

5. DRAFT DESIGN CRITERIA FOR ASD CABLING

May 25, 2001

Overall goal:

Provide specifications and drawings in sufficient detail to have SNS technicians and/or Davis Bacon forces procure and install cable tray, conduit, and cabling, terminate cabling, perform continuity testing, and perform loop testing.

Deliverables:

Provided by LBNL, LANL, and BNL

1. An Excel spreadsheet cable listing that will be input to the project cabling database.
2. For power cabling, calculation of heat dissipation needed to properly size cables, trays, and penetrations.
3. Drawings showing power and/or signal flow and cable termination information similar to those shown in Figure 1 and 2 below.
4. Recommended installation approach that identifies key characteristics such as spacing of power cables, lengths that are critical to performance, etc.

Provided by SNS-ASD

1. Calculations of tray fill, and other data needed to size trays and conduits and/or generate the drawings.
2. Drawings showing tray sizes, locations, and mounting details
3. A tray numbering/naming scheme that will allow routing data to be entered into the cabling database.
4. Generation of detailed routing data and pull lists.

Assumptions:

1. System drawings do not need to list all equipment. They need only show system construction in sufficient detail to allow listings of detailed data to be used effectively.
2. ASD tray designs will be completed prior to labs having to calculate cable lengths.
3. Cable drawings needed are for the cabling from cabinets or racks to junction boxes, terminal strips, connectors, etc. on the technical equipment. Cabling within cabinets and on the technical equipment to these connection points are not in the scope of this effort.
4. The project cabling database will be used to generate cable pull lists, detailed listings, etc. (ASD will provide modifications and/or additions to the database where needed).
5. An SNS Installation Team Leader will travel to your lab to participate in the generation of drawings and specifications to insure someone at the SNS site is familiar with the design and intentions.
6. All work will meet the requirements of SNS 109010000-SR0001, Systems Requirements Document (SRD) for Cabling.
7. Cabling data and drawings will be complete 2 months prior to building RFE or BOD dates.

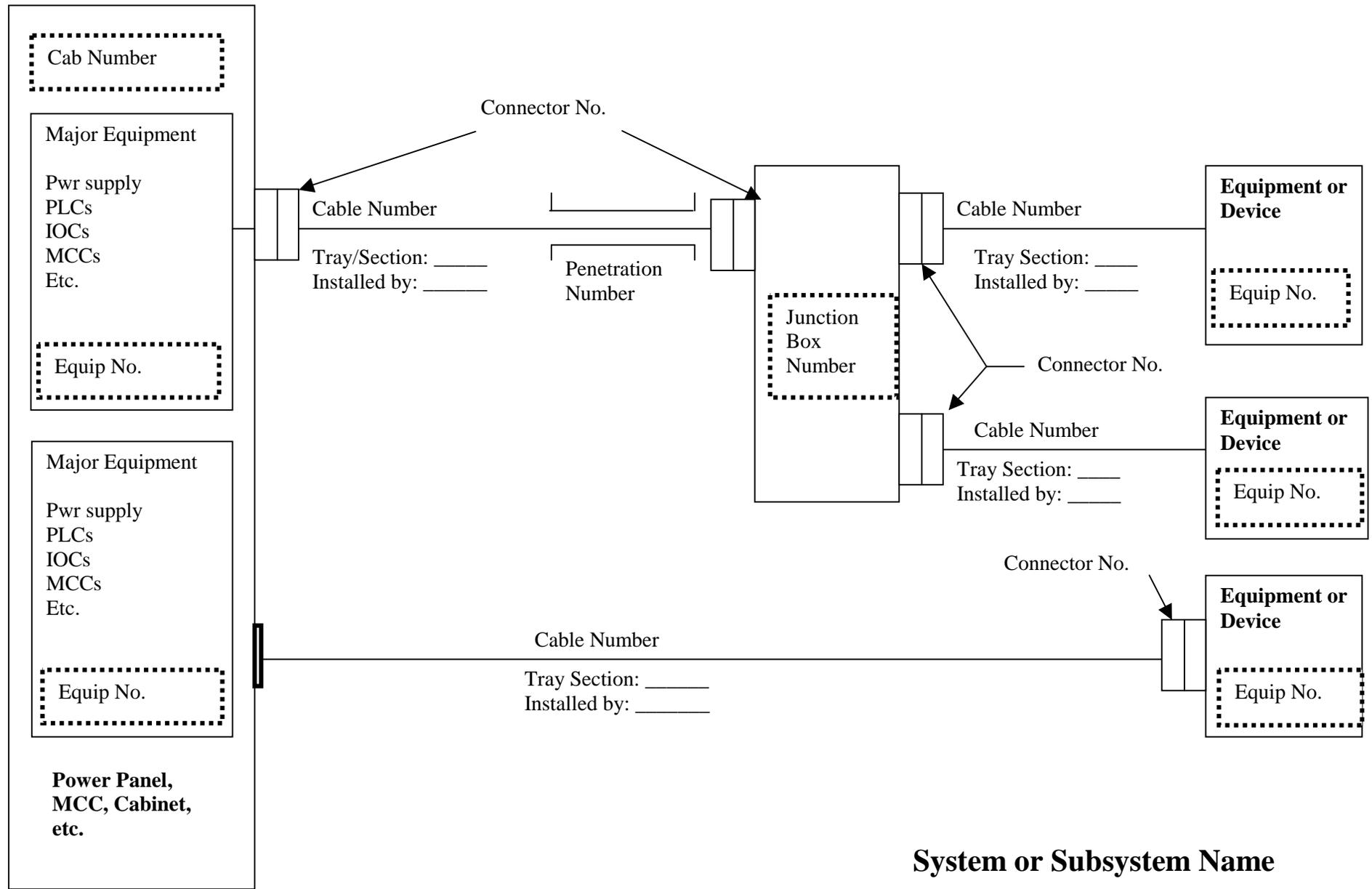
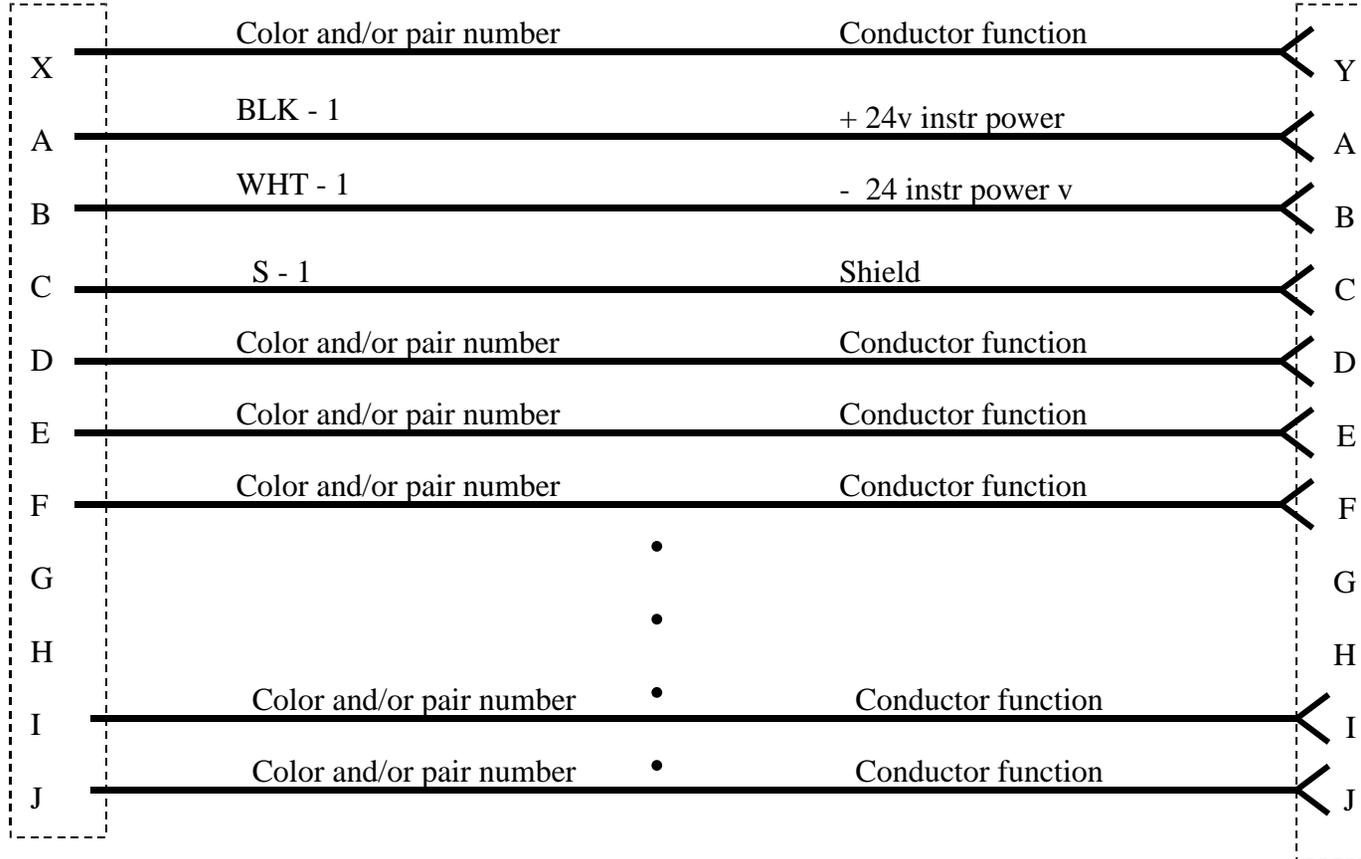


Fig. 1. Typical cable installation drawing.

Connector Number or
Terminal Strip designation

Connector Number or
Terminal Strip designation



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Cable Number xxxxx
Installation Dwg No. _____
Terminated by: _____

Fig. 2. Cable wiring diagram.