1-20-2012 LETTING ITEM 158

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARS	*		17	1
	ILLINOIS	CONTRACT NO. 46194		

* D7 OVD SIN STR REPL 12-21
Coles, Macon

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

VARIOUS ROUTES
SECTION D-7 OVD SIN STR REPL 12-21

SIGN STRUCTURE REPLACEMENT/REPAIRS
COLES & MACON COUNTIES

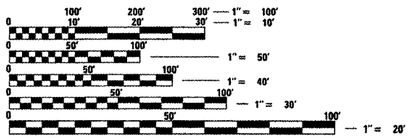
C-60-021-12

LOCATION OF SECTION INDICATED THUS:- -■-

HIGHWAY STANDARDS:

701101-02 OFF-RD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701106-02 OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701400-05 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-06 LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-06 LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-07 LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS >= 45 MPH
701421-03 LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS >=45 MPH TO 55 MPH
701422-03 LANE CLOSURE, MULTILANE, FOR SPEEDS >= 45 MPH TO 55 MPH
701451-01 RAMP CLOSURE FREEWAY/EXPRESSWAY
701456-01 PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
701601-07 URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701901-01 TRAFFIC CONTROL DEVICES
720021-02 SIGN PANELS EXTRUDED ALUMINUM TYPE

INDEX OF SHEETS:



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: KALEB HIRTZEL
PROJECT MANAGER: DEWAYNE SEACHRIST

CONTRACT NO. 46194

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED August 16 20 11
Gustavo Mann
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
Oct 14 20 11
Scott E. Stitt P.E. for
acting ENGINEER OF DESIGN AND ENVIRONMENT
Oct 14 20 11
Christine M. Reed for
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

SUMMARY OF QUANTITIES			100% STATE TOTAL QUANTITY	MACON URBAN 0040	COLES RURAL 0040
CODE NUMBER	PAY ITEM	UNIT			
67100100	MOBILIZATION	L SUM	1	0.5	0.5
73300200	OVERHEAD SIGN STRUCTURE - SPAN, TYPE IIA (4'-6" X 5'3")	FOOT	182		182
73301810	OVERHEAD SIGN STRUCTURE - WALKWAY, TYPE A	FOOT	102		102
73400200	DRILLED SHAFT CONCRETE FOUNDATION	CU YD	42		42
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	2		2
73700300	REMOVE CONCRETE FOUNDATION OVERHEAD	EACH	4		4
82109105	SIGN LIGHTING (HIGH PRESSURE SODIUM)	EACH	8		8
X0322906	WEEP HOLES CORED	EACH	8	4	4
X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1	0.4	0.6
X7200075	REMOVE AND REINSTALL SIGN PANEL	SQ FT	715		715
X7200085	REPLACE AND TIGHTEN SIGN MOUNTING CLIPS PER EACH SIGN	EACH	6	2	4
X7330066	REPAIR HANDRAIL LOCKING PIN CONNECTION	EACH	22		22
X7330070	OVERHEAD SIGN SUPPORT GROUT REPAIR	EACH	8	6	2
X7330080	REPLACE WALKWAY SUPPORT BRACKET BOLT	EACH	2		2
X7330112	SAFETY CHAIN	EACH	1		1
X7330097	OVERHEAD SIGN STRUCTURE - CANTILEVER CAP END OF CHORD	EACH	2	2	
X7330100	PAINT OVERHEAD SIGN SUPPORT	EACH	6	3	3

FILE NAME = #FILEL#	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
		DRAWN -	REVISED -				•		17 / 2
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	PLOT DATE = #DATE#	DATE -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			ILLINOIS	FED. AID PROJECT

• D7 OVD SIN STR REPL 12-21

Coles, Macon

SUMMARY OF QUANTITIES			100% STATE TOTAL QUANTITY	MACON URBAN 0040	COLES RURAL 0040
CODE NUMBER	PAY ITEM	UNIT			
X7330120	REPLACE SPLICE FLANGE BOLT	EACH	11		11
X7330122	REPLACE TRUSS ATTACH BOLT	EACH	24	24	
X7370005	REPAIR CONCRETE FOUNDATION FOR OVERHEAD SIGN STRUCTURE	EACH	3	1	2
X8040510	RELOCATE ELECTRIC SERVICE	EACH	2		2
X8140232	REPLACE HAND HOLE COVER BOLT	EACH	3		3
X8140234	REPLACE HANDHOLE COVER	EACH	1		1
X7330090	. METAL SCREEN	EACH	1		1
Z0052394	REPLACE U-BOLT	EACH	16	6	10

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	•		17	3
		CONTRACT NO. 46194		
	ILLINOIS FED. AID PROJECT			

• D7 OVD SIN STR REPL 12-21

Coles, Macon

Location No.:	7-01	State I.D. No.:	SN 7S015I057R189.4				
County:	Coles	Route:	I 57	M.P.:	189.4	Direction:	NB

Description of Work	Unit	Quantity
OVERHEAD SIGN STRUCTURE - SPAN TYPE IIA (4'-6" X 5'-3")	FOOT	96
OVERHEAD SIGN STRUCTURE - WALKWAY, TYPE A	FOOT	51
DRILLED SHAFT CONCRETE FOUNDATION	SQ YD	20.8
REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	1
REMOVE CONCRETE FOUNDATION OVERHEAD	EACH	2
SIGN LIGHTING (HIGH PRESSURE SODIUM)	EACH	4
REMOVE AND REINSTALL SIGN PANEL	SQ FT	289
RELOCATE ELECTRIC SERVICE	EACH	1

Location No.:	7-02	State I.D. No.:	SN 7S058I072L141.4				
County:	Macon	Route:	I 72	M.P.:	141.4	Direction:	WB

Description of Work	Unit	Quantity
OVERHEAD SIGN STRUCTURE - SPAN TYPE IIA (4'-6" X 5'-3")	FOOT	86
OVERHEAD SIGN STRUCTURE - WALKWAY, TYPE A	FOOT	51
DRILLED SHAFT CONCRETE FOUNDATION	SQ YD	21.2
REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	1
REMOVE CONCRETE FOUNDATION OVERHEAD	EACH	2
SIGN LIGHTING (HIGH PRESSURE SODIUM)	EACH	4
REMOVE AND REINSTALL SIGN PANEL	SQ FT	426
RELOCATE ELECTRIC SERVICE	EACH	1

Location No.:	7-03	State I.D. No.:	SN 7S058U036R016.57				
County:	Macon	Route:	US 36	M.P.:	16.57	Direction:	WB

Description of Work	Unit	Quantity
WEEP HOLES CORED	EACH	4
OVERHEAD SIGN SUPPORT GROUT REPAIR	EACH	2
PAINT OVERHEAD SIGN SUPPORT	EACH	1
REPAIR CONC FOUNDATION FOR OVERHEAD SIGN STR	EACH	1

Location No.:	7-04	State I.D. No.:	SN 7C058S105L005.2				
County:	Macon	Route:	105	M.P.:	5.2	Direction:	WB

Description of Work	Unit	Quantity
OVERHEAD SIGN STRUCTURE - CANTILEVER CAP END OF CHORD	EACH	2

Location No.:	7-05	State I.D. No.:	SN 7S058U036L007.5				
County:	Macon	Route:	US 36	M.P.	7.5	Direction:	WB

Description of Work	Unit	Quantity
WEEP HOLES CORED	EACH	4
REPL AND TIGHTEN SIGN MOUNT CLIPS PER EACH SIGN	EACH	1
OVERHEAD SIGN SUPPORT GROUT REPAIR	EACH	2
PAINT OVERHEAD SIGN SUPPORT	EACH	1
REPLACE SPLICE FLANGE BOLT	EACH	10

Location No.:	7-06	State I.D. No.:	SN 263				
County:	Macon	Route:	IL 48/121	M.P.:	N/A	Direction:	WB

Description of Work	Unit	Quantity
REPL AND TIGHTEN SIGN MOUNT CLIPS PER EACH SIGN	EACH	1
OVERHEAD SIGN SUPPORT GROUT REPAIR	EACH	2
PAINT OVERHEAD SIGN SUPPORT	EACH	1
REPLACE TRUSS ATTACH BOLT	EACH	12
REPLACE U-BOLT	EACH	6

Location No.:	7-07	State I.D. No.:	SN 264				
County:	Macon	Route:	IL 48/121	M.P.	N/A	Direction:	WB

Description of Work	Unit	Quantity
REPL AND TIGHTEN SIGN MOUNT CLIPS PER EACH SIGN	EACH	1
OVERHEAD SIGN SUPPORT GROUT REPAIR	EACH	2
PAINT OVERHEAD SIGN SUPPORT	EACH	1
REPLACE TRUSS ATTACH BOLT	EACH	12

Location No.:	7-08	State I.D. No.:	7S058I072R132.90				
County:	Macon	Route:	I 72	M.P.:	132.9	Direction:	EB

Description of Work	Unit	Quantity
REPL AND TIGHTEN SIGN MOUNT CLIPS PER EACH SIGN	EACH	1
REPAIR HANDRAIL LOCKING PIN CONNECTION	EACH	12
PAINT OVERHEAD SIGN SUPPORT	EACH	1
REPAIR CONC FOUNDATION FOR OVERHEAD SIGN STR	EACH	2
REPLACE HAND HOLE COVER BOLT	EACH	1
FURNISH AND INSTALL METAL SCREEN	EACH	1
REPLACE U-BOLT	EACH	1

Location No.:	7-09	State I.D. No.:	SN 7S058U051R007.10				
County:	Macon	Route:	US 51	M.P.:	7.1	Direction:	NB

Description of Work	Unit	Quantity
REPL AND TIGHTEN SIGN MOUNT CLIPS PER EACH SIGN	EACH	1
REPAIR HANDRAIL LOCKING PIN CONNECTION	EACH	10
REPLACE WALKWAY SUPPORT BRACKET BOLT	EACH	2
REPLACE HAND HOLE COVER BOLT	EACH	1
REPLACE HAND HOLE COVER	EACH	1
REPLACE U-BOLT	EACH	3

Location No.:	7-10	State I.D. No.:	SN 7S058U051R007.50				
County:	Macon	Route:	US 51	M.P.:	7.5	Direction:	NB

Description of Work	Unit	Quantity
REPL AND TIGHTEN SIGN MOUNT CLIPS PER EACH SIGN	EACH	1
FURNISH AND INSTALL SAFETY CHAIN	EACH	1
PAINT OVERHEAD SIGN SUPPORT	EACH	1
REPLACE SPLICE FLANGE BOLT	EACH	1
REPLACE HANDHOLE COVER BOLT	EACH	1
REPLACE U-BOLT	EACH	6

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARS	*		17	4
		CONTRACT NO. 46194		
		ILLINOIS FED. AID PROJECT		

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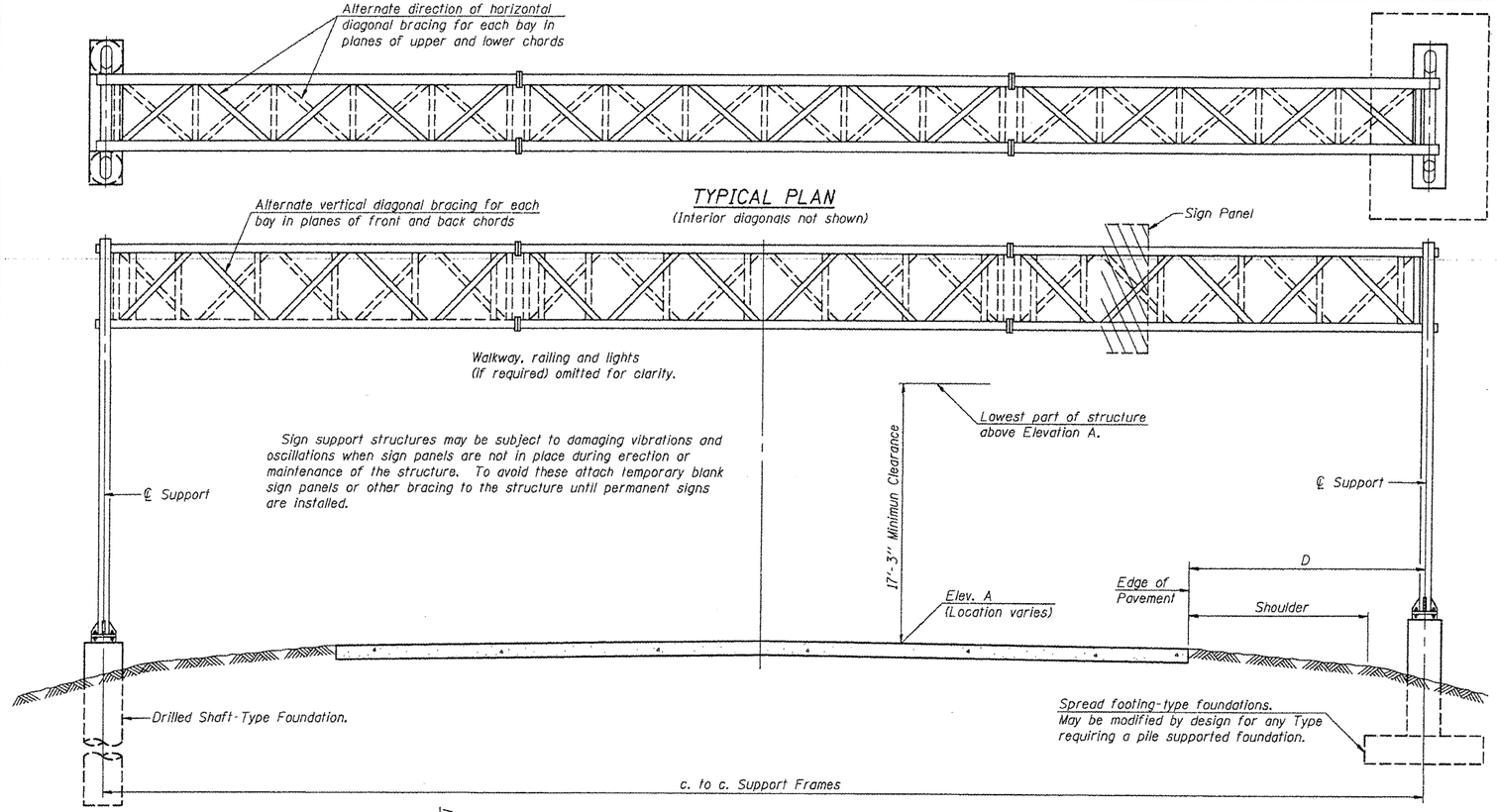
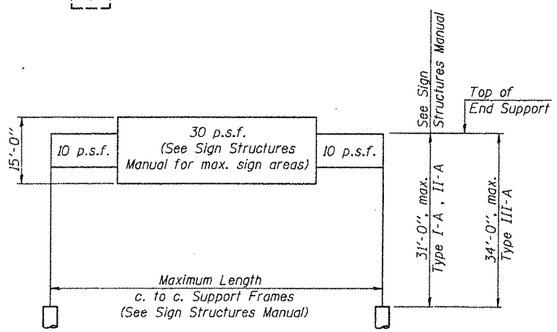
Coles, Macon





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
7S015I057R189.40	775+10	II-A	96'-0"	731.52	9'-0"	8'-6"	289
7S058I072L141.40	166+85	II-A	86'-0"	647.19	11'-0"	12'-0"	426

**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 Specifications.

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	182
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	-
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	102
CONCRETE FOUNDATIONS	Cu. Yds.	-
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	42.0

OS-A-1 1-20-11

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

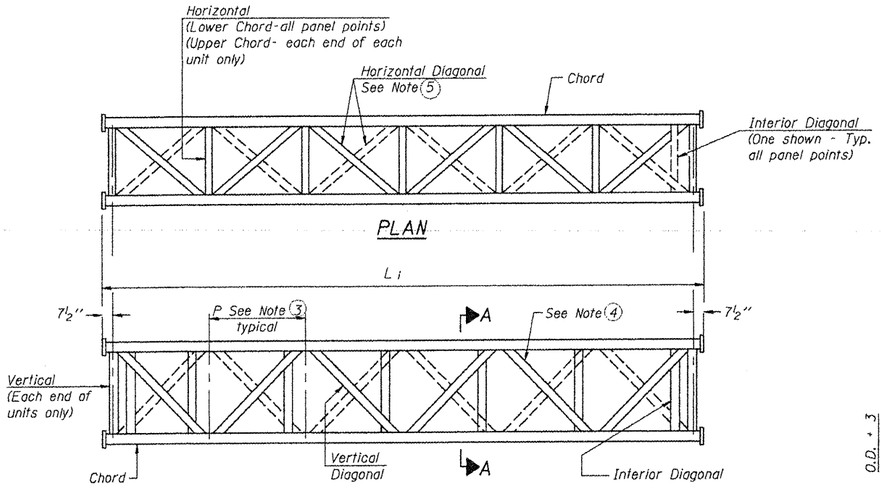
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

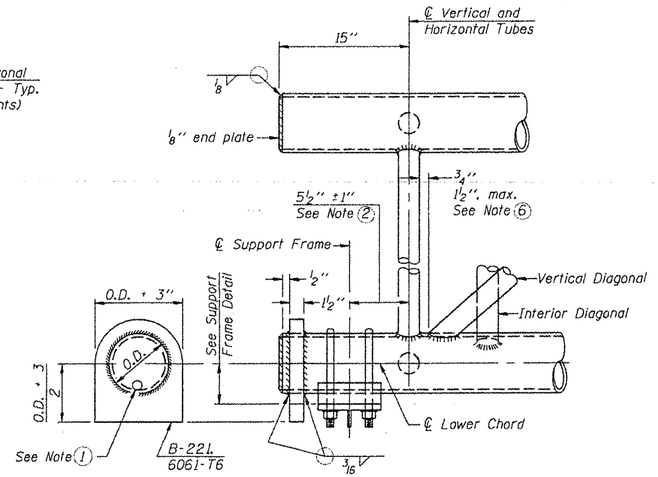
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARS	*		17	5

CONTRACT NO. 46194
ILLINOIS | FED. AID PROJECT

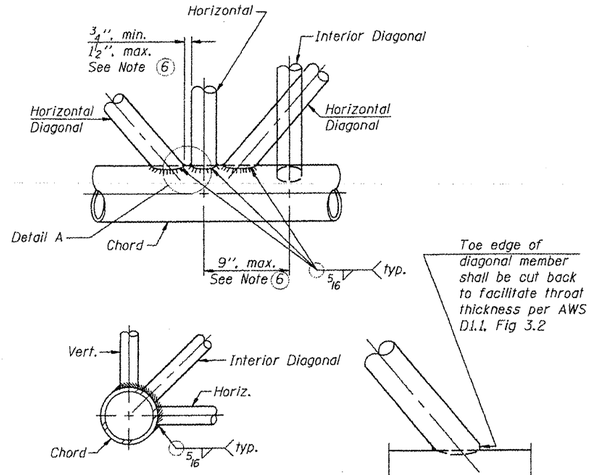


ELEVATION
TYPICAL INTERIOR UNIT

Even number of panels/interior unit required.

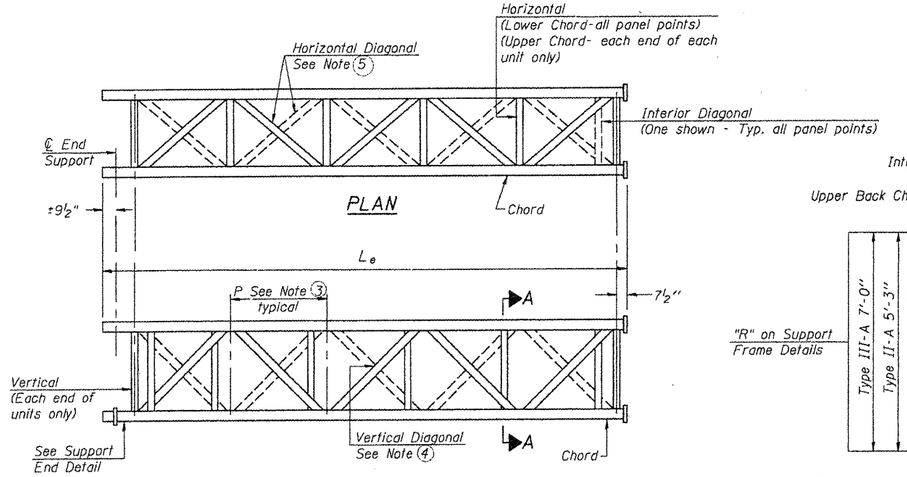


SUPPORT END DETAIL FOR EXTERIOR UNIT



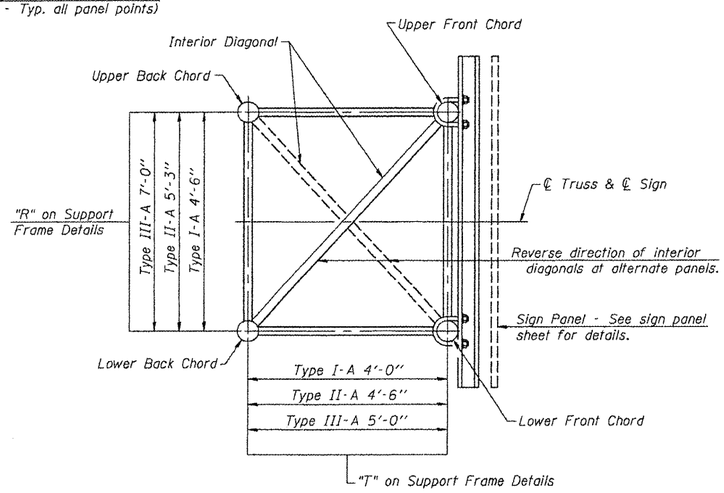
TYPICAL JOINT DETAILS

DETAIL A



ELEVATION
TYPICAL EXTERIOR UNIT

Even or odd number of panels/exterior units allowed.



SECTION A-S

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

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		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	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

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

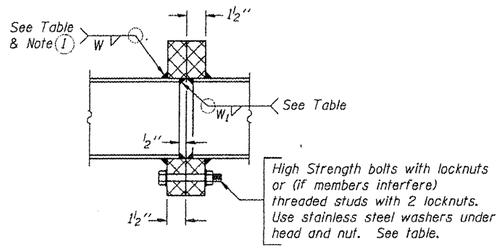
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARS	*		17	6
		CONTRACT NO. 46194		
	ILLINOIS FED. AID PROJECT			

* D7 OVD SIN STR REPL 12-21

Coles, Macon

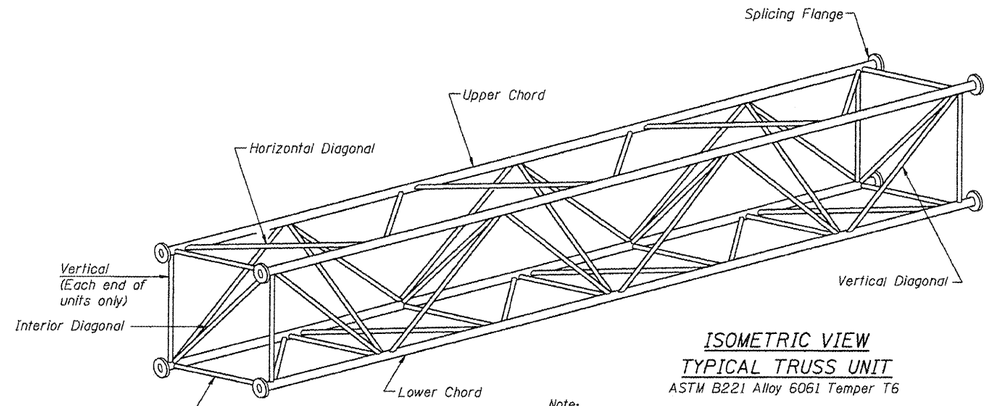
TRUSS UNIT TABLE

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		
7S015I057R189.40	775+10	II-A	6	32'-9"	5'-1¾"	1	6	2'-1½"	5'-1¾"	6"	5/16	3"	5/16	3"	6	7/8	3/8	1/4	10¼"	13¾"
7S058I072L141.40	166+85	II-A	5	27'-8½"	5'-2"	1	6	32'-3"	5'-2"	5½"	5/16	3"	5/16	2½"	6	7/8	3/8	1/4	9¼"	12¼"



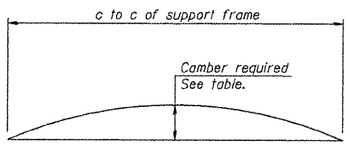
SECTION B-B

(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.



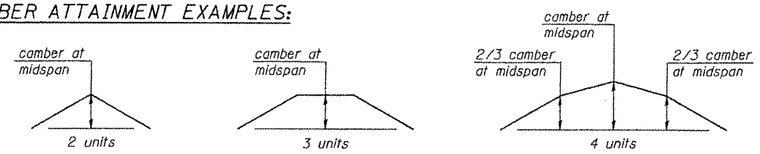
ISOMETRIC VIEW
TYPICAL TRUSS UNIT
ASTM B221 Alloy 6061 Temper T6

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.

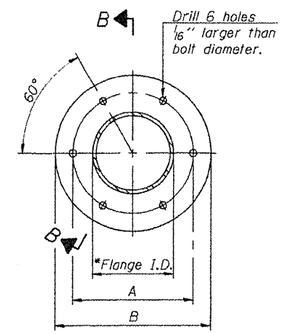


CAMBER DIAGRAM
Camber curve shown is theoretical. Actual camber attained by slope changes at splices between units.

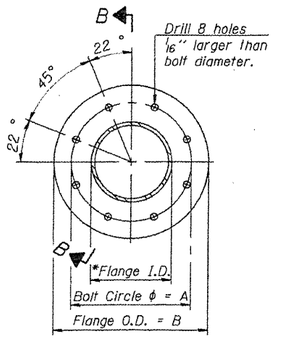
CAMBER ATTAINMENT EXAMPLES:



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 = #FILEL#	USER NAME = #USER#	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

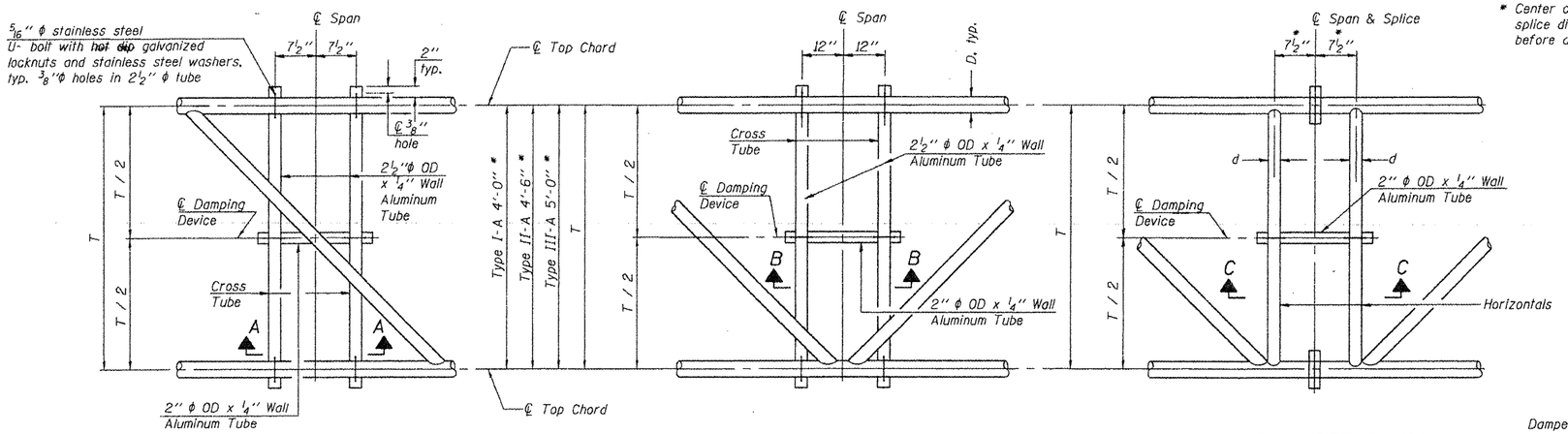
OVERHEAD SIGN STRUCTURES – ALUMINUM TRUSS DETAILS FOR TRUSS TYPES I-A, II-A AND III-A

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARS	-		17	7
		CONTRACT NO. 46194		
	ILLINOIS FED. AID PROJECT			

* D7 OVD SIN STR REPL 12-21

Coles, Macon



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

PLAN DETAIL "A"
℄ Span between Panel Points

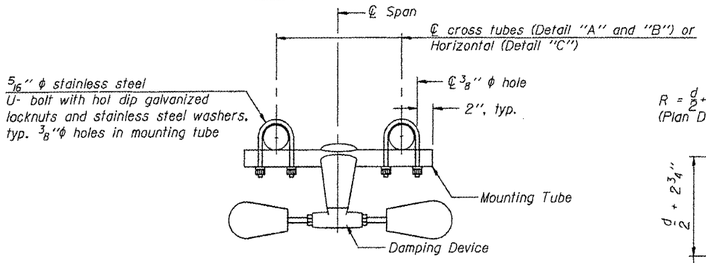
PLAN DETAIL "B"
℄ Span at Panel Point

PLAN DETAIL "C"
℄ Span at ℄ Chord Splice

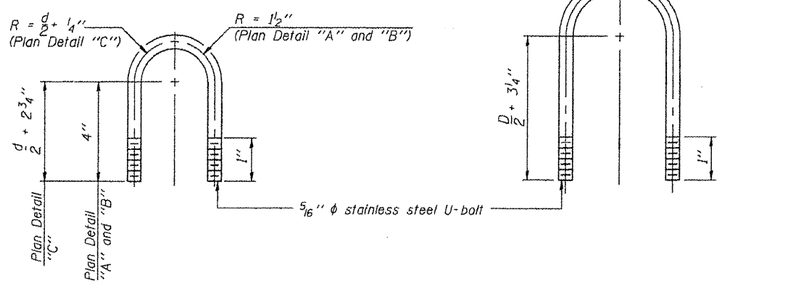
SECTION A-A

SECTION B-B

SECTION C-C

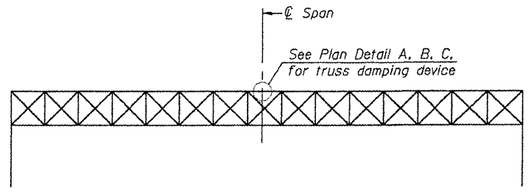


TRUSS DAMPING DEVICE CONNECTION DETAIL
(Typical)



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)

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

FILE NAME = #FILE1#	USER NAME = #USER#	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

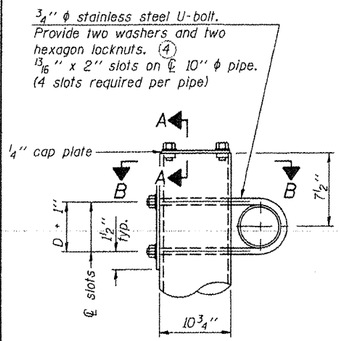
OVERHEAD SIGN STRUCTURE
DAMPING DEVICE

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

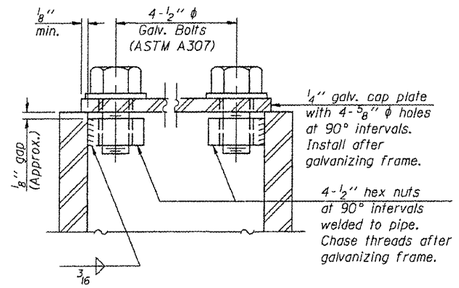
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARS	-		17	8
		CONTRACT NO. 46194		
	ILLINOIS	FED. AID PROJECT		

• DT OVD SIN STR REPL 12-21

Coles, Macon

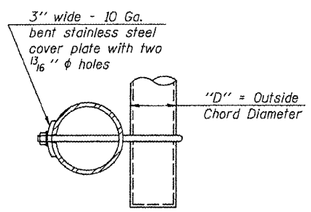


DETAIL A

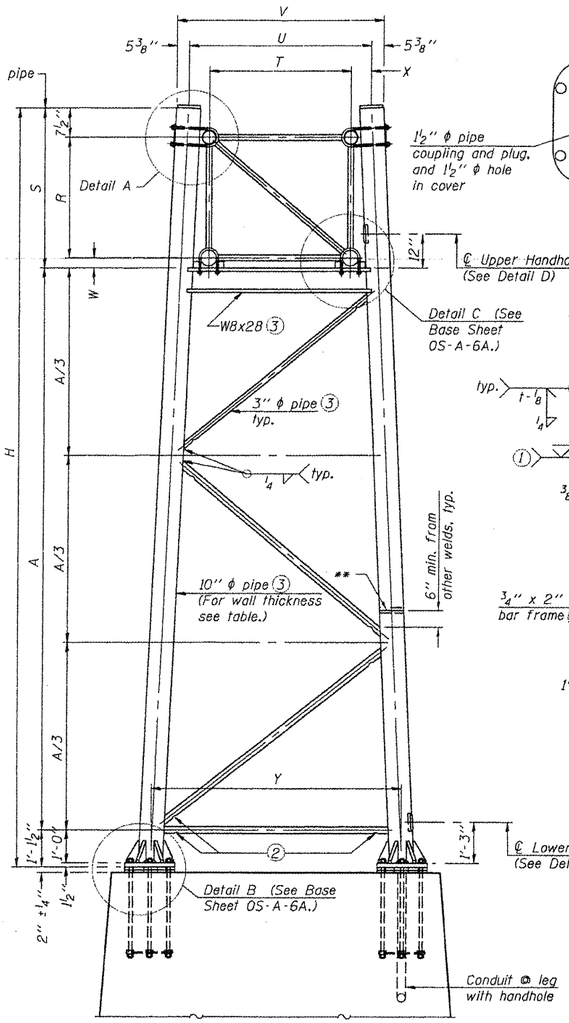


SECTION A-A

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

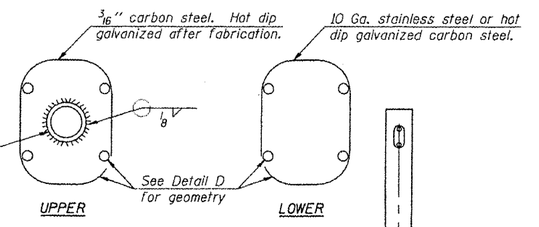


SECTION B-B

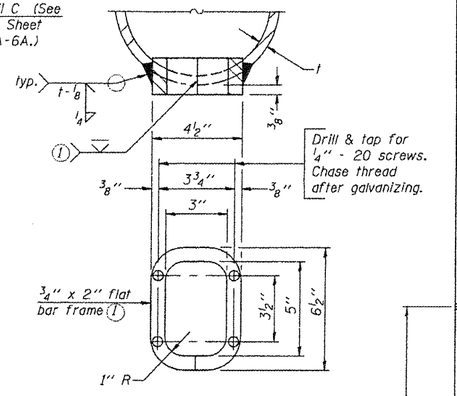


For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

SIDE ELEVATION

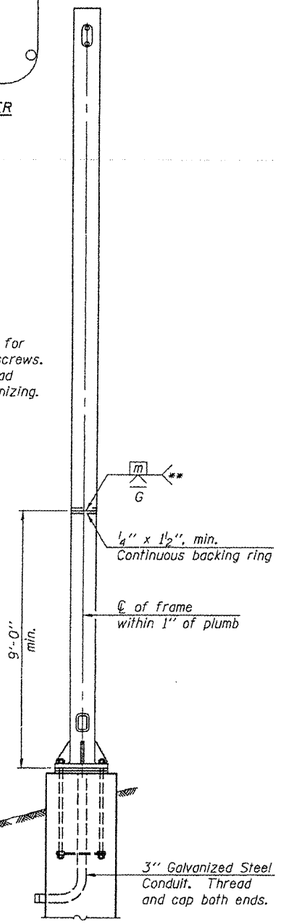


HANDHOLE COVERS



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		Truss Type	Pipe Wall Thickness	H (6)	A
		Left	Right				
7S015I057R189.40	775+10	X	X	II-A	0.365	30'-3"	22'-10 1/4"
7S058I072L141.40	166+85	X		II-A	0.365	28'-8 7/8"	21'-3 7/8"
			X	II-A	0.365	28'-1/8"	20'-7 7/8"

OS-A-6 1-20-11

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

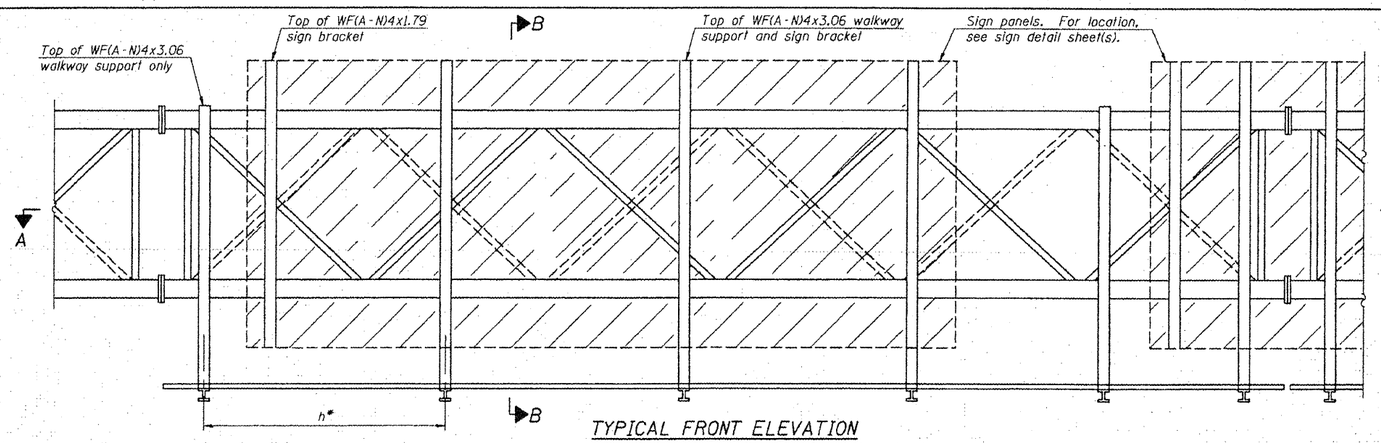
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR ALUMINUM TRUSS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARS	*		17	9
		CONTRACT NO. 46194		
	ILLINOIS FED. AID PROJECT			

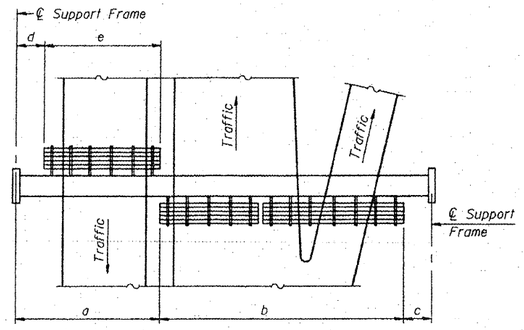
* D7 OVD SIN STR REPL 12-21

Coles, Macon



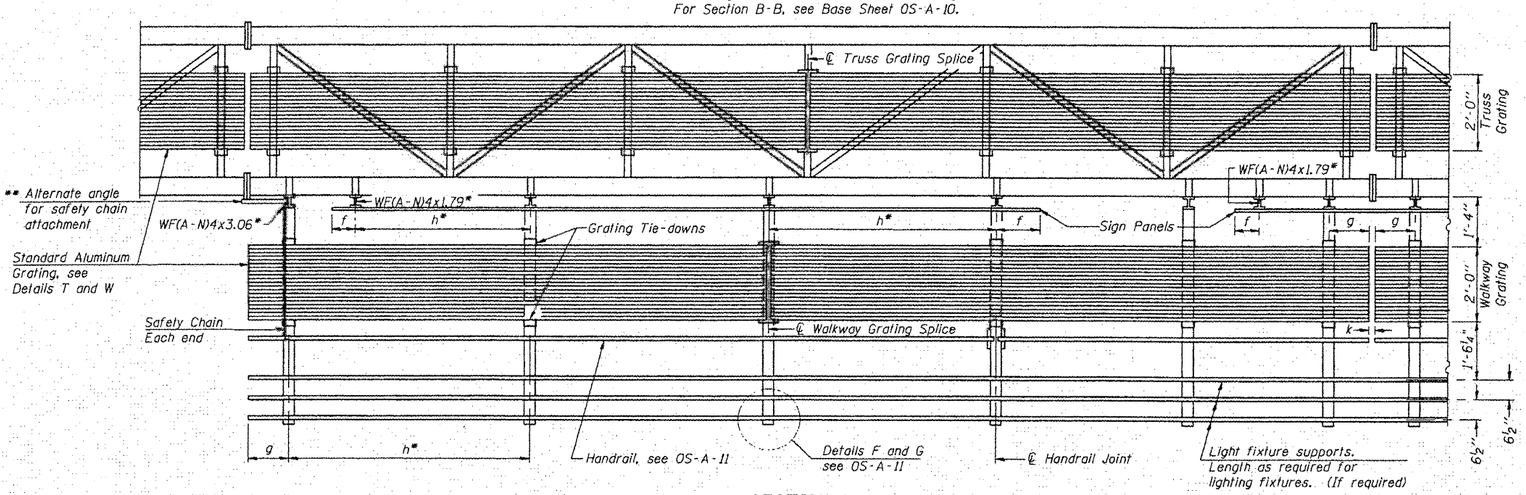
TYPICAL FRONT ELEVATION

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



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.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
7S0151057R189.40	775+10	30'	51'	15'	N/A	N/A	51'
7S0581072L141.40	166+85	21'	51'	14'	N/A	N/A	51'

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 ±½" based on available standard widths.

OS-A-9 1-20-11

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

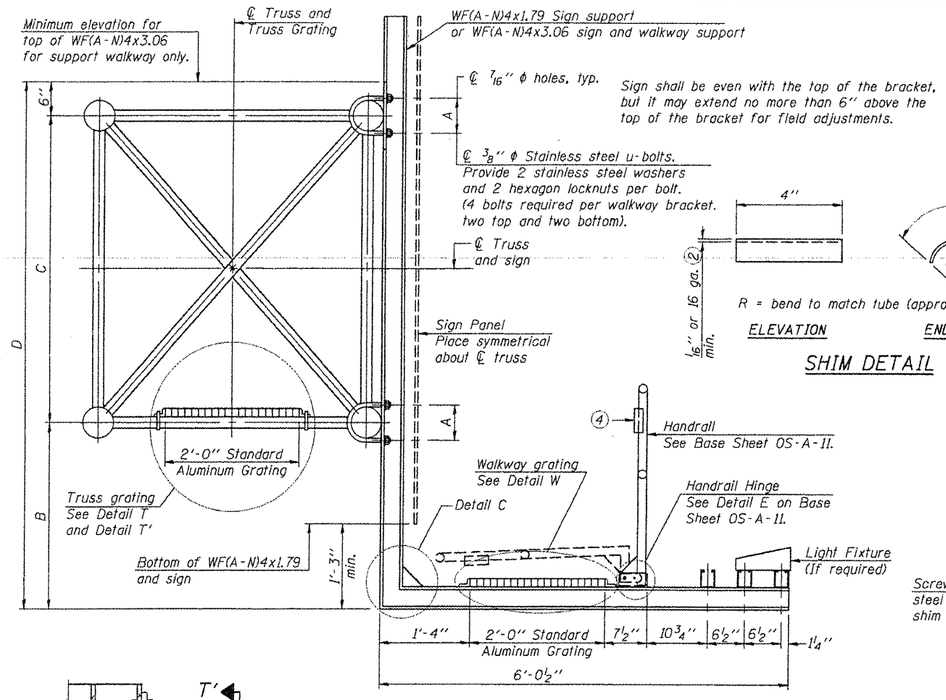
OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

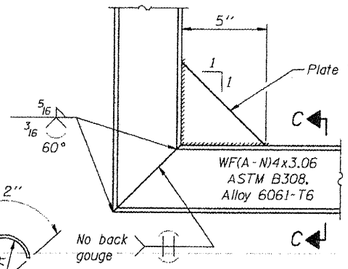
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARS	*		17	10
		CONTRACT NO. 46194		
		ILLINOIS FED. AID PROJECT		

* DT OVD SIN STR REPL 12-21

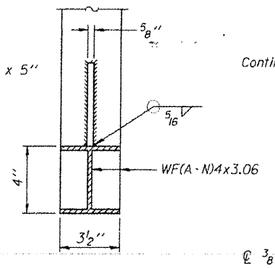
Coles, Macon



SECTION B-B

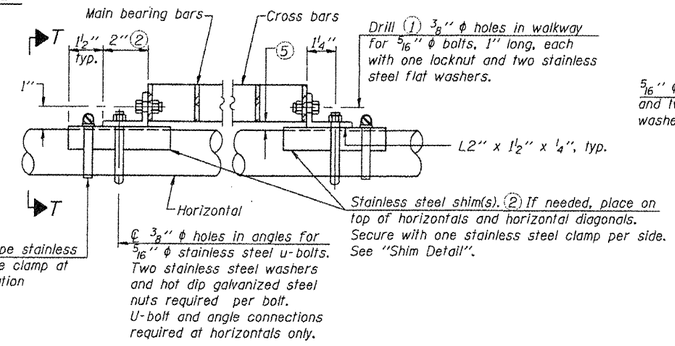


DETAIL C

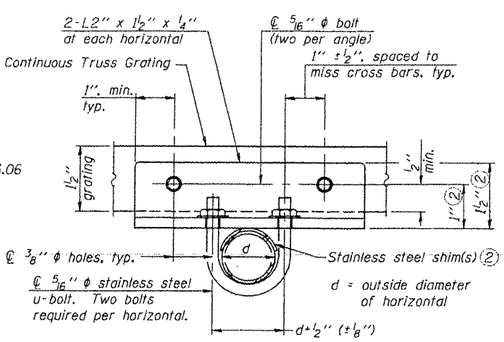


SECTION C-C

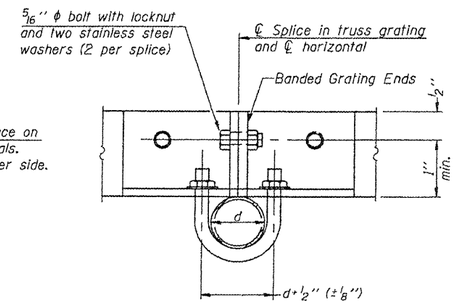
SHIM DETAIL



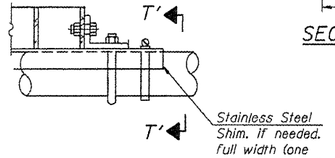
DETAIL T
(Continuous Truss grating)



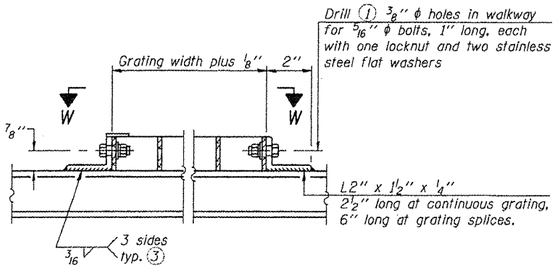
SECTION T-T



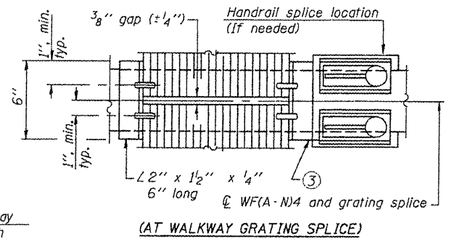
SECTION T'-T'



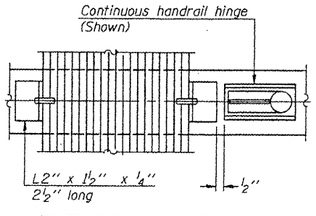
DETAIL T'
(Truss grating splice)
Details not shown same as Detail T. Alternate materials may be used subject to the Engineer's review and approval.



DETAIL W
(Walkway grating)



(AT WALKWAY GRATING SPLICE)



(CONTINUOUS WALKWAY GRATING)

SECTION W-W

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.

Structure Number	Station	A	(6) B	C	(6) D
7S015I057R189.40	775+10	6 1/2"	2'-10 1/2"	5'-3"	8'-1 1/2"
7S058I072L141.40	166+85	6"	4'-7 1/2"	5'-3"	10'-4 1/2"

(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) PL 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.

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

OS-A-10 1-20-11

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

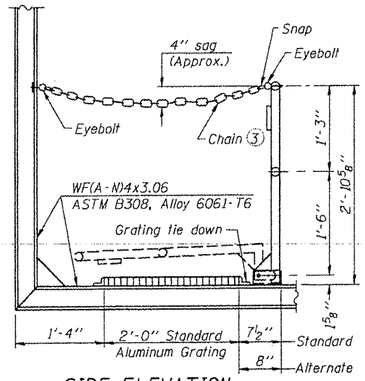
OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

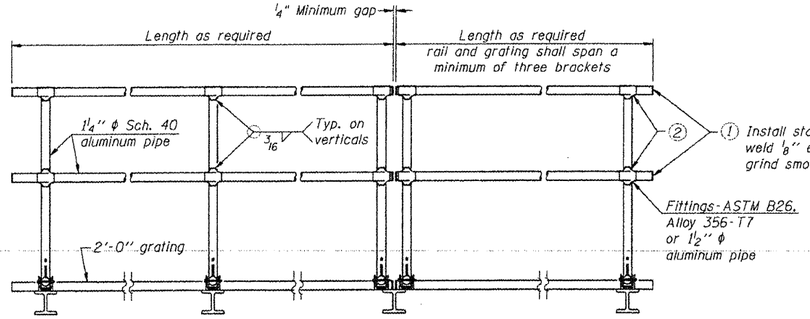
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	-		17	11
		CONTRACT NO. 46194		
		ILLINOIS FED. AID PROJECT		

* DT OVD SIN STR REPL 12-21

Coles, Macon



SIDE ELEVATION
(Showing safety chain w/o sign)



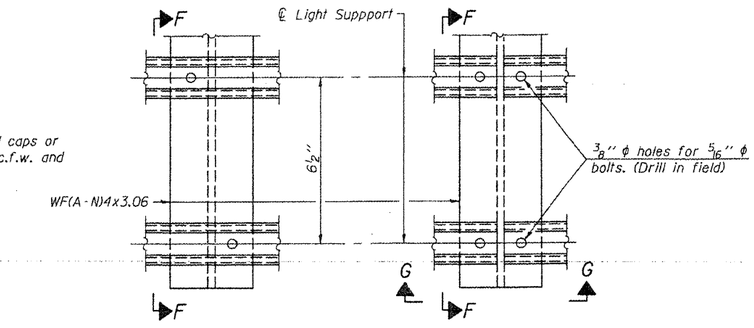
FRONT ELEVATION

(1) Install standard force-fit end caps or weld ⅛" end plates with ⅛" c.r.w. and grind smooth. (All rail ends)

(2) Horizontal handrail member shall be continuous thru fitting. Provide 7/16" ϕ hole in fitting for ⅜" 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.)

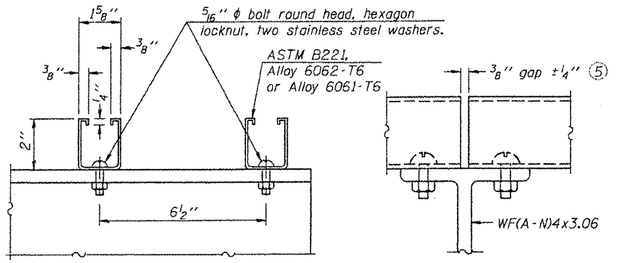
HANDRAIL DETAILS

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



DETAIL F

DETAIL G

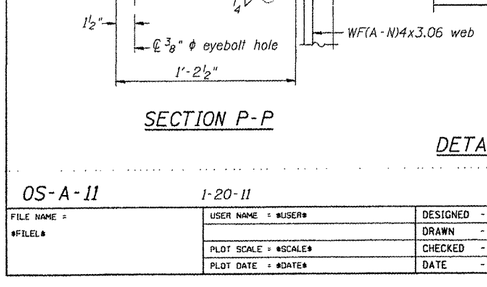


SECTION F-F

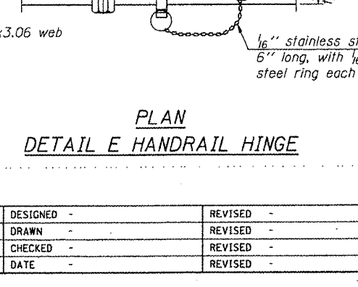
SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

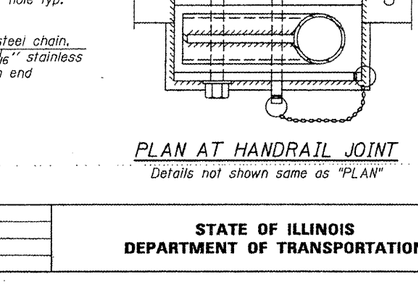
(5) Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



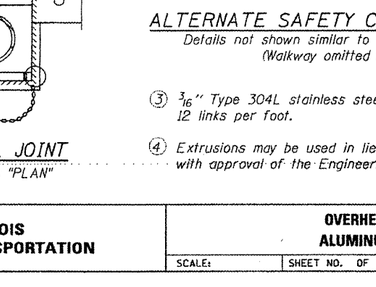
ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "Side Elevation" of "Handrail Details"



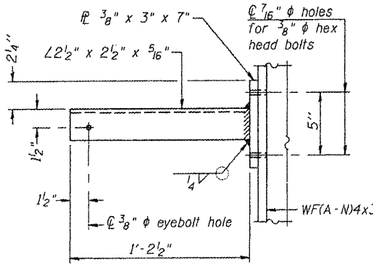
SIDE ELEVATION



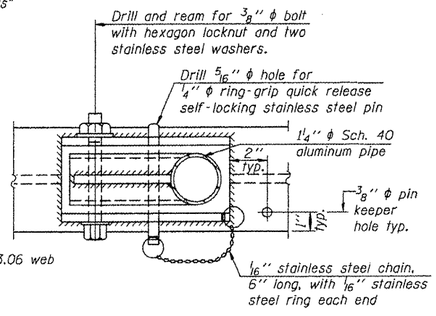
FRONT ELEVATION
See "Elevation" at right for dimensions.



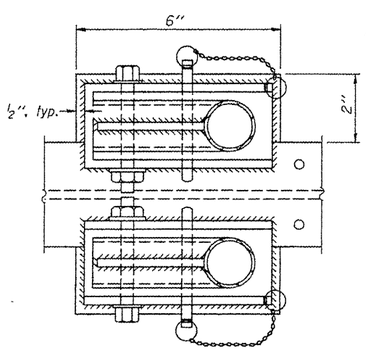
ELEVATION AT HANDRAIL JOINT (4)



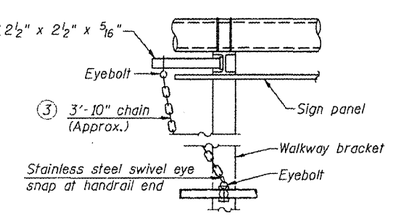
SECTION P-P



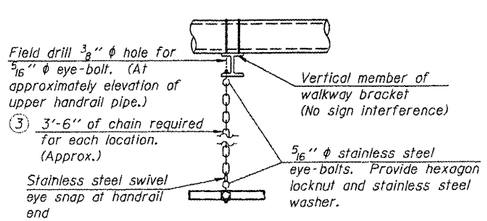
PLAN
DETAIL E HANDRAIL HINGE



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 = *FILEL*	USER NAME = *USER*	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = *SCALE*	CHECKED -	REVISED -
	PLOT DATE = *DATE*	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

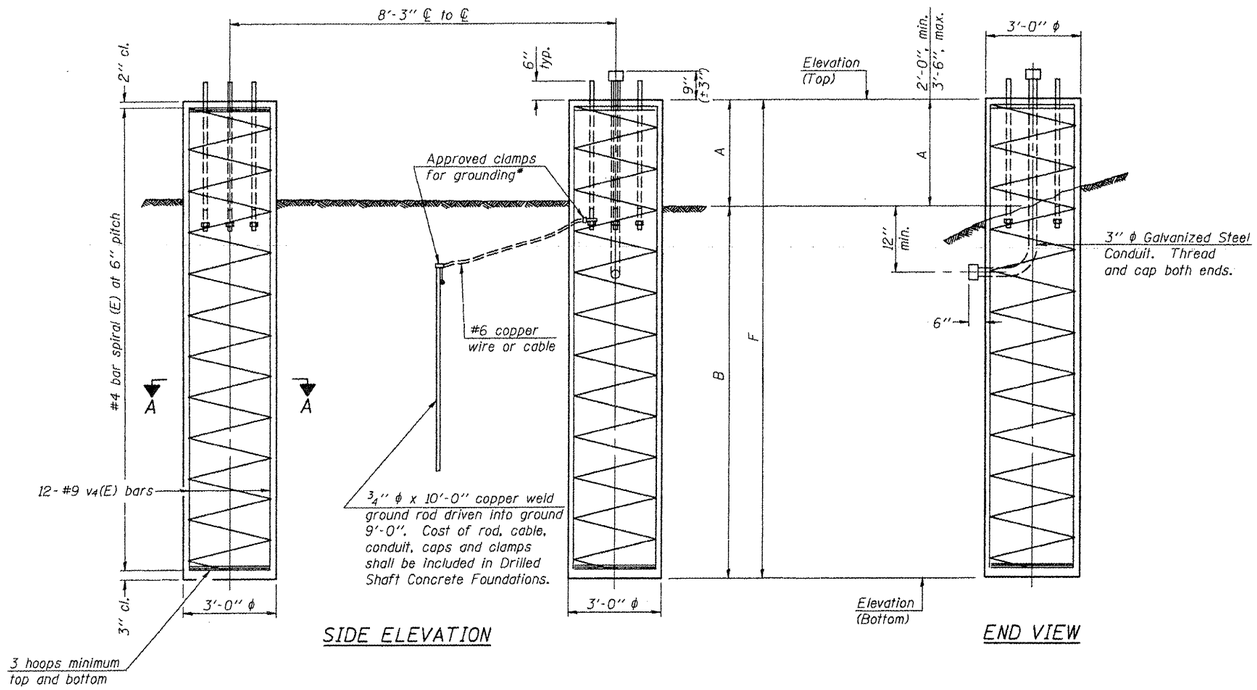
OVERHEAD SIGN STRUCTURES
ALUMINUM HANDRAIL DETAILS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARS	-		17	12
		CONTRACT NO. 46194		
		ILLINOIS FED. AID PROJECT		

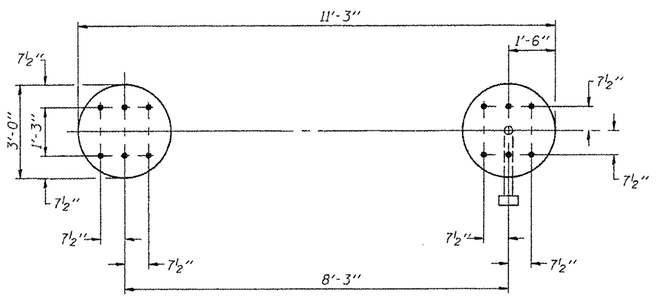
* D7 OVD SIN STR REPL 12-21

Coles, Macon



SIDE ELEVATION

END VIEW



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.

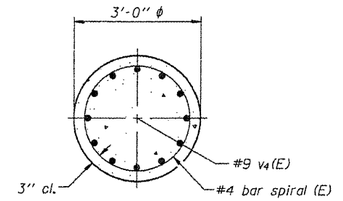
No sonotubes or decomposable forms shall be used below the lower conduit entrance.

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	
7S015I057R189.40	775+10	730.36	710.86	2'-0"	17'-6"	19'-6"	730.36	710.04	2'-9⅛"	17'-6"	20'-3⅛"	20.8
7S058I072L141.40	166+85	647.57	626.57	3'-6"	17'-6"	21'-0"	648.27	628.77	2'-0"	17'-6"	19'-6"	21.2

OS4-F3 1-20-11

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARS	•		17	13
		CONTRACT NO. 46194		
	ILLINOIS	FED. AID PROJECT		

• D7 OVD SIN STR REPL 12-21

Coles, Macon

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Date 7/13/11

ROUTE FAI 57 DESCRIPTION Overhead Sign Truss - NB LOGGED BY E. Sandschafer

SECTION LOCATION SW 1/4, SEC. 16, TWP. 12 N, RNG. 8 E, 3 PM

COUNTY Coles DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S015I057R189.4
Station 774+87

BORING NO. 1
Station 774+73
Offset 0.0ft CL
Ground Surface Elev. 727.78 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 713.3 ft
▽ Upon Completion 720.3 ft
▼ After 24 Hrs. 721.3 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
SILTY LOAM topsoil. 727.38			
Very stiff, damp, brown, CLAY LOAM.	3		
	5 6	3.5 PP	21
723.28			
Stiff, damp, gray, CLAY. -5	3		
	3 4	1.8 PP	24
▼ 720.78			
Very soft, very damp, gray, SILTY LOAM w/ Sand. ▽	1		
	1 2	0.1 B	14
-10	1		
717.48			
Medium, damp, brown, CLAY LOAM TILL.	2 3	0.8 B	15
715.78			
Stiff, damp, brown, SILTY CLAY LOAM TILL.	1		
	2 4	1.6 B	14
▽ 713.28			
712.98 Brown, SANDY LOAM. -15	1		
Very stiff, damp, gray, CLAY LOAM TILL.	4 6	2.1 B	13
	1		
709.78			
Medium, damp, gray, SILTY LOAM.	4 7	0.8 B	18
-20	3		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
707.58 Very stiff, damp, gray, CLAY LOAM TILL.	3 5	2.6 B	13
	2		
	4 6	2.3 B	12
703.28			
Stiff, damp, gray, SANDY CLAY TILL. -25	4		
	6 7	1.8 BS	9
700.78			
Stiff to medium, damp, gray, CLAY LOAM TILL.	1		
	3 4	1.6 B	13
-30	1		
	1 3	0.6 B	14
	2		
	3 4	0.9 B	14
	1		
-35	3 5	1.3 B	13
688.28			
-40	7		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name: S:\NEW SOILTECHNICAL\ONTDATA\PROJECTS\COLES CO (015)\015-0000 SOIL 2011 SIGN TRUSS.GPJ John Templeton DATEXPLT.GDT Data Printed 11/08/08
Latitude W 88 deg 19.333 min Longitude N 39 deg 28.838 min Datum Job Number

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Date 7/13/11

ROUTE FAI 57 DESCRIPTION Overhead Sign Truss - NB LOGGED BY E. Sandschafer

SECTION LOCATION SW 1/4, SEC. 16, TWP. 12 N, RNG. 8 E, 3 PM

COUNTY Coles DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S015I057R189.4
Station 774+87

BORING NO. 1
Station 774+73
Offset 0.0ft CL
Ground Surface Elev. 727.78 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 713.3 ft
▽ Upon Completion 720.3 ft
▼ After 24 Hrs. 721.3 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Medium, damp, gray, SANDY LOAM TILL. (continued) 686.78	13 13	0.9 S	15
Extent of exploration.			
Benchmark: Top of East sign truss foundation = 731.06' elevation. Provided by Program Development.			
Overhead Sign Truss #03 601, located at Mile Post 189.4, Northbound I-57. Just South of the I-57 / IL 16 Interchange. -45			
-50			
-55			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name: S:\NEW SOILTECHNICAL\ONTDATA\PROJECTS\COLES CO (015)\015-0000 SOIL 2011 SIGN TRUSS.GPJ John Templeton DATEXPLT.GDT Data Printed 11/08/08
Latitude W 88 deg 19.333 min Longitude N 39 deg 28.838 min Datum Job Number

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		DRAWN -	REVISED -				*		17	14
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	PLOT DATE = #DATE#	DATE -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

* D7 OVD SIN STR REPL 12-21

Coles, Macon

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Date 7/14/11

ROUTE FAI 57 DESCRIPTION Overhead Sign Truss - NB LOGGED BY E. Sandschafer

SECTION LOCATION SW 1/4, SEC. 16, TWP. 12 N, RNG. 8 E, 3 PM

COUNTY Coles DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S0151057R189.4
Station 774+87

BORING NO. 2
Station 775+15
Offset 90.0ft Rt
Ground Surface Elev. 730.11 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 703.1 ft
▽ Upon Completion 695.1 ft
▼ After 24 Hrs. 721.3 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
14.5" asphalt shoulder.			
728.91			
Very stiff, damp, gray, CLAY LOAM TILL embankment.	3		
	4 5	3.0 B	14
725.61			
Stiff, damp, black, TOPSOIL, highly organic.	3		
-5	5 6	1.9 B	23
723.11			
Medium, damp, gray, CLAY LOAM w/ trace small Gravel.	1		
	2 2	0.6 B	18
▼ 720.61			
Stiff, damp, gray, CLAY LOAM TILL.	1		
-10	1 2	0.6 B	16
	2		
	3 5	2.0 B	12
-15	2		
	3 5	1.7 B	12
	3		
	4 6	1.5 B	13
710.11 -20	3		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Stiff, damp, gray, CLAY LOAM TILL.	4 5	1.7 B	12
	1		
-25	1		
	2 4	1.1 B	13
	1		
	2 3	1.0 B	13
▽ 703.11			
Gray, SANDY LOAM. 702.61	5		
Medium to stiff, damp, gray, CLAY LOAM TILL.	4 3	0.7 B	14
-30	3		
	4 3	0.6 B	14
	1		
695.61	3		
Medium, damp, gray, SILTY LOAM. ▼ 694.91 -35	3 4	0.7 B	21
Soft to medium, damp, gray, CLAY LOAM TILL.			
Auger plug sank 2.5', skipped this trip.			
690.11 -40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\COLES CO (015)\015-0000 SOIL 2011 SIGN TRUSS.GPJ Data Template DATEMPLT.GDT Data Printed 11/09/08
Latitude W 88 deg 15.284 min Longitude N 39 deg 28.842 min Datum Job Number

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Date 7/14/11

ROUTE FAI 57 DESCRIPTION Overhead Sign Truss - NB LOGGED BY E. Sandschafer

SECTION LOCATION SW 1/4, SEC. 16, TWP. 12 N, RNG. 8 E, 3 PM

COUNTY Coles DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S0151057R189.4
Station 774+87

BORING NO. 2
Station 775+15
Offset 90.0ft Rt
Ground Surface Elev. 730.11 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 703.1 ft
▽ Upon Completion 695.1 ft
▼ After 24 Hrs. 721.3 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Soft to medium, damp, gray, CLAY LOAM TILL.			
	2		
686.11	3 3	0.5 B	15
Extent of exploration.			
-45			
Benchmark: Top of East sign truss foundation = 731.06' elevation. Provided by Program Development.			
Overhead Sign Truss #03 601, located at Mile Post 189.4, Northbound I-57. Just South of the I-57 / IL 16 Interchange.			
-50			
-55			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\COLES CO (015)\015-0000 SOIL 2011 SIGN TRUSS.GPJ Data Template DATEMPLT.GDT Data Printed 11/09/08
Latitude W 88 deg 15.284 min Longitude N 39 deg 28.842 min Datum Job Number

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		DRAWN -	REVISED -				
	PLOT SCALE = *SCALE*	CHECKED -	REVISED -				
	PLOT DATE = *DATE*	DATE -	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		17	15
		CONTRACT NO. 46194		
		ILLINOIS FED. AID PROJECT		

* DT OVD SIN STR REPL 12-21

Coles, Macon

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 7/28/11

ROUTE FAI 72 DESCRIPTION Overhead Sign Truss - WB LOGGED BY E. Sandschafer

SECTION N/A LOCATION S 1/2, SEC. 23, TWP. 17 N, RNG. 2 E, 3 PM

COUNTY Macon DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S058I072L141.4
Station 166+85

BORING NO. 1 (Median)
Station 167+13
Offset 0.0ft CL
Ground Surface Elev. 643.76 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter Dry ft
▽ Upon Completion Dry ft
▼ After 96 Hrs. 630.3 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
643.36 2" brown, Silty Loam topsoil.			
Very stiff, damp, brown marbled gray, CLAY LOAM TILL.	7		
	8 13	3.9	11 B
639.26			
Medium, damp, gray, CLAY LOAM TILL. -5	3		
	4 4	0.5	14 B
636.76			
Stiff, damp, gray, CLAY LOAM TILL.	3		
	5 6	1.5	12 B
-10	3		
	6 6	1.7	12 B
	2		
	4 5	1.4	12 B
-15	2		
	3 4	1.2	13 B
	2		
	3 6	1.5	12 B
623.76 -20	2		
Stiff to very stiff, damp, gray, CLAY LOAM TILL. -25	4 6	1.4	12 B
	3		
	5 10	2.1	11 B
	3		
	4 7	1.7	12 B
	4		
	6 11	3.9	11 B
-30	6		
	8 9	2.6	12 B
612.76			
Extent of exploration. -40			

Benchmark: Temporary BM on top of existing North OH Sign Truss foundation = 646.29'

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\DATA\PROJECTS\MACON CO (058)\058-6000 SOIL 2011 SIGN TRUSS.GPJ Data Template DATEMPLT.GDT Data Printed 11/08/28
Latitude N 39 deg 57.017 min Longitude W 88 deg 54.508 min Datum Job Number

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 7/29/11

ROUTE FAI 72 DESCRIPTION Overhead Sign Truss - WB LOGGED BY E. Sandschafer

SECTION N/A LOCATION S 1/2, SEC. 23, TWP. 17 N, RNG. 2 E, 3 PM

COUNTY Macon DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S058I072L141.4
Station 166+85

BORING NO. 2 (North)
Station 167+13
Offset 80.0ft LT
Ground Surface Elev. 646.13 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter Dry ft
▽ Upon Completion 642.6 ft
▼ After 72 Hrs. 642.8 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
11.75" asphalt shoulder on 6" crushed stone. 644.63			
Medium damp, gray, fine grained, SAND. 8% passing #200 sieve.	6		
	12 14		12
-5	6		
6% passing #200 sieve.	8 10		14
	1		
10% passing #200 sieve.	15 12		12
-10	3		
635.93			
Very stiff, damp, gray, CLAY LOAM TILL.	6 8	2.4	12 B
	4		
	8 11	3.7	12 B
	3		
-15	5 8	1.9	12 B
	3		
	4 7	1.6	12 B
626.13 -20	3		
Very stiff, damp, gray, CLAY LOAM TILL.	6 8	2.4	12 B
	3		
-25	6 8	2.4	12 B
	4		
	8 10	2.2	11 B
	2		
	4 6	1.3	13 B
-30	3		
	5 8	2.4	11 B
615.13			
Extent of exploration. -40			

Benchmark: Temporary BM on top of existing North OH Sign Truss foundation = 646.29'

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\DATA\PROJECTS\MACON CO (058)\058-6000 SOIL 2011 SIGN TRUSS.GPJ Data Template DATEMPLT.GDT Data Printed 11/08/28
Latitude N 39 deg 57.015 min Longitude W 88 deg 54.521 min Datum Job Number

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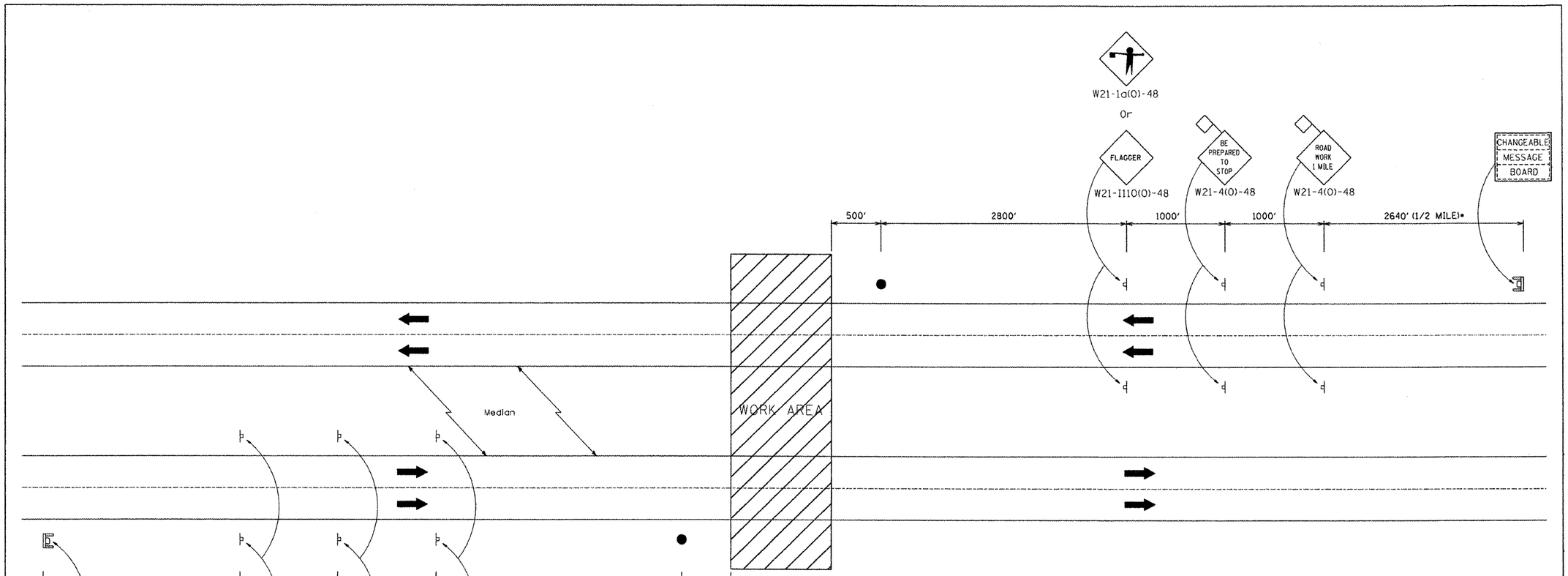
		DRAWN -	REVISED -		
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -		
	PLOT DATE = #DATE#	DATE -	REVISED -		

SCALE:	SHEET NO. OF SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		17	16
		CONTRACT NO. 46194		
		ILLINOIS FED. AID PROJECT		

* D7 OVD SIN STR REPL 12-21

Coles, Macon



* In advance of first warning sign.

SYMBOLS

- WORK AREA
- SIGN ON PORTABLE SUPPORT
- 18" X 18" MINIMUM ORANGE FLAG
- STATE TROOPER
- CHANGEABLE MESSAGE BOARD (WHEN SPECIFIED)

MESSAGES

ROAD WORK AHEAD

BE PREPARED TO STOP

GENERAL NOTES

1. Worker signs are to be removed when no work is being performed. Any unattended obstacle or excavation in the work area which in the opinion of the Engineer constitutes a hazard shall be protected by barricades at 50' centers, with flashing lights at night. If the hazard exceeds 100' in length, steady burning lights shall be substituted for flashing lights. When the distance is greater than 250', barricade spacing may be increased to 100'.
2. When traffic will be required to stop beyond the 1 mile signs, additional "ROAD WORK AHEAD" and "BE PREPARED TO STOP" signs shall be installed at 1 mile intervals as directed by the Engineer.
3. At least one State Trooper for each direction of traffic stopped shall be present before work is started.
4. If the work operation requires that four or more work vehicles enter through traffic lanes in one hour period, a flagger shall be provided.
5. Signs mounted in the median may be omitted when the median is less than 10 feet wide.
6. This standard also applies when work is being performed on a multilane undivided highway. Under these conditions the signs normally mounted in the median shall be omitted.
7. Longitudinal dimensions may be adjusted to fit field conditions.

MULTILANE DIVIDED AND UNDIVIDED RURAL DAY OPERATIONS

WHERE AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES WILL REQUIRE THE TEMPORARY STOPPAGE OF TRAFFIC NOT TO EXCEED A 15 MINUTE PERIOD.

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHORT-TERM ROAD CLOSURE TRAFFIC CONTROL DETAIL

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		17	17
		CONTRACT NO. 46194		
		ILLINOIS FED. AID PROJECT		

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