



NOTE:  
THE SUBSURFACE UTILITY QUALITY INFORMATION IN THIS PLAN IS LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

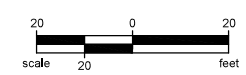
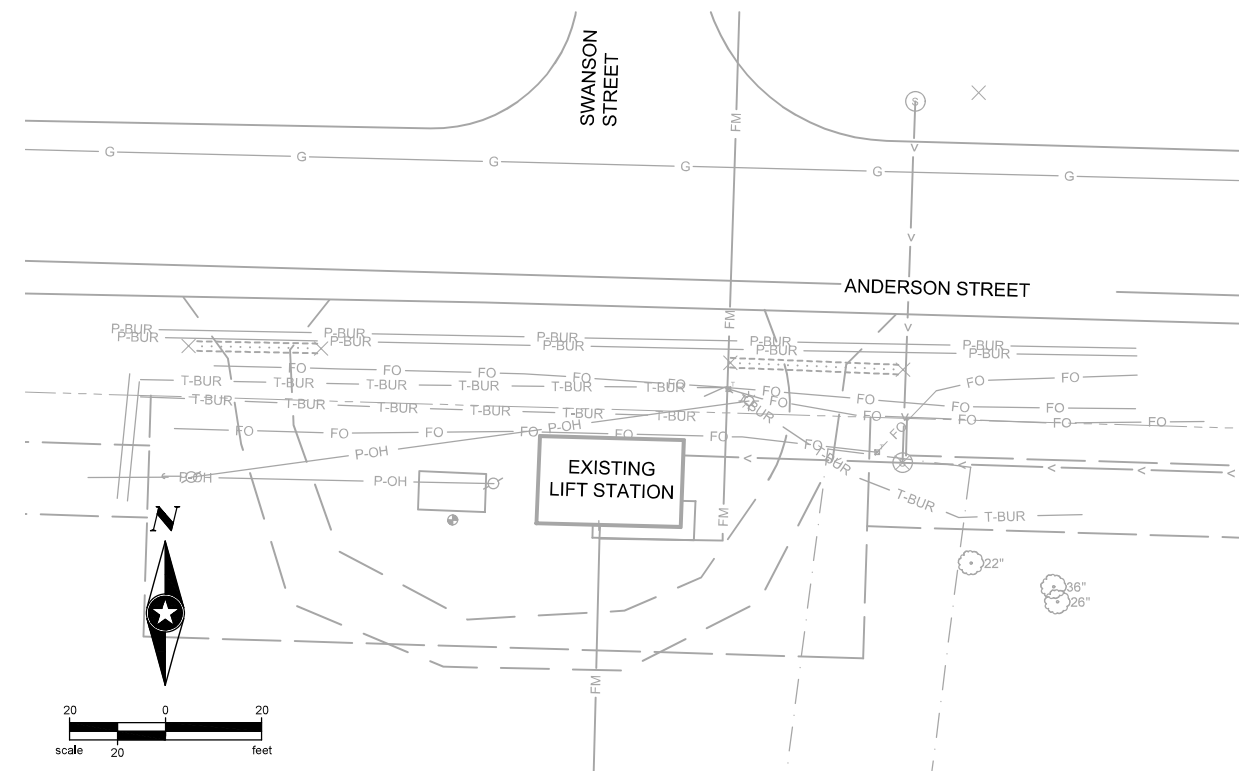
THE CONTRACTOR SHALL CALL THE STATE ONE CALL SYSTEM AT 811 BEFORE COMMENCING EXCAVATION.

# CONSTRUCTION PLANS FOR TRUAX LIFT STATION REPLACEMENT

## CITY OF MADISON, WI

PROJECT NO. 12457  
CONTRACT NO. 9312

- EXISTING**
- RIGHT OF WAY
  - PERMANENT EASEMENT
  - PROPERTY LINE
  - △<sup>XX</sup> HORIZONTAL CONTROL POINT
  - ⊙ BENCHMARK
  - ⊙ SURVEY MARKER
  - ⊙ SOIL BORING
  - LIFT SANITARY SEWER AND MANHOLE
  - FORCE MAIN AND LIFT STATION
  - SANITARY SEWER SERVICE & CLEANOUT
  - WATER MAIN, HYDRANT, VALVE AND MANHOLE
  - WATER SERVICE AND CURB STOP BOX
  - STORM SEWER, MANHOLE AND CATCH BASIN
  - CULVERT AND APRON ENDWALL
  - GAS MAIN, VALVE, VENT AND METER
  - HANDHOLE
  - BURIED FIBER OPTIC CABLE AND MANHOLE
  - T-BUR BURIED PHONE CABLE, PEDESTAL AND MANHOLE
  - TV-BUR BURIED TV CABLE, PEDESTAL AND MANHOLE
  - E-BUR BURIED ELECTRIC CABLE, PEDESTAL, MANHOLE, TRANSFORMER AND METER
  - P-OH OVERHEAD WIRE, POLE AND GUY WIRE
  - LIGHT POLE
  - TRAFFIC SIGNAL
  - STREET NAME SIGN
  - SIGN (NON STREET NAME)
  - RAILROAD TRACKS
  - ⊙ DECIDUOUS AND CONIFEROUS TREE
  - ⊙ BUSH / SHRUB AND STUMP
  - EDGE OF WOODED AREA
  - WETLAND
  - BUILDING
  - FENCE (UNIDENTIFIED)
  - BARBED WIRE FENCE
  - CHAIN LINK FENCE
  - ELECTRIC WIRE FENCE
  - WOOD FENCE
  - WOVEN WIRE FENCE
  - PLATE BEAM GUARDRAIL
  - CABLE GUARDRAIL
  - POST / BOLLARD
  - RETAINING WALL
- PROPOSED**
- 6+00 --- STREET CENTERLINE
  - RIGHT-OF-WAY
  - PERMANENT EASEMENT
  - TEMPORARY EASEMENT
  - CONSTRUCTION LIMITS
  - SANITARY SEWER, BULKHEAD AND MANHOLE
  - FORCE MAIN
  - SANITARY SERVICE AND CLEANOUT
  - WATER MAIN, TEE, HYDRANT, BULKHEAD AND VALVE
  - WATER VALVE MANHOLE, REDUCER, BEND AND CROSS
  - WATER SERVICE AND CURB STOP BOX
  - STORM SEWER, MANHOLE AND CATCH BASIN
  - CULVERT AND APRON ENDWALL
  - DRAIN TILE
  - DITCH / SWALE
  - RIPRAP
  - STREET NAME SIGN
  - SIGN (NON STREET NAME)
  - RETAINING WALL



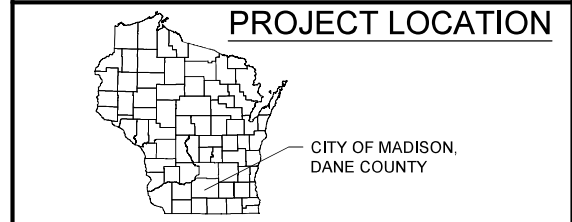
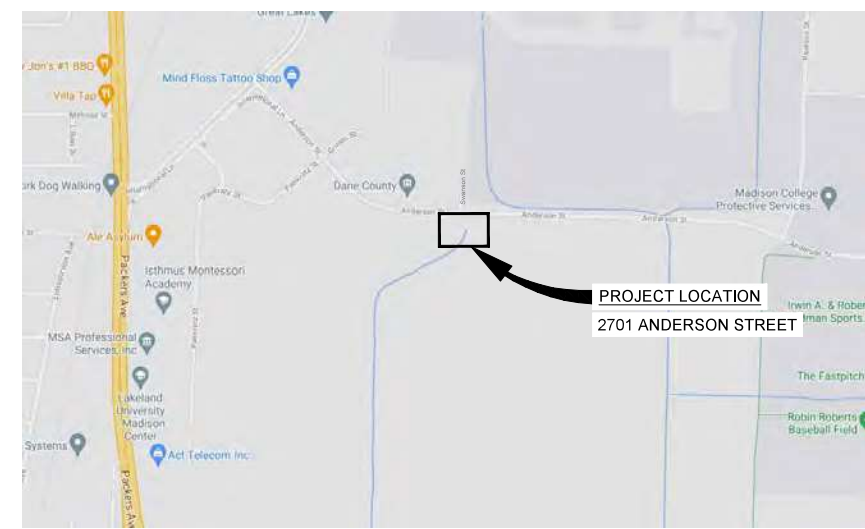
**SHEET INDEX**

SHEET NO.	DESCRIPTION
TO.1	TITLE SHEET
<b>CIVIL DRAWINGS</b>	
01C1	SITE DEMO PLAN
01C2	NOTES AND DETAILS
01C3	SITE PLAN AND PROFILE
01C4	GRADING AND EROSION CONTROL
<b>10-LIFT STATION</b>	
10P1	PLANS
10P2	SECTIONS
10E1	ELECT SYMBOLS & ABBREVIATIONS
10E2	ELECTRICAL ONE-LINE DIAGRAM
10E3	ELECTRICAL DETAILS
<b>20-EXISTING LIFT STATION DEMOLITION</b>	
20P1	FLOOR PLANS
20P2	SECTIONS



*Alan Bush*

**LOCATION MAP**



**CONTACTS**

- DESIGN ENGINEER**  
ALAN BUSH, PE, BCEE  
SEH, INC.  
809 NORTH 8TH ST, SUITE 205  
SHEBOYGAN, WI 53081  
PHONE (920) 287-0828
- AT&T**  
BRIAN SCHOLZ  
AT&T  
PHONE (608) 888-5555  
bs3154@exo.att.com
- LUMEN TECHNOLOGIES**  
KENT HOLMQUIST  
710 EAST MIFFLIN STREET  
MADISON, WI 53704  
PHONE (608) 598-9667
- MADISON GAS & ELECTRIC**  
SHAUN ENDRES  
133 S. BLAIR STREET  
MADISON, WI 53788  
PHONE (608) 252-7224  
CELL (608) 213-6708  
sendres@mge.com
- TDS TELECOM**  
MIKE SWEET  
TDS TELECOM  
PHONE (608) 664-4539
- MCI (VERIZON)**  
R.J. CICATELLO  
VERIZON BUSINESS  
15725 WEST RYERSON ROAD  
NEW BERLIN, WI 53151  
PHONE (262) 232-1323

**PUBLIC IMPROVEMENT PROJECT APPROVED**  
MARCH 29, 2022  
BY THE COMMON COUNCIL OF MADISON, WISCONSIN

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**PUBLIC IMPROVEMENT DESIGN APPROVED BY:**  
*[Signature]* Apr 6, 2023  
CITY ENGINEER DATE

**REVISIONS**





NO.	DATE	COMMENTS
1	7/20/2022	REVISIONS PER MMSD AND CITY COMMENTS
2	3/14/2023	DELETED GENERATOR / CONTROL BLDG

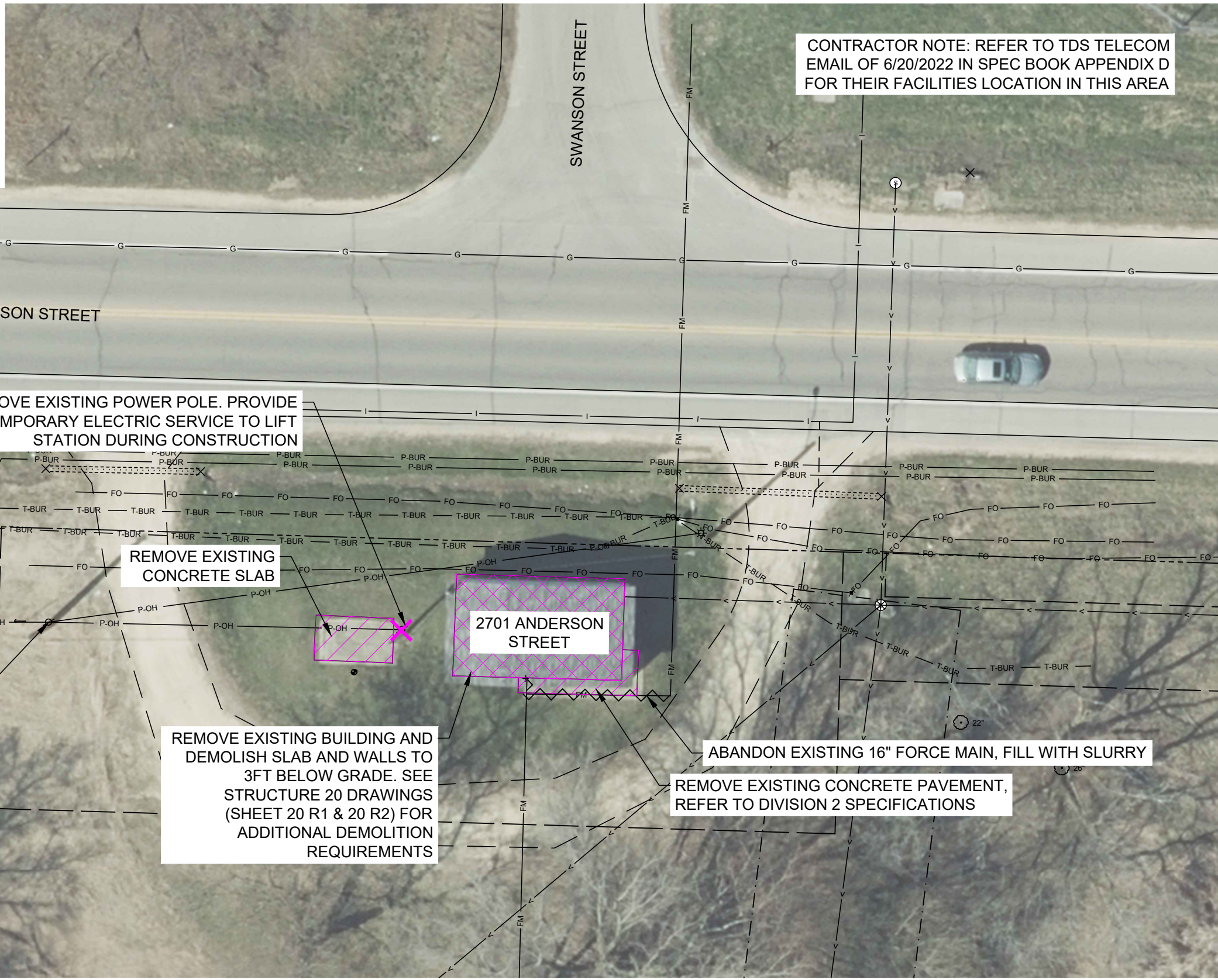


FILE NO.  
159311 MADIS  
DATE  
11/01/2021

T0.1



- LEGEND**
-  BUILDING REMOVAL
  -  CONCRETE REMOVAL
  -  FEATURE REMOVAL
  -  ABANDON PIPE



CONTRACTOR NOTE: REFER TO TDS TELECOM EMAIL OF 6/20/2022 IN SPEC BOOK APPENDIX D FOR THEIR FACILITIES LOCATION IN THIS AREA

REMOVE EXISTING POWER POLE. PROVIDE TEMPORARY ELECTRIC SERVICE TO LIFT STATION DURING CONSTRUCTION

REMOVE EXISTING CONCRETE SLAB

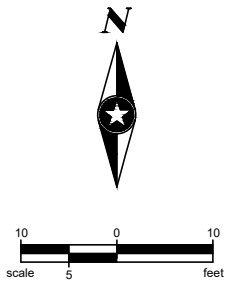
2701 ANDERSON STREET

MG&E POLE 25JT5-A4

REMOVE EXISTING BUILDING AND DEMOLISH SLAB AND WALLS TO 3FT BELOW GRADE. SEE STRUCTURE 20 DRAWINGS (SHEET 20 R1 & 20 R2) FOR ADDITIONAL DEMOLITION REQUIREMENTS

ABANDON EXISTING 16" FORCE MAIN, FILL WITH SLURRY

REMOVE EXISTING CONCRETE PAVEMENT, REFER TO DIVISION 2 SPECIFICATIONS



809 NORTH 8TH STREET,  
SUITE 205  
SHEBOYGAN, WI 53081  
PHONE: 920.452.6603  
WWW.SEHINC.COM



TRUAX LIFT STATION

MADISON, WISCONSIN

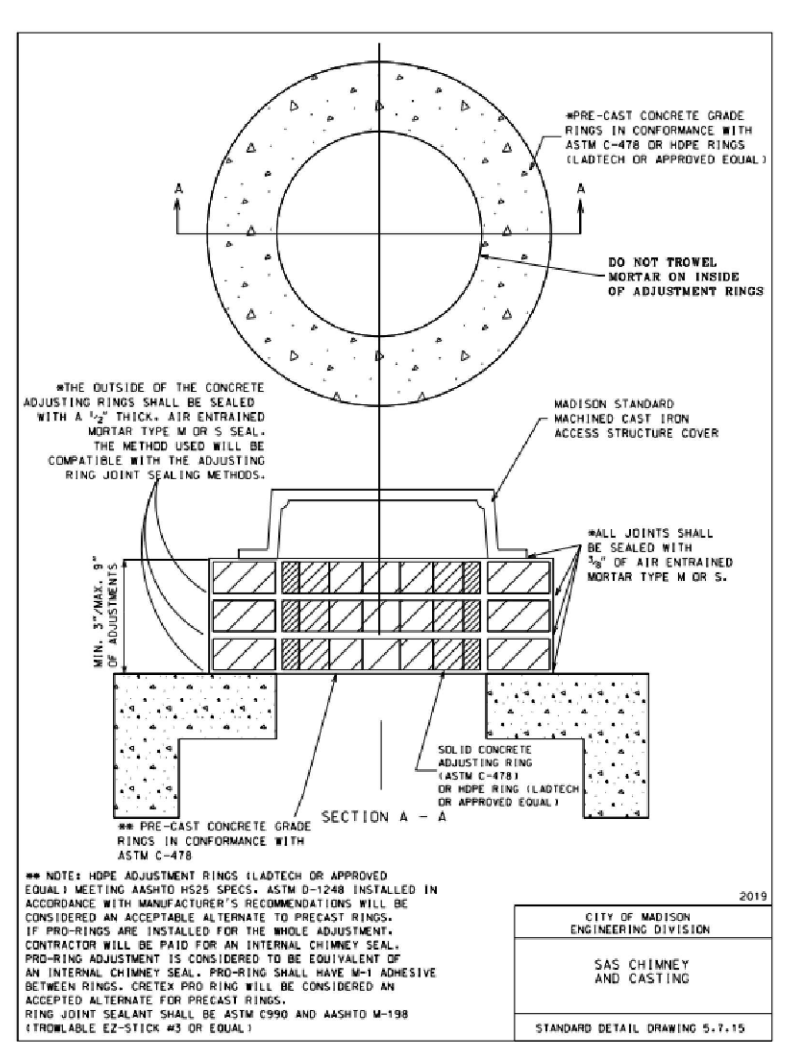
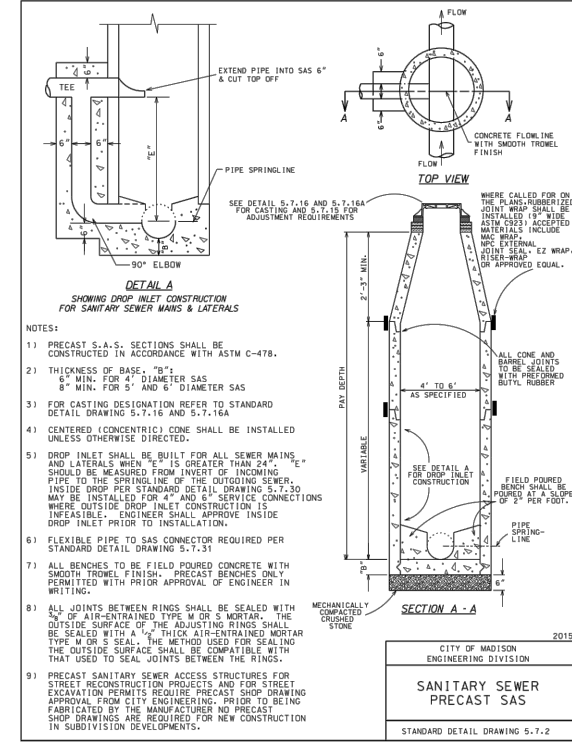
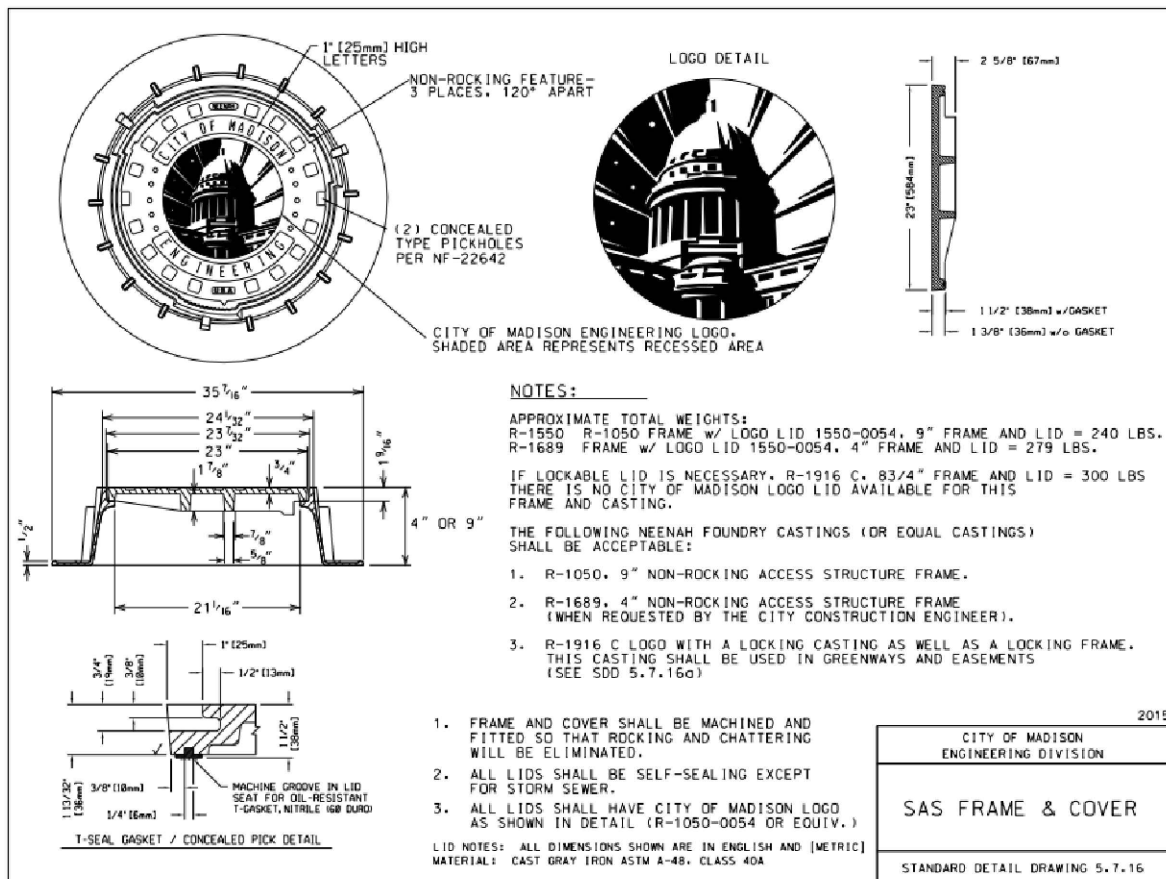
FILE NO. MADIS 158311  
CLIENT PROJECT NO. -  
PROJECT STATUS XXX  
ISSUE DATE XXX MFG  
DESIGNED BY MFG  
DRAWN BY MFG

Sheel Elloit Hendrickson, Inc. © (SEH)

SHEET TITLE  
TRUAX LIFT STATION  
SITE DEMOLITION  
PLAN

SHEET

01C1

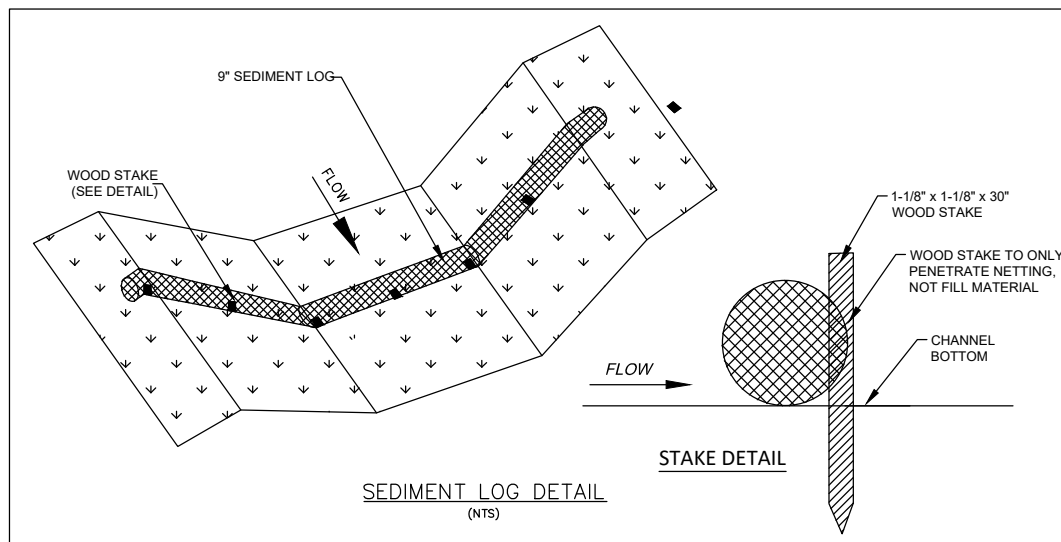
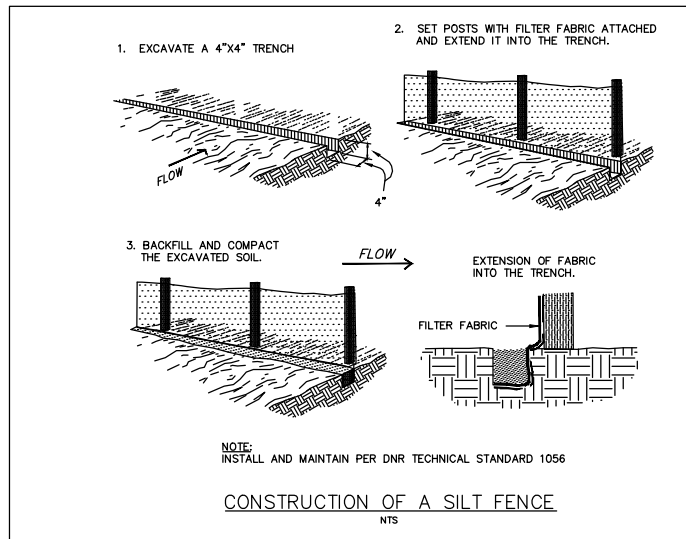


**GENERAL NOTES:**

- PROPOSED MANHOLE STRUCTURES SHALL BE PRE-CAST CONCRETE WITH 60" INSIDE DIAMETER UNLESS OTHERWISE NOTED. ALL FRAMES SHALL BE NEENAH R-1550 WITH MADISON LOGO LID PER S.D.D 5.7.16
- ALL GRAVITY SANITARY SEWER SHALL BE SDR-35 PVC AND ALL FORCE MAIN SANITARY SEWER SHALL BE PRESSURE CLASS 250 DUCTILE IRON PIPE UNLESS OTHERWISE NOTED. GRANULAR BACKFILL SHALL BE USED FOR ALL TRENCHES.
- INSTALL MARKER BALL ABOVE FORCE MAIN AT 25' INTERVALS AND ABOVE BENDS
- ALL SANITARY SEWER SHALL BE INSTALLED ACCORDING TO "CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION"
- ANY ASPHALT DAMAGED ON SITE BY THE CONTRACTOR SHALL BE SAW CUT OUTSIDE OF THE DAMAGE, REMOVED, AND REPLACED IN KIND.
- ALL ABANDONED STORM SEWER ENCOUNTERED DURING CONSTRUCTION SHALL BE REMOVED.
- STRIPPED TOPSOIL WHICH IS STOCKPILED ON SITE SHALL BE STABILIZED WITH TEMPORARY SEEDING IF INACTIVE FOR 14 DAYS OR MORE. PLACE TRENCH SPOILS UPHILL FROM TRENCH TO PRIOR TO STOCKPILING AND REMOVAL.
- ALL DISTURBED AREA TO BE STABILIZED WITH SEED AND MULCH FOLLOWING CONSTRUCTION UNLESS OTHERWISE NOTED.
- ANY SOIL TRACKED ONTO PAVEMENT SHALL BE CLEANED DAILY.
- INSTALL EXTERNAL SAS WRAPS ON MANHOLES (MAC WRAP BARREL JOINTS) IN CONFORMANCE WITH CITY S.D.D. 5.7.2
- INSTALL RIGID INTERNAL CHIMNEY SEALS ON MANHOLES IN ACCORDANCE WITH CITY SDD 5.7.15

**CONSTRUCTION SEQUENCE:**

- INSTALL TRACKING PAD AND INTERIM EROSION CONTROL MEASURES
- CONSTRUCT PROPOSED LIFT STATION AND VALVE VAULT. EXISTING LIFT STATION TO REMAIN IN SERVICE DURING CONSTRUCTION OF PROPOSED FACILITIES.
- CONSTRUCT PROPOSED SANITARY SEWER AND FORCE MAIN AND CONNECT TO PROPOSED LIFT STATION.
- TEST COMPLETED LIFT STATION AND OTHER PROPOSED SANITARY FACILITIES.
- DIVERT INFLUENT FLOW TO PROPOSED LIFT STATION AND CONNECT PROPOSED FORCE MAIN TO EXISTING FORCE MAIN.
- DEMOLISH EXISTING LIFT STATION.
- PLACE BASE MATERIAL AND PAVE ACCESS DRIVE.
- SEED AND MULCH IMPACTED SITE AREA.
- REMOVE INTERIM EROSION CONTROL MEASURES AND TRACKING PAD FOLLOWING ESTABLISHMENT OF VEGETATION ON SITE.



809 NORTH 9TH STREET,  
 SUITE 205  
 SHEBOYGAN, WI 53081  
 PHONE: 920.482.6003  
 WWW.SEHINC.COM



TRUAX LIFT STATION

MADISON, WISCONSIN

FILE NO. MADIS 158311  
 CLIENT PROJECT NO. XXX  
 PROJECT STATUS XXX  
 ISSUE DATE XXX MFG  
 DESIGNED BY MFG  
 DRAWN BY MFG

Short Elliott Hendrickson, Inc. © (SEH)

SHEET TITLE  
**TRUAX LIFT STATION**  
**NOTES & DETAILS**

SHEET

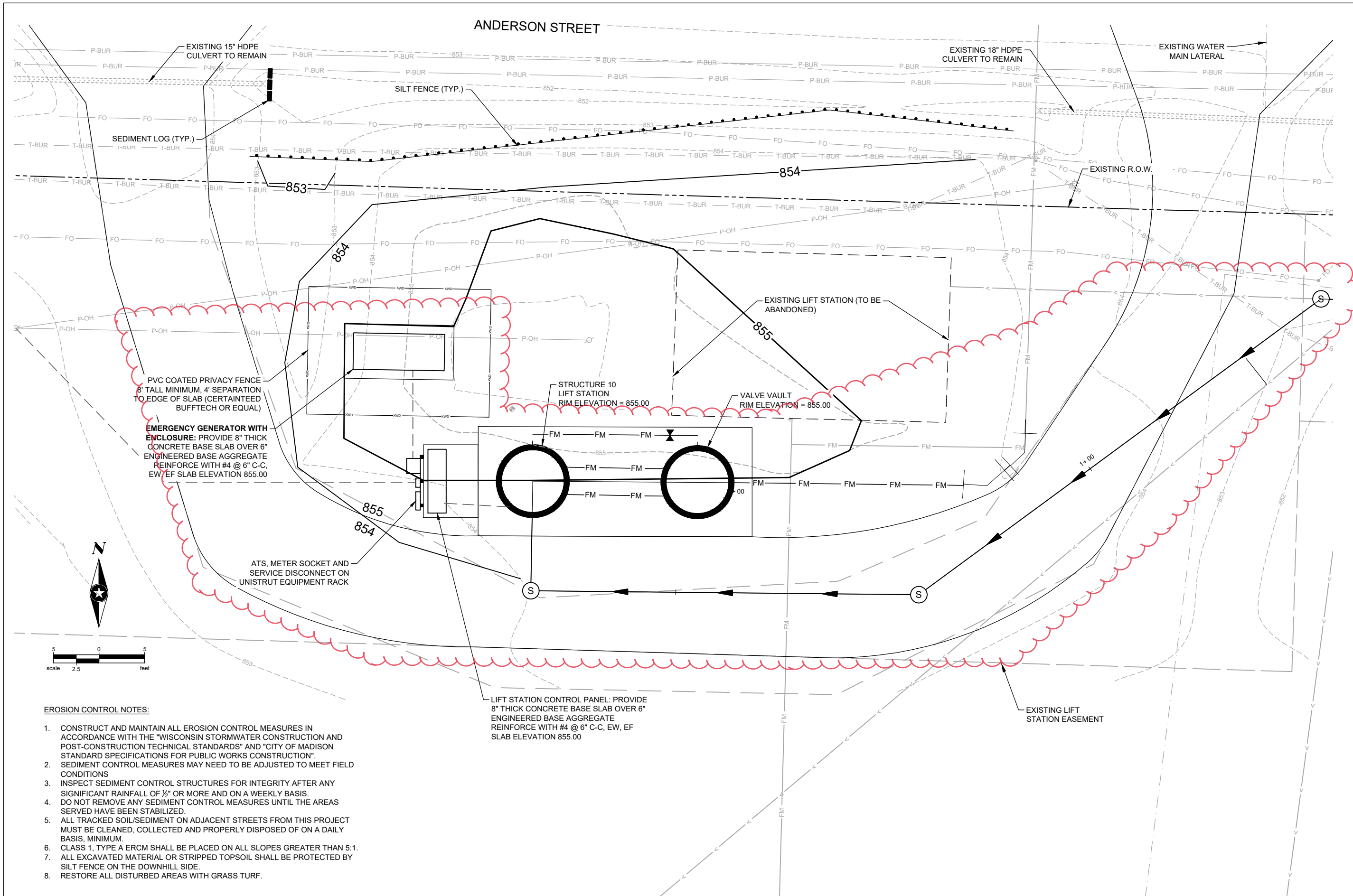
01C2

REVISIONS









809 NORTH 8TH STREET,  
SUITE 205  
SHEBOYGAN, WI 53081  
PHONE: 920.482.6003  
FAX: 920.482.6004  
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TRUAX LIFT STATION

MADISON, WISCONSIN

REVISIONS

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DESIGNED BY	MFG
DRAWN BY	MFG

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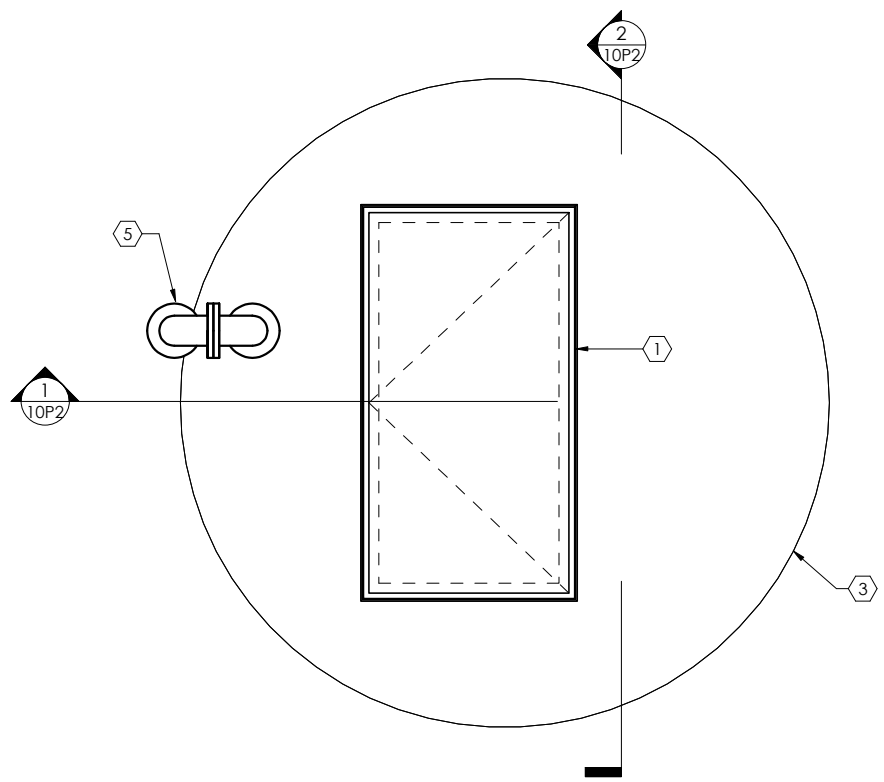
SHEET TITLE  
**TRUAX LIFT STATION  
GRADING &  
EROSION CONTROL  
PLAN**

SHEET

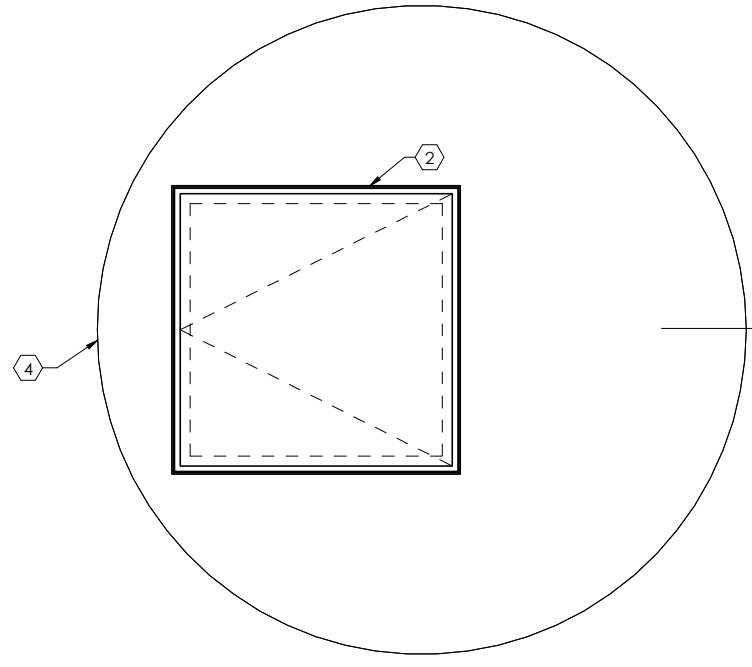
01C4

- EROSION CONTROL NOTES:**
1. CONSTRUCT AND MAINTAIN ALL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "WISCONSIN STORMWATER CONSTRUCTION AND POST-CONSTRUCTION TECHNICAL STANDARDS" AND "CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
  2. SEDIMENT CONTROL MEASURES MAY NEED TO BE ADJUSTED TO MEET FIELD CONDITIONS
  3. INSPECT SEDIMENT CONTROL STRUCTURES FOR INTEGRITY AFTER ANY SIGNIFICANT RAINFALL OF 1/2" OR MORE AND ON A WEEKLY BASIS. DO NOT REMOVE ANY SEDIMENT CONTROL MEASURES UNTIL THE AREAS SERVED HAVE BEEN STABILIZED.
  4. ALL TRACKED SOIL/SEDIMENT ON ADJACENT STREETS FROM THIS PROJECT MUST BE CLEANED, COLLECTED AND PROPERLY DISPOSED OF ON A DAILY BASIS, MINIMUM.
  5. CLASS 1, TYPE A ERCM SHALL BE PLACED ON ALL SLOPES GREATER THAN 5:1.
  7. ALL EXCAVATED MATERIAL OR STRIPPED TOPSOIL SHALL BE PROTECTED BY SILT FENCE ON THE DOWNHILL SIDE.
  8. RESTORE ALL DISTURBED AREAS WITH GRASS TURF.

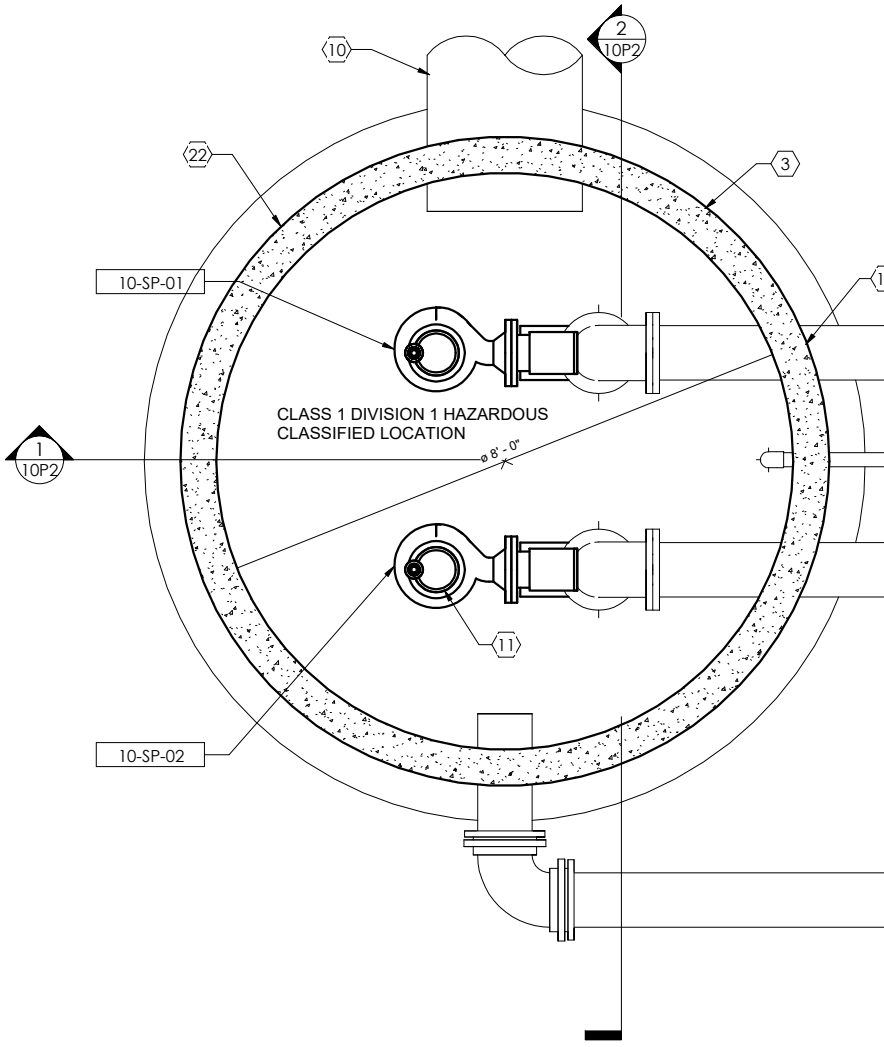




1 UPPER PLAN @ EL. 855.00  
10P1 3/4" = 1'-0"



2 WET WELL BASE SLAB @ EL. 823.50  
10P1 3/4" = 1'-0"



KEYNOTES:

- 1 LOCKABLE ALUMINUM HATCH w/ SAFETY GRATING CONFIRM PUMP HATCH SIZE WITH PUMP MANUFACTURER
- 2 42" x 42" LOCKABLE ALUMINUM HATCH w/ SAFETY GRATING
- 3 8' DIAMETER PRECAST CONCRETE WETWELL
- 4 8' DIAMETER PRECAST CONCRETE VALVE VAULT
- 5 4" VENT w/ #4 SS SCREEN
- 6 8" x 14" REDUCER
- 7 14" DIP FORCE MAIN
- 8 8" PLUG VALVE
- 9 8" SWING CHECK VALVE
- 10 24" PVC INFLUENT SEWER
- 11 SUBMERSIBLE PUMP
- 12 2" SCH 40 PVC DRAIN
- 13 8" DIP
- 14 8" MANHOLE BOOT - TYP
- 15 8" FORCE MAIN DRAIN GATE VALVE AND VALVE BOX
- 16 8" x 6" MJ TEE FITTING
- 17 6" QUICK CONNECT COUPLING FOR PORTABLE PUMP WITH REMOVABLE END CAP
- 18 8" AUXILIARY PIPING FOR PORTABLE PUMP DISCHARGE, CL. ELEV. 847.00
- 19 6" 90 DEGREE FITTING
- 20 PROVIDE 1/2" TAP, BALL VALVE AND PLUG FOR TESTING PORT ON FORCE MAIN
- 21 SEE SHEETS 01C3 AND 15E4 FOR BURIED ELECTRICAL CONDUIT AND WALL PENETRATIONS
- 22 PROVIDE CAUTION SIGNS ON WET WELL AND VALVE VAULT ACCESS HATCHES. 14"W x 10"H YELLOW PLASTIC SIGN WITH BLACK LETTERS FASTENED TO THE TOP OF ACCESS HATCHES WITH S.S. FASTENERS.



3 CAUTION SIGN  
10P1 NOT TO SCALE



TRUAX LIFT STATION

MADISON, WISCONSIN

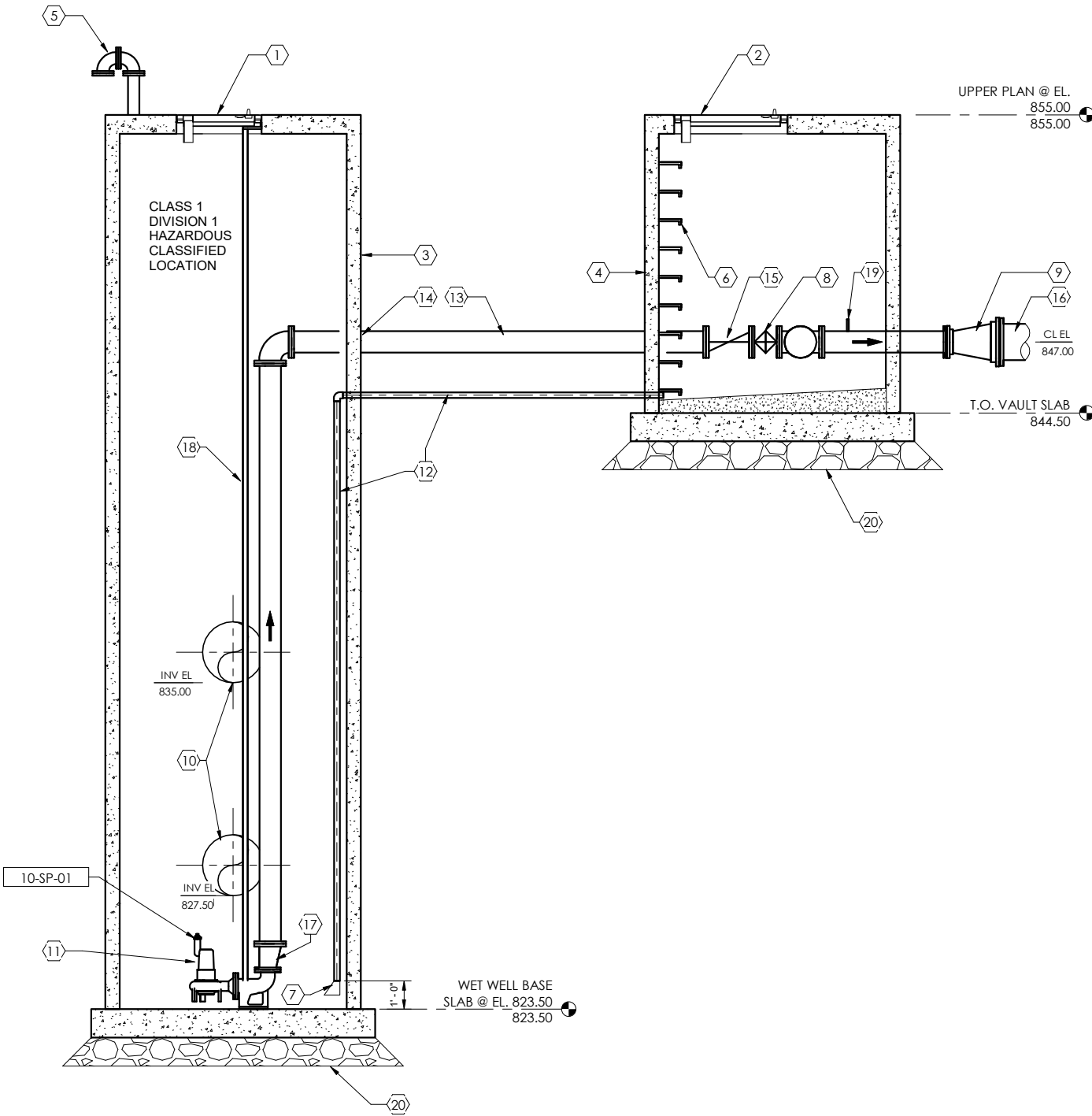
MARK	DATE	DESCRIPTION	REVISIONS

FILE NO.	MADIS 158311
CLIENT PROJECT NO.	
PROJECT STATUS	
ISSUE DATE	7/20/2022
DESIGNED BY	AB
DRAWN BY	DD

SHEET TITLE  
TRUAX LIFT STATION  
LIFT STATION PLANS

SHEET  
10P1



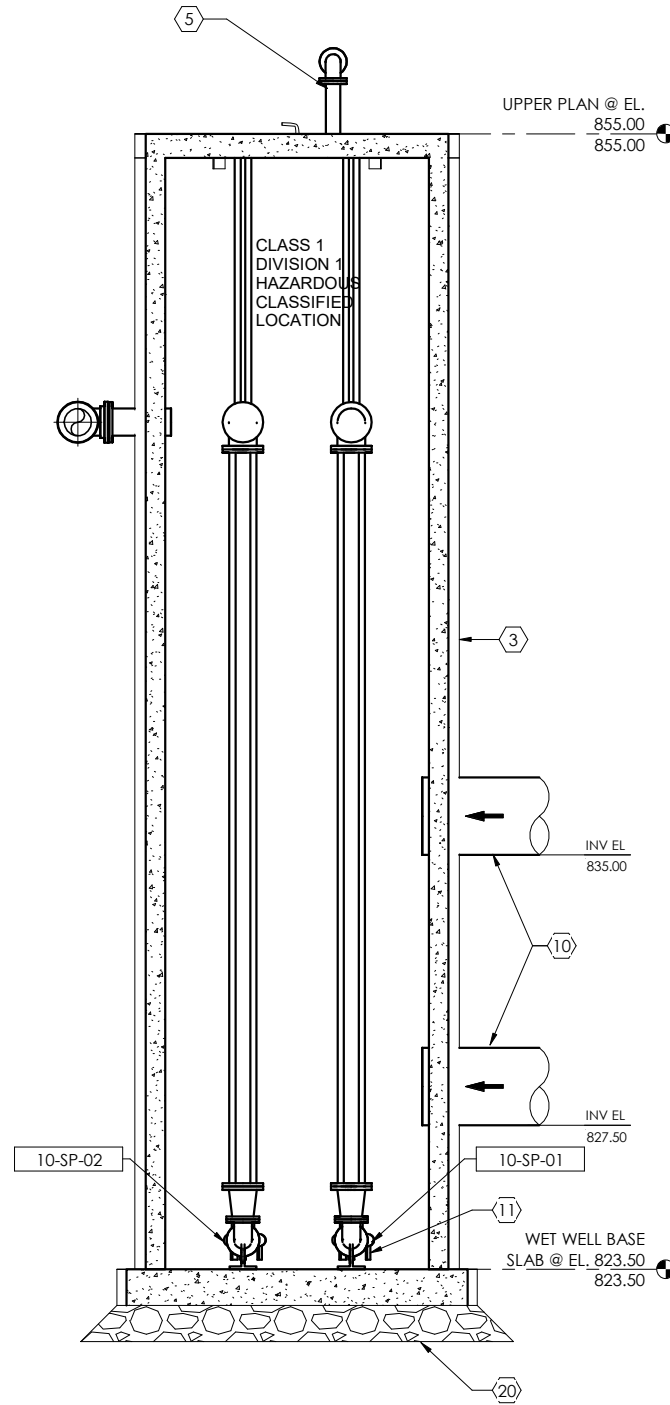


1  
10P2 3/8" = 1'-0"  
0 2 4 6

INSTRUMENTATION ELEVATION SET POINTS	
LWL ALARM	827.50
PUMPS OFF	828.50
LEAD PUMP ON	833.50
LAG PUMP ON	835.50
HWL ALARM	837.50

**GENERAL NOTES**

- LIFT STATION WET WELL IS A CLASS 1, DIVISION 1 HAZARDOUS CLASSIFIED LOCATION.
- ALL PIPE JOINTS MUST BE FULLY RESTRAINED.
- CONTRACTOR SHALL HANG AND SECURE ALL FLOATS AND POWER CABLES TO ENSURE INFLUENT FLOW DOES NOT INTERFERE WITH FLOAT OPERATION OR PUMP REMOVAL.
- SEE ELECTRICAL DRAWINGS FOR CONTROL PANEL LOCATION AND RELATED ELECTRICAL. GENERAL CONTRACTOR TO COORDINATE WITH ELECTRICAL SUBCONTRACTOR.
- SEE SPECIFICATIONS FOR PUMP INFORMATION AND COATINGS.



2  
10P2 3/8" = 1'-0"  
0 2 4 6

**KEYNOTES:**

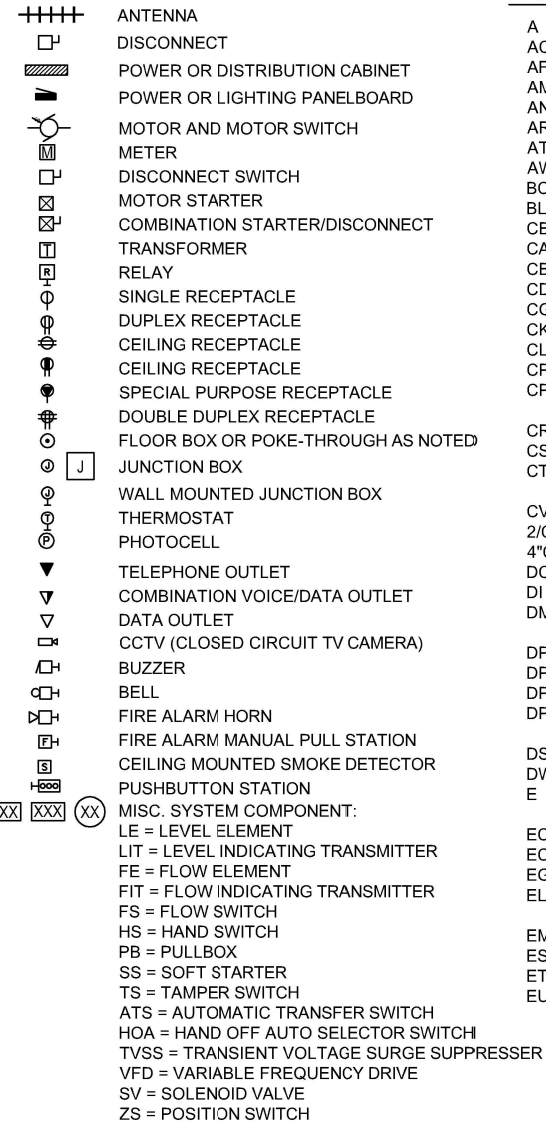
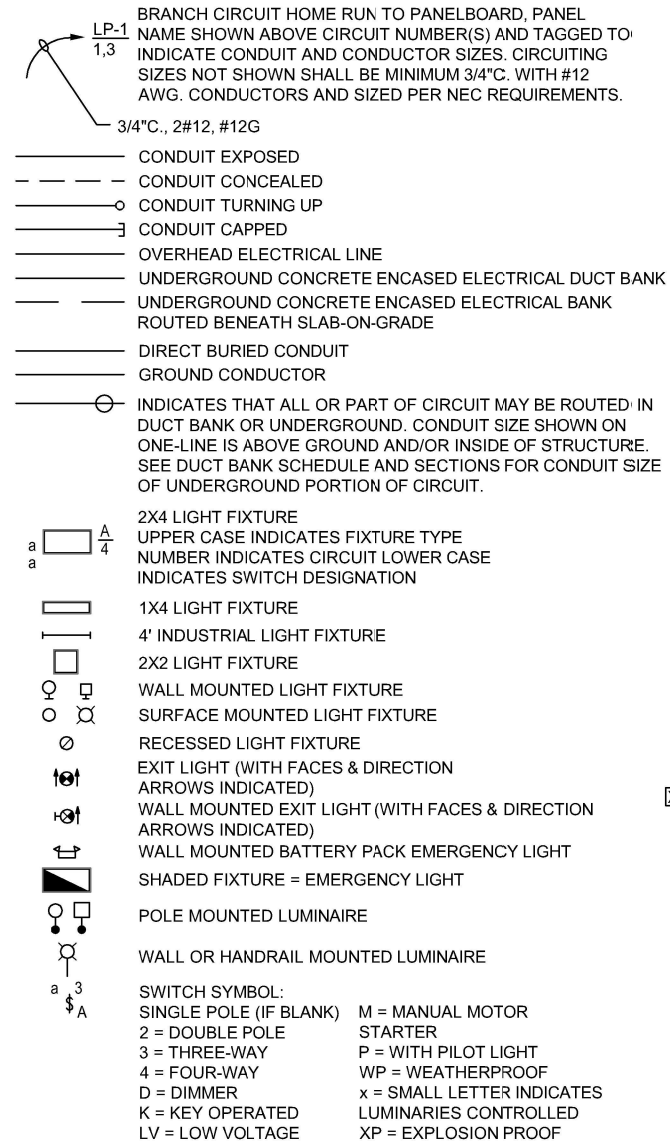
- LOCKABLE ALUMINUM HATCH w/ SAFETY GRATING CONFIRM PUMP HATCH SIZE WITH PUMP MANUFACTURER
- 3'X3' LOCKABLE ALUMINUM HATCH w/ SAFETY GRATING
- 8' DIAMETER PRECAST CONCRETE WETWELL
- 8' DIAMETER PRECAST CONCRETE VALVE VAULT
- 4" VENT w/ #4 SS SCREEN
- CAST IN MANHOLE STEPS AT 12" ON CENTER
- 3" RUBBER DUCKBILL CHECK VALVE
- 8" PLUG VALVE
- 8" x 14" REDUCER
- 24" PVC INFLUENT SEWER, OUTSIDE DROP CONNECTION
- SUBMERSIBLE PUMP
- 2" SCH 40 PVC DRAIN
- 8" DIP
- 8" MANHOLE BOOT - TYP
- 8" SWING CHECK VALVE
- 14" DIP
- 8x6 ECCENTRIC REDUCER w/ FLAT ALONG RAILS
- 316 STAINLESS STEEL PUMP GUIDE RAILS
- PROVIDE 1/2" TAP, BALL VALVE AND PLUG FOR TESTINGPORT ON FORCE MAIN
- MIN 12" CLEAR CRUSHED STONE BEDDING ENCASED IN GEOTEXTILE FABRIC, MIRAFI 160N OR EQUAL.

MARK	DATE	DESCRIPTION	REVISIONS

FILE NO.	MADIS 159311
CLIENT PROJECT NO.	
PROJECT STATUS	
ISSUE DATE	7/20/2022
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DRAWN BY	DD

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## POWER & LIGHTING SYMBOLS



## ELECTRICAL ABBREVIATIONS

A	AMBER, AMPERE, ALARM	EVS	EMERGENCY VENTILATION SHUTOFF	LIT	LEVEL INDICATING TRANSMITTER	RTU	REMOTE TERMINAL UNIT
AC	ALTERNATING	EXIST	EXISTING	LP	LIGHTING PANEL	SA	SURGE SUPPRESSOR
AFF	ABOVE FINISHED FLOOR	F	FORWARD	LS	LIMIT OR LEVEL SWITCH	SCC	SHORT CIRCUIT CURRENT SUPERVISORY CONTROL AND DATA ACQUISITION
AM	AMMETER	FA	FIRE ALARM	LTG	LIGHTING	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
ANN	ANNUNCIATOR	FACP	FIRE ALARM CONTROL PANEL	LWCO	LOW WATER CUTOFF	S2	SIZE 2 STARTER
AR	ALARM RELAY	FDR	FEEDER	M	MAGNETIC MOTOR STARTER	SN	SOLID NEUTRAL
ATS	AUTOMATIC TRANSFER SWITCH	FE	FLOW ELEMENT	MA	MILLIAMPERE	SP	SINGLE POLE
AWG	AMERICAN WIRE GAUGE	FIT	FLOW INDICATING TRANSMITTER	MCB	MAIN CIRCUIT BREAKER	SPD	SURGE PROTECTOR
BC	BATTERY CHARGER	FO	FIBER OPTIC	MCC	MOTOR CONTROL CENTER	SPDT	SINGLE POLE DOUBLE THROW
BLDG	BUILDING	FS	FLOW SWITCH	MD	MOISTURE DETECTOR	SPST	SINGLE POLE SINGLE THROW
CB	LOSE, COUNTER OR CONTACTOR	FPSP	FIRE PROTECTION SIGNALING PANEL	MFR	MANUFACTURER	SS	SELECTOR SWITCH
CAP	CAPACITOR	G	GREEN OR GROUND OR GENERATOR	MH	MANHOLE OR MOUNTING HEIGHT	S.S.	STAINLESS STEEL
CB	CIRCUIT BREAKER	GD	GROUND DETECTOR OR GAS DETECTOR	MOV	MOTOR OPERATED VALVE	SSRV	SOLID STATE REDUCED VOLTAGE STARTER
CD	CONTROL DAMPER	GEN	GENERATOR	MS	MANUAL MOTOR STARTER	SV	SOLENOID VALVE
CGD	COMBUSTIBLE GAS DETECTOR	GF1	GROUND FAULT INTERRUPTER	MSH	MOTOR SPACE HEATER	SWBD	SWITCHBOARD
CKT	CIRCUIT	GFCI	GROUND FAULT INTERRUPTEUR	MTR	MOTOR	SWGR	SWITCHGEAR
CL2	CHLORINE	N	NEUTRAL	MTS	MANUAL TRANSFER SWITCH	T	THERMOSTAT, TIMER OR TOTALIZER
CP	CONTROL PANEL	NC	NORMALLY CLOSED	MV	MILLIVOLT, MEDIUM VOLTAGE	TB	TERMINAL BLOCK
CPT	CONTROL POWER TRANSFORMER	NO	NORMALLY OPEN	MVA	MEGA VOLT AMPERE	TCP	TEMPERATURE CONTROL PANEL
CR	CURRENT OR CONTROL RELAY	O	OPEN	N	NEUTRAL	TD	TIME DELAY RELAY
CS	CONTROL STATION	OL	OVERLOAD	NC	NORMALLY CLOSED	TEMP	TEMPERATURE
CT	CYCLE TIMER OR CURRENT TRANSFORMER	OOA	ON-OFF-AUTO	OL	OVERLOAD	TQ	TORQUE
CV	CONTROL VALVE	OR	ON-OFF-REMOTE	OOA	ON-OFF-AUTO	TTB	TELEPHONE TERMINAL BOX
2/C	2 CONDUCTOR	OH	OVERHEAD	OOR	ON-OFF-REMOTE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
4"C	4" CONDUIT	P	PRIMARY	OH	OVERHEAD	UG	UNDERGROUND
DC	DIRECT CURRENT	PB	PUSHBUTTON OR PULL BOX	P	PRIMARY	UPS	UNINTERRUPTIBLE POWER SUPPLY
DI	DOOR INTERLOCK	PLC	PROGRAMMABLE LOGIC CONTROLLER	PH	PHASE, CHEMICAL TERM	UV	UNDER VOLTAGE OR ULTRAVIOLET
DM	DAMPER MOTOR OR DEMAN METER	PF	POWER FACTOR	PFCC	POWER FACTOR CORRECTION CAPACITOR	V	VOLTS
DPDT	DOUBLE POLE DOUBLE THROW	PH	PHASE, CHEMICAL TERM	PS	PRESSURE SWITCH OR PUMP STATION	VA	VOLT AMPERE
DPST	DOUBLE POLE SINGLE THROW	PRS	PROXIMITY SWITCH	PT	POTENTIAL TRANSFORMER OR PROGRAM TIMER	VAR	VOLTAMPERE REACTIVE DRIVE
DP	DIFFERENTIAL PRESSURE SWITCH	PRV	POWER ROOF VENTILATOR	2P	2 POLE	VFD	VARIABLE FREQUENCY DRIVE
DPS	DIFFERENTIAL PRESSURE SWITCH	PS	PRESSURE SWITCH OR PUMP STATION	R	RED, RAISE RELAY OR REVERSE	VM	VOLTMETER
DS	DISCONNECT SWITCH	PT	POTENTIAL TRANSFORMER OR PROGRAM TIMER	REC	RECEPTACLE	W	WHITE OR WATTS
DWG	DRAWING	2P	2 POLE	REC	RECEPTACLE	WE	WEIGHT ELEMENT
E	EMERGENCY OR DAMPER OPERATOR	R	RED, RAISE RELAY OR REVERSE	RGS	RIGID GALVANIZED STEEL	WIT	WEIGHT INDICATING TRANSMITTER
EC	EMPTY CONDUIT	REC	RECEPTACLE	RTD	RESISTANCE TYPE TEMP	WP	WEATHERPROOF
ECP	EQUIPMENT CONTROL PANEL	RG	RIGID GALVANIZED STEEL	LE	LEVEL ELEMENT	WPI	WEATHERPROOF IN-USE RECEPTACLE COVER
EG	ENGINE GENERATOR	RTD	RESISTANCE TYPE TEMP			XFMR	TRANSFORMER
EL	ELEVATION OR EMERGENCY LIGHT						
EMH	ELECTRICAL MANHOLE						
ES	END SWITCH						
ETM	ELAPSED TIME METER						
EUH	ELECTRICAL UNIT HEATER						

## DEFINITIONS

THE TERMS LISTED BELOW ARE DEFINED AS FOLLOWED:

- FURNISH: OBTAIN, COORDINATE, DELIVER TO THE JOB SITE AND GUARANTEE.
- INSTALL: FURNISHED BY OTHERS, RECEIVE ON SITE, UNLOAD, STORE, SET IN PLACE, CONNECT, PLACE IN OPERATION AND GUARANTEE WORKMANSHIP OF INSTALLATION.
- PROVIDE: FURNISH AND INSTALL.
- CONNECT: BRING SERVICE TO THE EQUIPMENT AND MAKE FINAL ATTACHMENTS, INCLUDING NECESSARY DISCONNECT SWITCHES, CONTROL SWITCHES, OUTLETS, ETC.
- CONDUIT: IN ADDITION TO CONDUIT INCLUDES FITTINGS, HANGERS, PULLBOXES, SUPPORTS, ETC. AS REQUIRED FOR A COMPLETE AND PROPER INSTALLATION.
- CONCEALED: HIDDEN FROM SIGHT IN WALLS, CEILINGS OR FLOORS..
- EXPOSED: SURFACE MOUNTED, NOT HIDDEN FROM SITE.
- BUILDING STRUCTURE: COLUMNS BEAMS, JOIST BRIDGING SHALL NOT BE USED FOR SUPPORTING ELECTRICAL EQUIPMENT.
- RELOCATE: EXISTING EQUIPMENT TO BE RELOCATED TO NEW LOCATION AND EXISTING CONDUIT AND BRANCH CIRCUITING (CONDUCTORS) TO BE EXTENDED TO NEW LOCATION AND RECONNECTED.
- CIRCUITRY: CONDUIT, CONDUCTORS AND CONNECTIONS FOR A COMPLETE OPERATIONAL SYSTEM.



TRUAX LIFT STATION

MADISON, WISCONSIN

REVISIONS

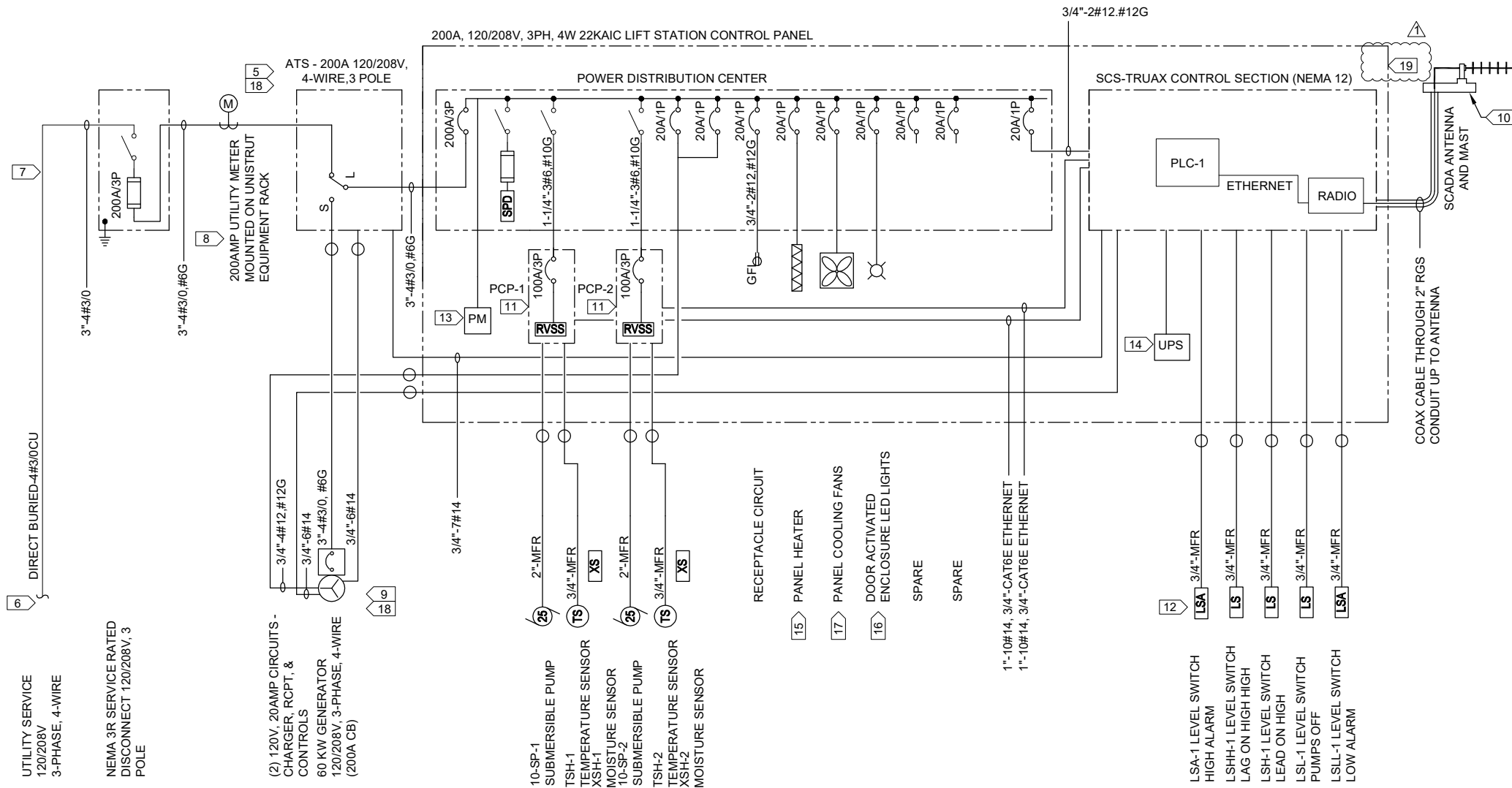
FILE NO.	MADIS 159311	DESIGNED BY	JC
CLIENT PROJECT NO.		DRAWN BY	AB
PROJECT STATUS			
ISSUE DATE			

SHEET TITLE  
TRUAX LIFT STATION  
ELECTRICAL - SYMBOLS,  
ABBREVIATIONS & NOTES

SHEET

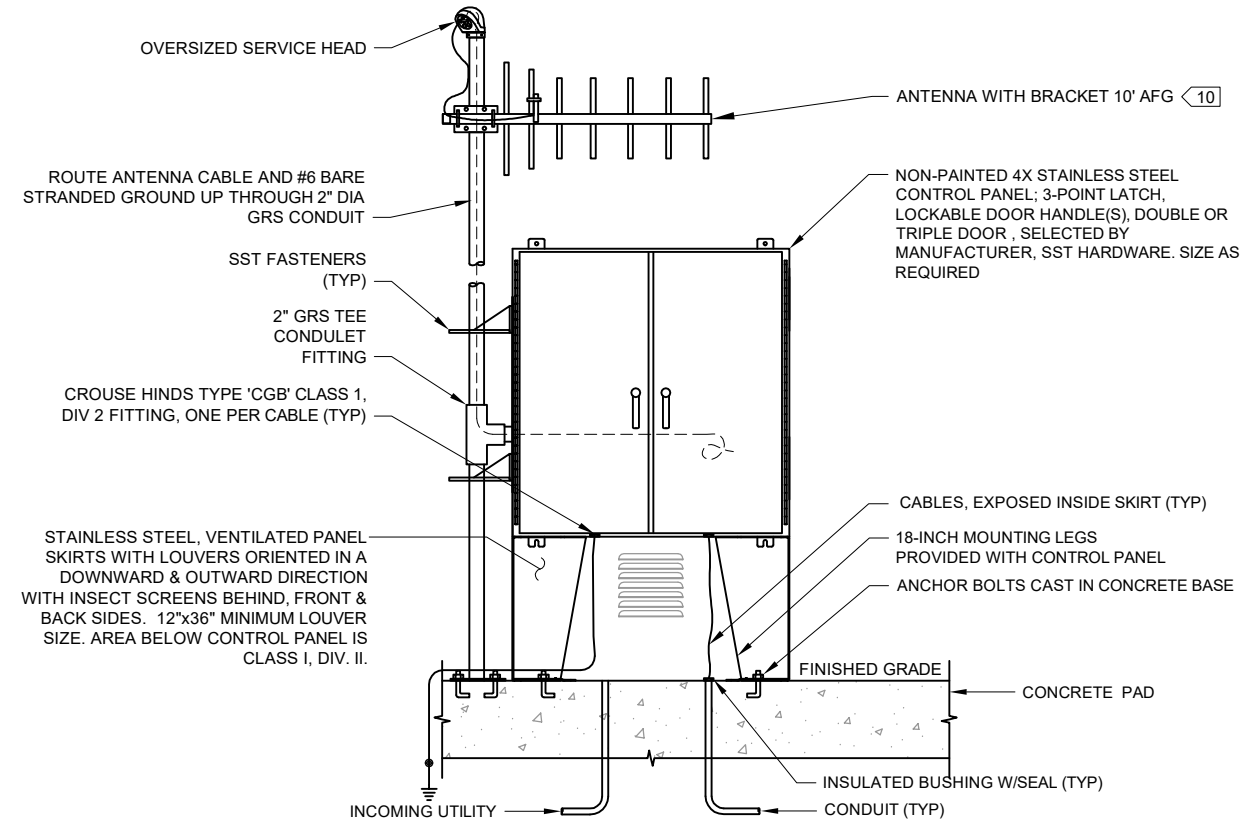
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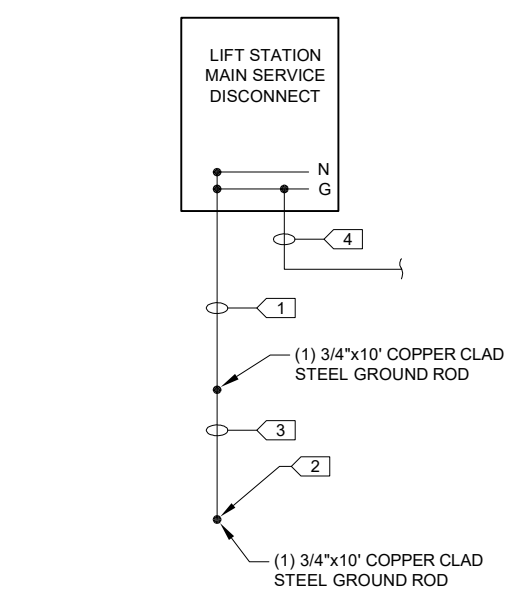


- KEY NOTES:**
- SIZE MAIN GROUNDING CONDUCTOR PER NEC OR 12.5% OF TOTAL CROSS SECTIONAL AREA OF MAIN SERVICE CONDUCTORS PER PHASE.
  - EXOTHERMIC WELD ALL CONNECTIONS OF CONDUCTORS TO GROUND RODS.
  - GROUND RODS SHALL BE SPACED A MINIMUM OF 6 FEET APART. CONDUCTOR CONNECTING THE GROUND RODS SHALL BE A MINIMUM OF #2/0 AWG BARE CU.
  - BONDING CONDUCTOR PER NEC FOR CONNECTION TO CONTROL PANEL, EXPOSED ABOVE GROUND PIPE/VENT AND ALL OTHER AREAS REQUIRED TO BE BONDED TO GROUNDING.
  - CONTRACTOR SHALL CONTACT UTILITY AND PROVIDE ARC FLASH AND AVAILABLE FAULT CURRENT LABELING ON EQUIPMENT PER NEC 110.16 AND 110.24.
  - UTILITY PROVIDED PRIMARY SERVICE AND TRANSFORMERS. ELECTRICAL CONTRACTOR SHALL COORDINATE UTILITY WORK.
  - PROVIDE SECONDARY CIRCUITRY AND CONNECTIONS.
  - PROVIDE MG&E APPROVED 200A SINGLE POSITION METER SOCKET AND INSTALL UTILITY FURNISHED METER.
  - CONNECT GENERATOR HEATER, CHARGER AND DEVICES RECOMMENDED BY GENERATOR MFR.
  - PROVIDE ANTENNA WITH CORD GRIP, CONDUIT, CABLE AND MOUNTING BRACKETS AND CONNECT TO RADIO. VERIFY HEIGHT REQUIREMENTS WITH OWNER. MMSD TO PROVIDE ANTENNA CABLE AND RADIO. CONTRACTOR TO PROVIDE MAST AND ANY ASSOCIATED HARDWARE OR BRACKETS. COORDINATE ANTENNA/MAST INSTALLATION WITH MMSD.
  - VERIFY INSTALLED MOTOR FULL LOAD AMPS (FLA) PRIOR TO ORDERING RVSS. PROVIDE CIRCUIT BREAKER AND RVSS SIZED FOR INSTALLED MOTOR. PROVIDE ETHERNET CONNECTION AND HARDWIRE IO CONNECTION BETWEEN EACH RVSS AND SUPERVISORY CONTROL PANEL.
  - MANUFACTURER (MFR) SUPPLIED CABLE, TYP.
  - PROVIDE 3-PHASE 208V POWER MONITOR IN SEPARATE ENCLOSURE. PROVIDE CIRCUIT PROTECTION FOR POWER MONITOR PER MANUFACTURER'S RECOMMENDATIONS.
  - PROVIDE UPS ON SHELF LOCATED WITHIN ENCLOSURE. UPS TO BE POWERED BY SINGLE OUTLET LOCATED ADJACENT TO UPS LOCATION POWERED BY THROUGH CONTROL SECTION. OUTLET SHOULD BE LABELED "UPS ONLY".
  - PROVIDE PANEL HEATER WITH BUILT IN THERMOSTAT.
  - PROVIDE LED ENCLOSURE LIGHT, TRIGGERED BY A DOOR SENSOR. PROVIDE (1) 18" LIGHT PER EVERY 3FT OF PANEL WIDTH.
  - PROVIDE COOLING FAN, THERMOSTATICALLY CONTROLLED. FAN SHALL PULL FILTERED AIR INTO PANEL. PROVIDE FILTERED LOUVERS AND COVERS FOR LOUVERS DURING WINTER MONTHS. PROVIDE SPARE FILTERS.
  - DEDUCT BID ALTERNATE: DELETE GENERATOR AND ATS, PROVIDE MANUAL TRANSFER SWITCH AND 200A RECEPTACLE FOR PORTABLE GENERATOR, 120/208V, 3-PHASE, 4-WIRE.
  - PROVIDE EMT CONDUIT FOR ALL WIRING BETWEEN SUBPANELS IN THE MAIN ENCLOSURE.

**1 CONTROL PANEL ONE-LINE DIAGRAM**  
NO SCALE



**2 CONTROL PANEL ELEVATION**  
NO SCALE



**3 BONDING & GROUNDING DETAIL**  
SCALE: NONE

10 NORTH BRIDGE STREET  
CHIPPewa FALLS, WI 54729  
PHONE: 715.726.6000  
FAX: 414.490.2100  
WWW.SEHINC.COM

**SEH**

**TRUAX LIFT STATION**

**MADISON, WISCONSIN**

ADDED NOTE 19, 4/17/2023

REV(S)IONS

FILE NO. MADIS 183311

CLIENT PROJECT NO. 1

PROJECT STATUS

ISSUE DATE CW

DESIGNED BY JFB

DRAWN BY

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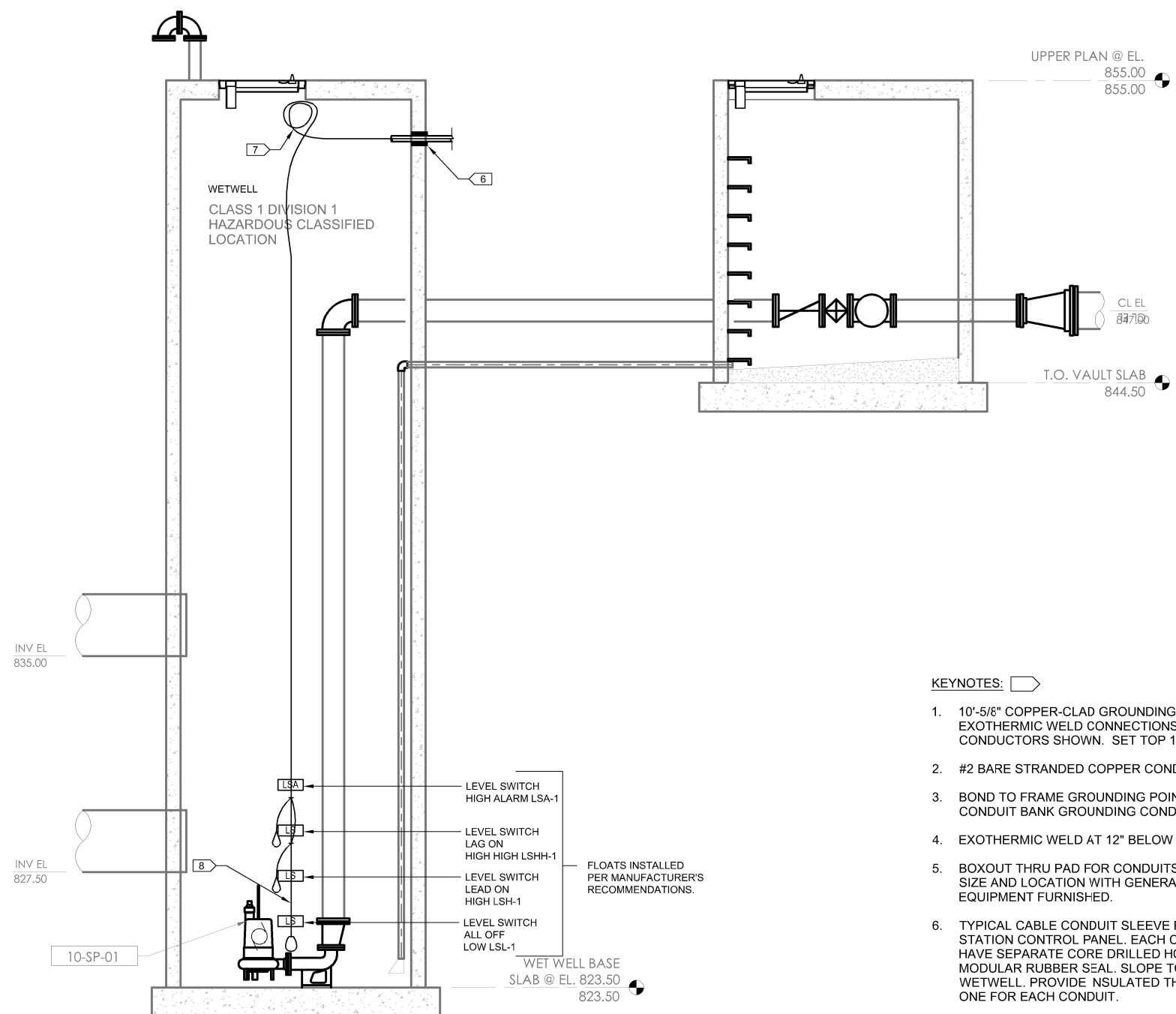
**TRUAX LIFT STATION**

**ELECTRICAL - ONE-LINE**

**DIAGRAM AND DETAIL**

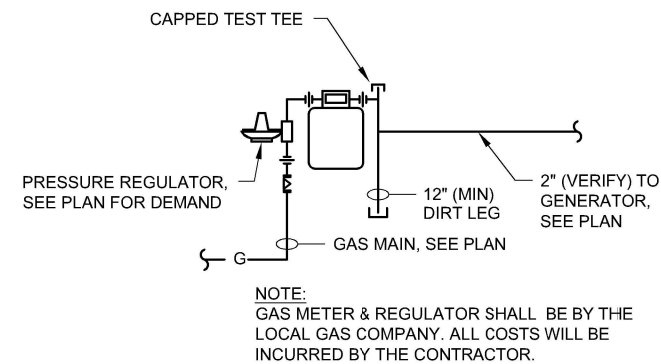
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**10E2**

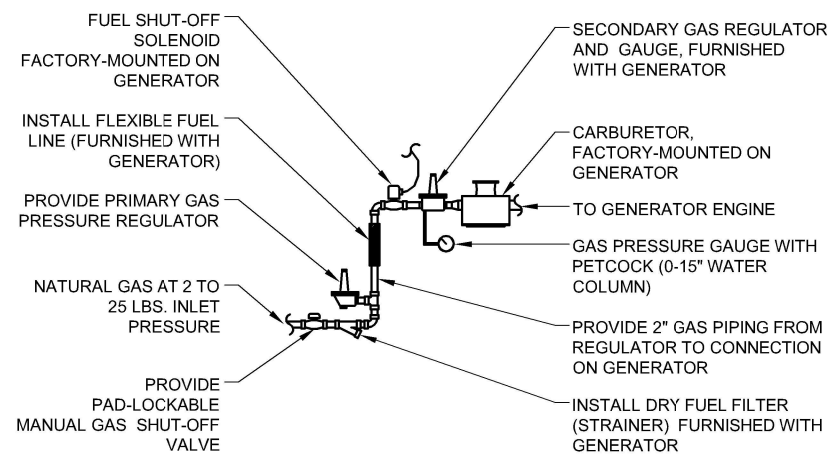


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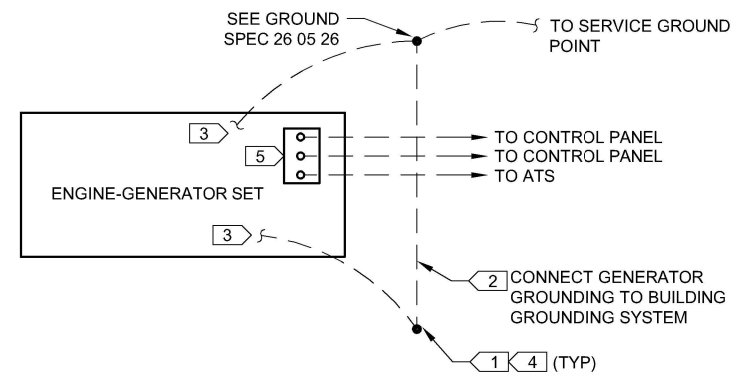
1. 10'-5/8" COPPER-CLAD GROUNDING ROD WITH EXOTHERMIC WELD CONNECTIONS TO CONDUCTORS SHOWN. SET TOP 12" DEEP.
2. #2 BARE STRANDED COPPER CONDUCTOR.
3. BOND TO FRAME GROUNDING POINT AND TO CONDUIT BANK GROUNDING CONDUCTOR(S).
4. EXOTHERMIC WELD AT 12" BELOW GRADE.
5. BOXOUT THRU PAD FOR CONDUITS. CONFIRM SIZE AND LOCATION WITH GENERATOR EQUIPMENT FURNISHED.
6. TYPICAL CABLE CONDUIT SLEEVE FROM LIFT STATION CONTROL PANEL. EACH CONDUIT SHALL HAVE SEPARATE CORE DRILLED HOLE WITH MODULAR RUBBER SEAL. SLOPE TO DRAIN INTO WETWELL. PROVIDE INSULATED THROAT BUSHING, ONE FOR EACH CONDUIT.
7. SST CABLE RACK 5 EACH 1/4" SST HOOK WITH 1 1/2" DIA BEND (TYP). PROVIDE 5' SLACK CABLE LOOPS. PROVIDE STAINLESS STEEL, SINGLE-EYE, MESH SUPPORT KELLUM CABLE GRIPS FOR EACH CABLE.
8. 316SST CABLE MOUNTING KIT WITH 1/4" 316SST ROPE, COMPLETE WITH 15 LB PLASTISOL COATED CAST IRON WEIGHT AND 316SST CONNECTING LINK.



1 GAS METER DETAIL  
 15E4 SCALE: NONE

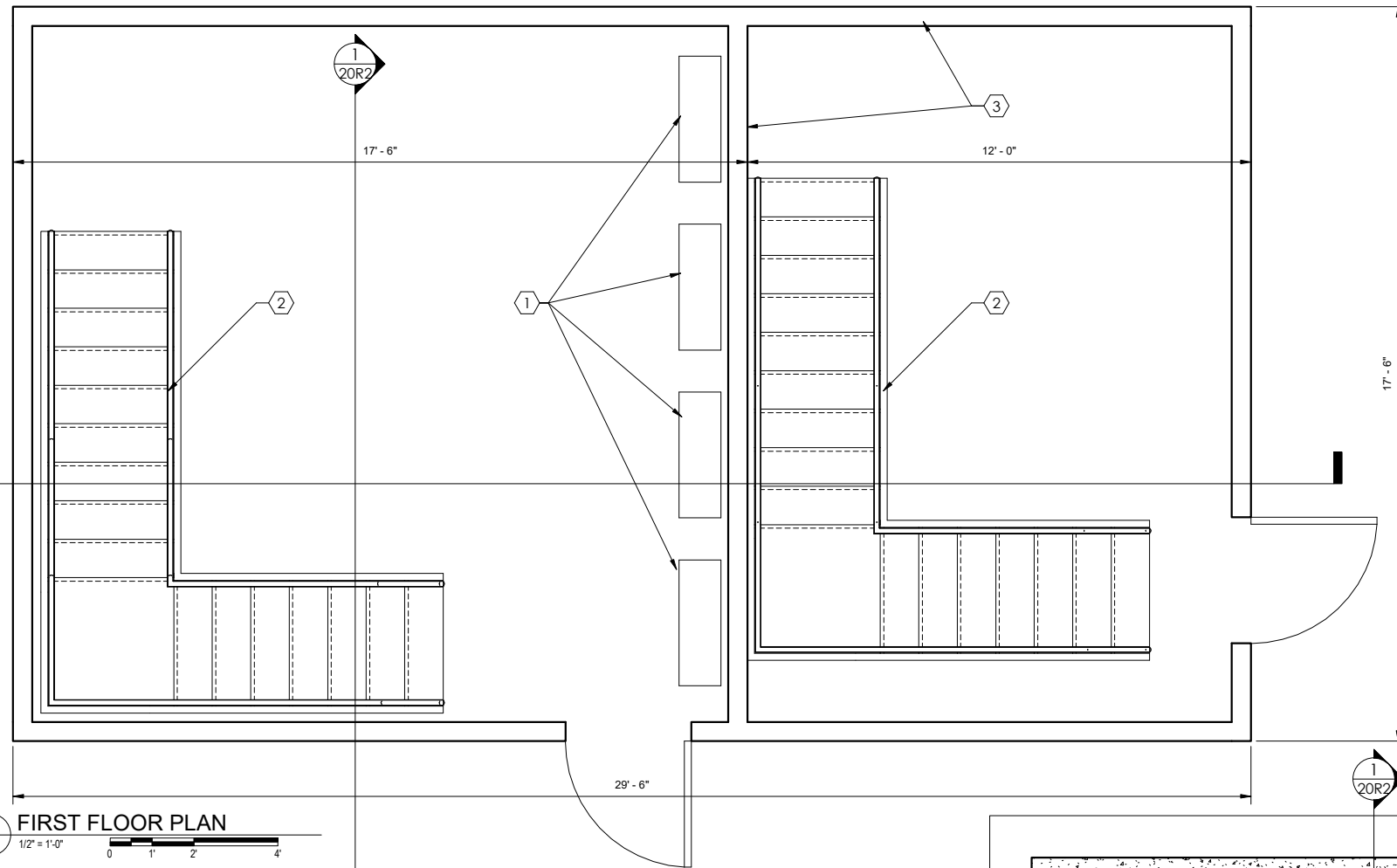


2 GENERATOR GAS PIPING DETAIL  
 15E4 SCALE: NONE

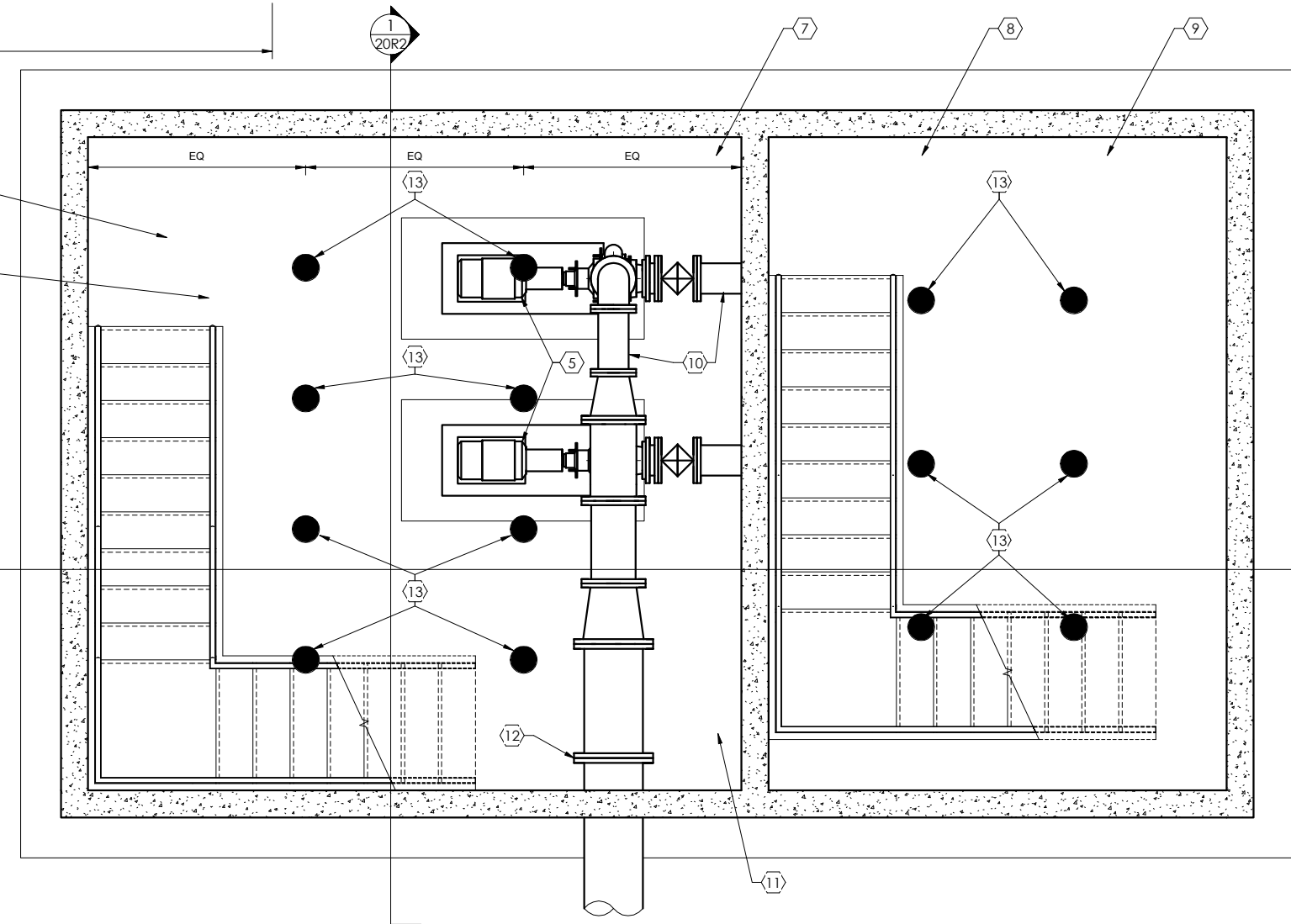


3 GENERATOR SET PLAN  
 15E4 SCALE: NONE





1  
20P1  
1/2" = 1'-0"



2  
20P1  
1/2" = 1'-0"

**KEYNOTES:**

- 1 REMOVE ELECTRICAL SERVICE, METERING, LIGHTING, DISCONNECTS, STARTERS, SCADA, AND EXPOSED CONDUITS IN ELECTRICAL ROOM
- 2 REMOVE STAIRS TO LOWER LEVEL
- 3 REMOVE ABOVE GRADE WOOD FRAME BUILDING
- 4 FILL PUMP ROOM WITH COMPACTED SAND FILL
- 5 REMOVE PUMPS AND MOTORS
- 6 REMOVE VENTILATION, LIGHTING AND EXPOSED CONDUIT IN PUMP ROOM
- 7 REMOVE SUMP PUMP, AND DISCHARGE PIPING AND VALVES
- 8 REMOVE VENTILATION, LIGHTING AND EXPOSED CONDUIT IN WET WELL
- 9 FILL WETWELL WITH COMPACTED SAND FILL
- 10 REMOVE PUMP SUCTION AND DISCHARGE PIPING AND VALVES
- 11 REMOVE EXISTING PLUMBING PIPING AND CAP IN YARD
- 12 PROVIDE 16-INCH BLIND FLANGE ON EXISTING 16-INCH FORCE MAIN LEAVING THE PUMP ROOM
- 13 PROVIDE FOURTEEN (14) TOTAL 8-INCH DIAMETER HOLES (CORE DRILL OR BREAK OUT) IN THE BASE SLAB OF THE EXISTING CONCRETE STRUCTURE, AND PROVIDE SAND FILL TO ALLOW FOR DRAINAGE. EIGHT (8) HOLES IN THE PUMP ROOM AND CENTER CELLS, AND SIX (6) HOLES IN THE WET WELL.



TRUAX LIFT STATION

MADISON, WISCONSIN

MARK	DATE	DESCRIPTION

FILE NO.	MADIS 158311
CLIENT PROJECT NO.	XXX
PROJECT STATUS	XXX
ISSUE DATE	AB
DESIGNED BY	DD
DRAWN BY	DD

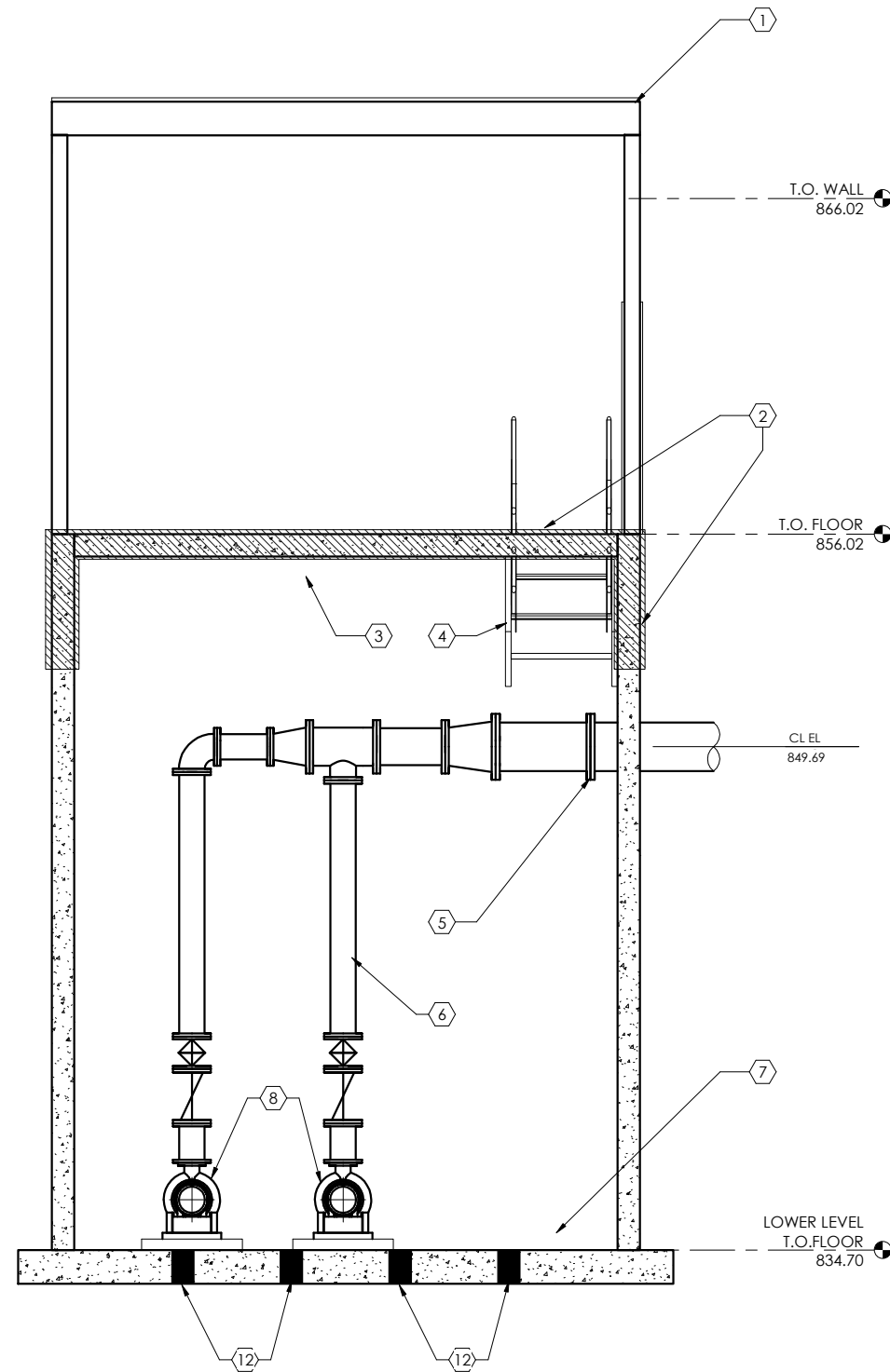
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SHEET TITLE  
TRUAX LIFT STATION  
EXISTING LIFT STATION  
DEMOLITION FLOOR PLANS

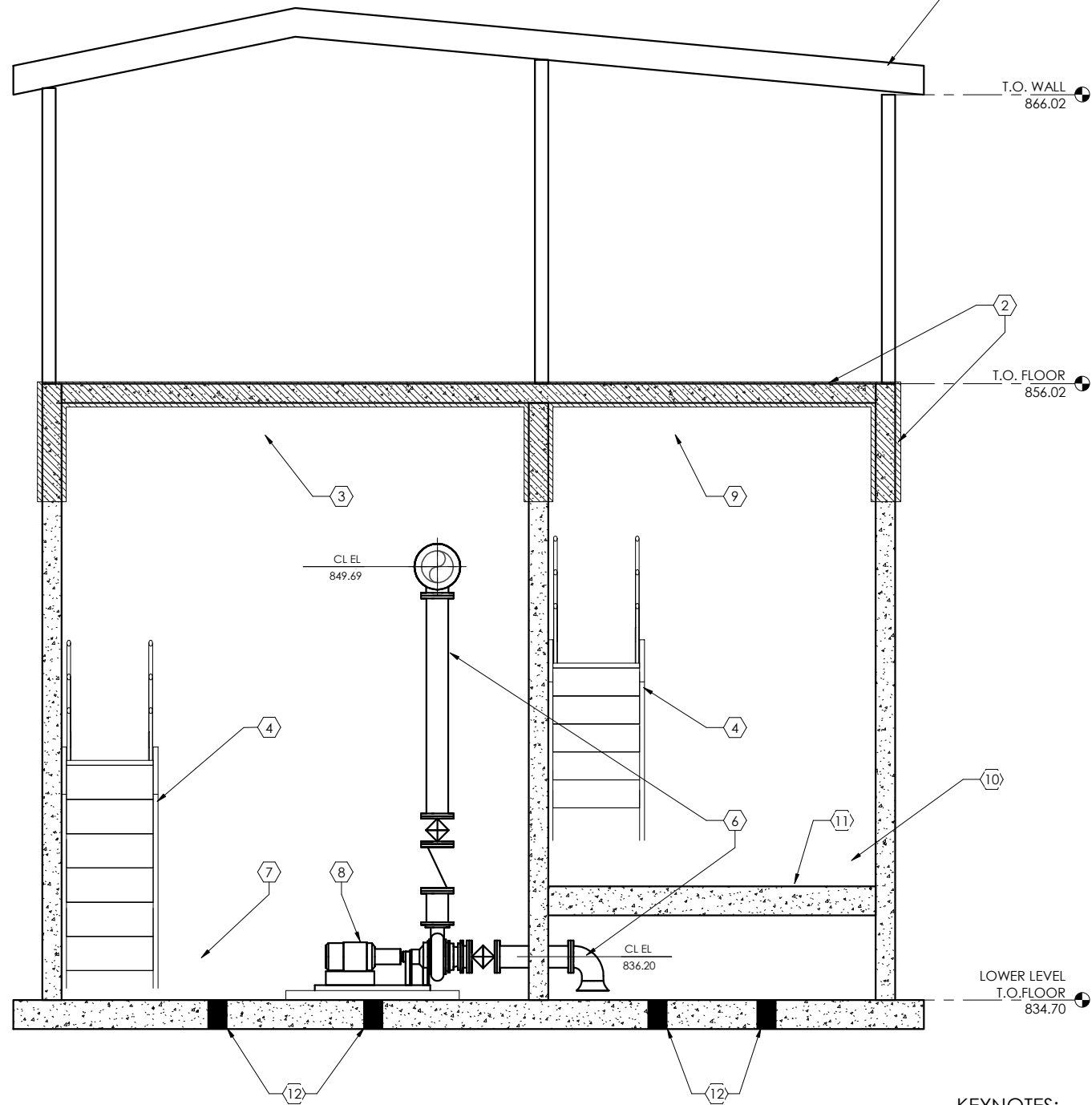
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20R1

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1  
20R2 3/8" = 1'-0"  
0 2 4 6



2  
20R2 3/8" = 1'-0"  
0 2 4 6

**KEYNOTES:**

- 1 REMOVE ABOVE GRADE WOOD FRAME BUILDING
- 2 REMOVE CONCRETE FLOOR SLAB, AND CONCRETE WALLS TO ELEVATION 852.00
- 3 REMOVE VENTILATION, LIGHTING AND EXPOSED CONDUIT IN PUMP ROOM
- 4 REMOVE STAIRS TO LOWER LEVEL
- 5 PROVIDE 16-INCH BLIND FLANGE ON EXISTING 16-INCH FORCE MAIN LEAVING THE PUMP ROOM
- 6 REMOVE PUMP SUCTION AND DISCHARGE PIPING AND VALVES WALL PIPES TO REMAIN
- 7 FILL PUMP ROOM WITH COMPACTED SAND FILL
- 8 REMOVE PUMPS AND MOTORS
- 9 REMOVE VENTILATION, LIGHTING AND EXPOSED CONDUIT IN WET WELL
- 10 FILL WET WELL WITH COMPACTED SAND FILL
- 11 REMOVE INTERMEDIATE FLOOR SLAB
- 12 PROVIDE FOURTEEN (14) TOTAL 8-INCH DIAMETER HOLES (CORE DRILL OR BREAK OUT) IN THE BASE SLAB OF THE EXISTING CONCRETE STRUCTURE, AND PROVIDE SAND FILL TO ALLOW FOR DRAINAGE. EIGHT (8) HOLES IN THE PUMP ROOM AND CENTER CELLS, AND SIX (6) HOLES IN THE WET WELL.

809 NORTH BRISTL SUITE 205  
SHEBOYGAN, WI 53081-14032  
PHONE: 920.452.4403  
FAX: 920.452.4403  
www.sehinc.com



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FILE NO. MADIS 159311

CLIENT PROJECT NO. XXX

PROJECT STATUS XXX

ISSUE DATE AB

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DRAWN BY DD

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SHEET TITLE  
TRUAX LIFT STATION  
EXISTING LIFT STATION  
DEMOLITION SECTIONS

SHEET

20R2

MARK DATE DESCRIPTION  
REVISIONS