

**SECTION 077213
ISOLATION CURBS AND RAILS**

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Isolation Curbs and Rails.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Roof Products, Inc. (RPI) – Chattanooga, TN and Phoenix, AZ
1. Tel: (800) 262-6669
 2. Fax: (423) 892-2107
 3. Email: sales@rpicurbs.com
 4. Web Site: <http://www.rpicurbs.com>

PART 3 CONSTRUCTION

3.1 ISOLATION ROOF CURBS

- A. Curb mounted rooftop equipment shall be mounted on 1", 2", or 3" static deflection spring isolation curbs. The lower member shall be a 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 seismic 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. Curb shall be type RPIC as manufactured by Roof products, Inc. or approved equal.
- B. Type RPIC: A rooftop isolation curb system that can be seismically rated and is flashed into roofing membrane. Standard unit curb will not be used.
1. Air and watertight upper floating curb shall have a neoprene sponge seal at the top and be rigid enough provide continuous perimeter support for rooftop unit.
 2. Type JQ spring isolators welded to a fixed base curb to withstand seismic loading shall support the upper curb.
 3. Restrained spring isolators shall be free standing, laterally stable springs with lateral seismic restraint low and close to the base plate to protect anchors. The formed steel housing with cushioned lateral and vertical limit stops shall restrict motion due to earthquakes and wind loads, or when weight is removed. The housing shall be Hot-Dipped galvanized. Hot-Dipped zinc coating shall be not less than 2 ounces per square foot complying with ASTM A123, springs to be zinc or powder coated. A clearance of ¼" maximum shall be maintained so that limit stops shall be out of contact during normal operation. Outside spring diameter not less than 80 percent of the compressed height of the spring at rated load. Minimum additional travel 50 percent of the rated deflection at rated load. Isolator/Restraint shall be type JQ as manufactured by California Dynamics Corporation or approved equal.
 4. A flexible bulb seal shall provide an airtight weatherproof seal between the upper and lower curbs.
 5. Weatherproof access doors shall be provided at each isolator to allow isolator adjustment.

- 6. Isolation curb shall permit the optional installation of exterior rigid insulation to be installed for thermal insulation and acoustic attenuation, or optional 1" interior insulation.
- C. The floating member of the roof curb shall have provision for optional perimeter angle and cross members to support two layers of gypsum board. The gypsum board provided by the contractor shall surround the duct and be caulked to attenuate the transmission of sound. Curbs shall accommodate roof pitch shown on drawings. Isolation curb shall use minimum 16 gauge Galvanized steel and shall be designed to withstand the greater of seismic forces or wind loading per local building code. Registered professional engineer in the employ of the manufacturer must certify design. Isolation curbs shall be Roof Products, Inc. Type RPI-C. Top plate shall have adequate means for fastening to the equipment. The base plate shall incorporate steel stiffeners at all spring locations to transfer supported loads with adequate means for positively attaching to the structure. The fixed base curb height will be designed to match the roofing method and roof pitch. Entire assembly can be rated to exceed the applied seismic load. Seismic isolator shall be Type JQ as supplied by Roof Products, Inc. (1-800-262-6669).

3.2 ISOLATION RAILS

- A. Curb mounted rooftop units shall be isolated with Roof Products, Inc. Type RPI-R isolation assembly consisting of a pair of extruded aluminum rails formed to fit curb and equipment with a flexible air and weather seal continuously joining the two rails and incorporating Type SW spring isolators sized for 1", 2" or 3" static deflection.
- B. Flexible weather seals shall be 1/16th inch thick minimum reinforced Neoprene protected from direct sunlight and accidental puncture by an extruded aluminum shield and shall be capable of being replaced completely without disturbing the unit mounting.
- C. Springs shall be stable with a KX/KY (horizontal to vertical spring rate) of 1.0 or greater and be properly sized to support the load.
- D. Isolation assembly shall have Neoprene cushioned wind restraints, which are not engaged in normal operation with sufficient capacity to resist wind load in any direction without distortion or damage to the isolated equipment.

PART 4 EXECUTION

4.1 INSTALLATION

- A. Install in accordance with Contract Document provisions and manufacturer's instructions.

4.2 COORDINATION

- A. Roof Products, Inc. (RPI) shall coordinate Isolation Curb and Rail sizes and options with the general and/or mechanical/roofing contractor prior to fabrication.
- B. Shop drawing approval is required before fabrication

4.3 WARRANTY

- A. The manufactured roof curbs shall be guaranteed to be free from defects in materials or workmanship for a period on not less than (5) five years.

END OF SECTION