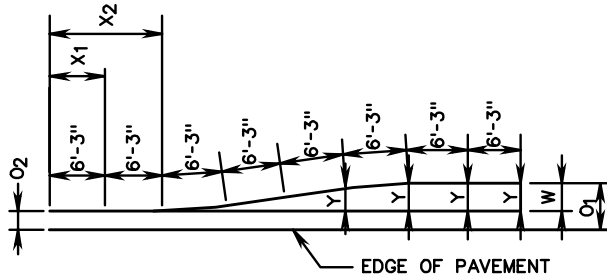


GR-INS



NOTE:
 GUARDRAIL INSTALLATION CRITERIA AS SHOWN ON THESE SHEETS IS TO APPLY TO THOSE LOCATIONS WHERE GUARDRAIL HAS TO BE TRANSITIONED FROM THE NORMAL LOCATION.

LENGTH OF TRANSITION (L) IS TO BE IN ACCORDANCE WITH TABLE III OR IV FOR APPLICABLE VALUES OF W OR AS DIRECTED BY THE ENGINEER.

RAIL TERMINAL SECTIONS IN ACCORDANCE WITH STANDARD GR-6, GR-7 OR GR-8 ARE TO BE INSTALLED AT EACH TERMINUS OF GUARDRAIL WHERE SPECIFIED ON PLANS.

ALL LENGTHS (L) ARE APPLIED ALONG FACE OF GUARDRAIL.

OFFSETS SHOWN IN TABLES ARE FOR 6'-3" SPACING, FOR 12'-6" SPACING (GR-8) USE EVERY SECOND VALUE OF Y.

INSTALLATION METHODS SHOWN ON THESE SHEETS ARE APPLICABLE TO STANDARD PLANS GR-2, GR-2A AND GR-8.

TABLE IV
OFFSETS (Y) FOR CONTINUOUS RUN-ON GUARDRAILS AND ALL RUN-OFF TRANSITIONS

LENGTH L IN FEET	X IN FEET	W-2'		W-3'		W-4'		W-5'		W-6'		W-7'		W-8'		W-9'		W-10'		W-11'		W-12'	
		RUN ON	RUN OFF	RUN ON	RUN OFF	RUN ON	RUN OFF	RUN ON	RUN OFF	RUN ON	RUN OFF	RUN ON	RUN OFF	RUN ON	RUN OFF	RUN ON	RUN OFF	RUN ON	RUN OFF	RUN ON	RUN OFF	RUN ON	RUN OFF
37.50	X ₁ 6.25	0.04	0.04	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01
	X ₂ 12.50	0.30	0.30	0.19	0.19	0.03	0.03	0.02	0.04	0.01	0.05	0.01	0.05	0.01	0.06	0.01	0.07	0.01	0.08	0.01	0.09	0.01	0.09
	X ₃ 18.75	1.00	1.00	0.63	0.63	0.11	0.11	0.07	0.13	0.05	0.16	0.03	0.18	0.03	0.21	0.03	0.24	0.03	0.26	0.04	0.29	0.04	0.32
	X ₄ 25.00	1.70	1.70	1.50	1.50	0.25	0.25	0.16	0.31	0.11	0.38	0.08	0.44	0.06	0.50	0.07	0.56	0.08	0.63	0.09	0.69	0.09	0.75
	X ₅ 31.25	1.96	1.96	2.37	2.37	0.49	0.49	0.31	0.61	0.22	0.73	0.16	0.85	0.12	0.98	0.14	1.10	0.15	1.22	0.17	1.34	0.18	1.46
	X ₆ 37.50	2.00	2.00	2.81	2.81	0.84	0.84	0.54	1.05	0.38	1.27	0.28	1.48	0.21	1.69	0.24	1.90	0.26	2.11	0.29	2.32	0.32	2.53
50.00	X ₇ 43.75			2.98	2.98	1.34	1.34	0.86	1.67	0.60	2.01	0.44	2.34	0.33	2.68	0.38	3.01	0.42	3.35	0.46	3.68	0.50	4.02
	X ₈ 50.00			3.00	3.00	2.00	2.00	1.28	2.50	0.89	3.00	0.65	3.50	0.50	4.00	0.56	4.50	0.63	5.00	0.69	5.50	0.75	6.00
100.00	X ₉ 56.25					2.66	2.66	1.82	3.33	1.27	3.99	0.93	4.66	0.71	5.32	0.80	5.99	0.89	6.65	0.98	7.32	1.07	7.98
	X ₁₀ 62.50					3.16	3.16	2.50	3.95	1.74	4.73	1.28	5.52	0.98	6.31	1.10	7.10	1.22	7.89	1.34	8.68	1.46	9.47
	X ₁₁ 68.75					3.51	3.51	3.18	4.39	2.31	5.27	1.70	6.15	1.30	7.02	1.46	7.90	1.62	8.78	1.79	9.66	1.95	10.54
	X ₁₂ 75.00					3.75	3.75	3.72	4.69	3.00	5.63	2.20	6.56	1.69	7.50	1.90	8.44	2.11	9.38	2.32	10.31	2.53	11.25
	X ₁₃ 81.25					3.89	3.89	4.14	4.87	3.69	5.84	2.80	6.82	2.15	7.79	2.41	8.76	2.68	9.74	2.95	10.71	3.22	11.68
	X ₁₄ 87.50					3.97	3.97	4.46	4.96	4.26	5.95	3.50	6.95	2.68	7.94	3.01	8.93	3.35	9.92	3.68	10.91	4.02	11.91
	X ₁₅ 93.75					4.00	4.00	4.69	5.00	4.73	5.99	4.20	6.99	3.30	7.99	3.71	8.99	4.12	9.99	4.53	10.99	4.94	11.99
	X ₁₆ 100.00					4.00	4.00	4.84	5.00	5.11	6.00	4.80	7.00	4.00	8.00	4.50	9.00	5.00	10.00	5.50	11.00	6.00	12.00
125.00	X ₁₇ 106.25							4.93	5.40		5.30		4.70		5.29		5.88		6.47		7.06		
	X ₁₈ 112.50							4.98	5.63		5.72		5.32		5.99		6.65		7.32		7.98		
	X ₁₉ 118.75							5.00	5.78		6.07		5.85		6.59		7.32		8.05		8.78		
	X ₂₀ 125.00							5.00	5.89		6.35		6.31		7.10		7.89		8.68		9.47		
150.00	X ₂₁ 131.25								5.95		6.56		6.70		7.54		8.38		9.21		10.05		
	X ₂₂ 137.50								5.99		6.72		7.02		7.90		8.78		9.66		10.54		
	X ₂₃ 143.75								6.00		6.84		7.29		8.20		9.11		10.02		10.93		
	X ₂₄ 150.00								6.00		6.92		7.50		8.44		9.38		10.31		11.25		
175.00	X ₂₅ 156.25										6.97		7.67		8.62		9.58		10.54		11.50		
	X ₂₆ 162.50										6.99		7.79		8.76		9.74		10.71		11.68		
	X ₂₇ 168.75										7.00		7.88		8.86		9.85		10.83		11.82		
	X ₂₈ 175.00										7.00		7.94		8.93		9.92		10.91		11.91		
200.00	X ₂₉ 181.25												7.97		8.97		9.97		10.96		11.96		
	X ₃₀ 187.50												7.99		8.99		9.99		10.99		11.99		
	X ₃₁ 193.75												8.00		9.00		10.00		11.00		12.00		
	X ₃₂ 200.00												8.00		9.00		10.00		11.00		12.00		



ROAD AND BRIDGE STANDARDS

SHEET 5 OF 8

REVISION DATE

501.38

W-BEAM GUARDRAIL INSTALLATION CRITERIA

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE

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