

SECTION 04085

MASONRY ANCHORS AND ACCESSORIES

PART 1 GENERAL

1.1 SECTION INCLUDES

NOTE: Delete items below not required for project.

- A. Masonry veneer anchors and ties.
- B. Stone veneer anchors and ties.
- C. Masonry accessories.

1.2 RELATED SECTIONS

- A. Section 04810 - Unit Masonry Assemblies.
- B. Section 04851 - Cut Stone Veneer.
- C. Section 04852 - Stone Masonry Veneer.

1.3 REFERENCES

NOTE: Delete references from the list below that are not actually required by the text of the edited section.

- A. ASCE/ACI 530.1 - Specifications for Masonry Structures; 1995.
- B. ASTM A 153/A 153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 1998.
- C. ASTM A 167 - Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip; 1996.
- D. ASTM A 240/A 240M - Standard Specification for Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels; 1998b.
- E. ASTM A 276 - Standard Specification for Stainless Steel Bars and Shapes; 1998b.
- F. ASTM A 479/A 479M - Standard Specification for Stainless and Heat-Resisting Steel Bars and Shapes for Use in Boilers and Other Pressure Vessels; 1997a.

- G. ASTM A 580/A 580M - Standard Specification for Stainless Steel Wire; 1998.
- H. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 1998.
- I. ASTM B 633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; (Reapproved 1994).

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data on each type of product furnished.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Heckmann Building Products.Inc.,
 1501 N. 31st Avenue, Melrose Park, IL 60160
 800-621-4140 or 708-865-2403 FAX: 708-865-2640
 Email: info@heckmannanchors.com.
 Website: www.heckmannanchors.com.

 NOTE: Delete paragraph below; coordinate with Division 1 requirements.

- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.
- C. Substitutions: Not permitted.

2.2 APPLICATIONS

A. Provide anchoring systems that comply with ACI 530.1/ASCE 6/TMS 602.

 NOTE: The following anchors are one part of a two-part system - the part that attaches to the backup or structure. These anchors are suitable for masonry veneer, stone, and other claddings. Be sure, if any of these are used, that the second part - the tie or other attachment to the cladding - is also specified. Delete the types not required. If more than one type for a particular application is required, be sure to indicate where each is to be used.

B. Masonry Anchors:

1. Anchors to Concrete: Channel slots screwed to face.

132 SCREW-ON CHANNEL SLOT

[11 gage][16 gage] x 12" (305 mm) long

133 LONG CHANNEL SLOT

16 gage x [5 ft (1.524 m)][10 ft (3.048 m)]

2. Anchors to Masonry Backup: Channel slots screwed to face.

131 MASONRY TYPE CHANNEL SLOT

[16 gage][11 gage] x 1-3/8 inches (35 mm) wide x 8 inches (203 mm) long with welded Z-Anchors [Length (1/2 of block thickness) and 1-1/2 inch (38 mm) bends

132 SCREW-ON CHANNEL SLOT

[11 gage][16 gage] x 12 inches (305 mm) long

133 LONG CHANNEL SLOT

16 gage x [5 feet (1.524 m)][10 feet (3.048 m)]

3. Anchors welded to Structural Steel:

130 CHANNEL SLOT

[16 gage][11 gage] x 1-3/8 inches (35 mm) wide x 8 inches (203 mm) long

133 LONG CHANNEL SLOT

16 gage x [5 feet (1.524 m)][10 feet (3.048 m)]

NOTE: The following masonry ties must be used with one or more of the anchor types listed above.

C. Masonry Veneer Seismic Ties: Continuous wire in mortar joint, anchored to **362 CHANNEL SLOT SEISMIC ANCHOR** [gage] x 1-1/4 inches (32 mm) wide x [length from face of channel].

D. Masonry Veneer Ties: Provide minimum 2 inches (50 mm) embedment in mortar.

Note: Delete all of the following types that are not required.

1. For Use with channel slots:

122 CHANNEL SLOT PARTITION ANCHOR

[gage] x 1-1/4 inches (32 mm) x 12 inches (305 mm) from face of channel.

123 CHANNEL SLOT HORIZONTAL TRIANGLE ANCHOR

[gage] x 1-1/4 inches (32 mm) x 12 inches (305 mm) from face of channel.

124 CHANNEL SLOT CAVITY WALL ANCHOR

[gage] x 1-1/4 inches (32 mm) x 5 inches (127 mm) from face of channel.

125 CHANNEL SLOT FURRING ANCHOR

[gage] x 1-1/4 inches (32 mm) x 1-1/2 inches (38 mm) from face of channel.

129 CHANNEL SLOT TRIANGULAR WIRE TIE

12 gage clip factory assembled to a 3/16 inch (4.76 mm) diameter x [tie length]

134 CHANNEL SLOT CORRUGATED ANCHORS

[gage] x 1-1/4 inches (32 mm) x [length] from face of channel.

135 CHANNEL SLOT STONE ANCHOR

[gage] x 1-1/4 inches (32 mm) x [length] from face of channel x [i.d. length of bend].

136 CHANNEL SLOT SPLIT BEND ANCHOR

[gage] x 1-1/4 inches (32 mm) x [length] from face of channel x [i.d. length of split bend].

137 CHANNEL SLOT PIN ANCHOR

[gage] x 1-1/4 inches (32 mm) x [length] from face of channel with [welded][fixed][loose] pin [diameter] x [length] centered [length] from end of anchor

138 CHANNEL SLOT FLAT ANCHOR

[gage] x 1-1/4 inches (32 mm) x [length] from face of channel

138-R CHANNEL SLOT THREADED ROD ANCHOR

[gage] x 1-1/4 inches (32 mm) x [length] from face of channel x [rod diameter]

2. Other Applications: Where details or installation conditions require, provide ties fabricated of shape and size to suit conditions and provide adequate anchorage.

E. Stone Ties: Custom strap ties, fabricated to suit details and installation requirements.

1. For Anchoring Into Edge of Dimension Stone Panels:

Use dowel pin type

137 CHANNEL SLOT PIN ANCHOR

[gage] x 1-1/4 inches (32 mm) x [length] from face of channel with [welded][fixed][loose] pin [diameter] x [length] centered [length] from end of anchor

2. For Anchoring Into edge of dimension Stone Panels:

Use Anchor type

135 CHANNEL SLOT STONE ANCHOR

[gage] x 1-1/4 inches (32 mm) x [length] from face of channel x [i.d. length of bend].

136 CHANNEL SLOT SPLIT BEND ANCHOR

[gage] x 1-1/4 inches (32 mm) x [length] from face of channel x [i.d. length of split bend].

137 CHANNEL SLOT PIN ANCHOR

[gage] x 1-1/4 inches (32 mm) x [length] from face of channel with [welded][fixed][loose] pin [diameter] x [length] centered [length] from end of anchor

3. Where not otherwise indicated, use anchoring method specified above.

Note: Select one of the following 3 combinations of materials:

all stainless steel, all hot-dip galvanized, or hot-dip galvanized except for items completely embedded in mortar. Delete the inappropriate choices.

- F. Material for Anchors and Ties in Exterior Walls: Stainless steel.
 - 1. Exception: Structural Plates, Angles, and Bars: Hot-dip galvanized.
- G. Material for Anchors and Ties in Exterior Walls: Hot-dip galvanized.
- H. Material for Anchors and Ties Exposed to Air in Exterior Walls: Hot-dip galvanized.
- I. Material for Ties Completely Embedded in Mortar Joints: Mill galvanized.

2.3 MATERIALS

- A. Stainless Steel: Type 304.
 - 1. Sheet Metal: ASTM A 167 or ASTM A 240/A 240M.
 - 2. Wire: ASTM A 580/A 580M.
 - 3. Bars: ASTM A 479/A 479M, annealed and ground.
 - 4. Plates, Bars, and Shapes: ASTM A 167 or ASTM A 276.
- B. Hot-Dip Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A 153/A 153M, Class B-2.
 - 1. Wire: Minimum 3/16 inch (4.76 mm) diameter.
- C. Electro-Galvanized Steel: Electro-galvanized after fabrication in accordance with ASTM B 633, Service Condition 1.
 - 1. Wire: Minimum 3/16 inch (4.76 mm) diameter.
- D. Mill Galvanized Steel:
 - 1. Sheet Metal: ASTM A 653/A 653M, G60 coating.
 - 2. Wire: ASTM A 641, regular coating; minimum 3/16 inch (4.76 mm) diameter.
- E. Channel Slots: 7-3/8 inch (187 mm) slots with 3/4 inch (19 mm) between slots.

Note: Delete any of the following types that would not be likely to be required on the project.

- Type for Welding On: **130 CHANNEL SLOTS** [16 gage][11 gage] x 1-3/8 inches (35 mm) wide x 8 inches (203 mm) long
- 1. Type for building into masonry: **131 MASONRY TYPE CHANNEL SLOT** [16 gage][11 gage] x 1-3/8 inches (35

mm) wide x 8 inches (203 mm) long with welded Z-Anchors [Length (1/2 of block thickness) and 1-1/2 inch (38 mm) bends

2. Type for Screwing On: **132 SCREW-ON CHANNEL SLOT** [11 gage][16 gage] x 12 inches (305 mm) long

3. Continuous Slots: **133 LONG CHANNEL SLOT** 16 gage x [5 feet (1.524 m)][10 feet (3.048 m)]

Note: Delete one of the following two paragraphs.

2. Metal Thickness: 11 gage (3 mm)

3. Metal Thickness: 16 gage (1.5 mm)

I. Strap Ties and Stone Anchors:

Note: Delete all but one of the following thickness descriptions. Coordinate with materials specified above.

Maximum thickness for channel slot ties stainless steel 1/8"; for galvanized, 3/16 inch.

1. Metal Thickness: 3/16 inch (4.7 mm).

2. Metal Thickness: 1/8 inch (3.175 mm).

3. Metal Thickness: 12 gage (2.6 mm).

4. Metal Thickness: 16 gage (1.5 mm).

PART 3 EXECUTION

3.1 INSTALLATION

A. Install as specified in applicable masonry section(s).

1. Anchors

A. **130 CHANNEL SLOTS:** - Weld 1-1/2 inches (38.1 mm) on both sides at the top and the bottom of the anchor.

B. **131 MASONRY TYPE CHANNEL SLOT:** Place Z-Anchors in the core of the CMU. Push the Channel Slot back until it is flush with the face of the CMU. Grout core.

C. **132 SCREW-ON CHANNEL SLOT:** Use an acceptable fastener for the backup system. Use two fasteners per anchor.

D. **133 LONG CHANNEL SLOT:**

1. Welded to Structural: Weld 1-1/2" (38.1 mm) on both sides at distances recommended by structural engineer.

2. Attached to Existing wall: Use Heckmann No. 133-P Bridge Plates along with acceptable fastener for the backup system. Fasten minimum of every 16 inches.

2. Ties: Insert tie into channel and rotate 90 degrees.

END OF SECTION