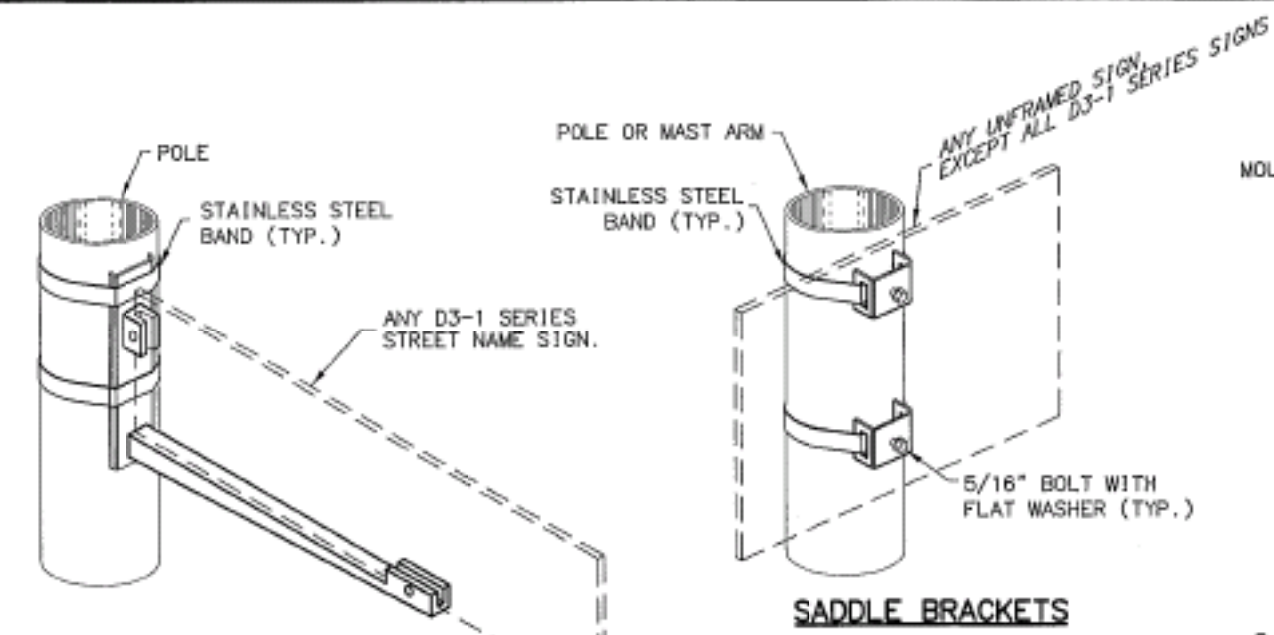
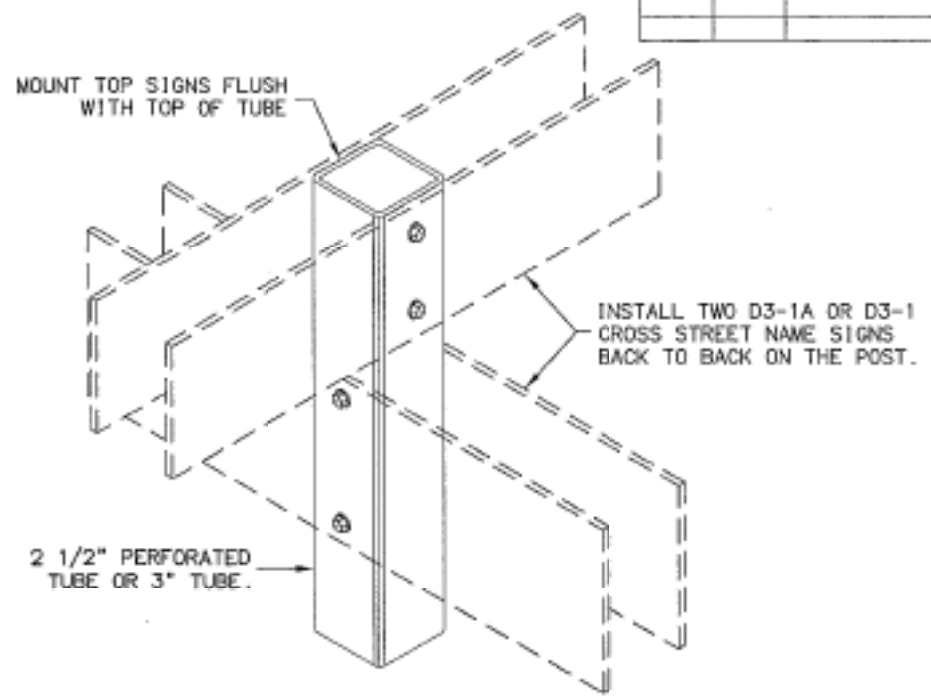


REVISIONS		
NO.	DATE	DESCRIPTION

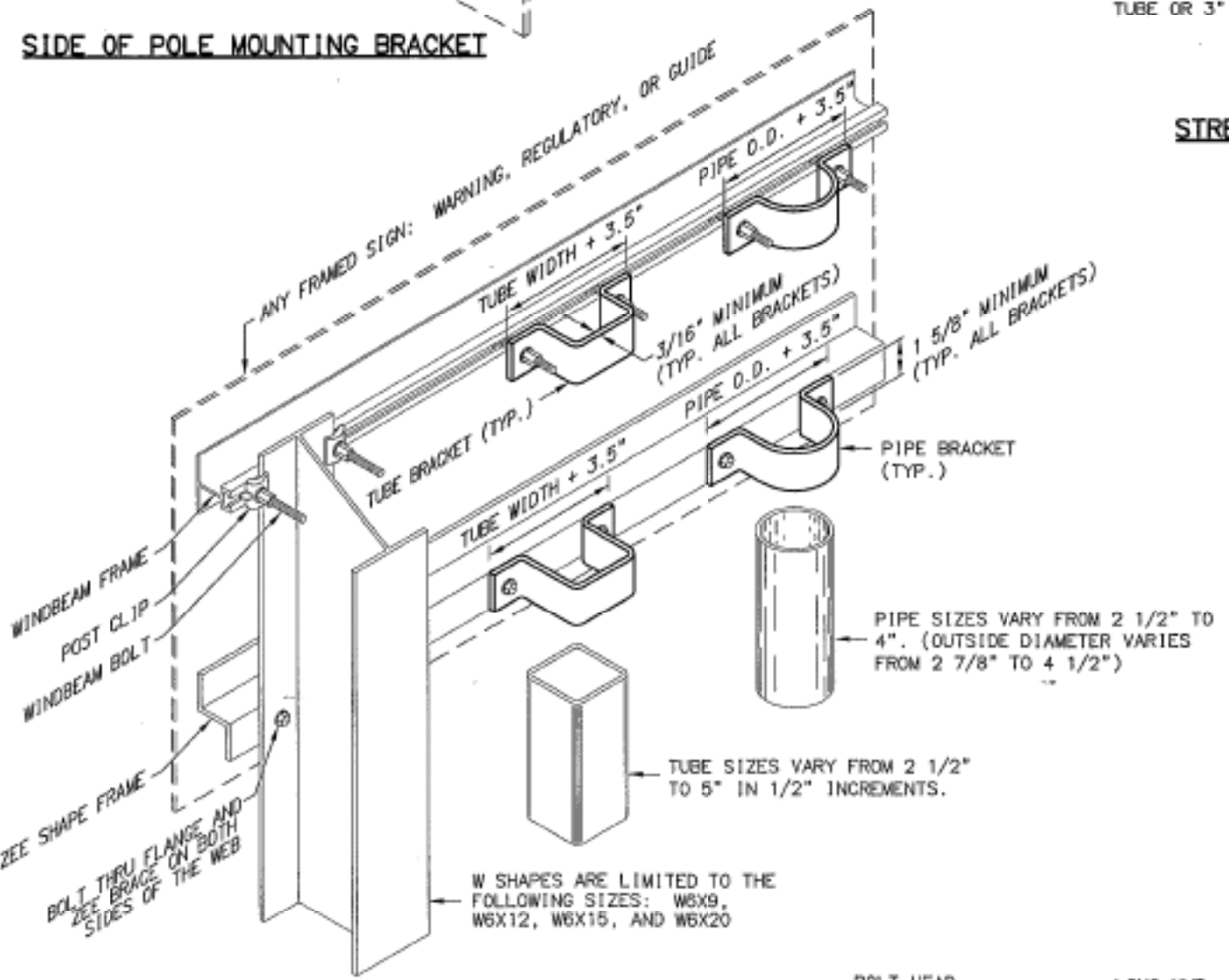
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CHECKED BY: JAW  
DATE: 06/13/06



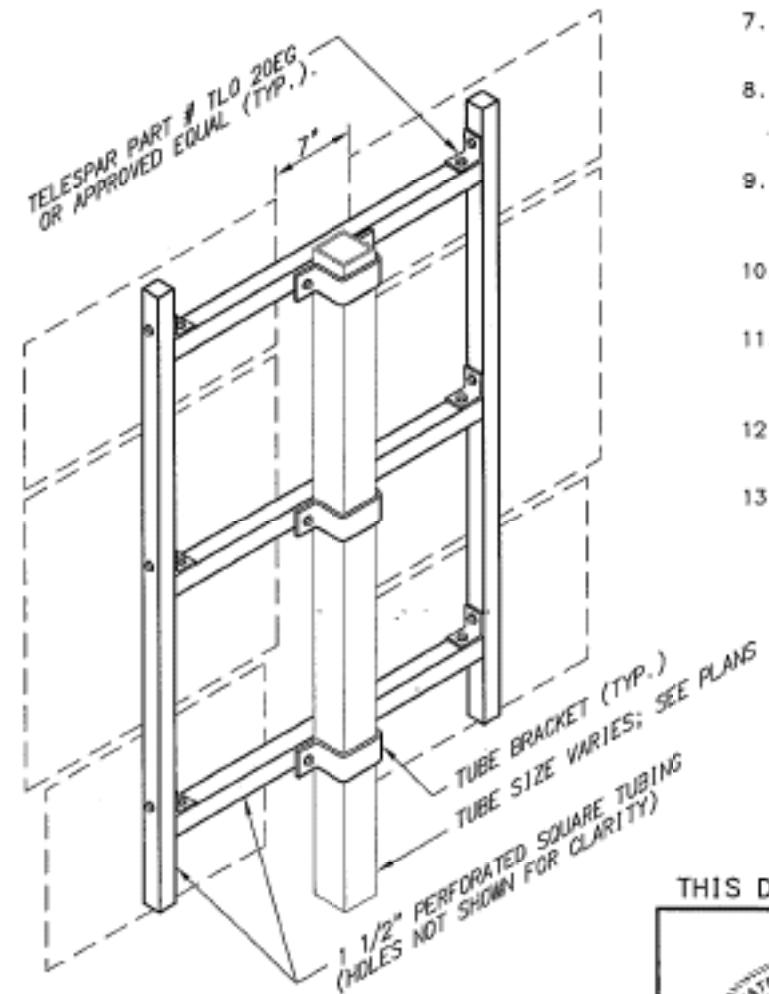
SIDE OF POLE MOUNTING BRACKET



STREET NAME SIGN INSTALLATION



FRAMED SIGN ATTACHMENT BRACKETS



ROUTE MARKER TREE

NOTES:

1. EXCEPT FOR POLES AND MAST ARMS, ONLY USE TUBES TO SUPPORT SIGNS MOUNTED ON ONE POST.
2. ATTACH ALL SIGNS, FRAMED AND UNFRAMED TO THEIR SUPPORTS WITH ZINC PLATED 3/8" BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO PERFORATED TUBES WITH ACCESSORY DRIVE RIVETS AND TO SADDLES WITH 5/16" BOLTS.
3. BOLT UNFRAMED SIGNS DIRECTLY TO TUBES, AND ATTACH THEM TO POLES AND MAST ARMS WITH TWO SADDLES.
4. ATTACH BRACKETS TO POLES AND MAST ARMS WITH DOUBLE WRAPS OF 3/4" WIDE BY 0.020" THICK STAINLESS STEEL BANDING MATERIAL. TIGHTEN EACH BAND UNTIL IT STOPS MOVING THROUGH THE BUCKLE.
5. ATTACH FRAMED SIGNS TO POSTS WHEREVER THE FRAMES CROSS THE POSTS. AT EACH CROSSING, ATTACH THE SIGN USING TWO POST CLIPS ON W-SHAPE POSTS, A U-SHAPED BRACKET ON PIPES, AND A BRACKET WITH SQUARE CORNERS ON TUBES.
6. THE TUBE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.
7. ONLY USE THE SPECIAL WINDBEAM BOLTS TO ATTACH SIGNS FRAMED WITH THE WINDBEAM FRAMING MATERIAL.
8. ATTACH FRAMED SIGNS TO POLES AND MAST ARMS USING POLE PLATES INSTALLED ACCORDING TO STANDARD DRAWING S-23.00
9. FOR ROUTE MARKER TREES, CUT PERFORATED TUBES TO ENSURE TIGHT FITTING JOINTS. ASSEMBLE THE PIECES WITH ACCESSORY ELL-SHAPED ANGLE BRACKETS.
10. INSTALL THE TOP EDGE OF SIGNS 1" ABOVE THE TOPS OF POSTS, EXCEPT FOR THE D3-1 STREET NAME SIGNS.
11. INSTALL THE TOP EDGE OF SIGNS 3" BELOW THE TOP OF POST, WHENEVER THEY ARE MOUNTED BELOW SIGNS SECURED BY POST TOP MOUNTING BRACKETS.
12. THE BRACKET DETAILS SHOWN INDICATE GENERAL DESIGNS ONLY. DESIGNS MAY VARY BY MANUFACTURER.
13. INSTALL WEATHER TIGHT CAPS ON ALL PIPE AND TUBE POSTS, EXCEPT PERFORATED TUBING.

FASTENER SPECIFICATION TABLE		
FASTENERS	STEEL	STAINLESS STEEL
BOLTS	ASTM A 307	ASTM F 593
NUTS	REGULAR LOCK	ASTM A 563 ASTM F 594
WASHERS	ASTM A 36	ASTM A 480
POST CLIPS		

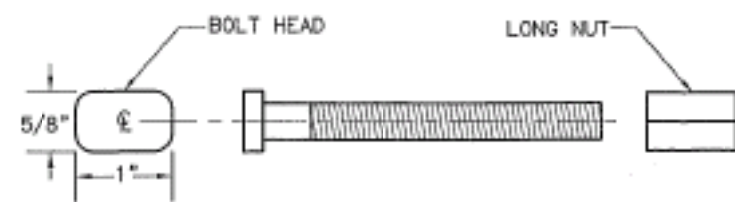
THIS DRAWING SUPERSEDES STANDARD DRAWING S-20.10



STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

PROJECT NAME

SIGN ATTACHMENT DETAILS



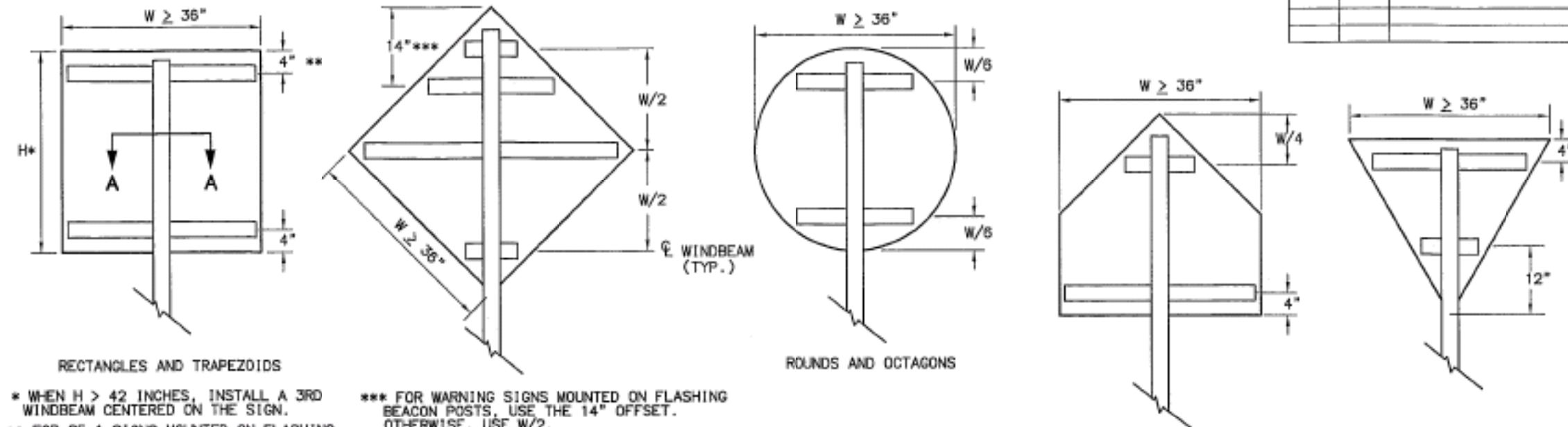
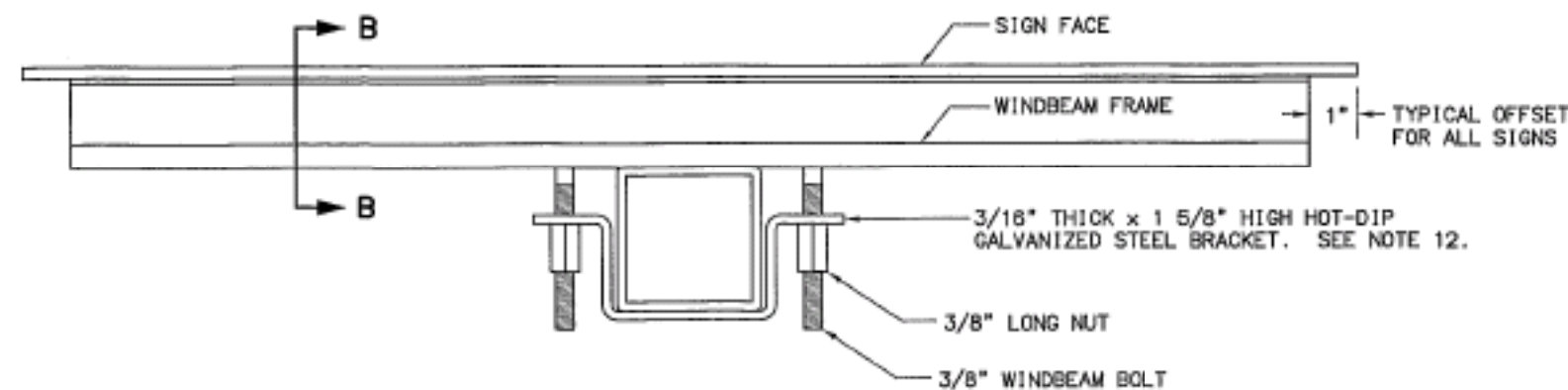
3/8" WINDBEAM BOLT AND LONG NUT



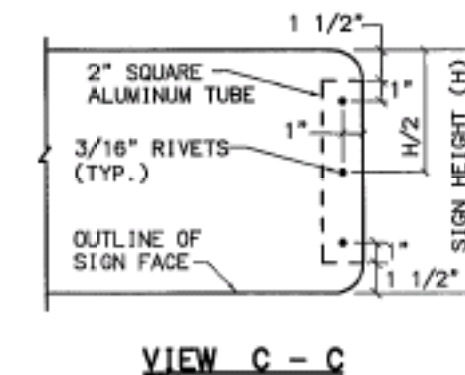
REVISIONS		
NO.	DATE	DESCRIPTION

## NOTES:

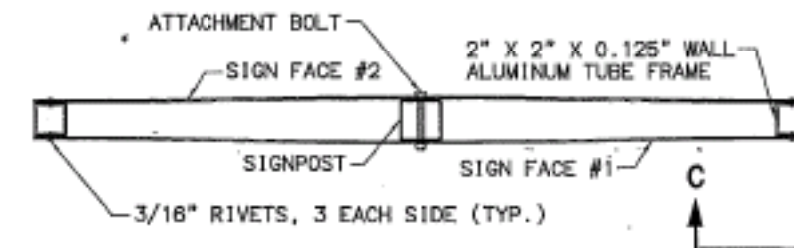
- EXCEPT FOR POLES AND MAST ARMS, ONLY USE SQUARE STEEL TUBES TO SUPPORT SIGNS MOUNTED ON SINGLE POSTS.
- INSTALL WINDBEAM OR ZEE SHAPED FRAMING MEMBERS ON ALL DIAMOND SHAPED SIGNS 36 INCHES AND LONGER ON A SIDE AND ON ALL OTHER SIGNS 36 INCHES WIDE AND WIDER.
- IN HIGH WIND AREAS, THE PLANS MAY REQUIRE SIGNS SMALLER THAN THOSE LISTED IN NOTE 2 BE FRAMED AS SHOWN HEREON.
- THIS DRAWING DEPICTS THE WINDBEAM FRAMING AND ATTACHMENT SYSTEM. ATTACH SIGNS FRAMED WITH ZEE SHAPED FRAMING ACCORDING TO REGIONAL DRAWING "SIGN ATTACHMENT DETAILS", USING "U" SHAPED BRACKETS AND TWO BOLTS WITH NUTS.
- THE ENGINEER MAY APPROVE OTHER FRAMING MEMBERS. SUBMIT DOCUMENTS THAT DETAIL THE FRAME'S CROSS SECTION AND STRENGTH, AND METHOD OF ATTACHING THE FRAME TO A POST.
- USE FRAMING MEMBERS MADE FROM ALUMINUM ALLOY 6061-T6.
- EACH FRAMING MEMBER SHALL BE ONE CONTINUOUS PIECE.
- ATTACH FRAMING MEMBERS TO THE SIGN PANELS WITH RIVETS OR AN ENGINEER APPROVED, DOUBLE SIDED, HIGH STRENGTH, ADHESIVE TAPE.
- WITH THE ADHESIVE TAPE, INSTALL TWO RIVETS IN BOTH ENDS OF EACH FRAMING MEMBER, AND ATTACH THE FRAMING MEMBERS TO THE SIGN PANELS ACCORDING TO THE TAPE MANUFACTURER'S WRITTEN INSTRUCTIONS, INCLUDING:
  - THE CLEANING AND HANDLING OF THE SIGN PANELS AND FRAMING MEMBERS.
  - THE APPLICATION OF THE ADHESIVE TAPE.
- WHEN RIVETS ARE USED TO ATTACH FRAMING MEMBERS, INSTALL 2 RIVETS IN EACH END AND THE BALANCE ON 8" MAXIMUM CENTERS.
- USE 3/16" DIAMETER RIVETS CONFORMING TO ALUMINUM ALLOY 6061-T6 FOR COLD DRIVEN RIVETS, OR ALUMINUM ALLOY 6061-T43 FOR HOT DRIVEN RIVETS.
- THE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.

WINDBEAM LOCATIONS FOR EACH SIGN SHAPE  
ELEVATION VIEW

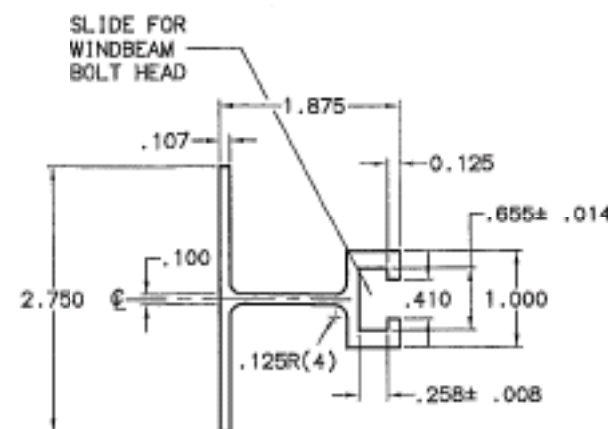
SECTION A - A TYPICAL SIGN ATTACHMENT DETAILS AT EACH WINDBEAM



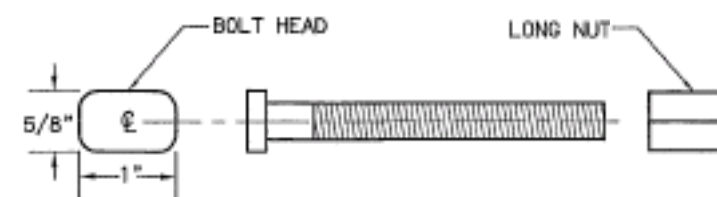
VIEW C - C



D3-1\*, D3-1A, D3-1D\* STREET NAME SIGN FRAMING DETAIL

\*THOSE WITH 6-INCH LETTERING ONLY  
PLAN VIEW

SECTION B - B WINDBEAM CROSS SECTION



3/8" WINDBEAM BOLT AND LONG NUT

THESE DETAILS SUPERSEDE THE LIGHT SIGN FRAMING  
DETAILS ONLY ON STANDARD DRAWING S-00.10 AND  
SUPERSEDES STANDARD DRAWING S-01.00 IN ITS ENTIRETY.STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

PROJECT NAME

LIGHT SIGN FRAMING AND  
ATTACHMENT DETAILS