

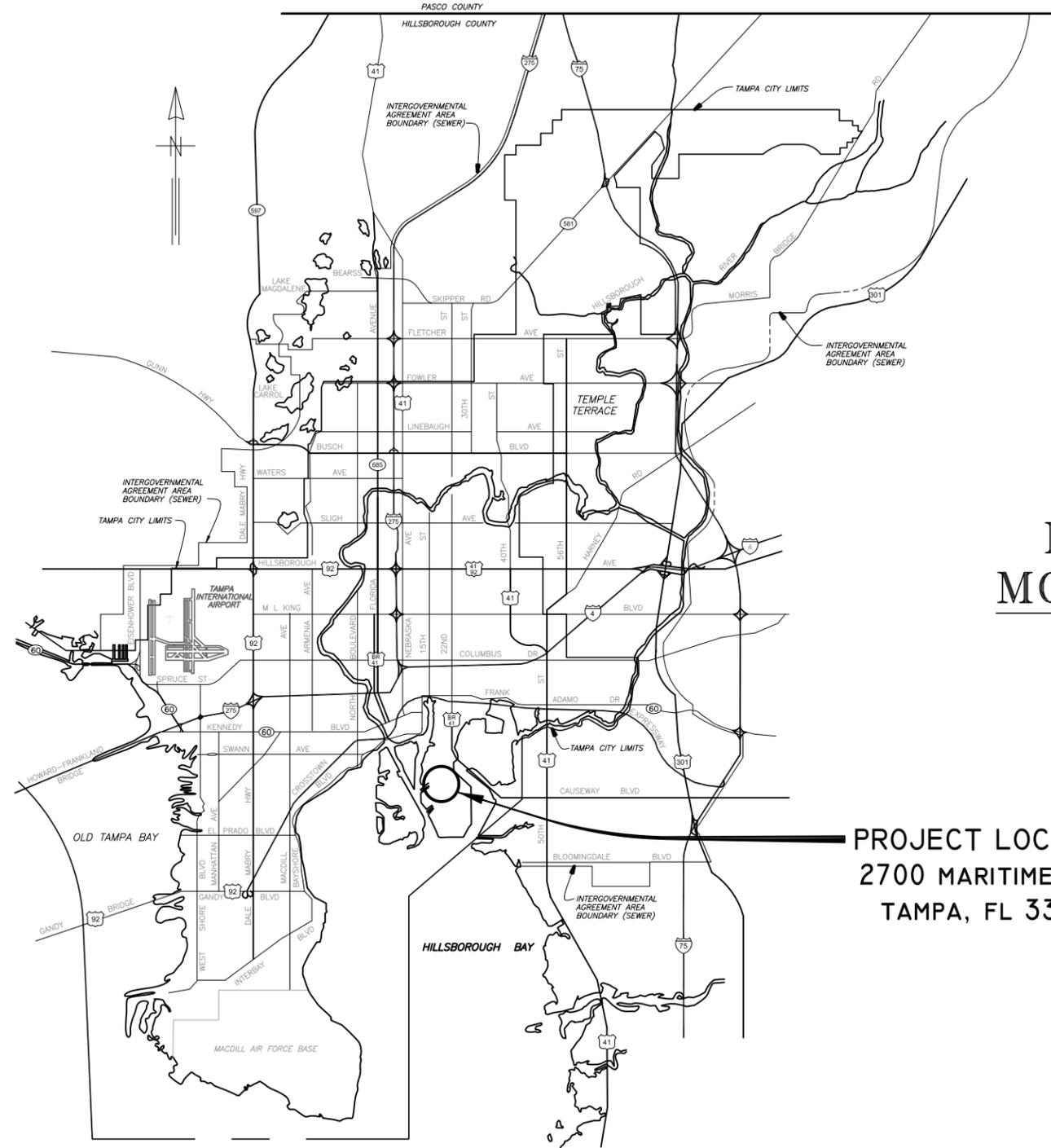
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Please Email ALL Questions:
[MailTo:ContractAdministration@TampaGov.net](mailto:ContractAdministration@TampaGov.net)

Please Let Us Know If You Plan To Bid

City of Tampa
Contract Administration Department
306 E. Jackson St. #280A4N
Tampa, FL 33602
(813)274-8456

LOCATION MAP



PROJECT LOCATION
2700 MARITIME BLVD.
TAMPA, FL 33605

PLANS

FOR

CITY OF TAMPA FLORIDA
WASTEWATER DEPARTMENT

FOR

THE CONSTRUCTION OF THE

HOWARD F. CURREN AWTP
PRIMARY SLUDGE PUMPING STATION
MOTOR CONTROL CENTER REPLACEMENT

CONTRACT : 13-C-00043

JULY 2015



TRICON
CONSULTING ENGINEERS

777 S. Harbour Island Blvd,
Suite 870
Tampa, FL 33602
813.227.9190
Certificate of Authorization No. 8363

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GENERAL NOTES :

- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR COMMENCING CONSTRUCTION.
- ALL CONDUCTORS SHALL BE STRANDED COPPER, #12 AWG MIN. WITH XHHW-2 INSULATION, UNLESS OTHERWISE NOTED.
- VERIFY ALL MECHANICAL EQUIPMENT SIZES AND RATING PRIOR TO CONNECTING.
- FIELD VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTIONS PRIOR TO COMMENCING CONSTRUCTION.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL APPLICABLE LOCAL ORDINANCES.
- ALL THREADED CONNECTIONS SHALL BE COATED WITH COPPER SHIELD ANTI-SEIZE COMPOUND MANUFACTURED BY THOMAS & BETTS (T & B) OR EQUAL.
- ALL PANELS, DISCONNECTS, SWITCHES, AND EQUIPMENT COVERPLATES SHALL BE LABELED WITH NAMEPLATES. NAMEPLATES SHALL BE THREE-PLY PHENOLIC BLACK-WHITE-BLACK ENGRAVED THROUGH THE FIRST BLACK LAYER. LETTERING SHALL BE 0.5 CM (3/16") MIN. EDGE OF NAMEPLATE SHALL BE BEVELED 45 DEG.
- ALL CONDUIT SHALL BE SUPPORTED AT MAXIMUM 5'-0" INTERVALS.
- ALL CIRCUITS SHALL HAVE A PROPERLY SIZED GROUNDING CONDUCTOR ROUTED INSIDE EACH CONDUIT WITH POWER CONDUCTORS.
- ALL CONDUCTOR LENGTHS SHALL BE CONTINUOUS, NO SPLICES OR CONDUCTOR TERMINATIONS SHALL BE PERMITTED UNLESS SPECIFICALLY DESIGNATED IN THE DRAWINGS.
- PROVIDE A MINIMUM OF 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110 OF THE NEC.
- ALL FASTENING HARDWARE (SCREW, BOLTS, NUTS, ETC.) SHALL BE 316-STAINLESS STEEL. FASTENING HARDWARE CONSTRUCTED OF FERROUS MATERIAL ARE NOT ACCEPTABLE.
- INTERIOR CONDUITS SHALL BE NON-COATED RIGID ALUMINUM CONDUIT, EXTERIOR, ABOVEGROUND CONDUIT SHALL BE RIGID ALUMINUM CONDUIT WITH 40 MIL PVC COATING. BELOWGRADE CONDUIT SHALL BE SCHEDULE 80 PVC.
- ALUMINUM WATERTIGHT HUBS (MYERS HUBS) SHALL BE USED FOR CONNECTIONS TO CONTROL BOXES, ETC. MOUNTED OUTDOORS, BELOW GRADE, OR IN WASHDOWN AREAS.
- A 316-STAINLESS STEEL CHANNEL ERECTOR SYSTEM SHALL BE USED TO SUPPORT ALL CONDUITS, BOXES, ETC. USE 316-STAINLESS STEEL MOUNTING HARDWARE.
- THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND MAKE ADJUSTMENTS AS NECESSARY TO EXECUTE THE PROPOSED INSTALLATIONS.
- ALL EXISTING INSTALLATIONS DENOTED ON THE DRAWINGS ARE FOR THE CONTRACTOR'S REFERENCE ONLY. ALL EXISTING INSTALLATIONS SHALL BE FIELD VERIFIED PRIOR TO SUBMITTING A BID AND PRIOR TO COMMENCING CONSTRUCTION.
- PULL BOXES SHALL BE INSTALLED AS NECESSARY TO FACILITATE WIRE PULLS AND AVOID EXCESSIVE PULLING TENSION ON WIRING. IN NO CASE SHALL CONDUIT LENGTHS EXCEED 150' OR THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL) WITHOUT A PULL BOX. PULL BOXES SHALL BE SIZED IN ACCORDANCE WITH ARTICLE 314 OF THE NEC.
- ALL ELECTRICAL WORK SHALL BE PERFORMED WITHIN LATEST NEC AND CITY OF TAMPA/ HILLSBOROUGH COUNTY CODES AND SHALL BE INSPECTED BY CITY OF TAMPA/ HILLSBOROUGH COUNTY ELECTRICAL INSPECTORS AS APPLICABLE.
- ALL ELECTRICAL COMPONENTS SHALL BE UL LISTED AND AS SPECIFIED, OR AS APPROVED BY THE ENGINEER. THE PANEL BUILDER SHALL BE UL-508A CERTIFIED AND A UL LABEL SHALL BE ATTACHED TO THE INSIDE OF THE ENCLOSURE.
- ALL EXISTING CONDUIT TO BE REUSED SHALL BE CLEANED USING A SWAB. THE CONTRACTOR SHALL THEN RUN A PROPERLY SIZED RUBBER SLUG MANDREL THROUGH THE CONDUIT TO PROVE INTEGRITY PRIOR TO THE INSTALLATION OF ANY NEW CONDUCTORS.
- ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH CITY OF TAMPA CODE 5-111.6.1.5 CITY OF TAMPA CODE CHAPTER 5 ISSUED 10/01/2005.



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DATE	7/2015					

SCALE

NOT TO SCALE

City of Tampa Wastewater Department
**HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT**

**DRAWING INDEX AND
GENERAL NOTES**

SHEET NUMBER

2

TIMOTHY THOMAS, P.E. No. 47079

FILE: 171407042

SCOPE OF WORK

THE WORK CONSISTS OF FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, AND PERFORMING ALL OPERATIONS REQUIRED TO SUPPORT THE INSTALLATION AND COMMISSIONING OF THE ELECTRICAL PORTION OF THE HFC AWTP PRIMARY SLUDGE MCC REPLACEMENT. THE WORK INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

1. SUBMIT WORKING DRAWINGS, PARTS SCHEDULES AND CUT-SHEETS TO THE ENGINEER.
2. FURNISH AND INSTALL ALL EQUIPMENT, CONTROLS AND INSTRUMENTATION AS SHOWN ON THE PLANS AND DESCRIBED IN THE SPECIFICATIONS.

SPECIFICALLY:

A. FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION AND PERFORMING ALL OPERATIONS REQUIRED TO SUPPORT THE INSTALLATION AND COMMISSIONING OF THE HOWARD F. CURREN AWTP PRIMARY SLUDGE PUMPING STATION MOTOR CONTROL CENTER (MCC) REPLACEMENT. THE WORK INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING :

1. DEMOLISH AND REMOVE THE EXISTING PRIMARY SLUDGE PUMPING STATION MOTOR CONTROL CENTER (MCC-20).
2. REPLACE THE EXISTING 600A, 480V, 3-PHASE, 3-WIRE, MOTOR CONTROL CENTER (MCC-20) WITH A NEW MOTOR CONTROL CENTER OF SIMILAR SPECIFICATIONS.
3. DEMOLISH AND REMOVE AN EXISTING 480V-120/208V, THREE-PHASE 9 KVA TRANSFORMER, 'T1'.
4. PROVIDE AND INSTALL A NEW 480V-120/208V, THREE-PHASE 15 KVA TRANSFORMER.
5. DEMOLISH AND REMOVE AN EXISTING 120/208V, THREE-PHASE, 4-WIRE, PANELBOARD.
6. PROVIDE AND INSTALL A NEW 120/208V, THREE-PHASE, 4-WIRE, 60 AMPERE MAIN CIRCUIT BREAKER PANELBOARD 'LP'.
7. DEMOLISH AND REMOVE AN EXISTING 480V, SINGLE-PHASE, 20A ENCLOSED CIRCUIT BREAKER.
8. PROVIDE AND INSTALL A NEW 480V-277/480V, THREE-PHASE 15 KVA ISOLATION TRANSFORMER, 'IT1'.
9. DEMOLISH AND REMOVE AN EXISTING 277/480V, THREE-PHASE, 4-WIRE PANELBOARD.
10. PROVIDE AND INSTALL A NEW 277/480V, THREE-PHASE, 4-WIRE, 30 AMPERE MAIN CIRCUIT BREAKER PANELBOARD 'LPO'.
11. DEMOLISH AND REMOVE AN EXISTING 277/480V, LIGHTING CONTROL CABINET.
12. PROVIDE AND INSTALL A NEW 480V, 4-POLE, 30 AMPERE LIGHTING CONTROL CABINET 'C1'.
13. DEMOLISH AND REMOVE AN EXISTING AIR COMPRESSOR.
14. DEMOLISH AND REMOVE EXISTING 8' AND 4' FLUORESCENT LIGHTING FIXTURES. DEMOLISH AND REMOVE ALL CONDUIT AND CONDUCTORS ASSOCIATED WITH THE FLUORESCENT LIGHTING FIXTURES.
15. PROVIDE AND INSTALL NEW 4' FLUORESCENT LIGHTING FIXTURES WITHIN THE INTERIOR OF THE PRIMARY SLUDGE PUMPING STATION. PROVIDE AND INSTALL NEW CONDUIT AND CONDUCTORS FOR THE FLUORESCENT LIGHTING FIXTURES.
16. DEMOLISH AND REMOVE EXISTING WALLPACK LIGHTING FIXTURES. DEMOLISH AND REMOVE ALL CONDUIT AND CONDUCTORS ASSOCIATED WITH THE WALLPACK LIGHTING FIXTURES.
17. PROVIDE AND INSTALL NEW WALLPACK LIGHTING FIXTURES ON THE EXTERIOR OF THE PRIMARY SLUDGE PUMPING STATION. PROVIDE AND INSTALL NEW CONDUIT AND CONDUCTORS FOR THE WALLPACK LIGHTING FIXTURES.
18. DEMOLISH AND REMOVE EXISTING LIGHT SWITCHES AS INDICATED ON THE DRAWINGS. DEMOLISH AND REMOVE ALL CONDUIT AND CONDUCTORS ASSOCIATED WITH THE LIGHT SWITCHES.
19. PROVIDE AND INSTALL NEW LIGHT SWITCHES WITHIN THE INTERIOR OF THE PRIMARY SLUDGE PUMPING STATION. PROVIDE AND INSTALL NEW CONDUIT AND CONDUCTORS FOR THE LIGHT SWITCHES.
20. DEMOLISH AND REMOVE EXISTING RECEPTACLES AS INDICATED ON THE DRAWINGS. DEMOLISH AND REMOVE ALL CONDUIT AND CONDUCTORS ASSOCIATED WITH THE RECEPTACLES.
21. PROVIDE AND INSTALL NEW RECEPTACLES WITHIN THE INTERIOR OF THE PRIMARY SLUDGE PUMPING STATION. PROVIDE AND INSTALL NEW CONDUIT AND CONDUCTORS FOR THE RECEPTACLES.
22. REMOVE EXISTING CONDUCTORS BETWEEN EXISTING MCC-62A (LOCATED WITHIN SLUDGE CONTROL BUILDING A) AND EXISTING MCC-20 (LOCATED WITHIN THE PRIMARY SLUDGE PUMPING STATION). AFTER CONDUIT CLEANING AND INTEGRITY CHECK, INSTALL NEW CONDUCTORS AS INDICATED ON THE DRAWINGS.
23. REMOVE EXISTING STARTER CABINET AND PUSHBUTTON CONTROLS FOR EACH LONGITUDINAL COLLECTOR AND CROSS COLLECTOR AS INDICATED ON THE DRAWINGS. REMOVE ALL ASSOCIATED CONDUIT AND CONDUCTORS.
24. PROVIDE NEW PUSHBUTTON CONTROL STATION FOR EACH LONGITUDINAL COLLECTOR AND CROSS COLLECTOR AS INDICATED ON THE DRAWINGS. PROVIDE NEW CONDUIT AND CONDUCTORS AS INDICATED.
25. REMOVE EXISTING 480V CONDUCTORS FOR: EXISTING SLUDGE PUMP NO. 1 (AND ASSOCIATED CONTROLS); SLUDGE PUMP NO. 2 (AND ASSOCIATED CONTROLS); EXHAUST FAN; SCUM GATE MOTOR OPERATED VALVE; AND SLIDE GATES 1G, 2G, 3G AND 4G. AFTER CONDUIT CLEANING AND INTEGRITY CHECK, INSTALL NEW CONDUCTORS AS INDICATED ON THE DRAWINGS.
26. REMOVE EXISTING CONTROL STATIONS AND JUNCTION BOXES FOR SLUDGE PUMP NO. 1 AND SLUDGE PUMP NO. 2 AND REPLACE WITH NEW AS INDICATED ON THE DRAWINGS.
27. REMOVE EXISTING GROUND SYSTEM GROUND RODS AND INSTALL NEW GROUNDING GRID SYSTEM.
28. DEMOLISH AND REPLACE MISCELLANEOUS CONDUCTORS/CONDUITS AS INDICATED ON THE DRAWINGS.
29. REMOVE EXISTING STARTERS FOR JUNCTION CHAMBER NO. 3 MIXER #1 AND MIXER #2, ALONG WITH ASSOCIATED CONDUIT AND CONDUCTORS. PROVIDE AND INSTALL NEW START-STOP SELECTOR SWITCHES FOR MIXER #1 AND MIXER #2. PROVIDE NEW CONDUIT AND CONDUCTORS AS INDICATED.

B. ALLOWABLE CONSTRUCTION PERIOD

1. THIS PROJECT WILL BE CONSTRUCTED WHILE THE WASTEWATER TREATMENT PLANT'S PRIMARY SEDIMENTATION TANKS 1 THRU 4 ARE COMPLETELY TAKEN OUT OF SERVICE. THE ACTUAL CONSTRUCTION WORK MUST BE PERFORMED BETWEEN DECEMBER 1ST AND JUNE 1ST OF THE FOLLOWING YEAR TO AVOID WORKING DURING THE HURRICANE SEASON. CONTRACTOR WILL BE REQUIRED TO HAVE ALL MATERIALS ON-SITE BEFORE THE START OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE THE CITY WITH A MINIMUM 4 WEEKS WRITTEN NOTICE PRIOR TO THE START OF THE SHUTDOWN PERIOD. THIS CONSTRUCTION TIME RESTRICTION DOES NOT PREVENT THE CONTRACTOR TO START THE SUBMITTAL AND MATERIAL ACQUISITION PHASES OF THE PROJECT. THE CITY WILL GRANT THE CONTRACTOR ADDITIONAL CONTRACT TIME IF NECESSARY TO COMPLY WITH THIS REQUIREMENT DEPENDING ON THE ACTUAL PROJECT AWARD DATE. HOWEVER, THE CITY WILL NOT BE RESPONSIBLE FOR ANY MONETARY COMPENSATION AS A RESULT OF DELAYS OR SCHEDULE ADJUSTMENTS TO COMPLY WITH THIS REQUIREMENT.

C. DEMOLITION

2. VERIFY EXISTING POWER / INSTRUMENTATION / CONTROL CONNECTIONS IN THE FIELD PRIOR TO COMMENCING DEMOLITION WORK. THE CONTRACTOR SHALL REROUTE OR MAKE OTHER ACCOMMODATIONS FOR ANY UNFORESEEN WIRING PASSING THROUGH CONDUITS OR ENCLOSURES, SCHEDULED FOR DEMOLITION, THAT MUST REMAIN IN SERVICE FOR PROPER OPERATION OF OTHER SYSTEMS. COORDINATE INSTRUMENTATION / CONTROL CONNECTIONS WITH CITY PERSONNEL.
3. THE CITY RETAINS THE RIGHT TO SALVAGE SOME, OR ALL, OF THE EQUIPMENT REMOVED BY THE CONTRACTOR. THE CITY WILL INSTRUCT THE CONTRACTOR PRIOR TO DEMOLITION, ON WHAT IS TO BE SALVAGED. EQUIPMENT NOT DESIRED BY THE CITY SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF PROPERLY BY THE CONTRACTOR.



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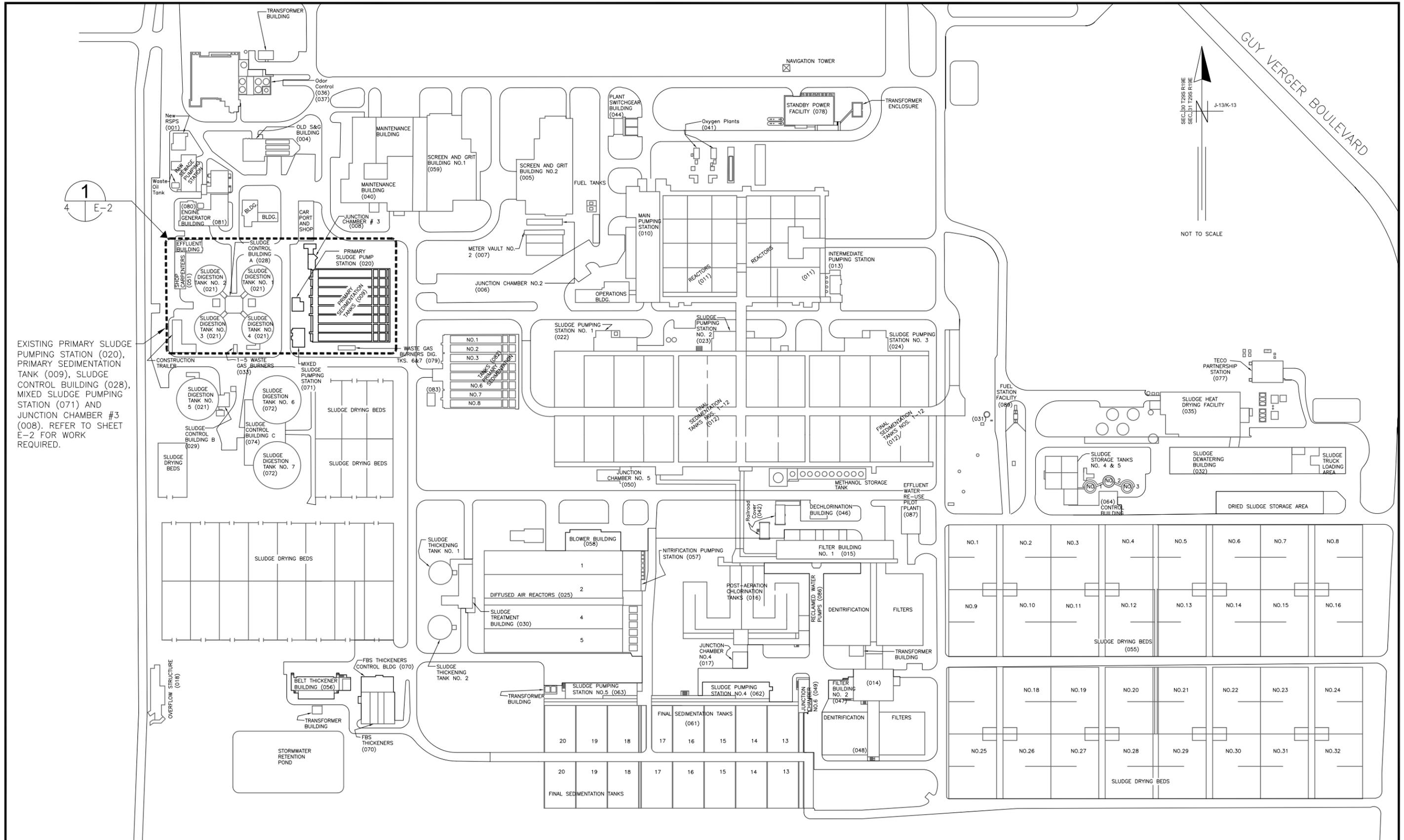
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HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT

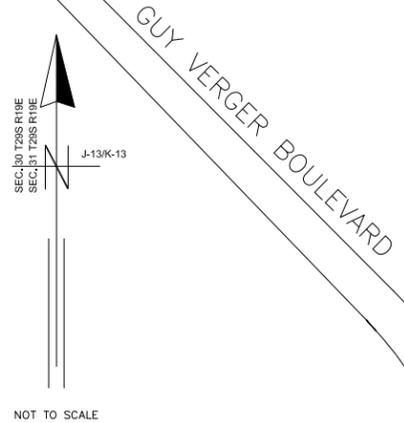
SCOPE OF WORK

SHEET NUMBER	3
TIMOTHY THOMAS, P.E. No. 47079	FILE: 171407042



EXISTING PRIMARY SLUDGE PUMPING STATION (020), PRIMARY SEDIMENTATION TANK (009), SLUDGE CONTROL BUILDING (028), MIXED SLUDGE PUMPING STATION (071) AND JUNCTION CHAMBER #3 (008). REFER TO SHEET E-2 FOR WORK REQUIRED.

1
E-2



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HOWARD F. CURREN AWWTP
PRIMARY SLUDGE MCC REPLACEMENT

HOWARD F. CURREN AWWTP
SITE PLAN

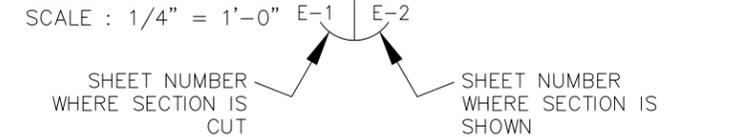
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SHEET NUMBER
4
 FILE: 171407042

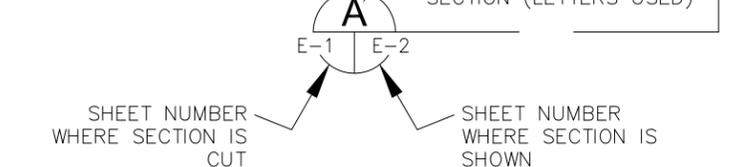


EXAMPLE OF SECTION CUT AND DETAIL

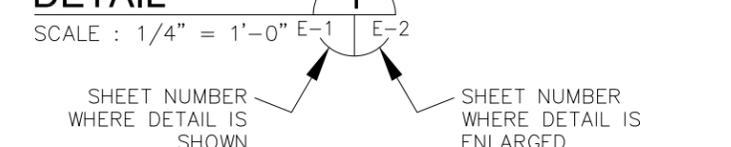
SECTION



DETAIL



DETAIL



LIGHTING AND RECEPTACLE WIRING INDICATED AS FOLLOWS:

- TWO WIRES:
- //— THREE WIRES:
- Z//— FOUR WIRES, ETC.
- NEUTRAL WIRE
- ISOLATED GR. WIRE

PROVIDE 2#12 THWN CU. IN 3/4" C. UNLESS OTHERWISE NOTED AND EQUIPMENT GROUND WIRE (NOT INDICATED) IN ALL POWER AND LIGHTING RACEWAYS.

- CONDUIT RUN EXPOSED
- - - CONDUIT RUN CONCEALED UNDERGROUND
- — — CONDUIT RUN CONCEALED IN FLOOR OR SLAB
- G — G — GROUNDING ELECTRODE CONDUCTOR
- [— CONDUIT STUB OUT AND CAP

- ⊙ GROUND ROD
- JUNCTION BOX
- JUNCTION BOX WITH FLEXIBLE CONNECTION

480V
15 KVA, 1*
120/240V

TRANSFORMER, 480V INDICATED PRIMARY VOLTAGE, 120/240V INDICATES SECONDARY VOLTAGE, 15 KVA REPRESENTS POWER RATING, AND 1* INDICATES SINGLE PHASE (THREE PHASE IF NOT INDICATED)

3P
30A

THERMAL MAGNETIC CIRCUIT BREAKER WITH NUMBER OF POLES AND AMPERE RATING

COMBINATION MAGNETIC STARTER WITH CONTROL POWER TRANSFORMER (SIZED FOR LOAD). LETTERS INDICATE TYPE :

- N - NON-REVERSING
- R - REVERSING
- 2S - TWO-SPEED
- C - CONTACTOR
- SS - SOLID STATE SOFT START

XXX	XXX DEVICE	DESCRIPTION
	HLS	HIGH LEVEL SWITCH
	HOA	HAND-OFF-AUTO
	LD	LEAK DETECTION
	LLS	LOW LEVEL SWITCH
	LOR	LOCAL-OFF-REMOTE
	PB	PUSH BUTTON
	RTU	REMOTE TERMINAL UNIT
	S/S	START/STOP SELECTOR SWITCH
	SS	SOFT STARTER
	SS/B	SOFT START OR BYPASS
	TS	TEMPERATURE SWITCH
	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	ZS	POSITION SENSOR (LIMIT SWITCH)

- [] FUSE
- XX MOTOR
- THERMAL OVERLOAD

- UTILITY METER
- TRANSFER SWITCH
- ELECTRIC PANELBOARD
- DISCONNECT OR SAFETY SWITCH
- FLOAT SWITCH. CLOSES ON HIGH LEVEL.
- FLOAT SWITCH. CLOSES ON LOW LEVEL.
- NORMALLY OPEN (N.O.) CONTACT
- NORMALLY CLOSED (N.C.) CONTACT
- GROUND CONNECTION
- INDICATING PILOT LIGHT LETTER INDICATES COLOR OF LENS
- DISCONNECT OR TOGGLE SWITCH
- NORMALLY OPEN MOMENTARY CIRCUIT CLOSING PUSH-BUTTON SWITCH. SPRING OPEN. NUMBER OF ELECTRICAL CONTACTS ON SWITCH SHOWN ON CONTROL SCHEMATIC
- NORMALLY CLOSED MOMENTARY CIRCUIT OPENING PUSH-BUTTON SWITCH. SPRING CLOSE. NUMBER OF ELECTRICAL CONTACTS ON SWITCH SHOWN ON CONTROL SCHEMATIC
- LIMIT SWITCH NORMALLY CLOSED CONTACT. CONTACT OPENS WHEN ACTUATED
- TORQUE SWITCH NORMALLY CLOSED CONTACT. CONTACT OPENS WHEN ACTUATED
- PUMP THERMAL SENSOR
- PHOTOCELL
- SEAL WATER SOLENOID VALVE

ABBREVIATIONS:

A	AMPS
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ATL	ACROSS-THE-LINE
C	CONDUIT
CU	COPPER
EX	EXISTING
ELEC	ELECTRICAL
EXP	EXPLOSION PROOF
FU	FUSE
GFI	GROUND FAULT INTERRUPTER
GND	GROUNDING CONDUCTOR
HP	HORSEPOWER
HZ	HERTZ
IG	ISOLATED GROUND
KVA	KILOVOLT AMPERES
KW	KILOWATTS
MAX	MAXIMUM
MIN	MINIMUM
N/A	NOT APPLICABLE
PH	PHASE
RECP	RECEPTACLE
RPM	REVOLUTIONS PER MINUTE
RTU	REMOTE TERMINAL UNIT
SPD	SURGE PROTECTION DEVICE
TYP	TYPICAL
V	VOLTS
WP	WEATHERPROOF



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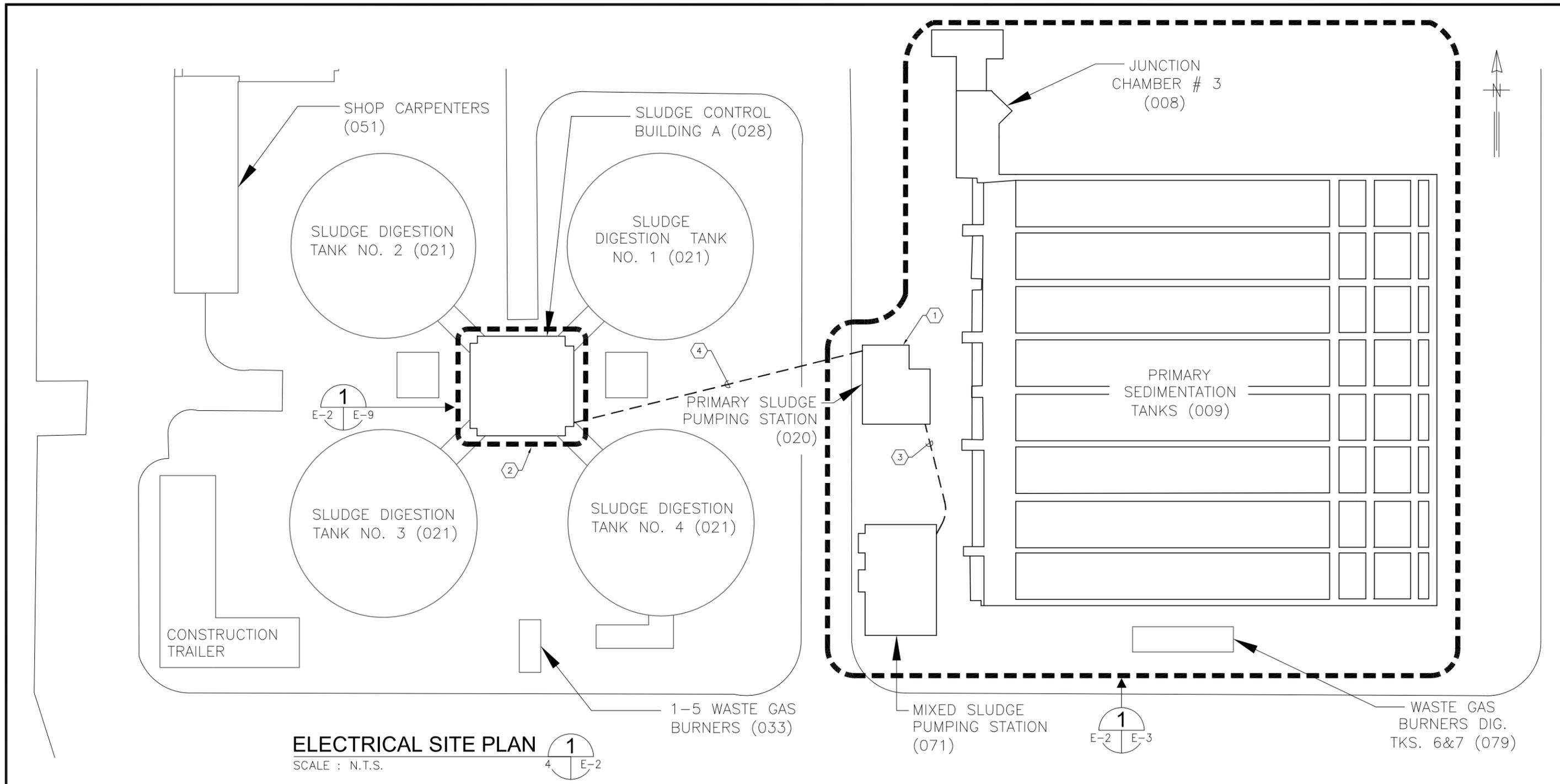
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**HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT**

**ELECTRICAL LEGEND
AND ABBREVIATIONS**

SHEET NUMBER
E-1

TIMOTHY THOMAS, P.E. No. 47079
FILE: 171407042



ELECTRICAL SITE PLAN
SCALE : N.T.S.

KEYED NOTES:	
①	EXISTING PRIMARY SLUDGE PUMPING STATION (020). REFER TO SHEETS E-3, E-4, E-5 AND E-6 FOR WORK REQUIRED.
②	EXISTING SLUDGE CONTROL BUILDING A (028). REFER TO SHEET E-9 FOR WORK REQUIRED.
③	EXISTING 1" CONDUIT BETWEEN PRIMARY SLUDGE PUMPING STATION AND MIXED SLUDGE PUMPING STATION. CONTRACTOR TO INSTALL 32-#14 + 1-#14 GND (C107) FOR NEW SCADA I/O. REFER ALSO TO SHEETS E-5, E-8 AND E-10. REFER TO SHEET E-22 FOR NEW I/O SCHEDULE.
④	EXISTING 2" CONDUIT BETWEEN SLUDGE CONTROL BUILDING 'A' AND PRIMARY SLUDGE PUMPING STATION (EXACT ROUTE IS NOT KNOWN). CONTRACTOR TO FIELD VERIFY SIZE. CONTRACTOR SHALL REMOVE EXISTING CONDUCTORS, AND CLEAN THE EXISTING CONDUIT USING A SWAB, AND RUN A PROPERLY SIZED RUBBER SLUG MANDREL THROUGH THE CONDUIT TO PROVE INTEGRITY. THE CONTRACTOR SHALL THEN PROVIDE AND INSTALL 3-1/0 XHHW-2 CU + 1-#6 XHHW-2 CU GND (20M1) TO BE USED AS THE NEW MCC-20, 480V FEEDER.

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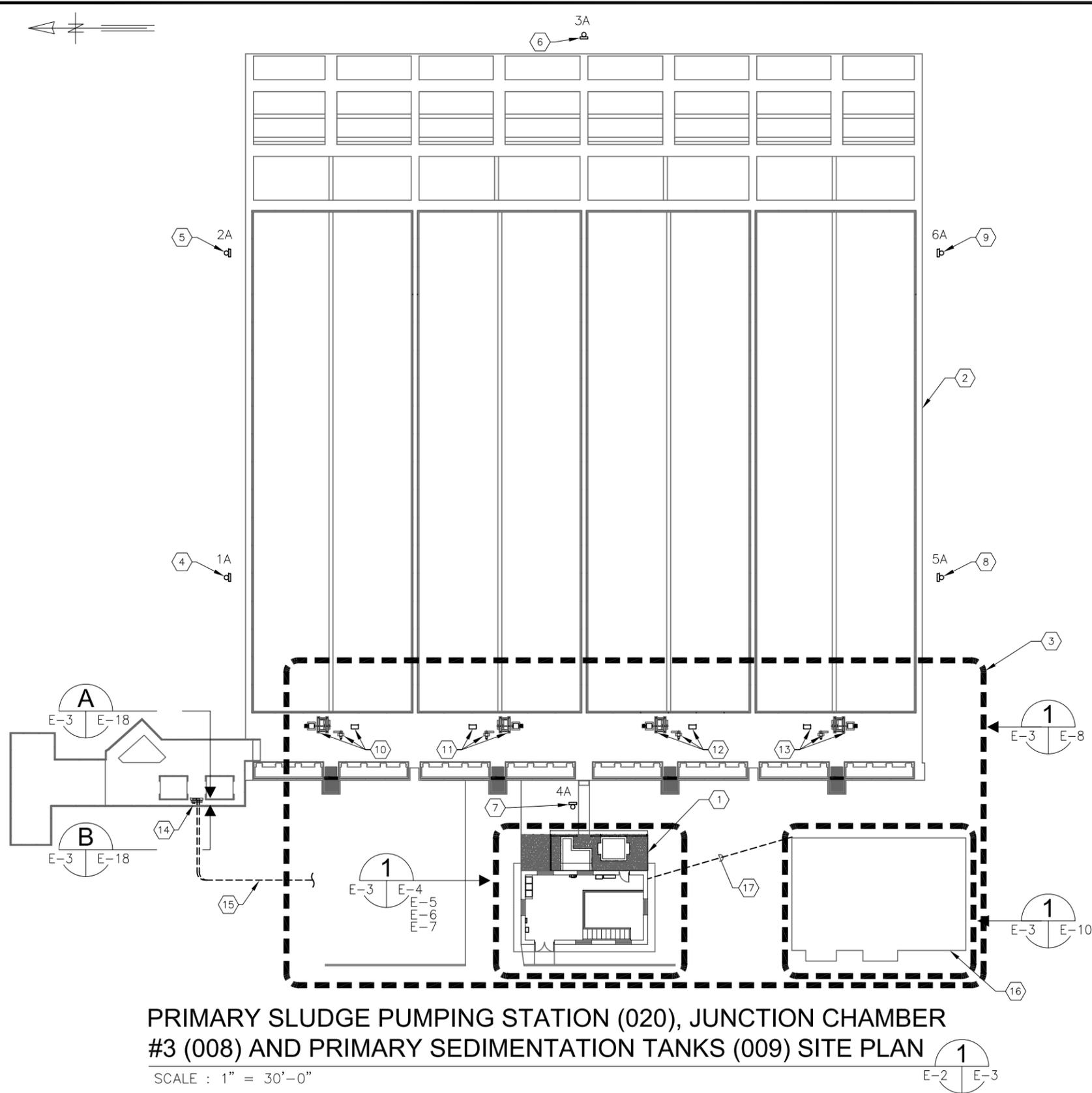
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HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT

ELECTRICAL SITE PLAN

TIMOTHY THOMAS, P.E. No. 47079

SHEET NUMBER
E-2
FILE: 171407042



KEYED NOTES:

- ① EXISTING PRIMARY SLUDGE PUMPING STATION (020). REFER TO SHEETS E-3, E-4, E-5, E-6 AND E-7 FOR WORK REQUIRED.
- ② EXISTING PRIMARY SEDIMENTATION TANKS (009)
- ③ REFER TO SHEET E-8 FOR LONGITUDINAL COLLECTOR DRIVES AND CROSS COLLECTOR DRIVES POWER PLAN.
- ④ EXISTING 250W HPS FLOODLIGHT DESIGNATED AS '1A' TO REMAIN. CONDUCTORS TO EXISTING 250W HPS FLOODLIGHT DESIGNATED AS '2A' TO BE REUSED. CONTRACTOR TO PROVIDE NEW 6-#12 THWN CU + 3-#12 THWN CU GND'S IN EXISTING 1" CONDUIT BETWEEN FIXTURE '1A' AND NEW LIGHTING CONTROL CABINET FOR NEW 277V, 1Ø LIGHTING CIRCUITS. REFER ALSO TO SHEET E-4 AND E-16.
- ⑤ EXISTING 250W HPS FLOODLIGHT DESIGNATED AS '2A' TO REMAIN, NO WORK REQUIRED.
- ⑥ EXISTING 250W HPS FLOODLIGHT DESIGNATED AS '3A' TO REMAIN, NO WORK REQUIRED.
- ⑦ EXISTING 250W HPS FLOODLIGHT DESIGNATED AS '4A' TO REMAIN. CONDUCTORS TO EXISTING 250W HPS FLOODLIGHT DESIGNATED AS '5A' TO BE REUSED. CONTRACTOR TO PROVIDE NEW 6-#12 THWN CU + 3-#12 THWN CU GND'S IN EXISTING 1" CONDUIT BETWEEN FIXTURE '1A' AND NEW LIGHTING CONTROL CABINET FOR NEW 277V, 1Ø LIGHTING CIRCUITS. REFER ALSO TO SHEET E-4 AND E-16.
- ⑧ EXISTING 250W HPS FLOODLIGHT DESIGNATED AS '5A' TO REMAIN, NO WORK REQUIRED.
- ⑨ EXISTING 250W HPS FLOODLIGHT DESIGNATED AS '6A' TO REMAIN, NO WORK REQUIRED.
- ⑩ EXISTING LONGITUDINAL COLLECTOR DRIVE PST-LC-1, EXISTING CROSS COLLECTOR DRIVE PST-CC-1, ASSOCIATED STARTER CABINET AND PUSHBUTTON CONTROLLER. REFER TO SHEET E-8 FOR WORK REQUIRED.
- ⑪ EXISTING LONGITUDINAL COLLECTOR DRIVE PST-LC-2, EXISTING CROSS COLLECTOR DRIVE PST-CC-2, ASSOCIATED STARTER CABINET AND PUSHBUTTON CONTROLLER. REFER TO SHEET E-8 FOR WORK REQUIRED.
- ⑫ EXISTING LONGITUDINAL COLLECTOR DRIVE PST-LC-3, EXISTING CROSS COLLECTOR DRIVE PST-CC-3, ASSOCIATED STARTER CABINET AND PUSHBUTTON CONTROLLER. REFER TO SHEET E-8 FOR WORK REQUIRED.
- ⑬ EXISTING LONGITUDINAL COLLECTOR DRIVE PST-LC-4, EXISTING CROSS COLLECTOR DRIVE PST-CC-4, ASSOCIATED STARTER CABINET AND PUSHBUTTON CONTROLLER. REFER TO SHEET E-8 FOR WORK REQUIRED.
- ⑭ EXISTING STARTER RACK FOR EXISTING MIXERS AT JUNCTION CHAMBER No. 3. REFER TO ELEVATIONS AND DETAILS ON SHEET E-18,
- ⑮ 20M15 AND 20M16. FOR CONTINUATION REFER TO SHEET E-5 AND E-8
- ⑯ EXISTING MIXED SLUDGE PUMPING STATION (071). REFER TO SHEET E-10.
- ⑰ EXISTING 1" SPARE (EMPTY) CONDUIT BETWEEN PRIMARY SLUDGE PUMPING STATION AND MIXED SLUDGE PUMPING STATION. CONTRACTOR TO INSTALL 32-#14 + 1-#14 GND FOR NEW SCADA I/O. REFER ALSO TO SHEETS E-5, E-8 AND E-10. REFER TO SHEET E-22 FOR NEW I/O SCHEDULE.

PRIMARY SLUDGE PUMPING STATION (020), JUNCTION CHAMBER #3 (008) AND PRIMARY SEDIMENTATION TANKS (009) SITE PLAN

SCALE : 1" = 30'-0"



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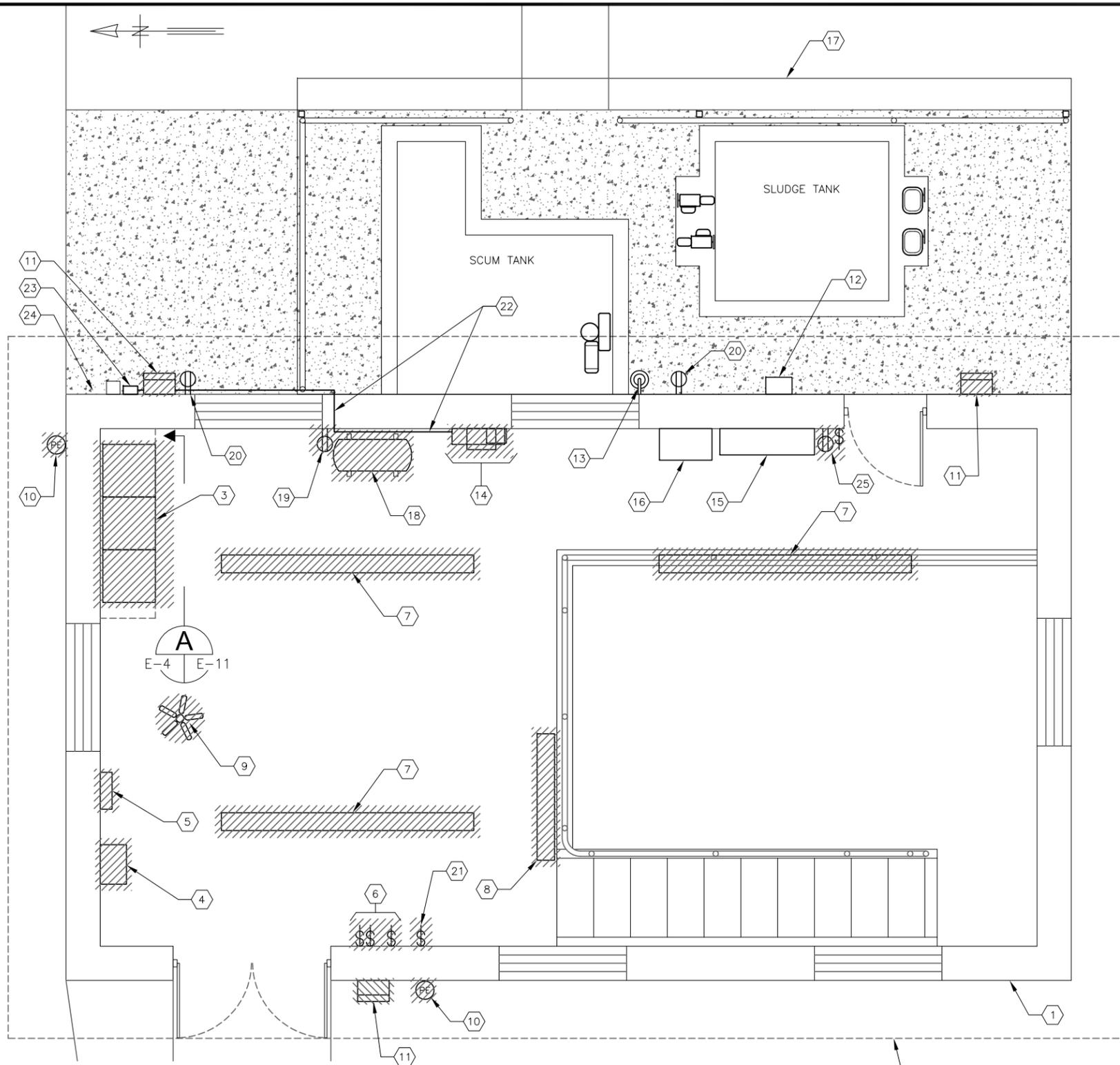
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City of Tampa Wastewater Department
HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT

SITE PLAN FOR
MCC REPLACEMENT

TIMOTHY THOMAS, P.E. No. 47079

SHEET NUMBER
E-3
FILE: 171407042



**PRIMARY SLUDGE PUMPING STATION (020)
GROUND FLOOR DEMOLITION PLAN**

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

KEYED NOTES:

- ① EXISTING PRIMARY SLUDGE PUMPING STATION (020).
- ② EXISTING PRIMARY SLUDGE PUMPING STATION ROOF OVERHANG. NO WORK REQUIRED.
- ③ EXISTING MOTOR CONTROL CENTER TO BE REMOVED. REFER TO SHEET E-11 FOR ELEVATION.
- ④ EXISTING 480V-120/208V, 9 KVA 3-PHASE TRANSFORMER AND ASSOCIATED CONDUIT/CONDUCTORS TO BE REMOVED.
- ⑤ EXISTING 120/208V, 3-PHASE, 4-WIRE PANELBOARD 'LP' AND ASSOCIATED CONDUIT/CONDUCTORS TO BE REMOVED.
- ⑥ EXISTING 120/277V, 20A, SINGLE POLE SWITCHES IN 4-GANG BOX AND ASSOCIATED CONDUIT/CONDUCTORS TO BE REMOVED.
- ⑦ EXISTING 8' FLUORESCENT LIGHT FIXTURE AND ASSOCIATED CONDUIT/CONDUCTORS TO BE REMOVED.
- ⑧ EXISTING 4' FLUORESCENT LIGHT FIXTURE AND ASSOCIATED CONDUIT/CONDUCTORS TO BE REMOVED.
- ⑨ EXISTING PADDLE FAN AND ASSOCIATED CONDUIT/CONDUCTORS TO BE REMOVED.
- ⑩ EXISTING PHOTOCELL TO BE REMOVED.
- ⑪ EXISTING WALLPACK LIGHTING FIXTURE TO BE REMOVED.
- ⑫ EXISTING FLOOD LIGHT TO REMAIN. PROVIDE NEW CONDUIT AND CONDUCTORS.
- ⑬ EXISTING EXPLOSION PROOF LIGHTING FIXTURE TO REMAIN. PROVIDE NEW CONDUIT AND CONDUCTORS.
- ⑭ EXISTING 480V, SINGLE-POLE, 20A, ENCLOSED CIRCUIT BREAKER, EXISTING OUTSIDE LIGHTING PANELBOARD AND LIGHTING CONTACTOR CONTROL CABINET (EACH ONE ABOVE THE OTHER) TO BE REMOVED. REMOVE ALL ASSOCIATED CONDUIT AND CONDUCTORS.
- ⑮ EXISTING SLUDGE LINE VALVE CONTROL STATION TO REMAIN.
- ⑯ EXISTING WALL MOUNTED JUNCTION BOX TO REMAIN.
- ⑰ EXISTING EXTERIOR CANOPY. NO WORK REQUIRED.
- ⑱ EXISTING AIR COMPRESSOR TO BE REMOVED.
- ⑲ EXISTING RECEPTACLE AND ASSOCIATED CONDUIT/CONDUCTORS TO BE REMOVED.
- ⑳ EXISTING RECEPTACLE TO REMAIN. PROVIDE NEW CONDUIT AND CONDUCTORS.
- ㉑ EXISTING EXHAUST FAN START/STOP SWITCH AND ASSOCIATED CONDUIT/CONDUCTORS TO BE REMOVED.
- ㉒ CURRENTLY, THERE ARE TWO (2) EXISTING 1" CONDUITS WHICH ARE INSTALLED BETWEEN THE EXISTING OUTDOOR LIGHTING CONTROL EQUIPMENT TO BE REMOVED (REFER TO NOTE #14). CONDUIT TRAVERSES THROUGH THE EXTERIOR WALL AND TERMINATES IN A JUNCTION BOX (REFER TO NOTE #23). THESE CONDUITS CONTAIN THE LIGHTING CIRCUITS FOR FIXTURES 1A, 2A, 3A AND 4A, 5A, 6A RESPECTIVELY. THE CONTRACTOR SHALL REMOVE THESE CONDUITS/LB FITTINGS AND REPLACE WITH NEW. THE CONTRACTOR SHALL THEN INSTALL NEW 6-#12 THWN CU + 3-#12 THWN CU GND IN EACH CONDUIT FROM THE NEW LIGHTING CONTROL CABINET TO FIXTURES 1A AND 4A. REFER ALSO TO SHEET E-3 AND E-16.
- ㉓ EXISTING JUNCTION BOX FOR 277V SITE LIGHTING CIRCUITS (TO BE REUSED).
- ㉔ CONTRACTOR TO CUT EXISTING GROUND ROD OFF AT EXISTING SLAB AND REMOVE EXISTING SERVICE GROUND ELECTRODE CONDUCTOR (NOTE : SECOND GROUND ROD BENEATH WINDOW, NOT SHOWN FOR CLARITY).
- ㉕ EXISTING 120/277V, 20A, SINGLE POLE SWITCH, RECEPTACLE AND ASSOCIATED CONDUIT/CONDUCTORS TO BE REMOVED.

GENERAL NOTES:



DENOTES EXISTING EQUIPMENT TO BE REMOVED. ITEM SHALL BE REMOVED FROM PREMISES AND DISPOSED OF PROPERLY. UNLESS OTHERWISE NOTED, REMOVE ALL ASSOCIATED CONDUIT AND WIRING CONNECTED TO THE EQUIPMENT TO BE REMOVED, INCLUDING ALL ABANDONED CONDUIT AND WIRING.

1. ALL EQUIPMENT, CONDUIT AND WIRING INCLUDED ON THIS DRAWING ARE EXISTING. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS BEFORE SUBMITTING A BID OR COMMENCING CONSTRUCTION.



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Certificate of Authorization No. 8363

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City of Tampa Wastewater Department
**HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT**

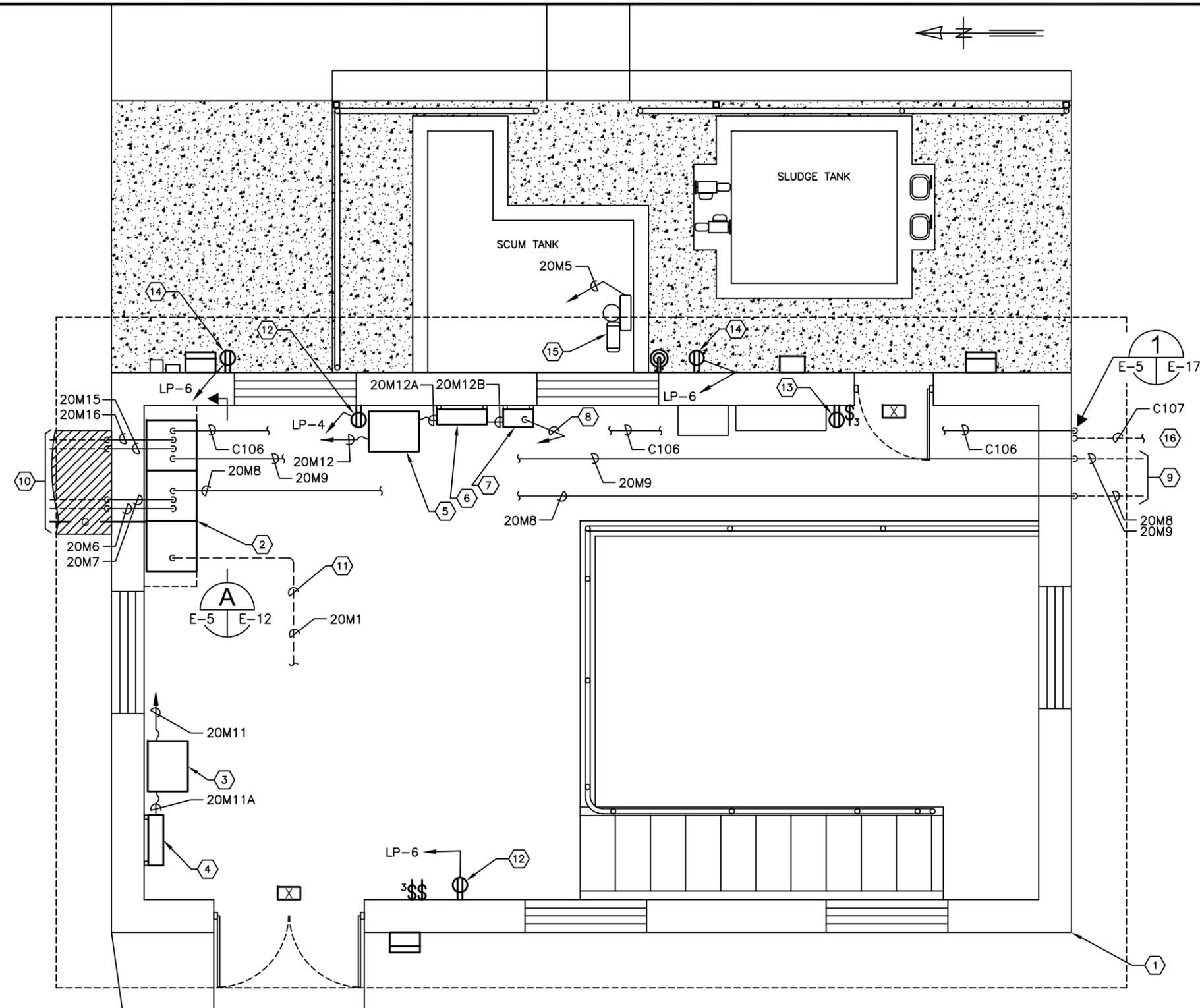
**GROUND FLOOR
DEMOLITION PLAN**

TIMOTHY THOMAS, P.E. No. 47079

SHEET NUMBER

E-4

FILE: 171407042



- KEYED NOTES:**
- ① EXISTING PRIMARY SLUDGE PUMPING STATION (020).
 - ② PROVIDE AND INSTALL NEW MOTOR CONTROL CENTER (MCC-20). REFER TO SHEET E-12 FOR ELEVATION. REFER TO NOTE #10 FOR GROUNDING REQUIREMENTS.
 - ③ PROVIDE AND INSTALL NEW 480V-120/208V, 3 ϕ , 15KVA TRANSFORMER 'T1', NEMA 2 RATED. TRANSFORMER TO BE FLOOR MOUNTED. REFER TO NOTE #10 FOR GROUNDING REQUIREMENTS. GROUNDING ELECTRODE CONDUCTOR SHALL BE INSTALLED IN 3/4" C. WITHIN BUILDING INTERIOR. BOND EACH END OF CONDUIT TO GROUNDING CONDUCTOR USING GROUNDING BUSHINGS.
 - ④ PROVIDE AND INSTALL NEW 120/208V, 3 ϕ , 4-WIRE PANELBOARD 'LP' IN NEMA 1 ENCLOSURE. PROVIDE PANELBOARD WITH 60A, 3-POLE MAIN CIRCUIT BREAKER. INSTALL PANELBOARD ON WALL WITH 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT. REFER TO SHEET E-21 FOR PANEL SCHEDULE.
 - ⑤ PROVIDE AND INSTALL NEW 480V-277/480V, 3 ϕ , 15KVA ISOLATION TRANSFORMER 'IT1', NEMA 2 RATED. TRANSFORMER TO BE FLOOR MOUNTED. REFER TO NOTE #10 FOR GROUNDING REQUIREMENTS. GROUNDING ELECTRODE CONDUCTOR SHALL BE INSTALLED IN 3/4" C. WITHIN BUILDING INTERIOR. BOND EACH END OF CONDUIT TO GROUNDING CONDUCTOR USING GROUNDING BUSHINGS.
 - ⑥ PROVIDE AND INSTALL NEW 277/480V, 3 ϕ , 4-WIRE PANELBOARD 'LPO' IN NEMA 1 ENCLOSURE. PROVIDE PANELBOARD WITH 30A, 3-POLE MAIN CIRCUIT BREAKER. INSTALL PANELBOARD ON WALL WITH 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT. REFER TO SHEET E-21 FOR PANEL SCHEDULE.
 - ⑦ PROVIDE AND INSTALL NEW LIGHTING CONTROL CABINET 'C1' WITH 4-POLE, 30A LIGHTING CONTACTOR. PROVIDE CONTACTOR WITH 120V COIL, HAND-OFF-AUTO SWITCH AND 20A CONTROL POWER CIRCUIT BREAKER. CABINET SHALL HAVE A NEMA 1 ENCLOSURE. INSTALL LIGHTING CONTROL CABINET ON WALL WITH 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT. REFER TO SHEET E-16 FOR CONTROL SCHEMATIC.
 - ⑧ CONTRACTOR TO PROVIDE AND INSTALL 2-#12 + 1-#12 CU GND IN 3/4" C. FROM LIGHTING CONTROL CABINET 'C1' TO PANEL 'LP' FOR CONTROL POWER.
 - ⑨ CONTRACTOR SHALL INSTALL 20M8 AND 20M9 IN PRIMARY SLUDGE PUMPING STATION CEILING JOIST. INTERIOR CONDUIT SHALL BE RIGID ALUMINUM. EXTERIOR ABOVEGROUND CONDUIT SHALL BE RIGID ALUMINUM WITH 40 mil PVC COATING, EXTERIOR BELOWGRADE CONDUIT SHALL BE SCHEDULE 80 PVC. PENETRATE EXISTING EXTERIOR WALL, INSTALL CONDUIT LB FITTINGS AND TRAVERSE DOWN TO BELOW GRADE INSTALLATION. FOR CONTINUATION REFER TO SHEET E-8.
 - ⑩ CONTRACTOR SHALL INSTALL 20M6, 20M7, 20M15 AND 20M16 IN RIGID ALUMINUM IN BUILDING INTERIOR. EXTERIOR ABOVEGROUND CONDUIT SHALL BE RIGID ALUMINUM WITH 40 mil PVC COATING, EXTERIOR BELOW GRADE CONDUIT SHALL BE SCHEDULE 80 PVC. PENETRATE EXISTING EXTERIOR WALL, INSTALL CONDUIT LB FITTINGS AND TRAVERSE DOWN TO BELOW GRADE INSTALLATION. CONTRACTOR SHALL ALSO PROVIDE AND INSTALL AN #4 BARE COPPER GROUNDING ELECTRODE CONDUCTOR FOR NEW MCC-20. (BOND #8 BARE GROUNDING ELECTRODE CONDUCTORS FOR NEW TRANSFORMER 'T1' AND NEW ISOLATION TRANSFORMER 'IT1' TO MCC-20 GROUNDING ELECTRODE CONDUCTOR). REFER TO SHEET E-8 FOR GROUND GRID DETAILS. CONTRACTOR SHALL CUT EXISTING CONCRETE SLAB AND REPAIR SLAB AFTER CONDUIT AND GROUNDING ELECTRODE INSTALLATION. FOR CONTINUATION REFER TO SHEET E-8.
 - ⑪ PROVIDE AND INSTALL 3-1/0 XHHW-2 CU + 1-#6 XHHW-2 CU GND IN EXISTING CONDUIT TO MCC-62A. REFER ALSO TO SHEETS E-2 AND E-9.
 - ⑫ PROVIDE AND INSTALL NEW 20A, DUPLEX RECEPTACLE IN SINGLE-GANG, ALUMINUM CAST DEVICE BOX (WITH GROUND SCREW). PROVIDE BRUSHED ALUMINUM DEVICE PLATE.
 - ⑬ REFER TO SHEET E-6 FOR NEW RECEPTACLE AND SWITCH REQUIREMENTS.
 - ⑭ EXISTING RECEPTACLE TO BE REUSED. PROVIDE NEW 3/4" CONDUIT AND CONDUCTORS AS REQUIRED.
 - ⑮ EXISTING SCUM GATE MOTOR OPERATED VALVE. CONTRACTOR TO REUSE EXISTING 1" CONDUIT AFTER CLEANING, PROVIDE NEW 3-#12 + 1-#12 CONDUCTORS.
 - ⑯ FOR CONTINUATION OF C107 REFER TO SHEET E-2, E-8 AND E-10. REFER ALSO TO DETAIL ON SHEET E-17 FOR WORK AT NEW SCADA I/O JUNCTION BOX

**PRIMARY SLUDGE PUMPING STATION (020)
GROUND FLOOR POWER PLAN**

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

1
E-3 | E-5



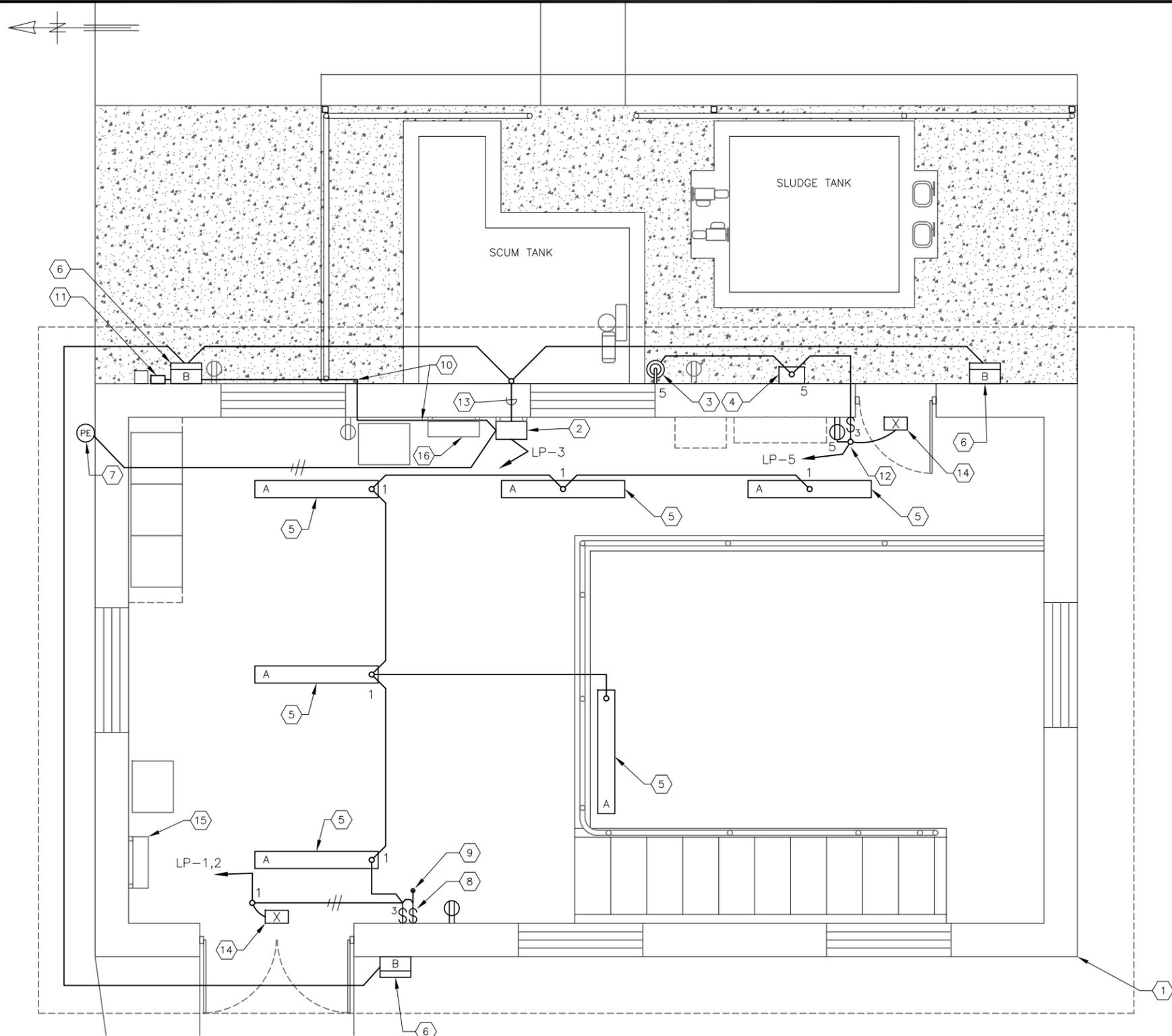
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City of Tampa Wastewater Department
HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT

GROUND FLOOR
POWER PLAN

SHEET NUMBER	E-5
TIMOTHY THOMAS, P.E. No. 47079	FILE: 171407042

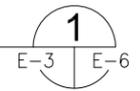


KEYED NOTES:

- 1 EXISTING PRIMARY SLUDGE PUMPING STATION (020).
- 2 NEW LIGHTING CONTROL CABINET 'C1'. PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" C. TO PANEL 'LP' FOR 120V CONTROL POWER. REFER ALSO TO EXTERIOR LIGHTING CONTROL SCHEMATIC ON SHEET E-16.
- 3 EXISTING EXPLOSION PROOF LIGHTING FIXTURE TO REMAIN. PROVIDE NEW CONDUIT AND CONDUCTORS.
- 4 EXISTING FLOOD LIGHT TO REMAIN. PROVIDE NEW CONDUIT AND CONDUCTORS.
- 5 PROVIDE AND INSTALL NEW 4' FLUORESCENT LIGHT FIXTURE. REFER TO FIXTURE SCHEDULE ON SHEET E-16.
- 6 PROVIDE AND INSTALL NEW WALLPACK LIGHT FIXTURE. REFER TO FIXTURE SCHEDULE ON SHEET E-16. CIRCUIT LPO-6.
- 7 PROVIDE AND INSTALL NEW 120V, 1000W PHOTOCELL. ALSO PROVIDE AND INSTALL 2-#12 + 1-#12 NEUTRAL + 1-#12 GND IN 3/4" C. TO LIGHTING CONTROL CABINET 'C1' FOR PHOTOCELL CONTROL. REFER ALSO TO EXTERIOR LIGHTING CONTROL SCHEMATIC ON SHEET E-16.
- 8 PROVIDE AND INSTALL ONE (1) THREE-WAY AND ONE (1) SINGLE-POLE - 120/277V, 20A SWITCHES IN A 2-GANG, ALUMINUM FS JUNCTION BOX. PROVIDE BRUSHED ALUMINUM DEVICE PLATE.
- 9 CONTRACTOR SHALL REUSE EXISTING CORE-DRILLED HOLE TO ACCESS NEW LIGHTING FIXTURES AND RECEPTACLE AT LOWER LEVEL (PROVIDE NEW CONDUIT AND CONDUCTORS). REFER TO SHEET E-7 FOR LOWER LEVEL LIGHTING.
- 10 PROVIDE AND INSTALL TWO (2), NEW 1" CONDUITS, EACH WITH 2-#12 + 1-#12 GND. CONDUITS SHALL BE INSTALLED FROM NEW LIGHTING CONTROL CABINET 'C1' TO EXISTING JUNCTION BOX IN NOTE #11. CONDUIT AND CONDUCTORS SHALL REPLACE THE CONDUIT IDENTIFIED IN NOTE #22 ON SHEET E-4. THESE CONDUITS/CONDUCTORS SHALL FEED THE EXISTING BRANCH CIRCUITS FOR THE EXISTING LIGHTING FIXTURES 1A, 2A, 3A (CIRCUIT LPO-2) AND LIGHTING FIXTURES 4A, 5A, 6A (CIRCUIT LPO-4) RESPECTIVELY. REFER TO SHEET E-3 FOR EXISTING FIXTURE 1A, 2A, 3A, 4A, 5A & 6A LOCATIONS. REFER ALSO TO EXTERIOR LIGHTING CONTROL SCHEMATIC ON SHEET E-16.
- 11 EXISTING JUNCTION BOX FOR 277V SITE LIGHTING CIRCUITS (TO BE REUSED).
- 12 PROVIDE AND INSTALL NEW 20A, DUPLEX RECEPTACLE AND THREE-WAY LIGHT SWITCH IN 2-GANG, ALUMINUM FS BOX (WITH GROUND SCREW). PROVIDE BRUSHED ALUMINUM DEVICE PLATE.
- 13 PROVIDE AND INSTALL 1-#12 + 1-#12 NEUTRAL + 1-#12 GND IN 3/4" C. FROM LIGHTING CONTROL CABINET 'C1' TO 277V WALLPACK FIXTURES. CIRCUIT LPO-6. REFER ALSO TO EXTERIOR LIGHTING CONTROL SCHEMATIC ON SHEET E-16.
- 14 PROVIDE AND INSTALL NEW LED EXIT SIGN ABOVE DOOR. REFER TO FIXTURE SCHEDULE ON SHEET E-16.
- 15 NEW 120/208V, 3Ø, 4-WIRE PANELBOARD 'LP'. REFER ALSO TO SHEET E-5 & E-21.
- 16 NEW 277/480V, 3Ø, 4-WIRE PANELBOARD 'LPO'. REFER ALSO TO SHEET E-5 & E-21.

**PRIMARY SLUDGE PUMPING STATION (020)
GROUND FLOOR LIGHTING PLAN**

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



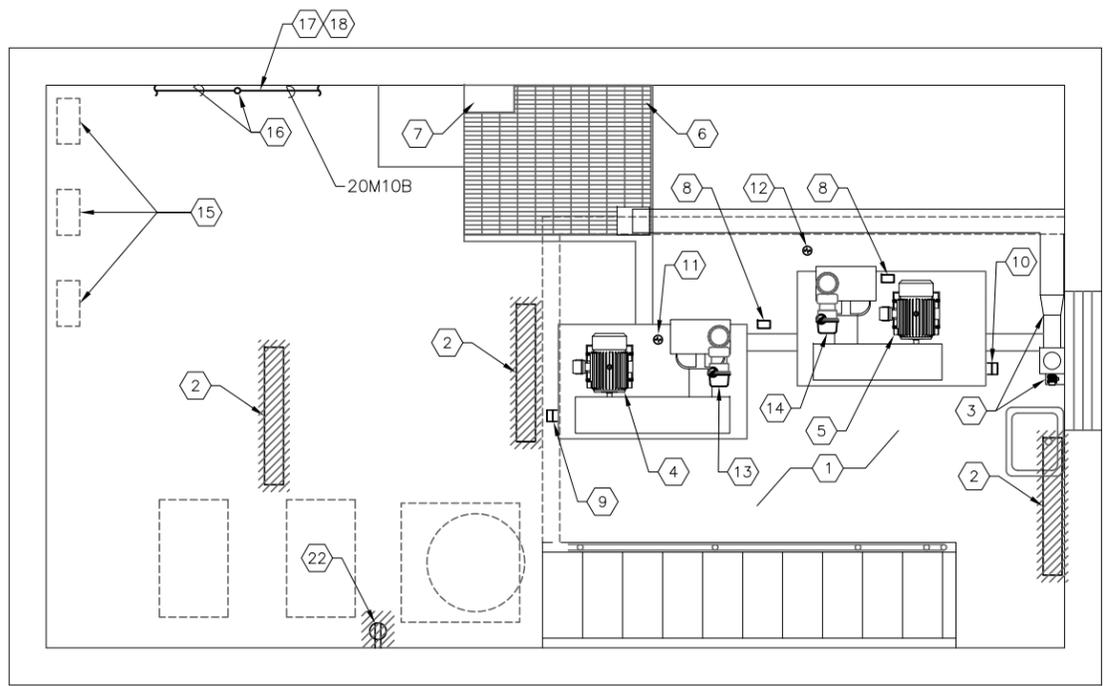
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City of Tampa Wastewater Department
HOWARD F. CURREN AWP
PRIMARY SLUDGE MCC REPLACEMENT

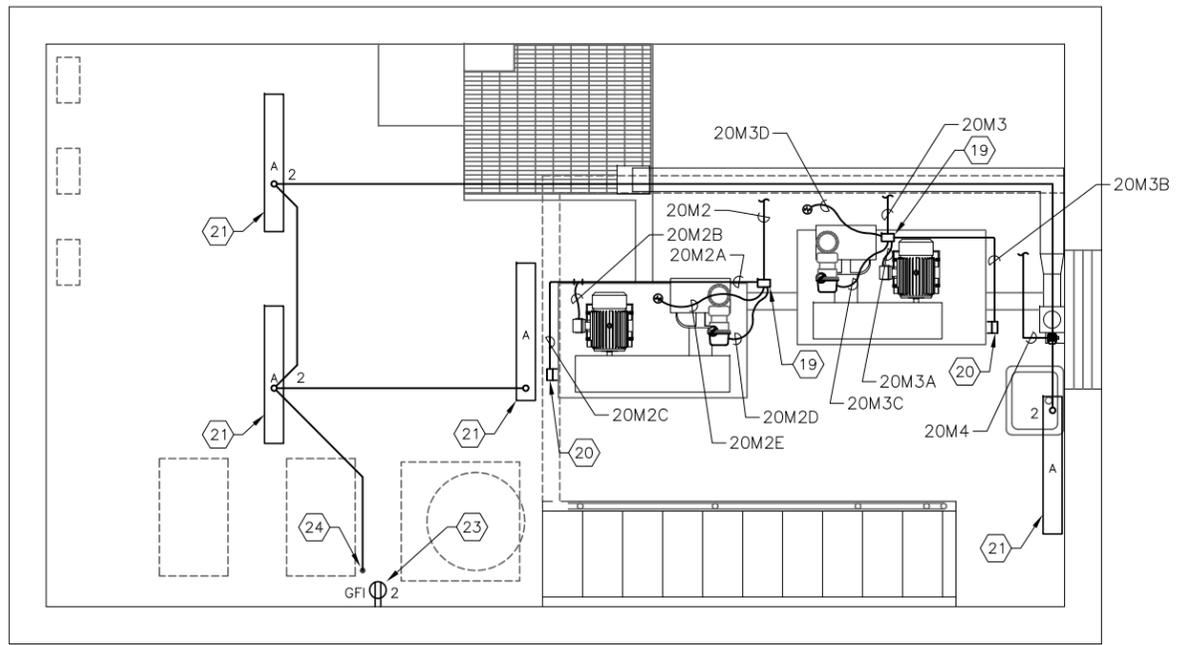
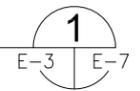
**GROUND FLOOR
LIGHTING PLAN**

TIMOTHY THOMAS, P.E. No. 47079	FILE: 171407042
SHEET NUMBER	E-6



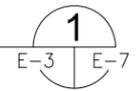
**PRIMARY SLUDGE PUMPING STATION (020)
LOWER LEVEL DEMOLITION PLAN**

SCALE : 3/16" = 1'-0"



**PRIMARY SLUDGE PUMPING STATION (020)
LOWER LEVEL NEW WORK PLAN**

SCALE : 3/16" = 1'-0"



KEYED NOTES:

- 1 EXISTING AREA OPEN TO ABOVE.
- 2 EXISTING 4' FLUORESCENT LIGHT FIXTURE AND ASSOCIATED CONDUIT/CONDUCTORS TO BE REMOVED.
- 3 EXISTING FAN AND ASSOCIATED DUCTWORK TO REMAIN. NO WORK REQUIRED.
- 4 EXISTING SLUDGE PUMP MOTOR No. 1.
- 5 EXISTING SLUDGE PUMP MOTOR No. 2.
- 6 EXISTING SUMP PUMP.
- 7 EXISTING SUMP ON/OFF FLOAT SWITCH AND HIGH LEVEL FLOAT.
- 8 EXISTING JUNCTION BOX FOR ASSOCIATED SLUDGE PUMP AND DISCHARGE VALVE.
- 9 EXISTING SLUDGE PUMP No. 1 CONTROL STATION.
- 10 EXISTING SLUDGE PUMP No. 2 CONTROL STATION.
- 11 EXISTING SLUDGE PUMP No. 1 SEAL WATER SOLENOID.
- 12 EXISTING SLUDGE PUMP No. 2 SEAL WATER SOLENOID.
- 13 EXISTING SLUDGE PUMP No. 1 DISCHARGE VALVE.
- 14 EXISTING SLUDGE PUMP No. 2 DISCHARGE VALVE.
- 15 EXISTING SLOT PENETRATIONS IN SLAB BELOW MCC-20.
- 16 EXISTING JUNCTION BOX AND CONDUIT 20M10. CONTRACTOR TO INSTALL NEW CONDUIT TO MCC-20 AND PROVIDE A NEW JUNCTION BOX ADJACENT TO SUMP PUMP AND FLOAT SWITCH. SUMP PUMP CABLE SHALL BE REUSED. PROVIDE NEW CONDUCTORS FOR FLOAT SWITCH.
- 17 EXISTING SUMP PUMP POWER CABLE IS CURRENTLY RUN ABOVE 20M10B ON EAST WALL. PROVIDE NEW CONDUIT PER NOTE 16.
- 18 EXISTING HIGH LEVEL FLOAT SWITCH CABLE IS CURRENTLY RUN BELOW 20M10B ON EAST WALL. PROVIDE NEW 3/4" CONDUIT FROM MCC-20 TO SUMP AND REINSTALL EXISTING HIGH LEVEL FLOAT CABLE.
- 19 CONTRACTOR TO REMOVE EXISTING JUNCTION BOX. PROVIDE AND INSTALL NEW (10" X 8" X 6") NEMA 4X ALUMINUM JUNCTION BOX. HAMMOND EJ1086AL OR EQUAL.
- 20 CONTRACTOR TO REMOVE CONTROL STATION. PROVIDE AND INSTALL NEW START-STOP SELECTOR SWITCH IN NEMA 4X, ALUMINUM ENCLOSURE. PROVIDE ATTACHMENT FOR PADLOCKING SWITCH IN THE STOP POSITION. PROVIDE MOMENTARY, NON-ILLUMINATED, 'JOG' PUSHBUTTON.
- 21 PROVIDE AND INSTALL NEW 4' FLUORESCENT LIGHT FIXTURE. REFER TO FIXTURE SCHEDULE ON SHEET E-16.
- 22 EXISTING RECEPTACLE AND ASSOCIATED CONDUIT/CONDUCTORS TO BE REMOVED.
- 23 PROVIDE AND INSTALL NEW 20A, DUPLEX RECEPTACLE IN SINGLE-GANG, ALUMINUM CAST DEVICE BOX (WITH GROUND SCREW). PROVIDE BRUSHED ALUMINUM DEVICE PLATE. CIRCUIT LP-2.
- 24 CONTRACTOR SHALL REUSE EXISTING CORE-DRILLED HOLE TO ACCESS LIGHTING FIXTURES ON LOWER LEVEL. INSTALL 2-#12 + 1-#12 GND IN 3/4" CONDUIT DOWN FROM GROUND LEVEL LIGHT SWITCHES. REFER ALSO TO SHEET E-6 FOR LOCATION. CIRCUIT LP-2.

GENERAL NOTES:

- DENOTES EXISTING EQUIPMENT TO BE REMOVED. ITEM SHALL BE REMOVED FROM PREMISES AND DISPOSED OF PROPERLY. UNLESS OTHERWISE NOTED, REMOVE ALL ASSOCIATED CONDUIT AND WIRING CONNECTED TO THE EQUIPMENT TO BE REMOVED, INCLUDING ALL ABANDONED CONDUIT AND WIRING.
- 1. ALL EQUIPMENT, CONDUIT AND WIRING INCLUDED ON THIS DRAWING ARE EXISTING. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS BEFORE SUBMITTING A BID OR COMMENCING CONSTRUCTION.



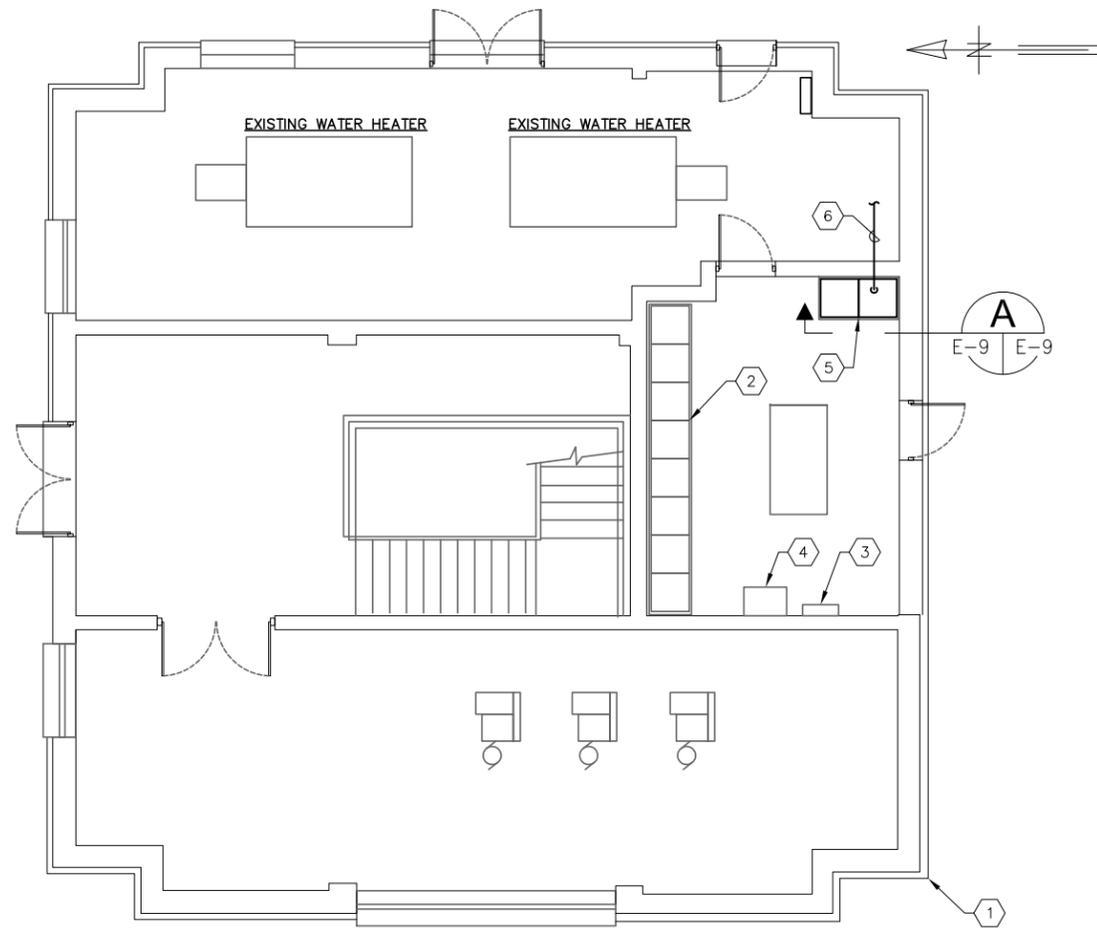
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City of Tampa Wastewater Department
**HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT**

**LOWER LEVEL NEW WORK
AND DEMOLITION PLANS**

TIMOTHY THOMAS, P.E. No. 47079	SHEET NUMBER E-7 FILE: 171407042
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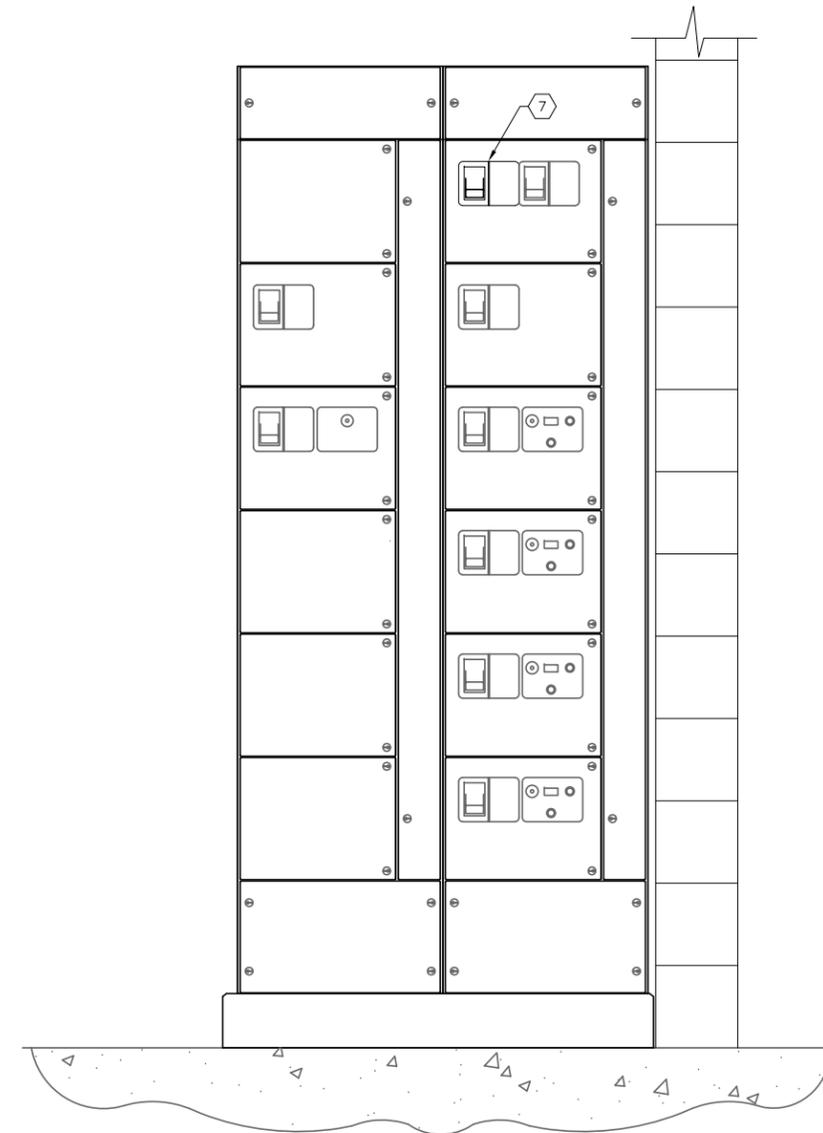
**SLUDGE CONTROL BUILDING A (028)
FLOOR PLAN**

SCALE : 1/8" = 1'-0"

1
E-2 | E-9

KEYED NOTES:

- ① EXISTING SLUDGE CONTROL BUILDING A (028).
- ② EXISTING MOTOR CONTROL CENTER (MCC-62). NO WORK REQUIRED.
- ③ EXISTING 125A, 208V, 3 ϕ , 4-WIRE PANELBOARD LP-CBA-62. NO WORK REQUIRED.
- ④ EXISTING 45 KVA 480-120/208V, 3 ϕ C, DRY TYPE TRANSFORMER. NO WORK REQUIRED.
- ⑤ EXISTING MOTOR CONTROL CENTER (MCC-62A). REFER TO ELEVATION ON THIS SHEET.
- ⑥ EXISTING 2" CONDUIT BETWEEN SLUDGE CONTROL BUILDING 'A' AND PRIMARY SLUDGE PUMPING STATION (EXACT ROUTE IS NOT KNOWN). CONTRACTOR TO FIELD VERIFY SIZE. CONTRACTOR SHALL REMOVE EXISTING CONDUCTORS, AND CLEAN THE EXISTING CONDUIT USING A SWAB, AND RUN A PROPERLY SIZED RUBBER SLUG MANDREL THROUGH THE CONDUIT TO PROVE INTEGRITY. THE CONTRACTOR SHALL THEN PROVIDE AND INSTALL 3-1/0 XHHW-2 CU + 1-#6 XHHW-2 CU GND TO BE USED AS THE NEW MCC-20, 480V FEEDER. REFER ALSO TO SHEETS E-2 AND E-5.
- ⑦ EXISTING 150A, 3-POLE, 480V CIRCUIT BREAKER TO BE REUSED FOR NEW MCC-20 FEEDER.



**EXISTING MOTOR CONTROL CENTER
(MCC-62A) FRONT ELEVATION**

SCALE : NTS

A
E-9 | E-9



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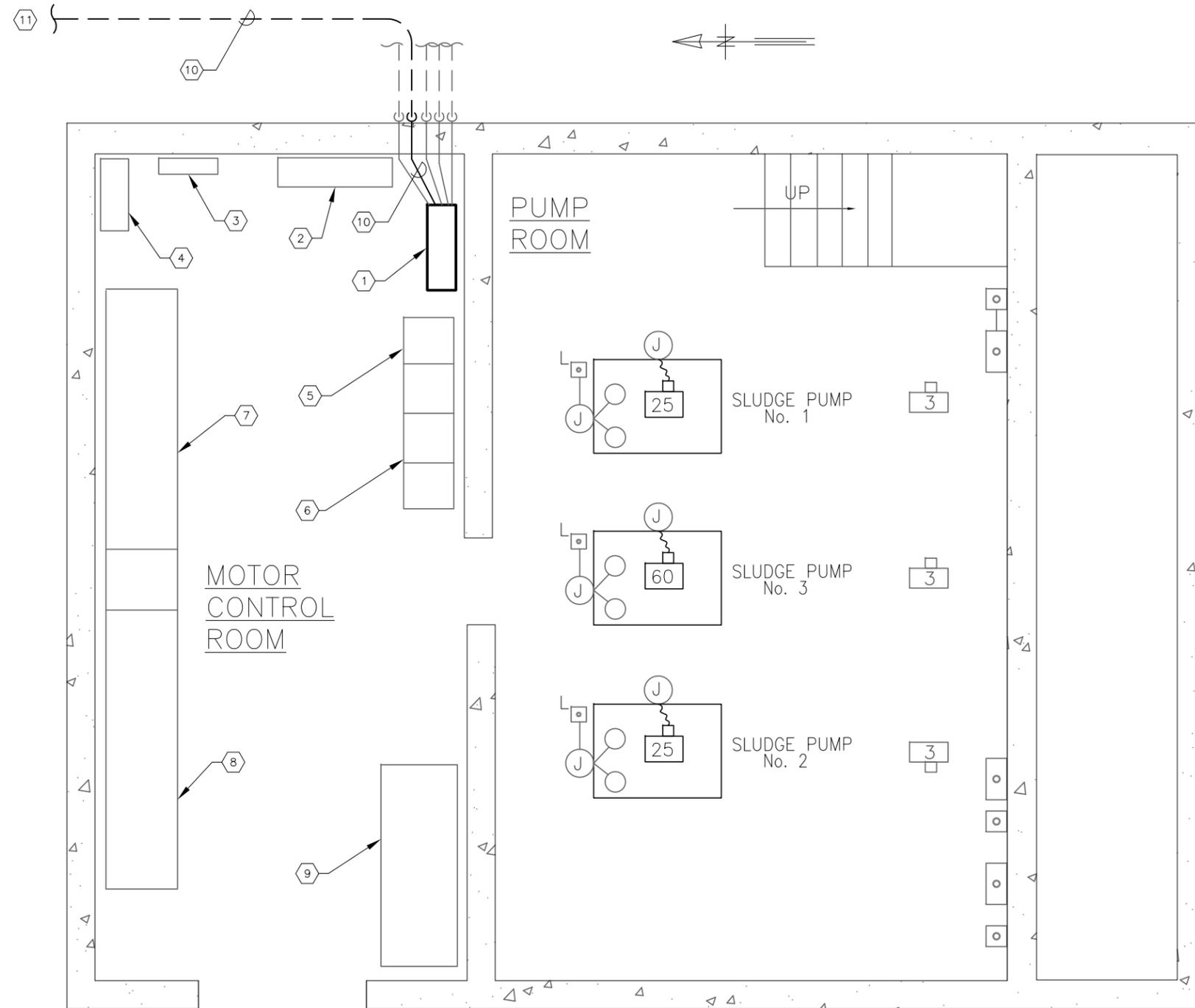
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City of Tampa Wastewater Department
**HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT**

**SLUDGE CONTROL BUILDING A
FLOOR PLAN**

TIMOTHY THOMAS, P.E. No. 47079

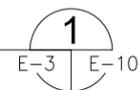
SHEET NUMBER
E-9
FILE: 171407042



- KEYED NOTES:**
- ① EXISTING SCADA RTU
 - ② EXISTING PLC PANEL, NO WORK REQUIRED.
 - ③ EXISTING LIGHTING PANEL "A", NO WORK REQUIRED.
 - ④ EXISTING 30 KVA 120/208V. LIGHTING TRANS.
 - ⑤ EXISTING MCC-40, NO WORK REQUIRED.
 - ⑥ EXISTING MCC-41, NO WORK REQUIRED.
 - ⑦ EXISTING SWBD 40, NO WORK REQUIRED.
 - ⑧ EXISTING SWBD 41, NO WORK REQUIRED.
 - ⑨ EXISTING INSTRUMENTATION CONTROL PANEL, NO WORK REQUIRED.
 - ⑩ EXISTING 1" SPARE CONDUIT WITH PULLSTRING. CONTRACTOR TO INSTALL 32-#14 + 1-#14 GND FROM NEW SCADA I/O JUNCTION BOX TO EXISTING MIXED SLUDGE PUMPING STATION SCADA RTU. REFER TO SHEET E-22 FOR NEW REMOTE I/O SCHEDULE. ALL TERMINATIONS IN EXISTING MIXED SLUDGE PUMPING STATION SCADA RTU SHALL BE MADE BY THE CITY OF TAMPA. THE CONTRACTOR SHALL IDENTIFY EACH CONDUCTOR WITH A PRINTED WHITE, HEAT-SHRINK, SEAMLESS TYPE TUBING WITH BLACK LETTERING. PROVIDE 6 FEET OF SLACK CONDUCTOR, COIL AND TAPE WITHIN THE SCADA RTU.
 - ⑪ FOR CONTINUATION REFER TO SHEET E-8

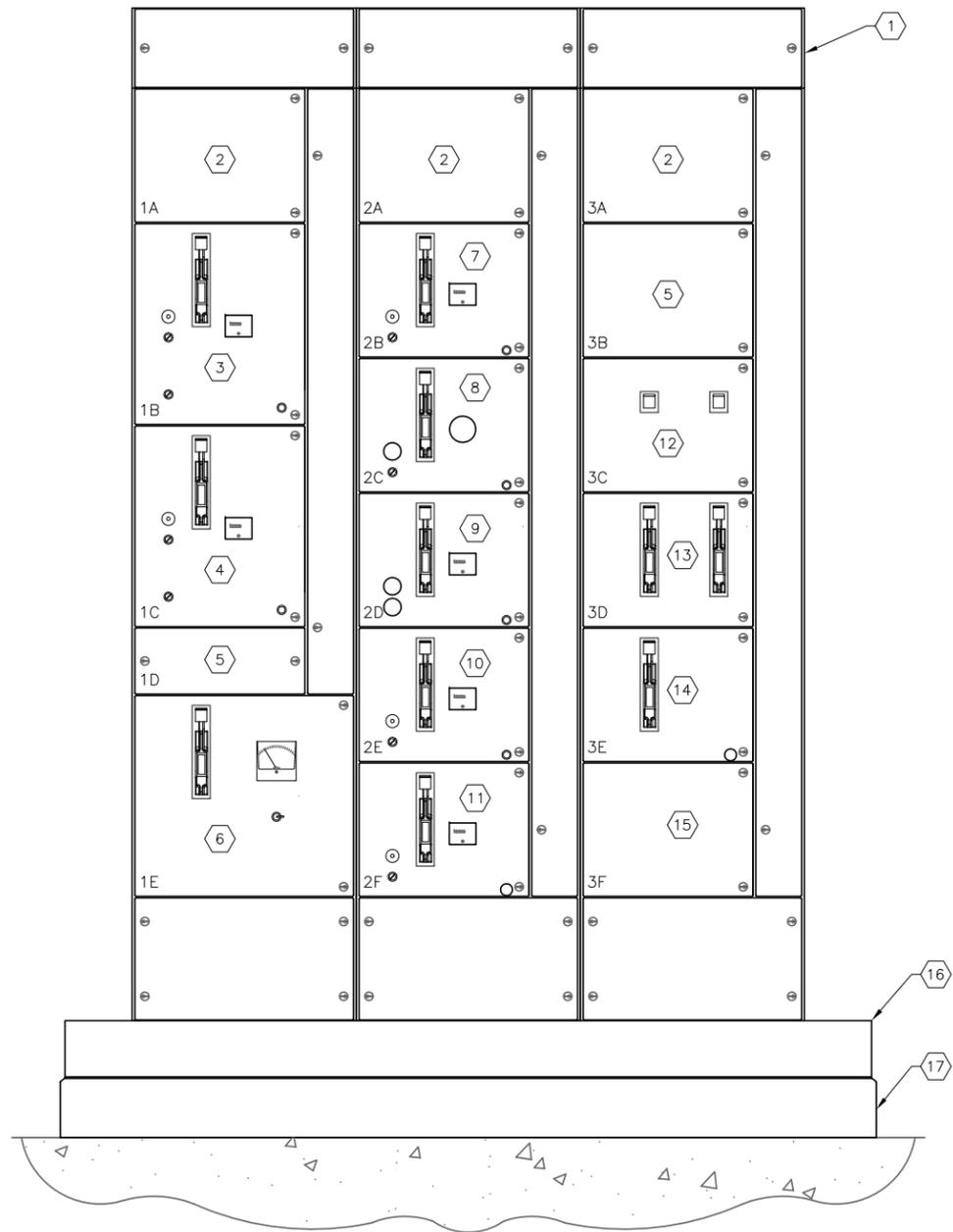
EXISTING MIXED SLUDGE PUMPING STATION (071) FLOOR PLAN

SCALE : NTS



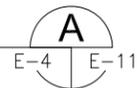
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DATE	7/2015	No.	DATE	BY	APP	REVISION	DESCRIPTION

SCALE	
NOT TO SCALE	



**EXISTING MOTOR CONTROL CENTER
FRONT ELEVATION**

SCALE : N.T.S.



KEYED NOTES:

- ① EXISTING PRIMARY SLUDGE PUMPING STATION MOTOR CONTROL CENTER (TO BE REMOVED).
- ② BLANK (BUSSED).
- ③ EXISTING NEMA SIZE 2 FVNR STARTER FOR SLUDGE PUMP No. 1.
- ④ EXISTING NEMA SIZE 2 FVNR STARTER FOR SLUDGE PUMP No. 2.
- ⑤ BLANK.
- ⑥ EXISTING 3-POLE, 600V, 150 AMPERE MAIN CIRCUIT BREAKER.
- ⑦ EXISTING 3-POLE, 600V, 15 AMPERE MAIN CIRCUIT BREAKER FOR EXHAUST FAN.
- ⑧ EXISTING 3-POLE, 600V, 15 AMPERE CIRCUIT BREAKER FOR DISCHARGE VALVE.
- ⑨ EXISTING 3-POLE, 600V, 20 AMPERE CIRCUIT BREAKER FOR LIGHTING PANEL.
- ⑩ EXISTING 3-POLE, 600V, 15 AMPERE CIRCUIT BREAKER FOR SCUM GATE.
- ⑪ EXISTING 3-POLE, 600V, 15 AMPERE CIRCUIT BREAKER FOR SUMP PUMP.
- ⑫ EXISTING 3-POLE, 600V, 15 AMPERE CIRCUIT BREAKERS FOR SLIDE GATES 1G & 2G, 3G & 4G RESPECTIVELY.
- ⑬ EXISTING 3-POLE, 600V, 15 AMPERE CIRCUIT BREAKERS FOR SED. TANKS 1 & 2 AND SED. TANKS 3 & 4 RESPECTIVELY.
- ⑭ EXISTING 3-POLE, 600V, 20 AMPERE CIRCUIT BREAKER FOR ISOLATION TRANSFORMER.
- ⑮ EXISTING 15KVA, 480-277/480V ISOLATION TRANSFORMER.
- ⑯ EXISTING 5" CHASE TO REMAIN.
- ⑰ EXISTING 5" HOUSEKEEPING PAD TO REMAIN.



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City of Tampa Wastewater Department
**HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT**

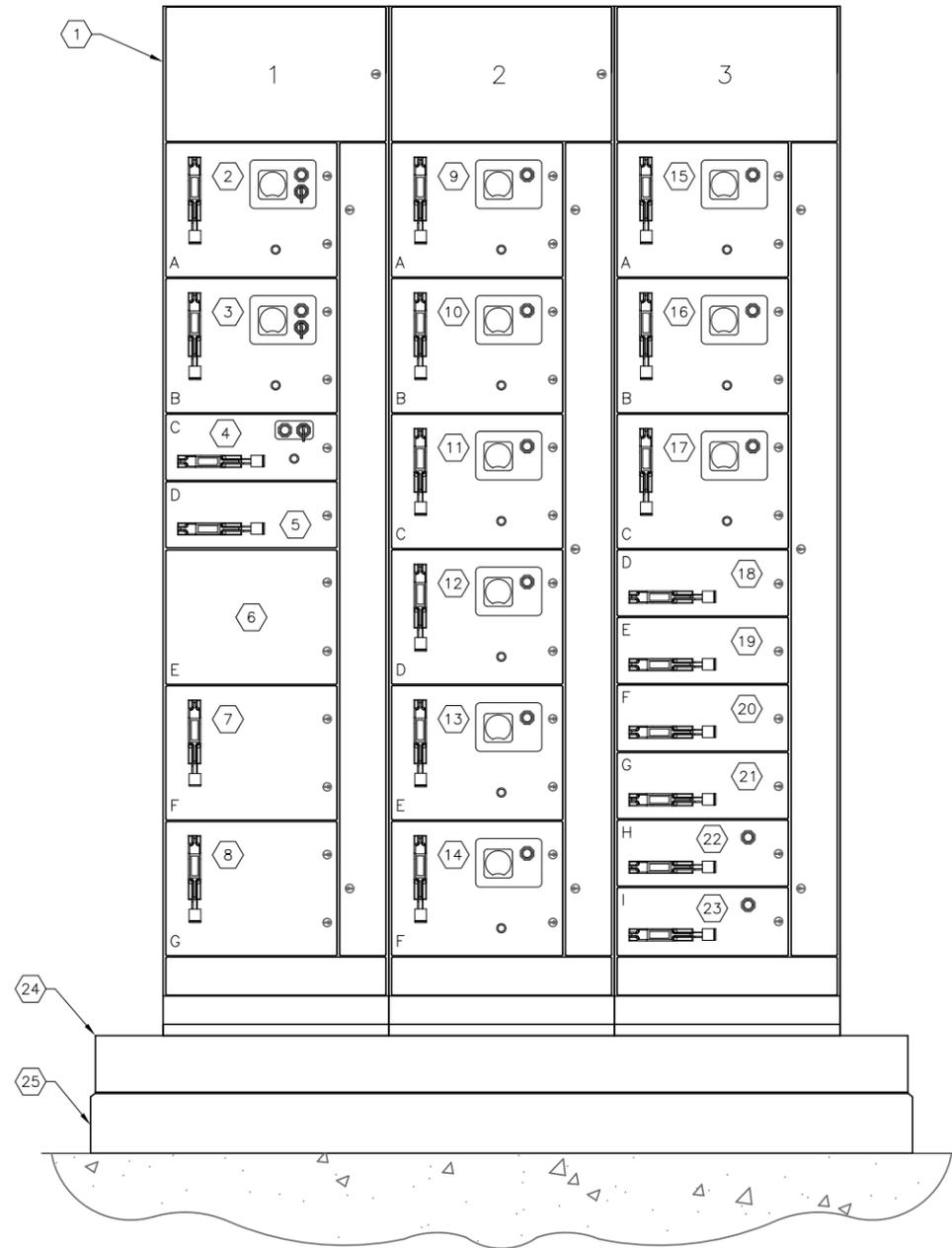
**EXISTING MCC-20
MOTOR CONTROL CENTER
ELEVATION**

TIMOTHY THOMAS, P.E. No. 47079

SHEET NUMBER

E-11

FILE: 171407042



**NEW MOTOR CONTROL CENTER
(MCC-20) FRONT ELEVATION**

SCALE : N.T.S.



KEYED NOTES:

- ① NEW MOTOR CONTROL CENTER MCC-20. REFER ALSO TO ONE-LINE DIAGRAM ON SHEET E-13.
- ② NEW NEMA SIZE 2 FVNR STARTER FOR SLUDGE PUMP No. 1.
- ③ NEW NEMA SIZE 2 FVNR STARTER FOR SLUDGE PUMP No. 2.
- ④ NEW NEMA SIZE 1 FVNR STARTER FOR EXHAUST FAN.
- ⑤ 15A CIRCUIT BREAKER FOR SCUM GATE.
- ⑥ SPACE.
- ⑦ SURGE PROTECTION DEVICE.
- ⑧ 150A MAIN CIRCUIT BREAKER.
- ⑨ NEW NEMA SIZE 1 FVNR STARTER FOR LONGITUDINAL COLLECTOR DRIVE PST-LC-1.
- ⑩ NEW NEMA SIZE 1 FVNR STARTER FOR CROSS COLLECTOR DRIVE PST-CC-1.
- ⑪ NEW NEMA SIZE 1 FVNR STARTER FOR LONGITUDINAL COLLECTOR DRIVE PST-LC-2.
- ⑫ NEW NEMA SIZE 1 FVNR STARTER FOR CROSS COLLECTOR DRIVE PST-CC-2.
- ⑬ NEW NEMA SIZE 1 FVNR STARTER FOR LONGITUDINAL COLLECTOR DRIVE PST-LC-3.
- ⑭ NEW NEMA SIZE 1 FVNR STARTER FOR CROSS COLLECTOR DRIVE PST-CC-3.
- ⑮ NEW NEMA SIZE 1 FVNR STARTER FOR LONGITUDINAL COLLECTOR DRIVE PST-LC-4.
- ⑯ NEW NEMA SIZE 1 FVNR STARTER FOR CROSS COLLECTOR DRIVE PST-CC-4.
- ⑰ NEW NEMA SIZE 1 FVNR STARTER FOR SUMP PUMP.
- ⑱ 25A CIRCUIT BREAKER FOR TRANSFORMER 'T1'.
- ⑲ 25A CIRCUIT BREAKER FOR ISOLATION TRANSFORMER 'IT1'.
- ⑳ 15A CIRCUIT BREAKER FOR SLIDE GATES 1G & 2G.
- ㉑ 15A CIRCUIT BREAKER FOR SLIDE GATES 3G & 4G.
- ㉒ NEW NEMA SIZE 1 FVNR STARTER FOR JUNCTION CHAMBER No. 3 MIXER #1
- ㉓ NEW NEMA SIZE 1 FVNR STARTER FOR JUNCTION CHAMBER No. 3 MIXER #2
- ㉔ EXISTING 5" CHASE TO REMAIN.
- ㉕ EXISTING 5" HOUSEKEEPING PAD TO REMAIN.



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SCALE

NOT TO SCALE

City of Tampa Wastewater Department
**HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT**

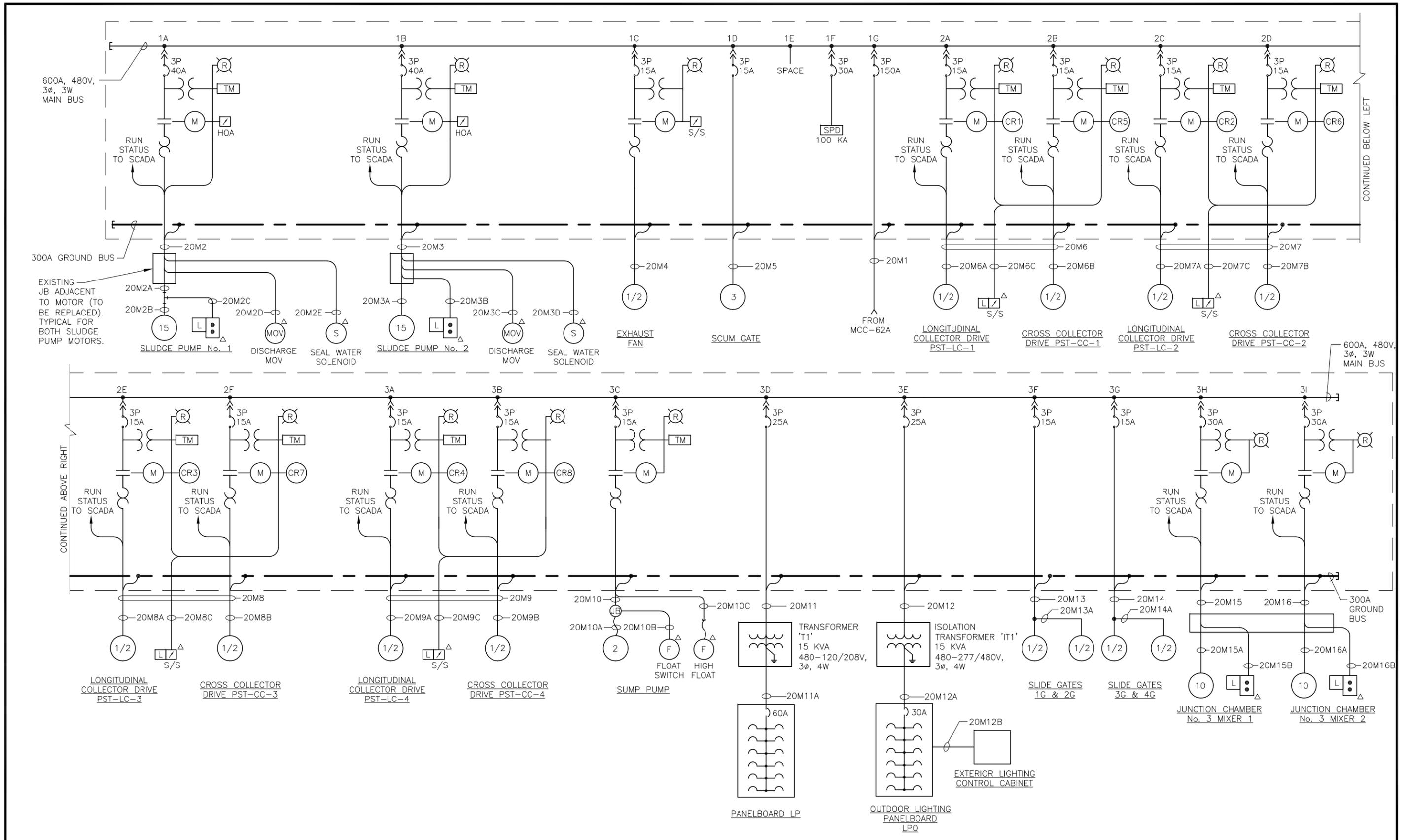
**NEW MOTOR CONTROL CENTER
(MCC-20) ELEVATION**

TIMOTHY THOMAS, P.E. No. 47079

SHEET NUMBER

E-12

FILE: 171407042



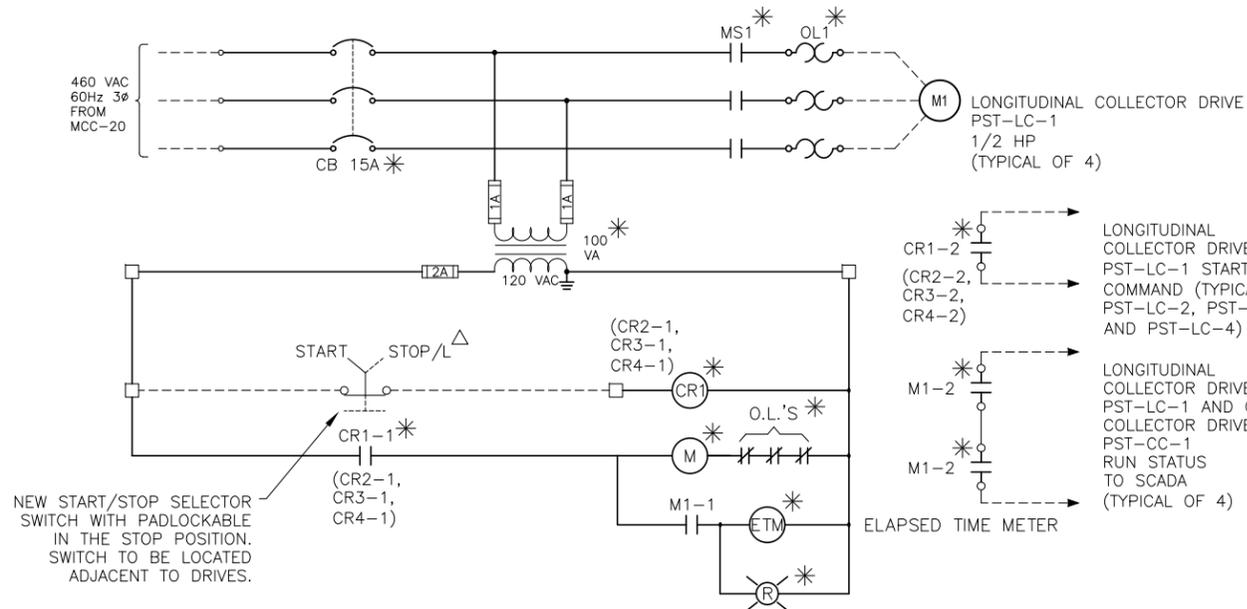
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NOT TO SCALE

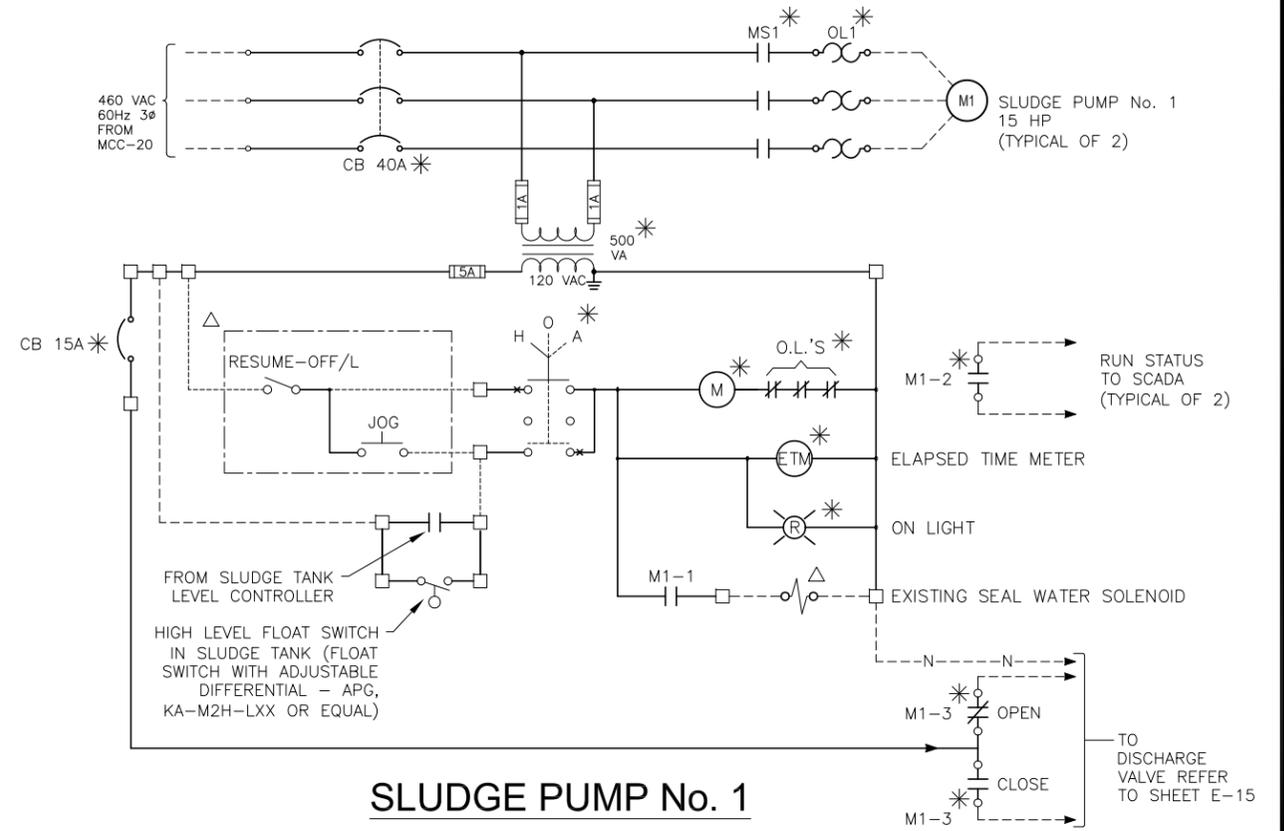
City of Tampa Wastewater Department
HOWARD F. CURREN AWP
PRIMARY SLUDGE MCC REPLACEMENT

NEW PRIMARY SLUDGE MCC
ONE-LINE DIAGRAM

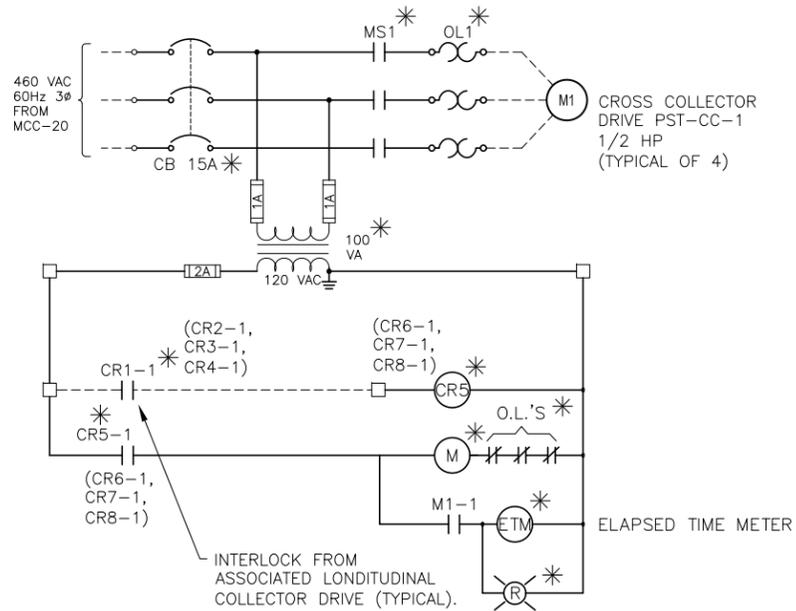
SHEET NUMBER	E-13
FILE:	171407042
TIMOTHY THOMAS, P.E. No. 47079	



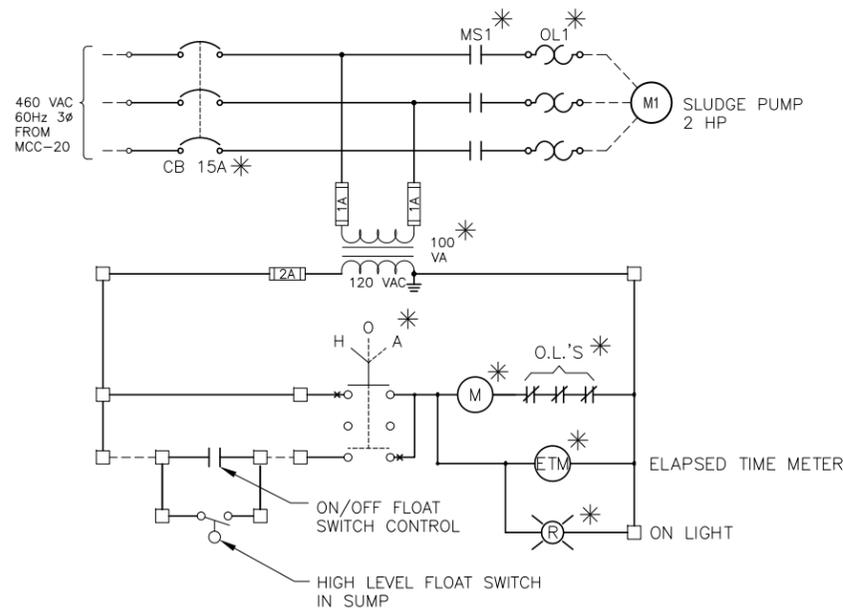
LONGITUDINAL COLLECTOR DRIVE PST-LC-1
TYPICAL FOR PST-LC-2, PST-LC-3 AND PST-LC-4



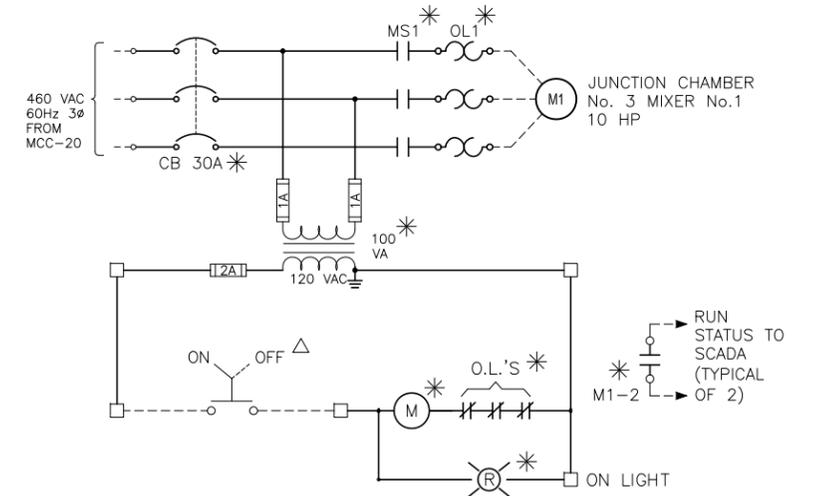
SLUDGE PUMP No. 1
TYPICAL FOR SLUDGE PUMP No. 2



CROSS COLLECTOR DRIVE PST-CC-1
TYPICAL FOR PST-CC-2, PST-CC-3 AND PST-CC-4



SUMP PUMP

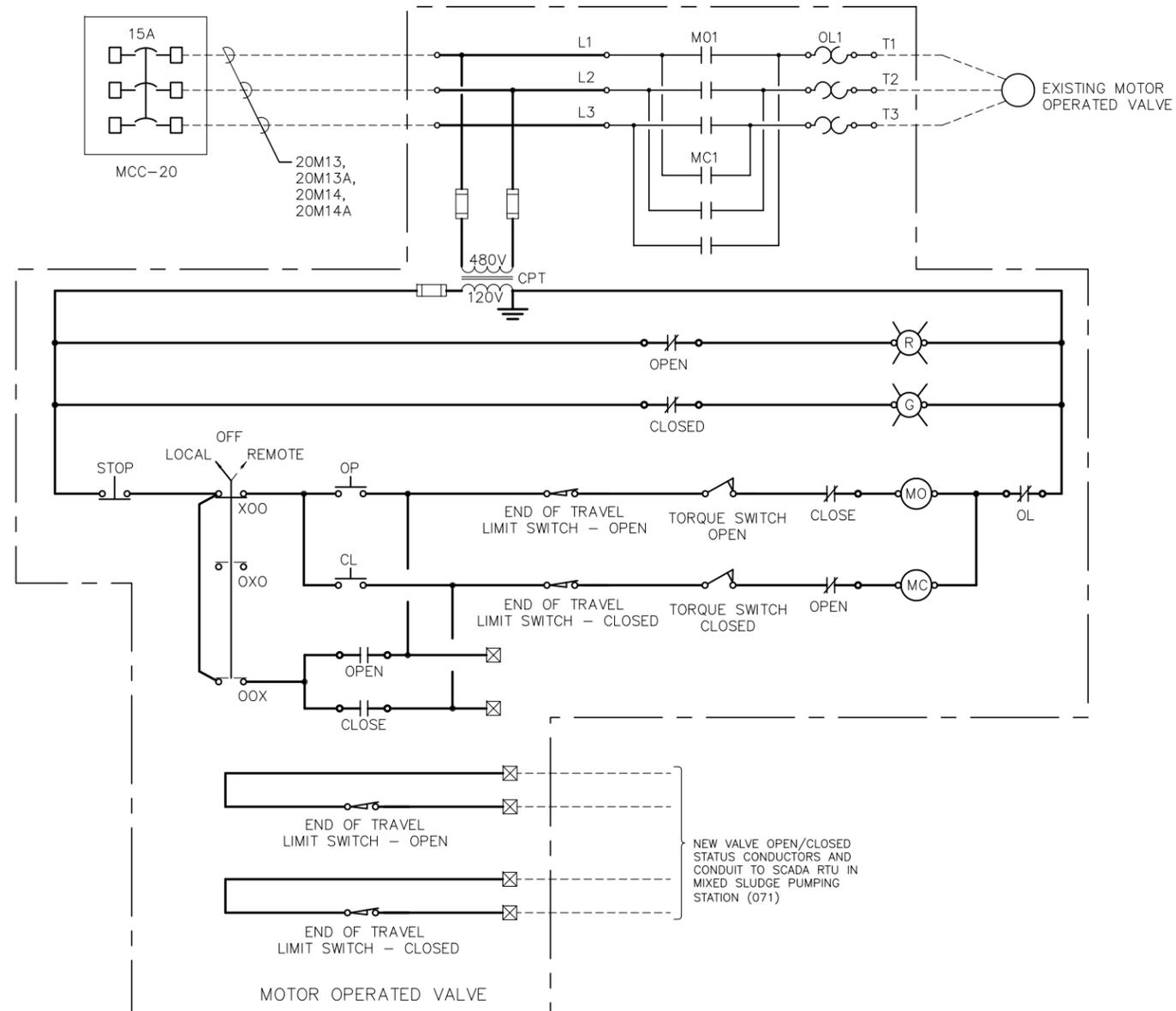


JUNCTION CHAMBER No. 3 MIXER No.1
TYPICAL FOR JUNCTION CHAMBER No. 3 MIXER No. 2

LEGEND

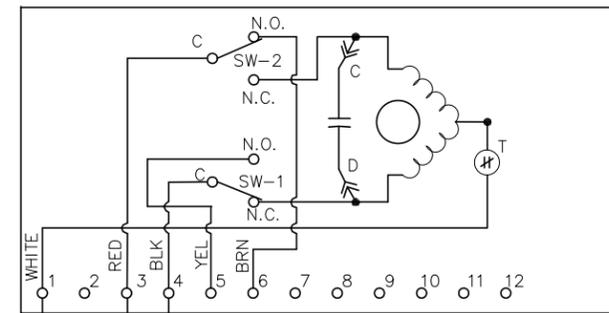
- △ INDICATES A REMOTE DEVICE NEAR THE MOTOR
- * INDICATES DEVICE LOCATED IN OR ON MCC-20
- INDICATES TERMINAL BLOCK IN MCC-20
- INDICATES FIELD WIRING

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SLIDE GATE 1G MOTOR OPERATED VALVE SCHEMATIC

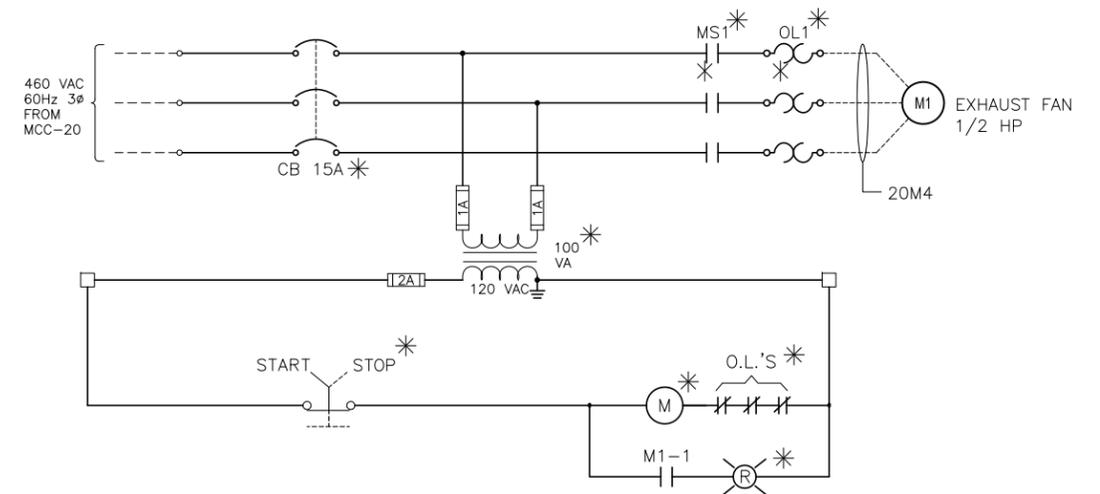
TYPICAL FOR SLIDE GATES 2G, 3G AND 4G. WORK CONSISTS SOLELY OF PROVIDING NEW 480V CONDUCTORS AND ADDITIONAL CONDUIT/ CONDUCTORS FOR VALVE OPEN/CLOSED STATUS. ADDITIONAL INFORMATION PROVIDED FOR REFERENCE ONLY.



120V AC POWER FROM ASSOCIATED SLUDGE PUMP CONTROL POWER TRANSFORMER. REFER TO SLUDGE PUMP MOTOR WIRING DIAGRAM ON SHEET E-14.
MCC-20, CUBICLE 1A, 500 VA CONTROL TRANSFORMER.
MCC-20, CUBICLE 1B, 500 VA CONTROL TRANSFORMER.

DISCHARGE VALVE NO. 1

TYPICAL FOR DISCHARGE VALVE No. 2



EXHAUST FAN

LEGEND

- △ INDICATES A REMOTE DEVICE NEAR THE MOTOR
- * INDICATES DEVICE LOCATED ON MCC-20
- INDICATES TERMINAL BLOCK IN MCC-20
- ⊠ INDICATES TERMINAL BLOCK IN EXISTING MOV
- INDICATES FIELD WIRING



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City of Tampa Wastewater Department
HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT

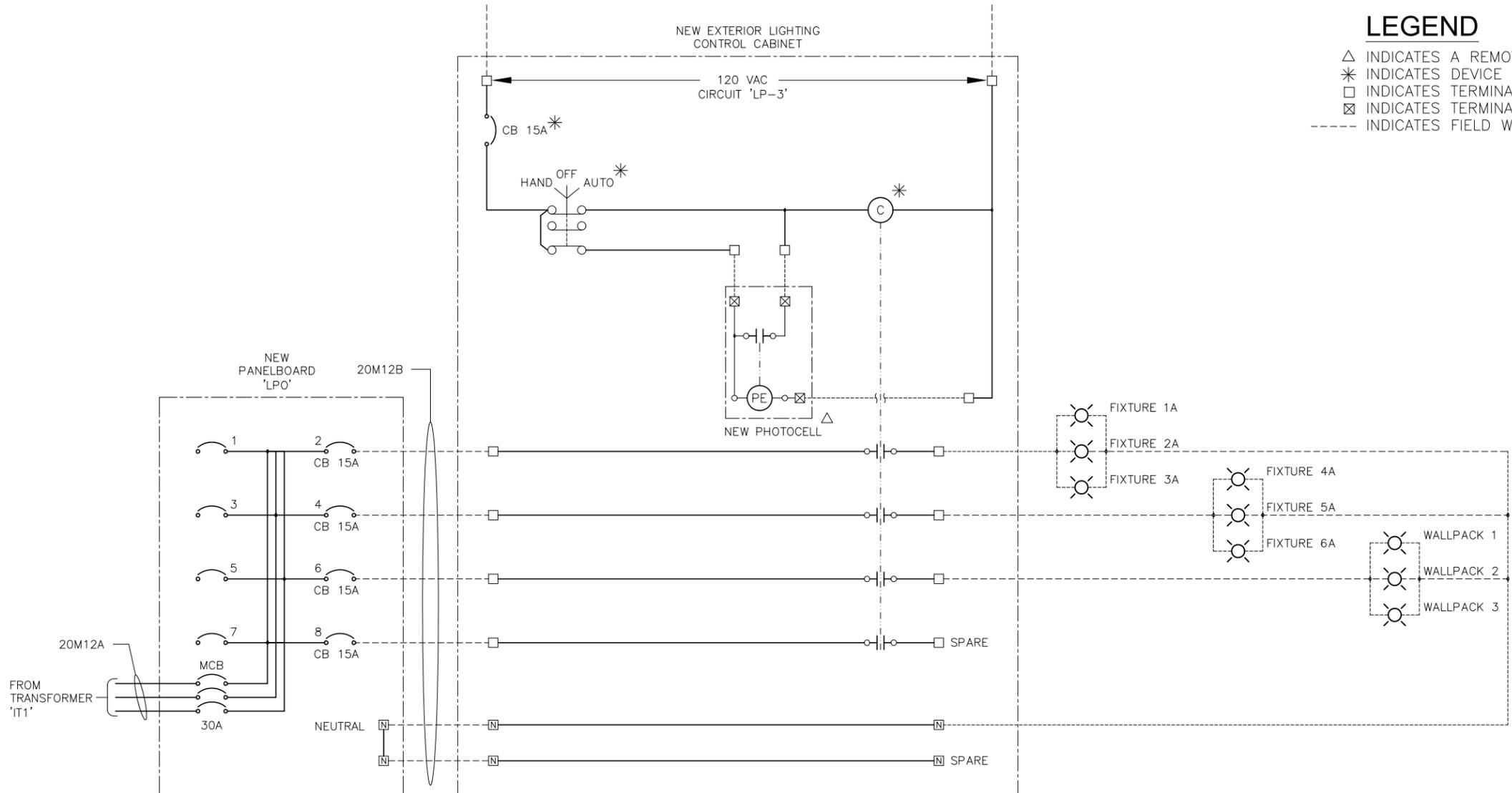
MOTOR SCHEMATIC
WIRING DIAGRAMS
(SHEET 2 OF 2)

TIMOTHY THOMAS, P.E. No. 47079

SHEET NUMBER

E-15

FILE: 171407042



LEGEND

- △ INDICATES A REMOTE DEVICE
- * INDICATES DEVICE LOCATED ON LIGHTING CONTROL PANEL
- INDICATES TERMINAL BLOCK IN LIGHTING CONTROL PANEL
- ⊠ INDICATES TERMINAL BLOCK IN DEVICE
- INDICATES FIELD WIRING

EXTERIOR LIGHTING CONTROL SCHEMATIC

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	LAMP(S)	VOLTS	MOUNTING	REMARKS
A	LITHONIA	XWL254MV	(2) 54W T8	120	CEILING	PROVIDE STAINLESS STEEL MOUNTING BRACKETS AND CONTINUOUS Poured GASKET FOR AIRTIGHT SEAL.
B	LITHONIA	TWH LED 30C 1000 50K T3M 277 DDBXD	(1) 104W DRIVER	277	WALL	LED WALLPACK LUMINAIRE
X	LITHONIA	LQMP3R120/277ELN	(1) 1W DRIVER	120/277	UNIVERSAL	LED EXIT SIGN WITH NICKEL CADMIUM BATTERY BACKUP



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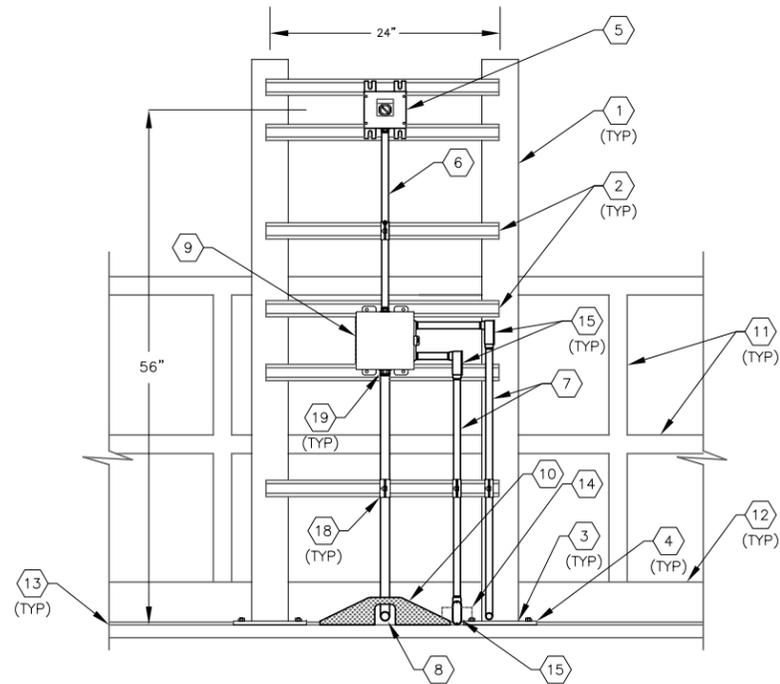
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City of Tampa Wastewater Department
HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT

LIGHTING CONTROLS AND
FIXTURE SCHEDULE

TIMOTHY THOMAS, P.E. No. 47079

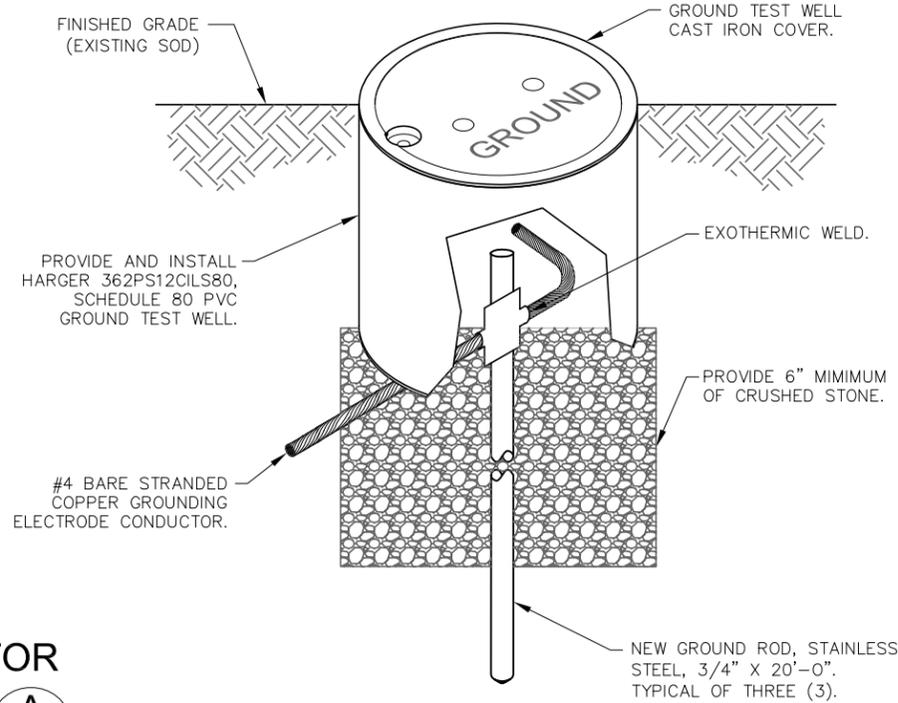
SHEET NUMBER
E-16
FILE: 171407042



TYPICAL COLLECTOR AND CROSS COLLECTOR EQUIPMENT RACK ELEVATION

SCALE : N.T.S.

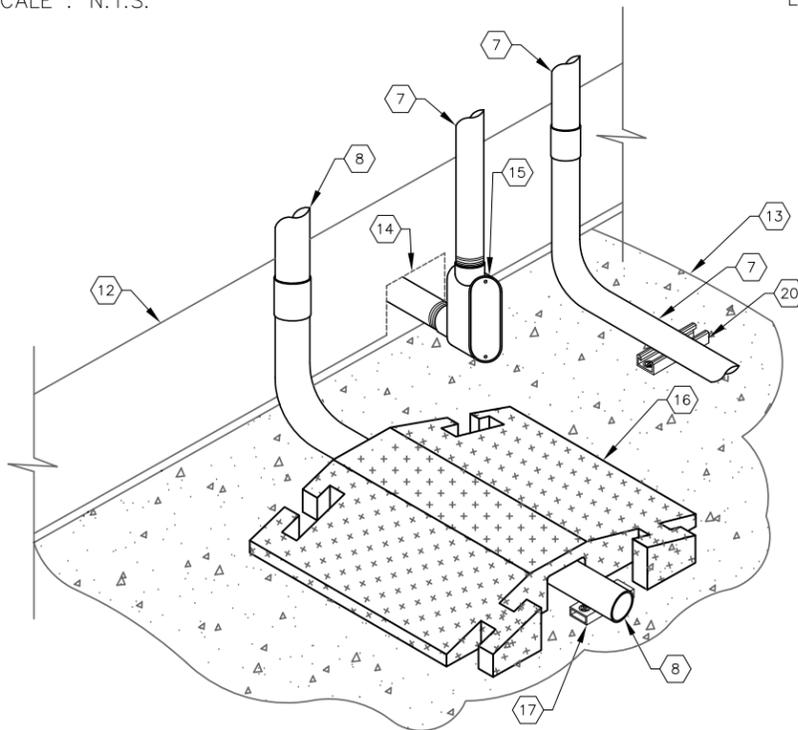
A
E-8 | E-17



GROUND TEST WELL DETAIL

SCALE : N.T.S.

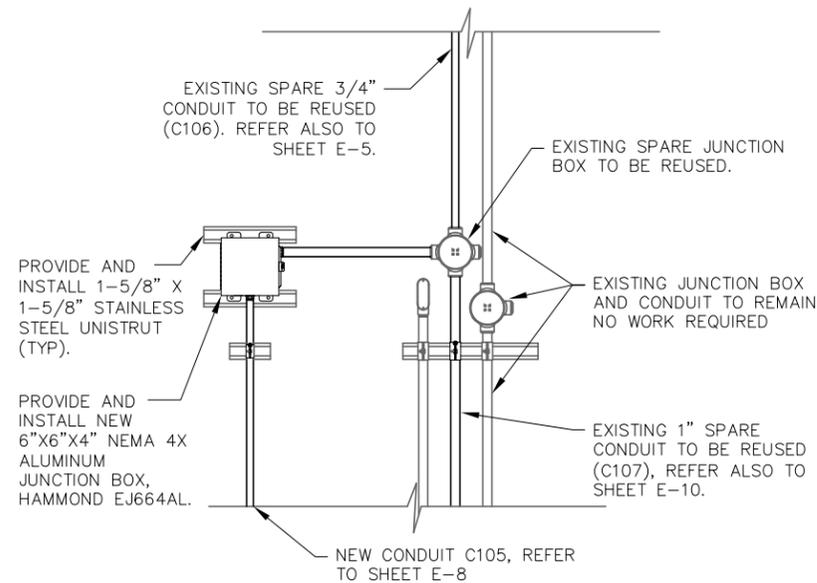
2
E-8 | E-17



DROP OVER CABLE PROTECTOR DETAIL

SCALE : N.T.S.

1
E-8 | E-17



NEW SCADA I/O JB DETAIL

SCALE : N.T.S.

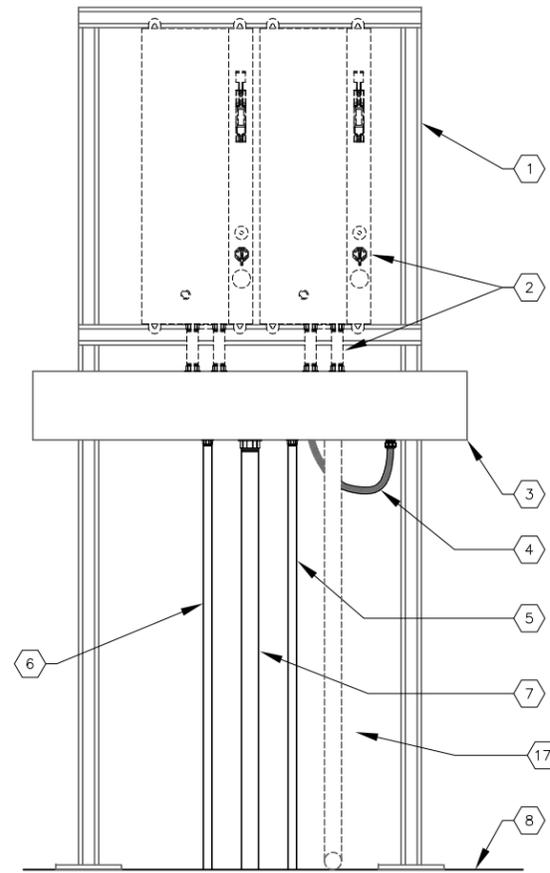
1
E-5 | E-17

KEYED NOTES:

- 1 PROVIDE AND INSTALL 4" SQUARE ALUMINUM POST WITH 1/2" WALL THICKNESS. WELD 1/4" CAP TO TOP OF EACH POST (TYPICAL OF 2).
- 2 PROVIDE AND INSTALL 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT. UNISTRUT BOLTS SHALL BE INSTALLED THROUGH POST.
- 3 PROVIDE FULL FILLET WELD TO BASE PLATE (TYPICAL OF 2).
- 4 PROVIDE AND INSTALL 8" X 8" X 3/4" ALUMINUM BASE PLATE. SECURE EACH BASE PLATE TO CONCRETE W/(4) STAINLESS STEEL 1/2" DIA. X 8" BOLTS & STAINLESS STEEL HEX NUTS WITH LOCKWASHER. DRILL CONCRETE & EMBED BOLTS AND ANCHORS IN EPOXY. COAT BOTTOM OF BASE PLATE WITH ASPHALT PAINT. PROVIDE NEOPRENE GASKET BETWEEN ALL STAINLESS STEEL AND ALUMINUM COMPONENTS.
- 5 PROVIDE AND INSTALL NEW START-STOP SELECTOR SWITCH IN NEMA 4X, ALUMINUM ENCLOSURE. PROVIDE ATTACHMENT FOR PADLOCKING SWITCH IN THE STOP POSITION.
- 6 PROVIDE AND INSTALL 2-#14 XHHW-2 CU + 1- #12 XHHW-2 CU GND IN 3/4" RIGID ALUMINUM WITH 40 mil PVC COATING FOR ASSOCIATED LONGITUDINAL COLLECTOR DRIVE AND CROSS COLLECTOR DRIVE START-STOP CONTROLS.
- 7 PROVIDE AND INSTALL 3-#12 XHHW-2 CU (480V POWER) + 1- #12 XHHW-2 CU GND IN 3/4" RIGID ALUMINUM WITH 40 mil PVC COATING FOR ASSOCIATED LONGITUDINAL COLLECTOR DRIVE OR CROSS COLLECTOR DRIVE. FEEDER LOCATIONS VARY BY STATION.
- 8 PROVIDE AND INSTALL 6-#12 XHHW-2 CU + 1- #12 XHHW-2 CU GND IN 1" RIGID ALUMINUM WITH 40 mil PVC COATING FOR ASSOCIATED LONGITUDINAL COLLECTOR DRIVE AND CROSS COLLECTOR DRIVE FEEDER CIRCUITS.
- 9 PROVIDE AND INSTALL NEW 6" X 6" X 4" NEMA 4X ALUMINUM JUNCTION BOX WITH HINGED COVER AND QUARTER TURN LATCH. HAMMOND EJ664AL OR EQUAL.
- 10 PROVIDE AND INSTALL DROP OVER CABLE PROTECTOR WITH SINGLE 2.25 INCH CHANNEL. ELECTRIDUCT PART # CP1X225-GP-DO.
- 11 EXISTING HANDRAIL.
- 12 EXISTING KICKPLATE.
- 13 FINISHED GRADE OF CONCRETE SLAB.
- 14 NOTCH EXISTING KICKPLATE AS REQUIRED TO ALLOW 480V FEEDER CONDUIT TO BE INSTALLED ON BACKSIDE OF HANDRAIL/KICKPLATE.
- 15 PROVIDE AND INSTALL NEW 3/4" PVC COATED ALUMINUM CONDUIT LB FITTING.
- 16 PROVIDE AND INSTALL DROP OVER CABLE PROTECTOR WITH SINGLE 2.25 INCH CHANNEL. ELECTRIDUCT PART # CP1X225-GP-DO. CABLE PROTECTOR INTERLOCKS WITH STANDARD 3'-0" LENGTHS. PROVIDE QUANTITY AS REQUIRED. CUT LAST PROTECTOR AS REQUIRED FOR PROPER FIT.
- 17 PROVIDE AND INSTALL 2" X 1/2", 16 GAUGE 304 STAINLESS STEEL CHANNEL TO ELEVATE CONDUIT ABOVE CONCRETE SLAB. FASTEN CHANNEL TO CONCRETE SLAB WITH 1/4" X 2" FLATHEAD STAINLESS STEEL TAPCONS AND STAINLESS STEEL WASHERS.
- 18 PROVIDE AND INSTALL STAINLESS STEEL CONDUIT STRAP.
- 19 PROVIDE AND INSTALL ALUMINUM MYERS HUB WITH STAINLESS STEEL GROUND SCREW.
- 20 PROVIDE AND INSTALL 1-5/8" X 7/8" STAINLESS STEEL UNISTRUT. FASTEN UNISTRUT TO CONCRETE SLAB WITH 1/4" X 2" FLATHEAD STAINLESS STEEL TAPCONS AND STAINLESS STEEL WASHERS.

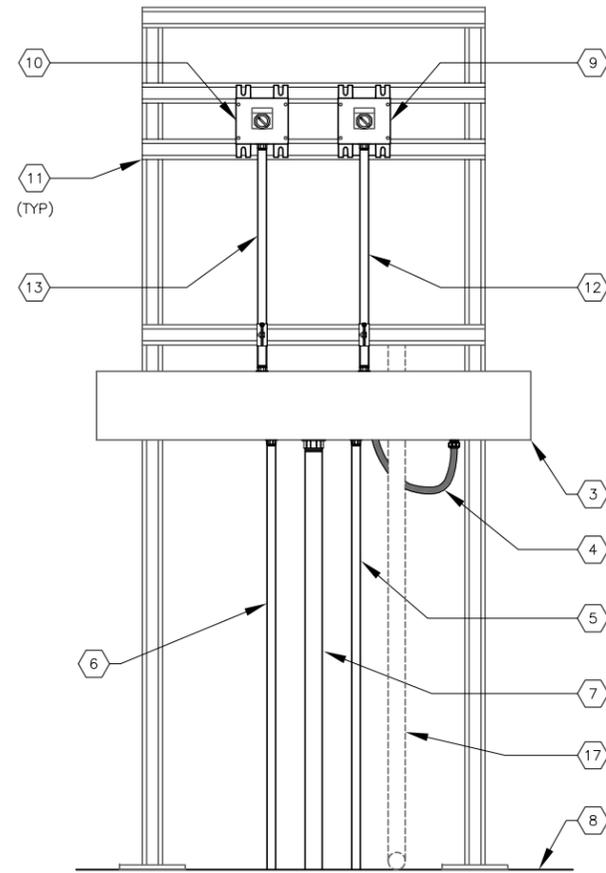
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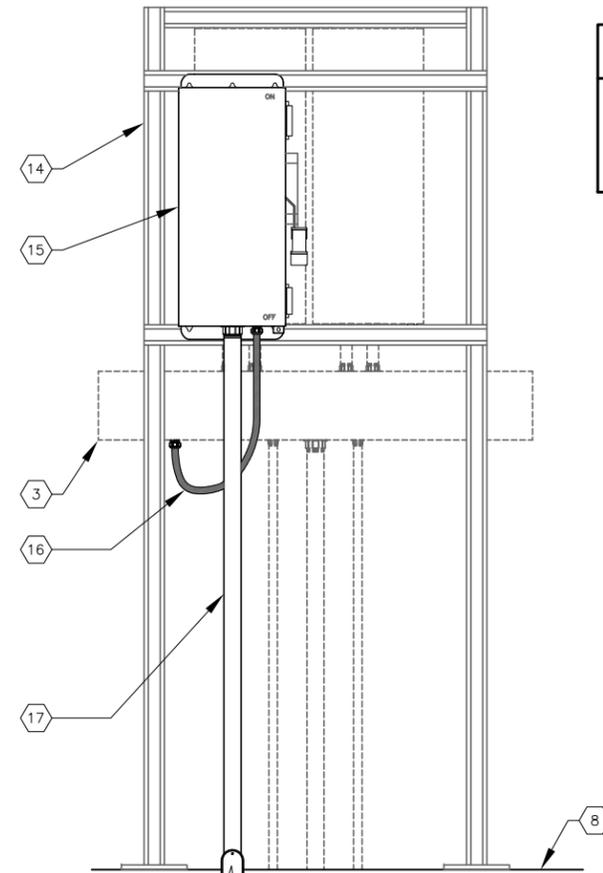
**JUNCTION CHAMBER No. 3
EXISTING MIXER STARTER
RACK FRONT ELEVATION**

SCALE : N.T.S.



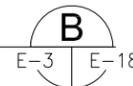
**JUNCTION CHAMBER No. 3
MIXER STARTER RACK
MODIFICATIONS**

SCALE : N.T.S.



**JUNCTION CHAMBER No. 3
EXISTING MIXER STARTER
RACK REAR ELEVATION**

SCALE : N.T.S.



GENERAL NOTES :

1. NEW CONDUITS (20M15 AND 20M16, REFER TO SHEET E-3) NOT SHOWN FOR CLARITY. NEW CONDUITS SHALL ENTER THE BACK OF THE EXISTING WIREWAY. PROVIDE CONDUIT LB FITTINGS AS REQUIRED.

KEYED NOTES:

- | | | |
|--|---|--|
| <p>① EXISTING STARTER RACK FOR JUNCTION CHAMBER No. 3 MIXERS. SUPPORTING HARDWARE, WIREWAY, DISCONNECT AND CONDUITS TO REMAIN.</p> <p>② EXISTING STARTERS FOR JUNCTION CHAMBER No. 3 MIXER #1 AND #2, ALONG WITH ASSOCIATED CONDUIT AND CONDUCTORS TO BE REMOVED. CONTRACTOR SHALL REMOVE FEEDER CONDUCTORS BACK TO SOURCE.</p> <p>③ EXISTING WIREWAY TO REMAIN.</p> <p>④ EXISTING SEALTITE CONDUIT TO EXISTING DISCONNECT ON BACKSIDE OF RACK. SEALTITE AND ASSOCIATED DISCONNECT TO REMAIN. NO WORK REQUIRED. REFER TO NOTE #16 FOR CONTINUATION.</p> <p>⑤ EXISTING 3/4" CONDUIT FOR MIXER #2 MOTOR FEEDER TO REMAIN. CONTRACTOR SHALL REMOVE EXISTING CONDUCTORS AND AFTER CLEANING CONDUIT, SHALL INSTALL NEW CONDUCTORS. 3-#8 XHHW-2 CU (480V POWER) + 1-#12 (20M16A). CONTRACTOR SHALL PROVIDE NEW 3/4" FLEXIBLE SEALTITE CONNECTION TO MOTOR.</p> | <p>⑥ EXISTING 3/4" CONDUIT FOR MIXER #1 MOTOR FEEDER TO REMAIN. CONTRACTOR SHALL REMOVE EXISTING CONDUCTORS AND AFTER CLEANING CONDUIT, SHALL INSTALL NEW CONDUCTORS. 3-#8 XHHW-2 CU (480V POWER) + 1-#12 (20M15A). CONTRACTOR SHALL PROVIDE NEW 3/4" FLEXIBLE SEALTITE CONNECTION TO MOTOR.</p> <p>⑦ EXISTING CONDUIT AND CONDUCTORS TO REMAIN. NO WORK REQUIRED.</p> <p>⑧ FINISHED GRADE OF CONCRETE SLAB AT JUNCTION CHAMBER No. 3. NO WORK REQUIRED.</p> <p>⑨ PROVIDE AND INSTALL NEW START-STOP SELECTOR SWITCH IN NEMA 4X, ALUMINUM ENCLOSURE. PROVIDE ATTACHMENT FOR PADLOCKING SWITCH IN THE STOP POSITION FOR MIXER #2.</p> <p>⑩ PROVIDE AND INSTALL NEW START-STOP SELECTOR SWITCH IN NEMA 4X, ALUMINUM ENCLOSURE. PROVIDE ATTACHMENT FOR PADLOCKING SWITCH IN THE STOP POSITION FOR MIXER #1.</p> <p>⑪ PROVIDE AND INSTALL 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT AS REQUIRED TO SUPPORT NEW START-STOP SELECTOR SWITCHES.</p> | <p>⑫ PROVIDE AND INSTALL 2-#12 XHHW-2 CU (START-STOP) + 1-#12 XHHW-2 CU GND IN 3/4" RIGID ALUMINUM WITH 40 mil PVC COATING FOR MIXER #2 CONTROL (20M15B).</p> <p>⑬ PROVIDE AND INSTALL 2-#12 XHHW-2 CU (START-STOP) + 1-#12 XHHW-2 CU GND IN 3/4" RIGID ALUMINUM WITH 40 mil PVC COATING FOR MIXER #1 CONTROL (20M16B).</p> <p>⑭ REAR OF STARTER RACK FOR JUNCTION CHAMBER No. 3 MIXERS. SUPPORTING HARDWARE TO REMAIN. NO WORK REQUIRED.</p> <p>⑮ EXISTING DISCONNECT ON REAR OF STARTER RACK FOR JUNCTION CHAMBER No. 3 MIXERS. DISCONNECT TO REMAIN. NO WORK REQUIRED.</p> <p>⑯ EXISTING SEALTITE CONDUIT FROM EXISTING DISCONNECT TO EXISTING WIREWAY TO REMAIN. NO WORK REQUIRED.</p> <p>⑰ EXISTING CONDUIT FROM EXISTING DISCONNECT TO ADJACENT MOTOR OPERATED SLIDE GATE. CONDUIT/CONDUCTORS TO REMAIN. NO WORK REQUIRED.</p> |
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NOT TO SCALE

City of Tampa Wastewater Department
**HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT**

**ELECTRICAL DETAILS
(SHEET 2 OF 2)**

TIMOTHY THOMAS, P.E. No. 47079	FILE: 171407042
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SHEET NUMBER
E-18

CONDUIT AND CABLE SCHEDULE

CONDUIT No.	SIZE	NUMBER OF CONDUCTORS/SIZE	FROM	TO	REMARKS
20M1	2"	3-#1/0 + 1-#6 GND	MCC-62A	MCC-20	2" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING, PROVIDE NEW CONDUCTORS. EXACT ROUTE UNKNOWN. (REFER TO SHEETS E-2 AND E-5).
20M2	1-1/4"	3-#8 + 9-#12 + 1-#12 GND	MCC-20	SLUDGE PUMP No. 1 JB	1-1/4" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING, PROVIDE NEW CONDUCTORS.
20M2A	1"	3-#8 + 3-#12 + 1-#12 GND	SLUDGE PUMP NO. 1 JB	SLUDGE PUMP No. 1	1" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING, PROVIDE NEW CONDUCTORS.
20M2B	1"	3-#8 + 1-#12 GND	SLUDGE PUMP NO. 1 JB	SLUDGE PUMP No. 1	1" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING, PROVIDE NEW CONDUCTORS
20M2C	3/4"	3-#12 + 1-#12 GND	SLUDGE PUMP NO. 1 JB	CONTROL STATION	3/4" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING, PROVIDE NEW CONDUCTORS.
20M2D	1/2"	3-#12 + 1-#12 GND	SLUDGE PUMP NO. 1 JB	DISCHARGE VALVE	PROVIDE NEW 1/2" FLEXIBLE SEALTITE CONDUIT WITH NEW CONDUCTORS.
20M2E	1/2"	2-#12 + 1-#12 GND	SLUDGE PUMP NO. 1 JB	SEAL WATER SOLENOID	PROVIDE NEW 1/2" FLEXIBLE SEALTITE CONDUIT WITH NEW CONDUCTORS.
20M3	1-1/4"	3-#8 + 9-#12 + 1-#12 GND	MCC-20	SLUDGE PUMP No. 2 JB	1-1/4" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING, PROVIDE NEW CONDUCTORS.
20M3A	1"	3-#8 + 1-#12 GND	SLUDGE PUMP NO. 2 JB	SLUDGE PUMP No. 2	1" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING, PROVIDE NEW CONDUCTORS.
20M3B	3/4"	3-#12 + 1-#12 GND	SLUDGE PUMP NO. 2 JB	CONTROL STATION	3/4" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING, PROVIDE NEW CONDUCTORS.
20M3C	1/2"	3-#12 + 1-#12 GND	SLUDGE PUMP NO. 2 JB	DISCHARGE VALVE	PROVIDE NEW 1/2" FLEXIBLE SEALTITE CONDUIT WITH NEW CONDUCTORS.
20M3D	1/2"	2-#12 + 1-#12 GND	SLUDGE PUMP NO. 2 JB	SEAL WATER SOLENOID	PROVIDE NEW 1/2" FLEXIBLE SEALTITE CONDUIT WITH NEW CONDUCTORS.
20M4	1"	3-#12 + 1-#12 GND	MCC-20	EXHAUST FAN	1" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING, PROVIDE NEW CONDUCTORS.
20M5	3/4"	3-#12 + 1-#12 GND	MCC-20	SCUM GATE	3/4" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING, PROVIDE NEW CONDUCTORS.
20M6	1"	6-#12 + 2-#14 + 1-#12 GND	MCC-20	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 6-#12 (480V POWER), 2-#14 (ON/OFF/L CONTROL).
20M6A	3/4"	3-#12 + 1-#12 GND	PST-LC-1	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 3-#12 (480V POWER).
20M6B	3/4"	3-#12 + 1-#12 GND	PST-CC-1	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 3-#12 (480V POWER).
20M6C	3/4"	2-#14 + 1-#14 GND	CONTROL STATION	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 2-#14 (ON/OFF/L CONTROL).
20M7	1"	6-#12 + 6-#14 + 1-#12 GND	MCC-20	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 6-#12 (480V POWER), 2-#14 (ON/OFF/L CONTROL).
20M7A	3/4"	3-#12 + 2-#14 + 1-#12 GND	PST-LC-2	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 3-#12 (480V POWER).
20M7B	3/4"	3-#12 + 2-#14 + 1-#12 GND	PST-CC-2	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 3-#12 (480V POWER).
20M7C	3/4"	2-#14 + 1-#14 GND	CONTROL STATION	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 2-#14 (ON/OFF/L CONTROL).
20M8	1"	6-#12 + 2-#14 + 1-#12 GND	MCC-20	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 6-#12 (480V POWER), 2-#14 (ON/OFF/L CONTROL).
20M8A	3/4"	3-#12 + 2-#14 + 1-#12 GND	PST-LC-3	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 3-#12 (480V POWER).
20M8B	3/4"	3-#12 + 2-#14 + 1-#12 GND	PST-CC-3	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 3-#12 (480V POWER).
20M8C	3/4"	2-#14 + 1-#14 GND	CONTROL STATION	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 2-#14 (ON/OFF/L CONTROL).
20M9	1"	6-#12 + 2-#14 + 1-#12 GND	MCC-20	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 6-#12 (480V POWER), 2-#14 (ON/OFF/L CONTROL).
20M9A	3/4"	3-#12 + 2-#14 + 1-#12 GND	PST-LC-4	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 3-#12 (480V POWER).
20M9B	3/4"	3-#12 + 2-#14 + 1-#12 GND	PST-CC-4	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 3-#12 (480V POWER).
20M9C	3/4"	2-#14 + 1-#14 GND	CONTROL STATION	LONG COLL & CROSS COLL JB	NEW CONDUIT AND CONDUCTORS 2-#14 (ON/OFF/L CONTROL).
20M10	1"	3-#12 + 2-#14 + 1-#12 GND	MCC-20	SUMP PUMP JB	REFER TO NOTES ON SHEET E-6 FOR MODIFICATIONS.
20M10A		3-#12 + 2-#14 + 1-#12 GND	MCC-20	SUMP PUMP	SUMP PUMP POWER CABLE. REFER TO NOTES ON SHEET E-6 FOR MODIFICATIONS.
20M10B	1/2"	2-#14 + 1-#14 GND	SUMP PUMP JB	FLOAT SWITCH	REFER TO NOTES ON SHEET E-6 FOR MODIFICATIONS.
20M10C	1/2"	2-#14 + 1-#14 GND	MCC-20	HIGH FLOAT	REFER TO NOTES ON SHEET E-6 FOR MODIFICATIONS.



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JOB No.	171407042						
DESIGNED	TDT						
DRAWN	JLH						
CHECKED	DEV						
DATE	7/2015	No.	DATE	BY	APP	REVISION	DESCRIPTION

SCALE

NOT TO SCALE

City of Tampa Wastewater Department
HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT

CONDUIT AND CABLE SCHEDULE

SHEET NUMBER

E-19

TIMOTHY THOMAS, P.E. No. 47079

FILE: 171407042

CONDUIT AND CABLE SCHEDULE

CONDUIT No.	SIZE	NUMBER OF CONDUCTORS/SIZE	FROM	TO	REMARKS
20M11	3/4"	3-#10 + 1-#12 GND	MCC-20	TRANSFORMER 'T1'	PROVIDE FLEXIBLE, NONMETALLIC LIQUID TIGHT CONDUIT CONNECTION TO TRANSFORMER.
20M11A	1"	3-#6 + 1-#6 NEUTRAL + 1-#8 GND	TRANSFORMER 'T1'	PANEL 'LP'	PROVIDE FLEXIBLE, NONMETALLIC LIQUID TIGHT CONDUIT CONNECTION TO TRANSFORMER.
20M12	3/4"	3-#10 + 1-#12 GND	MCC-20	TRANSFORMER 'IT1'	PROVIDE FLEXIBLE, NONMETALLIC LIQUID TIGHT CONDUIT CONNECTION TO TRANSFORMER.
20M12A	3/4"	3-#10 + 1-#10 NEUTRAL + 1-#12 GND	TRANSFORMER 'IT1'	PANEL 'LPO'	PROVIDE FLEXIBLE, NONMETALLIC LIQUID TIGHT CONDUIT CONNECTION TO TRANSFORMER.
20M12B	3/4"	3-#10 + 1-#12 GND	PANEL 'LPO'	LIGHTING CONTACTOR 'C1'	
20M13	1"	3-#10 + 1-#12 GND	MCC-20	SLIDE GATE 1G	1" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING. PROVIDE NEW CONDUCTORS.
20M13A	1"	3-#10 + 1-#12 GND	SLIDE GATE 1G	SLIDE GATE 2G	1" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING. PROVIDE NEW CONDUCTORS.
20M14	1"	3-#10 + 1-#12 GND	MCC-20	SLIDE GATE 3G	1" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING. PROVIDE NEW CONDUCTORS.
20M14A	1"	3-#10 + 1-#12 GND	SLIDE GATE 3G	SLIDE GATE 4G	1" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING. PROVIDE NEW CONDUCTORS.
20M15	1"	3-#8 + 2-#12 + 1-#12 GND	MCC-20	JC NO.3 WIREWAY	NEW 1" CONDUIT AND CONDUCTORS TO EXISTING WIREWAY AT MIXER STARTER RACK.
20M15A	3/4"	3-#8 + 1-#12 GND	JC NO.3 WIREWAY	MIXER No. 1	3/4" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING. PROVIDE NEW SEALTITE CONNECTION TO MOTOR. PROVIDE NEW CONDUCTORS.
20M15B	3/4"	2-#12 + 1-#12 GND	JC NO.3 WIREWAY	MIXER No. 1 START/STOP	NEW 3/4" CONDUIT AND CONDUCTORS TO NEW START/STOP STATION AT MIXER No. 1.
20M16	1"	3-#8 + 2-#12 + 1-#12 GND	MCC-20	JC NO.3 WIREWAY	NEW 1" CONDUIT AND CONDUCTORS TO EXISTING WIREWAY AT MIXER STARTER RACK.
20M16A	3/4"	3-#8 + 1-#12 GND	JC NO.3 WIREWAY	MIXER No. 1	3/4" CONDUIT IS EXISTING TO BE REUSED AFTER CLEANING. PROVIDE NEW SEALTITE CONNECTION TO MOTOR. PROVIDE NEW CONDUCTORS.
20M16B	3/4"	2-#12 + 1-#12 GND	JC NO.3 WIREWAY	MIXER No. 1 START/STOP	NEW 3/4" CONDUIT AND CONDUCTORS TO NEW START/STOP STATION AT MIXER No. 1.
C100	3/4"	4-#14 + 1-#14 GND	SLIDE GATE 1G	SLIDE GATE 2G JB	NEW 3/4" CONDUIT AND CONDUCTORS FOR SLIDE GATE 1G OPEN/CLOSED INDICATION
C101	3/4"	4-#14 + 1-#14 GND	SLIDE GATE 2G	SLIDE GATE 2G JB	NEW 3/4" CONDUIT AND CONDUCTORS FOR SLIDE GATE 2G OPEN/CLOSED INDICATION
C102	3/4"	8-#14 + 1-#14 GND	SLIDE GATE 2G JB	MCC-20	NEW 3/4" CONDUIT AND CONDUCTORS FOR SLIDE GATE 1G AND 2G OPEN/CLOSED INDICATION
C103	3/4"	4-#14 + 1-#14 GND	SLIDE GATE 4G	SLIDE GATE 3G JB	NEW 3/4" CONDUIT AND CONDUCTORS FOR SLIDE GATE 4G OPEN/CLOSED INDICATION
C104	3/4"	4-#14 + 1-#14 GND	SLIDE GATE 3G	SLIDE GATE 3G JB	NEW 3/4" CONDUIT AND CONDUCTORS FOR SLIDE GATE 3G OPEN/CLOSED INDICATION
C105	3/4"	8-#14 + 1-#14 GND	SLIDE GATE 3G JB	NEW JB AT 020	NEW 3/4" CONDUIT AND CONDUCTORS FOR SLIDE GATE 3G AND 4G OPEN/CLOSED INDICATION
C106	3/4"	24-#14 + 1-#14 GND	MCC-20	NEW JB AT 020	EXISTING 3/4" SPARE (EMPTY) CONDUIT. PROVIDE NEW CONDUCTORS FOR PUMP RUNNING STATUS (REFER TO ONE-LINE DIAGRAM) & SLIDE GATE 1G & 2G STATUS
C107	1"	32-#14 + 1-#14 GND	NEW JB AT 020	SCADA RTU AT 071	EXISTING 1" SPARE (EMPTY) CONDUIT. PROVIDE NEW CONDUCTORS - COMBINATION OF C106 AND SLIDE GATE 3G AND 4G STATUS TO SCADA RTU



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**HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT**

**CONDUIT AND CABLE
SCHEDULE (CONT'D)**

TIMOTHY THOMAS, P.E. No. 47079

SHEET NUMBER
E-20
FILE: 171407042

EXISTING PANEL SCHEDULE

EXISTING PANEL SCHEDULE																
PANEL 'LPO' ; SQUARE D CO. ; 277/480 VOLTS, 3 ϕ , 4W ; 30 AMP MAIN ; SURFACE ENCLOSURE ; TYPE NF ; CIRCUIT BREAKER ; 35K AIC RATING ; TOP AT 5'-6" AFF																
EQUIPMENT SERVED	CIRCUIT BREAKER			KVA/PHASE			CIRC. NO.	CIRC. NO.	KVA/PHASE			CIRCUIT BREAKER			EQUIPMENT SERVED	
	POLE	AMPS	FRAME	A	B	C			A	B	C	POLE	AMPS	FRAME		
SPACE	---	---	---	/	/	/	1	2	1.0	/	/	/	1	15	EDB	EXTERIOR LIGHTING NORTH
SPACE	---	---	---	/	/	/	3	4	1.0	/	/	/	1	15	EDB	EXTERIOR LIGHTING SOUTH
SPACE	---	---	---	/	/	/	5	6			0.4	/	1	15	EDB	EXTERIOR WALL PACKS
SPACE	---	---	---	/	/	/	7	8				---	---	---		SPACE
SPACE	---	---	---	/	/	/	9	10				---	---	---		SPACE
SPACE	---	---	---	/	/	/	11	12				---	---	---		SPACE
SPACE	---	---	---	/	/	/	13	14				---	---	---		SPACE
SPACE	---	---	---	/	/	/	15	16				---	---	---		SPACE
SPACE	---	---	---	/	/	/	17	18				---	---	---		SPACE
SUB-TOTAL KVA				0.0	0.0	0.0				1.0	1.0	0.4				
TOTAL CONNECTED LOAD = 2.4 KVA										TOTAL DEMAND LOAD = 2.4 KVA						

PANEL SCHEDULE

PANEL SCHEDULE																
PANEL 'LP' ; SQUARE D CO. ; 120/208 VOLTS, 3 ϕ , 4W ; 60 AMP MAIN ; SURFACE ENCLOSURE ; TYPE NQ ; CIRCUIT BREAKER ; PROVIDE EQUIPMENT GROUND BAR ; TOP AT 5'-6" AFF																
EQUIPMENT SERVED	CIRCUIT BREAKER			KVA/PHASE			CIRC. NO.	CIRC. NO.	KVA/PHASE			CIRCUIT BREAKER			EQUIPMENT SERVED	
	POLE	AMPS	FRAME	A	B	C			A	B	C	POLE	AMPS	FRAME		
GROUND LEVEL LIGHTING	1	20	QOB	0.4	/	/	1	2	0.4	/	/	/	1	20	QOB	LOWER LEVEL LIGHTING
LIGHTING CONTROL CABINET 'C1'	1	20	QOB	/	0.2	/	3	4	/	0.6	/	/	1	20	QOB	GROUND LEVEL RECEPTACLES
EXTERIOR 120V LIGHT FIXTURES	1	20	QOB	/	/	0.4	5	6	/	/	0.6	/	1	20	QOB	GROUND LEVEL RECEPTACLES
SPARE	1	20	QOB	/	/	/	7	8				---	---	---		SPACE
SPARE	1	20	QOB	/	/	/	9	10				---	---	---		SPACE
SPACE	---	---	---	/	/	/	11	12				---	---	---		SPACE
SPACE	---	---	---	/	/	/	13	14				---	---	---		SPACE
SPACE	---	---	---	/	/	/	15	16				---	---	---		SPACE
SPACE	---	---	---	/	/	/	17	18				---	---	---		SPACE
SPACE	---	---	---	/	/	/	19	20				---	---	---		SPACE
SPACE	---	---	---	/	/	/	21	22				---	---	---		SPACE
SPACE	---	---	---	/	/	/	23	24				---	---	---		SPACE
SUB-TOTAL KVA				0.4	0.2	0.4				0.4	0.6	0.6				
TOTAL CONNECTED LOAD = 2.6 KVA										TOTAL DEMAND LOAD = 2.6 KVA						



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City of Tampa Wastewater Department
HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT

PANEL SCHEDULES

SHEET NUMBER

E-21

TIMOTHY THOMAS, P.E. No. 47079

FILE: 171407042

NEW REMOTE I/O ADDITIONS SCHEDULE FOR MIXED SLUDGE PUMPING STATION (071) SCADA RTU

I/O DESIGNATION	I/O LOCATION	I/O TYPE	CONDUCTORS REQUIRED
SLUDGE PUMP 1 RUN STATUS	PRIMARY SLUDGE PUMP STATION (020) MCC-20	DRY CONTACT	2-#14
SLUDGE PUMP 2 RUN STATUS	PRIMARY SLUDGE PUMP STATION (020) MCC-20	DRY CONTACT	2-#14
LONGITUDINAL COLLECTOR DRIVE PST-LC-1 AND CROSS COLLECTOR DRIVE PST-CC-1 RUN STATUS	PRIMARY SLUDGE PUMP STATION (020) MCC-20	DRY CONTACT	2-#14
LONGITUDINAL COLLECTOR DRIVE PST-LC-2 AND CROSS COLLECTOR DRIVE PST-CC-2 RUN STATUS	PRIMARY SLUDGE PUMP STATION (020) MCC-20	DRY CONTACT	2-#14
LONGITUDINAL COLLECTOR DRIVE PST-LC-3 AND CROSS COLLECTOR DRIVE PST-CC-3 RUN STATUS	PRIMARY SLUDGE PUMP STATION (020) MCC-20	DRY CONTACT	2-#14
LONGITUDINAL COLLECTOR DRIVE PST-LC-4 AND CROSS COLLECTOR DRIVE PST-CC-4 RUN STATUS	PRIMARY SLUDGE PUMP STATION (020) MCC-20	DRY CONTACT	2-#14
SLIDE GATE 1G - VALVE OPEN INDICATION	VALVE 1G - LOCATED AT PRIMARY SEDIMENTATION TANKS	DRY CONTACT (LIMIT SWITCH)	2-#14
SLIDE GATE 1G - VALVE CLOSED INDICATION	VALVE 1G - LOCATED AT PRIMARY SEDIMENTATION TANKS	DRY CONTACT (LIMIT SWITCH)	2-#14
SLIDE GATE 2G - VALVE OPEN INDICATION	VALVE 2G - LOCATED AT PRIMARY SEDIMENTATION TANKS	DRY CONTACT (LIMIT SWITCH)	2-#14
SLIDE GATE 2G - VALVE CLOSED INDICATION	VALVE 2G - LOCATED AT PRIMARY SEDIMENTATION TANKS	DRY CONTACT (LIMIT SWITCH)	2-#14
SLIDE GATE 3G - VALVE OPEN INDICATION	VALVE 3G - LOCATED AT PRIMARY SEDIMENTATION TANKS	DRY CONTACT (LIMIT SWITCH)	2-#14
SLIDE GATE 3G - VALVE CLOSED INDICATION	VALVE 3G - LOCATED AT PRIMARY SEDIMENTATION TANKS	DRY CONTACT (LIMIT SWITCH)	2-#14
SLIDE GATE 4G - VALVE OPEN INDICATION	VALVE 4G - LOCATED AT PRIMARY SEDIMENTATION TANKS	DRY CONTACT (LIMIT SWITCH)	2-#14
SLIDE GATE 4G - VALVE CLOSED INDICATION	VALVE 4G - LOCATED AT PRIMARY SEDIMENTATION TANKS	DRY CONTACT (LIMIT SWITCH)	2-#14
JUNCTION CHAMBER No. 3 - MIXER 1 RUN STATUS	PRIMARY SLUDGE PUMP STATION (020) MCC-20	DRY CONTACT	2-#14
JUNCTION CHAMBER No. 3 - MIXER 2 RUN STATUS	PRIMARY SLUDGE PUMP STATION (020) MCC-20	DRY CONTACT	2-#14

GENERAL NOTES :

- CONTRACTOR TO INSTALL 32-#14 + 1-#14 GND FROM NEW SCADA I/O JUNCTION BOX TO EXISTING MIXED SLUDGE PUMPING STATION SCADA RTU. ALL TERMINATIONS IN EXISTING MIXED SLUDGE PUMPING STATION SCADA RTU SHALL BE MADE BY THE CITY OF TAMPA. THE CONTRACTOR SHALL IDENTIFY EACH CONDUCTOR WITH A PRINTED WHITE, HEAT-SHRINK, SEAMLESS TYPE TUBING WITH BLACK LETTERING. PROVIDE 6 FEET OF SLACK CONDUCTOR, COIL AND TAPE WITHIN THE SCADA RTU.



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City of Tampa Wastewater Department
HOWARD F. CURREN AWTP
PRIMARY SLUDGE MCC REPLACEMENT

NEW I/O SCHEDULE

TIMOTHY THOMAS, P.E. No. 47079

SHEET NUMBER

E-22

FILE: 171407042