

Type of Barrier/Guardrail	Face Side Both	40 MPH		50 MPH		60 MPH		70 MPH	
		Range	Avg	Range	Avg	Range	Avg	Range	Avg
Strong Post Blocked-out W-Beam	Face	2.4 -2.8	2.6	2.8 -3.4	3.1	3.2 -4.0	3.6	4.0 -4.5	4.3
Strong Post Blocked-out Thrie-Beam	Face	2.4 -2.8	2.6	2.8 -3.4	3.1	3.2 -4.0	3.6	3.8 -4.8	4.3
Concrete Safety Shape	Face	1.8 -2.8	2.3	2.4 -3.0	2.7	3.0 -3.8	3.4	3.8 -4.8	4.3
Stone Masonry Wall	Face	2.4 -2.8	2.6	2.8 -3.4	3.1	3.4 -4.2	3.8	4.0 -5.0	4.5
Retaining Wall or Vertical Face Barrier	Face	2.4 -2.8	2.6	2.8 -3.4	3.1	3.4 -4.2	3.8	4.0 -5.0	4.5

**FACTORS THAT AFFECT SEVERITY RANGE:**

*Low Range: New installation with proper design, placement and maintenance, area between the travel lane and hardware is flat and free of obstructions, runout area behind hardware clear, recovery area for redirection, adequate soil resistance, proper clearance from obstacle behind barrier, no curb in front/under.*

*Mid Range: Existing installation in fair condition and properly maintained, area between the travel lane and hardware is relatively flat and free of obstructions, no runout area behind hardware, some recovery area for redirection, questionable soil resistance, proper clearance from obstacle behind barrier in most cases, curb under barrier.*

*High Range: Existing installation in questionable condition and/or poorly maintained, height of rail low, bolts or blockouts missing, steep shoulder slope, curb in front, questionable placement with respect to hinge point, inadequate length for tension, high possibility of impact from several directions, insufficient anchorage, improper flare or runout cross-section at terminal, not anchored properly.*

**SEVERITY INDICES  
(Rigid Barrier and Guardrail Parallel to Roadway)**

**Figure 49-10H**