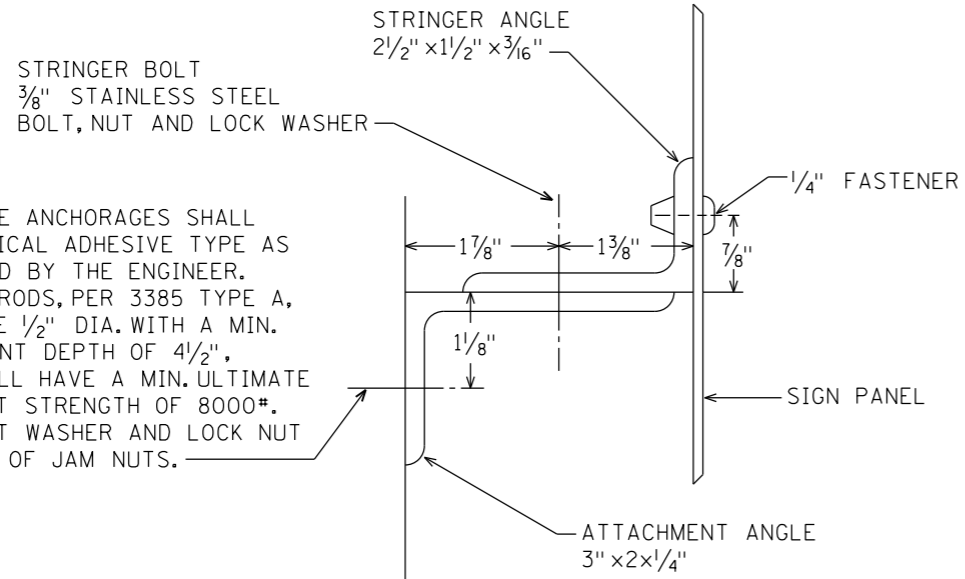
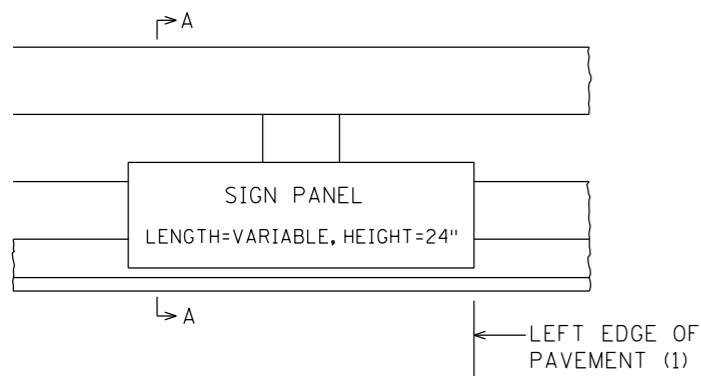


PLOTTED/REVISED: 11/8/2013

DISTRICT #: METRO
 IPLOT NAME: D SIGN BR.MOUNTINGS_STD*1
 PATH & FILENAME: IP_PWP-d1442IND SIGN BR.MOUNTINGS_STD*.dgn

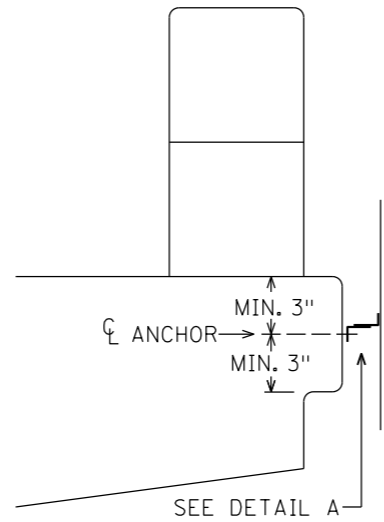


DETAIL A



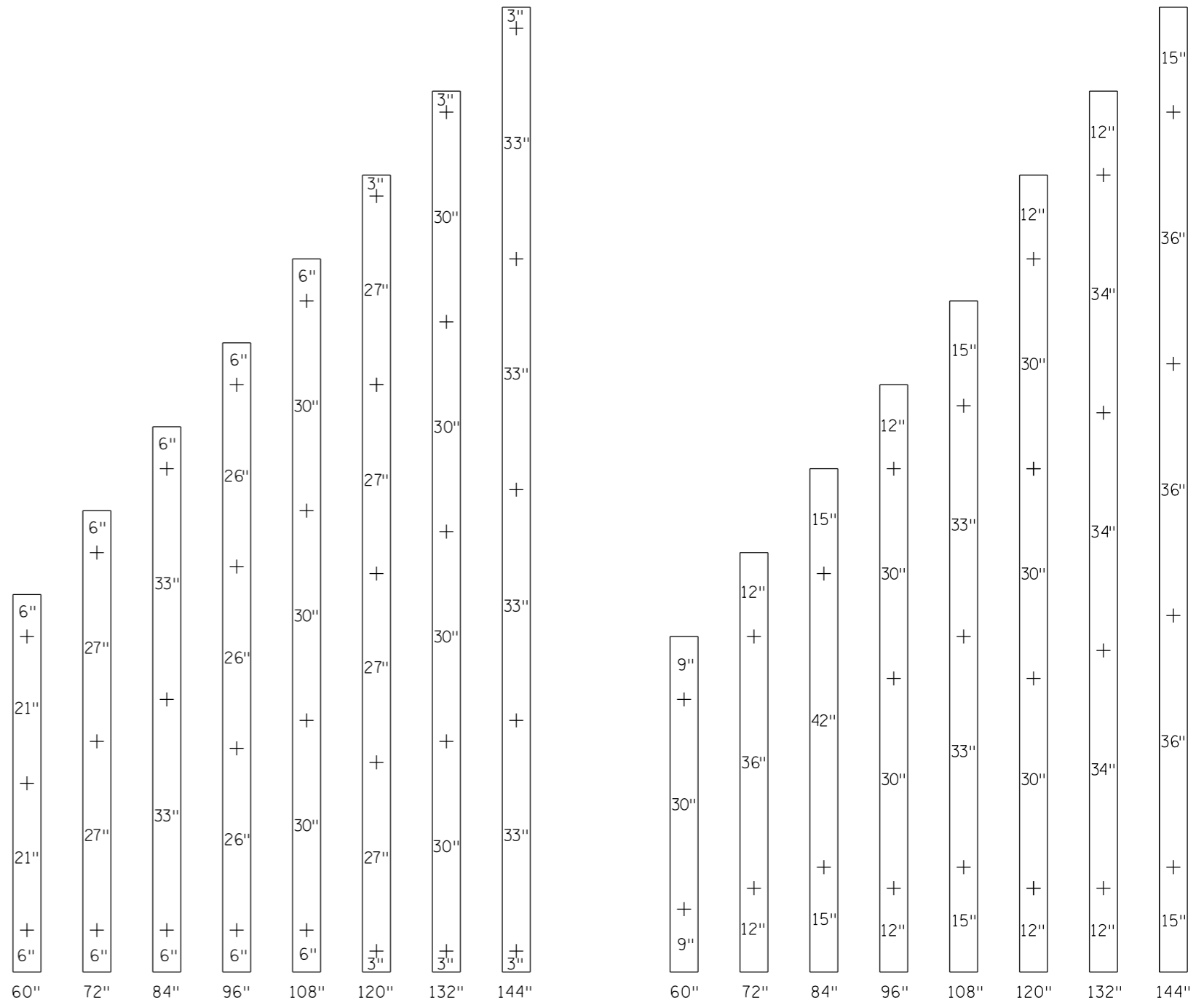
(1) SIGN PANEL MAY BE SHIFTED
 Laterally if necessary

ELEVATION



SECTION A-A

PANEL LENGTH	STRINGER ANGLE LENGTH	ATTACHMENT ANGLE LENGTH
60"	54"	48"
72"	66"	60"
84"	78"	72"
96"	90"	84"
108"	102"	96"
120"	114"	108"
132"	126"	120"
144"	138"	132"



SIGN PANEL LENGTH
PUNCHING FOR STRINGER BOLT

SIGN PANEL LENGTH
PUNCHING FOR CONCRETE ANCHOR

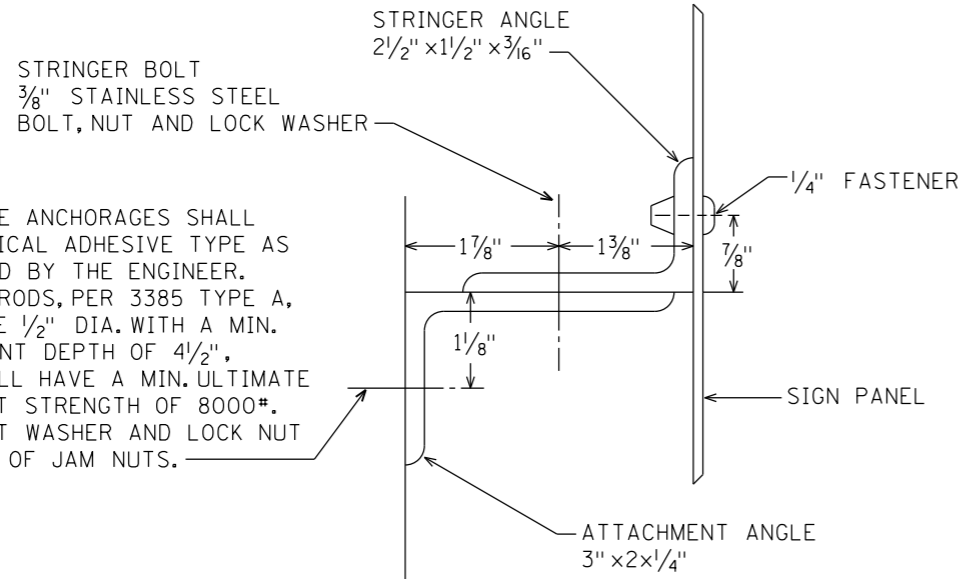
NOTES:

- STRUCTURAL STEEL SHALL CONFORM TO MNDOT 3306 AND SHALL BE GALVANIZED PER MNDOT 3394.
- SIGN PANEL SHALL BE FASTENED TO STRINGER AT 12" INTERVALS BEGINNING 6" FROM SIGN PANEL EDGE.

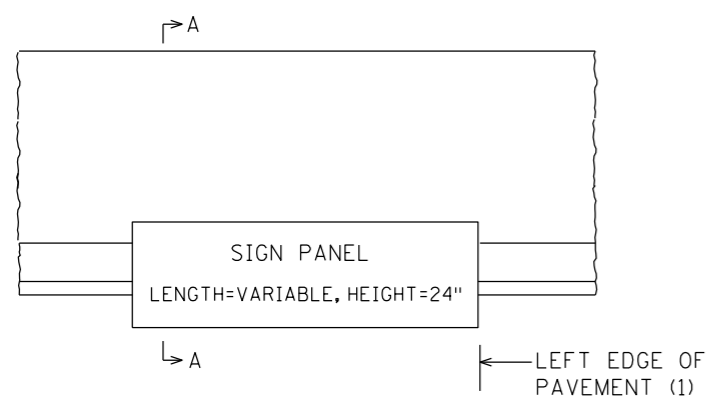
STRUCTURAL DETAILS
BRIDGE MOUNTED TYPE D SIGNS
DESIGN A1

PLOTTED/REVISED: 11/8/2013

DISTRICT #: METRO
 IPLOT NAME: D SIGN BR.MOUNTINGS STD*2
 PATH & FILENAME: IP_PWP-d1442IND SIGN BR.MOUNTINGS STD*.dgn

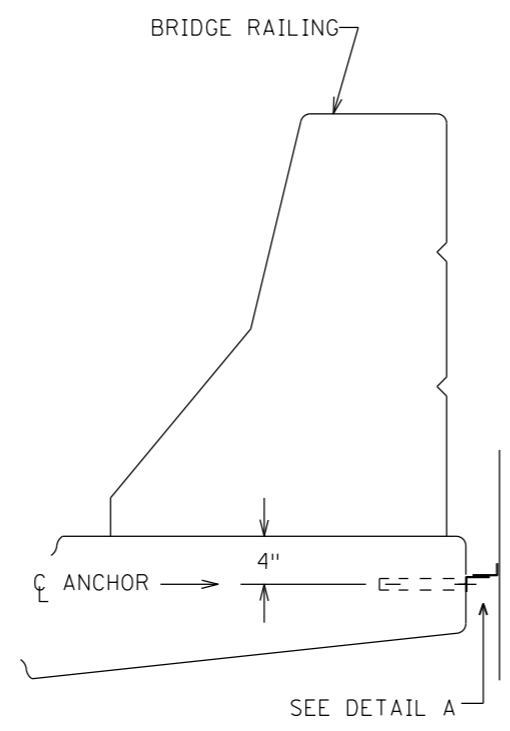


DETAIL A



(1) SIGN PANEL MAY BE SHIFTED
 Laterally if necessary

ELEVATION

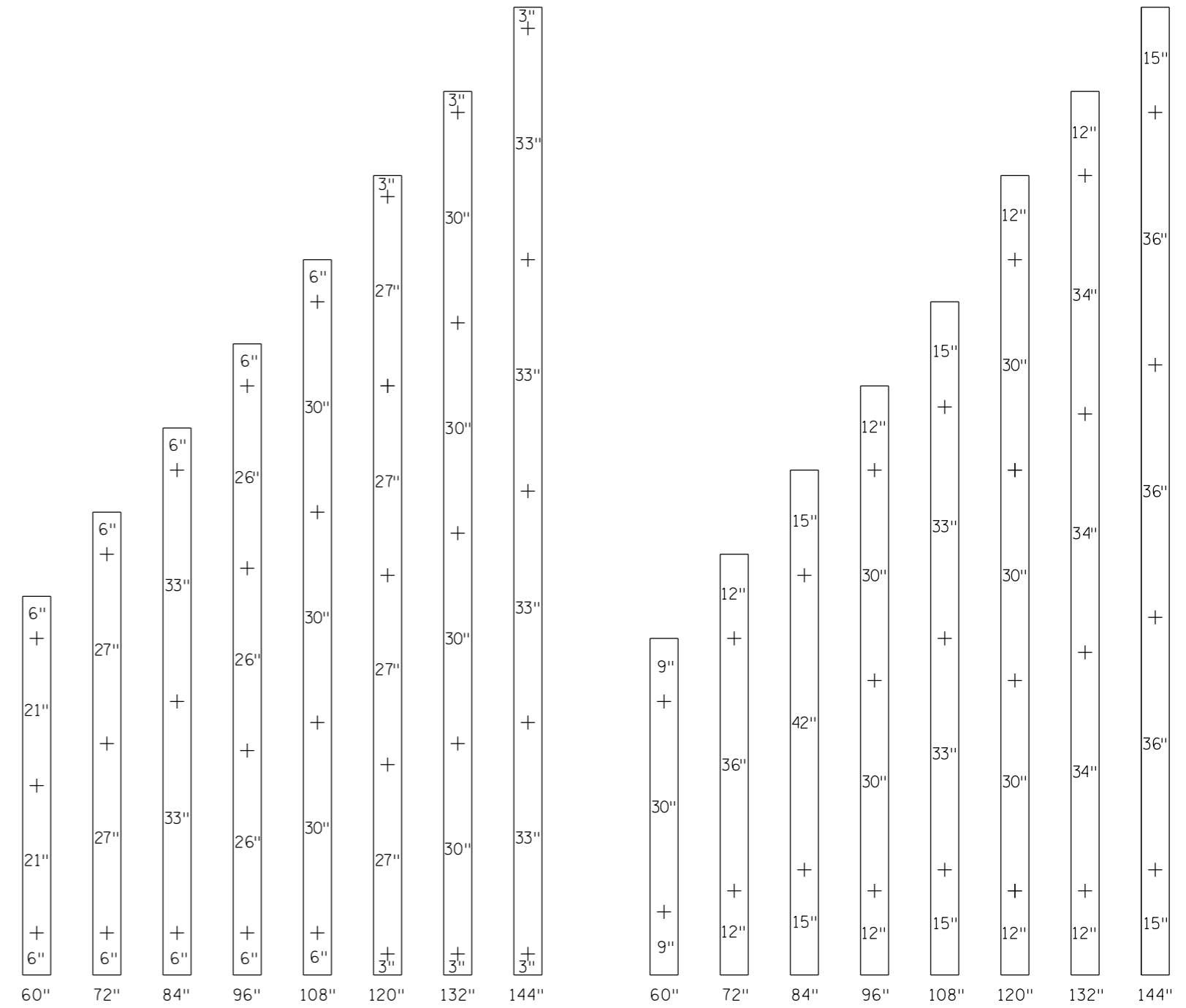


SECTION A-A

PANEL LENGTH	STRINGER ANGLE LENGTH	ATTACHMENT ANGLE LENGTH
60"	54"	48"
72"	66"	60"
84"	78"	72"
96"	90"	84"
108"	102"	96"
120"	114"	108"
132"	126"	120"
144"	138"	132"

NOTES:

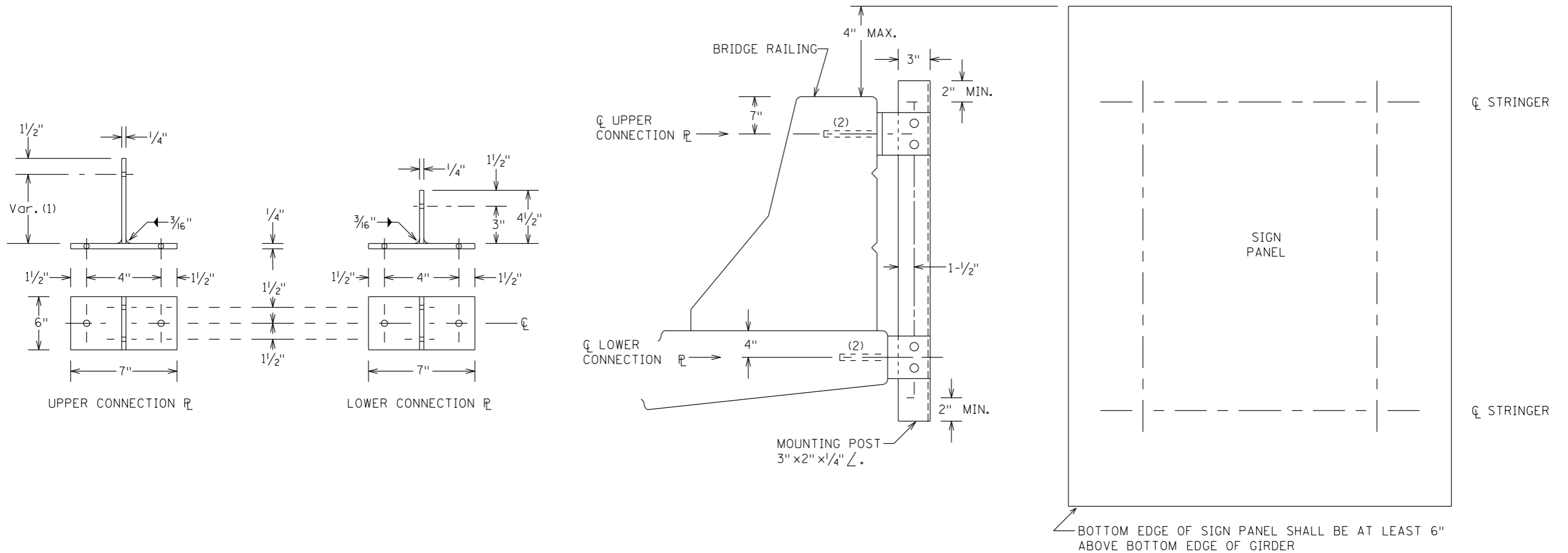
- STRUCTURAL STEEL SHALL CONFORM TO MNDOT 3306 AND SHALL BE GALVANIZED PER MNDOT 3394.
- SIGN PANEL SHALL BE FASTENED TO STRINGER AT 12" INTERVALS BEGINNING 6" FROM SIGN PANEL EDGE.



SIGN PANEL LENGTH
PUNCHING FOR STRINGER BOLT

SIGN PANEL LENGTH
PUNCHING FOR CONCRETE ANCHOR

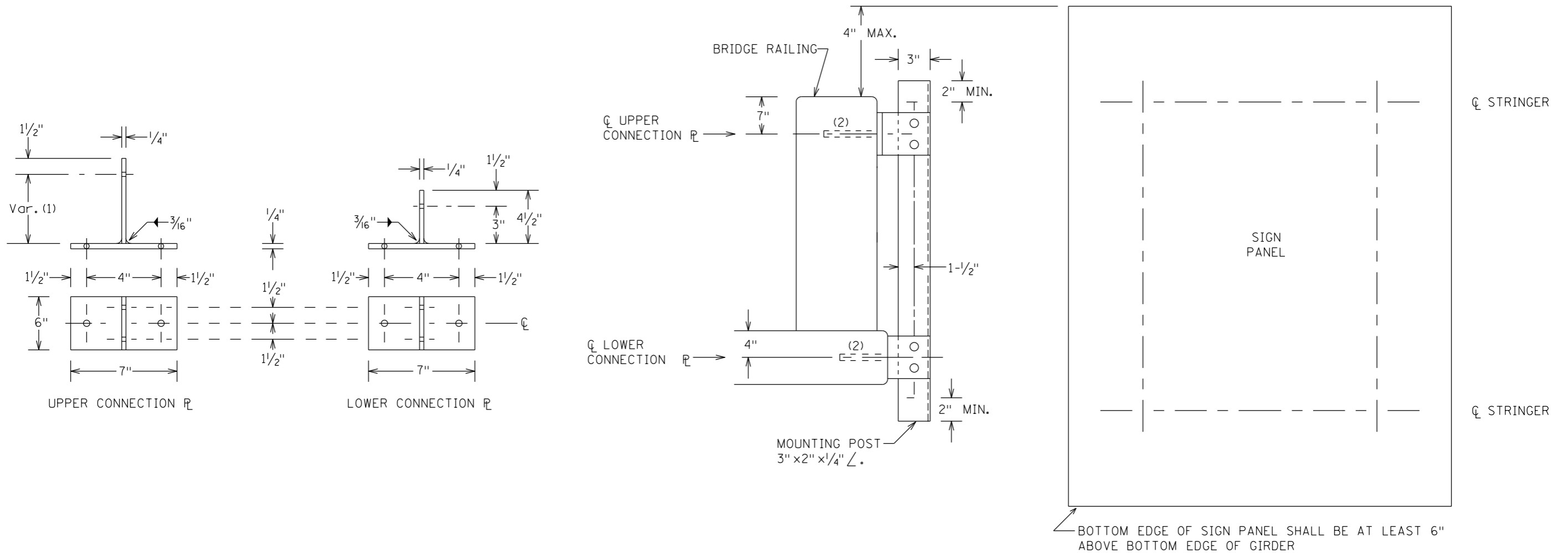
STRUCTURAL DETAILS
BRIDGE MOUNTED TYPE D SIGNS
DESIGN A2



- SPECIFIC NOTES:
- (1) POSTS SHALL BE PLUMB.
 - (2) CONCRETE ANCHORAGES SHALL BE CHEMICAL ADHESIVE TYPE AS APPROVED BY THE ENGINEER. ANCHOR RODS, PER 3385 TYPE A, SHALL BE 1/2" DIA. WITH A MIN. EMBEDMENT DEPTH OF 4 1/2", AND SHALL HAVE A MIN. ULTIMATE PULL-OUT STRENGTH OF 8000#. USE FLAT WASHER AND LOCK NUT OR PAIR OF JAM NUTS.

- GENERAL NOTES:
- 1. FOR DETAILS OF STRINGERS AND PANEL, SEE "C" AND "D" SIGN DETAILS.
 - 2. BOLTS FOR POST TO PLATE CONNECTIONS TO BE 1/2" DIA., HOLES TO BE 9/16" DIA.
 - 3. STRUCTURAL STEEL SHALL CONFORM TO Mn/DOT 3306 AND SHALL BE GALVANIZED PER Mn/DOT 3394.
 - 4. SIGN TO BE PLACED IN A HORIZONTAL POSITION.

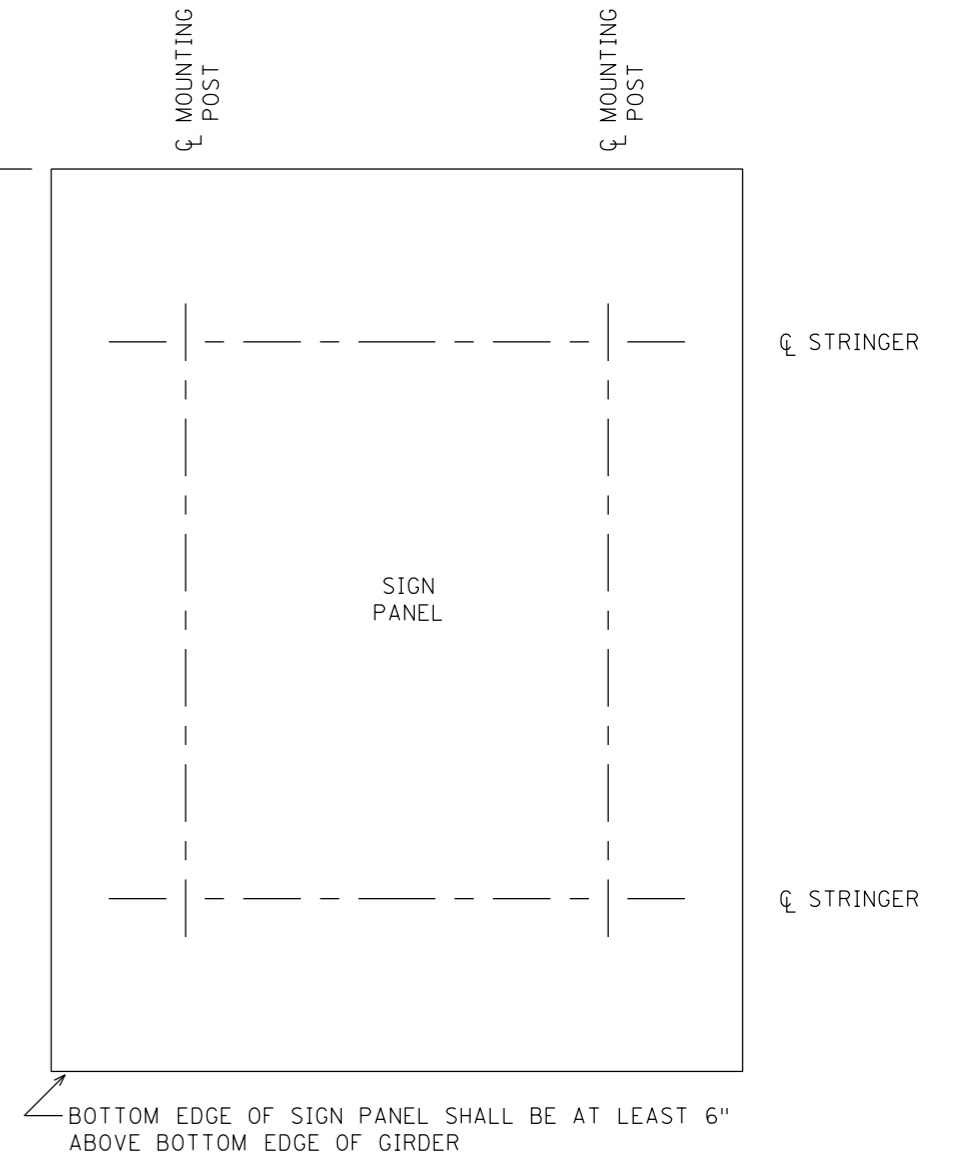
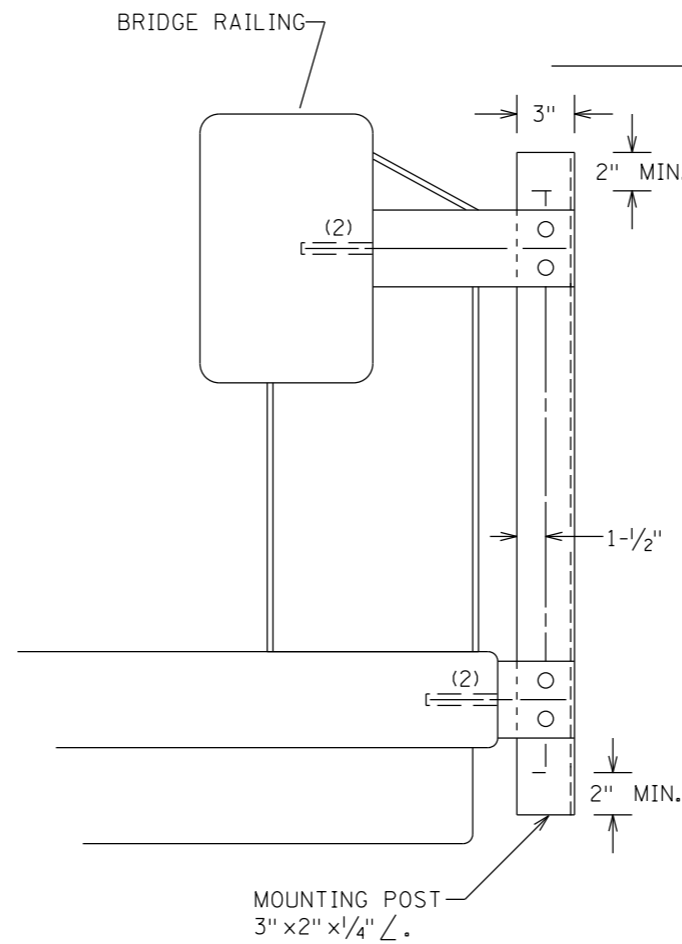
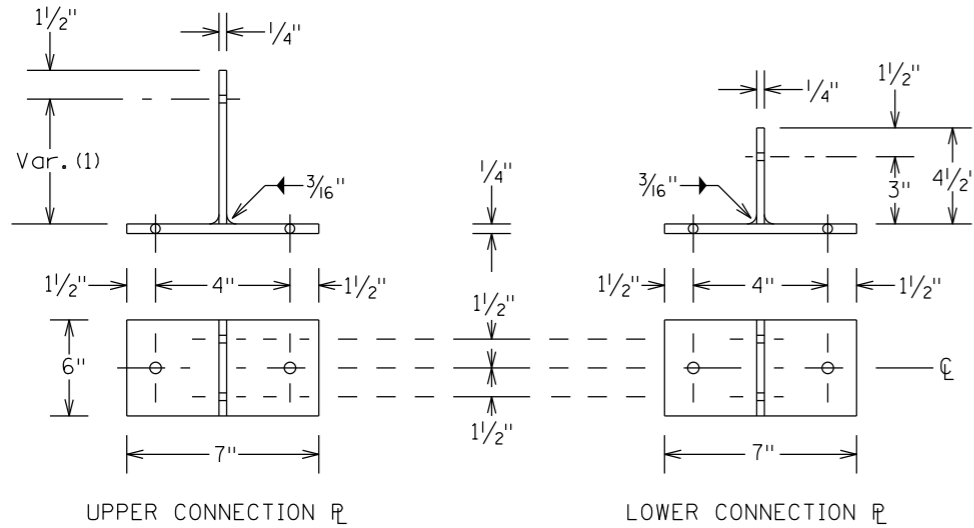
STRUCTURAL DETAILS
BRIDGE MOUNTED TYPE D SIGNS
DESIGN B1



- SPECIFIC NOTES:
- (1) POSTS SHALL BE PLUMB.
 - (2) CONCRETE ANCHORAGES SHALL BE CHEMICAL ADHESIVE TYPE AS APPROVED BY THE ENGINEER. ANCHOR RODS, PER 3385 TYPE A, SHALL BE 1/2" DIA. WITH A MIN. EMBEDMENT DEPTH OF 4 1/2", AND SHALL HAVE A MIN. ULTIMATE PULL-OUT STRENGTH OF 8000#. USE FLAT WASHER AND LOCK NUT OR PAIR OF JAM NUTS.

- GENERAL NOTES:
- 1. FOR DETAILS OF STRINGERS AND PANEL, SEE "C" AND "D" SIGN DETAILS.
 - 2. BOLTS FOR POST TO PLATE CONNECTIONS TO BE 1/2" DIA., HOLES TO BE 9/16" DIA.
 - 3. STRUCTURAL STEEL SHALL CONFORM TO Mn/DOT 3306 AND SHALL BE GALVANIZED PER Mn/DOT 3394.
 - 4. SIGN TO BE PLACED IN A HORIZONTAL POSITION.

STRUCTURAL DETAILS
BRIDGE MOUNTED TYPE D SIGNS
DESIGN B3



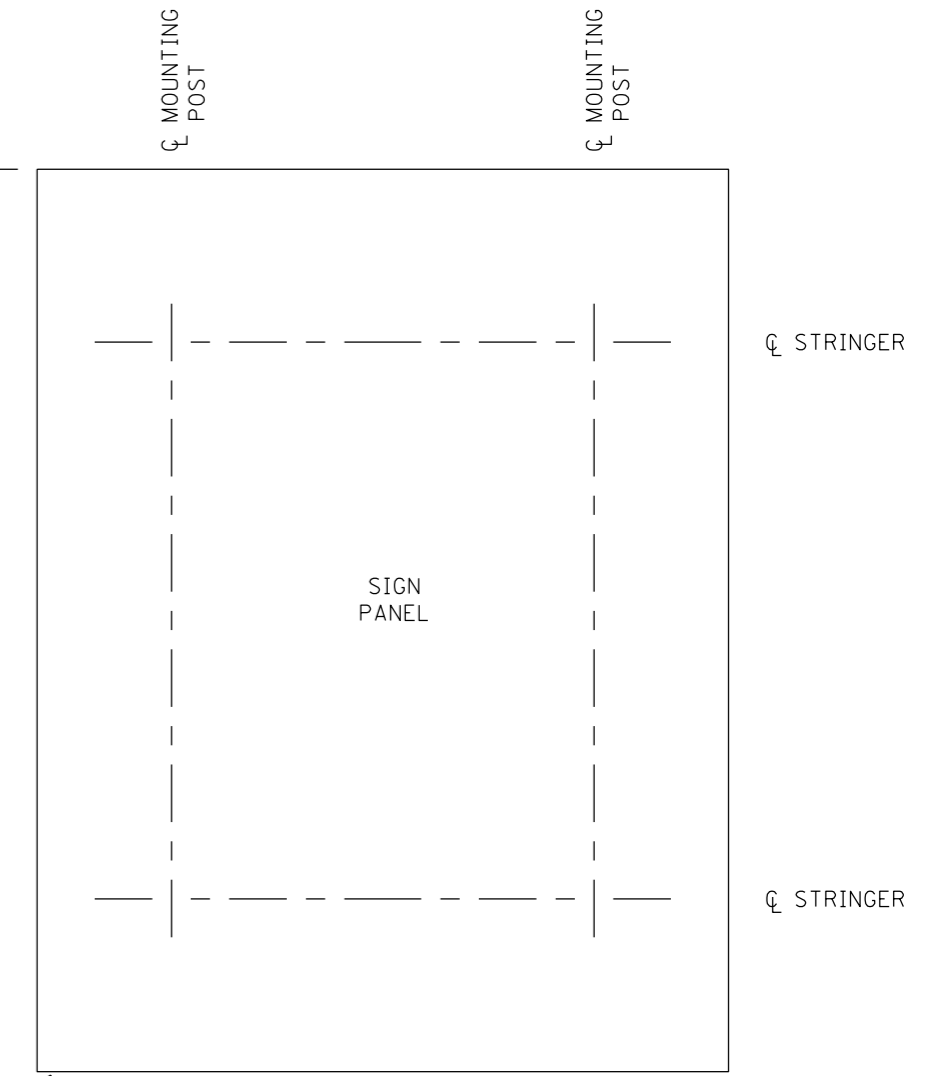
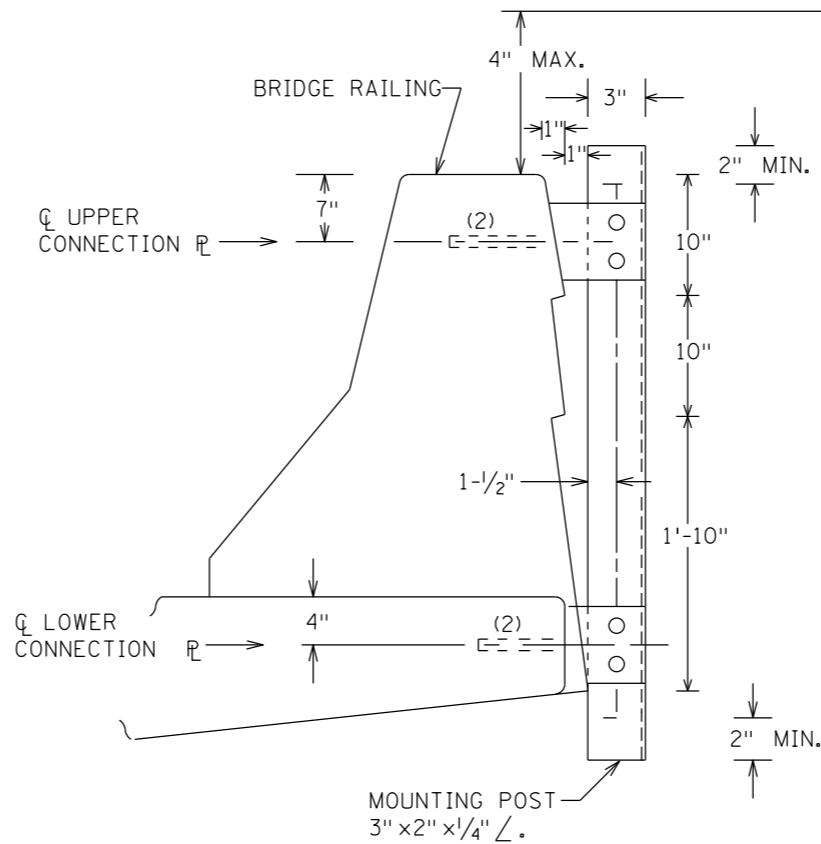
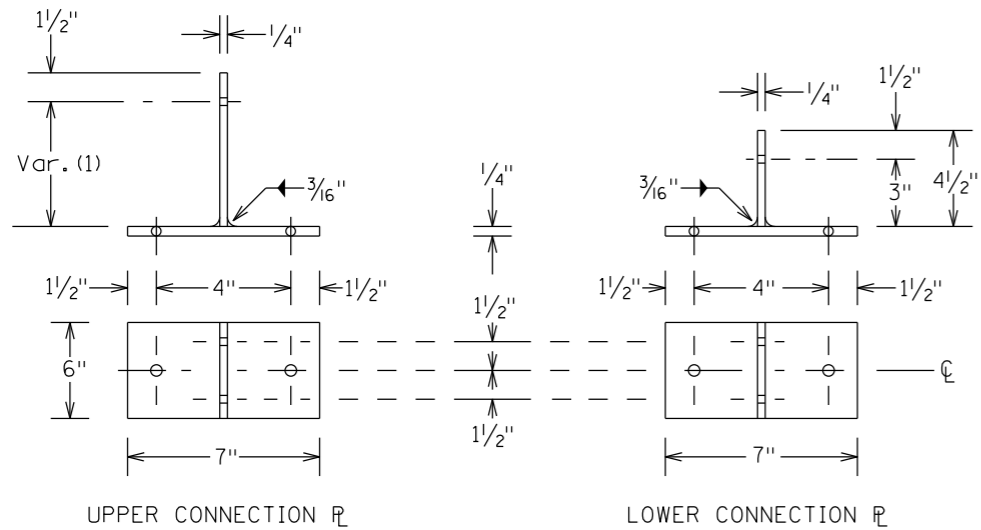
SPECIFIC NOTES:

- (1) POSTS SHALL BE PLUMB.
- (2) CONCRETE ANCHORAGES SHALL BE CHEMICAL ADHESIVE TYPE AS APPROVED BY THE ENGINEER. ANCHOR RODS, PER 3385 TYPE A, SHALL BE 1/2" DIA. WITH A MIN. EMBEDMENT DEPTH OF 4 1/2", AND SHALL HAVE A MIN. ULTIMATE PULL-OUT STRENGTH OF 8000#. USE FLAT WASHER AND LOCK NUT OR PAIR OF JAM NUTS.

GENERAL NOTES:

1. FOR DETAILS OF STRINGERS AND PANEL, SEE "C" AND "D" SIGN DETAILS.
2. BOLTS FOR POST TO PLATE CONNECTIONS TO BE 1/2" DIA., HOLES TO BE 9/16" DIA.
3. STRUCTURAL STEEL SHALL CONFORM TO Mn/DOT 3306 AND SHALL BE GALVANIZED PER Mn/DOT 3394.
4. SIGN TO BE PLACED IN A HORIZONTAL POSITION.

STRUCTURAL DETAILS
BRIDGE MOUNTED TYPE D SIGNS
DESIGN B4

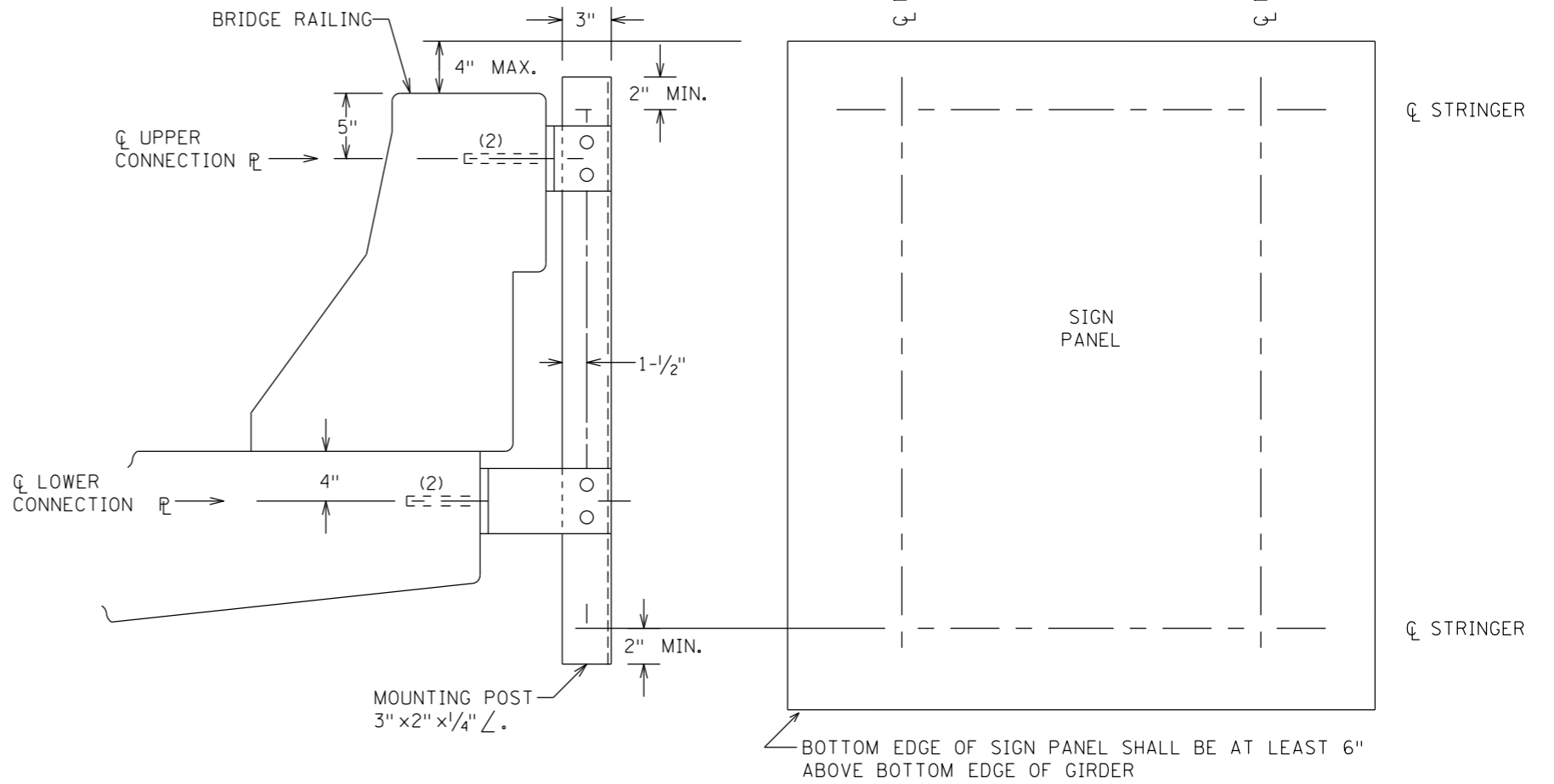
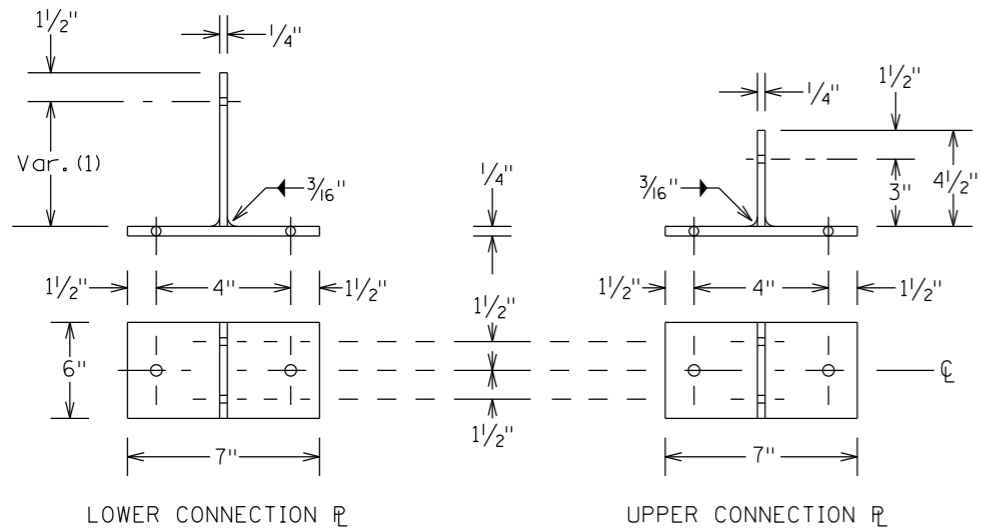


BOTTOM EDGE OF SIGN PANEL SHALL BE AT LEAST 6" ABOVE BOTTOM EDGE OF GIRDER

- SPECIFIC NOTES:
- (1) POSTS SHALL BE PLUMB.
 - (2) CONCRETE ANCHORAGES SHALL BE CHEMICAL ADHESIVE TYPE AS APPROVED BY THE ENGINEER. ANCHOR RODS, PER 3385 TYPE A, SHALL BE 1/2" DIA. WITH A MIN. EMBEDMENT DEPTH OF 4 1/2", AND SHALL HAVE A MIN. ULTIMATE PULL-OUT STRENGTH OF 8000#. USE FLAT WASHER AND LOCK NUT OR PAIR OF JAM NUTS.

- GENERAL NOTES:
1. FOR DETAILS OF STRINGERS AND PANEL, SEE "C" AND "D" SIGN DETAILS.
 2. BOLTS FOR POST TO PLATE CONNECTIONS TO BE 1/2" DIA., HOLES TO BE 9/16" DIA.
 3. STRUCTURAL STEEL SHALL CONFORM TO Mn/DOT 3306 AND SHALL BE GALVANIZED PER Mn/DOT 3394.
 4. SIGN TO BE PLACED IN A HORIZONTAL POSITION.

STRUCTURAL DETAILS
BRIDGE MOUNTED TYPE D SIGNS
DESIGN B5



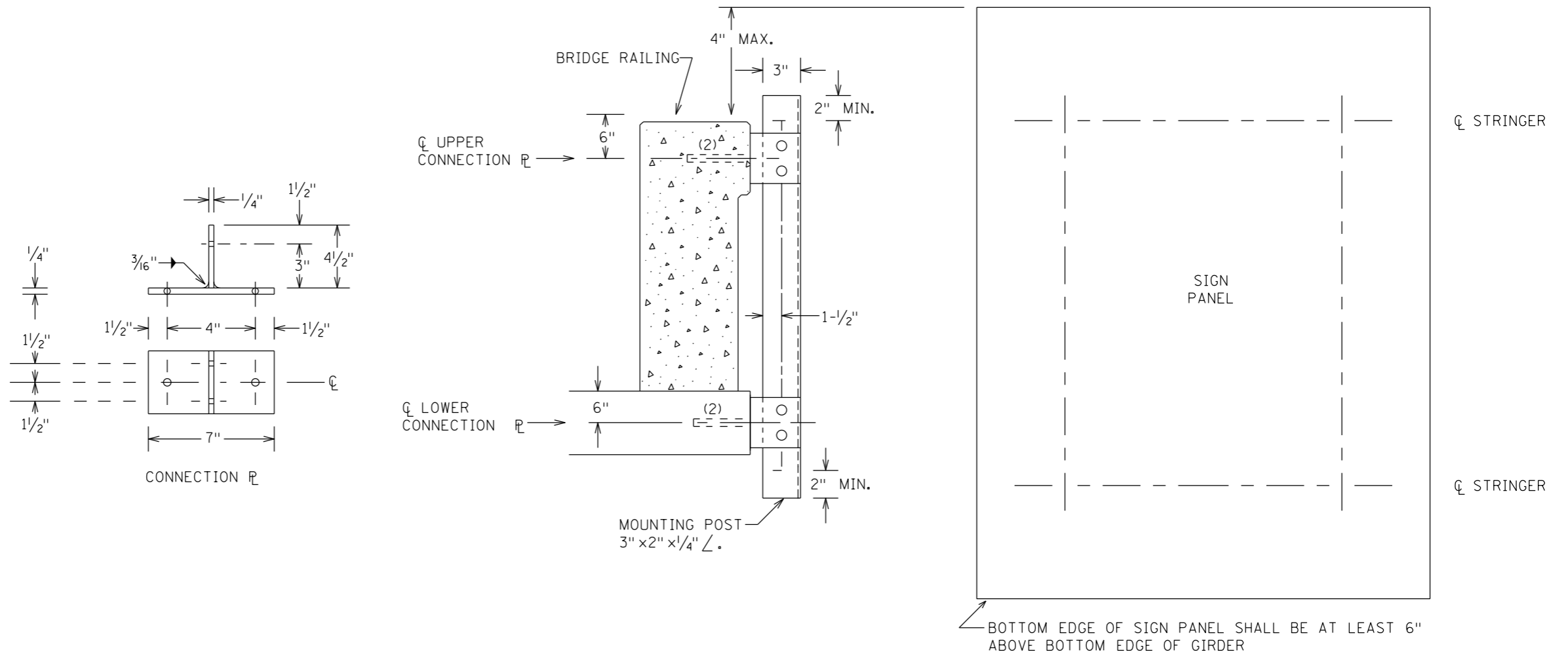
SPECIFIC NOTES:

- (1) POST SHALL BE PLUMB.
- (2) CONCRETE ANCHORAGES SHALL BE CHEMICAL ADHESIVE TYPE AS APPROVED BY THE ENGINEER. ANCHOR RODS, PER 3385 TYPE A, SHALL BE 1/2" DIA. WITH A MIN. EMBEDMENT DEPTH OF 4 1/2", AND SHALL HAVE A MIN. ULTIMATE PULL-OUT STRENGTH OF 8000#. USE FLAT WASHER AND LOCK NUT OR PAIR OF JAM NUTS.

GENERAL NOTES:

1. FOR DETAILS OF STRINGERS AND PANEL, SEE "C" AND "D" SIGN DETAILS.
2. BOLTS FOR POST TO PLATE CONNECTIONS TO BE 1/2" DIA., HOLES TO BE 9/16" DIA.
3. STRUCTURAL STEEL SHALL CONFORM TO Mn/DOT 3306 AND SHALL BE GALVANIZED PER Mn/DOT 3394.
4. SIGN TO BE PLACED IN A HORIZONTAL POSITION.

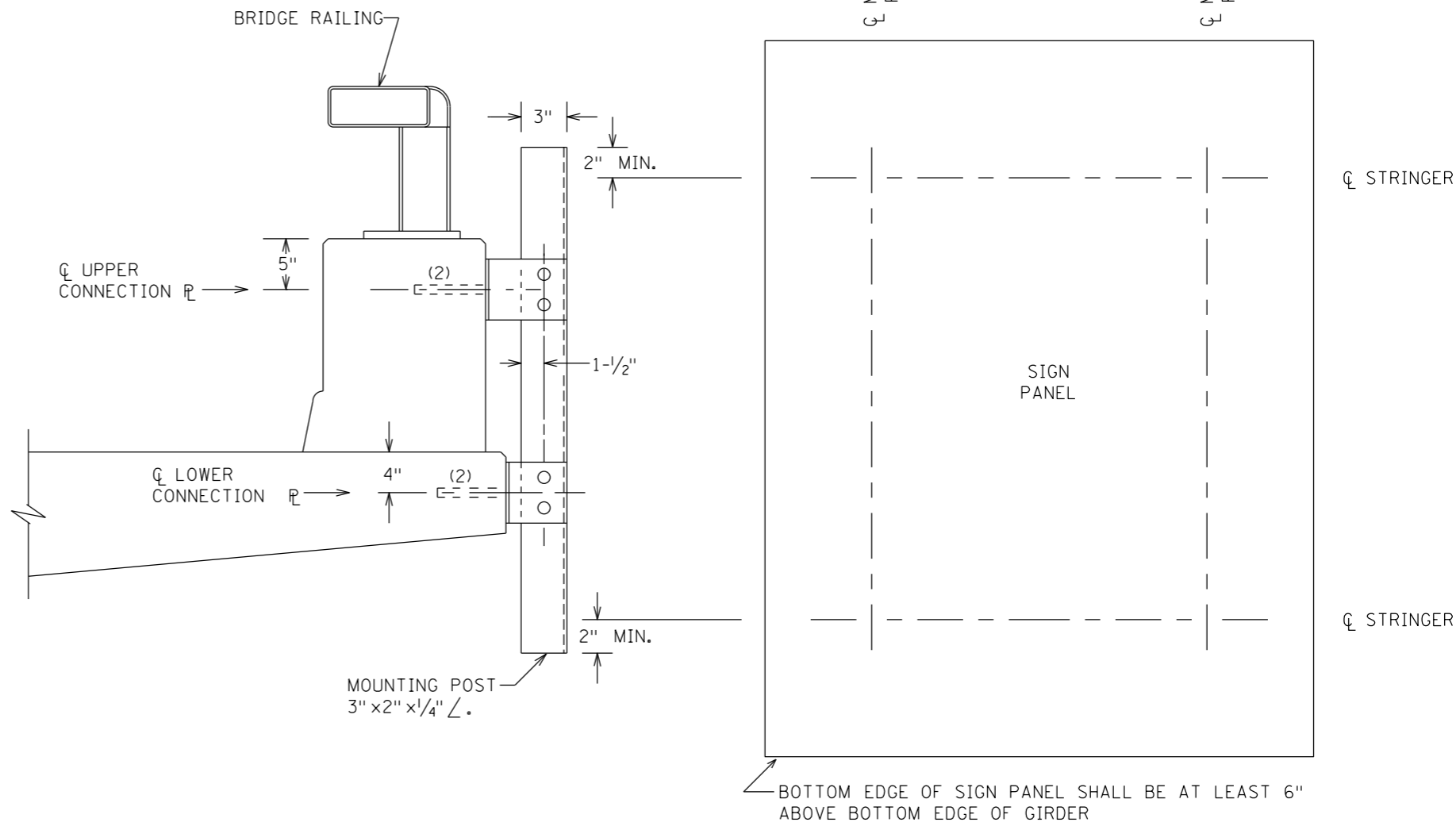
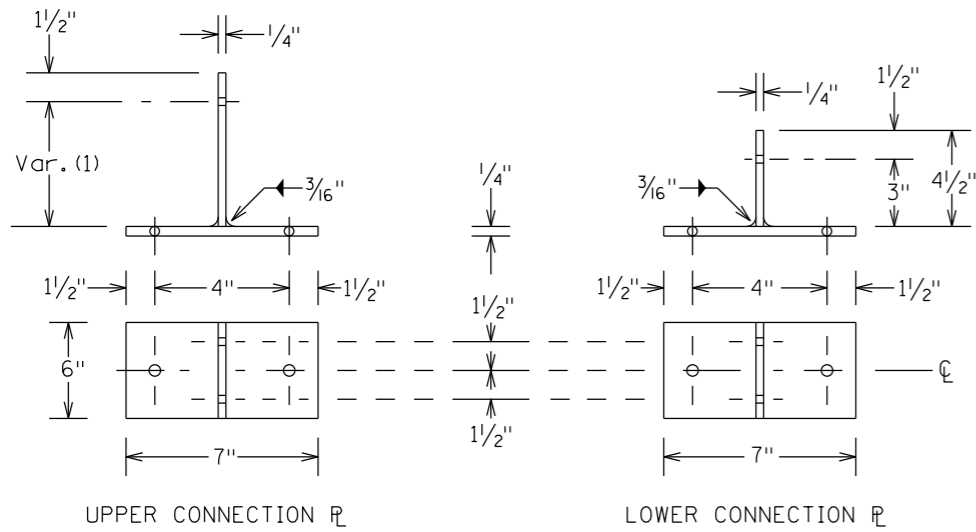
STRUCTURAL DETAILS
BRIDGE MOUNTED TYPE D SIGNS
DESIGN B6



- SPECIFIC NOTES:
- (1) POSTS SHALL BE PLUMB.
 - (2) CONCRETE ANCHORAGES SHALL BE CHEMICAL ADHESIVE TYPE AS APPROVED BY THE ENGINEER. ANCHOR RODS, PER 3385 TYPE A, SHALL BE 1/2" DIA. WITH A MIN. EMBEDMENT DEPTH OF 4 1/2", AND SHALL HAVE A MIN. ULTIMATE PULL-OUT STRENGTH OF 8000#. USE FLAT WASHER AND LOCK NUT OR PAIR OF JAM NUTS.

- GENERAL NOTES:
- 1. FOR DETAILS OF STRINGERS AND PANEL, SEE "C" AND "D" SIGN DETAILS.
 - 2. BOLTS FOR POST TO PLATE CONNECTIONS TO BE 1/2" DIA., HOLES TO BE 9/16" DIA.
 - 3. STRUCTURAL STEEL SHALL CONFORM TO Mn/DOT 3306 AND SHALL BE GALVANIZED PER Mn/DOT 3394.
 - 4. SIGN TO BE PLACED IN A HORIZONTAL POSITION.

STRUCTURAL DETAILS
BRIDGE MOUNTED TYPE D SIGNS



- SPECIFIC NOTES:**
- (1) POSTS SHALL BE PLUMB.
 - (2) CONCRETE ANCHORAGES SHALL BE CHEMICAL ADHESIVE TYPE AS APPROVED BY THE ENGINEER. ANCHOR RODS, PER 3385 TYPE A, SHALL BE 1/2" DIA. WITH A MIN. EMBEDMENT DEPTH OF 4 1/2", AND SHALL HAVE A MIN. ULTIMATE PULL-OUT STRENGTH OF 8000#. USE FLAT WASHER AND LOCK NUT OR PAIR OF JAM NUTS.

- GENERAL NOTES:**
- 1. FOR DETAILS OF STRINGERS AND PANEL, SEE "C" AND "D" SIGN DETAILS.
 - 2. BOLTS FOR POST TO PLATE CONNECTIONS TO BE 1/2" DIA., HOLES TO BE 9/16" DIA.
 - 3. STRUCTURAL STEEL SHALL CONFORM TO Mn/DOT 3306 AND SHALL BE GALVANIZED PER Mn/DOT 3394.
 - 4. SIGN TO BE PLACED IN A HORIZONTAL POSITION.

STRUCTURAL DETAILS
BRIDGE MOUNTED TYPE D SIGNS
DESIGN T-1