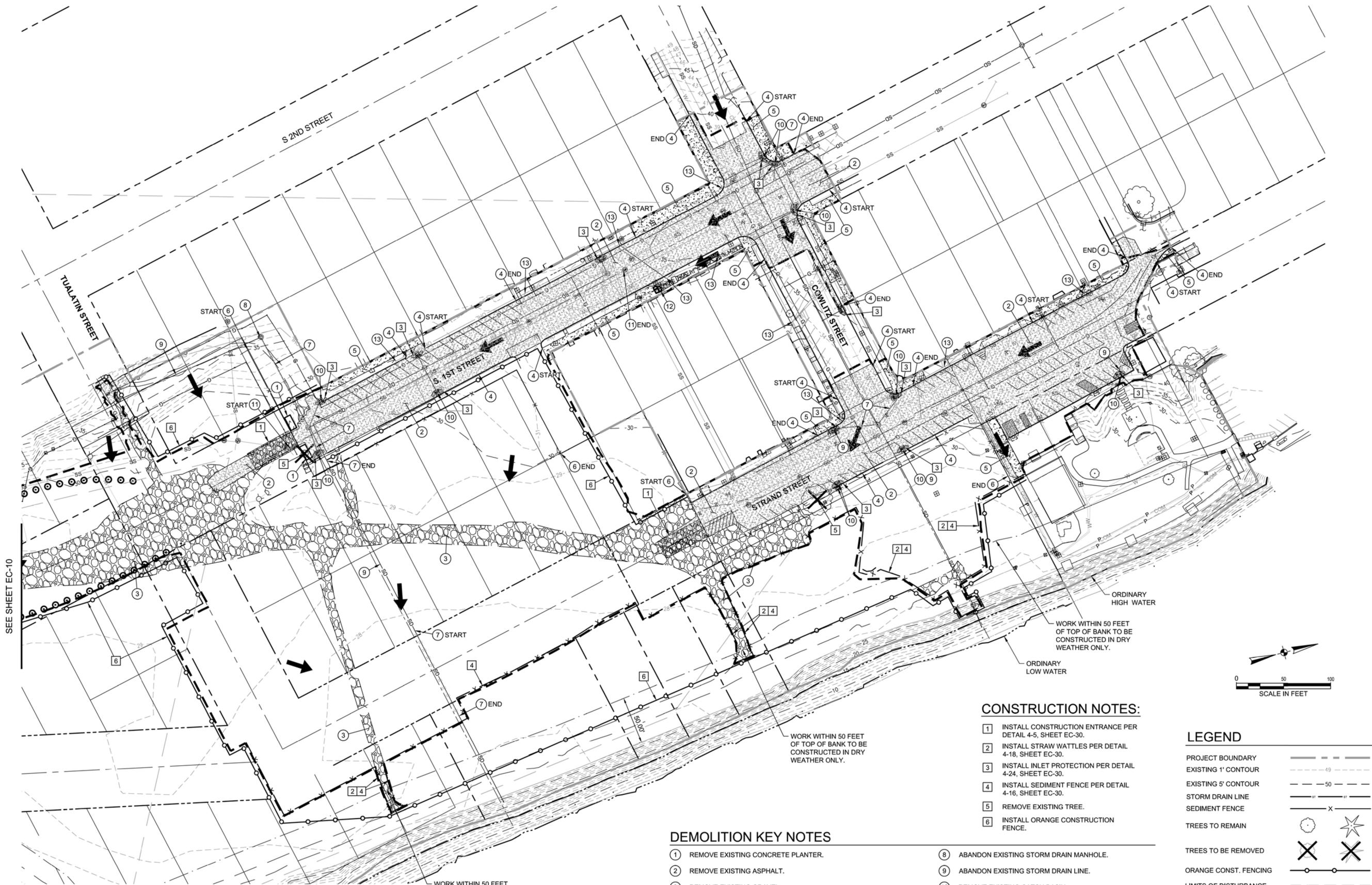


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**S. 1ST AND STRAND STREETS
 ROAD AND UTILITY EXTENSIONS**
 ST. HELENS, OREGON
 EROSION AND SEDIMENT CONTROL PLANS
EXISTING CONDITIONS AND DEMOLITION



SEE SHEET EC-10

Plotted: Jun 08, 2022 - 4:16pm. User: Bombardier. L:\Project\19823\19823\CADD\ACAD\DWG\C1\19823\EC-10.dwg. Layout Name: EC-11

CONSTRUCTION NOTES:

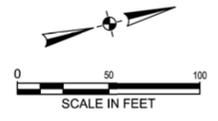
- 1 INSTALL CONSTRUCTION ENTRANCE PER DETAIL 4-5, SHEET EC-30.
- 2 INSTALL STRAW WATTLES PER DETAIL 4-18, SHEET EC-30.
- 3 INSTALL INLET PROTECTION PER DETAIL 4-24, SHEET EC-30.
- 4 INSTALL SEDIMENT FENCE PER DETAIL 4-16, SHEET EC-30.
- 5 REMOVE EXISTING TREE.
- 6 INSTALL ORANGE CONSTRUCTION FENCE.

DEMOLITION KEY NOTES

- 1 REMOVE EXISTING CONCRETE PLANTER.
- 2 REMOVE EXISTING ASPHALT.
- 3 REMOVE EXISTING GRAVEL.
- 4 REMOVE EXISTING CURB LINE.
- 5 REMOVE EXISTING SIDEWALK.
- 6 REMOVE EXISTING FENCE.
- 7 REMOVE EXISTING STORM DRAIN LINE.
- 8 ABANDON EXISTING STORM DRAIN MANHOLE.
- 9 ABANDON EXISTING STORM DRAIN LINE.
- 10 REMOVE EXISTING CATCH BASIN.
- 11 ABANDON EXISTING SANITARY SEWER LINE.
- 12 REMOVE EXISTING SANITARY PUMP STATION.
- 13 REMOVE EXISTING POWER POLE, UNDERGROUNDING, AND OVERHEAD LINES.

LEGEND

- PROJECT BOUNDARY
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- STORM DRAIN LINE
- SEDIMENT FENCE
- TREES TO REMAIN
- TREES TO BE REMOVED
- ORANGE CONST. FENCING
- LIMITS OF DISTURBANCE
- CONSTRUCTION ENTRANCE
- DRAINAGE ARROW
- STRAW WATTLES

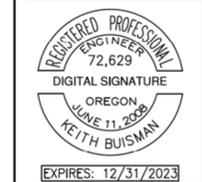


#	DATE	DESCRIPTION

REVISIONS	

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 FINAL PLANS
 STATUS
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 PROJECT NUMBER

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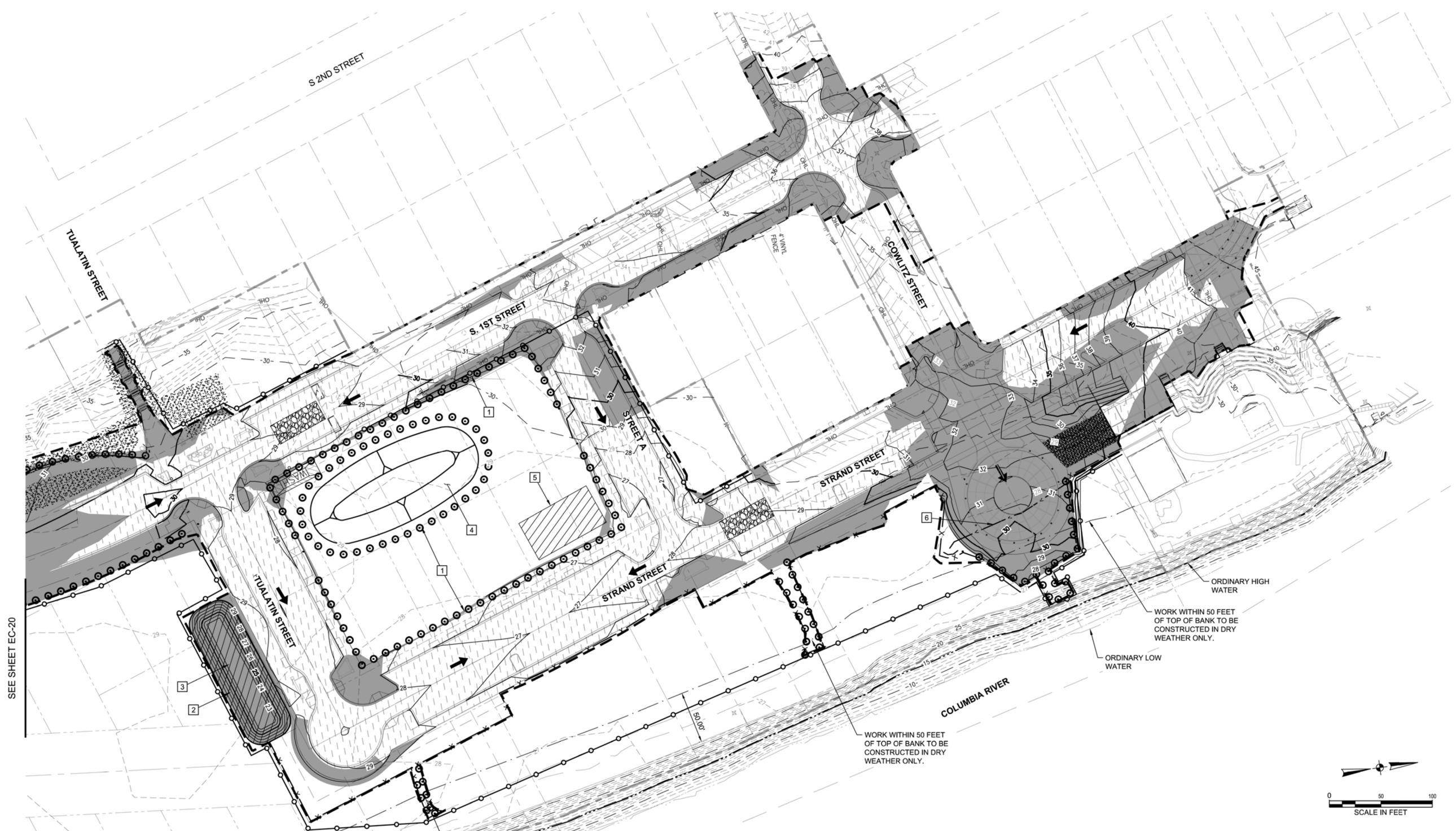
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**S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS
ST. HELENS, OREGON
EROSION AND SEDIMENT CONTROL PLANS
GRADING CONSTRUCTION**

#	DATE	DESCRIPTION

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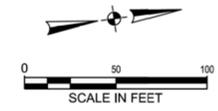


SEE SHEET EC-20

WORK WITHIN 50 FEET OF TOP OF BANK TO BE CONSTRUCTED IN DRY WEATHER ONLY.

WORK WITHIN 50 FEET OF TOP OF BANK TO BE CONSTRUCTED IN DRY WEATHER ONLY.

WORK WITHIN 50 FEET OF TOP OF BANK TO BE CONSTRUCTED IN DRY WEATHER ONLY.



CONSTRUCTION NOTES:

- 1 INSTALL STRAW WATTLES PER DETAIL 4-18, SHEET EC-30.
- 2 PROPOSED STORMWATER SWALE
- 3 INSTALL CHANNEL MATTING PER DETAIL 4-2, SHEET EC-30.
- 4 INSTALL STOCKPILE AREA PER DETAIL 4-4, SHEET EC-30.
- 5 CONSTRUCT STAGING AREA. INSTALL CLEAN ROCK PAD FOR SOLID HAZARDOUS WASTE, FUEL STORAGE, EQUIPMENT MAINTENANCE, WASTE RECEPTACLE WITH LID, AND PORT-A-POTTY.
- 6 CONSTRUCT DIVERSION DITCH FOR GRADING ACTIVITIES WITHIN 50 FEET OF THE TOP OF BANK PER DETAIL 4-15, SHEET EC-31.

EROSION CONTROL LEGEND

PROJECT BOUNDARY		EXISTING 1' CONTOUR		CUT	
LIMITS OF DISTURBANCE		EXISTING 5' CONTOUR		FILL	
SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING)		PROPOSED 1' CONTOUR			
STRAW WATTLES (TO BE INSTALLED AFTER GRADING)		PROPOSED 5' CONTOUR			
ORANGE CONST. FENCING					
CONSTRUCTION ENTRANCE					
DRAINAGE FLOW DIRECTION					
CHANNEL MATTING					
		STOCKPILE			
		CONSTRUCTION STAGING AREA (CLEAN ROCK PAD FOR SOLID & HAZARDOUS WASTE AND FUEL STORAGE)			

DRY WEATHER WORK:

GROUND-DISTURBING ACTIVITIES IN AREAS REQUIRING DRY WEATHER WORK SHALL NOT COMMENCE UNLESS THE LOCAL WEATHER FORECAST SHOWS NO GREATER THAN 10% CHANCE OF PRECIPITATION IN THE NEXT SEVEN (7) DAYS. DURING DRY WEATHER WORK, THE LOCAL WEATHER FORECAST SHALL BE CHECKED DAILY USING THE LOCAL WEATHER FORECASTING STATION DEFINED FOR DRY WEATHER WORK. IF GROUND DISTURBING ACTIVITIES HAVE COMMENCED AND THE WEATHER FORECAST SHOWS A GREATER THAN 10% CHANCE OF PRECIPITATION IN THE NEXT THREE (3) DAYS, THEN WORK IN THE DESIGNATED AREA MUST BE STOPPED, AND GROUND-STABILIZING MEASURES MUST IMMEDIATELY BE PUT IN PLACE. GROUND-DISTURBING ACTIVITIES MAY ONLY RECOMMENCE ONCE PRECIPITATION HAS CEASED AND THE LOCAL WEATHER FORECAST SHOWS NO GREATER THAN 10% CHANCE OF PRECIPITATION IN THE NEXT SEVEN (7) DAYS.

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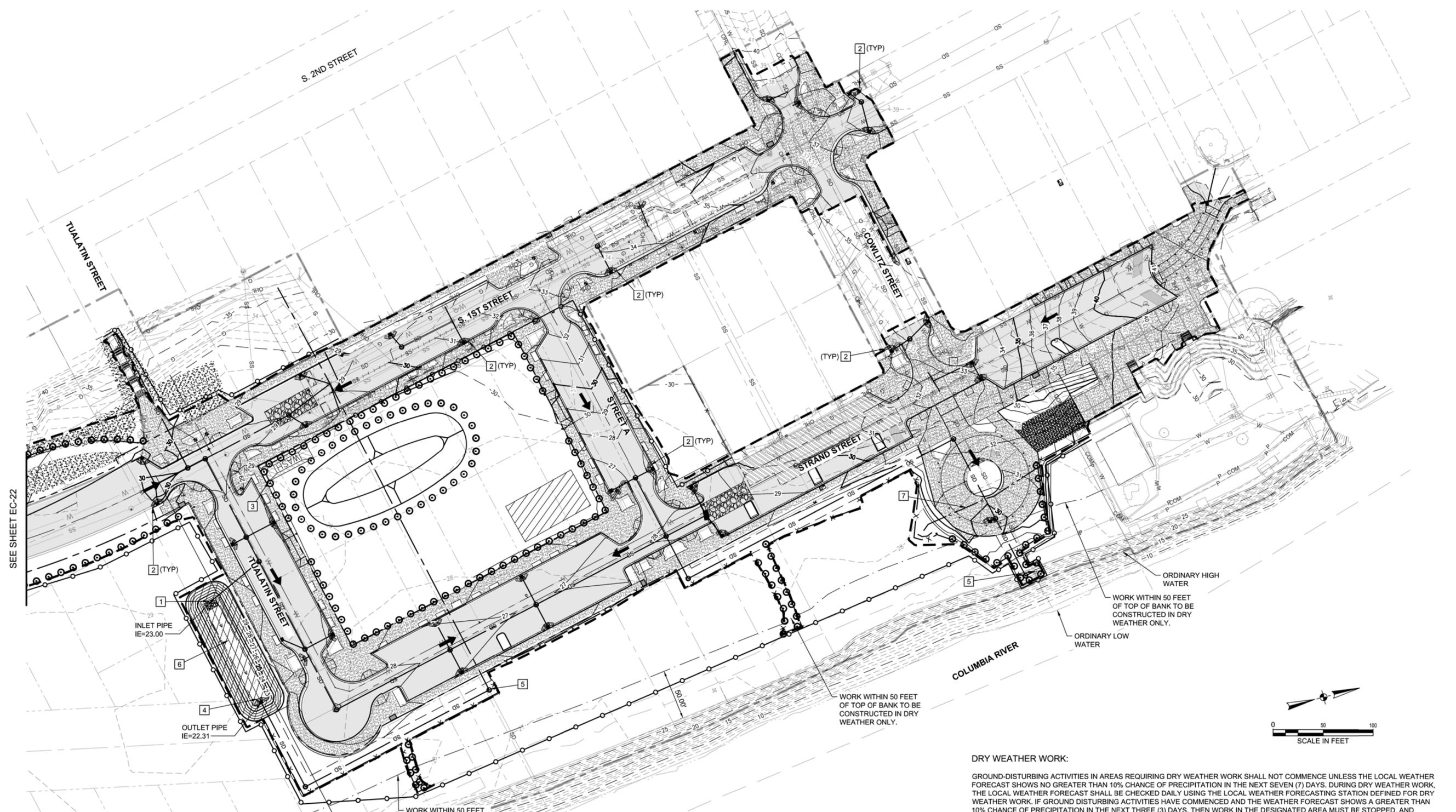


REGISTERED PROFESSIONAL ENGINEER
72,629
DIGITAL SIGNATURE
OREGON
JUNE 11, 2023
KEITH BUISMAN
EXPIRES: 12/31/2023

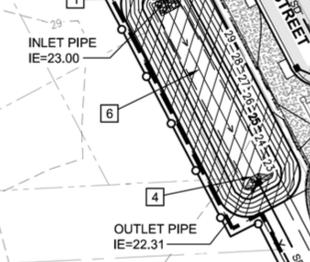


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STREET, UTILITY CONSTRUCTION PLAN



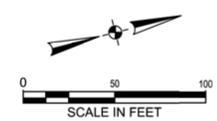
SEE SHEET EC-22



ORDINARY HIGH WATER
ORDINARY LOW WATER
WORK WITHIN 50 FEET OF TOP OF BANK TO BE CONSTRUCTED IN DRY WEATHER ONLY.

WORK WITHIN 50 FEET OF TOP OF BANK TO BE CONSTRUCTED IN DRY WEATHER ONLY.

WORK WITHIN 50 FEET OF TOP OF BANK TO BE CONSTRUCTED IN DRY WEATHER ONLY.

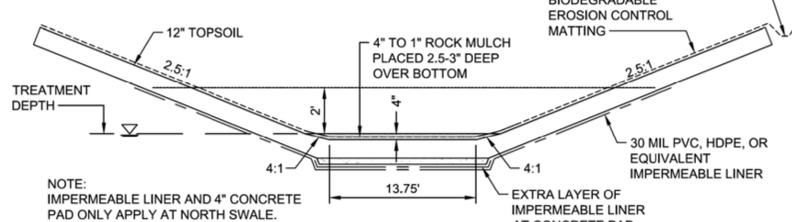


CONSTRUCTION NOTES:

- 1 INSTALL OUTLET PROTECTION PER DETAIL 4-9, SHEET EC-30.
- 2 INSTALL INLET PROTECTION TYPE 4 ON CATCH BASIN PER DETAIL 4-24, SHEET EC-30.
- 3 INSTALL CONCRETE WASHOUT STATION PER DETAIL 1, SHEET EC-30.
- 4 INSTALL INLET PROTECTION TYPE 4 ON DITCH INLET PER DETAIL 4-24, SHEET EC-30.
- 5 DISCHARGE TO EXISTING STORM LINE.
- 6 STORMWATER FACILITY TO BE RESTORED AFTER CONSTRUCTION ACTIVITIES CEASE. REMOVE TOP 18" OF SOIL AFTER FINAL STABILIZATION. TOP LAYER MUST BE RECONSTRUCTED AND FACILITY VEGETATED. SEE TYPICAL SWALE CROSS SECTION.
- 7 CONSTRUCT DIVERSION DITCH FOR UTILITY ACTIVITIES WITHIN 50 FEET OF THE TOP OF BANK PER DETAIL 4-15, SHEET EC-31.

EROSION CONTROL LEGEND

PROJECT BOUNDARY	---	EXISTING 1' CONTOUR	---49---	CONCRETE TRUCK WASHOUT	
LIMITS OF DISTURBANCE	---	EXISTING 5' CONTOUR	---50---	CONSTRUCTION STAGING AREA (CLEAN ROCK PAD FOR SOLID & HAZARDOUS WASTE AND FUEL STORAGE)	
SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING)	X---	PROPOSED 1' CONTOUR	---49---	STOCKPILE	
STRAW WATTLES (TO BE INSTALLED AFTER GRADING)	●●●●●	PROPOSED 5' CONTOUR	---50---		
ORANGE CONST. FENCING	○---○	DRAINAGE FLOW DIRECTION	→		
DIVERSION DITCH	>---	CHANNEL MATTING			
CONSTRUCTION ENTRANCE					



TYPICAL SWALE CROSS-SECTION

NOTE: IMPERMEABLE LINER AND 4" CONCRETE PAD ONLY APPLY AT NORTH SWALE.

DRY WEATHER WORK:
GROUND-DISTURBING ACTIVITIES IN AREAS REQUIRING DRY WEATHER WORK SHALL NOT COMMENCE UNLESS THE LOCAL WEATHER FORECAST SHOWS NO GREATER THAN 10% CHANCE OF PRECIPITATION IN THE NEXT SEVEN (7) DAYS. DURING DRY WEATHER WORK, THE LOCAL WEATHER FORECAST SHALL BE CHECKED DAILY USING THE LOCAL WEATHER FORECASTING STATION DEFINED FOR DRY WEATHER WORK. IF GROUND DISTURBING ACTIVITIES HAVE COMMENCED AND THE WEATHER FORECAST SHOWS A GREATER THAN 10% CHANCE OF PRECIPITATION IN THE NEXT THREE (3) DAYS, THEN WORK IN THE DESIGNATED AREA MUST BE STOPPED, AND GROUND-STABILIZING MEASURES MUST IMMEDIATELY BE PUT IN PLACE. GROUND-DISTURBING ACTIVITIES MAY ONLY RECOMMENCE ONCE PRECIPITATION HAS CEASED AND THE LOCAL WEATHER FORECAST SHOWS NO GREATER THAN 10% CHANCE OF PRECIPITATION IN THE NEXT SEVEN (7) DAYS.

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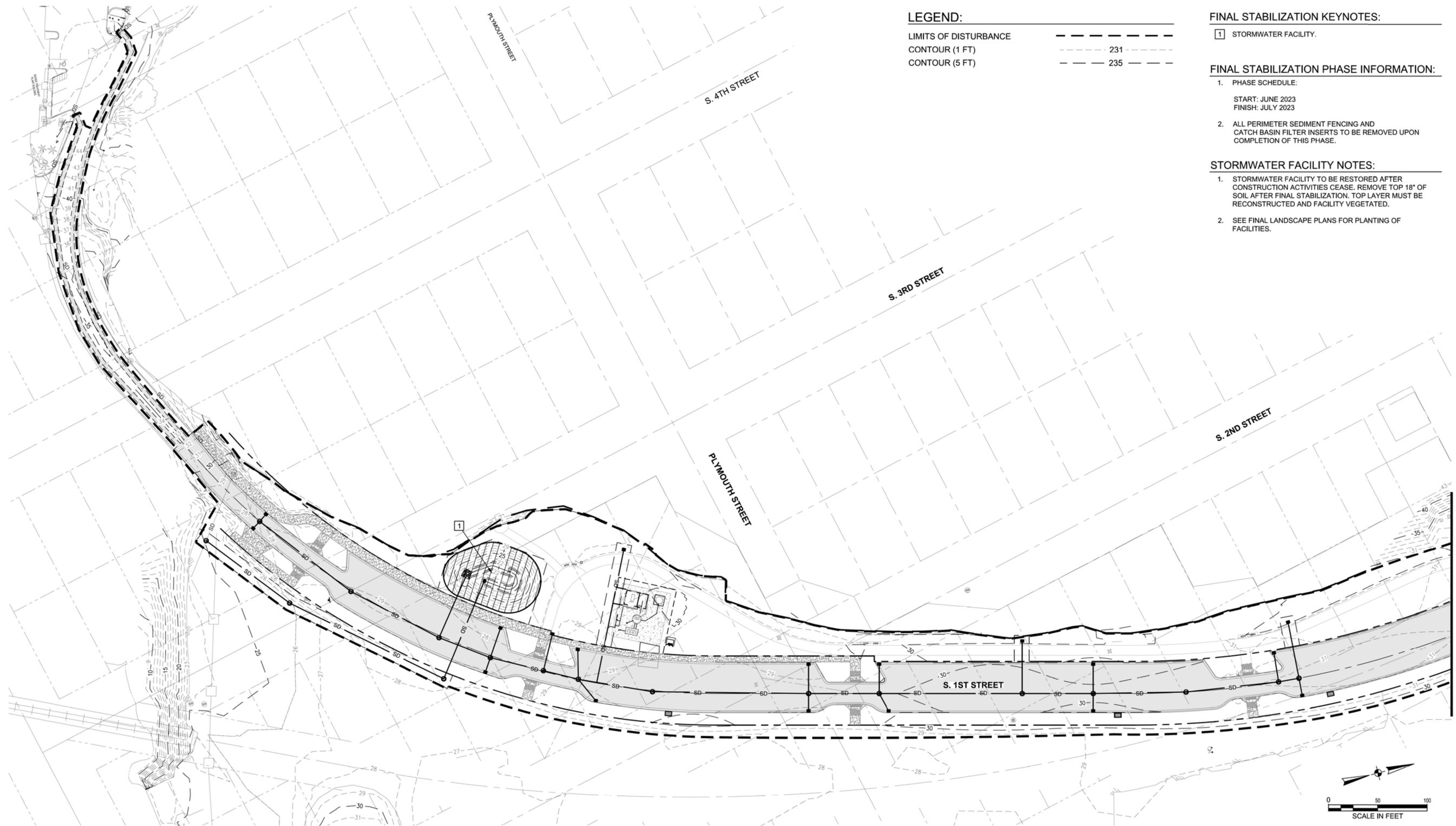
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OTAKCAD
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CHECKED BY:
FINAL PLANS
STATUS
JUNE 10, 2022
DATE
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PROJECT NUMBER

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SEE SHEET EC-25

LEGEND:

- LIMITS OF DISTURBANCE
- CONTOUR (1 FT) 231
- CONTOUR (5 FT) 235

FINAL STABILIZATION KEYNOTES:

- 1 STORMWATER FACILITY.

FINAL STABILIZATION PHASE INFORMATION:

- 1. PHASE SCHEDULE:
 - START: JUNE 2023
 - FINISH: JULY 2023
- 2. ALL PERIMETER SEDIMENT FENCING AND CATCH BASIN FILTER INSERTS TO BE REMOVED UPON COMPLETION OF THIS PHASE.

STORMWATER FACILITY NOTES:

- 1. STORMWATER FACILITY TO BE RESTORED AFTER CONSTRUCTION ACTIVITIES CEASE. REMOVE TOP 18" OF SOIL AFTER FINAL STABILIZATION. TOP LAYER MUST BE RECONSTRUCTED AND FACILITY VEGETATED.
- 2. SEE FINAL LANDSCAPE PLANS FOR PLANTING OF FACILITIES.



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 ST. HELENS, OREGON
 EROSION AND SEDIMENT CONTROL PLANS
 FINAL STABILIZATION PLAN**

#	DATE	DESCRIPTION

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PROJECT NUMBER	

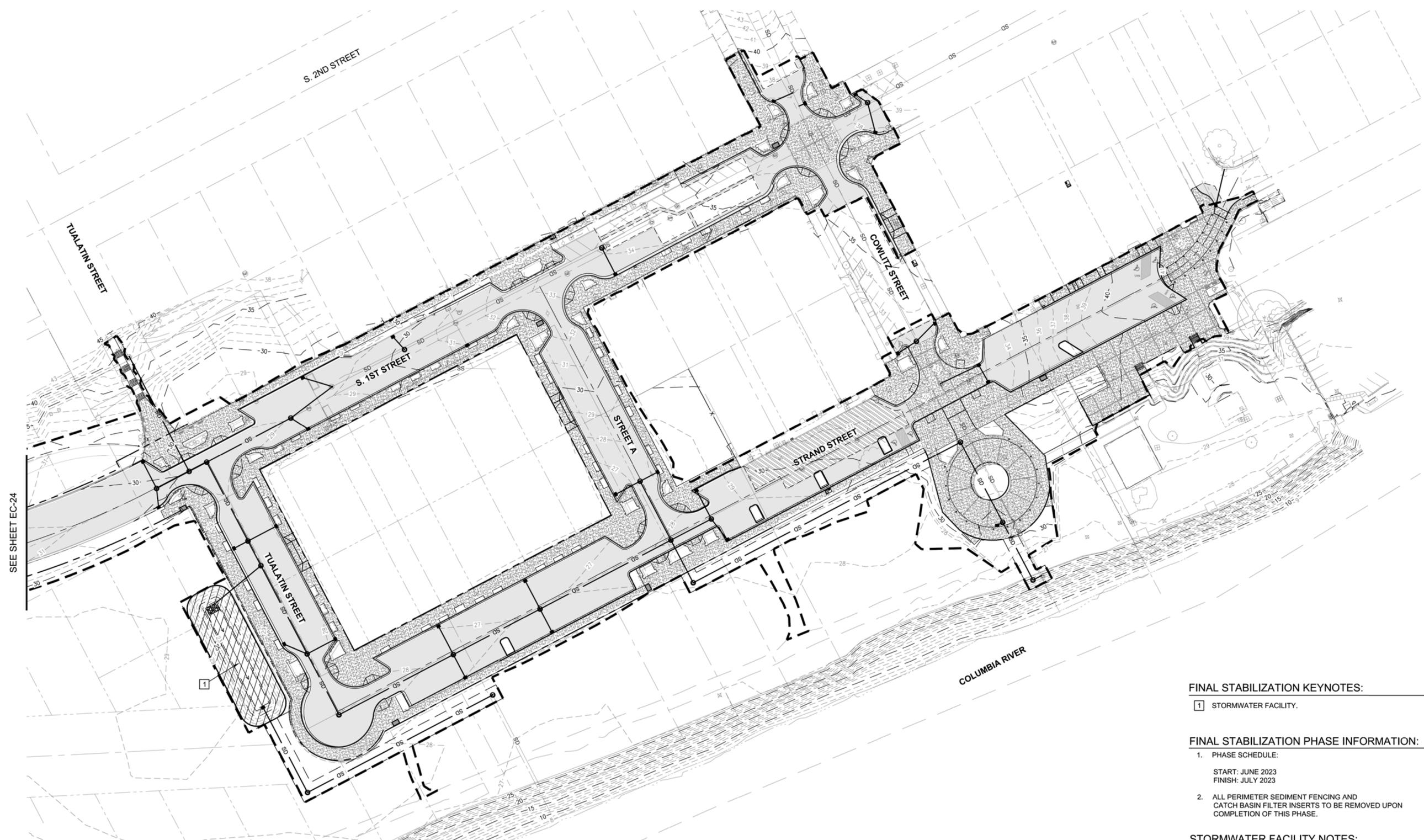
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 EROSION AND SEDIMENT CONTROL PLANS
 FINAL STABILIZATION PLAN**



SEE SHEET EC-24

FINAL STABILIZATION KEYNOTES:

- 1 STORMWATER FACILITY.

FINAL STABILIZATION PHASE INFORMATION:

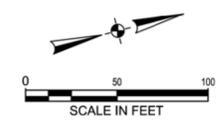
- PHASE SCHEDULE:
 START: JUNE 2023
 FINISH: JULY 2023
- ALL PERIMETER SEDIMENT FENCING AND CATCH BASIN FILTER INSERTS TO BE REMOVED UPON COMPLETION OF THIS PHASE.

STORMWATER FACILITY NOTES:

- STORMWATER FACILITY TO BE RESTORED AFTER CONSTRUCTION ACTIVITIES CEASE. REMOVE TOP 18" OF SOIL AFTER FINAL STABILIZATION. TOP LAYER MUST BE RECONSTRUCTED AND FACILITY VEGETATED.
- SEE FINAL LANDSCAPE PLANS FOR PLANTING OF FACILITIES.

LEGEND:

- LIMITS OF DISTURBANCE ————
- CONTOUR (1 FT) - - - - - 231
- CONTOUR (5 FT) - - - - - 235



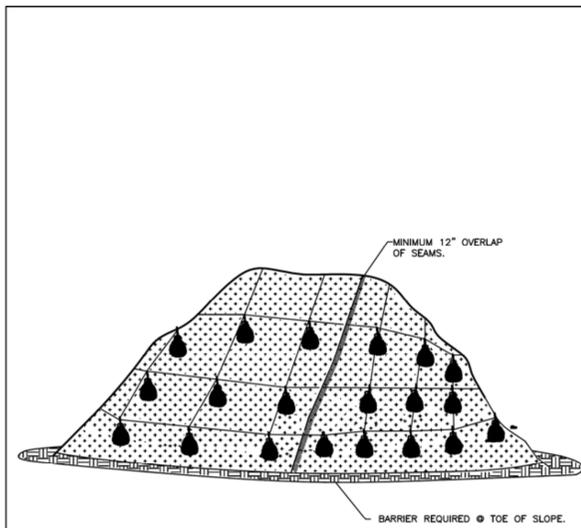
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REVISIONS	
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OTAKCAD	KJB
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FINAL PLANS STATUS	
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19823 / P-525	PROJECT NUMBER

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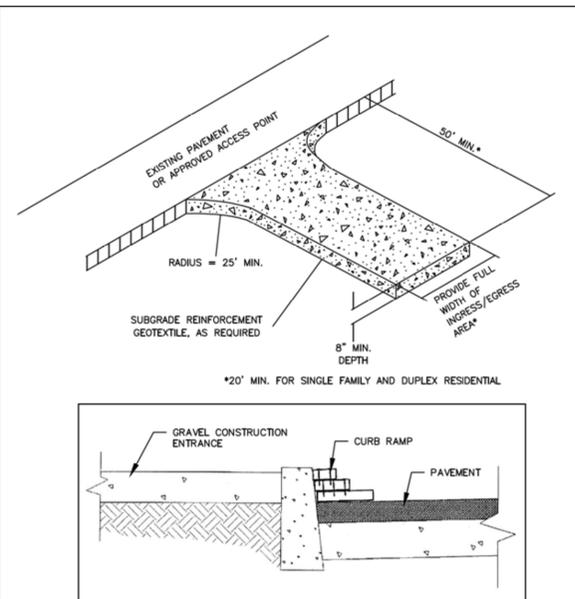
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- NOTES:**
1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
 2. BARRIER REQUIRED @ TOE OF STOCK PILE.
 3. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.

PLASTIC SHEETING

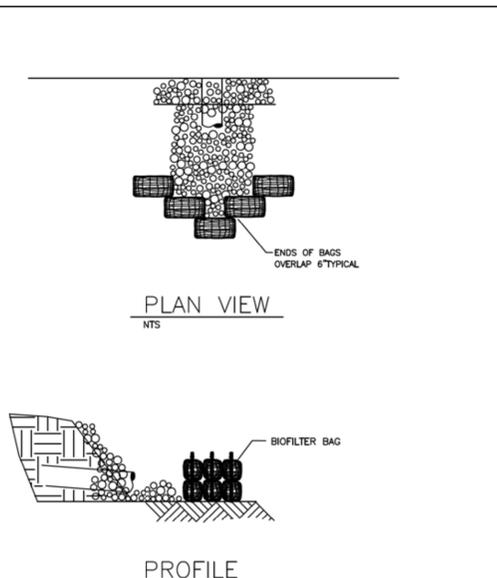
Detail Drawing 4-4



- NOTES:**
- DIMENSIONS**
- SINGLE FAMILY**
- 20' LONG BY 20' WIDE
8" DEEP OF 3/4" MINUS CLEAN ROCK.
- COMMERCIAL**
- 50' LONG BY 20' WIDE
3-6" CLEAN ROCK.
- GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

CONSTRUCTION ENTRANCE

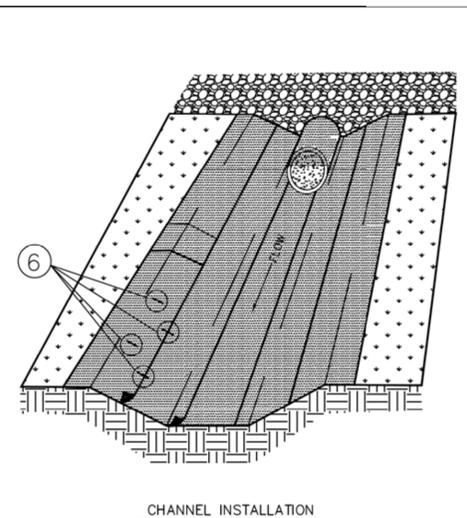
Detail Drawing 4-5



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

OUTLET PROTECTION RIP RAP

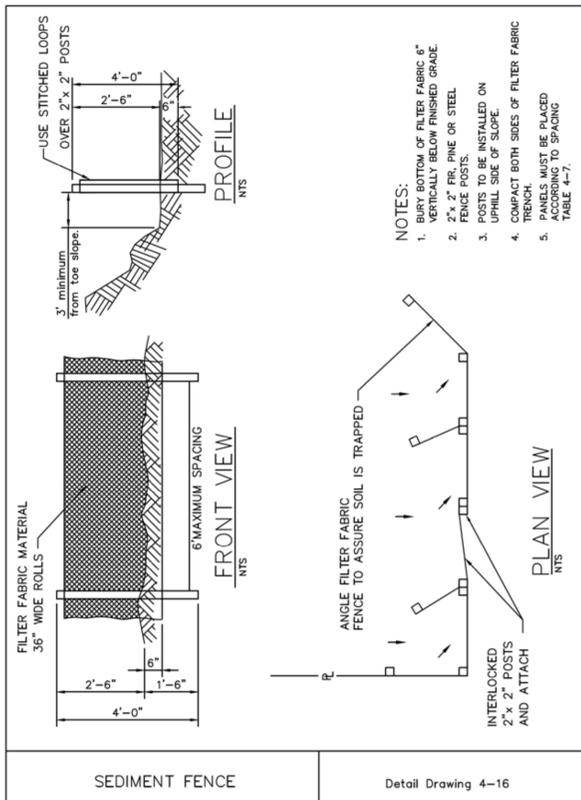
Detail Drawing 4-9



- NOTES:**
1. INFORMATION PROVIDED IS MINIMUM REQUIREMENTS. MANUFACTURERS REQUIREMENTS WHICH ARE MORE STRINGENT SHALL BE USED.
 2. INSTALL MAT PARALLEL IN CENTER OF CHANNEL IN THE DIRECTION OF FLOW. FOR CULVERT OUTFALLS, PLACE MAT UNDER CULVERT OR RIPRAP A MINIMUM OF 12 INCHES.
 3. IN CHANNEL BOTTOM, OVERLAP LENGTH ENDS A MINIMUM OF 12 INCHES.
 4. REFER TO DETAIL DRAWING 4-1 FOR CHANNEL SLOPE APPLICATION.
 5. REFER TO DETAIL DRAWING 4-2 FOR STAPLE PATTERN.
 6. LENGTH OF STAPLES SHALL BE DETERMINED BY SOIL TYPE- COHESIVE SOIL USE 6 INCH, NON-COHESIVE SOILS 8-12 INCH.

MATting CHANNEL INSTALLATION

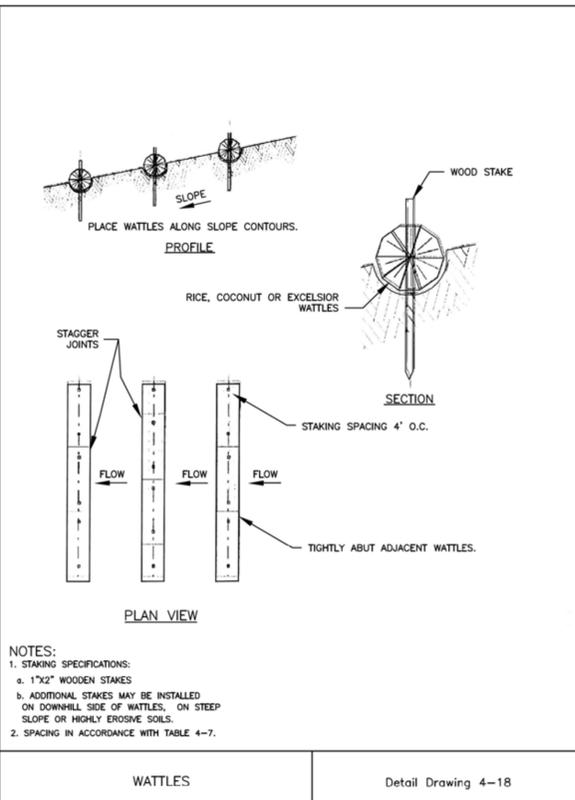
Detail Drawing 4-2



- NOTES:**
1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
 2. 2" x 2" FIR, PINE OR STEEL FENCE POSTS.
 3. POSTS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
 4. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
 5. STAPLES MUST BE PLACED ACCORDING TO SPACING TABLE 4-7.

SEDIMENT FENCE

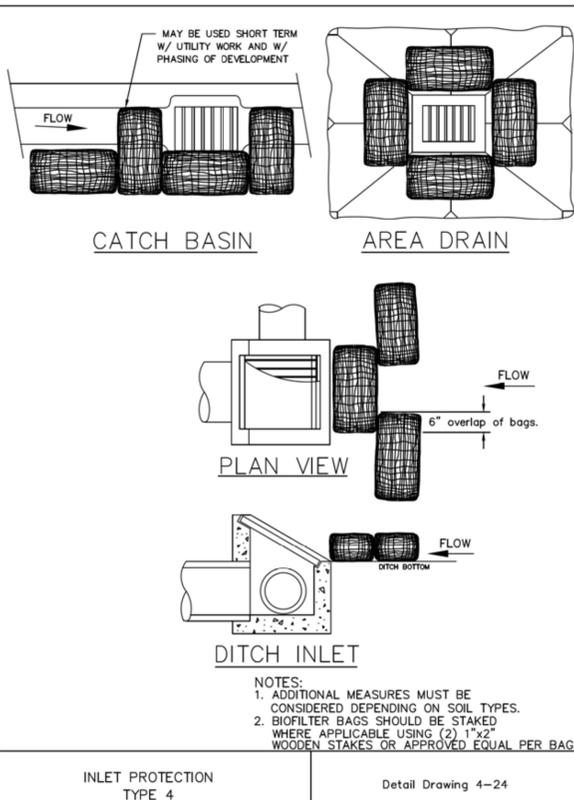
Detail Drawing 4-16



- NOTES:**
1. STAKING SPECIFICATIONS:
 - a. 1" x 2" WOODEN STAKES
 - b. ADDITIONAL STAKES MAY BE INSTALLED ON DOWNHILL SIDE OF WATTLES, ON STEEP SLOPE OR HIGHLY EROSION SOILS.
 2. SPACING IN ACCORDANCE WITH TABLE 4-7.

WATTLES

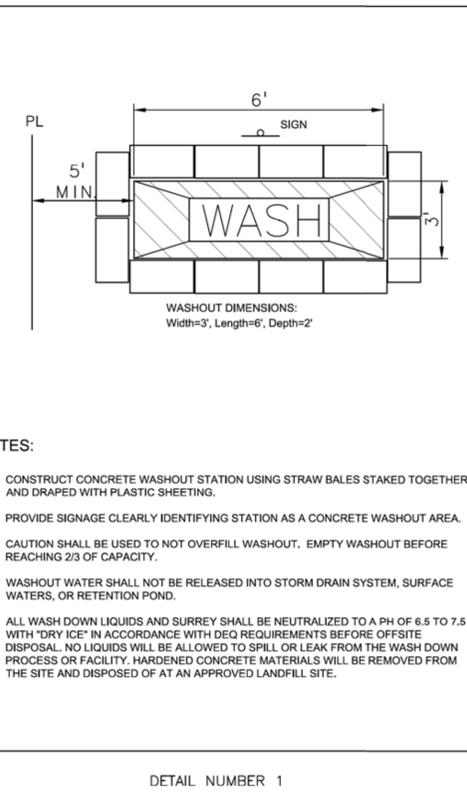
Detail Drawing 4-18



- NOTES:**
1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
 2. BIOFILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1" x 2" WOODEN STAKES OR APPROVED EQUAL PER BAG.

INLET PROTECTION TYPE 4

Detail Drawing 4-24



- NOTES:**
1. CONSTRUCT CONCRETE WASHOUT STATION USING STRAW BALES STAKED TOGETHER AND DRAPED WITH PLASTIC SHEETING. PROVIDE SIGNAGE CLEARLY IDENTIFYING STATION AS A CONCRETE WASHOUT AREA. CAUTION SHALL BE USED TO NOT OVERFILL WASHOUT. EMPTY WASHOUT BEFORE REACHING 2/3 OF CAPACITY. WASHOUT WATER SHALL NOT BE RELEASED INTO STORM DRAIN SYSTEM, SURFACE WATERS, OR RETENTION POND. ALL WASH DOWN LIQUIDS AND SURREY SHALL BE NEUTRALIZED TO A PH OF 6.5 TO 7.5 WITH "DRY ICE" IN ACCORDANCE WITH DEQ REQUIREMENTS BEFORE OFFSITE DISPOSAL. NO LIQUIDS WILL BE ALLOWED TO SPILL OR LEAK FROM THE WASH DOWN PROCESS OR FACILITY. HARDENED CONCRETE MATERIALS WILL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED LANDFILL SITE.

DETAIL NUMBER 1



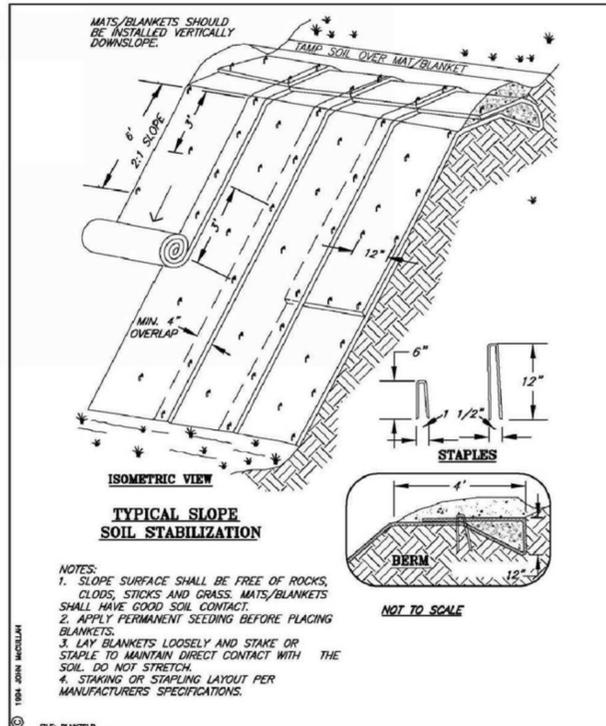
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 EROSION AND SEDIMENT CONTROL PLANS
 DETAILS**

TITLE	DATE	DESCRIPTION
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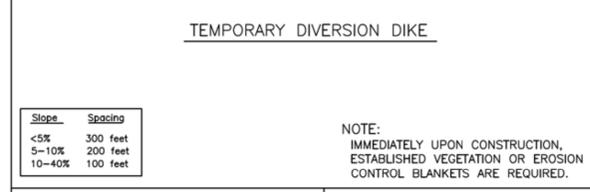
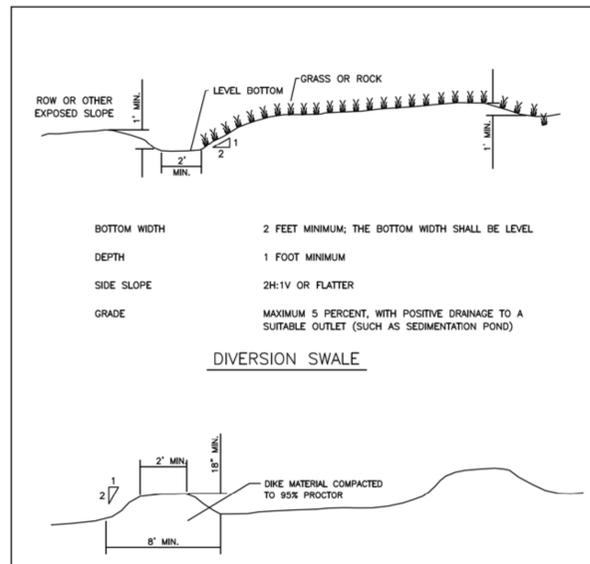
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OTAKCAD DRAWN BY
KJIB CHECKED BY
FINAL PLANS STATUS
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MATTING - SLOPE INSTALLATION

DETAIL DRAWING 4-1 REVISED 01-09



Slope	Spacing
<5%	300 feet
5-10%	200 feet
10-40%	100 feet

DIVERSION DIKE / SWALE Detail Drawing 4-15 Page 4-77



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 ST. HELENS, OREGON
 EROSION AND SEDIMENT CONTROL PLANS
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#	DATE	DESCRIPTION

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FINAL PLANS STATUS

JUNE 10, 2022 DATE

19823 / P-525 PROJECT NUMBER

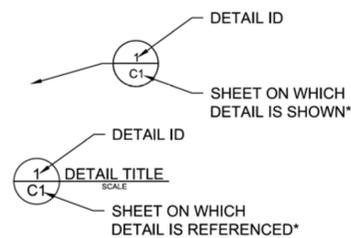
EC-31

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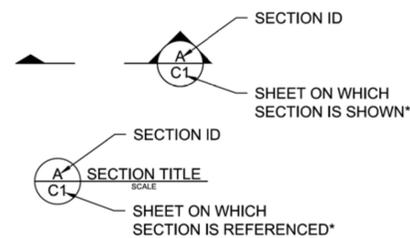
GENERAL NOTES

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE PLANS, THE SPECIAL PROVISIONS AND TECHNICAL SPECIFICATIONS OF THESE CONTRACT DOCUMENTS, AND THE LATEST EDITION OF THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION (ODOT).
- BEFORE ANY CONSTRUCTION ACTIVITY, A PRECONSTRUCTION MEETING MUST BE HELD BETWEEN THE CITY, CONTRACTOR, AND THE ENGINEER.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY LOCAL, COUNTY, STATE, AND UTILITY CONSTRUCTION PERMITS AND SHALL CONTACT EACH PERMITTING AGENCY AT LEAST TWO (2) BUSINESS DAYS PRIOR TO STARTING WORK. CONTRACTOR SHALL OBTAIN ALL REQUIRED LICENSES PRIOR TO STARTING WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION AND ELEVATION OF ALL EXISTING UNDERGROUND UTILITIES, INCLUDING THE INVERT AND TOP ELEVATIONS, PRIOR TO THE START OF CONSTRUCTION AND SHALL NOTIFY THE ENGINEER OF ANY POTENTIAL CONFLICTS. CONTRACTOR SHALL CONTACT THE NW UTILITY NOTIFICATION CENTER AT LEAST 2, BUT NOT MORE THAN 10 WORKING DAYS BEFORE THE START OF CONSTRUCTION OF THE WORK AND SHALL COMPLY WITH STATE REQUIREMENTS FOR UTILITY LOCATING.
- CONTRACTOR SHALL KEEP AND MAINTAIN A CURRENT SET OF DRAWINGS ON SITE. CONTRACTOR TO KEEP ACCURATE "AS-BUILT" RECORD COPY OF PLANS. "AS-BUILT" PLANS TO BE RETURNED TO ENGINEER AT COMPLETION OF PROJECT.
- CONTRACTOR SHALL MAINTAIN ACCESS TO HOMES AND BUSINESSES AT ALL TIMES. PROVIDE WRITTEN NOTICE TO ALL PROPERTY OWNERS AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE OF WORK ADJACENT TO PROPERTIES.
- CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER AT LEAST 48 HOURS BEFORE STARTING CONSTRUCTION, AND 24 HOURS BEFORE RESUMING WORK AFTER SHUTDOWNS EXCEPT FOR NORMAL RESUMPTION OF WORK FOLLOWING SATURDAYS, SUNDAYS, OR HOLIDAYS. CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS PRIOR TO ANY TESTING OR REQUIRED INSPECTION.
- ANY ALTERATION OR VARIANCE FROM THESE PLANS, EXCEPT MINOR FIELD ADJUSTMENTS NEEDED TO MEET EXISTING FIELD CONDITIONS, SHALL FIRST BE APPROVED BY THE ENGINEER. ANY PROPOSED CHANGES IN CONSTRUCTION PLANS MUST BE SUBMITTED IN WRITING AND APPROVED BY ENGINEER PRIOR TO COMMENCING WORK. ANY ALTERATIONS OR VARIANCE FROM THESE PLANS SHALL BE DOCUMENTED ON CONSTRUCTION "AS-BUILT" PLANS AND TRANSMITTED TO THE ENGINEER.
- CONTRACTOR SHALL PROTECT ALL PROPERTY CORNERS, SURVEY MONUMENTS AND CONTROL POINTS. SURVEY MONUMENTS OF THIS TYPE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED AT CONTRACTOR'S EXPENSE, WITH APPROPRIATE SURVEYS FILED WITH THE CITY OR COUNTY SURVEYOR.
- CONTRACTOR TO PROVIDE SHORING, AS NEEDED, IN ACCORDANCE WITH ODOT STANDARD SPECIFICATION 00510.44(B).
- CONTRACTOR SHALL DISPOSE OF ALL REMOVED OR REPLACED MATERIAL AND EQUIPMENT IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS, EXCEPT THOSE ITEMS DESIGNATED BY THE OWNER FOR SALVAGING. SALVAGED ITEMS SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE CAREFULLY REMOVED AND STORED AS DIRECTED.
- CONTRACTOR TO PROVIDE DEWATERING, AS NEEDED, IN ACCORDANCE WITH SECTION 31 23 19, DEWATERING.

DETAIL DESIGNATIONS



SECTION DESIGNATIONS



*SHOWN AS "--" IF DETAIL OR SECTION IS SHOWN ON MULTIPLE SHEETS

ABBREVIATIONS

ABS	ACRYLONITRILE BUTADIENE STYRENE	LIN	LINEAR
AC.	ACRE	LOC	LOCATION
AC	ASPHALTIC CONCRETE OR ASBESTOS CEMENT	LP	LIGHT POLE
AL	ALUMINUM	LVL	LEVEL
AGGR	AGGREGATE	MATL	MATERIAL
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MAX	MAXIMUM
APWA	AMERICAN PUBLIC WORKS ASSOCIATION	MIN	MINIMUM
APPROX	APPROXIMATE	MIX	MIXTURE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	MJ	MECHANICAL JOINT
		MGD	MILLION GALLONS PER DAY
B&S	BELL AND SPIGOT	MOD	MODIFIED
BO	BLOWOFF	MON	MONOLITHIC
BOTT	BOTTOM		
BDRY	BOUNDARY	N/C	NORMALLY CLOSED
BFV	BUTTERFLY VALVE	N/O	NORMALLY OPEN
BKFL	BACKFILL	NO	NUMBER
BLVD	BOULEVARD	NOM	NOMINAL
BLDG	BUILDING	NORM	NORMAL
BM	BENCH MARK	NTS	NOT TO SCALE
BPS	BOOSTER PUMP STATION		
		OC	ON CENTER
CB	CATCH BASIN	OD	OUTSIDE DIAMETER
CFS	CUBIC FEET PER SECOND	OPS	OPERATIONS
CI	CAST IRON		
CIP	CAST IRON PIPE	PE	POLYETHYLENE
CL	CENTERLINE	PERF	PERFORATED
CLR	CLEARANCE	PERM	PERMANENT
CLSM	CONCRETE LOW STRENGTH MIX	PH	PHASE
CMP	CORRUGATED METAL PIPE	P/L	PROPERTY LINE
CND	CONDUIT	LB	POUND
CO	CLEANOUT OR COUNTY	PROF	PROFILE
COMB	COMBINATION, COMBINATION SEWER	PROP	PROPOSED
COMP	COMPACTED	PS	PUMPING STATION
CONC	CONCRETE	PS	PER SQUARE INCH
CONN	CONNECTION	PVC	POLYVINYL CHLORIDE
CONST	CONSTRUCT	PVMT	PAVEMENT
CORR	CORRUGATED		
CU	CUBIC	RCP	REINFORCED CONCRETE PIPE
CULV	CULVERT	RDWY	ROADWAY
CY	CUBIC YARD	RDCR	REDUCER
		REINF	REINFORCE
D	DEGREE OF CURVE OR DELTA	REQ'D	REQUIRED
DC	DIRECT CURRENT	REV	REVISE
DEFL	DEFLECTION	RPM	REVOLUTIONS PER MINUTE
DET	DETAIL	RT	RIGHT
DEMO	DEMOLISH	RTP	RIDGEFIELD TREATMENT PLANT
DI	DUCTILE IRON	RW, ROW	RIGHT-OF-WAY
DIAM.	DIAMETER		
DIP	DUCTILE IRON PIPE	SALV	SALVAGE
DWG	DRAWING	SCTP	SALMON CREEK TREATMENT PLANT
DWY	DRIVEWAY	SEG	SEGMENT
		SF	SQUARE FEET
ECC	ECCENTRIC	SHT	SHEET
EL	ELEVATION	SL	SLOPE
ELEC	ELECTRIC OR ELECTRICAL	SQ.	SQUARE
EMB	EMBANKMENT	SST	STAINLESS STEEL
ESMT	EASEMENT	STA	STATION
EW	EACH WAY	STD	STANDARD
EXC	EXCAVATION	SURF	SURFACE
EXIST	EXISTING		
EXP	EXPANSION	TB	THRUST BLOCK
		TCP	TRAFFIC CONTROL PLAN
FBE	FUSION BONDED EPOXY	TEMP	TEMPORARY
FDTN	FOUNDATION	THKN	THICKNESS
FF	FINISHED FLOOR	TOPO	TOPOGRAPHY
FH	FIRE HYDRANT	TP	TEST PIT
FIN	FINISHED	TYP	TYPICAL
FL	FLOW LINE		
FLG	FLANGE	UG	UNDERGROUND
FT	FOOT OR FEET		
		VAR	VARIES
GA	GAUGE	VERT	VERTICAL
GAL	GALLONS		
GALV	GALVANIZED	WM	WATER METER
GEN	GENERAL	WS	WATER STANDPIPE
GPM	GALLONS PER MINUTE	WT	WEIGHT
GV	GATE VALVE	WV	WATER VALVE
		w/	WITH
HDPE	HIGH-DENSITY POLYETHYLENE		
HMAC	HOT-MIXED ASPHALT CONCRETE	YD	YARD
HORIZ	HORIZONTAL		
HWL	HIGH WATER LINE		
HWY	HIGHWAY		
ID	INSIDE DIAMETER		
IE	INVERT ELEVATION		
IN	INCHES		
JCT	JUNCTION		



**S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS**
 ST. HELENS, OREGON
PUMP STATION NOTES AND ABBREVIATIONS

TITLE	#	DATE	DESCRIPTION

REVISIONS

DATUM

GRAYLING CAD GRAYLING
DRAWN BY CHECKED BY

FINAL PLANS

STATUS

JUNE 10, 2022

DATE

19823 / P-525

PROJECT NUMBER

PS-1

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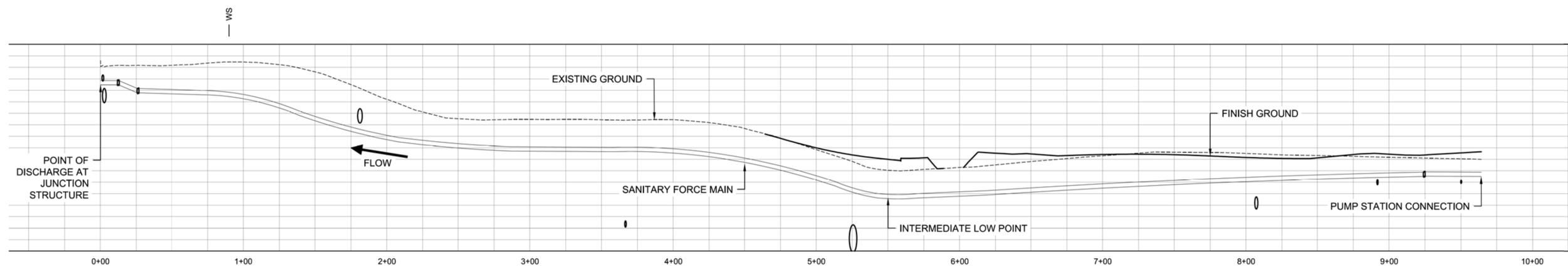
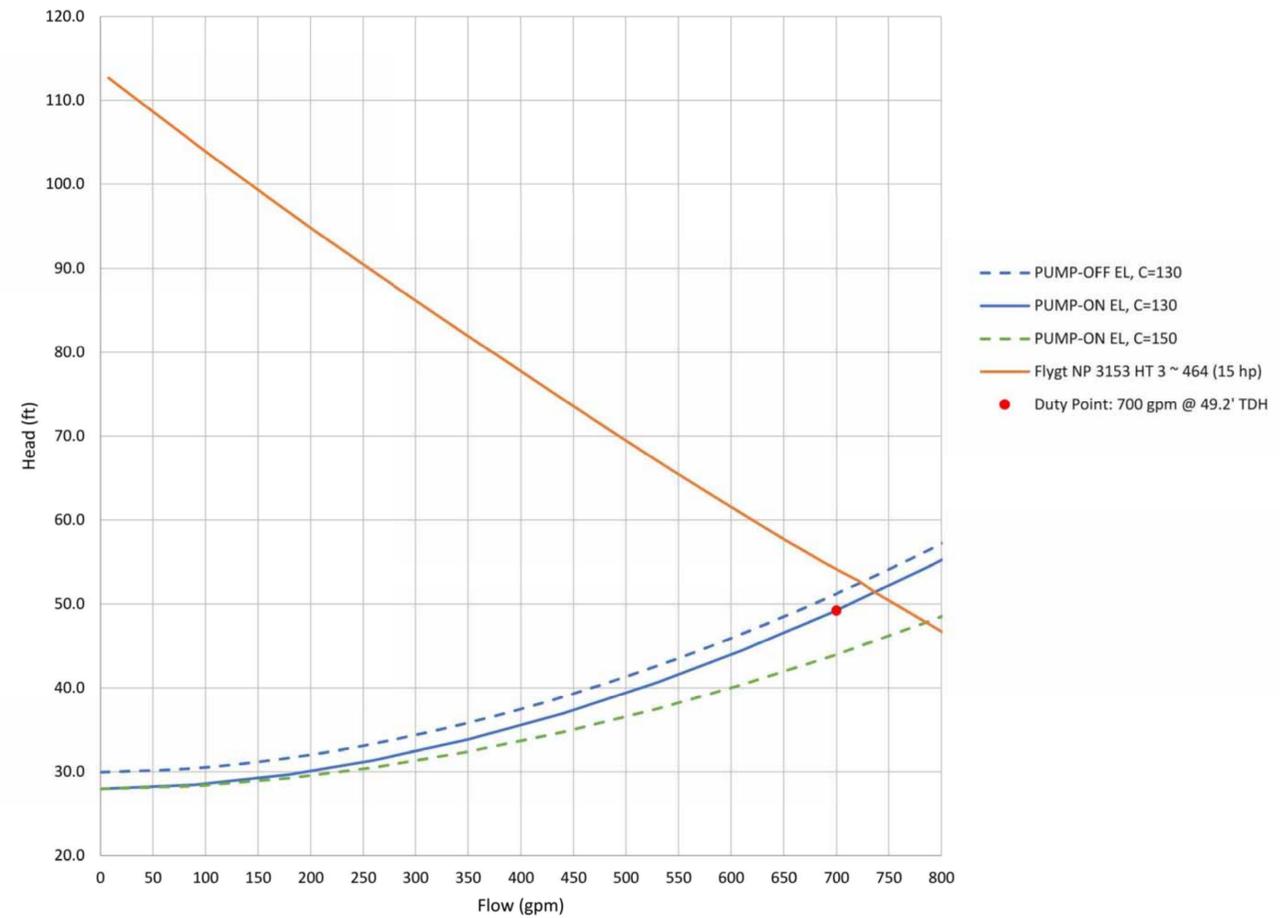


ADDRESS: 654 OFFICERS ROW
VANCOUVER, WA 98661
PHONE: (360) 347-6399

DESIGN DATA SUMMARY TABLE

PUMP STATION	
NAME	PUMP STATION # 1
TYPE	DUPLEX PUMP STATION WITH SUBMERSIBLE NON-CLOG SEWAGE PUMPS
PUMP MODEL	FLYGT NP 3153 HT 3 ~ 464
CAPACITY (PER PUMP)	MINIMUM 700 GPM AT 49.2 FEET TDH
MOTOR HORSEPOWER	15 HP
MOTOR DATA	460 V, 60 HZ, 3 PHASE, 1760 RPM
PUMP STARTS AT INFLOW = 50% OF PUMP CAPACITY	14 PER HOUR
WET WELL VOLUME	752 GALLONS (PUMPS OFF TO LEAD PUMP ON)
LEVEL CONTROL TYPE	SIEMENS HYDRORANGER 200 CONTROLLER w/ ECHOMAX XPS-15F ULTRASONIC TRANSDUCER
ALARM TELEMETRY TYPE	MISSION COMMUNICATIONS CELLULAR SCADA SYSTEM
STANDBY POWER TYPE	ON-SITE DIESEL GENERATOR
OVERFLOW POINT	SSMH B4
OVERFLOW ELEVATION	26.2 FEET
100-YEAR FLOOD ELEVATION	26 FEET
EPA RELIABILITY CLASS	1
CORROSION / ODOR CONTROL SYSTEM	
CHEMICAL STORAGE AND TYPE	FUTURE (IF NEEDED)
METERING SYSTEM	FUTURE (IF NEEDED)
FORCE MAIN	
TYPE AND LENGTH	DR 17 HDPE 8", 905 FEET
FORCE MAIN VELOCITY	5.0 FEET PER SECOND AT 700 GPM (8" FORCE MAIN)
PROFILE DESCRIPTION	SINGLE INTERMEDIATE LOW POINT
AIR RELEASE VALVES	SINGLE AIR RELEASE AT VALVE VAULT
AVERAGE FORCE MAIN DETENTION TIME (ADWF)	9 MINUTES (700 GPM AT 7.55" INNER DIAMETER)
FLOW METER	TOSHIBA ELECTROMAGNETIC
JUNCTION STRUCTURE LOCATION	PLYMOUTH STREET AT THE WASTEWATER TREATMENT PLANT

SYSTEM HEAD / PUMP CAPACITY CURVES



FORCE MAIN PROFILE



S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS
ST. HELENS, OREGON

PUMP STATION DESIGN DATA

TITLE	#	DATE	DESCRIPTION

REVISIONS

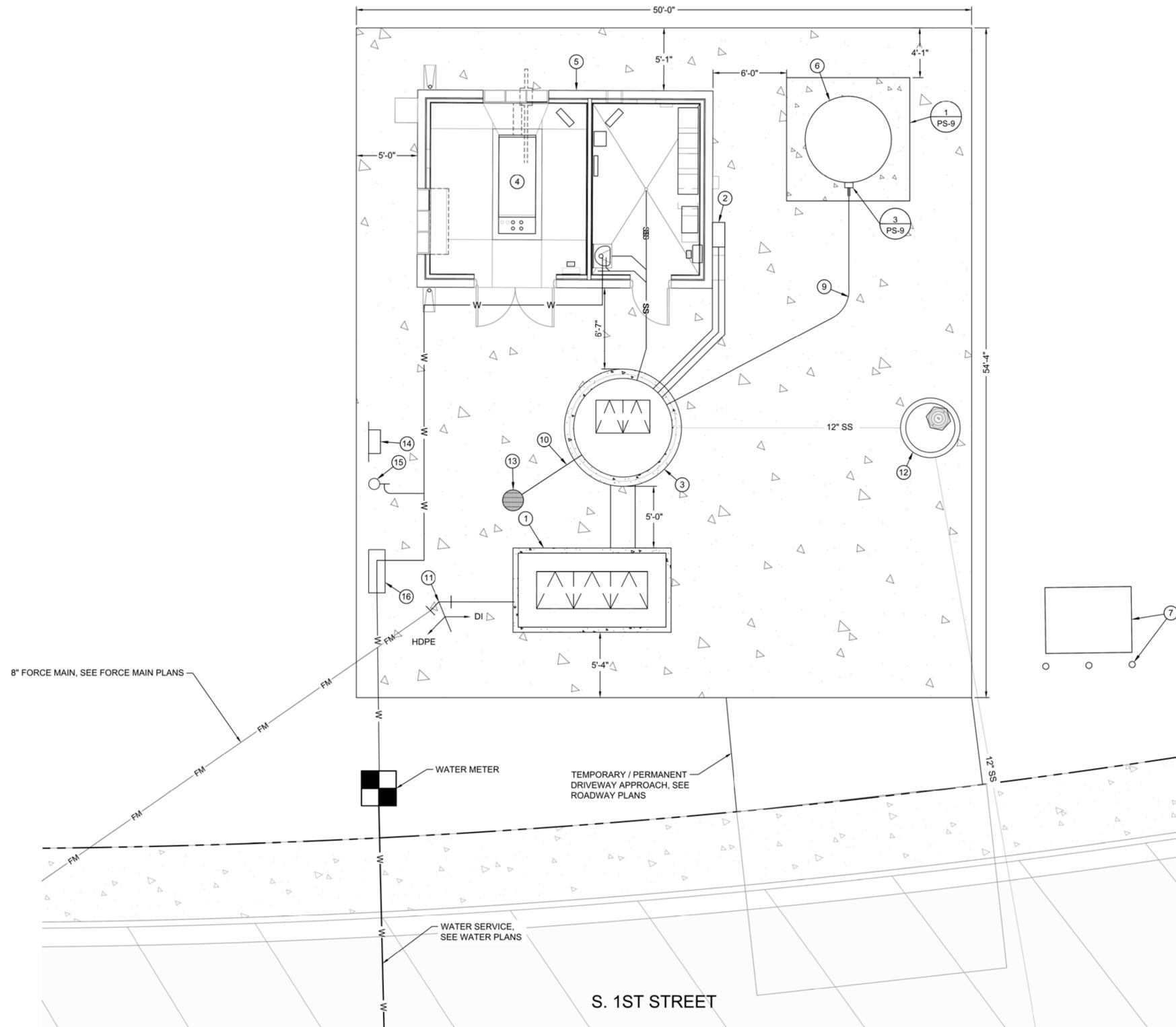
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STATUS	
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DATE	
19823 / P-525	
PROJECT NUMBER	

PS-2

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P:\0821 - Jun 08, 2022 - 5:43pm - Kosta Busby - G:\Shared\Drawings\Projects\21054 - St. Helens\Drawings\PS-2 - PUMP STATION DESIGN DATA

P:\08_08_2022_543m_Kosta_Bisby_GS\Shared\Drawings\Projects\2105A_1st and Strand\JUN19\Improvements\500 CAD\501_Plan_Sheets\2105A_Pump Station_Site Plan.dwg - Layout Name: PS-3_Pump Station Site Plan



PUMP STATION KEY NOTES

1	7' x 13' VALVE VAULT, TOP SLAB, AND HATCH, SEE SHEET PS-5
2	PUMP DISCONNECT PANEL AND CONDUIT, SEE ELECTRICAL
3	8' DIAM. PRE-CAST WET WELL, TOP SLAB, AND HATCH, SEE SHEET PS-5
4	50 KW GENERATOR, SEE ELECTRICAL
5	ELECTRICAL CONTROL BUILDING, SEE ARCHITECTURAL
6	1,000 GAL CHEMICAL FEED TANK (FUTURE)
7	ELECTRICAL SERVICE, TRANSFORMER, AND BOLLARDS, SEE ELECTRICAL
8	NOT USED
9	2" SCH 40 PVC CHEMICAL FEED CASING WITH LONG SWEEP ELBOWS, ROUTE BETWEEN CHEMICAL FEED SYSTEM AND WET WELL AT 2-FOOT MIN DEPTH WITH 2% MIN SLOPE TOWARDS WET WELL
10	10" DI STORM PIPE WITH 2% MIN SLOPE TOWARDS WET WELL
11	8" DI 45° BEND w/ RESTR JOINTS, CONNECT TO HDPE FORCE MAIN
12	4' ID MH, SEE SHEET SA - 8
13	AREA DRAIN, SEE DETAIL 3, SHEET PS-9
14	HOSE RACK, SEE DETAIL 3, SHEET PS-8
15	YARD HYDRANT, SEE DETAIL 2, SHEET PS-8
16	RPBA AND ENCLOSURE, SEE DETAIL 1, SHEET PS-8

NOTES

- SEE PLANTING PLANS FOR LANDSCAPING REQUIREMENTS.
- SEE CITY STANDARD DETAIL 300 FOR TYPICAL TRENCH SECTION.



**S. 1ST AND STRAND STREETS
 ROAD AND UTILITY EXTENSIONS**
 ST. HELENS, OREGON
PUMP STATION SITE PLAN

TITLE	
#	DESCRIPTION

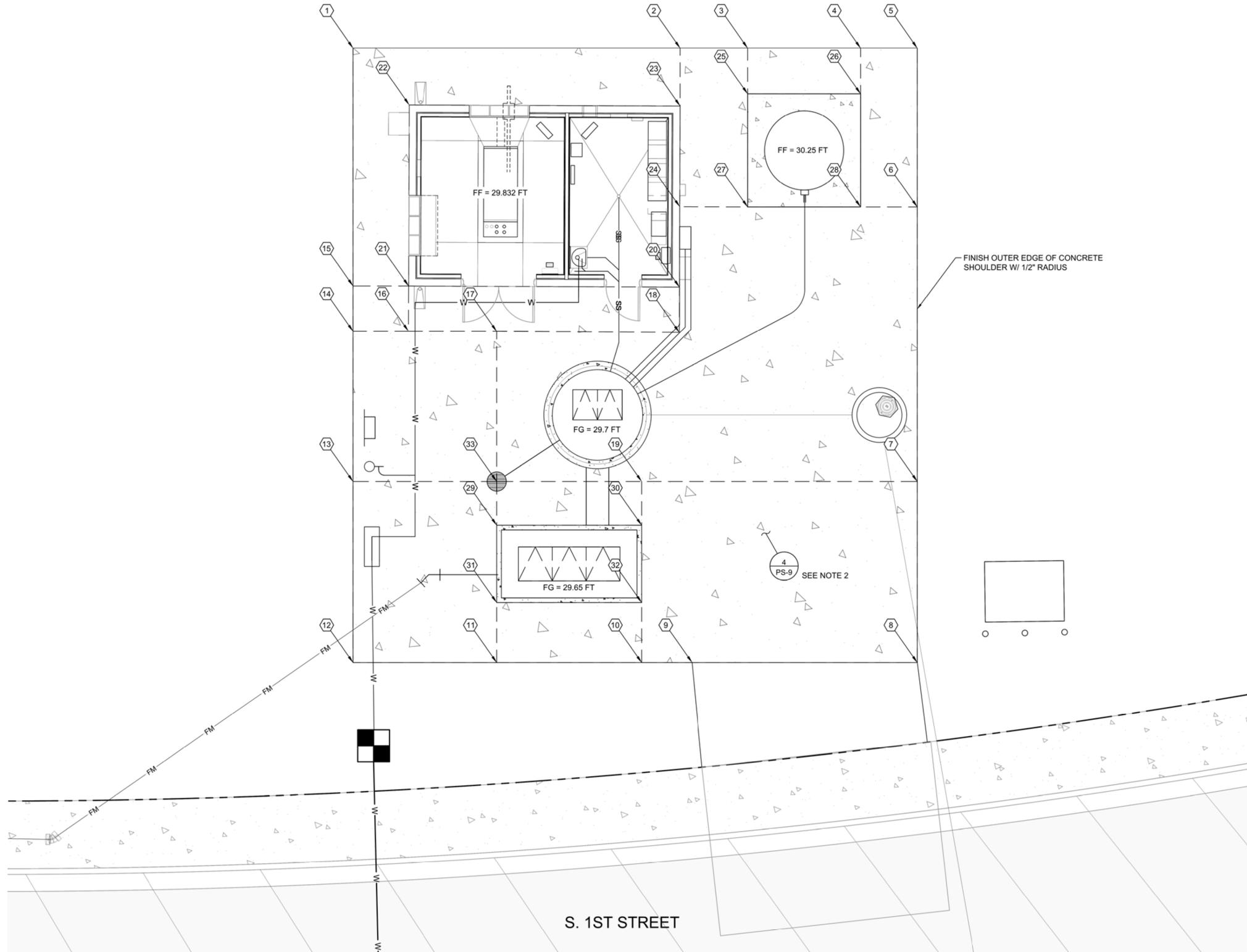
REVISIONS	

DATUM	
GRAYLING CAD	GRAYLING
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FINAL PLANS	
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JUNE 10, 2022	
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PS-3

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Plotted: Jun 08, 2022, 5:44am. Kisha Busby - G:\Shared\Drawings\Projects\2105A.1st and Strand\JUN08.improvements\500.CAD\501.Plan Sheets\2105A.PUMP STATION GRADING AND SURFACING PLAN

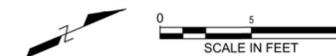


SURVEY STAKING POINTS

PT NO.	DESCRIPTION	EL.	NORTHING	EASTING
1	EOP	29.8250	587702.7312	603764.9135
2	EOP	29.9700	587729.4620	603776.1080
3	EOP	29.9100	587734.9960	603778.4256
4	EOP	30.0090	587744.2198	603782.2884
5	EOP	30.0600	587748.8503	603784.2275
6	EOP	29.9900	587734.0552	603797.1802
7	EOP	29.6260	587727.8748	603834.3141
8	EOP	29.7860	587727.8748	603834.3141
9	EOP	29.6860	587709.4668	603826.6052
10	EOP	29.6640	587705.3468	603824.8798
11	EOP	29.6000	587693.5096	603819.9225
12	EOP	29.6600	587681.7560	603815.0003
13	EOP	29.5800	587687.9361	603800.2421
14	EOP	29.8040	587693.0668	603787.9910
15	EOP	29.8440	587694.6119	603784.3014
16	FG	29.8120	587697.5886	603789.8846
17	FG	29.7150	587704.8206	603792.9133
18	FG	29.8100	587719.7014	603799.2134
19	FG	29.5210	587711.5273	603810.1217
20	BLDG FOUNDATION	29.8320	587721.2490	603795.5580
21	BLDG FOUNDATION	29.8320	587699.1481	603786.2011
22	BLDG FOUNDATION	29.8890	587705.3861	603771.4672
23	BLDG FOUNDATION	29.9440	587727.4869	603780.8242
24	BLDG FOUNDATION	29.9000	587724.0149	603789.0252
25	CHEM FOUNDATION	29.8900	587733.4344	603782.1544
26	CHEM FOUNDATION	29.9900	587742.6580	603786.0177
27	CHEM FOUNDATION	29.8400	587729.5719	603791.3775
28	CHEM FOUNDATION	29.9400	587738.7954	603795.2410
29	VAULT	29.4800	587698.1949	603808.7346
30	VAULT	29.5400	587710.0321	603813.6919
31	VAULT	29.5060	587695.5553	603815.0376
32	VAULT	29.5700	587707.3926	603819.9948
33	STRM DRAIN	29.4500	587699.6900	603805.1644

NOTES

- ALL SURVEY STAKING POINTS ARE AT CONCRETE SURFACING.
- PLACE CONCRETE PAVEMENT MEETING SECTION 00756.04 OF THE STANDARD SPECIFICATIONS USING CLASS 4000 CONCRETE WITH COARSE AGGREGATE MEETING AASHTO GRADING NO. 7. PROVIDE BROOM FINISH.
- CUT CONTRACTION JOINTS AT APPROXIMATE 10-FOOT SPACING USING POWER SAWS PER 00756.48. SEAL CONTRACTION JOINTS USING SIKAFLEX-2C SL, OR APPROVED EQUAL. CONTRACTOR TO LAYOUT JOINT SPACING FOR ENGINEER REVIEW PRIOR TO CUTTING JOINTS. PROVIDE ADDITIONAL JOINTS IN LOCATIONS THAT MAY BE PRONE TO CRACKING.
- PLACE ISOLATION JOINTS WITH PREMOLDED JOINT FILLERS AROUND ALL PRECAST CONCRETE STRUCTURES AND FOUNDATIONS. PREMOLDED JOINT FILLER SHALL BE W.R. MEADOWS CERAMAR, OR APPROVED EQUAL.
- PLACE CONSTRUCTION JOINTS AS NECESSARY. 30" LONG #5 REBAR SHALL BE PLACED AT 36" O.C. IN CONSTRUCTION JOINTS. SEAL CONSTRUCTION JOINTS USING SIKAFLEX-2C SL, OR APPROVED EQUAL. CONTRACTOR TO LAYOUT FOR ENGINEER REVIEW PRIOR TO POURING.



**S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS**
ST. HELENS, OREGON

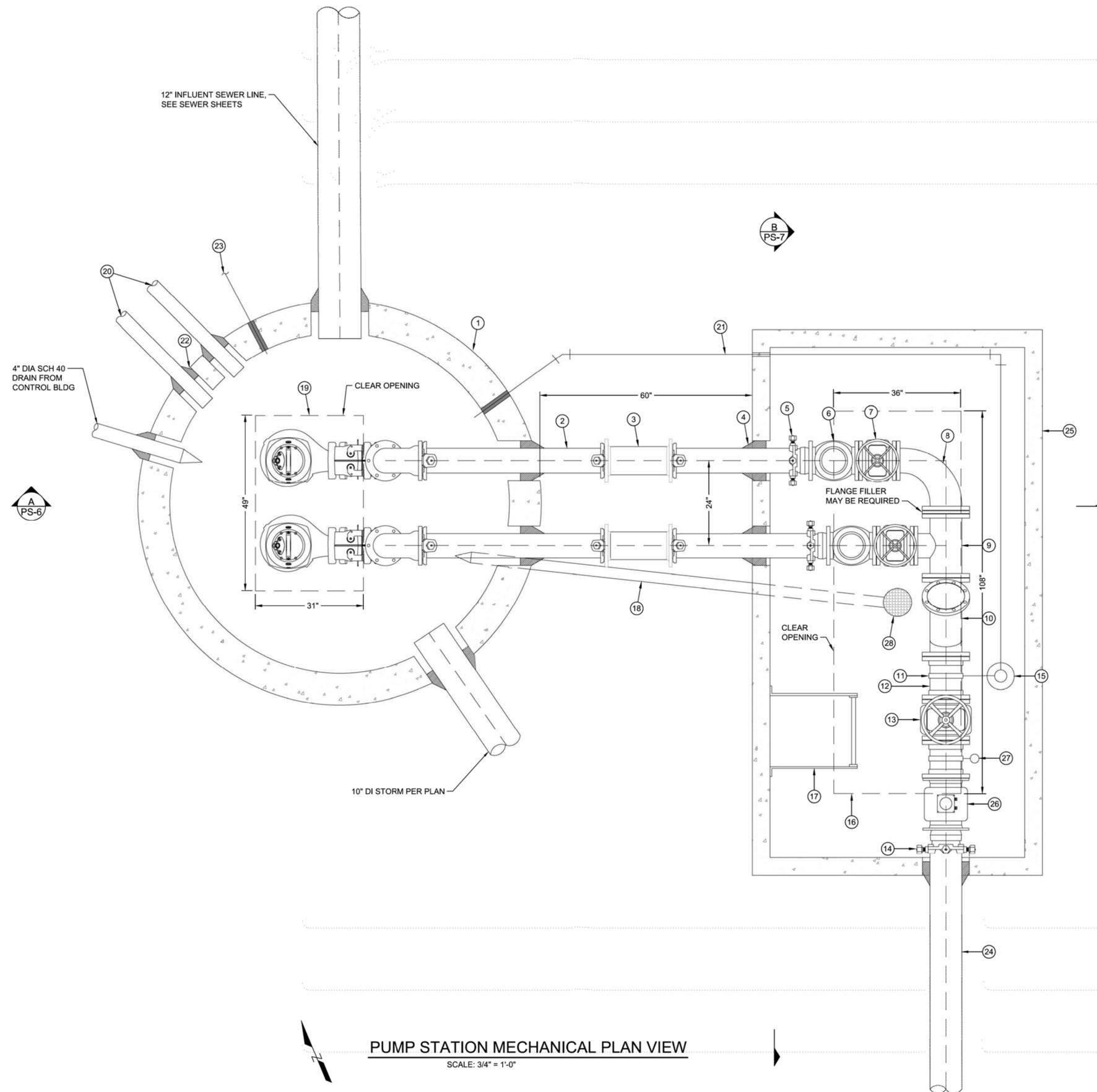
PUMP STATION GRADING AND SURFACING PLAN

TITLE	
#	DESCRIPTION

REVISIONS	
DATUM	
GRAYLING CAD	GRAYLING
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FINAL PLANS	
STATUS	
JUNE 10, 2022	
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19823 / P-525	
PROJECT NUMBER	

PS-4

P:\080108_2022_544rnm_Kosta_Bisby_GS\Shared\Drawings\Graving\Projects\21USA_1st and Strand Utility Improvements\500 CAD\501_Plan_Sheets\21USA_PUMP STATION MECHANICAL PLAN.dwg - Layout Name: PS-5 PUMP STATION MECHANICAL PLAN



PUMP STATION MECHANICAL PLAN VIEW

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

KEY NOTES

- ① 96-INCH ID PCC WET WELL w/ INTERIOR EPOXY COATING
- ② 6" CL 53 DI PE PIPE SEGMENT w/ EPOXY COATING (TYP 6)
- ③ 6" DI MJ LONG SLEEVE w/ JOINT RESTRAINTS (TYP 2)
- ④ CORE IN FIELD AND INSTALL KOR-N-SEAL BOOT W/ SST HARDWARE, OR APPROVED EQUAL (TYP 10)
- ⑤ 6" RESTRAINED FLANGE ADAPTER (TYP 2)
- ⑥ 6" DI FL SWING CHECK VALVE (TYP 2)
- ⑦ 6" DI FL GATE VALVE W/ HAND WHEEL (TYP 2)
- ⑧ 8" x 6" DI FL LONG SWEEP BEND
- ⑨ 8" x 6" DI FL TEE
- ⑩ 8" DI FL WYE w/ BLIND FLANGE, 2" CAMLOCK ASSY NOT SHOWN FOR CLARITY, SEE SECTION B, SHEET PS-7
- ⑪ 2" NPT DI PIPE SADDLE W/ SST STRAP, ROUTE 2" DIA SCH 80 PVC PIPING TO COMBINATION AIR RELEASE VALVE (CARV)
- ⑫ 8" CL 53 DI FL SPOOL, LENGTH = 12 INCHES ± (TYP 2)
- ⑬ 8" DI FL GATE VALVE W/ HAND WHEEL
- ⑭ 8" RESTRAINED FLANGE ADAPTER
- ⑮ 2" CARV, ARI SERIES D-025 L, PROVIDE 2" SST BV ON INLET OF VALVE
- ⑯ H-20 RATED TRIPLE LEAF ACCESS HATCH w/ SAFETY GRATE AND CHANNEL FRAME, CLR OPENING AS SHOWN
- ⑰ AL LADDER W/ 36" LADDERUP SAFETY POST EXTENSION, OSHA APPROVED
- ⑱ 3" CL52 DI DRAIN W/ FITTINGS AS NECESSARY
- ⑲ H-20 RATED DOUBLE LEAF ACCESS HATCH w/ SAFETY GRATE AND CHANNEL FRAME, CLR OPENING AS SHOWN
- ⑳ PUMP DISCONNECT CONDUIT, SEE ELECTRICAL
- ㉑ 2" SCH 80 PVC VENT PIPING FROM CARV TO WET WELL, - 2% SLOPE TOWARDS WET WELL
- ㉒ SEAL PENETRATION W/ MECHANICAL SEAL, SEE DETAIL 4, SHEET PS - 8 (TYP 3)
- ㉓ 2" SCH 40 PVC CHEMICAL FEED CASING, ROUTE BETWEEN CHEMICAL TANK FOUNDATION AND WET WELL AT 2' DEPTH
- ㉔ 8" DI PIPE SEGMENT, CONNECT TO FORCE MAIN
- ㉕ PRECAST SOLID WALL VAULT, OLD CASTLE MODEL 712 - LA
- ㉖ 8" FL MAGNETIC FLOW METER, SEE SPECS
- ㉗ PRESSURE GAUGE ASSY, SEE DETAIL 7, SHEET PS - 8. GAUGE RANGE 0 - 60 PSI
- ㉘ 8" DI FLOOR DRAIN W/ P-TRAP AND SST COVER

NOTES

1. CONTRACTOR RESPONSIBLE FOR ALL REQUIRED SHORING AND DEWATERING DESIGN. SUBMIT CALCULATIONS FOR THE SHORING AND DEWATERING DESIGN, STAMPED AND SIGNED BY AN ENGINEER LICENSED IN THE STATE OF OREGON.
2. BACKFILL STRUCTURES WITH 1.5" - 0" DENSE GRADED AGGREGATE COMPACTED TO 95% MAX DENSITY.
3. ALL HARDWARE INSIDE THE WET WELL SHALL BE EITHER TYPE 316 SST OR COATED IN A BAKED-ON, CERAMIC-FILLED FLUOROCARBON RESIN.
4. ALL CONCRETE STRUCTURE PIPE PENETRATIONS SHALL BE FIELD CORED, SEE SPECIFICATIONS.
5. PIPE AND FITTINGS TO BE COATED PER THE SPECIFICATIONS.
6. SECURE CARV VENT PIPING TO VAULT WALL PER DETAIL 6, SHEET PS - 8. SECURE CARV TO VAULT WALL WITH SST KINDORF BRACKETS AND HARDWARE.



**S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS**
 ST. HELENS, OREGON
PUMP STATION MECHANICAL PLAN

TITLE	#	DATE	DESCRIPTION

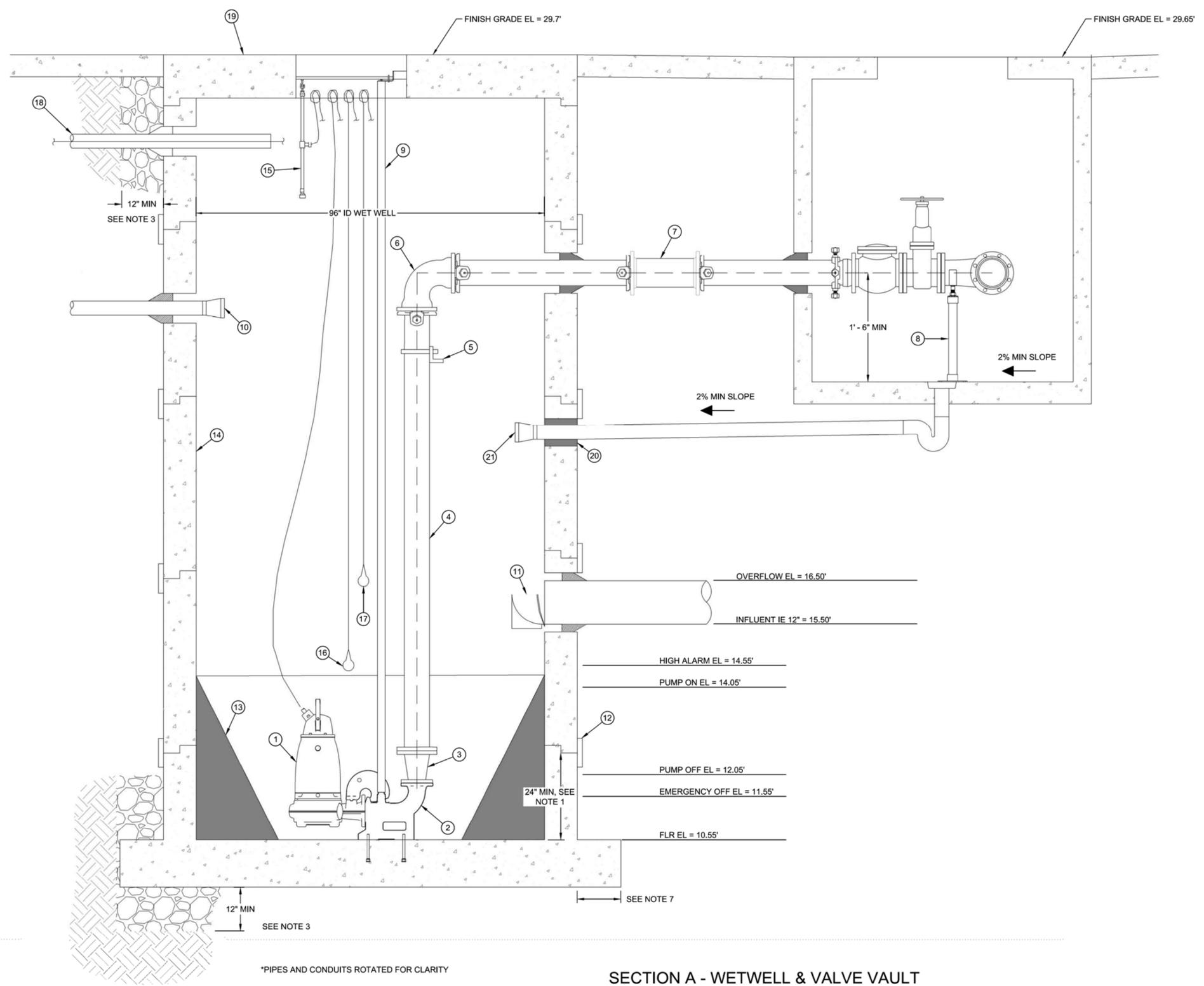
REVISIONS

DATUM	
GRAYLING CAD	GRAYLING
DRAWN BY	CHECKED BY
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STATUS	
JUNE 10, 2022	
DATE	
19823 / P-525	
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PS-5

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P:\08_2022_544m_Kosta_Busby_GS\Shared\Drawings\Projects\2105A_1st and Strand Utility Improvements\500 CAD\501_Plan_Sheets\2105A_PUMP STATION MECHANICAL PLAN.dwg - Layout Name: PS-6 PUMP STATION SECTION A - WETWELL & VAULT



*PIPES AND CONDUITS ROTATED FOR CLARITY

SECTION A - WETWELL & VALVE VAULT
SCALE: 3/4" = 1'-0"

KEY NOTES

- 1 FLYGT SUBMERSIBLE WASTEWATER PUMPS SUPPLY ONE PUMP W/ MIX-FLUSH VALVE, INCLUDE SPARE PUMP
- 2 BASE ELBOW, 4" FL OUTLET (TYP 2), ANCHOR TO FLOOR PER MANUFACTURER RECOMMENDATIONS
- 3 6" X 4" DI FL REDUCER (TYP 2)
- 4 6" CL 53 DI PE x FL PIPE SEGMENT (TYP 2)
- 5 PIPE SUPPORT, SEE DETAIL 5, SHEET PS - 8
- 6 6" DI MJ 90° BEND w/ JOINT RESTRAINTS (TYP 2)
- 7 6" DI MJ LONG SLEEVE w/ JOINT RESTRAINTS (TYP 2)
- 8 ADJUSTABLE PIPE STAND, SEE SPECIFICATIONS
- 9 SST GUIDE RAIL PROVIDED BY PUMP MANUFACTURER (TYP 4)
- 10 4" DUCKBILL STYLE CHECK VALVE CONNECTED TO 4" PVC BLDG DRAIN PIPING
- 11 DROP BOWL, RELINER B10R96 OR APPROVED EQUAL
- 12 8" NPC EXTERNAL SEAL OR APPROVED EQUAL. INSTALL ON WET WELL JOINTS
- 13 INSTALL CONCRETE FILLET AS RECOMMENDED BY PUMP MANUFACTURER
- 14 EPOXY COATING SYSTEM, APPLY ON ALL INTERIOR CONCRETE SURFACES, SEE SPECIFICATIONS
- 15 ULTRASONIC LEVEL TRANSDUCER, SEE ELECTRICAL
- 16 FLOAT FOR HIGH WET WELL ALARM
- 17 FLOAT FOR OVERFLOW ALARM
- 18 ELECTRICAL CONDUIT FROM DISCONNECT PANEL, SEE ELECTRICAL
- 19 PRECAST CONCRETE WETWELL LID
- 20 SEAL PENETRATION WITH MECHANICAL SEAL, SEE DETAIL 4, SHEET PS - 8
- 21 3" DUCKBILL STYLE CHECK VALVE CONNECTED TO 3" DI VAULT DRAIN PIPING

NOTES

1. WET WELL BASE SECTION SHALL BE CAST WITH A WALL SECTION TO ALLOW FOR WATER TIGHT SEAL TO BE PLACED ON EXTERIOR SIDE OF JOINT.
2. CONTRACTOR RESPONSIBLE FOR ALL REQUIRED SHORING AND DEWATERING DESIGN. SUBMIT CALCULATIONS FOR THE SHORING AND DEWATERING DESIGN, STAMPED AND SIGNED BY AN ENGINEER LICENSED IN THE STATE OF OREGON.
3. BACKFILL STRUCTURES WITH 1.5"-0" DENSE GRADED AGGREGATE COMPACTED TO 95% MAX DENSITY PER AASHTO T 180 TESTING METHODS.
4. ALL HARDWARE INSIDE THE WET WELL AND VAULT SHALL BE EITHER TYPE 316 SST OR COATED IN A BAKED-ON, CERAMIC-FILLED FLUOROCARBON RESIN.
5. ALL CONCRETE STRUCTURE PIPE PENETRATIONS SHALL BE FIELD CORED.
6. PIPE AND FITTINGS IN VAULTS AND WET WELL TO BE COATED PER THE SPECIFICATIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE SIZE AND CONSTRUCTION METHOD OF THE EXTENDED BASE, WHICH WILL BE NECESSARY TO COUNTERACT BUOYANCY FORCES. SEE SPECIFICATIONS, SECTION 33 05 17.
8. AREA DRAIN CONNECTION NOT SHOWN FOR CLARITY.
9. CHEMICAL FEED CONNECTION NOT SHOWN FOR CLARITY.



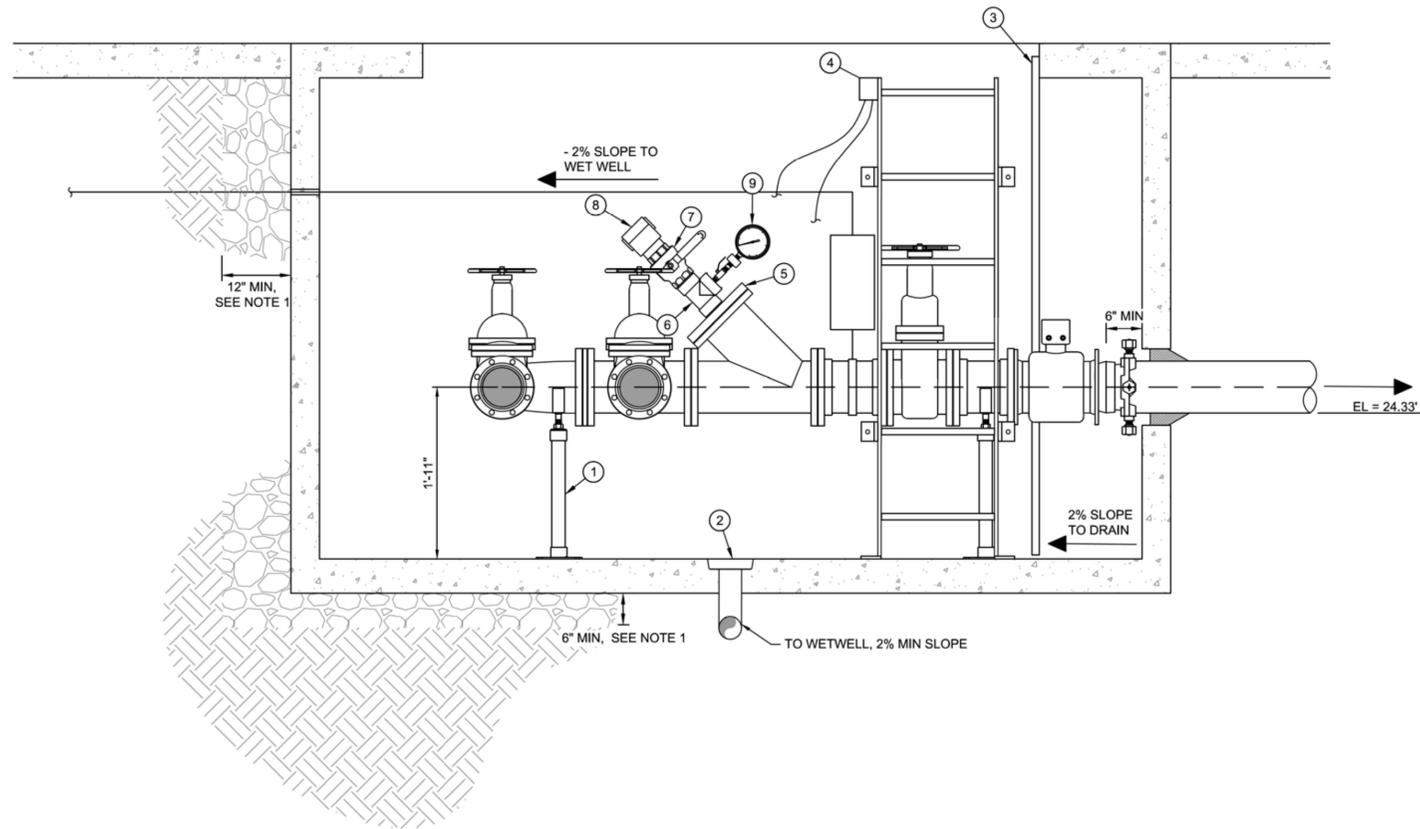
**S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS**
 ST. HELENS, OREGON
PUMP STATION SECTION A - WETWELL & VAULT

TITLE		
#	DATE	DESCRIPTION
REVISIONS		
DATUM		
GRAYLING CAD	GRAYLING	
DRAWN BY	CHECKED BY	
FINAL PLANS		
STATUS		
JUNE 10, 2022		
DATE		
19823 / P-525		
PROJECT NUMBER		

PS-6

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P:\0801 - Jun 08, 2022 - 5:44am - Kosta Busby - G:\Shared\Drawings\Graving\Projects\21054_1st and Strand\JUN08\Improvements\500 CAD\501_Plan_Sheets\21054_PUMP STATION MECHANICAL PLAN.dwg - Layout Name: PS-7 PUMP STATION SECTION B - VAULT



SECTION B - VALVE VAULT

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

KEY NOTES

- ① PIPE SUPPORT, STANDON MODEL S92, OR APPROVED EQUAL
- ② 8" FLOOR DRAIN W/ P-TRAP AND SST COVER
- ③ 1-1/4" SCH 40 PVC FROM HATCH TO DRAIN ALONG VAULT WALL TO FLOOR, DIRECT OUTLET TO VAULT DRAIN, ANCHOR PIPE TO WALL PER DETAIL 6, SHEET PS - 8.
- ④ TONING WIRE AND LOCATOR FINK
- ⑤ 8" BLIND FL WITH 2" FIPT TAP
- ⑥ 2" SST MIPT TEE
2" SST MIPT NIPPLE (TYP 2)
1/2" SST MIPT x FIPT BUSHING
- ⑦ 2" SST FIPT BALL VALVE
- ⑧ 2" MIPT x MALE CAMLOCK w/ FEMALE CAMLOCK DUST CAP
- ⑨ 1/2" SST MIPT NIPPLE (TYP 2)
1/2" SST FIPT BALL VALVE
1/2" 3.5" DISPLAY 60 PSI LIQUID FILLED PRESSURE GAUGE w/ DIAPHRAGM SEAL, GAUGE TO BE ROTATED TO FACE HATCH OPENING

NOTES

1. BACKFILL STRUCTURES WITH 1.5" - 0" DENSE GRADED AGGREGATE COMPACTED TO 95% MAX DENSITY PER AASHTO T 180 TESTING METHODS.
2. ALL CONCRETE STRUCTURE PIPE PENETRATIONS SHALL BE FIELD CORED.
3. PIPE AND FITTINGS TO BE COATED PER SPECIFICATIONS.



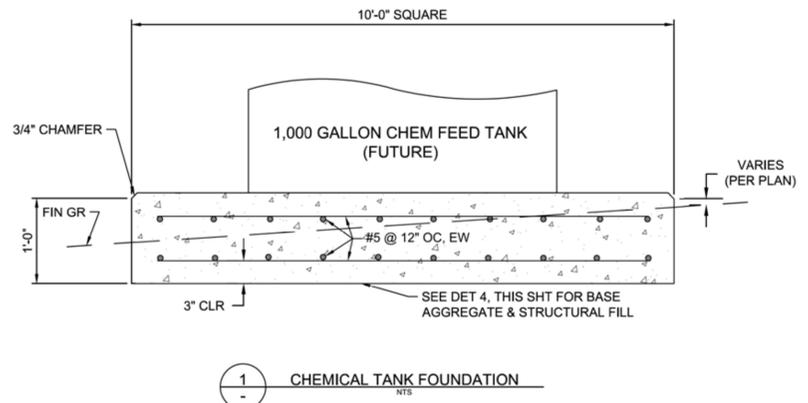
**S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS**
 ST. HELENS, OREGON
PUMP STATION SECTION B - VAULT

TITLE	
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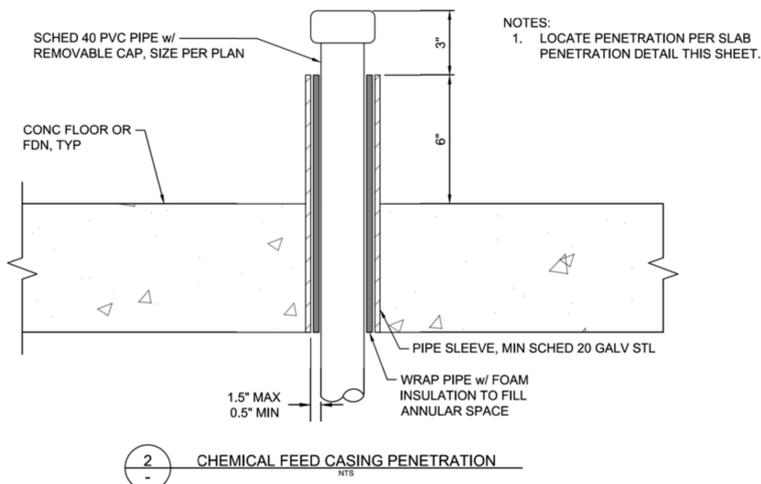
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DATE	
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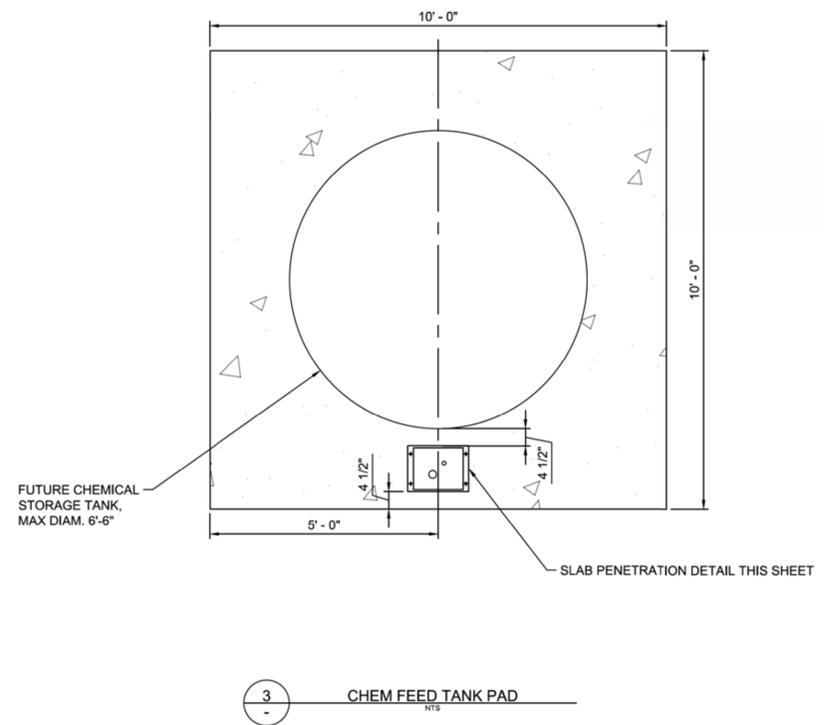
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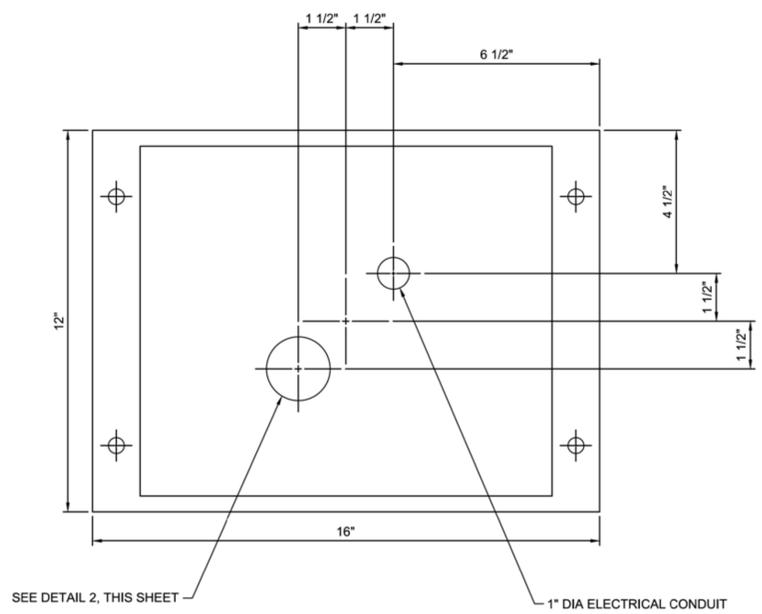
1 CHEMICAL TANK FOUNDATION
NTS



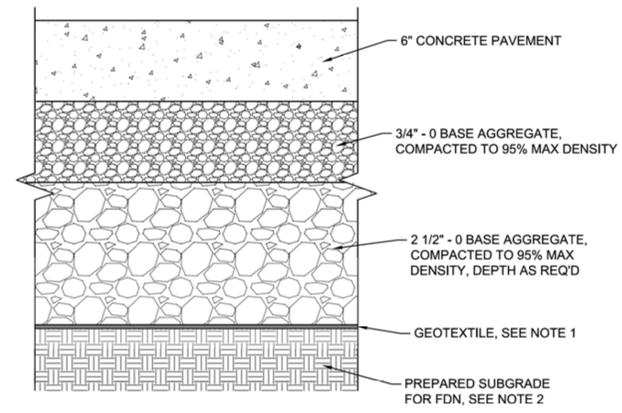
2 CHEMICAL FEED CASING PENETRATION
NTS



3 CHEM FEED TANK PAD
NTS

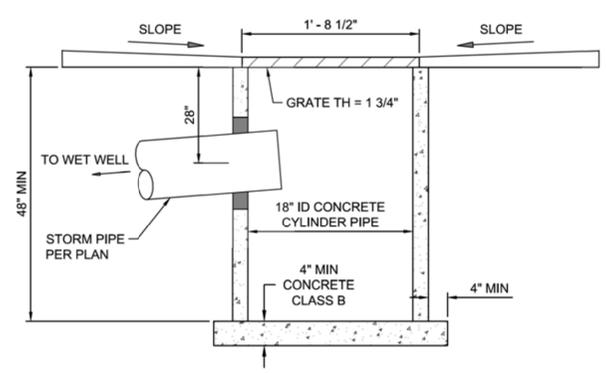


4 CHEM FEED TANK SLAB PENETRATION
NTS



- NOTES:
1. GEOTEXTILE SHALL BE MIRAFI 500X, OR APPROVED EQUAL.
 2. REMOVE 18\"/>

5 CONCRETE PAVEMENT SECTION
NTS



6 AREA DRAIN
NTS



S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS
ST. HELENS, OREGON

PUMP STATION DETAILS II

TITLE	#	DATE	DESCRIPTION

REVISIONS

DATUM	GRAYLING CAD	GRAYLING
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FINAL PLANS		
STATUS		
DATE	JUNE 10, 2022	
PROJECT NUMBER	19823 / P-525	

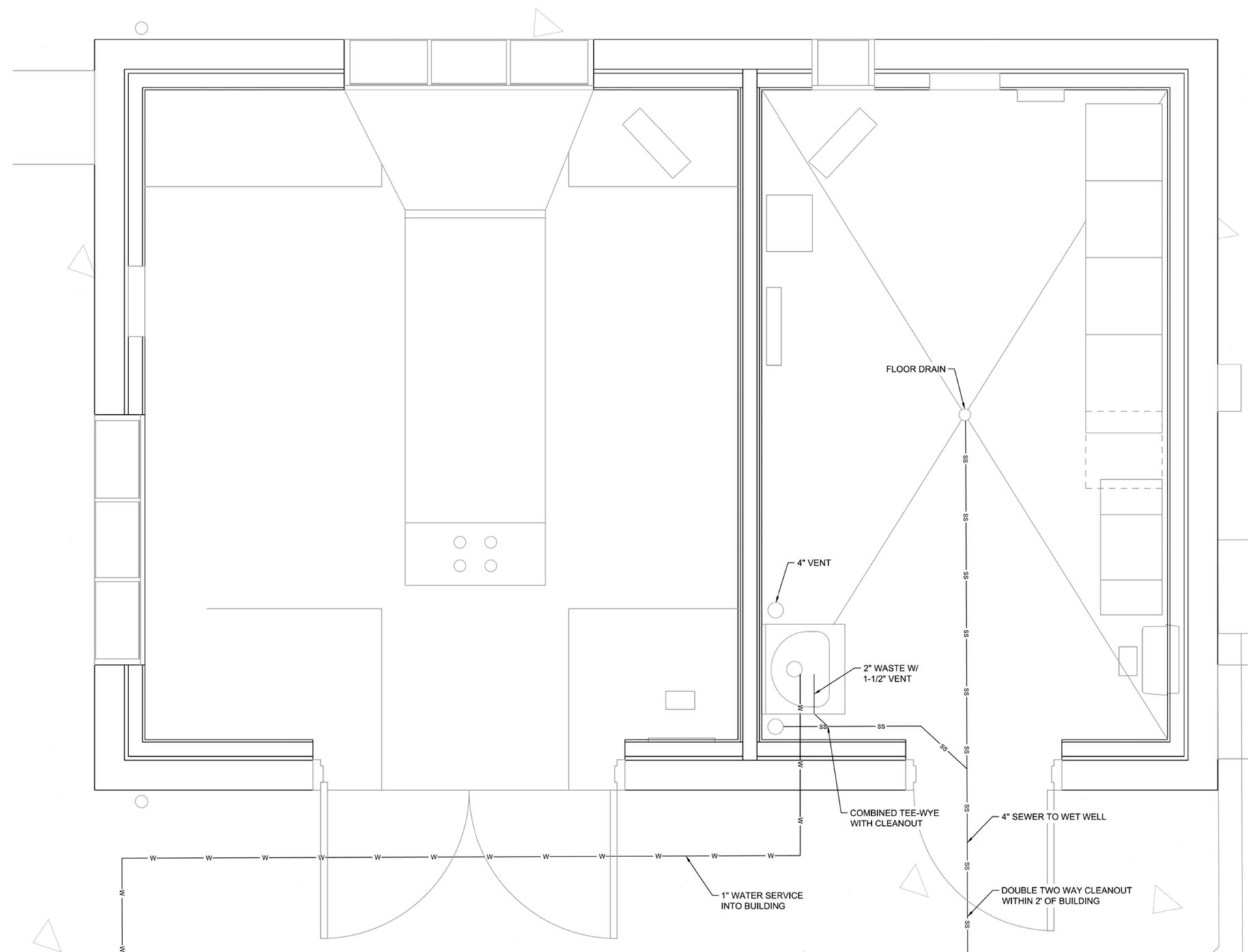
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GENERAL PLUMBING NOTES

1. ALL PIPE (WATER, SEWER, VENT), JOINTS, AND WORK SHALL CONFORM TO INTERNATIONAL PLUMBING CODE, STATE CODES, COUNTY AND LOCAL CODES AND ORDINANCES.
2. CONTRACTOR TO CONFIRM LOCATIONS OF SEWER AND WATER TIE-INS.
3. CONTRACTOR TO SOLIDLY BRACE ALL PIPING TIGHT AGAINST WALLS. FOR LONG OR COMPLICATED RUNS, SECURELY MOUNT USING UNISTRUT. IN STRAIGHT AND UNIFORM MANNER FOR FINISHED APPEARANCE. PIPING SHOWN IS DIAGRAMMATIC ONLY AND ACTUAL DESIGN BY CONTRACTOR.
4. CONTRACTOR MAY CHANGE PIPE SIZING IN FIELD TO PROVIDE ADEQUATE WATER PRESSURE TO ALL PLUMBING FIXTURES AS APPROVED BY INSPECTOR.
5. CONTRACTOR TO DETERMINE AND PROVIDE MEANS FOR DRAINING INTERIOR WATER AND SANITARY SEWER SYSTEMS, AS WELL AS SHUTOFF OF ALL FIXTURES.
6. WHEN FIXTURES REQUIRE WALL CARRIERS THE WALL CARRIER SHALL BE SUPPLIED BY CONTRACTOR.
7. PROVIDE CLEAN-OUT BENEATH ALL SINKS AS REQUIRED BY CODE.



PLUMBING PLAN

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

**S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS**
ST. HELENS, OREGON

PLUMBING PLAN

#	DATE	DESCRIPTION

REVISIONS

DATUM

GRAYLING CAD GRAYLING

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FINAL PLANS

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JUNE 10, 2022

DATE

19823 / P-525

PROJECT NUMBER

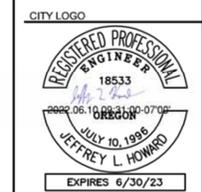
PS-10

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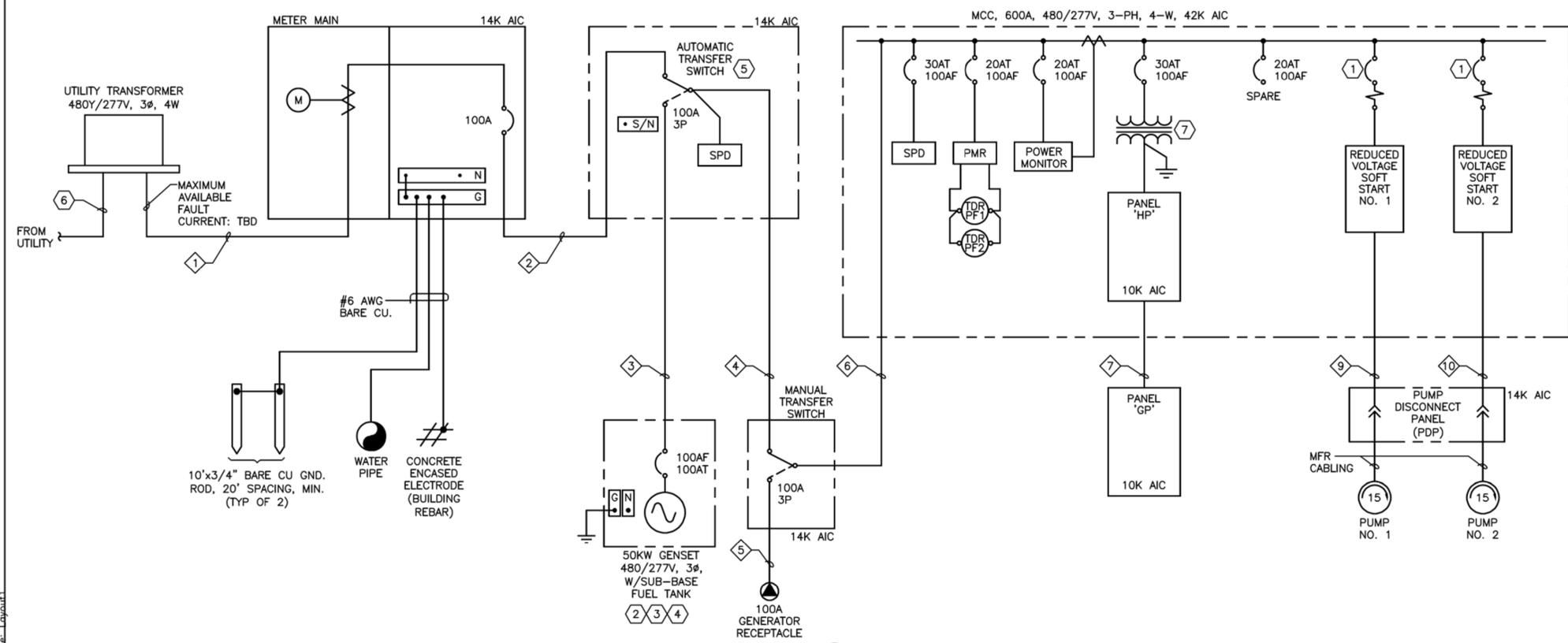


ADDRESS: 654 OFFICERS ROW
VANCOUVER, WA 98661
PHONE: (360) 347-6399

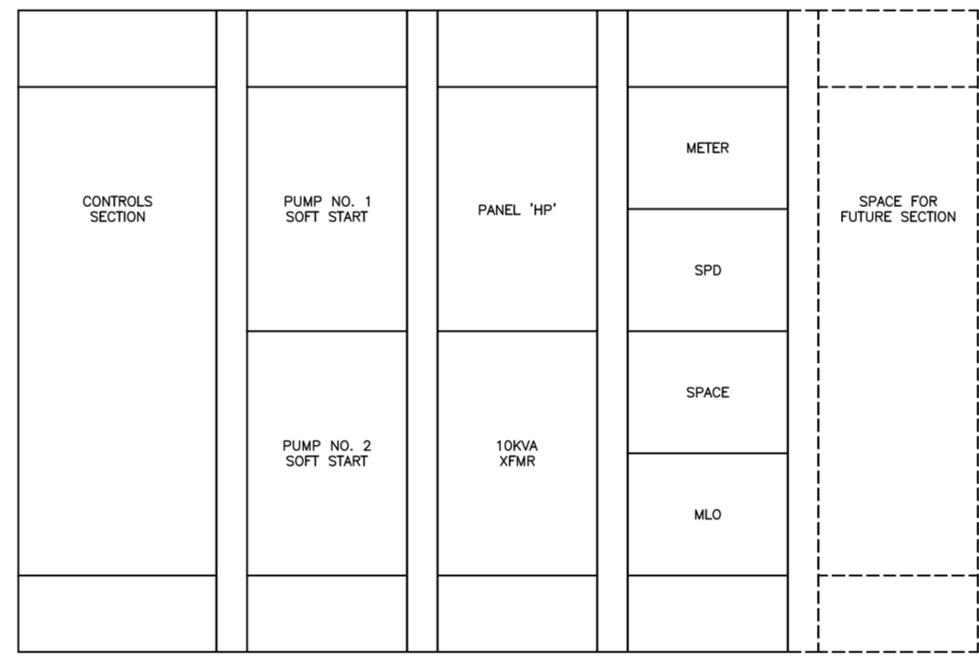
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**S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS**
 ST. HELENS, OREGON
ELECTRICAL ONE-LINE, SCHEMATIC & DETAILS



1 ELECTRICAL ONE-LINE DIAGRAM
E2.00 NOT TO SCALE



2 MCC ELEVATION
E2.00 NOT TO SCALE

LOAD SUMMARY			
LOAD SUMMARY		DATE: 06/03/22	
QTY.	DESCRIPTION	LOAD	
MOTOR LOADS			
1	PUMP NO. 1	15 HP	17.5 kVA
1	PUMP NO. 2	15 HP	17.5 kVA
NON-MOTOR LOADS			
	MISC. (10KVA XFMR, 1-PH)		10.0 kVA
SUBTOTAL		44.9 kVA	
LARGEST MOTOR x 25%		4.4 kVA	
NON-MOTOR LOADS x 25%		2.5 kVA	
SPARE CAPACITY (25%)		12.9 kVA	
TOTAL:		64.7 kVA	77.9 AMPS
SERVICE SIZE @ 480V, 3-PH:		100 AMPS	

- GENERAL NOTES**
- ALL CONDUCTORS ARE COPPER, UNLESS SPECIFICALLY NOTED OTHERWISE.
 - GROUNDING METHOD SHALL BE VIA RACEWAY AND EQUIPMENT GROUNDING CONDUCTORS, PER NEC ARTICLE 250.
 - ALL WITHSTAND (AIC) EQUIPMENT VALUES SHOWN ARE MINIMUM RATINGS.
 - VERIFY MAXIMUM AVAILABLE FAULT CURRENT (AFC) WITH POWER UTILITY PRIOR TO ORDERING EQUIPMENT. FOR BIDDING PURPOSES, ASSUME AFC OF 14K AMPS.

- NOTES THIS SHEET**
- CB FOR SOFT STARTER TO BE SIZED PER MANUFACTURER'S RECOMMENDATIONS.
 - PROVIDE 100% RATED CIRCUIT BREAKER WITH SOLID-STATE ELECTRONIC TRIP. ELECTRONIC TRIP SHALL HAVE L, S, I, AND DELAY ADJUSTMENTS.
 - CONTRACTOR TO COORDINATE GENERATOR CIRCUIT BREAKER WITH ALL CIRCUIT BREAKERS IN MCC, PER NEC ARTICLE 701.
 - REMOVE NEUTRAL/GROUND BOND FROM GENSET. SYSTEM IS SOLIDLY GROUNDED THROUGH ATS AND IS NOT A SEPARATELY DERIVED SYSTEM.
 - AUTOMATIC TRANSFER SWITCH PROVIDED WITH SOLID NEUTRAL AND DELAYED TRANSFER OPTIONS.
 - COORDINATE CONDUIT INSTALLATION WITH UTILITY. PROVIDE AND INSTALL 4-IN, SCHEDULE 40 PVC (VERIFY), IF REQUIRED BY UTILITY.
 - TRANSFORMER 'T1'. 480V:240/120V, 10KVA, SINGLE PHASE, STEP DOWN TRANSFORMER.

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REVISIONS

#	DATE	DESCRIPTION

19823 / P-525
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E2.00
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LUMINAIRE SCHEDULE

LUMINAIRE TYPE	DESCRIPTION	LAMP TYPE	INPUT WATTS	DRIVER/BALLAST	COLOR TEMP	MANUFACTURER AND MODEL SERIES
'A'	54" x 8" LINEAR ROUGH SERVICE LUMINAIRE. FROSTED POLYCARBONATE LENS, MEDIUM DISTRIBUTION, SURFACE MOUNTED.	LED 6000 LM	49W	STANDARD MVOLT 0-10V	4000K	LITHONIA LIGHTING: VAP SERIES OR APPROVED.
'AE'	SAME AS TYPE 'A' EXCEPT WITH 15W EMERGENCY BATTERY PACK.	LED 6000 LM	49W	STANDARD MVOLT 0-10V	4000K	LITHONIA LIGHTING: VAP SERIES OR APPROVED.
'B'	EXTERIOR WALL SCONCE, BRONZE FINISH, WET LOCATION RATED.	LED (1) E26	20W	120V	4000K	LAMPS PLUS: WYNDMERE COLLECTION BRONZE 9" HIGH OUTDOOR WALL LIGHT OR APPROVED.
'C'	33" X 13" POLE MOUNTED AREA LUMINAIRE, P6 FORWARD OPTICS, TYPE IV MEDIUM DISTRIBUTION, SQUARE POLE MOUNTING.	LED 17299 LM	163W	STANDARD MVOLT 0-10V	4000K	LITHONIA LIGHTING: DSX1 SERIES OR APPROVED.

NOTES:
 1. VERIFY FINISHES WITH ENGINEER AND OWNER PRIOR TO PURCHASE.
 2. ALL LUMINAIRES WITH BATTERY BACKUP TO OPERATE FOR A MINIMUM OF 90-MINUTES PER CODE REQUIREMENTS.
 3. LUMINAIRE SOCKETS TO HAVE LABEL "MAXIMUM 20 WATT LED LAMP".

PANEL: 'HP'		BUS: 100 A		DATE: 06/03/22		VOLTAGE: 120 / 240 VOLTS, 1 PHASE, 3 WIRE				
FEEDER: SEE ONE-LINE DIAGRAM		MAIN BRKR: 60 A		MOUNTING:						
CKT NO.	CIRCUIT DESCRIPTION	CKT BKR AMPS/POLE	LOAD TYPE	LOAD VA	PHASE	LOAD VA	LOAD TYPE	CKT BKR AMPS/POLE	CIRCUIT DESCRIPTION	CKT NO.
1	LIGHTING AND POLE RECEPTACLE	20/1	L	510	A			20/1	SPARE	2
3	RECEPTACLES	20/1	R	540	B			20/1	SPARE	4
5	EF-1, TSTAT, LOUVER	20/1	M	200	A			20/1	SPARE	6
7	HOT BOX GFCI	20/1	R	180	B			20/1	SPARE	8
9	PUMP DISCONNECT PANEL HEATER	20/1	H	500	A			20/1	SPARE	10
11	EWB-2	20/1	H	1500	B			20/1	SPARE	12
13	SPACE				A	2437	Z	60/2	PANEL GP	14
15	SPACE				B	2250	Z	--	--	16

CONNECTED LOAD		NOTES	
LOAD PER PHASE (VA)	A= 3,647 VA B= 4,470 VA	1.	
LOAD PER PHASE (AMPS)	A= 30.4 A B= 37.3 A	2.	
TOTAL LOAD (KVA)	8.1 KVA	3.	
TOTAL LOAD AMPS	33.8 A	4.	
		5.	

PANEL: 'GP'		BUS: 100 A		DATE: 06/03/22		VOLTAGE: 120 / 240 VOLTS, 1 PHASE, 3 WIRE				
FEEDER: SEE ONE-LINE DIAGRAM		MAIN BRKR: 60 A		MOUNTING:						
CKT NO.	CIRCUIT DESCRIPTION	CKT BKR AMPS/POLE	LOAD TYPE	LOAD VA	PHASE	LOAD VA	LOAD TYPE	CKT BKR AMPS/POLE	CIRCUIT DESCRIPTION	CKT NO.
1	GENERATOR ROOM LIGHTING	20/1	L	147	A	500	Z	20/1	GENERATOR BATTERY CHARGER	4
3	EWB-1	20/1	H	1500	B	750	H	20/2	GENERATOR JACKET HEATER	4
5	GENERATOR ROOM RECEPTACLES AND REMOTE FUEL	20/1	R	1040	A	750	H	--	--	6
7	SPACE	20/1			B				SPACE	8
9	SPACE	20/1			A				SPACE	10
11	SPACE	20/1			B				SPACE	12
13	SPACE	20/1			A				SPACE	14
15	SPACE	20/1			B				SPACE	16

CONNECTED LOAD		NOTES	
LOAD PER PHASE (VA)	A= 2,437 VA B= 2,250 VA	1.	
LOAD PER PHASE (AMPS)	A= 20.3 A B= 18.8 A	2.	
TOTAL LOAD (KVA)	4.7 KVA	3.	
TOTAL LOAD AMPS	19.5 A	4.	
		5.	

EQUIPMENT CONNECTION SCHEDULE

TAG	DESCRIPTION	LOCATION	LOAD	VOLT/PH	CIRCUIT	DISCONNECT	FEEDER	NOTES
EF-1	EXHAUST FAN	ELEC. ROOM	1/40 HP	120V / 1PH	HP - 5.	MANUAL SW.	(2) 12 AWG (1) 12 GND IN 3/4" C.	1.
EWB-1	ELECTRIC WALL HEATER	GEN. ROOM	1500W	120V / 1PH	GP - 3.	MANUAL SW.	(2) 12 AWG (1) 12 GND IN 3/4" C.	
EWB-2	ELECTRIC WALL HEATER	ELEC. ROOM	1500W	120V / 1PH	HP - 11.	MANUAL SW.	(2) 12 AWG (1) 12 GND IN 3/4" C.	

NOTES:
 1. CONTROLLED BY WALL MOUNTED TSTAT, INTERLOCK WITH LOUVER.

CIRCUIT SCHEDULE

ALL CIRCUITS ARE IDENTIFIED ON THE PLANS WITH THE DIAMOND SYMBOL. CONDUCTOR SIZES ARE BASED ON COPPER CONDUCTORS. CONDUIT SIZES ARE SHOWN FOR CASES WHEN CIRCUIT CONDUCTORS ARE RUN WITHOUT OTHER CIRCUITS. MULTIPLE CIRCUITS RUN IN COMMON CONDUITS ARE SHOWN ON PLANS AND SUPERSEDE THE BASIC CONDUIT SIZE SHOWN.

RACEWAY SIZES ARE IN INCHES WITH QUANTITIES IN EXCESS OF (1) SHOWN IN ADJACENT PARENTHESIS. CONDUCTOR CONFIGURATIONS ARE CODED AS FOLLOWS: P- FOR POWER CONDUCTORS, G - FOR GROUND CONDUCTORS, N - FOR NEUTRAL CONDUCTORS, C - FOR CONTROL CONDUCTORS, TSP - FOR TWISTED SHIELDED PAIR, AND SP - FOR SPARE CONDUCTORS.

CIRCUIT NUMBER	FROM	TO	CONDUCTORS	RACEWAY	NOTES
1	UTILITY TRANSFORMER	METER MAIN	(3) 3/0 AWG, P (1) 3/0 AWG, N	3	VERIFY ALL REQUIREMENTS WITH UTILITY PRIOR TO INSTALL.
2	METER MAIN	AUTOMATIC TRANSFER SWITCH	(3) 2 AWG, P (1) 2 AWG, N (1) 8 AWG, G	1.5	
3	GENERATOR	AUTOMATIC TRANSFER SWITCH	(3) 2 AWG, P (1) 2 AWG, N (1) 8 AWG, G	1.5	
4	AUTOMATIC TRANSFER SWITCH	MANUAL TRANSFER SWITCH	(3) 2 AWG, P (1) 2 AWG, N (1) 8 AWG, G	1.5	
5	GENERATOR RECEPTACLE	MANUAL TRANSFER SWITCH	(3) 2 AWG, P (1) 2 AWG, N (1) 8 AWG, G	1.5	
6	MANUAL TRANSFER SWITCH	MCC	(3) 2 AWG, P (1) 2 AWG, N (1) 8 AWG, G	1.5	
7	MCC - PANEL 'HP'	PANEL GP	(2) 4 AWG, P (1) 4 AWG, N (1) 10 AWG, G	1.5	
8	PANEL GP	GENERATOR	(3) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	1	GENERATOR BLOCK HEATER AND BATTERY CHARGER
9	MCC	PUMP DISCONNECT PANEL	(3) 10 AWG, P (1) 10 AWG, G	1	PUMP 1
10	MCC	PUMP DISCONNECT PANEL	(3) 10 AWG, P (1) 10 AWG, G	1	PUMP 2
11	MCC	PUMP DISCONNECT PANEL	---	1.5	SPARE
12	MCC - PANEL 'HP'	ODOR CONTROL PAD (FUTURE)	---	1	FUTURE ODOR CONTROL PAD POWER.
13	NOT USED				
14	MCC - PANEL 'HP'	HOT BOX GFCI	(1) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	1	
15	EXTERIOR LIGHTING SWITCH	EXTERIOR POLE LIGHT	(2) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	1	PROVIDE UNSWITCH CIRCUIT TO RECEPTACLE ON POLE LIGHT.
16	NOT USED				
17	REMOTE FUELING STATION	GENERATOR	(6) 14 AWG, C (1) 12 AWG, G	1	FILL SOLENIID AND TANK SIGNALS, COORDINATE WITH MFR.
18	MCC CONTROL PANEL	AUTOMATIC TRANSFER SWITCH	(8) 14 AWG, C (1) 12 AWG, G	1	GENERATOR CONTROLS
19	MCC CONTROL PANEL	MISSION CONTROL PANEL	(3) 16 TSP, C (15) 14 AWG, C (1) 12 AWG, G	2	
20	MCC CONTROL PANEL	PUMP DISCONNECT PANEL	(6) 14 AWG, C (1) 12 AWG, P (1) 12 AWG, N (1) 12 AWG, G	1	FLOAT SWITCHES (OVERFLOW, HIGH, LOW) PUMP DISCONNECT PANEL HEATER ROUTE HTR CKT FROM PANEL HP IN MCC
21	MCC CONTROL PANEL	PUMP DISCONNECT PANEL	MFR CABLES (1) 12 AWG, G	1.5	LEVEL TRANSDUCER, VERIFY CONDUIT SIZE REQUIRED WITH MFR RECOMMENDATIONS.
22	MCC CONTROL PANEL	VALVE VAULT FLOW METER	MFR CABLES (1) 12 AWG, G	(2) 1.25	FLOW METER, VERIFY CONDUIT SIZE AND COUNT REQUIRED WITH MFR RECOMMENDATIONS.
23	MCC CONTROL PANEL	VALVE VAULT DISCHARGE PRESS. XDCR	(1) 16 TSP, C (1) 12 AWG, G	1	PRESSURE XDCR INTRINSICALLY SAFE CIRCUIT.
24	MCC CONTROL PANEL	VALVE VAULT, CHECK VALVE LIMIT SWITCH	(4) 14 AWG, C (1) 12 AWG, G	1	VALVE VAULT LIMIT SWITCHES INTRINSICALLY SAFE CIRCUIT.
25	MCC CONTROL PANEL	GENERATOR	(8) 14 AWG, C (1) 12 AWG, G	1	GENERATOR CONTROLS
26	MCC CONTROL PANEL	ODOR CONTROL PAD (FUTURE)	---	2	FUTURE ODOR CONTROL PAD CONTROLS.
27	MCC CONTROL PANEL	VALVE VAULT	---	(2) 1.5	SPARE



CITY LOGO



STAMP



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 www.otak.com

CONSULTANT

**S. 1ST AND STRAND STREETS
 ROAD AND UTILITY EXTENSIONS**
 ST. HELENS, OREGON
ELECTRICAL SCHEDULES

TITLE

DATE DESCRIPTION

REVISIONS

NAVDB8

DATUM

R&W CAD R&W

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FINAL PLANS

STATUS

JUNE 10, 2022

DATE

19823 / P-525

PROJECT NUMBER

E4.00

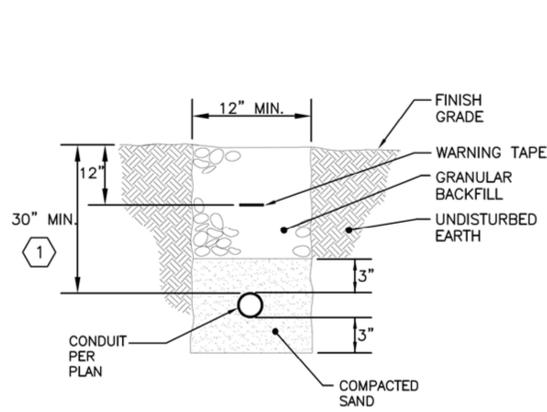
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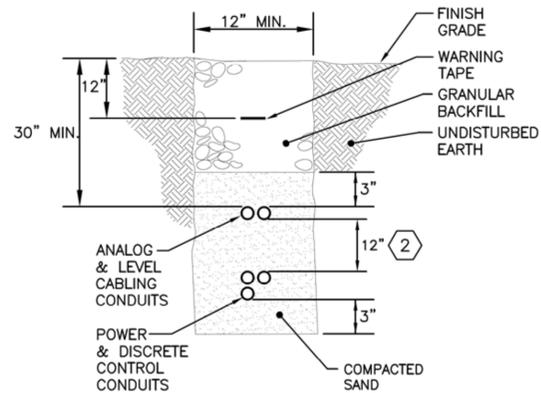
R&W ENGINEERING, INC.
 9615 S.W. Allen Boulevard
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Project No.: 1655.002.001 Contact: MICHAEL FOSTER

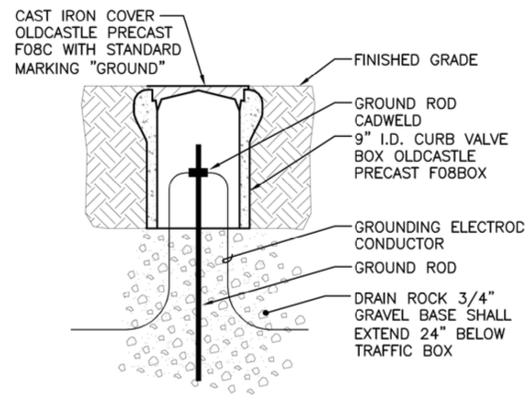
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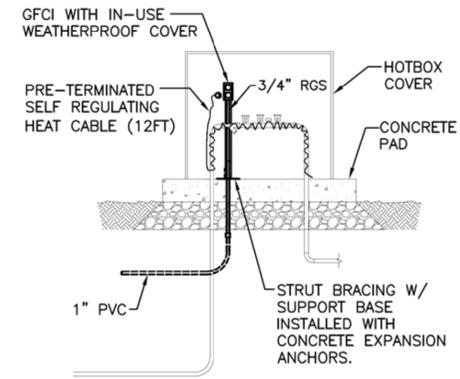
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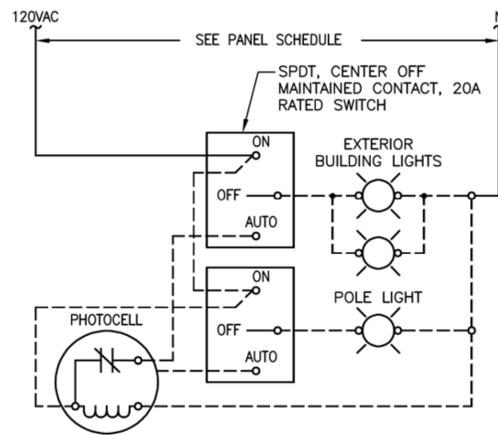
2 MIXED CONDUIT TRENCH
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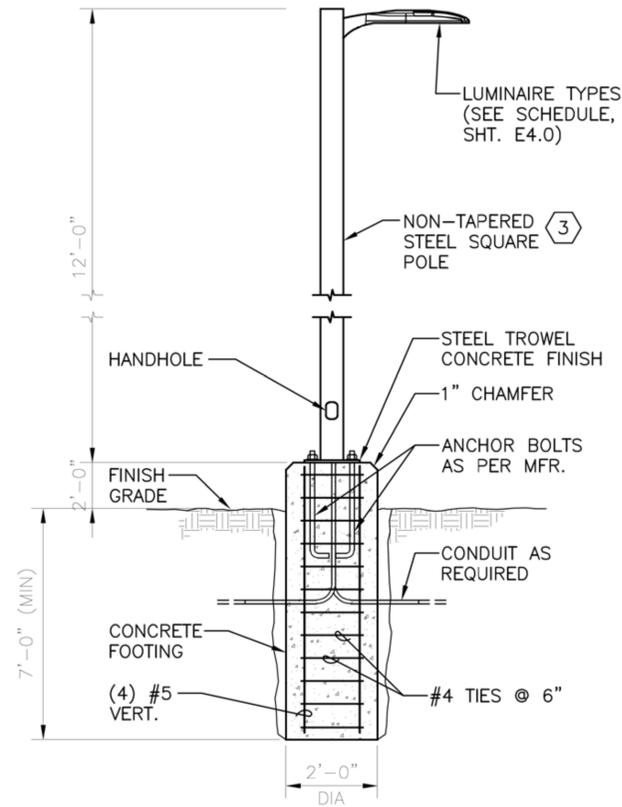
3 GROUND ROD TEST DETAIL
E5.00 NOT TO SCALE



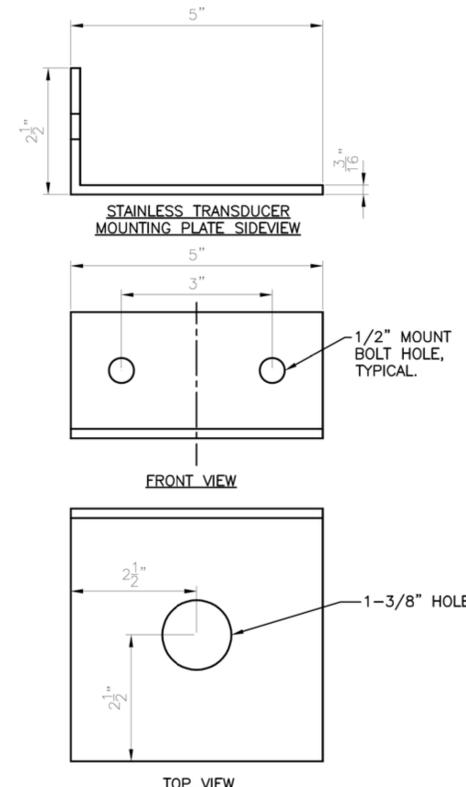
4 HOTBOX GFCI DETAIL
E5.00 NOT TO SCALE



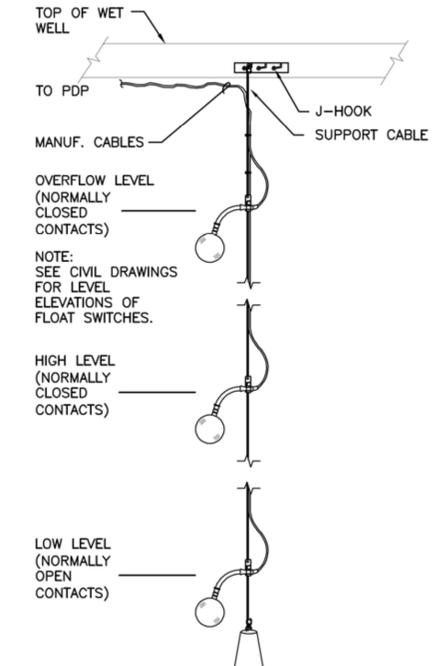
5 LIGHTING SWITCH CONTROL DETAIL
E5.00 NOT TO SCALE



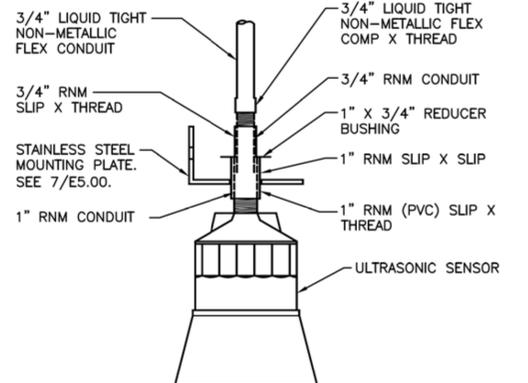
6 AREA LIGHT DETAIL
E5.00 NOT TO SCALE



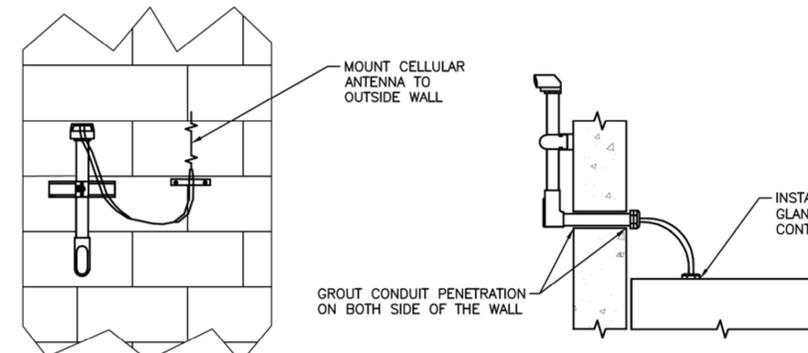
7 MOUNTING PLATE DETAIL
E5.00 NOT TO SCALE



9 FLOAT SWITCH MOUNTING DETAIL
E5.00 NOT TO SCALE



8 ULTRASONIC MOUNTING DETAIL
E5.00 NOT TO SCALE



10 CELLULAR ANTENNA MOUNTING DETAIL
E5.00 NOT TO SCALE

NOTES THIS SHEET

- VERIFY TRENCH DEPTH AND COVERING FOR INCOMING SERVICE CONDUIT WITH LOCAL UTILITY AND CIVIL DISCIPLINE FOR INTERSECTING PIPES.
- 12" SEPARATION MAY BE HORIZONTAL WITH SAME 30" TRENCH DEPTH FOR MIXED CONDUITS.
- 4" SQUARE STEEL POLE WITH 4'-0" ARM. POLE AND ARM FINISH SHALL BE DARK BRONZE AND MATCH LUMINAIRE. POLE SHALL BE WELDABLE-GRADE, HOT-ROLLED CARBON STEEL TUBING WITH MINIMUM YIELD OF 55,000 PSI. PROVIDE MANUAL RECEPTACLE WITH DIE CAST METAL WEATHERPROOF IN-USE COVER MOUNTED ON POLE AT 18" AFG.

- DETAIL NOTES:**
- ALL ASSOCIATED FIXINGS TO BE STAINLESS STEEL.
 - TRANSDUCER MOUNTING PLATE TO UNISTRUT BOLTS SHALL BE 3/8" TO ALLOW FOR PLUMB AND LEVEL ADJUSTMENT OF TRANSDUCER.
 - TRANSDUCER CABLE SHALL BE FULLY ENCLOSED BY 3/4" LT FLEX, UP TO TRENCH. DO NOT RUN LT FLEX IN TRENCH.
 - TRANSDUCER CABLE SHALL BE A "HOME RUN" WITH NO SPLICES OR TERMINATIONS UNTIL LANDED AT CONTROLLER.

CITY LOGO

REGISTERED PROFESSIONAL ENGINEER
18533
JULY 10, 1995
JEFFREY L. HOWARD
EXPIRES 6/30/23

STAMP
Otak

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**S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS**
ST. HELENS, OREGON

ELECTRICAL DETAILS

#	DATE	DESCRIPTION

REVISIONS

NAV088
DATUM

R&W CAD R&W
DRAWN BY CHECKED BY

FINAL PLANS
STATUS

JUNE 10, 2022
DATE

19823 / P-525
PROJECT NUMBER

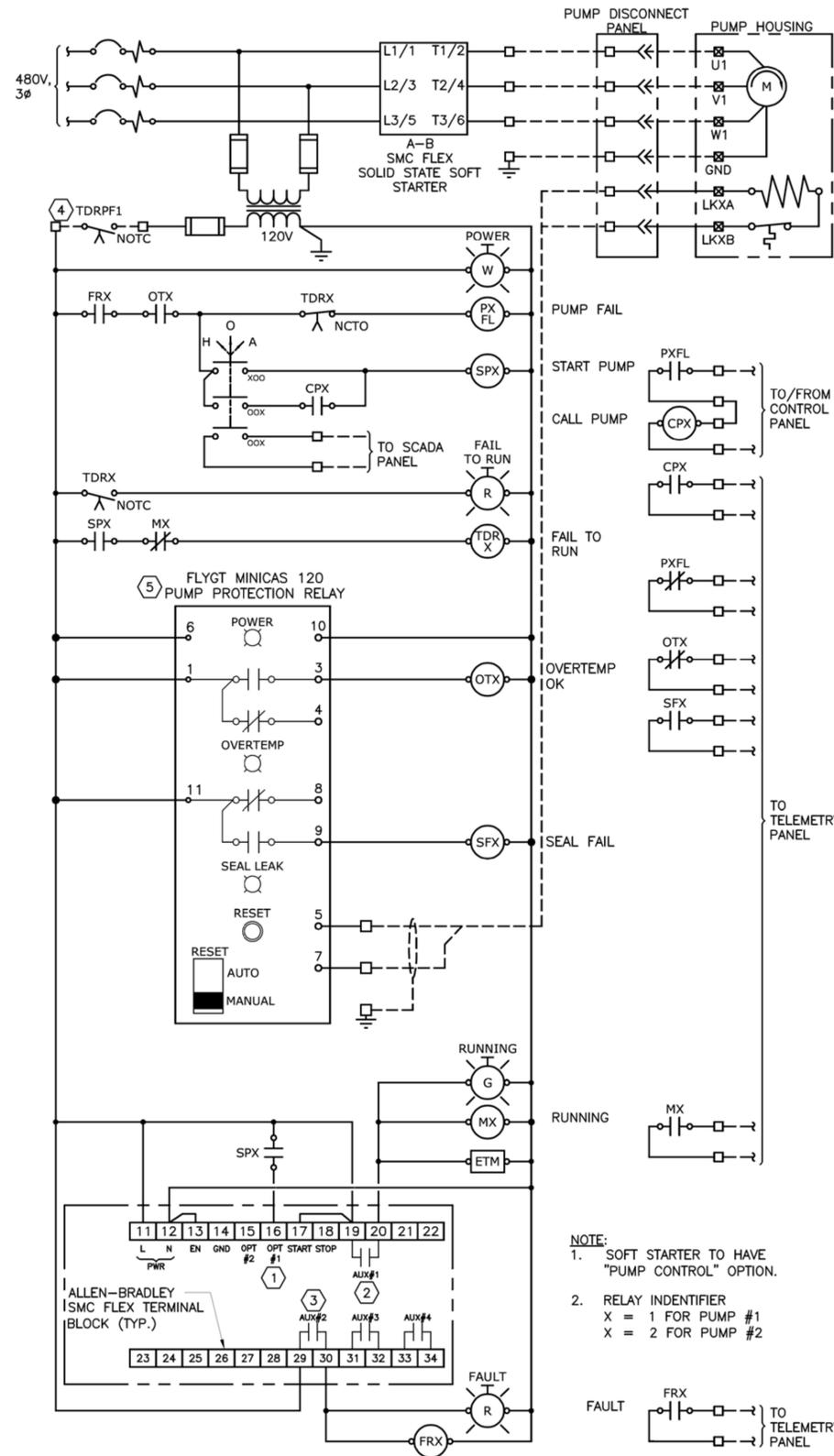
E5.00

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Project No.: 1655.002.001 Contact: MICHAEL FOSTER

W:\WE\1655_1655_Croyling_Engineers\002_St_Helens_WW_E5.001_Dwg\DWG\E5.00.dwg Layout Name: Layout1

W:\WE\1655_Croyling_Engineers\002_St_Helens_WW_ES\001_Dwg\DWG\E6.00.dwg - Layout - Name - Layout1
 PlotDate: Jun 06 2022 - 11:58am - modtp



SOFT STARTER DIAGRAM
NOT TO SCALE

- NOTE:
- SOFT STARTER TO HAVE "PUMP CONTROL" OPTION.
 - RELAY IDENTIFIER
X = 1 FOR PUMP #1
X = 2 FOR PUMP #2

- NOTES THIS SHEET**
- OPTION INPUT #1 PROGRAMMED FOR "STOP OPTION" (PUMP CONTROL STOP).
 - AUX #1 PROGRAMMED FOR "UP TO SPEED (NO)".
 - AUX #2 PROGRAMMED FOR "FAULT (NC)" (CONTACTS TO OPEN ON FAULT CONDITION OR LOSS OF POWER).
 - POWER FAIL TIME DELAY LOCATED IN SEPARATE MCC SECTION. SEE ONE-LINE DIAGRAM.
 - FLYGT MINICAS 120 SENSOR. THERMAL CONTACT CLOSED IN "NORMAL CONDITION", OPENING ON FAULT. LEAK CONTACT OPEN IN "NORMAL CONDITION", CLOSING ON FAULT. MOUNTED ON INTERIOR DOOR NEAR INTERFACE UNIT.



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 ST. HELENS, OREGON
ELECTRICAL WIRING DIAGRAMS

TITLE		
#	DATE	DESCRIPTION

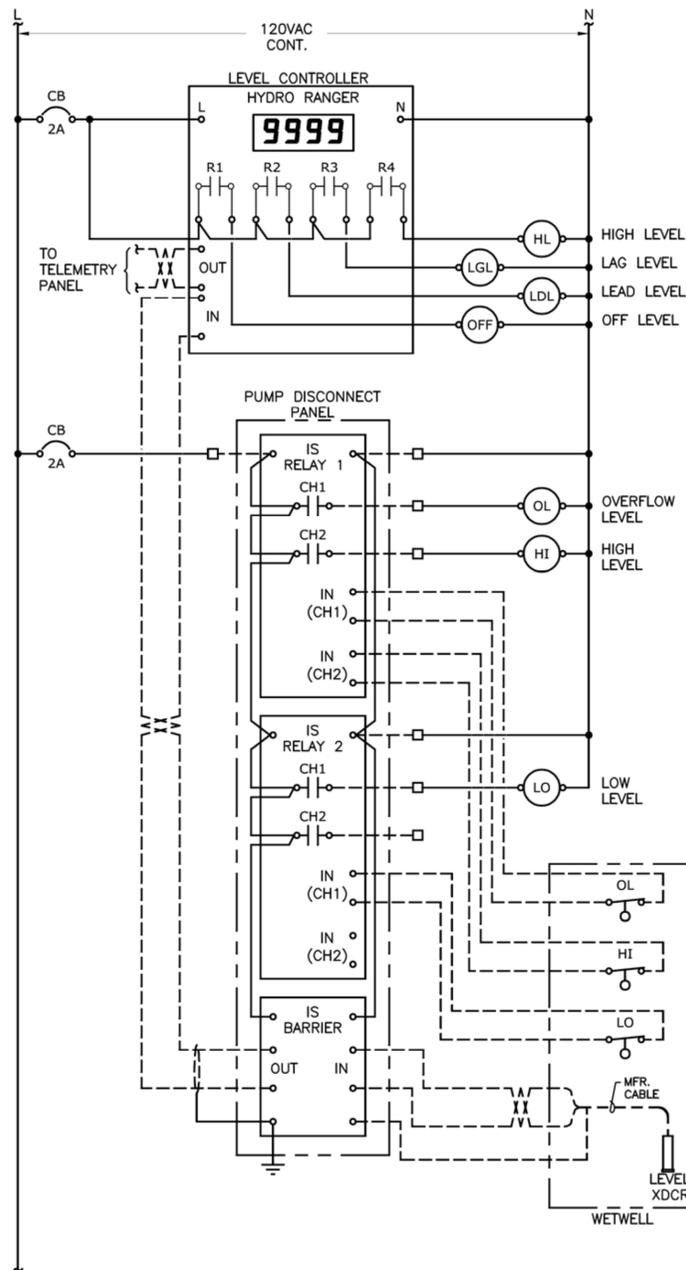
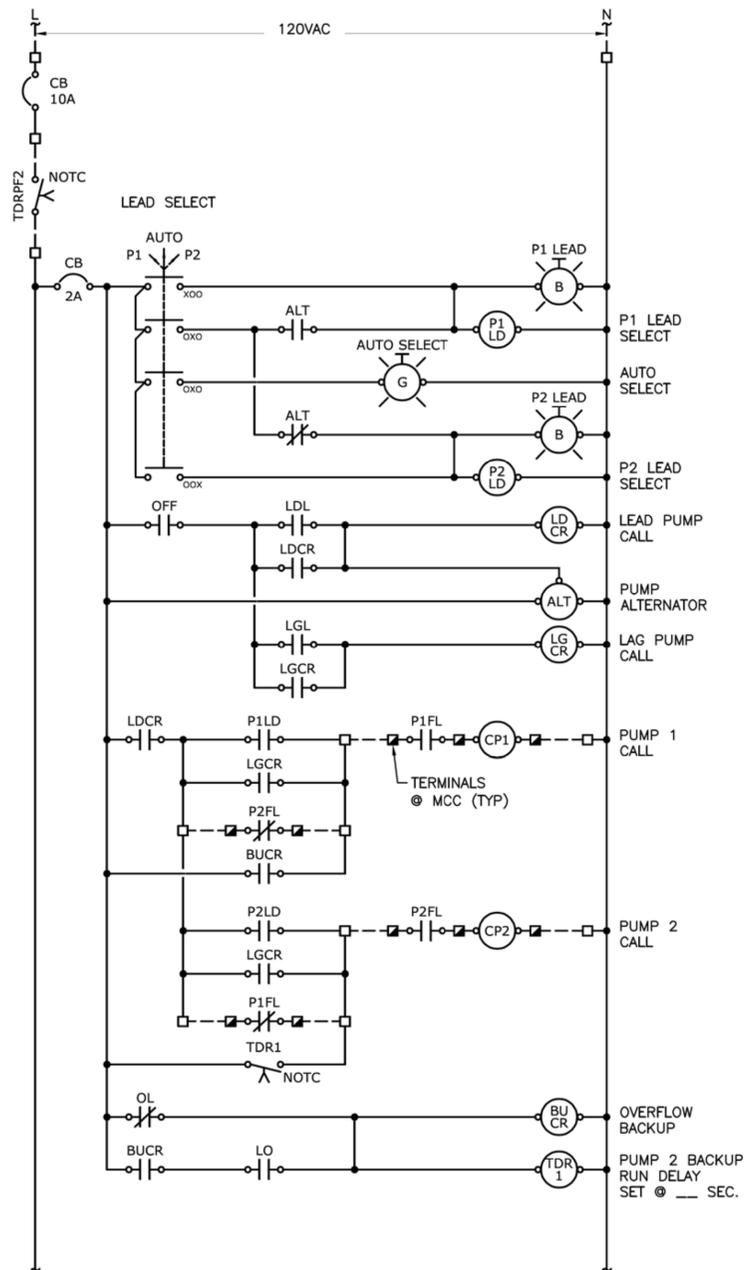
REVISIONS	

NAV088	DATUM
R&W CAD	R&W
DRAWN BY	CHECKED BY
FINAL PLANS	STATUS
JUNE 10, 2022	DATE
19823 / P-525	PROJECT NUMBER

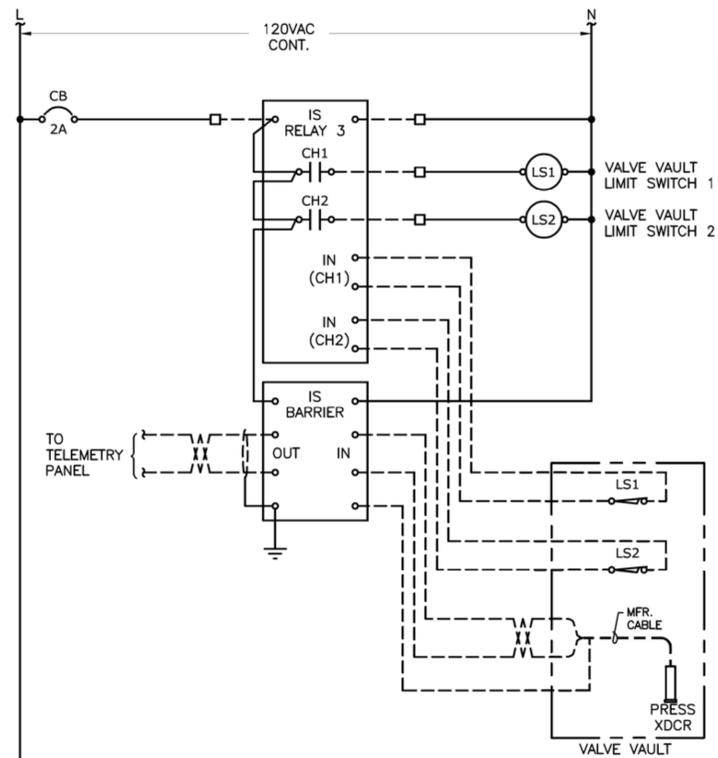
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E-mail: rweng@rweng.com

Project No.: 1655.002.001 Contact: MICHAEL FOSTER



PUMP CONTROL DIAGRAM
NOT TO SCALE



CITY LOGO
REGISTERED PROFESSIONAL ENGINEER
 18533
 2002.06.10.00.33.47-0700
 JULY 10, 1995
 JEFFREY L. HOWARD
 EXPIRES 6/30/23



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 ST. HELENS, OREGON
ELECTRICAL WIRING DIAGRAMS

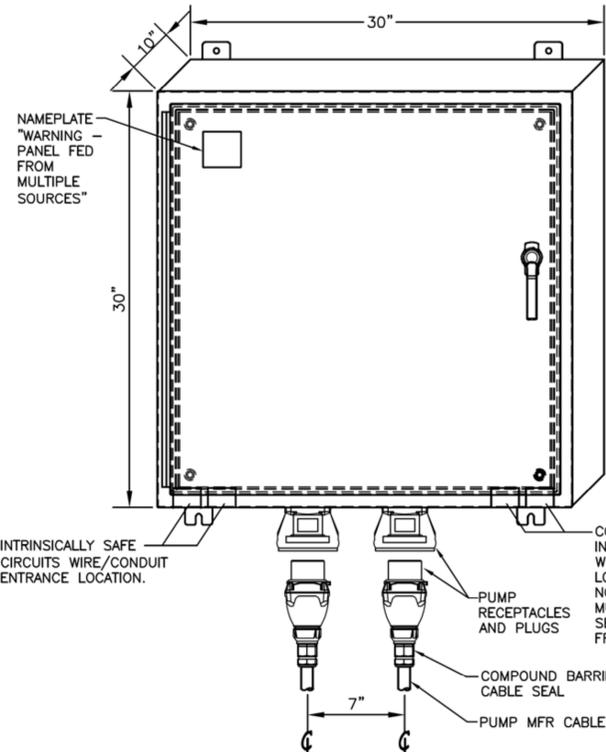
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 DATUM
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 STATUS
 JUNE 10, 2022
 DATE
 19823 / P-525
 PROJECT NUMBER

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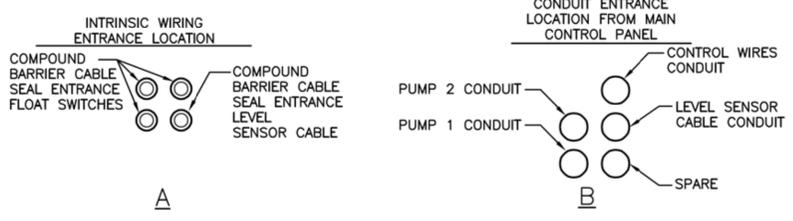
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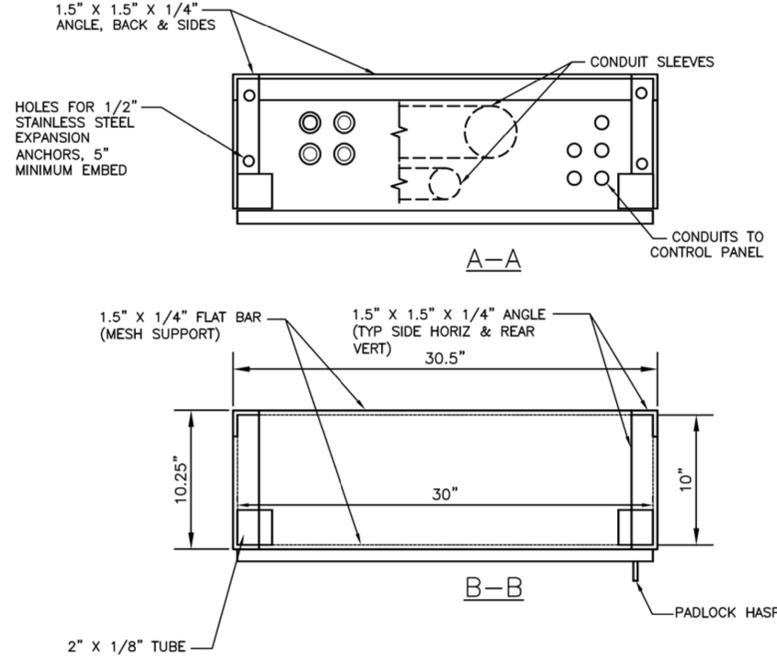
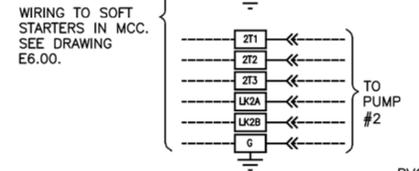
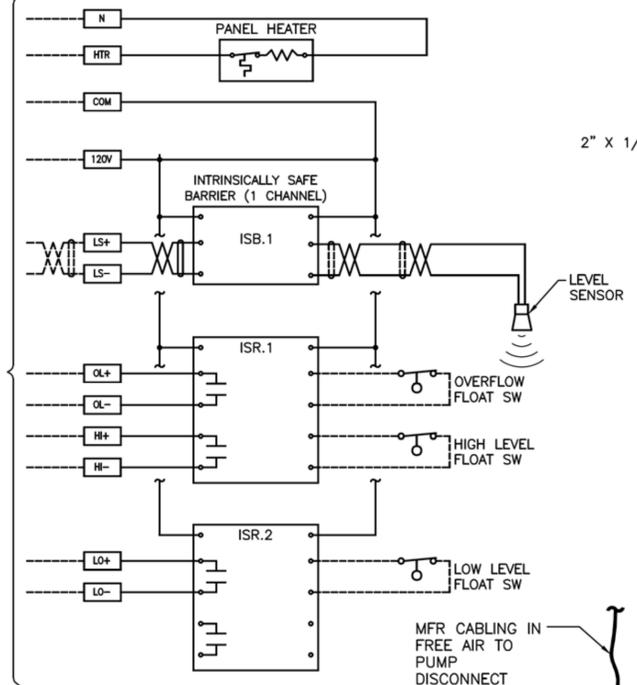
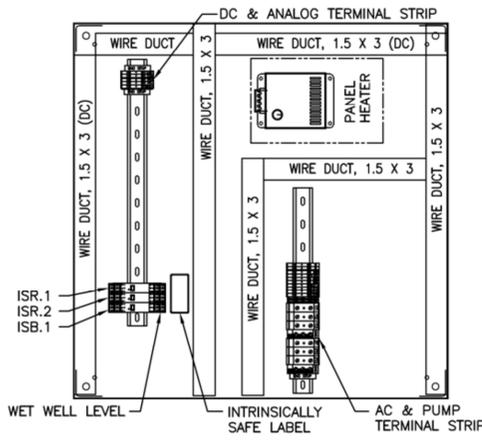


FRONT VIEW
NTS

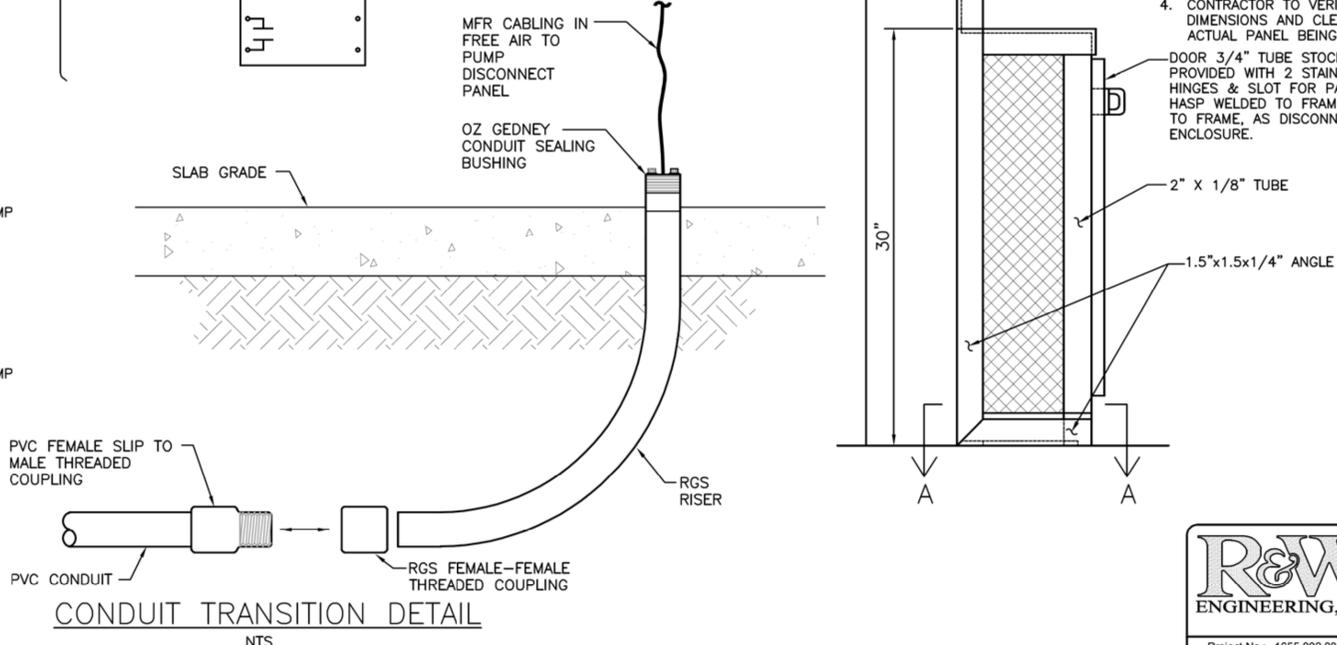
NOTE: ALL CONDUITS MUST BE CONTINUOUS RGS FROM BELOW GRADE TO CONTROL PANEL. REFERENCE NEC ARTICLE 501.15 (B2) EXCEPTION NO 1.



BOTTOM VIEW
NTS



- FRAME NOTES:
1. ALL MATERIAL TO BE STAINLESS STEEL.
 2. BACK AND SIDES OF STAND TO BE ENCASED WITH EXPANDED METAL MESH, WELDED TO STAND AND FRAME (1/2"x13MM).
 3. COVER DOOR WITH SAME MESH AS STAND.
 4. CONTRACTOR TO VERIFY ALL DIMENSIONS AND CLEARANCES WITH ACTUAL PANEL BEING PROVIDED.
- DOOR 3/4" TUBE STOCK FRAME, PROVIDED WITH 2 STAINLESS STEEL HINGES & SLOT FOR PADLOCK HASP WELDED TO FRAME. DOOR TO FRAME, AS DISCONNECTED ENCLOSURE.



S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS
ST. HELENS, OREGON

DISCONNECT PANEL WIRING & LAYOUT

TITLE	#	DATE	DESCRIPTION
E7.00			

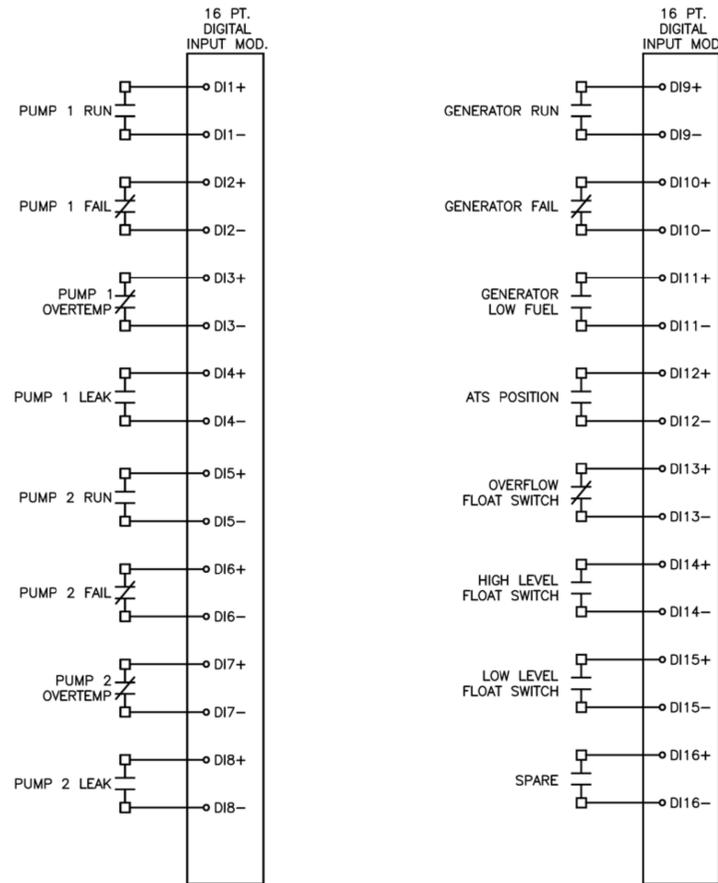
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NAVD08 DATUM
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FINAL PLANS STATUS
JUNE 10, 2022 DATE
19823 / P-525 PROJECT NUMBER

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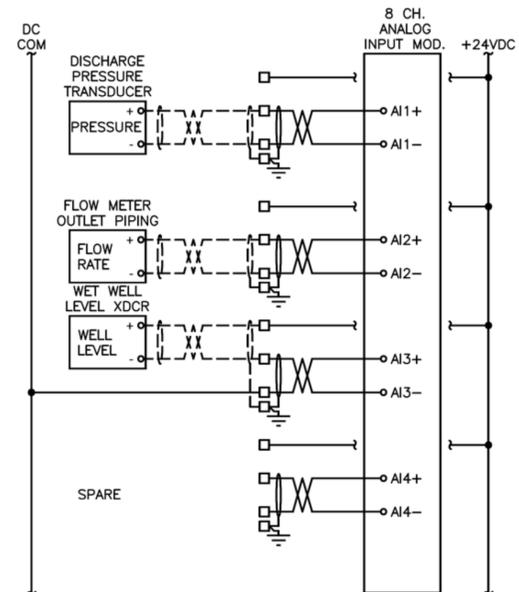
GENERAL NOTES

A, ANALOG AND DIGITAL INPUTS SHOWN FOR MISSION CONTROL PANEL.



GENERIC DIGITAL INPUTS

SCALE: N.T.S.

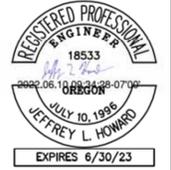


GENERIC ANALOG INPUTS

SCALE: N.T.S.



CITY LOGO



STAMP



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CONSULTANT

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ROAD AND UTILITY EXTENSIONS**
ST. HELENS, OREGON

ELECTRICAL DETAILS

TITLE	#	DATE	DESCRIPTION

REVISIONS

NAVD88
DATUM

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JUNE 10, 2022
DATE

19823 / P-525
PROJECT NUMBER

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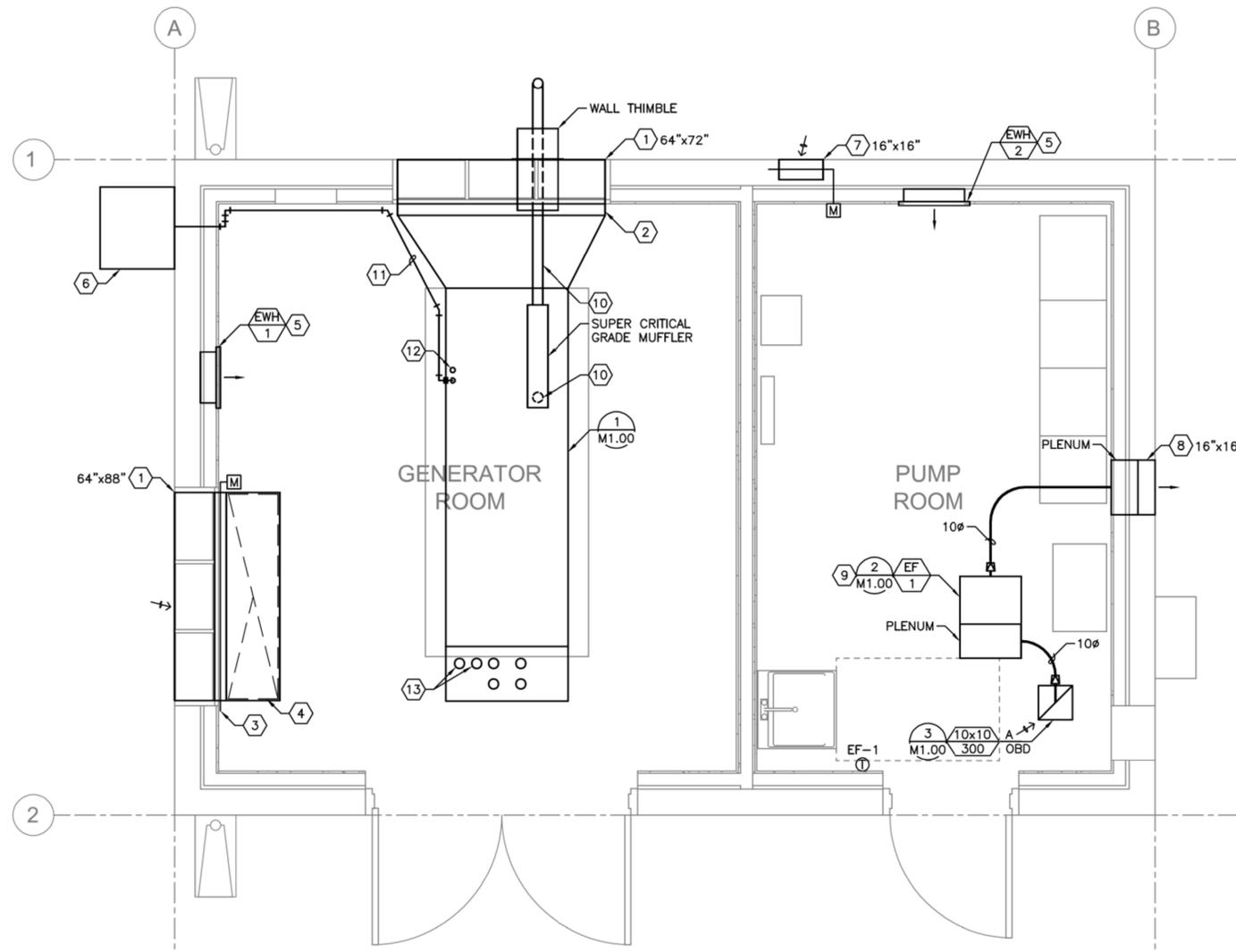
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Project No.: 1655.002.001 Contact: MICHAEL FOSTER

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1 MECHANICAL FLOOR PLAN
M1.01 SCALE: 1/2" = 1'-0"

NOTES THIS SHEET

- 1 GALVANIZED STEEL STATIONARY ACOUSTICAL LOUVER WITH BIRD SCREEN. LOUVER SHALL COME PRIMED, READY FOR PAINTING. SIZE INDICATED SHALL BE ON MODULE WITH CMU BLOCK. MOUNT AT 8" AFF. RUSKIN ACLB45 OR APPROVED EQUAL.
- 2 EXTRUDED ALUMINUM COUNTER BALANCED BACKDRAFT DAMPER (SAME SIZE AS LOUVER) RUSKIN CBD4 OR APPROVED EQUAL.
- 3 MOTORIZED CONTROL DAMPER WITH ACTUATOR. SAME SIZE AS LOUVER. RUSKIN CD36 OR APPROVED EQUAL. DAMPER SHALL FAIL OPEN AND BE PROVED OPEN PRIOR TO GENSET RUNNING.
- 4 1'-4"x5'-4" ACOUSTICALLY LINED PLENUM ATTACHED TO BACKSIDE OF DAMPER. PLENUM SHALL BE 8" AFF. AND OPEN AT BOTTOM.
- 5 MOUNT HEATER AT 24" AFF.
- 6 FUEL FILL BOX SURFACE MOUNTED AT 24" ABOVE GRADE WITH 2" BACK PIPE CONNECTION. BOX SHALL BE 304 STAINLESS STEEL. COVER STICKERS TEMPORARILY AND PAINT PER ARCHITECTURAL. BOX SHALL BE MORE THAN 5' FROM ANY BUILDING OPENING. BOX TO COMPLY WITH NFPA REQUIREMENTS AND INCLUDE:
 - MAIN SUPPLY LINE WITH MANUAL BALL VALVE, ANGLE CHECK VALVE AND TIGHTFILL ADAPTER.
 - LOCKABLE, WEATHERPROOF, ENCLOSURE WITH 10-GALLON CONTAINMENT.
 - LOCKABLE, MANUAL BALL VALVE.
 - TWO-POINT ALARM PANEL TO RECEIVE HIGH LEVEL AND LEAK DETECTION ALARM INDICATIONS.
 - GROUND CONNECTION.
 - ON/OFF POWER SWITCH AND VISUAL INDICATION
 - 90% AND 95% TANK FULL ALARM, VISUAL AND AUDIBLE, WITH AUTOMATICALLY CLOSING VALVE TO STOP FUEL DELIVERY.
 - MORRISON BROS. 715 REMOTE FILLPORT, SIMPLX, PRYCO OR APPROVED EQUAL.
- 7 EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER WITH BIRDSCREEN. LOUVER SHALL COME PRIMED, READY FOR PAINTING. SIZE INDICATED SHALL BE ON MODULE WITH CMU BLOCK. MOUNT AT 24" AFF. RUSKIN ELC6375DAX OR APPROVED EQUAL. PROVIDE WITH DAMPER ACTUATOR. DAMPER SHALL FAIL OPEN.
- 8 EXTRUDED ALUMINUM STATIONARY LOUVER WITH BIRDSCREEN. LOUVER SHALL COME PRIMED, READY FOR PAINTING. SIZE INDICATED SHALL BE ON MODULE WITH CMU BLOCK. MOUNT IN GABLE. RUSKIN ELF375DX OR APPROVED EQUAL.
- 9 PROVIDE 24"x24" CODE REQUIRED ACCESS DOOR IN CEILING BELOW EF-1 FOR SERVICE.
- 10 3" EXHAUST PIPE. PIPE SLOPE TOWARD GENERATOR.
- 11 2" FUEL PIPE. SLOPE A MINIMUM OF 2% TOWARD TANK.
- 12 2" VENT PIPE THROUGH ROOF. FLASH PENETRATION WATER TIGHT. TERMINATE WITH APPROVED VENT CAP.
- 13 3" EMERGENCY VENT THROUGH ROOF. FLASH PENETRATION WATER TIGHT. TERMINATE WITH APPROVED VENT CAP.



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**S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS**
ST. HELENS, OREGON
MECHANICAL SITE PLAN

TITLE	#	DATE	DESCRIPTION

REVISIONS	
NAVD88	
DATUM	
R&W CAD	R&W
DRAWN BY	CHECKED BY
FINAL PLANS	STATUS
JUNE 10, 2022	DATE
19823 / P-525	PROJECT NUMBER

M1.01

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Project No.: 1655.002.001 Contact: MARK JONES

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ST. HELENS-PUMP STATION

PROJECT TEAM

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PLUMBING ENGINEER
GRAYLING ENGINEERS
654 OFFICERS ROW
VANCOUVER, WA 98661
PHONE: (360) 347-6399
CONTACT: KYLE THOMPSON, PE

DRAWING SHEET INDEX

GENERAL	COVER SHEET	PLUMBING	PUMP STATION NOTES AND ABBREVIATIONS	ELECTRICAL	ELECTRICAL LEGEND AND ABBREVIATIONS
G0.01	G0.02	PS-1	PUMP STATION DESIGN DATA	E1.00	ELECTRICAL ONE-LINE, SCHEMATIC & DETAILS
G0.02	G0.11	PS-2	PUMP STATION SITE PLAN	E2.00	ELECTRICAL SITE PLAN
		PS-3	PUMP STATION GRADING AND SURFACING PLAN	E3.00	ELECTRICAL SCHEDULES
STRUCTURAL	GENERAL NOTES	PS-4	PUMP STATION MECHANICAL PLAN	E4.00	ELECTRICAL DETAILS
S0.01	S2.01	PS-5	PUMP STATION SECTION A - WETWELL & VAULT	E5.00	ELECTRICAL WIRING DIAGRAMS
	S3.01	PS-6	PUMP STATION SECTION B - VAULT	E6.00	ELECTRICAL WIRING DIAGRAMS
		PS-7	PUMP STATION DETAILS I	E7.00	DISCONNECT PANEL, WIRING & LAYOUT
ARCHITECTURE		PS-8	PUMP STATION DETAILS II	E8.00	ELECTRICAL DETAILS
A1.01	A2.01	PS-9	PUMP STATION DETAILS III		
	A2.02	MECHANICAL			
	A3.01	M1.00	MECHANICAL LEGEND, SCHEDULES AND DETAILS		
	A4.01	M1.01	MECHANICAL SITE PLAN		
	A7.01				
	A8.01				
	A8.11				

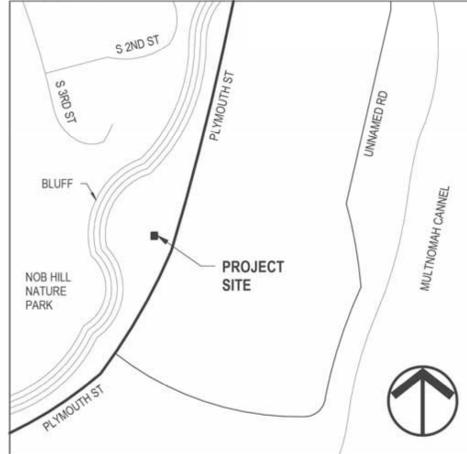
DEFERRED SUBMITTALS

- FIRE STOPPING
- FIRE ALARMS / DETECTION
- WOOD ROOF TRUSSES



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VICINITY MAP



PROJECT INFORMATION

SITE
ADDRESS: 1ST & STRAND LIFT STATION, ST HELENS, OR

LEGAL DESCRIPTION:
NEW PUMP STATION EQUIPPED WITH UNDERGROUND UTILITIES AND PUMP HOUSE. PUMP HOUSE INCLUDES A GENERATOR ROOM.

THE 384 SF BUILDING IS CONSTRUCTED WITH CMU AND METAL FRAMED WALLS WITH A WOOD TRUSS ROOF ON A STRUCTURALLY DESIGNED CONCRETE FOUNDATION AND SLAB ON GRADE.

THE PROJECT CONFORMS TO ABAS ENTRY CLEARANCES, CIRCULATION AND EQUIPMENT CLEARANCES.

TOTAL SITE: 4,131 SF (0.09 ACRES)
ON-SITE IMPERVIOUS (BLDG): 469 SF (0.01 ACRE)
ON-SITE IMPERVIOUS (ROADS, WALKS): 2,247 SF (0.05 ACRE)

ZONING
RD - RIVERFRONT DISTRICT (ORDINANCE NO. 3215 - ATTACHMENT "B" - ZONING)

EXISTING USE: NA
PROPOSED USE: PUMP STATION AND GENERATOR STORAGE

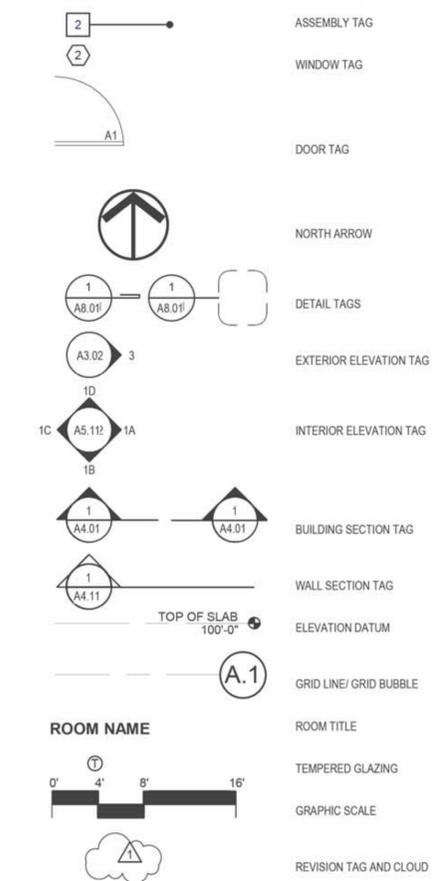
BUILDING DATA

CONSTRUCTION TYPE	VB
NUMBER OF FLOORS	1
BUILDING AREA	384 SF
BUILDING HEIGHT	11' - 0" +/-

ABBREVIATIONS

# & CENTERLINE	GA	GALVE	GALVANIZED	PLAM	PLASTIC LAMINATE
AC	GAL	GB	GALVANIZED	PL	PLATE, PROPERTY LINE
ACC	GB	GPM	GALLONS PER MINUTE	PLYWD	PLYWOOD
AED	GYP	GYP	GYPSUM	PNL	PANEL
	HB	HC-PHB	HOSE BIB	PNT	PAINT
	HDR	HDW	HOLLOW CORE PRIMED	PR	PAIR
AFF	HM	HORIZ	HARDBOARD	PREFIN	PRE-FINISHED
ADJ	HM	HR	HEADER	PREPR	PRE-PRIMED
AHU	HORIZ	HVAC	HARDWARE	PT	PRESSURE TREATED, POST TENSION
ALUM	HR		HOLLOW METAL	R	RISER, RADIUS
APPROX	HVAC		HORIZONTAL	R & S	ROD AND SHELF
APT			HOUR	RCP	REFLECTED CEILING PLAN(S)
			HOUR HEATING VENTILATION AND AIR CONDITIONING	RD	ROOF DRAIN
BD			BOARD	REF	REFERENCE
BDRM	IBC		BEDROOM	REFL	REFLECTED
BLDG			BUILDING	REFR	REFRIGERATOR
BLKG			BLOCKING	REQD	REQUIRED
BM	IN		BEAM	REST	RESTROOM
BOD	INFO		BASIS OF DESIGN	RM	ROOM
BOT	INSUL		BOTTOM	RO	ROUGH OPENING
BR	INT		BEDROOM		
	JAN		CAST-IN-PLACE	SAMF	SELF-ADHERING MEMBRANE
CIP	JST		CONTROL JOINT	SD	FLASHING
CJ	KDHM		CLOSET	SF	SMOKE DETECTOR
CL	KIT		CLOSET	SHTHG	SQUARE FOOT
CLG			CEILING	SIM	SHEATHING
CLR			CLEAR(ANCE)	SIM	SIMILAR
CMU	LAM		CONCRETE MASONRY UNIT	SPEC	SPECIFICATION
CPT	LAJN		CARPET	STD	STANDARD
COL	LD		COLUMNS	STL	STEEL
CONT	LGT		CONTINUOUS	STOR	STORAGE
CONC	LN		CONCRETE	STC	SOUND TRANSMISSION CLASS
CORR	LVT		CORRIDOR	STRUCT	STRUCTURAL
	LW		LUXURY VINYL TILE LIVEWORK	SV	SHEET VINYL
				T	TREAD, TEMPERED
DBL	MAINT		DOUBLE	T & G	TONGUE & GROOVE
DF	MATL		DRINKING FOUNTAIN	TB	TOWEL BAR
DIA	MAX		DIAMETER	TG	TEMPERED GLASS
DIM	MDF		DIMENSION	THK	THICK, THICKNESS
DN	MECH		DOWN	TO	TOP OF
DR	MEMB		DOOR	TP	TOILET PAPER
DS	MFR		DOWN SPOUT	T/S	TUB/SHOWER
DU	MIN		DWELLING UNIT	TYP	TYPICAL
DW	MIRR		DISHWASHER	UNO	UNLESS NOTED OTHERWISE UNFINISHED
DWG	MISC		DRAWING	UNFIN	
	MTL		MISCELLANEOUS METAL		
EA	N		EACH	VCT	VINYL COMPOSITION TILE
EJ	NA		EXPANSION JOINT	VERT	VERTICAL
EL	NIC		ELEVATION	VRFY	VERIFY
ELEC	NO		ELECTRICAL		
ELEV	NR		ELEVATOR		
EP	NTS		ELECTRICAL PANEL		
EQUIP			EQUIPMENT	W	WASHER
EQ			EQUAL	WD	WOOD
EXIST	OC		EXISTING	WH	WATER HEATER
EXT	OCC		EXTERIOR	WIC	WALK IN CLOSET
				WIN	WINDOW
FCP	OLF		FIBER CEMENT PANEL	WP	WATERPROOF
FD	OPP		FLOOR DRAIN	WR	WATER RESISTANT
FEC	OPNG		FIRE EXTINGUISHER CABINET	WRB	WATER RESISTANT BARRIER
FIN	ORD		FINISH		
FLR	OSB		FLOOR		
FND	OSSC		FOUNDATION		
FO			FACE OF		
FOC	OVFL		FACE OF CONCRETE		
FOF			FACE OF FINISH		
FOS			FACE OF STUD		
FOW			FACE OF WALL		
FT			FEET		
FTG			FOOTING WALL		
FT			FEET		

SYMBOLS



GENERAL NOTES

- THE INFORMATION HEREIN IS OF A PROPRIETARY NATURE AND IS SUBMITTED IN CONFIDENCE FOR USE BY OTAK, INC. CLIENTS ONLY. IT HAS BEEN PREPARED SPECIFIC TO THIS PROJECT AT THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE. LOCATION OR OWNER WITHOUT WRITTEN CONSENT OF OTAK, INC. UNAUTHORIZED REPRODUCTION, PUBLICATION OR DISSEMINATION, IN WHOLE OR IN PART IS EXPRESSLY PROHIBITED. INFORMATION CONTAINED HEREIN REMAINS PROPERTY OF OTAK, INC., AND RECEIPT OR POSSESSION OF THIS INFORMATION CONFERS NO RIGHT IN OR LICENSE TO USE OR DISCLOSE TO OTHERS THE SUBJECT MATTER CONTAINED HEREIN FOR ANY BUT AUTHORIZED PURPOSES. ALL RIGHTS RESERVED. COPYRIGHT 2022.
- THE CONTRACT DOCUMENTS CONSIST OF THE AGREEMENT BETWEEN OWNER AND CONTRACTOR, CONDITIONS OF THE CONTRACT (GENERAL, SUPPLEMENTARY, AND OTHER CONDITIONS), DRAWINGS, SPECIFICATIONS, ADDENDA ISSUED PRIOR TO AGREEMENT AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT.
- ANY DOCUMENT IN THIS SET WHICH HAS BEEN PREPARED BY ANY SUBCONTRACTOR, DESIGNER, AND/OR SUBCONSULTANT WHO IS UNDER A CONTRACT DIRECTLY WITH THE OWNER AND/OR CONTRACTOR IS ONLY INCLUDED IN THIS SET FOR PURPOSES OF REFERENCE AND COORDINATION. OTAK DISCLAIMS ALL LIABILITY RELATING TO THE DRAWING AND CONSTRUCTION OF THE IMPROVEMENTS OR SYSTEMS IT DEPICTS EXCEPT AS SPECIFICALLY ASSUMED IN A WRITTEN CONTRACT SIGNED BY OTAK AND THE OWNER.
- THE DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS, INCLUDING THOSE IN ELECTRONIC FORM, PREPARED BY THE ARCHITECT, AND THE ARCHITECT'S CONSULTANTS ARE INSTRUMENTS OF SERVICE THROUGH WHICH THE WORK TO BE EXECUTED BY THE CONTRACTOR IS DESCRIBED. UNLESS INDICATED OTHERWISE, THE ARCHITECT AND ARCHITECT'S CONSULTANTS SHALL BE DEEMED THE AUTHORS OF THEM AND WILL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, IN ADDITION TO THE COPYRIGHTS.
- IF COORDINATION OF ARCHITECTURAL, CIVIL, LANDSCAPE, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND SPRINKLER ELEMENTS RESULT IN CONFLICTS, NOTIFY ARCHITECT IMMEDIATELY PRIOR TO COMMENCING ANY WORK OF ELEMENTS RESULTING IN CONFLICTS.
- SLOPE ALL GRADES AT PLANTING AREAS, SIDEWALKS AND ASPHALT PARKING PAVING WITHIN 5' OF A BUILDING AWAY FROM THE BUILDING. IF CONFLICTS OCCUR, NOTIFY ARCHITECT IMMEDIATELY. SEE CIVIL DRAWINGS FOR FINISHED GRADES ADJACENT TO BUILDINGS.
- FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK.
- DIMENSIONS TAKE PRECEDENCE OVER DRAWINGS. DO NOT SCALE DRAWINGS, NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS AND SHALL MAINTAIN THE STRUCTURAL INTEGRITY OF CONSTRUCTION UNTIL FINAL LATERAL AND VERTICAL CARRYING SYSTEMS ARE COMPLETED.
- DIMENSIONS ARE SHOWN TO FACE OF STUD, FACE OF CONCRETE, FACE OF MASONRY, GRID/COLUMN LINE, CENTERLINE OF ELEMENT, COUNTERTOP EDGE, OR AS NOTED.
- CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND COORDINATION OF SUBCONTRACTOR WORK, COMPLIANCE WITH DRAWINGS AND SPECIFICATIONS, AND ACCURATE LOCATION OF STRUCTURAL MEMBERS, OPENINGS FOR MECHANICAL, ELECTRICAL, AND MISCELLANEOUS EQUIPMENT. CONTRACTOR SHALL VERIFY DIMENSIONS AND OPENING SIZES (CLEARANCES REQUIRED) FROM THE MANUFACTURERS PRIOR TO CONSTRUCTION OF OR INSTALLATION OF EQUIPMENT, FURNISHINGS, AND ACCESSORIES.

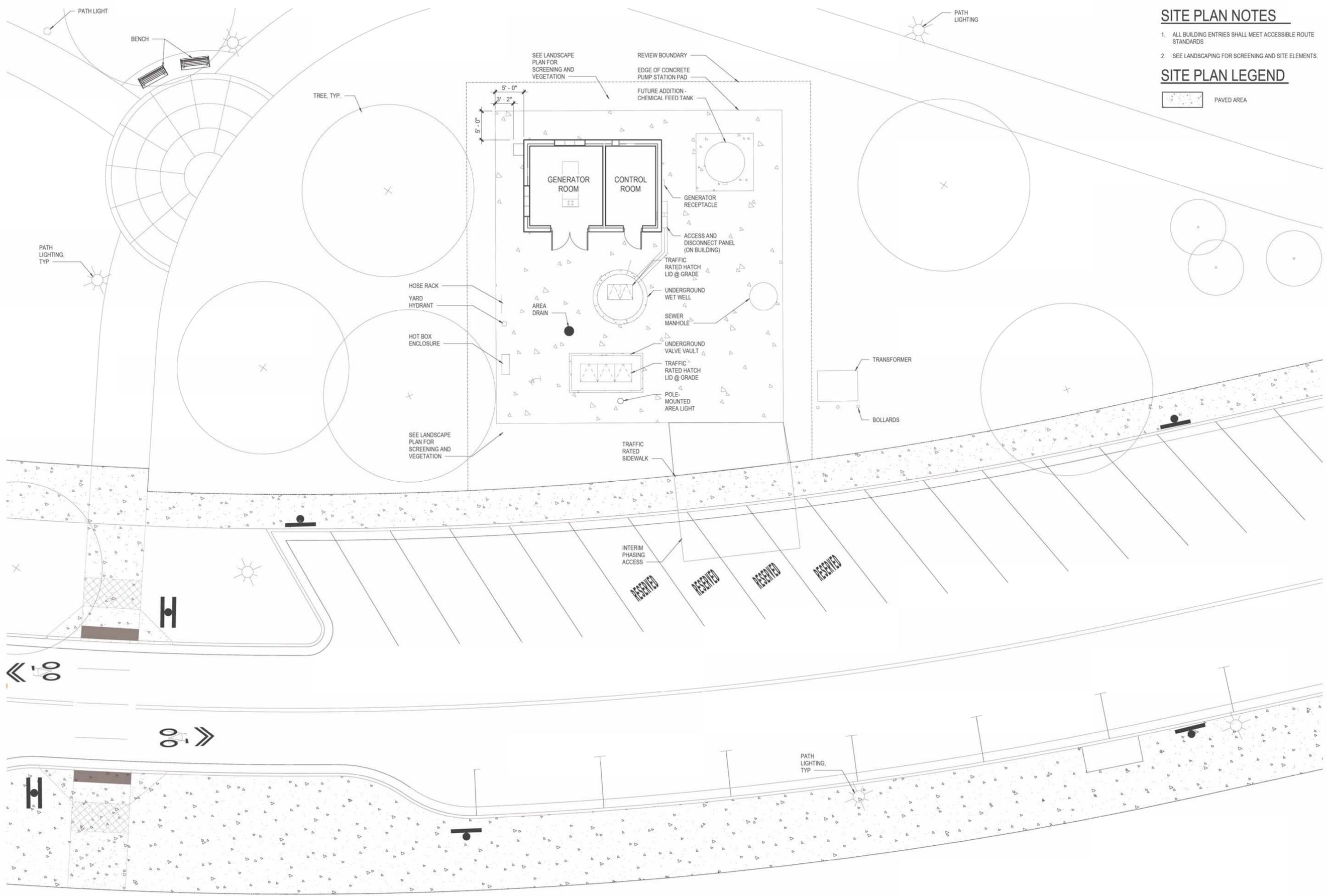
S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS
1ST & STRAND STREETS
ST. HELENS, OREGON
COVER SHEET

TITLE	#	DATE	DESCRIPTION
REVISIONS			
NAV088			
DATUM			
CJ		DS	
DRAWN BY		CHECKED BY	
FINAL PLANS			
STATUS			
JUNE 10, 2022			
DATE			
19823			
PROJECT NUMBER			
G0.01			
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SITE PLAN NOTES

1. ALL BUILDING ENTRIES SHALL MEET ACCESSIBLE ROUTE STANDARDS
2. SEE LANDSCAPING FOR SCREENING AND SITE ELEMENTS.

SITE PLAN LEGEND



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S. 1ST AND STRAND STREETS ROAD AND UTILITY EXTENSIONS

1ST & STRAND STREETS
ST. HELENS, OREGON

SITE PLAN

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REVISIONS	
NAVDB8	DATUM
CJ	DS
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FINAL PLANS	STATUS
JUNE 10, 2022	DATE
19823	PROJECT NUMBER

1 SITE PLAN
G0.02 SCALE: 1/8" = 1'-0"



G0.02
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TITLE	#	DATE	DESCRIPTION

REVISIONS
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1 | SCOPE & ADMINISTRATION

CODE PATH	
STRUCTURAL CODE:	2019 OREGON STRUCTURAL SPECIALTY CODE
MECHANICAL CODE:	2019 OREGON MECHANICAL SPECIALTY CODE
PLUMBING CODE:	2021 OREGON PLUMBING SPECIALTY CODE
ELECTRICAL CODE:	2021 OREGON ELECTRICAL SPECIALTY CODE
ENERGY CODE:	2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OEESC)
ACCESSIBILITY:	2015 ARCHITECTURAL BARRIERS ACT (ABAAS)

MUNICIPAL CODE	
ST. HELENS MUNICIPAL CODE - SECTION 17.32.170 - GUIDELINES FOR THE RIVERFRONT DISTRICT ZONING DISTRICT	

3 | USE & OCCUPANCY

OCCUPANCY GROUPS	
S-1:	STORAGE
U:	UTILITY

4 | SPECIAL OCCUPANCY REQUIREMENTS

NA

5 | BUILDING CONSTRUCTION

CONSTRUCTION TYPE	
CONSTRUCTION TYPE: V-B, NON-SPRINKLERED	

HEIGHT IN FEET	
PROVIDED:	10 - 10"
ALLOWED:	40' - 0"

NUMBER OF STORIES	
PROVIDED:	1 STORY
ALLOWED:	1 STORY

GROSS BUILDING AREA SUMMARY

OCCUPANCY GROUP	U	S-1	FLOOR TOTAL
LEVEL 1	165 GSF	219 GSF	384 GSF

FIRE-RATING REQUIREMENTS FOR BUILDING ELEMENTS

2 HRS	S-1 AND U OCCUPANCY REQUIRED SEPARATION
-------	---

OCCUPANCY GROUP AREA SUMMARY & TABULAR ALLOWABLE AREA

TYPE & OCCUPANCY:	BASE GSF:
TYPE VB - S-1 (STORAGE - NOT-SPRINKLERED) OCCUPANCY	9,000 GSF
TYPE VB - U (UTILITY - NOT-SPRINKLERED) OCCUPANCY	5,500 GSF

TABULAR ALLOWABLE AREA FOR TYPE VB BUILDING:
 $A_{ta} = [A_1 + (NS \times I_1)]$ WHERE:
 $A_1 = 5,500$
 $NS = NA$
 $I_1 = NA$
 $A_{ta} = [A_1 + (NS \times I_1)] = [5,500 + (0 + 0)] = 5,500$ GSF
 MAX TOTAL BUILDING AREA = 5,500 GSF

6 | TYPES OF CONSTRUCTION

FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)

TYPE VB		
PRIMARY STRUCTURAL FRAME	NR	
EXTERIOR BEARING WALLS	NR	
INTERIOR BEARING WALLS	NR	
STRUCTURAL FRAME SUPPORTING ROOF ONLY	NR	
FLOORS & SECONDARY MEMBERS	NR	
ROOF CONSTRUCTION	NR	

FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS

FIRE SEPARATION DISTANCE	V-B & S-1 OCC	V-B & U OCC
X < 5	2	1
5 < X < 10	1	1
10 < X < 30	0	0
X > 30	0	0

7 | FIRE & SMOKE PROTECTION FEATURES

BUILDING SEPARATION		
FIRE SEPARATION DISTANCE (FEET)	DEGREE OF OPENING PROTECTION	ALLOWABLE AREA
0 TO LESS THAN 3	UNPROTECTED / NONSPRINKLERED	NOT PERMITTED
3 TO LESS THAN 5	UNPROTECTED / NONSPRINKLERED	NOT PERMITTED
5 TO LESS THAN 10	UNPROTECTED / NONSPRINKLERED	10%
10 TO LESS THAN 15	UNPROTECTED / NONSPRINKLERED	15%
15 TO LESS THAN 20	UNPROTECTED / NONSPRINKLERED	25%
20 TO LESS THAN 25	UNPROTECTED / NONSPRINKLERED	45%
25 TO LESS THAN 30	UNPROTECTED / NONSPRINKLERED	70%
30 OR GREATER	UNPROTECTED / NONSPRINKLERED	NO LIMIT

FACADE	PROTECTION / SPRINKLERING	DISTANCE TO MEASURED SEPARATION
NORTH	UNPROTECTED / NONSPRINKLERED	NA
EAST	UNPROTECTED / NONSPRINKLERED	NA
SOUTH	UNPROTECTED / NONSPRINKLERED	NA
WEST	UNPROTECTED / NONSPRINKLERED	NA

FIRE BARRIERS

WHERE THE PROVISIONS OF SECTION 508.4 ARE APPLICABLE, THE FIRE BARRIER SEPARATING MIXED OCCUPANCIES SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN THAT INDICATED IN TABLE 508.4 BASED ON THE OCCUPANCIES BEING SEPARATED PER SECTION 707.3.9.

8 | INTERIOR FINISHES

FLAME-SPREAD RATING

WALL AND CEILING FINISH MATERIALS TO HAVE THE FOLLOWING FLAME SPREAD RATING OR HIGHER:

	INTERIOR EXIT STAIRWAYS & RAMPS & EXIT PASSAGEWAYS	CORRIDORS & ENCLOSURE FOR EXIT ACCESS STAIRWAYS & RAMPS	ROOMS & ENCLOSED SPACES
S-1	NA	NA	CLASS C
U	NA	NA	NO RESTRICTIONS

9 | FIRE PROTECTION SYSTEMS

SPRINKLER SYSTEM

SPRINKLER SYSTEM NOT REQUIRED PER OSSC 903.2.

10 | MEANS OF EGRESS

OCCUPANCY LOAD SUMMARY

LEVEL 01:	UTILITY @ 300 GROSS OLF = 1 OCCUPANT STORAGE @ 300 GROSS OLF = 1 OCCUPANT
TOTAL BUILDING OCCUPANTS: 2 OCCUPANTS	

NUMBER OF EXITS

LEVEL 01:	PROVIDED: 2 REQUIRED: 2
-----------	----------------------------

AREAS OF REFUGE

NO AREAS OF REFUGE ARE REQUIRED FOR THE SCOPE.

11 | ACCESSIBILITY

PARKING

SCOPE DOES NOT REQUIRE ADDITIONAL PARKING. NO ADDITIONAL PARKING PROVIDED AS PART OF THIS PROJECT.

SIGNAGE

NO SIGNAGE WILL BE ADDED OR MODIFIED AS PART OF THIS PROJECT.

13 | ENERGY EFFICIENCY

CRITERIA

BUILDINGS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE ENERGY CODE, PER SECTION 1301.1.1.

ASHRAE 90.1 - 2019

5.4.3.1 THE ENTIRE BUILDING ENVELOPE SHALL BE DESIGNED AND CONSTRUCTED WITH A CONTINUOUS AIR BARRIER.

TABLE 5.5-4 (CLIMATE ZONE 4C)

BUILDING ELEMENT	REQUIRED	PROVIDED
ROOFS - ATTIC AND OTHER (SEMIHEATED)	R-30	R-30
WALLS - STEEL-FRAMED (ABOVE GRADE)	R-13	R-13
SLABS - HEATED (SEMIHEATED)	R-10 for 24"	R-10 for 24"
OPAQUE DOORS - SWINGING	U-0.37	U-0.37 MIN

FLS LEGEND

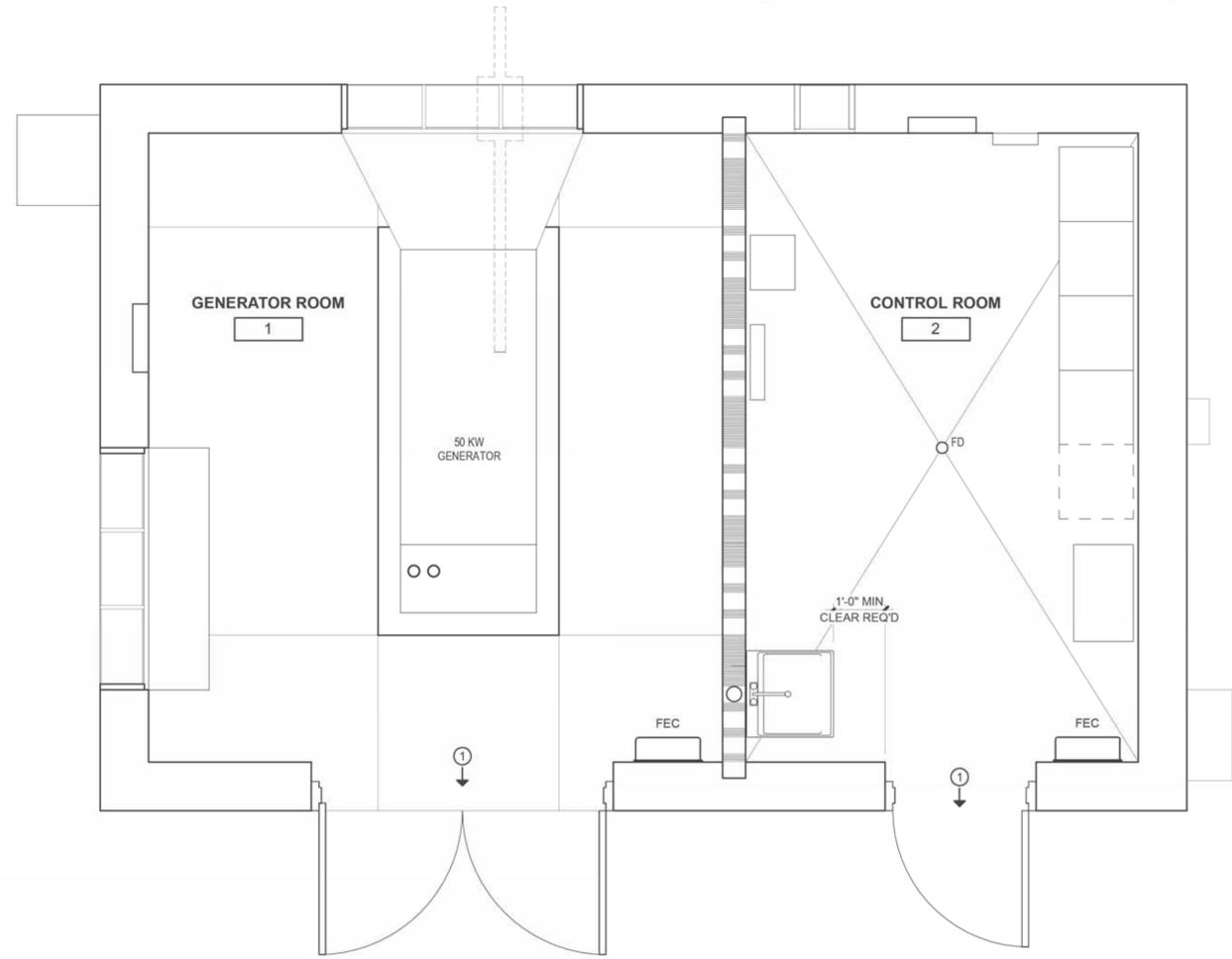
① → OCCUPANT LOAD

FEC SURFACE MOUNTED FIRE EXTINGUISHER CABINET

2-HR RATED FIRE BARRIER W/ 90 MIN. RATED DOORS

CODE PLAN GENERAL NOTES

1. CONTINUITY: FIRE BARRIERS SHALL EXTEND FROM THE TOP OF THE FLOOR ASSEMBLY BELOW TO THE UNDERSIDE OF THE ROOF ABOVE AND SHALL BE SECURELY ATTACHED THERETO. FIRE BARRIERS SHALL BE CONTINUOUS THROUGH CONCEALED SPACES.



1
G0.11 CODE PLAN
SCALE: 1/2" = 1'-0"



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GENERAL REQUIREMENTS

GOVERNING CODE

THE DESIGN AND CONSTRUCTION OF THIS PROJECT IS GOVERNED BY THE THE 2018 INTERNATIONAL BUILDING CODE AS AMENDED BY THE STATE OF REGON, 2019 OREGON STRUCTURAL SPECIALTY CODE (2019 OSSC).

THE STRUCTURAL DRAWINGS ARE INTENDED TO SHOW THE GENERAL CHARACTER AND EXTENT OF THE PROJECT ARE NOT INTENDED TO SHOW ALL DETAILS OF THE WORK USE DETAILS MARKED "TYPICAL" WHEREVER THEY APPLY.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING DETAILS AND ACCURACY OF THE WORK; FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; FOR SELECTING FABRICATION PROCESSES; FOR TECHNIQUES OF ASSEMBLY; AND FOR PERFORMING WORK IN A SAFE AND SECURE MANNER.

THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND ALL JOB RELATED SAFETY STANDARDS SUCH AS OSHA.

THE CONTRACTOR IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION AND SHALL PROVIDE TEMPORARY SHORING, BRACING, AND OTHER ELEMENTS REQUIRED TO MAINTAIN STABILITY UNTIL THE STRUCTURE IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH WORK REQUIRED IN THE CONSTRUCTION DOCUMENTS AND REQUIREMENTS FOR EXECUTING IT PROPERLY. THE STRUCTURE SHOWN ON THE PLANS HAS BEEN DESIGNED FOR STABILITY UNDER THE FINAL CONFIGURATION ONLY.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE. CONFLICTS BETWEEN THE DRAWINGS AND THE ACTUAL SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

DESIGN LOADS

Table with 2 columns: LOAD TYPE and VALUE. Includes FOUNDATION, WIND, SEISMIC, SNOW LOAD, DEAD LOAD, LIVE LOAD.

SPECIAL INSPECTIONS

SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH IBC CHAPTER 17 AND THE STANDARDS REFERENCED THEREIN. FOUNDATIONS, FOOTINGS, UNDER SLAB SYSTEMS AND FRAMING ARE SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL IN ACCORDANCE WITH IBC 110.3. CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS WITH THE ARCHITECT.

SPECIAL INSPECTORS SHALL BE EMPLOYED BY THE OWNER TO PROVIDE SPECIAL INSPECTIONS FOR THE PROJECT.

SPECIAL INSPECTIONS SHALL CONFORM TO PROJECT STATEMENT OF STRUCTURAL TESTS & INSPECTIONS FORM.

SUBMITTALS

SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION REGARDING ALL STRUCTURAL ITEMS, INCLUDING THE FOLLOWING:

CONCRETE MIX DESIGNS, CONCRETE REINFORCEMENT, CMU GROUT MIX DESIGNS, CMU REINFORCEMENT, EMBEDDED STEEL ITEMS, STRUCTURAL STEEL ASSEMBLIES, AND PREFABRICATED WOOD TRUSSES.

IF THE SHOP DRAWINGS DIFFER FROM, OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO, AND ARE SUBJECT TO REVIEW AND ACCEPTANCE OF, THE ARCHITECT & ENGINEER OF RECORD.

DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS, INCLUDING PREFABRICATED WOOD TRUSSES SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON, AND SHALL BE SUBMITTED TO THE BUILDING OFFICIAL, PRIOR TO FABRICATION. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE, CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED ON THE REQUIREMENTS OF THE CODES LISTED ABOVE AND THE LOADS OUTLINED ABOVE.

THE CONTRACTOR SHALL COORDINATE SEISMIC RESTRAINTS OF MECHANICAL, PLUMBING, AND ELECTRICAL EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING WITH THE STRUCTURE. ANY CONNECTIONS TO STRUCTURE NOT CONFORMING TO SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA), OR SPECIFICALLY DETAILED ON THE MECHANICAL ENGINEER'S DRAWINGS, SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF OREGON, AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION.

FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM, OR ADD TO, THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON AND SHALL BE SUBMITTED TO THE BUILDING OFFICIAL PRIOR TO CONSTRUCTION.

CAST-IN-PLACE CONCRETE

CONCRETE WORK SHALL CONFORM TO ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE".

CONTRACTOR TO SUBMIT ALL MIX DESIGNS REQUIRED BY ACI 301 SECTIONS 4.2.1. CONTRACTOR TO VERIFY CONCRETE STRENGTHS BY STANDARD 28-DAY CYLINDER TESTS PER ASTM C39. CONTRACTOR TO USE THE FOLLOWING MIX DESIGN REQUIREMENTS

FOOTINGS AND FLOOR SLABS
F'C = 4000 PSI, 28 DAY STRENGTH
1 INCH MAXIMUM AGGREGATE
0.5 MAXIMUM WATER/CEMENT RATIO

HIGHER WATER/CEMENT RATIOS THAN SHOWN ABOVE MAY BE USED IF SUBSTANTIATED IN ACCORDANCE WITH ACI 318-14, CHAPTER 19.

FLY ASH CONFORMING TO ASTM C845 MAY BE USED TO REPLACE UP TO 20% OF THE CEMENT CONTENT, PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST DATA.

THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS AS OUTLINED ABOVE, ALONG WITH TEST DATA AS REQUIRED, A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE.

SLEEVES, OPENINGS, CONDUIT, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE ARCHITECT BEFORE POURING. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE THIRD OF THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON CENTER. PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CONCRETE EDGES UNLESS NOTED OTHERWISE.

CONCRETE REINFORCING

CONCRETE REINFORCING SHALL CONFORM TO ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE".

CONTRACTOR SHALL SUBMIT PLACING DRAWINGS SHOW FABRICATION DIMENSIONS AND LOCATIONS FOR PLACEMENT OF REINFORCEMENT AND REINFORCEMENT SUPPORTS.

MATERIALS

REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED BARS AND ASTM A185 FOR SMOOTH WELDED WIRE FABRIC (WWF), UNLESS OTHERWISE NOTED. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706. COLUMN SPIRALS SHALL BE PLAIN OR DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60. REINFORCING STEEL SHALL BE SECURELY TIED IN PLACE WITH #16 ANNEALED IRON WIRE.

BAR IN SLABS SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS OR APPROVED METAL CHAIRS, AS SPECIFIED BY THE CRSI MANUAL OF STANDARD PRACTICE, MSP-1. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315.

WELDING OF REINFORCING STEEL IS NOT PERMITTED, UNLESS OTHERWISE NOTED ON PLANS, CONCRETE COVER SHALL BE:

Table with 2 columns: USE and COVER. Lists SLAB BARS, WALL BARS, FOOTING BARS, and ALL OTHER LOCATIONS with their respective cover requirements.

SPLICES

SPLICES SHALL CONFORM TO ACI 301, SECTION 3.3.2.7 "SPLICES". LAP SPLICES SHALL CONFORM TO THE TABLE BELOW:

Table: REINFORCING SPLICE LENGTHS (CLASS B) GRADE 60. Columns: BAR SIZE, #3, #4, #5, #6, #7, #8. Rows: UNCOATED, #3, #4, #5, #6, #7, #8.

CONCRETE ACCESSORIES:

PERMANENTLY EXPOSED EMBEDDED PLATES AND ANGLES SHALL BE HOT-DIPPED, GALVANIZED AFTER FABRICATION, UNLESS OTHERWISE NOTED. NO LOADS OR WELDS SHALL BE PLACED ON EMBEDDED PLATES OR ANGLES FOR A MINIMUM OF 7 DAYS AFTER PAINTING.

EPOXY ADHESIVE: EPOXY ADHESIVE SHALL CONFORM TO ASTM C881 AND SHALL BE A TWO-COMPONENT, LIQUID EPOXY WITH NON-SAG CONSISTENCY AND A LONG POT LIFE, AND SHALL BE SUITABLE FOR USE ON DRY OR DAMP SURFACES. MINIMUM SLANT SHEAR STRENGTH SHALL BE 5,000 PSI. AND MINIMUM TENSILE STRENGTH SHALL BE 4,000 PSI. HOLES FOR GROUTED RODS AND REBAR SHALL BE 1/4" LARGER THAN THE BAR DIAMETER. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

STRUCTURAL STEEL

STRUCTURAL STEEL IS DESIGNED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATIONS. CONSTRUCTIONS SHALL CONFORM TO CHAPTER 22 OF THE IBC. ALL STRUCTURAL STEEL EXPOSED TO WEATHER OR IN CONTACT WITH MOISTURE OR PARTIALLY BURIED SHOULD BE HOT DIP GALVANIZED.

MATERIALS

STRUCTURAL STEEL SHALL BE THE TYPES AND STRENGTHS LISTED BELOW:

Table with 4 columns: MATERIAL, TYPE, STRENGTH, and COMMENTS. Lists STRUCTURAL BARS AND PLATES (PL), HSS, WELDING ELECTRODES, PIPE, BOLTS, NUTS, WASHERS, and ROOFING MATERIAL.

ROOFING MATERIAL: SEE ARCH PLANS

WELDING SHALL CONFORM TO AWS D1.1 AND VISUALLY CONFORM TO AWS SECTION 6 AND TABLE 6.1. WELDERS SHALL BE QUALIFIED FOR THE SPECIFIC PREQUALIFIED JOINTS REQUIRED BY THE DESIGN AND CERTIFIED IN ACCORDANCE WITH AWS REQUIREMENTS. WELDING SHALL BE DONE IN ACCORDANCE WITH APPROPRIATE WELD PROCEDURE SPECIFICATIONS (WPS); WELDERS SHALL BE FAMILIAR WITH THE APPLICABLE WSPSS. WELDING SHALL BE DONE WITH AWS PREQUALIFIED WELDING PROCESSES UNLESS OTHERWISE APPROVED. WELDER QUALIFICATIONS AND WPS SHALL BE MAINTAINED AT THE SITE OF THE WORK AND SHALL BE READILY AVAILABLE FOR INSPECTION UPON REQUEST, BOTH IN THE SHOP AND IN THE FIELD.

TIMBER MEMBERS

TIMBER MEMBERS, INCLUDING WOOD TRUSSES, SHALL CONFORM TO CHAPTER 23 OF THE IBC AND THE STANDARDS LISTED THEREIN. TRUSSES SHALL BE DESIGNED FOR LOADS INDICATED IN THE DESIGN LOADS SECTION OF THE GENERAL NOTES. UPLIFT AT EAVES AND ON ROOF AS CALCULATED BY TRUSS DESIGN ENGINEER.

SUBMITTALS

SUPPLY SHOP DRAWINGS AND CALCULATIONS STAMPED BY AN ENGINEER LICENSED IN THE STATE OF OREGON FOR THE ENGINEERED WOOD TRUSSES. LOADINGS SHALL BE AS NOTED ON THE PLANS. TRUSS DESIGNER TO REVIEW LIGHT GAUGE CONNECTORS AND TO ACCOMMODATE THEIR ATTACHMENT THROUGH TRUSS PLATES TO STRUCTURE.

MATERIALS

ALL SAWN LUMBER AND PRE-MANUFACTURED WOOD PRODUCTS SHALL BE IDENTIFIED BY THE GRADE MARK OR A CERTIFICATE OF INSPECTION ISSUED BY THE CERTIFYING AGENCY. SAWN LUMBER SHALL CONFORM TO GRADING RULES OF WPPA, WCLIB OR NLGA AND THE TABLE BELOW.

Table with 2 columns: USE and GRADE. Lists WALL PLATES & NAILERS.

BLOCKING

2" TO 4" THICK, 2" AND WIDER #2 DFL

WALL PLATES & NAILERS

2" TO 4" THICK, 2" AND WIDER #2 PT-DFL

ALL BLOCKING SHOULD BE TOE NAILED AT EACH END WITH (2)-8D COMMON NAILS. ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE OR CMU SHALL BE PRESSURE TREATED UNLESS AN APPROVED BARRIER IS PROVIDED. ALL SHEATHING SHALL BE APA RATED. UNLESS OTHERWISE NOTED ON DRAWINGS, INSTALL ROOF AND FLOOR PANELS WITH LONG DIMENSIONS ACROSS SUPPORTS AND THE PANEL CONTINUOUS OVER TWO OR MORE SPANS. END JOINTS SHALL OCCUR OVER SUPPORTS. GRADE MARKING OF SHEATHING CERTIFICATION IS REQUIRED.

TIMBER CONNECTORS SHALL BE "STRONG TIE" BY SIMPSON COMPANY AS SPECIFIED IN THEIR CURRENT CATALOG. ALTERNATE CONNECTORS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUIVALENT OR GREATER LOAD CAPACITIES AND ARE REVIEWED AND APPROVED BY THE ARCHITECT PRIOR TO ORDERING. CONNECTORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS. WHERE CONNECTOR STRAPS CONNECT

TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER. WHERE STRAPS ARE USED AS HOLD-DOWNS, NAIL STRAP TO WOOD FRAMING JUST PRIOR TO DRYWALL APPLICATION, AS LATE AS POSSIBLE IN THE FRAMING PROCESS TO ALLOW THE WOOD TO SHRINK AND THE BUILDING TO SETTLE. PREMATURE NAILING OF THE STRAP MAY LEAD TO STRAP BUCKLING AND POTENTIAL FINISH DAMAGE. WHERE CONNECTORS ARE IN EXPOSED EXTERIOR APPLICATIONS IN CONTACT WITH PRESERVATIVE TREATED WOOD (PT) OTHER THAN CCA, CONNECTORS SHALL BE EITHER BATCH HOT-DIPPED GALVANIZED, MECHANICALLY GALVANIZED, OR STAINLESS STEEL.

REINFORCED MASONRY

ALL WORK AND MATERIALS SHALL CONFORM TO IBC CHAPTER 21 "MASONRY" AND ACI 530 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (MSJC) AND ACI 530.1 "SPECIFICATIONS FOR MASONRY STRUCTURES" (MSJC.1).

SUBMITTALS

MASONRY REINFORCEMENT, SIZE, LAYOUT, AND GRADE IN ACCORDANCE WITH PLANS. MATERIAL CERTIFICATES FOR ALL STEEL REINFORCING, ANCHORS, TIES, AND METAL ACCESSORIES CERTIFYING COMPLIANCE WITH REQUIRED STRENGTH, GRADE, AND ASTM STANDARDS. CERTIFICATION LETTER FOR MASONRY BLOCK AND GROUT MIX DESIGN CERTIFYING COMPLIANCE WITH REQUIRED STRENGTH AND RESPECTIVE ASTM STANDARDS. MIX DESIGNS FOR EACH GROUT MIX INDICATING TYPE AND PROPORTIONS OF INGREDIENTS IN COMPLIANCE OF PROPORTION SPECIFICATION.

STRENGTH

THE ASSUMED COMPRESSIVE STRENGTH OF THE MASONRY ASSEMBLAGE, F'M, IS 1500 PSI BASED ON IBC SECTION 2105.2.2.1.2 FOR CONCRETE MASONRY.

MATERIALS

CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, TYPE I (MOISTURE CONTROLLED) MEDIUM WEIGHT (APPROX. 115 PCF) UNITS. PROVIDE 1900PSI COMPRESSIVE STRENGTH TO ACHIEVE MASONRY ASSEMBLY STRENGTH AS INDICATED ABOVE UNDER THE SECTION "STRENGTH". MORTAR SHALL CONFORM TO ASTM C270, TYPE S, AND IBC SECTION 2103. "MORTAR". GROUT SHALL CONFORM TO ASTM C476 AND IBC SECTION 2103.12 PROPORTION SPECIFICATIONS. USE FIN GROUT EXCEPT COARSE GROUT MAY BE USED WHERE PERMITTED BY MSJC TABLE 1.16.1. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 DEFORMED BARS AND IBC SECTION 2103.12 UNLESS OTHERWISE NOTED. LAP SPLICES SHALL BE AS NOTED ABOVE. FABRICATION SHALL BE IN ACCORDANCE WITH MSJC.1 SECTION 2.7. JOINT REINFORCEMENT SHALL CONFORM TO ASTM A951 AND IBC SECTION 2103.13. ANCHORS, TIES AND ACCESSORIES SHALL CONFORM TO IBC SECTION 2103.13 AND MSJC.1 SECTION 2.4D. WATER SHALL BE CLEAN AND POTABLE. ADMIXTURES SHALL NOT BE USED. SECOND HAND UNITS SHALL NOT BE USED.

(2)-#5 HORIZONTAL BARS SHALL BE PROVIDED AT ALL ROOF LINES AND AT TOP OF WALL, AND (2) #4 BOND BEAMS AT 4'-0" O.C. MAX. DOWELS TO MASONRY WALLS SHALL BE EMBEDDED A MINIMUM OF 2'-0" OR HOOKED INTO THE SUPPORTING STRUCTURE AND BE OF THE SAME SIZE AND SPACING AS THE WALL REINFORCING. PROVIDE CORNER BARS TO MATCH THE HORIZONTAL WALL REINFORCING AT WALL INTERSECTIONS. ALL BARS SHALL BE LAPPED A MINIMUM 48 DIAMETERS OR 2'-0" MINIMUM UNLESS NOTED OTHERWISE ON THE PLANS. USE RUNNING BOND BLOCK PATTERN UNLESS NOTED OTHERWISE. PROVIDE (2) #4 HORIZONTAL BARS IN BOND BEAM ABOVE AND BELOW ALL OPENINGS, AND EXTEND THESE BARS 2'-0" PAST THE OPENING AT EACH SIDE. PROVIDE ONE BAR MATCHING VERTICAL BAR SIZE, FOR THE FULL HEIGHT OF THE WALL, AT EACH SIDE OF OPENINGS.

FILL CELLS WITH SOLID GROUT. UNO. MINIMUM GROUTING SPACES AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH MSJC SECTION 1.16 AND MSJC.1 SECTION 3.5. GROUT POUR HEIGHTS SHALL CONFORM TO REQUIREMENTS OF THE MSJC. GROUT LIFTS SHALL NOT EXCEED 5 FT. CLEAR DISTANCE BETWEEN PARALLEL BARS SHALL BE EQUAL TO 1". BARS SHALL BE CENTERED IN CELLS OF BLOCK.

ABBREVIATIONS

Table with 2 columns: ABBREVIATION and FULL NAME. Lists O.C., EL., U.N.O., T.O.F., T.O.S., REF., FDN., FTG., E.C., CONT., A.B., T.O.B.

STRUCTURAL TESTS & SPECIAL INSPECTIONS

NOTE: ALL PERIODIC TESTS & INSPECTIONS ARE PERFORMED EITHER 50% OF EACH MATERIAL TYPE/GRADE OR 50% OF EACH ACTIVITY/ ACTIVITY TIME OR 50% OF AREA/LENGTH THAT SUITS THE TEST/INSPECTION.

Table: TABLE 1704.3 and TABLE 1704.4. Columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REFERENCE STANDARD, IBC REFERENCE. Contains detailed inspection requirements for material verification, welding, and concrete placement.

Table: TABLE 1705.4 MASONRY CONSTRUCTION. Columns: TESTS, CONTINUOUS, PERIODIC. Lists inspection items for masonry construction.

Table: TABLE 1705.6 - SOILS. Columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC. Lists inspection items for soils.



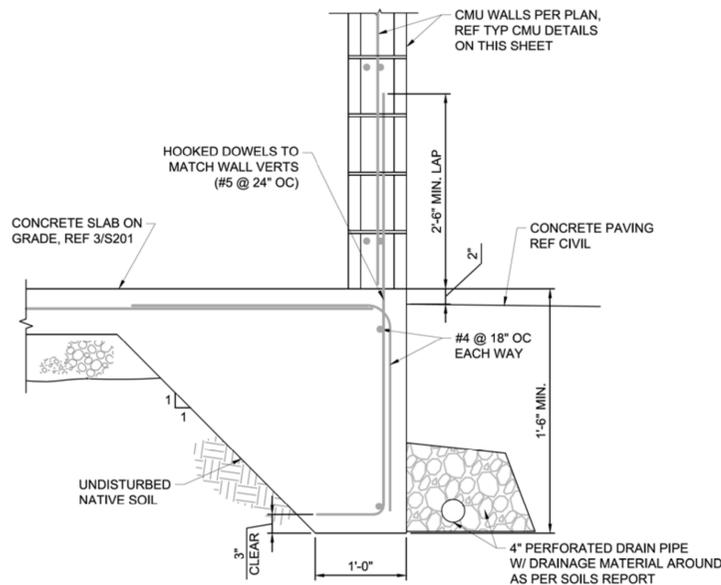
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GENERAL NOTES

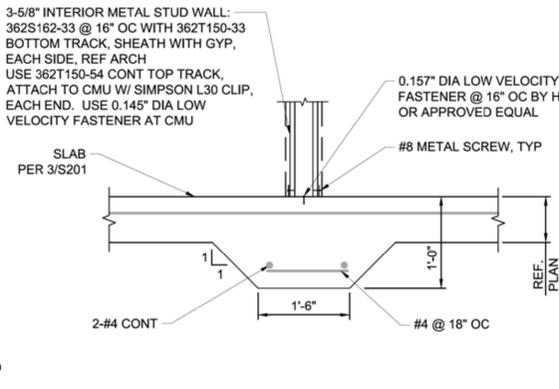
Table: REVISIONS, DATUM, DRAWN BY, CHECKED BY, FINAL PLANS STATUS, PROJECT NUMBER (S0.01), DATE (06/10/22), and copyright information.

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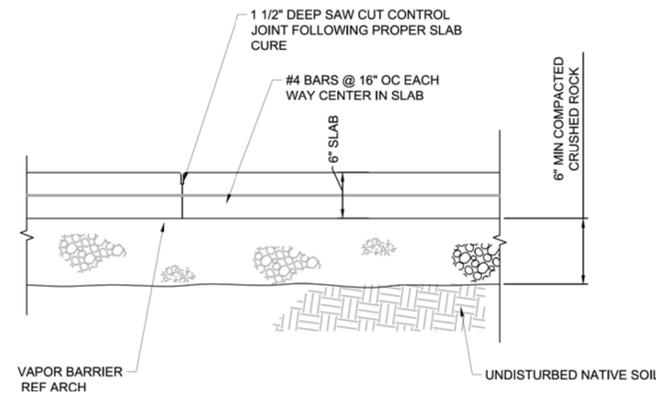
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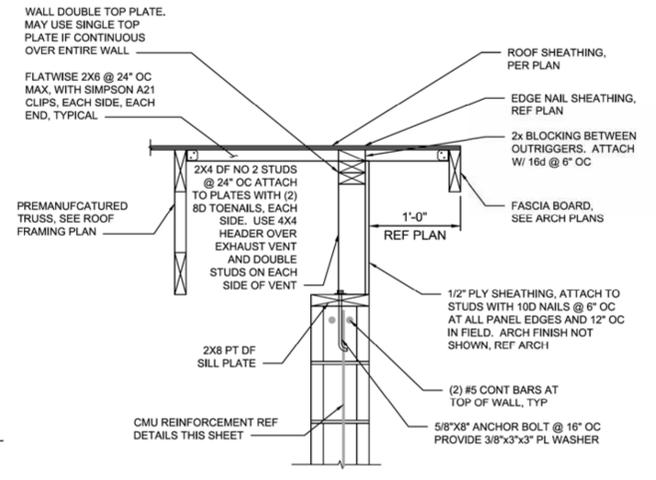
1 TYPICAL FOUNDATION DETAIL
SCALE: 1" = 1'-0"



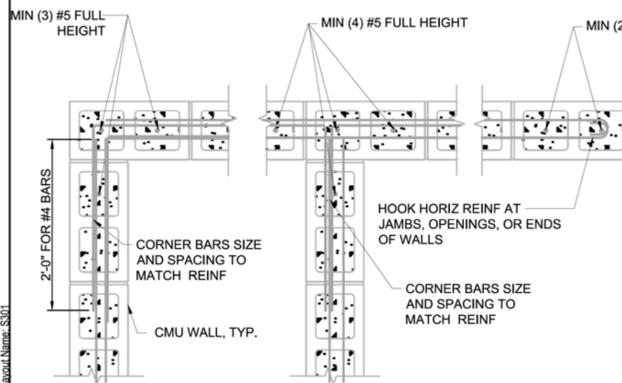
2 TYPICAL INTERIOR FOOTING
SCALE: 1" = 1'-0"



3 TYPICAL SLAB ON GRADE
SCALE: 1" = 1'-0"



4 GABLE END - OUTRIGGERS
SCALE: 1" = 1'-0"

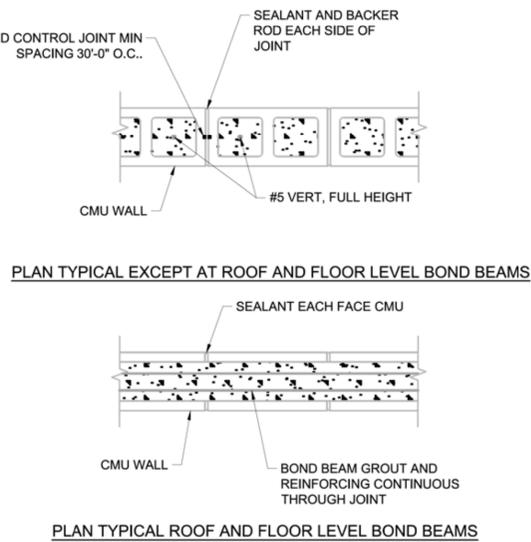


LINTEL REINFORCING	
OPENING	REINFORCING
16'-0" MAX	2 #5

BAR DEVELOPMENT OR SPLICE LENGTH	
BAR SIZE	CMU SINGLE CURTAIN REINF
#4	2'-0"
#5	2'-6"

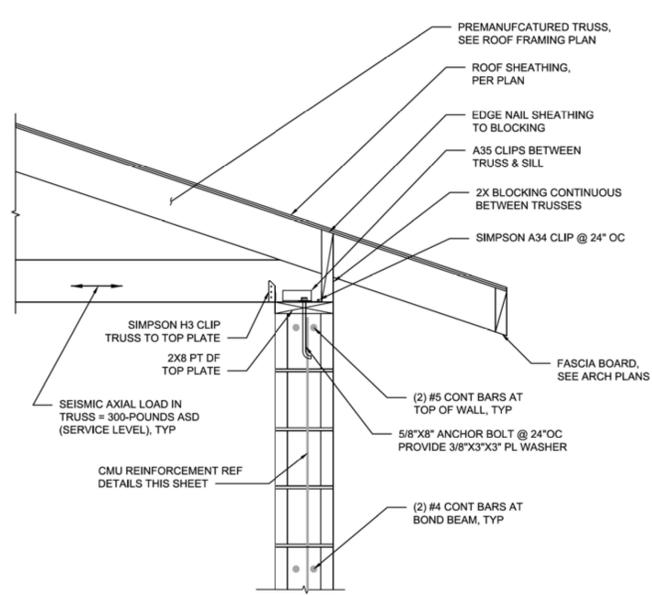
- NOTES:
- GROUT ALL CELLS SOLID.
 - UNLESS NOTED OTHERWISE, CMU WALLS SHALL BE REINFORCED WITH #5 AT 24" OC VERTICAL (CENTERED IN WALL) AND (2) #5 HORIZONTAL BARS AT TOP COURSE/ROOF AND (2) #4 HORIZONTAL BARS (BOND BEAM) AT 4'-0" OC MAXIMUM SPACING.
 - LINTEL REINFORCEMENT SHOULD EXTEND AT LEAST 2'-6" BEYOND OPENING ON EITHER SIDES, TYPICAL. WHERE BARS ARE UNABLE TO EXTEND BEYOND OPENING, TERMINATE BAR AT FAR END OF SUPPORT WITH 90° STANDARD HOOK

5 TYPICAL CMU DETAIL
SCALE: 1" = 1'-0"

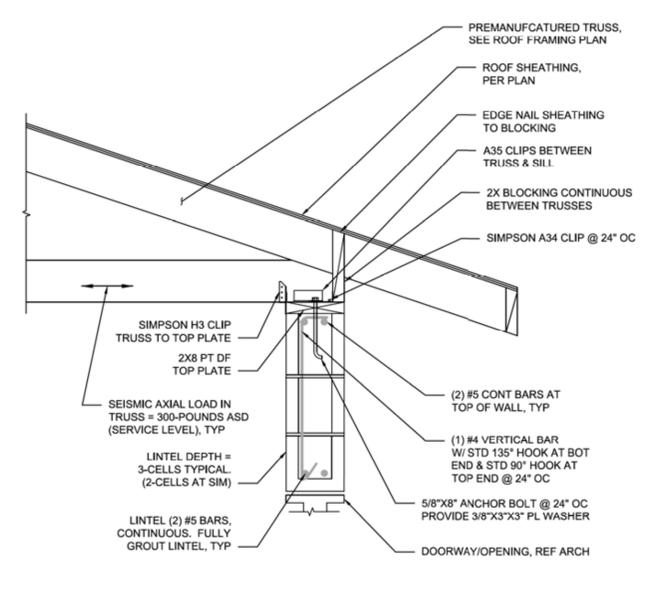


- NOTES:
- ALL HORIZONTAL REINFORCING IS TO BE DISCONTINUOUS AT CONTROL JOINTS EXCEPT LINTEL REINFORCEMENT (INCLUDING BARS EXTENDED PAST OPENINGS) & BOND BEAM REINFORCING AT ROOF LEVEL.
 - SEE ARCHITECTURAL ELEVATIONS FOR LOCATIONS OF CONTROL JOINTS.

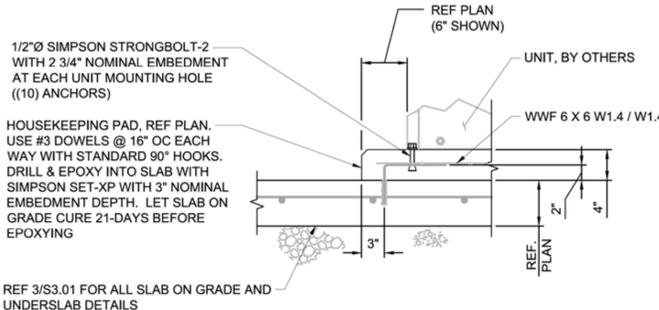
6 TYPICAL CMU DETAIL
SCALE: 1" = 1'-0"



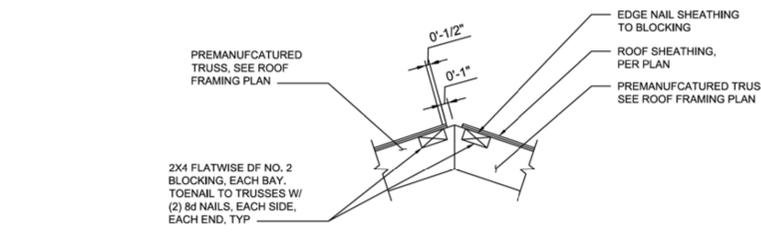
7 TYPICAL EAVE DETAIL
SCALE: 1" = 1'-0"



8 TYPICAL CMU LINTEL DETAIL
SCALE: 1" = 1'-0"



9 GENERATOR UNIT - ANCHORAGE
SCALE: 1" = 1'-0"



10 RIDGE VENT DETAIL
SCALE: N.T.S.

PRE-MANUFACTURED ROOF TRUSS NOTES:

- TOP AND BOTTOM CHORDS SHOWN IN DETAILS AS 2X6. MAXIMUM CHORD DEPTH = 5 1/2" MINIMUM = 3 1/2". TRUSS MANUFACTURER TO DETERMINE SIZE OF TOP AND BOTTOM CHORDS.
- MINIMUM TOP CHORD GRADE = DF NO. 2
- TOP CHORD MINIMUM DEAD LOAD: 14 PSF
- BOTTOM CHORD MINIMUM DEAD LOAD: 6 PSF
- TOP CHORD MINIMUM LIVE LOAD: 25 PSF (SNOW)
- BOTTOM CHORD MINIMUM LIVE LOAD: 10 PSF
- MAXIMUM DEFLECTIONS: L/240 FOR LIVE OR SNOW L/180 FOR TOTAL LOAD
- CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF TRUSSES DURING CONSTRUCTION.
- REFERENCE DETAILS 4/S3.02, 7/S3.02 & 8/S3.02 FOR AXIAL LOAD REQUIREMENTS (SEISMIC, ASD (SERVICE LEVEL) FORCES).
- REFERENCE GENERAL STRUCTURAL NOTES FOR OTHER REQUIREMENTS.

11 PRE-MANUFACTURED ROOF TRUSS NOTES
SCALE: N.T.S.



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DETAILS

TITLE	
#	DESCRIPTION

REVISIONS

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FINAL PLANS	CHECKED BY

STATUS	DATE

DATE	PROJECT NUMBER
06/10/22	19823

S3.01

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ROOM FINISH SCHEDULE

ROOM NO	ROOM NAME	FLOOR MATERIAL / FINISH	BASE MATERIAL / FINISH	WALL MATERIAL / FINISH	CEILING MATERIAL / FINISH	COMMENTS
1	GENERATOR ROOM	SEALED CONCRETE	RB	FRP / PAINT	PAINT	FRP TO 4 FT AFF
2	CONTROL ROOM	SEALED CONCRETE	RB	FRP / PAINT	PAINT	FRP TO 4 FT AFF

DOOR SCHEDULE

DOOR NO	LOCATION	OPENING WIDTH	HEIGHT	THICKNESS	DOOR		FRAME		HARDWARE	FIRE RATING	COMMENTS
					MATERIAL	FINISH	MATERIAL	FINISH			
A1	PUMP ROOM	3'-0"	7'-0"	1 3/4"	HM	PRE-PRIMED	HM	PRE-PRIMED	1	NR	INSULATED, 180 DEGREE SWING HINGES - FULL OPEN
B1	GENERATOR ROOM	6'-4"	7'-0"	1 3/4"	HM	PRE-PRIMED	HM	PRE-PRIMED	2	NR	INSULATED, 180 DEGREE SWING HINGES - FULL OPEN

DOOR HARDWARE GROUPS

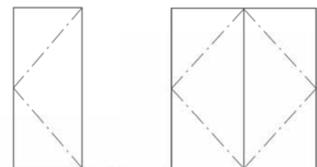
GROUP 1 - DOOR A1 - CONTROL ROOM

3	BUTTS	STANLEY	FBB179 NRP 4-1/2" X 4-1/2"
1	LOCKSET	SCHLAGE	ND80PD NEP 626 (LEVER)
1	DEADBOLT	SCHLAGE	9660
1	CLOSER	LCN	1461 SCUSH-AL
1	KICK PLATE	IVES	8400 8" X 34" LDW 630
1	WEATHERSTRIPPING	PEMKO	PK33D
1	THRESHOLD	PEMKO	271A
1	DOOR SHOE	PEMKO	216AV

GROUP 2 - DOOR B1 - GENERATOR ROOM

4	BUTTS	STANLEY	FBB179 NRP 4-1/2" X 4-1/2"
1	LOCKSET	SCHLAGE	ND80PD NEP 626 (LEVER)
1	CLOSER	LCN	1461 SCUSH-AL
2	KICK PLATE	IVES	8400 8" X 34" LDW 630
2	WEATHERSTRIPPING	PEMKO	PK33D
1	THRESHOLD	PEMKO	271A
2	DOOR SHOE	PEMKO	216AV

SCHEDULE ABBREVIATIONS	NOTES
GYP BD GYPSUM BOARD HC-PHB HOLLOW CORE PRIMED HARDBOARD HM HOLLOW METAL MDF MEDIUM DENSITY FIBREBOARD MFR MANUFACTURER PRE-FIN PREFINISHED PRE-PR PREPRIMED RB RUBBER BASE SC-PHB SOLID CORE PRIMED HARDBOARD	1. SEE A8.01 FOR HEAD AND JAMB DETAIL INFORMATION.



A. FLUSH - SINGLE

B. FLUSH - DOUBLE

DOOR TYPES

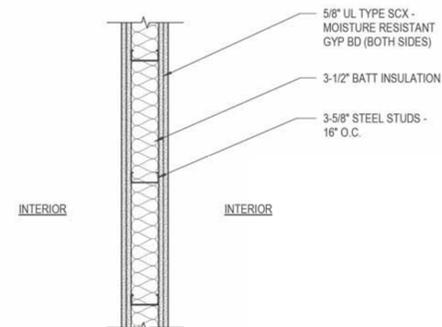
SCALE: 1/4" = 1'-0"



A. HOLLOW METAL

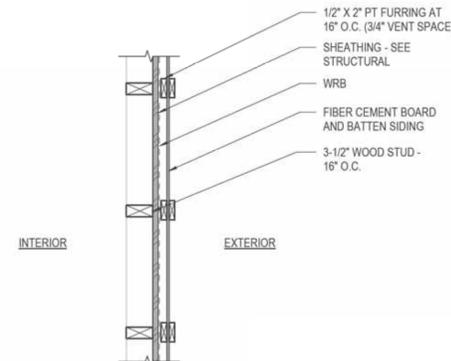
FRAME TYPES

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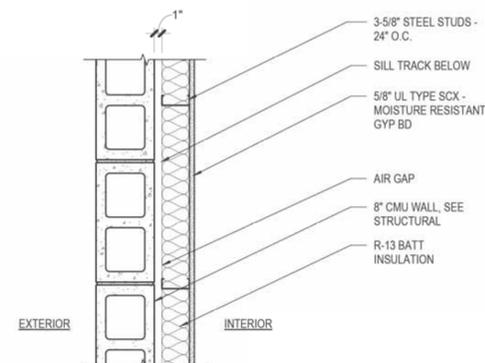
21A INTERIOR WALL - RATED - PARTITION

ASSEMBLY: UL U419 FIRE: 2-HR STC: 53



12A EXTERIOR WALL - NON-RATED - FIBER CEMENT

ASSEMBLY: NA FIRE: NR STC: NA

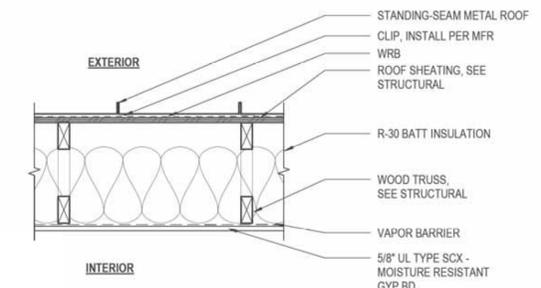


11A EXTERIOR WALL - NON-RATED - CMU W/ FURRING

ASSEMBLY: NA FIRE: NR STC: NA

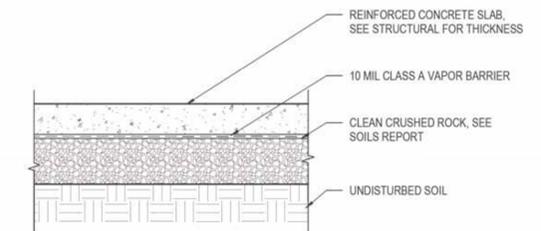
ASSEMBLY NOTES

- SEE STRUCTURAL FOR SHEAR WALL LOCATIONS. ADD SHEATHING TO ASSEMBLY AS REQUIRED BY STRUCTURAL ENGINEER. WHERE A NON-SHEAR WALL EXTENDS AND ALIGNS PARALLEL WITH A SHEAR WALL, PROVIDE ADDITIONAL SHEATHING LAYERS TO THE NON-SHEAR WALL TO PROVIDE CONTINUOUS FACE OF FINISH.
- PROVIDE FIRE BLOCKS AND DRAFT STOPS PER 2019 OREGON STRUCTURAL SPECIALTY CODE SECTION 718.
- LOCATE THERMAL INSULATION ON THE COLD SIDE (IN WINTER) OF DOMESTIC WATER PIPES AS REQUIRED TO PROTECT PIPES FROM FREEZING.
- PROVIDE ADDITIONAL FRAMING, BLOCKING, AND FINISHES AS REQUIRED FOR PLUMBING ACCESS PANELS.
- PROVIDE ADDITIONAL BLOCKING AS REQUIRED TO SUPPORT SHELVING, TOWEL BARS, RAILINGS, AND ALL OTHER WALL-MOUNTED ACCESSORIES AND EQUIPMENT.
- PROVIDE UL APPROVED THROUGH PENETRATION AND MEMBRANE PENETRATION FIRESTOP SYSTEMS AS REQUIRED BY CODE AT ALL ELECTRICAL, PLUMBING, AND MECHANICAL PENETRATIONS IN FIRE-RATED ASSEMBLIES, SEE A8.11.



2A ROOF/CEILING

ASSEMBLY: NA FIRE: NR STC: NA



1B GENERATOR PAD - SEE STRUCTURAL

ASSEMBLY: NA FIRE: NR STC: NA

1A SLAB - NON-RATED

ASSEMBLY: NA FIRE: NR STC: NA



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 CONSTRUCTION ASSEMBLIES AND SCHEDULES

#	DATE	DESCRIPTION

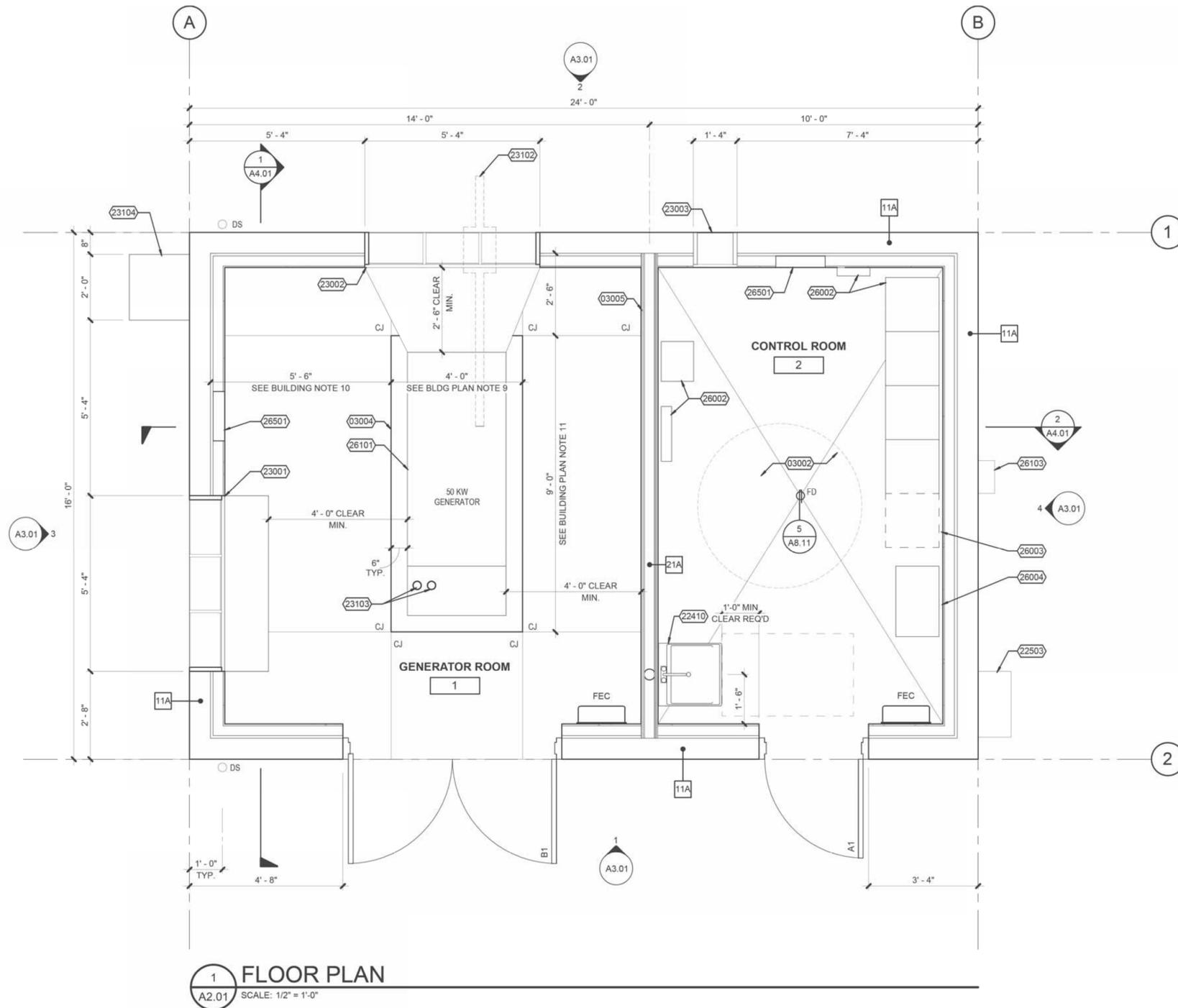
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 STATUS
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 PROJECT NUMBER
A1.01
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Plot Date: 6/9/2022 11:16:04 AM

Revit File: C:\Users\Chris.Jones\Documents\2022-04-04 - 18823 - St Helens Pump Station_chris.jones\A3\F1.rvt



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

BUILDING PLAN NOTES

1. ALL DIMENSIONS AND GRIDS ARE TO FACE OF CMU, CENTERLINE OF STUD AND EDGE OF ROUGH OPENING UNLESS OTHERWISE NOTED.
2. FOR ARCHITECTURAL ABBREVIATIONS & SYMBOL LEGEND SEE SHEET 00.01.
3. FOR CONSTRUCTION ASSEMBLY DESCRIPTIONS SEE SHEET A1.01.
4. SEE SHEET A1.01 FOR ROOM FINISH SCHEDULE AND FOR DOOR SCHEDULES.
5. SIDEWALKS AND PATIOS SHALL SLOPE AT 2% MAXIMUM AS SHOWN ON PLANS.
6. WARP CONCRETE AT WALLS AND COLUMNS AS SHOWN TO FORCE WATER TO MIGRATE AWAY FROM AND AROUND WITHOUT EXCEEDING 1.5% MAXIMUM SLOPE.
7. FOR MECHANICAL SYSTEMS & EQUIPMENT SEE MECHANICAL DRAWINGS.
8. FOR ELECTRICAL LIGHTING & EQUIPMENT SEE ELECTRICAL DRAWINGS.
9. FINAL GENERATOR SIZE MAY VARY. MINIMUM CLEAR DIMENSIONS TO WALLS AND 6" EXTENSION OF PAD AROUND THE FINAL GENERATOR TO BE MAINTAINED.
10. FINAL GENERATOR SIZE MAY VARY - POTENTIALLY AFFECTING NORTH-SOUTH POSITIONING OF PAD. ADJUST AS NEEDED TO ALIGN GENERATOR WITH LOUVER OPENING.
11. ADD A CONTROL JOINT UNDER THE GYPSUM BOARD OF THE DEMISING WALL ON THE SIDE OF THE GENERATOR ROOM.

KEYNOTE LEGEND

03002	SLOPE SLAB TO FLOOR DRAIN. 1/4" / 1'-0"
03004	GENERATOR PAD. SEE STRUCTURAL
03005	CONTROL JOINT UNDER DEMISING WALL. SEE PLAN NOTE 11
22410	UTILITY SINK WITH WALL MOUNT FAUCET (BASIS OF DESIGN - 24 X 24 X 14 BK RESOURCES 1-COMPARTMENT BUDGET SINK W/ GALVANIZED LEGS AND KROWNE SILVER SERIES 8" CENTER WALL MOUNT FAUCET W/ 16" SPOUT)
22503	ACCESS AND DISCONNECT PANELS - COLOR TO MATCH MUTUAL MATERIALS ONLYX. SEE PLUMBING
23001	5'-4" x 7'-4" SOUND-ATTENUATED INTAKE LOUVER W/ INTERIOR SHROUD MOUNTED 8" AFF AND SET WITHIN THE CMU MODULE - PAINT TO MATCH MUTUAL MATERIALS ONLYX
23002	5'-4" x 6'-0" SOUND-ATTENUATED EXHAUST LOUVER MOUNTED 8" AFF AND SET WITHIN THE CMU MODULE - PAINT TO MATCH MUTUAL MATERIALS ONLYX
23003	16" x 16" INTAKE LOUVER MOUNTED 24" AFF AND SET WITHIN THE CMU MODULE - PAINT TO MATCH MUTUAL MATERIALS ONLYX
23102	HEAVY DUTY GENERATOR EXHAUST VENT W/ SUPPORT THIMBLE ABOVE. SEE MECHANICAL
23103	VENT PIPE. SEE 191A8.01 AND MECHANICAL
23104	POST-MOUNT REMOTE FUEL FILL BOX - COLOR TO MATCH MUTUAL MATERIALS ONLYX. SEE MECHANICAL
26002	CONTROL EQUIPMENT. SEE ELECTRICAL
26003	SPACE FOR FUTURE EQUIPMENT. SEE ELECTRICAL
26004	TRANSFER SWITCH. SEE ELECTRICAL
26101	GENERATOR (BASIS OF DESIGN - 50 KW UNIT). SEE MECHANICAL
26103	GENERATOR RECEPTACLE - COLOR TO MATCH MUTUAL MATERIALS ONLYX. SEE ELECTRICAL
26501	ELECTRIC WALL HEATER. SEE ELECTRICAL



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FLOOR PLAN

#	DATE	DESCRIPTION

REVISIONS

NAVDB8

DATUM

CJ, AK DS

DRAWN BY CHECKED BY

FINAL PLANS

STATUS

JUNE 10, 2022

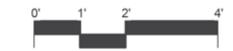
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PROJECT NUMBER

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ROOF VENT CALCULATIONS

ROOF AREA SF	SQ IN / 300	REQUIRED VENT AREA (SQ IN)	PROVIDED VENT AREA (SQ IN)
469 SF	67,536 / 300	225 SQ IN	2 IN * 23 FT = 2 IN * 276 IN = 552 SQ IN

ROOF PLAN NOTES

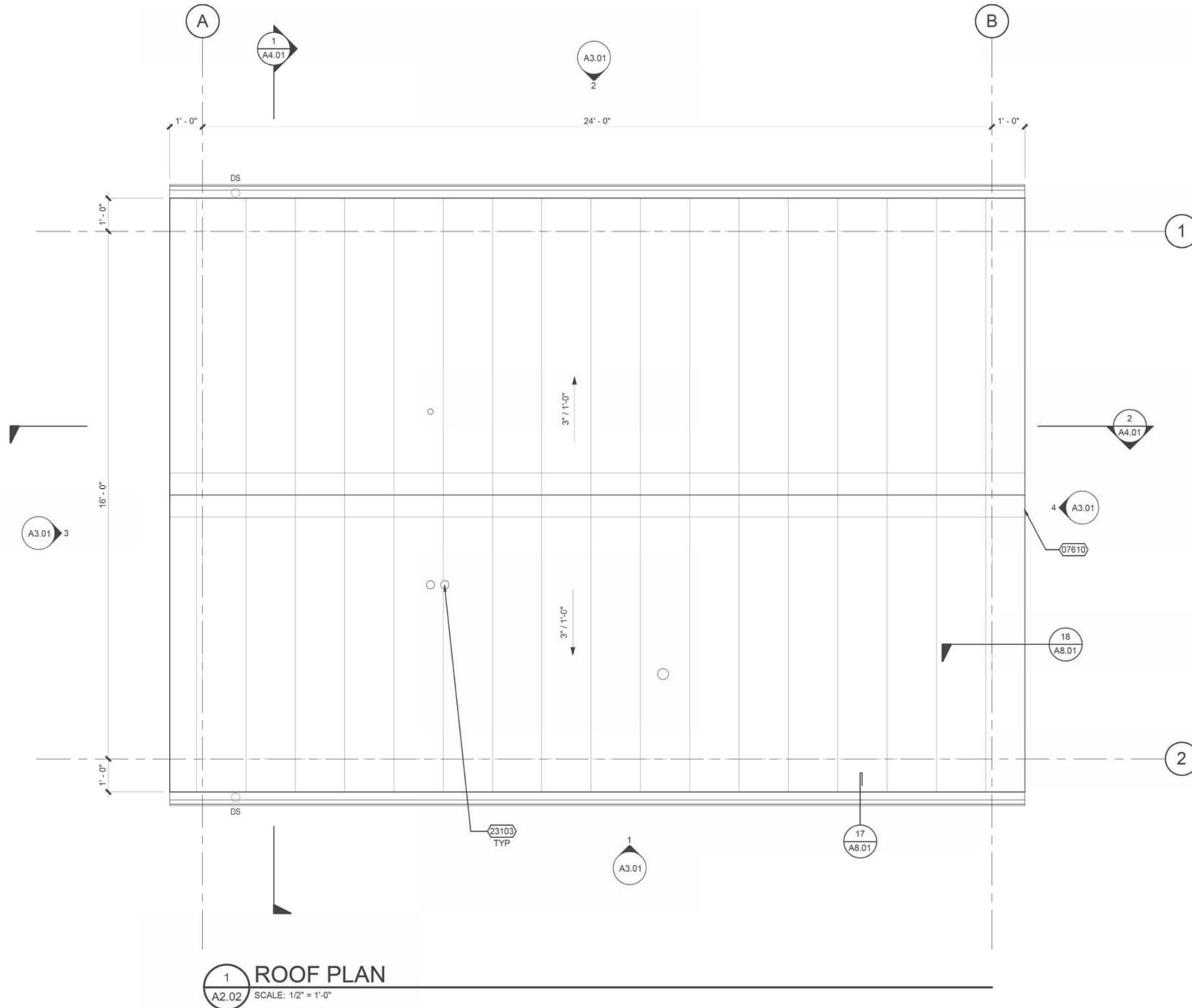
- SEE FLOOR PLANS FOR BUILDING DIMENSIONS.
- SEE SHEET A8.01 FOR ROOF PENETRATIONS DETAILS.

ROOF PLAN LEGEND

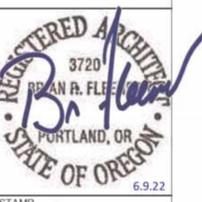
 STANDING SEAM METAL ROOF - FOREST GREEN

KEYNOTE LEGEND

 RIDGE VENT (BASIS OF DESIGN - AEP SPAN VENTED RIDGE CAP - COLOR TO MATCH ROOF PANELS - FOREST GREEN)
 VENT PIPE, SEE 19/A8.01 AND MECHANICAL



1 ROOF PLAN
 A2.02 SCALE: 1/2" = 1'-0"



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**S. 1ST AND STRAND STREETS
 ROAD AND UTILITY EXTENSIONS**
 1ST & STRAND STREETS
 ST. HELENS, OREGON
ROOF PLAN

#	DATE	DESCRIPTION

REVISIONS

NAVDB8

DATUM

CJ, AK DS

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FINAL PLANS

STATUS

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**S. 1ST AND STRAND STREETS
ROAD AND UTILITY EXTENSIONS**
1ST & STRAND STREETS
ST. HELENS, OREGON

EXTERIOR ELEVATIONS

ELEVATION NOTES

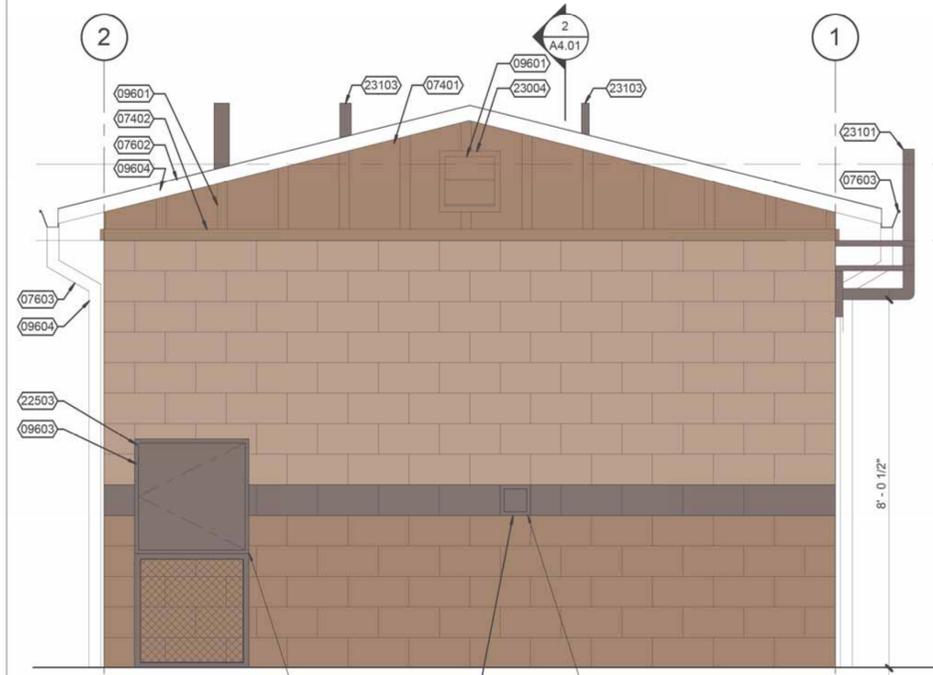
- SEE BUILDING FLOOR PLANS FOR DOOR TAGS.
- SEE SHEET A1.01 FOR DOOR SCHEDULE.
- BUILDING COLORS AND MATERIALS SHALL WRAP AROUND CORNERS UNLESS NOTED OTHERWISE.
- SEE 11/8.01 FOR TYPICAL SEALANT JOINTS.
- SEE 19/8.01 FOR TYPICAL ROOF PENETRATIONS.
- SEE 10/8.01 FOR ELECTRICAL AND MECHANICAL PENETRATIONS.

ELEVATION LEGEND

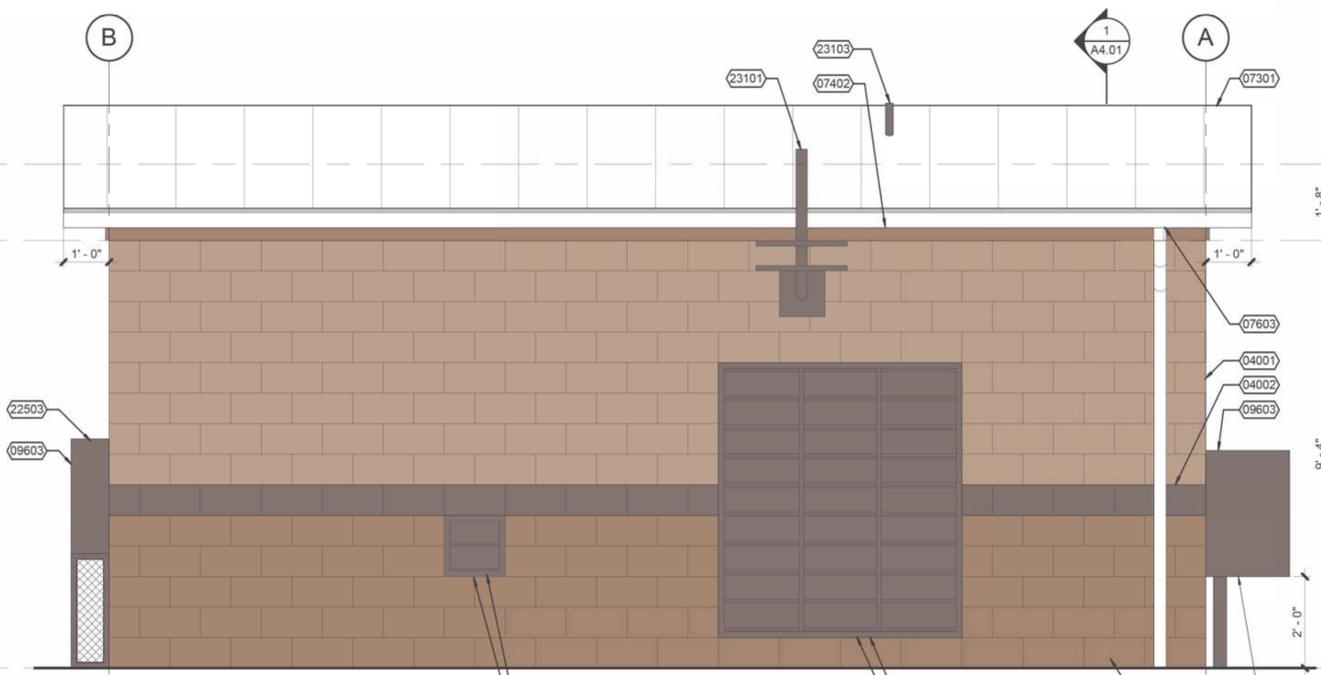
- FIBER CEMENT BOARD & BATTEN SIDING WITH BATTENS AT 16" O.C. - COLOR TO MATCH MOUNTAIN BROWN CMU
- STANDING SEAM METAL ROOF - FOREST GREEN
- SMOOTH FACE CMU - MESA TAN
- GROUND FACE CMU - ONYX
- SPLIT FACE CMU - MOUNTAIN BROWN

KEYNOTE...

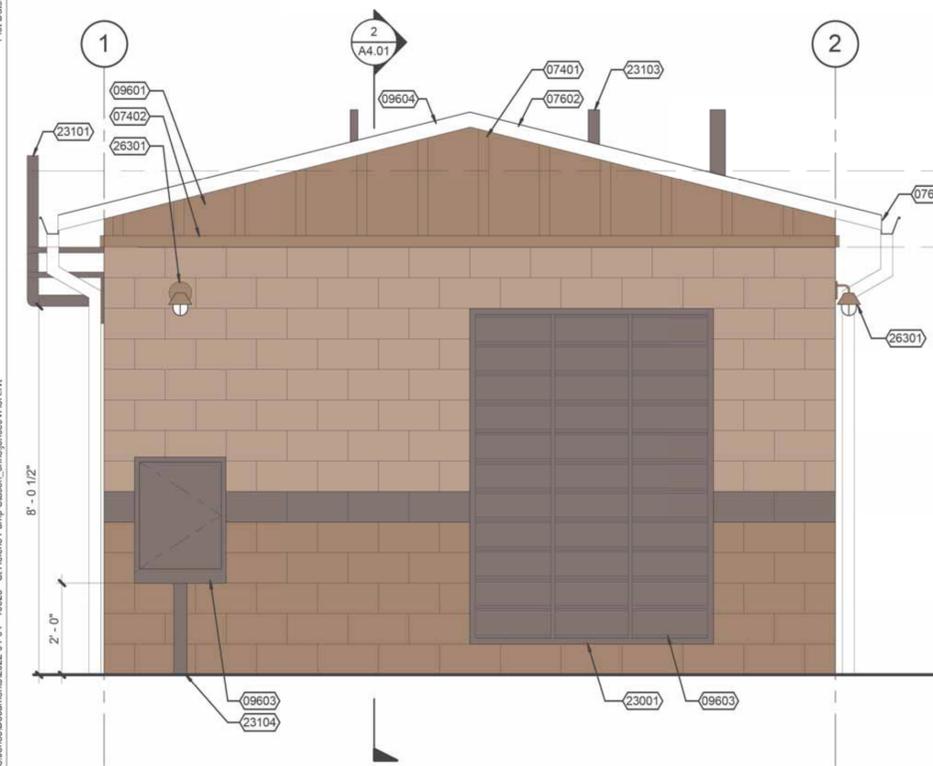
- 04001 8" INTEGRAL COLOR SMOOTH FACED CMU WITH SOLID GROUTING TO MATCH COLOR - PROVIDE SEALANT AND AN ANTI-GRAFFITI COATING ON EXTERIOR (BASIS OF DESIGN - MUTUAL MATERIALS CMU - MESA TAN)
- 04002 8" INTEGRAL COLOR GROUND FACED CMU WITH SOLID GROUTING TO MATCH COLOR - PROVIDE SEALANT AND AN ANTI-GRAFFITI COATING ON EXTERIOR (BASIS OF DESIGN - MUTUAL MATERIALS CMU - ONYX)
- 04003 8" INTEGRAL COLOR SPLIT FACED CMU WITH SOLID GROUTING TO MATCH COLOR - PROVIDE SEALANT AND AN ANTI-GRAFFITI COATING ON EXTERIOR (BASIS OF DESIGN - MUTUAL MATERIALS CMU - MOUNTAIN BROWN)
- 07301 STANDING SEAM METAL ROOF (BASIS OF DESIGN - 24 GAUGE 16" AEP SPANSEAM IN FOREST GREEN)
- 07401 FIBER CEMENT BOARD & BATTEN SIDING WITH BATTENS @ 16" O.C. - FINAL COLOR TO MATCH MOUNTAIN BROWN CMU (BASIS OF DESIGN - SMOOTH PRIMED FOR PAINT HARDIE PANEL VERTICAL SIDING W/ SMOOTH PRIMED FOR PAINT HARDIE BATTEN BOARDS)
- 07402 FIBER CEMENT TRIM - FINAL COLOR TO MATCH MOUNTAIN BROWN CMU (BASIS OF DESIGN - 5/4 SMOOTH PRIMED FOR PAINT HARDIE TRIM BOARDS)
- 07602 FIBER CEMENT TRIM FASCIA BOARD - PAINT TO MATCH ROOF PANELS
- 07603 4-1/2" 24 GAUGE, FASCIA METAL GUTTER AND DOWNSPOUT - PAINT TO MATCH ROOF PANELS - FOREST GREEN AND TIE IN TO STORM, SEE CIVIL
- 09601 SHERWIN WILLIAMS EXTERIOR SATIN PAINT, COLOR TO MATCH MUTUAL MATERIALS MOUNTAIN BROWN - SUBMIT COLOR SAMPLES TO ARCHITECT FOR FINAL APPROVAL
- 09603 SHERWIN WILLIAMS EXTERIOR SATIN PAINT, COLOR TO MATCH MUTUAL MATERIALS ONYX - SUBMIT COLOR SAMPLES TO ARCHITECT FOR FINAL APPROVAL
- 09604 SHERWIN WILLIAMS EXTERIOR SATIN PAINT, COLOR TO MATCH AEP FOREST GREEN - SUBMIT COLOR SAMPLES TO ARCHITECT FOR FINAL APPROVAL
- 22503 ACCESS AND DISCONNECT PANELS - COLOR TO MATCH MUTUAL MATERIALS ONYX, SEE PLUMBING
- 23001 5'-4" x 7'-4" SOUND-ATTENUATED INTAKE LOUVER W/ INTERIOR SHROUD MOUNTED 8" AFF AND SET WITHIN THE CMU MODULE - PAINT TO MATCH MUTUAL MATERIALS ONYX
- 23002 5'-4" x 6'-0" SOUND-ATTENUATED EXHAUST LOUVER MOUNTED 8" AFF AND SET WITHIN THE CMU MODULE - PAINT TO MATCH MUTUAL MATERIALS ONYX
- 23003 16" x 16" INTAKE LOUVER MOUNTED 24" AFF AND SET WITHIN THE CMU MODULE - PAINT TO MATCH MUTUAL MATERIALS ONYX
- 23004 18" x 18" EXHAUST FAN CENTERED IN THE CABLE END - PAINT TO MATCH MUTUAL MATERIALS MOUNTAIN BROWN
- 23101 HEAVY DUTY GENERATOR EXHAUST VENT W/ SUPPORT THIMBLE AND GALVANIZED ANCHOR STRAPS PAINTED TO MATCH MUTUAL MATERIALS ONYX, SEE MECHANICAL
- 23103 VENT PIPE, SEE 19/A8.01 AND MECHANICAL
- 23104 POST-MOUNT REMOTE FUEL FILL BOX - COLOR TO MATCH MUTUAL MATERIALS ONYX, SEE MECHANICAL
- 26301 EXTERIOR LIGHT (BASIS OF DESIGN - WYNDMIERE COLLECTION BRONZE 9" HIGH OUTDOOR LIGHT MOUNTED 8'-4" AFF



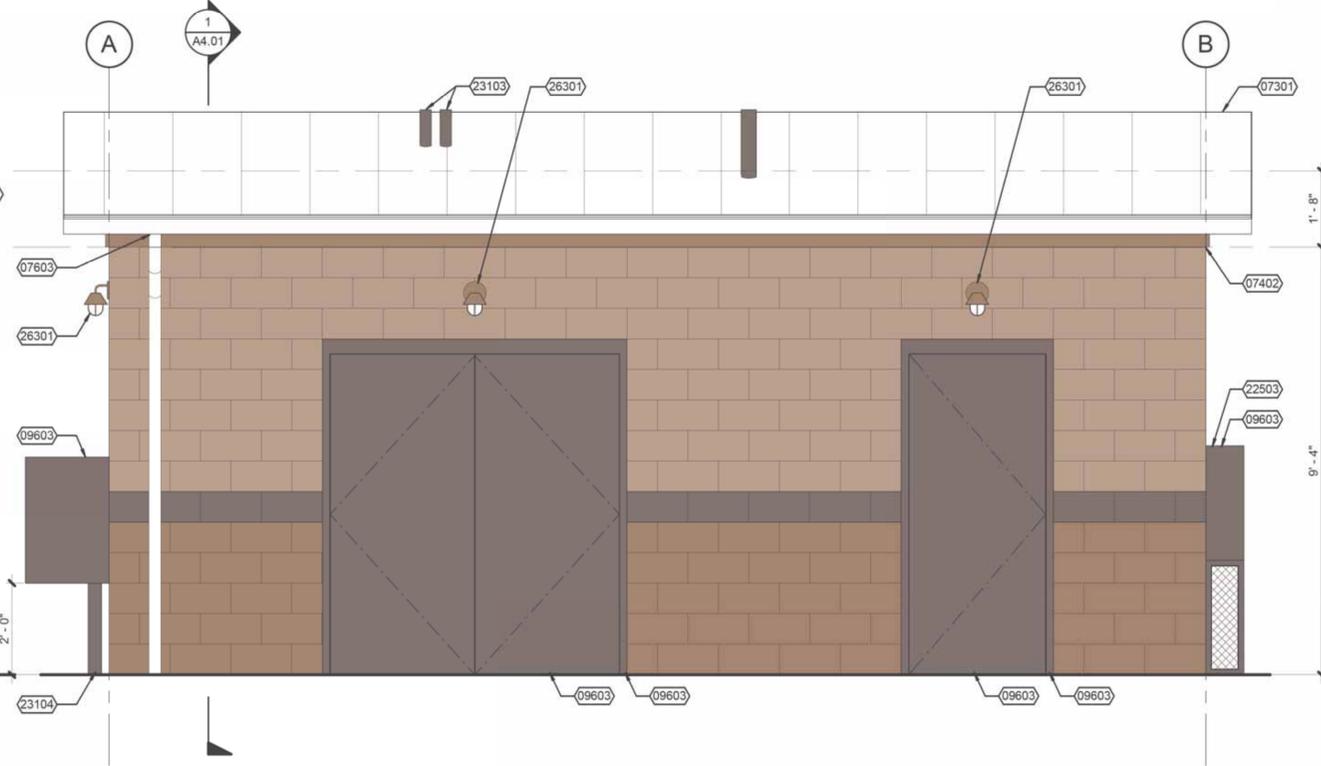
4 NORTH ELEVATION
A3.01 SCALE: 1/2" = 1'-0"



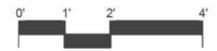
2 WEST ELEVATION
A3.01 SCALE: 1/2" = 1'-0"



3 SOUTH ELEVATION
A3.01 SCALE: 1/2" = 1'-0"



1 EAST ELEVATION
A3.01 SCALE: 1/2" = 1'-0"



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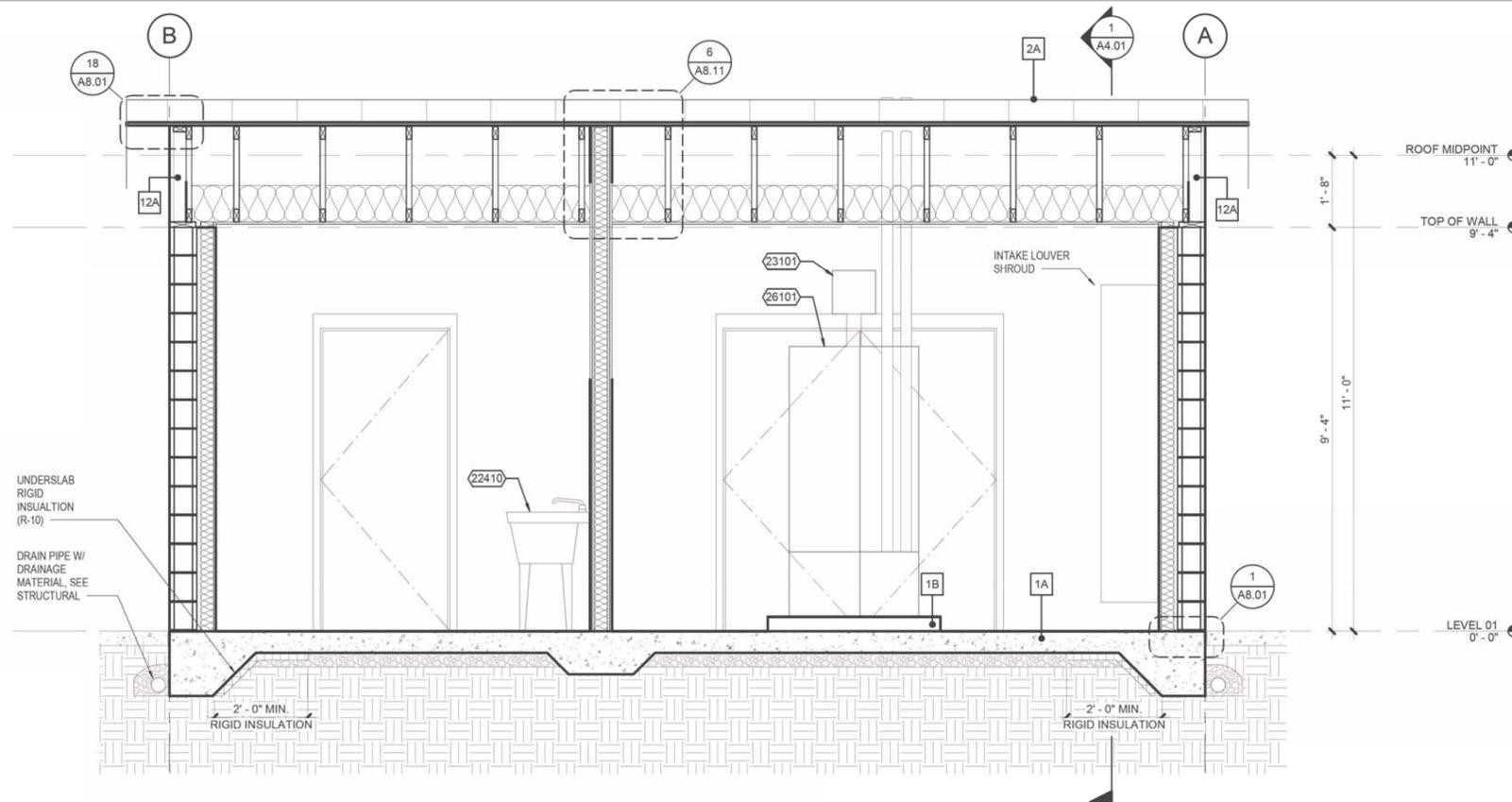
A3.01

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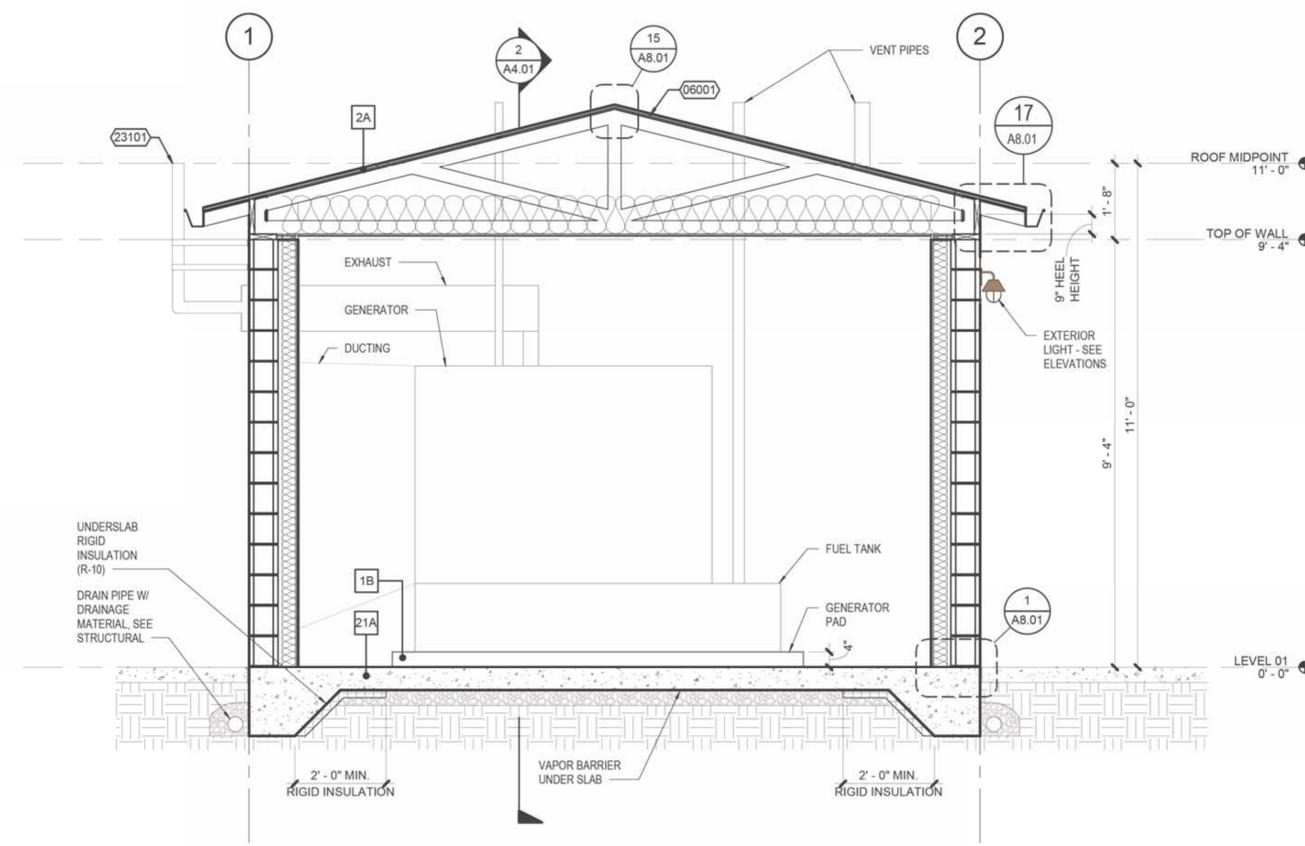
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2 NORTH-SOUTH BUILDING SECTION
A4.01 SCALE: 1/2" = 1'-0"



1 EAST-WEST BUILDING SECTION
A4.01 SCALE: 1/2" = 1'-0"

KEYNOTE LEGEND

06001	PREFABRICATED WOOD ROOF TRUSSES, SEE STRUCTURAL
22410	UTILITY SINK WITH WALL-MOUNT FAUCET (BASIS OF DESIGN - 24 X 24 X 14 BK RESOURCES 1-COMPARTMENT BUDGET SINK W/ GALVANIZED LEGS AND KROWNE SILVER SERIES 8" CENTER WALL MOUNT FAUCET W/ 16" SPOUT)
23101	HEAVY DUTY GENERATOR EXHAUST VENT W/ SUPPORT THIMBLE AND GALVANIZED ANCHOR STRAPS PAINTED TO MATCH MUTUAL MATERIALS ONLYX, SEE MECHANICAL
26101	GENERATOR (BASIS OF DESIGN - 50 KW UNIT), SEE MECHANICAL



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BUILDING SECTION

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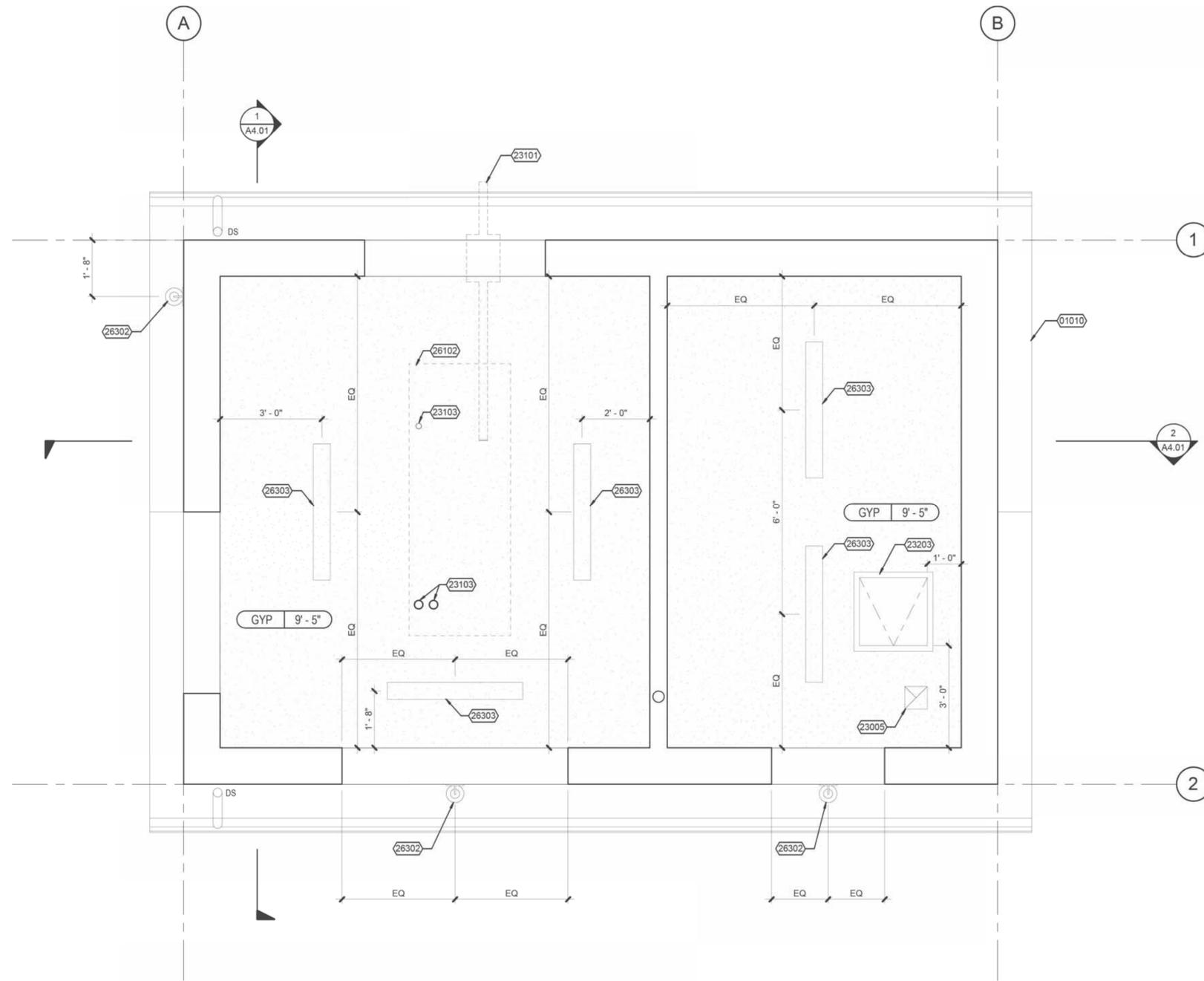
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1 REFLECTED CEILING PLAN
 A7.01 SCALE: 1/2" = 1'-0"

CEILING PLAN NOTES

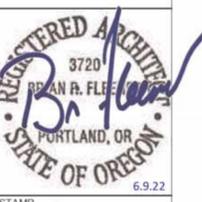
1. SEE MECHANICAL AND ELECTRICAL PLANS FOR CEILING FIXTURE AND EQUIPMENT INFORMATION.

CEILING LEGEND

□ GYP. BD. CEILING

KEYNOTE LEGEND

23103 VENT PIPE, SEE 19/A8.01 AND MECHANICAL



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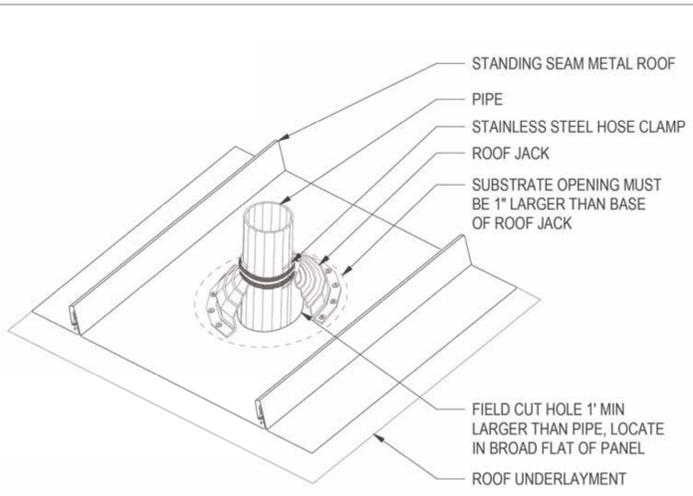
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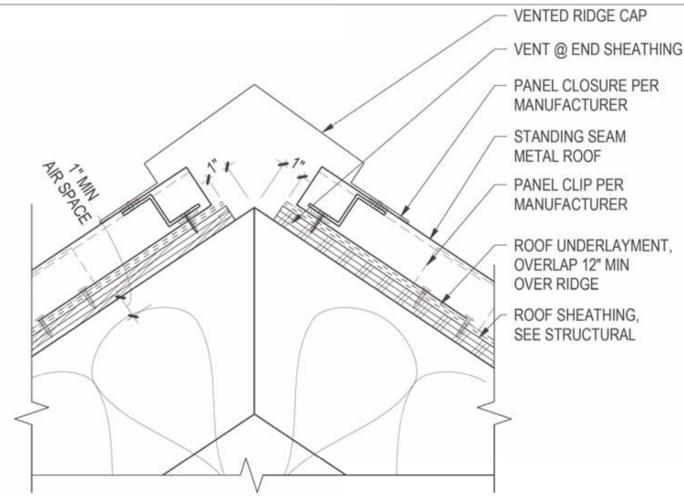
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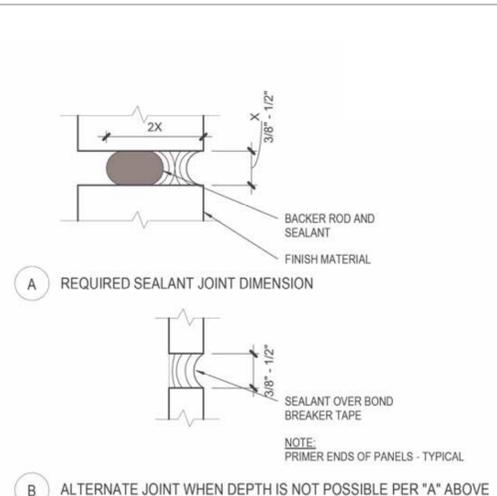




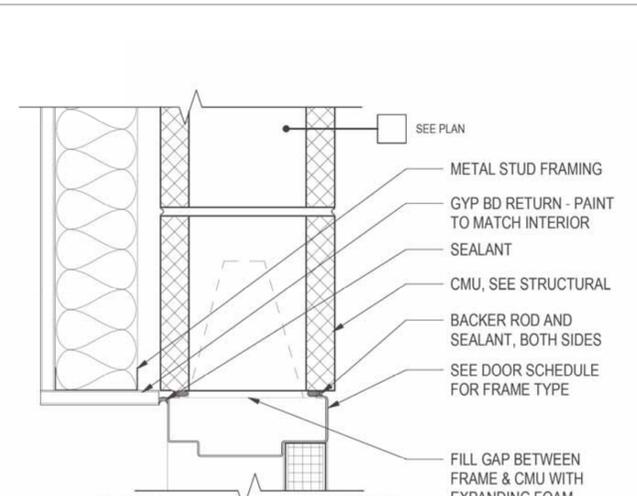
19 PENETRATION AT METAL ROOF
A8.01 SCALE: 3" = 1'-0"



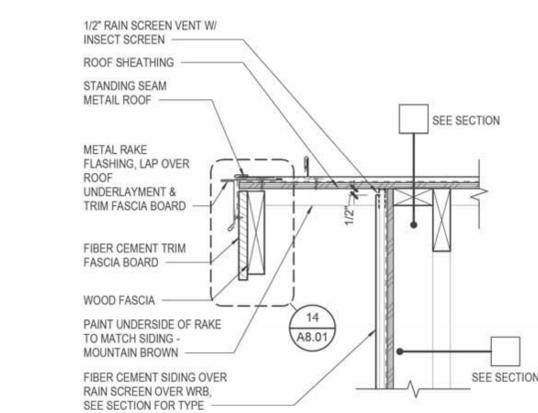
15 RIDGE@ METAL ROOF
A8.01 SCALE: 3" = 1'-0"



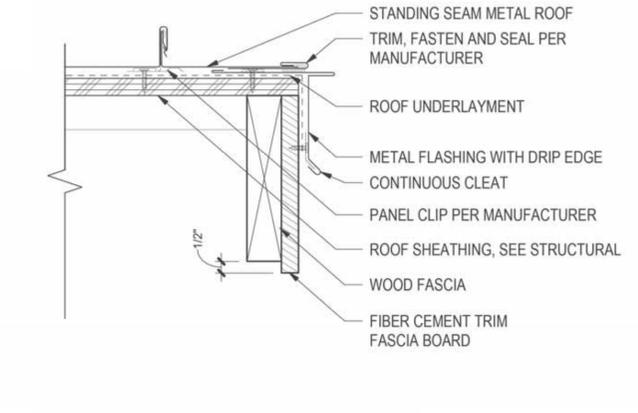
11 TYPICAL SEALANT JOINT
A8.01 SCALE: 12" = 1'-0"



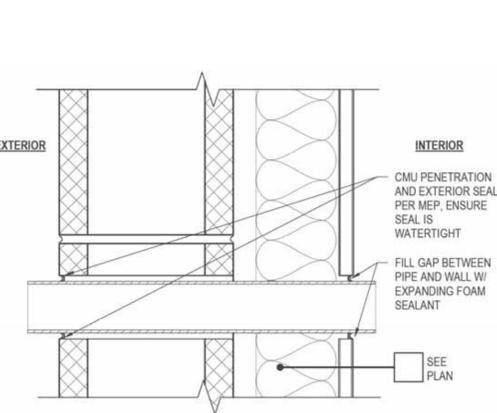
3 DOOR @ CMU - HEAD / JAMB (SIM)
A8.01 SCALE: 3" = 1'-0"



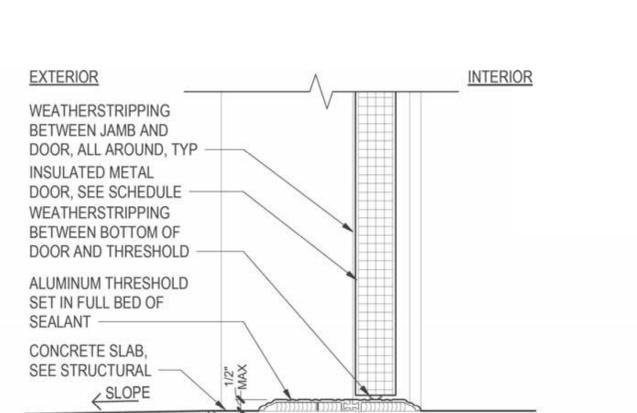
18 TYPICAL RAKE
A8.01 SCALE: 1 1/2" = 1'-0"



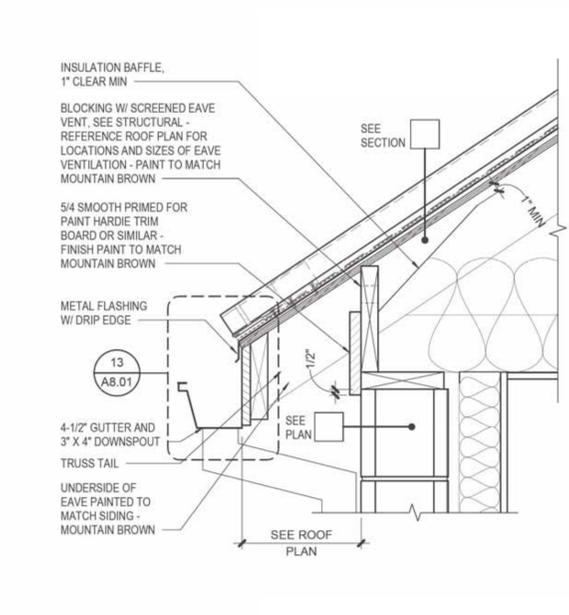
14 RAKE @ METAL ROOF
A8.01 SCALE: 3" = 1'-0"



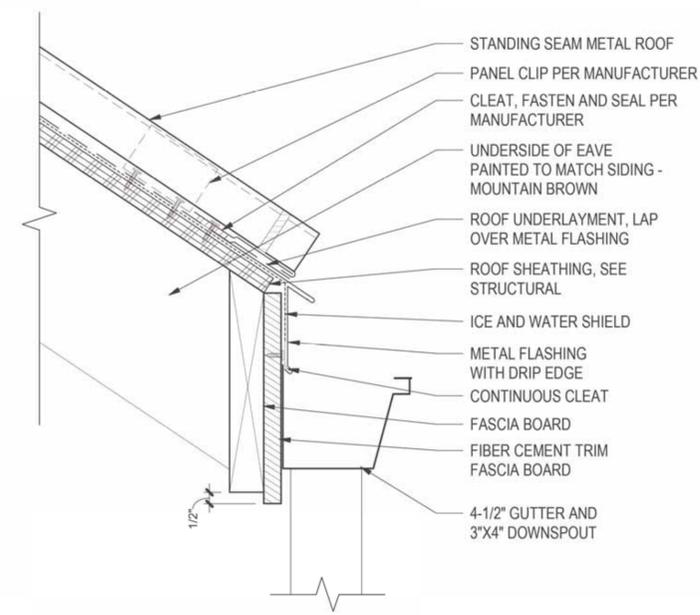
10 PIPE PENETRATION
A8.01 SCALE: 3" = 1'-0"



2 DOOR @ ADA THRESHOLD
A8.01 SCALE: 3" = 1'-0"



17 TYPICAL EAVE
A8.01 SCALE: 1 1/2" = 1'-0"



13 EAVE @ METAL ROOF
A8.01 SCALE: 3" = 1'-0"



1 CMU BASE @ GRADE
A8.01 SCALE: 3" = 1'-0"



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ST. HELENS, OREGON
EXTERIOR DETAILS

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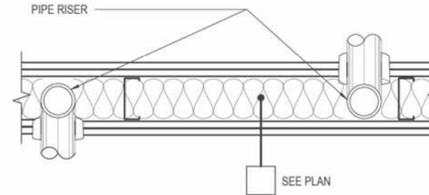
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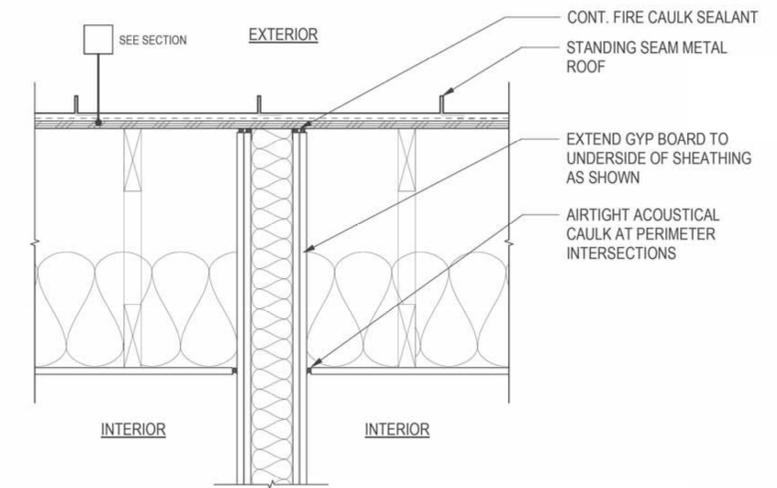
NOTE
CAULKING AND RELATED MATERIALS SPECIFIED IN UL SYSTEMS MUST BE APPROVED MATERIALS TO MEET THE REQUIRED FIRE RATING.

- * UL SYSTEM NO WL1001 AT METALLIC PIPE OR CONDUIT CONDITIONS
- * UL SYSTEM NO WL2003 AT NON-METALLIC PIPE OR CONDUIT CONDITIONS

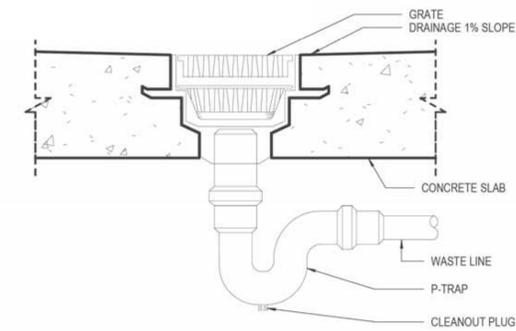
CONTRACTOR TO SUBMIT UL-LISTED DETAIL FOR EXACT PENETRATION CONDITION



8 2HR WALL PENETRATION
A8.11 SCALE: 1 1/2" = 1'-0"



6 DEMISING WALL @ CEILING
A8.11 SCALE: 1 1/2" = 1'-0"



5 FLOOR DRAINAGE
A8.11 SCALE: 3/4" = 1'-0"



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