

DESIGN TEAM RESPONSIBILITIES

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GENERAL INFORMATION:

Telecommunications Systems Structural, Design, and Building Requirements & Design Team Responsibilities for New Buildings and Renovations

The information included within this document is for submittal to Architects and Engineers at the beginning of the design process for each project, to be used as a guideline for expected responsibilities on the part of all involved parties, in the interest of obtaining a properly designed and documented project. This document is not intended to replace any existing UD Network & Systems Services Specifications for the builds of Telecommunications Systems in newly constructed or renovated buildings.

The department of Network & Systems Services (NSS) partners with the UD Facilities Planning & Construction (F.P.&C) department during the entire build or renovation process and acts as the University consultant to insure that all Telecommunications Systems are built to most current standards to support all aspects of voice, video (CATV), and data. An NSS Network Engineer is assigned to each project to attend all design meeting's, review design documents and drawings, then submit final specifications for the following aspects of the build or renovation:

- ✓ **Inter-Building Telecommunications Conduit and Manhole Systems**
- ✓ **Inter-Building Telecommunications Cabling Systems**
- ✓ **Intra-Building Telecommunications Cabling Systems**

As per final design of the project, the following aspects of design will be a part of the overall package, with the breakdown of responsibility listed:

1) Project Architect and Engineer Responsibilities

- a) Site drawings showing inter-building conduit and manhole systems. Site plan must show other UD buildings that inter-building cables are routed back to.
- b) Building/Floor drawings showing Telecommunications Outlets with UD standard triangles and alphabetical configuration designations. NSS will supply an Autocad template of these symbols. There shall also be a UD standard room circuit number on the drawings at each Telecommunications Outlet/triangle location, as per the specifications.

- c) Adequately sized Telecommunications Building Entrance Rooms, and Telecommunications Equipment rooms, based on the overall building Telecommunications requirements, which will be determined by UD-NSS during the design review process. Rooms shall be generally located on each floor, with total horizontal cable length to the furthest point on the floor being no more than 295 ft. from the termination point in the Telecommunications Room. A general rule of thumb for minimum room size is suggested as 10 ft. x 10 ft. (100 sq. ft total).
- d) Riser Diagram/Drawing for voice, video, and telephone cabling between Telecommunications Rooms.
- e) Indication on drawings of AC power outlet locations in Telecommunications Rooms.
- f) Indication on drawings of ¾" AC rated plywood, painted with 2 coats of fire retardant paint on *all* walls of the Telecommunications Rooms, as per specifications.
- g) Indication of Adequate lighting in all Telecommunications Rooms.
- h) Indication of VCT Flooring in all Telecommunications Rooms (light color).
- i) "Open" ceilings in all Telecommunications Rooms (no suspended or drywall ceilings).
- j) Indication on drawings of 4" Riser Sleeves between each floor Telecommunications Rooms.
- k) Indication on drawings of 4" Sleeves for horizontal cable routing into each Telecommunication Room.
- l) Indication on drawings of cable tray in all hallways in the building, preferably routed along one of the walls in the ceiling.
- m) Indication on drawings of 1" metallic/bushed sleeves into all offices from the hallway of each building, for cable routing from each room, into the hallway cable tray.
- n) Indication of appropriate size metallic/bushed sleeves into each lab, classroom, conference room, or any other type of similar room from the hallway of each building, for cable routing from each room, into the hallway cable tray.
- o) There shall be no conduits or piping carrying water, steam, or similar routed thru any Telecommunications Room.
- p) All efforts shall be made to only route HVAC duct into the room that is intended to supply the room itself.

2) UD Network & Systems Services Responsibilities

- a) Building Entrance Telecommunications Room design criteria and design drawing to be submitted to the design team for inclusion within the construction drawings and documents.
- b) Individual Floor Telecommunications Room design criteria and design drawings to be submitted to the design team for inclusion within the construction drawings and documents.
- c) Inter-Building Telecommunications Conduit and Manhole Specifications to be submitted to the design team for inclusion within the construction documents.

- d) Inter-Building Telecommunications Cabling Specifications to be submitted to the design team for inclusion within the construction documents.
- e) Intra-Building Telecommunications Cabling Specifications to be submitted to the design team for inclusion within the construction documents.
- f) Interface and coordinate with phone company (Verizon) for telephone trunk cable/Rate Demarcation Point installation within the building, if applicable.
- g) Interface and coordinate with a CATV company (Comcast, Campus Televideo Inc.) for design of the campus CATV System.
- h) Interface with the UD-IT Telephone Services Department and the users/building occupants to determine the telephone, fax line, and special circuit needs within the building. All ordering of existing Telephone line moves and orders for new service are processed thru the Telephone Services Department.
- i) Submittal of NSS Microsoft Work Breakdown Structure/Schedule of all NSS work as listed below that will be entered into the Master Project Schedule.
- j) UD Technician installation of the network/data system electronics for campus data/internet access, and the Blackboard/UD-1 card access system for door entry and debiting for cash transaction locations. This equipment is installed *after* the project Telecommunications Contractor has installed, terminated, and tested all inter/intra-building Telecommunications Cabling
- k) Interface with the UD-IT User Services Department for user/building occupant support and assistance with Personal Computer network configuration and general network needs.
- l) UD Technician and Verizon installation of the voice/telephone system and lines.
- m) Provide network connection and IP address for the door entry system, if applicable.
- n) Provide network connection and IP address for the energy management system, if applicable.
- o) Order and install the leased circuit or DAR/Dial-Up connection for the building fire alarm reporting system.

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