DFORD ELEVATOR REPLACEMENT

SOUTH

LANCASTER, SOUTH CAROLINA STATE PROJECT # H37-9513



INDEX OF DRAWINGS

COVER SHEET

ELEVATOR FLOOR PLAN AND SPECIFICATIONS ELECTRICAL FLOOR PLAN AND NOTES

GENERAL NOTES

DO NOT SCALE DRAWINGS. ROUGH FROM EXISTING CONDITIONS AND EQUIPMENT MANUFACTURER'S DRAWINGS.

- WHENEVER THE WORD "PROVIDE" IS USED IT SHALL MEAN FURNISH AND INSTALL COMPLETE AND READY FOR USE.
- INSTALLATION OF EQUIPMENT, WIRING, PIPING, ETC. SHALL COMPLY WITH THE 2012 INTERNATIONAL BUILDING CODE FOR SEISMIC PROTECTION.

CODE REVIEW INFORMATION

INSTALLATION OF ALL COMPONENTS SHALL COMPLY WITH THE LATEST EDITIONS OF THE FOLLOWING:

- International Building Code 2012 Edition.
 South Carolina Elevator Code
- ASME AIT.I Safety Code for Elevators and Escalators
 National Electric Code 2011 Edition.

MECHANICAL ENGINEER

MECHANICAL DESIGN, INC. 4403 BROAD RIVER ROAD COLUMBIA, S.C. 29210 (803) 731-9834



262 SANDHURST ROAD, SUITE 101 COLUMBIA, SOUTH CAROLINA (803) 528-1437 Joe.Land.LEA@sc.rr.com

> SPECIAL NOTE:
> IT IS HIGHLY RECOMMENDED THAT THE CONTRACTOR
> VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXIST CONDITIONS RELATING TO THIS PROJECT. SUBMISSION OF A BID WILL BE CONSIDERED AS EVIDENCE THAT



DATE: 06/18/15

(803) 731-9834 (803) 731-9837 FAX

сомм. No. 153194

C-1

MEDFORD ELEVATOR USC LANCASTER

CAMPUS PLANNING AND CONSTRUCTION COLUMBIA, SC 29208

1 OF 3

SPECIFICATIONS

1.1 <u>SCOPE</u>:

- A. Provide all related equipment, labor, materials, operations and accessories required for the installation of complete and quietly operating elevator system, in accordance with the plans and specifications. This shall include the following:
- 1. Submersible Power Unit
- 2. Hydraulic Elevator Shut—Off Valve
- 3. Hydraulic Piping 4. Hydraulic Oil
- 5. Electrical Wiring / Conduits
- 6. Tests
- 7. Guarantees

1.2 <u>DEMOLITION</u>:

- A. Contractor shall provide demolition and removal of existing equipment, piping, wiring, conduit, etc. required for the replacement as noted on drawings.
- B. The Owner reserves the right to claim any materials removed during demolition for this project. Contractor shall dispose of all materials not claimed by the Owner.

1.3 <u>SUBMERSIBLE POWER UNIT</u>

- A. All components shall be mounted inside the tank.
- B. The storage tank shall be constructed of steel and shall be provided with a removable cover containing a removable oil dip stick. The pump and submersible motor shall be mtd on reinforced isolation. The control valve shall be mounted in the discharge line above the oil level and easily accessible from the top of the tank.
- C. The motor shall be of the submersible alternating current, squirrel cage induction type and shall be of a design adapted to electro—hydraulic requirements.
- D. The pump shall be a positive displacement screw—type to give smooth operation and shall be designed and manufactured for
- E. The control valve shall be manifold with up, down and check valve sections. A control section including solenoid valves will direct the main valve and control up and down starting, transition from full speed to leveling speed, up and down stops, pressure relief and manual lowering. Down speed and up and down leveling shall be controlled at the main valve sections. All of these functions shall be fully adjustable for maximum smoothness and to meet contract conditions. The manual lowering feature will permit lowering the elevator at slow speed in the event of power failure or for adjusting purposes.
- the control valve discharge.
- G. Submersible power unit shall be as manufactured by MEI Total Elevator Solutions or equal unit by Delaware Elevator Manufacturing, Inc.
- H. The contractor shall modify the exist controls for the updated valve coils furnished with the power unit submitted. Field verify all requirements and make adjustments as necessary.

1.4 SHUT-OFF VALVE

- A. Provide 2" grooved full-port hydraulic elevator shut-off valve designed specifically for installation in hydraulic elevators.
- B. Valve shall be built, labeled and tested to comply with ASME A17.1 / CSA B44 standards at a 5:1 safety factor (1000 psi maximum operating pressure)
- C. Valve shall have a blow out proof stem and lockable handle to prevent accidental fluid loss.
- D. Valve shall carry a 2-year warranty.
- E. Valve shall be as manufactured by Maxton Mfg or accepted

1.5 <u>HYDRAULIC PIPING</u>:

- A. Replace hydraulic piping inside machine room as required to accommodate replaced power unit.
- B. Pipe and coupling/fittings shall match existing in material

1.6 <u>HYDRAULIC OIL:</u>

- A. Provide biodegradable hydraulic oil to replace existing once all components have been replaced.
- B. Oil shall have Rust and Oxidation additives and anti-foam agents to help provide maximum demulsibility of water and reduce air entrainment to provide higher circulation rates.
- C. Hydraulic oil shall be as manufactured by BioFlo EO or accepted equal.

1.7 <u>TESTS</u>:

- A. Provide load testing of unit once complete as directed by SC LLR
- 1. Provide written certification of final operation test prior to operation by Owner.

1.8 <u>GUARANTEE</u>:

- A. Contractor shall guarantee all equipment, piping and any other materials specified under this Division of the contract for a period of one (1) year from the date of project acceptance unless otherwise indicated. Upon failure of any part(s) of the system during the guarantee period, the affected part(s) shall br repaired or replaced promptly by and at the expense of the Contractor.
- B. If any component fails during the regular one year period, then the replacement part(s) shall be given an additional one (1) year guarantee from the time of replacement. This shall continue until the items have given one (1) year satisfactory service.

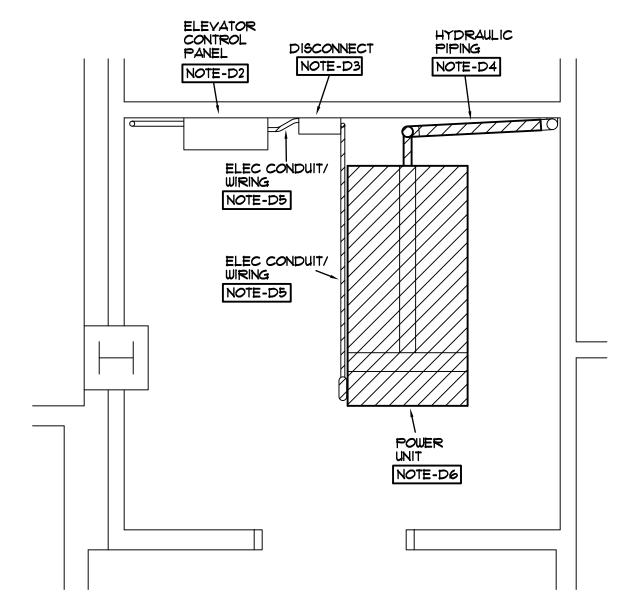
1.9 <u>SUBMITTALS</u>:

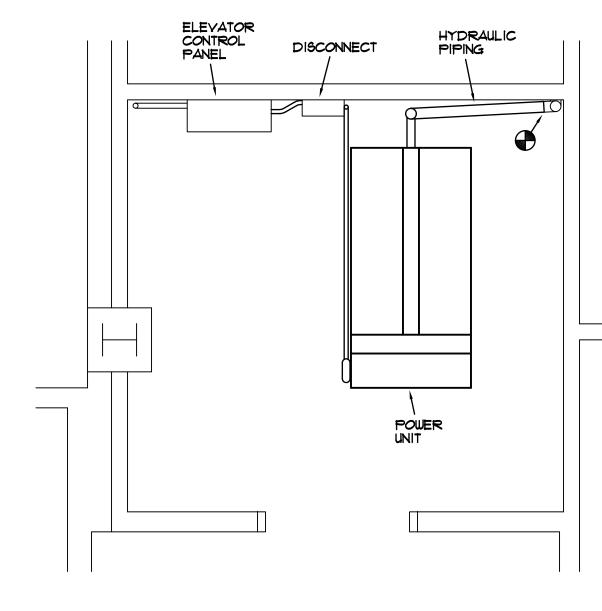
- A. Contractor shall submit detailed shop drgs, equipment materials cutsheets and product data <u>clearly marked</u> for all items listed below. All product data shall be submitted at one time in detail. Partial submission will not be accepted.
- 1. Submersible Power Unit
- 2. Hydraulic Elevator Shut-Off Valve
- 3. Hydraulic Piping
- 4. Hydraulic Oil

1.10 ENGINEER SITE VISIT REPORTS:

- A. Engineer site visit reports will be furnished during construction as requested by the Owner.
- B. Contractor is responsible for correcting all construction items and to respond in writing to all deficiencies as directed. Contractor shall contact Engineer immediately if there are any questions or conflicts after receipt of written site visit reports.
- C. Furnish response to all punchlist items within 10 days of receipt of report including completion status to maintain timely, planned construction progress without delays or problems.

END OF SPECIFICATIONS





DEMOLITION PLAN

REPLACEMENT PLAN

ELEVATOR FLOOR PLANS

SCALE: 1/2" ==== 1'-0"

CONNECT TO EXISTING

PLUMBING DEMOLITION NOTES

- DI. CONTRACTOR SHALL FIELD COORDINATE AND VERIFY EXIST CONDITIONS PRIOR TO START OF DEMOLITION WORK. NOTIFY ENGINEER IMMEDIATELY IF QUESTIONS OR CONFLICTS ARE DISCOVERED AT START OF PROJECT.
- D2. EXISTING ELEVATOR CONTROL PANEL TO REMAIN. SEE ELEC DRG AS REQUIRED.
- D3. EXISTING ELECTRICAL DISCONNECT TO REMAIN. SEE ELEC DRG AS REQUIRED.
- D4. REMOVE AND REPLACE EXISTING HYDRAULIC PIPING TO ACCOMMODATE REPLACED POWER UNIT. SEE FLOOR PLAN,
- D5. REMOVE (2) EXISTING ELECTRICAL WIRING AND CONDUIT TO EXIST DISCONNECT AND CONTROL PANEL COMPLETE. SEE ELEC DRG.
- D6. REMOVE EXISTING ELEVATOR POWER UNIT COMPLETE.
- D7. REMOVE EXISTING HYDRUALIC OIL COMPLETE AND DISPOSE OF IN ACCORDANCE WITH SC LLR AND ELEVATOR CODES.

MECHANICAL DESIGN, INC. Columbia, SC No. C00096

MECHANICAL 4403 Broad River Road

(803) 731-9834 (803) 731-9837 FAX

CONTACT: M. HENDRIX DATE: 06/18/15 сомм. No. 153194

SHEET: OF 3

REPLACEMENT

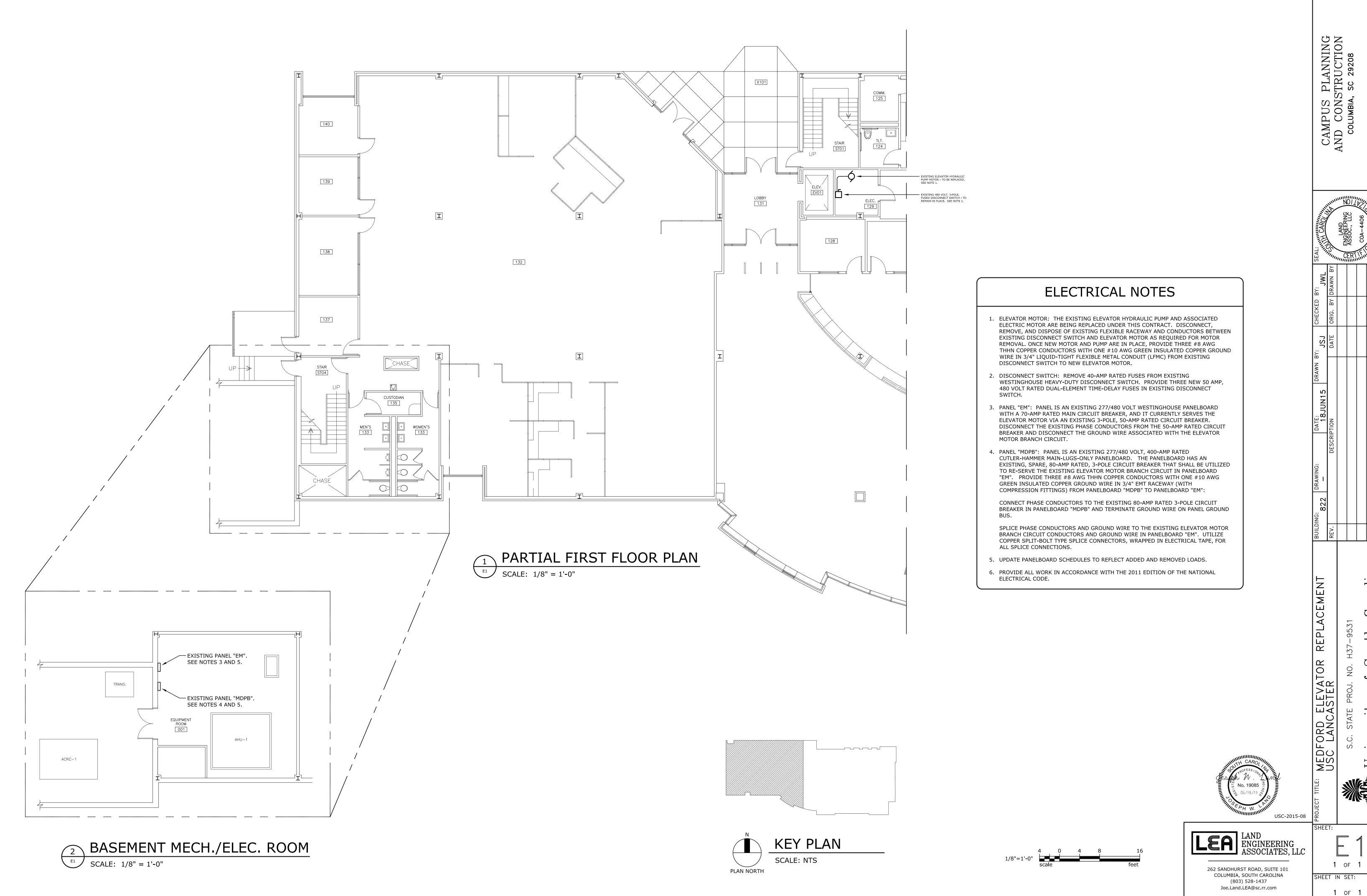
MEDFORD ELEVATOR USC LANCASTER

2 951

1 OF 3

SHEET IN SET:

PLANNING ISTRUCTION A, SC 29208



1 of 1 SHEET IN SET: