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SPECIFICATION 031709

For

Lighting Upgrade Project- State Sign Shop

I. GENERAL-

The scope of work consists of replacement of existing lighting fixtures on the loading dock, supply room and shop floor areas of the State Sign Shop in Montgomery AL at 523 Traffic Operations Dr. as detailed herein and on the referenced layout below.

The areas as described above are divided into zones as identified on the shop floor lighting layout. A zone is defined as an area within the complex where the finished, measured light distribution meets or exceeds the lumen specification. The layout and original electrical plans can be accessed at: <http://www.dot.state.al.us/Docs/Bureaus/Maintenance/Maintenance+Bureau+Publications.htm>

II. EXISTING CONDITIONS-

Approximate existing clearances are as follows:

- 13'-6" from shop floor to bottom of fixtures
- 12' from shop floor to bottom of reflector encasement
- 10' from shop floor to base of duck work in zone 2, metal/reflective sheeting section
- 8' from shop floor to base of duck work in zone 2, screening section
- 3' from shop floor to top of work tables/ benches in zones 2 & 3
- 2'-6" from shop floor to desktops in zones 2 & 3

Existing lighting types to be replaced: 1) Benjamin 250W and 400W Mercury with reflector encasement and 2) 150W-200W incandescent fixture

It is the responsibility of the bidder to verify any and all EXISTING CONDITIONS whether provided herein or not. The State neither guarantees nor assumes any liability for II. EXISTING CONDITION accuracy or completeness.

III. Requirements

Finished Light distribution minimum requirements shall equal or exceed standards set forth on sheet number 23 of the shop floor lighting layout. Calculations are based in part on (IESNA) Illuminating Engineering Society of North America Standards. Light distribution shall be measured in foot candles or equivalent. Horizontal illumination calculations shall be used for measurement. This method uses a meter's sensor at a horizontal position on a horizontal surface at the applicable floor area, work benches, desktop, and work tables in the shop area, loading dock, or supply room. The measurement shall be taken at the highest applicable elevation to routine work within the zone. Routine work

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elevations shall be determined by the Sign Shop Supervisor. Minimum lighting requirements for each Zone shall be as follows:

Zone 1 = 60-69 foot candles; Zone 2 = 70-79 foot candles; Zone 3 = 80 or greater foot candles

Final Minimum clearance from shop floor to lowest portion of new fixture reflector/globe/cover, etc. is as follows:

Metal 9'-6", Specials 9'-6", Screening 9'-6", Finished Signs 9'-6", Packaging 11'-3", Stock Room 11'-3", Mechanical/ Sanding 11'-3". The Final Minimum clearance shall be strictly adhered to. An exception to the Final Minimum clearance may only be made in writing to the contractor and must be obtained from the Sign Shop Supervisor prior to commencement of any work leading to or installation of any part which fails to meet the Final Minimum Clearance.

Contractor must implement proper disposal plan of non-salvaged parts and materials per ADEM guidelines. Salvaged material will become the property of the successful bidder. The successful bidder shall be responsible for removal of all salvaged and non-salvaged parts and materials and both shall be a subsidiary obligation of the bid price. Copy of Receipt from recycling and/or Salvage Company as applicable must be presented to ALDOT upon completion of the work.

Contractor is to notify ALDOT if removal of existing wiring is required. The contractor is responsible for all materials, labor, and equipment required to successfully perform the work. This includes but is not limited to new wiring, fixtures, harnesses, brackets, hardware, bulbs, conduits, circuits, breakers, fuses, resistors, capacitors, surge protection, fixture covers, ballasts and other electrical &/or mechanical devices, hardware, or accessories.

Additional ceiling, overhang, wall or other fixtures may be required to achieve lumen levels in the stock room, screen burning area, worktable and/or desk locations. The contractor should notify the Sign Shop Supervisor prior to installation of any new fixtures in these aforementioned areas in order to determine workable location and to ensure non-interference with shop activities.

Contractor must perform and deliver all work in conformance to applicable state electrical codes, NEMA and the National Electrical Code. Contractor is to submit a lighting plan which includes location, size, quantity, etc. of the new lighting prior to commencement of onsite work. An as built lighting plan, showing any modifications to existing circuits, breakers, fuses, panels, wiring, etc. shall be provided.

Bulbs to be installed are GE Ecolux T8 - F32T8/SP35/ECO or equal.

Contractor is to determine number of bulbs needed, type of fixture, size of fixture etc. based on foot candle chart data listed on page 23 of shop floor lighting layout. Bulb protection and/or covers as suitable for either a shop/industrial environment or work area as may be applicable shall be provided. Such protection or covers shall not supersede the required finished light distribution minimum requirement.

Contractor is to perform work during normal work hours (Monday- Friday, 8am - 5pm). Contractor is to contact Rodger Davis (Sign Shop Supervisor), 334-242-6267, for access to work area. Accessibility to work area beyond normal work hours is not guaranteed. Work is to be completed ninety (90) days from date of bid award notification. Contact Mr. Davis in order to tour the facility prior to submission of a bid.