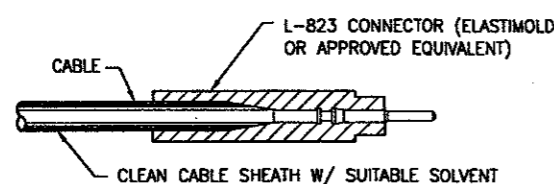
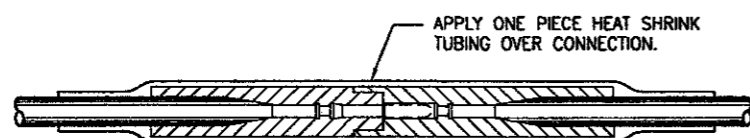


| MALS MODIFICATION SCHEDULE | | | | | | | | |
|----------------------------|------------------|------|----------------------|----------------------|----------------|----------------|-----------|--|
| EXISTING STATION | PROPOSED STATION | ITEM | EXISTING LIGHT ELEV. | PROPOSED LIGHT ELEV. | PROPOSED ANGLE | STRUCTURE TYPE | | ALTERATIONS |
| | | | | | | EXISTING | PROPOSED | |
| 2+00 | 2+00 | MALS | 634.11 | 634.11 | N/A | SEMIFLUSH | SEMIFLUSH | NONE |
| 3+99.95 | 3+99.95 | MALS | 634.88 | 634.88 | N/A | SEMIFLUSH | SEMIFLUSH | NONE |
| 5+99.93 | 5+99.93 | MALS | 635.72 | 635.72 | N/A | SEMIFLUSH | SEMIFLUSH | NONE |
| 7+99.82 | 7+99.82 | MALS | 636.37 | 636.37 | N/A | SEMIFLUSH | SEMIFLUSH | NONE |
| 9+99.92 | 10+00 | MALS | 637.72 | 640.37 | 3.4° | EMT | EMT | NEW FOUNDATIONS, FRANGIBLE COUPLINGS, EMT LAMPHOLDERS, WIRE, AND LAMPS |
| 11+99.59 | 12+00 | MALS | 643.00 | 644.37 | 3.5° | MG-20 | MG-20 | NEW FOUNDATIONS, FIBERGLASS LIR STRUCTURE, LAMP HOLDERS, WIRE, AND LAMPS |
| 13+99.83 | 14+00 | MALS | 650.00 | 648.37 | 3.5° | MG-20 | MG-20 | NEW FOUNDATIONS, FIBERGLASS LIR STRUCTURE, LAMP HOLDERS, WIRE, AND LAMPS |
| 15+99.92 | 16+00 | RAIL | 655.85 | 652.37 | 6.0° | MG-30 | MG-20 | NEW FOUNDATIONS, FIBERGLASS LIR STRUCTURE, JUNCTION BOX, RAIL CONTROL CABINET, FLASHER HEAD ASSEMBLY, WIRE, AND FLASH TUBE |
| 17+99.95 | 18+00 | RAIL | 662.00 | 656.37 | 6.0° | MG-30 | MG-20 | NEW FOUNDATIONS, FIBERGLASS LIR STRUCTURE, JUNCTION BOX, RAIL CONTROL CABINET, FLASHER HEAD ASSEMBLY, WIRE, AND FLASH TUBE |
| 19+99.85 | 20+14 | RAIL | 667.95 | 660.65 | 6.0° | MG-30 | MG-20 | NEW FOUNDATIONS, FIBERGLASS LIR STRUCTURE, JUNCTION BOX, RAIL CONTROL CABINET, FLASHER HEAD ASSEMBLY, WIRE, AND FLASH TUBE |
| 21+99.92 | 22+00 | RAIL | 674.00 | 664.37 | 6.0° | MG-40 | MG-30 | NEW FOUNDATIONS, FIBERGLASS LIR STRUCTURE, JUNCTION BOX, RAIL CONTROL CABINET, FLASHER HEAD ASSEMBLY, WIRE, AND FLASH TUBE |
| 23+99.90 | 24+00 | RAIL | 674.00 | 668.37 | 6.0° | MG-30 | MG-30 | NEW FOUNDATIONS, FIBERGLASS LIR STRUCTURE, JUNCTION BOX, RAIL CONTROL CABINET, FLASHER HEAD ASSEMBLY, WIRE, AND FLASH TUBE |

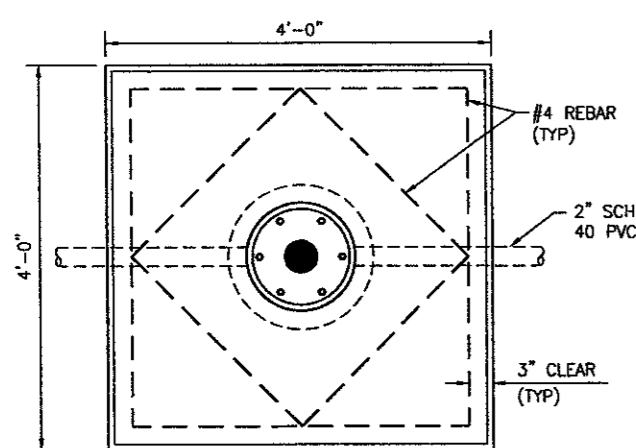


NOTE:
CONTRACTOR SHALL USE HEAT SHRINK TUBING. DIRECT FLAME HEATING OF TUBING WILL NOT BE ALLOWED UNLESS APPROVED BY THE MANUFACTURER.

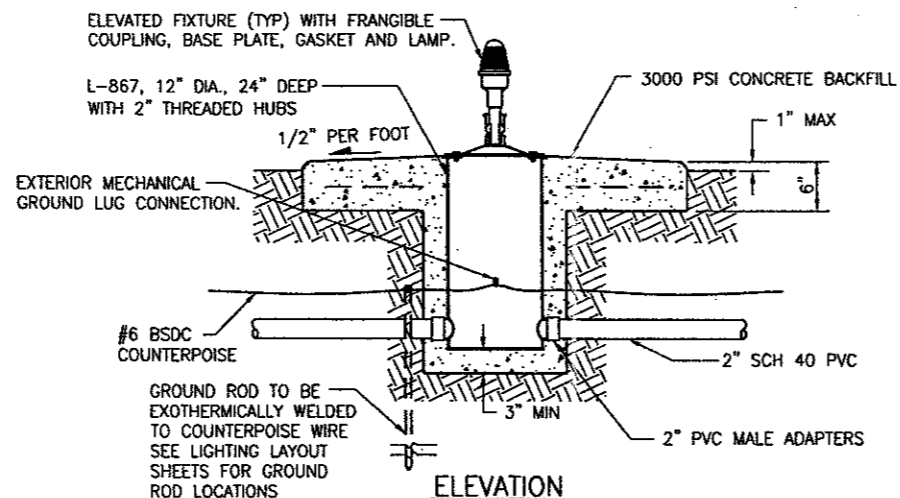
PLUG CONNECTED TO CABLE

1 SERIES CIRCUIT CONNECTOR DETAIL

NOT TO SCALE



PLAN



NOTES:

- CONTRACTOR SHALL CONNECT LIGHTS IN SERIES WITH EXISTING RUNWAY EDGE LIGHT CIRCUIT USING #8 L-824C 5KV CABLE WITH L-823 CONNECTORS.
- LEAVE APPROXIMATELY 6' OF EACH CABLE COILED IN EACH CAN SO THAT EACH CABLE MAY BE RAISED A MINIMUM OF 2' ABOVE THE TOP OF THE CAN.

2 RUNWAY 33 END LIGHT

NOT TO SCALE

DEMOLITION NOTES:

- EXISTING TAXWAY AND RUNWAY LIGHTING CIRCUITS MUST REMAIN IN SERVICE DURING ALL HOURS OF DARKNESS AND DURING INSTRUMENT METEOROLOGICAL CONDITIONS (BELOW 1000' OF CEILING OR 3 MILES VISIBILITY AS DEFINED BY FAA STANDARDS).
- PAVEMENT AREAS MAY BE CLOSED TO AIRCRAFT TRAFFIC WHEN PRIOR APPROVAL HAS BEEN COORDINATED THROUGH RESIDENT PROJECT REPRESENTATIVE (RPR).
- AFTER REMOVAL OF THE DESIGNATED AIRFIELD LIGHTS, THE CONTRACTOR SHALL RE-ESTABLISH THE SERIES CIRCUIT IN ORDER TO MEET THE REQUIREMENT OF NOTE 1. TEMPORARY JUMPER WIRES (LB24C 5KV CABLE) SHALL BE APPROVED AS NECESSARY TO ROUTE THE CIRCUIT CLEAR OF THE CONSTRUCTION ACTIVITY.
- TEMPORARY JUMPER WIRES SHALL NOT BE REUSED AS NEW CABLE FOR LIGHTING CIRCUITS. ABANDONED WIRES MAY BE REUSED FOR TEMPORARY JUMPERS PROVIDED THEY ARE IN SATISFACTORY CONDITION TO MEET THE REQUIREMENTS OF SAFETY CODES AND NOTE 1 ABOVE.
- TEMPORARY JUMPERS SHALL BE PROTECTED FROM MOWERS AND VEHICULAR TRAFFIC BY A MEANS SUITABLE FOR THE SITUATION TO ASSURE SAFETY. DIRT COVER, SAND BAGS, CONDUIT OR OTHER MEANS OF PROTECTION MAY BE NECESSARY AND ARE SUBJECT TO PRIOR APPROVAL BY RPR.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDUIT, DUCT, AND CIRCUIT CONFIGURATION. INFORMATION SHOWN IS BASED ON DATA AVAILABLE AT TIME OF DESIGN AND MAY NOT REFLECT ACTUAL EXISTING CONDITIONS.

MALS NOTES:

- EXISTING MALS IS A COMBINATION OF AN ORIGINAL GTE SILVANIA SYSTEM THAT HAS BEEN UPDATED WITH MULTI-ELECTRIC SOLID STATE TIMER AND GODFREY FLASH HEADS. CONTRACTOR SHALL VERIFY THAT THE NEW RAIL INDIVIDUAL CONTROL CABINETS AND FLASHER HEAD ASSEMBLIES ARE COMPATIBLE WITH THE EXISTING MALS CONTROL EQUIPMENT.
- CONTRACTOR SHALL PERFORM THE FOLLOWING MALS WORK:
 - REMOVE EXISTING MALS FROM STATION 9+99.92 THRU STATION 13+99.83 INCLUDING FOUNDATIONS AND MALS DISTRIBUTION PANEL.
 - REMOVE EXISTING RAIL FROM STATION 15+99.92 THRU STATION 23+99.90 INCLUDING FOUNDATIONS, JUNCTION BOXES, AND INDIVIDUAL CONTROL CABINETS.
 - BETWEEN STATION 9+99.92 AND STATION 23+99.90, CUT OFF EXISTING MALS DIRECT EARTH BURIED (DEB) CABLES A MINIMUM OF 12 INCHES BELOW EXISTING GRADE AND ABANDON IN PLACE.
 - FURNISH AND INSTALL MALS STATION 10+00, INCLUDING NEW EMT, FRANGIBLE COUPLINGS, LIGHT BASES, CONCRETE FOUNDATIONS, CONDUIT, WIRING, LIGHT ASSEMBLY, LAMPS, AND INCIDENTALS.
 - FURNISH AND INSTALL MALS STATIONS 12+00 AND 14+00 INCLUDING NEW LIR MG-20, CONCRETE FOUNDATIONS, CONDUIT WIRING, LIGHT ASSEMBLY LAMPS, AND INCIDENTALS.
 - FURNISH AND INSTALL RAIL STATIONS 16+00, 18+00, AND 20+14 INCLUDING NEW LIR MG-20, CONCRETE FOUNDATIONS, CONDUIT WIRING, JUNCTION BOX, CONTROL CABINET, FLASHER HEAD ASSEMBLY, FLASH TUBE, AND INCIDENTALS.
 - FURNISH AND INSTALL RAIL STATIONS 22+00 AND 24+00 INCLUDING NEW LIR MG-20, CONCRETE FOUNDATIONS, CONDUIT WIRING, JUNCTION BOX, CONTROL CABINET, FLASHER HEAD ASSEMBLY, FLASH TUBE, AND INCIDENTALS.
 - FURNISH AND INSTALL NEW POWER & CONTROL CABLES FOR MALS SYSTEM FROM THE EXISTING MALS POWER AND CONTROL PEDESTAL TO STATIONS 10+00 THRU 24+00 INCLUDING TRENCH & BACKFILL, CONDUIT JUNCTION CAN, JUNCTION CAN PLAZA, COUNTERPOISE, GROUND RODS, AND INCIDENTALS.
- FURNISH AND INSTALL NEW MALS POWER DISTRIBUTION PANEL INCLUDING FOUNDATION AND INCIDENTALS.
- SEE SHEETS E1 AND E2 FOR PLAN & PROFILE INFORMATION. SEE SHEETS E4 THROUGH E7 FOR MALS LAYOUT DETAILS.
- ESTABLISH AGGREGATE WALKWAYS. REPAIR EXISTING GRAVEL ROADWAY FROM END OF NEW ASPHALTIC CONCRETE ROAD OUTWARD TO MIDDLE MARKER.
- NOTWITHSTANDING THE EXISTING GROUND PROFILE SHOWN, MALS STATION TOP OF FOUNDATIONS OUTSIDE THE BLAST PAD SHALL BE 1-INCH MINIMUM, 2-INCHES MAXIMUM ABOVE FINISHED GRADE WITHIN THE RUNWAY SAFETY AREA (THROUGH MALS STATION 19+16). GRADING SHALL BE ACCOMPLISHED ACCORDINGLY AND SHALL MEET SAFETY AREA CRITERIA FOR SLOPE AND SMOOTHNESS. SEE GRADING DRAWINGS.
- ALL ELEVATIONS AND STATIONS ARE LOCATED RELATIVE TO THE APPROACH END OF RUNWAY 15 PAVEMENT.
- ALL LIR'S SHALL BE FAA APPROVED FIBERGLASS STRUCTURES MEETING SPECIFICATION FAA-E-2702.

R/W 33 END LIGHT NOTES:

- CONTRACTOR SHALL REMOVE, STORE, & REINSTALL R/W 33 END LIGHT FIXTURES AND ISOLATION TRANSFORMERS (8 TOTAL).
- EXISTING R/W 33 END LIGHT BASES AND CONCRETE ENCASUREMENTS SHALL BE REMOVED (8 TOTAL).
- CONTRACTOR SHALL FURNISH AND INSTALL NEW R/W 33 END LIGHT BASES AT LOCATIONS SHOWN ON SHEET E4 (8 TOTAL).
- CONTRACTOR SHALL PROVIDE NEW FRANGIBLE COUPLINGS.

R/W 15 DISPLACED THRESHOLD LIGHT NOTES:

- PROVIDE NEW LENSES FOR THE DISPLACED THRESHOLD LIGHTS. COLORS ARE SHOWN ON SHEET E2.

PROJECT NAME: **RUNWAY 15 ESA GRADING**

DRAWING TITLE: **R/W 15 MALS MODIFICATION NOTES**

DRAWING NO.: **E3**

DATE: **2/8/01**

BY: _____

CHECKED: _____

DESIGN: _____

DRAWN: _____

DATE: _____

TODD NO. _____

BID NO. _____

URS NO. **E701044.00**

DEBID: _____

APPROVED: _____

DATE: _____

PRELIMINARY

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www.usaep.com

URS Greiner Woodward Clyde
Consulting Engineers
02-04-05