

PROPERTIES SCHEDULE		
SIGN SIZE	ACCESSORIES	BOLTS (#)
3'x16'	ALUMINUM CHANNEL CS 3 x 2.7 (3 x 2 x 0.375")	7/8"
4'x16'	ALUMINUM CHANNEL CS 3 x 2.7 (3 x 2 x 0.375")	7/8"

ELEVATION

N.T.S. 1

GENERAL NOTES & SPECIFICATIONS

- 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
- DESIGN LOADS:**
DEAD LOAD 6.1 LBS. PER SQ. FT.
WIND LOAD 66.0 LBS. PER SQ. FT.
- RESTRICTIONS:**
A. THE DESIGN LOADS ABOVE ARE BASED ON A HEIGHT ABOVE GROUND OF 25 FEET MAXIMUM.
- 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 WEAPON OF ATTACHMENT TO SUPPORTS (SCREWS, WELDS, ETC.) IS NO PART OF THIS WORK AND MUST BE DESIGNED AND DETAILED BY OTHERS.
- MATERIALS:**
A. ALUMINUM - ALLOY 6061-T6 OR 6005-T5
BOLTS - ASTM F593
SIGN PANELS - TO BE UNDERWRITERS LABORATORY APPROVED, USE ONLY APPROVED PLASTICS.
- ADHESIVE ANCHORAGE:**
1. WALL ANCHORS ARE TO BE ARRANGED TO AVOID JOINTS IN WALL.
2. THREADED RODS SHALL BE HILTI "HIT" ROD OR MEET SAME
3. MATERIAL SPECIFICATIONS (ASTM F593/AISI 304)
4. INSTALL WALL ANCHORS ACCORDING TO I.C.B.O. REPORT NO. 5193 AND MANUFACTURER'S TECHNICAL GUIDES & RECOMMENDATIONS.
5. PROVIDE SPECIAL INSPECTION FOR ALL ANCHOR INSTALLATIONS.
- PROVIDE FOR ISOLATION OF DISSIMILAR MATERIALS.**
- 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 APPLICABLE CODES. CERTIFIED WELDERS ARE REQUIRED.
- WELD SPECIFICATIONS:**
STEEL WELDING
ALL WELDING SHOULD BE PERFORMED BY CERTIFIED WELDERS. WELDS USING E70 ELECTRODES OR WIRTS 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 16' SIGN

FRAME O.K. BY COMPARISON WITH 4' x 16' SIGN

4' x 16' SIGN

BOLTS (#)

WIND: W = 66.0 LBS. PER SQ. FT. (132.0 LB. PER SQ. FT.)
S = 5.028 LEFT
S = 5.028 RIGHT
GRAVITY: G = 12.0 LB. PER SQ. FT. (24.0 LB. PER SQ. FT.)
I = 2332 x 12 / 5.028 = 5697 PS (5697 PS) < 16800 PS O.K.
LOWER FRAME SUPPORTS ENGINE 0240 1040
W = 6.0 LBS. PER SQ. FT. (12.0 LB. PER SQ. FT.)
M = 12 x (133) / 8 = 202.5 FT. LB. = 3184 INCH-LB.
f (WED) = 3184 / 1846 IN² = 1725 PS
COMBINED STRESS:
6997 / 16800 + 5094 / 28800 = 0.60 < 1.33 O.K.

CHECK BOLTS:

V = 66.0 LBS. PER SQ. FT. (132.0 LB. PER SQ. FT.)
M = (66.0) x 2.5' = 165.0 LB. PER SUPPORT
ALUM. C 3 X 2 X 0.375 S = 0.59 IN
b = 1988 / 0.59 = 3389 PS O.K.
T = 1000 / 3 = 333#
MIN. T ALLOW = 400# - HILTI HIT HY20 ANCHORAGE SYSTEM

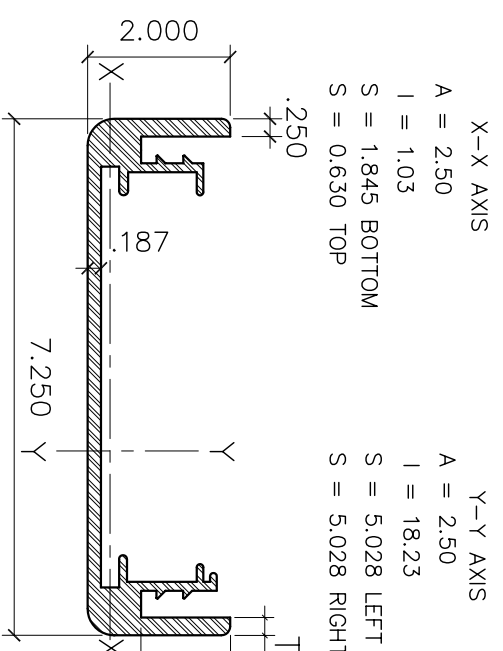
USE 3 - 1/2" Ø S.S. BOLTS

CHECK SHEAR AT CHANNEL TO BRACE CONNECTION:

WED 1 = 0.56"
ALLOW (V) = 2 X 0.56" X 0.25" X 0.20" X 6800 X 133 = 1711 LB
1711 LB > 1080 LB O.K. USE WED 0.25"
2" LONG, MIN.

EXTRUSION "C"

SECTION PROPERTIES

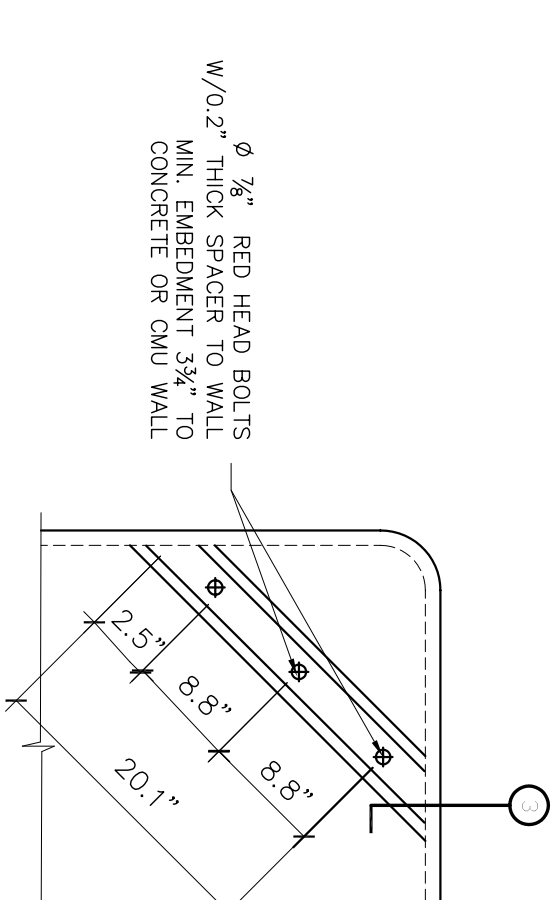


ALLOWABLE STRESSES:

BENDING TENSION:
X-X AXIS F_b = 28 KSI
Y-Y AXIS F_b = 19 KSI
BENDING COMPRESSION:
X-X AXIS F_b = 28 KSI
Y-Y AXIS F_b = 19 KSI

X-Y AXIS
A = 2.50
I = 1.03
S = 1.64 BOTTOM
S = 0.630 TOP
S = 5.028 RIGHT
2.50

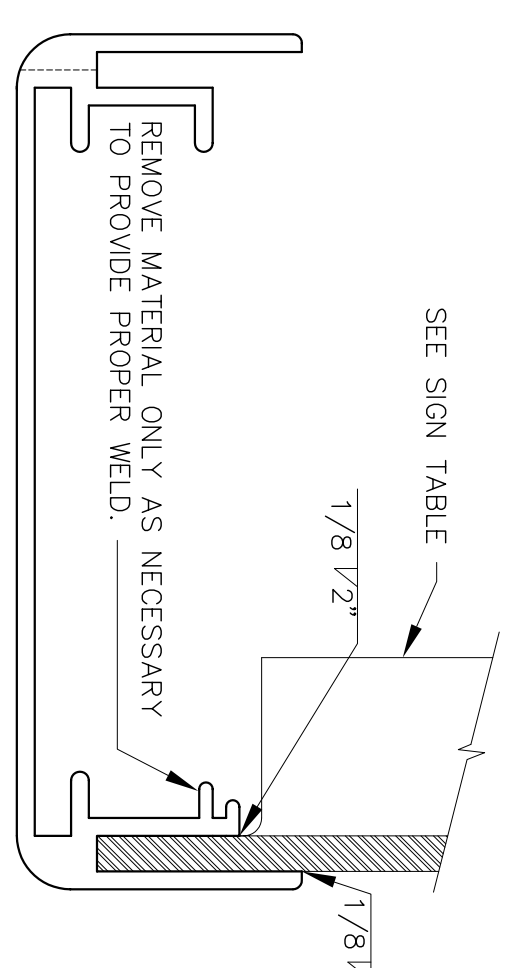
Y-Y AXIS
A = 18.23
I = 18.23
S = 5.028 LEFT
S = 5.028 RIGHT



Ø 3/16" RED HEAD BOLTS
W/0.2" THICK WASHER TO WALL
CONCRETE OR CMU WALL

CORNER DETAIL

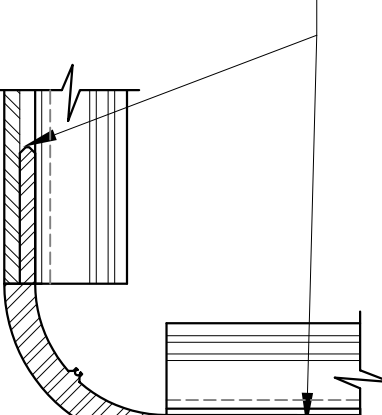
N.T.S. 2



SEE SIGN TABLE
REMOVE MATERIAL ONLY AS NECESSARY
TO PROVIDE PROPER WELD.

SUPPORT TO EXTRUSION

N.T.S. 3

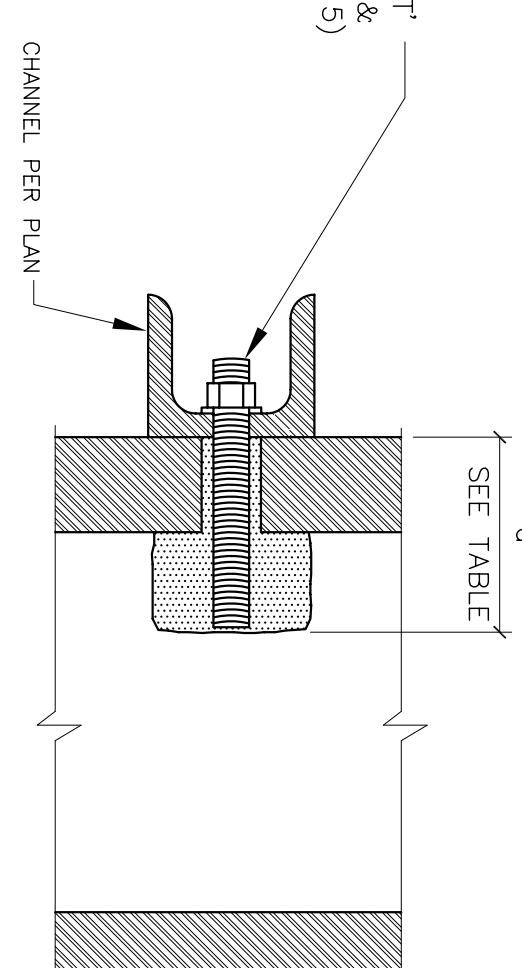


CORNER DETAIL

N.T.S. 4

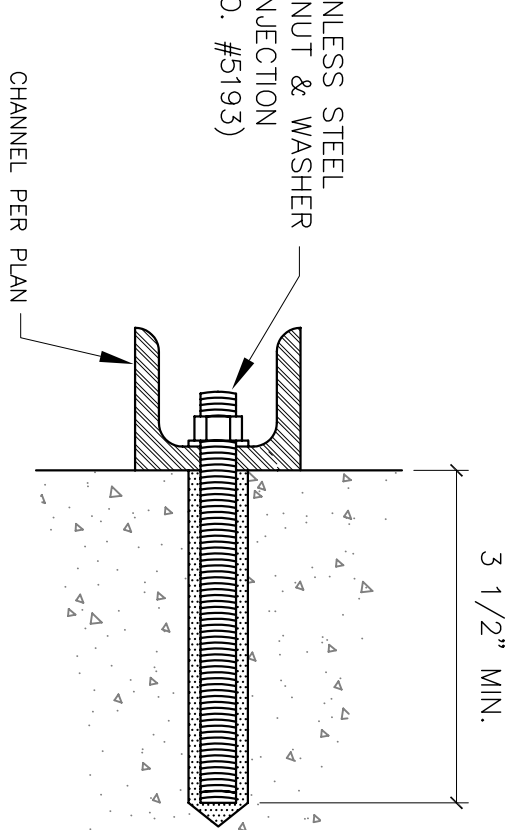
EMBEDMENT DEPTH TABLE		
MATERIAL	d (in)	
HOLLOW CONCRETE	2"	
BRICK WITH HOLES	3 3/8"	
MULTI-WYTHE BRICK	6"	

NOTE:
HOLLOW BASE TO BE CONCRETE BLOCK,
BRICK WITH HOLES, OR MULTI WYTHE
BRICK ONLY.



ANCHORAGE TO HOLLOW CORE

N.T.S. 5



HILTI 1/2" Ø STAINLESS STEEL
THREADED ROD, NUT & WASHER
W/"HIT" HY150" INJECTION
ADHESIVE (I.C.B.O. #9193)

NOTE:
SOLID BASE TO BE CONCRETE
OR CONCRETE MASONRY ONLY.

ANCHORAGE TO SOLID BASE

N.T.S. 6

