

~~~~~ **PROJECT NOTE** ~~~~~

ARCHITECT OF RECORD/ENGINEER OF RECORD IS RESPONSIBLE FOR REVIEWING THIS SPECIFICATION SECTION IN DETAIL FOR COORDINATION WITH THE PROJECT SCOPE OF WORK.

ALL "PROJECT NOTE" TEXT IS TO BE REMOVED FOLLOWING REVIEW OF THE CONTENT OF EACH NOTE BY THE ARCHITECT OF RECORD/ENGINEER OF RECORD.

EDIT THE DOCUMENT FOOTER TO INCLUDE THE PROJECT NAME AND NUMBER.

EDIT THE DOCUMENT HEADER TO INDICATE THE ARCHITECT OF RECORD PROJECT ISSUE" DATE. THE "CPS CONTROL" DATE SHOULD NOT BE EDITED.

ANY MODIFICATIONS TO THE TECHNICAL STANDARDS IN THIS SECTION - INCLUDING THE REMOVAL OR ADDITION OF MANUFACTURERS - MUST BE APPROVED BY CPS. REQUESTS FOR MODIFICATION ARE TO BE SUBMITTED TO THE DESIGN MANAGER DURING THE DESIGN PHASE FOR REVIEW AND APPROVAL.

~~~ **END OF PROJECT NOTE** ~~~

SECTION 26 05 33.23

SURFACE RACEWAYS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

~~~~~ **PROJECT NOTE** ~~~~~

SURFACE RACEWAYS AND WIREWAYS MAY NOT BE USED WITHIN PROJECT SCOPE OF WORK. COORDINATE INSTALLATION LOCATIONS AND REQUIREMENTS OF MILLWORK, FURNITURE, AND EQUIPMENT WITH INSTALLATIONS OF ELECTRICAL DEVICES AND THE REQUIREMENT FOR SURFACE RACEWAYS WITHIN THE PROJECT.

~~~ **END OF PROJECT NOTE** ~~~

1.01 SECTION INCLUDES

- A. Surface raceway systems.
- B. Wireways.

1.02 REFERENCE STANDARDS

- A. Chicago Electrical Code - Municipal Code of the City of Chicago, Building/Electrical Code Requirements; 2018.
- B. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.
- C. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- D. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2020.
- E. UL 5 - Surface Metal Raceways and Fittings; Current Edition, Including All Revisions.
- F. UL 111 - Outline of Investigation for Multioutlet Assemblies; Current Edition, Including All Revisions.

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| NAME OF SCHOOL
PROJECT NUMBER | 26 05 33.23 - 1 | SURFACE RACEWAYS FOR
ELECTRICAL SYSTEMS |
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- G. UL 870 - Wireways, Auxiliary Gutters, and Associated Fittings; Current Edition, Including All Revisions.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Concealed raceways are preferred by CPS. In renovation projects when concealed raceways are not possible, provide surface mounted raceways.
2. Coordinate the placement of raceways with millwork, furniture, equipment, etc. installed under other sections or by others.
3. Coordinate rough-in locations of outlet boxes provided under Section 26 05 33.16 - Boxes for Electrical Systems and conduit provided under Section 26 05 33.13 - Conduit for Electrical Systems as required for installation of raceways provided under this section.
4. Verify minimum sizes of raceways with the actual conductors and components to be installed.
5. Wall Duct: Coordinate the work with other trades to provide walls suitable for installation of flush-mounted wall duct where indicated.
6. Notify Architect/Engineer of Record of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

B. Sequencing:

1. Do not install raceways until final surface finishes and painting are complete.
2. Do not begin installation of conductors and cables until installation of raceways is complete between outlet, junction and splicing points.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

- B. Product Data: Provide manufacturer's standard catalog pages and data sheets including dimensions, knockout sizes and locations, materials, fabrication details, finishes, service condition requirements, and accessories.

1. Surface Raceway Systems: Include information on fill capacities for conductors and cables.

C. Shop Drawings:

1. Wireways: Provide dimensioned plan and elevation views including adjacent equipment with all required clearances indicated.

- D. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

1.05 QUALITY ASSURANCE

- A. Comply with the ANSI/IEEE 802.7.

- B. Product Listing Organization Qualifications: An organization recognized by OSHA Regulation 1910.7 as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 RACEWAY REQUIREMENTS

- A. Provide all components, fittings, supports, and accessories required for a complete raceway system.

- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Do not use raceways for applications other than as permitted by the City of Chicago Electrical Code and product listing.

2.02 SURFACE RACEWAY SYSTEMS

- A. Manufacturers:
 - 1. Hubbell Incorporated: www.hubbell-wiring.com.
 - 2. Legrand North America, Inc: www.legrand.us
- B. Surface Metal Raceways: Listed and labeled as complying with UL 5.
 - 1. Galvanized steel with snap-on cover.
 - 2. Manufacturer's standard enamel finish in color selected by the Architect/Engineer of Record.
- C. Multi-outlet Assemblies: Listed and labeled as complying with UL 111.

2.03 WIREWAYS

- A. Manufacturers:
 - 1. Eaton Corporation: www.eaton.com
 - 2. nVent HOFFMAN: www.nvent.com
 - 3. Schneider Electric; Square D Products: www.schneider-electric.us.
- B. Description: Lay-in wireways and wiring troughs with removable covers; listed and labeled as complying with UL 870.

~~~~~ **PROJECT NOTE** ~~~~~

OUTDOOR LOCATIONS AND HAZARDOUS LOCATIONS NOT TYPICAL FOR WIREWAYS.
COORDINATE WITH INSTALLATION REQUIREMENTS PER PROJECT SCOPE OF WORK.

~~~ **END OF PROJECT NOTE** ~~~

- C. Wireway Type, Unless Otherwise Indicated:
 - 1. Indoor Clean, Dry Locations: NEMA 250, Type 1, painted steel with screw-cover.
 - 2. Outdoor Locations: NEMA 250, Type 3R, painted steel with screw-cover; include provision for padlocking.
 - 3. Hazardous Locations: NEMA 250, Type 12, painted steel with screw-cover. Sealed and gasketed..
- D. Finish for Painted Steel Wireways: Manufacturer's standard enamel finish unless otherwise indicated.
- E. Where wireway size is not indicated, size to comply with the City of Chicago Electrical Code but not less than applicable minimum size requirements specified.

2.04 SOURCE QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that outlet boxes and conduit terminations are installed in proper locations and are properly sized in accordance with the City of Chicago Electrical Code to accommodate raceways.

- C. Verify that mounting surfaces are ready to receive raceways and that final surface finishes are complete, including painting.
- D. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Install raceways plumb and level.
- D. Arrange wireways and associated raceway connections to comply with the City of Chicago Electrical Code, including but not limited to requirements for deflected conductors and wireways used as pullboxes. Increase size of wireway where necessary.
- E. Secure and support raceways in accordance with Section 26 05 29 - Hangers and Supports for Electrical Systems at intervals complying with the City of Chicago Electrical Code.
- F. Close unused raceway openings.
- G. Provide grounding and bonding in accordance with Section 26 05 26 - Grounding and Bonding for Electrical Systems.
- H. Identify raceways in accordance with Section 26 05 53 - Identification for Electrical Systems.

3.03 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.
- B. Inspect raceways for damage and defects.
- C. Correct wiring deficiencies and replace damaged or defective raceways.

3.04 CLEANING

- A. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

3.05 PROTECTION

- A. Protect installed raceways from subsequent construction operations.

END OF SECTION