

**LEGEND:**  
 NEW AND/OR MODIFIED

**NOTE:**  
 1. PROVIDE ALUMINUM 8"x8" (MIN.) ACCESS PLATES FOR TRANSDUCERS (NOT SHOWN)

SEE SHEET 4 FOR LOCATION OF CONSTRUCTION AND EXPANSION JOINTS IN SLAB.

**SECTION**  
 C  
 5  
 SCALE: 1/2" = 1'-0"

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1/7/19	ISSUED FOR BID	TAA			
7/7/18	OWNER SUBMITTAL	TAA			
1/7/18	DHI REVIEW	TAA			
DATE	REVISIONS	BY	DATE	REVISIONS	BY

**ST. JOHN THE BAPTIST PARISH, LOUISIANA**  
 OWNER

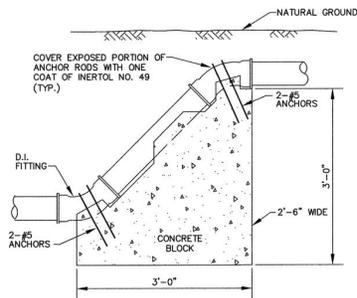
**MAIN WASTEWATER PUMP STATION REHABILITATION  
 NEW PIPING SECTIONS**  
 TITLE

DESIGNED: TAA	SCALE: 1/2" = 1'-0"
DRAWN: TLR	DATE: AUGUST 2017
CHECKED: BQH	
APPROVED: BQH	

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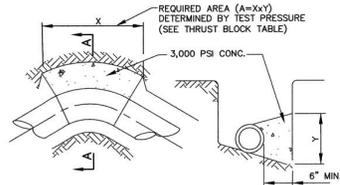
PROJECT NO. **11161**  
 SHEET NO. **9**



**THRUST BLOCK FOR VERTICAL OFFSETS**  
N.T.S.

NOTE: TO BE USED ONLY WHEN APPROVED BY PROJECT ENGINEER

ALLOWABLE SAFE LATERAL BEARING OF SOILS IN P.S.F.	
MUCK AND PEAT	0
SOFT CLAY	500
SAND	1,000
SAND AND GRAVEL	1,500
SAND AND GRAVEL CEMENTED W/CLAY	2,000
SHALE	2,000



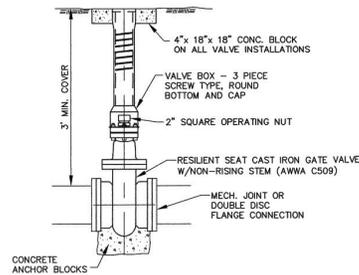
**PLAN SECTION A-A**

**TYPICAL THRUST BLOCKING FOR FORCE MAIN**

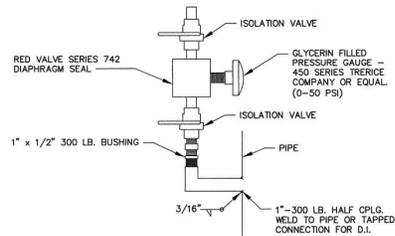
NOTE: TO BE USED ONLY WHEN APPROVED BY PROJECT ENGINEER

THRUSTS FOR VARIOUS FITTINGS AND TEST PRESSURES (THRUST IN POUNDS)																					
PIPE SIZE	90° BENDS				TEES				45° BENDS				22½° BENDS				11½° BENDS				
	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.	TEST PR.			
150	100	50	150	100	50	150	100	50	150	100	50	150	100	50	150	100	50	150	100	50	
18"	50,500	33,750	14,350	35,700	23,800	10,100	27,300	18,200	7,200	14,000	9,300	4,000	7,000	4,700	2,000						

- NOTE: 1. FOR AREA OF THRUSTS BLOCK IN SQ. FT. DIVIDE APPROPRIATE THRUST BY ALLOWABLE SOIL BEARING.  
2. TEST PRESSURES SHALL BE AS INDICATED IN THE SPECIFICATIONS OR SPECIAL CONDITIONS.  
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING THRUST BLOCKS AND ANCHORAGE FOR VARIOUS PIPE SIZE AND FITTINGS ACCORDING TO APPROPRIATE SOIL BEARING AND TEST PRESSURE. COST OF THRUST ANCHORAGE SHALL BE INCLUDED IN PRICE BID FOR FITTINGS OR PIPE.  
4. THE CONTRACTOR SHALL PROVIDE RESTRAINED JOINT PIPE THROUGHOUT PROJECT (FM) AND RESTRAINED FITTINGS WITH CONCRETE THRUST BLOCKS AT ALL FITTING LOCATIONS.  
5. NO DIRECT PAY FOR THRUST BLOCKS.  
6. TO BE USED ONLY WHEN APPROVED BY PROJECT ENGINEER

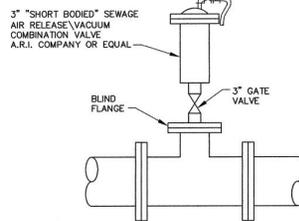


**TYPICAL VALVE SETTING**  
N.T.S.

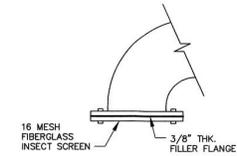


**TYPICAL PRESSURE GAUGE**  
N.T.S.

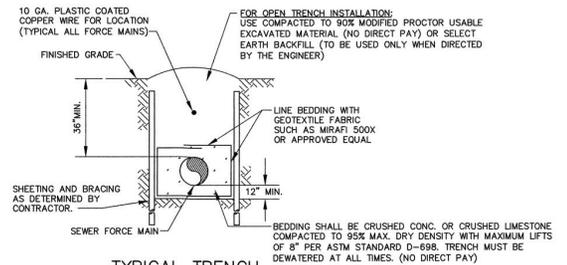
NOTE: ALL FITTINGS, BUSHINGS, ETC. TO BE STAINLESS STEEL



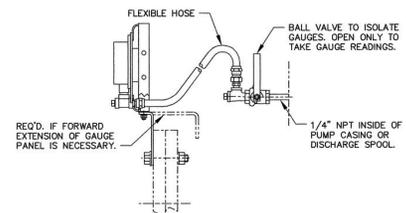
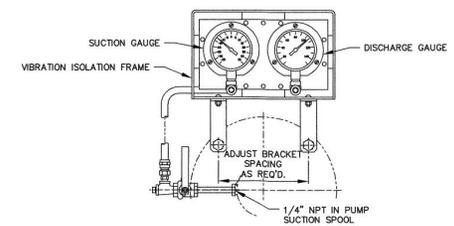
**FORCE MAIN AIR RELEASE VALVE**  
N.T.S.



**VENT SCREEN**  
N.T.S.



**TYPICAL TRENCH FOR FORCE MAIN**  
N.T.S.



**SUCTION AND DISCHARGE GAUGE PANEL KIT**  
N.T.S.



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DATE	REVISIONS	BY
1/19	ISSUED FOR BID	TAA
7/18	OWNER SUBMITTAL	TAA
1/18	DH REVIEW	TAA

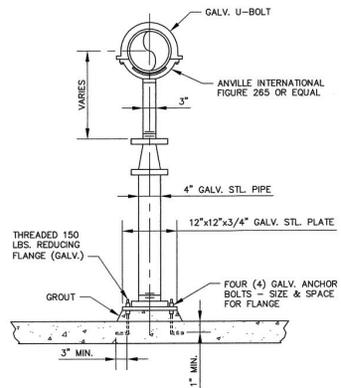
**ST. JOHN THE BAPTIST PARISH, LOUISIANA**  
OWNER

**MAIN WASTEWATER PUMP STATION REHABILITATION**  
MISCELLANEOUS DETAILS

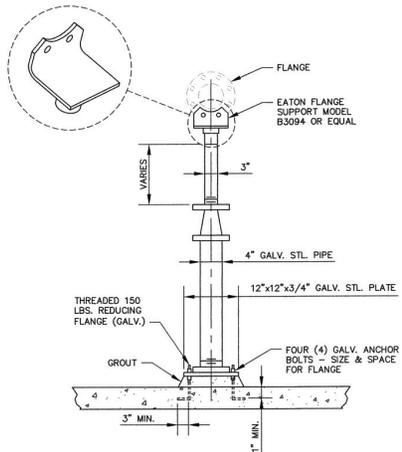
DESIGNED:	TAA	SCALE:	AS SHOWN
DRAWN:	TLB	CHECKED:	BGH
DATE:	AUGUST 2017	APPROVED:	BGH

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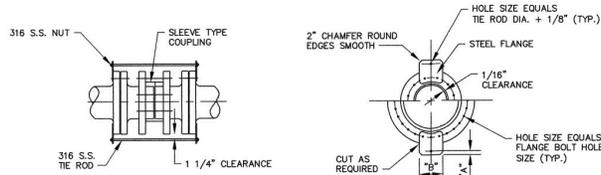
PROJECT NO. **11161**  
SHEET NO. **10**



**ADJUSTABLE GALVANIZED STEEL PIPE SUPPORT - TYPE A**  
N.T.S.



**ADJUSTABLE GALVANIZED STEEL PIPE SUPPORT - TYPE B**  
N.T.S.



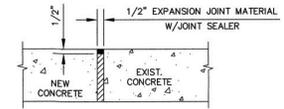
**NOTES:**

1. THE RODS SHALL BE EQUALLY SPACED AROUND PIPE.
2. FOR STEEL FLANGE CLAMPS REQUIRING 3 BOLTS PER CLAMP, THE ORIENTATION OF THE FLANGE CLAMP AND PIPE FLANGE DRILLING IS PICTORIAL ONLY. EXACT ORIENTATION OF THE FLANGE CLAMP IS DETERMINED BY THE STANDARD FLANGE DRILLING.

PIPE SIZE	TIERODS			FLANGE CLAMP		
	NO.	DIA.	THICKNESS	NO. OF FLANGE BOLTS PER CLAMP	"A"	"B"
16"	2	1 1/4"	7/8"	3	2"	12 1/4"

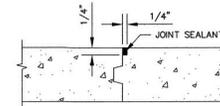
**FLEXIBLE COUPLING WITH THRUST RESTRAINT**

N.T.S.



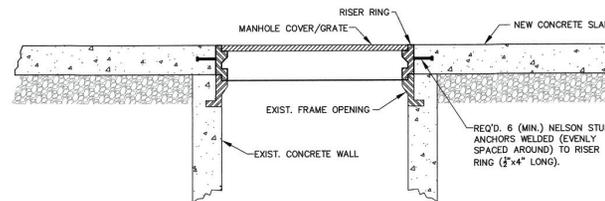
**EXPANSION JOINT**

N.T.S.

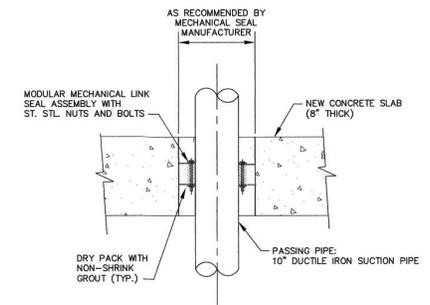


**CONSTRUCTION JOINT**

N.T.S.



**DETAIL OF MANHOLE ADJUSTMENT**



**SLAB OPENING - DETAIL**

N.T.S.

**NOTES:**

1. MODULAR MECHANICAL LINK SEAL SHALL BE MODEL T1S-410-C FOR 10" PASSING PIPE RESPECTIVELY, OR EQUAL.
2. CONTRACTOR SHALL PROVIDE PENETRATIONS FOR ALL PIPES AS RECOMMENDED BY MANUFACTURER.

© 11/17/2016 8:28:00 AM C:\Users\j... \Public\DWG\171 Jan 08, 2017 - 13:38:00 for review

DATE	REVISIONS	BY	DATE	REVISIONS	BY
1/19	ISSUED FOR BID	TAA			
7/18	OWNER SUBMITTAL	TAA			
1/18	DHJ REVIEW	TAA			

**ST. JOHN THE BAPTIST PARISH, LOUISIANA**  
OWNER

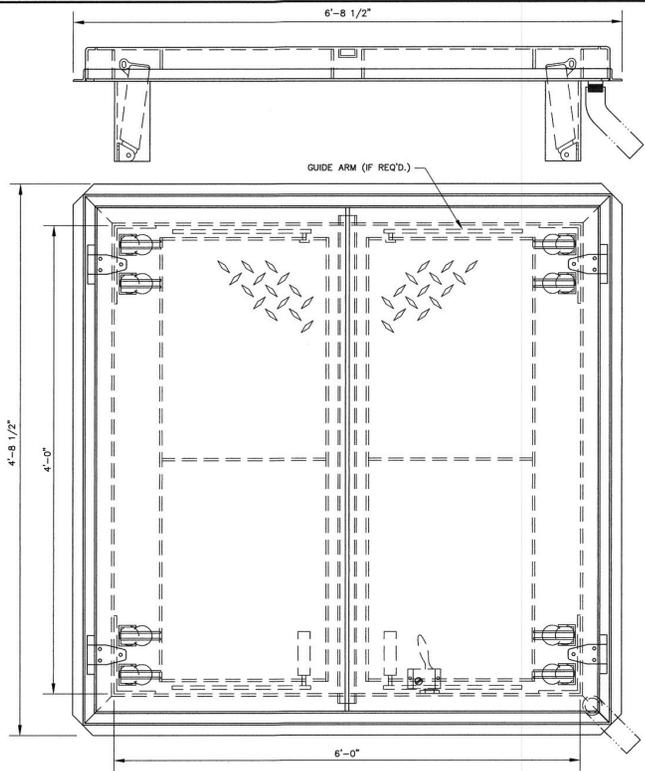
**MAIN WASTEWATER PUMP STATION REHABILITATION MISCELLANEOUS DETAILS**

DESIGNED: TAA  
DRAWN: TLB  
CHECKED: BGH  
APPROVED: BGH  
DATE: AUGUST 2017

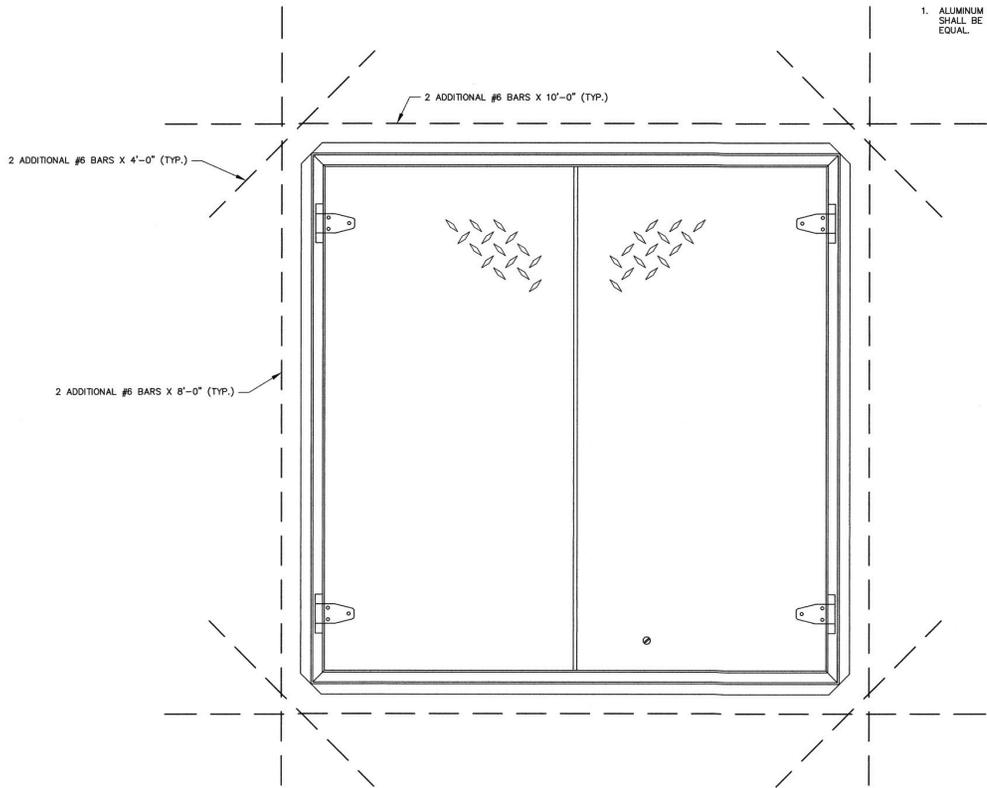
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PROJECT NO. **11161**  
SHEET NO. **11**



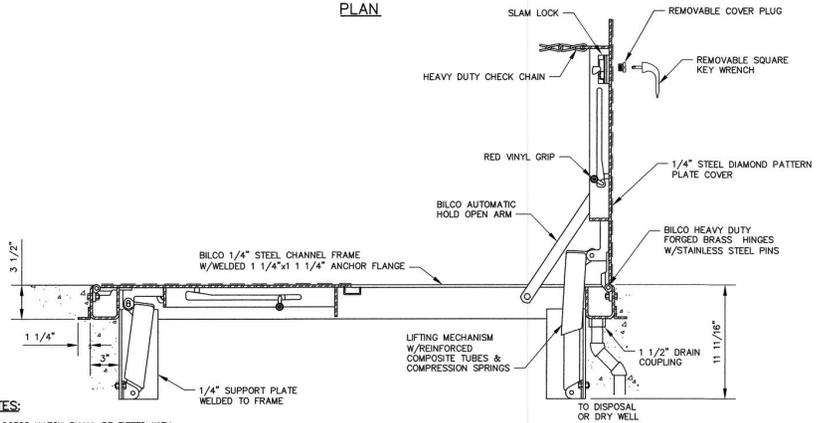


PLAN



ADDITIONAL REBAR AROUND ACCESS DOOR OPENING IN SLAB  
NTS

**NOTE:**  
1. ALUMINUM ACCESS DOORS SHALL BE BILCO TYPE JD OR EQUAL.



SECTION

ACCESS DOOR  
NTS

**NOTES:**  
1. ACCESS HATCH SHALL BE FITTED WITH FALL PROTECTION GRATING SYSTEM MEETING OSHA 29 CFR 1910.23 REQUIREMENTS. BILCO OR EQUAL.



1/19	ISSUED FOR BID	TAA			
7/18	OWNER SUBMITTAL	TAA			
1/18	DHJ REVIEW	TAA			
DATE	REVISIONS	BY	DATE	REVISIONS	BY

ST. JOHN THE BAPTIST PARISH,  
LOUISIANA  
OWNER

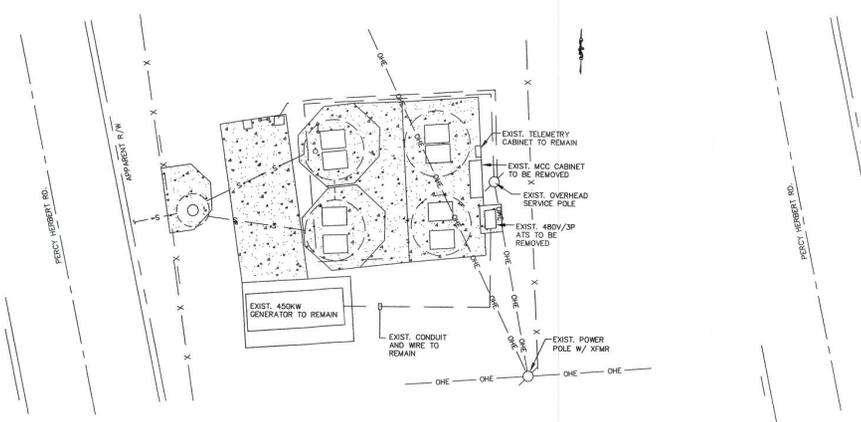
MAIN WASTEWATER PUMP STATION REHABILITATION  
MISCELLANEOUS DETAILS

DESIGNED: TAA	SCALE: AS SHOWN
DRAWN: TLB	DATE: AUGUST 2017
CHECKED: BGH	
APPROVED: BGH	

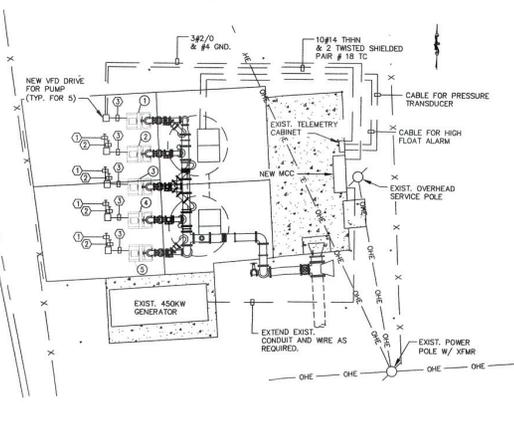
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PROJECT NO. 11161  
SHEET NO. 12

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ELECTRICAL SITE PLAN- DEMO  
SCALE: 3/32"=1'-0"



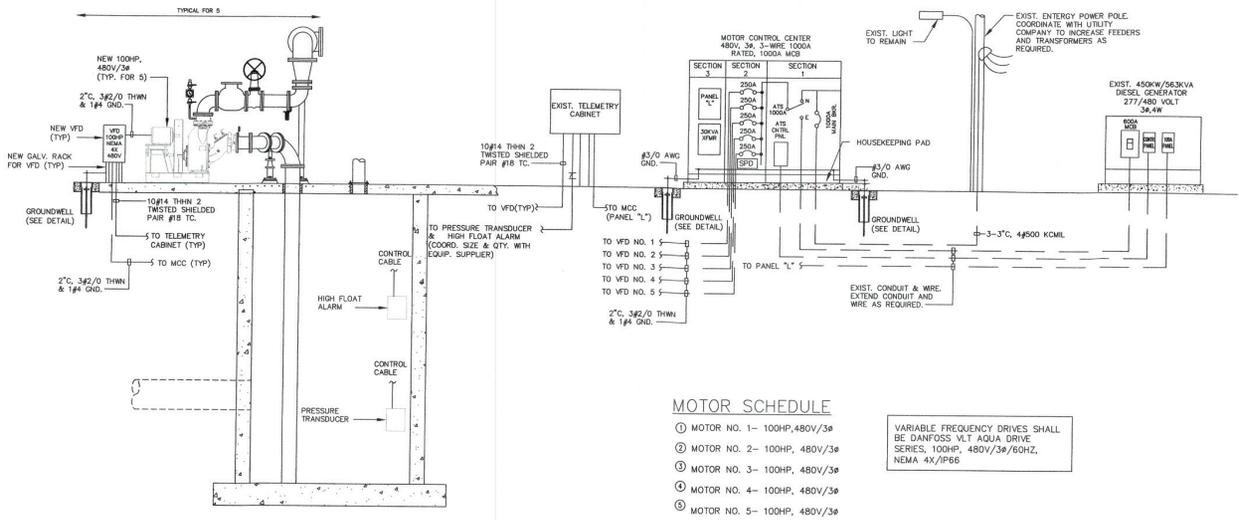
ELECTRICAL SITE PLAN- NEW  
SCALE: 3/32"=1'-0"

GENERAL NOTES

- ALL ELECTRICAL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE. ALL WORK SHOWN IS NEW UNLESS NOTED OTHERWISE.
- THE CONDUIT SYSTEM, ALL ELECTRICAL EQUIPMENT, ALL STEEL STRUCTURES, MOTOR FRAMES, ETC. SHALL BE CONNECTED TO THE GROUNDING SYSTEM PER ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
- ALL EQUIPMENT LOCATIONS SHALL BE VERIFIED IN THE FIELD WITH MECHANICAL TRADES, CONDUIT ROUTING AND EQUIPMENT. LOCATIONS SHOWN ARE DIAGRAMMATIC ONLY. THE EXACT LOCATION OF ALL EQUIPMENT AND ROUTING OF CABLES AND CABLES SHALL BE COORDINATED WITH & APPROVED BY THE OWNER'S REPRESENTATIVE DURING CONSTRUCTION.
- LOCATIONS OF CONDUITS, BOXES, FITTINGS, ETC., ARE DIAGRAMMATIC. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL SIZES, LOCATIONS, REVIEW ALL MECHANICAL SHOP DRAWINGS AND COORDINATE WITH THE MECHANICAL CONTRACTOR, OWNER AND ENGINEER TO INSURE THE TIMELY DELIVERY AND PROPER INSTALLATION OF ALL ELECTRICAL EQUIPMENT, (IE CONTROL PANELS, AREA LIGHTING, ETC.)
- BEFORE INSTALLATION, THE ELECTRICAL CONTRACTOR SHALL SUBMIT DETAILED LAYOUT DRAWINGS TO THE ENGINEER FOR REVIEW COVERING PROPOSED LOCATIONS, MOUNTING, AND ROUTING FOR ALL CONDUITS, SERVICES, FITTINGS, GROUND RODS, AREA LIGHTING, CONTROL PANELS, SUPPORTS, ETC.
- ENCLOSURE, JUNCTION BOXES, RECEPTACLES AND ALL OTHER ELECTRICAL EQUIPMENT USED OUTDOOR SHALL BE OF 304-4X (STAINLESS STEEL) CONSTRUCTION UNLESS OTHERWISE NOTED.
- MINIMUM CONDUIT SIZE IS 3/4" - ALL EXPOSED CONDUIT SHALL BE RIGID ALUMINUM AND ALL DUCT BANK CONDUIT SHALL BE SCHEDULE 40 PVC UNLESS NOTED OTHERWISE.
- ALL CONDUITS LEAVING THE WET WELL SHALL BE SEALED IN ACCORDANCE WITH ARTICLE 501 OF THE NATIONAL ELECTRICAL CODE FOR CLASS 1 DIVISION 1 LOCATIONS.
- ALL CABLES INSTALLED FROM WET WELL TO CONTROL PANEL SHALL BE CONTINUOUS. NO SPLICING WILL BE ALLOWED. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING THE PROPER LENGTHS FOR CONTINUOUS RUN.
- THE WET WELL SHOWN ON THIS DRAWING IS PRESENTED HERE FOR TYPICAL REPRESENTATION. FOR EXACT DETAILS, SEE CIVIL DRAWINGS.
- THE PHASE CONDUCTOR WITH THE HIGHER VOLTAGE TO GROUND SHALL BE IDENTIFIED WITH AN OUTER FINISH THAT IS ORANGE IN COLOR PER ARTICLE 215-8 OF THE NATIONAL ELECTRICAL CODE.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR AND CAREFULLY REVIEW THE MECHANICAL PACKAGES PROPOSED TO BE SUPPLIED. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ALL WIRE AND CONDUIT NEEDED FOR ELECTRICAL APPEARANCES ASSOCIATED WITH MECHANICAL PACKAGES, ARE PROVIDED EVEN IF NOT SPECIFICALLY CALLED FOR IN THE PLANS AND SPECIFICATIONS.
- FACTORY CABLE CONTRACTOR SHALL VERIFY CONDUIT SIZE BASED ON MANUFACTURER'S SUPPLIED CABLE.
- THERE SHALL BE WARNING LABELS LOCATED ON THE FRONT OF EACH ELECTRICAL ENCLOSURE. SEE SIGNAGE DETAIL; SHEET NO. 4.0.
- VERIFY CONDITION OF EXISTING CONDUITS PRIOR TO REUSE. PROVIDE NEW CONDUIT OF SAME SIZE AS REQUIRED.
- REPLACED CONDUCTORS TO BE THE SAME SIZE AS EXISTING UNLESS NOTED OTHERWISE ON DRAWINGS.

KEY NOTES

- ROUTE 3/2" Ø & 1/4" GND. TO NEW MCC FOR POWER TO THE MOTOR.
- ROUTE 10#14 THIN & 2 TWISTED SHELDED PAIR #18 TC TO EXISTING TELEMETRY CABINET FOR CONTROLS.
- ROUTE 3/2" Ø & #4 GND. TO PUMP FOR MOTOR POWER.



- MOTOR SCHEDULE
- ① MOTOR NO. 1- 100HP, 480V/3ø
  - ② MOTOR NO. 2- 100HP, 480V/3ø
  - ③ MOTOR NO. 3- 100HP, 480V/3ø
  - ④ MOTOR NO. 4- 100HP, 480V/3ø
  - ⑤ MOTOR NO. 5- 100HP, 480V/3ø

VARIABLE FREQUENCY DRIVES SHALL BE DANFOSS VLT AQUA DRIVE SERIES, 100HP, 480V/3ø/60HZ, NEMA 4X/IP66

ELECTRICAL RISER DIAGRAM- NEW  
SCALE: N.T.S.



ASSOCIATED DESIGN GROUP, INC.  
7911 Wrenwood Boulevard, Suite D  
Baton Rouge, Louisiana 70809  
Phone: (225) 922-9223  
Email: adg@adginc.org / adginc@adginc.org  
Project No. 17318

DATE	OWNER SUBMITTAL	TAA	BY	DATE	REVISIONS	BY
7/8						

ST. JOHN THE BAPTIST PARISH,  
LOUISIANA  
OWNER

MAIN WASTEWATER PUMP STATION REHABILITATION  
ELECTRICAL DEMOLITION & NEW PUMP STATION SITE PLAN,  
& ELECTRICAL RISER DIAGRAM

DESIGNED:	ONL	SCALE:	AS SHOWN
DRAWN:	ONL	DATE:	JULY 2018
CHECKED:	MLT	APPROVED:	DTC

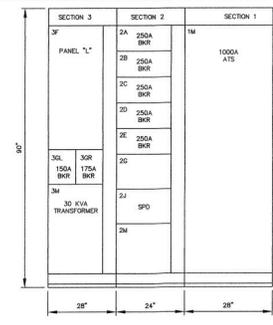


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PROJECT NO.	11161
SHEET NO.	E-1

**TYPE: MOTOR CONTROL CENTER** *MOTOR CONTROL CENTER* **MOUNTING: FREE-STANDING**  
**SERVICE: 480 VOLT, 3 $\phi$ , 3W** **"MCC"** **AIC: 65,000**  
**MAIN: 1200 AMP MAIN BREAKER** **REMARKS: GROUND BUS NEMA 4X**

CUBICLE NO.	DESCRIPTION	REMARKS
1M	1000A AUTOMATIC TRANSFER SWITCH	SERVICE ENTRANCE RATED
2A	250A BREAKER VFD #1	250AT J250H COMPACT BKR
2B	250A BREAKER VFD #2	250AT J250H COMPACT BKR
2C	250A BREAKER VFD #3	250AT J250H COMPACT BKR
2D	250A BREAKER VFD #4	250AT J250H COMPACT BKR
2E	250A BREAKER VFD #5	250AT J250H COMPACT BKR
2G	SPACE	
2J	SURGE PROTECTION DEVICE	60A/3P BREAKER
2M	SPACE	
3F	PANEL "L"	120/240V, 1 $\phi$ , 3-WIRE 225A MLO, 42 POLE
3GL	PRIMARY BREAKER FOR TRANSFORMER FEED TO PANEL "L"	150A BREAKER
3GR	SECONDARY BREAKER FOR TRANSFORMER FEED TO PANEL "L"	175A BREAKER
3M	30 KVA TRANSFORMER SERVING PANEL "L"	30 KVA, 1 $\phi$ , 480V PRIM.-120/240V SEC.

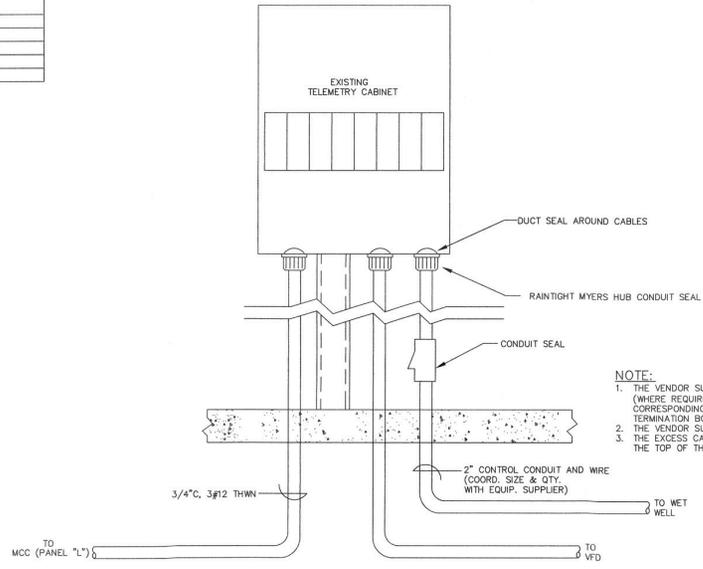


**PANEL SCHEDULES**  
NOT TO SCALE

**PANEL "L"**  
**TYPE: BOLT-ON BREAKER PANELBOARD** **MOUNTING: MCC MOUNTED**  
**SERVICE: 120/240 VOLT, 1 $\phi$ , 3W** **AIC: 10,000**  
**MAIN: 225 MLO** **REMARKS: GROUND BUS 42 POLE**

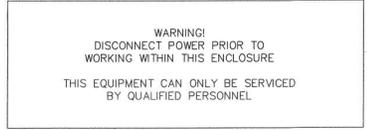
bkr. no.	trip amp	wire pole size	od	service
1	100	2	3	GENERATOR
2	20	1	12	TELEMETRY CABINET
3	20	1	12	LIGHT
4	20	1	12	RECEPTACLE
5	20	1		SPARE

**TO BE ADDED TO THE EXIST. TELEMETRY CABINET:**  
 1. THE DEAD FRONT INNER SWING PANEL NEEDS TO BE REPLACED TO ALLOW FOR 5 PUMP SWITCHES AND LIGHTS.  
 2. 2 (TWO) ANALOG INPUT CARDS WITH 4 (FOUR) INPUTS EACH NEED TO BE ADDED TO THE PLC.  
 3. 2 (TWO) ANALOG OUTPUT CARDS WITH 4 (FOUR) OUTPUTS EACH NEED TO BE ADDED TO THE PLC.



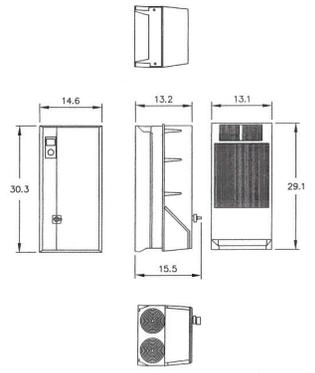
**TELEMETRY CABINET STUB-UP**  
**DETAIL**  
NOT TO SCALE

**SIGNAGE:**  
1) THE BELOW SIGN SHALL BE MOUNTED ON THE FRONT OF ALL ELECTRICAL ENCLOSURES.

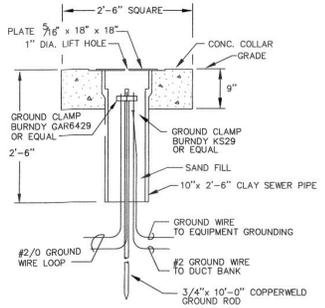


- NOTES:**
- NAMEPLATES TO BE FABRICATED FROM LAMACOID PLASTIC WITH BLACK OUTER LAMINATION AND A WHITE INNER LAMINATION.
  - LETTERING SHALL BE 1/4" HIGH CAPS, EXCEPT AS NOTED ON SCHEDULE. ENGRAVE LETTERS TO EXPOSE WHITE LAMINATION.
  - ATTACH NAMEPLATES ON EQUIPMENT IN A PROMINENT PLACE. USE TWO (2) SMALL SHEET METAL SCREWS FOR SHEET METAL ENCLOSURES. USE CONTACT BOND CEMENT ON ALL OTHER TYPE ENCLOSURES. ASSURE THAT SURFACE IS CLEAN AND FREE OF PAINT.

**SIGNAGE DETAIL**  
NOT TO SCALE



**VFD DETAIL**  
NOT TO SCALE



**GROUNDWELL DETAIL**  
NOT TO SCALE



**ASSOCIATED DESIGN GROUP, INC.**  
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 Project No. 17318

ST. JOHN THE BAPTIST PARISH, LOUISIANA  
OWNER

MAIN WASTEWATER PUMP STATION REHABILITATION  
ELECTRICAL DETAILS & PANEL SCHEDULES  
TITLE

DESIGNED: ONL	SCALE: AS SHOWN
DRAWING: ONL	
CHECKED: MLT	DATE: JULY 2018
APPROVED: DTC	

**PEC PROFESSIONAL ENGINEERING CONSULTANTS CORPORATION**  
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PROJECT NO. 11161
SHEET NO. E-2

V:\Users\PEC\17318.StJohn.Mts.Pump.Station\17318.StJohn.Mts.Pump.Station.dwg (2/28/18 11:53:10 AM) - 10:25am 16/06/2018