(Old) Type 1 Beam Guardrail
Transitions

Previously, WSDOT standard practice was to install W-beam guardrail at a rail height of 27 to 28 inches, referred to as “Type 1” guardrail. WSDOT introduced Type 31 guardrail in 2009 as the replacement for Type 1 guardrail. Type 1 guardrail is no longer used by WSDOT for new installations. The following information and plans are provided for information only.

When there is an abrupt change from one barrier type to a more rigid barrier type, a vehicle hitting the more flexible barrier may be caught in the deflected barrier pocket and directed into the more rigid barrier. This is commonly referred to as “pocketing.” A transition stiffens the more flexible barrier by decreasing the post spacing, increasing the post size, and using stiffer beam elements to reduce the possibility of pocketing.

Note: WSDOT introduced Type 31 guardrail in 2009 as the replacement for Type 1 guardrail. The guidance in the Design Manual regarding guardrail transitions was updated in 2009 to show Type 31 guardrail transitions instead of Type 1 guardrail transitions. As such, the May 2008 version of the Design Manual was the last Design Manual version to show complete guidance regarding transitions for Type 1 guardrail (Exhibit 710-10).

The Transitions listed below correspond to the transition types referenced in the May 2008 Design Manual Figure 710-10, and were shown on the following Standard Plans:

- Transition Types 1, 1A  Standard Plan C-3
- Transition Types 2, 4, 5, 6  Standard Plan C-3a
- Transition Types 10, 11, 12  Standard Plan C-3b
- Transition Type 13, 14, 15  Standard Plan C-3b
- Transition Type 16, 17, 18  Standard Plan C-3c