

INVITATION TO BID

BID CONTROL NUMBER ITB 230008



JACKSON COUNTY ADMINISTRATION BUILDING - GENERATOR

Jackson County Board of Commissioners

County Manager

Publish Date: June 7, 2023

**Bid Opening Date & Time: July 11, 2023 at 10:00 am, local time pertaining
Questions Deadline Date & Time: June 30, 2023 at 5:00 pm**

Jackson County Board of Commissioners

67 Athens Street

Jefferson, GA 30549

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DATE: June 7, 2023

TO: General Contractors

SUBJECT: Request for Bid to furnish generator and associated equipment at Jackson County Administration Building

INQUIRIES REGARDING REQUEST FOR BID SHOULD BE MADE TO KENNETH MORRIS, PURCHASING MANAGER, 706-367-4174

Jackson County Board of Commissioners (hereafter referred to as Jackson County) is requesting bids to furnish generator and associated equipment at Jackson County Administration Building.

Each bidder must deposit with his bid a Bid Bond for 5% of the total bid. Performance and Payment Bonds in the amount for 100% of the contract price will be required if the contract is awarded.

One (1) original and three (3) copies of the Request for Bid must be submitted. Bids must be sealed, marked with the bidder's name and address and Labeled: ITB 230008, "Furnish generator and associated equipment at Jackson County Administration Building"

Jackson County Board of Commissioners
Attention: Kenneth Morris, Purchasing Manager
67 Athens Street
Jefferson, Georgia 30549

No later than July 11, 2023 at 10:00 AM EST.

A qualified interpreter for the hearing impaired is available upon request at least 10 (ten) days in advance of the bid opening date. Please call (706) 367-6312 for more information. This service is in compliance with the American with Disabilities Act (ADA).

Jackson County reserves the right to reject any and all bid submittals, to waive any technicalities or irregularities and to award the bid based on the highest and best interest of Jackson County.

Jackson County

GENERAL INSTRUCTIONS FOR BIDDERS

I. PURPOSE:

The intent and purpose of this Bid Request is to request services for the Jackson County Board of Commissioner, hereinafter referred to as Jackson County to furnish generator at the Jackson County Correctional Institute.

II. SCOPE OF SERVICE:

A. WORK INCLUDED:

See attached specification/drawings

B. QUALITY OF WORKMANSHIP: All work shall be quality work performed according to the standards of the industry, and to the complete satisfaction of Jackson County.

C. PERSONNEL QUALIFICATIONS:

Jackson County reserves the right to refuse to accept services from any personnel deemed by Jackson County to be unqualified, disorderly, or otherwise unable to perform assigned work.

D. DETAILED SPECIFICATIONS: See attached. This project will be under the supervision of the engineer who will be inspecting all work completed under this contract.

1. Upon being awarded the contract by Jackson County, the approved contractor will execute a contract with Jackson County to provide services. The contractor agrees to perform all work in accordance with the bid schedule and set bid prices as outlined in their signed proposal. The prices submitted in the bid proposal will be valid until the completion of all projects originally listed in the bid proposal.
2. The approved contractor agrees to commence work within thirty (30) days of receiving the Notice to Proceed and will complete all the original work as outlined in this Bid Request within the time specified. Any additional work will be discussed and a reasonable start and completion date will be negotiated.
3. Jackson County will only pay invoices that have been reviewed and approved by the engineer for the quantities submitted for payment.

- E. MATERIAL SPECIFICATIONS: All material used in the performance of this contract must meet state and local requirements for use by an approved vendor. The contractor will be responsible for verifying this information with the engineer.
- F. SCHEDULING AND COORDINATION: It is the responsibility of the contractor to coordinate all work schedules and inspections with the Jackson County Facility's maintenance Director. Failure to do so may result in the delay of processing invoices for payment.
- G. **OTHER REQUIREMENTS: A Bid Bond for 5% of the base bid on the bid form must be submitted with the bid. Performance and Payment Bonds in the amount of 100% of the contract price will be required if the contract is awarded.**

III. **MANDATORY PRE-BID CONFERENCE**: There will be no formal pre-bid conference. Questions concerning this bid package or the bid process should be directed to Kenneth Morris at kmorris@jacksoncountygov.com. Technical questions concerning the work being requested in this BID REQUEST should be submitted to bvickery@jacksoncountygov.com and 752ks@ppi.us. All questions should be submitted in writing no later than 5:00 pm on June 30, 2023 so that an appropriate addendum can be created and sent to all vendors prior to the closing of the bid on July 11, 2023.

IV. **GENERAL TERMS AND CONDITIONS**:

- A. PURCHASING ORDINANCE: This Invitation to Bid (ITB) is subject to the provisions of the Jackson County Purchasing Ordinance and any revisions thereto, which are hereby incorporated into this contract in their entirety except as amended or superseded herein.
- B. MANDATORY USE OF JACKSON COUNTY FORM AND TERMS AND CONDITIONS: Failure to submit a bid on the official Jackson County form provided for that purpose shall be a cause for rejection of the bid. Return of the complete document is required. Modification of or additions to any portion of the invitation may be cause for rejection of the bid; however, Jackson County reserves the right to decide, on a case by case basis, in its sole discretion, whether or not to reject such a bid as non-responsive.
- C. PRECEDENCE OF TERMS: Except for paragraphs A, B, C, J, K and N of the General Terms and Conditions, which shall apply in all instances, in the event there is a conflict between the General Terms and Conditions and any Special Terms and Conditions for use in a particular procurement, the Special Terms and Conditions shall prevail.
- D. CLARIFICATION OF TERMS: If any prospective bidder has questions about the specifications or other bid documents, the prospective bidder should contact the Purchasing Manager whose name appears on the title page of the invitation, no later

than seven days before the opening date. Any revisions to the invitation will be made only by addendum issued by the Purchasing Manager.

- E. TESTING/INSPECTION: Jackson County reserves the right to conduct any test or inspection it may deem advisable to assure materials and services conform to the specification.
- F. PAYMENT TERMS: Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment in less than 30 days, however.
- G. INVOICES: Invoices for services ordered, delivered and accepted by Jackson County shall be submitted by the contractor direct to the payment address shown on the contract.
- H. DEFAULT: In case of failure to deliver goods or services in accordance with the contract terms and conditions, Jackson County, after due oral or written notice, may procure substitute goods or services from other sources and hold the contractor responsible for any resulting additional purchasing and administrative costs. This remedy shall be in addition to any other remedies, which Jackson County may have.
- I. ASSIGNMENT OF CONTRACT: A contract shall not be assignable by the contractor in whole or in part without the written consent of Jackson County.
- J. ETHICS IN PUBLIC CONTRACTING: By submitting their bids, all bidders certify that their bids are made without collusion or fraud and that they have not offered or received any kickbacks or inducements from any other bidder, supplier, manufacturer or subcontractor in connection with their bid, and that they have not conferred on any public employee having official responsibility for this procurement transaction any payment, loan, subscription, advance, deposit or money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.
- K. DEBARMENT STATUS: By submitting their bids, all bidders certify that they are not currently debarred from bidding on contracts by any agency of the State of Georgia, nor are they an agent of any person or entity that is currently debarred from submitting bids on contracts by any agency of the State of Georgia.
- L. NON-COLLUSION CERTIFICATION: Bidder declares that the bid is not made in connection with any other bidder submitting a bid for the same project, and that the bid is bona fide and is in all respects fair and without collusion or fraud.
- M. APPLICABLE LAW AND COURTS: Any contract resulting from this BID REQUEST shall be governed in all respects by the laws of the State of Georgia and any litigation with respect thereto shall be brought in the courts of the State of Georgia.

The contractor shall comply with applicable federal, state and local laws and regulations.

- N. QUALIFICATION OF BIDDERS: Jackson County may make such reasonable investigations as deemed proper and necessary to determine the ability of the bidder to perform the work/furnish the items and the bidder shall furnish to Jackson County all such information and data for this purpose as may be requested. Jackson County reserves the right to inspect bidder's physical plant prior to award to satisfy questions regarding the bidder's capabilities. Jackson County further reserves the right to reject any bid if the evidence submitted by, or investigations of, such bidder fails to satisfy Jackson County that such bidder is properly qualified to carry out the obligations of the contract and to complete the work/furnish the items contemplated therein.
- O. WITHDRAWAL OF BID DUE TO ERRORS:
1. The bidder shall give notice in writing of his claim of right to withdraw his bid without penalty due to an error within two (2) business days after the conclusion of the bid opening procedure. Bids may be withdrawn from consideration if the price was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of the bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and material used in the preparation of the bid sought to be withdrawn. The bidder's original work papers shall be the sole acceptable evidence of error and mistake if he elects to withdraw his bid. If a bid is withdrawn under the authority of this provision, the lowest remaining responsive bid shall be deemed low bid.
 2. No bidder who is permitted to withdraw a bid shall, for compensation, supply any material or labor or perform any subcontract or other work agreement for the person of firm to whom the contract is awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn bid was submitted.
 3. Supplier has up to forty-eight (48) hours to notify the Jackson County Purchasing Office of an obvious clerical error made in calculation of bid in order to withdraw a bid after bid opening. Withdrawal of bid for this reason must be done in writing within the forty-eight (48) hour period. Suppliers who fail to request withdrawal of bid by the required forty-eight (48) hours shall automatically forfeit bid bond (if one was required). Bid may not be withdrawn otherwise.
 4. Bid withdrawal is not automatically granted and will be allowed solely at Jackson County's discretion.

- P. LATE OFFERS: Jackson County will not be responsible for or consider late receipt of bids.
- Q. EO/AA STATEMENT: Jackson County, an Equal Opportunity Affirmative Action institution covered by Presidential Executive Order 11246 as amended, advises all contractors, subcontractors, vendors and suppliers that direct or indirect receipt of federal funds may require appropriate action on their part.
- R. ILLEGAL IMMIGRATION REFORM AND ENFORCEMENT ACT OF 2011
Vendors submitting a response to this RFP must complete the Contractor Affidavit under O.C.G.A. §13-10-91(b)(1) which is provided with the RFP package to verify compliance with the Illegal Immigration Reform and Enforcement Act of 2011.
- A. The form must be signed by an authorized officer of the contractor or their authorized agent.
 - B. The form must be notarized.
 - C. The contractor will be required to have all subcontractors and sub-subcontractors who are engaged to complete physical performance of services under the final contract executed between the County and the contractor complete the appropriate subcontractor and sub-subcontractor affidavits and return them to the County a minimum of five (5) days prior to any work being accomplished by said subcontractor or sub-subcontractor. Format for this affidavit can be provided to the contractor if necessary.

V. **SPECIAL TERMS AND CONDITIONS:**

- A. AVAILABILITY OF FUNDS: It is understood and agreed between the parties herein that Jackson County shall be bound hereunder only to the extent of the funds available or which may hereafter become available for the purpose of this agreement.
- B. AWARD OF CONTRACT: Jackson County will make award to the lowest responsive and responsible bidders. Due consideration will be given to price, quality as judged by tests and previous experience, and the ability of the bidders to render required services. Jackson County reserves the right to conduct any test it may deem advisable and to make all evaluations. Jackson County also reserves the right to reject any or all bids, in whole or in part, to waive informalities and to delete items prior to making the award, whenever it is deemed in the sole opinion of Jackson County to be in its best interest.
- C. BID ACCEPTANCE PERIOD: This bid shall be binding upon the bidder for 60 calendar days following the bid opening date. Any bid on which the bidder shortens the acceptance period may be rejected.

- D. BID PRICES: Bid prices submitted by the Contractor must remain firm for the entire length of the initial bid period and/or until the original list of projects as outlined in the specifications are completed.
- E. CANCELLATION OF CONTRACT: Jackson County reserves the right to cancel and terminate any resulting contract, in part or in whole, without penalty, upon 60 days written notice to the contractor. Any contract cancellation notice shall not relieve the contractor of the obligation to deliver and/or perform on all outstanding orders issued prior to the effective date of cancellation.
- F. CHANGES: By written notice to the contractor, Jackson County may from time to time make changes, within the general scope of the contract, in the goods or services to be provided by the contractor.
- G. CONTRACT DOCUMENTS: The contract entered into by the parties shall consist of this Invitation To Bid, the signed bid submitted by the contractor, the Jackson County Contract Form, General Terms and Conditions, Special Terms and Conditions, Specifications and Attachments, including all modifications thereof, all of which shall be referred to collectively as the Contract Documents.
- H. CONTRACT PERIOD: The contract period is defined above in paragraph II.D.1.
- I. IDENTIFICATION OF BID ENVELOPE: The signed bid should be returned in a separate envelope or package, sealed and identified as follows:

From:

_____	_____	_____
Name of Bidder	Bid Due Date	Time
_____	_____	
Street or Box Number	Bid Number	
_____	_____	
City, State, Zip Code	Bid Title	

The envelope should be addressed to Jackson County Board of Commissioners, Attention: Kenneth Morris, Purchasing Manager, 67 Athens Street, Jefferson, GA, 30549.

If a bid not contained in the special envelope is mailed, the bidder takes the risk that the envelope even if marked as described above, may be inadvertently opened and the

information compromised which may cause the bid to be disqualified. Bids may be hand delivered to the office of the Purchasing Department issuing the invitation at the location given above. No other correspondence or other bids should be placed in the envelope.

- J. INDEMNIFICATION: The contractor agrees to indemnify, defend and hold harmless Jackson County and their officers, agents, and employees from any claims, damages and actions of any kind or nature whether at law or in equity, arising from or caused by the use of any materials, goods, or equipment of any kind or nature furnished by the contractor/any services of any kind or nature provided by the contractor.
- K. INDEPENDENT CONTRACTOR: The contractor shall not be an employee of Jackson County, but shall be an independent contractor. Nothing in this agreement shall be construed as authority for the contractor to make commitments, which shall bind Jackson County, or to otherwise act on behalf of Jackson County, except as Jackson County may expressly authorize in writing.
- L. INSPECTION OF WORK SITE: Contractors desiring to submit a proposal for this BID REQUEST are encouraged to visit the sites listed. Claims, as a result of failure to do so, will not be considered by Jackson County.
- M. INSURANCE:
1. The contractor shall provide Jackson County a Certificate of Insurance prior to the start of any work and agrees to maintain such insurance until the completion of the contract. The minimum limits of liability shall be:
 - A. Workers' Compensation - In compliance with Georgia State Law
 - B. Broad Form Comprehensive General Liability, \$1,000,000.00, to include:
 1. Premises – Operations
 2. Products / Completed Operations
 3. Contractual
 4. Personal Injury
 5. Owners and Contractors Protective
 2. Jackson County reserves the right to require higher limits on any contract provided notice of such requirements is stated in the proposal for such contract. Included in the certificate of insurance shall be a hold harmless agreement saving Jackson County harmless from any liability from the contractor or from any subcontractors or by anyone directly or indirectly employed by either. Jackson County is to be named as additional insured.
- A 30-day notice of cancellation or non-renewal in writing shall be furnished by certified mail to the certificate holder at the address indicated on the face of this

form. Also, when deemed necessary, the contractor will provide explosion, collapse and underground coverage (X, C and U coverage).

The contractor agrees to be responsible for, indemnify and save harmless Jackson County and their representatives from the payment of all sums of money by reason of any claim against Jackson County or their representatives under the Workmen's Compensation Act, and by reason of all or any other occurrences resulting in bodily injury or property damage that may happen to occur upon or about said work. The contractor agrees that it will, at all times, and at least for one year after the completion of the work, indemnify and save harmless Jackson County against liabilities resulting from bodily injury or property damage directly or indirectly arising out of the performance or nonperformance of the contract.

3. ALL BIDDERS PROVIDE THE FOLLOWING INFORMATION:

NAME OF INSURANCE CARRIER:

NAME OF INSURANCE AGENT:

TELEPHONE NUMBER:

BROAD FORM COMPREHENSIVE

GENERAL LIABILITY LIMIT: \$

AUTOMOBILE LIABILITY LIMIT: \$

POLICY EXPIRATION DATE:

If a bidder fails to provide all the above information or does not indicate an amount of coverage, the bidder's signature on this invitation constitutes certification that, if the bidder is awarded the contract, the bidder shall obtain the necessary coverage as specified within ten days of notification of award of the contract.

If at any time or times any claim or claims shall be made to Jackson County by a subcontractor or other persons for any money due for any work, labor or material done upon or supplied upon the work herein contracted for, done for, furnished, or supplied, to the party of the first part, Jackson County may retain such amount as may be due, or may thereafter become due under this contract, or may pay the same when said claim shall thereafter be finally established in court, and such amount is hereby assigned to Jackson County to pay such claim or claims, such payment to be done when so established, but the contractor shall not be entitled to demand or receive payment of this agreement until all disputes, disagreements, and questions between the parties herein affecting the right to any portion of the amount claimed, shall have been settled as above provided for, and Jackson County is hereby authorized to deduct from the said amount any money due it upon any account or claim.

N. PROTECTION OF PERSONS AND PROPERTY:

1. The contractor shall take every precaution at all times for the protection of persons and property, including Jackson County's employees and property and its own.
 2. The contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work under this contract.
 3. The contractor shall continuously maintain adequate protection of all work from damage and shall protect Jackson County property from injury or loss arising in connection with this contract. The contractor shall make good any such damage, injury or loss.
- O. SAFETY: The contractor shall maintain an adequate safety program to insure the safety of contractor employees, subcontractor employees, and all other individuals working under this contract. In addition, the contractor must also provide Jackson County with a written safety program that he intends to follow in pursuing work under this contract. No work under this contract will be permitted until Jackson County is assured that the contractor has an adequate safety program in effect.
- P. SUBCONTRACTS: No portion of the work shall be subcontracted without prior written consent of Jackson County. In the event that the contractor desires to subcontract some part of the work specified herein, the contractor shall furnish Jackson County the names, qualifications and experience of their proposed subcontractors. The contractor will, however, remain fully liable and responsible for the work to be done by his subcontractor(s) and shall assure compliance with all requirements of the contract.

Nothing in the agreement shall be constructed as authority for the contractor to make commitments, which shall bind Jackson County, or to otherwise act on behalf of Jackson County, except as Jackson County may expressly authorize in writing.

- Q. SUPERINTENDENCE BY CONTRACTOR: The contractor shall be responsible for all work means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the contract except where otherwise specified herein. The contractor shall, at all times, enforce strict discipline and good order among the workers, and shall not employ any unfit person or anyone not skilled in their work.
- R. WORK SITE DAMAGES: Any damage, including damage to finished surfaces, resulting from the performance of this contract shall be repaired to Jackson County's satisfaction at the contractor's expense.
- S. OTHER SPECIAL INSTRUCTIONS/TERMS: See Section II G – Other requirements concerning bid and bid award.
- VI. METHOD OF PAYMENT: Jackson County will authorize payment to the contractor after providing satisfactory service and receipt of the contractor's invoice for services rendered. Payment will be made on a monthly basis at the prices as bid, Net 30.

BID DOCUMENT

Base bid = \$ _____

Completion time – _____

UPS Alternates: (amount to be deducted or added to bid amount. Indicate add or deduct with a plus or minus).

\$ _____

ATS Alternates: (amount to be deducted or added to bid amount. Indicate add or deduct with a plus or minus).

\$ _____

GENERATOR Alternates: (amount to be deducted or added to bid amount. Indicate add or deduct with a plus or minus).

\$ _____

Signed: _____

Title: _____

Company Name: _____

Address: _____

City, State, Zip: _____

Phone number: _____

Email: _____

Contractor must acknowledge receipt of any addenda on either this form or by signing and returning a copy of the addenda with their bid package.

Illegal Immigration Reform and Enforcement Act of 2011
CONTRACTOR AFFIDAVIT UNDER O.C.G.A. §13-10-91(b)(1)

The Jackson County Board of Commissioners and Contractor agree that compliance with the Illegal Immigration Reform and Enforcement Act of 2011 are conditions of this Agreement for the physical performance of services.

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. §13-10-91, stating affirmatively that the individual, firm, or corporation which is engaged in the physical performance of services on behalf of the Jackson County Board of Commissioners has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. §13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period and the undersigned contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present and affidavit to the contractor with the information required by O.C.G.A. §13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

E-Verify Employment Eligibility Verification User Identification Number

Date of Authorization to Use Federal Work Authorization Program

NAME OF CONTRACTOR

Name of Project

Jackson County Board of Commissioners
Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, _____, 20__ in _____ (City), _____ (State).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME ON THIS THE _____ DAY OF _____, 20__

Notary Public

My Commission Expires: _____

This form must be returned with the bid package submitted.

The following pages include a sample contract that will become finalized based on selection by Jackson County Board of Commissioners. Please execute as part of your bid package submission.

All Work performed under this contract is subject to inspection by the engineer and Facilities Maintenance department of Jackson County, Georgia. It shall be the Contractor's responsibility to coordinate with the above for inspection services. All Work shall be performed in accordance with current state and local laws and regulations for the State of Georgia.

ARTICLE 3

Time of Commencement and Completion

The Work to be performed under this Contract shall begin within thirty (30) days after the Contractor has received the Notice to Proceed (NTP) and will be completed within xxx days of starting the project.

ARTICLE 4

Contract Price

The Owner shall pay the Contractor, for the performance of the Work completed and approved by the engineer as provided in the Conditions of the Contract, in current funds, as calculated by the unit prices provided in the Contractor's response to the ITB. This price shall remain fixed during the entire length of the original contact period or until the satisfactory completion of all of the projects listed in the ITB. The Scope of Service as outlined ITB shall only be modified by a Change Order approved by all Parties. Each Change Order that is approved by Owner and Contractor will detail any unit price changes that are calculated according to the conditions outlined in the ITB.

ARTICLE 5

Payment

Payment for the Work as described in Article 4 above, shall be made monthly only for the portion of Work that is completed and inspected by the engineer and the Facilities Maintenance department during the month. Payment will be made within thirty (30) days after the completion of the Work, provided that the Contractor fully performed in accordance with the Contract Documents. The Contractor shall complete and submit an invoice for the monthly payment to the Jackson County Government, Attention: Accounts Payable, 67 Athens Street, Jefferson, Georgia 30549. Jackson County reserves the right to request proof of performance of all work completed under this contract.

ARTICLE 6

Georgia Illegal Immigration Reform and Enforcement Act of 2011

Contractor agrees and acknowledges that compliance with the requirements of the Georgia Illegal Immigration Reform and Enforcement Act of 2011 are conditions of this Contract. The Contractor Affidavit and Agreement executed by Contractor pursuant to O.C.G.A. §13-10-91(b)(1) is hereby incorporated into this Agreement by reference and made a part of this Contract. By the execution of this Contract, the Contractor affirms that the Illegal Immigration Reform and Enforcement Act of 2011 Contractor Affidavit submitted with the response to ITB 230008 is still valid, that the Contractor's Federal Work Authorization Number has not changed, that the Contractor will utilize the Federal Work Authorization Program during the duration of this contact, that the Contractor will ensure that all subcontractors and sub-subcontractors working on the Project covered by this Contract are participating in the Federal Work Authorization Program and have completed the Subcontractors and/or Sub-subcontractor Affidavit, and that the Contractor will advise the Owner of hiring a new subcontractor and/or sub-subcontractor and will provide the Owner with a Subcontractor/Sub-subcontractor Affidavit attesting to the subcontractor's/sub-subcontractor's name, address, user identification number, and date of authorization to use the Federal Work Authorization Program within five (5) days of hiring before the subcontractor/sub-subcontractor begins working on the Project. The Contractor understands and will ensure that all subcontractors and sub-subcontractors understand that knowingly and willfully making a false, fictitious, or fraudulent statement in an affidavit submitted in compliance with O.C.G.A. §13-10-91 shall be guilty of a violation of Code Section §16-10-20 and, upon conviction, shall be punished as provided for in such Code Section. Additionally, any contractor and/or sub-contractor convicted for false statements based upon a violation of this Code Section shall be prohibited from bidding on or entering into any public contract for twelve (12) months following the conviction

IN WITNESS WHEREOF, the Parties have executed this Contract on the date first written above.

OWNER:
Jackson County Board of Commissioners

CONTRACTOR:

Company's Legal Name

Tom Crow, Chairman

Representative

ATTEST:

ATTEST:

Notary Public

Notary Public



GENERAL SHEET NOTES

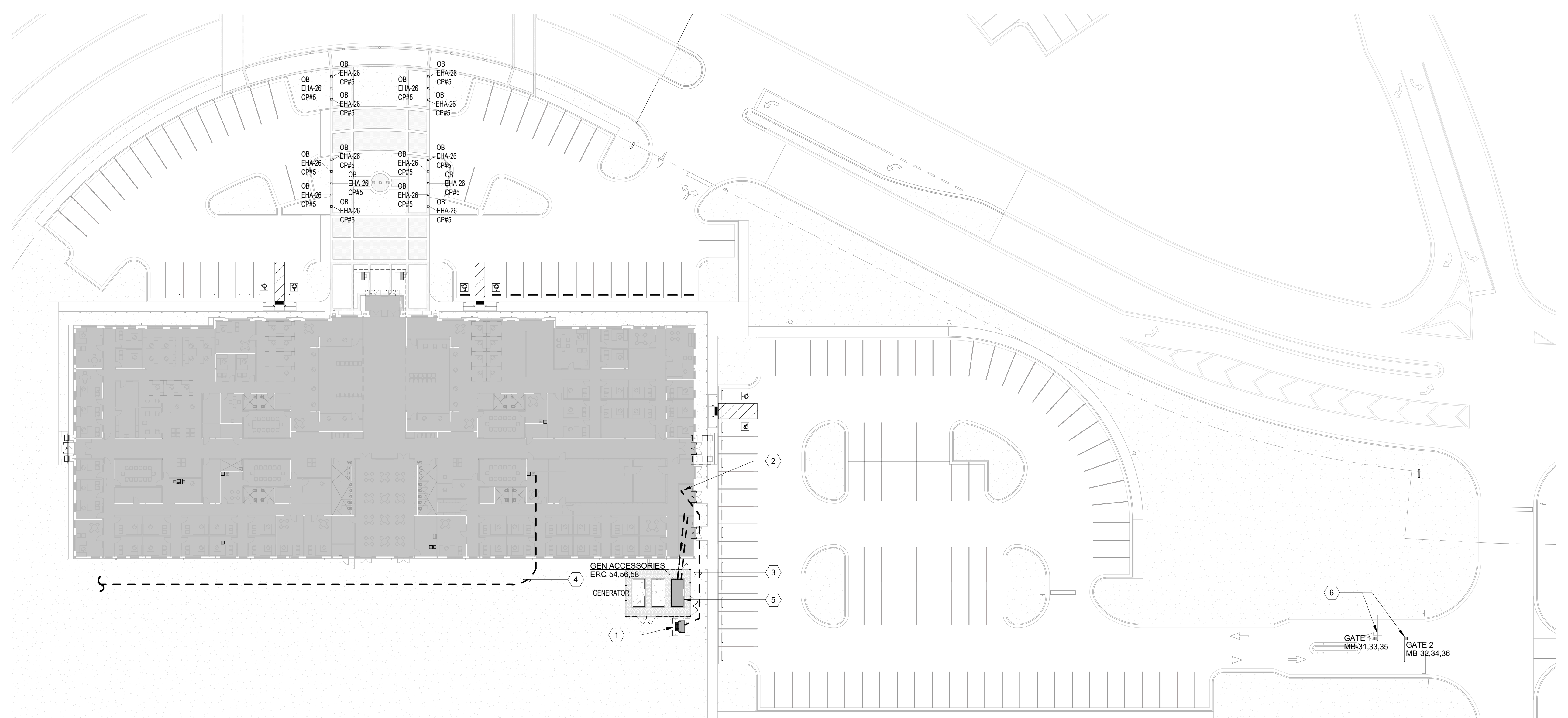
- A FIELD VERIFY EXACT LOCATION OF ALL EXISTING BURIED UTILITIES AND EQUIPMENT PRIOR TO ANY EXCAVATING FOR NEW WORK. HAND EXCAVATE AROUND EXISTING UTILITIES AND AVOID DAMAGE OR INTERRUPTION OF SERVICES.
- B CONTACT LOCAL UTILITIES FOR INFORMATION REGARDING LOCATE REQUEST. SUBMIT COMPLETED LOCATE REQUEST AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.
- C REFER TO CIVIL DRAWINGS FOR LIMITS OF DISTURBANCE AND ADDITIONAL UTILITY INFORMATION.
- D REFER TO LOW VOLTAGE DRAWINGS FOR TELECOM SERVICE ENTRANCE REQUIREMENTS.

SHEET KEYNOTES

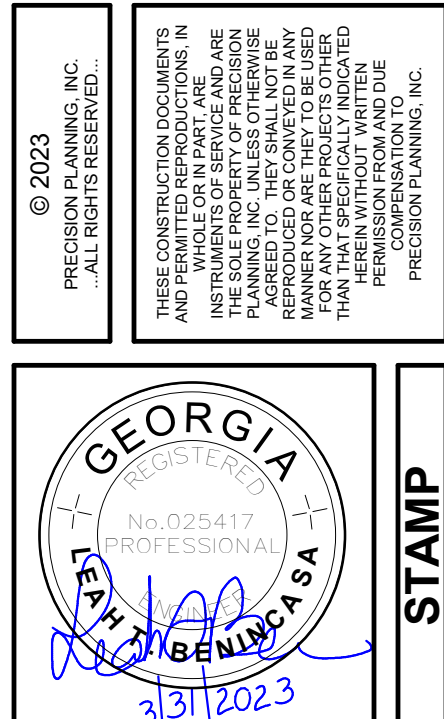
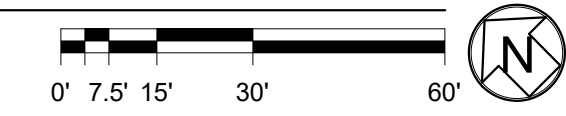
- 1 APPROXIMATE LOCATION OF NEW 480Y/277V UTILITY PADMOUNT TRANSFORMER FOR NEW BUILDING. COORDINATE ALL REQUIREMENTS WITH THE UTILITY.
- 2 APPROXIMATE LOCATION OF NEW SERVICE ENTRANCE SWITCHBOARD FOR NEW BUILDING. COORDINATE EXACT LOCATION OF CONDUIT ENTRY WITH EQUIPMENT SHOP DRAWINGS.
- 3 APPROXIMATE LOCATION OF NEW UNDERGROUND SECONDARY SERVICE DUCTBANK - PROVIDE (4) 4.00" CONDUITS AND (1) SPARE 4.00" CONDUIT. COORDINATE WITH STRUCTURAL ENGINEER WHEN PASSING UNDER BUILDING.
- 4 PROVIDE (1) 1.00" CONDUIT FOR FIRE ALARM CONNECTION TO POST INDICATOR VALVE. COORDINATE LOCATION AND REQUIREMENTS WITH CIVIL DRAWINGS.
- 5 APPROXIMATE LOCATION OF NEW NATURAL GAS GENERATOR
- 6 COORDINATE WITH EQUIPMENT PROVIDED TO PROVIDE POWER TO GATE OPERATORS.

SITE EQUIPMENT - ELECTRICAL CONNECTION SCHEDULE

EQUIPMENT ID	FED FROM	LOAD	VOLTAGE	NUMBER OF POLES	DISCONNECTING MEANS
GATE OPERATOR					
GATE 1	MB - 31.33.35	1.80 KVA	480 V	3	30A/3NF/WP
GATE 2	MB - 32.34.36	1.80 KVA	480 V	3	30A/3NF/WP



1 OVERALL SITE PLAN - ELECTRICAL
1" = 30'-0"



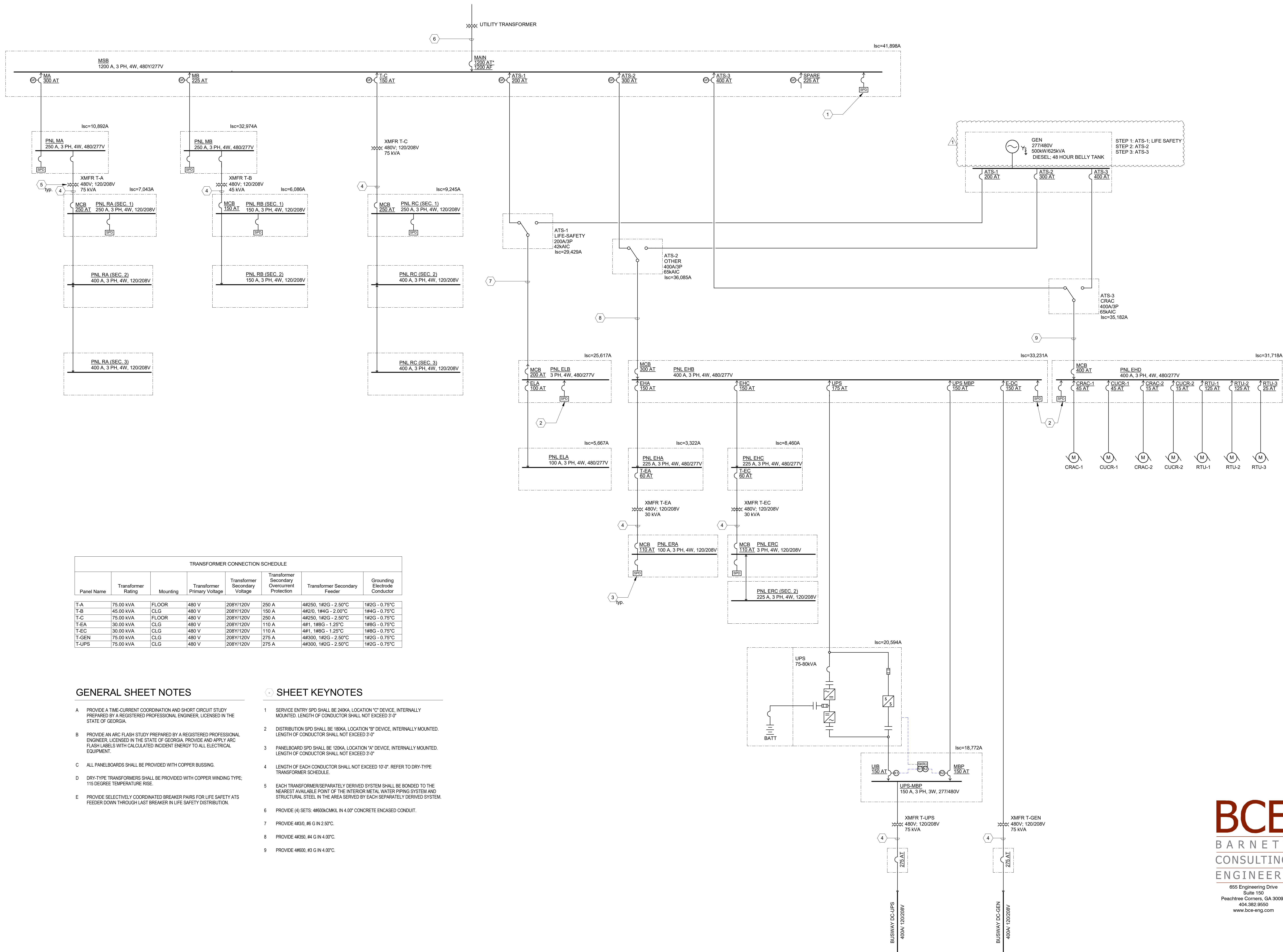
JACKSON COUNTY ADMINISTRATION CENTER
67 ATHENS STREET
JEFFERSON, GA 30049

DESIGN	BCE	DRAWN	BCE	CHECKED	BCE
ELECTRICAL SITE PLAN			SHEET TITLE		

DATE	NO.	DESCRIPTION
04/04/23	90%	RELEASE FOR PLAN REVIEW

04/04/23	DATE
22303	PROJ. NUMBER
	FILE NAME
	FILE NUMBER

E1.1



TRANSFORMER CONNECTION SCHEDULE							
Panel Name	Transformer Rating	Mounting	Transformer Primary Voltage	Transformer Secondary Voltage	Transformer Secondary Protection	Transformer Secondary Feeder	Grounding Electrode Conductor
T-A	75.00 kVA	FLOOR	480 V	208Y/120V	250 A	4#250, 1#2G - 2.50°C	1#2G - 0.75°C
T-B	45.00 kVA	CLG	480 V	208Y/120V	150 A	4#2/0, 1#4G - 2.00°C	1#4G - 0.75°C
T-C	75.00 kVA	FLOOR	480 V	208Y/120V	250 A	4#250, 1#2G - 2.50°C	1#2G - 0.75°C
T-EA	30.00 kVA	CLG	480 V	208Y/120V	110 A	4#1, 1#6G - 1.25°C	1#6G - 0.75°C
T-EC	30.00 kVA	CLG	480 V	208Y/120V	110 A	4#1, 1#6G - 1.25°C	1#6G - 0.75°C
T-GEN	75.00 kVA	CLG	480 V	208Y/120V	275 A	4#300, 1#2G - 2.50°C	1#2G - 0.75°C
T-UPS	75.00 kVA	CLG	480 V	208Y/120V	275 A	4#300, 1#2G - 2.50°C	1#2G - 0.75°C

GENERAL SHEET NOTES

- A. PROVIDE A TIME-CURRENT COORDINATION AND SHORT CIRCUIT STUDY PREPARED BY A REGISTERED PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF GEORGIA.
- B. PROVIDE AN ARC FLASH STUDY PREPARED BY A REGISTERED PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF GEORGIA. PROVIDE AND APPLY ARC FLASH LABELS WITH CALCULATED INCIDENT ENERGY TO ALL ELECTRICAL EQUIPMENT.
- C. ALL PANELBOARDS SHALL BE PROVIDED WITH COPPER BUSSING.
- D. DRY-TYPE TRANSFORMERS SHALL BE PROVIDED WITH COPPER WINDING TYPE; 115 DEGREE TEMPERATURE RISE.
- E. PROVIDE SELECTIVELY COORDINATED BREAKER PAIRS FOR LIFE SAFETY ATS FEEDER DOWN THROUGH LAST BREAKER IN LIFE SAFETY DISTRIBUTION.

SHEET KEYNOTES

- 1. SERVICE ENTRY SPD SHALL BE 340KA, LOCATION "C" DEVICE, INTERNALLY MOUNTED. LENGTH OF CONDUCTOR SHALL NOT EXCEED 3'-0"
- 2. DISTRIBUTION SPD SHALL BE 180KA, LOCATION "B" DEVICE, INTERNALLY MOUNTED. LENGTH OF CONDUCTOR SHALL NOT EXCEED 3'-0"
- 3. PANELBOARD SPD SHALL BE 120KA, LOCATION "A" DEVICE, INTERNALLY MOUNTED. LENGTH OF CONDUCTOR SHALL NOT EXCEED 3'-0"
- 4. LENGTH OF EACH CONDUCTOR SHALL NOT EXCEED 10'-0". REFER TO DRY-TYPE TRANSFORMER SCHEDULE.
- 5. EACH TRANSFORMER/SEPARATELY DERIVED SYSTEM SHALL BE BONDED TO THE NEAREST AVAILABLE POINT OF THE INTERIOR METAL WATER PIPING SYSTEM AND STRUCTURAL STEEL IN THE AREA SERVED BY EACH SEPARATELY DERIVED SYSTEM.
- 6. PROVIDE (4) SETS: #600KCMIL IN 4.00" CONCRETE ENCASED CONDUIT.
- 7. PROVIDE 4#30, #6 G IN 2.50°C.
- 8. PROVIDE 4#30, #4 G IN 4.00°C.
- 9. PROVIDE 4#60, #3 G IN 4.00°C.

1 ELECTRICAL ONE-LINE DIAGRAM - POWER
NOT TO SCALE

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GEORGIA
Professional Engineer
No. 002847
Professional Seal
Benjamin A. S.
3/31/2023

STAMP

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JACKSON COUNTY
ADMINISTRATION CENTER

67 ATHENS STREET
JEFFERSON, GA 30049

PROJECT

ELECTRICAL
ONE-LINE
DIAGRAM - POWER

DESIGN: BCE
DRAWN: BCE
CHECKED: BCE

SHEET TITLE

DATE	NO.	DESCRIPTION
04/04/23	1	90% RELEASE FOR PLAN REVIEW
05/11/23	1	Gas Removed from Building

04/04/23	23303			
DATE	PROJ. NUMBER	FILE NAME	FILE NUMBER	

E8.0

BCE
BARNETT
CONSULTING
ENGINEERS

655 Engineering Drive
Suite 150
Peachtree Corners, GA 30092
404.382.9550
www.bce-eng.com

RELEASE

SECTION 26 32 13
ENGINE GENERATORS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Packaged engine generator system and associated components and accessories:
 - 1. **Engine and engine accessory equipment.**
 - 2. **Alternator (generator).**
 - 3. **Generator set control system.**
 - 4. **Generator set enclosure.**
 - 5. **Auxiliary Load Bank: Provide a unit-mounted resistive load bank mounted inside the enclosure in the radiator outlet air duct.**

1.02 RELATED REQUIREMENTS

- A. Section 03 30 00 - Cast-in-Place Concrete: Concrete equipment pads.
- B. **Section 23 11 13 - Facility Fuel-Oil Piping: Diesel fuel piping.**
- C. Section 23 51 00 - Breechings, Chimneys, and Stacks: Engine exhaust piping.
- D. Section 26 05 26 - Grounding and Bonding for Electrical Systems.
- E. Section 26 05 29 - Hangers and Supports for Electrical Systems.
- F. Section 26 05 53 - Identification for Electrical Systems: Identification products and requirements.
- G. Section 26 36 00 - Transfer Switches.

1.03 REFERENCE STANDARDS

- A. **ASTM D975 - Standard Specification for Diesel Fuel 2022a.**
- B. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.
- C. NECA/EGSA 404 - Standard for Installing Generator Sets 2014.
- D. NEMA MG 1 - Motors and Generators 2021.
- E. **NFPA 30 - Flammable and Combustible Liquids Code 2021, with Amendment.**
- F. NFPA 37 - Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines 2021.
- G. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- H. NFPA 99 - Health Care Facilities Code 2021, with Amendment.
- I. NFPA 110 - Standard for Emergency and Standby Power Systems 2022.
- J. **UL 142 - Steel Aboveground Tanks for Flammable and Combustible Liquids Current Edition, Including All Revisions.**

- K. UL 1236 - Battery Chargers for Charging Engine-Starter Batteries Current Edition, Including All Revisions.
- L. UL 2200 - Stationary Engine Generator Assemblies Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate compatibility of generator sets to be installed with work provided under other sections or by others.
 - a. **Transfer Switches: See Section 26 36 00.**
 - 2. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment or other potential obstructions within the spaces dedicated for engine generator system.
 - 3. Coordinate arrangement of equipment with the dimensions and clearance requirements of the actual equipment to be installed.
 - 4. Coordinate the work to provide electrical circuits suitable for the power requirements of the actual auxiliary equipment and accessories to be installed.
 - 5. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Manufacturer's factory emissions certification.
- C. Field quality control test reports.
- D. Maintenance contracts.

1.06 QUALITY ASSURANCE

- A. Comply with the following:
 - 1. NFPA 70 (National Electrical Code).
 - 2. NFPA 37 (Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines).
 - 3. **NFPA 30 (Flammable and Combustible Liquids Code).**
- B. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store generator sets in accordance with manufacturer's instructions and NECA/EGSA 404.
- B. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.
- C. Handle carefully in accordance with manufacturer's instructions to avoid damage to generator set components, enclosure, and finish.

1.08 FIELD CONDITIONS

- A. Maintain field conditions within manufacturer's required service conditions during and after installation.

1.09 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Packaged Engine Generator Set:
 - 1. Caterpillar Inc: www.cat.com/#sle.
 - 2. Cummins Power Generation Inc: www.cumminspower.com/#sle.
 - 3. Generac Power Systems: www.generac.com/industrial/#sle. Generac Power Systems : www.generac.com/industrial/#sle. Generac Power Systems : www.generac.com/industrial/#sle.
 - 4. Kohler Co: www.kohlerpower.com/#sle.

2.02 PACKAGED ENGINE GENERATOR SYSTEM

- A. Provide new engine generator system consisting of all required equipment, sensors, conduit, boxes, wiring, piping, supports, accessories, system programming, etc. as necessary for a complete operating system that provides the functional intent indicated.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. System Description:
 - 1. Application: Emergency/standby.
 - 2. Configuration: Single packaged engine generator set operated independently (not in parallel).
- D. Packaged Engine Generator Set:
 - 1. **Type: Diesel (compression ignition).**
 - 2. Power Rating: as indicated on the drawings kW, standby.
 - 3. Voltage: As indicated on drawings.
 - 4. **Main Line Circuit Breaker:**
 - a. **Type: Electronic trip with long time and short time delay and instantaneous pickup.**
 - b. **Trip Rating: As indicated on drawings.**
- E. Generator Set General Requirements:
 - 1. Prototype tested in accordance with NFPA 110 for Level 1 systems.
 - 2. Factory-assembled, with components mounted on suitable base.
 - 3. List and label engine generator assembly as complying with UL 2200.
 - 4. Power Factor: Unless otherwise indicated, specified power ratings are at 0.8 power factor for three phase voltages and 1.0 power factor for single phase voltages.
 - 5. Provide suitable guards to protect personnel from accidental contact with rotating parts, hot piping, and other potential sources of injury.
 - 6. Main Line Circuit Breakers: Provide factory-installed line side connections with suitable lugs for load side connections.

- F. Service Conditions: Provide engine generator system and associated components suitable for operation under the service conditions at the installed location.
 - 1. **Altitude: 1000 feet.**
 - 2. **Ambient Temperature: Between 0 and 122 degrees F.**
- G. Starting and Load Acceptance Requirements:
 - 1. Cranking Method: Cycle cranking complying with NFPA 110 (15 second crank period, followed by 15 second rest period, with cranking limiter time-out after 3 cycles), unless otherwise required.
 - 2. Cranking Limiter Time-Out: If generator set fails to start after specified cranking period, indicate overcrank alarm condition and lock-out generator set from further cranking until manually reset.
 - 3. Start Time: Capable of starting and achieving conditions necessary for load acceptance within 10 seconds (NFPA 110, Type 10).
 - 4. Maximum Load Step: Supports 100 percent of rated load in one step.
- H. Exhaust Emissions Requirements:
 - 1. Comply with federal (EPA), state, and local regulations applicable at the time of commissioning; include factory emissions certification with submittals.
 - 2. Do not make modifications affecting generator set factory emissions certification without approval of manufacturer and Engineer. Where such modifications are made, provide field emissions testing as necessary for certification.

2.03 ENGINE AND ENGINE ACCESSORY EQUIPMENT

- A. Provide engine with adequate horsepower to achieve specified power output at rated speed, accounting for alternator efficiency and parasitic loads.
- B. **Engine Fuel System - Diesel (Compression Ignition):**
 - 1. **Fuel Source: Diesel, ASTM D975 No. 2-D or approved cold weather diesel blends.**
 - 2. **Fuel Storage: Sub-base fuel tank,**
 - 3. **Engine Fuel Supply: Provide engine-driven, positive displacement fuel pump with replaceable fuel filter(s), water separator, check valve to secure prime, manual fuel priming pump, and relief-bypass valve. Provide fuel cooler where recommended by manufacturer.**
 - 4. **Engine Fuel Connections: Provide suitable, approved flexible fuel lines for coupling engine to fuel source.**
 - 5. **Sub-Base Fuel Tank:**
 - a. **Provide sub-base mounted, double-wall fuel tank with secondary containment; listed and labeled as complying with UL 142.**
 - b. **Tank Capacity: Size for minimum of 48 hours of continuous engine generator operation at 100 percent rated load, but not larger than permissible by applicable codes.**
 - c. **Features:**
 - 1) **Direct reading fuel level gauge.**
 - 2) **Normal atmospheric vent.**
 - 3) **Emergency pressure relief vent.**
 - 4) **Fuel fill opening with lockable cap.**
 - 5) **Dedicated electrical conduit stub-up area.**
 - 6) **Low fuel level switch.**
 - 7) **Provide overfill protection valve at base of tank.**
 - 8) **Leak detection switch; located within secondary containment interstitial space for detection of primary tank fuel leak.**
- C. Engine Starting System:

1. System Type: Electric, with DC solenoid-activated starting motor(s).
 2. Battery(s):
 - a. Battery Type: Lead-acid.
 - b. Battery Capacity: Size according to manufacturer's recommendations for achieving starting and load acceptance requirements under worst case ambient temperature; capable of providing cranking through two complete periods of cranking limiter time-outs without recharging.
 - c. Provide battery rack, cables, and connectors suitable for the supplied battery(s); size battery cables according to manufacturer's recommendations for cable length to be installed.
 3. Battery-Charging Alternator: Engine-driven, with integral solid-state voltage regulation.
 4. Battery Charger:
 - a. Provide dual rate battery charger with automatic float and equalize charging modes and minimum rating of 10 amps; suitable for maintaining the supplied battery(s) at full charge without manual intervention.
 - b. Capable of returning supplied battery(s) from fully discharged to fully charged condition within 24 hours, as required by NFPA 110 for Level 1 applications while carrying normal loads.
 - c. Recognized as complying with UL 1236.
 - d. Furnished with integral overcurrent protection; current limited to protect charger during engine cranking; reverse polarity protection.
 - e. Provide integral DC output ammeter and voltmeter with five percent accuracy.
 - f. Provide alarm output contacts as necessary for alarm indications.
- D. Engine Speed Control System (Governor):
1. Single Engine Generator Sets (Not Operated in Parallel): Provide electronic isochronous governor for controlling engine speed/alternator frequency.
 2. Frequency Regulation, Electronic Isochronous Governors: No change in frequency from no load to full load; plus/minus 0.25 percent at steady state.
- E. Engine Lubrication System:
1. System Type: Full pressure, with engine-driven, positive displacement lubrication oil pump, replaceable full-flow oil filter(s), and dip-stick for oil level indication. Provide oil cooler where recommended by manufacturer.
- F. Engine Cooling System:
1. System Type: Closed-loop, liquid-cooled, with unit-mounted radiator/fan and engine-driven coolant pump; suitable for providing adequate cooling while operating at full load under worst case ambient temperature.
 2. Fan Guard: Provide suitable guard to protect personnel from accidental contact with fan.
 3. **Coolant Heater: Provide thermostatically controlled coolant heater to improve starting under cold ambient conditions; size according to manufacturer's recommendations for achieving starting and load acceptance requirements under worst case ambient temperature. Provide isolation shutoff valves to facilitate servicing without draining the cooling system.**
- G. Engine Air Intake and Exhaust System:
1. Air Intake Filtration: Provide engine-mounted, replaceable, dry element filter.
 2. Engine Exhaust Connection: Provide suitable, approved flexible connector for coupling engine to exhaust system.

2.04 ALTERNATOR (GENERATOR)

- A. Alternator: 4-pole, 1800 rpm (60 Hz output) revolving field, synchronous generator complying with NEMA MG 1; connected to engine with flexible coupling; voltage output configuration as indicated, with reconnectable leads for 3 phase alternators.
- B. Exciter:
 - 1. Exciter Type: Brushless; provide permanent magnet generator (PMG) excitation system; self-excited (shunt) systems are not permitted.
 - 2. PMG Excitation Short-Circuit Current Support: Capable of sustaining 300 percent of rated output current for 10 seconds.
 - 3. Voltage Regulation (with PMG excitation): Plus/minus 0.5 percent for any constant load from no load to full load.
- C. Temperature Rise: Comply with UL 2200.
- D. Insulation System: NEMA MG 1, Class H; suitable for alternator temperature rise.
- E. Enclosure: NEMA MG 1, drip-proof.
- F. Total Harmonic Distortion: Not greater than five percent.
- G. **Alternator Heater: Provide strip heater to prevent moisture condensation on alternator windings.**

2.05 GENERATOR SET CONTROL SYSTEM

- A. Provide microprocessor-based control system for automatic control, monitoring, and protection of generator set. Include sensors, wiring, and connections necessary for functions/indications specified.
- B. Control Panel:
 - 1. Control Panel Mounting: Unit-mounted unless otherwise indicated; vibration isolated.
 - 2. Generator Set Control Functions:
 - a. Automatic Mode: Initiates generator set start/shutdown upon receiving corresponding signal from remote device (e.g. automatic transfer switch).
 - b. Manual Mode: Initiates generator set start/shutdown upon direction from operator.
 - c. Reset Mode: Clears all faults, allowing generator set restart after a shutdown.
 - d. Emergency Stop: Immediately shuts down generator set (without time delay) and prevents automatic restarting until manually reset.
 - e. Cycle Cranking: Programmable crank time, rest time, and number of cycles.
 - f. Time Delay: Programmable for shutdown (engine cooldown) and start (engine warmup).
 - g. Voltage Adjustment: Adjustable through range of plus/minus 5 percent.
 - 3. Generator Set Status Indications:
 - a. Voltage (Volts AC): Line-to-line, line-to-neutral for each phase.
 - b. Current (Amps): For each phase.
 - c. Frequency (Hz).
 - d. Real power (W/kW).
 - e. Reactive power (VAR/kVAR).
 - f. Apparent power (VA/kVA).
 - g. Power factor.
 - h. Duty Level: Actual load as percentage of rated power.
 - i. Engine speed (RPM).
 - j. Battery voltage (Volts DC).
 - k. Engine oil pressure.

- l. Engine coolant temperature.
- m. Engine run time.
- n. Generator powering load (position signal from transfer switch).
- 4. Generator Set Protection and Warning/Shutdown Indications:
 - a. Comply with NFPA 110; configurable for NFPA 110 Level 1 or Level 2, or NFPA 99 systems including but not limited to the following protections/indications:
 - 1) Overcrank (shutdown).
 - 2) Low coolant temperature (warning).
 - 3) High coolant temperature (warning).
 - 4) High coolant temperature (shutdown).
 - 5) Low oil pressure (shutdown).
 - 6) Overspeed (shutdown).
 - 7) Low fuel level (warning).
 - 8) Low coolant level (warning/shutdown).
 - 9) Generator control not in automatic mode (warning).
 - 10) High battery voltage (warning).
 - 11) Low cranking voltage (warning).
 - 12) Low battery voltage (warning).
 - 13) Battery charger failure (warning).
 - b. In addition to NFPA 110 requirements, provide the following protections/indications:
 - 1) High AC voltage (shutdown).
 - 2) Low AC voltage (shutdown).
 - 3) High frequency (shutdown).
 - 4) Low frequency (shutdown).
 - 5) Overcurrent (shutdown).
 - 6) Fuel tank leak (warning), where applicable.
 - c. Provide contacts for local and remote common alarm.
 - d. Provide lamp test function that illuminates all indicator lamps.
- 5. Other Control Panel Features:
 - a. Event log.
 - b. Communications Capability: Utilize Modbus communications protocol. Provide all accessories necessary for proper interface.

C. Remote Annunciator:

- 1. Remote Annunciator Mounting: Wall-mounted; Provide flush-mounted annunciator for finished areas and surface-mounted annunciator for non-finished areas unless otherwise indicated.
- 2. Generator Set Status Indications:
 - a. Generator powering load (via position signal from transfer switch).
 - b. Communication functional.
- 3. Generator Set Warning/Shutdown Indications:
 - a. Comply with NFPA 110; configurable for NFPA 110 Level 1 or Level 2, or NFPA 99 systems including but not limited to the following indications:
 - 1) Overcrank (shutdown).
 - 2) Low coolant temperature (warning).
 - 3) High coolant temperature (warning).
 - 4) High coolant temperature (shutdown).
 - 5) Low oil pressure (shutdown).
 - 6) Overspeed (shutdown).
 - 7) Low fuel level (warning).
 - 8) Low coolant level (warning/shutdown).
 - 9) Generator control not in automatic mode (warning).

- 10) High battery voltage (warning).
- 11) Low cranking voltage (warning).
- 12) Low battery voltage (warning).
- 13) Battery charger failure (warning).
- b. Provide audible alarm with silence function.
- c. Provide lamp test function that illuminates all indicator lamps.
- d. **Provide interface with fire alarm system.**

2.06 GENERATOR SET ENCLOSURE

- A. Enclosure Type: Sound attenuating, weather protective.
- B. Enclosure Material: Steel or aluminum.
- C. Hardware Material: Stainless steel.
- D. Color: Manufacturer's standard.
- E. Access Doors: Lockable, with all locks keyed alike.
- F. Openings: Designed to prevent bird/rodent entry.
- G. External Drains: Extend oil and coolant drain lines to exterior of enclosure for maintenance service.
- H. Sound Attenuating Enclosures: Line enclosure with non-hydroscopic, self-extinguishing sound-attenuating material.
- I. **Exhaust Silencers: Where exhaust silencers are mounted within enclosure in main engine compartment, insulate silencer to minimize heat dissipation as necessary for operation at rated load under worst case ambient temperature.**
- J. **Provide 120V, 20A GFCI duplex receptacle.**
- K. **Provide 120V LED luminaires designed for average 30F at the floor level. Provide 3-way switches on each side of the enclosure for control of the luminaires.**

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that the ratings and configurations of generator sets and auxiliary equipment are consistent with the indicated requirements.
- C. Verify that rough-ins for field connections are in the proper locations.
- D. Verify that mounting surfaces are ready to receive equipment.
- E. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Perform work in accordance with NECA 1 (general workmanship).
- B. Install products in accordance with manufacturer's instructions.

- C. Install generator sets and associated accessories in accordance with NECA/EGSA 404.
- D. Arrange equipment to provide minimum clearances and required maintenance access.
- E. Unless otherwise indicated, mount generator set on properly sized, minimum 6 inch high concrete pad constructed in accordance with Section 03 30 00.
- F. Provide required support and attachment in accordance with Section 26 05 29.
- G. Use manufacturer's recommended oil and coolant, suitable for the worst case ambient temperatures.
- H. Provide diesel fuel piping and venting in accordance with Section 23 11 13, where not factory installed.
- I. Provide engine exhaust piping in accordance with Section 23 51 00, where not factory installed.
 - 1. Include piping expansion joints, piping insulation, thimble, condensation trap/drain, rain cap, hangers/supports, etc. as indicated or as required.
 - 2. Do not exceed manufacturer's maximum back pressure requirements.
- J. Provide grounding and bonding in accordance with Section 26 05 26.
- K. Identify system wiring and components in accordance with Section 26 05 53.

3.03 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.
- B. Notify Owner and Architect at least two weeks prior to scheduled inspections and tests.
- C. Notify authorities having jurisdiction and comply with their requirements for scheduling inspections and tests and for observation by their personnel.
- D. Provide all equipment, tools, and supplies required to accomplish inspection and testing, including load bank and fuel.
- E. Preliminary inspection and testing to include, at a minimum:
 - 1. Inspect each system component for damage and defects.
 - 2. Verify tightness of mechanical and electrical connections are according to manufacturer's recommended torque settings.
 - 3. Check for proper oil and coolant levels.
- F. Prepare and start system in accordance with manufacturer's instructions.
- G. Perform acceptance test in accordance with NFPA 110.
- H. Inspection and testing to include, at a minimum:
 - 1. Verify compliance with starting and load acceptance requirements.
 - 2. Verify voltage and frequency; make required adjustments as necessary.
 - 3. Verify phase sequence.
 - 4. Verify control system operation, including safety shutdowns.
 - 5. Verify operation of auxiliary equipment and accessories (e.g. battery charger, heaters, etc.).
 - 6. Perform load tests in accordance with NFPA 110 (1.5 hour building load test followed by 2 hour full load test).
- I. Provide field emissions testing where necessary for certification.

- J. Correct defective work, adjust for proper operation, and retest until entire system complies with Contract Documents.
- K. Submit detailed reports indicating inspection and testing results and corrective actions taken.

3.04 CLEANING

- A. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

3.05 CLOSEOUT ACTIVITIES

- A. **Demonstration: Demonstrate proper operation of system to Owner, and correct deficiencies or make adjustments as directed.**
- B. **Training: Train Owner's personnel on operation, adjustment, and maintenance of system.**
 - 1. **Use operation and maintenance manual as training reference, supplemented with additional training materials as required.**
 - 2. **Provide minimum of four hours of training.**
 - 3. **Instructor: Manufacturer's authorized representative.**
 - 4. **Location: At project site.**
- C. **After successful acceptance test and just prior to Substantial Completion, replace air, oil, and fuel filters and fill fuel storage tank.**

3.06 PROTECTION

- A. Protect installed engine generator system from subsequent construction operations.

3.07 MAINTENANCE

- A. Provide to Owner a proposal as an alternate to the base bid, a separate maintenance contract for the service and maintenance of engine generator system for two years from date of Substantial Completion; Include a complete description of preventive maintenance, systematic examination, adjustment, inspection, and testing, with a detailed schedule.
- B. Conduct site visit at least once every three months to perform inspection, testing, and preventive maintenance. Submit report to Owner indicating maintenance performed along with evaluations and recommendations.
- C. Provide trouble call-back service upon notification by Owner:
 - 1. Provide on-site response within 4 hours of notification.
 - 2. Include allowance for call-back service during normal working hours at no extra cost to Owner.
 - 3. Owner will pay for call-back service outside of normal working hours on an hourly basis, based on actual time spent at site and not including travel time; include hourly rate and definition of normal working hours in maintenance contract.
- D. Maintain an on-site log listing the date and time of each inspection and call-back visit, the condition of the system, nature of the trouble, correction performed, and parts replaced.

END OF SECTION

SECTION 26 36 00
TRANSFER SWITCHES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Transfer switches for low-voltage (600 V and less) applications and associated accessories:
 - 1. Automatic transfer switches.

1.02 RELATED REQUIREMENTS

- A. Section 03 30 00 - Cast-in-Place Concrete: Concrete equipment pads.
- B. Section 26 05 26 - Grounding and Bonding for Electrical Systems.
- C. Section 26 05 29 - Hangers and Supports for Electrical Systems.
- D. Section 26 05 53 - Identification for Electrical Systems: Identification products and requirements.
- E. Section 26 32 13 - Engine Generators: For interface with transfer switches.
 - 1. Includes additional testing requirements.

1.03 REFERENCE STANDARDS

- A. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.
- B. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum) 2020.
- C. NEMA ICS 10 Part 1 - Industrial Control and Systems Part 1: Electromechanical AC Transfer Switch Equipment 2020.
- D. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems 2021.
- E. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- F. UL 1008 - Transfer Switch Equipment Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate compatibility of transfer switches to be installed with work provided under other sections or by others.
 - 2. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances required by NFPA 70.
 - 3. Coordinate arrangement of equipment with the dimensions and clearance requirements of the actual equipment to be installed.
 - 4. Coordinate the work with placement of supports, anchors, etc. required for mounting.
 - 5. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for each product, including ratings, configurations, dimensions, finishes, weights, service condition requirements, and installed features.
- C. Shop Drawings: Include dimensioned plan views and sections indicating locations of system components, required clearances, and field connection locations. Include system interconnection schematic diagrams showing all factory and field connections.
 - 1. Clearly indicate whether proposed short circuit current ratings are based on testing with specific overcurrent protective devices or time durations; indicate short-time ratings where applicable.
 - 2. Identify mounting conditions required for equipment seismic qualification.
- D. Specimen Warranty: Submit sample of manufacturer's warranty.
- E. Source quality control test reports.
- F. Manufacturer's detailed field testing procedures.
- G. Field quality control test reports.
- H. Operation and Maintenance Data: Include detailed information on system operation, equipment programming and setup, replacement parts, and recommended maintenance procedures and intervals.
- I. Executed Warranty: Submit documentation of final executed warranty completed in Owner's name and registered with manufacturer.
- J. Project Record Documents: Record actual locations of system components, installed circuiting arrangements and routing, and final equipment settings.

1.06 QUALITY ASSURANCE

- A. Comply with the following:
 - 1. NFPA 70 (National Electrical Code).
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.
- C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store transfer switches in accordance with manufacturer's instructions.
- B. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.
- C. Handle carefully in accordance with manufacturer's instructions to avoid damage to transfer switch components, enclosure, and finish.

1.08 FIELD CONDITIONS

- A. Maintain field conditions within manufacturer's required service conditions during and after installation.

1.09 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Provide minimum two year manufacturer warranty covering repair or replacement due to defective materials or workmanship.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Transfer Switches:
 - 1. ASCO Power Technologies: www.ascopower.com/#sle.
 - 2. Russelectric, a Siemens business.
 - 3. Same as manufacturer of engine generator(s) used for this project.
- B. Source Limitations: Furnish transfer switches and accessories produced by a single manufacturer and obtained from a single supplier.

2.02 TRANSFER SWITCHES

- A. Provide complete power transfer system consisting of all required equipment, conduit, boxes, wiring, supports, accessories, system programming, etc. as necessary for a complete operating system that provides the functional intent indicated.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Applications:
 - 1. Utilize open transition transfer unless otherwise indicated or required.
- D. Construction Type: Only "contactor type" (open contact) transfer switches are acceptable. Do not use "breaker type" (enclosed contact) transfer switches.
- E. Automatic Transfer Switch:
 - 1. Transition Configuration: Delayed-transition (with neutral position).
 - 2. Voltage: As indicated on the drawings.
 - 3. Ampere Rating: As indicated on the drawings.
 - 4. Neutral Configuration: Switched neutral.
 - 5. Load Served: As indicated on the drawings.
 - 6. Primary Source: As indicated on the drawings.
 - 7. Alternate Source: As indicated on the drawings.
- F. Comply with NEMA ICS 10 Part 1, and list and label as complying with UL 1008 for the classification of the intended application (e.g. emergency, optional standby).
- G. Do not use double throw safety switches or other equipment not specifically designed for power transfer applications and listed as transfer switch equipment.
- H. Load Classification: Classified for total system load (any combination of motor, electric discharge lamp, resistive, and tungsten lamp loads with tungsten lamp loads not exceeding 30 percent of the

continuous current rating) unless otherwise indicated or required.

- I. Switching Methods:
 - 1. Open Transition:
 - a. Provide break-before-make transfer without a neutral position that is not connected to either source, and with interlocks to prevent simultaneous connection of the load to both sources.
 - 2. Delayed Transition:
 - a. Provide break-before-make transfer with programmable time delay in a neutral position not connected to either source, and with interlocks to prevent simultaneous connection of the load to both sources.
 - 3. Neutral Switching: Either simultaneously switched neutral (break-before-make) or overlapping neutral (make-before-break) methods are acceptable.
 - 4. Obtain control power for transfer operation from line side of source to which the load is to be transferred.
- J. Service Conditions: Provide transfer switches suitable for continuous operation at indicated ratings under the service conditions at the installed location.
- K. Enclosures:
 - 1. Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
 - a. Indoor Clean, Dry Locations: Type 1 or Type 12.
 - 2. Provide lockable door(s).
 - 3. Finish: Manufacturer's standard unless otherwise indicated.
- L. Short Circuit Current Rating:
 - 1. Withstand and Closing Rating: Provide transfer switches, when protected by the supply side overcurrent protective devices to be installed, with listed withstand and closing rating not less than the available fault current at the installed location as indicated on the drawings.
 - 2. Short Time Rating: Provide transfer switches with short time ratings suitable for 30 cycles (0.5 seconds).
- M. Automatic Transfer Switches:
 - 1. Description: Transfer switches with automatically initiated transfer between sources; electrically operated and mechanically held.
 - 2. Control Functions:
 - a. Automatic mode.
 - b. Test Mode: Simulates failure of primary/normal source.
 - c. Voltage and Frequency Sensing:
 - 1) Undervoltage sensing for each phase of primary/normal source; adjustable dropout/pickup settings.
 - 2) Undervoltage sensing for alternate/emergency source; adjustable dropout/pickup settings.
 - 3) Underfrequency sensing for alternate/emergency source; adjustable dropout/pickup settings.
 - d. Outputs:
 - 1) Contacts for engine start/shutdown (except where direct generator communication interface is provided).
 - 2) Auxiliary contacts; two set(s) for each switch position.
 - 3) Signal before transfer (load disconnect) contacts; for selective load disconnection prior to transfer.
 - e. Adjustable Time Delays:
 - 1) Transfer to alternate/emergency source time delay.
 - 2) Retransfer to primary/normal source time delay.
 - 3) Signal before transfer (load disconnect) contact time delay.

- f. In-Phase Monitor (Open Transition Transfer Switches): Monitors phase angle difference between sources for initiating in-phase transfer.
 - g. Retransfer to Normal Switch: Bypasses time delays for retransfer to primary/normal source.
3. Status Indications:
 - a. Connected to alternate/emergency source.
 - b. Connected to primary/normal source.
 - c. Alternate/emergency source available.
 - d. Primary/normal source available.
 4. Other Features:
 - a. Event log.
 - b. Communications Capability: Utilize Modbus communications protocol. Provide all accessories necessary for proper interface.
 5. Automatic Sequence of Operations:
 - a. Upon failure of primary/normal source, start the programmable utility failure timer.
 - b. Where applicable, initiate signal before transfer (load disconnect) contacts at programmable time before transfer.
 - c. When alternate/emergency source is available, transfer load to alternate/emergency source after programmable time delay.
 - d. When primary/normal source has been restored, retransfer to primary/normal source after a programmable time delay. Bypass time delay if alternate/emergency source fails and primary/normal source is available.

2.03 SOURCE QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.
- B. Perform production tests on transfer switches at factory to verify operation and performance characteristics prior to shipment. Include certified test report with submittals.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that the ratings and configurations of transfer switches are consistent with the indicated requirements.
- C. Verify that rough-ins for field connections are in the proper locations.
- D. Verify that mounting surfaces are ready to receive transfer switches.
- E. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Perform work in accordance with NECA 1 (general workmanship).
- B. Install products in accordance with manufacturer's instructions.
- C. Arrange equipment to provide minimum clearances and required maintenance access.
- D. Provide required support and attachment in accordance with Section 26 05 29.
- E. Install transfer switches plumb and level.

- F. Unless otherwise indicated, mount floor-mounted transfer switches on properly sized 3 inch high concrete pad constructed in accordance with Section 03 30 00.
- G. Provide grounding and bonding in accordance with Section 26 05 26.
- H. Identify transfer switches and associated system wiring in accordance with Section 26 05 53.

3.03 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.
- B. Provide services of a manufacturer's authorized representative to prepare and start systems and perform inspection and testing. Include manufacturer's detailed testing procedures and field reports with submittals.
- C. Prepare and start system in accordance with manufacturer's instructions.
- D. Automatic Transfer Switches:
 - 1. Inspect and test in accordance with NETA ATS, except Section 4.
 - 2. Perform inspections and tests listed in NETA ATS, Section 7.22.3. The insulation-resistance tests listed as optional are not required.
- E. Provide additional inspection and testing as required for completion of associated engine generator testing as specified in Section 26 32 13.
- F. Correct defective work, adjust for proper operation, and retest until entire system complies with Contract Documents.
- G. Submit detailed reports indicating inspection and testing results and corrective actions taken.

3.04 CLEANING

- A. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

3.05 CLOSEOUT ACTIVITIES

- A. Training: Train Owner's personnel on operation, adjustment, and maintenance of transfer switches.
 - 1. Use operation and maintenance manual as training reference, supplemented with additional training materials as required.
 - 2. Instructor: Manufacturer's authorized representative.
 - 3. Location: At project site.

3.06 PROTECTION

- A. Protect installed transfer switches from subsequent construction operations.

END OF SECTION