### General Notes

1. ALL EQUIPMENT & MATERIALS IDENTIFIED ON THIS SHEET ARE TO BE USED AS SHOWN OR AS INSTRUCTED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
2. ALL ELECTRICAL EQUIPMENT, MACHINES, MACHINES & MACHINES IDENTIFIED ON THIS SHEET ARE TO BE USED AS SHOWN OR AS INSTRUCTED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
3. ALL MACHINE PARTS IDENTIFIED ON THIS SHEET ARE TO BE USED AS SHOWN OR AS INSTRUCTED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
4. ALL MATERIALS IDENTIFIED ON THIS SHEET ARE TO BE USED AS SHOWN OR AS INSTRUCTED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
5. ALL OTHER MATERIALS IDENTIFIED ON THIS SHEET ARE TO BE USED AS SHOWN OR AS INSTRUCTED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.

### Abbreviations

- A = ALARM
- B = BATTERY
- C = CIRCUIT BREAKER
- D = DISCONNECT SWITCH
- E = ELECTRIC HEATER WINDING
- F = FAN
- G = GENERATOR
- H = HEAT TRACE CABLE
- I = INDICATING LIGHT
- J = JUNCTION BOX
- K = KEY OPERATED SWITCH
- L = LAMP
- M = MOTOR
- N = NEUTRAL
- O = OPERATOR INTERFACE TERMINAL
- P = PUSH BUTTON
- Q = QUAD PACK
- R = REACTOR
- S = THERMOSTAT
- T = TERMINAL IN CONTROL PANEL
- U = UNITS
- V = VOLTAGE TRANSFORMER
- W = WIRING CLOTHESPIN
- X = X-HANGER
- Y = Y-CONTACTOR
- Z = ZONES

### Reference Symbols

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**Sheet Notes**

A. **General Notes** apply to all drawings. Sheet Notes apply to all of the sheets on which they occur. Notes apply only where called out.

B. All equipment shown in black lines is intended for use in the project. Equipment shown in lighter lines is shown for orientation purposes only and is not to be used in the project.

C. Equipment shown in grey lines is only temporary and does not reflect the final design.

D. All equipment shown in white lines is final and is not subject to change.

**Key Notes**

1. Demolish existing equipment as shown and furnish new equipment and protect existing conduits and connections. See sheet E3 for more details.

2. Demolish existing equipment as shown and furnish new equipment and protect existing conduits and connections. See sheet E3 for more details.

3. Interception of existing conduits is only where called out.

4. Provide and protect existing conduits as shown and furnish new equipment.

5. Elements modified in this project are partial and do not reflect the entire distribution one-line diagram.

6. All equipment shown in bold line weight is final and is not subject to change.
05/10/2018

STANDBY DIESEL GENERATOR
200KW, 208/120V, 3Ø, 4W

1. SET, 4 #750MCM - 4"C + 1 SPARE CONDUIT
SCALE ACCORDINGLY IF NOT ONE INCH
AT FULL SIZE

2. SET, 4 #750MCM - 3 1/2"C

(E) DAY TANK CONTROLLER

(E) UPS
DIV 15
PANEL UPS
PANEL EM5 (ISP)
PANEL CR
PANEL M
PANEL AD7
PANEL AD6
PANEL AD4
PANEL AD3
PANEL AD2
ELEVATOR

CHILLER - CH-1
AC UNIT, RM B115

ITD GENERATOR REPLACEMENT

HEATER/BATTERY CHARGER
ELECTRODE SYSTEM.

MEET THE REQUIREMENTS OF NFPA 70,
BE SIZED BY THE MANUFACTURER BASED ON
THE OUTPUT RATING OF THE GENERATOR.
THE CIRCUIT BREAKER LONG TIME PICKUP
SETTING SHALL BE ADJUSTED DOWN TO
PROTECT THE INDUCTIVE LOAD
WHEN THE OUTPUT RATING OF THE
GENERATOR
YOU HAVE PROVIDED IS LESS THAN OR
EQUAL TO 2000A.

PROTECT THE 600A RATED FEEDER
ELEMENTS MODIFIED IN THIS PROJECT ARE
PARTIAL AND DOES NOT REFLECT THE ENTIRE
EXISTING ELECTRICAL EQUIPMENT,
SHEET NOTES
BOND NEW ATS, GENERATOR, AND DAY TANK
SYSTEM TO EXISTING SYSTEM GROUNDING
ELECTRICAL ROOM.

SITE POWER DISTRIBUTION SYSTEM. ONLY
WHERE CALLED OUT.

THE CIRCUIT BREAKER LONGTIME PICKUP
SETTING SHALL BE ADJUSTED DOWN TO
THE OUTPUT RATING OF THE GENERATOR.

ADJACENT GENERATOR ROOM, B105
APPURTENANCES, AND GROUTING FOR
COMPONENTS AND TRANSFER SWITCH.
SETTING FOR INSTALLATION OF NEW ATS AND DAY
TANK SYSTEM.

THE CIRCUIT BREAKER LONGTIME PICKUP
SETTING SHALL BE ADJUSTED DOWN TO
THE OUTPUT RATING OF THE GENERATOR.

300' LONGTIME PICKUP RATING OF THE GENERATOR.

ELEVATOR CH-1
AC UNIT, RM B115

ITD GENERATOR REPLACEMENT

HEATER/BATTERY CHARGER
ELECTRODE SYSTEM.

MEET THE REQUIREMENTS OF NFPA 70,
BE SIZED BY THE MANUFACTURER BASED ON
THE OUTPUT RATING OF THE GENERATOR.
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APPURTENANCES, AND GROUTING FOR
COMPONENTS AND TRANSFER SWITCH.
SETTING FOR INSTALLATION OF NEW ATS AND DAY
TANK SYSTEM.
<table>
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<th>COPPER WIRES PER RUN</th>
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<th>TO</th>
<th>NOTES</th>
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<td>AUTOMATIC TRANSFER SWITCH</td>
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</table>

**NOTE:**
- The conduit and wiring dimensions are based on the existing conditions. Settermans to see points should be reviewed by Trindera in project files.
- Copper wires should be included in the conduit and wire schedules.
SPECIAL SYSTEMS GROUNDING AND INTERSYSTEM BONDING BUS BAR

STRUCTURE GROUND (TYP) SCALE: 1/2"=1'-0"

EXOTHERMIC GROUND TAP CONNECTION (TYP) SCALE: 1/2"=1'-0"

GENERATOR DETAIL - TYPICAL SCALE: 1/2"=1'-0"

GENERATOR PAD PLAN SCALE: 1/2"=1'-0"

ITD GENERATOR REPLACEMENT

ELECTRICAL DETAILS

18180

REVISIONS

DRWN

CHKD

APVL

ENGR

PROJ

APVL

REV

DATE

1/3/2010

18180.DWG

A

ALH

ST

156

0

05/10/2018

ISSUED FOR BID

5/8" REBAR 12"O.C. TYP.

#4 REBAR 12"O.C. TYP.

SERVICE BONDING JUMPER

GENERATOR BREAKER

GROUND ELECTRODE SYSTEM

SERVICE ENTRANCE RATED MAIN DISCONNECT TRANSFER SWITCH

GROUND EARTH CONCRETE PAD EDGE

ANCHOR BOLT, TYPICAL

STAINLESS STEEL WALL MOUNTING BRACKET

STAMPED BRASS LABEL WITH NAME OF CONNECTION

#4/0 CU 1" PCV 18" BELOW GRADE TO GROUND GRID

BOLTED TWO-HOLE BRONZE CONNECTOR BURNDY #YGHA28-2N OR APPROVED EQUAL

MAIN GROUND LOOP CONDUCTOR SIZE AS SHOWN ON PLAN DRAWINGS

MAIN GROUND LOOP OR GROUND TAP CONDUCTOR SIZE AS SHOWN ON PLAN DRAWINGS

30" (MIN) "TEE"

"CROSS (BUTTED)"

"CROSS (PASS THRU)"

"SPLICE (HORIZONTAL)"

"SPLICE (VERTICAL)"

COPPER (ELECTRO-TIN PLATED) GROUND BAR

METAL TIE WIRE

STAMPED BRASS LABEL WITH NAME OF CONNECTION

CABLE (INSULATED OR BARE, AS REQUIRED BY SPECIFICATIONS)

TWO 1/2" STAINLESS STEEL BOLTS, NUTS, AND WASHERS

#4/0 CU 1" PCV 18" BELOW GRADE TO GROUND GRID

BOLTED TWO-HOLE BRONZE CONNECTOR BURNDY #YGHA28-2N OR APPROVED EQUAL

MAIN GROUND LOOP OR GROUND TAP CONDUCTOR SIZE AS SHOWN ON PLAN DRAWINGS

MAIN GROUND LOOP CONDUCTOR SIZE AS SHOWN ON PLAN DRAWINGS

GENERATOR DETAIL - TYPICAL

GENERATOR PAD SECTION

GENERATOR PAD PLAN

ITD GENERATOR REPLACEMENT
KEY NOTES

1. UTILITY SERVICE (PRIMARY) AND FEEDER (SECONDARY) CIRCUIT AND CONDUCTORS.
2. GENERATOR CIRCUIT AND CONDUCTORS.
3. REMOVE AND REPLACE EMERGENCY GENERATOR (PRIMARIES AND SECONDARIES) CONDUIT AND CONDUCTORS AS SHOWN ON SHEET E7, DETAIL 1.
4. PANEL AND CONDUCTORS FOR CONTROL/POWER SUPPLY TO GENERATOR, LINE, AND DAY TANK.
5. ATS DIMENSIONS 39"Wx59.5"Lx18"D.
6. GENERATOR DIMENSIONS 118"Lx42"Wx72"H.

EMERGENCY GENERATOR HATCH

EMERGENCY GENERATOR SWITCH

EXISTING STANDBY GENERATOR

EXISTING ATS
1. SUCTION/DISCHARGE LINES FOR DIESEL FUEL SYSTEM MAIN TANK.

2. EXISTING UNI-STRUT AND CONDUIT RACK EQUIPMENT INTERFERES WITH HATCH OPENING. ALL EXISTING UNI-STRUT AND CONDUIT. AS APPLICABLE, SHALL REMAIN FOR INSTALLATION OF NEW GENERATOR REPLACEMENT OF UNI-STRUT SHALL MATCH EXISTING AS NECESSARY FOR OVERHEAD CONDUIT RUNS FROM PANELBOARD/ATS/GENERATOR.

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**KEY NOTES**

1. SUCTION/DISCHARGE LINES FOR DIESEL FUEL SYSTEM MAIN TANK.

2. EXISTING UNI-STRUT AND CONDUIT RACK EQUIPMENT INTERFERES WITH HATCH OPENING. ALL EXISTING UNI-STRUT AND CONDUIT, AS APPLICABLE, SHALL REMAIN FOR INSTALLATION OF NEW GENERATOR REPLACEMENT.

---

**PHOTO DETAILS**

1. SUCTION/DISCHARGE LINES FOR DIESEL FUEL SYSTEM MAIN TANK.

2. EXISTING UNI-STRUT AND CONDUIT RACK EQUIPMENT INTERFERES WITH HATCH OPENING. ALL EXISTING UNI-STRUT AND CONDUIT, AS APPLICABLE, SHALL REMAIN FOR INSTALLATION OF NEW GENERATOR REPLACEMENT.

---

**SCALE:**

1. EMERGENCY GENERATOR SWITCH REFERENCE

2. FUEL SUPPLY PUMP & TANK

3. EXHAUST OUTLET & HATCH

4. BATTERY CHARGER CIRCUIT

---

**ITD GENERATOR REPLACEMENT**

**DATE:**

**PHOTO DETAILS**

1. SUCTION/DISCHARGE LINES FOR DIESEL FUEL SYSTEM MAIN TANK.

2. EXISTING UNI-STRUT AND CONDUIT RACK EQUIPMENT INTERFERES WITH HATCH OPENING. ALL EXISTING UNI-STRUT AND CONDUIT, AS APPLICABLE, SHALL REMAIN FOR INSTALLATION OF NEW GENERATOR REPLACEMENT.

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**ITD GENERATOR REPLACEMENT**

**DATE:**