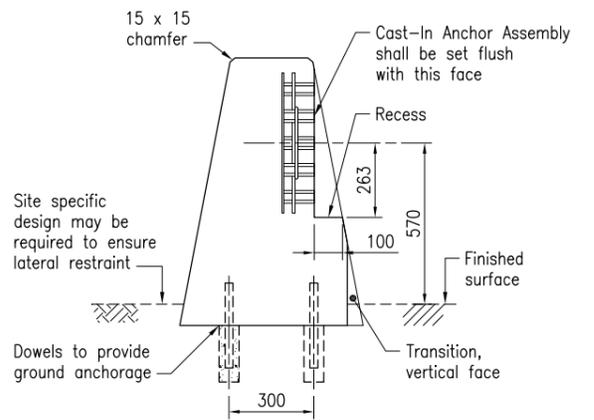
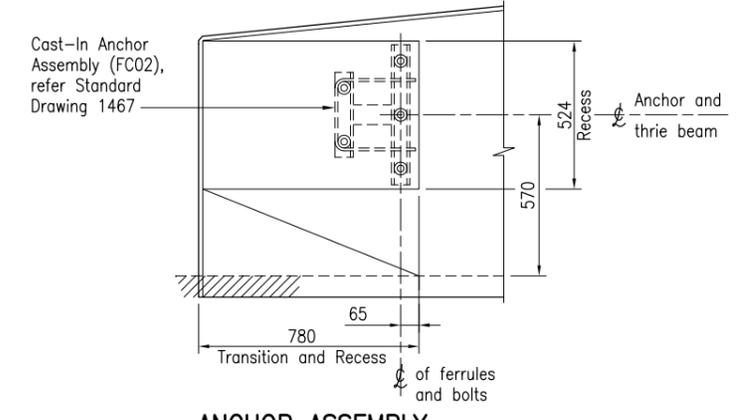


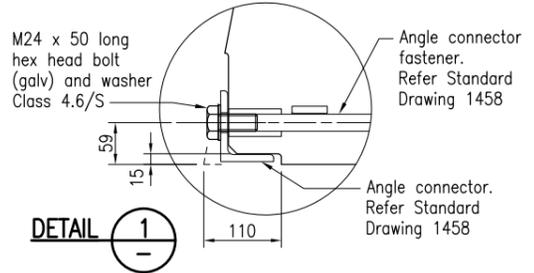
TYPICAL PLAN



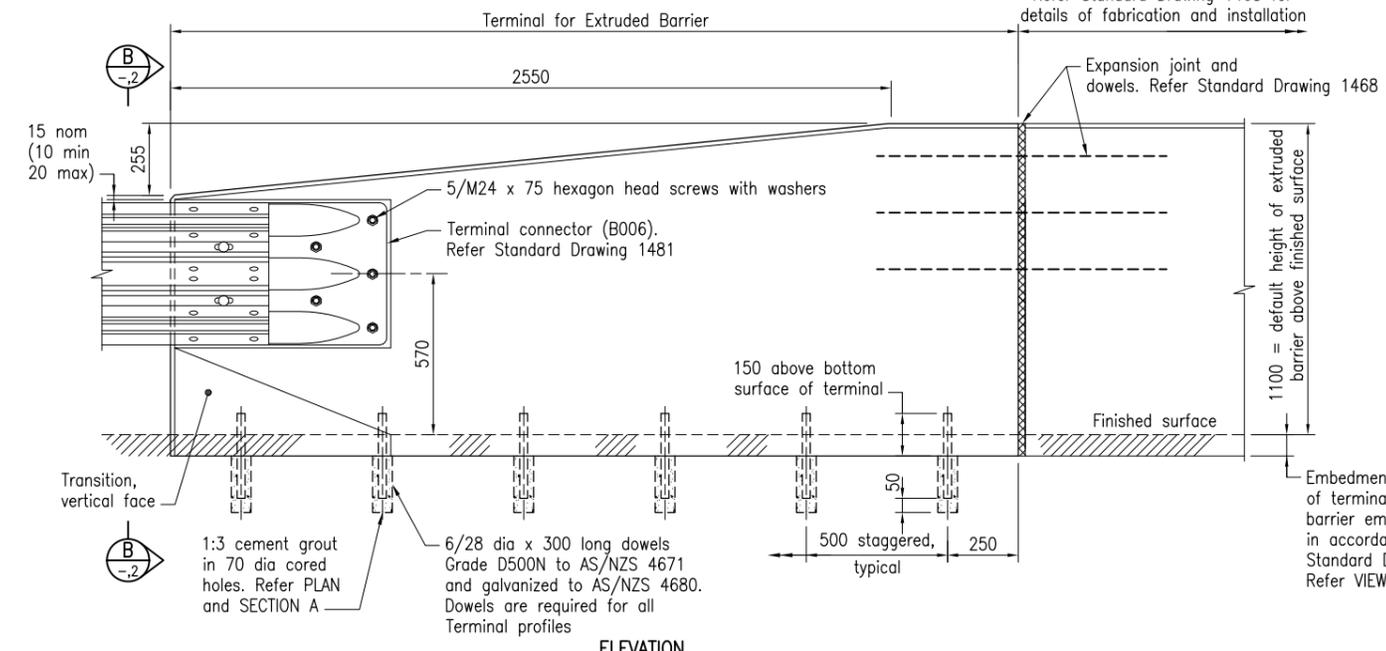
SECTION A TYPICAL DETAILS



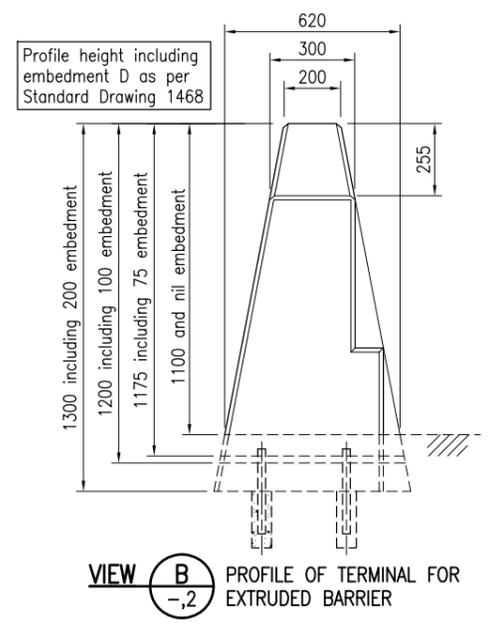
ANCHOR ASSEMBLY



DETAIL 1



ELEVATION
GENERAL ARRANGEMENT OF TERMINAL FOR EXTRUDED BARRIER



VIEW B PROFILE OF TERMINAL FOR EXTRUDED BARRIER

NOTES:

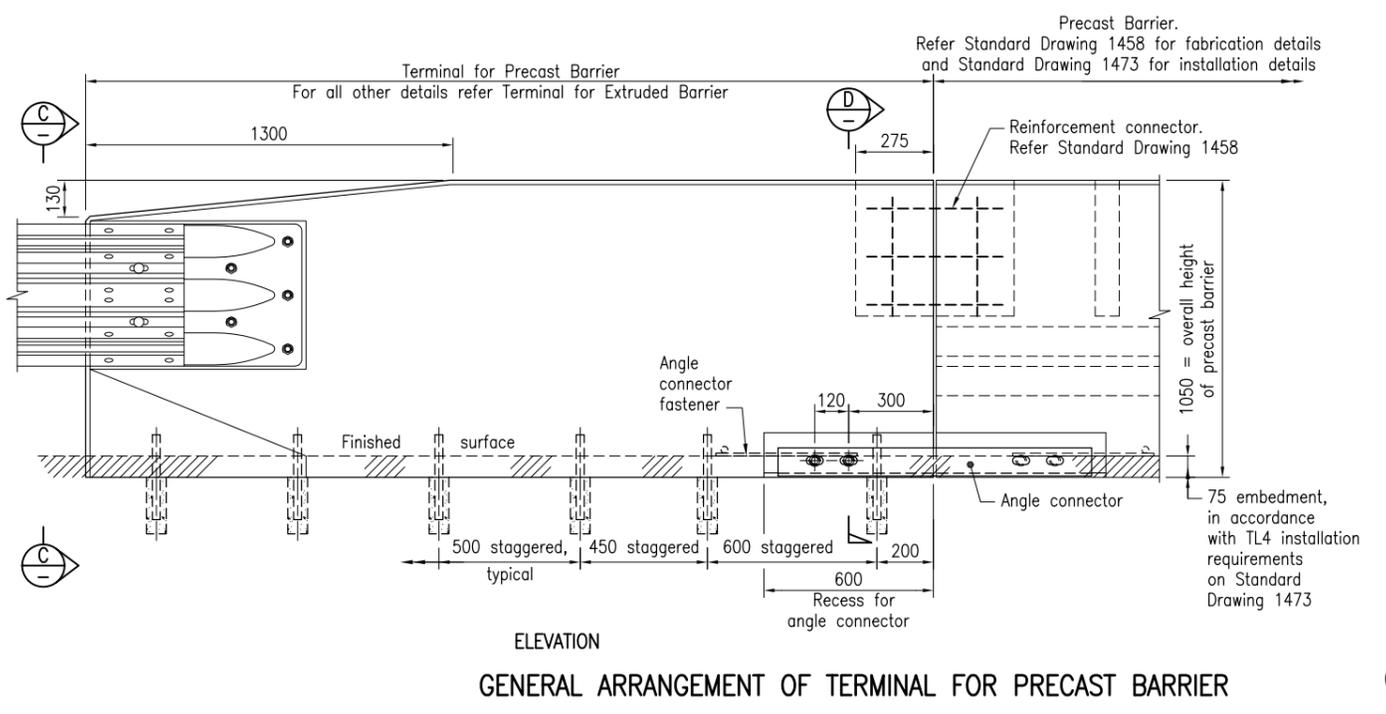
- SCOPE: This Standard Drawing provides concrete terminal details between Thrie beam guardrail and extruded barrier or precast barrier. This terminal shall be used where there is traffic on only one side of the barrier. The terminal shown can be modified to suit other applications such as "Cushion" or "Terminate with no barrier". Project specific design shall be developed for this purpose. The transitional height of the terminal shall not be steeper than 1 on 10. Project specific design of the terminal is required for alternative barrier heights. Refer Standard Drawing 1470 for concrete terminal details for median barrier.
- CONCRETE TERMINAL shall be constructed in accordance with MRTS14.
- CONCRETE shall be in accordance with MRTS70. Concrete S40/20. Exposure classification B2. Minimum cover to reinforcement shall be 45. All exposed edges shall have 15 x 15 chamfers, unless shown otherwise.
- REINFORCING STEEL shall be read in conjunction with Standard Drawings 1043 and 1044. Reinforcing steel material shall be in accordance with MRTS71 and AS/NZS 4671. Deformed bars Grade D500N. TACK WELDING to reinforcement for location purposes to AS/NZS 1554.3. Welding consumables to be controlled hydrogen type: G49X to AS/NZS ISO 14341-B or T49X to AS/NZS ISO 17632-B.
- DELINEATORS, where required, shall be fixed to the terminal in accordance with Standard Drawing 1468.
- DIMENSIONS are in millimetres unless shown otherwise.

ASSOCIATED DEPARTMENTAL DOCUMENTS:

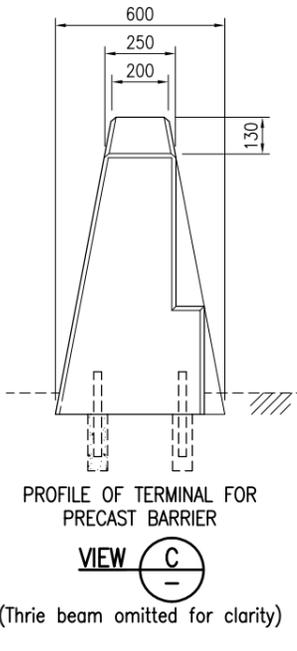
- Road Planning and Design Manual (RPDM)
- Main Roads Traffic and Road Use Manual (TRUM)

REFERENCED DOCUMENTS:

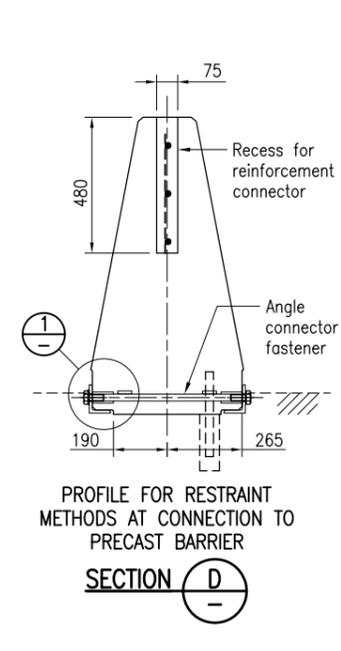
- Departmental Standard Drawings:
- 1043 Reinforcing Steel - Standard Bar Shapes
 - 1044 Reinforcing Steel - Standard Hook, Lap and Bend Details and General Steel
 - 1458 Single Slope Concrete Barrier - Precast Concrete Barrier Fabrication Details
 - 1467 Concrete Barrier/Bridge Parapet - Cast-in Anchor Assembly for W and Thrie Beam Guardrail Connection
 - 1468 Single Slope Concrete Barrier - Extruded Median Barrier - Barrier, Reinforcing and Expansion Joint Details
 - 1473 Single Slope Concrete Barrier - Precast Concrete Barrier Installation Details
 - 1475 Steel Beam Guardrail - Installation on Bridge and Barrier Approaches
 - 1477 Steel Beam Guardrail - Posts and Blockouts, Soil and Bearing Plates, Slip Base Plate
 - 1481 Steel Beam Guardrail - Fabrication Details for Thrie Beam Rails and Rail Components
- Departmental Specifications:
- MRTS14 Road Furniture
 - MRTS70 Concrete
 - MRTS71 Reinforcing Steel



ELEVATION
GENERAL ARRANGEMENT OF TERMINAL FOR PRECAST BARRIER

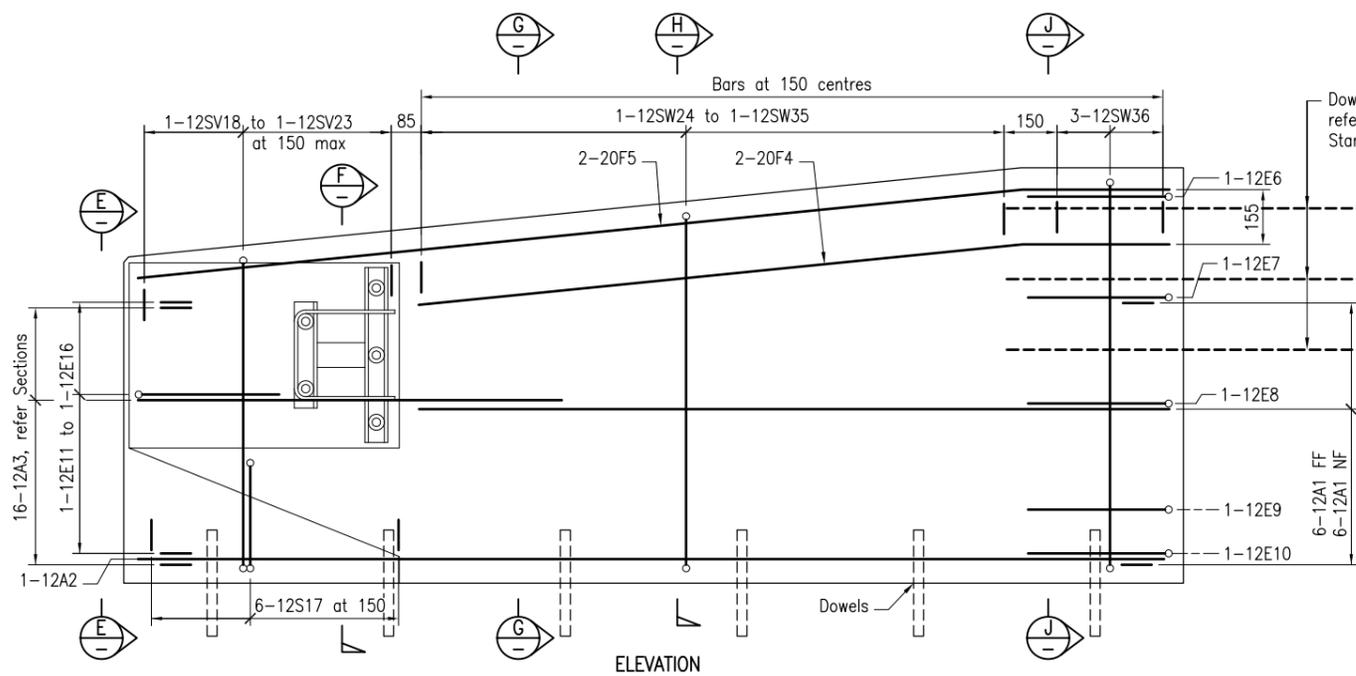


VIEW C PROFILE OF TERMINAL FOR PRECAST BARRIER
(Thrie beam omitted for clarity)

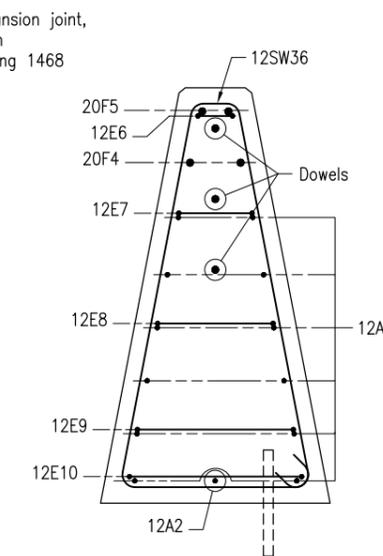


SECTION D PROFILE FOR RESTRAINT METHODS AT CONNECTION TO PRECAST BARRIER

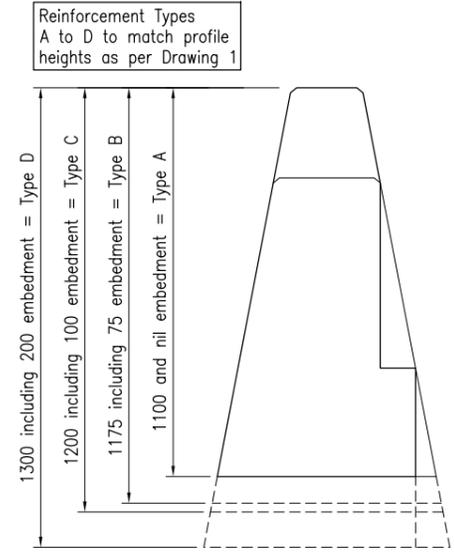
Department of Transport and Main Roads			
SINGLE SLOPE CONCRETE BARRIER			
CONCRETE TERMINAL FOR BARRIER WITH THRIE BEAM GUARDRAIL CONNECTION - GENERAL ARRANGEMENT		A3	Standard Drawing No 1486
DRAWING 1 OF 2		Not to Scale	Date 7/16
A	B	C	D



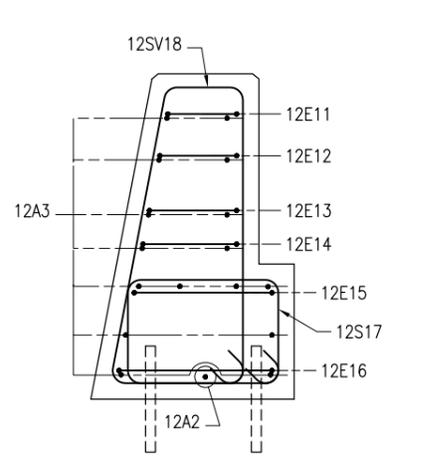
TYPICAL REINFORCEMENT FOR TERMINAL FOR EXTRUDED BARRIER



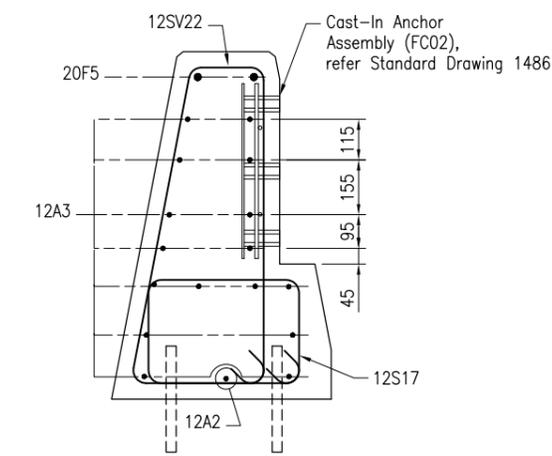
SECTION J TYPICAL REINFORCEMENT AT CONNECTION TO EXTRUDED BARRIER



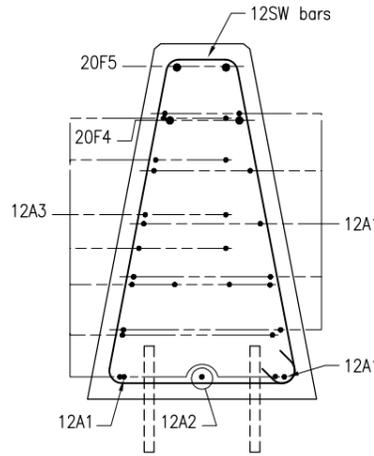
VIEW B REINFORCEMENT TYPES FOR TERMINAL FOR EXTRUDED BARRIER



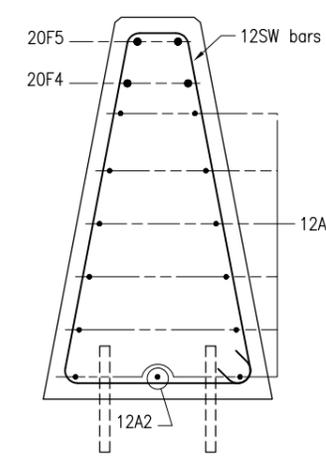
VIEW E TYPICAL REINFORCEMENT AT THRIE BEAM CONNECTION END



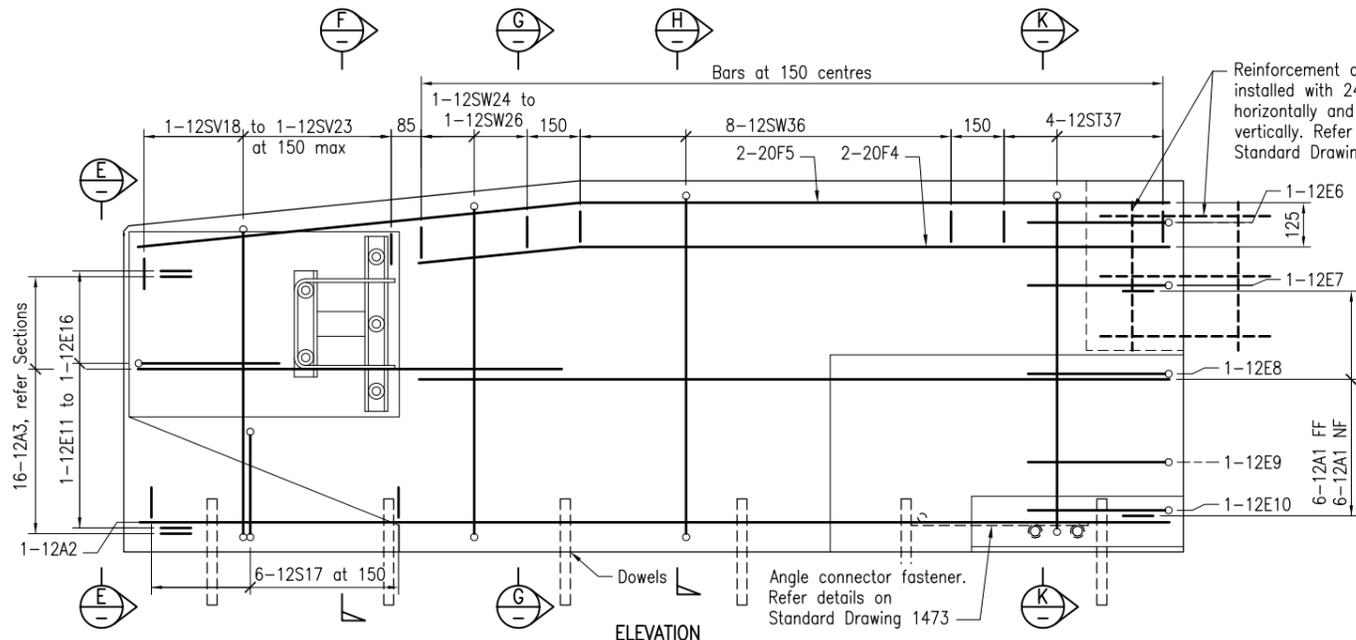
SECTION F TYPICAL REINFORCEMENT AT THRIE BEAM ANCHOR ASSEMBLY



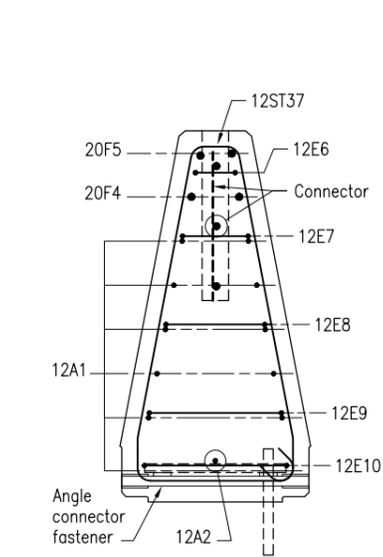
SECTION G



SECTION H



TYPICAL REINFORCEMENT FOR TERMINAL FOR PRECAST BARRIER (TYPE E)



SECTION K TYPICAL REINFORCEMENT AT CONNECTION TO PRECAST BARRIER

NOTE: Steel schedules are provided on a separate sheet for use with this drawing and are published in Technical Standards Publications. Each Terminal Type is scheduled separately. Numbers of bars are for one terminal only.

Department of Transport and Main Roads			
SINGLE SLOPE CONCRETE BARRIER			
CONCRETE TERMINAL FOR BARRIER WITH THRIE BEAM GUARDRAIL CONNECTION - REINFORCEMENT DETAILS		A3	Standard Drawing No
DRAWING 2 OF 2		Not to Scale	1486
			Date 7/16
A	B	C	D



Standard Drawing 1486

Single Slope Concrete Barrier - Concrete Terminal for Barrier with Thrie Beam Guardrail Connection - Reinforcement Details (Drawing 2 of 2)

Steel Schedule - Terminal Type A

Reinforcing steel shall be read in conjunction with standard drawings 1043 and 1044
Deformed bars Grade D500N

Bar Mark			Location	Dim A	Dim B	Dim C	Dim E	Dim F	Pin Dia	No Off	Cutting Length	Mass
Bar Dia	Shape	Seq No										
12	A	1	LONGITUDINAL	2100						12	2100	22.9 kg
12	A	2	LOWER LONGITUDINAL	2900						1	2900	2.6 kg
12	A	3	NOSING LONGITUDINAL	1200						16	1200	17.5 kg
20	F	4	TOP LONGITUDINAL	2505	410	60			100	2	2915	14.7 kg
20	F	5	TOP LONGITUDINAL	1710	410	60			100	2	2120	10.7 kg
12	E	6	BARRIER END	110	400	400			48	1	860	0.8 kg
12	E	7	BARRIER END	215	400	400			48	1	965	0.9 kg
12	E	8	BARRIER END	335	400	400			48	1	1085	1.0 kg
12	E	9	BARRIER END	450	400	400			48	1	1200	1.1 kg
12	E	10	BARRIER END	470	400	400			48	1	1220	1.1 kg
12	E	11	THRIE BEAM END	205	400	400			48	1	955	0.9 kg
12	E	12	THRIE BEAM END	225	400	400			48	1	975	0.9 kg
12	E	13	THRIE BEAM END	255	400	400			48	1	1005	0.9 kg
12	E	14	THRIE BEAM END	275	400	400			48	1	1025	0.9 kg
12	E	15	THRIE BEAM END	400	400	400			48	1	1150	1.0 kg
12	E	16	THRIE BEAM END	430	400	400			48	1	1180	1.1 kg
12	S	17	LOWER LIGATURE	425	215				48	6	1565	8.5 kg
12	SV	18	NOSING LIGATURE	355	760	215			48	1	2395	2.2 kg
12	SV	19	NOSING LIGATURE	355	770	210			48	1	2415	2.2 kg
12	SV	20	NOSING LIGATURE	355	785	210			48	1	2435	2.2 kg
12	SV	21	NOSING LIGATURE	355	795	205			48	1	2460	2.2 kg
12	SV	22	NOSING LIGATURE	355	805	205			48	1	2480	2.3 kg
12	SV	23	NOSING LIGATURE	355	820	200			48	1	2500	2.3 kg
12	SW	24	MID LIGATURE	495	190	840	153	152	48	1	2685	2.4 kg
12	SW	25	MID LIGATURE	495	185	855	155	155	48	1	2710	2.5 kg
12	SW	26	MID LIGATURE	495	180	870	158	157	48	1	2735	2.5 kg
12	SW	27	MID LIGATURE	495	170	885	163	162	48	1	2760	2.5 kg
12	SW	28	MID LIGATURE	495	165	900	165	165	48	1	2784	2.5 kg
12	SW	29	MID LIGATURE	495	160	915	168	167	48	1	2810	2.6 kg
12	SW	30	MID LIGATURE	495	155	930	170	170	48	1	2835	2.6 kg
12	SW	31	MID LIGATURE	495	150	945	173	172	48	1	2860	2.6 kg
12	SW	32	MID LIGATURE	495	145	960	175	175	48	1	2885	2.6 kg
12	SW	33	MID LIGATURE	495	140	975	178	177	48	1	2910	2.6 kg
12	SW	34	MID LIGATURE	495	135	990	180	180	48	1	2935	2.7 kg
12	SW	35	MID LIGATURE	495	130	1005	183	182	48	1	2960	2.7 kg
12	SW	36	END LIGATURES	495	125	1010	185	185	48	3	2965	8.1 kg
											Total Mass	139.90 kg



Standard Drawing 1486

Single Slope Concrete Barrier - Concrete Terminal for Barrier with Thrie Beam Guardrail Connection - Reinforcement Details (Drawing 2 of 2)

Steel Schedule - Terminal Type B

Reinforcing steel shall be read in conjunction with standard drawings 1043 and 1044

Deformed bars Grade D500N

Bar Mark			Location	Dim A	Dim B	Dim C	Dim E	Dim F	Pin Dia	No Off	Cutting Length	Mass
Bar Dia	Shape	Seq No										
12	A	1	LONGITUDINAL	2100						12	2100	22.9 kg
12	A	2	LOWER LONGITUDINAL	2900						1	2900	2.6 kg
12	A	3	NOSING LONGITUDINAL	1200						16	1200	17.5 kg
20	F	4	TOP LONGITUDINAL	2505	410	60			100	2	2915	14.7 kg
20	F	5	TOP LONGITUDINAL	1710	410	60			100	2	2120	10.7 kg
12	E	6	BARRIER END	110	400	400			48	1	860	0.8 kg
12	E	7	BARRIER END	215	400	400			48	1	965	0.9 kg
12	E	8	BARRIER END	335	400	400			48	1	1085	1.0 kg
12	E	9	BARRIER END	450	400	400			48	1	1200	1.1 kg
12	E	10	BARRIER END	500	400	400			48	1	1250	1.1 kg
12	E	11	THRIE BEAM END	205	400	400			48	1	955	0.9 kg
12	E	12	THRIE BEAM END	225	400	400			48	1	975	0.9 kg
12	E	13	THRIE BEAM END	255	400	400			48	1	1005	0.9 kg
12	E	14	THRIE BEAM END	275	400	400			48	1	1025	0.9 kg
12	E	15	THRIE BEAM END	400	400	400			48	1	1150	1.0 kg
12	E	16	THRIE BEAM END	440	400	400			48	1	1190	1.1 kg
12	S	17	LOWER LIGATURE	425	290				48	6	1715	9.4 kg
12	SV	18	NOSING LIGATURE	365	835	215			48	1	2555	2.3 kg
12	SV	19	NOSING LIGATURE	365	850	212			48	1	2580	2.3 kg
12	SV	20	NOSING LIGATURE	365	865	210			48	1	2605	2.4 kg
12	SV	21	NOSING LIGATURE	365	875	205			48	1	2630	2.4 kg
12	SV	22	NOSING LIGATURE	365	890	203			48	1	2655	2.4 kg
12	SV	23	NOSING LIGATURE	365	905	200			48	1	2680	2.4 kg
12	SW	24	MID LIGATURE	525	190	915	168	167	48	1	2865	2.6 kg
12	SW	25	MID LIGATURE	525	185	930	170	170	48	1	2890	2.6 kg
12	SW	26	MID LIGATURE	525	180	945	175	175	48	1	2915	2.7 kg
12	SW	27	MID LIGATURE	525	170	960	178	177	48	1	2940	2.7 kg
12	SW	28	MID LIGATURE	525	165	975	180	180	48	1	2965	2.7 kg
12	SW	29	MID LIGATURE	525	160	990	183	182	48	1	2995	2.7 kg
12	SW	30	MID LIGATURE	525	155	1005	185	185	48	1	3015	2.7 kg
12	SW	31	MID LIGATURE	525	150	1020	188	187	48	1	2040	1.9 kg
12	SW	32	MID LIGATURE	525	145	1035	190	190	48	1	3070	2.8 kg
12	SW	33	MID LIGATURE	525	140	1050	193	192	48	1	3095	2.8 kg
12	SW	34	MID LIGATURE	525	135	1065	195	195	48	1	3120	2.8 kg
12	SW	35	MID LIGATURE	525	130	1080	198	197	48	1	3145	2.9 kg
12	SW	36	END LIGATURES	525	125	1085	200	200	48	3	3150	8.6 kg
											Total Mass	143.27 kg



Standard Drawing 1486

Single Slope Concrete Barrier - Concrete Terminal for Barrier with Thrie Beam Guardrail Connection - Reinforcement Details (Drawing 2 of 2)

Steel Schedule - Terminal Type C

Reinforcing steel shall be read in conjunction with standard drawings 1043 and 1044
Deformed bars Grade D500N

Bar Mark			Location	Dim A	Dim B	Dim C	Dim E	Dim F	Pin Dia	No Off	Cutting Length	Mass
Bar Dia	Shape	Seq No										
12	A	1	LONGITUDINAL	2100						12	2100	22.9 kg
12	A	2	LOWER LONGITUDINAL	2900						1	2900	2.6 kg
12	A	3	NOSING LONGITUDINAL	1200						16	1200	17.5 kg
20	F	4	TOP LONGITUDINAL	2505	410	60			100	2	2915	14.7 kg
20	F	5	TOP LONGITUDINAL	1710	410	60			100	2	2120	10.7 kg
12	E	6	BARRIER END	110	400	400			48	1	860	0.8 kg
12	E	7	BARRIER END	215	400	400			48	1	965	0.9 kg
12	E	8	BARRIER END	335	400	400			48	1	1085	1.0 kg
12	E	9	BARRIER END	450	400	400			48	1	1200	1.1 kg
12	E	10	BARRIER END	510	400	400			48	1	1260	1.1 kg
12	E	11	THRIE BEAM END	205	400	400			48	1	955	0.9 kg
12	E	12	THRIE BEAM END	225	400	400			48	1	975	0.9 kg
12	E	13	THRIE BEAM END	255	400	400			48	1	1005	0.9 kg
12	E	14	THRIE BEAM END	275	400	400			48	1	1025	0.9 kg
12	E	15	THRIE BEAM END	400	400	400			48	1	1150	1.0 kg
12	E	16	THRIE BEAM END	450	400	400			48	1	1200	1.1 kg
12	S	17	LOWER LIGATURE	425	315				48	6	1765	9.6 kg
12	SV	18	NOSING LIGATURE	370	860	215			48	1	2610	2.4 kg
12	SV	19	NOSING LIGATURE	370	870	210			48	1	2630	2.4 kg
12	SV	20	NOSING LIGATURE	370	885	210			48	1	2650	2.4 kg
12	SV	21	NOSING LIGATURE	370	895	205			48	1	2675	2.4 kg
12	SV	22	NOSING LIGATURE	370	905	205			48	1	2695	2.5 kg
12	SV	23	NOSING LIGATURE	370	920	200			48	1	2715	2.5 kg
12	SW	24	MID LIGATURE	535	190	940	173	172	48	1	2930	2.7 kg
12	SW	25	MID LIGATURE	535	185	955	175	175	48	1	2955	2.7 kg
12	SW	26	MID LIGATURE	535	180	970	178	177	48	1	2980	2.7 kg
12	SW	27	MID LIGATURE	535	170	985	183	182	48	1	3005	2.7 kg
12	SW	28	MID LIGATURE	535	165	1000	185	185	48	1	3030	2.8 kg
12	SW	29	MID LIGATURE	535	160	1015	188	187	48	1	3055	2.8 kg
12	SW	30	MID LIGATURE	535	155	1030	190	190	48	1	3080	2.8 kg
12	SW	31	MID LIGATURE	535	150	1045	193	192	48	1	3105	2.8 kg
12	SW	32	MID LIGATURE	535	145	1060	195	195	48	1	3130	2.8 kg
12	SW	33	MID LIGATURE	535	140	1075	198	197	48	1	3155	2.9 kg
12	SW	34	MID LIGATURE	535	135	1090	200	200	48	1	3180	2.9 kg
12	SW	35	MID LIGATURE	535	130	1105	203	202	48	1	3205	2.9 kg
12	SW	36	END LIGATURES	535	125	1110	205	205	48	3	3210	8.8 kg
											Total Mass	145.56 kg



Standard Drawing 1486

Single Slope Concrete Barrier - Concrete Terminal for Barrier with Thrie Beam Guardrail Connection - Reinforcement Details (Drawing 2 of 2)

Steel Schedule - Terminal Type D

Reinforcing steel shall be read in conjunction with standard drawings 1043 and 1044
Deformed bars Grade D500N

Bar Mark			Location	Dim A	Dim B	Dim C	Dim E	Dim F	Pin Dia	No Off	Cutting Length	Mass
Bar Dia	Shape	Seq No										
12	A	1	LONGITUDINAL	2100						12	2100	22.9 kg
12	A	2	LOWER LONGITUDINAL	2900						1	2900	2.6 kg
12	A	3	NOSING LONGITUDINAL	1200						16	1200	17.5 kg
20	F	4	TOP LONGITUDINAL	2505	410	60			100	2	2915	14.7 kg
20	F	5	TOP LONGITUDINAL	1710	410	60			100	2	2120	10.7 kg
12	E	6	BARRIER END	110	400	400			48	1	860	0.8 kg
12	E	7	BARRIER END	230	400	400			48	1	980	0.9 kg
12	E	8	BARRIER END	360	400	400			48	1	1110	1.0 kg
12	E	9	BARRIER END	490	400	400			48	1	1250	1.1 kg
12	E	10	BARRIER END	545	400	400			48	1	1295	1.2 kg
12	E	11	THRIE BEAM END	205	400	400			48	1	955	0.9 kg
12	E	12	THRIE BEAM END	225	400	400			48	1	975	0.9 kg
12	E	13	THRIE BEAM END	255	400	400			48	1	1000	0.9 kg
12	E	14	THRIE BEAM END	275	400	400			48	1	1025	0.9 kg
12	E	15	THRIE BEAM END	400	400	400			48	1	1150	1.0 kg
12	E	16	THRIE BEAM END	465	400	400			48	1	1215	1.1 kg
12	S	17	LOWER LIGATURE	425	415				48	6	1965	10.7 kg
12	SV	18	NOSING LIGATURE	390	960	215			48	1	2830	2.6 kg
12	SV	19	NOSING LIGATURE	390	970	210			48	1	2850	2.6 kg
12	SV	20	NOSING LIGATURE	390	985	210			48	1	2870	2.6 kg
12	SV	21	NOSING LIGATURE	390	995	205			48	1	2890	2.6 kg
12	SV	22	NOSING LIGATURE	390	1002	205			48	1	2910	2.6 kg
12	SV	23	NOSING LIGATURE	390	1020	200			48	1	2925	2.7 kg
12	SW	24	MID LIGATURE	570	190	1040	190	190	48	1	3165	2.9 kg
12	SW	25	MID LIGATURE	570	185	1055	193	192	48	1	3190	2.9 kg
12	SW	26	MID LIGATURE	570	180	1070	195	195	48	1	3215	2.9 kg
12	SW	27	MID LIGATURE	570	170	1085	200	200	48	1	3240	2.9 kg
12	SW	28	MID LIGATURE	570	165	1100	203	202	48	1	3265	3.0 kg
12	SW	29	MID LIGATURE	570	160	1115	205	205	48	1	3290	3.0 kg
12	SW	30	MID LIGATURE	570	155	1130	208	207	48	1	3315	3.0 kg
12	SW	31	MID LIGATURE	570	150	1145	210	210	48	1	3340	3.0 kg
12	SW	32	MID LIGATURE	570	145	1160	213	212	48	1	3365	3.1 kg
12	SW	33	MID LIGATURE	570	140	1175	215	215	48	1	3390	3.1 kg
12	SW	34	MID LIGATURE	570	135	1190	218	217	48	1	3415	3.1 kg
12	SW	35	MID LIGATURE	570	130	1205	220	220	48	1	3440	3.1 kg
12	SW	36	END LIGATURES	570	125	1210	223	222	48	3	3445	9.4 kg
											Total Mass	151.17 kg



Standard Drawing 1486

Single Slope Concrete Barrier - Concrete Terminal for Barrier with Thrie Beam Guardrail Connection - Reinforcement Details (Drawing 2 of 2)

Steel Schedule - Terminal Type E

Reinforcing steel shall be read in conjunction with standard drawings 1043 and 1044
Deformed bars Grade D500N

Bar Mark			Location	Dim A	Dim B	Dim C	Dim E	Dim F	Pin Dia	No Off	Cutting Length	Mass
Bar Dia	Shape	Seq No										
12	A	1	LONGITUDINAL	2100						12	2100	22.9 kg
12	A	2	LOWER LONGITUDINAL	2900						1	2900	2.6 kg
12	A	3	NOSING LONGITUDINAL	1200						16	1200	17.5 kg
20	F	4	TOP LONGITUDINAL	1660	450	60			100	2	2110	10.7 kg
20	F	5	TOP LONGITUDINAL	1660	1245	130			100	2	2910	14.7 kg
12	E	6	BARRIER END	120	400	400			48	1	870	0.8 kg
12	E	7	BARRIER END	195	400	400			48	1	945	0.9 kg
12	E	8	BARRIER END	300	400	400			48	1	1050	1.0 kg
12	E	9	BARRIER END	385	400	400			48	1	1135	1.0 kg
12	E	10	BARRIER END	415	400	400			48	1	1165	1.1 kg
12	E	11	THRIE BEAM END	170	400	400			48	1	920	0.8 kg
12	E	12	THRIE BEAM END	180	400	400			48	1	930	0.8 kg
12	E	13	THRIE BEAM END	210	400	400			48	1	960	0.9 kg
12	E	14	THRIE BEAM END	225	400	400			48	1	975	0.9 kg
12	E	15	THRIE BEAM END	350	400	400			48	1	1100	1.0 kg
12	E	16	THRIE BEAM END	400	400	400			48	1	1150	1.0 kg
12	S	17	LOWER LIGATURE	375	190				48	6	1615	8.8 kg
12	SV	18	NOSING LIGATURE	320	835	165			48	1	2460	2.2 kg
12	SV	19	NOSING LIGATURE	320	850	160			48	1	2485	2.3 kg
12	SV	20	NOSING LIGATURE	320	860	160			48	1	2510	2.3 kg
12	SV	21	NOSING LIGATURE	320	875	155			48	1	2535	2.3 kg
12	SV	22	NOSING LIGATURE	320	890	150			48	1	2560	2.3 kg
12	SV	23	NOSING LIGATURE	320	905	150			48	1	2585	2.4 kg
12	SW	24	MID LIGATURE	475	140	915	168	167	48	1	2765	2.5 kg
12	SW	25	MID LIGATURE	475	135	930	170	170	48	1	2795	2.5 kg
12	SW	26	MID LIGATURE	475	130	945	173	172	48	1	2820	2.6 kg
12	SW	36	LIGATURES	475	125	960	175	175	48	8	2845	20.7 kg
12	ST	37	CONNECTION LIGS	120	825	160	125	440	48	4	2780	10.1 kg
											Total Mass	139.66 kg