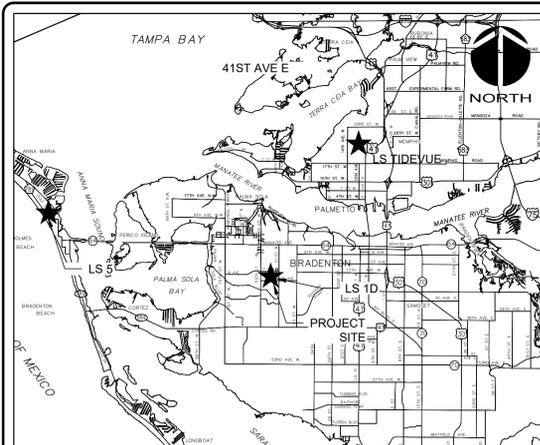


MLS-1D ELECTRICAL REHABILITATION MANATEE COUNTY, PROJECT NO. 6009783

PROJ. NO. 01024-0194
SEPTEMBER 16, 2022
ISSUED FOR BID



VICINITY MAP NOT TO SCALE

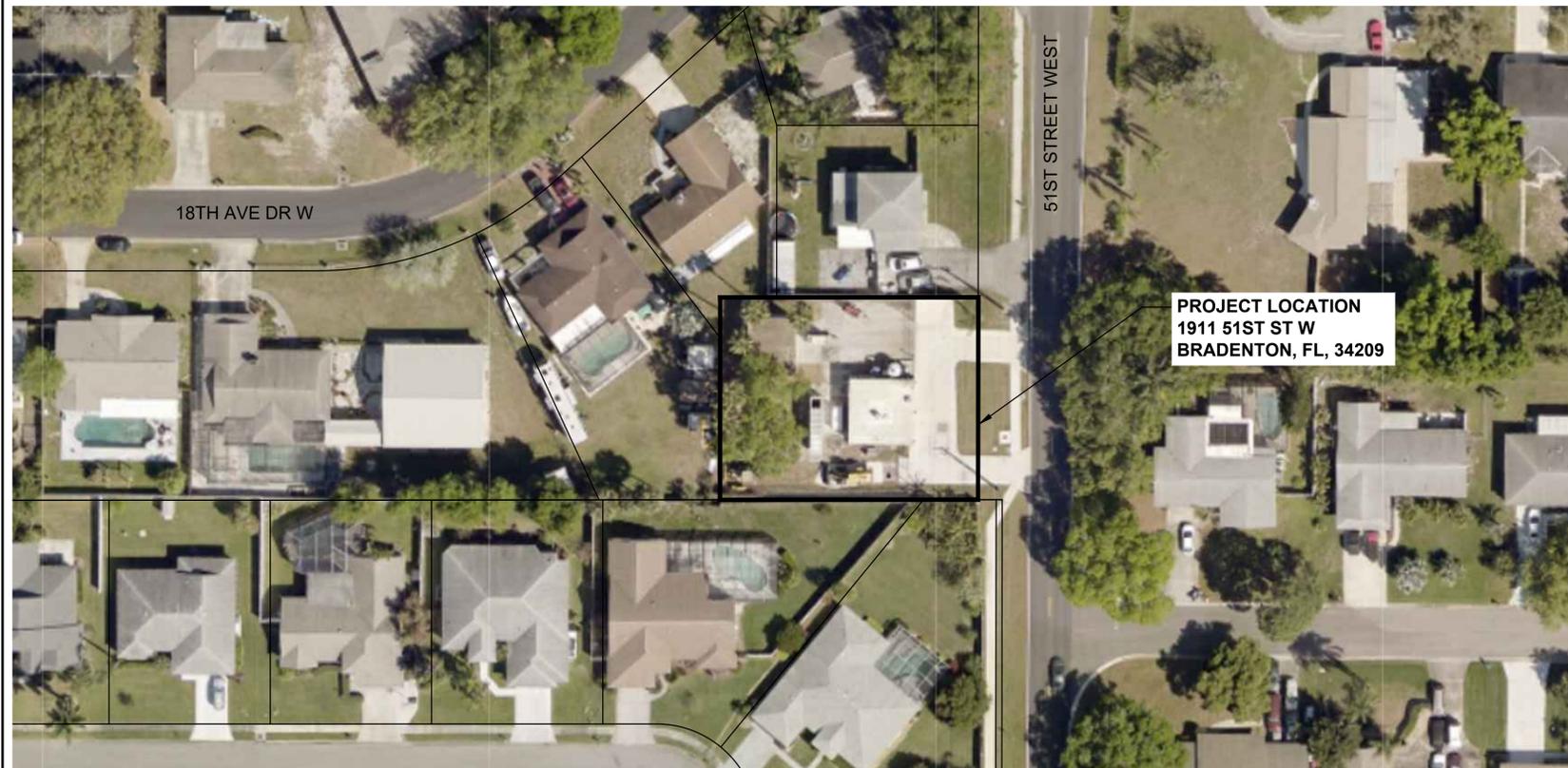
PROJECT NAME: MLS-1D ELECTRICAL REHABILITATION
PROJECT MANAGER: Brett Gocka, P.E.
EMAIL: Brett.Gocka@mymanatee.org
OWNER/DEVELOPER:
1911 51ST STREET WEST
BRADENTON FLORIDA
34209



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

CA Lic. No. 29588
www.mckimcreed.com

PROJECT INFORMATION



PROJECT LOCATION
1911 51ST ST W
BRADENTON, FL, 34209

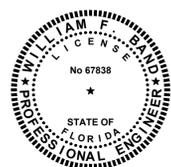


TRACEY L. WEBB, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 88356

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY TRACEY L. WEBB THE DATE INDICATED HERE: SEPTEMBER 15, 2022

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SHEET NUMBER	SHEET TITLE
CIVIL	
C1.01	SITE EXISTING CONDITIONS AND DEMOLITION PLAN
C1.02	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. ELECTRICAL BLDG. FDN. LAYOUT, SECTIONS & DETAILS



AUBREY A. HAURICOURT, 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 1D
ELECTRICAL	
E0.00	SYMBOLS, ABBREVIATIONS AND NOTES
E0.01	SYMBOLS ELECTRICAL 1
E0.02	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	ELECTRICAL BUILDING LIGHTING PLAN
E1.09	ELECTRICAL INTERCONNECT DIAGRAM
E1.10	PANELBOARD SCHEDULES
E1.11	ELECTRICAL DETAILS I
E1.12	ELECTRICAL DETAILS II
E1.13	ELECTRICAL CONTROLS SCHEMATICS



MICHAEL F. FADINI, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 87173

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SHEET NUMBER	SHEET TITLE
INSTRUMENTATION	
I0.00	INSTRUMENTATION SYMBOLS SHEET 1
I00.1	INSTRUMENTATION SYMBOLS SHEET 2
I1.00	PROCESS AND INSTRUMENT DIAGRAM
I1.01	CONTROL PANEL

SCALE: 1" = NTS'

Sheet List Table

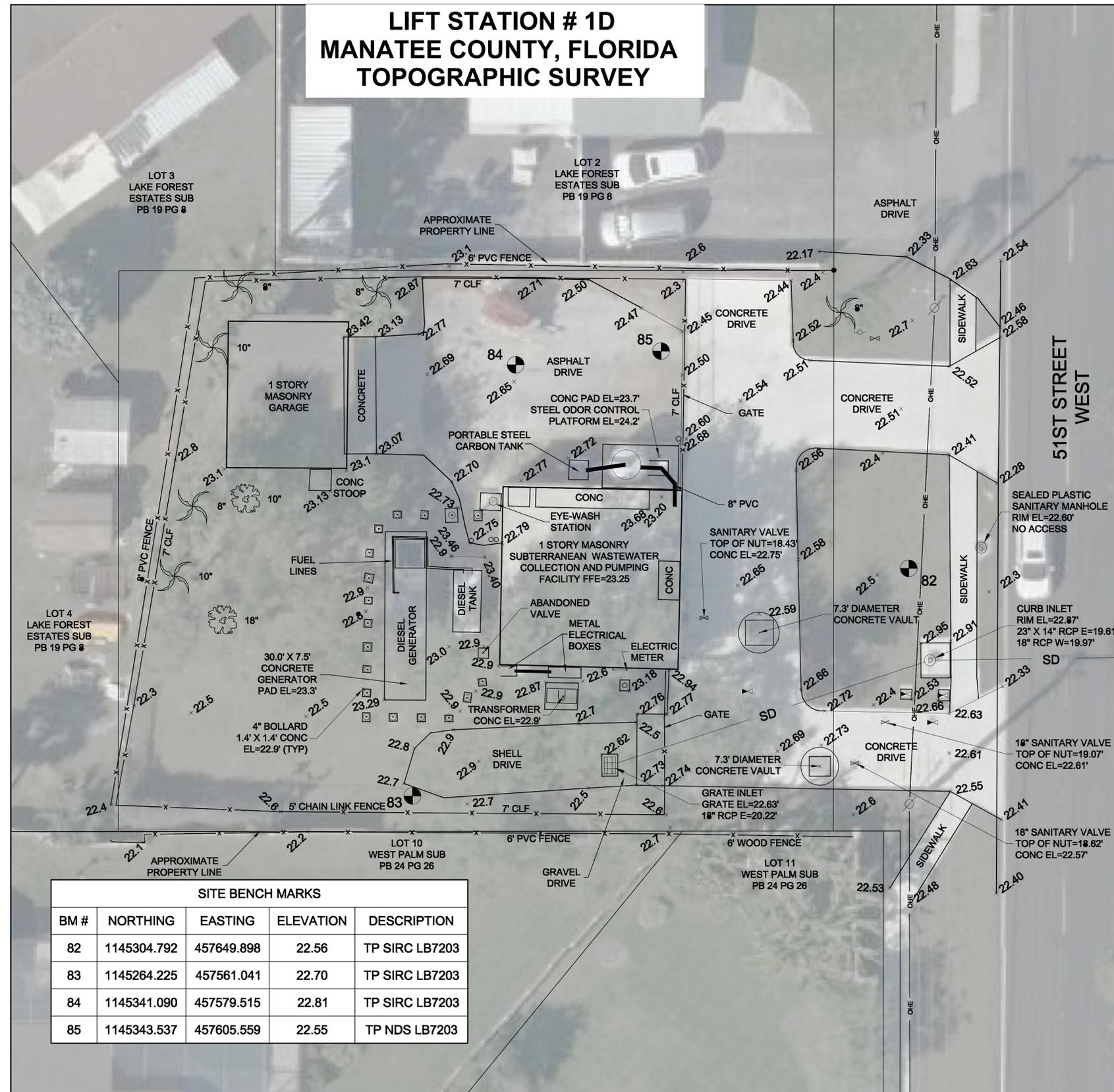
Sheet Number	Sheet Title
GENERAL	
G0.00	COVER SHEET
CIVIL	
C1.00	HYATT SURVEY 1D
C1.01	SITE EXISTING CONDITIONS AND DEMOLITION PLAN
C1.02	SITE PLAN
STRUCTURAL	
S0.00	GENERAL NOTES, DESIGN LOADS, DESIGN CRITERIA & LEGEND
S1.00	EXIST. L.S. ELECTRICAL BLDG. FDN. LAYOUT, SECTIONS & DETAILS
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E1.11	ELECTRICAL CONTROLS SCHEMATICS
E1.12	ELECTRICAL DETAILS 1 OF 2
E1.13	ELECTRICAL DETAILS 2 OF 2
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I00.1	INSTRUMENTATION SYMBOLS SHEET 2
I1.00	PROCESS AND INSTRUMENT DIAGRAM
I1.01	CONTROL PANEL



Know what's below.
Call before you dig.

SHEET INDEX

LIFT STATION # 1D MANATEE COUNTY, FLORIDA TOPOGRAPHIC SURVEY



SITE BENCH MARKS				
BM #	NORTHING	EASTING	ELEVATION	DESCRIPTION
82	1145304.792	457649.898	22.56	TP SIRC LB7203
83	1145264.225	457561.041	22.70	TP SIRC LB7203
84	1145341.090	457579.515	22.81	TP SIRC LB7203
85	1145343.537	457605.559	22.55	TP NDS LB7203

GENERAL NOTES

1. THE FOLLOWING CITY OF BRADENTON VERTICAL CONTROL MONUMENTS WERE RECOVERED AND UTILIZED FOR THE ELEVATIONS INDICATED HEREON: "COB 1049" NAVD 1988 ELEVATION 23.94"
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. THIS IS NOT A BOUNDARY SURVEY.
4. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY. SURVEYOR'S CERTIFICATION, SIGNATURE AND SEAL NULL AND VOID. ANY QUESTIONS CONCERNING THE CONTENT OR PURPOSE OF THIS DRAWING.
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 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 | ▶ 6" RECLAIMED WATER VALVE |
| ⊙ PK NAIL W/ DISC | ⊙ ANTENNA |
| ■ CONCRETE MONUMENT | ⊙ POTABLE WATER VALVE |
| ● SITE BENCHMARK | ○ CLEANOUT |
| ⊙ SIGN | ⊙ GRATE INLET |
| ⊙ WOOD POWER POLE | ⊙ PALM TREE |



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

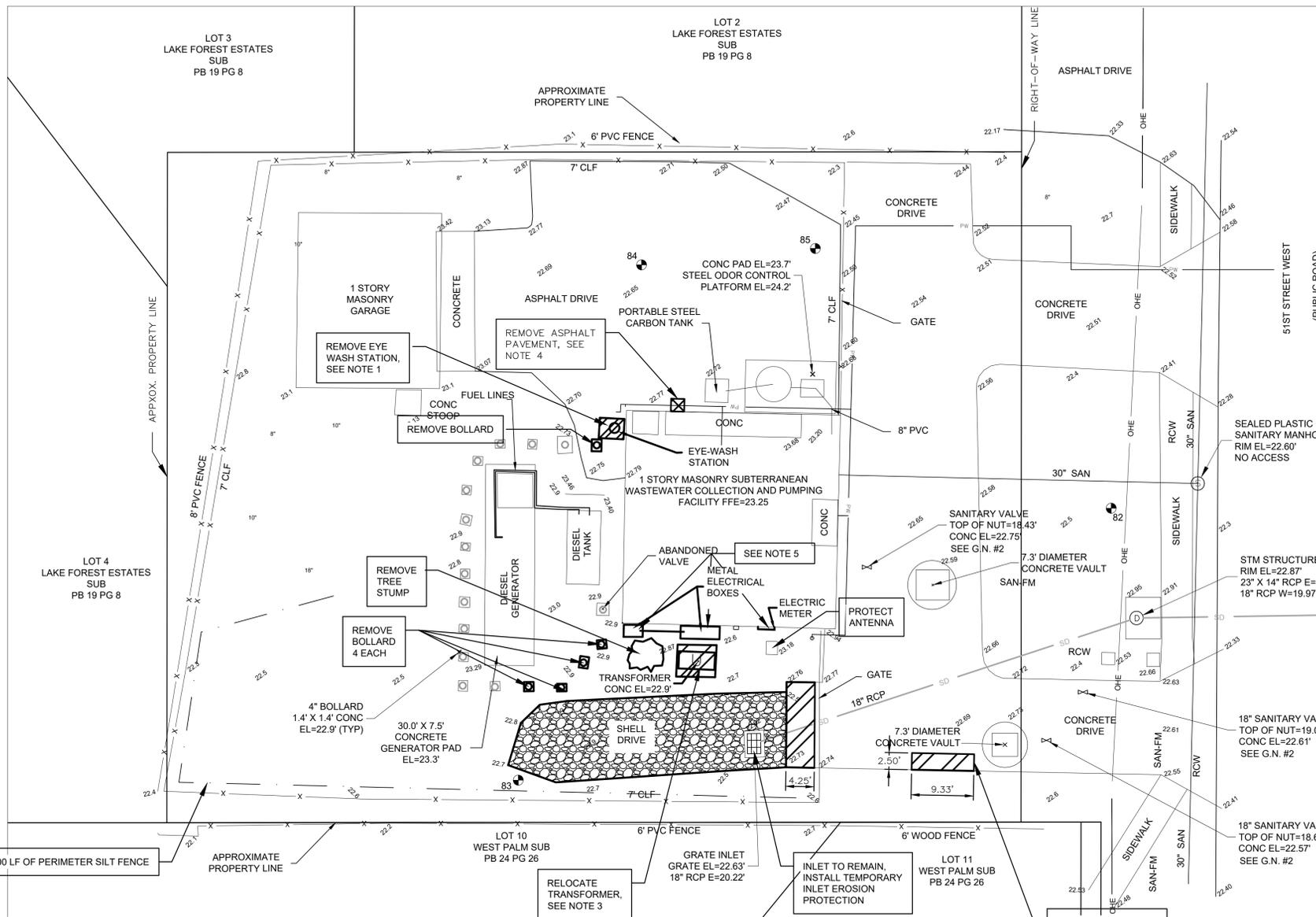
RUSSELL P. HYATT, PSM
FLORIDA SURVEYORS REGISTRATION NO. 5303

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	15-1986-1
SURVEY #	LS 1D
SECTION	32
TWN RNG	34-17
SCALE	1" = 20'
SURVEYED	HYATT 4/2021
DESIGNED	
DRAWN	DR 4/2021
CHECKED	RH 4/2021

Hyatt Survey Services, Inc.

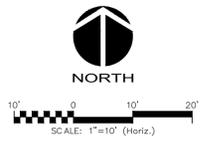
Geographic Data Specialists LB No.: 7203
2012 LENA ROAD, BRADENTON, FLORIDA 34211
PH. (941) 748-4693



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
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- WATER METER
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- STORM MANHOLE
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- UTILITY BOX
- 6" RECLAIMED WATER VALVE
- POTABLE WATER VALVE
- ANTENNA
- 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 CITY OF BRADENTON VERTICAL CONTROL MONUMENTS WERE RECOVERED AND UTILIZED FOR THE ELEVATIONS INDICATED HEREON: "COB 1049" NAVD 1988 ELEVATION 23.94"
- THIS SURVEY IS REFERENCED TO A PROJECTION OF THE FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE NAD 1983/2011 ADJUSTMENT).

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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.

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 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

- REMOVE CONCRETE, PIPING AND FIXTURES. CAP PIPE.
- PROVIDE CLEAN SAWCUT AT ALL PAVEMENT REMOVAL LOCATION (CONCRETE OR ASPHALT). REMOVAL LIMITS SHOWN ARE APPROXIMATE AND SHALL BE ADJUSTED AS NEEDED BASED ON FINAL EQUIPMENT SIZING.
- RELOCATE EXISTING TRANSFORMER AND REMOVE CONC PAD, SEE ELECTRIC RELOCATION PLAN REGARDING CONDUIT AND SERVICE IMPACTS.
- APPROXIMATE LOCATION OF NEW EYE WASH STATION. REMOVE ASPHALT PAVEMENT AS NEEDED TO LOCATE AND TAP WATER SERVICE.
- REMOVE ELECTRICAL EQUIPMENT, SEE ELECTRIC DEMOLITION PLAN.

REMOVAL LEGEND

- REMOVE CONCRETE
- REMOVE ASPHALT
- REMOVE COMPACTED SHELLS

REV. NO.	DESCRIPTION	DATE



MLS-1D ELECTRICAL REHABILITATION

CIVIL

SITE EXISTING CONDITIONS AND DEMOLITION PLAN

PROJ. START DATE: 2021.APR

MCE PROJ. # 01024-0194

DRAWN TLW

DESIGNED SS

CHECKED MAC

PROJ. MGR. AAH

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

C1.01

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

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
	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

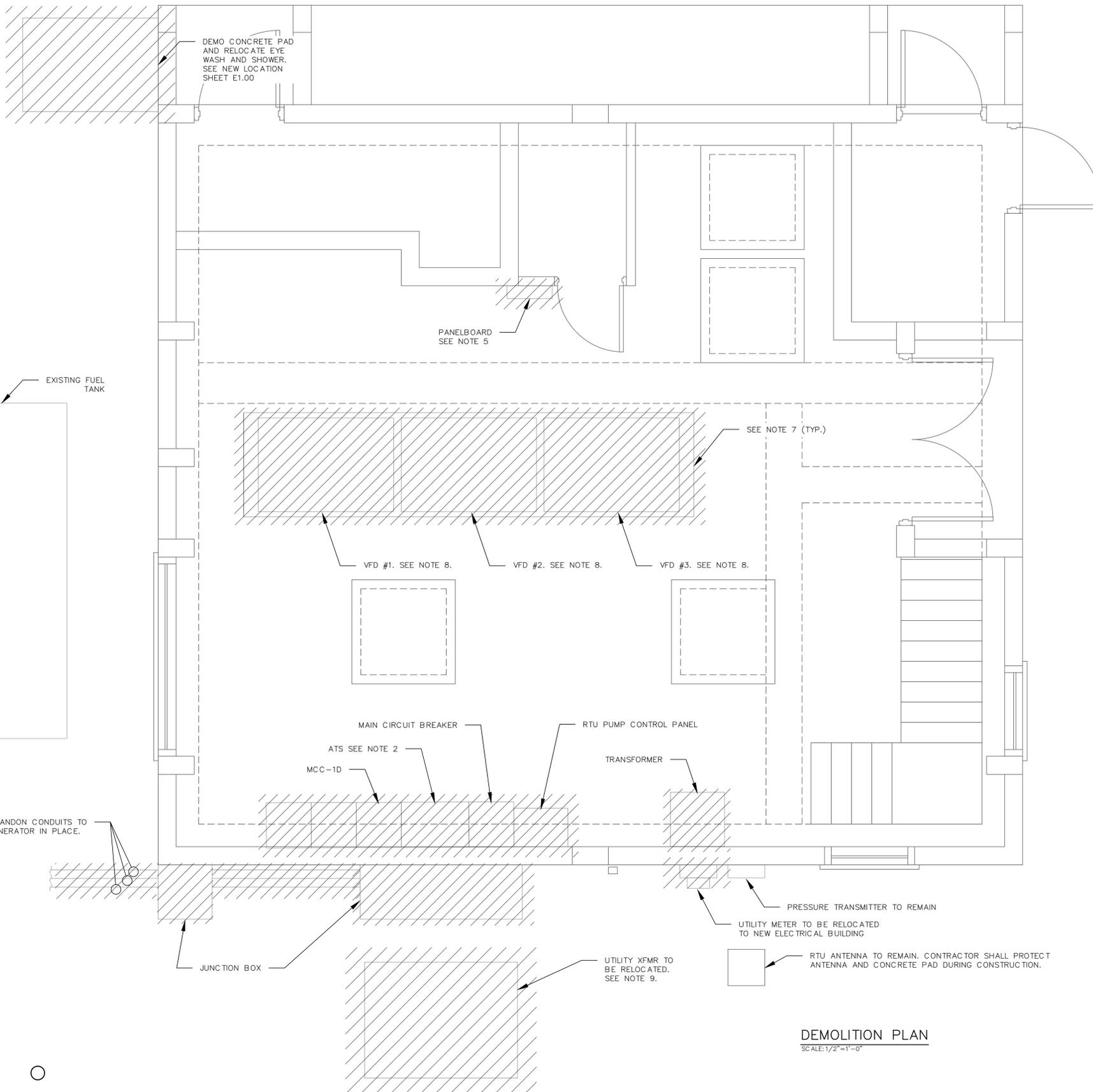


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MLS-1D ELECTRICAL REHABILITATION
ELECTRICAL
SYMBOLS ELECTRICAL 1

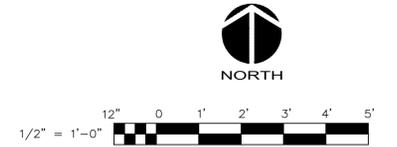
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MCE PROJ. # 01024-0194	VERTICAL: TBD	REVISION	
DRAWN DS			
DESIGNED SS			
CHECKED AAH			
PROJ. MGR. AAH			
STATUS: ISSUED FOR BID			



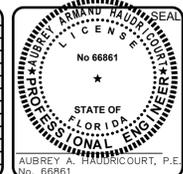
NOTES:

1. CONTRACTOR TO PROVIDE BYPASS PUMPING. REFER TO BYPASS PUMP SPECIFICATIONS.
2. EXISTING ATS SHALL BE REMOVED AND RETURNED TO THE COUNTY.
3. REMOVE ALL EXPOSED CONDUIT AND WIRE NOT USED PER EQUIPMENT DEMOLITION.
4. REMOVE ALL WIRING IN UNDERGROUND CONDUIT THAT IS TO BE ABANDONED. CAP ALL ABANDONED CONDUIT.
5. INTERCEPT EXISTING CONDUITS, AT EXISTING PANELBOARD LOCATION. INSTALL NEW PANELBOARD, REUSE EXISTING WIRE AND SPLICE AS NECESSARY INSIDE PANEL.
6. REMOVE AND REPLACE ALL RECEPTACLE AND SWITCHES W/NEW CORROSION RESISTANT DEVICES.
7. REMOVE EQUIPMENT PADS UNDERNEATH EQUIPMENT BEING DEMOLISHED AND REFINISH FLOOR.
8. MAS711 PUMP MONITORING UNITS TO BE RELOCATED TO NEW VFDs. COORDINATE INSTALLATION IN FIELD.
9. CONTRACTOR TO COORDINATE WITH FPL TO RELOCATE TRANSFORMER PER DRAWINGS. PROVIDE NEW CONCRETE PAD. PROVIDE DUCTBANK FROM RISER POLE TO TRANSFORMER AND FROM TRANSFORMER TO SERVICE METER. FPL TO PULL IN NEW PRIMARY. CONTRACTOR TO PULL IN NEW SECONDARY. FPL TO TERMINATE ALL CONNECTIONS ON TRANSFORMERS.

- EQUIPMENT TO BE DEMOLISHED OR RELOCATED.



REV. NO.	DESCRIPTION	DATE



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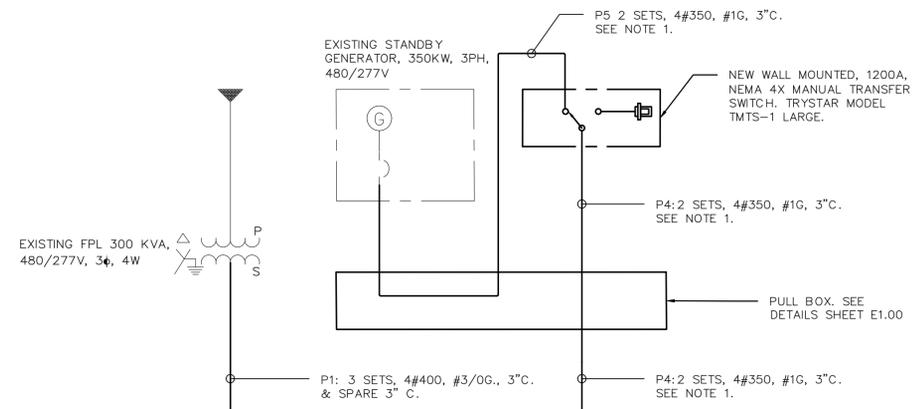


MLS-1D ELECTRICAL REHABILITATION
ELECTRICAL
DEMOLITION PLAN

PROJ. START DATE: 2021.APR	SCALE
MCE PROJ. # 01024-0194	HORIZONTAL: 1/2"=1'
DRAWN DS	VERTICAL: 1/2"=1'
DESIGNED SS	REVISION
CHECKED MAC	
PROJ. MGR. AAH	

E1.01
 DRAWING NUMBER
 REVISION

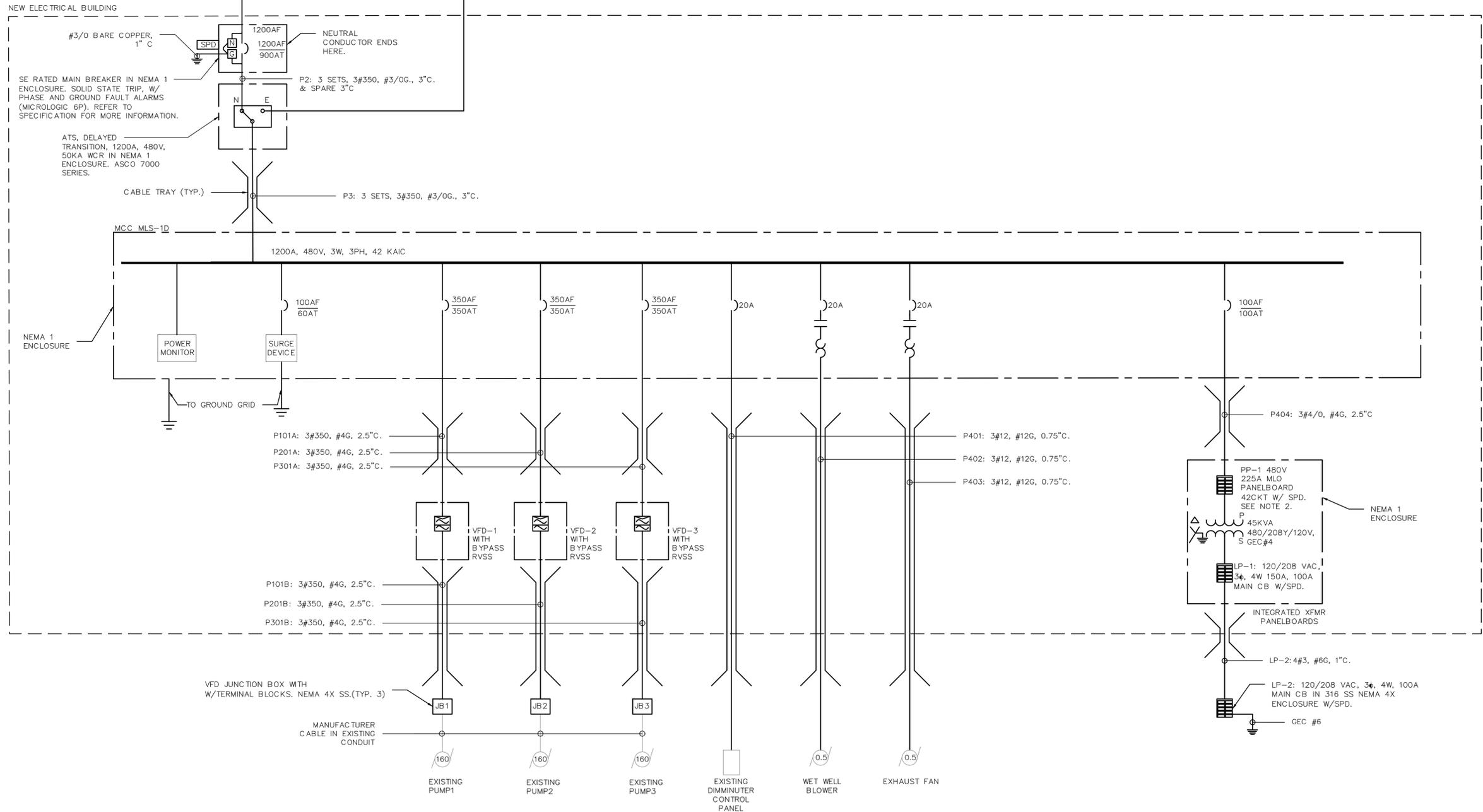
STATUS: **ISSUED FOR BID**



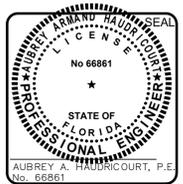
FAULT CALCULATIONS AT XFMR SECONDARY	
XFMR RATING (KVA):	300.00
SECONDARY VOLTS:	480.00
Z%:	4.32
FLA:	360.83
Z-TOLERANCE:	0.90
MULTIPLIER:	25.72
ISC:	10724.04
ISC/FLA:	29.72

MLS 1D		LOAD SUMMARY 480V	
LOAD DESCRIPTION	TYPE	HP/KVA	FLA
PUMP #1	Motor	200	240
PUMP #2	Motor	200	240
PUMP #3	Motor	200	240
DIMMINUTER	Motor	15	21
EXHAUST FAN	Motor	1	1
WET WELL BLOWER	Motor	1	1
PANEL PP-1	NonCont	54	65
NEC 430.24:		735 KVA	884 AMPS
NEC 230.42:		826 KVA	994 AMPS

- NOTES:
- INTERCEPT EXISTING CONDUITS AND PULL NEW WIRES.
 - INTERCEPT CONDUIT FOR GENERATOR BATTERY CHARGER AND BLOCK HEATER AND ROUTE TO PP-1, PULL NEW WIRE.



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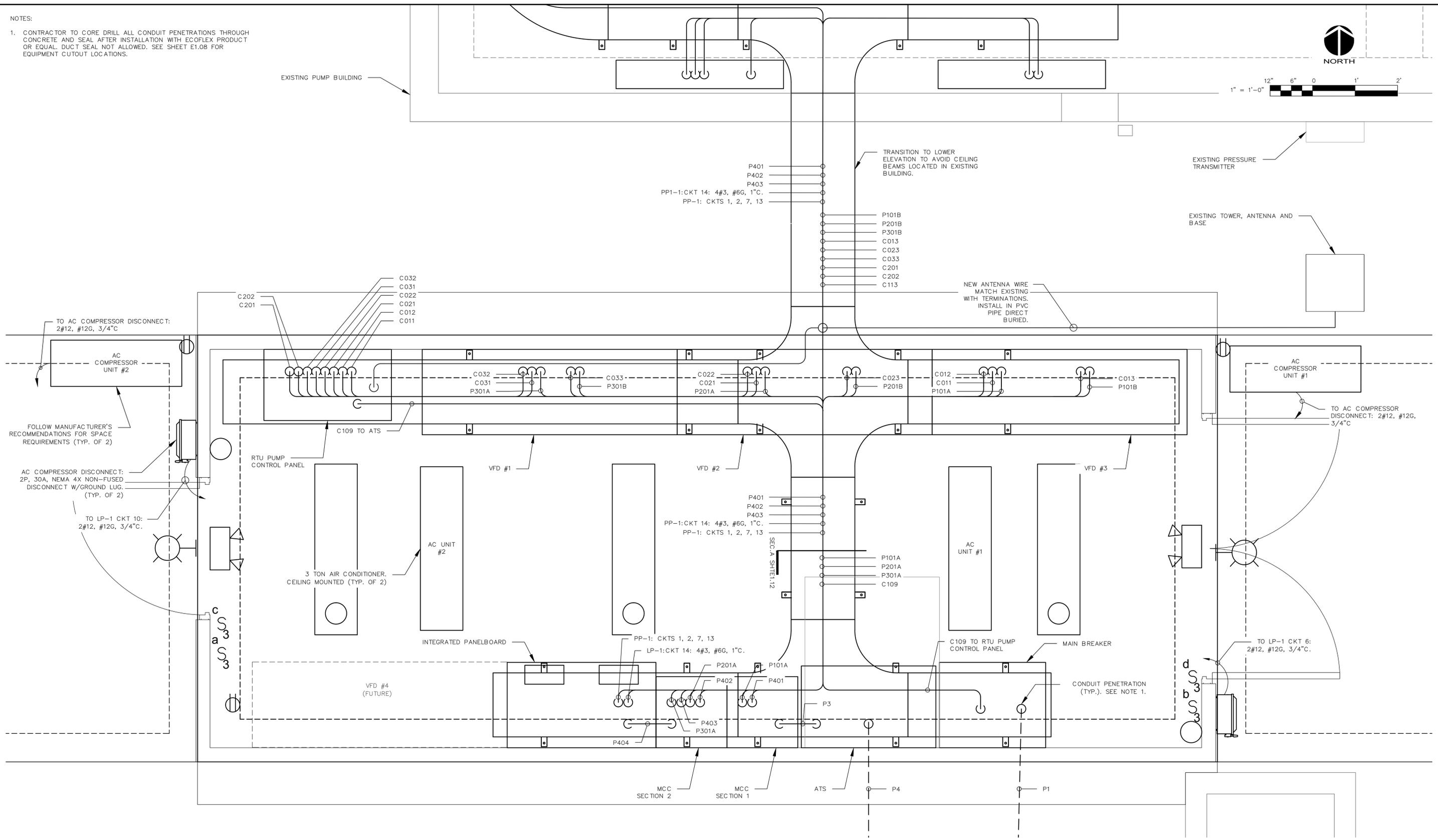
MLS-1D ELECTRICAL REHABILITATION

**ELECTRICAL
SINGLE LINE DIAGRAM**

PROJ. START DATE: 2021.APR	SCALE:
MCE PROJ. # 01024-0194	HORIZONTAL: E1.02
DRAWN: DS	VERTICAL: ----
DESIGNED: SS	REVISION:
CHECKED: MAC	
PROJ. MGR: AAH	
STATUS:	
ISSUED FOR BID	

NOTES:

1. CONTRACTOR TO CORE DRILL ALL CONDUIT PENETRATIONS THROUGH CONCRETE AND SEAL AFTER INSTALLATION WITH ECOFLEX PRODUCT OR EQUAL. DUCT SEAL NOT ALLOWED. SEE SHEET E1.08 FOR EQUIPMENT CUTOUT LOCATIONS.



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

REV. NO.	DESCRIPTION	DATE

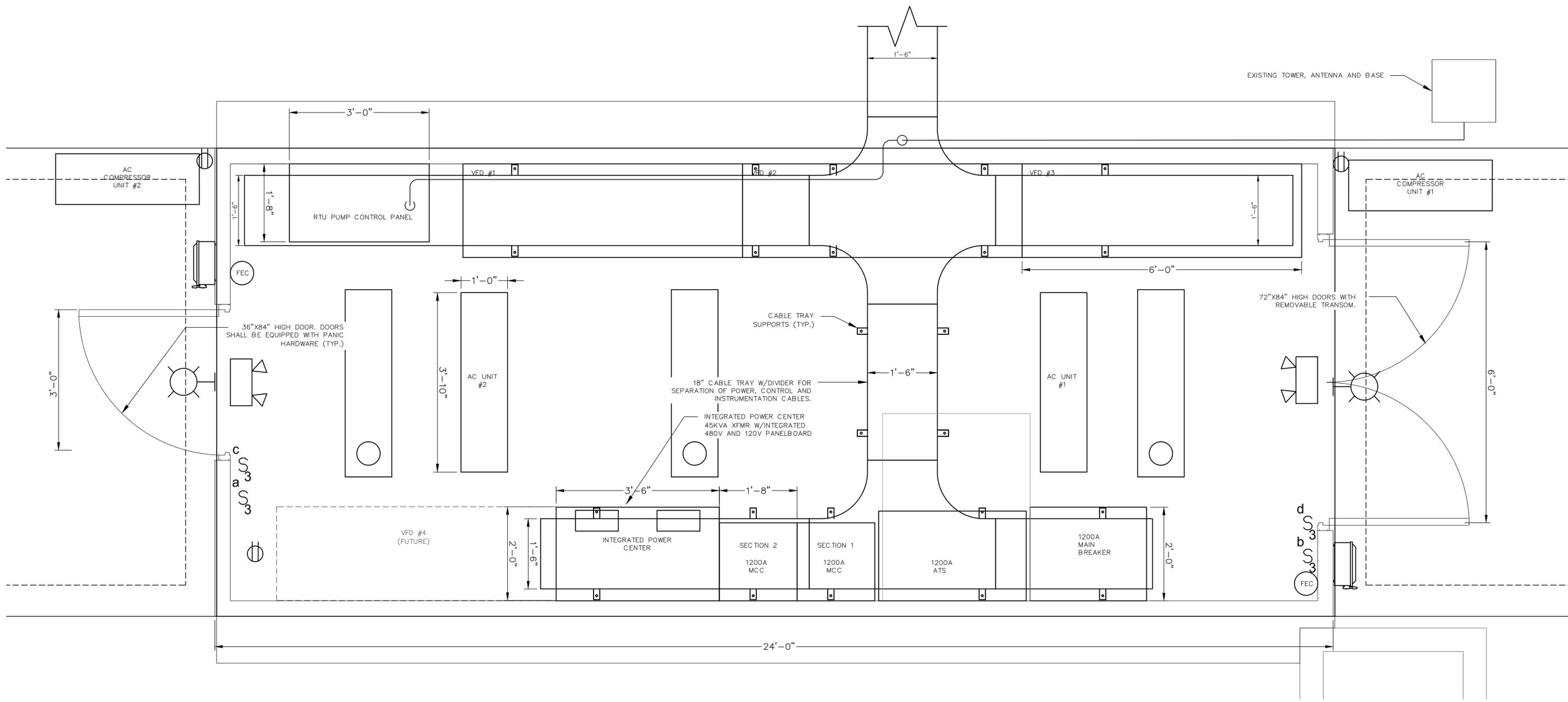


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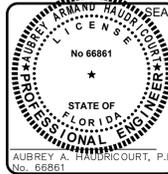
MLS-1D ELECTRICAL REHABILITATION
ELECTRICAL
ELECTRICAL BUILDING POWER PLAN

PROJ. START DATE: 2021.APR	SCALE: 1"=1'-0"	E1.04 DRAWING NUMBER
MCE PROJ. # 01024-0194	HORIZONTAL: 1"=1'	
DRAWN: DS	VERTICAL: 1"=1'	REVISION: ----
DESIGNED: SS	ISSUED FOR BID	
CHECKED: MAC		
PROJ. MGR: AAH		



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

REV. NO.	DESCRIPTION	DATE



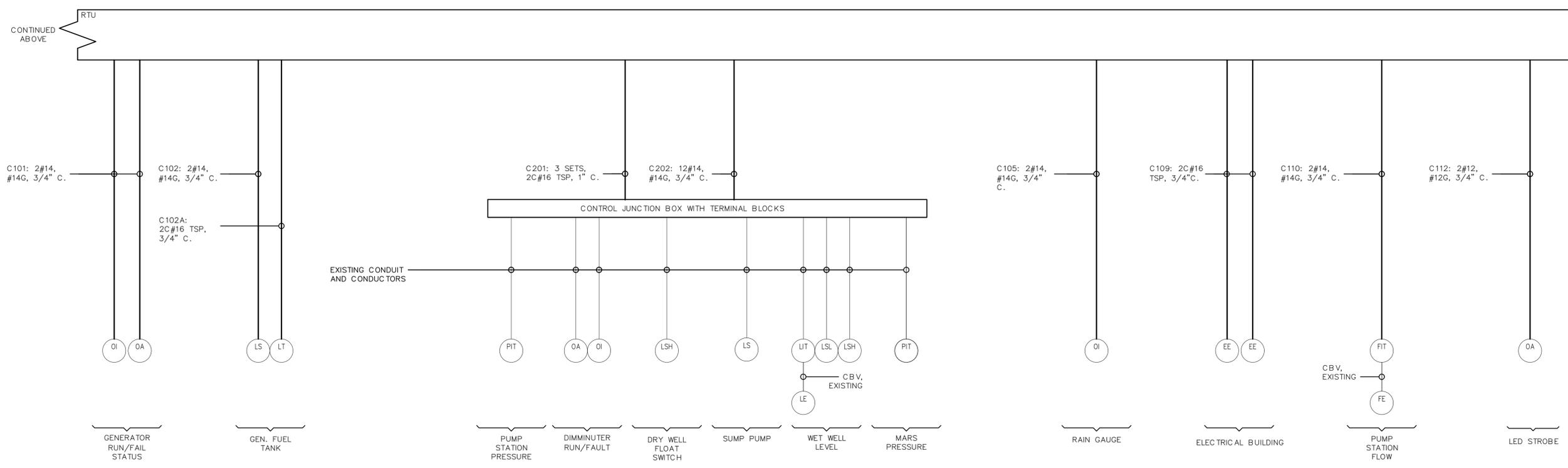
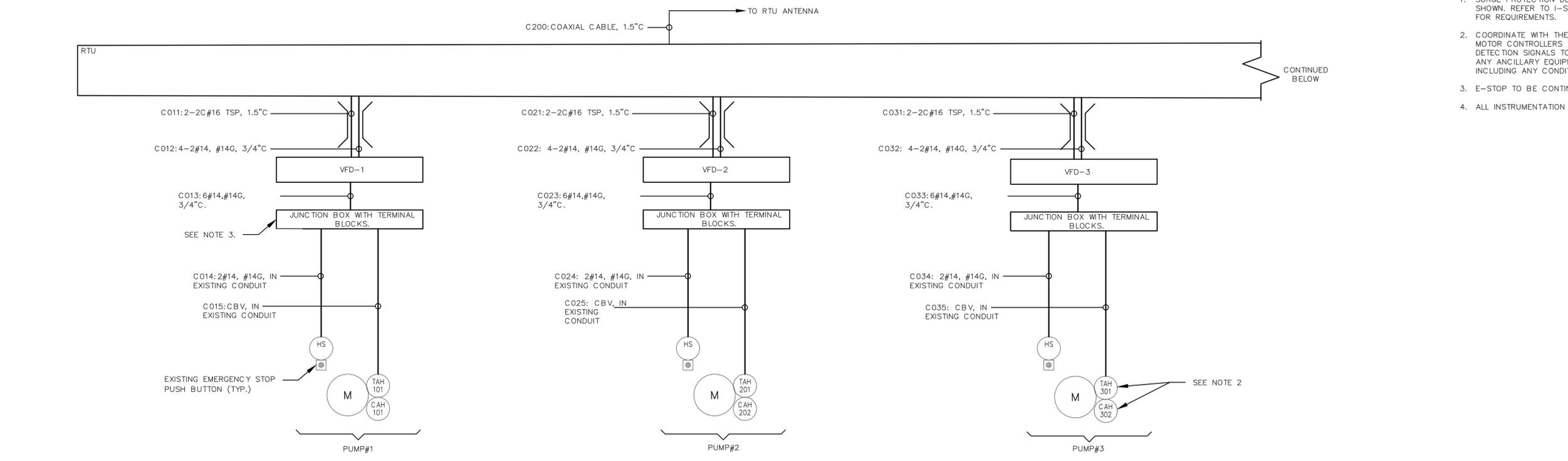
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MLS-1D ELECTRICAL REHABILITATION
ELECTRICAL
ELECTRICAL BUILDING LAYOUT

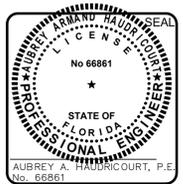
PROJ. START DATE: 2021.APR	SCALE:	E1.05 DRAWING NUMBER
MCE PROJ. # 01024-0194	HORIZONTAL: 1"=1'	
DRAWN: DS	VERTICAL: 1"=1'	
DESIGNED: SS	REVISION:	
CHECKED: MAC		
PROJ. MGR: AAH		
STATUS: ISSUED FOR BID		

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



ELECTRICAL INTERCONNECTION DIAGRAM
SCALE: NTS

REV. NO.	DESCRIPTION	DATE



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MLS-1D ELECTRICAL REHABILITATION
ELECTRICAL INTERCONNECT DIAGRAM

PROJ. START DATE: 2021.APR	SCALE: E1.09
MCE PROJ. # 01024-0194	HORIZONTAL: TBD
DRAWN: DS	VERTICAL: TBD
DESIGNED: SS	REVISION: ----
CHECKED: MAC	ISSUED FOR BID
PROJ. MGR: AAH	

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	BRIDGE CRANE	3.6	13.0	3	5.7			3	7.4	2.05	HOIST OVER WET WELL	20	2		
			3.6			5.7										
			3.6				5.7									
7	30	MONORAIL HOIST	3.6	13.0	3	4.1			3	1.8	0.5	PHASE LOSS MONITOR PLC CONTROL PANEL	20	8		
			3.6			4.1										
			3.6				4.1									
13	20	PREMIER MAG. EQUIP.	0.3	1.1	3	0.4			3	0.4	0.1	SURGE PROTECTION DEVICE	20	14		
			0.3			0.4										
			0.3				0.4									
19	20	SPARE			3	0.0			3			SPARE	30	20		
						0.0										
							0.0									
25	30	SPARE			3	0.0			3			SPARE	20	26		
						0.0										
							0.0									
31	30	SPARE			3	0.0			2			SPARE	30	32		
						0.0										
							0.0									
37		SPACE				0.0			2			SPACE	20	36		
						0.0										
							0.0									
39		SPACE				0.0			2			SPACE		40		
						0.0										
							0.0									
41	PANEL PP-1 LOCATION MANATEE COUNTY BUILDING ELECTRICAL BUILDING NOTES: INTEGRATED PANELBOARD		TOTAL KVA			10.2	10.2	10.2	SERVICE CHARACTERISTICS			VOLTS: 480 PHASE: 3 WIRE: 3			A MLO 225 A MCB	
			GRAND CONNECTED TOTAL KVA			30.5										

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	3.0	1	0.5			1	1.5	0.18	ELEC. BUILDING EMERG. EXIT LIGHT	20	2		
3	20	ELEC. BUILDING RECEPTACLES INSIDE	0.72	6.0	1		1.5		1	6.7	0.8	ELEC. BUILDING LIGHTING INSIDE	20	4		
5	20	ELEC. BUILDING OUTSIDE WALL PACKS	0.5	4.2	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	1.0	2	1.7			2	15.4	1.6	ELEC. BUILDING AC OUTDOOR UNIT #2	25	10		
			0.1			1.7										
11	15	ELEC. BUILDING AC INDOOR UNIT #2	0.1	1.0	2			1.7	3	50.0	6	PANEL LP-2	100	14		
			0.1			1.7										
15	20	SURGE PROTECTION DEVICE	0.1	0.8	3	6.1			1	12.5	1.5	RTU CONTROL PANEL	20	20		
			0.1			6.1										
			0.1				6.1									
21					1	1.6			1					22		
						0.0										
23					1			0.0	1					24		
25					1	0.0			1					26		
27					1			0.0	1					28		
29					1			0.0	1					30		
31					1	0.0			1					32		
33					1			0.0	1					34		
35					1			0.0	1					36		
37					1	0.0			1					38		
39					1			0.0	1					40		
41					1			0.0	1					42		
41	PANEL LP-1 LOCATION MANATEE COUNTY BUILDING ELECTRICAL BUILDING NOTES: INTEGRATED PANELBOARD		TOTAL KVA			9.9	9.3	9.9	SERVICE CHARACTERISTICS			VOLTS: 208Y/120 PHASE: 3 WIRE: 4			A MLO 225 A MCB	
			GRAND CONNECTED TOTAL KVA			29.2										

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	30	UPS RECPTICLE	2	16.7	1	3.0			3	8.3	1	HURRICANE SHELTER	60	2		
3	20	WEST RECEPTICLE	0.18	1.5	1		1.2		1							
5	20	NORTH OUTLETS	0.36	3.0	1			1.4	1							
7	20	EMER.&E. CNTRL.RM LIGHTS	0.6	5.0	1	2.1			1	12.5	1.5	WETWELL LIGHTS	20	8		
9	20	CONTRL.RM. W.LIGHTING	0.8	6.7	1		1.3		1	4.2	0.5	AIR PUMP	20	10		
11	20	OUTSIDE FLOODS	1	8.3	1			1.6	1	5.0	0.6	ENTRANCE LIGHTING	20	12		
13	20	SUMP PUMP	0.07	0.6	1	0.3			1	1.5	0.18	N. CONTROL.RM. OUTLET	20	14		
15	20	EAST&NORTH OUTLETS	0.36	3.0	1		0.4		1	0.5	0.06	FLOW METER	20	16		
17	20	DRYWELL LIGHTS	0.6	5.0	1			0.9	1	2.5	0.3	BATHROOM LIGHT	20	18		
19	20	PLC	0.1	0.8	1	0.1			1			SPARE	20	20		
21	20	PLC	0.1	0.8	1		0.1		1			SPARE	20	22		
23	20	PLC	0.1	0.8	1			0.2	1	0.8	0.1	VEED FUEL READER	20	24		
25	60	FEED TO GENERATOR HOUSE - PNL	1	8.3	3	1.0			1			SPARE	20	26		
			1			2.2										
			1				2.3									
31					1	0.0			1					32		
33					1			0.0	1					34		
35					1			0.0	1					36		
37					1	0.0			1					38		
39					1			0.0	1					40		
41					1			0.0	1					42		
41	PANEL LP-2 LOCATION MANATEE COUNTY BUILDING ELECTRICAL BUILDING NOTES: INTEGRATED PANELBOARD		TOTAL KVA			6.5	5.2	6.4	SERVICE CHARACTERISTICS			VOLTS: 208Y/120 PHASE: 3 WIRE: 4			A MLO 225 A MCB	
			GRAND CONNECTED TOTAL KVA			18.0										

PANEL SCHEDULE LP-2
SCALE: NTS

REV. NO.	DESCRIPTION	DATE



MLS-1D ELECTRICAL REHABILITATION

ELECTRICAL
PANELBOARD SCHEDULES

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

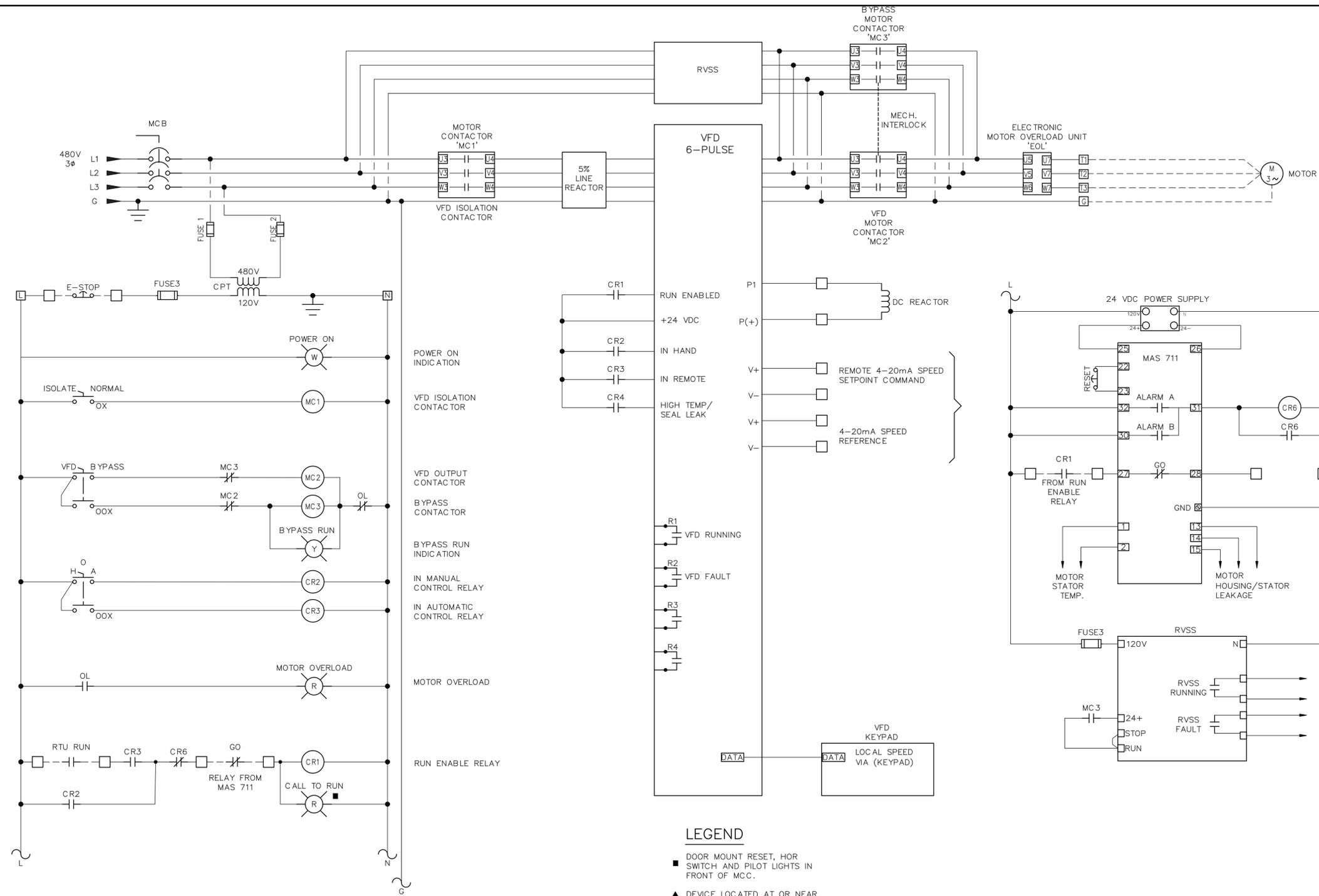
SCALE: TBD
HORIZONTAL: TBD
VERTICAL: TBD

E1.10
DRAWING NUMBER
REVISION

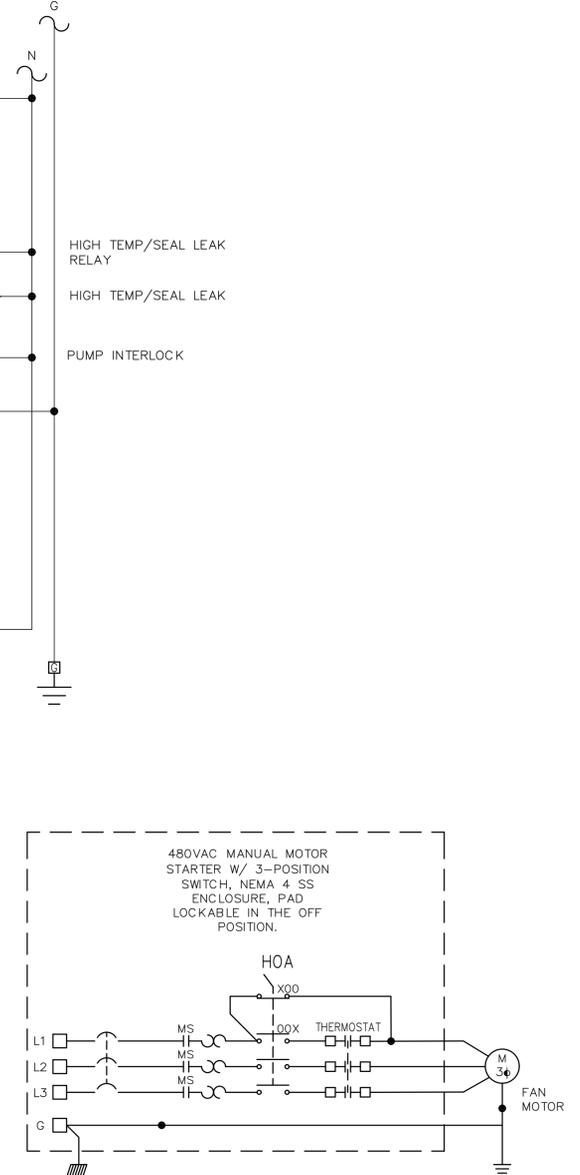
STATUS: ISSUED FOR BID

NOTES:

- EXISTING MAS 711 PUMP MONITORING UNITS TO BE RELOCATED TO NEW VFD IN FIELD.



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

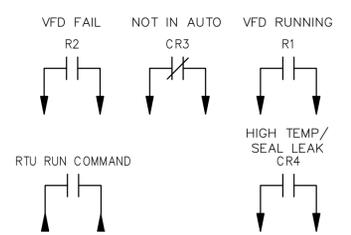


EXHAUST FAN SCHEMATIC
SCALE: NTS

TYPICAL FOR EXHAUST FANS

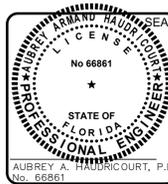
LEGEND

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



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

REV. NO.	DESCRIPTION	DATE



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MLS-1D ELECTRICAL REHABILITATION
ELECTRICAL
ELECTRICAL CONTROLS SCHEMATICS

PROJ. START DATE: 2021.APR	SCALE: TBD	E1.11
MCE PROJ. # 01024-0194	HORIZONTAL: TBD	
DRAWN: DS	VERTICAL: TBD	REVISION: ----
DESIGNED: SS		
CHECKED: MAC		
PROJ. MGR: AAH		

STATUS: ISSUED FOR BID

