Quantities shown are for estimating purposes only.

When called for in the plans, steel grating, baffles and accessories. Each. Payment shall include cost of concrete, reinforcing steel, and

Endwall to be paid for under the contract unit price for U-Endwall, 9.

Sodding shall be in accordance with Index No. 281, and paid for under

8.

requirements of Section 449 of the Specifications.

Concrete shall be Class I, except ASTM C478 (4000 psi) concrete may

7.

be substituted for precast items manufactured in plants meeting the

Concrete shall be Class I, except ASTM C478 (4000 psi) concrete may

6.

details.

Channel section C 3x6 may be substituted for C 4x5.4 channel.

5.

All reinforcing No. 4 bars with 2" clearance except as noted.

4.

All angles, channels and bars shall be ASTM A242/A242M, A572/A572M

or A588/A588M Grade 50 steel. When designated Alternate G in the

plans galvanize in accordance with Section 975 and 423-3.2 of the

Standard Specifications.

3.

Details.

When steel grating is required on endwall see Sheet 3 of 3 for

2.

Baffles to be constructed only when called for in plans.

1.

GENERAL NOTES

1. Baffles to be constructed only when called for in plans.

2. When steel grating is required on endwall see Sheet 3 of 3 for
details.

3. All reinforcing No. 4 bars with 2" clearance except as noted.

4. All angles, channels and bars shall be ASTM A242/A242M, A572/A572M

or A588/A588M Grade 50 steel. When designated Alternate G in the

plans galvanize in accordance with Section 975 and 423-3.2 of the

Standard Specifications.

5. Channel section C 3x6 may be substituted for C 4x5.4 channel.

6. Precasting of this endwall will be permitted. Precast units shall
conform to the dimensions shown in accordance with approved shop
drawings. Request for shop drawing approval shall be directed to the
State Drainage Engineer. Use Index No. 201 for opening and grouting
details.

7. Concrete shall be Class I, except ASIN C478 (4000 psi) concrete may
be substituted for precast items manufactured in plants meeting the
requirements of Section 448 of the Specifications.

8. Sodding shall be in accordance with Index No. 281, and paid for under

9. Endwall to be paid for under the contract unit price for U-Endwall.
Each. Payment shall include cost of concrete, reinforcing steel, and
when called for in the plans, steel grating, baffles and accessories.
Quantities shown are for estimating purposes only.
U-TYPE CONCRETE ENDWALLS

BAFFLES & GRATE OPTIONAL 15" TO 30" PIPE

DESCRIPTION:

REINFORCING DETAILS

SIDE VIEWS AND BACKWALL SECTIONS

REINFORCING DETAILS

DIMENSIONAL DETAILS

DIMENSIONS AND QUANTITIES FOR BAFFFLES

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>X Baffe</th>
<th>Y Baffle</th>
<th>Concrete</th>
<th>No. Cu. Ft.</th>
<th>Lbs.</th>
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<tbody>
<tr>
<td>15&quot;</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td>1.23</td>
<td>51</td>
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<tr>
<td>24&quot;</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>1.77</td>
<td>52</td>
</tr>
<tr>
<td>30&quot;</td>
<td>6</td>
<td>12</td>
<td>6</td>
<td>4.91</td>
<td>124</td>
</tr>
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</table>

DIMENSIONS AND QUANTITIES FOR ONE U-ENDWALL

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
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<tbody>
<tr>
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<td>15&quot;</td>
<td>1.23</td>
<td>1.9</td>
<td>3.7</td>
<td>3.7</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>1.19</td>
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<td>4.2</td>
<td>2.2</td>
<td>2.2</td>
<td>2.2</td>
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<td></td>
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<td>4.91</td>
<td>3.1</td>
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<td>3.1</td>
<td>3.1</td>
<td>3.1</td>
<td>2.53</td>
<td>180</td>
<td>224</td>
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</table>

ENDWALLS WITH AND WITHOUT BAFFFLES FOR 1:3, 1:4 AND 1:6 SLOPES

LOCATION REF.

PLAN

SECTION AA

SIDE VIEWS AND BACKWALL SECTIONS

REINFORCING DETAILS
STEEL GRATING USE CRITERIA

1. Grates to be used on pipe culvert endwalls located within the designated clear zone. Positive debris control shall be provided at all upgradient openings. Grates shall not be used unless one or more of the following conditions exist:

A. Drainage area to culvert consists of median or infield areas or areas where debris and/or drift is negligible.

B. Runoff to culvert is by sheetflow or in such ill-defined channels that debris transport is not considered a major problem.

C. Runoff to culvert is minor except on an infrequent basis (10 to 15 year frequency); for example a drainage basin in flat sandy terrain with normally low ground water table.

D. Areas where culvert blockage with resultant backwater would not seriously affect roadway embankment, traffic operation or upland property.

2. Steel grating to be used only where called for in plans.

TABLE OF DIMENSIONS AND QUANTITIES FOR ONE GRATE

<table>
<thead>
<tr>
<th>Rate Of Slope</th>
<th>Size Of Pipe</th>
<th>G</th>
<th>2 Each Bars @ 3.4 lb/ft</th>
<th>(X) Channels @ 5.4 lb/ft</th>
<th>2 Angles @ 3.62 lb/ft</th>
<th>Total Weight (lb)</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td>L</td>
<td>W-4'</td>
<td>P</td>
<td>F</td>
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<tr>
<td>1.6</td>
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<td>9</td>
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<td></td>
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<td>10</td>
<td>3-3'</td>
<td>94</td>
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<td>137</td>
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<td>3-3'</td>
<td>73</td>
<td>6</td>
</tr>
<tr>
<td></td>
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<td>9</td>
<td>3-4'</td>
<td>90</td>
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<tr>
<td></td>
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<td>107</td>
<td>10</td>
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<tr>
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<td>4</td>
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<tr>
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<td>3-4'</td>
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<td>3-4'</td>
<td>87</td>
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FDOT 2014 DESIGN STANDARDS