



To: Prospective Quoters

From: Will Mastin
City of Mobile Architectural Engineering Department

Re: Azalea City Golf Course – Pump House Repairs - Electrical Upgrades
Project #PR-023-24

Date: April 9, 2024

This Addendum forms a part of, and modifies, the Request for Quotes for the above referenced project, dated March 19, 2024. Acknowledge the receipt of this Addendum No. 2, and all subsequent addenda, in the space provided on the Quote Form. Failure to do so may subject Quoter to disqualification.

General:

Clarifications:

Drawings:

Item 1. Drawings attached, dated Revision 1, 2024-04-04-Addendum #1, shall replace drawings, dated February 5, 2024 and drawings attached in Addendum #1.

RFI's:

Question: “All of the drawings are showing February 5th (2/5/24) on the addendum. Have any of the drawings changed?”

Response: Please disregard drawings included in Addendum #1, and refer to drawings provided in Addendum #2 – dated Revision 1, 2024-04-04-Addendum#1.

END OF ADDENDUM NO. 2

Azalea City Irrigation Pump House Electrical Upgrades

FOR

The City of Mobile, Alabama

Museum Drive
Mobile, Alabama

BY



01/30/2024



AREA OF WORK

SUMMARY OF WORK - AZALEA CITY IRRIGATION PUMP HOUSE

THE PROJECT INVOLVES THE REMOVAL AND REPLACEMENT OF PORTIONS OF THE EXISTING SOUTH AND NORTH EAST WALLS DUE TO EXTENSIVE TERMITE DAMAGE. DUE TO THIS REPAIR THE FOLLOWING ELECTRICAL UPGRADES ARE TO BE INCORPORATED:

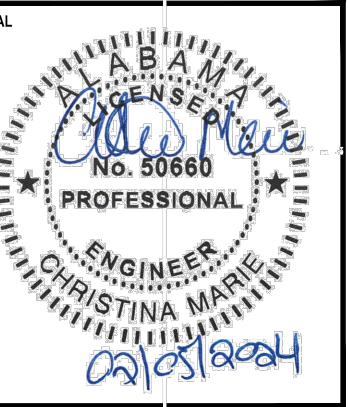
UPGRADING (REMOVE AND REPLACE) THE EXISTING ELECTRICAL EQUIPMENT (INCLUDING ALL ASSOCIATED CONDUCTORS, CONDUIT, BOXES, ETC.) ON THE SOUTH AND EAST WALLS SERVING THE IRRIGATION SYSTEM. THE IRRIGATION SYSTEM IS EXISTING TO REMAIN.

THE EXISTING LIGHT FIXTURES AND ASSOCIATED SWITCH (INCLUDING ALL ASSOCIATED CONDUCTORS, CONDUIT, BOXES, ETC.) TO BE REMOVED AND REPLACED NEW.

A NEW GALVANIZED SUPPORT SYSTEM IS TO BE PROVIDED AND INSTALLED FOR THE NEW INTERIOR EQUIPMENT.

A NEW 20' CLASS II WOODEN POLE IS TO BE PROVIDED AND INSTALLED FOR THE NEW EXTERIOR EQUIPMENT.

DRAWING #	DRAWING DESCRIPTION:
T-1.0	TITLE SHEET
E-1.0	LEGEND & SPECIFICATIONS
E-2.0	EXISTING / NEW WORK ELECTRICAL PLAN
E-3.0	ELECTRICAL SCHEDULES AND DETAILS
E-4.0	ELECTRICAL SCHEDULES AND DETAILS



NUMBER	REVISION	REVISION DESCRIPTION
1		2024-04-04 - ADDENDUM #1

AZALEA CITY IRRIGATION PUMP HOUSE ELECTRICAL UPGRADE MUSEUM DRIVE, MOBILE, AL

DESIGNED BY:
CM

DRAWN BY:
CM

CHECKED BY:
CM

DATE:
02/05/2024

SHEET TITLE:

TITLE SHEET

SHEET:

T-1.0

SUBMITTAL

ELECTRICAL SPECIFICATIONS

1. GENERAL ELECTRICAL:
 - 1.1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE ELECTRICAL SYSTEM AS INDICATED WITHIN THESE DRAWINGS. ALL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES AND WITH MANUFACTURER'S RECOMMENDATIONS.
 - 1.2. THE CONTRACTOR WILL BE REQUIRED TO FURNISH, INSTALL AND CONNECT ALL ITEMS AS INDICATED ON THE DRAWINGS.
 - 1.3. THE ARCHITECT SHALL BE NOTIFIED OF ANY CONFLICTS, OR INTERFERENCES THAT OCCUR BETWEEN INDIVIDUAL DRAWINGS.
 - 1.4. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN A NEAT, FIRST CLASS, WORKMANLIKE MANNER, TO THE APPROVAL OF THE OWNER / ENGINEER AND GOVERNING AUTHORITIES.
 - 1.5. IN ADDITION TO THE MANUFACTURERS STANDARD GUARANTEES, THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS, EQUIPMENT AND WORKMANSHIP AGAINST DEFECTS FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE, AND SHALL CORRECT ANY DEFECTS AT NO ADDITIONAL COST TO THE OWNER. ALL LAMPS SHALL BE GUARANTEED FOR 30 DAYS AFTER ACCEPTANCE.
 - 1.6. THE LOADS SHOWN FOR APPLIANCES AND EQUIPMENT ARE BASED ON DESIGN INFORMATION. THE CONTRACTOR SHALL VERIFY ALL APPLIANCE LOADS PRIOR TO RUNNING THE CIRCUIT. THE MINIMUM CIRCUIT REQUIREMENTS SHALL BE BASED ON THE APPLIANCE NAMEPLATE VALUE OR CODE REQUIREMENTS, WHICHEVER IS MORE STRINGENT. ADDITIONAL COMPENSATION SHALL NOT BE ALLOWED FOR APPLIANCE MODIFICATIONS BY THE CONTRACTOR.
 - 1.7. PRIOR APPROVAL: PRIOR APPROVAL SHALL BE REQUIRED FOR ANY MANUFACTURER OTHER THAN THOSE LISTED FOR ALL SPECIFIED ITEMS IN THESE DRAWINGS. SUBMIT ALL REQUESTS FOR PRIOR APPROVAL 2 WEEKS PRIOR TO BID OPENING. ENGINEER'S APPROVAL WILL BE IN THE FORM OF AN ADDENDUM.
2. CODES & STANDARDS:
 - 2.1. INSTALLATION AND MATERIALS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE FOLLOWING CODES & STANDARDS:
 - 2.1.1. NATIONAL ELECTRICAL CODE.
 - 2.1.2. NFPA 72. NATIONAL FIRE PROTECTION CODE.
 - 2.1.3. INTERNATIONAL BUILDING CODE.
 - 2.1.4. INTERNATIONAL ENERGY CONSERVATION CODE.
 - 2.1.5. NFPA 101.
 - 2.1.6. ADA.
 - 2.1.7. ANSI.
 - 2.1.8. NEMA.
 - 2.1.9. OSHA.
 - 2.1.10. UL.
3. ALTERATIONS & ADDITIONS TO EXISTING WORK:
 - 3.1. PROVIDE ALL NECESSARY ADDITIONS AND ALTERATIONS TO EXISTING WORK AS REQUIRED TO PROVIDE AND MAINTAIN A COMPLETE AND PROPER ELECTRICAL INSTALLATION.
 - 3.2. AS NECESSARY, RELOCATE EXISTING ELECTRICAL WORK SO OTHER TRADES CAN PURSUE THEIR WORK.
 - 3.3. MAINTAIN POWER TO EXISTING PORTIONS OF BUILDINGS FED FROM OR THROUGH AREA IN SCOPE OF THIS CONTRACT.
 - 3.4. COORDINATE ALL REQUIRED OUTAGES WITH OWNER.
4. BASIC MATERIALS & METHODS:
 - 4.1. ALL POWER AND DISTRIBUTION CABLING SHALL BE COPPER TYPE THWN/THHN.
 - 4.2. ALL ELECTRICAL EQUIPMENT, DEVICES, ETC. LOCATED OUTDOORS SHALL BE WEATHERPROOF.
 - 4.3. ELECTRICAL CONTRACTOR SHALL PROVIDE ADEQUATE AND PROPER SUPPORT FOR ALL ELECTRICAL OUTLETS, DEVICES, LIGHT FIXTURES, ETC. BUILT IN OR MOUNTED ON CEILINGS. NO OUTLET BOX, DEVICE, LIGHT FIXTURE, ETC. SHALL BE SUPPORTED FROM ANY ACOUSTICAL CEILING TILE OR DRYWALL CEILINGS. PROVIDE METAL SUPPORTS THAT ARE MADE FOR USE WITH CEILING GRID SYSTEMS OR PROVIDE HANGERS FROM STRUCTURE ABOVE.
 - 4.4. CONDUIT ROUTINGS AND DEVICE/EQUIPMENT LOCATIONS SHOWN ARE DIAGRAMMATIC ONLY, CONTRACTOR SHALL FIELD ROUTE AND LOCATE AS REQUIRED. CONDUIT ROUTINGS SHALL BE PARALLEL OR PERPENDICULAR TO BUILDING LINES.
 - 4.5. JUNCTION BOXES LOCATED ABOVE CEILING SHALL BE INSTALLED FACING DOWN AND SHALL BE ACCESSIBLE AFTER INSTALLATION.
 - 4.6. COORDINATE ALL ELECTRICAL WORK WITH OTHER TRADES AND STRUCTURAL COMPONENTS.
 - 4.7. THE CONDUIT MATERIAL SHALL BE AS FOLLOWS:
 - 4.7.1. BELOW GRADE - RNC (POWER & SITE LIGHTING ONLY), ELBOWS >1-1/2" SHALL BE RGS.
 - 4.7.2. RISER FROM 36" BELOW GRADE - RGS.
 - 4.7.3. CONCEALED RISER FROM 36" BELOW GRADE - RNC (POWER ONLY).
 - 4.7.4. ABOVE GRADE SUBJECT TO PHYSICAL ABUSE - RGS.
 - 4.7.5. ABOVE GRADE NOT SUBJECT TO PHYSICAL ABUSE OR WEATHER - EMT.
 - 4.7.6. INDOORS NOT SUBJECT TO PHYSICAL ABUSE - EMT. OR METAL CLAD CABLE (AS ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION).
 - 4.7.7. FINAL CONDUIT CONNECTIONS TO HEAT PUMPS, AIR HANDLERS, EXHAUST FANS, AND WATER HEATERS SHALL BE LFMC WHETHER INTERIOR OR EXTERIOR.
 - 4.8. CONDUIT FITTINGS SHALL BE AS FOLLOWS:
 - 4.8.1. EMT - <=2" USE STEEL SET SCREW WITH INSULATED THROATS FOR INTERIOR/ USE COMPRESSION FITTINGS WITH INSULATED THROATS FOR EXTERIOR, >2" USE SET-SCREW STEEL WITH INSULATED THROATS.
 - 4.8.2. RGS - THREADED GALVANIZED STEEL.
 - 4.8.3. PVC - PVC APPROVED FOR THE USE.
 - 4.8.4. FMC - ZINC-PLATED STEEL OR CADMIUM-PLATED MALLEABLE IRON SCREW TYPE WITH INSULATED THROAT.
 - 4.8.5. LFMC - CADMIUM-PLATED MALLEABLE IRON OR STEEL COMPRESSION TYPE WITH INSULATED THROAT.
- 4.9. ALL OUTLET BOXES SHALL BE 4"x4"x1-1/2" DEEP MINIMUM.
- 4.10. ALL SIDEWALKS AND PARKING LOT ASPHALT AREAS THAT ARE CUT DUE TO NEW ELECTRICAL SERVICES SHALL BE REPAIRED TO MATCH EXISTING.
- 4.11. ALL DIMENSIONS TO DEVICES AFF SHALL BE TO CENTERLINE UNLESS NOTED OTHERWISE.
- 4.12. COORDINATE LOCATIONS OF ELECTRICAL EQUIPMENT, DEVICES, OUTLETS, FIXTURES, ETC., PRIOR TO ROUGH-IN WORK.
5. GROUNDING & BONDING:
 - 5.1. PROVIDE AN INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS.
 - 5.2. GROUND RODS SHALL BE 3/4"x20" COPPERCLAD STEEL.
 - 5.3. BELOW GRADE CONNECTIONS SHALL BE EXOTHERMIC TYPE.
 - 5.4. ALL CABLES SHALL BE COPPER. ALL BOLTED CONNECTIONS SHALL BE BRONZE.
 - 5.5. WHERE AVAILABLE, BOND TO BUILDING STRUCTURAL STEEL, BUILDING FOUNDATION STEEL, METAL WATER SERVICE PIPING.
 - 5.6. PROVIDE THREE 20' GROUND RODS IN TRIANGLE ARRANGEMENT ON 20' CENTERS FOR MADE ELECTRODE SYSTEM. THE ELECTRICAL CONTRACTOR SHALL BOND NEW COPPER CLAD GROUND RODS WITH TINNED STRANDED BARE COPPER CONDUCTOR.
6. IDENTIFICATION:
 - 6.1. PROVIDE ENGRAVED 1"x3" PHENOLIC LABELS FOR ALL PANELBOARDS, SAFETY SWITCHES, TRANSFORMERS, CABINETS, ETC.
 - 6.2. PAINT THE RACEWAY SYSTEM COUPLINGS AND BOX COVERS ABOVE CEILINGS FOR THE FOLLOWING SYSTEMS AS FOLLOWS:
 - 6.2.1. 208 VOLT SYSTEMS - BLACK.
 - 6.2.2. 480 VOLT SYSTEMS - BROWN.
 - 6.2.3. AFTER PAINTING, WRITE THE CIRCUIT NUMBER (I.E. "LPA-34") ON ALL BRANCH CIRCUIT JUNCTION BOX COVERS ABOVE CEILING WITH WHITE MARKER.
7. GENERAL WIRING DEVICES:
 - 7.1. SWITCHES - SPECIFICATION GRADE, 20 AMP, COLOR BY ARCHITECT.
 - 7.2. RECEPTACLES - SPECIFICATION GRADE, 20 AMP, NEMA 5-20R, COLOR BY ARCHITECT.
 - 7.3. COVER PLATES - NYLON. COLOR BY ARCHITECT.
 - 7.4. SPECIAL RECEPTACLES - PER THE DRAWINGS, VERIFY WITH EQUIPMENT BEING SUPPLIED.
 - 7.5. APPROVED MANUFACTURERS - HUBBELL, LEVITON, EAGLE, PASS & SEYMOUR.
8. SAFETY SWITCHES:
 - 8.1. GENERAL DUTY, VISIBLE BLADE, LOCKABLE, QUICK-MAKE/QUICK-BREAK, HORSEPOWER RATED, FUSED WHERE INDICATED.
 - 8.2. PROVIDE WITH GROUND LUG KIT.
 - 8.3. INTERIOR - NEMA 1.
 - 8.4. EXTERIOR - NEMA 3R.
 - 8.5. APPROVED MANUFACTURERS - SQUARE D, GENERAL ELECTRIC, SIEMENS.
9. MOTOR STARTERS:
 - 9.1. MANUAL TYPE SHALL BE TOGGLE WITH THERMAL OVERLOAD.
 - 9.2. MAGNETIC TYPE SHALL HAVE SOLID STATE OVERLOAD RELAY WITH Ø LOSS AND Ø UNBALANCE PROTECTION, HOA SWITCH, RED RUN AND GREEN STOP LED LIGHTS.
 - 9.3. INTERIOR - NEMA 1.
 - 9.4. EXTERIOR - NEMA 3R.
 - 9.5. APPROVED MANUFACTURERS - SQUARE D, GENERAL ELECTRIC, CUTLER-HAMMER, SIEMENS, EATON.
10. PANELBOARDS:
 - 10.1. FRONT ACCESSIBLE, BOLT-ON MOLDED CASE C/Bs, COPPER PHASE & NEUTRAL BUSSING, COPPER GROUND BAR, FULLY RATED (SERIES RATING NOT ALLOWED).
 - 10.2. ENCLOSURES SHALL BE DOOR-IN-DOOR CONSTRUCTION.
 - 10.3. INTERIOR - NEMA 1.
 - 10.4. ALL INTERIOR PANELBOARDS ARE TO HAVE FOUR SPARE 3/4" CONDUITS INSTALLED TO AN ACCESSIBLE SPACE FOR FUTURE.
 - 10.5. EXTERIOR - NEMA 3R.
 - 10.6. PROVIDE TYPE-WRITTEN DIRECTORY IN CLEAR SLEEVE ON INSIDE OF DOOR.
 - 10.7. APPROVED MANUFACTURERS - SQUARE D, GENERAL ELECTRIC, SIEMENS.
11. DRY-TYPE TRANSFORMERS <800V:
 - 11.1. 150" RISE.
 - 11.2. COPPER WINDINGS.
 - 11.3. PROVIDE WITH 4" HIGH CONCRETE HOUSEKEEPING PAD.
 - 11.4. GROUND SECONDARY TO NEAREST BUILDING STEEL.
 - 11.5. APPROVED MANUFACTURERS - SQUARE D, GENERAL ELECTRIC, SIEMENS.
12. LIGHTING:
 - 12.1. FOR ALL FIXTURES, PROVIDE ALL MOUNTING HARDWARE AS REQUIRED FOR A FULLY FUNCTIONAL AND COMPLETE INSTALLATION.

ABBREVIATIONS

A	AMPS	MCM	THOUSAND CIRCULAR MILS
AC	ABOVE COUNTER	MH	MANHOLE
AF	AMP FRAME	MIN	MINIMUM
AFF	ABOVE FINISHED FLOOR	MISC	MISCELLANEOUS
AFG	ABOVE FINISHED GRADE	MLO	MAIN LUGS ONLY
AHU	AIR HANDLING UNIT	MNT	MOUNTING HEIGHT
AL	ALUMINUM	MTG	MOUNTING
ARCH	ARCHITECT OR ARCHITECTURAL	MTS	MANUAL TRANSFER SWITCH
AT	AMP TRIP	MV	MEDIUM VOLTAGE
ATS	AUTOMATIC TRANSFER SWITCH	N1	NEMA 1
ATU	AIR TERMINAL UNIT	N3R	NEMA 3R
AWG	AMERICAN WIRE GAUGE	N/A	NOT APPLICABLE
BAS	BUILDING AUTOMATION SYSTEM	NA	NOT APPLICABLE
BFG	BELOW FINISHED GRADE	NEC	NATIONAL ELECTRICAL CODE
BJ	BONDING JUMPER	NESC	NATIONAL ELECTRICAL SAFETY CODE
BKR	CIRCUIT BREAKER	NEU	NEUTRAL
BLDG	BUILDING	OCPD	OVERCURRENT PROTECTION DEVICE
BOD	BASIS OF DESIGN	OFOI	OWNER FURNISHED OWNER INSTALLED
C	CONDUIT	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
C/B	CIRCUIT BREAKER	OH	OVERHEAD
CL	CURRENT LIMITING	OHE	OVERHEAD ELECTRIC
C/L	CENTERLINE	OHP	OVERHEAD PRIMARY
CLG	CEILING	OHS	OVERHEAD SECONDARY
CKT	CIRCUIT	PBD	PANELBOARD
CT	CURRENT TRANSFORMER	PF	POWER FACTOR
CU	COPPER	PNL	PANELBOARD
DDC	DIRECT DIGITAL CONTROL	PT	POTENTIAL TRANSFORMER
DEMO	DEMOLISH	PWR	POWER
EC	ELECTRICAL CONTRACTOR	REC	RECEPTACLE
EGC	EQUIPMENT GROUNDING CONDUCTOR	REQD	REQUIRED
ELEC	ELECTRICAL	RM	ROOM
EMGB	ELECTRICAL MAIN GROUNDING BUSBAR	RGS	RIGID GALVANIZED STEEL CONDUIT
EF	EXHAUST FAN	RNC	RIGID NON-METALLIC CONDUIT
EX	EXISTING TO REMAIN	RVSS	REDUCED VOLTAGE SOLID STATE
EXT	EXTERIOR	SA	SURGE ARRESTER
EWC	ELECTRIC WATER COOLER	SCA	SHORT CIRCUIT AMPS
EMT	ELECTRICAL METALLIC TUBING	SF	SUPPLY FAN
EQUIP	EQUIPMENT	SPEC	SPECIFICATION
FMC	FLEXIBLE METAL CONDUIT	SWBD	SWITCHBOARD
FACP	FIRE ALARM SYSTEM CONTROL PANEL	SWGR	SWITCHGEAR
FU	FUSE	TBB	TELECOMMUNICATIONS BONDING BACKBONE
F/A	FIRE ALARM	TR	TELECOMMUNICATIONS ROOM
FLA	FULL LOAD AMPS	TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
FLR	FLOOR	TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
FVNR	FULL VOLTAGE NON-REVERSING	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
GFI	GROUND FAULT INTERRUPTER	TYP	TYPICAL
G	GROUND (OR GFI FOR RECEPTACLE SUBSCRIPT)	UFR	UNDERFLOOR RACEWAY
GC	GENERAL CONTRACTOR	UG	UNDERGROUND
GND	GROUND	UGE	UNDERGROUND ELECTRIC
GEC	GROUNDING ELECTRODE CONDUCTOR	UGP	UNDERGROUND PRIMARY
HH	HANDHOLE	UGS	UNDERGROUND SECONDARY
HOA	HAND-OFF-AUTOMATIC	UL	UNDERWRITERS' LABORATORIES
HP	HEAT PUMP OR HORSEPOWER	UNO	UNLESS NOTED OTHERWISE
HVAC	HEATING, VENTILATION & AIR-CONDITIONING	UPS	UNINTERRUPTIBLE POWER SUPPLY
IG	ISOLATED GROUND	V	VOLT
IMC	INTERMEDIATE METAL CONDUIT	VA	VOLT-AMPERES
JB	JUNCTION BOX	VAR	VOLT-AMPERES REACTIVE
k	KILO	VAV	VARIABLE AIR VOLUME UNIT
KAIC	KILO-AMPERE INTERRUPTING CAPABILITY	W	WATTS
KCMIL	THOUSAND CIRCULAR MILS	WAO	WORK AREA OUTLET
LCP	LIGHTING CONTROL PANEL	WP	WEATHERPROOF
LTG	LIGHTING	WSR	WITHSTAND RATING
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT	XFMR	TRANSFORMER
LV	LOW VOLTAGE	XP	EXPLOSION PROOF
MAX	MAXIMUM	φ	PHASE
MCA	MINIMUM CIRCUIT AMPACITY	72°	DEGREES
MCC	MOTOR CONTROL CENTER	Δ	DELTA
MCE	MAIN COMMUNICATIONS EQUIPMENT ROOM	Ω	OHMS

ELECTRICAL LEGEND

GENERAL ELECTRICAL DEVICES:

- ⊕ SINGLE POLE LIGHTING SWITCH. MOUNT 48" TO TOP OF BOX AFF UNLESS NOTED OTHERWISE. SUBSCRIPT INDICATES AS FOLLOWS:
 - M - 30 AMP TWO POLE MOTOR RATED SWITCH MOUNTED AT THE EQUIPMENT. PROVIDE PHENOLIC LABEL.
- ⊕ DUPLEX RECEPTACLE NEMA 5-20R. MOUNT 18" AFF UNLESS NOTED OTHERWISE. VERIFY DUPLEX MOUNTING REQUIREMENTS WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN. SUBSCRIPT INDICATES AS FOLLOWS:
 - G - GROUND FAULT CIRCUIT INTERRUPTER TYPE.
 - WP - GFI DEVICE WITH DIECAST WEATHERPROOF BACKBOX & DIECAST WEATHERPROOF (IN-USE) COVERPLATE. IN EXTERIOR LOCATIONS MOUNT 30" AFG. WEATHERPROOF OUTLET BOX COVERPLATES ARE TO BE LISTED AND IDENTIFIED AS "EXTRA-DUTY".
 - 84" - MOUNTING HEIGHT OF DEVICE AFF.
 - 21 - # INDICATES PANELBOARD CKT NUMBER
- ⊕ QUADRAPLEX RECEPTACLE (TWO NEMA 5-20R) MOUNTED 18" AFF. UNLESS NOTED OTHERWISE.

MISCELLANEOUS EQUIPMENT:

- ⊕ EXHAUST FAN.
- ⊕ ELECTRICAL CONNECTION TO EQUIPMENT. VERIFY LOCATION WITH EQUIPMENT PROVIDER.
- ▬ DISTRIBUTION & POWER EQUIPMENT:
 - ▬ PANELBOARD. MOUNT AS INDICATED. SEE PANELBOARD SCHEDULES.
 - ▬ NON-FUSED GENERAL DUTY SAFETY SWITCH. SIZE FOR LOAD BEING SERVED.
 - ▬ FUSED GENERAL DUTY SAFETY SWITCH. SIZE FOR LOAD BEING SERVED.
 - ▬ WALL MOUNTED TRANSFORMER WITH CONCRETE HOUSEKEEPING PAD. SEE TRANSFORMER SCHEDULE FOR SIZE AND TYPE.

LIGHTING FIXTURES:

SEE LIGHTING FIXTURE SCHEDULE FOR SYMBOLS AND DESCRIPTIONS. THE FIXTURE MARK IN AN ENCLOSED SPACE WITH SIMILAR FIXTURES WILL APPLY TO ALL FIXTURES IN THE SPACE.

OTHER:

- ⌒ CIRCUIT RUN CONCEALED ABOVE CEILING OR IN WALL.
- ⌒ CIRCUIT RUN CONCEALED IN OR BELOW FLOOR SLAB OR UNDERGROUND.
- ⌒ HOMERUN TO PANELBOARD. ANY CIRCUIT WITHOUT FURTHER DESIGNATION SHALL BE 2#12, #12G, 3/4"C. TICK MARKS INDICATE # OF CONDUCTORS (EGC NOT SHOWN). MINIMUM SIZE ON 120V HOMERUNS GREATER THAN 50 FEET SHALL BE #10 AWG. MINIMUM SIZE ON 120V HOMERUNS GREATER THAN 100 FEET SHALL BE #8 AWG. MINIMUM SIZE ON 277V HOMERUNS GREATER THAN 100 FEET SHALL BE #10 AWG. INCREASE CONDUIT SIZE AS REQUIRED PER NEC. UNDERLINED TEXT INDICATES CIRCUIT DESIGNATION.
- ⊕ LIGHT FIXTURE IDENTIFICATION TAG. SEE LIGHT FIXTURE SCHEDULE FOR SYMBOLS & DETAILS.
- ⊕ SHEET NOTE TAG.
- ⊕ PANELBOARD, SWITCHBOARD, TRANSFORMER & ELECTRICAL EQUIPMENT IDENTIFICATION TAG.
- ⌒ LEADERS.



NUMBER	REVISION	REVISION DESCRIPTION
1		2024-04-04 - ADDENDUM #1

AZALEA CITY
IRRIGATION PUMP HOUSE ELECTRICAL UPGRADE
MUSEUM DRIVE, MOBILE, AL

DESIGNED BY:
CM

DRAWN BY:
CM

CHECKED BY:
CM

DATE:
02/05/2024

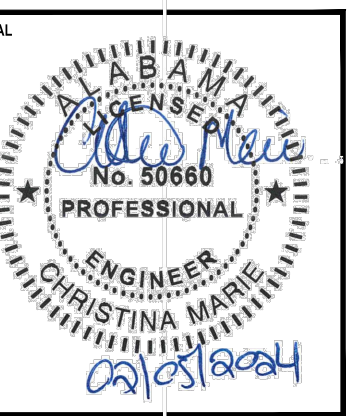
SHEET TITLE:

ELECTRICAL LEGENDS,
ABBREVIATIONS, NOTES
AND SPECIFICATIONS

SHEET:

E-1.0

SUBMITTAL

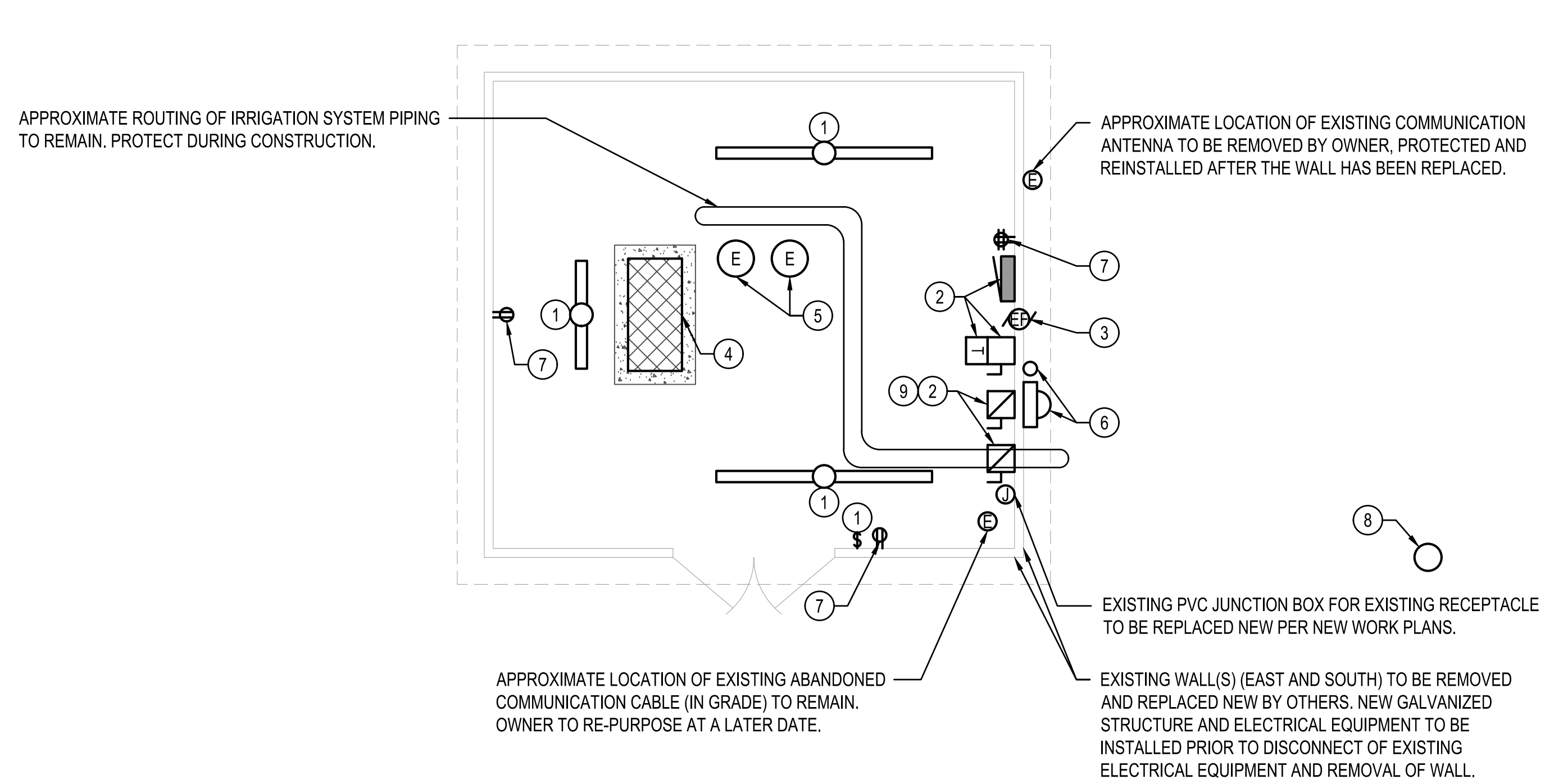


EXISTING / DEMOLITION SHEET NOTES

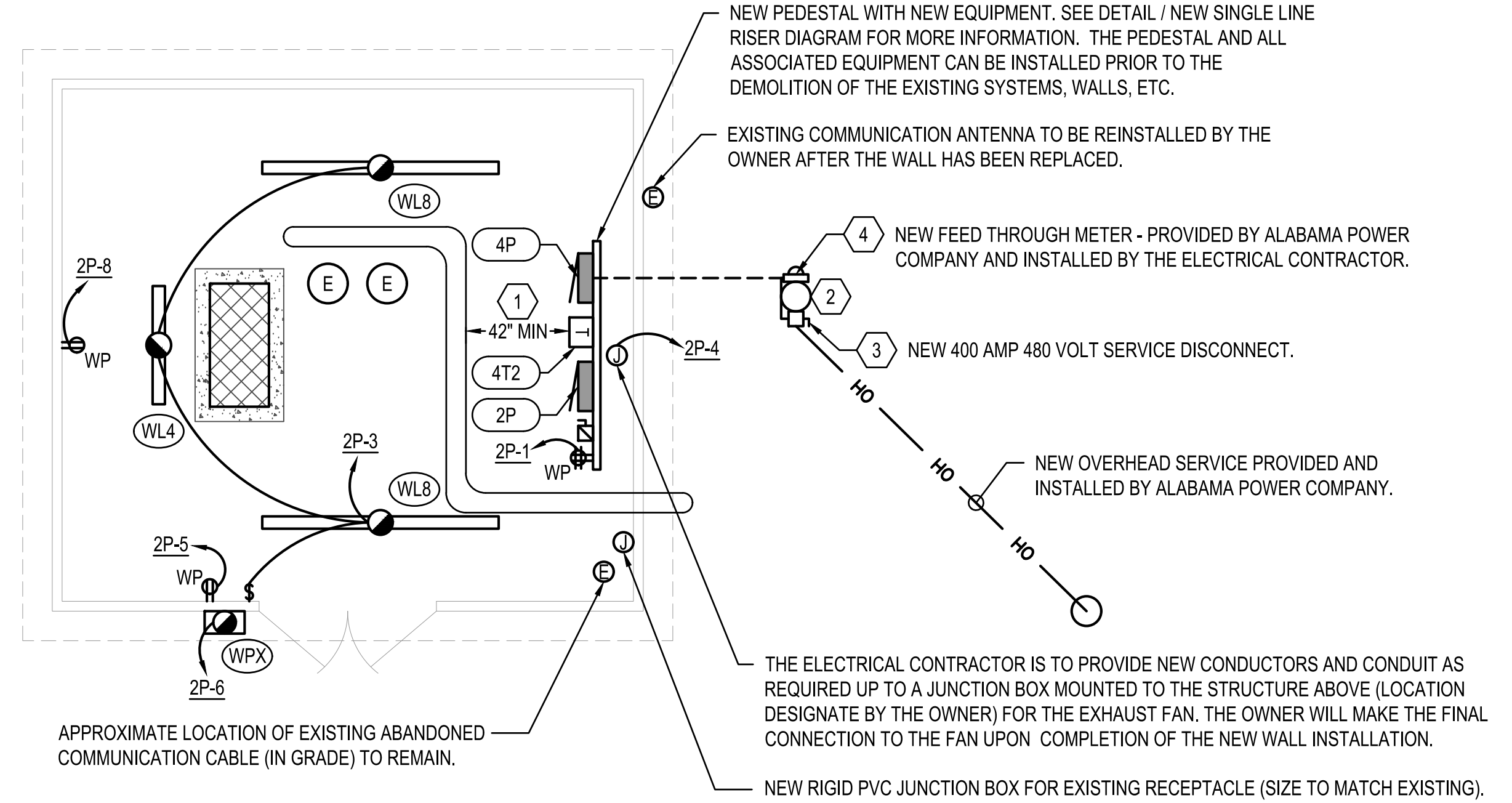
- ① EXISTING LIGHTING FIXTURE(S) AND ASSOCIATED LIGHTING CONTROL DEVICE IS TO BE COMPLETELY REMOVED AND REPLACED NEW PER NEW WORK PLANS. ALL ASSOCIATED CONDUCTORS, CONDUIT, BOXES, ETC. ARE TO BE REMOVED AND REPLACED NEW PER NEW WORK PLANS. LIGHT SWITCH IS TO BE RELOCATED PER NEW WORK PLANS.
- ② EXISTING ELECTRICAL EQUIPMENT TO BE COMPLETELY REMOVED AND REPLACED NEW PER NEW WORK PLANS. ALL ASSOCIATED CONDUCTORS, CONDUIT, BOXES, ETC. ARE TO BE REMOVED AND REPLACED NEW PER NEW WORK PLANS.
- ③ EXISTING ROOF MOUNTED EXHAUST FAN TO REMAIN - ALL ASSOCIATED CONDUCTORS, CONDUIT, BOXES, ETC. ARE TO BE REMOVED AND REPLACED NEW PER NEW WORK PLANS.
- ④ EXISTING IRRIGATION SYSTEM TO REMAIN - PROTECT DURING RENOVATIONS.
- ⑤ EXISTING IRRIGATION PUMPS TO REMAIN - PROTECT DURING RENOVATIONS.
- ⑥ EXISTING UTILITY METER AND WEATHERHEAD TO BE REMOVED AND REPLACED NEW PER NEW WORK PLANS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE DISCONNECT / RECONNECT OF THE SERVICE WITH ALABAMA POWER COMPANY PRIOR TO BEGINNING ANY WORK.
- ⑦ EXISTING RECEPTACLE TO BE REPLACED NEW (AND RELOCATED IF APPLICABLE) - ALL ASSOCIATED CONDUCTORS, CONDUIT, BOXES, ETC. ARE TO BE REMOVED AND REPLACED NEW PER NEW WORK PLANS.
- ⑧ EXISTING UTILITY POLE (TO REMAIN) IS APPROXIMATELY 15" FROM THE CORNER OF THE BUILDING. ELECTRICAL CONTRACTOR TO FIELD VERY.
- ⑨ CURRENTLY IT APPEARS THERE IS A WOODEN BOARD SUPPORTING A MEMBER OF THE ROOF SYSTEM USING THE EXISTING SERVICE DISCONNECT AS A BASE. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO REMOVING THIS PIECE OF EQUIPMENT.

NEW WORK SHEET NOTES

- ① INSTALL PEDESTAL AND EQUIPMENT SO THAT THERE IS A MINIMUM OF 42" BETWEEN THE FACE OF THE EQUIPMENT AND THE FRONT OF THE EXISTING PIPE.
- ② APPROXIMATE LOCATION OF NEW SERVICE ON NEW POLE (POLE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR). ALL ASPECTS OF THE NEW ELECTRICAL SERVICE ARE TO BE COORDINATED WITH ALABAMA POWER COMPANY AND INCLUDED IN THE CONTRACTOR'S BID PRICE. THE POLE SHALL BE INSTALLED SO THAT ALL REQUIRED CLEARANCES AND WORKSPACES ABOUT THE METER AND THE DISCONNECT ARE MAINTAINED. THE POLE SHALL BE LOCATED APPROXIMATELY 5' FROM THE EDGE OF THE BUILDING ROOF.
- ③ THE DISCONNECT SHALL BE INSTALLED ON THE NEW POLE IN ACCORDANCE WITH NEC 240.24 SO THAT THE CENTER OF THE GRIP OF THE OPERATING HANDLE IN THE HIGHEST POSITION DOES NOT EXCEED 6'-7" FROM FINISHED GRADE.
- ④ THE METER SHALL BE INSTALLED ON THE NEW POLE IN ACCORDANCE WITH ALABAMA POWER COMPANY REQUIREMENTS SO THAT THE CENTER OF METER SHALL NOT BE MORE THAN FIVE FEET OR LESS THAN FOUR FEET ABOVE FINAL GRADE OR FLOOR LEVEL.



1 EXISTING ELECTRICAL PLAN
 SCALE: 1/4"=1'-0"



2 NEW WORK ELECTRICAL PLAN
 SCALE: 1/4"=1'-0"

NUMBER	REVISION	REVISION DESCRIPTION
1		2024-04-04 - ADDENDUM #1

AZALEA CITY
IRRIGATION PUMP HOUSE ELECTRICAL UPGRADE
 MUSEUM DRIVE, MOBILE, AL

DESIGNED BY:
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DRAWN BY:
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CHECKED BY:
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SHEET TITLE:
EXISTING / NEW WORK ELECTRICAL PLANS

SHEET:
E-2.0

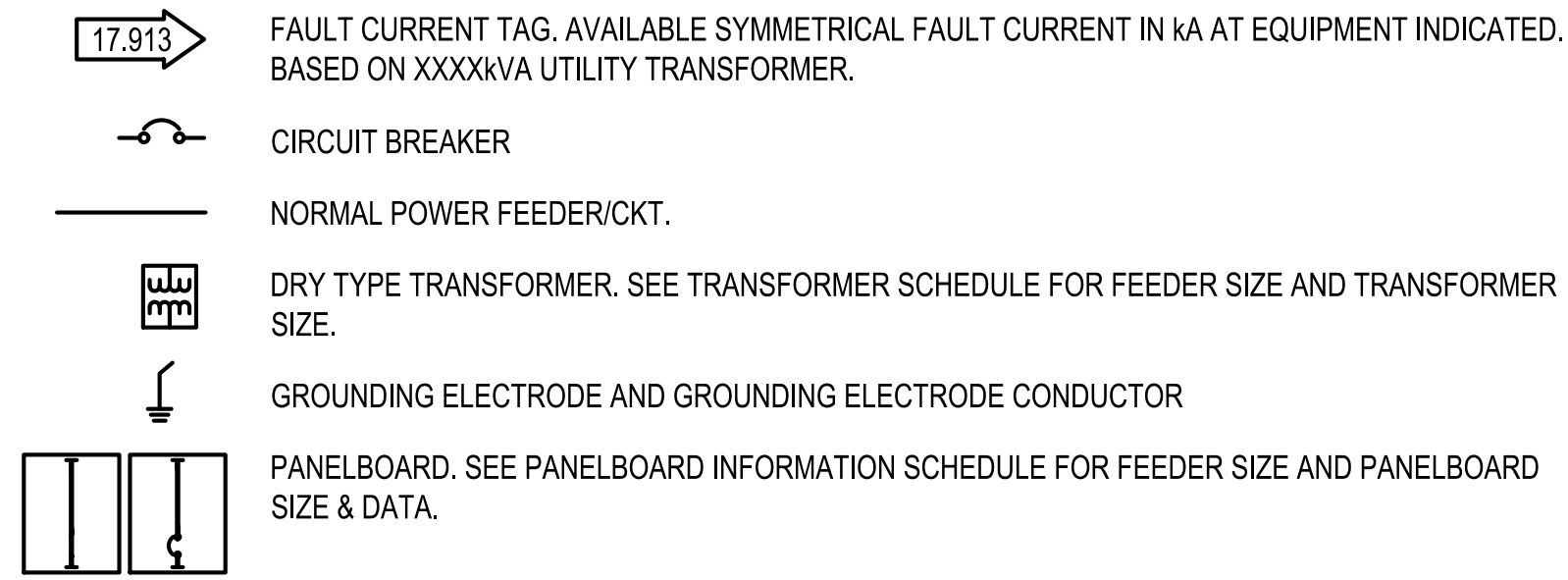
PANELBOARD INFORMATION SCHEDULE														
MARK	ENCLOSURE TYPE	MOUNTING STYLE	VOLTAGE	Ø	WIRE	MAIN BKR	IF MLO, SERVING BKR	SERVICE RATED	KAIC RATING	Ø BUS RATING (A)	N BUS RATING	FEEDER		
												CONDUCTORS	GROUND	CONDUIT
4P *	NEMA 3R	SURFACE	480Y/277	3	4	250	N/A	YES	14	250	100%	4#250	NONE	3"Ø
2P	NEMA 3R	SURFACE	208Y/120	3	4	60	N/A	NO	10	100	100%	4#4	#8	1 1/4"Ø

NOTES
 ALL PANELBOARDS ARE TO HAVE COPPER BUS.
 ALL PANELBOARDS ARE TO HAVE ARC FLASH WARNING LABEL IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ARTICLE 110.16.
 * THIS PANEL SHALL HAVE FEED THROUGH LUGS.

TRANSFORMER SCHEDULE										
MARK	PRIMARY VOLTAGE	SECONDARY VOLTAGE	Ø	WIRE	KVA	*MNT	**TYPE	PRIMARY FEEDER SIZE	SIZE GEC TO 3/4"X10" GND ROD	SIZE GEC TO FOUNDATION REBAR, WATER & BLDG STEEL

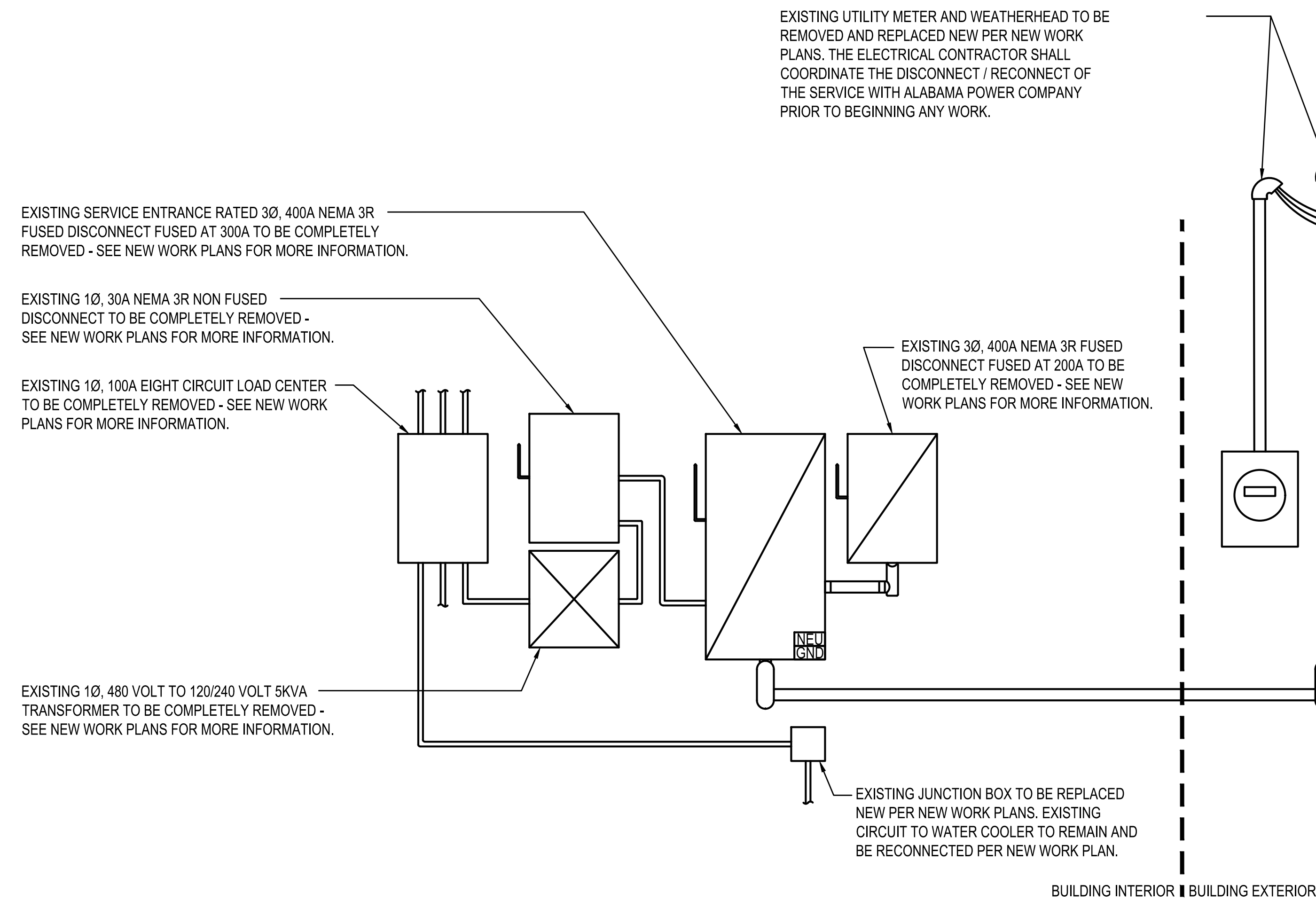
*MNT: WALL=WALL MOUNTED, PROVIDE MANUFACTURER'S WALL BRACKET.
 **TYPE: STD=STANDARD PER SPECIFICATIONS.
 SEE TRANSFORMER MOUNTING DETAIL.

SINGLE LINE DIAGRAM LEGEND



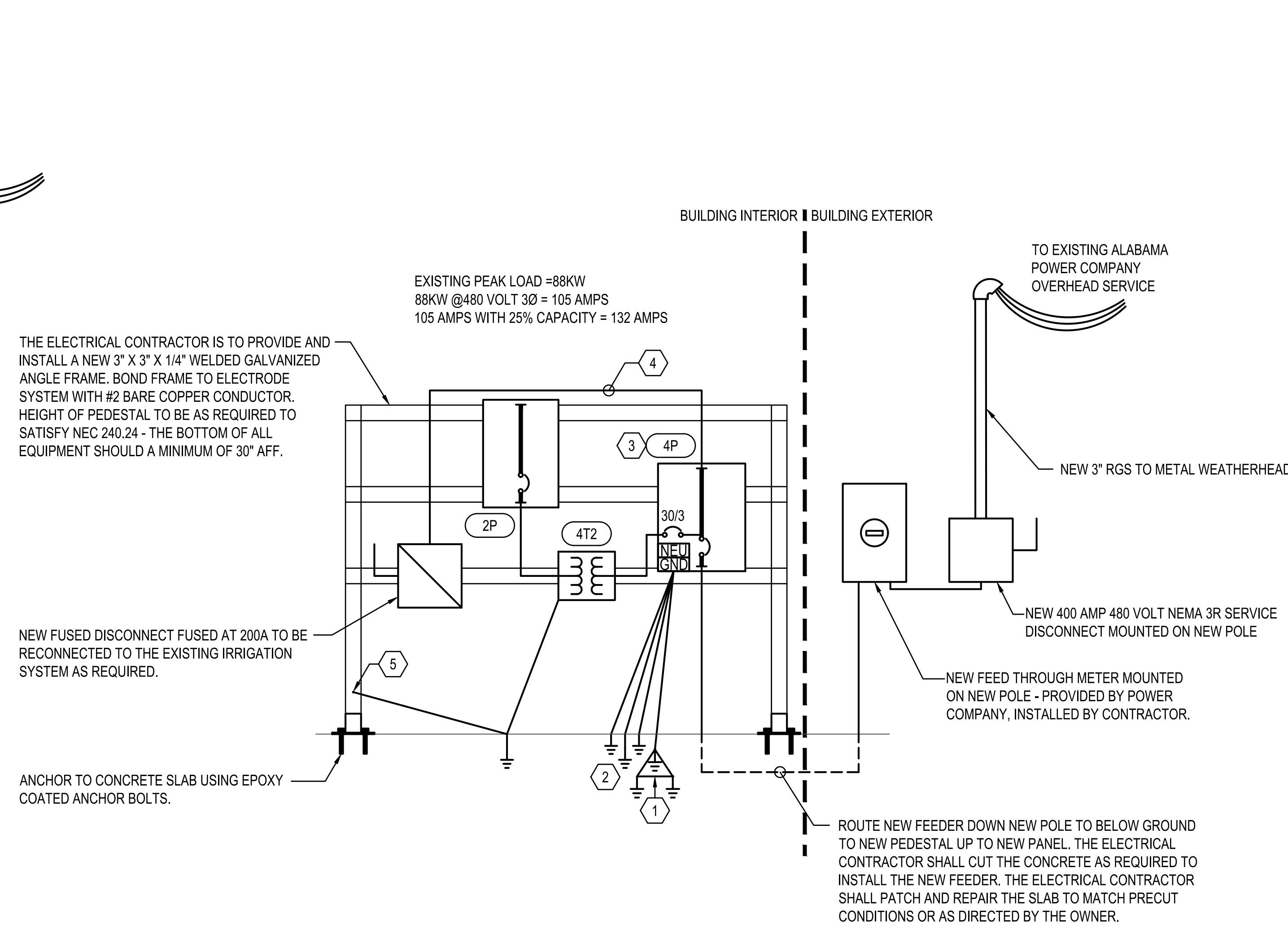
SINGLE LINE DIAGRAM NOTES

- #2 GEC TO THREE 20' GROUND RODS ON 20' CENTERS IN EQUILATERAL DELTA ARRANGEMENT.
- #2 BONDS TO FOUNDATION REBAR, BUILDING WATER SERVICE AND BUILDING STEEL.
- BASED ON AVAILABLE FAULT CURRENT FROM A 480 VOLT 3Ø 150 KVA OVERHEAD TRANSFORMER BANK, THE ELECTRICAL CONTRACTOR SHALL LABEL THE NEW PANEL "4P" AS "SERVICE ENTRANCE RATED" AND IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 110.24; AVAILABLE FAULT CURRENT 9,019 AMPS. FINAL PARAMETERS (DISTANCE, TRANSFORMER SIZE, ETC.) SHALL BE COORDINATED WITH ALABAMA POWER COMPANY PRIOR TO LABELING, ADJUST AS REQUIRED.
- NEW 4#3/0, #4G IN 2-1/2" CONDUIT TO EXISTING IRRIGATION PUMP EQUIPMENT.
- BOND FRAME TO ELECTRODE SYSTEM WITH #2 BARE COPPER CONDUCTOR.



NOTE: UNLESS OTHERWISE NOTED, ALL EXISTING IS TO BE REMOVED AND REPLACED NEW.

1 EXISTING SERVICE ON INTERIOR OF BUILDING
 NOT TO SCALE



NOTE: UNLESS OTHERWISE NOTED, ALL NEW EXPOSED CONDUIT TO BE GRS.

2 NEW SERVICE PEDESTAL INTERIOR OF BUILDING
 NOT TO SCALE

SUBMITTAL



NUMBER	REVISION	REVISION DESCRIPTION
1		2024-04-04 - ADDENDUM #1

AZALEA CITY
IRRIGATION PUMP HOUSE ELECTRICAL UPGRADE
 MUSEUM DRIVE, MOBILE, AL

DESIGNED BY:
 CM
 DRAWN BY:
 CM
 CHECKED BY:
 CM
 DATE:
 02/05/2024

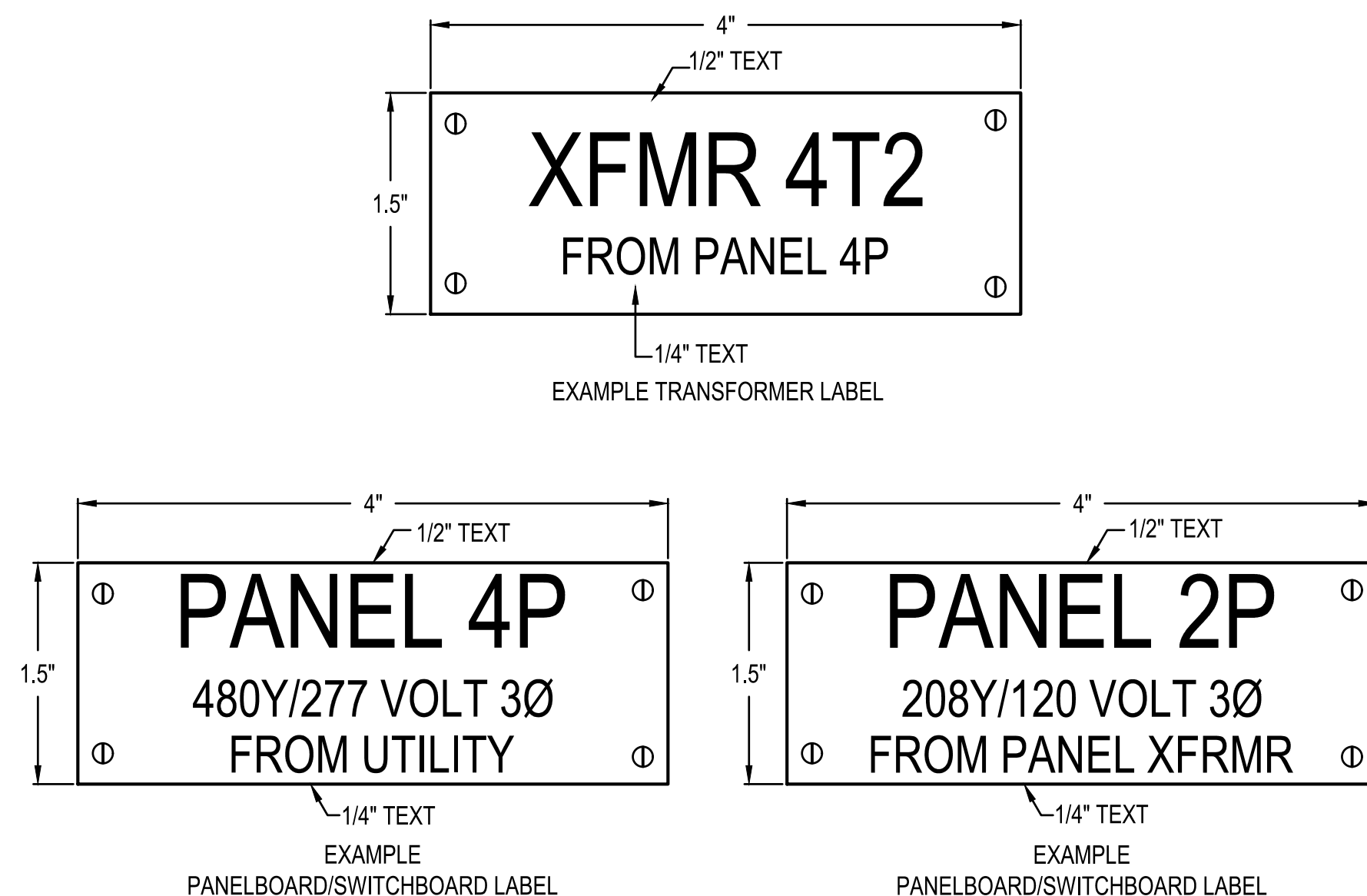
SHEET TITLE:
 ELECTRICAL RISERS AND SCHEDULES

SHEET:
E-3.0

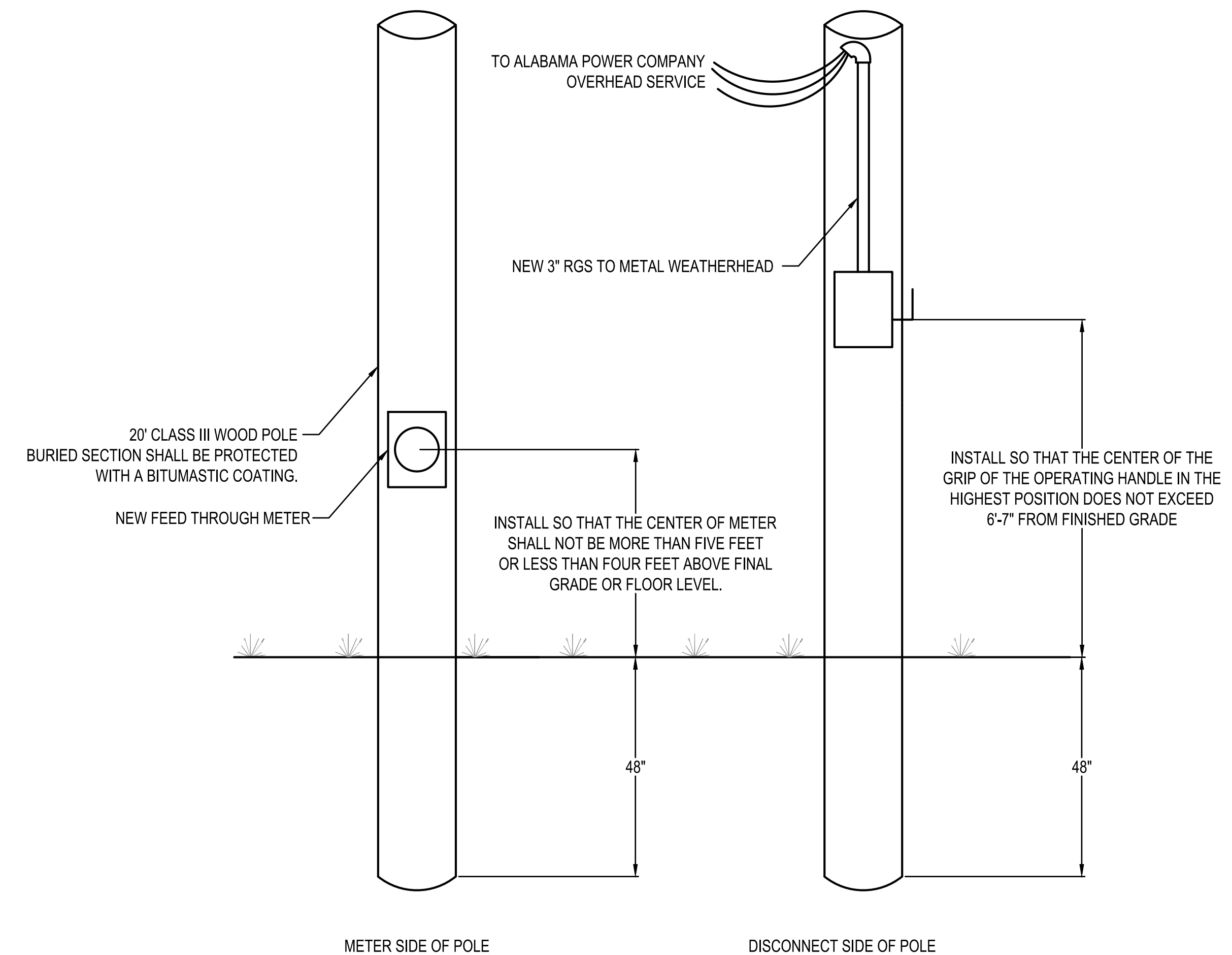
LIGHTING FIXTURE SCHEDULE						
MARK	MANUFACTURER AND CATALOG NUMBER	TYPE	WATTS	VOLTAGE	MOUNTING	NOTES
WL8	LITHONIA LIGHTING CLX-L96-6000LM-SEF-RDL-MVOLT-GZ1-35K-80CRI-PS1050-GALVW	LED	24	MVOLT	SURFACE	8' LED UTILITY FIXTURE
WPX	LITHONIA LIGHTING WPX1-LED-P2-40K-MVOLT-E14WCDDBDX	LED	24	MVOLT	SURFACE	LED WALL SCONCE WITH INTEGRAL EMERGENCY BATTERY BACK UP. PROVIDE WITH PHOTOCELL FOR LIGHTING CONTROL.
NOTES	FIXTURES W/HALF FILLED CENTERS TO BE PROVIDED W/EMERGENCY BALLAST; MAX AVAILABLE FOR FIXTURE. COORDINATE THE FINAL LOCATION WITH OWNER PRIOR TO ROUGH IN. COORDINATE THE FINAL FXTURE SELECTION WITH THE OWNER PRIOR TO ORDER.					

PANELBOARD SCHEDULE													
MARK: PANEL 4P													
CKT #	LOAD DESCRIPTION	BREAKER		PHASE (kVA)			PHASE (kVA)			BREAKER		LOAD DESCRIPTION	CKT #
		P	TRIP	A	B	C	A	B	C	TRIP	P		
1				44.3			5.0					2	
3	EXISTING IRRIGATION SYSTEM VIA FEED THROUGH LUGS			44.3				5.0		30	3	4	
5						44.3						6	
7	SPARE	1	20							20	1	8	
9	SPARE	1	20							20	1	10	
11	SPARE	1	20							20	1	12	
				44.3	44.3	44.3	5.0	5.0	5.0				
TOTAL (kVA) ØA				49.3	ØB	49.3	ØC	49.3	HIGH PHASE (AMPS)		178.0		
TOTAL CONNECTED LOAD (kVA)				147.9			TOTAL LOAD (AMPS)		177.9				
CREATE A DIRECTORY TO INDICATE INSTALLED LOADS. INDICATE LOAD TYPE (REC, LTG, AHU-1, ETC.) AND ROOM NUMBERS SERVED FOR EVERY BRANCH CIRCUIT.													

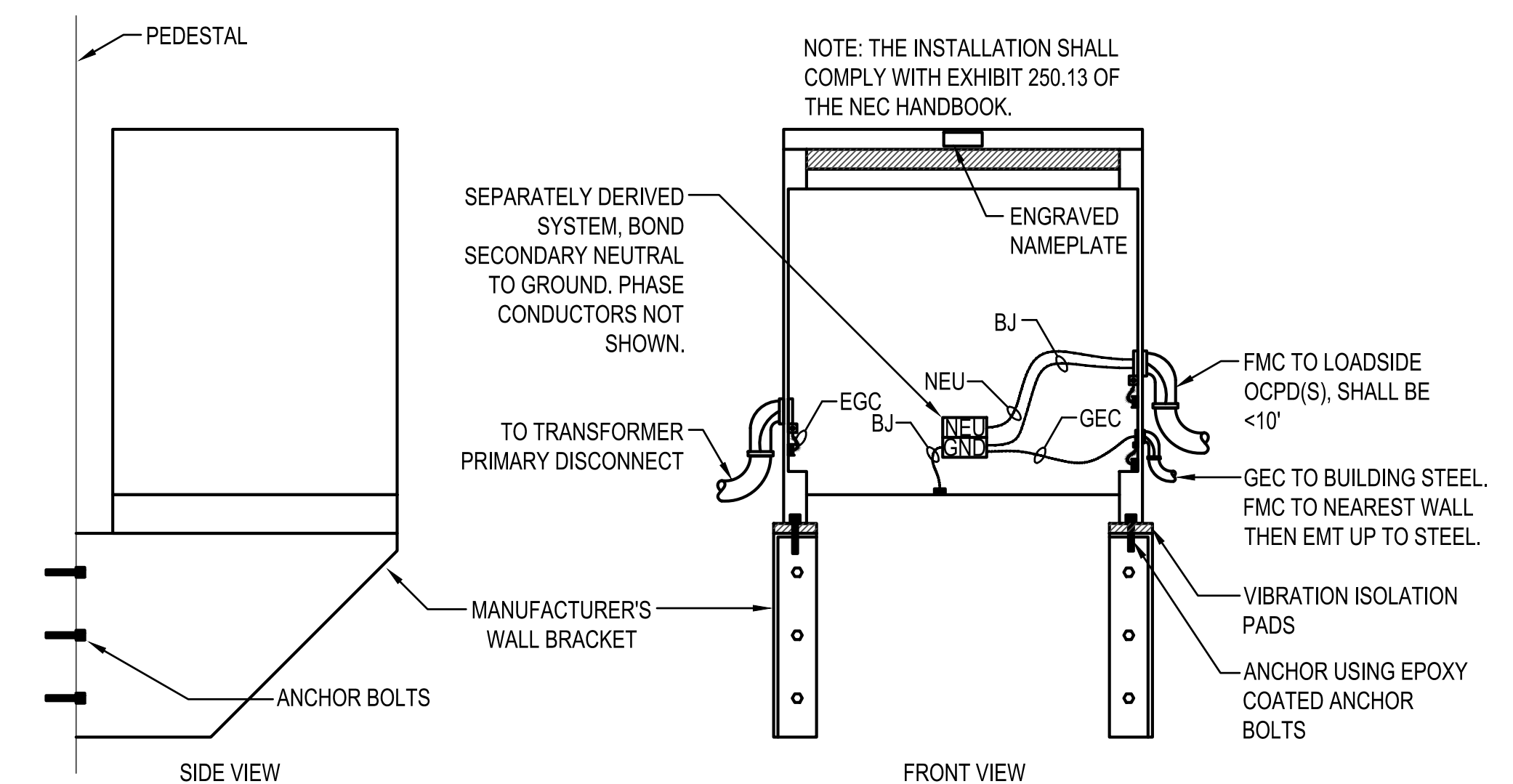
PANELBOARD SCHEDULE													
MARK: LOAD CENTER 2P													
CKT #	LOAD DESCRIPTION	BREAKER		PHASE (kVA)			PHASE (kVA)			BREAKER		LOAD DESCRIPTION	CKT #
		P	TRIP	A	B	C	A	B	C	TRIP	P		
1	RECEPTACLE	1	20	0.4			0.2			20	1	WATER COOLER (AT 16 TEE)	2
3	INTERIOR LIGHTING	1	20		0.1			0.2		20	1	EXHAUST FAN	4
5	RECEPTACLE	1	20			0.2			0.1	20	1	EXTERIOR LIGHTING	6
7	IRRIGATION CONTROLLER	1	20	0.3			0.2			20	1	RECEPTACLE	8
9	SPARE	1	20					2.5		30	2	FUTURE 5KVA HEATER	10
11	SPARE	1	20						2.5				12
				0.7	0.1	0.2	0.4	2.7	2.6				
TOTAL (kVA) ØA				1.1	ØB	2.8	ØC	2.8	HIGH PHASE (AMPS)		23.3		
TOTAL CONNECTED LOAD (kVA)				6.7			TOTAL LOAD (AMPS)		18.6				
CREATE A DIRECTORY TO INDICATE INSTALLED LOADS. INDICATE LOAD TYPE (REC, LTG, AHU-1, ETC.) AND ROOM NUMBERS SERVED FOR EVERY BRANCH CIRCUIT.													



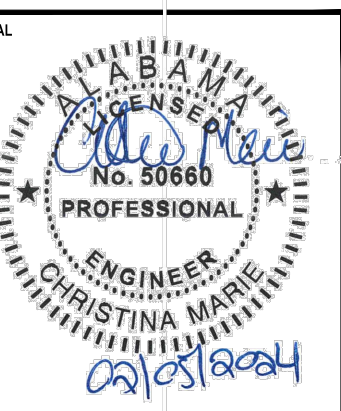
2 TYPICAL EQUIPMENT LABELING DETAIL
NOT TO SCALE



1 NEW SERVICE POLE DETAIL
NOT TO SCALE



3 DRY TYPE WALL MOUNTED TRANSFORMER DETAIL
NOT TO SCALE



REVISION DESCRIPTION	NUMBER	REVISION
2024-04-04 - ADDENDUM #1	1	

IRRIIGATION PUMP HOUSE ELECTRICAL UPGRADE
AZALEA CITY
MUSEUM DRIVE, MOBILE, AL

DESIGNED BY:
CM

DRAWN BY:
CM

CHECKED BY:
CM

DATE:
02/05/2024

SHEET TITLE:

ELECTRICAL DETAILS AND SCHEDULES

SHEET:

E-4.0