

This guide specification was prepared utilizing 3-part format recommended by the Construction Specifications Institute (CSI), and generally incorporates recommendations from their SectionFormat™/Page Format™, and MasterFormat™, latest Editions, insofar as practicable.

Carefully review and edit the text to meet the Project requirements and coordinate this Section with the remainder of the Specifications and the Drawings.

Where bracketed text is indicated, e.g. [text], make appropriate selection and delete the remainder of text within additional brackets, highlighting, and bold face type, if any.

Consult the manufacturer for assistance in editing this guide specification for specific Project applications where necessary.

This Specification was current at the time of publication but is subject to change. Please confirm the accuracy of these specifications with the manufacturer prior to use.



**SECTION: 12 48 19  
ENTRANCE FLOOR GRATES**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. Section Includes entrance grate systems and frames.
- B. Related Sections: The following sections contain requirements related to this section:
  - 1. Section 03300 – Cast-In-Place Concrete: For concrete floor slab recess, and grouting frames into recess.
  - 2. Section 036000 “Grouting” For concrete floor slab recess, and grouting frames into recess.
  - 3. Section 07110 - Damp-proofing.

**1.02 REFERENCES**

- A. American Society for Testing and Materials (ASTM)
  - 1. ASTM B 221-93 Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes
- B. American Architectural Manufacturers Association (AAMA)
  - 1. AAMA 606.1 Voluntary Guide Specifications and Inspection Methods for Integral Color Anodic Finishes for Architectural Aluminum
  - 2. AAMA 607.1 Voluntary Guide Specifications and Inspection Methods for Clear Anodic Finishes for Architectural Aluminum.

**1.03 COORDINATION**

- A. If product is to be recessed, coordinate with concrete work so that products are available for placing integrally with floor slabs.

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ENTRANCE FLOOR GRATES**

**1.04 SUBMITTALS**

- A. Product Data: Manufacturers product specifications, installation and maintenance instructions.
- B. Shop Drawings: Show layout and types of grates and frames not less than half-scale sections of typical installations, details of patterns or designs, anchors, and accessories, and field measurements of slab recess to receive frames grates (if applicable).
- C. Samples for Selection Purposes: Actual sections of grate and frame material in a convenient but representative size showing full range of colors, textures, finishes and patterns available for each type of floor grate and frame specified.
- D. Samples for Verification Purposes: Not less than 6-inch square sections of grate material and 6-inch length of frame material in selected colors and materials for each type of grate and frame specified.
- E. Installation, Operations and Maintenance data.

**1.05 QUALITY ASSURANCE**

- A. Single Source Responsibility: Obtain floor grates and frames from one source and from single manufacturer.

**1.06 SUBSTITUTIONS**

- A. Proposals for substitution products shall be accepted only from bidding contractors and not less than (10) working days before bid due date. Contractor guarantees that proposed substitution shall meet the performance and quality standards of this specification.

**1.07 PROJECT CONDITIONS**

- A. Field Measurements: Where possible, verify actual measurements by field measuring before fabrication and include measurements in shop drawings. To avoid construction delays, coordinate field measurements and fabrication schedule based on construction progress.
- B. Recessed Conditions: It is imperative that concrete recess is entirely flat and smooth for successful installation. If a concrete contractor is responsible for forming the recess, pour dimensions may require leveling grout to achieve the proper depth and a smooth finish. The final recess depth must match the specified product and must be field verified. Also, for proper frame installation, the side walls of the concrete recess must also be straight and smooth. Variances with the recess and side walls must be adjusted or corrected prior to product installation.

**1.08 WARRANTY**

- A. Floor mats and frames shall be fabricated free of defects in materials and workmanship in accordance with General Conditions, and the manufacturer shall offer a 2-year warranty against defects in materials and workmanship.

**PART 2 - PRODUCTS**

**2.01 ACCEPTABLE MANUFACTURERS**

- A. Acceptable Manufacturers:  
JL Industries – a Division of Activar Construction Products Group  
9702 Newton Ave. S.  
Bloomington, MN 55431

(800) 554-6077

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www.activarcpg.com  
sales@activarcpg.com

- B. Substitutions: Manufacturers seeking approval of their products are required to comply with the Owner's Instructions to Bidders, generally contained in the Project Manual.

## 2.02 MATERIALS

### A. ENTRANCE FLOOR GRATE 400 Series

1. Aluminum Rail: ASTM B221-93, alloy 6063-T5 and 6063-T6 aluminum.
2. Rail Finish: Rail finish shall be supplied in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).
3. Construction: Tread rails shall be manufactured from 6063-T6 aluminum complete with co-extruded soft durometer combination hinge cushion. Exposed hinge rail connectors shall be vinyl hinge only with perforations for drainage.
4. Wheel Load: 750 lbs.
5. Tread Insert Options for Activ-Grate™ 400 Series

**Specifier to select one below and delete others**

- i. Carpet Inserts shall meet the Carpet and Rug Institute's standard for good indoor air quality. Fibers shall include a minimum of 100, 12 mil monofilament fibers per square inch and colorfast, solution dyed nylon. Available in one of 12 standard colors as offered by Manufacturer. Each carpet fiber and monofilament shall be fusion-bonded to a rigid two-ply backing to prevent fraying and supplied in continuous splice-free lengths. Carpet weight shall be 33 oz./sq. yd.
- ii. Tuff Tread Inserts shall be solution-dyed polypropylene fibers with 4,500 total denier, available in one of three standard colors as offered by the Manufacturer. The textured fibers have ultraviolet blockers and color as an integral part of the filament. Each tuff tread carpet fiber and monofilament shall be fusion-bonded to a rigid two-ply backing to prevent fraying and supplied in continuous splice-free lengths. Carpet weight shall be 33 oz./sq. yd.
- iii. Vinyl Inserts shall include a flexible dual durometer vinyl insert in any one of three colors as offered by Manufacturer.
- iv. Vinyl Abrasive Inserts shall include a flexible abrasive grit tape, bonded to a rigid vinyl tread insert. Tread insert shall be supplied in black, complete with one of five abrasive colors as offered by Manufacturer.
- v. Serrated Aluminum Inserts shall be extruded 6063-T6 alloy. Serrated aluminum inserts shall be in mill finish, unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).

### B. Framing options for aluminum Activ-Grate™ 400 Series:

**Specifier to select one below and delete others**

1. EFRA4 - Aluminum Recessed Angle Frame for Activ-Grate™ EG400 shall be a 7/16 inch deep recessed frame in 6063-T6 aluminum alloy with 1/8 inch wide exposed surface. Frame color shall be supplied in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).
2. EFSA4 – Surface Mounted Tapered Aluminum Frame for Activ-Grate™ EG400 Series shall be supplied in 6063-T5 aluminum alloy and permanently secures mat for surface mount applications. Frame color shall be supplied in mill finish unless

otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).

3. EFRT4 - Threshold Frame (option for Activ-Grate™ EG400) shall be supplied in 6063-T6 aluminum alloy. For surface/recess installations to provide a flush transition from the entryway door threshold to the tread surface. The frame does not require a leveling screed. The threshold frame shall be supplied in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).

A. ENTRANCE FLOOR GRATE Activ-Grate™ 600 Series

1. Aluminum Rail: ASTM B221-93, alloy 6063-T5 and 6063-T6 aluminum.
2. Rail Finish: Rail finish shall be supplied in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).
3. Construction: Tread rails shall be manufactured from 6063-T6 aluminum complete with co-extruded soft durometer combination hinge cushion. Exposed hinge rail connectors shall be vinyl hinge only with perforations for drainage.
4. Wheel Load: 1000 lbs.
5. Tread Insert Options for Activ-Grate™ 600 Series:

Specifier to select one below and delete others

- i. Carpet Inserts shall meet the Carpet and Rug Institute's standard for good indoor air quality. Fibers shall include a minimum of 100, 12 mil monofilament fibers per square inch and colorfast, solution dyed nylon. Available in one of 12 standard colors as offered by Manufacturer. Each carpet fiber and monofilament shall be fusion-bonded to a rigid two-ply backing to prevent fraying and supplied in continuous splice-free lengths. Carpet weight shall be 33 oz./sq. yd.
- ii. Tuff Tread Inserts shall be solution-dyed polypropylene fibers with 4,500 total denier, available in one of three standard colors as offered by the Manufacturer. The textured fibers have ultraviolet blockers and color as an integral part of the filament. Each tuff tread carpet fiber and monofilament shall be fusion-bonded to a rigid two-ply backing to prevent fraying and supplied in continuous splice-free lengths. Carpet weight shall be 33 oz./sq. yd.
- iii. Vinyl Inserts shall include a flexible dual durometer vinyl insert in any one of three colors as offered by Manufacturer.
- iv. Vinyl Abrasive Inserts shall include a flexible abrasive grit tape, bonded to a rigid vinyl tread insert. Tread insert shall be supplied in black, complete with one of five abrasive colors as offered by Manufacturer.
- v. Serrated Aluminum Inserts shall be extruded 6063-T5 alloy. Serrated aluminum inserts shall be in mill finish, unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).

B. Framing options for aluminum Activ-Grate™ 600 Series:

Specifier to select one below and delete others

1. EFRA6 – Aluminum Recessed Angle Frame for Activ-Grate™ EG600 shall be a 3/4 a 3/4 inch deep recessed frame in 6063-T6 aluminum alloy with 1/8 inch wide exposed surface. Frame color shall be supplied in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).

2. EFRC6 – Cast-In-Place recessed level-bed frame, extruded 6063-T6 aluminum alloy, 1-3/8 inch frame has 3/4 inch recess for tread rails and 1/2 inch wide profile. Frame finish shall be supplied in mill (standard) or available in (anodized – clear, light bronze, medium bronze, dark bronze, black).

A. ENTRANCE FLOOR GRATE Activ-Grate™ 900 Series

1. Aluminum Rail: ASTM B221-93, alloy 6063-T5 and 6063-T6 aluminum.
2. Rail Finish: Rail finish shall be supplied in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).
3. Construction: Tread rails and gridlock shall be extruded 6063-T6 aluminum manufactured with 1/8 inch space between rails for drainage, complete with soft durometer vinyl cushions.
4. Wheel Load: 400 lbs.
5. Tread Insert Options: for Activ-Grate™ 900 Series:

Specifier to select one below and delete others

- i. Carpet Inserts shall meet the Carpet and Rug Institute's standard for good indoor air quality. Fibers shall include a minimum of 100, 12 mil monofilament fibers per square inch and colorfast, solution dyed nylon. Available in one of twelve standard colors as offered by Manufacturer. Each carpet fiber and monofilament shall be fusion-bonded to a rigid two-ply backing to prevent fraying and supplied in continuous splice-free lengths. Carpet weight shall be 33 oz./sq. yd.
- ii. Tuff Tread Inserts shall be solution-dyed polypropylene fibers with 4,500 total denier, available in one of three standard colors as offered by the Manufacturer. The textured fibers have ultraviolet blockers and color as an integral part of the filament. Each tuff tread carpet fiber and monofilament shall be fusion-bonded to a rigid two-ply backing to prevent fraying and supplied in continuous splice-free lengths. Carpet weight shall be 33 oz./sq. yd.
- iii. Vinyl Inserts shall include a flexible dual durometer vinyl insert in any one of three colors as offered by Manufacturer.
- iv. Vinyl Abrasive Inserts shall include a flexible abrasive grit tape, bonded to a rigid vinyl tread insert. Tread insert shall be supplied in black, complete with one of five abrasive colors as offered by Manufacturer.
- v. Serrated Aluminum Inserts shall be extruded 6063-T5 alloy. Serrated aluminum inserts shall be in mill finish, unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).

B. Framing options for aluminum Activ-Grate™ 900 Series:

Specifier to select one below and delete others

1. EFRA9 - Aluminum Recessed Tapered Frame for Activ-Grate™ EG900 shall have a vertical leg that is 1-7/8 inch tall and 3/8 inch thick with a tapered horizontal leg that is 2-7/8 inches. Recessed frame shall be extruded 6063-T5 aluminum alloy. Frame color shall be supplied in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).
2. EFRB9 – Aluminum Recessed Block Frame for EG900 shall have both vertical and horizontal legs that are 2 inch tall and 3/8 inch thick. Recessed frame shall be extruded 6063-T6 alloy. Frame color shall be mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).
3. EFRC9 – Cast-In-Place Frame recessed level-bed frame, extruded 6063-T6 aluminum alloy, 1-15/16 inch frame has 1-3/4 inch recess for tread rail and 1/2 inch

wide profile. Frame finish shall be supplied in mill (standard) or available in (anodized – clear, light bronze, medium bronze, dark bronze, black).

**2.03 LEED V3**

- A. IEQ Credit 5: Activ-Grate™ Series are designed for permanent installation.
- B. MR Credit 4: With vinyl inserts, 45.8% pre-consumer recycled content; with all other, 38.3% pre-consumer recycled content.
- C. MR Credit 5: Material must be manufactured within 500 miles of project location.

**2.04 LEED V4**

- A. MR Sources of Raw Materials Credit: 45.8% (vinyl inserts) and 38.3% (all other) pre-consumer.
- B. MR Regional Material Credit: Material must be manufactured within 100 miles of project location.
- C. IEQ Enhanced Indoor Air Quality Strategies Credit: Activ-Grate™ Series are LEED acceptable permanent entryway systems.

**PART 3 – EXECUTION**

**3.01 EXAMINATION**

- A. Products must be placed on a flat and level substrate. Substrate shall meet tolerance of 1/8 inch (3.2mm) over 10 feet (3.28M) in accordance with ACI 302.
- B. Examine the substrates and conditions under which the work is to be performed and notify the Contractor in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the installation until unsatisfactory conditions have been corrected.

**3.02 INSTALLATION**

- A. Install products in accordance with manufacturer's instructions, at locations shown and with top of products level with adjoining finished flooring where applicable.
- B. Coordinate top of product surfaces with swinging doors to provide under-door clearance.
  - 1. Provide necessary shims, spacers, and anchorages for proper location and secure attachment of frames to concrete.
  - 2. For installation in terrazzo flooring, contact manufacturer.

**3.03 PROTECTION**

- A. Upon completion of frame installations, provide temporary filler of plywood or fiberboard in grate recesses, and cover frames with plywood protective flooring. Maintain protection until construction traffic has ended and Project is near time of Substantial Completion.
- B. Install product when no further wheeled construction traffic will occur and wet type operations including painting and decorating are complete.

END OF SECTION