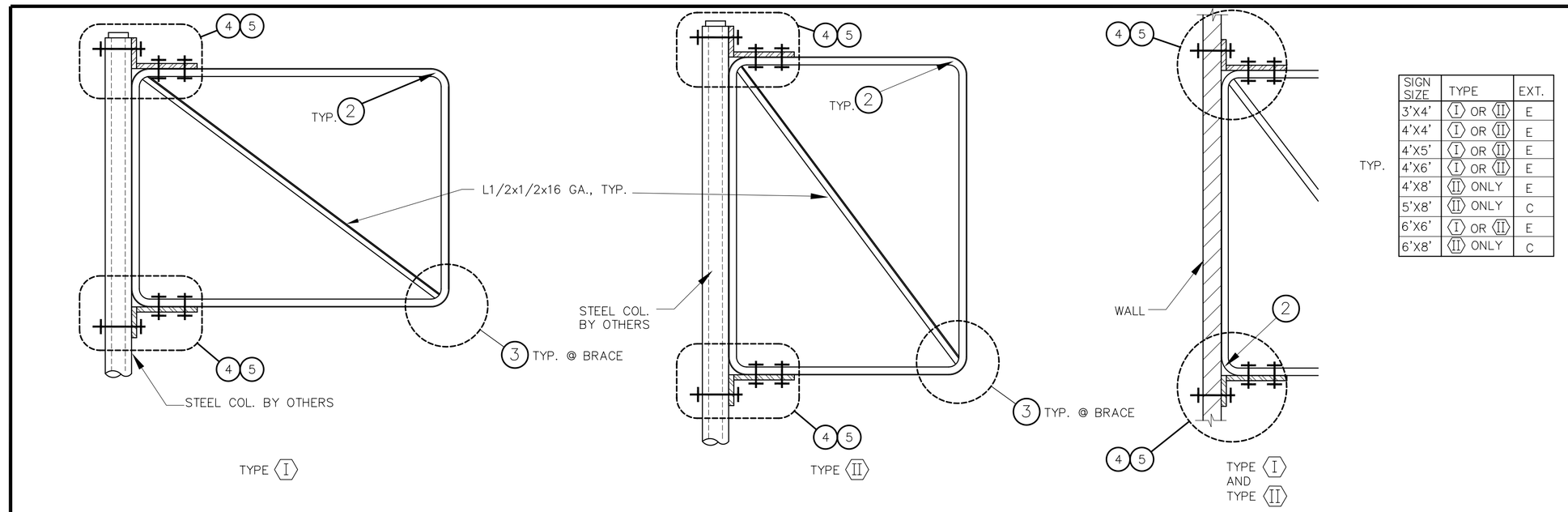


SIGN SIZE	TYPE	EXT.
3'X4'	I OR II	E
4'X4'	I OR II	E
4'X5'	I OR II	E
4'X6'	I OR II	E
4'X8'	II ONLY	E
5'X8'	II ONLY	C
6'X6'	I OR II	E
6'X8'	II ONLY	C

SIGN ELEVATION N.T.S. | 1

GENERAL NOTES & SPECIFICATIONS

1. GOVERNING CODES:

SOUTH FLORIDA BUILDING CODE (ASCE 7-98)	120 MPH, EXP. C
SOUTHERN STANDARD BUILDING CODE	138 MPH
UNIFORM BUILDING CODE, 1997	124 MPH, EXP. C

2. DESIGN LOADS:

DEAD LOAD	6 LBS. PER SQ. FT.
WIND LOAD	66.0 LBS. PER SQ. FT.

3. RESTRICTIONS:

A. THE DESIGN LOADS ABOVE ARE BASED ON A HEIGHT ABOVE GROUND OF 25 FEET MAXIMUM.

4. LIMITATIONS:

THE DESIGN AND CONSTRUCTION OF THE SIGN SHOWN HEREON CONFORMS TO THE ABOVE GOVERNING CODES WHEN INSTALLED AS SPECIFIED ON THIS DRAWING. NO OTHER WARRANTY IS EXPRESSED OR IMPLIED. ANY ALTERATIONS OF THIS DRAWING WILL VOID THE SHEET. THIS SHEET IS VALID ONLY IF SIGNED IN INK BY THE ENGINEER. THE METHOD OF ATTACHMENT TO SUPPORTS (POLES, WALLS, ETC.) IS NOT A PART OF THIS WORK AND MUST BE DESIGNED AND DETAILED BY OTHERS.

5. MATERIALS:

A. ALUMINUM – ALLOY 6061-T6 OR 6005-T5
BOLTS – ASTM F593
SIGN PANELS – TO BE UNDERWRITERS LABORATORY APPROVED. USE ONLY APPROVED PLASTICS.

PLATE STEEL – A36
PIPE – ASTM A53, GRADE B
TUBE – ASTM A500, GRADE B

B. PROVIDE FOR ISOLATION OF DISSIMILAR MATERIALS.

6. WORKMANSHIP:

ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE GOVERNING CODE (LATEST EDITION) AND THE LOCAL BUILDING OFFICIAL. WELDING SHALL CONFORM TO ALL APLICABLE CODES. CERTIFIED WELDERS ARE REQUIRED.

7. WELD SPECIFICATIONS:

STEEL WELDING
ALL WELDING SHOULD BE PERFORMED BY CERTIFIED WELDERS. WELDS USING E70 ELECTRODES OR WIRES AND AWS APPROVED SYSTEMS AND PROCEDURES ARE ACCEPTABLE. PROVIDE PERIODIC SPECIAL INSPECTION FOR FIELD WELDING IN ACCORDANCE WITH UBC SECTION 1701.5.

ALUMINUM WELDING
ALL WELDING SHALL BE DONE IN ACCORDANCE WITH LATEST EDITION OF THE AMERICAN WELDING SOCIETY D1.2 STRUCTURAL WELDING CODE ALUMINUM.

3' x 4' SIGN SUPPORT
ADDITIONAL SIZES O.K. BY COMPARISON

WIND:
W = 66 x 1.5 x 4 = 396 LB
M = 396 x 2 = 792 FT LB
PLATE:
S = .25 x 3^2 / 6 = .375 IN^3
f = 792 x 12 / .375 = 25344 PSI < 27000 x 1.33 O.K.
PLATE 1/4 x 3
WELD:
Z = 3^/6 = 1.5
f = 792 x 12 / 1.5 = 6336 LB/IN
FULL PENETRATION GROOVE WELD
ANGLE:
M = .5 x 792 = 396 FT LB
S = 396 x 12 / 1.33 x 22000 = .162 IN^3
L 2 x 2 x 1/4
BOLT TENSION:
T = 792 x 12 / 12 = 792 LB
ANGLE LOCAL BENDING AT BOLT:
M = 792 x 1.00 = 792 IN LB
fa = 792 / .25 x 3 = 1056 PSI
fb = 792 x 6 / 3 x .25^2 = 25344 PSI
COMBINED STRESS = 1056 + 25344 = 26400 PSI O.K.

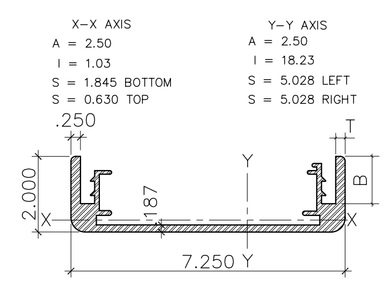
4' x 6' SIGN SUPPORT
ADDITIONAL SIZES O.K. BY COMPARISON

WIND:
W = 66 x 3 x 4 = 792 LB
M = 792 x 3 = 2376 FT LB
PLATE:
S = .375 x 4^2 / 6 = 1.00 IN^3
f = 2376 x 12 / 1.00 = 28512 PSI < 27000 x 1.33 O.K.
PLATE 3/8 x 4
WELD:
Z = 4^2 / 6 = 2.667
f = 1858 x 12 / 2.667 = 8361 LB/IN
FULL PENETRATION GROOVE WELD
ANGLE:
S = 2376 x 12 / 1.33 x 22000 = 0.974 IN^3
L 3 1/2 x 3 1/2 x 3/8"
BOLT TENSION:
T = 2376 x 12 / 12 = 2376 LB
ANGLE LOCAL BENDING AT BOLT:
O.K. BY COMPARISON TO 6' x 8' SIGN

6' x 8' SIGN
ADDITIONAL SIZES O.K. BY COMPARISON

WIND:
W = 66 x 6 x 4 = 1584 LB
M = 1584 x 3 = 4752 FT LB
f = 4752 x 12 / 5.028 = 11341 PSI <19 KSI O.K.
GRAVITY:
LOWER FRAME SUPPORTS ENTIRE DEAD LOAD
USE SAG ROD
LOWER FRAME:
W = 6 x 6 x 8 = 288 LB
M = 288 x 6 / 8 = 216 FT LB
f = 216 x 12 / 0.630 = 4114 PSI < 28 KSI O.K.
COMBINED STRESS O.K.
PLATE:
S = .375 x 6.5^2 / 6 = 2.64 IN^3
f = 4752 x 12 / 2.64 = 21600 PSI < 27000 x 1.33 O.K.
PLATE 3/8 x 6 1/2
WELD:
PLATE TO PIPE
Z = 5.5^2 / 6 = 5.04
f = 4752 x 12 / 5.04 = 11314 LB/IN
FULL PENETRATION GROOVE WELD
ANGLE:
S = 4752 x 12 / 1.33 x 22000 = 1.94 IN^3
L 5 x 3 x 3/8
BOLT TENSION:
T = 4752 x 12 / 27 = 2112 LB
ANGLE LOCAL BENDING AT BOLT:
M = 2112 x 1.625 = 3432 IN LB
fa = 2112 / .375 x 6.5 = 866 PSI
fb = 3432 x 6 / 4.5 x .375^2 = 32540 PSI
COMBINED STRESS = 866 + 32540 = 33406 PSI O.K.

EXTRUSION "C"
SECTION PROPERTIES

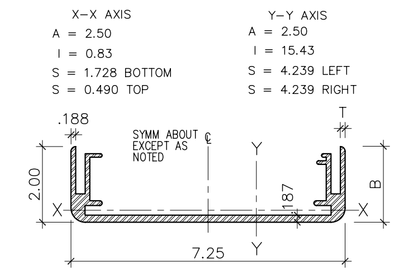


ALLOWABLE STRESSES:

BENDING TENSION:
X-X AXIS
Fb = 28 KSI
Y-Y AXIS
Fb = 19 KSI

BENDING COMPRESSION:
X-X AXIS
FLANGES:
b / t = 2.00 / .250 = 8.0 < 8.9
Fb = 28 KSI
Y-Y AXIS
FLANGES:
b / t = 2.00 / .250 = 8.0
Fb = 27.3 – 0.93 b / t = 19.9 KSI
WEB:
Lb / ry = 8 x 12 / 2.777 = 34.6
Fb = 23.9 – 0.124 Lb / ry = 19.6 KSI

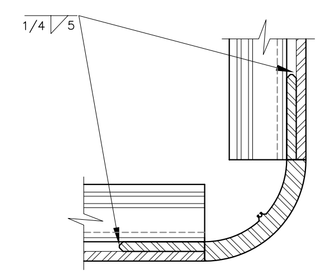
EXTRUSION "E"
SECTION PROPERTIES



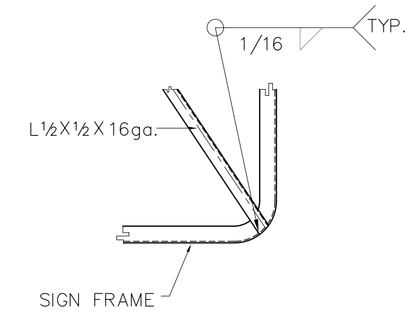
ALLOWABLE STRESSES

BENDING TENSION
X-X AXIS
Fb = 28 KSI
Y-Y AXIS
Fb = 19 KSI

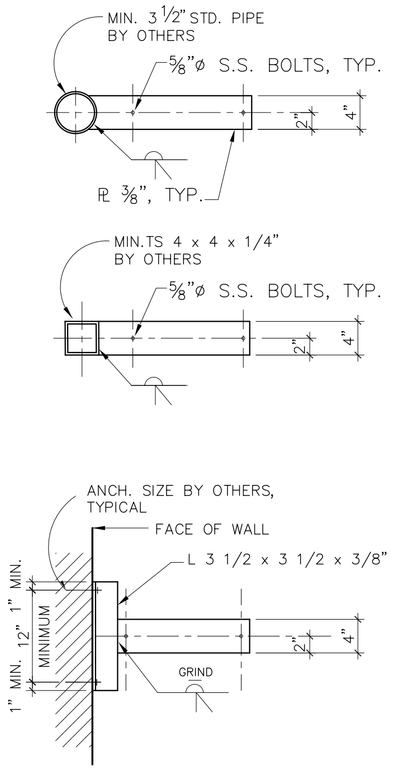
BENDING COMPRESSION
X-X AXIS
FLANGES
b / t = 2.00 / .188 = 10.6
Fb = 40.5 – 1.41 b / t = 25.5 KSI
Y-Y AXIS
FLANGES
b / t = 2.00 / .188 = 10.6
Fb = 27.3 – 0.936 b / t = 17.4 KSI
WEB
Lb / ry = 8 x 12 / 2.701 = 35.5
Fb = 23.9 – 0.124 Lb / ry = 19.5 KSI



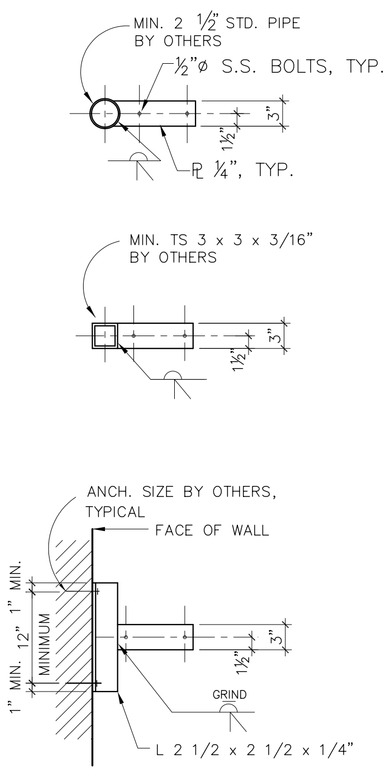
CORNER DETAIL N.T.S. | 2



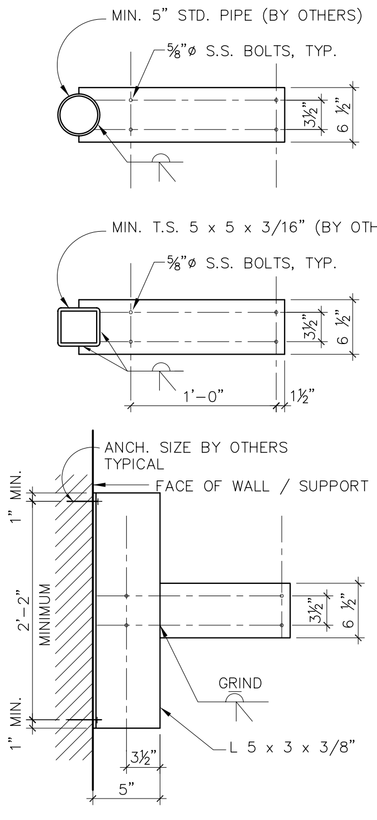
CORNER BRACING DTL., TYP. TOP & BOTTOM N.T.S. | 3



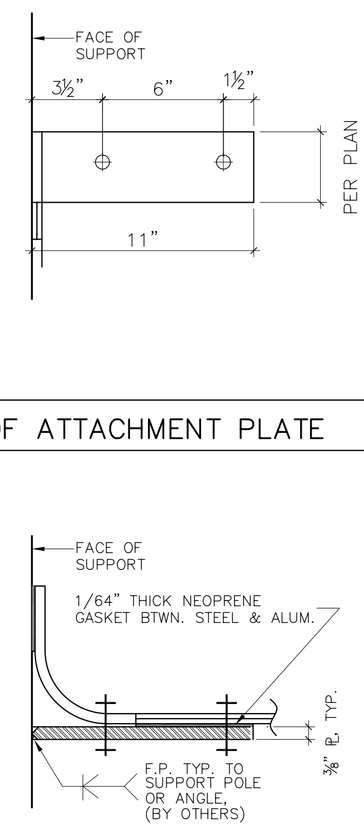
4'x4', 4'x5' & 4'x6' ATTACHMENT DETAILS N.T.S. | 4



3'x4' ATTACHMENT DETAILS N.T.S. | 5



4'x8',5'x8',6'x6',6'x8' ATTACHMENT DETAILS N.T.S. | 6



DIMENSIONS APPLY TO DETAILS 4 & 5

PLAN OF ATTACHMENT PLATE N.T.S. | 7

SECTION OF ATTACHMENT PLATE N.T.S. | 8

REVISIONS	BY	DATE

STRUCTURAL TECHNOLOGY
CONSULTANTS INCORPORATED
619.296.2096
851 ARROYO DRIVE
SAN DIEGO, CA 92103

SIGNTRONIX
1445 W. SEPULVEDA BLVD. TORRANCE CA. 90509
(310) 534-7500

FLAGMOUNT

SIGN ELEVATION,EXTRUSIONS AND MISCELLANEOUS DETAILS

DATE:	10/26/98
JOB No.	489
DESIGNED:	WTN
DRAWN BY:	Y.V.
APPROVED BY:	
	489 – FPM

SHEET 8 OF 14