5/26/2017 12:43

GENERAL NOTES - ROADSIDE TRAFFIC SIGNS

CONSTRUCTION SPECIFICATIONS: CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES. LATEST EDITION EXCEPT AS SUPPLEMENTED OR AMENDED BY THE PLANS, SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS, 1994 AND INTERM SPECIFICATIONS.

STEEL: STEEL SHALL CONFORM TO A.S.T.M. A-709, GRADE 36. STEEL TUBING SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF A.S.T.M. DESIGNATION A-36 OR HOT-FORMED TUBING (A-501) OR PIPE (A-53) TYPE "E" OR "S", GRADE "B" OR COLD-FORMED TUBING (A-500) GRADE "B" OR "C", UNLESS OTHERWISE NOTED.

ALUMINUM: ALL ALUMINUM EXCEPT SIGN PANELS SHALL CONFORM TO ASTM B-221, B-308, OR B-429 ALLOY 6061-T6 UNLESS OTHERWISE NOTED. SIGN PANELS SHALL BE .080" THICK ALUMINUM CONFORMING TO ASTM B-209 ALLOY 5052-H38 OR 6061-T6.

CONCRETE AND REINFORCING STEEL: CONCRETE SHALL BE CLASS "M", UNLESS OTHERWISE NOTED.DIMENSIONS RELATING TO REINFORCING STEEL FABRICATION ARE OUT TO OUT OF BAR UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO REINFORCING STEEL SPACING ARE CENTER TO CENTER OF BAR OR FACE OF CONCRETE TO CENTERLINE OF BAR. REINFORCING STEEL SHALL HAVE A MINIMUM COVERING OF 2" EXCEPT WHEN CONCRETE IS CAST AGAINST THE EARTH THEN THE COVERING WILL BE 3". ALL REINFORCING STEEL SHALL BE GRADE 60. THE FIRST DIGIT OF REINFORCING BAR NUMBER INDICATES THE BAR SIZE. THE TOP EDGES OF THE FOOTING SHALL BE CHAMFERED ¾".

CONCRETE FINISH: ALL PORTIONS OF THE FOOTINGS FOR CANTILEVERS AND TRUSSES ABOVE GROUNDLINE SHALL HAVE A FINISH IN ACCORDANCE WITH LOUISIANA SPECIFICATION. 805.08.3

WELDING: ALL WELDING SHALL CONFORM TO THE LA. STANDARD SPECIFICATIONS-SECTION 809 AND SUPPLEMENTAL SPECIFICATIONS.

GALVANIZING: ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. DESIGNATION A-123. DAMAGE TO GALVANIZED SURFACES THAT ARE NOT TO BE ENCASED IN CONCRETE SHALL BE REPAIRED IN ACCORDANCE WITH LA. STANDARD SPECIFICATIONS SUBSECTION 811.08. ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. DESIGNATION A-153 . ALL FIELD HOLES IN GALVANIZED MATERIAL SHALL BE TREATED WITH A COLD GALVANIZING COMPOUND FROM THE A.M.L..

BOLTS: UNLESS NOTED, ALL THREADED CONNECTIONS SHALL INCORPORATE A LOCKING DEVICE AND HAVE A MINIMUM OF 3 THREADS BEYOND THE NUTS. ALL BOLTS SHALL BE HIGH STRENGTH BOLTS, A.S.T.M. A-325, UNLESS OTHERWISE NOTED. ANCHOR BOLTS SHALL CONFORM TO AASHTO M314, GRADE 55 (OR APPROVED EQUAL) AND BE HOT DIP GALVANIZED TO A.S.T.M. A-153. STAINLESS STEEL FOR BOLTS SHALL CONFORM TO A.S.T.M. DESIGNATION A-320 B8, CLASS 2 TYPE 304, OR A-193 B8, CLASS 2 TYPE 304, UNLESS OTHERWISE NOTED. STAINLESS STEEL NUTS SHALL CONFORM TO A.S.T.M. DESIGNATION A-194, GRADE 8, TYPE 304. ALUMINUM BOLTS SHALL CONFORM TO A.S.T.M. F-468 ALLOY 2024-T4 AND NUTS ARE A.S.T.M. F-467 ALLOY 6061-T6 OR 6262-T9. WHERE BOLTS ARE USED ON BEVELED SURFACES, BEVELED WASHERS SHALL BE PROVIDED TO GIVE FULL BEARING TO THE HEAD AND/OR THE NUT.

RIVETS: ALL RIVETS SHALL BE ¼" DIAMETER BLIND RIVETS WITH POSITIVE MANDREL RETENTION. THE RIVET BODY AND MANDREL SHALL BE ALUMINUM WITH A ½" MAXIMUM DIAMETER DOME HEAD. THE RIVETS SHALL HAVE A MINIMUM ULTIMATE TENSILE STRENGTH = 875 LBS., AND CONFORM TO ASTM B-316 5056-H32.

BREAK-AWAY BASE: BASES FOR SIGNS LOCATED ADJACENT TO MORE THAN ONE ROADWAY (RAMP TERMINALS, INTERSECTIONS, ETC.) SHALL BE ORIENTED IN THE DIRECTION OF THE HIGHEST SPEED TRAFFIC. ALL MULTI-POST SIGNS WITH A DISTANCE BETWEEN POSTS OF 7'-0" CENTERS OR LESS SHALL HAVE BEVELED BASE CONNECTION. BASE CONNECTIONS SHALL BE WRAPPED PRIOR TO POURING THE FOOTING, WITH MATERIAL SUFFICIENT TO PREVENT CONCRETE SPLATTER ON THE BREAK-AWAY BASE ASSEMBLY.

ANCHOR BOLTS: ANCHOR BOLT NUTS TO BE TIGHTENED A MINIMUM ROTATION OF 240° (⅔ TURNS) FROM THE SNUG TIGHT CONDITION.

SIGN SHEETING: UNLESS OTHERWISE REQUIRED, ALL SIGN MATERIAL SHALL BE A MINIMUM ASTM D4956 TYPE X RETRO-REFLECTIVE SIGN SHEETING. IN ORDER TO OBTAIN AN ACCEPTABLE COLOR MATCH BETWEEN MULTIPLE PANELS ON A GUIDE SIGN, ALL OF THE BACKGROUND SHEETING FOR ANY GUIDE SIGN SHALL BE THE MINIMUM WIDTH OF THE LARGEST PANEL AND SHALL COME FROM THE SAME LOT OR RUN NUMBER FROM THE SHEETING MANUFACTURER UNLESS OTHERWISE APPROVED IN WRITING. RETRO-REFLECTIVE SHEETING SHALL BE APPLIED TO ALL PANELS IN SUCH A MANNER THAT THERE ARE NO HORIZONTAL SPLICES.

OVERLAY PANELS FULL SIGN OVERLAY PANELS SHALL BE IN ACCORDANCE WITH SECTION 729.05.3. PARTIAL SIGN OVERLAYS AND ALL SHIELDS SHALL HAVE SHIMS AT ALL RIVETS. SHIMS SHALL BE AT LEAST .080" THICK AND SIZED SO THEY WILL NOT EXTEND BEYOND EDGE OF OVERLAY. RIVETS SHALL BE AS SPECIFIED ON THIS STANDARD DETAIL SHEET.

SIGN LOCATIONS: FOR GROUND MOUNTED SIGN INSTALLATIONS, THE ENGINEER MAY ADJUST THE TYPE D AND E SIGN LOCATIONS INDICATED ON THE PLANS. THIS WILL BE ALLOWED TO AVOID PLACEMENT IN DEEP DITCHES, STEEP BACKSLOPES, TREE LINES, AND ANY OTHER UNACCOUNTED FOR FIELD CONDITIONS AND TO PROVIDE BETTER MESSAGE PRESENTATION. ANY ADJUSTMENTS MUST BE WITH THE CONCURRENCE OF THE GEOMETRIC DESIGN ENGINEER.

SIGN TYPES: TYPE A = SMALL SIGN WITH ONE POST; TYPE B = CLUSTER ASSEMBLY OF TYPE A SIGNS; TYPE D = LARGE RECTANGULAR SIGN ADJACENT TO TRAFFIC MOUNTED WITH MULTIPLE POSTS; TYPE E = SECONDARY SIGN (SUCH AS AN EXIT NUMBER PANEL) ATTACHED TO A LARGE RECTANGULAR PRIMARY SIGN; DELINEATOR, MILEPOST AND OBJECT MARKER SIGNS ARE NOT COVERED UNDER TRAFFIC SIGNS. SEE STANDARD PLAN HS-03.

MISCELLANEOUS: THE CONTRACTOR SHALL MARK THE DATE OF FABRICATION, SHEETING MANUFACTURER CODE, AND SIZE OF SIGN ON THE BACK OF EACH SIGN WITH AN APPROVED WEATHER RESISTANT PAINT STICK. MARK SHALL BE 2" MINIMUM HEIGHT ON MULTI-POST SIGNS. SEE DETAIL "A" SHEET 6 OF 11.

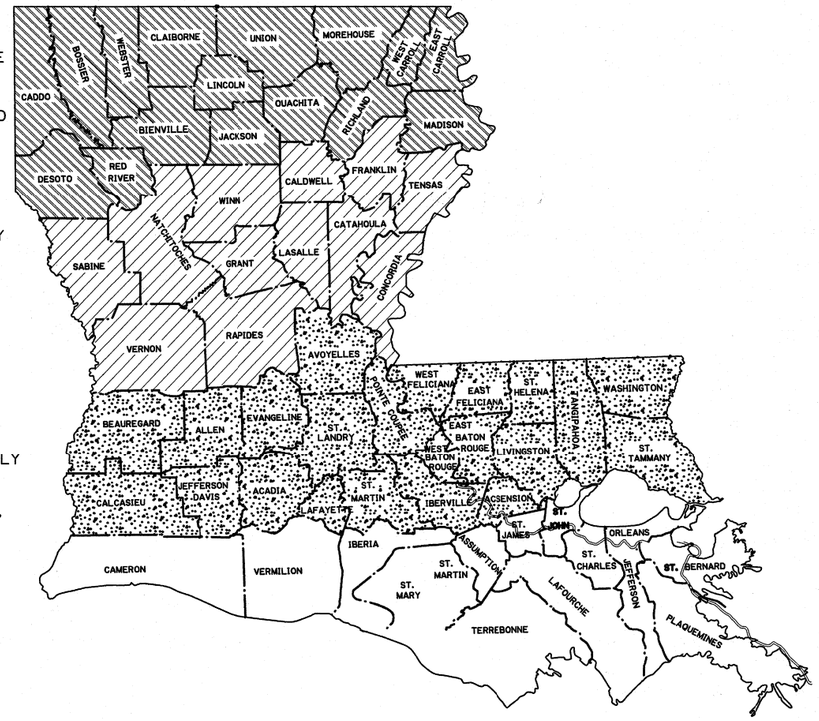
POST HINGE SPLICE ON MULTI-POST SIGNS WITH ALL POSTS CONNECTED BY A SECONDARY SIGN SHALL BE LOCATED BELOW THE SECONDARY SIGN. STUB POST SHALL BE ASSEMBLED TO SIGN POST WITH REQUIRED BOLTS AND ONE FLAT WASHER ON EACH BOLT BETWEEN PLATES PRIOR TO SHIPMENT. POST SPLICE SLIP PLATE SHALL BE ASSEMBLED TO MINIMUM BOLT TENSION IN SHOP PRIOR TO SHIPMENT. SIGN POST SHALL BE SHIPPED TO JOB SITE ASSEMBLED WITH ALL HARDWARE REQUIRED IN PLACE AND SECURED. EXPOSED ENDS OF ALL PIPE SHALL BE CAPPED. USE OF SECTIONS PROVIDING EQUAL OR GREATER STRENGTH FOR ANY MEMBER DESIGNATED ON THE PLANS SHALL BE SUBMITTED TO THE BRIDGE ENGINEER FOR APPROVAL.

ALL DIMENSIONS REQUIRED FOR SATISFACTORY INSTALLATION SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE FABRICATION. ADJUSTMENTS SHALL BE MADE AS DIRECTED BY THE ENGINEER.

ALL ALUMINUM SURFACES PLACED IN CONTACT WITH, OR FASTENED TO UNGAL-VANIZED STEEL MEMBERS SHALL BE THROUGHLY COATED WITH AN APPROVED ALUMINUM IMPREGNATED CAULKING COMPOUND. PAINT ALUMINUM SECTIONS IN CONTACT WITH CONCRETE WITH A HEAVY COAT OF AN ALKALI RESISTANT BITUMINOUS PAINT OR A COAT OF ZINC CHROMATE PAINT AND ALLOW TO DRY BEFORE PLACING.

TREE TRIMMING: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MISCELLANEOUS BRUSH AND TREE TRIMMING TO ALLOW FOR FULL SIGN PRESENTATION AS DIRECTED BY THE PROJECT ENGINEER.

SHOP DRAWINGS: NOT REQUIRED FOR SIGN BACKING AND SMALL GROUND MOUNTED SIGN SUPPORTS, UNLESS FABRICATOR INTENDS TO DEVIATE FROM THE DETAILS HEREIN. SHOP DRAWING ARE REQUIRED FOR ALL STRUCTURE MOUNTED SIGNS.



WIND LOAD MAP

WIND LOAD MAP LEGEND			
SYMBOL	ROADSIDE MOUNTED		
	ZONE	WIND VELOCITY (MPH)⊗	WIND LOAD (PSF) △
	1	70	20
	2	80	27

⊗ 25 YEAR MEAN RECURRENCE INTERVAL

△ INCLUDES C_d = 1.2

SHEET	BRIDGE STANDARD INDEX NO.	DESCRIPTION
1 OF 11	BD.2.7.2.0.1	INDEX, WIND LOAD MAP AND GENERAL NOTES
2 OF 11	BD.2.7.2.0.2	PANEL DETAILS TYPE A AND B SIGNS
3 OF 11	BD.2.7.2.0.3	MOUNTING DETAILS TYPE A AND B SIGNS
4 OF 11	BD.2.7.2.0.4	PANEL AND MOUNTING DETAILS TYPE A AND B SIGNS
5 OF 11	BD.2.7.2.0.5	PANEL DETAILS TYPE D AND E SIGNS
6 OF 11	BD.2.7.2.0.6	EXTRUDED ALUMINUM SIGNS TYPE D AND E SIGNS
7 OF 11	BD.2.7.2.0.7	EXTRUDED ALUMINUM PANEL TYPE D AND E SIGNS
8 OF 11	BD.2.7.2.0.8	ROADSIDE MOUNTED SUPPORT DETAILS TYPE A, B AND D SIGNS
9 OF 11	BD.2.7.2.0.9	ROADSIDE MOUNTED SUPPORT DETAILS TYPE A AND B SIGNS
10 OF 11	BD.2.7.2.0.10	ROADSIDE MOUNTED SUPPORT DETAILS TYPE D SIGNS
11 OF 11	BD.2.7.2.0.11	ROADSIDE MOUNTED SUPPORT DETAILS TYPE D SIGNS

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
8/24/11

SHEET NUMBER

PARISH	FEDERAL PROJECT	STATE PROJECT

DESIGNED / CHECKED	DETAILED / CHECKED	DATE / SHEET
P.FOSSIER / P.FOSSIER	J. KOEMPEL / K. BRAUNER	JAN. 2011 / 1 OF 11

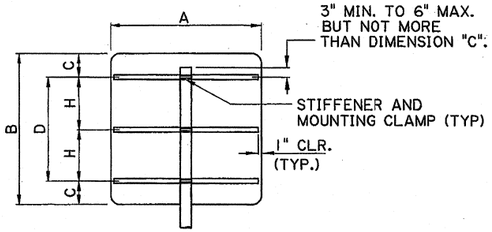
NO.	REVISION DESCRIPTION	DATE	BY
1	UPDATE FOR 2016 SPECIFICATIONS	12-02-16	K.M.B.

WIND LOAD MAP & GENERAL NOTES

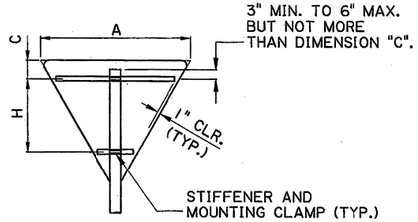
BD.2.7.2.0.1 - ROADSIDE TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN

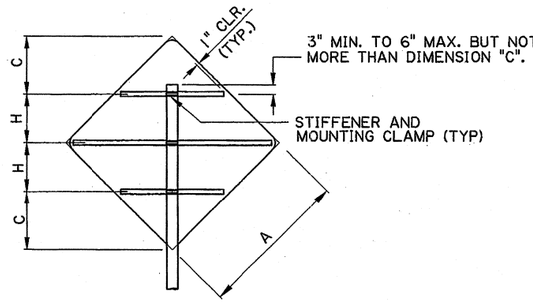
C:\Users\D25C0\Desktop\BD.2.7.2.0.01 - Roadside Traffic Signs 01.dgn



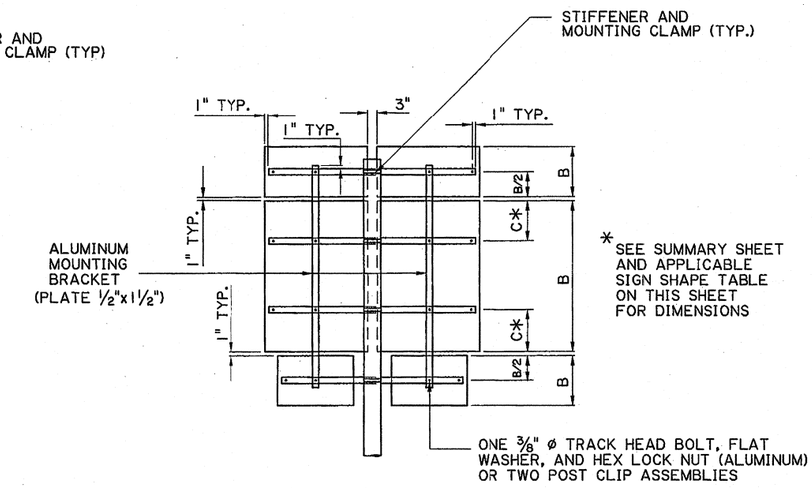
SQUARE, RECTANGLE, CIRCLE,
OCTAGON AND ROUTE MARKERS



EQUILATERAL TRIANGLE



DIAMOND



* SEE SUMMARY SHEET AND APPLICABLE SIGN SHAPE TABLE ON THIS SHEET FOR DIMENSIONS

TYPE B SIGN
(CLUSTER ASSEMBLY)

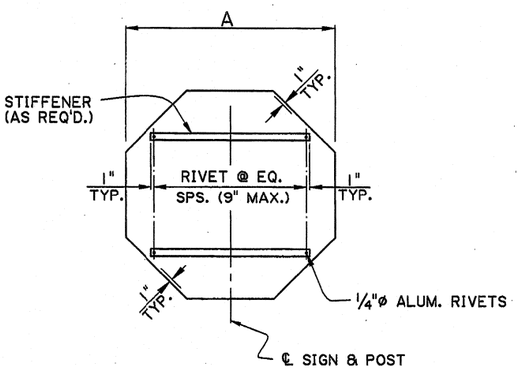
SQUARE, RECTANGLE, CIRCLE, OCTAGON AND ROUTE MARKERS					
A (IN.)	B (IN.)	C (IN.)	D (IN.)	H (IN.)	STIFFENER NUMBER REQUIRED
VARIABLE 12" TO 48" →	6	3			1
	12	6			1
	15	7.5			1
	18	9			1
	24	6	12		2
	30	7.5	15		2
	36	7.5	21		2
	48	10	28		2
	60	9	42	21	3
	72	11	6 △	25	3
↓	84	10.5	6 △	21	4
48	96	12	6 △	24	4

△ LOCATION OF BORDER ANGLE FROM EDGE

EQUILATERAL TRIANGLE			
A (IN.)	C (IN.)	H (IN.)	STIFFENER NUMBER REQUIRED
24	8		1
30	6	10	2
36	6	12.5	2
48	6	23	2
60	6	33.5	2

DIAMOND			
A (IN.)	C (IN.)	H (IN.)	STIFFENER NUMBER REQUIRED
24	10	6.97	1
30	12	9.21	2
36	14	11.46	2
48	18.5	15.44	3
60	22.5	19.93	3

TYPE A SIGNS



TYPICAL SIGN BACKING DETAIL

NOTES:

NO BOLTS SHALL BE PLACED THROUGH FACE OF SIGN.

ALL TRACK HEAD BOLTS SHALL HAVE HEADS DESIGNED TO FIT AND TRANSMIT LOAD TO BOLT SLOTS IN THE STIFFENER.

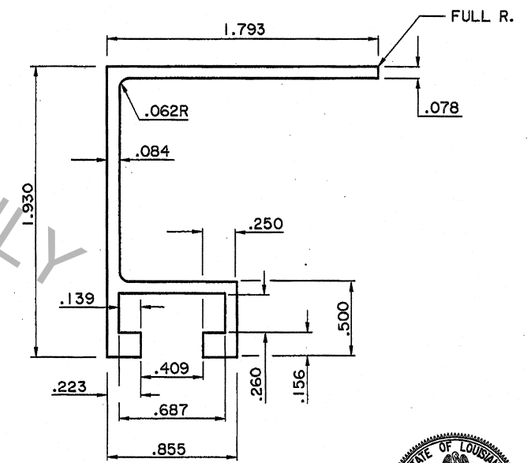
STIFFENERS SHALL BE ALUMINUM EXTRUSIONS AS DETAILED ON THIS SHEET UNLESS OTHERWISE NOTED.

MOUNTING CLAMP REQUIRED AT EACH HORIZONTAL STIFFENER.

SIGN PANELS AND POSTS SHALL BE THE SIZE REQUIRED ON THE PLANS AND SUMMARY SHEET.

SEE OTHER SHEETS FOR MOUNTING DETAILS.

THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET.



EXTRUSION STIFFENER

STATE OF LOUISIANA
PAUL B. FOSSIER, JR.
REG. No. 21028
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
8-31-00

SHEET NUMBER

PARISH | FEDERAL PROJECT | STATE PROJECT

DESIGNED A. ALLEN
CHECKED A. ALLEN
DETAILED E. DANIEL
CHECKED
DATE JULY 2000
SHEET 2 OF 11

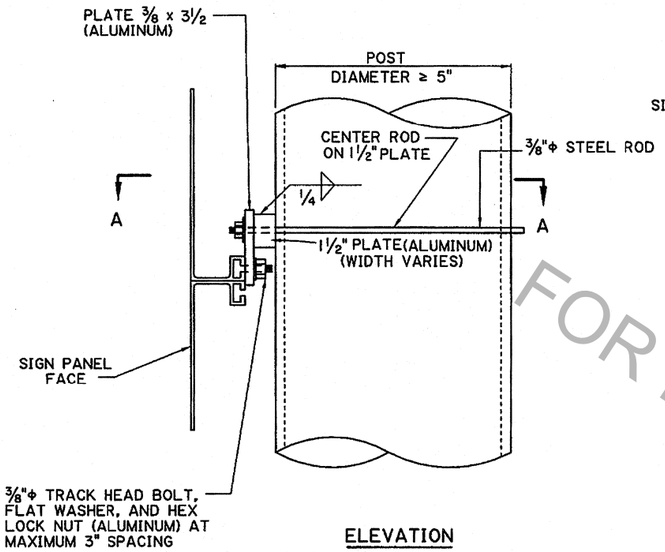
REVISION DESCRIPTION | BY | NO. | DATE

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DOTD

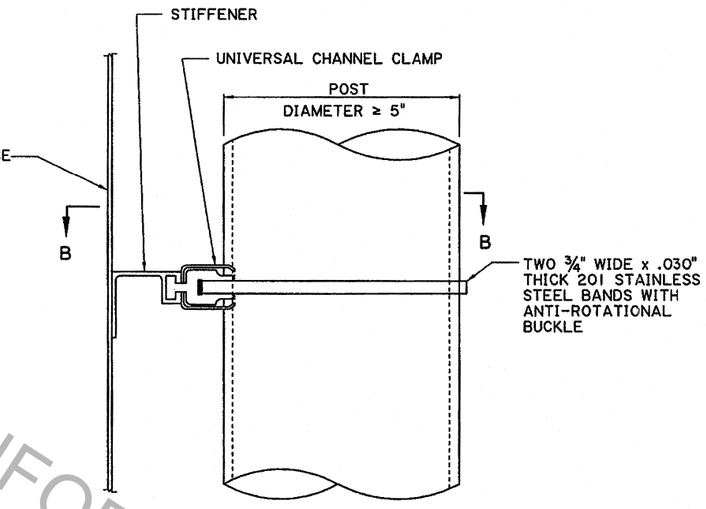
BRIDGE AND STRUCTURAL DESIGN

PANEL DETAILS
TYPE A & B SIGNS
BD.2.7.2.0.2 - ROADSIDE TRAFFIC SIGNS



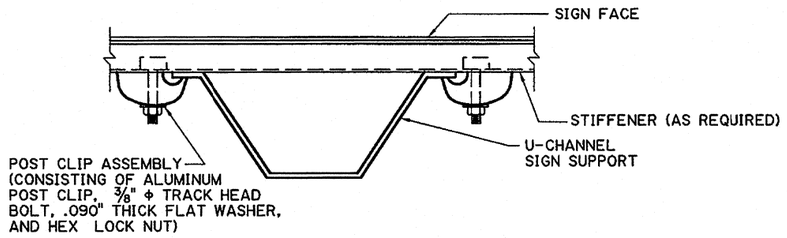
ELEVATION

(TYPICAL AT EACH STIFFENER.)

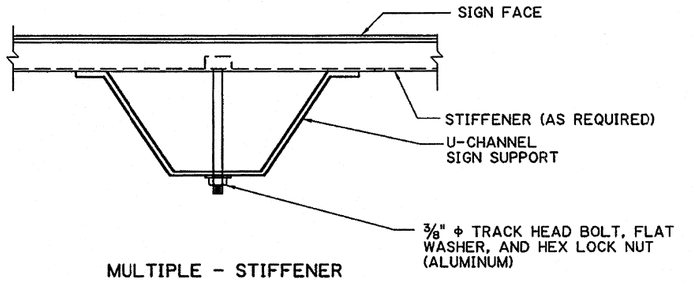


ELEVATION

(TYPICAL AT EACH STIFFENER.)

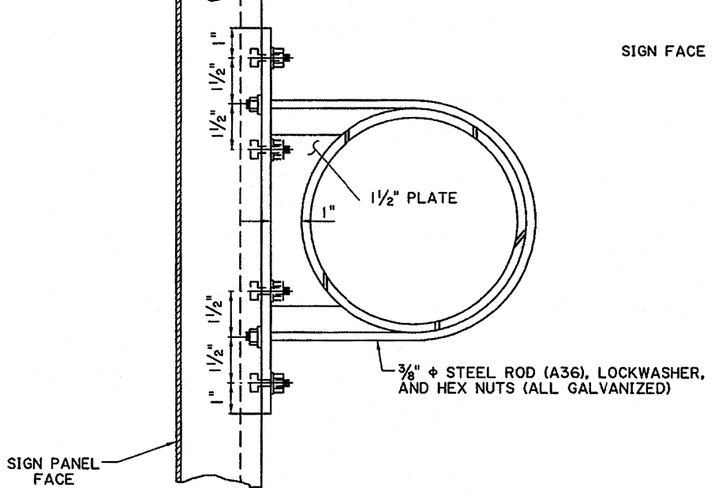


SINGLE AND MULTIPLE STIFFENER



MULTIPLE - STIFFENER

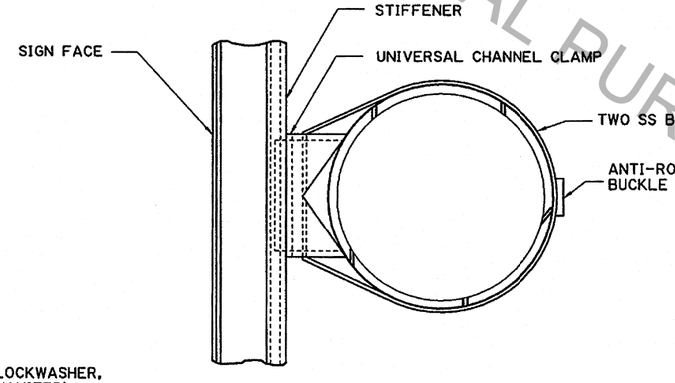
(OPTIONAL)



SECTION A-A

MOUNTING DETAIL (TYPE I)

(FOR NON-TAPERED ROUND METAL POST SIZES ≥ 5" DIAMETER AND SIGNS > 20 SQ. FT).



SECTION B-B

MOUNTING DETAIL (BAND TYPE)

(FOR ALL POSTS ≥ 5" AND WITH SIGN AREAS ≤ 20 SQ. FT. OR LESS THAN 4 FEET WIDE)

MOUNTING DETAIL (U-CHANNEL POST)

NOTES:

NO BOLTS SHALL BE PLACED THROUGH FACE OF SIGN.

ALL TRACK HEAD BOLTS SHALL HAVE HEADS DESIGNED TO FIT AND TRANSMIT LOAD TO BOLT SLOTS IN THE STIFFENER.

MOUNTING CLAMP REQUIRED AT EACH HORIZONTAL STIFFENER.

U-CHANNEL POSTS SHALL BE AT LEAST 3 POUND PER FOOT FLANGED CHANNEL STEEL FABRICATED FROM STEEL CONFORMING TO A.S.T.M. A-499, GRADE 60. HOLES 3/8" IN DIAMETER SHALL BE PUNCHED THROUGH EACH POST ON ONE INCH CENTERS ALONG THE CENTERLINE OF THE POST FOR ITS FULL LENGTH.

U-CHANNEL POSTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH A.S.T.M. A-123.

U-CHANNEL POSTS FOR GROUND MOUNTED SMALL SIGNS SHALL BE DRIVEN TO A DEPTH OF 3 FEET BELOW NATURAL GROUND USING A SUITABLE PROTECTIVE DRIVING CAP AND SHALL BE VERTICAL.

U-CHANNEL POST USE WILL BE LIMITED TO A TOTAL SIGN AREA OF LESS THAN 6.4 SQUARE FEET PER POST AND WITH A CENTROID LESS THAN 8' FROM THE GROUND.

STATE OF LOUISIANA
PAUL B. FOSSIER, JR.
REG. No. 21028
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

Paul B. Fossier, Jr. 8/31/00

SHEET NUMBER		
PARISH	FEDERAL PROJECT	STATE PROJECT
DESIGNED A. ALLEN CHECKED A. ALLEN	DETAILED E. DANIEL CHECKED	DATE JULY 2000 SHEET 3 OF 11

NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

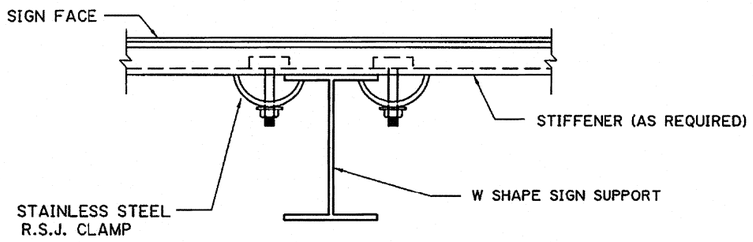
DOTD

BRIDGE AND STRUCTURAL DESIGN

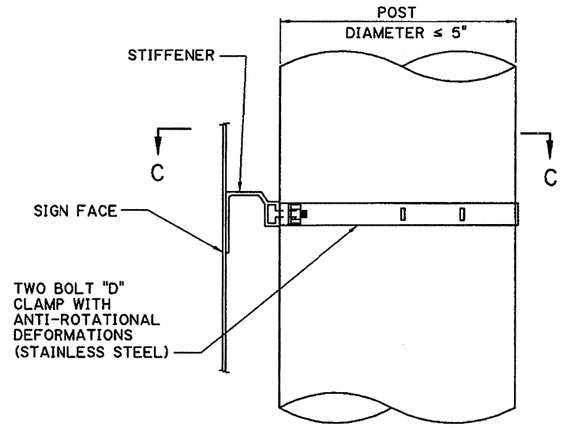
MOUNTING DETAILS

TYPE A & B SIGNS

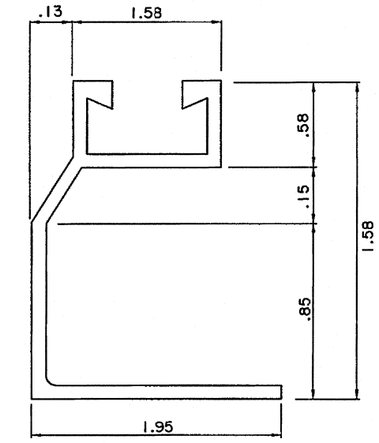
BD.2.7.2.0.3 - ROADSIDE TRAFFIC SIGNS



MOUNTING DETAIL (TYPE II)

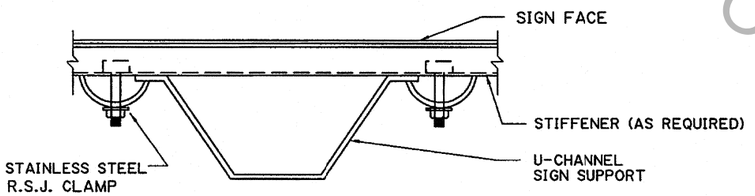


ELEVATION

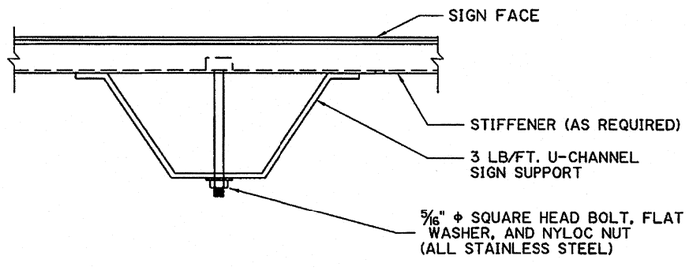


LARGE CORNER ANGLE EXTRUSION

(ALTERNATE TO EXTRUSION STIFFENER)



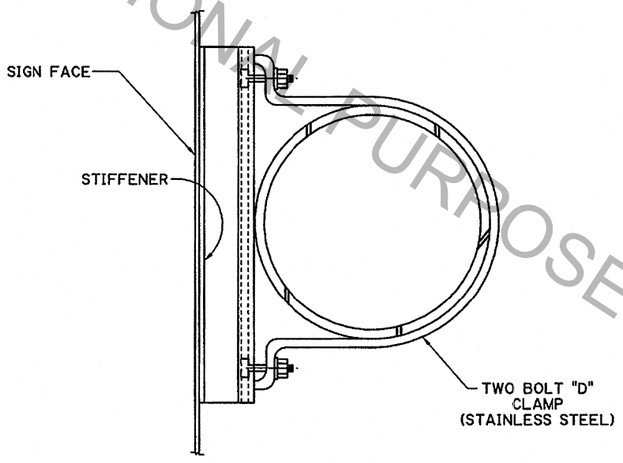
SINGLE AND MULTIPLE STIFFENER



MULTIPLE - STIFFENER

(OPTIONAL)

MOUNTING DETAIL (U-CHANNEL POST)



SECTION C-C

TYPE III & IV MOUNTING DETAIL

(FOR ALL POSTS ≤ 5" DIAMETER
AND SIGNS ≤ 20 SQ. FT.)

NOTES:

ALL BOLTED ATTACHMENTS SHALL INCORPORATE SIGN-FIX STAINLESS STEEL 5/16" ϕ LIP-LOC BOLTS, FLAT WASHERS, AND NYLOC NUTS, UNLESS OTHERWISE NOTED.

SQUARE HEAD BOLTS SHALL HAVE HEADS DESIGNED TO FIT AND TRANSMIT LOAD TO THE BOLT SLOTS IN THE STIFFENER.

FOR BACK-TO-BACK MOUNTING ON ALL ROUND METAL POSTS ≤ 5" DIAMETER AND SIGNS ≤ 20 SQUARE FEET, USE EITHER:

1) BACK-TO-BACK CHANNEL CLAMPS
2) TWO BOLT "D" CLAMPS, STAGGERED, AND FACE IN OPPOSITE DIRECTIONS.

MOUNTING CLAMP REQUIRED AT EACH HORIZONTAL STIFFENER.
THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET.

STATE OF LOUISIANA
PAUL B. FOSSIER, JR.
REG. No. 21028
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

8/31/00

SHEET NUMBER

PARISH	FEDERAL PROJECT	STATE PROJECT
DESIGNED A. ALLEN	CHECKED A. ALLEN	
DETAILED E. DANIEL	CHECKED	
DATE JULY 2000	SHEET 4 OF 11	

NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

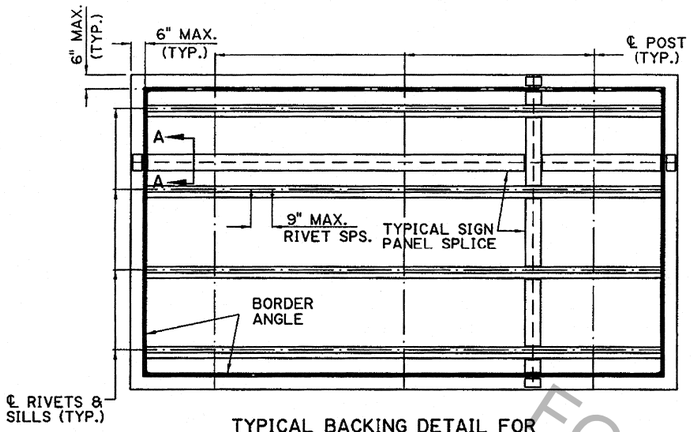
PANEL & MOUNTING DETAIL

TYPE A & B SIGNS

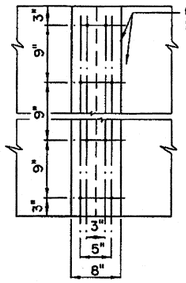
BD.2.7.2.0.4 - ROADSIDE TRAFFIC SIGNS

DOTD

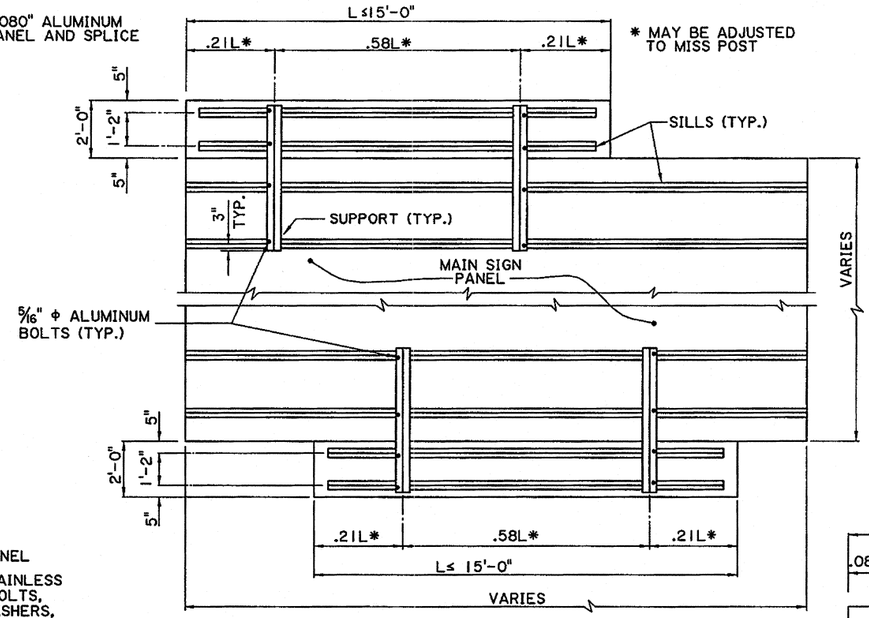
BRIDGE AND STRUCTURAL DESIGN



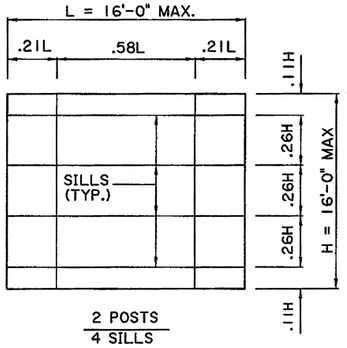
TYPICAL BACKING DETAIL FOR MULTIPLE POST MOUNTS



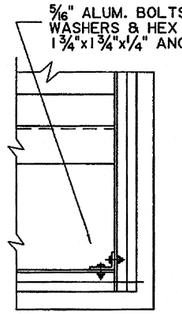
TYPICAL SIGN PANEL SPLICE



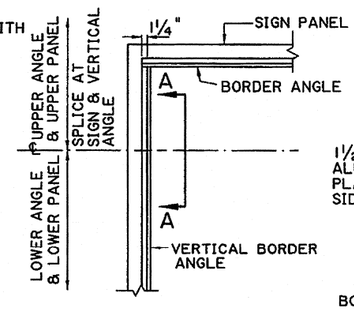
TYPE E SIGN MOUNTING DETAIL



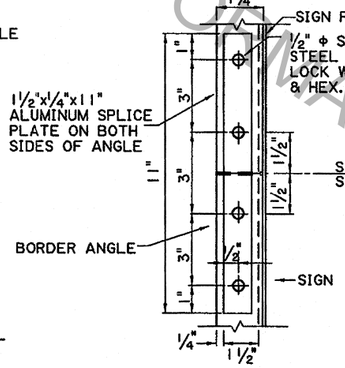
2 POSTS
4 SILLS



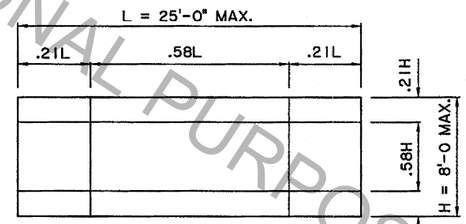
BORDER ANGLE AND SILL CONNECTION



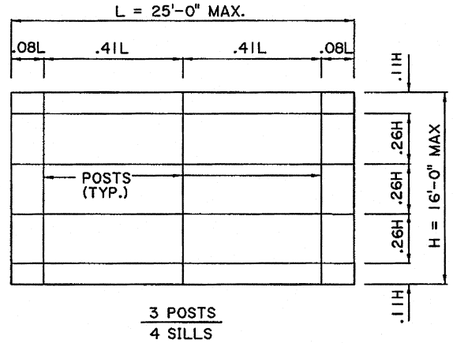
PERMISSABLE BORDER ANGLE SPLICE



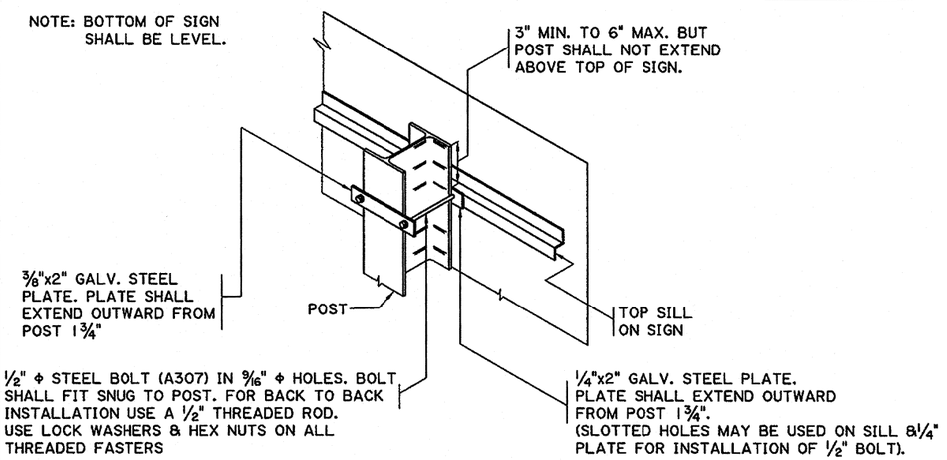
SECTION A-A



2 POSTS
2 SILLS

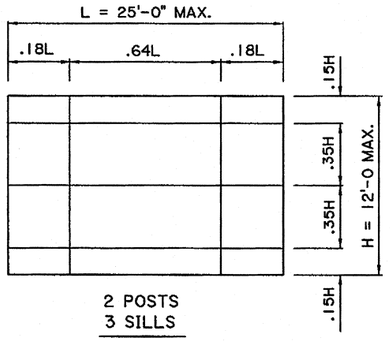


3 POSTS
4 SILLS



ISOMETRIC VIEW SHOWING METHOD OF ATTACHING SIGN PANEL TO W POST. TYPICAL FOR EACH SILL

(TYPE D OR E SIGN)



2 POSTS
3 SILLS

SPACING OF POSTS AND SILLS FOR GROUND MOUNTED SIGN INSTALLATIONS

NOTES:

MINIMUM PANEL WIDTH SHALL BE 1'-6".

RECTANGULAR SIGNS WITH VERTICAL BLANK DIMENSIONS 5'-6" OR GREATER SHALL HAVE BORDER ANGLES.

BORDER ANGLES SHALL BE ≤ 1¾"x1¼"x3/16" ALUMINUM. BORDER ANGLES SHALL BE PLACED AS CLOSE TO THE EDGE OF THE PANEL AS PRACTICAL WITH THE LONGER LEG EXTENDED OUTWARD FROM THE PANEL.

SILLS AND SUPPORTS SHALL BE "Z" 3"x2 11/16"x¼" ALUMINUM.

RIVETS SHALL HAVE A 0'-9" MAXIMUM PITCH AND PLACED 0'-1" FROM THE ENDS OF SILLS AND BORDER ANGLES. SPLICE PLATES SHALL NOT EXTEND UNDER PANEL BACKING MEMBERS. THESE PANEL BACKING MEMBERS SHALL NOT BE CUT WITHIN 0'-9" OF THE PANEL SPLICE.

THIS SHEET TO BE USED WITH GENERAL NOTES AND WIND LOAD MAP SHEET.

STATE OF LOUISIANA
PAUL B. FOSSIER, JR.
REG. No. 21028
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

Paul B. Fossier, Jr. 8/31/00

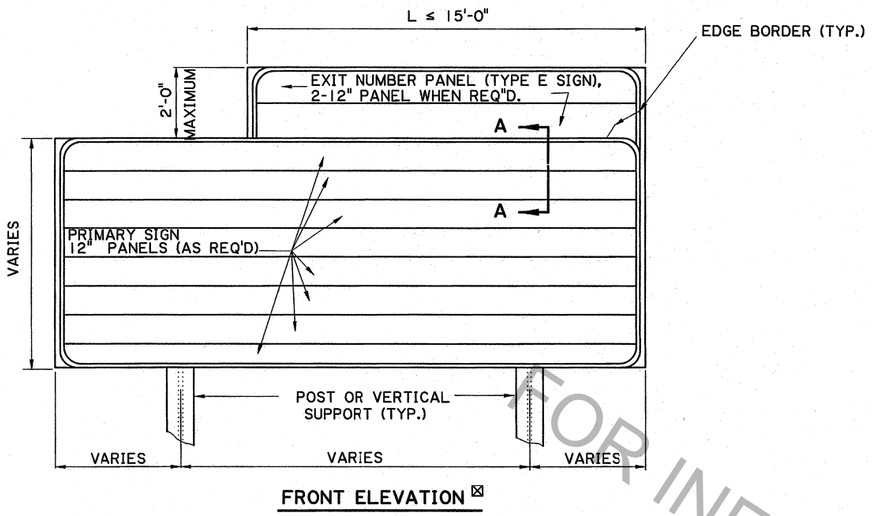
SHEET NUMBER

DESIGNED	J.C. PORTER	PARISH	FEDERAL PROJECT	STATE PROJECT
CHECKED	D. HUVAL			
DETAILED	E. DANIEL			
CHECKED	A. BRIDGES			
DATE	JULY 2000			
SHEET	5 OF 11			

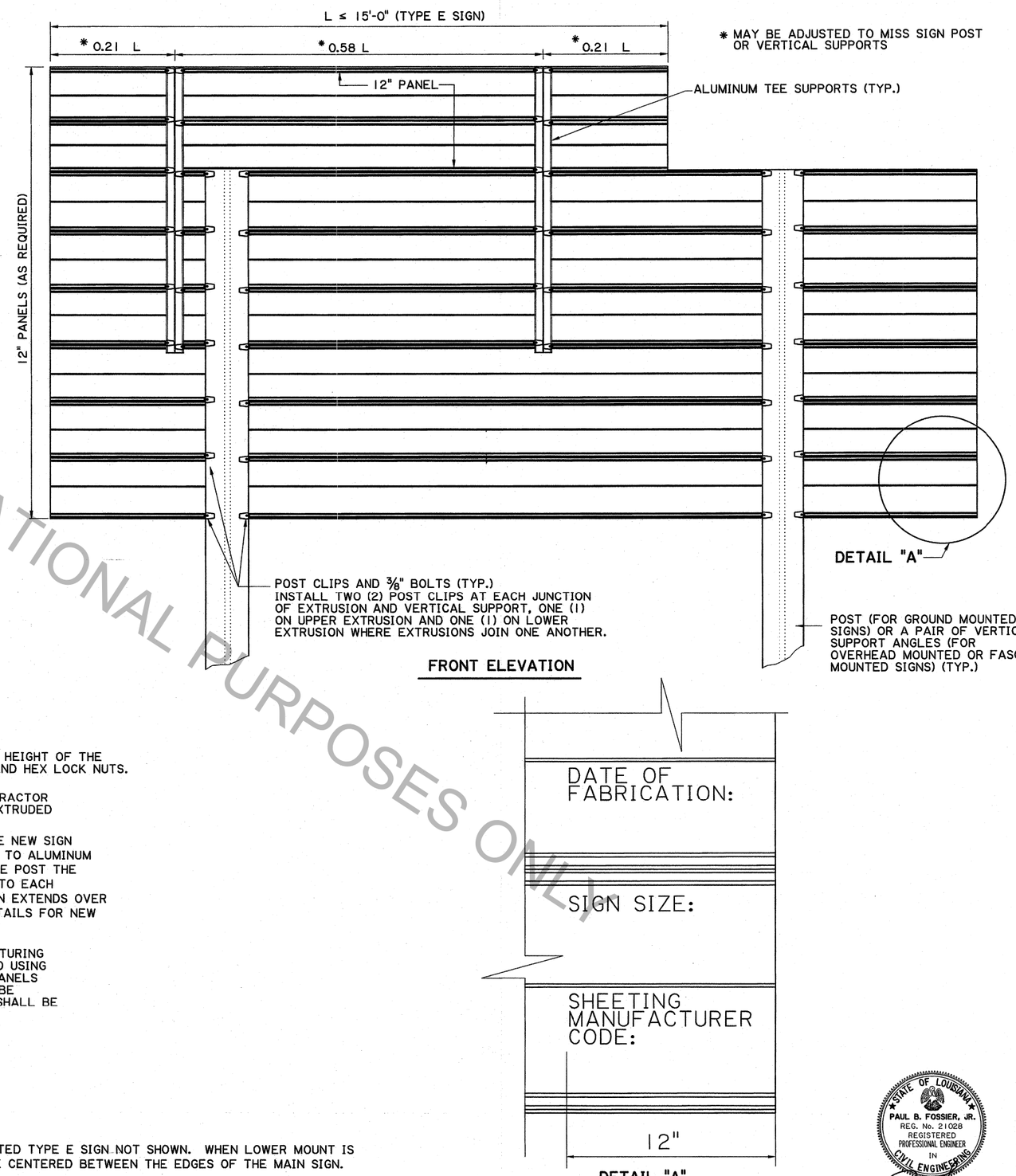
NO.	DATE	REVISION DESCRIPTION	BY

PANEL DETAILS
TYPE D & E SIGNS
BD.2.7.2.0.5 - ROADSIDE TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN



FRONT ELEVATION ⊠



FRONT ELEVATION

DETAIL "A"

2" LETTERING IN LAST 12" OF SIGN, SEE MISCELLANEOUS NOTE ON GENERAL NOTE SHEET OF TRAFFIC SIGN DETAILS.

NOTES:

1. EXTRUDED ALUMINUM PANELS WILL BE ALLOWED TO BE USED AS AN ALTERNATE TO SIGN PANEL DETAILS FOR TYPE "D" AND "E" GROUND MOUNTED AND OVERHEAD SIGNS ONLY. NUMBER AND SPACING OF POST SHALL MATCH THOSE SHOWN FOR PANEL DETAILS.
2. ALL 12" EXTRUDED ALUMINUM PANELS SHALL BE ALUMINUM ALLOY 6063-T6.
   ALL POST CLIPS SHALL BE ALUMINUM ALLOY 356-T6.
   ALL EXTRUDED PANEL BOLTS AND POST CLIP BOLTS SHALL BE ALUMINUM.
   ALL HEX LOCK NUTS SHALL BE ALUMINUM ALLOY 2017-T4.
   ALL POST CLIP BOLTS SHALL BE TORQUED TO A MINIMUM OF 175 IN.-LBS.
   ALL POST CLIP BOLTS, SHALL HAVE HEADS DESIGNED TO FIT THE BOLT SLOTS IN THE PANELS.
3. TYPE "E" SIGNS SHALL BE ATTACHED TO PRIMARY SIGNS WITH ALUMINUM TEE SUPPORTS, [DOUBLE THE HEIGHT OF THE TYPE "E" SIGN PLUS ONE(1) FOOT ONE(1) INCH FOR LENGTH OF TEE], POST CLIPS, POST CLIP BOLTS, AND HEX LOCK NUTS.
4. FOR NEW OVERHEAD SIGNS (INCLUDING FASCIA MOUNTED) INCORPORATING EXISTING MOUNTS, THE CONTRACTOR WILL PLACE VERTICAL SUPPORT ANGLES WITHOUT SPLICES THAT EXTEND THE FULL HEIGHT OF THE EXTRUDED PRIMARY SIGN PANEL.
5. FOR NEW TYPE D SIGNS INCORPORATING EXISTING MOUNTS, THE EXISTING POST MAY BE REUSED IF THE NEW SIGN PANEL DOES NOT EXTEND OVER 2'-0" ABOVE THE EXISTING POST. SUCH NEW SIGNS WILL BE MOUNTED TO ALUMINUM TEE SUPPORTS BEGINNING AT THE TOP OF THE SIGN AND EXTENDING DOWNWARD FROM THE TOP OF THE POST THE DISTANCE THE NEW SIGN IS ABOVE THE EXISTING POST PLUS 1'-0". ONE TEE IS REQUIRED ADJACENT TO EACH EXISTING POST AND ATTACHED WITH POST CLIPS AS SHOWN FOR NEW TYPE E SIGNS. IF THE NEW SIGN EXTENDS OVER 2'-0" ABOVE THE EXISTING POST, THE CONTRACTOR IS TO REPLACE THE EXISTING POST AND MEET DETAILS FOR NEW CONSTRUCTION.
6. REFLECTIVE SHEETING FOR EXTRUDED PANELS: ONLY SPLICES THAT OCCUR AS PART OF THE MANUFACTURING PROCESS SHALL BE PERMITTED. A MAXIMUM OF TWO VERTICAL SPLICES ON ANY ONE SIGN FABRICATED USING EXTRUDED PANELS, WITH ONE SPLICE PER EXTRUDED PANELS SHALL BE ALLOWED. ALL "EXIT ONLY" PANELS THAT ARE DETAILED WITH THE TOP AND/OR BOTTOM EDGE NOT AT AN EXTRUDED PANEL EDGE SHALL BE FABRICATED FROM .080" ALUMINUM AND ATTACHED AS AN OVERLAY. ALL OTHER "EXIT ONLY" PANELS SHALL BE FABRICATED BY APPLYING THE YELLOW REFLECTIVE SHEETING ON THE EXTRUDED PANELS.
   THE REFLECTIVE SHEETING APPLIED TO EXTRUDED PANELS SHALL EXTEND APPROXIMATELY 1/4" OVER EACH SIDE AND SHALL BE ADHERED TO THE SIDE OF THE PANEL.
7. THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET.

⊠ POSSIBLE LOWER MOUNTED TYPE E SIGN NOT SHOWN. WHEN LOWER MOUNT IS REQUIRED, IT SHALL BE CENTERED BETWEEN THE EDGES OF THE MAIN SIGN.

STATE OF LOUISIANA
PAUL B. FOSSIER, JR.
REG. No. 21028
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
8/31/00

SHEET NUMBER

PARISH	FEDERAL PROJECT	STATE PROJECT
DESIGNED P. FOSSIER CHECKED P. FOSSIER	DETAILED G. GRASS CHECKED	DATE JULY 2000 SHEET 6 OF 11

NO.	DATE	REVISION DESCRIPTION	BY

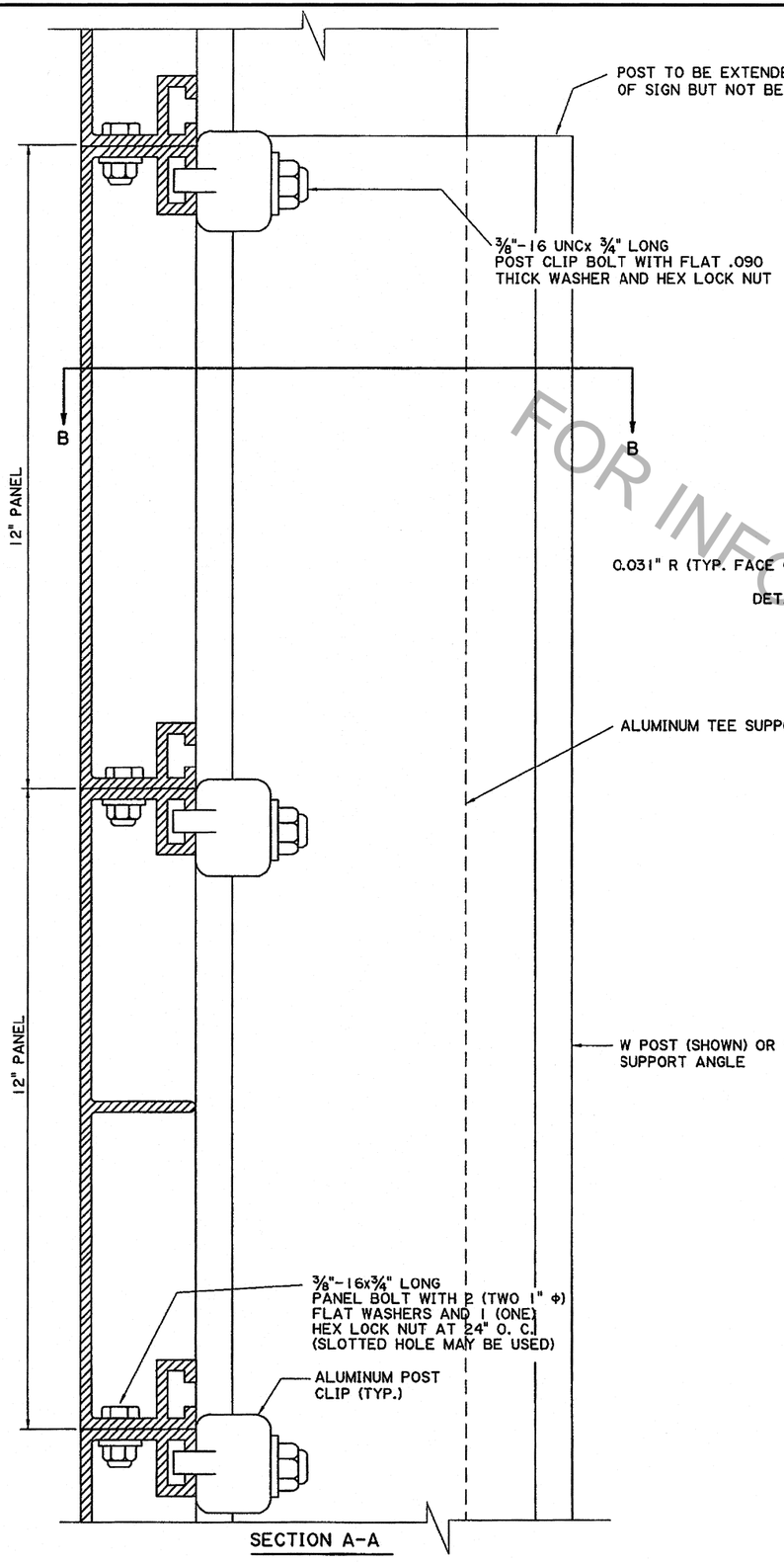
STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT DOTD

EXTRUDED ALUMINUM SIGNS

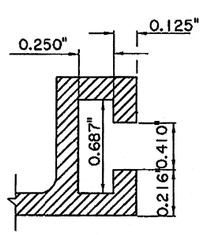
TYPE D & E SIGNS

BD.2.7.2.0.6 - ROADSIDE TRAFFIC SIGNS

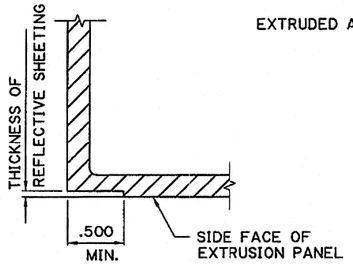
BRIDGE AND STRUCTURAL DESIGN



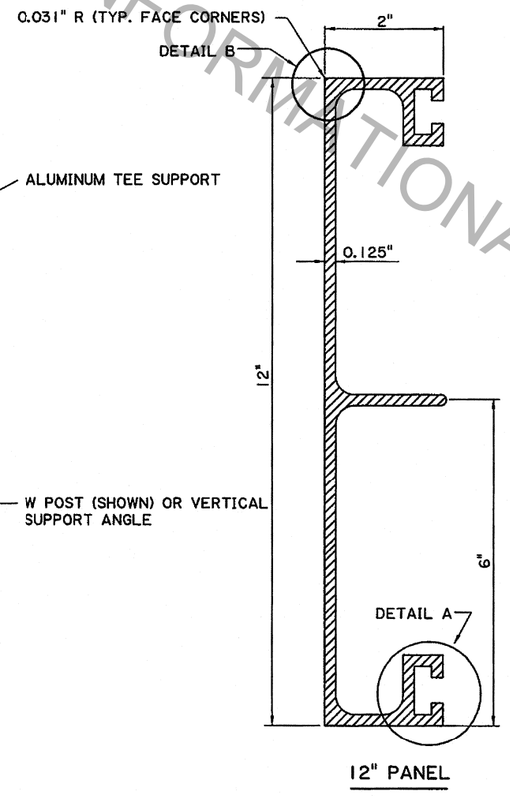
SECTION A-A



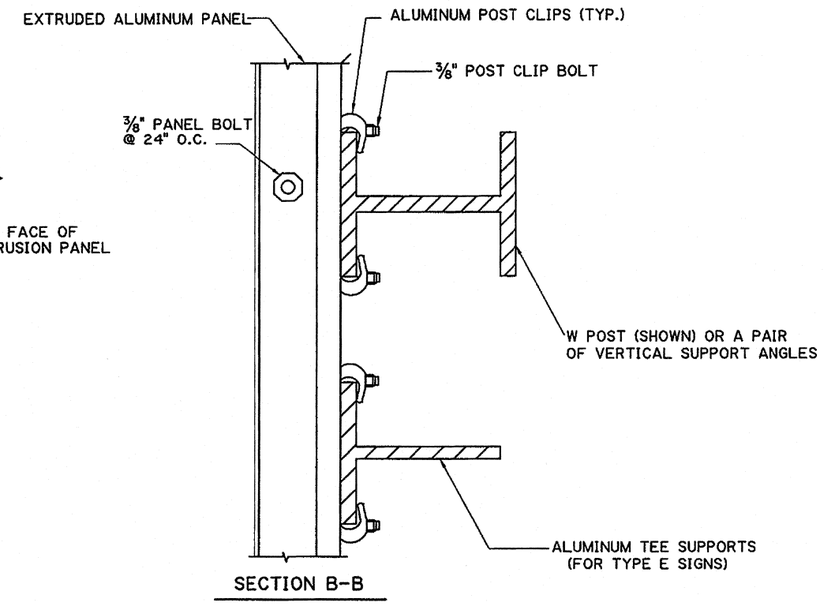
DETAIL "A"



DETAIL "B"

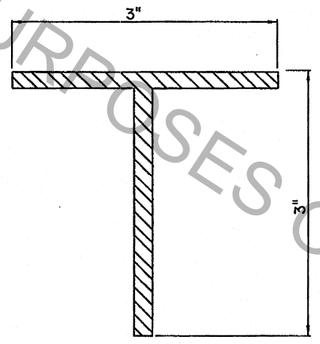


12" PANEL

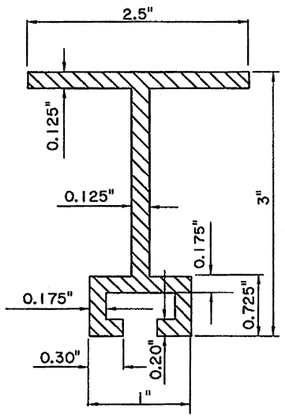


SECTION B-B

MINIMUM WALL THICKNESS IS 0.080" UNLESS OTHERWISE SPECIFIED



3"x3"x3/8"



3"x2.5"

ALUMINUM TEE SUPPORTS
(FOR TYPE E SIGNS)

STATE OF LOUISIANA
PAUL B. FOSSIER, JR.
REG. No. 21028
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
8/31/00

DESIGNED P. FOSSIER	CHECKED P. FOSSIER	PARISH	
DETAILED G. GRASS	CHECKED	FEDERAL PROJECT	
DATE JULY 2000	SHEET 7 OF 11	STATE PROJECT	

SHEET NUMBER

NO.	DATE	REVISION DESCRIPTION	BY

EXTRUDED ALUMINUM PANEL
TYPE D & E SIGNS
BD.2.7.2.0.7 - ROADSIDE TRAFFIC SIGNS

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT DOTD

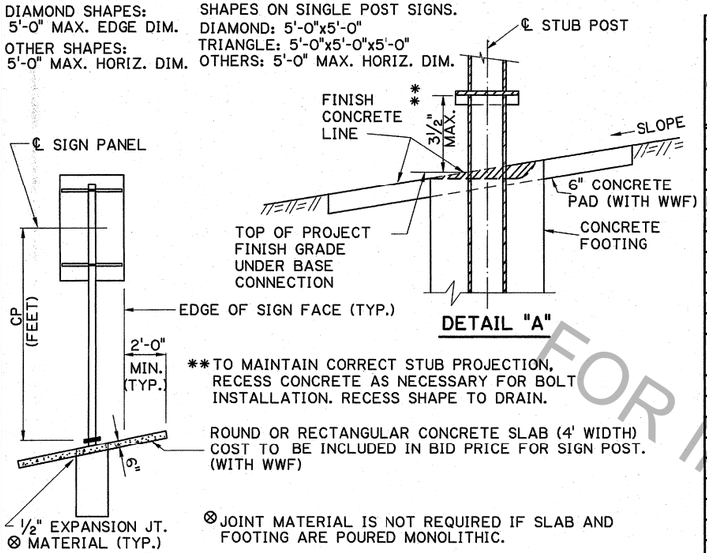
BRIDGE AND STRUCTURAL DESIGN

TYPE A SIGN

RECTANGULAR SHAPES:
4'-0" MAX. HORIZ. DIM.
DIAMOND SHAPES:
5'-0" MAX. EDGE DIM.
OTHER SHAPES:
5'-0" MAX. HORIZ. DIM.

TYPE B SIGN

CLUSTER ASSEMBLY
MAX. DIM. FOR DIFFERENT SIGN BLANK SHAPES ON SINGLE POST SIGNS.
DIAMOND: 5'-0"x5'-0"
TRIANGLE: 5'-0"x5'-0"x5'-0"
OTHERS: 5'-0" MAX. HORIZ. DIM.



DETAIL "A"

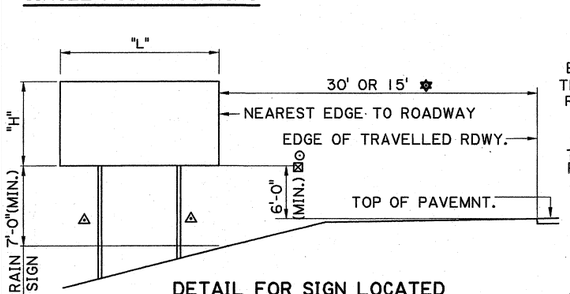
** TO MAINTAIN CORRECT STUB PROJECTION, RECESS CONCRETE AS NECESSARY FOR BOLT INSTALLATION. RECESS SHAPE TO DRAIN.

ROUND OR RECTANGULAR CONCRETE SLAB (4' WIDTH) COST TO BE INCLUDED IN BID PRICE FOR SIGN POST. (WITH WWF)

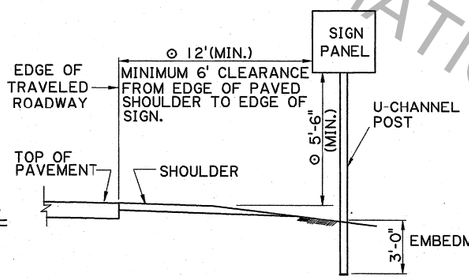
⊗ JOINT MATERIAL IS NOT REQUIRED IF SLAB AND FOOTING ARE POURED MONOLITHIC.

REAR ELEVATION OF SINGLE POST MOUNTING

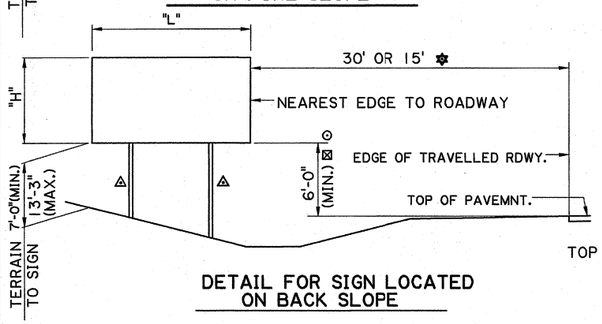
SINGLE POST MOUNTS																	
	TOTAL SQ. FT. SIGN AREA																
	ALUMINUM ALTERNATE																
CP	ZONE I							ZONE II									
	5	10	15	20	25	30	35	5	10	15	20	25	30	35
7	5	5	6	6	7	7	7	5	6	6	7	7	7	7
8		5		6						6				
9		6		6						6				
10				7						7				
11														
12			6						5					7
13			7						6	6				8
14										7				7
15										7				8
16	5	6	7	7	7	7	7	6	7	7	7	7	8	8
	STEEL ALTERNATE													
	ZONE I							ZONE II						
7	1	1	1	2	2	2	3	1	1	2	2	3	3	3
8			2			2			1					
9						3			2					
10					2						2			
11			1		3						3			
12		2							1					
13	2			2			3		2					3
14				3			4			2				4
15				3			4			3				4
16	2	2	2	3	3	3	3	2	2	3	3	3	3	4



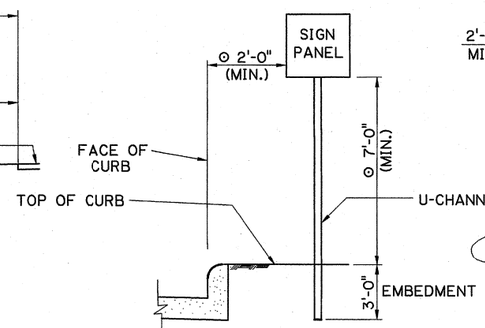
DETAIL FOR SIGN LOCATED ON FORE SLOPE



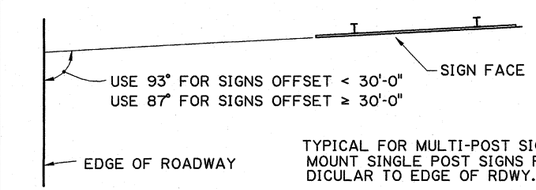
ROADSIDE SIGN U-CHANNEL POST
RURAL



DETAIL FOR SIGN LOCATED ON BACK SLOPE



ROADSIDE SIGN U-CHANNEL POST
URBAN



TYPICAL FOR MULTI-POST SIGNS. MOUNT SINGLE POST SIGNS PERPENDICULAR TO EDGE OF RDWY.

LOCATION OF GROUND MOUNTED SIGN STRUCTURES

NOTES:

W POST SECTIONS AND TABLE:
COLUMNS HEADED BY THE NUMBERS 42, 34, 27 AND 20 REPRESENT THE DESIGN WIND PRESSURE IN POUNDS PER SQUARE FOOT.
SEE ACCOMPANYING LOUISIANA WIND MAP TO DETERMINE THE DESIGN WIND PRESURE.
L - LENGTH OF SIGN PANEL DESIGNED.
H - HEIGHT OF SIGN PANEL DESIGNED.
ALL DIMENSIONS ARE IN INCREMENTS OF EVEN FEET.

THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET.

CONCRETE SLAB TO BE REINFORCED WITH A.S.T.M. A-185 WWF 4x4-W4.0 x W4.0 AND SHALL RECEIVE A CLASS 6 SIDEWALK FINISH IN ACCORDANCE WITH LA. STD. SPECS. 805.08.

✡ 30' FREEWAYS AND EXPRESSWAYS. 15' NORMAL FOR CONVENTIONAL, FRONTAGE ROADS & INTERSTATE RAMPS. THE MINIMUM CLEARANCE OUTSIDE THE USABLE ROADWAY SHOULDER, RIGHT OR LEFT SIDE OF THE ROADWAY SHALL BE 2'-0". FOR THE REQUIRED OFFSET AND MOUNTING HEIGHTS SEE SIGN SUMMARY SHEETS.

△ FOR DOUBLE POST SIGN MOUNTINGS WITH A MAX. SIGN AREA OF 20 SQ. FT. AND CP=12 FT., S3x5.7 STEEL POST SECTION SHOULD BE USED.

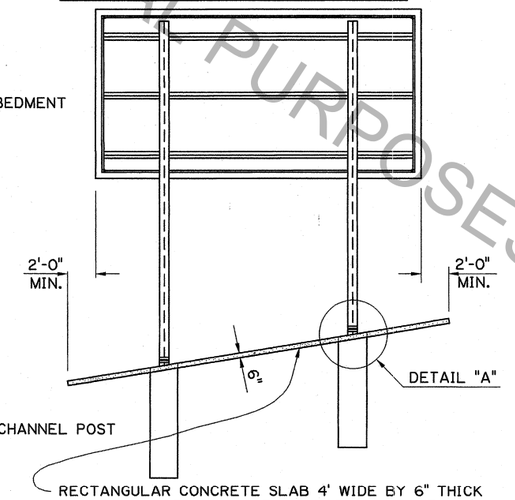
⊠ 6' MINIMUM FOR ROUTE MARKERS, WARNING AND REGULATORY SIGNS.

⊠ 8' MINIMUM FOR GUIDE SIGNS WHEN SECONDARY SIGN MOUNTED BELOW.

⊙ UNLESS OTHERWISE NOTED ON THE SIGN SUMMARY SHEET.

⊕ TO BE USED ON NON-BREAKWAY SUPPORTS ONLY.

SINGLE POST PIPE & TUBE SECTIONS AND INDEX NUMBERS			
NO.	ALUMINUM	NO.	STEEL
5	3"øx3/16" WALL	1	2½" ø SCHED. 40
6	4"øx3/16" WALL	2	3½" ø SCHED. 40
7	6"øx1/4" WALL	3	5" ø SCHED. 40 ⊕
8	8"øx1/4" WALL	4	6" ø SCHED. 40 ⊕



RECTANGULAR CONCRETE SLAB 4' WIDE BY 6" THICK TO BE INCLUDED IN PRICE BID FOR SIGN POST. (WITH WWF)

REAR ELEVATION OF MULTI - POST MOUNTING

W SECTIONS & INDEX NUMBERS			
NO.	STEEL	NO.	ALUMINIUM
1	W6x12	7	6WF 4.16
2	W8x18	8	8WF 5.90
3	W8x24	9	8WF 8.32
4	W10x33	10	10WF 11.41
5	W12x40	11	12WF 13.84
6	W12x45	12	12WF 18.34

W POST SECTIONS FOR DOUBLE & TRIPLE POST MOUNTINGS

PL	ALUM.				STEEL				PL	ALUM.				STEEL				PL	ALUM.				STEEL				PL	ALUM.				STEEL			
L	H	42	34	27	20	42	34	27	20	L	H	42	34	27	20	42	34	27	20	L	H	42	34	27	20	42	34	27	20	L	H	42	34	27	20	42	34	27	20
5	1	7	7	7	7	1	1	1	1	12	5	9	8	8	8	2	2	2	1	16	15	12	11	11	10	5	5	4	4	21	8	11	10	10	9	4	4	3	3
5	2	7	7	7	7	1	1	1	1	12	6	9	9	8	8	2	2	2	2	16	16	12	12	11	10	5	5	4	4	21	9	11	11	10	10	4	4	4	3
5	3	7	7	7	7	1	1	1	1	12	7	9	9	9	8	3	2	2	2	17	4	9	9	8	8	2	2	2	2	21	10	11	11	10	10	5	4	4	3
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5	5	7	7	7	7	1	1	1	1	12	9	10	9	9	9	3	3	2	2	17	6	10	9	9	9	3	3	2	2	21	12	12	12	11	10	5	5	4	4
5	6	8	7	7	7	1	1	1	1	12	10	10	10	9	9	3	3	2	2	17	7	10	10	9	9	3	3	3	2	21	13	11	11	10	10	5	4	4	3
6	1	7	7	7	7	1	1	1	1	12	11	10	10	9	9	4	3	3	2	17	8	10	10	9	9	4	3	3	2	21	14	12	11	11	10	5	4	4	3
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PAUL B. FOSSIER, JR.
REG. No. 21028
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
8/31/00

SHEET NUMBER

PARISH | FEDERAL PROJECT | STATE PROJECT

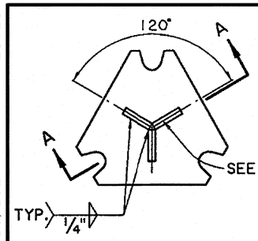
DESIGNED J.C. PORTER
CHECKED A. BRIDGES
DETAILED E.DEARMOND
CHECKED
DATE JULY, 2000
SHEET 8 OF 11
BY K.M.B.

NO. 1 | 12-02-16 | UPDATE FOR 2016 SPECIFICATE
REVISION DESCRIPTION | DATE

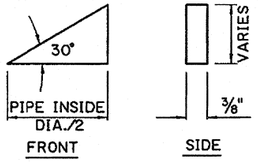
ROADSIDE MOUNTED SUPPORT DETAILS
TYPE A, B AND D SIGNS
BD.2.7.2.0.8 - ROADSIDE TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN

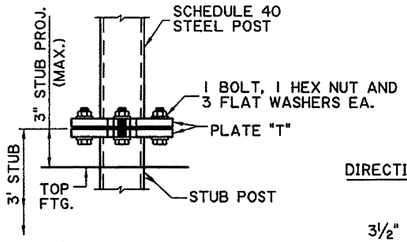
5/26/2017 13:11
C:\Users\D25C0\Desktop\BD.2.7.2.0.08 - Roadside Traffic Signs 08.dgn



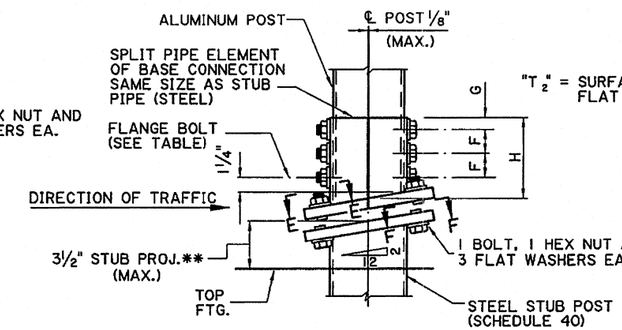
TOP VIEW STUB POST



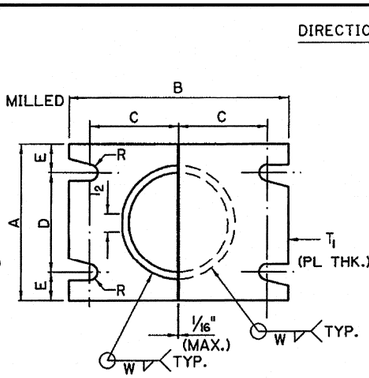
DETAIL "B"
3 REQ'D.



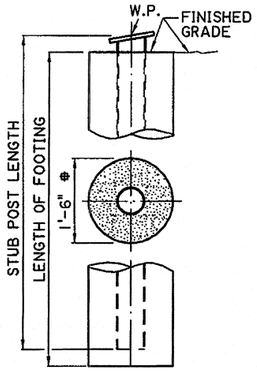
ELEVATION OF BASE CONNECTION

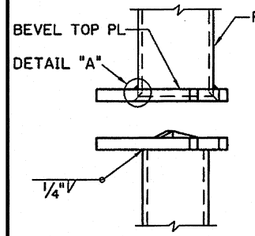


ELEVATION OF BEVELED BASE CONNECTION

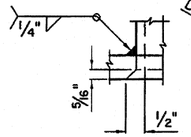


SECTION E-E SECTION F-F





SECTION A-A



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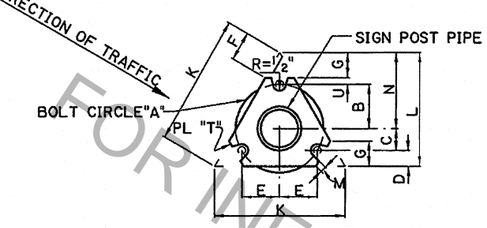


PLAN OF BASE

UNI-DIRECTIONAL BASE
ALUMINUM ALTERNATE

⊕ FOR 2½"Φ (STEEL) AND 3"Φ (ALUM.) POST SECTIONS, FOOTING DIAMETER SHALL BE 1'-0"

FOOTING DETAIL
PIPE SECTIONS

STEEL MULTI-DIRECTIONAL BASE CONNECTION DATA

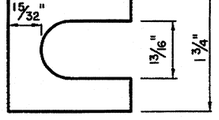
NOMINAL PIPE SIZE	BOLT SIZE & TORQUE ⊙	WELD SIZE	T	Y	A	B	C	D	E	F	G	K	L	M	N	U
2½" OR 3½" DIA.	⅝" T=226	⅜"	⅝"	7"	7"	3½"	1¾"	1¼"	3"	2⅝"	2"	10⅜"	9"	½"	6"	½"

FOR STUB POST LENGTH & FOOTING DIMENSION SEE TABLE BELOW AND FOOTING DETAIL. ⊙TORQUE IN INCH-LBS., BOLTS ARE HIGH STRENGTH

NOTE:
MULTI-DIRECTIONAL BREAK-AWAY FEATURE IS TO BE USED ONLY AT LOCATIONS WHERE SIGN IS LIKELY TO BE STRUCK FROM MORE THAN ONE DIRECTION.

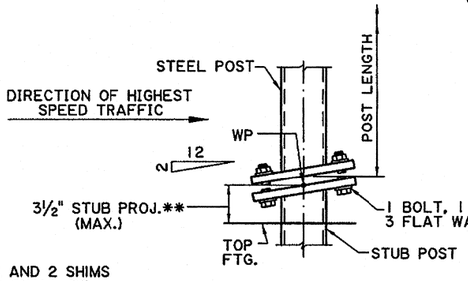
MULTI-DIRECTIONAL BASE
SINGLE STEEL POST ONLY

**TO MAINTAIN CORRECT STUB PROJECTION, RECESS CONCRETE AS NECESSARY FOR BOLT INSTALLATION (RECESS SHALL BE SHAPED TO DRAIN)

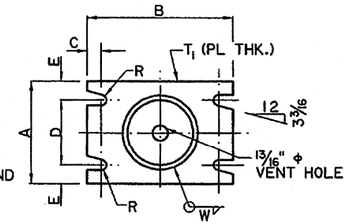


SHIM DETAIL
BOLTS UP TO ¾" Φ BOLTS

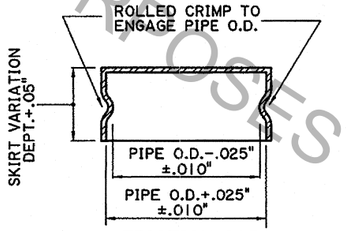
FURNISH 2 SHIMS 0.012"± THICK AND 2 SHIMS 0.032"± THICK PER POST. SHIMS SHALL BE BRASS CONFORMING TO A.S.T.M. SPEC B-36 AND BE USED AS DIRECTED BY THE PROJECT ENGINEER.



ELEVATION OF BEVELED BASE CONNECTION



PLAN
BASE PLATE AND PIPE POST

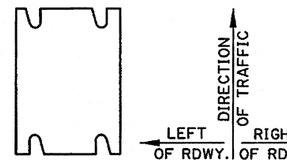


FRICTION CAP DETAIL
(USED AT TOP OF ALL POSTS)

UNI-DIRECTIONAL BASE
STEEL ALTERNATE

TYPE POST	DIMENSION (INCH) / SECTION	BOLT SIZE & TORQUE LIMITS *	A	B	C	D	E	F	G	H	T_1	T_2	W	R	FLANGE BOLTS	FOOTING DATA: STUB LTH.	LTH. OF FTG.	STEEL STUB POST	CU. YD. CONC.
STEEL SCH. 40	2½"Φ	½"Φ T=95-142	4½	6½	¾	2½	1	—	—	—	¾	—	5/16	9/32	—	36	36	2½"Φ	0.09
	3½"Φ	½"Φ T=95-142	5½	7¾	¾	3½	1	—	—	—	1	—	⅜	9/32	—	36	36	3½"Φ	0.20
	5"Φ	⅝"Φ T=226-345	6½	9¾	¾	4	1¼	—	—	—	1¼	—	7/16	11/32	—	48	48	5"Φ	0.26
	6"Φ	¾"Φ T=369-554	8	11	⅞	5½	1¼	—	—	—	1¼	—	⅜	13/32	—	60	60	6"Φ	0.33
ALUM. SCH. 40 (TUBE)	3"Φ x 3/16"	½"Φ T=95-142	5	8	3	3	1	1½	1	5⅝	¾	1	¼	9/32	½"Φ	36	36	3"Φ	0.09
	4"Φ x 3/16"	½"Φ T=95-142	6	9½	4	4	1	1½	1	5⅝	¾	1	⅜	9/32	½"Φ	36	36	4" Φ	0.20
	6"Φ x ¼"	⅝"Φ T=226-345	8	11	4½	5½	1¼	2	1	6¾	¾	1¼	7/16	11/32	⅝"Φ	48	48	6"Φ	0.26

* ALL BOLTS SHALL HAVE A MINIMUM OF 3 THREADS BEYOND THE NUT. BOLT TORQUE LIMITS IN INCH POUNDS. (THE HIGH STRENGTH BOLTS AT THE BASE CONNECTION SHOULD BE TORQUED WITHIN THE LIMITS SPECIFIED, HOWEVER, THE LOWER LIMIT IS DESIRABLE). FOR NON-BREAKAWAY USE TORQUE LIMITS GIVEN IN THE STANDARD SPECIFICATIONS.



LEFT HAND SLOTS

FOR ONE-WAY TRAFFIC LANES. FOR TWO-WAY TRAFFIC LANES, USE RIGHT HAND SLOTS ONLY.

RIGHT HAND SLOTS

TWO-WAY SLOTS

FOR GORE INSTALLATIONS

HOLES

FOR BRIDGE MOUNTED SIGNS & SIGNS BEHIND GUARDRAIL

ORIENTATION AND USE OF SLOTS AND HOLES

PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:

SPECIAL CAE SHALL BE TAKEN TO SET THE BASE PLUM TO AVOID EXCESSIVE SHIMMING AT THE BREAK-AWAY FEATURE AFTER FINAL INSTALLATION. EXCESSIVE SHIMMING COULD IMPAIR THE BREAK-AWAY FEATURE FOR WHICH THIS INSTALLATION WAS DESIGNED. SHIM PACKS SHOWN ON THIS DRAWING SHOULD BE SUFFICIENT TO ALLOW FOR NORMAL MISALIGNMENT.

1. BASE SHALL BE ALIGNED AND SET PLUM BEFORE OR IMMEDIATELY AFTER POURING CONCRETE FOOTING.
2. H.S. BOLTS IN BASE PLATE SHALL BE TIGHTENED TO THE PRESCRIBED TORQUE. CARE SHALL BE TAKEN TO AVOID OVERTIGHTING.

FRICTION CAPS:

CAPS MAY BE MANUFACTURED FROM EITHER HOT ROLLED OR COLD ROLLED STEEL SHEETS. FOR PIPE SIZES 3½" AND SMALLER THE MINIMUM SHEET METAL THICKNESS SHALL BE 24 GAUGE. THE RIM EDGES SHALL BE REASONABLY STRAIGHT AND SMOOTH. CAPS SHALL BE SIZED AND FORMED IN SUCH A MANNER AS TO PRODUCE A DRIVE-ON FRICTION FIT AND HAVE NO TENDENCY TO ROCK WHEN SEATED ON THE PIPE. THE DEPTH SHALL BE SUFFICIENT TO GIVE POSITIVE PROTECTION AGAINST ENTRANCE OF RAINWATER. THEY SHALL BE FREE OF SHARP CREASES OR INDENTATIONS AND SHOW NO EVIDENCE OF METAL FRACTURE. CAPS SHALL HAVE A ELECTRODEPOSITED COATING OF ZINC IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. SPECIFICATION B633 SC4, TYPE I.

THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET.

STATE OF LOUISIANA
PAUL B. FOSSIER, JR.
REG. No. 21028
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

Paul B. Fossier 8/31/00

SHEET NUMBER

PARISH | FEDERAL PROJECT | STATE PROJECT

DESIGNED J.C. PORTER
CHECKED A. BRIDGES
DETAILED E.DEARMOND
CHECKED
DATE JULY 2010
SHEET 9 OF 11

K.M.B. BY

NO. 1 | 12-02-16 | UPDATE FOR 2016 SPECIFICATIONS
NO. DATE REVISION DESCRIPTION

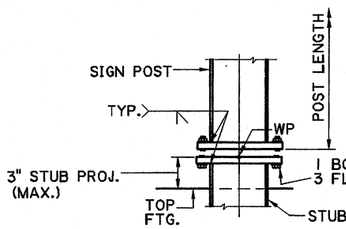
STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DOTD

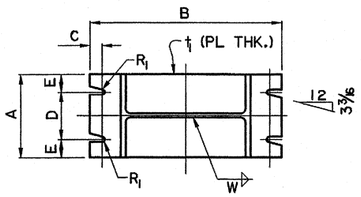
ROADSIDE MOUNTED SUPPORT DETAIL
TYPE A & B SIGNS
BD.2.7.2.0.9 - ROADSIDE TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN

5/26/2017 13:13
C:\Users\D25C0\Desktop\BD.2.7.2.0.09 - Roadside Traffic Signs 09.dgn



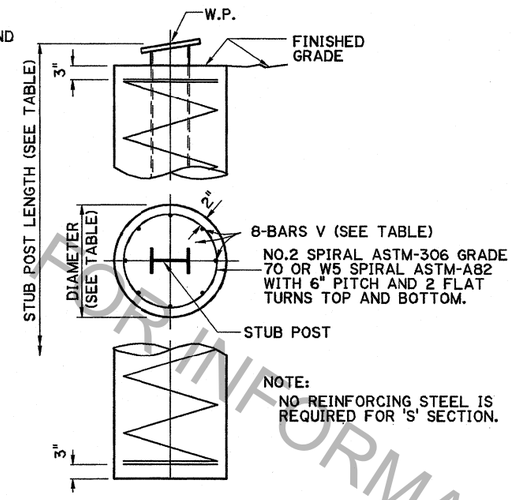
ELEVATION OF HORIZONTAL CONNECTION W SECTION



PLAN
BASE PLATE AND POST

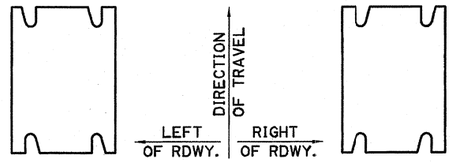
ADD ½" FOR BEVELED BASE PLATES

DIRECTION OF HIGHEST SPEED TRAFFIC



NOTE:
NO REINFORCING STEEL IS REQUIRED FOR 'S' SECTION.

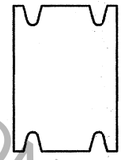
CONCRETE FOOTING DETAIL
W SECTION



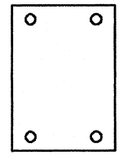
LEFT HAND SLOTS

RIGHT HAND SLOTS

FOR ONE-WAY TRAFFIC LANES. FOR TWO-WAY TRAFFIC LANES, USE RIGHT HAND SLOTS ONLY.

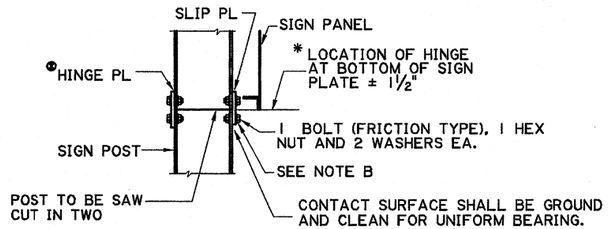


TWO-WAY SLOTS
FOR GORE INSTALLATIONS



HOLES

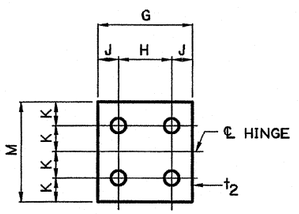
FOR BRIDGE MOUNTED SIGNS & SIGNS BEHIND GUARDRAIL



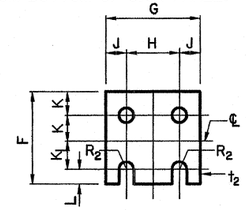
SLIP PLATE CONNECTION DETAIL

● WHEN SIGN IS LOCATED ON SIDE OF ROADWAY WITH TWO WAY TRAFFIC, A SLIP PLATE WILL BE USED ON SIDES OF THE POST IN LIEU OF THE HINGE PLATE SHOWN

* FOR EXTRUSION SIGN PANEL ALTERNATE, LOCATION OF ℄ HINGE SHALL BE 3½" FROM BOTTOM OF SIGN PANEL.



HINGE PLATE DETAIL



SLIP PLATE DETAIL

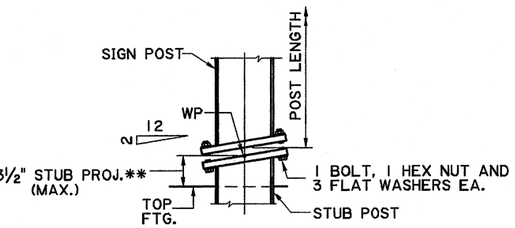
BOLT HOLE DIAMETERS TO BE EQUAL TO BOLT DIA. +1/16" IN POST FLANGE AND SLIP PLATE.

SLIP PLATE CONNECTION NOTES:

1. POST SHALL BE SAW CUT OR TORCH CUT PRIOR TO GALVANIZING.
2. SLIP PLATE SHALL BE INSTALLED WITH H.S. BOLTS AT MINIMUM BOLT TENSION.
3. TIGHTING SHALL BE OBTAINED BY
   (a) TURN OF NUT METHOD; OR
   (b) DIRECT TENSION INDICATOR METHOD USING LOAD INDICATOR WASHER. SEE NOTE A.
4. TIGHTING SHALL BE TO SUCH A DEGREE AS TO OBTAIN MINIMUM BOLT TENSION AS SPECIFIED IN STANDARD SPECIFICATIONS SUBSECTION 807.05.1.1, CURRENT AT TIME OF FABRICATION.
5. TIGHTEN BOLTS IN A SYSTEMATIC ORDER TO THE PRESCRIBED MINIMUM BOLT TENSION.

NOTE A:
WHEN HIGH STRENGTH BOLT IS TIGHTENED BY USE OF A DIRECT TENSION INDICATOR, THE INSTALLATION AND INSPECTION SHALL BE IN ACCORDANCE WITH SPECIFICATION FOR STRUCTURAL JOINTS, SECTION 5 AND 6 FOR ASTM A-325 BOLTS APPROVED BY THE RESEARCH COUNCIL ON RIVETED AND BOLTED STRUCTURAL JOINTS. FOR DETAILED INSTALLATION AND INSPECTION PROCEDURES FOLLOWED MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL BE REQUIRED TO SUBMIT BROCHURES TO THE BRIDGE DESIGN ENGINEER FOR APPROVAL.

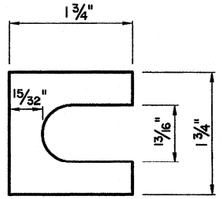
NOTE B:
WHEN HIGH STRENGTH BOLT IS TIGHNENED BY USE OF A DIRECT TENSION INDICATOR METHOD, THE WASHER UNDER THE BOLT HEAD SHALL BE A LOAD INDICATOR WASHER.



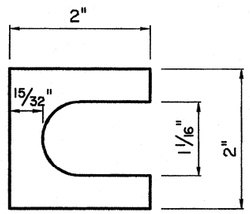
ELEVATION OF BEVELED CONNECTION W SECTION

TO BE USED ON ALL MULTI-POST SIGNS WITH DISTANCE BETWEEN POSTS 7'-0" ℄ TO ℄ OR LESS.

**TO MAINTAIN CORRECT STUB PROJECTION RECESS CONCRETE AS NECESSARY FOR BOLT INSTALLATION. RECESS SHAPE TO DRAIN.



* SHIM DETAIL
BOLTS UP TO ¾" ø BOLTS



* SHIM DETAIL
BOLTS UP TO 1" ø BOLTS

* FURNISH 2 SHIMS 0.012"± THICK AND 2 SHIMS 0.032"± THICK PER POST. SHIMS SHALL BE BRASS CONFORMING TO A.S.T.M. SPEC. B-36 AND BE USED AS DIRECTED BY THE PROJECT ENGINEER.

ORIENTATION AND USE OF SLOTS AND HOLES

PROCEDURE FOR ASSEMBLY OF BASE CONNECTION.

SPECIAL CARE SHALL BE TAKEN TO SET THE BASE PLUMB TO AVOID EXCESSIVE SHIMMING AT THE BREAK-AWAY FEATURE AFTER FINAL INSTALLATION. EXCESSIVE SHIMMING COULD IMPAIR THE BREAK-AWAY FEATURE FOR WHICH THIS INSTALLATION WAS DESIGNED. SHIM PACKS SHOWN ON THIS DRAWING SHOULD BE SUFFICIENT TO ALLOW FOR NORMAL MISALIGNMENT.

1. BASE SHALL BE ALIGNED AND SET PLUMB BEFORE OR IMMEDIATELY AFTER POURING CONCRETE FOOTING.
2. H.S. BOLTS IN BASE PLATE SHALL BE TIGHTENED TO THE PRESCRIBED TORQUE. CARE SHALL BE TAKEN TO AVOID OVERTIGHTING.

DIMENSION (INCH) / SECTION	BASE CONNECTION DATA										SLIP PLATE & HINGE PLATE DATA											FOOTING DATA				
	BOLT SIZE & * TORQUE LIMITS	A	B	C	D	E	t_1	R	W	W (ALT.) SEE NOTE	F	G	H	J	K	K_1	L	M	t_2	R_2	H.S. BOLT DIA.	STUB LTH.	FTG. DIA.	LTH. OF FTG.	BARS V SIZE	CU. YD. CONC.
S3x5.7	½"ø T= 95-142	4	7	¾	2	1	1	9/32	3/8	5/16	3 3/8	2 3/8	1½	7/16	1	1¼	⅝	4¼	⅜	9/32	½	36	18	36		0.20
W6x12	5/8"ø T= 226-345	4	10	¾	2	1	1½	11/32	5/16	5/16	3 5/8	4	2¼	⅞	1	1¼	⅝	4¼	⅜	9/32	½	24	24	48	#5	0.46
W8x18		5¼	12	¾	3	1⅛	1½	11/32	5/16	5/16	4⅛	5¼	2¾	1¼	1⅛	1⅜	¾	4¾	½	11/32	⅝	24	24	60	#6	0.58
W8x24	¾"ø T= 369-554	6½	12½	⅞	3¼	1⅝	1¾	13/32	⅜	7/16	4⅛	6½	3½	1½	1⅛	1⅜	¾	4¾	½	11/32	⅝	30	24	72	#7	0.70
W10x33	1"ø T= 460-735	8	15½	1¼	4½	1¾	2	17/32	⅜	7/16	4⅝	8	5½	1¼	1¼	1½	⅞	5¼	⅝	13/32	¾	30	24	96	#9	0.93
W12x40		8	17½	1¼	4½	1¾	2	17/32	⅜	7/16	4⅝	8	5½	1¼	1¼	1½	⅞	5¼	⅝	13/32	¾	36	24	120	#10	1.16
W12x45		10	17½	1¼	6	2	2	17/32	⅜	7/16	5½	10	5½	2¼	1½	1¾	1	6¼	¾	1 3/32	⅞	36	36	96	#9	2.09

BASE PLATE TO POST WELD ALTERNATE (AS AN ALTERNATE TO WELDS SHOWN IN DETAILS, THE POST MEMBERS TABULATED MAY BE WELDED ALL AROUND WITH A FILLET WELD W(ALT.).)

* ALL BOLTS SHALL HAVE A MINIMUM OF 3 THREADS BEYOND THE NUT. BOLT TORQUE LIMITS ARE IN INCH POUNDS. (THE HIGH STRENGTH BOLTS AT THE BASE CONNECTION SHOULD BE TORQUED WITHIN THE LIMITS SPECIFIED, HOWEVER, THE LOWER LIMIT IS DESIRABLE). FOR NON-BREAKAWAY USE TORQUE LIMITS GIVEN IN THE STANDARD SPECIFICATIONS.

STATE OF LOUISIANA
PAUL B. FOSSIER, JR.
REG. No. 21028
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
8/31/00

SHEET NUMBER

PARISH	FEDERAL PROJECT	STATE PROJECT
DESIGNED A. BRIDGES CHECKED S. SHAH	DETAILED E.DEARMOND CHECKED	DATE JULY.2000 SHEET 10 OF 11

NO.	DATE	REVISION DESCRIPTION	BY
1	12-02-16	UPDATE FOR 2016 SPECIFICATIONS	K.M.B.

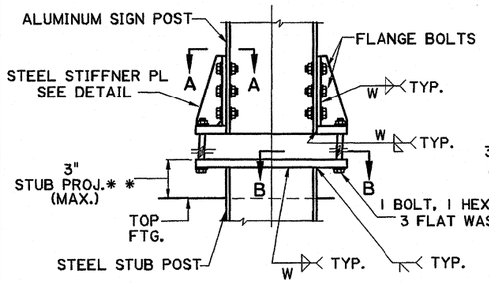
ROADSIDE MOUNTED SUPPORT DETAILS
TYPE D SIGNS
BD.2.7.2.0.10 - ROADSIDE TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN

SECTION \ DIMENSION (INCH)	BASE CONNECTION DATA														SLIP PLATE & HINGE PLATE DATA									FOOTING DATA					
	BOLT SIZE & TORQUE LIMITS	A	B	C	D	E	F	G	H	t_1	t_2	R	W	FLANGE BOLT DIA.	J	K	L	M	N	O	t_3	R_2	H.S. BOLT DIA.	STUB LTH.	LTH. OF FTG.	BARS V SIZE	STEEL STUB POST	CU. YD. CONC.	Δ W (ALT.)
W6x4.16	½"ø T=95	4	3	2⅜	2¼	⅞	2	1⅛	6¼	¾	⅜	9/32	¼	½	4	2¼	⅞	4	1	3⅝	⅜	9/32	½	24	48	#4	W6 x 12	0.46	5/16
W8x5.90		5¼	3	2⅜	3	1⅛	2	1⅛	6¼	¾	⅜	9/32	¼	⅝	5¼	2¾	1¼	4½	1⅛	4⅛	½	11/32	⅝	24	48	#5	W8 x 18	0.46	5/16
W8x8.32	⅝"ø T=226	6½	3½	2¾	4	1¼	2½	1¼	7½	¾	½	11/32	5/16	⅝	6½	3½	1½	4½	1⅛	4⅛	½	11/32	⅝	30	60	#6	W8 x 24	0.58	7/16
W10x11.41		8	3½	2¾	5	1½	3	1½	9	¾	½	11/32	5/16	¾	8	5½	1¼	5	1¼	4⅝	⅝	13/32	¾	30	84	#7	W10 x 33	0.81	7/16
W12x13.84	¾"ø T=369	8	4	3⅛	5	1½	3	1¾	9½	1	⅝	13/32	5/16	⅞	8	5½	1¼	5	1¼	4⅝	⅝	13/32	¾	36	96	#8	W12 x 40	0.93	
W12x18.34		10	4	3⅛	6	2	3½	2	11	1	⅝	13/32	5/16	1	10	5½	2¼	6	1½	5½	¾	15/32	⅞	36	108	#9	W12 x 45	1.05	

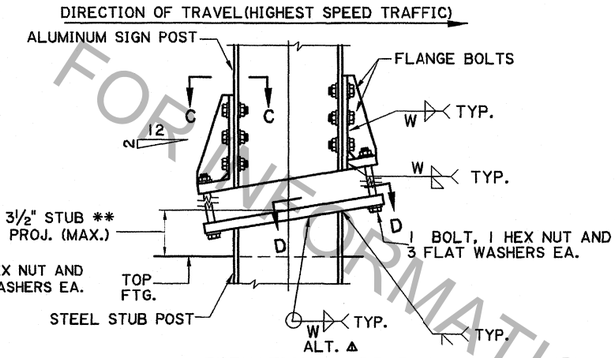
ΔBASE PLATE TO STUB POST WELD ALTERNATE (AS AN ALTERNATE TO WELDS SHOWN IN DETAILS, THE POST MEMBERS TABULATED MAY BE WELDED ALL AROUND WITH A FILLET WELD .

* ALL BOLTS SHALL HAVE A MINIMUM OF 3 THREADS BEYOND THE NUT. BOLT TORQUE LIMITS "-# LB. FOR NON-BREAKAWAY USE TORQUE LIMITS GIVEN IN THE STANDARD SPECIFICATIONS.



ELEVATION OF HORIZONTAL CONNECTION W SECTION

** TO MAINTAIN CORRECT STUB PROJECTION RECESS CONCRETE AS NECESSARY FOR BOLT INSTALLATION RECESS SHAPE TO DRAIN.



ELEVATION OF BEVELED CONNECTION W SECTION

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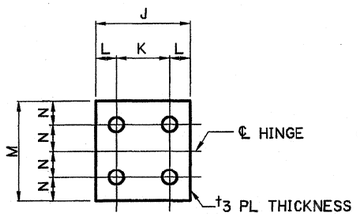
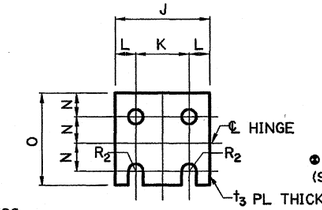


STEEL HINGE PLATE DETAIL



STEEL SLIP PLATE DETAIL

BOLT HOLE DIAMETERS TO BE EQUAL TO BOLT DIA. + 1/16" IN POST FLANGE AND SLIP PLATE.

SLIP PLATE CONNECTION NOTES:

1. SLIP PLATE SHALL BE INSTALLED WITH H.S. BOLTS AT MINIMUM BOLT TENSION.
2. TIGHTING SHALL BE OBTAINED BY
   (a) TURN OF NUT METHOD
   (b) DIRECT TENSION INDICATOR METHOD USING LOAD INDICATOR WASHER. SEE NOTE A.
3. TIGHTING SHALL BE TO SUCH A DEGREE AS TO OBTAIN MINIMUM BOLT TENSION AS SPECIFIED IN STANDARD SPECIFICATIONS SUBSECTION 807.05.1.1, CURRENT AT TIME OF FABRICATION.
4. TIGHTEN BOLTS IN A SYSTEMATIC ORDER TO THE PRESCRIBED MINIMUM BOLT TENSION.

NOTE A:

WHEN HIGH STRENGTH BOLT IS TIGHTENED BY USE OF A DIRECT TENSION INDICATOR, THE INSTALLATION AND INSPECTION SHALL BE IN ACCORDANCE WITH SPECIFICATIONS FOR STRUCTURAL JOINTS, SECTION 5 AND 6 FOR ASTM A-325 BOLTS, APPROVED BY THE RESEARCH COUNCIL ON RIVETED AND BOLTED STRUCTURAL JOINTS. FOR DETAILED INSTALLATION AND INSPECTION PROCEDURES FOLLOW MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL BE REQUIRED TO SUBMIT BROCHURES TO THE BRIDGE DESIGN ENGINEER FOR APPROVAL.

NOTE B:

WHEN HIGH STRENGTH BOLT IS TIGHTENED BY USE OF A DIRECT TENSION INDICATOR METHOD, THE WASHER UNDER THE BOLT HEAD SHALL BE A LOAD INDICATOR WASHER.

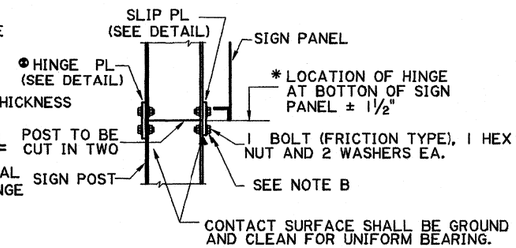
PROCEDURE FOR ASSEMBLY OF BASE CONNECTION: ***

SPECIAL CARE SHALL BE TAKEN TO SET THE BASES PLUMB TO AVOID EXCESSIVE SHIMMING AT THE BREAK-AWAY FEATURE AFTER FINAL INSTALLATION. EXCESSIVE SHIMMING COULD IMPAIR THE BREAK-AWAY FEATURE FOR WHICH THIS INSTALLATION WAS DESIGNED.SHIM PACKS SHOWN ON THIS DRAWING SHOULD BE SUFFICIENT TO ALLOW FOR NORMAL MISALIGNMENT.

1. BASE SHALL BE ALIGNED AND SET PLUMB BEFORE OR IMMEDIATELY AFTER POURING CONCRETE FOOTING.
2. H.S. BOLTS IN BASE PLATE SHALL BE TIGHTENED TO THE PRESCRIBED TORQUE. CARE SHALL BE TAKEN TO AVOID OVERTIGHTENING.

*** SEE STEEL ALTERNATE FOR ORIENTATION AND USE OF SLOTS AND HOLES.

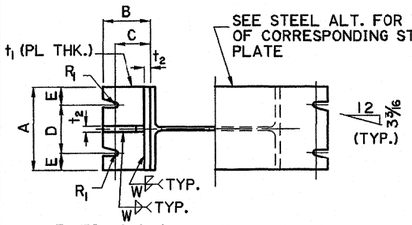
THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET.



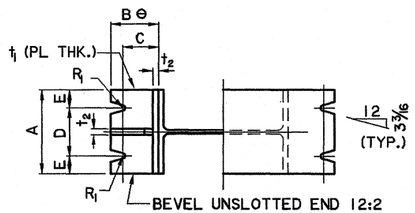
HINGE DETAIL

* WHEN SIGN IS LOCATED ON SIDE OF ROADWAY WITH TWO WAY TRAFFIC, A SLIP PLATE WILL BE USED ON SIDES OF THE POST IN LIEU OF THE HINGE PLATE SHOWN

* FOR EXTRUSION SIGN PANEL ALTERNATE, LOCATION OF ℄ HINGE SHALL BE 3½" FROM BOTTOM OF SIGN PANEL.

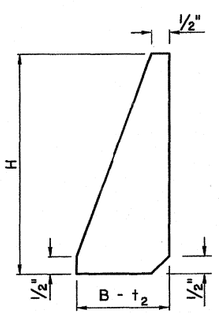


SECTION A-A SECTION B-B

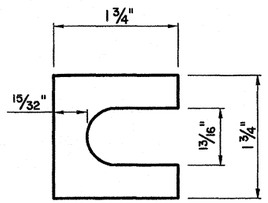


SECTION C-C SECTION D-D

⊖ ADD ¼" FOR BEVELED CONNECTIONS



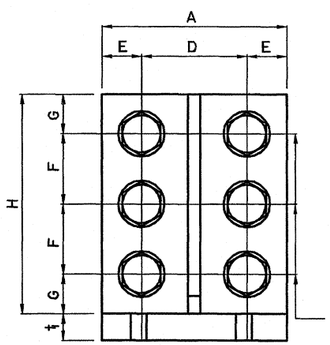
STEEL STIFFENER PLATE DETAIL



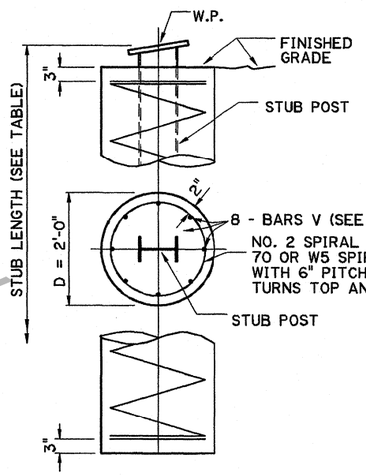
* SHIM DETAIL

BOLTS UP TO ¾" ø BOLTS

* FURNISH 2 SHIMS 0.012" ± THICK AND 2 SHIMS 0.032" ± THICK PER POST. SHIMS SHALL BE BRASS CONFORMING TO ASTM. SPEC. B-36 AND BE USED AS DIRECTED BY THE PROJECT ENGINEER.



STEEL BASE DETAIL



FOOTING DETAIL

STATE OF LOUISIANA
PAUL B. FOSSIER, JR.
REG. No. 21028
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
8/31/00

DESIGNED J.C. PORTER
CHECKED D. HUVEL
DETAILED E.DEARMOND
CHECKED A. BRIDGES
DATE JULY.2000
SHEET 11 OF 11
PARISH
FEDERAL PROJECT
STATE PROJECT
SHEET NUMBER

NO. 12-02-16 UPDATE FOR 2016 SPECIFICATIONS — DATE — REVISION DESCRIPTION — BY K.M.B.

ROADSIDE MOUNTED SUPPORT DETAILS
TYPE D SIGNS
BD.2.7.2.0.11 - ROADSIDE TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN

5/26/2017 13:21
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