<table>
<thead>
<tr>
<th>Run Information</th>
<th>Transitions</th>
<th>End Terminals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Barrier</strong></td>
<td><strong>Standard Sheet</strong></td>
<td><strong>Pay Item Family</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Standard</strong></td>
<td><strong>Sheet</strong></td>
<td><strong>Curvature/Post information</strong></td>
</tr>
<tr>
<td><strong>Cable</strong>&lt;sup&gt;c&lt;/sup&gt;</td>
<td>M606-3R1 M606-2R3</td>
<td>606.01</td>
</tr>
<tr>
<td><strong>High Tension Cable</strong> (proprietary system; see special spec for approved products)</td>
<td>Shop Dwg s</td>
<td>606.06x .09</td>
</tr>
<tr>
<td><strong>Modified 10½ Post Corrugated Beam</strong> (shop curve R ≥ 45 m)</td>
<td>R as small as 2 m is possible, but R ≥ 15 m is not recommended</td>
<td>M606-50R1 M606-50R1</td>
</tr>
<tr>
<td><strong>Box Beam</strong> (shop curve R ≥ 220 m)</td>
<td>R = -10 m possible if machine bent, R = 1 m possible with pic cutting</td>
<td>M606-55R1 M606-56 M606-58</td>
</tr>
<tr>
<td><strong>Heavy Post Block Out Corrugated Beam (HPBO)</strong> (shop curve R ≥ 45 m)</td>
<td>R as small as 2 m is possible, but R ≥ 15 m is not recommended</td>
<td>M606-8R5 M606-9R4</td>
</tr>
<tr>
<td><strong>Concrete Half-Section Single Slope</strong></td>
<td>M606-2TR2</td>
<td>606.30x</td>
</tr>
<tr>
<td><strong>Concrete half-section Jersey shape</strong></td>
<td>M606-20R1, 21R1, &amp; 22R1</td>
<td>606.50x</td>
</tr>
<tr>
<td><strong>Innovated</strong>&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Shop Dwg s</td>
<td>606.100X2014</td>
</tr>
</tbody>
</table>

**General Notes:**
A. Related information for guide rails included in HDMI 10.2.2.1.
B. Contact Bob Lohse at (518) 457-3528 with questions on this sheet.
C. See EI 99-022 on what design speeds to use in selecting or designing safety articles.
D. Deflections for relatively straight runs of rail mounted on regular length posts. Deflections are 30% larger when extra long posts are required. See HDMI 10.2.3.5.
E. 'Family' of guide rail items means that is the core pay item to which additional digits may be added conveying extra long posts, and shop curving, and for some families, size or number information. See the Standard Specifications and/or catalog of pay items (control report) for the additional digits.

**Notes:**
1. This system presents a very pleasing timber appearance.
2. This unit employs a slip-base post and anchor base plate. Older type w/o such a post may snag vehicles at the downstream end and are more costly to repair. Older existing units may be retained on the approach ends on one way roads.
3. Where lane volume > 5000 vpd, use of Cable Guide Rail would require a commitment from maintenance of expedited repair. Additionally, where side dops are steeper than 1:2, post spacing must be such that deflection is 2.4 m or less. This deflection cannot be attained in situations where extra long posts are required. Check out HDMI Table 10-4, Minimum Shoulder Break Offsets to Back of Guide Rail Posts.
4. Turned-down ends may be installed or retained in the clear zone in low-speed situations. Low speeds are defined as < 50 km/h in rural areas and < 70 km/h in urban areas.
5. Needs a mediak 3 m or wider.
6. Expendable or Reusable models may be used. Available in Test Levels II, and III. See Materials Approved List.
7. Pay items for temporary applications are also transmitted by EI 11-016. (See 10.2.6.15 for temporary applications)
8. Type 0 means to ground in backslope (3ft tall)<sup>g</sup> without using turned down end. Pay factor shown on standard sheet.
9. Includes the Bit End Piece and the 5.48 m shop curved section. May be used at driveways, see HDMI 10.2.5.4D. May require additional grading and culvert work. See standard sheets.
10. Turned-down ends may be installed or retained in the clear zone in low-speed situations. Low speeds are defined as < 50 km/h in rural areas and < 70 km/h in urban areas.
11. 2.2 m turned down end.
12. Type 0 means to ground in backslope (3ft tall)<sup>g</sup> without using turned down end. Pay factor shown on standard sheet.
13. Requires a minimum 200 mm thick reinforced foundation.
<table>
<thead>
<tr>
<th>Type of Barrier</th>
<th>Standard Sheet</th>
<th>Pay Item Family²</th>
<th>Curvature/Post Information (Radius in m)</th>
<th>Post Space (m)</th>
<th>Deflect (m)³</th>
<th>Pay Factor (PF)</th>
<th>Design Information</th>
<th>To Type</th>
<th>Standard Sheet</th>
<th>Pay Item Family²</th>
<th>Design Information</th>
<th>Type of End Terminal</th>
<th>Standard Sheet</th>
<th>Pay Item Family²</th>
<th>Design Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable Median Barrier²⁶</td>
<td>M606-52R1, M606-53R1, M606-54R1</td>
<td>606.05</td>
<td>R &lt; 220 requires 2.4 m spacing¹</td>
<td>5.00</td>
<td>3.75</td>
<td>2.50</td>
<td>1.25</td>
<td>PM 1.00</td>
<td>1.10</td>
<td>1.40</td>
<td>1.90</td>
<td>M606-52R1 (Intermediate Anchorage)</td>
<td>Anchor Unit</td>
<td>M606-53R1, M606-54R1</td>
<td>606.010</td>
</tr>
<tr>
<td>High Tension Cable (proprietary systems)</td>
<td>Shop Dwg. 606.014-09</td>
<td>See Manufacturer guidelines</td>
<td>varies</td>
<td>≤ 2.4 m</td>
<td></td>
<td></td>
<td>See Manufacturer guidelines</td>
<td>Box Beam (HPBO)</td>
<td>M606-23, 24 M606-18R2</td>
<td>606.8501</td>
<td>606.8601</td>
<td>HDM 10.2.5.6</td>
<td>Anchor Unit</td>
<td>M606-7</td>
<td>M606-7</td>
</tr>
<tr>
<td>Corrugated Beam¹ (Shop curve R &lt; 465)</td>
<td>M606-7</td>
<td>606.17</td>
<td>R =&gt; 48³</td>
<td>3.81</td>
<td>1.80</td>
<td>1.27</td>
<td>0.95</td>
<td>1.00</td>
<td>1.14</td>
<td>1.60</td>
<td>1.99</td>
<td>HDM 10.2.4.4</td>
<td>Shop Dwg.</td>
<td>M606-4, M606-33, 36, 37</td>
<td>606.8501</td>
</tr>
<tr>
<td>Box Beam</td>
<td>M606-4</td>
<td>606.11</td>
<td></td>
<td>1.83</td>
<td>0.9</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HDM 10.2.4.5</td>
<td>W-Beam, Weak Post Concrete Single Slope</td>
<td>M606-23, 24 M606-18R2</td>
<td>606.8501</td>
</tr>
<tr>
<td>HPBO Corrugated</td>
<td>M606-10R4</td>
<td>606.33</td>
<td></td>
<td>1.00</td>
<td>0.95</td>
<td>0.6</td>
<td>1.0</td>
<td>1.8</td>
<td></td>
<td></td>
<td></td>
<td>HDM 10.2.4.4</td>
<td>Concrete Single Slope Concrete Jersey Shape</td>
<td>M606-42R2, 43R1, 44R1 M606-42R2, 43R1, 48</td>
<td>606.8705</td>
</tr>
<tr>
<td>Concrete single slope</td>
<td>M606-26R1</td>
<td>606.304x</td>
<td>N/A</td>
<td>N/A</td>
<td>0</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HDM 10.2.4.6</td>
<td>Box Beam Jersey shape HPBO Corrugated Waze Slg Slope Core</td>
<td>M606-33, 36, 37 M606-32R1 M606-32R2, 43, 44 M606-38R1</td>
<td>606.8805</td>
</tr>
<tr>
<td>Concrete Jersey Shape</td>
<td>M606-20R1, 21R1, 22R1</td>
<td>606.308x</td>
<td>N/A</td>
<td>N/A</td>
<td>0</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HDM 10.2.4.6</td>
<td>Single Slope Box Beam</td>
<td>M606-32R1, 42R1, 43R1, 44R1</td>
<td>606.8801</td>
</tr>
</tbody>
</table>

**Notes:**
1. Weak-Post Corrugated Median Barrier is acceptable at TL3.
2. Because of the separation of cable median barrier from the traffic lanes, cable median barrier may be used where lane volume = 5000 vpd, without any special maintenance commitment.
3. Turned-down ends may be installed or retained in the clear zone in low-speed situations. Low speeds are defined as ≤ 70 km/h in rural areas and for maintenance considerations ≤ 60 km/h in urban areas.
4. Needs a median 3 meters or wide.
5. Expendable or Reusable models may be used. Available in Test Levels II, and III. See Materials Approved List and EI 10-011.
6. For Work Zone Traffic Control see 633.0xx.
7. Needs a median 3 meters or wide.
8. Close spacing is required on sharp curvature to avoid posts being pulled over by cable or beam tension when weak-post cable or corrugated beam barriers are hit by errant vehicles. Not a consideration with strong-post systems or box beam systems.
9. Permanent impact attenuators may also be used, but they are considerably more expensive.
10. Impact Attenuators on new foundation slabs require a minimum 200 mm thick reinforced foundation.

**General Notes:**
A. Point of redirection information for median barrier included in HDM 10.2.4.
B. Contact Bob Lohse at (518) 437-3228 with questions on this sheet.
C. See EI 99-032 for information on what design speeds to use in selecting or designing safety articles.
D. Family of guide rail items means the core pay item to which additional digits may be added conveying extra long posts, and shop curving, and for some families, size or number information. See the Standard Specifications and/or catalog of pay items (control report) for the additional digits.
E. Deflection distances apply to relatively straight runs.

¹Pay items for temporary applications are also transmitted by EI 11-016.
²For Work Zone Traffic Control use 633.0xx.
³Close spacing is required on sharp curvature to avoid posts being pulled over by cable or beam tension when weak-post cable or corrugated beam barriers are hit by errant vehicles. Not a consideration with strong-post systems or box beam systems.
⁴Permanent impact attenuators may also be used, but they are considerably more expensive.
⁵Impact Attenuators on new foundation slabs require a minimum 200 mm thick reinforced foundation.

**Design Information Reference:**
- Anchor Unit: M606-53R1, M606-54R1
- Inertial Barrier Modules (Sand Barrels): M606-7
- Turned Down°: M606-10R4
- Sgl Slp Turn Down': M606-30R1
- Jersey Turn Down': M606-30R1
- Brakemaster°°: M606-7
- Cat 35°: M606-7
- AdamII°: M606-7
- Impact Attenuator (permanent)°°°: M606-7
- Inertial Barrier Modules (Sand Barrels): M606-7

**Run Information Transitions End Terminals**