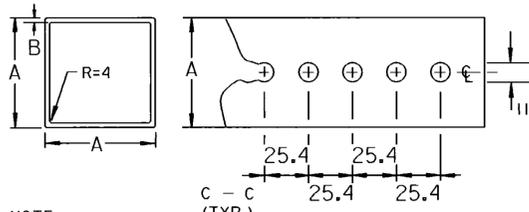


GUARDRAIL DEFLECTION CHART
(PER AASHTO - ROADSIDE DESIGN GUIDE)

TYPE	GR POST SPACING	DEFLECTION
THREE CABLE W/STEEL POSTS	5.0 m	3.5 m
W-BEAM	W/WEAK POST	3.8 m
	W/STRONG POST	1.9 m
BOX BEAM	1.83 m	1.5 m
THRE BEAM	W/WEAK POST	3.8 m
	W/STRONG POST	1.9 m

THIS CHART LISTS THE THEORETICAL DEFLECTION DISTANCE UPON IMPACT OF VARIOUS GUARDRAIL WITH DIFFERENT TYPES AND SPACING OF POSTS.



NOTE :
THE POSTS SHALL BE CAREFULLY FORMED OF STEEL, WITH A MINIMUM YIELD OF 380 MPa, INTO A SIZE AND SHAPE WITH CORNERS INDUCTION WELDED IN SUCH A MANNER THAT NEITHER FLASH NOR WELD SHALL INTERFERE WITH THE TELESCOPING PROPERTIES NOR DAMAGE THE GALVANIZATION.

- THE 2.7-mm WALL THICKNESS TOLERANCES SHALL BE +0.125 mm AND -0.250 mm.
- THE 2.0-mm WALL THICKNESS TOLERANCES SHALL BE +0.050 mm AND -0.200 mm.

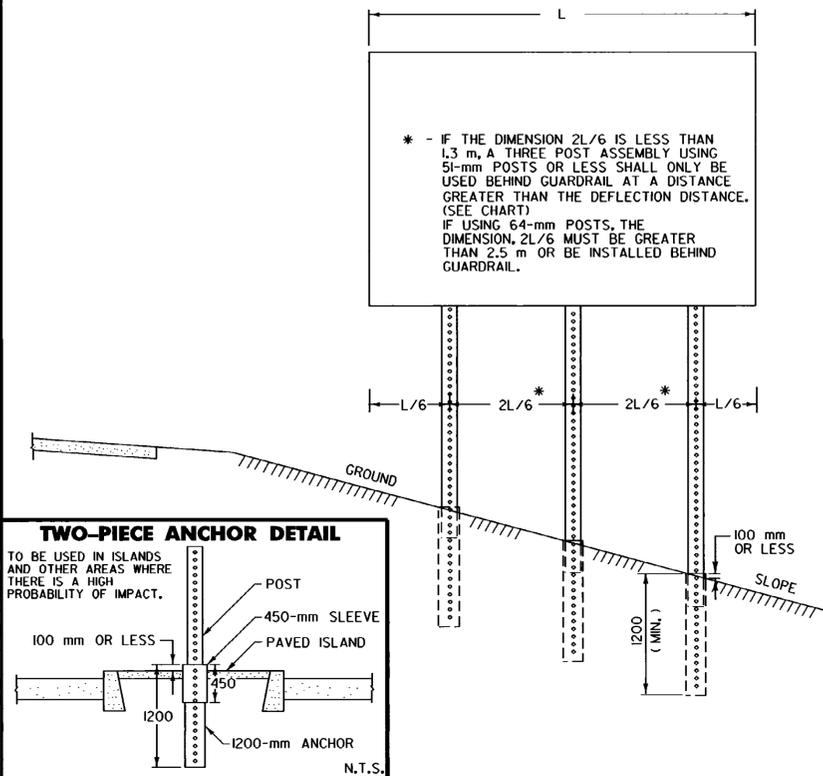
DIMENSION DETAILS AND POST SELECTION CHART

POST SELECTION CHART

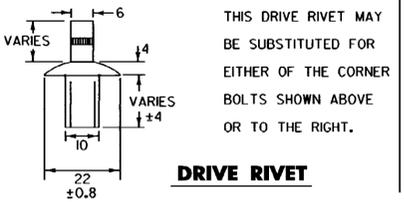
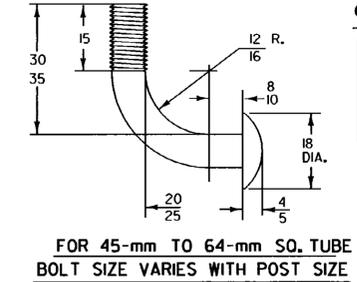
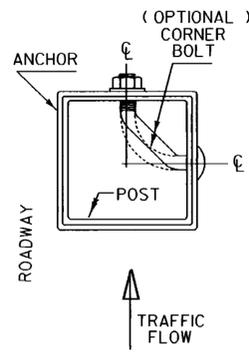
SIGN AREA (m²) X H (m) ≤ Sv (SELECTION VALUE)

POST SIZE	DIMENSIONS		SECTION MODULUS mm ³	ONE POST Sv	TWO POST Sv	THREE POST Sv	NUMBER PERMITTED IN 2.4-m PATH
	A	*B					
kg/m							
2.8	45	2.0	3770	1.63	3.26	4.89	TWO
3.2	51	2.0	4850	2.09	4.18	6.27	TWO
5.0	64	2.7	10 520	4.54	9.08	13.62	ONE

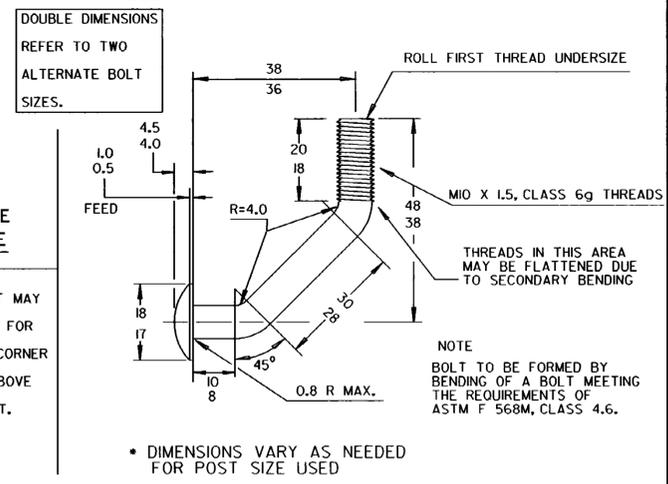
DESIGN CRITERIA:
WIND SPEED = 100 km/h (10 -YEAR MEAN RECURRENCE INTERVAL)
WIND PRESSURE = 740 Pa
STEEL MINIMUM YIELD = 380 MPa
ALLOWABLE STRESS = (1.4) 0.60 Fy



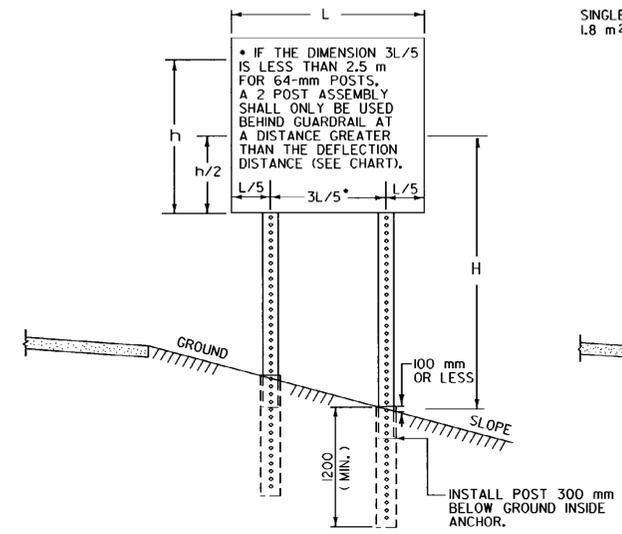
TOP VIEW OF ANCHOR, POST AND BOLT



OPTIONAL CORNER BOLT DETAILS



MULTI-POST INSTALLATIONS



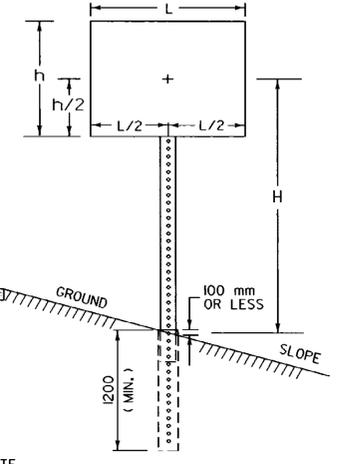
POST SPACING DETAILS

GENERAL NOTES

CONSTRUCTION METHODS - POSTS MAY BE DRIVEN OR SET IN A DUG HOLE AND BACKFILLED. IF DRIVEN, A DRIVING CAP SHALL BE USED. THE DUG HOLE INSTALLATION SHALL BE USED IN AREAS OF POOR SOIL CONDITIONS OR AS DIRECTED BY THE RESIDENT ENGINEER. BACKFILL SHALL BE COMPACTED AS DIRECTED BY THE RESIDENT ENGINEER.

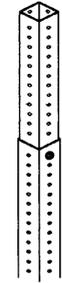
SIGN CLEARANCES - HORIZONTAL AND VERTICAL SIGN CLEARANCES SHALL BE SHOWN ON THE PLANS OR THE APPROPRIATE STD. SHEETS.

SINGLE POST INSTALLATIONS SHALL BE LIMITED TO A SIGN AREA OF 1.8 m² OR LESS.



NOTE
IF USING SQUARE STEEL POSTS ON STEEP SLOPES (1:2 OR STEEPER), ADD 300 mm OF EMBEDMENT FOR GREATER STABILITY.

CONNECTION DETAIL



POST IS TO BE INSERTED INTO ANCHOR 300 mm BELOW GROUND LEVEL. ANCHOR IS TO BE 1200 mm MINIMUM LENGTH WITH NO MORE THAN 100 mm ABOVE GROUND. ANCHOR IS ONE SIZE (6 mm) GREATER THAN THE POST AND ALL ANCHORS ARE TO BE 2.7 mm THICK EXCEPT ANCHORS FOR 64-mm POSTS ARE TO BE 76 mm AND 4.7 mm THICK. CONNECTION IS TO BE MADE USING THE BOLT PROVIDED WITH THE SIGN SYSTEM (SEE DETAILS LEFT), AT THE TOP HOLE IN THE ANCHOR (APPROXIMATELY 90 mm ABOVE GROUND). 75-mm ANCHORS WHICH DO NOT HAVE HOLES ON 25.4-mm CENTERS WILL REQUIRE DRILLING OF 11-mm HOLES FOR CONNECTIONS.

(SEE DETAIL LEFT FOR BOLT PLACEMENT)

REVISIONS AND CORRECTIONS
JUNE 13, 1997 - ORIGINAL APPROVAL DATE

APPROVED
[Signature]
DIRECTOR OF ENGINEERING
[Signature]
DIRECTOR OF CONSTRUCTION AND MAINTENANCE

SQUARE STEEL SIGN POST

OTHER STDS. E-120M
REQUIRED: E-160M
NOTE: ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT WHERE NOTED.



Metric STANDARD E-164M