
**Washroom Buildings Recapitalization
Buildings 32, 34 & 38
Newman Sound Campground
Terra Nova National Park, NL
Proj. No.: R.079272.001
Section 26 05 21 – Wire and Cables (0-1000V)**

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PART 1 GENERAL

1.1 RELATED SECTIONS

- .1 Section 26 05 20 - Wire and Box Connectors - 0 - 1000 V.
- .2 Refer to drawings for wiring type required under different applications.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA)
 - .1 CSA C22.2 No .0.3, Test Methods for Electrical Wires and Cables.
 - .2 CAN/CSA-C22.2 No. 131, Type TECK 90 Cable.

PART 2 PRODUCTS

2.1 BUILDING WIRES

- .1 Conductors: stranded for 10 AWG and larger. Minimum size: 12 AWG.
- .2 Copper conductors: size as indicated, with 600 V insulation of cross-linked thermosetting polyethylene material rated RW90 XLPE and RWU90 XLPE as indicated. Provide RWU90 XLPE rated cable for underground wiring.
- .3 Copper conductors: size as indicated, with thermoplastic insulation type TWH rated at 600 V, typically used for insulated ground wires.

2.2 TECK CABLE

- .1 Cable: to CAN/CSA-C22.2 No. 131.
- .2 Conductors:
 - .1 Grounding conductor: copper.
 - .2 Circuit conductors: copper and ACM alloy, size as indicated.
- .3 Insulation:
 - .1 Cross-linked polyethylene XLPE, rating – 600 V.
- .4 Inner jacket: polyvinyl chloride material.
- .5 Armour: interlocking aluminum, compliant to applicable Building Code classification for this project.

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- .6 Overall covering: thermoplastic polyvinyl chloride material.
- .7 Fastenings:
 - .1 One hole steel straps to secure surface cables 50 mm and smaller. Two hole steel straps for cables larger than 50 mm.
 - .2 Channel type supports for two or more cables at 1500 mm centers.
 - .3 Threaded rods: 6 mm dia. to support suspended channels.
- .8 Connectors:
 - .1 Watertight and/or type approved for TECK cable, as indicated.

2.3 ARMOURED CABLES

- .1 Conductors: insulated, copper, size as indicated.
- .2 Type: AC90.
- .3 Armour: interlocking type fabricated from aluminum strip.
- .4 Connectors: standard as required, complete with double split rings.

2.4 CONTROL CABLES

- .1 Type LVT: 2 soft annealed copper conductors, sized as indicated, with thermoplastic insulation, outer covering of thermoplastic jacket. Low energy 300 V control cable: stranded annealed copper conductors sized as indicated, with PVC insulation type TW - 40° C polyethylene insulation with shielding of tape coated with paramagnetic material wire braid over each conductor and overall covering of PVC jacket.

PART 3 EXECUTION

3.1 FIELD QUALITY CONTROL

- .1 Perform tests in accordance with Section 26 05 00 - Common Work Results for Electrical.
- .2 Perform tests using method appropriate to site conditions and to approval of Owner's Representative and local authority having jurisdiction over installation.
- .3 Perform tests before energizing electrical system.
- .4 No splices permitted in panel board feeders in new construction. Splices in re-work or renovation projects only with pre-approval by Owner's Representative.

3.2 GENERAL CABLE INSTALLATION

- .1 Terminate cables in accordance with Section 26 05 20 - Wire and Box Connectors - (0-1000 V).
- .2 Cable Colour Coding: to Section 26 05 00 Common Work Results for Electrical.
- .3 Conductor length for parallel feeders to be identical.
- .4 Wiring in walls: typically drop or loop vertically from above to better facilitate future renovations. Generally wiring from below and horizontal wiring in walls to be avoided unless indicated.
- .5 Provide numbered wire collars for control wiring. Numbers to correspond to control shop drawing legend. Obtain wiring diagram for control wiring.

3.3 INSTALLATION OF BUILDING WIRES

- .1 Install wiring as follows:
 - .1 In conduit systems in accordance with Section 26 05 34- Conduits, Fastenings and Fittings.

3.4 INSTALLATION OF TECK CABLE 0 -1000 V

- .1 Install cables.
 - .1 Group cables wherever possible on channels.
- .2 Install cable concealed, securely supported by straps and hangers.

3.5 INSTALLATION OF ARMOURED CABLES (AC-90)

- .1 Group cables wherever possible.
- .2 Use permitted only for work in movable partitions and vertical power supply drops to lighting fixtures.

3.6 INSTALLATION OF CONTROL CABLES

- .1 Install control cables in conduit. Size as per Canadian Electrical Code.
- .2 Ground control cable shield.

END OF SECTION