

SECTION 12 4813 - ENTRANCE FLOOR MATS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Roll-up rail mats.
- 2. Resilient entrance mats.
- 3. Recessed frames.

- B. Related Requirements:

- 1. Section 124816 "Entrance Floor Grilles" for rigid floor grilles and frames.

1.3 COORDINATION

- A. Coordinate size and location of recesses in concrete to receive floor mats and frames.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for floor mats and frames.

- B. Shop Drawings:

- 1. Items penetrating floor mats and frames, including door control devices.
- 2. Divisions between mat sections.
- 3. Perimeter floor moldings.
- 4. Custom Graphics: Scale drawing indicating colors.

- C. Samples: For the following products, in manufacturer's standard sizes:

- 1. Floor Mat: Assembled sections of floor mat.
- 2. Tread Rail: Sample of each type and color.
- 3. Frame Members: Sample of each type and color.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For floor mats and frames to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Comply with the most current edition of the Northwestern University Design Standards.

PART 2 - PRODUCTS

2.1 ENTRANCE FLOOR MATS AND FRAMES, GENERAL

- A. Structural Performance: Provide roll-up rail mats and frames capable of withstanding the following loads and stresses within limits and under conditions indicated:
1. Uniform floor load of 300 lbf/sq. ft. (14.36 kN/sq. m).
 2. Wheel load of 350 lb (159 kg) per wheel.
- B. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1.

2.2 ROLL-UP RAIL MATS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Babcock-Davis.
 2. Balco, Inc.
 3. C/S Group.
 4. JL Industries, Inc.; a division of the Activar Construction Products Group.
 5. Kadee Industries, Inc.
 6. Matco International.
 7. Mats Incorporated.
 8. Nystrom, Inc.
 9. Pawling Corporation.
- B. Roll-up, Aluminum-Rail Hinged Mats: Extruded-aluminum tread rails 1-1/2 inches (38 mm) wide by 3/8 inch (9.5 mm) thick, sitting on continuous vinyl cushions.
1. Tread Inserts: [**Plain serrated aluminum treads**] [**Textured-surface, resilient vinyl**] [**Ribbed-design-surface, resilient vinyl**] [**Mineral abrasive particles bonded to or embedded in vinyl**] [**Aluminum-oxide or silicon-carbide grit in epoxy matrix**] [**1/4-inch- (6.4-mm-) high, 28-oz./sq. yd. (950-g/sq. m) weight, level-cut, nylon-pile, fusion-bonded carpet**] <Insert tread inserts>.
 2. Colors, Textures, and Patterns of Inserts: As selected by Architect from full range of industry colors.
 3. Rail Color: [**Mill finish**] [**Clear**] [**Light bronze**] [**Medium bronze**] [**Dark bronze**] [**Black**] [**Match Architect's sample**] [**As selected by Architect from full range of industry colors and color densities**].
 4. Hinges: Aluminum.

5. Mat Size: As indicated.

C. Roll-up, Vinyl-Rail Hinged Mats: Vinyl-acrylic tread rails 1-1/2 inches (38 mm) wide by 3/8 inch (9.5 mm) thick, with slotted or perforated hinges.

1. Tread Inserts: **[Textured-surface, resilient vinyl]** **[Ribbed-design-surface, resilient vinyl]** **[Mineral abrasive particles bonded to or embedded in vinyl]** **[Aluminum-oxide or silicon-carbide grit in epoxy matrix]** **[1/4-inch- (6.4-mm-) high, 28-oz./sq. yd. (950-g/sq. m) weight, level-cut, nylon-pile, fusion-bonded carpet]** **<Insert tread inserts>**.
2. Colors, Textures, and Patterns of Inserts: As selected by Architect from full range of industry colors.
3. Rail Color: As selected by Architect from full range of industry colors.
4. Hinges: Vinyl.
5. Mat Size: As indicated.

2.3 RESILIENT ENTRANCE MATS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Amarco Products.
2. Babcock-Davis.
3. C/S Group.
4. JL Industries, Inc.; a division of the Activar Construction Products Group.
5. Kadee Industries, Inc.
6. Mats Incorporated.
7. Pawling Corporation.

B. Carpet-Type Mats: **[Nylon]** **[Polypropylene]** **[Olefin]** **[Polyester]** carpet bonded to 1/8- to 1/4-inch- (3.2- to 6.4-mm-) thick, flexible vinyl backing to form mats 3/8 or 7/16 inch (9.5 or 11 mm) thick with nonraveling edges.

1. Colors, Textures, and Patterns: As selected by Architect from full range of industry colors.
2. Mat Size: As indicated.

C. Graphics: Custom inlaid or woven-in graphic **[design,]** **[logo,]** **[emblem,]** **[characters,]** as indicated.

2.4 FRAMES

A. Recessed Frames: Manufacturer's standard extrusion.

1. Extruded Aluminum: ASTM B 221 (ASTM B 221M), Alloy 6061-T6 or Alloy 6063-T5, T6, or T52.
 - a. Color: **[Mill finish]** **[Clear]** **[Light bronze]** **[Medium bronze]** **[Dark bronze]** **[Black]**.

2.5 CONCRETE FILL AND GROUT MATERIALS

- A. Provide concrete fill and grout equivalent in strength to cast-in-place concrete slabs for recessed mats and frames. Use aggregate no larger than one-third fill thickness.

2.6 FABRICATION

- A. Floor Mats: Shop fabricate units to greatest extent possible in sizes indicated. Unless otherwise indicated, provide single unit for each mat installation; do not exceed manufacturer's recommended maximum sizes for units that are removed for maintenance and cleaning. Where joints in mats are necessary, space symmetrically and away from normal traffic lanes. Miter corner joints in framing elements with hairline joints or provide prefabricated corner units without joints.
- B. Recessed Frames: As indicated, for permanent recessed installation, complete with corner pins or reinforcement and anchorage devices.
 - 1. Fabricate edge-frame members in single lengths or, where frame dimensions exceed maximum available lengths, provide minimum number of pieces possible, with hairline joints equally spaced and pieces spliced together by straight connecting pins.
- C. Coat concealed surfaces of aluminum frames that contact cementitious material with manufacturer's standard protective coating.

2.7 ALUMINUM FINISHES

- A. Mill finish.
- B. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.
- C. Color Anodic Finish: AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.

2.8 COPPER-ALLOY (BRONZE) FINISHES

- A. Finish designations prefixed by CDA comply with the system established by the Copper Development Association for designating copper-alloy finishes, as defined in NAAMM's "Metal Finishes Manual for Architectural and Metal Products."
 - 1. Remove tool and die marks and stretch lines, or blend into finish.
 - 2. Grind and polish surfaces to produce uniform, directionally textured, polished finish, free of cross scratches. Run grain of directional finishes with long dimension of each piece.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and floor conditions for compliance with requirements for location, sizes, minimum recess depth, and other conditions affecting installation of floor mats and frames.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install recessed mat frames to comply with manufacturer's written instructions. Set mat tops at height recommended by manufacturer for most effective cleaning action; coordinate tops of mat surfaces with bottoms of doors that swing across mats to provide clearance between door and mat.
 - 1. For installation in terrazzo flooring areas, provide allowance for grinding and polishing of terrazzo without grinding surface of recessed frames. Coordinate with other trades as required.
 - 2. Install necessary shims, spacers, and anchorages for proper location, and secure attachment of frames.
 - 3. Install grout and fill around frames and, if required to set mat tops at proper elevations, in recesses under mats. Finish grout and fill smooth and level.
- B. Install surface-type units to comply with manufacturer's written instructions at locations indicated; coordinate with entrance locations and traffic patterns.

3.3 PROTECTION

- A. After completing frame installation and concrete work, provide temporary filler of plywood or fiberboard in recesses and cover frames with plywood protective flooring. Maintain protection until construction traffic has ended and Project is near Substantial Completion.

END OF SECTION 12 4813

NORTHWESTERN UNIVERSITY
PROJECT NAME _____
JOB # _____

FOR: _____
ISSUED: 03/29/2017

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