

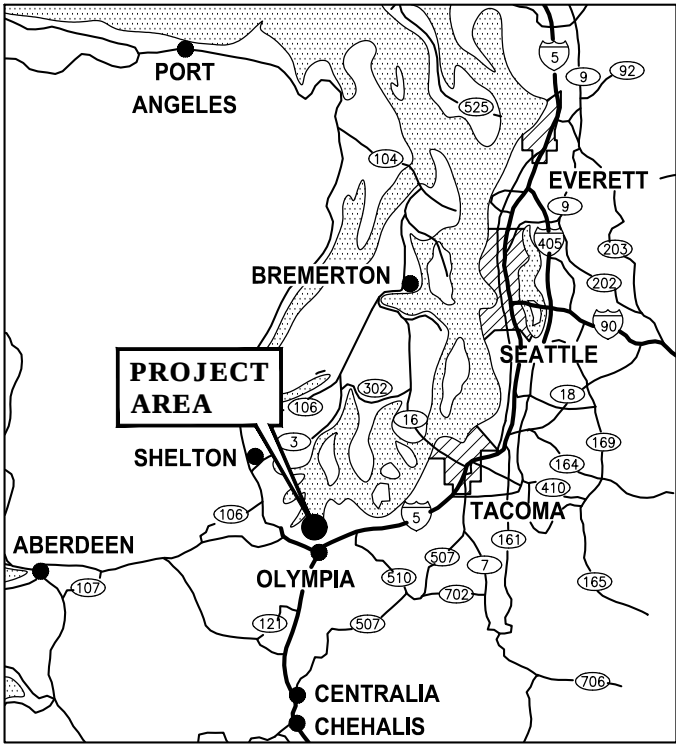


CITY OF OLYMPIA

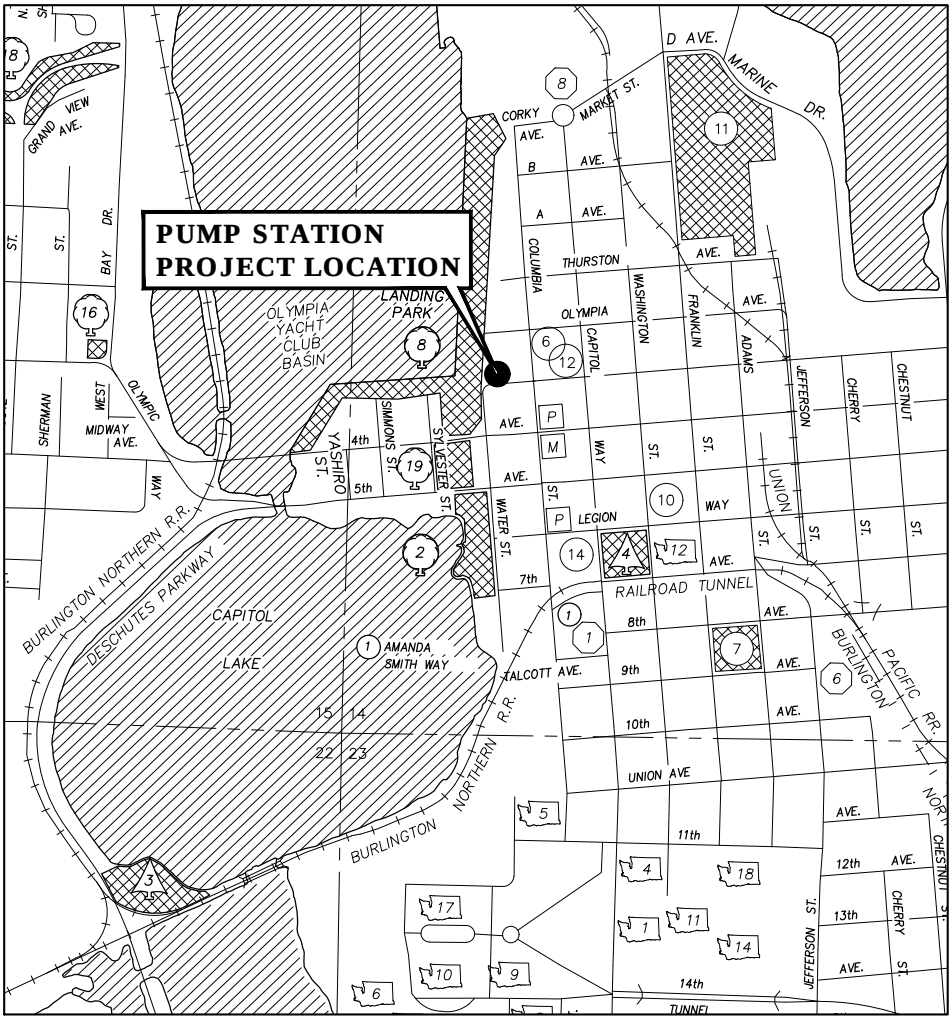
WATER STREET LIFT STATION GENERATOR

CITY PROJECT #1580Q

OLYMPIA, WASHINGTON



LOCATION MAP
NOT TO SCALE



PUMP STATION ADDRESS: 207 W. OLYMPIA AVE
OLYMPIA, WA

VICINITY MAP
NOT TO SCALE

INDEX TO DRAWINGS		
SHT NO.	DWG NO.	
GENERAL		
1	G1	COVER SHEET
DEMOLITION		
2	D1	EXTERIOR DEMOLITION PLAN AND DETAILS
3	D2	INTERIOR DEMOLITION DETAILS
CIVIL		
4	C1	CIVIL SITE PLAN
STRUCTURAL		
5	S1	STRUCTURAL LEGEND
6	S2	STRUCTURAL DETAILS
ELECTRICAL		
7	E1	ELECTRICAL LEGEND AND ABBREVIATIONS
8	E2	ELECTRICAL SITE PLAN
9	E3	ELECTRICAL ONE-LINE DIAGRAM AND CIRCUIT SCHEDULE
10	E4	ELECTRICAL CONTROL AND SIGNAL INTERCONNECT

Received March 20, 2019

PERMIT REVIEW 3/15/2019
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REVISIONS	DATE	BY	DESIGNED
			J. REINMUTH
			DRAWN
			A. PETERSON
			CHECKED
			K. HOUSE
			APPROVED

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FILE NAME	PS1577042G-01
JOB No.	216-1577-042
DATE	SEPTEMBER 2018



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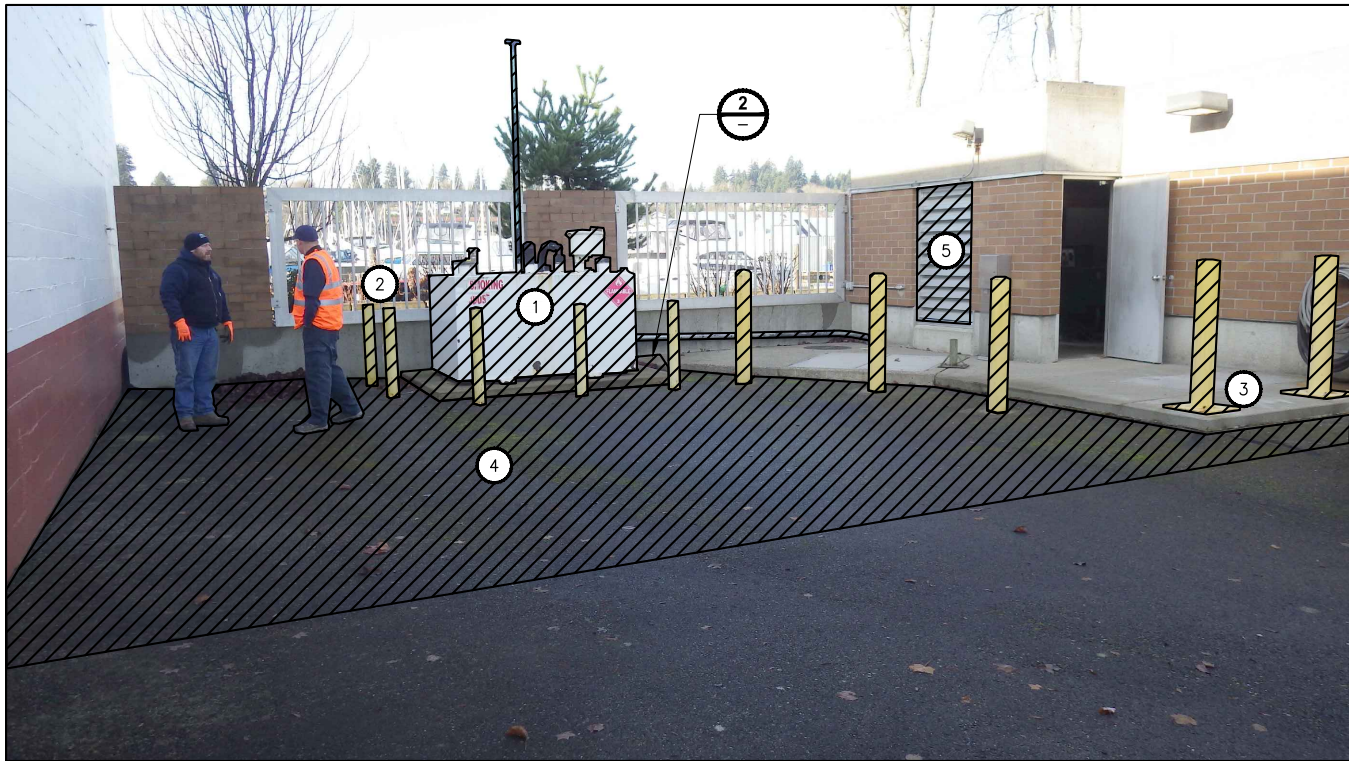
PROJECT NAME
WATER STREET LIFT STATION GENERATOR
OLYMPIA, WASHINGTON

COVER SHEET

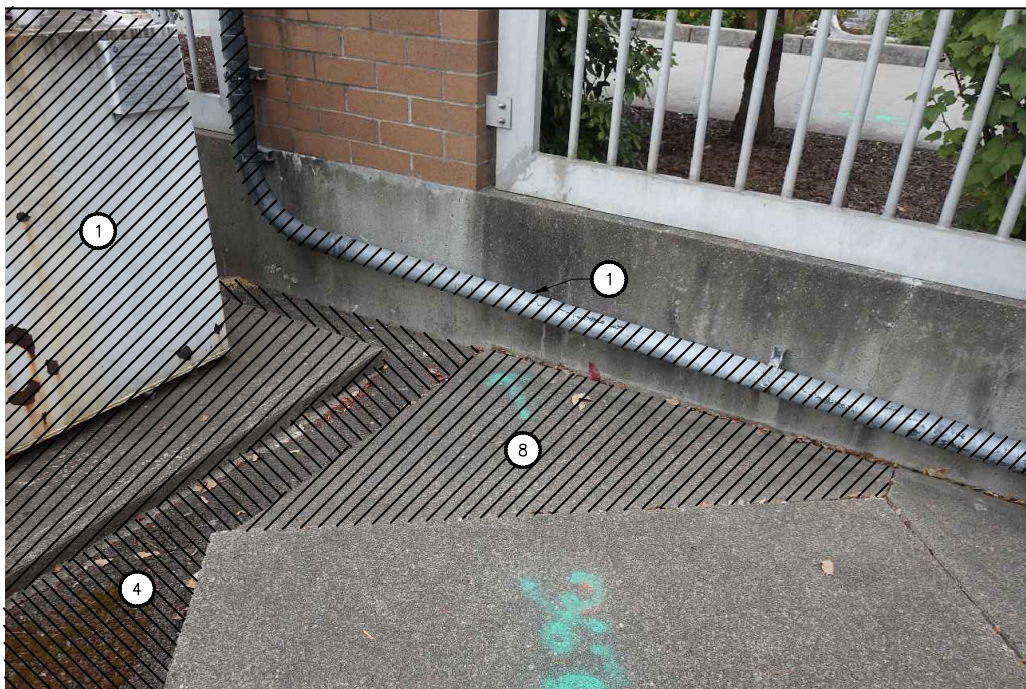
DRAWING NO. 1 OF 10
G1

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PLOTTER BY: peterden DATE: Friday, March 15, 2019 12:08:42 PM
LAYOUT: G1

PATH: U:\PSO\Projects\Clients\1577-ChgoOlympia\216-1577-042 EngrinR&WaterSILS\98Sves\CADD\DWG\Water Street
LAYOUT: D1
PLOTED BY: peterden DATE: Friday, March 15, 2019 12:09:15 PM



DEMOLITION
DETAIL
NO SCALE



DEMOLITION
DETAIL
NO SCALE

DEMO NOTES:

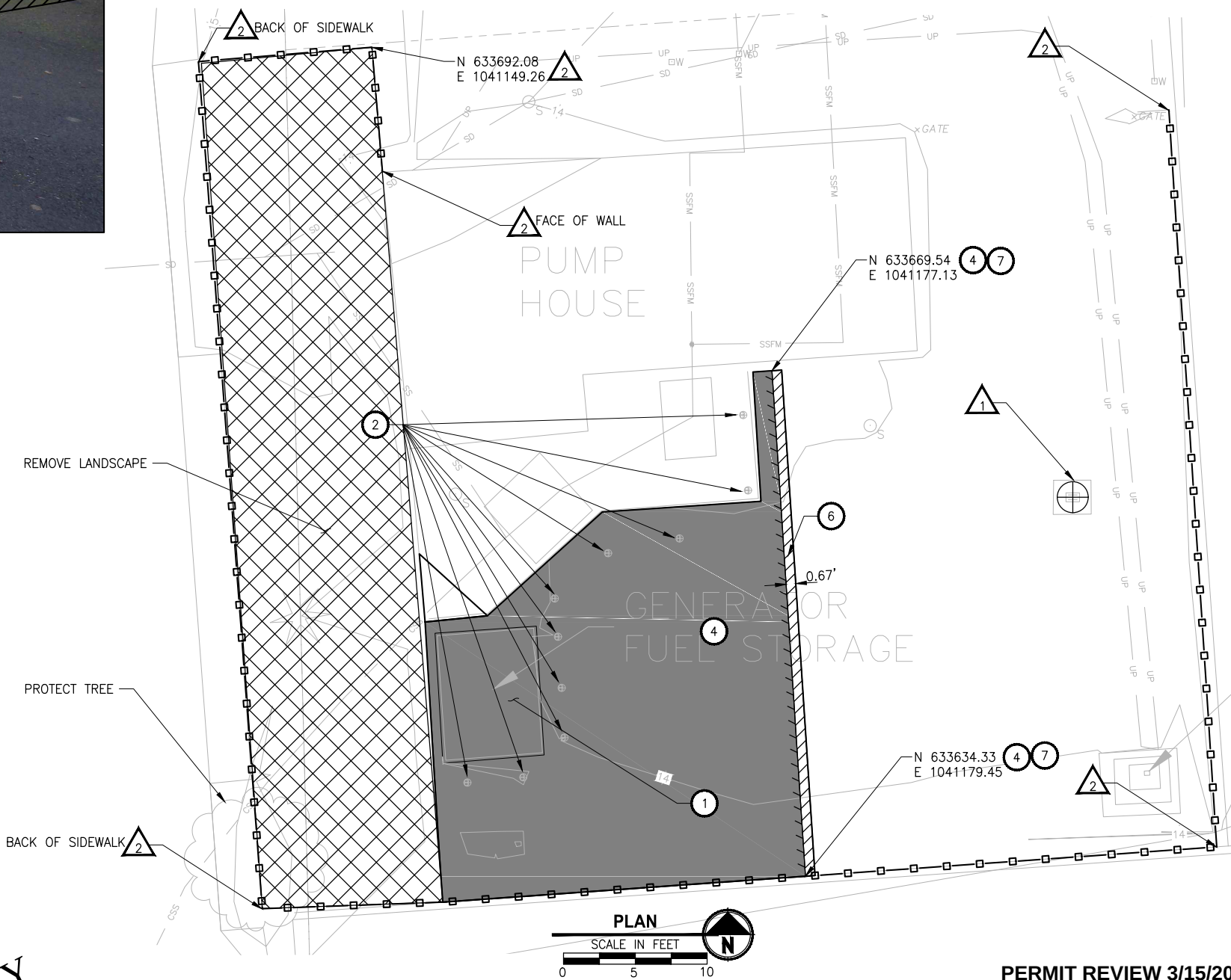
- 1 REMOVE FUEL AND 500 GALLON FUEL STORAGE TANK WITH ASSOCIATED EQUIPMENT PAD, FUEL PIPING, AND SIGNAL CONDUCTORS/CONDUITS.
- 2 REMOVE BOLLARDS. TYP 10.
- 3 REMOVE BOLLARD ANCHORS AND GROUT BELOW BASE PLATE BY GRINDING FLUSH WITH FINISHED CONCRETE SURFACE.
- 4 REMOVE EXISTING ASPHALT. REPLACE WITH NEW HMA PER CIVIL SHEET.
- 5 REMOVE LOUVER AND ASSOCIATED CONDUIT AND WIRE. SEE STRUCTURAL DETAILS SHEET S2.
- 6 GRIND PAVEMENT 2".
- 7 SAWCUT PAVEMENT.
- 8 REMOVE SUNKEN SECTION OF CONCRETE SLAB. SEE CIVIL SITE PLAN C1.

TESC NOTES:

- 1 INSTALL INLET PROTECTION PER CITY OF OLYMPIA BMP C220
- 2 INSTALL SILT FENCE PER CITY OF OLYMPIA BMP C233

GENERAL NOTES:

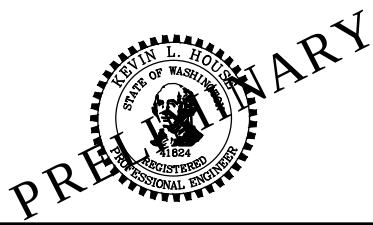
1. CONTRACTOR TO KEEP SIDEWALK CLEAN AT ALL TIMES
2. SOIL DISTURBED FOR LANDSCAPE RESTORATION SHALL BE RETAINED INSIDE PROJECT FOOTPRINT
3. TEMPORARY FENCING SHALL BE PROTECTED AND REMAIN INSTALLED DURING CONSTRUCTION



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REVISIONS	DATE	BY	DESIGNED
			J. REINMUTH
			DRAWN
			C. WOODCOCK
			CHECKED
			K. HOUSE
			APPROVED

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JOB No. 216-1577-042
DATE SEPTEMBER 2018



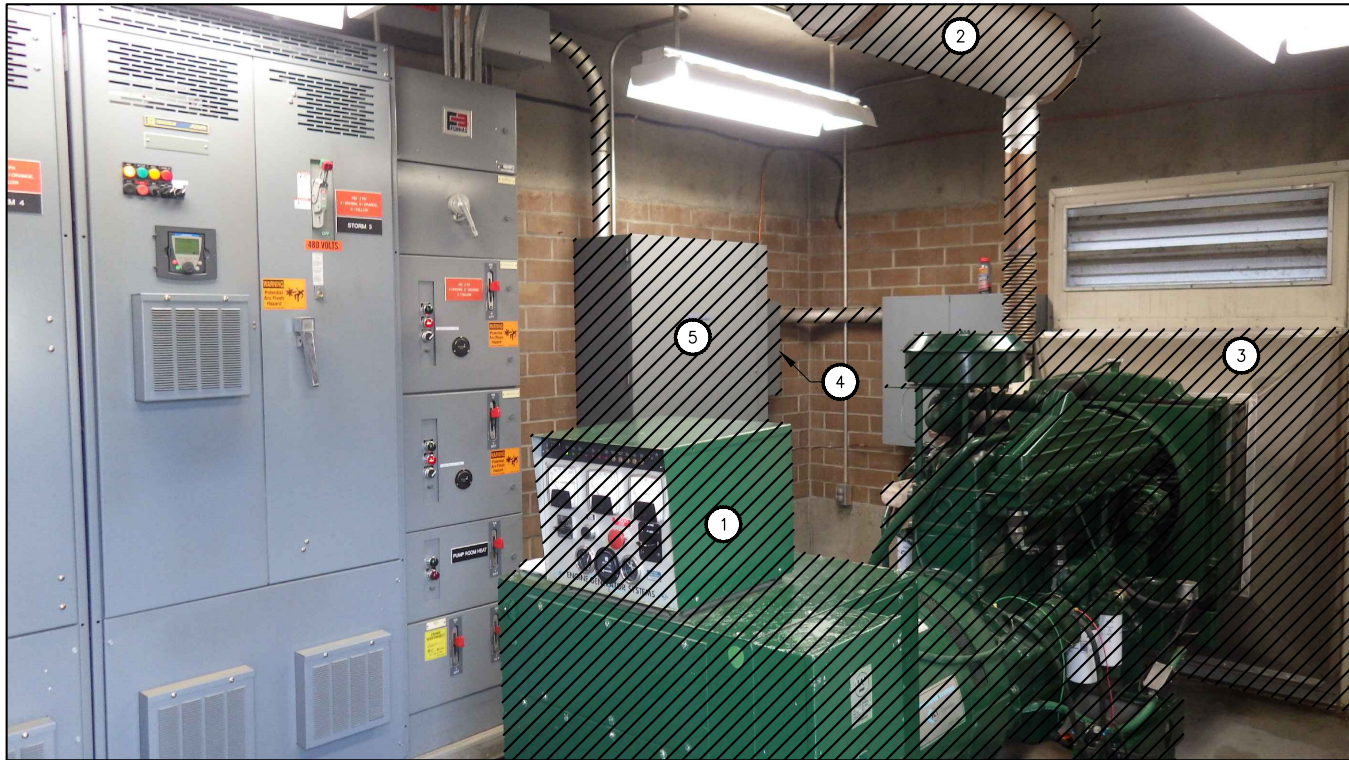
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WATER STREET LIFT STATION GENERATOR
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EXTERIOR DEMOLITION AND TESC PLAN AND DETAILS

DRAWING NO. 2 OF 10
D1

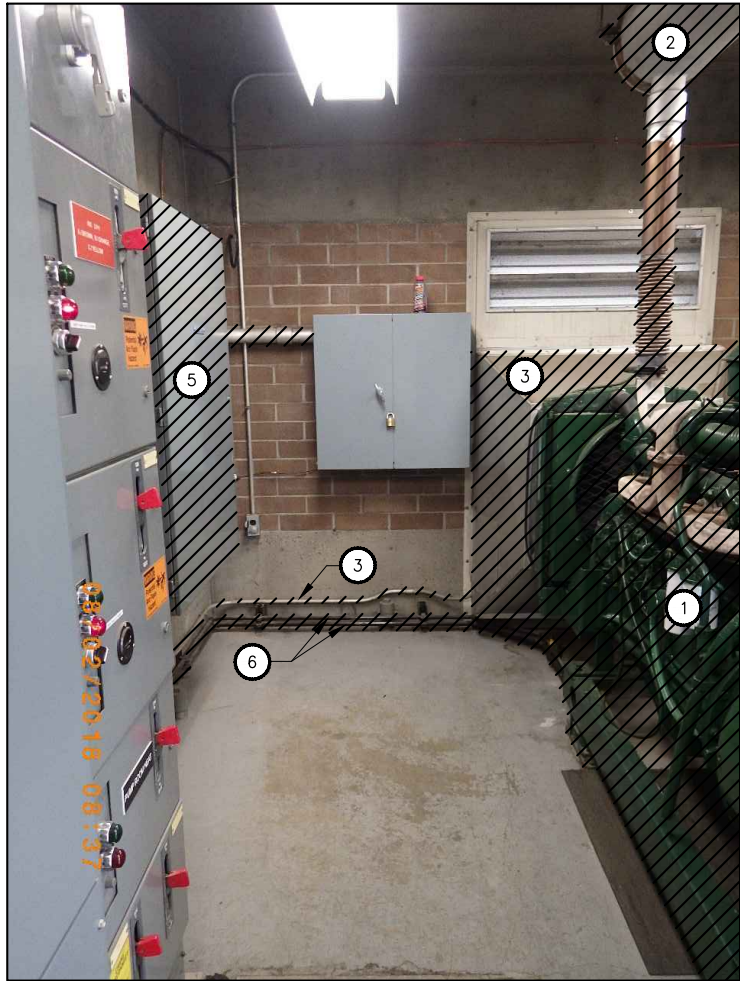
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LAYOUT: D2
PLOTTER BY: peterden DATE: Friday, March 15, 2019 12:10:18 PM



DEMOLITION
DETAIL

NO SCALE

3



DEMOLITION
DETAIL

NO SCALE

4

DEMO NOTES:

- 1 REMOVE GENERATOR.
- 2 REMOVE GENERATOR EXHAUST SYSTEM AND ASSOCIATED HARDWARE. REMOVE EXTERIOR EXHAUST RAIN CAP (NOT SHOWN) AND SEAL VENT STACK WITH WEATHER-TIGHT SHEET METAL CAP.
- 3 REMOVE VENT HOOD AND LOUVERS WITH ASSOCIATED CONDUIT AND WIRE. SEE STRUCTURAL DETAILS SHEET S2.
- 4 REPLACE EXISTING MAIN CIRCUIT BREAKER PER ELECTRICAL DRAWINGS.
- 5 REPLACE EXISTING AUTOMATIC TRANSFER SWITCH (ATS) PER ELECTRICAL DRAWINGS.
- 6 REMOVE FUEL PIPING.
7. REUSE EXISTING CONDUITS AS NECESSARY. UNUSED CONDUITS SHALL BE REMOVED. UNUSED CONDUITS IN CONCRETE SHALL BE SEALED AND PLUGGED PER SECTION 26 05 33.

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REVISIONS	DATE	BY	DESIGNED
			J. REINMUTH
			DRAWN
			C. WOODCOCK
			CHECKED
			K. HOUSE
			APPROVED

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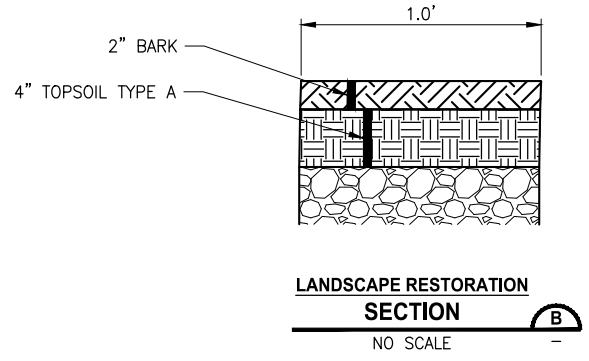
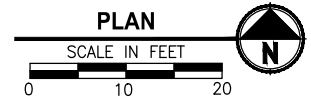
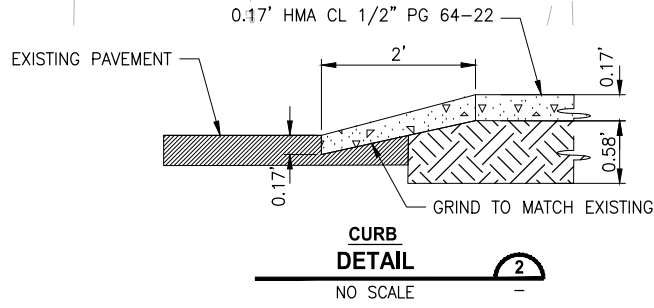
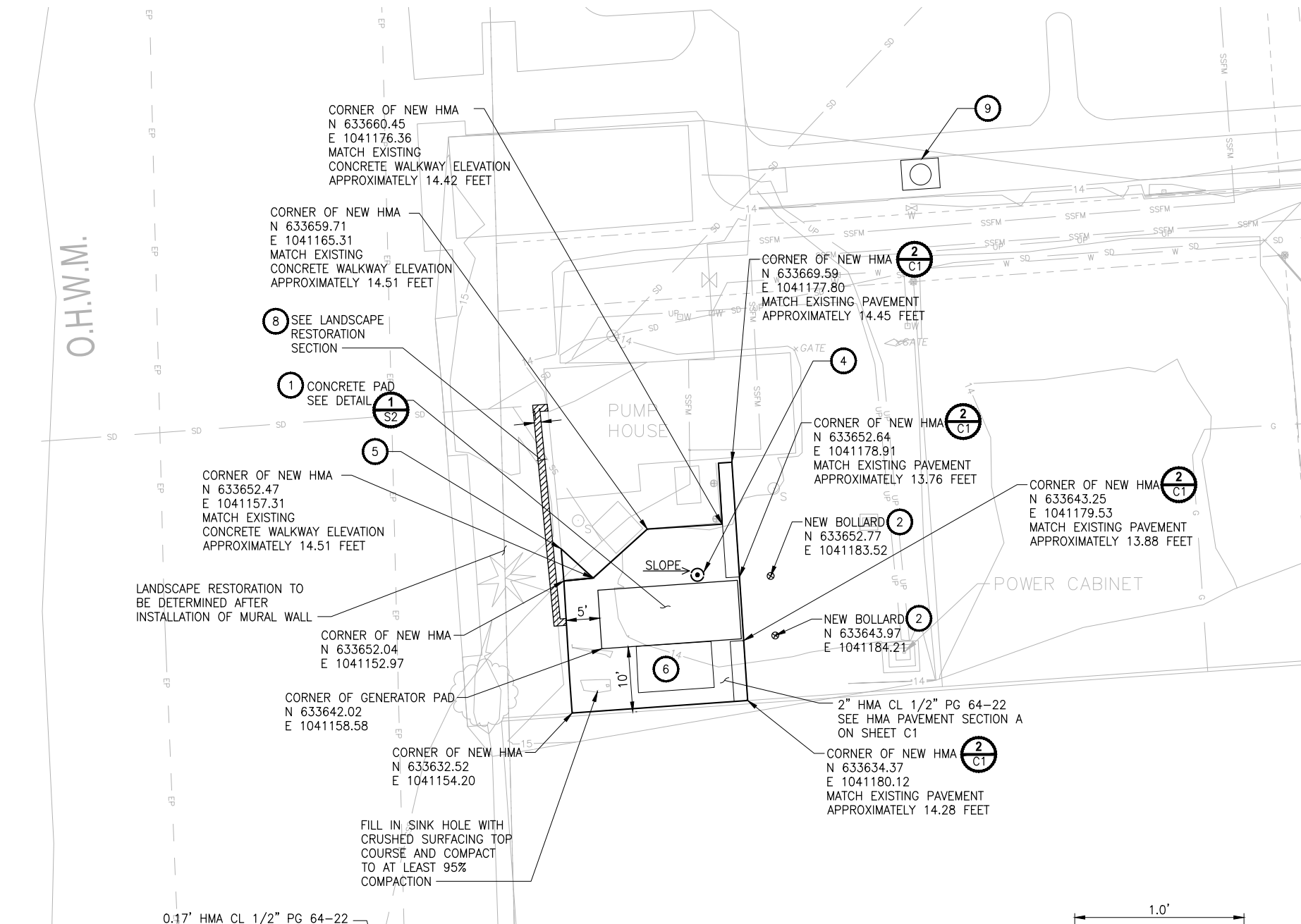
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OLYMPIA, WASHINGTON

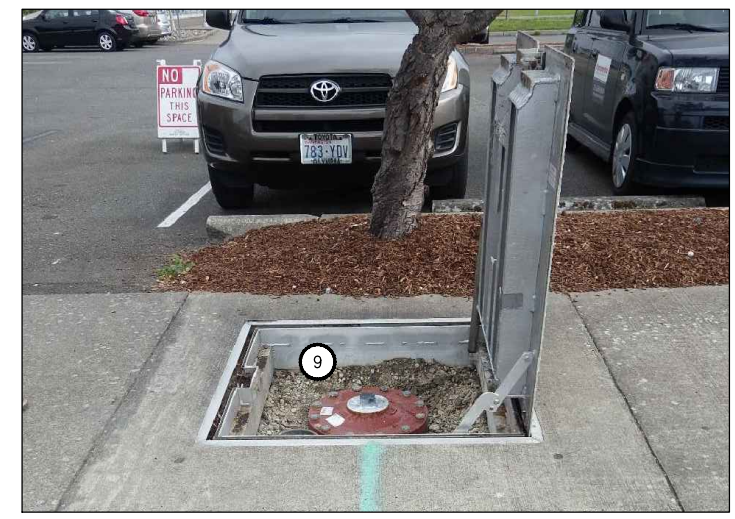
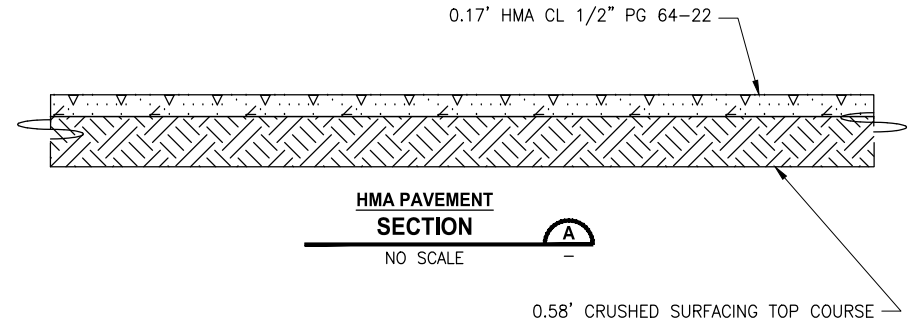
INTERIOR DEMOLITION DETAILS

DRAWING NO. 3 OF 10
D2

PATH: U:\PSO\Projects\Clients\1577-ChiyOlympia\216-1577-042 EngrinRd&WaterSILS\985ves\CADD\DWG\Water Street
LAYOUT: C1
PLOTED BY: peterden DATE: Friday, March 15, 2019 12:08:17 PM



- NOTES:**
1. PROVIDE CONCRETE GENERATOR PAD AT 20'-8"x8'-8" SIZED TO GENERATOR ENCLOSURE WITH 4 INCHES BEYOND ON ALL SIDES. VERIFY DIMENSIONS WITH APPROVED GENERATOR SHOP DRAWINGS.
 2. PROVIDE 2 PRECAST CONCRETE BOLLARDS 4 FEET TALL, 8 INCHES IN DIAMETER PAINTED YELLOW TO MATCH EXISTING. MAINTAIN MINIMUM OF 36 INCHES CLEARANCE BETWEEN BOLLARD AND GENERATOR PAD OR GENERATOR ENCLOSURE WHICHEVER IS CLOSER.
 3. RESTORE DISTURBED WORK AREAS OUTSIDE THE LIFT STATION FENCE LINE TO MATCH EXISTING CONDITIONS.
 4. SEE SHEET E2 FOR GROUND ROD AND BOX.
 5. PROVIDE NEW 4-INCH CONCRETE SLAB TO REPLACE SUNKEN SECTION SHOWN ON SHEET D1.
 6. PROVIDE 4 INCH THICK CONCRETE PAD UNDER GENERATOR ACCESS PLATFORM WITH STAIR. SEE SHEET E2, NOTE 11 FOR SIZE AND LOCATION. FINISHED SURFACE ELEVATION TO MATCH HMA.
 7. MATCH EXISTING CONCRETE WALKWAY'S NORTHWEST EDGE FOR ASPHALT ELEVATION. SLOPE TOWARD SOUTHEAST CORNER TO DRAIN. SLOPE LEADING EDGE OVER 12 INCHES TO MATCH EXISTING FINISH SURFACE.
 8. FOR TRENCH DETAIL SEE SHEET E2.
 9. BYPASS PORT: 12-INCH PIPE WITH 4-INCH FITTING.
 10. THE ORDINARY HIGH WATER LINE DEPICTED ON THIS DRAWING IS BASED ON A FIELD SURVEY OF THE VEGETATION LINE ASSOCIATED WITH BUDD INLET. THE ELEVATION ALONG THE ORDINARY HIGH WATER LINE IS APPROXIMATELY 12.4 FEET NAVD88.
 11. THE MURAL WALL, FENCING, AND GATES WILL BE INSTALLED BY TAS SEE SITE PLAN A100 OF THE LAURANA PROJECT



BYPASS PORT DETAIL (1)
NO SCALE

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REVISIONS	DATE	BY	DESIGNED
			J. REINMUTH
			C. WOODCOCK
			K. HOUSE
			APPROVED

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FILE NAME: PS1577042C-01
JOB No.: 216-1577-042
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PROJECT NAME
WATER STREET LIFT STATION GENERATOR
OLYMPIA, WASHINGTON

CIVIL SITE PLAN

DRAWING NO.
4 OF 10
C1

GENERAL STRUCTURAL NOTES:

DESIGN CRITERIA

APPLICABLE BUILDING CODES
2015 INTERNATIONAL BUILDING CODE, WASHINGTON STATE AMENDMENTS.

LOADS

ROOF LIVE OR SNOW LOAD25 psf
CONCRETE GROUND FLOOR 100 psf
GENERATOR SLABPER EQUIP. MFG.

WIND LOADS

WIND SPEED (3 SECOND GUST) = 110 MPH, EXPOSURE = B

SEISMIC LOADS

OLYMPIA, WA
SITE CLASS D, Ie = 1.25
Sds = 1.33 x 1.0 x ⅔ = 0.89
Sd1 = 0.55 x 1.50 x ⅔ = 0.55

FOUNDATIONS

BASED ON ORIGINAL CONSTRUCTION DRAWINGS.

ALLOWABLE SOIL BEARING = 2000 PSF

INSPECTIONS

CONTRACTOR SHALL BE RESPONSIBLE FOR REQUESTING AND COORDINATING REQUIRED BUILDING DEPARTMENT INSPECTIONS. IN ADDITION, SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE TABLE ON THIS SHEET. THESE INSPECTIONS SHALL BE PERFORMED BY A CURRENTLY WABO CERTIFIED INSPECTOR UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER.

THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.

THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE GENERAL CONTRACTOR FOR CORRECTION. THEN IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE REPORTED TO THE DESIGN PROFESSIONAL AND TO THE BUILDING OFFICIAL.

THE SPECIAL INSPECTOR SHALL SUBMIT A SEALED FINAL REPORT BY A REGISTERED PROFESSIONAL ENGINEER STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC.

MISCELLANEOUS

REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF RECESSES, DUCT OPENINGS, PIPING, CONDUITS, EQUIPMENT LOCATION AND ANCHORAGES, ETC., NOT SHOWN.

SUBMIT ALL REQUIRED SHOP DRAWINGS AND RECEIVE THEIR SATISFACTORY REVIEW FROM THE OWNER'S REPRESENTATIVE, PRIOR TO FABRICATION.

COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCHITECTURAL, MECHANICAL OR ELECTRICAL DRAWINGS AND VERIFY ALL DIMENSIONS AND CONDITIONS AT THE PROJECT SITE PRIOR TO STARTING WORK AND NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DISCREPANCIES.

REFER TO SPECIFICATIONS FOR INFORMATION NOT CONTAINED IN THESE GENERAL NOTES.

CONCRETE

ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, SHALL BE IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES ACI 315, LATEST EDITION.

CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318 BUILDING CODE.

DESIGN STRENGTH

CAST-IN-PLACE CONCRETE, UNLESS OTHERWISE NOTED:
f'c = 4000psi AT 28 DAYS
REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615,
GRADE 60. LAP SPLICES SHALL BE PER TABLE SHOWN BELOW.

CONCRETE COVER

CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS, BUT NOT LESS THAN ONE BAR DIAMETER:

FOOTINGS AND MATS FORMED AGAINST SOIL3"
CONCRETE IN CONTACT WITH SOIL, WEATHER OR WATER2"
CONCRETE NOT EXPOSED TO SOIL, WEATHER OR WATER1½"
BEAMS AND COLUMNS (TO STIRRUPS) 1½"
SLAB ON GRADE
UNDER 6" THICKAT SLAB CENTER
6" AND OVER.AS SHOWN

ANCHOR BOLTS

ANCHOR BOLTS FOR BUILDING STRUCTURE SHALL CONFORM TO ASTM A307
HOT DIPPED GALVANIZED. SET ALL BOLTS BY TEMPLATE

DRILLED-IN EXPANSION BOLTS

EXPANSION BOLTS SHALL BE STAINLESS STEEL "KWIK BOLTS" BY HILTI CORP., OR APPROVED EQUAL. ICBO CERTIFICATION AND SPECIAL INSPECTION IS REQUIRED. MINIMUM SPACING SHALL BE 12 BOLT DIAMETERS AND MINIMUM EDGE DISTANCE 6 BOLT DIAMETERS UNLESS NOTED OTHERWISE.

BOLT DIAMETER (IN.)	½	⅝	¾	⅞	1
MIN. EMBEDMENT IN STRUCTURAL CONCRETE (IN.)	4	4	5	6	7

ADHESIVE/EPOXY ANCHORING SYSTEM

ANCHORS SHALL BE STAINLESS STEEL RODS COMPLYING TO AISI 318. REINFORCING BARS AND RODS ANCHORED INTO EXISTING CONCRETE SHALL BE IN DRILLED HOLE WITH THREADED CODE APPROVED ADHESIVE ANCHORING MATERIALS. ICC-ES REPORTS ARE REQUIRED FOR USE IN CRACKED CONCRETE FOR WIND OR SEISMIC LOADING. MINIMUM EMBEDMENT IN STRUCTURAL CONCRETE SHALL BE 8 BAR DIAMETERS. MINIMUM EDGE DISTANCE 6 BAR DIAMETERS.

MASONRY

HOLLOW CLAY MASONRY UNITS SHALL BE SELECTED TO MATCH MASONRY IN EXISTING BUILDING IN SIZE, COLOR AND TEXTURE.

MASONRY SHALL CONFORM TO ASTM C652.

MORTAR SHALL BE TYPES WITH f'c = 1800psi @ 28 DAYS

GROUT SHALL ATTAIN A COMPRESSIVE STRENGTH f'c = 2000psi @ 28 DAYS.

SOLID GROUT ALL CELLS CONTAINING REINFORCEMENT.

STRUCTURAL ABBREVIATIONS

AB	ANCHOR BOLT
C	CHANNEL
EW	EACH WAY
HSS	HOLLOW STRUCTURAL SHAPE
L	ANGLE
M	MISCELLANEOUS SHAPE
MB	MACHINE BOLT
PL	PLATE
SCH	PIPE SCHEDULE
S	S SHAPE
T&B	TOP AND BOTTOM
TOC	TOP OF CONCRETE
TOW	TOP OF WALL
W	WIDE FLANGE

SPECIAL INSPECTION SCHEDULE

ITEM	CI	PI	REMARKS/REFERENCES
GENERAL:			
PREFABRICATED ITEMS		X	
SITE PREPARATION, FILL PLACEMENT, SOIL COMPACTION	X		BY GEOTECHNICAL ENGINEER OR AN APPROVED TESTING AGENCY
CONCRETE:			
REINFORCING MATERIALS		X	ASTM AS NOTED, ACI 318 7.1–7.4
REINFORCING PLACEMENT		X	ACI 318 7.5–7.8
WELDING – REINFORCING		X	AWS D1.4
ANCHOR RODS, EMBEDDED BOLTS & INSERTS	X		PRIOR TO AND DURING CONCRETE PLACEMENT
USE OF REQUIRED MIX DESIGN		X	
CONCRETE SLUMP, AIR CONTENT, TEMPERATURE & TEST SPECIMENS	X		WHILE MAKING SPECIMENS FOR STRENGTH TESTS, ACI 318 5.6
CONCRETE PLACEMENT	X		ACI 318 5.9, 5.10
CONCRETE CURING		X	ACI 318 5.11, 5.13
POST-INSTALLED ANCHORS			
GROUTED ANCHORS	X		
ADHESIVE ANCHORS	X		
MECHANICAL ANCHORS	X		
MASONRY:			
SITE-MIXED MORTAR & GROUT PROPORTIONS		X	ACI 530.1 2.6A–B
ANCHOR TYPE, SIZE & LOCATION		X	ACI 530.1 15.4, 2.1.2
SIZE, GRADE & TYPE OF REINFORCING		X	ACI 530.1 2.4,3.4
PLACEMENT OF UNITS & CONSTRUCTION OF MORTAR JOINTS		X	ACI 530.1 3.3B
PLACEMENT OF REINFORCING AND CONNECTORS		X	ACI 530.1 3.4
GROUT SPACE		NA	ACI 530.1 3.2D
GROUT PLACEMENT	X		ACI 530.1 3.5
TEST SPECIMEN PREPARATION	NA		ACI 530.1 1.4
HOT/COLD WEATHER CONSTRUCTION		X	ACI 530.1 1.8
WOOD:			
TYPE & SPACING OF STRUCTURAL PANEL NAILING		NA	IBC 1707.3
TYPE & INSTALLATION OF TRUSS SEISMIC TIES		NA	

INSPECTION SCHEDULE NOTES

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

STEEL REINFORCING LAP SCHEDULE

BAR SIZE	CONCRETE f' c = 4,000 OR 5,000 PSI	MASONRY f' m = 1,500 PSI
#3	19"	16"
#4	25"	21"
#5	31"	26"
#6	37"	43"
#7	48"	60"
#8	55"	92"
#9	62"	NA
#10	69"	NA

MINIMUM LAP SPLICES UNLESS OTHERWISE DETAILED ON DRAWINGS

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STRUCTURAL NOTES

DRAWING NO.
5 OF 10

S1

PATH: U:\PSO\Projects\Clients\1577-ChiyOlympia\216-1577-042 EngrinRd&WaterSILS\98Sves\CADD\DWG\Water Street
LAYOUT: S1
VERSION 00.01-2017.01.09
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REVISIONS	DATE	BY	DESIGNED
			S. WAGNER
			DRAWN D. PETERSON
			CHECKED K. HOUSE
			APPROVED

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FILE NAME PS1577042S-01
JOB No. 216-1577-042
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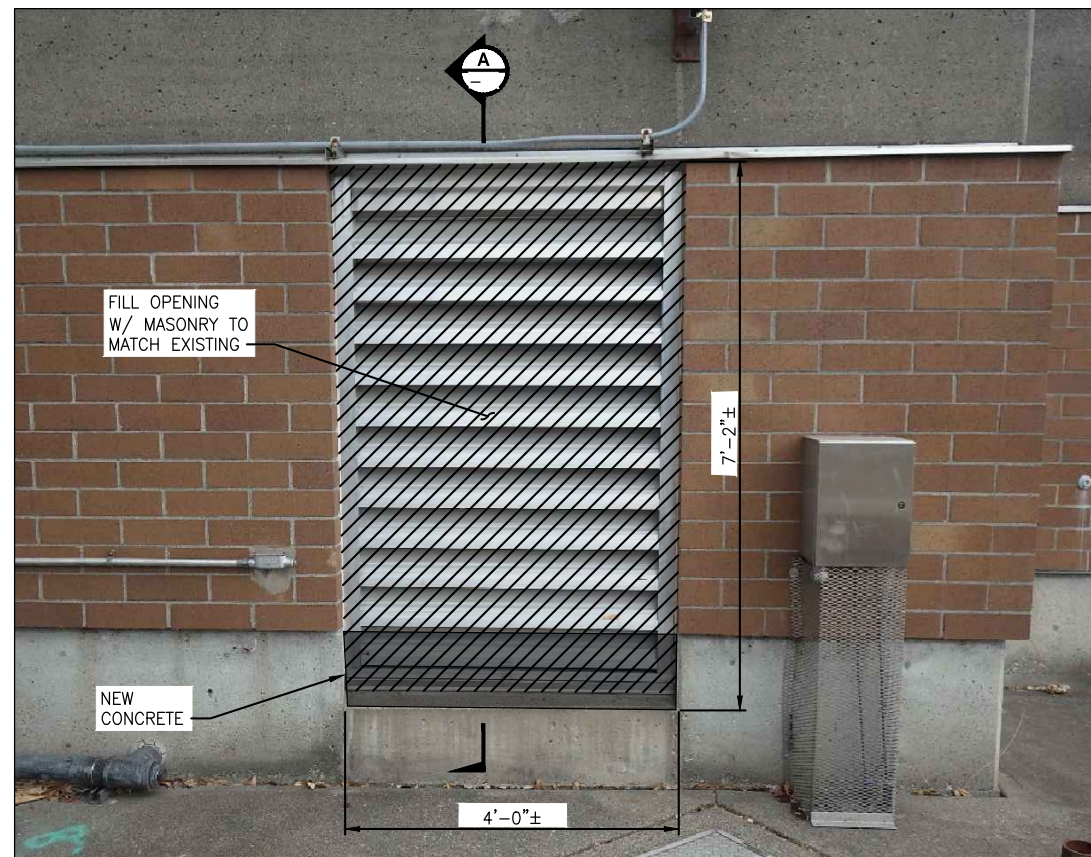


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PROJECT NAME
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OLYMPIA, WASHINGTON

LAYOUT: S2 PATH: U:\PSO\Projects\Clients\1577-CityOfOlympia\216-1577-042 EnsignRd&WaterSILS\995vcs\CADD\DWG\Water Street
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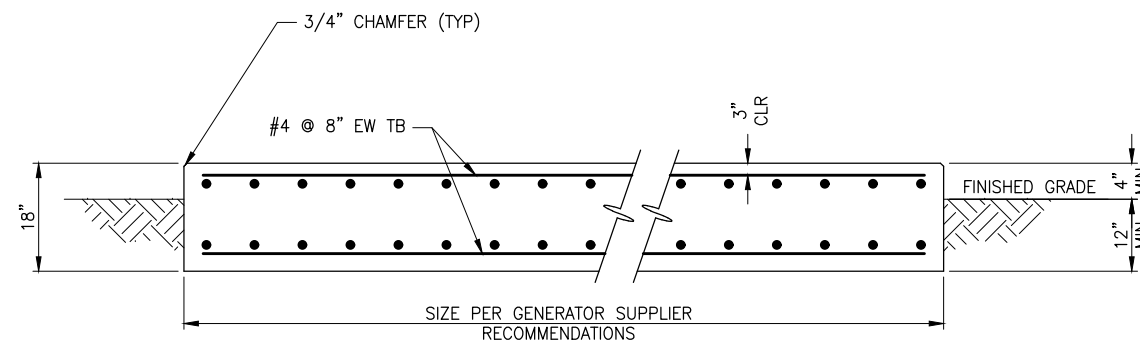
SOUTH LOUVER DETAIL

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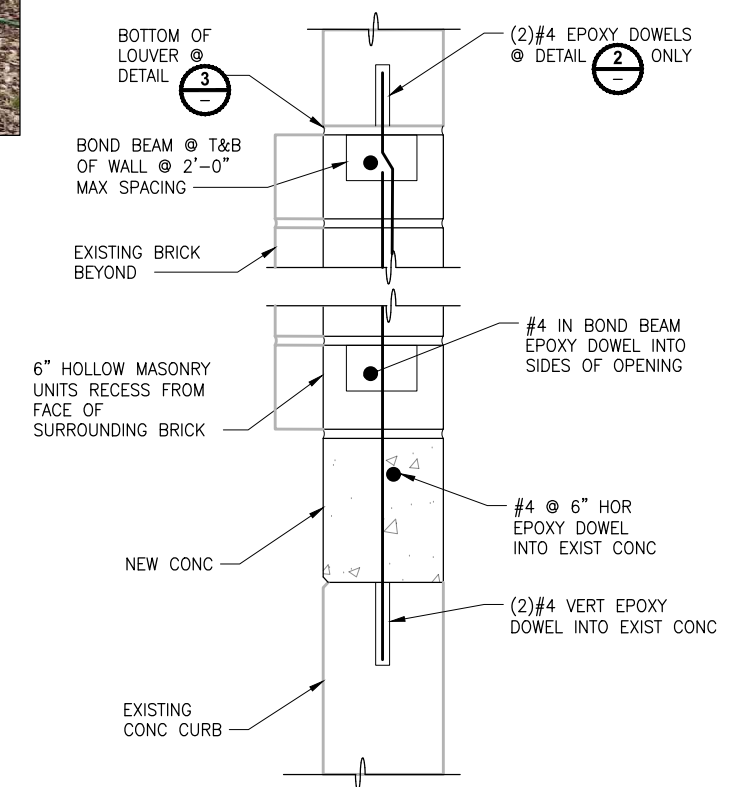
NORTH LOUVER
DETAIL

NO SCALE



GENERATOR PAD DETAIL

NO SCALE



SECTION

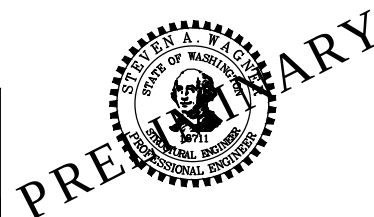
NO SCALE

NOTES:

- ① UPPER SECTION OF LOUVER SHALL BE REINSTALLED AS PART OF WALL RESTORATION. LOUVER MEETS NECESSARY VENTING TO PROVIDE REQUIRED SIX AIR CHANGES PER HOUR.
- ② INCREASE ELEVATION OF GENERATOR PAD FINISHED SURFACE AS NECESSARY TO BRING TOP OF FINAL APPROVED GENERATOR SUB-BASE FUEL TANK TO ELEVATION OF 17.1 FEET.

▽	REVISIONS	DATE	BY	DESIGNED S. WAGNER
				DRAWN D. PETERSON
				CHECKED K. HOUSE
				APPROVED

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PROJECT NAME

**WATER STREET LIFT STATION
GENERATOR**

OLYMPIA, WASHINGTON

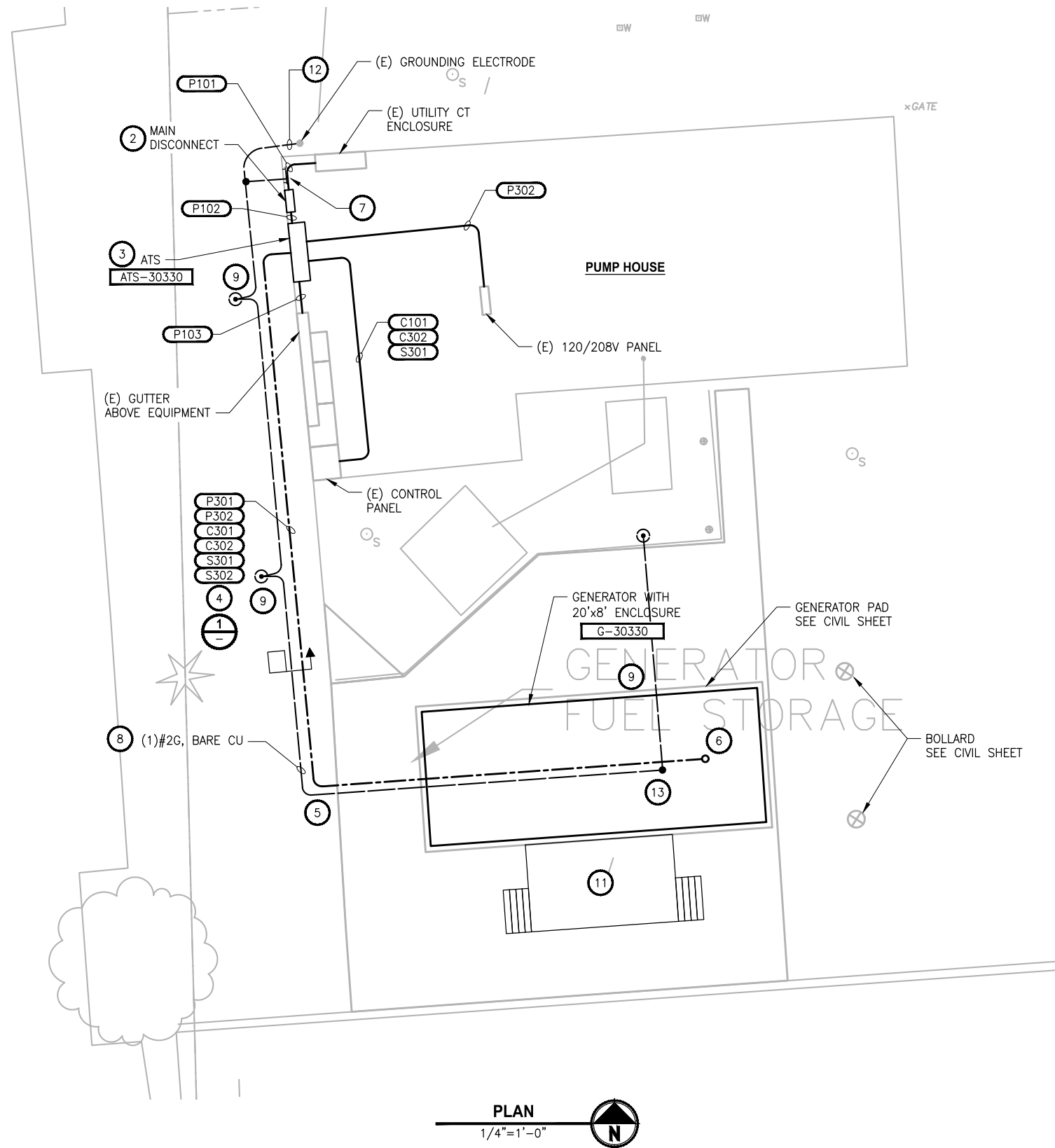
STRUCTURAL DETAILS

DRAWING NO.
6 OF 10

62

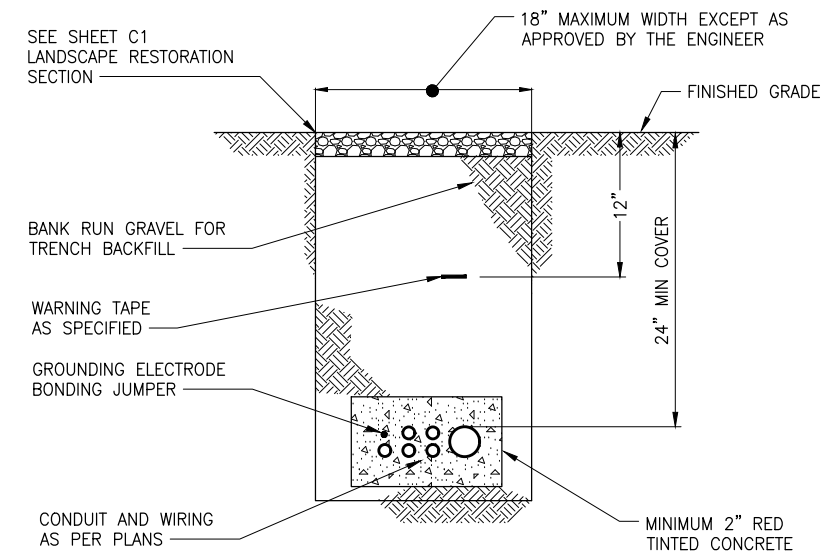
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PATH: U:\PSO\Projects\Clients\1577-CityOfOlympia\216-1577-042 Engineer&WaterS&S\99Svcs\CADD\DWG\Water Street
LAYOUT: E2
PLOTED BY: peterden DATE: Friday, March 15, 2019 12:13:48 PM



NOTES:

1. NOT ALL EXISTING CONDUIT AND EQUIPMENT SHOWN. FIELD VERIFY. ADDITIONAL CONDUITS SHOWN ON SHEET E3.
2. REPLACE EXISTING MAIN DISCONNECT WITH NEW ENCLOSED CIRCUIT BREAKER.
3. REPLACE EXISTING ATS WITH NEW ONAN OTPC ATS. PROVIDE GUTTER BELOW ATS.
4. PROVIDE MINIMUM 2 INCHES OF RED TINTED CONCRETE AROUND ELECTRICAL CONDUITS OUTSIDE PUMP STATION FENCE LINE.
5. CORE DRILL WALL PENETRATION FOR CONDUITS IF NOT RUN BELOW EXISTING FOOTING.
6. VERIFY ROUTING OF CONDUIT ENTRY WITH APPROVED GENERATOR SHOP DRAWINGS.
7. PROVIDE GROUND BUSBAR AND CONNECT TO:
 - BUILDING GROUND ELECTRODE SYSTEM PER SHEET E3.
 - EXISTING EXPOSED BARE COPPER GROUND WIRE IN ELECTRICAL ROOM.
8. SEE SHEET E3 FOR GROUNDING ELECTRODE BONDING JUMPER.
9. NEW GROUND RODS SHALL BE LOCATED A DISTANCE GREATER THAN 10 FEET AWAY FROM EXISTING BUILDING GROUNDING ELECTRODE SYSTEM. SEE SECTION 26 05 26 FOR GROUND ROD BOX SPECIFICATIONS.
10. ORIENT GENERATOR WITH RADIATOR AND FAN TO WEST.
11. PROVIDE GENERATOR ACCESS PLATFORM PER SECTION 26 32 13.
12. BOND NEW GROUND ELECTRODE SYSTEM TO EXISTING GROUNDING ELECTRODE WITH IRREVERSIBLE MEANS BELOW GRADE.
13. BOND GENERATOR GROUND TO GROUNDING ELECTRODE SYSTEM. PROVIDE (1)#2G, BARE COPPER CONDUCTOR IN 1 INCH PVC CONDUIT THROUGH GENERATOR PAD.



NOTES:

1. INSIDE LIFT STATION FENCE LINE, PROVIDE SAND INSTEAD OF RED TINTED CONCRETE.
2. CONCRETE ENCASEMENT OF GROUNDING ELECTRODE CONDUCTOR SHALL NOT BE REQUIRED OUTSIDE CONDUIT ROUTING.
3. LOCATE SIGNAL CONDUITS TO OPPOSITE SIDE OF TRENCH AWAY FROM THE GENERATOR LINE CONDUCTORS.

TYPICAL CONDUIT AND WIRING IN TRENCH

DETAIL

SCALE: 1"=1'-0"

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REVISIONS	DATE	BY	DESIGNED
			J. REINMUTH
			DRAWN
			A. PETERSON
			CHECKED
			A. STOKES
			APPROVED

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY	
FILE NAME	PS1577042E-02
JOB No.	216-1577-042
DATE	SEPTEMBER 2018



PRELIMINARY

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PROJECT NAME
WATER STREET LIFT STATION GENERATOR
OLYMPIA, WASHINGTON

ELECTRICAL SITE PLAN
E2

DRAWING NO. 8 OF 10
E2

PATH: U:\PSO\Projects\Clients\1577-CityOfOlympia\216-1577-042 EngrinRd&WaterSLS\99Svcs\CADD\DWG\Water Street
LAYOUT: E3
PLOTED BY: peterden DATE: Friday, March 15, 2019 12:15:08 PM

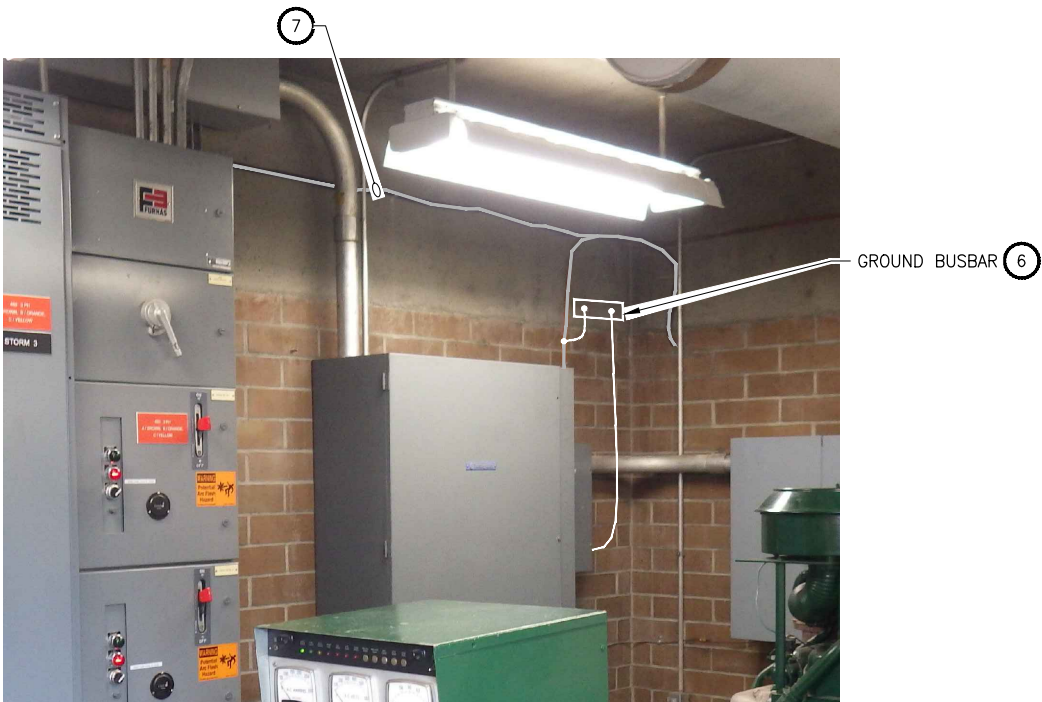
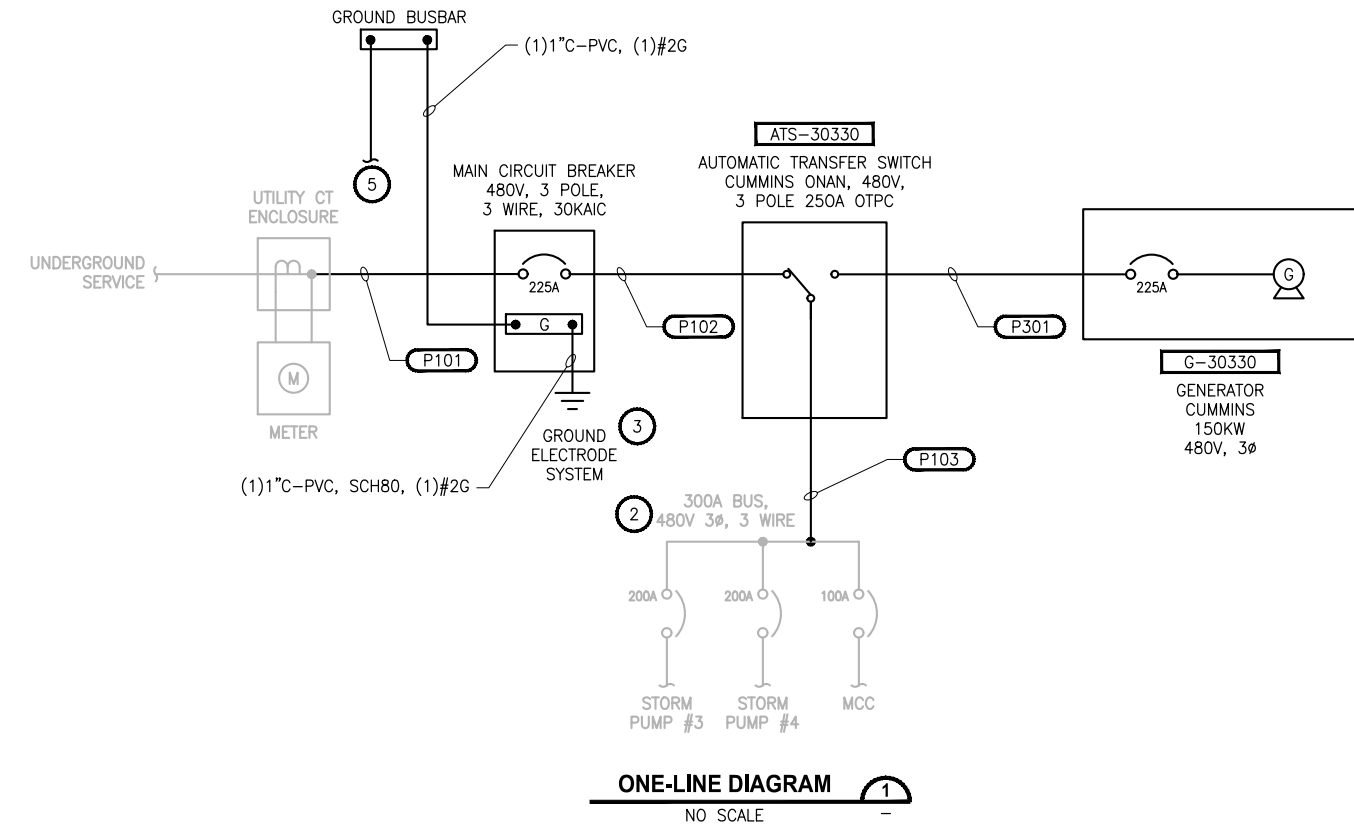
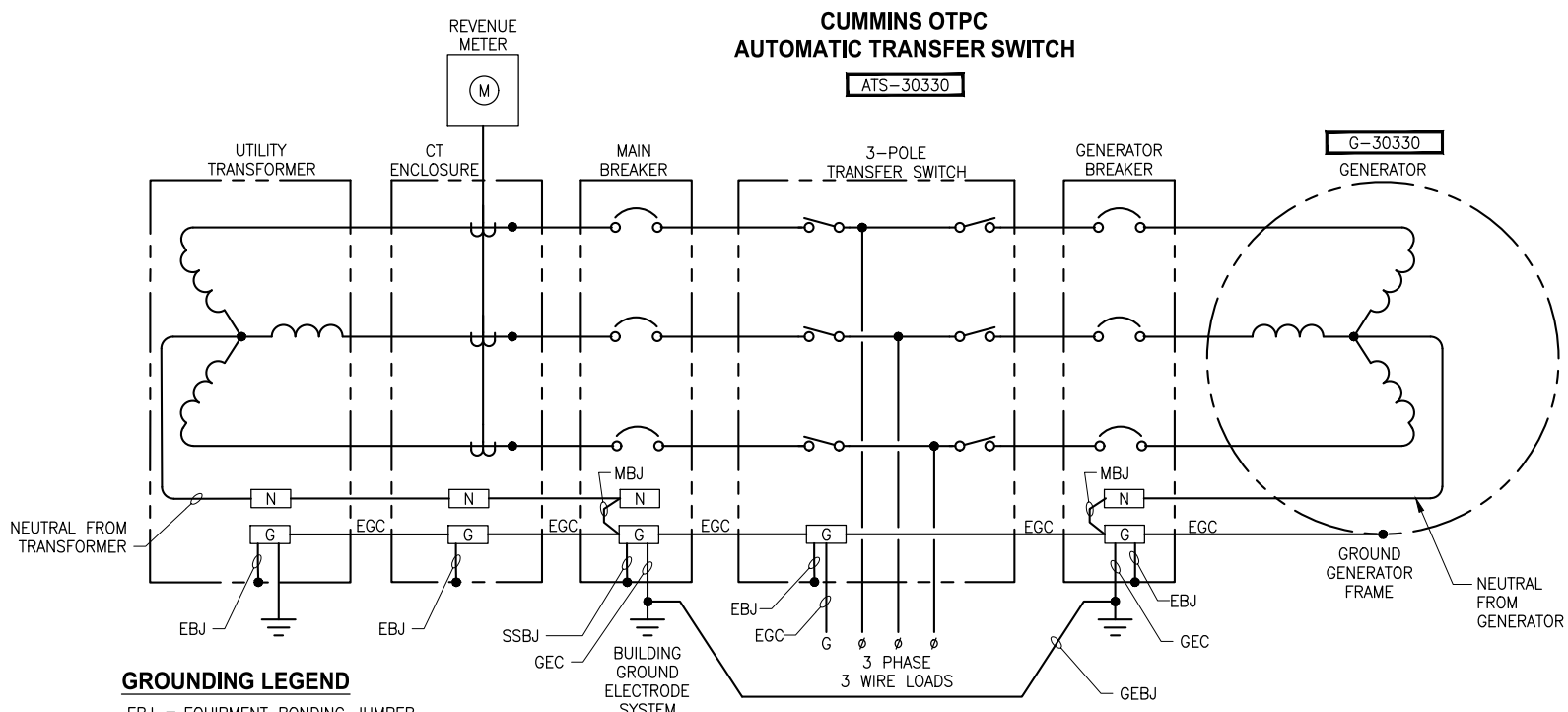


PHOTO SHOWS EXISTING CONDITIONS, FOR REFERENCE ONLY

DETAIL PHOTO

NO SCALE



GROUNDING LEGEND

EBJ = EQUIPMENT BONDING JUMPER
EGC = EQUIPMENT GROUNDING CONDUCTOR
GEC = GROUNDING ELECTRODE CONDUCTOR
GSC = GROUNDED SERVICE CONDUCTOR
MBJ = MAIN BONDING JUMPER
SBJ = SYSTEM BONDING JUMPER
SSBJ = SUPPLY-SIDE BONDING JUMPER
GEBJ = GROUNDING ELECTRODE BONDING JUMPER

TRANSFER SWITCH CONNECTION

DIAGRAM

NO SCALE

NOTES:

1. EXISTING POWER CONDUCTORS ARE ALUMINUM. WHEN REPLACING CONDUCTORS AS SHOWN, REPLACE CONDUCTOR TERMINATIONS AS NECESSARY.
2. EXISTING BUS MADE OF INDIVIDUAL CONDUCTORS TAPPED IN GUTTER ABOVE EQUIPMENT.
3. PROVIDE NEW GROUND ELECTRODE SYSTEM AND BOND TO EXISTING GROUND ELECTRODE SYSTEM.
4. PROVIDE THREADED PLUGS FOR SPARE CONDUIT.
5. BOND EXISTING BARE COPPER GROUND WIRE TO NEW GROUND BUSBAR. PROVIDE #2 AWG, BARE COPPER GROUND CONDUCTOR AND CONNECT TO EXISTING BARE GROUND WIRE USING IRREVERSIBLE CRIMP GROUND CONNECTORS.
6. SEE ONE-LINE GROUND CONDUCTORS, SEE SECTION 26 05 26 FOR GROUND BUSBAR SPECIFICATIONS.
7. EXISTING BARE GROUND CONDUCTOR.

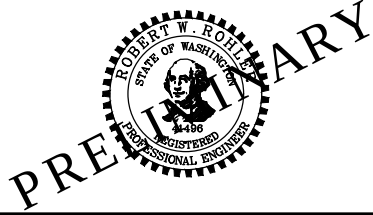
CIRCUIT SCHEDULE

CIRCUIT NUMBER	# OF CONDUITS	CONDUIT SIZE & TYPE	WIRE FILL	FROM	TO	REMARKS
P101	1	2-1/2" RMC	(3)#4/0,(1)#4G	UTILITY CT	MAIN CIRCUIT BREAKER	NEW COPPER CONDUCTORS
P102	1	2-1/2" RMC	(3)#4/0,(1)#4G	MAIN CIRCUIT BREAKER	ATS	NEW COPPER CONDUCTORS
P103	1	2-1/2" RMC	(3)#4/0,(1)#4G	ATS	300A BUS	NEW COPPER CONDUCTORS VIA EXISTING GUTTER
P301	1	2-1/2" RMC	(3)#4/0,(1)#4G	GENERATOR	ATS	
P302	1	1" RMC	(4)#12,(1)#12G	120/208V PANEL	GENERATOR ACCESSORY RECEPTS	GENERATOR BLOCK HEATER AND BATTERY CHARGER CIRCUITS VIA GUTTER BELOW ATS. REUSE EXISTING EQUIPMENT CIRCUITS IN 120/208V PANEL. PROVIDE SIMPLEX RECEPTACLES FOR THE INDIVIDUAL CIRCUITS AT POINT OF USE.
C101	1	1" RMC	(16)#14, (1)#14G	CONTROL PANEL	ATS	VIA GUTTER BELOW ATS. INCLUDES (4) SPARE CONDUCTORS.
C301	1	1" RMC	(8)#14, (1)#14G	GENERATOR CONTROL PANEL	ATS	VIA GUTTER BELOW ATS. INCLUDES (6) SPARE CONDUCTORS.
C302	1	1" RMC	(20)#14, (1)#14G	GENERATOR CONTROL PANEL	CONTROL PANEL	VIA GUTTER BELOW ATS. INCLUDES (8) SPARE CONDUCTORS.
S301	1	1" RMC	(1)#16 TSP	GENERATOR FUEL TANK	CONTROL PANEL	VIA GUTTER BELOW ATS.
S302	1	1" RMC	PULL STRING	GEN	ELECTRICAL ROOM	SPARE CONDUIT

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REVISIONS	DATE	BY	DESIGNED
			J. REINMUTH
			DRAWN
			A. PETERSON
			CHECKED
			A. STOKES
			APPROVED

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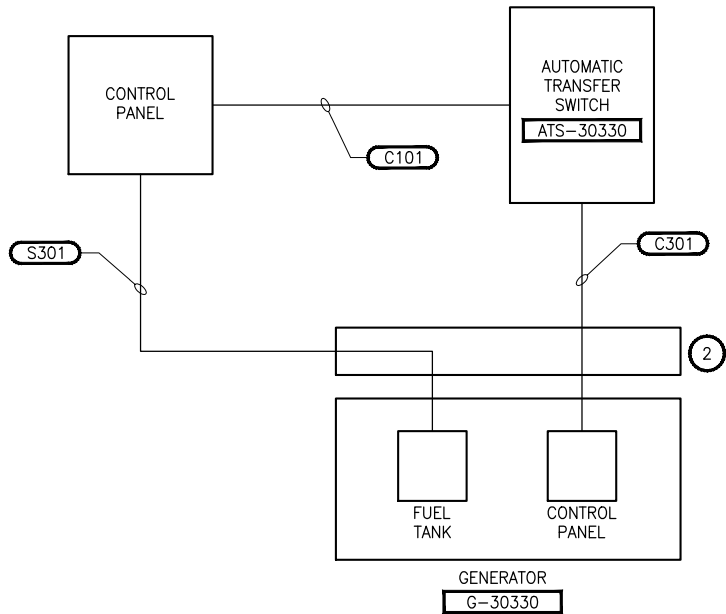
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PROJECT NAME
WATER STREET LIFT STATION GENERATOR
OLYMPIA, WASHINGTON

ELECTRICAL ONE-LINE DIAGRAM AND CIRCUIT SCHEDULE

DRAWING NO. 9 OF 10
E3

PATH: U:\PSO\Projects\Clients\1577-CityOfOlympia\216-1577-042 Engineer&WaterS&LS\99Svcs\CADD\DWG\Water Street
LAYOUT: E4
PLOTTED BY: peterden DATE: Friday, March 15, 2019 12:16:30 PM



CONTROL DIAGRAM 1
NO SCALE -

NOTES:

1. COMPLETE PLC I/O INFORMATION PROVIDED FOR REFERENCE. ATS AND GENERATOR RELATED I/O SHOWN AS BOLD TEXT.
- 2 GUTTER LOCATED BELOW ATS.

PLC I/O CARD TABLE			
I/O	CAGE/ CARD/ POINT	FUNCTION	TYPE
AI	01-03-00	0 COMMON	
	01-03-01	SUMP LVL	STATUS
	01-03-02	GEN FUEL LEVEL	STATUS
	01-03-03	SPARE	
	01-03-04	SPARE	
DI	01-04-00	COMMON 24V-	
	01-04-01	P1 AUTO	STATUS
	01-04-02	P2 AUTO	STATUS
	01-04-03	P3 AUTO	STATUS
	01-04-04	P4 AUTO	STATUS
	01-04-05	P1 RUN	STATUS
	01-04-06	P2 RUN	STATUS
	01-04-07	P3 RUN	STATUS
DI	01-05-00	COMMON 24V-	
	01-05-01	P1 C/V	STATUS
	01-05-02	P2 C/V	STATUS
	01-05-03	P3 C/V	STATUS
	01-05-04	P4 C/V	STATUS
	01-05-05	HI FLOAT	ALARM
	01-05-06	BAR SCN	ALARM
	01-05-07	DMP GT	ALARM
	01-05-08	GEN AUTO	STATUS
DI	01-06-00	COMMON 24V-	
	01-06-01	FIRE	ALARM
	01-06-02	INTRUSION	ALARM
	01-06-03	DRY WELL	ALARM
	01-06-04	A/C GEN	STATUS
	01-06-05	A/C NORM	STATUS
	01-06-06	GEN FAIL	ALARM
	01-06-07	GEN RUN	STATUS
AO	01-07-00	0 COMMON	
	01-07-01	SPARE	
	01-07-02	SPARE	
	01-07-03	P3 SPEED	STATUS
	01-07-04	P4 SPEED	STATUS
DO	01-08-00	COMMON 24V-	
	01-08-01	P1 START	CONTROL
	01-08-02	P2 START	CONTROL
	01-08-03	P3 START	CONTROL
	01-08-04	P4 START	CONTROL
	01-08-05	LOW WW LT	CONTROL
	01-08-06	SPARE	
	01-08-07	SPARE	
DI	01-08-08	GEN TEST	CONTROL
	02-02-00	COMMON 24V-	
	02-02-01	P4 FAULT	ALARM
	02-02-02	P3 FAULT	ALARM
	02-02-03	P2 TEMP	ALARM
	02-02-04	P2 MOIST	ALARM
	02-02-05	P1 TEMP	ALARM
	02-02-06	P1 MOIST	ALARM
	02-02-07	GEN LOW FUEL	ALARM
	02-02-08	GEN WARNING	ALARM

PERMIT REVIEW 3/15/2019
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REVISIONS	DATE	BY	DESIGNED
			J. REINMUTH
			D. MILES
			A. STOKES
			APPROVED

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PROJECT NAME
WATER STREET LIFT STATION GENERATOR
OLYMPIA, WASHINGTON

ELECTRICAL CONTROL AND SIGNAL INTERCONNECT
E4

DRAWING NO. 10 OF 10
E4