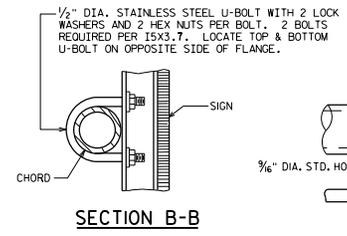
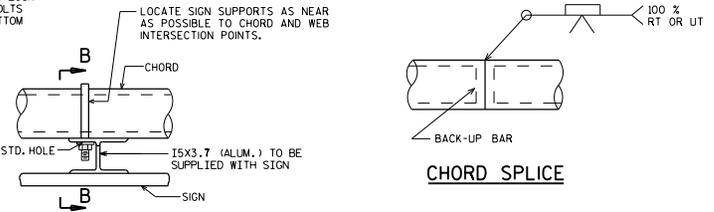


PLAN

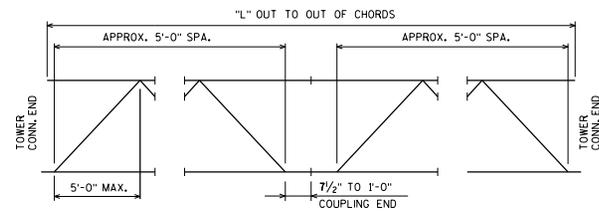


SECTION B-B

TYPICAL SIGN CONNECTION
USE FOR TYPE I AND II SIGNS ONLY



CHORD SPLICE



TRUSS ARRANGEMENT

FABRICATOR MAY MAKE TRUSSES ANY LENGTH KEEPING A SECTION A MINIMUM OF 20'-0" & A MULTIPLE OF 5'-0". CHORD FIELD SPLICES SHALL BE MADE WITH COUPLINGS. CHORD SHOP SPLICE SHALL BE THE WELDED SPLICE SHOWN ABOVE.

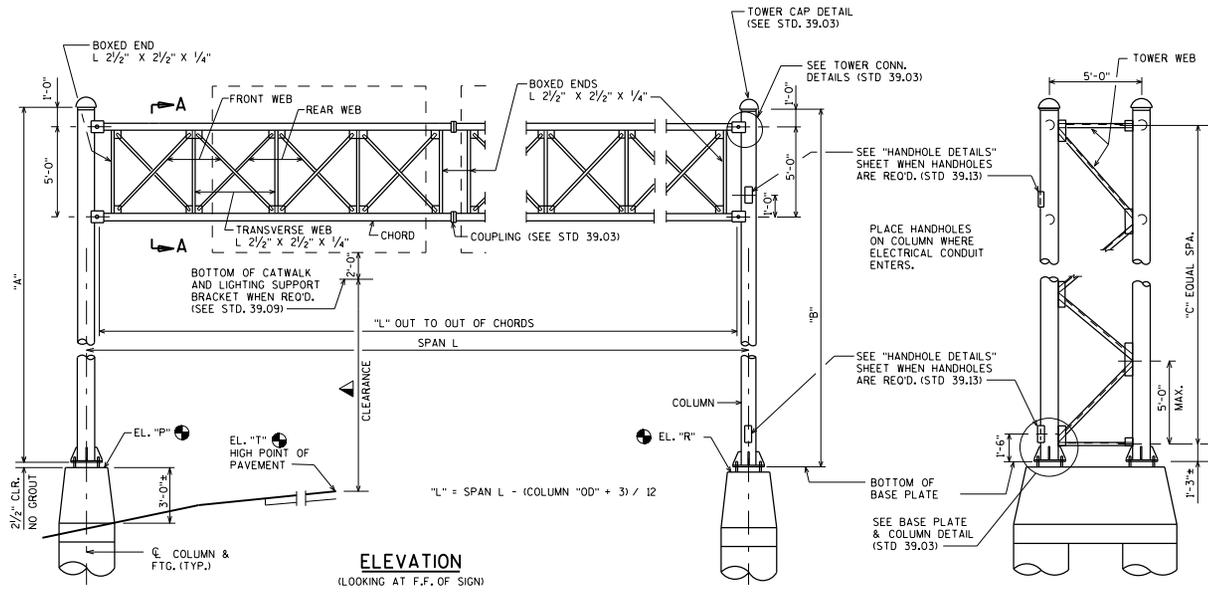
NOTES

- DRAWINGS SHALL NOT BE SCALED.
- STEEL COLUMN AND CHORD PIPES SHALL BE API SPEC. 5L GRADE X42 Fy = 42,000 PSI**
- PLATES, BARS & STRUCTURAL ANGLES SHALL BE ASTM A709 GRADE 36 Fy = 36,000 PSI
- STEEL ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554 GRADE 55, ASTM A563A HEAVY HEX NUTS, AND ASTM F436 WASHERS.
- UNLESS DETAILED OTHERWISE IN THE PLANS, ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH 3/4" DIA. A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.
- ALL STRUCTURAL STEEL MEMBERS, PLATES, ANCHOR RODS, H.S. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED PER SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.
- WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF A TRUSS UNIT CAN BE GALVANIZED IN ONE PIECE.
- WELD TEST AS PER AWS D11.
- EXACT LOCATION OF SIGN BRIDGE SHALL BE DETERMINED BY THE REGION TRAFFIC ENGINEER.
- SEE SIGN PLATE NO. 44-6 OF THE SIGN PLATE MANUAL FOR INSTRUCTION ON CENTERING SIGN VERTICALLY ON TRUSS.
- ** AN ALTERNATE MATERIAL MAY BE SUBSTITUTED, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION, SEE SECTION 39.3 IN THE BRIDGE MANUAL FOR ACCEPTABLE MATERIAL.
- ☼ ELEVATIONS TO BE SHOWN ON "GENERAL LAYOUT" SHEET.
- ▲ 20'-0" MIN. FOR OSOW HIGH CLEARANCE ROUTE, 18'-3" MIN. FOR ALL OTHERS.

DESIGN DATA

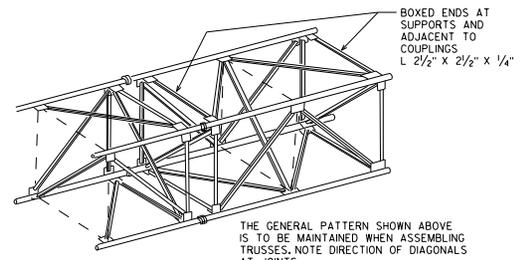
DEAD LOAD - 3 PSF OF SIGN, WT. OF SUPPORTING STRUCTURE, CATWALK, LIGHTS AND RAILINGS.
 ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS.
 WIND PRESSURE - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.
 FATIGUE GROUP LOAD IS APPLIED PER SECTION 39.4.2 OF THE WISDOT BRIDGE MANUAL.
 DESIGNED ACCORDING TO THE 6TH EDITION OF AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS."

STANDARDS 39.03, 39.09, AND 39.13 DETAILS ARE USED WITH THIS STANDARD TO DETAIL A "4-CHORD GALVANIZED STEEL SIGN BRIDGE" FOR TYPE I AND II SIGNS ONLY.

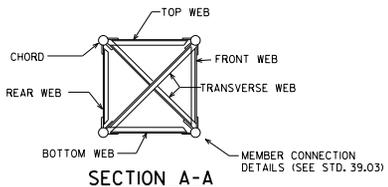


ELEVATION
(LOOKING AT F.F. OF SIGN)

END VIEW

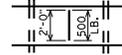


TYPICAL TRUSS SECTION



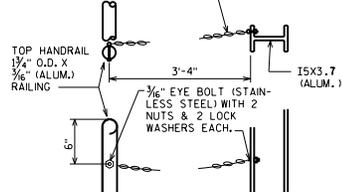
SECTION A-A

4-CHORD GALVANIZED STEEL SIGN BRIDGE	
	BUREAU OF STRUCTURES
APPROVED: <u>Bill Oliva</u>	DATE: 7-18



NOTE:
CATWALK SHALL MEET AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 6TH EDITION, (500 LB. DISTRIBUTED OVER 2'-0" TRANSVERSELY WITH THE BASIC ALLOWABLE UNIT STRESS INCREASED 25%), MAX. SPAN IS 8'-0". CATWALK SHALL ALSO MEET THE MOST RECENT ISSUE OF OSHA STD'S FOR WALKING-WORKING SURFACES.

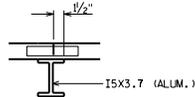
3/16" GALV. STEEL STRAIGHT LENGTH CHAIN WITH APPROX. 12 LINKS PER FOOT, RATED WORK LOAD = 700 LB.



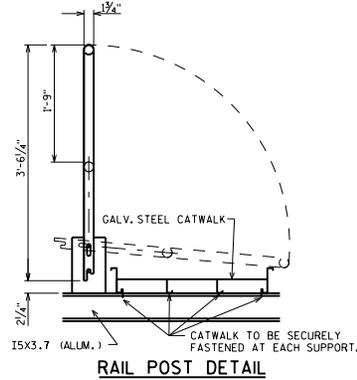
SAFETY CHAIN DETAIL



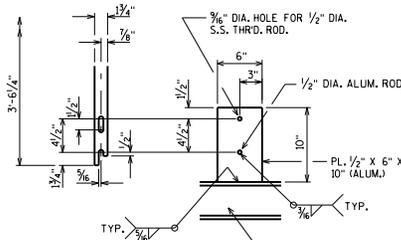
CATWALK TERMINATION DETAIL



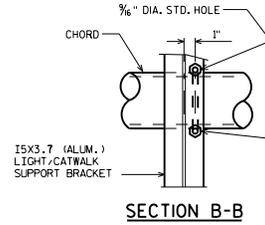
CATWALK SPLICE LOCATION DETAIL



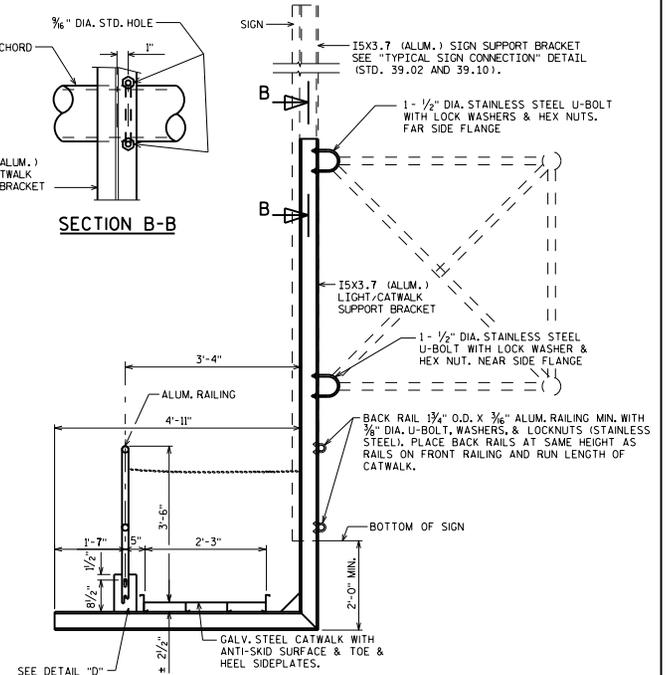
RAIL POST DETAIL



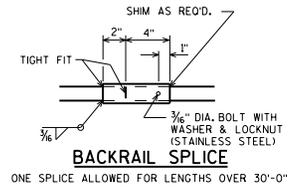
DETAIL "D"



SECTION B-B

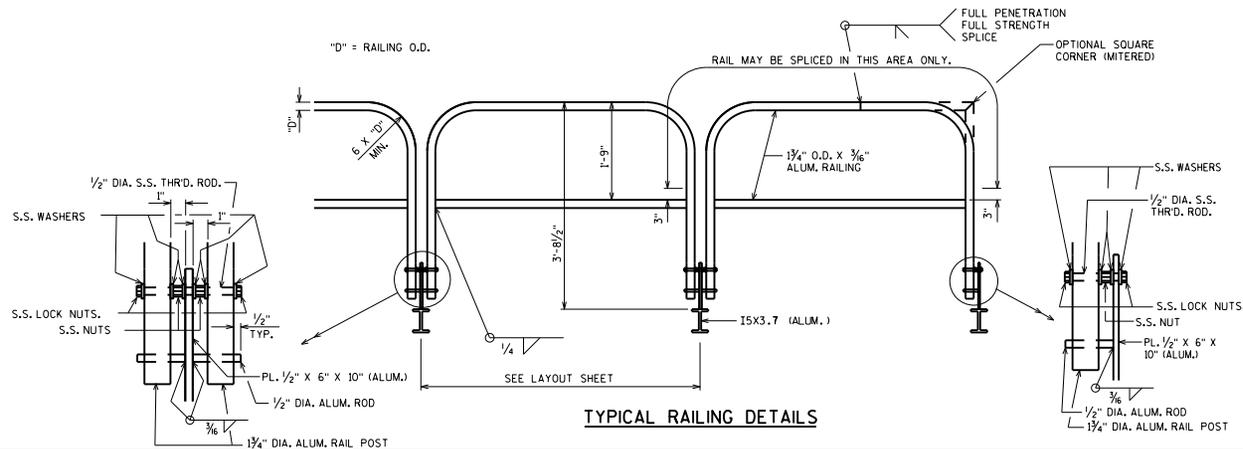


SECTION THRU WALKWAY

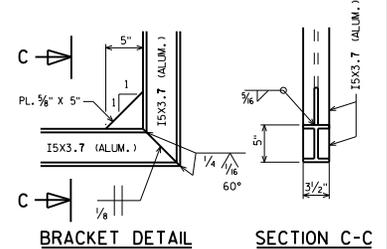


BACKRAIL SPLICE

ONE SPLICE ALLOWED FOR LENGTHS OVER 30'-0"



TYPICAL RAILING DETAILS



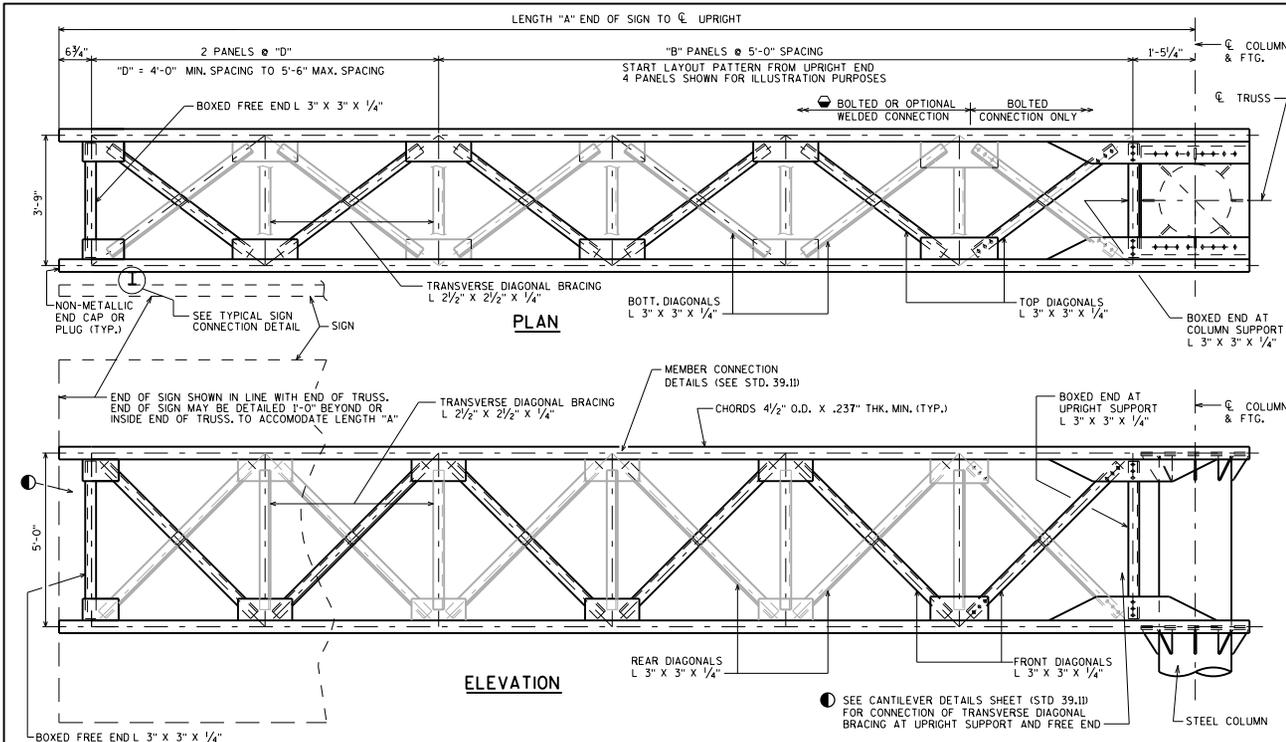
BRACKET DETAIL

SECTION C-C

SIGN BRIDGE CATWALK FOR TYPE I AND II SIGNS



APPROVED: Bill Oliva DATE: 7-16



NOTES

- DRAWINGS SHALL NOT BE SCALED.
- STEEL COLUMN AND CHORD PIPES SHALL BE API SPEC. 5L GRADE X42, PSL-2, F_y = 42,000 PSI **
- PLATES, BARS & STRUCTURAL ANGLES SHALL BE ASTM A709 GRADE 36, F_y = 36,000 PSI
- STEEL ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554 GRADE 55, ASTM A563A HEAVY HEX NUTS, AND ASTM F436 WASHERS.
- UNLESS DETAILED OTHERWISE IN THE PLANS, ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH 3/4" DIA. A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.
- ALL STRUCTURAL STEEL MEMBERS, PLATES, ANCHOR RODS, H.S. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED PER SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.
- WELD TEST AS PER AWS D11.
- EXACT LOCATION OF SIGN BRIDGE SHALL BE DETERMINED BY THE REGION TRAFFIC ENGINEER.
- PREFABRICATE CAMBER INTO THE HORIZONTAL SUPPORT PROVIDING AN AMOUNT "Y" AT END OF TRUSS SHOWN IN "CAMBER DIAGRAM". DO NOT RAKE VERTICAL UPRIGHT BY ADJUSTMENT OF LEVELING NUTS.
- SEE SIGN PLATE NO. A4-6 OF THE SIGN PLATE MANUAL FOR INSTRUCTION ON CENTERING SIGN VERTICALLY ON TRUSS.
- ** AN ALTERNATE MATERIAL MAY BE SUBSTITUTED, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION, SEE SECTION 39.3 IN THE BRIDGE MANUAL FOR ACCEPTABLE MATERIAL.
- WELDED CONNECTIONS MAY BE USED IF UNIT CAN BE GALVANIZED IN ONE PIECE.
- ELEVATIONS TO BE SHOWN ON "GENERAL LAYOUT" SHEET.
- 20'-0" MIN. FOR OSOW HIGH CLEARANCE ROUTE, 18'-3" MIN. FOR ALL OTHERS.

DESIGN DATA

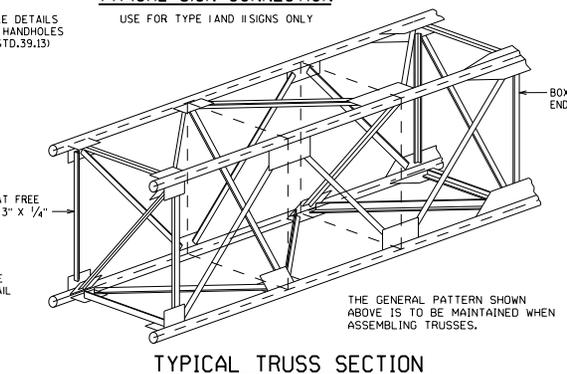
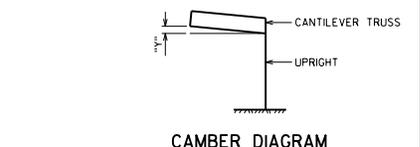
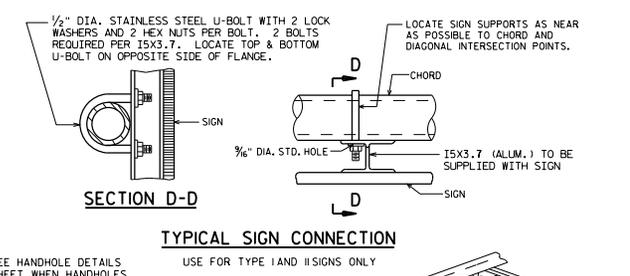
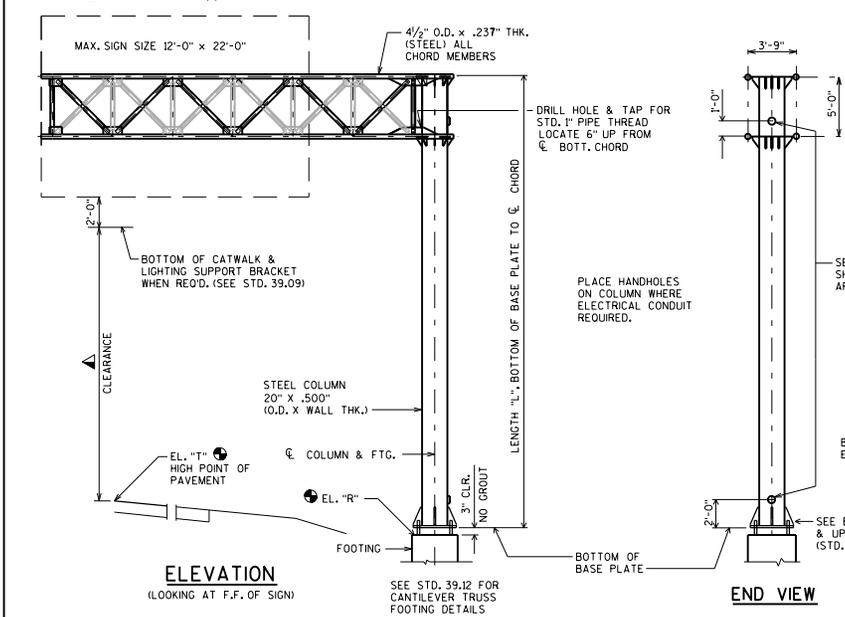
DEAD LOAD - 3 PSF OF SIGN, WT. OF SUPPORTING STRUCTURE, CATWALK, LIGHTS AND RAILINGS.
 ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS.
 WIND PRESSURE - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.
 FATIGUE CATEGORY I WITHOUT GALLOPING WIND EFFECTS.

DESIGNED ACCORDING TO THE 4TH EDITION AND INTERIM REVISIONS OF AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS."

DESIGNER NOTES

"L"	CAMBER VALUES "Y" (IN.)				
	32	30	28	26	24
30	4 1/8	3 1/2	2 7/8	2 3/8	1 7/8
28	3 3/8	3 1/4	2 3/4	2 1/4	1 3/4
26	3 1/8	3	2 1/2	2 1/8	1 3/4
24	3 1/8	2 7/8	2 3/8	2	1 1/2
22	3 1/8	2 3/8	2 1/4	1 7/8	1 1/2

"A" & "L" IN FT.
 INTERPOLATE FOR VALUES NOT SHOWN
 TABLES REFLECT CATWALK LOADING. FOR CAMBER VALUES WITHOUT CATWALK LOADING, MULTIPLY TABLE VALUES ABOVE AS FOLLOWS:
 MULTIPLY "Y" BY .72

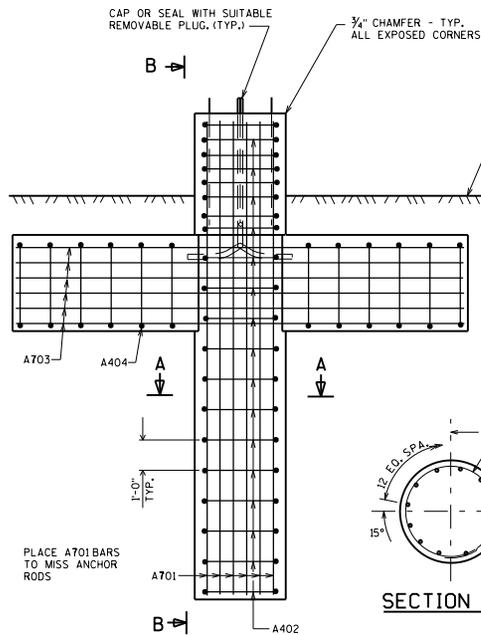


STANDARDS 39.9, 39.11, 39.12 AND 39.13 DETAILS ARE USED WITH THIS STANDARD TO DETAIL A "GALVANIZED STEEL CANTILEVER SIGN TRUSS" FOR TYPE I AND II SIGNS ONLY.

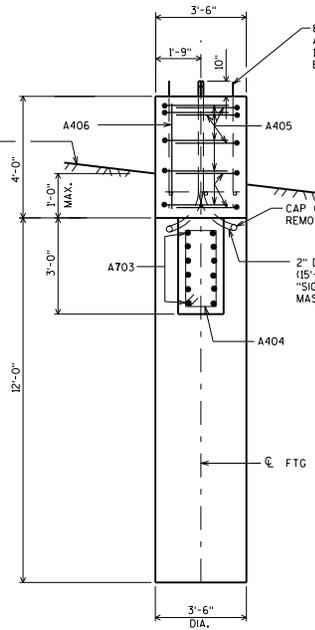
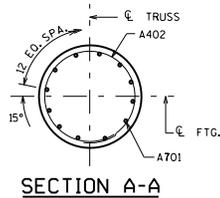
GALVANIZED STEEL CANTILEVER SIGN TRUSS

BUREAU OF STRUCTURES

APPROVED: Bill Oliva DATE: 7-18

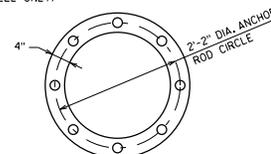


ELEVATION

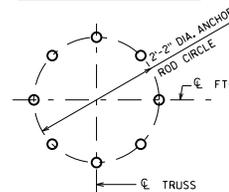


SECTION B-B

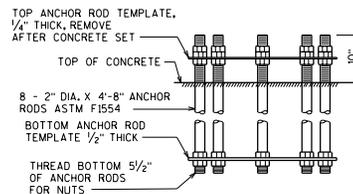
(SHOWING WING AND CAP STEEL ONLY)



TOP VIEW OF TOP & BOTTOM TEMPLATES

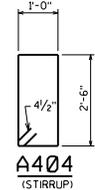
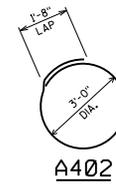
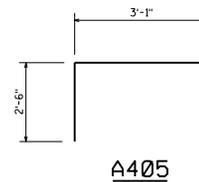


ANCHOR ROD DETAILS



BILL OF BARS

BAR MARK	COY.	NO. REQ'D	LENGTH	BEND	CUT. DIAG.	BUN-DLE	LOCATION
A701	X	12	15'-6"				FOOTING - COLUMN/TOP
A402	X	16	11'-2"	X			FOOTING - COLUMN/TOP
A703	X	12	15'-0"				FOOTING - WINGS
A404	X	12	7'-6"	X			FOOTING - WINGS
A405	X	10	7'-11"	X			FOOTING - TOP
A406	X	4	3'-6"				FOOTING - TOP - COLUMNS



NOTES

- DRAWINGS SHALL NOT BE SCALED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.
- BENDING DIMENSIONS ARE OUT TO OUT OF BAR.
- CENTER ANCHOR ROD ASSEMBLY TO MISS BAR STEEL REINFORCEMENT AND MAKE SURE IT IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE FOOTING AS DETAILED ON PLAN. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURE IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHOR ROD.

ULTIMATE DESIGN STRESSES

- CONCRETE MASONRY $f'_c=3,500$ PSI
- BAR STEEL REINFORCEMENT, GRADE 60 $f_y=60,000$ PSI
- ANCHOR BOLTS ASTM F1554 $f_y=55,000$ PSI

FOUNDATION DATA

ALLOWABLE SOIL BEARING PRESSURE = 2T/5F

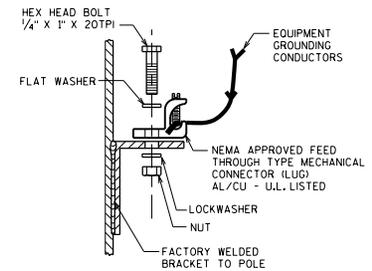
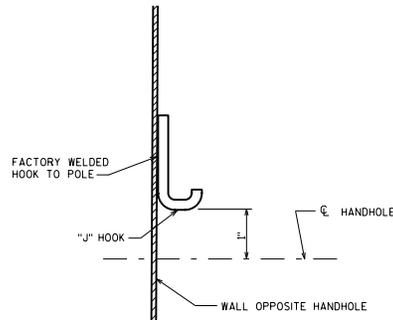
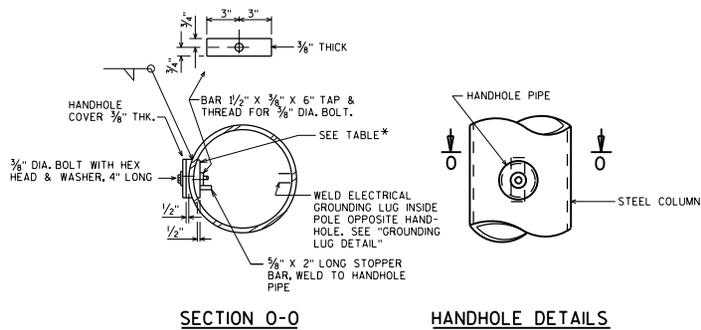
TOTAL ESTIMATED QUANTITIES (1 FTG.)

- SIGN SUPPORTS CONCRETE MASONRY _____ 8 CY
- SIGN SUPPORTS STEEL REINFORCEMENT HS _____ 990 LB

CANTILEVER TRUSS FOOTING



APPROVED: Bill Oliva DATE: 7-16



SECTION O-O

HANDHOLE DETAILS

TYPICAL "J" HOOK LOCATION

GROUNDING LUG DETAIL

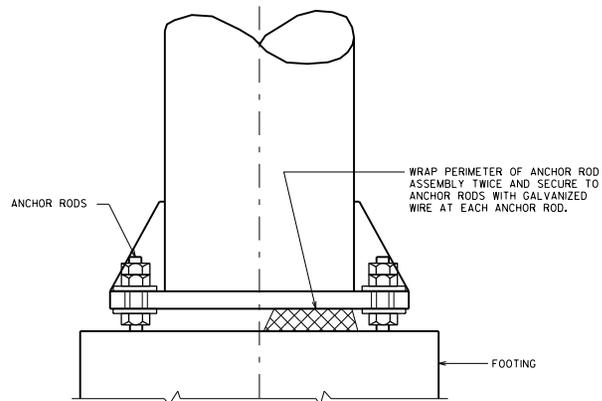
HANDHOLE NOTES

HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN BRIDGE STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE REGION TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMNS AND MEMBERS. CONDUIT (AS REQ'D) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL PLAN DETAIL SHEETS.

UNLESS NOTED OTHERWISE, ALL HANDHOLE ELEMENTS TO BE GALVANIZED PER SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.

* COLUMN SIZE O.D. X THK.	HANDHOLE PIPE O.D. X MIN. THK.
UP TO AND INCLUDING 16" X 0.375"	5.562" X 0.500"
GREATER THAN 16" X 0.375" TO AND INCLUDING 24" X 0.562"	6.625" X 0.562"



RODENT SCREEN

(ONLY REQ'D WHEN ELECTRICAL DEVICES ARE INSTALLED)

HANDHOLE DETAILS	
	BUREAU OF STRUCTURES
APPROVED: <u>Bill Oliva</u>	DATE: 7-18