

9-22-82

ELECTRICAL SEPARATION TEST
PUNCHLIST ITEM 3.52
(REFERENCE: SER SECTION 8.4.6.1)

1. PURPOSE

To justify the conclusion that fire or failure resulting from electrical faults induced in non-Class 1E cables will not cause electrical failure of Class 1E cables directly above.

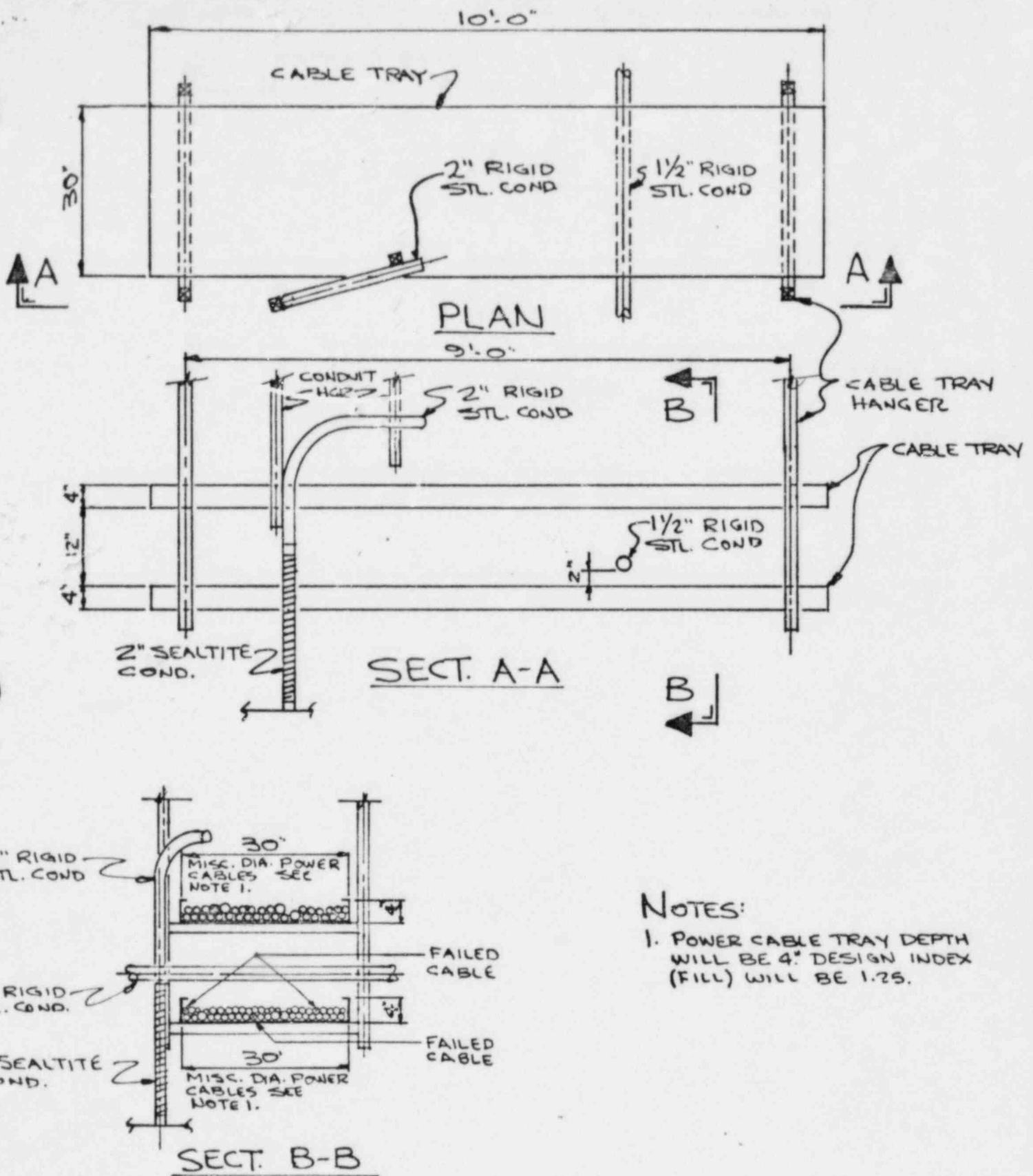
2. TEST CONFIGURATIONS

- a. All cables tested will be obtained from La Salle stock and be qualified to IEEE 383-1974.
- b. Cable failures will be induced by electrical faults only.
- c. Only power cable configurations will be tested.
(Instrumentation and control cables have insufficient potential energy to induce damage.)
- d. Failed cables will be installed in each of three locations (top, bottom and side) in the cable tray representing the non-Class 1E installation. (Figure 1)
- e. Cable failures will be induced by two methods in each of the three locations, one by high current representing a fault and one by a lower current value representing an overloaded circuit.
- f. Cable trays will be solid bottom 10 foot lengths of 30-inch wide tray from La Salle stock. Cable trays will be filled to a design index of 1.25.
- g. Cable trays representing Class 1E configurations will be installed 1 foot above the top of the lower "non-Class 1E" tray. Centerlines of both trays will be parallel to each other.

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- h. Conduit will be rigid steel, 1½" diameter, 10 foot lengths and liquid-tight galvanized steel (sealtite) 5 foot lengths from La Salle stock.
- i. Conduits representing Class 1E installations shall be installed within two-inches of the "non-1E" tray. Centerlines of conduit will be perpendicular to the centerline of the cable tray.
- j. Class 1E cable trays and rigid steel conduit will be supported with seismic hangers (Unistrut) at maximum 9 foot intervals. Sealtite will be supported just beyond its coupling to a length of rigid steel conduit.
- k. Power cable test configuration is shown in Figure 1.



NOTES:

1. POWER CABLE TRAY DEPTH WILL BE 4" DESIGN INDEX (FILL) WILL BE 1.25.

FIGURE - 1