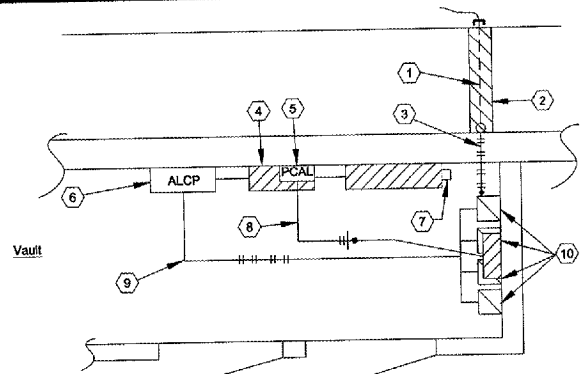


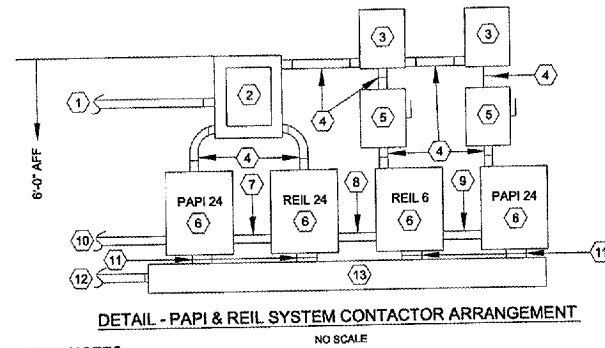
HA022



DETAIL - AIRPORT LIGHTING VAULT MODIFICATIONS
NO SCALE

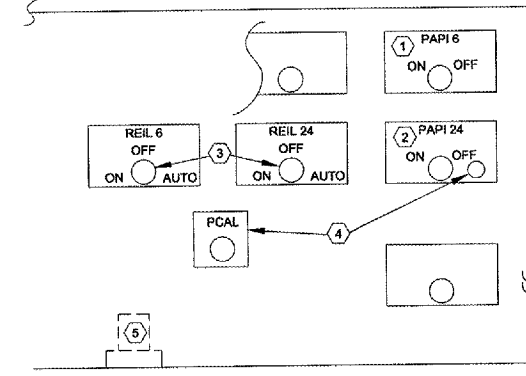
DETAIL NOTES:

- 1 Conductors in 3" RMC shall consist of the following. These shall be Unit Duct conductors with the outer jacket removed.
 - 3 - #6 (480 volt to Runway 6 PAPI)
 - 3 - #4 (240 volt to Runway 24 PAPI)
 - 3 - #8 (480 volt to Runway 6 REIL)
 - 3 - #8 (240 volt to Runway 24 REIL)
- 2 Saw-cut, remove and grade existing concrete sidewalk as necessary to place conduit 18" below grade.
- 3 Seal penetration through existing concrete block wall watertight with non-shrink grout.
- 4 Existing load center; remove one 2-pole circuit breaker feeding the existing VASI system and replace with a 2-pole, 30 amp circuit breaker of the same brand to feed the proposed PAPI/REIL load center. Disconnect and abandon in place one existing VASI contactor located below this load center.
- 5 Existing Pilot Control Airfield Lighting (PCAL) system shall remain in place with proposed REILS connected to operate in the automatic mode from the 100% brightness relay in this panel. See typical control schematic, this Sheet. Existing field lighting control scheme shall remain undisturbed.
- 6 Existing Airport Lighting Control Panel. See detail, this Sheet for toggle switch additions for PAPI & REIL control.
- 7 Surge arrester for 120/240 volt single-phase application. Arrester shall have LED indication for alarm and normal operation, with individually fused suppression modes, 1/2 nanosecond response, and shall be UL 1449, Second Edition Listed. Surge capacity shall be 80 kA/phase - APT #TE1XF, or equal. Connect to the line side of this existing panelboard.
- 8 2 - #10, 1 - #10 neutral, and 1 - #10 equip ground in 1/2" C.
- 9 7 - #14 in 1/2" C.
- 10 See detail this Sheet for REIL and PAPI lighting control component arrangement.



DETAIL NOTES:

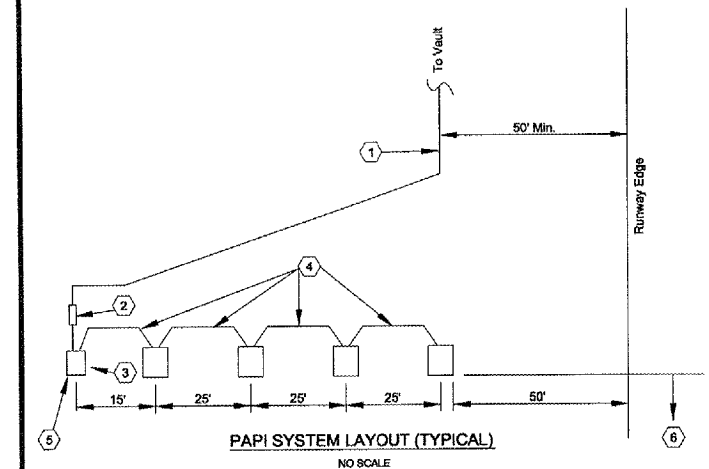
- 1 2 - #10, 1 - #10 neutral, and 1 - #10 equip ground in 1/2" C from proposed 30 amp, 2-pole circuit breaker in existing load center.
- 2 100 amp, 120/240 volt, main-lug only, single-phase, 3-wire S/N, 8-circuit load center in NEMA 1 surface mount enclosure with separate ground bus - Square D #Q0816L100DS/PK7GTA, or equal. Provide with two 15 amp, 2-pole circuit breakers for PAPI systems, and two 15 amp, 2-pole circuit breakers for REIL systems.
- 3 3 kVA, 240 volt to 480 volt, single-phase stepup transformer - Square D, #3S1F, or equal.
- 4 2 - #12, 1 - #12 neutral, and 1 - #12 equip ground in 1/2" C.
- 5 30 amp, 3-pole, 600 volt, fusible safety switch in NEMA 1 enclosure with ground bus - Square D, #H361, or equal. Fuse two poles at 8 amps with Bussman #FRSRB, or equal. Provide one set of spare fuses.
- 6 30 amp, 2-pole, 600 volt, electrically held lighting contactor with 120 VAC coil, in a NEMA 1 surface mounted enclosure - Square D, Class 8903, #SMG1V02, or equal. Provide plastic laminated engraved adhesive-backed labels for front of enclosure to read as shown. Lettering shall be 1/2" high, black on a white background.
- 7 4 - #14 in 1/2" C.
- 8 3 - #14 in 1/2" C.
- 9 2 - #14 in 1/2" C.
- 10 7 - #14 (2 spares) in 1/2" C, 120 volts from ALCP control switches.
- 11 2 - #12, and 1 - #12 equip ground in 1/2" C.
- 12 Conductors in 3" RMC shall consist of the following. These shall be Unit Duct conductors with the outer jacket removed.
 - 3 - #6 (480 volt to Runway 6 PAPI)
 - 3 - #4 (240 volt to Runway 24 PAPI)
 - 3 - #8 (480 volt to Runway 6 REIL)
 - 3 - #6 (240 volt to Runway 24 REIL)
 Provide grounding type insulating bushing on conduit termination and bond to other equipment ground wires with #6 AWG.
- 13 NEMA 1, 6" x 6" x 36" screw-cover wireway for splicing field conductors to #12's.



ALCP MODIFICATIONS
NO SCALE

DETAIL NOTES:

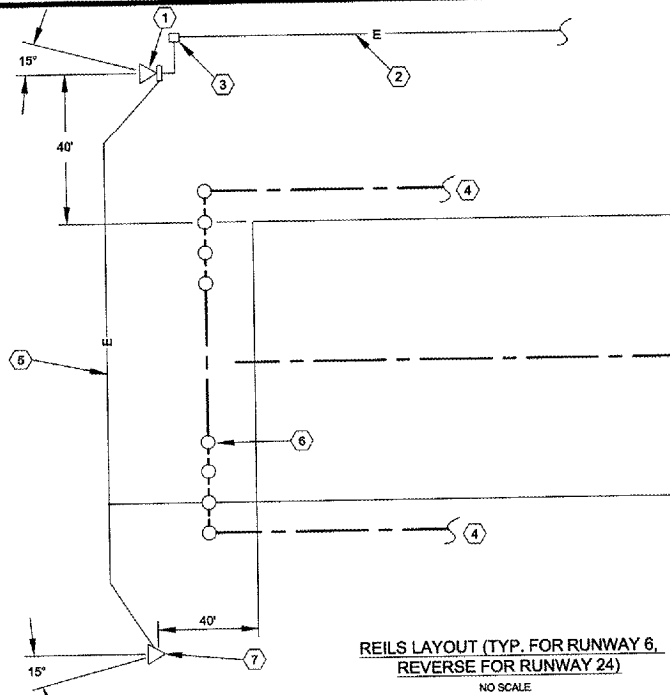
- 1 Remove existing control wiring for the VASI system. Provide new control wiring to terminal board in this ALCP to reuse this switch to control PAPI 6 contactor coil. Remove existing legend plate and provide one new plastic laminated engraved legend plate to match existing size and style, with legend as shown.
- 2 Provide one new 2-pole, single-throw, maintained contact, bat-handle 20 amp toggle switch to match existing style. Provide one new plastic laminated engraved legend plate to match existing size and style, with legend as shown.
- 3 Provide one new 2-pole, double-throw, center-off, maintained contact, bat-handle 20 amp toggle switch to match existing style. Provide one new plastic laminated engraved legend plate to match existing size and style, with legend as shown.
- 4 Remove one existing red miniature pilot light and relocate to lower center of the ALCP as shown. Provide new legend plate to match existing with legend as shown.
- 5 Mounted in the bottom of the ALCP, provide one plug-in style, 1/3 hp rated, double-pole, double-throw relay with 120 VAC coil, coil power indicator and push-to-test button - Dayton #5YP82/5X852, or equal. Connect per schematic, this Sheet, to control REIL systems.



PAPI SYSTEM LAYOUT (TYPICAL)
NO SCALE

DETAIL NOTES:

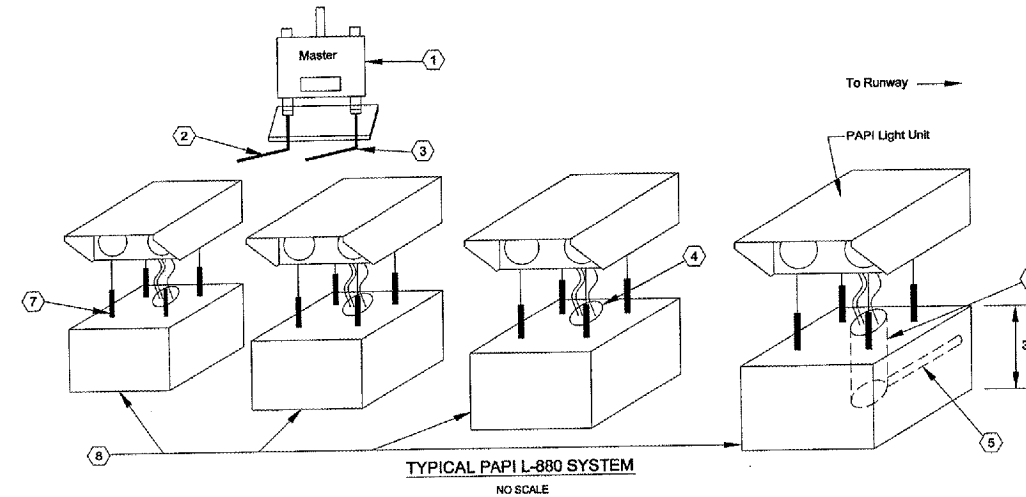
- 1 See Site Plans for circuit routing to vault and conductor sizes.
- 2 Stepdown transformer assembly. See detail, Sheet 9.
- 3 Master Unit. See detail, this Sheet.
- 4 Interconnect wiring in trench as required by system manufacturer.
- 5 Typical four-box layout. See chart, Sheet 9 for exact elevation to light beam center for each box.
- 6 See Site Plans for exact dimensions from runway threshold.



REILS LAYOUT (TYP. FOR RUNWAY 6,
REVERSE FOR RUNWAY 24)
NO SCALE

DETAIL NOTES:

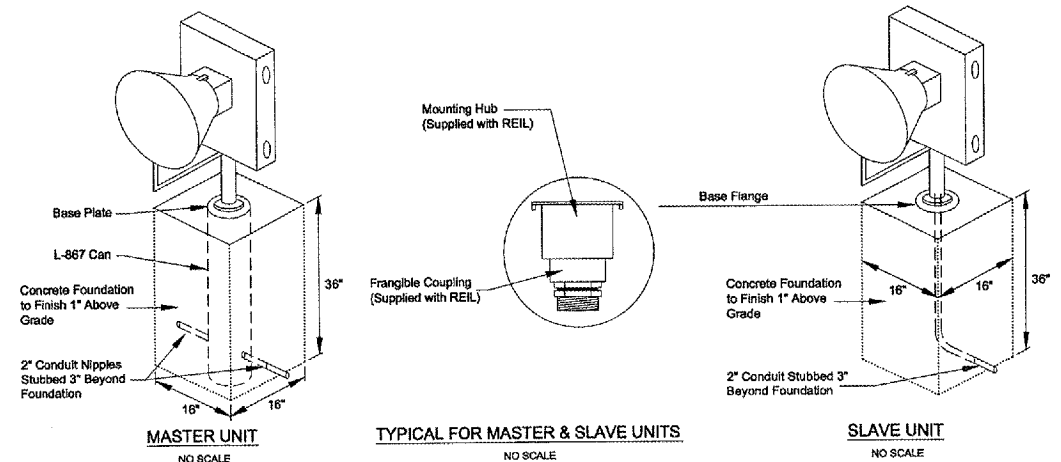
- 1 REIL master unit. For master and slave units, the vertical aiming angle shall be 10 degrees above horizontal, and angled away from the runway centerline as shown.
- 2 See Site Plans and 1-Line Diagram for wire feeds.
- 3 Stepdown transformer assembly. See detail, Sheet 9.
- 4 Existing runway lighting circuit. Locate and avoid damaging.
- 5 Interconnect wiring between master and slave units shall be per system manufacturer's requirements, and shall be considered incidental to this item. All power wiring shall be 600 volt rated, Type C for direct burial installations. Provide a minimum of two spare conductors between units.
- 6 Existing threshold lights. Locate and avoid underground wiring.
- 7 REIL slave unit.



TYPICAL PAPI L-880 SYSTEM
NO SCALE

DETAIL NOTES:

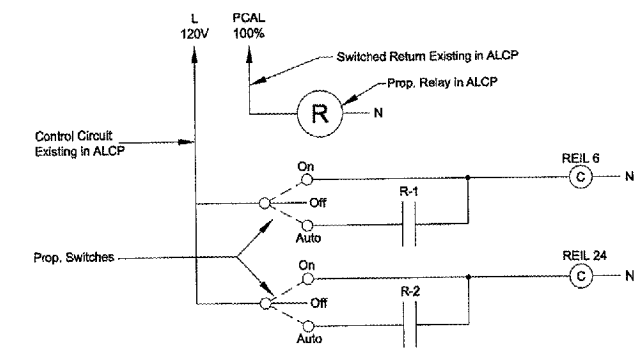
- 1 Master power and control unit. Concrete foundation requirements shall be same as Note 8.
- 2 240 volt AC power wiring in trench from local stepdown transformer. See Sheet 9.
- 3 Power and control wiring in trench as required by manufacturer.
- 4 Provide frangible couplings and L-823 connectors for all wire entrances into base plate hubs.
- 5 Typical 2" conduit stubbed 3" beyond outside edge of foundation for wiring.
- 6 Typical L-867, style D can with base plate; location per manufacturer's requirements.
- 7 Base flanges shall be fastened to the foundation with 1/2" x 6" galvanized anchor bolts, washers and nuts; quantity per flange shall be per manufacturer's requirements.
- 8 Concrete foundations shall extend 1 ft beyond edge of light box units, and shall finish 1" above the highest surrounding grade with edges beveled or chamfered. Center the unit on the foundation.



MASTER UNIT
NO SCALE

TYPICAL FOR MASTER & SLAVE UNITS
NO SCALE

SLAVE UNIT
NO SCALE



TYPICAL REIL CONTROL SCHEMATIC
NO SCALE