

**SECTION 07 72 13  
MANUFACTURED CURBS**

**PART 1 GENERAL**

**1.1 SUMMARY**

**A. Section Includes:**

1. Roof curbs for conventional buildings
2. Expansion joint curbing
3. Equipment supports
4. Adapters
5. Structural platforms
6. Isolation roof curbs and rails
7. Roof access curbs

**B. Related Sections**

1. Division 051200- Structural Steel: Steel roof framing
2. Division 052100- Open Web Steel Joists
3. Division 053100- Steel Deck
4. Division 076113- Metal Roof Panels
5. Division 075200- Modified Bitumen Membrane Roofing
6. Division 099113- Painting
7. Divisions 22- Plumbing
8. Divisions 23- Mechanical
9. Divisions 26- Electrical

**1.2 REFERENCES**

- A. ASTM A 653- Standard for Steel Sheet, Zinc-Coated (galvanized) or zinc-iron
- B. OSHA – Occupational Safety and Health Administration
- C. FM – Roof Assembly Classifications
- D. UL – Fire Hazard Classifications
- E. Florida Building Code

**1.3 SUBMITTALS**

- A. Product Data: Provide data on unit construction, size and configuration, jointing methods, attachment method, and manufacturer's installation instructions.
- B. Submit under provisions of Section 013300
- C. Shop drawings: dimensioned drawings showing overall layout details, jointing, connections, and fasteners. Show adjacent construction including roof deck, roofing system, and equipment.
- D. Structural Calculations: signed and sealed by FL registered, currently licensed professional engineer
- E. Manufacturer instructions

**1.4 QUALITY ASSURANCE**

- A. Manufacturer
- B. Design, fabricate, and furnish roof curbs and equipment supports to accurate dimensions, configuration, and structural rigidity to meet requirements for watertight systems, and spanning capacity between structural members at openings in roof deck.

**1.5 QUALIFICATIONS**

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A. Manufacturer:

1. Able to document minimum of 10 years continuous experience designing, manufacturing, and supplying work of this section.
2. Maintain engineering and design capabilities to furnish customized curbs, expansion joints, and equipment supports.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Comply with provisions of Section 016510 and manufacturer's instructions
- B. Deliver on pallets or protective packaging with manufacturer's identifying labels, legible and intact
- C. Store pallets above water and dirt
- D. Handle to prevent permanent warping and racking of frame

1.7 COORDINATION

- A. Conform to Section 013100 for coordination with work of other Sections.

1.8 WARRANTY

- A. Comply with Warranty provisions specified in Section 017836
- B. Manufacturer: Standard 5-year limited Warranty against defects in labor and workmanship.

**PART 2 PRODUCTS**

2.1 MANUFACTURERS

- A. Roof Products, Inc.

2.2 ROOF CURBS AND EQUIPMENT SUPPORTS AND MISCELLANEOUS ROOF CURBS

A. Frames:

1. Material: ASTM A 653 G90 hot-dipped galvanized steel.
  - a. Minimum 18 gauge or as engineered by manufacturer.
  - b. Minimum 18 gauge for curbs supporting HVAC units.
  - c. Minimum 20 gauge for expansion joint curbs.
2. Corners: Mitered and welded (welds to be micro-sealed and prime painted after fabrication). Bolted connections not acceptable.
3. Internally reinforced with galvanized 1" by 1" by 12-gauge angles for curbs exceeding 3' in length. Reinforce internal bulkhead at equipment curbs to support lateral loads.
4. Wood Nailers: Factory installed, pressure treated. Size and width as suitable for full support of items installed on curbs.

B. Insulation: Factory installed 1 1/2" thick three-pound density fiberglass insulation.

C. Curb Height: Minimum 8" above finished roof.

D. Construct curbs to match roof slope with plumb and level top surface for mounting mechanical equipment.

E. Gasketing: 1/4" thick, 1" wide at roof top units and skylights.

F. Counter Flashing: 18-gauge galvanized steel, 24 gauge stainless steel, or .040 aluminum.

G. Cants: fiber

H. Expansion Joint Curbs:

1. Fabricate in maximum 10' lengths, with fully mitered and welded corners at intersections and sloping end sections
2. Fabricate platform curbs, adapters, pipe curbs, curb covers, square to round, column and tube counter-flashings as necessary for complete watertight systems at roof penetrations.

2.3 ADAPTERS

- A. Standard features: Heavy gauge galvanized steel, fully welded one-piece construction, sloped for positive water runoff, welds are micro-sealed and primed painted after fabrication, gully insulated, with internal reinforcing as required to support equipment loads, with insulated pans, and supply/return air transitions as required to mate with exiting roof curbs.

#### 2.4 PLATFORM CURBS

- A. Structural Platform Curbs:
  - 1. Material: ASTM A 653 G90 hot-dipped galvanized steel.
    - a. Minimum 18 gauge or as engineered by manufacturer.
  - 2. Corners: Mitered and welded. Bolted connections not acceptable.
  - 3. Internally reinforced with galvanized 1" by 1" by 12- gauge angles for curbs exceeding 3' in length. Reinforce internal bulkhead at wider curbs to support lateral loads.
  - 4. Wood Nailers: Factory installed, pressure treated. Size and width as suitable for support of items installed on curbs.
- B.  $\frac{3}{4}$ " plywood top with support channels as required.
- C. Curb Height: Minimum of 8" above finished roof.
- D. Construct curbs to match roof slope with plumb and level top surface for mounting mechanical equipment.
- E. Counter Flashing: 18-gauge galvanized steel.
- F. Cants: fiber

#### 2.5 ISOLATION ROOF CURB

- A. Curb mounted rooftop equipment shall be mounted on 1", 2", or 3" static deflection spring isolation curbs. The lower member shall be full perimeter base curb with a wood nailer and OSHPD Pre-approved spring isolators that support the upper floating perimeter frame. The upper frame shall be fully welded and must support the equipment and must be captive so as to resist wind and lateral forces. Steel springs shall be laterally stable and zinc or powder coated. The upper curbs waterproofing shall consist of a continuous galvanized flashing with a bulb seal. All spring locations shall have access ports with removable waterproof covers for adjusting isolators. Lower curbs shall have provision for optional insulation.

#### 2.6 ROOF ACCESS CURBS

- A. Special structural roof curbs designed to permit full access through openings for easy install or removal of interior mounted equipment.
- B. Consult Roof Products, Inc. for opening sizes and roof curb designs
- C. Reinforced, insulated removable covers sloped for water run-off.

### **PART 3 EXECUTION**

#### **3.1 EXAMINATION**

- A. Verify conditions ready to receive work of this Section. Do not work until unsatisfactory conditions have been corrected. Beginning work constitutes acceptance of existing conditions.

#### **3.2 INSTALLATION**

- A. Install in accordance with Construction Document provisions and manufacturer's instructions. Where conflict, assume requirements that are more stringent, and verify with Architect before Beginning work.
- B. Weld, bolt, or screw roof curbs and expansion joint curbs as instructed by manufacturer, as shown on accepted shop drawings, and accepted by Architect.
- C. Equipment Supports: Span a minimum of two structural members.

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D. Do not apply load to cantilever exceeding 2- foot length, for equipment supports.

E. Do not apply load to cantilever exceeding 4-foot length, for roof curbs.

### 3.3 ADJUSTING

- a. Replace or repair installations not conforming to specified requirements including installations out of level and out of plumb.

### 3.4 CLEANING

- A. Leave installation clean, free of debris and residue resulting from work of this Section.

END OF SECTION