

Note to the Designer/Architect/Engineer: These Specifications are basic minimum criteria to be met in preparing the final project specifications for this section, which is the responsibility of the Designer

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1.0 GENERAL

1.1 Overview

- .1 Contractors are responsible for labeling all termination in accordance with UIT-IPA standards, any deviations will be corrected at the Contractor's expense.
- .2 The Contractor will be responsible for informing UIT-IPA Planning Manager of companies being sub-contracted as part of the project and the names of the technicians on site
- .3 The Contractor will be responsible for the coordination of furring, patching fire stopping and labelling as required to complete work.
- .4 The Contractor will secure all Communication Rooms and areas they are working within when vacating the space for any length of time or at the end of the workday.
- .5 The Contractor is responsible for maintaining a clean work environment and materials that are being used are not obstructing any traffic paths.
- .6 The Contractor is responsible for clearing all debris and dust from the Communication Rooms and workspaces.
- .7 The Contractor is responsible for ensuring all sub-contractors are adhering to all Health and Safety Codes, UIT-IPA standards and University standards.
- .8 Any overtime requirements must be approved by UIT-IPA Planning Manager prior to work commencing.

1.2 Horizontal Cables

- .1 All horizontal pathways feed directly from a Communication Room out to a faceplate for termination.

1.3 Pathways

- .1 Pathways consist of cable bundles run from the communication room along cable trays, J-hooks or conduit suspended above a plenum ceiling.
- .2 Cables will be dropped through an interior wall utilizing dedicated conduits and terminating at an information outlet/faceplate.
- .3 Pathways will be cleared of any materials or other equipment.
- .4 An access hatch will be made available and clear of wall or architectural obstructions to access the cable trays.
- .5 Pathways will be routed to avoid electrical interference.

1.4 Conduits

- .1 All materials purchased by the Contractor will be stored by the Contractor at their trailer or site.
- .2 The Contractor will be responsible for the purchase of all materials for the project and for the delivery and inventory of all materials for the project.
- .3 No section of conduit should be longer than 30 meters or contain two-90 degree bends.
- .4 A pull or splice box should be provided if there are more than two 90 degree bends, there is a reverse bend in the run or the length is over 30 meters.
- .5 Conduits should terminate in a separate electrical box or equivalent and should not be incorporated with any electrical faceplates.
- .6 A poly twine pull cord should be placed at each end of the conduit.

This table gives the internal diameter dimensions of conduit and a recommended number of cables that may be placed within them.

Conduit Size (inches)	No. of JKT. Stn.	6 PR.	16 PR.	No. of Inside Wiring-	Cables 50 PR.	75 PR.	100 PR.
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	Wires			25 PR.			
$\frac{3}{4}$	6	3	2	1	-	-	-
1	8	6	3	2	1	-	-
1 $\frac{1}{4}$	16	10	4	3	1	1	1
1 $\frac{1}{2}$	20	15	6	4	2	1	1
2	30	20	12	7	4	3	2

1.5 Ceiling

- .1 During the design phase UIT-IPA planning Manager should be consulted to discuss the type of ceiling that will be installed in all spaces. The type of materials does affect the wiring infrastructure. Obstruction to access for the cables trays, J-hooks, AV equipment or Wireless Access Points should be prevented.
- .2 Access hatches need to be incorporated into the ceiling design.
- .3 If designing for a hard ceiling than zone conduit to a common distribution point with a maximum fill of 50%.
- .4 Install drop conduit to each service work area with a maximum fill of 50% fill.
- .5 Access hatches to spaces above the ceiling should be placed every 5 meters.
- .6 If installing a removable ceiling (tiles) the J-hooks should be placed every 2 meters.
- .7 For open mechanical ceiling, cable trays are recommended. There should be a minimum of 30 centimeters of vertical space above the tray.

1.6 Drawings

- .1 Drawings indicate the location of the cable installations using the appropriate communications symbol. If there is a conflict on site then the Contractor will contact UIT-IPA Planning Manager for verification prior to proceeding with cable installations.

- .2 Drawings will represent all the locations using the UIT-IPA standardized symbols for the location of any cable requirements for a networked or analog service.
- .3 The horizontal cables that are fed from each Communication Room will be defined per floor on each drawings by UIT-IPA Planning Manager.
- .4 Cable numbering assignments will be defined on each drawing by the UIT-IPA Project Administrator for the Contractor to follow for terminating and labeling of horizontal cables.
- .5 Contractors will install all cabling infrastructure as per the drawings provided and will not omit or add any cables unless first reviewed and approved by the UIT-IPA Planning Manager.

2.0 PRODUCTS

2.1 Cable trays

- .1 All cables trays will be a minimum of 45.72 centimeters wide.
- .2 The recommended standard for cables trays is Homaco TRC-512 and associated hardware.

2.2 CAT 6 Voice and Data Cables.

- .1 All voice and data cabling will be NORDX Cat 6, 4 pair, 2400 service plenum rated cables. Colour blue.

2.3 Patch Cables

- .1 All patch cables will be 3 meters CAT 6, 4 pair, 2400 service. Colour blue.

3.0 EXECUTION

3.1 Pathways

- .1 Pathways will be installed with a minimum of 7.6 centimeters of clear vertical space above the ceiling tiles to ensure accessibility and adequate clearance for pulling additional cables.

- .2 All applicable codes will be followed for the installation of all cable trays.

3.2 Horizontal Cables

- .1 All horizontal cabling must be Belden installed and tested to meet Belden certification.
- .2 In accordance with Belden industry specification standards, at no time will CAT 6 cables be painted. If this is done, the cables will be replaced at the Contractors expense.
- .3 If, during the installation or testing stage of cables, it is determined that they have been damaged; the Contractor will replace the cable, patch cord, pigtail or other wiring infrastructure related material at their expense.

End of Section