



Department of Public Works  
**Engineering Division**  
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[www.cityofmadison.com/engineering](http://www.cityofmadison.com/engineering)

February 26, 2019

NOTICE OF ADDENDUM  
ADDENDUM NO. 2  
CONTRACT NO. 8119

S. BRYAN STREET, DALEY DRIVE, JAMES STREET AND THORP STREET  
RECONSTRUCTION DISTRICT – 2018

Revise and amend the contract document(s) for the above project as stated in this addendum, otherwise, the original document shall remain in effect.

**Addendum #1 referenced several plan sheets that were not attached to the addendum. See attached for the revised plan sheets.**

Please acknowledge this addendum on page E1 of the contract documents and/or in Section E: Bidder's Acknowledgement on Bid Express.

Electronic version of these documents can be found on the Bid Express web site at:  
<http://www.bidexpress.com>

If you are unable to download plan revisions associated with the addendum, please contact the Engineering office at 608-266-4751 receive the material by another route.

Sincerely,

---

Robert F. Phillips, P.E.  
City Engineer

**Deputy City Engineer**

Gregory T. Fries, P.E.

**Deputy Division Manager**

Kathleen M. Cryan

**Principal Engineer 2**

Christopher J. Petykowski, P.E.  
John S. Fahrney, P.E.

**Principal Engineer 1**

Christina M. Bachmann, P.E.  
Mark D. Moder, P.E.  
Janet Schmidt, P.E.

**Facilities & Sustainability**

Jeanne E. Hoffman, Manager  
Bryan Cooper, Principal Architect

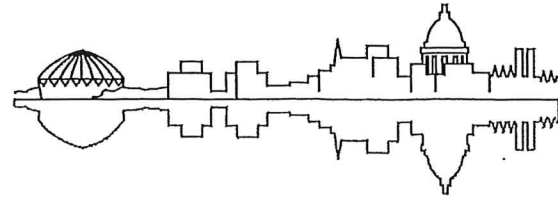
**Mapping Section Manager**

Eric T. Pederson, P.S.

**Financial Manager**

Steven B. Danner-Rivers





Madison, Wisconsin

# CITY OF MADISON

## CITY ENGINEERING DIVISION

### DEPARTMENT OF PUBLIC WORKS

#### PLAN OF PROPOSED IMPROVEMENT

### S. BRYAN STREET, DALEY DRIVE, JAMES STREET AND THORP STREET RECONSTRUCTION DISTRICT - 2018


CITY PROJECT NO. 11185  
CONTRACT NO. 8119

PUBLIC IMPROVEMENT PROJECT APPROVED

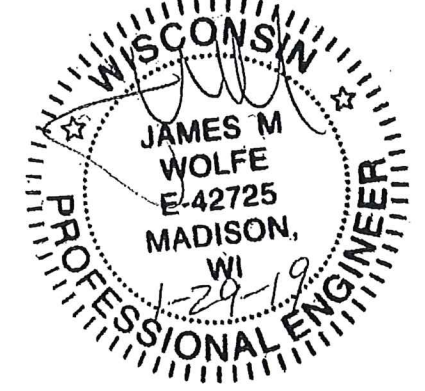
JULY 10, 2018

BY THE COMMON COUNCIL  
OF MADISON, WISCONSIN

PUBLIC IMPROVEMENT DESIGN  
APPROVED BY:

  
City Engineer Date 2/11/19

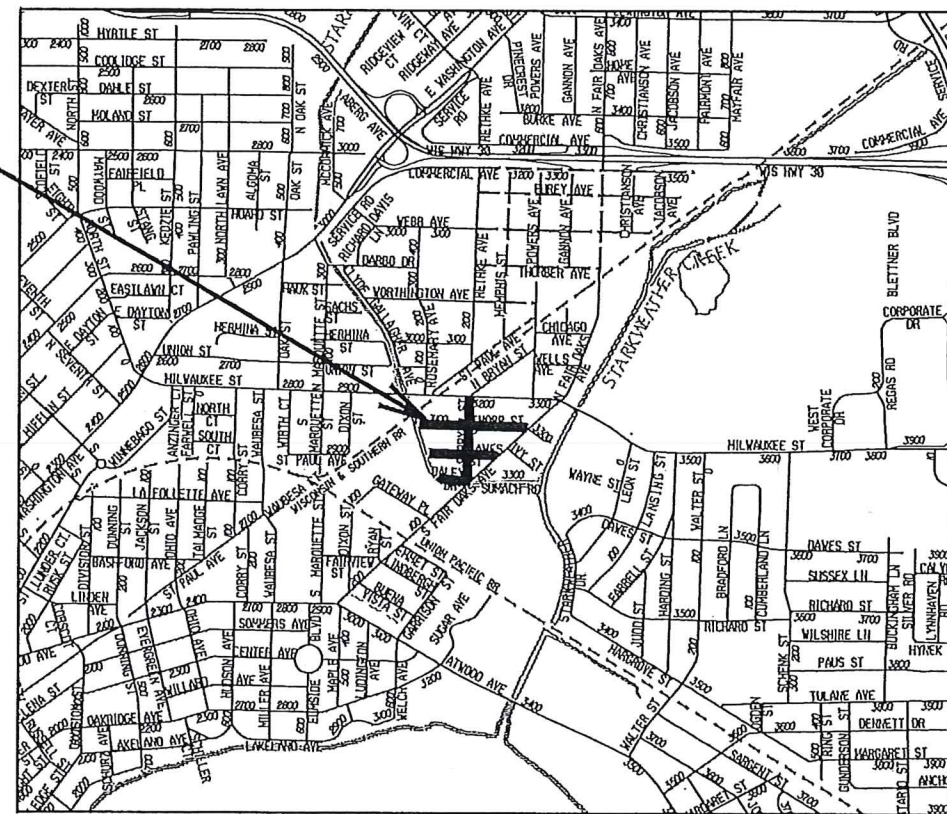
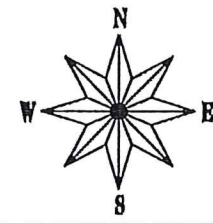
STREET  
DESIGNED BY:



#### INDEX OF SHEETS

SHEET NO.	TITLE
1	TYPICAL SECTIONS
DI	OVERVIEW PLAN
RGI-RG2	RAIN GARDEN PLANS
EC1-EC3	EROSION CONTROL PLANS
PI-P8	STREET PLAN & PROFILES
UI-U8	SEWERS PLAN & PROFILES
U9-UII	SEWER SCHEDULES
LSI-LS22	LIFT STATION PLAN & PROFILES & DETAILS
WI-W8	WATER PLAN & PROFILES
W9	WATER IMPACT PLAN
W10	WATER MATERIALS & DETAILS
SB1-SB11	STREAMBANK PLANS
PM1-PM4	PAVEMENT MARKING PLANS
XI-X24	CROSS SECTIONS

PROJECT  
LOCATION



CONVENTIONAL SIGNS  
FIELD VERIFY ALL UTILITY LOCATIONS

GAS	G
STORM SEWER	ST
SANITARY SEWER	SAN
WATER	W
OVERHEAD ELECTRIC	OH
POWER POLE	□

NOTES:

ALL GUTTERS SHALL DRAIN WITH A MINIMUM GRADE OF 0.50% TOWARD STORM SEWER INLETS.

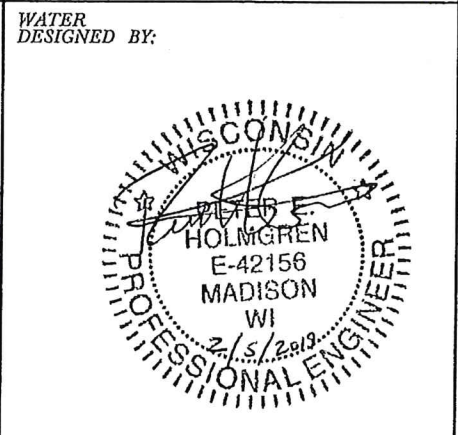
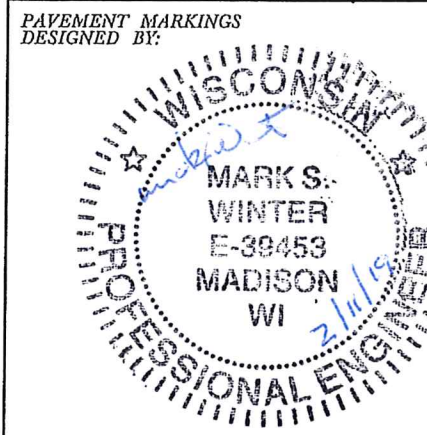
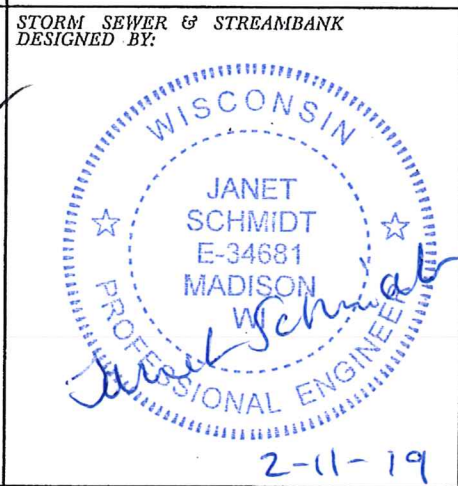
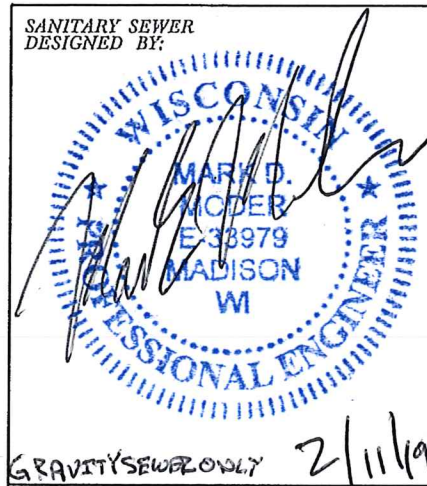
SIDEWALK RAMPS AND CURB THRU SIDEWALK RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1" PER 12". SIDEWALK AND CURB RAMPS SHALL BE CONSTRUCTED WITH A SIDE SLOPE OF 2.00%. SIDEWALK SHALL HAVE A MINIMUM LONGITUDINAL SLOPE OF 0.50% AND A MAXIMUM LONGITUDINAL SLOPE OF 5.00%

EARTH WORK SUMMARY:

EXCAVATION CUT (MEASURED PLAN QUANTITY).....4,105 C.Y.

ESTIMATED UNDISTRIBUTED UNDERCUT.....1,620 C.Y.

TOTAL UNCLASSIFIED EXCAVATION CUT.....5,725 C.Y.



PLOT SCALE: \_\_\_\_\_  
PLOT NAME: \_\_\_\_\_  
REV. DATE: \_\_\_\_\_  
ORIGINATOR: CITY OF MADISON - STREETS DIVISION



**NEW SHEET 2/25/2019 C.W.**

NOTE:  
ENGINEERED SOIL MIX FOR THE  
TERRACE RAIN GARDENS SHALL  
BE AS STATED IN STANDARD  
SPECIFICATION 211.2(a)

0710-051-1127-5  
HAZA, PATRICIA M  
3238 Thorp St

**STA 10+73.07, LT 23.18'  
856.69 @ POINT**

**STA 10+68.90, LT 19.01'  
855.30 @ BOTTOM**

**STA 10+69.71, LT 16.92'  
855.30 @ BOTTOM**

**STA 10+73.07, LT 13.56'  
856.42 @ POINT**

**STA 10+65.22, LT 14.55'  
855.48 @ CENTERLINE OF FLUME**

**STA 10+58.07, LT 23.18'  
856.51 @ POINT**

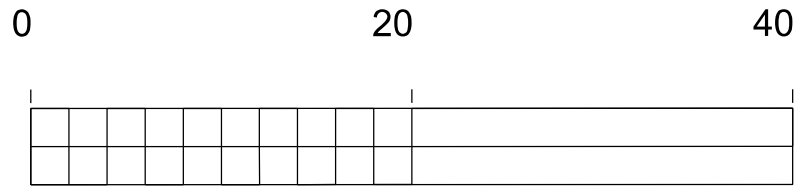
**STA 10+61.70, LT 19.55'  
855.30 @ BOTTOM**

**STA 10+61.07, LT 16.56'  
855.30 @ BOTTOM**

**10+00 STA 10+58.07, LT 13.56'  
856.30 @ POINT**

**STA 10+65.24, LT 12.50'  
855.66 @ FLUME CENTERLINE**

0710-051-1202-5  
KINNEY, GRANT M  
ROBIN P KINNEY  
3237 Thorp St



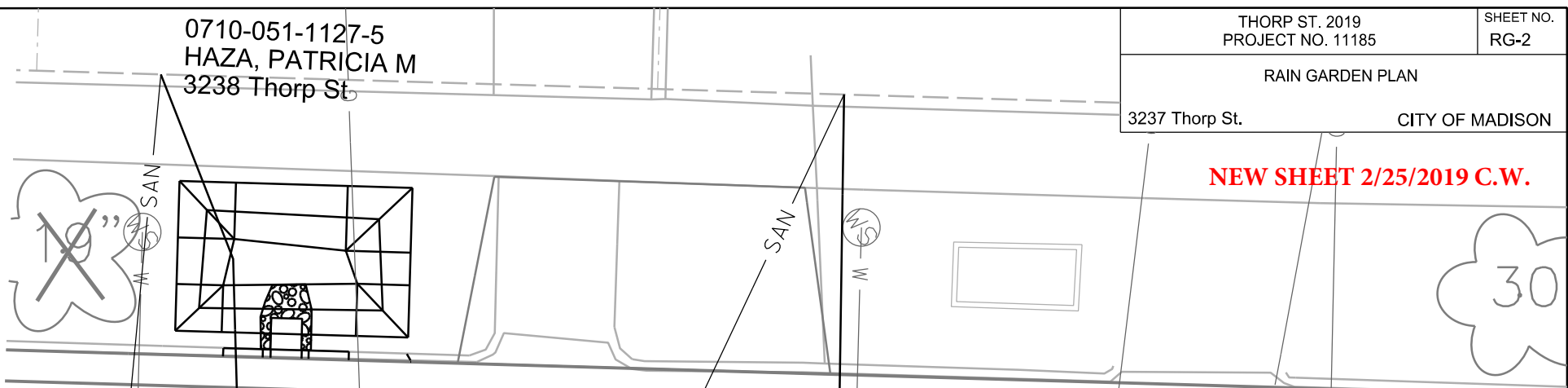
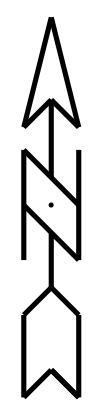
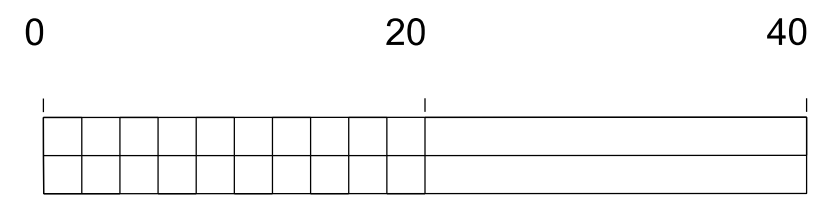
PLOT SCALE: 20

PLOT NAME: RG-1

REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

NEW SHEET 2/25/2019 C.W.



10+00

STA 10+62.51, RT 12.57'  
855.66 @ FLUME CENTERLINE

STA 10+62.53, RT 14.58'  
855.50 @ CENTERLINE OF FLUME

STA 10+55.33, RT 14.00'  
856.32 @ POINT

STA 10+70.42, RT 13.99'  
856.44 @ POINT

STA 10+58.43, RT 17.00'  
855.32 @ BOTTOM

STA 10+67.15, RT 17.35'  
855.32 @ BOTTOM

STA 10+59.66, RT 18.65'  
855.32 @ BOTTOM

STA 10+66.10, RT 18.38'  
855.32 @ BOTTOM

STA 10+55.62, RT 22.82'  
856.71 @ POINT

STA 10+70.68, RT 22.83'  
856.80 @ POINT

0710-051-1203-3  
MOORE, MICHAEL EUGENE  
& DIANE MARY FARRIS  
3233 Thorp St

0710-051-1202-5  
KINNEY, GRANT M  
ROBIN P KINNEY  
3237 Thorp St

0710-051-1201-7  
DAILY TRUST, RIM  
3241 Thorp St

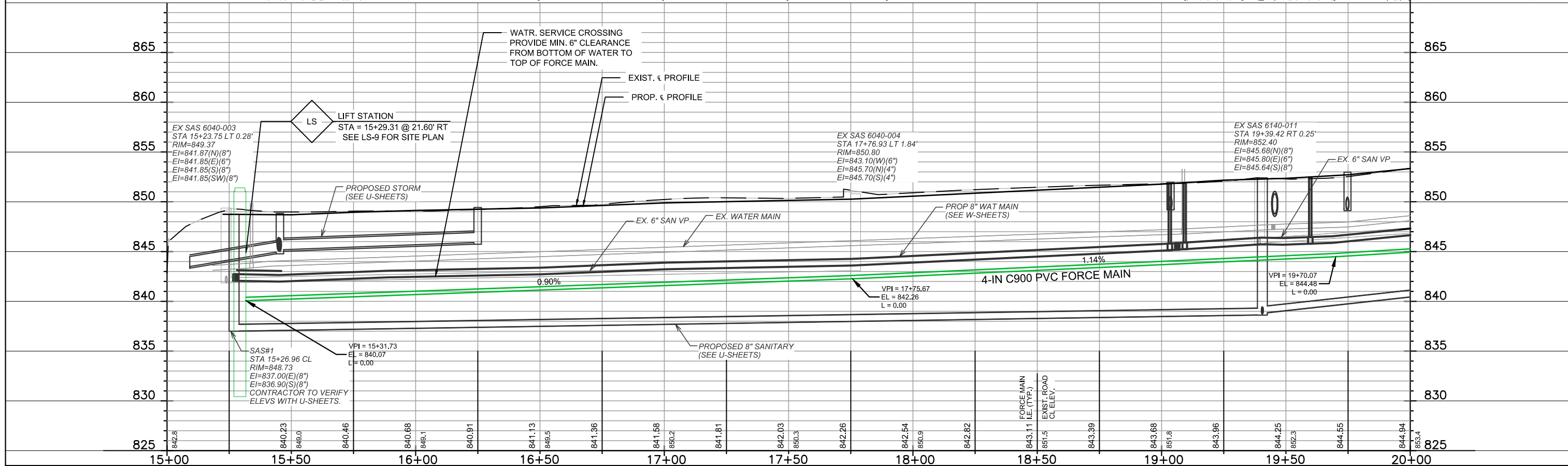
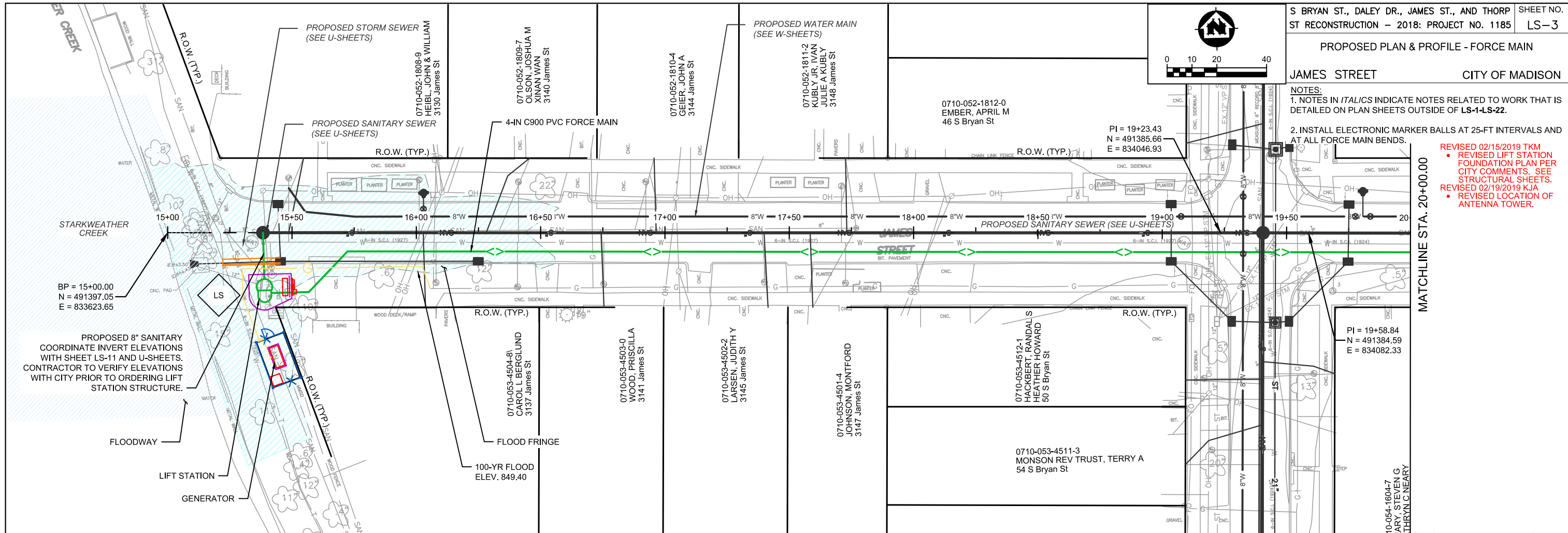
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SPECIFICATION 211.2(a)

PLOT SCALE: 20

PLOT NAME: RG-1

REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION





REVISED 02/15/2019 TKM  
 • REVISED KEY NOTES PER LIFT STATION FOUNDATION PLAN EDITS.  
 • REVISED LIFT STATION FOUNDATION PLAN PER CITY COMMENTS.

DESIGN LOADINGS	
LIVE LOADS	
SLAB LIVE LOAD	40

DESIGN STRESSES	
CAST-IN-PLACE CONCRETE	
- SEE SPECS	
STEEL	
REINFORCING	#6 @ 60
BOLTS	
ANCHOR	F1554, GRADE 36
EXPANSION	WEDGE TYPE
SOIL BEARING PRESSURE CAPACITY	
PER GEOTECHNICAL REPORT	#1000

STEEL REINFORCING	
MIN CLEAR COVER, UNO	
FOUNDATION WALLS FORMED	
#5 BARS SMALLER	1 1/2"
#6 BARS LARGER	2"
NON-STRUCTURAL SLABS ON GRADE	
BOTTOM SIDES	1 1/2"
TOP	3/4"
FOOTINGS AND STRUCTURAL SLABS ON GRADE	
BOTTOM SIDES	3"
TOP	2"
NOTES	
1. CLASS 'B' LAP AT SPLICES.	

**GENERAL FOUNDATION NOTES**

- CONTRACTOR TO COORDINATE STRUCTURAL, ARCHITECTURAL, PLUMBING, PROCESS MECHANICAL, HVAC, AND ELECTRICAL PLANS FOR DETAILS, DIMENSIONS, ELEVATIONS, OPENINGS, ETC. NOTIFY ARCHITECT OF ANY VARIANCE BEFORE COMMENCING CONSTRUCTION.
- IN NO CASE SHALL STRUCTURAL ALTERATIONS OR WORK AFFECTING A STRUCTURAL MEMBER BE MADE, UNLESS APPROVED BY ENGINEER.
- SIMILAR PORTIONS OF THE STRUCTURES SHALL HAVE SIMILAR DETAILING, UNLESS NOTED OTHERWISE.
- ALL WALL FORM TIES SHALL BE KNOCKED OFF FLUSH THE FACE OF THE WALL AT INTERIOR AND EXTERIOR FACE OF WALLS. AT TIES BELOW THE FINISHED FLOOR AND/ OR FINISHED GRADE PROVIDE A LAYER OF DAMPPROOFING PRODUCT OVER THE REMOVED TIE AREA, TYP.
- BACKFILL AND COMPACT ENGINEERED FILL ON BOTH SIDES OF FOUNDATION AT THE SAME TIME.
- FOOTINGS SHALL BE CENTERED ABOUT THE WALLS, UNLESS NOTED OTHERWISE.
- PROVIDE 3'-0" X 3'-0" CORNER BARS IN FOUNDATION WALL AT CORNERS. BARS SHALL BE SAME SIZE AND LOCATION OF THE HORIZONTAL REINFORCING.
- PROVIDE OPENING REINFORCING FOR ALL MISCELLANEOUS OPENINGS THROUGH FOOTING, FOUNDATION WALL OR FLOOR SLAB.

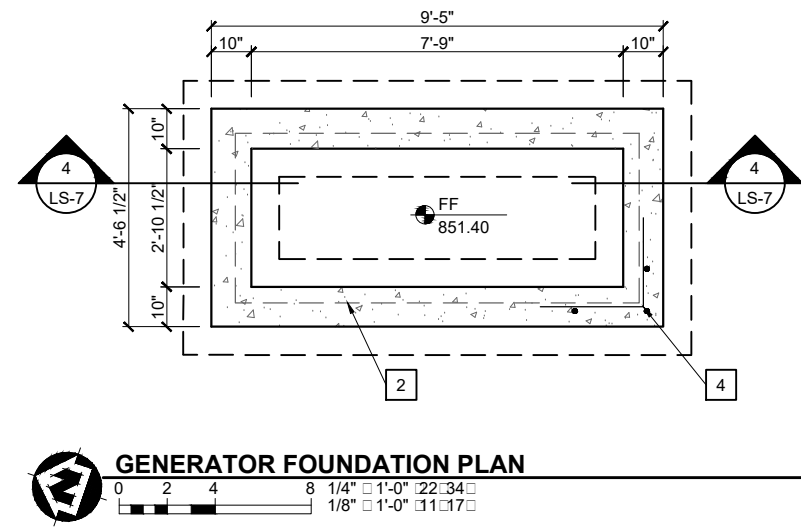
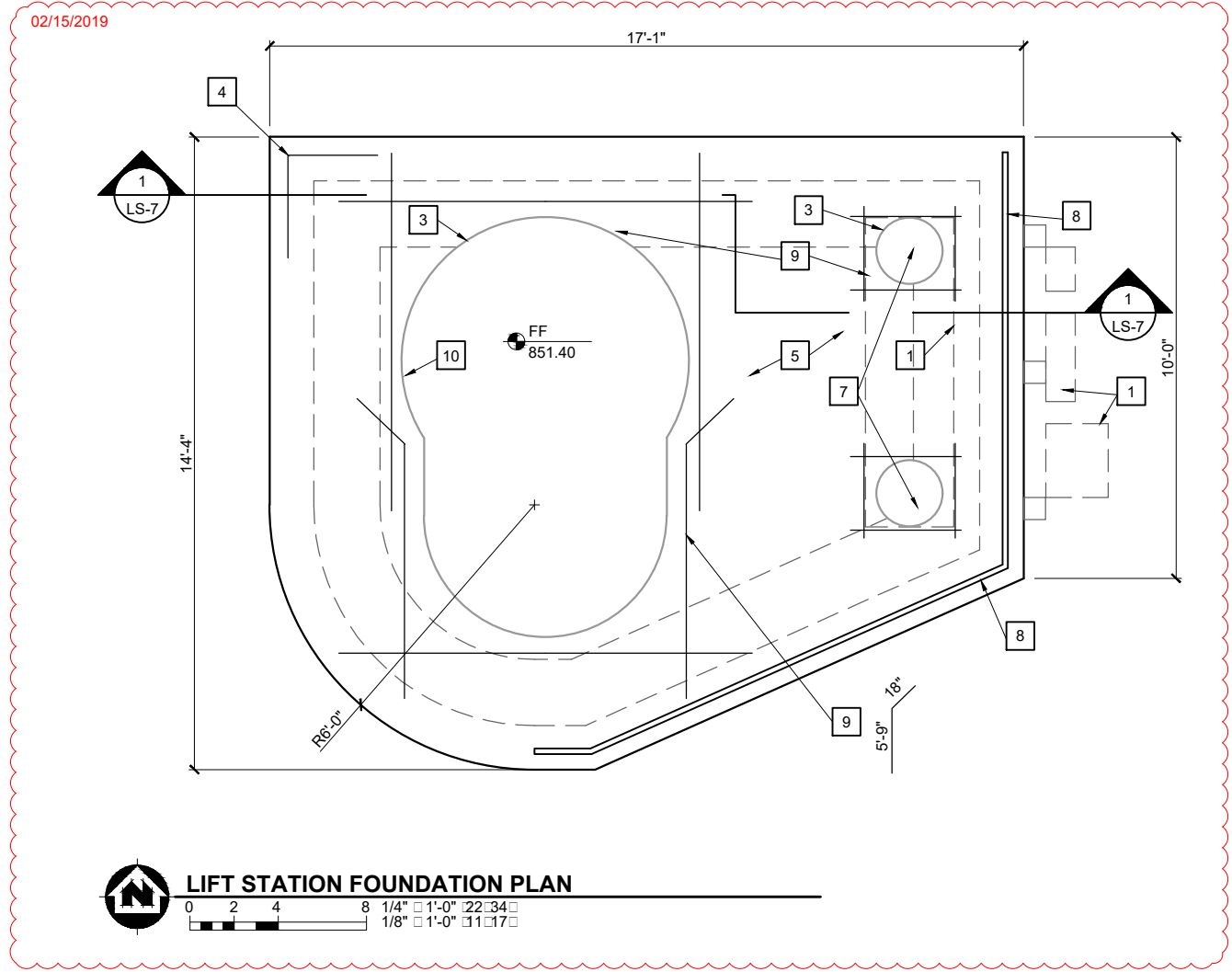
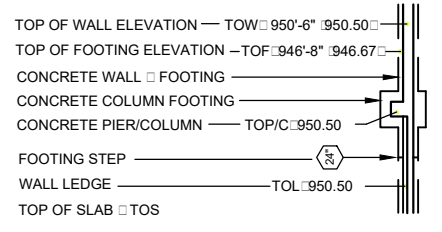
**GENERAL REINFORCING/CONCRETE NOTES**

- ALL LAPS SHALL BE CLASS-'B' PER ACI 318-14, UNLESS NOTED OTHERWISE ON THE DESIGN DRAWINGS. USE TOP BAR LAP LENGTHS FOR ALL HORIZONTAL ALL BARS AND FOR BARS IN SLABS WITH MORE THAN 12" OF CONCRETE BELOW.
- BAR PLACEMENT TOLERANCES SHALL BE AS SPECIFIED IN THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) MANUAL OF STANDARD PRACTICE, CURRENT EDITION.
- ALL REINFORCING BAR DIMENSIONS ARE FROM OUT-TO-OUT OF BAR. ALL BEND ANGLES ARE AT 45° AND 90°, UNLESS NOTED OTHERWISE.
- SEE SPECIFICATION FOR CONCRETE CLASS AND FINISH SCHEDULES, UNO.
- SEE GENERAL FOUNDATION NOTES FOR ADDITIONAL REINFORCING REQUIREMENTS.

**KEY NOTES**

- DASHED LINE INDICATES CONTROL PANELS ABOVE LOCATED ON SLAB-ON-GRADE, TYP - COORDINATE WITH ELECTRICAL
- DASHED LINE INDICATES GENERATOR ABOVE LOCATED ON SLAB-ON-GRADE, TYP - COORDINATE WITH ELECTRICAL
- 1/2" EXPANSION JOINT MATERIAL W/ REMOVABLE CAP AND SELF-LEVELING SEALANT, TYP
- CORNER REINFORCING IN FOUNDATION WALL, AT ALL CORNERS, TYP - SEE GENERAL FOUNDATION NOTES
- 12" THICK REINFORCED SLAB W/ THICKENED EDGES OVER MIN. 12" COMPACTED GRAVEL FILL AND COMPACTED GRANULAR FILL 02/15/2019
- NOTE NOT USED.** 02/15/2019
- CONTROL PANEL SUPPORTED ON SONOTUBE FOUNDATIONS. SEE TYPICAL DETAIL FOR FREE STANDING CONTROL PANEL MOUNTING ON SHEET LS-22 02/15/2019
- HOT-DIP GALVANIZED STEEL GUARDRAIL AND POSTS - SEE DETAILS: 2/LS-7 AND 3/LS-7 02/15/2019
- REBAR AROUND ELECTRICAL OPENING, ADDITIONAL #6 BARS AROUND SLAB OPENINGS AND AROUND SONOTUBE FOUNDATIONS PENETRATING SLAB. MAINTAIN MINIMUM CLEARANCE. BAR LENGTHS EQUAL TO DIAMETER OF OPENING 36" U.N.O. 02/15/2019
- LIFT STATION VALVE VAULT COORDINATE PLACEMENT WITH MECHANICAL / ELECTRICAL AND SITE CIVIL.

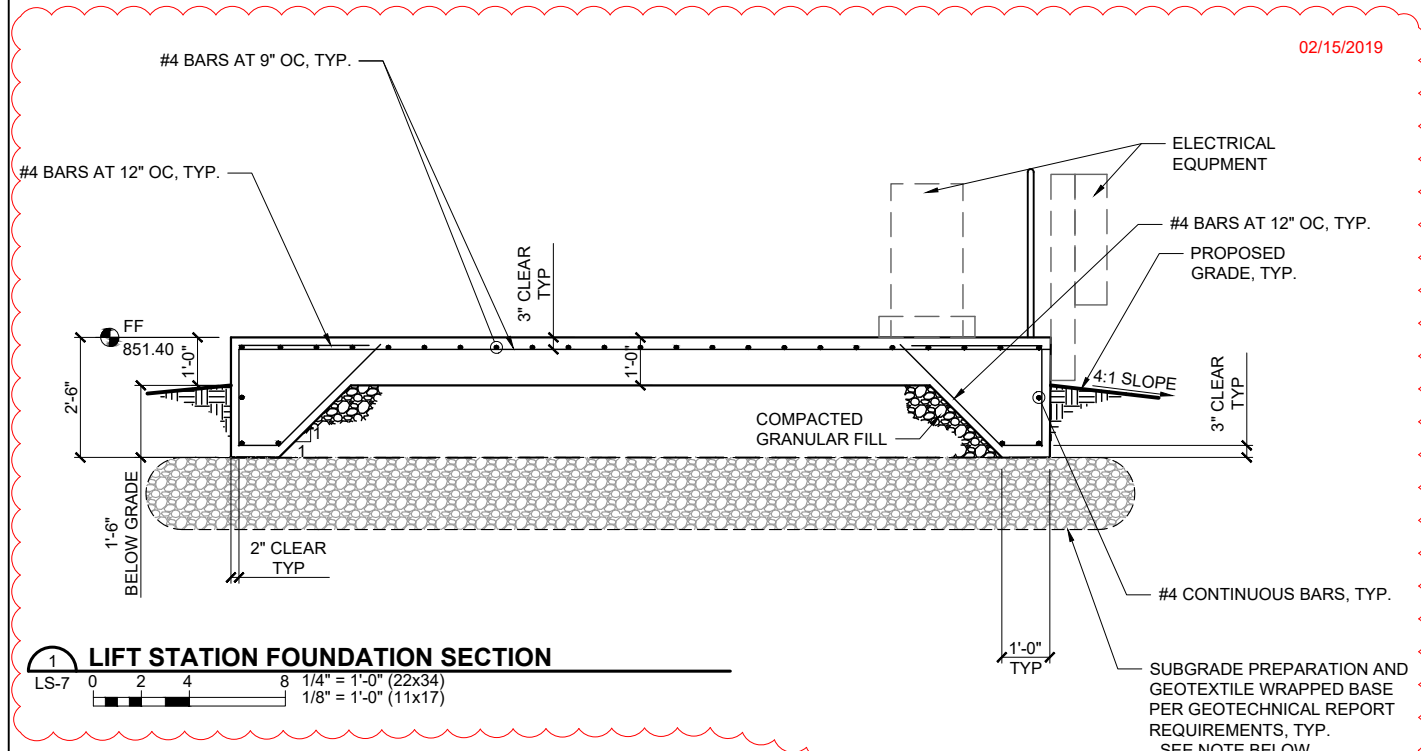
**FOUNDATION LEGEND**



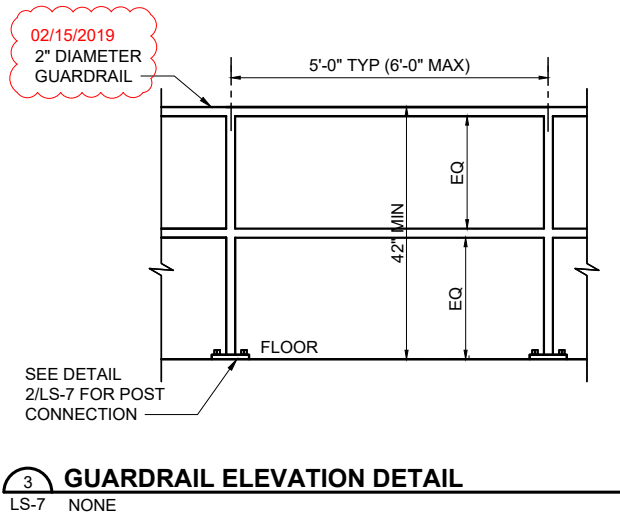
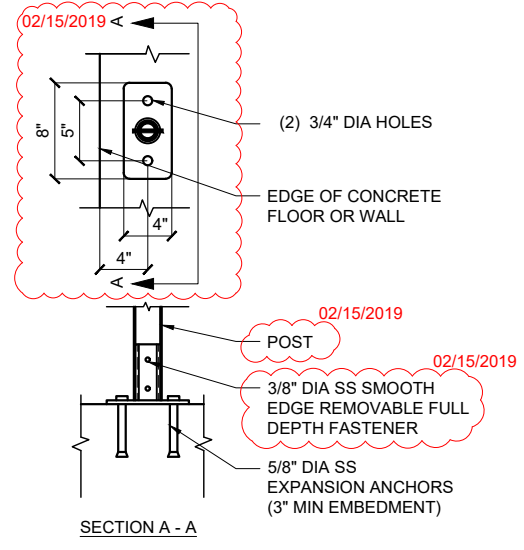
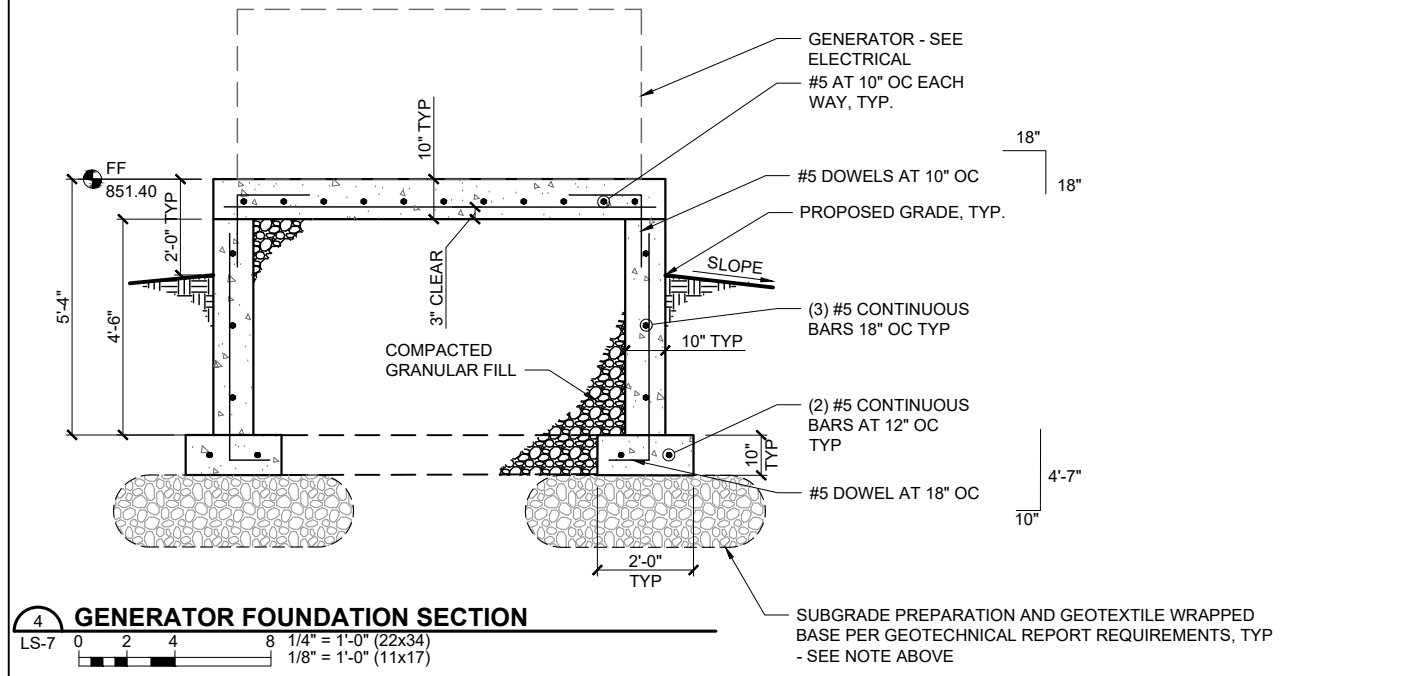
ORIGINATOR: CITY\_OF\_MADISON\_STREETS\_DIVISION

REV. DATE: PLOT NAME: PLOT SCALE:

- REVISED 02/15/2019 TKM
- REVISED LIFT STATION FOUNDATION SECTION 1/LS-7 PER CITY COMMENTS.
  - REVISED TYP REMOVABLE POST MOUNTED DETAIL 2/LS-7. REMOVED TOE-PLATE AND REVISED POST TO GO OVER TOP OF MOUNTING PLATE VERTICAL MEMBER.
  - REVISED GUARDRAIL ELEVATION DETAIL 3/LS-7. CHANGED DIAMETER OF GUARDRAIL.
  - REMOVED TYPICAL SLAB ON GRADE (CJ) DETAIL 5/LS-7.



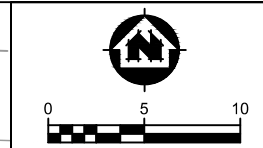
NOTE:  
 CONTRACTOR TO PREPARE SUBGRADE AND PROVIDE GEOTEXTILE WRAPPED, COMPACTED STONE BASE PER DIRECTION BY THE GEOTECHNICAL REPORT (GEOTECHNICAL EXPLORATION REPORT, JAMES STREET LIFT STATION BY CGC, INC. DATED JANUARY 25, 2019) - ATTACHED AS APPENDIX A TO PROJECT SPECIFICATIONS.



ORIGINATOR: CITY\_OF\_MADISON\_STREETS\_DIVISION

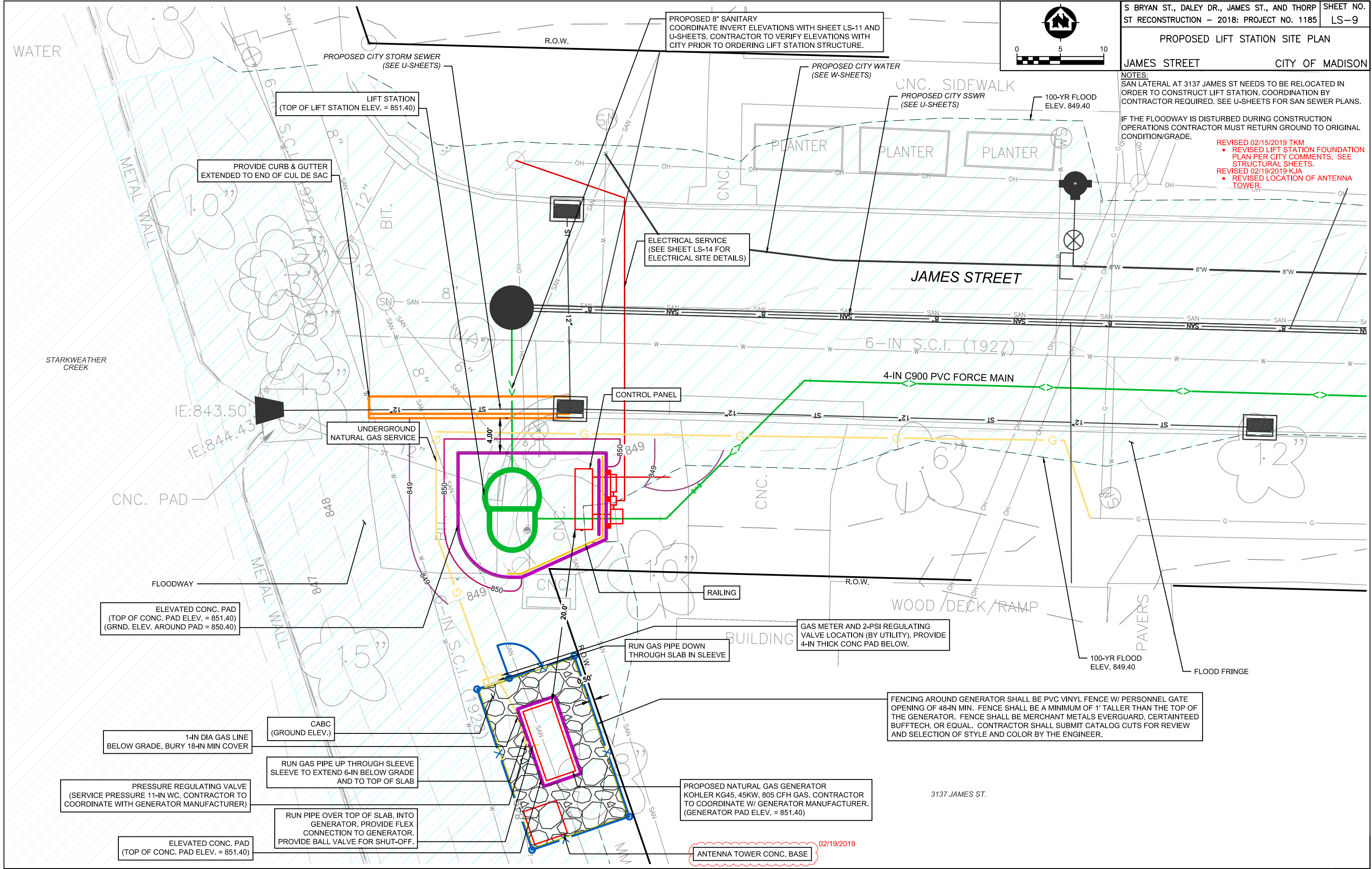
PLOT SCALE: \_\_\_\_\_  
 PLOT NAME: \_\_\_\_\_  
 REV. DATE: \_\_\_\_\_

PROPOSED LIFT STATION SITE PLAN  
JAMES STREET CITY OF MADISON



NOTES:  
SAN LATERAL AT 3137 JAMES ST NEEDS TO BE RELOCATED IN ORDER TO CONSTRUCT LIFT STATION. COORDINATION BY CONTRACTOR REQUIRED. SEE U-SHEETS FOR SAN SEWER PLANS.  
IF THE FLOODWAY IS DISTURBED DURING CONSTRUCTION OPERATIONS CONTRACTOR MUST RETURN GROUND TO ORIGINAL CONDITION/GRADE.

- REVISED 02/15/2019 TKM
- REVISED LIFT STATION FOUNDATION PLAN PER CITY COMMENTS. SEE STRUCTURAL SHEETS.
- REVISED 02/19/2019 KJA
- REVISED LOCATION OF ANTENNA TOWER.



PROPOSED 8" SANITARY COORDINATE INVERT ELEVATIONS WITH SHEET LS-11 AND U-SHEETS. CONTRACTOR TO VERIFY ELEVATIONS WITH CITY PRIOR TO ORDERING LIFT STATION STRUCTURE.

LIFT STATION (TOP OF LIFT STATION ELEV. = 851.40)

PROVIDE CURB & GUTTER EXTENDED TO END OF CUL DE SAC

ELECTRICAL SERVICE (SEE SHEET LS-14 FOR ELECTRICAL SITE DETAILS)

CNC. SIDEWALK PROPOSED CITY SSWR (SEE U-SHEETS)

100-YR FLOOD ELEV. 849.40

JAMES STREET

6-IN S.C.I. (1927)

4-IN C900 PVC FORCE MAIN

CONTROL PANEL

UNDERGROUND NATURAL GAS SERVICE

IE: 843.50'

IE: 844.43'

CNC. PAD

FLOODWAY

ELEVATED CONC. PAD (TOP OF CONC. PAD ELEV. = 851.40) (GRND. ELEV. AROUND PAD = 850.40)

RAILING

WOOD / DECK / RAMP

GAS METER AND 2-PSI REGULATING VALVE LOCATION (BY UTILITY). PROVIDE 4-IN THICK CONC PAD BELOW.

RUN GAS PIPE DOWN THROUGH SLAB IN SLEEVE

100-YR FLOOD ELEV. 849.40

FLOOD FRINGE

FENCING AROUND GENERATOR SHALL BE PVC VINYL FENCE W/ PERSONNEL GATE OPENING OF 48-IN MIN. FENCE SHALL BE A MINIMUM OF 1' TALLER THAN THE TOP OF THE GENERATOR. FENCE SHALL BE MERCHANT METALS EVERGUARD, CERTAINTTEED BUFTTECH, OR EQUAL. CONTRACTOR SHALL SUBMIT CATALOG CUTS FOR REVIEW AND SELECTION OF STYLE AND COLOR BY THE ENGINEER.

1-IN DIA GAS LINE BELOW GRADE, BURY 18-IN MIN COVER

CABC (GROUND ELEV.)

RUN GAS PIPE UP THROUGH SLEEVE SLEEVE TO EXTEND 6-IN BELOW GRADE AND TO TOP OF SLAB

PRESSURE REGULATING VALVE (SERVICE PRESSURE 11-IN WC. CONTRACTOR TO COORDINATE WITH GENERATOR MANUFACTURER)

RUN PIPE OVER TOP OF SLAB, INTO GENERATOR. PROVIDE FLEX CONNECTION TO GENERATOR. PROVIDE BALL VALVE FOR SHUT-OFF.

ELEVATED CONC. PAD (TOP OF CONC. PAD ELEV. = 851.40)

PROPOSED NATURAL GAS GENERATOR KOHLER KG45, 45KW, 805 CFH GAS. CONTRACTOR TO COORDINATE W/ GENERATOR MANUFACTURER. (GENERATOR PAD ELEV. = 851.40)

3137 JAMES ST.

ANTENNA TOWER CONC. BASE 02/19/2019

ORIGINATOR: CITY\_OF\_MADISON\_STREETS\_DIVISION

PLOT SCALE:

PLOT NAME:

REV. DATE:

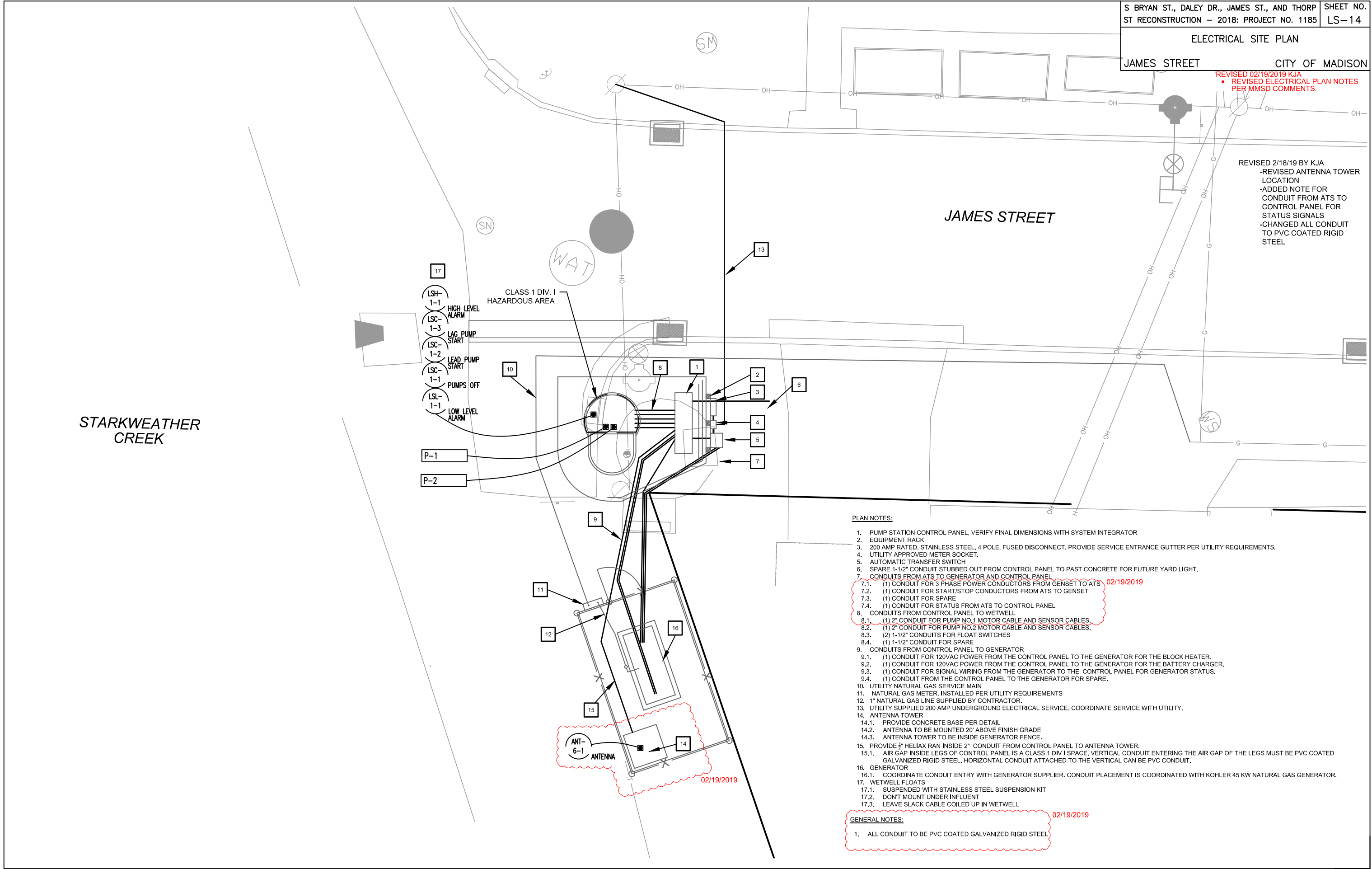


ELECTRICAL SITE PLAN

JAMES STREET CITY OF MADISON

REVISED 02/19/2019 KJA  
 • REVISED ELECTRICAL PLAN NOTES PER MMSD COMMENTS.

REVISED 2/18/19 BY KJA  
 -REVISED ANTENNA TOWER LOCATION  
 -ADDED NOTE FOR CONDUIT FROM ATS TO CONTROL PANEL FOR STATUS SIGNALS  
 -CHANGED ALL CONDUIT TO PVC COATED RIGID STEEL



PLAN NOTES:

1. PUMP STATION CONTROL PANEL. VERIFY FINAL DIMENSIONS WITH SYSTEM INTEGRATOR
2. EQUIPMENT RACK
3. 200 AMP RATED, STAINLESS STEEL, 4 POLE, FUSED DISCONNECT. PROVIDE SERVICE ENTRANCE GUTTER PER UTILITY REQUIREMENTS.
4. UTILITY APPROVED METER SOCKET.
5. AUTOMATIC TRANSFER SWITCH
6. SPARE 1-1/2" CONDUIT STUBBED OUT FROM CONTROL PANEL TO PAST CONCRETE FOR FUTURE YARD LIGHT.
7. CONDUITS FROM ATS TO GENERATOR AND CONTROL PANEL
  - 7.1. (1) CONDUIT FOR 3 PHASE POWER CONDUCTORS FROM GENSET TO ATS 02/19/2019
  - 7.2. (1) CONDUIT FOR START/STOP CONDUCTORS FROM ATS TO GENSET
  - 7.3. (1) CONDUIT FOR SPARE
  - 7.4. (1) CONDUIT FOR STATUS FROM ATS TO CONTROL PANEL
8. CONDUITS FROM CONTROL PANEL TO WETWELL
  - 8.1. (1) 2" CONDUIT FOR PUMP NO.1 MOTOR CABLE AND SENSOR CABLES.
  - 8.2. (1) 2" CONDUIT FOR PUMP NO.2 MOTOR CABLE AND SENSOR CABLES.
  - 8.3. (2) 1-1/2" CONDUITS FOR FLOAT SWITCHES
  - 8.4. (1) 1-1/2" CONDUIT FOR SPARE
9. CONDUITS FROM CONTROL PANEL TO GENERATOR
  - 9.1. (1) CONDUIT FOR 120VAC POWER FROM THE CONTROL PANEL TO THE GENERATOR FOR THE BLOCK HEATER.
  - 9.2. (1) CONDUIT FOR 120VAC POWER FROM THE CONTROL PANEL TO THE GENERATOR FOR THE BATTERY CHARGER.
  - 9.3. (1) CONDUIT FOR SIGNAL WIRING FROM THE GENERATOR TO THE CONTROL PANEL FOR GENERATOR STATUS.
  - 9.4. (1) CONDUIT FROM THE CONTROL PANEL TO THE GENERATOR FOR SPARE.
10. UTILITY NATURAL GAS SERVICE MAIN
11. NATURAL GAS METER. INSTALLED PER UTILITY REQUIREMENTS
12. 1" NATURAL GAS LINE SUPPLIED BY CONTRACTOR.
13. UTILITY SUPPLIED 200 AMP UNDERGROUND ELECTRICAL SERVICE. COORDINATE SERVICE WITH UTILITY.
14. ANTENNA TOWER
  - 14.1. PROVIDE CONCRETE BASE PER DETAIL
  - 14.2. ANTENNA TO BE MOUNTED 20' ABOVE FINISH GRADE
  - 14.3. ANTENNA TOWER TO BE INSIDE GENERATOR FENCE.
15. PROVIDE 3" HELIAX RAN INSIDE 2" CONDUIT FROM CONTROL PANEL TO ANTENNA TOWER.
  - 15.1. AIR GAP INSIDE LEGS OF CONTROL PANEL IS A CLASS 1 DIV I SPACE. VERTICAL CONDUIT ENTERING THE AIR GAP OF THE LEGS MUST BE PVC COATED GALVANIZED RIGID STEEL. HORIZONTAL CONDUIT ATTACHED TO THE VERTICAL CAN BE PVC CONDUIT.
16. GENERATOR
  - 16.1. COORDINATE CONDUIT ENTRY WITH GENERATOR SUPPLIER. CONDUIT PLACEMENT IS COORDINATED WITH KOHLER 45 KW NATURAL GAS GENERATOR.
17. WETWELL FLOATS
  - 17.1. SUSPENDED WITH STAINLESS STEEL SUSPENSION KIT
  - 17.2. DON'T MOUNT UNDER INFLUENT
  - 17.3. LEAVE SLACK CABLE COILED UP IN WETWELL

GENERAL NOTES:

1. ALL CONDUIT TO BE PVC COATED GALVANIZED RIGID STEEL

PLOT SCALE:

PLOT NAME:

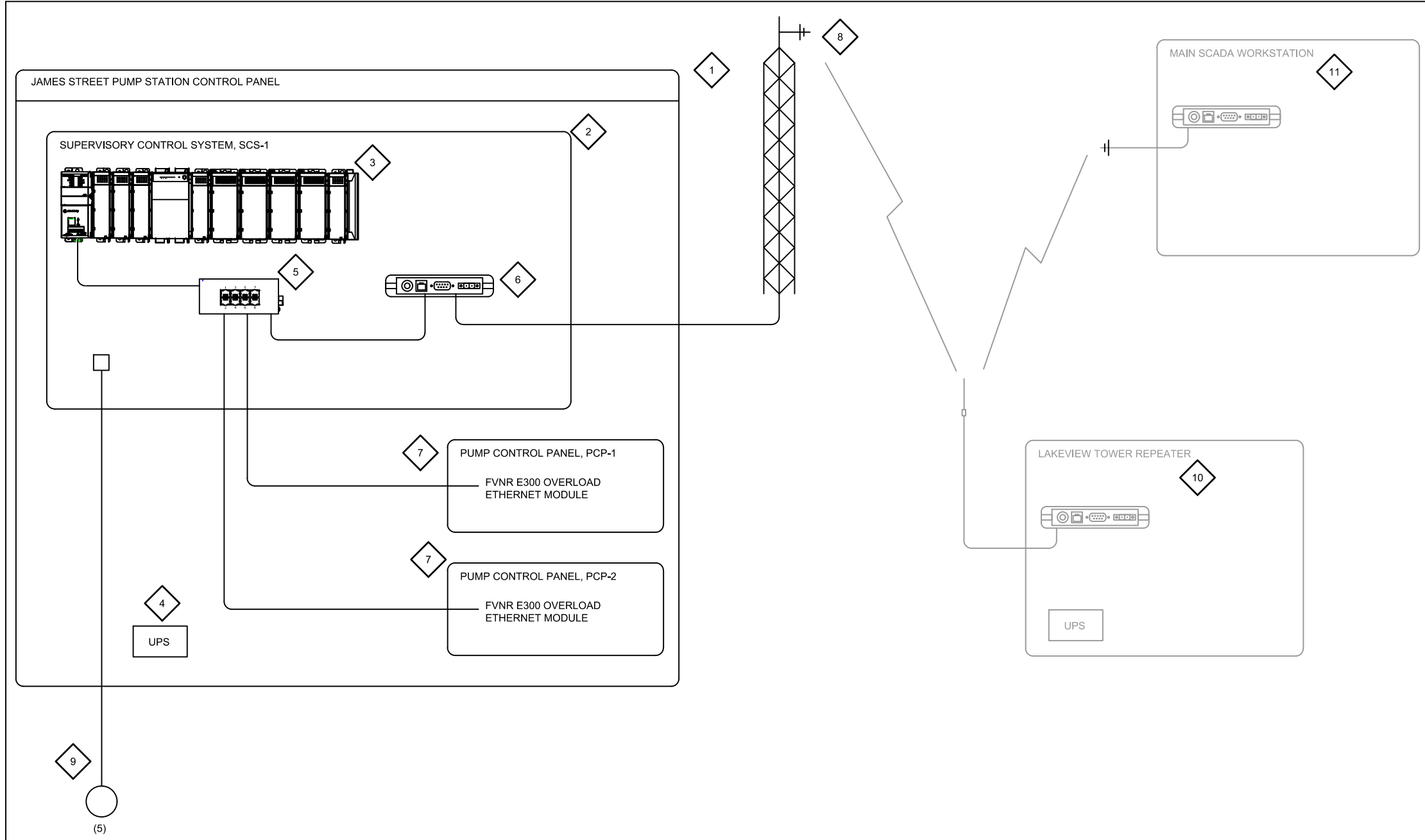
REV. DATE:

ORIGINATOR: CITY\_OF\_MADISON\_STREETS\_DIVISION

SCADA OVERVIEW  
 JAMES STREET CITY OF MADISON

REVISED 02/19/2019 BY KJA  
 • REVISED NOTE 8 FOR OWNER FURNISHED ANTENNA EQUIPMENT.  
 • DELETED STATION HAND/AUTO AND START/STOP PUSHBUTTON.

02/19/2019



PLC I/O LIST						
PANEL	EQUIPMENT NAME	TAG	DI	DO	AI	AO WIRE
<b>STATION STATUS</b>						
SCS-1	CONTROL POWER AVAILABLE		X			(2) #14
SCS-1	UPS POWER AVAILABLE		X			(2) #14
SCS-1	UPS SERVICE REQUIRED		X			(2) #14
SCS-1	PANEL ENTRY		X			(2) #14
SCS-1	3 PHASE POWER FAIL		X			(2) #14
SCS-1	ALTERNATION 1-2		X			(2) #14
SCS-1	ALTERNATION 2-1		X			(2) #14
SCS-1	E-STOP		X			(2) #14
<b>WETWELL</b>						
SCS-1	HIGH LEVEL ALARM	LSH-1-1	X			(2) #14
SCS-1	LAG PUMP START	LSC-1-3	X			(2) #14
SCS-1	LEAD PUMP START	LSC-1-2	X			(2) #14
SCS-1	COMMON PUMPS OFF	LSC-1-1	X			(2) #14
SCS-1	LOW LEVEL ALARM	LSL-1-1	X			(2) #14
<b>PUMP 1</b>						
SCS-1	IN SERVICE		X			(2) #14
SCS-1	IN AUTO		X			(2) #14
SCS-1	RUNNING		X			(2) #14
SCS-1	FAILED		X			(2) #14
SCS-1	CALL TO RUN			X		(2) #14
SCS-1	AMPS				X	ETHERNET
SCS-1	KW				X	ETHERNET
<b>PUMP 2</b>						
SCS-1	IN SERVICE		X			(2) #14
SCS-1	IN AUTO		X			(2) #14
SCS-1	RUNNING		X			(2) #14
SCS-1	FAILED		X			(2) #14
SCS-1	CALL TO RUN			X		(2) #14
SCS-1	MOTOR HIGH TEMPERATUR		X			(2) #14
SCS-1	SEAL FAIL		X			(2) #14
SCS-1	AMPS				X	ETHERNET
SCS-1	KW				X	ETHERNET
<b>GENERATOR</b>						
SCS-1	IN AUTO		X			(2) #14
SCS-1	RUNNING		X			(2) #14
SCS-1	FAILED		X			(2) #14
<b>ATS</b>						
SCS-1	NORMAL SOURCE AVAILABLE		X			(2) #14
SCS-1	NORMAL SOURCE CONNECTED		X			(2) #14
SCS-1	EMERGENCY SOURCE AVAILABLE		X			(2) #14
SCS-1	EMERGENCY SOURCE CONNECTED		X			(2) #14
SCS-1	IN AUTO		X			(2) #14
SCS-1	FAILED TO TRANSFER		X			(2) #14
SCS-1	INITIATE TEST			X		(2) #14
		TOTALS	32	3	4	0

- PLAN NOTES:
- JAMES STREET PUMP STATION CONTROL PANEL
  - PROVIDE SUPERVISORY CONTROL SYSTEM, SCS-1, INSIDE PUMP STATION CONTROL PANEL
  - PROVIDE ALLEN BRADLEY PLC 1769-L30ER, PLC PROGRAMMING PROVIDED BY OWNER.
  - PROVIDE UNINTERRUPTIBLE POWER SUPPLY ON SHELF INSIDE PUMP STATION AND OUTSIDE OF SCS-1 ENCLOSURE.
  - PROVIDE 8 PORT UNMANAGED INDUSTRIAL ETHERNET SWITCH.
  - INSTALL OWNER FURNISHED RADIO EQUIPMENT. PROVIDE MINIMUM 12"X12" SPACE ALLOCATED FOR RADIO EQUIPMENT. COORDINATE DIMENSIONS OF EQUIPMENT WITH OWNER. PROVIDE 24 VDC POWER SUPPLY WITH ADDITIONAL 2.5 A DEDICATED TO RADIO EQUIPMENT.
  - PROVIDE PUMP CONTROL PANELS PCP-1 AND PCP-2 INSIDE PUMP STATION CONTROL PANEL. PROVIDE ETHERNET CONNECTION TO E300 OVERLOAD ON STARTER.
  - ANTENNA TO BE MOUNTED AT 20 FT AFG FOR COMMUNICATIONS BACK TO MASTER PLC. 02/19/2019
    - PROVIDE ANTENNA TOWER PER SHEET LS-22
    - THE CITY WILL PROVIDE THE 1/2" HELIAX ANTENNA CABLE, CONNECTOR, GROUNDING CABLE AND RADIO. COORDINATE ANTENNA INSTALLATION WITH THE CITY.
  - PROVIDE FIBER OPTIC FLOATS WITH TRANSCIEVER RELAY. PROVIDE FLOAT WITH MANUFACTURERS CABLE LONG ENOUGH FOR HOME RUN TO PUMP STATION CONTROL PANEL. PROVIDE STAINLESS STEEL SUSPENSION KIT WITH ANCHOR WEIGHT.
  - EXISTING REPEATER SITE TO REMAIN.
  - EXISTING MAIN SCADA WORKSTATION, ALL PROGRAMMING UPDATES, ALARMS, REPORTS AND SCADA CONFIGURATION PROVIDED BY OWNER.

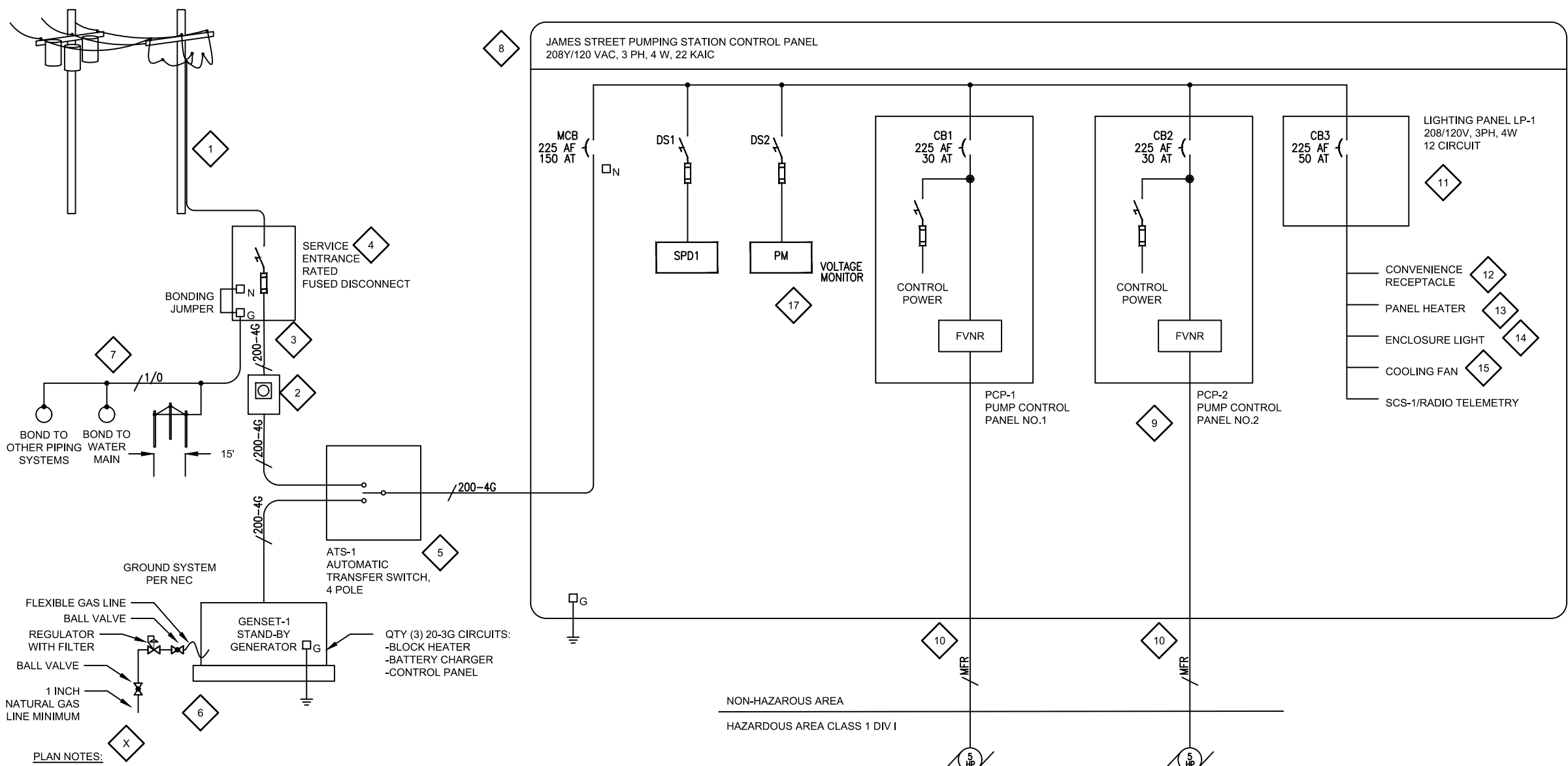
ORIGINATOR: CITY\_OF\_MADISON\_STREETS\_DIVISION

PLOT SCALE: \_\_\_\_\_  
 PLOT NAME: \_\_\_\_\_  
 REV. DATE: \_\_\_\_\_



ELECTRICAL ONE-LINE  
 JAMES STREET CITY OF MADISON

REVISED 02/19/2019 BY KJA  
 • ADDED NOTE TO GENERATOR TO GROUND PER NEC CODE.



- PLAN NOTES:**
- UTILITY TO PROVIDE ELECTRICAL SERVICE FROM POWER POLE TO FUSED DISCONNECT.
    - ELECTRICAL UNDERGROUND SERVICE PROVIDED AND INSTALLED BY UTILITY INCLUDES 4/0-ALUMINUM 3 PHASE CONDUCTORS IN 3" CONDUIT FROM THE POWER POLE TO THE FUSED DISCONNECT.
  - PROVIDE UTILITY APPROVED METER SOCKET. MOUNT PER UTILITY REQUIREMENTS.
  - PROVIDE 3 PHASE CONDUCTORS FROM FUSED DISCONNECT TO METER SOCKET
  - PROVIDE NEMA 4X STAINLESS STEEL SERVICE ENTRANCE RATED FUSED DISCONNECT SWITCH WITH ONE SET OF SPARE FUSES.
    - INSTALL PER UTILITY REQUIREMENTS.
    - PROVIDE 3" CONDUIT STUBBED OUT TO EXPANSION JOINT. UTILITY WILL RUN THEIR CONDUIT TO THAT EXPANSION JOINT.
  - PROVIDE 4-POLE, OPEN TRANSITION, AUTOMATIC TRANSFER SWITCH HOUSED IN A NEMA 4X STAINLESS STEEL ENCLOSURE.
  - PROVIDE PERMANENT GENERATOR
    - NATURAL GAS 45 KW, 208Y/120, 3 PHASE, 4 WIRE OUTPUT
    - PROVIDE NG LINE SIZED PER MANUFACTURERS RECOMMENDATIONS.
    - PROVIDE BALL VALVES, GAS REGULATOR, FILTER AND FLEXIBLE FUEL LINE.
    - GROUND PER NEC CODE
  - PROVIDE GROUNDING SYSTEM PER NEC.
  - PUMP STATION CONTROL PANEL
  - PUMP CONTROL PANELS, PCP-1 & PCP-2 SHALL BE MOUNTED IN NEMA 12 ENCLOSURES MOUNTED INSIDE PUMP CONTROL STATION.
  - PUMP MOTOR CABLES SHALL HOMERUN TO PUMP STATION MOTOR STARTER PANELS.
  - PROVIDE NEMA 1 LIGHTING PANEL, 12 CIRCUITS MINIMUM.
  - PROVIDE WEATHERPROOF GROUND FAULT INTERRUPTER CONVENIENCE RECEPTACLE.
  - PROVIDE PANEL HEATER WITH BUILT IN THERMOSTAT.
  - PROVIDE LED ENCLOSURE LIGHTS. PROVIDE (1) 18" LIGHT FOR EVERY 3 FT OF PANEL WIDTH.
  - PROVIDE COOLING FAN, THERMOSTATICALLY CONTROLLED. FAN SHALL PULL FILTERED AIR INTO PANEL. PROVIDE FILTERED LOUVERS. PROVIDE COVERS FOR LOUVERS FOR WINTER MONTHS. PROVIDE SPARE FILTERS.
  - PROVIDE CIRCUIT BREAKER FOR FUTURE YARD LIGHT. PROVIDE CONDUIT STUBBED OUT OF CONCRETE SLAB FOR FUTURE CONNECTION.
  - PROVIDE 3 PHASE VOLTAGE MONITOR, TIMEMARK MODEL 269 HOUSED IN POWER DISTRIBUTION PANEL.

**JAMES ST PUMP STATION**

NTS

THREE PHASE PANEL SCHEDULE LP-1									
DESCRIPTION		LOAD	BKR	A	B	C	BKR	LOAD	DESCRIPTION
1	MAIN CIRCUIT BREAKER		50/3	3.0	3.0	3.0	20/1	3.00	CONTROL/RADIO
3				3.0	3.0	3.0	20/1	3.00	LIGHT/RECEPTACLE
5				3.7	3.7	3.7	20/1	3.70	GENSET BATTERY CHARGER
7	HEATER/COOLING FAN	1.89	20/1	4.9	4.9	4.9	20/1	3.00	GENSET CONTROL PANEL
9	YARD LIGHT (FUTURE)		20/1	12.5	12.5	12.5	20/1	12.50	GENSET BLOCK HEATER
11	SPARE		20/1	0.0	0.0	0.0	20/1		GENSET SPARE
		<b>TOTAL AMPS / PHASE:</b>		<b>7.9</b>	<b>15.5</b>	<b>3.7</b>			
		<b>KVA / PHASE:</b>		<b>0.9</b>	<b>1.9</b>	<b>0.4</b>			<b>TOTAL CONNECTED KVA: 3.3</b>

**LIGHTING PANEL**

NTS

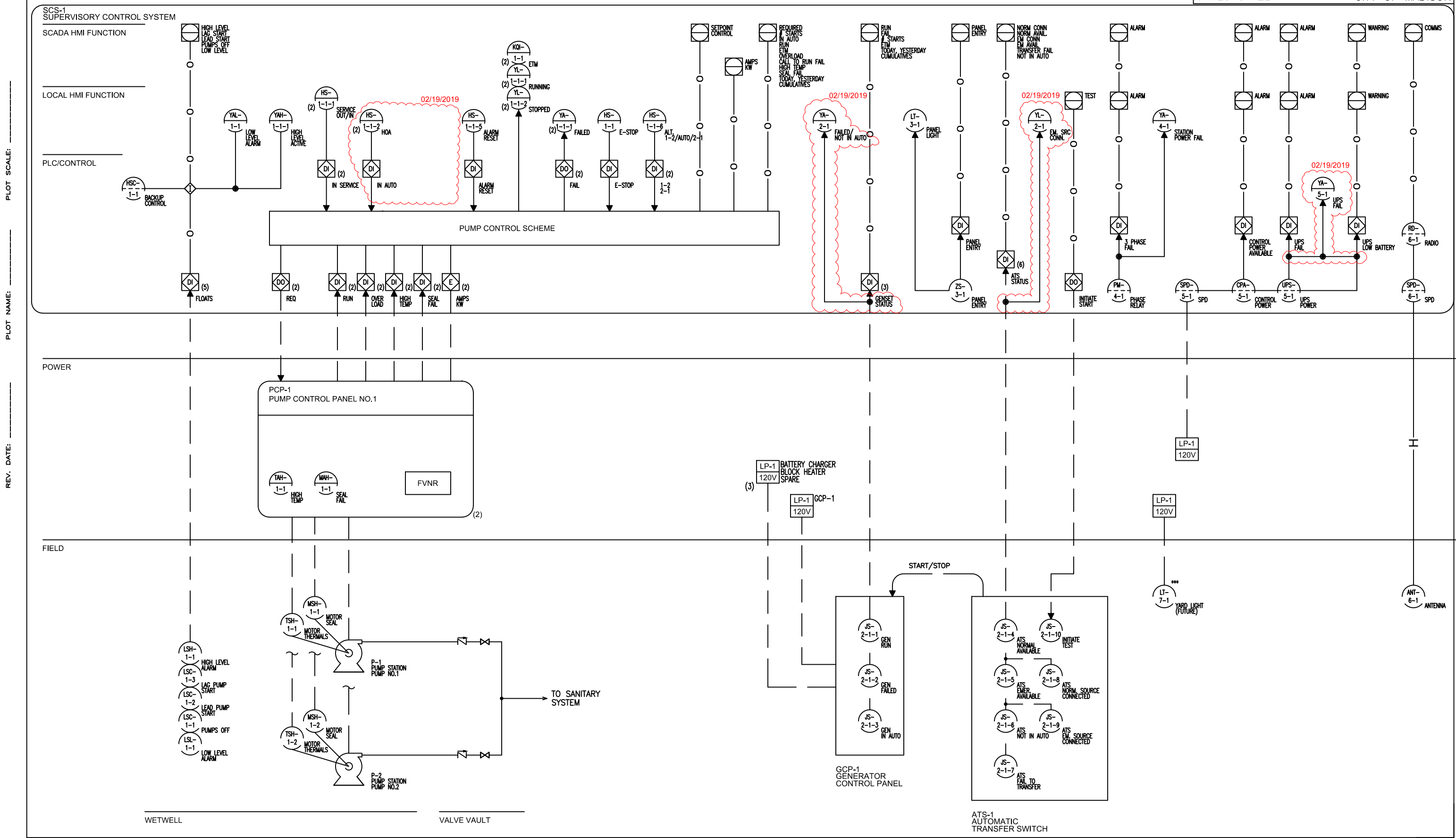
ORIGINATOR: CITY OF MADISON, STREETS DIVISION

PLOT SCALE: \_\_\_\_\_  
 PLOT NAME: \_\_\_\_\_  
 REV. DATE: \_\_\_\_\_

P&ID

JAMES STREET CITY OF MADISON

- REVISED 02/19/2019 BY KJA
- DELETED STATION HAND/AUTO.
- DELETED START/STOP PUSHBUTTONS.
- ADDED PILOT LIGHTS.



ORIGINATOR: CITY\_OF\_MADISON\_STREETS\_DIVISION

PLOT SCALE: \_\_\_\_\_  
PLOT NAME: \_\_\_\_\_  
REV. DATE: \_\_\_\_\_



REVISED 02/19/2019 BY KJA  
 • REVISED CONDUIT AND BOX SCHEDULE.

ELECTRICAL SCHEDULE

JAMES STREET CITY OF MADISON

FIELD INSTRUMENTATION														
TAGNAME	SHEET	DESC1	DESC2	LOCATION	ENVIRONMENT	SPEC SECTION	DESTINATION 1	WIRE TYPE 1	DESTINATION 2	WIRE TYPE 2	POWER SOURCE	POWER WIRING	DETAIL	COMMENT
ANT-6-1	E6	ANTENNA		REMOTE	OD	26 90 41	SCS-1	HELIAX					26 90 41	1
ATS-1	E6	AUTOMATIC	TRANSFER SWITCH	REMOTE	OD	26 36 23	SCS-1	D14, D4 SPARE	GCP-1	D2, D2 SPARE				5
GCP-1	E6	GENERATOR	CONTROL PANEL	REMOTE	OD	26 32 13	SCS-1	D6, D4 SPARE	ATS	D2, D2 SPARE	LP-1	(4) 20-3G	26 32 13	5
LSC-1-1	E6	PUMPS OFF		REMOTE		26 90 20-L2	SCS-1	MFR (FIBER)						4
LSC-1-2	E6	LEAD PUMP	START	REMOTE		26 90 20-L2	SCS-1	MFR (FIBER)						4
LSC-1-3	E6	LAG PUMP	START	REMOTE		26 90 20-L2	SCS-1	MFR (FIBER)						4
LSH-1-1	E6	HIGH LEVEL	ALARM	REMOTE		26 90 20-L2	SCS-1	MFR (FIBER)						4
LSL-1-1	E6	LOW LEVEL	ALARM	REMOTE		26 90 20-L2	SCS-1	MFR (FIBER)						4
LT-7-1	E6	YARD LIGHT	(FUTURE)	REMOTE										2
P-1	E6	PUMP STATION	PUMP NO.1	REMOTE	H		PCP-1	MFR			PCP-1	MFR		3
P-2	E6	PUMP STATION	PUMP NO.2	REMOTE	H		PCP-2	MFR			PCP-2	MFR		3

WIRE TYPE

A = ANALOG SIGNAL, # = NUMBER OF TWISTED SHIELDED PAIR

D = DIGITAL SIGNAL, # = NUMBER OF CONDUCTORS

H = ANTENNA CABLE

MFR = MANUFACTURER'S CABLE

20-2G

EX. A1 = 1 TWISTED SHIELDED PAIR FOR ANALOG SIGNAL

D2 = 2 CONDUCTORS FOR DIGITAL SIGNAL

20-2G = 20 IS THE AMPERE RATING OF THE CONDUCTORS, 2G IS 2 WIRES AND A GROUND.

SEE SPECIFICATION SECTION 26 05 19 FOR CONDUCTORS AND CABLES

LOCATION/DESTINATION

THE LOCATION IS THE PHYSICAL LOCATION THE TAGNAME CAN BE FOUND. THE DESTINATION IS WHERE THE DEVICE IS BEING WIRED TO

ENVIRONMENT

NH = NON-HAZARDOUS/NOT RATED

OD = OUTDOOR RATED, NEMA 3R OR NEMA 4X

C = CORROSIVE

SUB = SHALL BE RATED FOR FULL CONTACT AND 100% SUBMERGENCE IN WASTEWATER

XP = CLASS 1, DIVISION I OR II, INTRINSICALLY SAFE CIRCUITS MAY BE APPLIED

i.s. = CLASS 1, DIVISION I OR II, WITH INTRINSICALLY SAFE CIRCUIT APPLIED

COMMENTS:

- OWNER FURNISHED EQUIPMENT. 02/19/2019
- PROVIDE SPARE CONDUIT STUBBED OUT PAST CONCRETE FOR FUTURE YARD LIGHT.
- MOTOR CABLE TO HOMERUN TO PUMP CONTROL PANELS.
- EQUIPMENT CABLE TO HOMERUN TO PUMP STATION.
- COORDINATE VOLTAGE REQUIREMENTS WITH EQUIPMENT SUPPLIER.

CONDUIT & BOX SCHEDULE								
AREA CLASSIFICATION	VOLT.	TYPE	INSTALLATION	CONDUIT	USE BOX	SUPPORTS	HARDWARE	LOCATION
NON-HAZARDOUS	ALL	ALL	CONCEALED AFF	PGRS	PCB	SS/GS	SSGS	AS REQUIRED
NON-HAZARDOUS	ALL	ALL	UG/BELOW SLAB	PGRS	PCB	SS	SS	AS REQUIRED
WET/ NON-HAZARDOUS	ALL	ALL	INTERIOR EXPOSED	PGRS	PCB	SS	SS	AS REQUIRED
WET/ NON-HAZARDOUS	ALL	ALL	EXTERIOR EXPOSED	PGRS	PCB	SS	SS	AS REQUIRED
WET/ NON-HAZARDOUS	ALL	ALL	DIRECT BURIED OUTDOOR	PGRS	PCB	SS	SS	AS REQUIRED
HAZARDOUS	ALL	ALL	ALL	PGRS	PCB	SS	SS	AS REQUIRED
HAZARDOUS	ALL	ALL	SLEEVE	PVC 80	PCB	SS	SS	AS REQUIRED

SPACE CLASSIFICATION			
STRUCTURE	ROOM	NAME	CLASSIFICATION
WETWELL			HAZARDOUS
EXTERIOR			WET/NON-HAZARDOUS

02/19/2019

FEEDER SCHEDULE (600 V)				
FEEDER AMPACITY	CONDUCTOR SIZE (KCMIL)		CONDUIT SIZE	
	Ø & N	GRD	3Ø & GRD	3Ø & N & GRD
20	#12	#12	3/4"	3/4"
30	#10	#10	3/4"	1"
40	#8	#10	3/4"	1"
50	#6	#8	1"	1"
70	#4	#8	1-1/4"	1-1/4"
80	#3	#8	1-1/4"	1-1/4"
100	#2	#6	1-1/2"	2"
110	#2	#6	1-1/2"	2"
125	#1	#6	1-1/2"	2"
150	1/0	#6	1-1/2"	2"
175	2/0	#6	2"	2"
200	3/0	#6	2"	2-1/2"
225	4/0	#4	2"	2-1/2"
250	250	#4	2-1/2"	3"
300	350	#4	3"	3"
350	500	#3	3"	3-1/2"
380	500	#3	3"	3-1/2"
400	(2) 3/0	(2) #3	(2) 2"	(2) 2-1/2"
450	(2) 4/0	(2) #2	(2) 2"	(2) 2-1/2"
500	(2) 250	(2) #2	(2) 2-1/2"	(2) 3"
600	(2) 350	(2) #1	(2) 3"	(2) 3"
700	(2) 500	(2) #1/0	(2) 3"	(2) 3-1/2"
800	(2) 600	(2) #1/0	(2) 3-1/2"	(2) 4"
1000	(3) 400	(2) #2/0	(3) 3"	(3) 3-1/2"
1200	(3) 600	(2) #3/0	(3) 3-1/2"	(3) 4"
1600	(4) 600	(2) #4/0	(4) 3-1/2"	(4) 4"
2000	(5) 600	(2) #250	(5) 3-1/2"	(5) 4"

GENERAL NOTES:

- THE ABOVE FEED SCHEDULE IS A SCHEDULE OF TYPICAL FEEDS AND SOME SIZES MAY NOT BE UTILIZED.
- ALL CONDUCTOR AMPACITIES ARE BASED ON TABLE 310-16 OF THE NEC FOR COPPER CONDUCTOR TYPE THW/THWN.
- FEEDER SIZED ON THE RISER DIAGRAM INDICATOR FEEDER AMPACITIES AND DO NOT NECESSARILY CORRESPOND TO CIRCUIT BREAKER AMPACITIES. CERTAIN FEEDERS MAY BE SIZED FOR THE DURATION FACTORS REQUIRED BY CODE AND/OR ARE OVERSIZED FOR VOLTAGE DROP.
- WHERE MULTIPLE CONDUITS ARE INDICATED FOR THE SINGLE FEEDER EACH CONDUIT SHALL CONTAIN AN Aφ, Bφ, Cφ, GROUND CONDUCTOR, AND NEUTRAL CONDUCTOR.

200-4G FEEDER DESIGNATION

SYSTEM DESCRIPTION  
 (2G) 1φ, 2W + GRD  
 (3G) 3φ, 3W + GRD  
 (4G) 3φ, 4W + GRD

CONDUCTOR AMPACITY  
 (SEE FEEDER SCHEDULE)

NOTES:

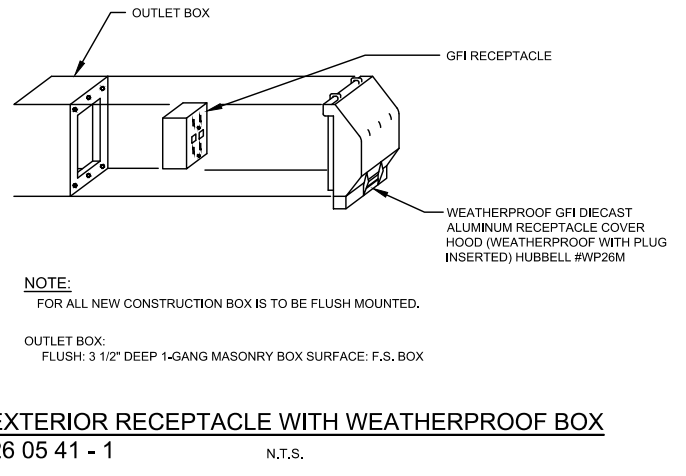
- ALL CONDUIT AND RACEWAYS SHALL BE CONCEALED
- NO SUBSTITUTIONS SHALL BE ALLOWED UNLESS WRITTEN PERMISSION TO THE CONTRARY HAS BEEN OBTAINED FROM ENGINEER
- TRANSITION TO EXPOSED CONDUIT SHALL COMPLY WITH SPECIFIED REQUIREMENTS FOR EXPOSED CONDUIT, REGARDLESS OF WHETHER TRANSITION IS RIGID OR FLEXIBLE. EMBEDDED TRANSITIONS SHALL BE RIGID MATERIAL
- ALL JUNCTION BOXES NOT LOCATED IN XP AREAS SHALL BE SS NEMA 4X, OR COST NEMA 7
- EC SHALL FURNISH AND INSTALL WIRE GUTTERS AS REQUIRED
- EX SHALL ONLY USE FLEX CONDUIT IN EQUIPMENT CONNECTIONS, USE ON FIXTURES AND I&C DEVICES SHALL NOT BE PERMITTED
- VFD MOTOR FEEDERS SHALL BE INSTALLED IN GRS CONDUIT AND USE VFD MOTOR CABLES
- EXPOSED CONDUIT SHALL BE PAINTED TO MATCH MOUNTING LOCATION.
- EC MAY SELECT MATERIAL FOR INTERMEDIATE AND TEMPORARY CONNECTION AND CONDUIT, SHALL BE CODE COMPLIANT
- NOTE SCHEDULE 80 PVC SHALL BE USED TO REATED EQUIPMENT CABLE SLEEVES AS DETAILED

ABBREVIATIONS:

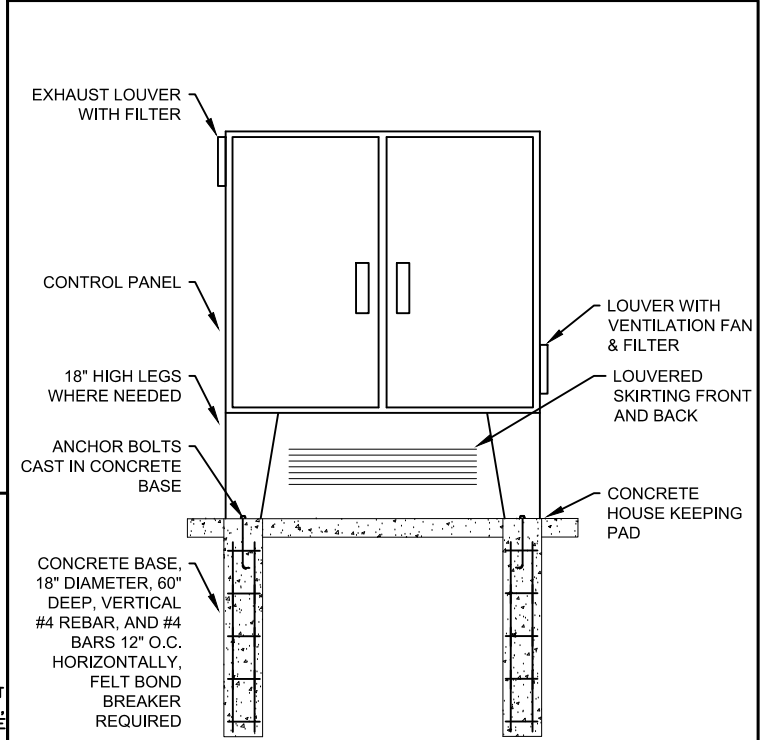
CONDUIT:		SUPPORTS & HARDWARE		BOXES	
PVC:	POLYVINYL CHLORIDE	GS:	GALVANIZED STEEL	SB:	STEEL
PVC 40:	SCHEDULE 40 PVC PIPE	SS:	STAINLESS STEEL	CB:	CAST BOX
PVC 80:	SCHEDULE 80 PVC PIPE	PVC:	POLYVINYL CHLORIDE	PCB:	PVC-COATED CAST BOX
GRS:	GALVANIZED RIGID STEEL	ZPS:	ZINC PLATED STEEL		
PBRs:	PVC-COATED GRS	PCS:	PVC COATED STEEL		
EMT:	ELECTRICAL METALLIC TUBING	S:	STEEL		
HDPE:	HIGH DENSITY POLYETHYLENE	AL:	ALUMINUM		

REVISED 02/19/2019 BY KJA  
 • REVISED GENERATOR PAD DETAIL.  
 • REVISED FREE STANDING CONTROL PANEL DETAIL.

PLOT SCALE: \_\_\_\_\_  
 PLOT NAME: \_\_\_\_\_  
 REV. DATE: \_\_\_\_\_

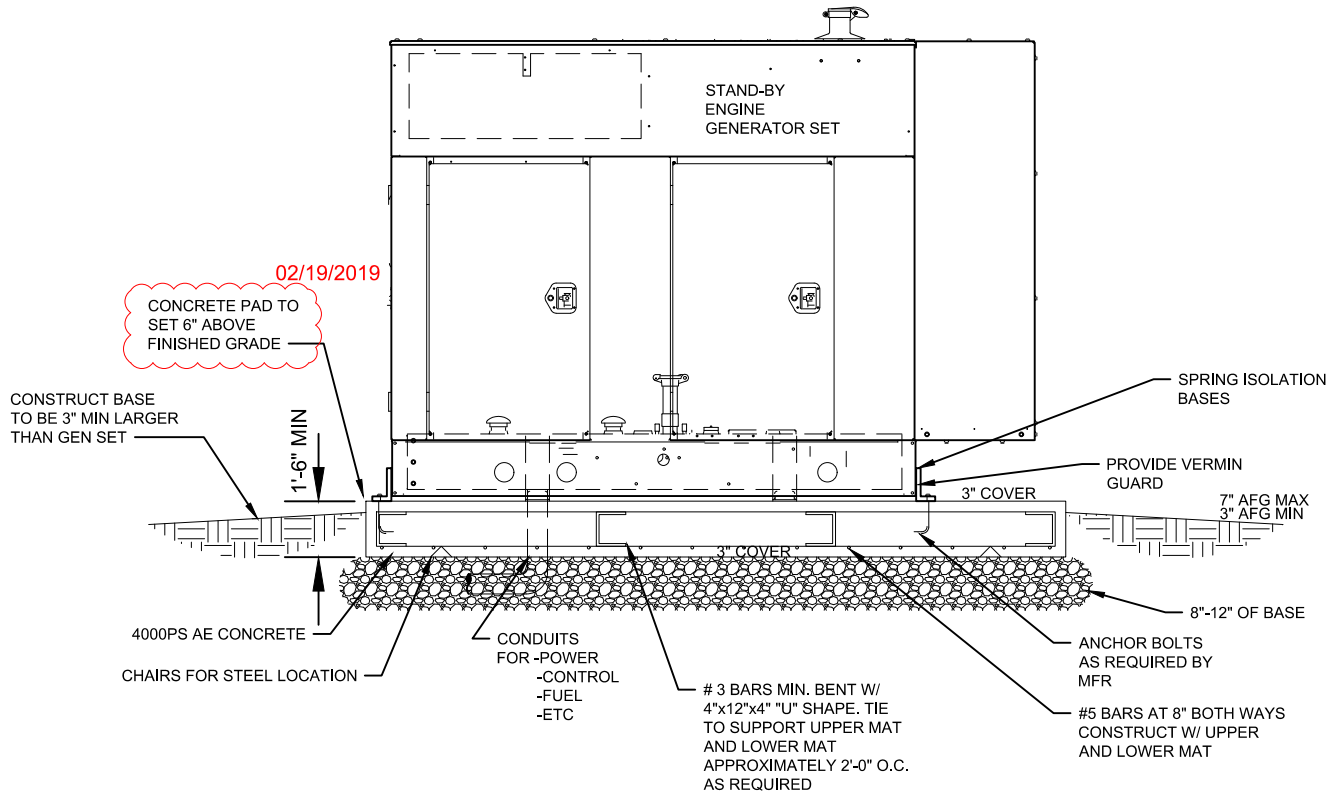


**EXTERIOR RECEPTACLE WITH WEATHERPROOF BOX**  
26 05 41 - 1 N.T.S.

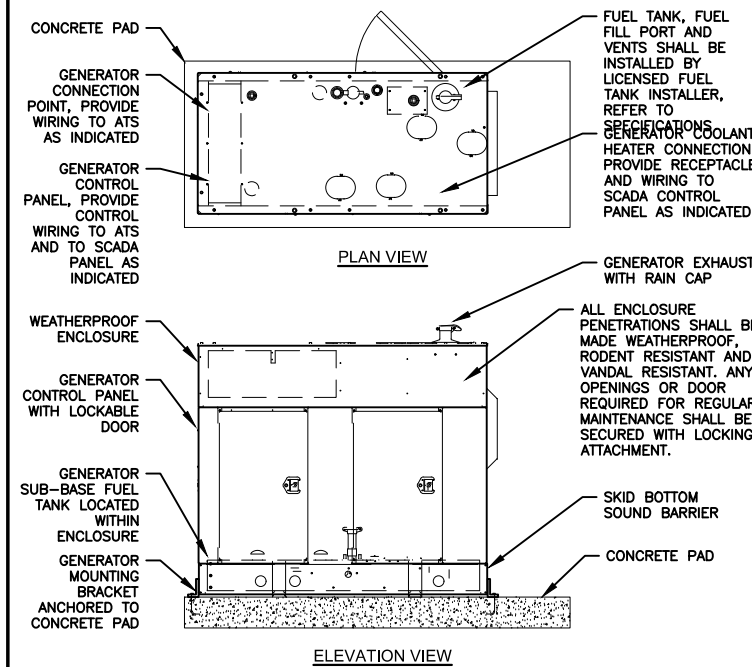


- NOTES:
1. REFER TO SITE PLAN FOR LOCATION AND ORIENTATION.
  2. ALL HARDWARE SHALL BE STAINLESS STEEL.
  3. PROVIDE VENTILATION AND AIR CONDITIONING WHEN REQUIRED FOR PANEL COMPONENT OPERATION.
  4. CONTROL PANEL TO HAVE LOCKABLE THREE POINT LATCH AND DOOR STOPS.
  5. VENTILATION FAN IS TO PUSH COOLER AIR INTO PANEL.

**FREE STANDING CONTROL PANEL MOUNTING**  
26 90 10 - 2 N.T.S.

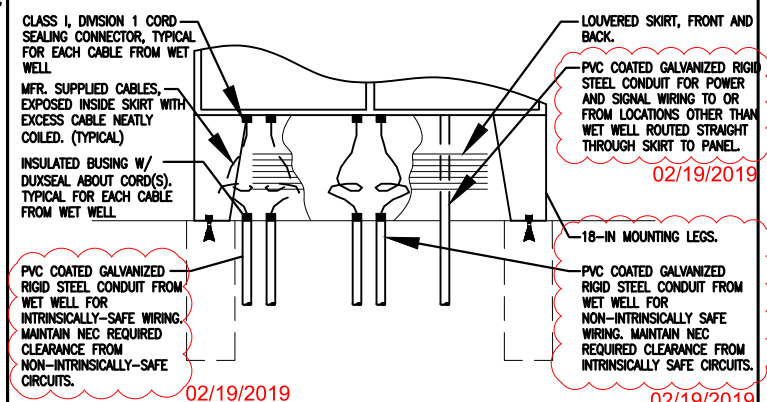


**GENERATOR BASE DETAIL**  
26 32 13-2 N.T.S.



- NOTES:
1. INSTALL GENERATOR PER MANUFACTURERS RECOMMENDATIONS, IN ACCORDANCE WITH ALL CODES AND ON CONCRETE INSULATION PAD. REFER TO ARCHITECTURAL/STRUCTURAL/CIVIL PLANS.
  2. REFER TO SITE PLAN FOR LOCATION AND ORIENTATION.

**PERMANENT STANDBY EMERGENCY GENERATOR**  
26 32 13-1 N.T.S.



**CABLE AND CONDUIT INSTALLATION**  
26 90 10 - 2-1 N.T.S.

ORIGINATOR: CITY\_OF\_MADISON\_STREETS\_DIVISION

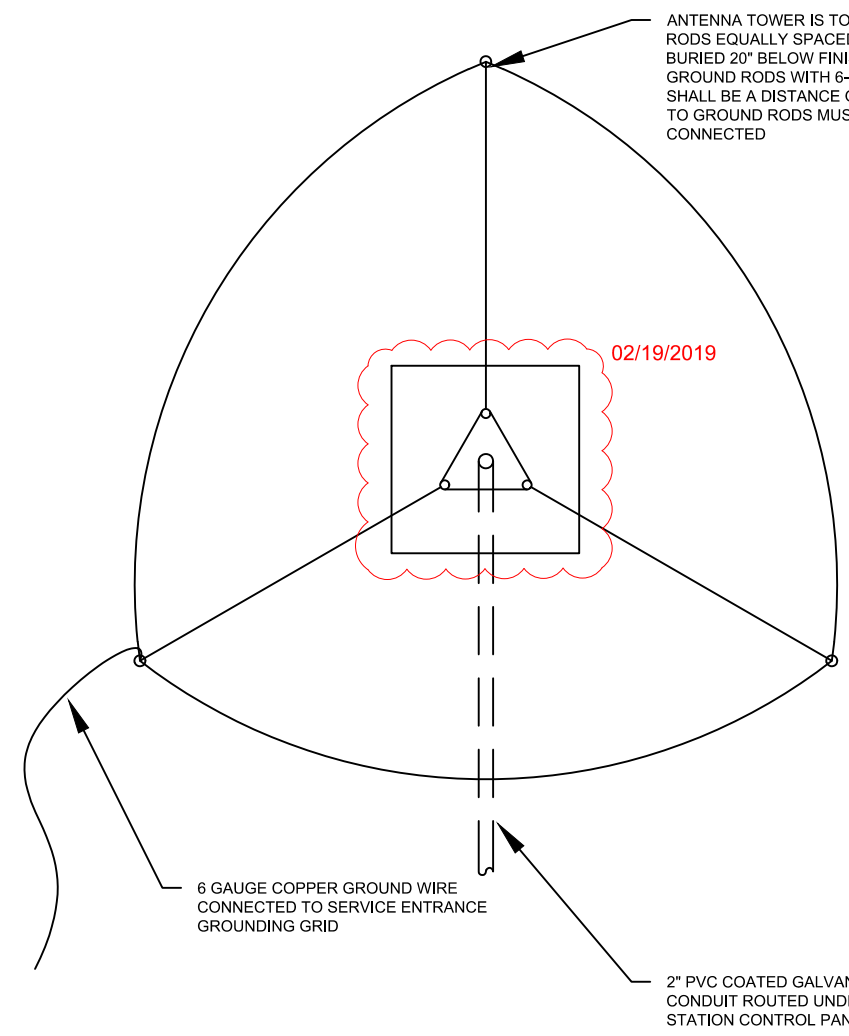


ELECTRICAL DETAILS 3

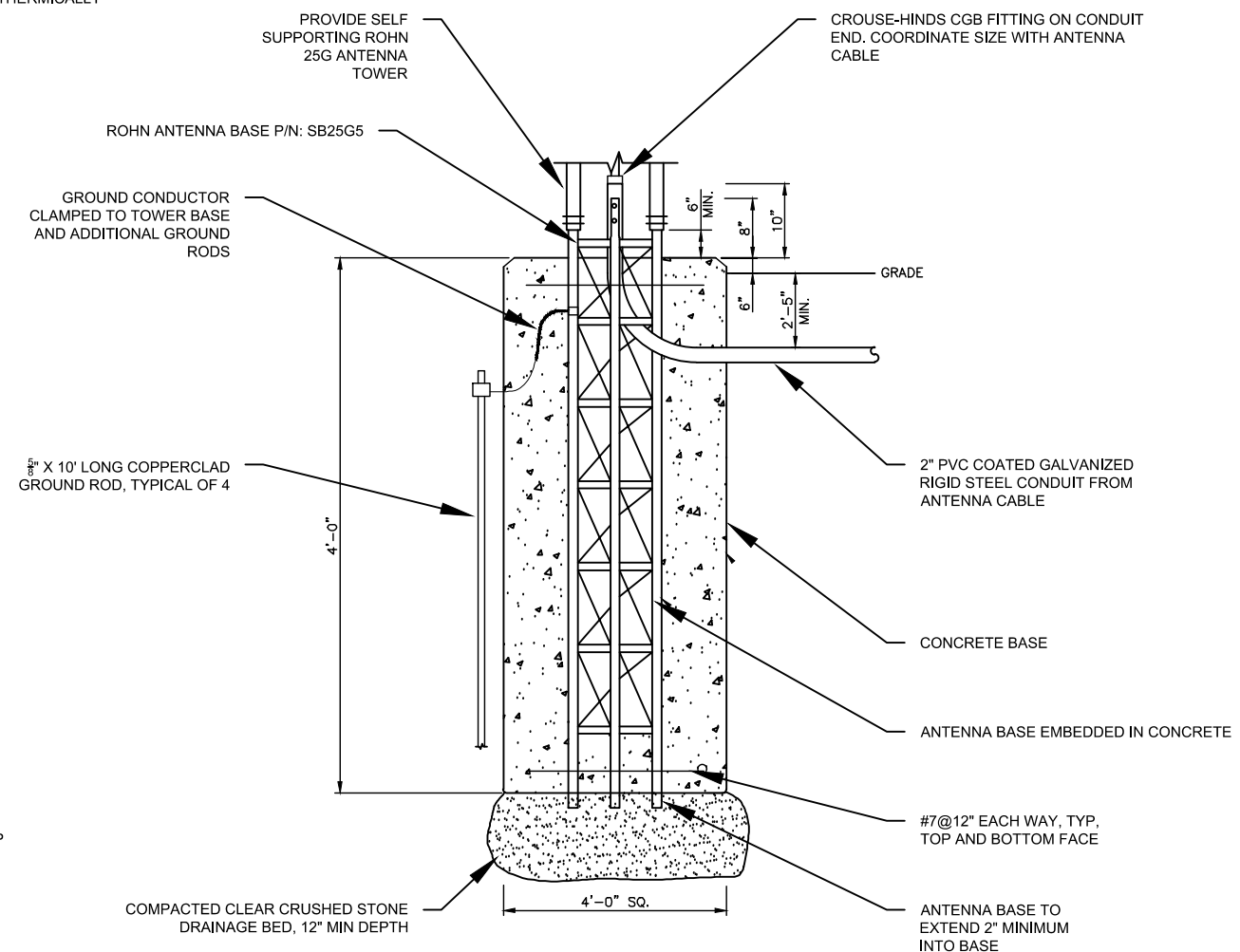
JAMES STREET CITY OF MADISON

REVISED 02/19/2019 BY KJA  
 • REVISED ANTENNA BASE.

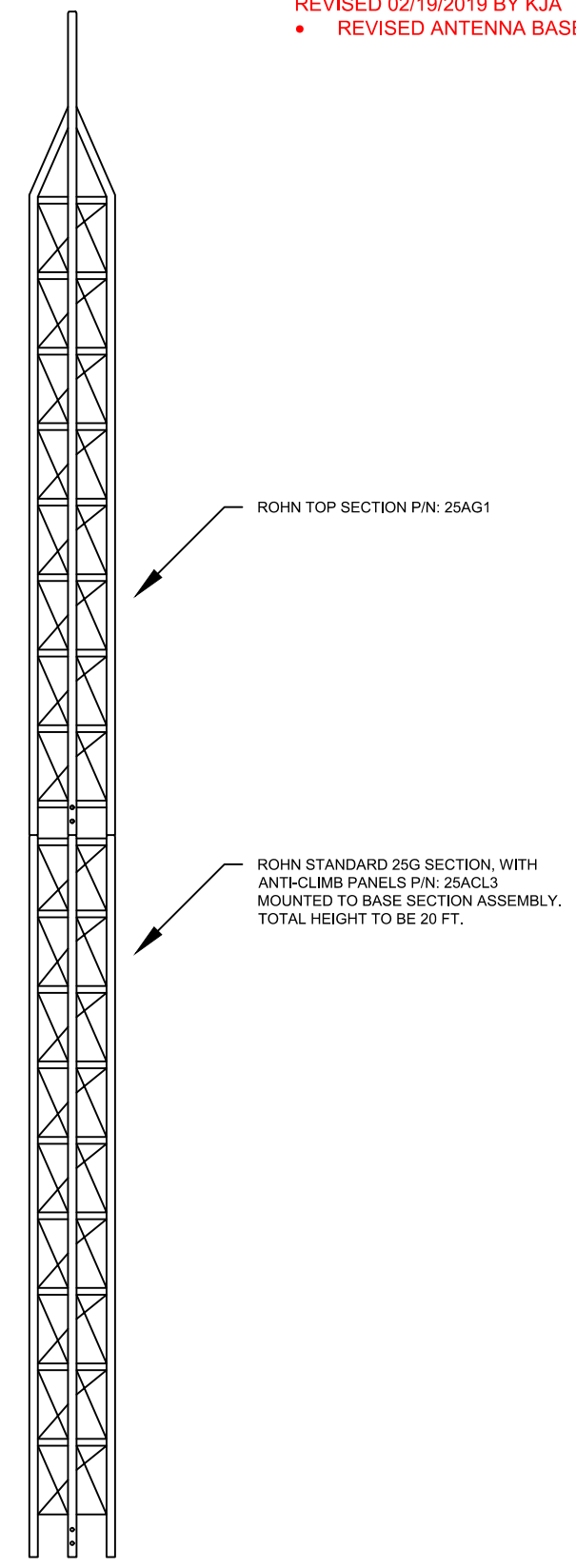
PLOT SCALE: \_\_\_\_\_  
 PLOT NAME: \_\_\_\_\_  
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ANTENNA TOWER GROUND GRID - TOP VIEW  
 NTS

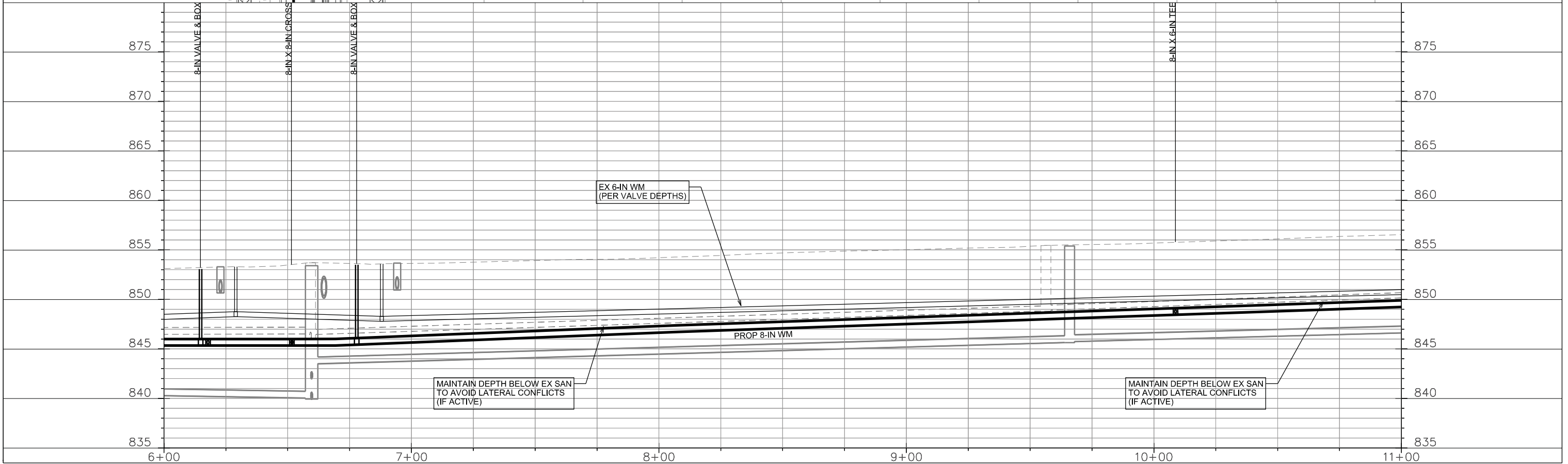
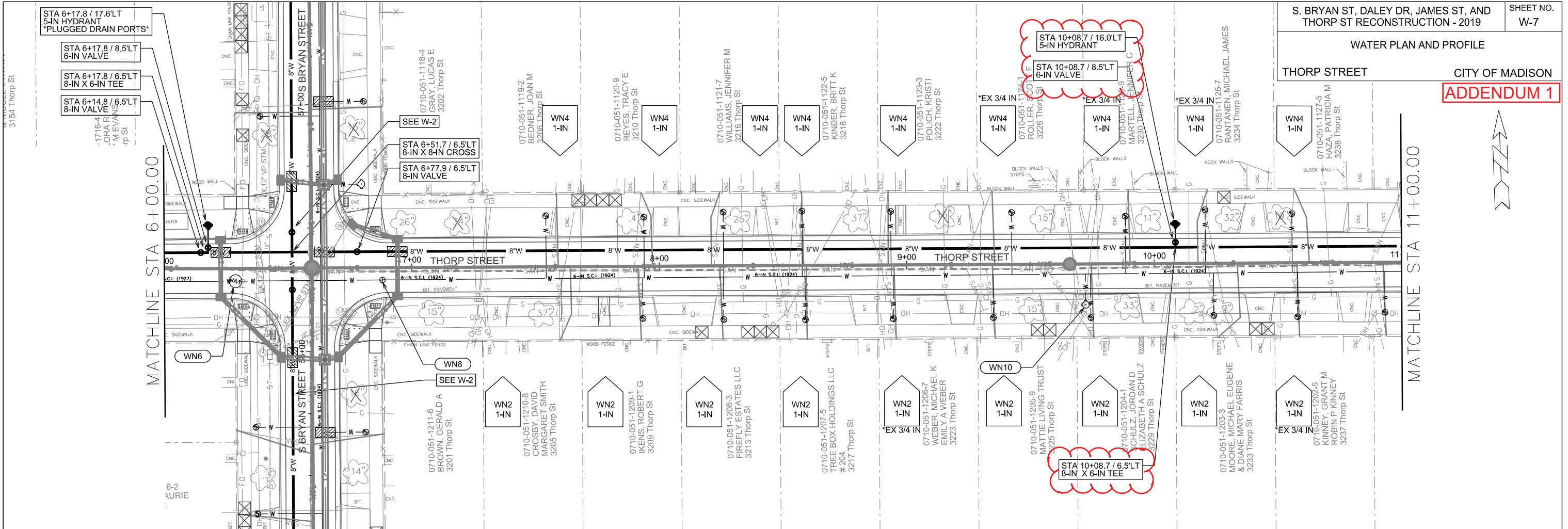


ANTENNA TOWER CONCRETE BASE - SIDE VIEW  
 NTS



ANTENNA TOWER - SIDE VIEW  
 NTS

ORIGINATOR: CITY\_OF\_MADISON\_STREETS\_DIVISION



PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

**CONSTRUCTION NOTES:**

- CONSTRUCT NEW WATER MAIN 6.0' BELOW FINISHED GRADE, UNLESS OTHERWISE NOTED. INSULATE MAIN WITH POLYSTYRENE BOARD AT STORM SEWER UTILITY CROSSINGS OR OTHER AREAS IDENTIFIED BY ENGINEER AS HAVING INADEQUATE COVER.
  - VERIFY SIZE OF EXISTING WATER SERVICES AND RECONNECT SERVICES AS INDICATED.
  - MINIMIZE DISRUPTION OF SERVICE TO EXISTING CUSTOMERS. NOTIFY PER CONTRACT REQUIREMENTS OF ANY PLANNED WATER OUTAGE.
  - THE EXISTING UTILITIES SHOWN ON THIS PLAN REPRESENT THE BEST INFORMATION AVAILABLE TO THE WATER UTILITY AT THE TIME OF PLAN PREPARATION. CONTRACTOR IS RESPONSIBLE FOR HAVING EACH UTILITY LOCATED PRIOR TO COMMENCING WORK.
- WN1 REPLACE THE EXISTING LEAD SERVICE WITH A NEW COPPER SERVICE.
  - WN2 EXTEND AND RECONNECT THE EXISTING COPPER SERVICE FROM THE OLDER WATER MAIN TO THE NEWER WATER MAIN.
  - WN3 EXISTING SERVICE TO BE ABANDONED WHEN THE WATER MAIN IS CUT OFF; ABANDON CURB BOX AS REQUIRED.
  - WN4 DISCONNECT FROM THE OLDER WATER MAIN AND RECONNECT THE EXISTING COPPER WATER SERVICE LATERAL TO THE NEWER WATER MAIN.
  - WN5 RELOCATE THE EXISTING FIRE HYDRANT.
  - WN6 ABANDON WATER VALVE ACCESS STRUCTURE.
  - WN7 FURNISH AND INSTALL THE NEW TOP SECTION FOR THE WATER ACCESS STRUCTURE.
  - WN8 ABANDON THE VALVE BOX.
  - WN9 FURNISH THE DITCH, COMPACTION, AND ALL MATERIALS AND LABOR FOR THE INSTALLATION OF NEW SERVICE LATERAL.
  - WN10 REMOVE AND SALVAGE EXISTING HYDRANT
  - WN11 REPLACE THE EXISTING COPPER SERVICE WITH A COPPER SERVICE

**ESTIMATE OF PROJECT WATER MATERIALS - FROM CONTRACTOR:**

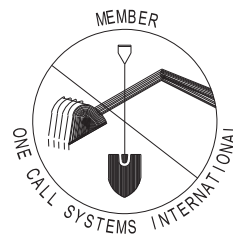
\* ESTIMATE OF MATERIALS IS FOR INFORMATION ONLY. ENGINEER DOES NOT GUARANTEE ACCURACY OF MATERIAL TAKE-OFF. ALWAYS REFER TO PLANS.


WATER ASSETS	TOTAL
6-IN PIPE (LF)	100
8-IN PIPE (LF)	2820
POLY WRAP	3230
6-IN VALVE & BOX	6
8-IN VALVE & BOX	14
8-IN - 45° BEND	10
6-IN - 45° BEND	1
6-IN - 90° BEND	1
8-IN X 6-IN TEE	7
8-IN X 8-IN TEE	1
8-IN X 6-IN CROSS	1
8-IN X 8-IN CROSS	2
5-IN HYDRANT	7
6-IN MJ PLUG	1
8-IN MJ PLUG	4
6-IN MJ CAP	2
8-IN X 6-IN REDUCER	2
2-IN STYROFOAM (LF)	168
8-IN X 12-IN OFFSET	1
6-IN X ?-IN OFFSET (AS REQ)	1
1-IN OR 1.5-IN COPPER PIPING	AS REQ

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE TOLL FREE  
811 OR 1-800-242-8511  
FAX-A-LOCATE 1-800-338-3860  
TDD (FOR HEARING IMPAIRED) 1-800-542-2289

WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.



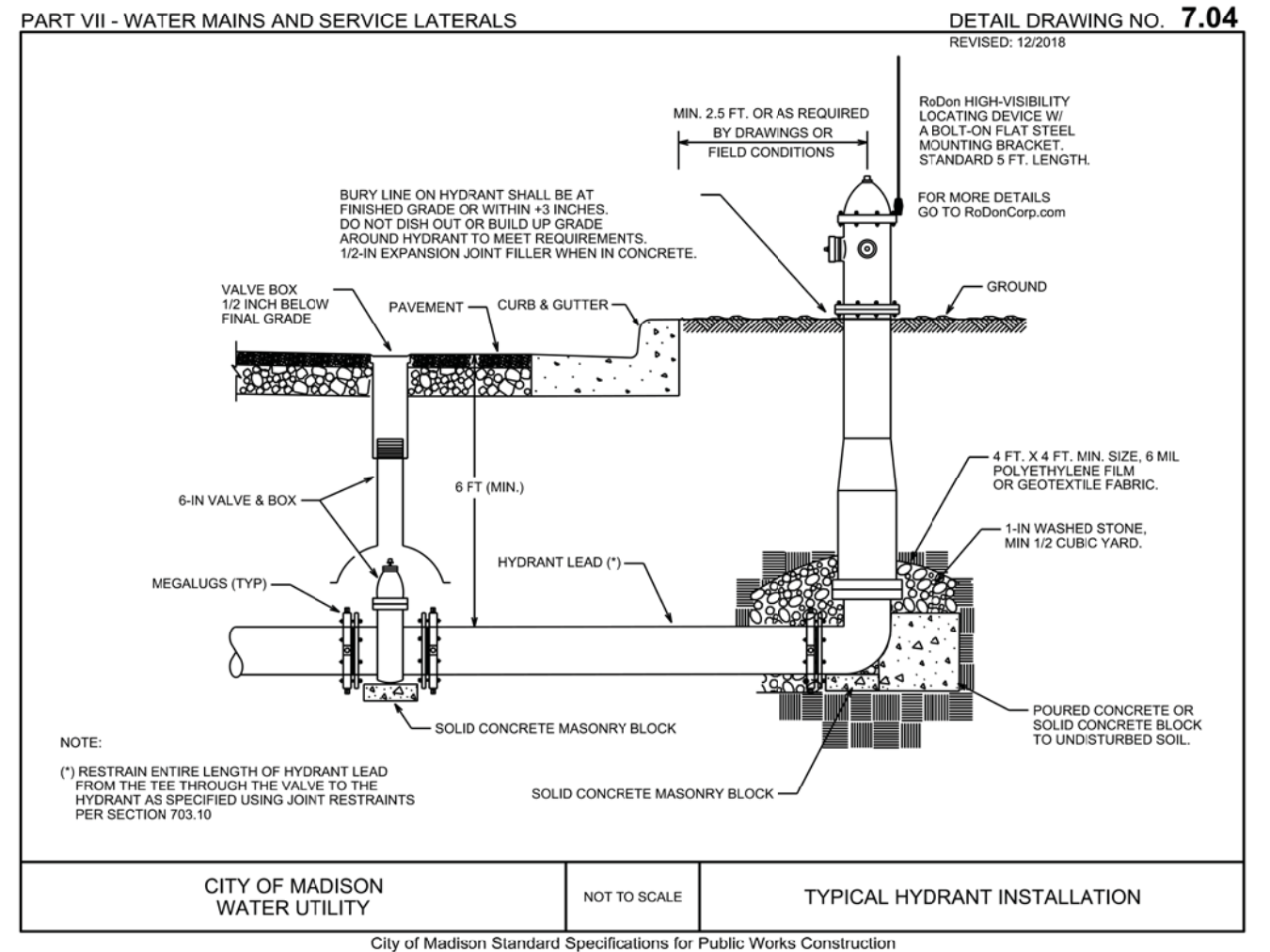
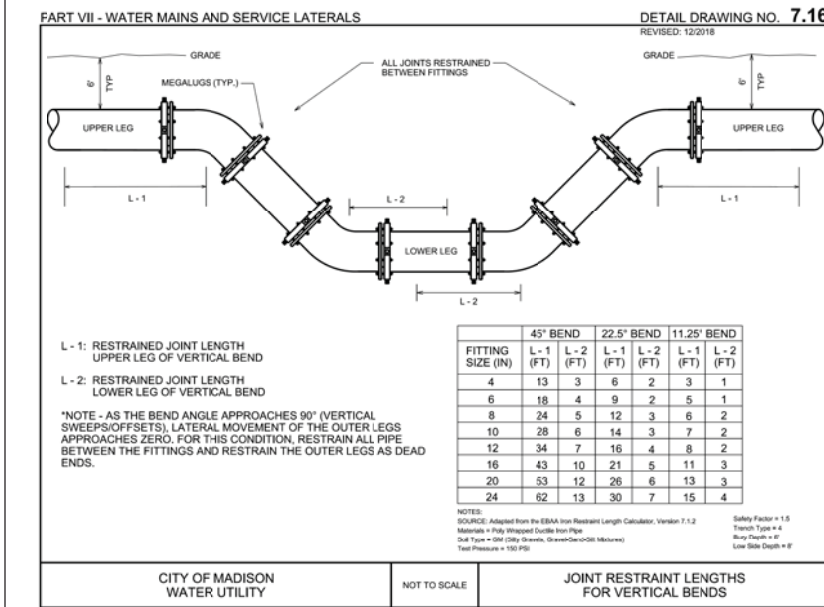
 = APPLY STYROFOAM INSULATION OVER THE WATER MAIN AND SERVICES AT STORM SEWER CROSSINGS, PER STANDARD SPECIFICATIONS

**ESTIMATE OF PROJECT WATER MATERIALS - FROM CITY:**

\* ESTIMATE OF MATERIALS IS FOR INFORMATION ONLY. ENGINEER DOES NOT GUARANTEE ACCURACY OF MATERIAL TAKE-OFF. ALWAYS REFER TO PLANS.

WATER ASSETS	TOTAL
6-IN TAPPING VALVE & BOX	1
8-IN TAPPING VALVE & BOX	1
6-IN X 6-IN TAPPING SLEEVE	1
8-IN X 8-IN TAPPING SLEEVE	1

**DISCLAIMER NOTE:**  
UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCING WORK.



PLOT SCALE: \_\_\_\_\_

REV. DATE: \_\_\_\_\_

ORIGINATOR: CITY OF MADISON - STREETS DIVISION