

**TABLE 2-2C. Recommended TL-3 Test Matrix for Single or Double Median Barrier Designed for Placement between 0 to 4-ft Offset from Slope Break Point of 4H:1V V-Ditch**

Test Desig. No.	Veh. Type	Impact Conditions		V-Ditch Width (ft)	Barrier Position	Barrier Location <sup>a</sup>	Critical Impact Point	Acceptable IS Range, <sup>b</sup> kip-ft (kJ)	Eval. Criteria <sup>c</sup>
		Speed, mph (km/h)	Angle (deg)						
3-10	1100C	62 (100)	25	NA <sup>d</sup>	Level Terrain	NA	Midspan Location	≥51 (69.7)	A,D,F,H,I
3-11	2270P	62 (100)	25	NA <sup>d</sup>	Level Terrain	NA	1 ft Upstream from Post	≥106 (144)	A,D,F,H,I
3-13	2270P	62 (100)	25	46	Front Slope	4 ft from Front SBP <sup>e</sup>	1 ft Upstream from Post	≥106 (144)	A,D,F,H,I
3-14	1100C	62 (100)	25	46	Front Slope	4 ft from Front SBP <sup>e</sup>	Midspan Location	≥51 (69.7)	A,D,F,H,I
3-15 <sup>f,g</sup>	1100C	62 (100)	25	46	Back Slope	4 ft from Ditch Bottom	Midspan Location	≥51 (69.7)	A,D,F,H,I
3-16 <sup>g</sup>	1100C	62 (100)	25	46	Back Slope	4 ft from Back SBP <sup>e</sup>	Midspan Location	≥51 (69.7)	A,D,F,H,I
3-17	1500A	62 (100)	25	46	Front Slope	Variable <sup>h</sup>	Midspan Location	≥70 (95.1)	A,D,F,H,I
3-18 <sup>g</sup>	2270P	62 (100)	25	46	Back Slope	8 ft from Back SBP <sup>i</sup>	1 ft Upstream from Post	≥106 (144)	A,D,F,H,I

a See Figure 2-2A for barrier placement.

b See Section 2.1.2 for tolerances on impact conditions.

c See Table 5-1.

d Not applicable.

e Slope break point.

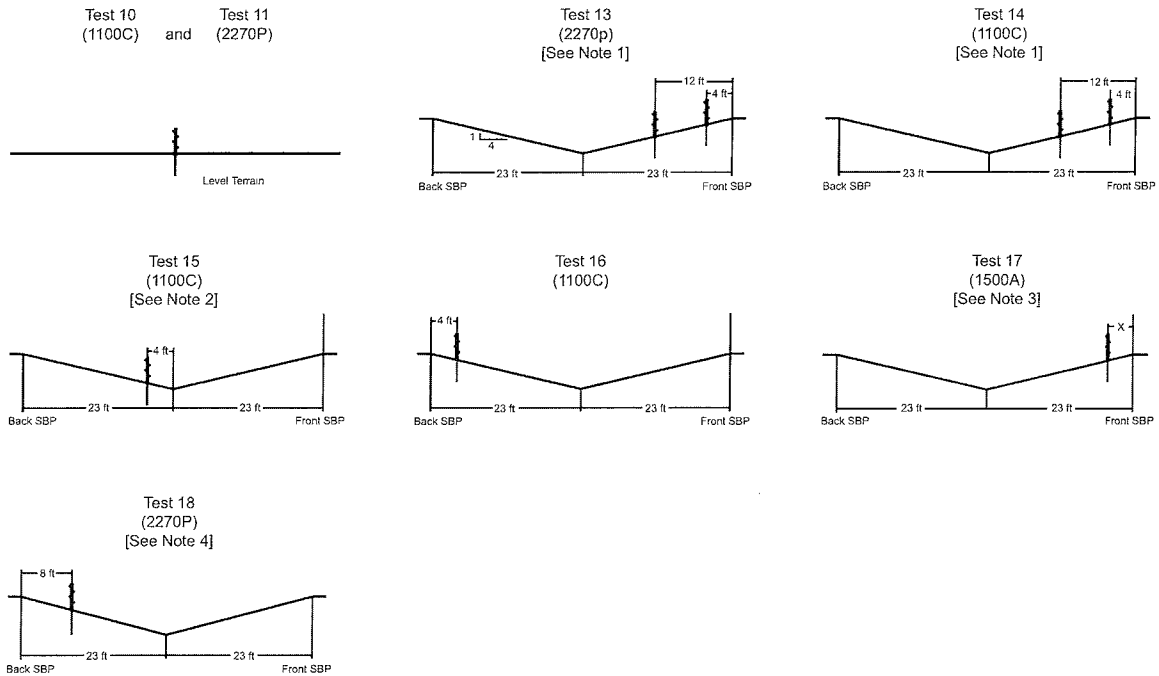
f Test no. 15 is unnecessary for V-ditches greater than or equal to 26 ft, as measured from front SBP to back SBP.

g Test nos. 15, 16, and 18 are unnecessary for double median barrier system placed within median ditch, one on each side and 0 to 4 ft from a SBP.

h Testing laboratory should determine critical barrier position from 0 to 4 ft on front slope of ditch in order to maximize propensity for front end of 1500A vehicle to penetrate between adjacent vertical cables. Critical factors may include vertical cable spacing, position of cables relative to front bumper, location and type of cable release mechanisms, trajectory of vehicle's front bumper, etc.

i A 46-ft wide ditch was selected to simplify the test matrix, thus resulting in barrier placement beyond the 0 to 4 ft range. However, narrower ditch widths provided similar risks for override with a barrier placed at the back SBP.

### Critical Barrier Placement for 4H:1V V-Ditch



- NOTES:
1. For barrier placement anywhere, use a 12-ft lateral offset. Otherwise, use a 4-ft lateral offset for barrier placement within 0 to 4 ft on front SBP.
  2. For single or double median barrier placement at 0 to 4 ft offset from SBP, Test No. 15 is unnecessary for V-ditches greater than or equal to 26 ft, as measured from front SBP to back SBP.
  3. Testing laboratory should determine critical barrier position from 0 to "X" on front slope of ditch or on level terrain in order to maximize the propensity for the front end of 1500A vehicle to penetrate between vertically adjacent cables. Critical factors may include vertical cable spacing, position of cables relative to front bumper, location and type of cable release mechanisms, trajectory of vehicle's front bumper, etc.
  4. A 46-ft wide ditch was selected to simplify the test matrix, thus resulting in barrier placement beyond the 0 to 4 ft range. However, narrower ditch widths provide similar risks for override with a barrier placed at the back SBP.

Figure 2-2A. Critical Cable Barrier Placement for 4H:1V V-Ditch