COMMUNICATION CABLES - INSIDE BUILDINGS

PART 1 GENERAL

1.1 RELATED SECTIONS

.1 Section 27 11 19 – Terminals and Connectors for Building Communication Conductors

1.2 REFERENCES

.1 CAN/CSA-T530-M90, Building Facilities, Design Guidelines for Telecommunications.

.2 CAN/CSA-T529-M91, Design Guidelines for Telecommunications Wiring System in Commercial Buildings.

.3 CAN/CSA-C22.2 No. 214-M90, Communications Cables.

.4 CAN/CSA-C22.2 No. 182.4-M90, Plugs, Receptacles, and Connectors for Communication Systems.

.5 EIA/TIA Bulletin TSB-36, Technical Systems Bulletin Additional Cable Specifications for Unshielded Twisted Pair Cables, Electronic Industries Association (USA), November 1991.

1.3 SYSTEM DESCRIPTION

.1 Structured telecommunications wiring system consist of copper unshielded-twisted-pair and optical fibre cables, terminations, connectors, cross-connection hardware and related equipment installed inside buildings for occupant's telecommunications systems.

.2 Installed in physical star configuration with separate horizontal and backbone sub-systems.

.1 Horizontal cables link work areas to telecommunications closet located on same floor.
.2 Telecommunications closets linked to central equipment room by backbone cables.

PART 2 PRODUCTS

2.1 STATION WIRE (ZSW)

.1 4-pair, 24 AWG, 100 ohm cable with insulated copper conductor in separate outer jacket: to C22.2 No.214. FT-6 fire-rated jacket.

.2 Voice-grade electrical transmission requirements: to CAN/CSA T529 and TSB-36, Category 6.

.3 Data-grade electrical transmission requirements to: CAN/CSA T529 and TSB-36, Category 6. Process related data CAT 6 cables – Blue coloured jackets. Security related CAT 6 cables, including security cameras – Red coloured jackets.

2.2 COMMUNICATIONS BUILDING CABLE (CBC)

.1 Data Line Cable:

.1 Data-grade electrical transmission requirements to: CAN/CSA T529 and TSB-36, Category 6.

.2 Fiber Optic Cable

.1 6 pair, 12 fiber 62.5mm/125 LT Direct Burial PE Armoured, Grade 3.5/1.0 DB 200/500 Mhz-MM fiber.

PART 3 EXECUTION

3.1 INSTALLATION OF HORIZONTAL DISTRIBUTION CABLES

.1 Install ZSW horizontal cables, as indicated in conduits from telecommunications closet to outlets.

.2 Install ZSW cables, as indicated in equipment room.

.3 Terminate 2 ZSW cables per work station terminated in accordance with CAN/CSA C22.2 No.182.4.

.1 2 service outlet(s) terminated in accordance with C22.2 No.182.4 and CAN/CSA-T529.

.2 Wall termination unit interconnecting ZSW to CFC wiring transition.

3.2 INSTALLATION OF BACKBONE CABLES

.1 Install CBC cable, as indicated in conduit from termination in each telecommunications closet to equipment room. Termination: to CAN/CSA-T529.

.2 Terminate CBC ZSW cables in accordance with CAN/CSA-T529 on patch panel.

3.3 TERMINATION FOR FIBER OPTIC CABLES

.1 Terminate all fiber with SC connectors.

3.4 FIELD QUALITY CONTROL

.1 Perform tests in accordance with Section 26 05 00 - Electrical General Requirements.

.2 Test UTP cable installations for:

.1 Continuity: including open/short, polarity, and pair transpositions.

.2 DC loop resistance.

.3 Test fiber optic cable after terminated. Test report to be forwarded to Engineer.

3.5 COORDINATION WITH BELL CANADA

~~.1~~ Contractor to coordinate connection of Static IP Fiber Internet service. Connection costs to be paid by owner. ~~Coordinate and pay for connection of static IP fibre internet service.~~[ADD 2]

END OF SECTION