

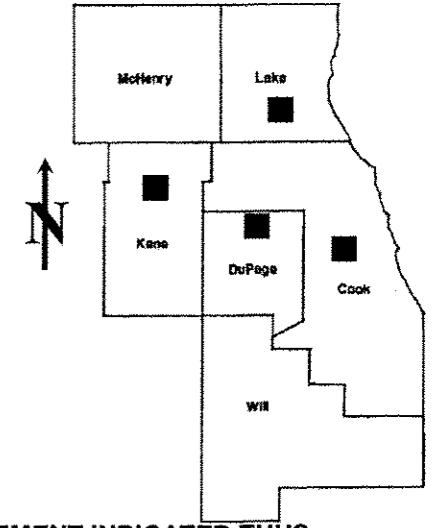
11-08-2013 LETTING ITEM 066

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
VARIOUS	D1 OVH SIN STR REPL 14-30	VARIOUS	53	1

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
DISTRICT ONE  
PROPOSED HIGHWAY PLANS**

D-1  
**CONTRACT NO. 46291**  
D-60-030-14

FOR INDEX OF SHEETS, SEE SHEET NO. 2



VARIOUS ROUTES  
SECTION: D1 OVH SIN STR REPL 14-30  
VARIOUS LOCATIONS IN DISTRICT ONE  
DIST-1 OVERHEAD SIGN STRUCTURE REPLACEMENT  
VARIOUS COUNTIES

LOCATION OF IMPROVEMENT INDICATED THUS: 

IMPROVEMENT LOCATED WITH THE VILLAGES OF  
BENSENVILLE, FOX LAKE, DEERFIELD, SUGAR  
GROVE, OAKBROOK, WILLOW SPRINGS AND THE  
CITY OF CHICAGO, ELGIN AND WAUKEGAN

C-60-030-14

FOR LOCATION MAPS  
SEE SHEETS 6, 7 AND 8

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS**

SUBMITTED: Aug 2 2013  
*Justin Munn*  
ACTING ENGINEER OF OPERATIONS

October 4 2013  
*John D. Baranzelli*  
actng ENGINEER OF DESIGN AND ENVIRONMENT

October 4 2013  
*Omer Osman, P.E.*  
DIRECTOR, DIVISION OF HIGHWAYS

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

**J.U.L.I.E.: JOINT UTILITY LOCATION  
INFORMATION FOR EXCAVATION  
(800) 892-0123 OR 811  
(312) 744-7000 IN CHICAGO**

**CONTRACT NO. 46291**

DISTRICT ONE - DESIGN - PLAN PREPARATION ENGINEER:  
KEN ENG / (847) 705-4247

### INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX AND HIGHWAY STANDARDS
3-4	SUMMARY OF QUANTITIES
5	SCHEDULE OF QUANTITIES
6-8	LOCATION MAPS
9	ROADWAY PLAN - LOCATION 19
10-17	ALUMINUM SPAN SIGN TRUSS PLANS
18-25	ALUMINUM CANTILEVER SIGN TRUSS PLANS
26-28	BRIDGE MOUNTED SIGN STRUCTURE PLANS
29-30	MONOTUBE SIGN STRUCTURE PLANS
31-33	MISCELLANEOUS SIGN STRUCTURE REPAIR PLANS
34-37	BORING LOGS
38-46	SIGN PANEL PLANS
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52	ARTERIAL ROAD INFORMATION SIGNING (TC 22)
53	CENTER LANE CLOSURE, AND SHOULDER LANE (TC 25)

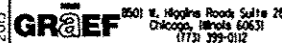
### HIGHWAY STANDARDS

STD. NO.	TITLE
606001-05	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
631031-11	TRAFFIC BARRIER TERMINAL, TYPE 6
701101-03	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701400-06	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-07	LANE CLOSURE, FREEWAY/EXPRESSWAY
701402-09	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
701406-07	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-08	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS • 45 MPH
701416-07	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH CROSSOVER AND BARRIER
701421-05	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS • 45 MPH TO 55 MPH
701426-05	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS • 45 MPH
701446-04	TWO LANE CLOSURE, FREEWAY/EXPRESSWAY
701901-02	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720021-02	SIGN PANELS, EXTRUDED ALUMINUM TYPE

### GENERAL NOTES

1. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
2. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
3. THE CONTRACTOR SHALL CONTACT THE EXPRESSWAY TRAFFIC OPERATIONS ENGINEER (847-705-4151) SEVENTY-TWO (72) HOURS IN ADVANCE OF ALL LANE, RAMP AND SHOULDER CLOSURES.
4. IT SHALL BE THE CONTACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
5. WHEN ARTIFICIAL LIGHTING IS USED IN NIGHT OPERATIONS THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
6. FOR OVERHEAD SIGN STRUCTURES, THE END SUPPORTS ARE INCLUDED IN THE COST OF THE OVERHEAD SPAN OR CANTILEVER STRUCTURE.
7. RESTORATION OF THE SIGN STRUCTURE FOUNDATION WORK AREAS SHALL BE INCLUDED IN THE RELATED FOUNDATION WORK ITEMS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALK PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD AND DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 252 AND 250 OF THE STANDARD SPECIFICATIONS RESPECTIVELY.
8. THE CONTRACTOR SHALL REMOVE ANY PROJECTING OBJECTS, SUCH AS BRACING OR FORM CLAMPS, THAT COULD CAUSE A DANGER TO THE MOTORING PUBLIC PRIOR TO RE-OPENING SHOULDERS.

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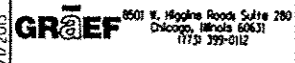
 8501 W. Higgins Road Suite 200 Chicago, Illinois 60637 (773) 399-0112	USER NAME = 1485	DESIGNED - EF	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>OVERHEAD SIGN STRUCTURE REPAIR &amp; REPLACEMENT</b> <b>INDEX OF SHEETS, HIGHWAY STANDARDS AND GENERAL NOTES</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 2.0000' / 1" =	DRAWN - EF	REVISED -			VAR. 01 OVD SIN STR REPL14-30	VARIOUS	53	2	
	PLOT DATE = 8/1/2013	CHECKED - RS	REVISED -			CONTRACT NO. 46291				
	DATE - 08/01/2013	REVISED -		SCALE:	SHEET 1	OF 1	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT

URBAN

PAY ITEM NUMBER	DESCRIPTION	UNIT	TOTAL QUANTITY	100% STATE 0021 COOK	100% STATE 0021 DuPAGE	100% STATE 0021 KANE	100% STATE 0021 LAKE
20101000	TEMPORARY FENCE	FOOT	30		30		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	246		246		
48101620	AGGREGATE SHOULDERS, TYPE B 10"	SQ YD	82		82		
60250200	CATCH BASINS TO BE ADJUSTED	EACH	1		1		
60600605	CONCRETE CURB, TYPE B	FOOT	30		30		
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	150		150		
60605500	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 ( VARIABLE WIDTH GUTTER FLAG)	FOOT	86		86		
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4		4		
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 ( SPECIAL) TANGENT	EACH	2		2		
63200310	GUARDRAIL REMOVAL	FOOT	91		91		
67100100	MOBILIZATION	L SUM	1	0.25	0.25	0.25	0.25
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	9		1	4	4
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	1	0.25	0.25	0.25	0.25
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	0.25	0.25	0.25	0.25
72000100	SIGN PANEL - TYPE 1	SO FT	61			61	
72000300	SIGN PANEL - TYPE 3	SO FT	1,430		568	294	568
73300100	OVERHEAD SIGN STRUCTURE-SPAN, TYPE I-A ( 4' -0" x 4' -6"	FOOT	140	67			73
73302170	OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE II-C-A ( 36" x 5' -6"	FOOT	78	78			
73302200	OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE III-C-A ( 36" x 7' -0"	FOOT	169		69	35	65
73303000	OVERHEAD SIGN STRUCTURE-MONOTUBE	FOOT	67			67	
73304000	OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED	FOOT	19			19	

\*specialty items

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PLOT DATE = 8/1/2013	CHECKED - RS	REVISED -
	DATE - 08/01/2013	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURE REPAIR & REPLACEMENT  
SUMMARY OF QUANTITIES

SCALE: SHEET 1 OF 2 SHEETS STA. TO STA.

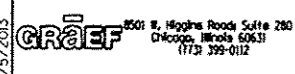
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01 QVD SIN STR REPL14-30		VARIOUS	53	3
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	

URBAN

PAY ITEM NUMBER	DESCRIPTION	UNIT	TOTAL QUANTITY	100% STATE 0021 COOK	100% STATE 0021 DuPAGE	100% STATE 0021 KANE	100% STATE 0021 LAKE
<del>73400200</del>	<del>DRILLED SHAFT CONCRETE FOUNDATIONS</del>	<del>CU YD</del>	<del>68.8</del>	<del>21.3</del>	<del>28.2</del>		<del>19.4</del>
73600100	REMOVE OVERHEAD SIGN STRUCTURE-SPAN	EACH	2	1			1
73600200	REMOVE OVERHEAD SIGN STRUCTURE-CANTILEVER	EACH	7	3	1	1	2
73601100	REMOVE OVERHEAD SIGN STRUCTURE, MONOTUBE-SPAN	EACH	1			1	
73602000	REMOVE OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED	EACH	1			1	
73700300	REMOVE CONCRETE FOUNDATION-OVERHEAD	EACH	6	3	1		2
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.25	0.25	0.25	0.25
Z0030850	TEMPORARY INFORMATION SIGNING	SO FT	405	69	26	232	78
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1			
Z0052394	REPLACE U-BOLT	EACH	2			2	
X0325749	FIBER WRAP	SO FT	30				30
X6640304	CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED	SO FT	96		96		
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1			
X7200075	REMOVE AND REINSTALL SIGN PANEL	SO FT	1,089	883			206
X7330090	METAL SCREEN	EACH	2	2			
X7330096	OVERHEAD SIGN STRUCTURE-END CAP	EACH	4	4			
X7340105	REBUILD CONCRETE FOUNDATION FOR OVERHEAD SIGN STRUCTURE	EACH	5	2		3	

16 • DENOTES SPECIALTY ITEM

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PLOT DATE = 9/5/2013	CHECKED - RS	REVISED -
	DATE - 09/05/2013	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURE REPAIR & REPLACEMENT  
SUMMARY OF QUANTITIES

SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. DI OVD SIN STR REPL14-30		VARIOUS	53	4
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	

Rev.

**SCHEDULE OF QUANTITIES**

LOCATION NO	1	STATE I.D. NO	1M0455031L000.0-000					
COUNTY	KANE	ROUTE	IL 31	M.P.:	0	DIRECTION:	SB	
DESCRIPTION OF WORK							UNIT	QUANTITY
SIGN PANEL - TYPE 1							SO FT	61
OVERHEAD SIGN STRUCTURE-MONOTUBE							FOOT	67
REMOVE OVERHEAD SIGN STRUCTURE, MONOTUBE-SPAN							EACH	1
REBUILD CONCRETE FOUNDATION FOR OVERHEAD SIGN STRUCTURE							EACH	2
TEMPORARY INFORMATION SIGNING							SO FT	35
TEMPORARY INFORMATION SIGNING - MOT							SO FT	26

LOCATION NO	2	STATE I.D. NO	1S049U012R000.0-000					
COUNTY	LAKE	ROUTE	US 12	M.P.:	0	DIRECTION:	EB	
DESCRIPTION OF WORK							UNIT	QUANTITY
OVERHEAD SIGN STRUCTURE-SPAN, TYPE I-A (4'-0" x 4'-6")							FOOT	73
REMOVE OVERHEAD SIGN STRUCTURE-SPAN							EACH	1
TEMPORARY INFORMATION SIGNING - MOT							SO FT	26
REMOVE AND REINSTALL SIGN PANEL							SO FT	206

LOCATION NO	3	STATE I.D. NO	1C049U041L000.0-001					
COUNTY	LAKE	ROUTE	DEERFIELD RD	M.P.:	0	DIRECTION:	EB	
DESCRIPTION OF WORK							UNIT	QUANTITY
SIGN PANEL - TYPE 3							SO FT	368
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE III-C-A (36" x 7'-0")							FOOT	35
DRILLED SHAFT CONCRETE FOUNDATIONS							CU YD	10.4
REMOVE OVERHEAD SIGN STRUCTURE-CANTILEVER							EACH	1
REMOVE CONCRETE FOUNDATION-OVERHEAD							EACH	1
TEMPORARY INFORMATION SIGNING - MOT							SO FT	26

LOCATION NO	4	STATE I.D. NO	1C049U041R000.0-000					
COUNTY	LAKE	ROUTE	DEERFIELD RD	M.P.:	0	DIRECTION:	EB	
DESCRIPTION OF WORK							UNIT	QUANTITY
SIGN PANEL - TYPE 3							SO FT	200
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE III-C-A (36" x 7'-0")							FOOT	30
DRILLED SHAFT CONCRETE FOUNDATIONS							CU YD	9.0
REMOVE OVERHEAD SIGN STRUCTURE-CANTILEVER							EACH	1
REMOVE CONCRETE FOUNDATION-OVERHEAD							EACH	1
TEMPORARY INFORMATION SIGNING - MOT							SO FT	26

LOCATION NO	5	STATE I.D. NO	1C045S056R000.0-000					
COUNTY	KANE	ROUTE	IL 56	M.P.:	0	DIRECTION:	EB	
DESCRIPTION OF WORK							UNIT	QUANTITY
SIGN PANEL - TYPE 3							SO FT	104
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE III-C-A (36" x 7'-0")							FOOT	35
REMOVE OVERHEAD SIGN STRUCTURE-CANTILEVER							EACH	1
REBUILD CONCRETE FOUNDATION FOR OVERHEAD SIGN STRUCTURE							EACH	1
TEMPORARY INFORMATION SIGNING							SO FT	29
TEMPORARY INFORMATION SIGNING - MOT							SO FT	26

LOCATION NO	6	STATE I.D. NO	1B045S056L000.0-000					
COUNTY	KANE	ROUTE	IL 56	M.P.:	0	DIRECTION:	WB	
DESCRIPTION OF WORK							UNIT	QUANTITY
SIGN PANEL - TYPE 3							SO FT	190
OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED							FOOT	19
REMOVE OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED							EACH	1
TEMPORARY INFORMATION SIGNING							SO FT	55
TEMPORARY INFORMATION SIGNING - MOT							SO FT	26

LOCATION NO	8	STATE I.D. NO	1C022S038R000.0-001					
COUNTY	DuPAGE	ROUTE	YORK RD	M.P.:	0	DIRECTION:	SB	
DESCRIPTION OF WORK							UNIT	QUANTITY
SIGN PANEL - TYPE 3							SO FT	176
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE III-C-A (36" x 7'-0")							FOOT	35
DRILLED SHAFT CONCRETE FOUNDATIONS							CU YD	9.2
REMOVE OVERHEAD SIGN STRUCTURE-CANTILEVER							EACH	1
REMOVE CONCRETE FOUNDATION-OVERHEAD							EACH	1
TEMPORARY INFORMATION SIGNING - MOT							SO FT	26

LOCATION NO	9	STATE I.D. NO	1C0161090R081.9-000					
COUNTY	COOK	ROUTE	1-90	M.P.:	81.9	DIRECTION:	EB	
DESCRIPTION OF WORK							UNIT	QUANTITY
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE II-C-A (36" x 5'-6")							FOOT	28
DRILLED SHAFT CONCRETE FOUNDATIONS							CU YD	7.1
REMOVE OVERHEAD SIGN STRUCTURE-CANTILEVER							EACH	1
REMOVE CONCRETE FOUNDATION-OVERHEAD							EACH	1
REMOVE AND REINSTALL SIGN PANEL							SO FT	132

LOCATION NO	10	STATE I.D. NO	1C0161090R082.5-000					
COUNTY	COOK	ROUTE	1-90	M.P.:	82.5	DIRECTION:	EB	
DESCRIPTION OF WORK							UNIT	QUANTITY
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE II-C-A (36" x 5'-6")							FOOT	27
DRILLED SHAFT CONCRETE FOUNDATIONS							CU YD	7.1
REMOVE OVERHEAD SIGN STRUCTURE-CANTILEVER							EACH	1
REMOVE CONCRETE FOUNDATION-OVERHEAD							EACH	1
REMOVE AND REINSTALL SIGN PANEL							SO FT	140

LOCATION NO	11	STATE I.D. NO	1C0161090R083.9-000					
COUNTY	COOK	ROUTE	1-90	M.P.:	83.9	DIRECTION:	EB	
DESCRIPTION OF WORK							UNIT	QUANTITY
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE II-C-A (36" x 5'-6")							FOOT	23
DRILLED SHAFT CONCRETE FOUNDATIONS							CU YD	7.1
REMOVE OVERHEAD SIGN STRUCTURE-CANTILEVER							EACH	1
REMOVE CONCRETE FOUNDATION-OVERHEAD							EACH	1
REMOVE AND REINSTALL SIGN PANEL							SO FT	164

LOCATION NO	12	STATE I.D. NO	1S0161090L082.6-000					
COUNTY	COOK	ROUTE	1-90	M.P.:	82.6	DIRECTION:	WB	
DESCRIPTION OF WORK							UNIT	QUANTITY
OVERHEAD SIGN STRUCTURE-SPAN, TYPE I-A (4'-0" x 4'-6")							FOOT	67
REMOVE OVERHEAD SIGN STRUCTURE-SPAN							EACH	1
TEMPORARY INFORMATION SIGNING							SO FT	69
REMOVE AND REINSTALL SIGN PANEL							SO FT	447
REBUILD CONCRETE FOUNDATION FOR OVERHEAD SIGN STRUCTURE							EACH	2

LOCATION NO	13	STATE I.D. NO	1S045S056L000.0-000					
COUNTY	KANE	ROUTE	IL 56	M.P.:	0	DIRECTION:	WB	
DESCRIPTION OF WORK							UNIT	QUANTITY
REPLACE U-BOLT							EACH	2

LOCATION NO	14	STATE I.D. NO	1C049S043L000.0-000					
COUNTY	LAKE	ROUTE	IL 43	M.P.:	0	DIRECTION:	SB	
DESCRIPTION OF WORK							UNIT	QUANTITY
FIBER WRAP							SO FT	30

LOCATION NO	15	STATE I.D. NO	1S0161090L081.8-000					
COUNTY	COOK	ROUTE	1-90	M.P.:	81.8	DIRECTION:	WB	
DESCRIPTION OF WORK							UNIT	QUANTITY
OVERHEAD SIGN STRUCTURE-END CAP							EACH	3

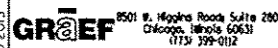
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COUNTY	COOK	ROUTE	1-90	M.P.:	79.9	DIRECTION:	WB	
DESCRIPTION OF WORK							UNIT	QUANTITY
OVERHEAD SIGN STRUCTURE-END CAP							EACH	1

LOCATION NO	17	STATE I.D. NO	1C016U045R000.0-003					
COUNTY	COOK	ROUTE	US 45	M.P.:	0	DIRECTION:	NB	
DESCRIPTION OF WORK							UNIT	QUANTITY
METAL SCREEN							EACH	1

LOCATION NO	18	STATE I.D. NO	1S0161055L290.2-000					
COUNTY	COOK	ROUTE	IL 55	M.P.:	290.2	DIRECTION:	SB	
DESCRIPTION OF WORK							UNIT	QUANTITY
METAL SCREEN							EACH	1

LOCATION NO	19	STATE I.D. NO	1C022S083L000.0-003					
COUNTY	DuPAGE	ROUTE	IL 83	M.P.:		DIRECTION:	SB	
DESCRIPTION OF WORK							UNIT	QUANTITY
TEMPORARY FENCE							FOOT	30
COMBINATION CURB AND GUTTER REMOVAL							FOOT	246
AGGREGATE SHOULDERS, TYPE B 10"							SO YD	82
CATCH BASINS TO BE ADJUSTED							EACH	1
CONCRETE CURB, TYPE B							FOOT	30
COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24							FOOT	150
COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (VARIABLE WIDTH CUTTER FLAG)							FOOT	86
TRAFFIC BARRIER TERMINAL, TYPE 6							EACH	4
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT							EACH	2
GUARDRAIL REMOVAL							FOOT	91
SIGN PANEL - TYPE 3							SO FT	392
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE III-C-A (36" x 7'-0")							FOOT	33.5
DRILLED SHAFT CONCRETE FOUNDATIONS							CU YD	19.0
CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED							FOOT	96

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9/5/2013



5501 W. Higgins Road Suite 200  
Chicago, Illinois 60631  
(773) 399-0112

USER NAME	1485	DESIGNED	EAD	REVISED	-
		DRAWN	EAD	REVISED	-
PLOT SCALE	2.0000 1/16"	CHECKED	RS	REVISED	-
PLOT DATE	9/5/2013	DATE	09/05/2013	REVISED	-

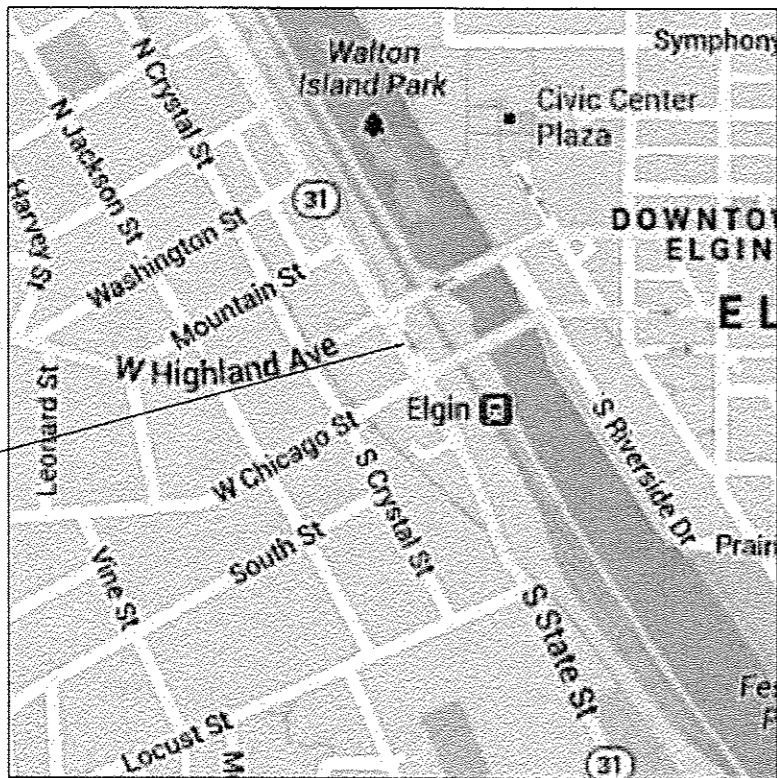
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURE REPAIR & REPLACEMENT  
SCHEDULE OF QUANTITIES**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	01 OVD SIN STR REPL14-30	VARIOUS	53	5
				CONTRACT NO. 46291
ILLINOIS FED. AID PROJECT				

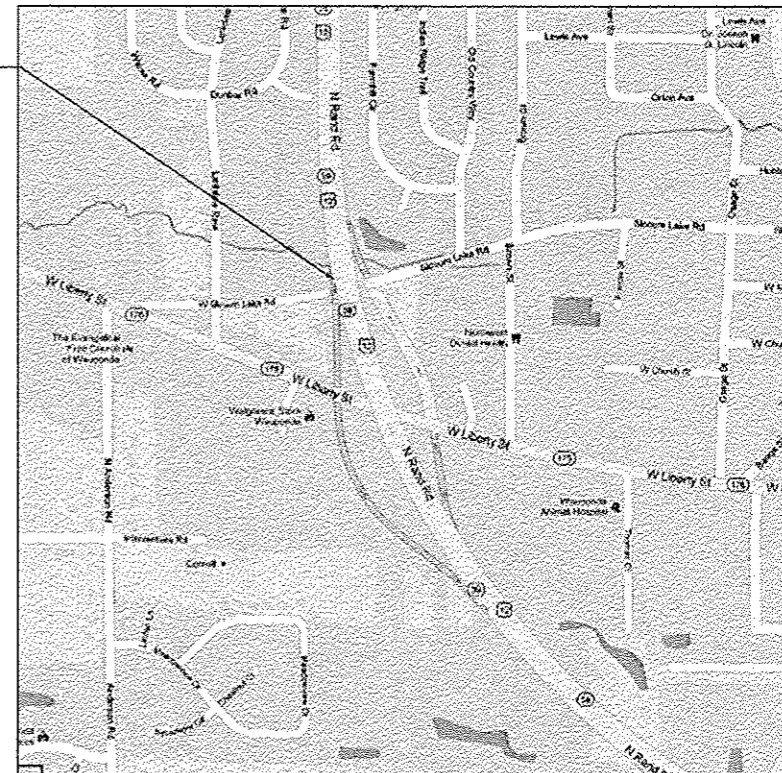
SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.



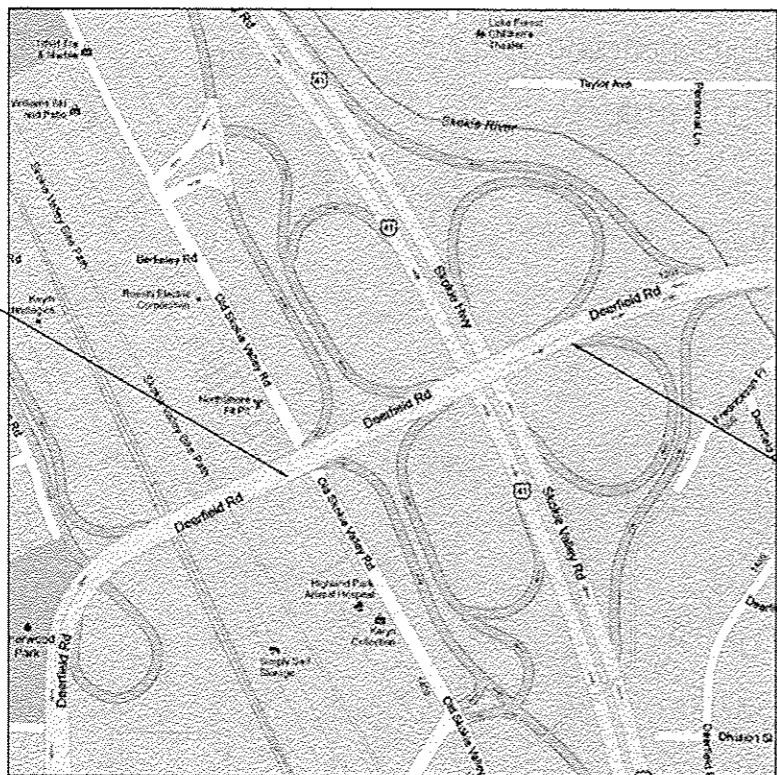


LOCATION 1  
1M045S031L000.0-000  
IL 31  
CITY OF ELGIN  
KANE COUNTY  
ADT = 10,650 (2013)  
SPEED LIMIT = 30 MPH

LOCATION 2  
1S049U012R000.0-000  
EB US 12/IL 59 SB AT IL 176 EXIT  
VILLAGE OF FOX LAKE  
LAKE COUNTY  
ADT = 30,800 (2013)  
SPEED LIMIT = 55 MPH

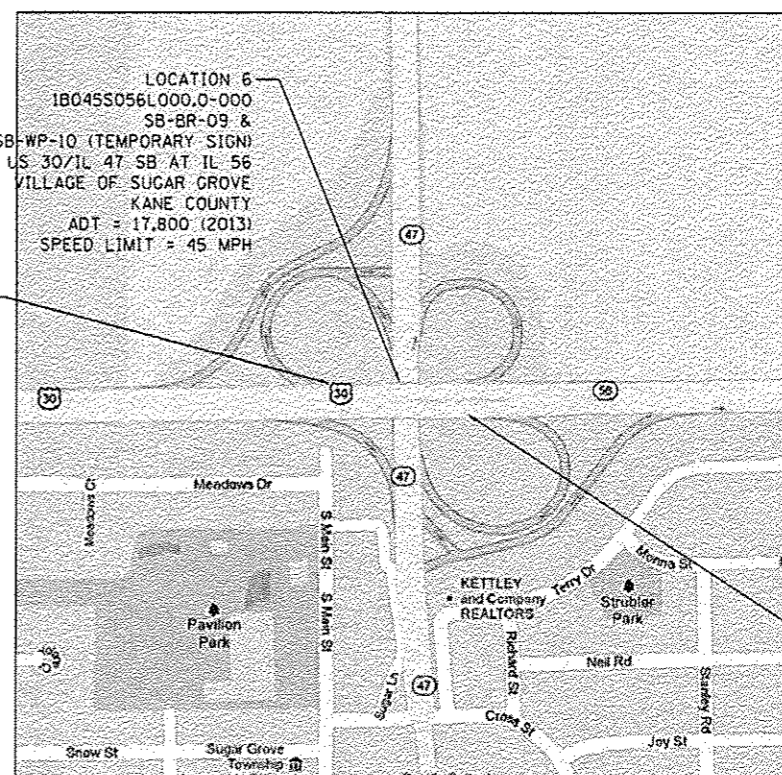


LOCATION 3  
1C049U041L000.0-001  
EB-TR-03  
DEERFIELD RD EB AT US 41 SB EXIT  
VILLAGE OF DEERFIELD  
LAKE COUNTY  
ADT = 24,800 (2013)  
SPEED LIMIT = 35 MPH



LOCATION 4  
1C049U041R000.0-000  
EB-TR-05  
DEERFIELD RD EB AT US 41 NB EXIT  
VILLAGE OF DEERFIELD  
LAKE COUNTY  
ADT = 24,800 (2013)  
SPEED LIMIT = 35 MPH

LOCATION 13  
1S045S056L000.0-000  
WB IL 56 AT EXIT RAMP TO  
US 30 & IL 47  
VILLAGE OF SUGAR GROVE  
KANE COUNTY  
ADT = 10,400 (2013)  
SPEED LIMIT = 55 MPH



LOCATION 6  
1B045S056L000.0-000  
SB-BR-09 &  
SB-WP-10 (TEMPORARY SIGN)  
US 30/IL 47 SB AT IL 56  
VILLAGE OF SUGAR GROVE  
KANE COUNTY  
ADT = 17,800 (2013)  
SPEED LIMIT = 45 MPH

LOCATION 5  
1C045S056R000.0-000  
EB-TR-07 &  
EB-WP-08 (TEMPORARY SIGN)  
IL 56 EB AT IL 47 NB EXIT (Elburn)  
VILLAGE OF SUGAR GROVE  
KANE COUNTY  
ADT = 10,400 (2013)  
SPEED LIMIT = 55 MPH

LOCATION 7 WAS REMOVED FROM THIS CONTRACT

IF LOCATION 3 AND 4 ARE TO BE DONE AT THE SAME TIME THEN ONLY ONE SET OF TEMPORARY INFORMATION SIGNING - NOT SHOULD BE USED.

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GR&EF 2501 N. Higgins Road Suite 280 Chicago, Illinois 60631 (773) 399-0112

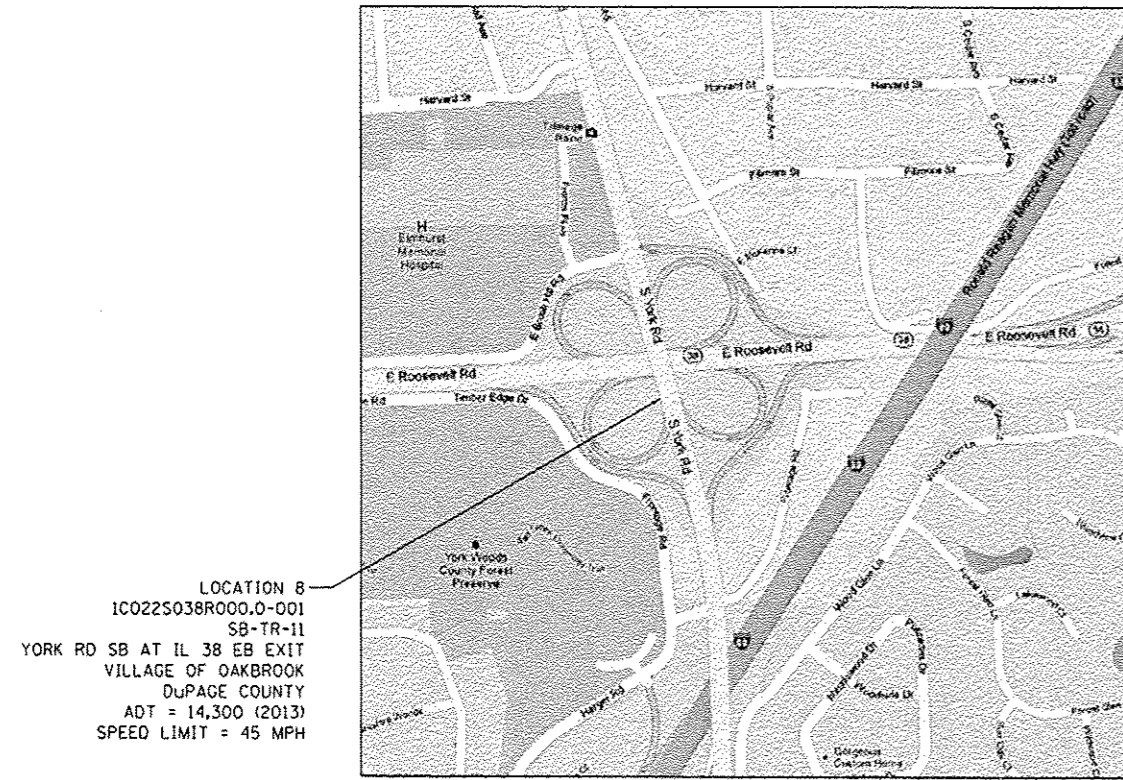
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PLOT SCALE = 2.0000' / in.	DRAWN - EF	REVISED -
PLOT DATE = 8/1/2013	CHECKED - RS	REVISED -
	DATE - 08/01/2013	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

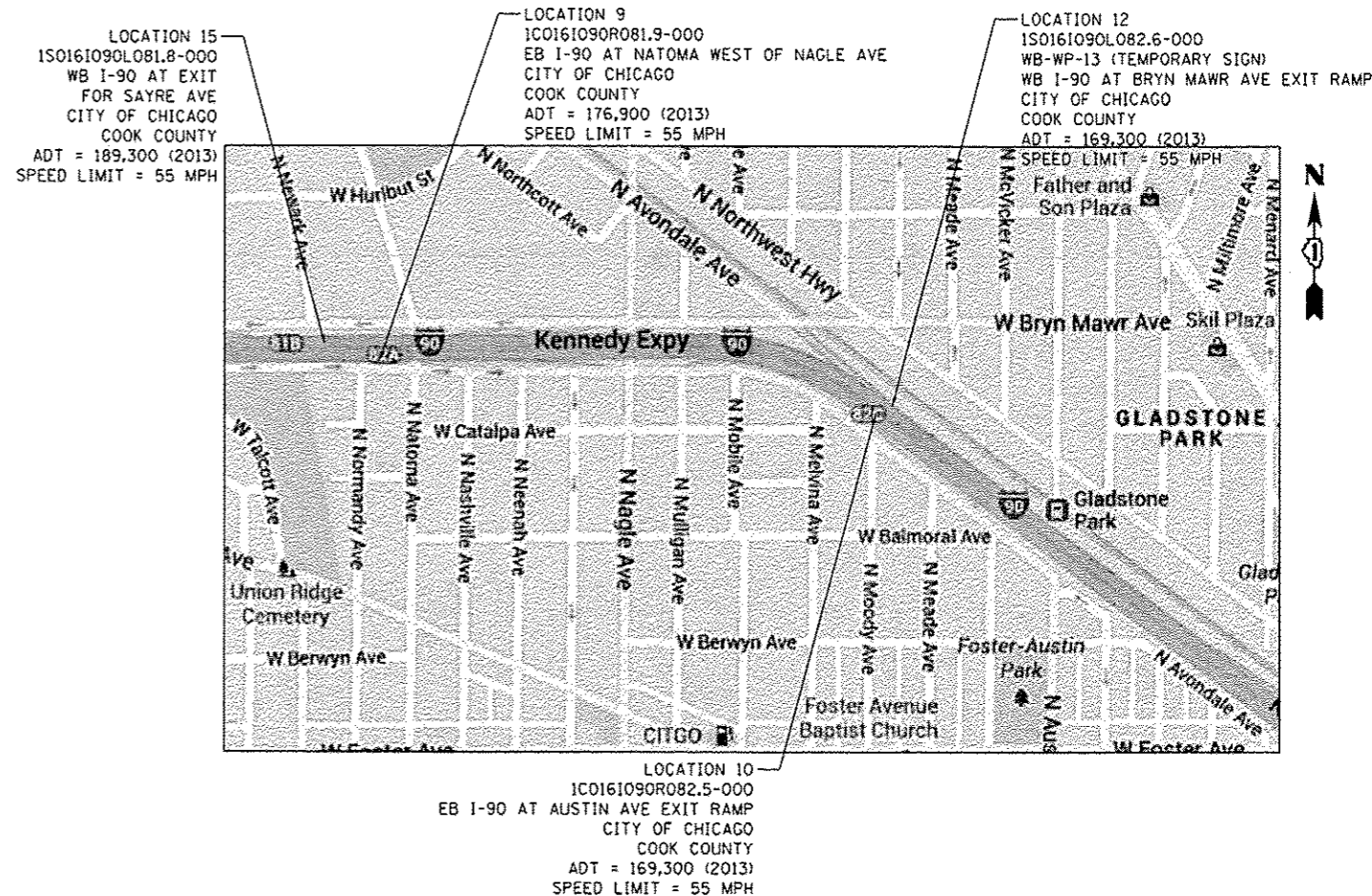
OVERHEAD SIGN STRUCTURE REPAIR & REPLACEMENT  
LOCATION MAP LOCATIONS 1 - 6 & 13

SCALE: SHEET 1 OF 3 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01 OVD SIN STR REPL14-30		VARIOUS	53	6
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	



LOCATION 8  
 IC0225038R000.0-001  
 SB-TR-11  
 YORK RD SB AT IL 38 EB EXIT  
 VILLAGE OF OAKBROOK  
 DUPAGE COUNTY  
 ADT = 14,300 (2013)  
 SPEED LIMIT = 45 MPH

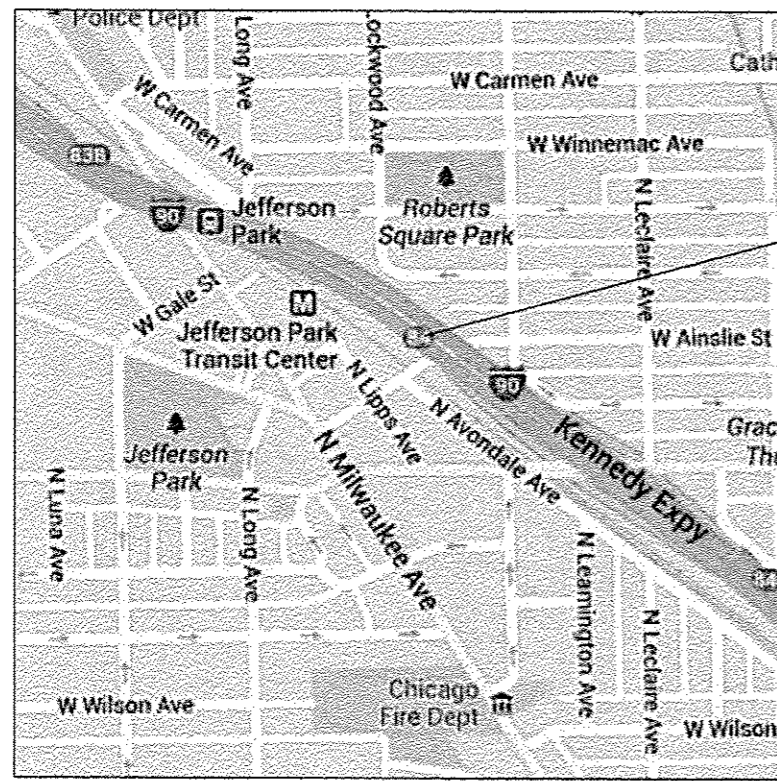


LOCATION 15  
 IS0161090L081.8-000  
 WB I-90 AT EXIT  
 FOR SAYRE AVE  
 CITY OF CHICAGO  
 COOK COUNTY  
 ADT = 189,300 (2013)  
 SPEED LIMIT = 55 MPH

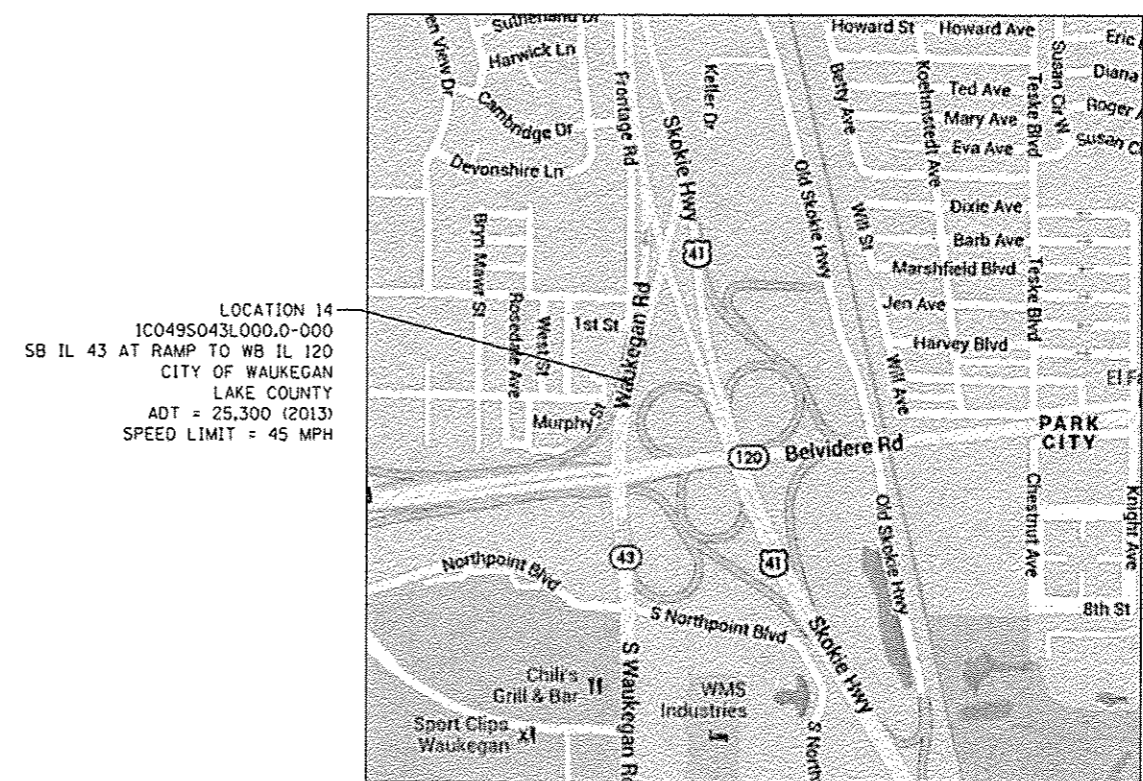
LOCATION 9  
 IC0161090R081.9-000  
 EB I-90 AT NATOMA WEST OF NAGLE AVE  
 CITY OF CHICAGO  
 COOK COUNTY  
 ADT = 176,900 (2013)  
 SPEED LIMIT = 55 MPH

LOCATION 12  
 IS0161090L082.6-000  
 WB-WP-13 (TEMPORARY SIGN)  
 WB I-90 AT BRYN MAWR AVE EXIT RAMP  
 CITY OF CHICAGO  
 COOK COUNTY  
 ADT = 169,300 (2013)  
 SPEED LIMIT = 55 MPH

LOCATION 10  
 IC0161090R082.5-000  
 EB I-90 AT AUSTIN AVE EXIT RAMP  
 CITY OF CHICAGO  
 COOK COUNTY  
 ADT = 169,300 (2013)  
 SPEED LIMIT = 55 MPH

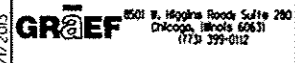


LOCATION 11  
 IC0161090R083.9-000  
 EB I-90 @ LAWRENCE AVE  
 CITY OF CHICAGO  
 COOK COUNTY  
 ADT = 141,200 (2013)  
 SPEED LIMIT = 55 MPH



LOCATION 14  
 IC0495043L000.0-000  
 SB IL 43 AT RAMP TO WB IL 120  
 CITY OF WAUKEGAN  
 LAKE COUNTY  
 ADT = 25,300 (2013)  
 SPEED LIMIT = 45 MPH

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PLOT DATE = 8/1/2013	CHECKED - RS	REVISED -
	DATE - 08/01/2013	REVISED -

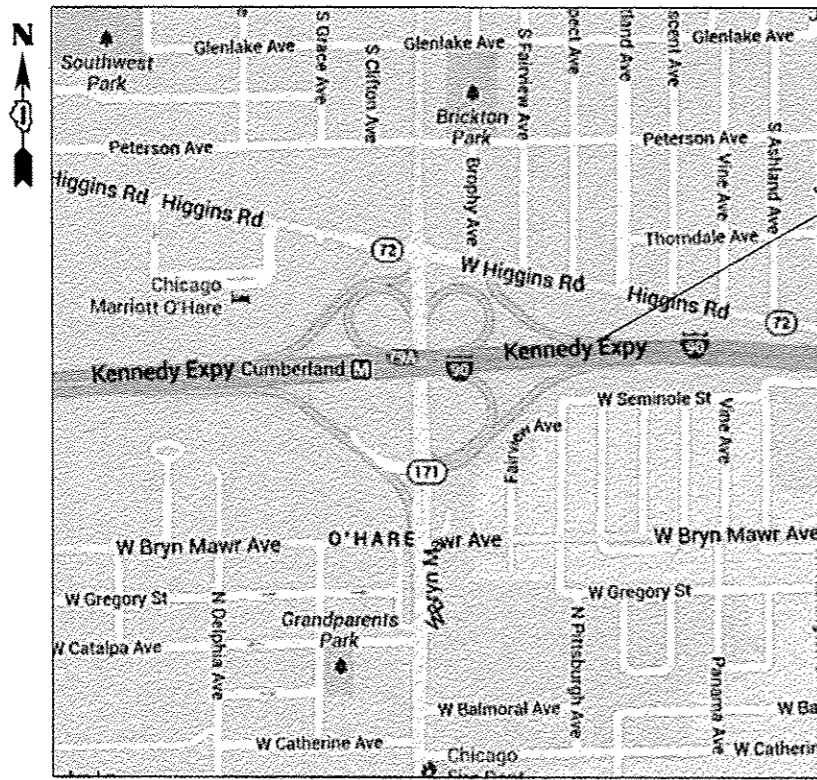
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURE REPAIR & REPLACEMENT  
 LOCATION MAP LOCATIONS 8-12 & 14-15

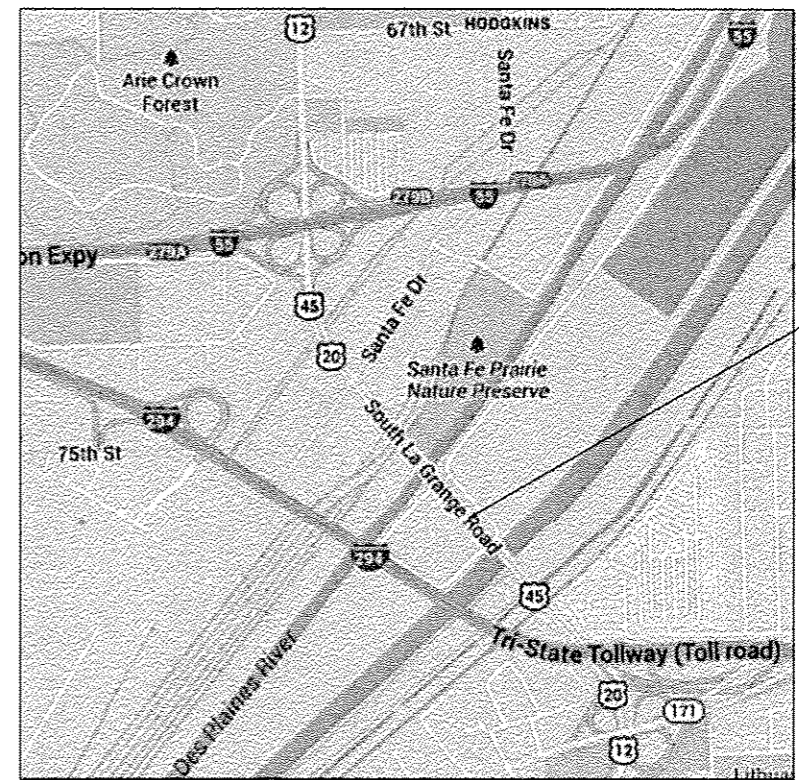
SCALE: SHEET 2 OF 3 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01 OVD SIN STR REPL14-30		VARIOUS	53	7
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	

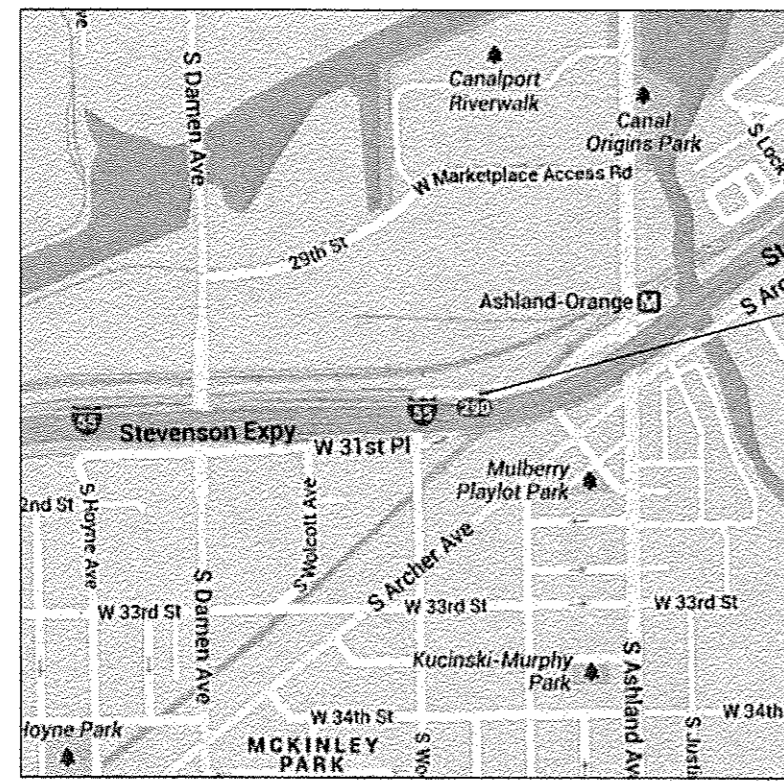




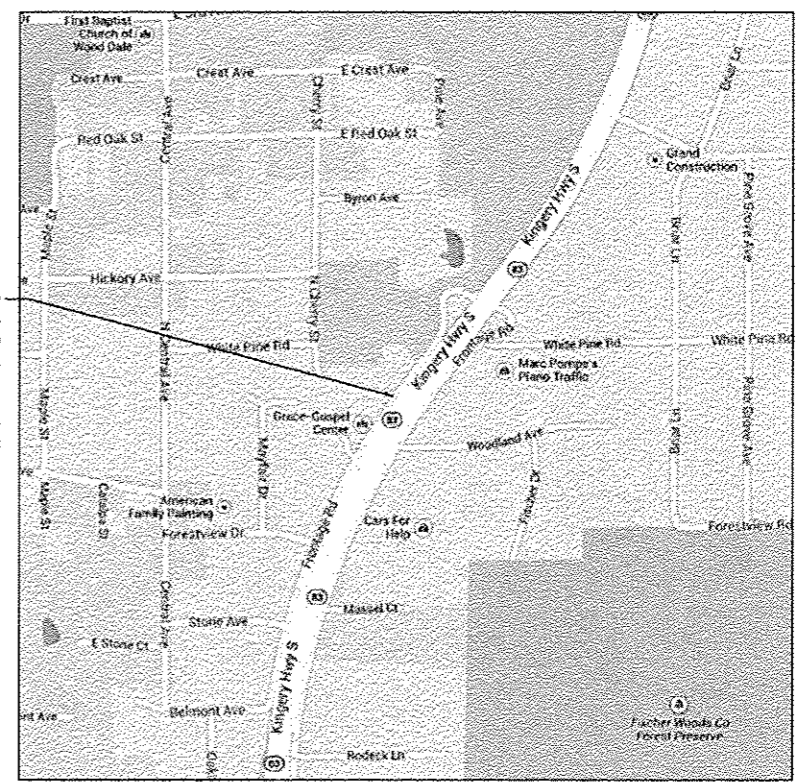
LOCATION 16  
 150161090L079.9-000  
 WB I-90 JUST EAST OF  
 CUMBERLAND AVE.  
 CITY OF CHICAGO  
 COOK COUNTY  
 ADT = 180,800 (2013)  
 SPEED LIMIT = 55 MPH



LOCATION 17  
 1C016U045R000.0-003  
 NB LA GRANGE RD (US 45)  
 SOUTH OF I-55  
 VILLAGE OF WILLOW SPRINGS  
 COOK COUNTY  
 ADT = 73,700 (2013)  
 SPEED LIMIT = 45 MPH

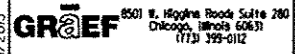


LOCATION 18  
 150161055L290.2-000  
 S.W. BOUND I-55 AT EXIT RAMP  
 FOR DAMEN, @ WOOD ST.  
 CITY OF CHICAGO  
 COOK COUNTY  
 ADT = 10,900 (2013)  
 SPEED LIMIT = 55 MPH



LOCATION 19  
 1C022S083L000.0-003  
 SB IL 83 (KINGERY HWY)  
 AT STA.  
 VILLAGE OF BENSENVILLE  
 DuPage COUNTY  
 ADT = 49,500 (2013)  
 SPEED LIMIT = 50 MPH

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PLOT SCALE = 2,0000' / 1" =	DRAWN - EF	REVISED -
PLOT DATE = 8/1/2013	CHECKED - RS	REVISED -
	DATE - 08/01/2013	REVISED -

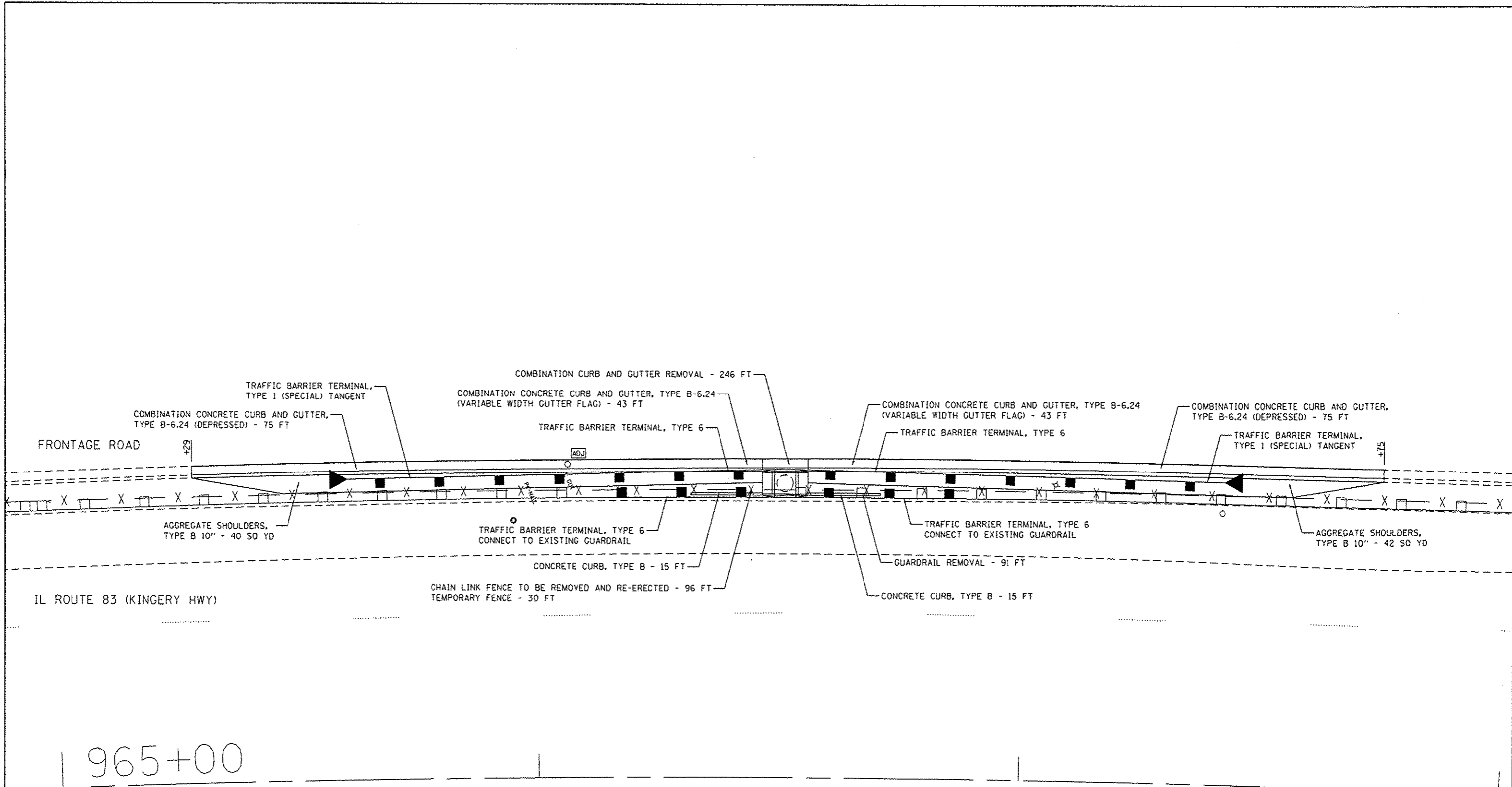
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURE REPAIR & REPLACEMENT  
 LOCATION MAP LOCATION 16-18

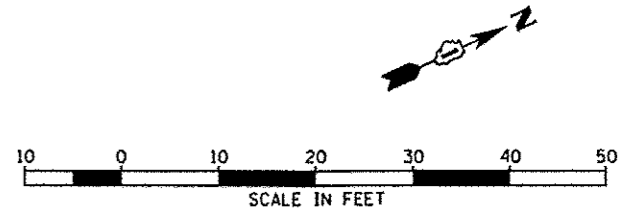
SCALE: SHEET 3 OF 3 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01 OVD SIN STR REPL14-30		VARIOUS	53	8
ILLINOIS FED. AID PROJECT			CONTRACT NO. 46291	





ADJ CATCH BASINS TO BE ADJUSTED  
SEE SHEET 25 FOR LAYOUT  
DIMENSIONS FOR CAISON



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Chicago, Illinois 60631  
(773) 399-0112

USER NAME = 1485	DESIGNED - EF	REVISED -
PLOT SCALE = 20.0000' / 1"	DRAWN - EF	REVISED -
PLOT DATE = 8/1/2013	CHECKED - RS	REVISED -
	DATE - 08/01/2013	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURE REPAIR & REPLACEMENT  
PROPOSED ROADWAY PLAN - LOCATION 19

SCALE: 1"=10' SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01 OVO SIN STR REPL14-30		VARIOUS	53	9
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	

**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  
 $f' = 3,500$  p.s.i.  
 $f_y = 60,000$  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. 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. 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.

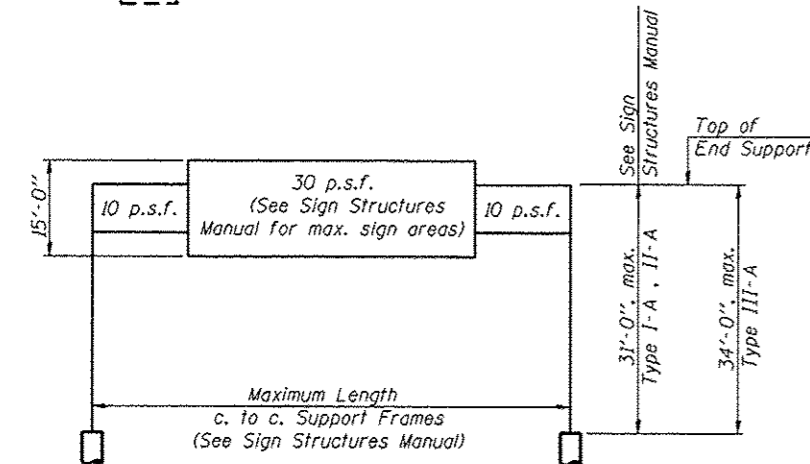
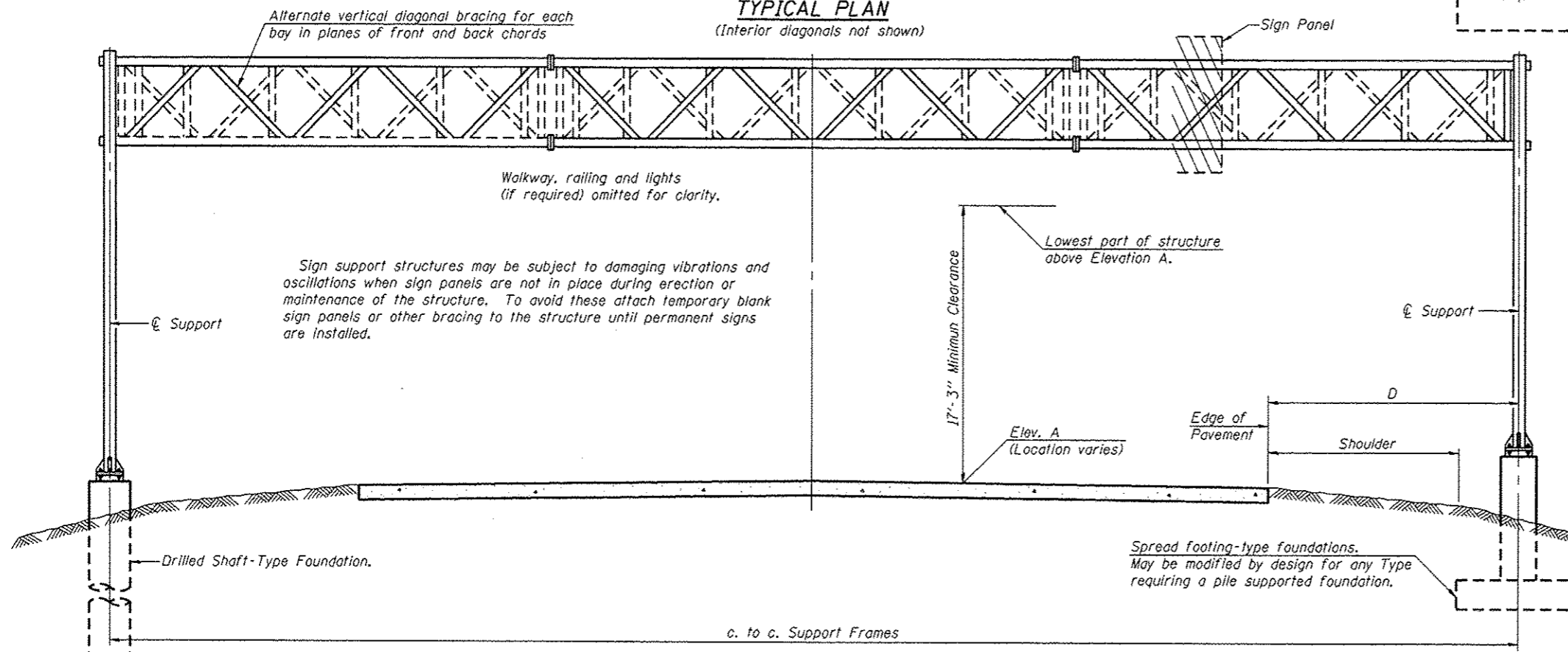
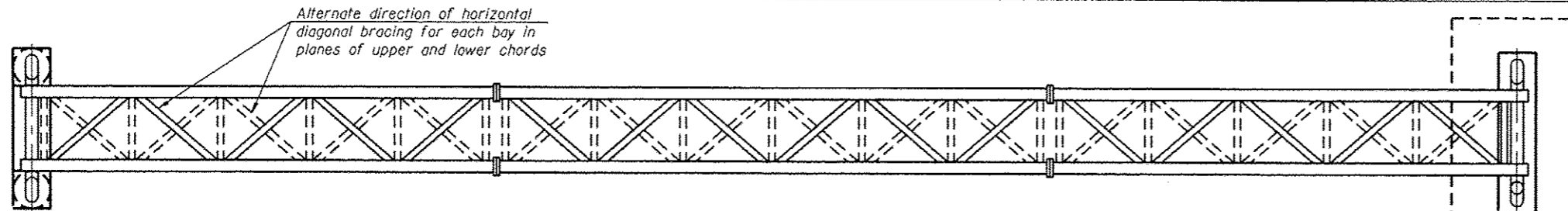
GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

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 Concrete Sealer in accordance with the Standard Specifications.

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

FOUNDATIONS: It shall be the Contractor's responsibility to verify all dimensions and conditions existing in the field prior to construction and ordering materials.



**TYPICAL ELEVATION**  
Looking at Face of Signs

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

Structure Number	Location	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area (Sq. Ft.)	Note
5 ISO49U012R000.0-000	2	247+00	I-A	73'-0" (4)	772.08	19'-1 1/2"	7'-6"	206.25	1
ISO161090L082.6-000	12	3535+00	I-A	67'-0" (3)	Note 3	17'-0"±	11'-6"	447	2

**NOTES**

- Anchor bolts in existing foundation will be reused for new structure.
- Top of existing concrete foundation will be reconstructed. See Sheet S8.
- Survey elevations and distances are not available for this Location. The Contractor is responsible to obtain survey elevations & span length and then determine the vertical dimensions and elevations for the pipe support frames, and the exact span length.
- The distance between existing support frames was measured by survey to be 73.07'.
- Sign panels to be removed and reinstalled.

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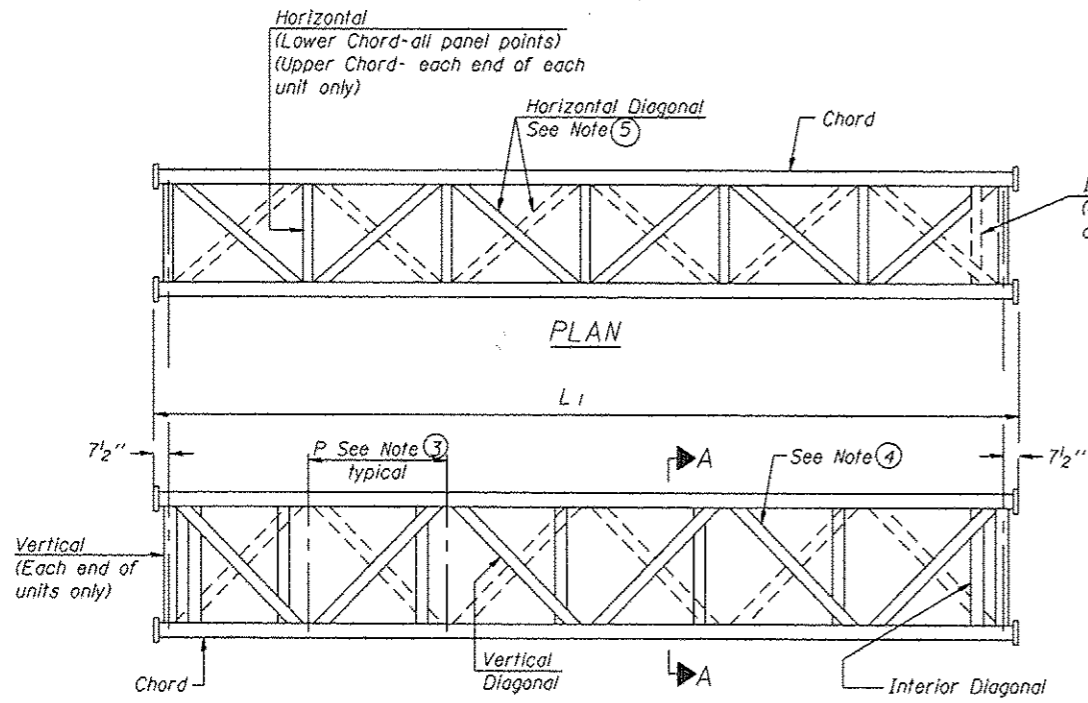


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PLOT SCALE *	CHECKED -	REVISED
PLOT DATE *	DRAWN - 08/01/2013	REVISED
	CHECKED -	REVISED

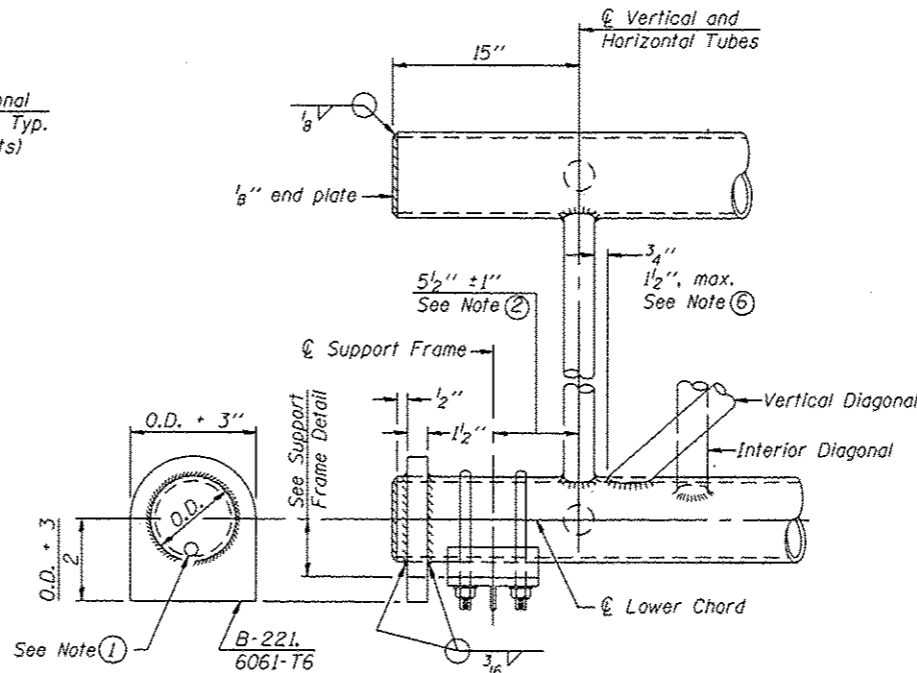
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ALUMINUM SPAN SIGN TRUSS; STEEL SUPPORTS  
GENERAL PLAN AND ELEVATION

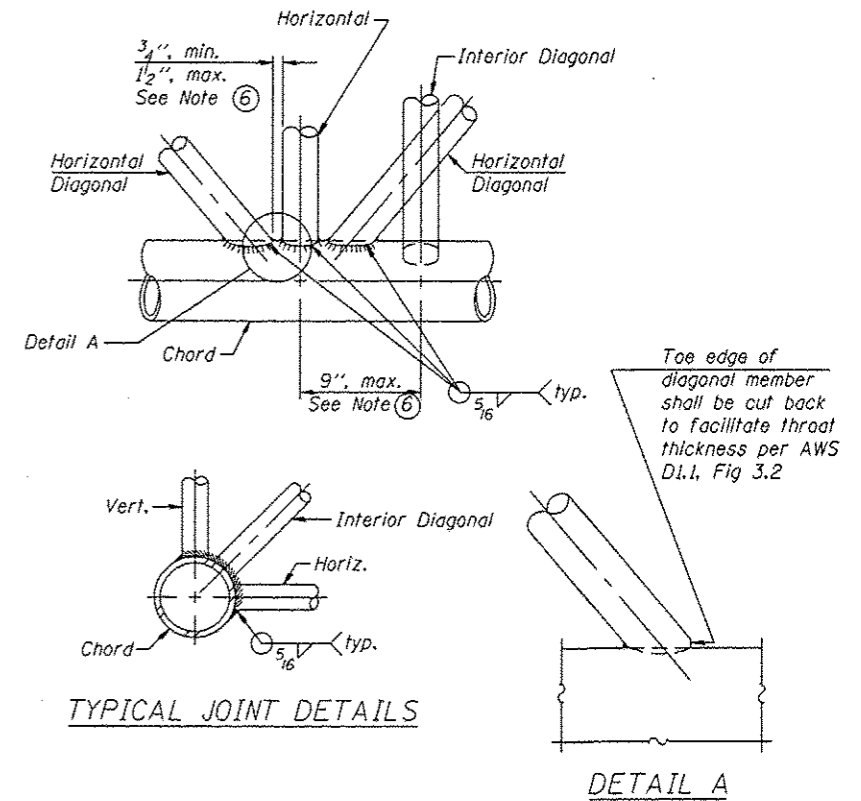
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01 OVD SIN STR REPL14-30		VARIOUS	47	10
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	



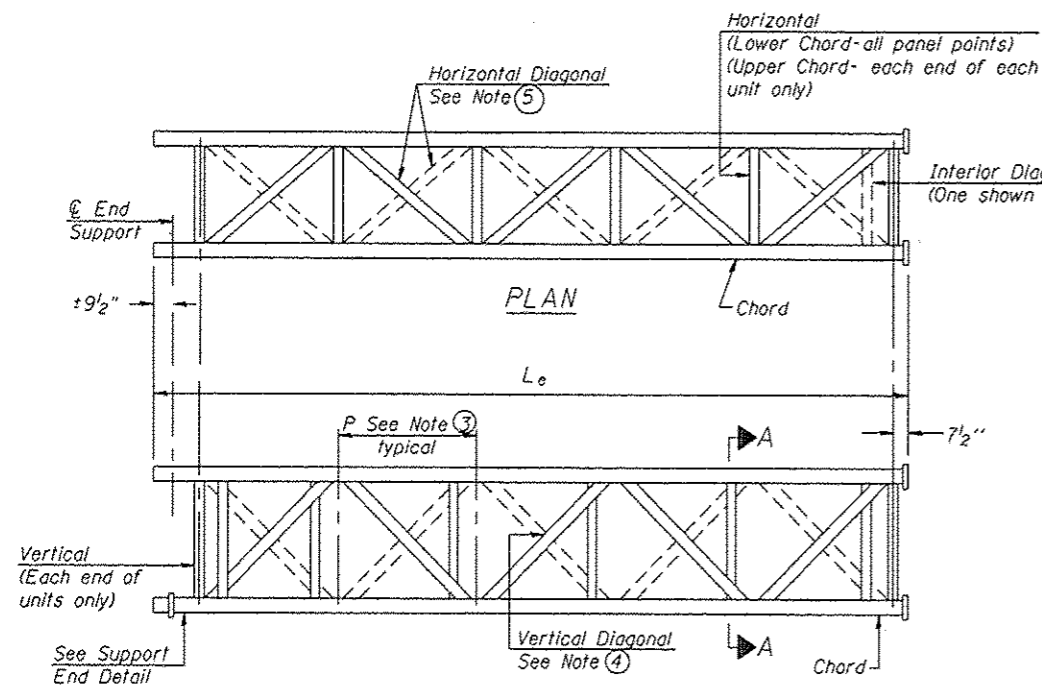
**ELEVATION  
TYPICAL INTERIOR UNIT**  
Even number of panels/interior unit required.



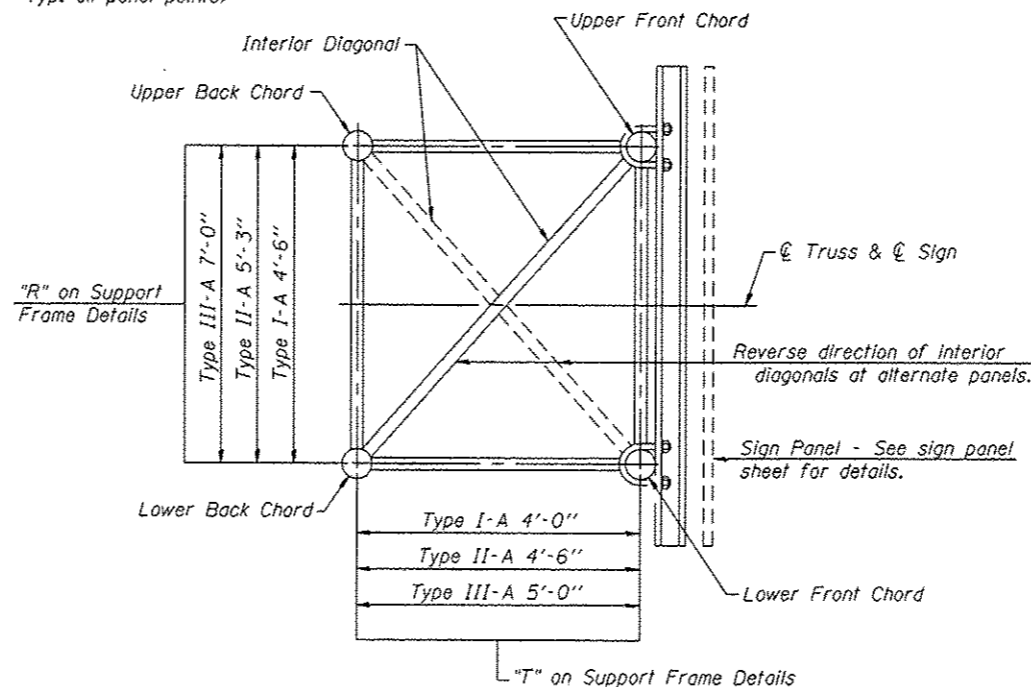
**SUPPORT END DETAIL FOR EXTERIOR UNIT**



**TYPICAL JOINT DETAILS**



**ELEVATION  
TYPICAL EXTERIOR UNIT**  
Even or odd number of panels/exterior units allowed.



**SECTION A-A**

**NOTES**

- ① Contractor may alternatively use standard aluminum drive-fit cap to close end. 1/2" φ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ② 5 1/2" 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 3/4" minimum to 1/2" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

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**GRAF** 8501 W. Higgins Road, Suite 280  
Chicago, Illinois 60631  
(773) 399-0112

USER NAME #	DESIGNED -	REVISIONS
PLOT SCALE #	CHECKED -	REVISIONS
PLOT DATE #	DRAWN - 08/01/2013	REVISIONS
	CHECKED -	REVISIONS

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ALUMINUM SPAN SIGN TRUSS; STEEL SUPPORTS  
SPAN TRUSS DETAILS 1**

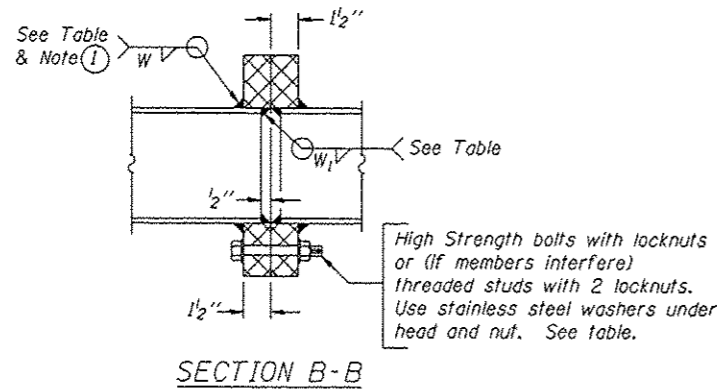
SHEET NO. 52 OF 28 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01 QVD SIN STR REPL14-30		VARIOUS	47	11
			CONTRACT NO. 46291	
ILLINOIS FED. AID PROJECT				

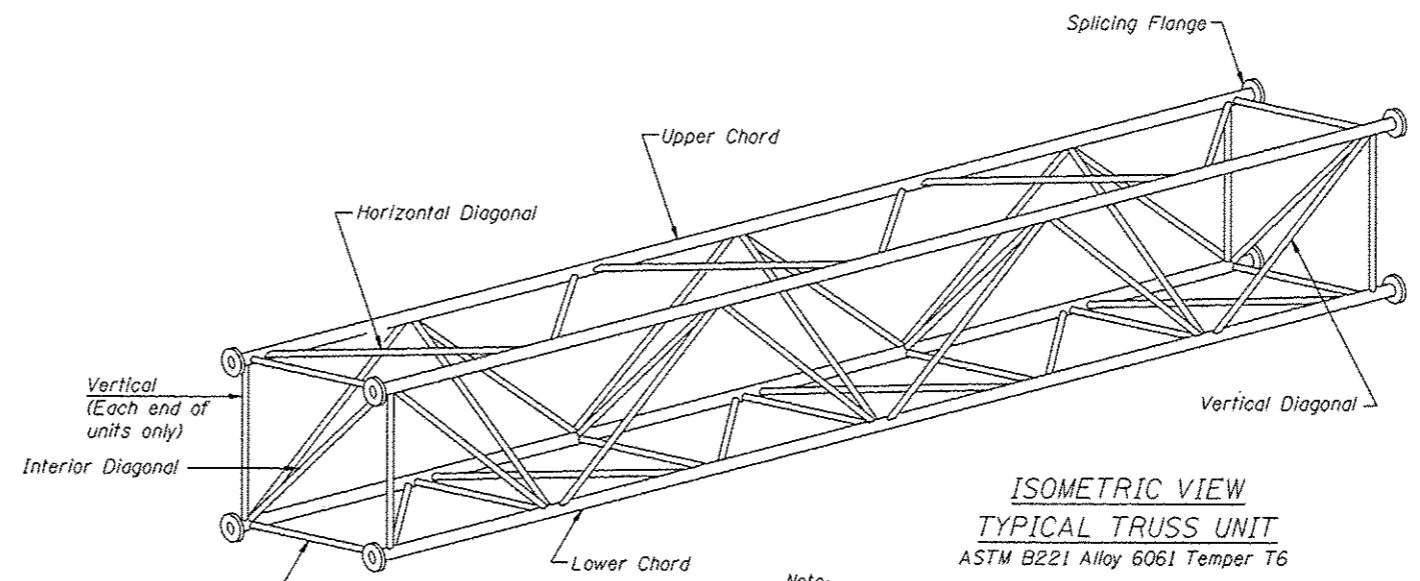


### TRUSS UNIT TABLE

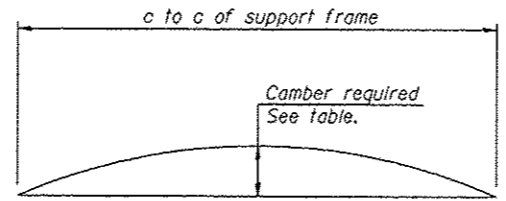
Structure Number	Location	Station	Design Truss Type	Exterior Units (2)			Interior Unit			Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange								
				No. Panels per Unit	Unit Lgth.(L <sub>u</sub> )	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L <sub>i</sub> )	Panel Lgth.(P)	O.D.	Wall	O.D.		Wall	Bolts		Weld Sizes		A	B		
																No./Splice	Dia.	W	W <sub>1</sub>				
ISO49U012R000.0-000	2	247+00	I-A	8	37'-2 1/2"	4'-5"	0	NA	NA	NA	5"	5/16"	2 1/2"	5/16"	1 7/8"	6	7/8"	5/16"	1/4"	8 3/4"	11 3/4"		
ISO161090L082.6-000	I2	3535+00	I-A	7	34'-3"	4'-7 1/2"	0	NA	NA	NA	5"	1/4"	2 1/2"	1/4"	1 5/8"	6	7/8"	5/16"	1/4"	8 3/4"	11 3/4"		



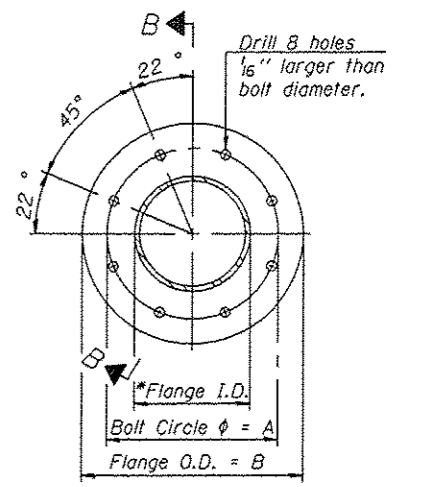
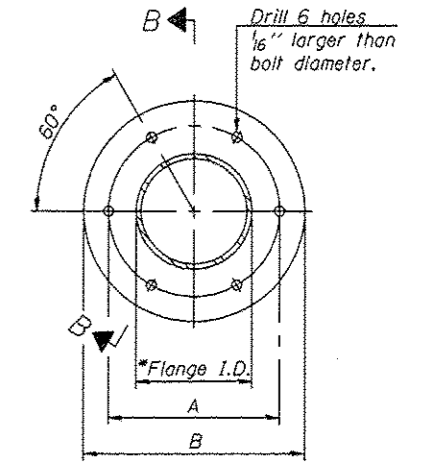
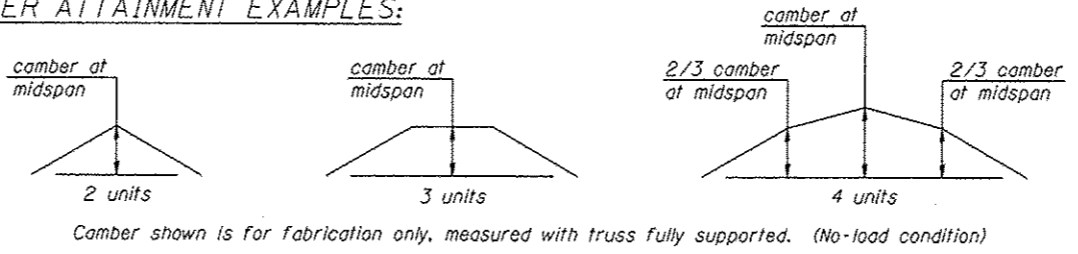
① Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining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



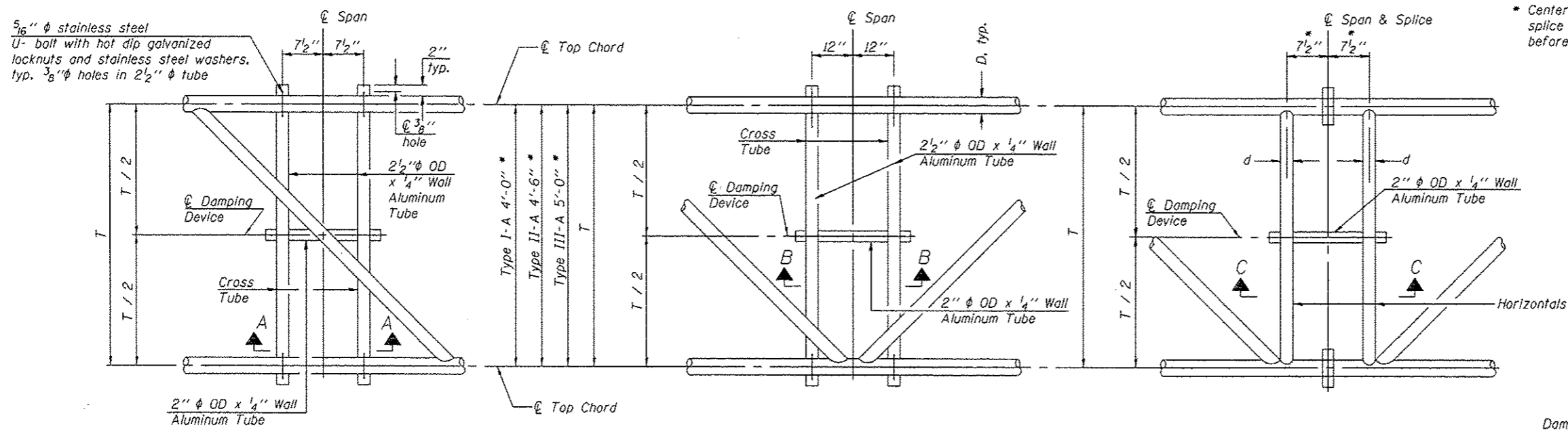
**Note:**  
Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection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



**CAMBER ATTAINMENT EXAMPLES:**



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

PLAN DETAIL "A"  
Span between Panel Points

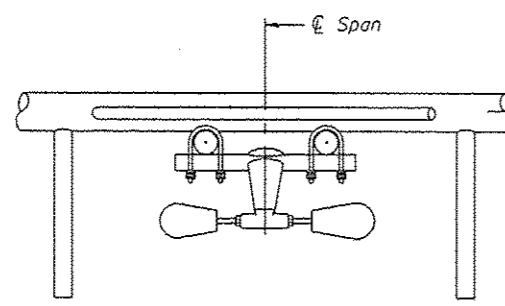
PLAN DETAIL "B"  
Span at Panel Point

PLAN DETAIL "C"  
Span at Chord Splice

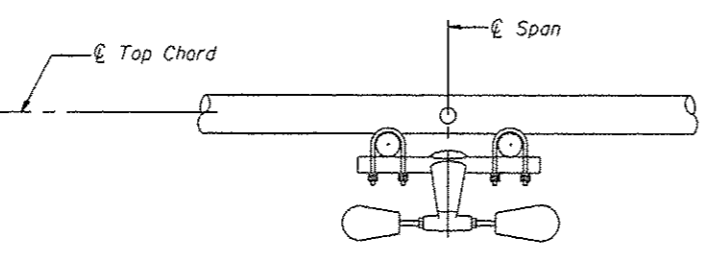
NOTES

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

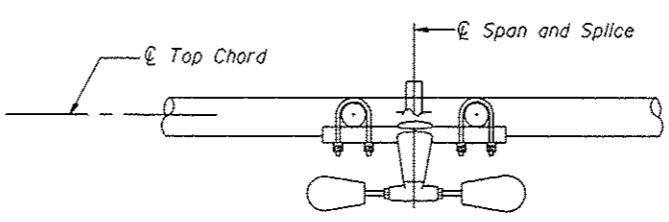
Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



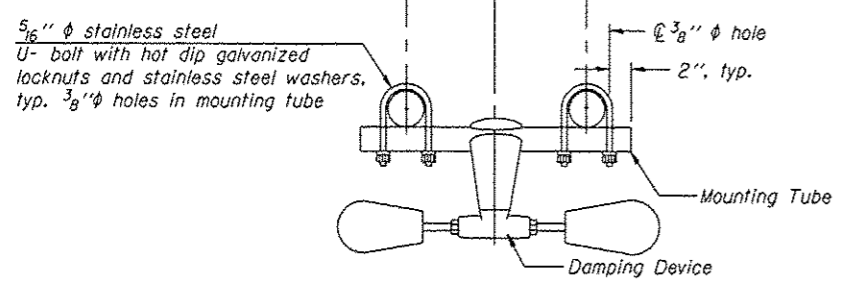
SECTION A-A



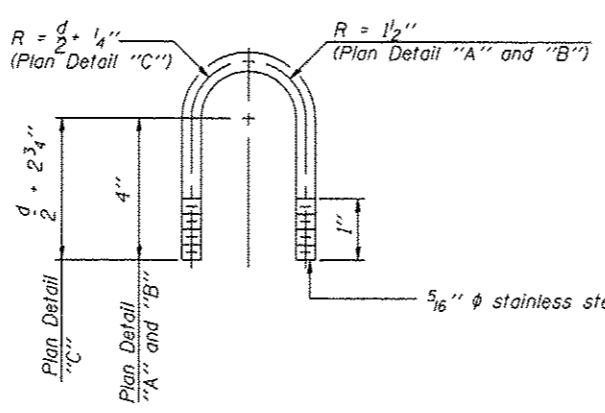
SECTION B-B



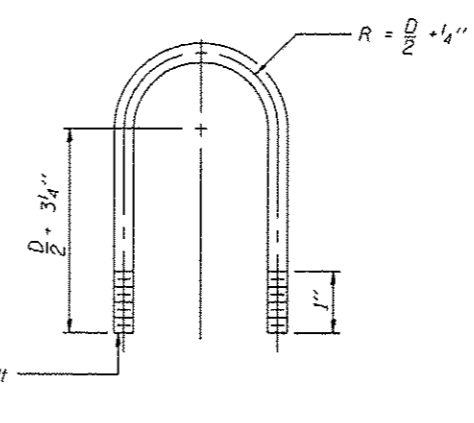
SECTION C-C



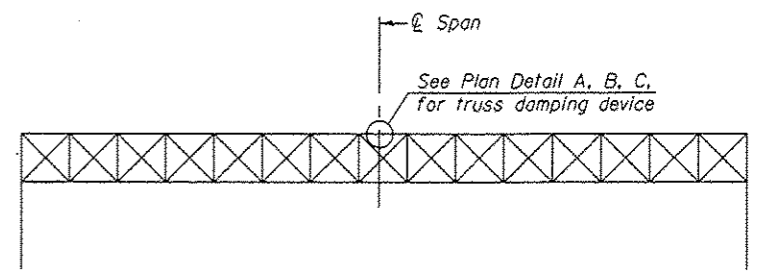
TRUSS DAMPING  
DEVICE CONNECTION DETAIL  
(Typical)



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

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OS-A-D

6-1-12

**GRAF**  
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Chicago, Illinois 60631  
(773) 399-0112

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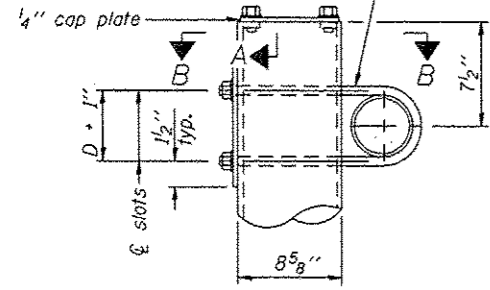
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ALUMINUM SPAN SIGN TRUSS; STEEL SUPPORTS  
SPAN TRUSS DAMPING DEVICE

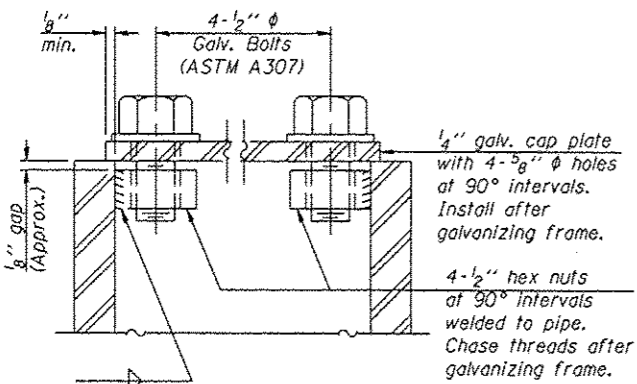
SHEET NO. 54 OF 28 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	DL OVD SIN STR REPL14-30	VARIOUS	47	13
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	

3/4" φ stainless steel U-bolt.  
Provide two washers and two hexagon locknuts. (4)  
13/16" x 2" slots on 8" φ pipe.  
(4 slots required per pipe)

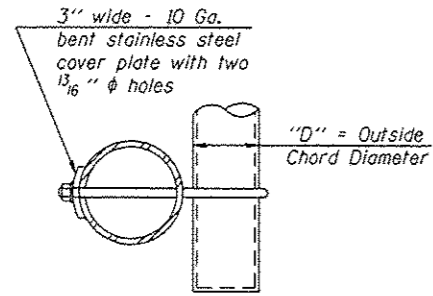


DETAIL A

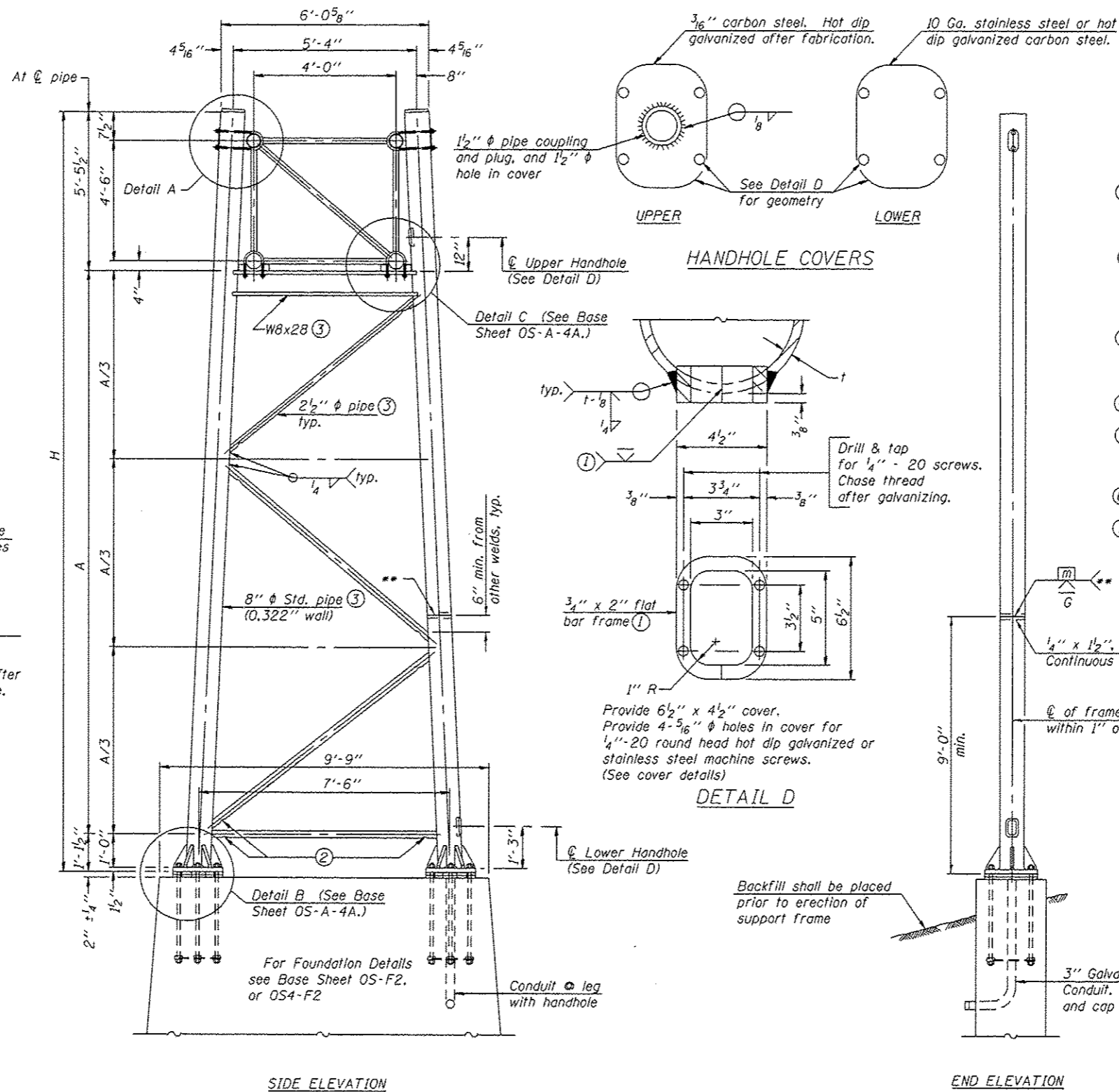


SECTION A-A

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

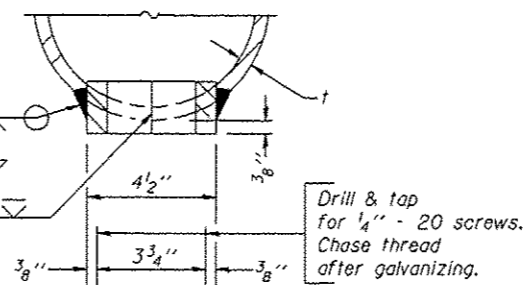


SECTION B-B



SIDE ELEVATION

HANDHOLE COVERS



DETAIL D

END ELEVATION

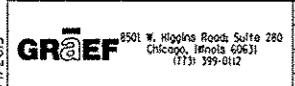
Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.  
Load combinations checked include deadload plus:  
a) 100% wind normal to sign, 20% parallel to sign  
b) 60% wind normal to sign, 30% parallel to sign

- 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 min 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.
- ⑦ Survey elevations are not available for this Location. The Contractor is responsible to obtain survey elevations and then determine the vertical dimensions and elevations for the pipe support frames.

**8" 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	Location	Station	Support		H ⑥	A	Note
			Left	Right			
ISO49U012R000.0-000	2	247+00	X		27'-8 3/4"	21'-1 3/4"	
ISO49U012R000.0-000	2	247+00		X	27'-10"	21'-3"	
ISO16I090L082.6-000	12	3535+00	X	X			7

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PLOT DATE =	DRAWN - 08/01/2013	REVISED
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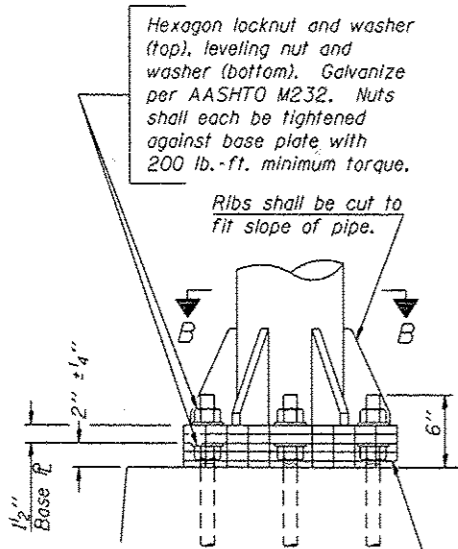
ALUMINUM SPAN SIGN TRUSS; STEEL SUPPORTS  
8" DIAMETER PIPE SUPPORT FRAME

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	01 OVD SIN STR REPL14-30	VARIOUS	47	14
			CONTRACT NO. 46291	

SHEET NO. 55 OF 28 SHEETS

ILLINOIS FED. AID PROJECT



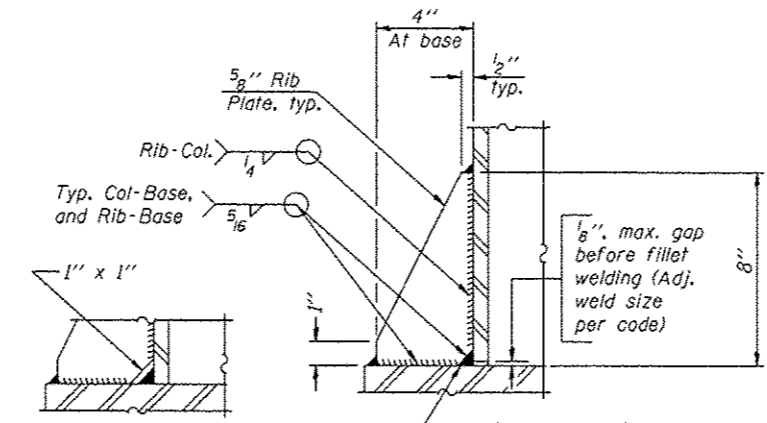


Hexagon locknut and washer (top), leveling nut and washer (bottom). Galvanize per AASHTO M232. Nuts shall each be tightened against base plate with 200 lb.-ft. minimum torque.

Ribs shall be cut to fit slope of pipe.

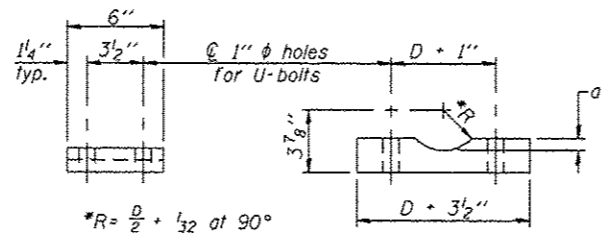
Metal Screen consists of Stainless Steel Standard Grade Wire Cloth, 3" wide, 1/4" maximum opening with a minimum wire diameter of AWG, No. 16 with a minimum 2" lap. Secure to base plate after erection with 3/4" stainless steel banding.

DETAIL B



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

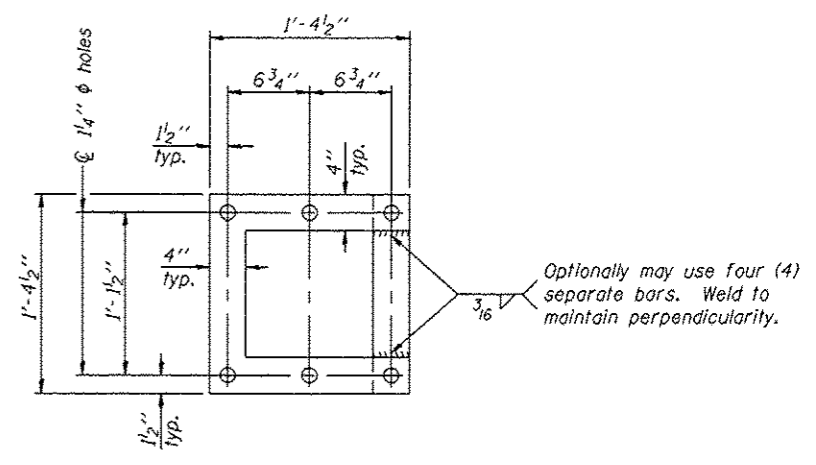
SECTION D-D



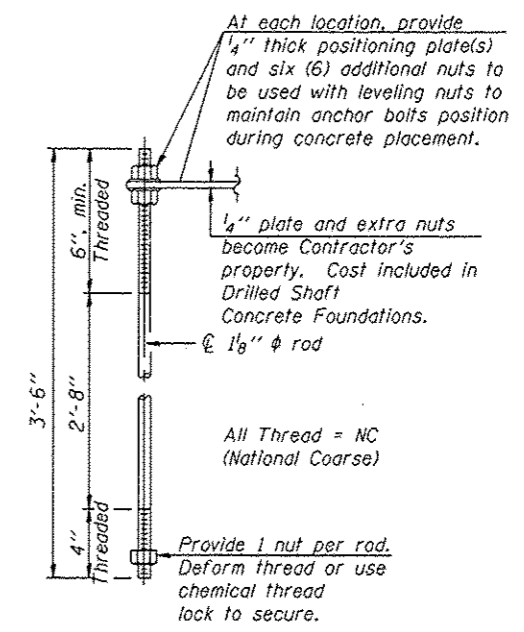
\*R =  $\frac{D}{2} + \frac{1}{32}$  at 90°  
D = Outside Diameter of Chord.

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"

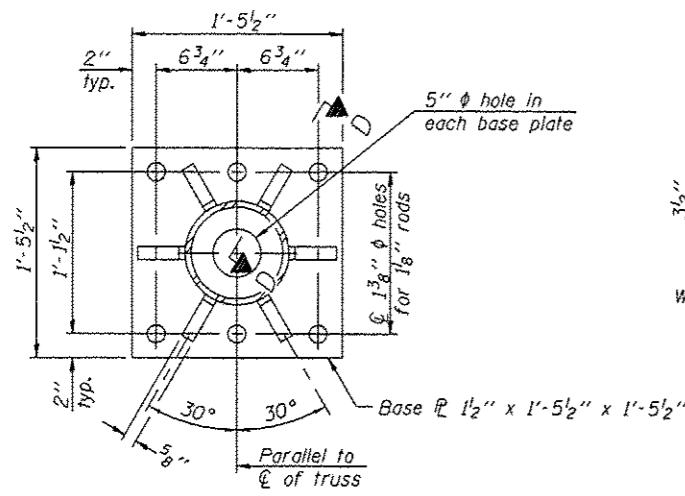


POSITIONING PLATE(S)

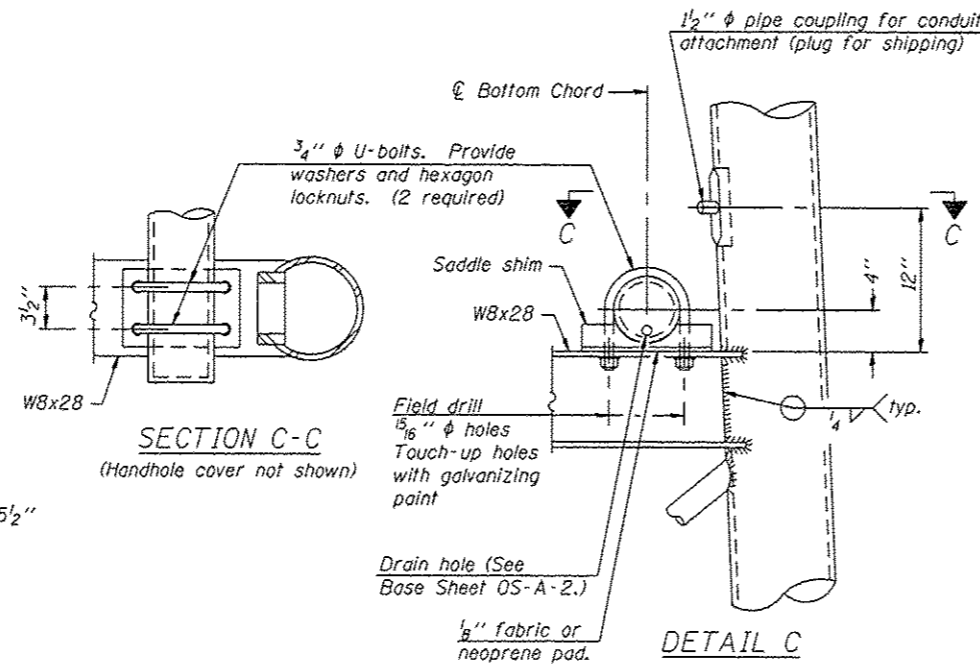


ANCHOR ROD DETAIL  
Drilled Shaft Foundation

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



SECTION B-B



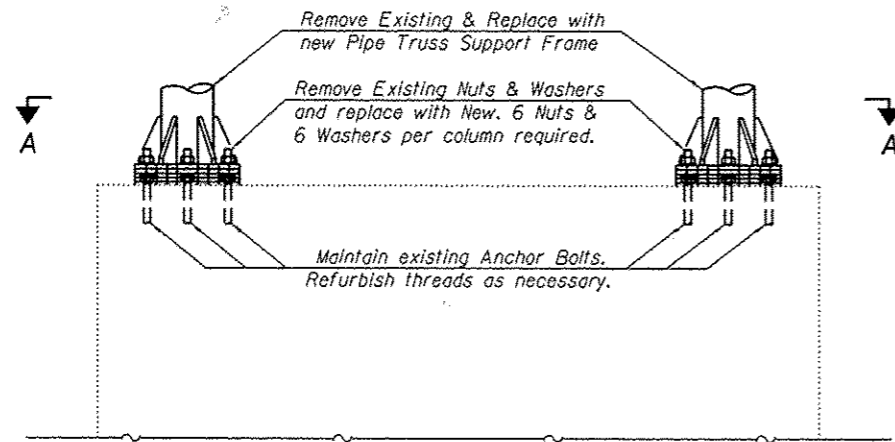
SECTION C-C  
(Handhole cover not shown)

DETAIL C

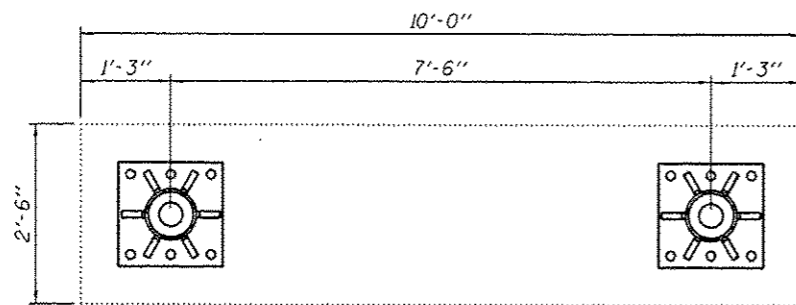
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01 OVD SIN STR REPL14-30		VARIOUS	47	15
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	



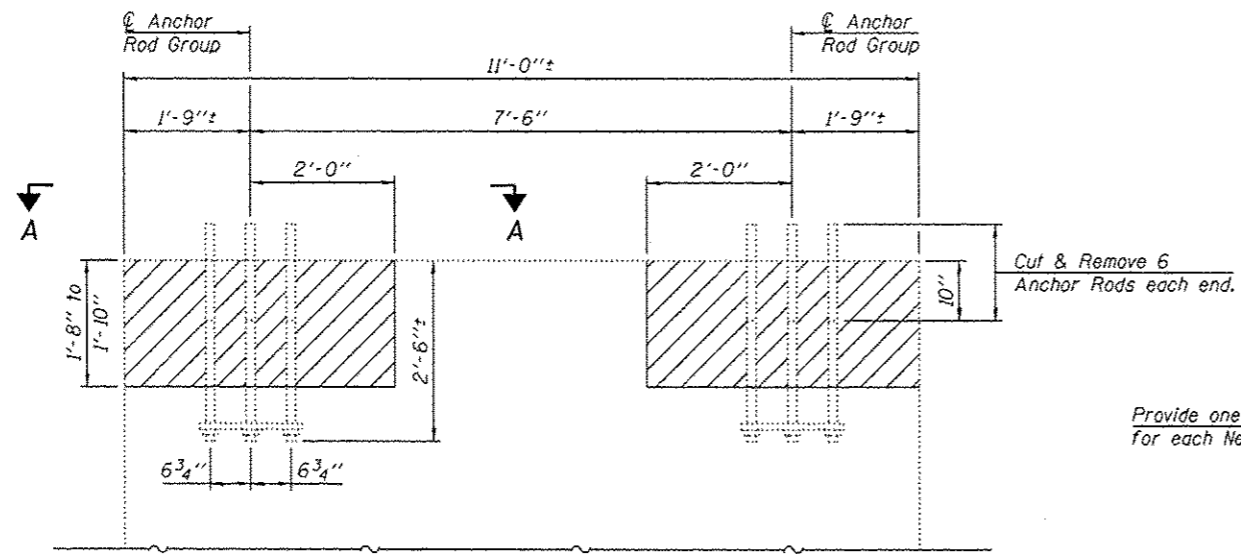
SIDE ELEVATION OF LEFT OR RIGHT  
SIGN STRUCTURE FOUNDATION AT LOCATION 2



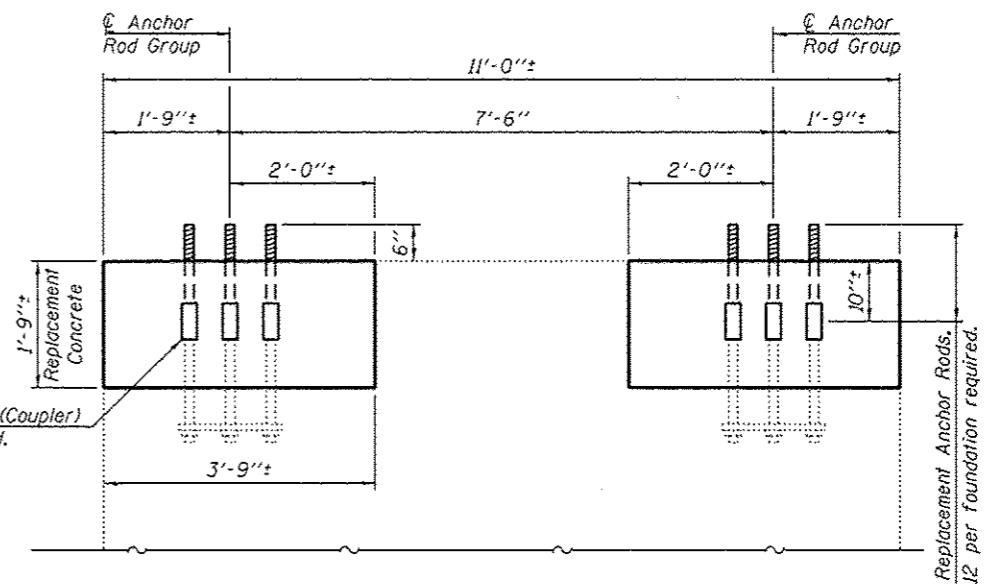
TOP VIEW OF FOUNDATION  
(VIEW A-A)

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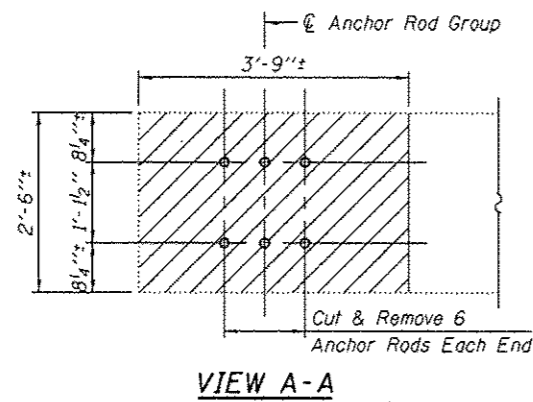
8501 N. Higgins Road Suite 200 Chicago, Illinois 60631 (773) 399-0122	USER NAME =	DESIGNED -	REVISED	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ALUMINUM SPAN SIGN TRUSS; STEEL SUPPORTS EXISTING FOUNDATION FOR REUSE AT LOCATION 2</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	CHECKED -	REVISED			VAR. 01 OVD SIN STR REPL14-30	VARIOUS	47	16	
	PLOT DATE =	DRAWN - 08/01/2013	REVISED			CONTRACT NO. 46291				
	CHECKED -	REVISED		SHEET NO. 57 OF 28 SHEETS		ILLINOIS FED. AID PROJECT				



**EXISTING ELEVATION OF LEFT OR RIGHT SIGN STRUCTURE FOUNDATION**



**PROPOSED ELEVATION OF LEFT OR RIGHT SIGN STRUCTURE FOUNDATION**



**VIEW A-A**

**LEGEND**  
 Indicates Concrete Removal.  
 Indicates Existing Structure.

- NOTES**
1. It shall be the Contractor's responsibility to verify all dimensions and conditions existing in the field prior to construction and ordering materials.
  2. Existing reinforcement bars are not shown (for clarity).
  3. Existing anchor rods are 1 1/8" diameter.
  4. Saw Cut 1" deep on the perimeter of Concrete Removal. Care shall be exercised to prevent damage to existing reinforcement bars. See Special Provisions.
  5. The work is paid for as REBUILD CONCRETE FOUNDATION FOR OVERHEAD SIGN STRUCTURES.

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	CHECKED -	REVISED

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ALUMINUM SPAN SIGN TRUSS; STEEL SUPPORTS  
 FOUNDATION REPAIRS, LOCATION 12**

SHEET NO. 58 OF 28 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 101 OVD SIN STR REPL14-30		VARIOUS	47	17
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	



**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:

F<sub>field</sub> Units  
 f' = 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. 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.

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 Concrete Sealer in accordance with the Standard Specifications.

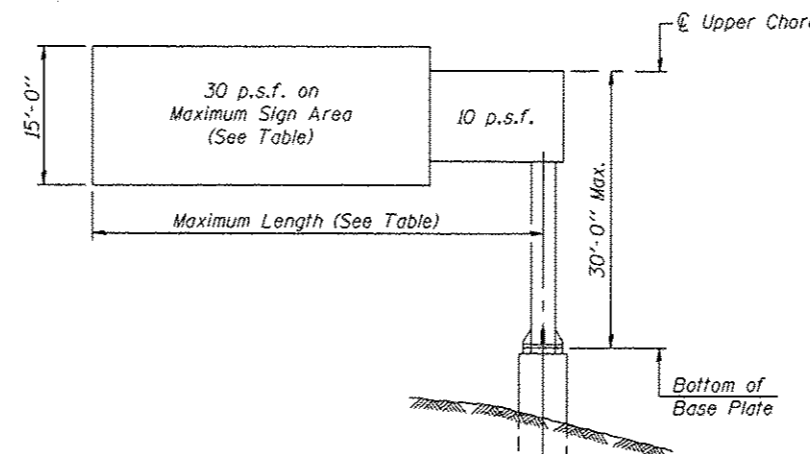
REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

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

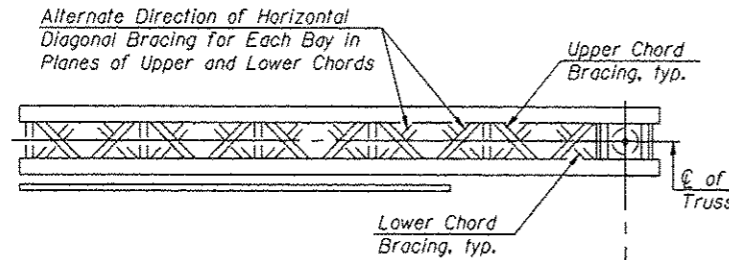
ERECTION AND MAINTENANCE: Sign support structures may be subject to damaging vibrations and oscillations when sign panels are not in place during erection or maintenance of the structure. To avoid these vibrations and oscillations, consideration should be given to attaching temporary blank sign panels to the structure.

Structure Number	Location	Station	Design Truss Type	Cantilever Length (L)	Elev. A	Dim. D	D <sub>s</sub>	Total Sign Area (Sq. Ft.)	Note
IC049U041L000.0-001	3	53+30.5	III-C-A	35'-0"	670.47	6'-0"	16'-0"	368	3
IC049U041R000.0-000	4	60+63.6	III-C-A	30'-0"	653.60	13'-0"	8'-0"	200	4
IC045S056R000.0-000	5	106+00	III-C-A	35'-0"	735.60	19'-5 1/8"	8'-0"	104	5
IC022S038R000.0-001	8	59+30.6	III-C-A	35'-0"	679.93	19'-0"	8'-0"	176	6
IC0161090R081.9-000	9	3502+10	II-C-A	27'-6"	NOTE 9	17'-0"	8'-0"	132	7
IC0161090R082.5-000	10	3533+10	II-C-A	27'-0"	NOTE 9	4'-0"	8'-0"	140	8
IC0161090R083.9-000	11	3608+10	II-C-A	23'-0"	NOTE 9	8'-0"	8'-0"	164	8
IC022S083L000.0-003	19	966+51.9	III-C-A	33'-6"	705.50	14'-10 1/4"	16'-0"	392	

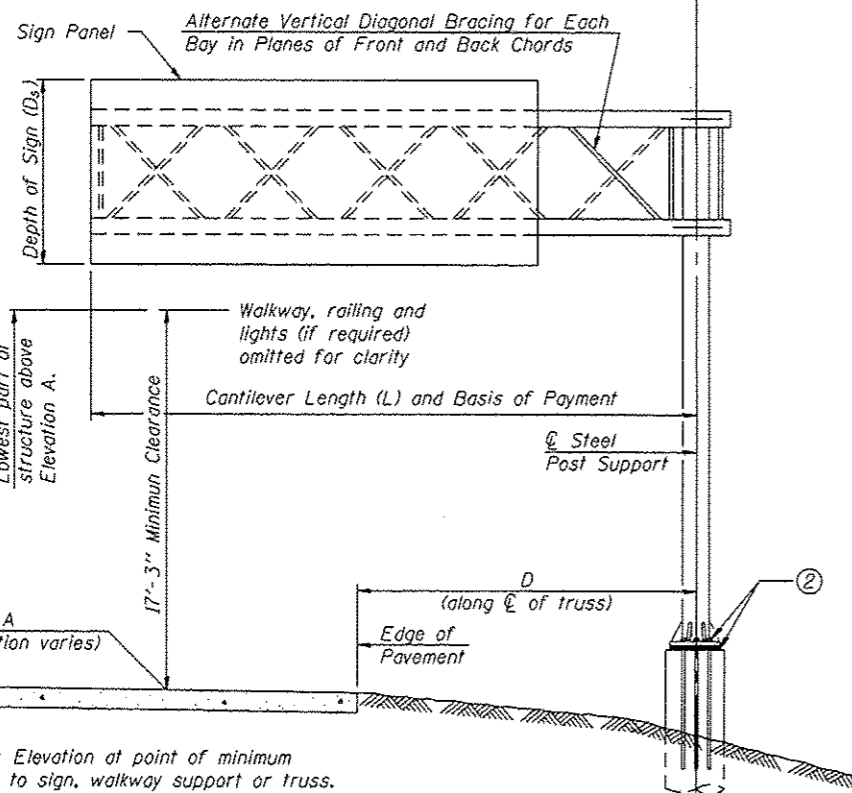
Truss Type	Maximum Sign Area	Maximum Length
I-C-A	170 Sq. Ft.	25 Ft.
II-C-A	340 Sq. Ft.	30 Ft.
III-C-A	400 Sq. Ft.	40 Ft.



**DESIGN WIND LOADING DIAGRAM**  
 Parameters shown are basis for I.D.O.T. Standards  
 Installations not within dimensional limits shown  
 require special analysis for all components.



**TYPICAL PLAN**  
 (Walkway not shown)



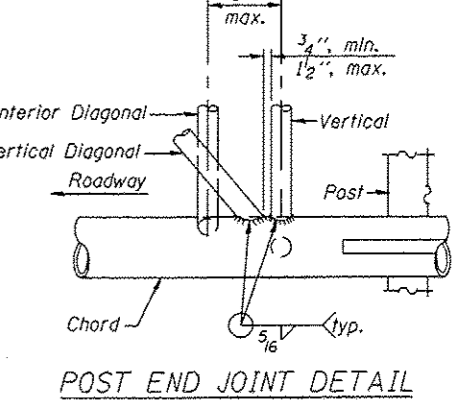
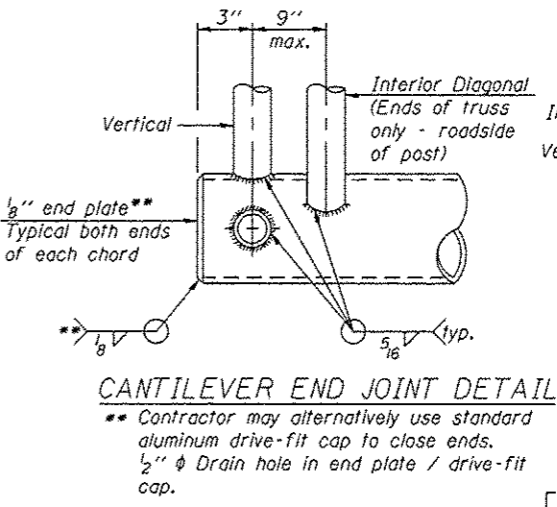
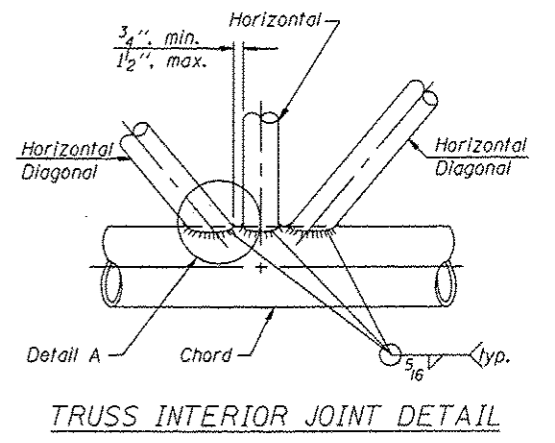
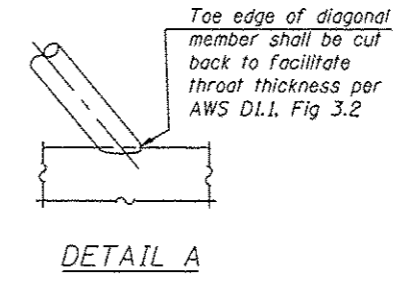
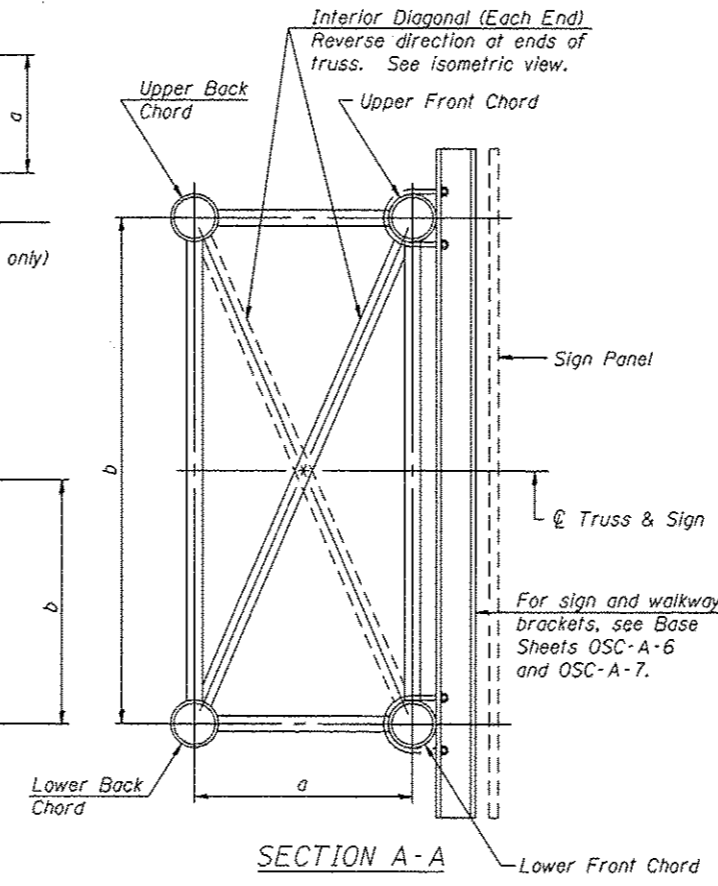
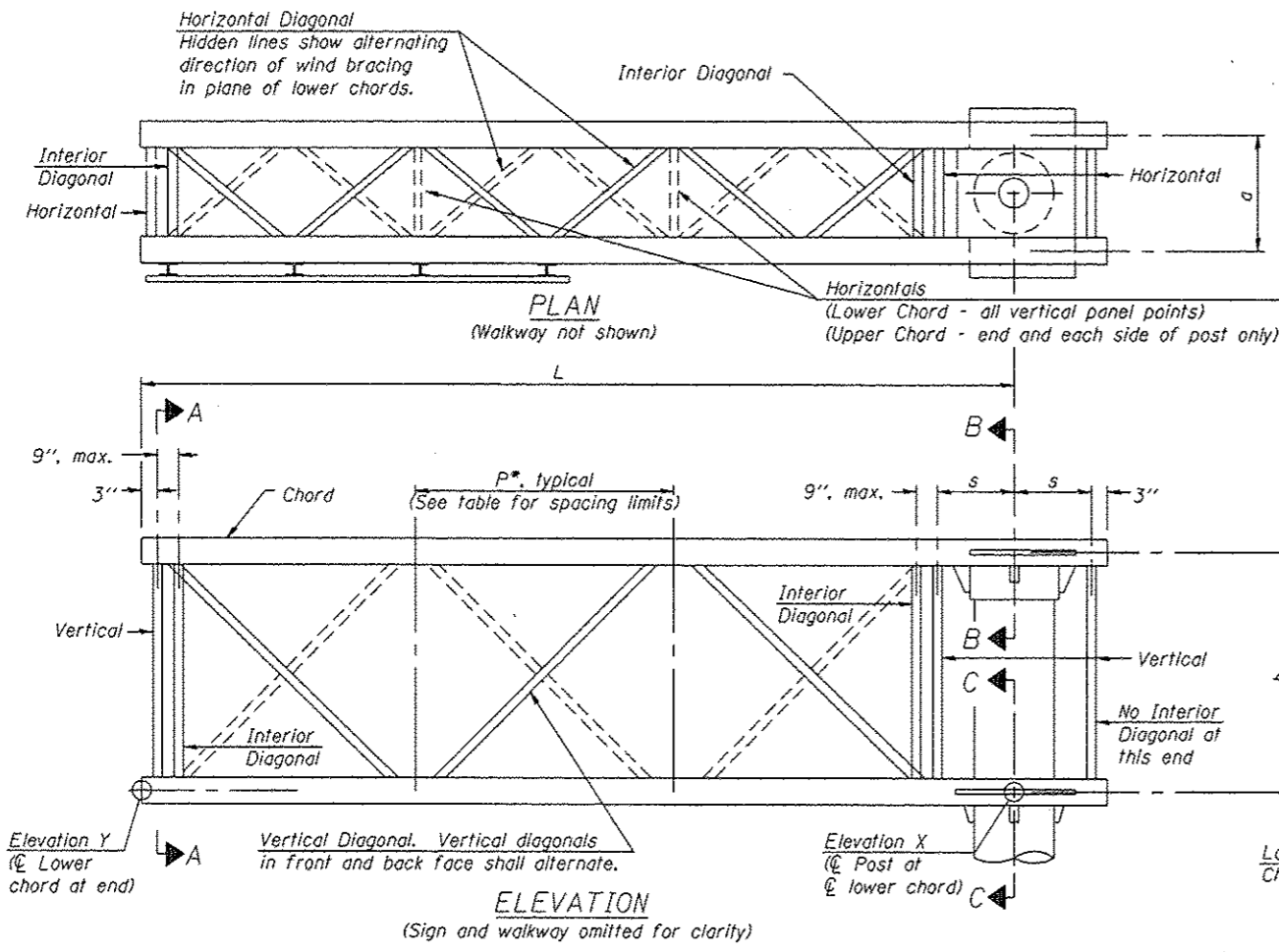
**TYPICAL ELEVATION**  
 Looking in Direction of Traffic

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

**NOTES**

- Trusses 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 trusses.
- After adjustments to level truss and insure adequate vertical clearance, all top and leveling nuts shall be tightened against the base plate with a minimum torque of 200 lb.-ft. Stainless steel mesh shall then be placed around the perimeter of the base plate. Secure to base plate with stainless steel banding.
- new foundation is approximately 10.0 feet west of existing foundation (measured parallel to edge of ramp) and approximately 4.5' north of existing foundation.
- new foundation is 11.75 feet east northeast of existing foundation (measured parallel to edge of ramp). Station shown in table is approximate.
- Top of existing concrete foundation will be reconstructed. See Sheet S17.
- new foundation is 13.0 feet north of existing foundation (measured parallel to edge of ramp). Station shown in table is approximate.
- new foundation is 10.0 feet east of existing foundation (measured parallel to edge of ramp). Station shown in table is approximate.
- new foundation is 10.0 feet southeast of existing foundation (measured parallel to edge of ramp). Station shown in table is approximate.
- Survey elevations are not available for this Location. The Contractor is responsible to obtain survey elevations and then determine the vertical dimensions and elevations for the column and foundation.

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Note:  
There are twice as many horizontal diagonals as there are vertical diagonals.

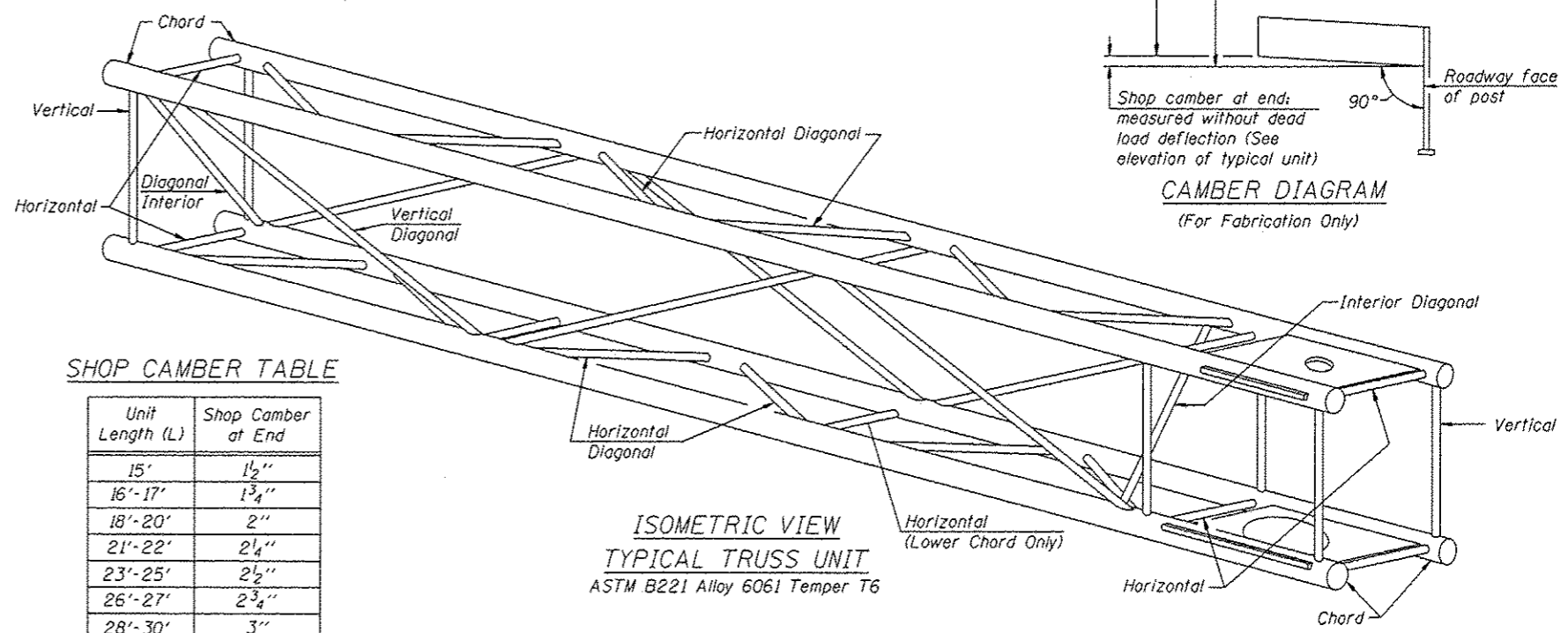
For Section B-B and Section C-C, see Base Sheet OSC-A-3.

**TRUSS UNIT TABLE**

Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord		Verticals, Horizontals, Vertical, Horizontal, and Interior Diagonals	
					O.D.	Wall	O.D.	Wall
I-C-A	24"	54"	16"	36" min. to 48" max.	5"	5/16"	2 1/2"	5/16"
II-C-A	36"	66"	21"	42" min. to 54" max.	6 1/2"	5/16"	3 1/4"	5/16"
III-C-A (35' Max.)	36"	84"	21"	48" min. to 66" max.	7"	3/8"	3 1/2"	3/8"
III-C-A (>35' to 40')	36"	84"	21"	48" min. to 66" max.	8"	3/8"	3 1/2"	3/8"

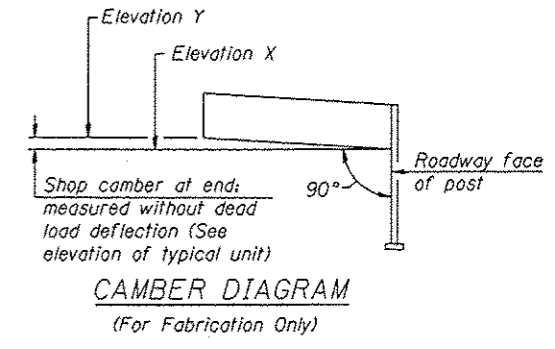
\*P =  $\frac{L-s-3}{\# \text{ Panels}}$

Structure Number	Location	Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
IC049U041L000.0-001	3	53+42	III-C-A	35'-0"	7	4'-8 9/16"
IC049U041R000.0-000	4	60+50	III-C-A	30'-0"	6	4'-8"
IC045S056R000.0-000	5	106+00	III-C-A	35'-0"	7	4'-8 9/16"
IC022S038R000.0-001	8	59+15	III-C-A	35'-0"	7	4'-8 9/16"
IC0161090R081.9-000	9	3502+10	II-C-A	27'-6"	6	4'-3"
IC0161090R082.5-000	10	3533+10	II-C-A	27'-0"	6	4'-2"
IC0161090R083.9-000	11	3608+10	II-C-A	23'-0"	5	4'-2 3/8"
IC022S083L000.0-003	19	966+51.9	III-C-A	33'-6"	6	5'-3"

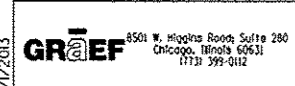


**SHOP CAMBER TABLE**

Unit Length (L)	Shop Camber at End
15'	1 1/2"
16'-17'	1 3/4"
18'-20'	2"
21'-22'	2 1/4"
23'-25'	2 1/2"
26'-27'	2 3/4"
28'-30'	3"
31'-32'	3 1/4"
33'-35'	3 1/2"
36'-37'	4"
38'-40'	4 1/2"



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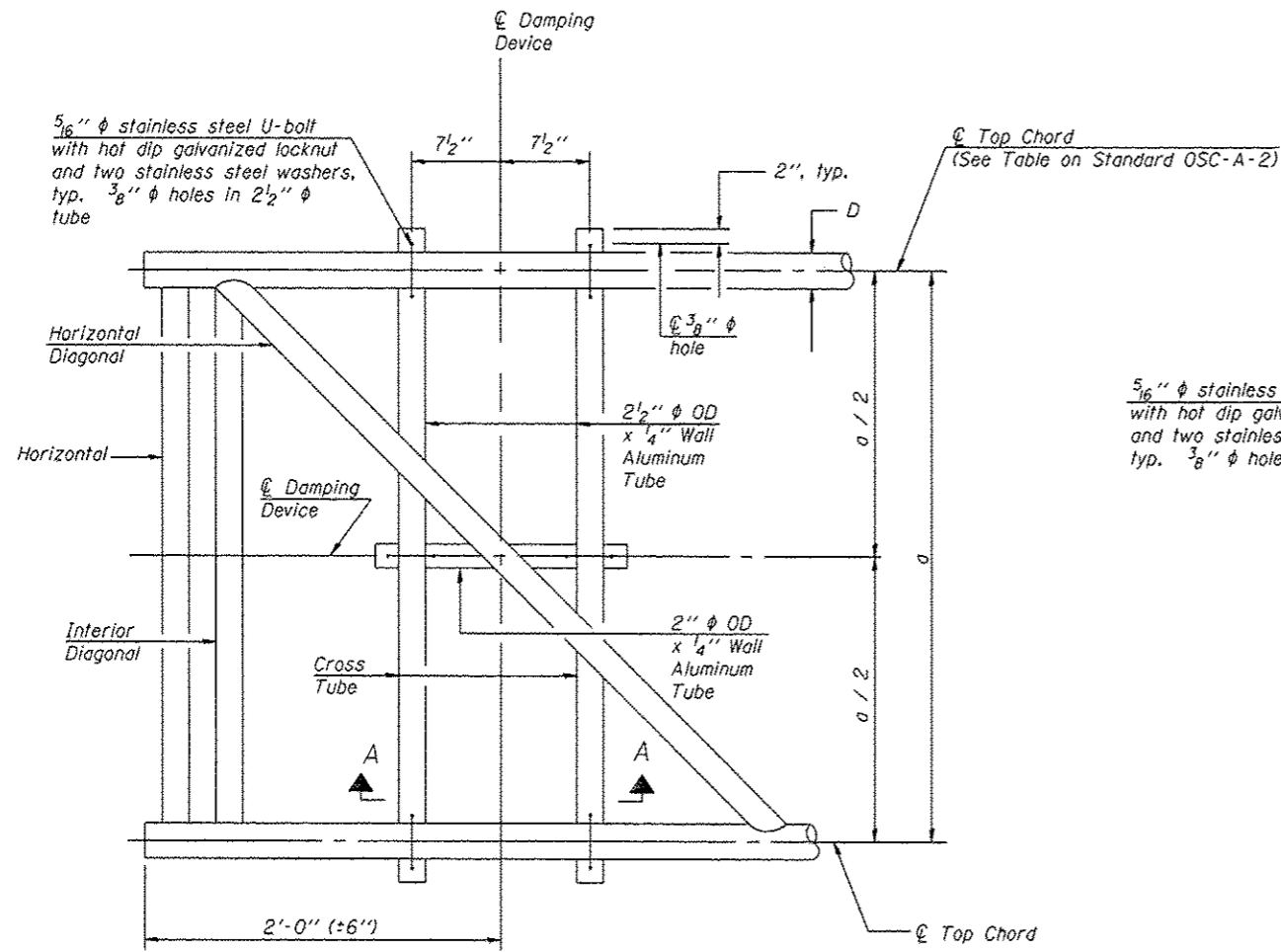
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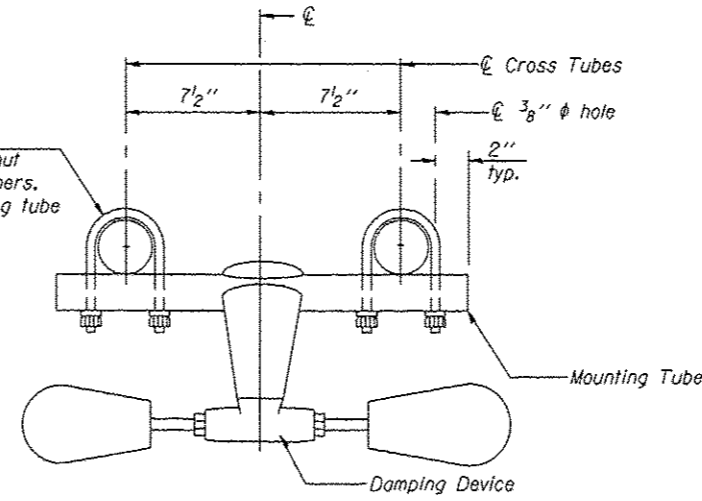
**ALUMINUM CANTILEVER SIGN TRUSS; STEEL COLUMN**  
**TRUSS DETAILS**

SHEET NO. 510 OF 28 SHEETS

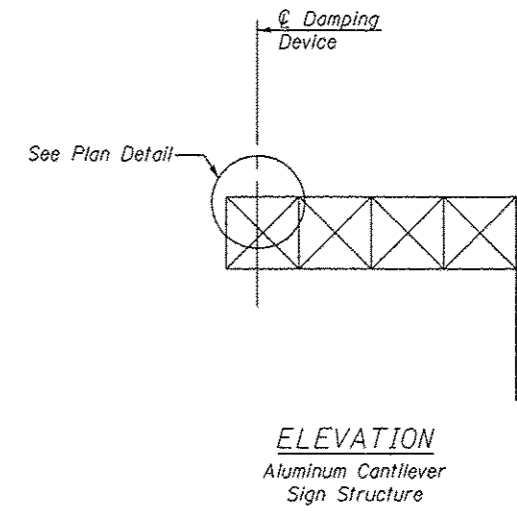
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VAR. 01 OVD SIN STR REPL14-30		VARIOUS	47	19
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	



PLAN DETAIL

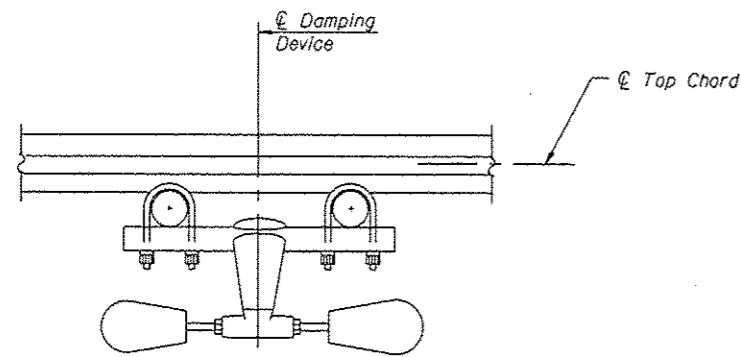


TRUSS DAMPING DEVICE CONNECTION DETAIL

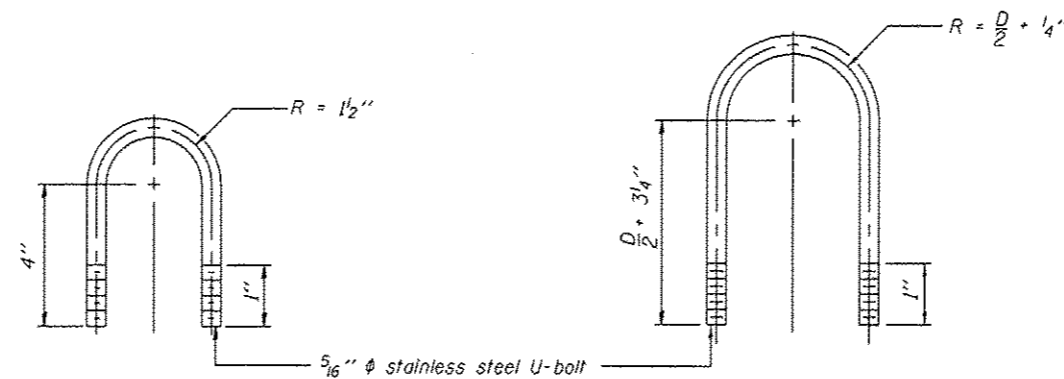


ELEVATION  
Aluminum Cantilever  
Sign Structure

- GENERAL NOTES**
- Damper: One damper per truss. (31 lbs. Stockbridge-Type Aluminum-29" minimum between ends of weights)
  - Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6



SECTION A-A



DAMPING DEVICE MOUNTING  
TUBE U-BOLT DETAIL  
(Typical)

TOP CHORD TO CROSS TUBE  
U-BOLT DETAIL  
(Typical)

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**GRÖEF**  
8501 N. Higgins Road, Suite 280  
Chicago, IL 60631  
(773) 399-0112

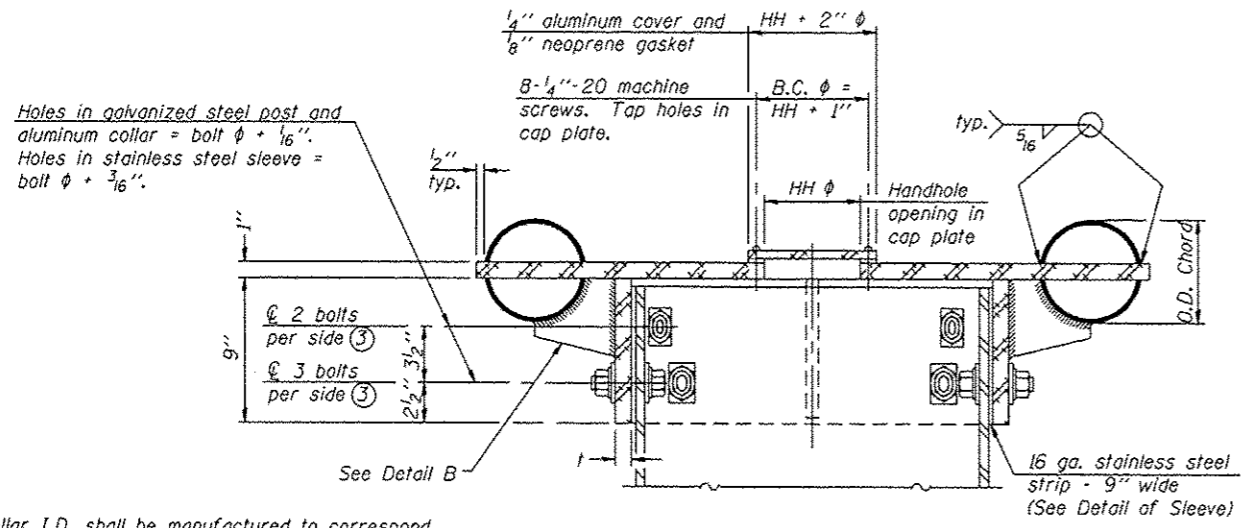
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ALUMINUM CANTILEVER SIGN TRUSS; STEEL COLUMN  
TRUSS DAMPING DEVICE

SHEET NO. 511 OF 28 SHEETS

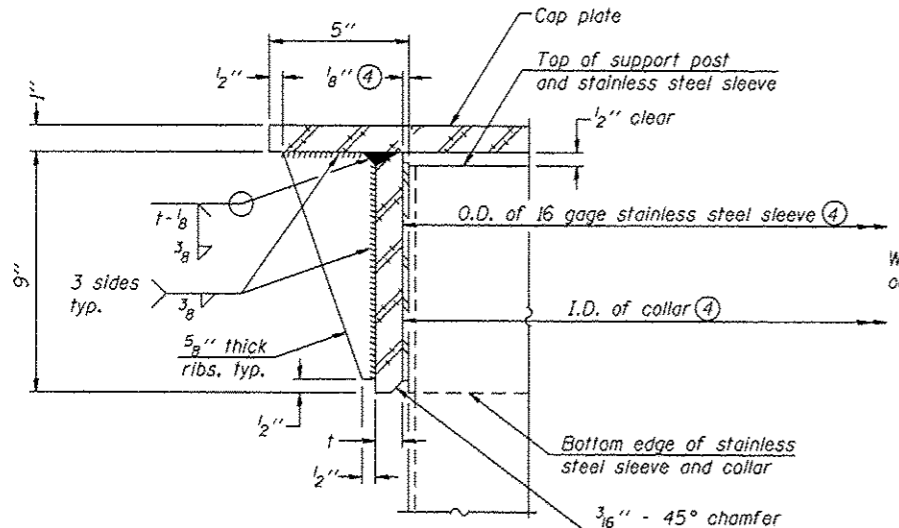
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VAR. 01 OVD SIN STR REPL14-30		VARIOUS	47	20
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	



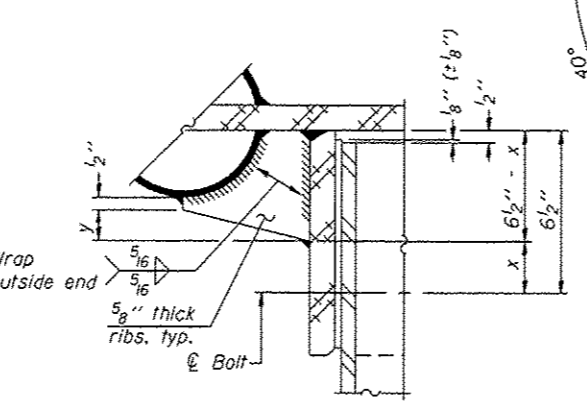
④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus  $\frac{1}{8}$ " ( $\pm \frac{1}{16}$ "). Maximum gap between post and collar at any location equals  $\frac{1}{8}$ " before tightening bolts.

**SECTION B-B**

Bolts, washers (including contoured washers), and locknuts shall be stainless steel.

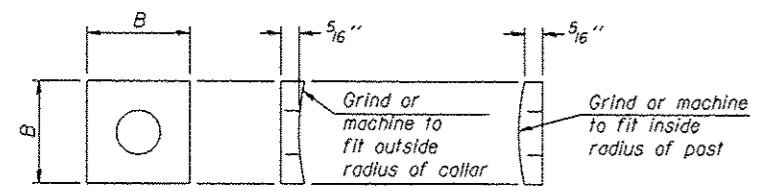


**DETAIL A**  
(Two locations)



**DETAIL B**

Two locations  
(For details not shown, see Detail C)

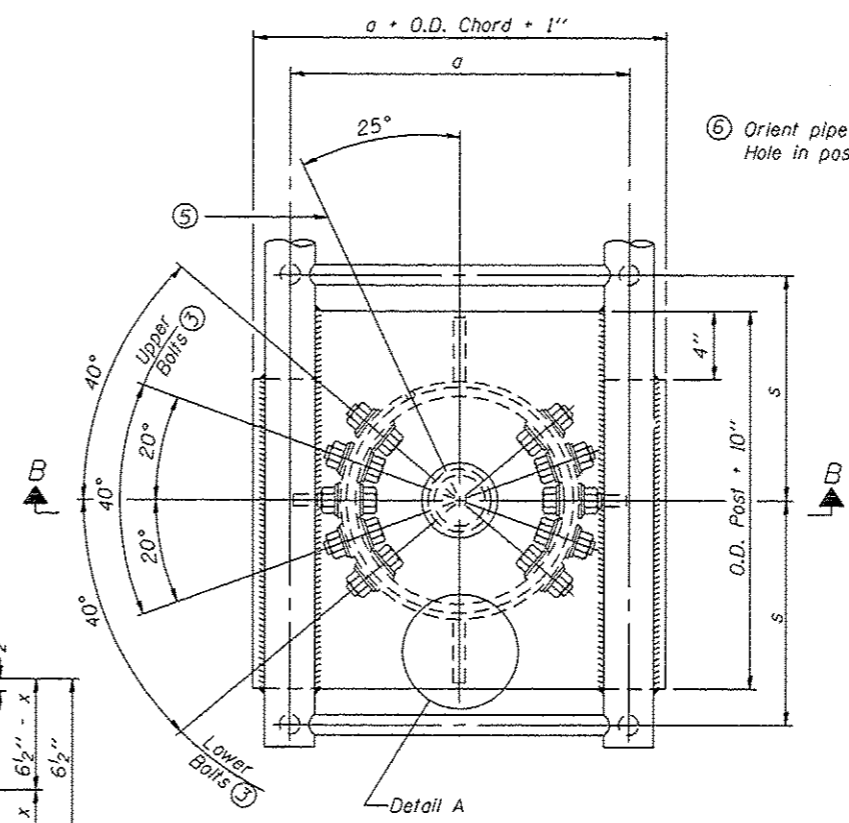


**CONTOURED WASHERS**

Bolt Size	Contoured Washers	
	Hole Dia.	B
7/8"	1"	2 1/2"
1"	1 1/8"	3"
1 1/4"	1 3/8"	3 1/4"

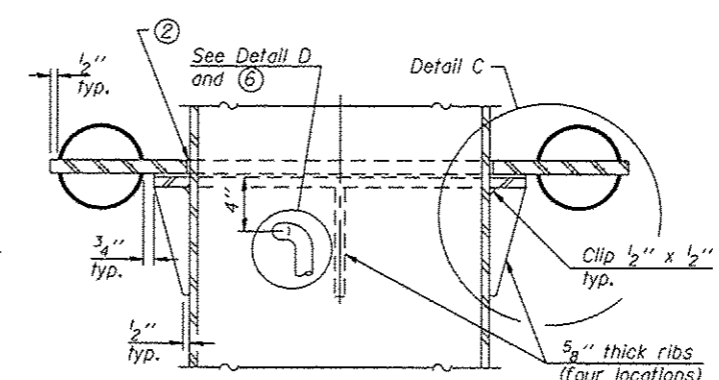
**DETAIL OF STAINLESS STEEL SLEEVE**

Weld to post after galvanizing. (Prepare post surface to insure tight, uniform fit and allow welding.) Welds to be 1/2" long at 6" cts. along top edge and at 1/4" opening.

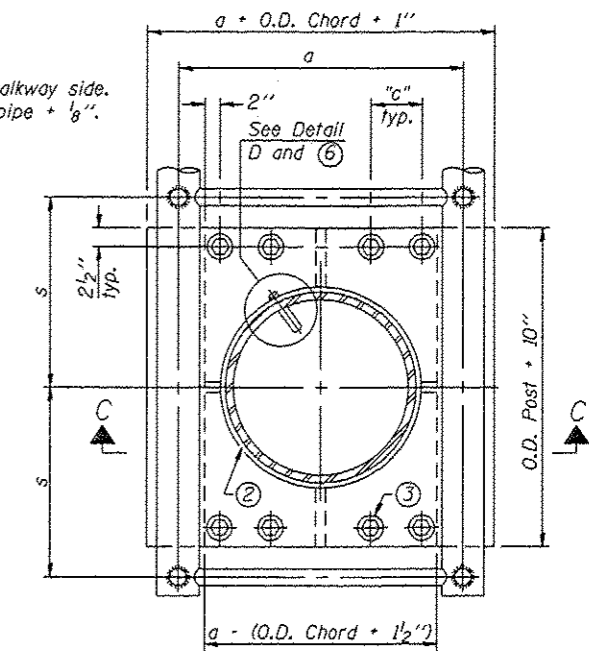


**PLAN VIEW - TOP OF COLUMN**

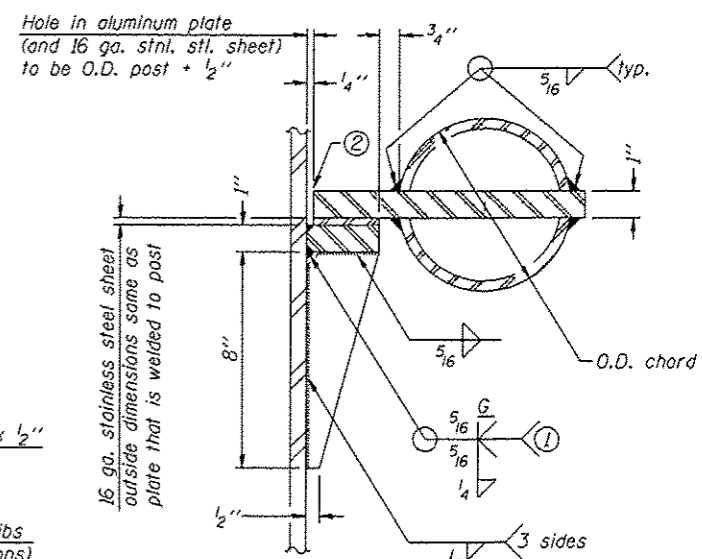
⑤ Optional full penetration weld in collar. (Two locations maximum... (180° apart)... X-ray or UT 100%)



**SECTION C-C**



**SECTION THRU POST ABOVE LOWER CHORDS**



**DETAIL C**

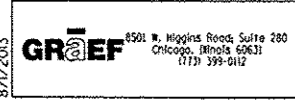
- ① Grind top if required to fully seat aluminum plate and stainless steel sheet.
- ② After tightening lower connection bolts, fill gap with non-hardening, silicone caulk suitable for exterior exposure and acceptable to the Engineer. Cost is included in Overhead Sign Structure Cantilever.
- ③ Upper and lower connection bolts in collar and bolts at lower chord connection shall be high strength with matching locknuts. Connection bolts shall have 2 stainless steel flat washers each.

Truss Type	Post Size	Upper & Lower Connection Bolt Diameter ③	Lower Juncture Bolt Spacing Dimension "c" ③	Opening in Cap Plate "HH"	Collar Thickness (t)	Side Ribs	
						x	y
I-C-A	16" $\phi$ (83#/'')	7/8"	3 1/4"	8"	5/8"	1 3/4"	2 1/4"
II-C-A	24" $\phi$ (125#/'')	1"	3 1/2"	12"	7/8"	2"	1 1/4"
III-C-A (35' max.)	24" $\phi$ (125#/'')	1 1/4"	3 1/2"	12"	7/8"	2"	1"
III-C-A (>35' to 40')	24" $\phi$ (171#/'')	1 1/4"	3 1/2"	12"	7/8"	2"	1"

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OSC-A-3

6-1-12



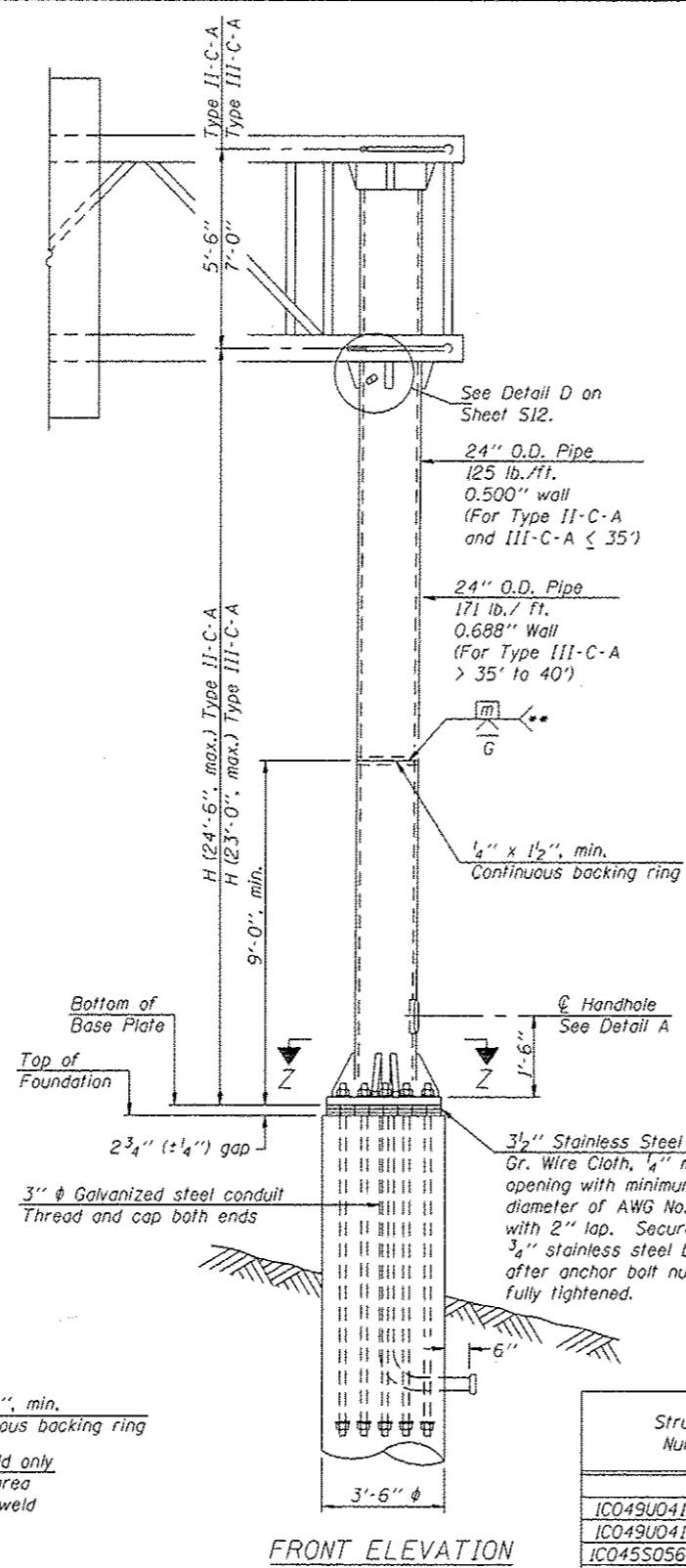
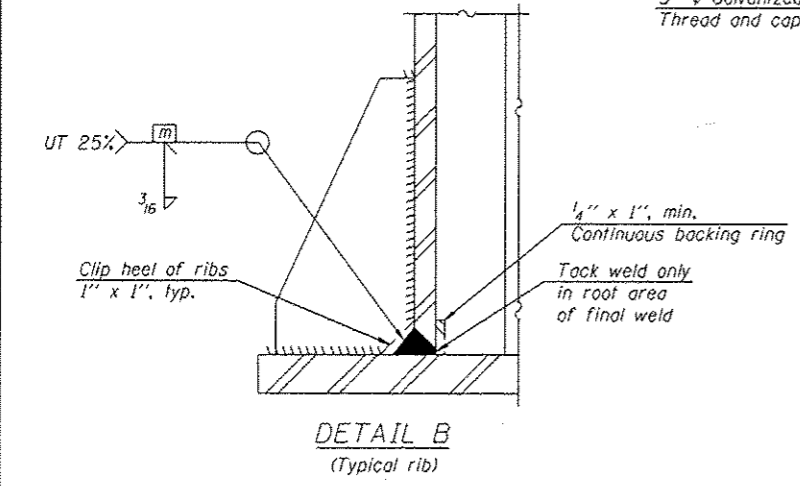
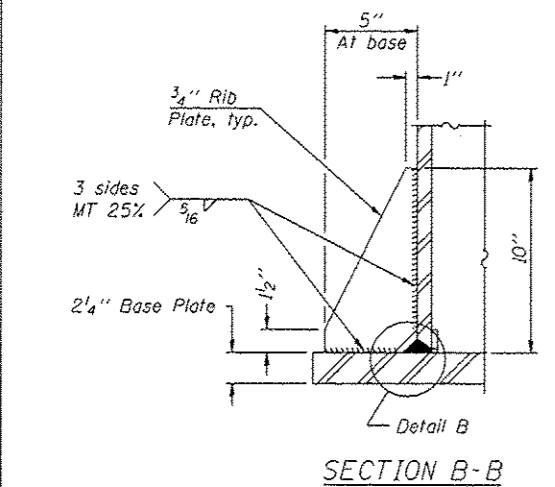
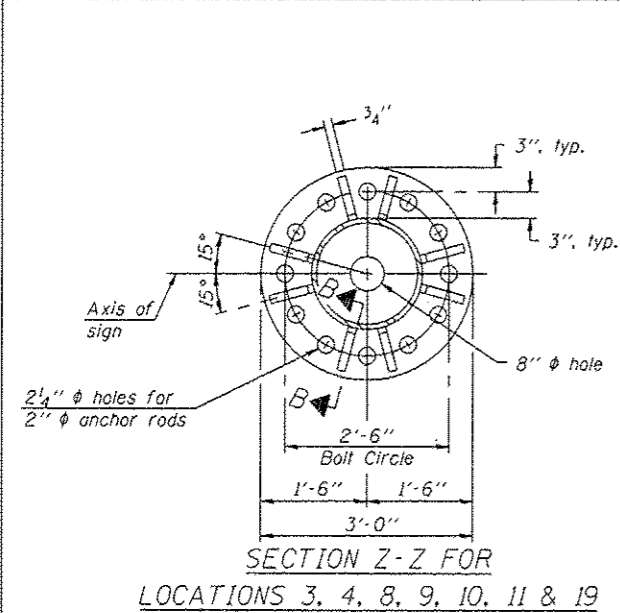
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STATE OF ILLINOIS  
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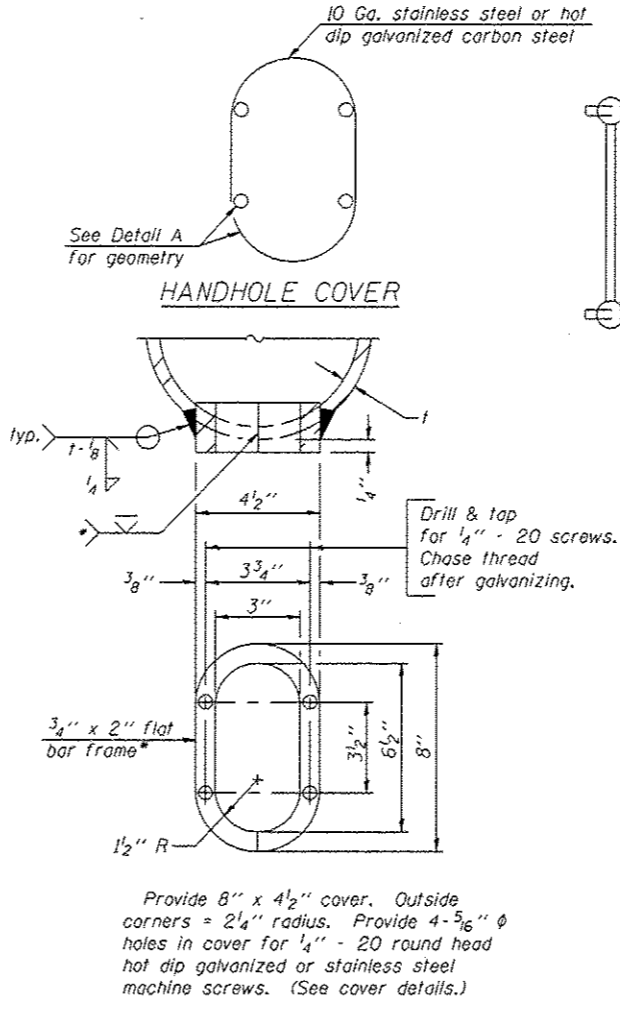
ALUMINUM CANTILEVER SIGN TRUSS; STEEL COLUMN  
JUNCTURE DETAILS

SHEET NO. S12 OF 28 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01 OVD SIN STR REPL14-30		VARIOUS	47	21
			CONTRACT NO. 46291	
ILLINOIS FED. AID PROJECT				



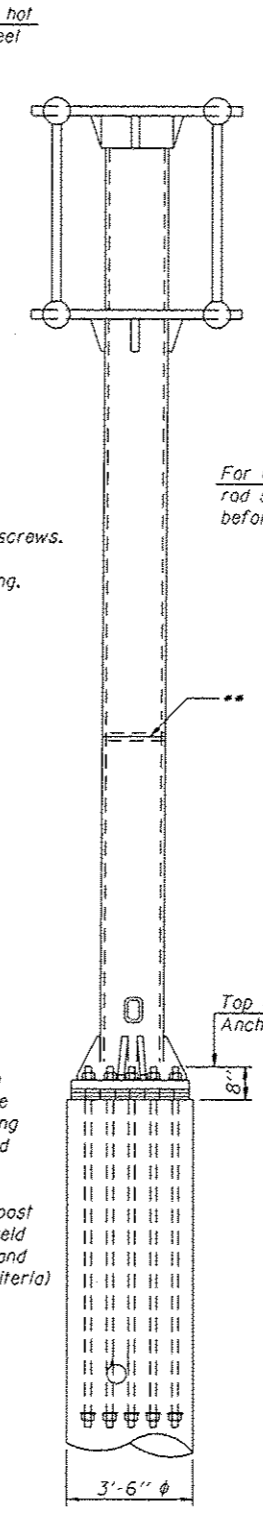
FRONT ELEVATION  
For Foundation Details see Sheets S14 & S16.



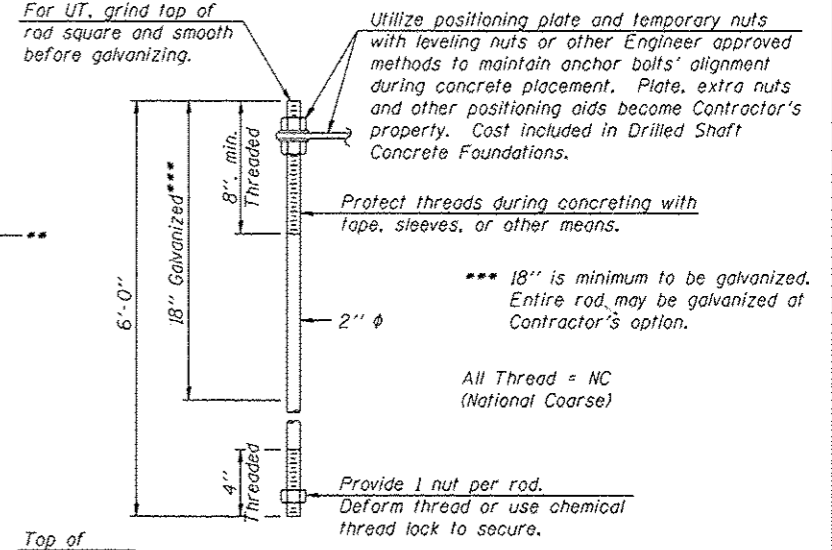
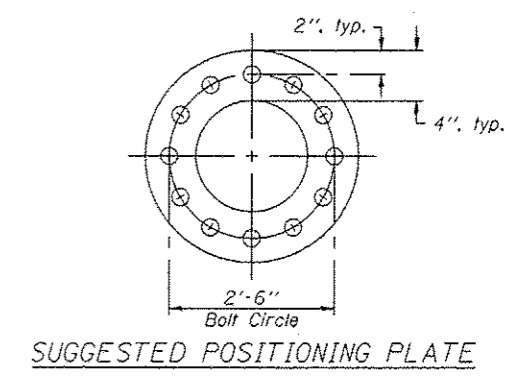
DETAIL A

\* Bent bars may be butt welded top and bottom or bottom only. 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 min or less.

\*\* Butt welded joint in past is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.



SIDE ELEVATION



ANCHOR ROD DETAIL

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize the upper 18" (minimum) and associated AASHTO M291, Grade A, C or DH heavy hex nuts and hardened washers per AASHTO M232. No welding shall be permitted on rods. Provide a nut at bottom, a hexagon locknut and washer above base plate and a leveling nut and washer below base plate. Nuts shall each be tightened with 200 lb.-ft. minimum torque against base plate. Before or after threading, but before galvanizing, each anchor rod shall be ultrasonically tested (UT) by a Level II or III inspector, qualified in accord with ANSI guidelines, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Drilled Shaft Concrete Foundations.

NOTES

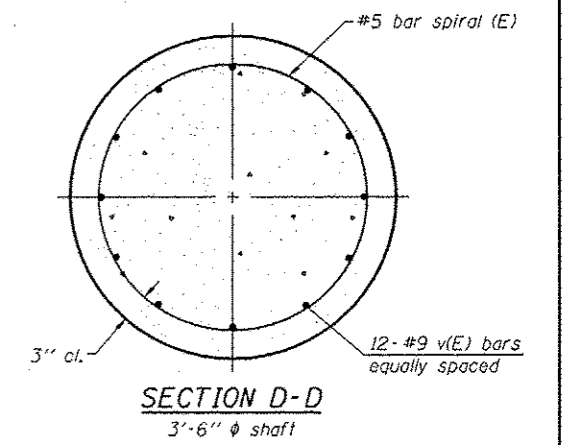
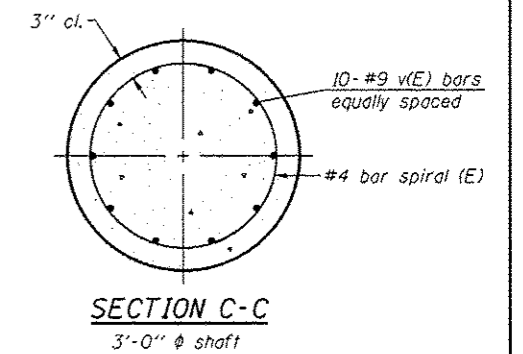
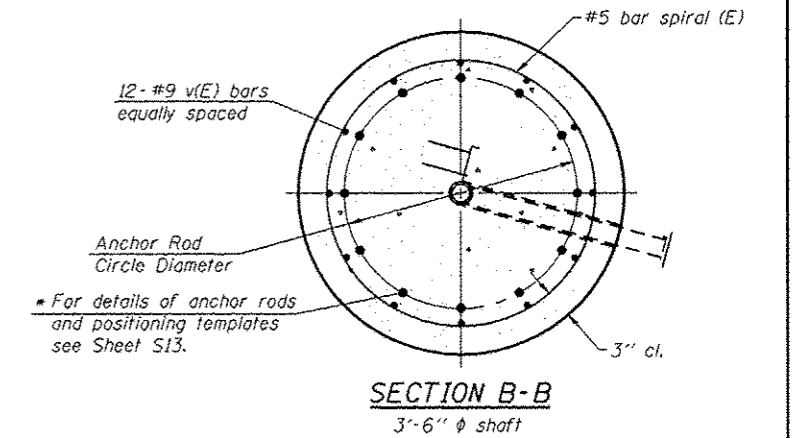
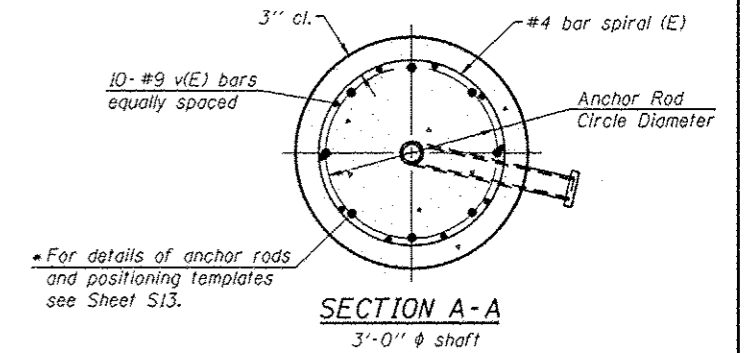
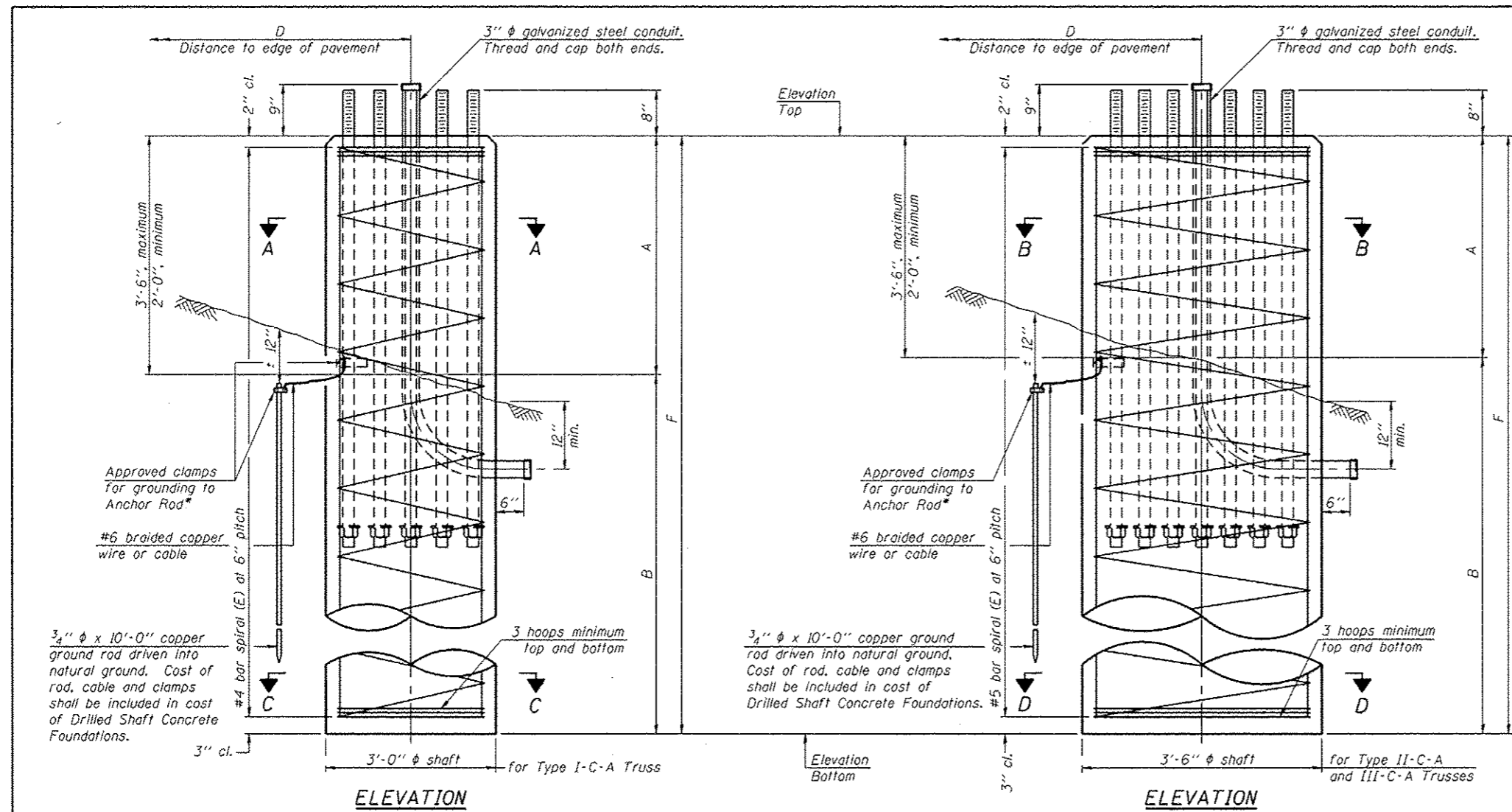
- Survey elevations are not available for this Location. The Contractor is responsible to obtain survey elevations and then determine the vertical dimensions and elevations for the column and foundation.
- For Section Z-Z for Location 5, see Sheet S15
- For Barrier Foundation for Location 19, see Sheet S16.

Structure Number	Location	Station	H
IC049U041L000.0-001	3	53+30.5	21'-3"
IC049U041R000.0-000	4	60+63.6	20'-8"
IC045S056R000.0-000	5	106+00	23'-0"
IC022S038R000.0-001	8	59+30.6	23'-0"
IC016I090R081.9-000	9	3502+10	NOTE 1
IC016I090R082.5-000	10	3533+10	NOTE 1
IC016I090R083.9-000	11	3608+10	NOTE 1
IC022S083L000.0-003	19	966+51.9	18'-7"

Note: "H" based on 15'-0" or actual sign height, whichever is greater.

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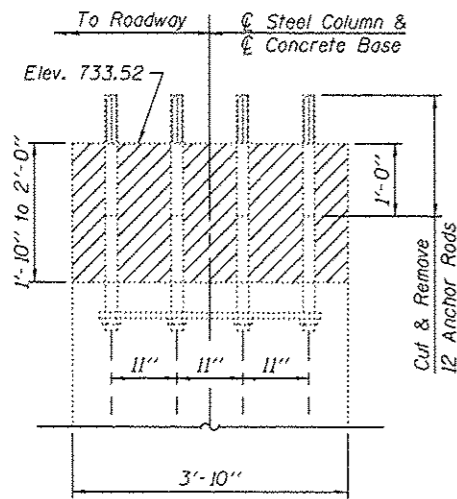
**NOTES**

- The foundation dimensions shown in the Foundation Design Table 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 in the Foundation Data Table 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. A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in "Drilled Shaft Concrete Foundation".
- Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.
- Survey elevations are not available for this Location. The Contractor is responsible to obtain survey elevations and then determine the vertical dimensions and elevations for the column and foundation.
- \* Grind anchor rod to bright finish at ground clamp location before installing clamp.
- The drilled shaft is 3" into a concrete barrier at Location 19. Section B-B depicts the drilled shaft below the barrier. See Sheet S16 for details of concrete barrier including reinforcement bars and anchor rods.

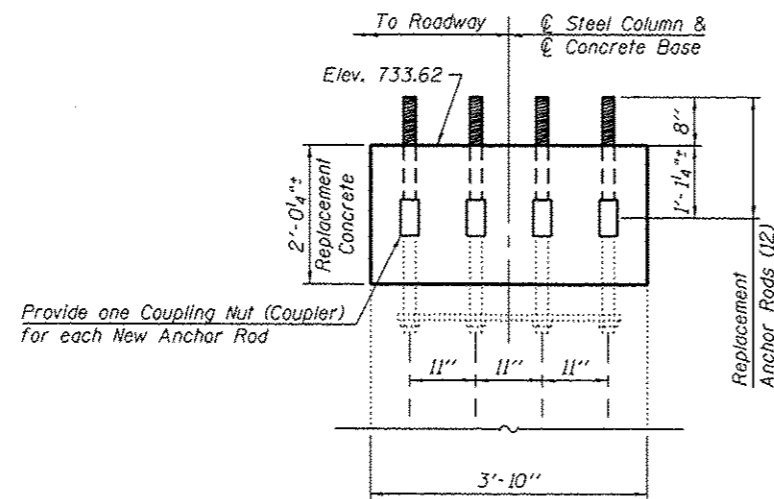
Truss Type	Post Base Sheet	Maximum Cantilever Length (ft)	Maximum Total Sign Area (sq ft)	Shaft Diameter (ft)	"B" Depth (ft)	Anchor Rods		Anchor Rod Circle Diameter (in)
						No.	Diameter (in)	
I-C-A	OSC-A-4	25	170	3.0	16.0	8	2	22
II-C-A	OSC-A-5	30	170	3.5	17.0	12	2	30
II-C-A	OSC-A-5	30	340	3.5	21.5	12	2	30
III-C-A	OSC-A-5	35	170	3.5	19.0	12	2	30
III-C-A	OSC-A-5	35	250	3.5	22.5	12	2	30
III-C-A	OSC-A-5	35	400	3.5	26.5	12	2	30
III-C-A	OSC-A-5	40	400	3.5	32.0	12	2	30

Structure Number	Location	Station	Truss Type	Shaft Diameter (ft)	Elevation Top	Elevation Bottom	Qu	A	B	F	Class DS Concrete Cubic Yards
IC049U04IL000.0-001	3	53+30.5	III-C-A	3.5	670.78	641.53	2.7 TSF	2'-9"	26'-6"	29'-3"	10.4
IC049U04IR000.0-000	4	60+63.6	III-C-A	3.5	654.00	628.75	2.6 TSF	2'-9"	22'-6"	25'-3"	9.0
IC045S056R000.0-000	5	106+00	III-C-A	NA	733.62	NA	NA	NA	NA	NA	0.0
IC022S038R000.0-001	8	59+30.6	III-C-A	3.5	677.95	652.37	3.8 TSF	3'-1"	22'-6"	25'-7"	9.2
IC0161090R081.9-000	9	3502+10	II-C-A	3.5	NOTE 6	NOTE 6	2.1 TSF	2'-9"	17'-0"	19'-9"	7.1
IC0161090R082.5-000	10	3533+10	II-C-A	3.5	NOTE 6	NOTE 6	3.8 TSF	2'-9"	17'-0"	19'-9"	7.1
IC0161090R083.9-000	11	3608+10	II-C-A	3.5	NOTE 6	NOTE 6	3.3 TSF	2'-9"	17'-0"	19'-9"	7.1
IC022S083L000.0-003	19	966+51.9	III-C-A	3.5	NOTE 8	677.15	2.5 TSF	3"	26'-6"	26'-9"	9.6

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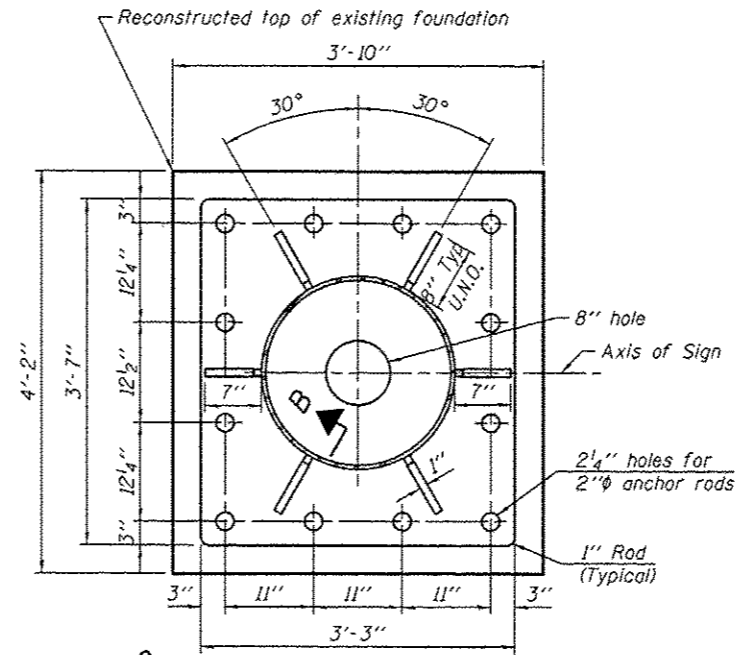


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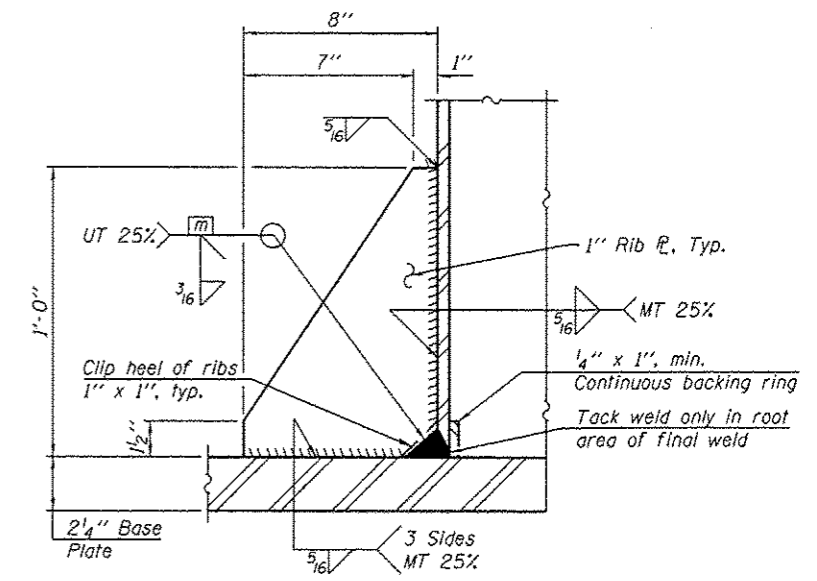


PROPOSED

**SIGN STRUCTURE FOUNDATION LOOKING EAST**



**SECTION Z-Z FOR LOCATION 5**



**SECTION B-B**

**LEGEND**

- Indicates Concrete Removal.
- Indicates Existing Structure.

**NOTES**

1. It shall be the Contractor's responsibility to verify all dimensions and conditions existing in the field prior to construction and ordering materials.
2. In "Sign Structure Foundation Looking East", existing reinforcement bars within the concrete foundation are not shown (for clarity). 12 Existing Anchor Rods (Bolts), 2" diameter, are to be removed partially as shown.
3. For Location of Section Z-Z, see Sheet S13.
4. Saw cut 1" deep on the perimeter of concrete removal. Care shall be exercised to prevent damage to existing reinforcement bars. See Special Provisions.
5. This work is paid for as REBUILD CONCRETE FOUNDATION FOR OVERHEAD SIGN STRUCTURE.

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**GRAF** 8501 N. Higgins Road Suite 200  
Chicago, Illinois 60631  
773 399-0112

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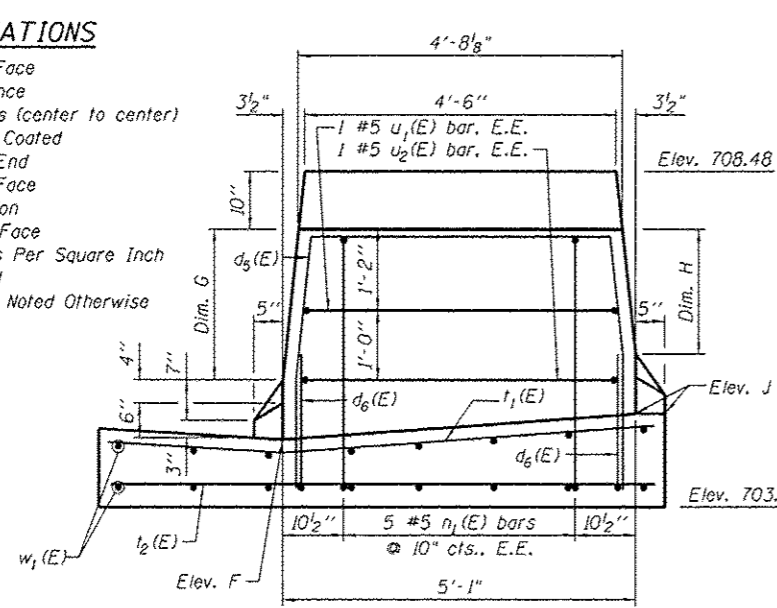
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ALUMINUM CANTILEVER SIGN TRUSS; STEEL COLUMN  
FOUNDATION REPAIRS, LOCATION 5**

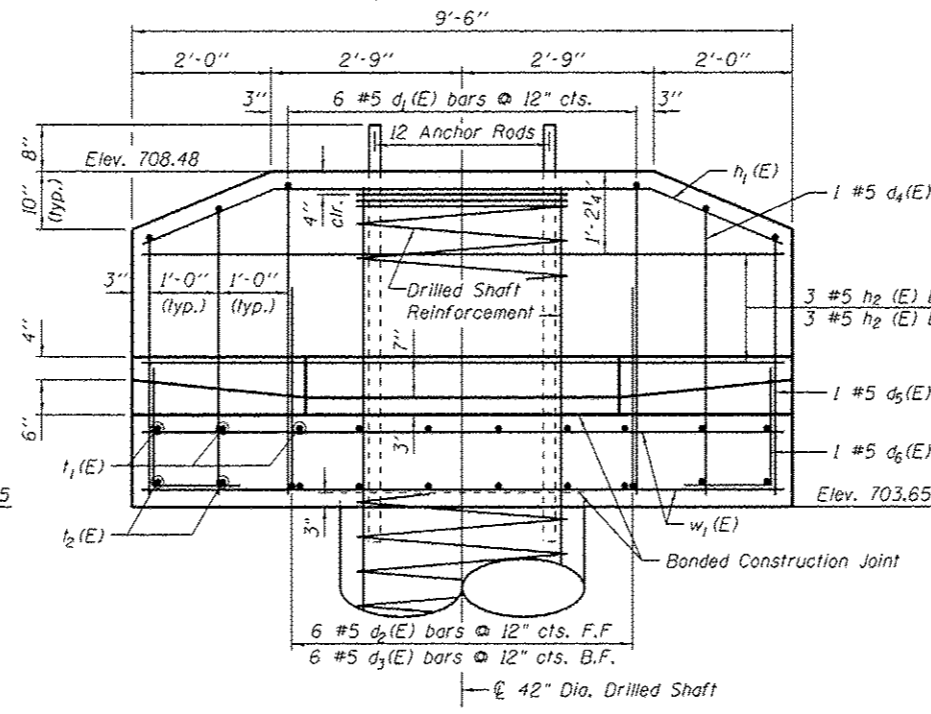
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VAR. 01 OVD SIN STR REPL14-30		VARIOUS	47	24
			CONTRACT NO. 46291	
ILLINOIS FED. AID PROJECT				

**ABBREVIATIONS**

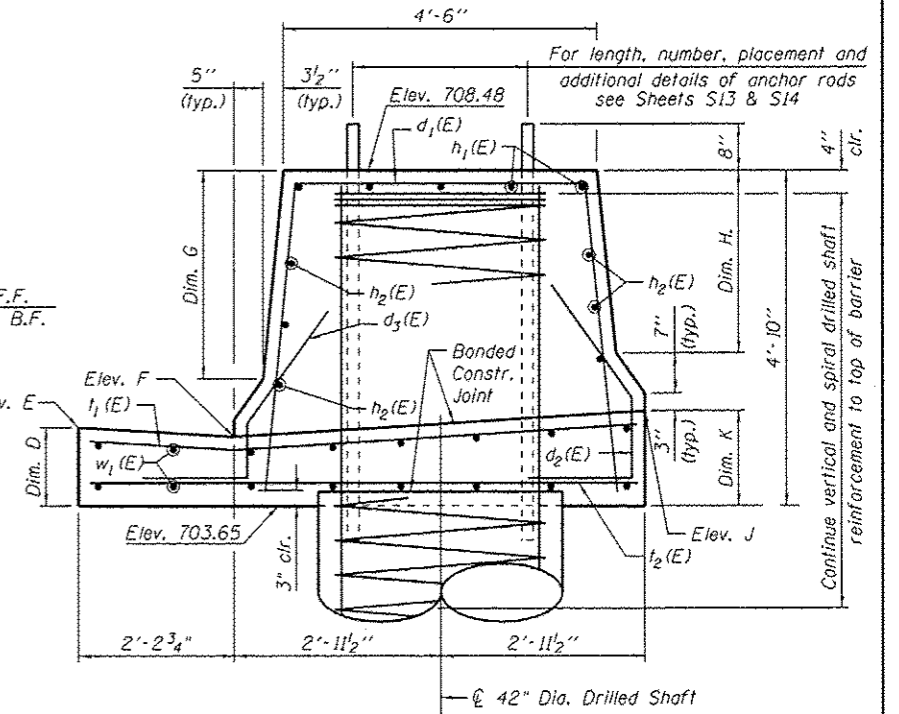
- B.F. Back Face
- clr. Clearance
- cts. centers (center to center)
- E.C. Epoxy Coated
- E.E. Each End
- E.F. Each Face
- Elev. Elevation
- F.F. Front Face
- psi Pounds Per Square Inch
- Typ. Typical
- U.N.O. Unless Noted Otherwise



**VIEW A-A**



**VIEW B-B**



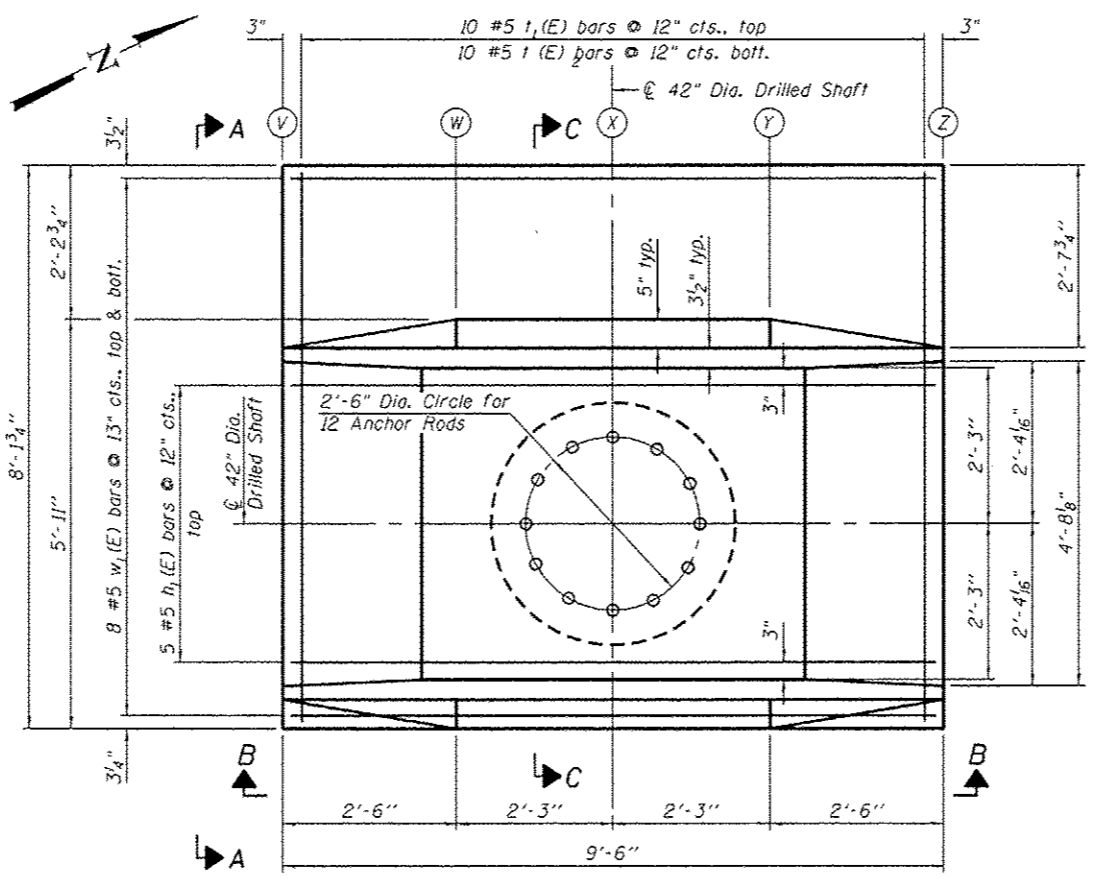
**SECTION C-C**

**TABLE OF DIMENSIONS & ELEVATIONS**

Location	V	W	X	Y	Z
Dim. D	1'-2"	1'-2 1/4"	1'-2 1/2"	1'-2 3/4"	1'-3"
Elev. E	704.82	704.84	704.86	704.88	704.90
Elev. F	704.65	704.70	704.72	704.74	704.73
Dim. G	2'-2"	2'-11 3/8"	2'-11 1/8"	2'-10 7/8"	2'-1"
Dim. H	1'-10 3/8"	2'-8 1/4"	2'-8 1/8"	2'-8 1/8"	1'-10"
Elev. J	704.95	704.96	704.97	704.97	704.98
Dim. K	1'-3 5/8"	1'-3 3/4"	1'-3 7/8"	1'-3 7/8"	1'-4"

**NOTES**

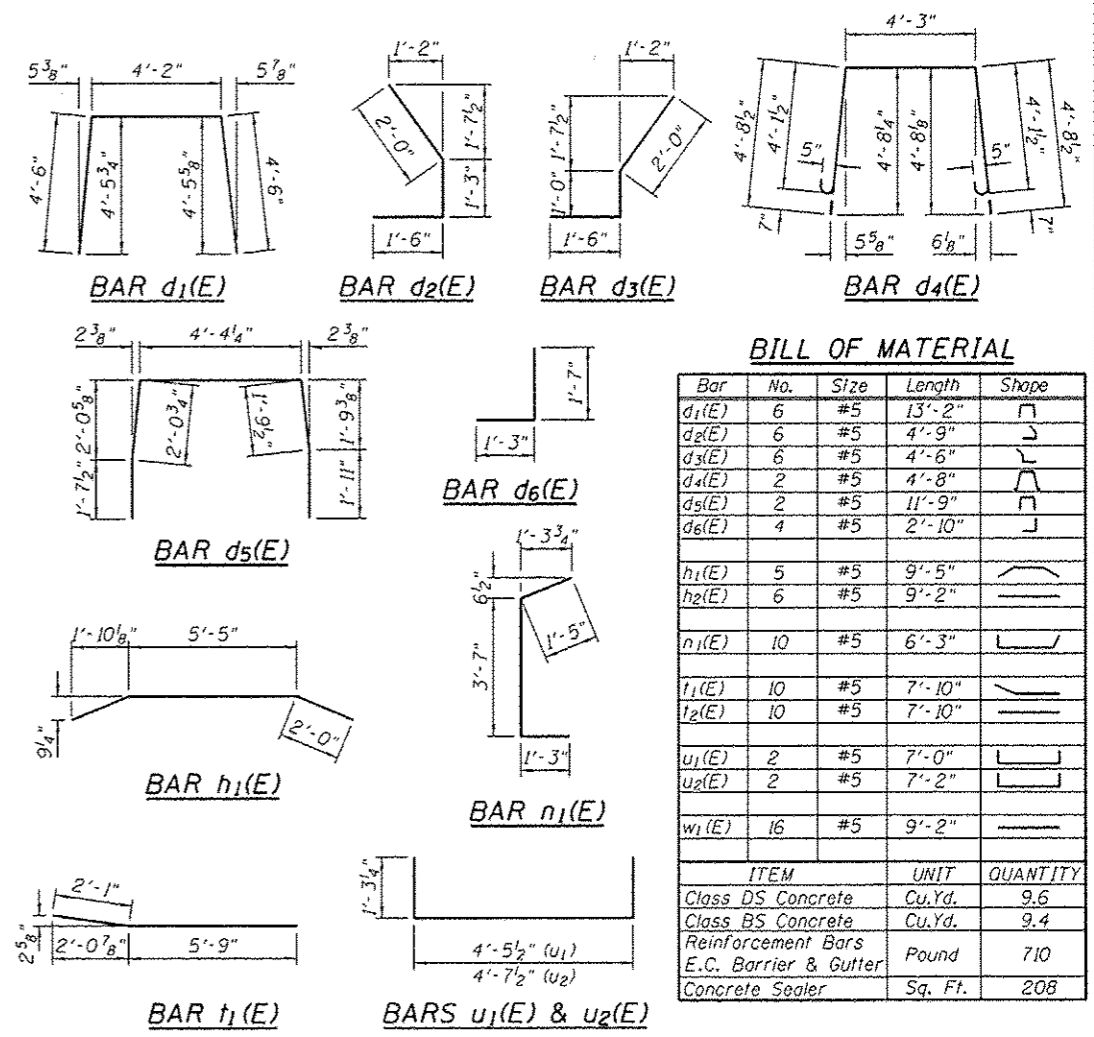
1. All exposed concrete edges shall have a 3/4" x 45° chamfer except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished grade level.
2. Reinforcement bar bending details shall be in accordance with the latest "Manual of Standard Practice For Detailing Reinforced Concrete Structures", ACI 315.
3. Reinforcement bar bending dimensions are out to out.
4. Cover from face of concrete to face of reinforcement bars shall be 3" for surfaces cast against earth and 2" for all other surfaces unless otherwise noted.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Concrete for barrier & gutter shall be Class BS and shall be paid for as Drilled Shaft Concrete Foundations.
7. A normal surface finish followed by an application of Concrete Sealer will be required on the vertical, nearly vertical and top surfaces of the barrier and gutter. Cost is included in Drilled Shaft Concrete Foundations.
8. For galvanized steel conduit embedded in the barrier, see Sheet S14.



**PLAN VIEW**

**DESIGN STRESSES**

f'c = 4,000 psi @ 14 days, Class BS Concrete, for Barrier & Gutter  
 f'c = 4,000 psi @ 14 days, Class DS Concrete, for Drilled Shaft  
 fy = 60,000 psi, Reinforcement Bars



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d1(E)	6	#5	13'-2"	U
d2(E)	6	#5	4'-9"	U
d3(E)	6	#5	4'-6"	U
d4(E)	2	#5	4'-8"	U
d5(E)	2	#5	11'-9"	U
d6(E)	4	#5	2'-10"	U
h1(E)	5	#5	9'-5"	U
h2(E)	6	#5	9'-2"	U
n1(E)	10	#5	6'-3"	U
t1(E)	10	#5	7'-10"	U
u2(E)	10	#5	7'-10"	U
u1(E)	2	#5	7'-0"	U
u2(E)	2	#5	7'-2"	U
w1(E)	16	#5	9'-2"	U
ITEM	UNIT	QUANTITY		
Class DS Concrete	Cu.Yd.	9.6		
Class BS Concrete	Cu.Yd.	9.4		
Reinforcement Bars	Pound	710		
E.C. Barrier & Gutter				
Concrete Sealer	Sq. Ft.	208		

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**GENERAL NOTES**

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications") ②

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.

MINIMUM CLEARANCE: 3" greater than bridge members at all locations. (All Obstructions)

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

MATERIALS: All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. 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 (M183, M223 Gr. 50).

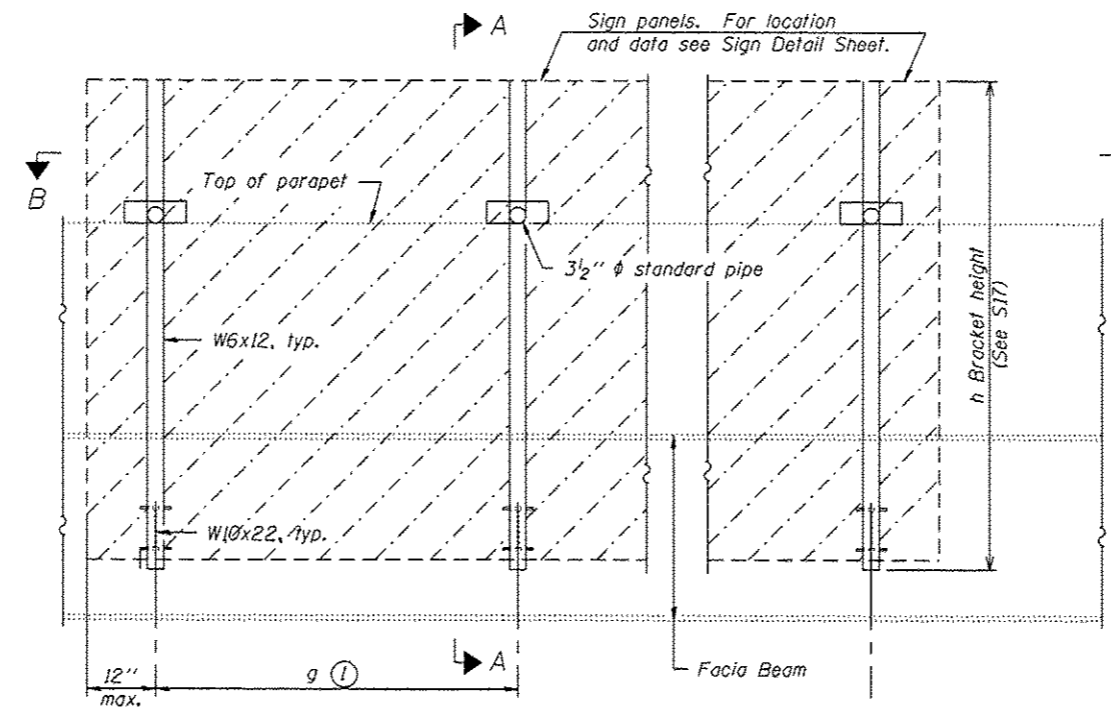
HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise specified.

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

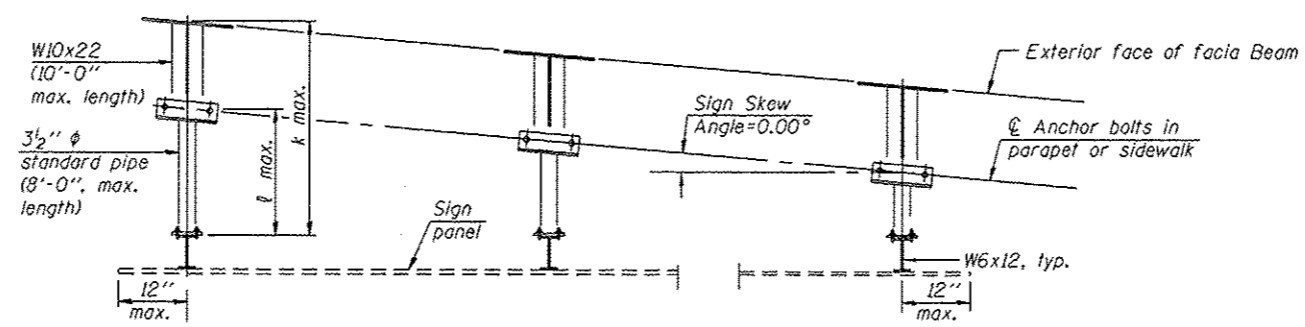
ANCHOR RODS: All-threaded rod shall conform to ASTM F1554 Grade 105, 3/4"  $\phi$  x 12" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be either cast into the concrete or epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 9".

**NOTES**

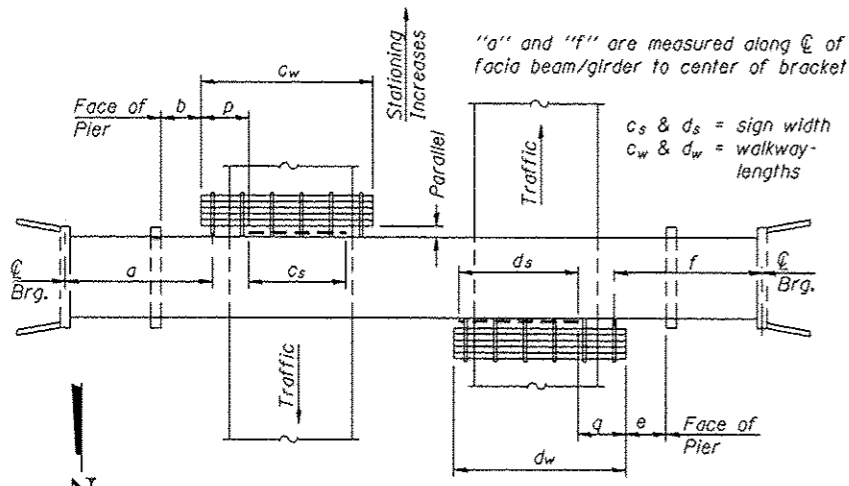
- ① Bracket spacing  $g < 6'-0"$ , max. Spacing shall be uniform if possible but may vary  $\pm 6"$  to miss existing obstruction (rail post, light poles, web stiffeners, splice plates, etc.). Adjust bracket lengths accordingly on skewed structures.
- ② Any design modifications shall be based on the current version of applicable specifications and submitted for the Engineer's approval.
- ③ Unit price includes brackets, supports, anchor bolts, fasteners, fabrication, delivery, erection, field drilling and other necessary items. Limits of payment are based on sign panel length ( $d_s$ ).
- 4 Work sheets S16, S17 & S18 together.
- 5 It shall be the Contractor's responsibility to verify all dimensions and conditions existing in the field prior to construction and ordering materials.



**TYPICAL FRONT ELEVATION**  
(With lights, safety chain and handrail omitted for clarity.)



**SECTION B-B**  
(Shown: Left Sign Skew)



**SITE PLAN**

(No proposed walkway nor handrails at this location)

Structure Number	Location	Sign Skew Angle (L) or (R)	Bridge Station	Bridge Structure Number	Contract Route Designation	a	b	c <sub>s</sub>	c <sub>w</sub>	d <sub>s</sub>	d <sub>w</sub>	e	f	g	No. of Brackets (Total)	p	q	Total Grating/Hndrl. Lengths (c <sub>w</sub> + d <sub>w</sub> )
IB045S056L000.0-000	6	0.00°	103+99.59	045-0036	FA573	NA	NA	NA	NA	19'-0"	NA	NA	NA	5'-9"	4	NA	NA	NA

Dimensions a, b, e, f & g may vary as approved by the Engineer, see ①.  
When c<sub>w</sub> < c<sub>s</sub> and/or d<sub>w</sub> < d<sub>s</sub>, use alternate brackets without walkway supports where applicable, see ③.

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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**BRIDGE MOUNTED SIGN STRUCTURE**  
**GENERAL PLAN & ELEVATION**  
SHEET NO. S17 OF 28 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 101 OVD SIN STR REPL14-30		VARIOUS	47	26
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	

**NOTES**

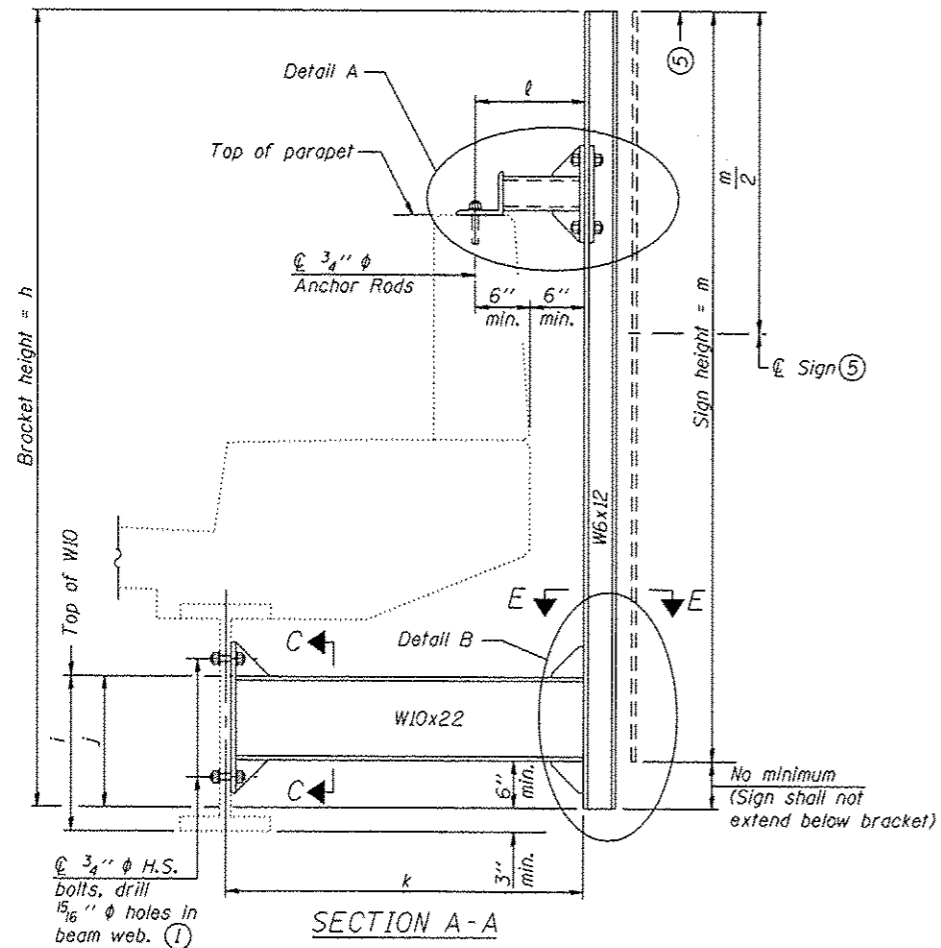
Installations not within dimensional limits shown require special analysis for all components and must be submitted to the Bureau of Bridges and Structures for approval.

Contractor shall field check all pertinent existing bridge dimensions shown on plans before submitting shop drawings. It shall be Contractor's responsibility to verify all dimensions and conditions existing in the field prior to construction and ordering materials.

All holes in bridge beams or girders should be located in the middle half of the member. There shall be no holes drilled in the lower quarter of the member's depth. (For R.C. girder, depth = bottom of deck to bottom of the girder.) Proposed exceptions must be approved by the Bureau of Bridges and Structures.

The Engineer may adjust dimension "i" to meet the above condition and to keep the sign level.

For Details A & B, Sections C-C and E-E, see Sheet S18.



- ① Holes in new steel members may be drilled in the fabrication shop or in the field. Field drill existing members.
- ② Not Used
- ③ Not Used
- ④ Not Used
- ⑤ Sign shall not extend more than 6" above top of bracket, and this dimension may vary to keep sign level if bridge is on grade or vertical curve. Multiple signs of various heights shall share a common horizontal centerline and use equal bracket heights. If no sign is attached to a W6x12 vertical (bracket only supporting walkway), dimension h shall be the same as an adjacent bracket with a sign attached, unless Engineer specifically directs shorter brackets due to locational restraints on future uses. (See Detail A for minimum bracket height.)
- ⑥ Not Used

Structure Number	Location	Station	h	i	j	k max. (10'-0" max.)	l max. (8'-0" max.)	m (15'-0" max.)
1B045S056L000.0-000	6	103+99.59	10'-3"	1'-11"	1'-6"	3'-8"	1'-2"	10'-0"

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PLOT DATE =	DRAWN - 08/01/2013	REVISED
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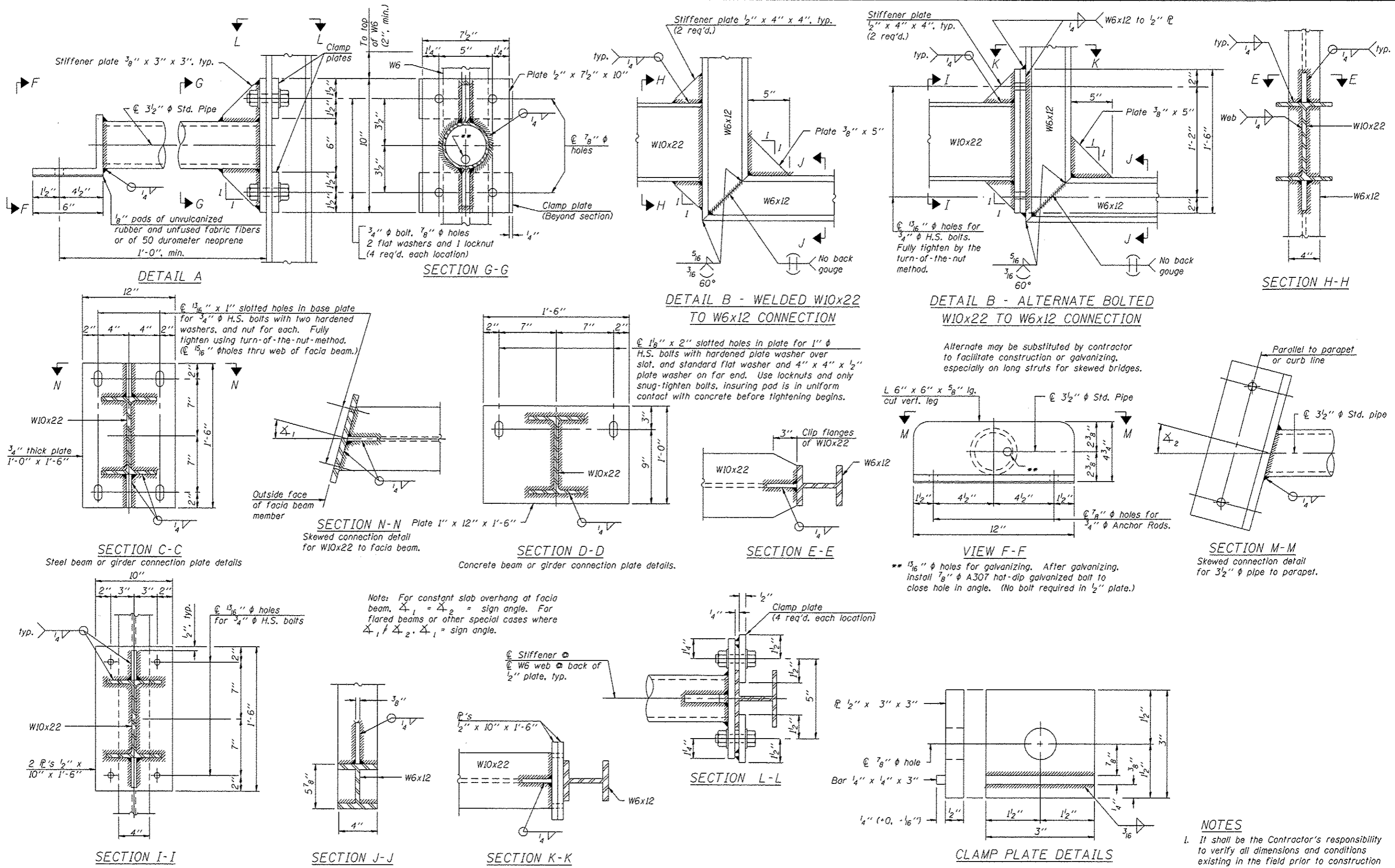
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BRIDGE MOUNTED SIGN STRUCTURE  
 CONNECTION DETAILS 1**

SHEET NO. S18 OF 28 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	01 OVD SIN STR REPL14-30	VARIOUS	47	27
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	





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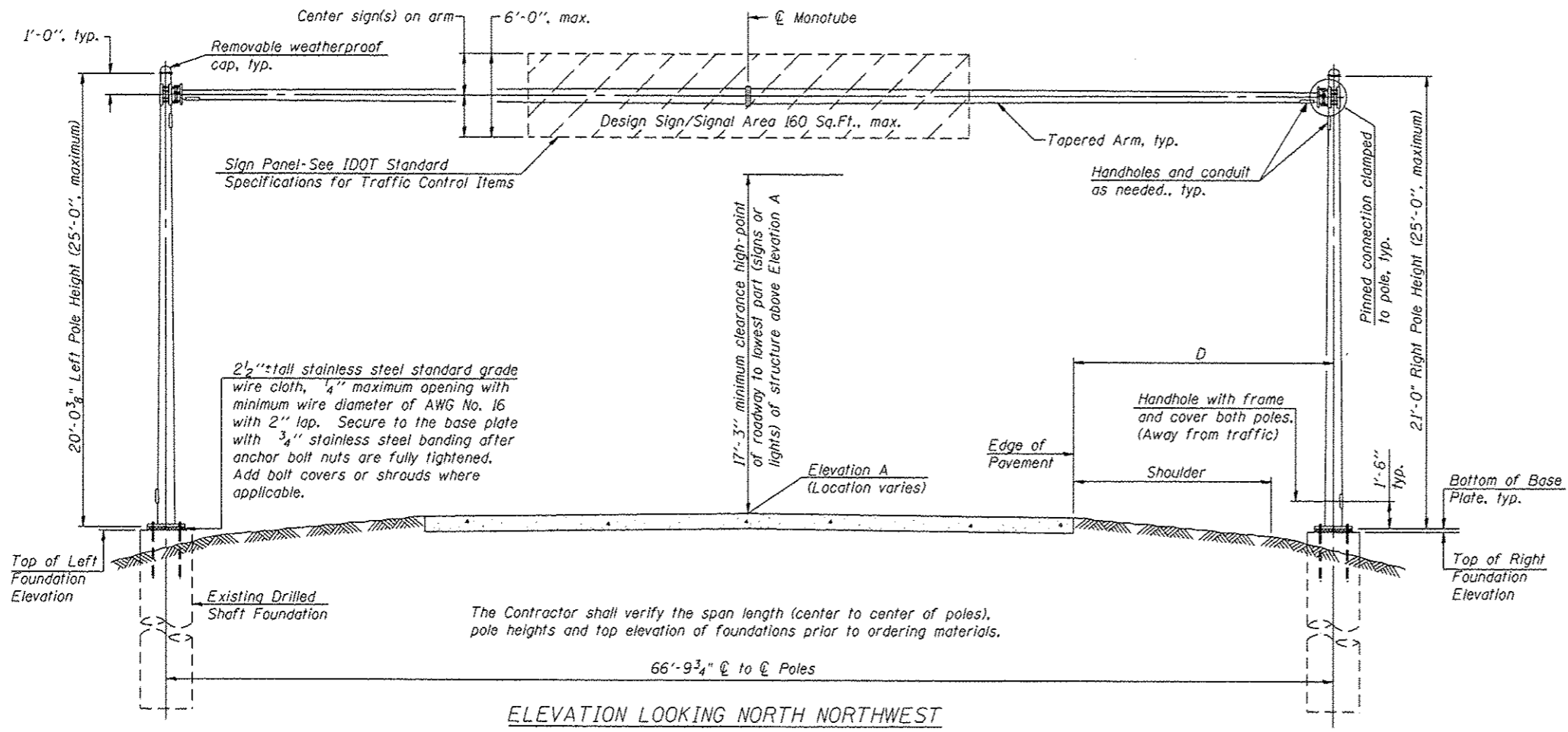
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**BRIDGE MOUNTED SIGN STRUCTURE**  
**CONNECTION DETAILS 2**  
 SHEET NO. 519 OF 28 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01 OVD SIN STR REPL14-30		VARIOUS	47	28
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	

**NOTES**

1. It shall be the Contractor's responsibility to verify all dimensions and conditions existing in the field prior to construction and ordering materials.



**GENERAL NOTES**

**EXISTING STRUCTURE:** The existing steel structure shall be replaced. The existing foundations are intended for reuse. The top portions of the existing anchor rods shall not be reused. New anchor rods shall be coupled onto existing anchor rods. It shall be the Contractor's responsibility to verify all dimensions and conditions existing in the field prior to construction and ordering materials.

**DESIGN:** Current (at time of letting) AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals (Fatigue Category II - natural wind gust only). The Contractor will submit detailed shop drawings from the manufacturer showing design materials, diameter and thickness of sections, camber, weld sizes, sign panel mounting hardware, anchor rods, etc., for structural review by the I.D.O.T. Bureau of Bridges & Structures.

**CONSTRUCTION:** Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Recurring Special Provisions. ("Standard Specifications") All references to "Mast Arm Assembly and Pole" are applicable, unless otherwise noted.

**WELDING:** All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code and the Standard Specifications.

**ANCHOR RODS:** Shall conform to ASTM F1554 Grade 105. No welding shall be permitted on rods.

**FASTENERS:** All connection bolts shall be High Strength Bolts M164, Galvanize M232 (A153), Type 3, or stainless steel heavy hex conforming to ASTM A193, Grade B8 or B8M, Class 1. U-bolts shall be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished, or an equivalent material acceptable to the Engineer. Nuts for stainless steel bolts shall be stainless steel conforming to ASTM A194, Grade 8 (AISI Type 304) or Grade 8F (AISI Type 303). All nuts shall be "locknuts" with nylon or steel inserts and semifinished hexagonal heads equivalent to the finished heavy hex series of the American National Standard. Washers for stainless steel bolts shall be stainless steel conforming to ASTM A240, Type 302 or 304.

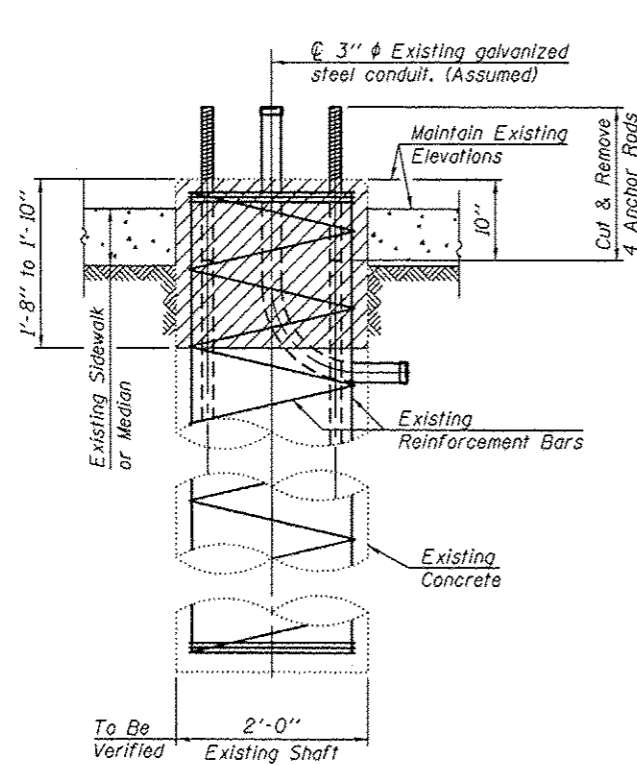
**CAMBER:** Minimum AASHTO camber =  $L / 1000 + \text{dead load camber}$ .

**ELEVATION LOOKING NORTH NORTHWEST**

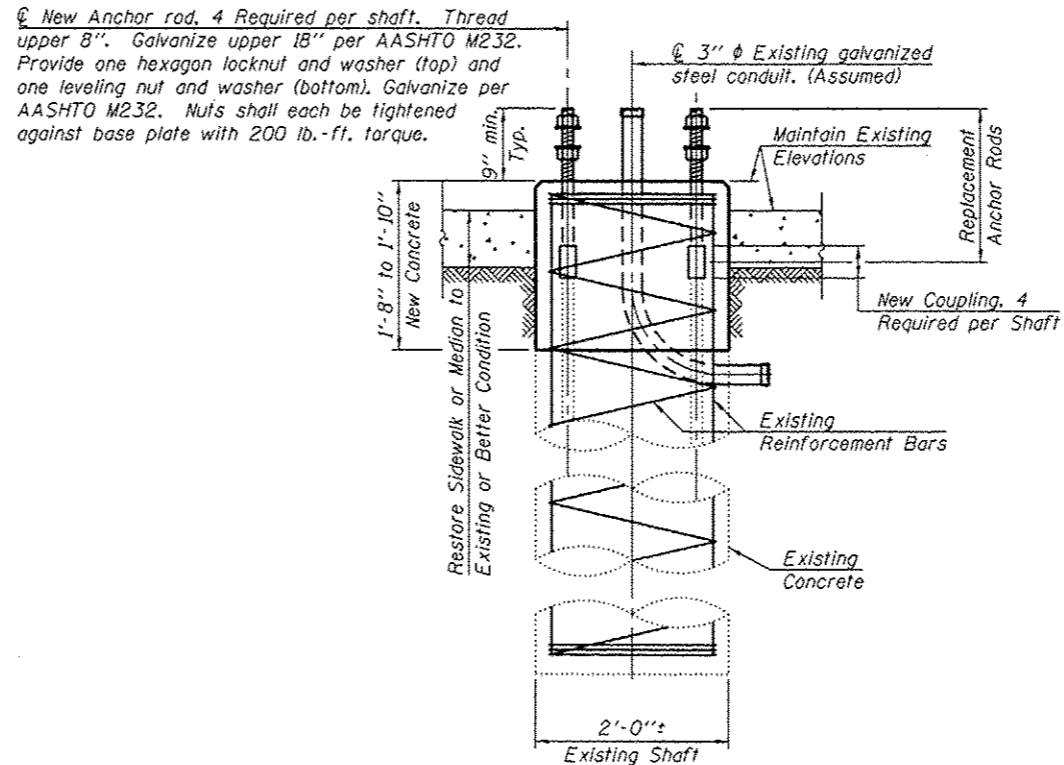
**SIGN STRUCTURE DATA TABLE**

Structure Number	Location	Station	℄ to ℄ Poles	Elevation A	Dimension D	Actual Sign Area	Left Foundation					Right Foundation					Class SI Concrete (Cu. Yds.)
							Elevation Top	Elev. Bottom	A	B	F	Elevation Top	Elev. Bottom	A	B	F	
1M0455031L000.0-000	1	NA	66'-9 3/4"	715.11	3'-9 3/8"	61 sq. ft.	716.04	NA	NA	NA	NA	715.07	NA	NA	NA	NA	NA

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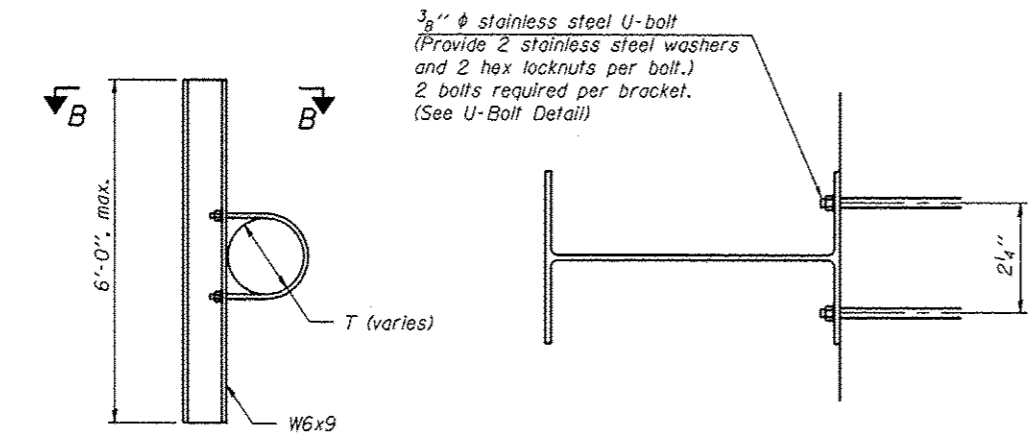


**EXISTING RIGHT OR LEFT SIGN STRUCTURE FOUNDATION**



**PROPOSED RIGHT OR LEFT SIGN STRUCTURE FOUNDATION**

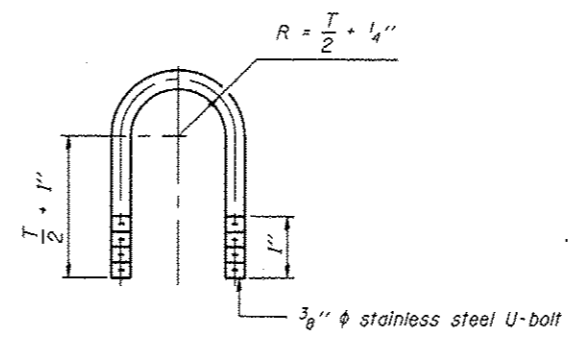
4 New Anchor rod, 4 Required per shaft. Thread upper 8". Galvanize upper 18" per AASHTO M232. Provide one hexagon locknut and washer (top) and one leveling nut and washer (bottom). Galvanize per AASHTO M232. Nuts shall each be tightened against base plate with 200 lb.-ft. torque.



**SIGN MOUNTING BRACKET**  
(Minimum 2 Brackets Each Sign)

3/8"  $\phi$  stainless steel U-bolt  
(Provide 2 stainless steel washers and 2 hex locknuts per bolt.)  
2 bolts required per bracket.  
(See U-Bolt Detail)

**SECTION B-B**  
6'-0" maximum spacing.  
2'-0" maximum sign overhang beyond end bracket.

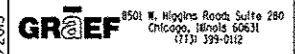


**U-BOLT DETAIL**  
(Typical)

**LEGEND**  
 Indicates Concrete Removal.  
 Indicates Existing Structure.

- NOTES**
- Galvanized steel conduit is assumed to be at one or both foundations.
  - It shall be the Contractor's responsibility to verify all dimensions and conditions existing in the field prior to construction and ordering materials.
  - The foundation work shown is paid for as REBUILD CONCRETE FOUNDATION FOR OVERHEAD SIGN STRUCTURE.

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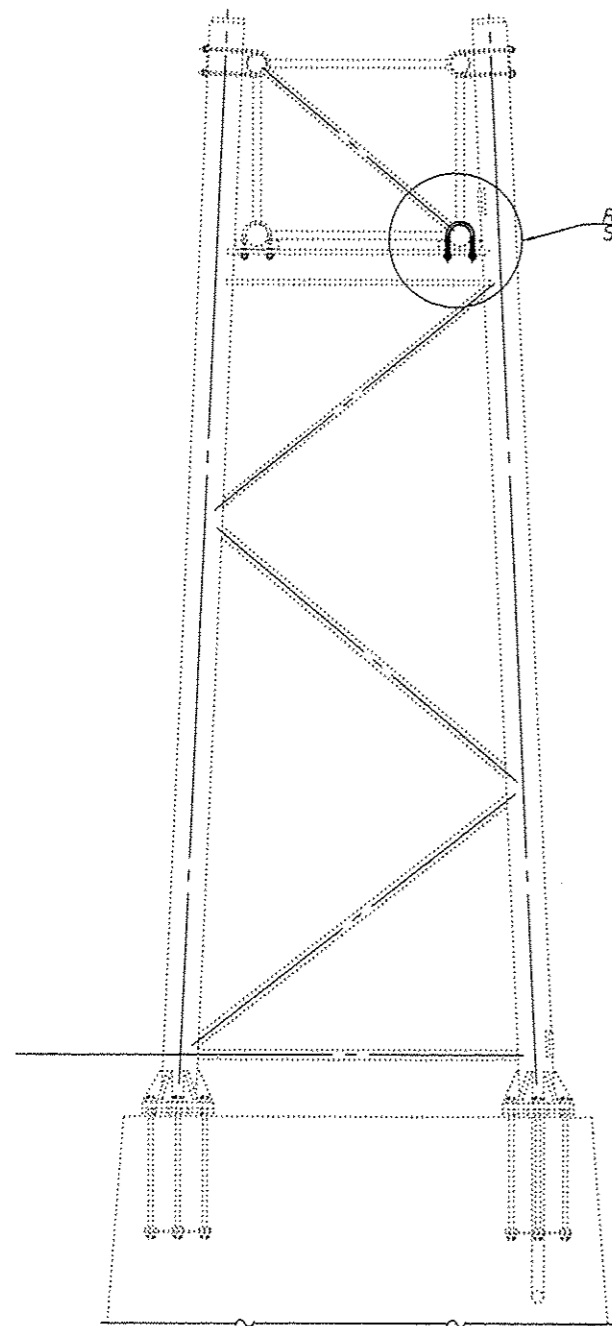


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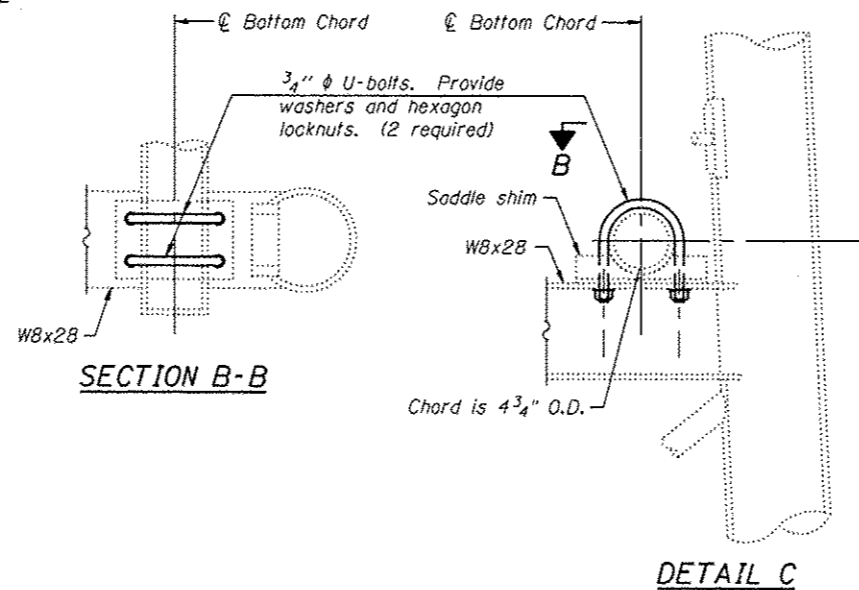
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**MONOTUBE SIGN STRUCTURE**  
**RECONSTRUCTED FOUNDATIONS & DETAILS, LOCATION 1**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01 OVO SIN STR REPL14-30		VARIOUS	47	30
			CONTRACT NO. 46291	
ILLINOIS FED. AID PROJECT				

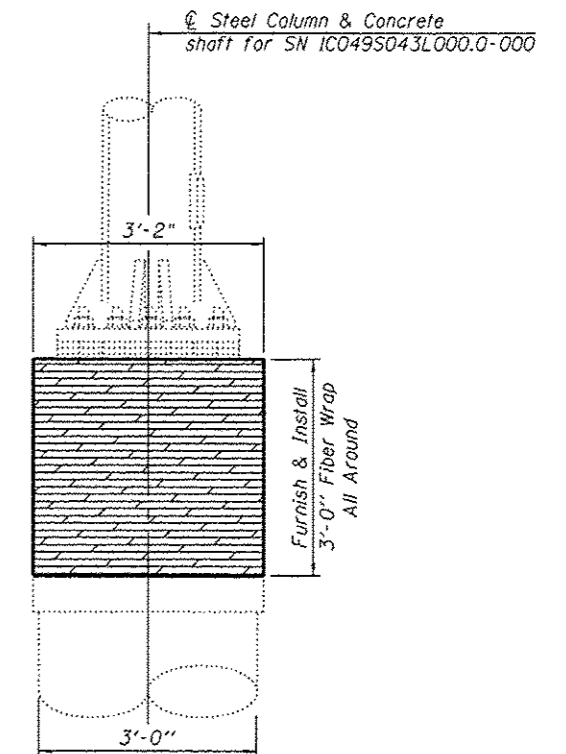


Replace 2 Missing U-Bolts  
See Detail C



SECTION B-B

DETAIL C



ELEVATION VIEW OF FOUNDATION  
LOCATION #14

SIDE ELEVATION LOOKING NORTH AT SOUTH SUPPORT  
FRAME, SN:IS045S056L000.0-000, LOCATION 13

**NOTES**

1. It shall be the Contractor's responsibility to verify all dimensions and conditions existing in the field prior to construction and ordering materials.
2. ..... Indicates Existing Structure.

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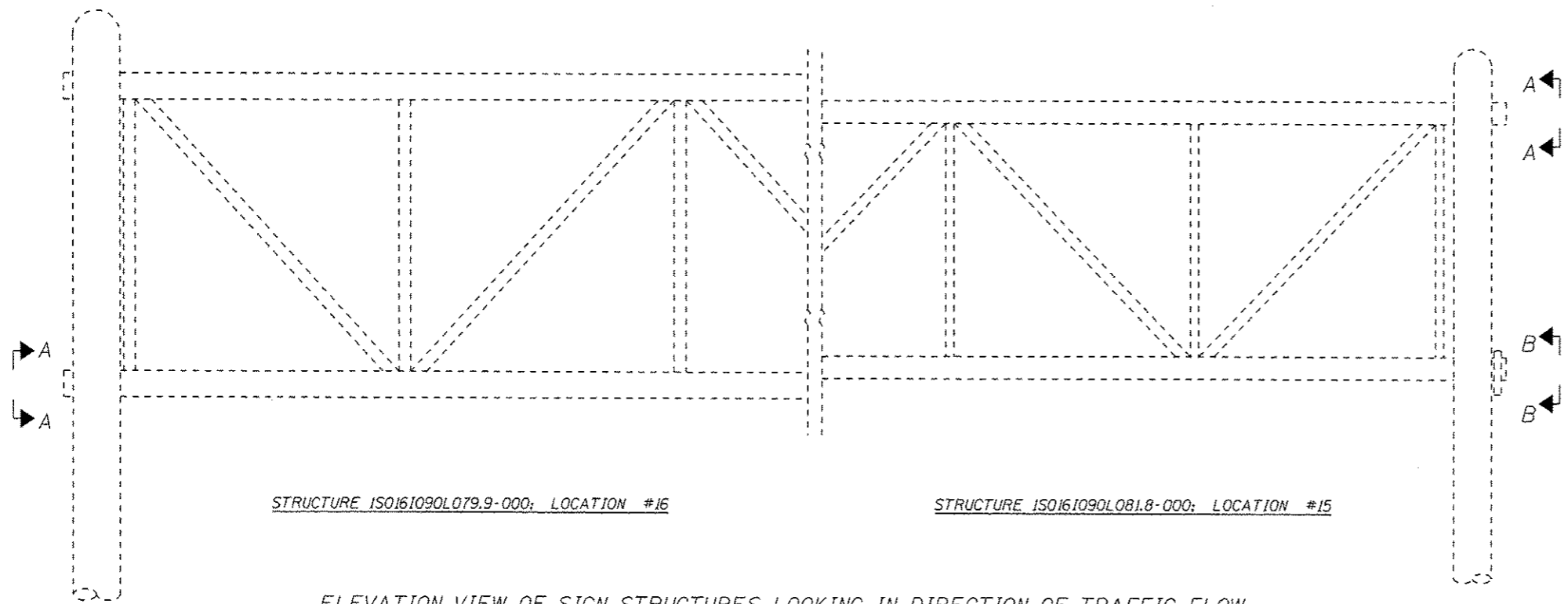
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PLOT DATE =	DRAWN - 08/01/2013	REVISIONS
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SIGN STRUCTURE REPAIRS  
LOCATIONS 13 & 14**

SHEET NO. 522 OF 28 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. DI OVD SIN STR REPL14-30		VARIOUS	47	31
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	



STRUCTURE ISO161090L079.9-000; LOCATION #16

STRUCTURE ISO161090L081.8-000; LOCATION #15

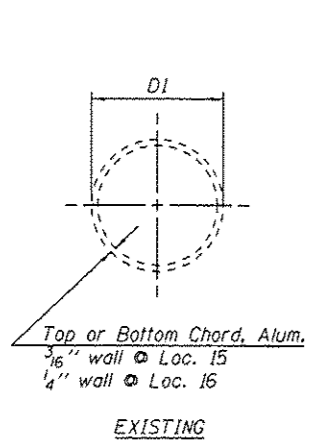
ELEVATION VIEW OF SIGN STRUCTURES LOOKING IN DIRECTION OF TRAFFIC FLOW

**NOTES**

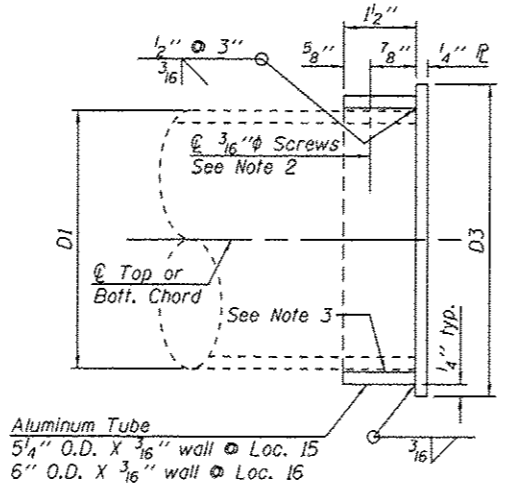
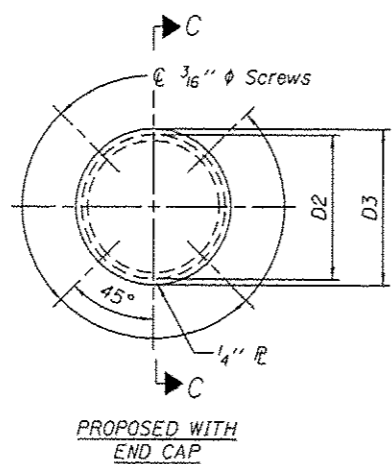
1. Bolts shall be 1/4" diameter Hex Head stainless steel with holes field drilled into stop block. Four bolts are required per cap. One cap is required on front chord.
2. Screws shall be 3/16" diameter stainless steel self threading with holes field drilled into existing chord tubes. Four screws are required per cap. Two caps are required at Location 15 and one cap is required at Location 16 on the back chord.
3. Provide aluminum or stainless steel 1/4" width shim all around to provide snug fit between existing aluminum chord and proposed end cap. Theoretical shim thickness is less than 0.0625". Size (diameter) of existing aluminum chords should be field measured by Contractor to determine required shim thicknesses.
4. It shall be the Contractor's responsibility to verify all dimensions existing in the field prior to construction and ordering materials.

**CAP DIMENSIONS**

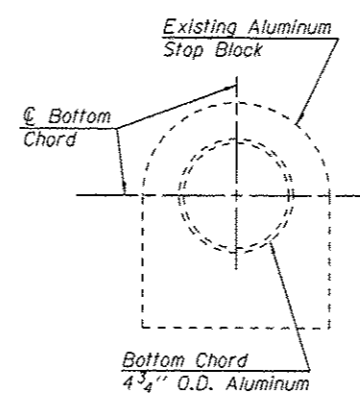
Location	D1	D2	D3
15	4 3/4"	5 1/4"	5 3/4"
16	5 1/2"	6"	6 1/2"



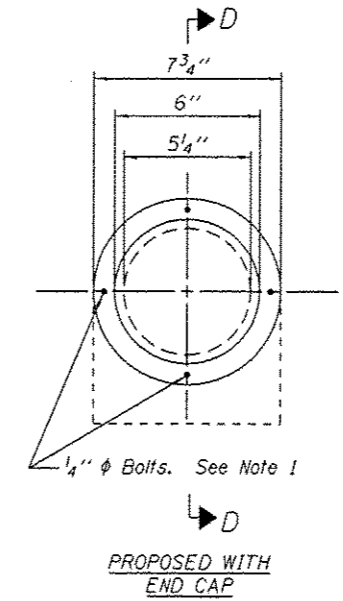
VIEW A-A



SECTION C-C

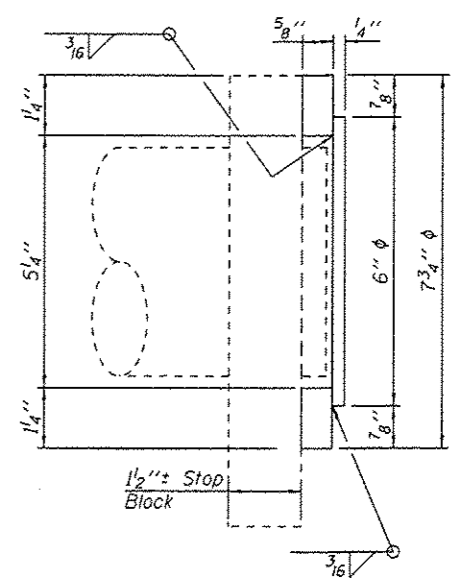


EXISTING



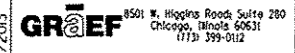
PROPOSED WITH END CAP

VIEW B-B



SECTION D-D

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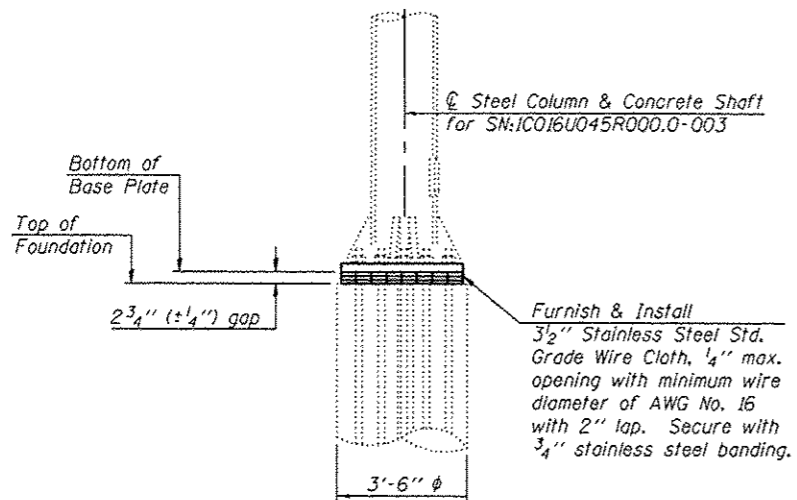
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SIGN STRUCTURE REPAIRS  
END CAPS, LOCATIONS 15 & 16

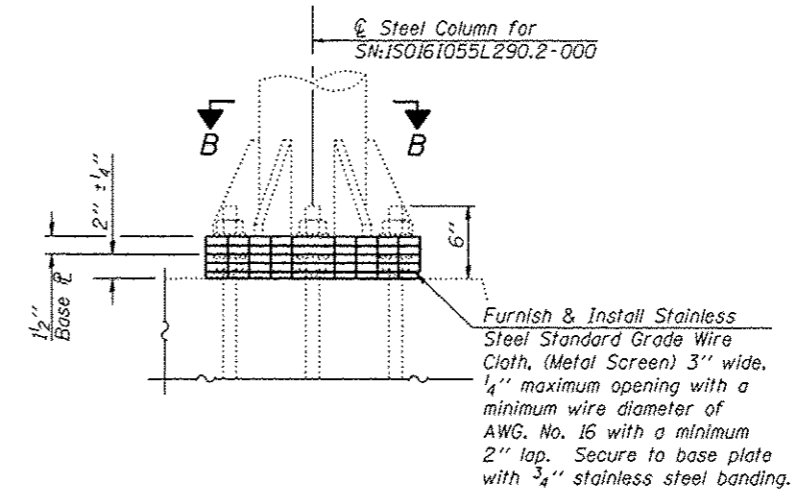
SHEET NO. 523 OF 28 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. D1 OVD SIN STR REPL14-30		VARIOUS	47	32
			CONTRACT NO. 46291	
ILLINOIS FED. AID PROJECT				

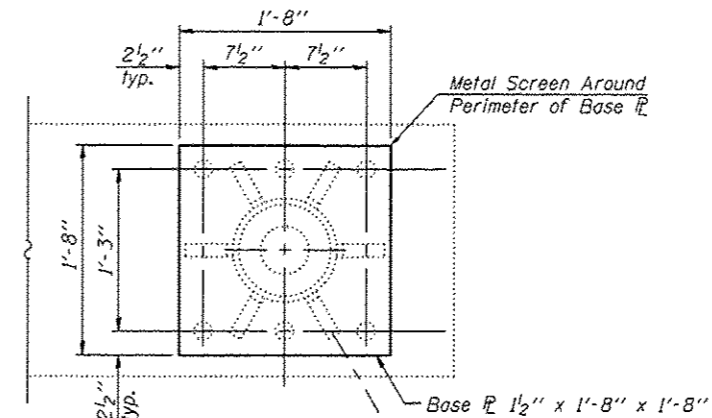




**ELEVATION VIEW OF FOUNDATION  
LOCATION 17**



**SIDE ELEVATION OF LEFT REAR  
COLUMN AND FOUNDATION, LOCATION 18**



**SECTION B-B**

**NOTES**

- It shall be the Contractor's responsibility to verify all dimensions and conditions existing in the field prior to construction and ordering materials.

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SIGN STRUCTURE REPAIRS  
LOCATIONS 17 & 18**

SHEET NO. 524 OF 28 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01 OVD SIN STR REPL14-30		VARIOUS	47	33
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	



LOCATION 3

GSI Job No. 13032

SOIL BORING LOG

Page 1 of 1

Date 5/7/13

ROUTE US-41 (EB) DESCRIPTION IDOT Job No. D-91-233-11 Sign Structures, Deerfield Road EB at US-41 SB Exit LOGGED BY DM

SECTION LOCATION SEC. TWP. RNG. 3rd PM

COUNTY Lake DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

Table with columns for DEPTH, BLOW COUNT, UCS, MOISTURE, and SOIL DESCRIPTION. Includes data for TOPSOIL, CLAY LOAM, SANDY CLAY LOAM, and SANDY LOAM.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-89)



LOCATION 4

GSI Job No. 13032

SOIL BORING LOG

Page 1 of 1

Date 5/7/13

ROUTE US-41 (EB) DESCRIPTION IDOT Job No. D-91-233-11 Sign Structures, Deerfield Road EB at US-41 NB Exit LOGGED BY DM

SECTION LOCATION SEC. TWP. RNG. 3rd PM

COUNTY Lake DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

Table with columns for DEPTH, BLOW COUNT, UCS, MOISTURE, and SOIL DESCRIPTION. Includes data for ASPHALT/CONCRETE, CLAY LOAM, SANDY CLAY LOAM, and CLAYEY SAND.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-89)

Vertical text on the left margin: Z:\PROJECTS\2013\13032\GRAFF.PTB 158-009 WORK ORDER 44, SIGN STRUCTURES\13032 BORING LOGS\13032 LOG.GPJ 6/18/13

Vertical text on the right margin: Z:\PROJECTS\2013\13032\GRAFF.PTB 158-009 WORK ORDER 44, SIGN STRUCTURES\13032 BORING LOGS\13032 LOG.GPJ 6/18/13



LOCATION 8

GSI Job No. 13032

SOIL BORING LOG

Page 1 of 1

Date 5/2/13

ROUTE IL-38 (SB) DESCRIPTION IDOT Job No. D-91-233-11 Sign Structures, York Road SB at IL-38 EB Exit LOGGED BY DM

SECTION LOCATION SEC. TWP. RNG. 3<sup>rd</sup> PM

COUNTY Dupage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 1C022S038R000.0-001 Station	DEPTH (ft)	BLOW S Qu (/ft)	UCS (tsf)	MOIST (%)	Surface Water Elev. n/a ft	Stream Bed Elev. n/a ft	Groundwater Elev.: First Encounter Upon Completion After Hrs. ft	DEPTH (ft)	BLOW S Qu (/ft)	UCS (tsf)	MOIST (%)
12.0" ASPHALT											
CLAY LOAM-brown & gray-stiff to very stiff (Fill)	3							6			
	4	3.0					10	3.7	23		
	5	P					14	B			
	2						7				
	3	2.3		25			12	5.6	21		
CLAY to CLAY LOAM-gray-very stiff to hard (continued)	2						5				
	3	1.8		25			10	4.4	20		
	5	P					13	B			
	2						7				
	3	1.9		20			10	3.0	20		
CLAY to CLAY LOAM-gray-very stiff to hard	2						7				
	3	1.9		20			10	3.0	20		
	2						11	P			
	6						6				
	9	3.0		24			8	3.3	20		
CLAY-gray-stiff to very stiff	6						6				
	9	3.1		23			8	3.3	20		
	11	B					9	B			
	8						8				
	14	8.1		16			14	8.1	16		
SANDY CLAY LOAM-gray-loose	18	B					18	B			
	9						9				
	12	5.9		17			12	5.9	17		
	15	B					15	B			
	End Of Boring @ -35.0'. Boring backfilled with cuttings.										

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)  
BBS, from 137 (Rev. 8-99)



LOCATION 9

GSI Job No. 13032

SOIL BORING LOG

Page 1 of 1

Date 5/10/13

ROUTE I-90 (EB) DESCRIPTION IDOT Job No. D-91-233-11 Sign Structures, I-90 Kennedy Expy EB at Nagle Ave. Exit MP 81.9 LOGGED BY DM

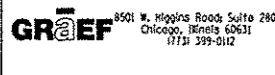
SECTION LOCATION SEC. TWP. RNG. 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 1C016I090R081.9-000 Station	DEPTH (ft)	BLOW S Qu (/ft)	UCS (tsf)	MOIST (%)	Surface Water Elev. n/a ft	Stream Bed Elev. n/a ft	Groundwater Elev.: First Encounter Upon Completion After Hrs. ft	DEPTH (ft)	BLOW S Qu (/ft)	UCS (tsf)	MOIST (%)
13.0" ASPHALT											
SILTY CLAY LOAM-gray-loose	7							5			
	6	1.9		19			10	3.0	14		
	4	B					10	P			
	3						6				
	3	2.2		18			6	2.8	13		
CLAY LOAM-gray-very stiff	3						6				
	3	2.2		18			6	2.8	13		
	6	B					7	B			
	2						5				
	2	1.5		27			7	3.1	16		
SANDY CLAY LOAM-gray-loose	4	B					9	B			
	3						5				
	4	2.9		15			7	2.8	16		
	4	B					9	B			
	2						5				
CLAY-gray-stiff to very stiff	3						5				
	4	2.7		18			7	1.3	25		
	5	B					8	B			
	3						7				
	4	1.2		20			9		20		
SILTY CLAY LOAM-gray-medium dense	4	B					9				
	3						7				
	7	2.4		21			9				
	9	B					9				
	End Of Boring @ -35.0'. Boring backfilled with cuttings.										

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)  
BBS, from 137 (Rev. 8-99)

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USER NAME =	DESIGNED - GSI	REVISED
PLLOT SCALE =	CHECKED -	REVISED
PLLOT DATE =	DRAWN - 08/01/2013	REVISED
	CHECKED -	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BORING LOGS  
LOCATIONS 8 & 9

SHEET NO. S26 OF 28 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	DI OVD SJN STR REPL14-30	VARIOUS	47	35
			CONTRACT NO. 46291	

ILLINOIS FED. AID PROJECT



LOCATION 10

GSI Job No. 13032

SOIL BORING LOG

Page 1 of 1

Date 5/11/13

ROUTE I-90 (EB) DESCRIPTION Kennedy Expy EB at Austin Ave. Exit MP 82.5 LOGGED BY DM

SECTION LOCATION SEC. TWP. RNG. 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

Table with columns for DEPTH, BLOW COUNTS, and SOIL DESCRIPTIONS. Includes data for 6.0" ASPHALT, 7.0" CONCRETE and CLAY-brown & gray-stiff to hard.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208) BBS, from 137 (Rev. 8-99)



LOCATION 11

GSI Job No. 13032

SOIL BORING LOG

Page 1 of 1

Date 5/11/13

ROUTE I-90 (EB) DESCRIPTION Kennedy Expy EB at Lawrence Ave. MP 83.9 LOGGED BY DM

SECTION LOCATION SEC. TWP. RNG. 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

Table with columns for DEPTH, BLOW COUNTS, and SOIL DESCRIPTIONS. Includes data for 6.0" ASPHALT, 9.0" CONCRETE and SAND with GRAVEL-gray-dense.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208) BBS, from 137 (Rev. 8-99)

Vertical text on the left margin: H:\JCS2011\20110502-44\CAD\Site\Site.dgn 5/11/2013 3:57:32 PM

LOCATION 19

PAGE 1 of 1

**Geo Services Inc.**  
 Geotechnical, Environmental & Civil Engineering  
 805 Amberg-Capt. Plaza 204  
 Naperville, Illinois 60563  
 (630) 355-2638

**SOIL BORING LOG**

DATE 8/7/2013  
 LOGGED BY MD  
 GSI JOB No. 13118

ROUTE Il. Route 83 DESCRIPTION Job No. D-91-233-11 Sign Structure, DuPage County, District 1  
 SECTION XX LOCATION SEC 22, T40N, R11E, SE 1/4, 3rd PM; West Frontage Road NB Lane  
 COUNTY DuPage DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

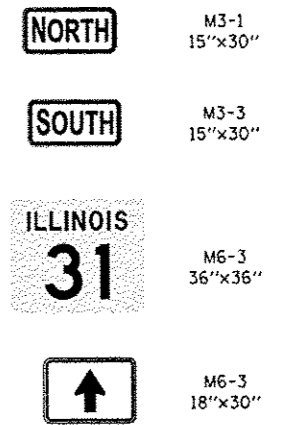
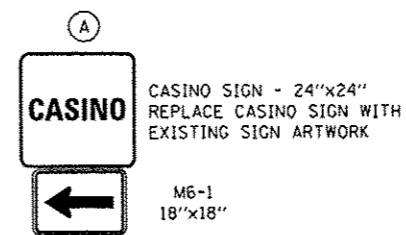
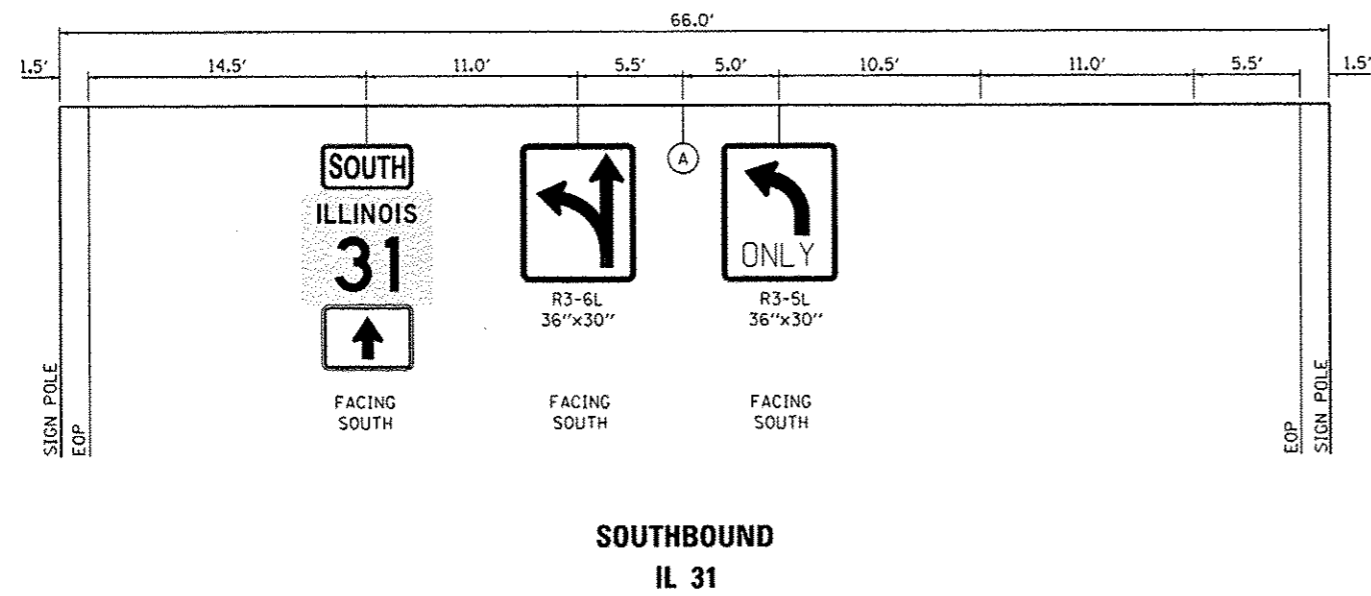
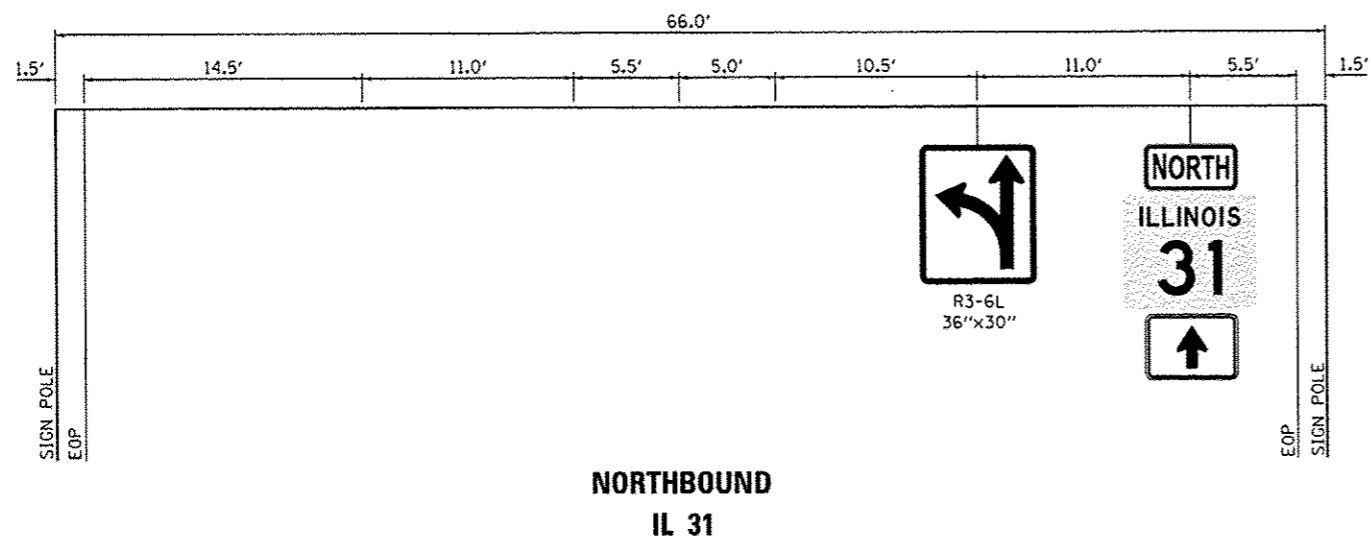
STRUCT. NO. 1C022S083L000.0-003  
 Station 966+60  
 BORING NO. B-1  
 Northing --  
 Easting --  
 Ground Surface Elev. --

DEPTH H (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST T (%)	Surface Water Elev. Stream Bed Elev. Groundwater Elevation: First Encounter Upon Completion After _____ Hrs.	DEPTH H (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST T (%)
9.0" CONCRETE								
	2				3			108
	2				4			
	4	2.5P	22		7	1.8B		21
CLAY LOAM—brown & gray— stiff to hard								
	4		110		2			108
	5				4			
	-5	6	1.0B	18	-25	6	2.4B	20
CLAY to CLAY LOAM— gray—stiff to very stiff								
	4				3			111
	8				6			
	11	4.5P	17		10	2.8B		18
SILTY SAND & GRAVEL— brown—medium dense								
	5				3			110
	10				5			
	-10	11	8		-30	9	3.1B	19
CLAY to CLAY LOAM— gray—stiff to very stiff								
	6		114					
	8							
	9	3.2B	17					
	4		109		3			109
	6				6			
	-15	8	3.5B	19	-35	9	2.8B	19
End Of Boring @ -35.0' Hollow Stem Augers CME Automatic Hammer								
	3		108					
	4							
	6	3.0B	19					
	2		105					
	3							
	-20	6	1.5P	22	-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B—Blow, S—Shear, P—Penetrometer) ST—Shear Tube Sample VS—Vane Shear Test  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
 NR—No Recovery

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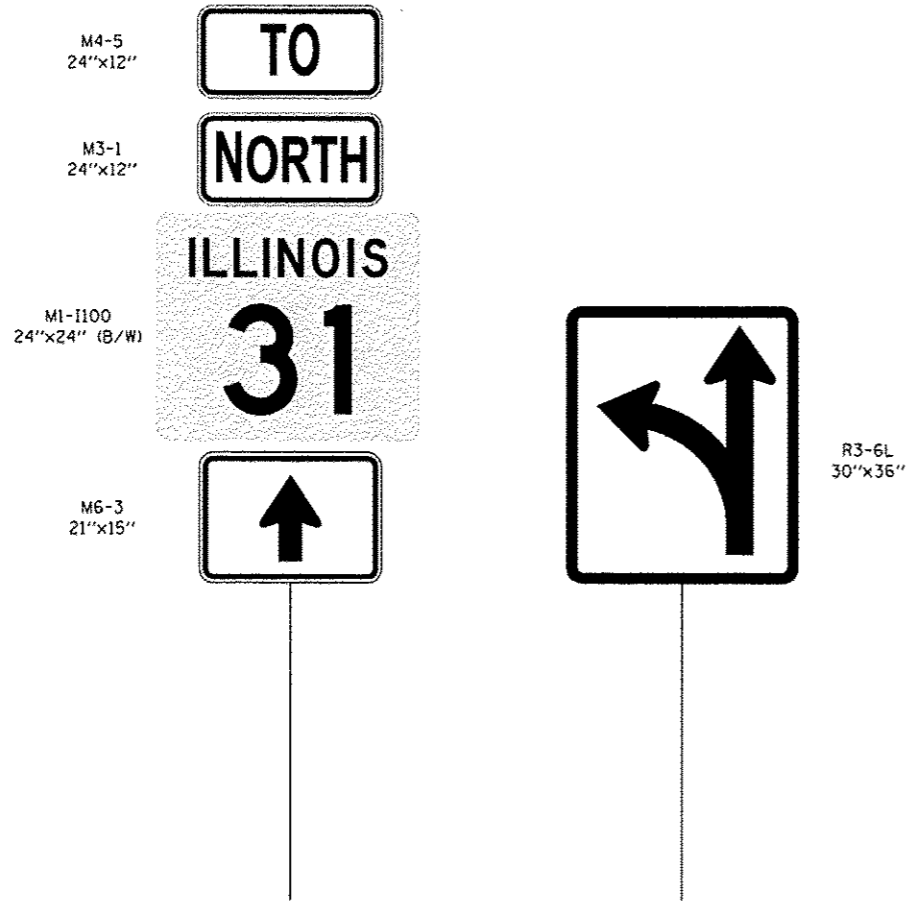
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<b>GRAF</b> 8501 N. Higgins Road Suite 280 Chicago, Illinois 60631 (773) 399-0112	USER NAME = 1485	DESIGNED - EF	REVISED -
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	PLDT DATE = 8/1/2013	CHECKED - RS	REVISED -
		DATE - 08/01/2013	REVISED -

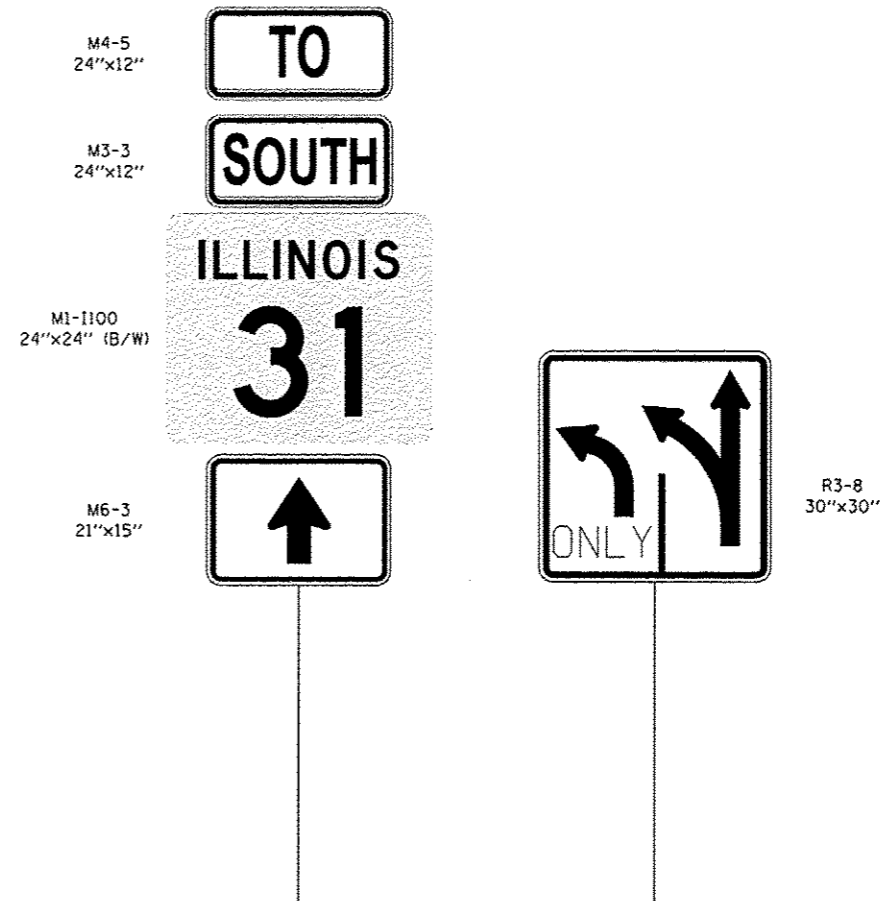
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURE REPAIR & REPLACEMENT			
SIGN PANEL PLAN - LOCATION 1 NEW			
SCALE: N.T.S.	SHEET 1	OF 9 SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01	OVD SIN STR REPL14-30	VARIOUS	53	38
ILLINOIS FED. AID PROJECT			CONTRACT NO. 46291	

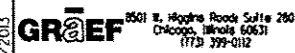


**NORTHBOUND IL 31  
TEMPORARY CONSTRUCTION SIGNING**



**SOUTHBOUND IL 31  
TEMPORARY CONSTRUCTION SIGNING**

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USER NAME = 1485	DESIGNED - EF	REVISED -
DRAWN - EF	CHECKED - RS	REVISED -
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PLOT DATE = 8/1/2013		

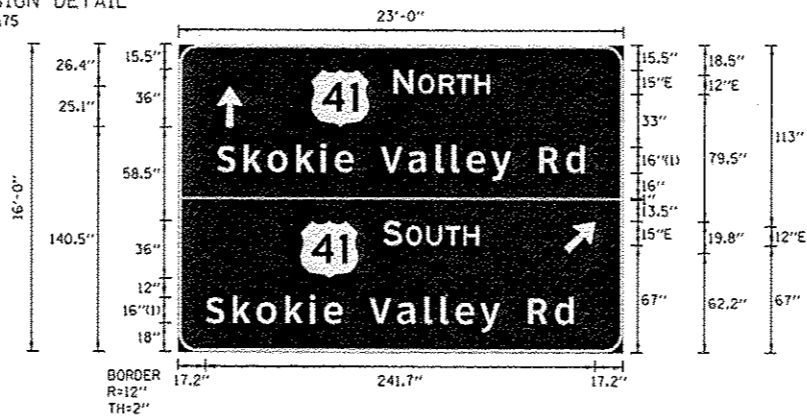
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURE REPAIR & REPLACEMENT  
SIGN PANEL PLAN - LOCATION 1 TEMPORARY SIGNS**

SCALE: N.T.S. SHEET 2 OF 9 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01	0VD SIN STR REPL14-30	VARIOUS	53	39
ILLINOIS FED. AID PROJECT			CONTRACT NO. 46291	

**SIGN DETAIL**  
1:75



SIGN NUMBER	EB-TR-03
WIDTH x HGHT.	23'-0" x 16'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: ZZ Sheeting COLOR: Green / Green
LEGEND/BORDER	TYPE: ZZ Sheeting COLOR: White/White

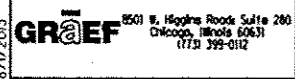
AN_Type A	0	23.9	140.5	15.9	25.1
ML_4	0	82.5	140.5	36	36
AN_Type A	315	239.1	62.2	15.9	25.1
ML_4	0	75.9	46	36	36

FONT:  
(1) ClearviewHwy-5-W  
  
Panel Style: guide\_fwv\_Intermediate.ssi  
M.U.T.C.O., 2009 Edition

Panel Style: guide\_fwv\_Intermediate.ssi  
Dimensions are in inches, tenths Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)															LENGTH	SERIES/SIZE
N	O	R	T	H												E 2000
133.5	148.8	161.7	172.7	183.8											59.9	15,12
S	K	O	K	I	E	V	A	I	L	E	Y	R	D		228.3	ClearviewHwy-5-W
23.9	40.6	55.4	73.2	88.4	97.2	109	125.7	142.7	159.7	169.6	178.8	194.1	206.7	223.8	240.5	16/13
S	O	U	T	H												E 2000
126.9	141.3	154.2	165.9	177											59.8	15,12
S	K	O	K	I	E	V	A	I	L	E	Y	R	D		228.3	ClearviewHwy-5-W
17.2	33.9	48.7	66.5	81.7	90.5	102.3	119	136	153	162.9	172.1	187.4	200	217.1	233.8	16/13

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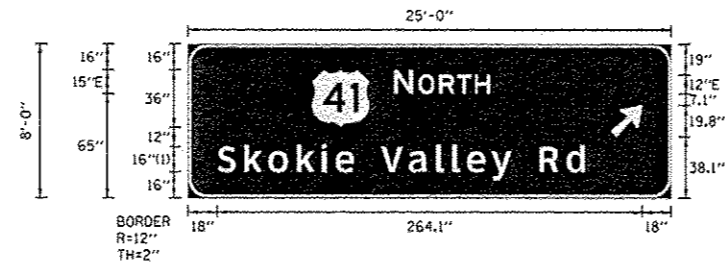
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	DATE - 08/01/2013	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURE REPAIR & REPLACEMENT**  
**SIGN PANEL PLAN - LOCATION 3**  
SCALE: N.T.S. SHEET 3 OF 9 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. DI OVD SIN STR REPL14-30		VARIOUS	53	40
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	

SIGN DETAIL  
1:75



FONT:  
(1) ClearviewHwy-5-W

Panel Style: guide.fwy\_intermediate.ssi  
M.U.T.C.D.: 2009 Edition

Panel Style: guide.fwy\_intermediate.ssi  
Dimensions are in Inches.tenths

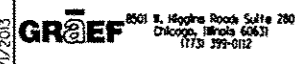
Letter locations are panel edge to lower left corner

SIGN NUMBER	EB-TR-05
WIDTH x HIGHT	25'-0" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: ZZ Sheeting COLOR: Green
LEGEND/BORDER	TYPE: ZZ Sheeting COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
ML_4	0	76.6	44	36	36
AR_Type A	315	262.3	38.1	15.3	25.1

LETTER POSITIONS (X)													LENGTH	SERIES/SIZE			
N	O	R	T	H											E 2000		
127.7	143	155.8	166.8	177.9											60	15,12	
S	K	O	K	I	E	V	O	L	I	E	Y	R	D			ClearviewHwy-5-W	
18	34.7	49.5	67.3	82.5	91.3	103.1	119.8	136.8	153.8	163.7	172.9	188.2	200.8	217.9	234.6	228.3	16/13

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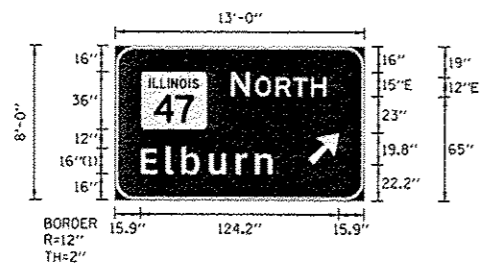
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PLOT SCALE = 10.0000' / in.	DATE - 08/01/2013	REVISED -
PLOT DATE = 8/1/2013		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURE REPAIR & REPLACEMENT			
SIGN PANEL PLAN - LOCATION 4			
SCALE: N.T.S.	SHEET 4	OF 9 SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01	OVD SIN STR REPL14-30	VARIOUS	53	41
				CONTRACT NO. 46291
ILLINOIS FED. AID PROJECT				

SIGN DETAIL  
1:75



SIGN NUMBER	EB-TR-07
WIDTH x HGHT.	13'-0" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: ZZ Sheeting COLOR: Green
LEGEND/BORDER	TYPE: ZZ Sheeting COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
MI-1100A-2	0	15.9	44	41.1	36
AK_Type A	315	120.3	22.2	15.9	25.1

FONT:  
(1) ClearviewHwy-5-W  
  
Panel Style: guide\_fwv\_intermediate.sst  
M.U.T.C.D.: 2009 Edition

Panel Style: guide\_fwv\_intermediate.sst  
Dimensions are in inches, tenths Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)											LENGTH	SERIES/SIZE		
N	O	R	T	H									E 2000	
72.1	87.4	100.2	111.3	122.3									59.9	15.12
E	I	D	U	R	N									ClearviewHwy-5-W
15.9	31.4	41.3	58.3	75.3	87.3								82.5	16/13

SIGN DETAIL  
1:75



SIGN NUMBER	SB-BR-09
WIDTH x HGHT.	19'-0" x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: ZZ Sheeting COLOR: Green
LEGEND/BORDER	TYPE: ZZ Sheeting COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
MI-1	0	59.5	70	36	36
MI-1100A-2	0	111.5	70	41.1	36

FONT:  
(1) ClearviewHwy-5-W  
  
Panel Style: guide\_fwv\_intermediate.sst  
M.U.T.C.D.: 2009 Edition

Panel Style: guide\_fwv\_intermediate.sst  
Dimensions are in inches, tenths Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)											LENGTH	SERIES/SIZE			
E	A	S	T											E 2000	
167.7	180.5	194	205.1											46.4	15.12
T	O														E 2000
18	31.4													26	15
C	H	I	C	A	G	O									ClearviewHwy-5-W
54.5	77.4	94.2	103.1	117.6	134	151.1								103.9	16/13
N	E	X	T		L	E	F	T							EM 2000
46.5	63.9	78	93.7	105.5	121.5	135.9	151.1	164.7						130.1	16

3:57:44 PM

**GROEF**  
2001 E. Higgins Road, Suite 200  
Chicago, Illinois 60631  
(773) 399-0112

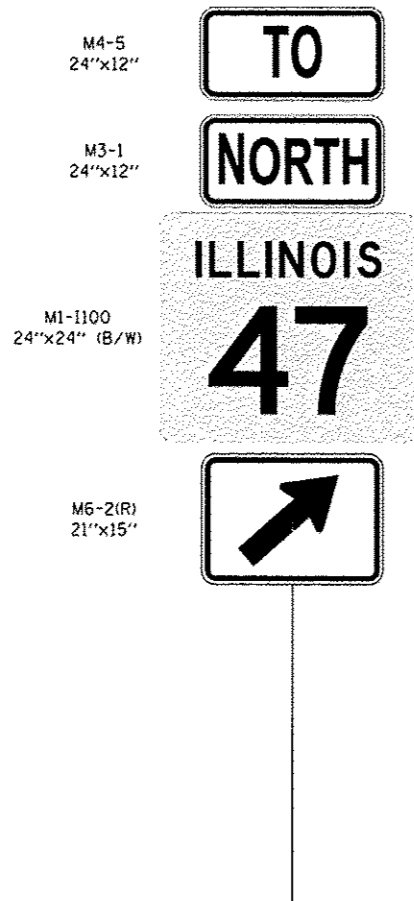
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

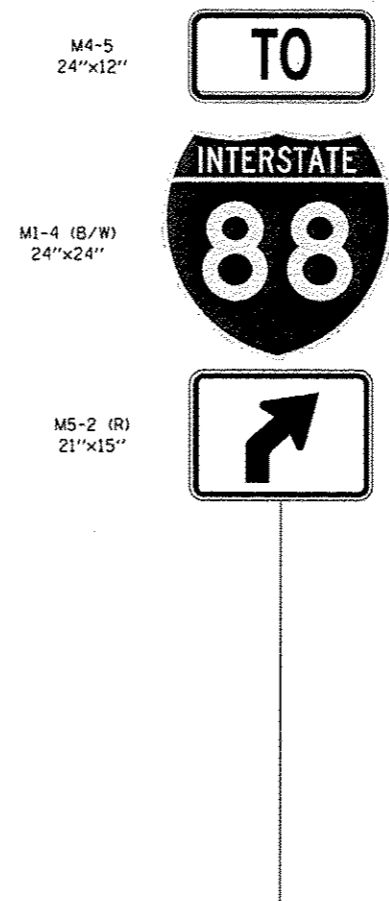
**OVERHEAD SIGN STRUCTURE REPAIR & REPLACEMENT  
SIGN PANEL PLAN - LOCATION 5 & 6 PROPOSED**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01	OVD SIN STR REPL14-30	VARIOUS	53	42
CONTRACT NO. 46291				
ILLINOIS FED. AID PROJECT				

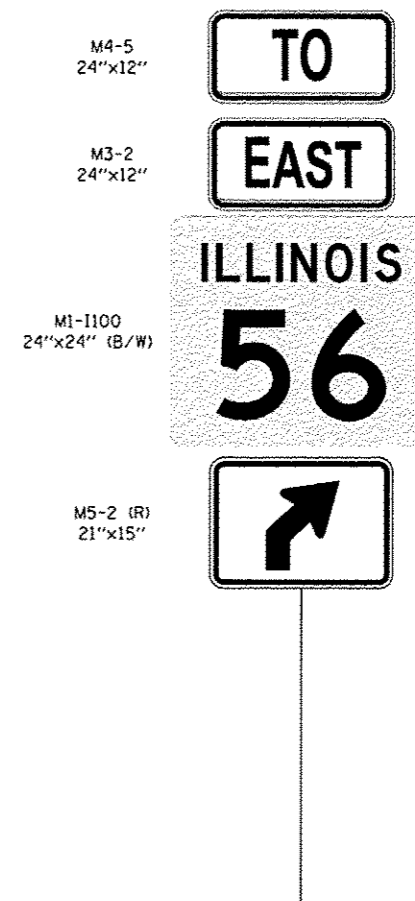
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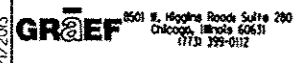
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NORTHBOUND IL 47  
TEMPORARY INFORMATION SIGNING



LOCATION 6 (1B045S056L000.0-000)  
EASTBOUND IL 88  
TEMPORARY INFORMATION SIGNING



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USER NAME = 1485	DESIGNED - EF	REVISED -
	DRAWN - EF	REVISED -
PLOT SCALE = 10,0000' / 1"	CHECKED - RS	REVISED -
PLOT DATE = 8/1/2013	DATE - 08/01/2013	REVISED -

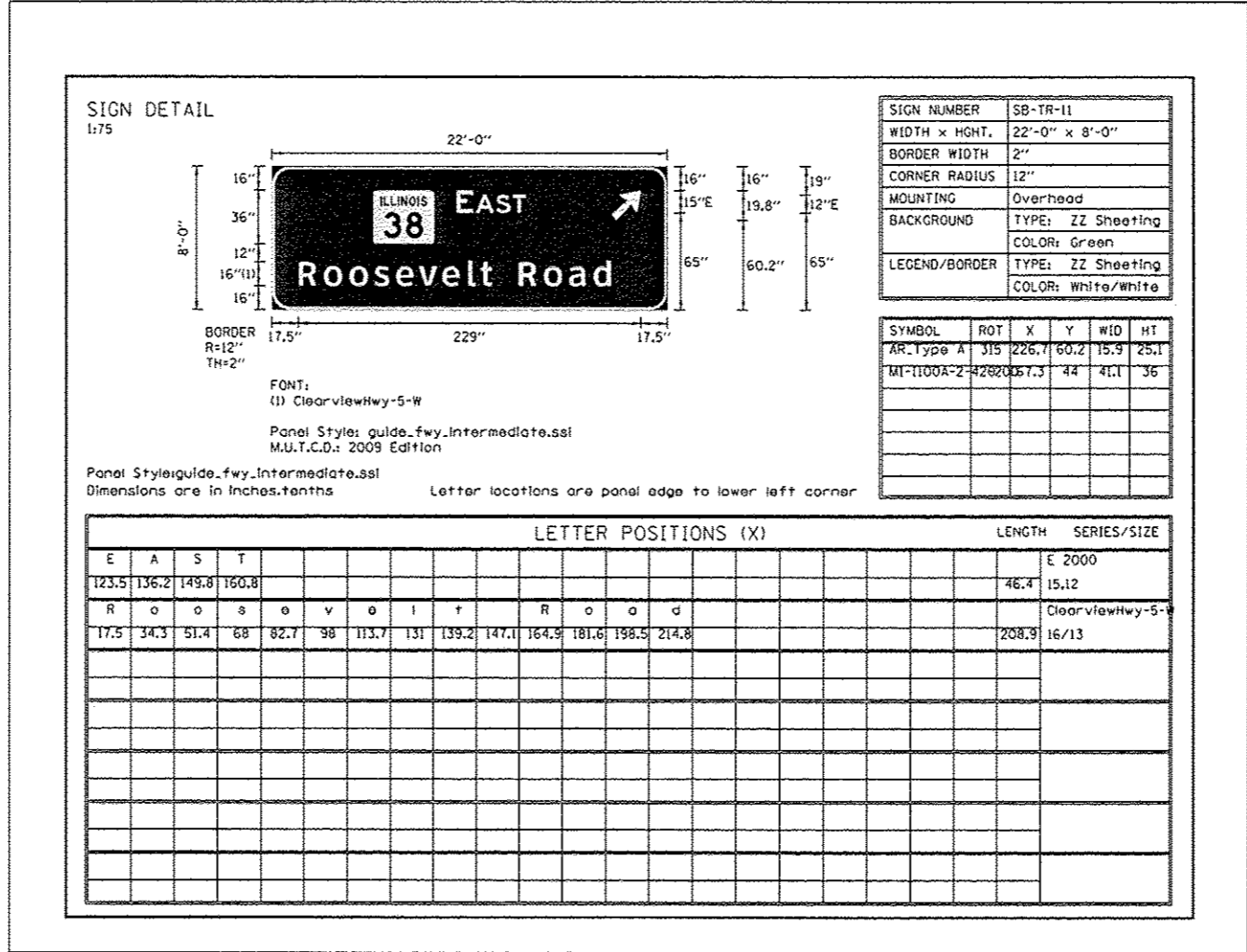
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURE REPAIR & REPLACEMENT			
SIGN PANEL PLAN - LOCATION 5 & 6 TEMPORARY			
SCALE: N.T.S.	SHEET 6	OF 9 SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 01 OVD SIN STR REPL14-30		VARIOUS	53	43
CONTRACT NO. 46291			ILLINOIS FED. AID PROJECT	



SFILES 8/17/2013 3:57:45 PM



<b>GRÖEF</b> 2501 N. High Road, Suite 290 Chicago, Illinois 60631 (773) 399-0112	USER NAME = 1485	DESIGNED - EF	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>OVERHEAD SIGN STRUCTURE REPAIR &amp; REPLACEMENT SIGN PANEL PLAN - LOCATION 8</b>			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 10.0000' / in.	CHECKED - RS	REVISED -		SCALE: N.T.S.	SHEET 7	OF 9 SHEETS	STA.	TO STA.	VAR. 01 OVD SIN STR REPL14-30	VARIOUS	53	44
	PLOT DATE = 8/1/2013	DATE - 08/01/2013	REVISED -									CONTRACT NO. 46291	

ILLINOIS FED. AID PROJECT

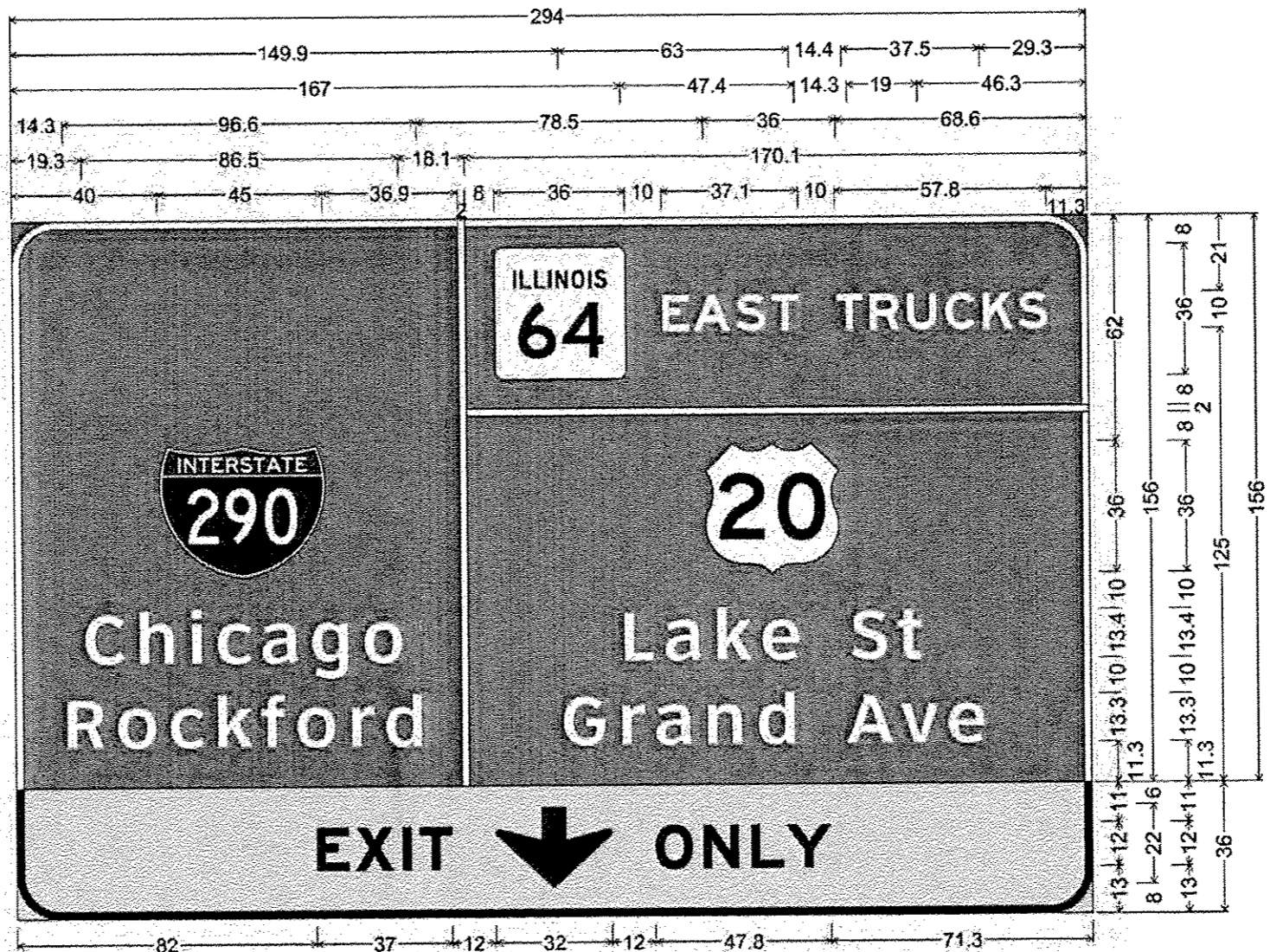


9.0" Radius, 2.0" Border, White on Green;  
 "EXIT" E Mod 2K; "82" E Mod 2K; "B" E Mod 2K;  
 9.0" Radius, 2.0" Border, White on Green;  
 "Bryn Mawr" ClearviewHwy-5-W-R; "Ave" ClearviewHwy-5-W-R; Arrow Custom - 24.3" 45";

Table of distances between letter and object lefts.

	E	X	I	T	8	2	B	
26.1	7.1	8.6	3.1	17.9	12.2	17.2	9.8	12.0
10.4	B	r	y	n	M	a	w	r
	8.3	4.6	7.3	14.2	9.5	7.2	10.9	11.7
	A	v	e					
32.7	8.2	7.4	5.9	59.8				

8/1/2013 3:57:45 PM

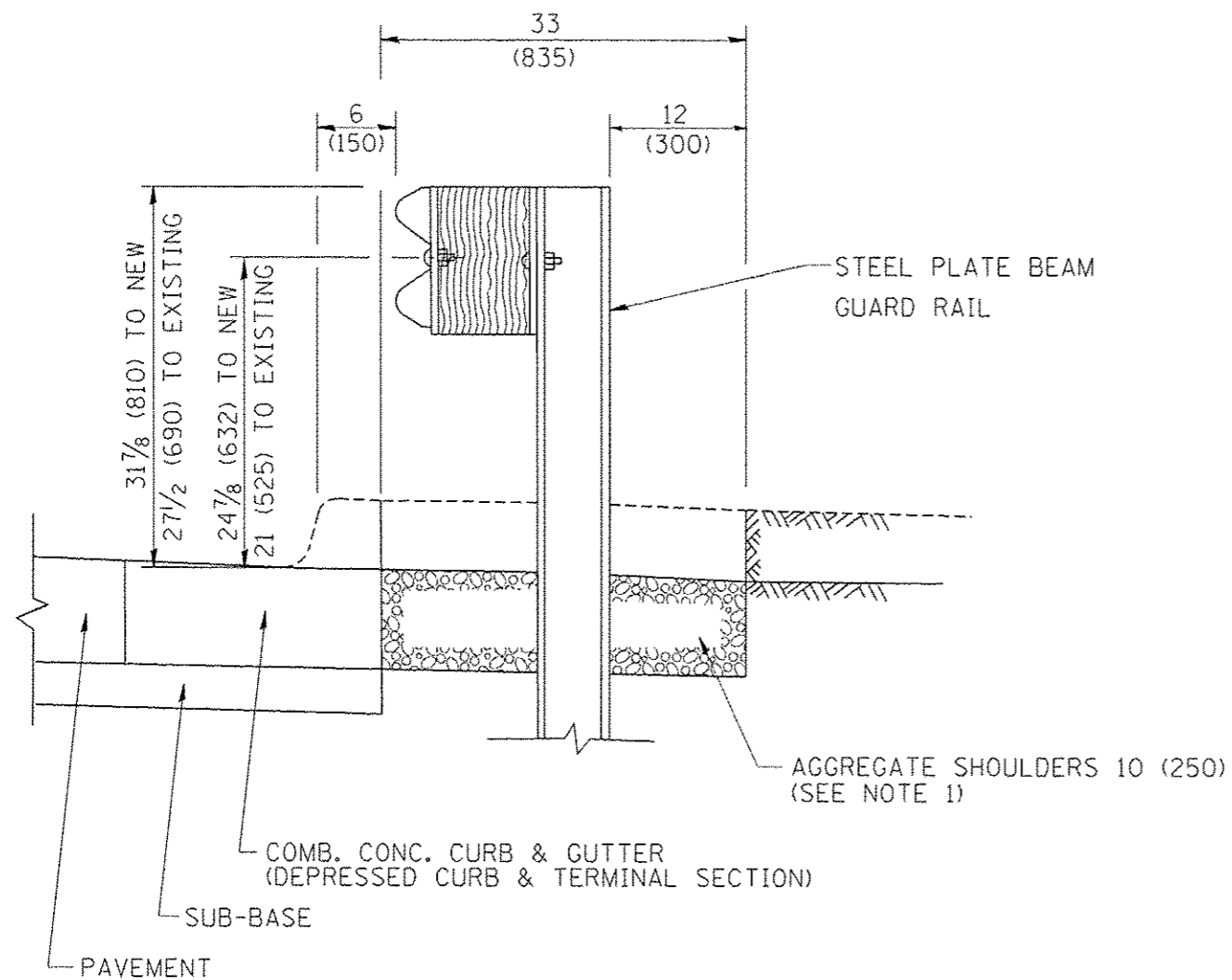


12.0" Radius, 2.0" Border, White on Green;  
 "Chicago" ClearviewHwy-5-W; "Rockford" ClearviewHwy-5-W; "EAST TRUCKS" E Mod 2K;  
 "Lake St" ClearviewHwy-5-W; "Grand Ave" ClearviewHwy-5-W;  
 12.0" Radius, 2.0" Border, Black on Yellow;  
 "EXIT" E Mod 2K; Down Arrow 22.0" 270°; "ONLY" E Mod 2K;  
 Table of distances between letter and object lefts.

40.0	81.9	10.0	46.0	8.5	11.6	9.6	17.4	9.3	10.1	10.5	10.3	9.5	8.1	11.3
19.3	C	h	i	c	a	g	o							
14.3	R	o	c	k	f	o	r	d	20					
167.0	L	a	k	e	s	t								
149.9	G	r	a	n	d	A	v	e						
82.0	E	X	I	T	↓	O	N	L	Y					

WIDTH X HEIGHT	24' x 16'
MOUNTING	OVERHEAD
BACKGROUND	TYPE: Z2 SHEETING COLOR: GREEN - 3M 4097
LEGEND/BORDER	TYPE: Z2 SHEETING COLOR: WHITE - 3M 4090

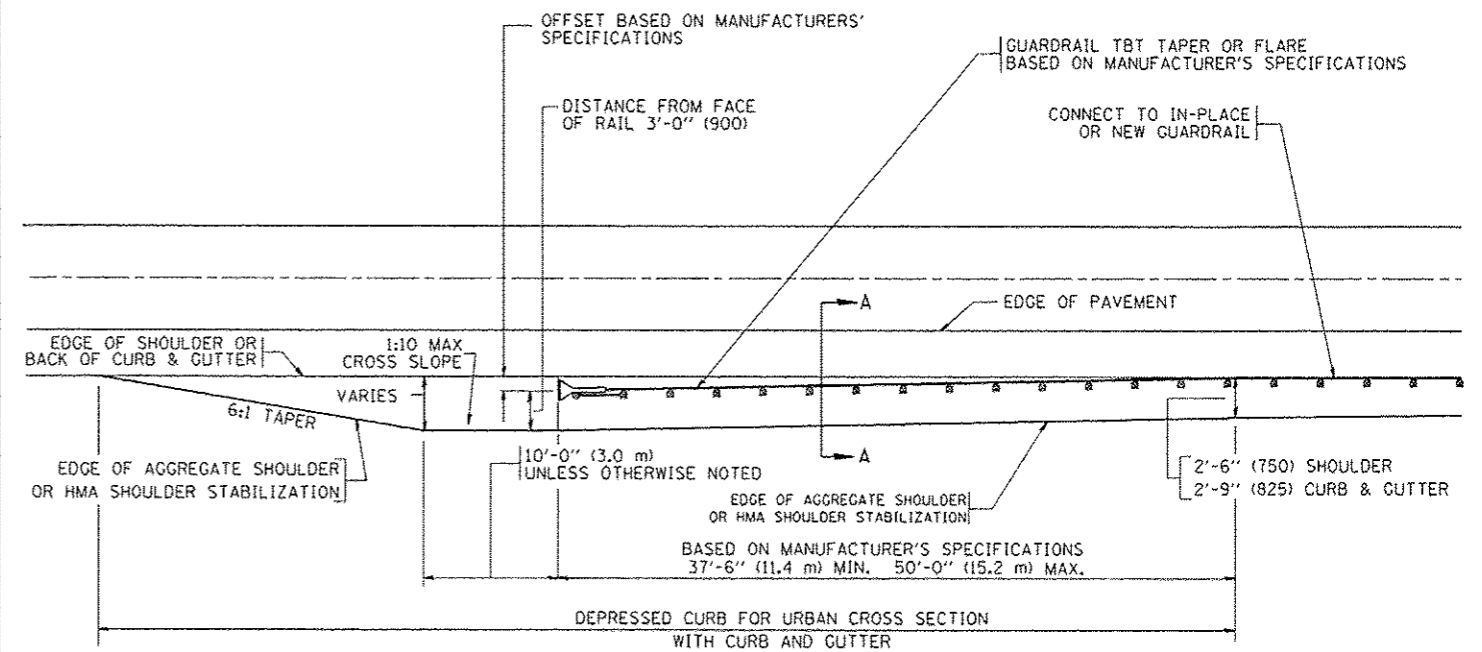
\*\* SIGN DIMENSIONS ARE IN INCHES



SECTION A-A

- NOTES:
1. THE AGGREGATE SHOULDER, 10" OR HMA SHOULDER, 6" (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
  2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
  3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

**DETAILS FOR STEEL PLATE BEAM  
GUARD RAIL ADJACENT TO CURB AND GUTTER  
[FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]**



**DEPRESSED CURB AND GUTTER AND  
SHOULDER TREATMENT AT TBT TY. 1 SPL.**

BASIS OF PAYMENT: HMA SHOULDERS 6" (150) (IF REQUIRED) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SHOULDERS 6" (150 mm)".

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL  
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

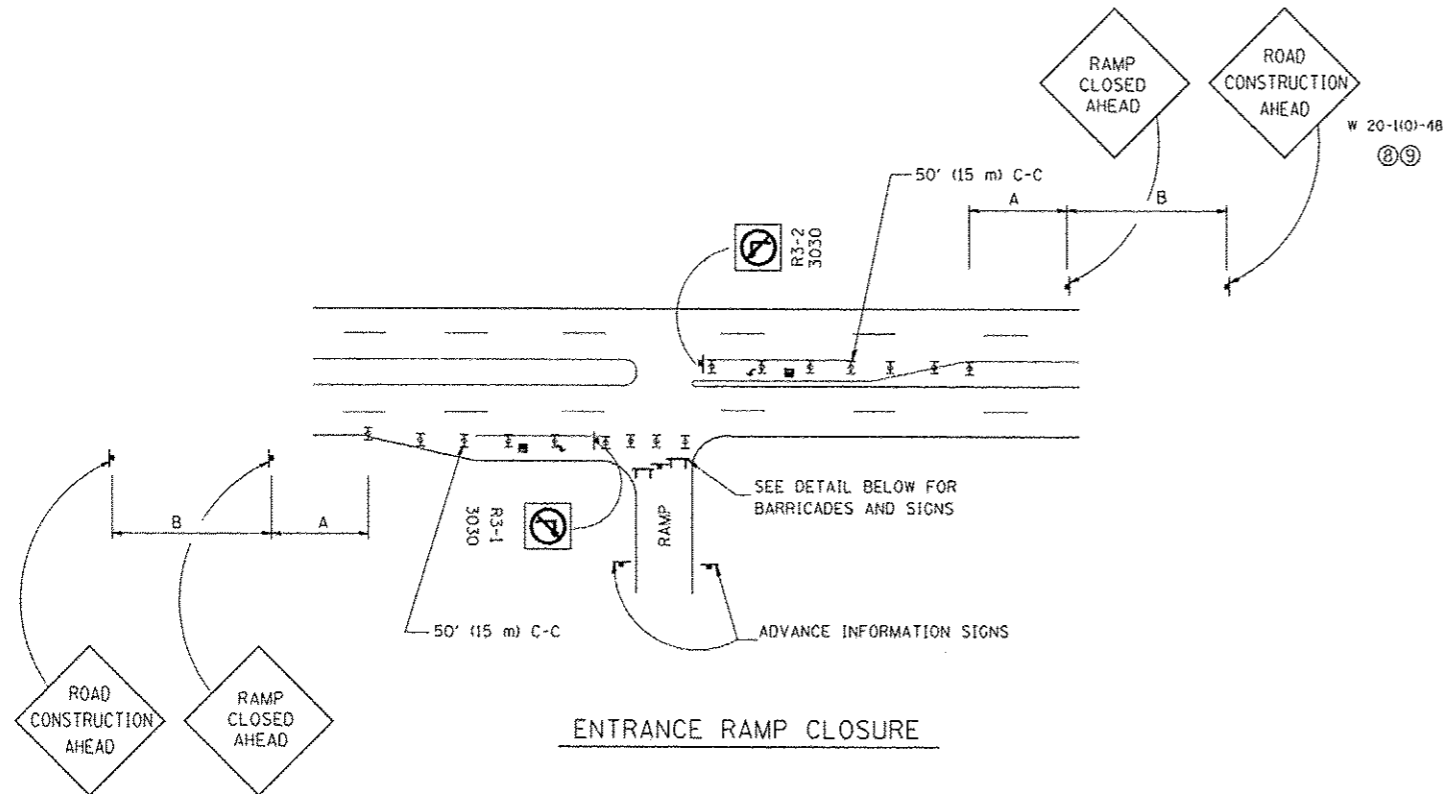
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c:\pwwork\pwwork\DRIVAKOSGN\08188315\08188315.dgn		DRAWN -	REVISED - R. BORO 01-01-07
	PLOT SCALE = 1/8" = 1' / IN.	CHECKED -	REVISED - R. BORO 12-08-2008
	PLOT DATE = 9/21/2009	DATE - 09-22-90	REVISED - R. BORO 09-14-2009

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DETAILS FOR DEPRESSED CURB & GUTTER AND  
SHOULDER TREATMENT AT TBT TY 1 SPL.**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	DI OVD SIN STR REPL 14-30	VARIOUS	53	47
BD600-10 (BD 34)		CONTRACT NO. 46291		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



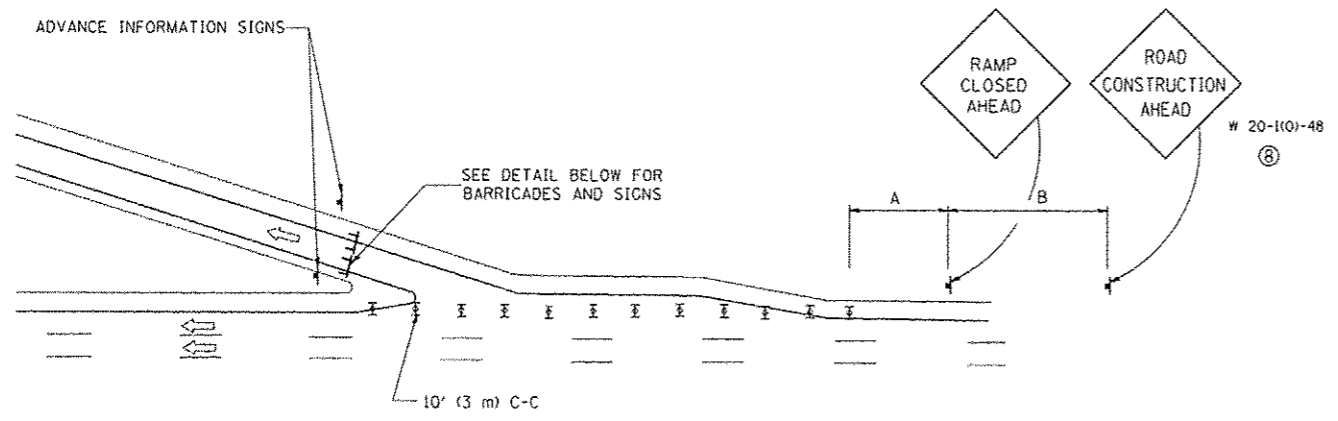
**ENTRANCE RAMP CLOSURE**

**SIGN SPACING TABLE**

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY ≤24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL ≥45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	150' (45 m)	150' (45 m)

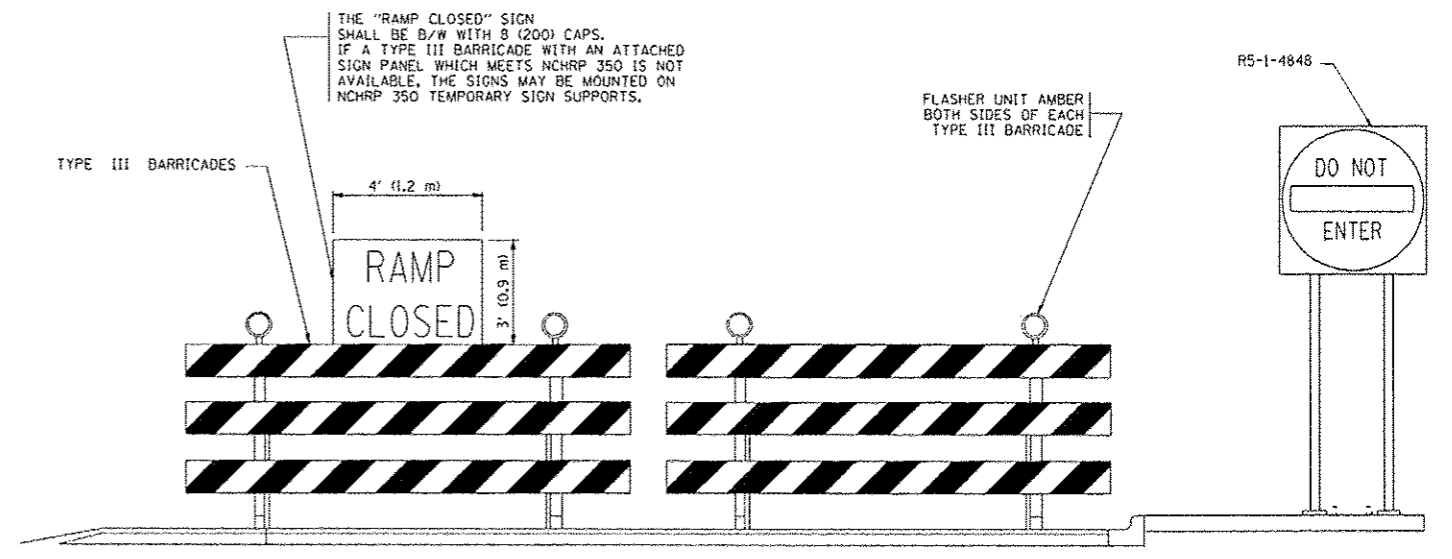
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.

W 20-1101-48 (8) (9)

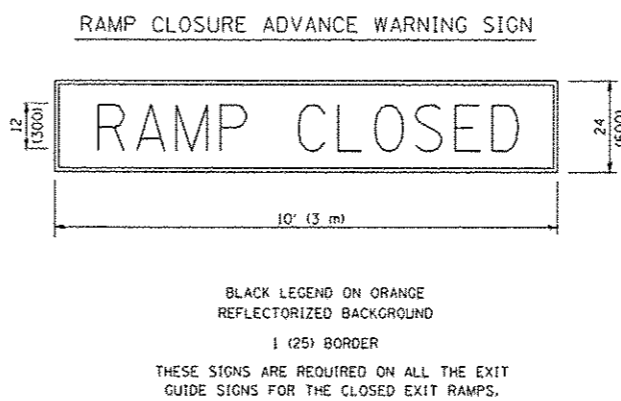


**EXIT RAMP CLOSURE**

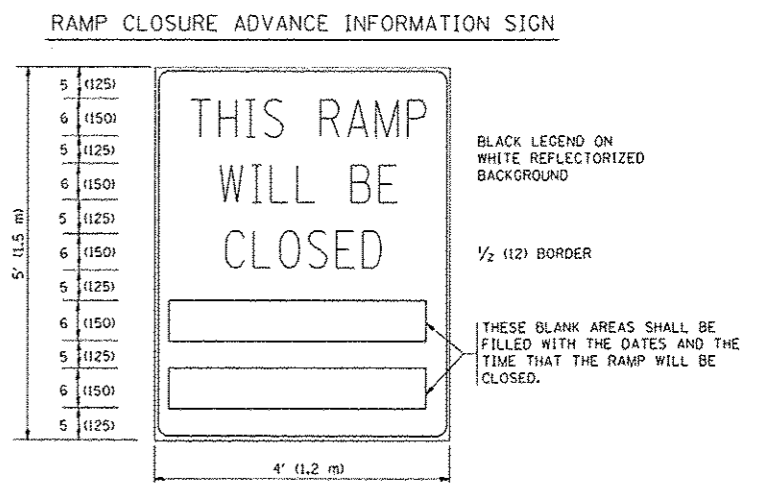
- SYMBOLS**
- ⌈ TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
  - ⌈ TYPE III BARRICADE WITH FLASHING LIGHT



**DETAIL FOR REQUIRED BARRICADES & SIGNS**



BLACK LEGEND ON ORANGE REFLECTORIZED BACKGROUND  
1 (25) BORDER  
THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR THE CLOSED EXIT RAMPS.



THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

**GENERAL NOTES:**

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED.
- ⑤ THE SIGNING AND BARRICADEING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED TWENTY FOUR (24) HOURS IN LENGTH.
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED ON CLOSURES LESS THAN 24 HOURS IN DURATION.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\distrd\22x34\1c88.dgn	USER NAME = jayso	DESIGNED - DWS	REVISED - DWS/JAF 12-02
		DRAWN -	REVISED - JAF 02-06
	PLOT SCALE = 3/8" = 1' / IN.	CHECKED -	REVISED - SPB 01-07
	PLOT DATE = 11/3/2010	DATE - 02-03	REVISED - SPB 12-09

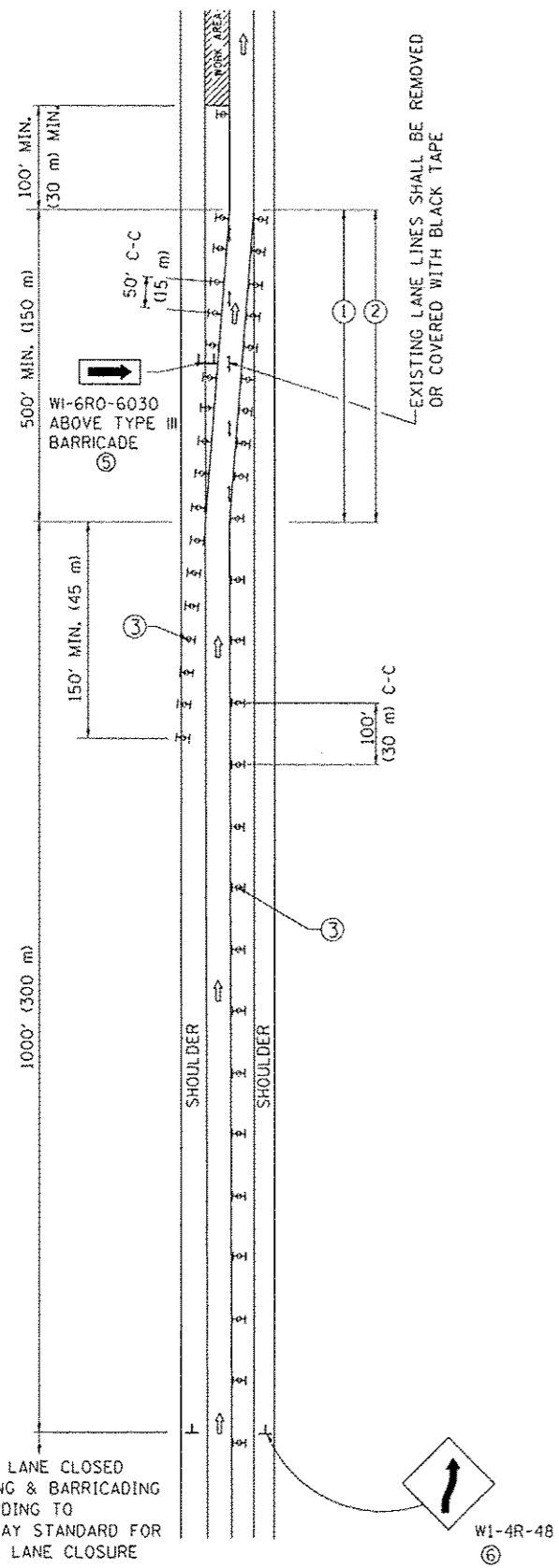
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**FREEWAY ENTRANCE AND EXIT RAMP  
CLOSURE DETAILS**

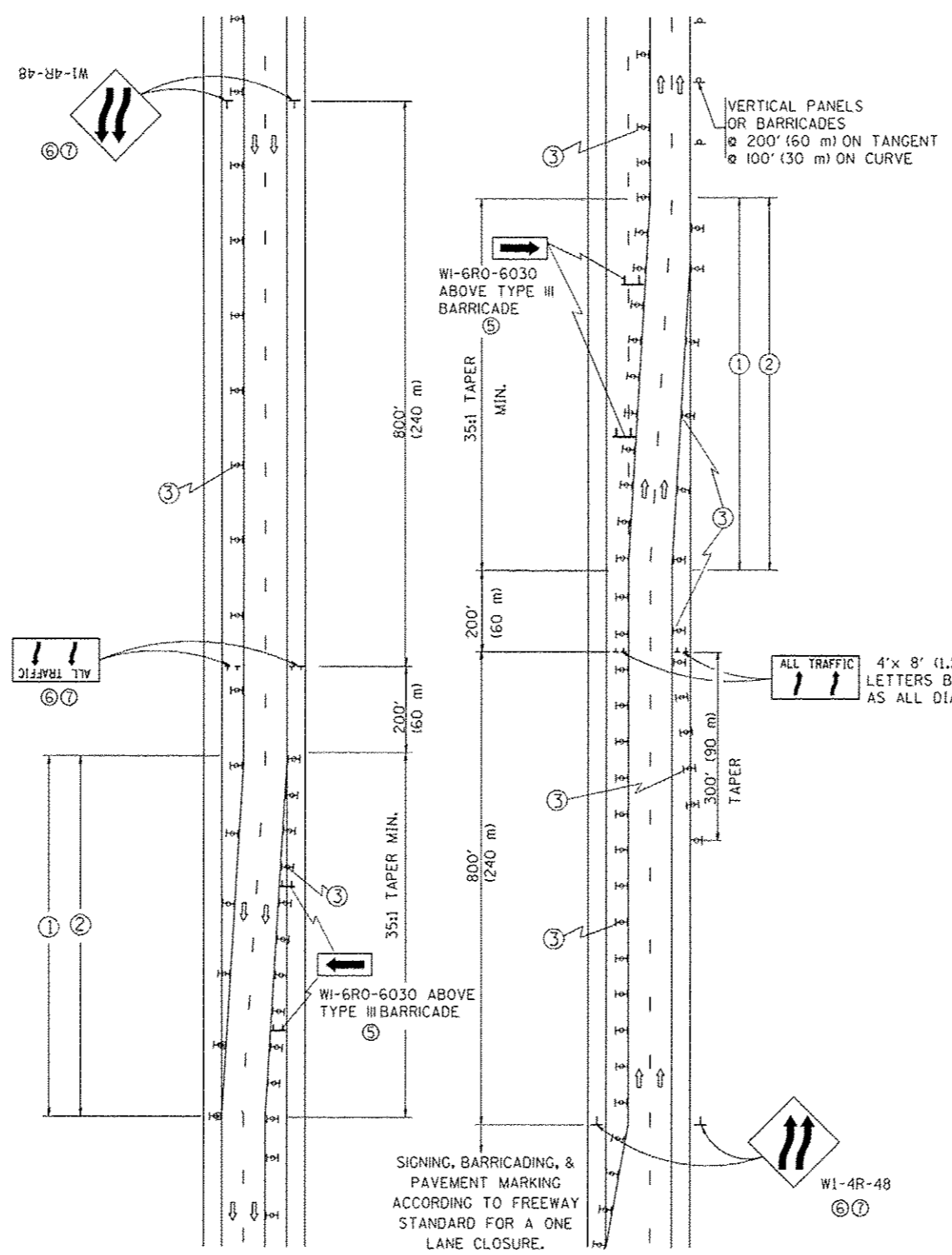
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. D1 OVD SIN STR REPL 14-30	TC-08	VARIOUS	53	48
FED. ROAD DIST. NO. 1 ILLINOIS		CONTRACT NO. 46291		

# SINGLE LANE WEAVE



# MULTI-LANE WEAVE



### GENERAL NOTES

- ① EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 24 HOURS IN DURATION.
- ② CONTINUOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 300' (90 m) ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVES LANE LINES SHALL BE 5 INCH, 10'-30' (3 m-9 m) SKIP DASH, WHITE.
- ③ PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.
- ④ ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- ⑤ IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON NCHRP 350 TEMPORARY SIGN SUPPORTS. TYPE III BARRICADES MAY BE OMITTED FOR SINGLE-LANE WEAVES UNDER 24-HOURS IN DURATION. W1-6 SIGNS WILL STILL BE REQUIRED. IF THE WIDTH OF OFFSET IS LESS THAN 6' THEN THE TYPE III BARRICADE WITH ATTACHED ARROW SIGN PANEL CAN BE ELIMINATED IN THE TAPER AREAS.
- ⑥ WHEN THE LENGTH OF THE SHIFTED SEGMENT (DISTANCE BETWEEN WEAVE POINTS) IS LESS THAN 1500', DOUBLE REVERSE CURVE SIGNS (W24-1) SHOULD BE USED INSTEAD OF THE REVERSE CURVE (W1-4) SIGNS. ARROWS ON THE 4'x8' "ALL TRAFFIC" SIGNS SHALL BE THE SAME SHAPE.
- ⑦ THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

### SYMBOLS

- DIRECTION OF TRAFFIC
  - WORK AREA
  - SIGN ON PORTABLE OR PERMANENT SUPPORT
  - TYPE II BARRICADE OR DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- W24-1-48

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME W:\data\22x34\1c87.dgn	USER NAME lsgo	DESIGNED DWS	REVISED JAF 01-03
		DRAWN -	REVISED JAF 02-06
		CHECKED -	REVISED SPB 01-07
		DATE 02-87	REVISED SPB 12-09

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

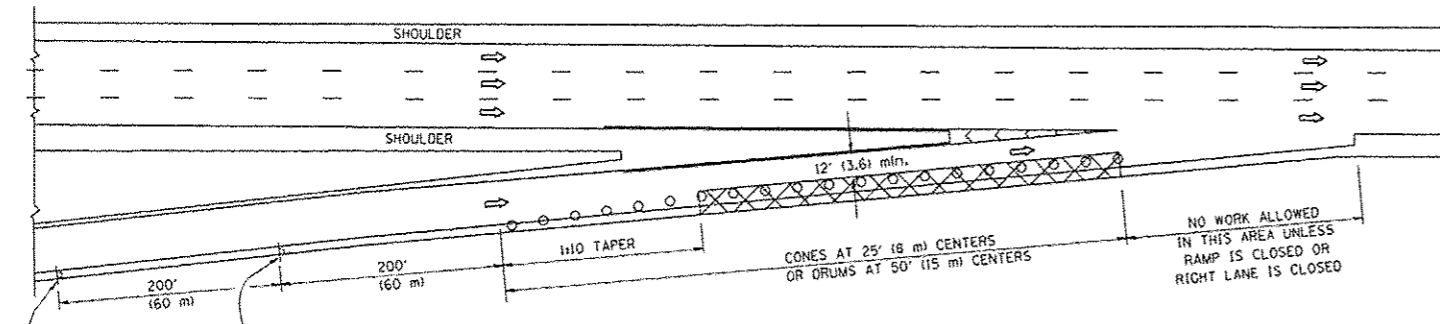
TRAFFIC CONTROL DETAILS FOR  
FREEWAY SINGLE & MULTI-LANE WEAVE

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

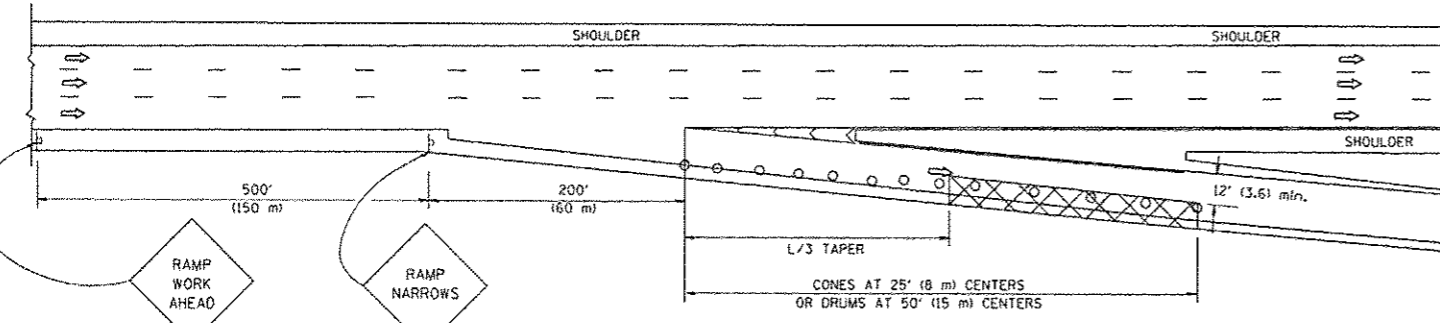
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	DI OVD SIN STR REPL 14-30	VARIOUS	53	49
TC-09			CONTRACT NO. 46291	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



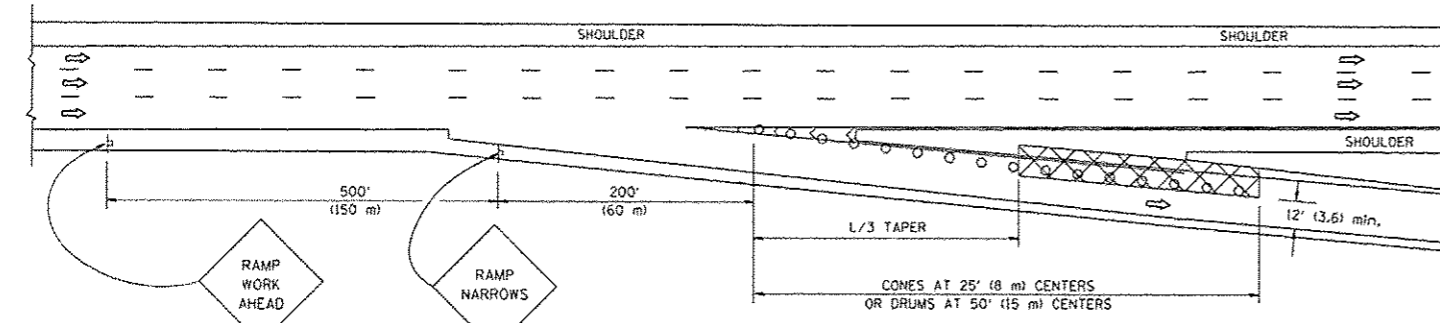
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

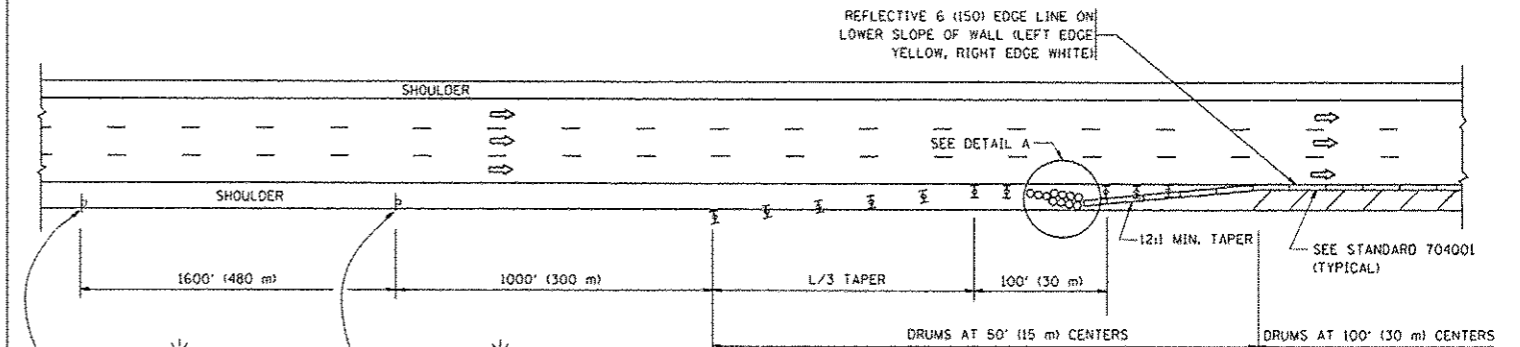
- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

GENERAL NOTES

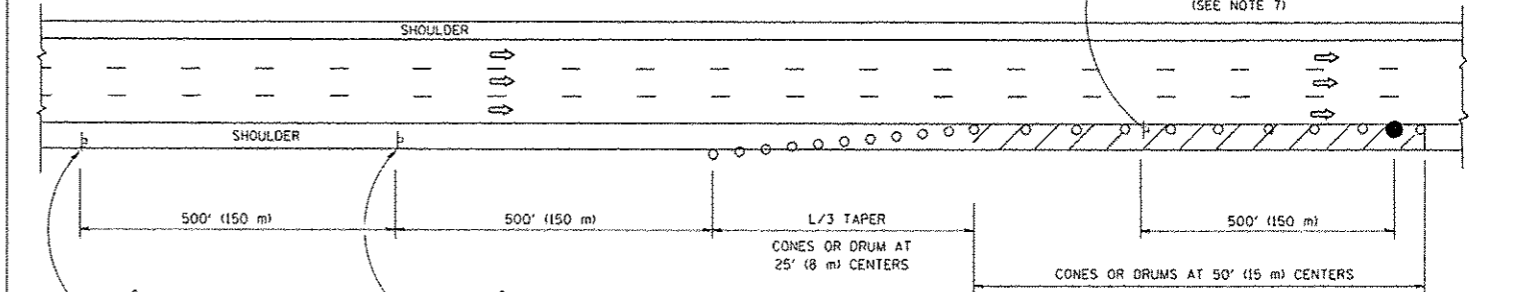
1. THE "L" DISTANCE EQUALS:  

SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER	METRIC ENGLISH L=0.65(WXS) L=(W)S
W = WIDTH OF OFFSET IN FEET (METERS)	
S = NORMAL POSTED SPEED MPH (KM/H)	
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

SHOULDER CLOSURE DETAILS



PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:  
 1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCR OACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.

ARRAY DESIGN PER MANUFACTURER TO BE NCHRP 350 COMPLIANT.

DETAIL "A"  
 IMPACT ATTENUATOR, TEMPORARY  
 (SEE NOTE 5)

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME \*  
 W:\dststd\22x34\1c17.dgn

USER NAME \* jeyso  
 PLOT SCALE = 0.00000 1/ IN.  
 PLOT DATE = 1/25/2018

DESIGNED -  
 DRAWN - D.W.S.  
 CHECKED -  
 DATE - 11-96

REVISED - 04-03  
 REVISED - J.A.F. 12-06  
 REVISED - S.P.B. 01-07  
 REVISED - S.P.B. 12-09

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

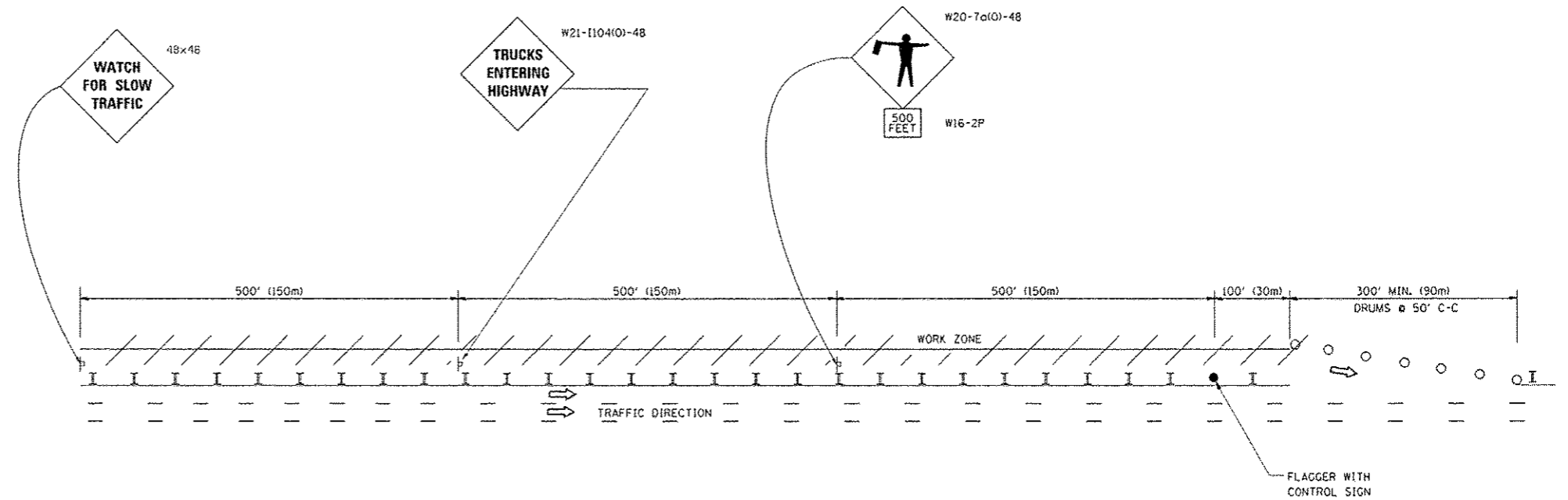
TRAFFIC CONTROL DETAILS FOR FREEWAY  
 SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

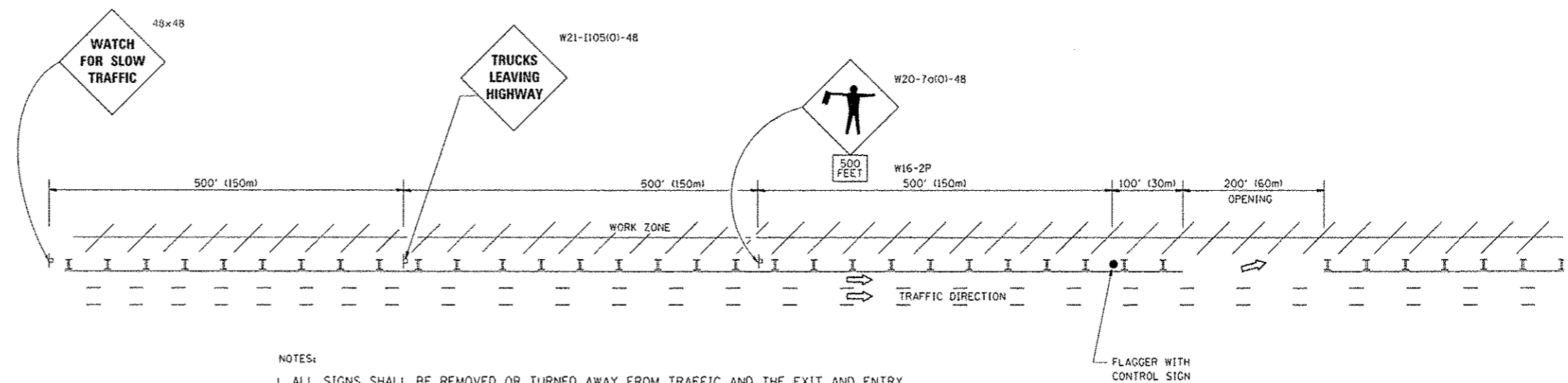
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	DI OVD SIN STR REPL 14-30	VARIOUS	53	50
TC-17		CONTRACT NO.	46291	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

# SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

## WORK ZONE EXIT OPENING



## WORK ZONE ENTRY OPENING

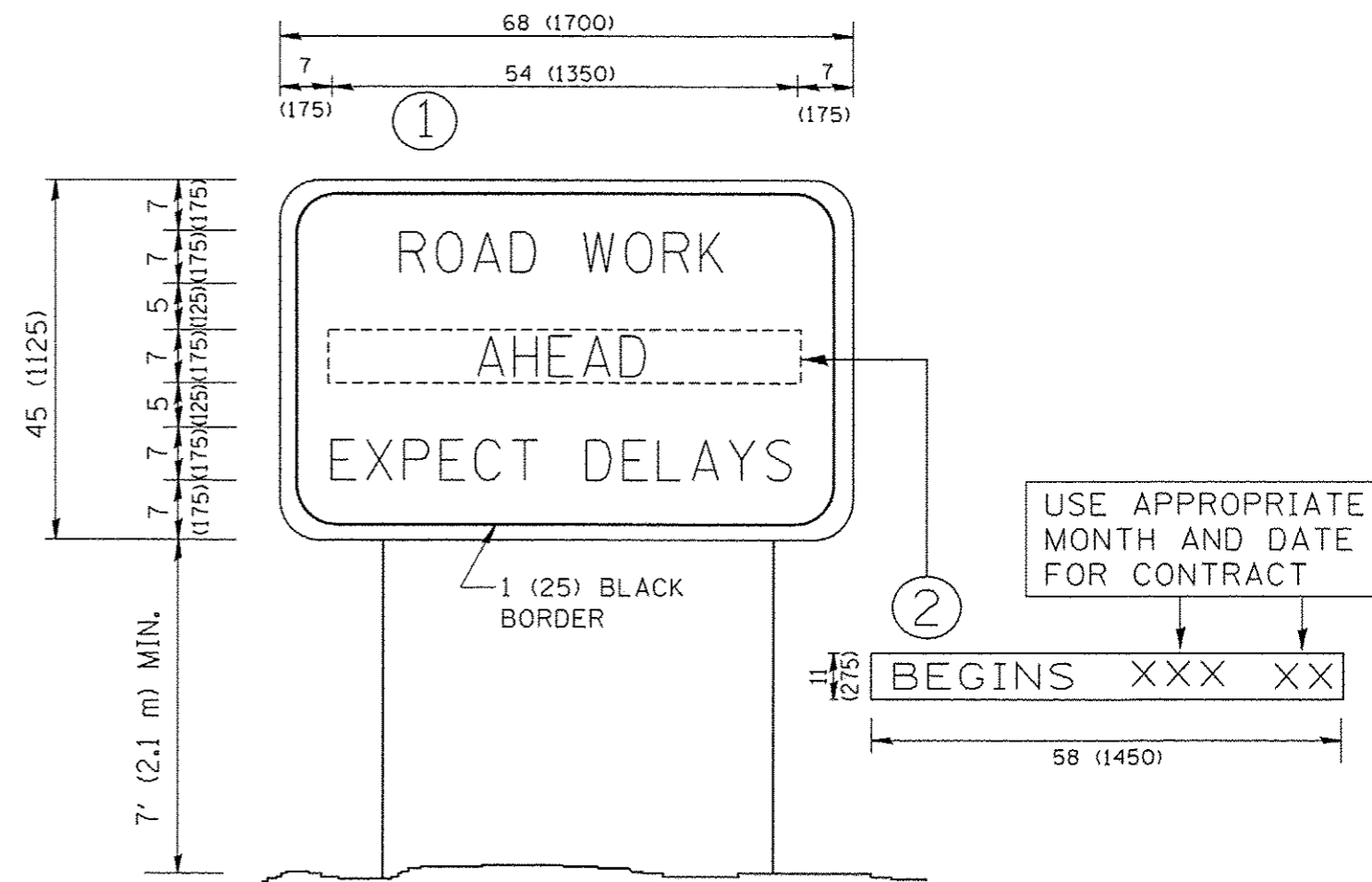


**NOTES:**

1. ALL SIGNS SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE OPENINGS SHALL BE A MINIMUM OF ONE HALF MILE APART AND A MINIMUM OF ONE QUARTER MILE FROM ALL ENTRANCE AND EXIT RAMPS.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS
5. FLAGGERS SHALL NOT STOP TRAFFIC OR DIRECT TRAFFIC INTO AN ADJACENT LANE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME =	USER NAME = foatemj	DESIGNED -	REVISED - J.A.F. 02-06	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FREWAY/EXPRESSWAY SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS ON FREEWAY/EXPRESSWAYS</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwwork\pwwork\foatemj\d01003155\1c10.dgn	DRAWN -	REVISED - S.P.B. 01-07	VAR			D1 OVD SIN STR REPL14-30	VARIOUS	53	51	
PLOT SCALE = 50.000 / 1 in.	CHECKED -	REVISED - S.P.B. 12-09	<b>TC-18</b>			CONTRACT NO. 46291				
PLOT DATE = 7/8/2013	DATE -	REVISED - M.D. 06-13	SCALE: NONE			SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME * W:\distatd\22\34\to22.dgn	USER NAME * goglionobt	DESIGNED - DRAWN -	REVISED - R, MIRS 09-15-97 REVISED - R, MIRS 12-11-97
PLOT SCALE * 50.000' / IN.	CHECKED -	REVISED - T, RAMMACHER 02-02-99	
PLOT DATE * 1/4/2000	DATE -	REVISED - C, JUCIUS 01-31-07	

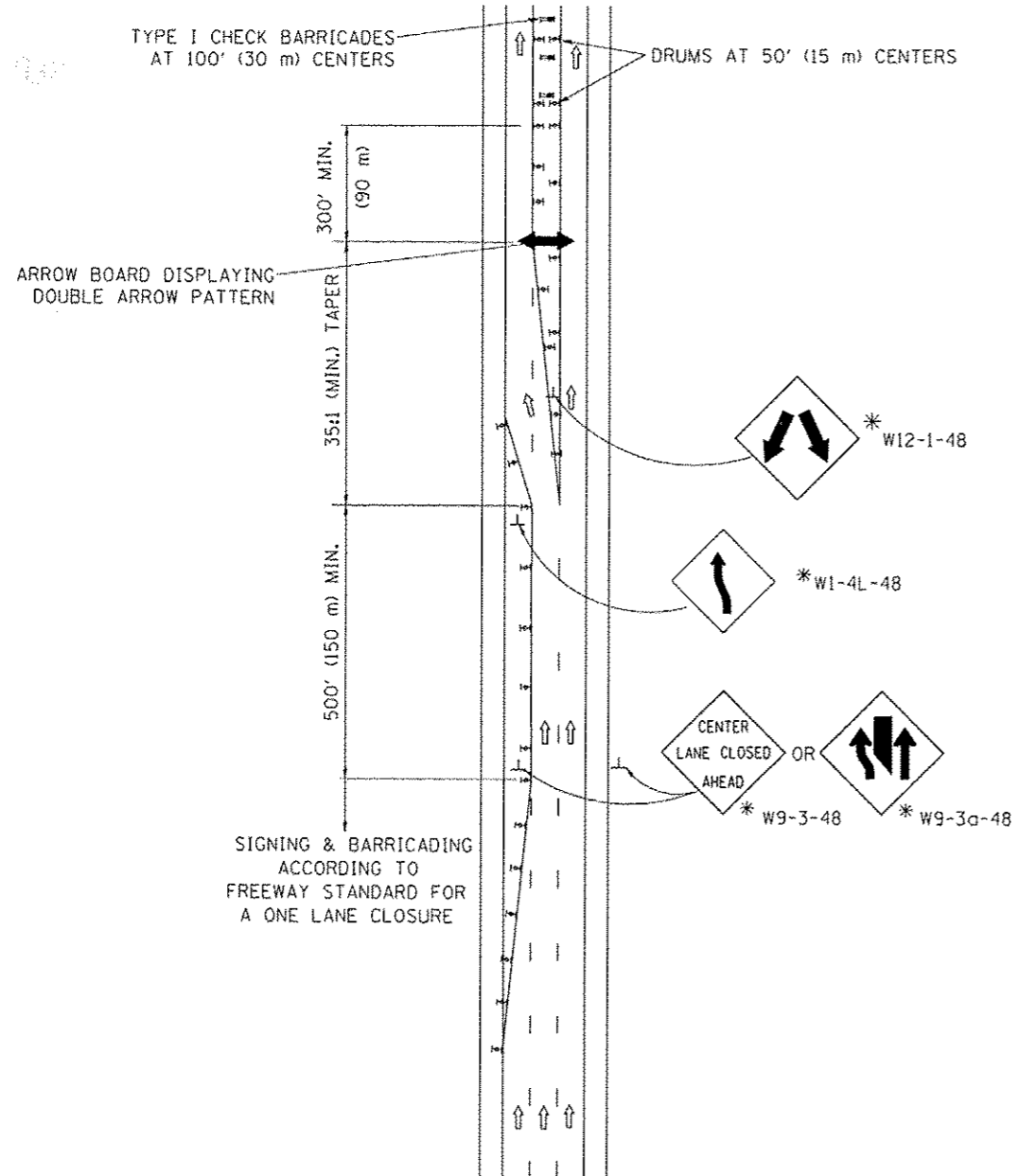
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD  
INFORMATION SIGN

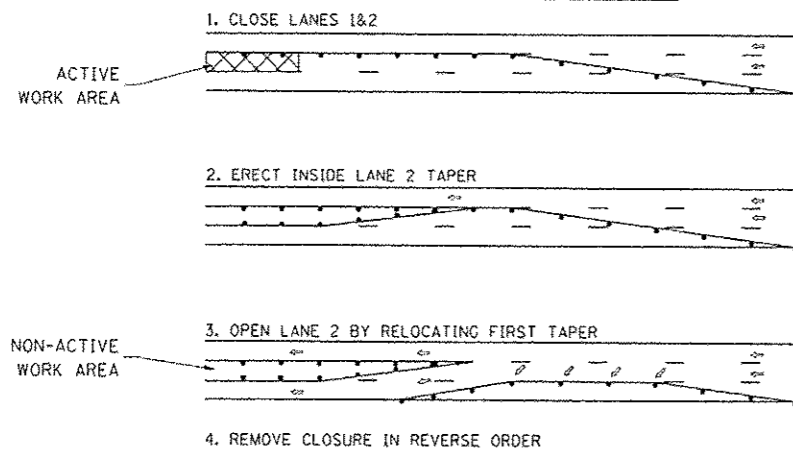
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. D1 OVD SIN STR REPL 14-30		VARIOUS	53	52
TC-22		CONTRACT NO. 46291		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

# CENTER LANE CLOSURE



### INSTALLATION SEQUENCE

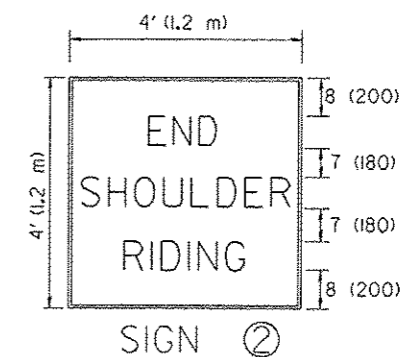
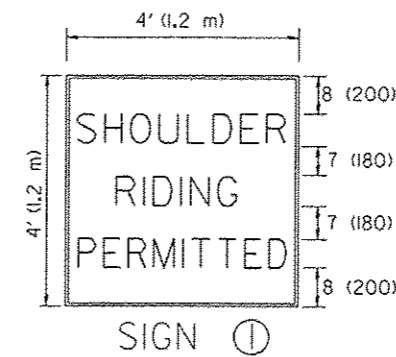
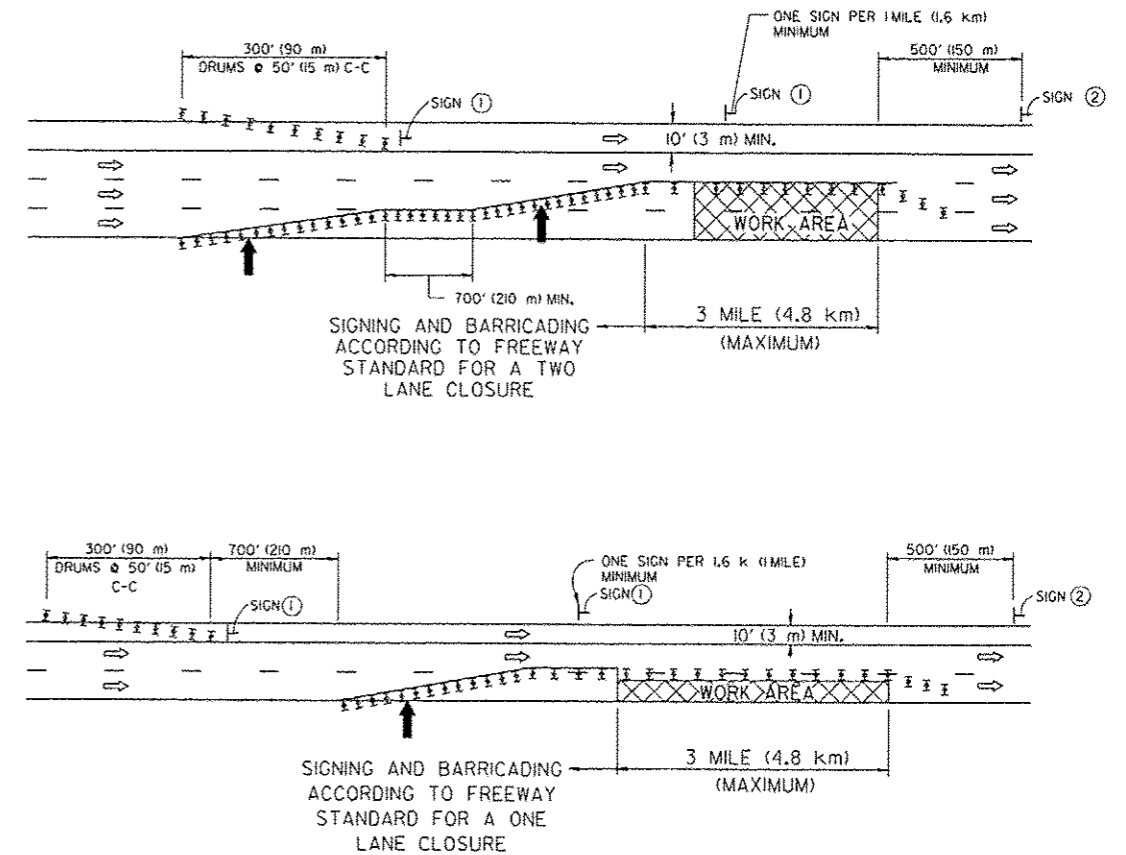


### NOTES

1. DRUMS WITH STEADY BURN LIGHTS SHALL BE USED AT 50' (15 m) CENTERS ON ALL TAPERS AND TANGENTS IN ADVANCE OF WORK AREA.
2. CLOSURE SHALL BE USED ONLY FOR OPERATIONS LASTING 72 HOURS OR LESS.
3. CENTER LANE CLOSURE CONFIGURATION IS NOT TO BE USED WITH WORKERS PRESENT.

# SHOULDER LANE

NOTE: CLOSURE SHALL BE USED ONLY FOR OPERATIONS LASTING 72 HOURS OR LESS.



6 (50) SERIES "C" LEGEND  
BLACK LEGEND  
WHITE REFLECT. BACKGROUND  
1 (25) BORDER

### SYMBOLS

- ↑ DIRECTION OF TRAFFIC
- ➔ ARROWBOARD
- ▣ ACTIVE WORK AREA
- ⊥ SIGN ON PORTABLE OR PERMANENT SUPPORT \*
- ⊥ TYPE II BARRICADE, OR DRUM WITH MONO-DIRECTIONAL STEADY BURN LIGHT

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

\* ALL SIGNS SHALL BE MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).

FILE NAME \*  
W:\data\std\22\34\to29.dgn

USER NAME \* logao

DESIGNED -

REVISED - J.A.F. 04-03

DRAWN -

REVISED - S.P.B. 01-07

PLOT SCALE = 1/8" = 1' IN.

CHECKED -

REVISED - S.P.B. 12-09

PLOT DATE = 1/26/2010

DATE -

REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR FREEWAY  
CENTER LANE CLOSURE SHOULDER LANE

SCALE: NONE

SHEET NO. 1 OF 1 SHEETS

STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D1 OVD SIN STR REPL 14-30	VARIOUS	53	53
TC-25		CONTRACT NO. 46291		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				