

GENERAL ELECTRICAL NOTES:

1. THE ELECTRICAL INSTALLATION, AS A MINIMUM, SHALL MEET THE NATIONAL ELECTRICAL CODE AND LOCAL REGULATIONS.
2. IN LIEU OF STENCILING, CONTRACTOR SHALL FURNISH AND INSTALL PLASTIC LAMINATED ENGRAVED LEGEND PLATES SECURELY FASTENED TO EQUIPMENT WITH TAPPING OR MACHINE SCREWS. LEGEND PLATES SHALL BE 1/2" HIGH BLACK LETTERS ON WHITE BACKGROUND.
3. COLOR CODE ALL PHASE WIRING BY THE USE OF COLORED WIRE, INSULATION AND/OR COLORED TAPE. WHERE TAPE IS USED, THE WIRE INSULATION SHALL BE BLACK. BLACK AND RED SHALL BE USED FOR SINGLE PHASE, THREE WIRE SYSTEMS, AND BLACK, RED AND BLUE SHALL BE USED FOR THREE PHASE SYSTEMS. NEUTRAL CONDUCTOR SIZE NO. 6 AWG OR SMALLER SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH. NEUTRAL CONDUCTORS SIZE LARGER THAN NO. 6 SHALL BE IDENTIFIED EITHER BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH OR BY THE USE OF WHITE TAPE AT ITS TERMINATIONS AND INSIDE ACCESSIBLE WIREWAYS.
4. ALL BRANCH CIRCUIT CONDUCTORS CONNECTED TO A PARTICULAR PHASE SHALL BE IDENTIFIED WITH THE SAME COLOR. THE COLOR CODING SHALL BE EXTENDED TO THE POINT OF UTILIZATION.
5. NEATLY LACE WIRING IN DISTRIBUTION PANELS, SWITCHES AND JUNCTION/PULL BOXES.
6. GROUND ALL NONCURRENT-CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT BY USING INSULATED COPPER WIRE TO BE RUN INSIDE CABINETS AND IN CONDUITS TOGETHER WITH OTHER WIRES.
7. ALL GROUND CONNECTIONS TO BUSES, PANEL, ETC., SHALL BE MADE WITH PRESSURE TYPE SOLDERLESS LUG CLAMPS. SOLDERED OR BOLT & WASHER TYPE CONNECTIONS ARE NOT ACCEPTABLE. CLEAN ALL METAL SURFACES BEFORE MAKING GROUND CONNECTIONS. CONNECTIONS TO GROUND RODS & GROUND RING SHALL BE MADE WITH EXOTHERMIC WELDING PROCESS.
8. RIGID STEEL CONDUIT SHALL BE USED THROUGHOUT THE INSTALLATION UNLESS OTHERWISE SPECIFIED. ALL STEEL CONDUITS, & FITTINGS SHALL BE GALVANIZED.
9. FOR INDOOR LOCATIONS EQUIPMENT SUPPORT STRUCTURES, CHANNEL OR STRUT, INCLUDING FASTENING HARDWARE, SHALL BE GALVANIZED. FOR OUTDOOR LOCATIONS EQUIPMENT SUPPORT STRUCTURES, CHANNEL OR STRUT, INCLUDING FASTENING HARDWARE, SHALL BE 316 STAINLESS STEEL.
10. USE DUAL LUGS WHERE TWO WIRES SIZE NO. 6 OR LARGER ARE TO BE CONNECTED TO THE SAME TERMINAL.
11. USE INSULATED CONDUIT BUSHING AT EACH CONDUIT TERMINATION.
12. USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.
13. UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.
14. LABEL BOTH ENDS OF ALL CONTROL CONDUCTORS TO IDENTIFY TERMINAL NUMBER AND CIRCUIT, SUCH LABELING SHALL BE DONE AT ALL TERMINALS AND SPLICES.
15. UNLESS OTHERWISE NOTED, ALL SINGLE CONTROL CONDUCTORS SHALL BE NO. 12 AWG, THHN, STRANDED COPPER, EXTENSIONS TO EXISTING CONTROL CONDUCTORS SHALL BE THE SAME COLOR AS EXISTING.
16. BOTH ENDS OF EACH CONTROL CONDUCTOR SHALL BE TERMINATED AT A TERMINAL BLOCK. THE TERMINAL BLOCKS SHALL BE OF PROPER RATING AND SIZE AND THEY SHALL BE LOCATED IN EQUIPMENT ENCLOSURES OR SPECIAL TERMINAL CABINETS.
17. BOTH ENDS OF ALL CONTROL CONDUCTORS SHALL BE IDENTIFIED AS TO THE CIRCUIT TERMINAL BLOCK, AND TERMINAL NUMBER. ONLY SHRINKABLE PERMANENT LABELS SHALL BE USED.
18. A SEPARATE AND CONTINUOUS NEUTRAL CONDUCTOR SHALL BE INSTALLED AND CONNECTED FOR EACH CIRCUIT IN THE POWER PANEL(S) FROM THE NEUTRAL BAR TO EACH POWER/CONTROL CIRCUIT.
19. SPLICES AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS AND AT EASILY ACCESSIBLE LOCATIONS.
20. UNLESS OTHERWISE NOTED, ALL UNDERGROUND FIELD POWER MULTIPLE AND SERIES CIRCUIT CONDUCTORS SHALL BE FAA APPROVED L-824, TYPE C INSULATION. VOLTAGE AND SIZE SHALL BE AS SPECIFIED.
21. THE JOINT OF THE PRIMARY L-823 PRIMARY CONNECTORS SHALL BE WRAPPED WITH AT LEAST ONE LAYER OF RUBBER OR SYNTHETIC RUBBER TAPE AND ONE LAYER OF PLASTIC TAPE. ONE-HALF LAPPED. EXTENDING AT LEAST 1 INCH ON EACH SIDE OF THE JOINT. HEAT-SHRINK TUBING SHALL BE APPLIED WHERE CABLE ENTERS BACK OF CONNECTOR. SEE DETAIL DRAWING.
22. THE ID OF THE PRIMARY L-823 FIELD ATTACHED CONNECTORS SHALL MATCH THE CABLE OD TO PROVIDE A WATERTIGHT CABLE ENTRANCE.
23. ALL POWER AND CONTROL CIRCUIT CONDUCTORS SHALL BE COPPER. ALUMINUM SHALL NOT BE ACCEPTED. THIS INCLUDES WIRE, CABLE, BUSES, TERMINALS, SWITCH/PANEL COMPONENTS, ETC.
24. CABLE/SPLICE/DUCT MARKERS SHALL BE PRECAST CONCRETE OF SIZE SHOWN. LETTER/NUMBERS FOR THE LEGEND TO BE IMPRESSED INTO TOPS OF THE MARKERS SHALL BE PREASSEMBLED AND SECURED IN MOLD BEFORE CONCRETE IS POURED. LEGEND INSCRIBED BY HAND IN WET CONCRETE SHALL NOT BE ACCEPTABLE.
25. THE CONTRACTOR SHALL ASCERTAIN THAT ALL LIGHTING SYSTEM COMPONENTS FURNISHED BY HIM (INCLUDING FAA APPROVED EQUIPMENT) ARE COMPATIBLE IN ALL RESPECTS WITH EACH OTHER AND REMAINDER OF THE NEW/EXISTING SYSTEM. ANY NONCOMPATIBLE COMPONENTS FURNISHED BY THIS CONTRACTOR SHALL BE REPLACED BY HIM AT NO ADDITIONAL COST TO THE AIRPORT SPONSOR WITH A SIMILAR UNIT, APPROVED BY THE ENGINEER (DIFFERENT MODEL OF DIFFERENT MANUFACTURER) THAT IS COMPATIBLE WITH THE REMAINDER OF THE AIRPORT LIGHTING SYSTEM.
26. IN CASE THE CONTRACTOR SELECTS TO FURNISH AND INSTALL AIRPORT LIGHTING EQUIPMENT REQUIRING ADDITIONAL WIRING, TRANSFORMERS, ADAPTERS, MOUNTINGS, ETC., TO THOSE SHOWN ON THE DRAWINGS AND/OR LISTED IN THE SPECIFICATIONS, ANY COST FOR THESE ITEMS SHALL BE INCIDENTAL TO THE EQUIPMENT COST.
27. THE CONTRACTOR INSTALLED EQUIPMENT (INCLUDING FAA APPROVED) SHALL NOT GENERATE ANY ELECTROMAGNETIC INTERFERENCE IN THE EXISTING AND/OR NEW COMMUNICATIONS, WEATHER, AND AIR TRAFFIC CONTROL EQUIPMENT. ANY EQUIPMENT GENERATING SUCH INTERFERENCE SHALL BE REPLACED BY THE CONTRACTOR, AT NO ADDITIONAL COST, BY EQUIPMENT MEETING THE APPLICABLE SPECIFICATIONS AND NOT GENERATING ANY INTERFERENCE.
28. ALL EXISTING LIGHTS REMOVED UNDER THIS CONTRACT SHALL BE CONTRACTOR SALVAGE.
29. WHERE EXISTING SIGNS AND FOUNDATIONS ARE TO BE REMOVED, THE AREA SHALL BE BACKFILLED WITH EARTH TO THE ORIGINAL GRADE, COMPACTED AND SEEDED. SUCH REMOVAL SHALL BECOME CONTRACTOR SALVAGE UNLESS NOTED OTHERWISE.
30. CONTRACTOR SHALL LOCATE EXISTING UNDERGROUND CIRCUITS, GAS OR WATER LINES WITH A PORTABLE CABLE OR PIPE LOCATOR WHERE POSSIBLE TO AVOID DAMAGE TO EXISTING UTILITIES TO BE RETAINED. EXCAVATING REQUIRED IN CONGESTED AREAS CONTAINING OTHER UTILITIES SHALL BE DONE BY HAND. ANY SUCH WIRING DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AFTER DISCOVERY AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. ALL UNDERGROUND SPLICES SHALL BE INSPECTED BY THE RESIDENT ENGINEER PRIOR TO BACKFILLING TRENCHES.
31. SHOP DRAWINGS SHALL BE REQUIRED FOR ALL PROPOSED LIGHTING EQUIPMENT INCLUDING CABLE, CABLE CONNECTIONS, TRANSFORMERS, L-867 BASES, WIND CONE & REIL SYSTEMS, & ALL EQUIPMENT ITEMS DESCRIBED UNDER SPECIFICATIONS ITEM 109, OR SHOWN ON THE PLANS.