

Sign Installation

1. BEAM BREAK-AWAY SIGN

1.1 GENERAL

- .1 Design conforms with AASTHO specifications for design and construction of structural supports for highway signs.

1.2 MATERIALS

- .1 All high strength bolts, nuts and washers shall conform to ASTM - 325.
- .2 All bolts other than high strength bolts shall conform to ASTM - A307, Class A.
- .3 All structural steel, bolts, nuts and washers shall be galvanized as per ASTM A - 153.
- .4 Steel shall be galvanized after fabrication except as noted.
- .5 All steelwork to be grade 350W - galvanized.
- .6 Cement to be Type 50.
- .7 Reinforcement to be grade 400.
- .8 Notched steel fuse plates shall conform to the requirements for G40 - 21M81, Grade 350W. All holes shall be drilled. All plate cuts shall preferably be saw cuts, however, flame cutting will be permitted provided all edges are ground. Metal projecting beyond the plane of the plate face will not be tolerated.
- .9 Concrete shall have 28 - Day strength = 30 MPa.
- .10 Concrete air content to be 4 - 6%.

1.3 CONSTRUCTION

- .1 Tighten the high strength bolts in the base plate connection only to the torque provided by the Engineer. Do not over tighten.
- .2 Concrete reinforcement cover to be = 50 mm.

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1.4 DESIGN

- .1 Design wind pressure according to NBC 1980 for 1 in 10 year wind in Lethbridge area.
- .2 All friction fuse bolts shall be tightened in the shop following a method approved by the Engineer. Tightening shall to be such a degree as to obtain the following residual tension in each bolt.

1.5 SPECIFICATION TABLES

<i>Bolt Size (Diameter)</i>	<i>Min. Residual Tension</i>
13 mm	54 KN
16 mm	85 KN
19 mm	126 KN
22 mm	175 KN

<i>Signs with Non - Breakaway Posts</i>				
Structure Number	Number Of Supports	Support Size	Depth of Foundation	Diameter of Foundation
1	2	M100 x 19	3000	610
2	2	W150 x 30	3000	610
3	2	W250 x 39	4000	760

Dimen/ Post Size	Base Connection Data Table										Fuse Plate Data Table										Foundation Data	
	Bolt Size	A	B	C	D	E	T1	T2	W	R	F	G	H	J	K	L	N	D1	T3	Bolt Dia.	Stub Lngth	Stub Proj
M100 x 19	16x70	12 7	51	32	70	29	19	13	6	9	92	51	29	102	57	22	13	14	6	19	600	75
W150 x30	16x70	12 7	51	32	70	29	19	13	6	9	11 4	64	32	152	89	32	19	21	13	19	750	75
W250	19x10	12		38				13	6		11			146	83						900	75

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x39	2	7	51		70	29	35			10	4	64	32			32	19	21	10	19		
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2.0 TELESPAR BREAK-AWAY SIGN

2.1 GENERAL

- .1 Drive sign post anchor into ground approximately 3', depending on local soil conditions. Leave one (1) hole exposed above ground for bolt connection. Post anchor is the next size larger tube than sign post.
- .2 Drive in anchor sleeve which is a size larger than post anchor and about 18" long. The sleeve insures more strength at critical bending area and provides a double wall thickness for the break-away post function. When driving sleeve, leave post anchor 2" or 3" above surface as friction from dirt between anchor and sleeve causes anchor to drive slightly with sleeve.
- .3 Insert sign post and bolt in place.