GENERAL NOTES:

1. The architect is responsible for ensuring that the work is done in accordance with the written specifications and plans, and that the contractor complies with all applicable codes and regulations. The contractor is responsible for ensuring that all work is completed in a professional and timely manner.

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ABBREVIATIONS LIST:

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<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
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<tr>
<td>G</td>
<td>Generator</td>
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<tr>
<td>SP</td>
<td>Spare</td>
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<tr>
<td>MSB</td>
<td>Main Switchboard</td>
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<tr>
<td>DRWGS</td>
<td>Drawings</td>
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<tr>
<td>VFD</td>
<td>Variable Frequency Drive</td>
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<tr>
<td>SWBD</td>
<td>Switchboard</td>
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<tr>
<td>WP</td>
<td>Weatherproof</td>
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<tr>
<td>AFR</td>
<td>Alternate</td>
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<td>ON CENTER</td>
<td>On Center</td>
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<td>EX</td>
<td>Existing</td>
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<td>NT</td>
<td>Not to Scale</td>
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<td>IN CENTER</td>
<td>In Center</td>
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<td>DN</td>
<td>Down</td>
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<td>IU</td>
<td>In Unit</td>
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<td>IU EX</td>
<td>In Unit Existing</td>
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<td>Complete</td>
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ELECTRICAL SHUTTLE AND PHASING NOTES:

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DEMOLITION NOTES

1. NEW UPS MUST BE INSTALLED PRIOR TO DISCONNECTION AND DEMOLITION OF EXISTING UPS.

2. ALL ELECTRICAL EQUIPMENT, BUILDING SUBSYSTEMS, AND ASSOCIATED COMPONENTS MUST BE REMOVED PRIOR TO DEMOLITION OF THE RELATED ELECTRICAL ROOMS/SPACES.

3. COORDINATE ALL REMOVAL WORK WITH NEW CONSTRUCTION.

4. DISCONNECT POWER TO ABANDONED TERMINAL UNITS UNDER FLOOR TU-1 THROUGH 6 IN CONTROL ROOM 308. SEE MECHANICAL PLANE "2/M303.1". RE-LABEL BREAKERS AS SPARE.

5. DEMOLISH EXISTING LIGHT FIXTURE FOR NEW HVAC EQUIPMENT LOCATION. SEE DEMOLITION ONE-LINE DIAGRAM SHEET E200.

6. CHECK FOR PROPER OPERATION OF ALL EXISTING DEVICES OR SYSTEMS THAT ARE TO BE REMOVED OR RELOCATED. REPAIR IF NEEDED. REMOVE OR RELOCATE ALL EXISTING ELECTRICAL DEVICES ASSOCIATED WITH REMOVED OR RELOCATED MECHANICAL EQUIPMENT, COORDINATE WITH HVAC DRAWINGS.

SHEET NOTES

1. DEMOLISH EXISTING AC4 PANEL TO BE RELOCATED TO NEW LOCATION AS SHOWN ON SHEET E102.

2. DEMOLISH EXISTING UNINTERRUPTABLE POWER SUPPLY (UPS) AND ASSOCIATED WIRING FROM "ATS-B" AND TO "PDU-1" AND "PDU-2".

3. DISCONNECT POWER TO ABANDONED TERMINAL UNITS UNDER FLOOR TU-1 THROUGH 6 IN CONTROL ROOM 308. SEE MECHANICAL PLANE "2/M303.1". RE-LABEL BREAKERS AS SPARE.

4. DEMOLISH EXISTING LIGHT FIXTURE FOR NEW HVAC EQUIPMENT LOCATION. SEE DEMOLITION ONE-LINE DIAGRAM SHEET E200.
THIRD FLOOR ELECTRICAL PLAN - NEW

GENERAL NOTES

1. NEW UPS 'B' MUST BE INSTALLED PRIOR TO DISCONNECTION AND DEMOLITION OF EXISTING UPS.

2. E3P AND E3P/C ARE BASED ON LIEBERT EQUIPMENT.

3. BRANCH CIRCUIT WIRING MENTIONED IN THE SHEET SHALL BE RUN IN LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH APPROPRIATE RECEPTACLE, GALLVANIZED BOX AND FACE PLATE.

4. BRANCH CIRCUIT WIRING INSTALLED BELOW THE RAISED FLOOR SHALL BE RUN IN LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH APPROPRIATE RECEPTACLE, GALVANIZED BOX AND FACE PLATE.

5. ALL WALL, FLOOR, AND CEILING PENETRATIONS SHALL BE FIRE SEALED FOR 1-HR RATING UNLESS A HIGHER RATING IS REQUIRED. COORDINATE WITH ARCHITECT.

6. E.C. SHALL COORDINATE EQUIPMENT CONNECTIONS TO DETERMINE WHETHER CORD AND PLUG OR HARDWIRED.

7. BRANCH CIRCUIT WIRING SHALL BE LABELED AT EACH END WITH ASSIGNED CIRCUIT NUMBER, AND PANEL FEED.

8. LIQUID TIGHT FLEXIBLE METAL CONDUIT SHALL BE COLORED TO MATCH UPS SOURCE. SOURCE "A" SHALL BE YELLOW. SOURCE "B" SHALL BE BLUE.

9. PROVIDE CONTROL WIRING FOR NEW AND EXISTING MECHANICAL EQUIPMENT. SEE MECHANICAL PLANS FOR MORE DETAIL.

SHEET NOTES

1. INSTALL NEW DUPLEX OUTLET IN BACK OF THE CORRESPONDING DATA RACK NEXT TO THE EXISTING QUAD OUTLET, FED FROM NEW "PDU-3".

2. INSTALL NEW "ATS/C" AND "BP/B" ONTO FREE STANDING UNISTRUT.

3. DESK TO BE REMOVED BY OWNER. INSTALL NEW "PDU/3" AND CONNECT TO NEW "UPS/A".

4. INSTALL NEW SURGE PROTECTIVE DEVICE "SPD" ABOVE THE PANEL "DOT/EMDP".

5. PROVIDE #2AWG BONDING CONDUCTOR FROM RAISED FLOOR GROUNDING SYSTEM TO NEW EQUIPMENT.

6. AIR COOLED CONDENSING UNITS AND ELECTRICAL CONNECTIONS ON ROOF TOP.

7. RELOCATE AND WIRE EXISTING AC4 PANEL TO THE NEW LOCATION AS SHOWN. THE CONTRACTOR SHALL WORK WITH LIEBERT AND THE TMC IT DEPARTMENT TO COMMISSION THE PANEL AND VERIFY ALARMING FUNCTIONS.

8. INSTALL NEW STATIC TRANSFER SWITCH ON RAISED FLOOR ADJACENT TO PDU-2. PROVIDE UNDERFLOOR BRACING AND EQUIPMENT SUPPORT. SEE DETAIL '1/E202'.
PROJECT LOCATION: STATEWIDE TRAFFIC MANAGEMENT CENTER

PROJECT NUMBER: DATA CENTER ELECTRICAL IMPROVEMENTS

LEEDY & PETZOLD ASSOCIATES, LLC
Ph. (262) 860-1544, Fax (262) 860-1566
Elm Grove, Wisconsin 53122 12970 W. Bluemound Road - Suite 101

SHEET TITLE: ELECTRICAL ONE-LINE DIAGRAM - DEMOLITION

SHEET NUMBER: E200

DATE: 12/12/2019

NO SCALE

ONE-LINE DIAGRAM NOTES:

1. DEMOLISH EXISTING UPS AND ASSOCIATED INPUT AND OUTPUT FEEDERS.

2. EXISTING MG&E UPS SYSTEM MODEL 72-160400-44, 150KVA, INPUT 480VAC, 3-PH, 3W+G, 60Hz, 155A.

3. OUTPUT 480VAC, 3-PH, 3W+G, 60Hz, 180A.

SHEET NOTES:

- DESIGN-ENGINEERING-MATERIALS-IMPORT AND EXPORT SPECIFICATIONS.
- SHEET LINES, SEE SYSTEM MODEL TO INSTALLATION HOOKUP, SURFACE MOUNT, EARTH, MALE, FEMALE.
- ONE-LINE DIAGRAM SYMBOLS:
  - DISCONNECT SWITCH
  - ONE-LINE DIAGRAM SYMBOLS:
  - NEW BUSDUCT
  - CT CABINET
  - AUTOMATIC TRANSFER SWITCH
  - FUSE
  - FUSIBLE SWITCH
  - CIRCUIT BREAKER
  - JUNCTION OF CONNECTION
  - RACEWAY WIRE CONNECTIONS
  - GENERATOR EXISTING BUSDUCT
  - TRANSFORMER
  - SELECTOR SWITCH
  - GROUND
  - FUSIBLE BUS PLUG
  - JUNCTION BOX
  - PANELBOARD (DIAGRAMMATIC)
  - SPECIAL PURPOSE OUTLET
  - MOTOR
  - METER

- ONE-LINE DIAGRAM NOTES:
  - ALL ITEMS DEPICTED BY A DARK DASHED LINE ARE EXISTING TO REMAIN.
  - ALL ITEMS DEPICTED BY A LIGHT SOLID LINE ARE NEW.
  - ALL ITEMS DEPICTED BY A DARK SOLID LINE ARE EXISTING TO BE REMOVED.
  - ALL ITEMS DEPICTED BY A LIGHT DASHED LINE ARE NEW AND LOADING IS REMOVED.
WISCONSIN DEPARTMENT OF TRANSPORTATION
TMC DATA CENTER ELECTRICAL & HVAC IMPROVEMENTS

DESIGN INTENT

4. Electrical Room - Base Bid
   a. Provide a second split system cooling unit to provide 34 T cooling capacity. This new unit will become the primary unit with the existing one being the back-up. Contractor to adjust temperature setpoints so that the new unit is the load.
   b. Provide temperature monitoring (by the Department).

3. Data Center - Base Bid
   a. Provide a third computer room cooling unit to provide full 34 T cooling capacity. With the current two units, space temperature is not maintained where one unit fails.
   b. Relocate auto changeover panel to coordinate the three computer room cooling units.
   c. Provide temperature and alarm monitoring (by the Department).

2. Control Room Alternate Bid - HVAC-1
   a. Eliminate the non-functioning underfloor terminal units. Add a new space temperature sensor and control the cooling unit to space temperature. The control room will be controlled as a single zone.
   b. All zone valves and dampers will have manual dampers for balancing and temperature adjustment.
   c. Improve return on flow back to the cooling unit.
ALL WORK ON THIS PAGE AT THIS LOCATION

CUTTING OF FLOOR TILE AND CARPET SHALL BE DONE OUTSIDE OF THE CONTROL ROOM TO MINIMIZE DISTRACTIONS TO THE OCCUPANTS.