

**SECTION 05 53 00**  
**Metal Fabrications – Metal Gratings**

**PART 1 GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawing and general provisions of the Contract, including General and Supplementary Conditions and Divisions 01 Specifications, apply to this Section.

**1.2 SUMMARY**

- A. Section Includes
- B. Bar Grating
- C. Attachment Method and Hardware
- D. Stair Treads and Nosing

**1.3 RELATED SECTIONS UTILIZING BAR GRATING**

- A. 05 12 00 Structural Steel Framing
- B. 05 51 19 Metal Grating Stairs
- C. 05 51 36 Metal Walkways and Ramps
- D. 05 55 00 Metal Stair Treads and Nosing

**1.4 REFERENCES**

- A. ANSI/NAAMM MBG 532 - National Association of Architectural Metal, Heavy Duty Metal Bar Grating Manual
- B. ANSI/NAAMM MBG 533 - National Association of Architectural Metal, Welding Standards for Fabrication, Steel, Stainless Steel and Aluminum
- C. ANSI/NAAMM MBG 534 - National Association of Architectural Metal, Metal Bar Grating Engineering Design Manual

**1.5 SUBMITTALS**

- A. Product Data: Submit manufacturer's literature including load and deflection tables for each product submitted.
- B. Shop Drawings: Submit shop drawings for all grating materials and fabrications as required.
  - 1. Placement Drawings: Include plans, elevations; sections showing construction, installation and fastenings.
  - 2. Method of joining grating materials.

**1.6 DESIGN CRITERIA**

- A. Design of grating including the engineering analysis shall be provided by the owner's professional engineer meeting the required performance and design criteria.
- B. Limit deflection to

**1.7 QUALITY CONTROL**

- A. Grating manufacturer shall have documented quality control processes in place to assure meeting ANSI/NAAMM, National Association of Architectural Metal Manufacturers standards.
- B. Grating manufacturer shall comply with ANSI/NAAMM, National Association of Architectural Metal Manufacturers standards.

**1.8 PACKING AND IDENTIFICATION**

- A. Piece mark each fabricated piece as noted on drawings

## 1.9 SITE CONDITIONS / REQUIREMENTS

- A. Contractor shall verify actual locations of walls and any other construction adjoining the grating work by field measurements and communicate via approved drawings to manufacturer prior to the start of order fabrication.

## PART 2 PRODUCTS

### 2.1 GENERAL

- A. The grating materials shall be fabricated to meet the drawings and specifications as manufactured by Interstate Gratings . [www.interstategratings.com](http://www.interstategratings.com) 888-499-8494
- B. Grating shall be welded with rectangular bearing bars of an appropriate depth for the required load in 1/8", 1/4" or 3/8" thickness per NAAMM Standards, on \_\_\_\_\_ centers. Specified at the discretion of the Architect/Engineer. Additional custom spacing available as per the manufacture.
- C. Cross Bars shall be twisted wire or round rod 4" or 2" on center per NAAMM standards.
- D. Surface: The bearing bars shall have a \_\_\_\_\_ surface for the application as determined by the Architect/Engineer.
- E. Finish: To be determined by Architect/Engineer from the following.
- F. All bearing bars and cross rods shall be made in North America from domestically produced metals.

### 2.4 FASTENING SYSTEMS

### 2.5 FABRICATED CUTOUTS

- A. Fabricate cutouts in grating sections for penetrations as shown on drawings.
- B. Edge-banding shall be full height of grating.
- C. Edge-band openings in grating that interrupt four or more bearing bars using the same size material as bearing bars.

### 2.6 REMOVABLE GRATING SECTIONS

- A. Fabricate sections welding banding to entire perimeter of each section.
- B. Provide fasteners, hinges and handle as noted on drawings or recommended by manufacturer.

### 2.7 METAL BAR GRATING STAIR TREADS

- A. Stair Tread grating type: \_\_\_\_\_ bar grating per section 2.1 above.
- B. Tread end plates shall be \_\_\_\_\_ to the stair tread stringer.
- C. Do not leave exposed fasteners on top of treads or platform surfaces.
- D. Nosing:

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Confirm location of work.
- B. Verify sizes and dimensions.
- C. Verify the location of all grating penetrations.

### **3.2 ERECTION TOLERANCES**

- A. Conform to NAAMM MBG 531.
- B. Maximum Space Between Adjacent Sections: 1/4 inch.
- C. Maximum Variation from Top Surface Plane of Adjacent Sections: 1/8 inch.

### **3.3 INSTALLATION, GENERAL**

- A. Install grating in accordance with shop drawings and standard installation clearances as recommended by ANSI/NAAMM MBG-531-09 Metal Bar Grating Manual.
- B. Set and secure structural framing for grating in the correct location, plumb and level.
- C. Perform job site cutting, drilling and placement of panels required for installation.
- D. Mechanically cut finish surfaces. Do not flame cut.
- E. Set panels and secure in location, align in relation to walls and other construction work free of rack.
- F. Attach removable sections using type and size of fasteners indicated or by grating manufacturer.
- G. Attach non-removable sections to same material support members by

### **3.4 STAIR TREAD INSTALLATION**

- A. Perform job site welding and bolting as specified for shop fabrication.
- B. Set stairs and other members in position and secure to structure as shown.
- C. Install stairs plumb, level and true to line.
- D. Provide steel closure plate to fill any gap between the stringer and surrounding shaft wall. Weld and finish with prime and paint finish of adjoining steel.

END OF SECTION