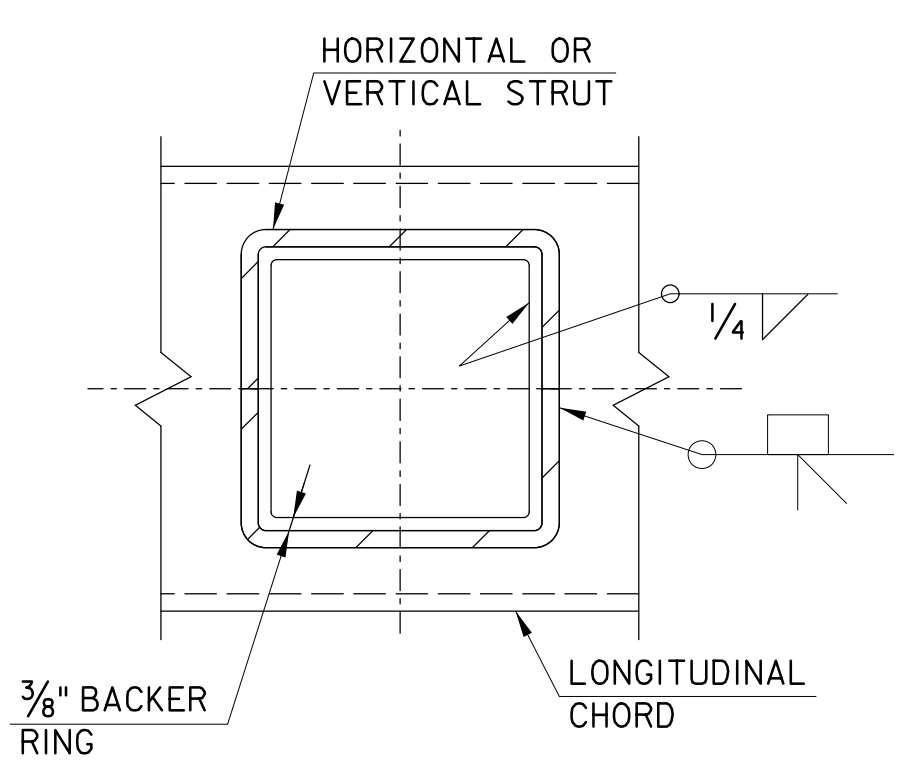
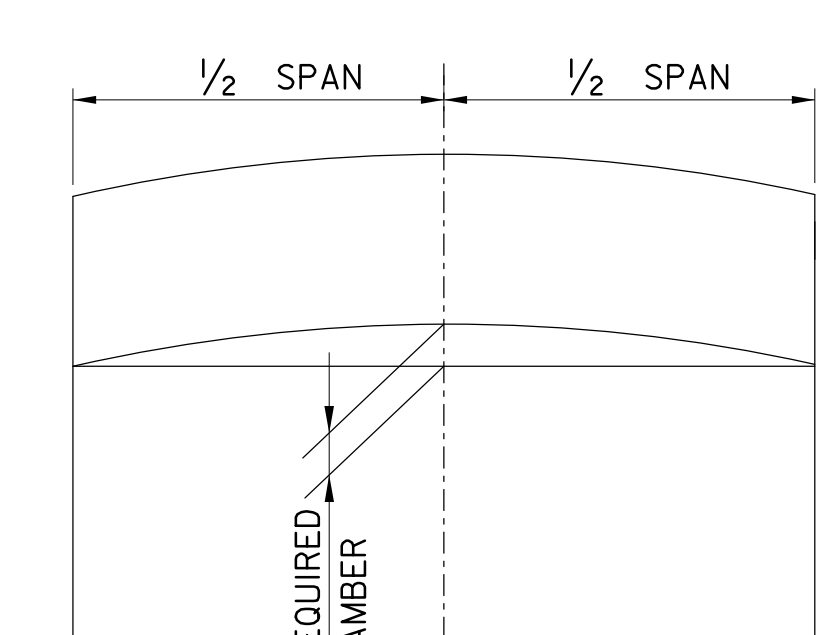


**DETAIL 2**  
(STEEL GRATING ATTACHMENT DETAIL)  
3" = 1'-0"



**SECTION C-C**  
N.T.S.



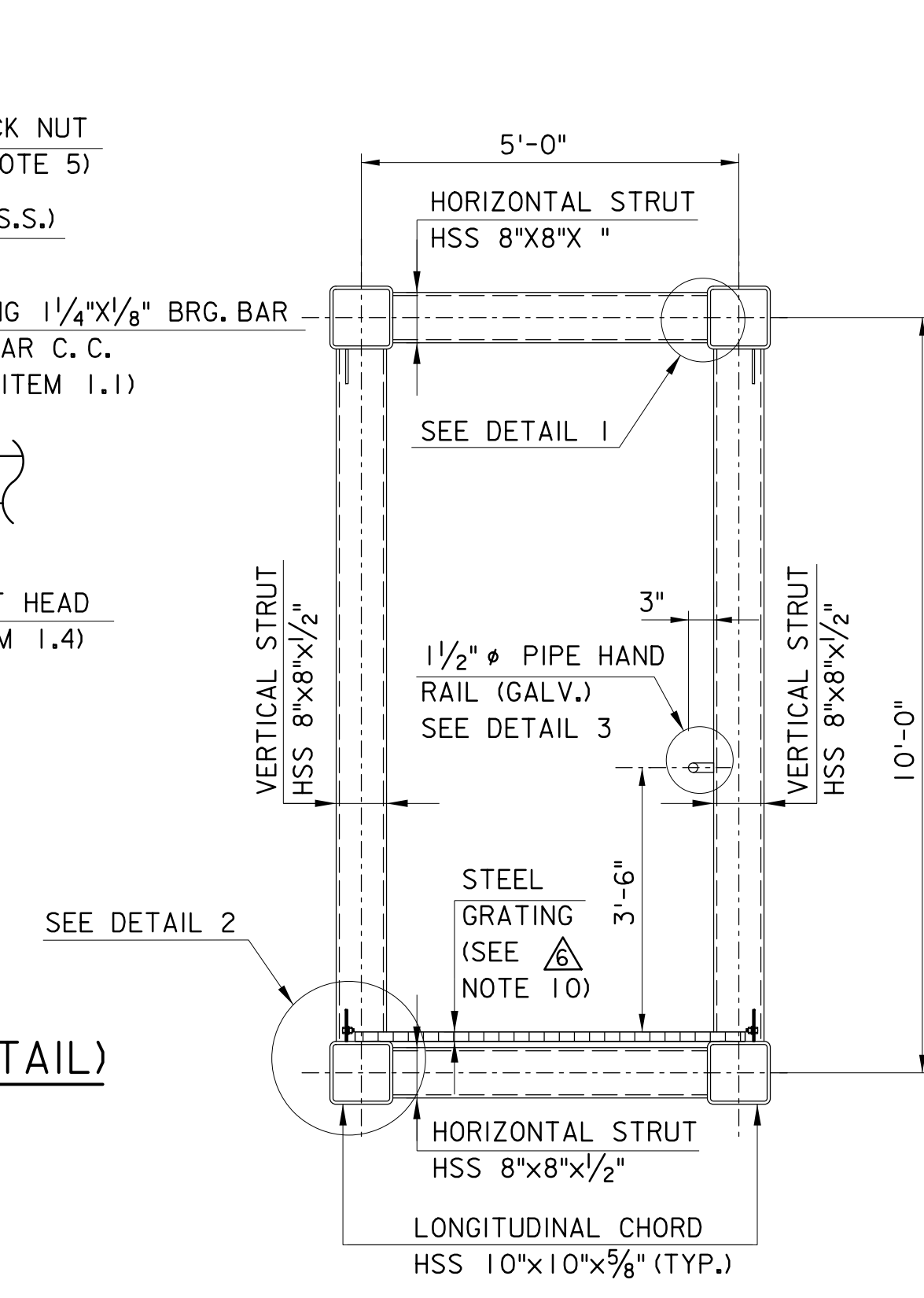
**CAMBER DIAGRAM**  
N.T.S.

TABLE A			
STRUCTURE SPAN LENGTH	END SECTION "L"	"N" SPACES (10'-0")	CAMBER (IN.)
60'	4'-0"	1	1 1/4"
65'	6'-6"	1	1 1/2"
70'	9'-0"	1	1 3/4"
75'	11'-6"	1	2"
80'	4'-0"	2	2"
85'	6'-6"	2	2 1/4"

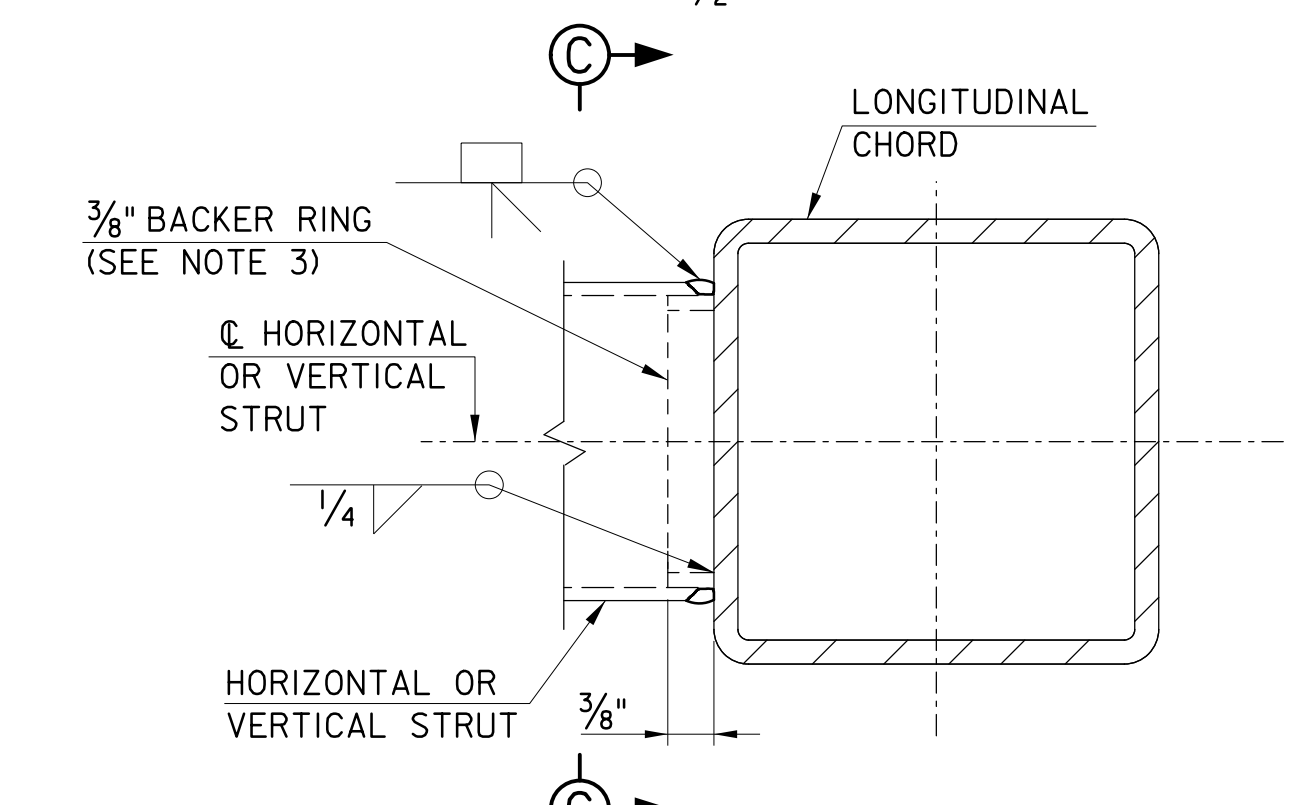
**△ CAMBER NOTE:**

- CAMBER SHALL BE OBTAINED BY ONE OF THE FOLLOWING METHODS:
- 1) INCREASING THE LENGTH OF THE TOP CHORDS AND DECREASING THE LENGTH OF THE BOTTOM CHORDS TO CREATE CONCENTRIC ARCS. THE INDIVIDUAL TOP AND BOTTOM CHORDS MAY BE FORMED INTO ARCS VIA AN APPROVED MECHANICAL OR HEAT BENDING METHOD.
  - 2) MITER THE TOP AND BOTTOM CHORDS VIA SHOP WELDED SPLICE CONNECTIONS WITH AN APPROVED FULL PENETRATION GROOVE WELD. MITERED SPLICES WILL NOT BE PERMITTED AT VMS PANEL LOCATION AND WILL PREFERABLY BE LOCATED 12" FROM VERTICAL STRUT LOCATIONS. A MINIMUM OF TWO (2) MITERED SHOP WELDED SPLICE CONNECTIONS WILL BE REQUIRED IN ORDER TO ENSURE THE PORTION OF THE TRUSS SPAN SUPPORTING THE VMS PANEL IS PLUMB AND LEVEL WHEN VIEWED IN ELEVATION.
  - 3) ALTERNATE METHOD AS APPROVED BY THE ENGINEER.

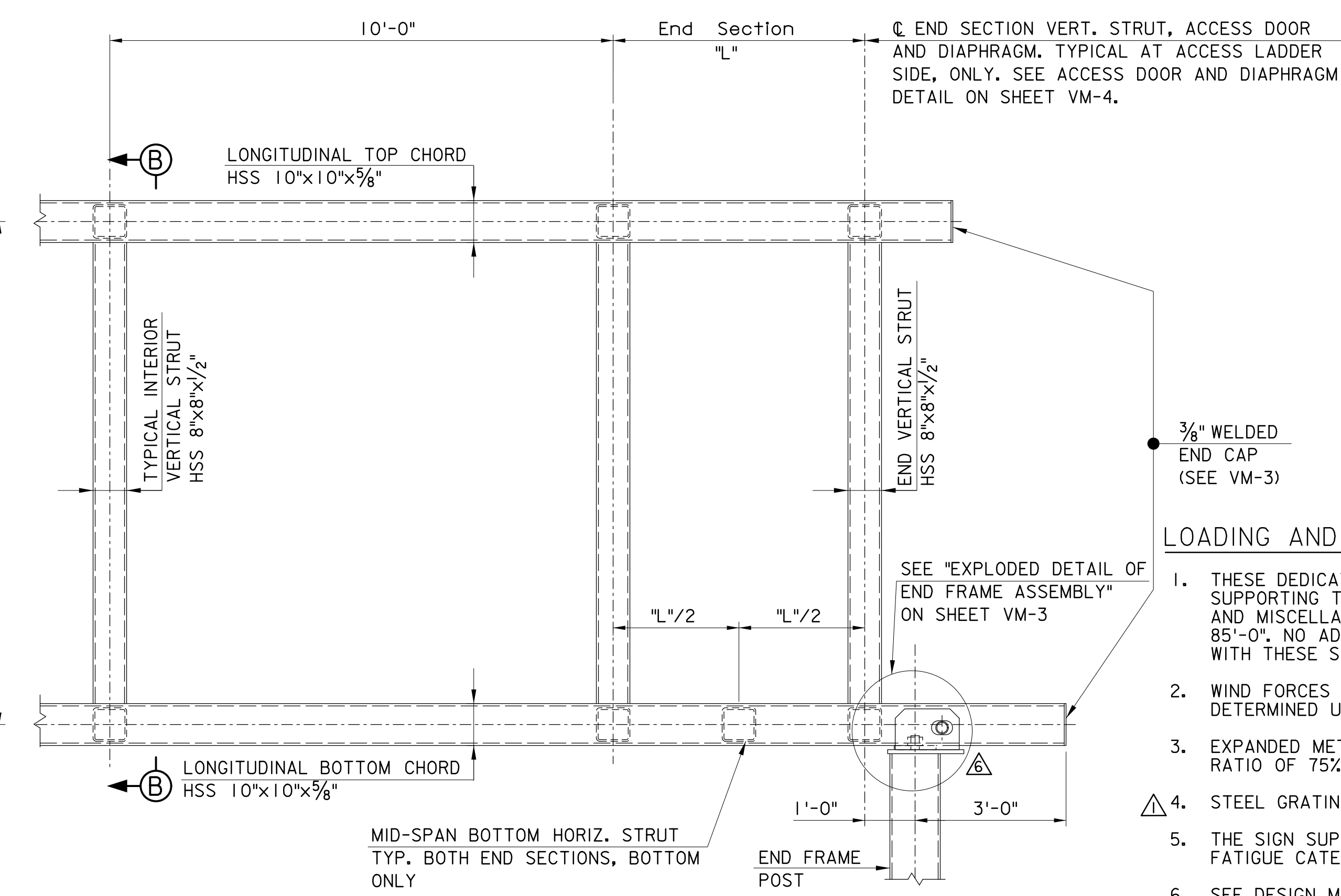
NO FORCE SHALL BE APPLIED IN ORDER TO OBTAIN THE CAMBER EXCEPT AS NOTED IN METHOD 1. THE REQUIRED CAMBER SHALL BE AS PROVIDED IN TABLE A ON THIS SHEET.



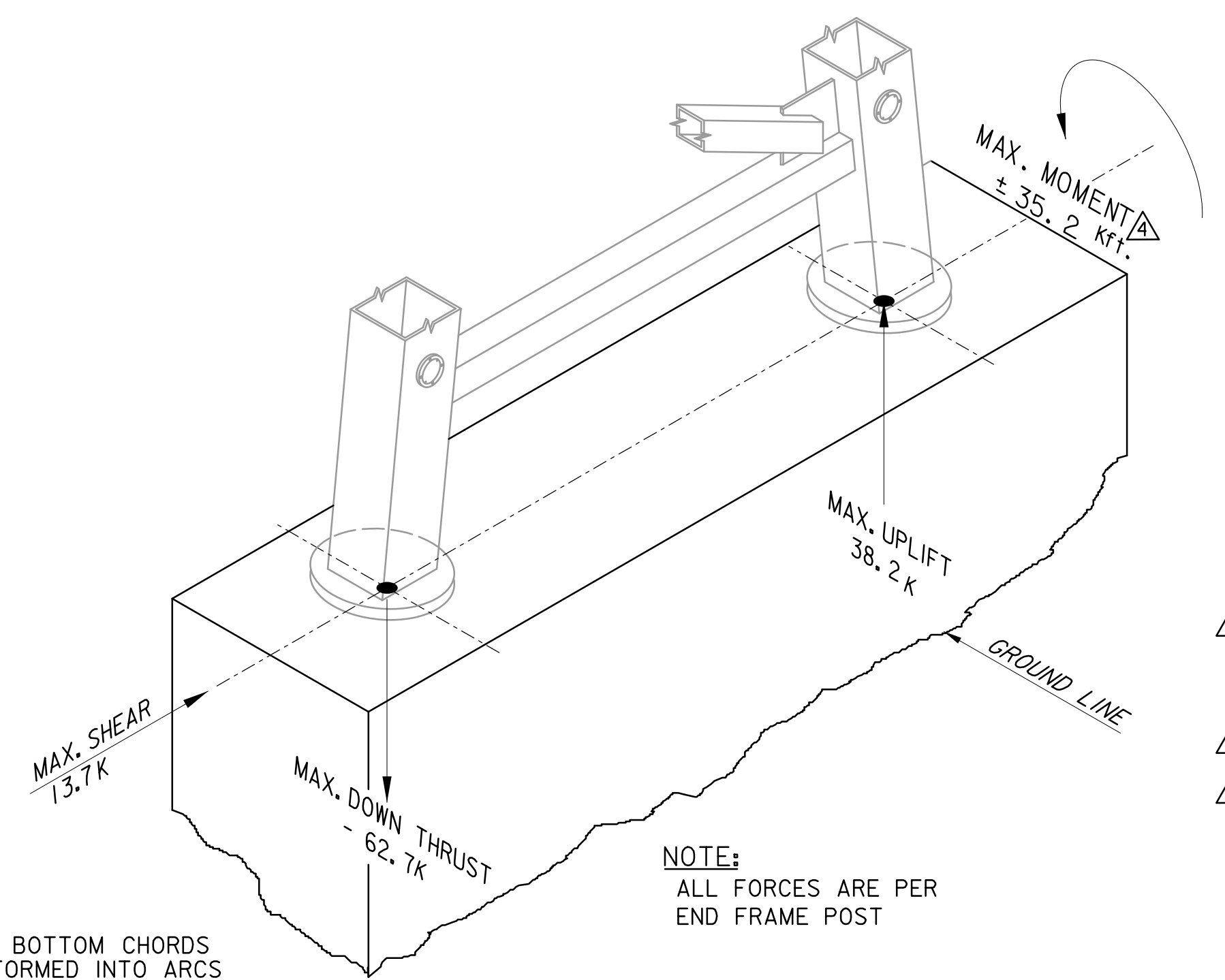
**SECTION B-B**  
1/2" = 1'-0"



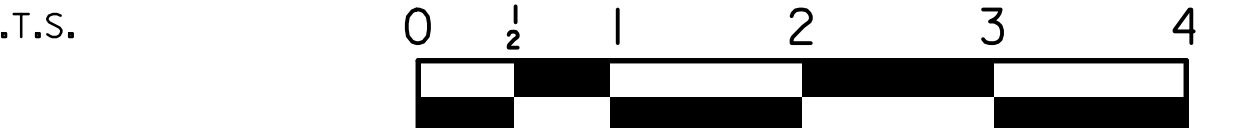
**DETAIL 1**  
(TYPICAL TRUSS WELDED CONNECTION)  
N.T.S.



**ELEVATION VIEW OF TYPICAL TRUSS END**  
(FENCE, GRATING, HANDRAIL AND SIGNS NOT SHOWN FOR CLARITY)  
1/2" = 1'-0"

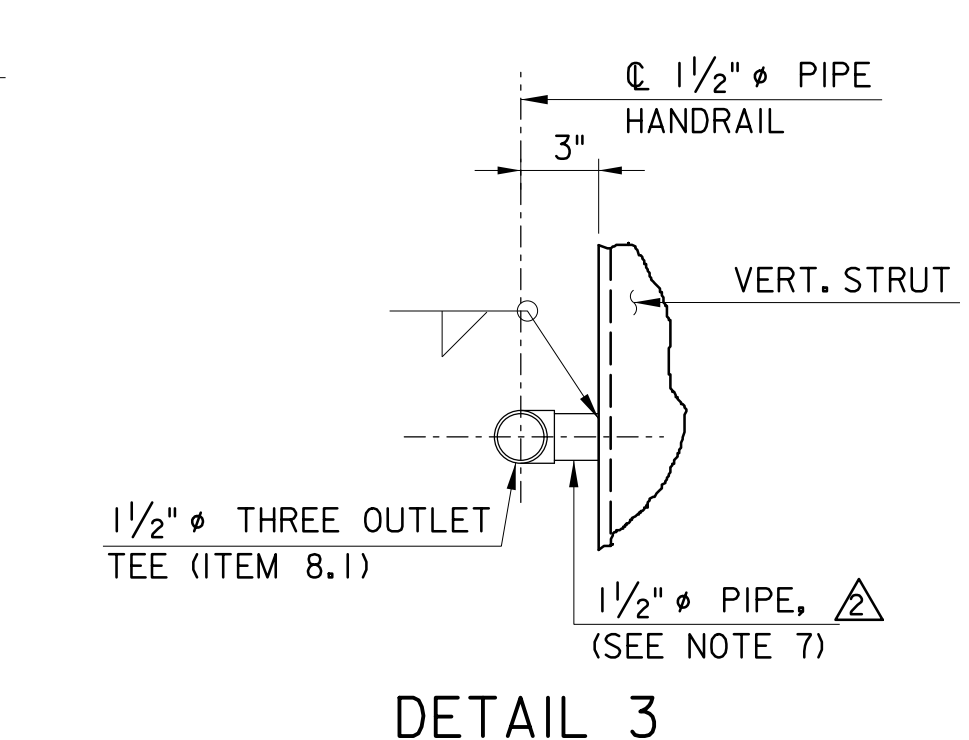


**FOUNDATION LOADING DIAGRAM**  
N.T.S.



ORIGINAL SIZE IN INCHES

APP.	NO.	DATE	REVISION
	6	10/23	ADDED NOTE AND REVISED LOCK PIN BRACKET
	5	4/16	SHEET TEXT FORMAT REVISIONS
	4	3/14	REVISED LOAD
	3	3/11	ADDED NOTE
	2	3/10	MINOR DETAIL REVISION
	1	7/09	REVISED NOTES
	0	8/08	ORIGINAL DRAWING



**DETAIL 3**  
1/2" = 1'-0"

△ NOTE:  
HANDRAIL TO EXTEND FOR FULL LENGTH OF TRUSS FROM END DIAPHRAGM TO END DIAPHRAGM.

**LOADING AND DESIGN NOTES:**

1. THESE DEDICATED SIGN STRUCTURE STANDARDS ARE INTENDED FOR THE SOLE PURPOSE OF SUPPORTING THE VARIABLE MESSAGE SIGN (VMS), VARIABLE SPEED LIMIT SIGN (VSL), AND MISCELLANEOUS APPURTENANCES SHOWN HEREIN FOR SPANS UP TO AND INCLUDING 85'-0". NO ADDITIONAL SIGN AREA OR APPURTENANCES MAY BE USED IN CONJUNCTION WITH THESE STANDARD DRAWINGS WITHOUT THE EXPRESS WRITTEN CONSENT OF THE AUTHORITY.
2. WIND FORCES ON VARIABLE MESSAGE SIGN AND VARIABLE SPEED LIMIT SIGN HAVE BEEN DETERMINED USING A DRAG COEFFICIENT (CD) OF 1.2.
3. EXPANDED METAL FENCING SHOWN IN THESE STANDARD DRAWINGS HAS AN OPEN AREA RATIO OF 75%.
- △ 4. STEEL GRATING SHOWN IN THESE STANDARD DRAWINGS HAS AN OPEN AREA RATIO OF 71%.
5. THE SIGN SUPPORT STRUCTURE HAS BEEN DESIGNED TO THE REQUIREMENTS OF AASHTO FATIGUE CATEGORY II.
6. SEE DESIGN MANUAL EXHIBITS 2-405 THROUGH 2-411 FOR REQUIRED PEDESTAL OFFSET AND PROTECTION.

**NOTES:**

1. CHORDS AND STRUTS OF THE TRUSS ARE TO BE USED AS ROUTING CONDUITS FOR VMS/VSL POWER AND CONTROL WIRING. SPECIFIC CHORD TO STRUT CONNECTIONS WILL REQUIRE WIRE PULL HOLES. SPECIFIC STRUTS WILL REQUIRE HAND HOLES TO FACILITATE THE INSTALLATION OF THE ASSOCIATED WIRING THROUGH THE WIRE PULL HOLES. SEE SHEET VM-7 FOR LOCATIONS AND DETAILS OF WIRE PULL HOLES AND HAND HOLES.
2. FOR FENCE ATTACHMENT DETAILS, SEE SHEET VM-3.
3. FULL PENETRATION WELDED CHORD TO STRUT CONNECTION WITH THE BACKER RING ATTACHED TO THE CHORD WITH A CONTINUOUS FILLET WELD AROUND THE INTERIOR FACE OF THE RING. THE THICKNESS OF THE BACKING RING SHALL NOT EXCEED 3/8".
4. STEEL GRATING SHALL BE COPED TO FIT AROUND VERTICAL STRUT MEMBER, AS REQUIRED.
5. WASHER SHALL BE OVERSIZE FENDER-WASHER, MIN. O.D.=1.625", MIN. THICKNESS=0.056".
6. FOR ITEM LISTS, SEE SHEET VM-10.
7. PIPE TO BE WELDED TO VERTICAL STRUT SHALL BE OF THE SAME MATERIAL AS THE VERTICAL STRUT, AS DEFINED IN NOTE 3A ON SHEET VM-1.
- △ 8. STRUCTURE SPAN LENGTHS SHALL BE IN 5 FOOT INCREMENTS AS SHOWN IN TABLE A. WHERE LOCAL SITE CONDITIONS PRECLUDE THE USE OF THE PROVIDED SPAN LENGTHS SHOWN IN TABLE A, THE END SECTION LENGTH "L" SHALL BE REDUCED AS REQUIRED TO ACCOMMODATE THE NON-STANDARD SPAN LENGTH.
- △ 9. A FABRICATED STEEL SPACER IS REQUIRED BETWEEN THE SADDLE CLIP AND NUT INSERT.
- △ 10. ATTACH ALL INDIVIDUAL STEEL WALKWAY GRATING PANELS TO ONE ANOTHER WITH PERFORATED STAINLESS STEEL LOCKING CABLE TIES (ITEM 1.5). USE 3 CABLE TIES EVENLY SPACED AT EACH JOINT. JOIN TOGETHER USING AVAILABLE TENSIONING TOOL.

NEW JERSEY TURNPIKE AUTHORITY  
**NEW JERSEY TURNPIKE**

OVERHEAD SPAN VMS/VSL SUPPORT STRUCTURES  
**TRUSS DETAILS**

OFFICE OF THE CHIEF ENGINEER  
NEW JERSEY TURNPIKE AUTHORITY

WOODBRIDGE NEW JERSEY

2008 STANDARD DRAWING  
**VM-2**