

Approved: 2011-12-31

Part 1 General

1.1 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for [communication raceway systems] and include product characteristics, performance criteria, physical size, finish and limitations.

Part 2 Products

2.1 SYSTEM DESCRIPTION

- .1 Telecommunications raceways system consists of outlet boxes, cover plates, conduits, cable trays, pull boxes, sleeves and caps, fish wires, service poles, and service fittings.
- .2 Existing overhead cable tray distribution system.

2.2 MATERIAL

- .1 Conduits: EMT type, in accordance with Section 26 05 34 - Conduits, Conduit Fastenings and Conduit Fittings.
- .2 Cable trays: existing
- .3 Indoor service poles: in accordance with Section 26 27 23 - Indoor Service Poles.
- .4 Fish wire: polypropylene type.

Part 3 Execution

3.1 INSTALLATION

- .1 Modify and extend existing raceway system, including overhead distribution system, fish wire, outlet boxes, floor boxes, pull boxes, cover plates, conduit, sleeves and caps, cable tray, service poles, miscellaneous and positioning material to constitute complete system.

3.2 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

3.3 PROTECTION

- .1 Protect installed products and components from damage during construction.

- .2 Repair damage to adjacent materials caused by pathways for communications systems installation.

END OF SECTION

Part 1 General

- .1 Canadian Standards Association (CSA International)
 - .1 CSA-C22.2 No. 214-02, Communications Cables (Bi-National standard with UL 444).
- .2 Telecommunications Industry Association (TIA)/Electronic Industries Alliance (EIA)
 - .1 TIA/EIA-568-B.1-(2001), Commercial Building Telecommunications Cabling Standard, Part 1: General Requirements.
 - .2 TIA/EIA-568-B.2-(2001), Commercial Building Telecommunications Cabling Standard, Part 2: Balanced Twisted-Pair Cabling Components.
 - .3 TIA/EIA-568-B.3-(2000), Optical Fiber Cabling Components Standard.
 - .4 TIA/EIA-606-A-(2002), Administration Standard for the Commercial Telecommunications Infrastructure.

.1 Refer to TIA/EIA-598-C, Annex A for definitions of terms: optical-fiber interconnect, distribution, and breakout cables.

- .1 Structured telecommunications wiring system consist of unshielded-twisted-pair and coaxial cables, terminations, connectors, cross-connection hardware and related equipment installed inside building for occupant's telecommunications systems, including voice (telephone), data, and image.
- .2 Installed in physical star configuration with separate horizontal and backbone sub-systems.
 - .1 Horizontal cables link work areas to telecommunications rooms located on same floor.

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 As-built Records and Drawings:
 - .1 Provide database reflecting cable installation and cross-connections.
 - .2 Provide electronic drawings in AutoCAD 2010 format depicting all construction.
 - .3 Provide two (2) bound complete hard-copy sets of as-built records to the Departmental Representative.
 - .1 Provide and place one hard copy of as-built records for each telecommunications room in plan holder in each telecommunications room.

1.5 QUALITY ASSURANCE

- .1 Health and Safety Requirements: do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.

Part 2 Products

2.1 FOUR-PAIR 100 Ω BALANCED TWISTED PAIR CABLE

- .1 Four-pair, 100 ohm balanced unshielded-twisted-pair (UTP) cable, flame test classification FT6 or MPP or CMP to: CSA-C22.2 No. 214, Category 5e (Cat 5e) to: TIA/EIA-568-B.2.
- .2 Cable shall be manufactured by Nordex / Belden/CDT to match existing system.

2.2 WORK AREA UTP 4-PAIR MODULAR JACK

- .1 Eight-position modular jack ("RJ-45"), type T568A Category 5e to: TIA/EIA-568- B.2:
 - .1 Mounted in compatible single gang faceplate, flush entry, 4 jack positions per faceplate.

2.3 TERMINATION AND CROSS-CONNECTION HARDWARE FOR UTP

- .1 Existing block for housing 12 IDC terminal strips, mounted on wall.
 - .1 Distribution rings or channels capable of externally mating with the above mount for managing cross-connection wires.
- .2 Provide f(4) additional 1A wafers. Install as required to accommodate new cabling.

2.4 COAXIAL CABLE

- .1 RG-6 coaxial drop wire: centre conductor No. 18 AWG copper-covered steel, polypropylene foam insulation, medium density polyethylene skin, two longitudinal drain wires for shielding continuity, outer conductor and shield of polyolefin-coated aluminum tape, and outer jacket of polyvinyl chloride.

Part 3 Execution

3.1 INSTALLATION OF TERMINATION AND CROSS-CONNECT HARDWARE

- .1 Install termination and cross-connect hardware on wall as indicated and according to manufacturers' instructions. Identify and label as indicated to: TIA/EIA-606-A.

3.2 INSTALLATION OF HORIZONTAL DISTRIBUTION CABLES

- .1 Install horizontal cables as indicated in conduits and cable trays from telecommunication rooms to individual work-area jacks. Identify and label as indicated to: TIA/EIA-606-A.
- .2 Support horizontal cables at intervals not exceeding 1.5 metres.
 - .1 Where raceways are used to distribute cables to each zone, provide supplementary "J" hooks to support cables at intervals not exceeding 1.5 metres.

- .3 Terminate horizontal cables in telecommunications room and at individual work-area jacks.
 - .1 Identify and label as indicated to: TIA/EIA-606-A.
- .4 Coil spare cables and store in ceiling space in zone.
- .5 Harness slack cable in cabinets, racks, and wall-mounted termination and cross-connection hardware.

3.3 FIELD QUALITY CONTROL

- .1 Test horizontal UTP cables as specified below and correct deficiencies provide record of results as electronic record on CD.
 - .1 Perform tests for Permanent Link on installed cables, including spares:
 - .1 Category 5e using certified level III tester to: TIA/EIA-568-B.2.

END OF SECTION