***North De-icing Facility***

***Scope of services***

Our Lighting design is governed by DOA standards in conjunction with the appropriate FAA Advisor Circulars (AC) and Illumination Engineers Society (IESNA) guidelines. The lighting shall be achieved with High pressure Sodium (HPS) floodlights to cover the site; AC 150/5360-13 outlines recommended illumination at 5 foot-candles at building entrances, apron areas and associated equipment parking areas. In order to support the deicing activities in the apron area we will follow recommendation of the IESNA for illumination level which in effect will exceed the minimum recommended by the Advisory.

On the south side:, adjacent to the NLVR:, there are existing 12’ HPS lights each with: (20 1000W HPS lamps. In order to adequately illuminate the task area, it will be necessary to adjust these pole heights. We have investigate the relevant circulars (AC 150/5300-13 Object Clearing Criteria Section 306) and our calculation attached herein confirm that we may raise the pole heights in the area to about 40’-00” for a better areal coverage of the aircraft so the fuselages of 767 can be properly lighted. We therefore propose (3) 1000W HPS on 40’-00” poles along the south side of the project area as shown on the proposed site plan. At the vehicle fueling areas and the truck loading/unloading area we propose a combination of 150 watts surface mounted fluorescent light that can quickly restart in the event of transfer to standby generator power due to utility failure. In the building we will utilize primarily various combination of fluorescent light fixtures, most of the light fixture in the building shall be vapor tight. There shall be wall mounted fluorescent light fixtures around the building for enhanced illumination (white light) in order to softly support the poles mounted light emitting primarily yellow light

**Power:**

All power design shall be in compliance with the DOA standards, NEC along with all pertinent ACs. The power to the facility shall be from a Georgia power pad mounted transformer with a standby generator capable of picking up the operation in its entirety in case of power failure from the utility. It should be noted that ground power system shall not be support by the standby generator.

We will have a 2000Amp, 480/277v main distribution switchboard (MDP) which will feed a secondary distribution switchboard (SDP) that serves most of the proposed operation except for the 400Hz system. The MDP in addition to the SDP hall feed four 400Hz group power units in the north side and 10 ground power units in the south side via a 1200Amp, 480/277V panel PP2 located on the south service island. The SDP shall be fully backed up by the standby generator and shall feed all motor loads via a 600Amp MCC and all miscellaneous lighting power and HVAC load. There will be a 112-1/2kVA transformer in the building to step down power from 480-208/120v as needed for miscellaneous power use.

We will propose a 600kW Standby generator out-fitted with (2) circuit breakers one for the essential system and the other for the non-essential load in compliance with NEC 700.6(d). The non-essential load shall be served by a circuit breaker rated at 800Amp via a similarly rated transfer switch (ATS-1). The essential Load is currently rated at 150A and will be reevaluated during the Construction document phase of the project.

There is a fueling center that will be designed in compliance with all requirements as to comply with all requirements of the NEC 501 for Class I Div. II facility