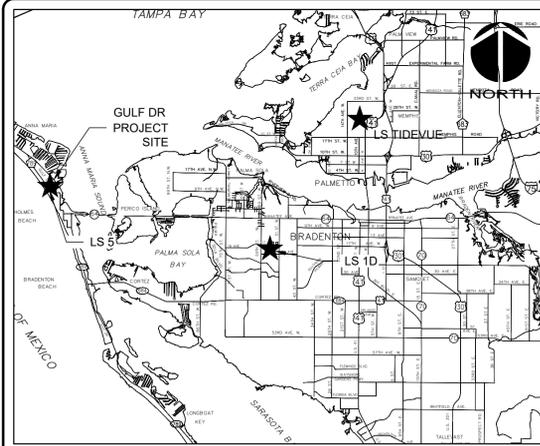


MLS 5 ELECTRICAL REHABILITATION MANATEE COUNTY, PROJECT NO. 6097482

PROJ. NO. 01024-0190
SEPTEMBER 16, 2022
ISSUED FOR BID



VICINITY MAP NOT TO SCALE



4300 GULF DR, HOLMES, FL, 34217

PROJECT NAME: MLS 5 ELECTRICAL REHABILITATION
PROJECT MANAGER: Brett Gocka, P.E.
EMAIL: Brett.Gocka@mymanatee.org
OWNER/DEVELOPER:
4300 GULF DR
HOLMES FLORIDA
34217



1365 Hamlet Avenue
Clearwater, Florida 33756
Phone: (727) 442-7196, Fax: (727) 461-3827

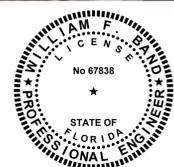
CA Lic. No. 29588
www.mckimcreed.com

PROJECT INFORMATION



TRACEY L. WEBB, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 88356
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY TRACEY L. WEBB THE DATE INDICATED HERE, SEPTEMBER 16, 2022
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SHEET NUMBER	SHEET TITLE
CIVIL	
C1.01	EXISTING CONDITIONS AND SITE DEMOLITION
C1.02	CIVIL SITE PLAN



WILLIAM F. BAND, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 67838
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SHEET NUMBER	SHEET TITLE
STRUCTURAL	
S0.00	GENERAL NOTES, DESIGN LOADS, DESIGN CRITERIA & LEGEND
S1.00	EXIST. L.S. & ELECTR. BLDG. FDN. LAYOUT, SECTIONS & DETAILS
S1.01	ELECTR. BLDG. FRMG. PLAN, SECTIONS & DETAILS



MICHAEL F. FADINI, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 87173
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SHEET NUMBER	SHEET TITLE
INSTRUMENTATION	
I0.00	INSTRUMENTATION SYMBOL SHEET 1
I0.01	INSTRUMENTATION SYMBOL SHEET 2
I1.00	PROCESS AND INSTRUMENT DIAGRAM
I1.01	CONTROL PANEL



AUBREY A. HAUDRICOURT, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 66861
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SHEET NUMBER	SHEET TITLE
GENERAL	
G0.00	COVER SHEET
CIVIL	
C1.00	HYATT SURVEY MLSS
ELECTRICAL	
E0.01	SYMBOLS, ABBREVIATIONS AND NOTES
E0.02	SYMBOLS ELECTRICAL 1
E0.03	SYMBOLS ELECTRICAL 2
E1.00	ELECTRICAL SITE PLAN
E1.01	DEMOLITION PLAN
E1.02	SINGLE LINE DIAGRAM
E1.03	PUMP BUILDING POWER PLAN
E1.04	ELECTRICAL BUILDING POWER PLAN
E1.05	ELECTRICAL BUILDING LAYOUT
E1.06	GROUNDING AND LIGHTNING PROTECTION
E1.07	MCB, ATS AND MCC ELEVATION
E1.08	LIGHTING PLAN
E1.09	ELECTRICAL INTERCONNECT DIAGRAM
E1.10	PANELBOARD SCHEDULES
E1.11	ELECTRICAL CONTROLS SCHEMATICS
E1.12	ELECTRICAL DETAILS 1 OF 2
E1.13	ELECTRICAL DETAILS 2 OF 2

SCALE: NTS

SITE MAP

Sheet List Table

Sheet Number	Sheet Title
GENERAL	
G0.00	COVER SHEET
CIVIL	
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SHEET INDEX



LIFT STATION # 5 MANATEE COUNTY, FLORIDA TOPOGRAPHIC SURVEY



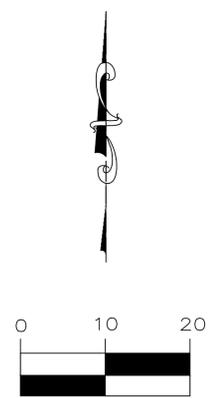
SITE BENCH MARKS				
BM #	NORTHING	EASTING	ELEVATION	DESCRIPTION
53	1150970.079	425345.328	5.80	TP SIRC LB7203
55	1150944.257	425268.148	6.54	TP SIRC LB7203
56	1150892.755	425344.442	6.95	TP SIRC LB7203

GENERAL NOTES

1. THE FOLLOWING NGS VERTICAL CONTROL MONUMENTS WERE RECOVERED AND UTILIZED FOR THE ELEVATIONS INDICATED HEREON:
"J 254" PID AG1981 NAVD 1988 ELEVATION 13.48' AND "GIS 103" PID AG9208 NAVD 1988 ELEVATION 4.27"
2. THIS SURVEY IS REFERENCED TO A PROJECTION OF THE FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE NAD 1983/2011 ADJUSTMENT).
3. TITLE WORK WAS NOT PROVIDED FOR THIS SURVEY. PARCEL LINES SHOWN HEREIN ARE BASED ON FOUND BOUNDARY MONUMENTATION TOGETHER WITH PUBLIC INFORMATION AVAILABLE ON THE MANATEE COUNTY CLERK WEBSITE.
4. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
5. THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTY OR PARTIES CERTIFIED TO BELOW FOR THE EXPRESS PURPOSE STATED HEREON AND/OR CONTAINED IN THE CONTRACT BETWEEN HYATT SURVEY SERVICES, INC. AND THE CLIENT FOR THIS PROJECT. COPYING, DISTRIBUTING AND/OR USING THIS DRAWING, IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN ORIGINALLY INTENDED WITHOUT WRITTEN CONSENT FROM HYATT SURVEY SERVICES, INC. IS STRICTLY PROHIBITED AND RENDERS THE SURVEYOR'S CERTIFICATION, SIGNATURE AND SEAL NULL AND VOID. ANY QUESTIONS CONCERNING THE CONTENT OR PURPOSE OF THIS DRAWING SHOULD BE DIRECTED TO HYATT SURVEY SERVICES, INC.

LEGEND

- | | |
|------------------------------|-------------------------|
| R/W RIGHT-OF-WAY | ← GUY WIRE |
| PID PARCEL IDENTIFICATION | □ WATER METER |
| PB PLAT BOOK | ⊙ SANITARY MANHOLE |
| OR OFFICIAL RECORD | ⊙ STORM MANHOLE |
| PG PAGE | ☐ MAILBOX |
| BM BENCHMARK | ⊙ LIGHT POLE |
| FFE FINISHED FLOOR ELEVATION | ⊙ FIRE HYDRANT |
| EL ELEVATION | ⊙ 2" BACKFLOW PREVENTER |
| CLF CHAIN LINK FENCE | ⊙ BOLLARD |
| ○ IRON PIPE | ☐ UTILITY BOX |
| ● IRON ROD W/ CAP | ⊙ ANTENNA |
| ⊙ PK NAIL W/ DISC | ⊙ VALVE |
| ■ CONCRETE MONUMENT | ○ CLEANOUT |
| ⊙ SITE BENCHMARK | ☐ GRATE INLET |
| ⊙ SIGN | ☐ PALM TREE |
| ⊙ UTILITY POLE | |



Hyatt Survey Services, Inc.

Geographic Data Specialists LB No.: 7203
2012 LENA ROAD, BRADENTON, FLORIDA 34211
PH. (941) 748-4693



THIS SURVEY IS NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED SEAL OR DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

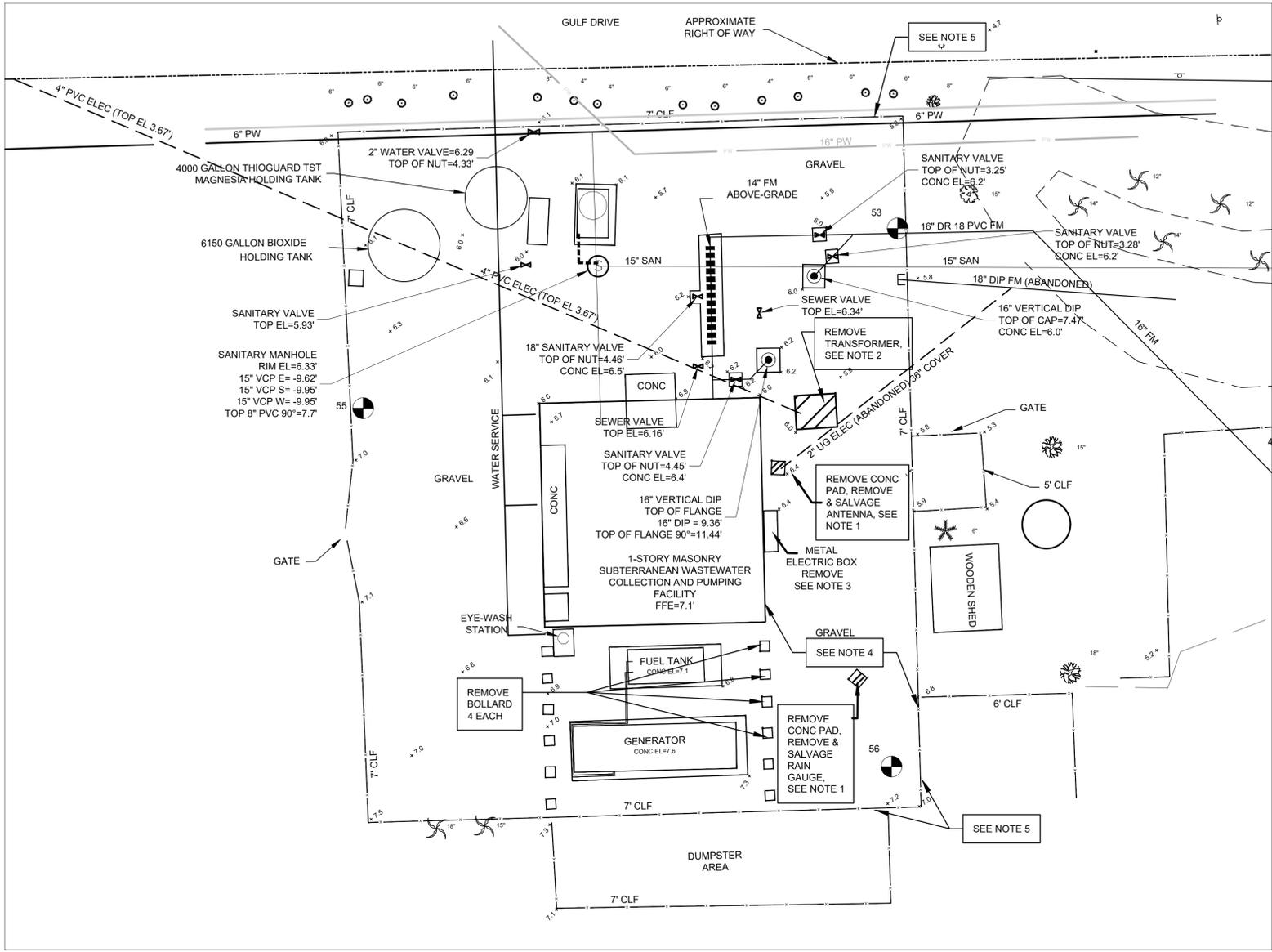
RUSSELL P. HYATT, PSM
FLORIDA SURVEYORS REGISTRATION NO. 5303

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	15-1967-1
SURVEY #	LIFT STATION 5
SECTION	28
TWN RNG	34-16
SCALE	1" = 30'
SURVEYED	HYATT 4/2021
DESIGNED	
DRAWN	DR 4/2021
CHECKED	RH 4/2021



NORTH
SCALE: 1"=10' (Horiz.)



EXISTING SITE PLAN
SCALE: 1"=10'-0"

SURVEY LEGEND

- R/W RIGHT-OF WAY
- PID PARCEL IDENTIFICATION
- PB PLAT BOOK
- OR OFFICIAL RECORD
- PG PAGE
- BM BENCHMARK
- FFE FINISHED FLOOR ELEVATION
- EL ELEVATION
- CLF CHAIN LINK FENCE
- IRON PIPE
- IRON ROD W/ CAP
- ⊙ PK NAIL W/ DISC
- CONCRETE MONUMENT
- ⊙ SITE BENCHMARK
- ⊙ SIGN
- ⊘ WOOD POWER POLE
- ← GUY WIRE
- WATER METER
- ⊙ SANITARY MANHOLE
- ⊙ STORM MANHOLE
- MAILBOX
- ⊙ LIGHT POLE
- ⊙ FIRE HYDRANT
- ⊙ 2" BACKFLOW PREVENTER
- ⊙ BOLLARD
- UTILITY BOX
- ▶ 6" RECLAIMED WATER VALVE
- ⊙ ANTENNA
- ⊙ POTABLE WATER VALVE
- CLEANOUT
- ⊙ GRATE INLET
- ⊙ PALM TREE

SURVEYOR'S NOTES

- SURVEY COMPLETED BY HYATT SURVEY SERVICES, INC. LOCATED AT 2012 LENA ROAD, BRADENTON FLORIDA 34211. FIELD WORK COMPLETED APRIL 2021.
- THE FOLLOWING NGS VERTICAL CONTROL MONUMENTS WERE RECOVERED AND UTILIZED FOR THE ELEVATIONS INDICATED HEREON: "J 254" PID AG1981 NAVD 1988 ELEVATION 13.48' AND "GIS 103" PID AG9208 NAVD 1988 ELEVATION 4.27"
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GENERAL NOTES EROSION AND SEDIMENT CONTROL

- CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION (PRIOR TO CONSTRUCTION) AND MAINTENANCE/REPAIRS OF (DURING CONSTRUCTION) EROSION AND SEDIMENT CONTROL MEASURES AS REQUIRED TO RETAIN ALL SEDIMENT AND EROSION ON THE SITE OF DEVELOPMENT. THE PROVISIONS SHOWN HEREIN REPRESENT THE MINIMUM EROSION CONTROL MEASURES TO BE TAKEN.
- NO DEVIATIONS FROM THE PROJECT PLANS OR SPECIFICATIONS ARE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER OF RECORD AND THE ARCHITECT.
- AT THE TIME OF SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT PERMANENT COVER MUST BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR PERMANENT COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL BE EMPLOYED (I.E. EROSION CONTROL FABRIC, RIP-RAP, ETC.).
- THE CONTRACTOR MUST MAKE REGULAR INSPECTIONS OF ALL CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PROCESS TO ENSURE THE OVERALL EFFECTIVENESS OF THE EROSION AND SEDIMENT CONTROL PLAN. AT A MINIMUM, INSPECTIONS WILL OCCUR AT LEAST ONCE A WEEK AND WITHIN TWENTY-FOUR (24) HOURS OF THE END OF A STORM EVENT THAT IS ONE-HALF (0.50) INCH OR GREATER. ALL INSPECTIONS WILL BE DOCUMENTED IN ACCORDANCE WITH FDEP NPDES REQUIREMENTS.
- IN THE EVENT THAT AN ON-SITE INSPECTION BY ANY PARTY REVEALS A DEFICIENCY IN THE INSTALLATION AND/OR MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE IMMEDIATE REMEDIATION OF THE PROBLEM AT NO ADDITIONAL COST TO THE OWNER.
- FAILURE TO COMPLY WITH THE REQUIRED EROSION AND SEDIMENT CONTROL GUIDELINES MAY RESULT IN FINES LEVIED BY GOVERNMENTAL AGENCIES. ANY FINES SUFFERED DUE TO NON-COMPLIANCE WILL BECOME THE RESPONSIBILITY OF THE CONTRACTOR.

SEQUENCE OF EROSION AND SEDIMENT CONTROL MEASURES IMPLEMENTATION SITE PREPARATION

- PRIOR TO ANY SOIL DISTURBANCE, SILT FENCE MUST BE INSTALLED ALONG ENTIRE DOWN-GRADE PERIMETER OF PLANNED DISTURBANCE AS SHOWN IN PLANS AND DETAILS, OR BY EQUIVALENT MEASURES. SILT FENCE MUST BE MAINTAINED IN PLACE UNTIL ALL UP-GRADE AREAS OF DISTURBANCE HAVE BEEN PERMANENTLY STABILIZED.
- A PROPER CONSTRUCTION ENTRANCE MUST BE ESTABLISHED AT ALL POINTS OF INGRESS/EGRESS FROM CONSTRUCTION SITE PER DETAIL PROVIDED IN THE PLANS, OR BY EQUIVALENT MEASURES. ALL CONSTRUCTION ENTRANCES MUST REMAIN IN PLACE UNTIL INGRESS/EGRESS FROM THE SITE AT THAT POINT HAS STOPPED.

CLEARING AND GRUBBING

- ALL DISTURBED AREAS THAT WILL BE LEFT EXPOSED FOR MORE THAN FOURTEEN (14) DAYS, AND ARE NOT SUBJECT TO CONSTRUCTION TRAFFIC, MUST RECEIVE A TEMPORARY SEEDING IMMEDIATELY UPON DISTURBANCE. IF THE SEASON PREVENTS ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREA WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE.
- ALL DISTURBED AREAS THAT ARE SUBJECT TO HIGH AMOUNTS OF EROSION (I.E. STEEP SLOPES, EMBANKMENTS GREATER THAN 3:1, OR OTHER AS DICTATED BY SITE CONDITIONS) MUST IMMEDIATELY RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH MULCHING WITH STRAW, OR EQUIVALENT MATERIAL, AT A THICKNESS OF TWO (2) TO FOUR (4) INCHES MIXED WITH THE TOP TWO (2) INCHES OF SOIL.
- ALL DISTURBED AREAS MUST, AS A MINIMUM, BE MAINTAINED BY WATER TO MINIMIZE THE GENERATION OF DUST.

SITE GRADING

- THE SITE MUST, AT ALL TIMES, BE GRADED AND MAINTAINED SUCH THAT ALL STORM WATER RUNOFF IS CONTROLLED BY EROSION AND SEDIMENT CONTROL MEASURES.
- ALL AREAS USED FOR MATERIAL STOCKPILE, BE IT FILL/EXCAVATED MATERIALS, STONE, OR OTHERWISE, MUST BE STABILIZED, AND MUST HAVE SILT FENCE INSTALLED PER THE DETAILS PROVIDED IN THE PLANS, OR BY EQUIVALENT MEASURES, AROUND THEIR ENTIRE DOWNGRADE PERIMETER.

INSTALLATION OF STORM SEWER AND UTILITIES

- TEMPORARY OUTLET PROTECTION MUST BE INSTALLED AT ALL PROPOSED STORM WATER OUTFALLS PRIOR TO THE INSTALLATION OF THE DRAINAGE SYSTEM.
- ALL SITE DRAINAGE, INCLUDING ROOF DRAINS, DOWN SPOUTS, GUTTERS, OR OTHERWISE MUST BE ROUTED TO CARRY ALL STORM WATER TO THE PROPOSED STORM WATER MANAGEMENT SYSTEM(S).
- ANY SLOPES GREATER THAN 3:1 (H:V) RECEIVING PIPELINE OR UTILITY INSTALLATION MUST BE BACKFILLED AND STABILIZED DAILY AS THE INSTALLATION PROCEEDS.

FINAL SITING

- PERMANENT SOD MUST BE INSTALLED ON ALL EXPOSED AREAS WITHIN THREE (3) DAYS AFTER FINAL GRADING.
- UPON COMPLETION OF CONSTRUCTION, BUT PRIOR TO FINAL ACCEPTANCE, ALL CONSTRUCTION WASTE AND DEBRIS MUST BE REMOVED FROM THE SITE AND ALL PAVED ROADWAYS AND/OR PARKING AREAS WILL BE SWEEPED CLEAN OF ALL SEDIMENT.
- TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES MUST REMAIN IN PLACE AND BE MAINTAINED UNTIL SUCH TIME WHEN ALL UP-GRADE AREAS HAVE BEEN PERMANENTLY STABILIZED, AT WHICH POINT THEY MUST BE REMOVED.

GENERAL NOTES

- IN CASE OF A DISCREPANCY ON THESE DRAWINGS OR BETWEEN THESE DRAWINGS AND THE DRAWINGS OF OTHER DISCIPLINES OR CONDITIONS IN THE FIELD, THE MORE STRINGENT REQUIREMENT WILL BE MET. REPORT ANY DISCREPANCY TO ENGINEER PRIOR TO ACTION.
- LOCATIONS AND ELEVATIONS OF UTILITIES SHOWN ON PLANS ARE BASED ON AVAILABLE RECORD DRAWING INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE ONLY. THE CONTRACTOR MUST EMPLOY THE USE OF GROUND PENETRATING RADAR (GPR) EQUIPMENT BY A QUALIFIED COMPANY AND PERSONNEL TO LOCATE, IDENTIFY AND PROTECT EXISTING UNDERGROUND UTILITIES IN THE AREA OF WORK. ANY UTILITIES SPOTTED MUST BE DRAWN ON THE SITE PLAN PROVIDED BY THE ARCHITECT/ENGINEER AND SUBMITTED AS PART OF THE AS BUILT DRAWINGS. NOTIFY UTILITY AND ARCHITECT/ENGINEER OF CONFLICTS BETWEEN EXISTING AND PROPOSED FACILITIES.
- DAMAGE TO EXISTING SIDEWALKS, ASPHALT OR OTHER OFF-SITE IMPROVEMENTS DURING CONSTRUCTION MUST BE CORRECTED AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR MUST COMPLY WITH ALL FEDERAL AND STATE REGULATIONS CONCERNING NOTIFICATION TO THE REGULATORY AUTHORITIES OF ANY AND ALL BUILDING RENOVATIONS AND/OR DEMOLITION.

PLAN NOTES

- RELOCATE AND SALVAGE EQUIPMENT FOR REUSE ON SITE. SEE SHEET C1.02. REMOVE CONCRETE PAD AND CONDUIT TO A MINIMUM OF 18-INCHES BELOW GRADE, PLUG OR CAP OPEN CONDUIT. SEE ELECTRICAL SHEETS FOR WIRING AND NEW EQUIPMENT LOCATIONS.
- REMOVE EXISTING TRANSFORMER AND CONG PAD, SEE ELECTRIC REMOVAL PLAN REGARDING CONDUIT AND SERVICE IMPACTS.
- REMOVE ELECTRICAL EQUIPMENT, SEE ELECTRIC DEMOLITION PLAN.
- REMOVE COMPACTED GRAVEL AS NEEDED FOR EXCAVATION.
- INSTALL TEMPORARY PERIMETER BARRIER ALONG SITE FENCING ON NORTH, WEST AND SOUTH SIDES.

REMOVAL LEGEND



REV. NO.	DESCRIPTION	DATE



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 CA Lic. No. 29588
 www.mckimcreed.com



MLS 5 ELECTRICAL REHABILITATION
 CIVIL
EXISTING CONDITIONS AND SITE DEMOLITION

PROJ. START DATE: 2021 MAR
 MCE PROJ. # 01024-0190
 DRAWN: TLW
 DESIGNED: SS
 CHECKED: MAC
 PROJ. MGR: AAH

SCALE: HORIZONTAL: 1"=10' VERTICAL: 1"=10'

C1.01
DRAWING NUMBER

STATUS: ISSUED FOR BID

1 GENERAL ELECTRICAL SYMBOLS

	LIGHTING, APPLIANCE OR INSTRUMENT PANELBOARD
	POWER PANELBOARD
	CP - CONTROL PANEL
	MOTOR CONTROL CENTER
	THERMOSTAT
	MOTORIZED DAMPER
	LOUVER MOTOR
	MOTOR, UNIT HEATER-NUMERAL DENOTES LIGHTING PANEL AND BRANCH CIRCUIT NUMBER. MOTOR SYMBOL SHOWN DASHED DENOTES EQUIPMENT LOCATED ON ROOF.
	COMPUTER ROOM AIR CONDITIONER
	EMERGENCY INVERTER SYSTEM
	AUTOMATIC TRANSFER SWITCH
	ELECTRICAL MANHOLE / HANDHOLE AND THE LETTERS INDICATE THE TYPE OF THE HOLE
	RACEWAY SYSTEM CALL-OUTS: CT - CABLE TRAY BD - BUS DUCT DB - DUCTBANK EC - EXPOSED CONDUIT WW - WIRE WAY/TROUGH
	RACEWAY AND/OR CABLE ID NUMBER
	LINE REACTOR
	CONDUIT HOMERUN TO EQUIPMENT SHOWN. LINE TYPE DESIGNATES CONCEALED, EXPOSED, ETC. NUMBERS/TEXT DESIGNATE HOMERUN EQUIPMENT (I.E. PANEL BOARD CIRCUIT NUMBER).
	GENERAL CONDUIT RUN CONCEALED IN FURRED WALLS AND CEILINGS, EXPOSED ELSEWHERE UNLESS OTHERWISE NOTED OR SPECIFIED.
	CONCEALED CONDUIT IN FLOOR SLAB, UNDERGROUND, ETC.
	EXISTING CABLE OR CONDUIT
	CONDUIT TURNED DOWN
	CONDUIT TURNED UP
	CONDUIT CAPPED
	DEMOLITION
	SITE ELECTRICAL
	EXISTING SITE ELECTRICAL
	SITE TELEPHONE
	EXISTING SITE TELEPHONE
	OVERHEAD ELECTRICAL UTILITY
	OVERHEAD TELEPHONE UTILITY
	UNDERGROUND ELECTRICAL UTILITY
	UNDERGROUND TELEPHONE UTILITY
	SITE GROUND
	EXISTING SITE GROUND

2 TYPICAL DEVICE MOUNTING HEIGHTS

RECEPTACLES (INTERIOR PROCESS AREAS)	16" AFF
RECEPTACLES (EXTERIOR PROCESS AREAS)	48" AFF
LIGHT SWITCHES	48" AFF
PHONE OUTLETS	16" AFF
PHONE OUTLETS (WALL MOUNT)	64" AFF
DATA OUTLETS	16" AFF
EXIT LIGHTS (WALL MOUNT)	16" ABOVE DOOR
EMERGENCY LIGHTS (WALL MOUNT)	96" AFF

NOTES:
DIMENSIONS ARE TO DEVICE BOTTOM UNLESS NOTED OTHERWISE. IN CONCRETE BLOCK OR BRICK WALL CONSTRUCTION, CONTRACTOR SHALL COORDINATE DEVICE BOX INSTALLATION WITH MORTAR AND CONSTRUCTION JOINTS.

REV. NO.	DESCRIPTION	DATE

REVISIONS

2 POWER SYMBOLS

	CLASS 1/DIVISION III CONDUIT SEAL-OFF FITTING
	CONTROL STATION
	STOP-START STATION
	LOCK-OUT-STOP SWITCH
	LOCATED AT FIELD DEVICE
	LOCATED AT MAIN CONTROL PANEL
	LOCATED AT LOCAL CONTROL PANEL
	MOUNTED ON DOOR
	INDUSTRIAL BATTERY SET W/MOUNTING RACK
	ELECTRICAL DEVICE AND THE LETTERS INDICATE THE TYPE
	ELECTRICAL BUBBLE AND THE LETTERS INDICATE THE TYPE
	DELTA/WYE TRANSFORMER CONNECTION W/GROUND
	LIGHTNING ARRESTOR
	FUSE - VOLTAGE AS REQUIRED AND SIZE NOTED ON THE DRAWINGS. CL DENOTES CURRENT LIMITING TYPE. NUMBER INDICATES QUANTITY WHEN LESS THAN 3.
	PFD DENOTES PULL FUSE DISCONNECT TYPE
	MICROPROCESSOR BASED METERING DEVICE
	POWER RECEPT. WITH DISCONNECT-600V, 3 PHASE, 4 WIRE NUMBER DENOTES AMPERE RATING
	POWER RECEPT. 600V, 3 PHASE, 4 WIRE
	POWER ON-OFF SNAP SWITCH, 1PH, 120V AC, 20A S2-DENOTES, 2 POLE, 240 VOLTS, 20A
	PUSH-BUTTON STATION
	PUSH-BUTTON STATION WITH LOCK-OUT FEATURE
	SELECTOR SWITCH
	INDICATING LIGHT
	CONTROL STATION
	LOCAL-OFF-REMOTE SELECTOR SWITCH CONTROL STATION
	ATS-BI AUTOMATIC TRANSFER SWITCH -ATS, WITH SOLID STATE CONTROLS AND ACCESSORIES. -BI WHEN INDICATED DENOTES WITH BYPASS-ISOLATION SWITCH
	SUBMERSIBLE CABLES BY VENDOR
	POTENTIAL TRANSFORMER
	TRANSFORMER - SIZE AS NOTED ON THE THE DRAWINGS
	SHIELDED ISOLATION TRANSFORMER
	CABLE TRAY
	NON-FUSED OR FUSED DISCONNECT SWITCH: TOP NUMBER DENOTES FUSE SIZE (NF=NON-FUSED). BOTTOM NUMBER DENOTES FRAME SIZE. RIGHT NUMBER DENOTES NEMA ENCLOSURE RATING.
	ENCLOSED THERMAL MAGNETIC CIRCUIT BREAKER: TOP NUMBER DENOTES TRIP. BOTTOM NUMBER DENOTES FRAME SIZE. CENTER RIGHT NUMBER DENOTES NUMBER OF POLES (2P OR 3P). THE UPPER LEFT NUMBER DENOTES NEMA ENCLOSURE RATING.
	DRAWOUT FIXED MOUNTED POWER CIRCUIT BREAKER WITH RMS TYPE SOLID STATE TRIP PROGRAMMER. EO DENOTES ELECTRICALLY OPERATED.
	LOAD BREAK
	CIRCUIT BREAKER
	FUSE
	DISCONNECT SWITCH WITH FUSING WHERE NOTED
	STAND-ALONE MOTOR CONTROLLER WITH EXTERNAL DISCONNECT: UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE. UPPER RIGHT NUMBERS DENOTE AMPERE TRIP AND FRAME RATINGS. LOWER LEFT NUMBER DENOTES NEMA ENCLOSURE RATING. THE MIDDLE LETTERS DENOTE TO ONE OF 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
	FULL-VOLTAGE NON-REVERSING MOTOR CONTROLLER, MCC UNIT. UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE. THE MIDDLE LETTERS DENOTE TO ONE OF 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
	REDUCED VOLTAGE SOLID-STATE MOTOR CONTROLLER, MCC UNIT. UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE. THE MIDDLE LETTERS DENOTE TO ONE OF 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
	VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER, MCC UNIT. UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE. THE MIDDLE LETTERS DENOTE TO ONE OF 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
	ANSI/IEEE TYPE-52 AC POWER CIRCUIT BREAKER
	AC MOTOR (SINGLE PHASE/THREE PHASE)
	DC MOTOR
	SPD

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 INSTRUMENTATION SYMBOLS

	PHOTOCELL
	DEVICE LOCATED IN FIELD AT OR NEAR MOTOR
	DEVICE LOCATED IN CONTROL PANEL
	INDICATING LIGHT, PT-DENOTES PUSH TO TEST TYPE LETTER INDICATES LENS COLOR W-WHITE G-GREEN A-AMBER R-RED B-BLUE C-CLEAR
	SWITCH - TOGGLE OPEN
	MOMENTARY CONTACT PUSH BUTTON NORMALLY OPEN / NORMALLY CLOSED
	MUSHROOM HEAD MAINTAINED CONTACT PUSH/PULL BUTTON
	MOMENTARY LOCKOUT STOP PUSHBUTTON
	INSTRUMENTATION BUBBLE
	SWITCH - LIMIT HELD CLOSED / OPEN
	LIMIT SWITCH CLOSE / OPEN
	TEMPERATURE SWITCH CLOSE / OPEN
	FLOAT SWITCH CLOSE / OPEN
	PRESSURE SWITCH CLOSE / OPEN
	FLOW SWITCH CLOSE / OPEN
	VALVE LIMIT SWITCH (OPEN / CLOSED)
	TORQUE SWITCH, OPENS / CLOSSES ON RISING TORQUE
	NORMALLY OPEN / CLOSED CONTACT, NUMBER INDICATES RELAY.
	THERMALLY ACTUATED MOTOR OVERLOAD RELAY. LATCHES OPEN / CLOSED ON OVERLOAD
	TIMED CONTACT: NOTC NORMALLY OPENED CONTACT - TIMED CLOSED TIME DELAY AFTER COIL ENERGIZED NCTO NORMALLY CLOSED CONTACT - TIMED OPEN TIME DELAY AFTER COIL ENERGIZED NOTO NORMALLY OPENED CONTACT - TIMED OPEN TIME DELAY AFTER COIL DE-ENERGIZED NCTC NORMALLY CLOSED CONTACT - TIMED CLOSED TIME DELAY AFTER COIL DE-ENERGIZED
	CONTROL RELAY COIL DESIGNATION: CR CONTROL RELAY MX AUXILIARY RELAY TR TIMING RELAY AR ALARM RELAY RR READY RELAY
	SOLENOID VALVE
	MOTOR STARTER CONTACTOR COIL COIL DESIGNATION: M COIL S SLOW FT FAST F FORWARD R REVERSE 1S REDUCED VOLTAGE CONTACTOR COIL #1 2S REDUCED VOLTAGE CONTACTOR COIL #2 R RUN
	MOTOR SPACE HEATER
	SPACE HEATER OR SPACE HEATER
	SELECTOR SWITCH, 2 POSITION MAINTAINED CONTACT 3 POSITION MAINTAINED CONTACT (X INDICATES CONTACT CLOSED, O DENOTES CONTACT OPEN)
	MAINTAINED CONTACT PUSH BUTTON W/MECHANICAL INTERLOCK
	ELAPSED TIME METER
	CONTROL POWER TRANSFORMER
	CURRENT TRANSFORMER
	MOTOR OPERATED VALVE: MOD - MODULATING O/C - OPEN/CLOSE
	SOLENOID VALVE
	STROBE LIGHT
	H- HORN AV- STROBE/HORN COMBINATION



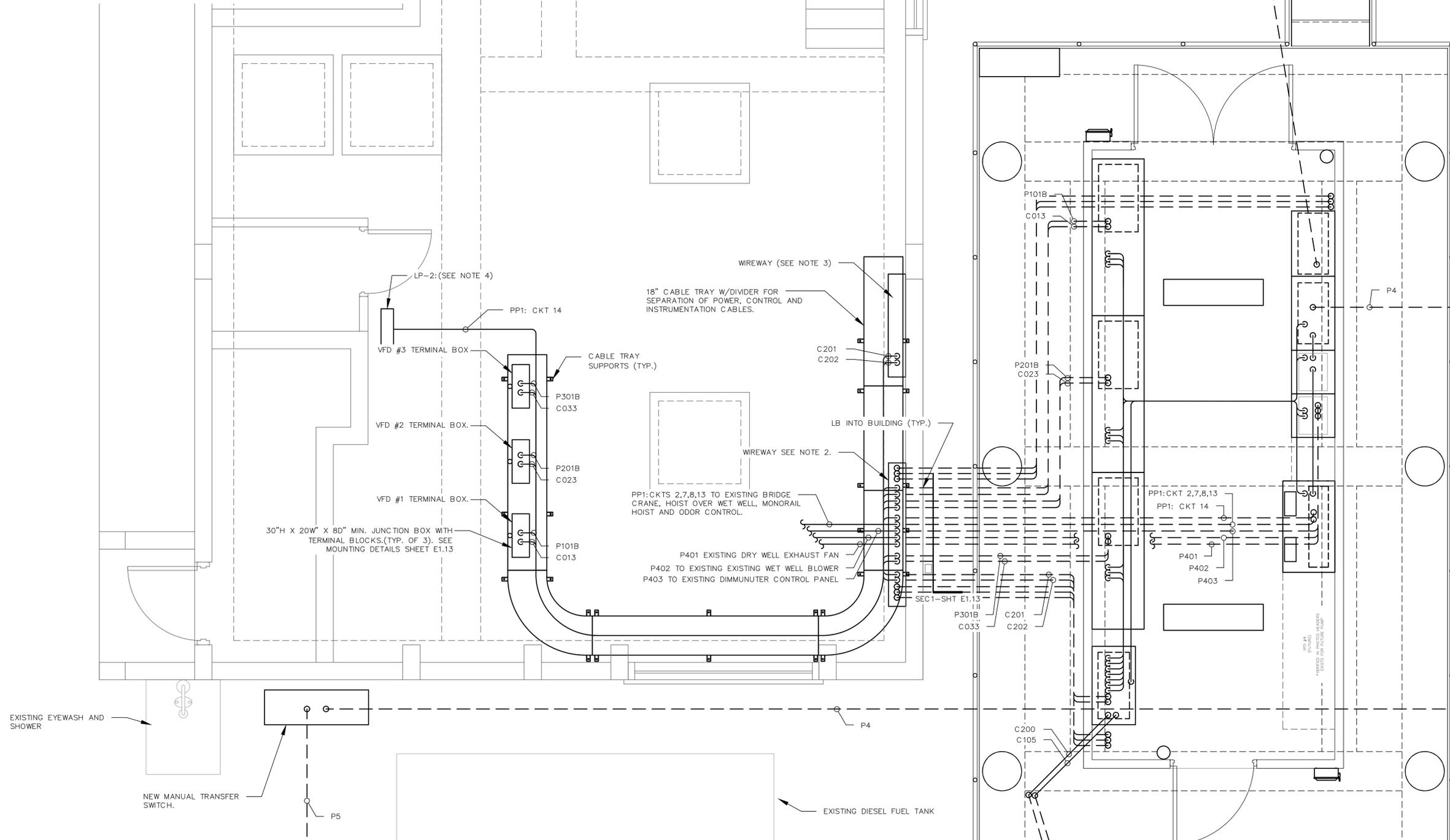
MLS 5 ELECTRICAL REHABILITATION

ELECTRICAL SYMBOLS ELECTRICAL 1

PROJ. START DATE: 2021.APR	SCALE: HORIZONTAL: E0.02
MCE PROJ. # 01024-0194	HORIZONTAL: TBD
DRAWN DS	VERTICAL: TBD
DESIGNED SS	REVISION: ----
CHECKED AAH	
PROJ. MGR. AAH	
STATUS: ISSUED FOR BID	

NOTES:

- COORDINATE W/STRUCTURAL ON BEAM LOCATIONS FOR EQUIPMENT CUTOUTS.
- PROVIDE NEMA 1 SS WIREWAY, 12"D x 12"H", LENGTH DETERMINED BY CONDUIT SPACING ON FLOOR. RE-PULL NEW WIRE TO EQUIPMENT.
- REFER ALSO TO "INTERCONNECT" SHEET (E1.09). PROVIDE NEMA 1 SS WIREWAY JUNCTION 12"D x 12"H", LENGTH DETERMINED BY CONDUIT SPACING ON FLOOR. WIREWAY SHALL CAPTURE EXISTING CONDUITS. RE-PULL NEW WIRE TO EQUIPMENT EXCEPT FOR "CABLE BY VENDOR" (CBV). INTERCEPT CBV SIGNAL WIRES FROM THOSE INSTRUMENTS AND PROVIDE WATERPROOF TERMINAL SPLICE BLOCKS. (WAGO "GELBOX" OR APPROVED EQUAL.)
- NEW 120/208 VAC, 3Ø, 4W, 100A MAIN CB IN 316 SS NEMA 4X ENCLOSURE W/SURGE PROTECTION. REPLACE IN EXISTING PANEL LOCATION. REUSE EXISTING WIRE AND SPLICE AS NECESSARY INSIDE PANEL.



PUMP BUILDING POWER PLAN
SCALE: 1/4"=1'-0"

REV. NO.	DESCRIPTION	DATE

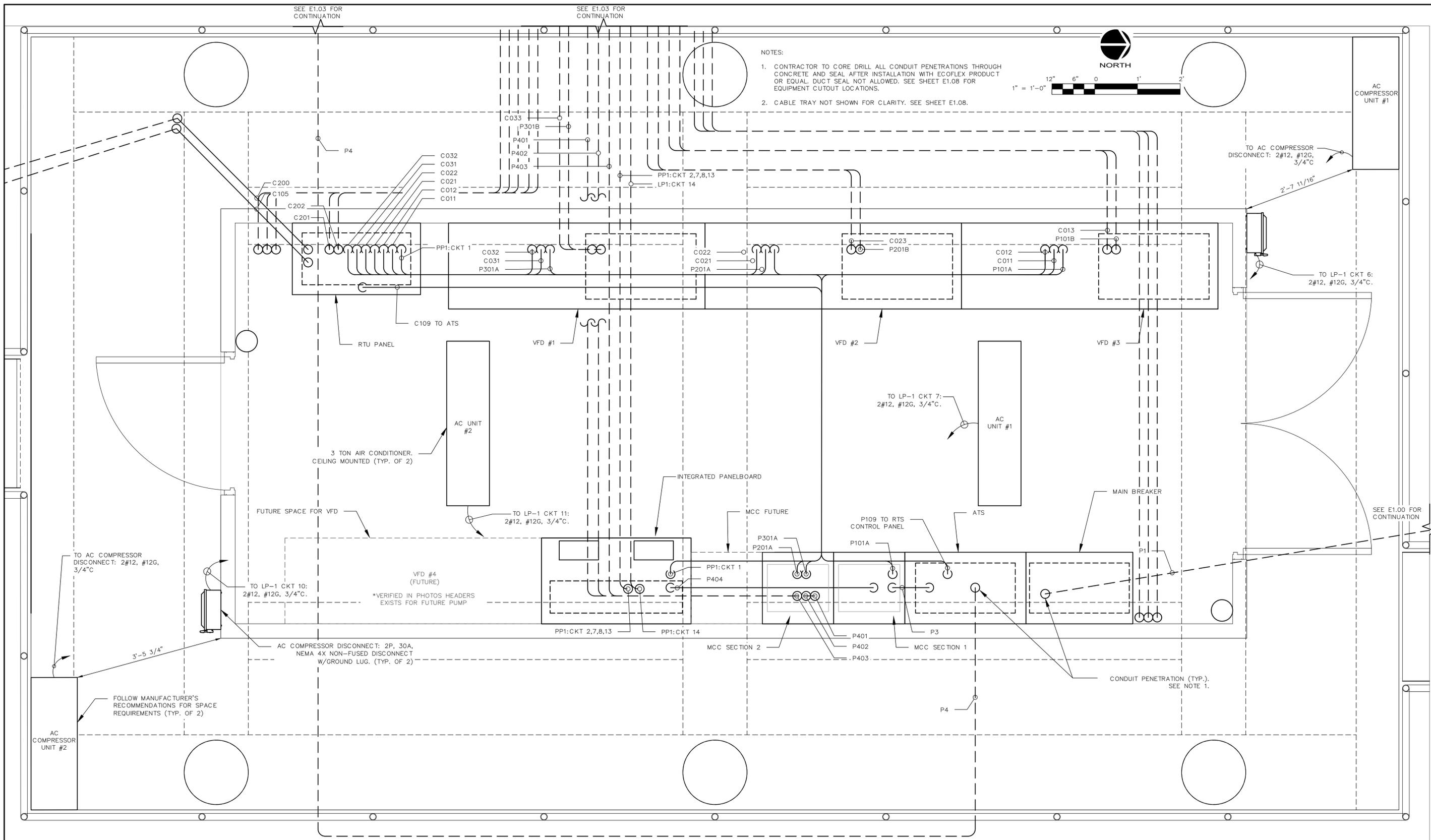


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MLS 5 ELECTRICAL REHABILITATION
ELECTRICAL
PUMP BUILDING POWER PLAN

PROJ. START DATE: 2021.MAR	SCALE: 1/2"=1'	E1.03 DRAWING NUMBER
MCE PROJ. # 01024-0190	HORIZONTAL: 1/2"=1'	
DRAWN: DS	VERTICAL: 1/2"=1'	
DESIGNED: SS		
CHECKED: MAC		
PROJ. MGR: AAH		
STATUS: ISSUED FOR BID		



ELECTRICAL BUILDING POWER PLAN
SCALE: 1"=1'-0"

REV. NO.	DESCRIPTION	DATE

REVISIONS



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MLS 5 ELECTRICAL REHABILITATION

ELECTRICAL

ELECTRICAL BUILDING POWER PLAN

PROJ. START DATE: 2021.MAR

MCE PROJ. # 01024-0190

DRAWN DS

DESIGNED SS

CHECKED MAC

PROJ. MGR. AAH

STATUS:

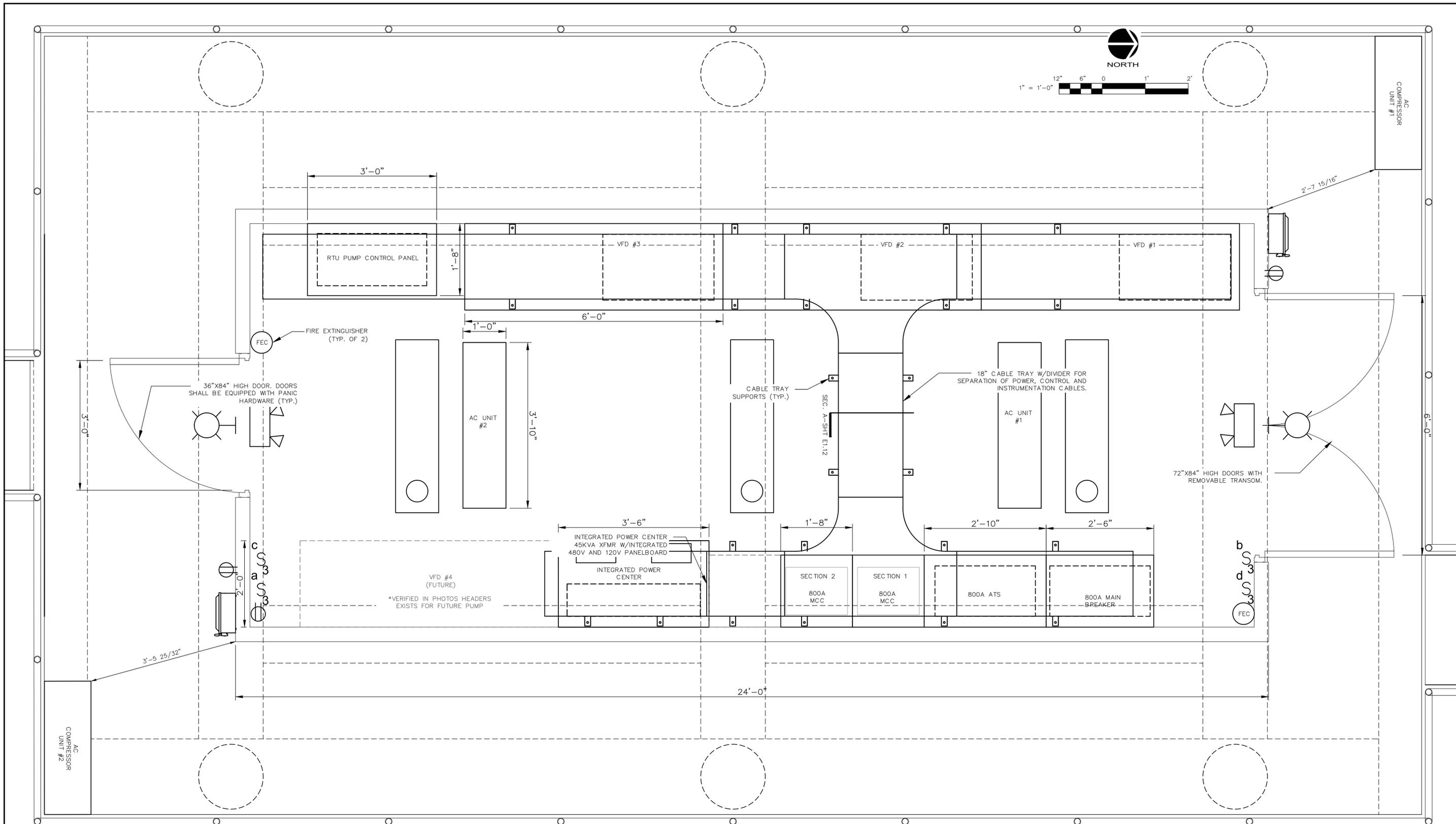
SCALE: HORIZONTAL: 1"=1' VERTICAL: 1"=1'

E1.04

DRAWING NUMBER

REVISION

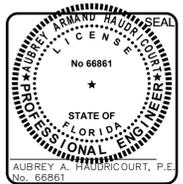
ISSUED FOR BID



ELECTRICAL BUILDING LAYOUT
SCALE: 1"=1'-0"

REV. NO.	DESCRIPTION	DATE

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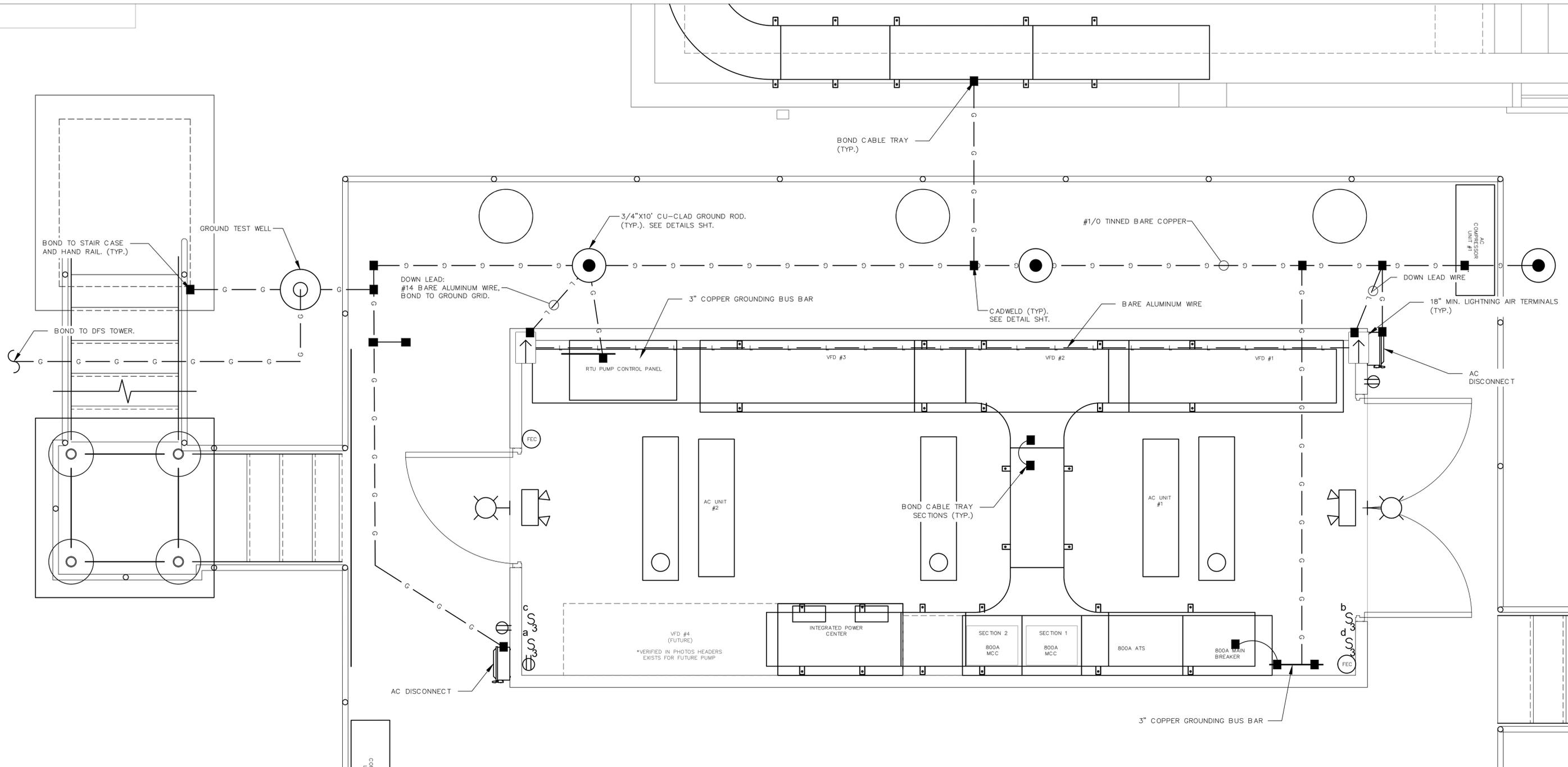
MLS 5 ELECTRICAL REHABILITATION

ELECTRICAL BUILDING LAYOUT

PROJ. START DATE: 2021.MAR	SCALE: 1"=1'	E1.05
MCE PROJ. # 01024-0190	HORIZONTAL: 1"=1'	
DRAWN: DS	VERTICAL: 1"=1'	DRAWING NUMBER
DESIGNED: SS		
CHECKED: MAC		
PROJ. MGR: AAH		
STATUS: ISSUED FOR BID		

NOTES:

1. BOND ALL ENCLOSURE GROUNDING TO GROUND BUS BAR.
2. BOND ALL CABLE TRAY TO GROUND BUS BAR.



GROUNDING AND LIGHTNING PROTECTION PLAN

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

REV. NO.	DESCRIPTION	DATE



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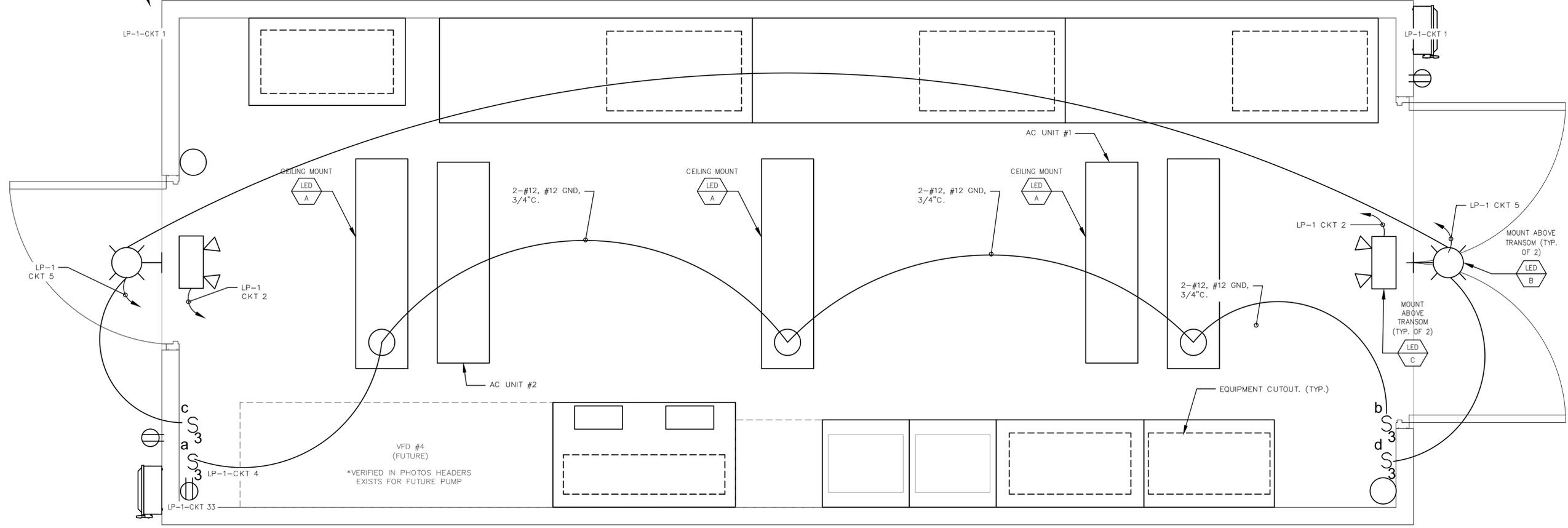
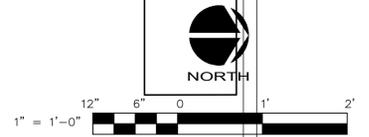
MLS 5 ELECTRICAL REHABILITATION

ELECTRICAL

GROUNDING AND LIGHTNING PROTECTION

PROJ. START DATE: 2021.MAR	SCALE: 3/4"=1'	HORIZONTAL: 3/4"=1'	VERTICAL: 3/4"=1'	E1.06
MCE PROJ. # 01024-0190	DESIGNED: SS			
STATUS: _____				
ISSUED FOR BID				

GFCI IN WEATHERPROOF ENCLOSURE WITH INUSE COVER (TYP.)



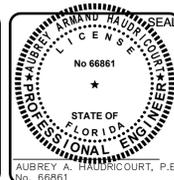
LIGHTING SCHEDULE

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-LPB40-NES7-SC OR APPROVED EQUAL.	
B	LED OUTDOOR RATED WALL PACK. TYPE II/MEDIUM DISTRIBUTION. FULL CUTOFF. AMBER PHOSPHOR CONVERTED FOR SEA TURTLE FRIENDLY LIGHTING. DARK BRONZE.	20 LED 47W AMBER LED LIGHTING	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	LED, CLASS 1, DIV 2 RATED, EXPLOSION PROOF FIXTURE WITH DOME REFLECTOR AND GLOBE GUARD.	LED, 40W, 120V.	KILLARK MODEL NO. EMLC-50-30 OR APPROVED EQUAL. WALL MOUNT AND CEILING MOUNT AS NECESSARY.	

LIGHTING PLAN
SCALE: 1"=1'-0"

REV. NO.	DESCRIPTION	DATE

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MLS 5 ELECTRICAL REHABILITATION

**ELECTRICAL
LIGHTING PLAN**

PROJ. START DATE: 2021.MAR	SCALE: 1"=1'
MCE PROJ. # 01024-0190	HORIZONTAL: E1.08
DRAWN: DS	VERTICAL: ----
DESIGNED: SS	REVISION: ----
CHECKED: MAC	
PROJ. MGR: AAH	

STATUS: **ISSUED FOR BID**

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	AMPS	POLES	KVA PER PHASE			POLES	AMPS	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.	
						A	B	C							
1	30	PHASE LOSS MONITOR PLC CONTROL PANEL	1	3.6	3	4.6			3	13.0	3.6	BRIDGE CRANE	30	2	
			1				4.6				3.6				
			1					4.6			3.6				
7	20	HOIST OVER WET WELL	2.05	7.4	3	5.7			3	13.0	3.6	MONORAIL HOIST	30	8	
			2.05				5.7				3.6				
			2.05					5.7			3.6				
13	20	SIEMEN CHEMICAL ODOR CONTROL	1.7	6.1	3	1.8			3	0.4	0.1	SURGE PROTECTION DEVICE	20	14	
			1.7				1.8				0.1				
			1.7					1.8			0.1				
19	20	SPARE			3	0.0			3				30	20	
							0.0								
								0.0							
25	30	SPARE			3	0.0			3				20	26	
							0.0								
								0.0							
31	30	SPARE			3	0.0			2		SPARE	30	32		
							0.0								
								0.0							
37 39 41		SPACE				0.0			2		SPACE		40		
							0.0								
								0.0							
PANEL PP-1 LOCATION MANATEE COUNTY BUILDING ELECTRICAL BUILDING NOTES: INTEGRATED PANELBOARD			TOTAL KVA			12.1	12.1	12.1							
			GRAND CONNECTED TOTAL KVA			36.2									
			SERVICE CHARACTERISTICS						VOLTS: 480			225	A MLO		
									PHASE: 3			0	A MCB		
									WIRE: 3						

PANEL SCHEDULE PP-1
SCALE: NTS

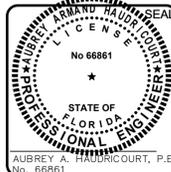
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	AMPS	POLES	KVA PER PHASE			POLES	AMPS	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
						A	B	C						
1	20	ELEC. BUILDING RECEPTACLES OUTSIDE	0.36		1	0.5			1	1.5	0.18	ELEC. BUILDING EMERG. EXIT LIGHT	20	2
3	20	ELEC. BUILDING RECEPTACLES INSIDE	0.72		1		1.5		1	6.7	0.8	ELEC. BUILDING LIGHTING INSIDE	20	4
5	20	ELEC. BUILDING OUTSIDE WALL PACKS	0.5		1			2.1	2	15.4	1.6	ELEC. BUILDING AC OUTDOOR UNIT #1	25	6
7	15	ELEC. BUILDING AC INDOOR UNIT #1	0.1		2	1.7			2	15.4	1.6			
			0.1				1.7				1.6			
11	15	ELEC. BUILDING AC INDOOR UNIT #2	0.1		2			1.7	3	50.0	6	PANEL LP-2	100	14
			0.1				1.7				6			
15	20	SURGE PROTECTION DEVICE	0.1		3			6.1	1	12.5	1.5	RTU CONTROL PANEL	20	20
			0.1				6.1				6			
			0.1					6.1			6			
21					1		0.0	1					22	
23					1		0.0	1					24	
25					3	0.0			1				26	
							0.0			1				28
					1		0.0	1					30	
PANEL LP-1 LOCATION MANATEE COUNTY BUILDING ELECTRICAL BUILDING NOTES: INTEGRATED PANELBOARD			TOTAL KVA			9.9	9.3	9.9						
			GRAND CONNECTED TOTAL KVA			29.2								
			SERVICE CHARACTERISTICS						VOLTS: 208Y/120			225	A MLO	
									PHASE: 3			0	A MCB	
									WIRE: 4					

PANEL SCHEDULE LP-1
SCALE: NTS

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	AMPS	POLES	KVA PER PHASE			POLES	AMPS	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
						A	B	C						
1	60	N.W. OUTLET (OFF)			2	0.6			1	5.0	0.6	SIEMENS CHEM./EMER. LIGHTING	30	2
5	20	NORTH WALL OUTLET	0.18	1.5	1		0.0		1	5.0	0.6	UNKOWN	20	4
								0.8						
7	20	DRY WELL LIGHTS	1	8.3	1	2.0			1	8.3	1	OUTSIDE FLOOD LIGHTS	20	8
9	20	UNKOWN			1		1.0		1	8.3	1	FLOW METER	20	10
11	20	SUMP PUMP DRYWELL OUTLET	0.18	1.5	1			0.4	1	1.5	0.18	GOLF CART OUTLET	20	12
13	20	WETWELL LIGHTS	1	8.3	1	1.0			1			UNKOWN	20	14
15	20	ENTRANCE LIGHTING	1	8.3	1		3.5		1	20.8	2.5	UPS OUTLET	30	16
17	20	S.W. WALL OUTLET	0.18	1.5	1			0.4	1	1.5	0.18	WEST WALL OUTLET	20	18
19	20	CONTROL ROOM LIGHTING	0.6	5.0	1	0.7			1	0.8	0.1	AIR PUMP	20	20
21	20	CONTROL ROOM LIGHTING	0.6	5.0	1		0.6		1			UNKOWN	20	22
23	20	UNKOWN			1			1.3	1	10.8	1.3	CONTROL ROOM EX. FAN	20	24
25	30	OUTSIDE GENERATOR - PANEL FEED	1	8.3	3	1.0			1			UNKOWN	20	26
			1				1.0		1			UNKOWN	20	28
			1					2.0		1	8.3	1	VEEDER ROOT FUEL READER	20
PANEL LP-2 LOCATION MANATEE COUNTY BUILDING ELECTRICAL BUILDING NOTES: INTEGRATED PANELBOARD			TOTAL KVA			5.3	6.1	4.8						
			GRAND CONNECTED TOTAL KVA			16.2								
			SERVICE CHARACTERISTICS						VOLTS: 208Y/120			225	A MLO	
									PHASE: 3			0	A MCB	
									WIRE: 4					

PANEL SCHEDULE LP-2
SCALE: NTS

REV. NO.	DESCRIPTION	DATE



MLS 5 ELECTRICAL REHABILITATION

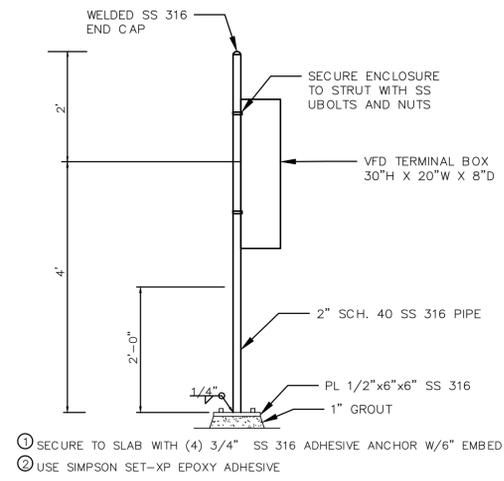
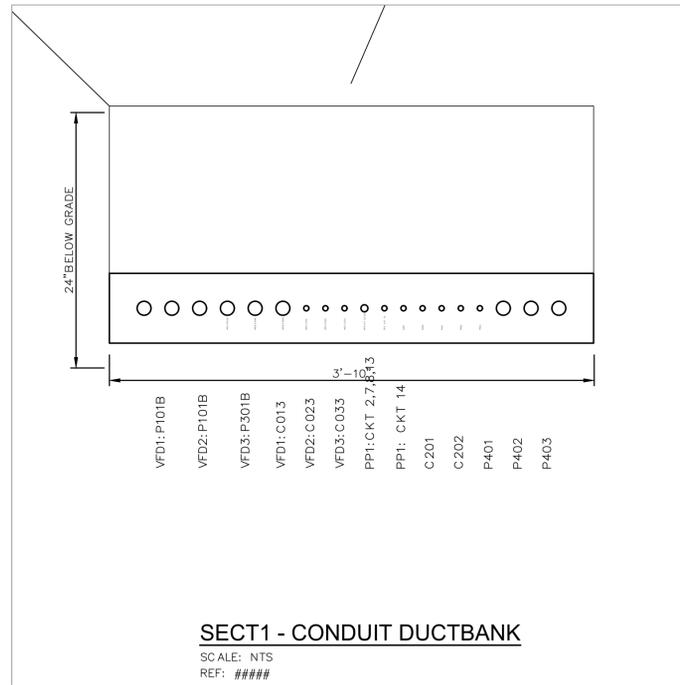
ELECTRICAL
PANELBOARD SCHEDULES

PROJ. START DATE: 2021.APR
MCE PROJ. # 01024-0194
DRAWN DS
DESIGNED SS
CHECKED MAC
PROJ. MGR. AAH

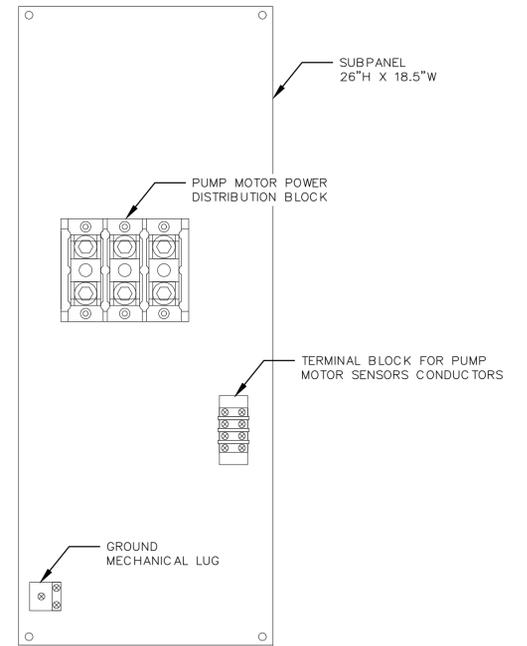
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HORIZONTAL: N/A
VERTICAL: N/A

E1.10
DRAWING NUMBER
REVISION

STATUS: ISSUED FOR BID



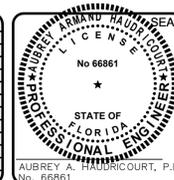
VFD TERMINAL BOX MOUNTING DETAIL
 SCALE: NTS



VFD TERMINAL BOX SUBPANEL LAYOUT
 SCALE: NTS

REV. NO.	DESCRIPTION	DATE

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MLS 5 ELECTRICAL REHABILITATION
ELECTRICAL
ELECTRICAL DETAILS 2 OF 2

PROJ. START DATE: 2021.APR	SCALE
MCE PROJ. # 01024-0194	HORIZONTAL: N/A
DRAWN JG	VERTICAL: N/A
DESIGNED SS	
CHECKED MAC	
PROJ. MGR. AAH	
STATUS:	

E1.13
 DRAWING NUMBER
 REVISION

ISSUED FOR BID

