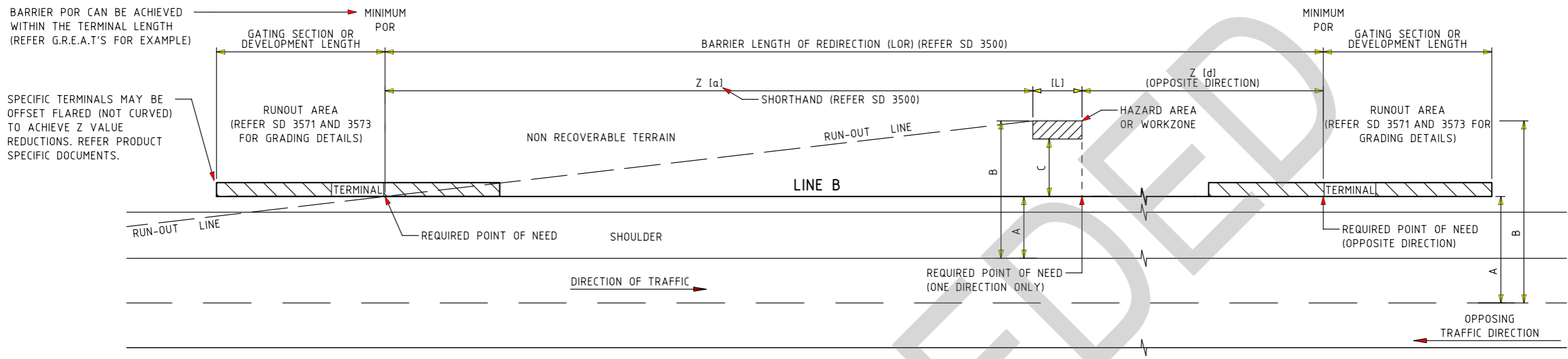
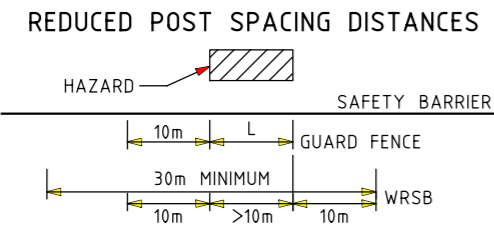


ISSUE	APPROVED BY	DATE	AMENDMENT
G	D.C	11/13	TITLE BLOCK, INCLUDE ALL BARRIERS, TABLE B, NOTES



BARRIER POR CAN BE ACHIEVED WITHIN THE TERMINAL LENGTH (REFER G.R.E.A.T'S FOR EXAMPLE)

SPECIFIC TERMINALS MAY BE OFFSET FLARED (NOT CURVED) TO ACHIEVE Z VALUE REDUCTIONS. REFER PRODUCT SPECIFIC DOCUMENTS.



- NOTES:
- SAFETY BARRIER TERMINOLOGY, SHORTHAND AND GENERAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH SD 3500.
 - IN SOME LOCATIONS THE TERRAIN NEAR THE HAZARD CAN BE FLATTENED, ENABLING A 'LINE A' (SD 3511) SAFETY BARRIER INSTALLATION CLOSE TO THE HAZARD.
 - ALIGNMENT DETAILS IN THIS STANDARD DRAWING APPLY TO ALL ACCEPTED LONGITUDINAL SAFETY BARRIER PRODUCTS.
 - DETAILS IN THIS DRAWING ARE FOR BARRIERS ON STRAIGHT SECTIONS OF ROAD. "Z" VALUES FOR CURVED SECTIONS OF ROAD SHALL BE DETERMINED IN ACCORDANCE WITH AGRD PART 6 OR AASHTO 2011.
 - DEPARTURE TERMINALS (e.g. TRAILING TERMINAL) MUST NOT BE LOCATED WITHIN THE CLEAR ZONE OF OPPOSING TRAFFIC. IF THE TERMINAL IS TO BE LOCATED WITHIN OPPOSING TRAFFIC CLEAR ZONE, USE AN APPROVED APPROACH TERMINAL. REFER RDN 06-04.
 - VALUES OF "Z" IN TABLE B ARE MINIMUM LENGTHS BASED ON 5m GUARD FENCE UNIT LENGTHS. "Z" VALUES SHALL BE A MULTIPLE OF THE SAFETY BARRIER UNIT LENGTH AND ROUNDED UP TO SUIT. SEE NOTE 7 FOR OTHER AADT VOLUMES AND TABLE B FOR SPECIFIC CALCULATION OF "Z" VALUES.
 - VALUES OF "Z" MAY ALSO BE CALCULATED USING THE RUN-OUT LENGTH EQUATION IN TABLE B AND RUN-OUT LENGTH VALUES (L_r) SPECIFIED IN AGRD PART 6 OR AASHTO 2011.
 - FOR OTHER AADT VOLUMES, "Z" VALUES IN TABLE B MAY BE MULTIPLIED BY THE AADT FACTOR IN TABLE B AND ROUNDED TO THE CLOSEST WHOLE BARRIER UNIT LENGTH. VALUES CALCULATED USING THE EQUATION IN TABLE B AND L_r ALREADY CONSIDER AADT VOLUMES AND SHALL NOT USE AADT FACTORS IN TABLE B. FUTURE TRAFFIC VOLUMES AT THE SITE SHALL BE CONSIDERED WHEN USING AADT CORRECTION FACTORS IN TABLE B.
 - REDUCED POST SPACING MINIMUM DISTANCES FOR GUARD FENCE AND WRSB, SHALL BE IN ACCORDANCE WITH THE REDUCED POST SPACING DISTANCES FIGURE.

TABLE B - LENGTH "Z" FOR ALL LINE B SAFETY BARRIERS (m) (SEE NOTE 6)

PROTECTED WIDTH "B" (m)		15			13			11			9			8			7			6			5			4			3								
SPEED (km/h)		120	110	100	120	110	100	120	110	100	120	110	100	120	110	100	120	110	100	120	110	100	120	110	100	120	110	100	120	110	100	120	110	100	120	110	100
"A" SAFETY BARRIER OFFSET FROM TRAFFIC LANE (m)	0*	120	115	95	130	110	95	130	110	95	130	110	95	130	110	95	130	110	95	130	110	95	130	110	95	130	110	95	130	110	95	130	110	95	130	110	95
	0.5*	115	110	90	125	110	90	125	105	90	120	105	90	120	105	90	120	105	85	120	105	85	120	105	85	120	105	85	120	105	85	120	105	85	120	105	85
	1*	110	105	85	120	105	85	120	100	85	115	100	85	115	100	80	110	95	80	110	95	80	110	95	80	110	95	80	110	95	80	110	95	80	110	95	80
	2*	105	100	80	110	95	80	105	90	75	100	90	75	100	85	70	95	80	65	95	80	65	95	80	65	95	80	65	95	80	65	95	80	65	95	80	65
	3	95	90	75	100	85	70	95	80	70	85	75	65	80	70	60	75	65	55	75	65	55	75	65	55	75	65	55	75	65	55	75	65	55	75	65	55
	4	90	85	70	90	80	65	85	70	60	75	65	55	65	55	45	65	55	45	65	55	45	65	55	45	65	55	45	65	55	45	65	55	45	65	55	45
	5	80	75	65	80	70	60	70	60	50	60	50	45	60	50	45	50	45	35	50	45	35	50	45	35	50	45	35	50	45	35	50	45	35	50	45	35
	6	70	70	55	70	60	50	60	50	45	45	40	35	35	30	25	35	30	25	35	30	25	35	30	25	35	30	25	35	30	25	35	30	25	35	30	25
	7	65	60	50	60	55	45	50	40	35	30	25	25																								
	8	55	55	45	50	45	35	35	30	25																											
	9	50	45	40	40	35	30	25	20	20																											
	10	40	40	35	30	30	25																														
	11	35	30	25	20	20	20																														
12	25	25	20																																		
13	20	20	20																																		
DESIGN VEHICLES / DAY FACTOR (AADT)	>10,000	(X)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
	5,000-10,000	(X)	0.92	0.92	0.89	0.92	0.92	0.89	0.92	0.92	0.89	0.92	0.92	0.89	0.92	0.92	0.89	0.92	0.92	0.89	0.92	0.92	0.89	0.92	0.92	0.89	0.92	0.92	0.89	0.92	0.92	0.89	0.92	0.92	0.89		
	1,000-5,000	(X)	0.81	0.81	0.78	0.81	0.81	0.78	0.81	0.81	0.78	0.81	0.81	0.78	0.81	0.81	0.78	0.81	0.81	0.78	0.81	0.81	0.78	0.81	0.81	0.78	0.81	0.81	0.78	0.81	0.81	0.78	0.81	0.81	0.78		
	<1,000	(X)	0.7	0.7	0.69	0.7	0.7	0.69	0.7	0.7	0.69	0.7	0.7	0.69	0.7	0.7	0.69	0.7	0.7	0.69	0.7	0.7	0.69	0.7	0.7	0.69	0.7	0.7	0.69	0.7	0.7	0.69	0.7	0.7	0.69		

RUN-OUT LENGTH EQUATION

$$Z = \frac{(B - A)}{\left(\frac{B}{L_r}\right)}$$

E.G. "Z" = 60x0.69 = 41.4 (40m)
Z VALUES ABOVE MAY BE MULTIPLIED WITH AADT CORRECTION FACTOR BELOW AS PER EXAMPLE

*OFFSETS BELOW 3.0M REQUIRE VICROADS APPROVAL. REFER VRS TO AGRD PART 6

	2					1				
	120	110	100	90	80	120	110	100	90	80
0*	125	110	90	80	70	125	110	90	80	70
0.5*	95	85	70	60	55	65	55	45	40	35
1*	65	55	45	40	35	30	25	20		

TABLE B IS CALCULATED USING THE AGRD PART 6 'RUN-OUT LENGTH METHOD' AND L_r VALUES FROM AASHTO 2011. REFER AGRD PART 6 FOR METHODOLOGY.

VicRoads Drawing No. 720273

- REFERENCES AND NOTES:
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
 - SAFETY BARRIER TERMINOLOGY, SHORTHAND AND GENERAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH SD 3500.
 - SAFETY BARRIERS SHALL BE VICROADS ACCEPTED PRODUCTS IN ACCORDANCE WITH RDN 06-04.
 - LINE A SHALL BE CONSIDERED IN ALL CASES BEFORE LINE B. REFER SD 3511 OR 3573.
 - RUNOUT AREA REQUIREMENTS IN ACCORDANCE WITH SD 3571 AND 3573.

- VICROADS SUPPLEMENTS TO AGRD
AUSTROADS GUIDE TO ROAD DESIGN PART 6
RDN 06-02 USE OF WIRE ROPE SAFETY BARRIERS
RDN 06-04 ACCEPTED SAFETY BARRIER PRODUCTS
RDN 06-08 USE OF STEEL GUARD FENCE
AASHTO 2011 ROADSIDE DESIGN GUIDE
SD 3500 TERMINOLOGY, SHORTHAND AND GENERAL REQUIREMENTS
- SD 3501, 4311 LOCATION PROCEDURES
SD 3502 OFFSET TO KERB AND SHOULDER
SD 3511 LINE A
SD 3571, 3573 RUNOUT AREA

INVESTMENT AND DESIGN SERVICES
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ROAD SAFETY BARRIERS			
SAFETY BARRIER (LINE B) ALIGNMENT DETAILS			
NOT TO SCALE	APPROVED R.GORDON	24/02/94	SD NO. SD 3521
			ISSUE H