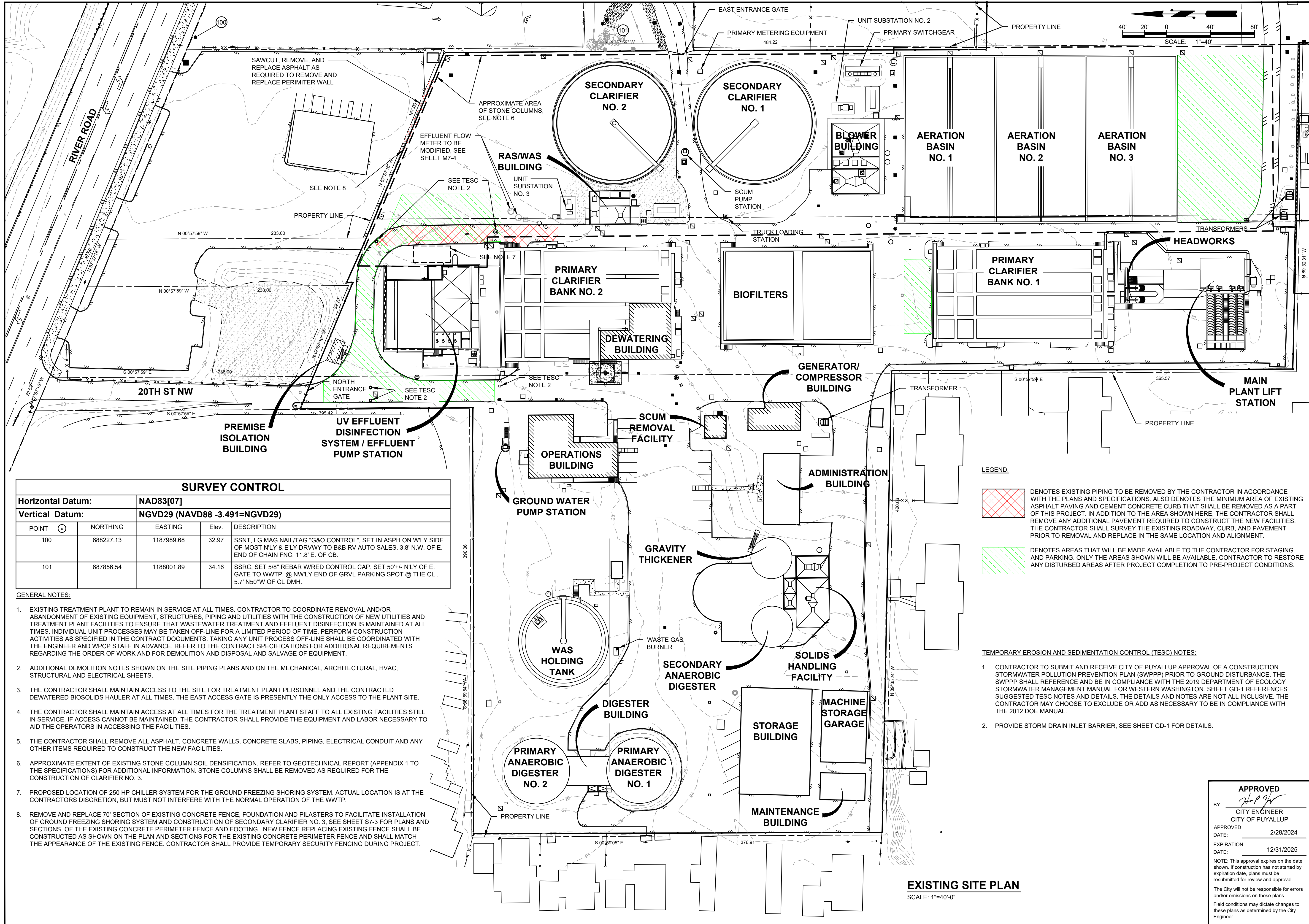
HYDRAULIC PROFILE

DRAWING: **G-5** OF: **9**

SHEET: **5** OF: **60**

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: 2/28/2024
EXPIRATION
DATE: 12/31/2025
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SURVEY CONTROL					
Horizontal Datum:		NAD83[07]			
Vertical Datum:		NGVD29 (NAVD88 -3.491=NGVD29)			
POINT	NORTHING	EASTING	Elev.	DESCRIPTION	
100	688227.13	1187989.68	32.97	SSNT, LG MAG NAIL/TAG "G&O CONTROL", SET IN ASPH ON W'LY SIDE OF MOST N'LY & E'LY DRV'Y TO B&B RV AUTO SALES. 3.8' N.W. OF E. END OF CHAIN FNC. 11.8' E. OF CB.	
101	687856.54	1188001.89	34.16	SSRC, SET 5/8" REBAR W/RED CONTROL CAP. SET 50'+/- N'LY OF E. GATE TO WWTP, @ NW'LY END OF GRVL PARKING SPOT @ THE CL. 5.7' N50°W OF CL DMH.	

- GENERAL NOTES:**
- EXISTING TREATMENT PLANT TO REMAIN IN SERVICE AT ALL TIMES. CONTRACTOR TO COORDINATE REMOVAL AND/OR ABANDONMENT OF EXISTING EQUIPMENT, STRUCTURES, PIPING AND UTILITIES WITH THE CONSTRUCTION OF NEW UTILITIES AND TREATMENT PLANT FACILITIES TO ENSURE THAT WASTEWATER TREATMENT AND EFFLUENT DISINFECTION IS MAINTAINED AT ALL TIMES. INDIVIDUAL UNIT PROCESSES MAY BE TAKEN OFF-LINE FOR A LIMITED PERIOD OF TIME. PERFORM CONSTRUCTION ACTIVITIES AS SPECIFIED IN THE CONTRACT DOCUMENTS. TAKING ANY UNIT PROCESS OFF-LINE SHALL BE COORDINATED WITH THE ENGINEER AND WPCP STAFF IN ADVANCE. REFER TO THE CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS REGARDING THE ORDER OF WORK AND FOR DEMOLITION AND DISPOSAL AND SALVAGE OF EQUIPMENT.
 - ADDITIONAL DEMOLITION NOTES SHOWN ON THE SITE PIPING PLANS AND ON THE MECHANICAL, ARCHITECTURAL, HVAC, STRUCTURAL AND ELECTRICAL SHEETS.
 - THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE SITE FOR TREATMENT PLANT PERSONNEL AND THE CONTRACTED DEWATERED BIOSOLIDS HAULER AT ALL TIMES. THE EAST ACCESS GATE IS PRESENTLY THE ONLY ACCESS TO THE PLANT SITE.
 - THE CONTRACTOR SHALL MAINTAIN ACCESS AT ALL TIMES FOR THE TREATMENT PLANT STAFF TO ALL EXISTING FACILITIES STILL IN SERVICE. IF ACCESS CANNOT BE MAINTAINED, THE CONTRACTOR SHALL PROVIDE THE EQUIPMENT AND LABOR NECESSARY TO AID THE OPERATORS IN ACCESSING THE FACILITIES.
 - THE CONTRACTOR SHALL REMOVE ALL ASPHALT, CONCRETE WALLS, CONCRETE SLABS, PIPING, ELECTRICAL CONDUIT AND ANY OTHER ITEMS REQUIRED TO CONSTRUCT THE NEW FACILITIES.
 - APPROXIMATE EXTENT OF EXISTING STONE COLUMN SOIL DENSIFICATION. REFER TO GEOTECHNICAL REPORT (APPENDIX 1 TO THE SPECIFICATIONS) FOR ADDITIONAL INFORMATION. STONE COLUMNS SHALL BE REMOVED AS REQUIRED FOR THE CONSTRUCTION OF CLARIFIER NO. 3.
 - PROPOSED LOCATION OF 250 HP CHILLER SYSTEM FOR THE GROUND FREEZING SHORING SYSTEM. ACTUAL LOCATION IS AT THE CONTRACTORS DISCRETION, BUT MUST NOT INTERFERE WITH THE NORMAL OPERATION OF THE WWTP.
 - REMOVE AND REPLACE 70' SECTION OF EXISTING CONCRETE FENCE, FOUNDATION AND PILASTERS TO FACILITATE INSTALLATION OF GROUND FREEZING SHORING SYSTEM AND CONSTRUCTION OF SECONDARY CLARIFIER NO. 3. SEE SHEET S7-3 FOR PLANS AND SECTIONS OF THE EXISTING CONCRETE PERIMETER FENCE AND FOOTING. NEW FENCE REPLACING EXISTING FENCE SHALL BE CONSTRUCTED AS SHOWN ON THE PLAN AND SECTIONS FOR THE EXISTING CONCRETE PERIMETER FENCE AND SHALL MATCH THE APPEARANCE OF THE EXISTING FENCE. CONTRACTOR SHALL PROVIDE TEMPORARY SECURITY FENCING DURING PROJECT.

- LEGEND:**
- DENOTES EXISTING PIPING TO BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ALSO DENOTES THE MINIMUM AREA OF EXISTING ASPHALT PAVING AND CEMENT CONCRETE CURB THAT SHALL BE REMOVED AS A PART OF THIS PROJECT. IN ADDITION TO THE AREA SHOWN HERE, THE CONTRACTOR SHALL REMOVE ANY ADDITIONAL PAVEMENT REQUIRED TO CONSTRUCT THE NEW FACILITIES. THE CONTRACTOR SHALL SURVEY THE EXISTING ROADWAY, CURB, AND PAVEMENT PRIOR TO REMOVAL AND REPLACE IN THE SAME LOCATION AND ALIGNMENT.
 - DENOTES AREAS THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR FOR STAGING AND PARKING. ONLY THE AREAS SHOWN WILL BE AVAILABLE. CONTRACTOR TO RESTORE ANY DISTURBED AREAS AFTER PROJECT COMPLETION TO PRE-PROJECT CONDITIONS.

- TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC) NOTES:**
- CONTRACTOR TO SUBMIT AND RECEIVE CITY OF PUYALLUP APPROVAL OF A CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PRIOR TO GROUND DISTURBANCE. THE SWPPP SHALL REFERENCE AND BE IN COMPLIANCE WITH THE 2019 DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON. SHEET GD-1 REFERENCES SUGGESTED TESC NOTES AND DETAILS. THE DETAILS AND NOTES ARE NOT ALL INCLUSIVE. THE CONTRACTOR MAY CHOOSE TO EXCLUDE OR ADD AS NECESSARY TO BE IN COMPLIANCE WITH THE 2012 DOE MANUAL.
 - PROVIDE STORM DRAIN INLET BARRIER, SEE SHEET GD-1 FOR DETAILS.

APPROVED

BY:

CITY ENGINEER
CITY OF PUYALLUP

APPROVED DATE: 2/28/2024

EXPIRATION DATE: 12/31/2025

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EXISTING SITE PLAN
SCALE: 1"=40'-0"

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

PRCNC20240061

DOUGLAS A. WELCH
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
29743
2/28/24

CITY OF PUYALLUP
STATE OF WASHINGTON

WATER POLLUTION CONTROL PLANT THIRD SECONDARY CLARIFIER INSTALLATION
CIP NO. 20-018
1802 18TH ST NW, PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR: BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: DAW		
CHECKED BY: DAW		
DRAWN BY: CRR		
DESIGNER: BJ		
G & O JOB NO.: 21462.00		
FILE: G_SITE_EX.DWG		

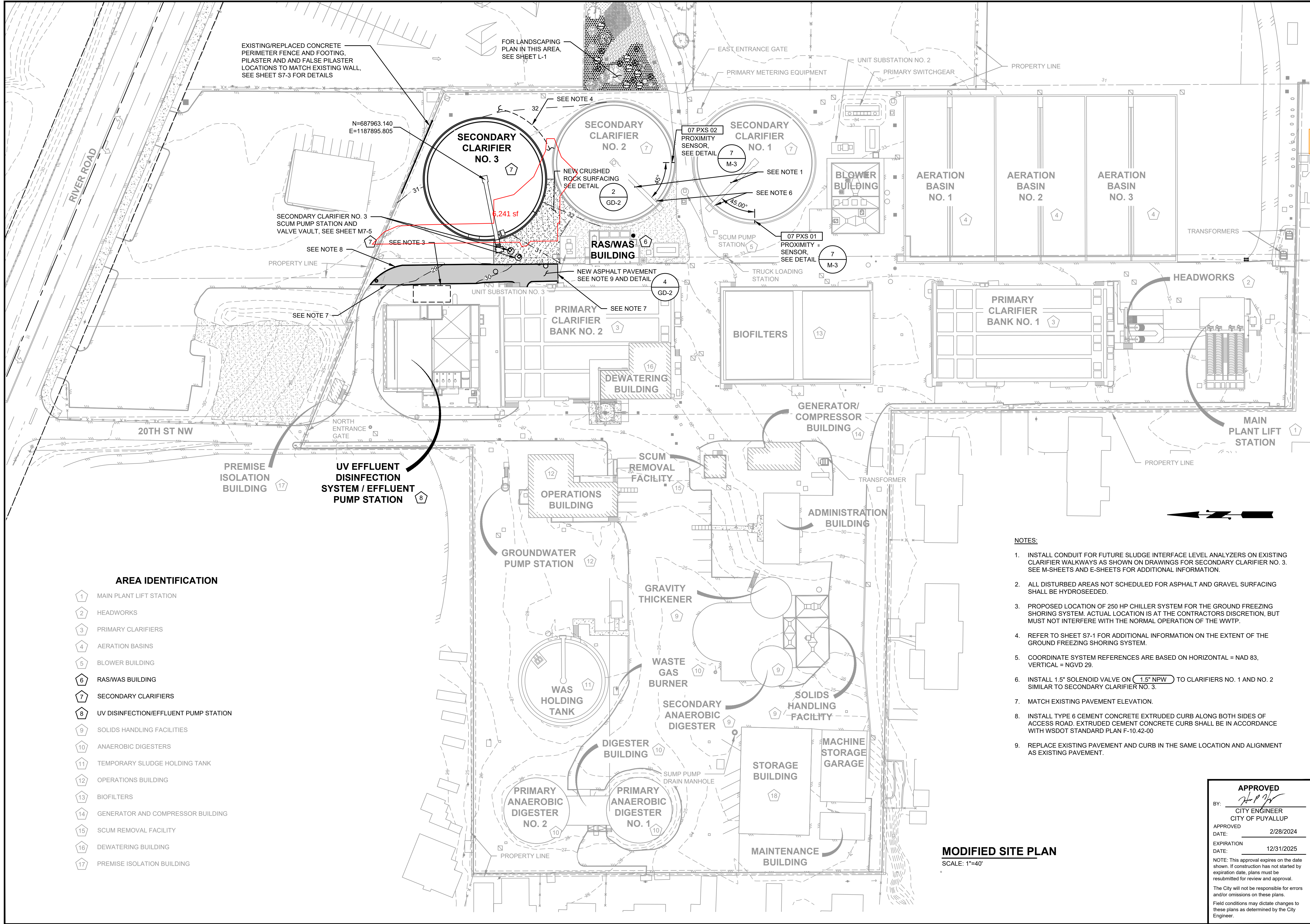
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

GENERAL

EXISTING SITE PLAN, TESC PLAN AND SITE DEMOLITION PLAN

DRAWING:	G-6	OF: 9
SHEET:	6	OF: 60

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AREA IDENTIFICATION

- 1 MAIN PLANT LIFT STATION
- 2 HEADWORKS
- 3 PRIMARY CLARIFIERS
- 4 AERATION BASINS
- 5 BLOWER BUILDING
- 6 RAS/WAS BUILDING
- 7 SECONDARY CLARIFIERS
- 8 UV DISINFECTION/EFFLUENT PUMP STATION
- 9 SOLIDS HANDLING FACILITIES
- 10 ANAEROBIC DIGESTERS
- 11 TEMPORARY SLUDGE HOLDING TANK
- 12 OPERATIONS BUILDING
- 13 BIOFILTERS
- 14 GENERATOR AND COMPRESSOR BUILDING
- 15 SCUM REMOVAL FACILITY
- 16 DEWATERING BUILDING
- 17 PREMISE ISOLATION BUILDING

- NOTES:
- INSTALL CONDUIT FOR FUTURE SLUDGE INTERFACE LEVEL ANALYZERS ON EXISTING CLARIFIER WALKWAYS AS SHOWN ON DRAWINGS FOR SECONDARY CLARIFIER NO. 3. SEE M-SHEETS AND E-SHEETS FOR ADDITIONAL INFORMATION.
 - ALL DISTURBED AREAS NOT SCHEDULED FOR ASPHALT AND GRAVEL SURFACING SHALL BE HYDROSEEDING.
 - PROPOSED LOCATION OF 250 HP CHILLER SYSTEM FOR THE GROUND FREEZING SHORING SYSTEM. ACTUAL LOCATION IS AT THE CONTRACTORS DISCRETION, BUT MUST NOT INTERFERE WITH THE NORMAL OPERATION OF THE WWTP.
 - REFER TO SHEET S7-1 FOR ADDITIONAL INFORMATION ON THE EXTENT OF THE GROUND FREEZING SHORING SYSTEM.
 - COORDINATE SYSTEM REFERENCES ARE BASED ON HORIZONTAL = NAD 83, VERTICAL = NGVD 29.
 - INSTALL 1.5" SOLENOID VALVE ON 1.5" NPW TO CLARIFIERS NO. 1 AND NO. 2 SIMILAR TO SECONDARY CLARIFIER NO. 3.
 - MATCH EXISTING PAVEMENT ELEVATION.
 - INSTALL TYPE 6 CEMENT CONCRETE EXTRUDED CURB ALONG BOTH SIDES OF ACCESS ROAD. EXTRUDED CEMENT CONCRETE CURB SHALL BE IN ACCORDANCE WITH WSDOT STANDARD PLAN F-10.42-00
 - REPLACE EXISTING PAVEMENT AND CURB IN THE SAME LOCATION AND ALIGNMENT AS EXISTING PAVEMENT.

MODIFIED SITE PLAN
SCALE: 1"=40'

APPROVED

BY:

CITY ENGINEER
CITY OF PUYALLUP

APPROVED

DATE: 2/28/2024

EXPIRATION

DATE: 12/31/2025

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CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH,
SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

PRCNC20240061

ELAINE JACOBSON
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
14062
2/28/24

DOUGLAS A. WELCH
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
28743
2/28/24

CITY OF PUYALLUP
STATE OF WASHINGTON

WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR: BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: DAW		
CHECKED BY: DAW		
DRAWN BY: CRR		
DESIGNER: BJ		
G & O JOB NO.: 21462.00		
FILE: AREA_PLN.DWG		

82'-1 1/4"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

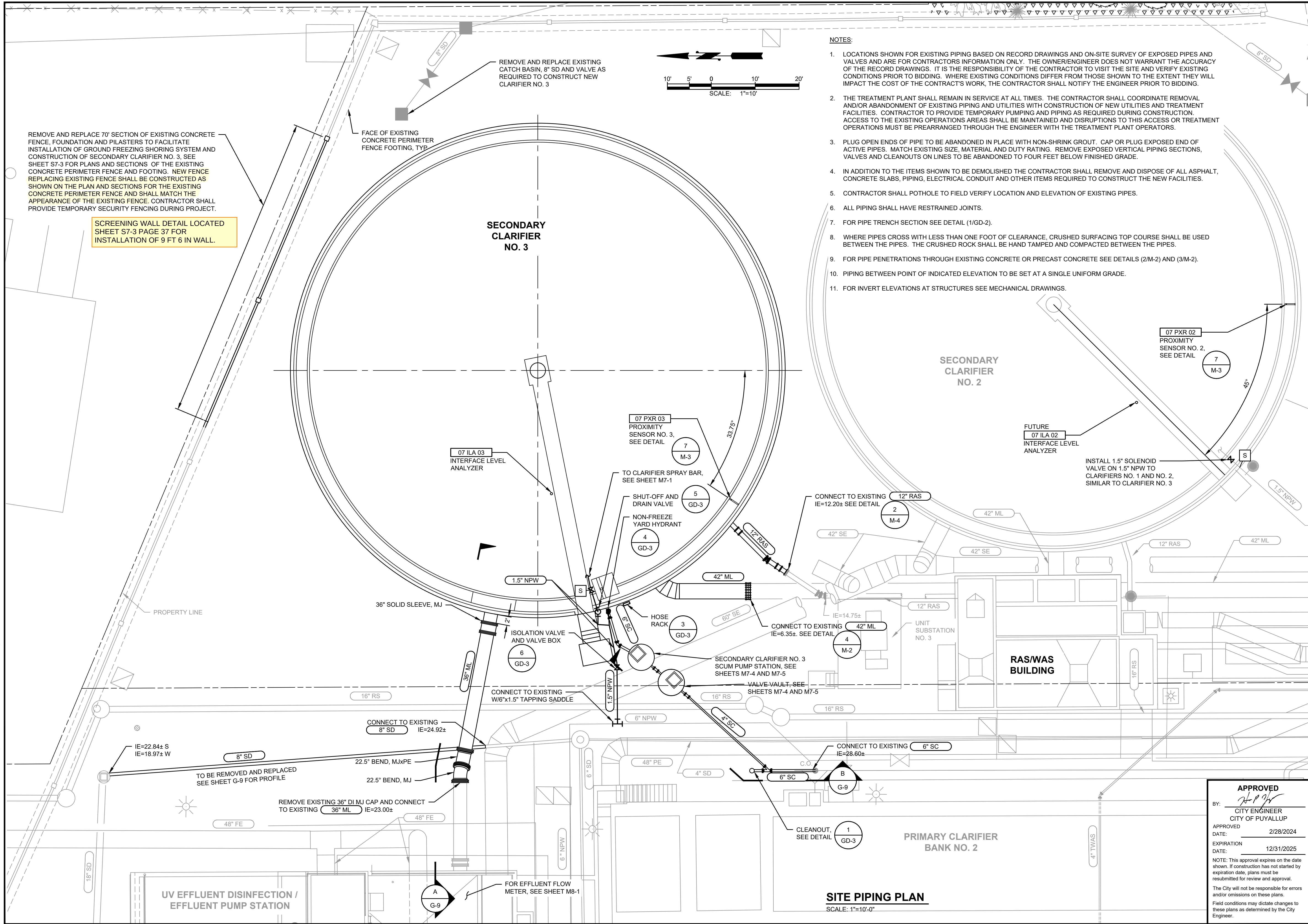
GENERAL

MODIFIED SITE PLAN
AND AREA
IDENTIFICATION

DRAWING: G-7 OF: 9

SHEET: 7 OF: 60

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NOTES:

- LOCATIONS SHOWN FOR EXISTING PIPING BASED ON RECORD DRAWINGS AND ON-SITE SURVEY OF EXPOSED PIPES AND VALVES AND ARE FOR CONTRACTORS INFORMATION ONLY. THE OWNER/ENGINEER DOES NOT WARRANT THE ACCURACY OF THE RECORD DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND VERIFY EXISTING CONDITIONS PRIOR TO BIDDING. WHERE EXISTING CONDITIONS DIFFER FROM THOSE SHOWN TO THE EXTENT THEY WILL IMPACT THE COST OF THE CONTRACT'S WORK, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO BIDDING.
- THE TREATMENT PLANT SHALL REMAIN IN SERVICE AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE REMOVAL AND/OR ABANDONMENT OF EXISTING PIPING AND UTILITIES WITH CONSTRUCTION OF NEW UTILITIES AND TREATMENT FACILITIES. CONTRACTOR TO PROVIDE TEMPORARY PUMPING AND PIPING AS REQUIRED DURING CONSTRUCTION. ACCESS TO THE EXISTING OPERATIONS AREAS SHALL BE MAINTAINED AND DISRUPTIONS TO THIS ACCESS OR TREATMENT OPERATIONS MUST BE PREARRANGED THROUGH THE ENGINEER WITH THE TREATMENT PLANT OPERATORS.
- PLUG OPEN ENDS OF PIPE TO BE ABANDONED IN PLACE WITH NON-SHRINK GROUT. CAP OR PLUG EXPOSED END OF ACTIVE PIPES. MATCH EXISTING SIZE, MATERIAL AND DUTY RATING. REMOVE EXPOSED VERTICAL PIPING SECTIONS, VALVES AND CLEANOUTS ON LINES TO BE ABANDONED TO FOUR FEET BELOW FINISHED GRADE.
- IN ADDITION TO THE ITEMS SHOWN TO BE DEMOLISHED THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ASPHALT, CONCRETE SLABS, PIPING, ELECTRICAL CONDUIT AND OTHER ITEMS REQUIRED TO CONSTRUCT THE NEW FACILITIES.
- CONTRACTOR SHALL POTHOLE TO FIELD VERIFY LOCATION AND ELEVATION OF EXISTING PIPES.
- ALL PIPING SHALL HAVE RESTRAINED JOINTS.
- FOR PIPE TRENCH SECTION SEE DETAIL (1/GD-2).
- WHERE PIPES CROSS WITH LESS THAN ONE FOOT OF CLEARANCE, CRUSHED SURFACING TOP COURSE SHALL BE USED BETWEEN THE PIPES. THE CRUSHED ROCK SHALL BE HAND TAMPED AND COMPACTED BETWEEN THE PIPES.
- FOR PIPE PENETRATIONS THROUGH EXISTING CONCRETE OR PRECAST CONCRETE SEE DETAILS (2/M-2) AND (3/M-2).
- PIPING BETWEEN POINT OF INDICATED ELEVATION TO BE SET AT A SINGLE UNIFORM GRADE.
- FOR INVERT ELEVATIONS AT STRUCTURES SEE MECHANICAL DRAWINGS.

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH,
SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

PRCNC20240061

2/28/24

2/28/24

CITY OF PUYALLUP
STATE OF WASHINGTON

**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR: BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: DAW		
CHECKED BY: DAW		
DRAWN BY: CRR		
DESIGNER: BJ		
G & O JOB NO.: 21462.00		
FILE: G_PIPE_PLN.DWG		

GENERAL

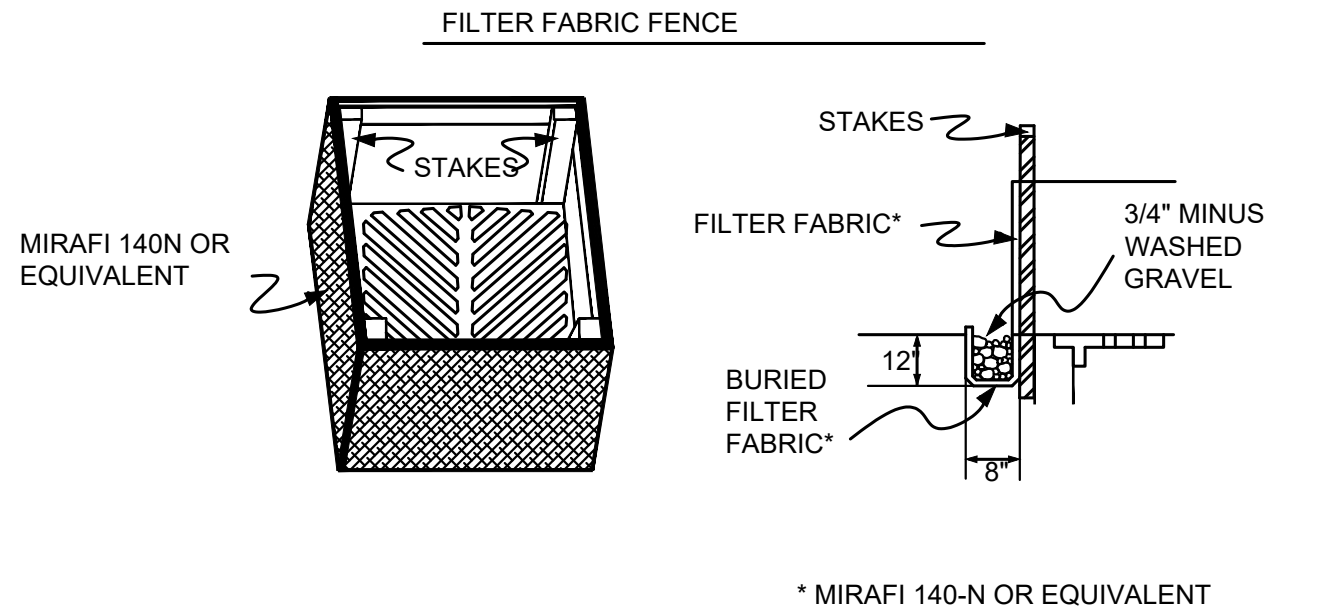
APPROVED
BY:
CITY ENGINEER
CITY OF PUYALLUP
DATE: **2/28/2024**
EXPIRATION DATE: **12/31/2025**
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SITE PIPING PLAN

DRAWING: **G-8** OF: **9**

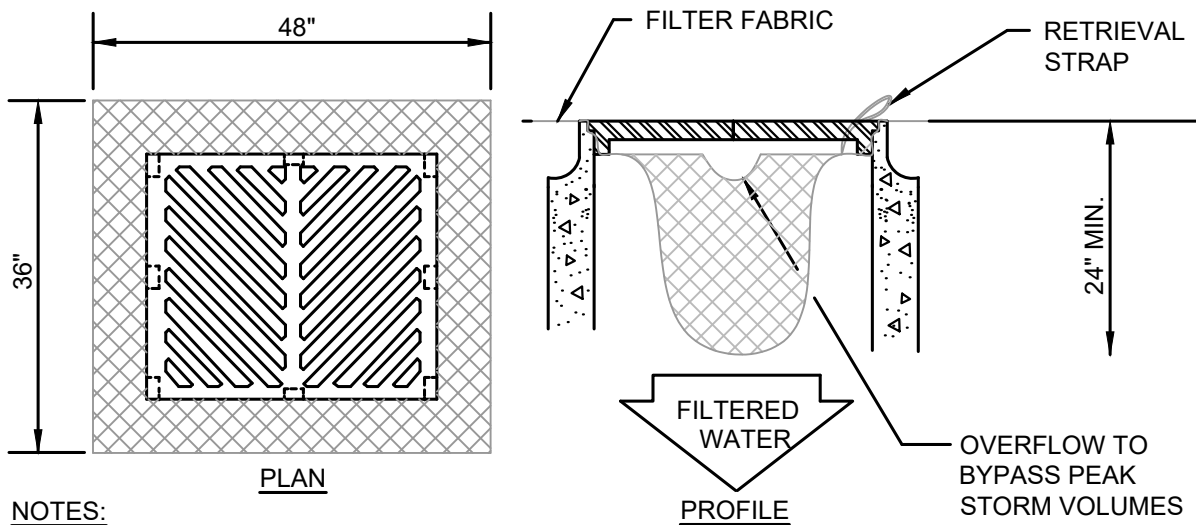
SHEET: **8** OF: **60**

M:\PUYALLUP\21462 WPCP 3rd Secondary Clarifier\01 Design\Plans\General\WASH WAT-DET.dwg, 2/28/2024 12:57 PM, CHARLEY REID



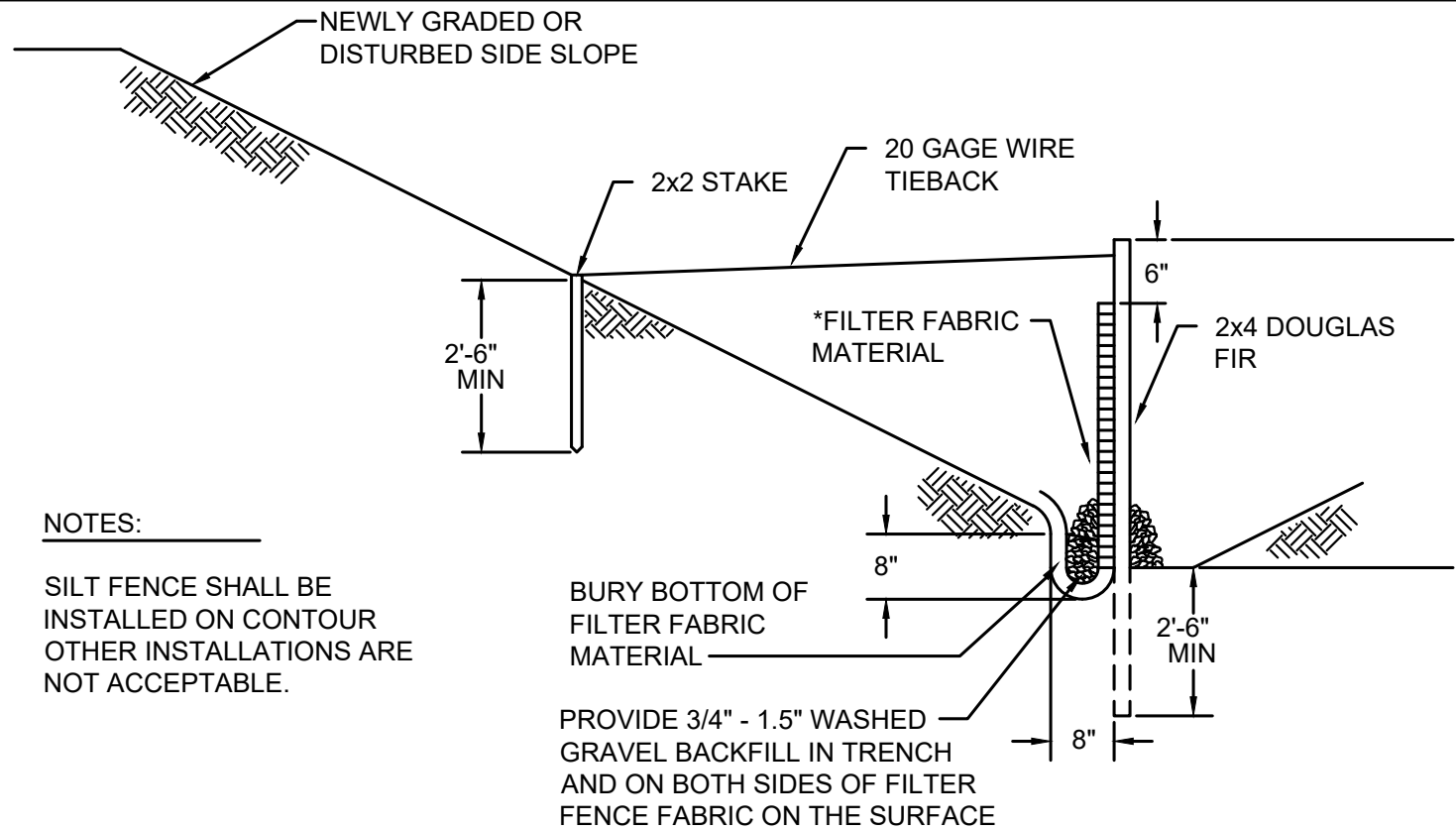
- NOTES:
- PLACE 2-INCH BY 2-INCH WOODEN STAKES AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART AND DRIVE THEM AT LEAST 8-INCHES INTO THE GROUND. THE STAKES MUST BE AT LEAST 3 FEET LONG.
 - EXCAVATE A TRENCH APPROXIMATELY 8-INCHES WIDE AND 12-INCHES DEEP AROUND THE OUTSIDE PERIMETER OF THE STAKES.
 - STAPLE THE FILTER FABRIC* TO THE WOODEN STAKES SO THAT 32-INCHES OF THE FABRIC EXTENDS AND CAN BE FORMED INTO THE TRENCH, AND USE HEAVY-DUTY WIRE STAPLES AT LEAST 1/2-INCHES LONG.
 - BACKFILL THE TRENCH WITH 3/4-INCH MINUS WASHED GRAVEL ALL THE WAY AROUND.
 - NOT FOR USE IN PAVED AREAS.

1
TYP
STORM DRAIN FILTER FABRIC FENCE BARRIER
NOT TO SCALE

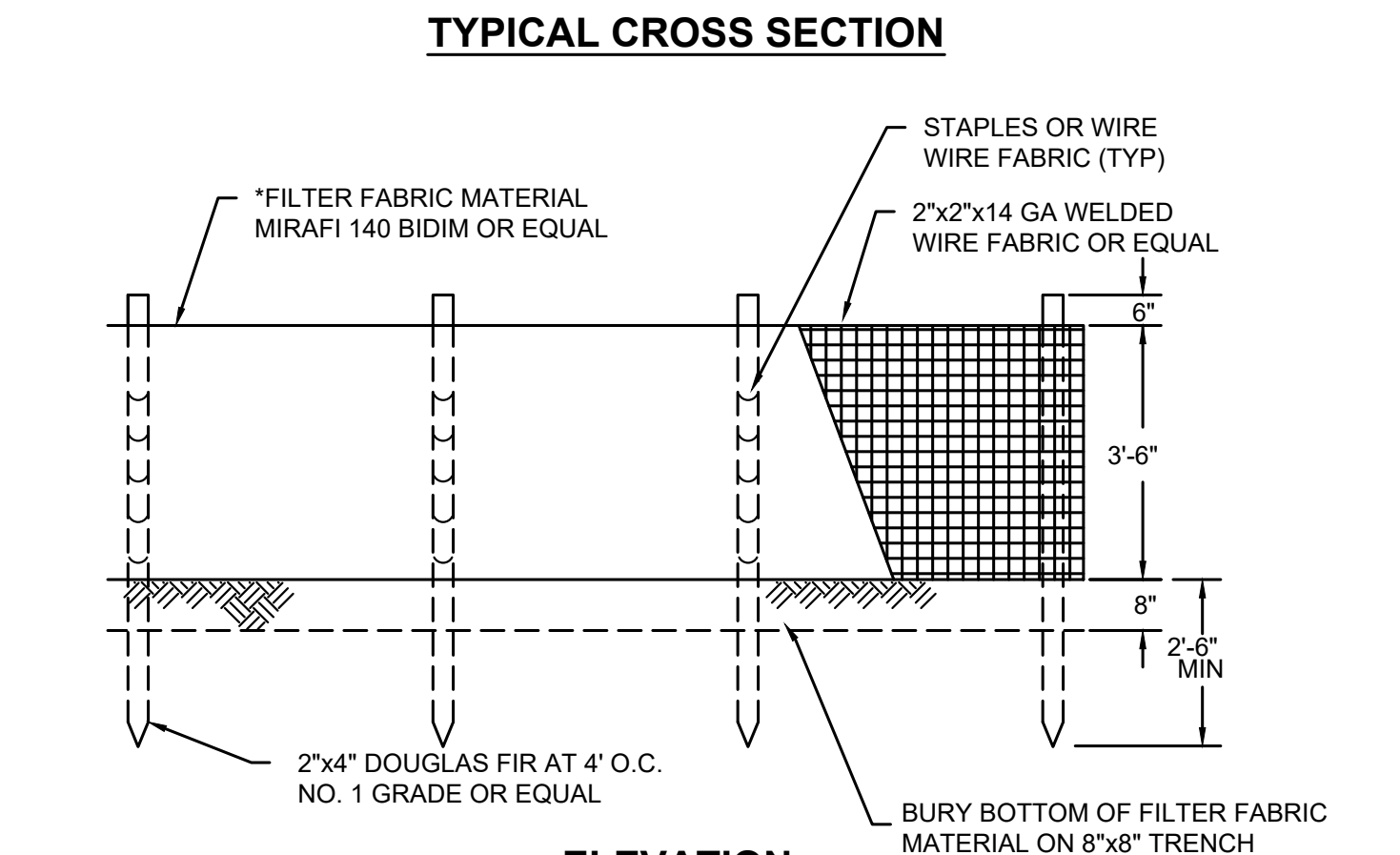


- NOTES:
- REMOVE CATCH BASIN GRATING.
 - CLEAN DIRT AND DEBRIS FROM GRATING LEDGE.
 - LAY THE CATCH BASIN INSERT INSIDE THE BASIN
 - REPLACE THE GRATING, PINCHING THE INSERT FABRIC BETWEEN THE GRATING AND THE CATCH BASIN FRAME.
 - CUT OFF THE EXCESS FABRIC OFF WITH A BLADE KNIFE. A 3 TO 5 INCH WIDE STRIP OF FABRIC SHOULD BE LEFT AROUND THE OUTSIDE OF THE GRATING IF THE INSERT IS TO BE USED MORE THAN ONCE.

2
TYP
FILTER FABRIC CATCH BASIN INSERT FOR SEDIMENT ONLY
NOT TO SCALE

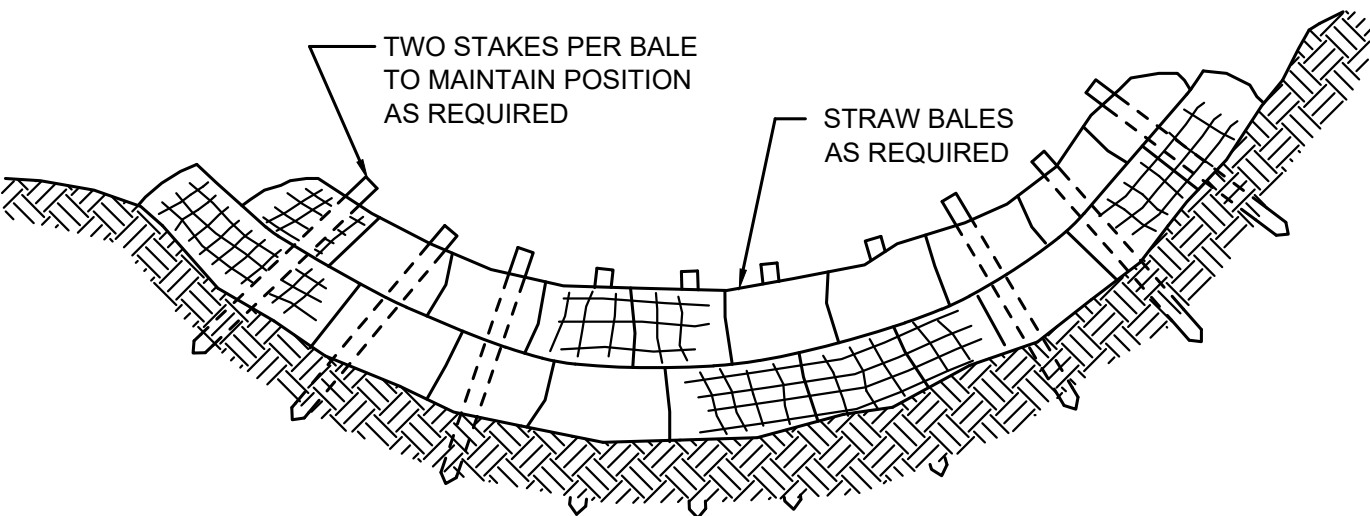


- NOTES:
- SILT FENCE SHALL BE INSTALLED ON CONTOUR OTHER INSTALLATIONS ARE NOT ACCEPTABLE.



3
TYP
SILTATION FENCE
NOT TO SCALE

- NOTES:
- WHERE POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
 - TEMPORARY SILTATION AND DETENTION PONDS TO BE CONSTRUCTED BY PLACING STRAW BALES OR SILTATION FENCES ACROSS SWALES.
 - SILTATION FENCES OR STRAW BALES TO BE LOCATED AT THE BOTTOM OR TOE OF NEWLY EXCAVATED SLOPES.
 - CONSTRUCT ROCK CHECK DAMS IN OPEN DITCHES AS REQUIRED.
 - ALL TEMPORARY EROSION CONTROL STRUCTURES SHALL BE MAINTAINED IN SATISFACTORY CONDITION UNTIL CLEARING AND/OR CONSTRUCTION IS COMPLETED AND SURFACE RESTORATION HAS BEEN COMPLETED.
 - RETURN SILTATION CONTROL AREAS TO ORIGINAL GROUND CONDITIONS.



4
TYP
STRAW BALE DAM DETAIL
NOT TO SCALE

- GENERAL NOTES:
- ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION AS PRESCRIBED ON THE PLANS SHALL BE CLEARLY FLAGGED IN THE FIELD AND OBSERVED DURING CONSTRUCTION.
 - ALL REQUIRED SEDIMENTATION AND EROSION CONTROL FACILITIES MUST BE CONSTRUCTED AND IN OPERATION PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM. THE CONTRACTOR SHALL SCHEDULE AN INSPECTION OF THE EROSION CONTROL FACILITIES PRIOR TO ANY LAND CLEARING AND/OR CONSTRUCTION. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION AS DETERMINED BY THE CITY, UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT, AND ADDITIONS TO THE EROSION AND SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE PERMITEE.
 - THE EROSION AND SEDIMENTATION CONTROL SYSTEM FACILITIES DEPICTED ON THESE PLANS ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SILTATION CONTROL ON THE SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE PERMITEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES, SENSITIVE AREAS, NATURAL WATER COURSES, AND/OR STORM DRAINAGE SYSTEMS.
 - APPROVAL OF THESE PLANS IS FOR GRADING, TEMPORARY DRAINAGE, EROSION AND SEDIMENTATION CONTROL ONLY. IT DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT STORM DRAINAGE DESIGN, SIZE OR LOCATION OF PIPES, RESTRICTORS, CHANNELS, OR RETENTION FACILITIES.
 - ANY DISTURBED AREA WHICH HAS BEEN STRIPPED OF VEGETATION AND WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 30 DAYS OR MORE, MUST BE IMMEDIATELY STABILIZED WITH MULCHING, GRASS PLANTING, OR OTHER APPROVED EROSION CONTROL TREATMENT APPLICABLE TO THE TIME OF YEAR IN QUESTION. GRASS SEEDING ALONE WILL BE ACCEPTABLE ONLY DURING THE MONTHS OF APRIL THROUGH SEPTEMBER INCLUSIVE. SEEDING MAY PROCEED OUTSIDE THE SPECIFIED TIME PERIOD WHENEVER IT IS IN THE INTEREST OF THE PERMITEE BUT MUST BE AUGMENTED WITH MULCHING, NETTING, OR OTHER TREATMENT APPROVED BY THE CITY.
 - IN CASE EROSION OR SEDIMENTATION OCCURS TO ADJACENT PROPERTIES, ALL CONSTRUCTION WORK WITHIN THE DEVELOPMENT THAT WILL FURTHER AGGRAVATE THE SITUATION MUST CEASE, AND THE OWNER/CONTRACTOR WILL IMMEDIATELY COMMENCE RESTORATION METHODS. RESTORATION ACTIVITY WILL CONTINUE UNTIL SUCH TIME AS THE AFFECTED PROPERTY OWNER IS SATISFIED.
 - NO TEMPORARY OR PERMANENT STOCKPILING OF MATERIALS OR EQUIPMENT SHALL OCCUR WITHIN CRITICAL AREAS OR ASSOCIATED BUFFERS, OR THE CRITICAL ROOT ZONE FOR VEGETATION PROPOSED FOR RETENTION.
 - WHERE POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
 - TEMPORARY SILTATION CONTROL AND DETENTION PONDS TO BE CONSTRUCTED BY PLACING GRAVEL FILLED BURLAP SACKS.
 - FILTER FABRIC FENCES OR GRAVEL SACKS TO BE LOCATED AS INDICATED ON THE PLANS OR AS REQUIRED.
 - TO PROVIDE EROSION CONTROL ON STEEP AND NEWLY GRADED SLOPES, CONTRACTOR SHALL EMPLOY EROSION CONTROL BLANKET OR CLEAR PLASTIC IMMEDIATELY AFTER GRADING SLOPES AND THE APPLICATION OF SEEDING.
 - ALL TEMPORARY EROSION CONTROL STRUCTURES SHALL BE MAINTAINED IN SATISFACTORY CONDITION UNTIL CLEARING AND/OR CONSTRUCTION IS COMPLETED AND SURFACE RESTORATION HAS BEEN COMPLETED.
 - RETURN SILTATION CONTROL AREAS TO ORIGINAL GROUND CONDITIONS UNLESS OTHERWISE NOTED.

- TEMPORARY COVER PRACTICES:
- DISTURBED AREAS WHICH ARE TO REMAIN WITHOUT PERMANENT COVER FOR MORE THAN 30 DAYS, SHALL BE STABILIZED BY PROVIDING TEMPORARY SEEDING, MULCHING, MATTING, OR CLEAR PLASTIC COVERING AS A GUARD AGAINST EROSION.
- STABILIZATION AND REMOVAL:
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY "BEST MANAGEMENT PRACTICES" ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.
- CLEAR PLASTIC COVERINGS:
- CLEAR PLASTIC COVERINGS SHALL HAVE A MINIMUM THICKNESS OF 6 MIL AND MEET THE REQUIREMENTS OF WSDOT/APWA SECTION 9-14.5.
 - COVERING SHALL BE INSTALLED ON EXPOSED SLOPES SUBJECT TO EROSION AND MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES OR ROPES WITH A MAXIMUM 10 FOOT GRID SPACING IN ALL DIRECTIONS. ALL SEAMS SHALL BE TAPED OR WEIGHTED DOWN FULL LENGTH AND THERE SHALL BE AT LEAST A 1 TO 2 FOOT OVERLAP OF ALL SEAMS. SEAMS SHOULD THEN BE ROLLED AND STAKED OR TIED.
 - COVERING SHALL BE INSTALLED IMMEDIATELY ON AREAS SEEDED BETWEEN OCTOBER 1 TO APRIL 30 AND REMAIN UNTIL VEGETATION IS FIRMLY ESTABLISHED.
 - WHEN THE COVERING IS USED ON UNSEEDED SLOPES, IT SHALL BE LEFT IN PLACE UNTIL THE NEXT SEEDING PERIOD.
 - SHEETING SHOULD BE TOED IN AT THE TOP OF THE SLOPE TO PREVENT SURFACE FLOW BENEATH THE PLASTIC.
 - SHEETING SHOULD BE REMOVED AS SOON AS IS POSSIBLE ONCE VEGETATION IS WELL ESTABLISHED TO PREVENT BURNING THE VEGETATION.
 - CHECK SHEETING REGULARLY FOR RIPS AND PLACES WHERE THE PLASTIC MAY BE DISLODGED. CONTACT BETWEEN THE PLASTIC AND THE GROUND SHOULD ALWAYS BE MAINTAINED. ANY AIR BUBBLES FOUND SHOULD BE REMOVED IMMEDIATELY OR THE PLASTIC MAY RIP DURING THE NEXT WINDY PERIOD. RE-ANCHOR OR REPLACE THE PLASTIC AS NECESSARY.

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PRCNC20240061

BARNE JACOBSEN
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
14062
2/28/24

DOUGLAS A. WELSH
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
29743
2/28/24

CITY OF PUYALLUP
STATE OF WASHINGTON

WATER POLLUTION CONTROL PLANT THIRD SECONDARY CLARIFIER INSTALLATION
CIP NO. 20-018
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR: BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: DAW		
CHECKED BY: DAW		
DRAWN BY: CRR		
DESIGNER: BJ		
G & O JOB NO.: 21462.00		
FILE: WASH WAT-DET.DWG		
0 1" 2" TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY		

GENERAL

TESC NOTES AND DETAILS

DRAWING: **GD-1** OF: **3**

SHEET: **10** OF: **60**

APPROVED

BY: 
CITY ENGINEER
CITY OF PUYALLUP

APPROVED DATE: 2/28/2024

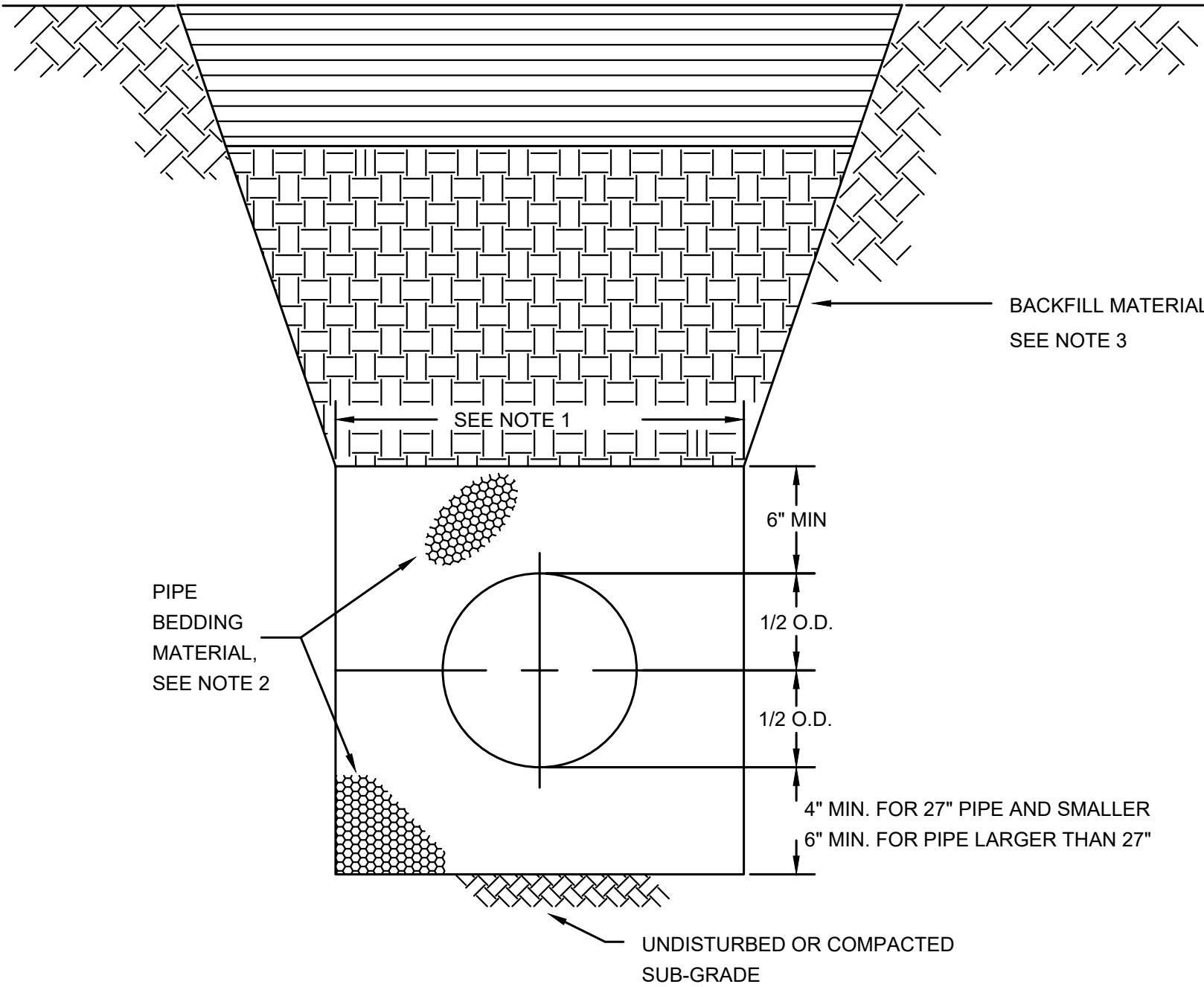
EXPIRATION DATE: 12/31/2025

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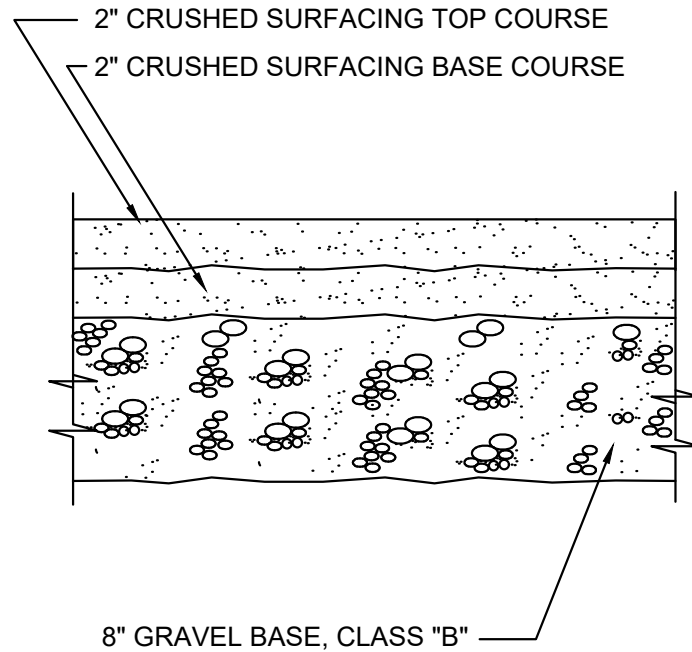
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NOTES:

- TRENCHING SHALL MEET THE REQUIREMENTS OF SECTION 7-08.3(1)A AND 2-06.3(1) OF THE WSDOT SPECIFICATIONS.
- BEDDING MATERIAL FOR PIPE SHALL BE CRUSHED OR PARTIALLY CRUSHED MATERIAL CONFORMING TO SPECIFICATION SECTION 02700.2.2, GRAVEL BACKFILL FOR PIPE BEDDING. NATIVE MATERIAL SHALL NOT BE USED FOR PIPE BEDDING.
- GRAVEL BACKFILL SHALL CONFORM TO 9-03.12(1)A GRAVEL BACKFILL FOR FOUNDATIONS, CLASS A.

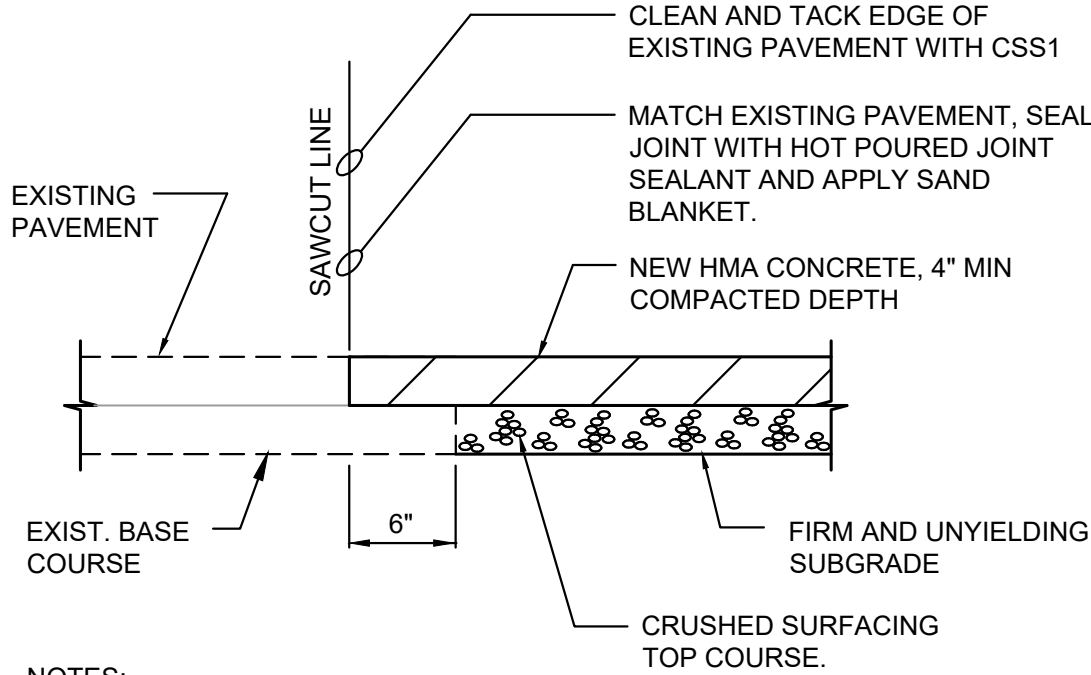
1
TYP
TYPICAL TRENCH SECTION
NOT TO SCALE



NOTES:

- SEE SHEET G-7 FOR FINISHED GRADE ELEVATIONS.

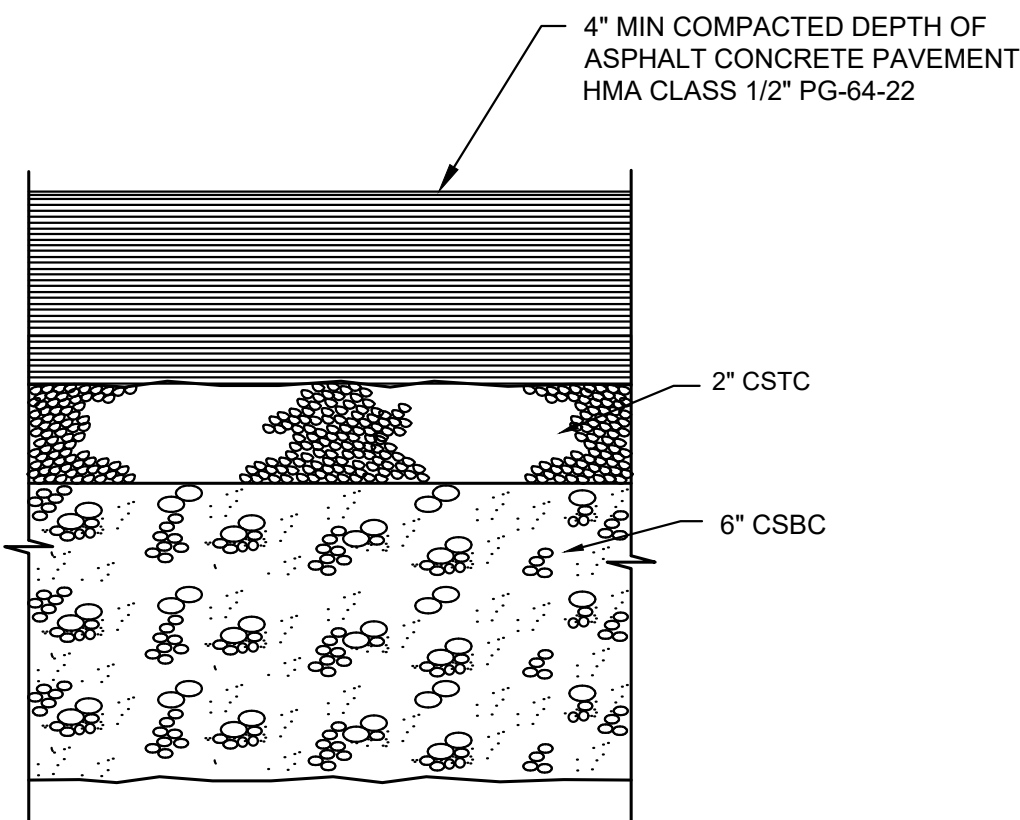
2
TYP
CRUSHED ROCK SURFACING DETAIL
NOT TO SCALE



NOTES:

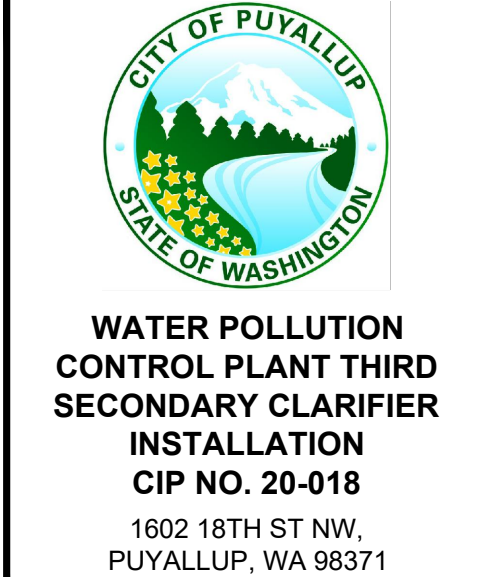
- ALL JOINTS SHALL BE FULL DEPTH SAW CUT.
- ALL CATCH BASINS, VALVES AND OTHER APPURTENANCES SHALL BE TACK COATED WITH AN ASPHALT EMULSION PRIOR TO THE APPLICATION OF ASPHALT CONCRETE.
- COMPACTED ASPHALT CONCRETE SHALL NOT EXTEND MORE THAN 1/4" ABOVE THE EXISTING SURFACE.

3
TYP
ASPHALT BUTT JOINT DETAIL
NOT TO SCALE

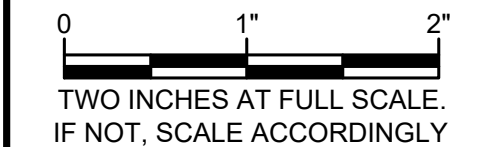


4
TYP
ASPHALT PAVEMENT DETAIL
NOT TO SCALE

PRCNC20240061



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GENERAL

GENERAL DETAILS

DRAWING: **GD-2** OF: **3**

SHEET: **11** OF: **60**

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CITY OF PUYALLUP
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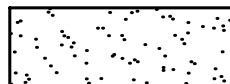
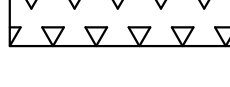
- 3
TYP
- HOSE RACK DETAIL**
- NOT TO SCALE



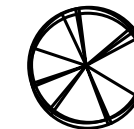
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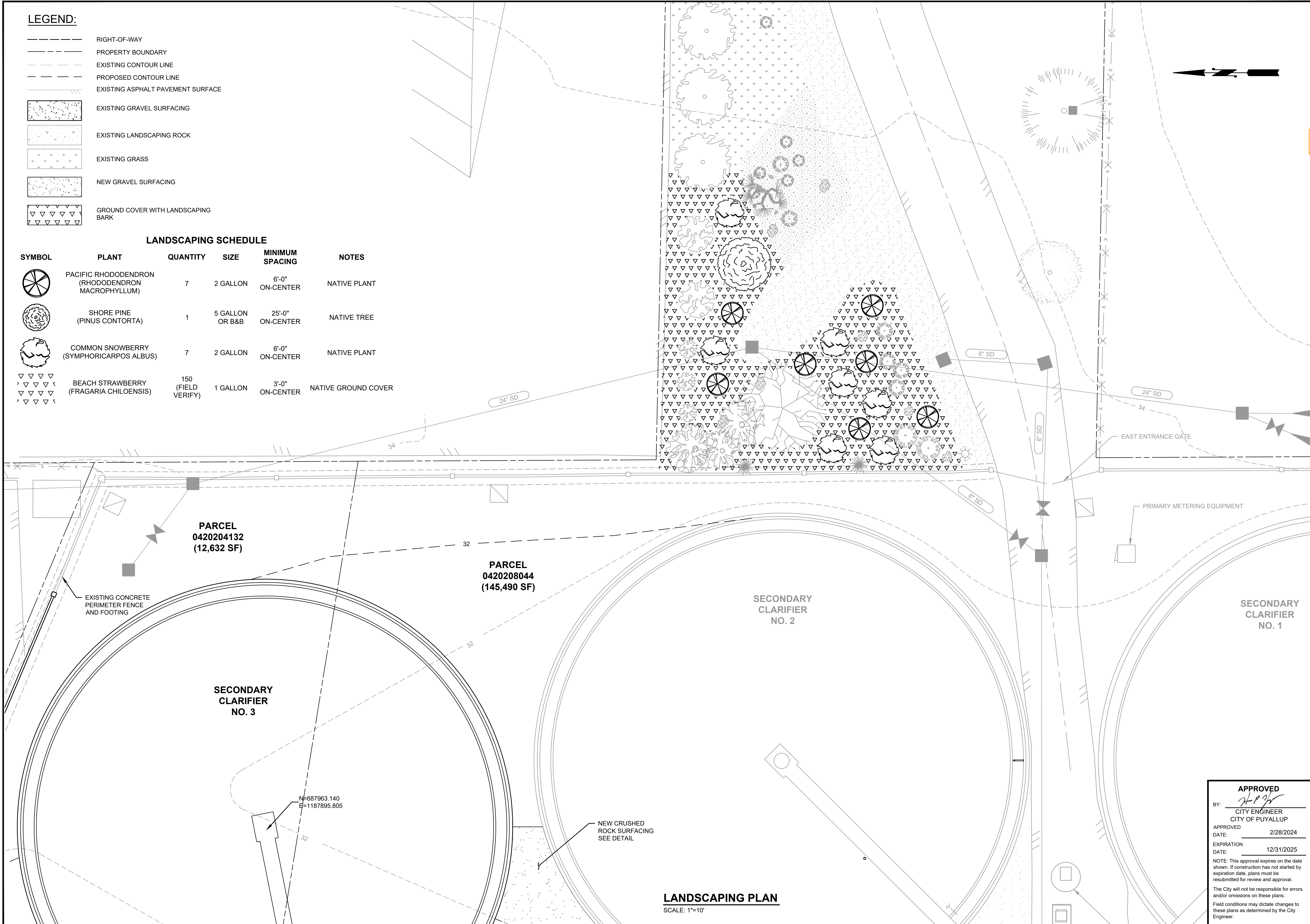
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LEGEND:

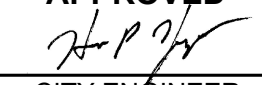
- RIGHT-OF-WAY
----- PROPERTY BOUNDARY
----- EXISTING CONTOUR LINE
----- PROPOSED CONTOUR LINE
===== EXISTING ASPHALT PAVEMENT SURFACE
 EXISTING GRAVEL SURFACING
 EXISTING LANDSCAPING ROCK
 EXISTING GRASS
 NEW GRAVEL SURFACING
 GROUND COVER WITH LANDSCAPING BARK

LANDSCAPING SCHEDULE

SYMBOL	PLANT	QUANTITY	SIZE	MINIMUM SPACING	NOTES
	PACIFIC RHODODENDRON (RHODODENDRON MACROPHYLLUM)	7	2 GALLON	6'-0" ON-CENTER	NATIVE PLANT
	SHORE PINE (PINUS CONTORTA)	1	5 GALLON OR B&B	25'-0" ON-CENTER	NATIVE TREE
	COMMON SNOWBERRY (SYMPHORICARPOS ALBUS)	7	2 GALLON	6'-0" ON-CENTER	NATIVE PLANT
	BEACH STRAWBERRY (FRAGARIA CHILOENSIS)	150 (FIELD VERIFY)	1 GALLON	3'-0" ON-CENTER	NATIVE GROUND COVER

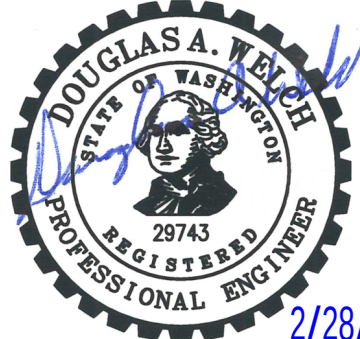


LANDSCAPING PLAN
SCALE: 1"=10'

APPROVED
BY: 
CITY ENGINEER
CITY OF PUYALLUP
APPROVED DATE: 2/28/2024
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PRCNC20240061


DOUGLAS A. WELCH
REGISTERED PROFESSIONAL ENGINEER
2/28/24


CITY OF PUYALLUP
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WATER POLLUTION
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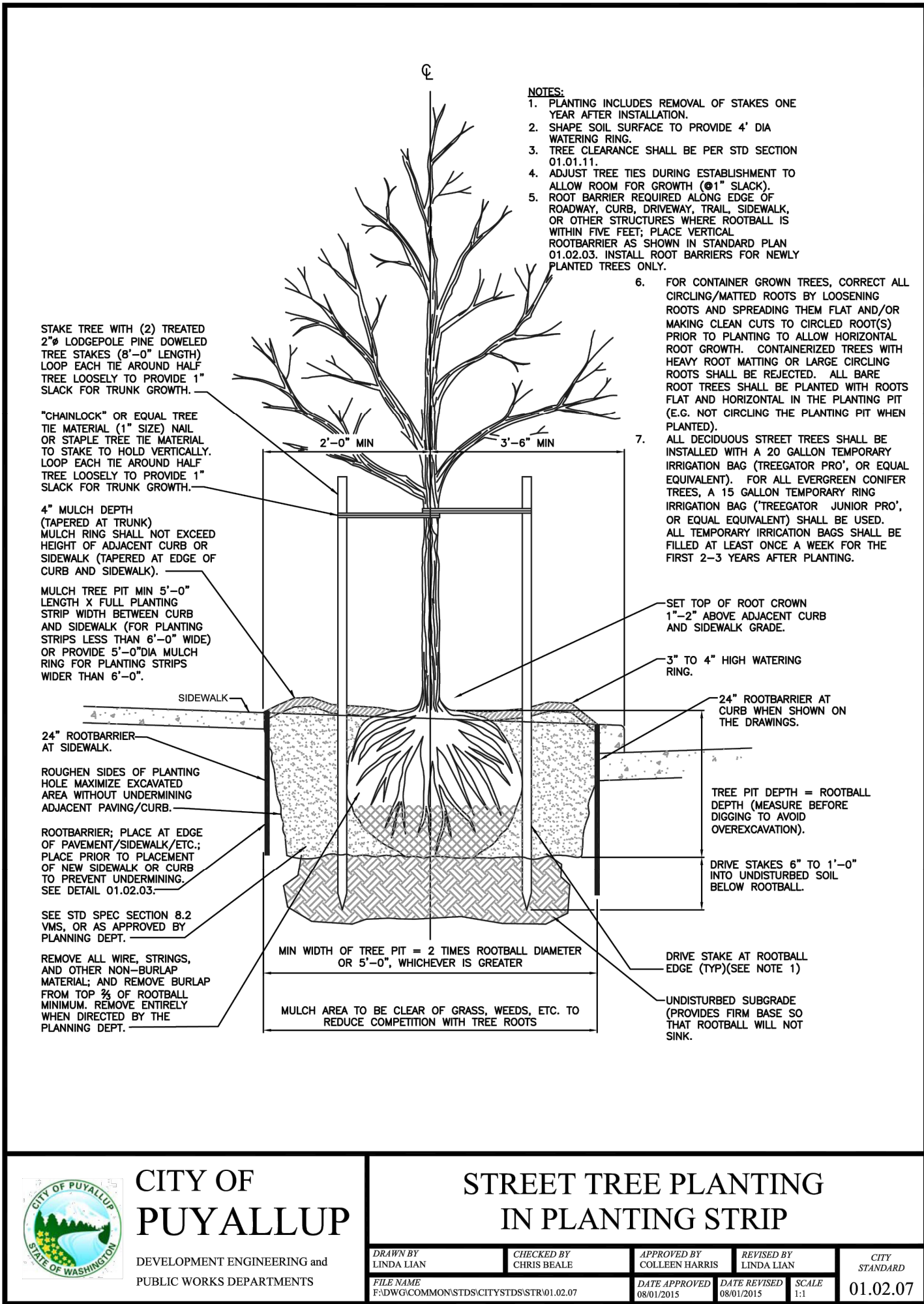
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0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

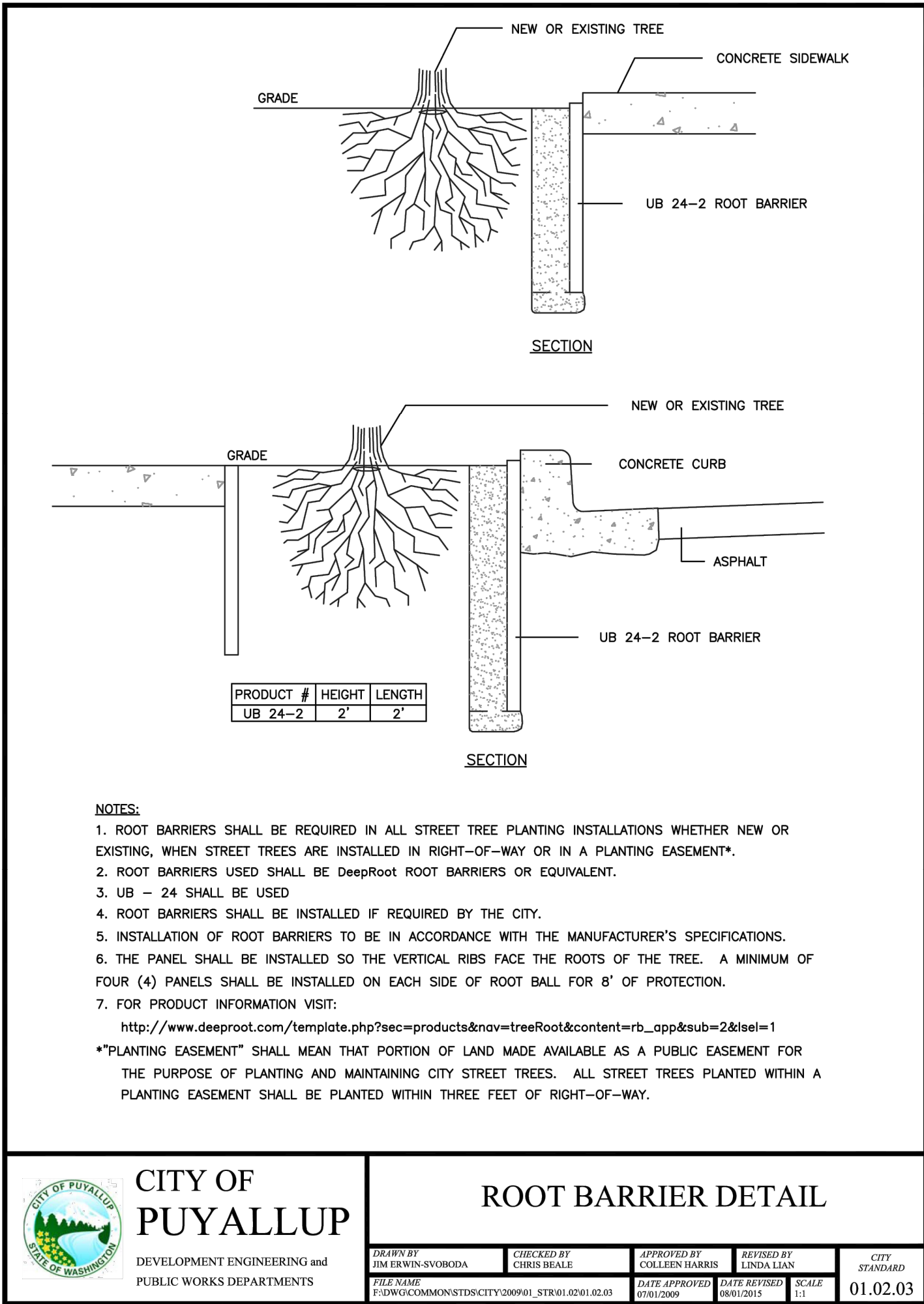
LANDSCAPING PLAN

DRAWING: L-1 OF: 2

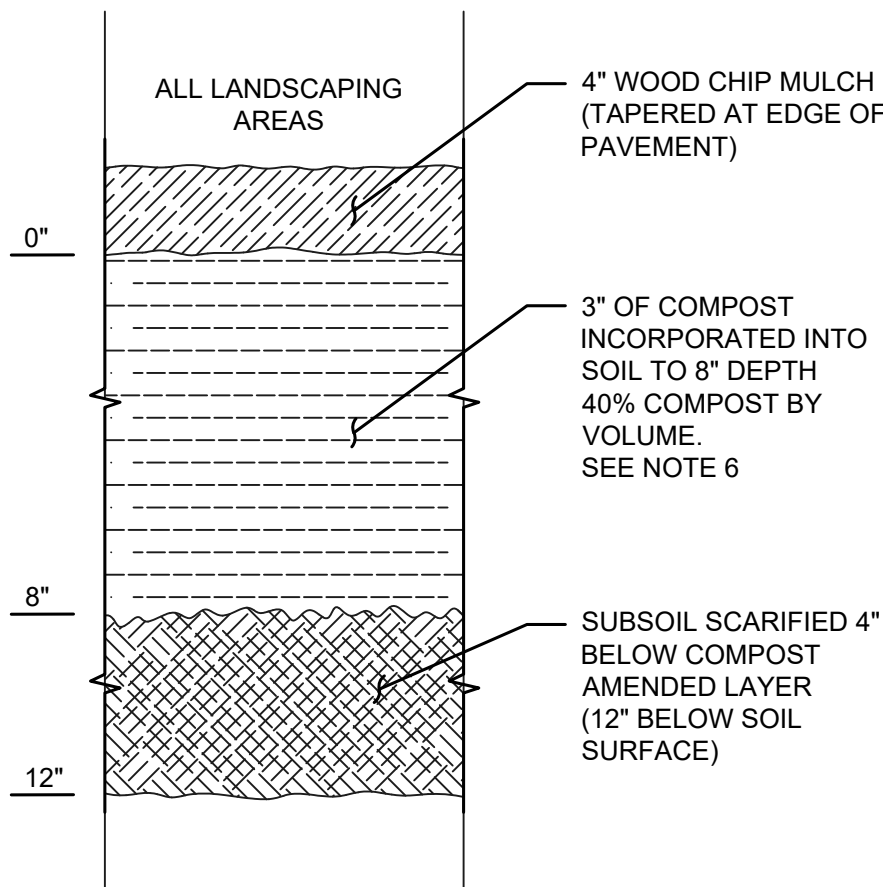
SHEET: 13 OF: 60



1
TYP
BALL AND BURLAP DETAIL
NOT TO SCALE



2
TYP
ROOT BARRIER DETAIL
NOT TO SCALE



3
TYP
SOIL AMENDMENT DETAIL
NOT TO SCALE

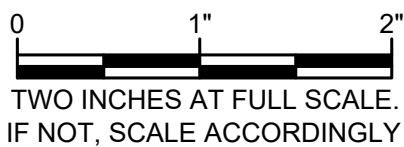
- NOTES:**
1. ALL SOIL AREAS DISTURBED OR COMPACTED DURING CONSTRUCTION, AND NOT COVERED BY BUILDINGS OR PAVEMENT, SHALL BE AMENDED WITH COMPOST AS DESCRIBED BELOW.
 2. SUBSOIL SHOULD BE SCARIFIED (LOOSENEED) 4 INCHES BELOW AMENDED LAYER, TO PRODUCE 12-INCH DEPTH OF UN-COMPACTED SOIL, EXCEPT WHERE SCARIFICATION WOULD DAMAGE TREE ROOTS OR AS DETERMINED BY THE ENGINEER. SEE NOTE BELOW REGARDING PLANTING STEPS FOR STREET TREES.
 3. COMPOST SHALL BE TILLED IN TO 8 INCH DEPTH INTO EXISTING SOIL, OR PLACE 8 INCHES OF COMPOST-AMENEDED SOIL, PER SOIL SPECIFICATION.
 4. PLANTING BEDS SHALL RECEIVE 3 INCHES OF COMPOST TILLED IN TO 8-INCH DEPTH, OR MAY SUBSTITUTE 8' OF IMPORTED SOIL CONTAINING 35-40% COMPOST BY VOLUME. MULCH AFTER PLANTING, WITH 4 INCHES OF ARBORIST WOOD CHIP MULCH OR EQUAL (8" OF LOOSE WOOD CHIPS AT THE TIME OF PLANTING TO ALLOW SETTLING TO 4").
 5. SETBACKS: TO PREVENT UNEVEN SETTLING, DO NOT COMPOST-AMEND SOILS WITHIN 3 FEET OF UTILITY INFRASTRUCTURES (POLES, VAULTS, METERS, ETC.). WITHIN ONE FOOT OF PAVEMENT EDGE, CURBS AND SIDEWALKS, SOIL SHOULD BE COMPACTED TO APPROXIMATELY 95% PROCTOR TO ENSURE A FIRM SURFACE.
 6. SEE SECTION 8.2(B) OF THE VMS FOR SOIL AMENDMENT AND INSTRUCTION PROCEDURES FOR STREET TREE PLANTER STRIPS. ALL STREET TREE PLANTER STRIPS SHALL RECEIVE 40% COMPOST AMENDED SOIL TO THE FULL DEPTH OF THE STREET TREE ROOT BALL.

PRCNC20240061



**WATER POLLUTION
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APPROVED

BY:

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CITY OF PUYALLUP

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**LANDSCAPING AND
SURFACE
RESTORATION
DETAILS**

DRAWING: **L-2** OF: **2**

SHEET: **14** OF: **60**

M:\PUYALLUP\21462 WPCP 3rd Secondary Clarifier\01 Design\Plans\Mechanical\M_DET.dwg, 2/28/2024 12:57 PM, CHARLEY REID

PIPING SYMBOLS

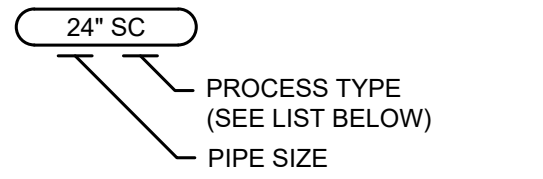
DOUBLE LINE	SINGLE LINE	
		EXISTING PIPE
		NEW PIPE
		WELDED
		SCREWED JOINT
		FLANGED
		MECHANICAL JOINT
		GROOVED COUPLING
		FLANGED COUPLING ADAPTER
		FLANGED COUPLING ADAPTER W/ THRUST TIES TO NEXT FLANGED JOINT
		FLEXIBLE COUPLING
		STAINLESS STEEL LOW PRESSURE AIR PIPE COUPLING
		ADAPTOR FLANGE
		UNION
		RESTRAINED FLEXIBLE COUPLING
		RUBBER EXPANSION JOINT
		RESTRAINED RUBBER EXPANSION JOINT
		BLIND FLANGE
		CHECK VALVE
		GATE VALVE
		PLUG VALVE
		BUTTERFLY VALVE
		BALL VALVE
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		ELBOW, 45°
		ELBOW, 90°
		ELBOW UP
		ELBOW DOWN

DOUBLE LINE	SINGLE LINE	
		TEE
		TEE UP
		TEE DOWN
		CROSS
		WYE
		BELL UP
		FLEXIBLE HOSE OR TUBING
		VALVE WITH MOTOR ACTUATOR
		SOLENOID VALVE
		PIPE SUPPORT.
		DENOTES ITEMS TO BE SALVAGED OR DEMOLISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATIONS
		EXISTING PIPE TO BE DEMOLISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS
		EXISTING PIPE TO BE ABANDONED BY CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATIONS

NOTE:
FOR ADDITIONAL ABBREVIATIONS AND SYMBOLS
SEE SHEETS G-3, S-1 AND E-1.

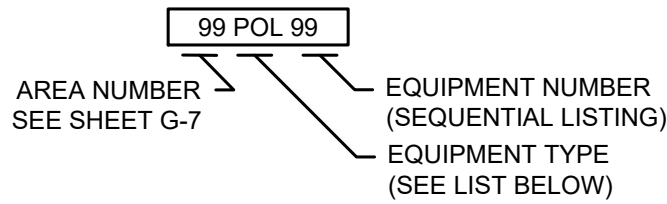
PROCESS PIPING, VALVE, GATE AND EQUIPMENT IDENTIFICATIONS

PROCESS PIPING



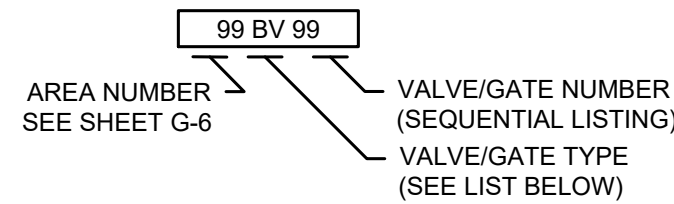
ABBREVIATION	PROCESS TYPE
D	DRAIN
FE	FINAL EFFLUENT
I	IRRIGATION
LUB	LUBRICATION
ML	MIXED LIQUOR
NPW	NON-POTABLE WATER
P	PRIMARY INFLUENT
PD	PROCESS DRAIN
RAS	RETURN ACTIVATED SLUDGE
RS	RAW SEWAGE
SAM	SAMPLE
SC	SCUM
SD	STORM DRAIN
SE	SECONDARY EFFLUENT
SS	SANITARY SEWER
W	POTABLE WATER
WAS	WASTE ACTIVATED SLUDGE

EQUIPMENT



ABBREVIATION	EQUIPMENT TYPE
AG	AIR GAP UNIT
EF	EFFLUENT FLOW METER
ILA	INTERFACE LEVEL ANALYZER
MFM	MAGNETIC FLOW METER
PXS	PROXIMITY SENSOR
RP	RETURN ACTIVATED SLUDGE PUMP
RLS	RADAR LEVEL SENSOR
SCM	SECONDARY CLARIFIER MECHANISM
TH	SUSPENDED SOLIDS PROBE/SENSOR
WP	TROLLEY HOIST
	WASTE ACTIVATED SLUDGE PUMP

VALVES AND GATES



ABBREVIATION	VALVE TYPE
AV	AIR RELEASE VALVE
BLV	BALL VALVE
CV	CHECK VALVE
GV	GATE VALVE
MV	MUD VALVE
PV	PLUG VALVE
SG	SLIDE GATE
SLG	SLUICE GATE

NOTE:
FOR ADDITIONAL EQUIPMENT
IDENTIFICATION SEE SHEET E-1.



Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH,
SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

PRCNC20240061



2/28/24

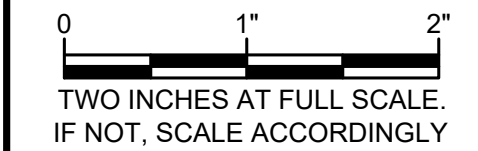


2/28/24



**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR: BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: DAW		
CHECKED BY: DAW		
DRAWN BY: CRR		
DESIGNER: BJ		
G & O JOB NO.: 21462.00		
FILE: M_DET.DWG		



MECHANICAL

**ABBREVIATIONS,
SYMBOLS AND
EQUIPMENT
IDENTIFICATIONS**

DRAWING: **M-1** OF: **4**

SHEET: **15** OF: **60**

APPROVED

BY: 
CITY ENGINEER
CITY OF PUYALLUP

APPROVED DATE: 2/28/2024

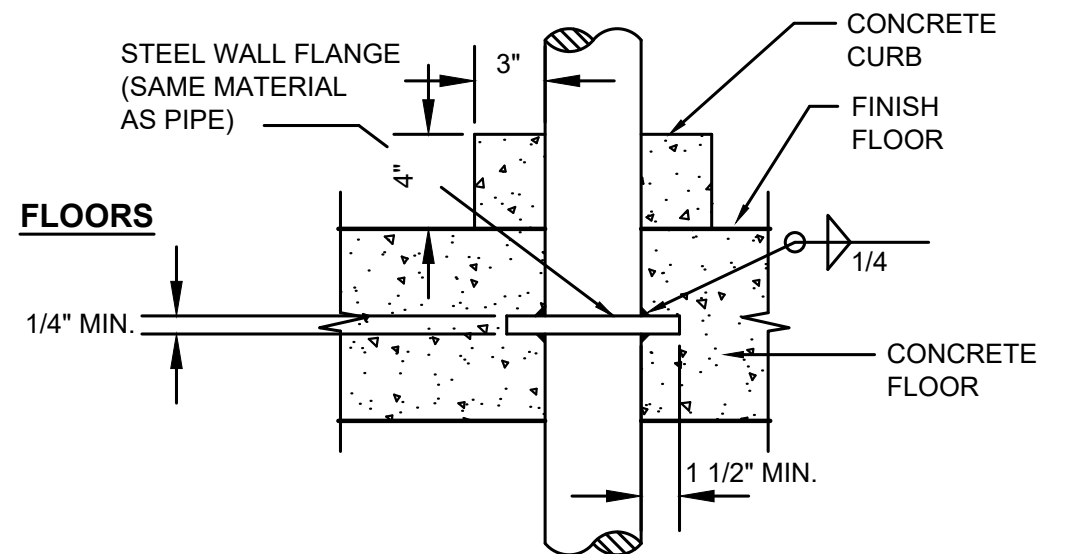
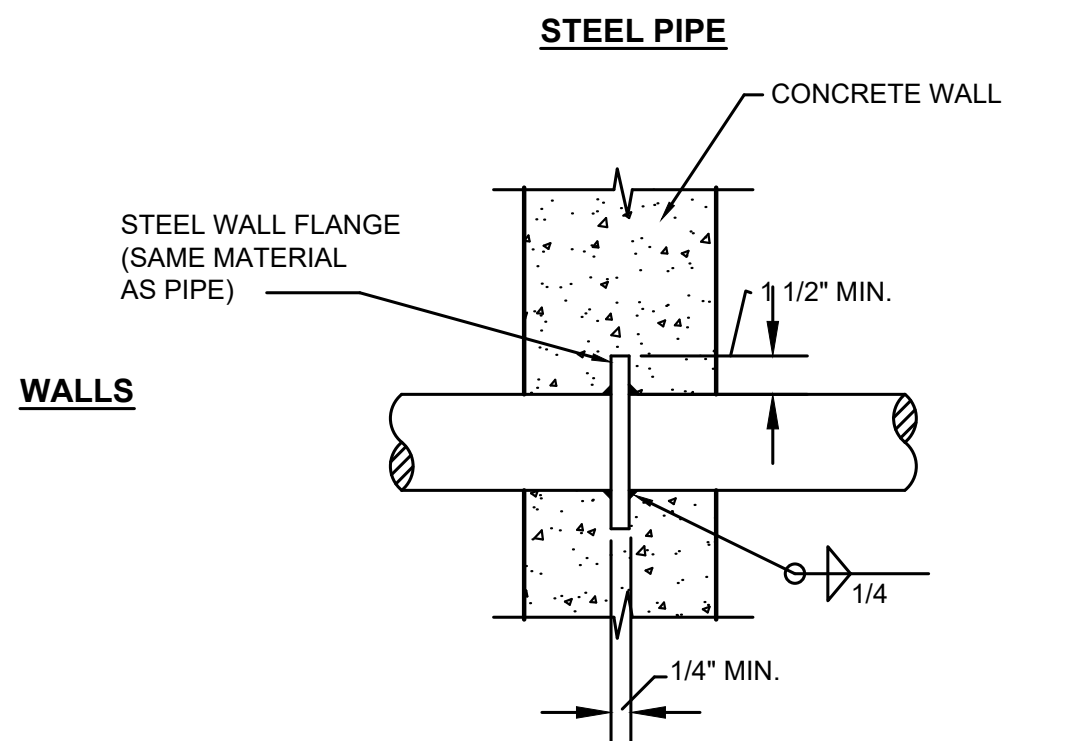
EXPIRATION DATE: 12/31/2025

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

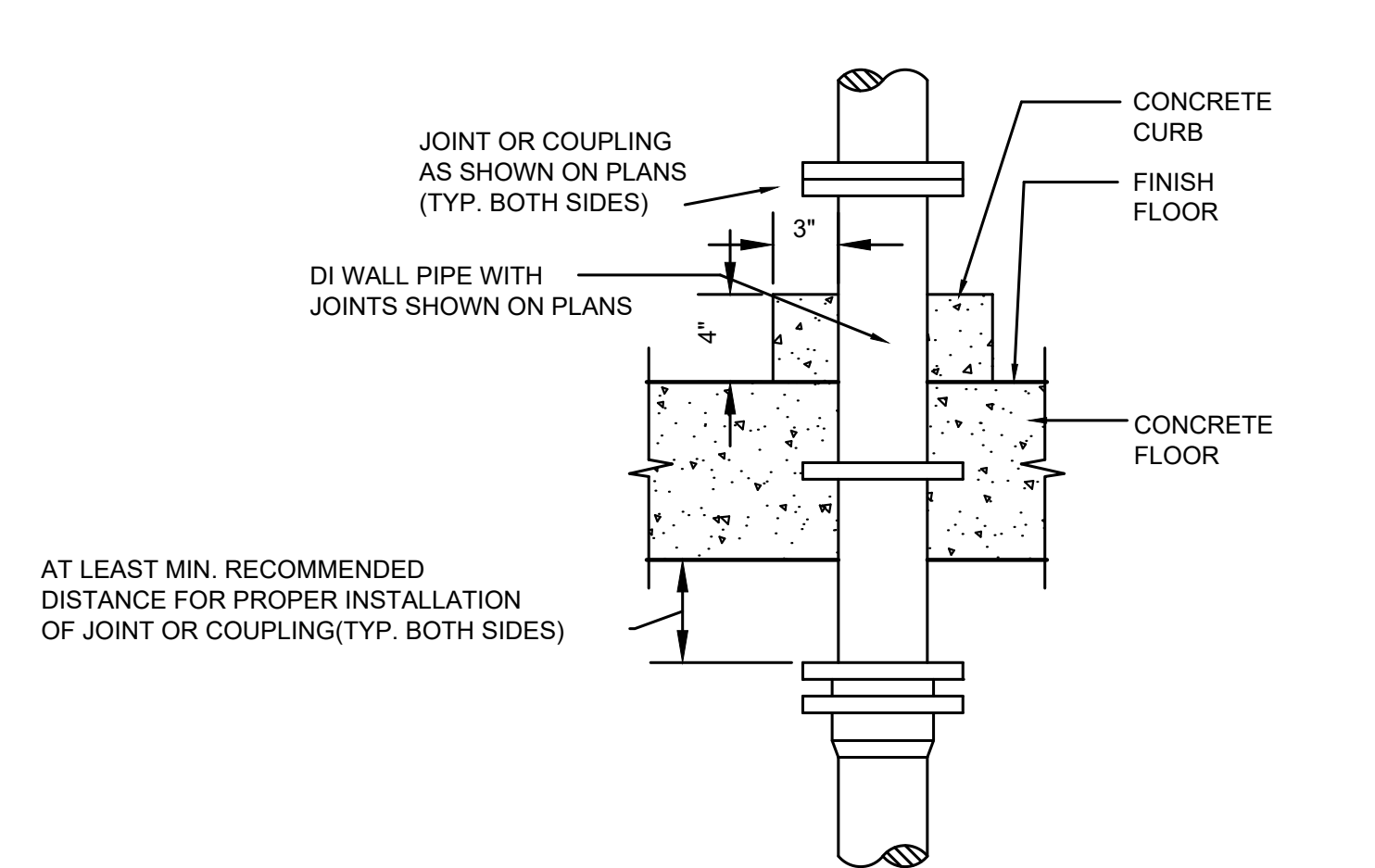
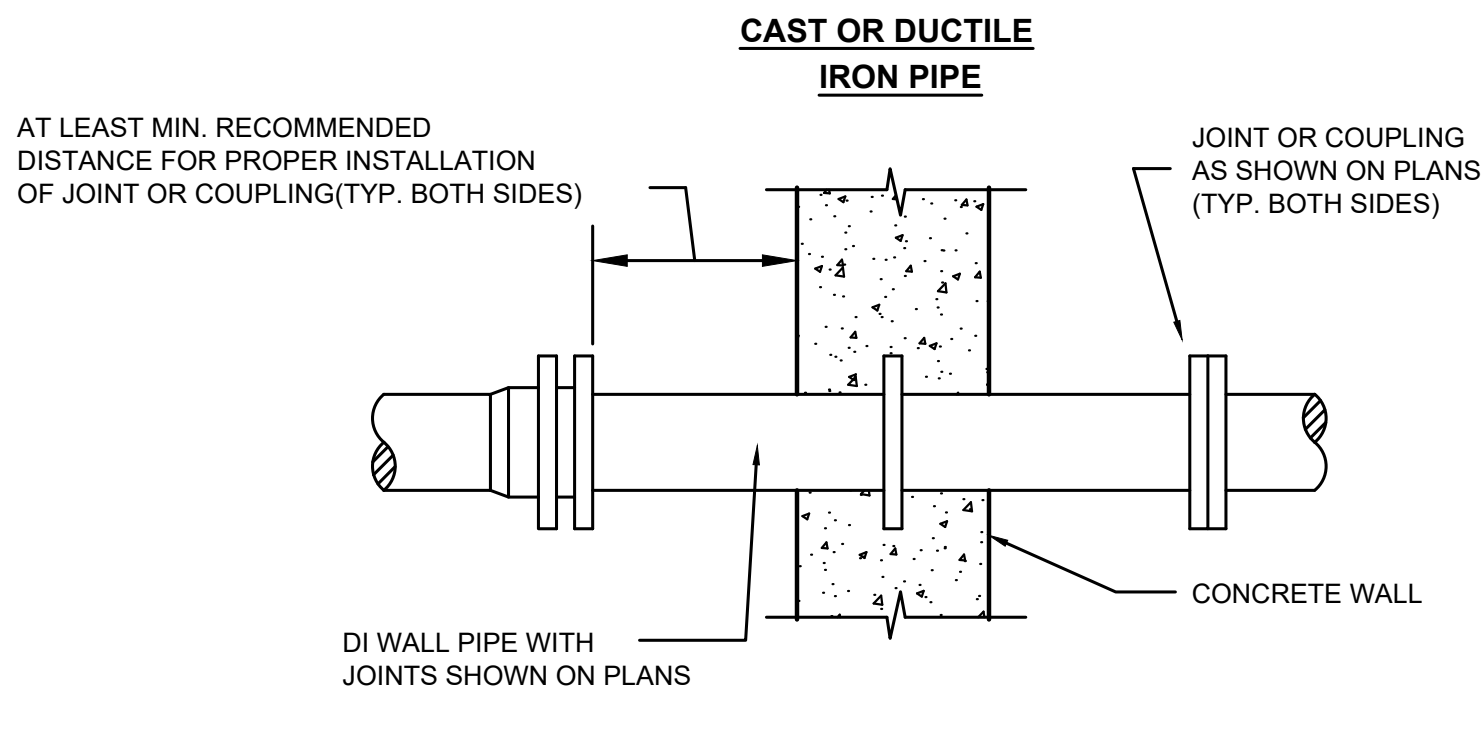
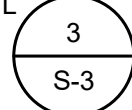
Field conditions may dictate changes to these plans as determined by the City Engineer.

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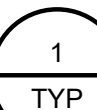
NOTE:

- FOR NEW CAST-IN-PLACE CONCRETE, IT IS ALLOWED TO PROVIDE BLOCKOUT IN THE AREA OF A PIPE PENETRATION AND FILL WITH NON-SHRINK GROUT AFTER PIPE INSTALLATION IN ACCORDANCE WITH THIS DETAIL.
- FOR EXISTING CONCRETE OR PRECAST CONCRETE, AN OPENING SHALL BE PROVIDED OF ADEQUATE SIZE TO ALLOW FOR INSTALLATION OF PENETRATION SHOWN ON THIS DETAIL. THE OPENING SHALL BE FILLED WITH NON-SHRINK GROUT AFTER PIPE INSTALLATION. IF OPENING IS PROVIDED BY CORE DRILLING, RESULTING SMOOTH CONCRETE SURFACES SHALL BE ROUGHENED BEFORE FILLING WITH GROUT.
- FOR ADDITIONAL REINFORCEMENT AROUND PIPE PENETRATIONS SEE DETAIL



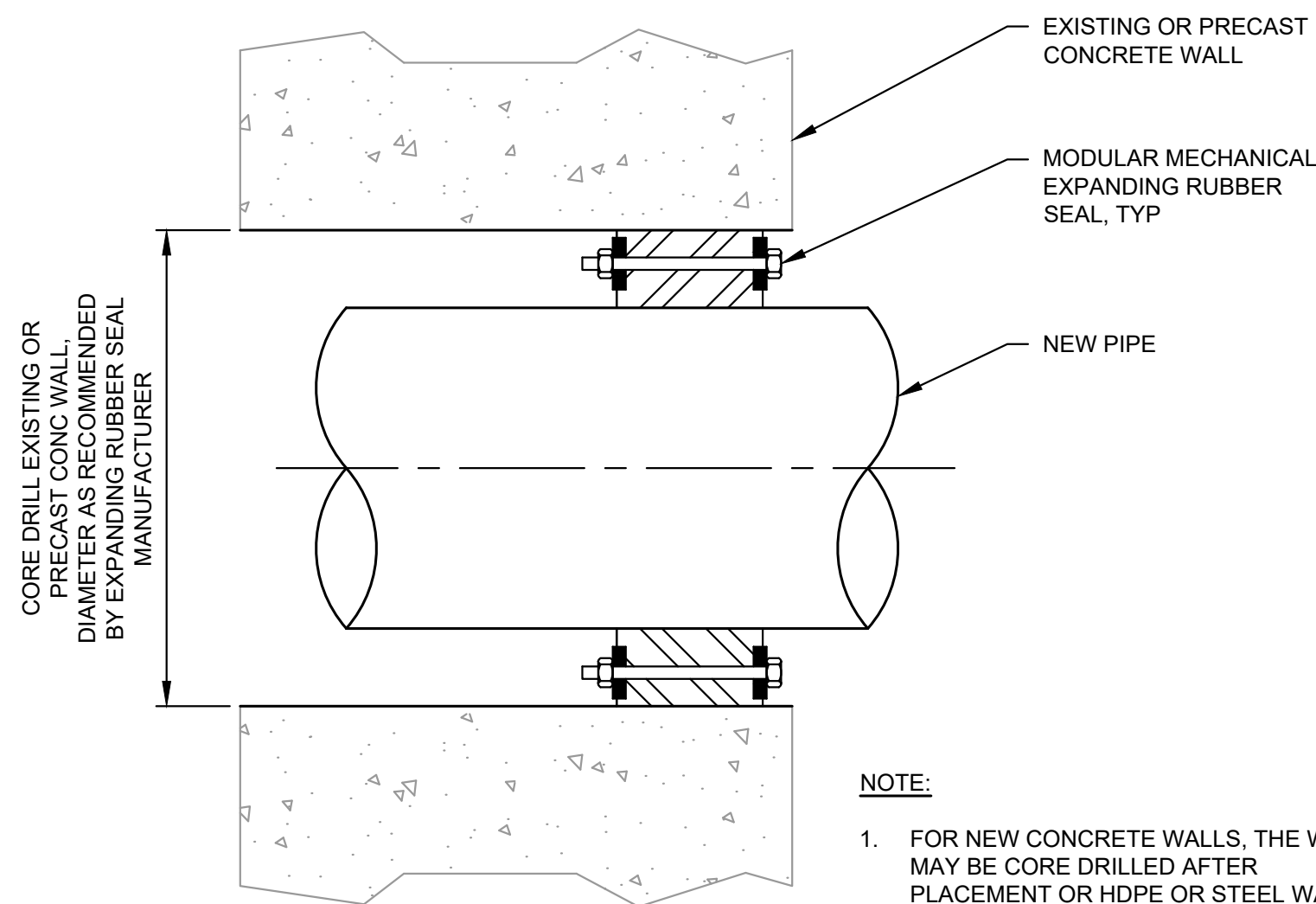
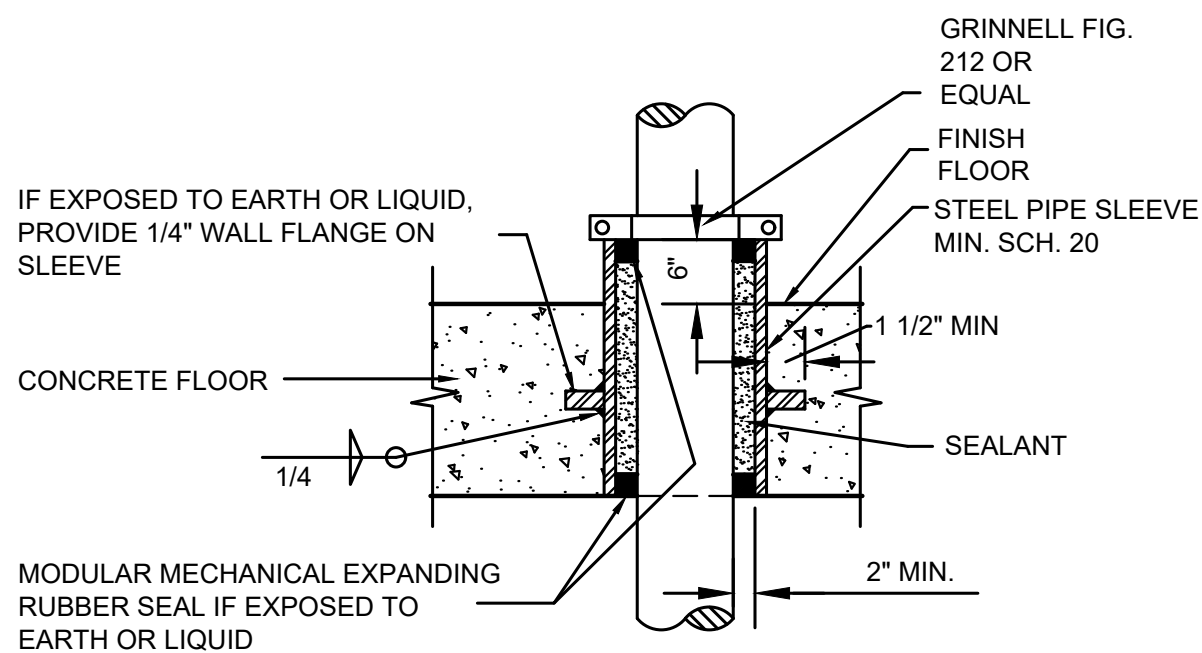
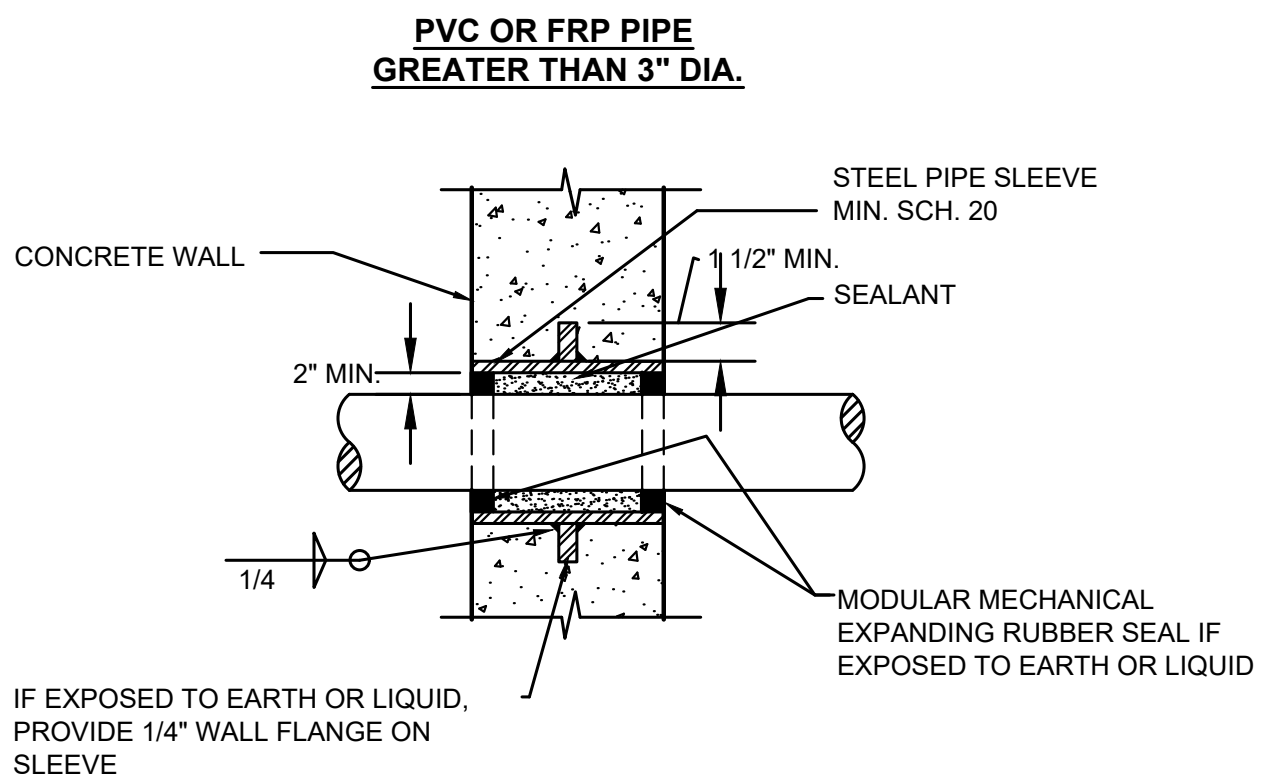
NOTE:

- AT LEAST MIN. RECOMMENDED DISTANCE FOR PROPER INSTALLATION OF JOINT OR COUPLING(TYP. BOTH SIDES)



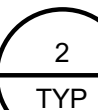
PIPE PENETRATIONS THROUGH CONCRETE WALLS AND FLOORS DETAILS

NOT TO SCALE



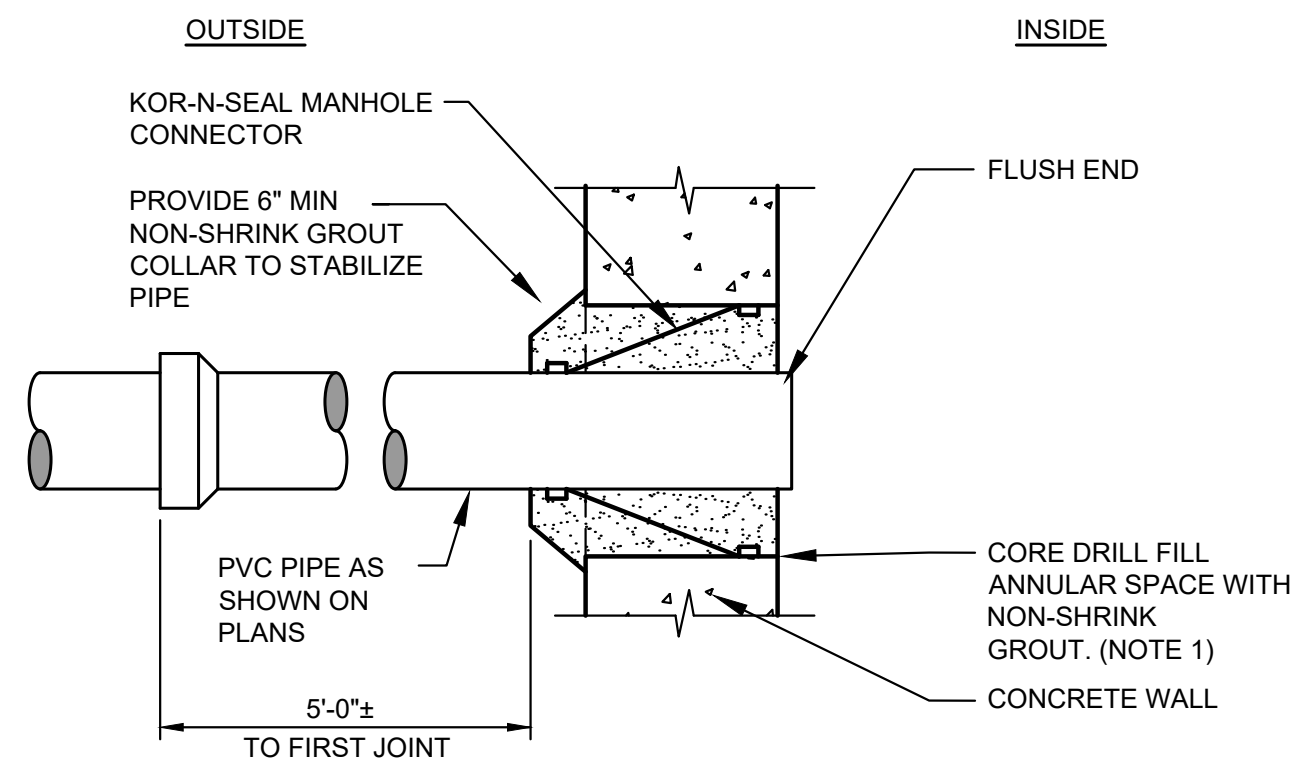
NOTE:

- FOR NEW CONCRETE WALLS, THE WALLS MAY BE CORE DRILLED AFTER PLACEMENT OF HDPE OR STEEL WALL SLEEVES WITH A 2-INCH SEEP RING MAY BE USED.



PIPE PENETRATIONS THROUGH CONCRETE WALLS

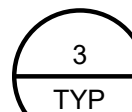
NOT TO SCALE



FLEXIBLE PIPE BURIED PRECAST WALL

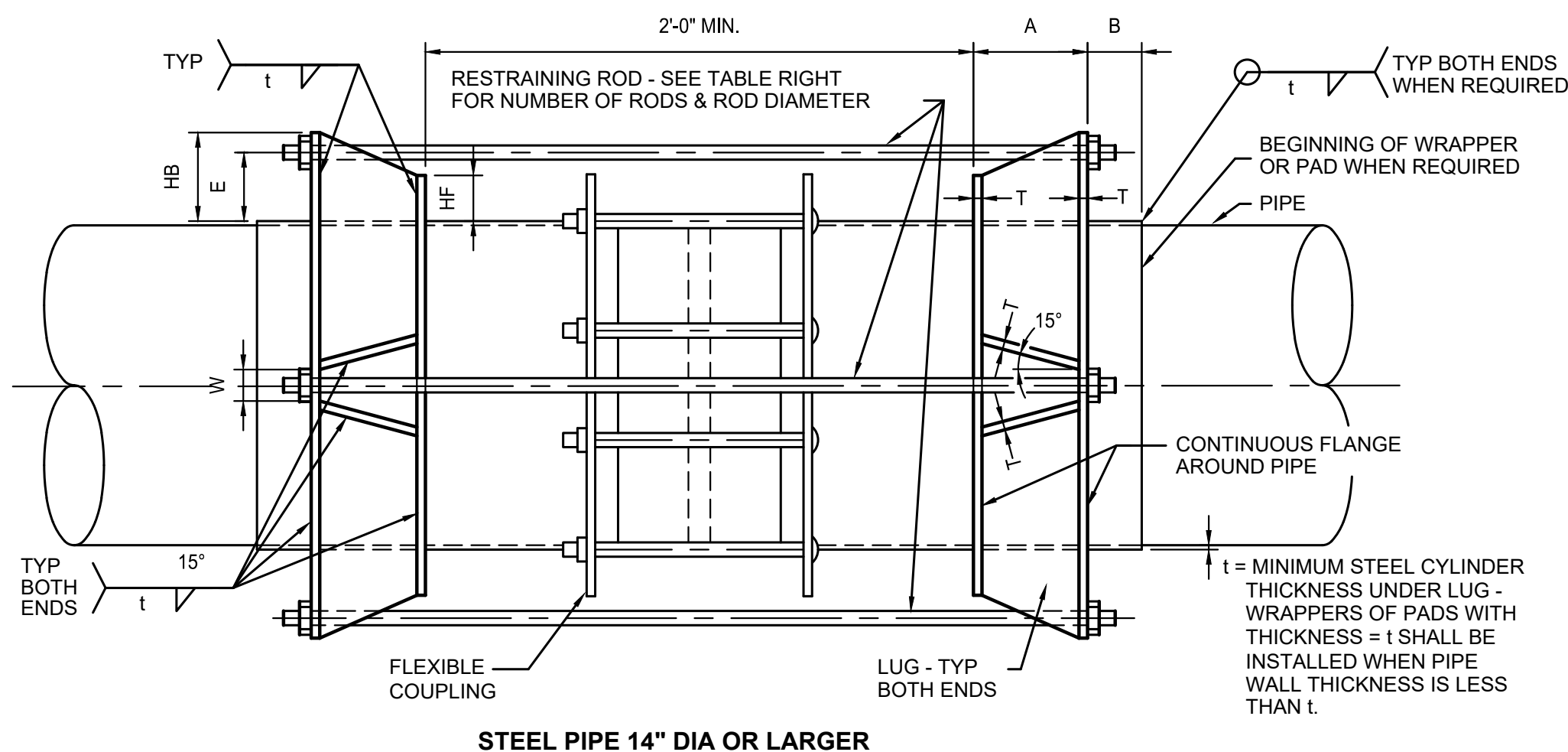
NOTES:

- AN OPENING SHALL BE PROVIDED OF ADEQUATE SIZE TO ALLOW FOR INSTALLATION OF PENETRATION SHOWN.
- ROUGHEN CORE-DRILLED OPENING BEFORE FILLING ANNULAR SPACE WITH GROUT.



PIPE PENETRATION THROUGH PRECAST CONCRETE WALLS

NOT TO SCALE



STEEL PIPE 14" DIA OR LARGER



FLEXIBLE COUPLING RESTRAINT DETAIL

NOT TO SCALE

PIPE DIAMETER	NUMBER OF RODS	ROD DIAMETER	A	B	E	HB	HF	T	t	W
42"	4	1"	5 3/4"	6 1/2"	3 1/4"	4 1/2"	2"	1/2"	0.188"	1 3/4"

NOTES:

- MINIMUM REQUIRED NUMBER OF RESTRAINING RODS, MINIMUM RESTRAINING ROD DIAMETER AND MINIMUM DIMENSIONS FOR LUGS FOR STEEL PIPE ARE SHOWN ON TABLE I, THIS SHEET, FOR VARIOUS PIPE SIZES.
- TABLE I AND THE RESTRAINT DETAIL FOR STEEL PIPE IS BASED IN AWWA MANUAL OF WATER SUPPLY PRACTICES M 11.
- THIS DETAIL IS DEVELOPED FOR A PIPE DESIGN PRESSURE OF 50 PSI AND A RESTRAINING ROD ALLOWABLE STRESS OF 40,000 PSI

APPROVED

BY: 
CITY ENGINEER
CITY OF PUYALLUP
APPROVED DATE: 2/28/2024
EXPIRATION DATE: 12/31/2025
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Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

PRCNC20240061



WATER POLLUTION CONTROL PLANT THIRD SECONDARY CLARIFIER INSTALLATION
CIP NO. 20-018
1802 18TH ST NW, PUYALLUP, WA 98371

No.	DATE	REVISION
-----	------	----------

ISSUED FOR: **BID SET**

ISSUE DATE: FEBRUARY 2024

APPROVED BY: DAW

CHECKED BY: DAW

DRAWN BY: CRR

DESIGNER: BJ

G & O JOB NO.: 21462.00

FILE: M_DET.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

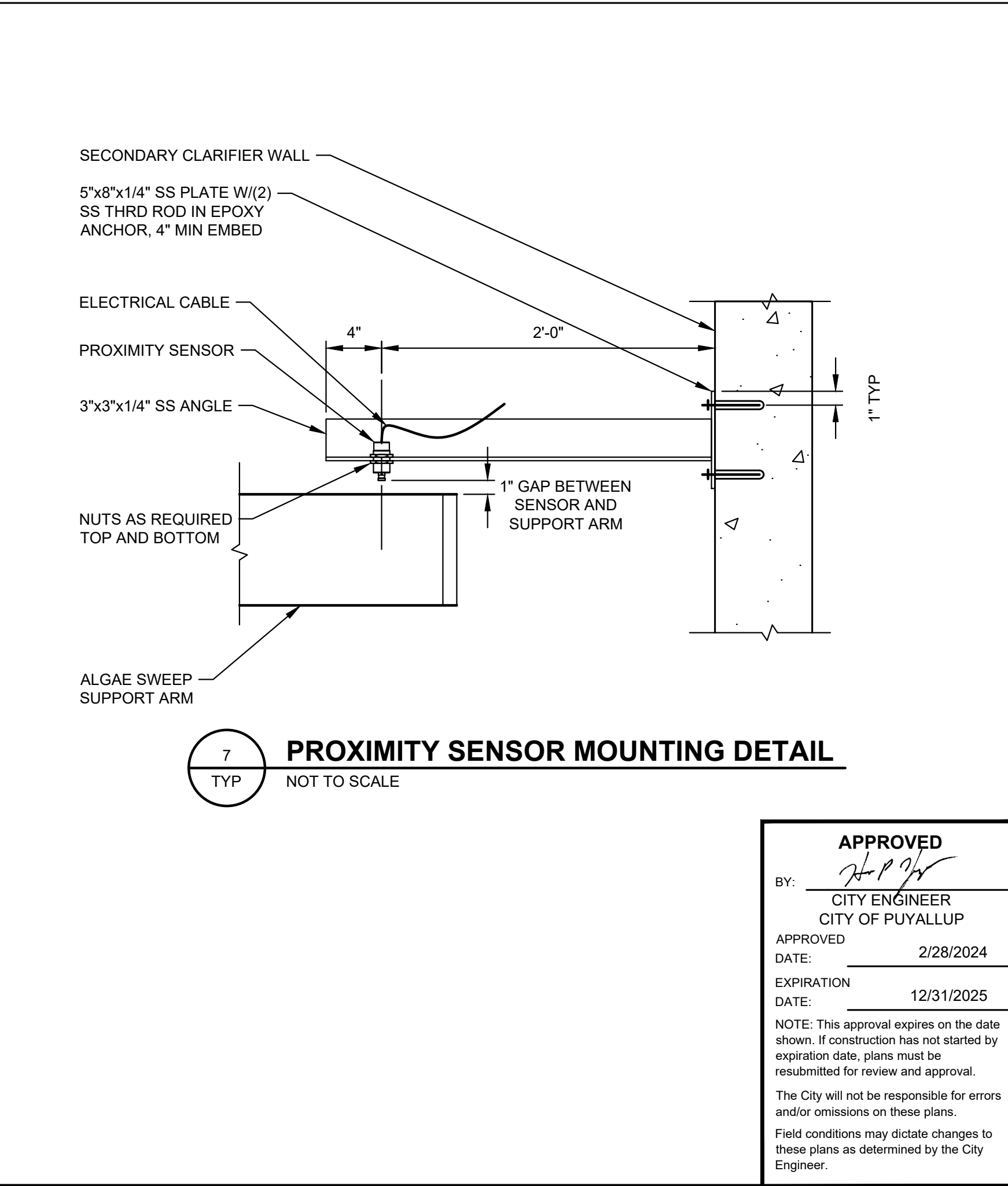
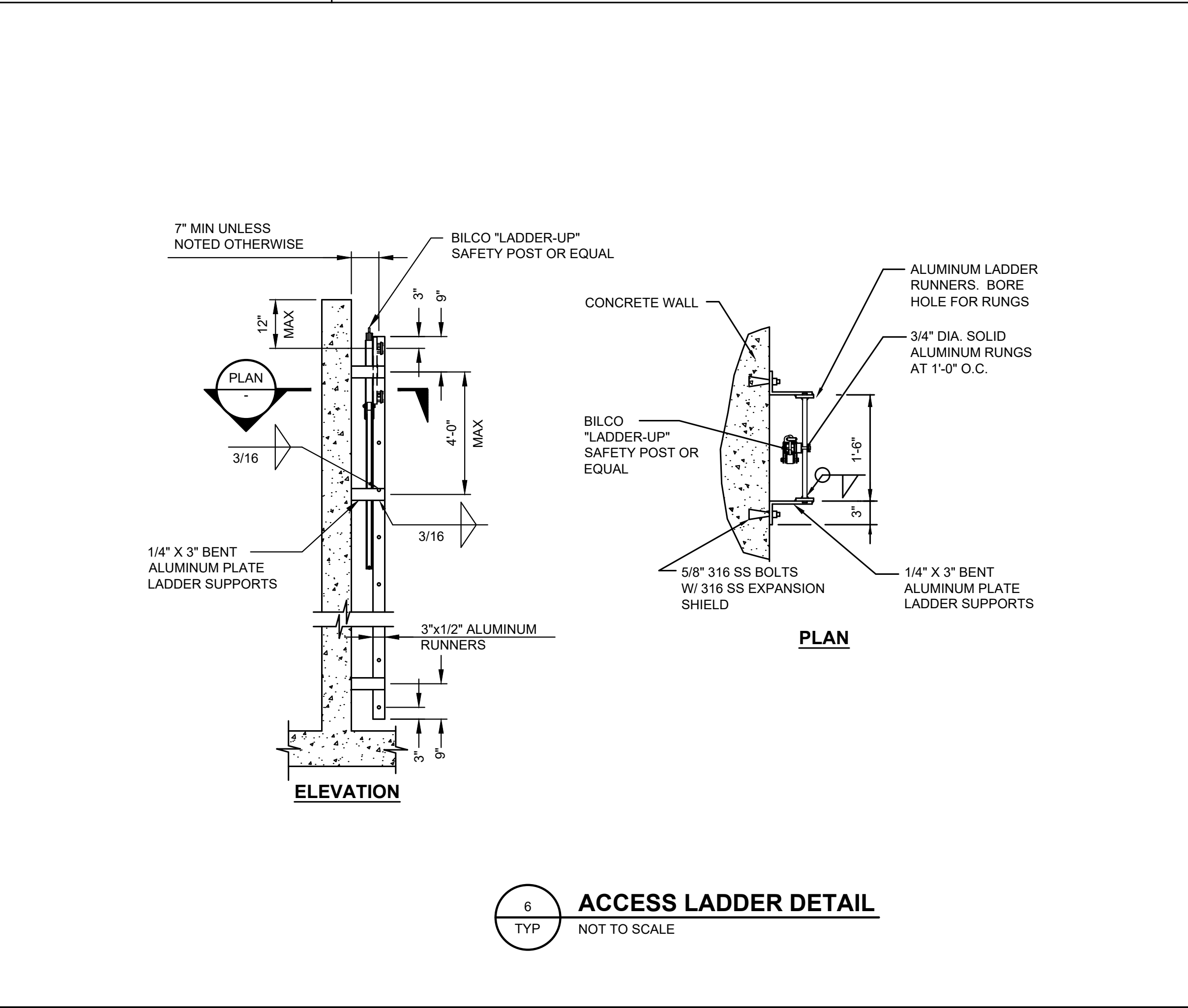
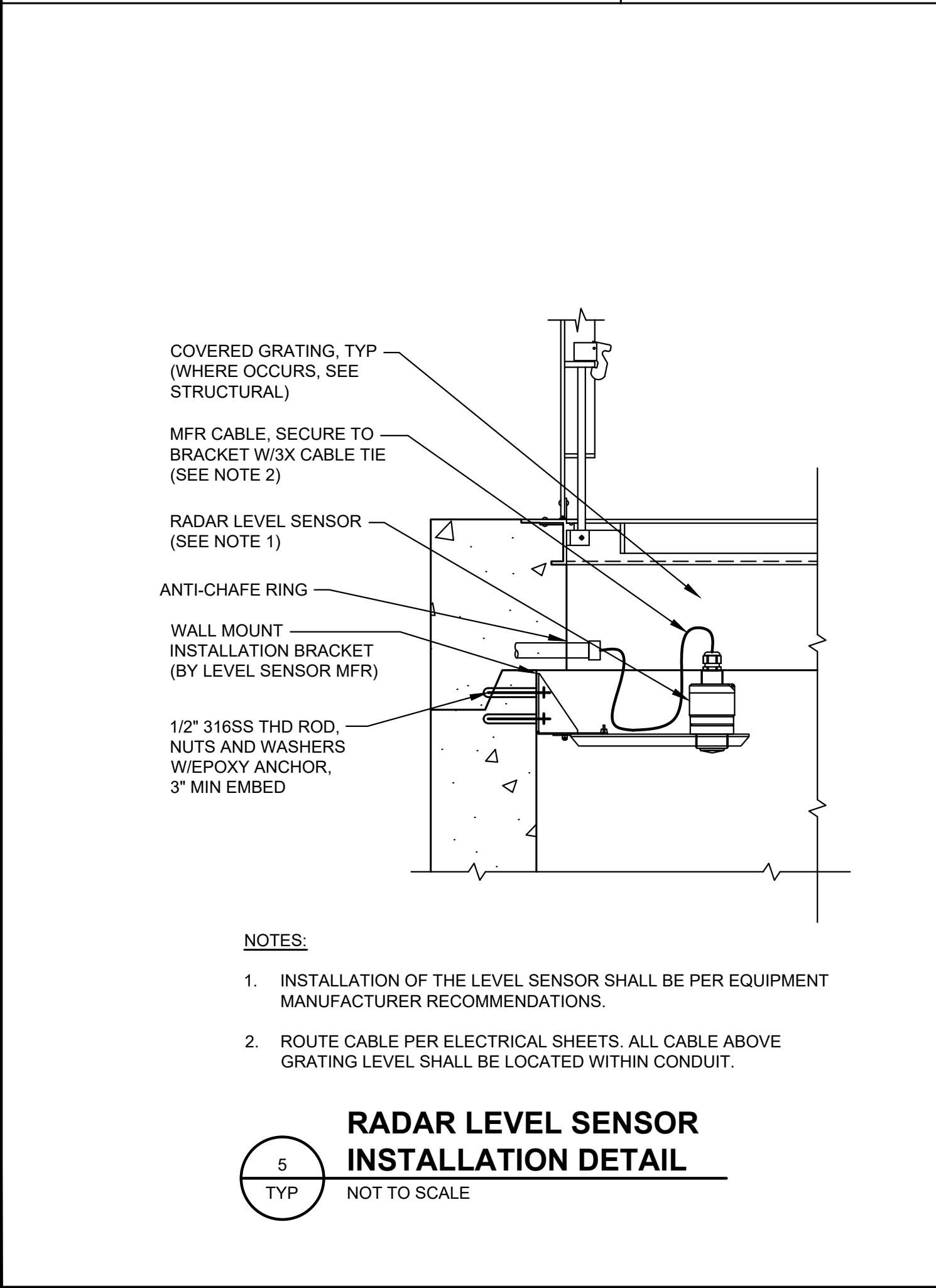
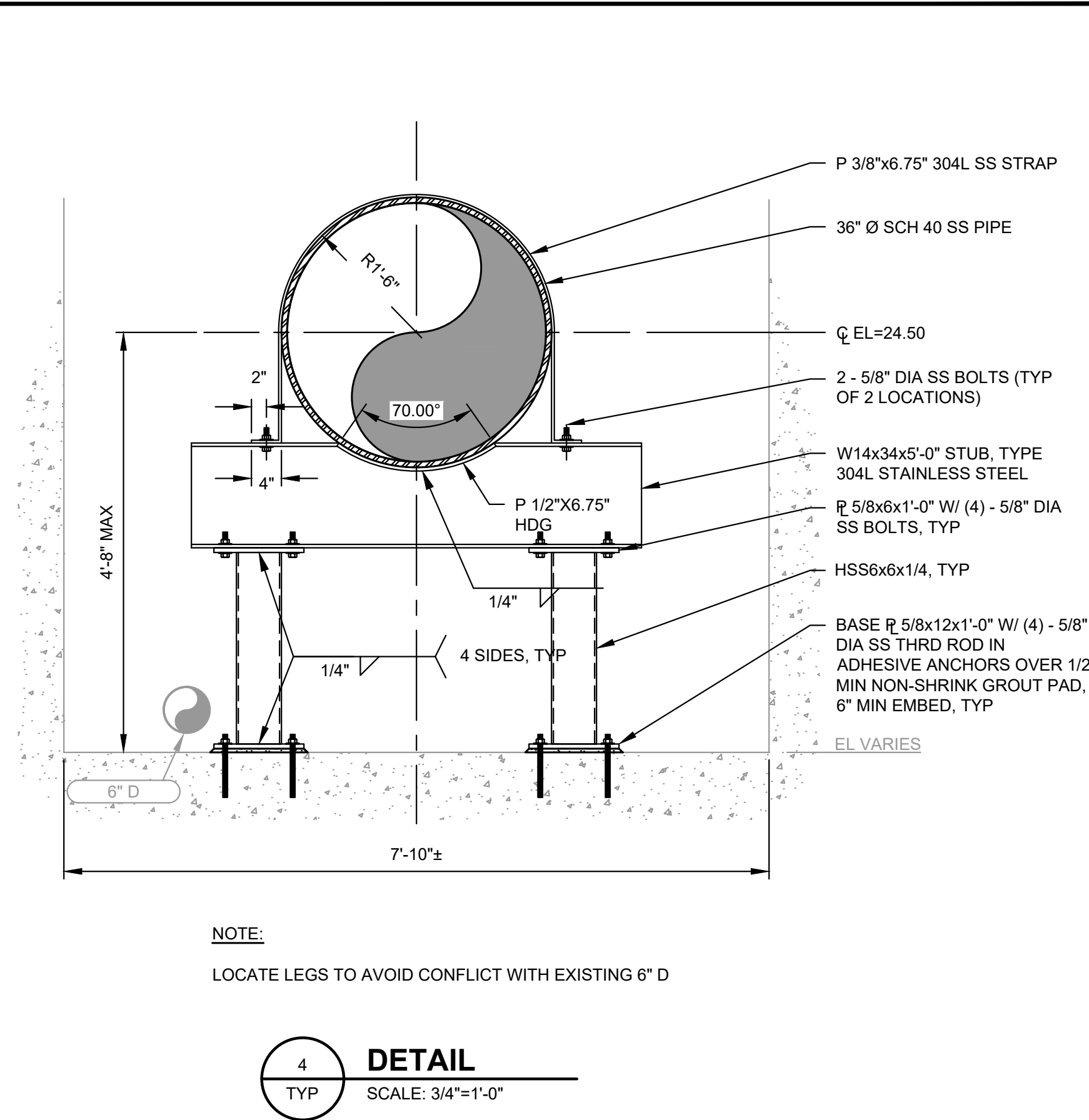
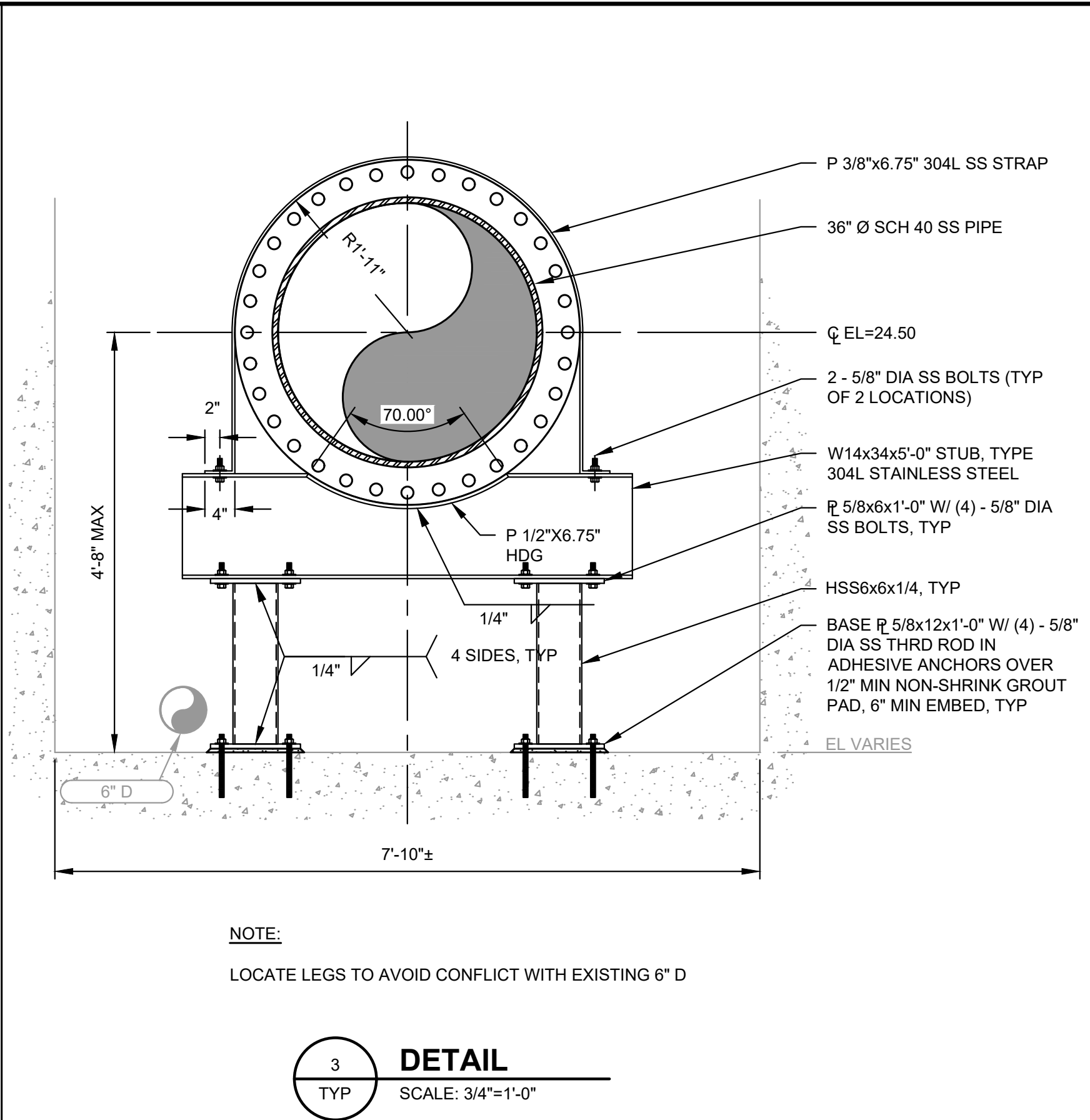
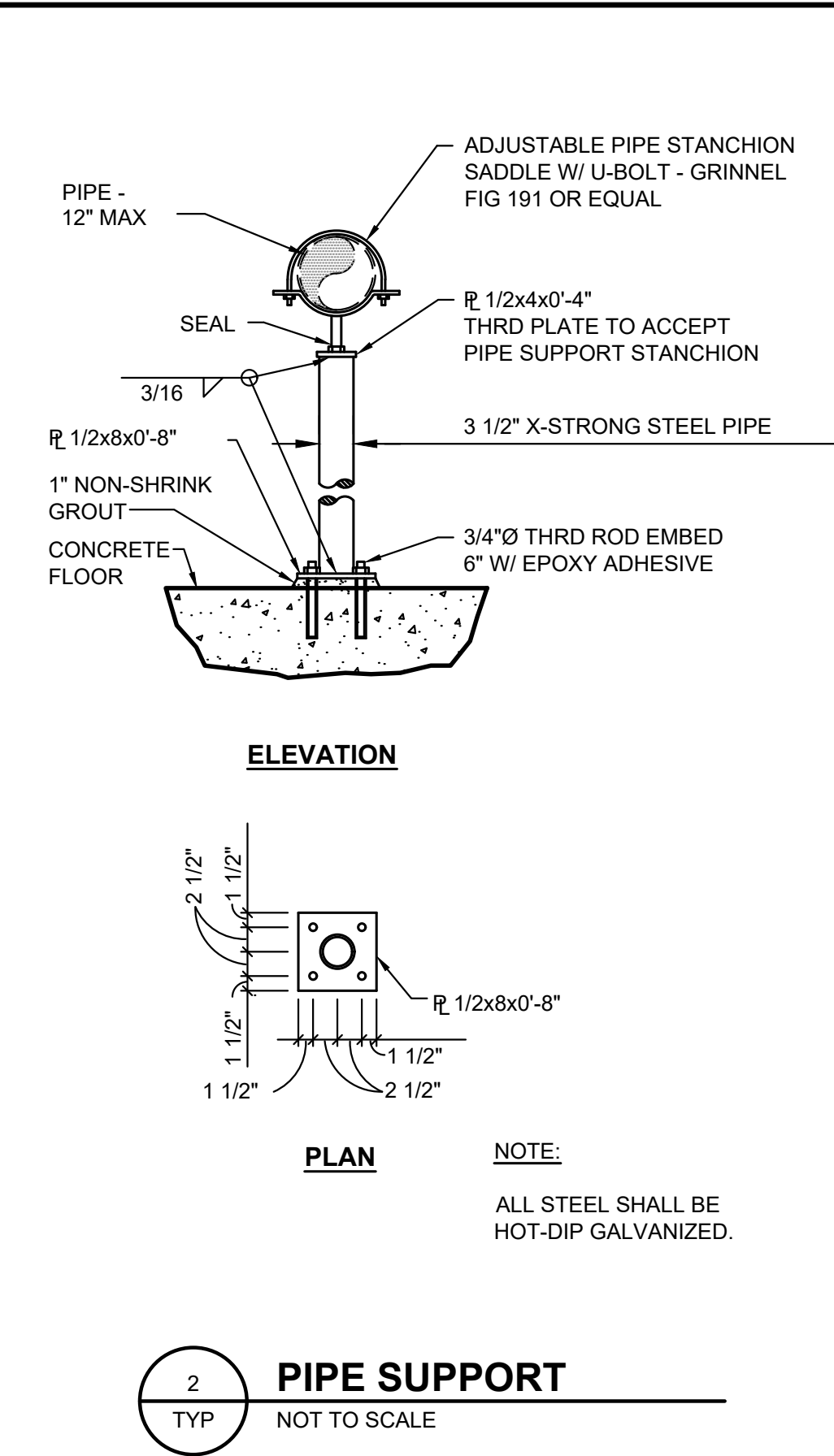
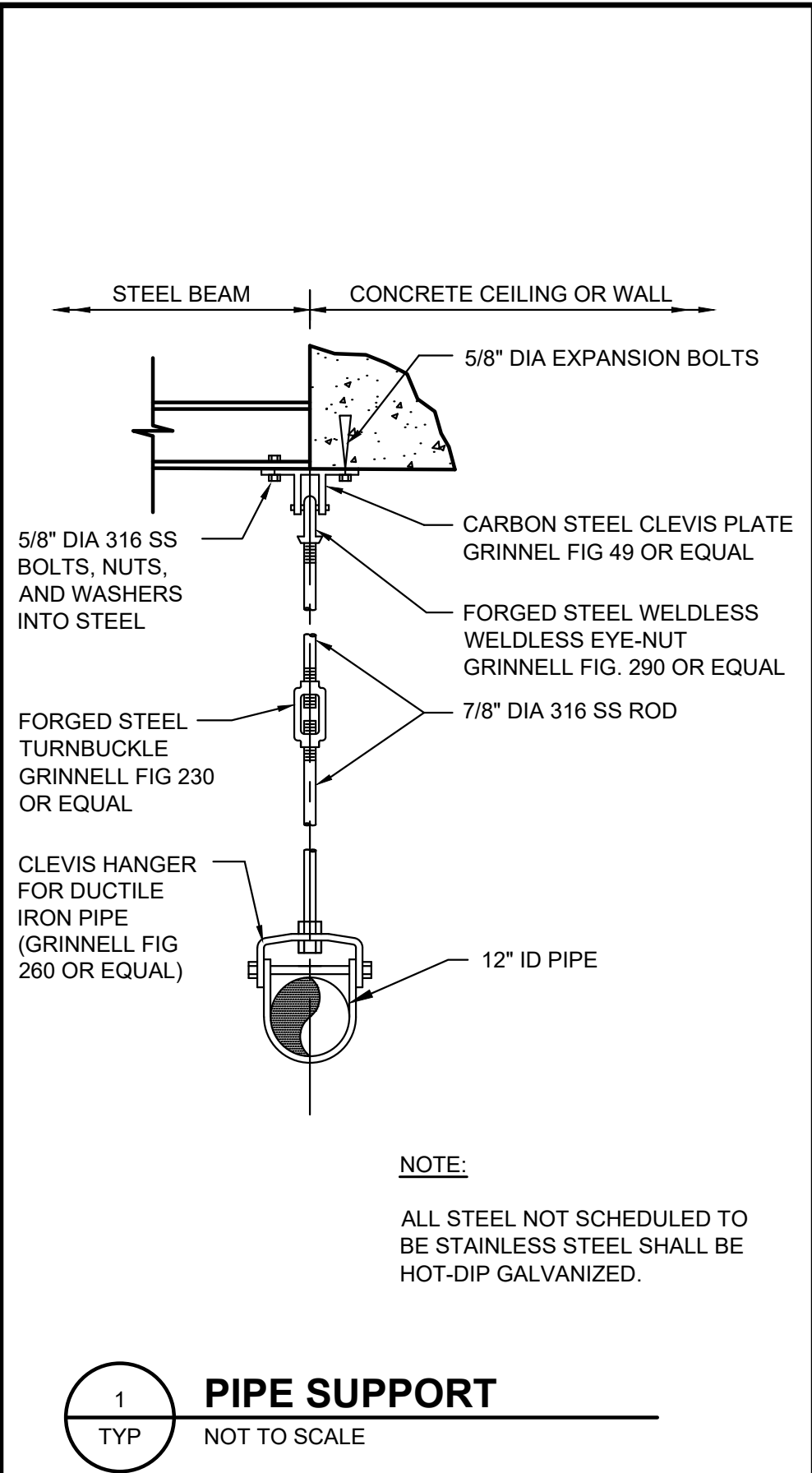
MECHANICAL

PIPE DETAILS

DRAWING: **M-2** OF: **4**

SHEET: **16** OF: **60**

M:\PUYALLUP\21462 WPCP 3rd Secondary Clarifier\01 Design\PlanSet\Mechanical\M_DET.dwg, 2/28/2024 12:57 PM, CHARLEY REID



APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
DATE: 2/28/2024
EXPIRATION DATE: 12/31/2025
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Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

PRCNC20240061

BLAINE JACOBSON
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
14062
2/28/24

DOUGLAS A. WELCH
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
28743
2/28/24

CITY OF PUYALLUP
STATE OF WASHINGTON

**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION

ISSUED FOR: **BID SET**

ISSUE DATE: FEBRUARY 2024

APPROVED BY: DAW

CHECKED BY: DAW

DRAWN BY: CRR

DESIGNER: BJ

G & O JOB NO.: 21462.00

FILE: M_DET.DWG

TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

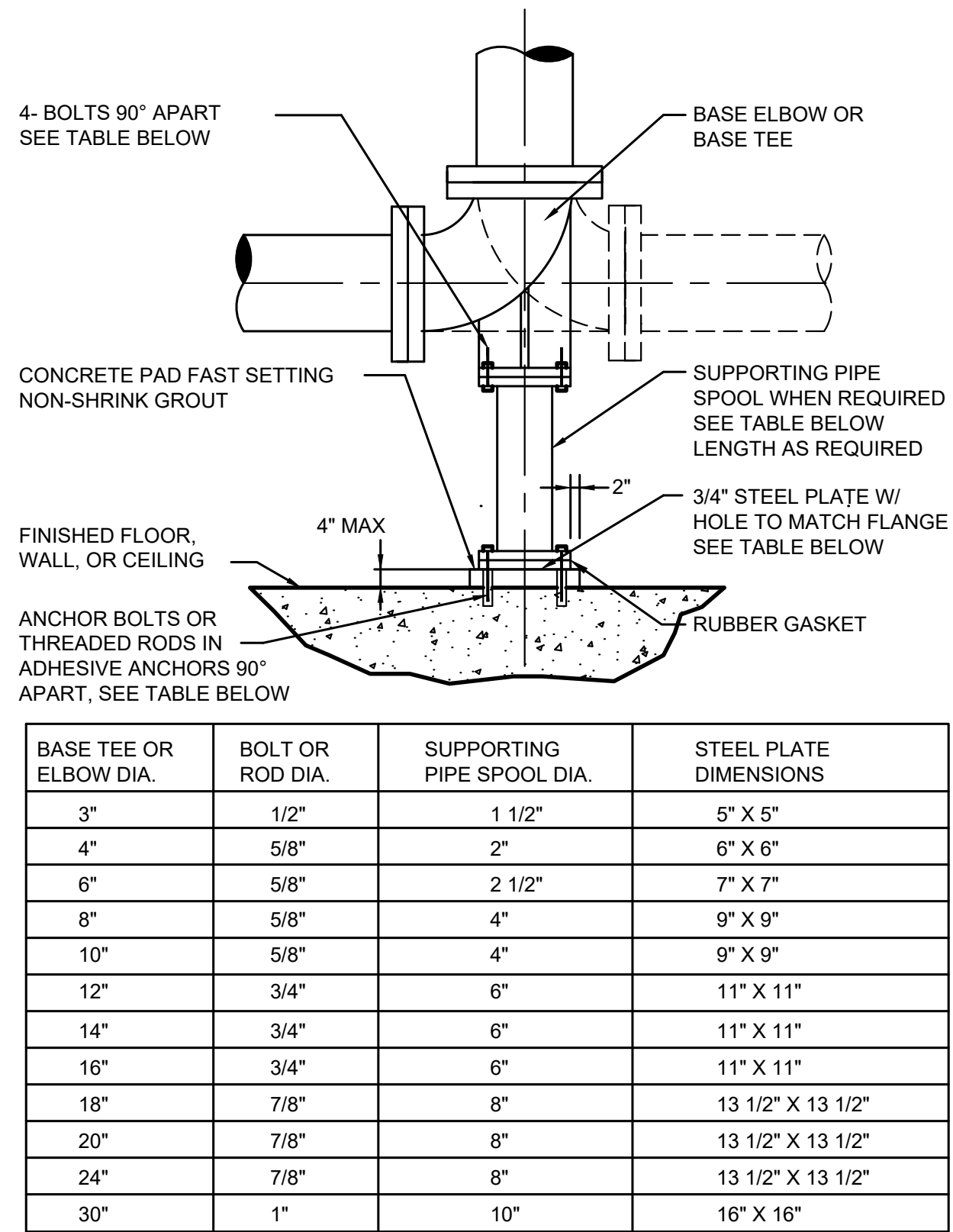
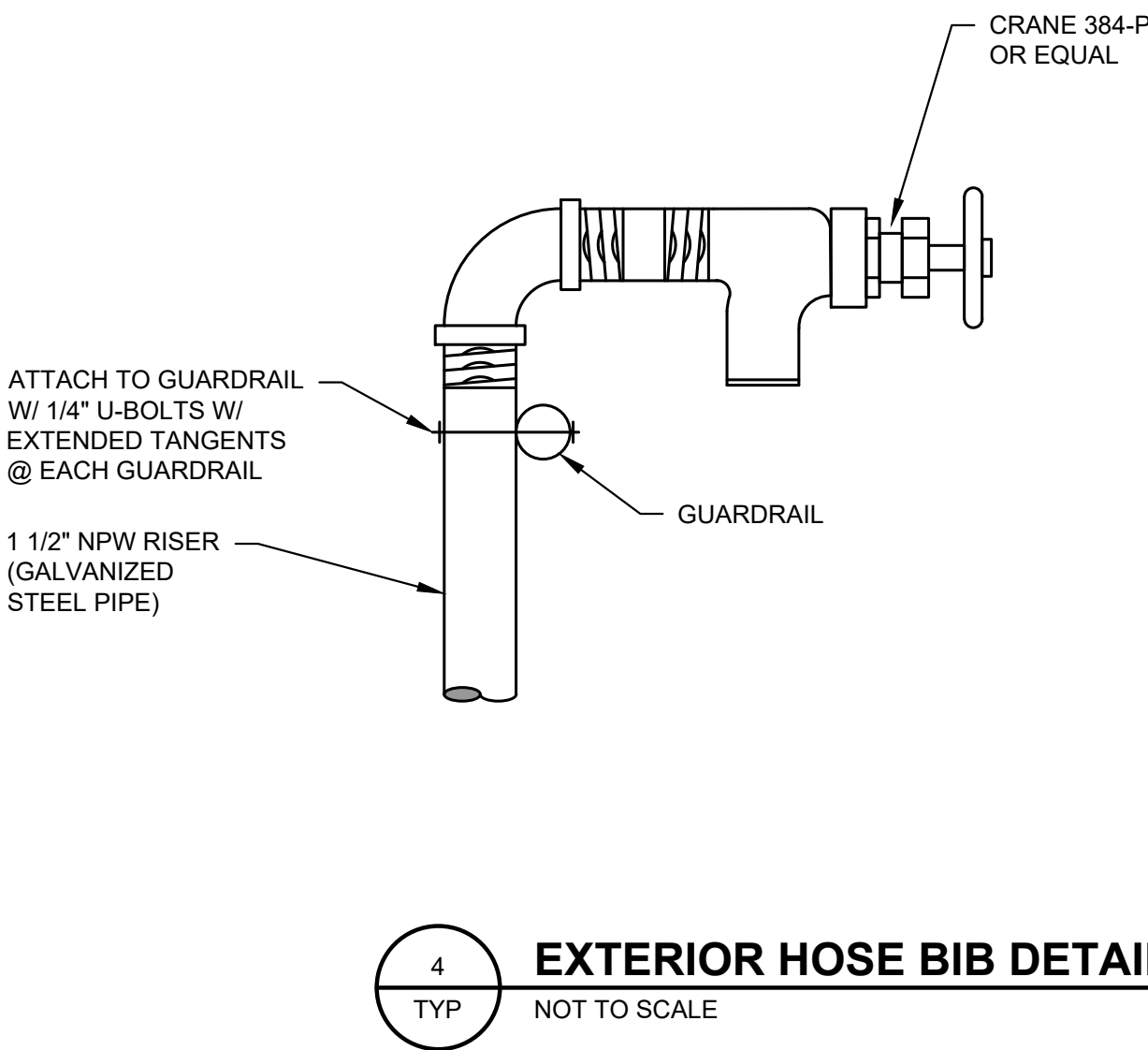
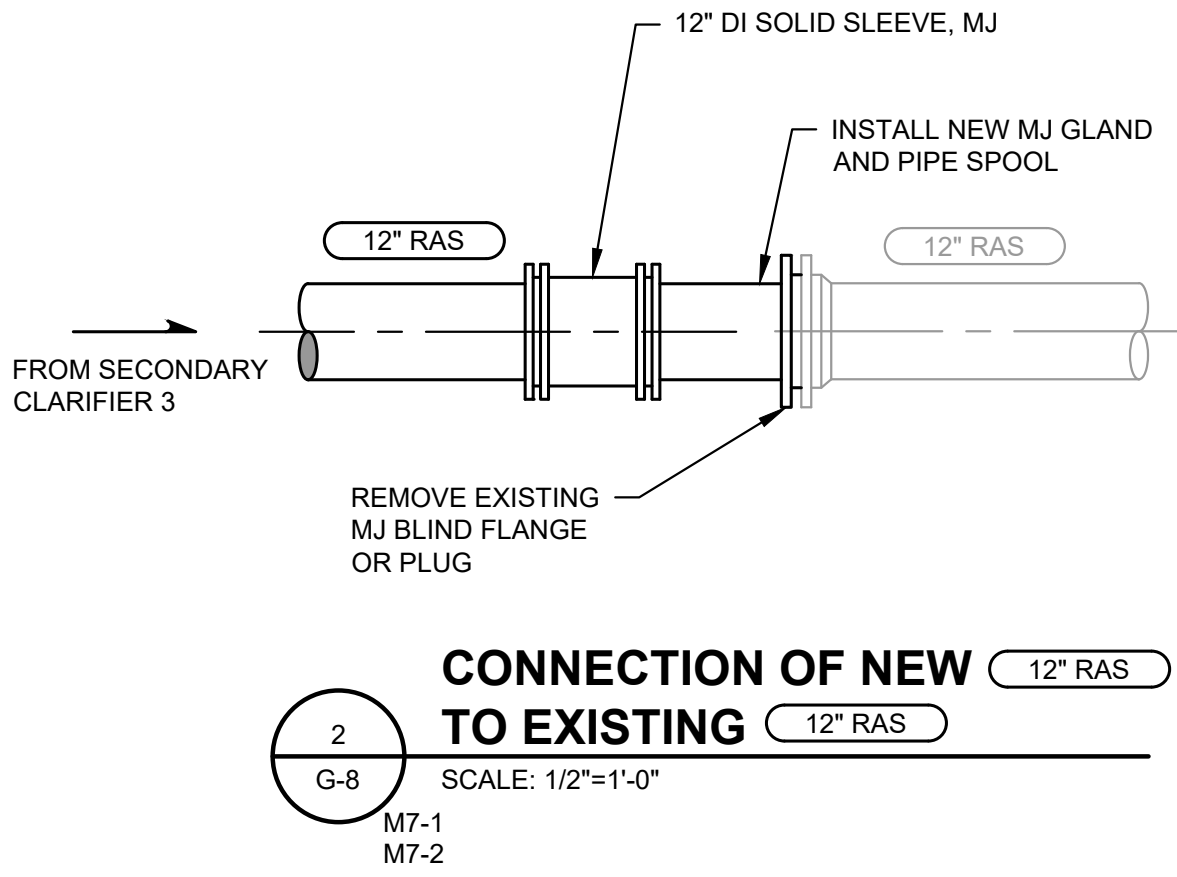
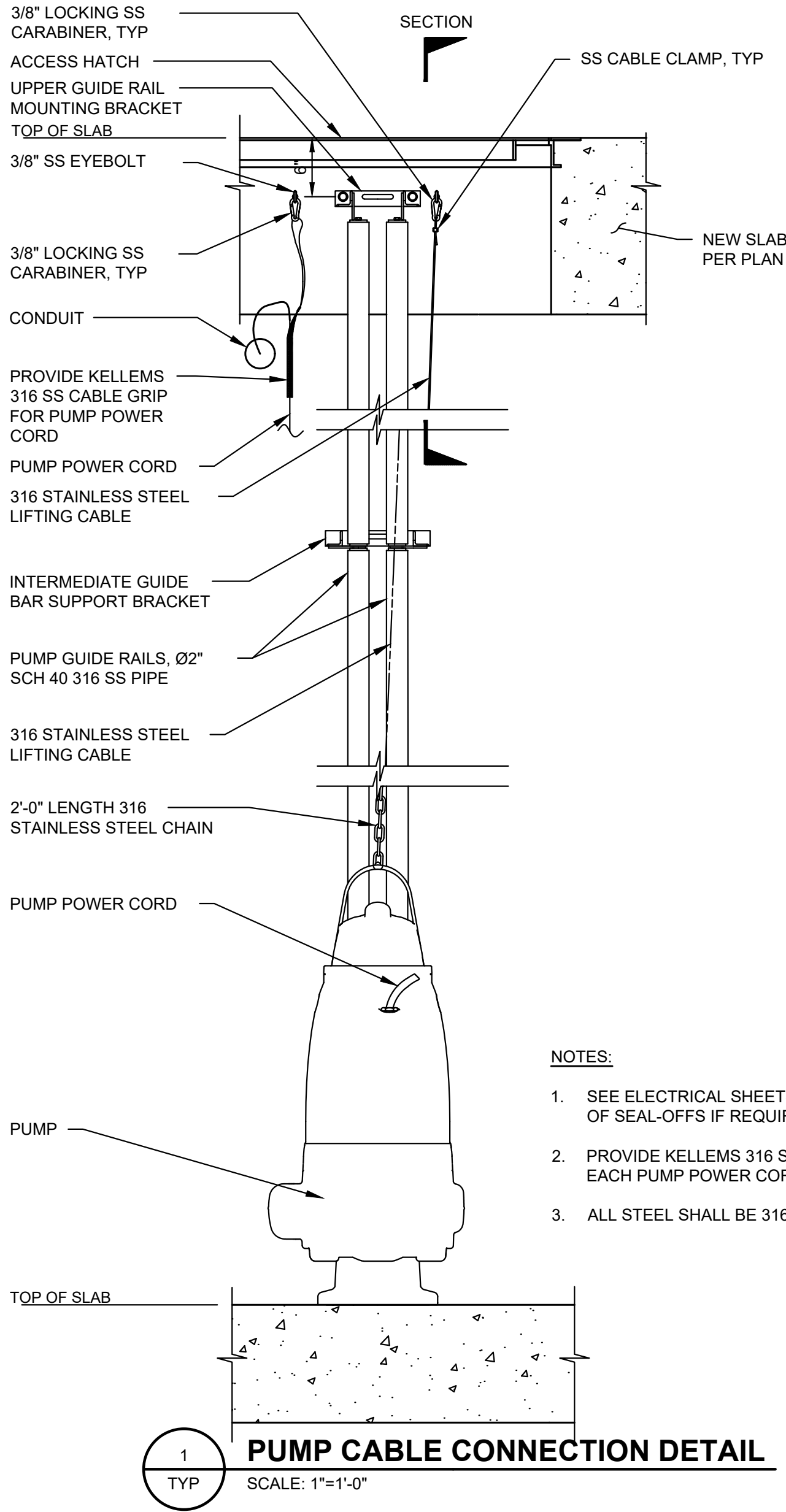
MECHANICAL

**MISCELLANEOUS
DETAILS**

DRAWING: **M-3** OF: **4**

SHEET: **17** OF: **60**

M:\PUYALLUP\21462 WPCP 3rd Secondary Clarifier\01 Design\PlanSet\Mechanical\M_DET.dwg, 2/28/2024 12:57 PM, CHARLEY REID



APPROVED
BY: 
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: 2/28/2024
EXPIRATION
DATE: 12/31/2025
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CONSULTING ENGINEERS
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SEATTLE, WASHINGTON 98144
(206) 284-0860

PRCNC20240061



No.	DATE	REVISION
ISSUED FOR:		
BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: DAW		
CHECKED BY: DAW		
DRAWN BY: CRR		
DESIGNER: BJ		
G & O JOB NO.: 21462.00		
FILE: M_DET.DWG		

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

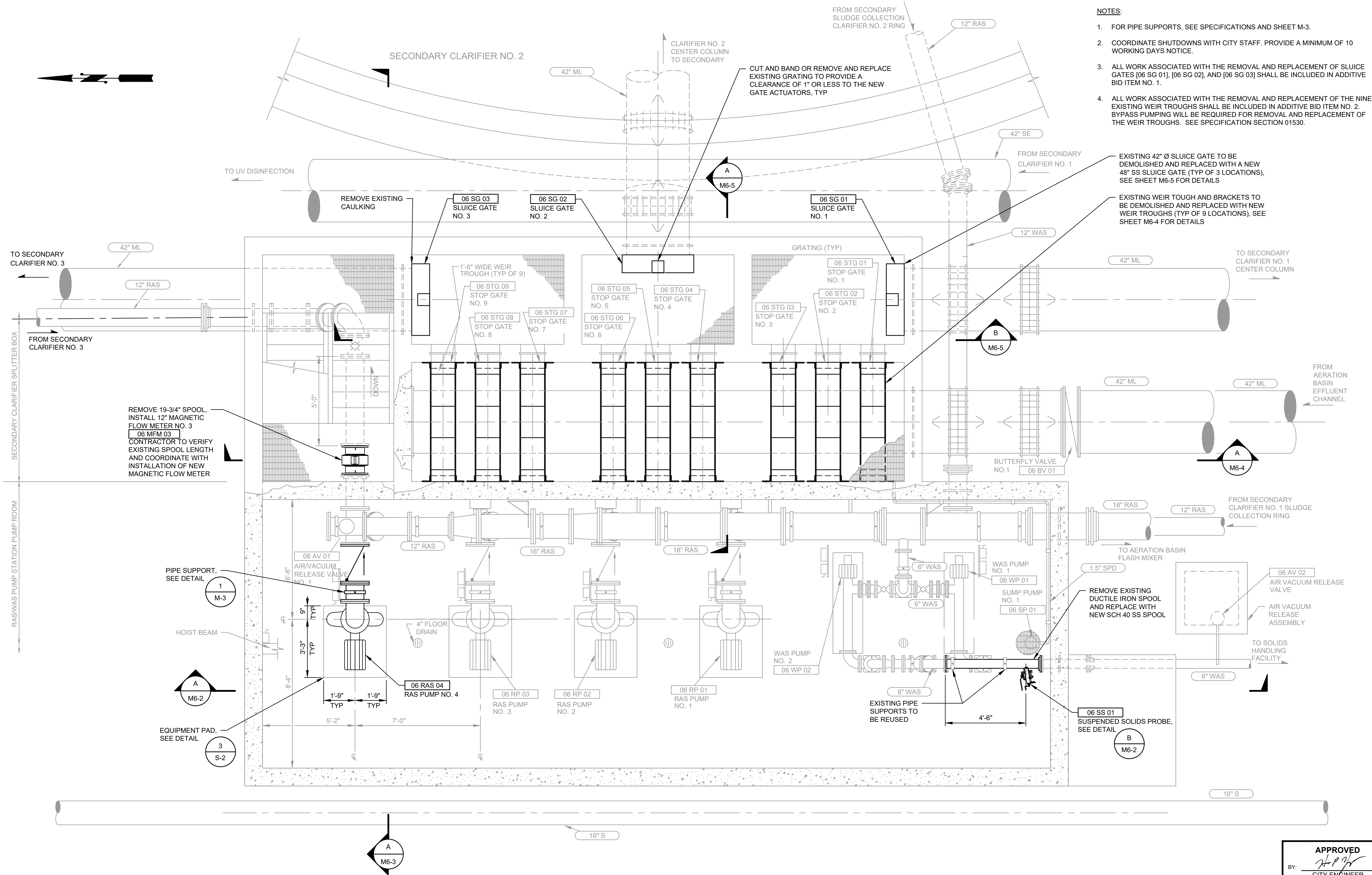
MECHANICAL

**MISCELLANEOUS
DETAILS**

DRAWING: **M-4** OF: **4**

SHEET: **18** OF: **60**

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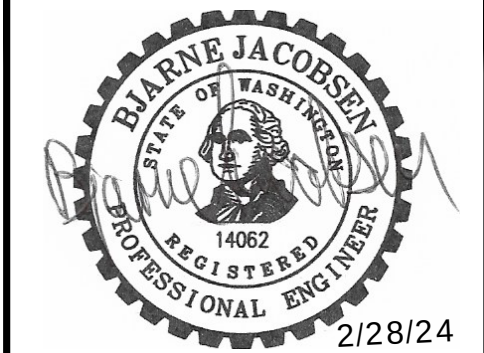


NOTES:

1. FOR PIPE SUPPORTS, SEE SPECIFICATIONS AND SHEET M-3.
2. COORDINATE SHUTDOWNS WITH CITY STAFF. PROVIDE A MINIMUM OF 10 WORKING DAYS NOTICE.
3. ALL WORK ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF SLUICE GATES [06 SG 01], [06 SG 02], AND [06 SG 03] SHALL BE INCLUDED IN ADDITIVE BID ITEM NO. 1.
4. ALL WORK ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF THE NINE EXISTING WEIR TROUGHS SHALL BE INCLUDED IN ADDITIVE BID ITEM NO. 2. BYPASS PUMPING WILL BE REQUIRED FOR REMOVAL AND REPLACEMENT OF THE WEIR TROUGHS. SEE SPECIFICATION SECTION 01530.

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PRCNC20240061



CITY OF PUYALLUP
STATE OF WASHINGTON
**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION**
CIP NO. 20-018
1802 18TH ST NW,
PUYALLUP, WA 98371

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FILE: M6_SB-PLN-SEC.DWG		

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

MECHANICAL
AREA 6
**SECONDARY
CLARIFIER SPLITTER
BOX AND RAS/WAS
PUMP STATION PLAN**

DRAWING: **M6-1** OF: **5**

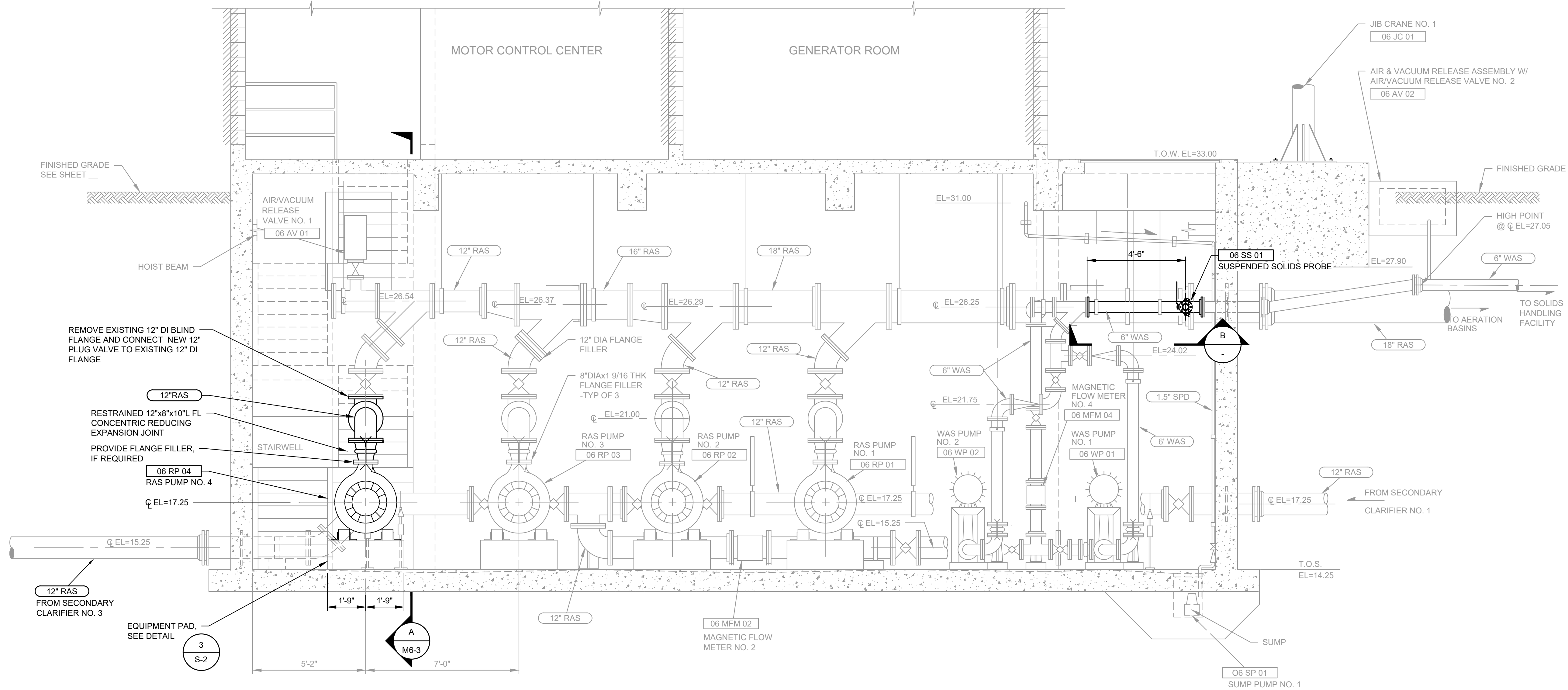
SHEET: **19** OF: **60**

APPROVED
BY:
CITY ENGINEER
CITY OF PUYALLUP
APPROVED DATE: **2/28/2024**
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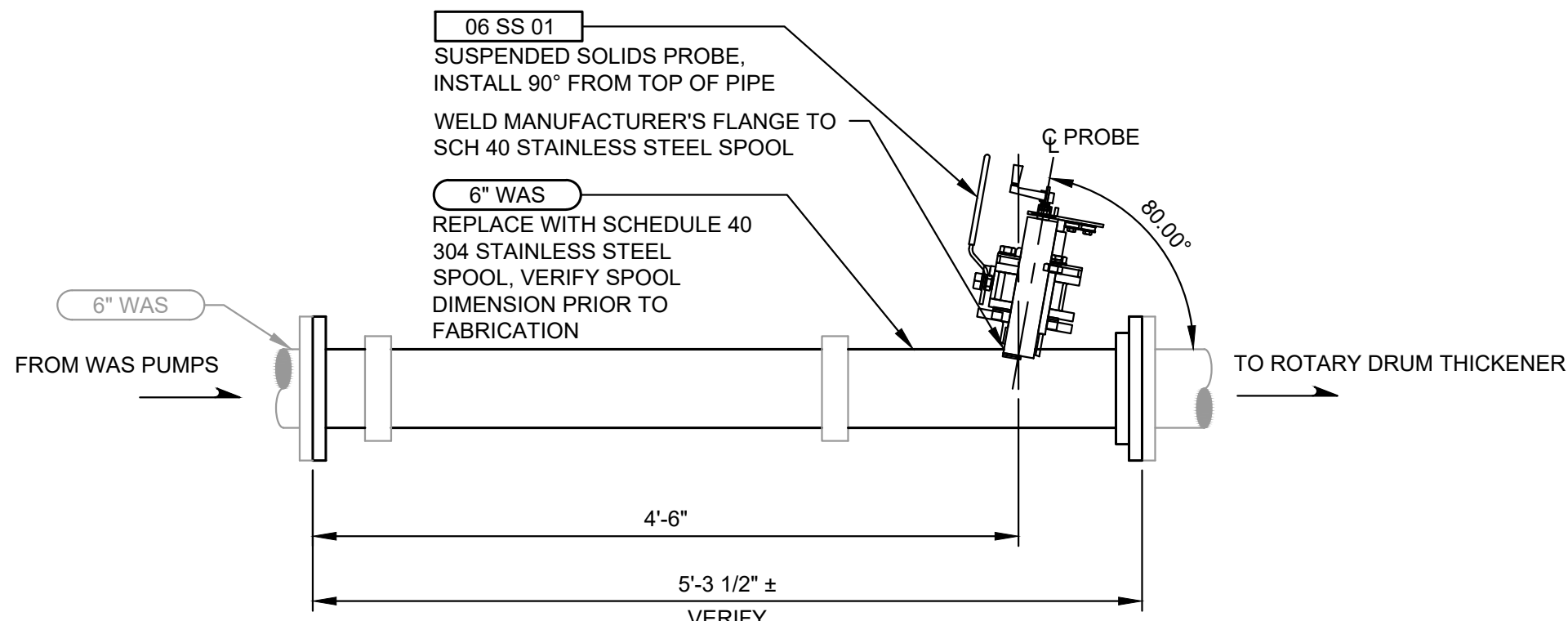
**SECONDARY CLARIFIER SPLITTER BOX
AND RAS/WAS PUMP STATION PLAN**

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

M:\PUYALLUP\21462 WPCP 3rd Secondary Clarifier\01 Design\PlanSet\Mechanical\M6_SB-PLN-SEC.dwg, 2/28/2024 12:57 PM, CHARLEY REID



SECTION
A
M6-1
SCALE: 3/8\"=1'-0\"



SECTION
B
SCALE: 1\"=1'-0\"

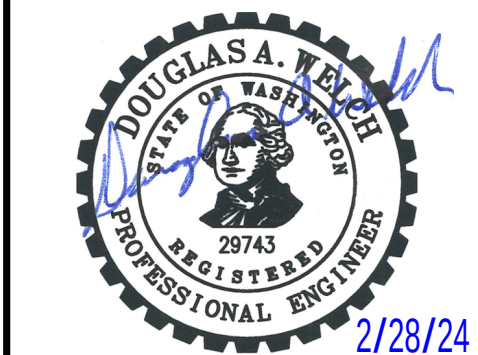
NOTES:

- FOR PIPE SUPPORTS, SEE SPECIFICATIONS AND SHEET M-3.
- COORDINATE SHUTDOWNS WITH CITY STAFF. PROVIDE A MINIMUM OF 10 WORKING DAYS NOTICE.

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
APPROVED DATE: 2/28/2024
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CONSULTING ENGINEERS
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SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

PRCNC20240061



CITY OF PUYALLUP
STATE OF WASHINGTON
WATER POLLUTION CONTROL PLANT THIRD SECONDARY CLARIFIER INSTALLATION
CIP NO. 20-018
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
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FILE: M6_SB-PLN-SEC.DWG		

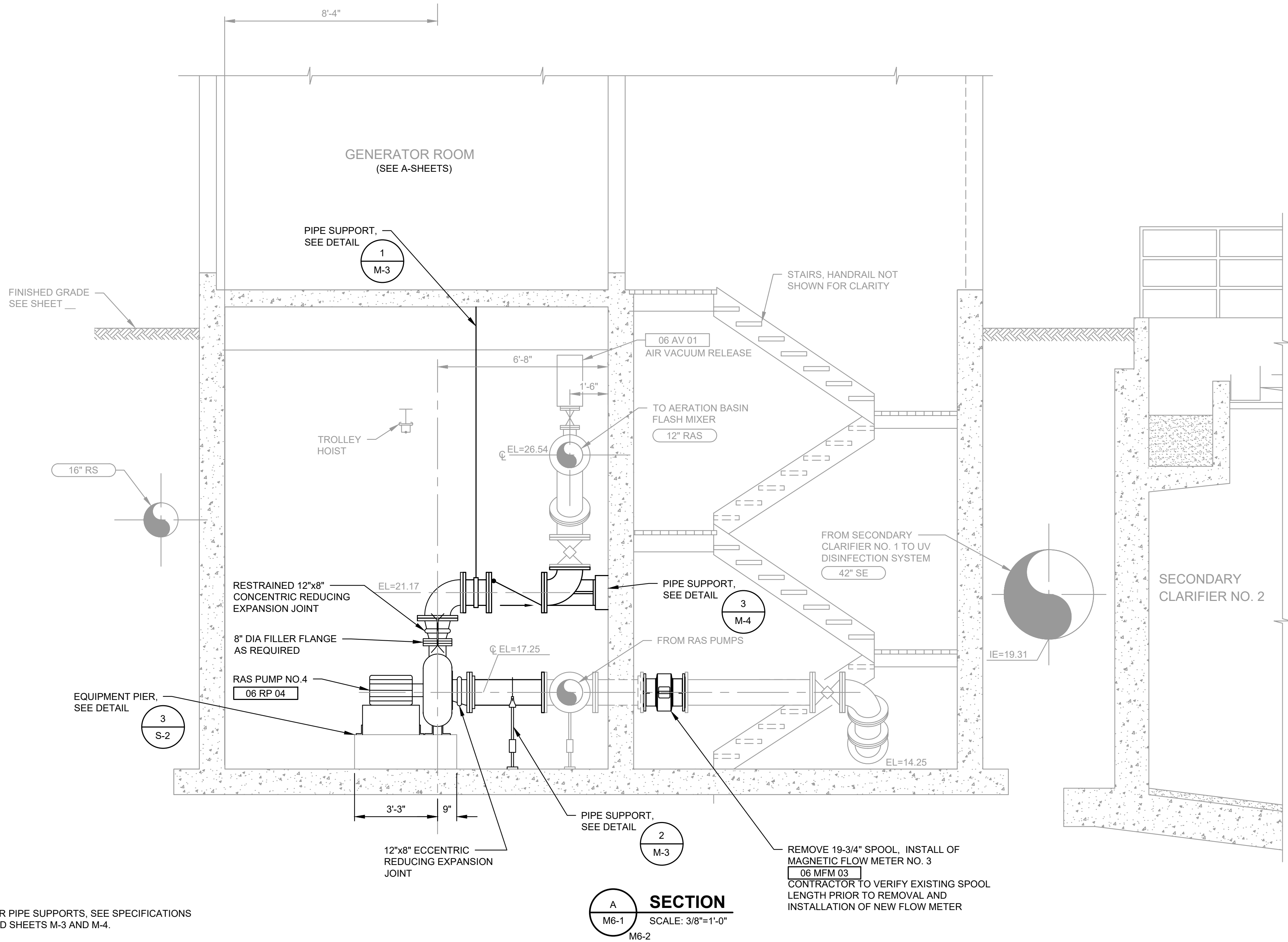
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

MECHANICAL
AREA 6
SECONDARY CLARIFIER SPLITTER BOX AND RAS/WAS PUMP STATION SECTIONS

DRAWING: **M6-2** OF: **5**

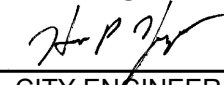
SHEET: **19** OF: **60**

M:\PUYALLUP\21462 WPCP 3rd Secondary Clarifier\01 Design\PlanSet\Mechanical\M6_SB-PLN-SEC.dwg, 2/28/2024 12:57 PM, CHARLEY REID



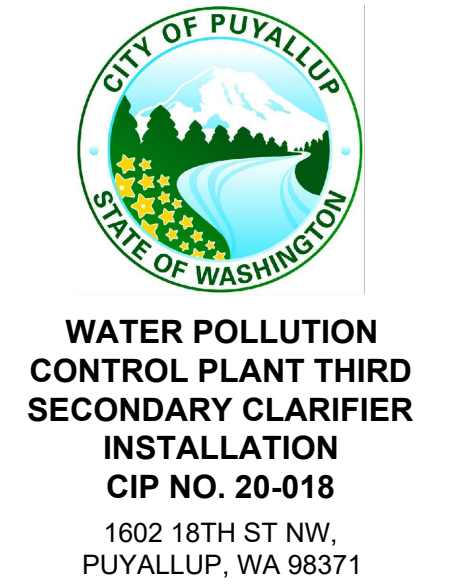
NOTE:

- FOR PIPE SUPPORTS, SEE SPECIFICATIONS AND SHEETS M-3 AND M-4.

APPROVED
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CITY OF PUYALLUP
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Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH,
SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

PRCNC20240061



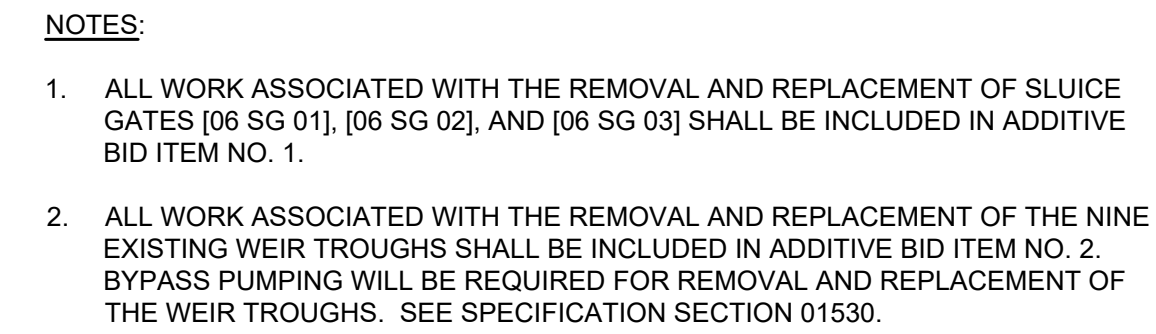
No.	DATE	REVISION
ISSUED FOR: BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: DAW		
CHECKED BY: DAW		
DRAWN BY: CRR		
DESIGNER: BJ		
G & O JOB NO.: 21462.00		
FILE: M6_SB-PLN-SEC.DWG		

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

MECHANICAL
AREA 6
SECONDARY CLARIFIER SPLITTER BOX AND RAS/WAS PUMP STATION SECTIONS AND DETAILS

DRAWING: **M6-3** OF: **5**

SHEET: **21** OF: **60**

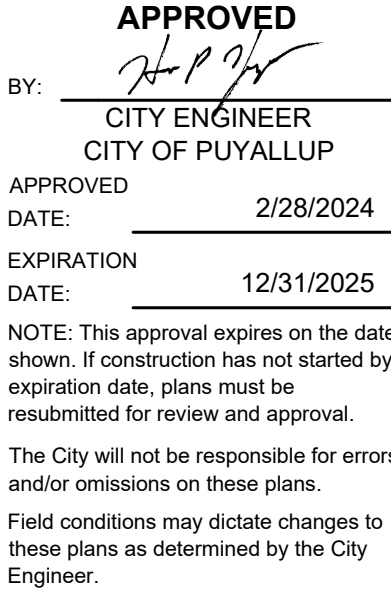


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CONSULTING ENGINEERS

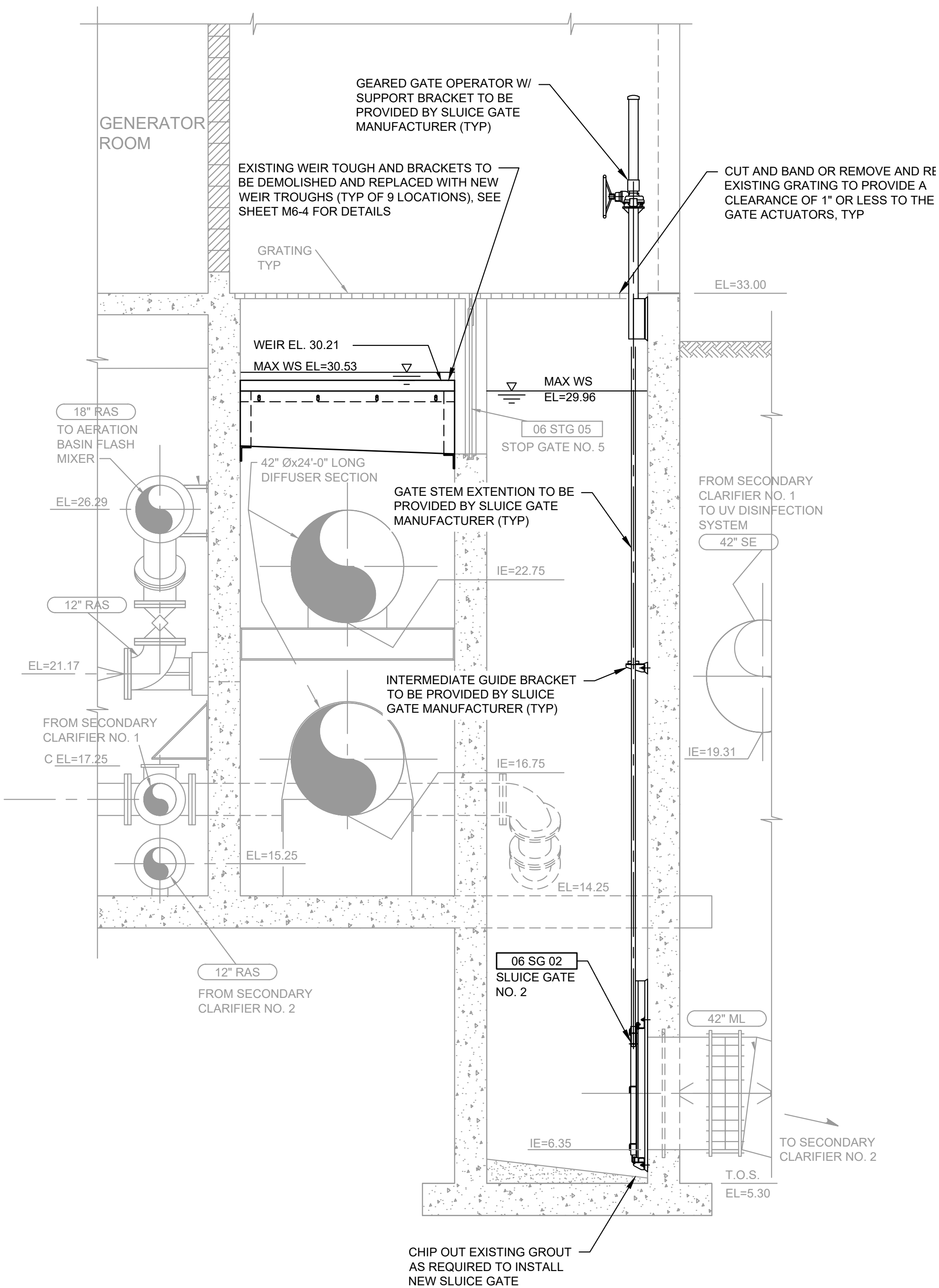
1130 RAINIER AVENUE SOUTH,
SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860



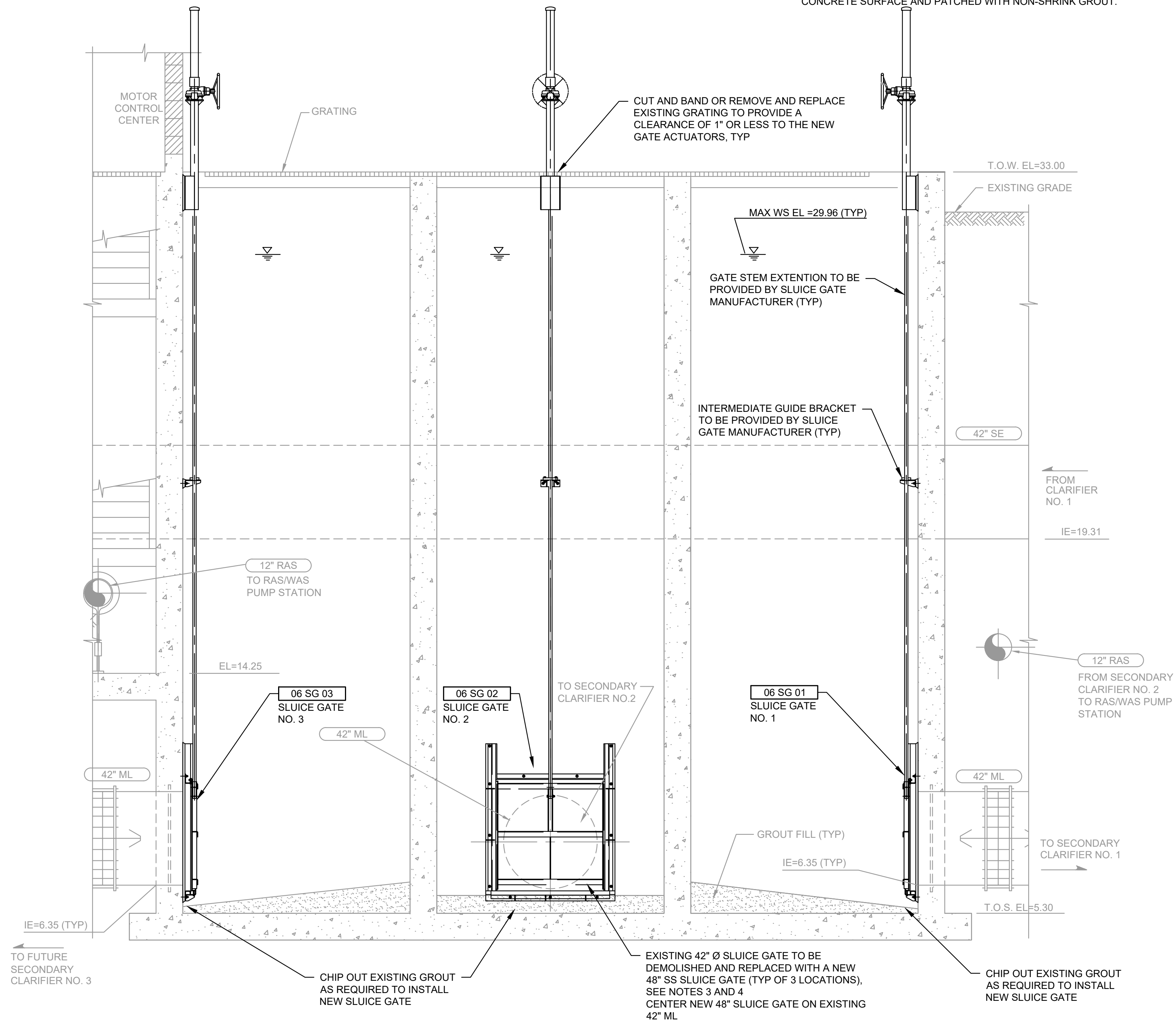
STREET 22 37 55



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

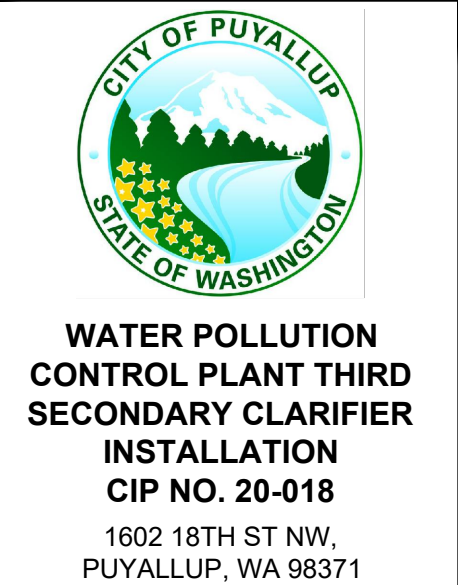


SECTION B
SCALE: 1 1/2"=1'-0"

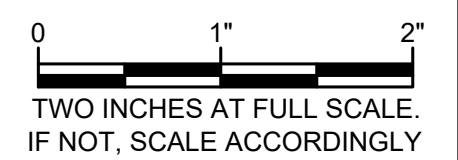
NOTES:

1. ALL WORK ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF SLUICE GATES [06 SG 01], [06 SG 02], AND [06 SG 03] SHALL BE INCLUDED IN ADDITIVE BID ITEM NO. 1.
2. ALL WORK ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF THE NINE EXISTING WEIR TROUGHS SHALL BE INCLUDED IN ADDITIVE BID ITEM NO. 2. BYPASS PUMPING WILL BE REQUIRED FOR REMOVAL AND REPLACEMENT OF THE WEIR TROUGHS. SEE SPECIFICATION SECTION 01530.
3. REMOVE AND WASTEHAUL EXISTING CAST IRON SLUICE GATES, INTERMEDIATE GUIDE BAR BRACKETS, AND PEDESTAL GATE OPERATOR AND REPLACE WITH NEW 48" SS SLUICE GATE.
4. EXISTING ANCHOR BOLTS TO BE CUT TO A DEPTH OF 1" BELOW THE EXISTING CONCRETE SURFACE AND PATCHED WITH NON-SHRINK GROUT.

PRCNC20240061



No.	DATE	REVISION
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G & O JOB NO.: 21462.00		
FILE: M6_SB-PLN-SEC.DWG		

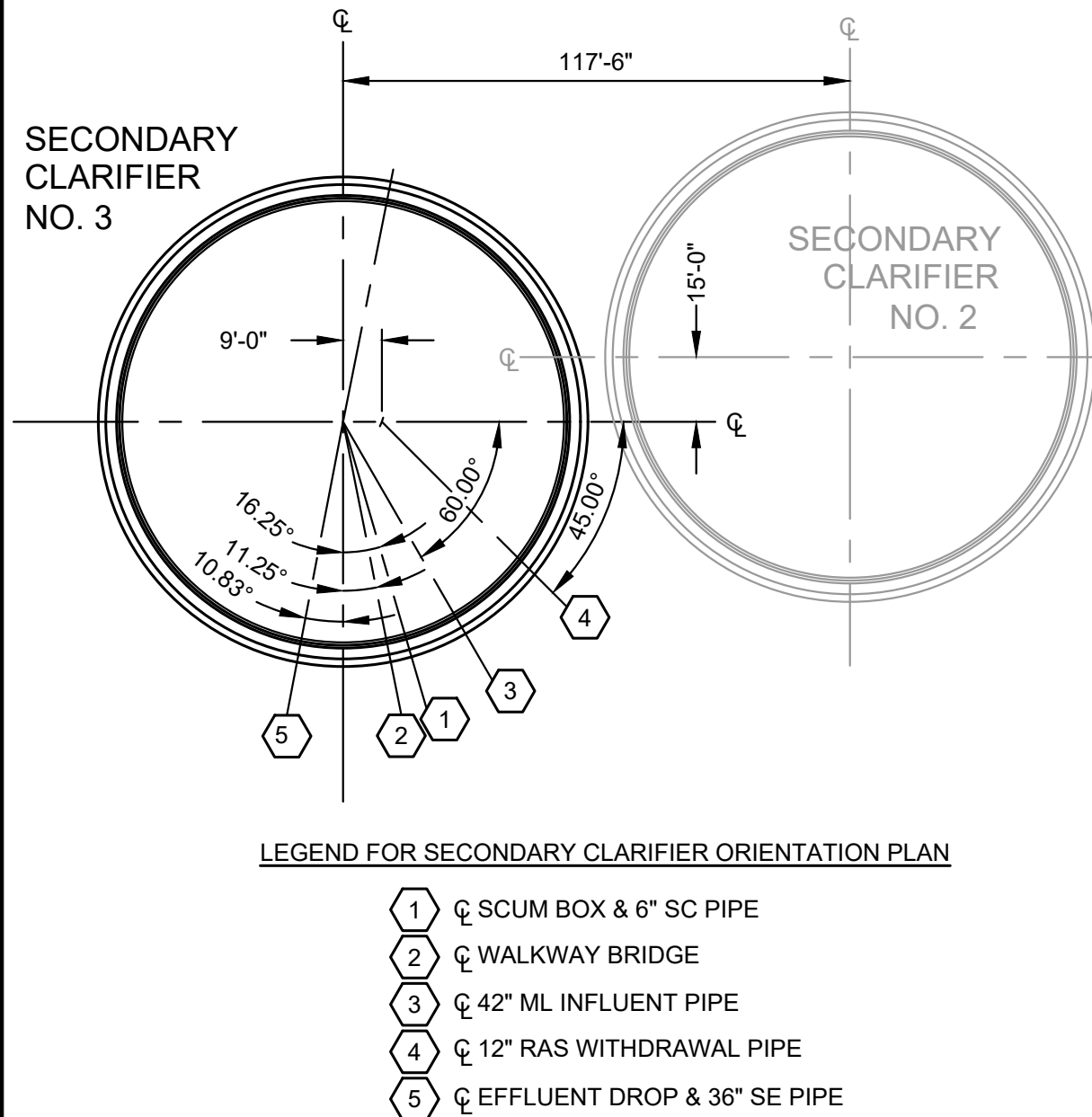


MECHANICAL
AREA 6
SECONDARY CLARIFIER SPLITTER BOX AND RAS/WAS PUMP STATION SECTIONS AND DETAILS

DRAWING: **M6-5** OF: **5**
SHEET: **23** OF: **60**

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
APPROVED DATE: 2/28/2024
EXPIRATION DATE: 12/31/2025
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SECONDARY CLARIFIERS ORIENTATION PLAN

SCALE: 1"=40'-0"

FIBERGLASS WEIR/EFFLUENT BAFFLE/STAMFORD BAFFLE

- 1 1/4"x12" FIBERGLASS SCUM BAFFLE PLATE
- 2 1/4"x10" V-NOTCH FIBERGLASS WEIR PLATE WITH NEOPRENE SEAL, SEE DETAIL
- 3 L 6x6x3/8x3" AND L 6x6x3/8x3" 316 SS BAFFLE SUPPORT BRACKETS @ 4'-0" OC AT WALL
- 4 (2) 3/8"x1 3/4" FLAT HEAD BOLTS w/WASHERS AND NUTS. PROVIDE 7/16"x1 1/2" SLOTTED HOLE IN L 6x6x3/8
- 5 3/4"x2" BOLT w/WASHER AND NUT. PROVIDE 13/16"x1 3/4" SLOTTED HOLE IN L 6x6x3/8
- 6 (2) 1/2"x6" SS THREADED ROD, EMBED 4" IN EPOXY ANCHOR w/WASHER AND NUT. PROVIDE 9/16"x1 1/2" SLOTTED HOLE IN L 6x6x3/8. FOR HOLE IN WEIR PLATE, SEE DETAIL
- 7 3/8" DIA THRD RODS IN EPOXY ANCHOR, 3-1/2" MIN EMBEDMENT
- 8 3/8" OVERSIZED FLAT WASHER
- 9 3/8" HEX NUT
- 10 1/4" X 1-1/4" HEX BOLT
- 11 1/4" FENDER WASHER
- 12 1/4" LOCK WASHER
- 13 1/4" HEX NUT

GROUT FILL IN EFFLUENT LAUNDER

- 1 HIGH POINT @ 180° FROM EFFLUENT PIPE
- 2 135° FROM EFFLUENT PIPE
- 3 90° FROM EFFLUENT PIPE
- 4 45° FROM EFFLUENT PIPE
- 5 LOW POINT @ EFFLUENT PIPE, SEE SECTION

NOTE:

- 1. ALL NUTS, BOLTS, AND WASHERS SHALL BE 316 SS.

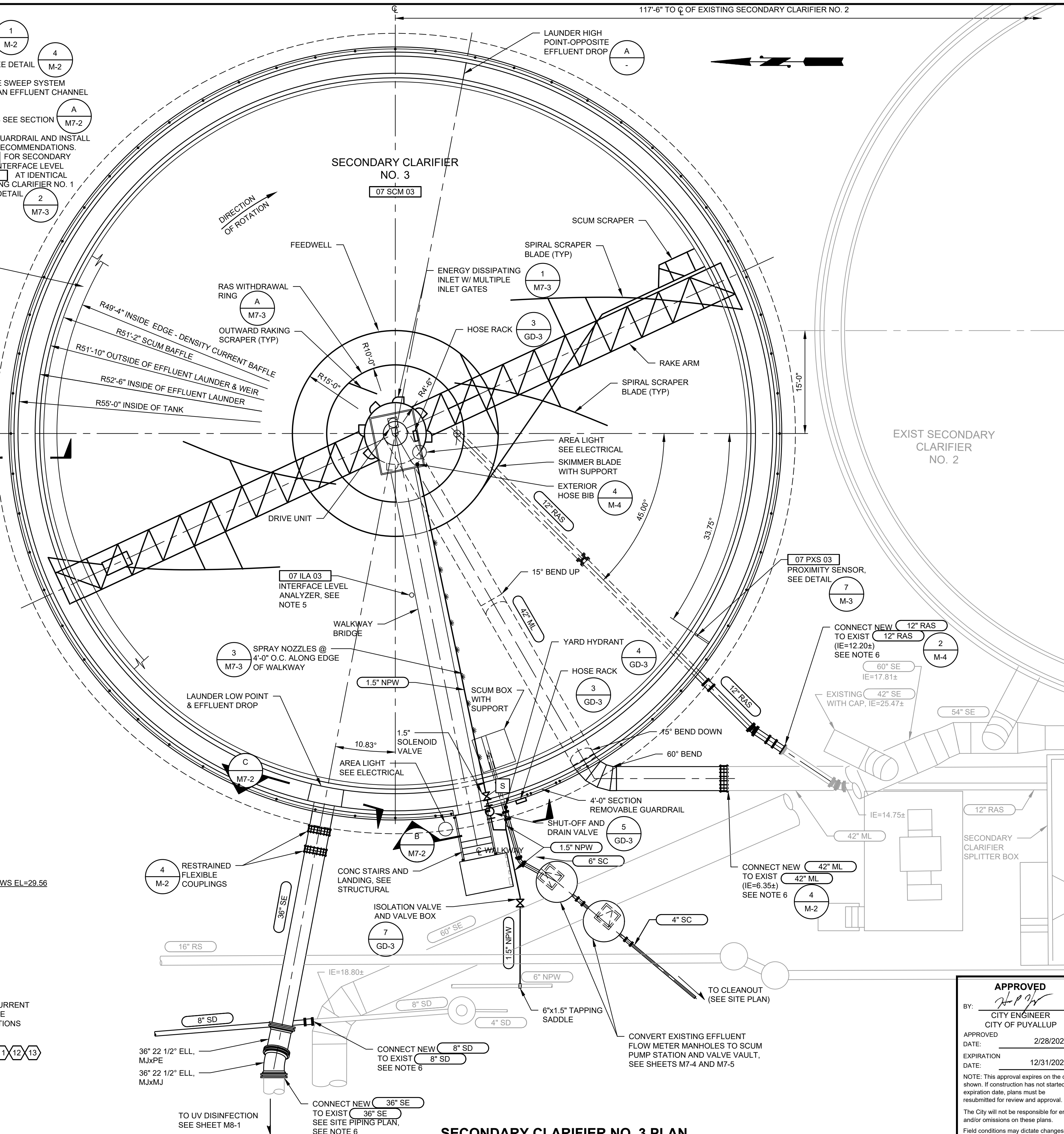
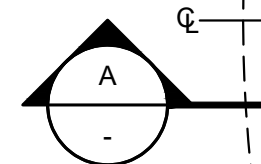
EFFLUENT LAUNDER SECTION

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

NOTES:

- 1. FOR PIPING PENETRATIONS, SEE DETAIL
- 2. FOR RESTRAINED FLEXIBLE COUPLINGS, SEE DETAIL
- 3. SECONDARY CLARIFIER SHALL HAVE ALGAE SWEEP SYSTEM INSTALLED AT END OF MECHANISM TO CLEAN EFFLUENT CHANNEL AND EFFLUENT WEIR.
- 4. FOR SECTIONAL ELEVATION OF CLARIFIERS SEE SECTION
- 5. ATTACH INTERFACE LEVEL ANALYZER TO GUARDRAIL AND INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. INTERFACE LEVEL ANALYZER 07 ILA 03 FOR SECONDARY CLARIFIER NO. 3 IS SHOWN. INSTALL NEW INTERFACE LEVEL ANALYZERS 07 ILA 01 AND 07 ILA 02 AT IDENTICAL LOCATIONS ALONG WALKWAYS FOR EXISTING CLARIFIER NO. 1 AND CLARIFIER NO. 2 RESPECTIVELY. SEE DETAIL
- 6. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING PIPES.

DENSITY CURRENT BAFFLE. SEE SPECS



SECONDARY CLARIFIER NO. 3 PLAN

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

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**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR:		
BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: DAW		
CHECKED BY: DAW		
DRAWN BY: CRR		
DESIGNER: BJ		
G & O JOB NO.: 21462.00		
FILE: SC3_PLAN.DWG		

0	1"	2"
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY		

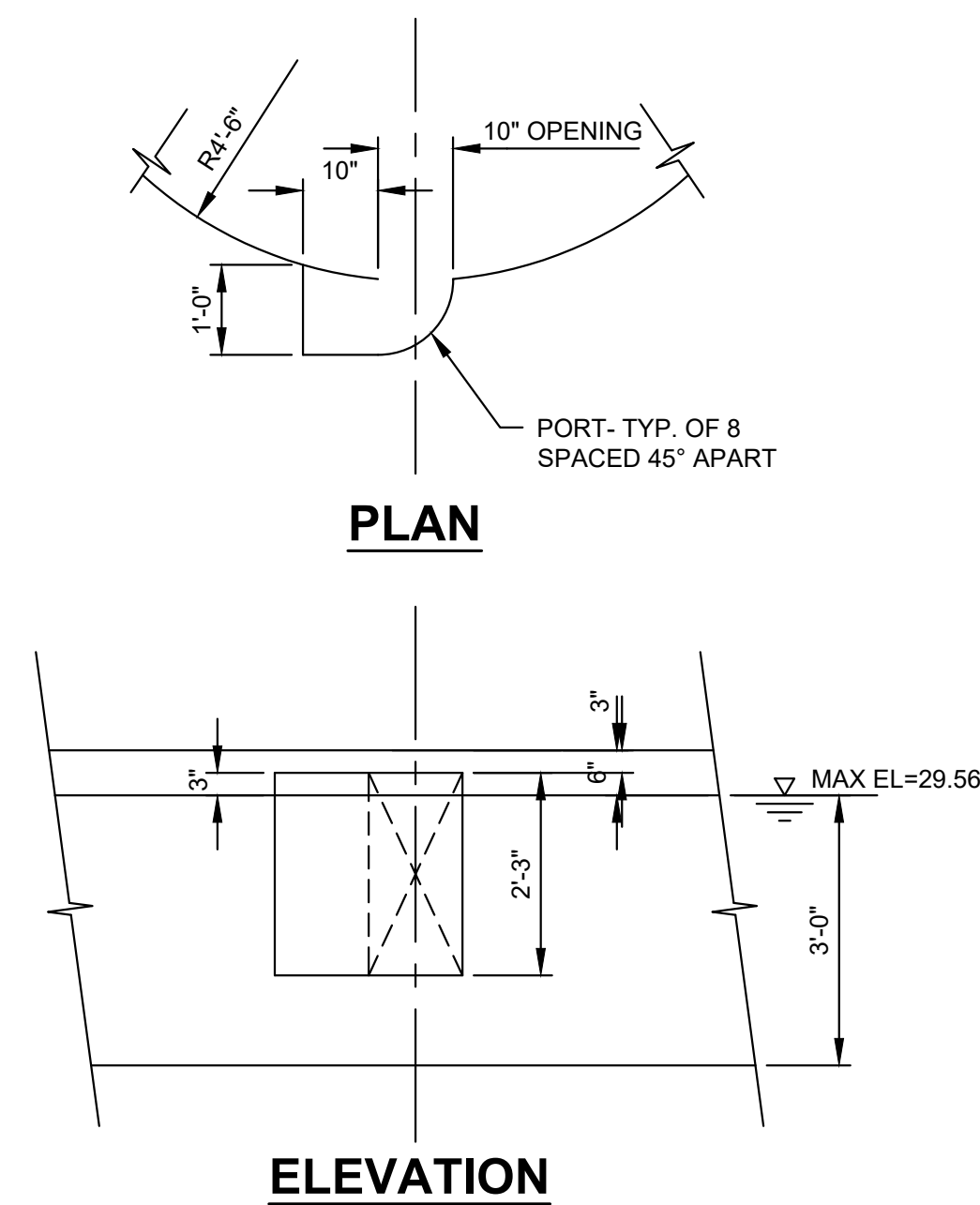
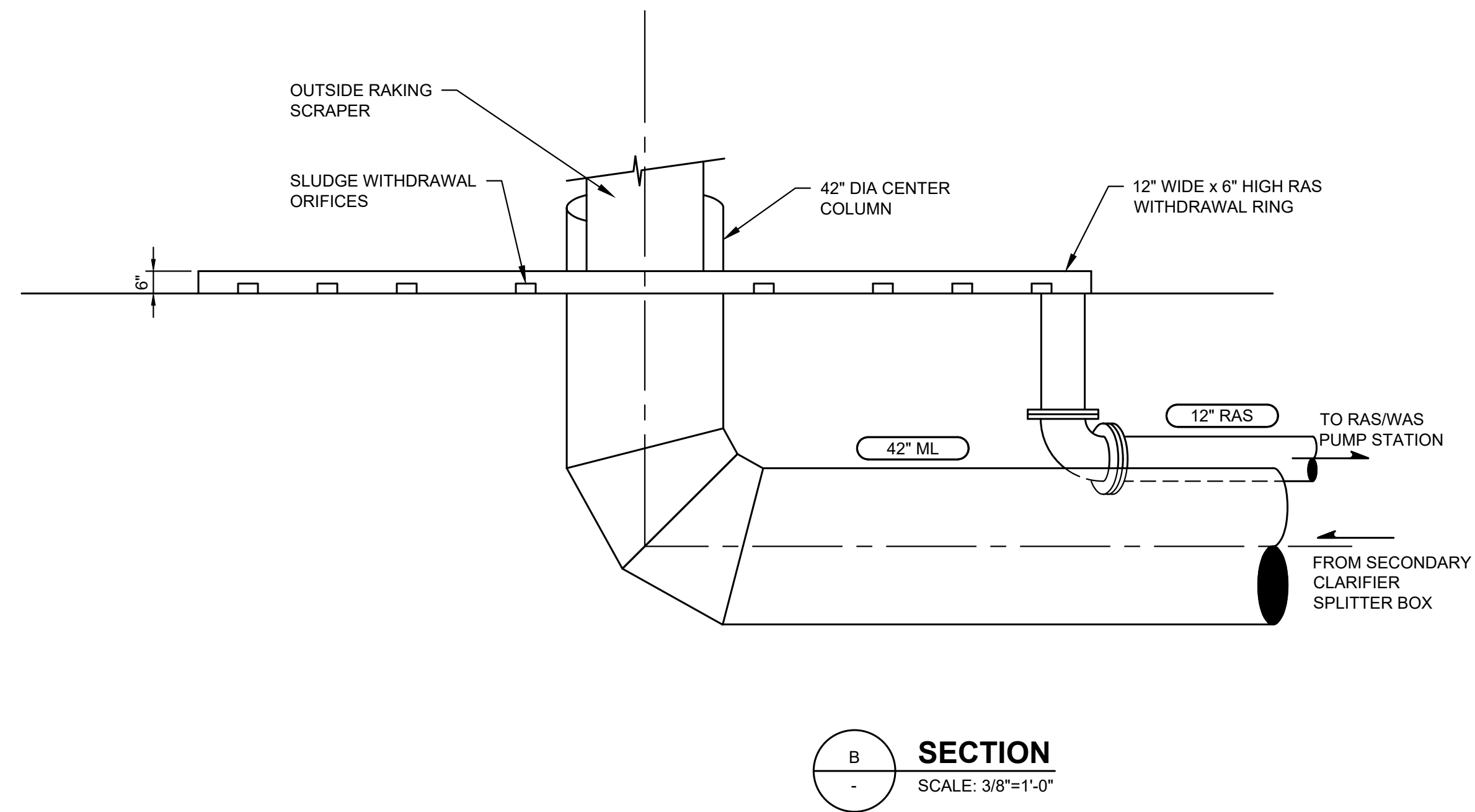
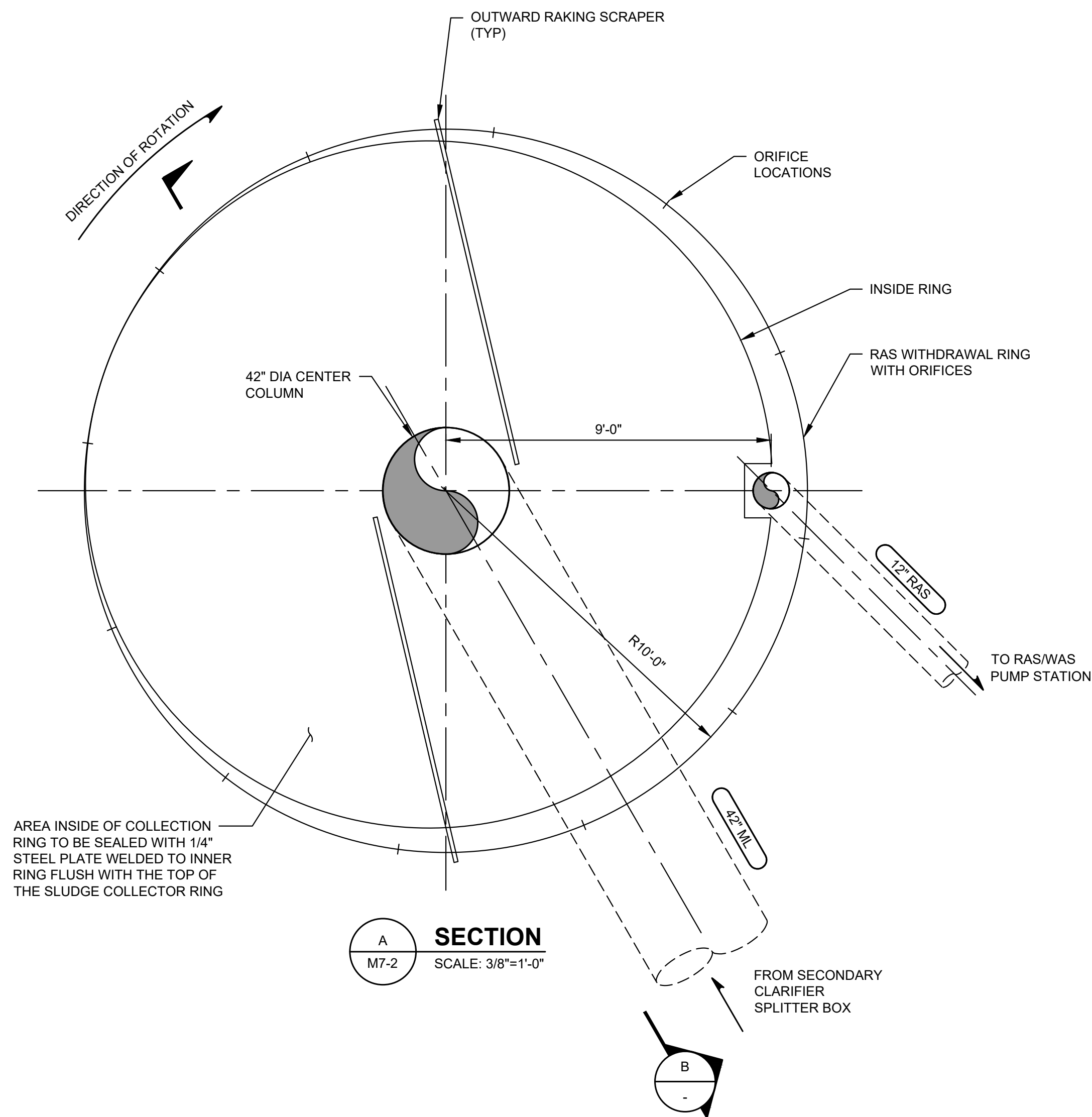
**MECHANICAL
AREA 7**

**SECONDARY
CLARIFIER NO. 3 PLAN**

DRAWING: **M7-1** OF: **5**

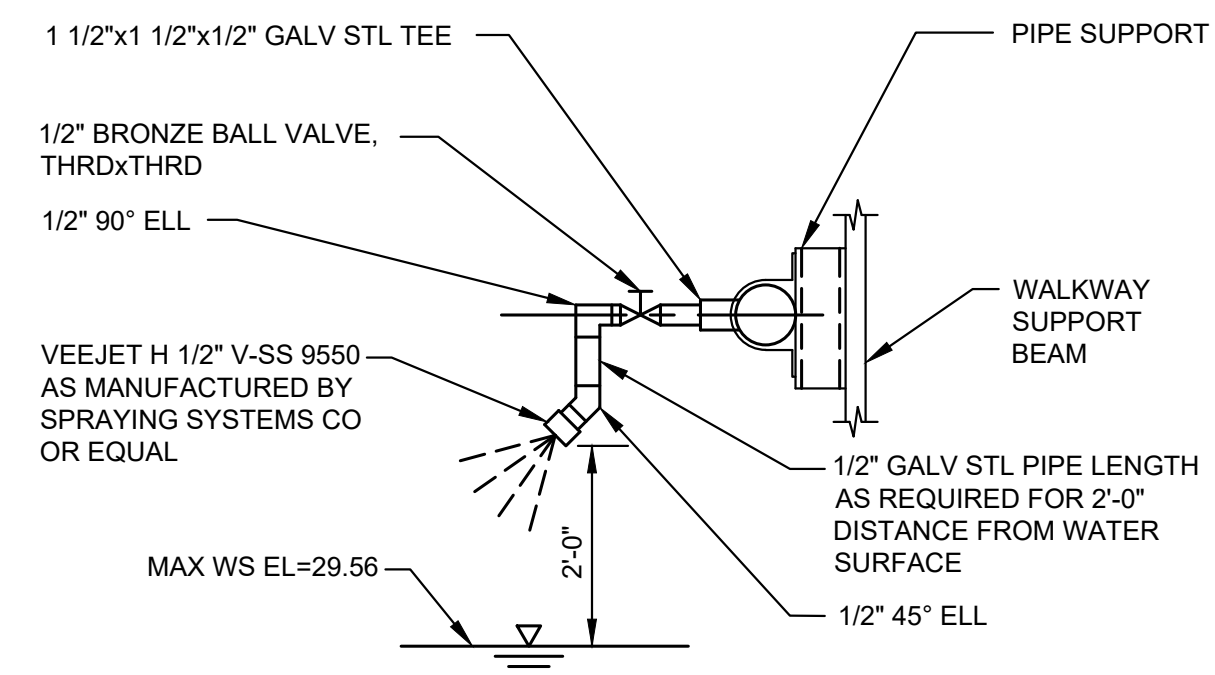
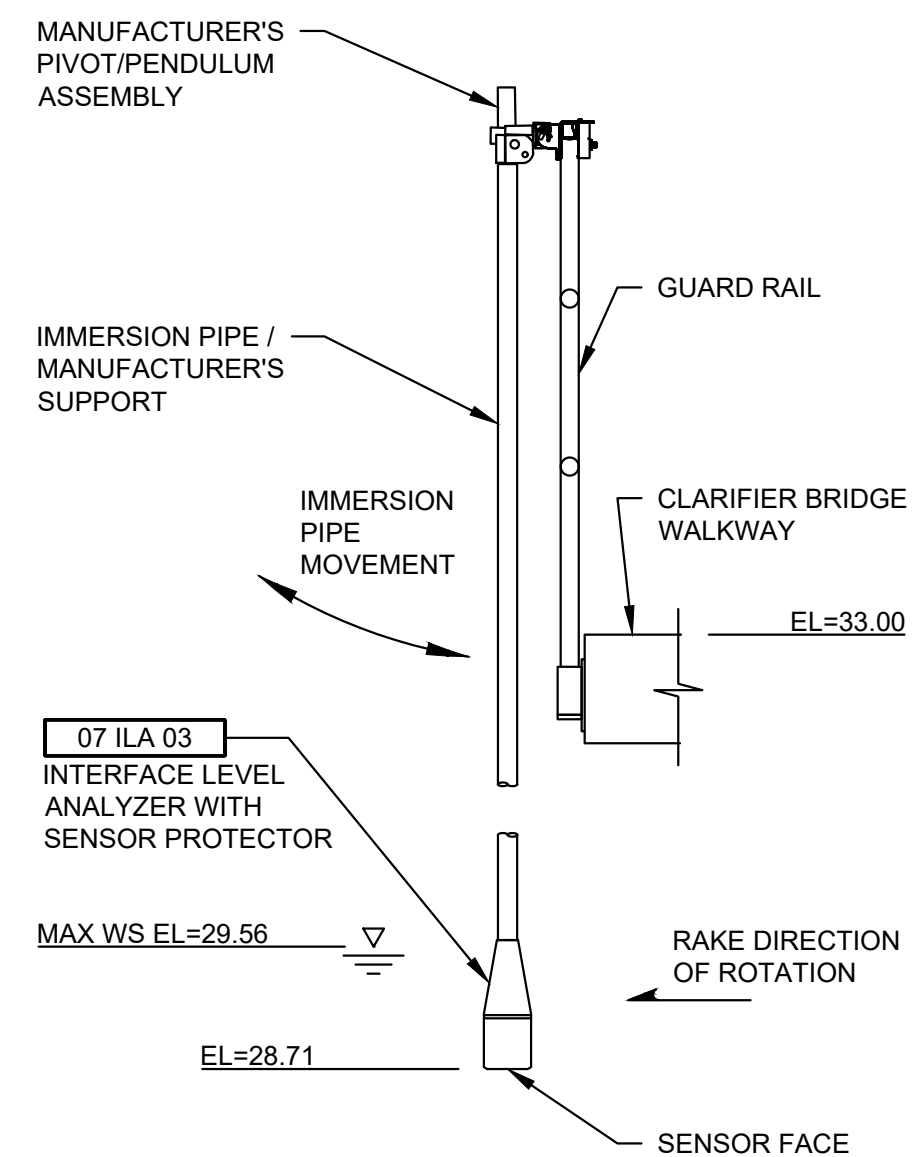
SHEET: **24** OF: **60**

APPROVED
BY:
CITY ENGINEER
CITY OF PUYALLUP
DATE: 2/28/2024
EXPIRATION DATE: 12/31/2025
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NOTE:

1. TANGENTIAL ENERGY DISSIPATING INLET SHOWN. DUAL GATE ENERGY DISSIPATING INLET ALSO ACCEPTABLE.



APPROVED	
BY:	
CITY ENGINEER CITY OF PUYALLUP	
APPROVED	
DATE:	2/28/2024
EXPIRATION	
DATE:	12/31/2025
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PRCNC20240061



**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**

1602 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
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ISSUED FOR:

ISSUE DATE: FEBRUARY 2024

APPROVED BY: DAW

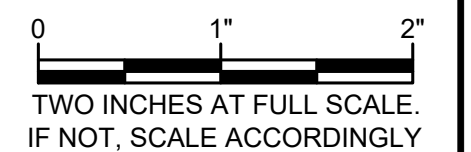
CHECKED BY: DAW

DRAWN BY: CRR

DESIGNER: BJ

G & O JOB NO.:	21462.00
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FILE: SC3_PLAN.DWG



MECHANICAL

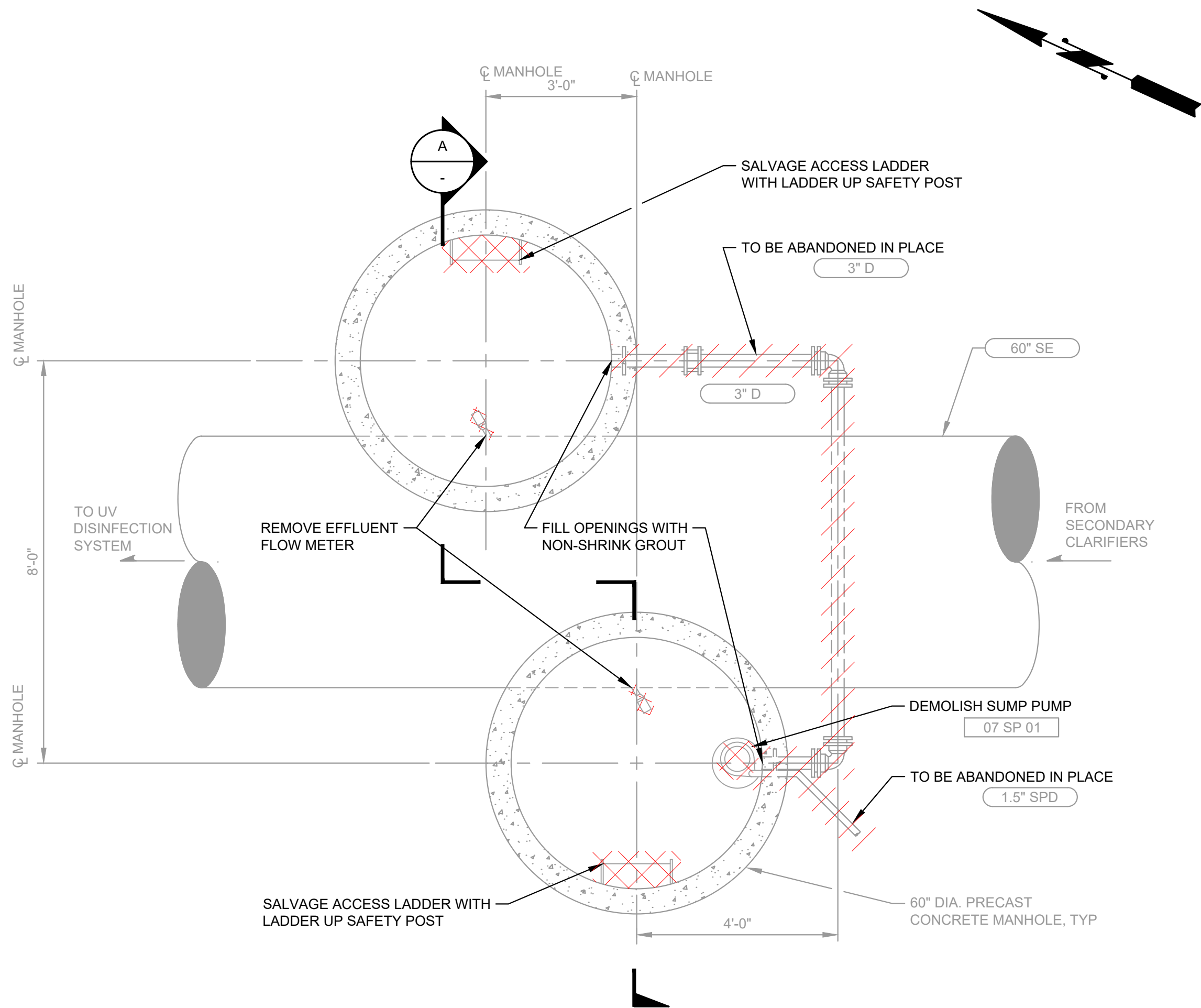
AREA 7

SECONDARY CLARIFIER NO. 3 SECTIONS AND DETAILS

DRAWING: **M7-3** OF: **5**

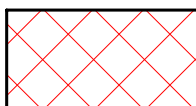
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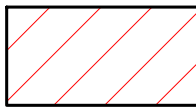


**EXISTING EFFLUENT FLOW METER
MANHOLE DEMOLITION PLAN**
SCALE: 1/2"=1'-0"

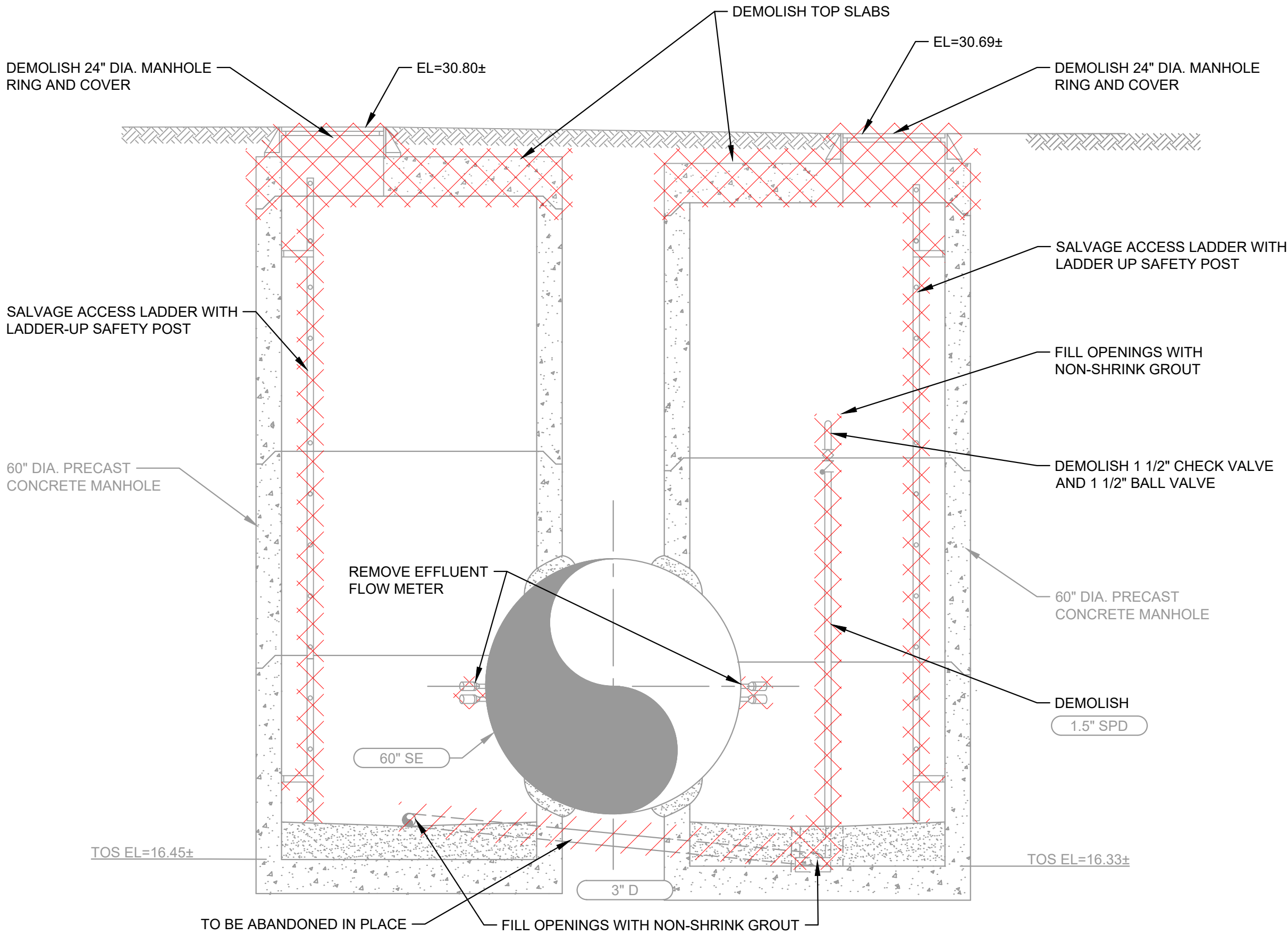
LEGEND:



DENOTES ITEMS TO BE DEMOLISHED BY CONTRACTOR IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS



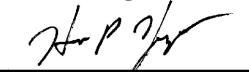
DENOTES ITEMS TO BE ABANDONED IN PLACE BY CONTRACTOR IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS



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

- NOTES:**
- SEE SPECIFICATIONS FOR REMOVAL AND DISPOSAL OF PIPING, EQUIPMENT AND MATERIALS.
 - CONTRACTOR TO VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK.
 - PLUG OPEN ENDS OF ALL ABANDONED PIPING WITH NON-SHRINK GROUT.

APPROVED

BY: 
CITY ENGINEER
CITY OF PUYALLUP

APPROVED DATE: 2/28/2024

EXPIRATION DATE: 12/31/2025

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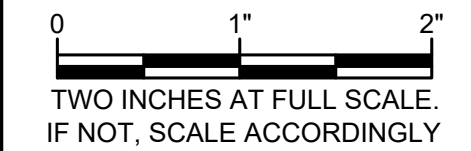

ELAINE JACOBSON
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
14062
2/28/24


DOUGLAS A. WELCH
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
28743
2/28/24


CITY OF PUYALLUP
STATE OF WASHINGTON

**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION**
CIP NO. 20-018
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR: BID SET		
ISSUE DATE: FEBRUARY 2024		
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CHECKED BY: DAW		
DRAWN BY: CRR		
DESIGNER: BJ		
G & O JOB NO.: 21462.00		
FILE: M7_SCUM-PS-PLN.DWG		



MECHANICAL

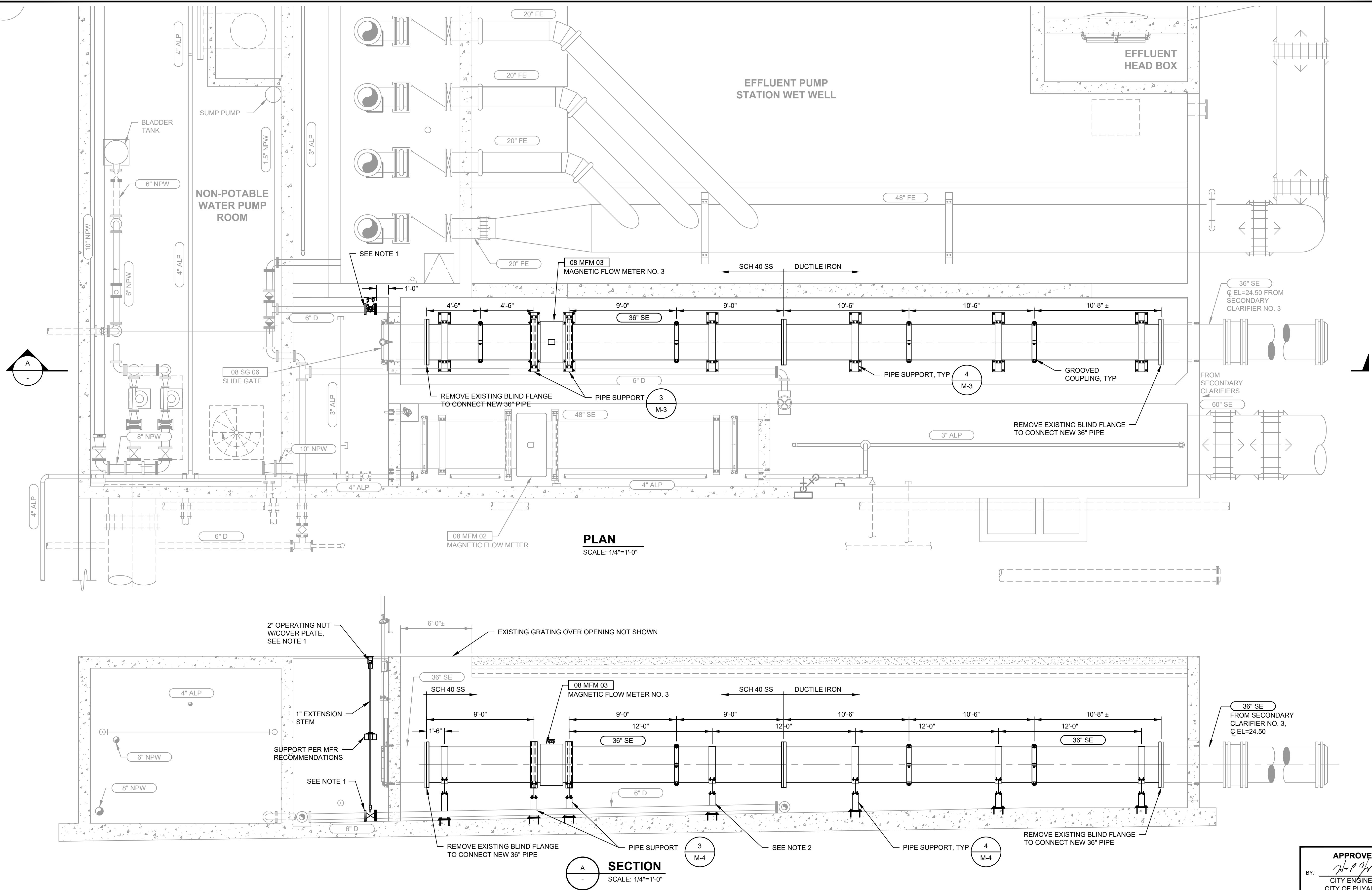
AREA 7

**EXISTING EFFLUENT
FLOWMETER
MANHOLE
DEMOLITION PLAN**

DRAWING: **M7-4** OF: **5**

SHEET: **27** OF: **60**

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(206) 284-0860

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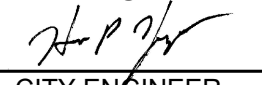
CITY OF PUYALLUP
STATE OF WASHINGTON
**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
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CIP NO. 20-018**
1802 18TH ST NW,
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DESIGNER: BJ		
G & O JOB NO.: 21462.00		
FILE: M8_EFM-PLN-SEC.DWG		

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

MECHANICAL
AREA 8
**EFFLUENT FLOW
METER PLAN AND
SECTION**

DRAWING: **M8-1** OF: **1**
SHEET: **29** OF: **60**

APPROVED
BY: 
CITY ENGINEER
CITY OF PUYALLUP
DATE: **2/28/2024**
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- NOTES:**
- CUT 6" PIPE AND INSTALL NEW 6" PLUG VALVE WITH EXTENDED BONNET AND 2-INCH ACTUATOR NUT. PROVIDE SUPPORTS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. PROVIDE 4-INCH DIAMETER BANDED OPENING IN EXISTING ALUMINUM GRATING WITH SOLID COVER PLATE. OPENING TO BE CENTERED ON VALVE ACTUATOR NUT.
 - CONTRACTOR SHALL VERIFY SLAB ELEVATION AT EACH SUPPORT LOCATION PRIOR TO FABRICATING SUPPORTS.

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PROJECT DATA

CODES:
IBC 2018 INTERNATIONAL BUILDING CODE
IMC 2018 INTERNATIONAL MECHANICAL CODE
IFC 2018 INTERNATIONAL FIRE CODE
UPC 2018 UNIFORM PLUMBING CODE
WSEC 2018 WASHINGTON STATE ENERGY CODE

NFPA 2020 STANDARD FOR FIRE PROTECTION IN WASTEWATER
820 TREATMENT AND COLLECTION FACILITIES

PROJECT DESCRIPTION:
ADDITION OF A METAL STUD FRAMED WALL AND DOOR TO SEPARATE THE
MOTOR CONTROL CENTER AND THE RAS/WAS PUMP ROOM.

IBC OCCUPANCY:
U - RAS/WAS PUMP STATION

IBC TYPE OF CONSTRUCTION:
TYPE - V.B.

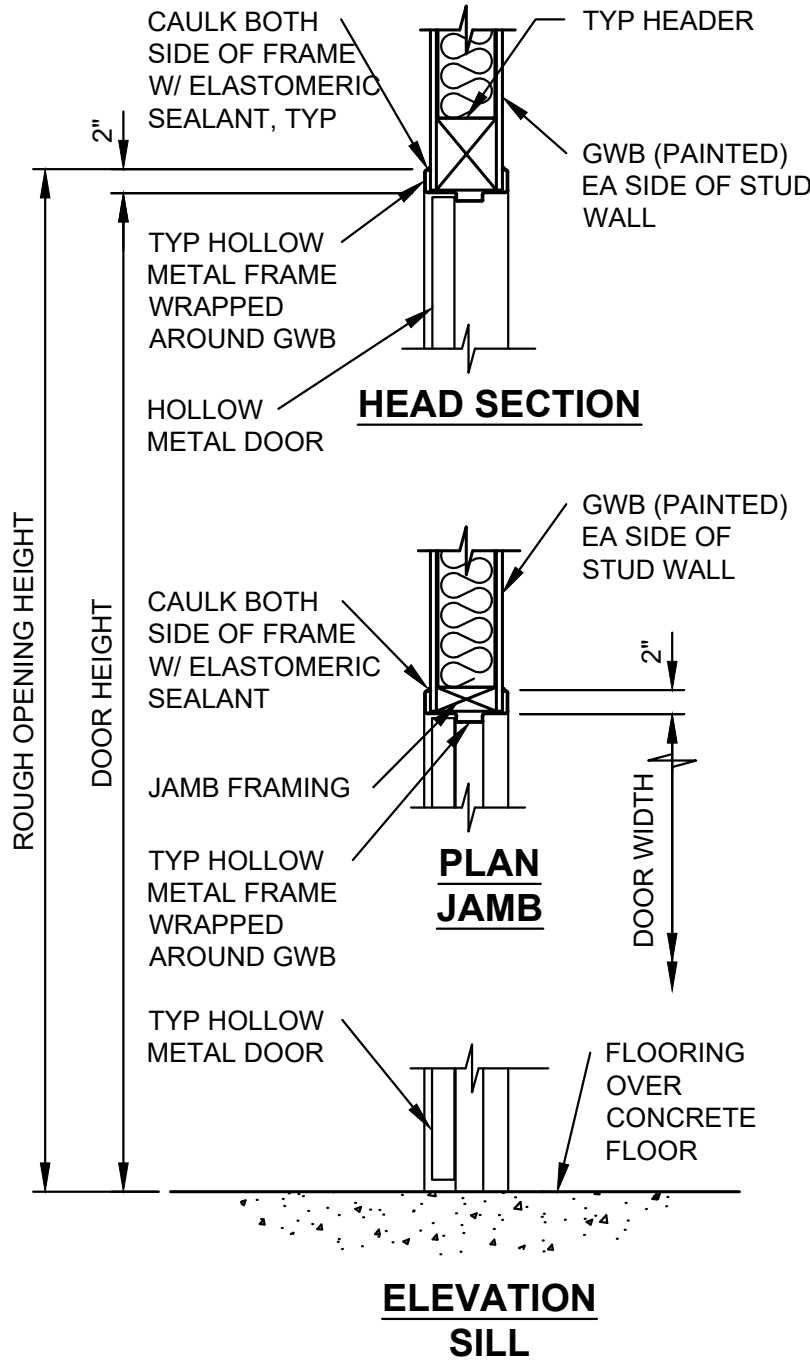
IBC FIRE RESISTIVE REQUIREMENTS:
BEARING WALLS - 0 HOURS
NONBEARING WALLS - 0 HOURS
FLOOR ASSEMBLIES - 0 HOURS
ROOF ASSEMBLIES - 0 HOURS
ALL OTHER CONSTRUCTIONS - NON-RATED
(ALL FIRE SEPARATION DISTANCES ≥ 30 FEET.)

NFPA 820 REQUIREMENTS:
THE RAS/WAS PUMP ROOM SHALL BE UNCLASSIFIED PER NEC AREA
ELECTRICAL CLASSIFICATION REQUIREMENTS WHEN VENTILATED AT 6 AIR
CHANGES PER HOUR IN ACCORDANCE WITH NFPA 820.

- GENERAL NOTES:
- ALL DIMENSIONS ARE TO FACE OF FRAMING AND CMU WALL UNLESS NOTED OTHERWISE.
 - NOT ALL WALL PENETRATION, MAY BE SHOWN. COORDINATE SIZE AND LOCATIONS WITH MECHANICAL, PLUMBING, ELECTRICAL AND HVAC DRAWINGS.
 - INSULATION SHALL BE INSTALLED SUCH THAT IDENTIFICATION MARKINGS ARE READILY OBSERVABLE DURING INSPECTION.

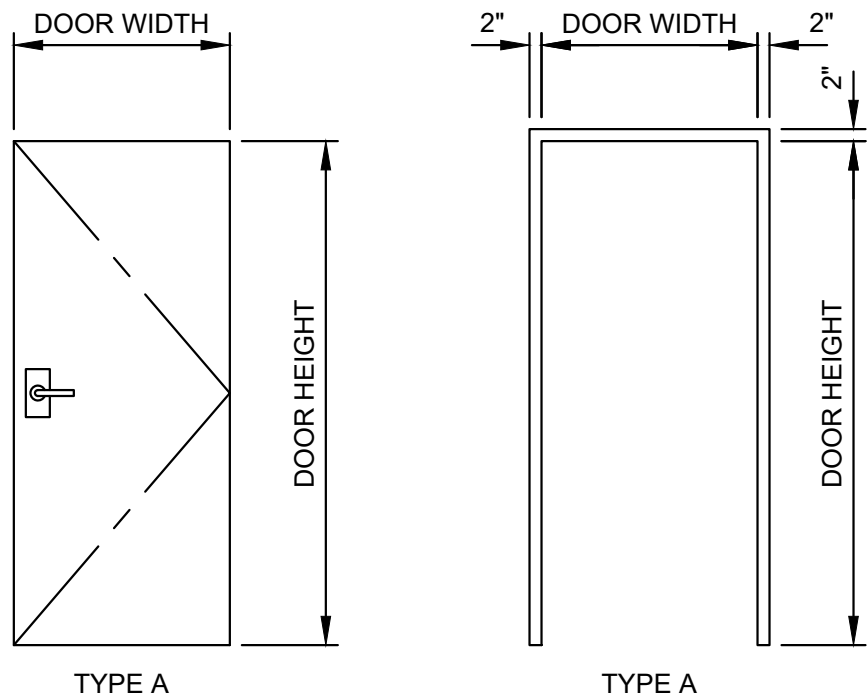
WALL TYPES & LEGEND

EXISTING WALL
NEW 2x4 METAL STUD @ 16" OC TO EXISTING
GWB CEILING W/ 1/2" GWB EA SIDE; PAINT TO
SPECIFICATIONS
DOOR NUMBER, SEE DOOR SCHEDULE THIS
SHEET



METAL DOOR FOR INTERIOR STUD WALL DETAIL

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



DOOR TYPE

SCALE: NTS

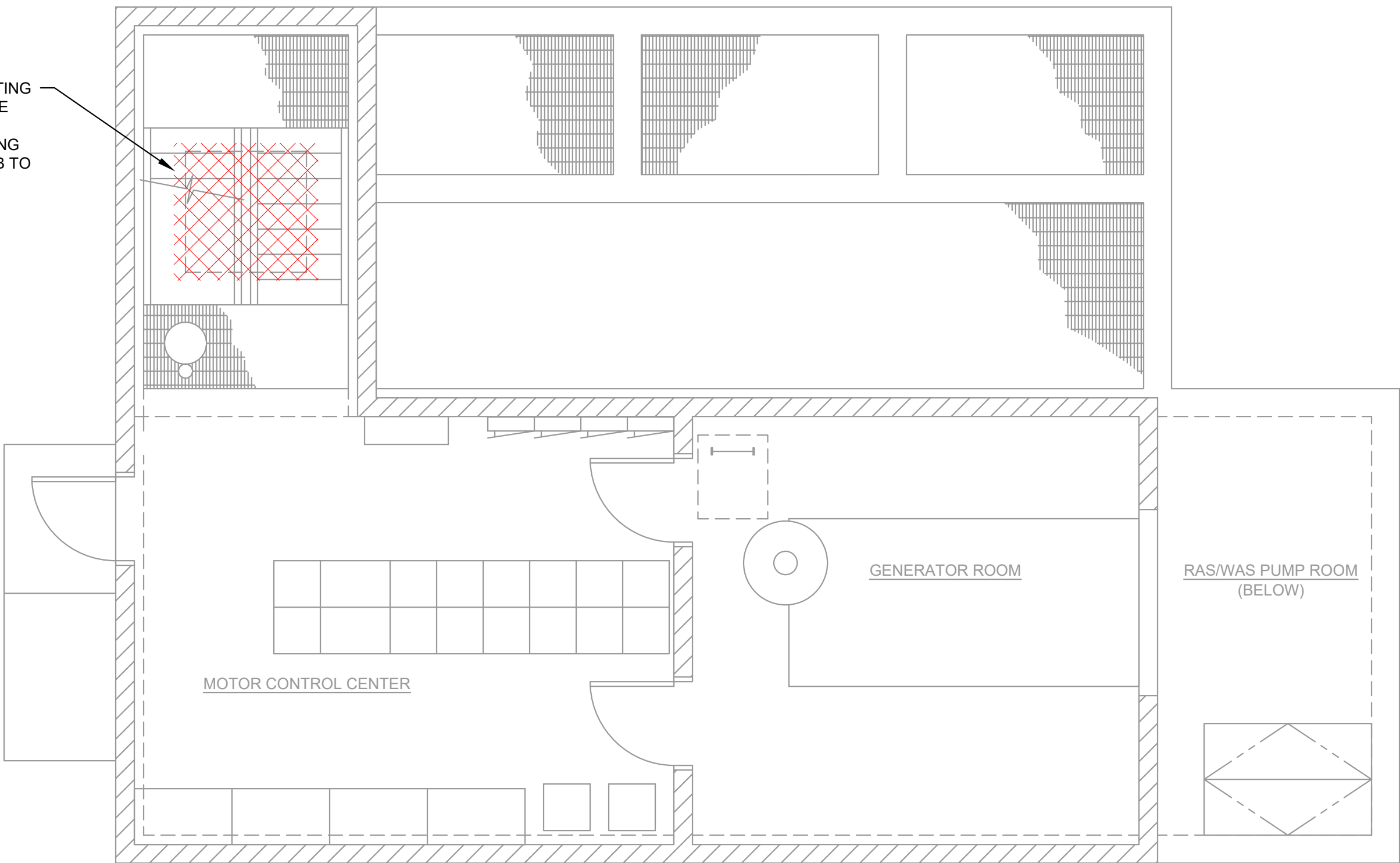
DOOR FRAME TYPE

SCALE: NTS

DOOR SCHEDULE							
NO.	MATERIAL & TYPE	DOOR SIZE: WIDTH x HEIGHT x THICKNESS	DOOR TYPE	FRAME TYPE	MAX. U-FACTOR	FINISH	HARDWARE GROUP
1	HOLLOW METAL INSULATED	3'-0" x 7'-0" x 1 3/4"	A	A	0.34	PAINT	1
2	HOLLOW METAL INSULATED (E)	FIELD VERIFY	-	-	-	-	2
3	HOLLOW METAL INSULATED (E)	FIELD VERIFY	-	-	-	-	2

NOTE: EXISTING DOORS 2 AND 3 SHALL BE RETROFITTED W/ NEW DOOR CLOSERS PER SPECIFICATION.

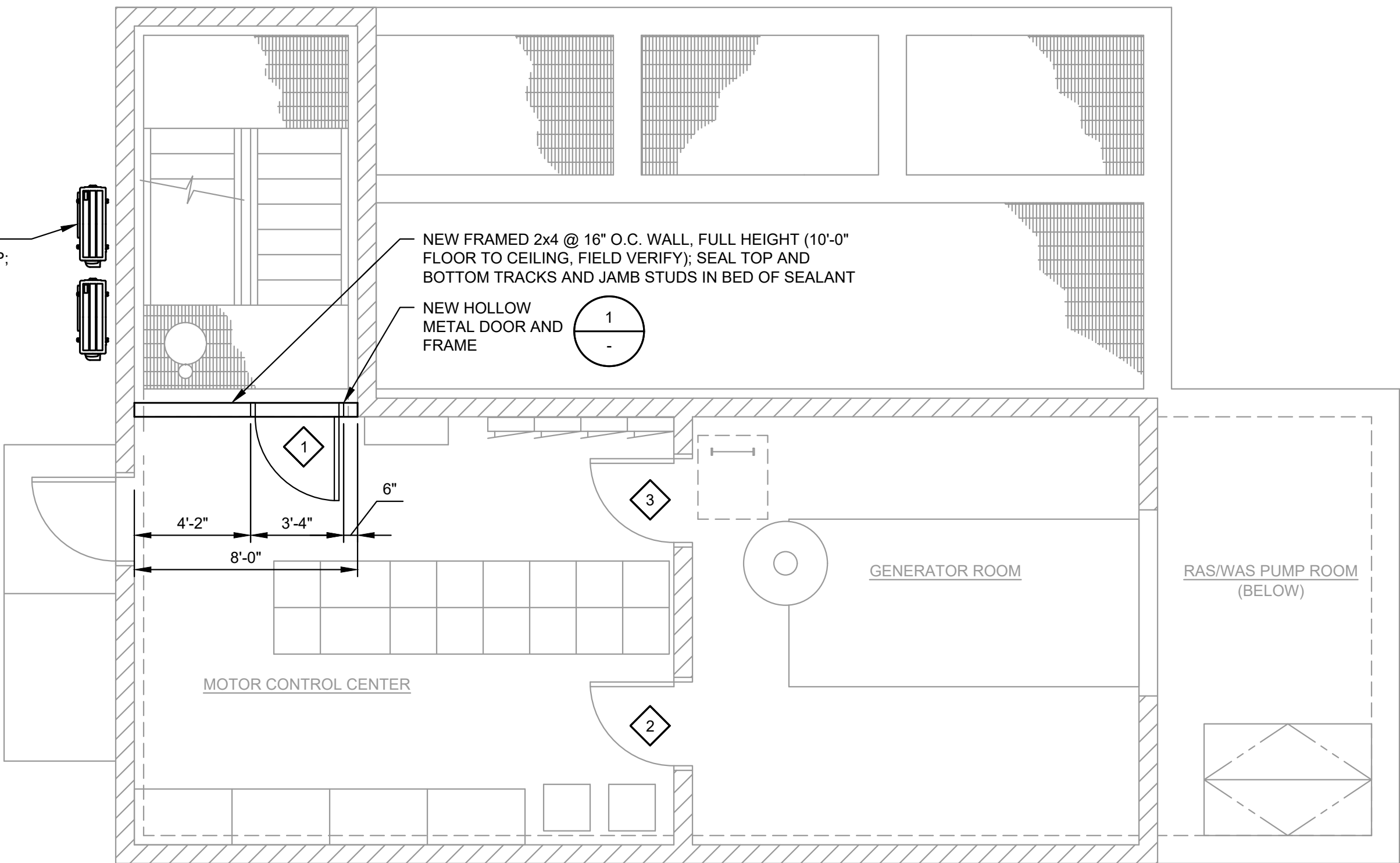
DEMOLISH EXISTING SKYLIGHT ABOVE STAIR PLENUM THROUGH CEILING AND ROOF CURB TO REMAIN



DEMO PLAN

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

NEW HVAC EQUIPMENT, TYP; SEE H-SHEETS



PLAN

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

APPROVED

BY: *[Signature]*

CITY ENGINEER
CITY OF PUYALLUP

APPROVED DATE: 2/28/2024

EXPIRATION DATE: 12/31/2025

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SEATTLE, WASHINGTON 98144
(206) 284-0860

PRCNC20240061



WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018
1802 18TH ST NW,
PUYALLUP, WA 98371

No. DATE REVISION

ISSUED FOR: BID SET

ISSUE DATE: FEBRUARY 2024

APPROVED BY: AMP

CHECKED BY: DAW

DRAWN BY: ASD

DESIGNER: ASD

G & O JOB NO.: 21462.00

FILE: A_RASWAS - PLAN.DWG

0 1" 2"

TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

ARCHITECTURAL
AREA 6

RAS/WAS PUMP
STATION NOTES,
DETAILS, AND PLANS

DRAWING: A6-1 OF: 1

SHEET: 30 OF: 60

M:\PUYALLUP\21462 WPCP 3rd Secondary Clarifier\01 Design\Plan\set\HVACH_RASWAS.dwg, 2/28/2024 12:58 PM, CHARLEY REID

HVAC DESIGN CRITERIA

EXISTING CONDITIONS

MOTOR CONTROL CENTER AND RAS/WAS PUMP ROOM:

COOLING: VENTILATION
SYSTEM: ROOF SUPPLY FAN [06 EX 01] AND ROOF EXHAUST FAN [06 EX 03]
CAPACITY: 3,000 CFM
CONTROLS: REMOTE THERMOSTAT W/ 80 °F SETPOINT

HEATING: NONE

GENERATOR ROOM:

COOLING: VENTILATION
SYSTEM: ROOF EXHAUST FAN [06 EX 02]
CAPACITY: 600 CFM
CONTROLS: REMOTE THERMOSTAT W/ 90 °F SETPOINT

HEATING: NONE

DESIGN TEMPERATURES

THE NEAREST DEFINED WSEC APPENDIX C LOCATION IS PUYALLUP.

WINTER AMBIENT TEMP: 19 °F
SUMMER AMBIENT TEMP: 86 °F
INTERIOR HEATING SETPOINT: 45 °F
INTERIOR COOLING SETPOINT: 95 °F

VENTILATION

RAS/WAS PUMP ROOM:

THE RAS/WAS PUMP ROOM WILL BE VENTILATED WITH BOTH SUPPLY AND EXHAUST AT A RATE OF >6 ACH TO DECLASSIFY THE SPACE PER NFPA 820. EXHAUST FLOW WILL BE INCREASED TO NEGATIVELY PRESSURIZE THE SPACE PER NFPA 820.

FLOOR AREA: 664 SF
AVERAGE HEIGHT: 20.6 FT
TOTAL VOLUME: 13,710 CUBIC FT
REQ'D ACH: 6 ACH
REQ'D AIRFLOW: 1,370 CFM

DESIGN SUPPLY: 1,500 CFM
DESIGN EXHAUST: 1,600 CFM

MOTOR CONTROL CENTER:

NONE: THE MOTOR CONTROL CENTER IS CONSIDERED AN UNOCCUPIED EQUIPMENT SPACE.

GENERATOR ROOM:

NO NEW WORK

HEATING/COOLING

RAS/WAS PUMP ROOM:

REQ'D HEATING LOAD: 55.9 MBH
ELECTRIC RESISTANCE
TYPE:
REQ'D CAPACITY: 16.1 KW

MOTOR CONTROL CENTER:

REQ'D HEATING LOAD: 7.4 MBH
REQ'D COOLING LOAD: 25.7 MBH
TYPE: TWO SPLIT HEAT PUMP AND FAN COIL SYSTEMS; EACH FOR 70% OF LOAD
CAPACITY: 18.0 MBH

GENERATOR ROOM:

NO NEW WORK

CONTROL DESCRIPTION:

HEAT PUMP [06 HP 01] AND WALL MOUNTED FAN COIL [06 FC 01] PROVIDE HEATING AND COOLING FOR THE MOTOR CONTROL CENTER AND IS CONTROLLED BY THERMOSTAT [06 T 01].

HEAT PUMP [06 HP 02] AND WALL MOUNTED FAN COIL [06 FC 02] PROVIDE REDUNDANT HEATING AND COOLING FOR THE MOTOR CONTROL CENTER AND IS CONTROLLED BY THERMOSTAT [06 T 02].

ROOF SUPPLY FAN [06 SF 01] AND ROOF EXHAUST FAN [06 EF 01] PROVIDE CONTINUOUS VENTILATION TO DECLASSIFY THE RAS/WAS PUMP ROOM PER NFPA 820.

AIRFLOW SWITCHES [06 FS 01] AND [06 FS 02] MONITOR THE AIRFLOW WITHIN THE SUPPLY AND EXHAUST DUCTWORK OF THE RAS/WAS PUMP ROOM. EACH SWITCH SHALL BE SET TO ALARM IF THE AIRFLOW FALLS BELOW 1,370 CFM.

DUCT HEATER [06 HT 01] PROVIDE HEATING FOR FREEZE PROTECTION TO THE RAS/WAS PUMP ROOM AND IS CONTROLLED BY THERMOSTAT [06 T 03].

HVAC SYMBOLS

	RECTANGULAR DUCT (DIMENSION SHOWN X DIMENSION HIDDEN)
	8" DIAMETER ROUND DUCT
	TRANSITION, CONCENTRIC, 15" MAX
	TRANSITION, ECCENTRIC, 30" MAX
	TRANSITION, SQUARE TO ROUND
	STANDARD RADIUS ELBOW
	SQUARE THROAT ELBOW W/ TURNING VANES
	45 DEGREE RECTANGLE-TO-ROUND BRANCH
	45 DEGREE RECTANGULAR BRANCH
	BRANCH, 45° TEE WYE
	DUCT CHANGE OF ELEVATION
	MANUAL VOLUME DAMPER
	EXHAUST/RETURN/OA DUCT (TOWARD VIEWER)
	EXHAUST/RETURN/OA DUCT (AWAY FROM VIEWER)
	SUPPLY DUCT (TOWARD VIEWER)
	SUPPLY DUCT (AWAY FROM VIEWER)
	ROUND DUCT TOWARD/AWAY
	FLEXIBLE DUCT CONNECTION (TO AIR HANDLING EQUIPMENT)
	SECTION EXHAUST/RETURN/OA
	SECTION SUPPLY DUCT
	OPPOSED BLADE DAMPER
	PARALLEL BLADE DAMPER
	BACK DRAFT DAMPER
	LOUVER
	CEILING DIFFUSER, ROUND NECK

	THERMOSTAT, WALL MOUNTED WALL TYPE VARIES, SEE S-SHEETS FOR WALL TYPE
	ELECTRIC MOTOR
	FLOW SWITCH
	FLOW DIRECTION, EXHAUST LOUVER OR SUPPLY DIFFUSER/GRILLE
	FLOW DIRECTION, INTAKE LOUVER OR EXHAUST/RETURN GRILLE

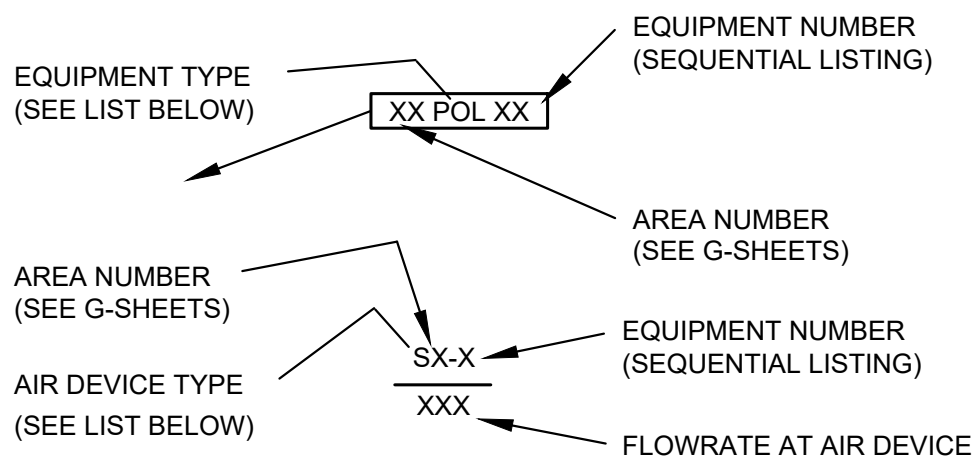
HVAC ABBREVIATIONS

A	AMPERE
ACH	AIR CHANGES PER HOUR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
BDD	BACK DRAFT DAMPER
BLDG	BUILDING
BTU	BRITISH THERMAL UNIT
CA	COMPRESSED AIR
CAP	CAPACITY
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
DIA	DIAMETER
DN	DOWN
EA	EXHAUST AIR
ECM	ELECTRONICALLY COMMUTATED MOTOR
EF	EXHAUST FAN
°F	DEGREES FAHRENHEIT
FS	FLOW SWITCH
GPM	GALLONS PER MINUTE
HOA	HAND/OFF/AUTO
MA	MIXED AIR
MBH	1,000 BTU'S/HR
MCA	MINIMUM CIRCUIT AMPS
MFR	MANUFACTURER
MOCPP	MAXIMUM OVER CURRENT PROTECTION
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NG	NATURAL GAS
NO	NORMALLY OPEN
OA	OUTSIDE AIR
POC	POINT OF CONNECTION
RA	RETURN AIR
SA	SUPPLY AIR
SP	STATIC PRESSURE
TEMP	TEMPERATURE
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
VD	VOLUME DAMPER
VRF	VARIABLE REFRIGERANT FLOW
W	WATT
WC	WATER COLUMN
WP	WALL PENETRATION
WSEC	WASHINGTON STATE ENERGY CODE

HVAC GENERAL NOTES

- MATERIALS, METHODS AND INSTALLATION SHALL COMPLY WITH THE CONTRACT SPECIFICATIONS AND WITH THE PROVISIONS OF THE 2018 INTERNATIONAL MECHANICAL CODE, 2018 INTERNATIONAL BUILDING CODE, 2018 INTERNATIONAL FIRE CODE AS AMENDED BY THE STATE OF WASHINGTON AND THE LOCAL AUTHORITY HAVING JURISDICTION.
- THESE PLANS ARE SCHEMATIC AND DO NOT SHOW EXACT ROUTING OR EVERY OFFSET, WHICH MAY BE REQUIRED. THE HVAC CONTRACTOR IS TO COORDINATE WITH ALL OTHER TRADES AND IS TO VERIFY ALL CLEARANCES BEFORE COMMENCING WORK.
- CONTRACTOR SHALL VERIFY THE DIMENSIONS WITH THE EQUIPMENT MANUFACTURER TO PROVIDE DUCT TRANSITIONS TO HVAC VENTILATORS, FANS, LOUVERS, OR SUPPLY/EXHAUST GRILLES TO MATCH THE INLET/OUTLET DIMENSIONS OF THE EQUIPMENT.
- PROVIDE EARTHQUAKE RESTRAINT FOR HVAC EQUIPMENT IN ACCORDANCE WITH SMACNA RESTRAINT MANUAL AS REQUIRED BY 2018 INTERNATIONAL BUILDING CODE REQUIREMENTS.
- CONSTRUCTION, SUPPORTS AND INSTALLATION SHALL BE INSTALLED AND COMPLY WITH THE 2018 INTERNATIONAL MECHANICAL CODE (IMC) AND WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE.
- ALL DUCTWORK IS CLASSIFIED AS LOW PRESSURE.
- BALANCING: ALL HVAC SYSTEMS SHALL BE BALANCED BY A LICENSED CONTRACTOR IN ACCORDANCE WITH ACCEPTED ENGINEERING STANDARDS AND SPECIFICATION. AN AIR BARRIER TEST SHALL BE PERFORMED IN ACCORDANCE WITH THE WASHINGTON STATE ENERGY CODE AND ASTM E779.
- LOCATE THERMOSTATS 5 FEET AFF. UNLESS OTHERWISE NOTED.
- PROVIDE FLEXIBLE DUCT CONNECTIONS ON ALL DUCTWORK CONNECTING TO EQUIPMENT.
- EQUIPMENT DRAIN PIPING SHALL MAINTAIN A MIN HORIZONTAL SLOPE IN THE DIRECTION OF DISCHARGE OF MIN -1/8 INCH VERTICAL PER 1 FOOT HORIZONTAL.
- CONTRACTOR SHALL COORDINATE CEILING EQUIPMENT LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND ELECTRICAL LIGHTING LAYOUT.
- EQUIPMENT CONDENSATE DRAINS SHALL BE TRAPPED AS REQUIRED BY THE EQUIPMENT OR APPLIANCE MANUFACTURER.
- REFRIGERANT PIPING SHALL BE INSTALLED WITH CLOSED CELL ELASTOMERIC INSULATION IN ACCORDANCE WITH SPECIFICATION 15700. INSULATION EXPOSED TO OUTSIDE CONDITIONS SHALL BE ENCLOSED BY A LINE-HIDE LINESET COVER SYSTEM.
- BUILDING HVAC DOCUMENTS SUCH AS RECORDS, CALCULATIONS, COMPLIANCE FORMS, AND EQUIPMENT MANUALS SHALL BE SUPPLIED TO THE BUILDING OWNER.

HVAC EQUIPMENT & AIR DEVICE IDENTIFICATIONS



EQUIPMENT	AIR DEVICE
AC	AIR CONDITIONER
BC	BRANCH CONTROLLER
C	CONTROLLER
CU	CONDENSING UNIT
DS	DUCT STAT
EF	EXHAUST FAN
FC	FAN COIL
FS	FLOW SWITCH
HP	HEAT PUMP
HT	HEATER
MD	MOTORIZED DAMPER
SF	SUPPLY FAN
T	THERMOSTAT
VD	VOLUME DAMPER
E	EXHAUST GRILLE
LVR	LOUVER
R	RETURN GRILLE
S	SUPPLY DIFFUSER/GRILLE

APPROVED

BY:

CITY ENGINEER
CITY OF PUYALLUP

APPROVED DATE: 2/28/2024

EXPIRATION DATE: 12/31/2025

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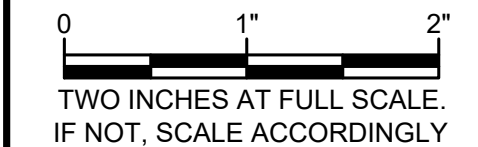
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PRCNC20240061

CITY OF PUYALLUP
WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR: BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: AMP		
CHECKED BY: ASD		
DRAWN BY: ASD		
DESIGNER: AMP		
G & O JOB NO.: 21462.00		
FILE: H_RASWAS.DWG		



HVAC
AREA 6

NOTES AND ABBREVIATIONS

DRAWING: **H6-1** OF: **3**

SHEET: **31** OF: **60**

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FAN SCHEDULE								
BUILDING	ROOM NAME	UNIT NO.	TYPE	MANUFACTURER & MODEL NO.	HP, VOLTAGE, AND PHASE	CONTROLS	CFM AND STATIC PRESSURE	REMARKS
RAS/WAS PUMP STATION	RAS/WAS PUMP ROOM	06 EF 01	ROOF EXHAUST FAN	GREENHECK CUE-180-VG OR EQUAL	3/4 HP 115 V 1 Ø	CONTINUOUS	1,600 CFM @ 0.2" WC	PROVIDE THERMAL OVERLOAD, NEMA 4X DISCONNECT, ALUMINUM HOUSING, S.S. FASTENERS, S.S SHAFT, & HI-PRO POLYESTER FINISH.
		06 SF 01	ROOF SUPPLY FAN	GREENHECK RBF-1H20 OR EQUAL	1/4 HP 115 V 1 Ø	CONTINUOUS	1,500 CFM @ 0.2" WC	PROVIDE THERMAL OVERLOAD, NEMA 4X DISCONNECT, ALUMINUM HOUSING, S.S. FASTENERS, S.S SHAFT, 2" ALUMINUM MESH FILTERS, & HI-PRO POLYESTER FINISH.

GRILLE/DIFFUSER SCHEDULE						
BUILDING	ROOM NAME	DIFFUSER/GRILLE NO.	TYPE	MANUFACTURER & MODEL NO.	SIZE (WxL)	REMARKS
RAS/WAS PUMP STATION	RAS/WAS PUMP ROOM	S6-1	SUPPLY GRILLE	PRICE RID OR EQUAL	20"	PROVIDE DUCT MOUNTING, VOLUME DAMPER, AND BAKED ENAMEL FINISH. ADJUST TO FULL VERTICAL FLOW.
		E6-1	EXHAUST GRILLE	PRICE 95 OR EQUAL	20"x20"	PROVIDE DUCT MOUNTING, AND BAKED ENAMEL FINISH.

HEATER SCHEDULE									
BUILDING	ROOM NAME	UNIT NO.	TYPE	MANUFACTURER & MODEL NO.	KW OUTPUT	CONTROLS	VOLTAGE AND PHASE	MOUNTING TYPE	REMARKS
RAS/WAS PUMP STATION	PUMP ROOM	06 HT 01	DUCT HEATER	INDEECO QUA OR EQUAL	20 KW	06 T 03	480 V 3 Ø	SLIP-IN, VERTICAL DOWN AIR FLOW, 22"x22" DUCT	PROVIDE DISCONNECT, DUST TIGHT TERMINAL BOX, INSULATED TERMINAL BOX, 24 V CONTROL TRANSFORMER AND CONTACTORS, PILOT LIGHT "ON" & "LOW AIRFLOW", S.S FRAME.

HEAT PUMP SCHEDULE											
BUILDING	ROOM NAME	UNIT NO.	TYPE	MANUFACTURER & MODEL NO.	VOLTAGE, PHASE AND MCA	CONTROLS	STANDARD AIRFLOW	HEATING CAPACITY	COOLING CAPACITY	AHRI LISTED EFFICIENCY	REMARKS
RAS/WAS PUMP STATION	MOTOR CONTROL CENTER	06 HP 01	OUTDOOR HEAT PUMP	mitsubishi PUZ-A24NHA7 OR EQUAL	208 V 1 Ø 19 A	06 FC 01	~1,900 CFM	15.7 MBH @ 17 °F OAT	24.0 MBH @ 95 °F OAT	21.4 SEER 11.0 HSPF	PROVIDE INSULATED LINE SET, INSULATED DRAIN PIPE, LINE HIDE SET, WALL BRACKET, WIND BAFFLE, AND MITSUBISHI REMOTE ADAPTER WIRING HARNESS (PART #PAC-725AD)
		06 FC 01	WALL MOUNTED FAN COIL	mitsubishi PKA-A24KA7 OR EQUAL	208 V 1 Ø 2 A	06 T 01	570-775 CFM				PROVIDE CONDENSATE PUMP. LOCATE ABOVE DOOR.
		06 HP 02	OUTDOOR HEAT PUMP	mitsubishi PUZ-A24NHA7 OR EQUAL	208 V 1 Ø 19 A	06 FC 02	~1,900 CFM	15.7 MBH @ 17 °F OAT	24.0 MBH @ 95 °F OAT	21.4 SEER 11.0 HSPF	PROVIDE INSULATED LINE SET, INSULATED DRAIN PIPE, LINE HIDE SET, WALL BRACKET, WIND BAFFLE, AND MITSUBISHI REMOTE ADAPTER WIRING HARNESS (PART #PAC-725AD)
		06 FC 02	WALL MOUNTED FAN COIL	mitsubishi PKA-A24KA7 OR EQUAL	208 V 1 Ø 2 A	06 T 02	570-775 CFM				PROVIDE CONDENSATE PUMP. LOCATE ABOVE DOOR.

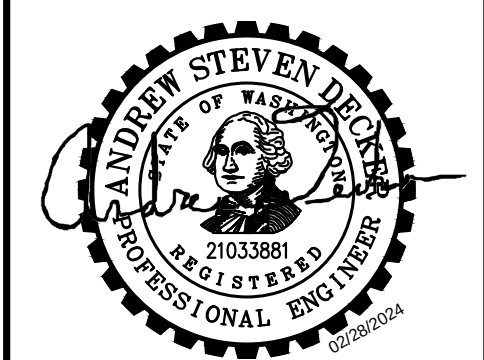
NOTE: HEATING AND COOLING CAPACITIES ARE ASSUMING 70 °F AND 80 °F INDOOR TEMPERATURES RESPECTIVELY, PER THE MANUFACTURER

CONTROL SCHEDULE									
BUILDING	ROOM NAME	UNIT NO.	TYPE	CONTROLLED EQUIPMENT	MANUFACTURER & MODEL NO.	HEAT SET POINT	COOL SET POINT	VOLTAGE AND PHASE	REMARKS
RAS/WAS PUMP STATION	MOTOR CONTROL CENTER	06 T 01	PROGRAMMABLE THERMOSTAT	06 FC 01	mitsubishi PAR-40MAAU OR EQUAL	45 °F	95 °F	12 VDC	
		06 T 02	PROGRAMMABLE THERMOSTAT	06 FC 02	mitsubishi PAR-40MAAU OR EQUAL	45 °F	95 °F	12 VDC	
	RAS/WAS PUMP ROOM	06 FS 01	FLOW SWITCH	N/A	DEGREE CONTROLS S500 OR EQUAL	N/A	N/A	120 V 1 Ø	MOUNT INSIDE SUPPLY DUCT.
		06 FS 02	FLOW SWITCH	N/A	DEGREE CONTROLS S500 OR EQUAL	N/A	N/A	120 V 1 Ø	MOUNT INSIDE EXHAUST DUCT.
		06 T 03	THERMOSTAT	06 HT 01	indeeco 1006998 OR EQUAL	45 °F	N/A	30 V MAX	



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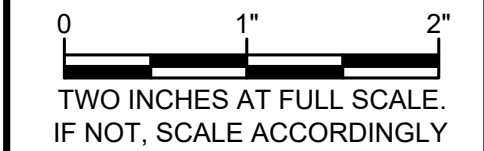




WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION

ISSUED FOR:		BID SET
ISSUE DATE:	FEBRUARY 2024	
APPROVED BY:	AMP	
CHECKED BY:	ASD	
DRAWN BY:	ASD	
DESIGNER:	AMP	
G & O JOB NO.:	21462.00	
FILE:	H_RASWAS.DWG	



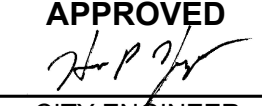
HVAC
AREA 6

EQUIPMENT
SCHEDULES

DRAWING: **H6-2** OF: **3**

SHEET: **32** OF: **60**

APPROVED

BY: 

CITY ENGINEER
CITY OF PUYALLUP

APPROVED DATE: 2/28/2024

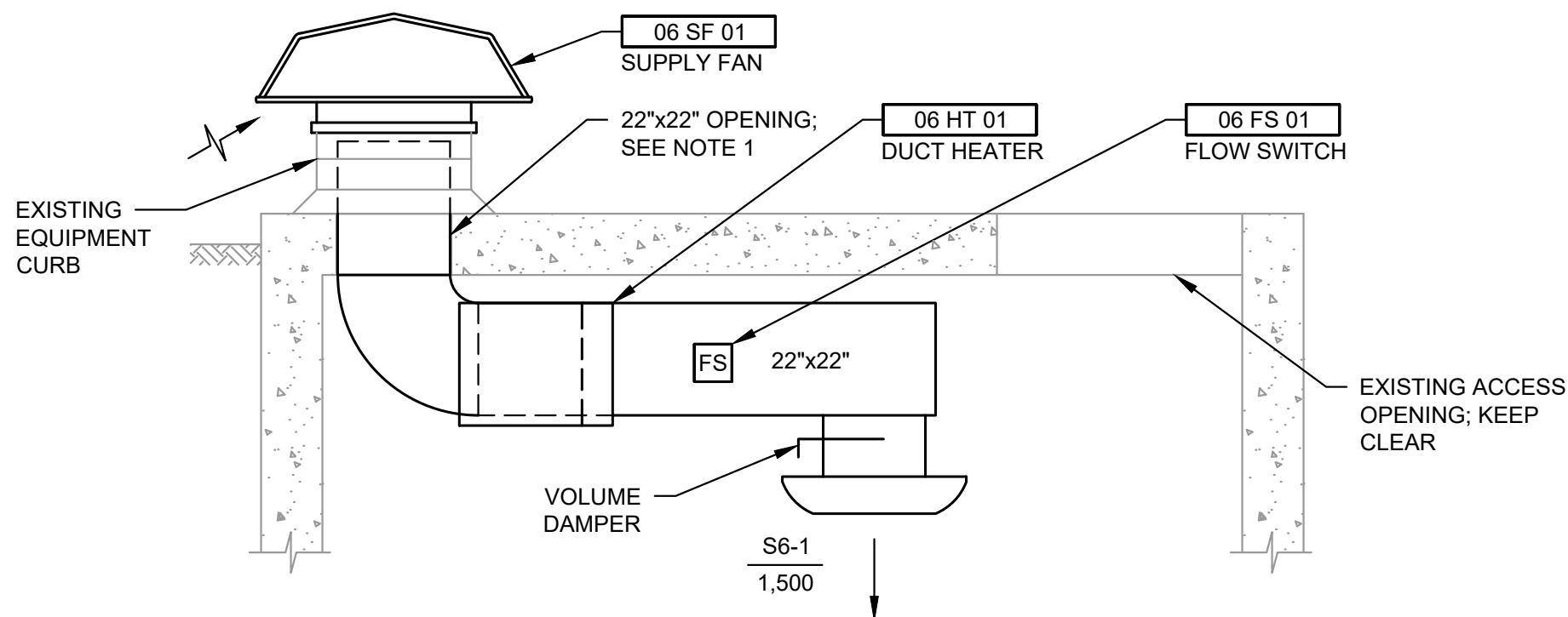
EXPIRATION DATE: 12/31/2025

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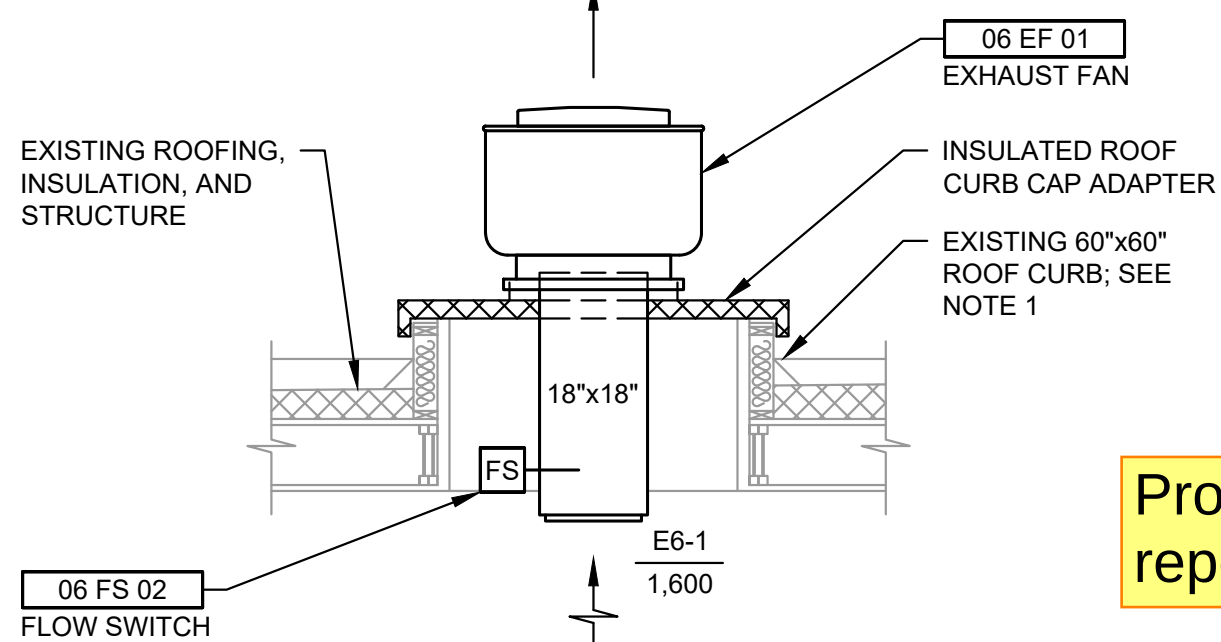
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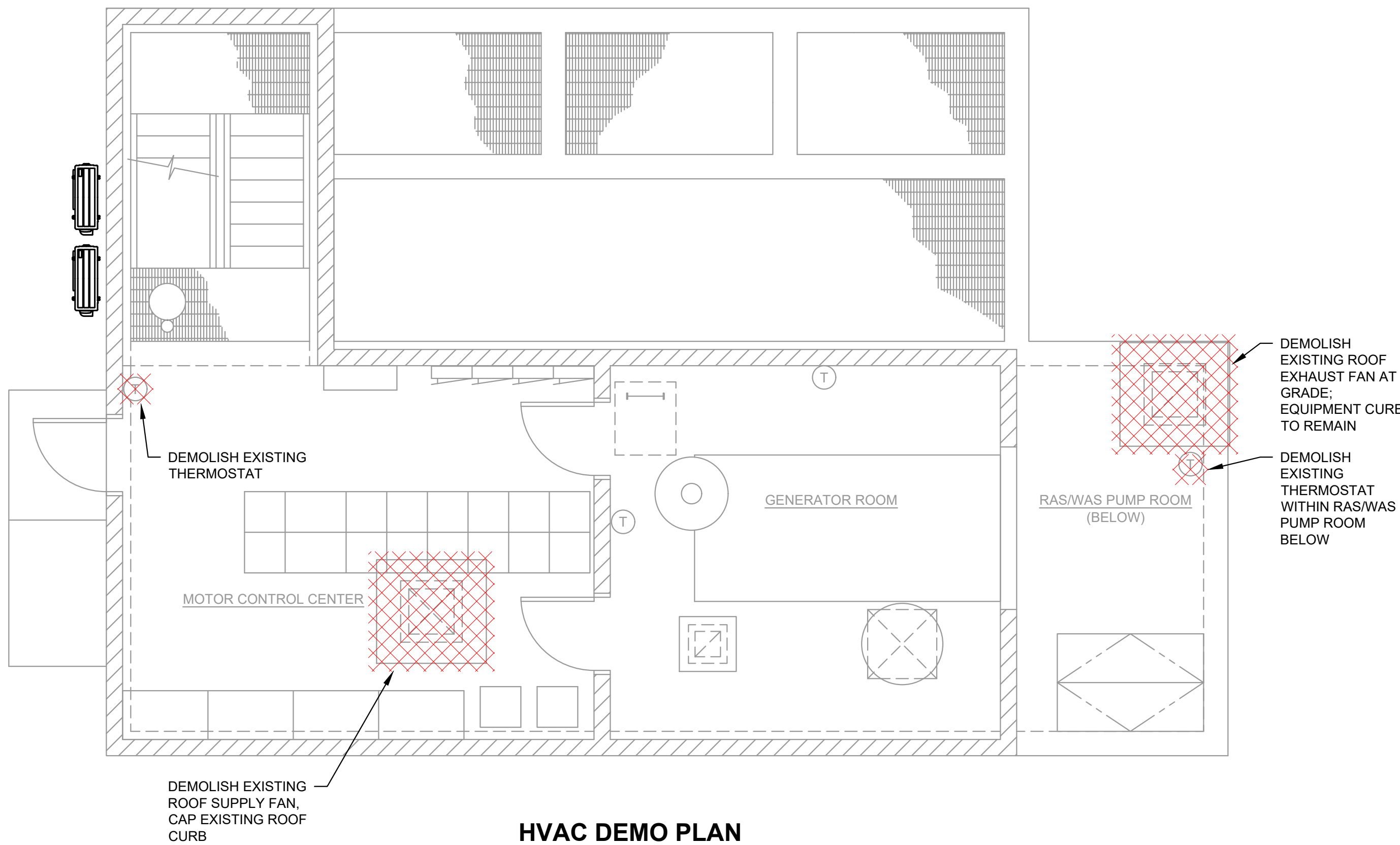
SUPPLY FAN SECTION
SCALE: 3/8"=1'-0"



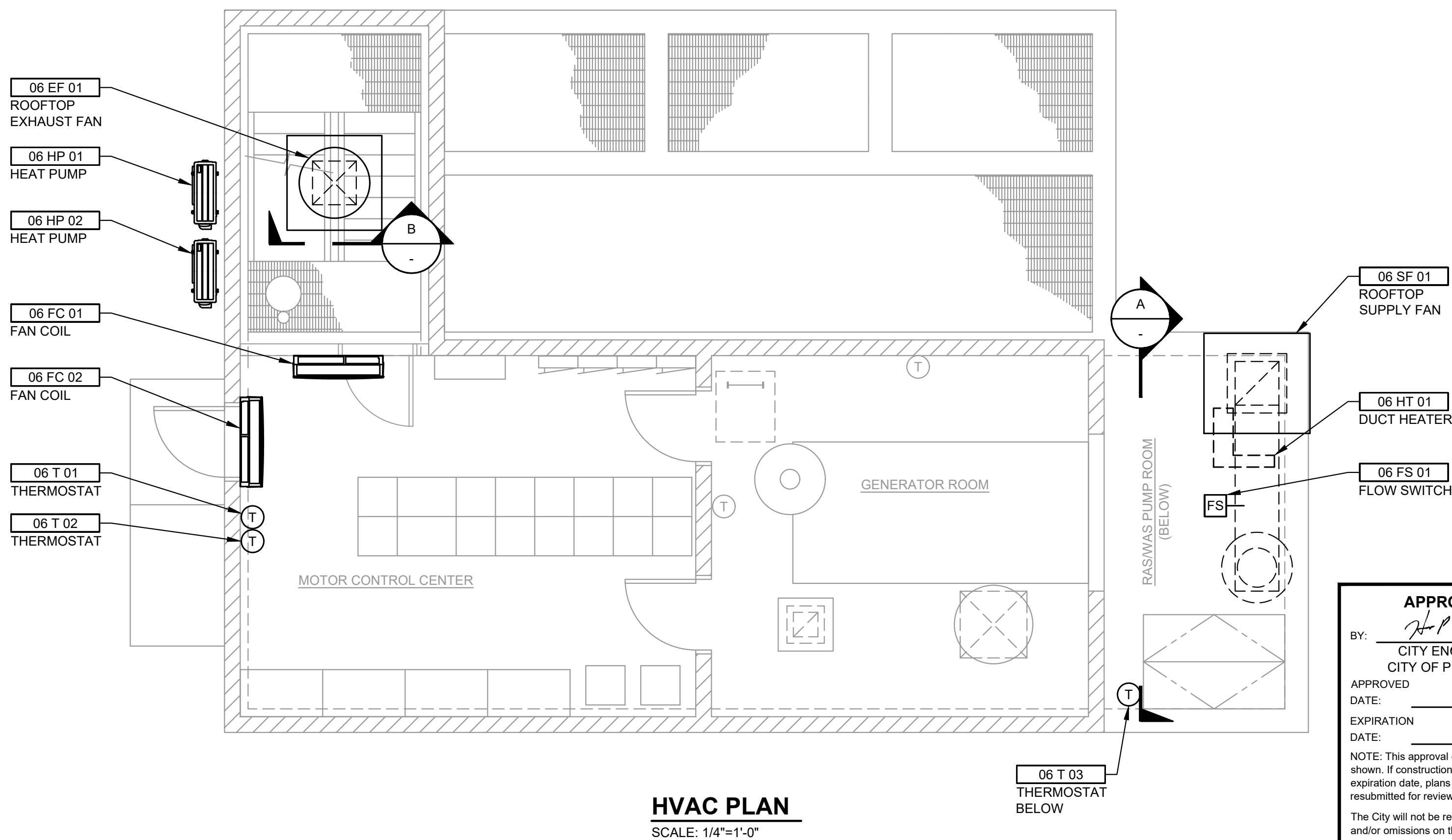
EXHAUST FAN SECTION
SCALE: 3/8"=1'-0"

- NOTE:**
1. ROOF PENETRATIONS AND CONSTRUCTION IS BASED ON AVAILABLE INFORMATION; CONTRACTOR TO FIELD VERIFY.

Provide copy of all special inspection reports to building inspector.



HVAC DEMO PLAN
SCALE: 1/4"=1'-0"

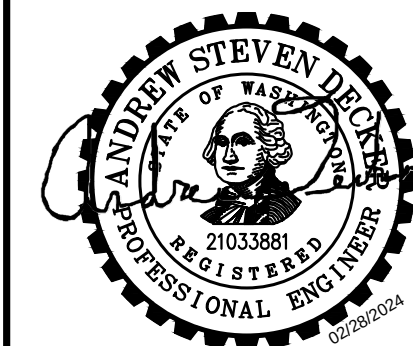


HVAC PLAN
SCALE: 1/4"=1'-0"

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
DATE: 2/28/2024
EXPIRATION DATE: 12/31/2025
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PRCNC20240061



WATER POLLUTION CONTROL PLANT THIRD SECONDARY CLARIFIER INSTALLATION
CIP NO. 20-018
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
-----	------	----------

ISSUED FOR: **BID SET**

ISSUE DATE: FEBRUARY 2024

APPROVED BY: AMP

CHECKED BY: ASD

DRAWN BY: ASD

DESIGNER: AMP

G & O JOB NO.: 21462.00

FILE: H_RASWAS.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

HVAC AREA 6

DEMOLITION AND PROPOSED PLANS

DRAWING: **H6-3** OF: **3**

SHEET: **33** OF: **60**

WATER PIPING NOTES

NOTES:

1. INSTALL SHUT OFF VALVE TO ISOLATE WATER CLOSET SINKS AND DISH WASHER.
2. PROVIDE WATER HAMMER ARRESTOR (MINIMUM 12" AIR CHAMBER) AT SINKS.
3. ALL WATER PIPES SHALL BE COPPER.
4. ALL PIPING TO BE CONCEALED IN INTERIOR WALLS, CEILINGS, OR IN UTILITY SPACE BEHIND LABORATORY FURNITURE.
5. USE WALL AND CEILING FLANGE AT WALL AND CEILING PENETRATIONS.
6. ALL EXPOSED NON-POTABLE AND PROCESS WATER PIPING INCLUDING HOSE BIBS, SHALL BE LABELED EVERY 3 TO 5 FEET - "DANGER-UNSAFE WATER".
7. ALL HOT WATER PIPING SHALL BE 1/2" DIAMETER, UNLESS OTHERWISE NOTED ON PLANS, AND SHALL BE INSULATED W/ FIBERGLASS WRAP OUTSIDE.

DRAINAGE PIPING NOTES

NOTES:

1. DRAIN PIPE UNDER SLAB TO CI SOIL PIPE WITH SLOPE 1/4"/FT FOR PIPES < 3", SLOPE 1/8"/FT FOR PIPES > 3".
2. FLOOR DRAIN (FD) TO BE 3".
3. ALL BENDS UNDER FLOOR TO BE 45° FITTING MAXIMUM.
4. ALL FIXTURES SHALL BE TRAPPED.
5. ALL PLUMBING WORK SHALL CONFORM WITH THE MOST RECENT UNIFORM PLUMBING CODE OR SHALL BE APPROVED BY THE LOCAL BUILDING OFFICIAL.
6. ALL DRAIN PIPING TO BE CAST IRON (CI).

WATER PIPING LEGEND

- COLD WATER PIPE (CW)
- HOT WATER PIPE (HW)
- VALVE
- HOSE BIBB
- 90° BEND DOWN
- AIR GAP TRAP PRIMER

DRAINAGE PIPING LEGEND

- SEWER PIPE OR DRAIN PIPE IN CAST IRON (CI)
- FLOOR CLEAN OUT
- CLEAN OUT
- FLOOR DRAIN
- VENT STACK THRU ROOF WITH WALL CLEANOUT



- NOTE:
1. MODIFY AIR GAP UNIT PIPING AS SHOWN ON SHEET P6-2.

1
P6-2

PHOTO DETAIL

NOT TO SCALE

APPROVED

BY: *[Signature]*

CITY ENGINEER

CITY OF PUYALLUP

APPROVED DATE: 2/28/2024

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**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**

1802 18TH ST NW,
PUYALLUP, WA 98371

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G & O JOB NO.: 21462.00		
FILE: NOTES_DEMO.DWG		

0 1" 2"

TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

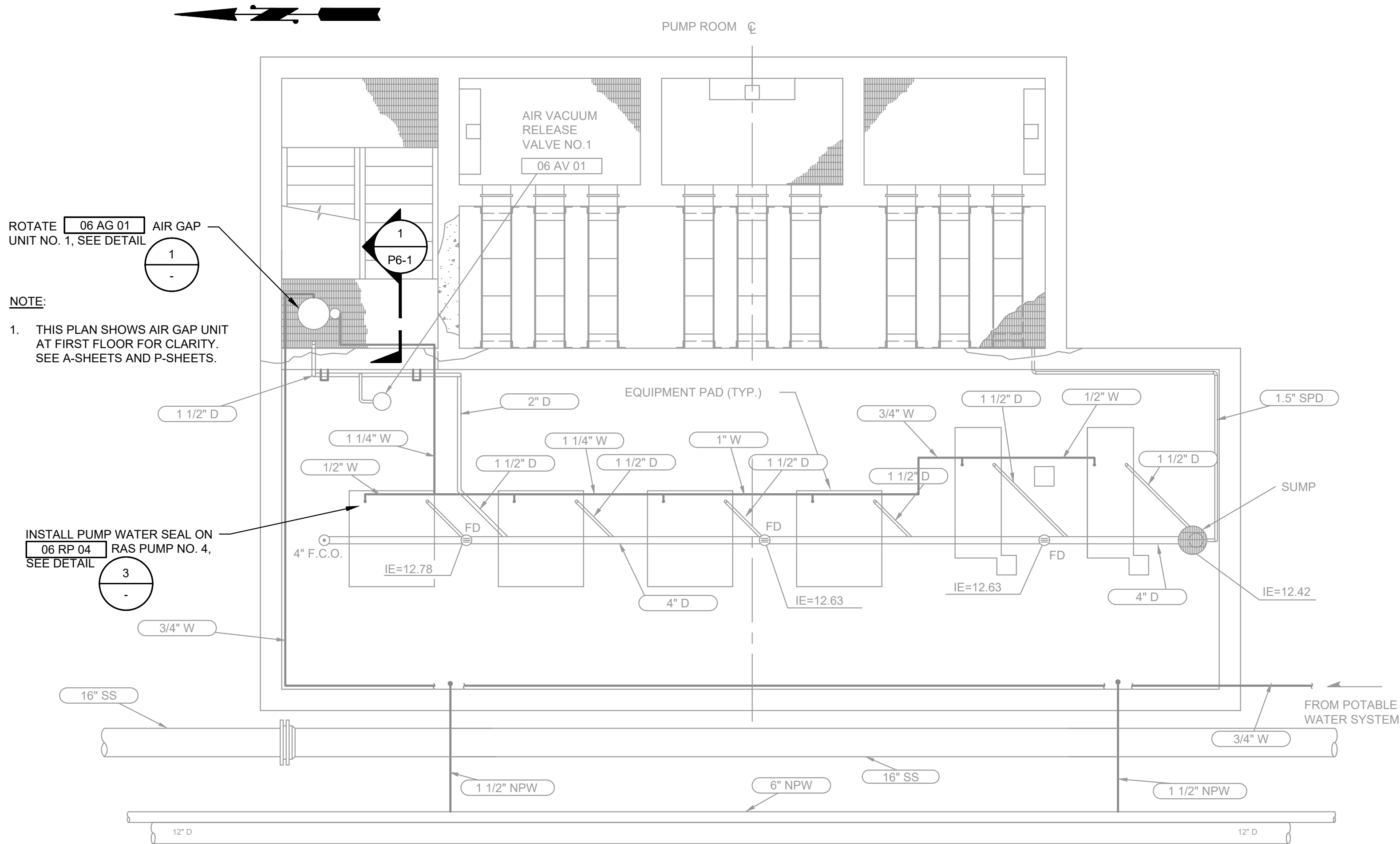
PLUMBING
AREA 6

PLUMBING NOTES,
LEGEND AND DETAILS

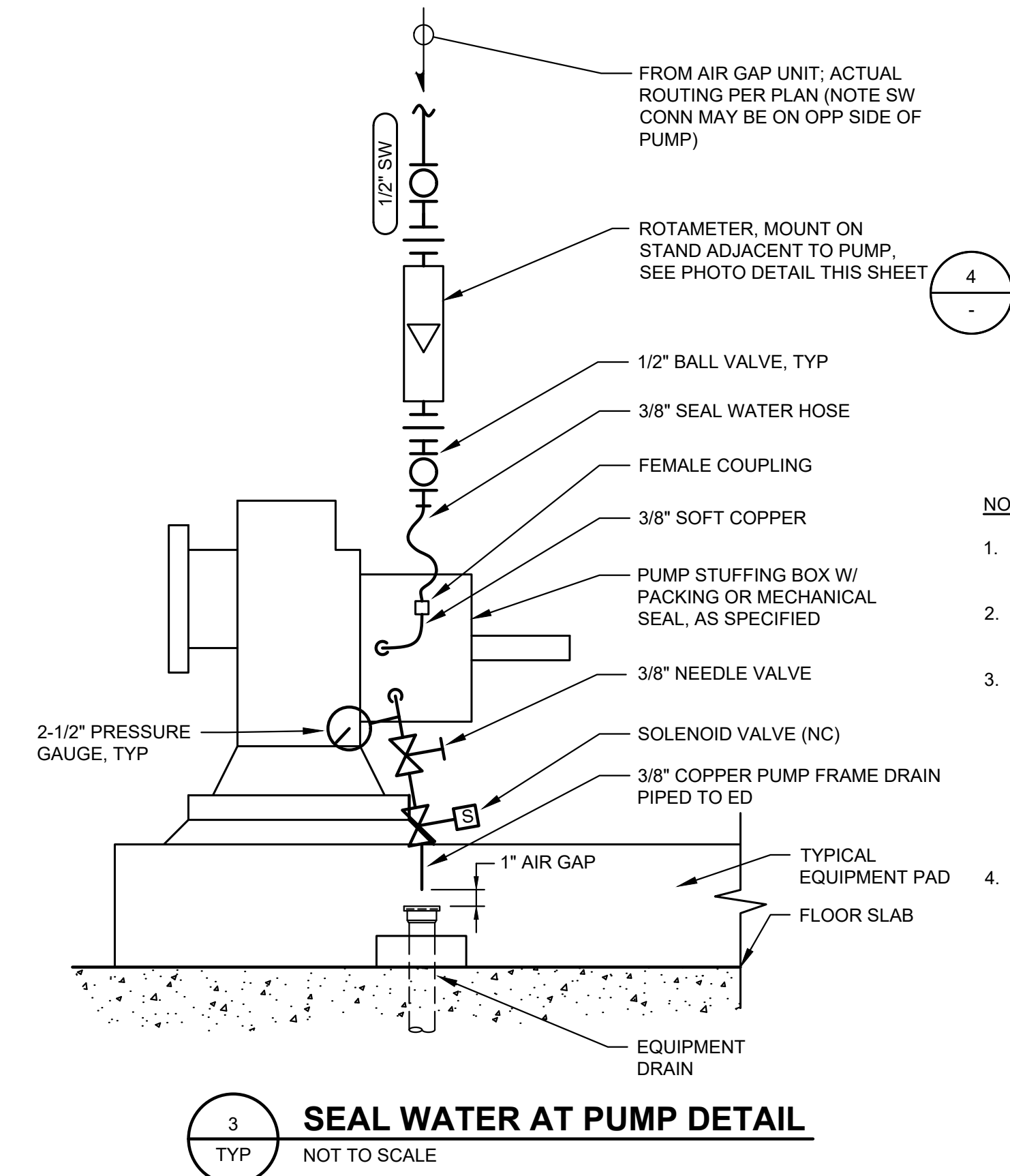
DRAWING: P6-1 OF: 2

SHEET: 34 OF: 60

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SECONDARY CLARIFIER SPLITTER BOX AND RAS/WAS PUMP STATION PLAN
SCALE: 1/4"=1'-0"



SEAL WATER AT PUMP DETAIL

NOTES:

1. USE COPPER ADAPTERS AND BUSHINGS AS REQUIRED FOR ALL CONNECTIONS TO PUMP.
2. VERIFY CONNECTION LOCATION FOR SEAL WATER OF EACH PUMP.
3. THIS DETAIL SHOWS A WATER SEAL SYSTEM APPLICABLE TO MOST PUMP INSTALLATIONS. SOME PUMP MANUFACTURERS RECOMMEND DIFFERENT CONFIGURATIONS. THE CONTRACTOR SHALL PROVIDE SEAL WATER INSTALLATIONS IN STRICT ACCORDANCE WITH THE PUMP MANUFACTURER'S INSTRUCTIONS AT NO ADDITIONAL COST TO THE OWNER.
4. ROTAMETER SHALL BE DWYER RMC-141, 0.1-1.0 GPM WATER RANGE, OR EQUAL.

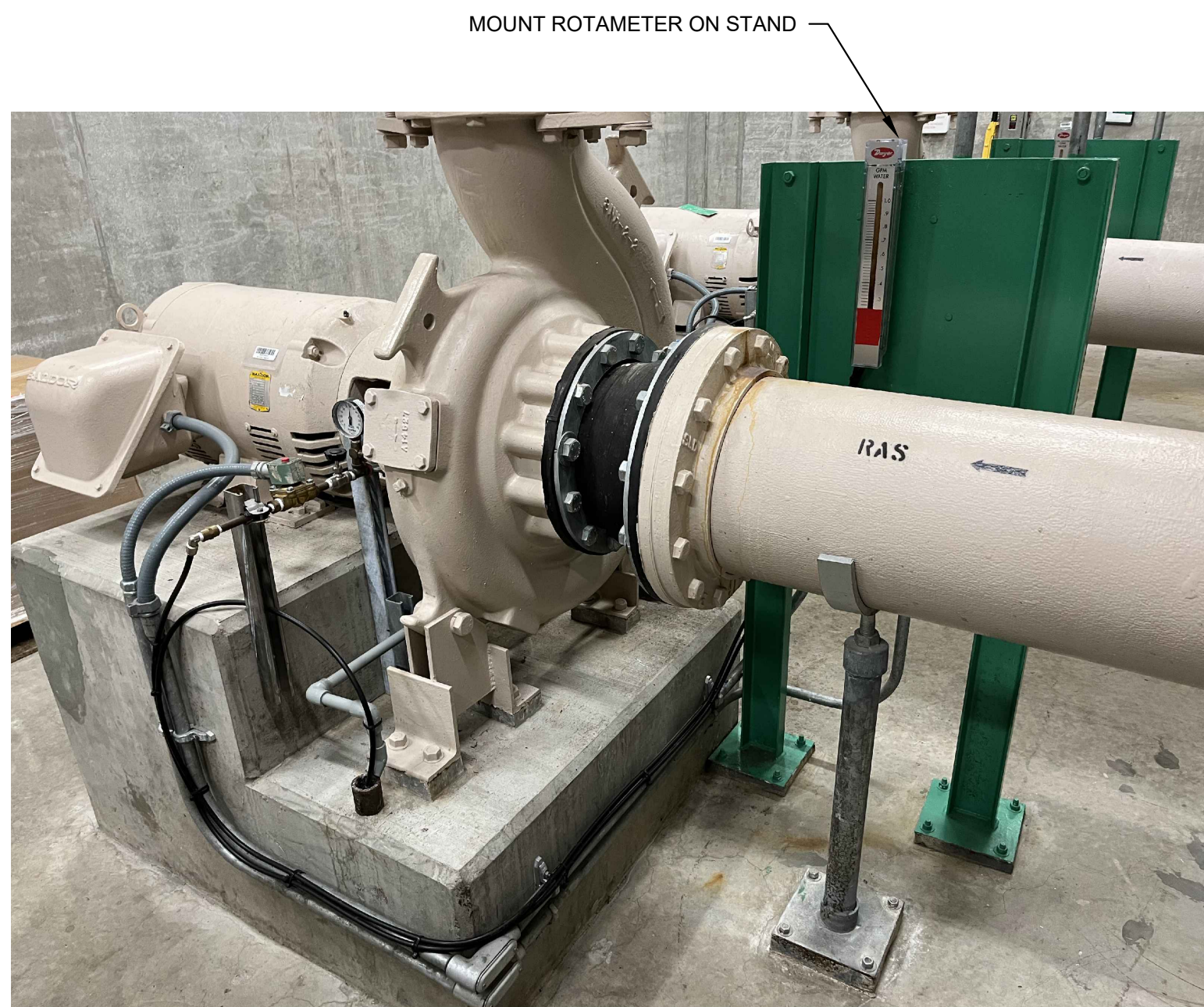
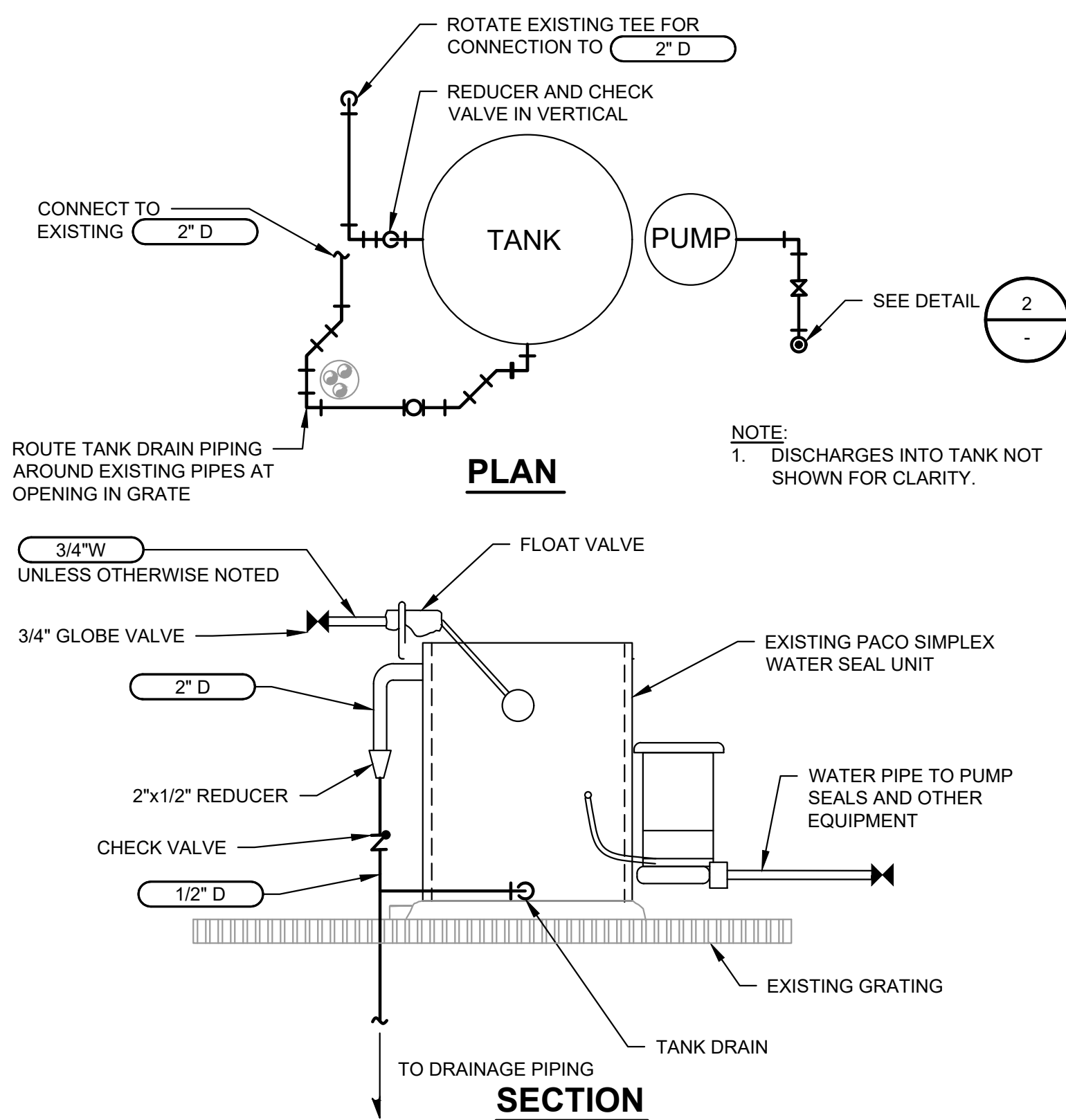


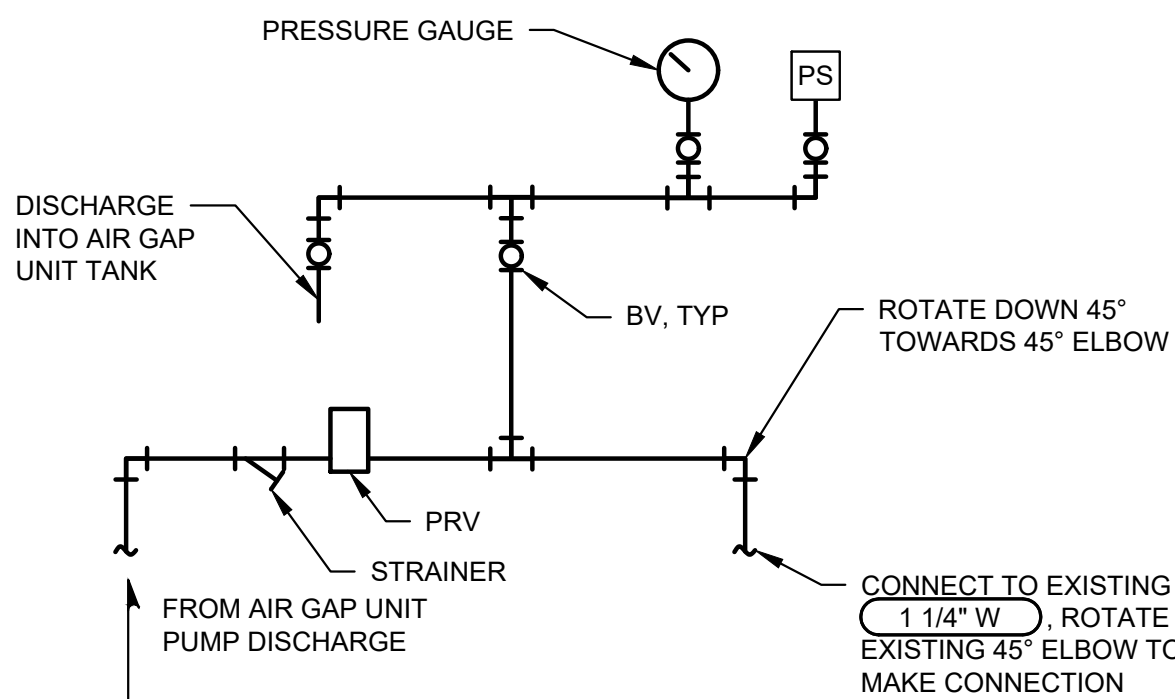
PHOTO DETAIL



PLAN

SECTION

AIR GAP UNIT DETAIL

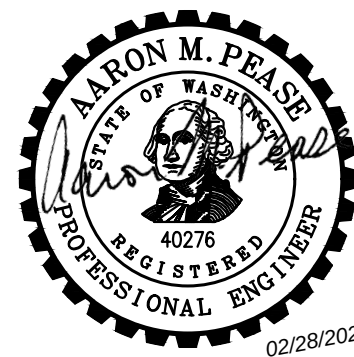


AIR GAP UNIT PIPING SCHEMATIC DETAIL

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
APPROVED DATE: 2/28/2024
EXPIRATION DATE: 12/31/2025
NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.
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Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH,
SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

PRCNC20240061



**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
-----	------	----------

ISSUED FOR: **BID SET**

ISSUE DATE: **FEBRUARY 2024**

APPROVED BY: **AMP**

CHECKED BY: **ASD**

DRAWN BY: **ASD**

DESIGNER: **AMP**

G & O JOB NO.: **21462.00**

FILE: **NOTES_DEMO.DWG**

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

PLUMBING

AREA 6

**SECONDARY
SPLITTER BOX AND
RAS/WAS PUMP
STATION PLAN AND
DETAILS**

DRAWING: **P6-2** OF: **2**

SHEET: **35** OF: **60**

M:\PUYALLUP\21462 WPCP 3rd Secondary Clarifier\01 Design\PlanSet\Structural\S_STND.dwg, 2/28/2024 12:58 PM, CHARLEY REID

GENERAL STRUCTURAL NOTES

GENERAL
THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY. USE DETAIL MARKED "TYPICAL" WHEREVER APPLICABLE. CHANGES, OMISSIONS OR SUBSTITUTIONS ARE NOT PERMITTED WITHOUT WRITTEN APPROVAL OF THE ENGINEER. REFER TO THE SPECIFICATIONS FOR FURTHER REQUIREMENTS. DO NOT SCALE THE DRAWINGS.

ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2018 EDITION OF THE INTERNATIONAL BUILDING CODE.

THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC., IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, AND HAS NOT BEEN CONSIDERED BY THE ENGINEER OF RECORD. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO ITS COMPLETION. THE CONTRACTOR SHALL PROVIDE THE NECESSARY BRACING TO PROVIDE STABILITY PRIOR TO THE COMPLETION OF THE STRUCTURE.

THE GENERAL NOTES APPLY TO ALL STRUCTURES UNLESS NOTED OTHERWISE (U.N.O.). LOCATION AND SIZE OF ANCHOR BOLTS FOR SPECIFIC EQUIPMENT SHALL BE SPECIFIED BY THE VENDOR. CONTRACTOR SHALL COORDINATE LOCATIONS OF STRUCTURAL OPENINGS, PENETRATIONS AND EMBEDDED ITEMS WITH THE MECHANICAL, ARCHITECTURAL, ELECTRICAL, PLUMBING AND VENTILATION SECTIONS OF THE DRAWINGS AND WITH SUPPLIERS AND SUBCONTRACTORS AS MAY BE REQUIRED.

SPECIAL INSPECTION & TESTING
SPECIAL INSPECTIONS SHALL MEET THE REQUIREMENTS OF IBC CHAPTER 17.
OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH APPROVED DRAWINGS AND SPECIFICATIONS.

FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND ENGINEER. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION; THEN, IF NOT CORRECTED, TO THE BUILDING OFFICIAL AND ENGINEER. SUBMIT A FINAL REPORT STATING THE WORK WAS IN CONFORMANCE WITH THE APPROVED DRAWINGS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF IBC.

SPECIAL INSPECTION REQUIRED:
STEEL: IN ACCORDANCE WITH SECTION 1705.2 AND TABLE 1705.2.3
CONCRETE: IN ACCORDANCE WITH SECTION 1705.3 AND TABLE 1705.3
SOIL: IN ACCORDANCE WITH SECTION 1705.6 AND TABLE 1705.6

ALL WATER CONTAINMENT STRUCTURES SHALL BE TESTED FOR WATER TIGHTNESS. TESTING OF WATER CONTAINMENT STRUCTURES FOR WATER TIGHTNESS SHALL BE PERFORMED IN COMPLIANCE WITH ACI 350.1. THESE STRUCTURES INCLUDE, BUT ARE NOT LIMITED TO SECONDARY CLARIFIER NO. 3

SHOP DRAWINGS
SHOP DRAWINGS, WHERE REQUIRED, SHALL BE CHECKED AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING FOR ENGINEER REVIEW. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW OF DESIGN INTENT, PRIOR TO FABRICATION. GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND COORDINATION OF DIMENSIONS AND DETAILS FOR EACH SUBCONTRACTOR.

DESIGN LOADS
GROUND SNOW LOAD, Pg..... 20 PSF

WIND DESIGN DATA:
ULTIMATE WIND SPEED (3-SECOND GUST), Vult..... 105 MPH
RISK CATEGORY..... III
WIND EXPOSURE..... C

EARTHQUAKE DESIGN DATA
MAPPED SPECTRAL RESPONSE ACCELERATIONS
Ss..... 1.287 g
S1..... 0.443 g
SITE CLASS..... D
SPECTRAL RESPONSE COEFFICIENT
Sds..... 1.030 g
Sd1..... 0.548 g
SEISMIC IMPORTANCE FACTOR, Ie..... 1.5
RISK CATEGORY..... III
SEISMIC DESIGN CATEGORY..... D

FOUNDATION DATA PER GEOTECHNICAL REPORT BY PanGEO, INC., DATED AUGUST 18, 2021.

ALLOWABLE BEARING PRESSURE:.....1500 PSF

ABOVE ARE ASSUMED PER DATA PROVIDED,
CONTRACTOR MUST VERIFY IN FIELD.

EXTEND ALL EXTERIOR FOOTINGS 2'-0" MINIMUM BELOW FINISHED GRADE. UNO (UNLESS NOTED OTHERWISE), BOTTOM OF ALL FOOTINGS TO BEAR ON 12" MINIMUM OF PROPERLY COMPACTED CRUSHED SURFACING BASE COURSE (CSBC) OVER NATIVE, INORGANIC, UNDISTURBED SOIL. NO FOOTING SHALL BEAR HIGHER THAN 1 VERTICAL TO 1.5 HORIZONTAL SLOPE ABOVE ANY EXCAVATION, EXISTING OR PLANNED. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING TO PREVENT MOVEMENT OF WALLS IF BACKFILL IS PLACED BEFORE FLOOR SYSTEM IS IN PLACE. THERE SHALL BE 95% COMPACTION (ASTM D1557 MODIFIED PROCTOR DENSITY) OF ALL BACKFILL SOIL UNDER SLABS ON GRADE.

CAST-IN-PLACE CONCRETE
CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:
28-DAY STRENGTH f'c=4,000 PSI
AIR ENTRAINMENT: 5%-7%
WATER CONTAINMENT STRUCTURES: f'c=4,000 PSI @ 28 DAYS
MAXIMUM SLUMP: 3" FOR SLABS FOOTINGS, 4" FOR WALLS, COLUMNS AND BEAMS. CONSTRUCTION TO BE IN ACCORDANCE WITH ACI 318.

SUBMIT MIX DESIGN FOR REVIEW AND PROVIDE NOT LESS THAN 6 SACKS OF CEMENT PER CUBIC YARD FOR ALL CONCRETE WITH MAXIMUM W/C=0.45.

REINFORCING STEEL
WELDED WIRE FABRIC (W.W.F.): ASTM A82 AND A185
DEFORMED BARS: ASTM A615, GRADE 60 (GRADE 40 FOR #3).
UNLESS OTHERWISE NOTED ON THESE DRAWINGS, MINIMUM CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS:
CONCRETE CAST AGAINST SOIL=3".
FORMED CONCRETE AGAINST SOIL=2".
WALLS, COLUMNS AND BEAMS EXPOSED TO WATER, SEWAGE & WEATHER=2".
WALLS, COLUMNS AND BEAMS DRY CONDITION=1 1/2".

PROVIDE 2-#5 MIN. U.N.O. TRIM BARS AROUND ALL OPENINGS IN CONCRETE WALLS OR SLAB EXTENDING 2'-6" PAST CORNERS, TYP. AT TIME OF CONCRETE PLACEMENT, REINFORCING SHALL BE FREE OF MUD, OIL, OR OTHER NONMETALLIC COATINGS THAT MAY DECREASE BOND.

WELDING OF REINFORCING BARS SHALL CONFORM TO ANSI/AWS D1.4.
WHERE PERMITTED, LOW HYDROGEN WELDING RODS SHALL BE USED FOR ALL WELDING OF REINFORCING BARS. SPECIAL INSPECTION IS REQUIRED FOR ALL FIELD WELDING.

SUBMIT SHOP DRAWINGS OF REINFORCING STEEL FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION. REINFORCING SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 AND 318 (LATEST EDITION).

STRUCTURAL STEEL AND MISCELLANEOUS METALS
"W" SHAPES: ASTM A992, Fy=50 KSI.
CHANNELS, ANGLES, PLATES, AND BARS: ASTM A36, Fy=36 KSI.
PIPE: ASTM A53 OR A501, Fy=35 KSI MINIMUM.
TUBING: ASTM A500, GRADE B, Fy=46 KSI.

ALL BOLTS FOR CONNECTIONS IN SUBMERGED CONDITION SHALL BE: ASTM F593C OR F593D STAINLESS STEEL (SS) BOLTS. ALL OTHERS SHALL BE GALVANIZED ASTM A325-N BOLTS HIGH STRENGTH BOLTS (H.S.B.), U.N.O. AS ASTM A307 MACHINE BOLTS (M.B.). WHERE HIGH STRENGTH BOLTS ARE USED, THEY SHALL BE INSTALLED WITH LOAD INDICATOR DEVICES (LOAD INDICATOR WASHERS OR SNAP-OFF HEADS).
ADHESIVE ANCHORS: HILTI HIT-RE 500 V3 OR APPROVED EQUAL, U.N.O. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

HEADED ANCHOR STUDS (H.A.S.): ASTM A108, Fy=50 KSI, END WELDED PER MANUFACTURER'S RECOMMENDATIONS.
ALL ANCHOR BOLTS AND THREADED RODS: ASTM F1554, U.N.O. ALL ANCHOR BOLTS MUST BE ACCURATELY PLACED IN THEIR FINAL LOCATION PRIOR TO POURING CONCRETE, "WET STICKING" OF ANCHOR BOLTS IS NOT ALLOWED.

WELDING ELECTRODES OR WIRES: AWS A5.1 OR A5.5, E70XX; AWS A5.17, E70S-X; AWS A5.20, E7XT-X.
FOR ALL SHOP WELDS AND FIELD WELDS OF ALL LATERAL RESISTING ELEMENTS, ELECTRODES SHALL BE E70 WITH A MINIMUM SPECIFIED CVN OF 20 FT-LBS AT -20 DEGREES FAHRENHEIT. ALL WELDS SHALL BE 3/16" MINIMUM U.N.O.

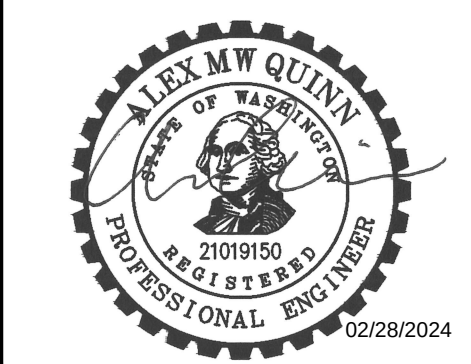
ERECTION AND FABRICATION IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS." WELDING SHALL CONFORM TO AWS "STRUCTURAL WELDING CODE - STEEL". ALL WELDING SHALL BE PERFORMED BY AWS/WABO CERTIFIED WELDERS.

ALL COLUMNS AND BEAMS TO BE FROM UNSPLICED LENGTHS U.N.O. ON THE DRAWINGS. SUBMIT SHOP DRAWINGS SHOWING SIZES, DIMENSIONS AND REQUIRED CONNECTION DETAILS FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION.



Gray & Osborne, Inc.
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PRCNC20240061

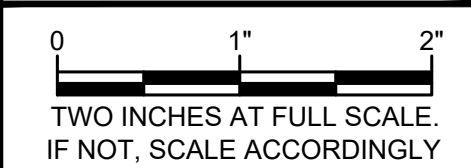




**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION

ISSUED FOR:	
BID SET	
ISSUE DATE:	FEBRUARY 2024
APPROVED BY:	MJB
CHECKED BY:	AQ
DRAWN BY:	RAH
DESIGNER:	MJB
G & O JOB NO.:	21462.00
FILE:	S_STND.DWG



STRUCTURAL

**GENERAL
STRUCTURAL
NOTES**

DRAWING: **S-1** OF: **3**

SHEET: **36** OF: **60**

APPROVED

BY: 
CITY ENGINEER
CITY OF PUYALLUP

APPROVED DATE: 2/28/2024

EXPIRATION DATE: 12/31/2025

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SPECIAL INSPECTION SCHEDULE			
VERIFICATION AND INSPECTION	CI	PI	REMARKS/REFERENCES
CONCRETE:			
REINFORCING STEEL INCLUDING PLACEMENT	-	X	ACI 318: CH 20, 25.2, 25.3, 26.6.1-26.6.3
ANCHOR RODS, EMBEDDED BOLTS AND INSERTS	X	-	PRIOR TO AND DURING PLACEMENT OF CONCRETE
USE OF REQUIRED DESIGN MIX	-	X	ACI 318: CH. 19, 26.4.3, 26.4.4
CONCRETE SLUMP, AIR CONTENT, TEMPERATURE AND TEST SPECIMENS	X	-	WHILE MAKING SPECIMENS FOR STRENGTH TESTS
CONCRETE AND SHOTCRETE PLACEMENT	X	-	ACI 318: 26.5
CONCRETE CURING	-	X	ACI 318: 26.5.3-26.5.5
CONCRETE FORMWORK FOR SHAPE, LOCATIONS AND DIMENSIONS	-	X	ACI 318: 26.11.1.2(6)
STEEL:			
MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:			
MANUFACTURER'S CERTIFICATE	-	X	
INSPECTION OF HIGH-STRENGTH BOLTING:	-	X	AISC 360, SECTION N5.6
MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:	-	X	
IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	-	X	AISC 360, N5.7
INSPECTION OF WELDING:			SHOP AND FIELD
COMPLETE AND PARTIAL PENETRATION GROOVE WELDS	X	-	AWS D1.1
MULTIPASS, SINGLE-PASS FILLET WELDS > 5/16", PLUG AND SLOT WELDS	X	-	AWS D1.1
SINGLE-PASS FILLET WELDS < 5/16", FLOOR AND ROOF DECK WELDS	-	X	AWS D1.3
REINFORCING STEEL	X	-	AWS D1.4, ACI 318: SECTION 26.6.4
SOILS:			
VERIFY DESIGN BEARING CAPACITY	-	X	
VERIFY EXCAVATIONS	-	X	
CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	-	X	
USE OF MATERIALS, DENSITIES AND LIFT THICKNESSES	X	-	DURING PLACEMENT AND COMPACTION
OBSERVE SUBGRADE AND SITE PREPARED PROPERLY	-	X	PRIOR TO PLACEMENT OF COMPACTED FILL

INSPECTION SCHEDULE NOTES

- ITEMS MARKED WITH AN "X" REQUIRE INSPECTION BY A SPECIAL INSPECTOR APPROVED BY THE BUILDING OFFICIAL.
- ITEMS MARKED "NA" ARE NOT APPLICABLE TO THIS PROJECT.
- CI = CONTINUOUS INSPECTION DURING PROGRESS OF WORK BY SPECIAL INSPECTOR.
- PI = PERIODIC INSPECTION BY SPECIAL INSPECTOR AS REQUIRED TO CONFIRM CONFORMANCE OF WORK.
- TESTING AND INSPECTION REPORTS SHALL BE SUBMITTED TO THE ENGINEER, BUILDING OFFICIAL AND CONTRACTOR.
- OWNER WILL CONTRACT FOR SPECIAL INSPECTION SERVICES.

NOTES:

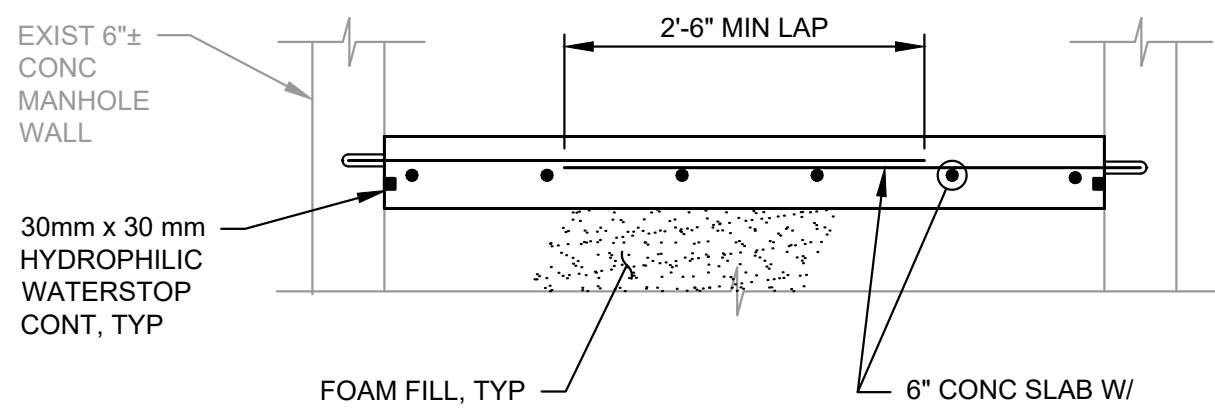
FOAM FILL SHALL BE US COMPOSITES 2 PART LIQUID, EXPANDING URETHANE FOAM, 8 LB DENSITY:

SHALL BE 2 PART LIQUID, EXPANDING RIGID URETHANE FOAM. CLOSED CELL, POURABLE, AND WATER RESISTANT.

SHALL EXPAND TO COMPLETELY FILL VOID SPACE TO THE ELEVATION SHOWN ON THE PLANS.

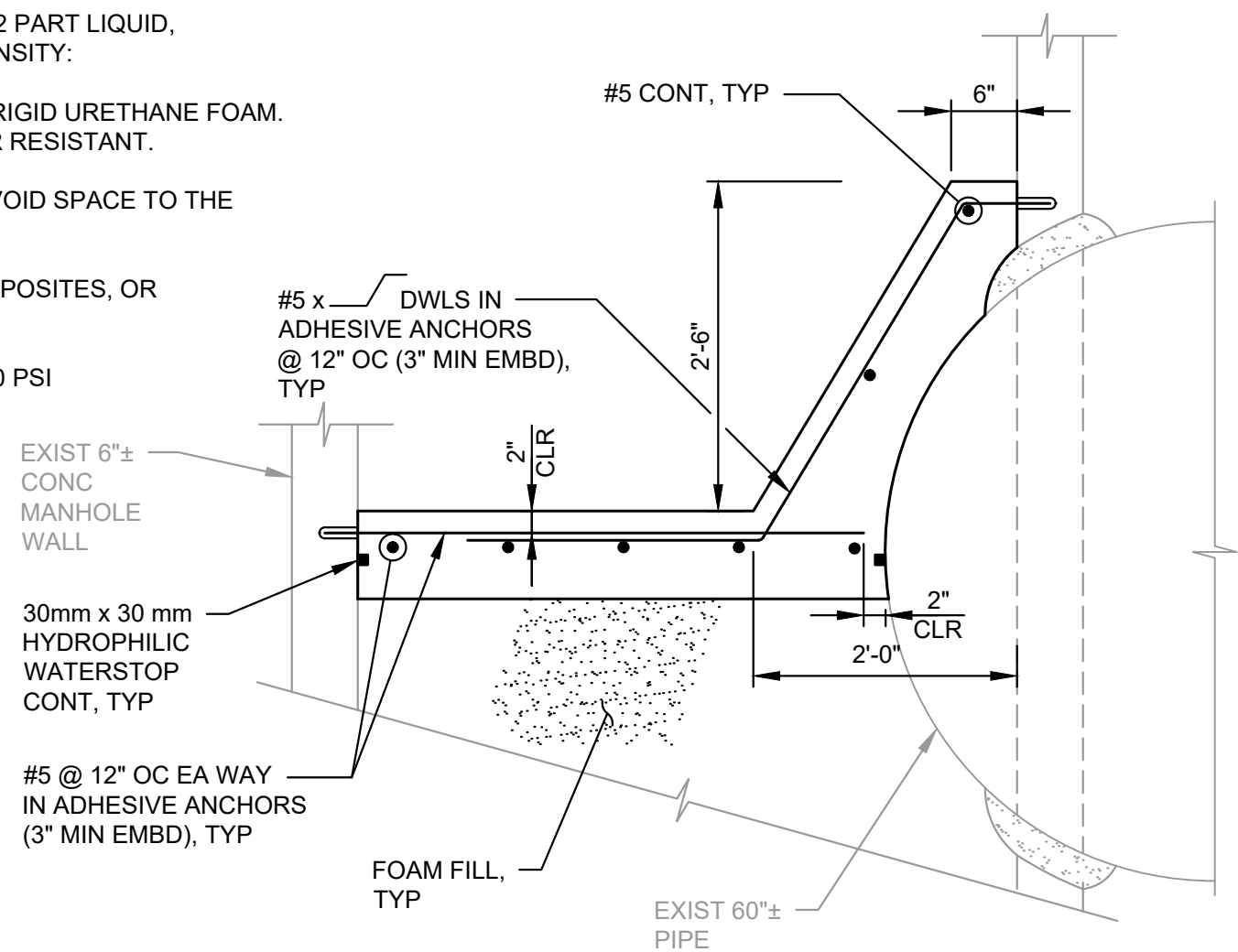
SHALL BE MANUFACTURED BY US COMPOSITES, OR APPROVED EQUIVALENT.

- MIN COMPRESSIVE STRENGTH: 250 PSI
- MIN TENSILE STRENGTH: 225 PSI
- DENSITY: 8 LB/FT³



TYPICAL SLAB INFILL IN EXISTING MANHOLE

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



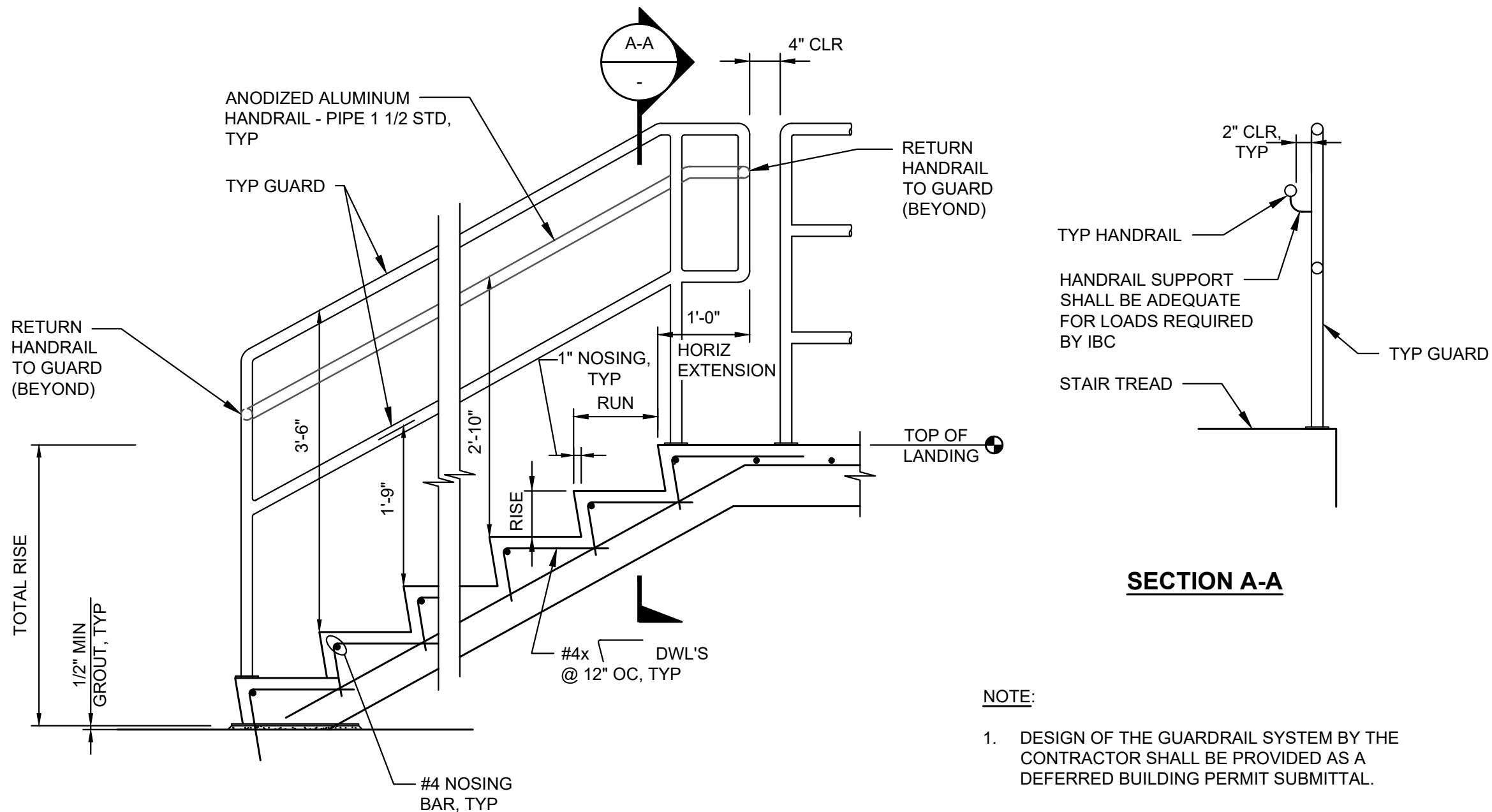
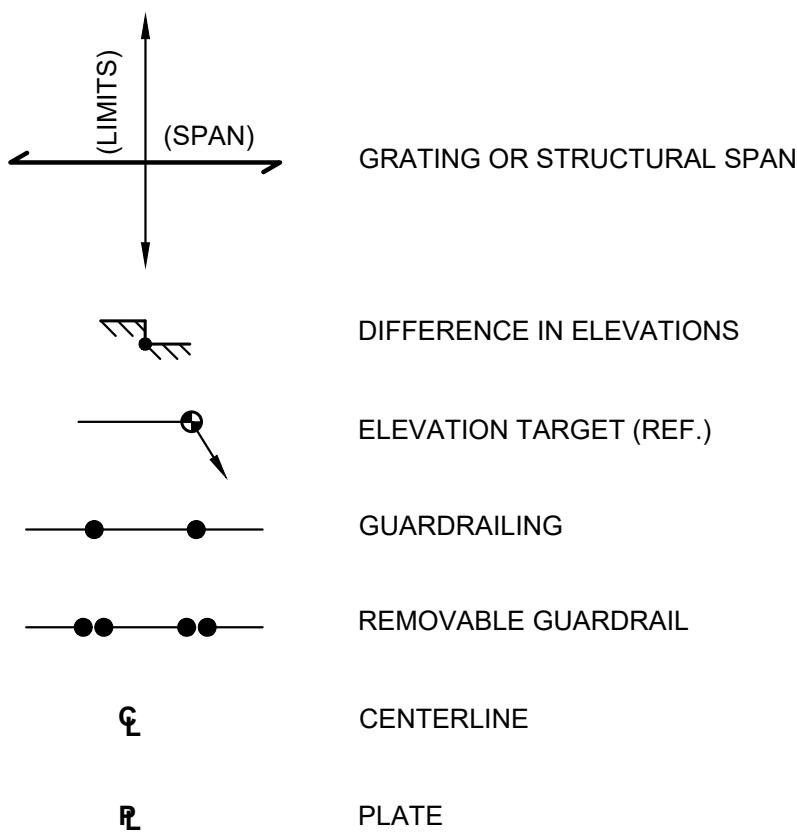
MODIFIED SLAB INFILL IN EXISTING MANHOLE

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

SUPPLEMENTAL STRUCTURAL ABBREVIATIONS:

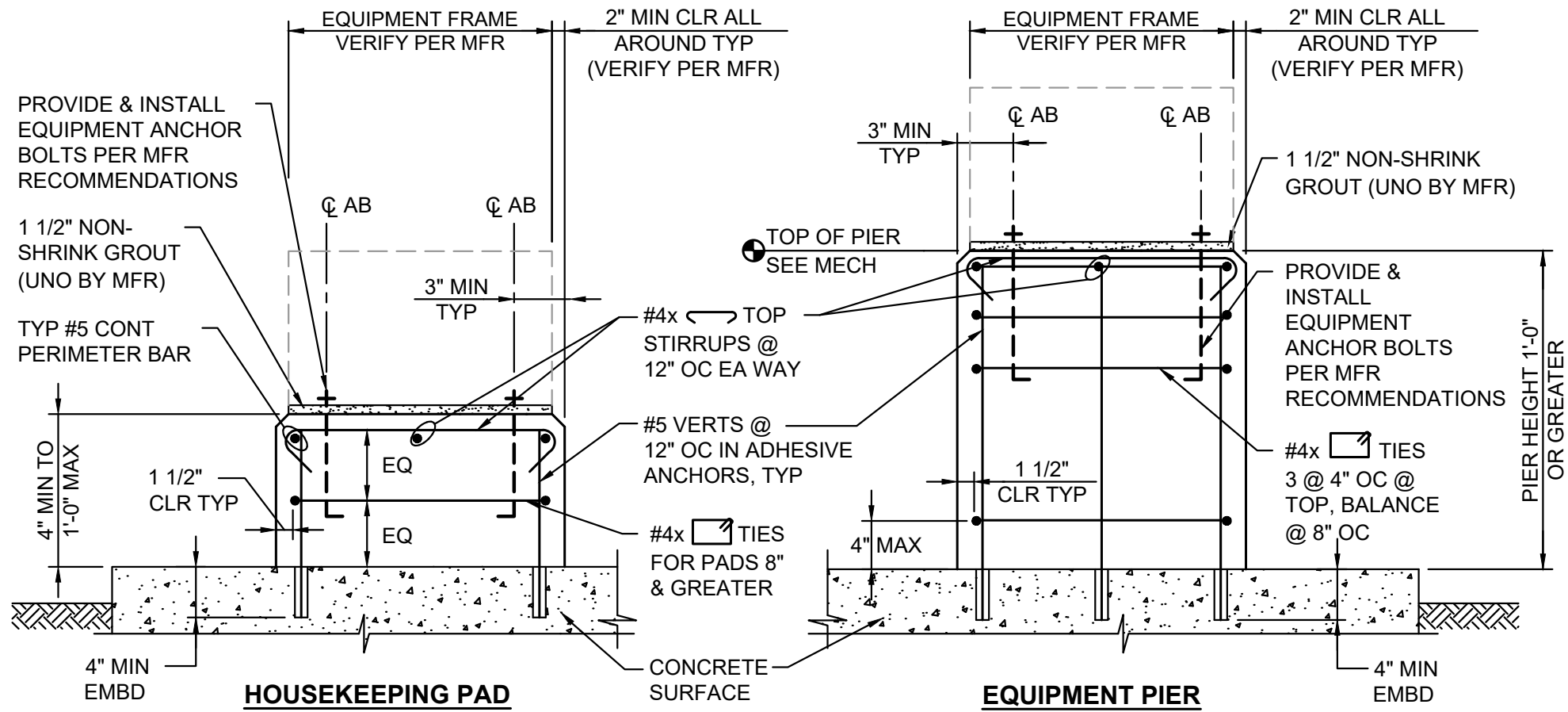
ABV	ABOVE	FND	FOUNDATION	PERP	PERPENDICULAR
AFF	ABOVE FINISH FLOOR	FO	FACE OF	PT	PRESSURE TREAT(ED)
ADD'L	ADDITIONAL	FS	FAR SIDE	QTY	QUANTITY
ADJ	ADJACENT	FTG	FOOTING	REF	REFERENCE
AL	ALUMINUM	GA	GAUGE	REINF	REINFORCEMENT
APPRX	APPROXIMATE	HAS	HEADER ANCHOR STUDS	SHT	SHEET
@	AT	HDR	HEADER	SIM	SIMILAR
BEL	BELOW	HGR	HANGER	SKW	SKWE(ED)
BM	BEAM	HSB	HIGH STRENGTH BOLT (A325 UNO)	SFC	SPACING
BNDRY	BOUNDRY	HSS	HOLLOW STRUCTURAL STEEL	SS	STAINLESS STEEL
BO	BOTTOM OF	IBC	INTERNATIONAL BUILDING CODE	STGR	STAGGER
BOS	BOTTOM OF SLAB	IF	INSIDE FACE	STIFF	STIFFENER
BOT	BOTTOM	INT	INTERIOR	STIRR	STIRRUP
BRG	BEARING	K	KIPS (1000 POUNDS)	STRUC	STRUCTURE(AL)
CANT	CANTILEVER(ED)	LAT	LATERAL	SYM	SYMMETRICAL
CDF	CONTROLLED DENSITY FILL	LDGR	LEDGER	T	TOP
CG	CENTER OF GRAVITY	LLH	LONG LEG HORIZONTAL	TMPLY	TEMPORARY
CIP	CAST IN PLACE	LLV	LONG LEG VERTICAL	TO	TOP OF
CJ	CONTROL JOINT	LS	LAG SCREW	TOS	TOP OF SLAB
CJP	COMPLETE JOINT PENETRATION	MAT'L	MATERIAL	TRANS	TRANSVERSE
COL	COLUMN	MB	MACHINE BOLT (A307)	TYP	TYPICAL
CONST	CONSTRUCTION	MFR	MANUFACTURER	UNO	UNLESS NOTED OTHERWISE
CONT	CONTINUOUS	MTL	METAL	VFY	VERIFY
CTSK	COUNTERSINK	(N)	NEW MEMBER	WHS	WELDED HEADED STUD
D	DEPTH	NS	NEAR SIDE	WP	WORK POINT
DBL	DOUBLE	OH	OVERHANG	WTS	WELDED THREADED STUD
DIAG	DIAGONAL	ORNT	ORIENTATE (ION)	X-STG	EXTRA STRONG
DIAPH	DIAPHRAGM	PAR	PARALLEL	XX-STG	DOUBLE EXTRA STRONG
do	DITTO (DO OVER)				
DWG	DRAWING				
DWL	DOWEL				
EA	EACH				
EF	EACH FACE				
EJ	EXPANSION JOINT				
EMBD	EMBED(MENT)				
ENG	ENGINEER				
EQ	EQUAL				
ES	EACH SIDE				
EXIST	EXISTING MEMBER				
EXT	EXTERIOR				
FFE	FINISHED FLOOR ELEVATION				

STRUCTURAL LEGEND



TYP STAIR, GUARD AND HANDRAIL DETAILS

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



TYP HOUSEKEEPING PAD & EQUIPMENT PIER DETAILS

NOT TO SCALE

NOTES:

- CHAMFER ALL EXPOSED CORNERS OF HOUSEKEEPING PADS AND EQUIPMENT PIERS.
- FOR PIER HEIGHT LESS THAN 1'-0" SEE HOUSEKEEPING PAD DETAIL

APPROVED

BY:

CITY ENGINEER
CITY OF PUYALLUP

APPROVED DATE: 2/28/2024

EXPIRATION DATE: 12/31/2025

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CONSULTING ENGINEERS

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PRCNC20240061

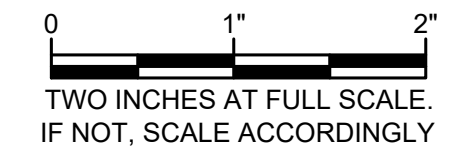
2/28/2024

02/28/2024

WATER POLLUTION CONTROL PLANT THIRD SECONDARY CLARIFIER INSTALLATION
CIP NO. 20-018

1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR:		
BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: MJB		
CHECKED BY: AQ		
DRAWN BY: RAH		
DESIGNER: MJB		
G & O JOB NO.: 21462.00		
FILE: S_STND.DWG		



STRUCTURAL SPECIAL INSPECTION SCHEDULE, SUPPLEMENTAL STRUCTURAL ABBREVIATIONS, STRUCTURAL LEGEND AND TYPICAL DETAILS

DRAWING: **S-2** OF: **3**

SHEET: **37** OF: **60**

1
TYP

TYP LAP SCHEDULE

NOT TO SCALE



NOTE:

ALL BARS, EACH FACE. USE THESE BAR SIZES UNLESS OTHERWISE NOTED.



ANCHOR BOLT EMBEDMENT IN VERTICAL
SURFACE APPLIES TO CONCRETE ONLY.

4
TYP

TYP ANCHOR BOLT DETAIL

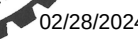
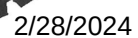
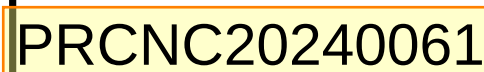
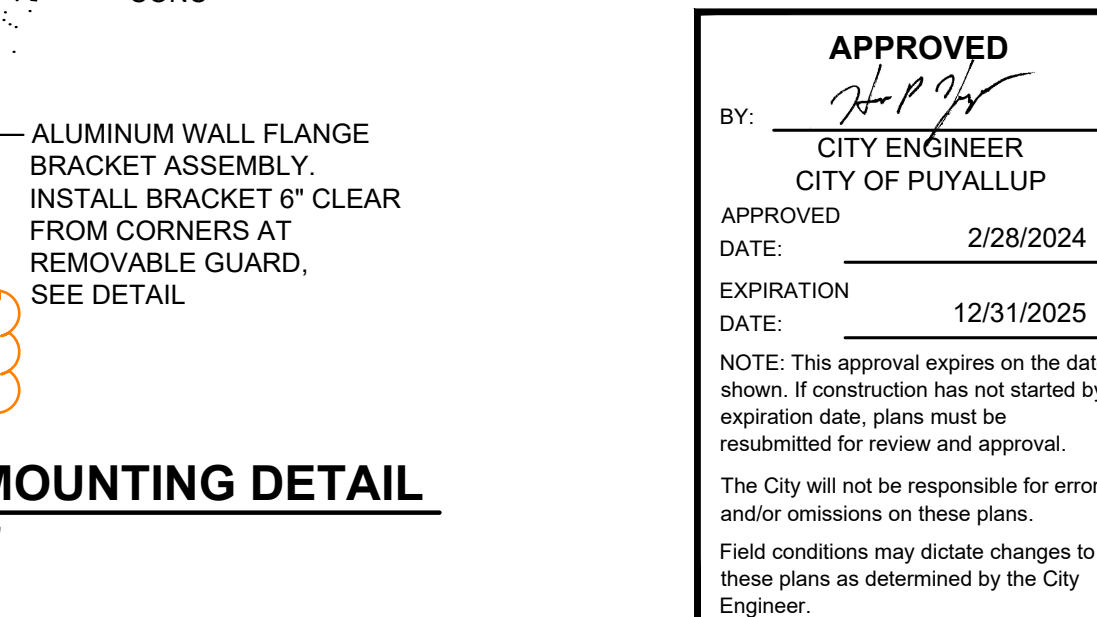
NOT TO SCALE



1. FOR SINGLE CURTAIN REINFORCING LOCATE REINFORCING AT CENTER OF WALL & WATER STOP ON DRY SIDE OF WALL.
2. WATERSTOP REQUIRED FOR ALL WATER CONTAINMENT STRUCTURES.



1. CONTRACTOR SHALL PROVIDE GUARD CONNECTIONS CAPABLE OF RESISTING REACTIONS DUE TO LATERAL LOADS AS REQ'D BY IBC.
2. DESIGN OF THE GUARDRAIL SYSTEM BY THE CONTRACTOR SHALL BE PROVIDED AS A DEFERRED BUILDING PERMIT SUBMITTAL.



No.	DATE	REVISION
-----	------	----------

ISSUED FOR:

BID SET

ISSUE DATE: FEBRUARY 2022

APPROVED BY:	
CHECKED BY:	

DRAWN BY: RA

DESIGNER: MJ

G & O JOB NO.: 21462.0

FILE:	S-STREISW
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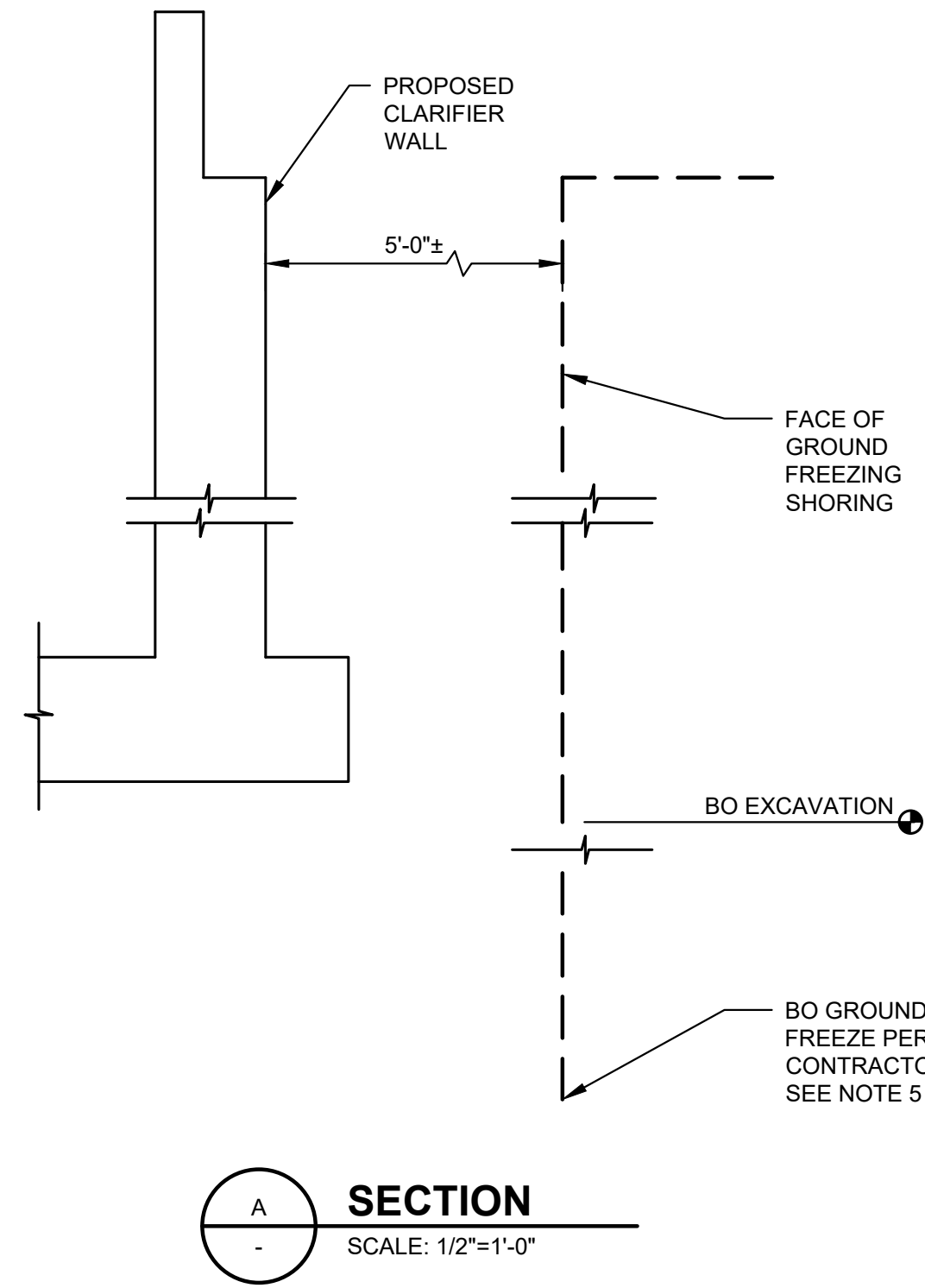
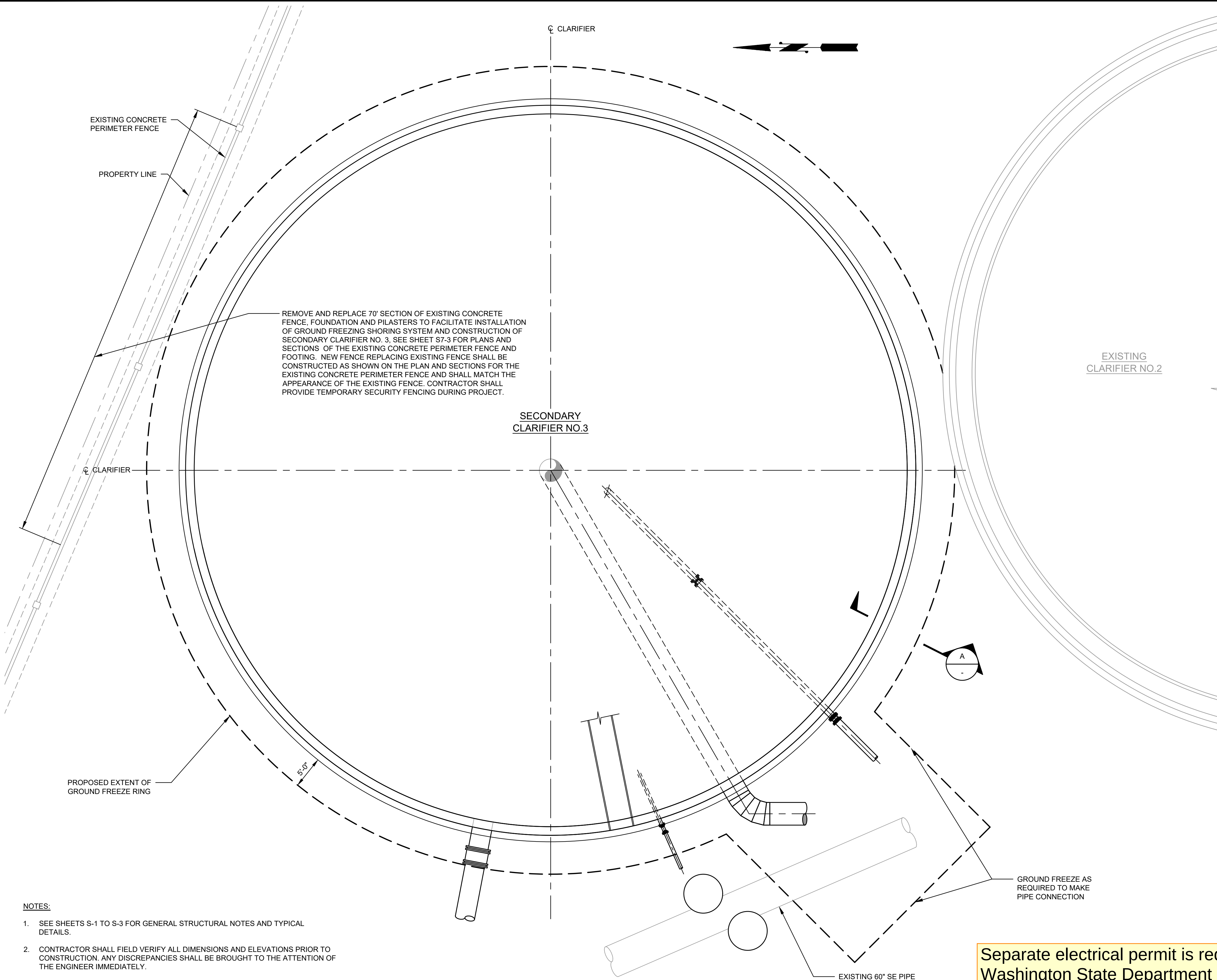
STRUCTURAL

TYPICAL STRUCTURAL DETAILS

DRAWING: **S-3** OF: **3**

SHEET: **38** OF: **60**

M:\PUYALLUP\21462 WPCP 3rd Secondary Clarifier\01 Design\PlanSet\Structural\SC3_SEC DTL.S.dwg, 2/28/2024 12:58 PM, CHARLEY REID



- NOTES:
- SEE SHEETS S-1 TO S-3 FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
 - CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
 - FOR GROUND FREEZE REQUIREMENTS SEE THE SPECIFICATIONS.
 - CONTRACTOR SHALL SUBMIT A GROUND FREEZE SHORING PLAN FOR REVIEW PRIOR TO INSTALLATION OF THE SHORING SYSTEM.
 - GROUND FREEZE SHALL EXTEND DOWN TO AN ELEVATION DETERMINED BY THE CONTRACTOR AS REQUIRED TO CUT OFF GROUND WATER.
 - CONTRACTOR TO NOTE PREVIOUSLY INSTALLED STONE COLUMNS EXIST WITHIN THE PROPOSED EXCAVATION AREA. STONE COLUMNS SHALL BE REMOVED AS REQUIRED FOR THE CONSTRUCTION OF CLARIFIER NO. 3.

**SECONDARY CLARIFIER NO. 3
TEMPORARY SHORING/GROUND FREEZE PLAN**
SCALE: 1/8"=1'-0"

Separate electrical permit is required with Washington State Department of Labor & Industries.
<https://lni.wa.gov/licensing-permits/electrical/electric-al-permits-fees-and-inspections> or Licensing information: Call 1-800-647-0982

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
APPROVED DATE: 2/28/2024
EXPIRATION DATE: 12/31/2025
NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.
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Field conditions may dictate changes to these plans as determined by the City Engineer.

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

PRCNC20240061



CITY OF PUYALLUP
STATE OF WASHINGTON
**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1802 18TH ST NW,
PUYALLUP, WA 98371

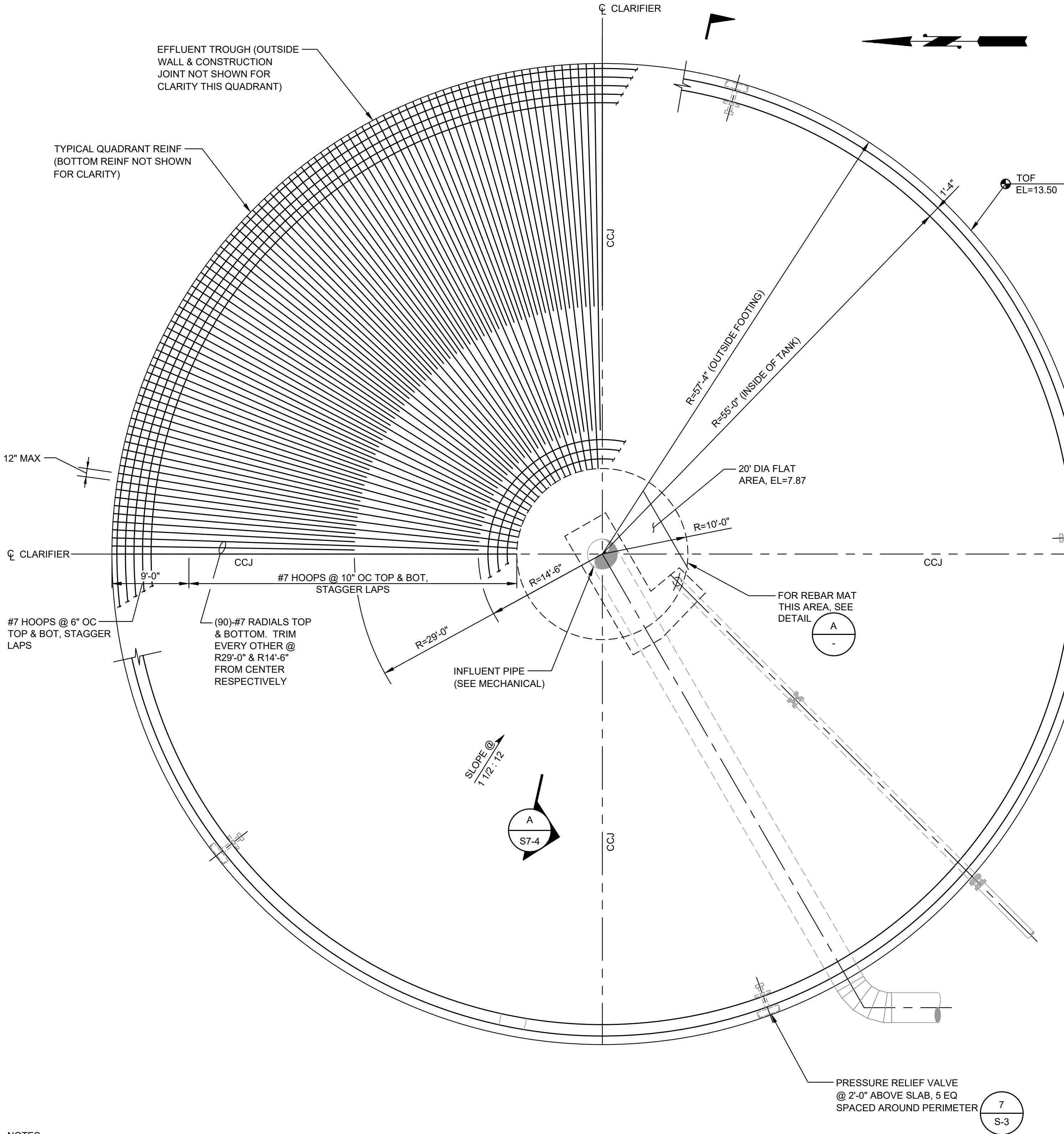
No.	DATE	REVISION
ISSUED FOR: BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: MJB		
CHECKED BY: AQ		
DRAWN BY: RAH		
DESIGNER: MJB		
G & O JOB NO.: 21462.00		
FILE: SC3_SEC DTL.S.DWG		

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

**STRUCTURAL
AREA 7
AREA 7 SECONDARY
CLARIFIER NO. 3
TEMPORARY
SHORING/GROUND
FREEZE PLAN**

DRAWING: **S7-1** OF: **4**
SHEET: **39** OF: **60**

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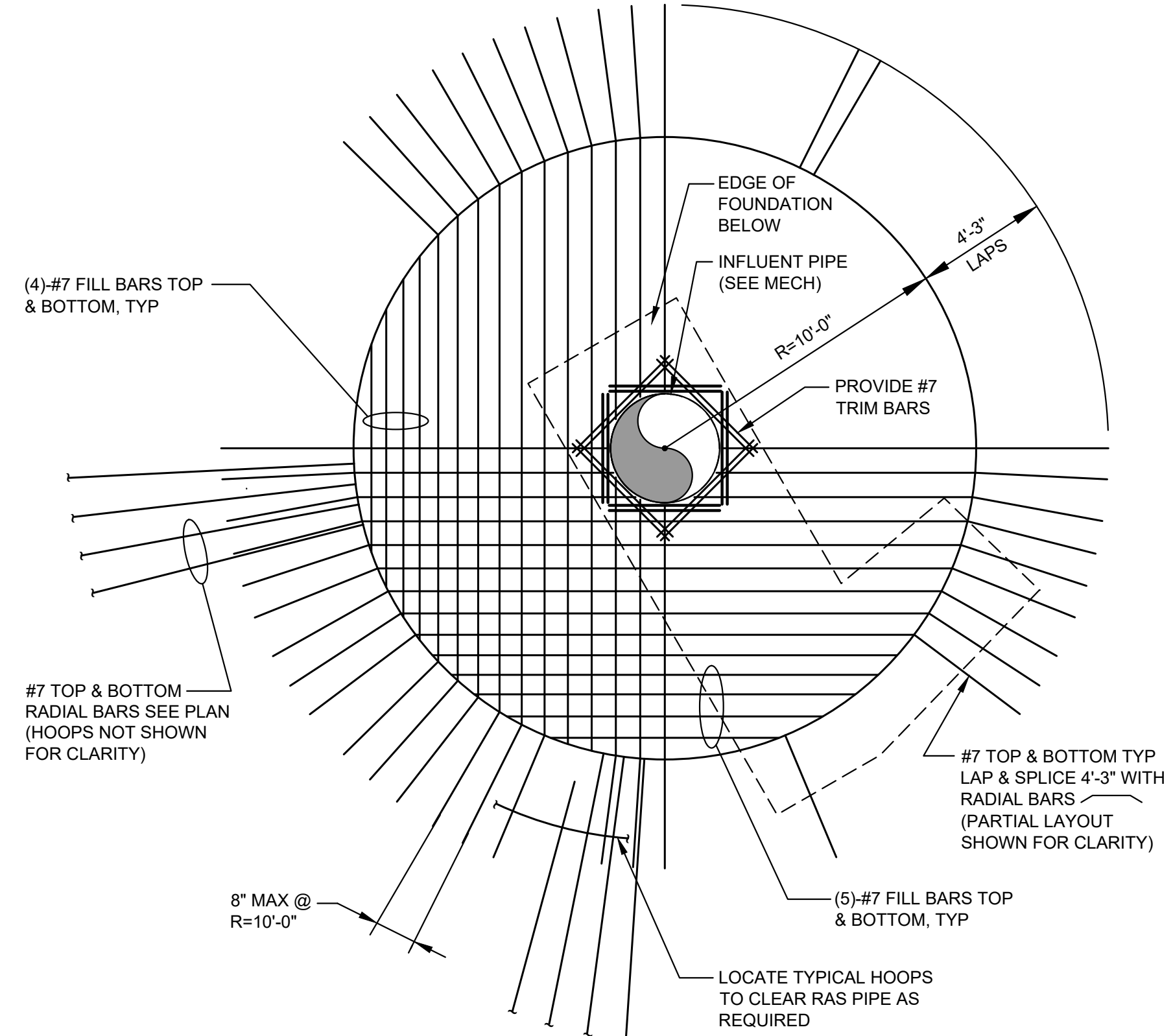


NOTES:

- SEE SHEETS S-1 TO S-3 FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
- STRUCTURAL STEEL SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH THE SPECIFICATIONS.
- ALL DIMENSIONS SHALL BE DETERMINED, COORDINATED AND VERIFIED BY THE EQUIPMENT MANUFACTURER PRIOR TO ANY CONCRETE CONSTRUCTION. DIMENSIONS AND ELEVATIONS SHOWN ON THE DRAWINGS ARE FOR INFORMATION PURPOSES ONLY. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO COORDINATE ALL DIMENSIONS WITH THE EQUIPMENT SYSTEMS MANUFACTURER.
- PROVIDE 4" MIN PVC WATERSTOPS AT ALL CONSTRUCTION JOINTS, TYPICAL UNO. FABRICATE REINFORCEMENT TO CLEAR WATERSTOPS BY 1" MINIMUM, TYPICAL.

**SECONDARY CLARIFIER NO. 3
FOUNDATION PLAN**

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



REBAR MAT PLAN DETAIL
SCALE: 1/4"=1'-0"

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
APPROVED DATE: 2/28/2024
EXPIRATION DATE: 12/31/2025
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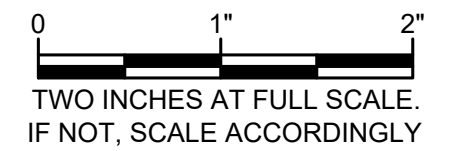
Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH,
SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

PRCNC20240061



**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR: BID SET		
ISSUE DATE: FEBRUARY 2024		
APPROVED BY: MJB		
CHECKED BY: AQ		
DRAWN BY: RAH		
DESIGNER: MJB		
G & O JOB NO.: 21462.00		
FILE: SC3_SEC DTLs.DWG		



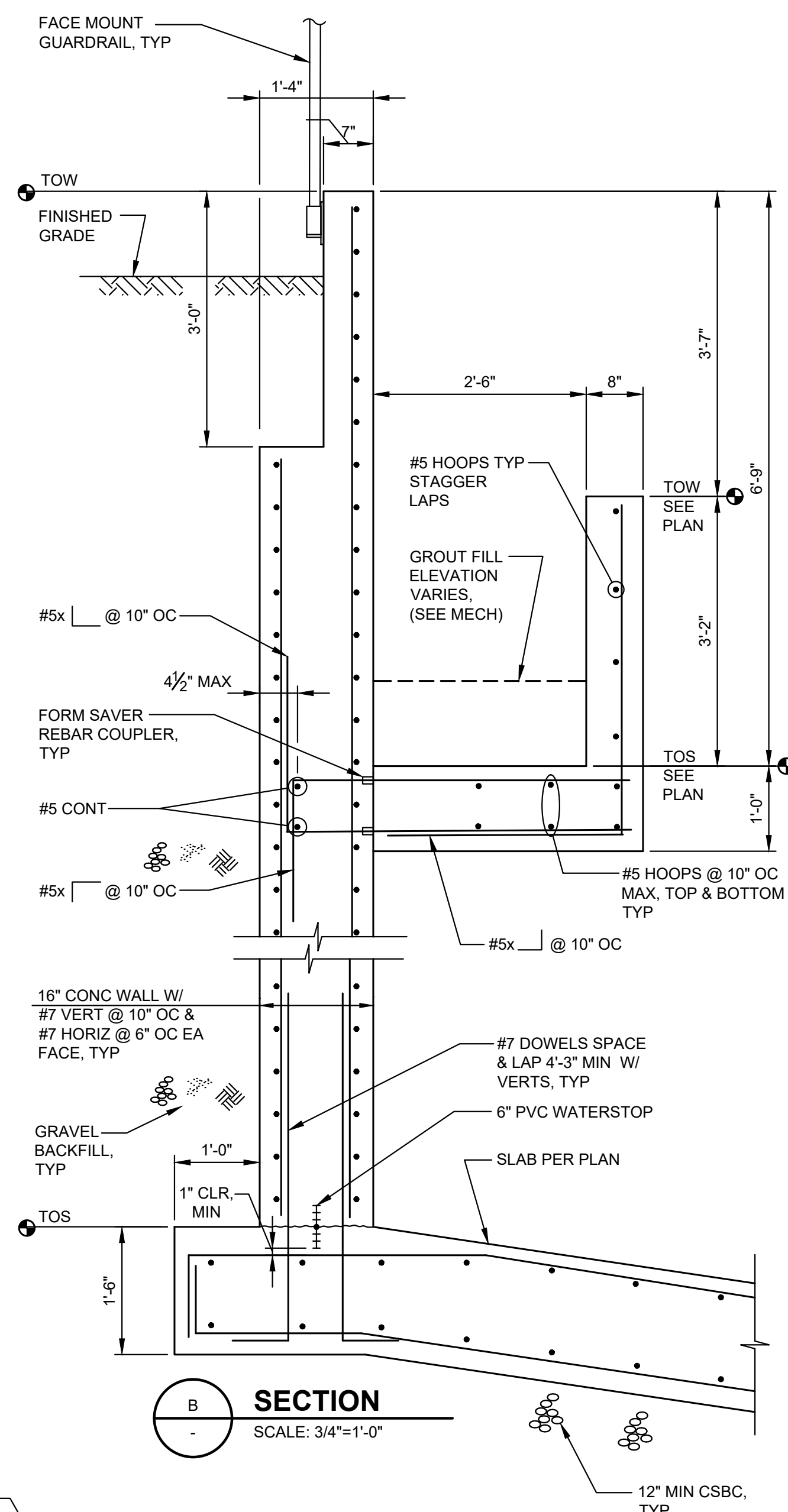
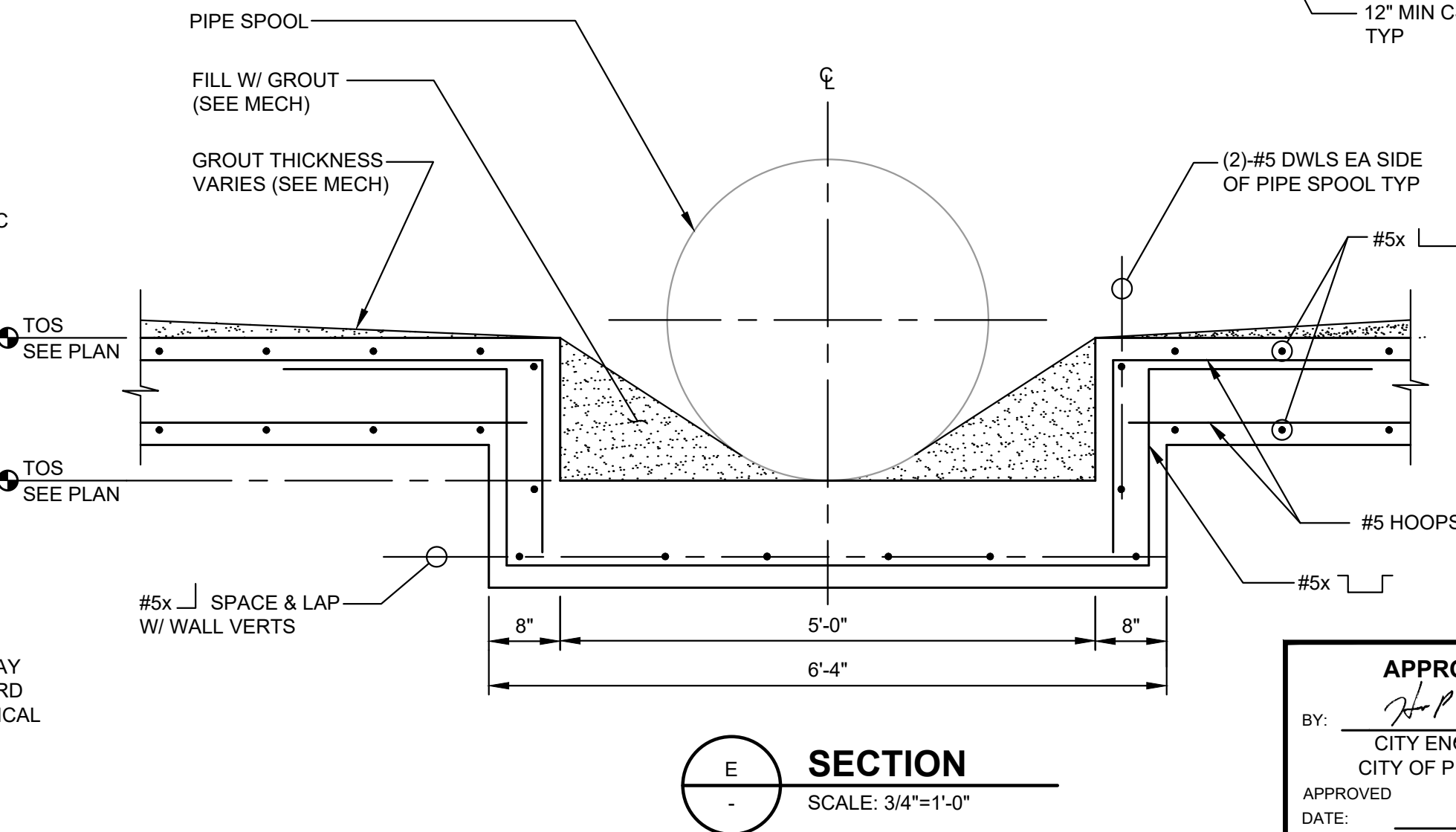
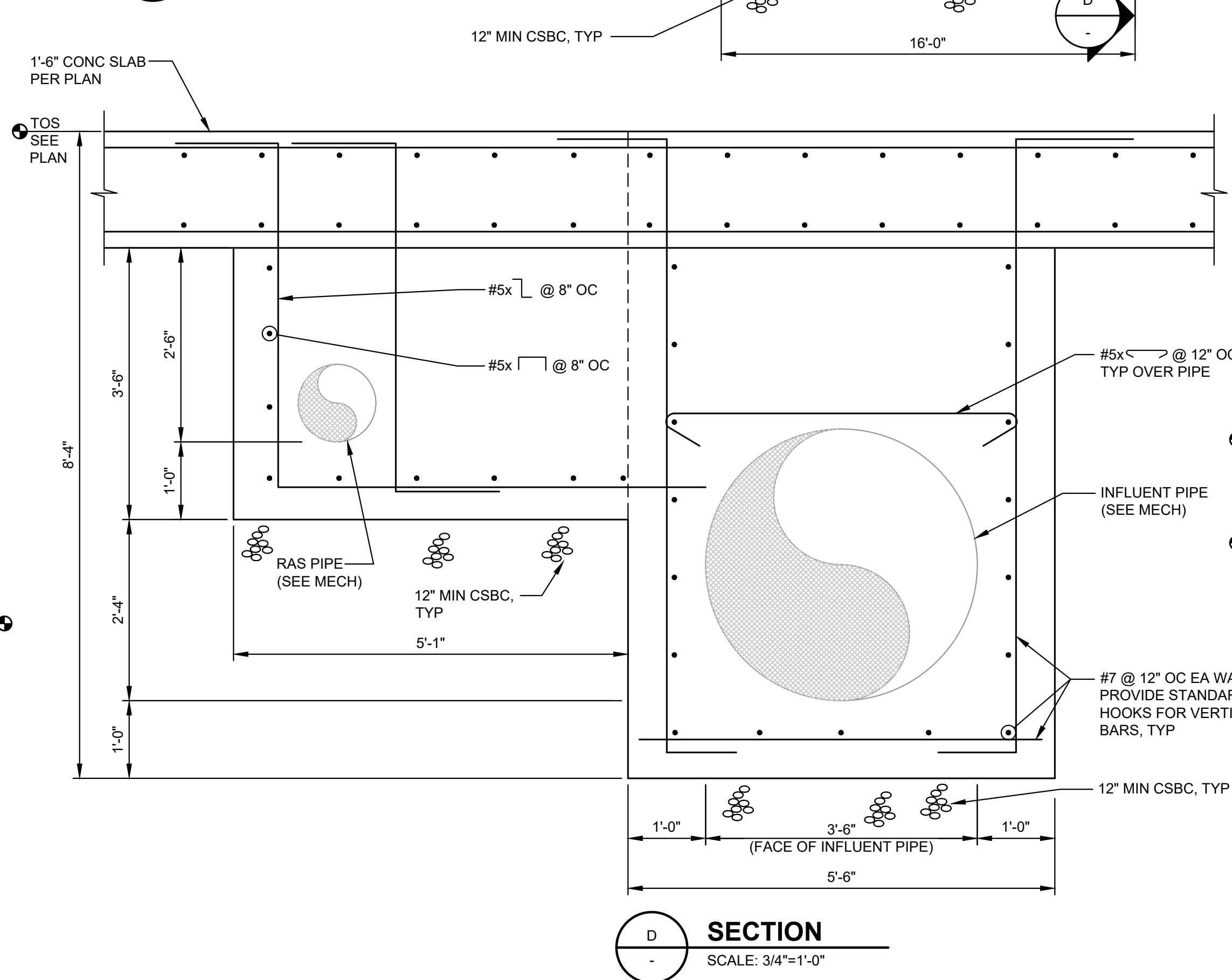
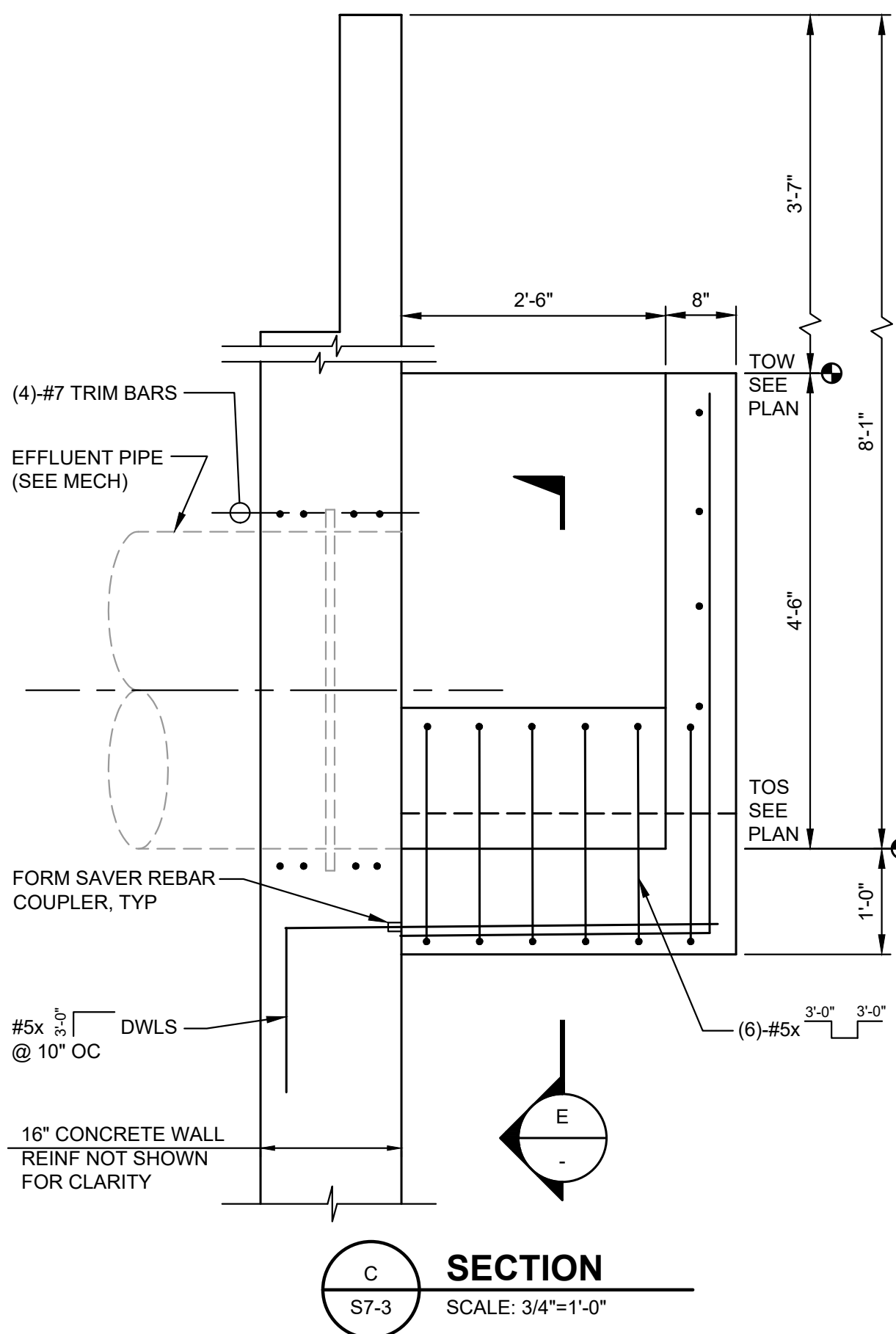
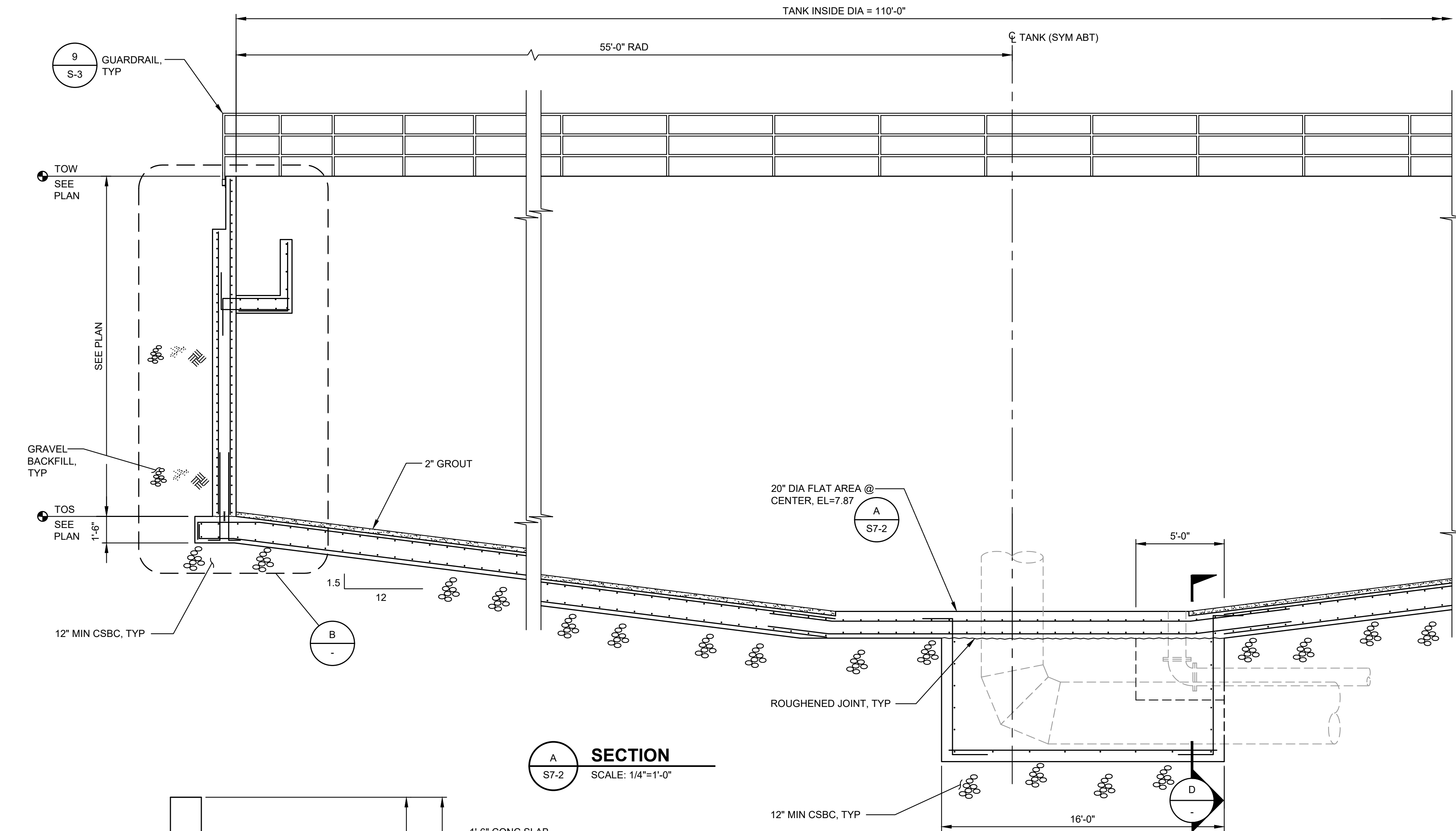
**STRUCTURAL
AREA 7**

**AREA 7 SECONDARY
CLARIFIER NO. 3
FOUNDATION PLAN
AND DETAIL**

DRAWING: **S7-2** OF: **4**

SHEET: **40** OF: **60**

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APPROVED

BY: *[Signature]*

CITY ENGINEER

CITY OF PUYALLUP

APPROVED DATE: 2/28/2024

EXPIRATION DATE: 12/31/2025

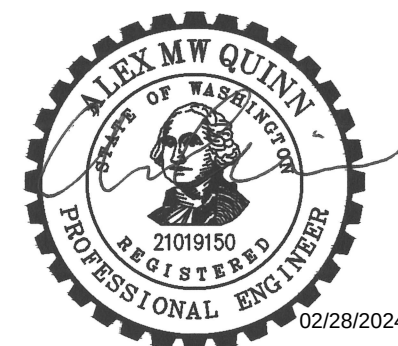
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PRCNC20240061



**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1802 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
-----	------	----------

ISSUED FOR: **BID SET**

ISSUE DATE: **FEBRUARY 2024**

APPROVED BY: **MJB**

CHECKED BY: **AQ**

DRAWN BY: **RAH**

DESIGNER: **MJB**

G & O JOB NO.: **21462.00**

FILE: **SC3_SEC DTLS.DWG**

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

**STRUCTURAL
AREA 7**

**SECONDARY
CLARIFIER NO. 3
SECTION AND DETAILS**

DRAWING: **S7-4** OF: **4**

SHEET: **42** OF: **60**

Z:\JOBS\G&OS\21462\Cad\G-E00-01.DWG, 2/27/2024 3:53 PM, EDWARD J. GODDY

ELECTRICAL GENERAL NOTES	GENERAL ELECTRICAL ACRONYMS AND ABBREVIATIONS	ELEMENTARY WIRING DIAGRAMS SYMBOL SCHEDULE	ONE LINE DIAGRAMS SYMBOL SCHEDULE	ELECTRICAL PLAN DRAWINGS SYMBOL SCHEDULE
G01 IN GENERAL, DEVICES SHOWN ON THE ELECTRICAL DRAWINGS IN BACKGROUND (GRAY OR SCREENED) REPRESENT ONE OF THE FOLLOWING UNLESS NOTED OTHERWISE ON AN INDIVIDUAL SHEET: - STRUCTURAL OR ARCHITECTURAL BUILDING STRUCTURES SUCH AS WALLS, DOORS, STAIRS, ETC. AND STRUCTURAL FRAMING MEMBERS. - MECHANICAL EQUIPMENT OR DEVICES SUCH AS HVAC UNITS AND PROCESS EQUIPMENT WHICH ARE SHOWN ON THE MECHANICAL DRAWINGS AND ARE SHOWN IN BACKGROUND (GRAY OR SCREENED) ON THE ELECTRICAL DRAWINGS TO ASSIST IN DETERMINING THE LOCATION OF THE EQUIPMENT, CONNECTIONS AND DEVICES. - DISTRIBUTION EQUIPMENT SHOWN ON ELECTRICAL PLAN DRAWINGS (SUCH AS LIGHTING PLANS) IS SHOWN IN BACKGROUND (GRAY OR SCREENED) IN ORDER TO CLARIFY OTHER ELECTRICAL DEVICES AND CIRCUITS SHOWN ON THAT SHEET. - EQUIPMENT OR DEVICES THAT ARE EXISTING TO REMAIN (AND TO BE PRESERVED AND PROTECTED) WHERE SHOWN ON REVISED/MODIFICATIONS ELECTRICAL SHEETS. G02 THE EXISTING FUNCTION OF THE TREATMENT PLANT TO TREAT AND DISINFECT SEWAGE ARE TO REMAIN IN OPERATION AT ALL TIMES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE WORK OF THE CONSTRUCTION PROCESS AND, TO ENSURE THAT ALL TREATMENT FUNCTIONS REMAIN IN OPERATION DURING THE COURSE OF CONSTRUCTION, INCLUDING PROVIDING BYPASS PUMPING OR OTHER MEANS, FOR ITEMS THAT ARE SHOWN TO BE DEMOLISHED, THEY SHALL REMAIN IN OPERATION UNTIL NO LONGER REQUIRED FOR THE OPERATION OF THE TREATMENT PROCESS. G03 THE ELECTRICAL EQUIPMENT, MATERIALS, DEVICES AND CIRCUITS SHOWN ON THESE DRAWINGS ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED AS BEING DEMOLISHED OR MODIFIED. THE CONTRACTOR SHALL COORDINATE NEW CONDUIT AND CIRCUIT ROUTING AND ELEVATIONS WITH EXISTING EQUIPMENT, MATERIALS, DEVICES AND CIRCUITS PRIOR TO INSTALLATION. PROVIDE ALL MEANS NECESSARY TO PRESERVE, PROTECT AND KEEP EXISTING EQUIPMENT, MATERIALS, DEVICES AND ELECTRICAL CIRCUITS IN OPERATION DURING THE COURSE OF CONSTRUCTION INCLUDING PROVIDING TEMPORARY CIRCUITS TO ALLOW THEM TO REMAIN IN OPERATION AT ALL TIMES. THE INFORMATION SHOWN FOR EXISTING EQUIPMENT, MATERIALS AND UNDERGROUND OR CONCEALED ELECTRICAL CIRCUITS IS BASED ON AVAILABLE RECORD INFORMATION AND ON SITE SURVEY OF EXPOSED CIRCUITS, AND IS PROVIDED FOR INFORMATION ONLY. PRIOR TO COMMENCING NEW ELECTRICAL WORK OR TRENCHING, VERIFY LOCATIONS AND CONTENTS OF EXISTING EQUIPMENT, MATERIALS, DEVICES AND EXPOSED, CONCEALED OR UNDERGROUND CIRCUITS IN FIELD (BY TONING, X-RAY, EXCAVATION POTHOLING OR OTHER MEANS). G04 THE DRAWINGS ARE NOT INTENDED TO SHOW ALL OF THE EXISTING CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND REVIEW EXISTING CONDITIONS PRIOR TO BIDDING. WHERE EXISTING CONDITIONS DIFFER FROM THOSE SHOWN TO THE EXTENT IT WILL IMPACT THE COST OF THE CONTRACTOR'S WORK, THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING A MINIMUM OF 10 DAYS PRIOR TO BIDDING. G05 THERE ARE EXISTING AND NEW PROCESS PIPING AND EQUIPMENT INSTALLED/TO BE INSTALLED ON THIS SITE. THE CONTRACTOR SHALL COORDINATE NEW CONDUIT AND CIRCUIT ROUTING AND ELEVATIONS WITH EXISTING EQUIPMENT, PIPING, AND OTHER CONSTRUCTION ACTIVITIES PRIOR TO INSTALLATION. LOCATE EXISTING UNDERGROUND FACILITIES, PRESERVE AND PROTECT THEM DURING CONSTRUCTION AND ROUTE NEW CONDUITS TO AVOID CONFLICTS BY INSTALLING AT DIFFERENT LEVELS OR WHEN APPROVED BY THE ENGINEER, DIFFERENT ROUTING. G06 EXISTING EQUIPMENT, MATERIALS, DEVICES AND CIRCUITS DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE IMMEDIATELY REPLACED WITH NEW EQUIPMENT, MATERIALS, DEVICES AND CIRCUITS OF LIKE MATERIALS AT NO ADDITIONAL COST TO THE OWNER. G07 DEMOLISH EXISTING EQUIPMENT, MATERIALS AND DEVICES SHOWN CROSS HATCHED AND AS INDICATED UNLESS OTHERWISE NOTED. REMOVE CONDUIT (EXCEPT CONCEALED OR UNDERGROUND CONDUIT AS NOTED BELOW), FITTINGS, HANGERS, CONDUCTORS, DEVICE/JUNCTION BOXES, AND SIMILAR ITEMS ASSOCIATED WITH ITEM NOTED, BACK TO NEXT DEVICE REMAINING ON THE CIRCUIT OR BACK TO THE PANEL/MCC UNIT FROM WHICH THE CIRCUIT ORIGINATES. WHERE DEVICE BEING REMOVED IS IN THE MIDDLE OF A CIRCUIT, REPLACE/REPAIR CIRCUIT AS REQUIRED TO KEEP REMAINING DEVICES ON CIRCUIT IN OPERATION. ABANDON-IN-PLACE UNUSED CONDUITS CONCEALED IN SLAB, OR UNDERGROUND BELOW SLAB OR BELOW GRADE. CUT EXPOSED PORTION FLUSH WITH SLAB, OR 12" BELOW GRADE. AND PLUG WITH NON-SHRINK GROUT. CUT, PATCH, REPAIR AND PAINT EXISTING WALLS/CEILINGS AS REQUIRED TO REMOVE EXISTING DEVICES/EQUIPMENT. LEGALLY DISPOSE OF MATERIAL/EQUIPMENT WHICH ARE REMOVED. G08 SALVAGE EQUIPMENT, MATERIALS AND DEVICES TO OWNER PER REQUIREMENTS OF DIVISION 1, SECTION 01900 UNLESS OTHERWISE NOTED ON DRAWINGS. G09 COORDINATE CONDUIT STUB UP LOCATIONS WITH APPROVED EQUIPMENT SHOP DRAWING SUBMITTALS PRIOR TO LOCATING CONDUIT STUB UPS IN THE SLAB. LOCATE CONDUIT STUB UPS PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.	A AMPERE AC ALTERNATING CURRENT AFC AVAILABLE FAULT CURRENT AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE AI ANALOG INPUT AL ALUMINUM AO ANALOG OUTPUT ATS AUTOMATIC TRANSFER SWITCH AWG AMERICAN WIRE GAUGE BKR BREAKER C CONDUIT CB CIRCUIT BREAKER CP CONTROL PANEL CPT CONTROL POWER TRANSFORMER CR CONTROL RELAY CT CURRENT TRANSFORMER CU COPPER DC DIRECT CURRENT DI DISCRETE INPUT DO DISCRETE OUTPUT EMT ELECTRICAL METALLIC TUBING ENCL ENCLOSURE ENT ELECTRICAL NONMETALLIC TUBING EWD ELEMENTARY WIRING DIAGRAM EXIST EXISTING FACP FIRE ALARM CONTROL PANEL FMC FLEXIBLE METAL CONDUIT FU FUSE FVNR FULL VOLTAGE NON REVERSING FVR FULL VOLTAGE REVERSING G GROUNDING CONDUCTOR GFP GROUND FAULT PROTECTOR GND GROUND HC HORIZONTAL CROSSCONNECT HMI HUMAN MACHINE INTERFACE HP HORSEPOWER IC INTERRUPTING CAPACITY IP INTERNET PROTOCOL ISR INTRINSICALLY SAFE RELAY KA KILO AMPERES KAIC KILO AMPERES INTERRUPTING CAPACITY KCMIL THOUSAND CIRCULAR MILLS KV KILOVOLT KVA KILOVOLT-AMPERE KVAR KILOVAR (REACTIVE KILOVOLT AMPERE) KW KILOWATT KWH KILOWATT-HOUR LCP LIGHTING CONTROL PANEL LDP LOAD REACTOR LFMC LIQUIDTIGHT FLEXIBLE METAL CONDUIT LNR LINE REACTOR LPU LINE PROTECTION UNIT LT LIGHT M MAGNETIC CONTACTOR mA MILLIAMPERES MC MAIN CROSSCONNECT MCP MOTOR CURRENT PROTECTOR – MAGNETIC ONLY MEG MEGOHM MHO MAGNETIC HOLD OPEN MLO MAIN LUGS ONLY MTS MANUAL TRANSFER SWITCH mV MILLIVOLT MW MEGAWATT N NEUTRAL CONDUCTOR NAC NOTIFICATION ADVANCE CIRCUIT NEC NATIONAL ELECTRICAL CODE NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION. NESC NATIONAL ELECTRICAL SAFETY CODE OCP OVERCURRENT PROTECTOR ODP OPEN DRIP PROOF OI OPERATOR INTERFACE OL OVERLOAD P POLE PF POWER FACTOR PH PHASE PLC PROGRAMMABLE LOGIC CONTROLLER POT POTENTIOMETER PRMC PVC COATED RIGID METALLIC (STEEL) CONDUIT PS POWER SUPPLY PV PHOTOVOLTAIC PVC POLYVINYL CHLORIDE RMC RIGID METAL (STEEL) CONDUIT RNC RIGID NON-METALLIC CONDUIT RPM REVOLUTIONS PER MINUTE RS485 SERIAL RS485 CABLE RTRC REINFORCED THERMOSETTING RESIN CONDUIT SCS SHIELDED CAT 5e CABLE SEC SECOND SHL'D SHIELDED SPD SURGE PROTECTIVE DEVICE SS SELECTOR SWITCH STP SHIELDED TWISTED PAIR SUSET SUITABLE FOR USE AS SERVICE ENTRANCE TB TERMINAL BLOCK TEFC TOTALLY ENCLOSED FAN COOLED TENV TOTALLY ENCLOSED NON-VENTILATED TR TIMING RELAY UC5 UNSHIELDED CAT 5e CABLE UC6 UNSHIELDED CAT 6 CABLE UPS UNINTERRUPTIBLE POWER SUPPLY UTP UNSHIELDED TWISTED PAIR V VOLT VA VOLT AMPERE VAC VOLTS ALTERNATING CURRENT VFD VARIABLE FREQUENCY DRIVE VPN VIRTUAL PRIVATE NETWORK VR VOLTAGE MONITORING RELAY W WATT WAN WIDE AREA NETWORK WG WIREGUARD WH WATT HOUR WP WEATHER PROOF XFMR POWER TRANSFORMER	SYMBOL DESCRIPTION ----- PANEL OR DEVICE WIRING ----- FIELD WIRING ----- EQUIPMENT/DEVICE ENCLOSURE ----- WIRING CONNECTED ----- WIRING NOT CONNECTED ----- DEVICE OR EQUIPMENT TERMINAL ----- CONTROL PANEL TERMINAL ----- MCC TERMINAL ----- TRANSFORMER WINDING ----- FUSE ----- GROUND ----- ARC SUPPRESSOR (METAL OXIDE VARISTOR) ----- DIODE CONTACT BLOCK OPERATORS N.O. N.C. ----- PUSHBUTTON (1PB,2PB,ETC.) ----- MUSHROOM HEAD PUSHBUTTON (1PB,2PB,ETC.) ----- "HAND OFF AUTO" ----- SELECTOR SWITCH (1SS,2SS,ETC.) "X" = CLOSED IN THIS POSITION ----- OFF-ON SELECTOR SWITCH (1SS,2SS,ETC.) "X" = CLOSED IN THIS POSITION ARROW POSITION DENOTES OPEN/CLOSED STATUS (SHOWN IN "OPEN" POSITION) CONTACTS N.O. N.C. ----- SINGLE BREAK CONTACTS ----- DOUBLE BREAK CONTACTS (CONTACT BLOCKS) RELAY CONTACTS N.O. N.C. XXCR XXCR ----- INSTANTANEOUS CONTACT OF RELAY (1CR, 2CR, ETC.) XXTR XXTR ----- TIMED DELAY CONTACT OF RELAY (DELAY ON ENERGIZATION-ON DELAY) (1TR, 2TR, ETC.) XXTR XXTR ----- TIMED DELAY CONTACT OF RELAY (DELAY ON DE-ENERGIZATION-OFF DELAY) (1TR, 2TR, ETC.) X-OL X-OL ----- OVERLOAD RELAY (1OL, 2OL, ETC.) MECHANICALLY ACTUATED SWITCHES N.O. N.C. XXFS XXFS ----- FLOAT SWITCHES (1FS, 2FS, ETC.) XXPS XXPS ----- PRESSURE SWITCH (1PS, 2PS, ETC.) XXTAS XXTAS ----- TEMPERATURE ACTUATED SWITCH (THERMOSTAT) (1TAS, 2TAS, ETC.) XXLS XXLS FREE XXLS XXLS LIMIT SWITCHES (1LS, 2LS, ETC.) HELD MAGNETIC COILS XX XCR ----- CONTROL RELAY (1CR, 2CR, ETC.) XX XTR ----- TIMED DELAY RELAY (1CR, 2CR, ETC.) XX M ----- MAGNETIC MOTOR STARTER (1M, 2M, ETC.) XX XCON ----- MAGNETIC CONTACTOR (1CON, 2CON, ETC.) XX XMTR ----- DEVICE MOTOR DRIVE ----- SOLENOID (1SV, 2SV, ETC.) (FOR VALVE UNLESS OTHERWISE NOTED) PILOT LIGHTS ----- INCANDESCENT TRANSFORMER TYPE (1LT, 2LT, ETC.) ----- INCANDESCENT "PUSH-TO-TEST" (CONNECT TEST CIRCUIT TO LINE) (1LT, 2LT, ETC.) LENS COLOR CODE A = AMBER B = BLUE C = CLEAR G = GREEN O = ORANGE R = RED W = WHITE Y = YELLOW	SYMBOL DESCRIPTION ----- DEVICE OR EQUIPMENT TERMINAL ----- WIRING CONNECTED ----- BUS ----- WIRING ----- EQUIPMENT/DEVICE ENCLOSURE ----- PLUG-IN CONNECTION ----- NON-AUTOMATIC BREAKER ----- THERMAL MAGNETIC CIRCUIT BREAKER ----- MAGNETIC ONLY CIRCUIT BREAKER (MOTOR CIRCUIT PROTECTOR) ----- SWITCH ----- CONTACTOR ----- THERMAL OVERLOAD ----- FUSE ----- POWER TRANSFORMER ----- CONTROL POWER TRANSFORMER ----- CURRENT TRANSFORMER ----- CAPACITOR ----- GROUND CONNECTION ----- TRANSFER SWITCH ----- WATTHOUR METER (REVENUE METERING) ----- VOLTAGE RELAY ----- GENERATOR ----- TAP BLOCK ----- SOLID NEUTRAL ----- MOTOR ----- LIMIT SWITCH ----- FLOAT SWITCH ----- PRESSURE SWITCH ----- THERMOSTAT/TEMPERATURE SWITCH ----- SOLENOID VALVE ----- TORQUE SWITCH ----- CONTROL STATION/PUSHBUTTON/SPEED POTENTIOMETER ----- LOAD BREAK FUSE HOLDER AND FUSE ----- SAFETY DISCONNECT (NEMA 4X ENCLOSURE UNLESS OTHERWISE NOTED) ----- AUXILIARY CONTACT NON-SWITCHED CONDUCTOR ----- KIRK KEY INTERLOCK DESIGNATIONS A,B,C,ETC. ARE KEY DESIGNATIONS THAT ARE NOT INTERCHANGEABLE WITH OTHER KIRK KEYS.	POWER DISTRIBUTION AND CONTROL ----- DISTRIBUTION/CONTROL EQUIPMENT – FLOOR MOUNTED ----- DISTRIBUTION/CONTROL EQUIPMENT – WALL MOUNTED ----- PANELBOARD – WALL MOUNTED ----- SWITCH (SAFETY OR DISCONNECT) ----- SWITCH (FUSIBLE) DESIGNATIONS A,B,C,ETC. ARE FUTURE TYPE, REFER TO LIGHTING FIXTURE SCHEDULE a,b,c,ETC. ARE SWITCHING CONTROL REFERENCE LIGHTING FIXTURES ----- FLUORESCENT LED LINEAR FIXTURE CEILING MOUNTED (RECESSED, SURFACE OR PENDANT) SWITCHING ----- SINGLE POLE SWITCH – WALL MOUNTED DESIGNATIONS E EXISTING SWITCH M MOTOR RATED SWITCH 3 THREE WAY SWITCH o LOWER CASE = SWITCH LEG 4 FOUR WAY SWITCH ANY COMBINATION OF THE ABOVE DESIGNATIONS MAY BE SHOWN ON PLANS RECEPTACLE OUTLETS ----- DUPLX RECEPTACLE OUTLET – WALL MOUNTED (NEMA 5-15R UNLESS OTHERWISE SPECIFIED) ----- QUADRUPLX RECEPTACLE OUTLET – WALL MOUNTED (NEMA 5-15R UNLESS OTHERWISE SPECIFIED) ----- SPECIAL PURPOSE RECEPTACLE OUTLET ----- SPECIAL PURPOSE RECEPTACLE OUTLET – WALL MOUNTED DESIGNATIONS 1,2,3,ETC. ARE CIRCUIT NUMBERS OF PANELBOARD TO WHICH OUTLET IS TO BE CONNECTED. REFER TO CIRCUIT SCHEDULE WP = WEATHERPROOF GFCI = GROUND FAULT CIRCUIT INTERRUPTER SPECIAL PURPOSE CONNECTIONS ----- SPECIAL PURPOSE EQUIPMENT CONNECTION ----- SPECIAL PURPOSE EQUIPMENT CONNECTION – WALL MOUNTED ELECTRICAL DEVICES ----- SOLENOID VALVE ----- MOTOR (NUMBER = HORSEPOWER) ----- PUSH BUTTON CONTROL MECHANICALLY ACTUATED SWITCHES ----- FLOAT SWITCH ----- LEVEL TRANSDUCER ----- PRESSURE SWITCH ----- FLOW (VELOCITY) SWITCH ----- PHOTO ELECTRIC SWITCH (PHOTOCELL) – WALL MOUNTED ----- LIMIT SWITCH GENERAL WIRING SYMBOLS ----- JUNCTION BOX ----- JUNCTION BOX – WALL MOUNTED ----- WIRING RUN EXPOSED ON BUILDING OR STRUCTURE UNLESS OTHERWISE NOTED ON DRAWINGS ----- WIRING RUN CONCEALED UNDER SLAB OR BELOW GRADE UNLESS OTHERWISE NOTED ON DRAWINGS ----- INDICATES WIRE SIZE IF OTHER THAN #12AWG ----- LINE OR PHASE CONDUCTOR CROSSMARKS INDICATE QUANTITY AND USE OF CONDUCTORS ----- ARROWHEAD INDICATES HOMERUN TO EQUIPMENT/DEVICE NOTED AT END OF ARROWHEAD, NUMBER (WHERE NOTED) INDICATES CIRCUIT WITHIN EQUIPMENT/DEVICE NOTED. ----- CONDUIT TURN UP ----- CONDUIT TURN DOWN APPROVED BY: _____ CITY ENGINEER CITY OF PUYALLUP APPROVED DATE: 2/28/2024 EXPIRATION DATE: 12/31/2025 NOTE: This approval expires on the date shown. 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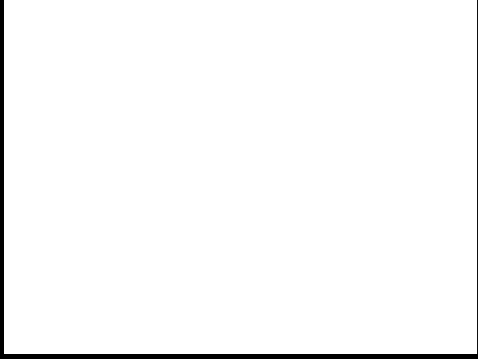
Gray & Osborne, Inc.
CONSULTING ENGINEERS
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(206) 284-0860



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ELECTRICAL COMMUNICATIONS SECURITY INDUSTRIAL AUTOMATION
1430 North 16th Avenue, Yakima, WA 98902
(509) 965-9872 connex.com

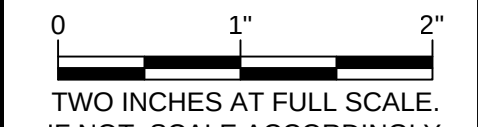


BRADLEY R. BAILEY
REGISTERED PROFESSIONAL ENGINEER
NO. 20282023

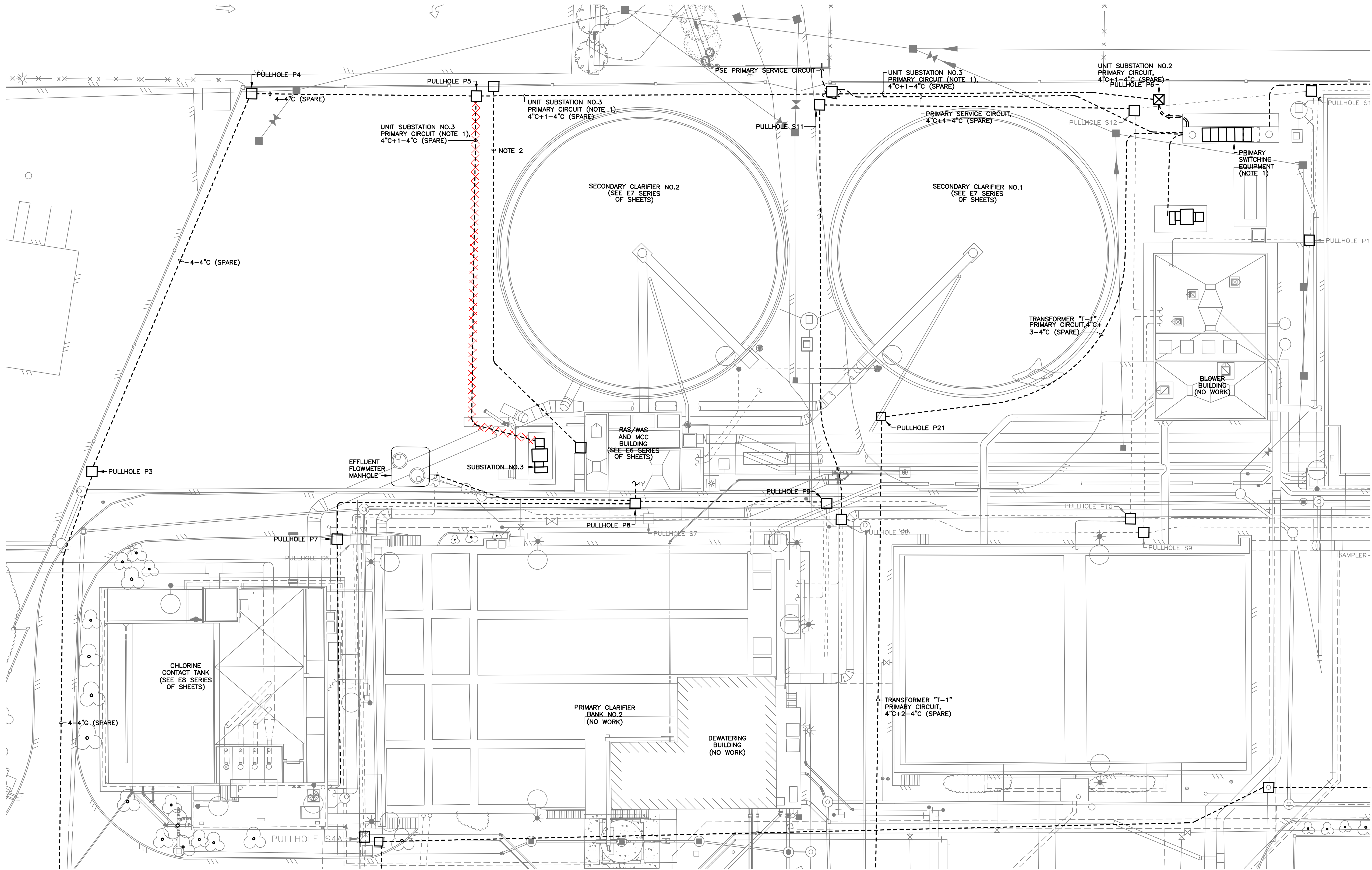


CITY OF PUYALLUP
STATE OF WASHINGTON

WATER POLLUTION CONTROL PLANT THIRD SECONDARY CLARIFIER INSTALLATION
CIP NO. 20-018
1602 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR: BID SET		
ISSUE DATE: 02-28-2024		
APPROVED BY: BBB		
CHECKED BY: JRM		
DRAWN BY: CJD		
DESIGNER: MLO		
G & O JOB NO.: 21462.00		
FILE: C-E00-01.DWG		
 TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY		
SYMBOL SCHEDULES AND GENERAL NOTES		
DRAWING: E-1 OF: 12		
SHEET: 43 OF: 60		

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**EXISTING ELECTRICAL SITE PLAN
PUYALLUP WATER POLLUTION CONTROL PLANT**

SCALE: 1" = 20'-0"

NOTES:

SEE DRAWING E-1 FOR GENERAL NOTES.

- SEE EXISTING/DEMOLITION ONE LINE DIAGRAM SHEET E-4 FOR CIRCUIT AND EQUIPMENT INFORMATION.
- EXISTING 1" SECURITY CONDUIT. REROUTE AS NECESSARY FOR ADDITION OF 3RD CLARIFIER. OWNER WILL REMOVE & REINSTALL CONDUCTORS.

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: 2/28/2024
EXPIRATION
DATE: 12/31/2025
NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.
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Field conditions may dictate changes to these plans as determined by the City Engineer.

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH,
SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

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1430 North 16th Avenue, Yakima, WA 98902
(509) 965-9872 connetix.com



**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1602 18TH ST NW,
PUYALLUP, WA 98371

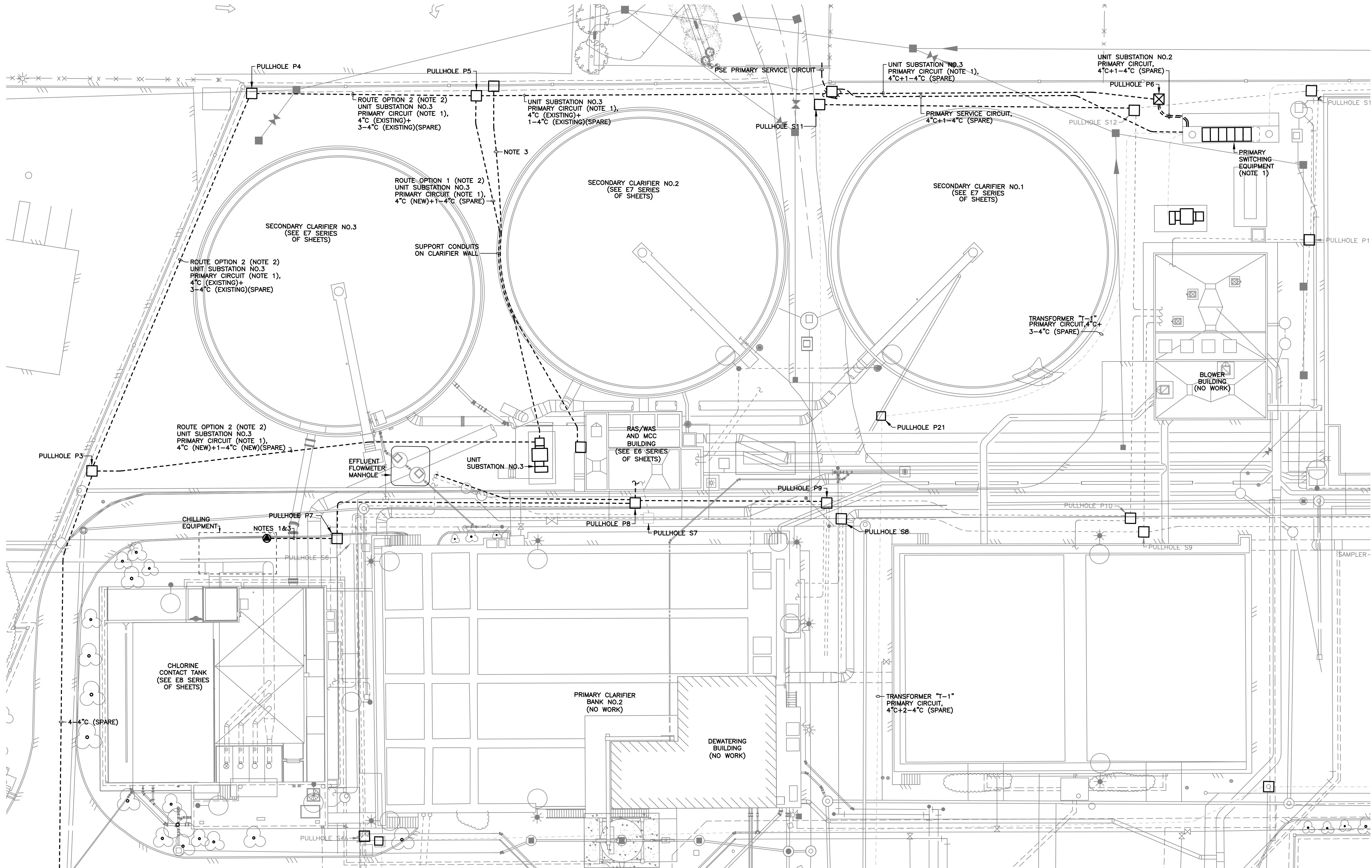
No.	DATE	REVISION
ISSUED FOR:		
BID SET		
ISSUE DATE: 02-28-2024		
APPROVED BY: BBB		
CHECKED BY: JRM		
DRAWN BY: CJD		
DESIGNER: MLO		
G & O JOB NO.: 21462.00		
FILE: C-E00-02.DWG		

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

**EXISTING ELECTRICAL
SITE PLAN**

DRAWING: **E-2** OF: **12**

SHEET: **44** OF: **60**



**MODIFIED ELECTRICAL SITE PLAN
PUYALLUP WATER POLLUTION CONTROL PLANT**
SCALE: 1" = 20'-0"
(NOTE 4)

NOTES:

SEE DRAWING E-1 FOR GENERAL NOTES.

- SEE MODIFIED ONE LINE DIAGRAM SHEET E-5 FOR CIRCUIT AND EQUIPMENT INFORMATION.
- TWO POSSIBLE ROUTES ARE SHOWN FOR THE MODIFIED UNIT SUBSTATION NO.3 PRIMARY CIRCUIT. THE CONTRACTOR MAY UTILIZE EITHER ROUTE AT THEIR DISCRETION, OR, PROPOSE AN ALTERNATIVE ROUTING. ANY PROPOSED ALTERNATE ROUTING SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER. NOTE THAT

EXCAVATION FOR THE CLARIFIER IS EXPECTED TO BE APPROXIMATELY 25 FEET DEEP.

- REROUTE EXISTING 1" SECURITY CONDUIT. OWNER WILL REMOVE AND PULL CONDUCTORS BACK IN AS NECESSARY.
- SEE DETAILS 2/E-11, 3/E-11, AND 4/E-11 FOR UNDERGROUND TRENCHING REQUIREMENTS.

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
APPROVED DATE: 2/28/2024
EXPIRATION DATE: 12/31/2025
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**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1602 18TH ST NW,
PUYALLUP, WA 98371

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DESIGNER:		MLO
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FILE:		C-E00-03.DWG

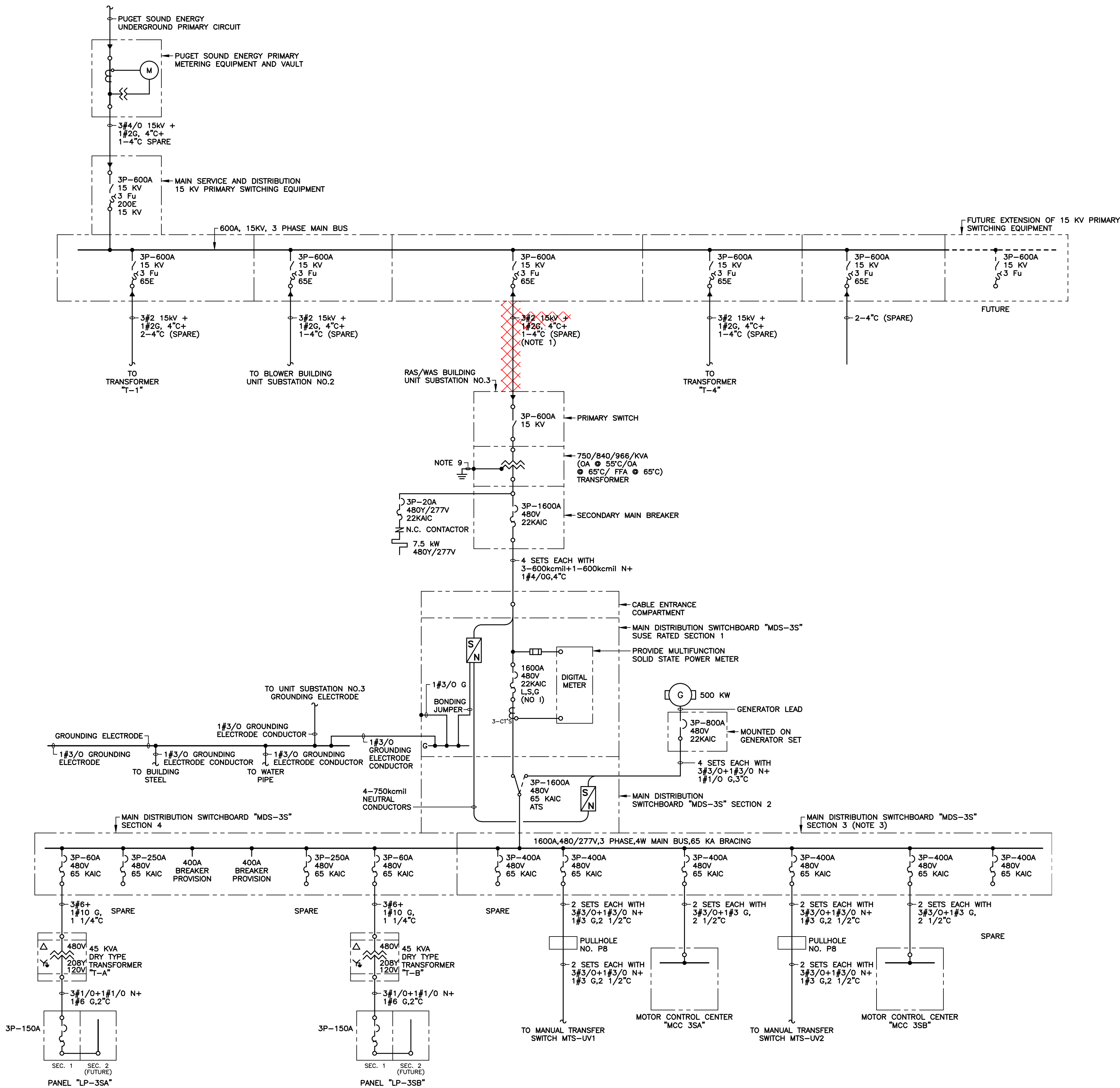
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

**MODIFIED ELECTRICAL
SITE PLAN**

DRAWING: **E-3** OF: **12**

SHEET: **45** OF: **60**

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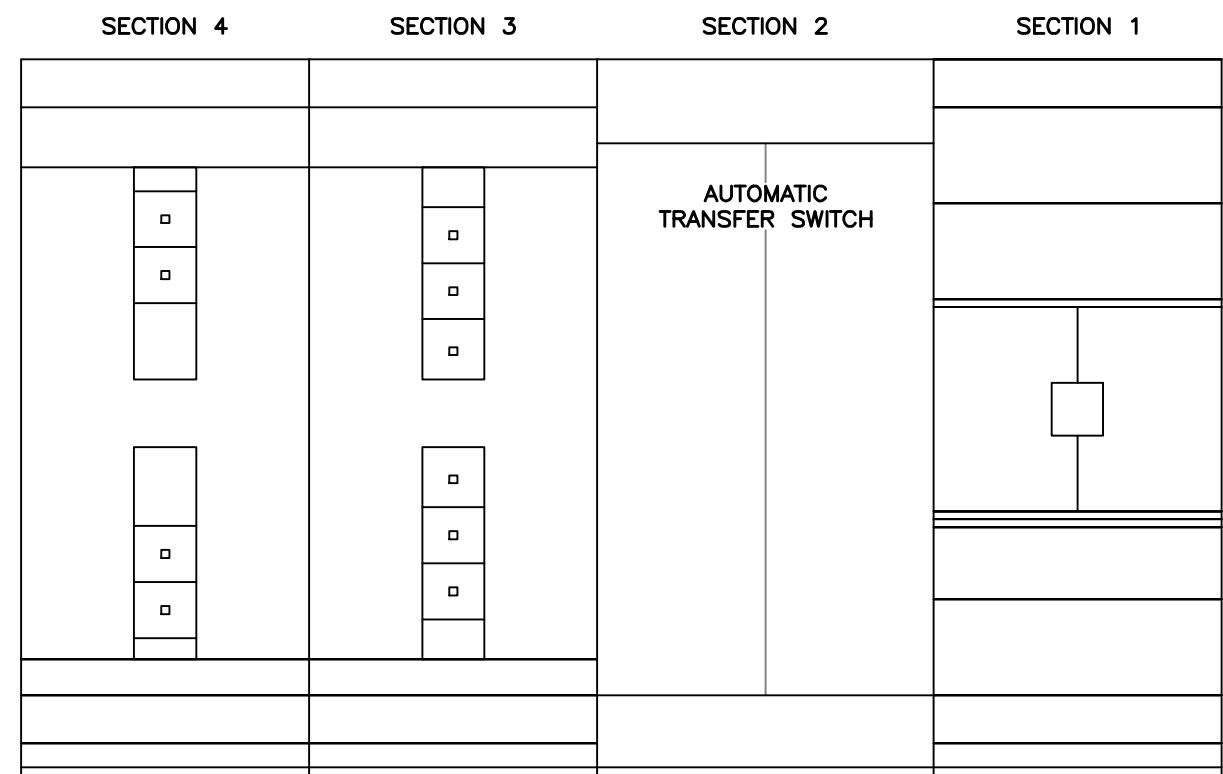
**EXISTING/DEMOLITION ONE LINE DIAGRAM
PUYALLUP WATER POLLUTION CONTROL PLANT**

SCALE: NONE
(NOTE 2)

NOTES:

SEE DRAWING E-1 FOR GENERAL NOTES.

- DEMOLISH CONDUCTORS. CONDUIT TO REMAIN FOR REUSE UNLESS INDICATED AS DEMOLISHED ON EXISTING/DEMOLITION ELECTRICAL SITE PLAN. CONDUIT FROM PRIMARY SWITCHING EQUIPMENT TO PULLHOLE P5 TO REMAIN. SEE SHEETS E-2 AND E-3 FOR FURTHER INFORMATION.
- COORDINATE SHUT DOWNS WITH CITY STAFF. PROVIDE A MINIMUM OF 10 WORKING DAYS NOTICE.
- EXISTING SWITCHBOARD IS A SQUARE D QED STYLE.



**EXISTING/DEMOLITION ELEVATION
MAIN DISTRIBUTION SWITCHBOARD "MDS-3S"**

SCALE: NONE

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
APPROVED DATE: 2/28/2024
EXPIRATION DATE: 12/31/2025
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**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1602 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
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DESIGNER: MLO		
G & O JOB NO.: 21462.00		
FILE: C-E00-04.DWG		

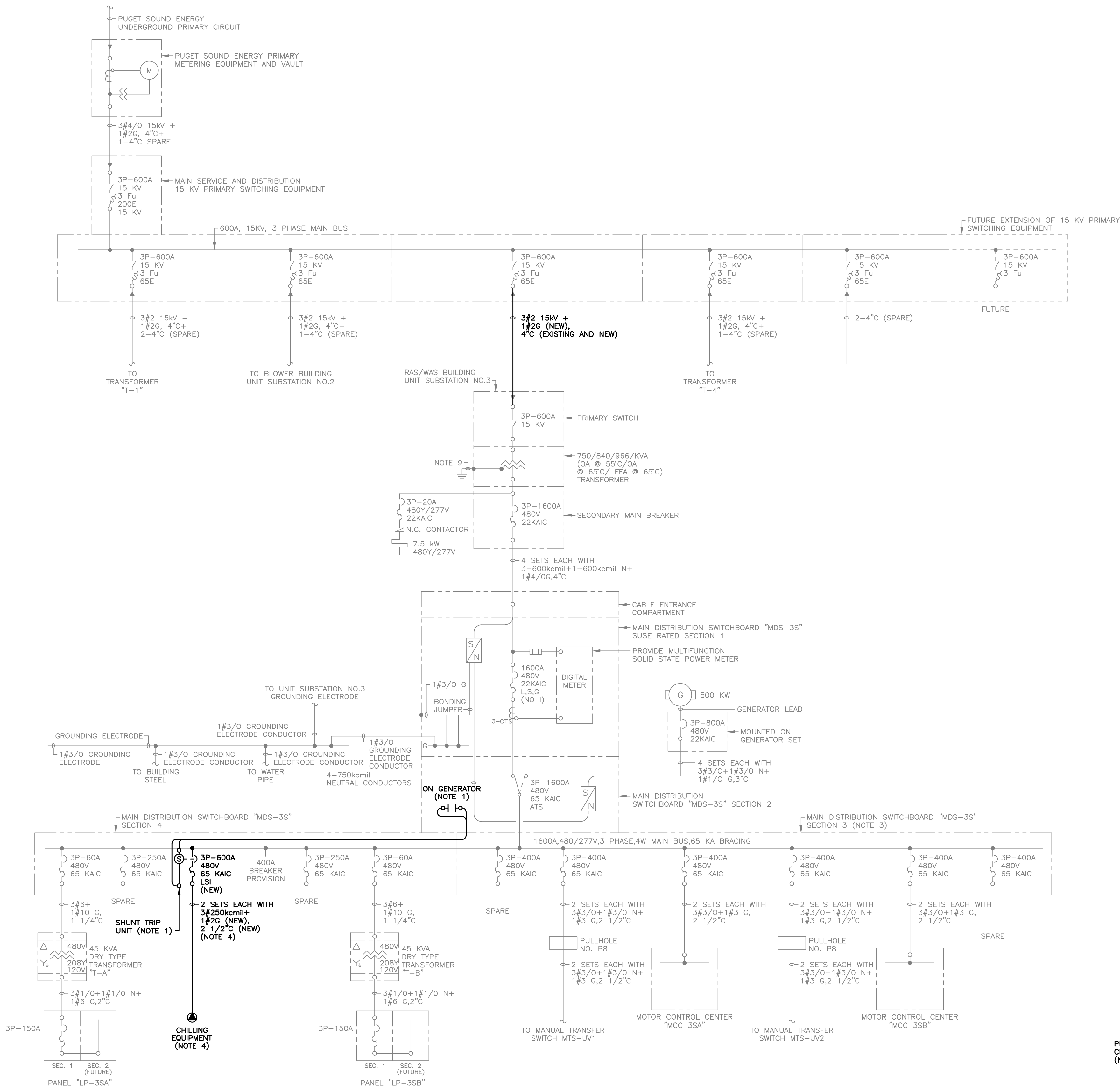
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

**EXISTING/DEMOLITION
ONE LINE DIAGRAM**

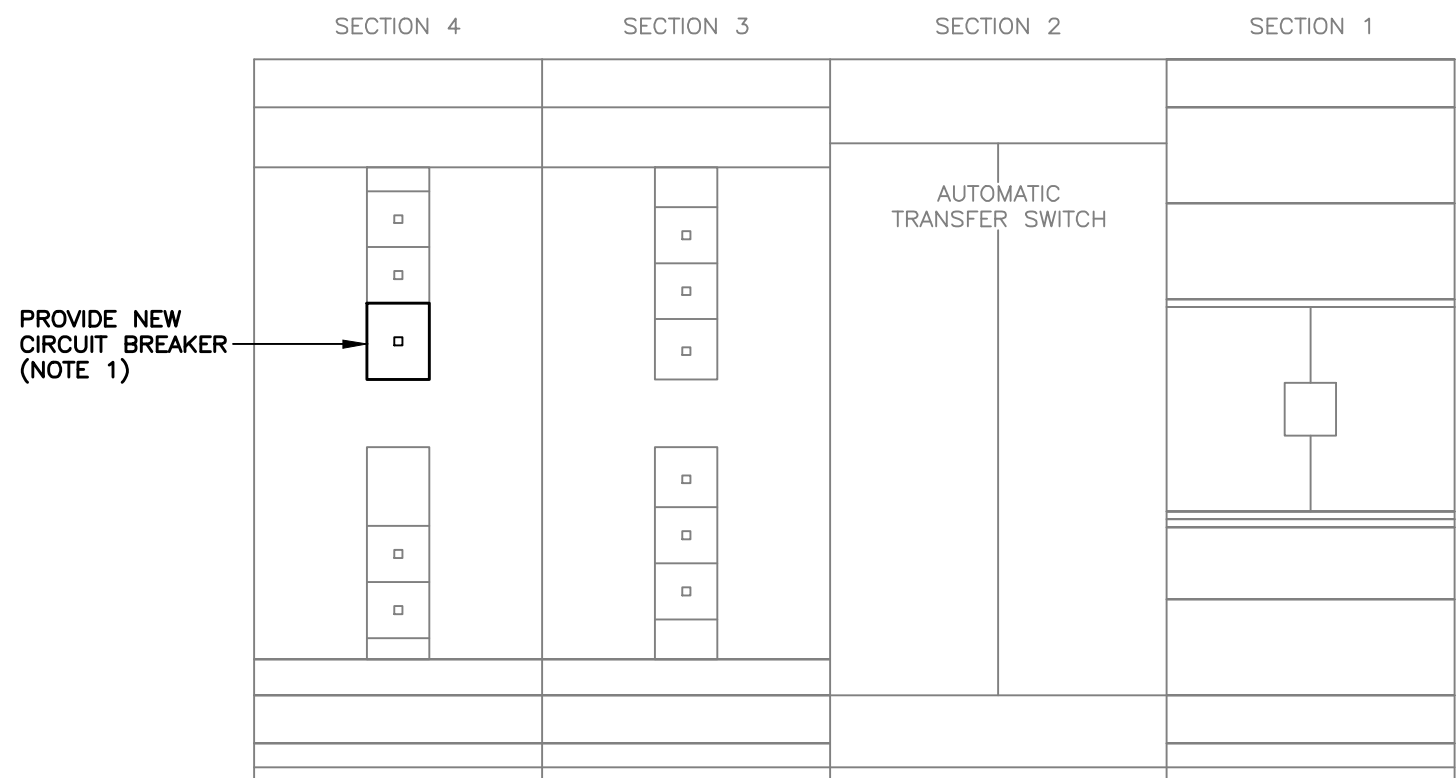
DRAWING: **E-4** OF: **12**

SHEET: **46** OF: **60**

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MODIFIED ONE LINE DIAGRAM
PUYALLUP WATER POLLUTION CONTROL PLANT
SCALE: NONE
(NOTES 2&3)



MODIFIED ELEVATION
MAIN DISTRIBUTION SWITCHBOARD "MDS-3S"
SCALE: NONE
(NOTE 3)

NOTES:

SEE DRAWING E-1 FOR GENERAL NOTES.

1. PROVIDE SHUNT TRIP BREAKER. CONNECT SHUNT TRIP SOLENOID TO MDS-3S AUTOMATIC TRANSFER SWITCH SUCH THAT SHUNT TRIP WILL OPEN THE BREAKER WHEN TRANSFER SWITCH MOVES TO GENERATOR POSITION.
2. DEVICES AND EQUIPMENT SHOWN ON ONE LINE DIAGRAM ARE EXISTING UNLESS OTHERWISE NOTED.
3. EXISTING SWITCHBOARD IS A SQUARE D QED STYLE.
4. CHILLING EQUIPMENT WILL BE ADDED AT START OF CONSTRUCTION AND THEN REMOVED DURING PROJECT CONSTRUCTION. CIRCUIT BREAKER TO REMAIN. CONDUIT AND CONDUCTORS TO BE REMOVED AFTER CHILLING EQUIPMENT IS REMOVED. COORDINATE THIS REMOVAL WITH OWNER.



**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
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1602 18TH ST NW,
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G & O JOB NO.:		21462.00
FILE:		C-E00-05.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

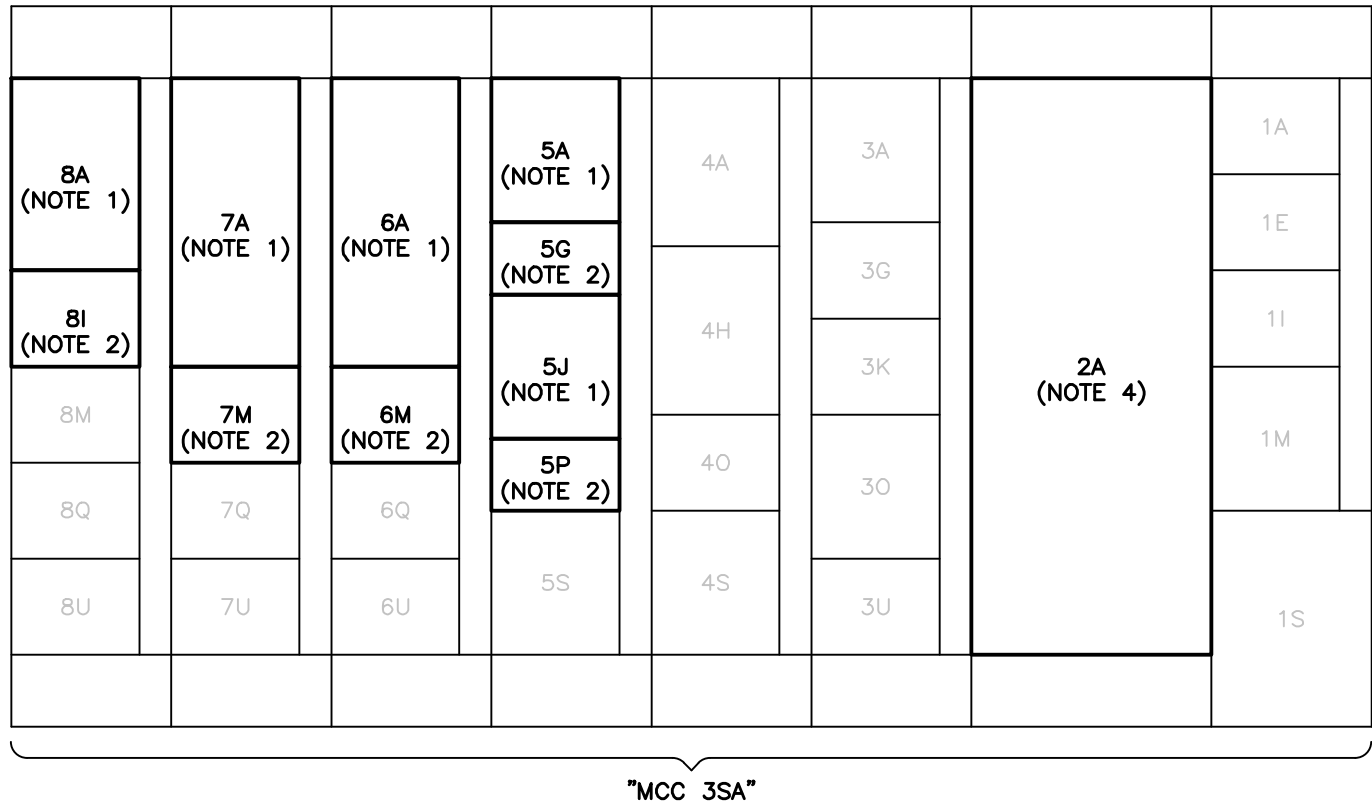
APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: 2/28/2024
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**MODIFIED ONE LINE
DIAGRAM**

DRAWING: **E-5** OF: **12**

SHEET: **47** OF: **60**

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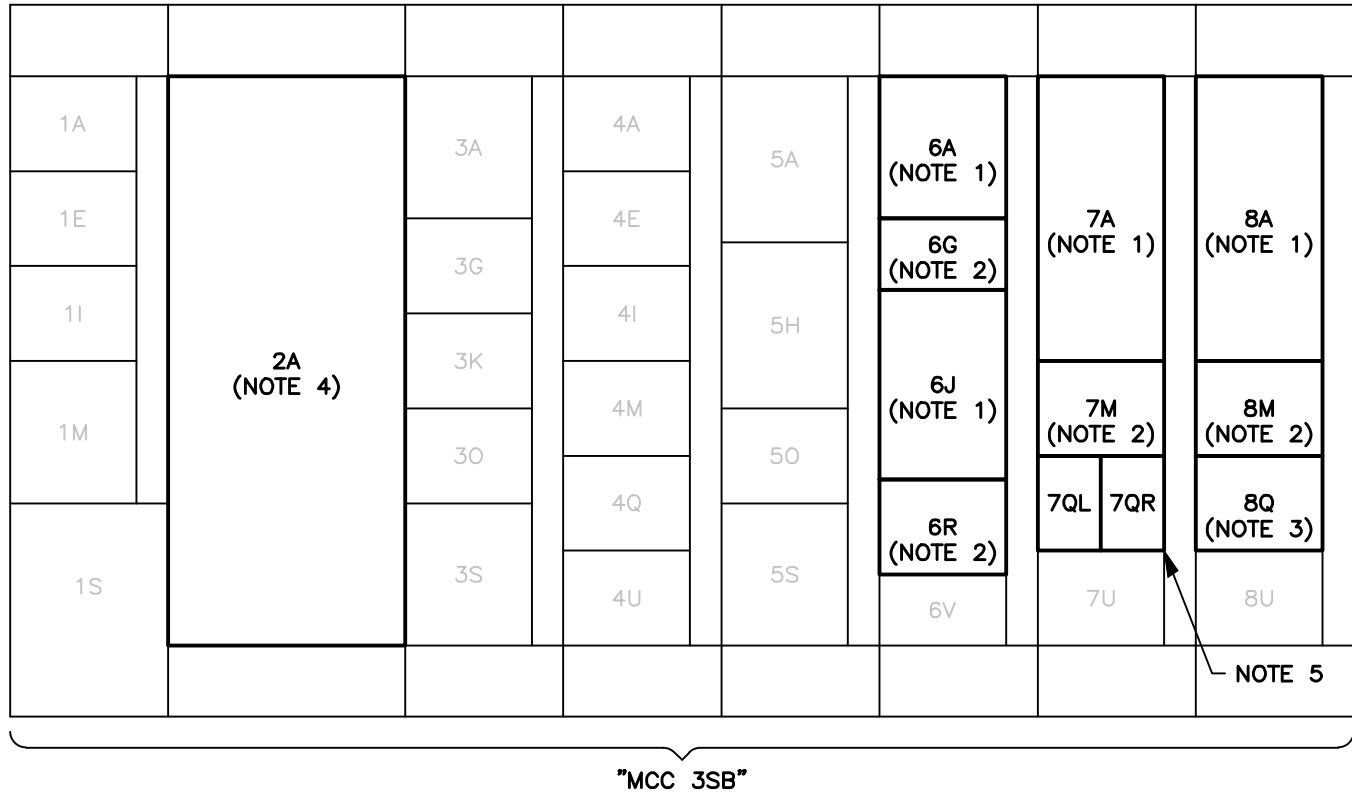
ELEVATION
MOTOR CONTROL CENTER "MCC 3SA"
SCALE: 1/2"=1'-0"
(NOTE 6)

MOTOR CONTROL CENTER
CIRCUIT SCHEDULE
"MCC 3SA"

SEC.	UNIT	DESCRIPTION (NAMEPLATE)	TAG I.D.	O.L.D. # / SHEET #	E.W.D # / SHEET #	NOTES
1	A	RAS BUILDING JIB CRANE	06 JC 01	N/A	N/A	
1	E	SPACE	N/A	N/A	N/A	
1	I	SPACE	N/A	N/A	N/A	
1	M	SPACE	N/A	N/A	N/A	
1	S	MAIN LUGS	N/A	N/A	N/A	
2	A	PLC "MCC 3SA"	N/A	N/A	N/A	NOTE 4
3	A	NON-POTABLE WATER PUMP #1	08 P 01	N/A	N/A	
3	G	SPACE	N/A	N/A	N/A	
3	K	SPACE	N/A	N/A	N/A	
3	O	SPACE	N/A	N/A	N/A	
3	U	SPACE	N/A	N/A	N/A	
4	A	EFFLUENT PUMP #1	08 EP 01	N/A	N/A	
4	H	EFFLUENT PUP #3	08 EP 03	N/A	N/A	
4	O	EFFLUENT PUP NO.1 HEATER	N/A	N/A	N/A	
4	S	EFFLUENT PUP NO.3 HEATER	N/A	N/A	N/A	
5	A	SECONDARY CLARIFIER #1	07 SCM 01	O.L.D. 4/E-8	E.W.D. 2/E-8	NOTE 1
5	G	SECONDARY CLARIFIER #1 LINE REACTOR	N/A	N/A	N/A	NOTE 2
5	J	SECONDARY CLARIFIER #3	07 SCM 03	O.L.D. 3/E-8	E.W.D. 5/E-8	NOTE 1
5	P	SECONDARY CLARIFIER #3 LINE REACTOR	N/A	N/A	N/A	NOTE 2
5	S	SPACE	N/A	N/A	N/A	
6	A	RAS PUMP #3	06 RP 03	O.L.D. 5/E-8	E.W.D. 1/E-8	NOTE 1
6	M	RAS PUMP #3 LINE REACTOR	N/A	N/A	N/A	NOTE 2
6	Q	SECONDARY CLARIFIER SCUM PUMP NO.1	07 SCP 01	N/A	N/A	NOTE 8
6	U	GENERATOR COOLING FAN	06 RR 01	N/A	N/A	
7	A	RAS PUMP #1	06 RP 01	O.L.D. 5/E-8	E.W.D. 1/E-8	NOTE 1
7	M	RAS PUMP #1 LINE REACTOR	N/A	N/A	N/A	NOTE 2
7	Q	SPACE	N/A	N/A	N/A	
7	U	SPACE	N/A	N/A	N/A	
8	A	WAS PUMP #1	06 WP 01	O.L.D. 6/E-8	E.W.D. 1/E-8	NOTE 1
8	I	WAS PUMP #1 LINE REACTOR	N/A	N/A	N/A	NOTE 2
8	M	SPACE	N/A	N/A	N/A	
8	Q	SPACE	N/A	N/A	N/A	
8	U	SPACE	N/A	N/A	N/A	

MOTOR CONTROL CENTER
I/O SCHEDULE
PLC MCC 3SA (NOTE 7)

FIELD I/O	DESCRIPTION	PLC I/O POINT
07 SCM 03-1LR	OVERTORQUE ALARM	CARD 5, DI CH 10
07 SCP 02-CALL	SCUM PUMP 2 - CALL TO RUN	CARD 6, DO CH 3
07 SCP 02-RUN	SCUM PUMP 2 - RUN STATUS	CARD 5, DI CH 11
07 SCP 02-AUTO	SCUM PUMP 2 - AUTO STATUS	CARD 5, DI CH 12
06 FS 01	SUPPLY AIR PROVEN	CARD 5, DI CH 12
06 FS 02	EXHAUST AIR PROVEN	CARD 5, DI CH 14
06 MFM 03-FLOW	RAS PUMP 4 - INSTANTANEOUS FLOW	CARD 7, AI CH 0
06 MFM 03-TOTAL	RAS PUMP 4 - TOTALIZED FLOW	CARD 5, DI CH 15
07 ILA 03	SECONDARY CLARIFIER 3 - SLUDGE BLANKET LEVEL	CARD 7, AI CH 1
07 ILA 02	SECONDARY CLARIFIER 2 - SLUDGE BLANKET LEVEL	CARD 7, AI CH 2
07 ILA 01	SECONDARY CLARIFIER 1 - SLUDGE BLANKET LEVEL	CARD 7, AI CH 3
08 MFM 03-FLOW	EFFLUENT - INSTANTANEOUS FLOW	CARD 7, AI CH 4
08 MFM 03-TOTAL	EFFLUENT - TOTALIZED FLOW	CARD 4, DI CH 0
06 SS 01	RAS SUSPENDED SOLIDS	CARD 7, AI CH 5
07 RLS 03	SECONDARY CLARIFIER 3 - SCUM LEVEL	CARD 7, AI CH 6



ELEVATION
MOTOR CONTROL CENTER "MCC 3SB"
SCALE: 1/2"=1'-0"
(NOTE 6)

MOTOR CONTROL CENTER
CIRCUIT SCHEDULE
"MCC 3SB"

SEC.	UNIT	DESCRIPTION (NAMEPLATE)	TAG I.D.	O.L.D. # / SHEET #	E.W.D # / SHEET #	NOTES
1	A	RAS PUMP HOIST	06 TH 01	N/A	N/A	
1	E	SPACE	N/A	N/A	N/A	
1	I	SPACE	N/A	N/A	N/A	
1	M	SPACE	N/A	N/A	N/A	
1	S	MAIN LUGS	N/A	N/A	N/A	
2	A	REMOTE I/O RACK "MCC 3SB"	N/A	N/A	N/A	NOTE 4
3	A	NON-POTABLE WATER PUMP #2	08 P 02	N/A	N/A	
3	G	SPACE	N/A	N/A	N/A	
3	K	SPACE	N/A	N/A	N/A	
3	O	SPACE	N/A	N/A	N/A	
3	S	SPACE	N/A	N/A	N/A	
4	A	SPACE	N/A	N/A	N/A	
4	E	SPACE	N/A	N/A	N/A	
4	I	SPACE	N/A	N/A	N/A	
4	M	SPACE	N/A	N/A	N/A	
4	Q	SPACE	N/A	N/A	N/A	
4	U	SPACE	N/A	N/A	N/A	
5	A	EFFLUENT PUMP #2	08 EP 02	N/A	N/A	
5	H	EFFLUENT PUMP #4	08 EP 04	N/A	N/A	
5	O	EFFLUENT PUP NO.2 HEATER	N/A	N/A	N/A	
5	S	EFFLUENT PUP NO.4 HEATER	N/A	N/A	N/A	
6	A	SECONDARY CLARIFIER #2	07 SCM 02	O.L.D. 4/E-8	E.W.D. 2/E-8	NOTE 1
6	G	SECONDARY CLARIFIER #2 LINE REACTOR	N/A	N/A	N/A	NOTE 2
6	J	WAS PUMP #2	06 WP 02	O.L.D. 6/E-8	E.W.D. 1/E-8	NOTE 1
6	R	WAS PUMP #2 LINE REACTOR	N/A	N/A	N/A	NOTE 2
6	V	SPACE	N/A	N/A	N/A	
7	A	RAS PUMP #2	06 RP 02	O.L.D. 5/E-8	E.W.D. 1/E-8	NOTE 1
7	M	RAS PUMP #2 LINE REACTOR	N/A	N/A	N/A	NOTE 2
7	QL	PUMP ROOM HEATER	06 HT 01	(NOTE 5)	N/A	NOTE 5
7	QR	SPARE	N/A	N/A	N/A	NOTE 5
7	U	SPACE	N/A	N/A	N/A	
8	A	RAS PUMP #4	06 RAS 04	O.L.D. 2/E-8	E.W.D. 3/E-8	NOTE 1
8	M	RAS PUMP #4 LINE REACTOR	N/A	N/A	N/A	NOTE 2
8	Q	SECONDARY CLARIFIER SCUM PUMP NO.2	07 SCP 02	O.L.D. 1/E-8	E.W.D. 4/E-8	NOTE 3
8	U	SPACE	N/A	N/A	N/A	

NOTES:

SEE DRAWING E-1 FOR GENERAL NOTES.

- REPLACE EXISTING MCC UNIT WITH NEW VFD UNIT. PROVIDE NEW DOOR WITH NEW UNIT.
- REPLACE EXISTING MCC LINE REACTOR UNIT WITH NEW LINE REACTOR UNIT. PROVIDE NEW DOOR WITH NEW UNIT. ALTERNATIVELY, EXISTING MCC LINE REACTOR UNIT MAY BE REUSED IF COMPATIBLE WITH NEW VFD UNIT.
- PROVIDE NEW MCC FVNR STARTER UNIT IN EXISTING MCC SPACE. PROVIDE NEW DOOR WITH NEW UNIT.
- PRESERVE EXISTING CONTROL WIRING FROM THE PLC AND REMOTE IO UNITS TO THE MCC VFD UNITS FOR RECONNECTION TO THE NEW MCC UNITS. SEE SHEETS E-7 AND E-8 FOR ADDITIONAL INFORMATION.
- PROVIDE NEW SPLIT BUCKET MCC-UNIT WITH TWO 3P-35A BRANCH CIRCUIT BREAKERS.
- EXISTING MCC IS A SQUARE D MODEL 6 ORIGINALLY BUILT IN 1998.
- CONNECT NEW I/O SIGNALS TO PLC I/O POINTS AS LISTED IN THE I/O SCHEDULE. SEE SHEET E-12 FOR I/O CARD INFORMATION. TERMINATE PER MANUFACTURER'S INSTRUCTIONS.
- FIELD CONTROL PANEL FOR EXISTING SECONDARY CLARIFIER SCUM PUMP NO.1 IS BEING REPLACED. SEE SHEET E-9 AND E7-X SERIES OF SHEETS FOR FURTHER INFORMATION. CONNECT EXISTING MCC BUCKET AND MOTOR CONTROLLER TO NEW CONTROL PANEL IN FIELD.



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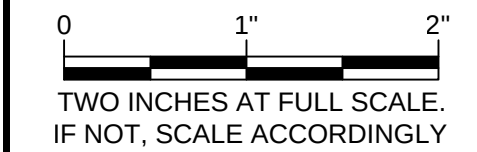
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connecting ideas with solutions
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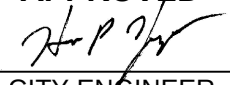
**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION**
CIP NO. 20-018
1602 18TH ST NW,
PUYALLUP, WA 98371

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CHECKED BY:	JRM
DRAWN BY:	CJD
DESIGNER:	MLO
G & O JOB NO.:	21462.00
FILE:	C-E00-06.DWG



APPROVED

BY: 

CITY ENGINEER
CITY OF PUYALLUP

APPROVED
DATE: 2/28/2024

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DATE: 12/31/2025

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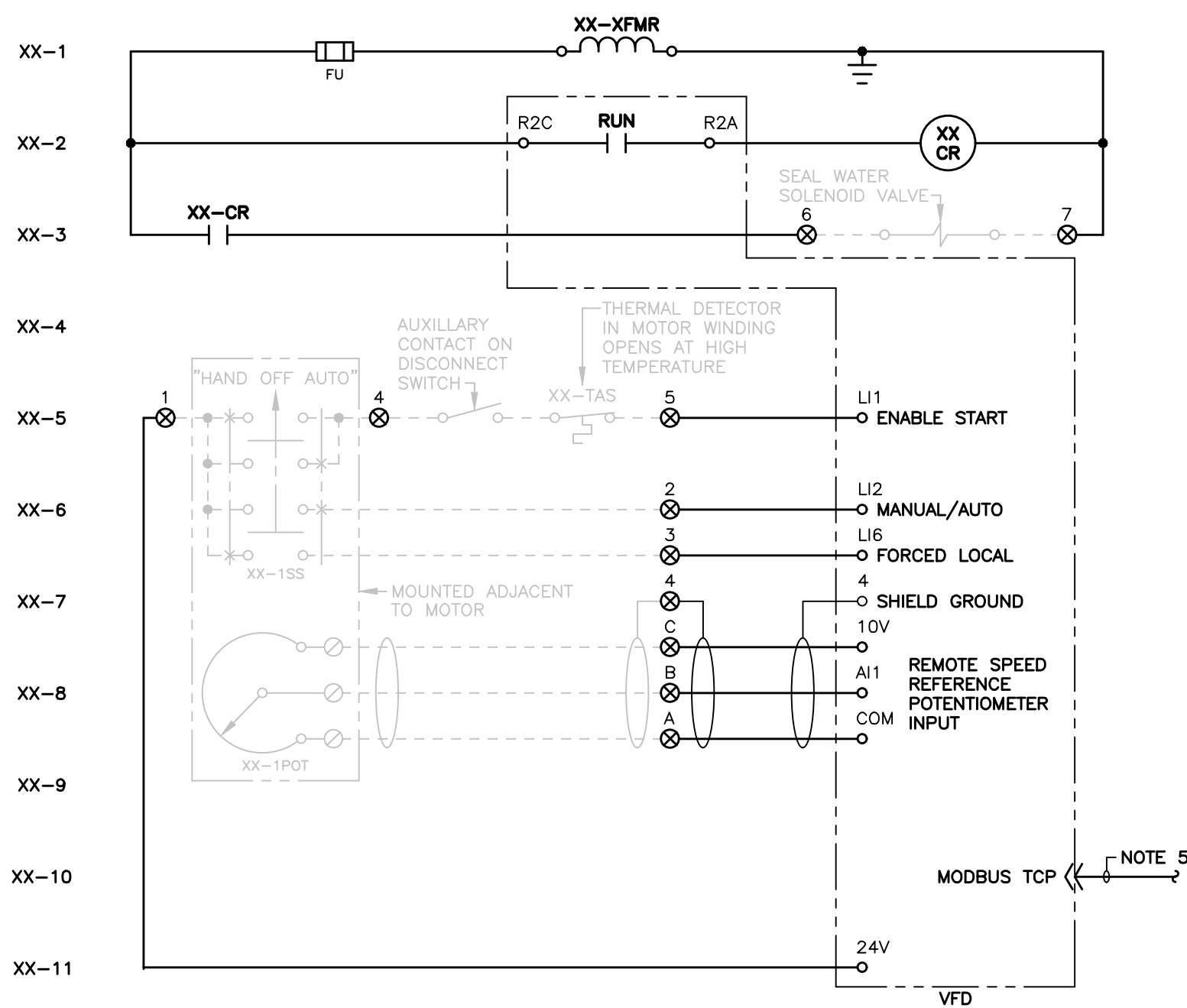
Field conditions may dictate changes to these plans as determined by the City Engineer.

**MCC ELEVATIONS
AND SCHEDULES**

DRAWING: **E-6** OF: **12**

SHEET: **48** OF: **60**

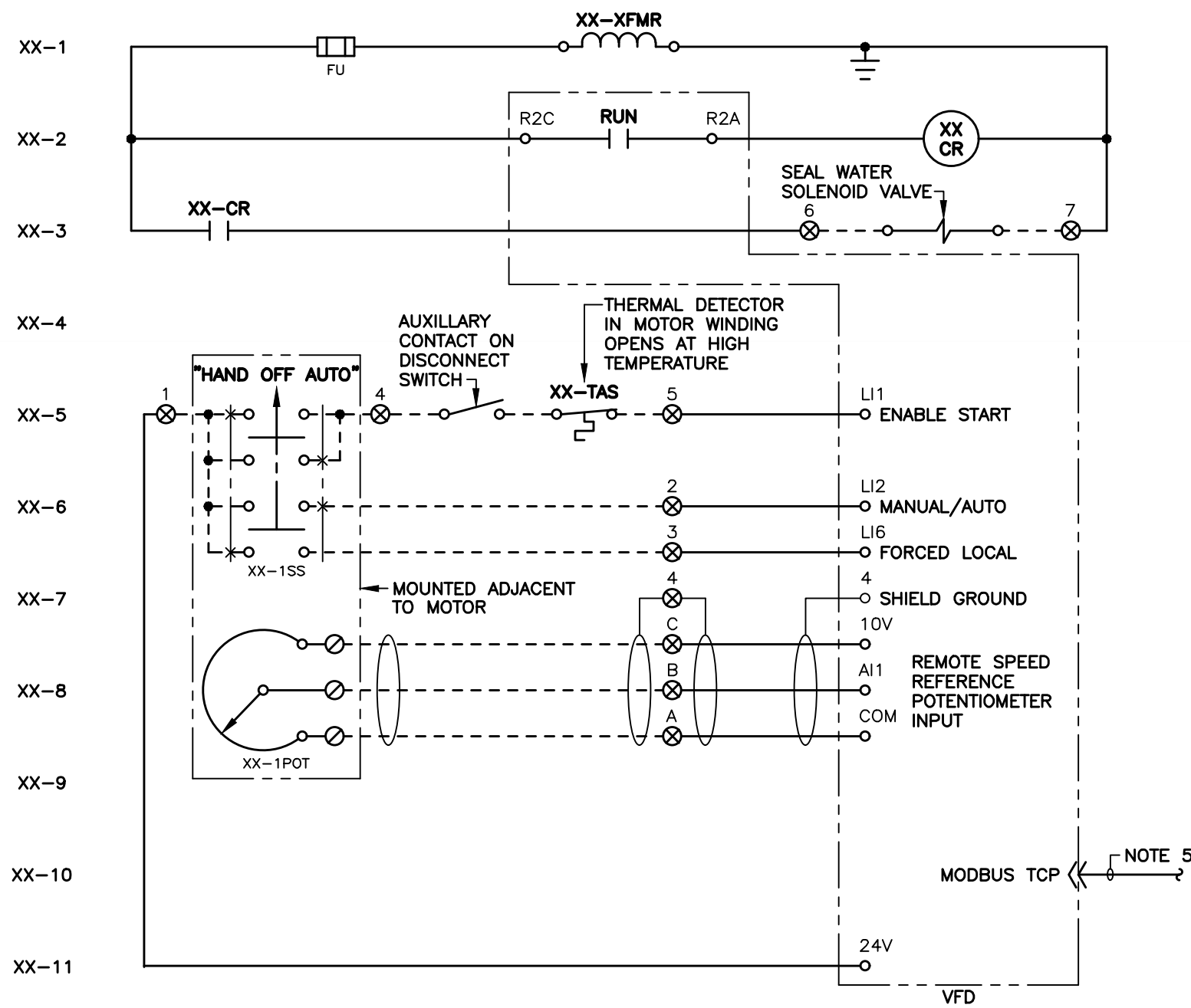
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E.W.D. 1/E-8

(NOTES 1&4)

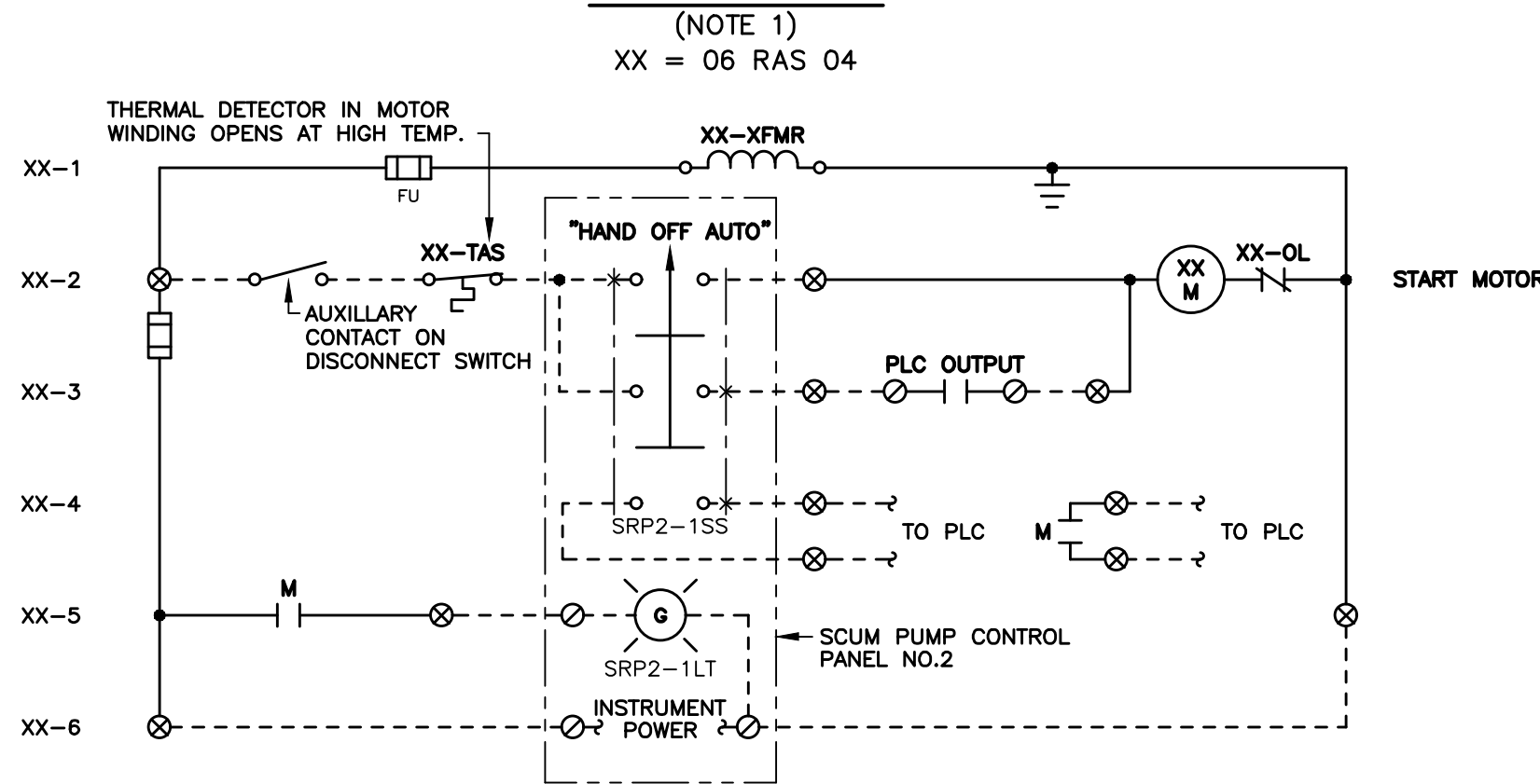
XX = 06 RAS 01, 06 RAS 02, 06 RAS 03,
XX = 06 WAS 01, 06 WAS 02



E.W.D. 2/E-8

(NOTES 1&4)

XX = 07 SCM 01, 07 SCM 02



E.W.D. 3/E-8

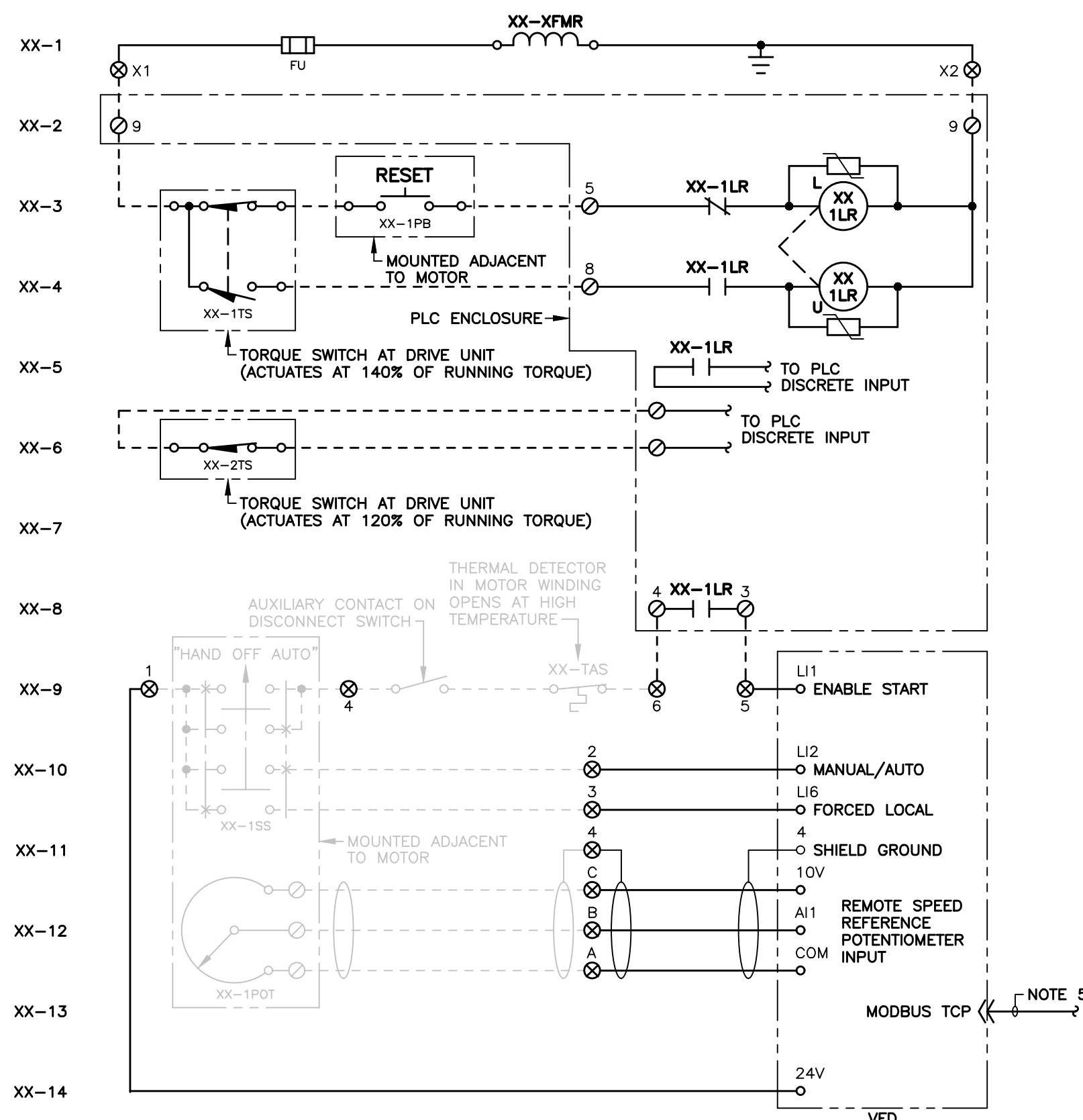
(NOTE 1)

XX = 06 RAS 04

E.W.D. 4/E-8

(NOTE 3)

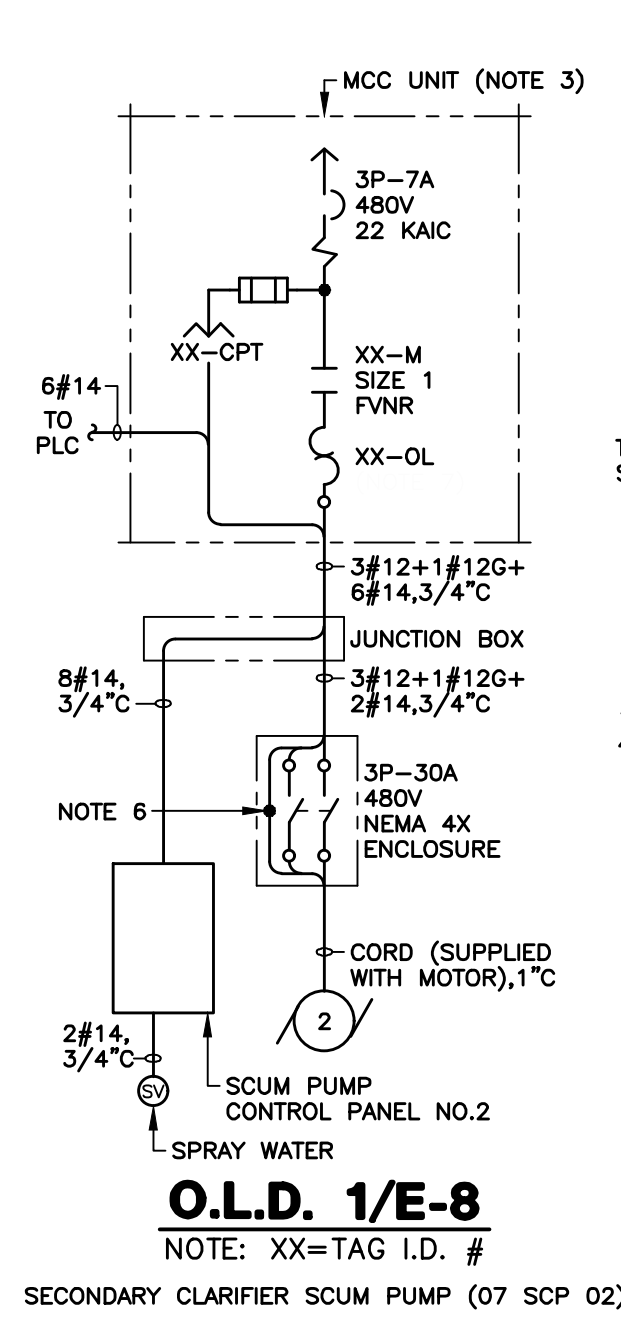
XX = 07 SCP 02



E.W.D. 5/E-8

(NOTE 1)

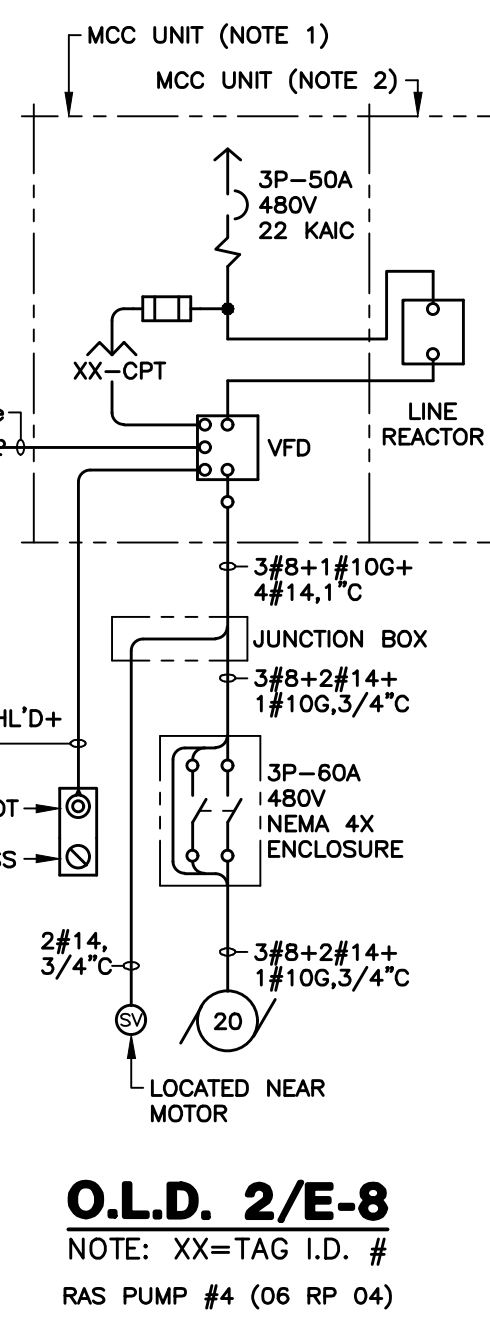
XX = 07 SCM 03



O.L.D. 1/E-8

NOTE: XX=TAG I.D. #

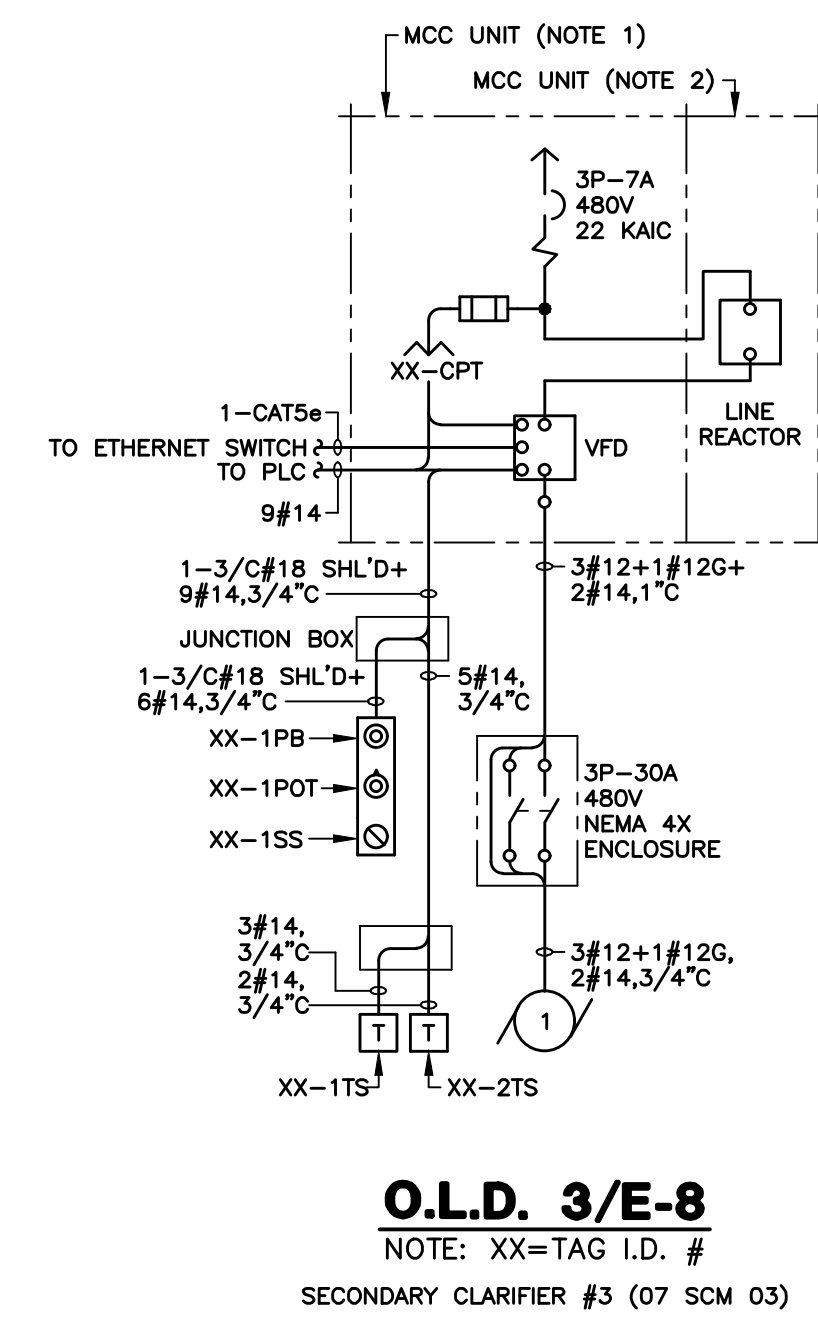
SECONDARY CLARIFIER SCUM PUMP (07 SCP 02)



O.L.D. 2/E-8

NOTE: XX=TAG I.D. #

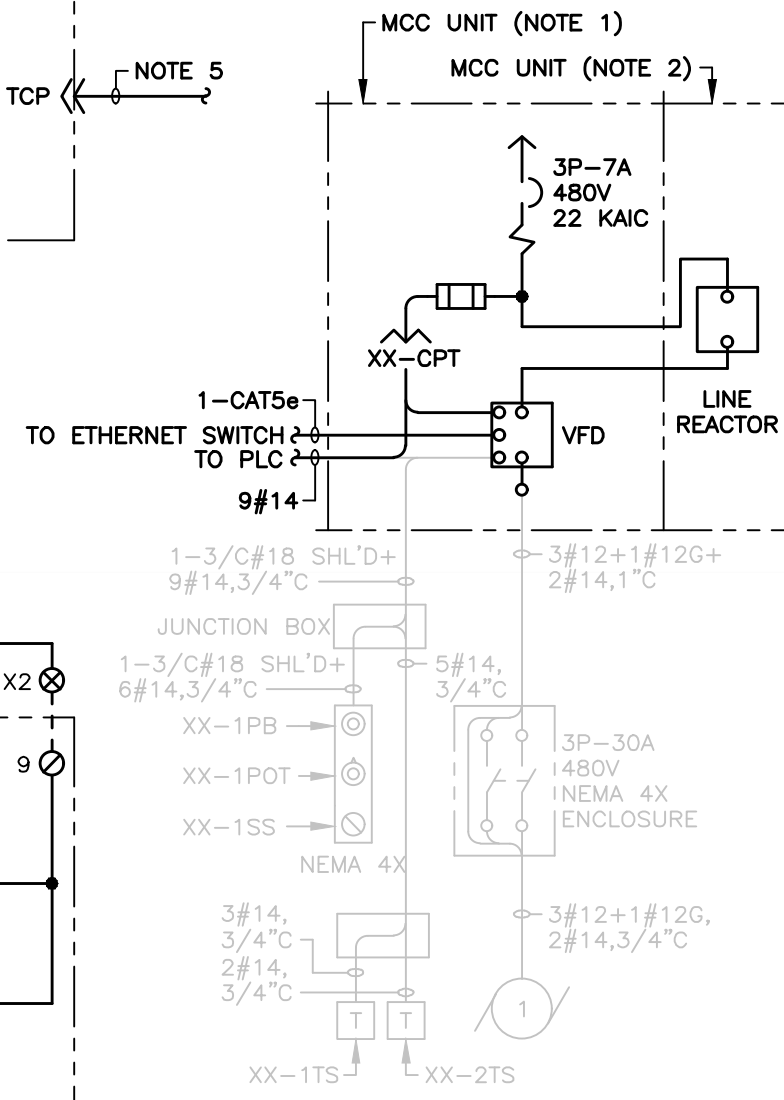
RAS PUMP #4 (06 RP 04)



O.L.D. 3/E-8

NOTE: XX=TAG I.D. #

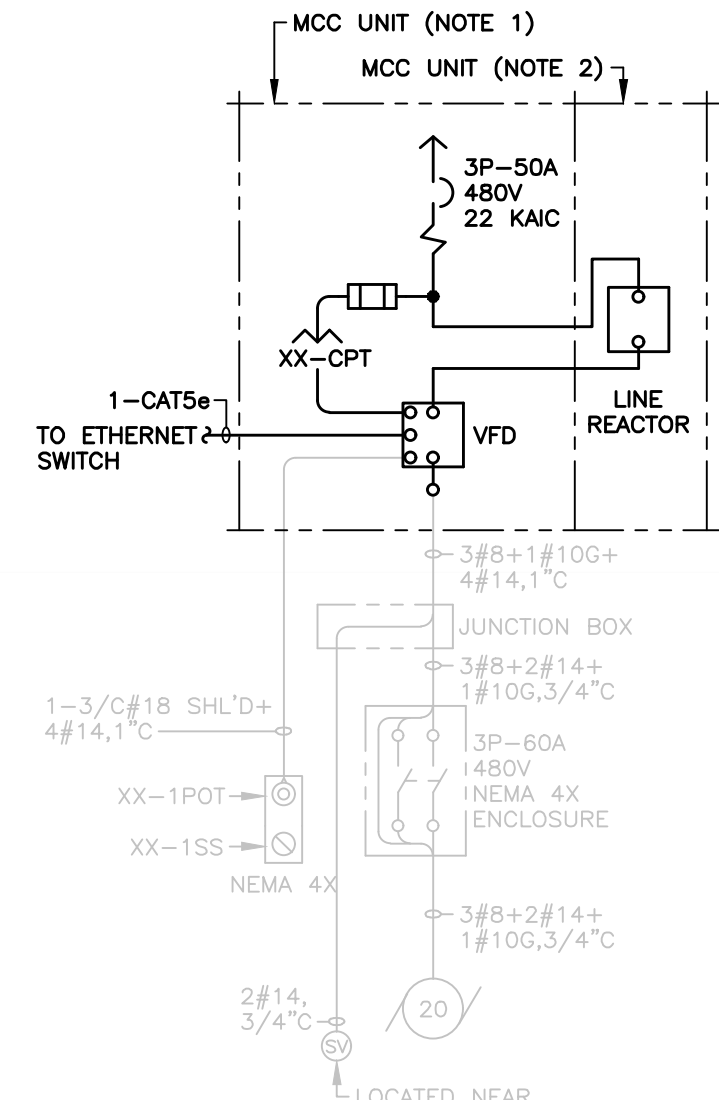
SECONDARY CLARIFIER #3 (07 SCM 03)



O.L.D. 4/E-8

NOTE: XX=TAG I.D. #

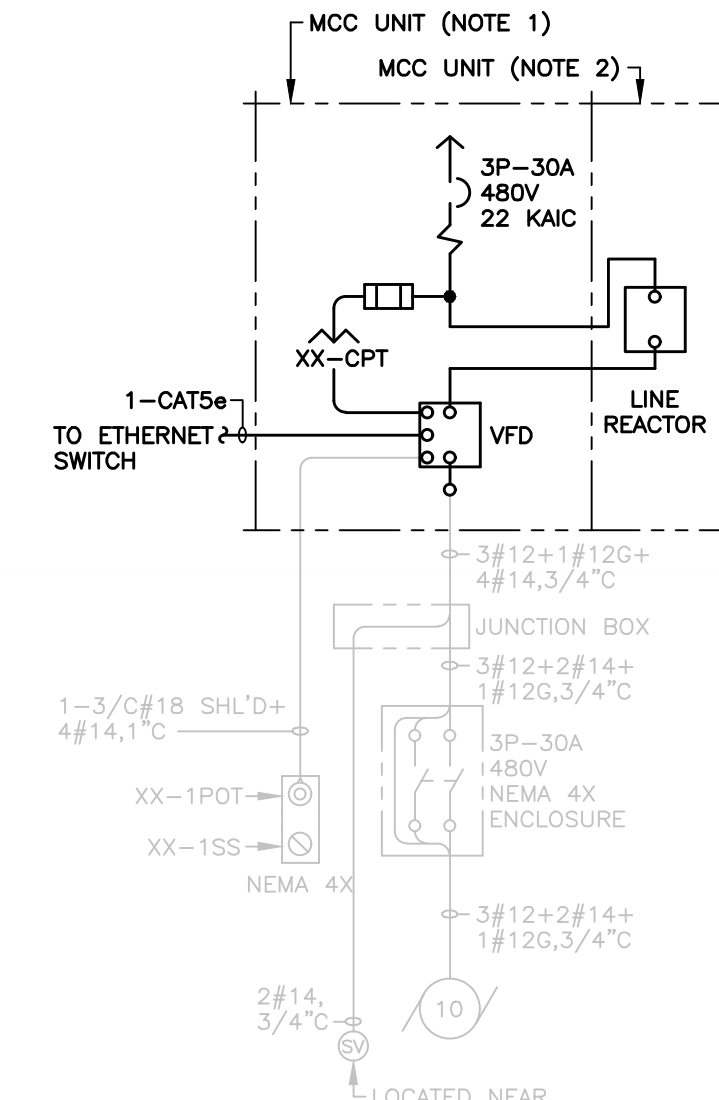
SECONDARY CLARIFIER #1 (07 SCM 01)
SECONDARY CLARIFIER #2 (07 SCM 02)
(NOTE 4)



O.L.D. 5/E-8

NOTE: XX=TAG I.D. #

RAS PUMP #1 (06 RP 01)
RAS PUMP #2 (06 RP 02)
RAS PUMP #3 (06 RP 03)
(NOTE 4)



O.L.D. 6/E-8

NOTE: XX=TAG I.D. #

WAS PUMP #1 (06 WP 01)
WAS PUMP #2 (06 WP 02)
(NOTE 4)

NOTES:

SEE DRAWING E-1 FOR GENERAL NOTES AND FOR GENERAL PLAN NOTES.

- REPLACE EXISTING MCC UNIT WITH NEW VFD UNIT. PROVIDE NEW DOOR WITH NEW UNIT.
- REPLACE EXISTING MCC LINE REACTOR UNIT WITH NEW LINE REACTOR UNIT. PROVIDE NEW DOOR WITH NEW UNIT. ALTERNATIVELY, EXISTING MCC LINE REACTOR UNIT MAY BE REUSED IF COMPATIBLE WITH NEW VFD UNIT.
- PROVIDE NEW MCC FVNR STARTER UNIT IN EXISTING MCC SPACE. PROVIDE NEW DOOR WITH NEW UNIT.
- PRESERVE FIELD DEVICE CONDUCTORS FOR RECONNECTION TO NEW MOTOR CONTROLLER.
- CAT 5e TO NEW ETHERNET SWITCH. SEE DRAWING E-12.
- SPLICE CORD TO CONDUCTORS.

APPROVED

BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP

DATE: 2/28/2024

EXPIRATION DATE: 12/31/2025

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CHECKED BY: JRM		
DRAWN BY: CJD		
DESIGNER: MLO		
G & O JOB NO.: 21462.00		
FILE: C-E00-08.DWG		

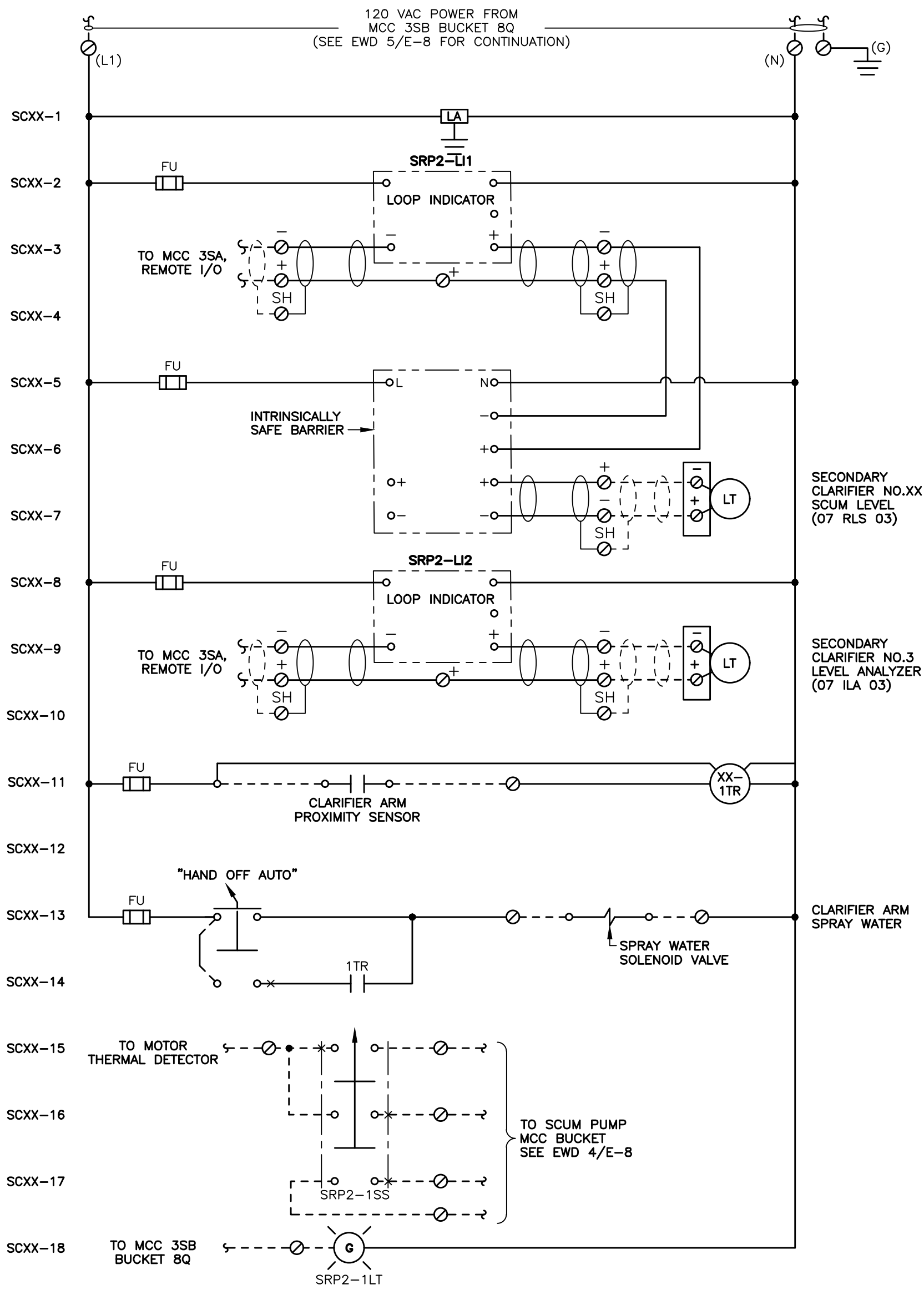
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

MOTOR CONTROL CENTER ONE LINE DIAGRAMS AND ELEMENTARY WIRING DIAGRAMS

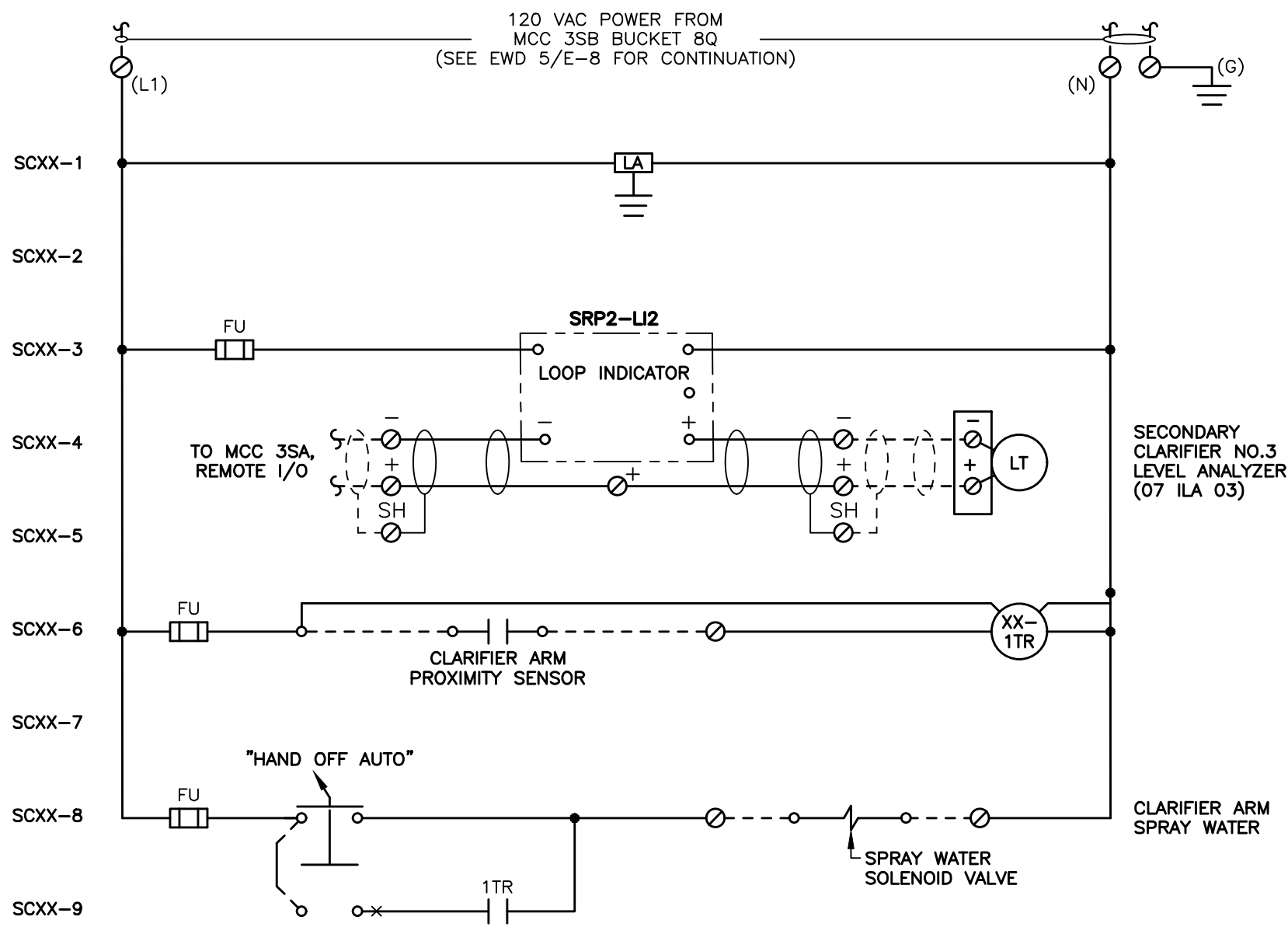
DRAWING: **E-8** OF: **12**

SHEET: **50** OF: **60**

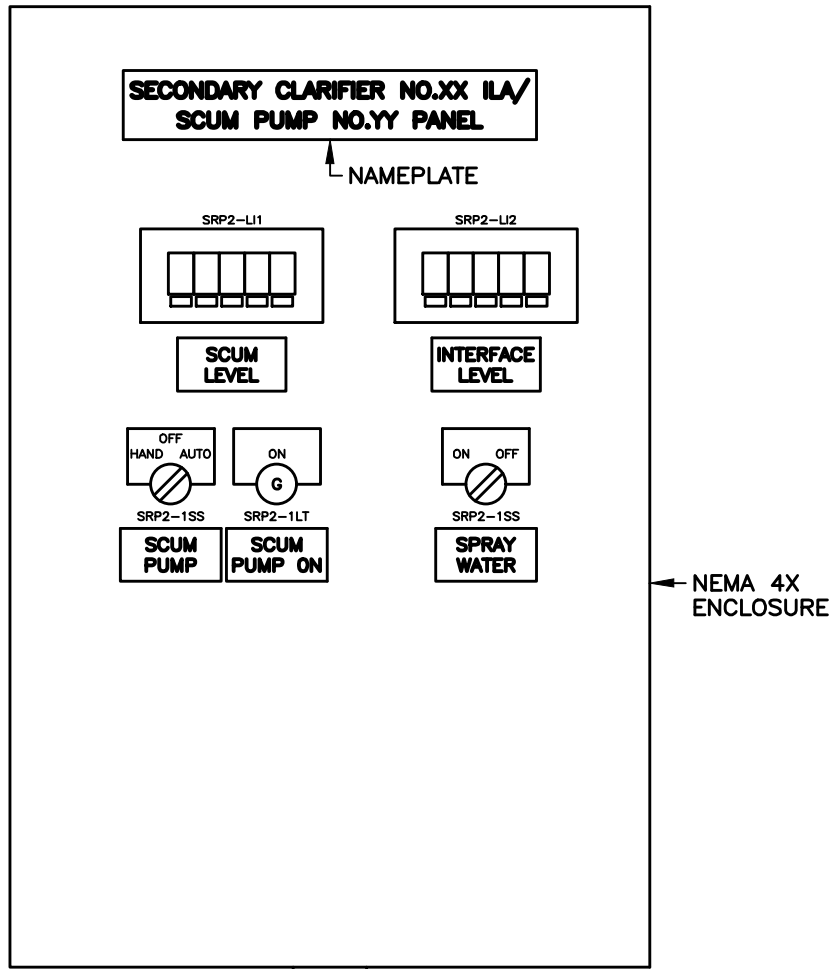
Z:\JOBS\G&OS\21462\Cad\C-E00-09.DWG, 2/27/2024 3:53 PM, EDWARD J. GODOY



E.W.D. 1/E-9
(NOTE 2)
XX=02CP,03CP

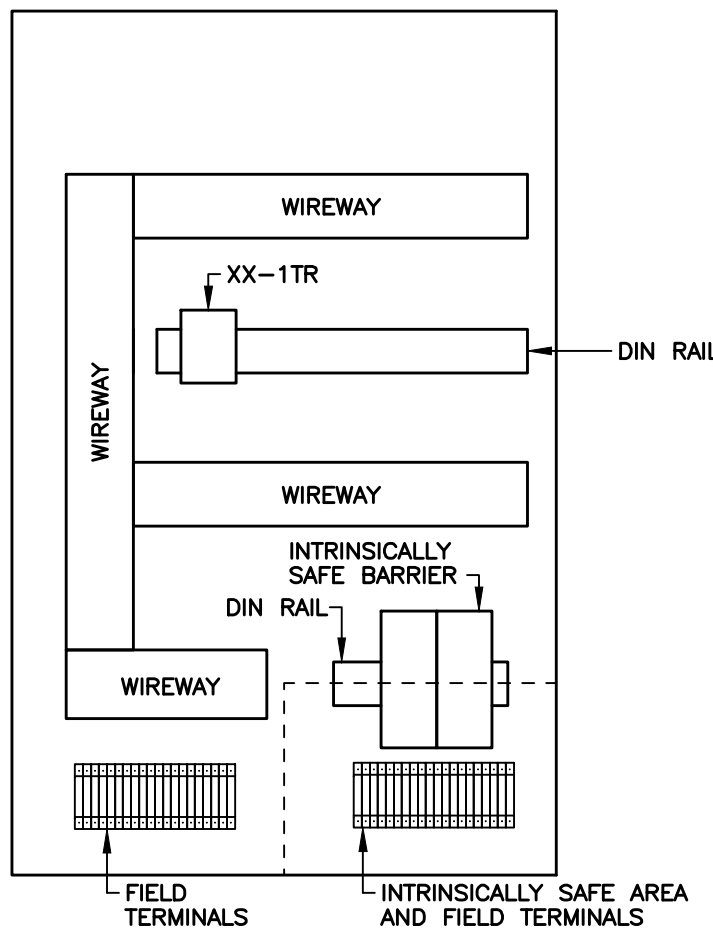


E.W.D. 2/E-9
(NOTE 2)
XX=01CP



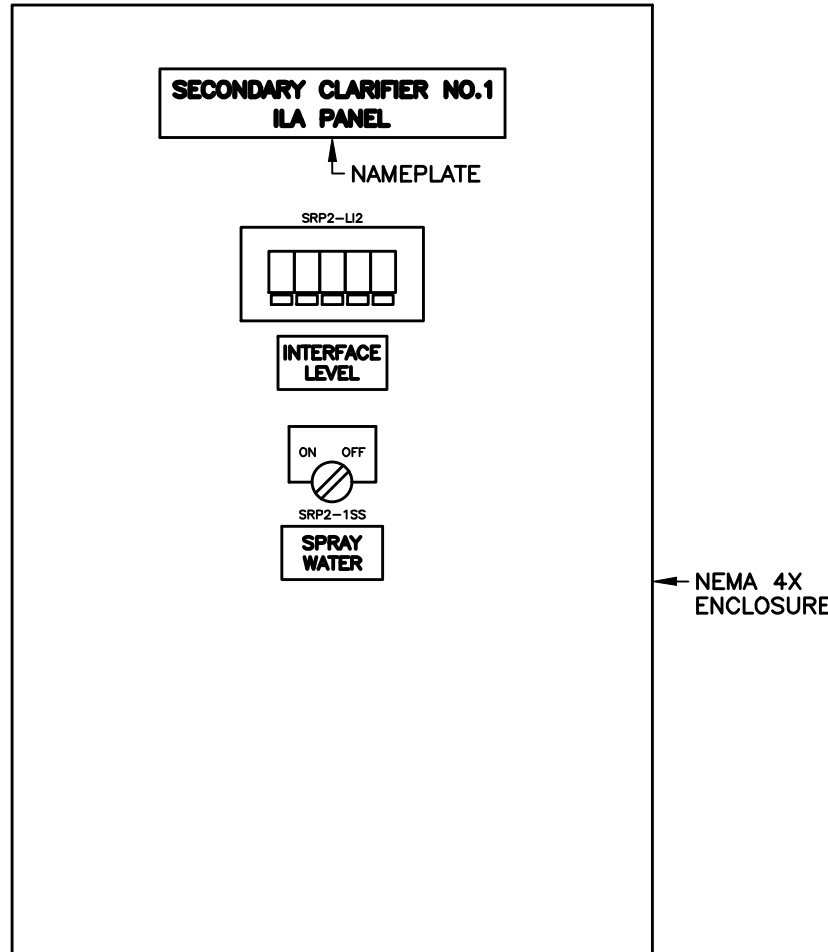
**EXTERIOR ELEVATION
SEC. CLARIFIER NO. XX
ILA/SCUM PUMP YY PANEL**

SCALE: 2"=1'-0"
(NOTE 2)
(XX=2,3)
(YY=1,2)



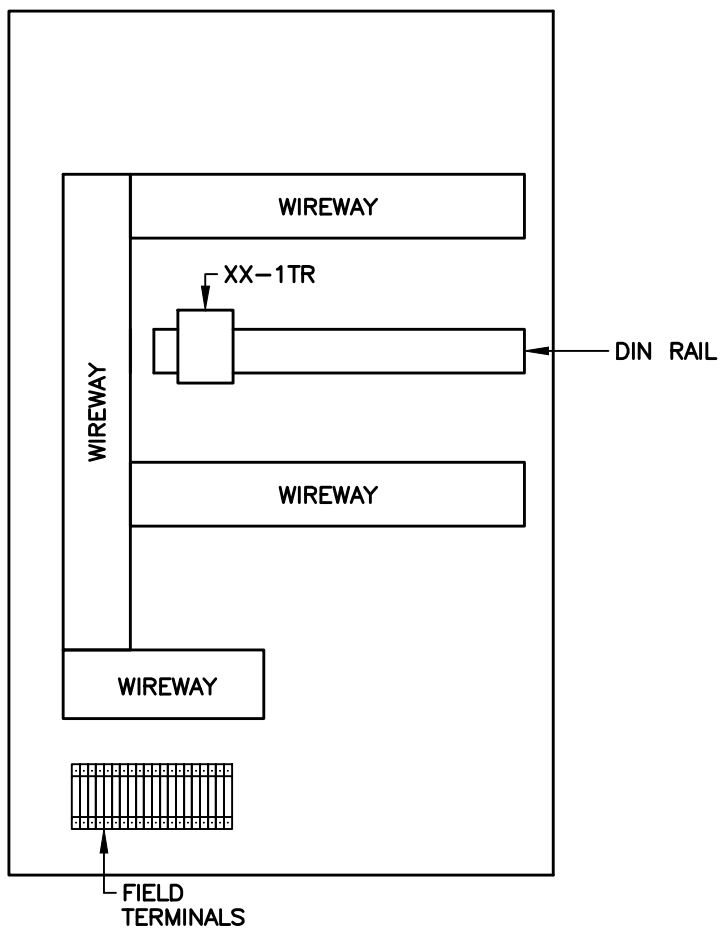
**INTERIOR ELEVATION
SEC. CLARIFIER NO. XX
ILA/SCUM PUMP YY PANEL**

SCALE: 2"=1'-0"



**EXTERIOR ELEVATION
SEC. CLARIFIER NO.2
ILA PANEL**

SCALE: 2"=1'-0"



**INTERIOR ELEVATION
SEC. CLARIFIER NO. 2
ILA PANEL**

SCALE: 2"=1'-0"

APPROVED

BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP

APPROVED
DATE: 2/28/2024

EXPIRATION
DATE: 12/31/2025

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DESIGNER: MLO		
G & O JOB NO.: 21462.00		
FILE: C-E00-09.DWG		

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

Z:\JOBS\SG&OS\21462\Cad\C-E00-10.DWG, 2/27/2024 3:53 PM, EDWARD J. GODOY

PANELBOARD CIRCUIT SCHEDULE PANEL LP-3SA (EXISTING)							SECTION 1 OF 1
CKT. #	LOAD DESCRIPTION	BREAKER TYPE	POLE #	POLE #	BREAKER TYPE	LOAD DESCRIPTION	CKT. #
1	RAS/WAS PUMP ROOM AIR GAP UNIT	1P-20A	1	2	1P-20A	RAS/WAS PUMP ROOM RECEPTACLES	2
3	EFFLUENT FLOWMETER MANHOLE SUMP PUMP	1P-20A	3	4	1P-20A	RAS/WAS PUMP ROOM RECEPTACLES	4
5	EFFLUENT FLOWMETER CONVERTER	1P-20A	5	6	1P-20A	ELECTRICAL ROOM RECEPTACLES	6
7	EFFLUENT SAMPLER	1P-20A	7	8	1P-20A	GENERATOR ROOM RECEPTACLES	8
9	EFFLUENT FLOWMETER 08 MFM 01	1P-20A	9	10	1P-20A	RAS/WAS PUMP ROOM SUMP PUMP	10
11	RAS/WAS MAGNETIC FLOWMETER	1P-20A	11	12	1P-20A	PLC " MCC 3SA"	12
13	SPARE	1P-20A	13	14	1P-30A	SPARE	14
15	SPARE	1P-20A	15	16	1P-20A	LEVEL SENSOR	16
17	SPARE	1P-20A	17	18	1P-20A	ELECRRICAL ROOM RECEPTACLES	18
19	SPARE	1P-20A	19	20	1P-20A	SPARE	20
21	SPARE	1P-20A	21	22	1P-20A	LEVEL DETECTION PANEL	22
23	SPARE	1P-20A	23	24	1P-20A	SPARE	24
25	SPARE	1P-20A	25	26	1P-20A	SPARE	26
27	SPARE	1P-20A	27	28	1P-20A	SPARE	28
29	SPARE	1P-20A	29	30	1P-20A	SPARE	30
31	SPARE	1P-20A	31	32	1P-20A	SPARE	32
33	SPARE	2P-50A	33	34		SPACE	34
			35	36		SPACE	36
37	SPACE		37	38		SPACE	38
39	SPACE		39	40		SPACE	40
41	SPACE		41	42		SPACE	42

PANELBOARD CIRCUIT SCHEDULE PANEL LP-3SB (EXISTING)							SECTION 1 OF 1
CKT. #	LOAD DESCRIPTION	BREAKER TYPE	POLE #	POLE #	BREAKER TYPE	LOAD DESCRIPTION	CKT. #
1	RAS/WAS ROOM EXHAUST FAN	1P-20A	1	2	1P-20A	RAS/WAS BUILDING LIGHTING	2
3	GENERATOR ROOM EXHAUST FAN	1P-20A	3	4	1P-20A	RAS/WAS BUILDING LIGHTING	4
5	ELECTRICAL ROOM EXHAUST FAN	1P-20A	5	6	1P-20A	SITE LIGHTING	6
7	GENERATOR BATTERY CHARGER	1P-20A	7	8	1P-20A	SITE LIGHTING	8
9	GENERATOR ROOM EXHAUST	1P-20A	9	10	1P-20A	POLE BASE RECEPTACLES	10
11	EFFLUENT METER CHANNEL SUMP PUMP	1P-50A	11	12	1P-20A	POLE BASE RECEPTACLES	12
13	GENERATOR BLOCK HEATER	2P-20A	13	14	1P-20A	REMOTE I/O RACK "MCC 3SB"	14
			15	16	1P-20A	RAS/WAS BUILDING EXTERIOR LIGHTING	16
			17	18	1P-20A	SPARE	18
19	SPARE	1P-20A	19	20	1P-20A	SUBSTATION NO.3 LIGHTS	20
21	SPARE	1P-20A	21	22	1P-20A	HEATER CONTROL	22
23	SPARE	1P-20A	23	24	1P-20A	SPARE	24
25	SPARE	1P-20A	25	26	1P-20A	SITE LIGHTS PHOTOCONTROL	26
27	SPACE		27	28		SPACE	28
29	SPACE		29	30		SPACE	30
31	SPACE		31	32		SPACE	32
33	SPACE		33	34		SPACE	34
35	SPACE		35	36		SPACE	36
37	SPACE		37	38		SPACE	38
39	SPACE		39	40		SPACE	40
41	SPACE		41	42		SPACE	42

PANELBOARD CIRCUIT SCHEDULE PANEL LP-3SA (MODIFIED)							SECTION 1 OF 1
CKT. #	LOAD DESCRIPTION	BREAKER TYPE	POLE #	POLE #	BREAKER TYPE	LOAD DESCRIPTION	CKT. #
1	RAS/WAS PUMP ROOM AIR GAP UNIT	1P-20A	1	2	1P-20A	RAS/WAS PUMP ROOM RECEPTACLES	2
3	EFFLUENT FLOWMETER MANHOLE SUMP PUMP	1P-20A	3	4	1P-20A	RAS/WAS PUMP ROOM RECEPTACLES	4
5	EFFLUENT FLOWMETER CONVERTER	1P-20A	5	6	1P-20A	ELECTRICAL ROOM RECEPTACLES	6
7	EFFLUENT SAMPLER	1P-20A	7	8	1P-20A	GENERATOR ROOM RECEPTACLES	8
9	EFFLUENT FLOWMETER 08 MFM 01	1P-20A	9	10	1P-20A	RAS/WAS PUMP ROOM SUMP PUMP	10
11	RAS/WAS MAGNETIC FLOWMETER	1P-20A	11	12	1P-20A	PLC " MCC 3SA"	12
13	MAGNETIC FLOWMETER 06 MFM 03	1P-20A	13	14	1P-30A	SPARE	14
15	EFFLUENT FLOWMETER 08 MFM 03	1P-20A	15	16	1P-20A	LEVEL SENSOR	16
17	SPARE	1P-20A	17	18	1P-20A	ELECRRICAL ROOM RECEPTACLES	18
19	SPARE	1P-20A	19	20	1P-20A	SPARE	20
21	SPARE	1P-20A	21	22	1P-20A	LEVEL DETECTION PANEL	22
23	SPARE	1P-20A	23	24	1P-20A	SPARE	24
25	SPARE	1P-20A	25	26	1P-20A	SPARE	26
27	SPARE	1P-20A	27	28	1P-20A	SPARE	28
29	SPARE	1P-20A	29	30	1P-20A	SPARE	30
31	SPARE	1P-20A	31	32	1P-20A	SPARE	32
33	SPARE	2P-50A	33	34		SPACE	34
			35	36		SPACE	36
37	SPACE		37	38		SPACE	38
39	SPACE		39	40		SPACE	40
41	SPACE		41	42		SPACE	42

PANELBOARD CIRCUIT SCHEDULE PANEL LP-3SB (MODIFIED)							SECTION 1 OF 1
CKT. #	LOAD DESCRIPTION	BREAKER TYPE	POLE #	POLE #	BREAKER TYPE	LOAD DESCRIPTION	CKT. #
1	RAS/WAS ROOM SUPPLY FAN 06 SF 01	1P-20A	1	2	1P-20A	RAS/WAS BUILDING LIGHTING	2
3	GENERATOR ROOM EXHAUST FAN	1P-20A	3	4	1P-20A	RAS/WAS BUILDING LIGHTING	4
5	RAS/WAS ROOM EXHAUST FAN 06 EF 01	1P-20A	5	6	1P-20A	SITE LIGHTING	6
7	GENERATOR BATTERY CHARGER	1P-20A	7	8	1P-20A	SITE LIGHTING	8
9	GENERATOR ROOM EXHAUST	1P-20A	9	10	1P-20A	POLE BASE RECEPTACLES	10
11	EFFLUENT METER CHANNEL SUMP PUMP	1P-50A	11	12	1P-20A	POLE BASE RECEPTACLES	12
13	GENERATOR BLOCK HEATER	2P-20A	13	14	1P-20A	REMOTE I/O RACK "MCC 3SB"	14
			15	16	1P-20A	RAS/WAS BUILDING EXTERIOR LIGHTING	16
17	SPARE	1P-50A	17	18		SPACE	18
19	SPARE	1P-20A	19	20	1P-20A	SUBSTATION NO.3 LIGHTS	20
21	SPARE	1P-20A	21	22	1P-20A	HEATER CONTROL	22
23	SPARE	1P-20A	23	24	1P-20A	SPARE	24
25	SPARE	1P-20A	25	26	1P-20A	SITE LIGHTS PHOTOCONTROL	26
27	SPACE		27	28		SPACE	28
29	SPACE		29	30		SPACE	30
31	SPACE		31	32		SPACE	32
33	SPACE		33	34		SPACE	34
35	HEAT PUMP 06 HP 01	2P-25A	35	36		SPACE	36
			37	38		SPACE	38
39	HEAT PUMP 06 HP 02	2P-25A	39	40		SPACE	40
			41	42		SPACE	42



Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH,
SUITE 300
SEATTLE, WASHINGTON 98144
(206) 284-0860

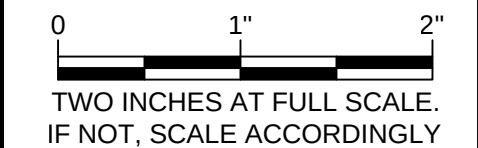


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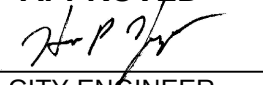


**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1602 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
ISSUED FOR:		
BID SET		
ISSUE DATE:		02-28-2024
APPROVED BY:		BBB
CHECKED BY:		JRM
DRAWN BY:		CJD
DESIGNER:		MLO
G & O JOB NO.:		21462.00
FILE:		C-E00-10.DWG



APPROVED

BY: 
CITY ENGINEER
CITY OF PUYALLUP

APPROVED
DATE: 2/28/2024

EXPIRATION
DATE: 12/31/2025

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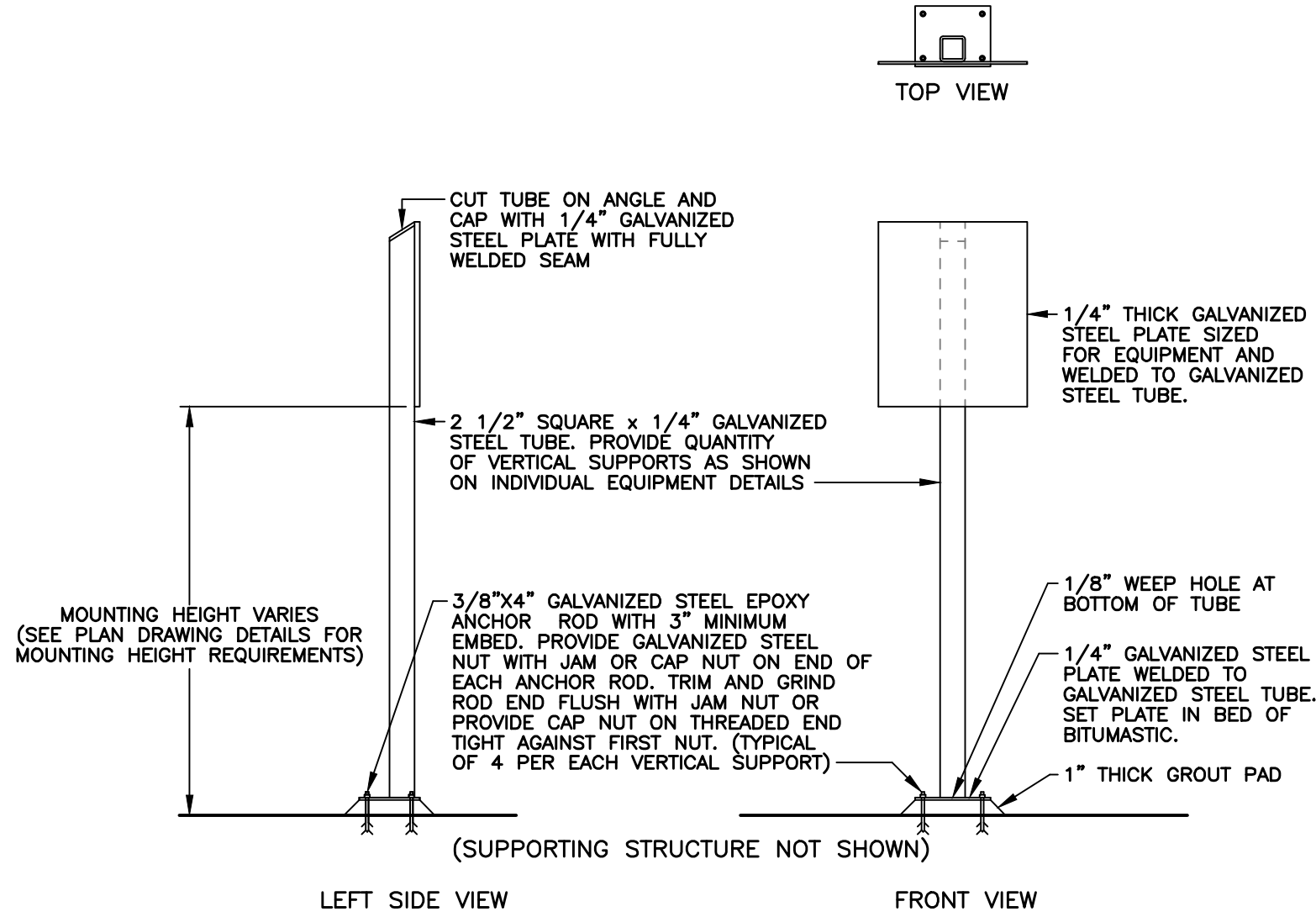
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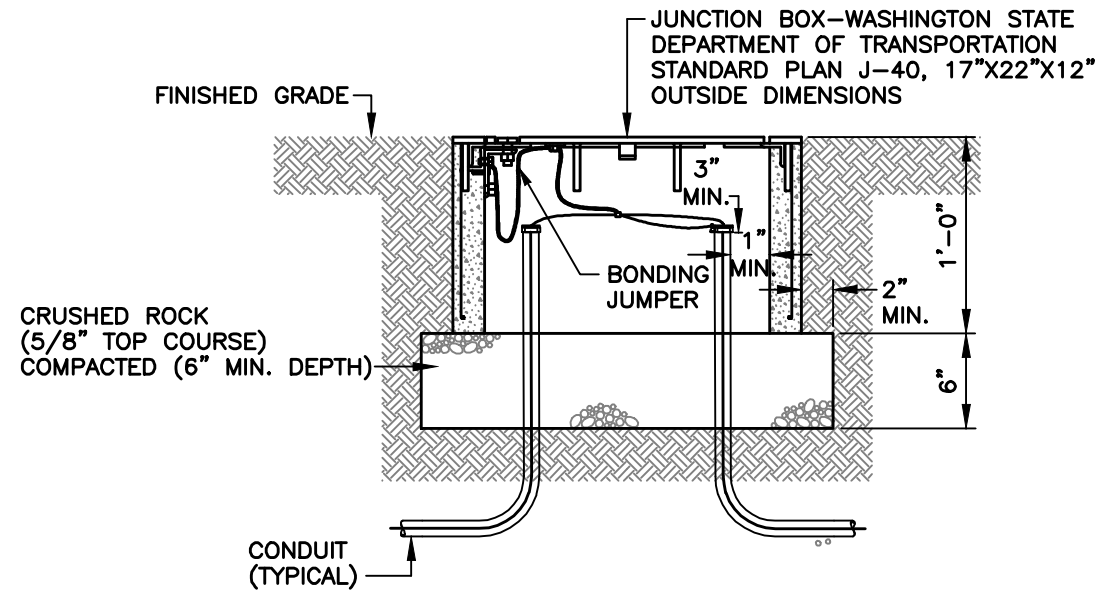
PANEL SCHEDULES

DRAWING: **E-10** OF: **12**

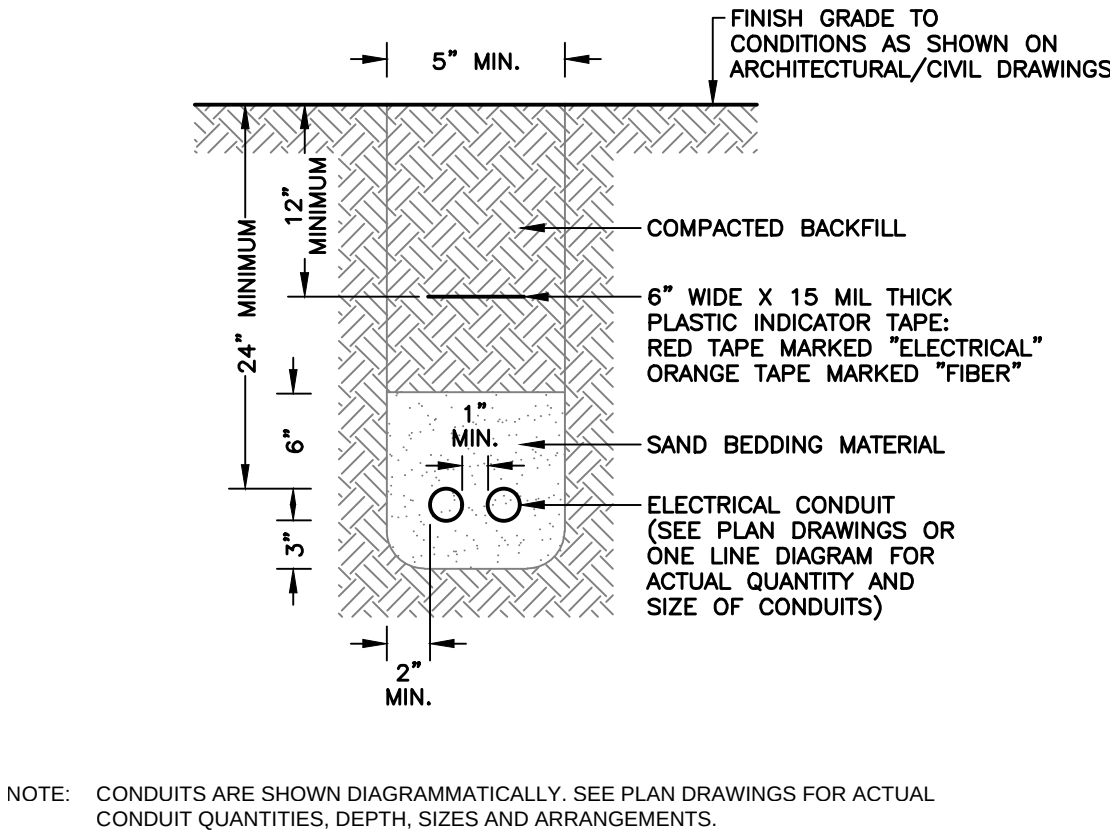
SHEET: **52** OF: **60**



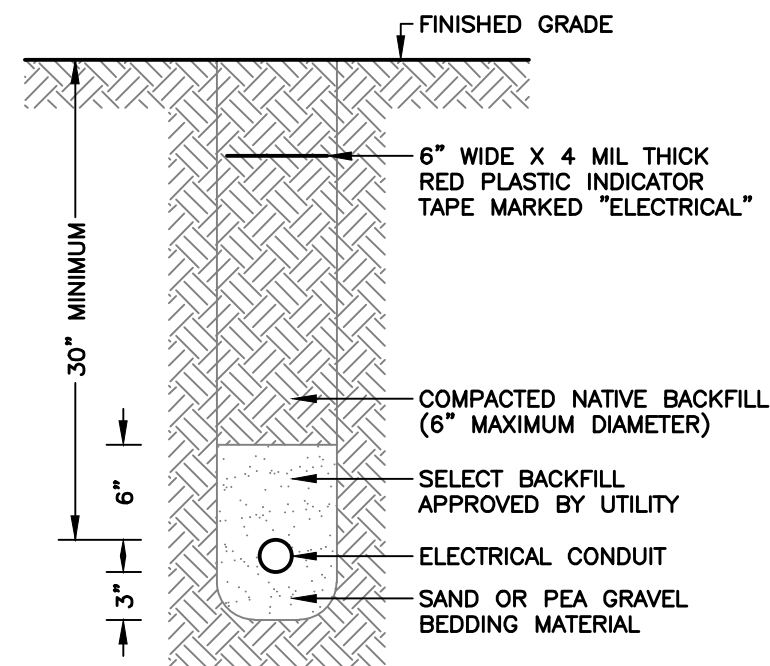
DETAIL 1/E-11
MOUNTING ON STANCHION
SCALE: NONE



DETAIL 2/E-11
TYPE 1L JUNCTION BOX
SCALE: NONE
NOTE: CONDUITS ARE SHOWN DIAGRAMMATICALLY. SEE PLAN DRAWINGS FOR ACTUAL CONDUIT QUANTITIES, DEPTH, SIZES AND ARRANGEMENTS.



DETAIL 3/E-11
TRENCHING FOR ELECTRICAL CIRCUITS
SECONDARY POWER OR SIGNAL CIRCUITS
SCALE: NONE
NOTE: CONDUITS ARE SHOWN DIAGRAMMATICALLY. SEE PLAN DRAWINGS FOR ACTUAL CONDUIT QUANTITIES, DEPTH, SIZES AND ARRANGEMENTS.

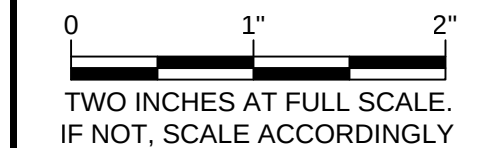


DETAIL 4/E-11
TRENCHING FOR
PRIMARY ELECTRICAL CIRCUIT
SCALE: NONE



**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
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PUYALLUP, WA 98371

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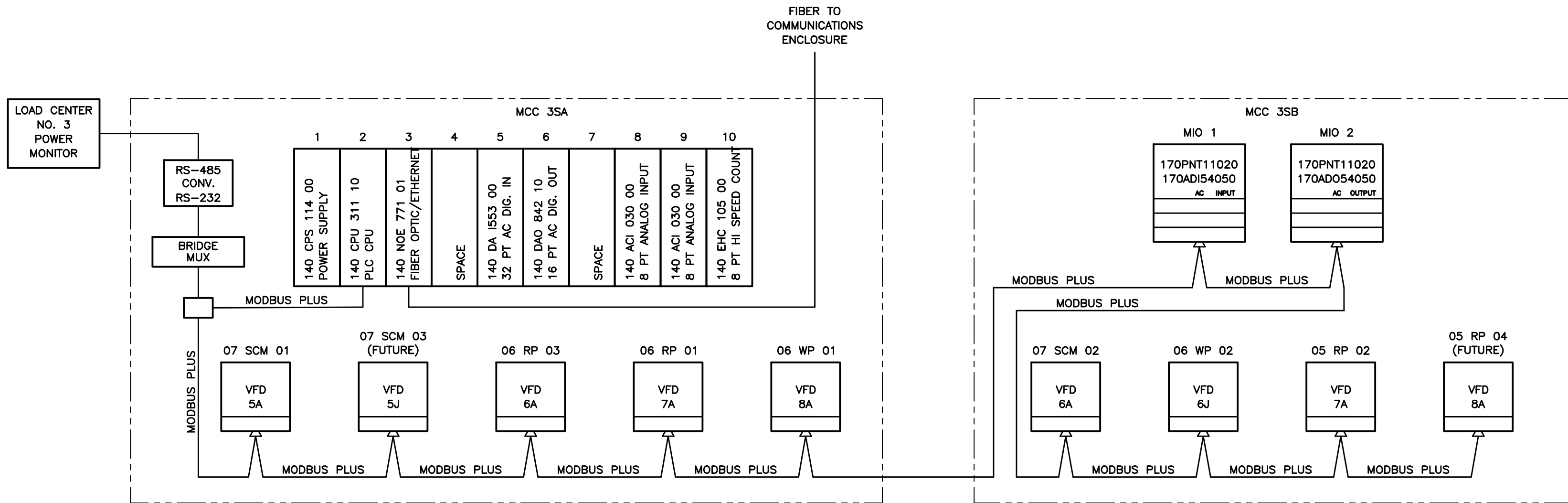


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BY: *[Signature]*
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CITY OF PUYALLUP
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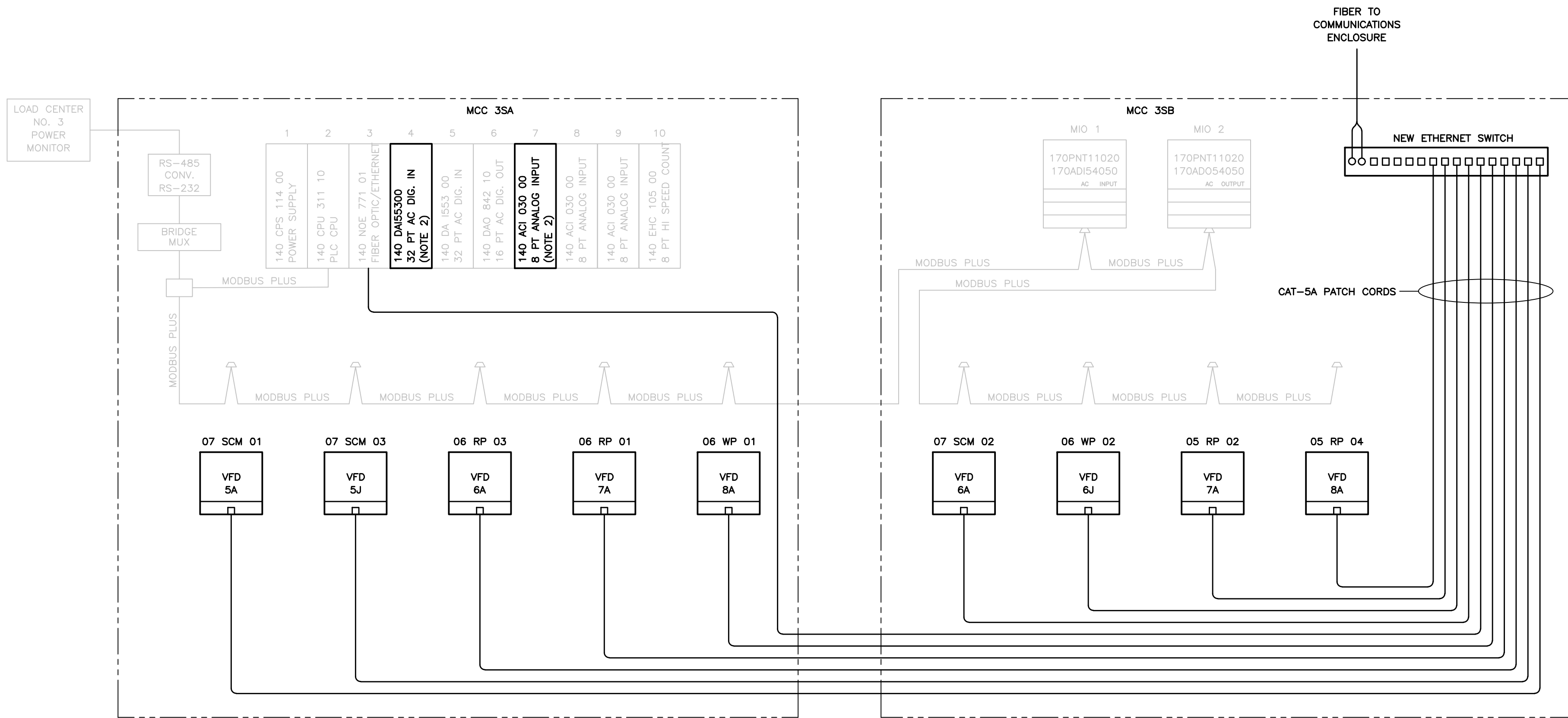
ELECTRICAL DETAILS

DRAWING: **E-11** OF: **12**
SHEET: **53** OF: **60**

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EXISTING COMMUNICATION DIAGRAM



MODIFIED COMMUNICATION DIAGRAM

(NOTE 1)

NOTES:

SEE DRAWING E-1 FOR GENERAL NOTES AND FOR GENERAL PLAN NOTES.

- COIL DISCONNECTED MODBUS PLUS CABLING IN BOTTOM OF MCC UNIT WHERE DISCONNECTED. TAPE OFF CONNECTOR TO KEEP CLEAN AND DEBRIS OUT OF CONNECTOR PINS. MODBUS PLUS CABLE WILL BE REMOVED AS PART OF FUTURE PLC UPGRADES PROJECT.
- OWNER PROVIDED CONTRACTOR INSTALLED I/O CARDS. ADD FIELD TERMINALS AS NECESSARY TO CONNECT NEW I/O POINTS TO NEW I/O CARDS.

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
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SECONDARY CLARIFIER
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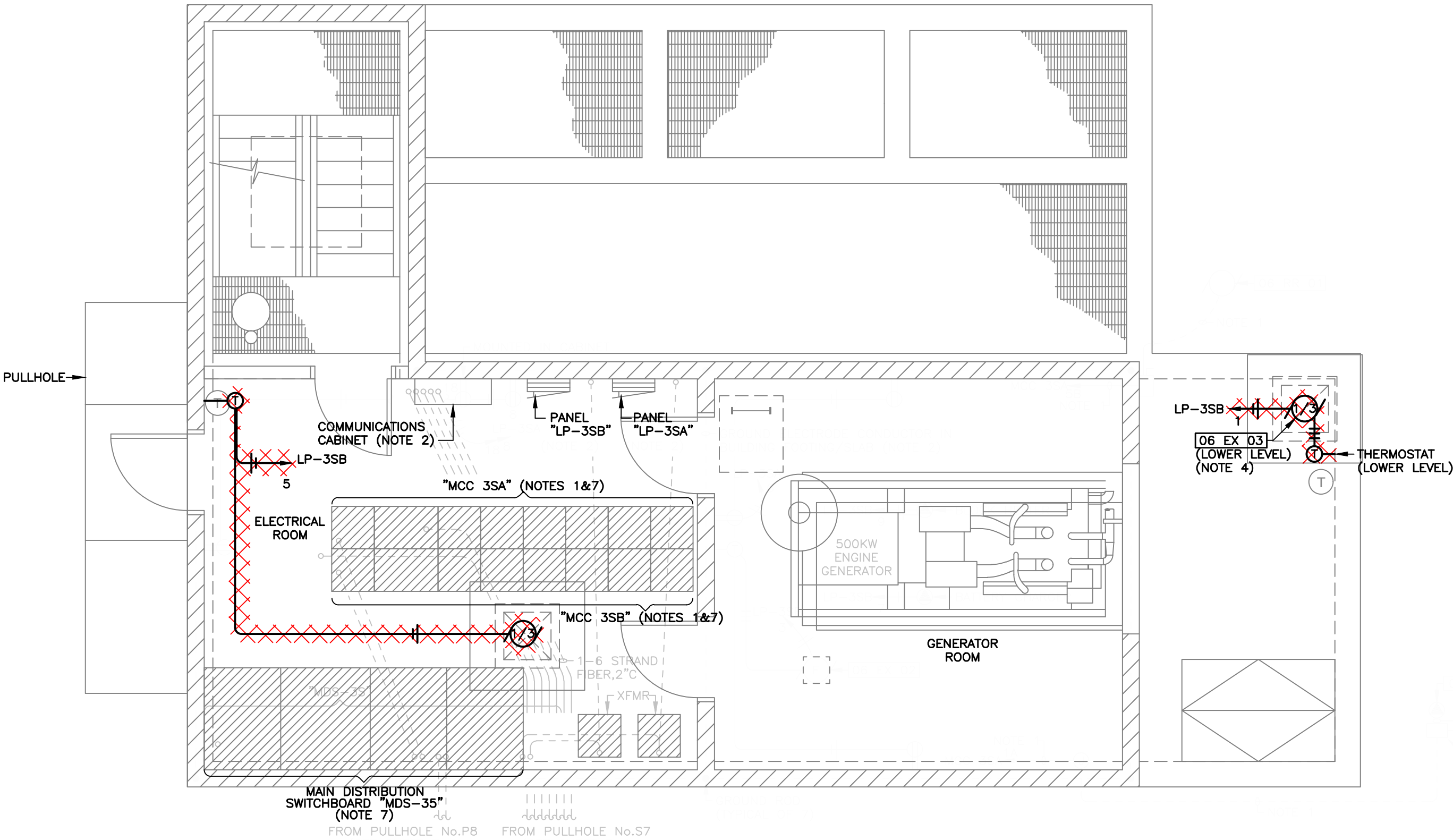
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APPROVED BY: BBB		
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DRAWN BY: DEK		
DESIGNER: MLO		
G & O JOB NO.: 21462.00		
FILE: C-E00-12.DWG		

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

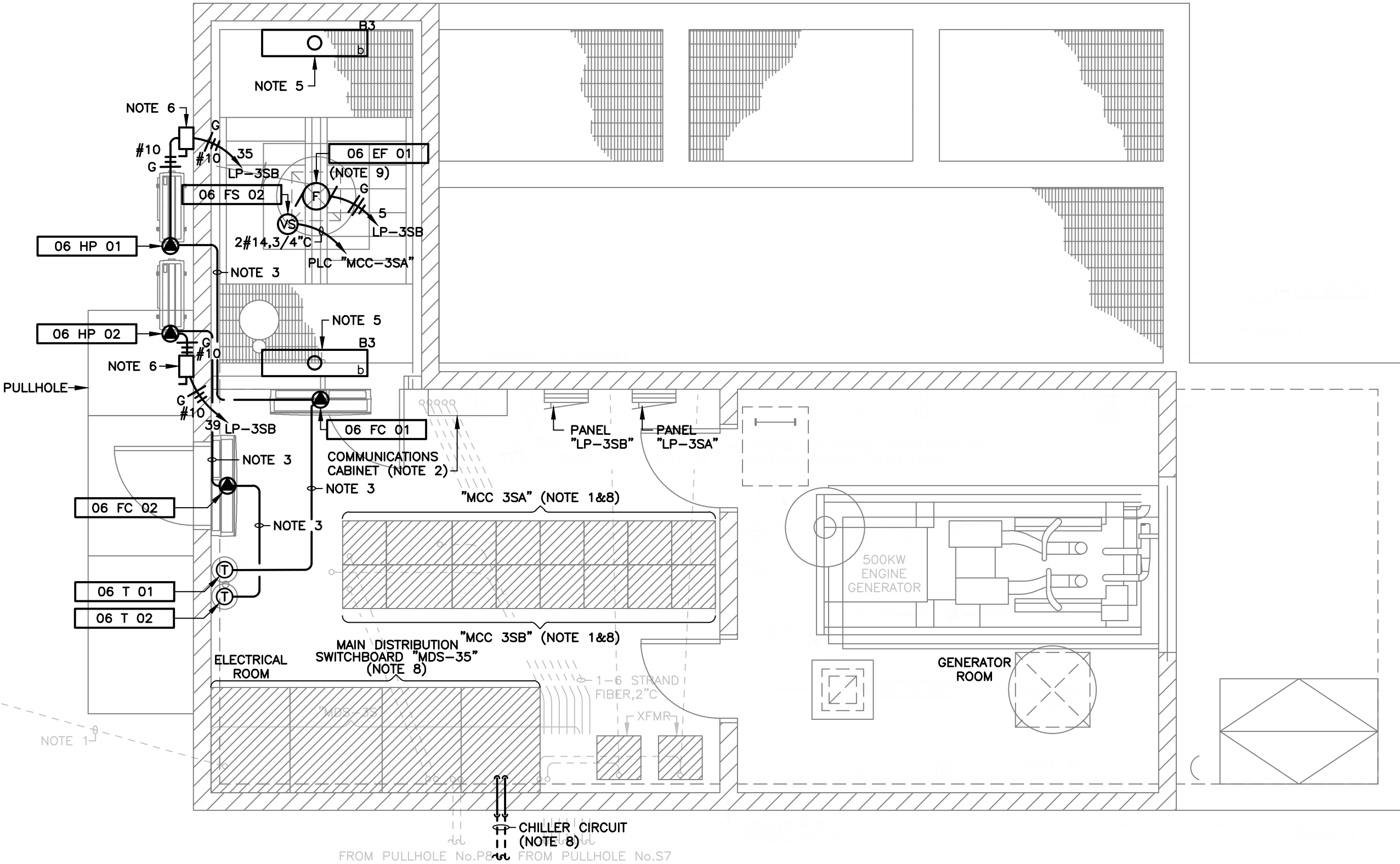
**PLC CONTROL
SYSTEM
MODIFICATIONS**

DRAWING: E-12 OF: 12

SHEET: 54 OF: 60



DEMOLITION ELECTRICAL PLAN
RAS/WAS BUILDING - MAIN LEVEL
SCALE: 1/4" = 1'-0"



MODIFIED ELECTRICAL PLAN
RAS/WAS BUILDING - MAIN LEVEL
SCALE: 1/4" = 1'-0"

INTERIOR LUMINAIRES							
Type Mark	Description	Manufacturer	Catalog Number	Lumens	Lamp Type	Input Watts	Remarks
B3	LED, COMMERCIAL, 3" X 4' SURFACE MOUNT, FROSTED SQUARE LINEAR LENS, FIBERGLASS HOUSING, BAKED WHITE ACRYLIC MATTE, 120/277 VOLT, 5 YEAR WARRANTY	LUMINAIRE - METALUX	4VT3-LD5-4-W-UNV-L840-SSL	4,767	LED 4000K	31	
EXTERIOR LUMINAIRES							
Type Mark	Description	Manufacturer	Catalog Number	Lumens	Lamp Type	Input Watts	Remarks
AA	LED, OUTDOOR AREA LIGHT, TYPE IV FT DISTRIBUTION, DIECAST ALUMINUM HOUSING WITH INTEGRAL THERMAL MANAGEMENT, ARM MOUNT, 120 VOLT. PROVIDE 30" SQUARE 6.25" TAPERED STEEL POLE, 11mm THICKNESS, WITH BOLT COVER., DARK BRONZE PAINT, WET LISTED, 5 YEAR WARRANTY	LUMINAIRE - COOPER MCGRAW EDISON POLE - ULS	LUMINAIRE - GALN-SA4A-740-1-T4FT-PA-BZ POLE - STP-30-62-11-AB-D1-DB-GFCI-180-12-UL	18,051	LED 4000K	149	
BB	LED, OUTDOOR AREA LIGHT, TYPE II DISTRIBUTION, DIECAST ALUMINUM HOUSING WITH INTEGRAL THERMAL MANAGEMENT, ARM MOUNT, 120 VOLT. PROVIDE 8" SQUARE STRAIGHT 4" STEEL POLE 11mm THICKNESS, WITH BOLT COVER., DARK BRONZE PAINT, WET LISTED, 5 YEAR WARRANTY	LUMINAIRE - COOPER MCGRAW EDISON POLE - ULS	LUMINAIRE - GPC-SA1C-740-1-T2-QM-BZ POLE - ROSQ-10-4-11-AB-D1-DB-GFCI-0-48-UL	7,412	LED 4000K	126	COORDINATE WITH CONTRACTOR FOR BOLT PATTERN MOUNTING PLATE TO ME WELDED TO WALKWAY. CUT OFF 2" FROM TOP OF POLE.
CC	LED, OUTDOOR AREA LIGHT, TYPE IV FT DISTRIBUTION, DIECAST ALUMINUM HOUSING WITH INTEGRAL THERMAL MANAGEMENT AND DIMMING, ARM MOUNT, 120 VOLT, WET LISTED, 5 YEAR WARRANTY	LUMINAIRE - COOPER MCGRAW EDISON POLE - ULS	LUMINAIRE - GALN-SA4A-740-1-T4FT-PA-BZ	18,051	LED 4000K	149	PROVIDE NECESSARY APPURTENANCE TO MOUNT TO EXISTING POLE.

NOTES:

SEE DRAWING E-1 FOR GENERAL NOTES.

- SEE MCC ELEVATIONS, ONE LINE DIAGRAMS, AND ELEMENTARY WIRING DIAGRAMS DRAWINGS E-6, E-7, AND E-8 FOR ADDITIONAL INFORMATION.
- SEE DRAWING E-12 FOR ADDITIONAL INFORMATION.
- PROVIDE MANUFACTURER'S RECOMMENDED CONDUCTORS IN 3/4" MINIMUM CONDUIT.
- DEMOLISH EXISTING HVAC EQUIPMENT CIRCUIT BACK TO EXISTING PANELBOARD. CONDUIT MAY BE REUSED (IF POSSIBLE) FOR NEW HVAC EQUIPMENT AT CONTRACTOR'S OPTION.
- PROVIDE LED LIGHTING FIXTURE SURFACE MOUNTED TO WALL IN STAIRWELL AT 8 FEET ABOVE PLATFORM LANDING. LIGHTING FIXTURE SHALL BE 4 FOOT LONG, ENCLOSED AND GASKETED, ONE PIECE MOLDED FIBERGLASS REINFORCED POLYESTER BODY WITH END ENTRY HUBS, IMPACT RESISTANT POLYCARBONATE DIFFUSER WITH STAINLESS STEEL LATCHES, WET LABEL, AND FIVE YEAR WARRANTY. SEE FIXTURE SCHEDULE, THIS DRAWING, FOR PRODUCT INFORMATION. EXTEND EXISTING LIGHTING CIRCUITS TO NEW FIXTURES AND CONNECT.
- PROVIDE 2P-30A, NEMA 3R, HEAVY DUTY FUSED DISCONNECT. SIZE FUSES PER HVAC EQUIPMENT MANUFACTURER'S RECOMMENDATIONS FOR ACTUAL HVAC EQUIPMENT PROVIDED ON SITE.
- SEE EXISTING/DEMOLITION ONE LINE DIAGRAM DRAWING E-7 FOR CIRCUIT AND EQUIPMENT INFORMATION.
- SEE MODIFIED ONE LINE DIAGRAM DRAWING E-8 FOR CIRCUIT AND EQUIPMENT INFORMATION.
- INTEGRAL DISCONNECTING MEANS SPECIFIED UNDER DIVISION 15. SEE MECHANICAL DRAWINGS FOR FURTHER INFORMATION.

APPROVED	
BY:	
CITY ENGINEER CITY OF PUYALLUP	
APPROVED DATE:	2/28/2024
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CHECKED BY: JRM		
DRAWN BY: CJD		
DESIGNER: MLO		
G & O JOB NO.: 21462.00		
FILE: C-E06-01.DWG		

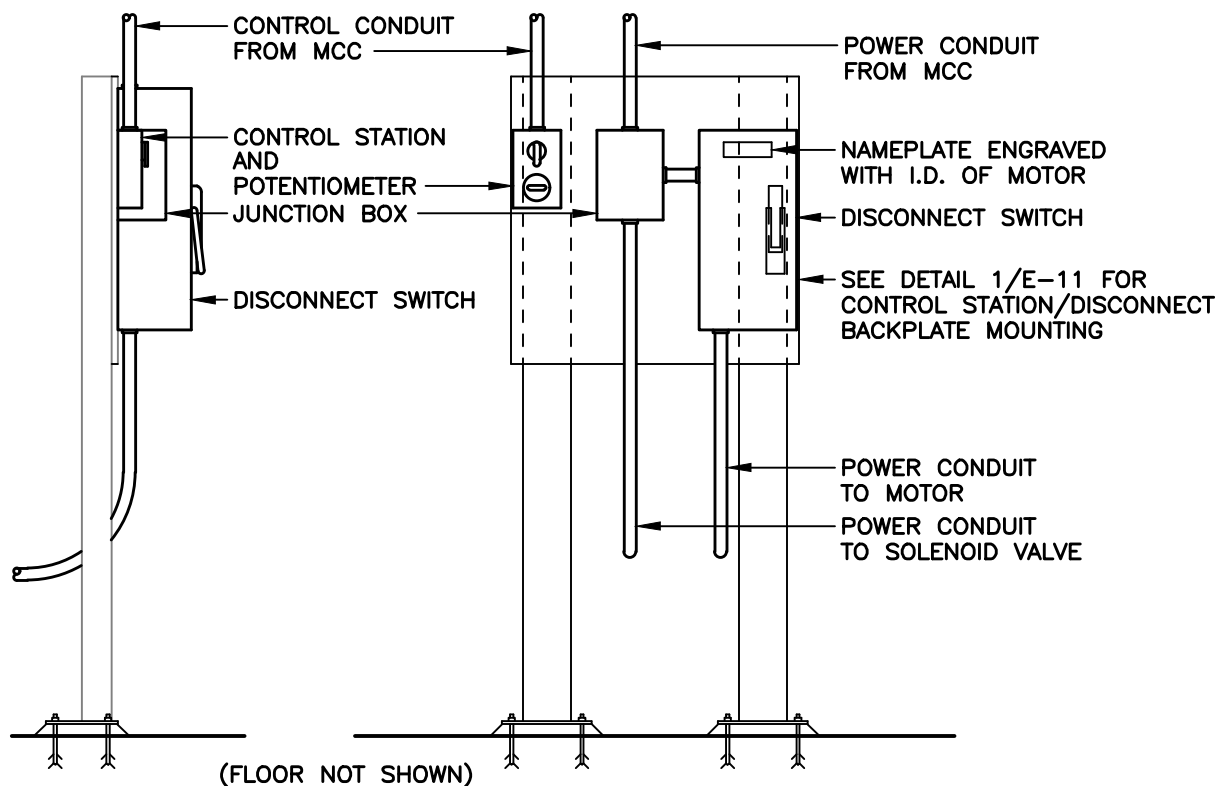
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY



NOTES:

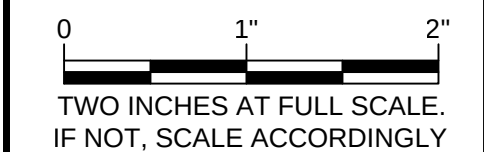
SEE DRAWING E-1 FOR GENERAL NOTES AND FOR GENERAL PLAN NOTES.

- SEE ONE LINE DIAGRAM DRAWING E-8 AS REFERENCED BY SCHEDULES ON DRAWING E-6 FOR CIRCUIT AND EQUIPMENT INFORMATION.
- ROUTE CONDUITS ON EXISTING RACKS UNDER CEILING TO BELOW MCC-3SB, AND CONNECT TO EXISTING LABELED STUBOUTS UNDER THE MCC.
- ROUTE CONDUITS ON EXISTING RACKS UNDER CEILING TO BELOW THE PLC SECTION OF MCC-3SA. CORE DRILL THROUGH CEILING TO ROUTE CONDUITS INTO THE MCC SECTION.
- ROUTE CONDUITS ON EXISTING RACKS UNDER CEILING TO POINT BELOW THE EQUIPMENT NOTED. CORE DRILL THROUGH CEILING TO ROUTE CONDUITS UP INTO THE EQUIPMENT ABOVE.
- PROVIDE 1" PVC CONDUIT TO SUPPORT MANUFACTURE'S CABLE.
- INTEGRAL DISCONNECTING MEANS SPECIFIED UNDER DIVISION 15. SEE MECHANICAL DRAWINGS FOR FURTHER INFORMATION.
- PENETRATE EXTERIOR WALL BELOW TOP FLIGHT OF STAIRS TO INSTALL NEW CONDUITS. THEN ROUTE CONDUITS ALONG INSIDE OF EXTERIOR WALL. CORE DRILL WALL BETWEEN STAIRWAY AND PUMP ROOM. THEN ROUTE NEW CONDUITS TO EXISTING RACKS UNDER CEILING TO BELOW MOTOR CONTROL CENTERS. CORE DRILL AND SEAL EXTERIOR PENETRATIONS.



LEFT SIDE VIEW FRONT VIEW
**MOUNTING DETAIL 1/E-2
CONTROL STATION/DISCONNECT**
SCALE: 3/4"=1'-0"

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FILE: C-E06-02.DWG		



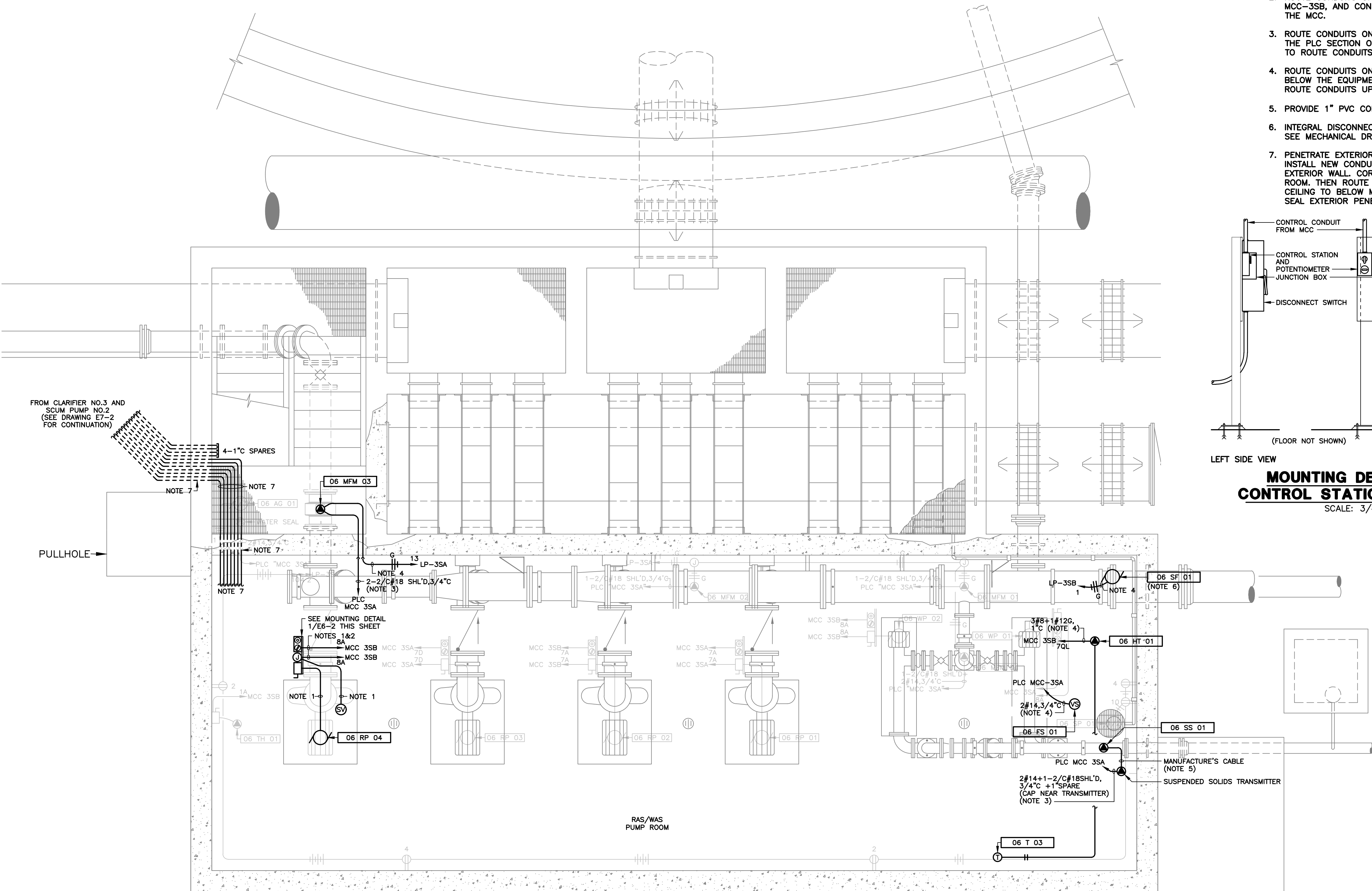
APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
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**EXISTING/MODIFIED
RAS/WAS BUILDING
LOWER LEVEL**

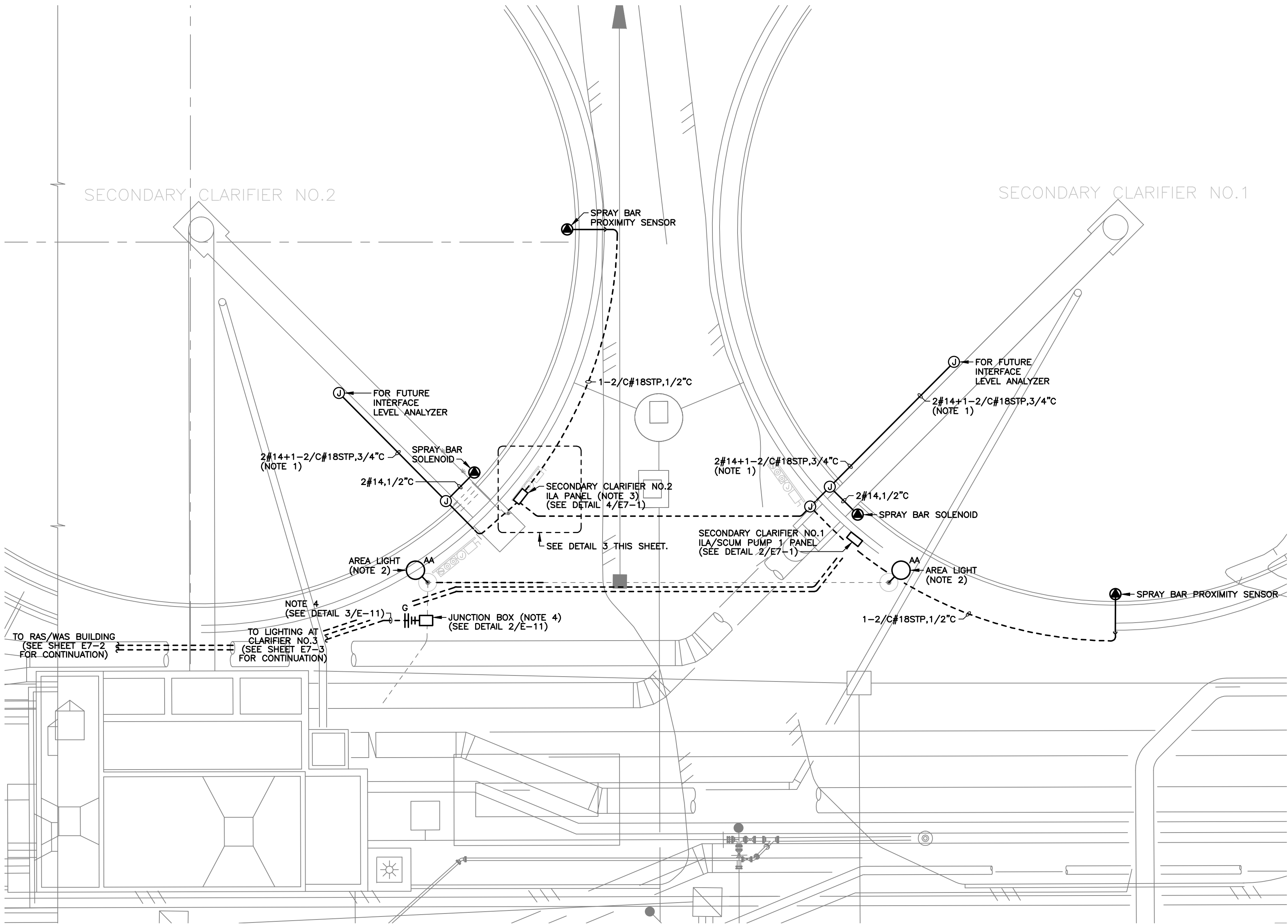
DRAWING: **E6-2** OF: **2**

SHEET: **56** OF: **60**

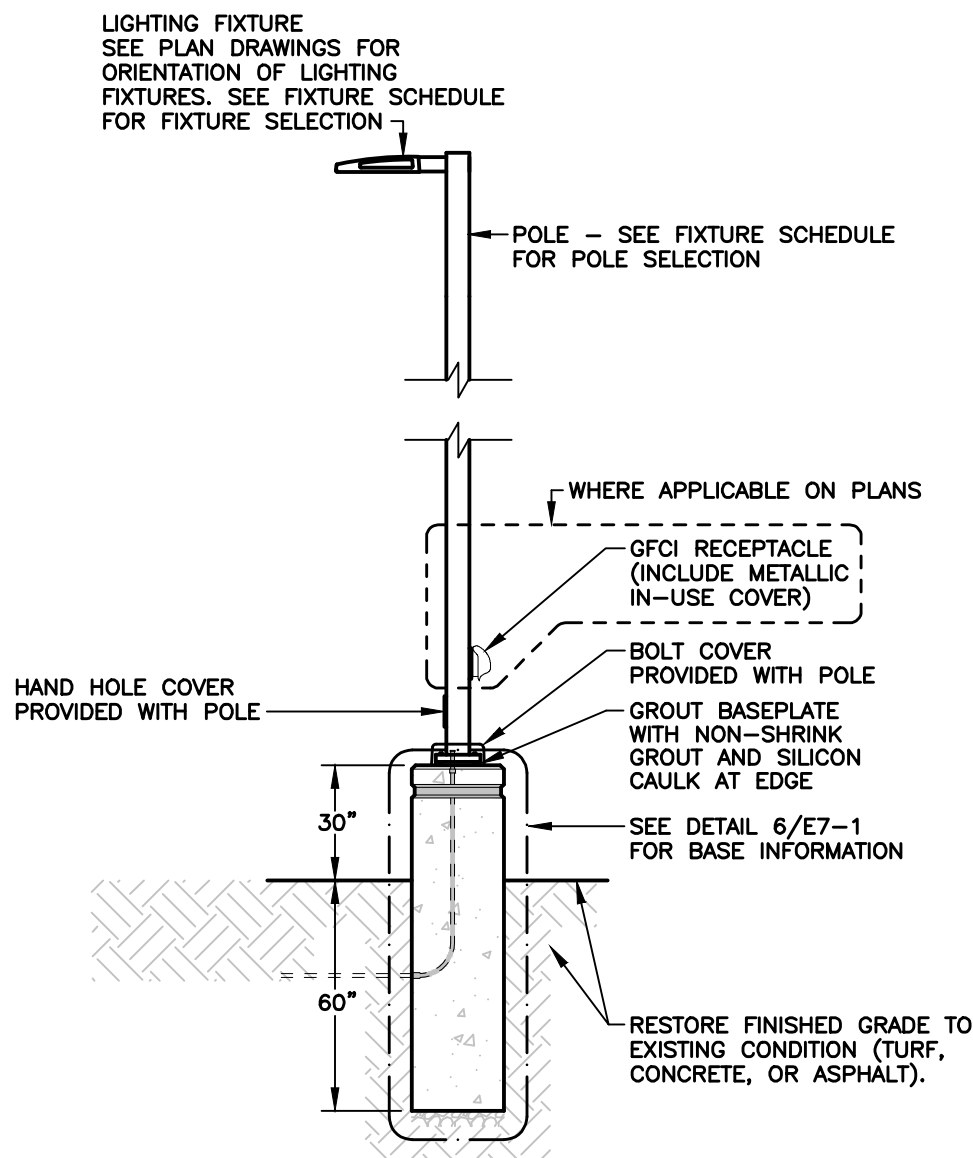
**EXISTING/MODIFIED ELECTRICAL PLAN
RAS/WAS BUILDING - LOWER LEVEL**
SCALE: 3/8" = 1'-0"



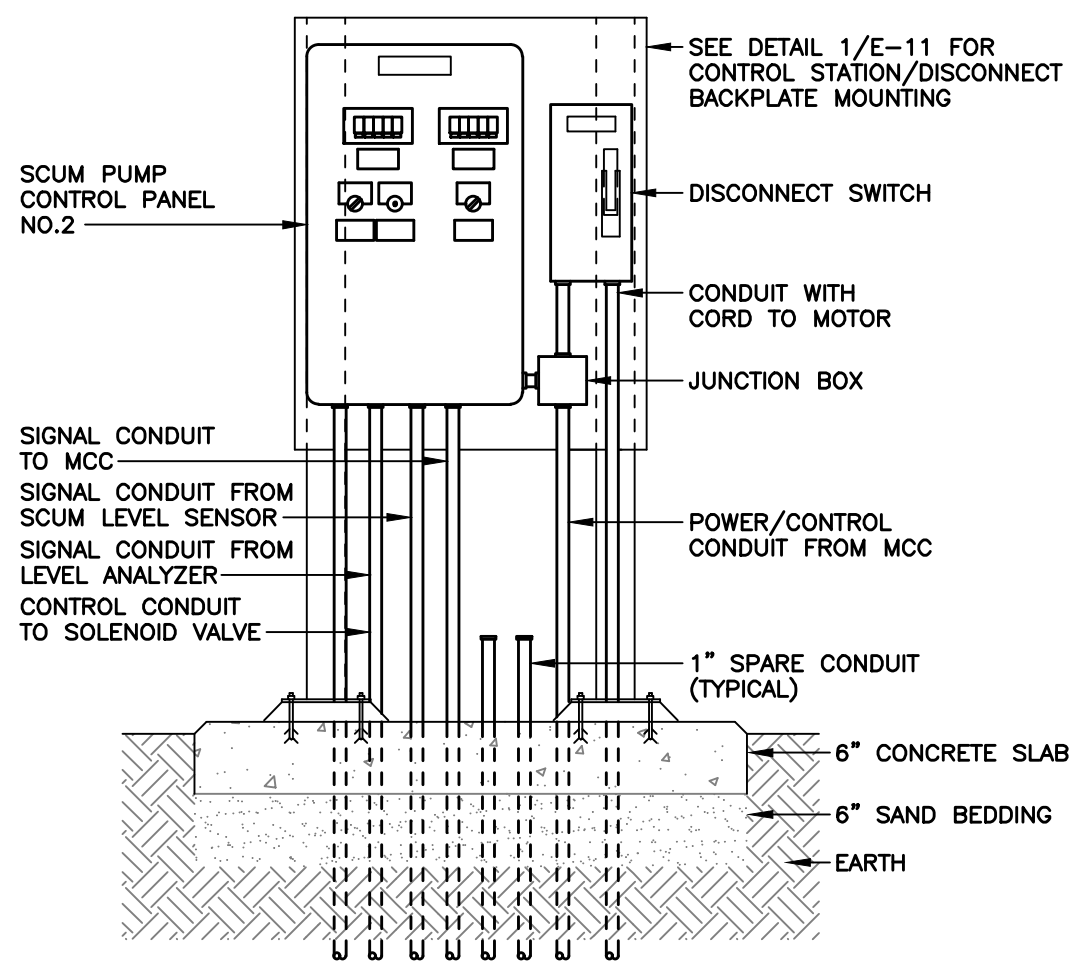
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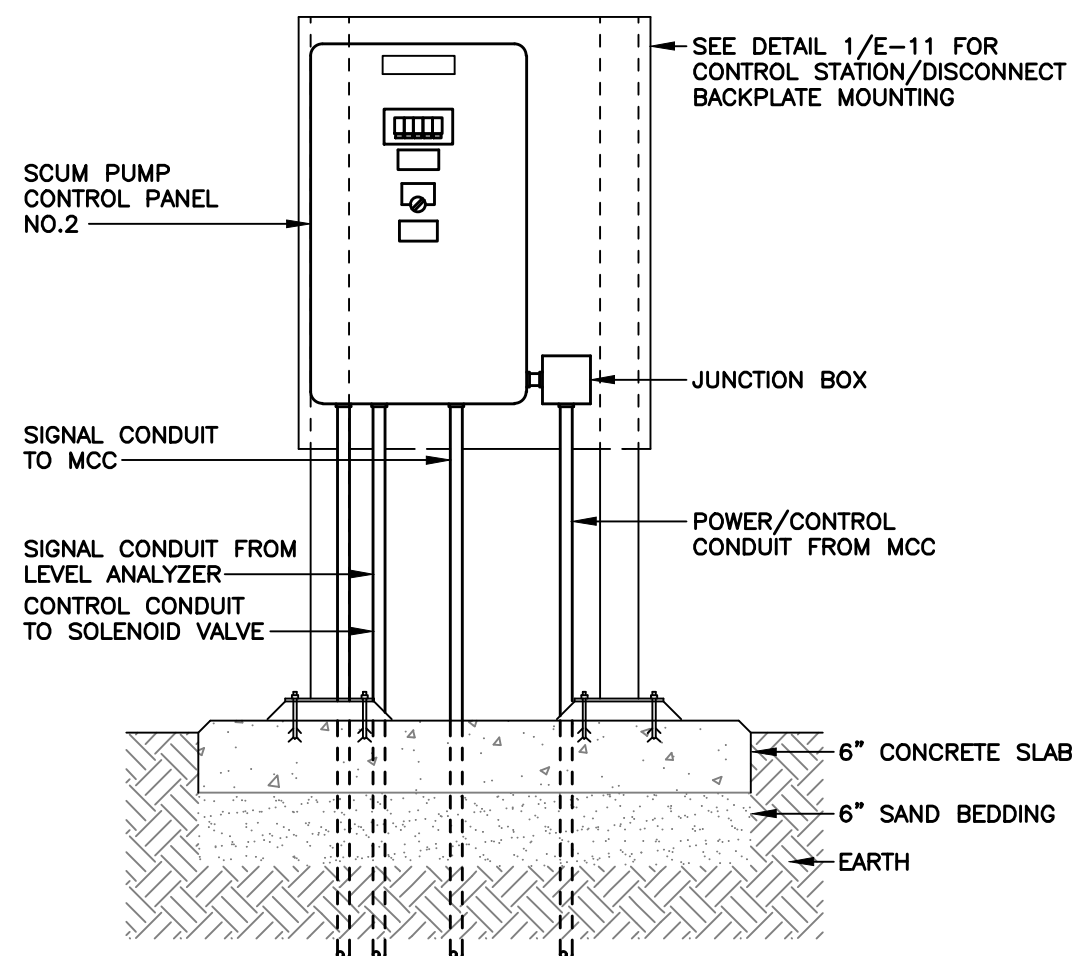
**ELECTRICAL PLAN
EXISTING CLARIFIERS**
SCALE: 1" = 10'-0"



**DETAIL 1/E7-1
AREA LIGHT**
SCALE: 1/4"=1'-0"



**MOUNTING DETAIL 2/E7-1
SEC. CLAR. NO.1 ILA/
SCUM PUMP 1 PANEL**
SCALE: 3/4"=1'-0"

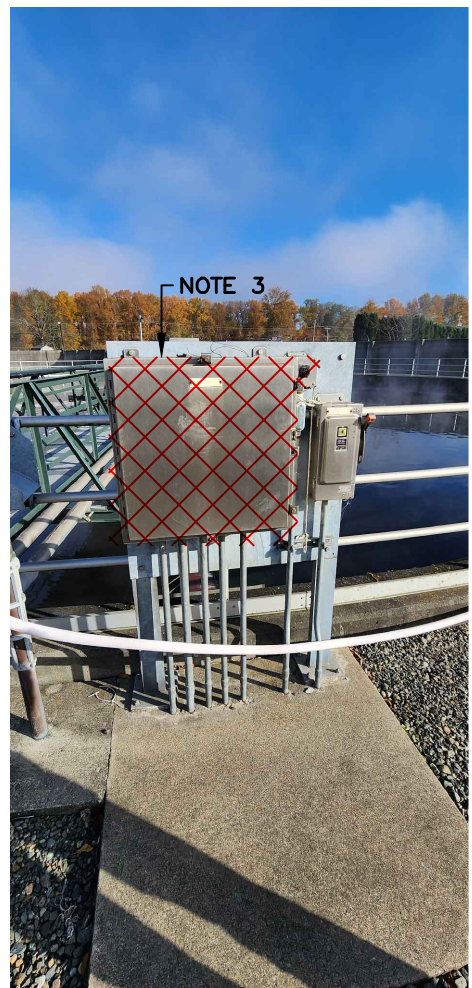


**MOUNTING DETAIL 4/E7-1
SEC. CLAR. NO.2 ILA PANEL**
SCALE: 3/4"=1'-0"

NOTES:

SEE DRAWING E-1 FOR GENERAL NOTES AND FOR GENERAL PLAN NOTES.

- ROUTE NEW CONDUIT PARALLEL TO EXISTING CONDUITS ALONG CLARIFIER BRIDGE STRUCTURE, THEN UNDERGROUND TO EXISTING SCUM CONTROL PANEL. SEE DETAIL 3/E-11 FOR TRENCHING INFORMATION. SEE SHEET E-9 FOR PANEL MODIFICATIONS.
- REPLACE EXISTING FIXTURE HEAD WITH FIXTURE TYPE INDICATED.
- DEMOLISH & REPLACE EXISTING SCUM PUMP CONTROL PANEL. SEE SHEET E-9 FOR NEW PANEL INFORMATION. USE EXISTING PATHWAY FROM EXISTING PANEL TO BRING NEW INTERFACE LEVEL SIGNALS AND NEW CONTROL SIGNALS BACK TO MCC AND PLC 1/0 IN.
- INTERCEPT EXISTING LIGHTING CIRCUIT AT THIS LOCATION. EXTEND EXISTING LIGHTING CIRCUIT TO NEW LIGHTING FIXTURES AT CLARIFIER NO.3. CONNECT LIGHTING CIRCUIT SUCH THAT NEW CLARIFIER LIGHTING FIXTURES ARE CONTROLLED THE SAME AS THE EXISTING CLARIFIER LIGHTING FIXTURES. EXTEND UNSWITCHED CONDUCTOR TO POLE MOUNTED RECEPTACLES AT CLARIFIER NO.3. IF UNSWITCHED CONDUCTOR IS NOT AVAILABLE PROVIDE NEW CIRCUIT FROM PANEL LP-3SA TO POLE MOUNTED RECEPTACLES.



**DETAIL 3/E7-1
SEC. CLAR. 2 ILA &
SCUM PUMP 1 PANEL**
SCALE: NONE

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: 2/28/2024
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**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1602 18TH ST NW,
PUYALLUP, WA 98371

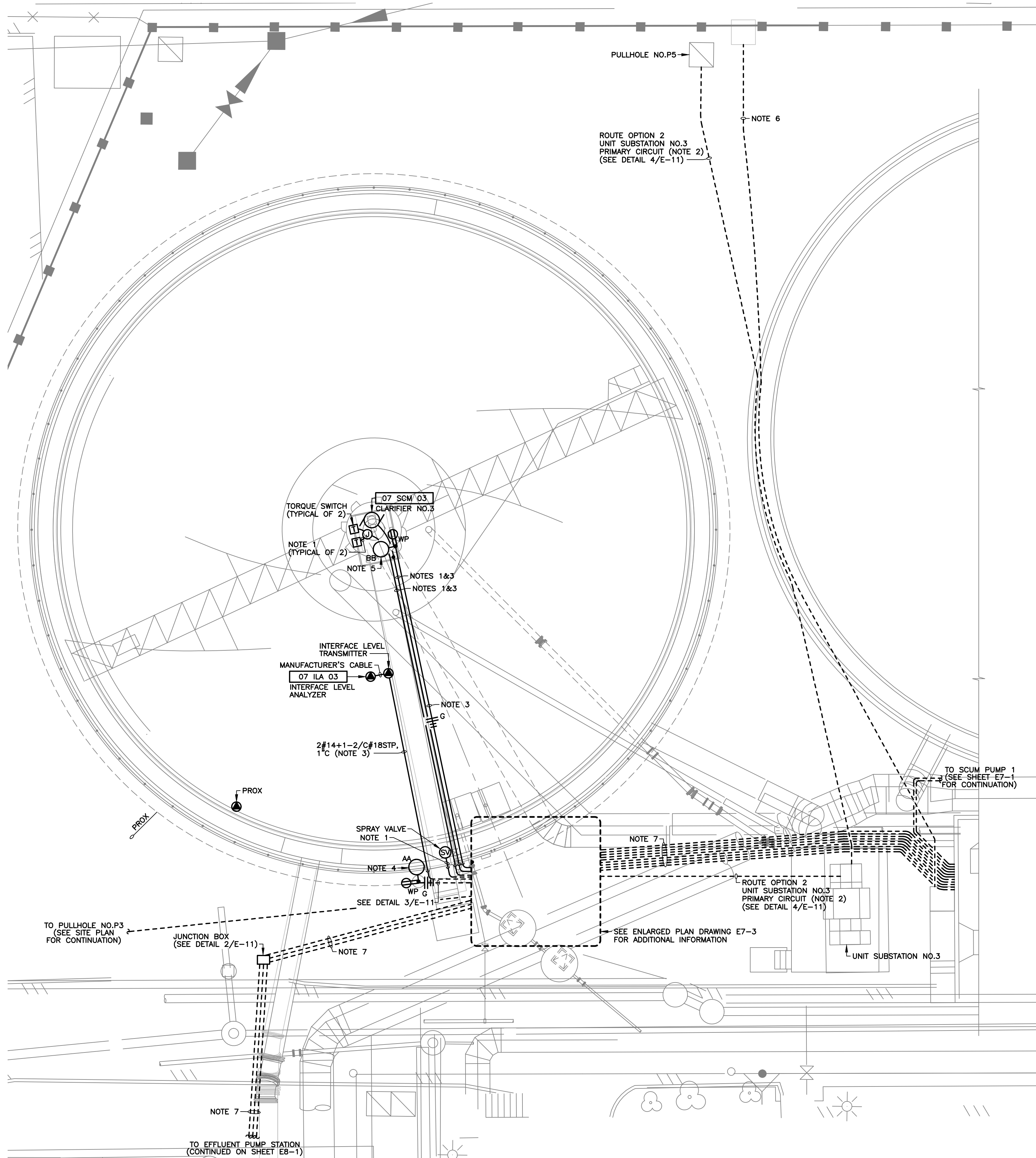
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G & O JOB NO.:		21462.00
FILE:		C-E07-01.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

**ELECTRICAL PLAN
EXISTING CLARIFIERS**

DRAWING: **E7-1** OF: **2**

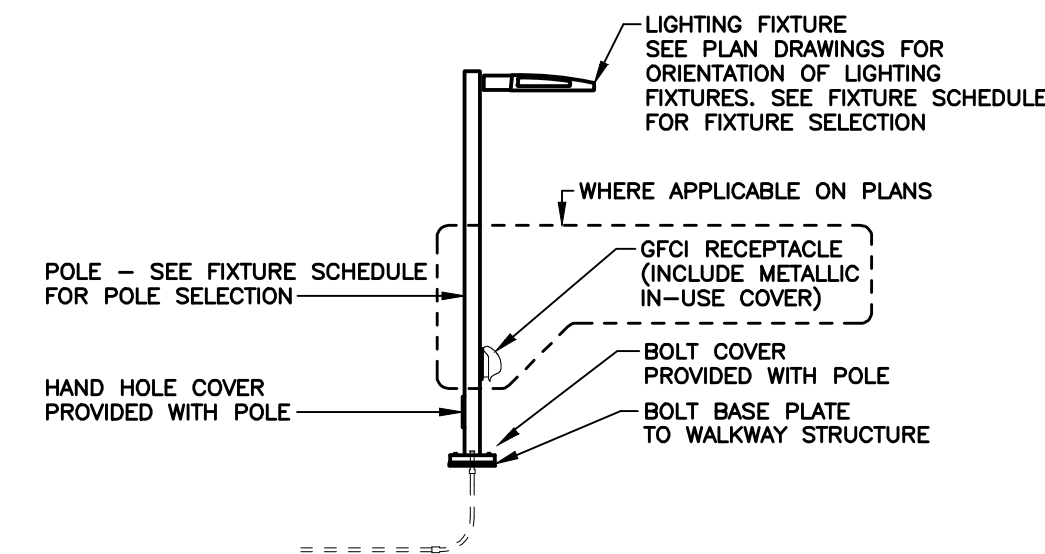
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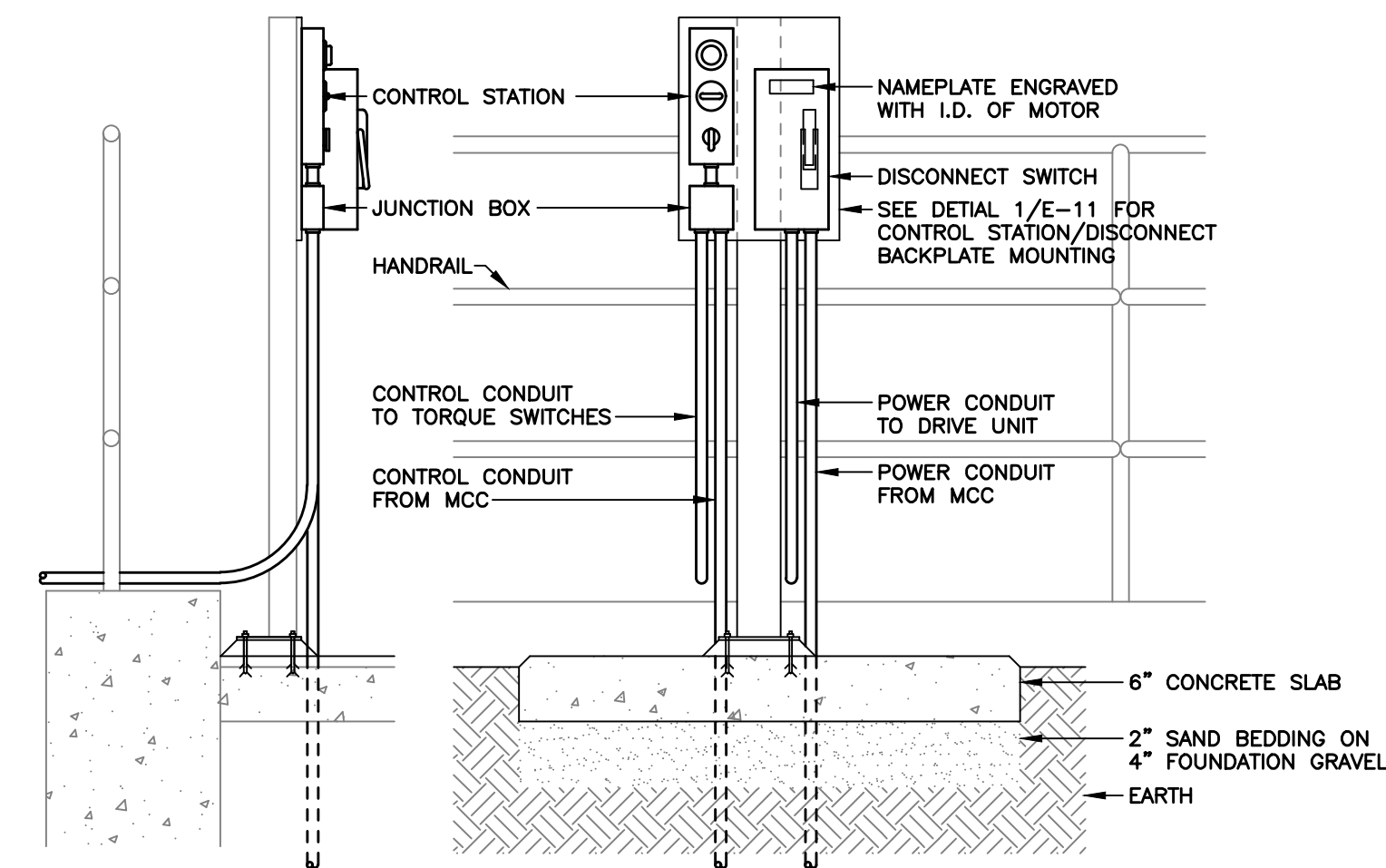
**ELECTRICAL PLAN
CLARIFIER NO.3**
SCALE: 1" = 10'-0"

NOTES:

- SEE DRAWING E-1 FOR GENERAL NOTES AND FOR GENERAL PLAN NOTES.
- SEE ONE LINE DIAGRAM DRAWING E-4 AS REFERENCED BY SCHEDULES ON DRAWING E-6 FOR CIRCUIT AND EQUIPMENT INFORMATION.
 - REROUTED EXISTING 13.5 kV PRIMARY FEEDER CIRCUIT, 1" SECURITY CONDUIT, AND SPARE 4"C (OWNED BY CITY OF PUYALLUP) TO UNIT SUBSTATION NO.3. THIS CIRCUIT WILL NEED TO BE RELOCATED OUT OF THE FOUNDATION AREA FOR THE NEW CLARIFIER. EXACT ROUTING IS NOT KNOWN. CONTRACTOR IS RESPONSIBLE TO LOCATE AND REROUTE THIS CIRCUIT AS NECESSARY TO CONSTRUCT THE NEW CLARIFIER. SEE SITE PLANS SHEETS E-2 AND E-3.
 - ROUTE CONDUIT MOUNTED BESIDE WALKWAY ON TOP OF HORIZONTAL SUPPORTS OF CLARIFIER BRIDGE STRUCTURE.
 - SEE AREA LIGHT POLE DETAIL 1/E7-1 FOR FURTHER INFORMATION.
 - SEE AREA LIGHT POLE DETAIL 1/E7-2 FOR FURTHER INFORMATION.
 - REROUTE EXISTING 1" SECURITY CONDUIT. OWNER WILL REMOVE AND PULL CONDUCTORS BACK IN AS NECESSARY.
 - MULTIPLE CONDUITS IN TRENCH. SEE DRAWINGS E7-3 AND E8-1 FOR FURTHER INFORMATION. SEE DETAIL 3/E-11 FOR TRENCHING INFORMATION.



**DETAIL 2/E7-2
AREA LIGHT**
SCALE: 1/4"=1'-0"



**MOUNTING DETAIL 1/E7-2
DISCONNECT/CONTROL STATION**
SCALE: 3/4"=1'-0"

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
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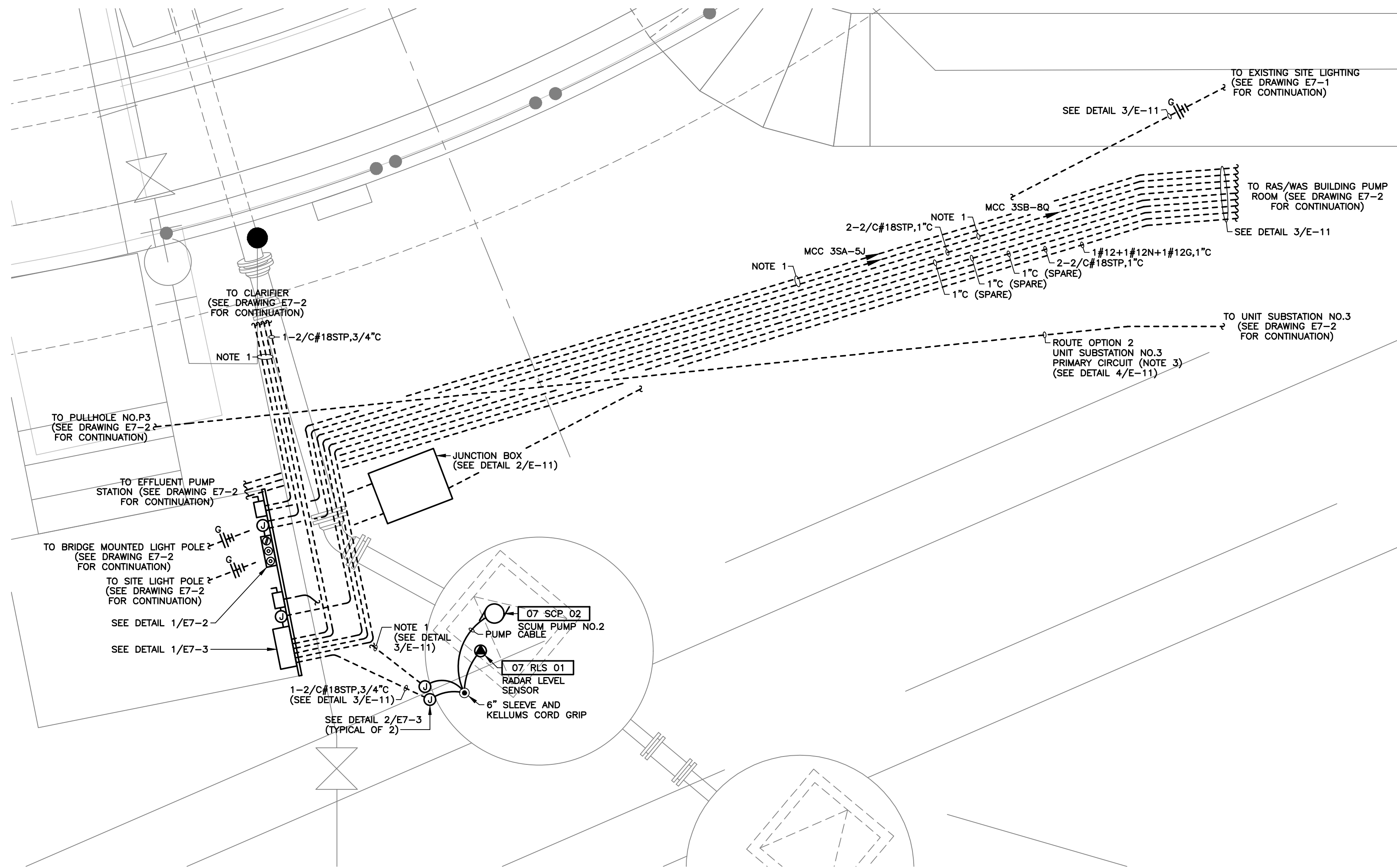
**WATER POLLUTION
CONTROL PLANT THIRD
SECONDARY CLARIFIER
INSTALLATION
CIP NO. 20-018**
1602 18TH ST NW,
PUYALLUP, WA 98371

No.	DATE	REVISION
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ISSUE DATE: 02-28-2024		
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DRAWN BY: CJD		
DESIGNER: MLO		
G & O JOB NO.: 21462.00		
FILE: C-E07-02.DWG		

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

**ELECTRICAL PLAN
CLARIFIER NO.3**

DRAWING: **E7-2** OF: **2**
SHEET: **58** OF: **60**



**ELECTRICAL PLAN
CLARIFIER NO.3**
SCALE: 1/2" = 1'-0"

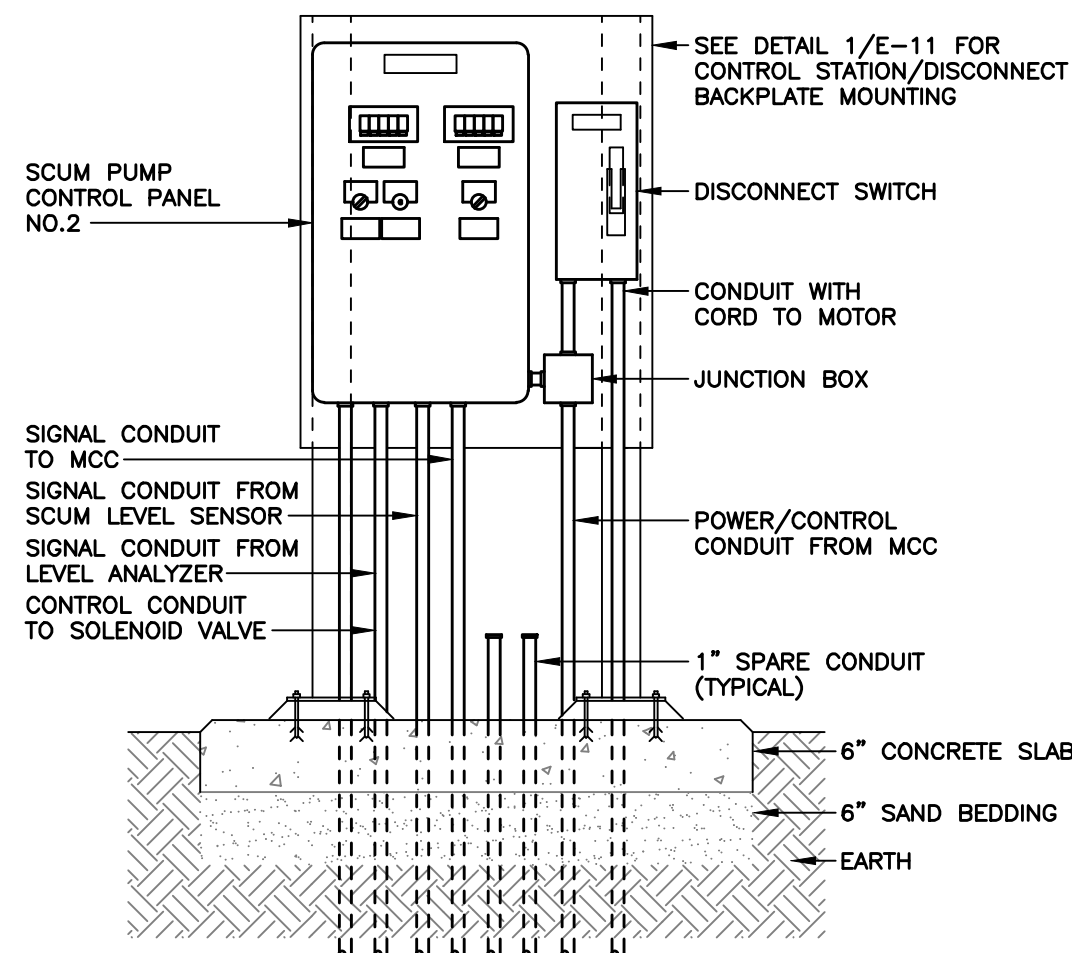
NOTES:

SEE DRAWING E-1 FOR GENERAL NOTES AND FOR GENERAL PLAN NOTES.

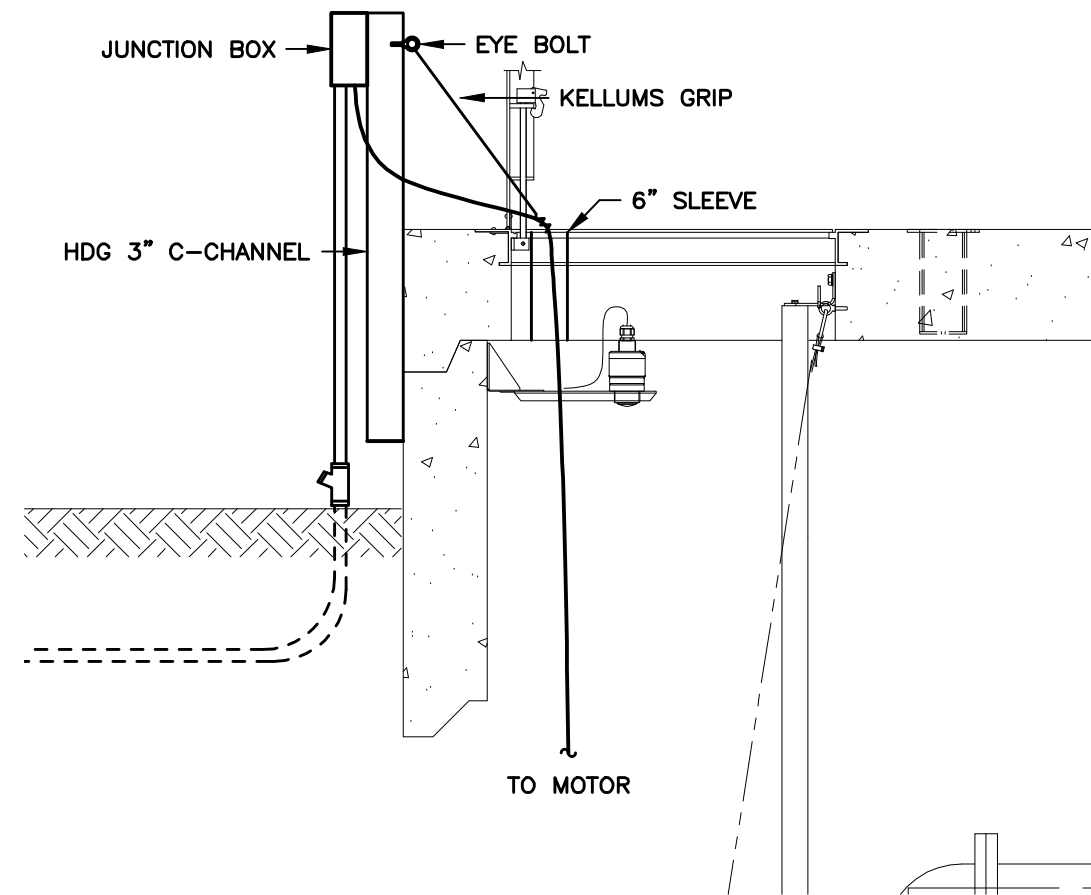
1. SEE ONE LINE DIAGRAM DRAWING E-4 AS REFERENCED BY SCHEDULES ON E-6 FOR CIRCUIT AND EQUIPMENT INFORMATION.

2. REROUTED EXISTING 13.5 kV PRIMARY FEEDER CIRCUIT, 1" SECURITY CONDUIT, AND SPARE 4"C (OWNED BY CITY OF PUYALLUP) TO UNIT SUBSTATION NO.3. THIS CIRCUIT WILL NEED TO BE RELOCATED OUT OF THE FOUNDATION AREA FOR THE NEW CLARIFIER. EXACT ROUTING IS NOT KNOWN. CONTRACTOR IS RESPONSIBLE TO LOCATE AND REROUTE THIS CIRCUIT AS NECESSARY TO CONSTRUCT THE NEW CLARIFIER. SEE SITE PLANS SHEETS E-2 AND E-3.

3. SEE MODIFIED ONE LINE DIAGRAM SHEET E-5 FOR CIRCUIT AND EQUIPMENT INFORMATION.



**MOUNTING DETAIL 1/E7-3
SCUM CONTROL PANEL**
SCALE: 3/4"=1'-0"



**MOUNTING DETAIL 2/E7-3
RADAR LEVEL SENSOR**
SCALE: 3/4"=1'-0"

APPROVED
BY: *[Signature]*
CITY ENGINEER
CITY OF PUYALLUP
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**WATER POLLUTION
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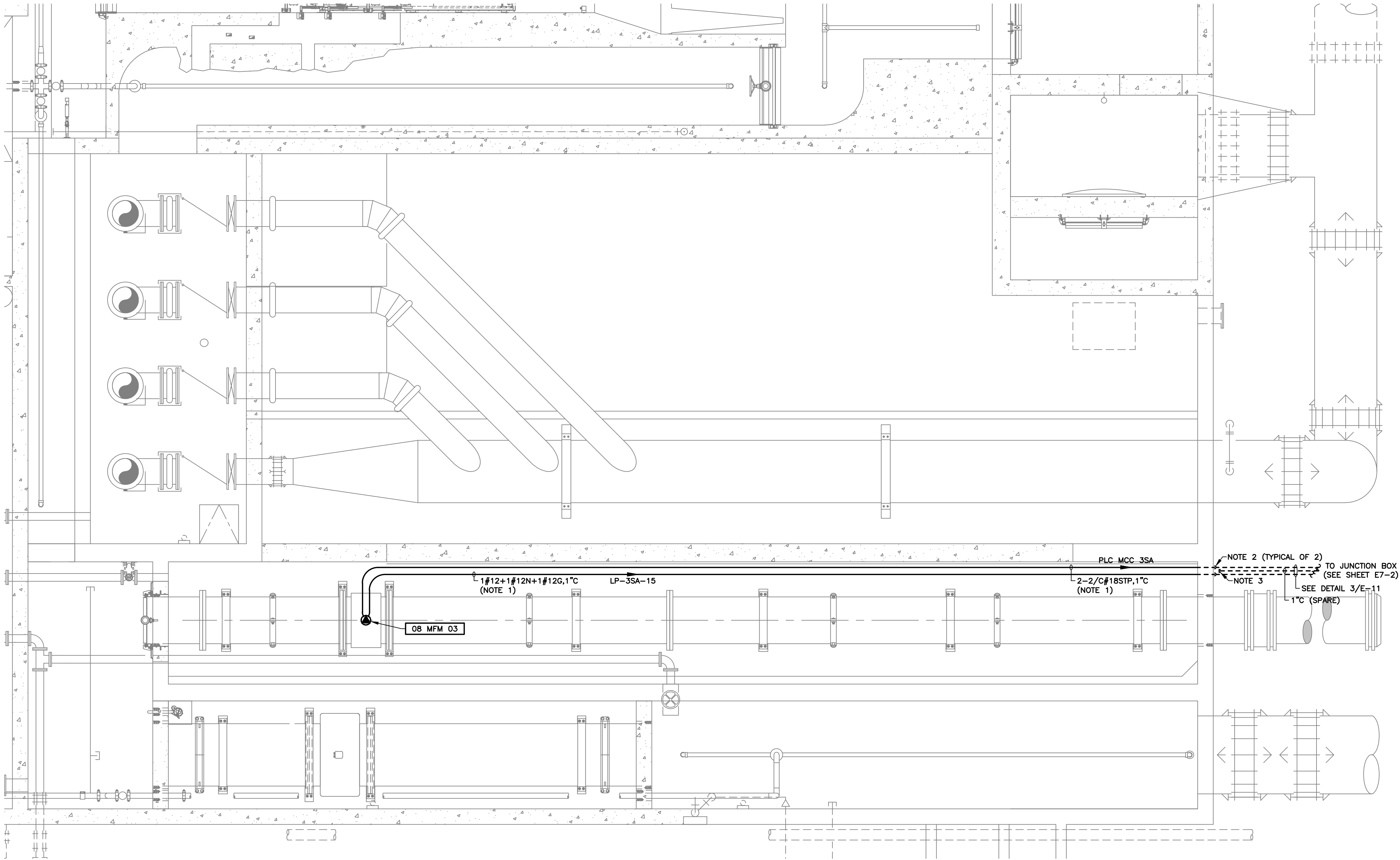
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DESIGNER: MLO		
G & O JOB NO.: 21462.00		
FILE: C-E07-03.DWG		

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

**ELECTRICAL PLAN
CLARIFIER NO.3**

DRAWING: **E7-3** OF: **2**

SHEET: **59** OF: **60**



**ELECTRICAL PLAN
EFFLUENT FLOWMETER**
SCALE: 1/4" = 1'-0"

NOTES:

SEE DRAWING E-1 FOR GENERAL NOTES AND FOR GENERAL PLAN NOTES.

1. ROUTE CONDUIT ON WALL OF EFFLUENT PIPE GALLERY.
2. CORE DRILL WALL 12" ABOVE GRADE FOR CONDUIT PENETRATION AROUND CONDUIT AFTER CONDUIT INSTALLATION. IF PENETRATION IS BELOW GRADE, THEN CORE DRILL AND USE LINK SEAL. READ 16130 FOR SEAL DESCRIPTION.
3. CAP SPARE CONDUIT 12" ABOVE GRADE.



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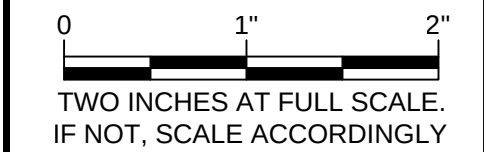
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CITY OF PUYALLUP
STATE OF WASHINGTON
**WATER POLLUTION
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SECONDARY CLARIFIER
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CIP NO. 20-018**
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FILE: C-E08-01.DWG		



APPROVED

BY: 

CITY ENGINEER
CITY OF PUYALLUP

APPROVED DATE: 2/28/2024

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**ELECTRICAL PLAN
EFFLUENT
FLOWMETER**

DRAWING: **E8-1** OF: **1**

SHEET: **60** OF: **60**