

3-PART CSI MASTERFORMAT SPECIFICATION
SECTION 05 5000
STAIR TREADS AND NOSINGS

REV 08/20

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Anti-slip Safety Stair Treads and Nosing's for new construction and renovation, inside and outside stair applications including extruded aluminum and cast systems.

1.2 REFERENCES

- A. State of California Title 24, Striping code for the visually impaired
- B. American Disability Act (ADA) barrier-free code design
- C. Occupational Safety and Health Association (OSHA)
- D. International Building Code (IBC)
- E. Underwriters Laboratories (UL) 1994 Luminous Egress Path Markings
- F. ASTM B 221 Standard Specification for Aluminum and Aluminum Alloy extruded bars, rods, wire, shapes and tubes.
- G. ASTM 2072 Standard Specification for Photoluminescent (Phosphorescent) Safety Markings.

1.3 COORDINATION

- A. Coordinate with other trades such as concrete and masonry.

1.4 ACTION SUBMITTALS

- A. Shop Drawings: Indicate configuration and dimensions, show components, adjacent construction, required clearances and tolerance and other affected work.
- B. Product Data: Manufacturer's technical data for each type of floor door, including setting drawings and finish requirements

1.5 INFORMATIONAL SUBMITTALS

- A. Provide manufacturer's standard warranty.
- B. Sustainable Design Submittals:
 1. Building Product Disclosure Requirements: To encourage the use of building products that are working to minimize their environmental and health impacts, provide the following information when available:
 - a. Material Ingredients Documentation demonstrating the chemical inventory of the product

1.6 CLOSEOUT SUBMITTALS

- A. Manufacturer's Installation Instructions and Operation & Maintenance: Indicate installation, operation and maintenance requirements and rough-in dimensions.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Nystrom
9300 73rd Ave N
Minneapolis, MN 55428
PH: 800-547-2635
www.Nystrom.com

2.2 ABRASIVE METAL [NOSINGS] [TREADS] [AND] [THRESHOLDS]

Retain product and nosing types required and revise to suit Project. Delete all if configurations are indicated on Drawings.

- A. Single Part Unit: Aluminum with abrasive filler consisting of aluminum oxide, silicon carbide, or a combination of both, in an epoxy-resin binder.
1. Ribbed bar abrasive. Aluminum alternating with abrasive filler consisting of aluminum oxide, silicon carbide, or a combination of both, in an epoxy-resin binder
 - a. Basis of-Design Product: Nystrom, STSB
 - b. Nosing Types:
 - 1) Short Nose Tread: **[1-7/8 inches (48 mm)] [3 inches (76 mm)] [4 inches (102 mm)]** wide, with **1/2 inch (13 mm)** lip for poured concrete applications.
 - a) Attachment Method: **[Cast-In, continuous extruded anchor] [Drilled Hole, Mechanically Fastened].**
 - 2) Short Tipped Nose: **[1-7/8 inches (48 mm)] [3 inches (76 mm)] [4 inches (102 mm)]** wide, with **1/4 inch (6 mm)** lip for poured concrete and steel pan applications.
 - a) Attachment Method: **[Cast-In, continuous extruded anchor] [Drilled Hole, Mechanically Fastened].**
 - 3) Angled Long Nose Tread: **[1-7/8 inches (48 mm)] [3 inches (76 mm)]** wide, with **1-1/8 inch (31 mm)** lip, 83 degree angle for sloped risers.
 - a) Attachment Method: **[Cast-In, continuous extruded anchor] [Drilled Hole, Mechanically Fastened].**
 - 4) Inset, Square Front and Back: **[1-3/8 inches (35 mm)] [3 inches (76 mm)]**.
 - a) Attachment Method: **[Cast-In, continuous extruded anchor] [Drilled Hole, Mechanically Fastened].**
 - c. Finish: 6063-T5 aluminum, mill finish.
 - d. Abrasive Colors: **[Black] [Safety yellow] [see manufacturer for available color selections].**
 2. Full abrasive filler. Aluminum filled with abrasive consisting of aluminum oxide, silicon carbide, or a combination of both, in an epoxy-resin binder no less than flush with the aluminum extrusion.
 - a. Basis-of-Design Product: Nystrom; STSF
 - b. Nosing Types:
 - 1) Short Nose Tread: **[2 inches (51 mm)] [3 inches (76 mm)] [4 inches (102 mm)]** wide, with **1/2 inch (13 mm)** lip for poured concrete applications.
 - a) Attachment Method: **[Cast-In, continuous extruded anchor] [Drilled Hole, Mechanically Fastened].**

- 2) Short Tipped Nose: **[2 inches (51 mm)] [3 inches (76 mm)] [4 inches (102 mm)]** wide, with **1/4 inch (6 mm)** lip for poured concrete and steel pan applications.
 - a) Attachment Method: Cast-In, continuous extruded anchor.
 - 3) Long Nose Tread: **[2-1/8 inches (54 mm)] [3-1/8 inches (79 mm)] [4 inches (102 mm)]** wide, with **1-1/8 inch (31 mm)** lip with 90 degree angle.
 - a) Attachment Method: **[Cast-In, continuous extruded anchor] [Drilled Hole, Mechanically Fastened].**
 - 4) Inset, Square Front and Back: **[2-1/4 inches (57.2 mm)]**
 - a) Attachment Method: **[Cast-In, continuous extruded anchor] [Drilled Hole, Mechanically Fastened].**
- c. Abrasive Colors: **[Black] [Safety yellow] [see manufacturer for available color selections].**
d. Finish: 6063-T5 aluminum, mill finish.

Specify taped top to prevent concrete from penetrating tread during installation. Painted undersides create a barrier between metal and concrete to avoid adverse reaction.

- e. Options:
- 1) Taped Top.
 - 2) Painted Undersides.
3. Renovation: Aluminum channel with **1 inch (25 mm)** tapered back, abrasive filler consisting of aluminum oxide, silicon carbide, or a combination of both, in an epoxy-resin binder.
- a. Basis-of-Design Product: Nystrom STRB
- b. Nosing Types:
- 1) Long Nose Tread: **[5 inches (127 mm)] [9 inches (229 mm)] [11 inches (280 mm)]** wide, with **1-1/8 inch (31 mm)** lip with 90 degree angle.
 - a) Attachment Method: Drilled Hole, Mechanically Fastened.
 - 2) Angled Nose Tread: **[5 inches (127 mm)] [9 inches (229 mm)] [11 inches (280 mm)]** wide, with **1-1/8 inch (31 mm)** lip with 83 degree angle.
 - a) Attachment Method: Drilled Hole, Mechanically Fastened.
 - 3) Rounded (Bull) Nose Tread: **4 inches (102 mm)** wide, with **1-3/16 inch (30.2 mm)** lip.
 - a) Attachment Method: Drilled Hole, Mechanically Fastened.
- c. Abrasive Colors: **[Black] [Safety yellow] [see manufacturer for available color selections].**
d. Finish: 6063-T5 aluminum, mill finish.

Specify taped top to prevent concrete from penetrating tread during installation. Painted undersides create a barrier between metal and concrete to avoid adverse reaction.

- e. Options:
- 1) Taped Top.
 - 2) Painted Undersides.

- B. Two Part Extruded Units: One part, Sub-channel and plywood insert; second part, Aluminum, with abrasive filler consisting of aluminum oxide, silicon carbide, or a combination of both, in an epoxy-resin binder.

1. Basis-of-Design Product: provide Nystrom **[Ribbed Bar Abrasive, STTB] [Full Abrasive, STTF]** with abrasive filler strips no less than flush with the aluminum extrusion.
 - a. Nosing Type:
 - a) Short Tipped Nose: **3-3/8 inches (86 mm)** wide, with **1/2 inch (13 mm)** lip for poured concrete and steel pan applications.
 - b) Attachment Method: **[Cast-In, continuous extruded anchor] [Drilled Hole, Mechanically Fastened].**
 - b. Abrasive Colors: **[Black] [Safety yellow] [see manufacturer for available color selections]**
 - c. Finish: 6063-T5 aluminum, mill finish.

Specify taped top to prevent concrete from penetrating tread during installation. Painted undersides create a barrier between metal and concrete to avoid adverse reaction.

- d. Options:
 - 1) Taped Top.
 - 2) Painted Undersides.

2.3 PHOTOLUMINESCENT [ABRASIVE] [TRANSLUCENT RESIN] METAL [NOSINGS] [TREADS] [AND] [THRESHOLDS]

Retain product and nosing types required and revise to suit Project. Delete all if configurations are indicated on Drawings.

- A. Extruded Units: Aluminum with Photoluminescent **[53 mil Resin Strip] [21 mil abrasive grit]** and abrasive filler consisting of aluminum oxide, silicon carbide, or a combination of both, in an epoxy-resin binder
 - 1. Basis-of-Design Product: provide Nystrom STSM
 - a. Two-Part Short Tipped Ribbed Bar Abrasive Nosing **3-3/8 inch (86 mm)** with **1 inch (25 mm)** v-in, continuous extruded anchor attachment method. Nystrom Model: STTM-P3.375E
 - b. Ribbed Abrasive Short Tipped Nose: **3 inches (76 mm)** wide, **1 inch (25 mm)** Photoluminescent **[53 mil Resin Strip] [21 mil abrasive grit]**. Nystrom Model: STSM-P3E
 - a) Attachment method: **[Cast-In, continuous extruded anchor] [Drilled Hole, Mechanically Fastened]**.

Specify taped top to prevent concrete from penetrating tread during installation. Painted undersides create a barrier between metal and concrete to avoid adverse reaction.

- a. Options:
 - 1) Taped Top.
 - 2) Painted Undersides

- B. Extruded Units: Aluminum with abrasive filler consisting of aluminum oxide, silicon carbide, or a combination of both, in an epoxy-resin binder.

- 1. Basis-of-Design Product: Subject to compliance with requirements, provide Nystrom; STSB, STTB

Retain types required and revise to suit Project. Delete all if configurations are indicated on Drawings

- a. Two-Part Short Tipped Nose Ribbed Bar Abrasive Nosing **3-3/8 inch (86 mm)** with **1 inch (25 mm)** 21 mil abrasive photoluminescent grit. Cast-in, continuous extruded anchor attachment method. Nystrom Model: STTB-P3.375E-V2FC1
- b. Ribbed Abrasive Short Tipped Nose: **3 inches (76 mm)** wide, **1 inch (25 mm)** 23 mil abrasive Photoluminescent grit. Cast-in, continuous extruded anchor attachment method. Nystrom Model: STSB-P3E-V2FC1

- C. Extruded Units for Renovation: Aluminum channel with **1 inch (25 mm)** tapered back, Photoluminescent **[53 mil Resin Strip] [21 mil abrasive grit]**.

- 1. Basis-of-Design Product: Subject to compliance with requirements, provide Nystrom; STRM-R2A

- D. Photoluminescent Tapered Edge Translucent Resin Extrusion for Perimeter landing, exit path, door hardware, & door frame, Self-Adhesive **1 inch by 100 feet (25mm by 30.4 Meters)**. Nystrom Model: EM-DS1-100.

2.4 RECYCLED RUBBER AND EXTRUDED ALUMINUM [NOSINGS] [TREADS] [AND] [THRESHOLDS]

- A. Extruded Units: Aluminum, with EcoTread slip resistant, replaceable, recycled rubber and EPDM backing.

- a. Basis of-Design Product: Nystrom, STSB
- b. Nosing Types:
 - 1) Short Nose Tread: **3 inches (76 mm)** wide, with **1/2 inch (13 mm)** lip for poured concrete applications.
 - a) Attachment Method: **[Cast-In, continuous extruded anchor] [Drilled Hole, Mechanically Fastened].**
 - 2) Short Tipped Nose: **[1-7/8 inches (48 mm)] [3 inches (76 mm)] [4 inches (102 mm)]** wide, with **1/4 inch (6 mm)** lip for poured concrete and steel pan applications.
 - a) Attachment Method: **[Cast-In, continuous extruded anchor] [Drilled Hole, Mechanically Fastened].**
- c. Finish: 6063-T5 aluminum, mill finish.
- d. EcoTread Colors: **[Black][Safety Yellow] [Steel Gray] [Blue][Gray] [Red] [Yellow] [Purple][Green Tea] [Blue/Gray] [Red/Gray]**

B. Extruded Units: Aluminum, with EcoTread slip resistant, replaceable, recycled rubber combined with Photoluminescent insert.

1. Ribbed Abrasive Short Tipped Nose: **3 inches (76 mm)** wide EcoTread, **1 inch (25 mm)** Photoluminescent **[53 mil Resin Strip] [21 mil abrasive grit]**. Nystrom Model: STSM-P3
 - a. Attachment method: **[Cast-In, continuous extruded anchor] [Drilled Hole, Mechanically Fastened].**

Specify taped top OR CONSTRUCTION COVER to prevent concrete from penetrating tread during installation. Painted undersides create a barrier between metal and concrete to avoid adverse reaction.

- b. Options:
 - 1) Taped Top.
 - 2) Painted Undersides
 - 3) Construction Cover
- c. Finish: 6063-T5 aluminum, mill finish.
- d. EcoTread Colors: **[Black][Safety Yellow] [Steel Gray] [Blue][Gray] [Red] [Yellow] [Purple][Green Tea] [Blue/Gray] [Red/Gray]**

2.5 CAST-METAL UNITS: CAST ALUMINUM, WITH AN INTEGRAL-ABRASIVE, AS-CAST FINISH CONSISTING OF ALUMINUM OXIDE, SILICON CARBIDE, OR A COMBINATION OF BOTH.

1. Basis-of-Design Product: provide Nystrom; STCA
2. Provide cross-hatched units with silicon carbide abrasive 20 grit, a minimum of **2-1/ ounces/sq. ft. (687 grams/sq. m)**, to a minimum of **1/32 inch (0.8 mm)** thick.

Retain types required and revise to suit Project. Delete all three if configurations are indicated on Drawings.

3. Nosing Type:
 - a. Short Nose: Cross-hatched units, **[2 inches (51 mm)] [3 inches (76 mm)] [4 inches (102 mm)]** wide with **1/4-inch (6-mm)** lip.
 - 1) Attachment Method: **[Cast-In, wing anchor and nut] [Cast-In bolt].**
 - b. Short Tipped Nose: Cross-hatched units, **[2 inches (51 mm)] [3 inches (76 mm)] [4 inches (102 mm)]**.
 - 1) Attachment Method: **[Cast-In, wing anchor and nut] [Cast-In, bolt].**
 - c. Long Nose: Cross-hatched units, **[3 inches (76 mm)] [4 inches (102 mm)]**.
 - 1) Attachment Method: **[Cast-In, wing anchor and nut] [Cast-In, bolt].**

Specify taped top to prevent concrete from penetrating tread during installation. Painted undersides create a barrier between metal and concrete to avoid adverse reaction.

4. Options:
 - a. Taped Top.
 - b. Painted Undersides.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that preparation and affected dimensions are acceptable.
- B. Verify tolerances and correct improper conditions.

3.2 PREPARATION

- A. Advise installers of details relating to floor hatch installation, including rough opening dimensions, locations of supports, and anchoring methods.

3.3 INSTALLATION

- A. Follow manufacturer's instructions for installing floor doors and hatches.
- B. Install frames plumb and level in opening, in proper alignment with floor surface for flush installation. Secure rigidly in place.
- C. Position units to provide convenient access to concealed Work requiring access.

3.4 ADJUSTING

- A. Operational Units: Test-operate units with operable components.
- B. Clean and lubricate joints and hardware.
- C. Adjust for proper operation.

3.5 CLEANING

- A. Clean adjacent surfaces and remove unused product and debris from site.
- B. Adjust doors for smooth operation.

END OF SECTION