

MANATEE COUNTY MISSIONARY VILLAGE LIFT STATION REHABILITATION

PROJECT NO. 6022386 SEPTEMBER 2022 ISSUED FOR BID



PROJECT NAME: MISSIONARY VILLAGE LIFT STATION REHABILITATION
 MANATEE COUNTY PROJECT NO. 6022386
 MCKIM & CREED PROJECT NO. 01024-0191

OWNER/DEVELOPER:
 MANATEE COUNTY
 1022 26TH AVENUE EAST
 BRADENTON, FLORIDA



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G00.3	CONSTRUCTION SEQUENCE NOTES
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C00.2A	PROPOSED SITE PLAN
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NOTE:
 ALL ITEMS AND/OR MATERIALS FURNISHED AND INSTALLED SHALL CONFORM TO THE MANATEE COUNTY APPROVED PRODUCTS LIST. ALL ITEMS LISTED IN THE SUBMITTAL REQUIREMENTS UNDER EACH SECTION SHALL BE REQUIRED TO BE SUBMITTED FOR REVIEW AND/OR ACCEPTANCE.



BLAKE PETERS, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 64429
 THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BLAKE PETERS THE DATE INDICATED HERE, SEPTEMBER 23, 2022.
 PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.



A. E. ANDERSON, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 34779
 THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY A. E. ANDERSON THE DATE INDICATED HERE, SEPTEMBER 23, 2022.
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AUBREY A. HAURDICOURT, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 66861
 THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY AUBREY A. HAURDICOURT THE DATE INDICATED HERE, SEPTEMBER 23, 2022.
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WILLIAM F. BAND, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 67838
 THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY WILLIAM F. BAND THE DATE INDICATED HERE, SEPTEMBER 23, 2022.
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PROJECT INFORMATION

SHEET INDEX



SUBMITTAL DATE: SEPTEMBER 2022 PROJECT NO. 6022386 MISSIONARY VILLAGE LIFT STATION REHABILITATION M&C PROJECT NO. 01024-0191

GENERAL LIFT STATION NOTES:

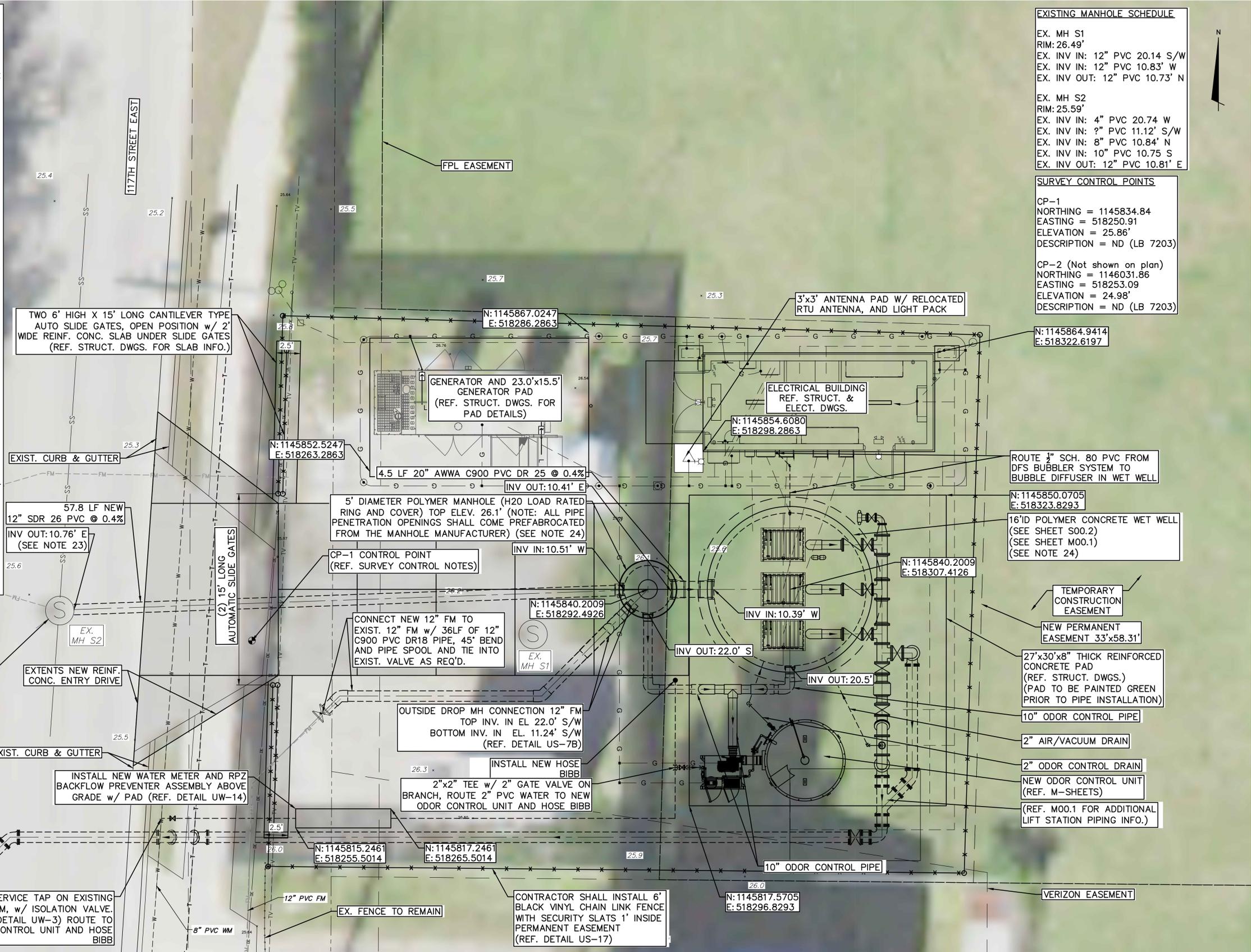
- GROUND SHALL BE SLOPED AWAY FROM SLAB TO NATURAL GROUND ELEVATION AS SHOWN ON THIS DRAWING. SITE SHALL INCLUDE A WEED BARRIER FABRIC THAT IS COVERED WITH WASHED SHELL OR ROCK WITHIN LIFT STATION FENCING. SITE SHALL INCLUDE A WEED BARRIER FABRIC THAT IS COVERED WITH SHREDDED WOOD TYPE MULCH INSIDE AND OUTSIDE OF THE FENCE AS SHOWN ON THIS DRAWING. GROUND COVER INSIDE THE SITE FENCED IN AREAS NOT COVERED WITH SLABS OR PAVING SHALL BE 4 INCH THICKNESS OF WASHED SHELL OR INERT NON-LEACHING LANDSCAPING STONE PLACED OVER A POLYPROPYLENE WEED BARRIER FABRIC. THE SURFACE OF THE SHELL OR STONE SHALL BE LEVEL WITH THE CONCRETE DRIVEWAY WITH THE EXCEPTION THAT THE SURFACE OF STONE SHALL NOT BE HIGHER THAN ELEVATION 25.6 SO THAT SURFACE DRAINAGE WILL NOT FLOW INTO THE WET WELL. THE SHELL OR STONE SHALL BE SLOPED TO DRAIN TOWARD 117TH STREET. GROUND COVER AROUND THE OUTSIDE OF THE FENCE ON THE NORTH, EAST AND SOUTH SIDES OF THE LIFT STATION SITE SHALL HAVE 4" OF SHREDDED WOOD TYPE MULCH WITH POLYPROPYLENE WEED BARRIER FABRIC UNDER THE MULCH AND THE MULCH SURFACE SHALL MATCH THE SURFACE ELEVATION OF THE ADJACENT STONE INSIDE THE FENCE.
- FOR 5/8" WATER METER, PROVIDE POTABLE WATER SERVICE CONNECTION WITH 3/4" BRASS LOCKSHIELD AND LOOSE KEY HOSE BIBB. PROVIDE WAITS 909 BACKFLOW PREVENTER (OR APPROVED EQUAL). ALL WATER SERVICE PIPING FROM WATER METER TO BE TYPE "K" COPPER OR BRASS, 3/4" MIN. DIAMETER FOR 5/8" METER AND 2" MIN. DIAMETER PIPING FOR 2" METER.
- A RAIN SENSOR SHALL BE FURNISHED AND INSTALLED.
- HOSE BIBB TO BE A MINIMUM OF 6 FEET FROM THE ELECTRICAL CONTROL PANEL, 24" ABOVE THE SURROUNDING FINISH GRADE, AND ANCHORED TO A 4" PVC CONCRETE FILLED PIPE.
- WATER METER ASSEMBLY TO BE INSTALLED BY CONTRACTOR AS PART OF WATER SERVICE CONNECTION WITH FEES PAID BY THE COUNTY.
- FLEXIBLE GASKET CONNECTORS SHALL MEET THE REQUIREMENTS OF ASTM C-923 LATEST REVISION AND ARE REQUIRED IN ALL MANHOLES.
- ELECTRICAL SERVICE SHALL BE 3 PHASE MINIMUM UNLESS THE ELECTRICAL UTILITY PROVIDES CORRESPONDENCE STATING THAT 3 PHASE SERVICE IS UNAVAILABLE.
- ELECTRICAL CONDUIT SHALL BE RUN BY THE SHORTEST ROUTE POSSIBLE FROM THE ELECTRICAL SOURCE TO THE CONTROL PANEL AND FROM THE CONTROL PANEL TO THE LIFT STATION WET WELL.
- A FLOW METER, BACKUP POWER GENERATOR, FUEL STORAGE LEVEL TRANSDUCER AND FORCE MAIN PRESSURE TRANSDUCER SHALL BE REQUIRED FOR ALL LIFT STATIONS THAT REPUMP SEWAGE FROM OTHER LIFT STATIONS.
- THE CONTROL PANEL, HOSE BIBB, EMERGENCY GENERATOR, FUEL STORAGE TANK AND ANTENNA SHALL NOT BE LOCATED BETWEEN THE WETWELL AND THE DRIVEWAY. THE GENERATOR SHALL NOT BE LOCATED WITHIN 25 FEET OF THE EDGE OF THE LIFT STATION EASEMENT AT THE ROW LINE.
- INSTALL NEW 6" BLACK VINYL COATED CHAIN LINK FENCE WITH SECURITY SLATS IN LOCATION SHOWN. FENCE AND POSTS TO BE BLACK.
- ALL WORK SHALL COMPLY WITH SPECIFICATIONS - SECTION 3500 - LIFT STATION SPECIFICATION AND THE MANATEE COUNTY APPROVED LIST.
- SITE GRADE IS 4" (MIN.) BELOW TOP ELEVATION OF THE PUMP STATION SLAB.
- IN SILTS, CLAY OR HIGHLY ORGANIC SOILS (FINE-DRAINED SOILS GROUPS ML, CL, OL, MH, CH, OH AND PT), THE SOILS SHALL BE OVER-EXCAVATED AN ADDITIONAL 12" MIN. AND BACKFILLED WITH GRANULAR BACKFILL (57 STONE).
- SLOPE SITE CONCRETE 1" PER 8' TO DRAIN TOWARDS STREET OR OTHER ADJACENT CITY OR MANATEE COUNTY OWNED DRAINAGE FACILITY. THE DRIVEWAY SLOPE SHALL BE LESS THAN 6% UNLESS SPECIFICALLY APPROVED BY MANATEE COUNTY.
- WET WELL ACCESS HATCHES SHALL UTILIZE A STAPLE ASSEMBLY ON EACH HATCH FOR LOCKING THE WET WELL.
- CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT FLOTATION DURING CONSTRUCTION. ENGINEER SHALL SUBMIT FLOTATION CALCULATIONS ALONG WITH HYDRAULIC CALCULATIONS TO MCPWD ENGINEERING SERVICES DIVISION AT CONSTRUCTION PLAN REVIEW SUBMITTAL.
- THE CONTRACTOR IS TO REMOVE THE EXISTING GENERATOR AND TRANSPORT IT TO A SITE TO BE DESIGNATED BY MANATEE COUNTY.
- NORTHERN AND EASTERN COORDINATES SHOWN ON THIS PLAN REPRESENT THE NORTHEAST CORNER AND SOUTHWEST CORNERS OF THE SLABS/PADS OR IF CIRCULAR STRUCTURE REPRESENT THE CENTERLINE OF THAT STRUCTURE.
- INSTALLATION OF NEW 12" GRAVITY SEWER SHALL BE MADE BY CAREFULLY CHISELING THE CONCRETE IN THE EXISTING MANHOLE AROUND THE EXISTING 10" PIPE TO CREATE AN OPENING LARGE ENOUGH TO INSTALL THE NEW 12" GRAVITY SEWER PIPE AT THE ELEVATION INDICATED. THE NEW 12" GRAVITY SEWER PIPE SHALL BE INSTALLED IN THE OPENING TO ELEVATION AND GRADE AND THE GROUTED IN PLACE WITH NON-METALLIC, NON-SHRINK GROUT.
- THE CONTRACTOR SHALL VERIFY INVERTS OF EXISTING PIPES TO BE CONNECTED TO THE NEW POLYMER CONCRETE MANHOLE PRIOR TO ORDERING THE MANHOLE AND WET WELL STRUCTURES SO THAT THE PIPE CONNECTIONS TO THE POLYMER STRUCTURES CAN BE FITTED WITH PIPE OPENINGS USING PRES SEAL CAST-A-SEAL BOOTS OR APPROVED EQUAL.

EXISTING MANHOLE SCHEDULE

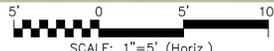
EX. MH S1	RIM: 26.49'
EX. INV IN: 12" PVC 20.14 S/W	
EX. INV IN: 12" PVC 10.83' W	
EX. INV OUT: 12" PVC 10.73' N	
EX. MH S2	RIM: 25.59'
EX. INV IN: 4" PVC 20.74 W	
EX. INV IN: ?" PVC 11.12' S/W	
EX. INV IN: 8" PVC 10.84' N	
EX. INV IN: 10" PVC 10.75 S	
EX. INV OUT: 12" PVC 10.81' E	

SURVEY CONTROL POINTS

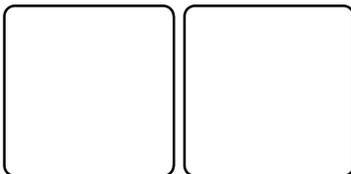
CP-1	NORTHING = 1145834.84	EASTING = 518250.91	ELEVATION = 25.86'	DESCRIPTION = ND (LB 7203)
CP-2 (Not shown on plan)	NORTHING = 1146031.86	EASTING = 518253.09	ELEVATION = 24.98'	DESCRIPTION = ND (LB 7203)



PROPOSED SITE PLAN
SCALE: 1"=5'



REV. NO.	DESCRIPTION	DATE
D	ISSUED FOR BID	SEPT. 2022
C	100% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	JULY 2022
B	80% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
A	30% CLIENT SUBMITTAL	JUNE 2021



MCKIM & CREED
551 North Cattlemen Road, Suite 106
Sarasota, FL 34232
Phone: (941) 379-3404, Fax: (941) 203-1956
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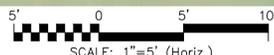
MISSIONARY VILLAGE LIFT STATION REHABILITATION
CIVIL
PROPOSED SITE PLAN

PROJ. START DATE: 2021 MARCH	SCALE: AS SHOWN	C00.2A DRAWING NUMBER
MCE PROJ. # 6022386	HORIZONTAL: NA	
DRAWN: EJB	VERTICAL: NA	D REVISION
DESIGNED: LC	STATUS: ISSUED FOR BID	
CHECKED: PJL		
PROJ. MGR: BP		

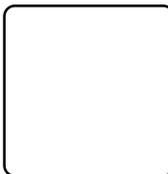
- NOTES:**
1. LJ = CONCRETE PAVEMENT LONGITUDINAL JOINT
 2. CJ = CONCRETE PAVEMENT CONTRACTION JOINT
 3. EJ = CONCRETE PAVEMENT EXPANSION JOINT
 4. REFERENCE CONCRETE JOINT DETAILS ON SHEET D00.4.



PROPOSED SITE PLAN
SCALE: 1"=5'



REV. NO.	DESCRIPTION	DATE
C	ISSUED FOR BID	SEPT. 2022
B	100% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	JULY 2022
A	90% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022



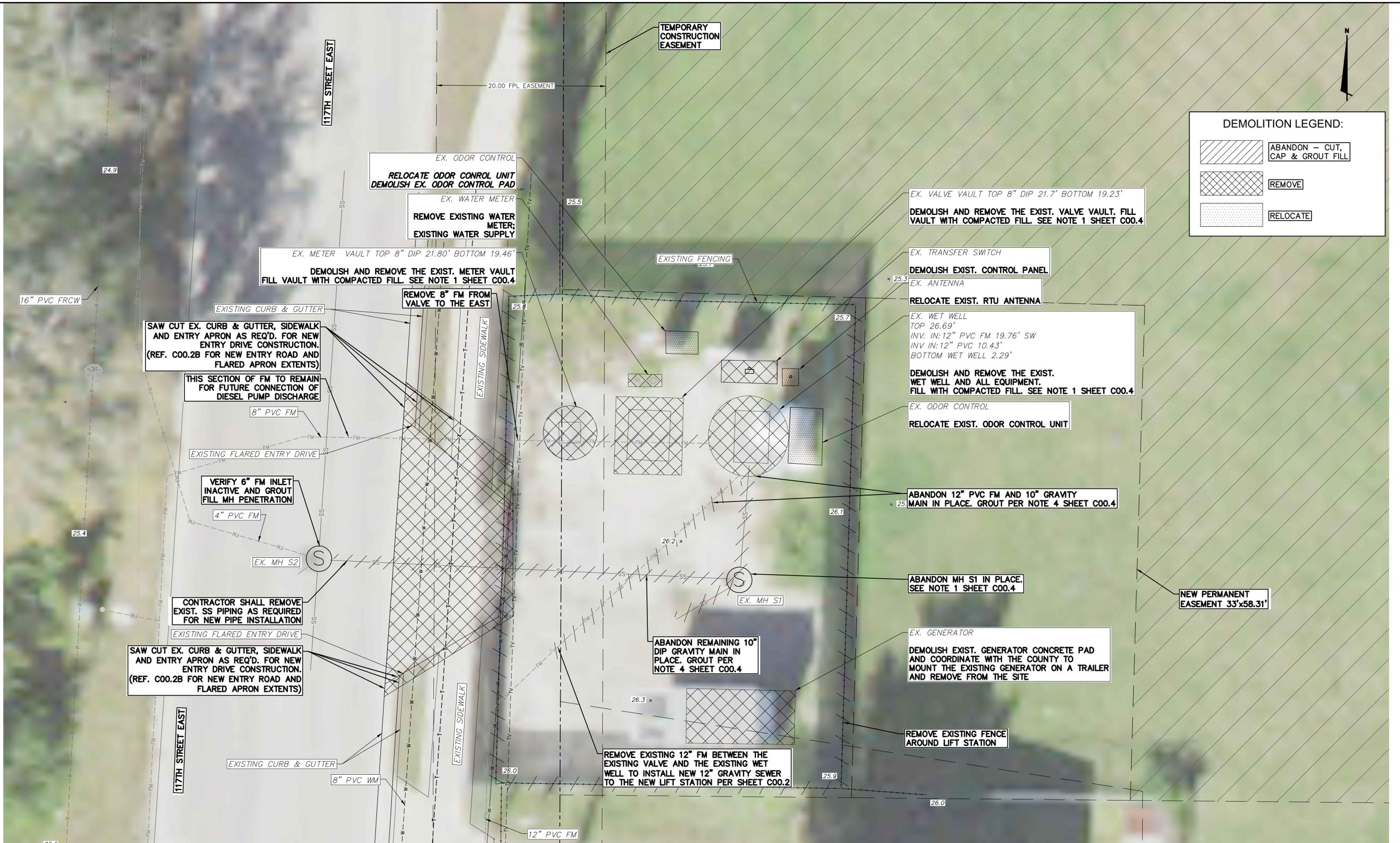
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**MISSIONARY VILLAGE LIFT STATION
REHABILITATION**

CIVIL
SITE PLAN DRIVEWAY

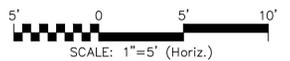
PROJ. START DATE: 2021 MARCH	SCALE: 1"=5' (Horiz.)	C00.2B DRAWING NUMBER
MCE PROJ. # 6022386	HORIZONTAL: AS SHOWN	
DRAWN: EJB	VERTICAL: NA	C REVISION
DESIGNED: AS	STATUS: ISSUED FOR BID	
CHECKED: P.J.L.		
PROJ. MGR: MAC		



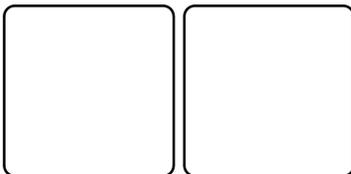
DEMOLITION LEGEND:

- ABANDON - CUT, CAP & GROUT FILL
- REMOVE
- RELOCATE

DEMOLITION PLAN
SCALE: 1"=5'



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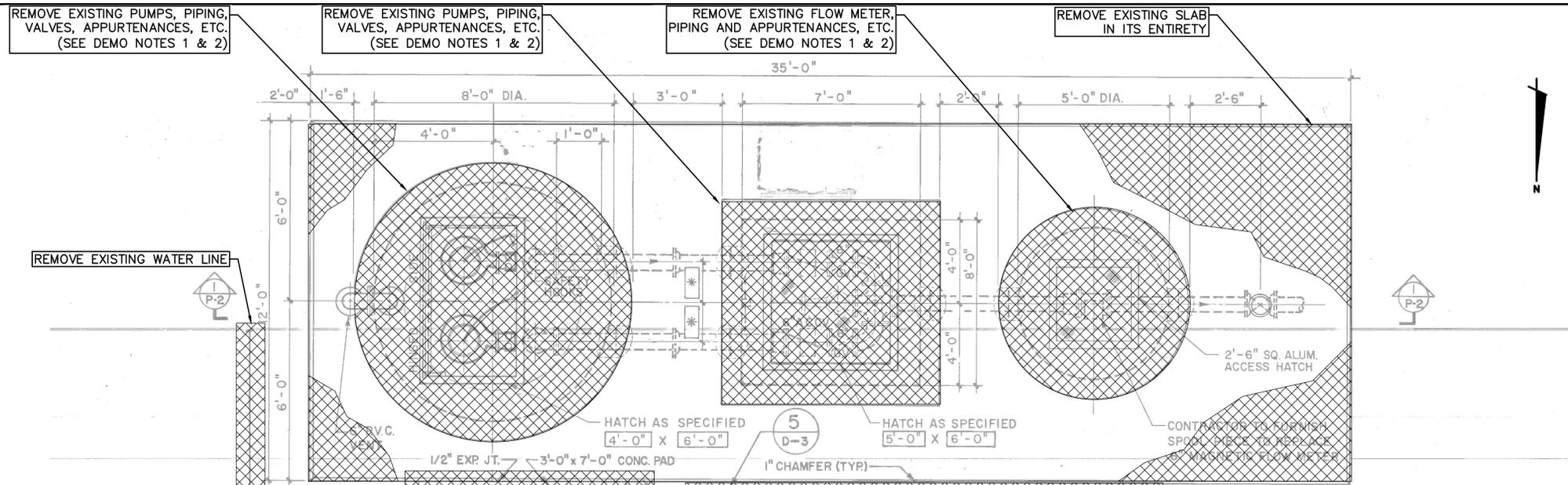
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**MISSIONARY VILLAGE LIFT STATION
REHABILITATION**

CIVIL
DEMOLITION PLAN

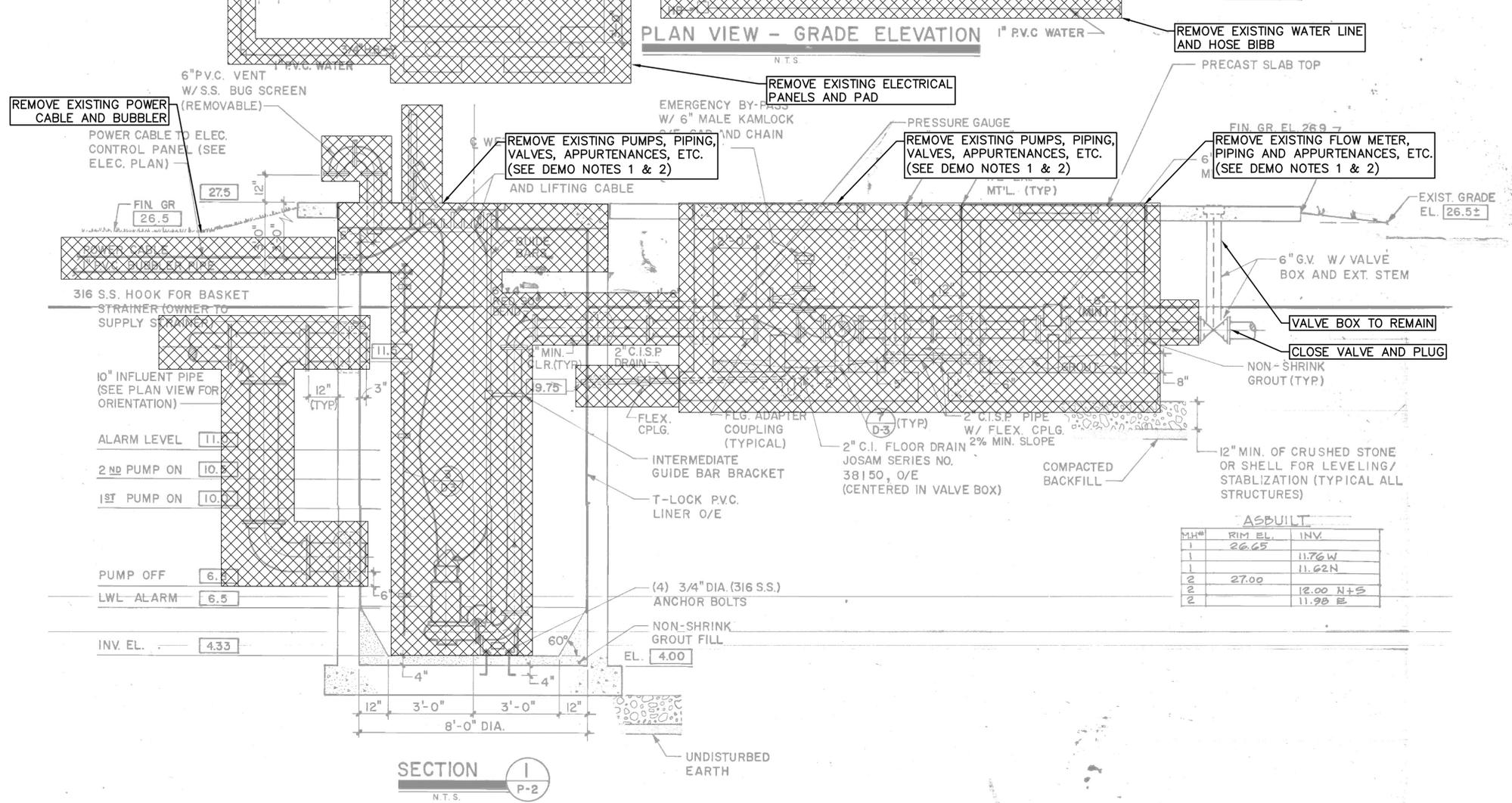
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MCE PROJ. # 6022386	HORIZONTAL: AS SHOWN	
DRAWN: EJB	VERTICAL: NA	
DESIGNED: LC	REVISION: D	
CHECKED: PJL	STATUS: ISSUED FOR BID	
PROJ. MGR: BP		



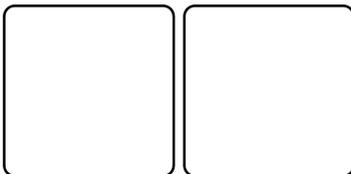
DEMOLITION LEGEND:

	ABANDON - CUT, CAP & GROUT FILL
	REMOVE
	RELOCATE

- DEMOLITION NOTES:**
1. REMOVE TOP 3 FEET OF STRUCTURES, OR FIRST SECTION IF PREFERRED, INCLUDING TOP SLABS UNLESS NOTED OTHERWISE.
 2. DRILL MINIMUM OF (3) 12" DIAMETER HOLES IN ALL STRUCTURE BASE SLABS WITHIN EACH STRUCTURE AND FILL STRUCTURE WITH CLEAN SAND COMPACTED TO 95% RELATIVE COMPACTION.
 3. EXISTING RECORD DRAWINGS FROM "SOUTHEAST SUBREGIONAL WASTEWATER TREATMENT FACILITIES", PUMP STATION AND FORCE MAIN PHASE I--SEGMENT C--PART 2, DATED MARCH 1989.
 4. ALL EXISTING GRAVITY MAINS AND FORCE MAINS THAT ARE TO BE ABANDONED-IN-PLACE SHALL BE GROUTED COMPLETELY FULL WITH CEMEX SAP CODE 1386014 OR APPROVED EQUAL AND OPENINGS TO BE SEALED WITH APPROPRIATE PIPE FITTINGS.
 5. REMOVE THE VALVE AND METER VAULTS IN THEIR ENTIRETY, INCLUDING BASE SLABS.



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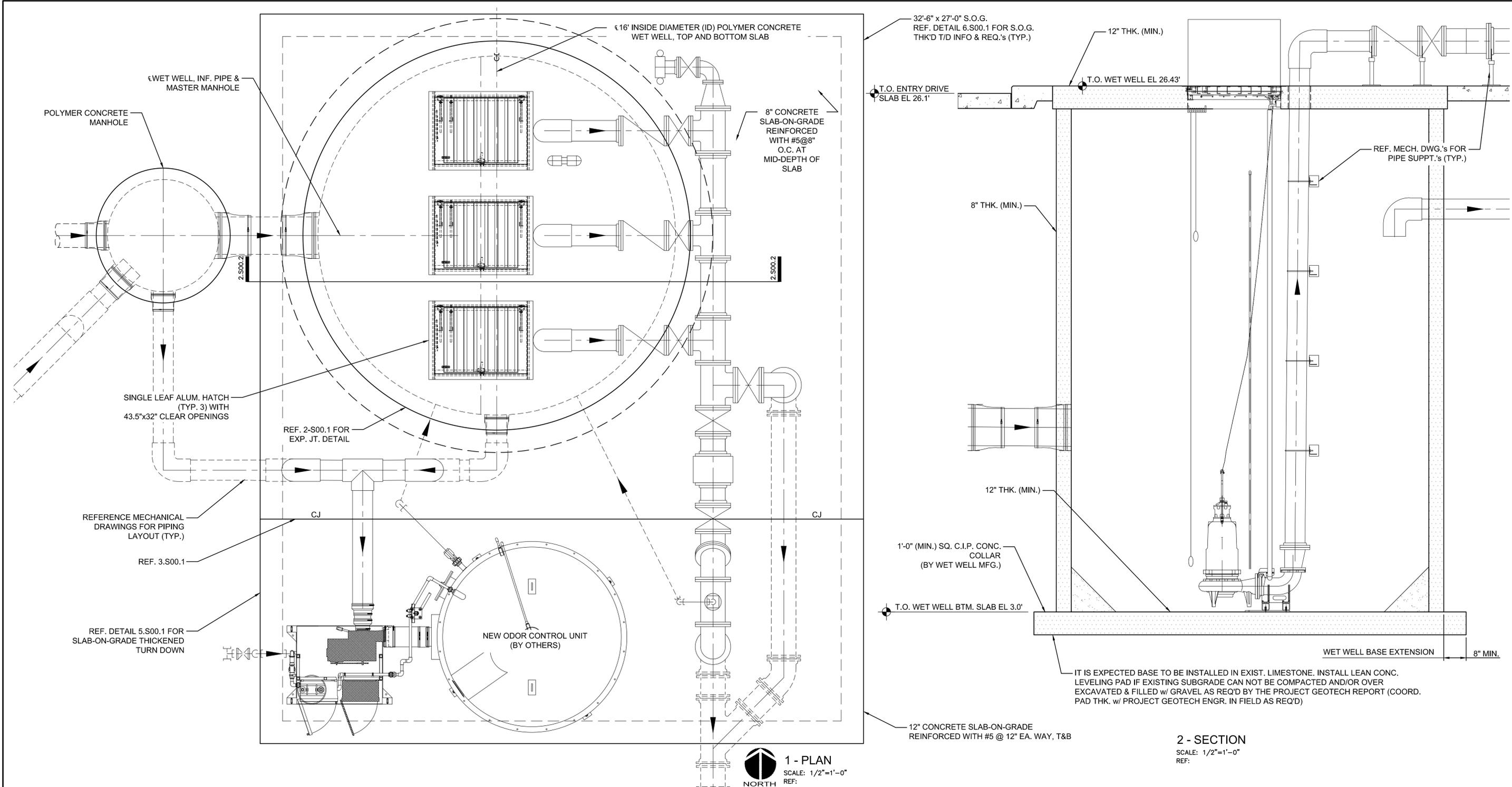
MISSIONARY VILLAGE LIFT STATION REHABILITATION

CIVIL

EXISTING LIFT STATION DEMOLITION

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MCE PROJ. # 6022386	HORIZONTAL: AS SHOWN	
DRAWN: EJB	VERTICAL: NA	C
DESIGNED: AS		
CHECKED: PJL		
PROJ. MGR: MAC		

STATUS: ISSUED FOR BID



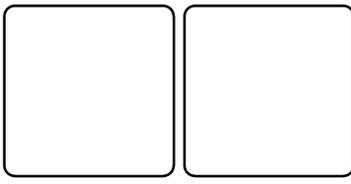
PLAN NOTES:

- REFERENCE ELEVATION FOR THE LIFT STATION (LS) WILL BE THE BASE SLAB T.O. CONC. EL 3.0'. COORDINATE THE T.O. CONC. EL w/ THE SPECIFIC SITE ELEVATION DATUM. THE GC IS TO VERIFY WHETHER THE ELEVATION DATUM CORRESPONDS w/ N.A.V.D.-88. REFERENCE CIVIL DRAWINGS IF APPLICABLE FOR ADD'L INFORMATION.
- GRADE ELEVATION AROUND THIS STRUCTURE IS TO BE COORDINATED w/ SPECIFIC SITE SURVEY AND/OR CIVIL SITE DRAWINGS.
- EQUIPMENT & PROCESS PIPE LAYOUTS ARE SHOWN FOR GENERAL INFO ONLY. REFERENCE CIVIL, ELECTRICAL, MECHANICAL & EQUIPMENT VENDOR DRAWINGS FOR LOCATIONS & INFO REGARDING SLAB & WALL PENETRATIONS, OPENINGS, PIPING & MISCELLANEOUS EQUIPMENT EITHER SHOWN OR NOT SHOWN.
- THE LIFT STATION FACILITY CONSISTS OF (1) PRECAST POLYMER CONCRETE STRUCTURE. NOTE THE FOLLOWING:
 - LIFT STATION: 16' ID x 22' (±) TO THE T.O. CONC. OF THE BASE SECTION. THE LIFT STATION SHALL BE A PRECAST POLYMER CONCRETE ASSEMBLY.

- THE LIFT STATION IS TO BE DESIGNED & FABRICATED BY A VENDOR EXPERIENCED w/ THE DESIGN & FABRICATION OF PRECAST POLYMER CONCRETE ASSEMBLIES DETAILED THIS DWG.
- IN ADDITION TO THE LIFT STATION RISER SECTIONS IT IS THE RESPONSIBILITY OF THE LIFT STATION VENDOR TO DESIGN & FABRICATE THE PRECAST POLYMER CONCRETE TOP AND BOTTOM SLABS
- IN REGARDS TO THE DESIGN OF THE LIFT STATION ASSEMBLY NOTE THE FOLLOWING:
 - DESIGN SHALL BE IN CONFORMANCE w/ THE FLORIDA BLDG. CODE. REFERENCE "DESIGN LOADS" TABLE ON DWG. S00.0.
 - DESIGN SHALL BE BY PROFESSIONAL ENGINEER CURRENTLY LICENSED BY THE STATE OF FLORIDA.
 - DESIGN SHALL INCLUDE ALL APPLICABLE LOADS & COMBINATIONS AS REQUIRED BY THE FLORIDA BLDG. CODE.
- SUBMITTAL REQUIREMENTS DURING CONSTRUCTION SHALL INCLUDE THE FOLLOWING:
 - BUOYANCY CALCS. INDICATING A F.S. ≥ 1.25 WITHOUT INCORPORATING SOIL FRICTION. BUOYANCY CALCULATIONS SHALL ASSUME WATER LEVEL ABOVE GRADE.
 - STRUCTURAL CALCULATIONS FOR LS SLABS, RISERS, & BASE SECTIONS.

- LS SHOP DRAWINGS w/ REINF. REQUIREMENTS.
- ALUMINUM ACCESS HATCH SHOP DRAWINGS.
- ALL SUBMITTAL DOCUMENTS SHALL BE SIGNED, SEALED, & DATED BY ENGR. REFERENCED IN NOTE ABOVE.
- ANCHORS & LIFTING DEVICES SHALL NOT PENETRATE THE WALLS OF THE WET WELL.
- ALL METAL APPURTENANCES INCLUDING BOLTS, NUTS AND WASHERS INSIDE THE WET WELL AND VALVE VAULT SHALL BE STAINLESS STEEL UNLESS OTHERWISE NOTED (TYPE 316). ALL STAINLESS STEEL BOLTS SHALL BE TREATED WITH NEVER-SEIZE PRIOR TO ASSEMBLY.
- BASE AND FIRST WALL SECTION AND THE TOP SLAB AND LAST WALL SECTION SHALL BE MONOLITHIC.

REV. NO.	DESCRIPTION	DATE
C	ISSUED FOR BID	SEPT. 2022
B	100% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	JULY 2022
A	90% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022



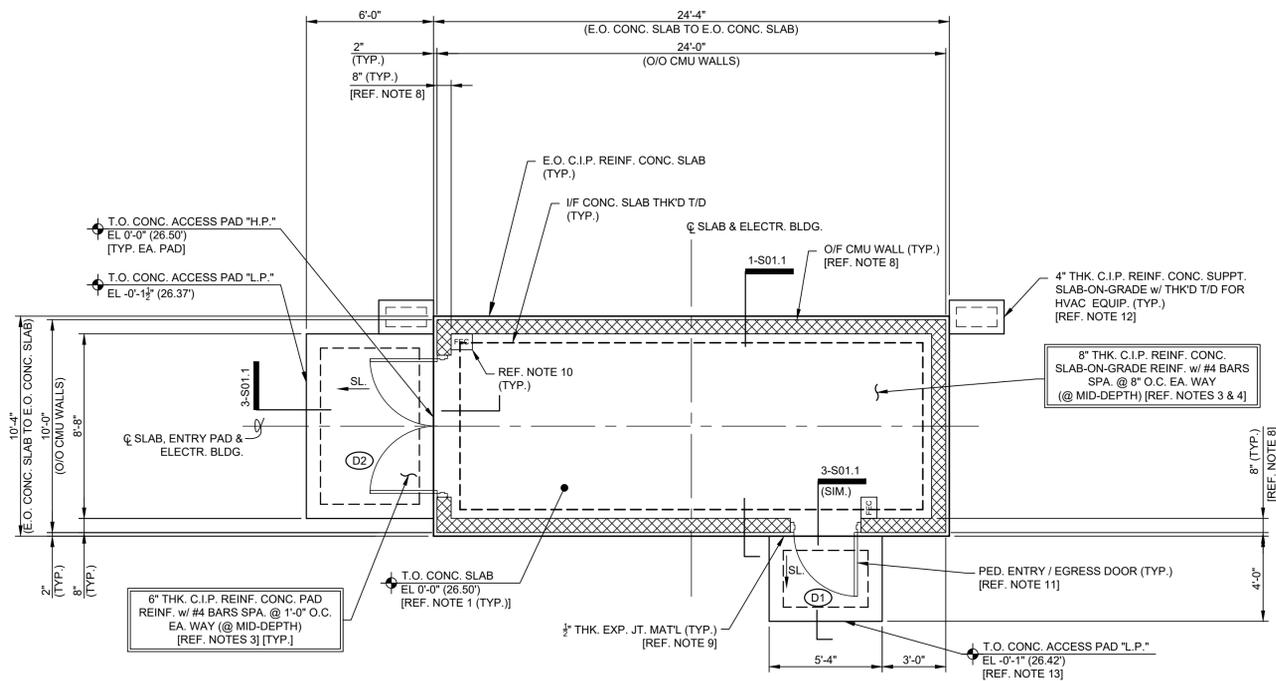
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 Phone: (941) 379-3404, Fax: (941) 203-1956
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MISSIONARY VILLAGE LIFT STATION REHABILITATION
 STRUCTURAL
LIFT STATION PLAN AND SECTION

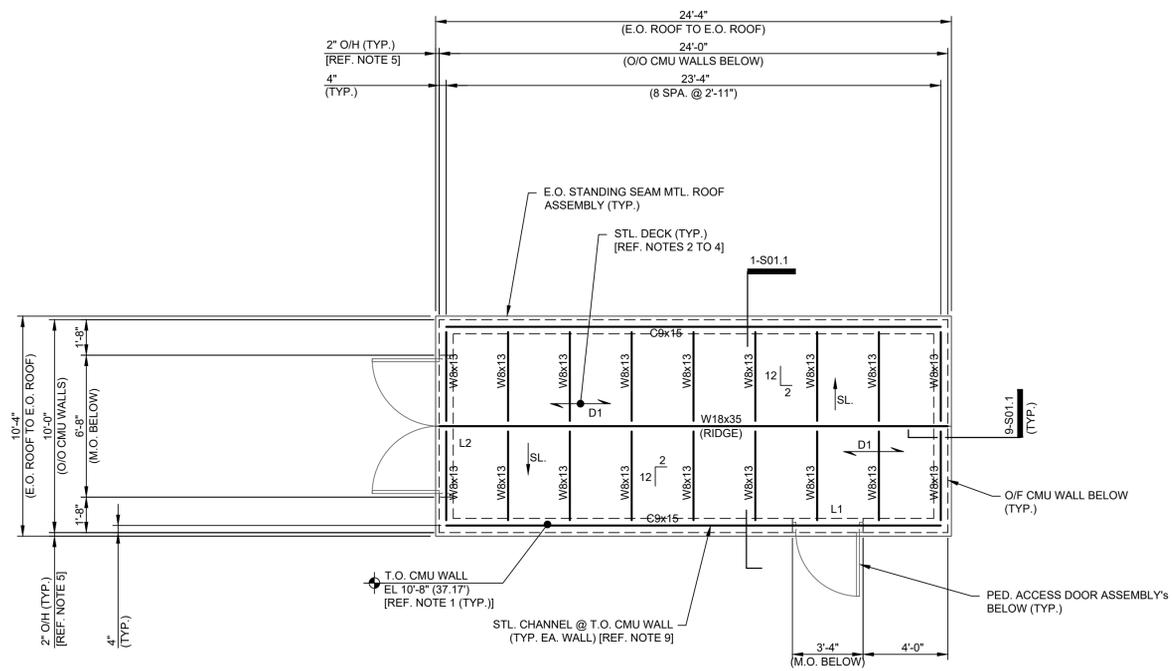
PROJ. START DATE: 2021 MARCH	SCALE: AS SHOWN	S00.2
MCE PROJ. # 6022386	HORIZONTAL: AS SHOWN	
DRAWN: EJB	VERTICAL: NA	C
DESIGNED: AS		
CHECKED: PJL		
PROJ. MGR: MAC		

STATUS: ISSUED FOR BID



1 - PLAN - ELECTRICAL BLDG. FOUNDATION LAYOUT

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



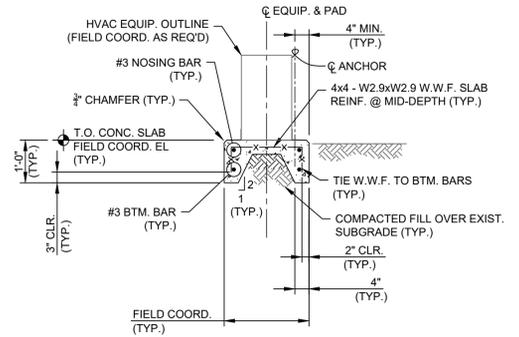
2 - PLAN - ELECTRICAL BLDG. ROOF FRAMING LAYOUT

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

FOUNDATION PLAN NOTES:

- REFERENCE ELEVATION FOR THE ELECTRICAL BUILDING FACILITY IS THE BUILDING'S SLAB-ON-GRADE T.O. CONC. EL. 0'-0" = 26'-6" (26.50) N.A.V.D.-88. REFERENCE CIVIL DWG.'S FOR ADDITIONAL INFORMATION.
- GRADE ELEVATION AROUND THIS STRUCTURE IS 26.25(+). REFERENCE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
- PREPARE SUBGRADE FOR THIS FACILITY BASED UPON INFORMATION PROVIDED IN THE PROJECT GEOTECHNICAL REPORT. FOUNDATIONS COULD REQUIRE CUT / FILL OF SUBGRADE SOILS. REFERENCE "FOUNDATIONS" STRUCTURAL GENERAL NOTES 3.1 THRU 3.11 ON DWG. S00.0 FOR ADDITIONAL REQUIREMENTS & INFORMATION.
- CONSTRUCT THE PUMP SUPPORT PEDESTAL'S W/ THE TOP SURFACE LEVEL & W/ IN EQUIPMENT MFG.'S ALLOWED TOLERANCES.
- EQUIPMENT LAYOUTS ARE SHOWN FOR GENERAL INFORMATION ONLY. REFERENCE ELECTRICAL & EQUIPMENT VENDOR DRAWINGS AS REQUIRED, FOR MISCELLANEOUS EQUIPMENT LAYOUTS, ACCESSORIES, DIMENSIONS & ELEVATIONS.
- CONTRACTOR TO NOTE NOT ALL EQUIPMENT & PIPING / CONDUIT MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR COORDINATING W/ CIVIL, ELECTRICAL & OTHER DISCIPLINE DWG.'S, IN ADDITION TO EQUIPMENT VENDOR DRAWINGS FOR LOCATIONS & INFO REGARDING PIPING, CONDUIT & MISCELLANEOUS EQUIPMENT EITHER SHOWN OR NOT SHOWN THIS PLAN.
- COORDINATE W/ CIVIL, ELECTRICAL, & EQUIPMENT VENDOR DRAWINGS FOR LOCATIONS & INFORMATION REGARDING SLAB PENETRATIONS FOR PIPING & CONDUIT ROUTING REQUIREMENTS EITHER SHOWN OR NOT SHOWN.
- WALLS ARE STANDARD NORMAL WEIGHT CONCRETE MASONRY UNIT ASSEMBLIES. WALL DIMENSION INDICATED IS THE NOMINAL WALL THICKNESS. REFERENCE SECTIONS & DETAILS FOR CMU WALL REINFORCING REQUIREMENTS.
- EXPANSION JOINT MATERIAL BETWEEN THE ELECTRICAL BUILDING SUPPORT SLAB-ON-GRADE & THE ENTRY PADS. NOTE THE FOLLOWING:
 - INSTALL W.R. MEADOWS SEAL/TIGHT FIBRE EXP. JOINT MATERIAL OR AN APPROVED EQUAL.
 - JOINT MATERIAL IN CONFORMANCE W/ ASTM D1751.
- INSTALL FIRE EXTINGUISHERS & CABINET ASSEMBLY'S ANCHORED TO THE CONCRETE WALL PANELS & IN CONJUNCTION W/ REQ.'S OF THE PROJECT SPECIFICATIONS, OSHA STANDARDS & OWNER SAFETY PLAN CRITERIA AS APPLICABLE.
- (DX) * SYMBOL ON PLANS REFERS TO DOOR ASSEMBLY MARK NUMBERS. DOOR ASSEMBLY'S SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING:
 - MATERIALS = ALUMINUM HOLLOW CORE PANEL & ALUMINUM FRAME ASSEMBLY W/ PAINTED FINISH.
 - ACCESSORIES FOR DOORS SHALL INCLUDE WINDOW PANES, DOOR LEVERS, CLOSER, CYLINDER & DEADBOLT LOCKS, PANIC HARDWARE, SILENCER, KICK PLATE & THRESHOLD.
 - REFERENCE DOOR DWG. SCHEDULE & DETAILS AND PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

- NOTES CTD.
- REGARDING SUPPT. SLABS-ON-GRADE FOR THE HVAC EQUIPMENT, NOTE THE FOLLOWING:
 - REFERENCE ELECTR. DWG.'S & PROJECT SPECS AS REQ'D FOR EQUIPMENT INFO.
 - COORDINATE PAD DIMENSION'S W/ DETAIL 2A-S01.0 AND THE APPROVED EQUIPMENT SUBMITTAL'S AS REQUIRED.
 - FIELD COORDINATE E.O. CONCRETE PAD W/ E.O. SLAB-ON-GRADE AROUND THE WET WELL BASED UPON THE LAYOUT OF THE WET WELL FACILITY CONTRACTOR MAY EXTEND E.O. PAD TO E.O. SLAB-ON-GRADE & SET T.O. CONC. ACCESS PAD EQUAL TO T.O. CONC. SLAB-ON-GRADE @ EL. -0'-0 1/2" (26.43).
 - REFERENCE DWG.'S S00.0 FOR ADDITIONAL STRUCTURAL GENERAL NOTES, MATERIAL SPECIFICATIONS & REQUIREMENTS, DESIGN CRITERIA AND LEGEND.



2A - DETAIL - HVAC EQUIP. PAD

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

ROOF FRMG. PLAN NOTES:

- REFERENCE "FOUNDATION PLAN" NOTE 1 FOR THE ELECTRICAL BUILDING REFERENCE ELEVATION.
- * SYMBOL ON PLANS INDICATES SPAN DIRECTION OF THE STEEL ROOF DECK.
- "D1" ROOF DECKING IS 1/2" TYPE B 20 GA. DECK PANELS W/ GALVD FINISH.
- ATTACH THE STEEL DECK TO THE STEEL PURLINS & BEAMS, USING A 36 / 4 PATTERN OF #12 TEK SCREWS & A MIN. (4) #10 TEK SCREW SIDE LAP FASTENERS.
- IN GENERAL THE ROOF O/H DIMENSIONS PROVIDED ARE FROM THE O/F OF THE WALLS TO THE E.O. OF THE STANDING SEAM METAL ROOF PANELS. REFERENCE STRUCTURAL DRAWING SECTIONS & DETAILS FOR ADDITIONAL INFORMATION.
- RIDGE VENT NOT SHOWN THIS PLAN VIEW FOR CLARITY. PROVIDE ASSEMBLY IN CONFORMANCE W/ ROOF MFG.'S SPECIFICATIONS & REQUIREMENTS.
- ALL STRUCTURAL STEEL PLATE AND SHAPE SECTIONS SHALL BE HOT DIPPED GALVD.
- ALL STRUCTURAL STEEL CONNECTIONS BOLTS & HARDWARE SHALL BE HOT-DIPPED GALVD.
- CHANNEL SECTION @ THE EAST & WEST WALLS NOT SHOWN FOR CLARITY. REFERENCE SECTIONS & DETAILS FOR ADDITIONAL INFORMATION.
- REFERENCE DWG.'S S00.0 FOR ADDITIONAL STRUCTURAL GENERAL NOTES, MATERIAL SPECIFICATIONS & REQUIREMENTS, DESIGN CRITERIA AND LEGEND.

DOOR & FRAME SCHEDULE														
DOOR NO.	UL LABEL	DOOR			FRAME			HDW. SET	REMARKS					
		WIDTH	HEIGHT	THK.	MAT'L	TYPE	GLAZING			MAT'L	TYPE	HEAD	JAMB	SILL
(D1)	N/A	3'-0"	7'-2"	1 1/2"	AL	1	N/A	AL	1	*1	*1	*1	*2	REF. 5-S01.0 & 6-S01.0
(D2)	N/A	3'-2" PR.	7'-2"	1 1/2"	AL	2	YES	AL	2	*1	*1	*1	*2	REF. 5-S01.0 & 6-S01.0

MATERIAL LEGEND:

AL - ALUMINUM	FRP - FIBERGLASS REINF. PLASTIC	HM - HOLLOW METAL
IAL - INSULATED ALUMINUM	STL - STEEL GALVD	LAM - LAMINATE
SCW - SOLID CORE WOOD	F - FLUSH	SLG - SIDE LIGHT GLASS
SCWHG - SCW HALF GLASS	FG - FULL GLASS	

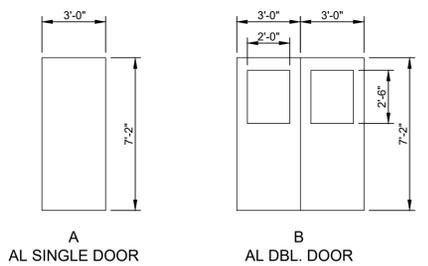
3 - SCHEDULE - DOORS & FRAMES

SCALE: N.T.S.

CMU WALL LINTEL SCHEDULE				
LINTEL MARK	OPENING CLR. SPAN	LINTEL DEPTH	LINTEL BM. REINF.	END BRG. @ EA. END
L1	3'-4"	8"	(2) #4 BARS	1'-4"
L2	6'-8"	16"	(2) #4 BARS	1'-4"

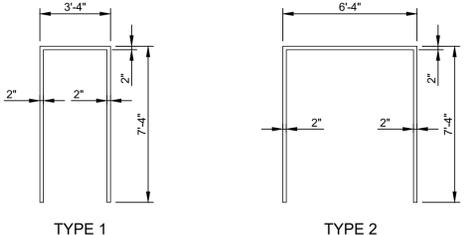
4 - SCHEDULE - LINTEL BEAM'S

SCALE: N/A



5 - DETAIL - BLDG. DOOR TYPES

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



6 - DETAIL - BLDG. DOOR FRAME TYPES

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

REV. NO.	DESCRIPTION	DATE
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REVISIONS

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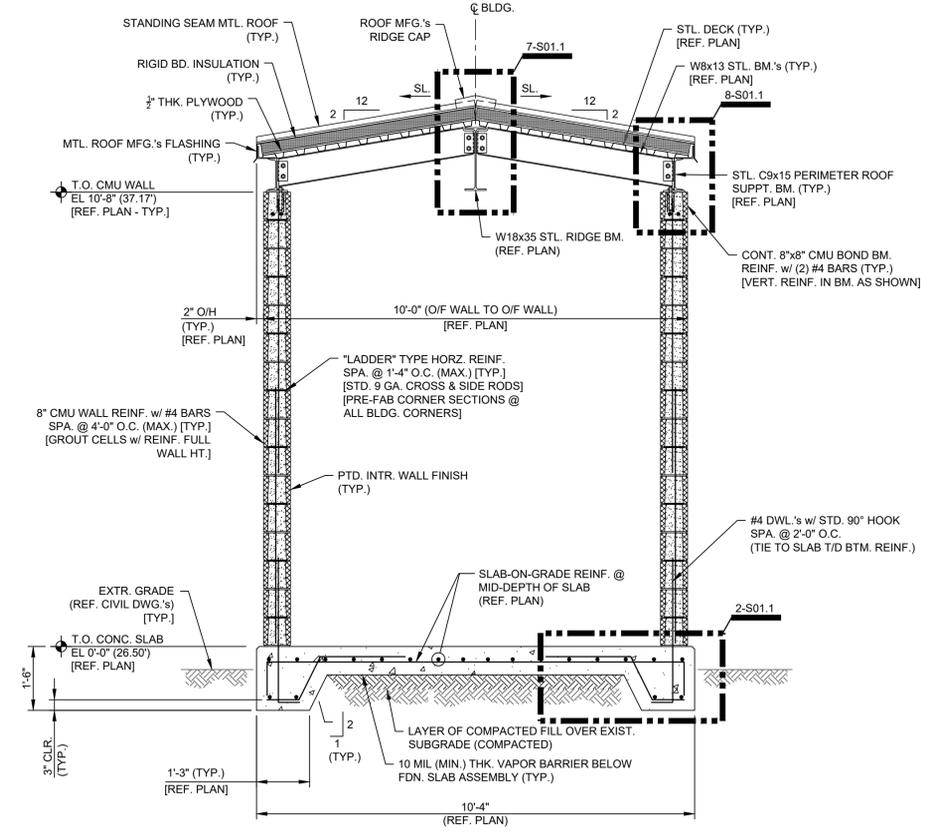
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MISSIONARY VILLAGE LIFT STATION REHABILITATION

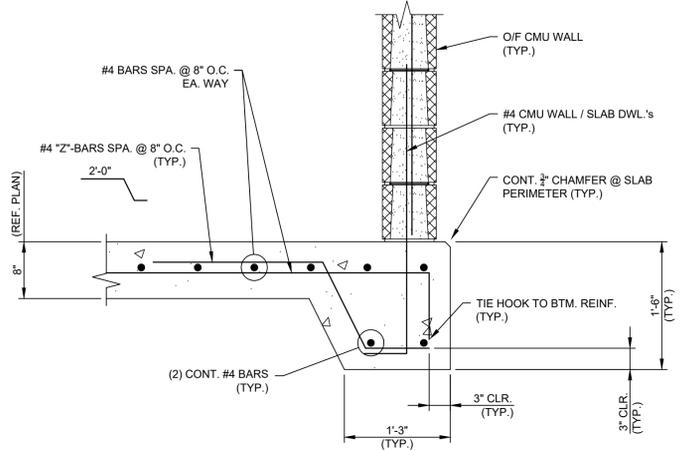
STRUCTURAL

ELECTR. BLDG. FOUNDATION & ROOF FRMG. PLANS

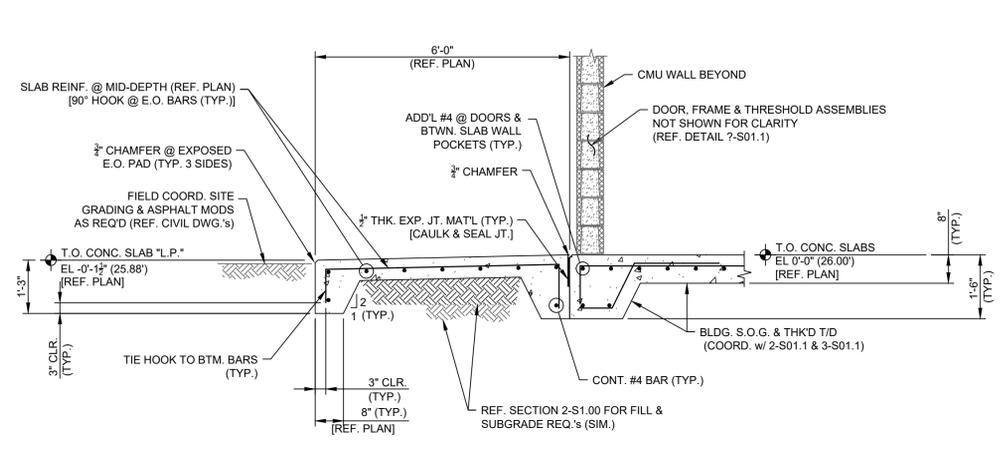
PROJ. START DATE: 2021 MARCH	SCALE: HORIZONTAL: NA	S01.0
MCE PROJ. # 6022386	VERTICAL: NA	
DRAWN: WFB / EAB	AS NOTED	DRAWING NUMBER: B
DESIGNED: WFB	REVISION: NA	
CHECKED: AEA		
PROJ. MGR: TLC / BRP		
STATUS: ISSUED FOR BID		



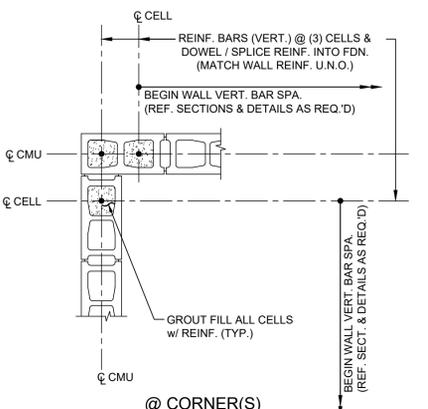
1 - SECTION - THRU ELECTRICAL BLDG.
SCALE: 1/2" = 1'-0"



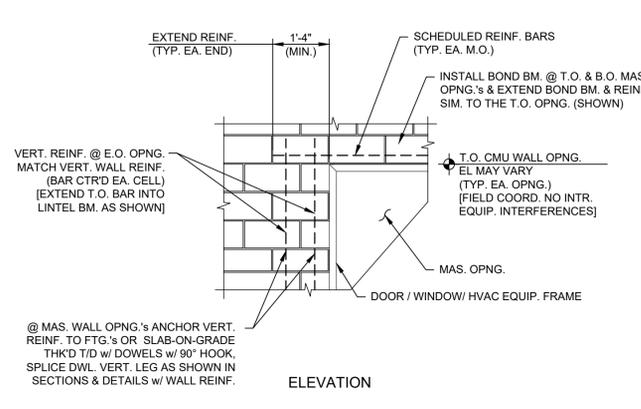
2 - DETAIL - SLAB THK'D T/D REINF.
SCALE: 1" = 1'-0"



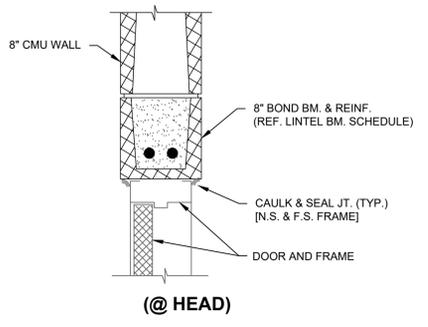
3 - SECTION - THRU ELECTRICAL BLDG. WEST ENTRY PAD
SCALE: 1/2" = 1'-0"



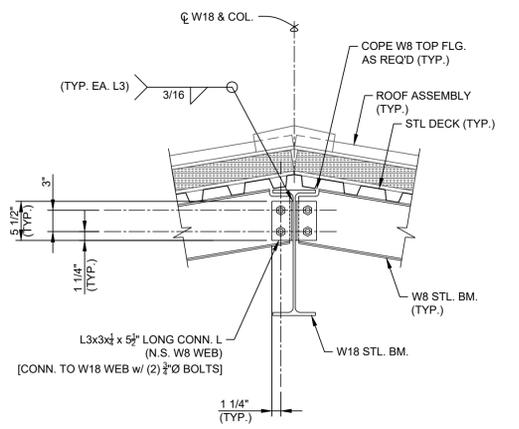
4 - DETAIL - TYP. REINF. LAYOUT REQ.'s
SCALE: 3/4" = 1'-0"



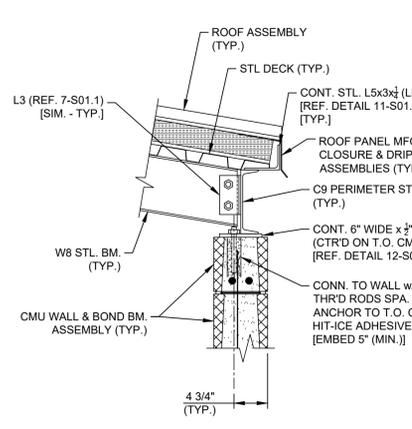
5 - DETAIL - TYP. REINF. OPNG. REQ.'s
SCALE: 1/2" = 1'-0"



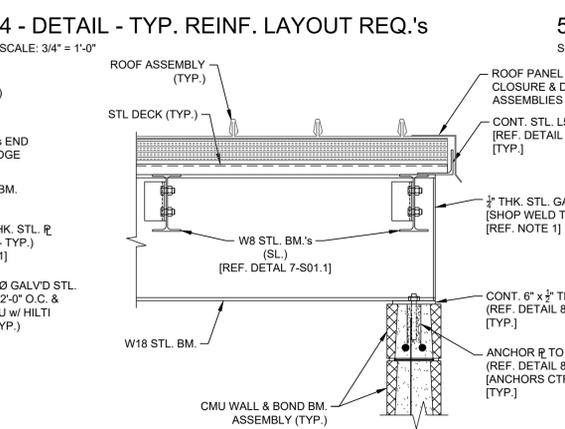
6 - DETAIL - TYP. DOOR, HEAD, JAMB & SILL REQ.'s
SCALE: 1 1/2" = 1'-0"



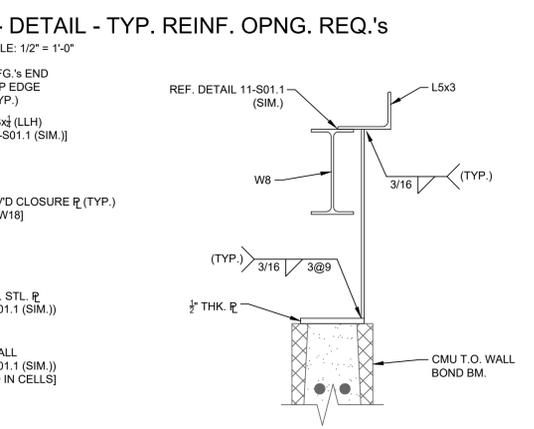
7 - DETAIL - W18 / W8 CONN.
SCALE: 1" = 1'-0"



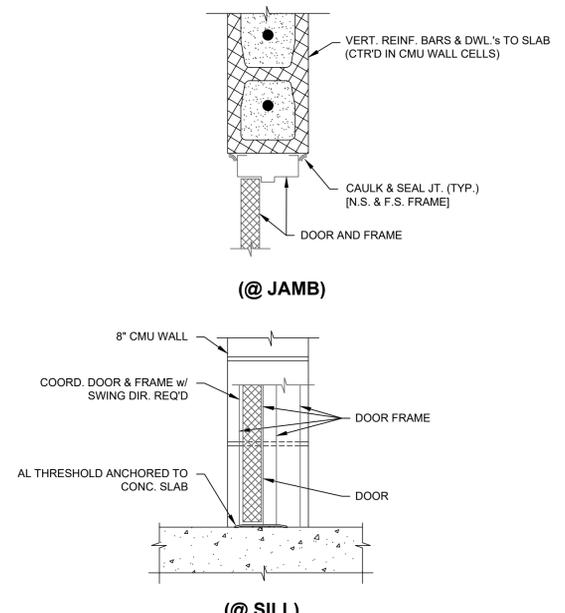
8 - DETAIL - W8 / C9 / CMU WALL CONN.
SCALE: 1" = 1'-0"



9 - SECTION - W18 / CMU WALL CONN.
SCALE: 1" = 1'-0"

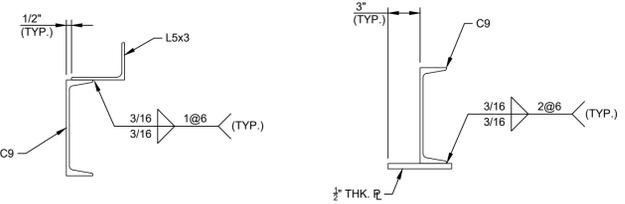


10 - DETAIL - END WALL CLOSURE REQ.'s
SCALE: 1 1/2" = 1'-0"



11 - DETAIL - C9 / L5x3 CONN. 12 - DETAIL - C9 / PLATE CONN.
SCALE: 1 1/2" = 1'-0"

NOTES:
1. BOTH N.S. & F.S. OF THE W18 RIDGE BM. PROVIDE 1/2" THK. CLOSURE PLATE'S & NOTE THE FOLLOWING:
a.) PLATE TO ALIGN FLUSH W/ W18 CLOSURE & THE T.O. WALL BRG. PLATE'S AS SHOWN.
b.) SLOPE T.O. PLATE AS REQ'D. TO B.O. L5x3.
c.) PLATE'S SHALL ALIGN W/ E.O. C9'S AT THE NORTH & SOUTH LONG WALLS.
d.) FIELD WELD CLOSURE PLATE'S TO L5x3 & T.O. WALL BRG. PLATE'S (REF. DETAIL 10-S01.1).
2. REFERENCE DWG.'S S00.0 FOR ADDITIONAL STRUCTURAL GENERAL NOTES, MATERIAL SPECIFICATIONS & REQUIREMENTS, DESIGN CRITERIA AND LEGEND.



11 - DETAIL - C9 / L5x3 CONN. 12 - DETAIL - C9 / PLATE CONN.
SCALE: 1 1/2" = 1'-0"

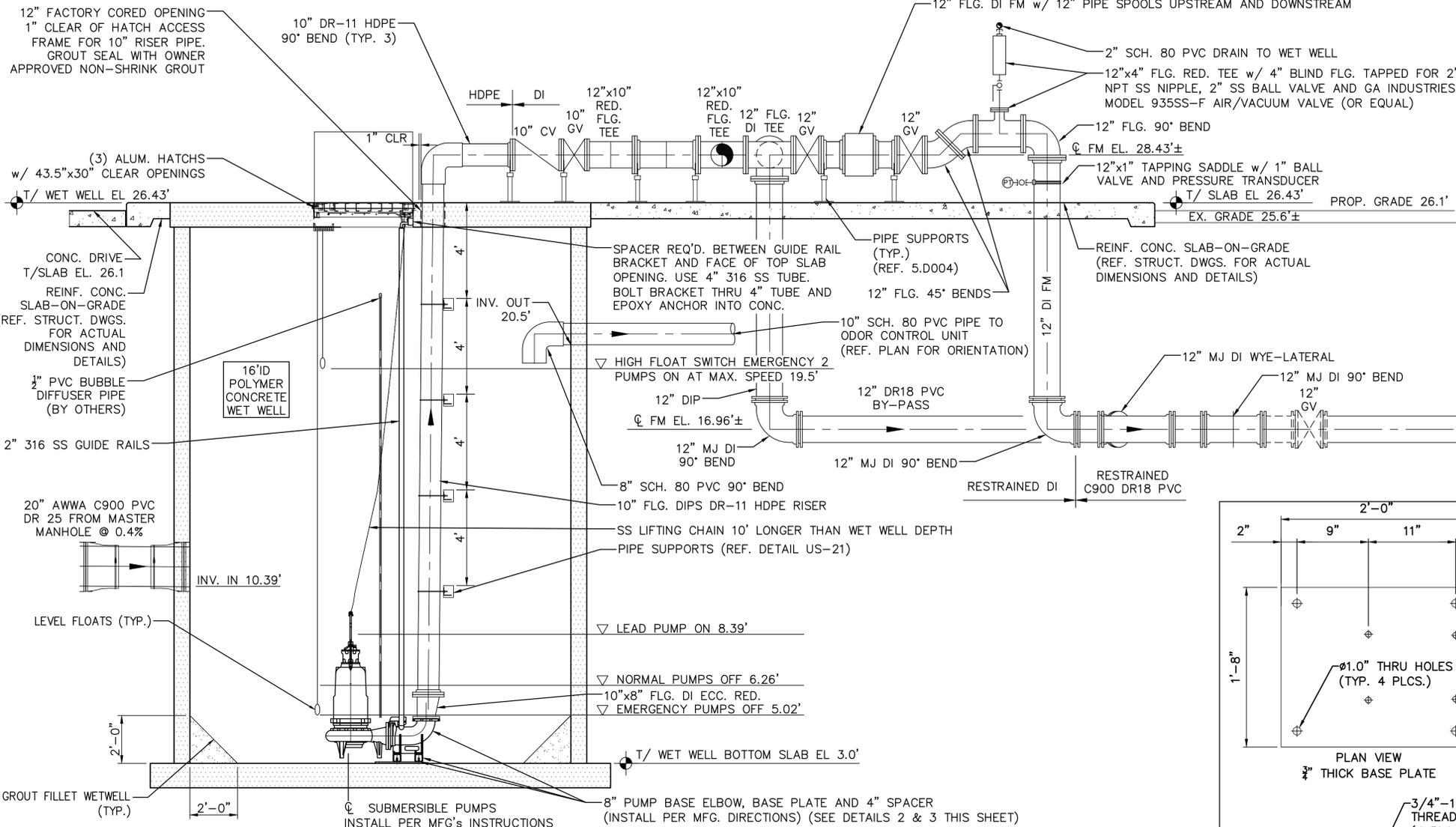
REV. NO.	DESCRIPTION	DATE
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**MISSIONARY VILLAGE LIFT STATION
REHABILITATION**

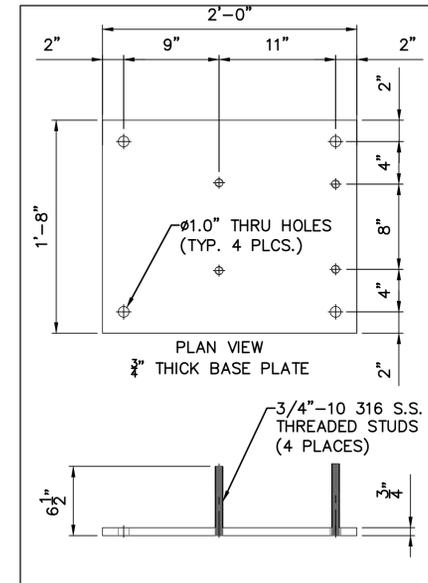
STRUCTURAL
ELECTRICAL BLDG. SECTIONS & DETAILS

PROJ. START DATE: 2021 MARCH	SCALE: HORIZONTAL: AS NOTED VERTICAL: NA	S01.1 DRAWING NUMBER B REVISION
MCE PROJ. # 6022386 DRAWN: WFB / EAB DESIGNED: WFB CHECKED: AEA PROJ. MGR: TLC / BRP	STATUS: ISSUED FOR BID	

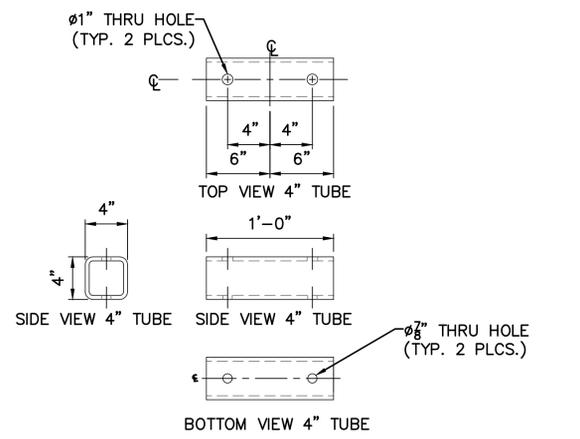


NOTE: OPERATIONAL LEVELS SHOWN ARE IN ACCORDANCE WITH MANATEE COUNTY REQUIREMENTS. OTHER CONTROL LEVELS WILL BE SET IN THE FIELD DURING THE LIFT STATION STARTUP.

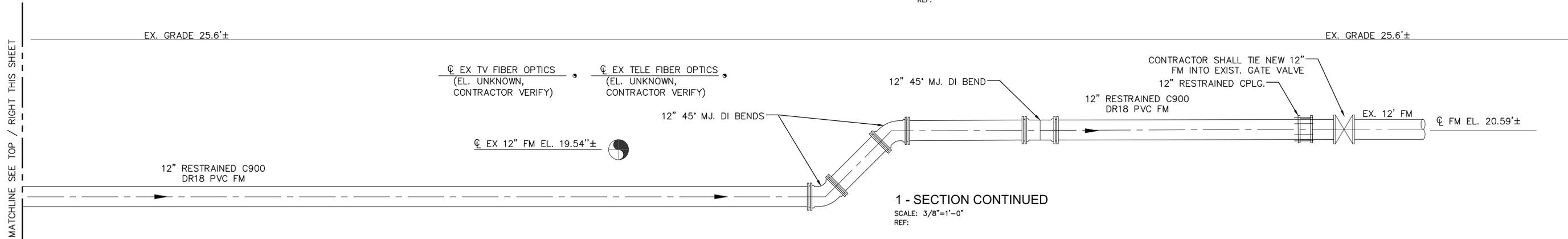
1 - SECTION
SCALE: 3/8"=1'-0"
REF:



2 - DETAIL - PUMP BASE ELBOW MOUNTING PLATE
SCALE: N.T.S.
REF:

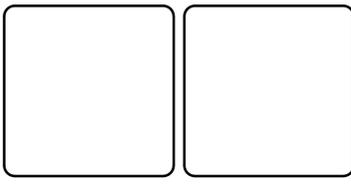


3 - DETAIL - 4" SPACER FOR 8" BASE ELBOWS
N.T.S.



1 - SECTION CONTINUED
SCALE: 3/8"=1'-0"
REF:

REV. NO.	DESCRIPTION	DATE
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**MISSIONARY VILLAGE LIFT STATION
REHABILITATION**
MECHANICAL
PUMP MECHANICAL SECTIONS

PROJ. START DATE: 2021 MARCH	SCALE: M00.2
MCE PROJ. #: 6022386	HORIZONTAL: AS NOTED
DRAWN: EJB	VERTICAL: NA
DESIGNED: LC	REVISION: C
CHECKED: P.J.L.	
PROJ. MGR: BP	
STATUS: ISSUED FOR BID	

1 ANY BLOCKS

- ANY GENERAL PANEL
- ANY SQUARE
- ANY CIRCLE
- ANY FIRE BLOCK
- ANY CIRCUIT BREAKER
- ANY LIGHTING
- ANY EMERGENCY LIGHTING
- ANY AUXILIARY
- ANY OUTLET
- ANY VALVE
- ANY GROUND BLOCK

4 GENERAL ELECTRICAL SYMBOLS

- LIGHTING, INSTRUMENT OR RECEPTACLE PANELBOARD
- POWER PANELBOARD
- CONTROL PANEL
- MOTOR CONTROL CENTER
- POWER MONITOR
- AMMETER
- AMMETER SWITCH
- VOLTMETER
- VOLTMETER SWITCH
- FLOAT/FLOW SWITCH
- LIMIT SWITCH
- PRESSURE SWITCH
- THERMOSTAT
- JUNCTION BOX, SIZE PER NEC
- ELECTRICAL EQUIPMENT CONNECTION
- ELECTRICAL MANHOLE / HANDHOLE AND THE LETTERS INDICATE THE TYPE OF THE HOLE

2 POWER SYMBOLS

- CLASS 1/2 DIVISION III CONDUIT SEAL-OFF FITTING
- LOCAL CONTROL STATION WITH THREE OR MORE SELECTOR/PUSH SWITCHES LOWER-RIGHT SYMBOL INDICATES MOUNTING LOCATION
- LOCAL CONTROL STATION WITH TWO SELECTOR/PUSH SWITCHES LOWER-RIGHT SYMBOL INDICATES MOUNTING LOCATION
- LOCAL CONTROL STATION WITH ONE SELECTOR/PUSH SWITCH LOWER-RIGHT SYMBOL INDICATES MOUNTING LOCATION
- LOCATED AT FIELD DEVICE
- LOCATED AT MAIN CONTROL PANEL
- LOCATED AT LOCAL CONTROL PANEL
- MOUNTED ON DOOR
- DRAW-OUT POWER CIRCUIT BREAKER WITH PROGRAMMABLE SOLID STATE RELAY 'EO' DENOTES ELECTRICALLY OPERATED
- FIXED-MOUNT POWER CIRCUIT BREAKER WITH ADJUSTABLE SOLID STATE RELAY
- CIRCUIT BREAKER, GENERIC FIXED-MOUNT 'TMTU' THERMAL-MAGNETIC TRIP UNIT 'ELTU' ELECTRONIC TRIP UNIT
- CIRCUIT BREAKER, GENERIC
- CIRCUIT BREAKER, THERMAL
- CIRCUIT BREAKER, MOTOR CIRCUIT PROTECTOR
- CIRCUIT BREAKER, THERMAL ENCLOSED TOP NUMBER DENOTES TRIP BOTTOM NUMBER DENOTES FRAME SIZE UPPER LEFT NUMBER DENOTES NEMA ENCLOSURE RATING
- FUSE, GENERIC
- FUSE, GENERIC TOP NUMBER DENOTES TRIP BOTTOM NUMBER DENOTES VOLTAGE CLASS MIDDLE NUMBER DENOTES TYPE
- WIRING DEVICE, POWER RECEPTACLE WITH INTEGRAL DISCONNECT / LOAD BREAK NEMA CONFIGURATION SHOWN LOWER RIGHT
- WIRING DEVICE, POWER RECEPTACLE NEMA CONFIGURATION SHOWN LOWER RIGHT
- PANELBOARD
- TRANSFORMER, POWER TYPE AND RATINGS AS NOTED ON THE DRAWINGS
- TRANSFORMER, SHIELDED ISOLATION TYPE AND RATINGS AS NOTED ON THE DRAWINGS
- TRANSFORMER, CURRENT 'CT' TYPE AND RATINGS AS NOTED ON THE DRAWINGS
- TRANSFORMER, POTENTIAL 'PT' OR 'VT' TYPE AND RATINGS AS NOTED ON THE DRAWINGS
- AUTOMATIC OR MANUAL TRANSFER SWITCH, STAND-ALONE TYPE AND RATINGS AS NOTED ON THE DRAWINGS
- SAFETY / DISCONNECT SWITCH TOP NUMBER DENOTES FUSE SIZE (NF=NON-FUSED) BOTTOM NUMBER DENOTES FRAME SIZE RIGHT NUMBER DENOTES NEMA ENCLOSURE RATING
- MOTOR CONTROLLER, STAND-ALONE WITH EXTERNAL DISCONNECT: UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE UPPER RIGHT NUMBERS DENOTE AMPERE AND FRAME RATINGS CENTER RIGHT NUMBER DENOTES NEMA ENCLOSURE RATING LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING: FVNR FULL VOLTAGE NON-REVERSE FVR FULL VOLTAGE REVERSIBLE TS1W TWO SPEED - SINGLE WINDING TS2W TWO SPEED - DUAL WINDING RVSS REDUCED VOLTAGE SOFT STARTER RVAT REDUCED VOLTAGE AUTO TRANSFORMER VFD VARIABLE FREQUENCY DRIVE
- MOTOR CONTROLLER, FULL-VOLTAGE MCC UNIT: UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING: FVNR FULL VOLTAGE NON-REVERSE FVR FULL VOLTAGE REVERSIBLE TS1W TWO SPEED - SINGLE WINDING TS2W TWO SPEED - DUAL WINDING
- MOTOR CONTROLLER, PART-WINDING MCC UNIT: UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING: TS1W TWO SPEED - SINGLE WINDING TS2W TWO SPEED - DUAL WINDING
- MOTOR CONTROLLER, REDUCED-VOLTAGE MCC UNIT: UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING: RVSS REDUCED VOLTAGE SOFT STARTER RVAT REDUCED VOLTAGE AUTO TRANSFORMER
- MOTOR CONTROLLER, VARIABLE FREQUENCY DRIVE, MCC UNIT: UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING: VFD VARIABLE FREQUENCY DRIVE
- LINE OR LOAD REACTOR CENTER RIGHT NUMBER DENOTES PERCENT IMPEDANCE
- MOTOR PROTECTION FILTER
- AC MOTOR SINGLE OR THREE PHASE AS NOTED
- CABLE-TRAY TYPE AS NOTED ON THE DRAWINGS
- WIRE WAY TYPE AS NOTED ON THE DRAWINGS
- ENCLOSURE FAN, 120VAC UON

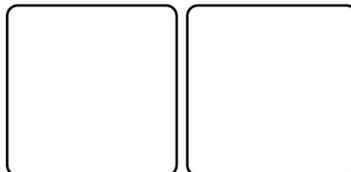
NOTES:
ALL SYMBOLS MAY NOT BE UTILIZED FOR THIS PROJECT.
ADDITIONAL SYMBOLS NOT SHOWN ON THIS DRAWING MAY BE SHOWN ELSEWHERE ON THE ELECTRICAL DRAWINGS. IF REQUIRED, IEC RATINGS WILL INCLUDE THE "IEC" AND "IP" PREFIX.

3 CONTROL DIAGRAM AND SCHEMATIC SYMBOLS

- PB1 MOMENTARY PUSH BUTTON NORMALLY OPENED
- PB2 MOMENTARY PUSH BUTTON NORMALLY CLOSED
- PB3 MUSHROOM PUSH BUTTON NORMALLY OPENED
- PB4 MUSHROOM PUSH BUTTON NORMALLY CLOSED
- TG1 TOGGLE SWITCH NORMALLY OPENED
- TG2 TOGGLE SWITCH NORMALLY CLOSED
- SS1 TWO-POSITION SWITCH NORMALLY OPENED
- SS2 THREE-POSITION BUTTON NORMALLY OPENED
- LS1 LIMIT SWITCH NORMALLY OPENED
- LS2 LIMIT SWITCH NORMALLY CLOSED
- LS3 LIMIT SWITCH HELD OPENED
- LS4 LIMIT SWITCH HELD CLOSED
- TS1 TEMPERATURE SWITCH NORMALLY OPENED
- TS2 TEMPERATURE SWITCH NORMALLY CLOSED
- FLS1 FLOAT SWITCH NORMALLY OPENED
- FLS2 FLOAT SWITCH NORMALLY CLOSED
- FS1 FLOW SWITCH NORMALLY OPENED
- FS2 FLOW SWITCH NORMALLY CLOSED
- PS1 PRESSURE SWITCH NORMALLY OPENED
- PS2 PRESSURE SWITCH NORMALLY CLOSED
- TD1 ON DELAY TIME RELAY NORMALLY OPENED TIMED CLOSED NCTC
- TD2 ON DELAY TIME RELAY NORMALLY CLOSED TIMED OPENED NCTO
- TD3 OFF DELAY TIME RELAY NORMALLY OPENED TIMED OPENED NOTO
- TD4 OFF DELAY TIME RELAY NORMALLY CLOSED TIMED CLOSED NCTC
- INDICATION LIGHT W - WHITE G - GREEN A - AMBER R - RED B - BLUE C - CLEAR
- INDICATION LIGHT, PUSH-TO-TEST W - WHITE G - GREEN A - AMBER R - RED B - BLUE C - CLEAR
- CR1 CONTROL RELAY, GENERIC DESIGNATIONS: CR CONTROL RELAY MX AUXILIARY RELAY TR TIMING RELAY AR ALARM RELAY RR READY RELAY
- LR1 CONTROL RELAY, LATCHING
- CR1 CONTACT, NORMALLY OPENED TOP ID TAG DENOTES PARENT RELAY
- LR1 CONTACT, NORMALLY CLOSED TOP ID TAG DENOTES PARENT RELAY
- SOL1 SOLENOID, GENERIC
- R1 HEATING ELEMENT, GENERIC
- ETM ELAPSED TIME METER, ELECTRONIC
- AH2 HORN, ALARM A/V INDICATES AUDIO AND VISUAL ANNUNCIATION
- XF3 TRANSFORMER, CONTROL POWER RATINGS AS NOTED ON THE DRAWINGS
- BAT1 BATTERY OR DC POWER SOURCE
- M O/C MOTOR ACTUATED VALVE M MODULATING O/C OPEN/CLOSE
- S O/C SOLENOID VALVE O/C OPEN/CLOSE
- NEW ANY GEN BLOCK

NOTES:
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REV. NO.	DESCRIPTION	DATE
C	ISSUED FOR BID	SEPT. 2022
B	40% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
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MISSIONARY VILLAGE LIFT STATION REHABILITATION
ELECTRICAL
SYMBOLS 1 OF 2

PROJ. START DATE: 2021 MARCH	SCALE	E00.2 DRAWING NUMBER
MCE PROJ. # 6022386	HORIZONTAL: AS NOTED	
DRAWN SS	VERTICAL: N/A	
DESIGNED SS	REVISION: C	
CHECKED AAH		
PROJ. MGR. BP		

STATUS: ISSUED FOR BID

5 LIGHTING AND RECEPTACLE SYMBOLS

A1
LP-100/15
a

LIGHT FIXTURE, VARIOUS TYPES
UPPERCASE CHARACTERS "A1" DENOTES TYPE.
REFER TO LIGHTING SCHEDULE OR DRAWING NOTES
LOWER CASE LETTER "a" DENOTES CONTROL SWITCH
DUAL SWITCHING INDICATED BY PAIRS OF LOWER CASE LETTERS "a,b"
NUMBER "LP-100/15" DENOTES LIGHTING PANEL AND CIRCUIT NUMBER
"NL" DENOTES NIGHT LIGHT, CIRCUIT AHEAD OF CONTROL SWITCHES.

A1
LP-100/15
A

LIGHT FIXTURE, VARIOUS TYPES
EMERGENCY / EGRESS BATTERY BACK-UP POWER

A1 **B**
LP-100/15 LP-100/15

PENDANT OR CEILING MOUNTED LIGHTING FIXTURE

A1
LP-100/15

WALL MOUNTED LIGHTING FIXTURE

A A1
LP-100/15

POLE OR STANCHION MOUNTED LIGHTING FIXTURE

A A1
LP-100/15

TWO (2) POLE OR STANCHION MOUNTED LIGHTING FIXTURE

GF A1
LP-100/15

POLE OR STANCHION MOUNTED LIGHTING FIXTURE WITH RECEPTACLE

A A1
LP-100/15
EM

TWO (2) LAMP EMERGENCY / EGRESS LIGHTING FIXTURE
LETTERS DENOTE TYPE

A A1
LP-100/15

EXIT SIGN WALL MOUNTED (SINGLE FACE WITH INDICATING ARROWS)
WITH BATTERY PACK ARROW INDICATES DIRECTION OF EXIT DOOR

A A1
LP-100/15

EXIT SIGN PENDANT MOUNTED (DOUBLE FACE WITH INDICATING ARROWS)
WITH BATTERY PACK ARROWS INDICATE DIRECTION OF EXIT DOOR

D
150
10'-0" AFF

FIXTURE DESIGNATION SYMBOL. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION AND TYPE. ALL FIXTURES SHOWN IN A ROOM WITH THIS SYMBOL SHALL BE OF TYPE INDICATED BY LETTER; NUMBER IN SYMBOL INDICATES LAMP WATTAGE AND NUMBER OF LAMPS WHERE MORE THAN ONE (UNLESS OTHERWISE NOTED). NUMBER BELOW SYMBOL INDICATES MOUNTING HEIGHT ABOVE FINISHED FLOOR OR AS NOTED.

a
2

WIRING DEVICE
LIGHTING CONTROL SWITCHES:
UPPER-LEFT CHARACTER "a" DENOTES SWITCH DESIGNATION.
LOWER-RIGHT CHARACTER "4" DENOTES SWITCH CONTROL

a b
SS
3D

2
3
4
D
OS
M
T
V

TWO POLE
THREE-WAY SWITCH CONTROL
FOUR-WAY SWITCH CONTROL
DIMMER CONTROL
OCCUPANCY SENSOR
MOTOR RATED SWITCH
24V DC MOMENTARY CONTACT SWITCH
VARIABLE SPEED FAN SWITCH

L21-30
PR1
L21-30

WIRING DEVICE, POWER RECEPTACLE
WITH INTEGRAL DISCONNECT / LOAD BREAK
NEMA CONFIGURATION SHOWN LOWER RIGHT

WIRING DEVICE, POWER RECEPTACLE
NEMA CONFIGURATION SHOWN LOWER RIGHT

GF

WIRING DEVICE, SINGLE DUPLEX RECEPTACLE, TYPICAL
LOWER RIGHT CHARACTERS DENOTE THE FOLLOWING:
GF GROUND FAULT CIRCUIT INTERRUPTER
IG ISOLATED GROUND
SS SURGE PROTECTIVE
WP WEATHER-PROOF
GF/WP GROUND FAULT CIRCUIT INTERRUPTER / WEATHERPROOF

GF/WP

WIRING DEVICE, DUPLEX RECEPTACLE
GROUND FAULT CIRCUIT INTERRUPTER / WEATHERPROOF
NEMA 5-20 125V 20A UNLESS OTHERWISE NOTED ON DRAWINGS

GF

WIRING DEVICE, DUPLEX RECEPTACLE
SPLIT-WIRED / SWITCHED
NEMA 5-20 125V 20A UNLESS OTHERWISE NOTED ON DRAWINGS

GF

WIRING DEVICE, QUADPLEX RECEPTACLE
NEMA 5-20 125V 20A UNLESS OTHERWISE NOTED ON DRAWINGS

GF

WIRING DEVICE, QUADPLEX RECEPTACLE
FLOOR BOX MOUNTED
NEMA 5-20 125V 20A UNLESS OTHERWISE NOTED ON DRAWINGS

GF

WIRING DEVICE, HEAT-TRACE OR SPECIAL PURPOSE RECEPTACLE
REFERENCE DRAWINGS FOR ADDITIONAL DETAILS

▽

WIRING DEVICE, TELEPHONE
RJ-11 UNLESS OTHERWISE NOTED ON DRAWINGS

▽

WIRING DEVICE, TELEPHONE AND DATA
RJ-11 AND RJ-45 UNLESS OTHERWISE NOTED ON DRAWINGS

▽

WIRING DEVICE, DATA
RJ-45 UNLESS OTHERWISE NOTED ON DRAWINGS

▽

WIRING DEVICE, TELEPHONE AND DATA
FLOOR BOX MOUNTED
RJ-11 AND RJ-45 UNLESS OTHERWISE NOTED ON DRAWINGS

8 RACEWAY/LINE WEIGHTS

CT110

RACEWAY SYSTEM CALL-OUTS:
CT - CABLE TRAY
BD - BUS DUCT
DB - DUCTBANK
EC - EXPOSED CONDUIT
WW - WIRE WAY/TROUGH

042000

RACEWAY AND/OR CABLE ID NUMBER

LP-3

RACEWAY HOMERUN TO EQUIPMENT ID TAG AS SHOWN. LINE TYPE DESIGNATES CONCEALED, EXPOSED, ETC.
NUMBERS/TEXT DESIGNATE HOMERUN EQUIPMENT (I.E. PANEL BOARD CIRCUIT NUMBER).

TO PLC-1
CONDUCTOR/CABLE CALL-OUT WITHIN RACEWAY
9#14 #12G 0.75"C

----- CONCEALED RACEWAY(S) IN FLOOR SLAB, UNDERGROUND, ETC.
----- EXISTING RACEWAY(S) AND/OR CABLES
----- RACEWAY TURNED DOWN
----- RACEWAY TURNED UP
----- RACEWAY TERMINATED / CAPPED OFF
----- RACEWAY REMOVED / ABANDONED

----- E ----- NEW ELECTRICAL RACEWAY(S)
----- E ----- EXISTING ELECTRICAL RACEWAY(S)
----- T ----- NEW TELEPHONE LINE(S)
----- T ----- EXISTING TELEPHONE LINE(S)
----- OHE ----- OVERHEAD ELECTRICAL UTILITY
----- OHT ----- OVERHEAD TELEPHONE UTILITY
----- UGE ----- UNDERGROUND ELECTRICAL UTILITY
----- UGT ----- UNDERGROUND TELEPHONE UTILITY
----- G ----- NEW GROUNDING / BONDING
----- G ----- EXISTING GROUNDING / BONDING
----- L ----- NEW LIGHTNING PROTECTION CONDUCTOR

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REVISIONS



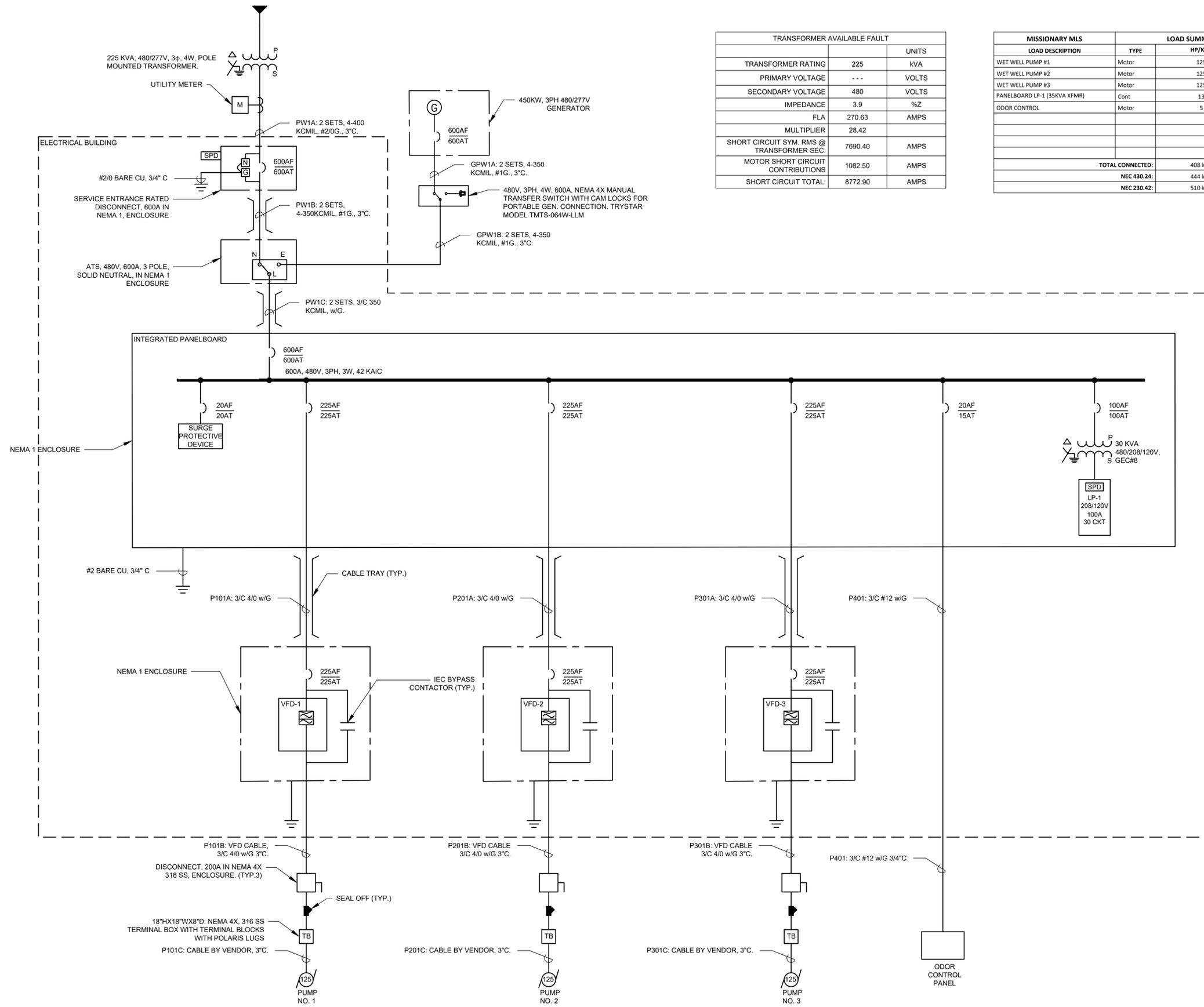
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MISSIONARY VILLAGE LIFT STATION REHABILITATION
ELECTRICAL
SYMBOLS 2 OF 2

PROJ. START DATE 2021 MARCH	SCALE	E00.3 DRAWING NUMBER
MCE PROJ. # 6022386	HORIZONTAL: AS NOTED	
DRAWN SS	VERTICAL: N/A	
DESIGNED SS	REVISION	
CHECKED AAH		
PROJ. MGR. BP		

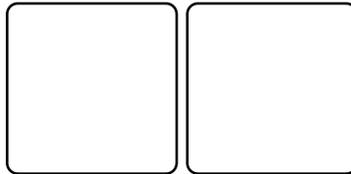
STATUS: ISSUED FOR BID



TRANSFORMER AVAILABLE FAULT		
		UNITS
TRANSFORMER RATING	225	kVA
PRIMARY VOLTAGE	---	VOLTS
SECONDARY VOLTAGE	480	VOLTS
IMPEDANCE	3.9	%Z
FLA	270.63	AMPS
MULTIPLIER	28.42	
SHORT CIRCUIT SYM. RMS @ TRANSFORMER SEC.	7690.40	AMPS
MOTOR SHORT CIRCUIT CONTRIBUTIONS	1082.50	AMPS
SHORT CIRCUIT TOTAL:	8772.90	AMPS

MISSIONARY MLS			
LOAD DESCRIPTION	TYPE	LOAD SUMMARY 480V	
		HP/KVA	FLA
WET WELL PUMP #1	Motor	125	156
WET WELL PUMP #2	Motor	125	156
WET WELL PUMP #3	Motor	125	156
PANELBOARD LP-1 (35KVA XFMR)	Cont	13	16
ODDR CONTROL	Motor	5	8
TOTAL CONNECTED:		408 kVA	491 AMPS
NEC 430.24:		444 kVA	534 AMPS
NEC 230.42:		510 kVA	614 AMPS

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MISSIONARY VILLAGE LIFT STATION REHABILITATION
 ELECTRICAL
 SINGLE LINE DIAGRAM

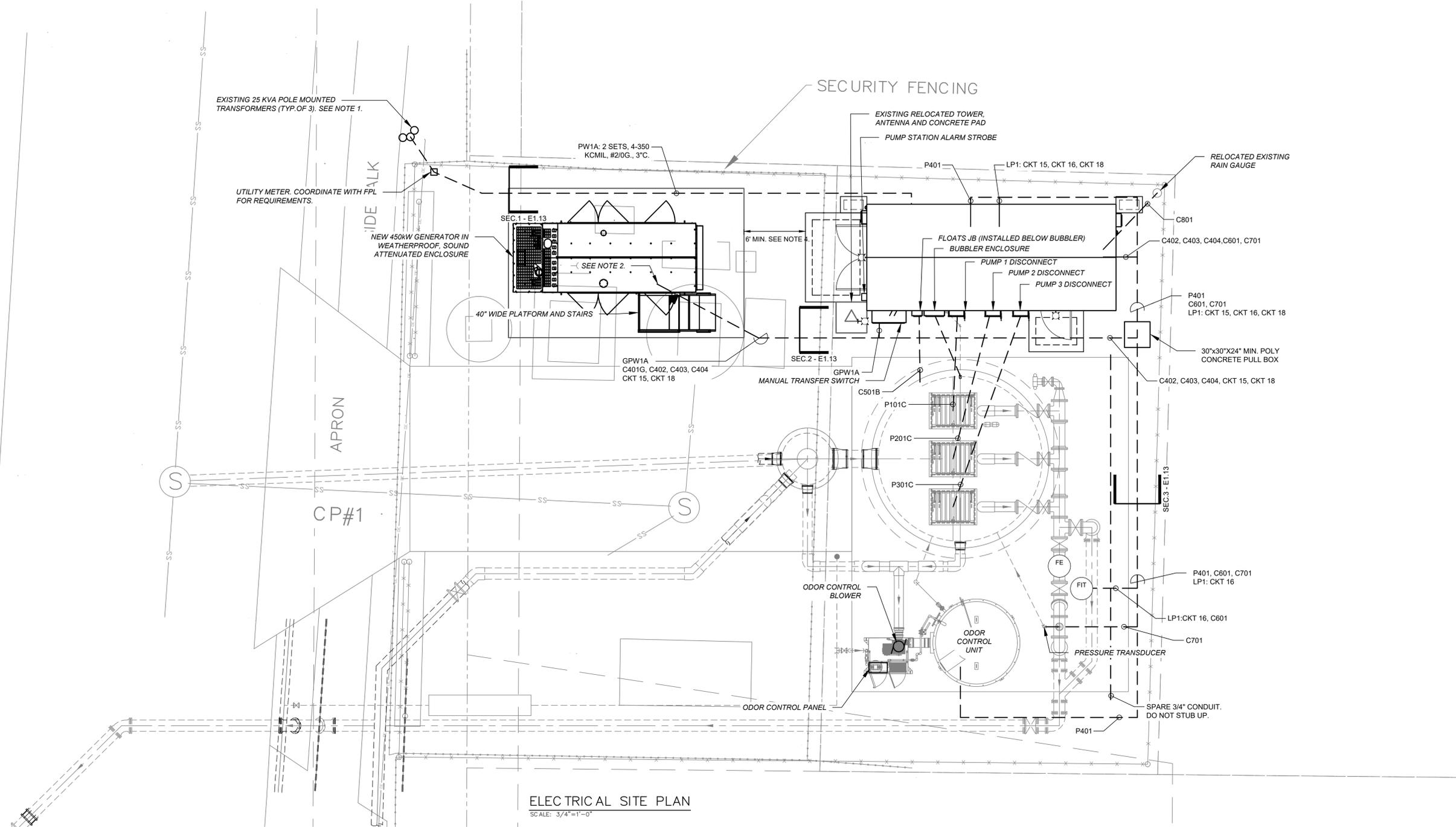
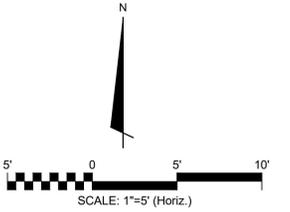
PROJ. START DATE: 2021 MARCH	SCALE	E1.01 DRAWING NUMBER
MCE PROJ. # 6022386	HORIZONTAL: AS NOTED	
DRAWN SS	VERTICAL: N/A	
DESIGNED SS	REVISION C	
CHECKED AAH		
PROJ. MGR. BP		
STATUS:		ISSUED FOR BID

GENERAL LIFT STATION NOTES:

1. DEMARCATION BOX SHALL BE PLACED AS CLOSE AS POSSIBLE TO WET WELL. IT SHALL BE PLACED AT LEAST 3' FROM WET WELL HATCH AND AT LEAST 5' FROM VENTS. IT SHALL BE PLACED SO AS NOT TO INTERFERE WITH ACCESS TO THE WET WELL OR DISCHARGE APPARATUS, AND DOOR SHALL FACE AWAY FROM THE WET WELL.
2. SEE GROUNDING PLAN FOR ELECTRICAL SERVICE GROUNDING REQUIREMENTS. (SEE GROUNDING DETAIL SHEET)
3. CONTRACTOR MUST KEEP COMPANY SIGN AND PHONE NUMBER ON FENCE UNTIL STATION IS ACCEPTED.
4. TRANSFORMERS SHALL BE LOCATED ON THE SAME SIDE OF PROPERTY AS METER AND ELECTRICAL PANELS.

NOTES:

1. PROVIDE AND COORDINATE NEW TRANSFORMER REQUIREMENTS INCLUDING SCHEDULING WITH FLORIDA POWER AND LIGHT (FPL). PROVIDE TEMPORARY SERVICE FOR CONSTRUCTION AND TEMPORARY BYPASS PUMPING FOR SANITARY FLOWS.
2. APPROXIMATE LOCATION OF GENERATOR CIRCUIT BREAKER AND GENERATOR CONTROL PANEL. COORDINATE WITH GENERATOR MANUFACTURE FOR EXACT REQUIREMENTS.
3. ODOR CONTROL SYSTEM TO BE RELOCATED PER DEMO PLAN SHEET C00.3 - DEMOLITION PLAN. BLOWER AND CONTROL PANEL TO BE REUSED AND RECONNECTED.
4. 6' MIN. SHALL BE MAINTAINED BETWEEN GENERATOR EQUIPMENT PAD AND ELECTRICAL BUILDING APRON.



ELECTRICAL SITE PLAN

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

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REVISIONS

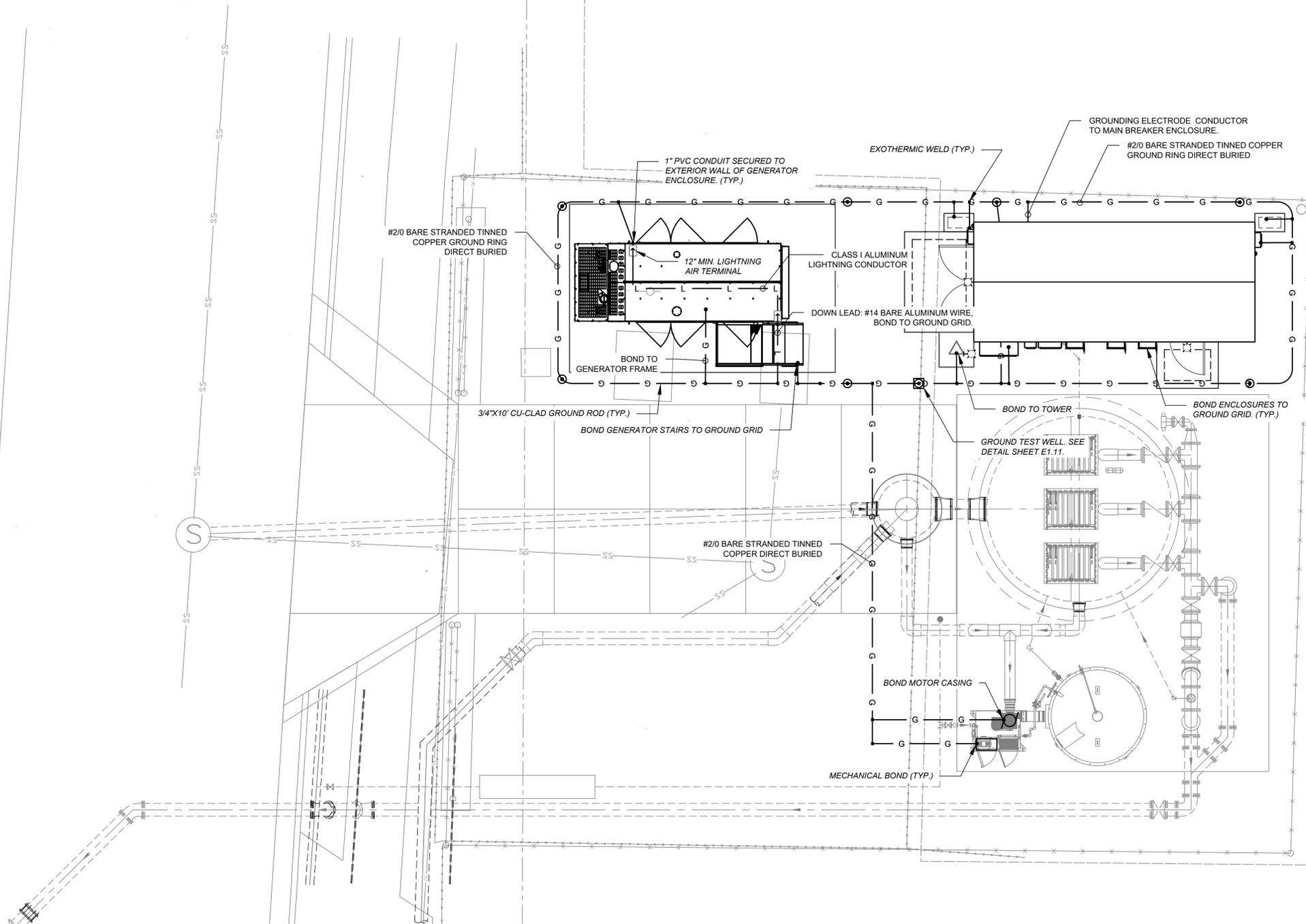
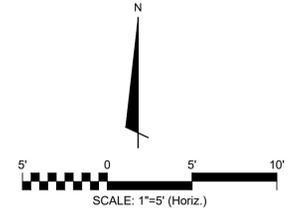
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**MISSIONARY VILLAGE LIFT STATION
 REHABILITATION**
 ELECTRICAL
ELECTRICAL SITE PLAN

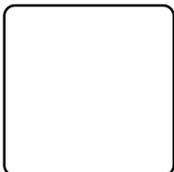
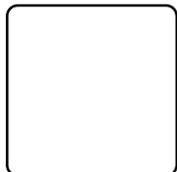
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MCE PROJ. # 6022386	HORIZONTAL: AS NOTED	
DRAWN SS	VERTICAL: N/A	
DESIGNED SS	REVISION	
CHECKED AAH	C	
PROJ. MGR. BP		
STATUS:		ISSUED FOR BID

R/W LINE
ORB 2430 PG 1479



REV. NO.	DESCRIPTION	DATE
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**MISSIONARY VILLAGE LIFT STATION
REHABILITATION**

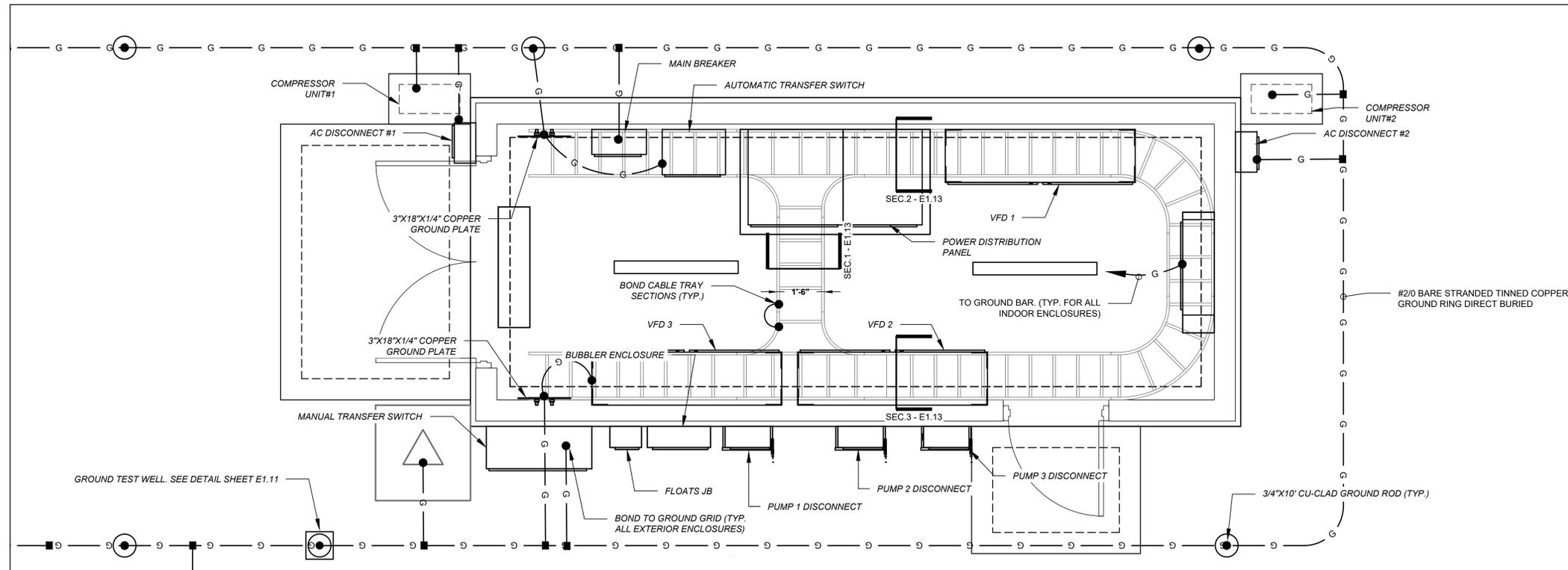
**ELECTRICAL
ELECTRICAL GROUNDING PLAN**

PROJ. START DATE	2021 MARCH
MCE PROJ. #	6022386
DRAWN	SS
DESIGNED	SS
CHECKED	AAH
PROJ. MGR.	BP

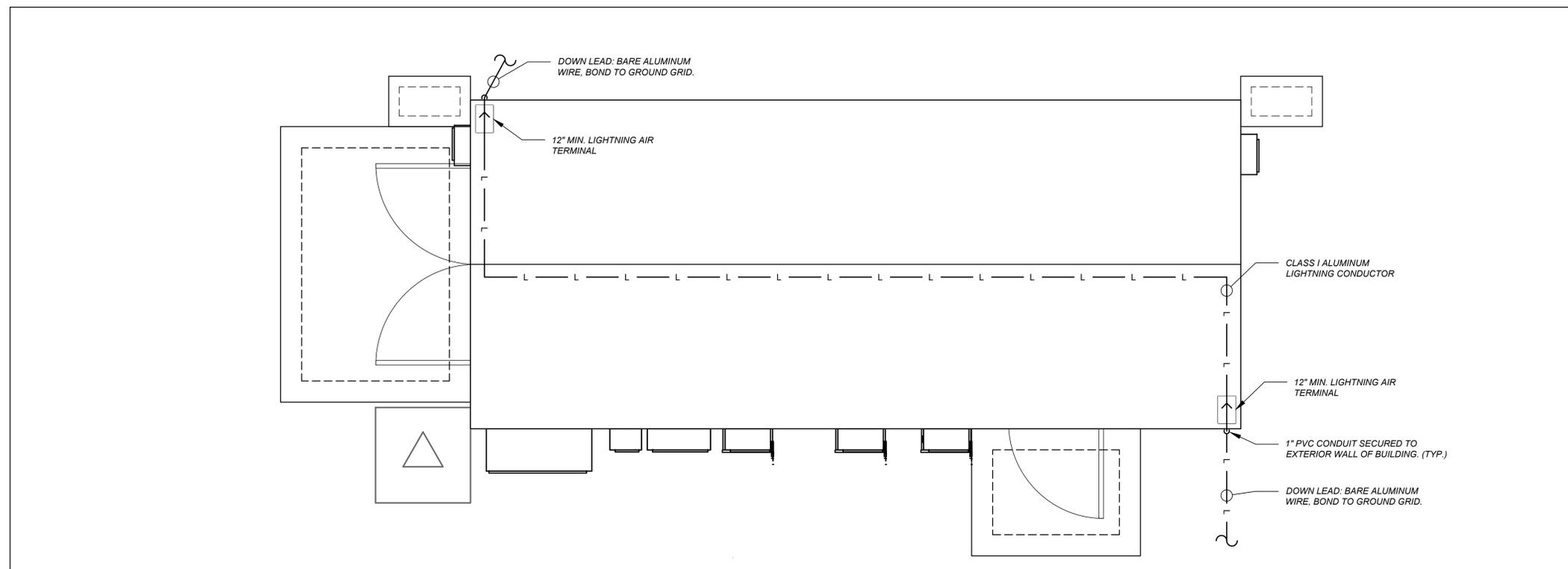
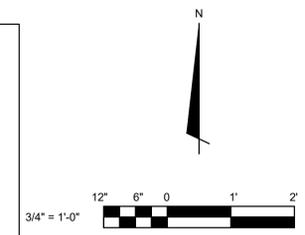
SCALE	
HORIZONTAL:	AS NOTED
VERTICAL:	N/A

E1.03
DRAWING NUMBER
C
REVISION

STATUS: **ISSUED FOR BID**



ELECTRICAL BUILDING GROUNDING PLAN
SCALE: 1/2"=1'-0"



LIGHTNING PROTECTION SYSTEM PLAN
SCALE: 1/2"=1'-0"

REV. NO.	DESCRIPTION	DATE
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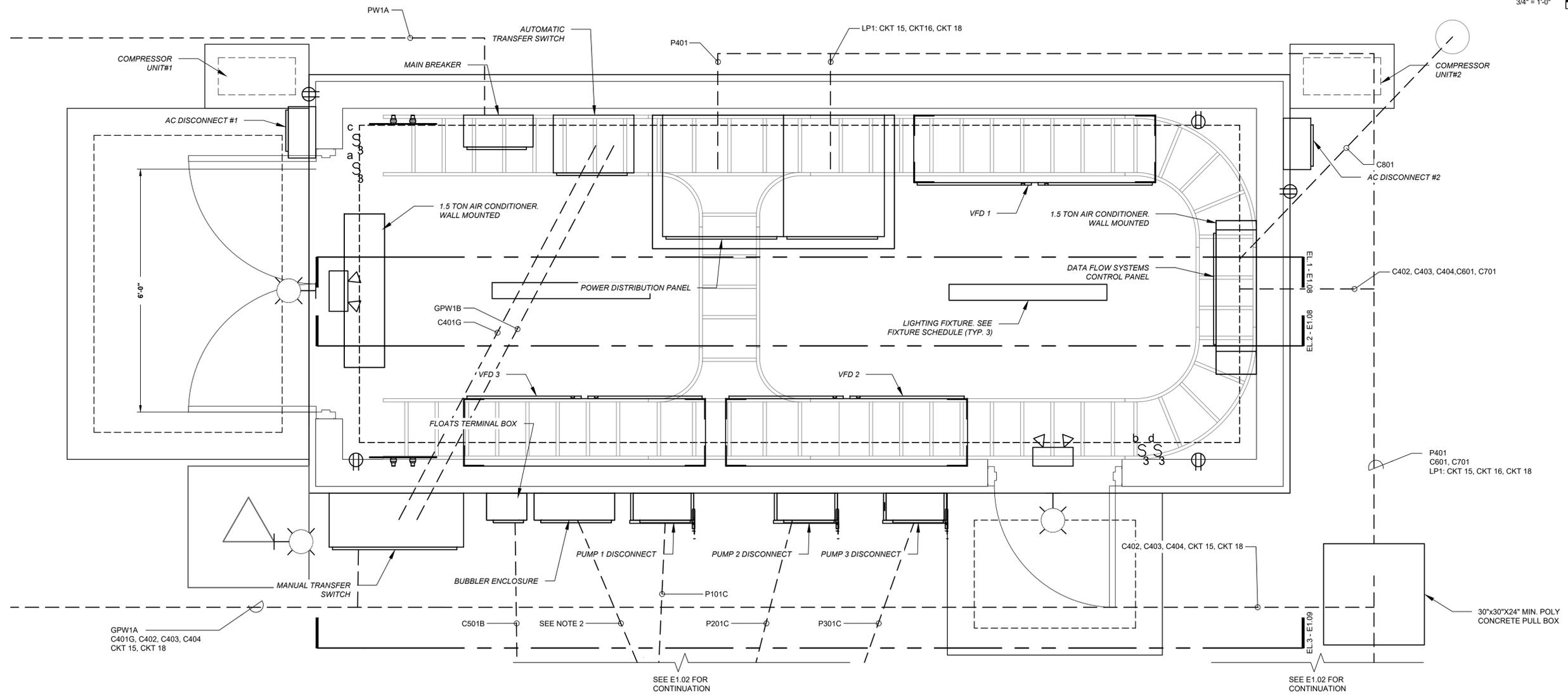
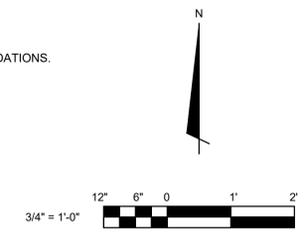
**MISSIONARY VILLAGE LIFT STATION
 REHABILITATION**

**ELECTRICAL
 ELECTRICAL BUILDING GROUNDING AND
 LIGHTNING PROTECTION**

PROJ. START DATE: 2021 MARCH	SCALE	E1.04 DRAWING NUMBER
MCE PROJ. # 6022386	HORIZONTAL: AS NOTED	
DRAWN: SS	VERTICAL: N/A	
DESIGNED: SS	REVISION: C	
CHECKED: AAH		
PROJ. MGR. BP		
STATUS:		ISSUED FOR BID

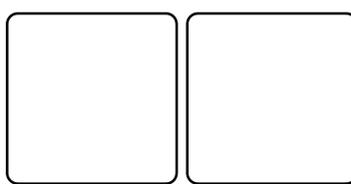
NOTES:

1. CABLE TRAY NOT SHOWN FOR CLARITY. SEE SHEET E1.04
2. COORDINATE WITH DFS FOR SIZE AND INSTALLATION RECOMMENDATIONS.



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

REV. NO.	DESCRIPTION	DATE
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**MISSIONARY VILLAGE LIFT STATION
 REHABILITATION**

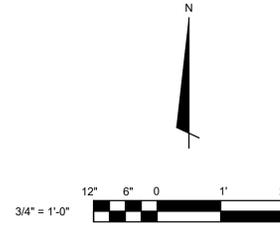
**ELECTRICAL
 EQUIPMENT LAYOUT**

PROJ. START DATE: 2021 MARCH	SCALE	E1.05 DRAWING NUMBER
MCE PROJ. # 6022386	HORIZONTAL: AS NOTED	
DRAWN: SS	VERTICAL: N/A	
DESIGNED: SS	REVISION: C	
CHECKED: AAH		
PROJ. MGR. BP		

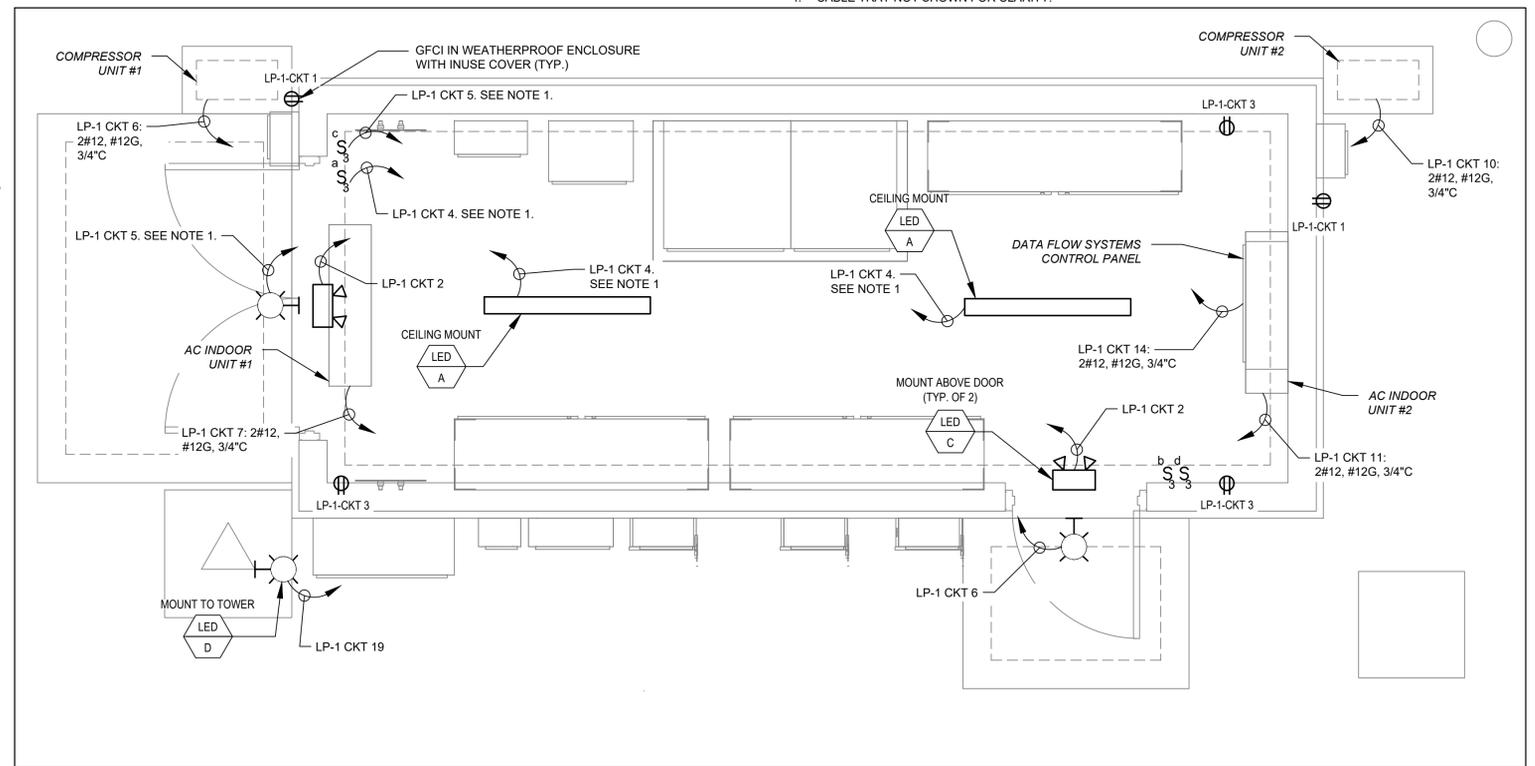
STATUS: **ISSUED FOR BID**

NOTES:

1. LIGHTING FIXTURE SHALL BE WIRED 3 WAY SWITCHABLE.
2. ALL LIGHTING AND RECEPTACLE CIRCUITS SHALL BE 2#12, #12G., 3/4" C.
3. PHOTOMETRIC SHOWN IS WITH WORKING PLANE SET AT 3'.
4. CABLE TRAY NOT SHOWN FOR CLARITY.



LIGHTING SCHEDULE				
LETTER	DESCRIPTION	LAMPS	REMARKS	SYMBOL
A	4' SURFACE MOUNT LED LUMINAIRE. ROLLED STEEL HOUSING. IMPACT MODIFIED LINEAR FACETED REFRACTOR. INTEGRAL OCCUPANCY SENSOR.	LED MIN CRI 82, L90/60,000HRS, 39W, 4000K	LITHONIA LIGHTING MOD. WL4-40L-LP840-NE57-SC OR APPROVED EQUAL.	
B	LED OUTDOOR RATED WALL PACK. TYPE II MEDIUM DISTRIBUTION. INTEGRAL BALLAST & PHOTOCCELL. FULL CUTOFF. DARK BRONZE.	20 LED 73W 4000K	LITHONIA LIGHTING DSXW2 LED, LSI INDUSTRIES XGBWM3, OR APPROVED ALTERNATE	
C	WALL MOUNT EMERGENCY EXIT LIGHT W/SIGN. INJECTION-MOLDED, FLAME-RETARDANT, HIGH-IMPACT, THERMOPLASTIC HOUSING. BATTERY BACKUP. TEST SWITCH FOR MANUAL ACTIVATION OF 30-SECOND DIAGNOSTIC TESTING. SELF DIAGNOSTIC TESTING EVERY 30 DAYS.	LED, RED LENS <1W, 120V	LITHONIA LIGHTING MOD. LHQM OR APPROVED EQUAL	
D	POST MOUNTED LED LIGHT FIXTURE WITH MOUNTING ARM. FULL CUTOFF FIXTURE.	LED, 4000K, 55.9 W, 120V	LITHONIA LIGHTING MOD. BGR LED P2 40K MVOLT PER DNA OR APPROVED EQUAL. EXTRUDED MOUNTING ARM PART#: OMA	

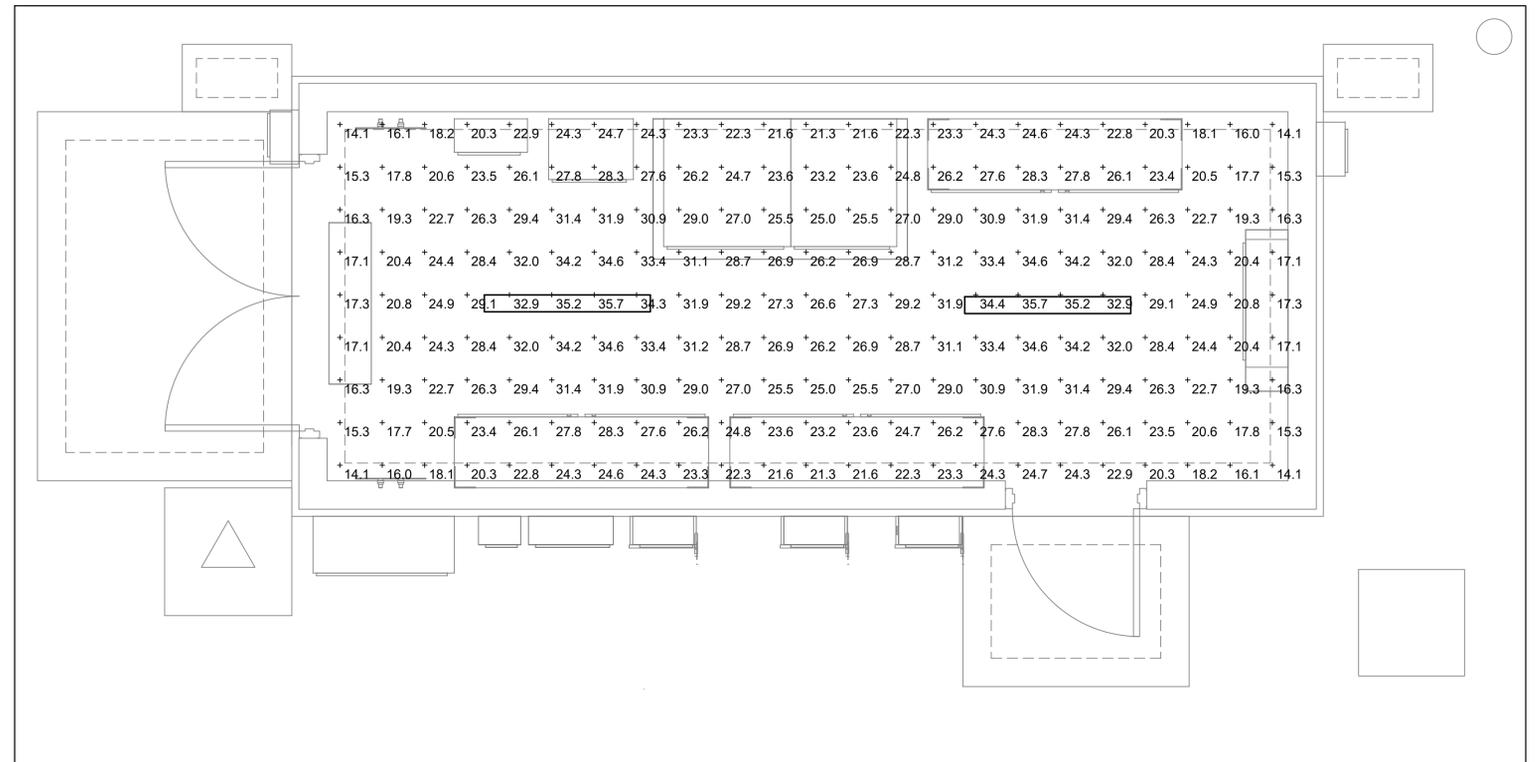


ELECTRICAL BUILDING LIGHTING AND RECEPTACLE
SCALE: 1/2"=1'-0"

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	AMPS	POLES	KVA PER PHASE		AMPS	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
						A	B					
1	20	RECEPTACLES OUTSIDE	0.36	3.46	1	0.540		1.73	0.18	EMERGENCY EXIT LIGHT	20	2
3	20	RECEPTACLES INSIDE	0.72	6.92	1		1.520	7.69	0.8	INTERIOR LIGHTING	20	4
5	20	EXTERIOR LIGHTING WALL PACKS	0.5	4.81	1	2.100		15.38	1.6	AC OUTDOOR UNIT #1	25	6
7	15	AC INDOOR UNIT #1	0.1	0.96	2		1.700	15.38	1.6	AC OUTDOOR UNIT #2	25	10
11	15	AC INDOOR UNIT #2	0.1	0.96	2		1.700	15.38	1.6	DFS CONTROL PANEL	20	14
15	20	GENERATOR BLOCK HEATER	0.08	0.08	2		0.120	0.38	0.04	FLOW TRANSMITTER (FIT)	15	16
	20	GENERATOR BLOCK HEATER	0.08	0.08			0.290	2.02	0.21	GENERATOR BATTERY CHARGER	20	18
19	20	LIGHT FIXTURE - DFS TOWER	0.3	2.88	1		0.300			SPARE	20	20
21	20	SPARE			1	0.000				SPARE	20	22
23	20	SPARE			1		0.000			SPARE	20	24
25	20	SURGE PROTECTION DEVICE	0.1	0.8	3	0.100				SPARE	20	26
	20		0.1			0.1				SPARE	20	28
	20		0.1							SPARE	20	30

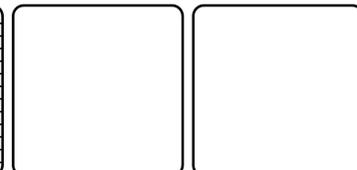
PANEL LP-1		TOTAL KVA		5.930	5.440	VOLTS: 208/120		A MLO	
LOCATION ELEC. BUILDING		GRAND CONNECTED TOTAL KVA		11.370		PHASE: 3		100 A MCB	
NOTES:						WIRE: 4			
						10k MIN AIC SYMM, FULLY RATED ASSEMBLY			

PANELBOARD SCHEDULE
SCALE: NTS



ELECTRICAL BUILDING INTERIOR PHOTOMETRICS
SCALE: 1/2"=1'-0"

REV. NO.	DESCRIPTION	DATE
C	ISSUED FOR BID	SEPT. 2022
B	40% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
A	30% CLIENT SUBMITTAL	JUNE 2021



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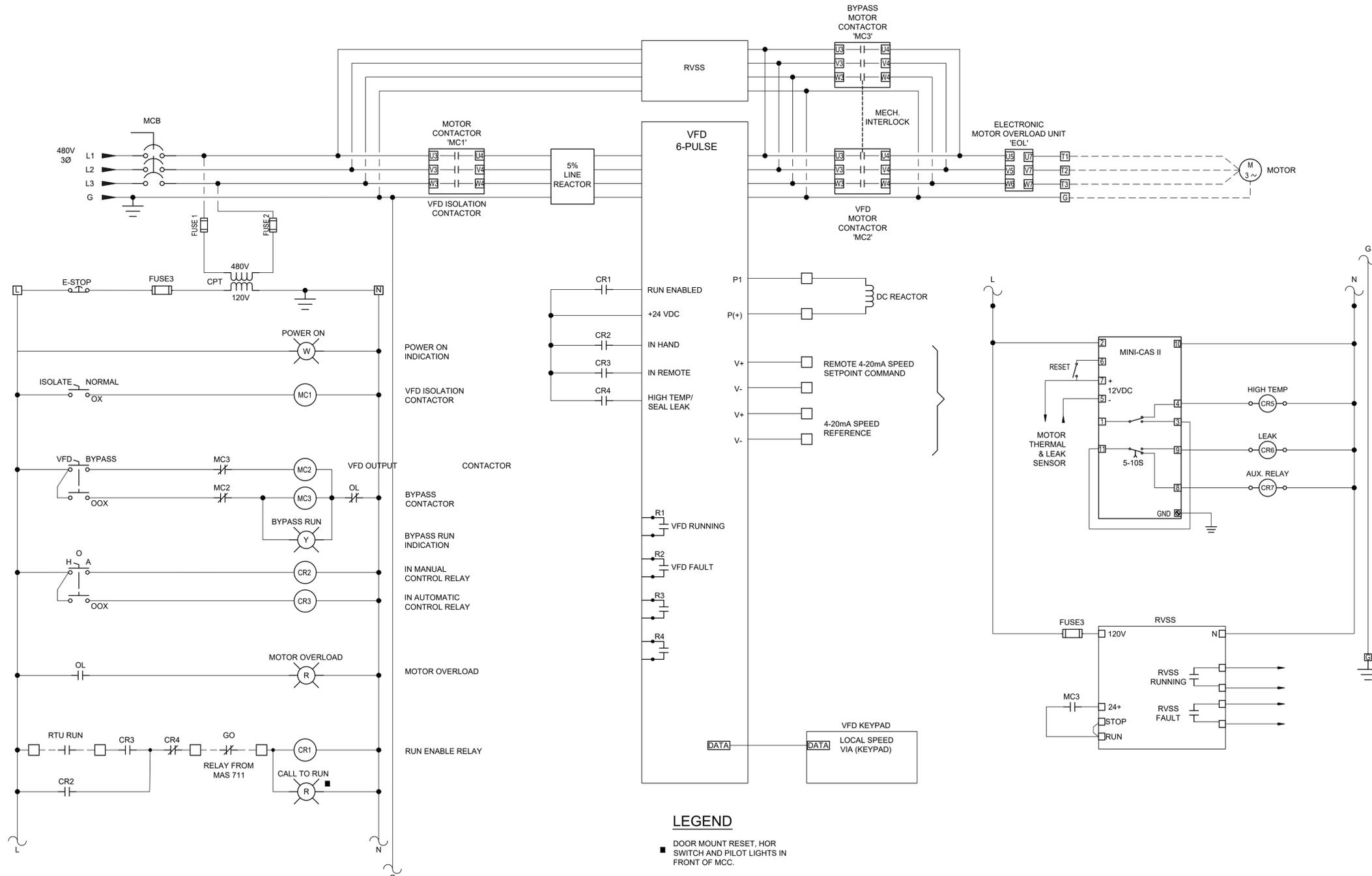
Manatee County
FLORIDA

**MISSIONARY VILLAGE LIFT STATION
REHABILITATION**

**ELECTRICAL
LIGHTING RECEPTACLE AND
PHOTOMETRICS**

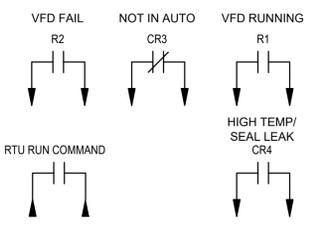
PROJ. START DATE: 2021 MARCH	SCALE	E1.06
MCE PROJ. # 6022386	HORIZONTAL: AS NOTED	
DRAWN: SS	VERTICAL: N/A	C
DESIGNED: SS		REVISION
CHECKED: AAH		
PROJ. MGR: BP		

STATUS: **ISSUED FOR BID**



LEGEND

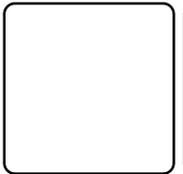
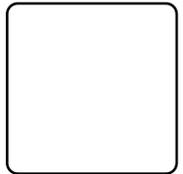
- DOOR MOUNT RESET, HOR SWITCH AND PILOT LIGHTS IN FRONT OF MCC.
- ▲ DEVICE LOCATED AT OR NEAR MOTOR EQUIPMENT



ALL STATUS & CONTROL SIGNALS COMMUNICATED BETWEEN VFD AND RTU VIA ETHERNET DATA HIGHWAY.

PUMP SCHEMATIC: PUMP#1, PUMP#2, PUMP#3
SCALE: NTS

REV. NO.	DESCRIPTION	DATE
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A	30% CLIENT SUBMITTAL	JUNE 2021



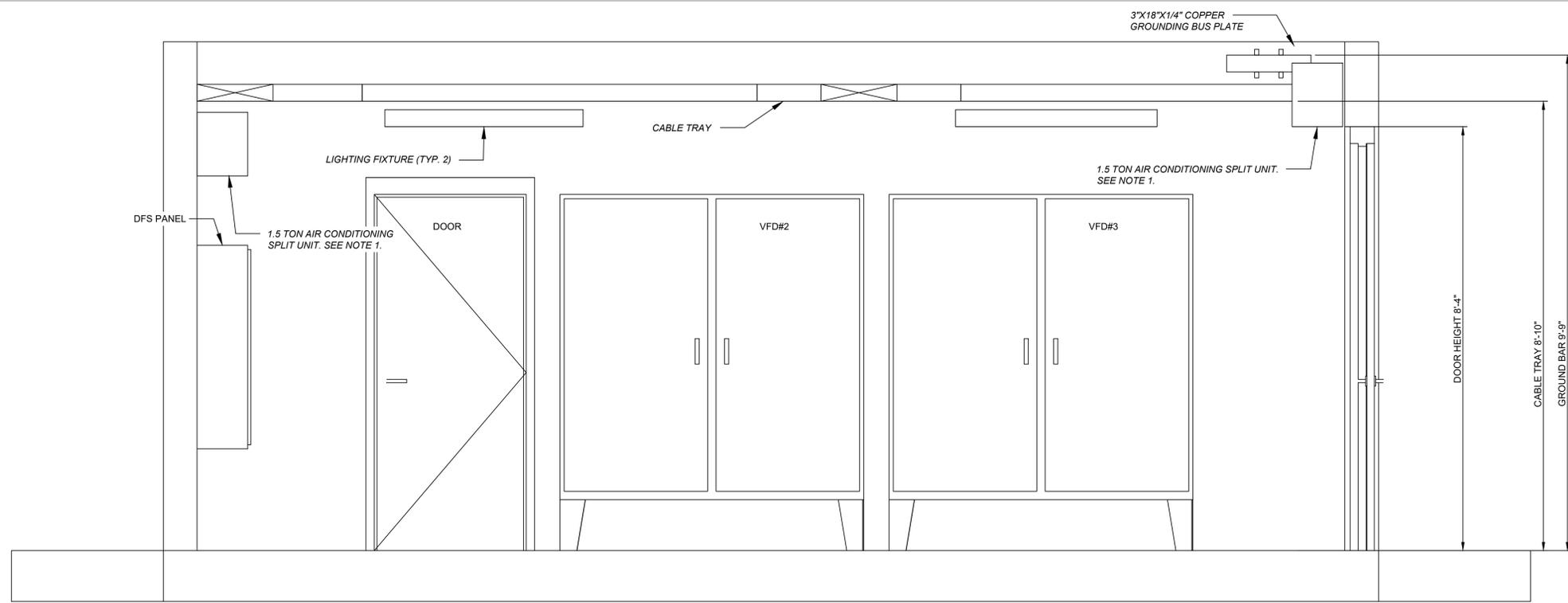
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**MISSIONARY VILLAGE LIFT STATION
 REHABILITATION**
 ELECTRICAL
VFD WIRING DIAGRAM

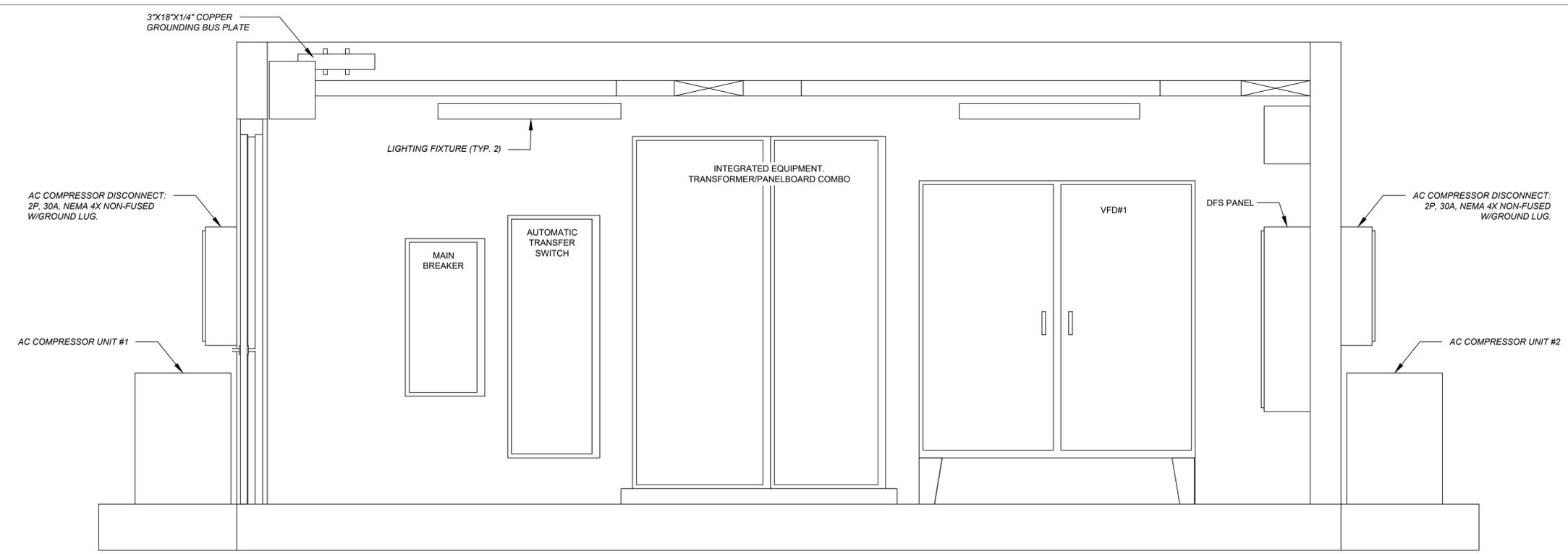
PROJ. START DATE 2021 MARCH	SCALE	E1.07 DRAWING NUMBER
MCE PROJ. # 6022386	HORIZONTAL: AS NOTED	
DRAWN SS	VERTICAL: N/A	
DESIGNED SS	REVISION C	
CHECKED AAH		
PROJ. MGR. BP		

STATUS: **ISSUED FOR BID**



NOTES:
1. FOLLOW MANUFACTURER RECOMMENDATIONS FOR MOUNTING.

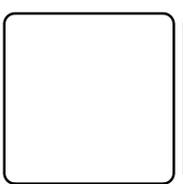
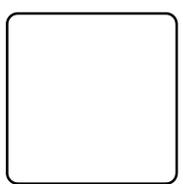
ELEVATION 1
SCALE: 3/4"=1'-0"



ELEVATION 2
SCALE: 3/4"=1'-0"

REV. NO.	DESCRIPTION	DATE
C	ISSUED FOR BID	SEPT. 2022
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REVISIONS



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**MISSIONARY VILLAGE LIFT STATION
 REHABILITATION**

ELECTRICAL

ELECTRICAL BUILDING ELEVATION 1 OF 2

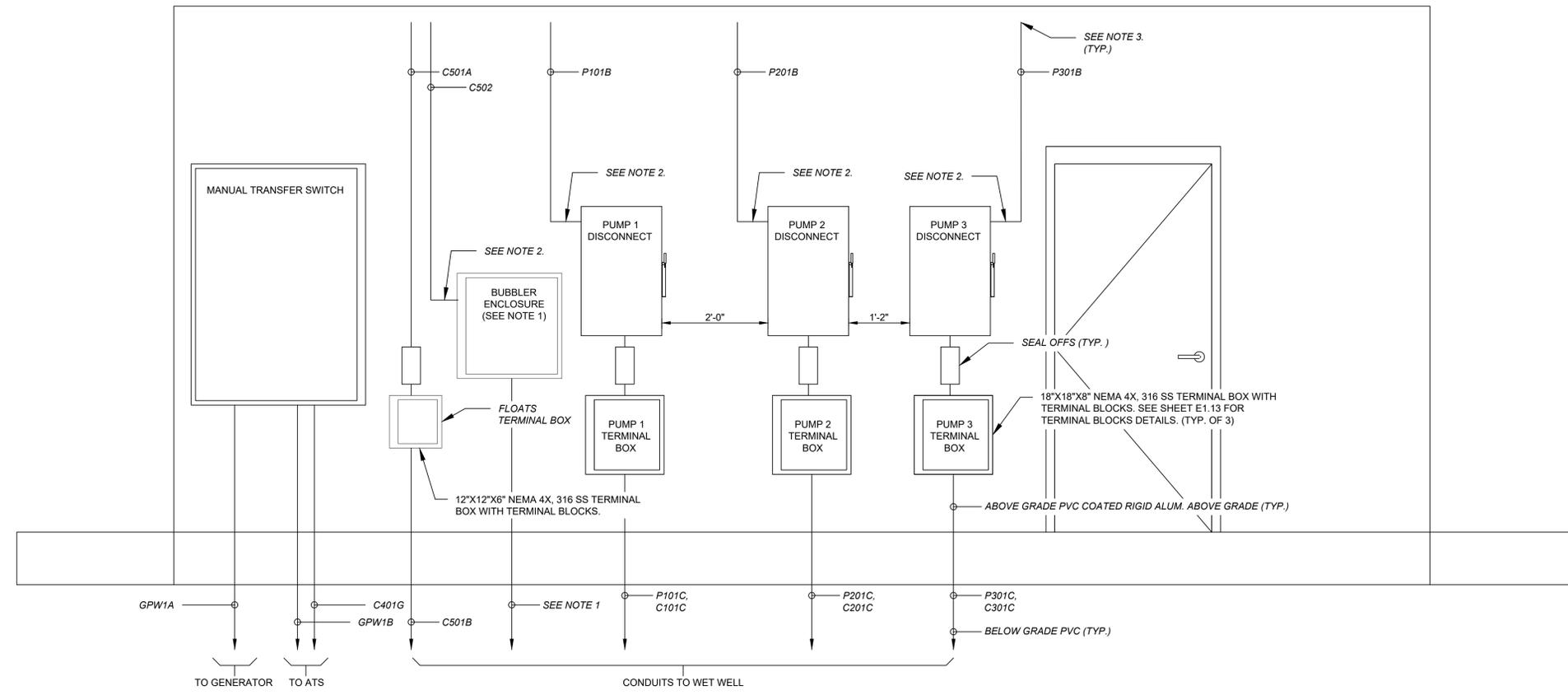
PROJ. START DATE	2021 MARCH
MCE PROJ. #	6022386
DRAWN	SS
DESIGNED	SS
CHECKED	AAH
PROJ. MGR.	BP

SCALE	N/A
HORIZONTAL:	AS NOTED
VERTICAL:	N/A
DRAWING NUMBER	E1.08
REVISION	C

STATUS: **ISSUED FOR BID**

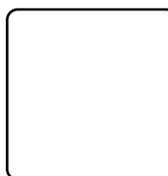
NOTES:

1. COORDINATE WITH DFS FOR SIZE AND INSTALLATION RECOMMENDATIONS.
2. UTILIZE LBD TO MAKE 90 DEGREE TURN UP.
3. UTILIZE LBD TO MAKE 90 DEGREE TURN INTO THE BUILDING AND ONTO THE CABLE TRAY.



ELEVATION 3
SCALE: N.T.S.

REV. NO.	DESCRIPTION	DATE
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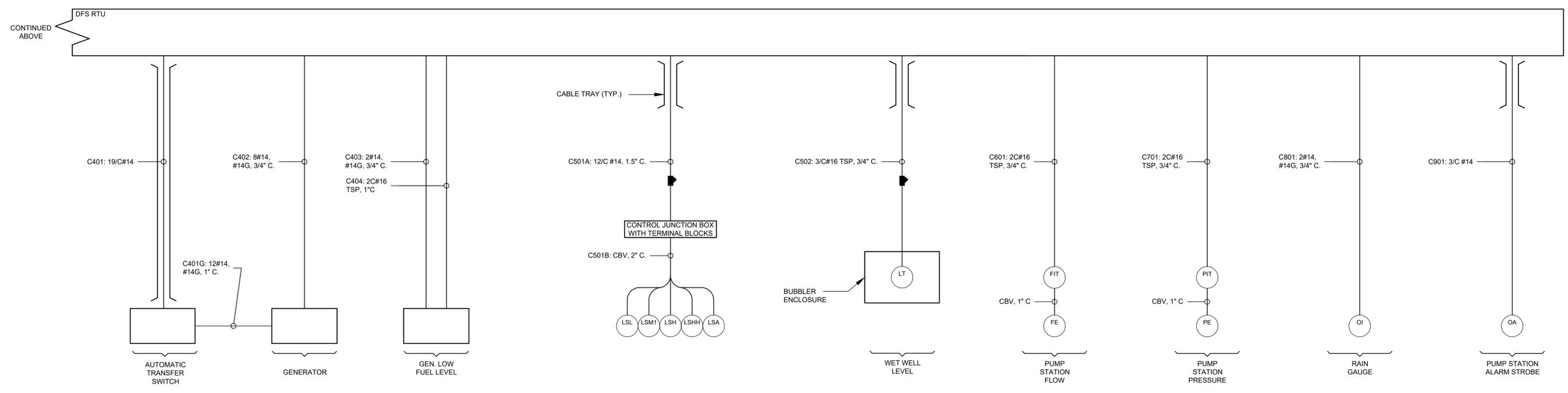
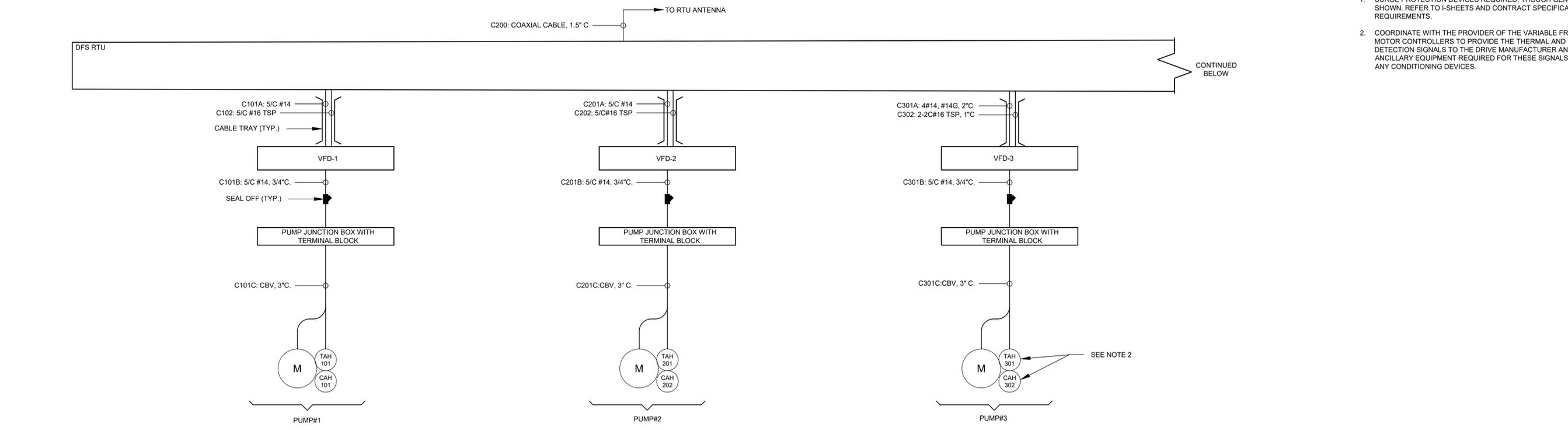
**MISSIONARY VILLAGE LIFT STATION
 REHABILITATION**
 ELECTRICAL
ELECTRICAL BUILDING ELEVATION 2 OF 2

PROJ. START DATE	2021 MARCH
MCE PROJ. #	6022386
DRAWN	SS
DESIGNED	SS
CHECKED	AAH
PROJ. MGR.	BP

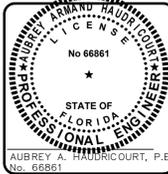
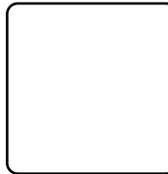
SCALE	
HORIZONTAL:	AS NOTED
VERTICAL:	N/A
DRAWING NUMBER	E1.09
REVISION	C

STATUS: **ISSUED FOR BID**

- NOTES:**
1. SURGE PROTECTION DEVICES REQUIRED, THOUGH GENERALLY NOT SHOWN. REFER TO I-SHEETS AND CONTRACT SPECIFICATIONS FOR REQUIREMENTS.
 2. COORDINATE WITH THE PROVIDER OF THE VARIABLE FREQUENCY MOTOR CONTROLLERS TO PROVIDE THE THERMAL AND LEAK DETECTION SIGNALS TO THE DRIVE MANUFACTURER AND SUPPLY ANY ANCILLARY EQUIPMENT REQUIRED FOR THESE SIGNALS, INCLUDING ANY CONDITIONING DEVICES.



REV. NO.	DESCRIPTION	DATE
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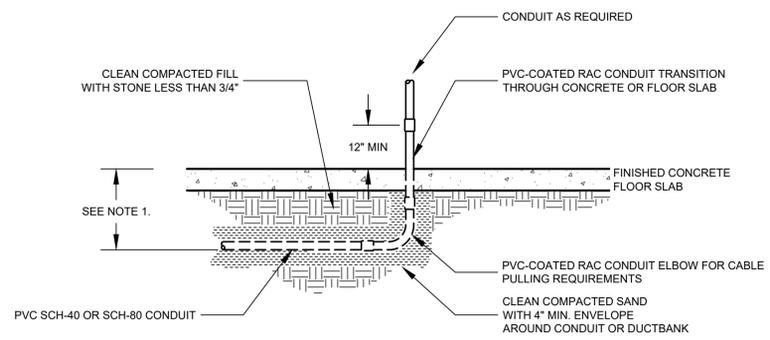
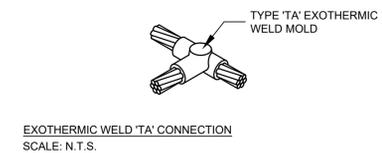
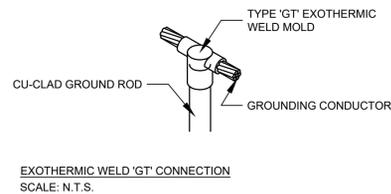
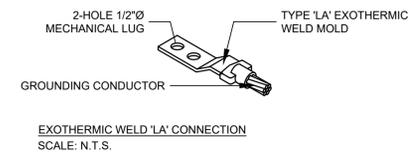
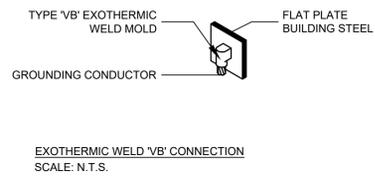
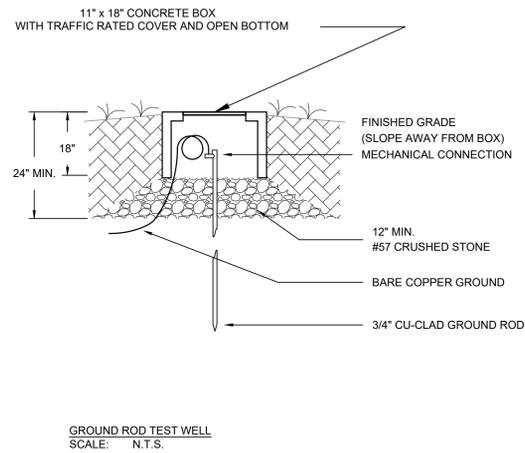


**MISSIONARY VILLAGE LIFT STATION
 REHABILITATION**
**ELECTRICAL
 INTERCONNECTION DIAGRAM**

PROJ. START DATE	2021 MARCH
MCE PROJ. #	6022386
DRAWN	SS
DESIGNED	SS
CHECKED	AAH
PROJ. MGR.	BP

SCALE	
HORIZONTAL:	AS NOTED
VERTICAL:	N/A
DRAWING NUMBER	E1.10
REVISION	C

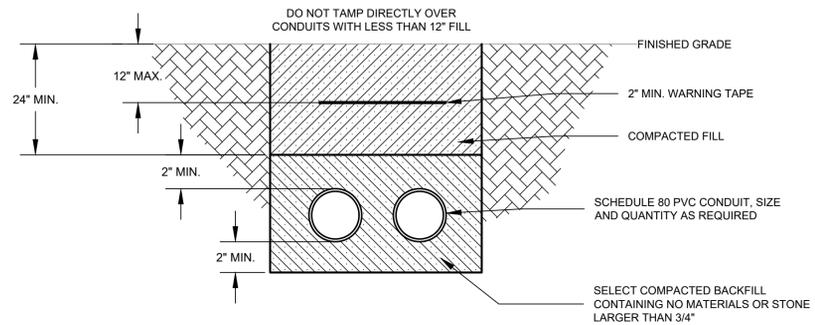
STATUS: **ISSUED FOR BID**



DETAIL NOTES:

- BURIAL DEPTH OF CONDUIT OR DUCTBANK SHALL BE BASED ON THE LARGEST CONDUIT RADIUS SUCH THAT THE THREADED CONNECTION TO THE PVC-COATED RAC CONDUIT TRANSITION IS 6" MINIMUM BELOW BOTTOM OF CONCRETE FLOOR SLAB

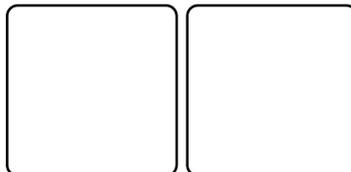
TYPICAL UNDERSLAB CONDUIT STUB-UP INSTALLATION
SCALE: N.T.S.



DIRECT BURIED DUCTBANK
SCALE: N.T.S.

REV. NO.	DESCRIPTION	DATE
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**MISSIONARY VILLAGE LIFT STATION
REHABILITATION**

**ELECTRICAL
ELECTRICAL DETAILS**

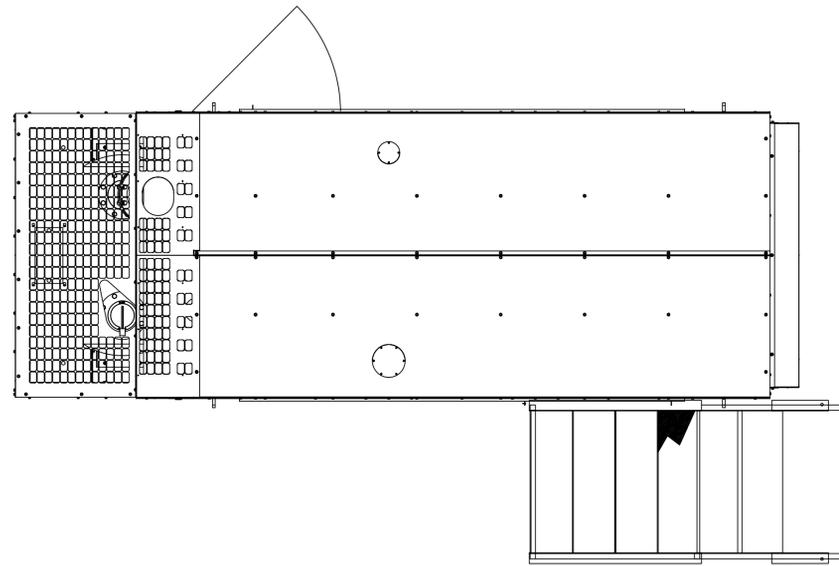
PROJ. START DATE	2021 MARCH
MCE PROJ. #	6022386
DRAWN	SS
DESIGNED	SS
CHECKED	AAH
PROJ. MGR.	BP

SCALE	
HORIZONTAL:	AS NOTED
VERTICAL:	N/A
DRAWING NUMBER	E1.11
REVISION	C

STATUS: **ISSUED FOR BID**

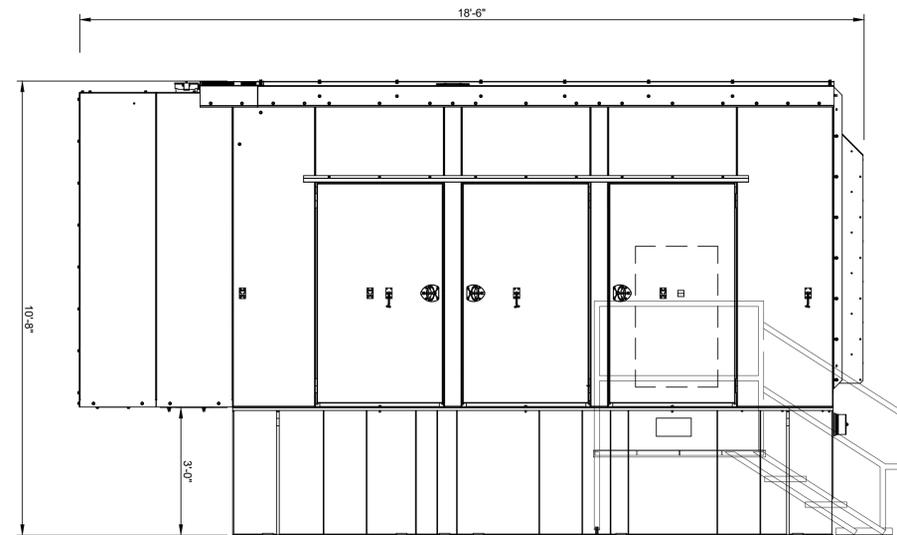
NOTES:

- DRAWING ARE CONCEPTUAL ONLY. DRAWINGS ARE ONLY A REPRESENTATION AND MAY NOT REFLECT ACTUAL GENERATOR SET DESIGN. COORDINATE WITH SELECTED MANUFACTURER FOR GENERATOR SET FOR DIMENSIONS.



GENERATOR TOP VIEW

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

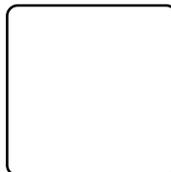


GENERATOR ELEVATION VIEW

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

REV. NO.	DESCRIPTION	DATE
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**MISSIONARY VILLAGE LIFT STATION
 REHABILITATION**

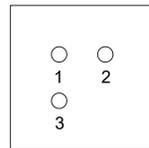
**ELECTRICAL
 GENERATOR SECTIONS**

PROJ. START DATE	2021 MARCH
MCE PROJ. #	6022386
DRAWN	SS
DESIGNED	SS
CHECKED	AAH
PROJ. MGR.	BP

SCALE	
HORIZONTAL:	AS NOTED
VERTICAL:	N/A

E1.12
DRAWING NUMBER
C
REVISION

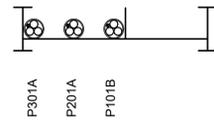
STATUS: **ISSUED FOR BID**



DUCTBANK SECTION 1

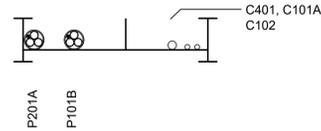
SCALE: NTS

- 1. PW1A (SET 1)
- 2. PW1A (SET 2)
- 3. SPARE 3" C.



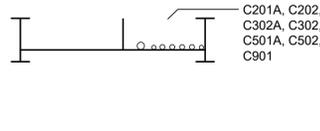
CABLE TRAY SECTION 1

SCALE: NTS



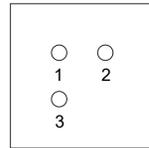
CABLE TRAY SECTION 2

SCALE: NTS



CABLE TRAY SECTION 3

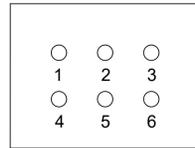
SCALE: NTS



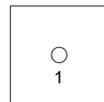
DUCTBANK SECTION 2

SCALE: NTS

- 1. GPW1A (SET 1)
- 2. GPW1A (SET 2)
- 3. SPARE 3" C.



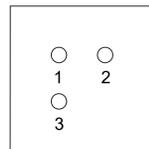
- 1. LP1: CKT 15
- 2. LP1: CKT 18
- 3. C402
- 5. C403
- 6. C404



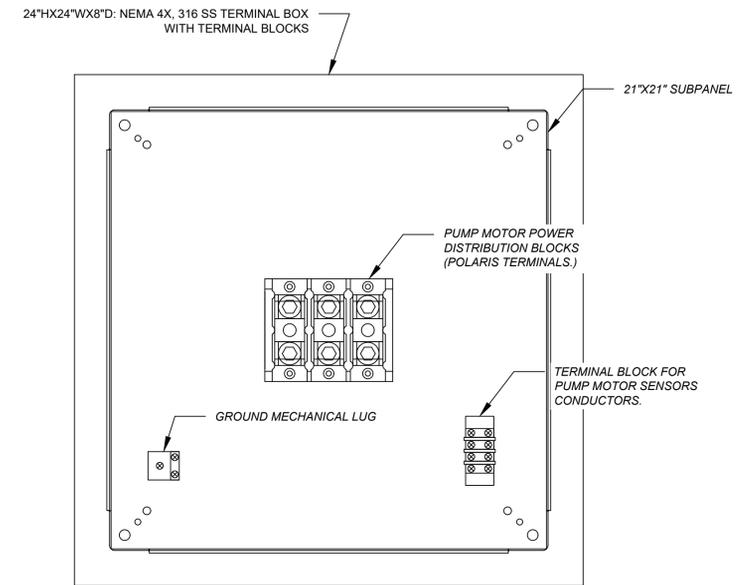
DUCTBANK SECTION 3

SCALE: NTS

- 1. P401

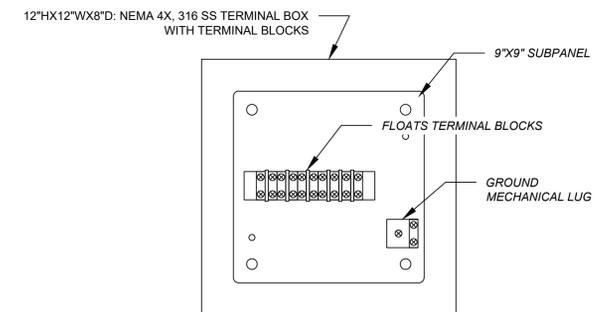


- 1. LP1: CKT 16
- 2. C601
- 3. C701



PUMP TERMINAL BOX DETAILS

SCALE: 3"=1'



FLOATS TERMINAL BOX DETAILS

SCALE: 3"=1'

REV. NO.	DESCRIPTION	DATE
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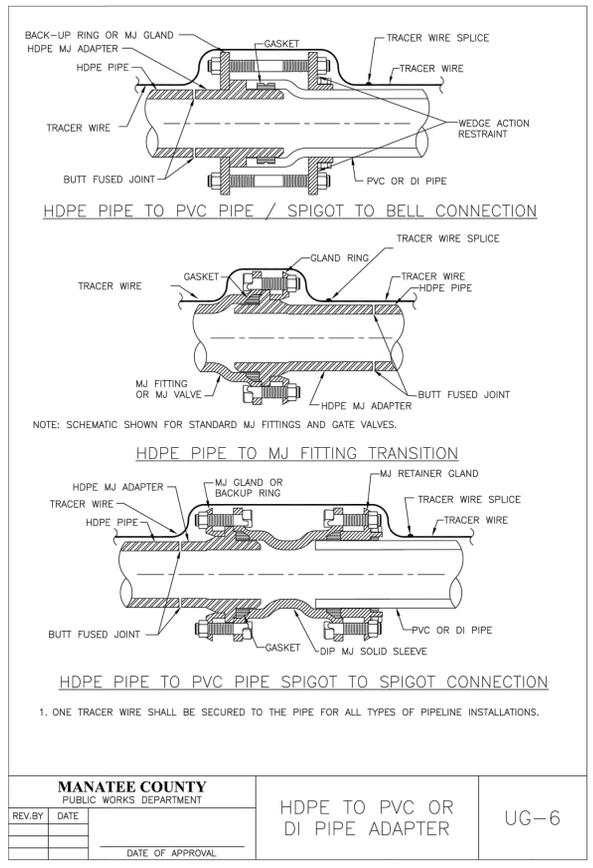
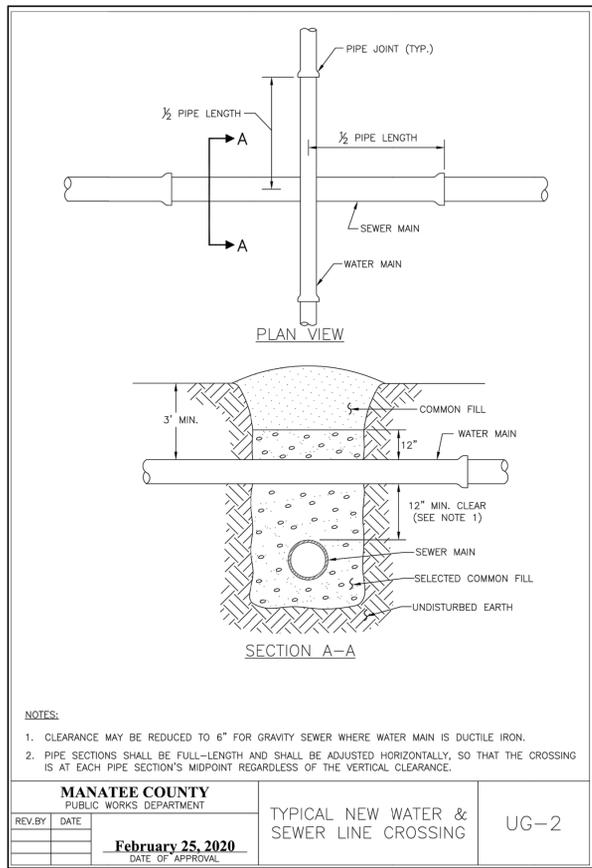
**MISSIONARY VILLAGE LIFT STATION
 REHABILITATION**

ELECTRICAL

**DUCTBANK, CABLE TRAY & TERMINAL BOX
 DETAILS**

PROJ. START DATE 2021 MARCH	SCALE	E1.13 DRAWING NUMBER
MCE PROJ. # 6022386	HORIZONTAL: AS NOTED	
DRAWN SS	VERTICAL: N/A	
DESIGNED SS	REVISION	
CHECKED AAH	C	
PROJ. MGR. BP		

STATUS: **ISSUED FOR BID**



THRUST BLOCK DIMENSIONS B ft. x d inches

PIPE SIZE (IN.)	90° BEND		45° BEND		22.5° BEND		11.25° BEND		DEAD END & TEE		45° WYE	
	B	d	B	d	B	d	B	d	B	d	B	d
4	1.5	3 1/2	1.1	3 1/2	0.8	3 1/2	0.6	3 1/2	1.3	3 1/2	1.1	3 1/2
6	2.2	5 1/4	1.6	3 3/4	1.2	3 3/4	0.8	3 3/4	1.9	4 1/2	1.6	3 3/4
8	2.9	7	2.1	5	1.5	3 3/4	1.1	3 3/4	2.4	5 3/4	2.0	4 3/4
10	3.5	8 1/2	2.6	6 1/4	1.9	4 1/2	1.3	3 3/4	3.0	7 1/4	2.5	6
12	4.2	10	3.1	7 1/2	2.2	5 1/4	1.6	3 3/4	3.5	8 1/4	3.0	7 1/4
14	4.9	11 3/4	3.6	8 3/4	2.6	6 1/4	1.8	4 1/4	4.1	9 3/4	3.4	8 3/4
16	5.5	13 1/4	4.1	9 3/4	2.9	7	2.1	5	4.7	11 1/4	3.9	9 3/4
18	6.2	15	4.6	11	3.3	8	2.3	5 1/2	5.2	12 1/2	4.4	10 1/2
20	6.9	16 1/2	5.0	12	3.6	8 3/4	2.6	6 1/4	5.8	14	4.9	11 3/4
24	8.2	19 1/4	6.0	14 3/4	4.3	10 1/4	3.1	7 1/2	6.9	16 1/2	5.8	14
30	10.1	24 1/4	7.5	18	5.3	12 3/4	3.8	9	8.5	20 3/4	7.2	17 1/4
36	12.1	29	8.9	21 1/4	6.4	15 1/4	4.5	10 3/4	10.2	24 1/2	8.6	20 3/4

REINFORCEMENT MAT SCHEDULE

FOR DIM. "B" BETWEEN 5.75' & 12.5' USE #4 @ 8" EACH WAY
FOR DIM. "B" LESS THAN 5.75' USE #3 @ 8" EACH WAY

MANATEE COUNTY
PUBLIC WORKS DEPARTMENT

REVISIONS: February 25, 2020

CONCRETE THRUST BLOCKS UG-7

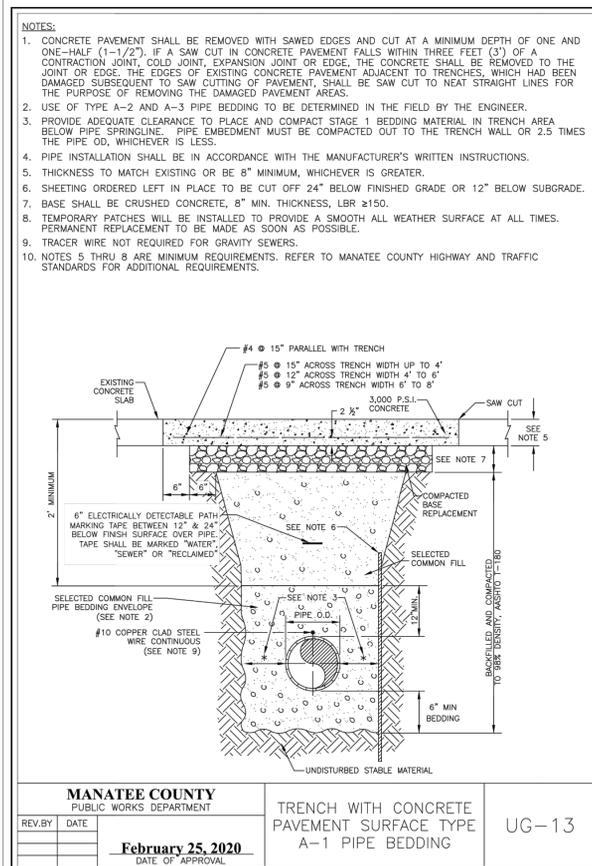
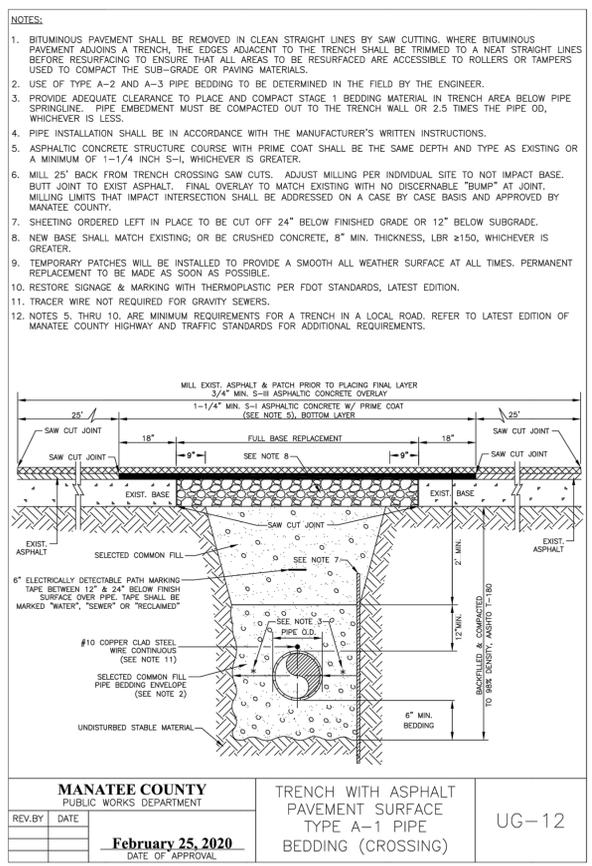
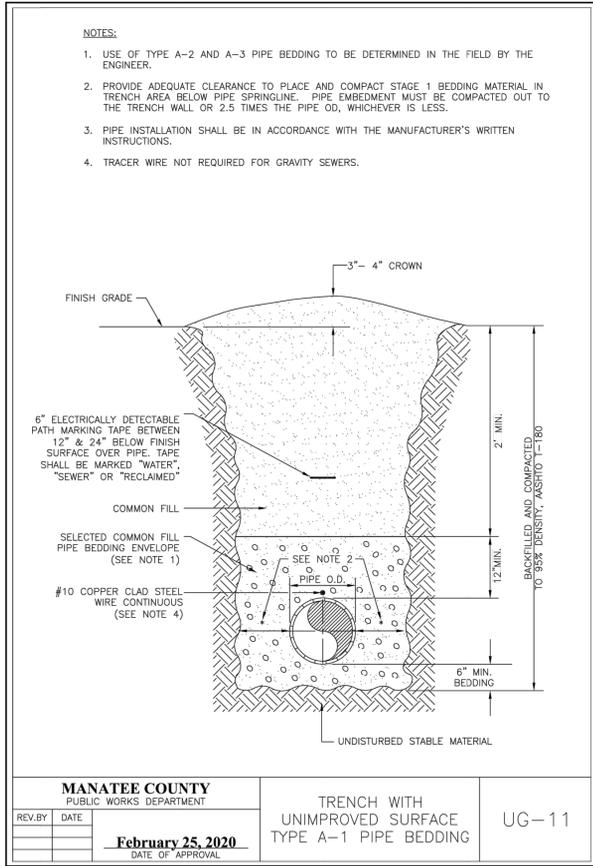
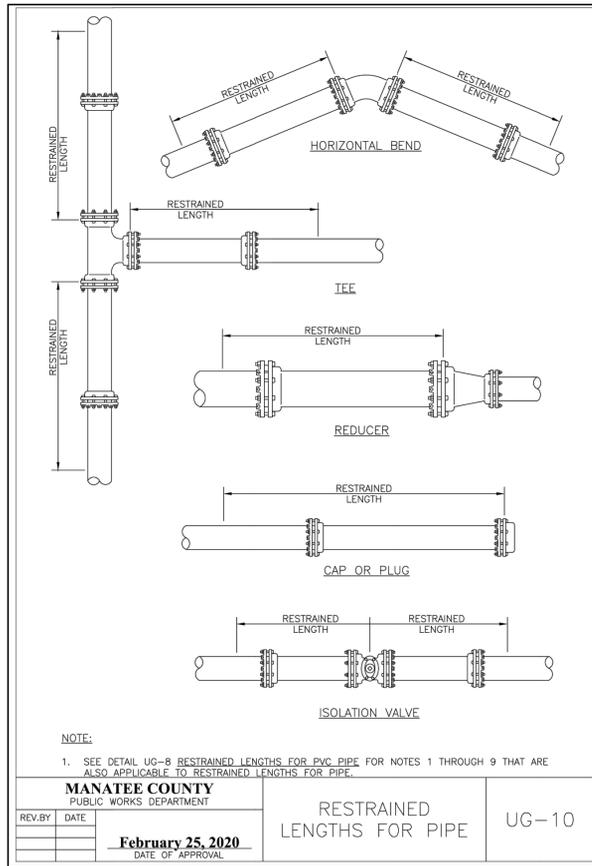
REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR C900-16 PVC PIPE (DR-18)

MAIN PIPE SIZE	HORIZ. BENDS			TEES						REDUCERS						PLUGS & VALVES
	90°	45°	22.5°	SIZE LENGTH						SIZE LENGTH						
24	90	38	18	X24	X18	X12	X10	X8	X6	X20	X18	X12	X10	X8	214	
20	78	32	16	X20	X16	X12	X10	X8	X6	X20	X18	X12	X10	X8	184	
16	66	27	13	X16	X12	X10	X8	X6	X4	X16	X12	X10	X8	X6	151	
12	52	22	10	X12	X10	X8	X6	X4	X3	X12	X10	X8	X6	X4	118	
10	44	18	9	X10	X8	X6	X4	X3	X2	X10	X8	X6	X4	X3	100	
8	37	15	7	X8	X6	X4	X3	X2	X1	X8	X6	X4	X3	X2	83	
6	29	12	6	X6	X4	X3	X2	X1	X1	X6	X4	X3	X2	X1	63	
4	21	8	4	X4	X3	X2	X1	X1	X1	X4	X3	X2	X1	X1	45	

MANATEE COUNTY
PUBLIC WORKS DEPARTMENT

REVISIONS: February 25, 2020

RESTRAINED LENGTHS FOR PVC PIPE UG-8



REV. NO.	DESCRIPTION	DATE
D	ISSUED FOR BID	SEPT. 2022
C	100% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	JULY 2022
B	80% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
A	30% CLIENT SUBMITTAL	JUNE 2021

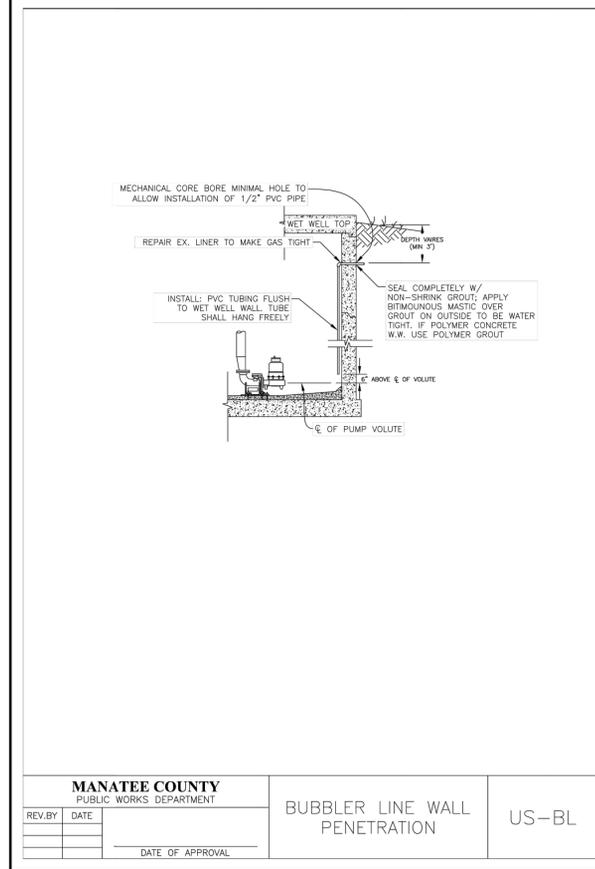
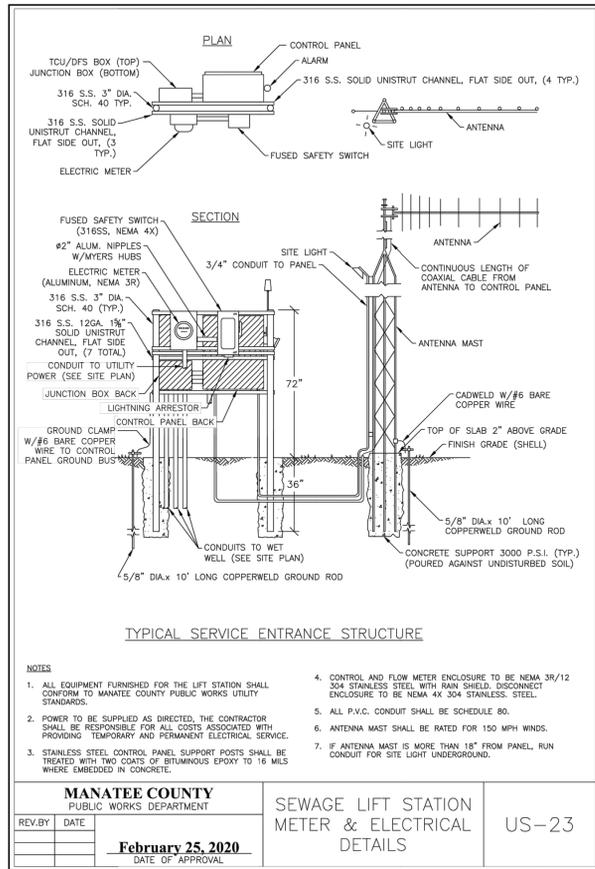
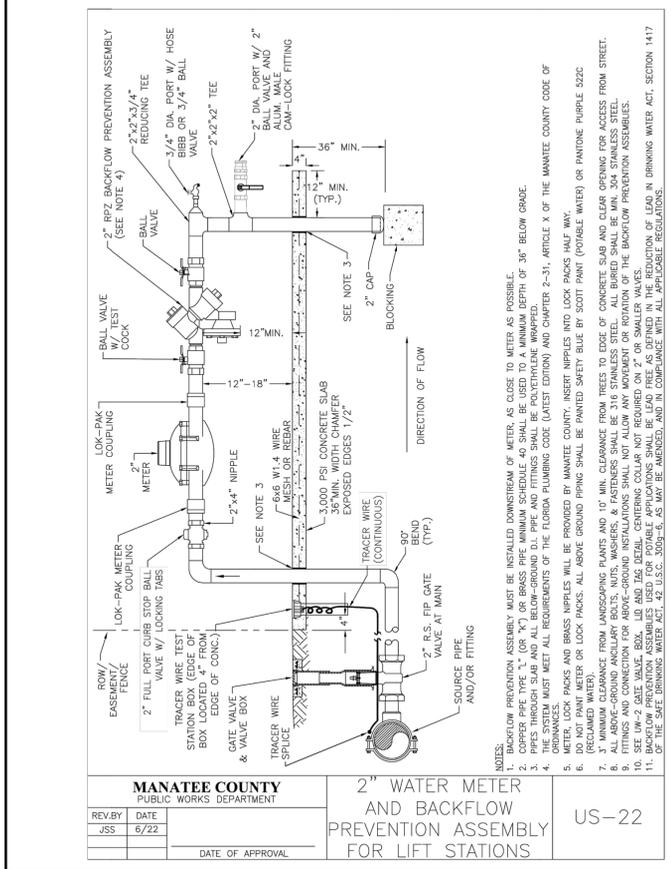
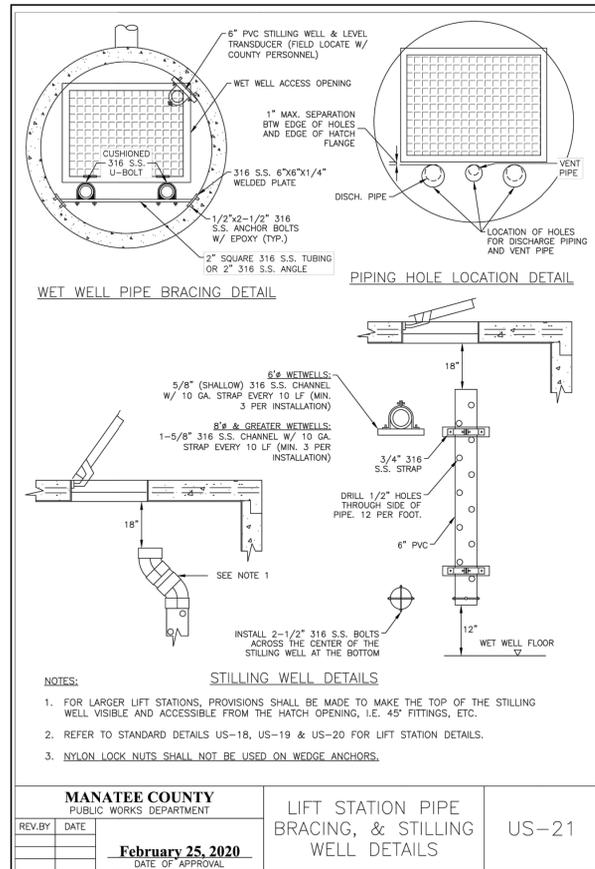


MCKIM & CREED
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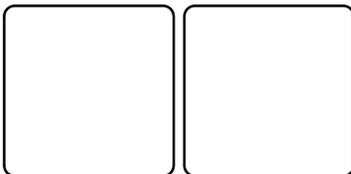
MISSIONARY VILLAGE LIFT STATION REHABILITATION
DETAILS
DETAILS 1 OF 4

PROJ. START DATE: 2021 MARCH	SCALE: HORIZONTAL: N/A VERTICAL: NA
MCE PROJ. #: 6022386	DRAWN: EJB
DESIGNED: LC	CHECKED: PJL
PROJ. MGR: BP	STATUS: ISSUED FOR BID



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REVISIONS



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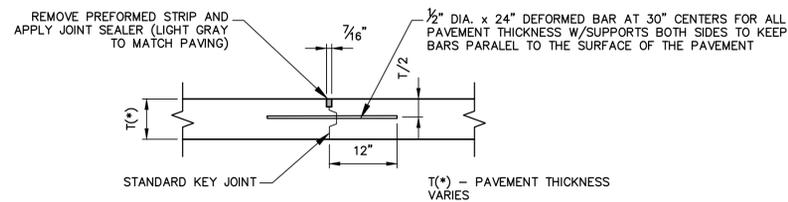
MISSIONARY VILLAGE LIFT STATION REHABILITATION

DETAILS
DETAILS 3 OF 4

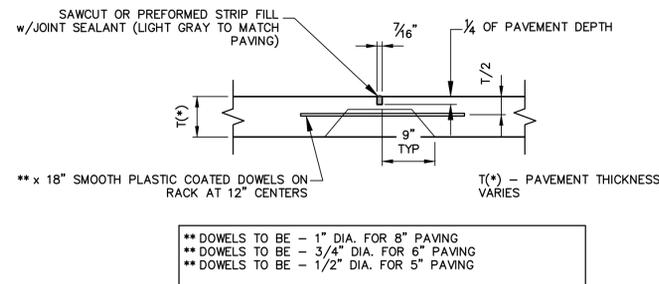
PROJ. START DATE 2021 MARCH	SCALE	D00.3
MCE PROJ. # 6022386	HORIZONTAL: N/A	
DRAWN EJB	VERTICAL: NA	D
DESIGNED LC		REVISION
CHECKED PJL		
PROJ. MGR. BP		

STATUS: _____

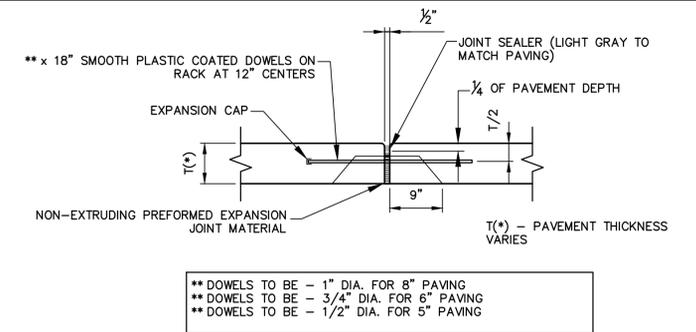
ISSUED FOR BID



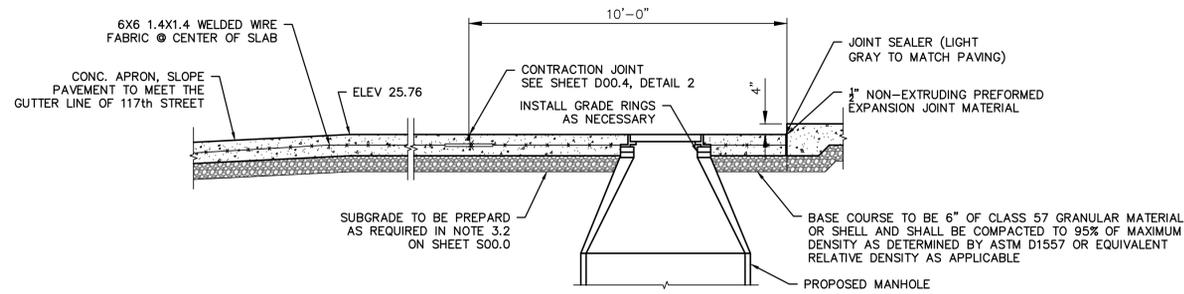
1 - CONCRETE PAVEMENT LONGITUDINAL JOINT
N.T.S.



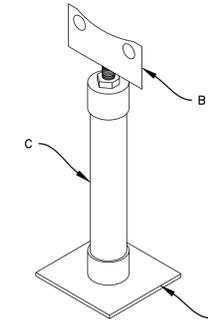
2 - CONCRETE PAVEMENT CONTRACTION JOINT
N.T.S.



3 - CONCRETE PAVEMENT EXPANSION JOINT
N.T.S.



4 - CONCRETE PAVEMENT SECTION
N.T.S.

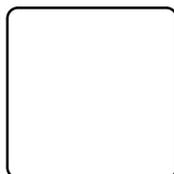


- A. LARGE BASE:
4" x 6" OR 8" x 8"
- B. SADDLE ASSEMBLY AND HEIGHT-ADJUSTMENT CAP, WHICH ALLOWS FOR UP TO 3" OF FINAL HEIGHT ADJUSTMENT.
- C. EXTENSION PIPE, AT THE LENGTH REQUIRED

CLASS 125 FLANGE SIZE	304 SS ITEM NO.	FLANGE PLATE DIMENSIONS	THREADED ROD	BASE PLATE	EXTENSION PIPE SIZE	MIN. HEIGHT FROM FLOOR
3"	364-5890	6" x 3-1/4" x 1/4"	1"-8 NC x 6"	1/4" x 4" x 6"	2" Sch 40	7"
4"	364-5891	4-1/2" x 2-1/2" x 1/4"				
6"	364-5892	5-1/4" x 2-1/2" x 1/4"				
8"	364-5893	6-1/2" x 2-1/2" x 1/4"				
10"	364-5894	6" x 2-1/2" x 1/4"				
12"	364-5895	6-1/2" x 2-1/2" x 1/4"				
14"	364-5896	7-1/2" x 3-1/2" x 3/8"	1-1/2"-6 NC x 6"	1/2" x 8" x 8"	3" Sch 40	10"
16"	364-5897					
18"	364-5898					
20"	364-5899					
22"	364-5900					
24"	364-5900		2"-4 NC x 6"		4" Sch 40	

5 - PIPE SUPPORT DETAIL
N.T.S.

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MISSIONARY VILLAGE LIFT STATION REHABILITATION
DETAILS
DETAILS 4 OF 4

PROJ. START DATE	2021 MARCH
MCE PROJ. #	6022386
DRAWN	EJB
DESIGNED	LC
CHECKED	PJL
PROJ. MGR.	BP

SCALE	AS SHOWN
HORIZONTAL:	NA
VERTICAL:	NA

D00.4
DRAWING NUMBER
B
REVISION
ISSUED FOR BID