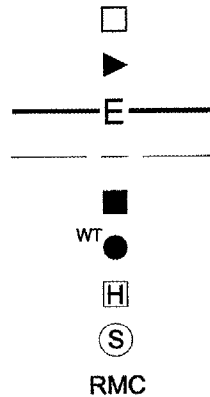
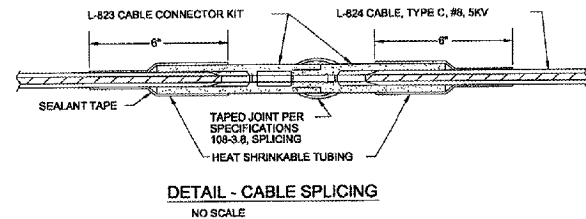
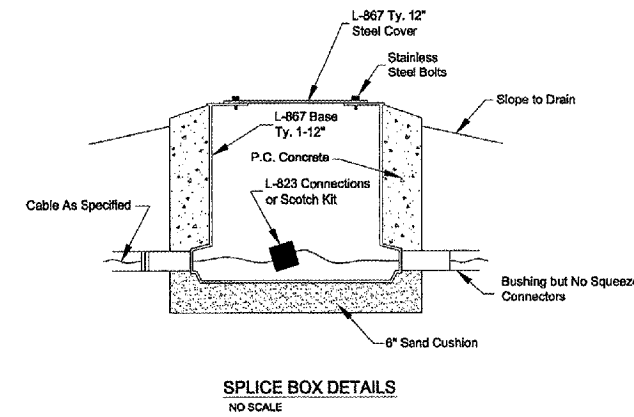


ELECTRICAL PLAN LEGEND



PROPOSED PAPI SYSTEM COMPONENT
 PROPOSED REIL MASTER OR SLAVE UNIT
 PROPOSED UNDERGROUND ELECTRICAL
 EXISTING UNDERGROUND ELECTRICAL
 EXISTING VASI COMPONENT
 EXISTING WIND TEE
 PROPOSED HANDHOLE
 PROPOSED SPLICE CAN
 RIGID METAL CONDUIT, SCHEDULE 40 STEEL

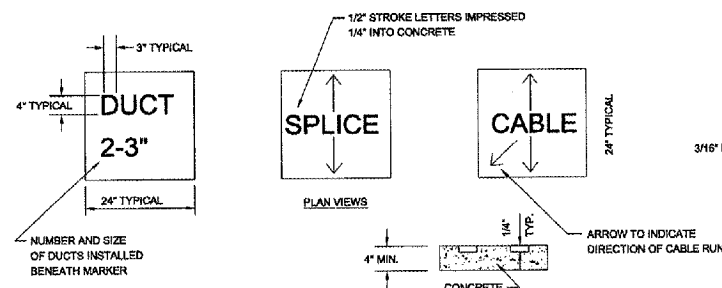
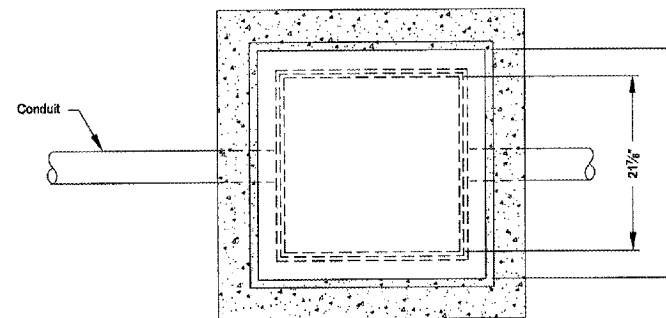
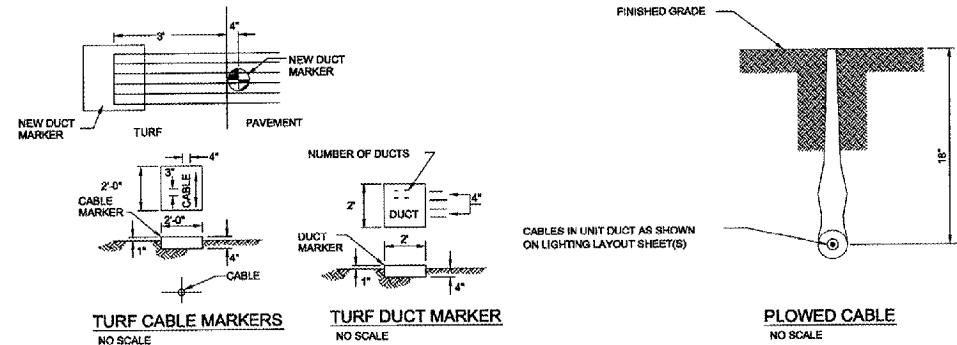


GENERAL ELECTRICAL NOTES

- The electrical installation as a minimum shall meet the National Electric Code and local regulations.
- 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.
- 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. 2 AWG or smaller shall be identified by a continuous white outer finish along its entire length. Neutral conductors size larger than No 2 shall be identified either by a continuous white outer finish along its entire length or by the use of white tape at its terminations and inside accessible wireways.
- 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.
- Neatly lace wiring in distribution panels, switches, and junction/pull boxes.
- 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.
- All ground connections to busses, 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 shall be made with exothermic welding process.
- Rigid steel conduit shall be used throughout the installation unless otherwise specified.
- All steel conduits, fittings, nuts, bolts, etc., shall be galvanized.
- Use insulated conduit bushing at each conduit termination.
- Use double lock nuts at each conduit termination.
- Unless otherwise shown, all exposed conduits shall be run parallel to or at right angles with the lines of the structure.
- Label both ends of all control conductors to identify terminal number and circuit. Such labeling shall be done at all terminals and splices.
- 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.
- 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.
- 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.
- 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 120 volt power/control circuit.
- Except where noted otherwise for equipment grounding conductors, splices and junction points shall be permitted only in junction boxes, ducts equipped with removable covers and at easily accessible locations.
- Unless otherwise noted, all underground field power multiple and series circuit conductors shall be FAA approved L-824, type, insulation, voltage and size shall be as specified.
- The joint of the L-823 connectors shall be wrapped in at least one layer of rubber or synthetic rubber tape and one layer of plastic tape, one-half lapped extending at least 1 1/2 inches on each side of the joint. Heat-shrink tubing shall be applied where cable enters back of connector, see Detail Drawing.
- The ID of the L-823 field-attached connectors shall match the cable OD to provide a watertight cable entrance.
- All power and control circuit conductors shall be copper. Aluminum shall not be accepted. This includes wire, cable, busses, terminals, switch/panel components, etc.
- 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 pre assembled and secured in mold before concrete is poured. Legend inscribed by hand in wet concrete shall not be acceptable.
- 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 incompatible 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.
- 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.
- 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.

CABLE SPLICING NOTES:

- HEAT-SHRINKABLE TUBING WILL NOT BE REQUIRED FOR ISOLATION TRANSFORMER PRIMARY CONNECTORS WHICH ARE MOLDED ON TO THE CABLE LEADS AT THE FACTORY.
- THE SEALANT TAPE AROUND THE CONNECTOR SHALL BE WATER INSOLUBLE, MAINTAINING ELASTICITY OVER A WIDE RANGE OF TEMPERATURE, AND SHALL BE RAYCHEM NO. 5-1011 OR APPROVED EQUAL.
- HEAT-SHRINKABLE TUBING SHALL HAVE MINIMUM EXPANDED ID. OF 1.200", MAXIMUM RECOVERED ID. OF .300", MINIMUM EXPANDED WALL THICKNESS OF .04", NOMINAL RECOVERY WALL THICKNESS OF 0.17", A MASTIC WATER SEALANT COATING APPLIED ON THE INSIDE, AND SHALL BE RAYCHEM NO. WCS-300-B-S OR APPROVED EQUAL.
- MINIMUM LENGTH OF THE HEAT-SHRINKABLE TUBING SHALL BE 6".
- CLEAN THE CABLE INSULATION BEFORE APPLYING THE TUBING WITH A SOLVENT SPECIFIED BY THE TUBING MANUFACTURER.
- TO HEAT THE TUBING, USE PROPANE TORCH, OR ELECTRIC HEATER RECOMMENDED BY THE TUBING MANUFACTURER.
- BEGIN HEATING THE TUBING AT THE CENTER, GO COMPLETELY AROUND, THEN MOVE TOWARD THE ENDS.
- CONTINUE HEATING THE TUBING UNTIL IT SHRINKS COMPLETELY AND THE SEALANT IS BEING SQUEEZED OUT AT BOTH ENDS.
- IF THERE IS ANY NOTICEABLE HEAT DAMAGE TO THE CABLE OR THE TUBING, THE CONNECTION, INCLUDING THE DAMAGED PORTION, WILL BE REMOVED AND ANOTHER CONNECTION MADE.
- ALLOW THE CONNECTION TO COOL BEFORE HANDLING.
- INSTALL THE CONNECTIONS WITHOUT BENDING THEM.
- THE CONTRACTOR SHALL TRAIN THE AIRPORT MAINTENANCE PERSONNEL IN THE EMPLOYMENT OF CABLE CONNECTION WITH HEAT-SHRINKABLE TUBING. THE INSTRUCTION SHALL INCLUDE AT LEAST TWO ASSEMBLIES AND DISASSEMBLIES FOR SUCH CONNECTIONS.
- AFTER COMPLETION OF THE CONSTRUCTION, THE CONTRACTOR SHALL TRANSFER ONE OF THE HEATER UNITS TO THE AIRPORT MANAGER. IT SHALL BECOME THE PROPERTY OF THE AIRPORT.



NOTES:

- MARKERS SHALL BE PLACED AS SPECIFIED IN ITEMS 108, 109 & 125 OF THE SPECIFICATIONS.
- COST OF CONCRETE MARKERS IS INCIDENTAL TO THE ASSOCIATED ITEMS OF DUCT OR CABLE.
- EDGE EXPOSED CONCRETE WITH A 1/2" RADIUS TOOL.
- WHERE ADDITIONAL SPACE TO FIT THE LEGEND IS REQUIRED, SOME OF THE FOLLOWING METHODS SHALL BE EMPLOYED:
 - REDUCE LETTER SIZE TO 3" HIGH, 2" WIDE
 - INCREASE THE MARKER SIZE TO 30" x 30" MAX.
 - PROVIDE ADDITIONAL MARKERS PLACED SIDE BY SIDE.

