

**State of Florida
Department of Transportation**



EXHIBIT "A", SCOPE OF WORK

F6004

DISTRICT SIX SOUTH DADE MAINTENANCE YARD

GENERATOR INSTALLATION PROJECT

<p>CONTRACT NUMBER: F6004 FINANCIAL PROJECT NUMBER: 446785-1-52-01</p>
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EXHIBIT “A”

SCOPE OF WORK

**THE FLORIDA DEPARTMENT OF TRANSPORTATION,
DISTRICT SIX, SOUTH DADE MAINTENANCE YARD
GENERATOR PROJECT**

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EXHIBIT "A"
SCOPE OF WORK
THE FLORIDA DEPARTMENT OF TRANSPORTATION,
DISTRICT 6 SOUTH DADE, MAINTENANCE YARD
GENERATOR PROJECT

1.0 Purpose:

- 1.1** The Florida Department of Transportation requires the services of an appropriately licensed and insured certified Electrical and/or General contractor to provide everything required for the installation of a 200KW Diesel Generator, located at the FDOT, District 6 South Dade Maintenance Yard, 14655 SW 122nd Ave. Miami, fl. 33186.
- 1.2** This turnkey project shall provide everything that is (or may be) required to safely and properly perform the services to the satisfaction of the Departments Project Manager or Designee, including but not limited to:
- 1.2.1** Installation of the new 200KW MTU Onsite Energy model – DS200D6SJA (MTU 6R0120 DS200) Generator Unit.
- 1.2.2** The Vendor awarded this turnkey project through the Invitation to Bid process shall provide to the Department, a complete, operational, and properly functioning standby power system that has been tested as required during and after installation, proven and documented to meet the manufacturers and the Department's specifications.
- 1.2.3** The completed system will consist of a completely integrated emergency diesel generator system to provide an alternate source of electrical power to South Dade Administration Building electrical loads in the event of utility power outages such as weather related, accidental, or commanded outages. The generator set and related component accessories shall be sized to accommodate the entire building electrical loading.
- 1.2.4** This project includes, but is not limited to: The preparation, provision and handling of all required permitting and permits, inspections, signed / sealed engineering drawings / plans, as-built drawings / plans, supervision, labor, materials, ancillary components, fuel tanks, concrete mounting pads, fuel, service entrance rated automatic transfer switch, and protected / vandal resistant housing structures, wiring, installation, start up, commissioning , testing etc., any and all related systems and required building structures, providing and installation of outdoor rated enclosures, while providing safe full operator / technician access to the

equipment as needed for servicing and operations, all freight & freight expediting, supplies, equipment, mobilization, set up, all testing, construction site safety, maintenance, cleanup, site restoration / any repairs to damages resulting from this project, and anything else required to complete the project to the Departments satisfaction at the Department's South Dade Maintenance Yard, 14655 SW 122nd ave. Miami, fl. 33186.

2.0 Definitions:

- 2.1 F.D.O.T: The Florida Department of Transportation, hereafter known as the Department.
- 2.2 Contractor: The firm retained by the Department to provide all equipment, labor, installation, and services as described within this Scope of Services.
- 2.3 Contract Manager: The Contractor's assigned representative to coordinate all activities associated with this Scope of Services.
- 2.4 Project Manager: The Departments representative responsible for enforcing the Contractors performs in accordance with the contract terms and conditions and serving as liaison between the Department and Contractor.
- 2.5 **Contractor – Normal Working Hours:** Unless otherwise specifically authorized in advance by the Department in writing, all contractor services shall occur as indicated below:
- 2.5.1 The project work shall not interfere with the Department's normal operations. **Exceptions to this will require pre-approval by the Department Project Manager or designee.** Proposed Contractor work schedules (and any subsequent proposed schedule change requests) by the Contractor shall be submitted in advance for pre-approval by the **Department Project Manager or designee.**
- 2.5.2 For this Scope of Work, the Department's current normal working hours are from 7:30 AM to 5:00 PM, Monday through Friday, except for nine State Holidays, declared state of emergency and days of state or national mourning etc.
- 2.5.3 While it is expected that the majority of this work will occur during regular day hours, night and/or weekend / Holiday work hours may be required to perform and/or complete certain portions of the project.
- 2.6 **Sub-Contractor(s):** Any sub-contractors that are, or may be utilized, by the Contractor during the course of this contract, which includes any modifications / changes, renewals and/or extensions thereto. Unless otherwise previously agreed to in writing by the Department, all Sub-Contractor(s) shall be required

to meet the requirements of EXHIBIT "A", SCOPE OF WORK, MINIMUM QUALIFICATIONS and any other contract documentation.

- 2.7** "I. T. B." shall refer to: THE FLORIDA DEPARTMENT OF TRANSPORTATION, DISTRICT SIX SOUTH DADE MAINTENANCE YARD GENERATOR INSTALLATION PROJECT", "Invitation To Bid process" itself, and to the derived document package, and shall include all other related contract documents, exhibits, attachments etc.
- 2.8** "Exhibit "A" or Exh. "A" shall refer to: This document, titled "EXHIBIT "A", SCOPE OF WORK, THE FLORIDA DEPARTMENT OF TRANSPORTATION, DISTRICT SIX SOUTH DADE MAINTENANCE YARD GENERATOR INSTALLATION PROJECT" in its entirety, **AND also to any attachments.**
- 2.9** "Exhibit "B" or Exh. "B" shall refer to: "EXHIBIT "B", METHOD OF COMPENSATION, THE FLORIDA DEPARTMENT OF TRANSPORTATION, DISTRICT 6 SOUTH DADE MAINTENANCE YARD GENERATOR INSTALLATION PROJECT" in its entirety.
- 2.10** "Exhibit "C" or Exh. "C" shall refer to: "EXHIBIT "C", PRICE PROPOSAL, THE FLORIDA DEPARTMENT OF TRANSPORTATION, DISTRICT SIX SOUTH DADE MAINTENANCE YARD GENERATOR INSTALLATION PROJECT" in its entirety.

3.0 PROJECT APPROACH

Unless otherwise specifically approved in writing by the Department, the awarded Contractor will be responsible for the following:

CONTRACTOR NOTE: When preparing its response to the proposal and project approach documents as requested here and elsewhere in the I.T.B. package, the Proposer shall detail how it intends to address the concerns indicated.

- 3.1** ALL engineering, permitting and fees / fines etc., ordering / handling / storage / transportation / material and equipment freight expedition and delivery, receiving of materials etc., / demolition and debris removal handling, cleaning, proper transportation, and disposal thereof / set up and layout, installation / cutting / setting / replacement of all materials / final project clean up to the satisfaction of the Department.
- 3.2** Working harmoniously with the Department and any other contractors / vendors / that may be involved with this project.

- 3.3 Contractor shall utilize, and maintain odor, noise, material storage, dust, and debris control methods in a manner acceptable to, and in compliance with the Department's safety and security procedures.
- 3.4 The specifications, materials, and installation method should adhere to all applicable Codes, Standards, and project documents.

4.0 Contractors Minimum Qualifications:

4.1 Certification / Registration.

4.1.1 The Contractor shall hold (and maintain) a valid and current license as an Electrical and/or General contractor in accordance with the laws of the State of Florida and any other authorities having jurisdiction as appropriate and required for this project, authorizing the Contractor to perform the specified work. Must have certification, and registrations, to inspect, install, service and warranty all proposed system equipment.

4.2 The Contractor and installing Technicians shall have provided similar type services and installation of the same products. Must have worked on similar projects of similar project size or larger, as outlined within these contract documents.

4.3 Have been actively involved in providing Commercial generator installation and related services for a minimum of 3 continuous years will be considered for this project. The Contractor shall adhere to all Federal, State, Local Codes and Generator industry standards.

4.3.1 The Contractor shall only use qualified, certified, and experienced installing technicians for the same type of equipment, systems, and installation as being requested for this project.

4.3.2 Installation technicians shall be factory trained on all proposed equipment and installation methods with a minimum of three (3) years' experience in the installation of all proposed equipment.

4.4 **Note:** Whenever a conflict arises in codes and/or standards the Contractor shall apply the most stringent code and/or standard as applicable to the type of systems application/installation. Whenever such a conflict exists the Contractor shall immediately notify the Department in writing of the conflict and the contractor's proposed resolution prior to finalizing any decisions.

4.5 Submittals to be Included with Bid:

- 4.5.1** Contractor References: Contractor must submit a list of three (3) projects that have been completed and operational for the last three (3) years. *For each facility above, project's description, location, date of installation and Owner's representative contact name and telephone number.*
- 4.5.2** The Contactor must submit a notarized letter on company letter head stating the Contractor has a minimum of three (3) years' experience in successfully completing projects of equal scope.
- 4.5.3** The Contractor must provide current copies of all relevant Licenses and Certifications.
- 4.5.4** For any substitution, Contractor shall submit complete product specification sheets of the same format as in Attachment 1 "Schematic and Equipment specifications / Plans" from E-1 through E-4 for comparison purposes.
- 4.5.5** Failure to fully comply with the Bid Submittal requirements detailed above shall grounds for Bid disqualifications.

5.0 SITE CONDITIONS

- 5.1** It shall be and remain the Proposer's responsibility to properly and completely field verify the full entire scope of work, all existing / anticipated site conditions, all required additional equipment and efforts necessary to provide all services as required herein. This includes but not limited to the determination of an accurate site layout, all actual site conditions, the full extent of all work to be performed, and the conditions surrounding the performance, thereof.
- 5.2** The failure or neglect of the Contractor to familiarize themselves with this project, the existing equipment, operating systems, hardware / software / firmware etc., wiring, infrastructure and operating conditions shall in no way relieve the Contractor from any obligations with respect to completing all work in a safe, proper and timely as outlined within this Scope of Services.
- 5.2.1 NOTE:** *There will be certain additional information provided only to those properly qualified contractors attending the mandatory pre-bid / site review meeting.*

6.0 **Proposed 200KW Diesel Generator**

6.1 Please see Attachment 1 "Site plan, System Riser, Equipment Plans and General Specs" E-1 through E-4 for details and requirements.

6.1.1 The Contractor shall provide all the required services, including, but not limited, to the following:

- 6.1.1.1 All electrical work to disconnect and re-installation of all conduits, electrical, control wiring and outdoor HV transformer.
- 6.1.1.2 Electrical feed and Service entrance.
- 6.1.1.3 Provide crane and labor services for hoisting and rigging.
- 6.1.1.4 Legal and proper disposal of the old equipment.
- 6.1.1.5 The Contractor shall set up and tie-in the new remote annunciator unit. This includes all application engineering, set up, installation and programming. If required by the AHJ, setup and tie-in of off-site generator trouble fault monitoring.
- 6.1.1.6 All necessary power supplies as required by the suggested manufacturing equipment specifications.
- 6.1.1.7 Provide all necessary protection to prevent damage around the working area including but not limited to parking lot area etc.
- 6.1.1.8 Provide on-site Temporary Generator for entire building in the event of unforeseen or planned power outage occurs during normal working hours.

7.0 **Substitutions:**

7.1 Throughout the specifications, Product Data is specified in Attachment 1 as a minimum specification to establish standards of quality and performance. If the bidder elects to substitute, he may provide any product that meets or exceeds the applicable specifications. The Contractor shall demonstrate comparability, including appropriate catalog materials, literature, and specifications.

NOTE: Grounds for rejection shall exist if in the opinion of the FDOT, the information submitted is inaccurate or does not satisfy the minimum qualification requirements.

8.0 System Warranties:

- 8.1** Upon project completion the Contractor shall provide, to the Department, the Project Close out document indicating and certifying, in writing, all optional items, components, standard features are all included, properly installed and in place and fully operational, programming of system and components have been properly installed according to the manufacture recommendation.
- 8.2** The Contractor shall provide a full one (1) year warranty to include all parts and labor effective from the date of final Department acceptance of the Generator Unit.
- 8.3** The warranty shall include service response for all service calls by phone and on-site service provided by Technicians with full experience servicing these specific models of equipment. A service technician shall return all service calls within two (2) hours and four (4) hour response on-site as needed to ensure the unit is functional.
- 8.4** All required labor, parts and or repairs of defective or damaged components shall be repaired or replaced with only new parts of the same make and model as necessary to ensure a fully functional and operating Generator unit at no additional cost.

9.0 System Commissioning and Staff Training:

- 9.1** All commissioning of equipment to be conducted by a product factory trained Technician.
 - 9.1.1** At system start-up, the Contractor shall provide a factory trained Technician to perform system checkout of all components, input required data and place the system in operation.
 - 9.1.2** The Contractor shall also be responsible for checking subsystem functionality and verifying proper operation of all hardware and software.
 - 9.1.3** Testing shall be witnessed and monitored for acceptance by a Department representative as part of the commissioning operations.
- 9.2** The Contractor shall provide a minimum of four hours of training on the equipment operations for the Facilities Services Staff. Training scheduling shall be coordinated with and approved by Facilities Services prior to the training.

9.2.1 Two (2) complete sets of maintenance and parts manuals shall be delivered to the Department prior to training and final project acceptance.

10.0 Working Hours/Schedule:

10.1 Unless otherwise approved in advance and in writing by the Department, all work involving system shutdown shall be performed after normal working hours starting at Friday 5:00 P.M to Monday 6:00 A.M. after the weekend.

10.1.1 If the Contractor chooses to perform the work during normal working hours, an alternate source of power system approved by the Department Project Manager shall be in place to avoid workplace downtime.

10.2 Upon awarding of this contract the Contractor shall provide to the Department's Project Manager a project work schedule which shall include the following information:

10.2.1 Provide a complete list of all proposed employees who are expected to work on this project along with their work experience and other related qualifications and project responsibility.

10.2.2 All work schedules shall include project start and end dates & identify all tasks and time frames, assignments, and personnel responsible for carrying out all work.

11.0 Safety/Work Area Clean up:

11.1 Staging area and parking shall not create any safety hazards / issues or impede automobile traffic to/from and/or around the facility.

11.2 The contractor shall be responsible for all repairs and/or replacement of damaged walls, etc. that are a result of this project, and shall carefully inspect and clean the entire workspace to ensure that debris is not left.

11.3 All new wall or floor penetrations required will be properly repaired and sealed, including the replacement of any existing sealant removed from walls, floor penetrations as necessary to run new pipes and wire.

11.4 All exposed wiring within the cabinets, consoles, and terminals shall be formed neatly with wires grouped in bundles using non-metallic, flame-resistant wiring cleats or wire ties.

11.5 The Contractor and assigned workers to this project shall only be permitted to work in areas identified as work areas, anyone outside of these areas shall be asked to leave the property, and this shall be strictly enforced throughout the term of this contract.

11.6 The Contractor shall immediately notify the Department's Project Manager, of any problems along with possible solutions and any increase to the project cost. Only upon written approval by the Department's Project Manager shall any changes be made to the scope of work, equipment materials used and installation of same.

12.0 LOSS AND DAMAGES:

12.1 The Contractor agrees to make a claim(s) settlement offer, on all damage claim(s) within twenty (20) working days after submission of appropriate claims form(s), including a complete inspection report at which time the Department shall provide a repair cost estimate. Failure to meet these requirements shall result in payment of **\$500** per day, per claim settlement, paid by the Contractor to the Department for each day past the (20) working day period, this shall include any sub-contractors utilized to provide services under this agreement.

12.2 The Contractor shall notify the Department's Project Manager at the time of any incident, accident or damage to persons, vehicles, or property, incurred prior to or during the Contractor performing services.

12.3 The Contractor shall provide a written narrative report describing what, when, where and how any of the above occurred, and what actions were taken immediately afterwards, a copy of this report shall be given to the Departments Project Manager, the Department shall proceed with all appropriate actions with regards to insurance & procedures.

12.4 The Contractor shall be responsible for all repairs or replacement of any damaged areas, infrastructure, structures, systems and / or any other items damaged in any manner by the Contractor, their employees and / or any other sub-contractors and / or other agents that it causes to be utilized to perform any portion(s) of this Contract. All repairs or replacements shall be accomplished utilizing qualified craftsmen with experience within the trade(s) necessary to complete the type of work required. All repairs shall be subject to the Departments inspection and approval.

12.5 The Contractor shall be responsible for the security of all tools and material supplied and used on this project at all times. The Contractor shall bear sole responsibility as to the result of any accidents involving State- or privately-owned property including but not limited to all office equipment and structure of the facility while providing services.

12.6 The Department shall not be held responsible for any loss or stolen equipment, or materials provided by the Contractor, to perform services as described within the Scope of Services. The Contractor shall replace and/or repair, as required

by the Department, any item(s), damaged, or destroyed while providing services as a result of an accident, neglect or willfulness act. The Department shall make the determination whether an item is repairable or must be replaced. All repairs shall be approved by the Department's Project Manager. The Department reserves the right to reject any proposed vendor that the Contractor recommends to perform repairs or replacements.

12.7 Upon rejection the Contractor shall submit a list of three (3) additional vendors qualified to perform repairs or replacement as identified above. The Department shall select, at its discretion, a qualified vendor, from the submission of the Contractor, to provide the necessary services, if the Department feels the submitted vendors list are not qualified to perform the type of work required, the Department shall provide to the Contractor a list of acceptable vendors to select from.

13.0 DEPARTMENT RESPONSIBILITIES

The Department shall provide to the Contractor full access to the project site as well as other areas that are necessary for the Contractor to successfully perform all services as required by the terms and conditions of this contract. The Department shall make available to the Contractor any available necessary information to perform all work as outlined within the Scope of Services i.e. floor plans, electrical plans and other specifications as needed.

**>> END OF EXHIBIT "A" SCOPE OF WORK <<
THE FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT 6, SOUTH DADE MAINTENANCE YARD GENERATOR INSTALLATION
PROJECT**

**State of Florida
Department of Transportation**



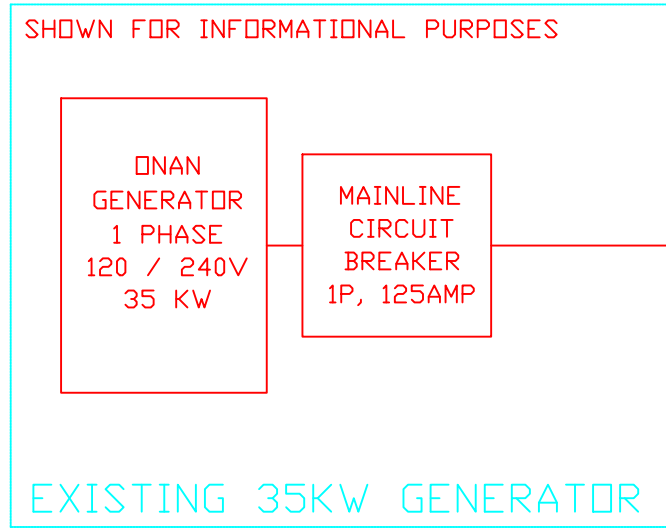
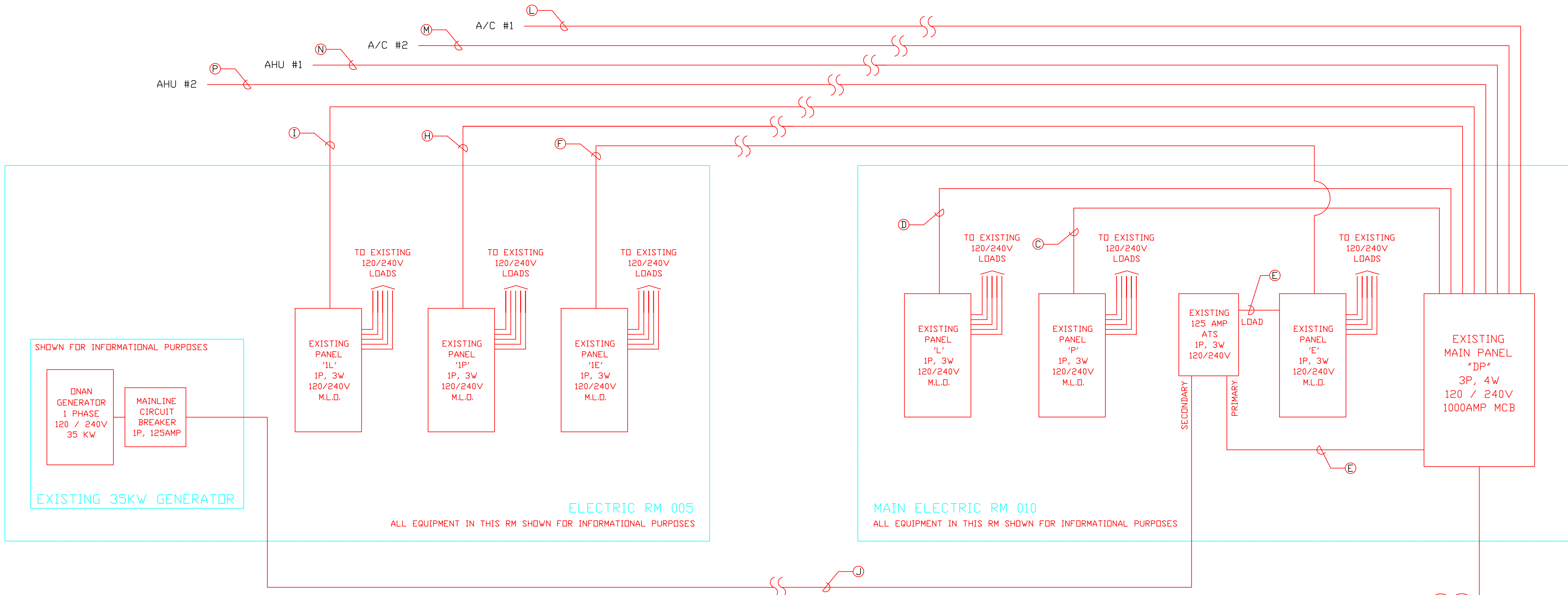
**EXHIBIT "A"
ATTACHMENT "1" (E-1 TO E-4)
(MAIN BLDG. PLANS, ELECTRICAL SYSTEM RISER, BLDG.
ELECTRICAL PANELS, AND NOTES AND GENERAL
SPECIFICATIONS)**

CONTRACT #: F6004

SOUTH DADE MAINTENANCE YARD GENERATOR

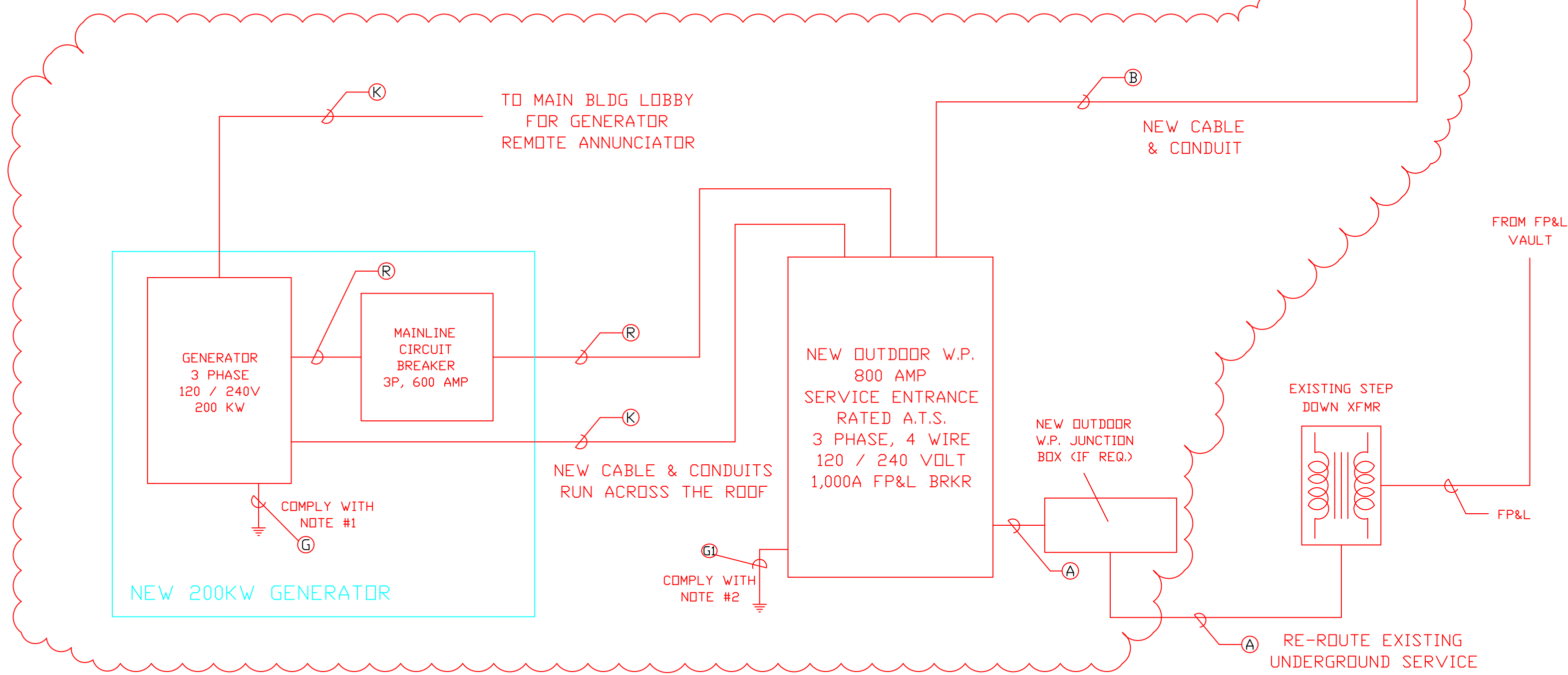
INSTALLATION PROJECT

<p>CONTRACT NUMBER: F6004 FINANCIAL PROJECT NUMBER: 446785-1-52-01</p>
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WIRE/CONDUIT LEGEND						
SYMBOL	Existing New/Re-use	CONDUIT SIZE	CONDUCTORS			NOTES
			PHASE	NEUTRAL	GND	
(A)	Existing	3-35"	3-400MCM, EA	1/0	1/0	Extend
(B)	New	2-35"	3-400MCM, EA	1/0	1/0	
(C)	Existing	1-25"	2-4/0	4/0	#4	
(D)	Existing	1-1/4"	2-#3	#3	#8	
(E)	Existing	1-1/4"	2-#1	#1	#6	
(F)	Existing	1-1/4"	2-#4	#4	#8	
(G)	New			3/0		Bond End
(H)	Existing	2"	2-3/0	3/0	#6	
(I)	Existing	1-1/4"	2-#3	#3	#8	
(J)	Existing	1-1/2"	2-1/0	1/0		
(K)	New	1"	AS REQUIRED			Control
(L)	Existing	2"	3-1/0		#6	
(M)	Existing	1-1/4"	3-#3		#8	
(N)	Existing	1-1/4"	3-#4		#8	
(P)	Existing	1-1/4"	3-#6		#10	
(R)	New	3-25"	3-3/0, EA	1/0		
(G)	New	1"			#6	

- NOTES:**
1. CU GROUNDING ELECTRODE CONDUCTOR, 5/8"x8" GROUND ROD AND NEW REBAR IN NEW GENERATOR CONCRETE PAD.
 2. CU GROUNDING ELECTRODE CONDUCTOR, 5/8"x8" GROUND ROD AND BUILDING STEEL.
 3. GENERALLY ALL NEW WORK IS SHOWN CLOUDED.
 4. THE CONTRACTOR SHALL RESET THE TRANSFER DELAY OF THE EXISITNG 125AMP A.T.S. FOR A DELAY OF 20 SECONDS.



ELECTRICAL POWER RISER
N.T.S.

REVISIONS	DATE
10/19/21	
BID DOCUMENTS	



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STATE OF FL, DEPT OF TRANSPORTATION
SOUTH DADE MAINTENANCE YARD
14655 SW 122 AVENUE
MIAMI, FLORIDA 33186
MAIN BLDG NEW GENERATOR PROJECT
ELECTRICAL RISER DIAGRAM

ENGINEER INFORMATION		SEAL
NAME :	SAUL SMUKLER	
ADDRESS :	9375 Park Drive, Suite #1	
PHONE NUMBER :	(305) 759-5552	
STATE REG. NUMBER :	44148	
DISCIPLINE :	ELECTRICAL	
CONSULTANTS :	NONE	
OWNER INFORMATION		
NAME :	Florida Department of Transportation	
ADDRESS :	1000 NW 111 Ave, Miami, FL 33172	
PHONE NUMBER :	(305) 470-5455	

DATE:	PROJECT MANAGER:
10/18/2021	RUEL UMBAY
DRAWN BY:	PROJECT ENGINEER:
SMUKLER	-
PROJECT NUMBER:	
446785-1-52-01	
DRAWING NO.:	
E-2	

SHOWN FOR INFORMATIONAL PURPOSES

LOCATION: MAIN ELECTRIC ROOM 010
 ■ EXISTING □ NEW
 MAINS: ■ M.L.D. □ BREAKER

PANEL "E"

BUS: 400 AMPS
120/240 VOLTS 1 PHASE 4 WIRE

LOAD	COND.	WIRE	TRIP	POLE	TYPE	LOAD DESCRIPTION	CKT	CKT	LOAD DESCRIPTION	TYPE	POLE	TRIP	WIRE	COND.	LOAD
300	3/4"	#12	20	1		ELECTRIC RM LIGHTS	1	2	ISOLATED GROUND RECP		1	20	#12	3/4"	1,080
700	3/4"	#12	20	1		CORRIDOR NIGHT LIGHTS	3	4	ISOLATED GROUND RECP		1	20	#12	3/4"	1,080
720	3/4"	#12	20	1		TELEPHONE EQUIPMENT	5	6	ISOLATED GROUND RECP		1	20	#12	3/4"	1,080
720	3/4"	#12	20	1		FIRE ALARM PANEL	7	8	ISOLATED GROUND RECP		1	20	#12	3/4"	1,080
7,680	-	-	80	2		SUBPANEL 1E	9	10	ISOLATED GROUND RECP		1	20	#12	3/4"	1,080
7,680	-	-	-	-		SPACE	11	12	ISOLATED GROUND RECP		1	20	#12	3/4"	1,080
-	-	-	-	-		SPACE	13	14	ISOLATED GROUND RECP		1	20	#12	3/4"	1,080
720	3/4"	#12	20	1		TELEPHONE EQUIPMENT	15	16	TELEPHONE EQUIPMENT		1	20	#12	3/4"	720
-	-	-	-	-		SPACE	17	18	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	19	20	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	21	22	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	23	24	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	25	26	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	27	28	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	29	30	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	31	32	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	33	34	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	35	36	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	37	38	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	39	40	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	41	42	SPACE		1	-	-	-	-

MOUNTING: ■ SURFACE □ FLUSH □ FREE STANDING
 ENCLOSURE: ■ NEMA 1 □ NEMA 3R □ NEMA 4X

CIRCUIT TYPE: (1) SHUNT TRIP (2) GROUND FAULT (3) DEDICATED (4) ISOLATED GRD.

FEEDER SIZE: SEE RISER
 TOTAL CONNECTED LOAD = 30,000 WATTS

SHOWN FOR INFORMATIONAL PURPOSES

LOCATION: ELECTRIC ROOM 005
 ■ EXISTING □ NEW
 MAINS: ■ M.L.D. □ BREAKER

PANEL "1E"

BUS: 400 AMPS
120/240 VOLTS 1 PHASE 4 WIRE

LOAD	COND.	WIRE	TRIP	POLE	TYPE	LOAD DESCRIPTION	CKT	CKT	LOAD DESCRIPTION	TYPE	POLE	TRIP	WIRE	COND.	LOAD
1000	3/4"	#12	20	1		ISOLATED GROUND RECP	1	2	ISOLATED GROUND RECP		1	20	#12	3/4"	1000
1000	3/4"	#12	20	1		ISOLATED GROUND RECP	3	4	ISOLATED GROUND RECP		1	20	#12	3/4"	1000
1000	3/4"	#12	20	1		ISOLATED GROUND RECP	5	6	ISOLATED GROUND RECP		1	20	#12	3/4"	1000
1000	3/4"	#12	20	1		ISOLATED GROUND RECP	7	8	ISOLATED GROUND RECP		1	20	#12	3/4"	1000
1000	3/4"	#12	20	1		ISOLATED GROUND RECP	9	10	ISOLATED GROUND RECP		1	20	#12	3/4"	1000
1000	3/4"	#12	20	1		ISOLATED GROUND RECP	11	12	NIGHT LIGHTS		1	20	#12	3/4"	1000
-	-	-	-	-		SPACE	13	14	NIGHT LIGHTS		1	20	#12	3/4"	1000
-	-	-	-	-		SPACE	15	16	ISOLATED GROUND RECP		1	20	#12	3/4"	1200
-	-	-	-	-		SPACE	17	18	SPACE		1	20	-	-	-
1000	3/4"	#12	20	1		AHU CONTROL	19	20	SPACE		1	20	-	-	-
-	-	-	-	-		SPACE	21	22	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	23	24	SPACE		1	-	-	-	-

MOUNTING: ■ SURFACE □ FLUSH □ FREE STANDING
 ENCLOSURE: ■ NEMA 1 □ NEMA 3R □ NEMA 4X

CIRCUIT TYPE: (1) SHUNT TRIP (2) GROUND FAULT (3) DEDICATED (4) ISOLATED GRD.

FEEDER SIZE: SEE RISER
 TOTAL CONNECTED LOAD = 15,360 WATTS

SHOWN FOR INFORMATIONAL PURPOSES

LOCATION: MAIN ELECTRIC ROOM 010
 ■ EXISTING □ NEW
 MAINS: ■ M.L.D. ■ BREAKER, 1,000 AMP

PANEL MAIN PNL "DP"

BUS: 1,200 AMPS
120/240 VOLTS 3 PHASE 4 WIRE

LOAD	COND.	WIRE	TRIP	POLE	TYPE	LOAD DESCRIPTION	CKT	CKT	LOAD DESCRIPTION	TYPE	POLE	TRIP	WIRE	COND.	LOAD
-	-	-	-	-		SPACE	3	4	SPACE		3	4	-	-	-
-	-	-	-	-		SPACE	5	6	SPACE		3	4	-	-	-
-	-	-	-	-		SPACE	7	8	SPACE		3	4	-	-	-
-	-	-	-	-		SPACE	9	10	SPACE		3	4	-	-	-
-	-	-	-	-		SPACE	11	12	SPACE		3	4	-	-	-
-	-	-	-	-		SPACE	13	14	SPACE		3	4	-	-	-
-	-	-	-	-		SPACE	15	16	SPACE		3	4	-	-	-
-	-	-	-	-		SPACE	17	18	SPACE		3	4	-	-	-
-	-	-	-	-		SPACE	19	20	SPACE		3	4	-	-	-
-	-	-	-	-		SPACE	21	22	SPACE		3	4	-	-	-
-	-	-	-	-		SPACE	23	24	SPACE		3	4	-	-	-
11,650	2"	1/0	150	3		A/C COMPRESSOR UNIT #1	25	26	SPACE		3	4	-	-	-
11,650	-	-	-	-		SPACE	27	28	SPACE		3	4	-	-	-
11,650	-	-	-	-		SPACE	29	30	SPACE		3	4	-	-	-
19,750	2-1/2"	4/0"	225	2		PANEL 'P'	31	32	PANEL 'L'		2	100	#3	1-1/2"	9,200
-	-	-	-	-		SPACE	33	34	SPACE		3	4	-	-	-
19,750	-	-	-	-		SPACE	35	36	SPACE		3	4	-	-	-
18,750	2"	3/0	200	2		PANEL 'IP'	37	38	PANEL 'IL'		2	100	#1	2"	12,000
-	-	-	-	-		SPACE	39	40	SPACE		3	4	-	-	-
18,750	-	-	-	-		SPACE	41	42	SPACE		3	4	-	-	-
15,000	2"	#1	125	2		PANEL 'E'	43	44	A/C AHU #1		3	60	#6	2"	12,000
-	-	-	-	-		SPACE	45	46	SPACE		3	4	-	-	-
15,000	3-4"	400MCM	1000	3		MAIN BREAKER	49	50	A/C AHU #2		3	80	#4	1-1/2"	7,900
-	-	-	-	-		SPACE	51	52	SPACE		3	4	-	-	-
-	-	-	-	-		SPACE	53	54	A/C COMPRESSOR UNIT #2		3	100	#3	1-1/2"	7,900
-	-	-	-	-		SPACE	55	56	SPACE		3	4	-	-	-
-	-	-	-	-		SPACE	57	58	SPACE		3	4	-	-	-
-	-	-	-	-		SPACE	59	60	SPACE		3	4	-	-	-

MOUNTING: ■ SURFACE □ FLUSH □ FREE STANDING
 ENCLOSURE: ■ NEMA 1 □ NEMA 3R □ NEMA 4X

CIRCUIT TYPE: (1) SHUNT TRIP (2) GROUND FAULT (3) DEDICATED (4) ISOLATED GRD.

FEEDER SIZE: SEE RISER
 TOTAL LOAD: 322,000 W

FED FROM: CUSTOMER'S OUTDOOR XFMR

SHOWN FOR INFORMATIONAL PURPOSES

LOCATION: MAIN ELECTRIC ROOM 010
 ■ EXISTING □ NEW
 MAINS: ■ M.L.D. □ BREAKER

PANEL "P"

BUS: 400 AMPS
120/240 VOLTS 1 PHASE 4 WIRE

LOAD	COND.	WIRE	TRIP	POLE	TYPE	LOAD DESCRIPTION	CKT	CKT	LOAD DESCRIPTION	TYPE	POLE	TRIP	WIRE	COND.	LOAD
1700	3/4"	#12	20	1		CONV. RECEPTACLES	1	2	OUTSIDE RECEPTACLE		1	20	#12	3/4"	720
720	3/4"	#12	20	1		CONV. RECEPTACLES	3	4	VAV BOX		1	20	#12	3/4"	720
720	3/4"	#12	20	1		CONV. RECEPTACLES	5	6	VAV BOX		1	20	#12	3/4"	720
720	3/4"	#12	20	1		CONV. RECEPTACLES	7	8	VAV BOX		1	20	#12	3/4"	720
720	3/4"	#12	20	1		CONV. RECEPTACLES	9	10	VAV BOX		1	20	#12	3/4"	720
720	3/4"	#12	20	1		CONV. RECEPTACLES	11	12	E.W.H.		2	20	#12	3/4"	1,750
720	3/4"	#12	20	1		CONV. RECEPTACLES	13	14	GAZEBO PANEL		2	60	#6	1"	3,620
720	3/4"	#12	20	1		CONV. RECEPTACLES	15	16	SPACE		1	-	-	-	-
1,000	3/4"	#12	20	1		COPY RM RECEPTACLES	17	18	ELECTRIC RANGE		2	50	#6	1"	6,000
1,000	3/4"	#12	20	1		COPY RM RECEPTACLES	19	20	SPACE		1	-	-	-	-
1,000	3/4"	#12	20	1		COPY RM RECEPTACLES	21	22	VAV BOX		1	20	#12	3/4"	720
720	3/4"	#12	20	1		VENDING MACHINE	23	24	VAV BOX		1	20	#12	3/4"	720
720	3/4"	#12	20	1		VENDING MACHINE	25	26	VAV BOX		1	20	#12	3/4"	720
720	3/4"	#12	20	1		VENDING MACHINE	27	28	SPACE		1	20	-	-	-
1,500	3/4"	#12	20	1		MICROWAVE	29	30	SPACE		1	20	-	-	-
1,800	3/4"	#12	20	1		***PREFERRED***	31	32	SPACE		1	20	-	-	-
1,000	3/4"	#12	20	1		SMALL APPLIANCE	33	34	SPACE		1	20	-	-	-
-	-	-	-	-		SPACE	35	36	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	37	38	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	39	40	SPACE		1	-	-	-	-
-	-	-	-	-		SPACE	41	42	SPACE		1	-	-	-	-

MOUNTING: ■ SURFACE □ FLUSH □ FREE STANDING
 ENCLOSURE: ■ NEMA 1 □ NEMA 3R □ NEMA 4X

CIRCUIT TYPE: (1) SHUNT TRIP (2) GROUND FAULT (3) DEDICATED (4) ISOLATED GRD.

FEEDER SIZE: SEE RISER
 TOTAL CONNECTED LOAD = 39,500 WATTS

SHOWN FOR INFORMATIONAL PURPOSES

LOCATION: ELECTRIC ROOM 005
 ■ EXISTING □ NEW
 MAINS: ■ M.L.D. □ BREAKER

PANEL "1P"

BUS: 400 AMPS
120/240 VOLTS 1 PHASE 4 WIRE

LOAD	COND.	WIRE	TRIP	POLE	TYPE	LOAD DESCRIPTION	CKT	CKT	LOAD DESCRIPTION	TYPE	POLE	TRIP	WIRE	COND.	LOAD
1700	3/4"	#12	20	1		CONV. RECEPTACLES	1	2	OUTSIDE RECEPTACLE		1	20	#12	3/4"	720
720	3/4"	#12	20	1		CONV. RECEPTACLES	3	4	VAV BOX #1		2	20	#12	3/4"	500
720	3/4"	#12	20	1		CONV. RECEPTACLES	5	6	VAV BOX #2		2	20	#12	3/4"	500
720	3/4"	#12	20	1		CONV. RECEPTACLES	7	8	VAV BOX #3		2	20	#12	3/4"	500
720	3/4"	#12	20	1		CONV. RECEPTACLES	9	10	VAV BOX #4		2	20	#12	3/4"	500
720	3/4"	#12	20	1		CONV. RECEPTACLES	11	12	VAV BOX #5		2	20	#12	3/4"	500
720	3/4"	#12	20	1		CONV. RECEPTACLES	13	14	VAV BOX #6		2	20	#12	3/4"	500
700	3/4"	#12	20	1		CONV. RECEPTACLES	15	16	HURRICANE DOOR MOTOR		1	20	#12	3/4"	720
700	3/4"	#12	20	1		CONV. RECEPTACLES	17	18	VAV CONTROL		1	20	-	-	720
1,750	3/4"	#12	20	2		E.W.H.	21	22	VAV BOX #5		2	20	#12	3/4"	2000
1,750	3/4"	#12	20	1		CONV. RECEPTACLES	23	24	VAV BOX #7		2	20	#12	3/4"	2000
720	3/4"	#12	20	1		VAV BOX #11	25	26	VAV BOX #8		2	20	#12	3/4"	2000
750	3/4"	#12	20	2		VAV BOX #12	27	28	VAV BOX #9		2	20	#12	3/4"	2000
750	3/4"	#12	20	2		VAV BOX #13	29	30	VAV BOX #10		2	20	#12	3/4"	2000
500	3/4"	#12	20	2		VAV BOX #14	31	32	VAV BOX #11		2	20	#12	3/4"	720
500	3/4"	#12	20	2											

GENERAL NOTES

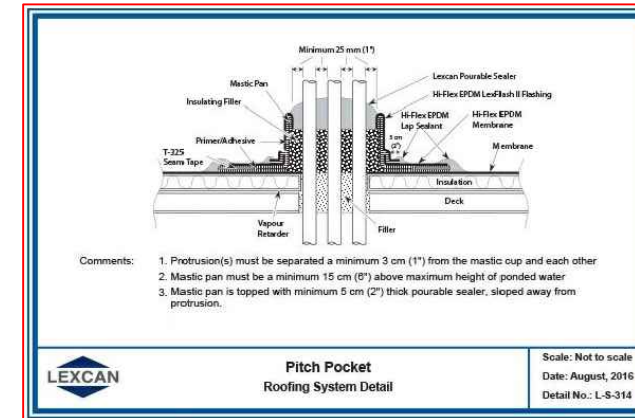
- SCOPE OF WORK: CONTRACTOR SHALL RE-WIRE, RE-USE AND INSTALL ELECTRICAL EQUIPMENT AND RELATED FACILITIES IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AS FOLLOWS:
 - THE FOLLOWING NEW EQUIPMENT SHALL BE PROVIDED & INSTALLED:
 - SITE:** OUTDOOR ENCLOSED 200KW DIESEL GENERATOR WITH 600A MAIN BREAKER & FUEL TANK. 600V, 800A, 3 PHASE SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH. INSTALL NEW GENERATOR SERVICE & CONTROL CONDUCTORS IN CONDUIT RUN ACROSS THE ROOF AS SHOWN ON PLANS. RE-PURPOSE AND EXTEND EXISTING UNDERGROUND SERVICE FEEDERS FROM THE EXISTING STEP DOWN TRANSFORMER TO THE NEW OUTDOOR A.T.S. AS FOLLOWS: THE EXISTING 400MCM CONDUCTORS SHALL BE UTILIZED FOR THE A, B, & C PHASE CONDUCTORS, AND EXISTING 1/0 CONDUCTORS SHALL BE USED FOR THE NEUTRAL CONDUCTORS. BREAK GLASS GENERATOR SHUT-OFF CONTROL STATION AND ALL REQUIRED J-BOXES, WIRING GUTTERS, WIRE/CABLE.
 - BLDG MAIN ELEC RM:** RE-WIRE PANEL 'DP' TO BE FED FROM THE NEW OUTDOOR A.T.S.
 - MAIN BLDG:** INSTALL GENERATOR REMOTE ANNUNCIATOR IN BLDG LOBBY AS SHOWN ON THE PLANS, ALL REQUIRED CONDUIT, J-BOXES & WIRE.
 ALL ITEMS NOT SHOWN BUT OBVIOUSLY REQUIRED FOR THE INSTALLATION SHALL BE INCLUDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BUILDING (2) NEW REBAR REINFORCED CONCRETE PADS ADEQUATE FOR THE NEW GENERATOR AND THE SERVICE ENTRANCE RATED A.T.S. & INCLUDING EXTENDING REQUIRED EXISTING CONDUITS AND WIRE. ALL OF THE REINFORCED CONCRETE PADS SHALL BE DESIGNED THREE FEET LARGER ALL AROUND THE EQUIPMENT INSTALLED FOR CLEAR, UNOBSTRUCTED SERVICE ACCESS. ALL EQUIPMENT SHALL BE SUFFICIENTLY ANCHORED TO THE REINFORCED CONCRETE FLOOR PADS WHICH ARE SEISMICALLY DESIGNED & PERMIT APPROVED BY THE CONTRACTOR TO RESIST SEISMIC LOADS FROM THE EQUIPMENT BEING ANCHORED TO THE PADS. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND SURVEYS FOR THE WORK AND INCLUDE ALL PERMIT COSTS IN HIS BID. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OF THE TRENCHING, CUTTING, PATCHING, REFINISHING AND RESTORING ALL OF THE SITE CONDITIONS TO THEIR PRE-CONSTRUCTION CONDITIONS.
 - THE CONTRACTOR SHALL MAKE EARLY CONTACT WITH FP&L FOR THE TIMELY COORDINATION AND MINIMIZATION OF POWER OUTAGES DURING THE GENERATOR UPGRADE. THE CONTRACTOR SHALL INCLUDE IN HIS BID THE COST TO PROVIDE, INSTALL, FUEL AND MAINTAIN A TEMPORARY PORTABLE GENERATOR CAPABLE OF CONTINUOUSLY POWERING ALL BUILDING LOADS DURING DEPARTMENT'S NORMAL WORKING HOURS WHEN POWER WILL BE DISCONNECTED, UNAVAILABLE OR UNFORSEEN OUTAGES.
 - THE TOTAL ELECTRICAL INSTALLATION MUST MEET THE REQUIREMENTS OF THE 2017 EDITION OF NFPA 70, THE NATIONAL ELECTRICAL CODE, AND THE 2016 EDITION OF NFPA 110, STANDARD FOR EMERGENCY AND STANDBY POWER SYSTEMS, THE CURRENT EDITION OF THE FLORIDA BUILDING CODE, ALL STANDARDS REFERENCED THEREIN INCLUDING WORKING CLEARANCES COMPLYING WITH ARTICLE 110 OF THE NEC. PAVEMENT AND LANDSCAPE SHALL BE RESTORED TO CONDITIONS FOUND OR BETTER, AND SHALL MEET THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION & MAINTENANCE FOR STREETS AND HIGHWAYS (FLORIDA GREENBOOK).
 - ALL MATERIALS AND EQUIPMENT INSTALLED SHALL BE ENTIRELY NEW, AND SHALL BE LISTED.
 - EQUIPMENT SHALL BE OF MATERIALS SUITABLE FOR AND RATED FOR THE ENVIRONMENT IN WHICH THEY ARE TO BE INSTALLED.
 - ALL PANELBOARDS, SWITCHBOARDS AND DISCONNECT SWITCHES SHALL HAVE COPPER BUS.
 - CONTRACTOR SHALL INCLUDE IN HIS BID TO TRACE AND FIELD VERIFY ALL LOADS FROM PANELS, DISCONNECTS, TIME CLOCKS AND CONTACTORS WITH THE PANEL SCHEDULES. CONTRACTOR SHALL ADVISE OF ANY DISCREPANCIES FOUND AND IMPLEMENT CORRECTIONS. CONTRACTOR SHALL PROVIDE AND INSTALL NEW PERMANENT W.P. ENGRAVED LABELS ON ALL NEW AND EXISTING PANELS. THE IDENTIFICATION ON THE LABELS MUST CONFORM TO THESE DRAWINGS.
 - ALL CONDUIT SHALL BE SCHEDULE 80 PVC UNLESS OTHERWISE SHOWN OR REQUIRED BY CODE.
 - THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW PITCH PANS ON THE ROOF OF THE BUILDING AT THE NEW CONDUIT PENETRATIONS AND SUPPORTS AS REQUIRED. NEW PITCH PANS SHALL BE INSTALLED BY FDOT'S RECOMMENDED ROOFING CONTRACTOR, BE FULLY COMPATIBLE WITH THE EXISTING ROOFING SYSTEM AND COMPLYING WITH THE PITCH PAN DETAIL SHOWN ON THE PLANS.
 - CONDUCTORS SHALL BE THHN/THWN EXCEPT WHERE SPECIFIED OTHERWISE ON THE DRAWINGS SUCH AS THE REQUIREMENT FOR MTW INSULATION ON THE CONDUCTORS BETWEEN THE A.T.S. GENERATOR AND ASSOCIATED PANELS. CONDUCTORS NO. 8 AWG AND LARGER SHALL BE JOINED BY AN APPROVED PRESSURE CONNECTOR. CONNECTION TO GROUND CONDUCTORS NO. 1/0 AWG AND LARGER SHALL BE CAST BY FUSIBLE METAL PROCESS. ALL CONDUCTORS MUST BE INSTALLED IN CONDUIT, MC CABLE, OR LFNC. CONDUCTORS IN PANELS SHALL HAVE THEIR FACTORY LABELS VISIBLE TO A PERSON IN THE WORKING SPACE. ALL CONDUCTORS SHALL BE COPPER.
 - COLOR CODE FOR ALL WIRING SHALL CONFORM TO INDUSTRY STANDARDS.
 - CONTRACTOR SHALL MAKE TESTS AND ADJUSTMENTS AS REQUIRED, UPON COMPLETION OF THE WORK AND BEFORE FINAL ACCEPTANCE BY THE OWNER, THE CONTRACTOR SHALL TEST THE COMPLETE ELECTRICAL SYSTEM IN THE PRESENCE OF THE PROJECT MANAGER OR DESIGNEE FOR THE CONTINUITY, FUNCTION, CONTROL, PERFORMANCE, LOAD BALANCE, GROUNDS, SHORTS AND TO INSURE SATISFACTORY OPERATION AND CONFORMANCE. START UP TESTING PER NFPA 110, 200KW 4 HOURS LOAD BANK TEST.
 - ALL EQUIPMENT, LABOR AND MATERIALS REQUIRED FOR TESTING SHALL BE FURNISHED BY THE CONTRACTOR AS PART OF THIS CONTRACT.
 - AFTER COMPLETION OF THE WORK, THE CONTRACTOR SHALL SECURE CERTIFICATES OF FINAL INSPECTION AND APPROVAL FROM THE AUTHORITIES HAVING JURISDICTION (AHJ).
 - WITHIN 30 DAYS OF ELECTRICAL SYSTEM ACCEPTANCE BY THE AHJ, THE CONTRACTOR SHALL PROVIDE THE BUILDING OWNER WITH RECORD DRAWINGS OF THE ACTUAL INSTALLATION. THE RECORD DRAWINGS SHALL INCLUDE A SINGLE-LINE DIAGRAM OF THE BUILDING ELECTRICAL DISTRIBUTION SYSTEM AND FLOOR PLANS INDICATING LOCATION AND AREA SERVED FOR ALL DISTRIBUTION.
 - WITHIN 30 DAYS OF ELECTRICAL SYSTEM ACCEPTANCE BY THE AHJ, THE CONTRACTOR SHALL PROVIDE THE BUILDING OWNER THREE (3) COPIES OF OPERATING AND MAINTENANCE MANUALS AND A MINIMUM OF FOUR HOURS OF ON-SITE OPERATIONS & MAINTENANCE TRAINING OF THE ELECTRICAL SYSTEMS INSTALLED. THE MANUALS SHALL INCLUDE:
 - EQUIPMENT RATING AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.
 - OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE SHALL CLEARLY IDENTIFY MAINTENANCE ACTIONS.
 - NAMES AND ADDRESSES OF AT LEAST ONE QUALIFIED SERVICE AGENCY.

GENERAL NOTES (continued)

- WORKMANSHIP, MATERIALS AND APPARATUS UNDER THIS CONTRACT SHALL BE GUARANTEED FOR A MINIMUM PERIOD OF TWO (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER. ALL MANUFACTURER WARRANTIES SHALL BE PROVIDED AND TRANSFERRED TO THE FDOT AT THE TIME OF FINAL ACCEPTANCE.
- THE CONTRACTOR SHALL VISIT AND CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AND SITE AFFECTED BY THIS WORK BEFORE SUBMITTING PROPOSAL SO AS TO BECOME FAMILIAR WITH THE EXISTING WORK. SUBMISSION OF PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED. IT IS TO BE UNDERSTOOD THAT UNFORSEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON THESE DRAWINGS.
- THE CONTRACTOR IS TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID, BRING ANY FOUND DISCREPANCIES TO THE ATTENTION OF THE PROJECT MANAGER OR DESIGNEE, AND INCLUDE ANY DEVIATIONS IN THE CONTRACT.

GENERATOR AND A.T.S. SPECIFICATIONS

- POWER RATINGS:**
 - FREQUENCY: 60 HZ.
 - VOLTAGE: THREE PHASE 120/240 VOLTS ALTERNATING CURRENT.
 - POWER RATING: 200 KW, 250KVA.
 - DESIGN SPEC: MTU ONSITE ENERGY, MODEL DS200D6SJA (MTU 6R0120 DS200), OR APPROVED SUBSTITUTION. MTU ONSITE ENERGY, MODEL MGC-2000 CONTROL PANEL, OR APPROVED SUBSTITUTION. MTU ONSITE ENERGY, MODEL RDP-110 ANNUNCIATOR PANEL, OR APPROVED SUBSTITUTION.
- FUEL SYSTEM:**
 - A. THE GENERATOR SHALL OPERATE ON ULTRA LOW SULFUR DIESEL FUEL.
 - B. FUEL TANK VOLUME SHALL BE SUFFICIENT TO CONTINUOUSLY OPERATE THE UNIT AT 50% LOAD FOR A MINIMUM OF 24 HOURS. FUEL TANK CAPACITY SHALL BE NO LESS THAN 200 GALLONS.
 - C. CONTRACTOR SHALL INCLUDE ALL COSTS TO PROVIDE THE APPLICABLE AHJ FUEL TANK PLANS AND SPECIFICATIONS, WHICH SHALL INCLUDE AT A MINIMUM:
 - ABOVE GROUND TANK, DOUBLE WALL CONSTRUCTION.
 - OVERFILL PREVENTION AND OVERSPILL PROTECTION.
 - TANK INTERSTITIAL MONITORING.
 - CONTINUOUS AUTOMATIC LEAK DETECTION.
 - FUEL GAUGE VISIBLE FROM FILLING POINT AND WATERTIGHT FUEL FILLING CAP.
- GENERAL SPECIFICATIONS:**
 - A. ENCLOSURE: ALUMINUM WEATHERPROOF, 190MPH WIND LOAD RATED.
 - B. SOUND: HOSPITAL GRADE MUFFLER (72.3 dBA @ 23') PROVIDED.
 - C. EXPOSURE: OUTDOOR, FULL SUN, NO SHADE. ANTI FREEZE COOLANT REQUIRED. BLOCK HEATER REQUIRED.
 - D. THE GENERATOR ENCLOSURE SHALL BE SUFFICIENTLY ANCHORED TO A REBAR REINFORCED CONCRETE FLOOR PAD THAT IS SEISMICALLY DESIGNED BY THE CONTRACTOR AND APPROVED TO RESIST THE SEISMIC LOADS FROM THE COMPONENTS BEING ANCHORED TO THE PAD.
 - E. THE CONTRACTOR SHALL PROVIDE A NEMA 3R RATED EMERGENCY BREAK GLASS SHUT OFF CONTROL STATION AND ALL NECESSARY TRENCHING, CONDUIT AND CONTROL WIRING.
- ENGINE SYSTEM:**
 - A. OIL HEATER.
 - B. OIL DRAIN EXTENSION WITH S/O VALVE.
 - C. FUEL LOCKOFF SOLENOID.
 - D. SECONDARY FUEL WATER SEPARATOR FILTERS AND FLEXIBLE FUEL CONNECTORS.
 - E. STAINLESS STEEL FLEXIBLE EXHAUST CONNECTION.
 - F. INDUSTRIAL EXHAUST SILENCER.
 - G. 120VAC COOLANT HEATER.
 - H. CLOSED COOLANT RECOVERY SYSTEM.
 - I. UV/OZONE RESISTANT HOSES.
 - J. FACTORY INSTALLED RADIATOR.
 - K. RADIATOR DRAIN EXTENSION.
 - L. BATTERY CHARGING 24V ALTERNATOR.
 - M. BATTERY, BATTERY CABLES AND BATTERY TRAY.
 - N. 10A UL FLOAT/EQUALIZE BATTERY CHARGER.
 - D. SOLENOID ACTIVATED ELECTRIC STARTER MOTOR.
 - P. AIR CLEANER.
 - Q. FAN GUARD.
 - R. ELECTRONIC ASYNCHRONOUS GOVERNOR.
 - S. FULL FLOW OIL FILTERS.
 - T. RUBBER BOOTED ENGINE ELECTRICAL CONNECTORS.
- GENERATOR:**
 - A. SUSTAINED SHORT CIRCUIT RATED FOR 300% OF RATED CURRENT FOR UP TO 10 SECONDS.
 - B. DIGITAL SOLID STATE REGULATOR - NO LOAD TO FULL LOAD REGULATION.
 - C. 4 POLE, ROTATING FIELD BRUSHLESS DESIGN WITH FULL AMORTISSEUR WINDINGS.
 - D. SEALED BEARINGS WITH 125% ROTOR BALANCING.
- CONTROL SYSTEM:**
 - A. 7 DAY PROGRAMMABLE ENGINE EXERCISOR.
 - B. FULL SYSTEM STATUS TO DISPLAY: POWER OUTPUT, AC VOLTAGE OUTPUT, AC CURRENT OUTPUT, POWER FACTOR, OIL PRESURE, COOLANT TEMPERATURE, COOLANT LEVEL, OIL TEMPERATURE, FUEL PRESURE, ENGINE SPEED, BATTERY VOLTAGE, FREQUENCY OUTPUT AND EVENT/ALARM LOG.
- ALARMS:**
 - LOW FUEL, BATTERY VOLTAGE, COOLANT LEVEL, OIL PRESURE, COOLANT TEMPERATURE, OIL TEMPERATURE, FUEL PRESURE, ENGINE SPEED AND VOLTAGE OUTPUT.
- 800 AMP A.T.S. SPECIFICATIONS:**
 - A. 600V, 800 AMP, 3 POLE, NEMA 3R RATED ENCLOSURE. COPPER BUS, AUTOMATIC & MANUAL LOAD TRANSFER, AND RE-TRANSFER.
 - B. DESIGN SPEC: ASCO 300 SERIES, CAT# H03AUSA30800NGXM, 11BE, 18RX, 44G, SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH, OR APPROVED SUBSTITUTION.
 - C. INPHASE TRANSFER CONTROL OF LOADS BETWEEN LIVE SOURCES.
 - D. PROGRAMMABLE ENGINE EXERCISER.
 - E. PROVIDE SIGNAGE PER NEC 700.7 AND 702.7.



REVISIONS	DATE
10/19/21	
BID DOCUMENTS	

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**MIAMI
MICROTRONIX
INCORPORATED**
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Miami Shores, Florida 33138
(305) 759-5552

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STATE OF FL, DEPT OF TRANSPORTATION
SOUTH DADE MAINTENANCE YARD
14655 SW 122 AVENUE
MIAMI, FLORIDA 33186
MAIN BLDG NEW GENERATOR PROJECT
GENERAL NOTES AND SPECIFICATIONS

ENGINEER INFORMATION	
NAME :	SAUL SMUKLER
ADDRESS :	9375 Park Drive, Suite #1
PHONE NUMBER :	(305) 759-5552
STATE REG. NUMBER :	44148
DISCIPLINE :	ELECTRICAL
CONSULTANTS :	NONE
OWNER INFORMATION	
NAME :	Florida Department of Transportation
ADDRESS :	1000 NW 111 Ave, Miami, FL 33172
PHONE NUMBER :	(305) 470-5455

SEAL	
DATE:	10/18/2021
PROJECT MANAGER:	RUEL UMBAY
DRAWN BY:	SMUKLER
PROJECT ENGINEER:	-
PROJECT NUMBER:	4446785-1-52-01
CHECKING NO.:	E-4

**State of Florida
Department of Transportation**



**EXHIBIT "B"
METHOD OF COMPENSATION
F6004**

DISTRICT SIX SOUTH DADE MAINTENANCE YARD

GENERATOR INSTALLATION PROJECT

**CONTRACT NUMBER: F6004
FINANCIAL PROJECT NUMBER: 446785-1-52-01**

1.0 PURPOSE:

This Exhibit defines the limits and method of compensation to be made to the Contractor for services set forth in Exhibit "A" Scope of Services and the method by which payments shall be made.

2.0 COMPENSATION:

For the satisfactory performance of the services detailed in Exhibit "A" Scope of Services, the Department will, at intervals make progress payments to the Contractor.

3.0 DETAILS OF COSTS AND FEES:

Details of costs and fees for the performance of the Contractor's services are attached as Exhibit "B" Bid Price sheet attached hereto and made part hereof.

4.0 PROGRESS PAYMENTS:**4.1 Payments to Contractor:**

Thirty (30) calendar days shall be allowed for the Department's inspection and approval of the goods and services for which any application for payment is made. Based upon application for payment submitted to the **Department's Project Manager or Designee by the Contractor** and certificates of payment issued by the Department's Project Manager or designee and accepted by the Department, the Department shall make progress payments to the Contractor against the account of the contract sum in accordance with the following:

- 4.1.1 Within thirty (30) calendar days from the Department's receipt and acceptance of a certificate of payment, the Department shall pay, or cause to be paid to the **Contractor**, ninety percent (90%) of the portion of the contract sum properly allocable to labor, materials, and equipment incorporated into the work, and ninety percent (90%) of that portion of the contract sum properly allocable to materials and equipment suitably stored at the site or at some other location agreed upon in writing by the parties, less the aggregate of previous payments.

NOTE: For projects with contract sums exceeding, \$25,000 (see section A-1 of Fixed Capital Outlay Non-technical Specifications for Building Construction Contracts for definition of "Contract Level", at the time work is fifty percent (50%) complete or thereafter, if the manner of completion of the work and its progress are and remain satisfactory to the Department's Project Manager or designee and the Department, the Department may authorize a five percent (5%) retainage on future progress payments. The full ten percent (10%) retainage may be reinstated if the manner of completion of the work and its progress do not remain satisfactory to the Department's Project Manager or designee and the Department or for other good and sufficient reasons.

- 4.1.2 The **Contractor** shall promptly pay each Sub-Contractor in accordance with Section 287.0585, Florida Statutes, upon receipt of payment from the Department out of the amount paid to the **Contractor** on account of such **Sub-Contractor's** work, the amount to which said **Sub-Contractor** is entitled, reflecting the percentage retained, if any, from payments to the **Contractor** on account of such **Sub-Contractor's** work.
- 4.1.3 The Department's Project Manager or designee may, on request, at its discretion, furnish to a Sub-Contractor, if practical, information regarding the percentages of completion of the amount applied for by the Contractor and the action taken thereon by the Department's Project Manager or designee on account of work done by such Sub-Contractor.
- 4.1.4 Neither the Department nor the Department's Project Manager or designee shall have any obligation to pay or to see to the payment of any monies to any Sub-Contractor except as may otherwise be required by law.
- 4.1.5 No certificate for a progress payment, nor any progress payment, nor any partial or entire use of occupancy of the project by the Department, shall constitute an acceptance of any work not in accordance with the Contract Documents.
- 4.1.6 The Contractor shall request such compensation by submitting:
- 4.1.6.1 A detailed invoice in a format pre-approved by the Department Project Manager.

5.0 FINAL PAYMENT:

- 5.1 Within thirty (30) calendar days from the date of **Contract Completion**, the Department shall pay or cause to be paid to the Contractor the entire unpaid balance of the then Contract Sum, less the amount of any sums which continue to be retained to satisfy the cost of performing any change in the work which is the subject of any claim or dispute and which has not been satisfactorily performed by the Contractor, provided that the parties have not otherwise stipulated in the certificate of Substantial Completion and provided further that the work has been satisfactorily completed, the Contractor's obligations under the contract have been fully performed, and a final Certificate for Payment has been issued by the Department's Project Manager or designee.
- 5.2 The **Contractor** shall submit all required documents along with final invoice to the Department no later than one hundred and twenty (120) days after the project is completed and final acceptance of work is issued by the Department. Invoices submitted after the one hundred and twenty (120) day-time period will not be paid.

- 5.3 The **Contractor's** application for FINAL PAYMENT shall be accompanied with the following:
- 5.3.1 Department's Certificate of Partial Payment marked as "**FINAL PAYMENT**" – (4 copies with original signatures and original seals).
 - 5.3.2 Final schedule of Contracts Values.
 - 5.3.3 For Contracts exceeding \$100,000, the consent of Surety to make Final Payment-Signed and Sealed.
 - 5.3.4 Notice of release of Lien from each sub-Contractor, worker, or supplier, who has filed Notices to Department.
 - 5.3.5 Contractor's Guarantee of Construction for two (2) years from the date of Substantial Completion. Reference to exhibit "A" scope of work 18.0 warranty/Guarantee.
 - 5.3.6 Copy of the Approval by the Department's Project Manager or designee and the Transmittal to the Owner of Manuals and other related close-out documents as per 8.3 of exhibit "A" scope of work.
 - 5.3.7 Other special warranties as required by specifications, in the name of the Department and list of Sub-contractors with contact person's telephone number and addresses.
 - 5.3.8 Fully executed Contractor's Certificate of No Asbestos-Containing Materials.

**>> END OF EXHIBIT "B" METHOD OF COMPENSATION <<
DISTRICT SIX SOUTH DADE MAINTENANCE YARD GENERATOR INSTALLATION
PROJECT**