Proof Epoxy

In Shrink-

2. Vertical posts to be evenly spaced.

Steel Plate x 5" Mild

1/4"x 5" Anchor Bolts

2-1/2" x 6"

Handrail Post

1/4"x 5" x 5" Mild Steel Plate

4-3/8" x 5" Expansion Bolts in Shrink-Proof Epoxy

Type 1

Anchor Plate Detail

ELEVATION

Cope Ends Prior To Welding

Grind Smooth (Typical)

Vertical Posts Equally Spaced

8'-0" Maximum

Top Of Wingwall

Handrail Post

1/4"x 5" x 5" Mild Steel Plate

4-3/8" x 5" Expansion Bolts in Shrink-Proof Epoxy

Type 2

Expansion Bolt Detail

Cope Ends Prior To Welding

Grind Smooth (Typical)

Vertical Posts Equally Spaced

8'-0" Maximum

Top Of Headwall

Anchor Connection Type 1, 2, Or 3 Per Plans

CONSTRUCTION NOTES

1. Paint handrail per MAG Specifications Section 530. Color per plans.

2. Vertical posts to be evenly spaced.
**SECTION B-B**

1. **24" x 5'-0" Footing (Typ)**
2. **8" CMU Wall**
3. **Bar 1" x 1/4" @ 4" O.C. (Typ)**
4. **1/2" x 5" Stainless Steel Anchor Bolts @ 16" O.C. Embed 4" Minimum Using Shrink Proof Epoxy**
5. **1/2" x 5" Stainless Steel Expansion Bolts @ 16" O.C.**
6. **Bar 1" x 1/4" @ 4" O.C. (Typ)**
7. **Bar 4" x 1/2"**
8. **Varies - 5'-8" Maximum**
9. **Varies - 6'-0" Maximum**
10. **@ Optional Center Span**

**SECTION C-C**

1. **8" CMU Wall**
2. **1-#4 Bar @ 24" O.C.**
3. **2-L's 5" x 3 1/2" x 5/16"**
4. **x Length To Match C to C Distance Of External Pilasters**
5. **1/8"**
6. **Pipe 4" XStrong**
7. **3/16"**
8. **3"**
9. **3/16"**

**DETAIL AT PIPE COLUMN**

1. **2-#5 Bars, Line Up Over Walls Of Pipe Column**
2. **8" CMU Wall**
3. **2-R-1/4" x 2" x 0'-4"**
4. **Clip Corner Of P - Typ**
5. **2-L's 5" x 3 1/2" x 5/16" x Length To Match C to C Distance Of External Pilasters**
6. **1" @ 12"**

**GRATE NOTES:**
1. Steel Work Shall Conform To Mag Sections 515 And 770.
2. Shop Drawings Are Not Required. Contractor Shall Be Responsible For Correct Fit Between The Trash Rack, Channel And Wall As Constructed In The Field.
3. Shop Prime Steel And Touch-Up Per MAG Section 515.5. Apply A Second Coat After Erection And A Finish Coat Of Alkyd Enamel To Match Wall Finish Color. Property Owner Responsible for Cleaning.

**APPROVED BY:**
Scottsdale Standards & Specifications Committee

**DRAINAGE GRATE AT BLOCK WALL**

**DETAIL NO. 2515-2**

**REVISIONS:**
- REVISED 5/17/06
**TYPE 2A - BURIED GROUTED RIP-RAP DETAIL**

- **Top Stone:**
  - Loose Naturally Placed Native Stone. $D_{50} = 8''$ (Size: 3'' Min. - 12'' Max.)

- **Bed Stone:**
  - Hand Placed Native Stone $D_{50} = 15''$ (Size: 12'' Min. - 18'' Max.)

- **Min. Slope:**
  - 0.5%

- **Native Bed Material**
  - 2'' Min.

- **Concrete**
  - 6'' Min.

- **Integrally Colored Concrete Or Grout,**
  - Color To Be Determined By Plans or City Of Scottsdale Inspector

- **Existing Ground**
  - 6' Minimum

- **Turndown**
  - 18'' Minimum

- **Color to match native stone**

**SECTION A-A**

- **Continuous Turndown Along All Edges**

- **Slope Per Plan**
  - 6'' Thick Colored Pneumatically Placed Mortar (Gunite) w/
    - 6 x 6 1.4W x 1/4W WWF

**TYPE 2B - PNEUMATICALLY PLACED MOTAR DETAIL**

- **Existing Ground**
  - 6' Minimum

- **Slope To Match Existing Channel**

- **Existing Channel**
  - 18'' Minimum Turndown Depth

- **Details:**
  - Collection and placement of water runoff

**APPROVED BY:**
- Scottsdale Standards & Specifications Committee

**EROSION PROTECTION - TYPE 2**

**DETAIL NO.** 2515-3

**City of Scottsdale Standard Details**
NOTES

1. Material: Cast Gray iron ASTM A-48, Class 35B, Unpainted
2. The Total Width Of Individual Letters To Be Such That Letters And Words Are Equally Spaced And Balanced.
3. Letters To Be 2" In Height And Raised 1/8" Above Level Of Cover. Type Of Letters To Be Submitted For Approval.
**Grate for Type "F" Catch Basin**

Replaces grate shown in MAG Detail NO 535

- 1/4" x 3" bar at each end
- (20) 1/2" x 3" steel bars @ 1-7/8" O.C.
- 1/2" dia steel rod

**Grate for Type "G" Catch Basin**

Replaces grate shown in MAG Detail 537

- 1/2" rod to outside grate (typ both ends)
- 1/4" x 2-1/2" bar each end
- 1-1/2" C/L bar to outside grate (typ both sides)
- 1/2" x 2-1/2" steel grate (typ both ends)
- 1/2" DIA steel rod flush with top of bars
- Weld per MAG Spec's

**Notes:**

1. All materials and fabrication to be as specified in MAG Standard Detail NO 540-2

**Section A-A**

End Spacing as Required

- See plan above

- 1/4" x 2-1/2" or 3" Steel End Bars
- 1/2" DIA Steel Rod

- 1/2" Steel Bar as shown in plan views above
GENERAL NOTES

1. For lateral dimensions of invert paving, use 72° control for CMP and span for CMPA.

2. Paving shall be scored at 18" min. (transverse) along pipe length.

3. Use bevel on inlet headwall only.

4. Wire mesh shall be tack welded to corrugation crests at 18" intervals. Laps shall be 6" min.

5. Paving shall not be placed until backfilling is completed.

6. Concrete shall be Class "B".

---

**ELEVATION A-A**

**ELEVATION B-B**

**NO HEADWALL**

**WITH HEADWALL**

**CONCRETE INVERT PAVING FOR CORRUGATED METAL PIPE AND PIPE ARCH**

**DETAIL NO. 2554**

City of Scottsdale Standard Details  
Approved by: Scottsdale Standards & Specifications Committee  
CONCRETE INVERT PAVING FOR CORRUGATED METAL PIPE AND PIPE ARCH  
DETAIL NO. 2554
**STORM DRAIN INLET MARKER**

**NOTES**

1. Material: Cast Aluminum
2. The Total Width Of Individual Letters To Be Such That Letters And Words Are Equally Spaced And Balanced.
3. Letters To Be 1/2" In Height. Type Of Letters To Be Submitted For Approval.

**TYPE "A:"**

TO BE INSTALLED IN WET CONCRETE DURING CONSTRUCTION

**TYPE "B:"**

TO BE INSTALLED WITH ADHESIVE ON EXISTING STRUCTURES

DETAIL NO. 2560-1

City of Scottsdale Standard Details

APPROVED BY: Scottsdale Standards & Specifications Committee

STORM DRAIN INLET MARKER

DETAIL NO. 2560-1
Locate Marker On Center Of The Headwall.

Locate Marker On the Vertical Face Of Headwall When Face Is 3' Or Greater. Center On Headwall.

**TYPE "A"**
TO BE INSTALLED IN WET CONCRETE DURING CONSTRUCTION

**TYPE "B"**
TO BE INSTALLED WITH ADHESIVE ON EXISTING STRUCTURES

Dynamix #6125-1 Urethane Universal Adhesive

STORM DRAIN INLET MARKER ON HEADWALL

APPROVED BY:
Scottsdale Standards & Specifications Committee

City of Scottsdale
Standard Details

DETAIL NO. 2560-2

DETAIL NO. 2560-2
STORM DRAIN INLET MARKER ON CATCH BASIN/SCUPPER

**TYPE "A"**

TO BE INSTALLED IN WET CONCRETE DURING CONSTRUCTION

Locate Marker On Center Of Catch Basin/Scupper

Dynamix #6125-1 Urethane Universal Adhesive

**TYPE "B"**

TO BE INSTALLED WITH ADHESIVE ON EXISTING STRUCTURES

- Catch Basin Inlet
- Scupper Inlet

APPROVED BY:
Scottsdale Standards & Specifications Committee
NOTES:

1. ALL SHEAR PIN ANGLES SHALL FIT SNUGLY AND TRULY FACE TO FACE. COVER WITH WATERPROOF GREASE PRIOR TO INSTALLATION OF PIN.
2. GALVANIZE ALL FERROUS PARTS AFTER FABRICATION.
3. THE SHEAR PIN HOLES IN THE ANGLE SHALL BE DRILLED FOR A TIGHT FIT OF THE SHEAR PINS.
4. FRAME AND HINGE ANGLES SHALL HAVE THE OUTSTANDING LEGS OUT FOR OUTLETS.
5. ALL ANCHOR BOLTS SHALL BE 5/8" ANCHOR BOLTS EMBEDDED 4" (MIN.) INTO EPOXY GROUT.
6. ALL SHEAR PINS ARE TO BE PEENED BOTH ENDS AFTER INSTALLATION.
7. SHEAR PIN MATERIAL SHALL BE COMMERCIALLY PURE ALUMINUM WIRE.
8. SEE BARRIER SCHEDULE, DET. 2562-2 FOR VARIABLE DIMENSIONS.
9. COVER ALL MOVABLE CONTACT SURFACE WITH A COAT OF WATERPROOF GREASE PRIOR TO INSTALLATION.
10. ALL BARRIER BARS TO BE 1/2" PLAIN.

ANCHOR BOLT DETAIL

ANCHOR BOLT 

BARRE R OPENING 

ANCHOR BOLT & NUT

CLIP ANGLE & SHEAR PIN DETAIL

Hinge & Clip Angle Detail

30" & 36" Pipes Only, Single Hinge & Clip Angle Detail

Hinge Pin


Frame & Nut. (See Detail)

Section

Hinge Installation Detail

Clips Angle & Shear Pin Detail

Typical Barrier Detail

City of Scottsdale Standard Details

Scottsdale Standards & Specifications Committee

STORM SEWER OUTFALL ACCESS BARRIER

APPROVED BY:

REVISED 3/28/02

DET. 2562-1

DETAIL NO. 2562-1

2562-1

1-1/2" HOLE X 5" DEEP

4" MIN. EMBED.
<table>
<thead>
<tr>
<th>SIZE OF OUTFALL CONDUIT</th>
<th>FRAME ANGLES</th>
<th>SHEAR PIN CLIP ANGLES</th>
<th>SHEAR PINS</th>
<th>HINGE PINS</th>
<th>HINGE ANGLES</th>
<th>HINGE STD. PIPE</th>
<th>NO. OF EQUAL BARRIER BAR SPACES (HORIZ.)</th>
<th>NO. OF EQUAL BARRIER BAR SPACES (VERT.)</th>
<th>H (OUT TO OUT ANGLES)</th>
<th>W (OUT TO OUT ANGLES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30&quot;</td>
<td>2X2X1/4</td>
<td>4X4X1/4</td>
<td>1-3/4&quot;Ø</td>
<td>1/2&quot;Ø</td>
<td>2X2X1/4</td>
<td>3/4&quot;</td>
<td>3</td>
<td>5</td>
<td>34&quot;</td>
<td>20&quot;</td>
</tr>
<tr>
<td>36&quot;</td>
<td>2X2X1/4</td>
<td>4X4X1/4</td>
<td>1-1/6&quot;Ø</td>
<td>3/4&quot;Ø</td>
<td>2-1/2X2-1/2X1/4</td>
<td>1&quot;</td>
<td>4</td>
<td>6</td>
<td>40&quot;</td>
<td>26&quot;</td>
</tr>
<tr>
<td>42&quot;</td>
<td>2X2X1/4</td>
<td>4X4X1/4</td>
<td>2-1/8Ø</td>
<td>1/2&quot;Ø</td>
<td>2X2X1/4</td>
<td>3/4&quot;</td>
<td>5</td>
<td>6</td>
<td>42&quot;</td>
<td>32&quot;</td>
</tr>
<tr>
<td>48&quot;</td>
<td>3X3X7/16</td>
<td>5X3X1/4</td>
<td>2-1/8Ø</td>
<td>3/4&quot;Ø</td>
<td>2-1/2X2-1/2X1/4</td>
<td>1&quot;</td>
<td>5</td>
<td>7</td>
<td>47&quot;</td>
<td>38&quot;</td>
</tr>
<tr>
<td>54&quot;</td>
<td>3X3X7/16</td>
<td>5X3X1/4</td>
<td>2-1/8Ø</td>
<td>3/4&quot;Ø</td>
<td>2-1/2X2-1/2X1/4</td>
<td>1&quot;</td>
<td>6</td>
<td>8</td>
<td>54&quot;</td>
<td>44&quot;</td>
</tr>
<tr>
<td>60&quot;</td>
<td>3X3X7/16</td>
<td>5X3X1/4</td>
<td>2-1/8Ø</td>
<td>3/4&quot;Ø</td>
<td>2-1/2X2-1/2X1/4</td>
<td>1&quot;</td>
<td>7</td>
<td>9</td>
<td>60&quot;</td>
<td>50&quot;</td>
</tr>
<tr>
<td>66&quot;</td>
<td>3X3X7/16</td>
<td>5X3X1/4</td>
<td>2-1/8Ø</td>
<td>3/4&quot;Ø</td>
<td>2-1/2X2-1/2X1/4</td>
<td>1&quot;</td>
<td>8</td>
<td>10</td>
<td>66&quot;</td>
<td>56&quot;</td>
</tr>
<tr>
<td>72&quot;</td>
<td>4X4X5/8</td>
<td>5X3X1/4</td>
<td>2-3/16Ø</td>
<td>1&quot;Ø</td>
<td>3X3X3/8</td>
<td>1-1/4&quot;</td>
<td>9</td>
<td>11</td>
<td>73&quot;</td>
<td>62&quot;</td>
</tr>
<tr>
<td>78&quot;</td>
<td>4X4X5/8</td>
<td>5X3X1/4</td>
<td>2-3/16Ø</td>
<td>1&quot;Ø</td>
<td>3X3X3/8</td>
<td>1-1/4&quot;</td>
<td>10</td>
<td>11</td>
<td>79&quot;</td>
<td>68&quot;</td>
</tr>
<tr>
<td>84&quot;</td>
<td>4X4X5/8</td>
<td>5X3X1/4</td>
<td>2-3/16Ø</td>
<td>1&quot;Ø</td>
<td>3X3X3/8</td>
<td>1-1/4&quot;</td>
<td>11</td>
<td>13</td>
<td>86&quot;</td>
<td>74&quot;</td>
</tr>
<tr>
<td>90&quot;</td>
<td>4X4X5/8</td>
<td>5X3X1/4</td>
<td>2-3/16Ø</td>
<td>1&quot;Ø</td>
<td>3X3X3/8</td>
<td>1-1/4&quot;</td>
<td>12</td>
<td>13</td>
<td>92&quot;</td>
<td>80&quot;</td>
</tr>
<tr>
<td>96&quot;</td>
<td>4X4X5/8</td>
<td>5X3X1/4</td>
<td>2-3/16Ø</td>
<td>1&quot;Ø</td>
<td>3X3X3/8</td>
<td>1-1/4&quot;</td>
<td>12</td>
<td>14</td>
<td>98&quot;</td>
<td>86&quot;</td>
</tr>
</tbody>
</table>

*NOTE: Adjust these values for skewed conduits. Provide 5" maximum opening at each side and between bars.*