03-09-12 LETTING ITEM 056

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

VARIOUS ROUTES
D-9 OVD SIN STR REPL 12-12
VARIOUS COUNTIES
C-60-012-12

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 12/14 20 11
PASSED

Acting Gustav Mann
ENGINEER OF OPERATIONS

Feb 3 20 12

acting John D. Baranzelli P.E. for
ENGINEER OF DESIGN AND ENVIRONMENT

APPROVED Feb 3 20 12

acting William R. Frey for
DIRECTOR DIVISION OF HIGHWAYS

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

CONTRACT NO. 46185

FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED -	REVISED -			Various	D-9 OVD SIN STR REPL 12-12	Various	17	1
	PLOT SCALE =	DRAWN -	REVISED -						CONTRACT NO. 46185	
	PLOT DATE =	CHECKED -	REVISED -					ILLINOIS FED. AID PROJECT		

INDEX OF SHEETS

NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, GENERAL NOTES, STANDARDS
3	SUMMARY OF QUANTITIES
4	SCHEDULES
5-14	OVERHEAD SIGN STRUCTURE SPAN DETAILS
15	SIGN DETAILS
16-17	SOIL BORINGS

STANDARDS

630001-10	701101-02
630301-05	701106-02
631011-08	701400-05
635001-01	701401-06
635006-03	701411-08
635011-02	701446-03
	701901-02
	720021-02

GENERAL NOTES

EXISTING STATE-OWNED AND MAINTAINED UTILITY ARE PRESENT AT THE LOCATIONS. THE CONTRACTOR SHALL NOTIFY THE DISTRICT OPERATIONS ENGINNER TWO WEEKS PRIOR TO COMMENCING ANY EXCAVATION IN THE VICINITY OF THESE LINES. THE STATE WILL THEN LOCATE AND MARK THE HORIZONTAL LOCATIONS OF THE LINES AND PROVIDE ANY AVAILABLE INFORMATION AS TO THEIR DEPTH. SHOULD ANY OF THE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATION, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF THE ENGINEER AND AT NO COST TO THE STATE.

ALSO THERE MAY BE UTILITIES PRESENT WHICH WERE INSTALLED BY THE STATE BUT ARE MAINTAINED BY OTHERS (CITY, TOWN, ETC.). THE CONTRACTOR SHALL COORDINATE THE LOCATING OF THESE LINES WITH THE LOCAL AGENCY PRIOR TO COMMENCING ANY EXCAVATION OR BORING IN THEIR VICINITY. SHOULD THESE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF, AND AT NO COST TO, THE LOCAL AGENCY AND THE STATE.

FINAL GRADING SHALL BE DONE BY HAND AROUND ANY NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THE ITEMS. IT IS THE INTENT THAT THE LIMITS OF CONSTRUCTION BE SUCH AS TO PRESERVE IN THE ORIGINAL STATE AS MUCH AREA OF TEMPORARY EASEMENTS AS POSSIBLE. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE ASSOCIATED PAY ITEMS FOR SIGN TRUSS REPLACEMENT WITH NO ADDITIONAL COMPENSATION ALLOWED.

FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, STANDARDS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED -	REVISED -			Various	D-9 OVD SIN STR REPL 12-12	Various	17	2
	PLOT SCALE =	DRAWN -	REVISED -					CONTRACT NO. 46185		
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	CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITY	RURAL 100% STATE 0021	RURAL 100% STATE 0040
	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	LUMP SUM	1.0		1.0
	X7330070	OVERHEAD SIGN SUPPORT GROUT REPAIR	EACH	16.0		16.0
	X7330093	INTERNAL MEMBER TRUSS CLAMP	EACH	6.0		6.0
	X7330100	PAINT OVERHEAD SIGN SUPPORT	EACH	2.0		2.0
	X7370005	REPAIR CONCRETE FOUNDATION FOR OVERHEAD SIGN STRUCTURE	EACH	10.0		10.0
	X8040310	ELECTRIC SERVICE DISCONNECT	EACH	2.0		2.0
	50200400	ROCK EXCAVATION FOR STRUCTURES	CU YD	6.0		6.0
X	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	1,925.0	1,925.0	
X	63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	6.0	6.0	
X	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	6.0	6.0	
	67100100	MOBILIZATION	L SUM	1.0		1.0
	70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	5.0		5.0
	70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.0		1.0
	70100430	TRAFFIC CONTROL AND PROTECTION, STANDARD 701446	EACH	1.0		1.0
	70200100	NIGHT TIME WORK ZONE LIGHTING	L SUM	1.0		1.0
	72000300	SIGN PANEL - TYPE 3	SQ FT	642.0		642.0
	73300200	OVERHEAD SIGN STRUCTURE - SPAN, TYPE II-A (4'-6"X5'3")	FOOT	200.0		200.0
	73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	87.0		87.0
	73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	46.1		46.1
	73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	2.0		2.0
	73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	4.0		4.0
	78200420	GUARDRAIL MARKERS, TYPE B	EACH	28.0	28.0	
	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	6.0	6.0	

XSPECIALTY ITEM

FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Summary of Quantities	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED -	REVISED -			Various	D-9 OVD SIN STR REPL 12-12	Various	17	3
	PLOT SCALE =	DRAWN -	REVISED -					CONTRACT NO. 46185		
	PLOT DATE =	CHECKED -	REVISED -					ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
District 9
Schedule of Overhead Sign Structure Repair & Replacement

Location No.:	9-01	State I.D. No.:	9S100I057L044.6		
County:	Williamson	Route:	I-57	M.P.:	44.6

Direction: SB

Description of Work	Unit	Quantity
Remove Overhead Sign Structure Span	Each	1.00
Overhead Sign Structure Span Type II-A	Foot	112.00
Overhead Sign Structure Walkway	Foot	55.00
Remove Concrete Foundation • Overhead	Each	2.00
Drilled Shaft Concrete Foundation	Cu Yd	24.60
Electric Service Disconnect	Each	1.00
Sign Panel - Type 3	SQ FT	372.00
Rock Excavation For Structures	Cu Yd	2.00
Steel Plate Beam Guardrail, Type A, 6 Foot Posts	Foot	962.50
Traffic Barrier Terminal, Type 2	Each	3.00
Traffic Barrier Terminal, Type 1 (Special) Tangent	Each	3.00
Terminal Marker-Direct Applied	Each	3.00
Guardrail Markers, Type B	Each	14.00

Location No.:	9-02	State I.D. No.:	9S100I057L044.9		
County:	Williamson	Route:	I-57	M.P.:	44.9

Direction: SB

Description of Work	Unit	Quantity
Remove Overhead Sign Structure Span	Each	1.00
Overhead Sign Structure Span Type II-A	Foot	88.00
Overhead Sign Structure Walkway	Foot	32.00
Remove Concrete Foundation • Overhead	Each	2.00
Drilled Shaft Concrete Foundation	Cu Yd	21.50
Electric Service Disconnect	Each	1.00
Sign Panel - Type 3	SQ FT	270.00
Rock Excavation For Structures	Cu Yd	4.00
Steel Plate Beam Guardrail, Type A, 6 Foot Posts	Foot	962.50
Traffic Barrier Terminal, Type 2	Each	3.00
Traffic Barrier Terminal, Type 1 (Special) Tangent	Each	3.00
Terminal Marker-Direct Applied	Each	3.00
Guardrail Markers, Type B	Each	14.00

Location No.:	9-03	State I.D. No.:	9C028I057R073.8		
County:	Franklin	Route:	I-57	M.P.:	73.8

Direction: NB

Description of Work	Unit	Quantity
Overhead Sign Support Grout Repair	Each	4.00

Location No.:	9-04	State I.D. No.:	9S028I057L078.8		
County:	Franklin	Route:	I-57	M.P.:	78.8

Direction: SB

Description of Work	Unit	Quantity
Overhead Sign Support Grout Repair	Each	4.00

Location No.:	9-05	State I.D. No.:	9C091I057R024.6		
County:	Union	Route:	I 57	M.P.:	24.6

Direction: NB

Description of Work	Unit	Quantity
Furnish and Install Internal Member Truss Clamp	Each	4.00

Location No.:	9-06	State I.D. No.:	9S100I057R043.4		
County:	Williamson	Route:	I 57	M.P.:	43.4

Direction: NB

Description of Work	Unit	Quantity
Furnish and Install Internal Member Truss Clamp	Each	2.00

Location No.:	9-07	State I.D. No.:	9S041I057R090.9		
County:	Jefferson	Route:	I-57	M.P.:	90.9

Direction: NB

Description of Work	Unit	Quantity
Overhead Sign Support Grout Repair	Each	4.00
Repair Concrete Foundation for Overhead Sign Structure	Each	2.00
Paint Overhead Sign Support	Each	2.00

Location No.:	9-08	State I.D. No.:	9S041I057L097.5		
County:	Jefferson	Route:	I 57	M.P.:	97.5

Direction: SB

Description of Work	Unit	Quantity
Repair Concrete Foundation for Overhead Sign Structure	Each	2.00

Location No.:	9-09	State I.D. No.:	9S041I064R072.9		
County:	Jefferson	Route:	I 64	M.P.:	72.9

Direction: EB

Description of Work	Unit	Quantity
Repair Concrete Foundation for Overhead Sign Structure	Each	2.00
Overhead Sign Support Grout Repair	Each	4.00

Location No.:	9-10	State I.D. No.:	9S041I064L078.5		
County:	Jefferson	Route:	I 64	M.P.:	78.5

Direction: WB

Description of Work	Unit	Quantity
Repair Concrete Foundation for Overhead Sign Structure	Each	2.00

Location No.:	9-11	State I.D. No.:	9S041I064L078.9		
County:	Jefferson	Route:	I 64	M.P.:	78.9

Direction: WB

Description of Work	Unit	Quantity
Repair Concrete Foundation for Overhead Sign Structure	Each	2.00

GUARDRAIL SCHEDULE

LOCATION STA TO STA	STEEL PLATE BEAM GUARDRAIL TYPE A, 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 2	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	GUARDRAIL MARKERS, TYPE B	TERMINAL MARKER - DIRECT APPLIED
	FOOT	EACH	EACH	EACH	EACH
I 57					
SBL					
LT STA 368+61.9 TO STA 369+11.9 (MEDIAN SIDE)			1.0		1.0
LT STA 369+11.9 TO STA 372+49.4 (MEDIAN SIDE)	337.5			5.0	
LT STA 372+49.4 TO STA 372+63.7 (MEDIAN SIDE)		1.0			
RT STA 369+20.6 TO STA 369+70.6 (OUTSIDE)			1.0		1.0
RT STA 369+70.6 TO STA 372+45.6 (OUTSIDE)	275.0			4.0	
RT STA 372+45.6 TO STA 372+62.9 (OUTSIDE)		1.0			
LT STA 385+01.9 TO STA 385+51.9 (MEDIAN SIDE)			1.0		1.0
LT STA 385+51.9 TO STA 388+89.4 (MEDIAN SIDE)	337.5			5.0	
LT STA 388+89.4 TO STA 389+03.7 (MEDIAN SIDE)		1.0			
RT STA 385+60.6 TO STA 386+10.6 (OUTSIDE)			1.0		1.0
RT STA 386+10.6 TO STA 388+85.6 (OUTSIDE)	275.0			4.0	
RT STA 388+85.6 TO STA 389+02.9 (OUTSIDE)		1.0			
NBL					
RT STA 372+53.7 TO STA 372+68. (MEDIAN SIDE)		1.0			
RT STA 372+68. TO STA 376+18. (MEDIAN SIDE)	350.0			5.0	
RT STA 376+18. TO STA 376+68. (MEDIAN SIDE)			1.0		1.0
RT STA 388+93.7 TO STA 389+08. (MEDIAN SIDE)		1.0			
RT STA 389+08. TO STA 392+58. (MEDIAN SIDE)	350.0			5.0	
RT STA 392+58. TO STA 393+08. (MEDIAN SIDE)			1.0		1.0
PROJECT TOTAL	1,925.0	6.0	6.0	28.0	6.0

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
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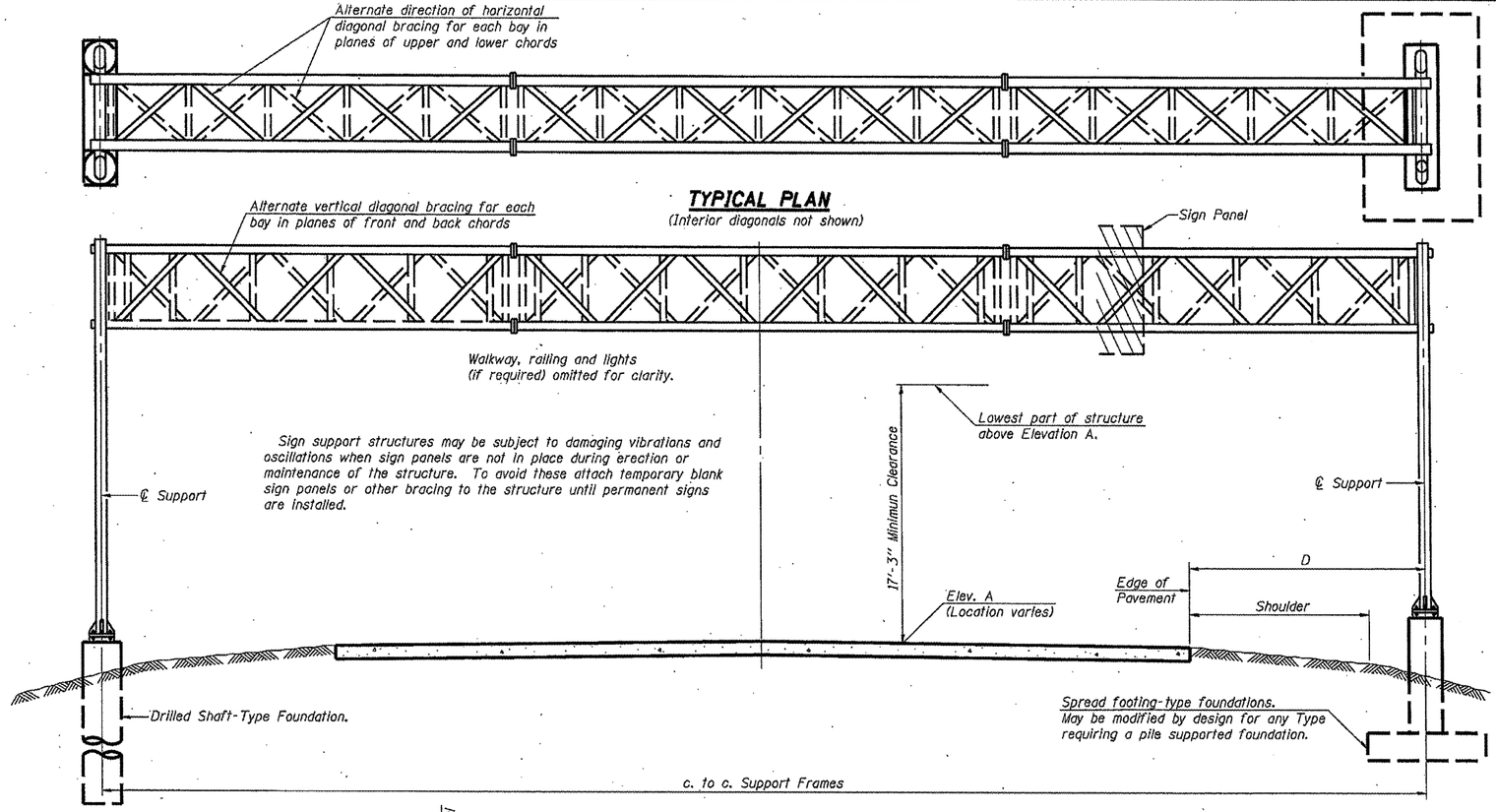
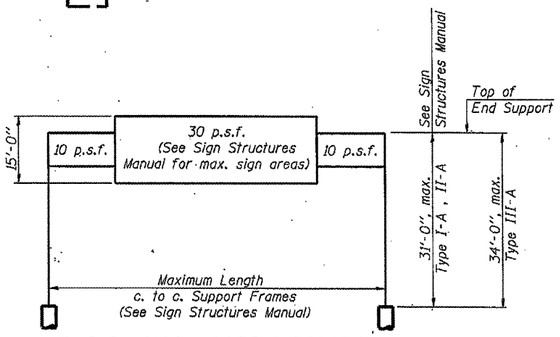
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	D-9 OVD SIN STR REPL 12-12	Various	17	4

CONTRACT NO. 46185
ILLINOIS FED. AID PROJECT





DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

TYPICAL ELEVATION

*(Looking at Face of Signs**)*

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
9S1001057L044.9	372+50	II-A	88'	567.10	32'	12'-0"	270.0
9S1001057L044.6	388+90	II-A	112'	598.28	32'	13'-0"	372.0

**Looking upstation for structures with signs both sides.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specificiations.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.
The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seat Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

FOUNDATIONS: The contract unit price for Concrete Foundations and Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE I-A	Foot	
OVERHEAD SIGN STRUCTURE SPAN TYPE II-A	Foot	200
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	87
CONCRETE FOUNDATIONS	Cu. Yds.	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	46.1

OS-A-1 1-20-11

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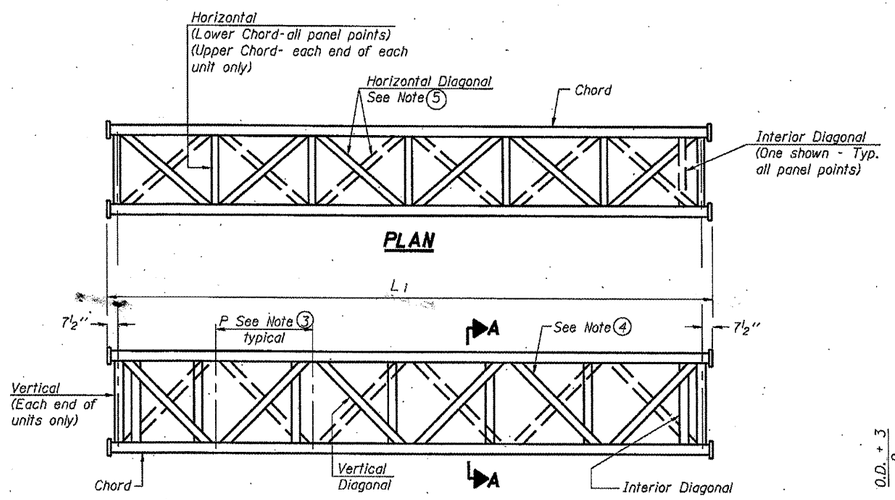
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

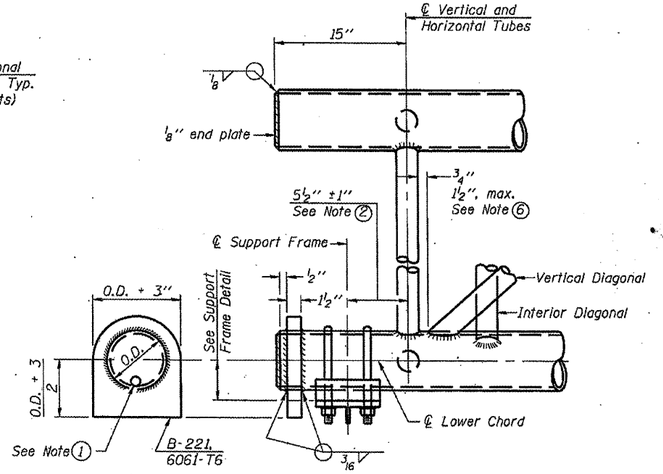
OVERHEAD SIGN STRUCTURES – GENERAL PLAN & ELEVATION – ALUMINUM TRUSS & STEEL SUPPORTS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	0-9 OVD SIN STR REPL 12-12	Various	17	5
		CONTRACT NO. 46185		
	ILLINOIS FED. AID PROJECT			

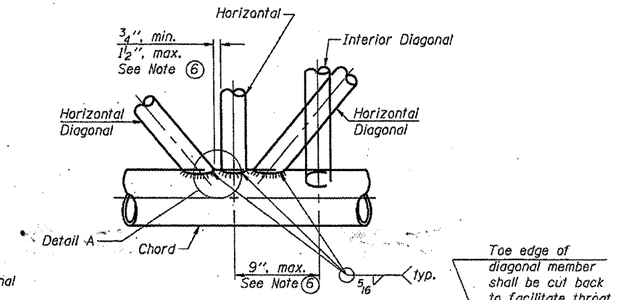


ELEVATION
TYPICAL INTERIOR UNIT

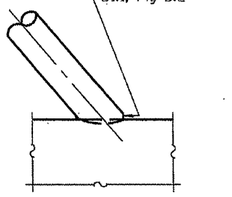
Even number of panels/interior unit required.



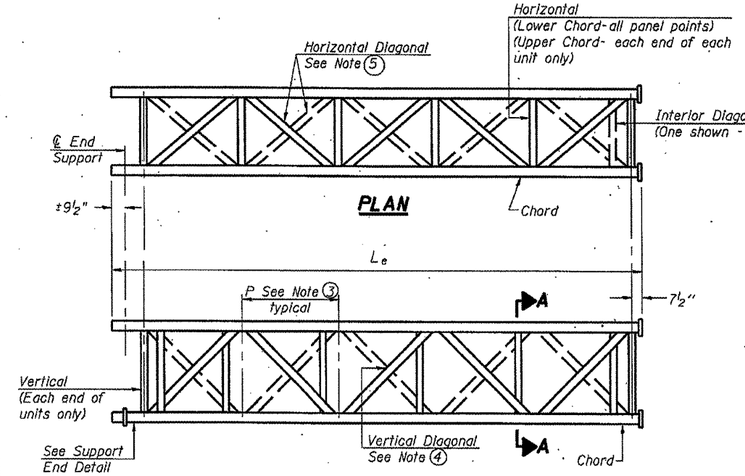
SUPPORT END DETAIL FOR EXTERIOR UNIT



TYPICAL JOINT DETAILS

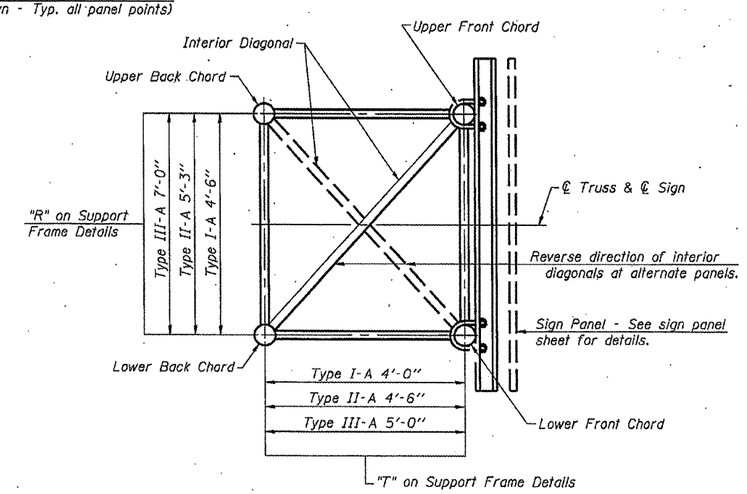


DETAIL A



ELEVATION
TYPICAL EXTERIOR UNIT

Even or odd number of panels/exterior units allowed.



SECTION A-A

1. Contractor may alternatively use standard aluminum drive-fit cap to close end. ½" ϕ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
2. 5½" end dimension may vary by ±1" to provide uniform panel spacing (P).
3. Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-A or 4'-0" and 5'-6" for Types II-A and III-A.
4. Vertical Diagonals in front and back face shall alternate.
5. Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
6. All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a ¾" minimum to 1½" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

OS-A-2 1-20-11

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
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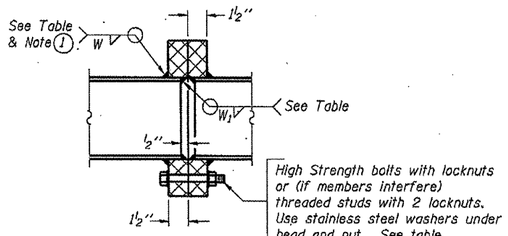
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES – ALUMINUM TRUSS
DETAILS FOR TRUSS TYPES I-A, II-A AND III-A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	D-9 OVD SIN STR REPL 12-12	Various	17	6
		CONTRACT NO. 46185		
		ILLINOIS FED. AID PROJECT		

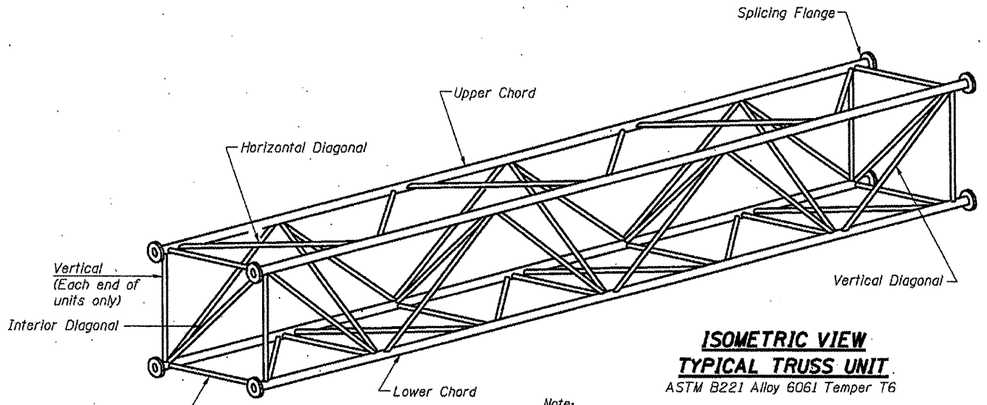
TRUSS UNIT TABLE

Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(L_E)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L_I)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	W_1		
9S1001057L044.9	372+50	II-A	5	28'-4"	5'-3.5"	1	6	33'-0"	5'-3.5"	5 1/2"	5/16"	3"	5/16"	2.4"	6	1"	3/8"	1/4"	9 1/4"	12 1/4"
9S1001057L044.6	388+90	II-A	7	39'-11.25"	5'-5.25"	1	6	33'-10.5"	5'-5.25"	7"	5/16"	3"	5/16"	3.75"	6	1"	3/8"	1/4"	11.5"	15"



SECTION B-B

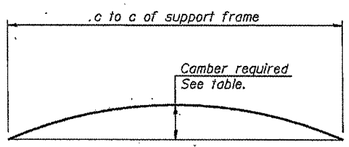
(1) Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match marked" to insure proper field assembly.



ISOMETRIC VIEW
TYPICAL TRUSS UNIT

ASTM B221 Alloy 6061 Temper T6

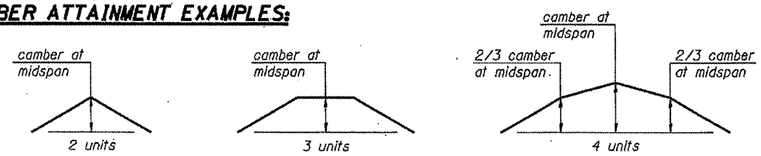
Note:
Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection of the units.



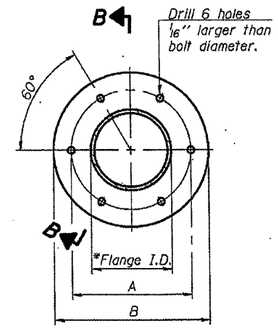
CAMBER DIAGRAM

Camber curve shown is theoretical. Actual camber attained by slope changes at splices between units.

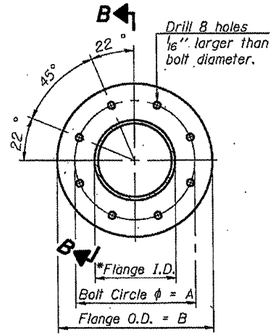
CAMBER ATTAINMENT EXAMPLES:



Camber shown is for fabrication only, measured with truss fully supported. (No-load condition)



TRUSS TYPES I-A, II-A, & III-A



TRUSS TYPES II-A & III-A

SPLICING FLANGES

ASTM B221, Alloy 6061-T6
or ASTM B209, Alloy 6061-T651
*To fit O.D. of Chord with maximum gap of 1/16".

OS4-A-2 1-20-11

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
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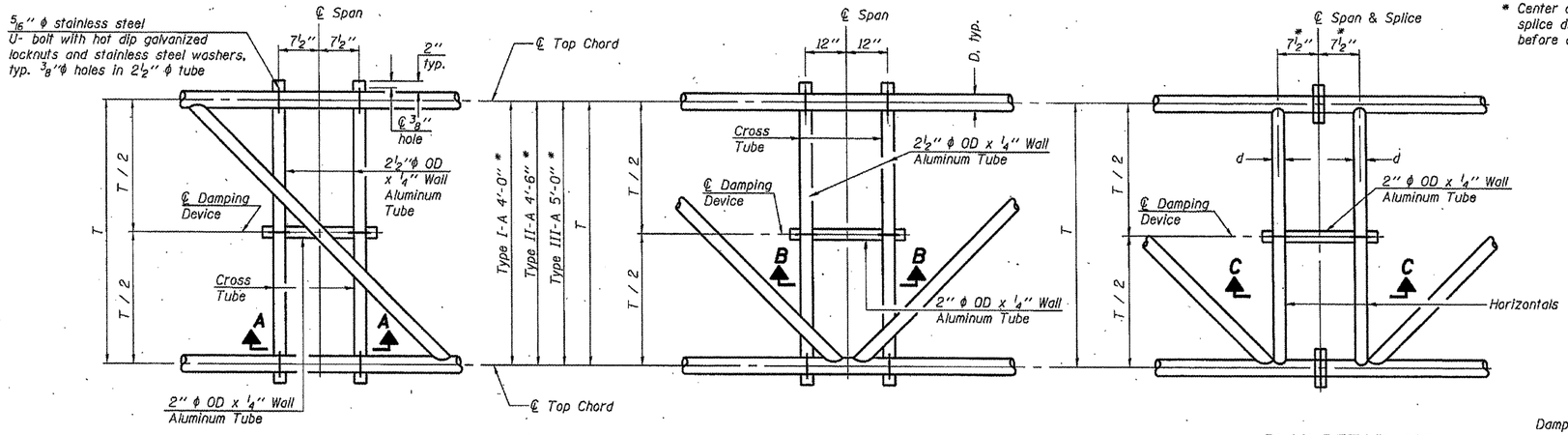
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES – ALUMINUM TRUSS DETAILS FOR TRUSS TYPES I-A, II-A AND III-A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	0-9 OVD SIN STR REPL 12-12	Various	17	7
		CONTRACT NO. 46185		
	ILLINOIS FED. AID PROJECT			

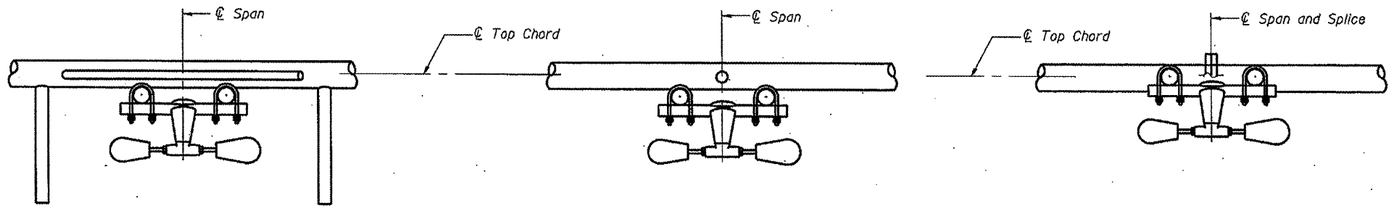


* Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.

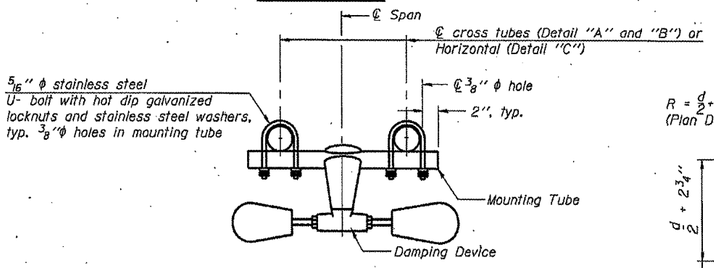
PLAN DETAIL "A"
℄ Span between Panel Points

PLAN DETAIL "B"
℄ Span at Panel Point

PLAN DETAIL "C"
℄ Span at ℄ Chord Splice

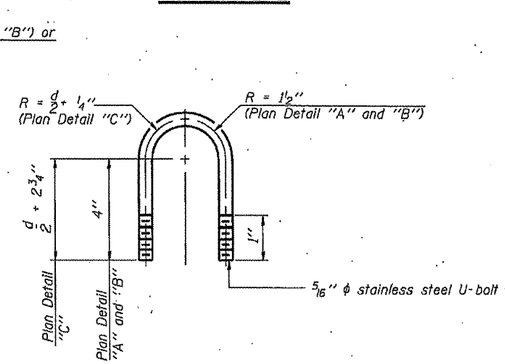


SECTION A-A



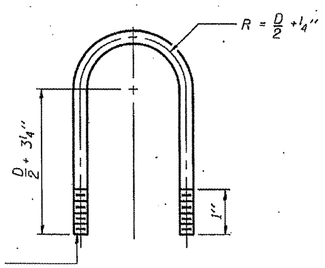
TRUSS DAMPING DEVICE CONNECTION DETAIL
(Typical)

SECTION B-B

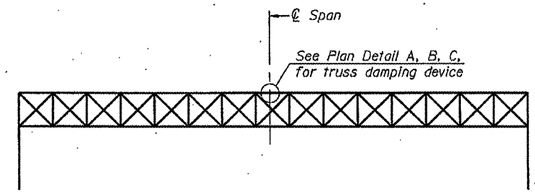


DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)

SECTION C-C



TOP CHORD TO CROSS TUBE U-BOLT DETAIL
(Typical - Detail "A" and "B")



ELEVATION
Aluminum Overhead Sign Truss

NOTES

Damper: One damper per truss. (31 lbs. minimum Stockbridge-Type Aluminum - 29" minimum between ends of weights) Cost included in Overhead Sign Structure...

Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...

OS-A-D 1-20-11

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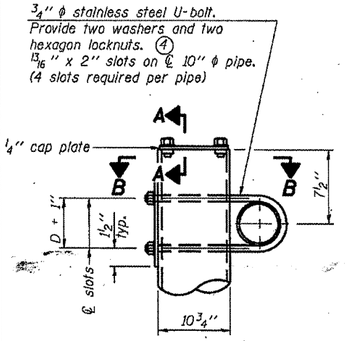
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

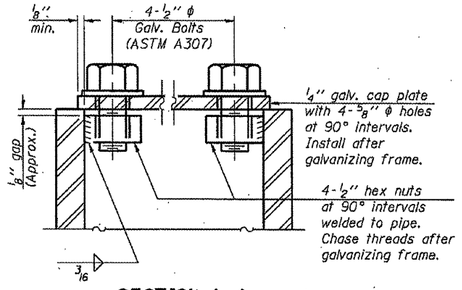
OVERHEAD SIGN STRUCTURE
DAMPING DEVICE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	D-9 OVD SIN STR REPL 12-12	Various	17	8

CONTRACT NO. 46185
ILLINOIS FED. AID PROJECT

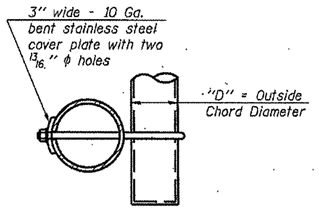


DETAIL A

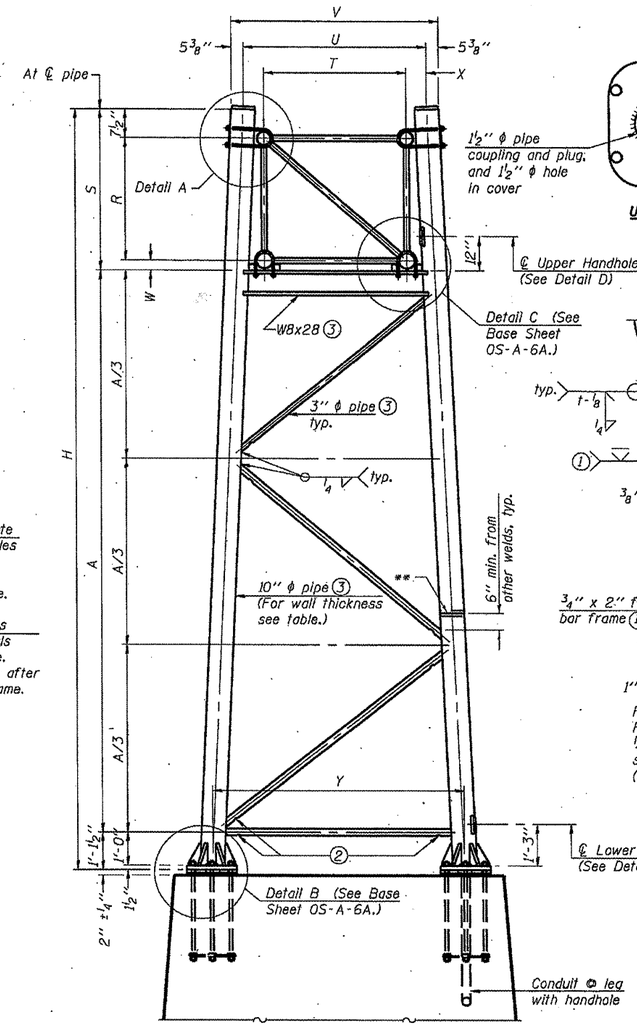


SECTION A-A

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

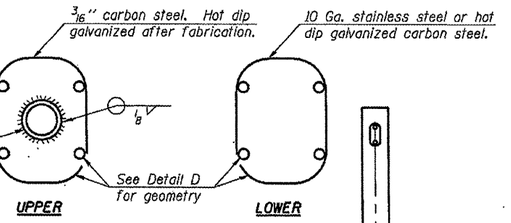


SECTION B-B

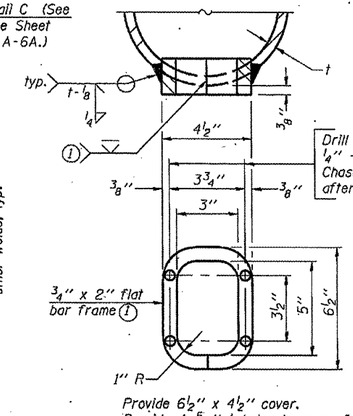


For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

SIDE ELEVATION

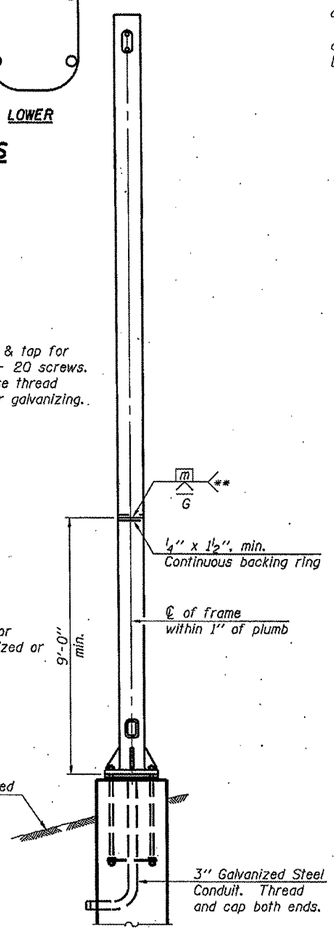


HANDHOLE COVERS



Provide 6 1/2" x 4 1/2" cover.
Provide 4-5/16" ϕ holes in cover for 1/4"-20 round head hot dip galvanized or stainless steel machine screws.
(See cover details)

DETAIL D



END ELEVATION

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 µIn 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.

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"

10" ϕ PIPE TRUSS SUPPORT FRAME

** One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	Support Left	Support Right	Truss Type	Pipe Wall Thickness	H (6)	A
9S1001057L044.9	372+50		X	II-A	0.365	28.17	23.02
9S1001057L044.9	372+50	X		II-A	0.365	27.67	22.52
9S1001057L044.6	388+90		X	II-A	0.500	32.10	24.70
9S1001057L044.6	388+90	X		II-A	0.500	31.60	24.20

OS-A-6 1-20-11

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
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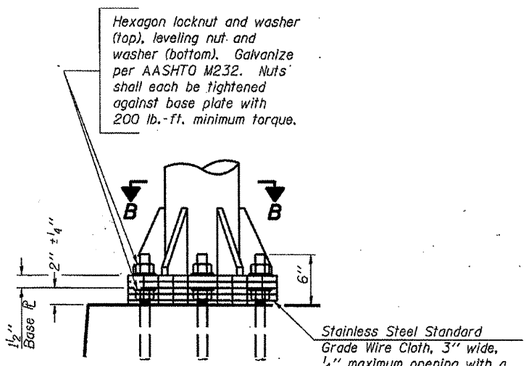
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

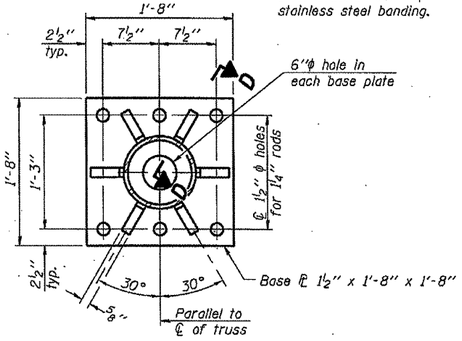
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR ALUMINUM TRUSS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	D-9 OVD SIN STR REPL 12-12	Various	17	9
		CONTRACT NO. 46185		
	ILLINOIS FED. AID PROJECT			

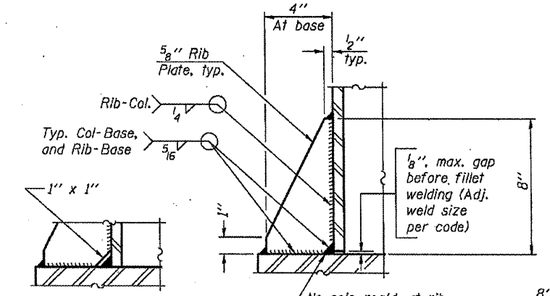


DETAIL B

Ribs shall be cut to fit slope of pipe.

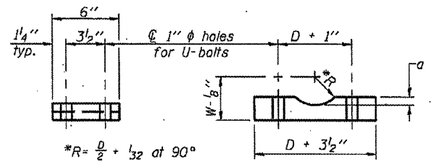


SECTION B-B



** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip.

SECTION D-D



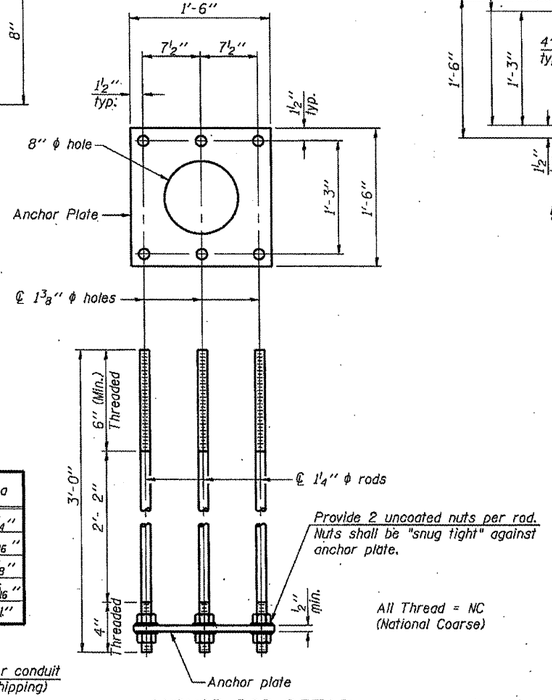
*R = a/2 + 1/32 at 90°

D = Outside Diameter of Chord.
For W, see Base Sheet OS-A-6.

SADDLE SHIM DETAIL

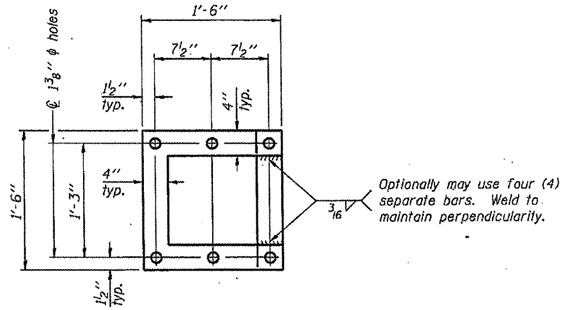
ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

Truss Chord Nominal Dia.	a
5"	3/4"
5 1/2"	13/16"
6"	7/8"
6 1/2"	15/16"
7"	1"

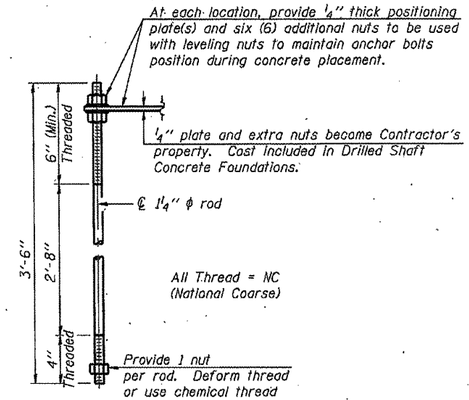


ANCHOR ROD DETAIL

Spread Footing Foundation



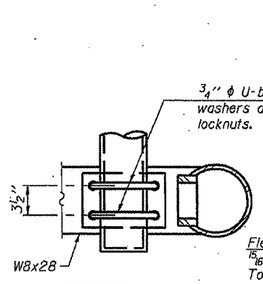
POSITIONING PLATE(S)



ANCHOR ROD DETAIL

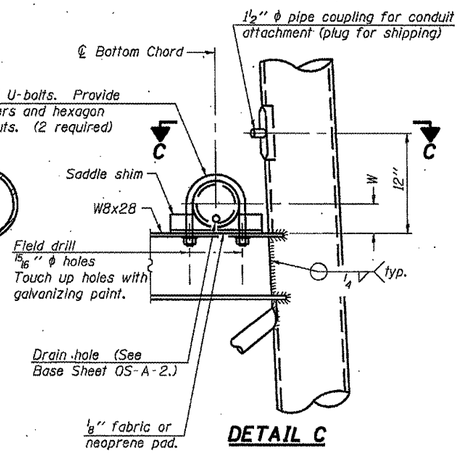
Drilled Shaft Foundation

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.



SECTION C-C

(Handhole cover not shown)



DETAIL C

10" ϕ PIPE SUPPORT FRAME DETAILS

OS-A-6A 1-20-11

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
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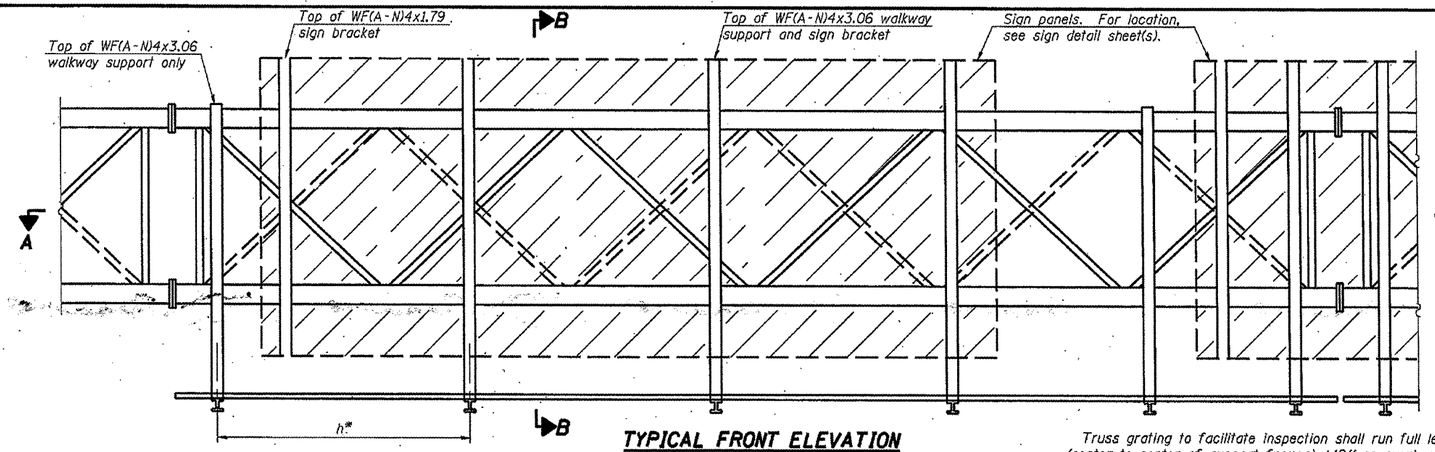
	PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS – ALUMINUM TRUSS

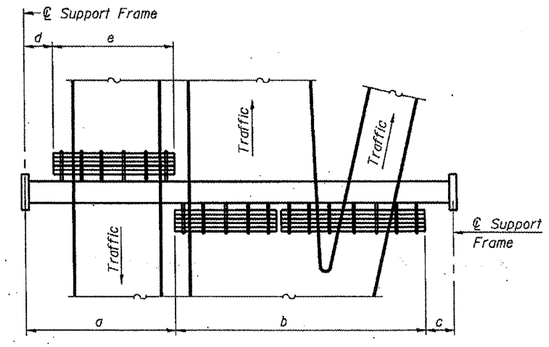
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	0-9 OVD SIN STR REPL 12-12	Various	17	10
		CONTRACT NO. 46185		
	ILLINOIS FED. AID PROJECT			



TYPICAL FRONT ELEVATION

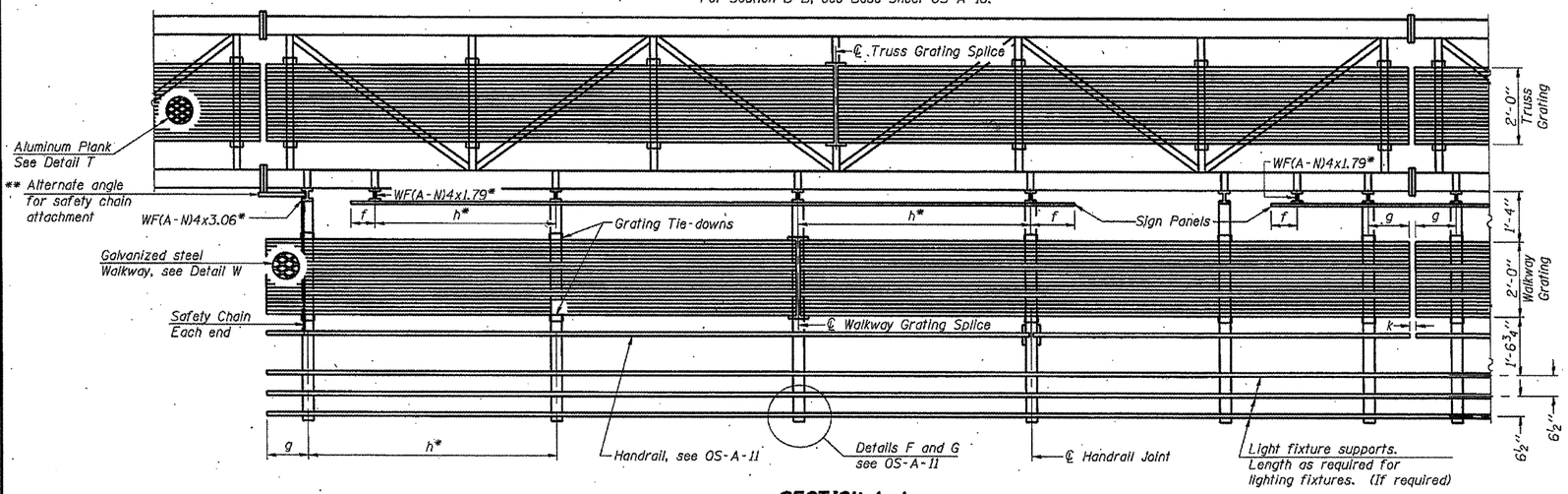
With lights and handrail omitted for clarity.
For Section B-B, see Base Sheet OS-A-10.

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".



PLAN
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath truss varies)



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.

BRACKET TABLE

WF(A-N)4x1.79 or WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
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

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 ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to ℄ of nearest support bracket)
h = 6'-0" maximum (℄ to ℄ 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.

Note:
Details shown are considered equal alternatives to the Aluminum Walkway on Base Sheet OS-A-9, and may be substituted by Contractor at no change in contract cost.

Walkway and Truss Grating width dimensions are nominal and may vary ±½" based on available standard widths.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
9S1001057L044.9	372+50	29'	32'	27'	X	X	32'
9S1001057L044.6	388+90	30'	55'	27'	X	X	55'

OS-A-9S 1-20-11

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
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	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

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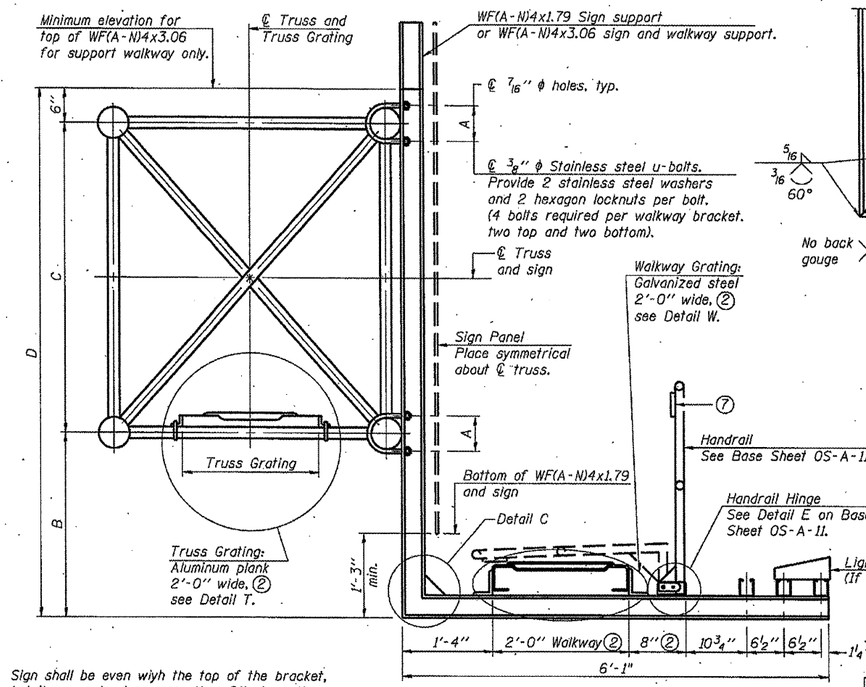
DEPARTMENT OF TRANSPORTATION

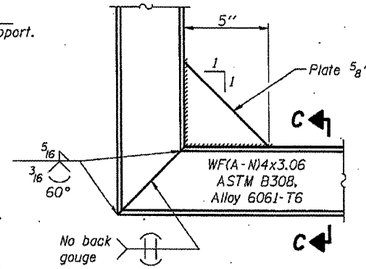
OVERHEAD SIGN STRUCTURES
ALTERNATE WALKWAY DETAILS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	D-9 OVD SIN STR REPL 12-12	Various	17	11
		CONTRACT NO. 46185		
	ILLINOIS FED. AID PROJECT			

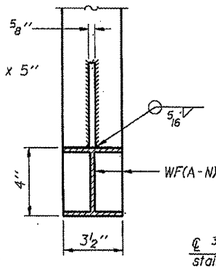


Sign shall be even wiyh the top of the bracket, but it may extend no more than 6" above the top of the bracket for field adjustments.

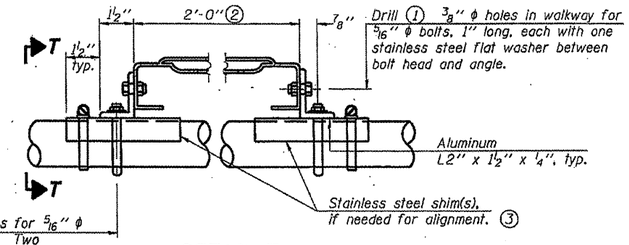
SECTION B-B



DETAIL C



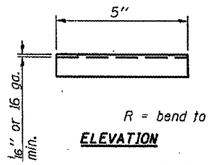
SECTION C-C



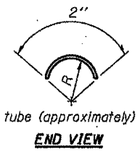
℄ 3/8" ϕ holes in angles for 5/16" ϕ stainless steel u-bolts. Two stainless steel washers and hot dip galvanized steel nuts required per bolt. U-bolt and angle connections required at horizontals only.

DETAIL T

(Truss grating at horizontal)



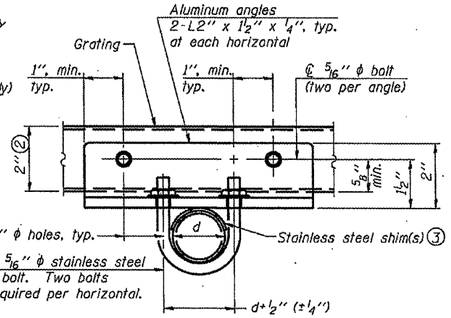
ELEVATION



R = bend to match tube (approximately)

END VIEW

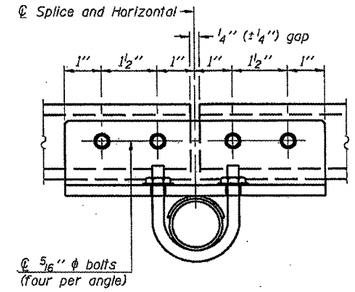
SHIM DETAIL



SECTION T-T

(Truss Grating Continuous)

d = outside diameter of horizontal

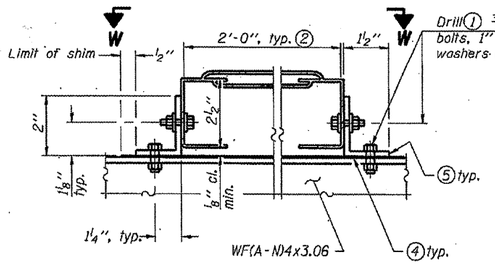


SECTION T-T

(Truss Grating Splice)

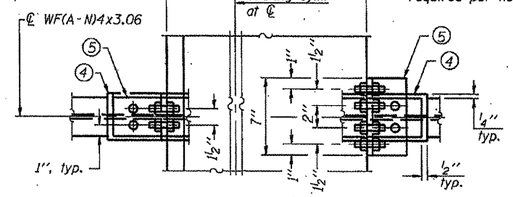
Alternate splice details and locations may be used subject to the Engineer's review and approval.

ALUMINUM TRUSS GRATING



DETAIL W

GALVANIZED STEEL WALKWAY GRATING



WALKWAY GRATING CONTINUOUS **AT WALKWAY GRATING SPLICE**

SECTION W-W

(1) Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.

(2) Perforated or expanded metal grating providing a skid resistant (non-serrated) surface and capable of supporting a 500 pound concentrated load with a 6'-0" clear span. Walkway and truss grating dimensions are nominal and may vary (width ±1/2", depth ±1/2") based on available standard sizes. Cut ends of grating shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

(3) Stainless steel shims shall be placed under angles at horizontals and horizontal diagonals if needed to compensate for alignment variations and differences in horizontal diagonal pipe sizes beyond adjustment provided by angles. Secure with one stainless steel clamp per location, see "Shim Detail". Thicker shim plates may be used when needed subject to shims performing properly.

(4) 1/16" (or 16 ga.) x 2 1/2" x 4" stainless steel shim adhered to top of WF(A-N)4x3.06 beneath each galvanized angle. Adhesives for shims shall be suitable for materials joined and full exposure conditions.

(5) Galvanized steel L2" x 2" x 1/4", 3 1/2" long with continuous grating, 7" long at grating splice.

(6) Details shown are considered equal alternatives to the Aluminum Walkway on Base Sheet OS-A-10 and may be substituted by Contractor at no change in contract cost.

(7) ℄ 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.

(8) Based on actual height of tallest sign given on OS-A-1.

Structure Number	Station	A	(8) B	C	(8) D
9S1001057L044.9	372+50	6"	4'-7.5"	5'-3"	10'-4.5"
9S1001057L044.6	388+90	7.5"	7'-5.5"	5'-3"	13'-2.5"

OS-A-10S 1-20-11

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

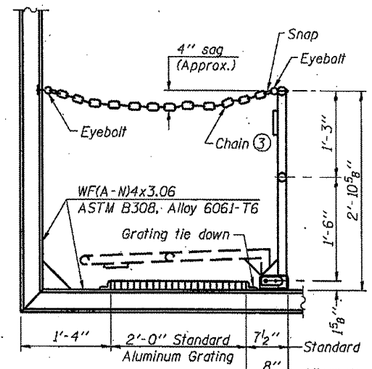
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALTERNATE WALKWAY DETAILS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	D-9 OVD SIN STR REPL 12-12	Various	17	12

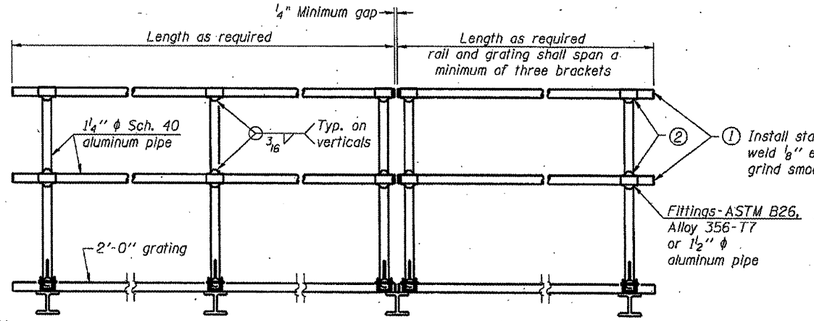
CONTRACT NO. 46185

ILLINOIS FED. AID PROJECT



SIDE ELEVATION

(Showing safety chain w/o sign)



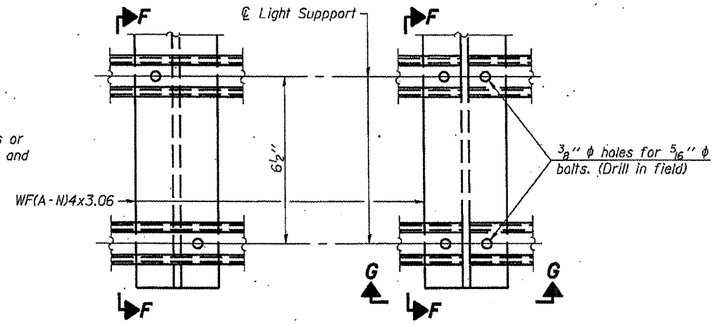
FRONT ELEVATION

HANDRAIL DETAILS

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

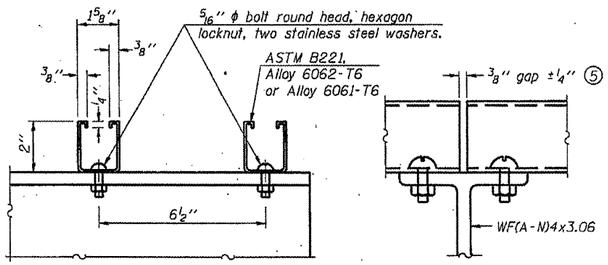
① Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)

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



DETAIL F

DETAIL G

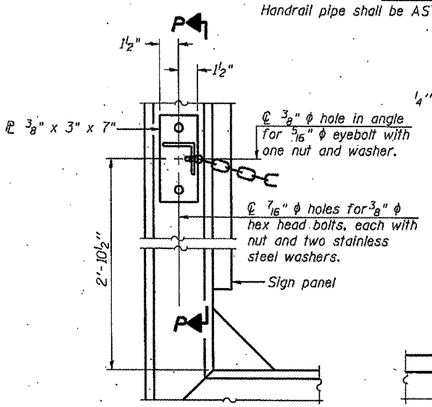


SECTION F-F

SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

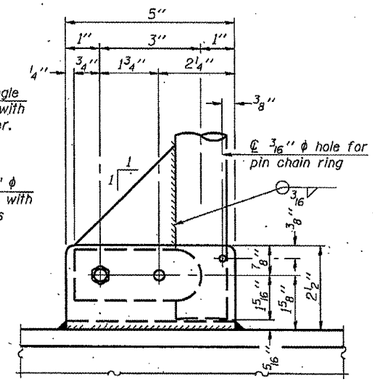
(5) Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



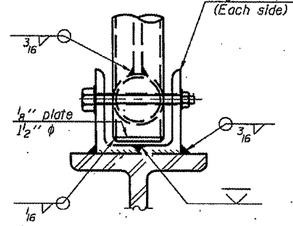
ALTERNATE SAFETY CHAIN ATTACHMENT

(With Sign Present)

Items not shown same as "Side Elevation" of "Handrail Details"

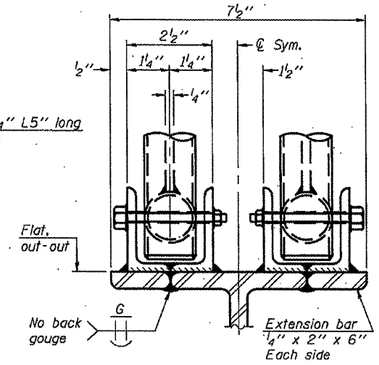


SIDE ELEVATION

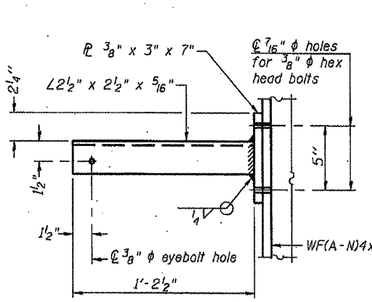


FRONT ELEVATION

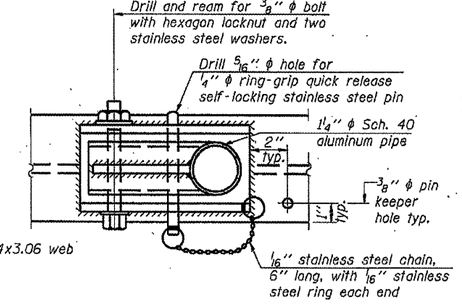
See "Elevation" at right for dimensions.



ELEVATION AT HANDRAIL JOINT (4)

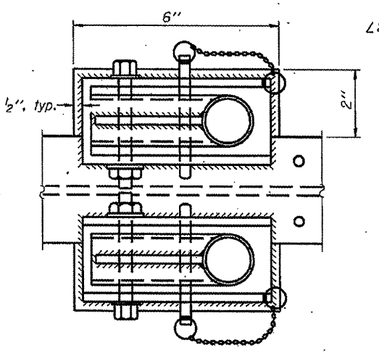


SECTION P-P



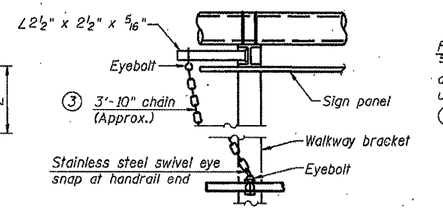
PLAN

DETAIL E HANDRAIL HINGE



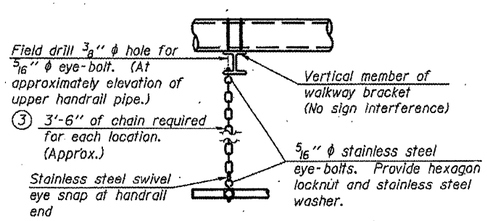
PLAN AT HANDRAIL JOINT

Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT

Details not shown similar to "Safety Chain" Details (Walkway omitted for clarity)



SAFETY CHAIN

One required for each end of each walkway.

(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.

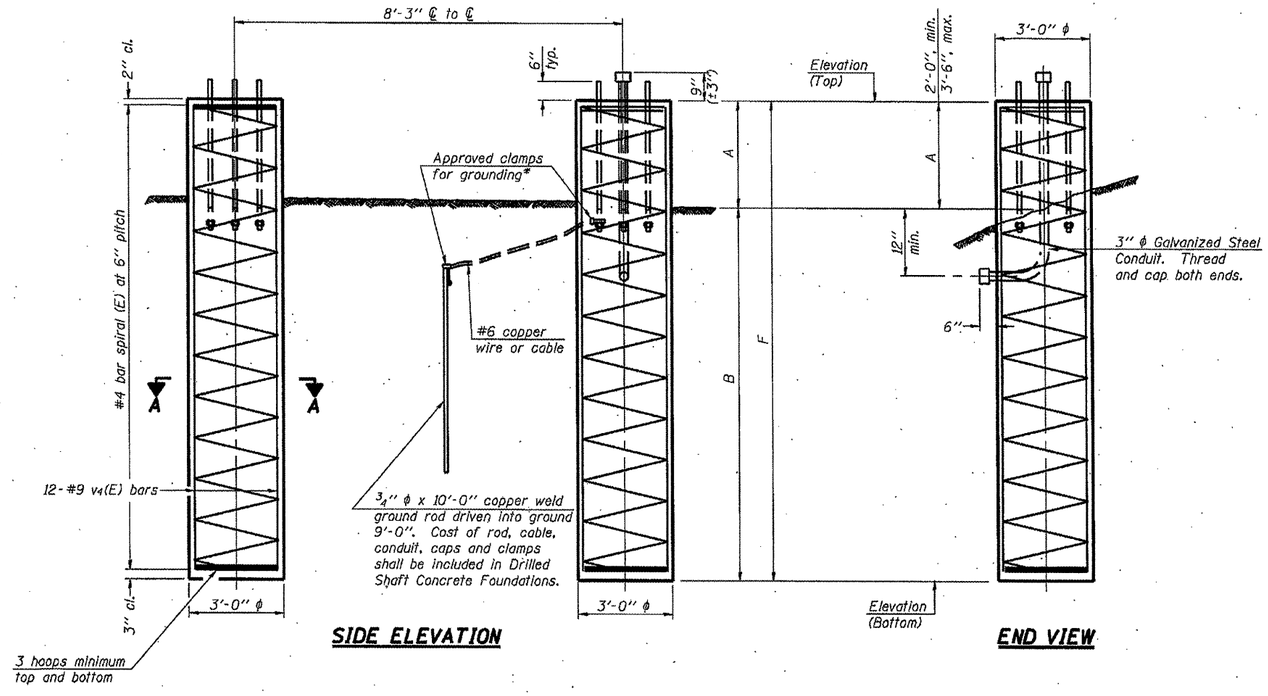
OS-A-11 1-20-11

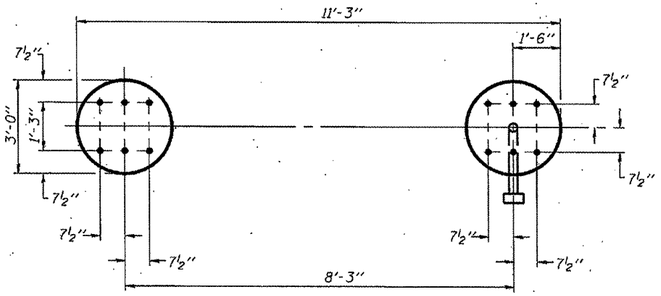
FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALUMINUM HANDRAIL DETAILS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	0-9 OVD SIN STR REPL 12-12	Various	17	13
		CONTRACT NO. 46185		
		ILLINOIS FED. AID PROJECT		





PLAN

For anchor rod size and placement, see Support Frame Detail Sheet.

* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	24	#9	F less 5"	——
#4 bar spiral (E) - see Side Elevation				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

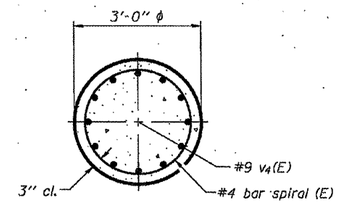
No sonotubes or decomposable forms shall be used below the lower conduit entrance.

Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



SECTION A-A

DETAILS FOR 10" ϕ SUPPORT FRAME TYPE I-A or II-A TRUSS

Structure Number	Station	Left Foundation					Right Foundation					Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	
9S100I057L044.9	372+50	568.01	547.51	3'	17.5'	20.5'	568.01	547.51	3'	17.5'	20.5'	21.5
9S100I057L044.6	388+90	595.26	571.76	3'	20.5'	23.5'	595.26	571.76	3'	20.5'	23.5'	24.6

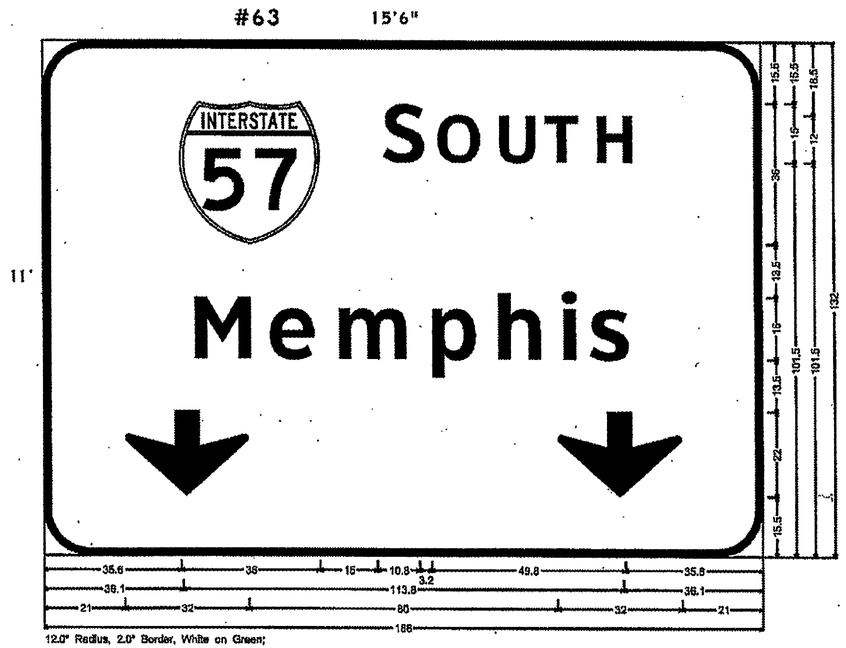
OS4-F3 1-20-11

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	D-9 OVD SIN STR REPL 12-12	Various	17	14
		CONTRACT NO. 46185		
	ILLINOIS FED. AID PROJECT			

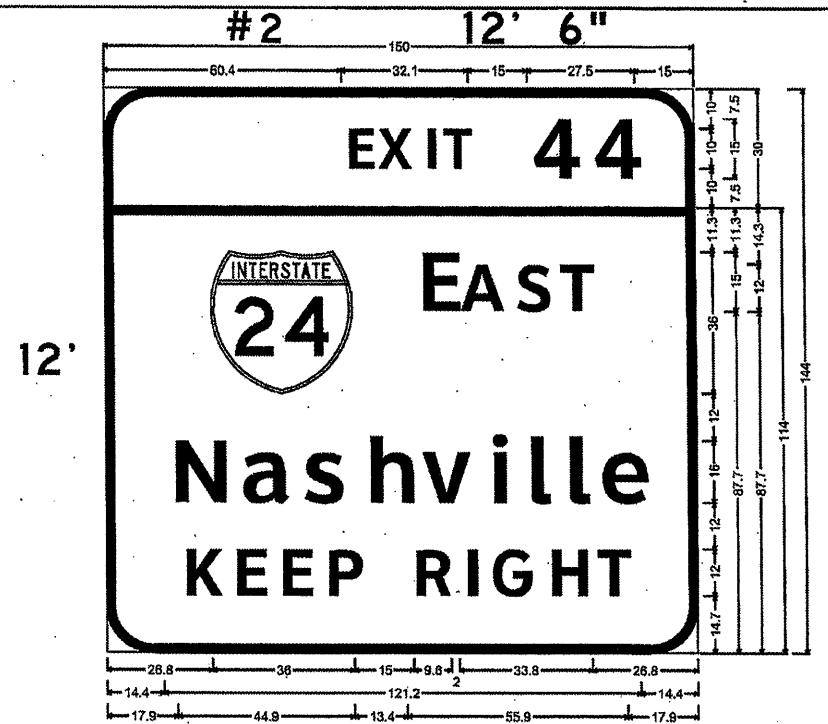


12.0" Radius, 2.0" Border, White on Green;
Interstate 57 18.0" D 2K; [S OUTH] ClearviewHwy-5-W; [Memphis] ClearviewHwy-5-W; Down Arrow 22.0" 270°; Down Arrow 22.0" 270°;
Table of widths and spaces.

	🛡		S		O		U		T		H	
35.6	36.0	15.0	10.8	3.2	11.1	4.4	9.2	3.6	8.7	3.6	9.2	35.6

	M		e		m		p		h		i		s	
36.1	14.7	5.6	11.7	5.5	18.0	6.1	11.6	5.4	11.1	5.7	3.8	4.4	10.2	36.1

	↓		↓	
21.0	32.0	80.0	32.0	21.0



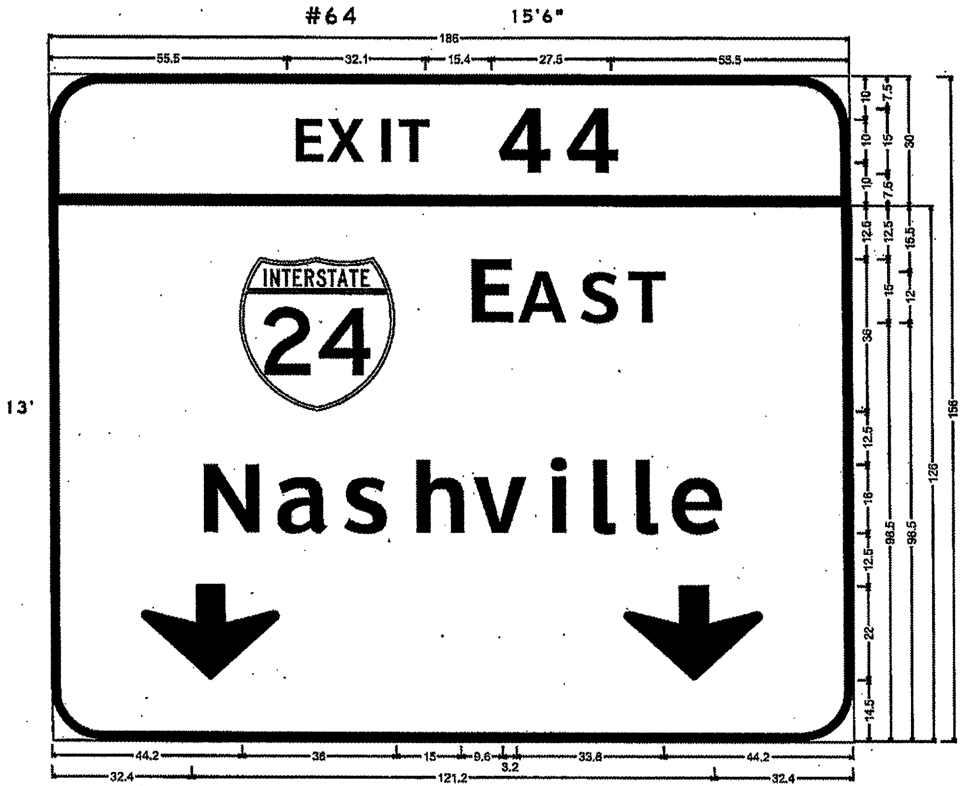
12.0" Radius, 2.0" Border, White on Green;
[EXIT 44] ClearviewHwy-5-W;
12.0" Radius, 2.0" Border, White on Green;
[E AST] ClearviewHwy-5-W; [Nashville] ClearviewHwy-5-W;
[KEEP RIGHT] ClearviewHwy-5-W;
Table of widths and spaces.

	E		X		I		T		4		4	
60.4	6.4	2.1	8.7	2.8	1.9	3.0	7.2	15.0	11.9	3.7	11.9	15.0

	🛡		E		A		S		T	
26.8	36.0	15.0	9.6	2.0	11.2	2.6	8.7	2.6	8.7	26.8

	N		a		s		h		v		i		l		l		e	
14.4	13.2	5.3	11.9	3.8	10.2	5.2	11.1	4.1	12.2	3.8	3.8	5.7	5.1	4.8	5.1	4.1	11.8	14.4

	K		E		E		P		R		I		G		H		T	
17.9	9.3	3.5	7.7	4.0	7.7	4.0	8.7	13.4	9.0	4.1	2.3	4.4	10.4	4.3	9.2	3.5	8.7	17.9



12.0" Radius, 2.0" Border, White on Green;
[EXIT 44] ClearviewHwy-5-W;
12.0" Radius, 2.0" Border, White on Green;
Interstate 24 18.0" D 2K; [E AST] ClearviewHwy-5-W; [Nashville] ClearviewHwy-5-W; Down Arrow 22.0" 270°; Down Arrow 22.0" 270°;
Table of widths and spaces.

	E		X		I		T		4		4	
55.5	6.4	2.2	8.6	2.8	1.9	3.0	7.2	15.4	11.9	3.7	11.9	55.5

	🛡		E		A		S		T	
44.2	36.0	15.0	9.6	3.2	11.2	2.6	8.7	2.6	8.7	44.2

	N		a		s		h		v		i		l		l		e	
32.4	13.2	5.3	11.9	3.8	10.2	5.2	11.1	4.1	12.2	3.8	3.8	5.7	5.1	4.8	5.1	4.1	11.8	32.4

	↓		↓	
21.0	32.0	80.0	32.0	21.0

12.0" Radius, 2.0" Border, White on Green;
Interstate 57 18.0" D 2K; [S OUTH] ClearviewHwy-5-W; [Memphis] ClearviewHwy-5-W;
[KEEP LEFT] ClearviewHwy-5-W;
Table of widths and spaces.

	🛡		S		O		U		T		H	
15.8	36.0	12.0	10.8	3.8	11.1	4.3	9.3	3.6	8.7	3.6	9.2	15.8

	M		e		m		p		h		i		s	
15.1	14.7	5.6	11.7	5.5	18.0	6.1	11.6	5.4	11.1	5.7	3.8	4.4	10.2	15.1

	K		E		E		P		L		E		F		T	
22.2	9.3	3.5	7.6	4.1	7.7	4.0	8.7	13.4	7.1	3.8	7.7	4.0	7.3	2.8	8.6	22.2

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	D-9 OVD SIN STR REPL 12-12	Various	17	15
		CONTRACT NO. 46185		
	ILLINOIS	FED. AID PROJECT		

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation
Boring Log
Sheet 1 of 1

Sign Truss Foundation

Route: FAI 57/24 Structure Number: Date: 5/20/2011
Section Bored By: R Moberly
County: Williamson Location: Milepost 44.9, Median Checked By: R Graeff

Boring No 3-T
Station 372+52
Offset 55' Lt CL I57 SBL
Ground Surface 98.5 Ft

Surf Wat Elev:
Ground Water Elevation
when Drilling
At Completion
At: Hrs:

DEPTH	BLOWS	Qu tsf	W%	DEPTH	BLOWS	Qu tsf	W%
Stiff, moist, brown, Silty Clay A-6 97.0	1.5E						
Very dense, dry, brown, Sandstone 96.0	100/3"						
Cored 2.3 to 7.3 feet							
100% Recovery; 48% RQD							
5.0				30.0			
Very dense, dry, brown, Sandstone							
91.0							
Cored 7.3 to 12.3 feet							
100% Recovery; 35% RQD							
10.0				35.0			
Very dense, dry, brown, Sandstone							
86.0							
Bottom of hole = 12.3 feet							
No free water observed							
Elevation referenced to top of existing concrete foundation at median; Assumed Elev.=100.0 ft							
Borehole advanced with hollow stem auger (8" O.D, 3.25" I.D.)							
To convert "N" values to "N60" multiply by 1.25							
15.0				40.0			
20.0				45.0			
25.0				50.0			

N-Std Pentr Test: 2" OD Sampler,140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation
Boring Log
Sheet 1 of 1

Sign Truss Foundation

Route: FAI 57/24 Structure Number: Date: 5/20/2011
Section Bored By: R Moberly
County: Williamson Location: Milepost 44.9, Driving Shoulder Checked By: R Graeff

Boring No 4-T
Station 372+65
Offset 50' Rt CL I57 SBL
Ground Surface 99.3 Ft

Surf Wat Elev:
Ground Water Elevation
when Drilling
At Completion
At: Hrs:

DEPTH	BLOWS	Qu tsf	W%	DEPTH	BLOWS	Qu tsf	W%
Dense, damp, brown, weathered Sandstone 98.3	Augered						
	100/1"						
Cored 1.0 to 6.0 feet							
100% Recovery; 62% RQD							
Very dense, dry, brown, Sandstone							
5.0				30.0			
93.3							
Cored 6.0 to 11.0 feet							
92% Recovery; 47% RQD							
Very dense, dry, brown, Sandstone							
10.0				35.0			
88.3							
Bottom of hole = 11.0 feet							
No free water observed							
Elevation referenced to top of existing concrete foundation at median; Assumed Elev=100.0 ft							
Borehole advanced with hollow stem auger (8" O.D, 3.25" I.D.)							
To convert "N" values to "N60" multiply by 1.25							
15.0				40.0			
20.0				45.0			
25.0				50.0			

N-Std Pentr Test: 2" OD Sampler,140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION			
		CHECKED -	REVISED -				
	PLOT SCALE =	DRAWN -	REVISED -				
	PLOT DATE =	CHECKED -	REVISED -				

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	D-9 OVD SIN STR REPL 12-12	Various	17	16
		CONTRACT NO. 46185		
	ILLINOIS FED. AID PROJECT			

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation Boring Log
Sheet 1 of 1

Sign Truss Foundation

Route: FAI 57/24 Structure Number: Date: 5/19/2011

Section Bored By: R Moberly

County: Williamson Location: Milepost 44.6, Driving Shoulder Checked By: R Graeff

Boring No 1-T
Station 388+98
Offset 27' Rt CL I24 EBL
Ground Surface 596.1Ft

Surf Wat Elev:
Ground Water Elevation
when Drilling
At Completion
At: Hrs:

DEPTH	BLOWS	Qu tsf	W%	DEPTH	BLOWS	Qu tsf	W%
Very stiff, moist, brown and grey, Silty Clay to Clay A7-6							
	2						
	6	2.7B	17				
	8						
591.6							
Very stiff, moist, brown and grey, Silty Clay to Clay A7-6 with broken Sandstone gravel (Embankment)	5.0	2					
		6	2.3S	19			
		14					
		20					
		8	1.6S	18			
		6					
	10.0	4			35.0		
		7	1.4S	17			
		9					
		11					
		8	2.9B	17			
		6					
581.6							
Stiff, moist, grey, Silty Clay to Clay A7-6	15.0	1			40.0		
		3	1.7B	27			
		5					
579.1							
Medium, very moist, grey, Silty Clay Loam A-4		2					
		1	0.7B	21			
		2					
576.6							
Stiff, moist, grey and brown, Silty Clay to Clay A7-6 with broken Sandstone gravel	20.0	2			45.0		
		7	1.3B	20			
		9					
574.1							
Very dense, dry, brown, Sandstone		100/2"					
572.1		Refusal					
	25.0				50.0		

Bottom of hole = 24.0 feet

No free water observed

Elevation referenced to BM 72 at median foundation; Elev=595.0 ft

Borehole advanced with hollow stem auger (8" O.D, 3.25" I.D.)

To convert "N" values to "N60" multiply by 1.25

N-Std Pentr Test: 2" OD Sampler,140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation Boring Log
Sheet 1 of 1

Sign Truss Foundation

Route: FAI 57/24 Structure Number: Date: 5/20/2011

Section Bored By: R Moberly

County: Williamson Location: Milepost 44.6, Median Checked By: R Graeff

Boring No 2-T
Station 389+00
Offset 44' Lt CL I57 SBL
Ground Surface 594.3Ft

Surf Wat Elev:
Ground Water Elevation
when Drilling
At Completion
At: Hrs:

DEPTH	BLOWS	Qu tsf	W%	DEPTH	BLOWS	Qu tsf	W%
Very stiff, moist, brown, Silty Clay A7-6							
	1						
	4	2.5B	21				
	7						
589.8							
Stiff, moist, brown, Silty Clay Loam A-6 with broken Sandstone gravel	5.0	2					
		8	1.3B	16			
		10					
587.3							
Broken Sandstone gravel with Silty Clay binder		3					
		9		13			
		7					
584.8							
Stiff, moist, grey, Silty Clay Loam A-6	10.0	2			35.0		
		4	1.8S	18			
		4					
582.3							
Stiff, moist, grey, Silty Clay to Silty Clay Loam A-6		2					
		3	1.6S	20			
		4					
580.3							
Sandstone gravel with Silty Clay binder	15.0	8			40.0		
		13		11			
		10					
578.3							
Very dense, dry, brown, Sandstone with Clay seams							
576.8		100/3"					
Bottom of hole = 17.3 feet							
No free water observed	20.0				45.0		
Elevation referenced to BM 72 at median foundation; Elev=595.0 ft							
Borehole advanced with hollow stem auger (8" O.D, 3.25" I.D.)							
To convert "N" values to "N60" multiply by 1.25							
	25.0				50.0		

N-Std Pentr Test: 2" OD Sampler,140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Various	D-9 OVD SIN STR REPL 12-12	Various	17	17
		CONTRACT NO. 46185		
	ILLINOIS FED. AID PROJECT			