

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Various Routes
D 1 OVD SIN STR REPL 2010-29
Various Counties
Sheet 1 of 16
Contract Number 46092

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

Various Routes
D 1 OVD SIN STR REPL 2010-29
Various Counties
C-60-030-10

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED PASSED Nov. 2, 2009

[Signature]
ENGINEER OF OPERATIONS

December 4, 2009

Charles J. Ingersoll
ENGINEER OF DESIGN AND ENVIRONMENT

APPROVED December 4, 2009

Christine M. Reed
DIRECTOR DIVISION OF HIGHWAYS

JOINT UTILITY LOCATING INFORMATION FOR
EXCAVATIONS PHONE: 800-892-0123

CONTRACT NO. 46092

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Summary and Schedule of Quantities

Various Routes
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CODE NUMBER	PAYITEM	UNIT	Y002 - 1C 100% STATE TOTAL QUANTITY	URBAN
T9995400	FURNISH ^{AND} INSTALL SADDLE SHIM BLOCK	EACH	48.00	48.00
T9996200	REPAIR CONCRETE FOUNDATION FOR OVERHEAD SIGN STRUCTURE	EACH	2.00	2.00
T9996300	OVERHEAD SIGN SUPPORT GROUT REPAIR	EACH	16.00	16.00
T9997255	FURNISH ^{AND} INSTALL INTERNAL TRUSS DAMPER	EACH	12.00	12.00
T9997700	FURNISH ^{AND} INSTALL SAFETY CHAIN	EACH	24.00	24.00
T9998820	FURNISH ^{AND} INSTALL HANDRAIL	FOOT	905.25	905.25
T9998910	FURNISH ^{AND} INSTALL METAL SCREEN	EACH	32.00	32.00
67100100	MOBILIZATION	L SUM	1.00	1.00
70101700	TRAFFIC CONTROL ^{AND} PROTECTION	L SUM	1.00	1.00
73305000	OVERHEAD SIGN STRUCTURE WALKWAY	FOOT	1,110.00	1,110.00
73800100	STRUCTURAL STEEL SUPPORT FOR OVERHEAD SIGN STRUCTURE-SPAN	EACH	24.00	24.00
73801100	REMOVE ^{AND} RE ERECT OVERHEAD SIGN STRUCTURE-SPAN	EACH	12.00	12.00
X0325702	NIGHTTIME WORK ZONE LIGHTING	L SUM	1.00	1.00
X0326714	REPLACE OVERHEAD SIGN STRUCTURE ANCHOR ROD	EACH	5.00	5.00
X0326715	REMOVE LIGHT GLARE REDUCTION SYSTEM	EACH	1.00	1.00

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District 1
Schedule of Overhead Sign Structure Repair & Replacement

Location No.:	1-01	State I.D. No.:	1S045U030R000.0-001(KG6)				
County:	Kane	Route:	US-30	M.P.:	0.0	Direction:	EB
Description of Work	Unit	Quantity					
Remove & Re-erect Overhead Sign Structure - Span	Each	1.00					
Structural Steel Support Overhead Sign Structure	Each	2.00					
Furnish & Install Internal Truss Damper	Each	1.00					
Furnish & Install Safety Chain	Each	2.00					
Overhead Sign Support Grout Repair	Each	4.00					
Overhead Sign Structure Walkway	Foot	70.00					
Furnish & Install Saddle Shim Block	Each	4.00					
This work shall be completed during District 1 night-time hours.							

Location No.:	1-02	State I.D. No.:	1S049U041R000.0-004 (T3)				
County:	Lake	Route:	US-41	M.P.:	0.0	Direction:	NB
Description of Work	Unit	Quantity					
Remove Light Glare Reduction System	Each	1.00					
This work shall be completed during District 1 night-time hours.							

Location No.:	1-03	State I.D. No.:	1S045S056L000.0 (HG3)				
County:	Kane	Route:	IL 56	M.P.:	0.0	Direction:	WB
Description of Work	Unit	Quantity					
Remove & Re-erect Overhead Sign Structure-Span	Each	1.00					
Structural Steel Sign Support Overhead Sign Structure	Each	2.00					
Furnish & Install Internal Truss Damper	Each	1.00					
Furnish & Install Safety Chain	Each	2.00					
Overhead Sign Support Grout Repair	Each	4.00					
Overhead Sign Structure Walkway	Foot	67.00					
Furnish & Install Saddle Shim Block	Each	4.00					
Repair Concrete Foundation for Overhead Sign Structure	Each	2.00					
This work shall be completed during District 1 night-time hours.							

Location No.:	1-04	State I.D. No.:	1S016I057R341.9 (W2)				
County:	Cook	Route:	I-57	M.P.:	341.9	Direction:	NB
Description of Work	Unit	Quantity					
Remove & Re-erect Overhead Sign Structure-Span	Each	1.00					
Structural Steel Sign Support Overhead Sign Structure	Each	2.00					
Furnish & Install Internal Truss Damper	Each	1.00					
Furnish & Install Safety Chain	Each	2.00					
Overhead Sign Structure Walkway	Foot	111.50					
Furnish & Install Saddle Shim Block	Each	4.00					
Furnish & Install Metal Screen	Each	4.00					
This work shall be completed during District 1 night-time hours.							

Location No.:	1-05	State I.D. No.:	1S016I057L342.4 (W1)				
County:	Cook	Route:	I-57	M.P.:	342.4	Direction:	SB
Description of Work	Unit	Quantity					
Remove & Re-erect Overhead Sign Structure-Span	Each	1.00					
Structural Steel Sign Support Overhead Sign Structure	Each	2.00					
Furnish & Install Internal Truss Damper	Each	1.00					
Furnish & Install Safety Chain	Each	2.00					
Overhead Sign Structure Walkway	Foot	112.50					
Furnish & Install Saddle Shim Block	Each	4.00					
Furnish & Install Metal Screen	Each	4.00					
This work shall be completed during District 1 night-time hours.							

Location No.:	1-06	State I.D. No.:	1S016I057L342.4 (W1)				
County:	Cook	Route:	I-57	M.P.:	342.4	Direction:	NB
Description of Work	Unit	Quantity					
Remove & Re-erect Overhead Sign Structure-Span	Each	1.00					
Structural Steel Sign Support Overhead Sign Structure	Each	2.00					
Furnish & Install Internal Truss Damper	Each	1.00					
Furnish & Install Safety Chain	Each	2.00					
Overhead Sign Structure Walkway	Foot	112.50					
Furnish & Install Saddle Shim Block	Each	4.00					
Furnish & Install Metal Screen	Each	4.00					
This work shall be completed during District 1 night-time hours.							

Location No.:	1-07	State I.D. No.:	1C016I080R154.3 (E2)				
County:	Cook	Route:	I-80	M.P.:	154.3	Direction:	EB
Description of Work	Unit	Quantity					
Remove & Re-erect Overhead Sign Structure - Span	Each	1.00					
Structural Steel Support Overhead Sign Structure	Each	2.00					
Furnish & Install Internal Truss Damper	Each	1.00					
Furnish & Install Safety Chain	Each	2.00					
Overhead Sign Support Grout Repair	Each	4.00					
Overhead Sign Structure Walkway	Foot	89.50					
Furnish & Install Saddle Shim Block	Each	4.00					
Replace Anchor Bolt	Each	3.00					
This work shall be completed during District 1 night-time hours.							

Location No.:	1-08	State I.D. No.:	1S016I094L000.0 (P2)				
County:	Cook	Route:	I-94	M.P.:	0.0	Direction:	WB
Description of Work	Unit	Quantity					
Remove & Re-erect Overhead Sign Structure - Span	EACH	1.00					
Structural Steel Support Overhead Sign Structure	EACH	2.00					
Furnish & Install Internal Truss Damper	EACH	1.00					
Furnish & Install Safety Chain	EACH	2.00					
Overhead Sign Support Grout Repair	EACH	4.00					
Overhead Sign Structure Walkway	FOOT	60.00					
Furnish & Install Saddle Shim Block	EACH	4.00					
This work shall be completed during District 1 night-time hours.							

Location No.:	1-09	State I.D. No.:	1S016I057L345.0 (T3)				
County:	Cook	Route:	I-57	M.P.:	345.0	Direction:	SB
Description of Work	Unit	Quantity					
Remove & Re-erect Overhead Sign Structure - Span	EACH	1.00					
Structural Steel Support Overhead Sign Structure	EACH	2.00					
Furnish & Install Internal Truss Damper	EACH	1.00					
Furnish & Install Safety Chain	EACH	2.00					
Overhead Sign Structure Walkway	FOOT	116.50					
Furnish & Install Saddle Shim Block	EACH	4.00					
Furnish & Install Metal Screen	EACH	4.00					
This work shall be completed during District 1 night-time hours.							

Location No.:	1-10	State I.D. No.:	1S016I057L344.6 (T5)				
County:	Cook	Route:	I-57	M.P.:	344.6	Direction:	SB
Description of Work	Unit	Quantity					
Remove & Re-erect Overhead Sign Structure - Span	EACH	1.00					
Structural Steel Support Overhead Sign Structure	EACH	2.00					
Furnish & Install Internal Truss Damper	EACH	1.00					
Furnish & Install Safety Chain	EACH	2.00					
Overhead Sign Structure Walkway	FOOT	128.50					
Furnish & Install Saddle Shim Block	EACH	4.00					
Furnish & Install Metal Screen	EACH	4.00					
This work shall be completed during District 1 night-time hours.							

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Location No.:	1-11	State I.D. No.:	1S016I057R344.6 (U6)				
County:	Cook	Route:	I-57	M.P.:	344.6	Direction:	NB
Description of Work	Unit	Quantity					
Remove & Re-erect Overhead Sign Structure - Span	EACH	1.00					
Structural Steel Support Overhead Sign Structure	EACH	2.00					
Furnish & Install Internal Truss Damper	EACH	1.00					
Furnish & Install Safety Chain	EACH	2.00					
Overhead Sign Structure Walkway	FOOT	109.50					
Furnish & Install Saddle Shim Block	EACH	4.00					
Furnish & Install Metal Screen	EACH	4.00					
This work shall be completed during District 1 night-time hours.							

Location No.:	1-12	State I.D. No.:	1S016I-57R345.0 (T2)				
County:	Cook	Route:	I-57	M.P.:	345	Direction:	NB
Description of Work	Unit	Quantity					
Remove & Re-erect Overhead Sign Structure - Span	EACH	1.00					
Structural Steel Support Overhead Sign Structure	EACH	2.00					
Furnish & Install Internal Truss Damper	EACH	1.00					
Furnish & Install Safety Chain	EACH	2.00					
Overhead Sign Structure Walkway	FOOT	106.50					
Furnish & Install Saddle Shim Block	EACH	4.00					
Furnish & Install Metal Screen	EACH	4.00					
Replace Anchor Bolt	EACH	2.00					
This work shall be completed during District 1 night-time hours.							

Location No.:	1-13	State I.D. No.:	1S016I-80R153.0				
County:	Cook	Route:	I-80	M.P.:	153.0	Direction:	EB
Description of Work	Unit	Quantity					
Remove & Re-erect Overhead Sign Structure - Span	Each	1.00					
Structural Steel Support Overhead Sign Structure	Each	2.00					
Furnish & Install Internal Truss Damper	Each	1.00					
Furnish & Install Safety Chain	Each	2.00					
Overhead Sign Structure Walkway	Foot	69.00					
Furnish & Install Saddle Shim Block	Each	4.00					
Furnish & Install Metal Screen	Each	4.00					
This work shall be completed during District 1 night-time hours.							

Location No.:	1-14	State I.D. No.:	1C0222S000R006.0				
County:	Du Page	Route:	*	M.P.:	6	Direction:	EB
Description of Work	Unit	Quantity					
FURNISH & INSTALL HANDRAIL	FOOT	24.50					
* Elgin - O'Hare Expressway							
This work shall be completed during District 1 night-time hours.							

Location No.:	1-15	State I.D. No.:	1C022S000R006.4				
County:	Du Page	Route:	*	M.P.:	6.4	Direction:	
Description of Work	Unit	Quantity					
FURNISH & INSTALL HANDRAIL	FOOT	24.00					
* Elgin - O'Hare Expressway							
This work shall be completed during District 1 night-time hours.							

Location No.:	1-16	State I.D. No.:	1C022S000R006.6				
County:	Du Page	Route:	*	M.P.:	6.6	Direction:	EB
Description of Work	Unit	Quantity					
FURNISH & INSTALL HANDRAIL	FOOT	24.00					
* Elgin - O'Hare Expressway							
This work shall be completed during District 1 night-time hours.							

Location No.:	1-17	State I.D. No.:	1S022S000R6.8				
County:	Du Page	Route:	*	M.P.:	6.8	Direction:	EB
Description of Work	Unit	Quantity					
FURNISH & INSTALL HANDRAIL	FOOT	46.00					
* Elgin - O'Hare Expressway							
This work shall be completed during District 1 night-time hours.							

Location No.:	1-18	State I.D. No.:	1C016S000R008.2				
County:	Cook	Route:	*	M.P.:	8.2	Direction:	EB
Description of Work	Unit	Quantity					
FURNISH & INSTALL HANDRAIL	FOOT	17.00					
* Elgin - O'Hare Expressway							
This work shall be completed during District 1 night-time hours.							

Location No.:	1-19	State I.D. No.:	1C016S000R008.7				
County:	Cook	Route:	*	M.P.:	8.7	Direction:	EB
Description of Work	Unit	Quantity					
FURNISH & INSTALL HANDRAIL	FOOT	23.00					
* Elgin - O'Hare Expressway							
This work shall be completed during District 1 night-time hours.							

Location No.:	1-20	State I.D. No.:	1S016S000R009.1				
County:	Cook	Route:	*	M.P.:	9.1	Direction:	EB
Description of Work	Unit	Quantity					
FURNISH & INSTALL HANDRAIL	FOOT	50.00					
* Elgin - O'Hare Expressway							
This work shall be completed during District 1 night-time hours.							

Location No.:	1-21	State I.D. No.:	1C016S000R009.9				
County:	Cook	Route:	*	M.P.:	9.9	Direction:	EB
Description of Work	Unit	Quantity					
FURNISH & INSTALL HANDRAIL	FOOT	24.00					
* Elgin - O'Hare Expressway							
This work shall be completed during District 1 night-time hours.							

Location No.:	1-22	State I.D. No.:	1C016S000R010.4				
County:	Cook	Route:	*	M.P.:	10.4	Direction:	EB
Description of Work	Unit	Quantity					
FURNISH & INSTALL HANDRAIL	FOOT	24.00					
* Elgin - O'Hare Expressway							
This work shall be completed during District 1 night-time hours.							

Location No.:	1-23	State I.D. No.:	1S022S000R010.9				
County:	Du Page	Route:	*	M.P.:	10.9	Direction:	EB
Description of Work	Unit	Quantity					
FURNISH & INSTALL HANDRAIL	FOOT	50.00					
* Elgin - O'Hare Expressway							
This work shall be completed during District 1 night-time hours.							

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Location No.:	1-24	State I.D. No.:	1S022S000R011.5		
County:	Du Page	Route:	*	M.P.:	11.5
Direction:	EB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	46.00			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

Location No.:	1-25	State I.D. No.:	1C022S000R011.8		
County:	Du Page	Route:	*	M.P.:	11.8
Direction:	EB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	22.50			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

Location No.:	1-26	State I.D. No.:	1C022S000L011.9		
County:	Du Page	Route:	*	M.P.:	11.9
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	22.50			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

Location No.:	1-27	State I.D. No.:	1S022S000L011.8		
County:	Du Page	Route:	*	M.P.:	11.8
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	64.00			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

Location No.:	1-28	State I.D. No.:	1C022S000L011.6		
County:	Du Page	Route:	*	M.P.:	11.6
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	18.25			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

Location No.:	1-29	State I.D. No.:	1S022S000L011.3		
County:	Du Page	Route:	*	M.P.:	11.3
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	50.50			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

Location No.:	1-30	State I.D. No.:	1C016S000L010.7		
County:	Cook	Route:	*	M.P.:	10.7
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	18.50			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

Location No.:	1-31	State I.D. No.:	1S016S000L009.7		
County:	Cook	Route:	*	M.P.:	9.7
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	50.00			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

Location No.:	1-32	State I.D. No.:	1C016S000L009.1		
County:	Cook	Route:	*	M.P.:	9.1
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	22.00			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

Location No.:	1-33	State I.D. No.:	1C016S000L010.2		
County:	Cook	Route:	*	M.P.:	10.2
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	18.50			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

Location No.:	1-34	State I.D. No.:	1S016S000L008.2		
County:	Cook	Route:	*	M.P.:	8.2
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	40.50			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

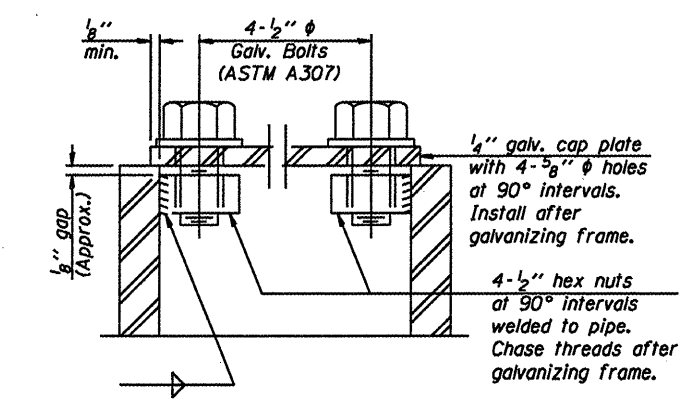
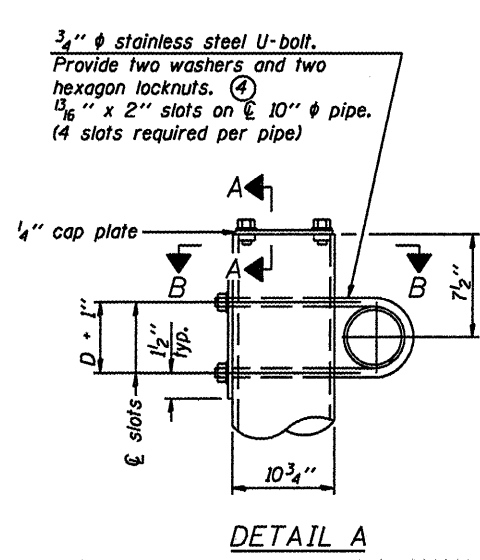
Location No.:	1-35	State I.D. No.:	1S016S000L008.6		
County:	Cook	Route:	*	M.P.:	8.6
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	49.50			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

Location No.:	1-36	State I.D. No.:	1S016S000L007.8		
County:	Cook	Route:	*	M.P.:	7.8
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	47.00			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

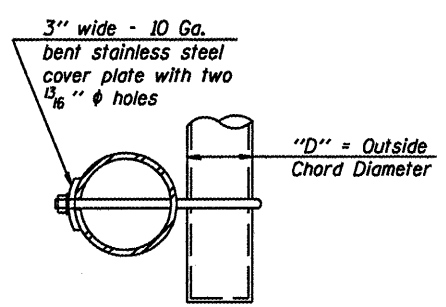
Location No.:	1-37	State I.D. No.:	1S016S000L007.4		
County:	Cook	Route:	*	M.P.:	7.4
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	50.00			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

Location No.:	1-38	State I.D. No.:	1C022S000L006.6		
County:	Du Page	Route:	*	M.P.:	6.6
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	23.00			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					

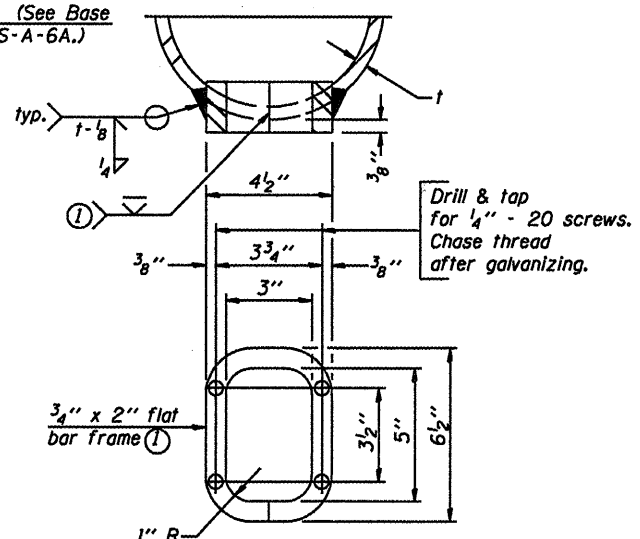
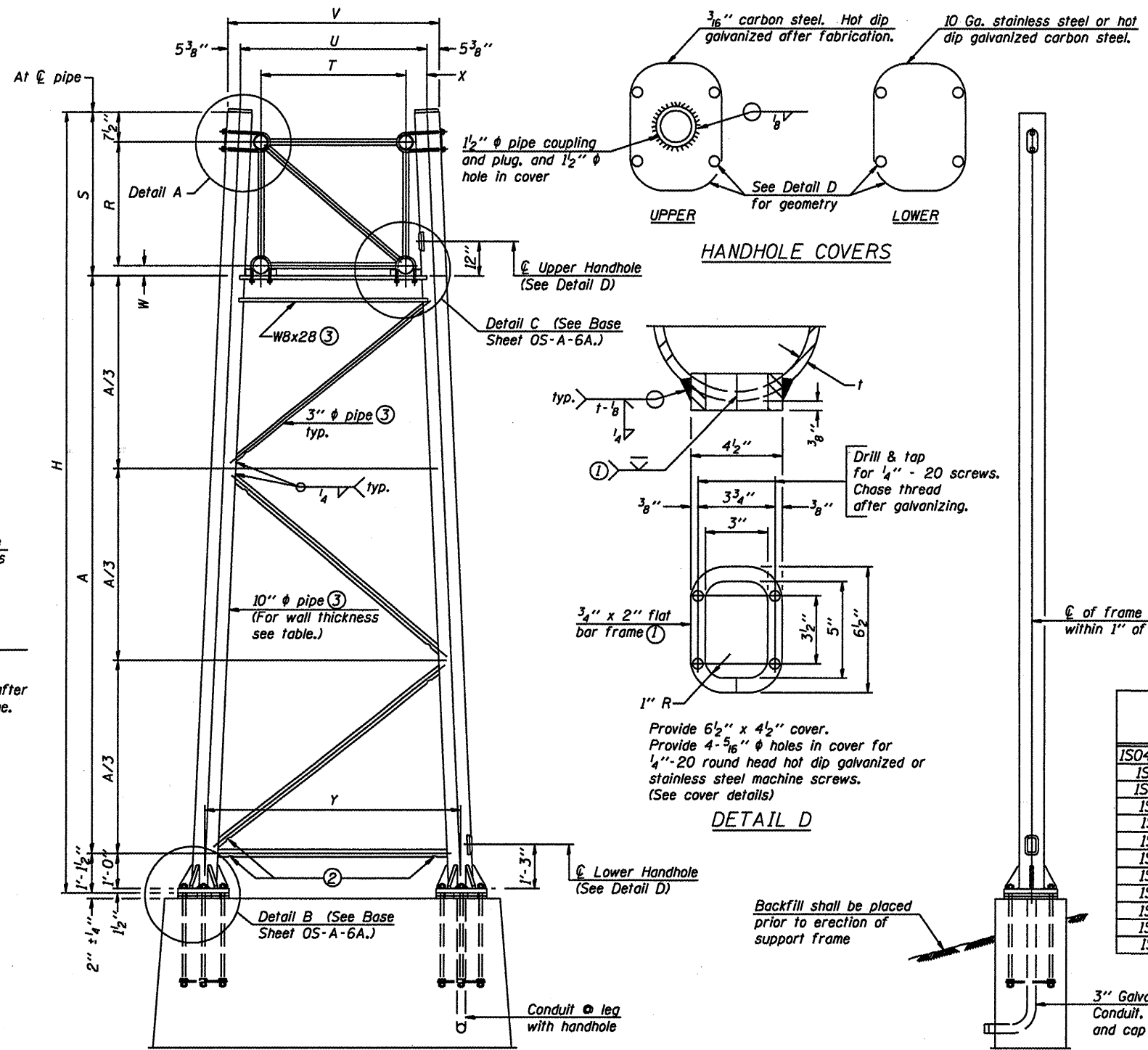
Location No.:	1-39	State I.D. No.:	1S022S000L006.3		
County:	Du Page	Route:	*	M.P.:	6.3
Direction:	WB				
Description of Work	Unit	Quantity			
FURNISH & INSTALL HANDRAIL	FOOT	56.00			
* Elgin - O'Hare Expressway					
This work shall be completed during District 1 night-time hours.					



SECTION A-A
 As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B



DETAIL D

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
 Load combinations checked include deadload plus:
 a) 100% wind normal to sign, 20% parallel to sign
 b) 60% wind normal to sign, 30% parallel to sign

- ① In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 in or less.
- ② Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
- ③ Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.
- ④ See General Notes for fasteners.
- ⑤ Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
- ⑥ "H" based on 15'-0" or actual sign height, whichever is greater.

Structure Number	Station	Support		Truss Type	Pipe Wall Thickness	H ⑥	A
		Left	Right				
ISO45U030R000.0-001	98 + 90	#1					
ISO45S056L000.0	100 + 50	#1					
ISO161057R341.9.0	229 + 20 NB	X	X	II-A	0.365(Std)	26'-6"	18'-10 1/4"
ISO161057L342.4	257 + 00 SB	X	X	II-A	0.365(Std)	28'-0 1/4"	20'-4 1/2"
ISO161080R153.0	1503 + 00 EB	X	X	I-A	0.279	23'-6 1/4"	16'-7 1/4"
ISO161080R154.3	1577 + 25 EB	X	X	II-A	0.279	24'-1 1/2"	16'-7"
ISO161094L000.0	43 + 80	#1					
ISO161057L345.0	395 + 60 SB	X	X	III-A	0.365(Std)	28'-8 1/4"	19'-3 1/4"
ISO161057L344.6	374 + 00 SB	X	X	III-A	0.365(Std)	28'-8 1/4"	19'-3 1/4"
ISO161057R344.6	372 + 35 NB	X	X	II-A	0.365(Std)	28'-0 1/4"	20'-4 1/2"
ISO161057R345.0	390 + 20 NB	X	X	III-A	0.365(Std)	28'-8 1/4"	19'-3 1/4"
ISO161080R153.0	1503 + 00 EB	X	X	I-A	0.279	23'-6"	16'-7 1/2"

#1. Existing End Support Details are not available. The H and A dimensions shown were taken from the existing end support details. The Contractor and the Resident Engineer shall field verify all dimensions prior to fabrication of the end supports.

For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

SIDE ELEVATION

END ELEVATION

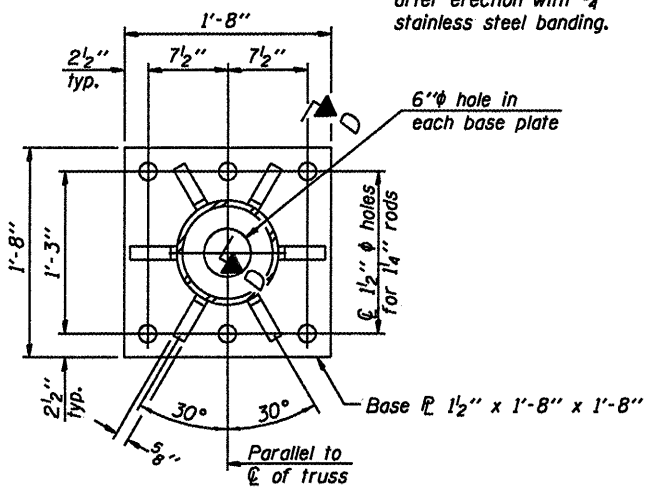
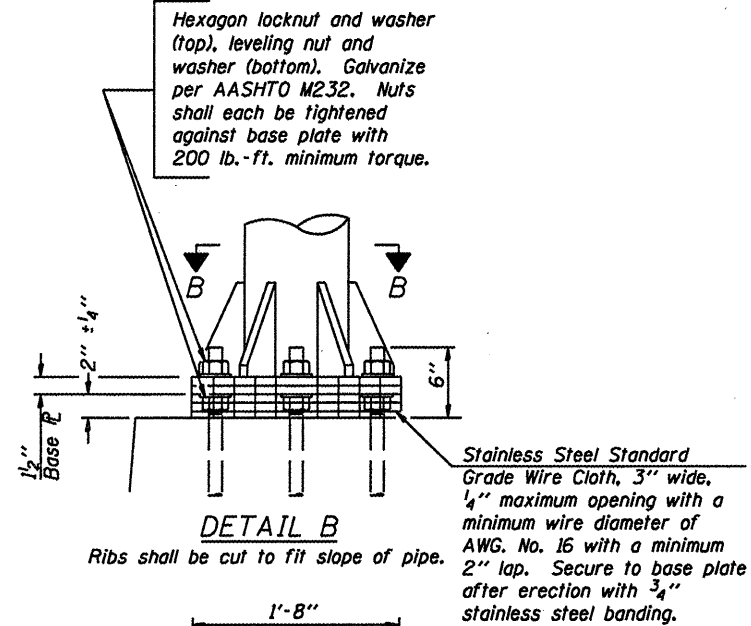
10" φ PIPE TRUSS SUPPORT FRAME

Truss Type	Dimensions							
	R	S	T	U	V	W	X	Y
I-A	4'-6"	5'-5 1/2"	4'-0"	5'-6"	6'-4 3/4"	4"	9"	8'-3"
II-A ⑤	5'-3"	6'-3 1/4"	4'-6"	6'-1"	6'-11 3/4"	4 3/4"	9 1/2"	8'-3"

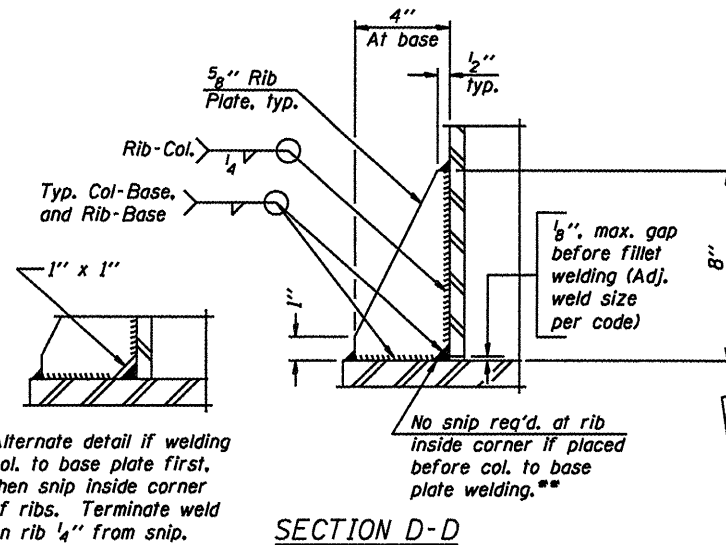
NUMBER	REVISION	DATE

**OVERHEAD SIGN STRUCTURES
 SUPPORT FRAME for ALUMINUM TRUSS**

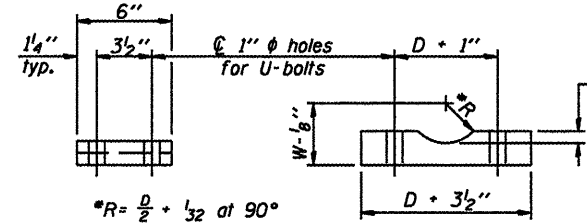
District 1
 Sign Structure
 Repair and Replacement



SECTION B-B



SECTION D-D

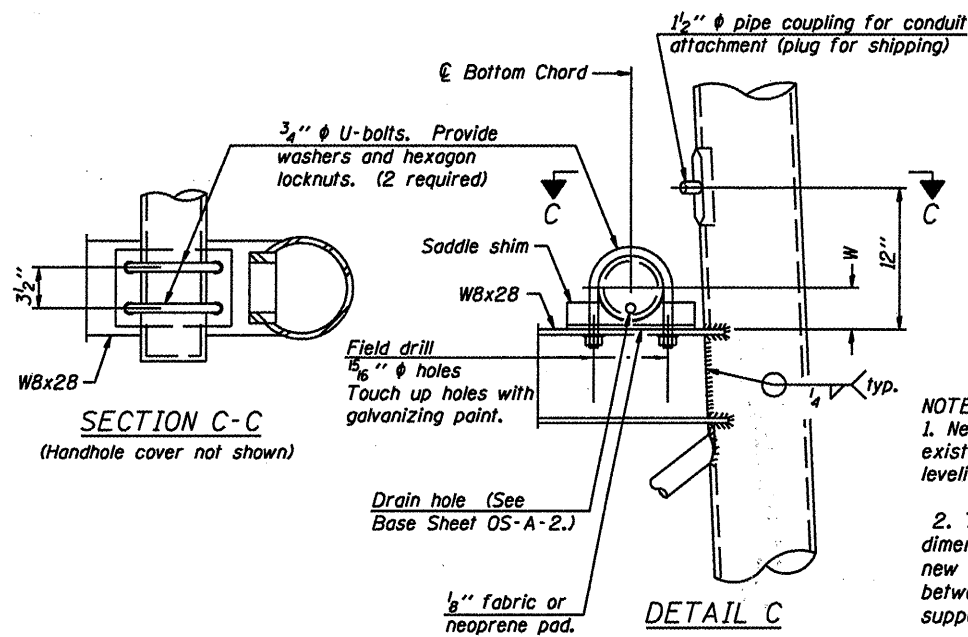


SADDLE SHIM DETAIL

ASTM B26 Alloy 356-F
 or
 ASTM B209 Alloy 6061-T651
 (4 required per sign truss)

Truss Chord Nominal Dia.	a
5"	3/4"
5 1/2"	15/16"
6"	7/8"
6 1/2"	15/16"
7"	1"

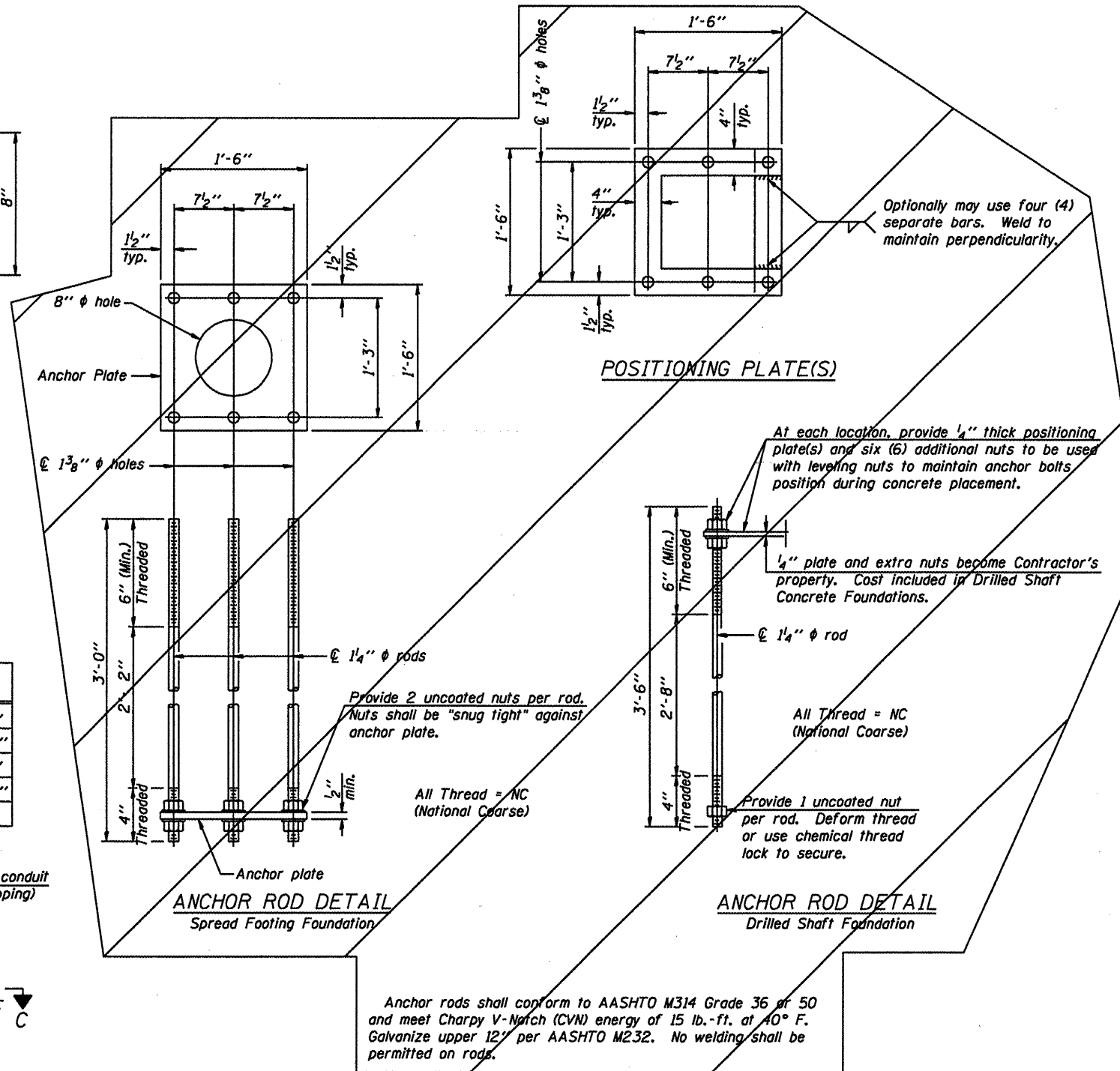
NUMBER	REVISION	DATE



SECTION C-C

(Handhole cover not shown)

DETAIL C



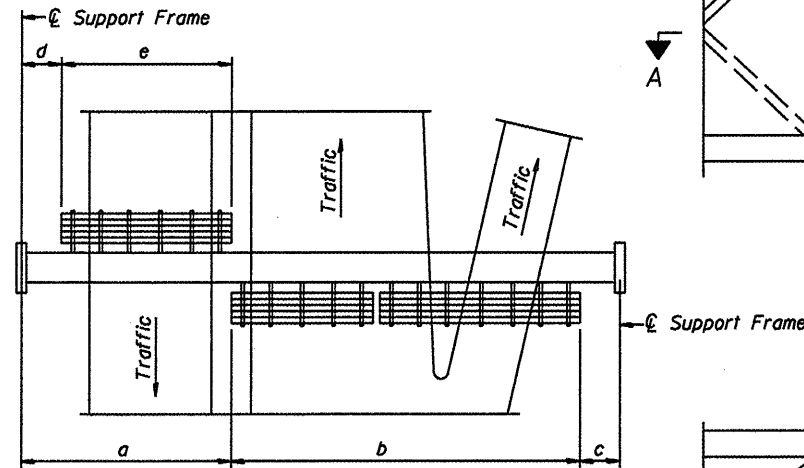
10" ϕ PIPE SUPPORT FRAME DETAILS

NOTES:
 1. New End Supports to be installed on existing concrete foundations with existing anchor bolts. The Contractor shall provide new anchor bolt nuts, leveling nuts and washers as necessary.
 2. The Contractor and the Engineer shall field verify the existing end support dimensions and the existing anchor bolt dimensions prior to fabrication of the new end supports. This measurement should include the horizontal distance between the center line of the columns at the base plate to assure the new supports will fit the existing anchor bolt pattern.

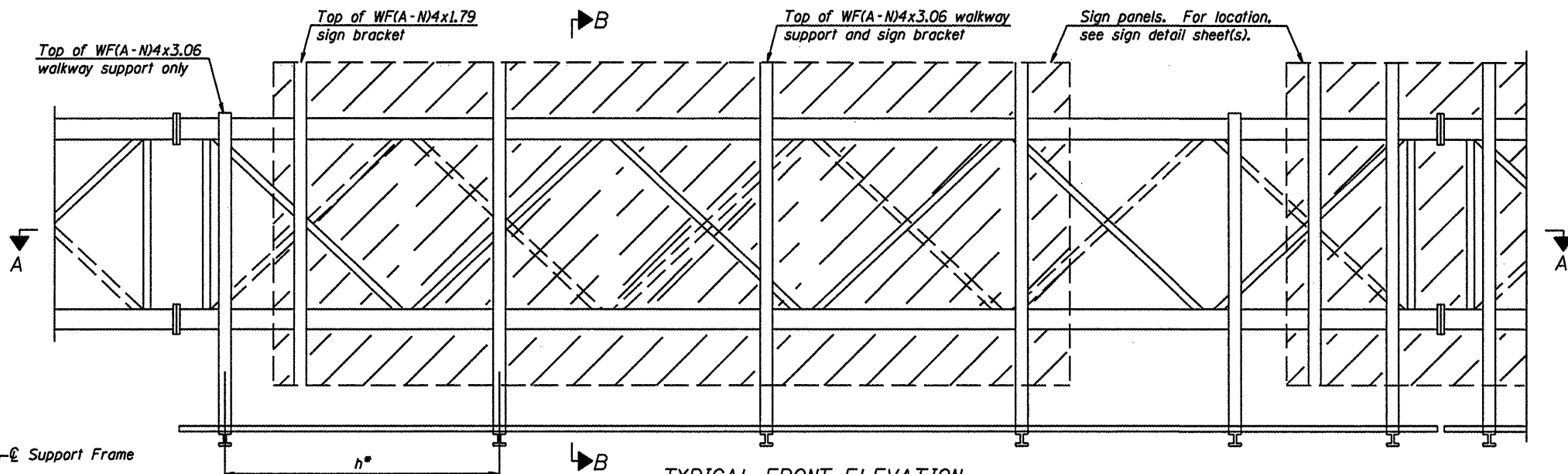
OVERHEAD SIGN STRUCTURES
 SUPPORT FRAME DETAILS ALUMINUM TRUSS

District 1
 Sign Structure
 Repair and Replacement

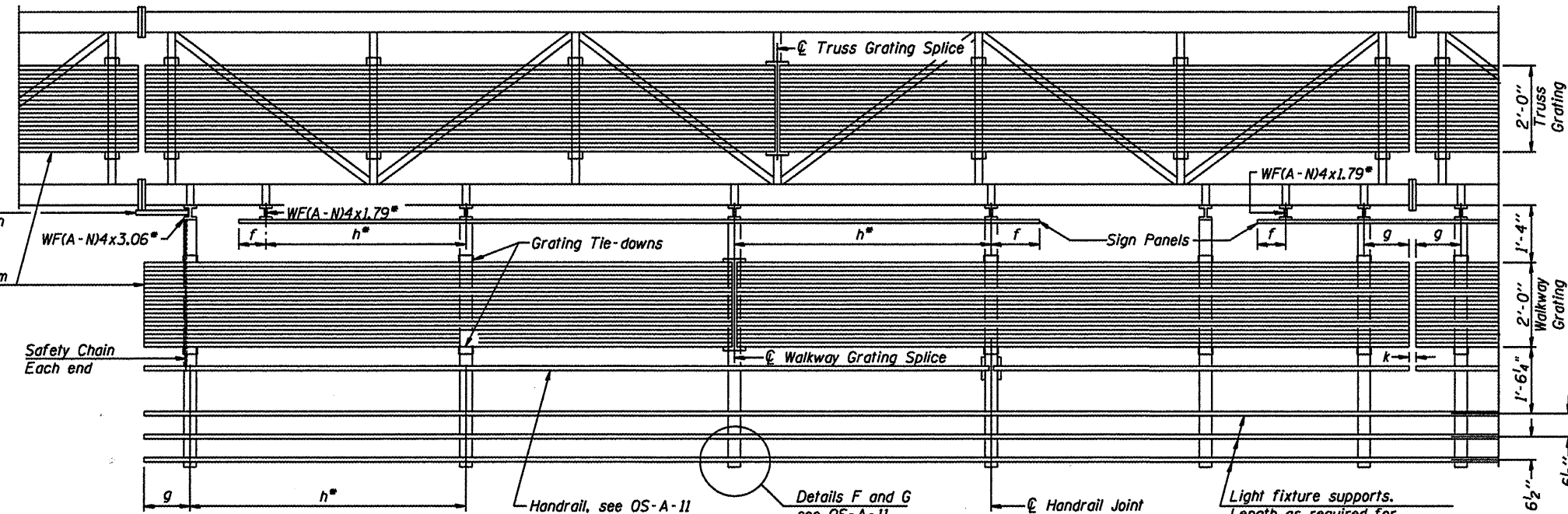
NUMBER	REVISION	DATE



PLAN
WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)



TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.
For Section B-B, see Base Sheet OS-A-10.



SECTION A-A

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints. Place all sign and walkway brackets as close to panel points as practical. Handrail joints, grating, and light support splices placed as needed.

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12" on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".

BRACKET TABLE

Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
8'-0"	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

- Notes:
• Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:

- f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to center of nearest support bracket)
h = 6'-0" maximum (center to center of sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
k = 2" maximum gap between adjacent walkway grating sections and handrail ends

- If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-A-11.

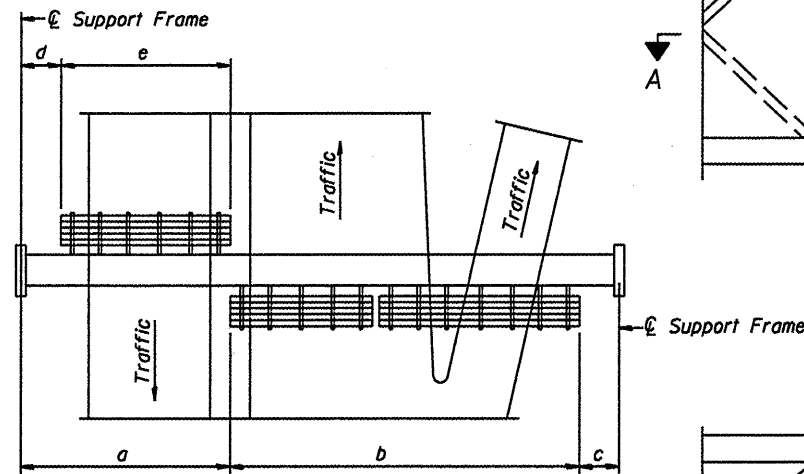
For Details T and W, Section B-B and Grating Splice Details see Base Sheet OS-A-10.
For Handrail Details see Base Sheet OS-A-11.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
ISO45U030R000.0-001	98 + 90	N/A	N/A	N/A	N/A	N/A	70' - 0"
ISO45S056L000.0	100 + 50	N/A	N/A	N/A	N/A	N/A	67' - 0"
ISO161057R341.9.0	229 + 20 NB	N/A	N/A	N/A	N/A	N/A	111' - 6"
ISO161057L342.4	257 + 00 SB	N/A	N/A	N/A	N/A	N/A	112' - 6"
ISO161080R153.0	1503 + 00 EB	N/A	N/A	N/A	N/A	N/A	69' - 6"
ISO161080R154.3	1577 + 25 EB	N/A	N/A	N/A	N/A	N/A	89' - 6"
ISO161094L000.0	43 + 80	N/A	N/A	N/A	N/A	N/A	60' - 0"
ISO161057L345.0	395 + 60 SB	N/A	N/A	N/A	N/A	N/A	116' - 6"
ISO161057L344.6	374 + 00 SB	N/A	N/A	N/A	N/A	N/A	128' - 6"
ISO161057R344.6	372 + 35 NB	N/A	N/A	N/A	N/A	N/A	109' - 6"
ISO161057R345.0	390 + 20 NB	N/A	N/A	N/A	N/A	N/A	106' - 6"
ISO161080R153.0	1503 + 00 EB	N/A	N/A	N/A	N/A	N/A	69' - 0"

OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

District 1
Sign Structure
Repair and Replacement

NUMBER	REVISION	DATE



PLAN
WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)

BRACKET TABLE

Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
8'-0"	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

Notes:
• Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:

f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to center of nearest support bracket)
h = 6'-0" maximum (center to center of sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
k = 2" maximum gap between adjacent walkway grating sections and handrail ends

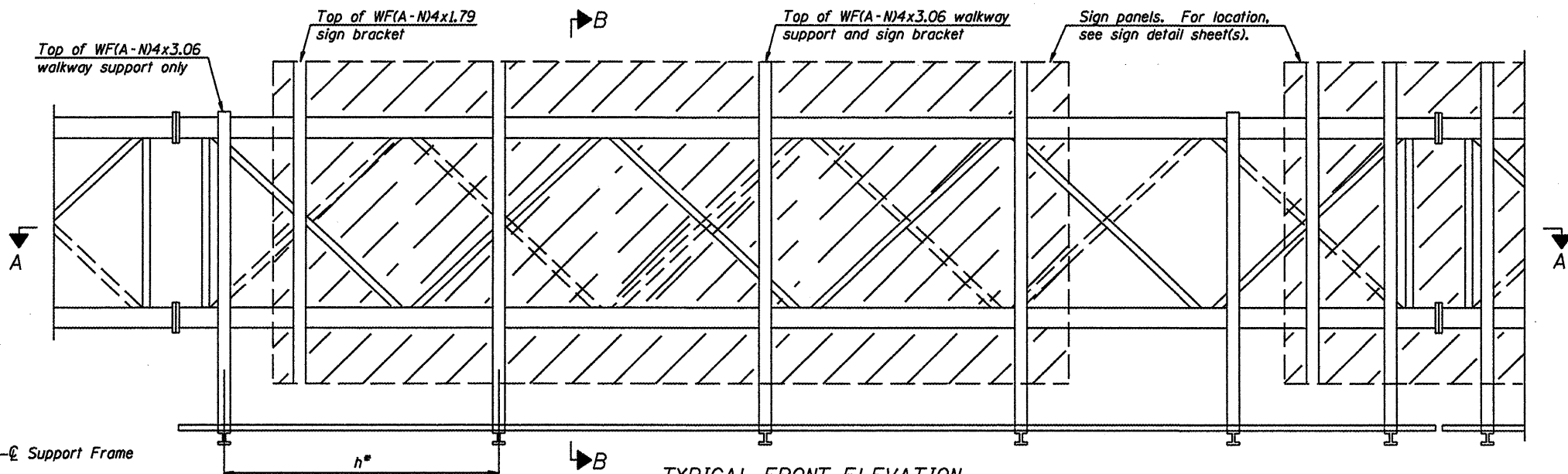
•• If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-A-11.

For Details T and W, Section B-B and Grating Splice Details see Base Sheet OS-A-10.
For Handrail Details see Base Sheet OS-A-11.

	2

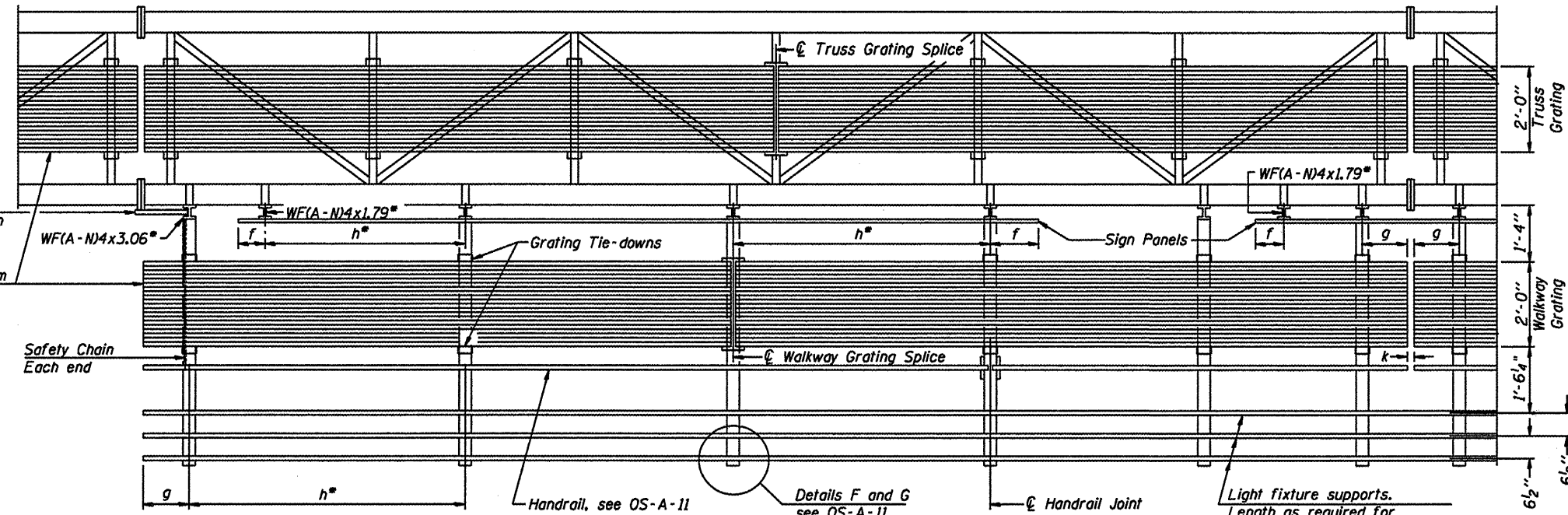
OS-A-9

5/16/08



TYPICAL FRONT ELEVATION

With lights and handrail omitted for clarity.
For Section B-B, see Base Sheet OS-A-10.



SECTION A-A

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints.
Place all sign and walkway brackets as close to panel points as practical.
Handrail joints, grating, and light support splices placed as needed.

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12" on overhead trusses.
Cost of truss grating is included in "Overhead Sign Structure".

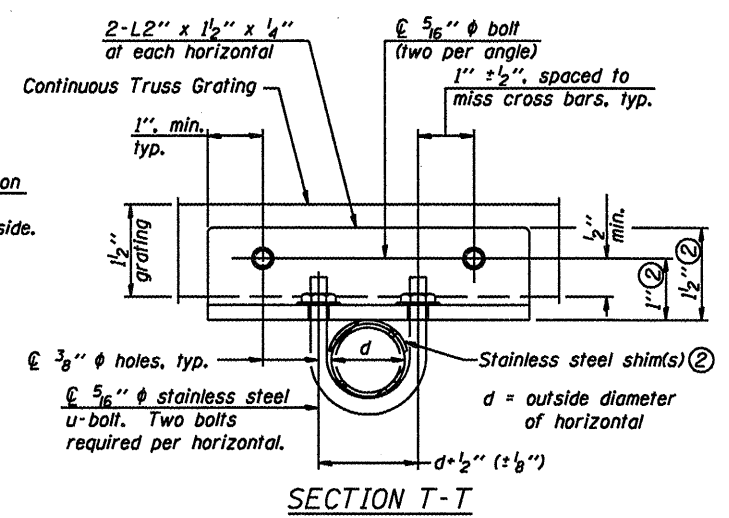
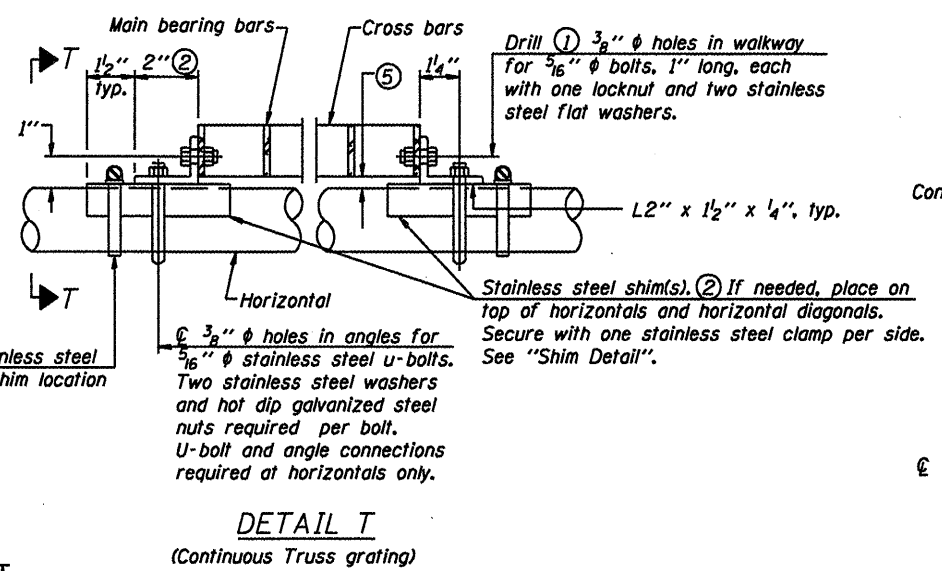
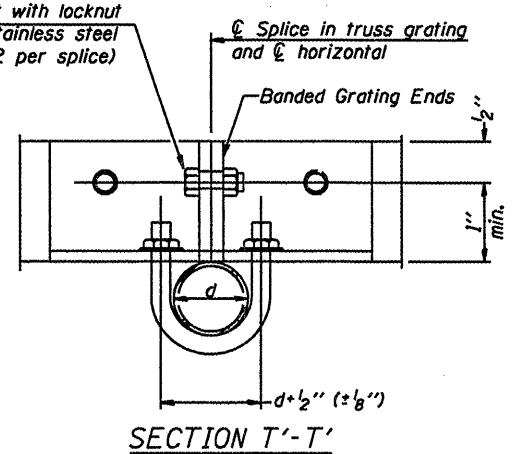
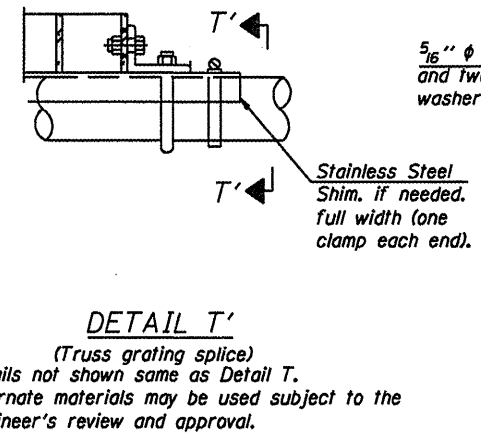
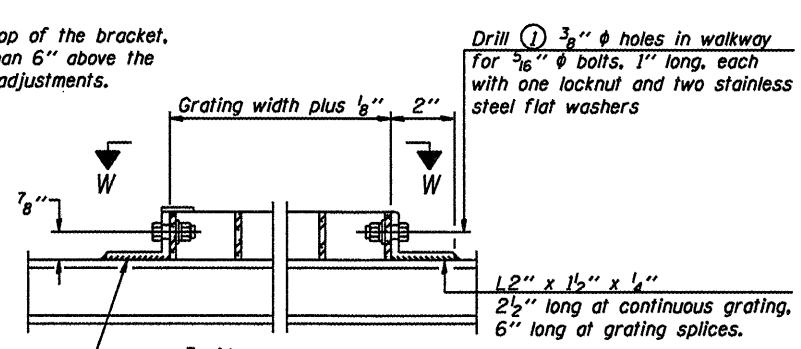
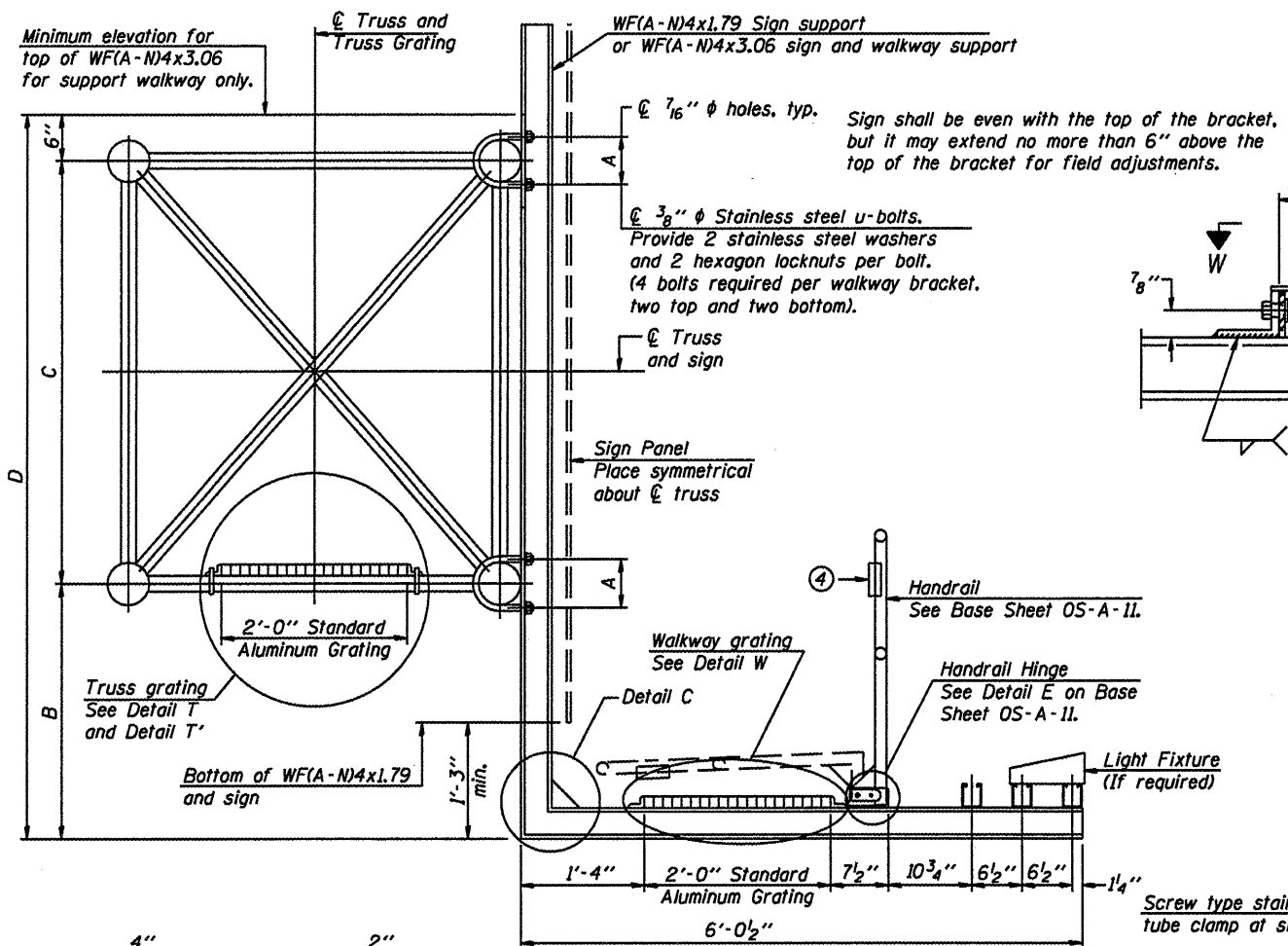
Walkway and Truss Grating width dimensions are nominal and may vary ±1/2" based on available standard widths.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
ISO22S000R006.8	N/A	N/A	N/A	N/A	N/A	N/A	46' - 0"
ISO16S000R009.1	N/A	N/A	N/A	N/A	N/A	N/A	50' - 0"
ISO22S000R010.9	N/A	N/A	N/A	N/A	N/A	N/A	50' - 0"
ISO22S000R011.5	N/A	N/A	N/A	N/A	N/A	N/A	46' - 0"
ISO22S000L011.8	N/A	N/A	N/A	N/A	N/A	N/A	64' - 0"
ISO22S000L011.3	N/A	N/A	N/A	N/A	N/A	N/A	50' - 6"
ISO16S000L009.7	N/A	N/A	N/A	N/A	N/A	N/A	50' - 0"
ISO16S000L008.2	N/A	N/A	N/A	N/A	N/A	N/A	40' - 6"
ISO16S000L008.6	N/A	N/A	N/A	N/A	N/A	N/A	49' - 6"
ISO16S000L007.8	N/A	N/A	N/A	N/A	N/A	N/A	47' - 0"
ISO16S000L007.4	N/A	N/A	N/A	N/A	N/A	N/A	50' - 0"
ISO22S000L006.3	N/A	N/A	N/A	N/A	N/A	N/A	56' - 0"

* Length shown is for the existing handrail to be replaced.

OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

District 1
Sign Structure
Repair and Replacement

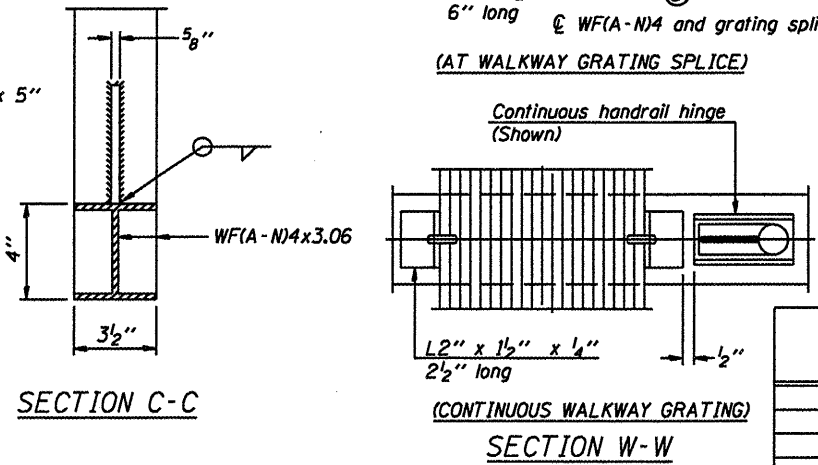
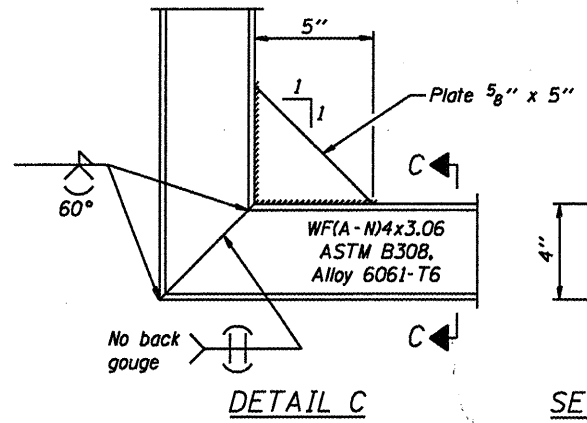
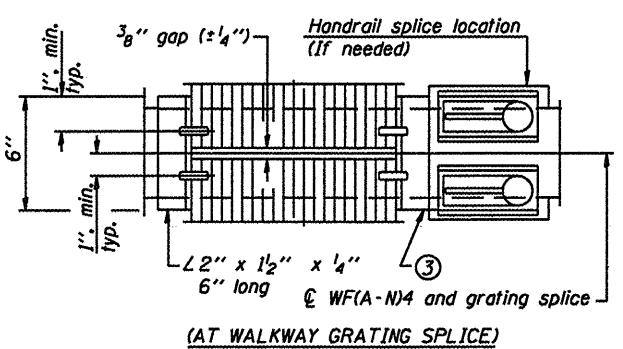
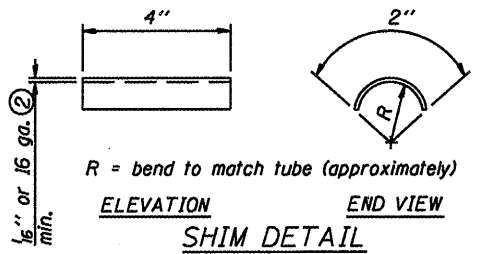


SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6.
 Cross bars shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "I" sections for main bearing bars shall meet the following requirements:
 Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.
 Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.



- ① Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- ② Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- ③ If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-11.)
- ④ R 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- ⑤ Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.

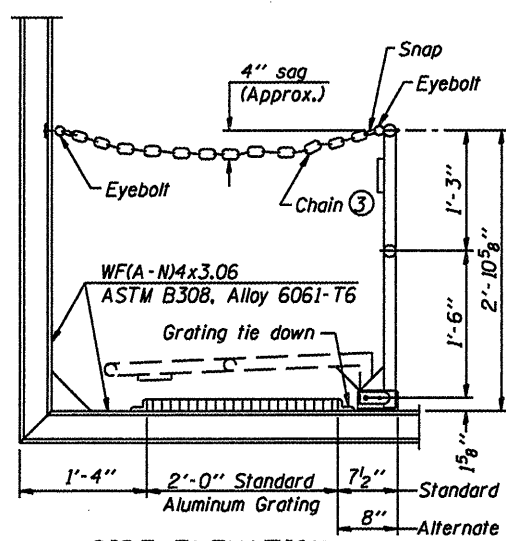
Structure Number	Station	A	B	C	D

NUMBER	REVISION	DATE

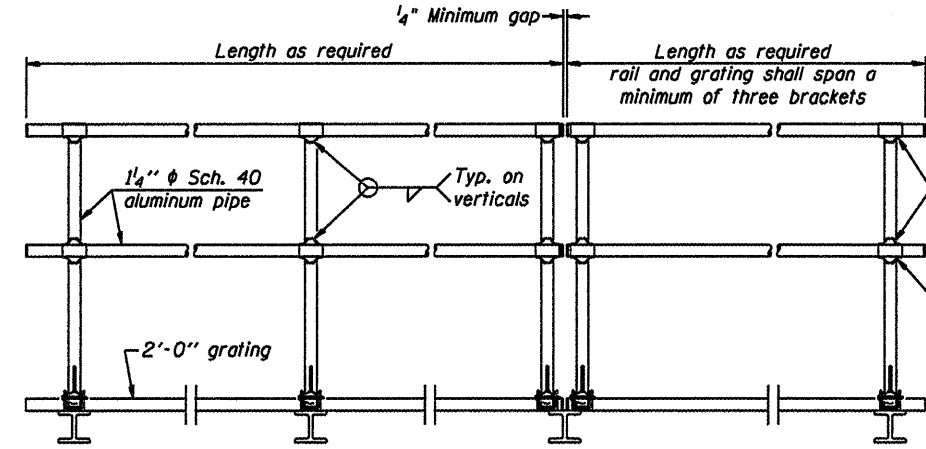
OS-A-10 5/16/08

**OVERHEAD SIGN STRUCTURES
 ALUMINUM WALKWAY DETAILS**

District 1
 Sign Structure
 Repair and Replacement



SIDE ELEVATION
(Showing safety chain w/o sign)

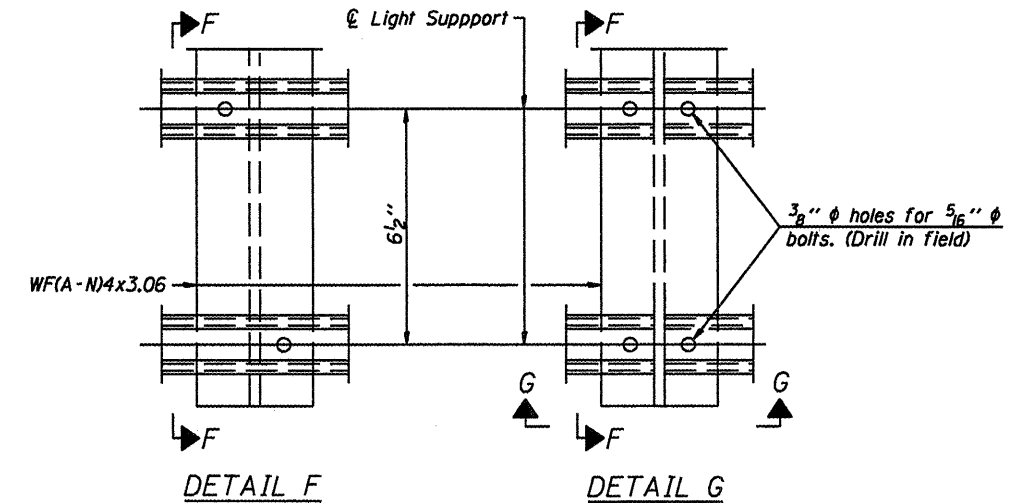


FRONT ELEVATION

HANDRAIL DETAILS

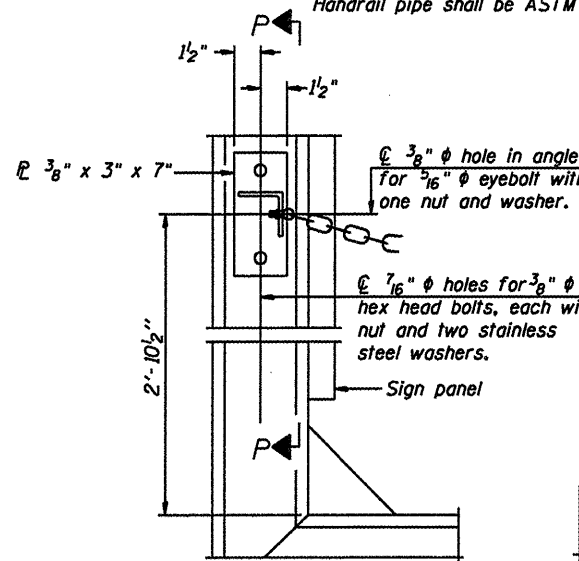
Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

- Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)
- Horizontal handrail member shall be continuous thru fitting. Provide 7/16" hole in fitting for 3/8" bolt. Field drill 1/16" hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 7/16" holes on top rail at ends only.)

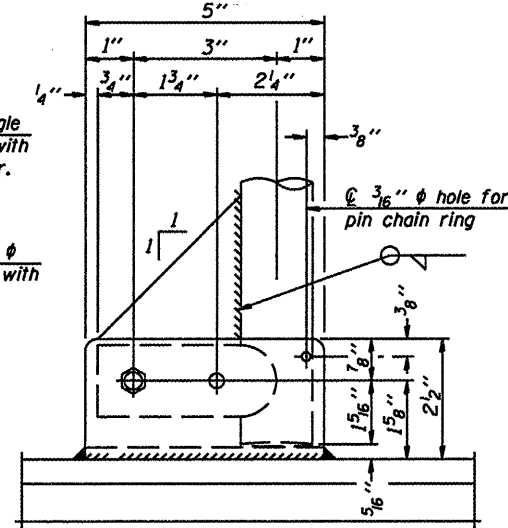


DETAIL F

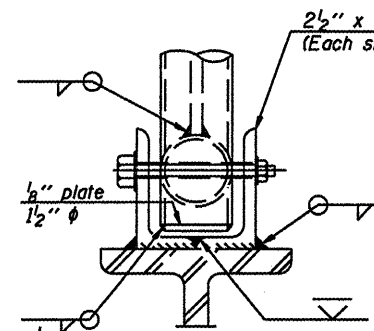
DETAIL G



ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "Side Elevation" of "Handrail Details"

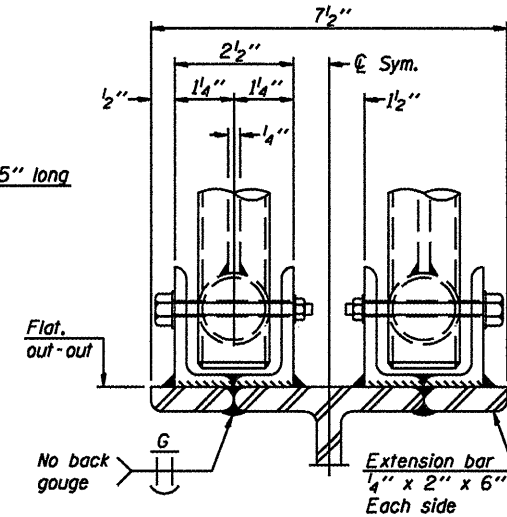


SIDE ELEVATION

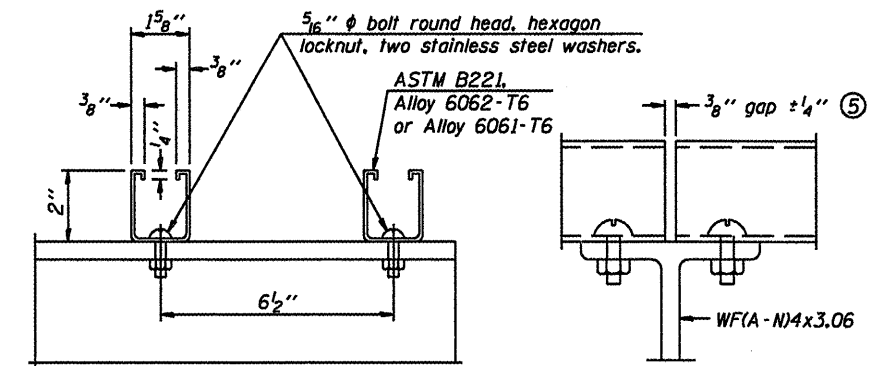


FRONT ELEVATION

See "Elevation" at right for dimensions.



ELEVATION AT HANDRAIL JOINT ④

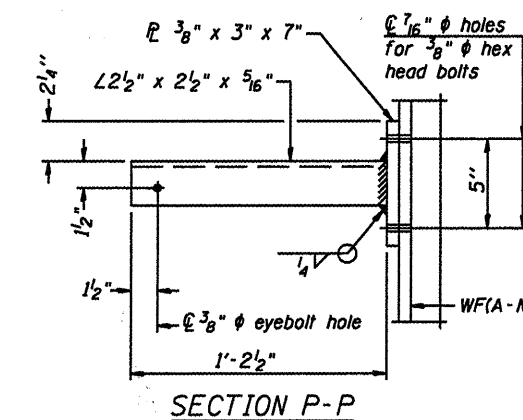


SECTION F-F

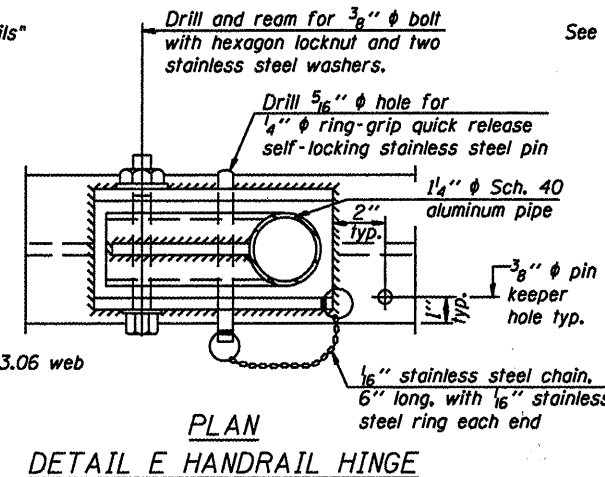
SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

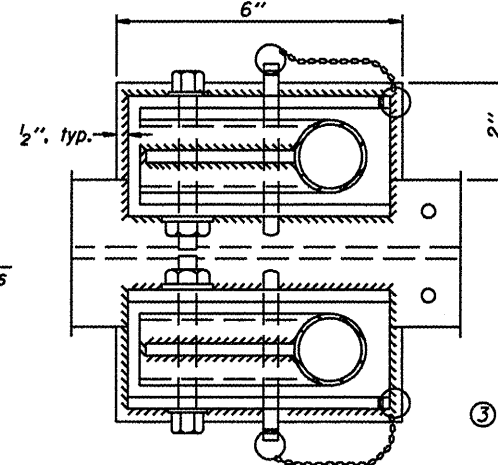
- Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



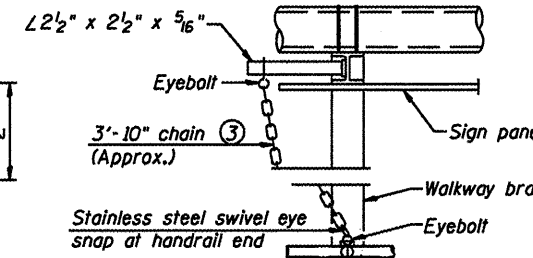
SECTION P-P



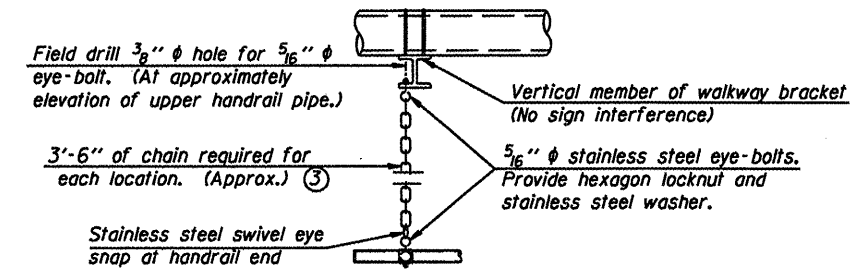
DETAIL E HANDRAIL HINGE



PLAN AT HANDRAIL JOINT
Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT
Details not shown similar to "Safety Chain" Details
(Walkway omitted for clarity)



SAFETY CHAIN
One required for each end of each walkway.

This Sheet For Information Only

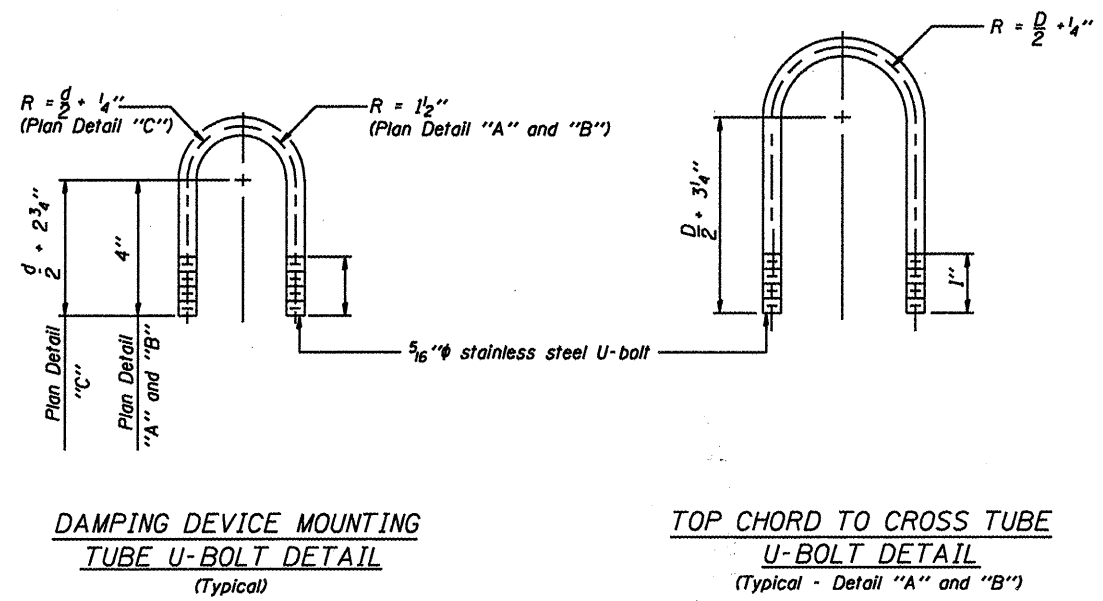
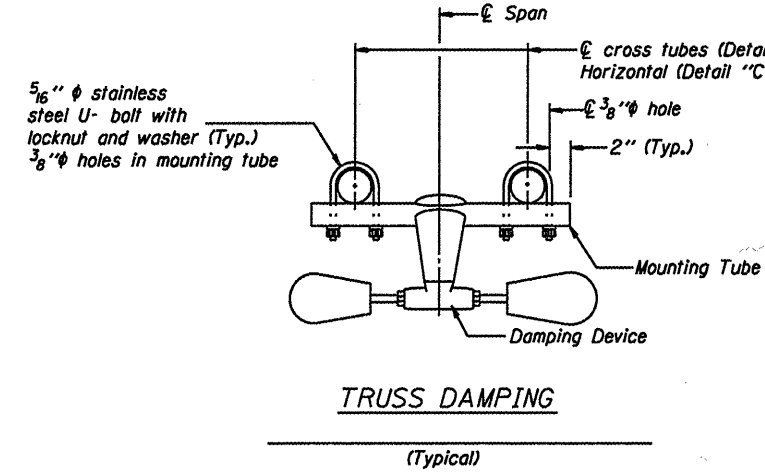
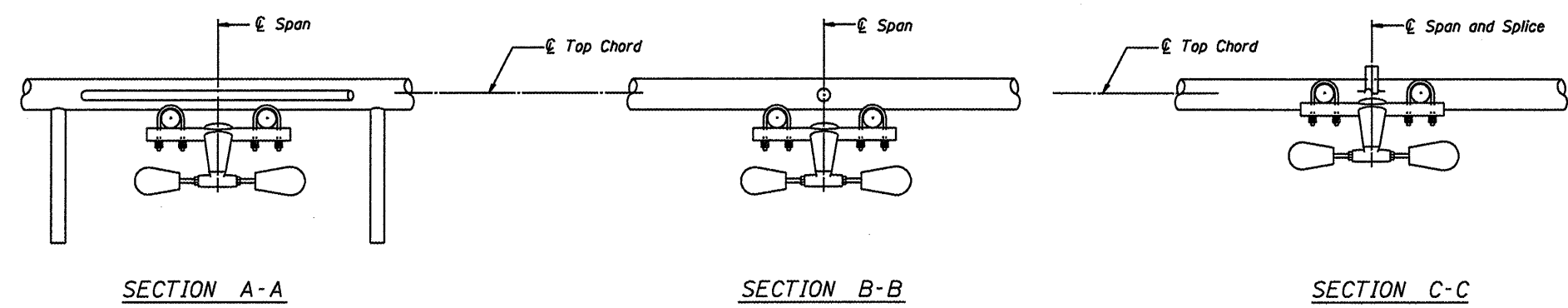
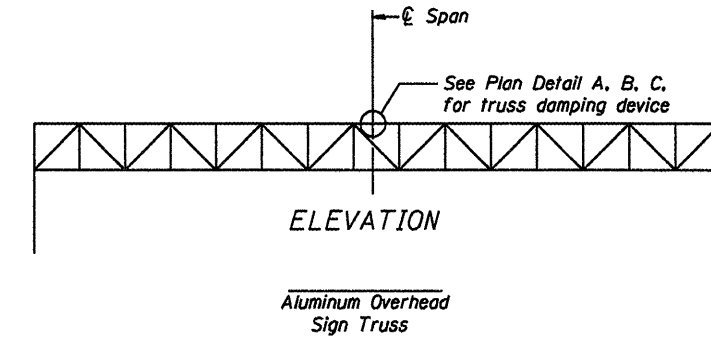
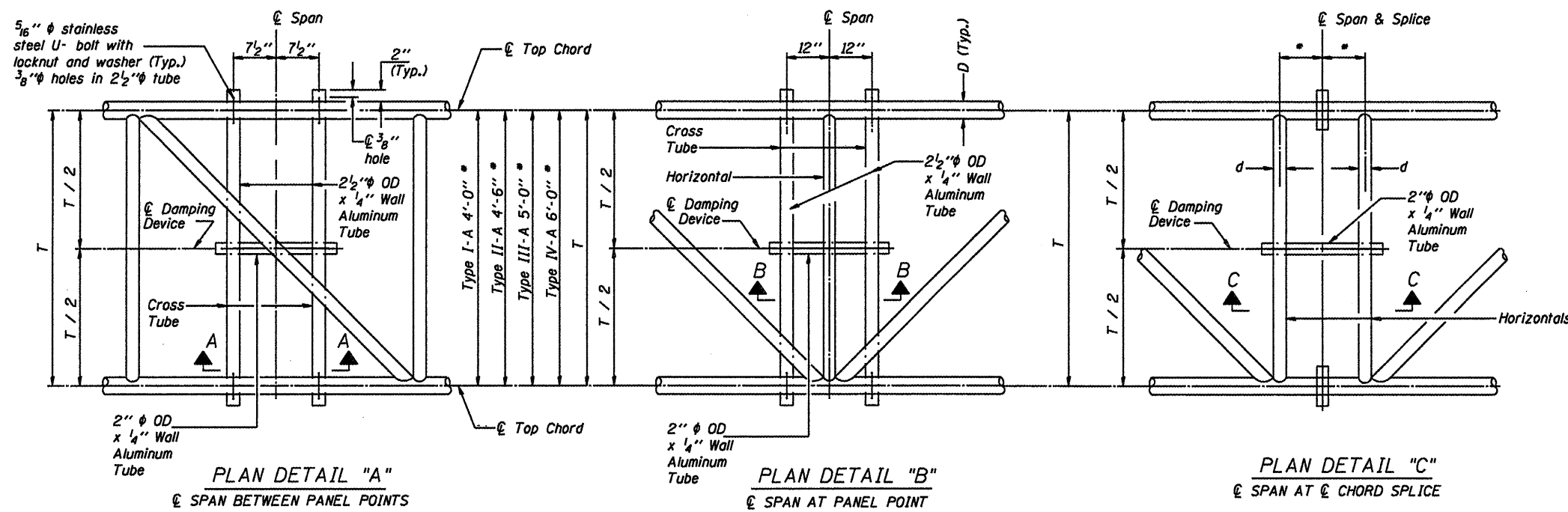
**OVERHEAD SIGN STRUCTURES
ALUMINUM HANDRAIL DETAILS**

District 1
Sign Structure
Repair and Replacement

NUMBER	REVISION	DATE

- 3/16" Type 304L stainless steel chain, approximately 12 links per foot.
- Extrusions may be used in lieu of the details shown, with approval of the Engineer.

* Verify before drilling holes in mounting tube and cross tubes.



GENERAL NOTES

Damper: One damper per truss. (31 lbs. Stockbridge-Type Aluminum)

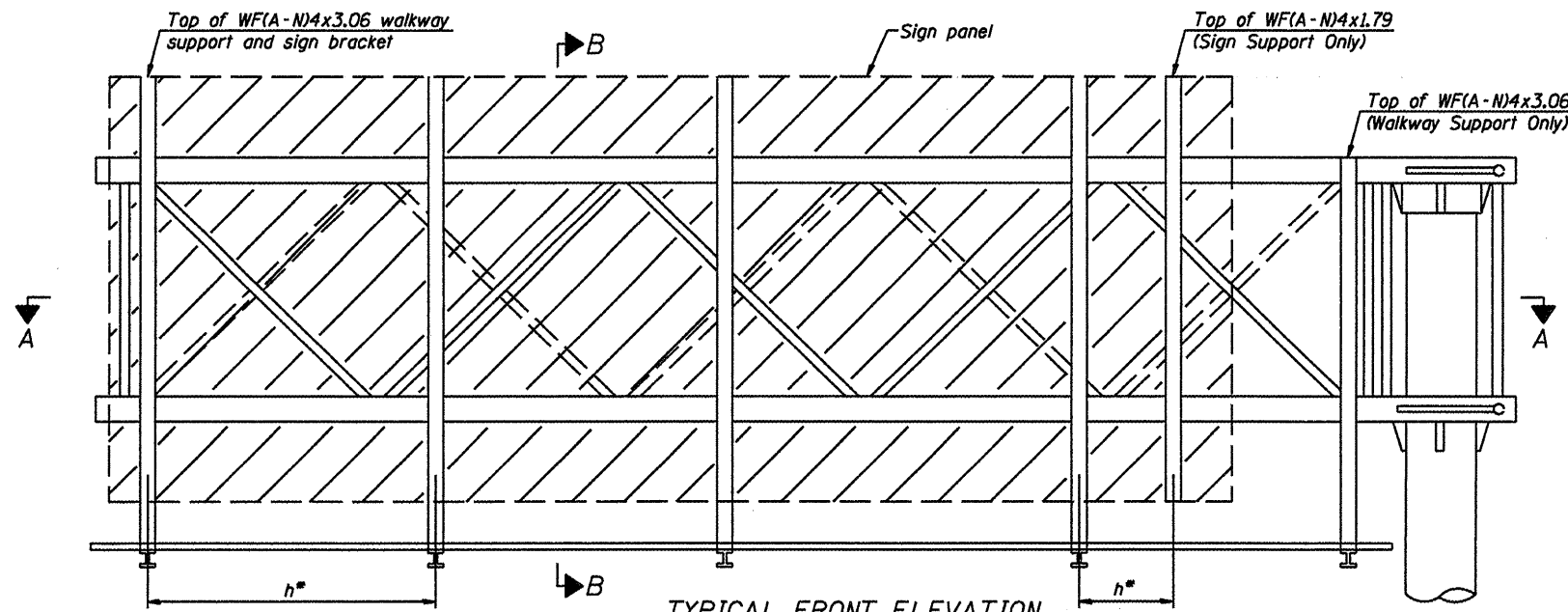
Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6

Fasteners: U-bolts shall be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finish, or an equivalent material acceptable to the Engineer. All nuts shall be stainless steel conforming to ASTM A194, Grade 8 (AISI Type 304) or Grade 8F (AISI Type 303). The nuts shall be "locknuts" with nylon or steel inserts and semifinished hexagonal heads equivalent to the finished hex series of the American National Standards. All washers shall be stainless steel conforming to ASTM A240, Type 302 or 304.

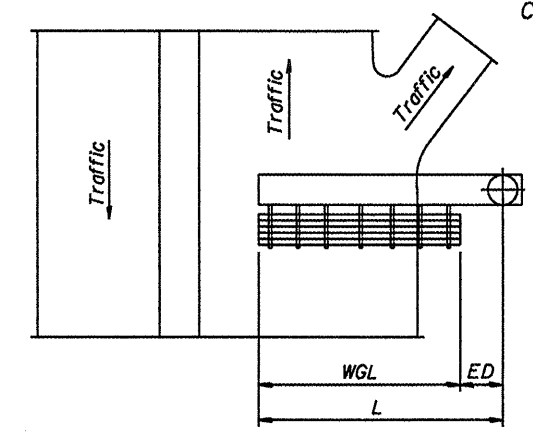
OVERHEAD SIGN STRUCTURE
DAMPING DEVICE

District 1
Sign Structure
Repair and Replacement

TRUSS DAMPER RETROFIT 07-01-2001

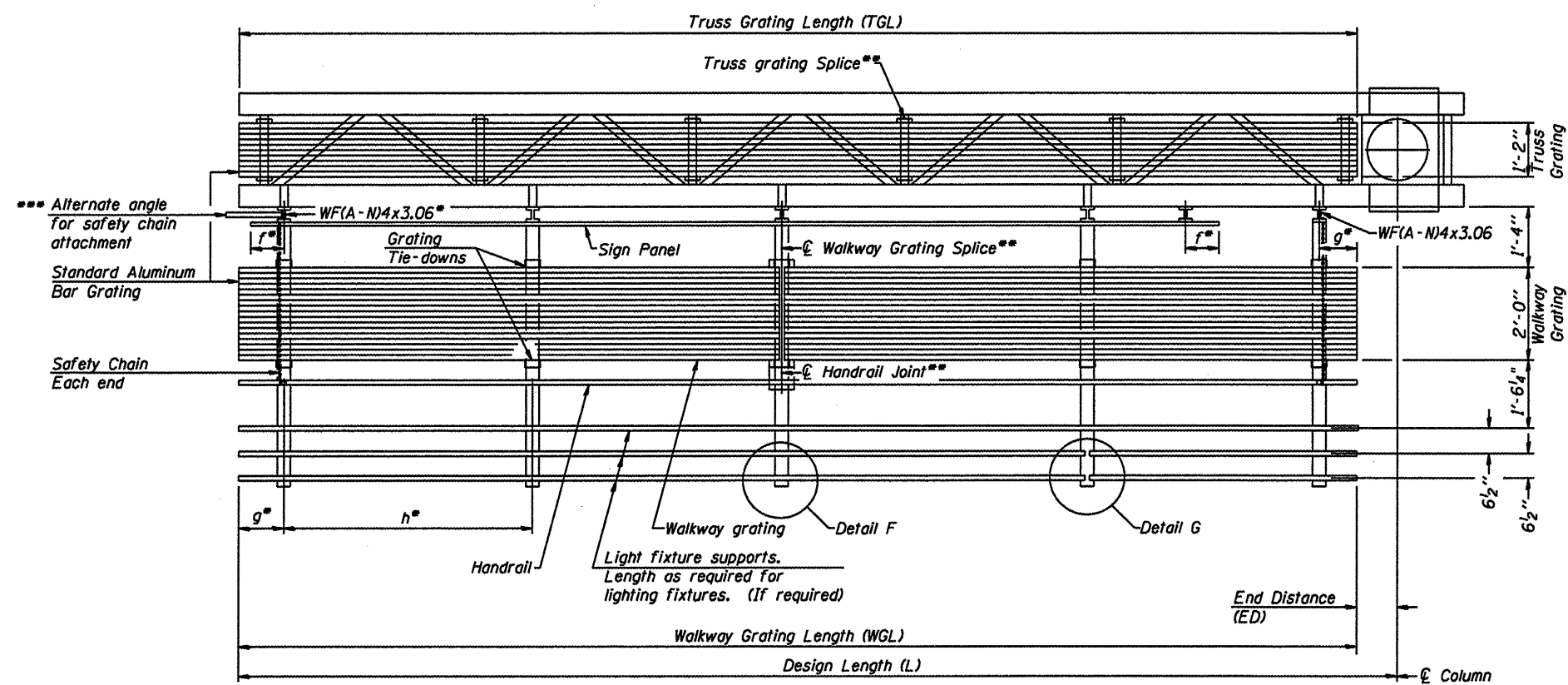


TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.



PLAN WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)

Walkway and truss grating dimensions are nominal and may vary (width ± 1/2", depth ± 1/2") based on available standard widths.



SECTION A-A

Truss grating to facilitate inspection shall run full length of cantilevers. Cost of truss grating is included in Overhead Sign Structure Cantilever.

Handrail and walkway grating shall span a minimum of three brackets between splices.
** Use and location of handrail joints or grating splices are optional, based on lengths needed and material availability.

$$TGL = L - \left(\frac{\text{Post O.D.} + 6''}{2} \right)$$

NUMBER	REVISION	DATE

Structure Number	Station	WGL	ED	TGL
IC022S000R006.0	N/A	24' - 6"	N/A	N/A
IC022S000R006.4	N/A	24' - 0"	N/A	N/A
IC022S000R006.6	N/A	24' - 0"	N/A	N/A
IC016S000R008.2	N/A	17' - 0"	N/A	N/A
IC016S000R008.7	N/A	23' - 0"	N/A	N/A
IC016S000R009.9	N/A	24' - 0"	N/A	N/A
IC016S000R010.	N/A	24' - 0"	N/A	N/A
IC022S000R011.8	N/A	22' - 6"	N/A	N/A
IC022S000L011.9	N/A	22' - 6"	N/A	N/A
IC022S000L011.6	N/A	18' - 3"	N/A	N/A
IC016S000L010.7	N/A	18' - 6"	N/A	N/A
IC016S000L009.1	N/A	22' - 0"	N/A	N/A
IC016S000L010.2	N/A	18' - 6"	N/A	N/A
IC022S000L006.6	N/A	23' - 0"	N/A	N/A

* Length shown is for the existing handrail to be replaced.

- Notes:
- Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:
 - f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
 - g = 12" maximum, 4" minimum (End of walkway to center of nearest bracket)
 - h = 6'-0" maximum center to center of sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06
 - *** If walkway bracket at safety chain location is behind sign, add angle to bracket. See alternate safety chain attachment on base sheet OSC-A-B.
 - For details of sign placement, sign/walkway brackets, truss and walkway gratings, grating splices and Section B-B, see Base Sheet OSC-A-7.
 - For details of handrail, handrail joint, safety chain and Details F and G, see Base Sheet OSC-A-B.

BRACKET TABLE

WF(A-N)4x1.79 or WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6		Number Brackets Required
Sign Width Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

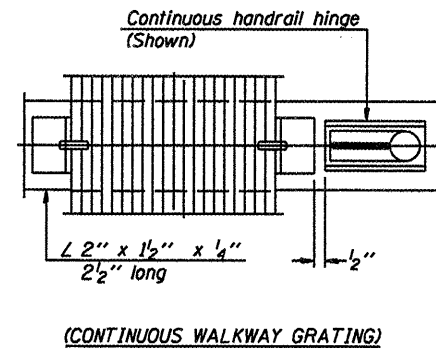
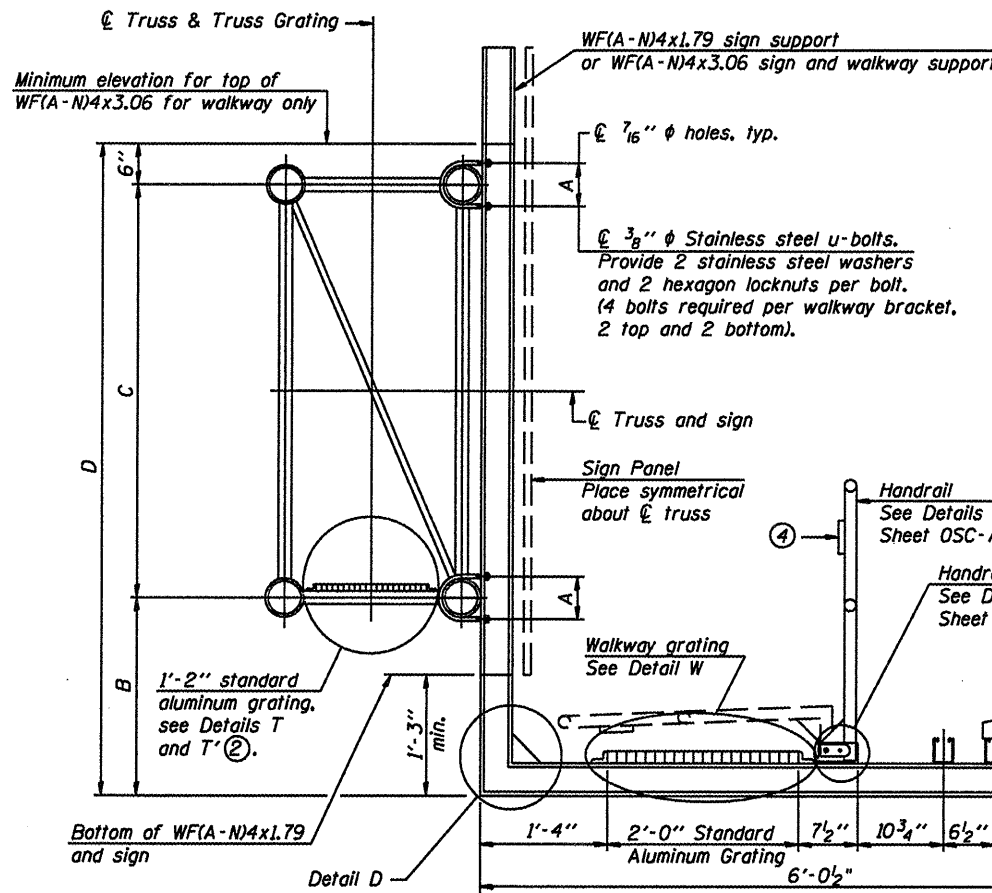
**CANTILEVER SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS
ALUMINUM TRUSS & STEEL POST**

District 1
Sign Structure
Repair and Replacement

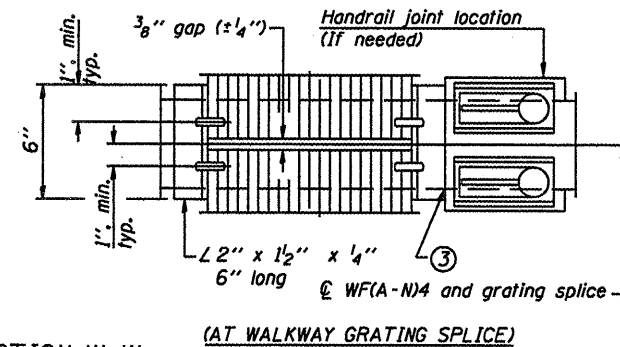
Various Routes
D 1 OVD SIN STR REPL 2010-29
Various Counties
Sheet 15 of 16
Contract Number 46092

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING
Main Bearing Bars (MBB) shall be 3/16" x 1/2" on 1 3/16" centers and conform to ASTM B211 Alloy 6061-T6.
Cross bars (CB) shall be 3/16" x 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

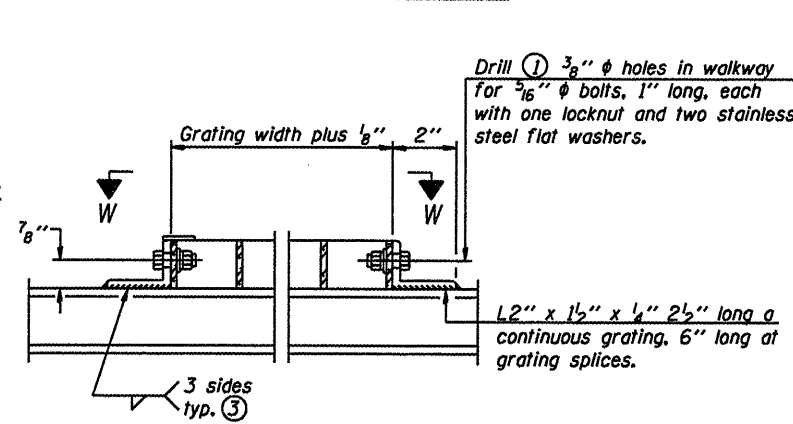
OR
Aluminum Grating with modified "I" sections for main bearing bars shall meet the following requirements:
Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.
Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.



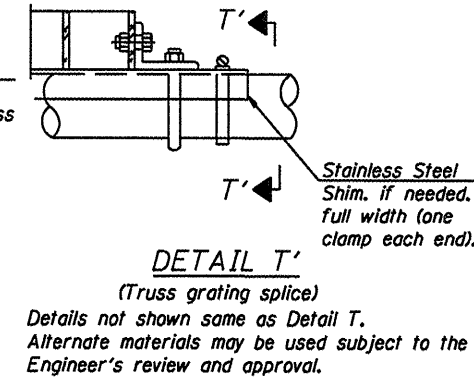
SECTION W-W



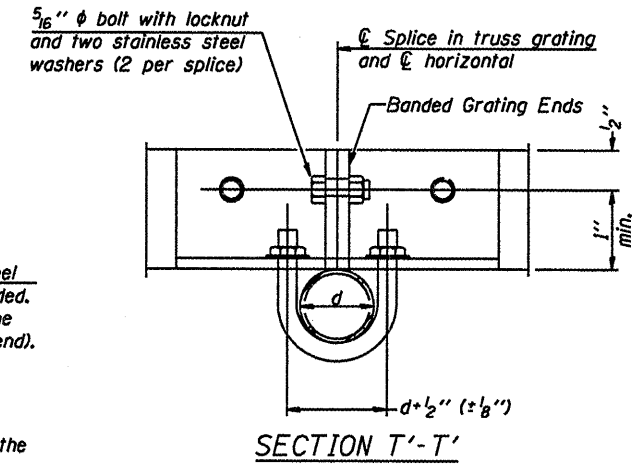
(AT WALKWAY GRATING SPLICE)



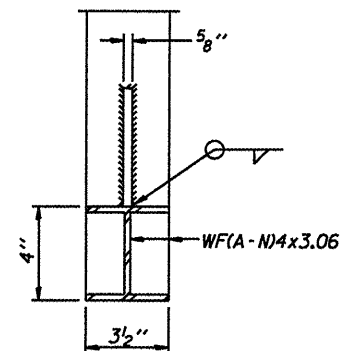
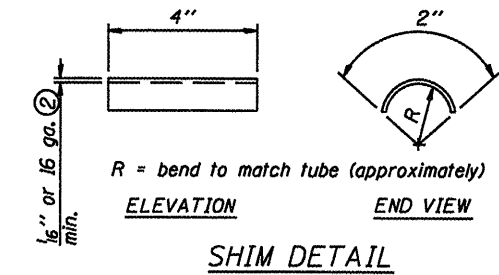
DETAIL W
(Walkway grating)



DETAIL T'
(Truss grating splice)

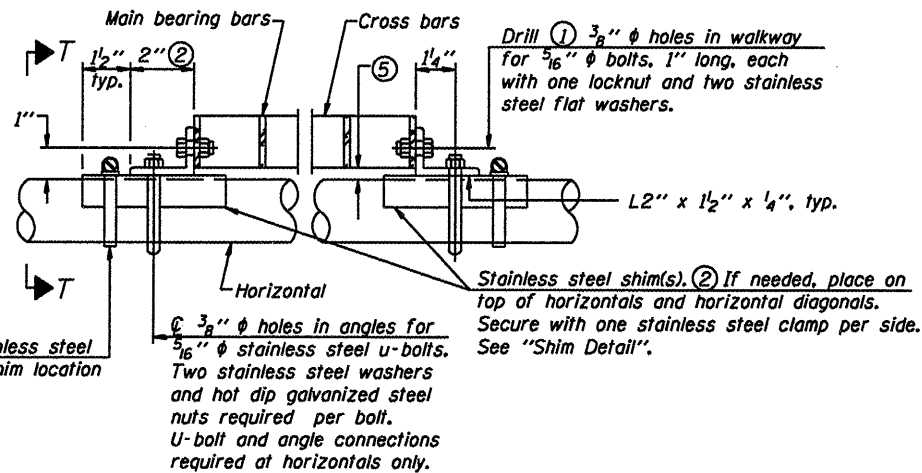


SECTION T'-T'



SECTION D-D

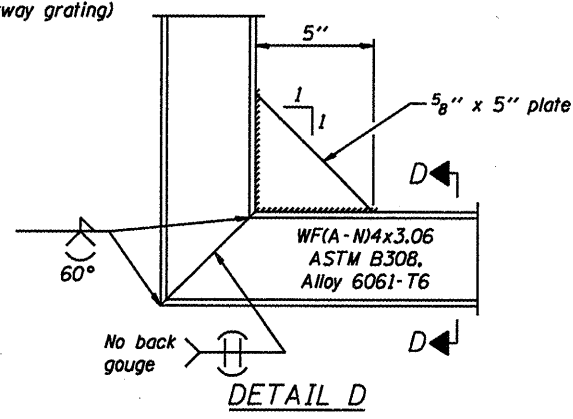
Screw type stainless steel tube clamp at shim location



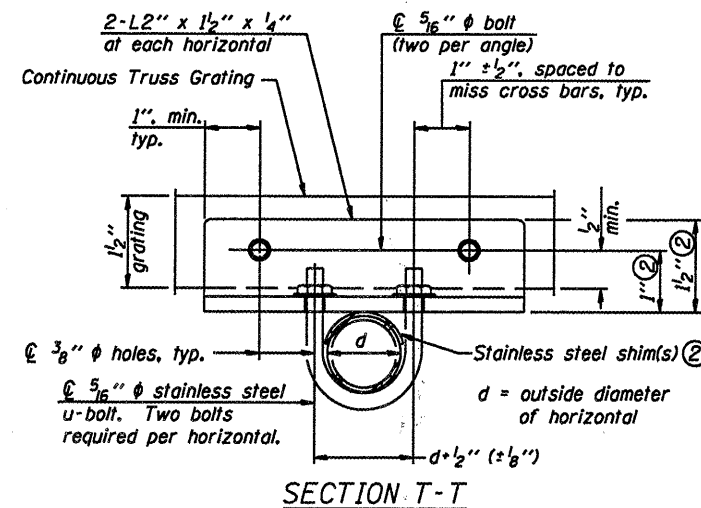
DETAIL T

(Continuous Truss grating)

- ① Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- ② Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- ③ If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OSC-A-8.)
- ④ L 1/2" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- ⑤ Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.



DETAIL D



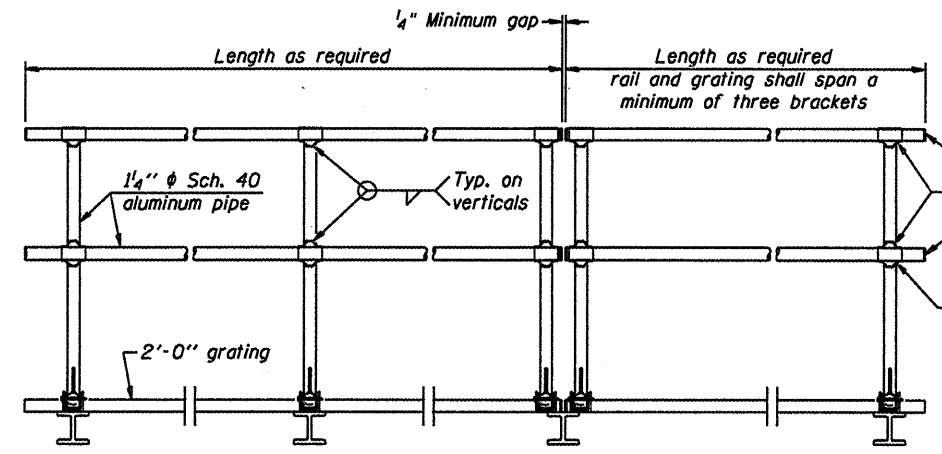
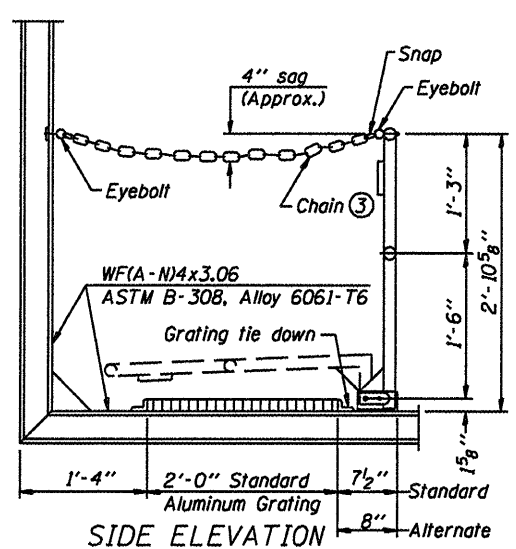
SECTION T-T

Structure Number	Station	A	B	C	D

CANTILEVER SIGN STRUCTURES
WALKWAY DETAILS
ALUMINUM TRUSS & STEEL POST

District 1
Sign Structure
Repair and Replacement

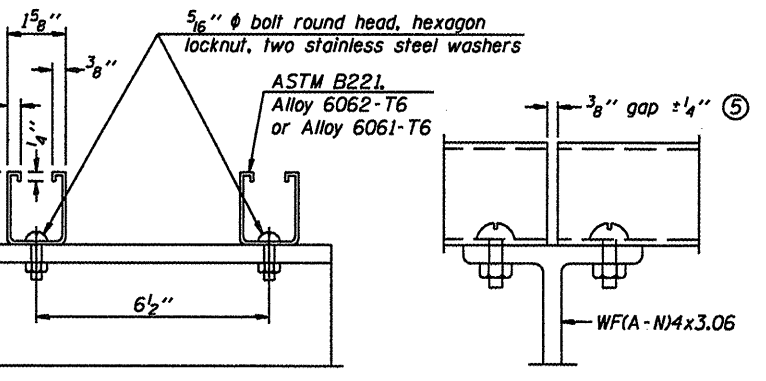
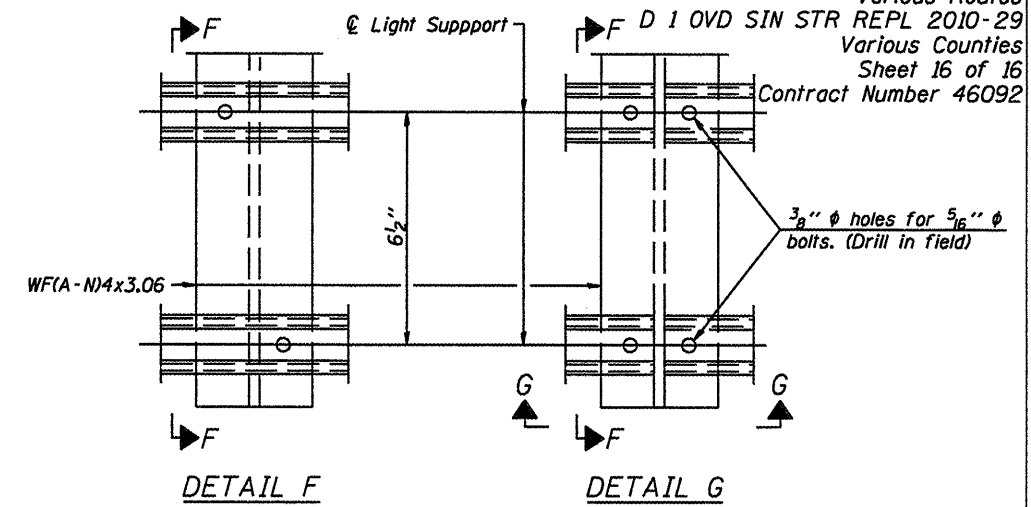
NUMBER	REVISION	DATE



① Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)

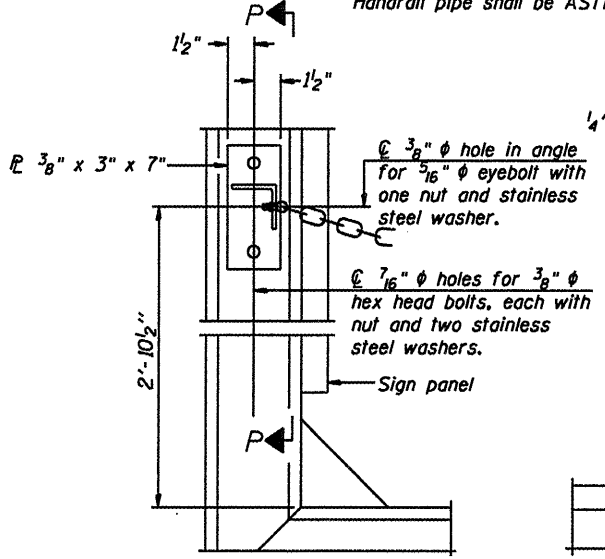
② Horizontal handrail member shall be continuous thru fitting. Provide 7/16" hole in fitting for 3/8" bolt. Field drill 1/16" hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 1/16" holes on top rail at ends only.)

HANDRAIL DETAILS
 Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

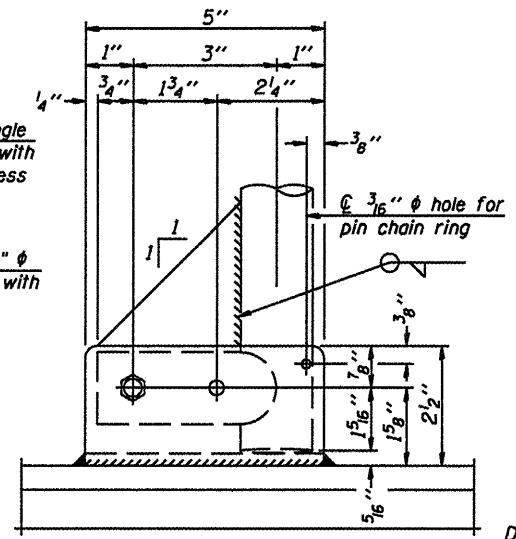


SECTION F-F
 SECTION G-G
 LIGHTING FIXTURE MOUNTS (IF REQUIRED)

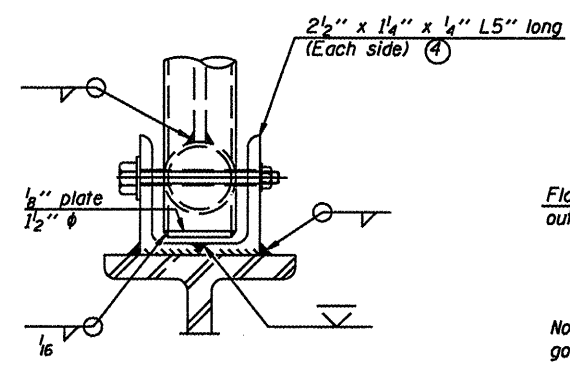
⑤ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



ALTERNATE SAFETY CHAIN ATTACHMENT
 (With Sign Present)
 Items not shown same as "Side Elevation" of "Handrail Details"

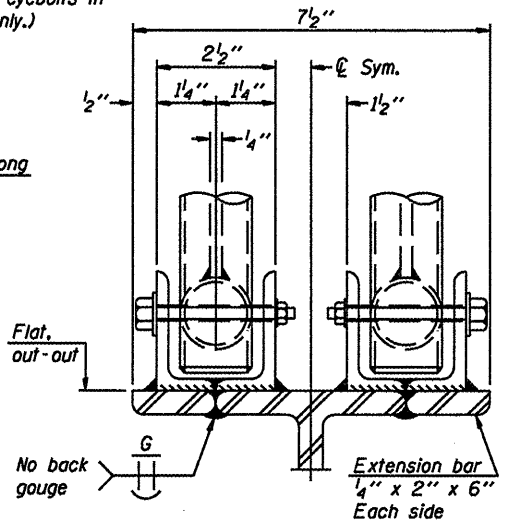


SIDE ELEVATION

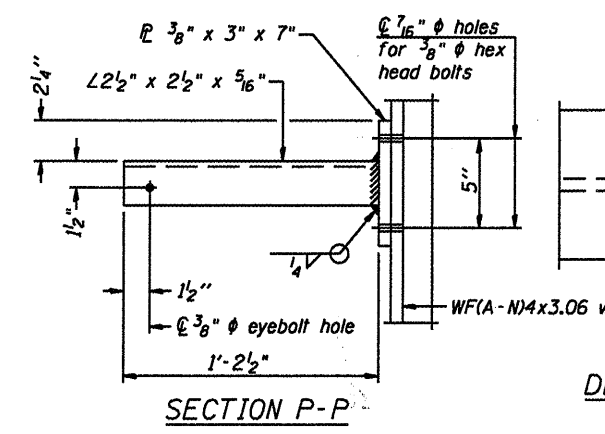


FRONT ELEVATION

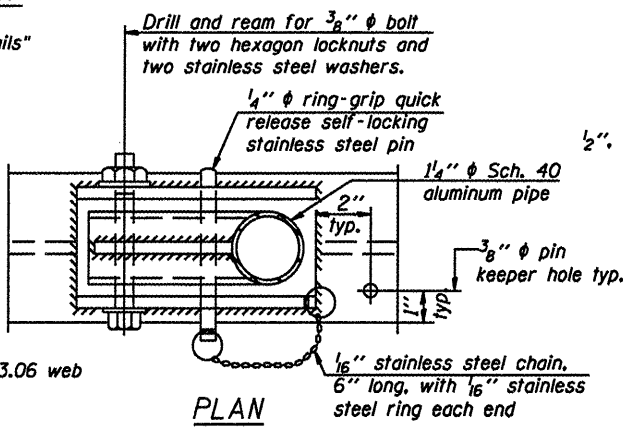
Details not shown same as "ELEVATION" at right.



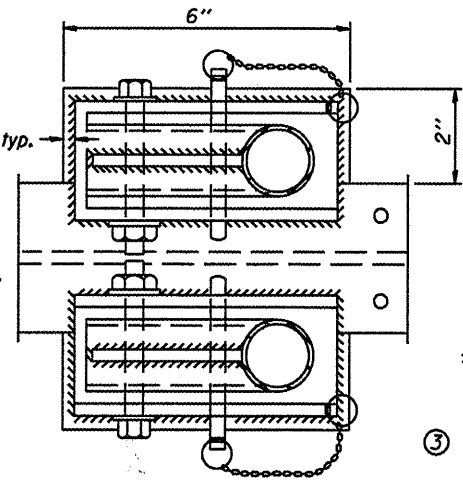
ELEVATION AT HANDRAIL JOINT
 Details not shown same as "FRONT ELEVATION"



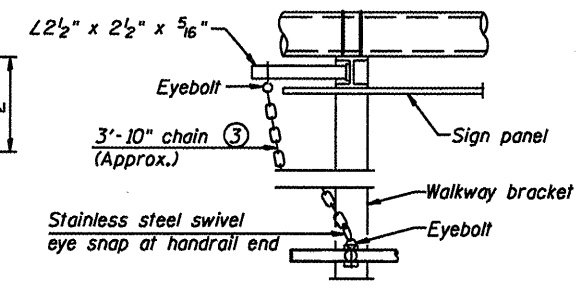
SECTION P-P



PLAN
 DETAIL E HANDRAIL HINGE



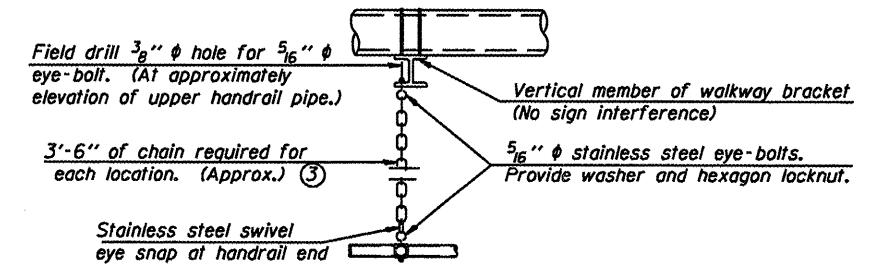
PLAN AT HANDRAIL JOINT
 Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT
 Details not shown similar to "Safety Chain" Details
 (Walkway omitted for clarity)

③ 3/16" Type 304L stainless steel chain, approximately 12 links per foot.

④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.



SAFETY CHAIN

One required for each end of each walkway.

CANTILEVER SIGN STRUCTURES
 HANDRAIL DETAILS
 ALUMINUM TRUSS & STEEL POST

District 1
 Sign Structure
 Repair and Replacement

NUMBER	REVISION	DATE