

SECTION 27 05 39  
SURFACE RACEWAYS AND BOXES COMMUNICATIONS SYSTEMS

**Part 1 General**

1.1 Summary

1.1.1 This section shall govern the products and installation of surface raceway and boxes for communications systems.

1.2 Related Documents

1.2.1 The latest versions of the following codes, standards, and guidelines shall be followed. Bring to the immediate attention of CCS if construction documents or conditions differ from requirements in codes, standards, guidelines and specifications.

1.2.2 The following codes, as required by law:

Ontario Electrical Safety Code (OESC)

Ontario Building Code (OBC)

1.2.3 The following standards:

TIA-569-C Commercial Building Standard for Telecommunications Pathways and Spaces

NECA/BICSI-568-2006, Standard for Installing Commercial Building Telecommunications Cabling

1.2.4 The following best practices:

BICSI, Telecommunications Distribution Methods Manual (TDMM)

BICSI, Information Transport Systems Installation Methods Manual (ITSIMM)

**Part 2 Product**

2.1 Metallic Raceway

1. Size according to Execution section.

Manufacturer shall be:

1. Wiremold

2. Or approved equivalent

2. Be specifically designed for telecommunications cables.

SECTION 27 05 39  
SURFACE RACEWAYS AND BOXES COMMUNICATIONS SYSTEMS

3. Bear a surface of sufficient width to comply with required bend radii of high Performance cables

2.2 Surface Outlet Boxes

2.2.1 Single-gang

1. Minimum of 2-3/4" deep
2. Manufacturer shall be:
  - a) Wiremold
  - b) Or approved equivalent

2.2.2 Double-gang

1. Minimum of 2-3/4" deep
2. Manufacturer shall be:
  - a) Wiremold
  - b) Or approved equivalent

**Part 3 Execution**

3.1 General

- 3.1.1 Follow all manufacturers' instructions.
- 3.1.2 Coordinate with all other trades prior to installation.
- 3.1.3 Delivery, Storage, and Handling
- 3.1.4
  1. Store products in manufacturer's unopened packaging until ready for installation.
  2. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
  3. Protect from damage due to weather, excessive temperature, and construction operations.
- 3.1.5 Verify routing locations of raceway prior to installation.
- 3.1.6 Surface raceways shall be sized to accommodate 1 square in of space per work area.
- 3.1.7 Do not begin installation until substrates have been properly prepared. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- 3.1.8 Clean surfaces thoroughly prior to installation.
- 3.1.9 Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- 3.1.10 Install all components necessary to make a complete, code-compliant installation.  
Sections of surface raceway less than 7' in length shall be a single piece of raceway.

SECTION 27 05 39  
SURFACE RACEWAYS AND BOXES COMMUNICATIONS SYSTEMS

- 3.2.7 Identify to site supervisor, and resolve issues with any location where cable pathways fail to meet separation clearances as detailed in this document, prior to start of cable path installation.
- 3.2.8 Maintain the following clearances from electrical and heat sources when installing J-Hooks for data/telephone cables.

Item	Minimum Separation Distances		
	(<2kVA)	(2-5kVA)	(>5kVA)
Unshielded power lines or electrical equipment in proximity to open or non-metallic pathway.	127 mm (5"(in))	305 mm (12"(in))	610 mm (24"(in))
Unshielded power lines or electrical equipment in proximity to a grounded metal conduit pathway.	64 mm (2.5"(in))	152 mm (6"(in))	305 mm (12"(in))
Power lines enclosed in a grounded metal conduit (or equivalent shielding) in proximity to a grounded metal conduit pathway.	---	76 mm (3"(in))	152 mm (6"(in))
Motors	1.2 m (4'-0")		
Transformers	1.2 m (4'-0")		
Conduit and cables used for electrical distribution less than 1kV	0.3 m (1'-0")		
Conduit and cables used for electrical distribution greater than 1kV	1.0 m (3'-0")		
Fluorescent Luminaires	300 mm (12")		
Pipes (gas, oil, water, etc.)	120 mm (5")		
HVAC (equipment, ducts, etc.)	150 mm (6")		
Coax (CATV/CCTV)	Separate conduits or metallic divider in cable tray (do not run Cat6A and coax in same pathways)		

End of Section 27 05 39