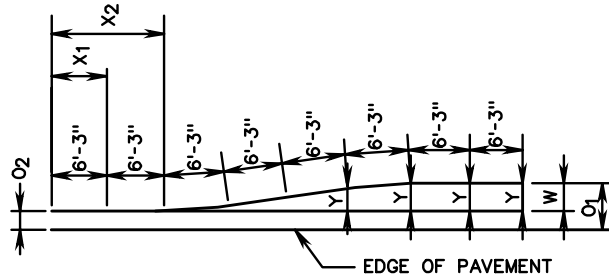


GR-INS



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	X1 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
	X2 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
	X3 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
	X4 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
	X5 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
	X6 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	X7 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
	X8 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	X9 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
	X10 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
	X11 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
	X12 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
	X13 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
	X14 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
	X15 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
	X16 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	X17 106.25							4.93	5.40		5.30		4.70		5.29		5.88		6.47		7.06		
	X18 112.50							4.98	5.63		5.72		5.32		5.99		6.65		7.32		7.98		
	X19 118.75							5.00	5.78		6.07		5.85		6.59		7.32		8.05		8.78		
	X20 125.00							5.00	5.89		6.35		6.31		7.10		7.89		8.68		9.47		
150.00	X21 131.25								5.95		6.56		6.70		7.54		8.38		9.21		10.05		
	X22 137.50								5.99		6.72		7.02		7.90		8.78		9.66		10.54		
	X23 143.75								6.00		6.84		7.29		8.20		9.11		10.02		10.93		
	X24 150.00								6.00		6.92		7.50		8.44		9.38		10.31		11.25		
175.00	X25 156.25										6.97		7.67		8.62		9.58		10.54		11.50		
	X26 162.50										6.99		7.79		8.76		9.74		10.71		11.68		
	X27 168.75										7.00		7.88		8.86		9.85		10.83		11.82		
	X28 175.00										7.00		7.94		8.93		9.92		10.91		11.91		
200.00	X29 181.25												7.97		8.97		9.97		10.96		11.96		
	X30 187.50												7.99		8.99		9.99		10.99		11.99		
	X31 193.75												8.00		9.00		10.00		11.00		12.00		
	X32 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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