



INGRAM & ASSOCIATES
CONSULTING ENGINEERS, LLC

ADDENDUM NO. 3

PLANS, SPECIFICATIONS, AND CONTRACT DOCUMENTS

June 21, 2021

PROJECT: Stand-By Power for the Jones County Government Center, The EMA Office,
The 911 Tower and The Haddock Wells
I&A Project No.: 1160-108-01

OWNER: Jones County Board of Commissioners

REVISED BID DATE: June 25, 2021 at 3:00 p.m.

Item 1: RESPONSES to QUESTIONS SUBMITTED

- **GENERAC is NOT an approved generator for this bid.**
- *Will erosion control be required for any of the sites?*

No. Backfill against the concrete pad and spread any remaining dirt around the generator.

- *There are no specifications for the ATS or Generators for the 3 Haddock sites. Can these be provided?*

See Specification Section 16210

- *Specification 01340-4 1.04 states that no electronic submittals will be excepted is this correct?*

Electronic submittals will be accepted

- *Will concrete and compaction testing be required?*

Concrete testing is required

- *Can a specification be provided for the required parking lot striping?*

Parking lot striping will be handled under a separate contract

- *Sheet 5 of the plans show the existing fence to be removed. Is this correct and will a new fence be required?*

The generator will be located within the existing fence footprint. Jones County and the Engineer will meet on site to help determine a location.

- *Where the Automatic Transfer Switch for the Government Center- EMA office and the Hwy 18 911 Call Center are shown to be reused can the county provide documentation that they are working properly before the contractor assumes responsibility of the electrical system?*

**Provide new automatic transfer switches for these locations
See Revised Drawings.**

- *Specification 16210-9, 2.2 A and B imply that Jones County will make changes to Natural Gas and Propane fuel supply systems if required. Is this correct? Or will the contractor be required to do this work and bear the cost for changes?*

Hwy 18 911 tower – by propane provider to inlet of generator

EMA Office – From meter/regulator to generator, contractor to coordinate with generator provided.

Up to meter/regulator, contractor to coordinate with gas utility and provide generator requirements

Provide oversize pipe between regulator and generator inlet as recommended by generator manufacturer

Length as needed and diameter as per manufacturer's recommendations.

- *The power change over at the Government Center and the EMA Office will need to happen after normal work hours. Will the county provide access for this work without cost to the contractor?*

YES

- *Will engineer and county entertain changes to contract time base on equipment deliver time?*

YES. The bid form has been changed to allow the bidder to bid the time needed for this project.

- *Bid document state that bidder can pick and choose which sites he wants to bid. What will be used for base of award overall bid or each site? Based on this statement should not this project be done in separate contract bid in place if one bid?*

After review by Jones County, the Contractor shall bid the project as a whole. Jones County is looking for one (1) Contractor to handle this project. The generators are grouped by department and all costs associated with that set of generators should be included. Do not carry costs across the different departments in case a department must be deleted due to budget constraints.

The generators group together as follows:

Bid Group No. 1 – Jones County Water Department

Bid Group No. 2 – EMA

Bid Group No. 3 – Board of Commissioners

Bid Group No. 4 – Animal Control

- *Sheet E1 for the Government Center note 8 states the replace generator with an 800-amp breaker. Is this breaker to be a 100% rated breaker? Or an 80% rated breaker?*

80%

- *Sheet E1 for the Government Center note 8 states that the generator is to be retaped. Has the county confirmed with generator manufacture that this can be done on this generator? Cummins verified the generator can be retaped for 208Y/120V 3-Phase 4-Wire*

The Contractor shall include funds for Cummins to come and start-up this generator after work is completed.

- *Sheet E1 for the Government Center note 8 states that a two-hour load bank test is to be done on the generator. Is this test to be performed before the generator is fitted with the new fuel tank? If so, does the generator have a fuel tank connected to it know?*

Tank is installed

The load bank test shall be done in accordance with NFPA 110, Paragraph 8.4.2.4

- *Can the County confirm that the generator to be located at the Government Center does run and block heater and battery charger is working before the contract takes responsibility for the generator?*

Replace the block heater and battery charger as part of this project. Generator does run.

- *Sheet E1 for the Government Center drawing 6 shows conduits to enter the top of a NEMA 4X Stainless Steel wiring trough. Doing this will void the NEMA 4X rating. Please confirm the engineer is ok with doing this.*

Use sealing (Meyers) hubs to maintain rating of the enclosure

- *Will permit fees be waived by the county for this project?*

Paperwork for the permit must be filed, but no fees will be charged.

Item 2: REPLACE the existing 00300-Bid Form with the attached REVISED 00300-Bid Form.

Item 3: INCLUDE the attached Modified Drawings (E1-E7)

END ADDENDUM NO. 3

PROJECT IDENTIFICATION:

**Stand-By Power for The Jones County Government Center,
The EMA Office, The 911 Tower, The Animal Control and the Haddock Wells**

CONTRACT IDENTIFICATION AND NUMBER:

I & A Project No.: 1160-108-01

THIS BID IS SUBMITTED TO:

**Jones County Board of Commissioners
Gray, GA**

THIS BID IS SUBMITTED FROM:

The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

BIDDER accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for sixty days after the day of Bid opening. BIDDER will sign and submit the Agreement with the Bonds and other documents required by the Bidding Requirements within fifteen days after the date of Owner's Notice of Award.

REVISED - Bid Form

00300-2

In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:

BIDDER has examined copies of all the Bidding Documents and of the following Addenda (receipt of all which is hereby acknowledged):

Date	Number
<hr/>	
<hr/>	

BIDDER has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

BIDDER has studied carefully all reports and drawings of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in paragraph 4.2 of the General Conditions, and accepts the determination set forth in paragraph 5 of the Supplementary Conditions of the extent of the technical data contained in such reports and drawings upon which BIDDER is entitled to rely.

BIDDER has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests and studies (in addition to or to supplement those referred to in (c) above) which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress, performance or furnishing of the Work as BIDDER considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.2 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports or similar information or data are or will be required by BIDDER for such purposes.

BIDDER has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports or similar information or data in respect of said Underground Facilities are or will be required by BIDDER in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions.

BIDDER has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

BIDDER has given ENGINEER written notice of all conflicts, errors or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to BIDDER.

This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with an agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other BIDDER or over OWNER.

BIDDER agrees to commence work under this Agreement on or before a date to be specified in a written "Notice to Proceed" of the OWNER and to fully complete the work within consecutive calendar days from the "Notice to Proceed" date as bid by the contractor.

The bidder submits this work can be completed in _____ consecutive calendar days from the Notice to Proceed.

BIDDER accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work on time.

By signing this bid form, the Bidder agrees that they are submitting a bid with equipment and materials as specified in these documents.

The Rest of this page intentionally left blank.

REVISED - Bid Form

00300-4

Jones County Board of Commissioners

ITEM NO.	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
The Haddock Wells – Bid Group No. 1					
1	3	EA	Furnish and Install Emergency Stand-By Generator including Automatic Transfer Switch, Wiring, Concrete Pad, Miscellaneous Power Panels, and Start-up of the generators and automatic transfer switch. Contractor shall include all Materials, Labor, and Miscellaneous Appurtenances Needed for a Complete and Operational Generator.	\$	\$
2	3	EA	Site Work Including; Grading, Generator Pad, Compaction, Graded Aggregate Base (GAB)(As Needed) for a Complete and Operational Site.	\$	\$
3	1	EA	Mobilization, Bonding, and Insurance	\$	\$
SUBTOTAL (The Haddock Wells)				\$	
The EMA Office & 911 Tower – Bid Group No. 2					
4	2	EA	Furnish and Install Emergency Stand-By Generator including Wiring. Contractor shall include all Materials, Labor, and Miscellaneous Appurtenances Needed for a Complete and Operational Generator. Start-up of the Generator and Automatic transfer switch as specified shall be included.	\$	\$
5	2	EA	Site Work Including; Grading Generator Pad, Compaction, Graded Aggregate Base (GAB)(As Needed) for a Complete and Operational Site.	\$	\$
6	1	EA	Mobilization, Bonding, and Insurance	\$	\$
SUBTOTAL (EMA Office & 911 Tower)				\$	

ITEM NO.	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
The Government Center – Bid Group No. 3					
1	1	EA	Furnish and Install all Wiring, Connections, Start-up of the Generator and Transfer Switch, Automatic Transfer Switch, conduits, all materials, labor and miscellaneous Appurtenances needed for a complete and operational Generator as specified. Some conduits, concrete generator pad, generator, and fuel tank are in place.	\$	\$
SUBTOTAL (Government Center)				\$	
ITEM NO.	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
The Animal Control – Bid Group No. 4					
1	1	EA	Furnish and Install Emergency Stand-By Generator including Automatic Transfer Switch, Wiring, Concrete Pad, and Start-up of the Generator and Automatic transfer switch. Contractor shall include all Materials, Labor, and Miscellaneous Appurtenances Needed for a Complete and Operational Generator.	\$	\$
2	1	EA	Site Work Including; Grading Generator Pad, Compaction, Graded Aggregate Base (GAB)(As Needed) for a Complete and Operational Site.		
3	1	LS	Installation of Wire to Well		
4	1	LS	Wiring and Miscellaneous Appurtenances at the well as specified.		
SUBTOTAL (Animal Control)				\$	
TOTAL BASE BID				\$	

REVISED - Bid Form

00300-6

Bidder agrees to furnish all materials, equipment and to perform all labor necessary for the construction of the project titled **Stand-By Power for the Jones County Government Center, The EMA Office, The 911 Tower, The Animal Control, and The Haddock Wells** for the Jones County Board of Commissioners for the sum of: _____

_____ Dollars (\$_____).

The above lump sum and unit prices shown shall include all labor, materials, bailing, shoring removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for. BIDDER understands that the OWNER reserves the right to reject any or all bids and to waive any informality in the bidding.

BIDDER furthermore agrees that, in the case of a failure on his part to execute the Contract Agreement and Bonds within fifteen days after receipt of conformed contract documents for execution, the Bid Bond accompanying his bid and the monies payable thereon shall be paid into the funds of the OWNER as liquidated damages for such failures.

The following documents are attached to and made a condition of this Bid:

- a. Required Bid Bond for the sum of _____ Dollars (\$_____) according to the conditions of "Instructions to Bidders".
- b. Bid Data submitted by BIDDER that indicates standard specifications, details or drawings with any deviation from the specifications indicated.

SUBMITTED on _____, 2021.

BIDDER: _____

By: _____

Title: _____

Address: _____

Phone: _____

Fax: _____

Seal: (if bid by a Corporation)

BID DATA (BASE BID)

Following BID DATA forms provide information on equipment offered in the BID FORM base bid.

Bidder shall fill in, or submit, all the following data for equipment offered in his Bid. All Bids are subject to evaluation by the Engineers and it is agreed by the bidder that the following tabulated and submitted data is made a part of his Bid and shall become a part of this Contract. Substitutions, as proposed by the Bidder, shall be submitted before the bid date:

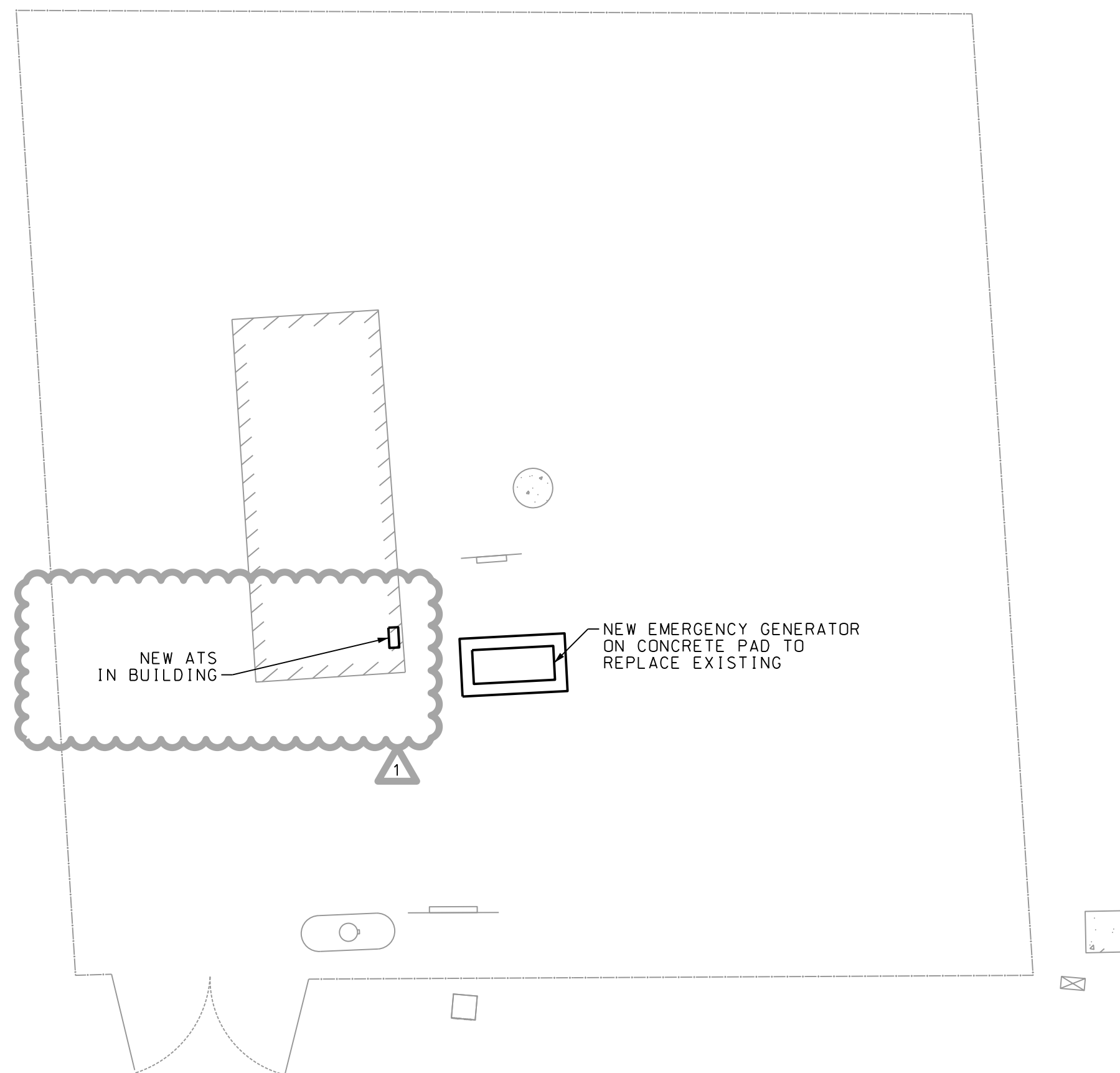
The price, as listed below for each piece of major equipment, shall include equipment cost, supervisory services by the manufacturer's representative and all accessories as detailed in the technical specifications.

Major Equipment For Base Bid (Manufacturer Listed In Technical Specifications):

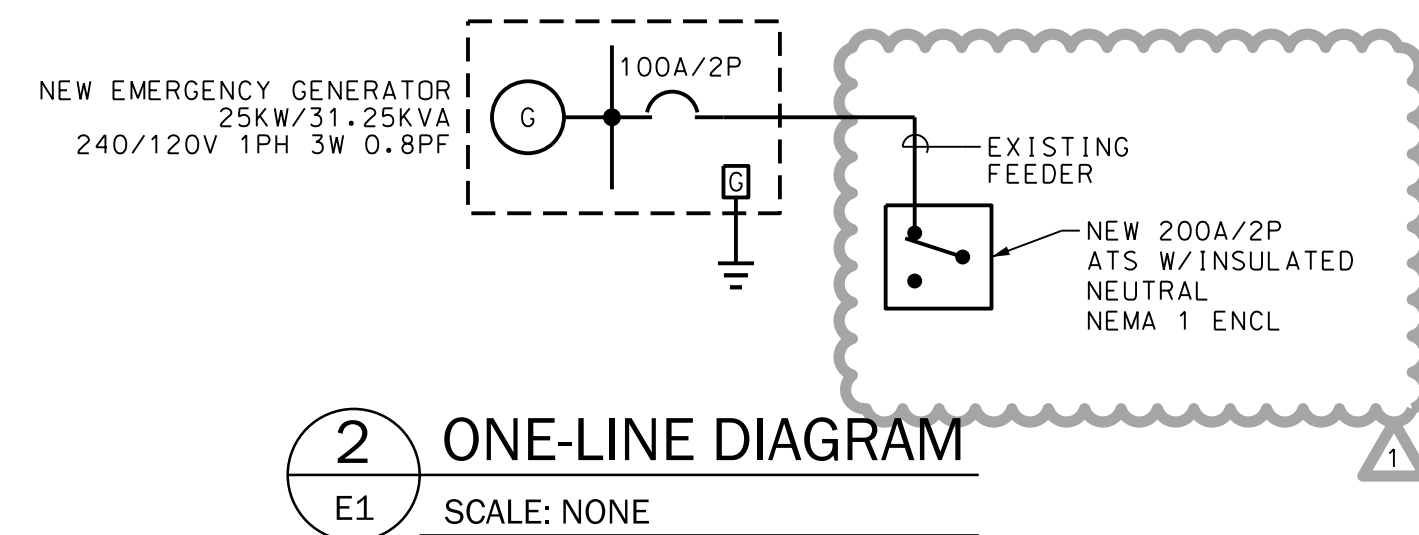
1. Generator:
 - a. Manufacturer: _____

2. Automatic Transfer Switch
 - a. Manufacturer: _____

END OF SECTION



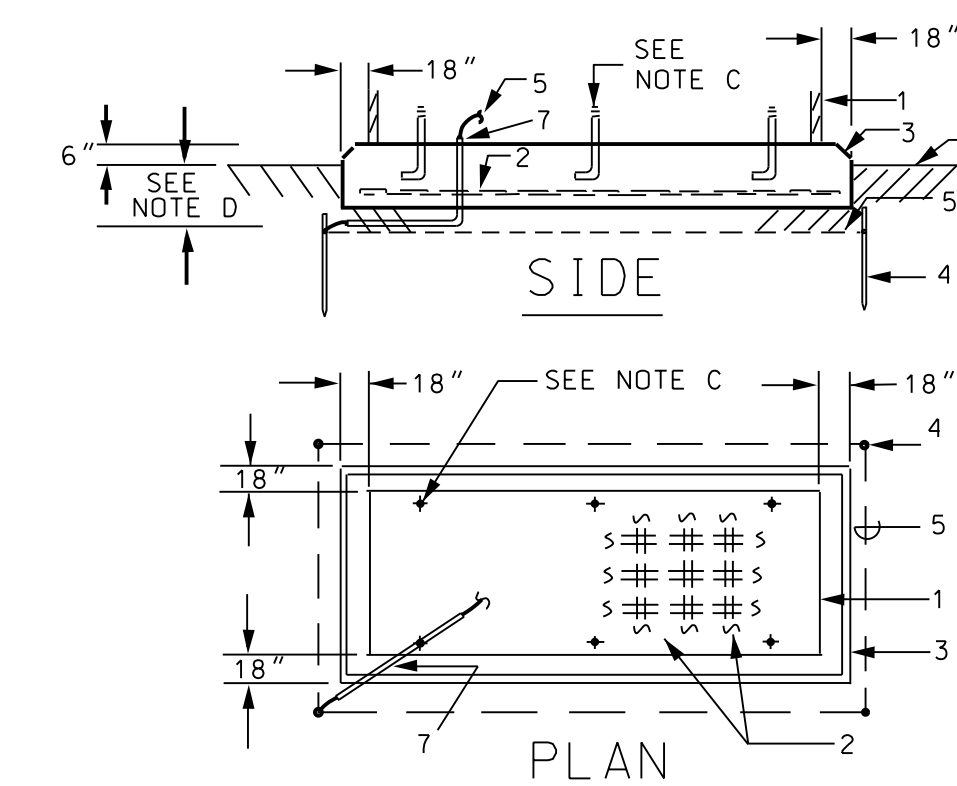
1 ELECTRICAL SITE PLAN
E1 SCALE: 1" = 10' - 0"



2 ONE-LINE DIAGRAM
E1 SCALE: NONE

NOTES:

1. THE EXISTING ELECTRICAL SERVICE SHALL REMAIN.
2. THE CONTRACTOR SHALL DISCONNECT AND REMOVE THE EXISTING PROPANE FUELED GENERATOR AND THE AUTOMATIC TRANSFER SWITCH. COORDINATE WITH THE OWNER FOR DISPOSAL OR RETENTION OF THE GENERATOR. FOR BIDDING PURPOSES, ASSUME DISPOSAL OF GENERATOR TO BE PART OF THE PROJECT REQUIREMENTS.
3. FURNISH AND INSTALL A NEW PROPANE FUELED GENERATOR, 25kW/31.25KVA 240/120V 1-PHASE 3-WIRE 0.8PF, AS SPECIFIED. FURNISH WITH A 100A/2P/22KAIC CIRCUIT BREAKER. CONNECT EXISTING COOLANT HEATER AND BATTERY CHARGER CIRCUITS TO THE NEW GENERATOR. CONNECT START/STOP CONDUCTORS FROM ATS. FURNISH AND INSTALL A NEW 200A/2P/NEMA 1 AUTOMATIC TRANSFER SWITCH WITH AN INSULATED NEUTRAL AND GROUND LUGS. INSTALL AT LOCATION OF EXISTING SWITCH. BRING ANY COORDINATION ISSUES TO THE IMMEDIATE ATTENTION OF THE OWNER AND ENGINEER.
4. FIELD COORDINATE THE FUEL REQUIREMENTS (PRESSURE, FLOW RATE, CONSUMPTION AT FULL LOAD, ETC.) WITH THE PROPANE PROVIDER. NEW FUEL LINES FROM THE PROPANE TANKS TO THE GENERATOR, IF REQUIRED, SHALL BE THE RESPONSIBILITY OF THE PROPANE PROVIDER.
5. REUSE THE EXISTING CONCRETE GENERATOR PAD IF IT EXCEEDS THE NEW GENERATOR FRAME. IF THE NEW GENERATOR IS LARGER THAN THE EXISTING PAD, DEMOLISH THE EXISTING PAD AND PROVIDE A NEW PAD PER DETAIL 3/E1, THIS SHEET.
6. CONNECT GENERATOR ALARMS TO THE EXISTING ANNUNCIATION SYSTEM.
7. VISIT THE SITE TO REVIEW EXISTING CONDITIONS PRIOR TO THE BID.
8. THE CONTRACTOR SHALL DEMONSTRATE ACCEPTABLE GENERATOR PERFORMANCE, UNDER LOAD, PRIOR TO FINAL ACCEPTANCE.



- 1 - GENERATOR SET ENCLOSURE OUTLINE
- 2 - REINFORCING STEEL, NOTE A
- 3 - 1" CHAMFER
- 4 - 3/4" X 10" COPPERCLAD GROUND ROD AND
- 5 - #1/0 CU BARE GROUND CONDUCTOR
- 6 - FINISHED GRADE
- 7 - 3/4" PVC, SEE NOTE B

NOTES: EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL

- A. #8 GA. STEEL WIRE MESH, 6" O.C. OR #6 REBAR, 12" O.C., VERTICALLY AND HORIZONTALLY.
- B. CONNECT TO GENERATOR GROUND CONNECTION LUG. VERIFY STUB UP LOCATION WITH MANUFACTURER'S SHOP DRAWINGS. SEAL CONDUIT END WITH ELECTRICAL DUCT SEAL.
- C. ANCHOR BOLTS FURNISHED WITH GENERATOR SET. PROVIDE SIX, MINIMUM. TIE TO REINFORCING STEEL.
- D. DIMENSION SHALL BE 6" (12" OVERALL DEPTH) UP TO & INCLUDING 600KW; 12" (18" OVERALL DEPTH) LARGER THAN 600KW.

3 EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL
E1 SCALE: NONE

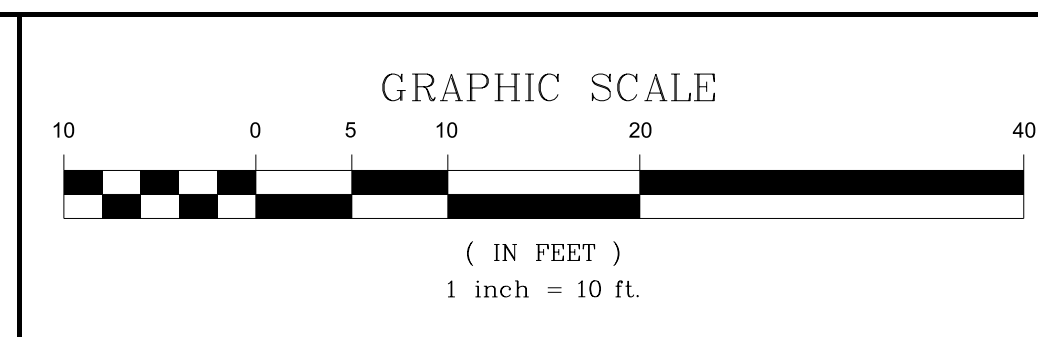
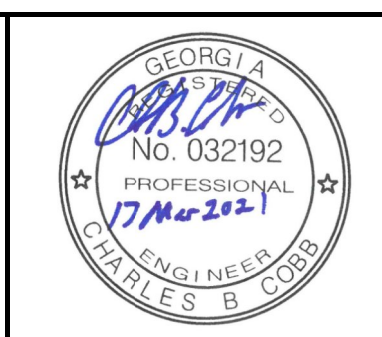
HWY 18 911 CALL TOWER

NO.	DATE	DESCRIPTION OF REVISION
1	06/20/21	REPLACE ATS

INGRAM & ASSOCIATES
Consulting Engineers, LLC

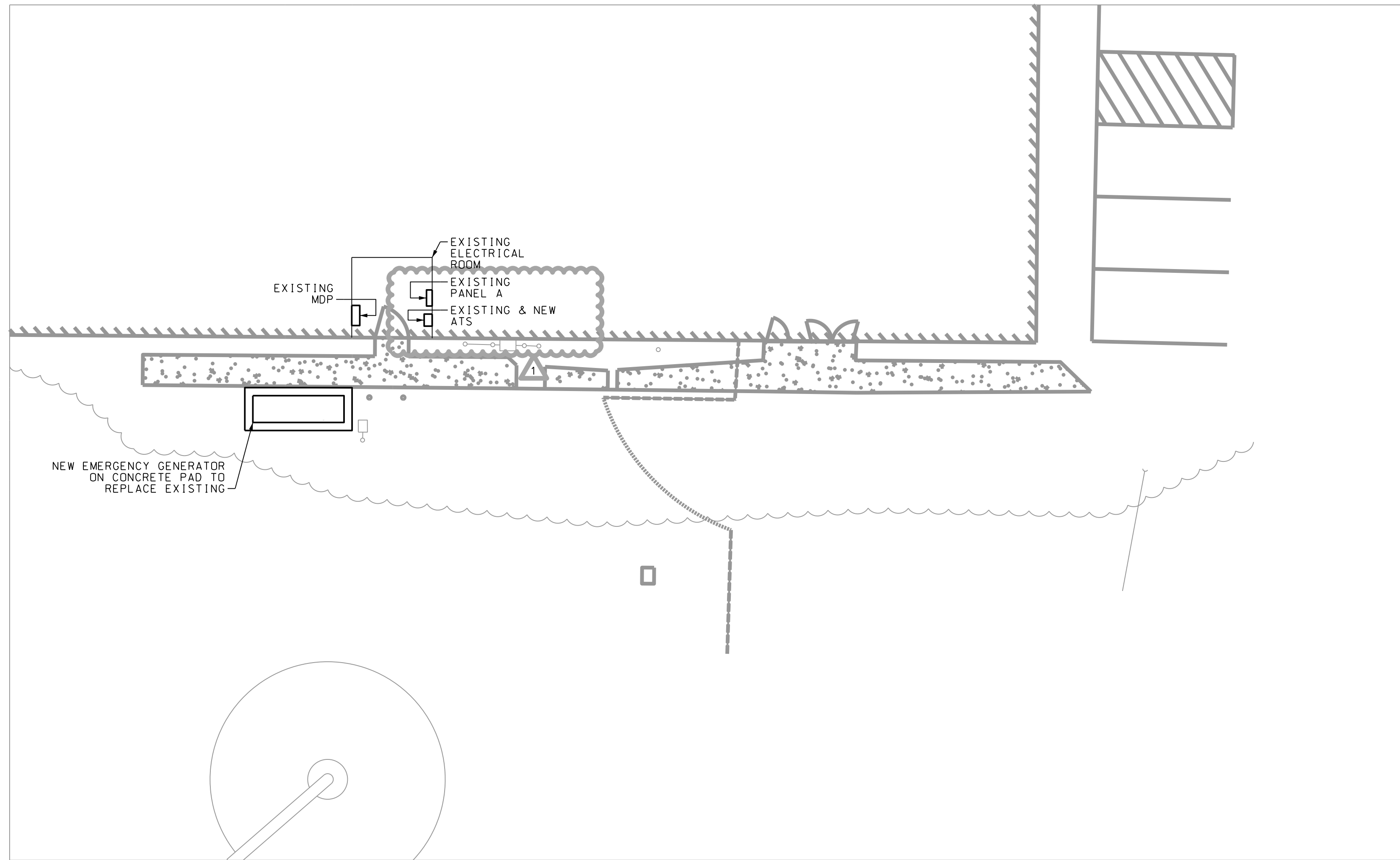
332 New Street
Macon, Georgia 31201
(T) 478-745-3996
(F) 478-742-4690

1002 Park Avenue N.
Tifton, Georgia 31793
(T) 229-387-8536
www.ingrameng.com



EMA GENERATOR REPLACEMENTS
FOR THE
Jones County Board of Commissioners
Jones County, Georgia

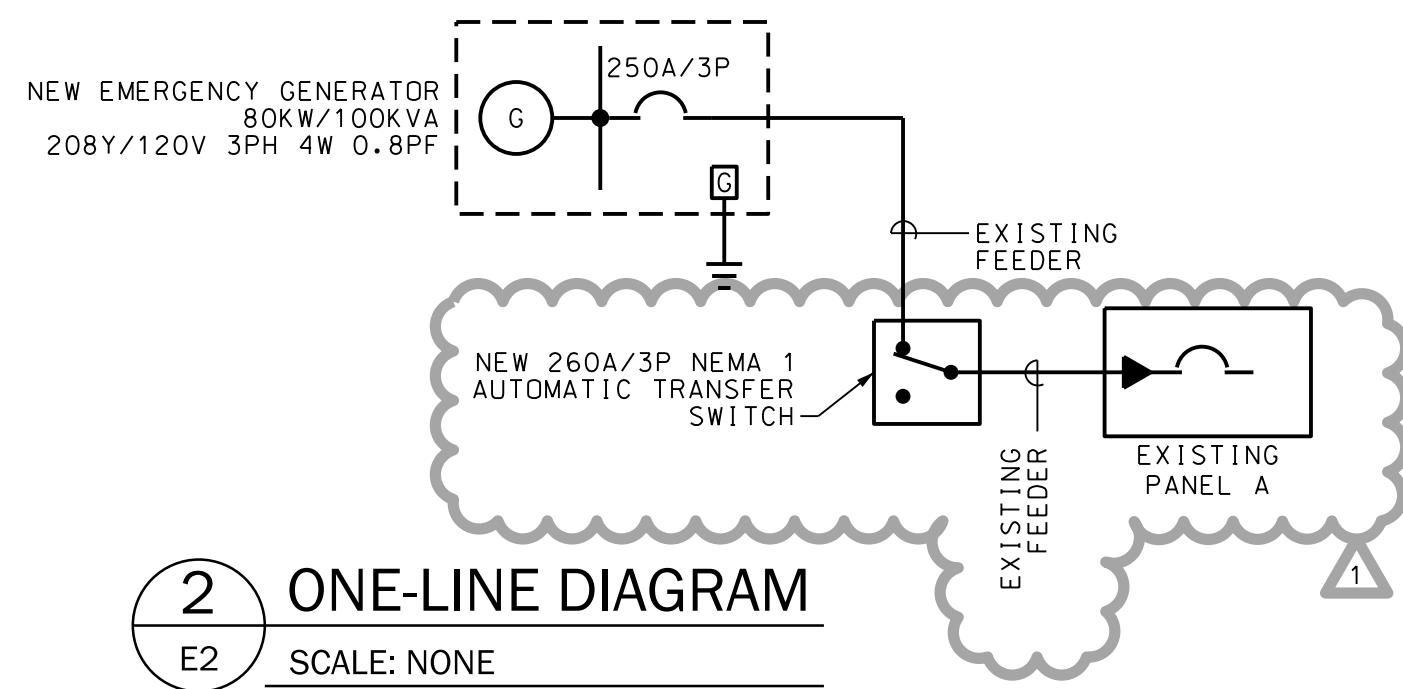
PROJ. #:	1160-106-01	SHEET #:	E1
DSGN BY:	CC	CHECKED BY:	CC
CAD BY:	LC	DATE:	20-JUN-2021
SHT.	OF		



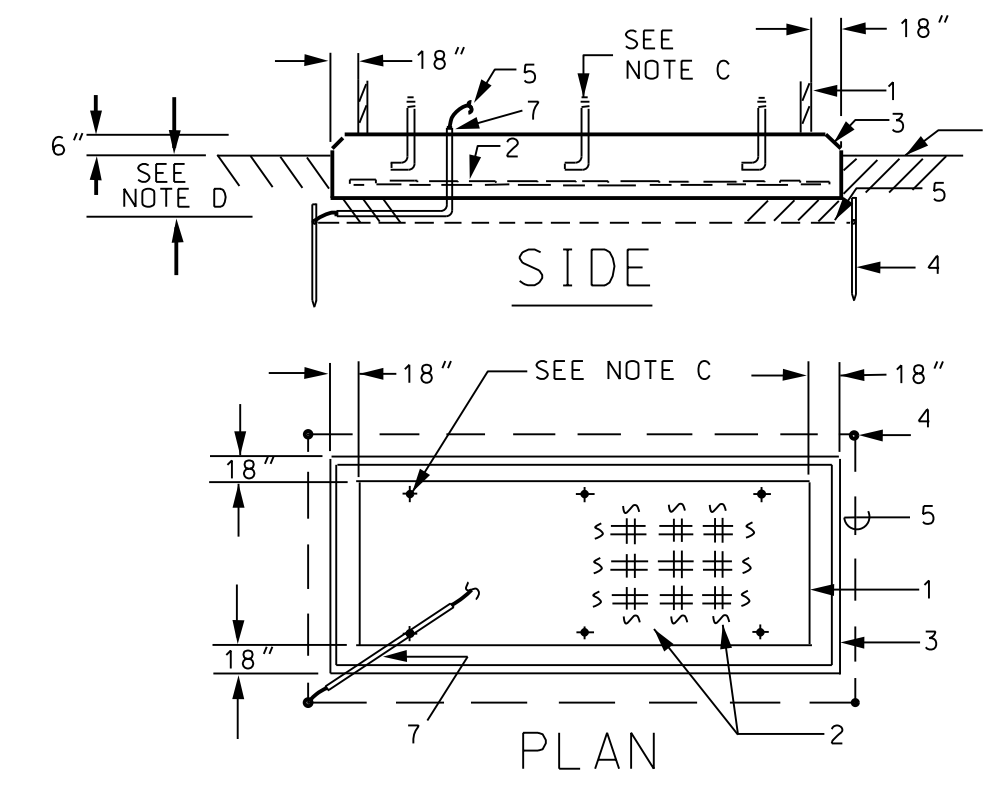
1 ELECTRICAL SITE PLAN
E2 SCALE: 1" = 10' - 0"

NOTES:

- VISIT THE SITE PRIOR TO THE BID TO ASSESS THE EXISTING CONDITIONS.
- DISCONNECT AND REMOVE THE EXISTING 80KW/100KVA 240/120V 3-PHASE 4-WIRE DELTA GENERATOR. FOR BIDDING PURPOSES ASSUME DISPOSAL OF THE GENERATOR SHALL BE PART OF THE CONTRACT. COORDINATE WITH THE OWNER FOR FINAL DISPOSITION OF THE GENERATOR. DISCONNECT AND REMOVE THE EXISTING 260A 3-POLE AUTOMATIC TRANSFER SWITCH.
- FURNISH AND INSTALL A NEW NATURAL GAS FUELED 80KW/100KVA 0.8PF 208Y/120V 3-PHASE 4-WIRE GENERATOR. CONNECT EXISTING FEEDERS TO THE NEW GENERATOR. CONNECT EXISTING COOLANT HEATER AND BATTERY CHARGER CIRCUITS TO THE NEW GENERATOR. CONNECT START/STOP CONDUCTORS FROM ATS. FURNISH AND INSTALL A NEW 260A/3P NEMA 1 AUTOMATIC TRANSFER SWITCH. PROVIDE WITH INSULATED NEUTRAL AND GROUND LUGS. COORDINATE LUGS WITH EXISTING FEEDERS.
- FIELD COORDINATE WITH THE NATURAL GAS SUPPLIER FOR THE REQUIRED FUEL SUPPLY (PRESSURE, CFH, ETC.). MODIFY THE EXISTING PIPING SYSTEM AS REQUIRED FOR GENERATOR OPERATION.
- REUSE THE EXISTING CONCRETE GENERATOR PAD IF IT EXCEEDS THE NEW GENERATOR FRAME. IF THE NEW GENERATOR IS LARGER THAN THE EXISTING PAD, DEMOLISH THE EXISTING PAD AND PROVIDE A NEW PAD PER DETAIL 3/E2, THIS SHEET.
- CONNECT GENERATOR ALARMS TO THE EXISTING ANNUNCIATION SYSTEM.
- THE CONTRACTOR SHALL DEMONSTRATE ACCEPTABLE GENERATOR PERFORMANCE, UNDER LOAD, PRIOR TO FINAL ACCEPTANCE.
- THE EXISTING ELECTRICAL SERVICE SHALL REMAIN ALONG WITH THE AUTOMATIC TRANSFER SWITCH.



2 ONE-LINE DIAGRAM
E2 SCALE: NONE



- 1 - GENERATOR SET ENCLOSURE OUTLINE
- 2 - REINFORCING STEEL, NOTE A
- 3 - 1" CHAMFER
- 4 - 3/4" X 10' COPPERCLAD GROUND ROD AND
- 5 - #1/0 CU BARE GROUND CONDUCTOR
- 6 - FINISHED GRADE
- 7 - 3/4" PVC, SEE NOTE B

NOTES: EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL

- A. #8 GA. STEEL WIRE MESH, 6" O.C. OR #6 REBAR, 12" O.C., VERTICALLY AND HORIZONTALLY.
- B. CONNECT TO GENERATOR GROUND CONNECTION LUG. VERIFY STUB UP LOCATION WITH MANUFACTURER'S SHOP DRAWINGS. SEAL CONDUIT END WITH ELECTRICAL DUCT SEAL.
- C. ANCHOR BOLTS FURNISHED WITH GENERATOR SET. PROVIDE SIX, MINIMUM. TIE TO REINFORCING STEEL.
- D. DIMENSION SHALL BE 6" (12" OVERALL DEPTH) UP TO & INCLUDING 600KW; 12" (18" OVERALL DEPTH) LARGER THAN 600KW.

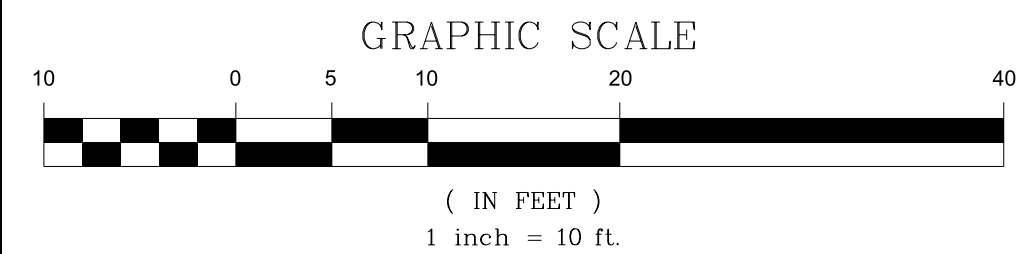
3 EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL
E2 SCALE: NONE

NO.	DATE	DESCRIPTION OF REVISION
1	06/20/21	REPLACE THE ATS

INGRAM & ASSOCIATES
Consulting Engineers, LLC

332 New Street
Macon, Georgia 31201
(T) 478-745-3996
(F) 478-742-4690

1002 Park Avenue N.
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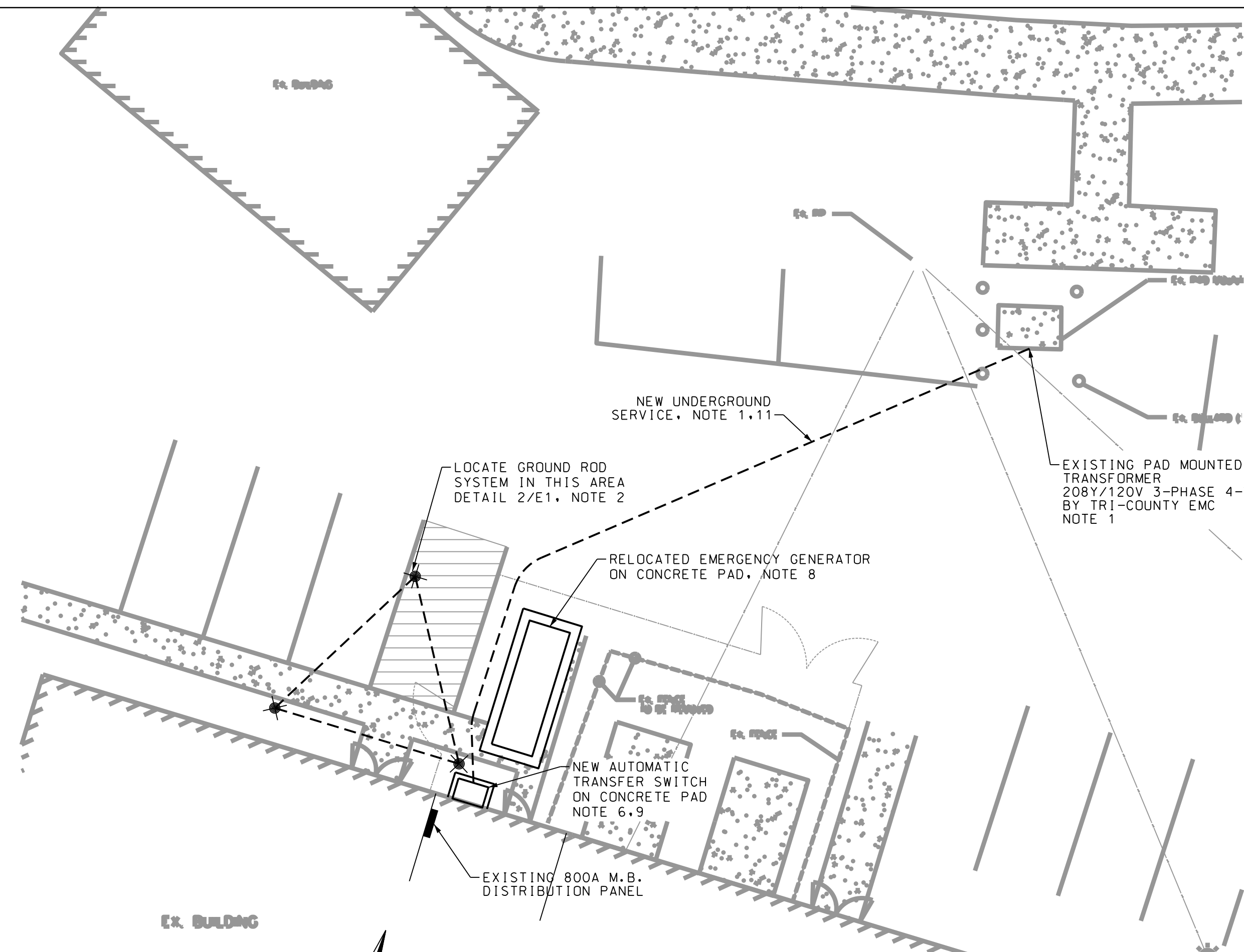


GOVERNMENT CENTER - EMA OFFICES

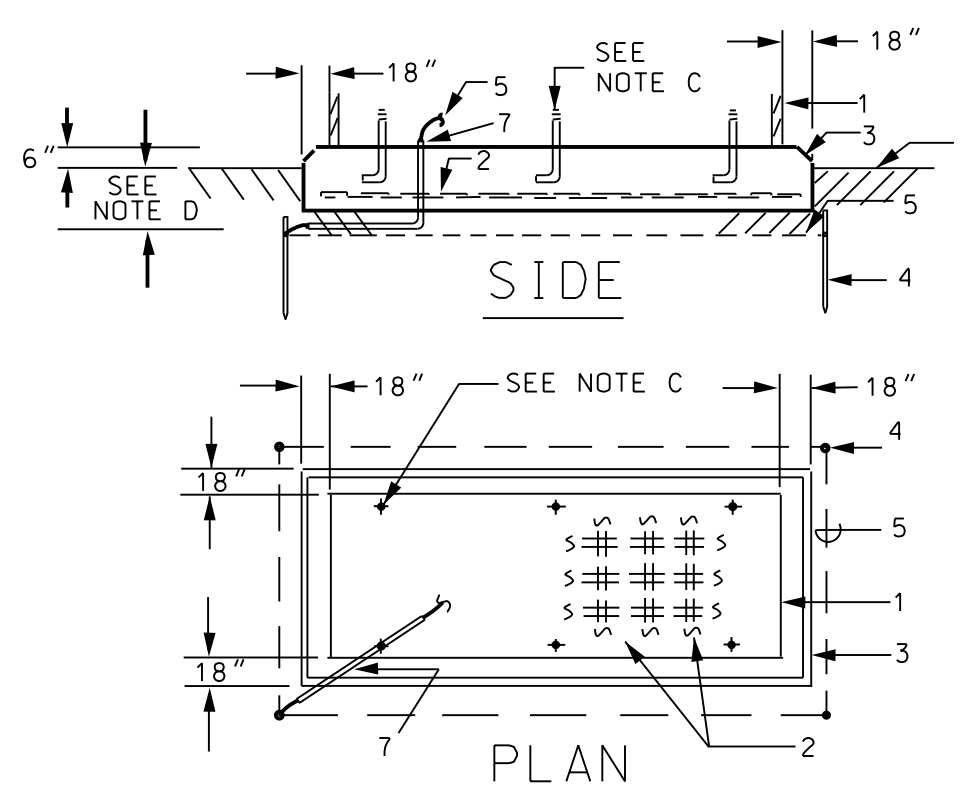
EMA GENERATOR REPLACEMENTS

FOR THE
Jones County Board of Commissioners
Jones County, Georgia

PROJ. #:	1160-106-01	SHEET #:	E2
DSGN BY:	CC	CHECKED BY:	CC
CAD BY:	LC	DATE:	20-JUN-2021
SHT. OF		01	



1 ELECTRICAL SITE PLAN
E1 SCALE: 1" = 10' - 0"

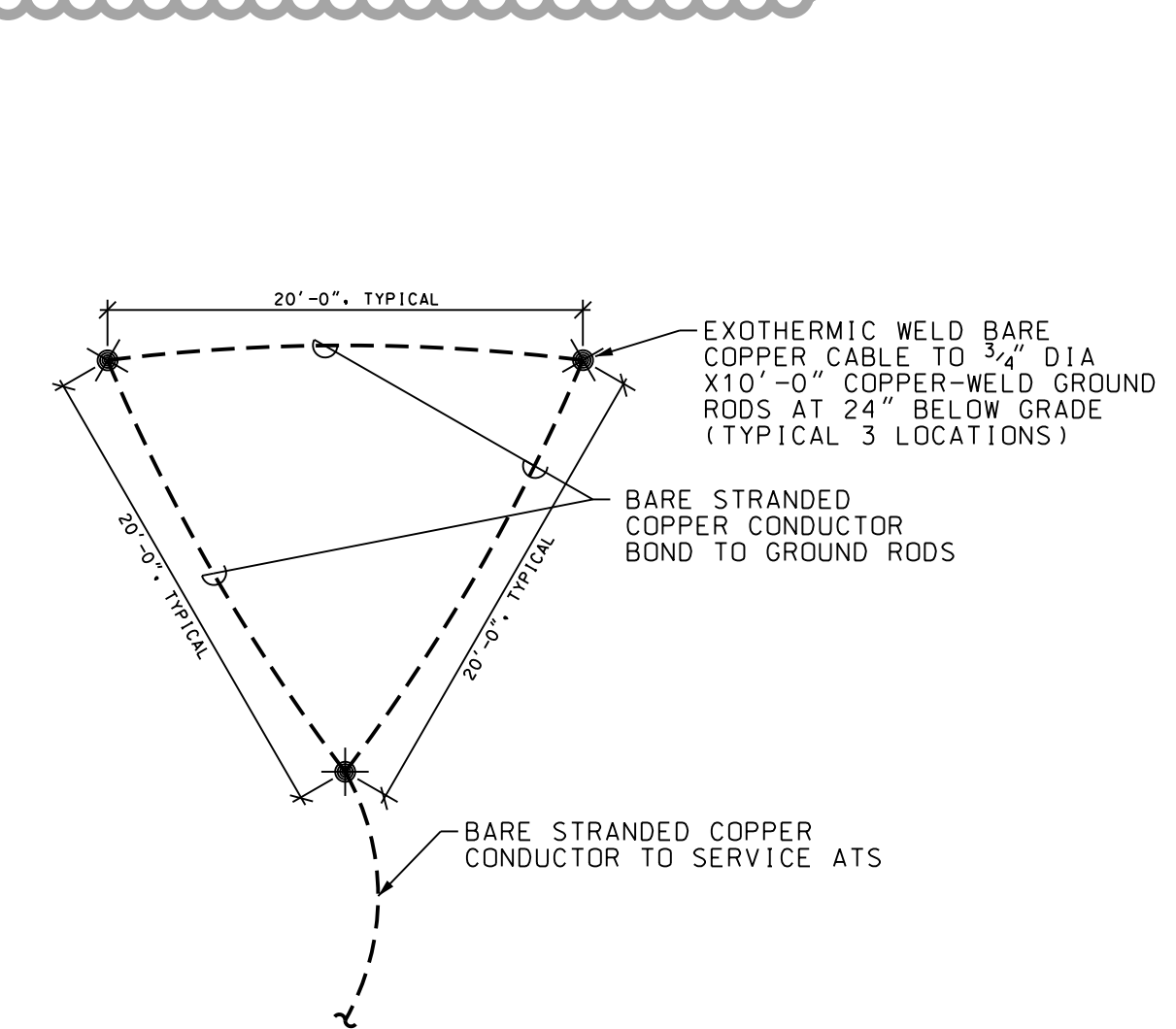
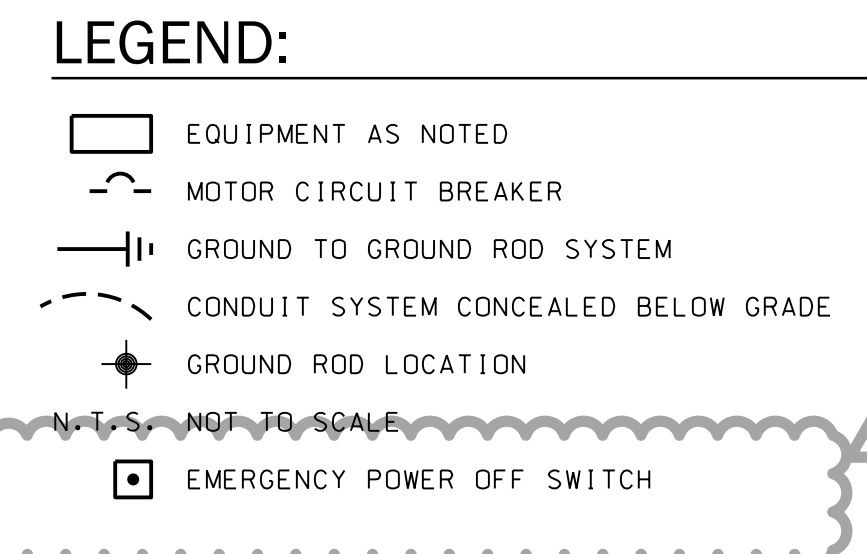


- 1 - GENERATOR SET ENCLOSURE OUTLINE
- 2 - REINFORCING STEEL, NOTE A
- 3 - 1" CHAMFER
- 4 - 3/4" X 10' COPPERCLAD GROUND ROD AND
- 5 - #1/0 CU BARE GROUND CONDUCTOR
- 6 - FINISHED GRADE
- 7 - 3/4" PVC, SEE NOTE B

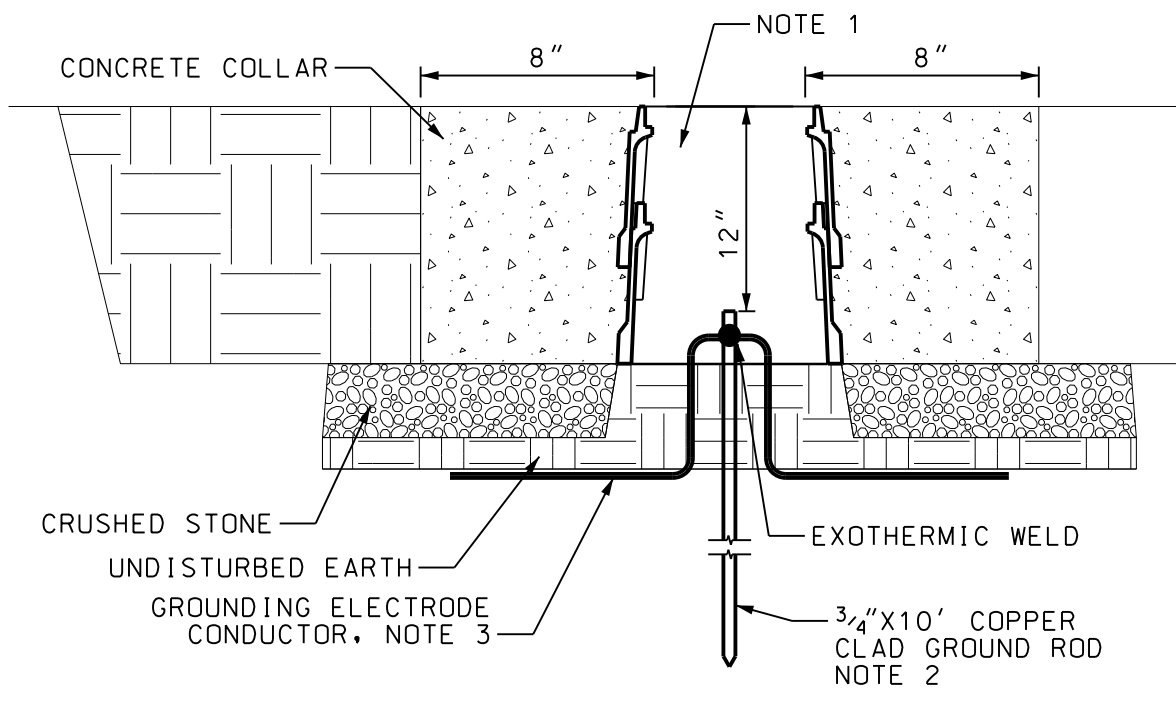
NOTES: EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL

- A. #8 GA. STEEL WIRE MESH, 6" O.C. OR #6 REBAR, 12" O.C., VERTICALLY AND HORIZONTALLY.
- B. CONNECT TO GENERATOR GROUND CONNECTION LUGS. VERIFY STUB UP LOCATION WITH MANUFACTURER'S SHOP DRAWINGS. SEAL CONDUIT END WITH ELECTRICAL DUCT SEAL.
- C. ANCHOR BOLTS FURNISHED WITH GENERATOR SET. PROVIDE SIX, MINIMUM. TIE TO REINFORCING STEEL.
- D. DIMENSION SHALL BE 6" (12" OVERALL DEPTH) UP TO & INCLUDING 600KW; 12" (18" OVERALL DEPTH) LARGER THAN 600KW.

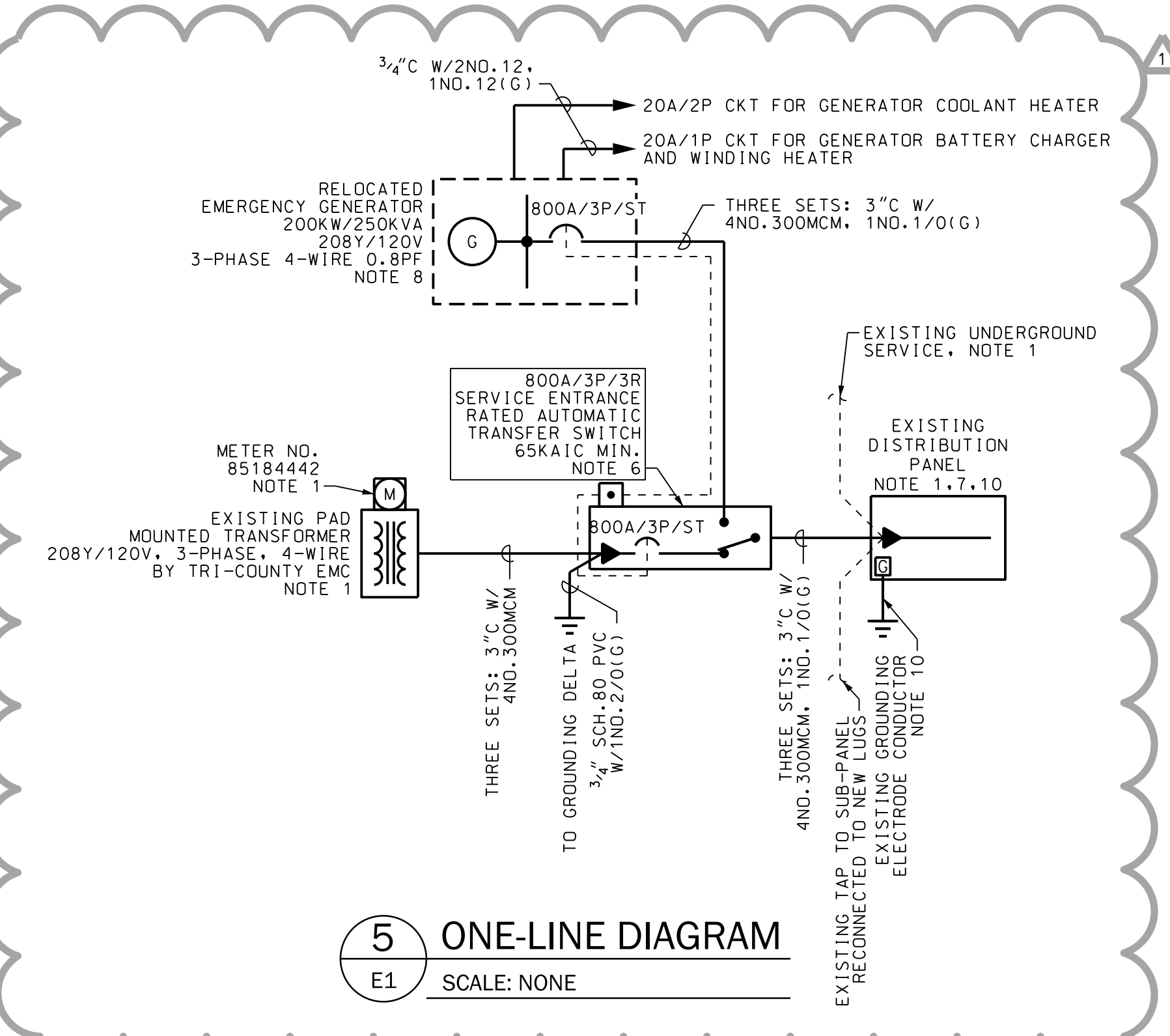
4 EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL
E1 SCALE: NONE



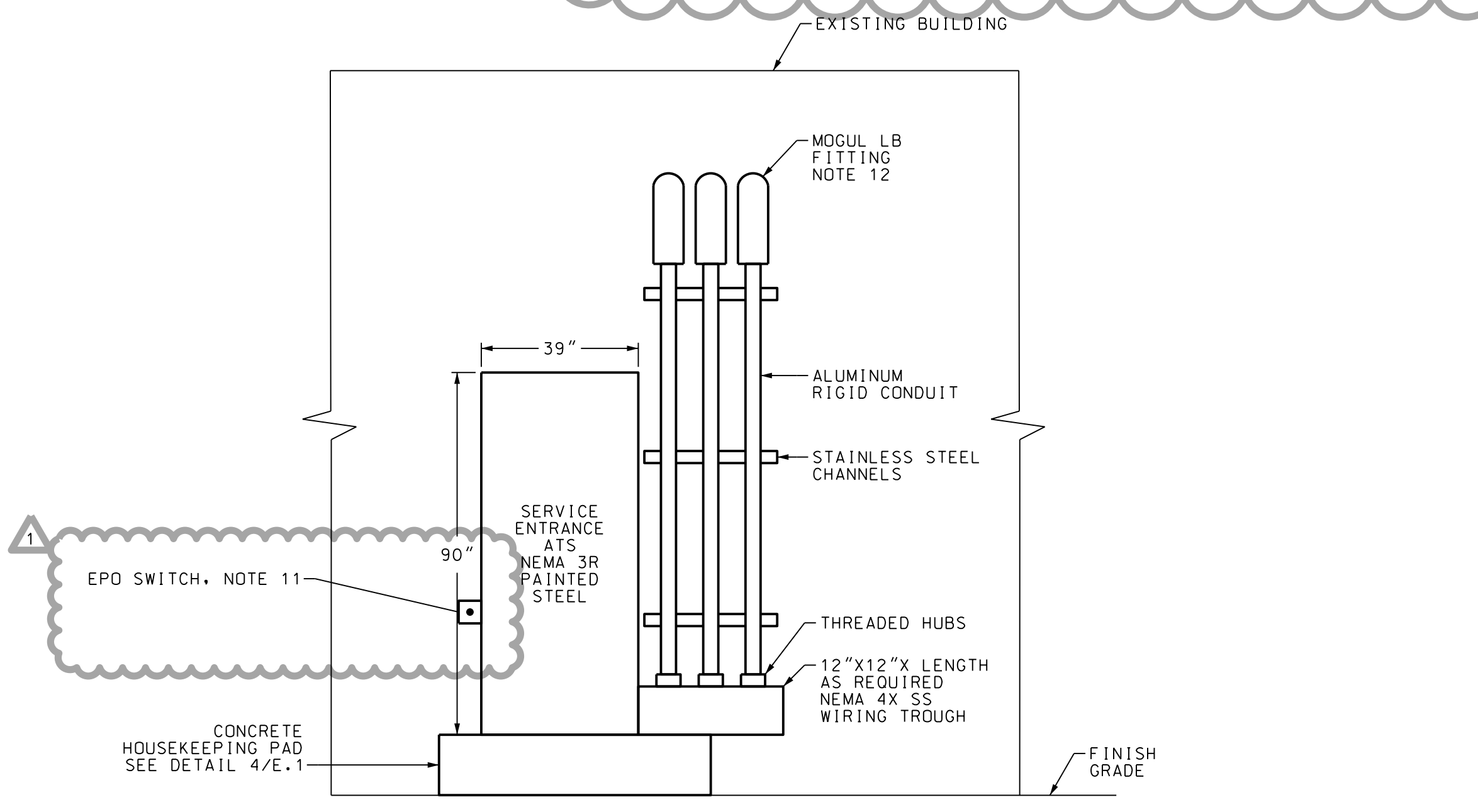
2 SECONDARY ELECTRICAL GROUNDING
E1 SCALE: N.T.S.



3 GROUND ROD TEST WELL DETAIL
E1 SCALE: NONE



5 ONE-LINE DIAGRAM
E1 SCALE: NONE



6 ELECTRICAL EQUIPMENT ELEVATION
E1 SCALE: N.T.S.

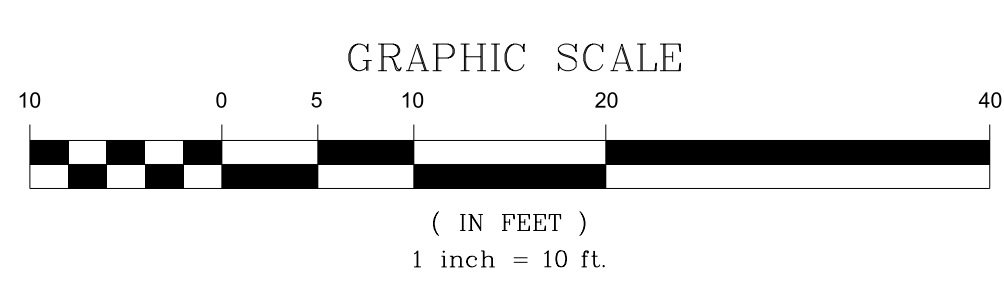
- NOTES:**
1. EXISTING PAD MOUNTED TRANSFORMER (PMT):
 - A. FIELD LOCATE THE EXISTING PAD MOUNTED TRANSFORMER.
 - B. LOCATE ALL UNDERGROUND SERVICES ORIGINATING FROM THE TRANSFORMER.
 - C. THE SERVICE TO THE CITY CENTER (THIS PROJECT) SHALL BE MAINTAINED IN OPERATION UNTIL AN OUTAGE WITH THE OWNER CAN BE SCHEDULED.
 - D. THE OUTAGE SHALL NOT OCCUR UNTIL
 1. THE GENERATOR IS INSTALLED AND TESTED.
 2. THE SERVICE ENTRANCE AUTOMATIC TRANSFER SWITCH IS INSTALLED AND TESTED.
 3. ALL SERVICE CONDUCTORS ARE INSTALLED.
 4. ALL GROUNDING IS COMPLETE.
 5. COORDINATE WITH AHJ FOR REVIEW OF INSTALLED EQUIPMENT.
 - E. FOLLOWING THE OUTAGE AND AFTER THE EXISTING DISTRIBUTION PANEL IS CUT OVER TO THE NEW ATs, THE EXISTING UNDERGROUND SERVICE CABLES SHALL BE REMOVED.
 - F. THE METER IS EXISTING AND SHALL REMAIN.
 - G. ALL WORK IN THE PMT SHALL BE COORDINATED IN THE FIELD WITH THE UTILITY COMPANY AND WITH OTHER WORK ON THE PROJECT SITE.
 - H. CONTACT TRI-COUNTY EMC, LEE MARSH, 478-986-8100
 2. FURNISH AND INSTALL THREE 10' X 3/4" DIA. GROUND RODS, TRIAD/DELTA CONFIGURATION, WITH 20" SEPARATION, DRIVEN 12" BELOW GRADE. SERVICE GROUNDING SHALL BE BONDED AT THE ENCLOSED BREAKER AND AT THE GENERATOR. REFER TO DETAIL 2/E1. PROVIDE GROUND ROD TEST WELLS PER DETAIL 3/E1.
 3. ALL CONDUITS INSTALLED EXPOSED OUTSIDE OF BUILDING SHALL BE RIGID ALUMINUM. ALL CONDUITS INSTALLED BELOW GRADE SHALL BE SCHEDULE 80 PVC. ALL ELBOWS AND STUB-UPS TO BE RIGID ALUMINUM. CONDUITS INSIDE BUILDING TO BE EMT.
 4. COAT ALL ARC CONDUITS ENCASED IN CONCRETE OR IN CONTACT WITH EARTH WITH TWO COATS OF SCOTCHPAPE PIPE PRIMER AND TWO OVERLAPPING LAYERS OF SCOTCHPAPE 51 TAPE. APPLY FROM 6" ABOVE GRADE TO BOTTOM OF STRUCTURAL MEMBER OR TRANSITION TO SCH. 80 PVC. ALLOW FOR PRIMER TO DRY BEFORE APPLICATION OF SECOND COAT AND/OR TAPE.
 5. ALL ATTACHMENT HARDWARE, BOLTS, NUTS, WASHERS, ETC. SHALL BE STAINLESS STEEL. PROVIDE FIBER WASHER BETWEEN DISSIMILAR METAL COMPONENTS AND ENCLOSURES. ALL CONNECTIONS SHALL BE BOLTED WITH STAINLESS STEEL FASTENERS.
 6. FIELD COORDINATE MOUNTING LOCATION OF AUTOMATIC TRANSFER SWITCH. SWITCH OPERATING HANDLES SHALL BE A MAXIMUM OF 66" ABOVE FINISHED GRADE. PROVIDE ALUMINUM CHANNELS ATTACHED TO THE BUILDING EXTERIOR WALL FOR SUPPORT OF THE AUTOMATIC TRANSFER SWITCH.
 7. FURNISH ONE 20A/2P AND ONE 20A/1P BREAKERS IN EXISTING PANEL FOR GENERATOR COOLANT HEATER AND BATTERY CHARGER. FIELD COORDINATE SOURCE PANEL FOR CIRCUITS.
 8. FOR THE RELOCATED GENERATOR, PERFORM THE FOLLOWING TASKS:
 - A. THE GENERATOR HAS BEEN RELOCATED TO THE BUILDING AND MOUNTED ON THE NEW SUB-BASE TANK
 - B. RECONNECT THE GENERATOR ALTERNATOR FOR 208Y/120V 3-PHASE 4-WIRE SUPPLY VOLTAGE. CUMMINS HAS CONFIRMED THAT THE ALTERNATOR IS RECONNECTABLE FOR THE REQUIRED VOLTAGE.
 - C. REPLACE THE EXISTING BREAKER WITH A 800A/3P/65KAIC RATED BREAKER. COORDINATE MOUNTING WITH THE EXISTING GENERATOR. FURNISH THE BREAKER WITH A SHUNT TRIP.
 - D. REPLACE THE EXISTING COOLANT HEATER AND BATTERY CHARGER.
 - E. PROVIDE A GALVANIZED STEEL OR ALUMINUM PLATE OVER THE OPENING TO THE ALTERNATOR WIRING/CONNECTION CABINET. FIELD COORDINATE SIZE.
 - F. PERFORM TWO HOUR LOAD BANK AT 75% MAXIMUM OF GENERATOR RATED CAPACITY TO DETERMINE OPERATIONAL PERFORMANCE. PROVIDE THREE TYPED COPIES OF THE TEST REPORT FOR REVIEW BY THE ENGINEER.
 9. MOUNT THE NEW SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH ON CONCRETE HOUSEKEEPING PAD. SEE DETAIL 6/E1.
 10. AT THE EXISTING 800A M.B. DISTRIBUTION PANEL
 - A. REMOVE THE EXISTING MAIN BREAKER. OBTAIN FOUR-BARREL LUGS FOR EACH PHASE AND MOUNT DIRECTLY TO THE BUS. NEW LUGS SHALL ACCOMMODATE 300MCM CABLES AND THE TAP TO THE SUB-PANEL.
 - B. VERIFY EXISTING LUGS ON THE NEUTRAL BUS. PROVIDE ADDITIONAL LUGS AS REQUIRED FOR NEW 300MCM CABLES.
 - C. DURING OUTAGE, DISCONNECT AND REMOVE THE BONDING JUMPER BETWEEN THE NEUTRAL BUS AND THE GROUND BUS/GROUNDED PANEL ENCLOSURE.
 - D. DURING OUTAGE, MOVE THE EXISTING GROUNDING ELECTRODE CONDUCTOR TO THE GROUND BUS IN THE PANEL. PROVIDE NEW LUGS AS REQUIRED.
 11. FURNISH A WEATHERPROOF, BREAK-GLASS TYPE EMERGENCY POWER OFF SWITCH MOUNTED TO THE SIDE OF THE AUTOMATIC TRANSFER SWITCH. CONNECT TO THE NEW BREAKER IN THE GENERATOR AND THE MAIN BREAKER IN THE ATs.
 12. FEEDER FROM ATs TO EXISTING DISTRIBUTION PANEL SHALL PENETRATE EXTERIOR WALL BELOW BAR JOIST. ROUTE CONDUIT WITHIN BUILDING TO DISTRIBUTION PANEL AS REQUIRED. SEAL WALL AFTER INSTALLING CONDUITS. PAINT TO MATCH EXISTING FINISH.

NO.	DATE	DESCRIPTION OF REVISION
1	06/20/21	SHUNT TRIP, MISC. CHANGES

INGRAM & ASSOCIATES
Consulting Engineers, LLC

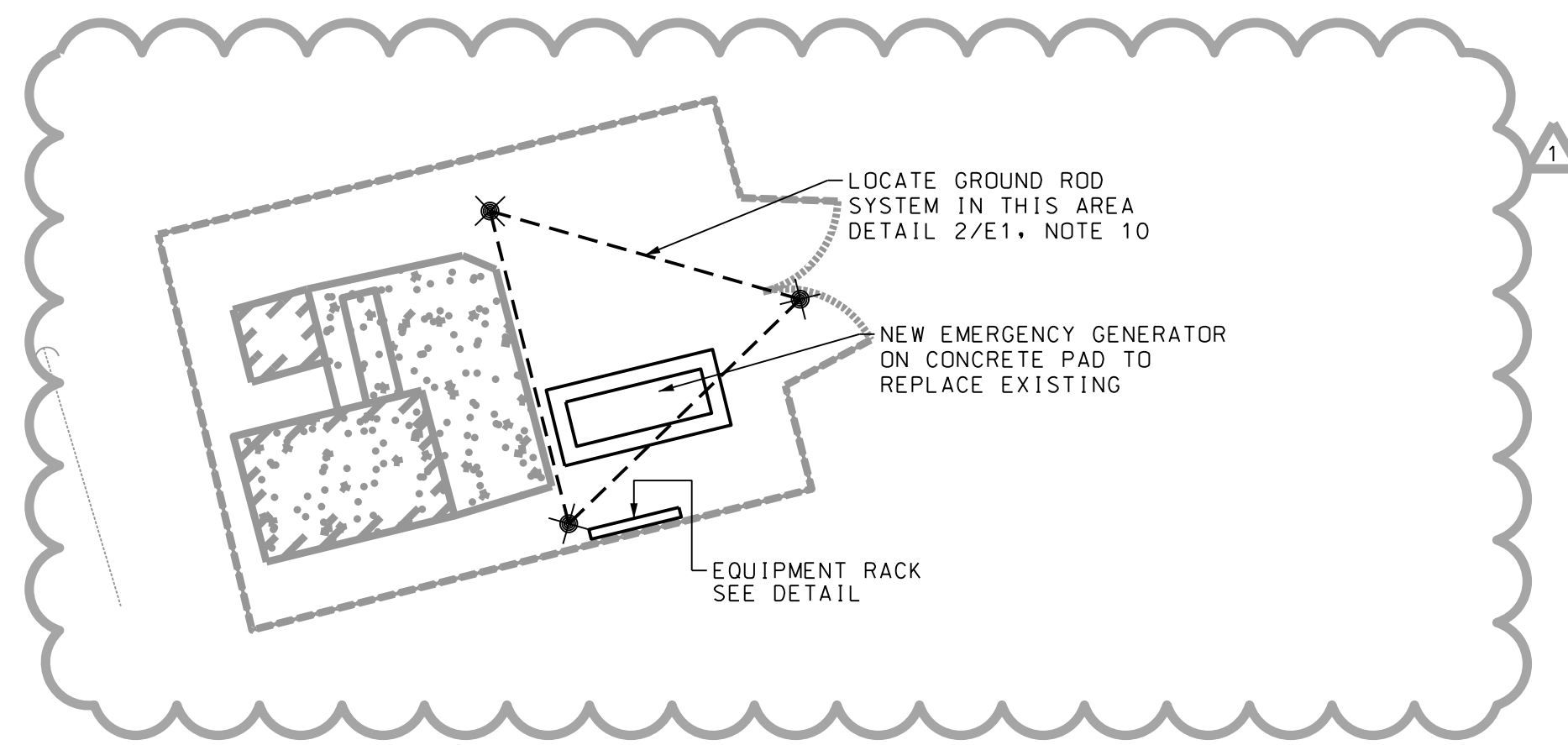
332 New Street
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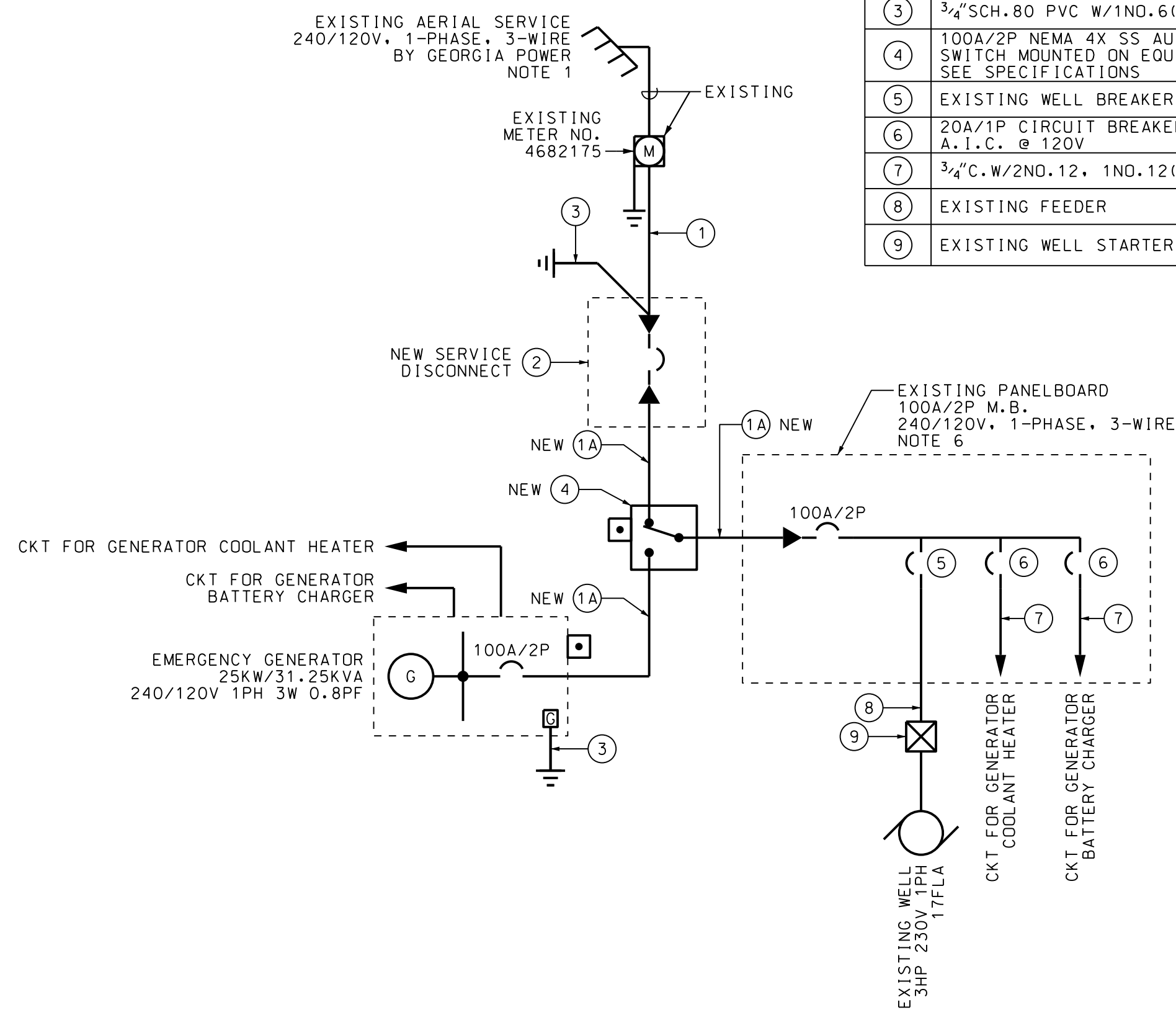
EMA GENERATOR REPLACEMENTS
FOR THE
Jones County Board of Commissioners
Jones County, Georgia

Proj. #:	1160-106-01	SHEET #:	E1
Dsgn By:	CC	Checked By:	CC
CAD By:	LC	Date:	20-JUN-2021
DATE:		SHT. OF	



1 ELECTRICAL SITE PLAN
E1 SCALE: 1/4" = 1'-0"

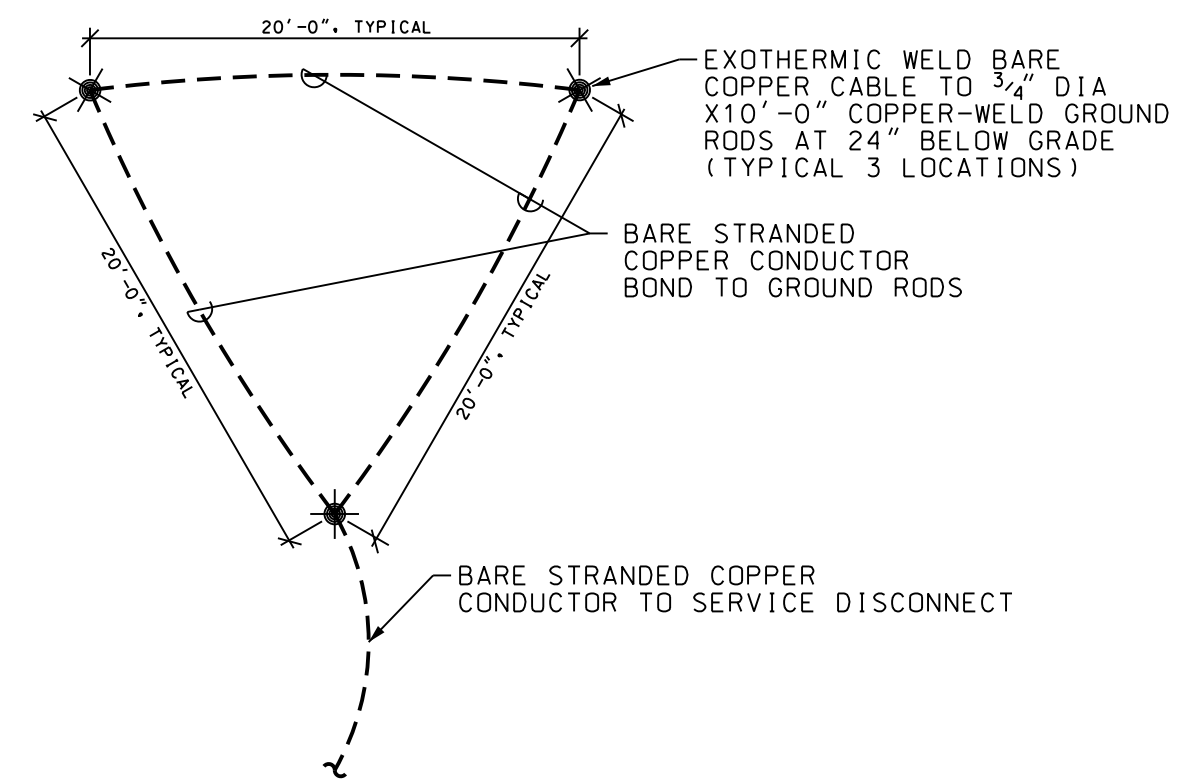
ETHERIDGE ROAD WELL ONE LINE SCHEDULE	
ITEM#	3 HP 17 F.L.A. 230V 1PH
①	1 1/2" C W/3 NO.1, NOTE 7,8
①A	1 1/2" C W/3 NO.1, 1NO.8(G), NOTE 9
②	100A/2P/4XSS ENCLOSED BREAKER W/ SERVICE LABEL, 10KA1C MIN. @ 240V. LABEL "SERVICE DISCONNECT"
③	3/4" SCH.80 PVC W/1NO.6(G), NOTE 10
④	100A/2P NEMA 4X SS AUTOMATIC TRANSFER SWITCH MOUNTED ON EQUIPMENT RACK, SEE SPECIFICATIONS.
⑤	EXISTING WELL BREAKER
⑥	20A/1P CIRCUIT BREAKER, 10 000 MIN. A.I.C. @ 120V
⑦	3/4" C. W/2NO.12, 1NO.12(G)
⑧	EXISTING FEEDER
⑨	EXISTING WELL STARTER



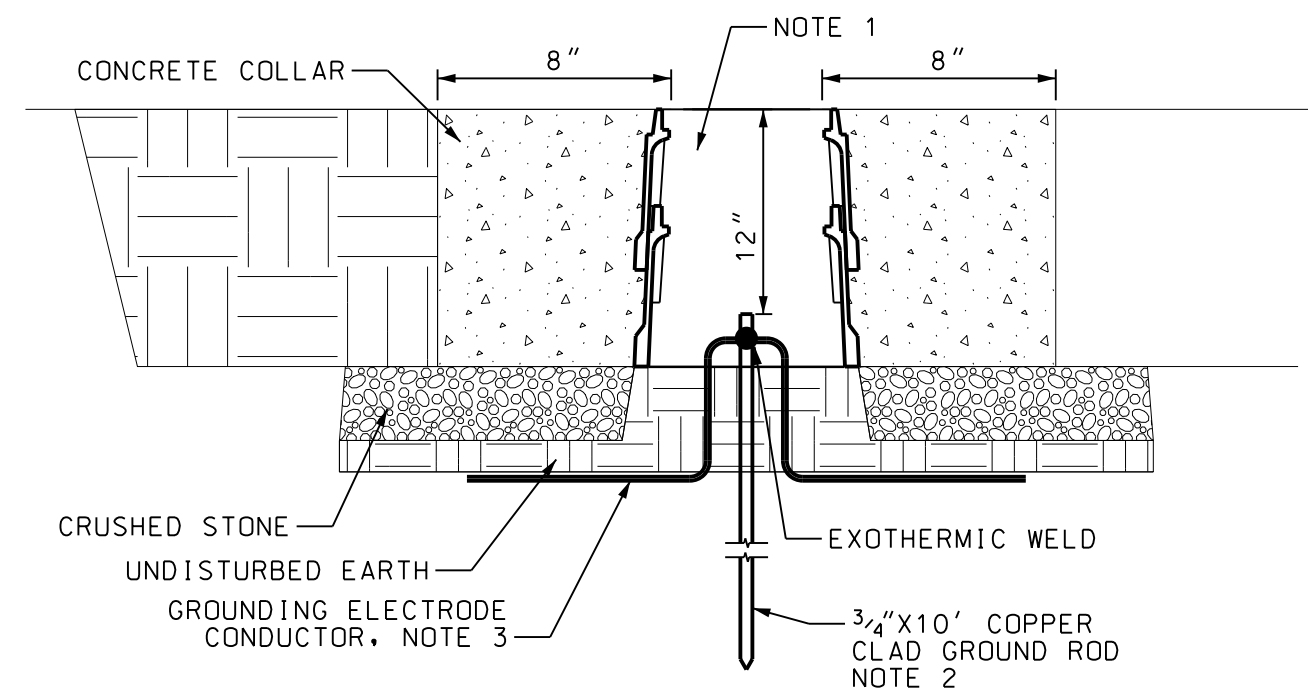
5 ONE-LINE DIAGRAM
E1 SCALE: NONE

NOTES:

- THE METER AND SERVICE DROP IS EXISTING AND SHALL REMAIN. COORDINATE UTILITY REVIEW OF THE NEW ATS AND GENERATOR WITH GEORGIA POWER. CONTACT JANET MARTIN, 478-454-5540.
- ALL CONDUITS INSTALLED EXPOSED TO ATMOSPHERE SHALL BE ALUMINUM RIGID CONDUIT, ALL CONDUITS INSTALLED BELOW GRADE SHALL BE SCHEDULE 80 PVC. ALL ELBOWS AND STUB-UPS TO BE ALUMINUM RIGID CONDUIT.
- COAT ALL STRUCTURAL SUPPORTS AND ARC CONDUITS ENCASED IN CONCRETE WITH TWO COATS OF SCOTCHRAP PIPE PRIMER AND TWO OVERLAPPING LAYERS OF SCOTCHRAP 51 TAPE. APPLY FROM 6" ABOVE GRADE TO BOTTOM OF STRUCTURAL MEMBER OR TRANSITION TO SCH.80 PVC. ALLOW FOR PRIMER TO DRY BEFORE APPLICATION OF SECOND COAT AND/OR TAPE.
- ALL ATTACHMENT HARDWARE, BOLTS, NUTS, WASHERS, ETC. SHALL BE STAINLESS STEEL. PROVIDE FIBER WASHER BETWEEN DISSIMILAR METAL COMPONENTS AND ENCLOSURES. ALL CONNECTIONS SHALL BE BOLTED WITH STAINLESS STEEL FASTENERS.
- FIELD COORDINATE MOUNTING LOCATION OF NEW SERVICE DISCONNECT/ENCLOSED BREAKER AND AUTOMATIC TRANSFER SWITCH. SWITCH OPERATING HANDLES SHALL BE A MAXIMUM OF 66" ABOVE FINISHED GRADE. PROVIDE ALUMINUM CHANNELS ATTACHED TO THE BUILDING EXTERIOR WALL FOR SUPPORT OF THE NEW EQUIPMENT.
- FURNISH TWO 20A/1P BREAKERS IN EXISTING PANEL FOR GENERATOR COOLANT HEATER AND BATTERY CHARGER.
- DEMOLISH THE EXISTING SERVICE FROM THE METER TO THE EXISTING PANELBOARD.
- PROVIDE A NEW SERVICE FROM THE METER TO THE NEW ENCLOSED BREAKER.
- PROVIDE A NEW FEEDER FROM THE NEW ENCLOSED BREAKER TO THE ATS. FROM THE GENERATOR TO THE ATS AND FROM THE ATS TO THE EXISTING PANELBOARD.
- PROVIDE A NEW GROUNDING DELTA. INSTALL PER DETAIL THIS SHEET.



2 SECONDARY ELECTRICAL GROUNDING
E1 SCALE: N.T.S.



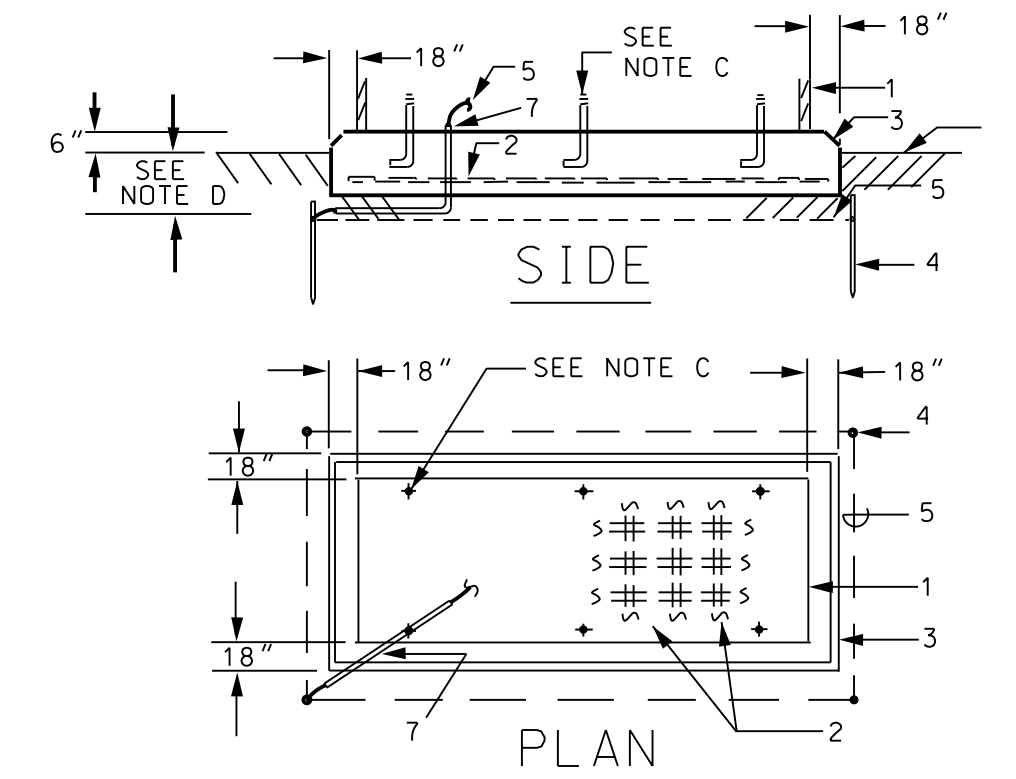
NOTES:

- OLDCASTLE ENCLOSURE SOLUTIONS, OLDCASTLE POLYMER 910 FLUSH-IN-GRADE POLYMER CONCRETE ROUND ENCLOSURE, NOMINAL 9" DIAMETER OPENING, 10" TALL. PROVIDE TWO STACKED BODIES AND ONE LID WITH "GROUNDING" LOGO. LID AND BODIES SHALL BE ANSI/SCTE-77 TIER 22 RATED.
- GROUND ROD SHALL BE DRIVEN TO 12" BELOW FINISH GRADE. GROUNDING ELECTRODE CONDUCTOR TERMINATION SHALL BE MADE WITH EXOTHERMIC WELD.
- GROUNDING ELECTRODE CONDUCTOR SHALL BE BURIED 24" BELOW FINISH GRADE.

3 GROUND ROD TEST WELL DETAIL
E1 SCALE: NONE

LEGEND:

- EQUIPMENT AS NOTED
- MOTOR CIRCUIT BREAKER
- GROUND TO GROUND ROD SYSTEM
- CONDUIT SYSTEM CONCEALED BELOW GRADE
- GROUND ROD LOCATION
- GENERATOR EMERGENCY STOP
- N.T.S. NOT TO SCALE

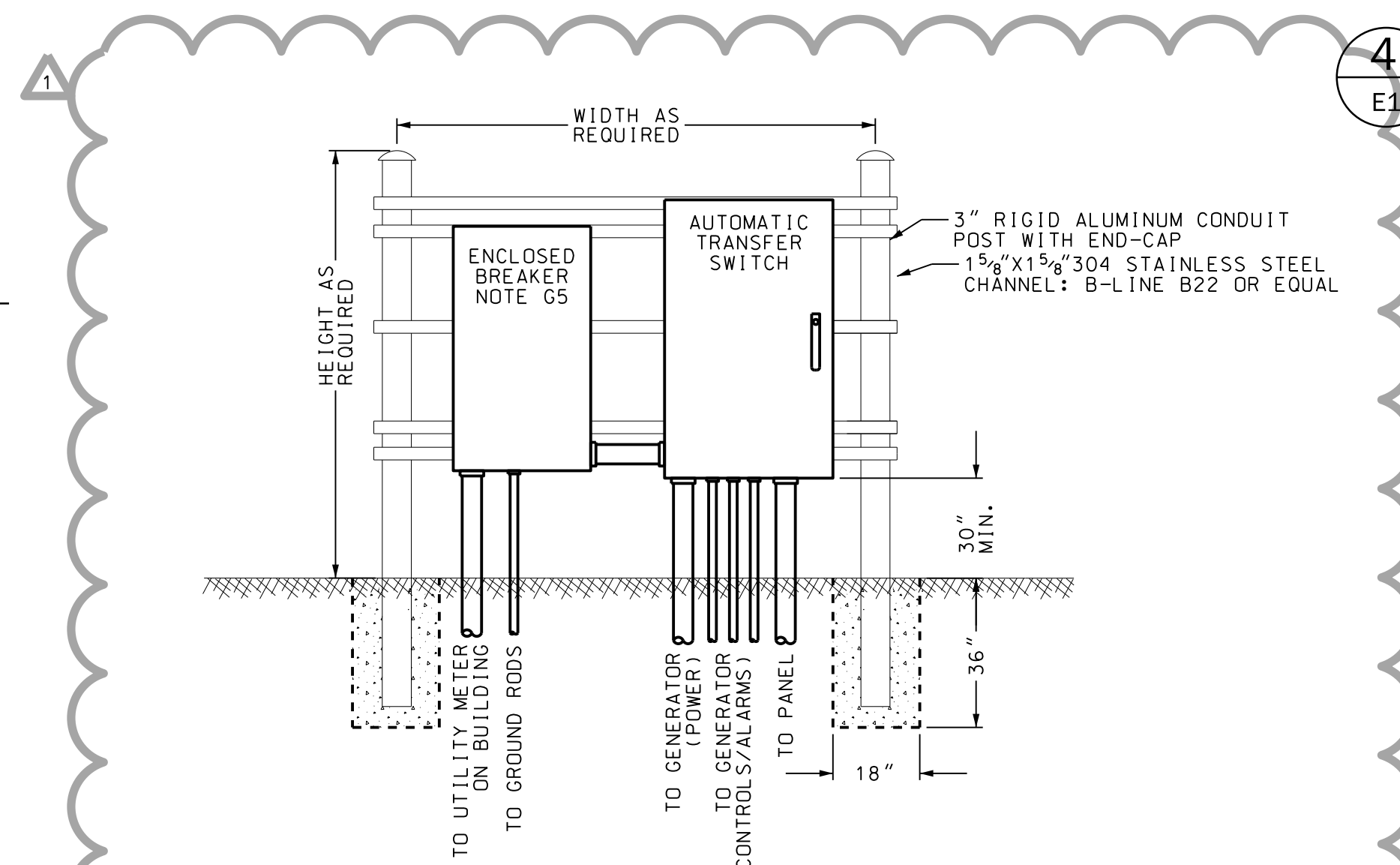


- GENERATOR SET ENCLOSURE OUTLINE
- REINFORCING STEEL. NOTE A
- 1" CHAMFER
- 3/4" X 10' COPPERCLAD GROUND ROD AND
- #1/0 CU BARE GROUND CONDUCTOR
- FINISHED GRADE
- 3/4" PVC. SEE NOTE B

NOTES: EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL

- #8 GA. STEEL WIRE MESH, 6" O.C. OR #6 REBAR, 12" O.C., VERTICALLY AND HORIZONTALLY.
- CONNECT TO GENERATOR GROUND CONNECTION LUG. VERIFY STUB UP LOCATION WITH MANUFACTURER'S SHOP DRAWINGS, SEAL CONDUIT END WITH ELECTRICAL DUCT SEAL.
- ANCHOR BOLTS FURNISHED WITH GENERATOR SET. PROVIDE SIX, MINIMUM, TIE TO REINFORCING STEEL.
- DIMENSION SHALL BE 6" (12" OVERALL DEPTH) UP TO & INCLUDING 600KW; 12" (18" OVERALL DEPTH) LARGER THAN 600KW.

EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL
E1 SCALE: NONE



5 EQUIPMENT RACK DETAIL
E1 SCALE: NONE

ETHRIDGE ROAD PUMP STATION

EMA GENERATOR REPLACEMENTS
FOR THE
Jones County Board of Commissioners
Jones County, Georgia

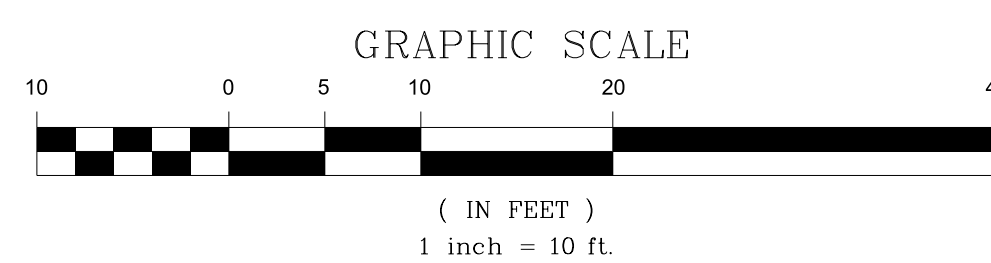
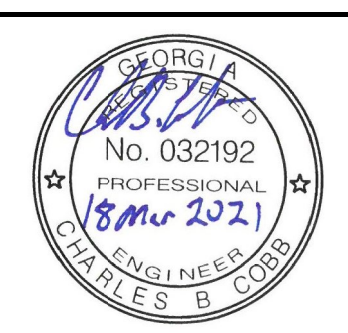
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DATE: 20-JUN-2021

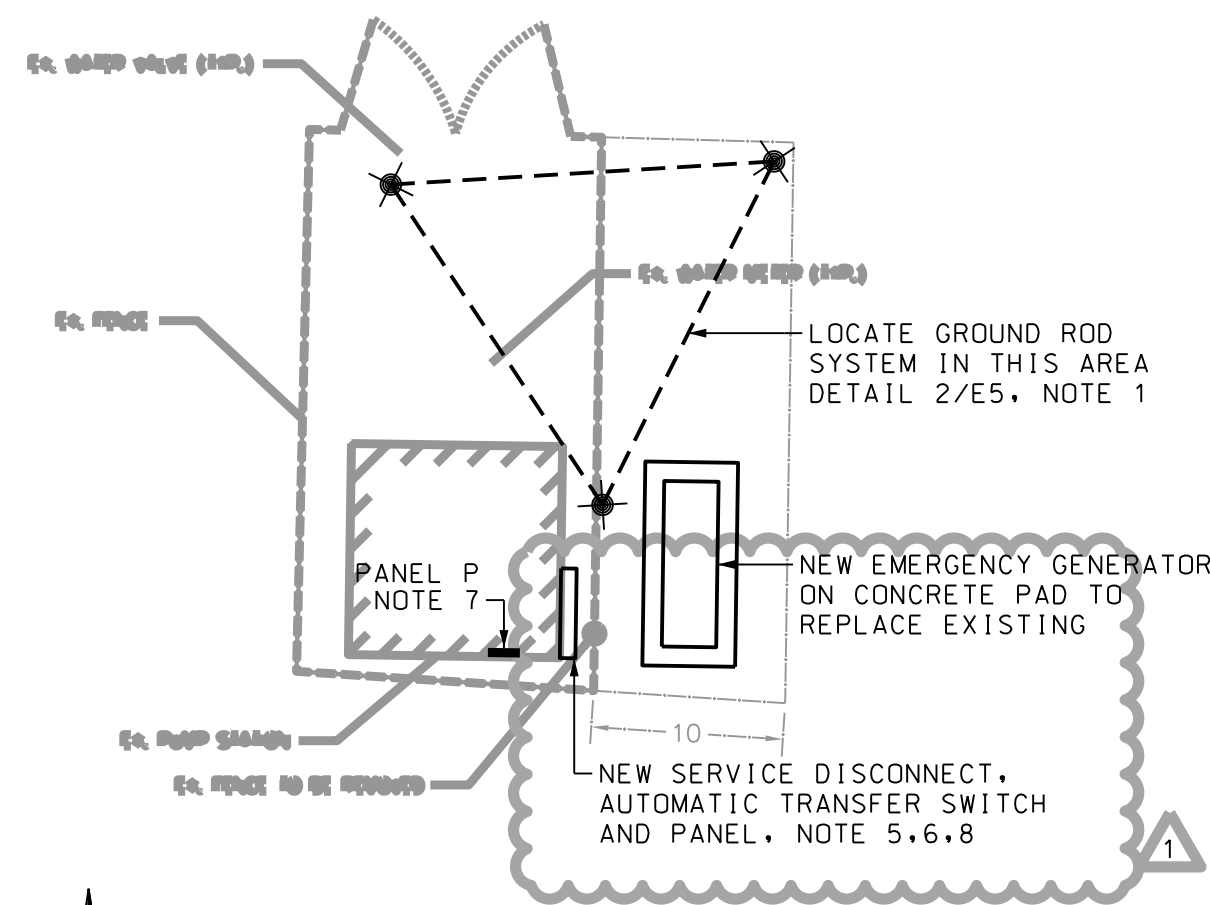
SHEET #:
E1
SHT. OF

NO.	DATE	DESCRIPTION OF REVISION
1	06/20/21	EQUIPMENT RACK, RELOCATED GENERATOR

INGRAM & ASSOCIATES
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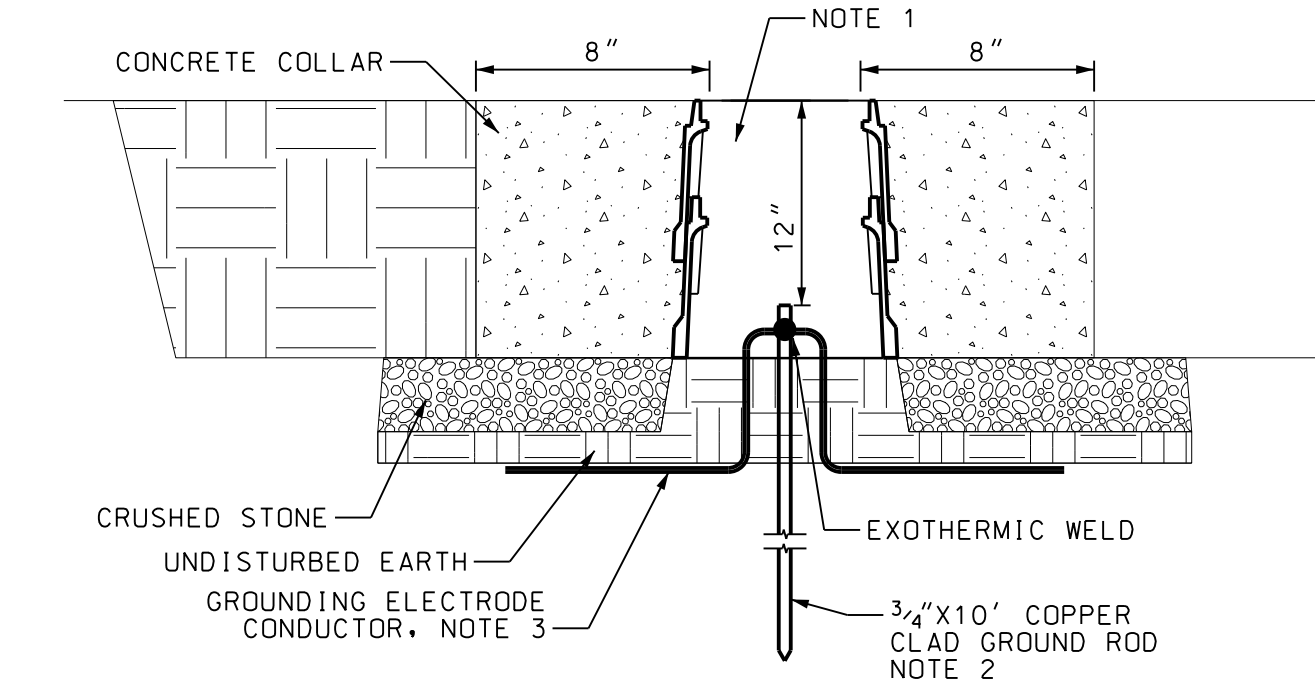


1 ELECTRICAL SITE PLAN
E2 SCALE: 1" = 10' - 0"

NOTES: ELECTRICAL SITE PLAN

- FURNISH AND INSTALL THREE 10' X 3/4" DIA. GROUND RODS, TRIAD/DELTA CONFIGURATION, WITH 20" SEPARATION, DRIVEN 12" BELOW GRADE. SERVICE GROUNDING SHALL BE BONDED AT THE ENCLOSED BREAKER AND AT THE GENERATOR. REFER TO DETAIL 2/E2.
- ALL CONDUITS INSTALLED EXPOSED TO ATMOSPHERE SHALL BE RIGID ALUMINUM. ALL CONDUITS INSTALLED BELOW GRADE SHALL BE SCHEDULE 80 PVC. ALL ELBOWS AND STUB-UPS TO BE RIGID ALUMINUM.
- COAT ALL STRUCTURAL SUPPORTS AND ARC CONDUITS ENCASED IN CONCRETE WITH TWO COATS OF SCOTCHRAP PIPE PRIMER AND TWO OVERLAPPING LAYERS OF SCOTCHRAP 51 TAPE. APPLY FROM 6" ABOVE GRADE TO BOTTOM OF STRUCTURAL MEMBER OR TRANSITION TO SCH. 80 PVC. ALLOW FOR PRIMER TO DRY BEFORE APPLICATION OF SECOND COAT AND/OR TAPE.
- ALL ATTACHMENT HARDWARE, BOLTS, NUTS, WASHERS, ETC. SHALL BE STAINLESS STEEL. PROVIDE FIBER WASHER BETWEEN DISSIMILAR METAL COMPONENTS AND ENCLOSURES. ALL CONNECTIONS SHALL BE BOLTED WITH STAINLESS STEEL FASTENERS.
- FIELD COORDINATE MOUNTING LOCATION OF THE NEW SERVICE DISCONNECT AND AUTOMATIC TRANSFER SWITCH. SWITCH OPERATING HANDLES SHALL BE A MAXIMUM OF 66" ABOVE FINISHED GRADE. PROVIDE ALUMINUM CHANNELS ATTACHED TO THE BUILDING EXTERIOR WALL FOR SUPPORT OF THE AUTOMATIC TRANSFER SWITCH.
- FURNISH NEW PANELBOARD NEMA 3R ENCLOSURE. BREAKERS TO MATCH EXISTING IN PLACE. TWO ADDITIONAL 20A/1P BREAKERS SHALL BE ADDED FOR GENERATOR COOLANT HEATER AND BATTERY CHARGER. THE NEW PANEL SHALL BE MOUNTED ON THE EXTERIOR OF THE EXISTING BUILDING.
- DEMOLISH THE EXISTING PANEL. EXTEND THE EXISTING BRANCH CIRCUITS TO THE NEW PANEL ON THE BUILDING EXTERIOR.

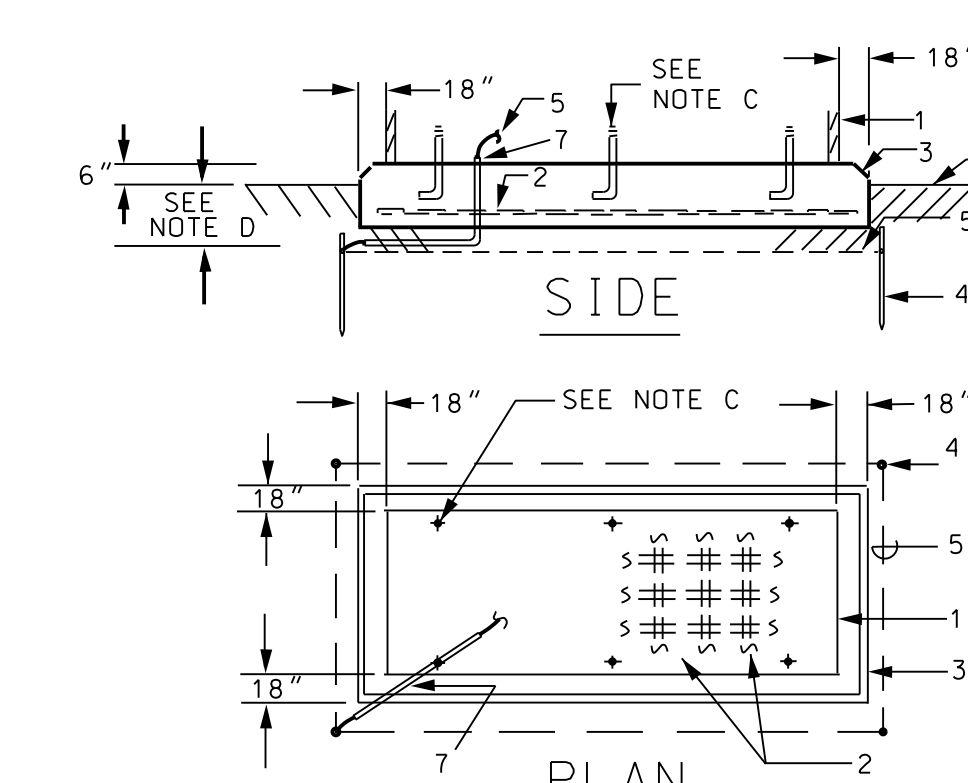
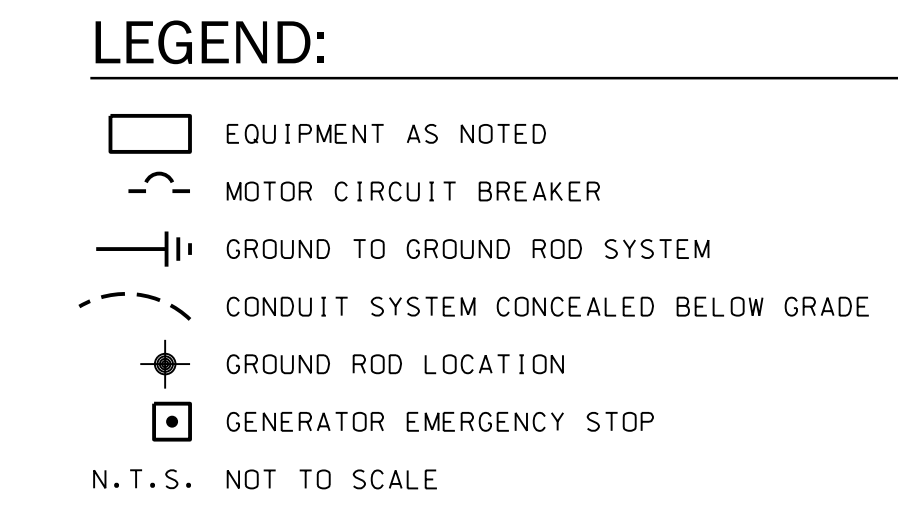
2 SECONDARY ELECTRICAL GROUNDING
E2 SCALE: N.T.S.



NOTES:

- OLDCASTLE ENCLOSURE SOLUTIONS, OLDCASTLE POLYMER 910 FLUSH-IN-GRADE POLYMER CONCRETE ROUND ENCLOSURE. NOMINAL 3" DIAMETER OPENING, 10" TALL. PROVIDE TWO STACKED BODIES AND ONE LID WITH "GROUNDING" LOGO. LID AND BODIES SHALL BE ANSI/SCTE-77 TIER 22 RATED.
- GROUND ROD SHALL BE DRIVEN TO 12" BELOW FINISH GRADE. GROUNDING ELECTRODE CONDUCTOR TERMINATION SHALL BE MADE WITH EXOTHERMIC WELD.
- GROUNDING ELECTRODE CONDUCTOR SHALL BE BURIED 24" BELOW FINISH GRADE.

3 GROUND ROD TEST WELL DETAIL
E2 SCALE: NONE



- GENERATOR SET ENCLOSURE OUTLINE
- REINFORCING STEEL, NOTE A
- 1" CHAMFER
- 3/4" X 10' COPPERCLAD GROUND ROD AND
- #1/0 CU BARE GROUND CONDUCTOR
- FINISHED GRADE
- 3/4" PVC. SEE NOTE B

NOTES: EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL

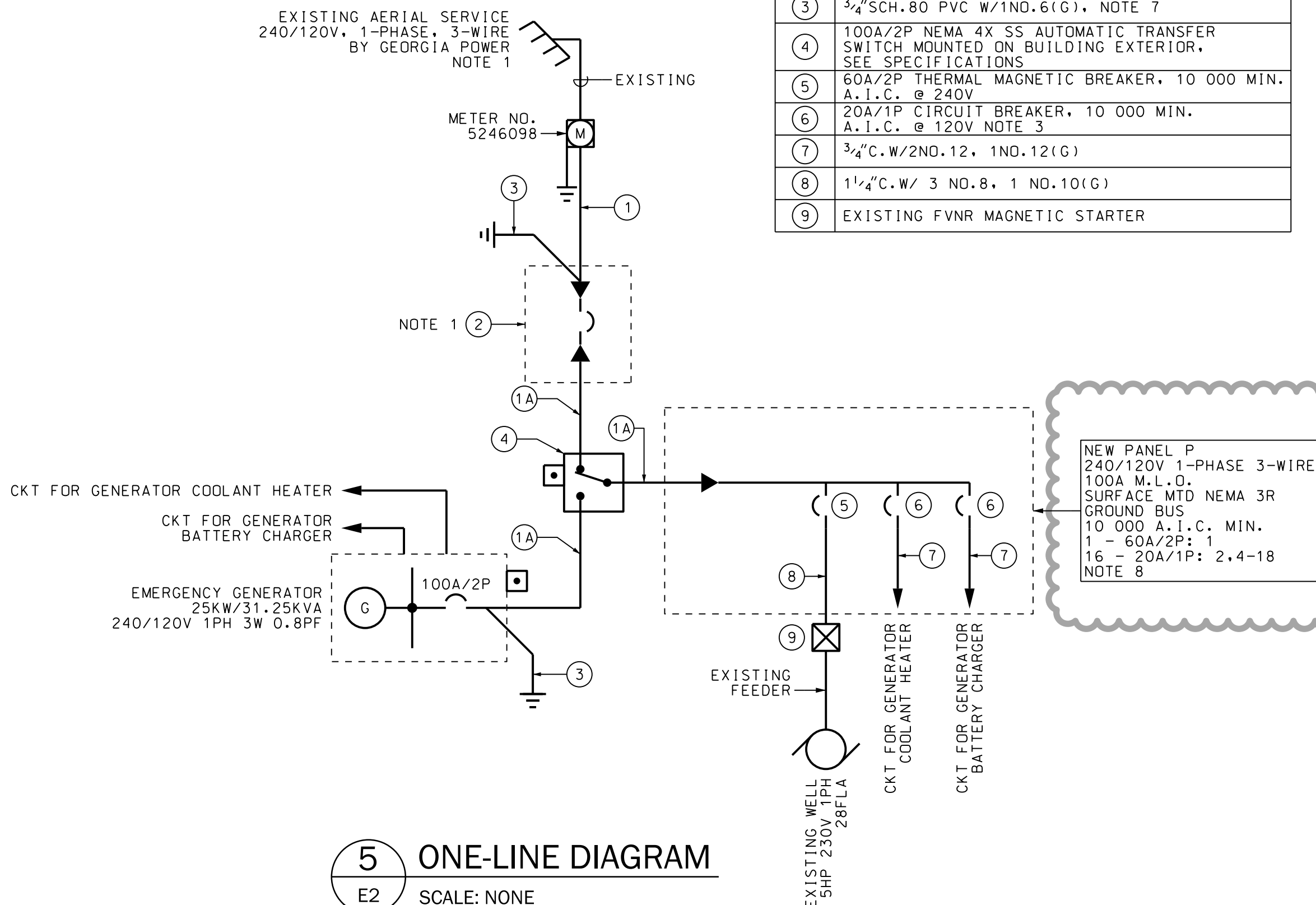
- #8 GA. STEEL WIRE MESH, 6" O.C. OR #6 REBAR, 12" O.C., VERTICALLY AND HORIZONTALLY.
- CONNECT TO GENERATOR GROUND CONNECTION LUG. VERIFY STUB UP LOCATION WITH MANUFACTURER'S SHOP DRAWINGS. SEAL CONDUIT END WITH ELECTRICAL DUCT SEAL.
- ANCHOR BOLTS FURNISHED WITH GENERATOR SET. PROVIDE SIX. MINIMUM. TIE TO REINFORCING STEEL.
- DIMENSION SHALL BE 6" (12" OVERALL DEPTH) UP TO & INCLUDING 600KW; 12" (18" OVERALL DEPTH) LARGER THAN 600KW.

4 EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL
E2 SCALE: NONE

PEACH STREET - DUNCAN WELL ONE LINE SCHEDULE	
ITEM#	5 HP 28 F.L.A. 230V 1PH
1	1 1/2" C W/3 NO. 1
1A	1 1/2" C W/3 NO. 1, 1ND.8(G) NOTE 6
2	100A/2P ENCLOSED BREAKER W/ SERVICE LABEL, 10 000 MIN., A.I.C. @ 240V. LABEL "SERVICE DISCONNECT".
3	3/4" SCH. 80 PVC W/1ND.6(G), NOTE 7
4	100A/2P NEMA 4X SS AUTOMATIC TRANSFER SWITCH MOUNTED ON BUILDING EXTERIOR. SEE SPECIFICATIONS
5	60A/2P THERMAL MAGNETIC BREAKER, 10 000 MIN., A.I.C. @ 240V
6	20A/1P CIRCUIT BREAKER, 10 000 MIN., A.I.C. @ 120V NOTE 3
7	3/4" C. W/2ND.12, 1ND.12(G)
8	1 1/2" C. W/ 3 NO. 8, 1 NO.10(G)
9	EXISTING FVNR MAGNETIC STARTER

NOTES: ONE-LINE DIAGRAM

- THE METER AND SERVICE DROP IS EXISTING AND SHALL REMAIN. COORDINATE UTILITY REVIEW OF THE NEW ATS AND GENERATOR WITH GEORGIA POWER. CONTACT JANET MARTIN, 478-454-5540.
- ALL CONDUITS INSTALLED EXPOSED TO ATMOSPHERE SHALL BE ALUMINUM RIGID CONDUIT, ALL CONDUITS INSTALLED BELOW GRADE SHALL BE SCHEDULE 80 PVC. ALL ELBOWS AND STUB-UPS TO BE ALUMINUM RIGID CONDUIT.
- FURNISH TWO 20A/1P BREAKERS IN THE NEW PANEL FOR GENERATOR COOLANT HEATER AND BATTERY CHARGER.
- DEMOLISH THE EXISTING SERVICE FROM THE METER TO THE EXISTING PANELBOARD.
- PROVIDE A NEW SERVICE FROM THE METER TO THE NEW ENCLOSED BREAKER.
- PROVIDE A NEW FEEDER FROM THE NEW ENCLOSED BREAKER TO THE ATS, FROM THE GENERATOR TO THE ATS AND FROM THE ATS TO THE EXISTING PANELBOARD.
- PROVIDE A NEW GROUNDING DELTA. INSTALL PER DETAIL THIS SHEET.
- MOUNT THE NEW PANEL ON THE BUILDING EXTERIOR ADJACENT TO THE AUTOMATIC TRANSFER SWITCH. EXTEND THE EXISTING BRANCH CIRCUITS TO THE NEW PANEL. RECONNECT ALL EXISTING BRANCH CIRCUITS TO THE NEW PANELBOARD. FIELD COORDINATE CIRCUIT LOCATION AND REQUIRED TRIP SETTING WITH THE EXISTING PANEL. MAKE ADJUSTMENTS TO BREAKER TRIP RATING AS REQUIRED.



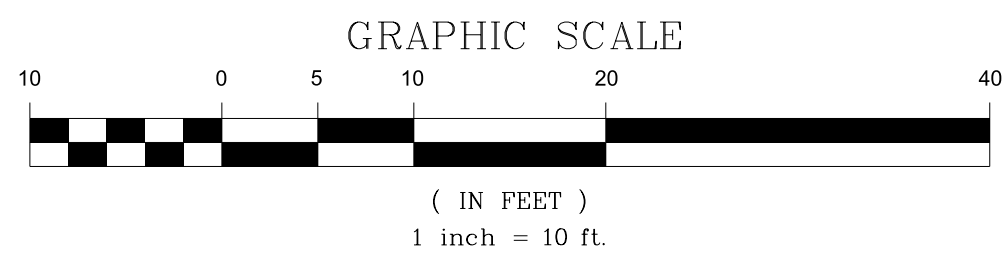
5 ONE-LINE DIAGRAM
E2 SCALE: NONE

NO.	DATE	DESCRIPTION OF REVISION
1	06/20/21	ADDED PANELBOARD

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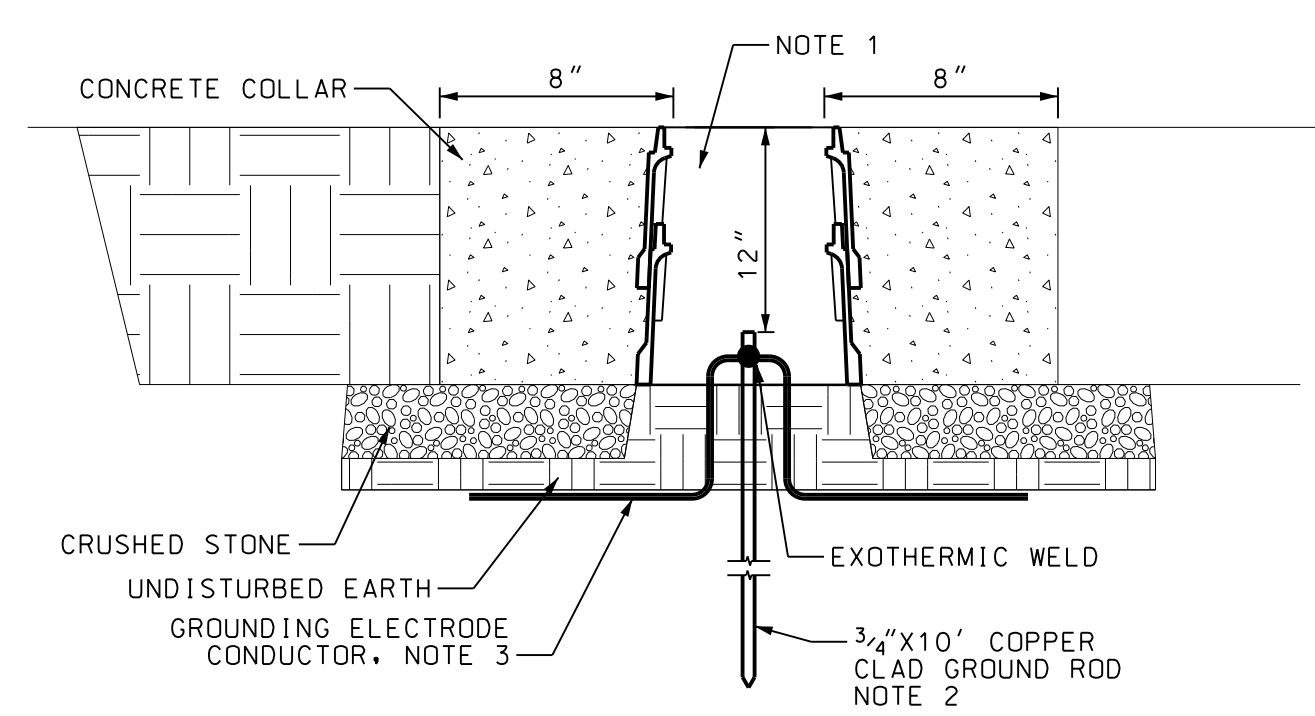
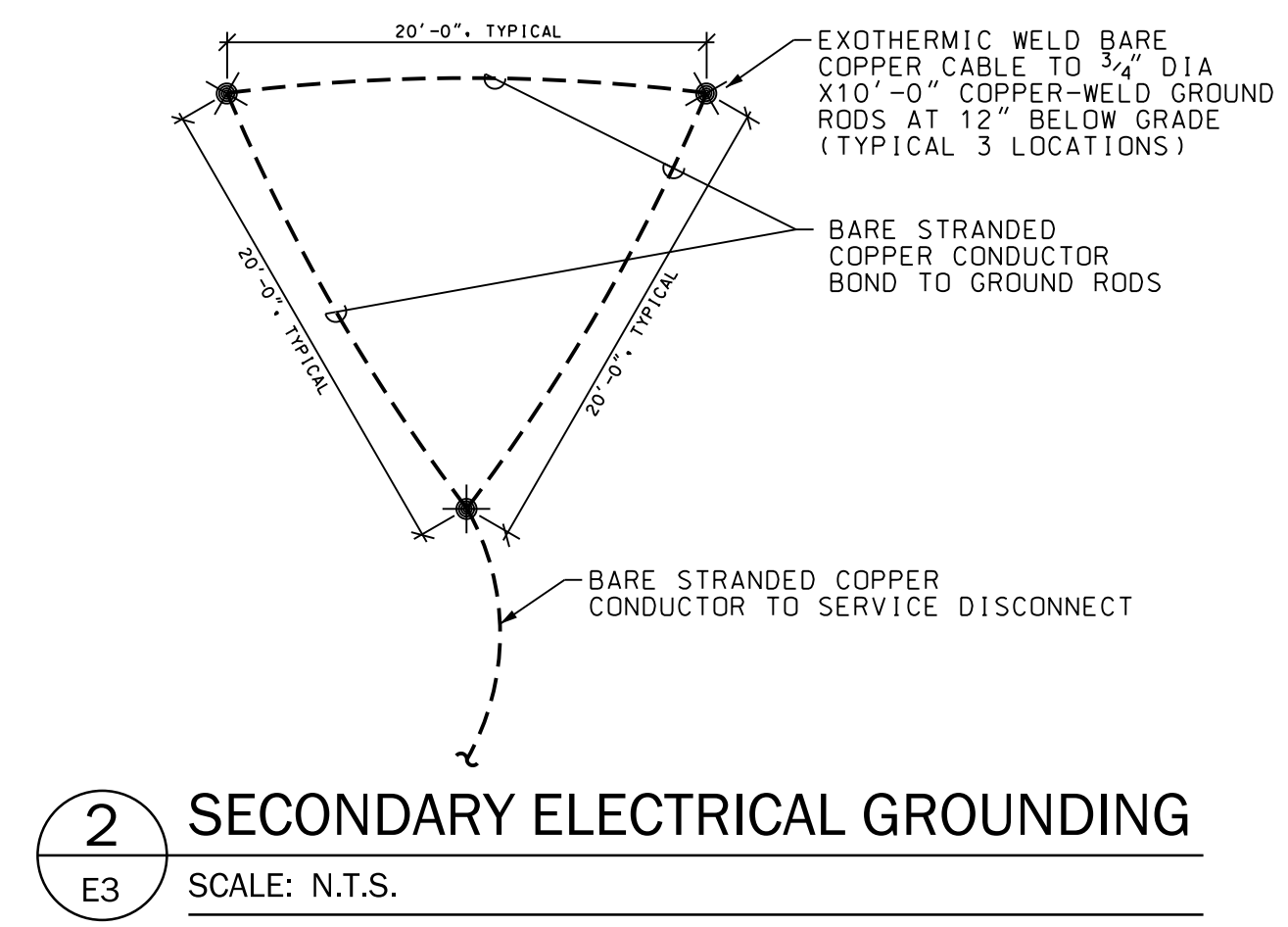
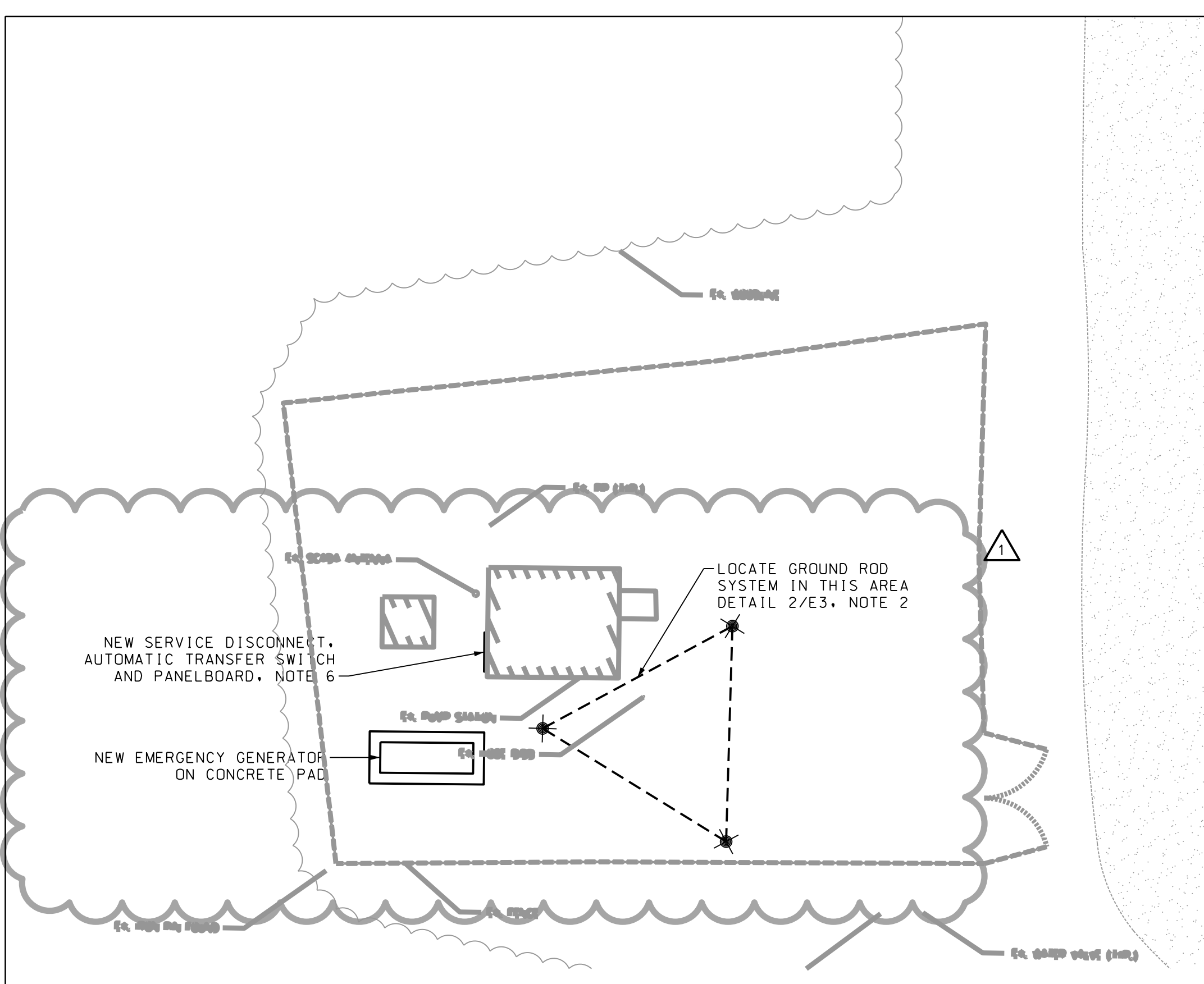


PEACH STREET PUMP STATION

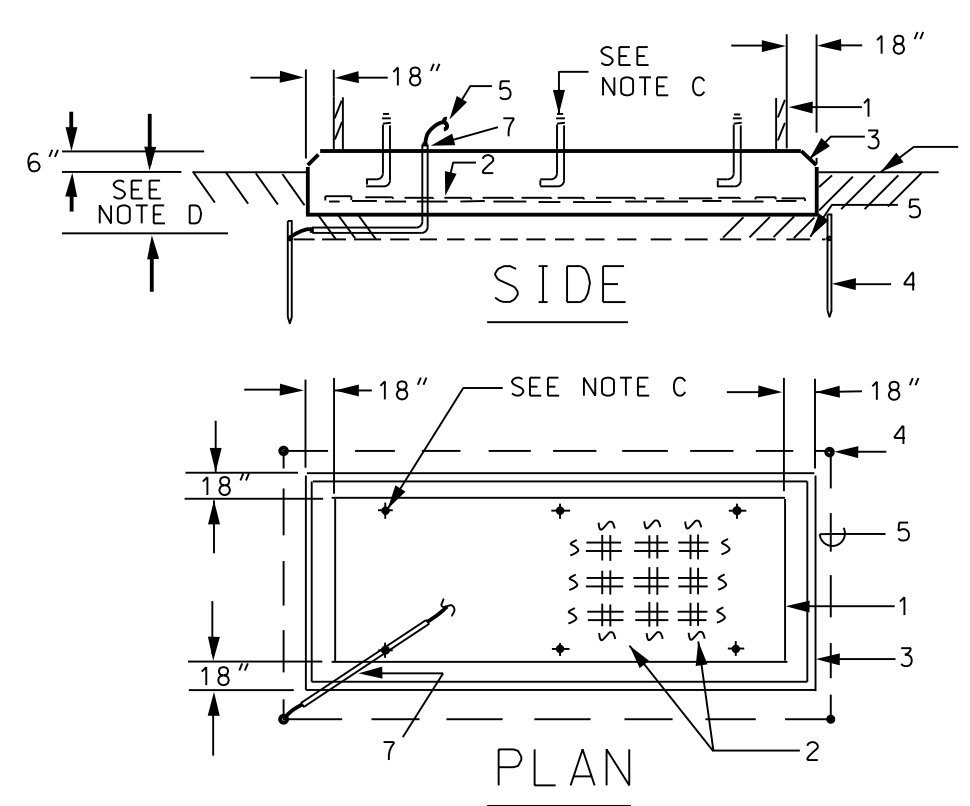
EMA GENERATOR REPLACEMENTS

FOR THE
Jones County Board of Commissioners
Jones County, Georgia

PROJ. #:	1160-106-01	SHEET #:	E2
DSGN BY:	CC	CHECKED BY:	CC
CAD BY:	LC	DATE:	20-JUN-2021
SHT.		OF	



- LEGEND:**
- EQUIPMENT AS NOTED
 - MOTOR CIRCUIT BREAKER
 - GROUND TO GROUND ROD SYSTEM
 - CONDUIT SYSTEM CONCEALED BELOW GRADE
 - GROUND ROD LOCATION
 - GENERATOR EMERGENCY STOP
 - N.T.S. NOT TO SCALE
 - EXISTING FUSED DISCONNECT SWITCH



- NOTES:**
- 1 - GENERATOR SET ENCLOSURE OUTLINE
 - 2 - REINFORCING STEEL, NOTE A
 - 3 - 1" CHAMFER
 - 4 - 3/4" x 10' COPPERCLAD GROUND ROD AND
 - 5 - #1/0 CU BARE GROUND CONDUCTOR
 - 6 - FINISHED GRADE
 - 7 - 3/4" PVC, SEE NOTE B

1 ELECTRICAL SITE PLAN
E3 SCALE: 1" = 10'-0"

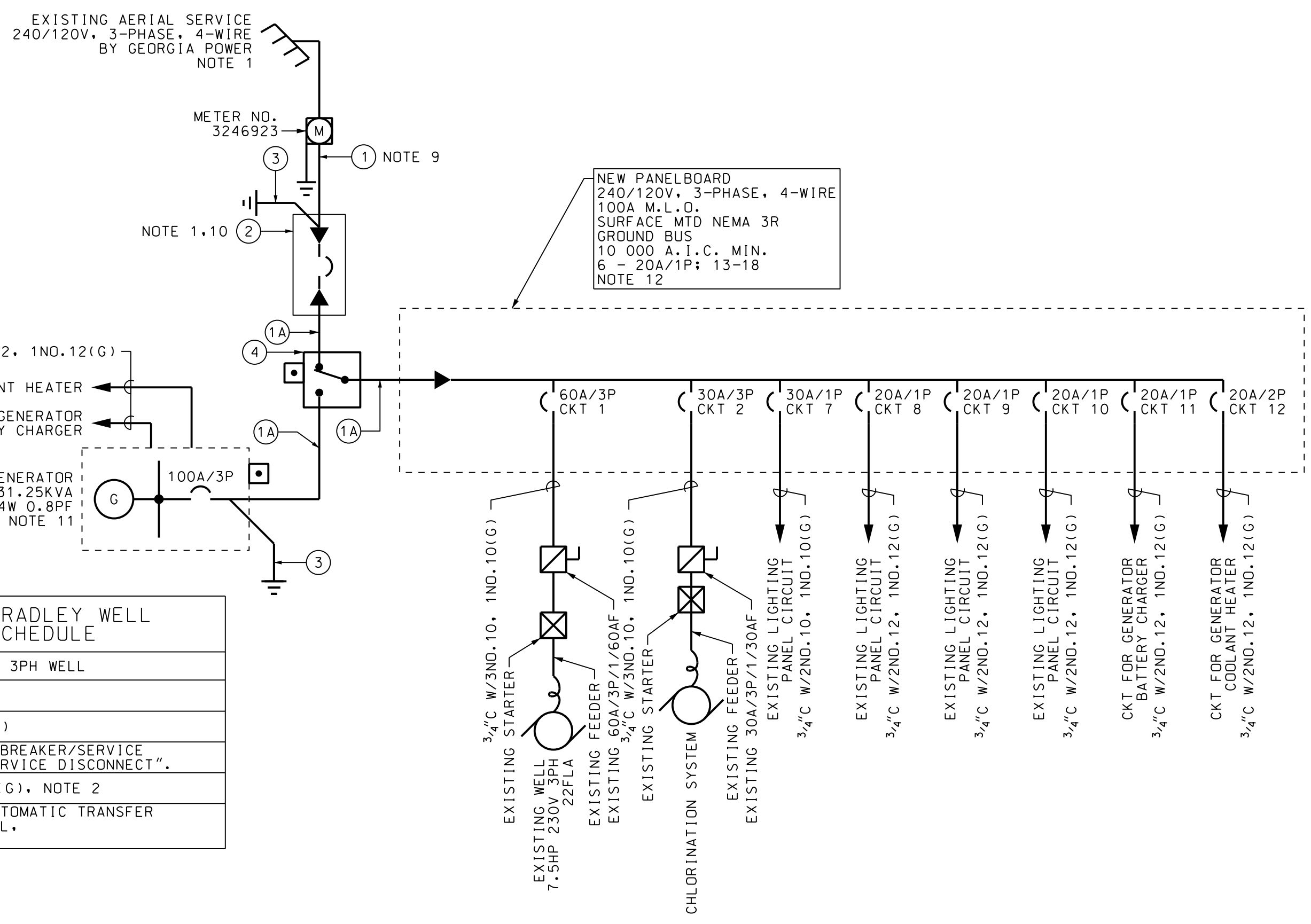
2 SECONDARY ELECTRICAL GROUNDING
E3 SCALE: N.T.S.

3 GROUND ROD TEST WELL DETAIL
E3 SCALE: NONE

NOTES: EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL

- A. #8 GA. STEEL WIRE MESH, 6" O.C. OR #6 REBAR, 12" O.C., VERTICALLY AND HORIZONTALLY.
- B. CONNECT TO GENERATOR GROUND CONNECTION LUG. VERIFY STUB UP LOCATION WITH MANUFACTURER'S SHOP DRAWINGS. SEAL CONDUIT END WITH ELECTRICAL DUCT SEAL.
- C. ANCHOR BOLTS FURNISHED WITH GENERATOR SET. PROVIDE SIX, MINIMUM, TIE TO REINFORCING STEEL.
- D. DIMENSION SHALL BE 6" (12" OVERALL DEPTH) UP TO & INCLUDING 600K#; 12" (18" OVERALL DEPTH) LARGER THAN 600K#.

4 EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL
E3 SCALE: NONE



NOTES:

1. THE EXACT LOCATION OF THE METER AND SERVICE SHALL BE COORDINATED IN THE FIELD WITH THE UTILITY COMPANY AND WITH OTHER WORK ON THE PROJECT SITE. CONTACT GEORGIA POWER - JANET MARTIN, 478-454-5540.
2. FURNISH AND INSTALL THREE 10' x 3/4" DIA. GROUND RODS, TRIAD/DELTA CONFIGURATION, WITH 20' SEPARATION, DRIVEN 12" BELOW GRADE. SERVICE GROUNDING SHALL BE BONDED AT THE ENCLOSED BREAKER AND AT THE GENERATOR. REFER TO DETAIL 2/E3.
3. ALL CONDUITS INSTALLED EXPOSED TO ATMOSPHERE SHALL BE RIGID ALUMINUM. ALL CONDUITS INSTALLED BELOW GRADE SHALL BE SCHEDULE 80 PVC. ALL ELBOWS AND STUB-UPS TO BE RIGID ALUMINUM.
4. COAT ALL STRUCTURAL SUPPORTS AND ARC CONDUITS ENCASED IN CONCRETE WITH TWO COATS OF SCOTCHRAP PIPE PRIMER AND TWO OVERLAPPING LAYERS OF SCOTCHRAP 51 TAPE. APPLY FROM 6" ABOVE GRADE TO BOTTOM OF STRUCTURAL MEMBER OR TRANSITION TO SCH.80 PVC. ALLOW FOR PRIMER TO DRY BEFORE APPLICATION OF SECOND COAT AND/OR TAPE.
5. ALL ATTACHMENT HARDWARE, BOLTS, NUTS, WASHERS, ETC. SHALL BE STAINLESS STEEL. PROVIDE FIBER WASHER BETWEEN DISSIMILAR METAL COMPONENTS AND ENCLOSURES. ALL CONNECTIONS SHALL BE BOLTED WITH STAINLESS STEEL FASTENERS.
6. FIELD COORDINATE MOUNTING LOCATION OF THE SERVICE DISCONNECT. AUTOMATIC TRANSFER SWITCH AND PANELBOARD. SWITCH AND BREAKER OPERATING HANDLES SHALL BE A MAXIMUM OF 66" ABOVE FINISHED GRADE. PROVIDE ALUMINUM CHANNELS, ATTACHED TO THE BUILDING EXTERIOR WALL FOR SUPPORT OF THE EQUIPMENT.
7. DEMOLISH THE EXISTING WIRING TROUGH AND FEEDS TO THE WELL DISCONNECT, CHLORINATOR DISCONNECT AND THE LIGHT PANEL. DEMOLISH THE LIGHT PANEL. RETAIN ALL BRANCH CIRCUITS FOR REUSE.
8. REPLACE BROKEN 1" SEALTITE FLEX TO WELL MOTOR
9. DEMOLISH THE SERVICE FOR THE METER TO THE SERVICE DISCONNECT. DEMOLISH THE EXISTING 100A/3P/1/100AF SERVICE DISCONNECT SWITCH.
10. DEMOLISH THE FEEDER FROM THE EXISTING SERVICE DISCONNECT TO THE EXISTING WIRING TROUGH.
11. PROVIDE A CONCRETE FOUNDATION PAD FOR THE NEW GENERATOR PER DETAIL 4/E3 THIS SHEET.
12. EXTEND THE NEW CIRCUITS TO THE EXISTING EQUIPMENT. FURNISH THE PANEL AS SPECIFIED. FIELD COORDINATE THE BRANCH CIRCUITS AND BRING ANY ISSUES TO THE ATTENTION OF THE ENGINEER.

5 ONE-LINE DIAGRAM
E3 SCALE: NONE

HIGHWAY 22 - BRADLEY WELL ONE LINE SCHEDULE

ITEM#	DESCRIPTION
1	7.5 HP 22 F.L.A. 230V 3PH WELL
1	2" W/4 NO.1
1A	2" W/4 NO.1, 1NO.8(G)
2	NEW 100A/3P ENCLOSED BREAKER/SERVICE DISCONNECT, LABEL "SERVICE DISCONNECT".
3	3/4" SCH.80 PVC W/1NO.6(G), NOTE 2
4	100A/3P NEMA 4X SS AUTOMATIC TRANSFER SWITCH MOUNTED ON WALL, SEE SPECIFICATIONS

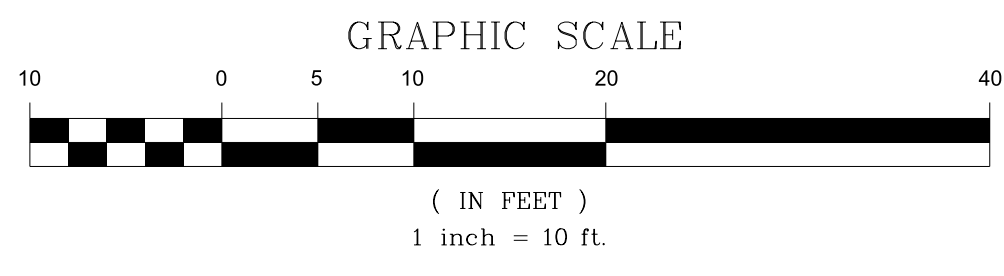
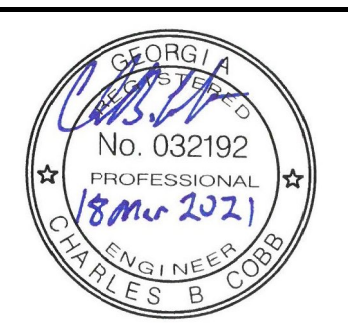
HIGHWAY 22 PUMP STATION

NO.	DATE	DESCRIPTION OF REVISION
1	06/20/21	ADDED PANEL, REARRANGE SITE

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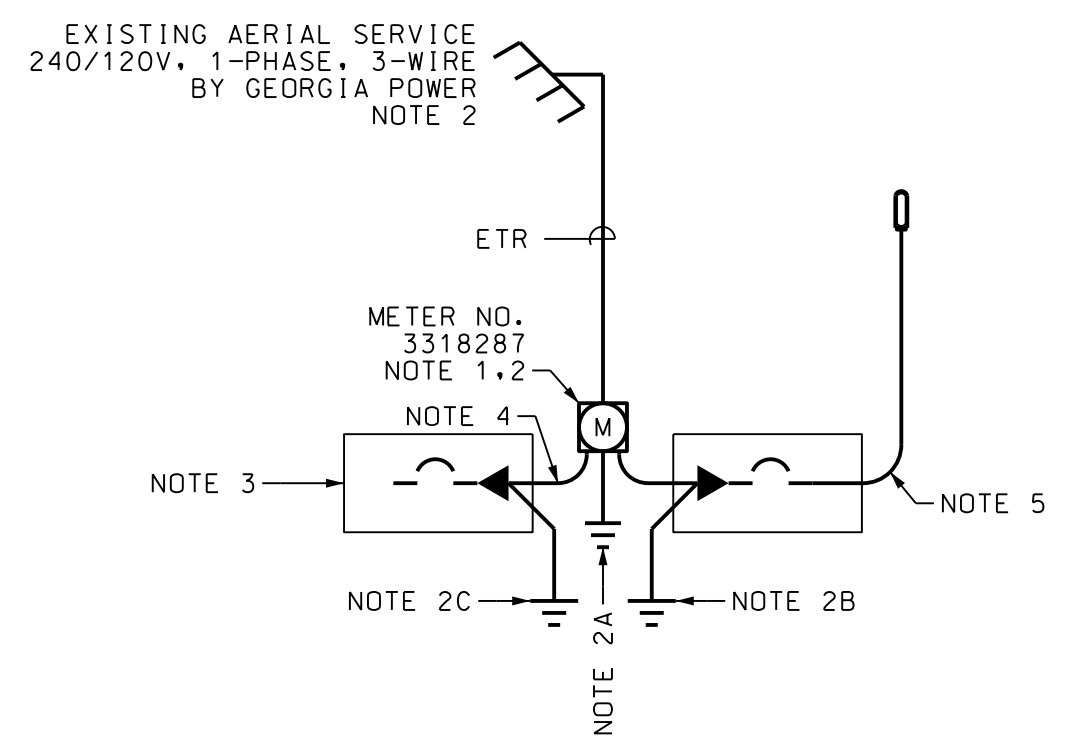


EMA GENERATOR REPLACEMENTS
FOR THE
Jones County Board of Commissioners
Jones County, Georgia

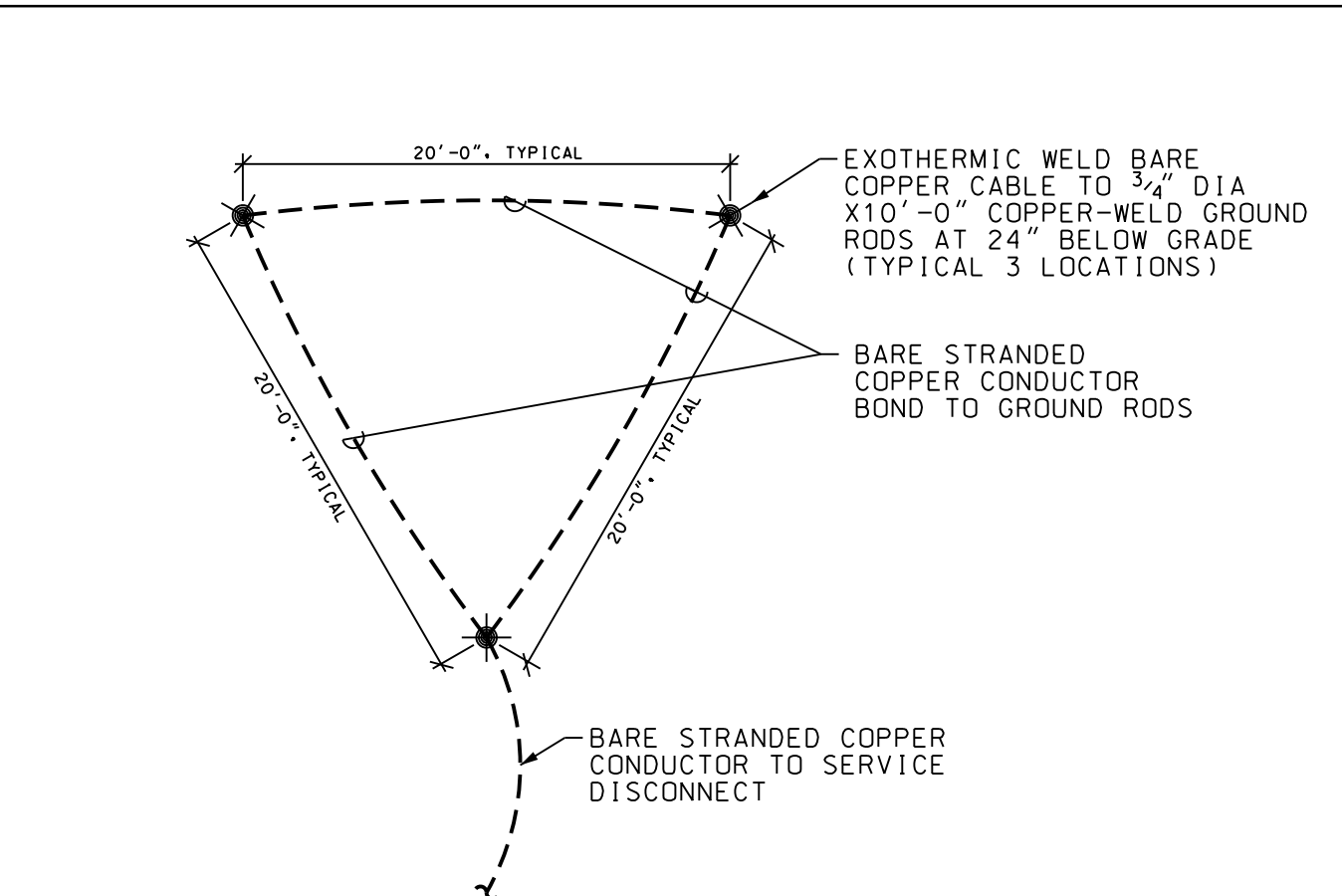
PROJ. #:	1160-106-01	SHEET #:	E3
DSGN BY:	CC	CHECKED BY:	CC
CAD BY:	LC	DATE:	20-JUN-2021
DATE:		20-JUN-2021	SHT. OF



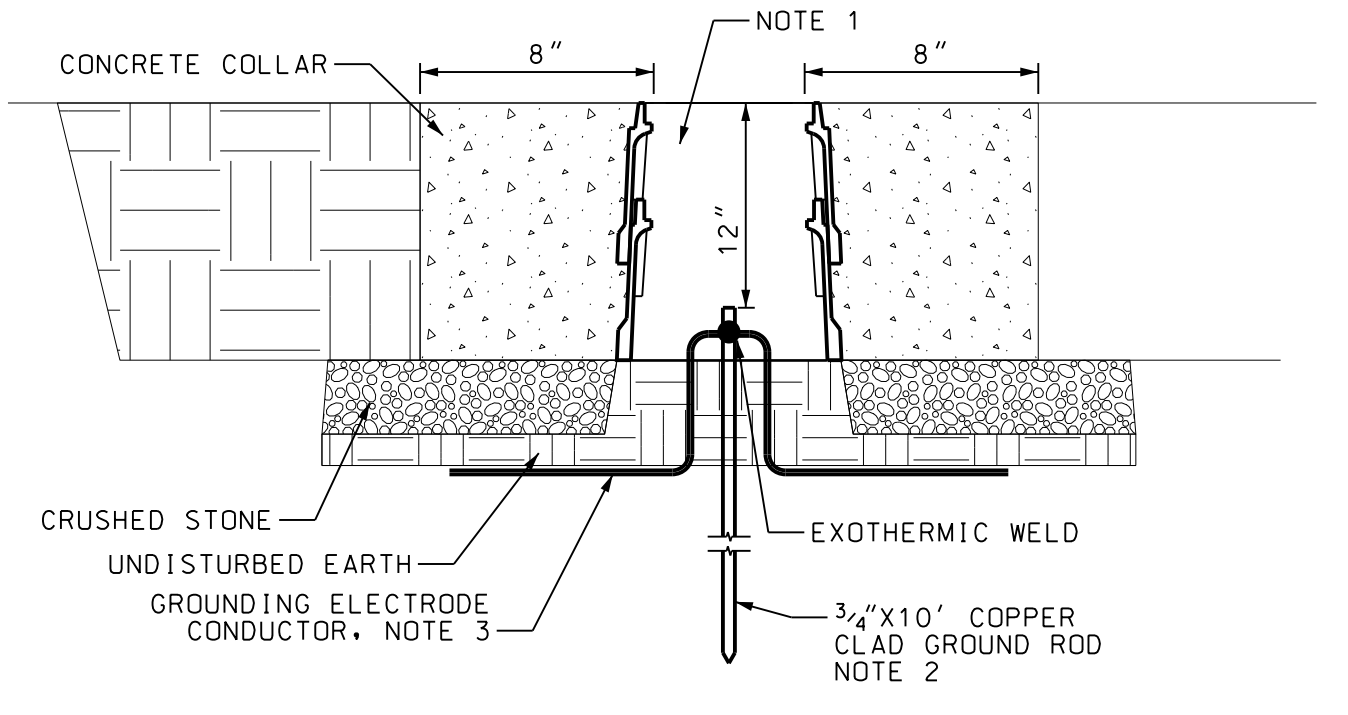
1 PICTURE OF EXISTING SERVICE (ELEVATION)
E4 SCALE: NONE



2 DEMOLITION ONE-LINE DIAGRAM
E4 SCALE: NONE



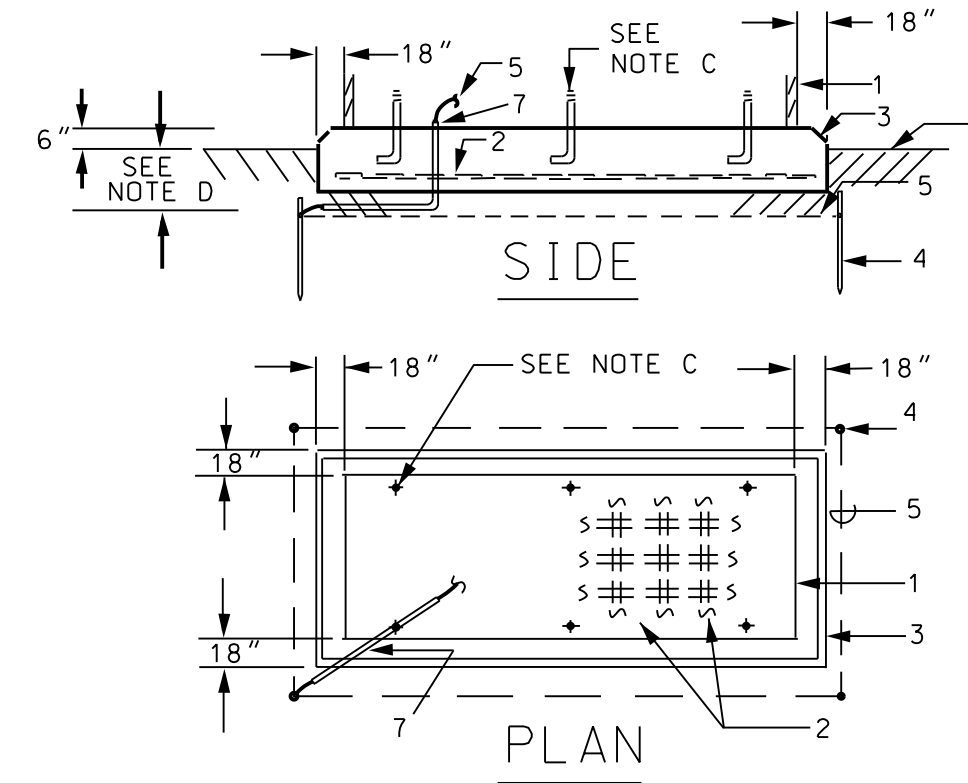
4 SECONDARY ELECTRICAL GROUNDING
E4 SCALE: N.T.S.



- NOTES:**
- OLDCASTLE ENCLOSURE SOLUTIONS. OLDCASTLE POLYMER 910 FLUSH-IN-GRADE POLYMER CONCRETE ROUND ENCLOSURE. NOMINAL 9" DIAMETER OPENING, 10" TALL. PROVIDE TWO STACKED BODIES AND ONE LID WITH "GROUNDING" LOGO. LID AND BODIES SHALL BE ANSI/SCIE-77 TIER 22 RATED.
 - GROUND ROD SHALL BE DRIVEN TO 12" BELOW FINISH GRADE. GROUNDING ELECTRODE CONDUCTOR TERMINATION SHALL BE MADE WITH EXOTHERMIC WELD.
 - GROUNDING ELECTRODE CONDUCTOR SHALL BE BURIED 24" BELOW FINISH GRADE.

5 GROUND ROD TEST WELL DETAIL
E4 SCALE: NONE

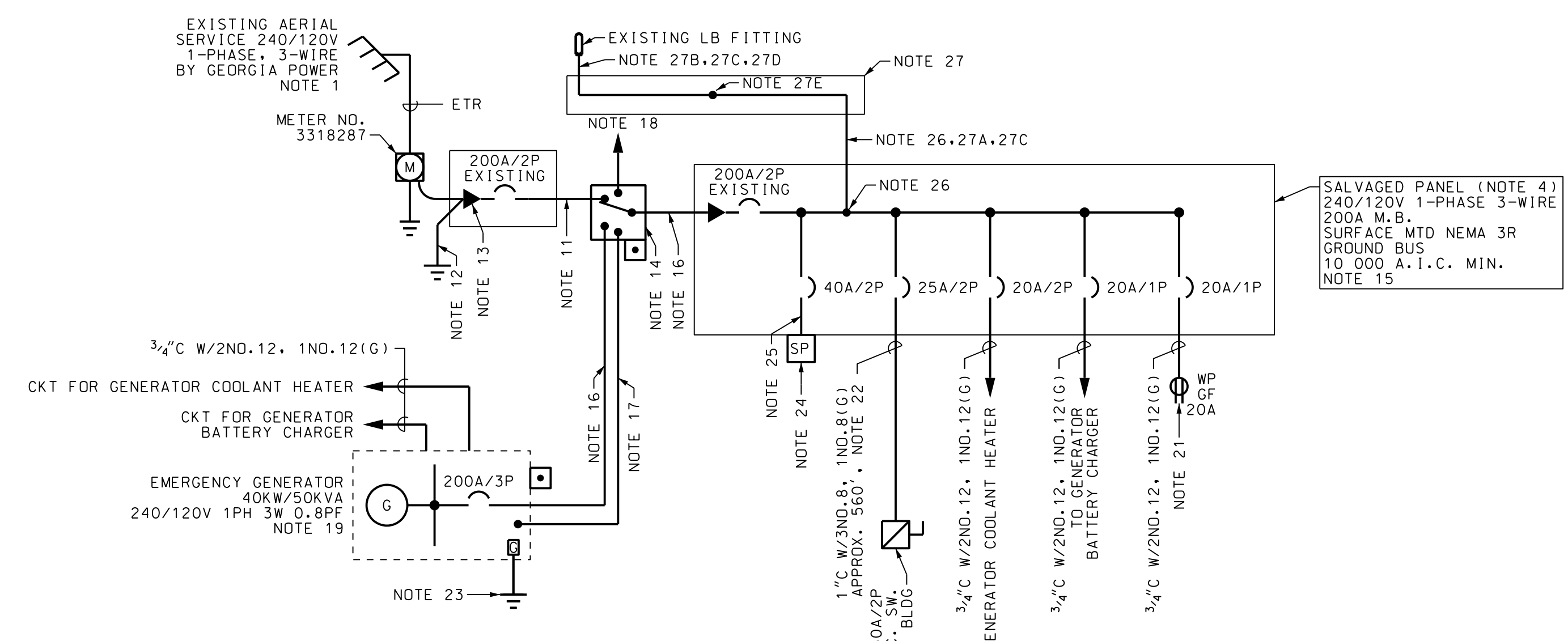
- LEGEND:**
- EQUIPMENT AS NOTED
 - MOTOR CIRCUIT BREAKER
 - GROUND TO GROUND ROD SYSTEM
 - CONDUIT SYSTEM CONCEALED BELOW GRADE
 - GROUND ROD LOCATION
 - GENERATOR EMERGENCY STOP
 - N.T.S. NOT TO SCALE
 - EXISTING FUSED DISCONNECT SWITCH



- 1 - GENERATOR SET ENCLOSURE OUTLINE
- 2 - REINFORCING STEEL, NOTE A
- 3 - 1" CHAMFER
- 4 - 3/4" X 10" COPPERCLAD GROUND ROD AND
- 5 - #1/0 CU BARE GROUND CONDUCTOR
- 6 - FINISHED GRADE
- 7 - 3/4" PVC, SEE NOTE B

- NOTES:** EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL
- #8 GA. STEEL WIRE MESH, 6" O.C. OR #6 REBAR, 12" O.C., VERTICALLY AND HORIZONTALLY.
 - CONNECT TO GENERATOR GROUND CONNECTION LUG. VERIFY STUB UP LOCATION WITH MANUFACTURER'S SHOP DRAWINGS. SEAL CONDUIT END WITH ELECTRICAL DUCT SEAL.
 - ANCHOR BOLTS FURNISHED WITH GENERATOR SET. PROVIDE SIX, MINIMUM. TIE TO REINFORCING STEEL.
 - DIMENSION SHALL BE 6" (12" OVERALL DEPTH) UP TO & INCLUDING 600KW; 12" (18" OVERALL DEPTH) LARGER THAN 600KW.

6 EMERGENCY GENERATOR SET EXTERIOR FOUNDATION DETAIL
E4 SCALE: NONE



3 RENOVATION ONE-LINE DIAGRAM
E4 SCALE: NONE

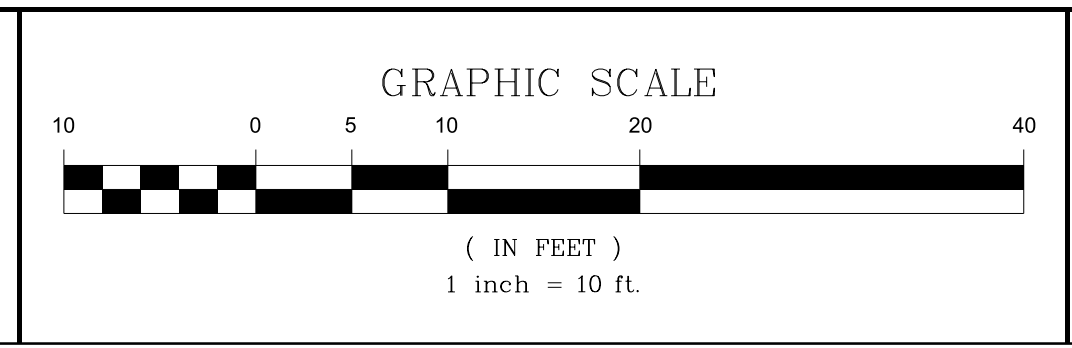
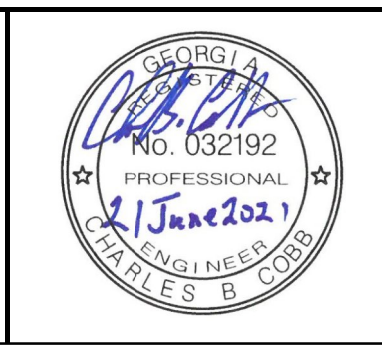
- NOTES:**
- COORDINATE THE MODIFICATIONS TO THE UTILITY METER WITH THE UTILITY COMPANY AND WITH OTHER WORK ON THE PROJECT SITE. CONTACT GEORGIA POWER - JANET MARTIN, 478-454-5540.
 - THE EXISTING SERVICE, WEATHERHEAD AND METER SHALL REMAIN.
 - MAINTAIN THE EXISTING METER GROUND.
 - DISCONNECT THE GROUND CONNECTION IN THE EXISTING PANEL ON THE RIGHT.
 - DISCONNECT AND REMOVE GROUND CONNECTION IN THE EXISTING PANEL ON THE LEFT.
 - DISCONNECT THE PANEL ON THE LEFT. IT DOES NOT HAVE ANY LOAD CONNECTED.
 - DEMOLISH THE SERVICE FROM THE METER TO THE PANEL ON THE LEFT. PROVIDE NEMA 3R HOLE SEAL IN THE UNUSED OPENING IN THE METER.
 - DISCONNECT THE FEEDER IN THE PANEL TO THE RIGHT. PULL THE FEEDER BACK TO THE LB FITTING ON THE WALL. REMOVE THE CONDUIT FROM THE PANEL TO THE LB FITTING. RETAIN THE FEEDER AND THE CONDUIT FOR REUSE.
 - FURNISH AND INSTALL THREE 10' X 3/4" DIA. GROUND RODS, TRIAD/DELTA CONFIGURATION, WITH 20' SEPARATION, DRIVEN 12" BELOW GRADE. SERVICE GROUNDING SHALL BE BONDED AT THE ENCLOSED BREAKER. REFER TO DETAIL 4/E4.
 - ALL CONDUITS INSTALLED EXPOSED TO ATMOSPHERE SHALL BE RIGID ALUMINUM. ALL CONDUITS INSTALLED BELOW GRADE SHALL BE SCHEDULE 80 PVC. ALL ELBOWS AND STUB-UPS TO BE RIGID ALUMINUM.
 - COAT ALL STRUCTURAL SUPPORTS AND ARC CONDUITS ENCASED IN CONCRETE, OR IN CONTACT WITH EARTH, WITH TWO COATS OF SCOTCHRAP PIPE PRIMER AND TWO OVERLAPPING LAYERS OF SCOTCHRAP 51 TAPE, APPLY FROM 6" ABOVE GRADE TO BOTTOM OF STRUCTURAL MEMBER OR TRANSITION TO SCH.80 PVC. ALLOW FOR PRIMER TO DRY BEFORE APPLICATION OF SECOND COAT AND/OR TAPE.
 - ALL ATTACHMENT HARDWARE, BOLTS, NUTS, WASHERS, ETC. SHALL BE STAINLESS STEEL. PROVIDE FIBER WASHER BETWEEN DISSIMILAR METAL COMPONENTS AND ENCLOSURES. ALL CONNECTIONS SHALL BE BOLTED WITH STAINLESS STEEL FASTENERS.
 - FIELD COORDINATE MOUNTING LOCATION OF THE SERVICE DISCONNECT. AUTOMATIC TRANSFER SWITCH AND PANELBOARD. SWITCH AND BREAKER OPERATING HANDLES SHALL BE A MAXIMUM OF 5' FROM FINISH GRADE. PROVIDE ALUMINUM CHANNELS, ATTACHED TO THE BUILDING EXTERIOR WALL FOR SUPPORT OF THE EQUIPMENT.
 - EXTEND 2" C W/3NO.3/0, 1NO.6(G) FROM THE EXISTING SERVICE PANEL TO THE ATS. CONNECT DIRECTLY TO THE BUS USING THE EXISTING LUGS.
 - EXTEND 3/4" SCH.80 PVC W/1NO.4(G) FROM THE NEUTRAL BUS IN THE SERVICE PANEL TO THE GROUNDING DELTA. INSTALL THE GROUNDING DELTA PER DETAIL 4/E4, THIS SHEET.
 - PROVIDE A BONDING JUMPER BETWEEN THE NEUTRAL BUS AND THE GROUND BUS.
 - FURNISH AND INSTALL A 225A/2P/3R AUTOMATIC TRANSFER SWITCH.
 - INSTALL THE SALVAGED PANEL (NOTE 4) ADJACENT TO THE ATS. FURNISH BRANCH BREAKERS AS INDICATED ON THE ONE-LINE DIAGRAM. OPERATING HANDLES SHALL BE A MAXIMUM OF 5' FROM FINISH GRADE. PROVIDE ALUMINUM CHANNELS, ATTACHED TO THE BUILDING EXTERIOR WALL FOR SUPPORT OF THE EQUIPMENT.
 - EXTEND 2" C W/3NO.3/0, 1NO.6(G) FROM THE EXISTING SERVICE PANEL TO THE ATS. CONNECT DIRECTLY TO THE BUS USING THE EXISTING LUGS.
 - EXTEND 2" C W/3NO.3/0, 1NO.6(G) FROM THE ATS TO THE GENERATOR AND FROM THE ATS TO THE SALVAGED PANEL (NOTE 4).
 - EXTEND THREE 1" C W/CONDUCTORS AS REQUIRED FROM THE ATS TO THE GENERATOR FOR START/STOP CONTROL AND ALARM ANNUNCIATION.
 - EXTEND 3/4" C W/CONDUCTORS AS REQUIRED INTO THE BUILDING FOR THE REMOTE ANNUNCIATOR. FIELD COORDINATE THE REMOTE ANNUNCIATOR WITH THE OWNER. EXTEND CONDUIT AND WIRE AS REQUIRED.
 - PROVIDE A CONCRETE FOUNDATION PAD FOR THE NEW GENERATOR PER DETAIL 6/E4 THIS SHEET. FIELD COORDINATE THE LOCATION OF THE GENERATOR WITH THE OWNER. FOR BIDDING PURPOSES, ASSUME IT IS ADJACENT TO THE FENCE OPPOSITE THE BUILDING.
 - EXTEND THE CIRCUITS TO THE EQUIPMENT AS INDICATED ON THE ONE-LINE DIAGRAM, 3/E4.
 - FURNISH AND INSTALL A HUBBELL WEATHER RESISTANT RECEPTACLE BELOW THE PANEL. PROVIDE A HUBBELL WEATHER RESISTANT RECEPTACLE, CAT. NO. GFWR5120W. FURNISH AN IN-USE TYPE COVER.
 - THE CONTRACTOR SHALL DIRECTIONAL BORE FROM BEYOND THE COUNTY GARBAGE TRANSFER STATION TO THE BUILDING FOR INSTALLATION OF THE CONDUIT FOR THE WELL. FROM THE TRANSFER STATION TO THE WELL BUILDING, THE CONTRACTOR MAY OPEN CUT A TRENCH. THE DISTANCE IS APPROXIMATELY 560'. THE CONTRACTOR SHALL VERIFY THE TOTAL DISTANCE PRIOR TO INSTALLATION OF CONDUIT AND WIRE. IF THE DISTANCE EXCEEDS 560', IMMEDIATELY CONTACT THE ENGINEER.
 - EXTEND 3/4" SCH.80 PVC W/1NO.4(G) FROM THE GROUND LUG ON THE GENERATOR TO THE GROUNDING DELTA.
 - SURGE PROTECTION DEVICE; SQUARE D D5SE SERIES, 100KA, CAT. NO. SSP01XDSE10A2 OR EQUAL BY GE OR EATON. MOUNT TO THE SIDE OF THE PANEL SUCH THAT THE CONDUCTOR LENGTH FROM THE BREAKER TO THE SPD IS MINIMIZED.
 - THREE NO.8, 1NO.8(G).
 - EXTEND 2" C W/3NO.3/0, 1NO.6(G) FROM THE SALVAGED PANEL TO THE WIRING TROUGH. CONNECT DIRECTLY TO THE BUS USING NEW NO.3/0 LUGS.
 - FURNISH AND INSTALL A 6"X6" WIRING TROUGH, LENGTH AS REQUIRED, NEMA 3R.
 - EXTEND 2" CONDUIT FROM THE SALVAGE PANEL TO THE TROUGH.
 - EXTEND 2" CONDUIT FROM THE LB FITTING DOWN TO THE TROUGH.
 - TERMINATE CONDUIT WITH MEYERS HUBS.
 - PULL THE EXISTING 200A FEEDER FROM LB TO THE TROUGH.
 - PROVIDE INSULATED LUGS (POLARIS) IN THE TROUGH FOR CONNECTION OR THE NEW FEEDER TO THE EXISTING.

NO.	DATE	DESCRIPTION OF REVISION

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Jones County, Georgia

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