

**Table 3.3: Technically Acceptable Barriers, Primary Design Issue:
Aesthetics**

Speed		Minimum Available Hazard Offset Meters (Feet)							
Metric	U.S. Customary	0.6 (2)	1.0 (3)	1.2 (4)	1.5 - 2.0 (5 - 6)	2.1 (7)	2.4 - 3.5 (8 - 11)	3.6+ (12+)	
30 – 50 km/h	20 - 30 mph	RCW	SBL	G1	G1	G1	G1	G1	G1
			SBT	HTC	HTC	HTC	HTC	HTC	HTC
			RCW	G3	G3	G3	G3	G3	G3
			SBL	SBL	SBL	SBL	SBL	SBL	SBL
			SBT	SBT	SBT	SBT	SBT	SBT	SBT
			PCG	PCG	PCG	PCG	PCG	PCG	PCG
			SMG	SMG	SMG	SMG	SMG	SMG	SMG
			RCW	RCW	RCW	RCW	RCW	RCW	RCW
55 – 70 km/h	35 - 45 mph		SBL	SBL	HTC	HTC	G1	G1	
			SBT	SBT	G3	G3	HTC	HTC	
				PCG	SBL	SBL	G3	G3	
				SMG	SBT	SBT	SBL	SBL	
					PCG	PCG	SBT	SBT	
					SMG	SMG	PCG	PCG	
							SMG	SMG	SMG
									SMG
80+ km/h	50+ mph			SBT	SBT	HTC	HTC	G1	
				PCG	PCG	G3	G3	HTC	
				SMG	SMG	SBT	SBT	G3	
						PCG	PCG	SBT	
						SMG	SMG	PCG	PCG

Notes:

1. G1, HTC and G3 systems are listed because of minimized view obstruction rather than the aesthetics of the barrier itself.
2. See Table 3.1 for definitions of acronyms.

Table 3.4: Technically Acceptable Barriers, Primary Design Issue: Severe Conditions

Speed		Minimum Available Hazard Offset Meters (Feet)			
Metric	U.S. Customary	0.6 (2)	1.0 (3)	1.2 - 2.1 (4 - 7)	2.4+ (8+)
30 - 50 km/h	20 – 30 mph	G9 CSS	G4 G9 CSS	HTC G4 G9 CSS	HTC G4 G9 CSS
55 - 80 km/h	35 – 50 mph	CSS	G9M CSS	G9M CSS	HTC G9M CSS

Notes:

1. General note: steel elements in barriers can be supplied with weathering steel, adding an aesthetic element to barriers primarily selected for cost.
2. See Table 3.1 for definitions of acronyms.

3.4 END TREATMENTS

The end treatment of a roadside barrier is a key element in ensuring that the system is as safe as possible. Selection of a satisfactory end treatment that meets the requirements of the situation must be part of the barrier selection process. End treatments for the various barrier types are discussed below.

Table 3.5: Available End Treatments

Barrier System	End Treatment	Test Level	Reference
Three-Strand Cable (G1)	Three-Strand Cable Terminal	TL-3	<i>RDG</i>
High-Tension Cable (HTC)	Manufacturer specific	TL-3	See Supplier Data
Weak Post W-Beam (G2)	Turned-down	Must be flared outside CZ	<i>RDG</i>
	Buried in Backslope	TL-2	STD 617-17
Box Beam (G3)	Wyoming Box Beam End Terminal	TL-3	<i>RDG</i>
	Turned Down End	Must be flared outside CZ	<i>RDG</i>
Strong Post W-Beam (G4)	MELT	TL-2	STD 617-12
	Low Speed Terminal	TL-2	STD 617-14
	Buried in Backslope	TL-3	STD 617-17
	Flared Terminal	TL-3	STD 617-19
Thrie-Beam (G9)	Tangent Terminal	TL-3	STD 617-20
	None available. Transition to G-4, then use appropriate end treatment.		
Modified Thrie-Beam (G9M)	None available. Transition to G-4, then use appropriate end treatment.		

Table 3.5: Available End Treatments
(Continued)

Barrier System	End Treatment	Test Level	Reference
Concrete Safety Shape (CSS)	Buried in Backslope	TL-3	<i>RDG</i>
	Crash Cushion	TL-3	<i>RDG</i>
	Sloped Terminal	Must be flared outside CZ	
	Transition to G-4, then use appropriate end treatment		
Steel-Backed Log Rail (SBL)	Turned-Down	Must be flared outside CZ	STD 617-61
	Buried in Backslope	TL-3	STD 617-62
Steel-Backed Timber Rail (SBT)	Turned-Down	TL-2	STD 617-82
	Buried in Backslope	TL-2	
Precast Concrete Guardwall, Type 1 (PCG)	Turned-Down	Must be flared outside CZ	STD 618-3
	Transition to G-4, then use appropriate end treatment		
Stone Masonry Guardwall (SMG)	Buried Terminal	TL-3	STD 620-3
	Stand Alone Terminal	Must be flared outside CZ	STD 620-3
	Transition to G-4, then use appropriate end treatment		
Random Rubble Cavity Wall (RCW)	Buried Terminal	TL-1	
	Stand Alone Terminal	Must be flared outside CZ	

Figure 3.13: Wyoming Box Beam End Terminal



Figure 3.14: W-Beam with MELT



Figure 3.15: W-Beam Buried in Backslope



Figure 3.16: W-Beam Flared End



Figure 3.17: W-Beam Tangent End



Figure 3.18: Concrete Safety Shape Buried in Backslope

