

SECTION 07 72 00 - ROOF ACCESSORIES

SECTION 22 05 29 - HANGERS & SUPPORTS FOR PLUMBING PIPING & EQUIPMENT

SECTION 23 05 29 - HANGERS & SUPPORTS FOR HVAC PIPING & EQUIPMENT

SECTION 26 05 29 - HANGERS & SUPPORTS FOR ELECTRICAL SYSTEMS

SECTION 27 05 28 29 - HANGERS & SUPPORTS FOR COMMUNICATION SYSTEMS

**(ROOF PIPE SUPPORT SYSTEMS)
(using rubber curb)**

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A.** The work of this contract consists of the furnishing of all labor, equipment, materials and devices required in conjunction with the installation of supports for all Mechanical, Electrical and Plumbing piping or conduit, HVAC Air Ducts and HVAC Equipment.
- B.** Manufacturer must supply 100% molded virgin rubber pipe curb. Curb made from rubber crumb and binder is **not** considered an equal or allowed as a substitute.
- C.** Manufacturer must supply Vibration Isolation and Cushion system with a minimum of shock transmission to the roofing surface to allow free movement with no pipe tension or binding.

1.02 RELATED SECTIONS:

- A. Division 05 - Metals**
 - 05 45 00 Metal Support Assemblies
 - 05 45 13 Mechanical Metal Supports
 - 05 45 16 Electrical Metal Supports
 - 05 45 19 Communications Metal Supports
 - 05 50 00 Metal Fabrication
 - 05 51 00 Metal Stairs
 - 05 52 00 Metal Railings
- B. Division 07 - Thermal and Moisture Protection**
 - 07 01 70 Operation & Maintenance of Roof Specialties and Accessories
 - 07 06 70 Schedules for Roof Specialties and Accessories
 - 07 72 00 Roof Accessories
 - 07 72 13 Manufactured Curbs
 - 07 72 46 Roof Walkways
- C. Division 22 - Plumbing**
 - 22 05 29 Hangers & Supports for Plumbing Piping & Equipment
 - 22 05 48 Vibration & Seismic Controls for Plumbing Piping & Equipment
 - 22 11 19 Domestic Water Piping Specialties
 - 22 63 13 Gas Piping for Laboratory and Health Care Facilities
- D. Division 23 - HVAC**
 - 23 05 29 Hangers & Supports for HVAC Piping & Equipment
 - 23 05 48 Vibration & Seismic Controls for HVAC Piping & Equipment
 - 23 11 23 Facility Natural Gas Piping
 - 23 21 13 23 Aboveground Hydronic Piping
 - 23 22 13 Steam & Condensate Heating Piping
 - 23 23 16 Refrigerant Piping Specialties
 - 23 33 00 Air Duct Specialties
 - 23 56 16 Packaged Solar Heating Equipment
 - 23 83 16 Radiant Heating Hydronic Piping
- E. Division 26 - Electrical**
 - 26 05 29 Hangers & Supports for Electrical Systems

	26 05 36	Cable Trays for Electrical Systems
	26 05 48	Vibration & Seismic Controls for Electrical Systems
	26 33 16	Battery Racks
F.	Division 27 - Communications	
	27 05 28 29	Hangers & Supports for Communication Systems
	27 05 28 36	Cable Trays for Communication Systems
	27 05 48	Vibration & Seismic Controls for Communication Systems
	27 11 16	Communication Cabinets, Racks, Frames & Enclosures
	27 11 23	Communication Cable Management and Ladder Racks
	27 53 19	Internal Cellular, Paging & Antenna Systems
G.	Division 28 - Electronic Safety and Security	
	28 05 28 29	Hangers & Supports for Electronic Safety & Security
	28 05 28 36	Cable Trays for Electronic Safety & Security
H.	Division 33 - Utilities	
	33 81 16	Antenna Towers

1.03 REFERENCES:

- A.** American Society for Testing and Materials (ASTM):
 1. A 123-89a Zinc (Hot-Dip Galvanized) Coating on Iron and Steel Products.
 2. A 153-82 Zinc Coating (Hot-Dip) Steel and Iron Hardware.
 3. A 167-92b Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Plate.
 4. A 570-92 Steel, Sheet and Strip, Carbon, Hot-Rolled, Structural Quality.
 5. D 2240-91 Rubber Property - Durometer Hardness.
- B.** Manufacturer's Standardization Society of the Valve and Fittings Industry, Inc. (MSS)
 1. SP-58 Pipe Hangers and Supports, Materials, Design and Manufacture.
 2. SP-69 Pipe Hangers and Supports, Selection and Application.
- C.** National Roofing Contractor's Association (NRCA): NRCA Roofing and Waterproofing Manual, current edition.
- D.** Sheet Metal and Air Conditioning Contractor's Association, Inc. (SMACNA): Architectural Sheet Metal Manual, current edition.

1.04 SYSTEM DESCRIPTION:

Design Requirements: Prefabricated, engineered support system designed specifically for use on roofing without adhesive, roof penetrations, flashings or damage to roofing system.

1.05 SUBMITTALS:

- A.** Submit under provision of Section [01 33 00] [_____].
- B.** Product Data: Submit manufacturer's product data sheets, including installation instructions for each fabricated unit. Curb design must be molded from virgin rubber.
- C.** Shop Drawings: Indicate layout, support components and methods of installation.
- D.** Samples: If requested, submit sample of rubber curb, 12 inch long framing members, each support, hanger and fastener.

1.06 QUALITY CONTROL:

The Manufacturer or his representative on request will inspect the completed installation and report in writing that the design requirements meet with the Manufacturer's approval.

1.07 DELIVERY, STORAGE AND HANDLING:

Deliver, store and handle products under provisions of Section [01 60 00] [_____].

1.08 WARRANTY:

The Product Manufacturer shall provide a one-year full system material warranty necessary to cover replacement of all components of the system against defects in manufacturing. The warranty will not include Acts of God, vandalism, neglect, metal finish or improper spacing of equipment which would be a result of improper application.

PART 2 - PRODUCTS

2.01 MANUFACTURER:

The support system shall be manufactured by:
Advanced Support Products, Inc.
P.O. Box 1284
Tomball, Texas 77377
Phone: 281-357-1277
Fax: 281-357-0577
Toll Free: 800-941-5737

2.02 MATERIALS:

- A. Curb: Molded Virgin Rubber.
- B. Curb Dimensions: 4" high x 6" wide in lengths of, 6", 9" or 13".
- C. Frame: Pre-Galvanized Zinc coated 12 ga. channel (ASTM. A653).
- D. Hangers: Clevis and/or Band type as per pipe requirements.
- E. Accessories: Cadmium plated threaded rods, clamps, nuts, bolts and washers.
- F. Rollers: Non-Binding Heavy Duty SBR Rubber.

2.03 RELATED PRODUCTS:

- A. Isolation Pads are not required.
- B. If required by roofing manufacturer, a separation sheet or pad conforming to the existing roof manufacturers system.

2.04 PIPE SUPPORTS:

- A. To support conduit or pipe sized up to Ø4" without height adjustment use **EcoCurb** Model # **REC6** (6"L), **REC9** (9"L) or **REC13** (13"L) - Molded Virgin Rubber curb. May attach pipe clamps directly to curb as option for securing conduit or pipe.
- B. To support piping up to Ø8" without height adjustment use **EcoCurb** Model # **REC9S** (9"L), **REC13S** (13"L), **REC1609S** (9"L curb with 16"L strut) and **REC2413S** (13"L curb with 24"L strut). Curb is a Model **REC** with 12 ga. framing channel attached directly to curb with ½" bolts. May use strut clamps as option for securing pipe.
- C. To support piping up to Ø8" when height adjustment is needed use **EcoCurb** Model # **REC9A** (9"L) and **REC13A** (13"L). Curb is a Model **REC** with 12ga. framing channel attached to curb using ½" threaded rods, 12"L, with washers and nuts. Height of channel can be adjusted along the length of the ½" threaded rods. Strut clamps are suggested to hold piping or conduit in place.
- D. To support water or gas piping up to Ø8" or when a roller support is needed use **EcoCurb** Model # **REC9R** (9"L) and **REC13R** (13"L). Curb is a Model **REC** with SBR heavy-duty rubber roller assembly attached directly to curb with ½" bolts.
- E. To support water or gas piping up to Ø8" or when a roller support with height adjustment is needed use **EcoCurb** Model # **REC9RA** (9"L) and **REC13RA** (13"L). Curb is a Model **REC** with SBR heavy-duty rubber roller assembly attached to curb using ½" threaded rods, 12"L, with washers and nuts. Height of roller assembly can be adjusted along the length of the ½" threaded rods.
- F. To support all type of piping in multiple runs or piping up to Ø12" use **EcoCurb Cross Brace Bridge** Model # **RCB2409, 3609, 4809** or **RCB3613, 4813, 6013**. **Cross Brace Bridge** is made of two **EcoCurbs** Model **REC** (9" or 13") and framing channel (24", 36", 48" or 60"L) attached directly to the Curbs using ½" bolts. **Cross Brace Bridge** is to be used with strut clamps or roller accessories.
- G. To support multiple pipe runs, piping up to Ø12" when height adjustment or pipe suspension is needed use **EcoCurb Adjustable Support Bridge** Model # **RSB1836A, RSB2436A, RSB3636A** or **RSB4836A**. **Adjustable Support Bridge** is made of four (4) **EcoCurbs** Model **REC** and 12ga. framing channel formed to make an "H" shaped support with one crossbar. Crossbar height is adjustable and offered in 18", 24", 36", and 48" lengths. Use **Adjustable Support Bridge** with strut clamps or roller assembly or use optional hanger supports to suspend water or gas piping at various heights. Optional hanger supports attached to support frame using ½" threaded rods. Hangers offer complete height adjustments along the length of ½" threaded rods.

PART 3 -EXECUTION Section 01 70 00

3.01 PREPARATION:

- A. Verify that roof surface is smooth and clean to extent needed to receive materials.
- B. Review approved final drawings to determine the locations of supports.
- C. Clean surfaces to receive supports removing any loose gravel and any foreign matter.
- D. Supports can be placed on completed gravel roof systems. Sweep any loose gravel before setting support curbs.

3.02 INSTALLATION:

- A. Install support systems in accordance with manufacturer's instructions and approved shop drawings.
- B. Accurately locate and align pre-fabricated pipe supports in locations specified as per approved shop drawings or as required herein and by site conditions to limit pipe and/or conduit deflection to $L/240$, not to exceed 10' (3m) on center. No Isolation pads are required under the support curbs.
- C. Should the roofing manufacturer require a separation sheet between the roof and the support system, place a separation sheet or protective pad conforming to the existing roof manufacturer's system under curbs. Do not adhere to the roof system or curb.
- D. Adjust height of each strut or channel and hanger or roller to its required height and tighten with nut, but do not over-tighten. Check each support for equal weight disbursement. Correct if necessary.
- E. Remove any unused materials and packaging from job site.

END OF SECTION