

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-41-1	ST. CLAIR	19	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAI ROUTE 55/70
SECTION 82-41-1
PROJECT: HSIP-000S(531)
ST. CLAIR COUNTY

OVERHEAD SIGN STRUCTURE AND
DYNAMIC MESSAGE SIGN
INSTALLATION I-55/70 BETWEEN
MAIN ST. & 4TH ST. IN EAST ST. LOUIS
C-98-056-06

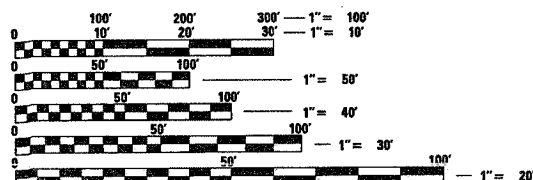
INDEX OF SHEETS

1. TITLE SHEET
2. SUMMARY OF QUANTITIES AND GENERAL NOTES
- 3 & 4. TRAFFIC CONTROL AND PROTECTION
5. LEGEND, SCHEDULES AND DETAILS
6. LOCATION PSBC01.5E.04S
7. COMMUNICATION SYSTEM COVER SHEET
8. PSBC MP1.4, MP1.45 AND MP1.5 CABINETS
9. OVERHEAD SIGN STRUCTURES GENERAL PLAN & ELEVATION ALUMINUM TRUSS & STEEL SUPPORTS
- 10 & 11. OVERHEAD SIGN STRUCTURES ALUMINUM TRUSS DETAILS FOR TRUSS TYPES I-A, II-A AND III-A
- 12 & 13. OVERHEAD SIGN STRUCTURES SUPPORT FRAME FOR TYPE III-A ALUMINUM TRUSS
- 14 & 15. OVERHEAD SIGN STRUCTURES ALTERNATIVE ALUMINUM WALKWAY DETAILS FOR DMS
16. OVERHEAD SIGN STRUCTURES ALTERNATIVE ALUMINUM HANDRAILS DETAILS FOR DMS
17. OVERHEAD SIGN STRUCTURES DAMPING DEVICE
18. OVERHEAD SIGN STRUCTURES DRILLED SHAFT DETAILS
19. SOIL BORING LOGS

STANDARDS

000001-04	701101-01	701106-01
701400-02	701401-03	701411-03
701446	702001-06	878001-05

MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS

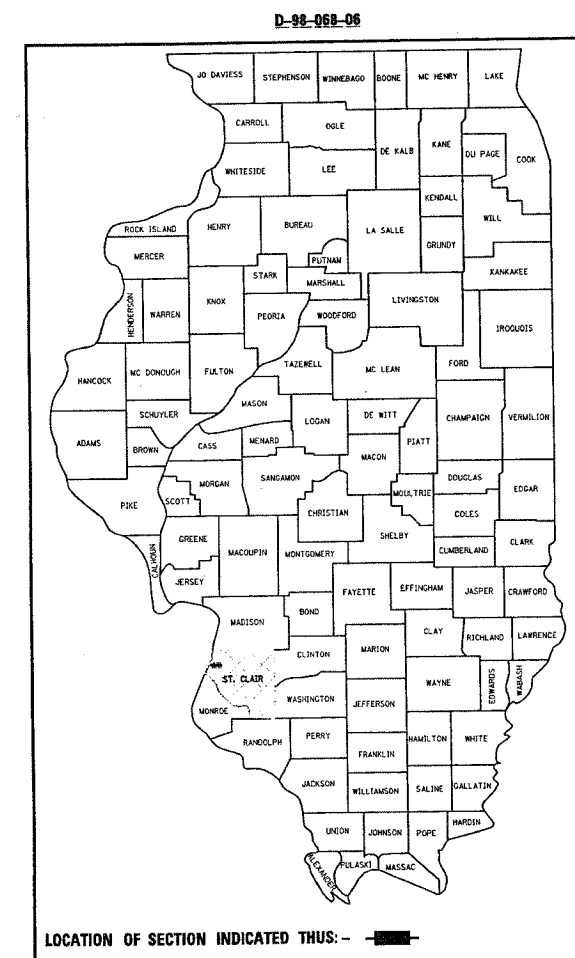
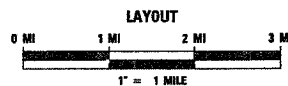
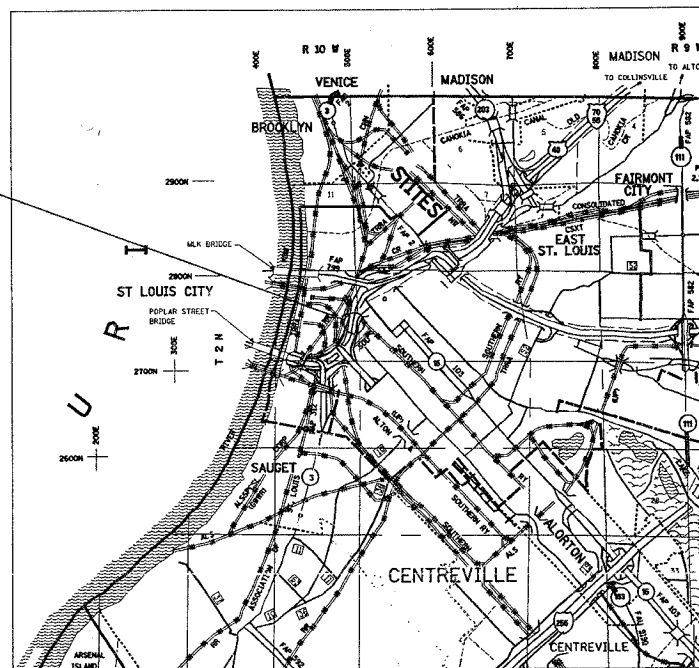


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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



PSBC01.5E.04S
STA. 105+70
EAST SAINT LOUIS
TOWNSHIP



LOCATION OF SECTION INDICATED THIS: - [shaded box] -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED October 19, 2006
Mary C. Janis
DEPUTY DIRECTOR OF HIGHWAYS
REGION FIVE ENGINEER

December 8, 2006
Eric E. Horn
ENGINEER OF DESIGN AND ENVIRONMENT

December 8, 2006
Milton R. Swartz, P.E.
DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

PLOT DATE = 10/17/2006
 FILE NAME = c:\projects\76a28\electrical\map\psbc01.5e.04s.dgn
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 PLOT SCALE = 1" = 100'
 PLOT SHEET NO. = 1
 PLOT SHEET TOTAL = 19
 PROJECT ENGINEER: PATTI LEBEAU (618) 346-3179
 SQUAD LEADER: MICHAEL PRESTON (618) 346-3143
 LIASION ENGINEER: BRIAN A. SNEED (618) 346-3118

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-41-1	ST. CLAIR	19	2

SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES			URBAN 90% FED, 10% STATE TOTAL QUANTITIES	Y032-1E		
CODE NO	ITEM	UNIT				
X7015012	CHANGEABLE MESSAGE SIGN, SPECIAL	EACH	5	5		
X8710048	OPTICAL ETHERNET TRANSCEIVER	EACH	4	4		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	5	5		
67100100	MOBILIZATION	L SUM	1	1		
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	3	3		
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	1		
70100815	TRAFFIC CONTROL AND PROTECTION, STANDARD 701446	L SUM	1	1		
73300300	OVERHEAD SIGN STRUCTURE - SPAN, TYPE III-A (5'-0" X 7'-0")	FOOT	86	86		
73305000	OVERHEAD SIGN STRUCTURE WALKWAY	FOOT	52	52		
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	21.6	21.6		
80300100	LOCATING UNDERGROUND CABLE	FOOT	800	800		
80500100	SERVICE INSTALLATION, TYPE A	EACH	1	1		
80801500	WOOD POLE, 25 FT., CLASS 5	EACH	1	1		
81012800	CONDUIT IN TRENCH, 3" DIA., PVC	FOOT	50	50		
81500200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	32	32		
81702500	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 4/C NO. 6	FOOT	120	120		
86300305	CONTROLLER CABINET TYPE III, SPECIAL	EACH	1	1		
87100110	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 6F	FOOT	745	745		
87800210	CONCRETE FOUNDATION, TYPE D (SPECIAL)	FOOT	3.5	3.5		
X0323228	FURNISH AND INSTALL TRUSS DAMPER	EACH	1	1		
X0325470	CONDUIT ATTACHED TO STRUCTURE, 3" DIA., ALUMINUM	FOOT	80	80		
X7010600	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406, SPECIAL	L SUM	1	1		
X7015015	TRUSS MOUNTED CHANGEABLE MESSAGE SIGNS	EACH	1	1		
X8100065	CONDUIT IN TRENCH, 4" DIA., PVC TYPE C	FOOT	6	6		

GENERAL NOTES

- ALL MATERIALS SUPPLIED SHALL CONFORM TO SECTION 106 OF THE STANDARD SPECIFICATIONS FOR CONTROL OF MATERIALS.
- THE CONTROLLER CABINETS SHALL BE UNPAINTED ALUMINUM SHEET METAL UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- UNDERGROUND CABLE MARKING TAPE SHALL BE INSTALLED WITH ALL TRENCH AND BACKFILL FOR ELECTRICAL WORK IN ACCORDANCE WITH ARTICLES 819.05 AND 1066.05 OF THE STANDARD SPECIFICATIONS.
- A 1/4 " DIA. NYLON ROPE SHALL BE INSTALLED IN ALL CONDUIT RUNS. THE COST OF PULL ROPE SHALL BE INCLUDED IN THE PROPOSED ELECTRIC CABLE INSTALLATION AND OR FIBER OPTIC IN THAT CONDUIT.
- ALL GROUND RODS SUPPLIED FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH ARTICLE 1087.01 EXCEPT THAT THEY SHALL BE 3/4 " DIAMETER X 12'-0" LONG. ALL CONNECTIONS TO GROUND RODS SHALL BE MADE VIA EXOTHERMIC WELD, COMPRESSION CLAMPS WILL NOT BE ALLOWED.
- COORDINATION WITH THE DEPARTMENT'S BUREAU OF OPERATIONS IS REQUIRED BEFORE ANY TRENCHING SHALL BE DONE TO LOCATE HIGHWAY LIGHTING/PUMP STATION/ITS FACILITIES AND TO COORDINATE OTHER FIELD ACTIVITIES.
- BENDING RADIUS OF FIBER OPTIC CABLE SHALL NOT EXCEED SIX (6) INCHES.
- NO OVERNIGHT PERMANENT LANE CLOSURES SHALL BE PERMITTED ON THIS PROJECT.

THE CONTRACTOR SHALL GIVE THE ENGINEER TWO (2) WEEKS NOTICE PRIOR TO ANY INTERSTATE ROADWAY LANE CLOSURE.
- ANY GROUND AREA THAT THE CONTRACTOR COMPACTS OR DISTURBS SHOULD BE SEEDED AT THE END OF EACH WEEK WITH CLASS 7 TEMPORARY EROSION CONTROL SEEDING W/MULCH PER APPLICABLE PORTIONS OF SECTION 250 OF THE STANDARD SPECIFICATIONS. FOR PERMANENT SEEDING USE CLASS 1B LAWN MIXTURE IN EAST SAINT LOUIS CITY LIMITS OR CLASS 2 ROADSIDE MIXTURE ALONG THE INTERSTATE.

THE PRICE FOR THIS SEEDING SHALL BE INCLUDED IN THE UNIT COST FOR THE PAY ITEM ASSOCIATED WITH THE GROUND AREA COMPACTION OR DISTURBANCE.(I.E DRILLED SHAFT CONCRETE FOUNDATION TRENCH AND BACKFILL FOR ELECTRICAL WORK, CONCRETE FOUNDATION, TYPE DISPECIAL, ETC.)
- ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:
(MEMBER OF J.U.L.I.E. (800-892-0123) ARE INDICATED BY "*", NON J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.)

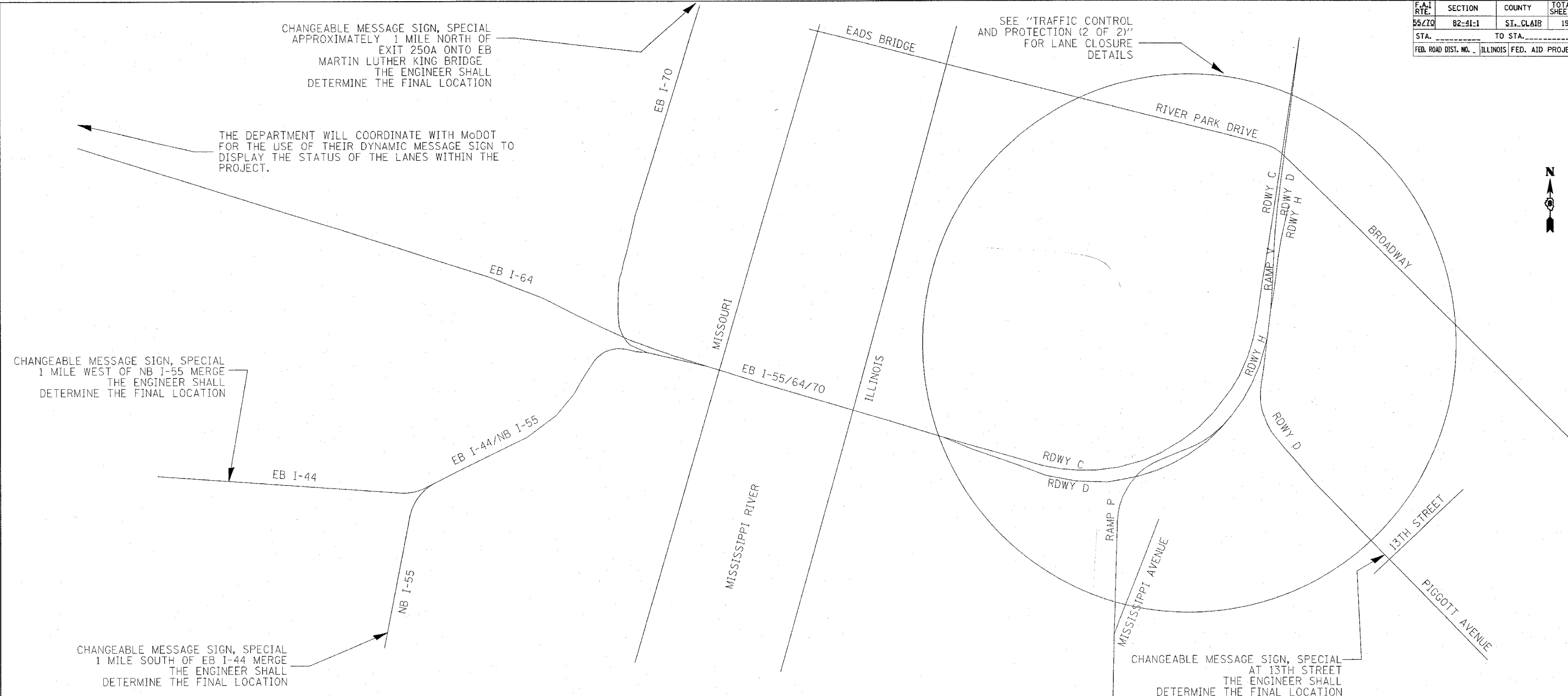
 - AMEREN IP (GAS)
 - AMEREN UE (ELECTRIC)
 - AT & T ILLINOIS (COMMUNICATIONS)
 - CHARTER COMMUNICATIONS, INC. (CABLE TV)
 - CITY OF EAST ST. LOUIS (SANITARY SEWER)
 - ILLINOIS AMERICAN WATER CO. (WATER)
 - LEVEL 3 COMMUNICATIONS, LLC (COMMUNICATIONS)
 - LIGHTCORE (COMMUNICATIONS)
 - MC LEOD USA TELECOMMUNICATIONS, INC. (COMMUNICATIONS)
 - METRO (COMMUNICATIONS)
 - NETWORKS, 360 (COMMUNICATIONS)
 - QWEST COMMUNICATIONS (COMMUNICATIONS)
 - VERIZON BUSINESS (COMMUNICATIONS)
- A 9-1-1 ADDRESS MUST BE OBTAINED FROM THE ST. CLAIR COUNTY 9-1-1 COORDINATOR PRIOR TO OBTAINING ELECTRIC/ TELEPHONE SERVICE AT THE PROJECT LOCATIONS. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER/TECHNICIAN A MINIMUM OF SIX WEEKS IN ADVANCE OF THE ANTICIPATED DATE THAT ELECTRIC/TELEPHONE SERVICE WILL BE REQUIRED IN ORDER THAT THE NECESSARY ADDRESS CAN BE OBTAINED. IF THERE ARE ANY QUESTIONS REGARDING THE ABOVE, CONTACT THE 9-1-1 COORDINATOR AT 618-277-7316 EXT. 104 FOR ST. CLAIR COUNTY
- THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO SECTION 107. "LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC OF THE STANDARD SPECIFICATIONS". IN PARTICULAR 107.01 "LAWS TO BE OBSERVED" AND "107.04 PERMITS AND LICENSES".
- FIELD MEASUREMENTS ARE REQUIRED TO VERIFY DIMENSIONS OF EXISTING STRUCTURES PRIOR TO ORDERING MOUNTING HARDWARE.

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**SUMMARY OF QUANTITIES
 AND GENERAL NOTES**
 FAP ROUTE 55/70
 SECTION 82-41-1
 ST. CLAIR COUNTY
 DATE 10/18/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-41-1	ST. CLAIR	19	3
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		



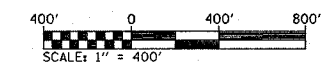
TRAFFIC CONTROL STANDARDS SCHEDULE-DRILLED SHAFTS, TRUSS SUPPORT, SERVICE INSTALLATION, CONTROLLER WORK, AND DMS CONNECTIONS

TRAFFIC CONTROL AND PROTECTION STANDARDS	LOCATION PSBC01.5E.04S STA.105+70,RT	LOCATION PSBC01.5E.04S STA.105+70,LT	ILLINOIS					MISSOURI			
			4TH ST. EXIT OFF RDWY H	RDWY D ENTRANCE ONTO RDWY H	RAMP P ENTRANCE ONTO RDWY H	NB IL 3	PIGGOTT AVE. ENTRANCE RAMP	RDWY C CLOSURE	EB I-70	NB I-55	EB I-44
701101	X										
701106	X										
701400							.	.	X	.	.
701401	X	X									
701411			X	X	X						
701446	X	X							X		

TRAFFIC CONTROL STANDARDS SCHEDULE-TRUSS/DMS INSTALLATION

TRAFFIC CONTROL AND PROTECTION STANDARDS	LOCATION PSBC01.5E.04S STA.105+70,RT	LOCATION PSBC01.5E.04S STA.105+70,LT	ILLINOIS					MISSOURI			
			4TH ST. EXIT OFF RDWY H	RDWY D ENTRANCE ONTO RDWY H	RAMP P ENTRANCE ONTO RDWY H	NB IL 3	PIGGOTT AVE. ENTRANCE RAMP	RDWY C CLOSURE	EB I-70	NB I-55	NB I-55
701101	X										
701106	X										
701400							.	.	X	.	.
701401											
701411			X	X	X						
701446	X	X							X		

*USE THIS STANDARD FOR SELECTING AND LOCATING THE TRAFFIC CONTROL DEVICES RELATIVE TO THE CHANGEABLE MESSAGE SIGN, SPECIAL TRAFFIC CONTROL AND PROTECTION -COMPLETE EB LANES CLOSURE WILL BE PERMITTED ONLY (A) WITH 2 WEEK PRIOR APPROVAL FROM THE ENGINEER AND (B) DURING WEEKENDS (FRIDAY-6:00PM TO MONDAY-3:00PM) FOR PERIODS LESS THAN 15 MINUTES, WITH AN 1 HOUR INTERVAL OR PER THE ENGINEER'S DIRECTION BEFORE A SUBSEQUENT CLOSURE.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL AND PROTECTION (1 OF 2)
 FAP ROUTE 55/70
 SECTION 82-41-1
 ST. CLAIR COUNTY
 DATE 10/18/2006

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55/70	82-41-1	ST. CLAIR	19	4
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

LOCATION	TRAFFIC VOLUME SCHEDULE			
	YEAR	ADT (ESTIMATED)	SUZ	MUZ
PSBC01.5E.04S	2006	106100	3.1	13.8

-COMPLETE EB LANES CLOSURE WILL BE PERMITTED ONLY:
 (A) WITH 2 WEEK PRIOR APPROVAL FROM THE ENGINEER AND
 (B) DURING WEEKENDS (FRIDAY-6:00PM TO MONDAY-3:00PM) FOR PERIODS LESS THAN 15 MINUTES, WITH AN 1 HOUR INTERVAL OR PER THE ENGINEER'S DIRECTION BEFORE A SUBSEQUENT CLOSURE.

USE STANDARDS 701400 AND 701446 FOR RDWY C CLOSURE DIVERTING ALL TRAFFIC TO RDWY D

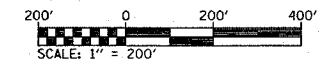
USE STANDARD 701400, 701401 & 701446 TO MERGE RDWY D TO RDWY C WITH CLOSED RT. LANE(S) @STA.105+70

USE STANDARD 701400, 701401 & 701446 TO MERGE RDWY D TO RDWY C WITH CLOSED LT. LANE(S) @STA.105+70

USE STANDARD 701411 FOR RDWY H TRAFFIC EXITING ONTO 4TH STREET DURING RT./LT. LANE(S) CLOSINGS AT STA.105+70

USE STANDARD 701411 FOR RDWY D TRAFFIC MERGING ONTO RDWY H DURING RT./LT. LANE(S) CLOSINGS AT STA.105+70

USE STANDARD 701411 FOR RAMP P TRAFFIC MERGING ONTO RDWY H DURING RT./LT. LANE(S) CLOSINGS AT STA.105+70



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL
 AND PROTECTION (2 OF 2)**

FAP ROUTE 55/70
 SECTION 82-41-1
 ST. CLAIR COUNTY

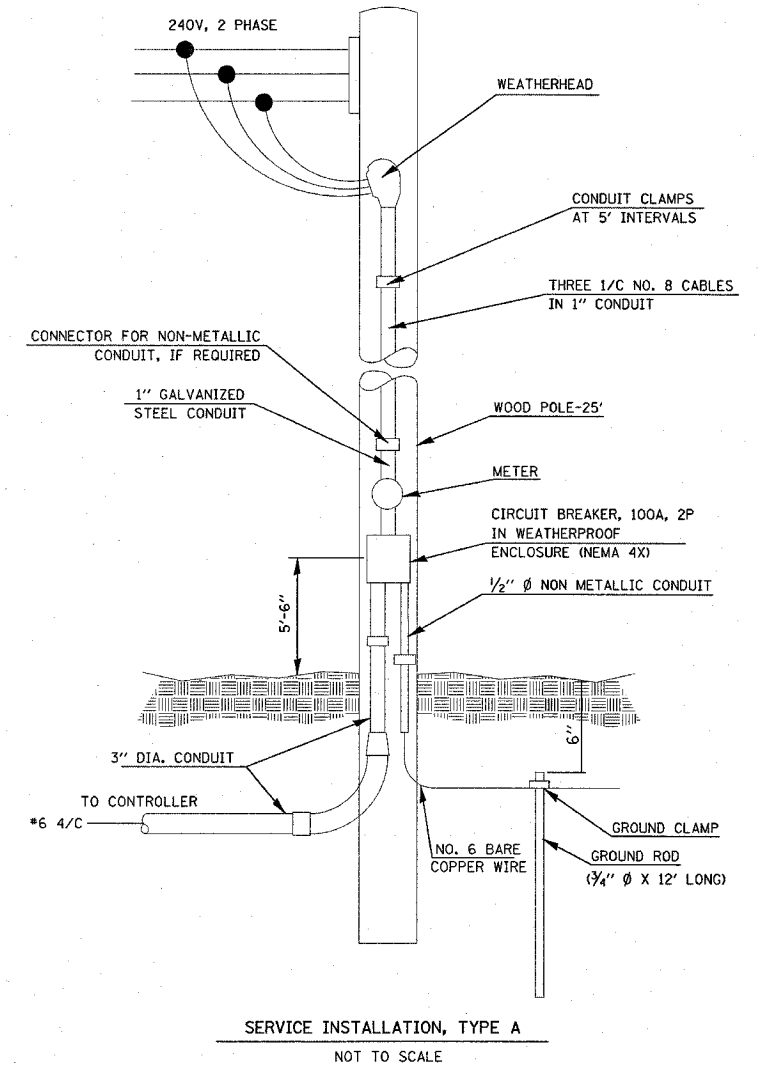
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F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-41-1	ST. CLAIR	19	5
STA.	TO STA.			
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

LEGEND

- ALUM ALUMINUM
- EP EDGE OF PAVEMENT
- F.O. FIBER OPTIC
- J.B. JUNCTION BOX
- GSC GALVANIZED STEEL CONDUIT
- PVCC POLYVINYL CHLORIDE CONDUIT
- FGC FIBER GLASS CONDUIT
- ☐ EXISTING HANDHOLE
- ☒ EXISTING DOUBLE HANDHOLE
- ☒ EXISTING CONTROLLER
- ☐ EXISTING SERVICE INSTALLATION
- EXISTING GALVANIZED STEEL CONDUIT
- ⊙ EXISTING JUNCTION BOX
- ⊕ EXISTING SIGN TRUSS
- ⊙ EXISTING HIGHWAY LIGHTING UNIT
- ⊙ EXISTING UNDERGROUND LIGHTING CABLES
- PROPOSED HANDHOLE
- ☒ PROPOSED DOUBLE HANDHOLE
- ☒ PROPOSED CONTROLLER
- PROPOSED CONDUIT: "T" TRENCH, "P" PUSH
- "ATS" ATTACHED TO STRUCTURE, SIZE SPECIFIED
- PROPOSED SERVICE INSTALLATION
- ⊙ PROPOSED JUNCTION BOX, SIZE SPECIFIED
- ⊙ PROPOSED WOOD POLE, SIZE SPECIFIED
- PROPOSED LIGHT POLE, SIZE SPECIFIED
- ⊕ PROPOSED CHANGEABLE MESSAGE SIGN



FIELD EQUIPMENT NUMBERING SYSTEM	
EXAMPLE : 006402.8W.11D	
0064	DESIGNATES HIGHWAY WHERE FIELD EQUIPMENT IS LOCATED.
006402.8	DESIGNATES MILE MARKER WHERE FIELD EQUIPMENT IS LOCATED.
006402.8W	DESIGNATES DIRECTION VIDEO DETECTOR IS MONITORING TRAFFIC OR DIRECTION TRAFFIC IS TRAVELLING TO RECEIVE DMS MESSAGE.
006402.8W.11	NUMBER ASSIGNED TO THAT FIELD EQUIPMENT
006402.8W.11D	A = ALL DIRECTIONS D = VEHICLE DETECTION C = CAMERA (P/T/Z SURVEILLANCE) H = HAR SIGNAGE WITH BEACON R = RADAR DETECTION

REVISIONS	
NAME	DATE

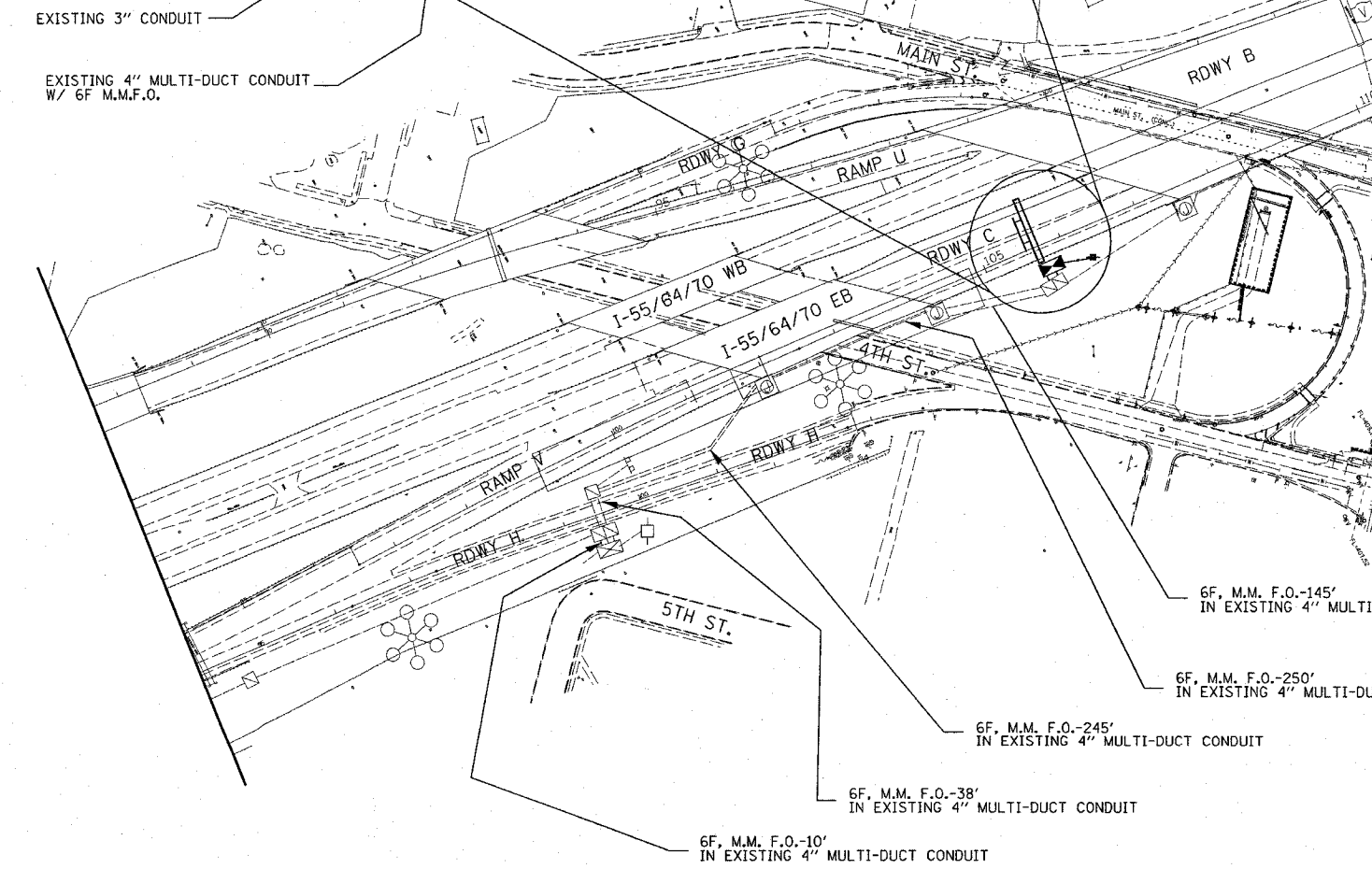
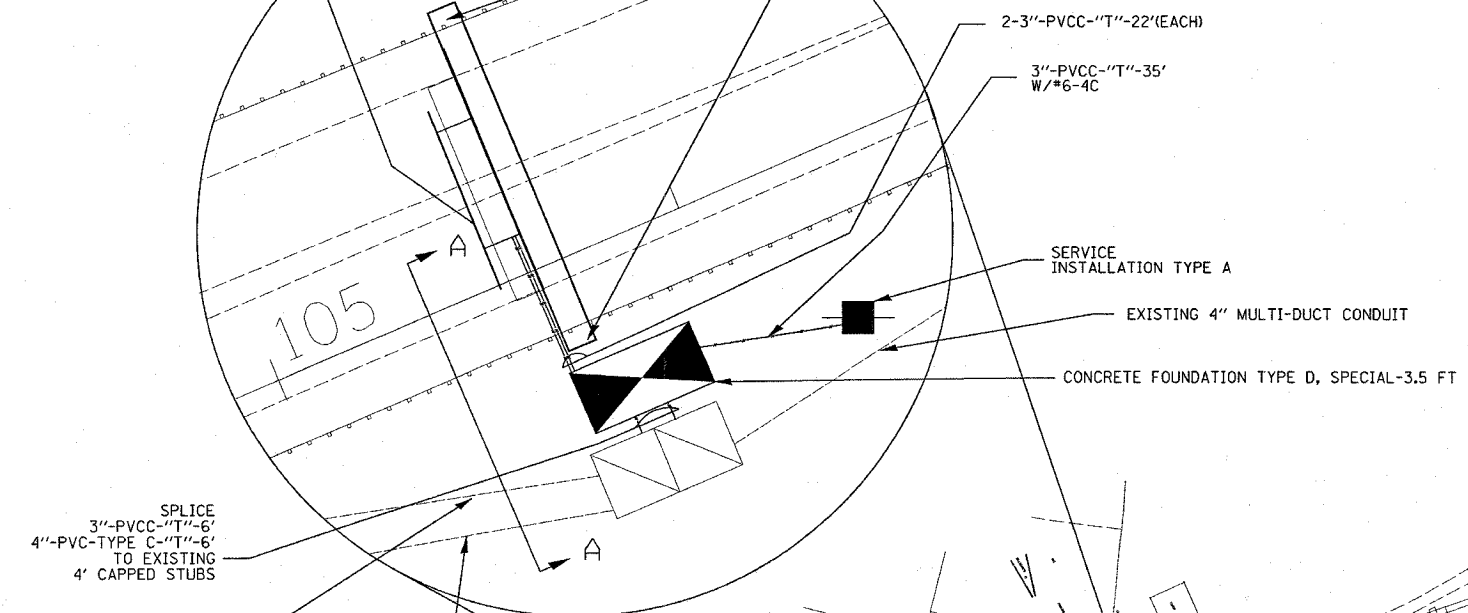
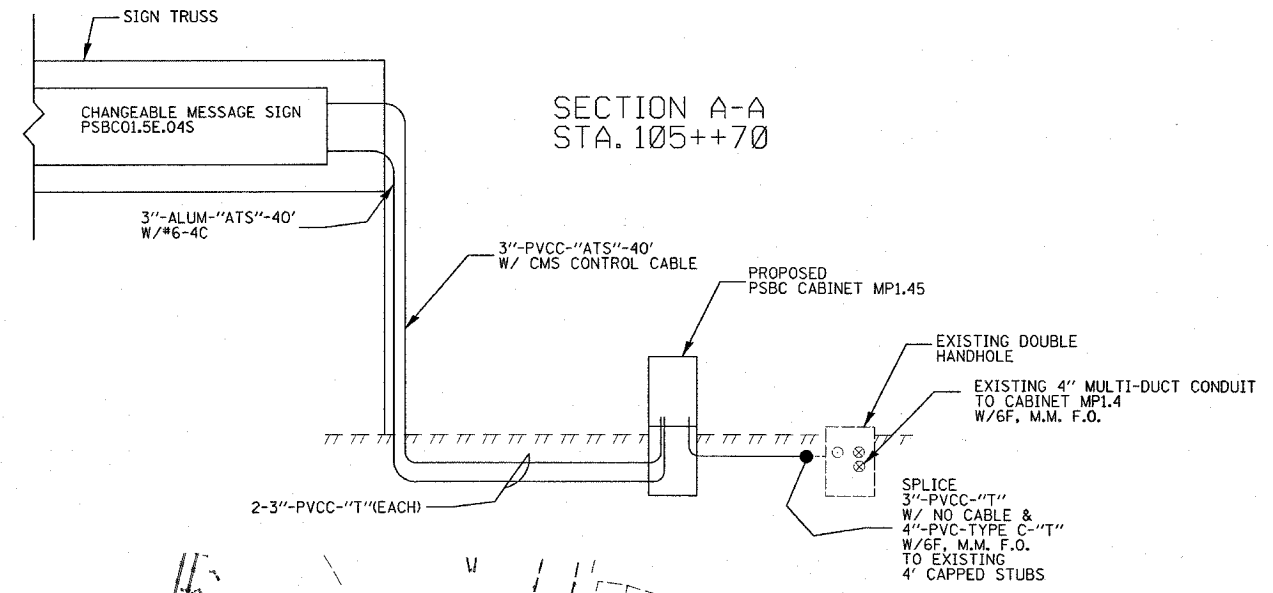
ILLINOIS DEPARTMENT OF TRANSPORTATION
LEGEND, SCHEDULES AND DETAILS
FAP ROUTE 55/70
SECTION 82-41-1
ST. CLAIR COUNTY

DATE 10/17/2006

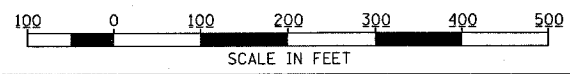
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-41-1	ST. CLAIR	19	6

-OVERHEAD SIGN STRUCTURE-SPAN, TYPE III-A (5'-0" X 7'-0")-86FT
 -OVERHEAD SIGN STRUCTURE WALKWAY TYPE A-52 FT
 -TRUSS MOUNTED CHANGEABLE MESSAGE SIGN PSBC01.5E.04S-1 EACH

DRILLED SHAFT CONCRETE FOUNDATION-21.6 CU YD
 THE CONTRACTOR SHALL BE AWARE OF RIPRAP IN THE MEDIAN WITH RESPECT TO PERFORMING THIS WORK. THE COST OF REMOVING AND RESTORING RIPRAP SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THIS PAY ITEM. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR REMOVING AND RESTORING RIPRAP.



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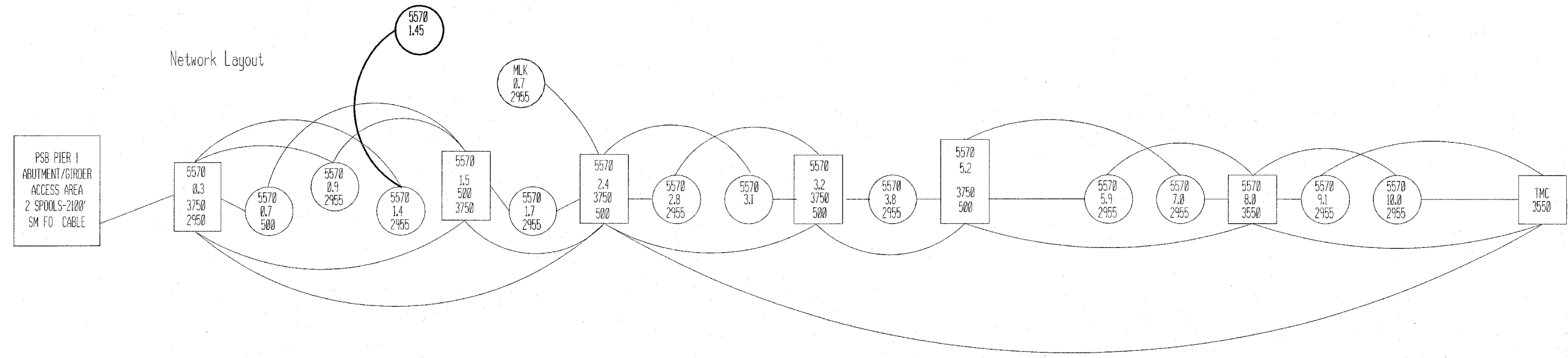
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
LOCATION PSBC01.5E.04S
 FAP ROUTE 55/70
 SECTION 82-41-1
 ST. CLAIR COUNTY

DATE 10/17/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-41-1	ST. CLAIR	19	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

Network Layout



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REVISIONS	
NAME	DATE

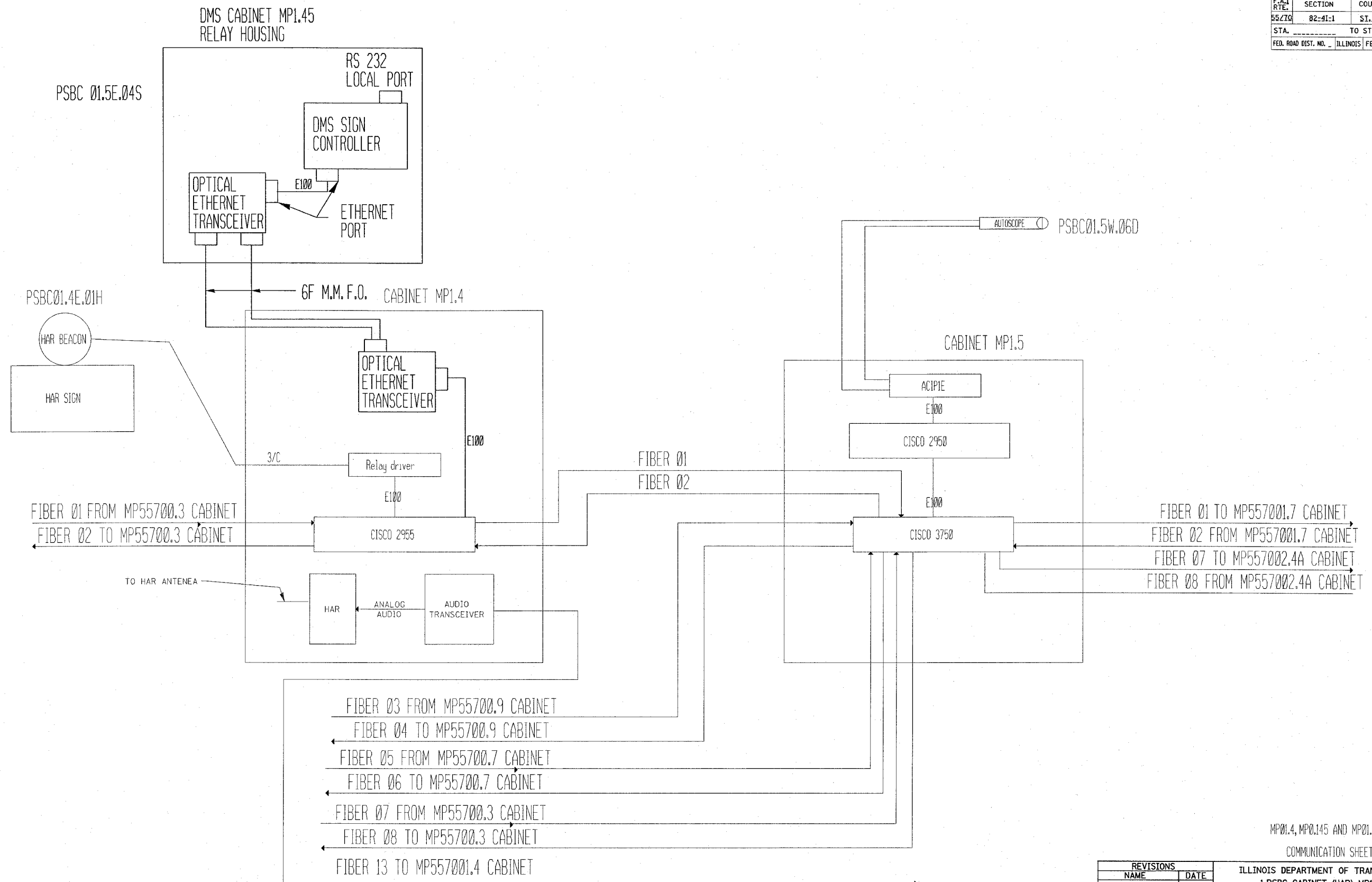
ILLINOIS DEPARTMENT OF TRANSPORTATION

COMMUNICATION SYSTEM COVER SHEET

FAI 55/70
SECTION 82-41-1
ST. CLAIR COUNTY

DATE 10/17/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-41-1	ST. CLAIR	19	8
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



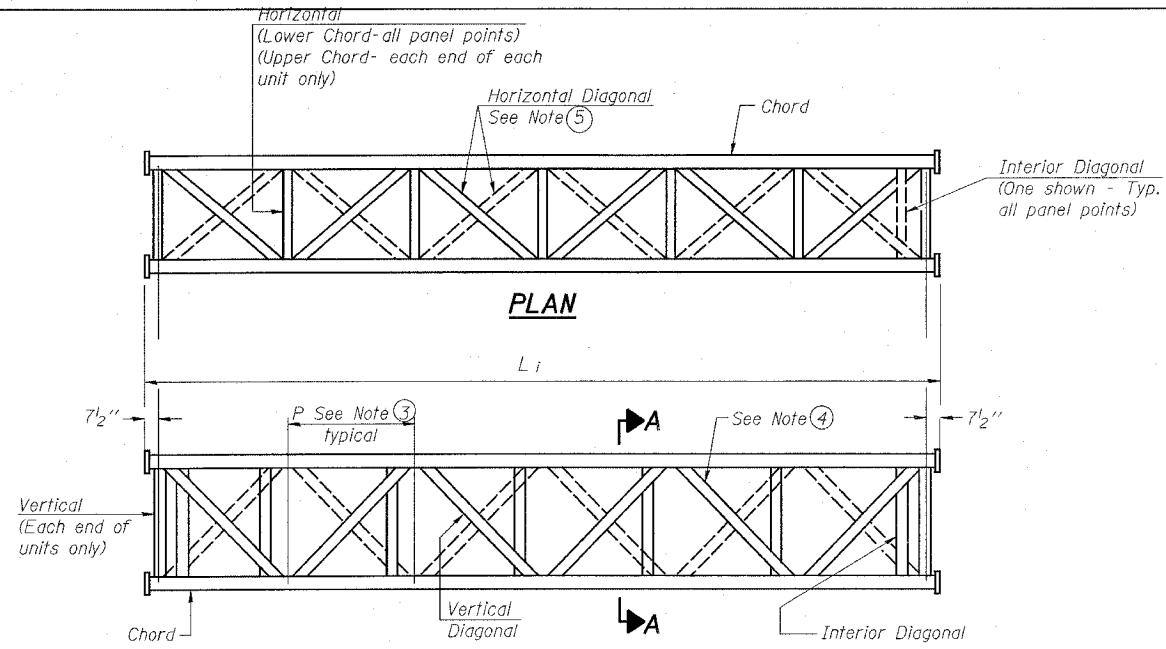
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MP01.4, MP01.45 AND MP01.5
COMMUNICATION SHEET

REVISIONS	
NAME	DATE

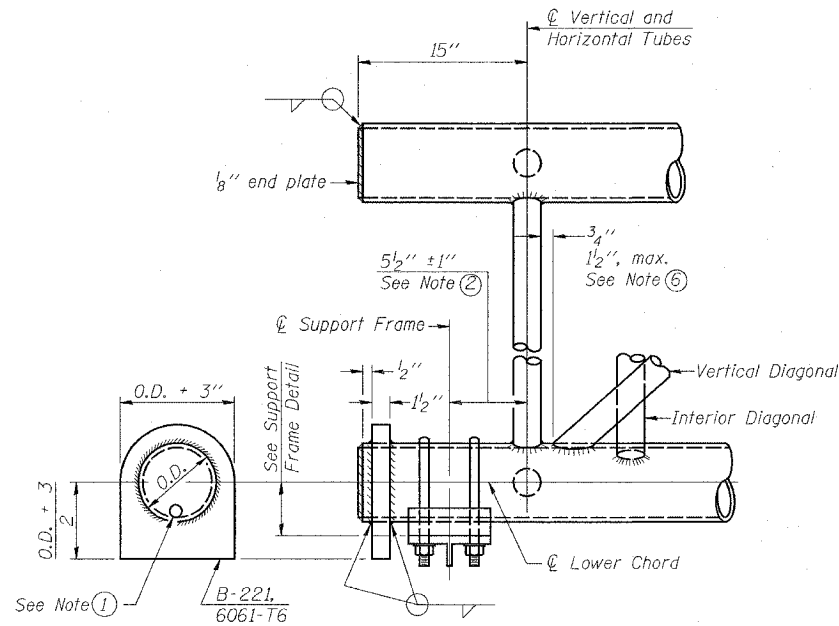
ILLINOIS DEPARTMENT OF TRANSPORTATION
 1.PSBC CABINET (HAR) MP1.4
 PSBC01.4E.01H AND HAR
 2.PSBC CABINET MP1.45
 PSBC01.5E.04S
 3.PSBC CABINET MP1.5
 PSBC01.5W.06D
 FAI 55/70
 SECTION 82-41-1
 ST. CLAIR COUNTY
 DATE 10/17/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-41-1	ST. CLAIR	19	10
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

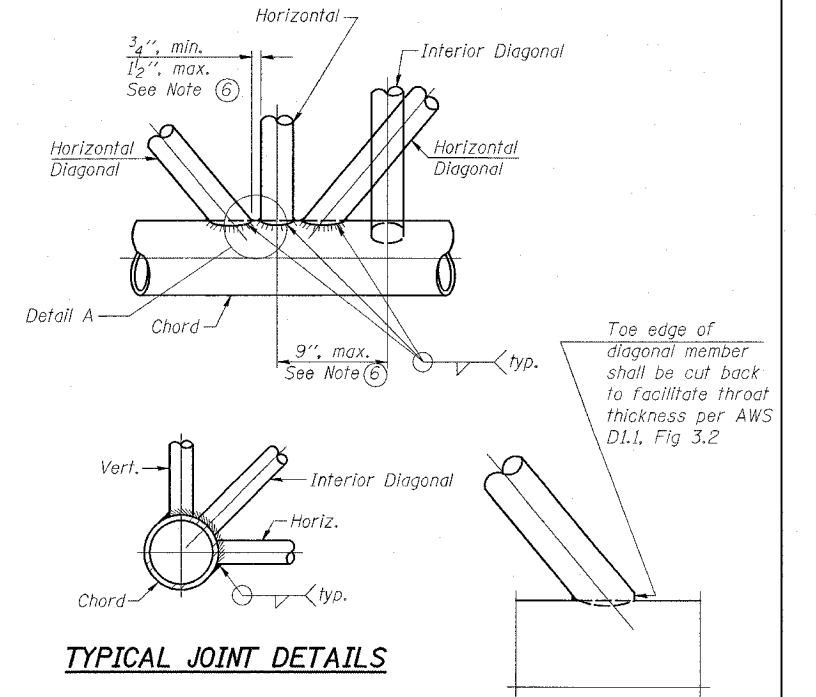


**ELEVATION
TYPICAL INTERIOR UNIT**

Even number of panels/interior unit required.



SUPPORT END DETAIL FOR EXTERIOR UNIT

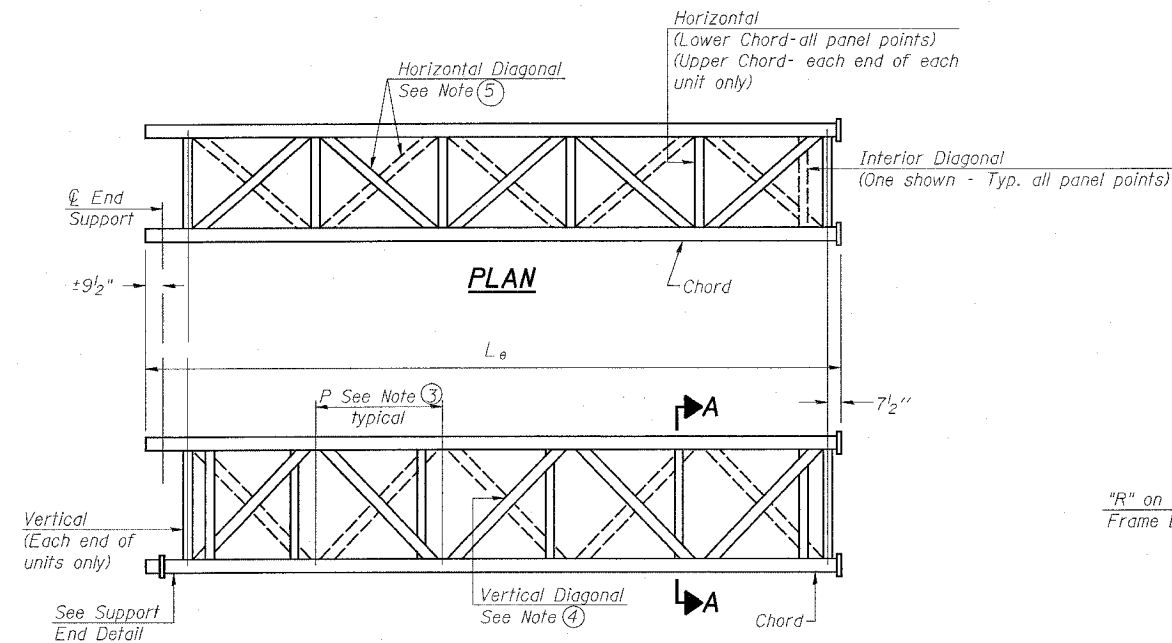


TYPICAL JOINT DETAILS

DETAIL A

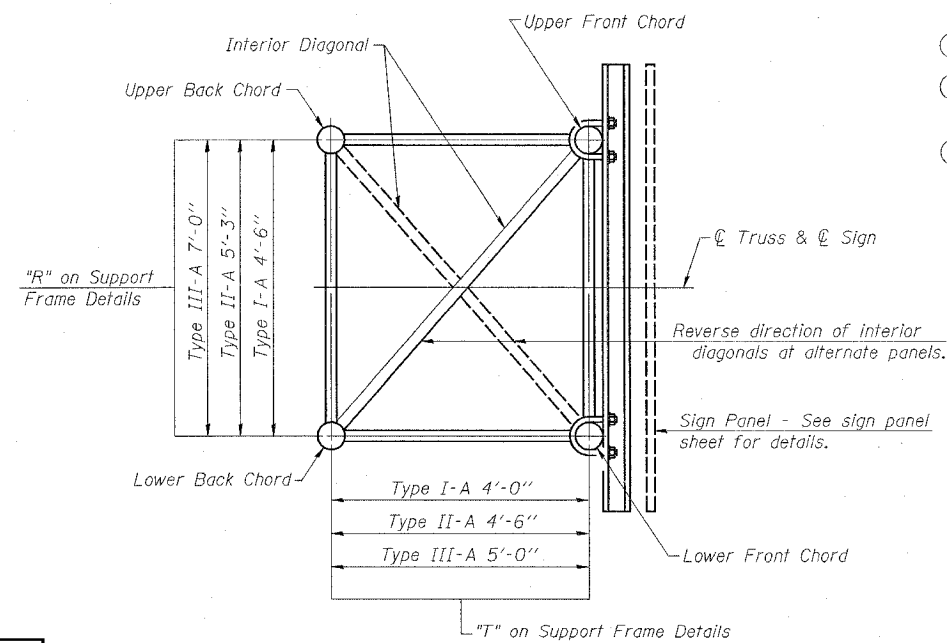
NOTES

- ① Contractor may alternatively use standard aluminum drive-fit cap to close end. 1/2" Ø 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.



**ELEVATION
TYPICAL EXTERIOR UNIT**

Even or odd number of panels/exterior units allowed.



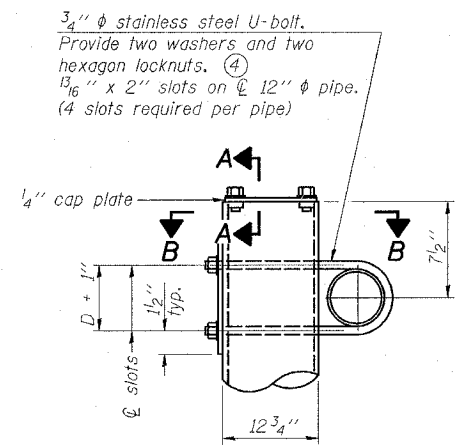
SECTION A-A

NUMBER	REVISION	DATE

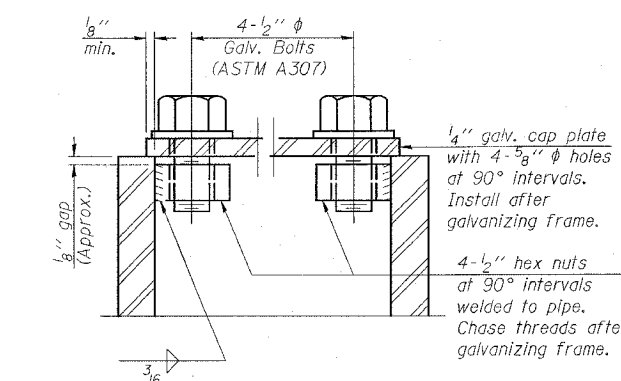
**OVERHEAD SIGN STRUCTURES
ALUMINUM TRUSS DETAILS
FOR TRUSS TYPES I-A, II-A AND III-A
ILLINOIS DEPARTMENT OF TRANSPORTATION**

**F.A.I. ROUTE 55/70
SECTION 82-41-1
ST. CLAIR COUNTY**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-41-1	ST. CLAIR	19	12
STA.		TO STA.		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

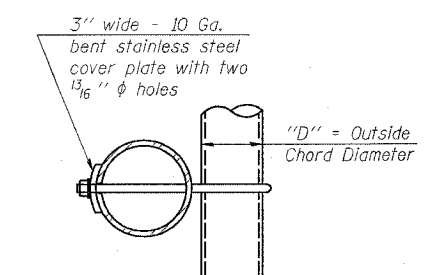


DETAIL A

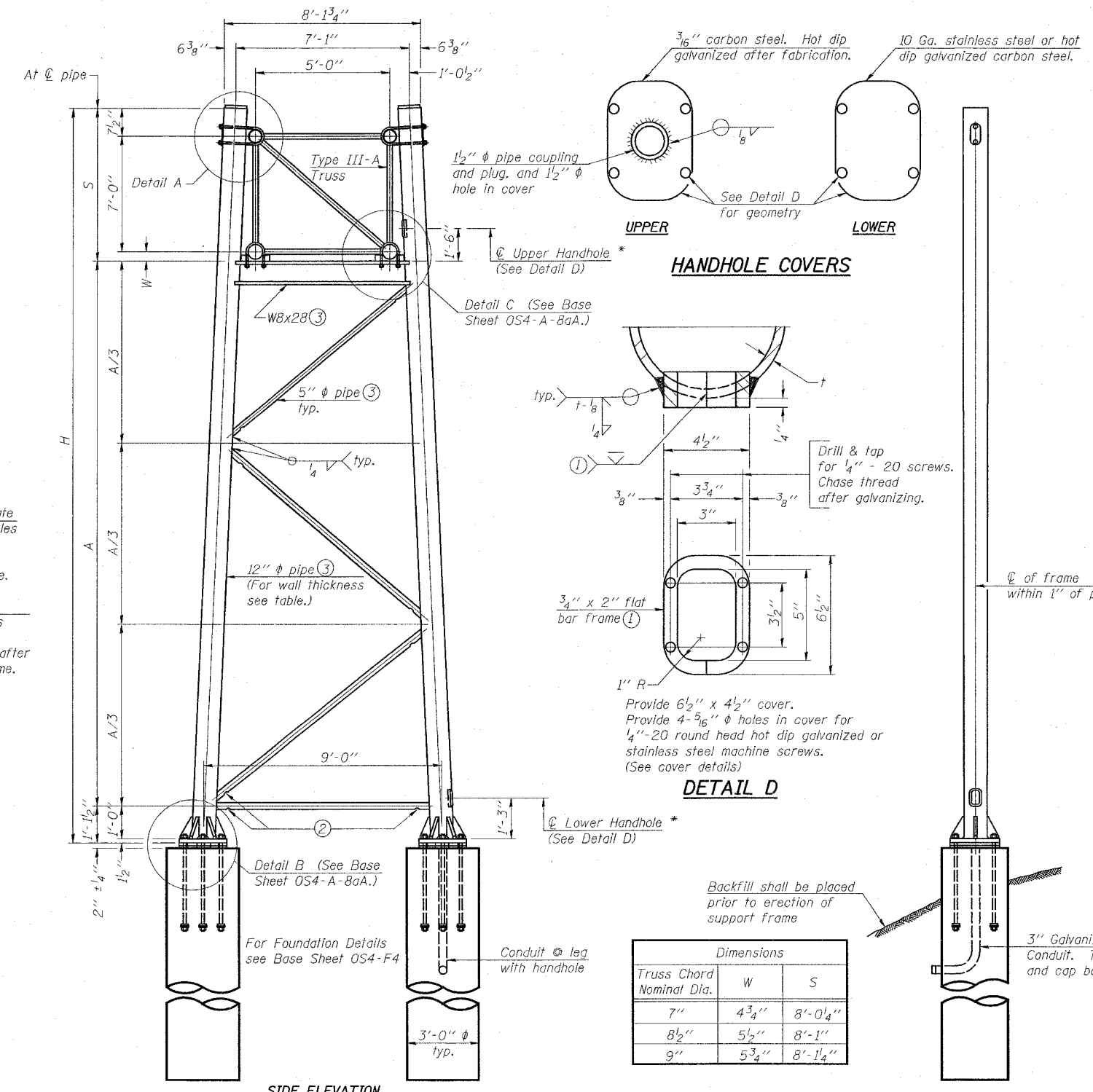


SECTION A-A

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



SECTION B-B



SIDE ELEVATION

END ELEVATION

TRUSS SUPPORT DETAILS
(12" ϕ Pipe-Type III-A Truss)

Dimensions		
Truss Chord Nominal Dia.	W	S
7"	4 3/4"	8'-0 1/4"
8 1/2"	5 1/2"	8'-1"
9"	5 3/4"	8'-1 1/4"

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

- 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 μ in or less.
- 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.
- 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.
- See General Notes for fasteners.
- Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
- "H" based on 15'-0" or actual sign height, whichever is greater.

* For dynamic message sign installations, provide upper and lower handholes in both legs of each support frame.

Structure Number	Station	Support		Pipe Wall Thickness	H (6)	A
		Left	Right			
850821055R001.4	105+67.6	X		.33	27.458	18.312
850821055R001.4	105+67.6		X	.33	30.343	21.197

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR
TYPE III-A ALUMINUM TRUSS
ILLINOIS DEPARTMENT OF TRANSPORTATION

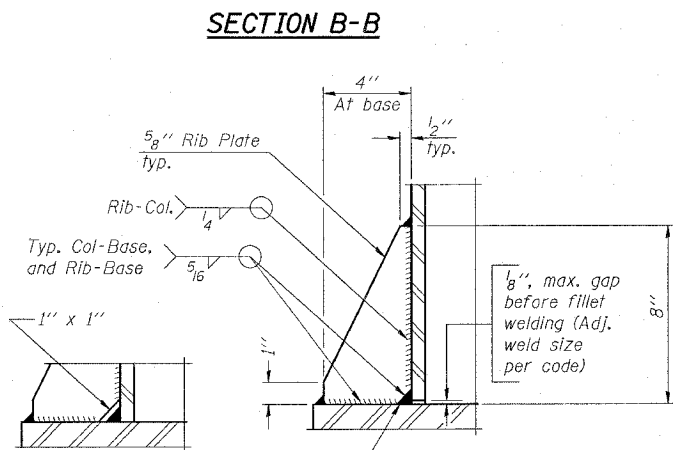
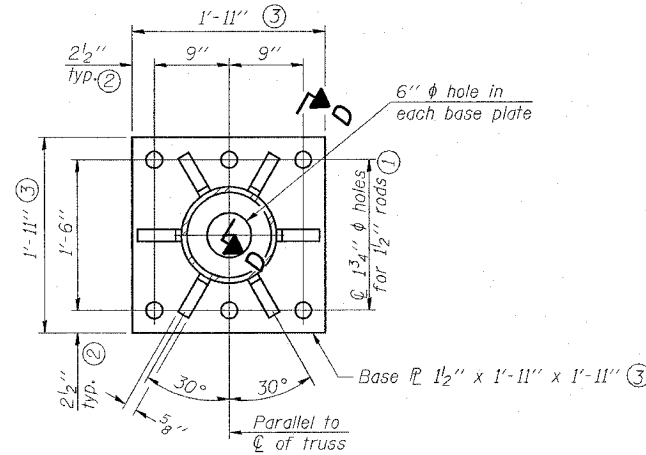
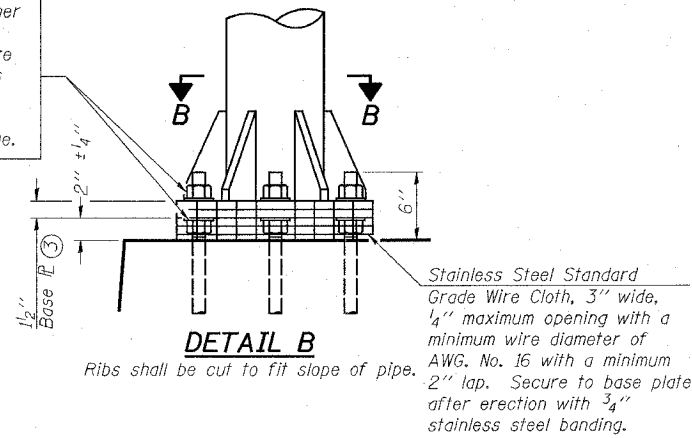
F.A.I. ROUTE 55/70
SECTION 82-41-1
ST. CLAIR COUNTY

NUMBER	REVISION	DATE

PLOT DATE * * * * *
FILE NAME * * * * *
PLOT SCALE * * * * *
REFERENCE * * * * *

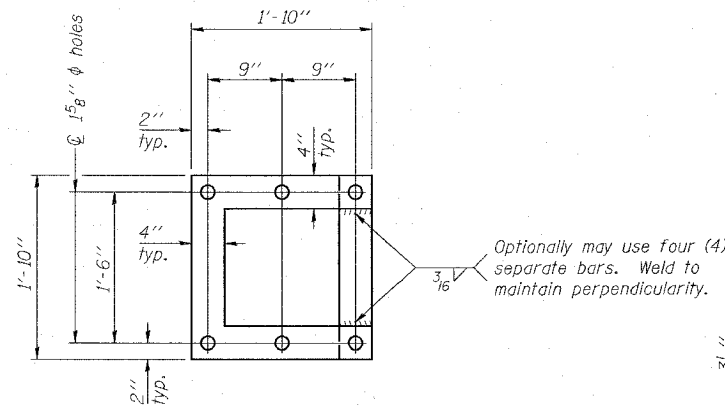
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-4I-1	ST. CLAIR	19	13
STA.		TO STA.		
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

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.



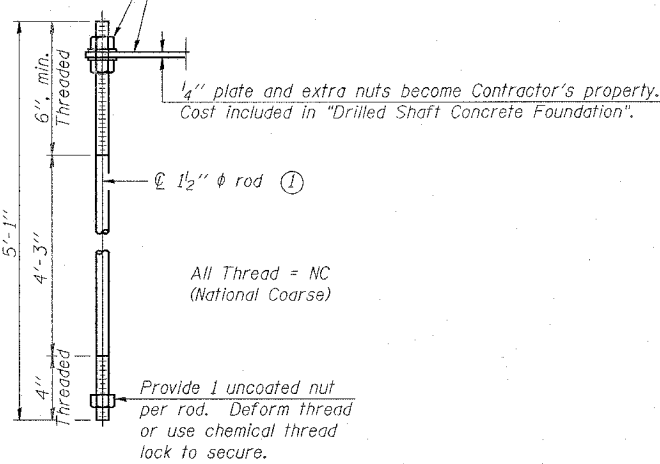
** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip.

SECTION D-D



POSITIONING PLATE(S)

At each location, provide 1/4" thick positioning plate(s) and six (6) additional nuts to be used with leveling nuts to maintain anchor bolts position during concrete placement.



ANCHOR ROD DETAIL

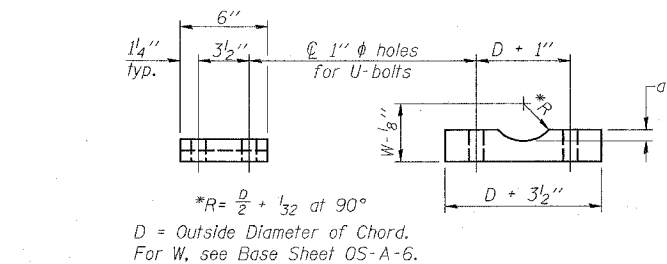
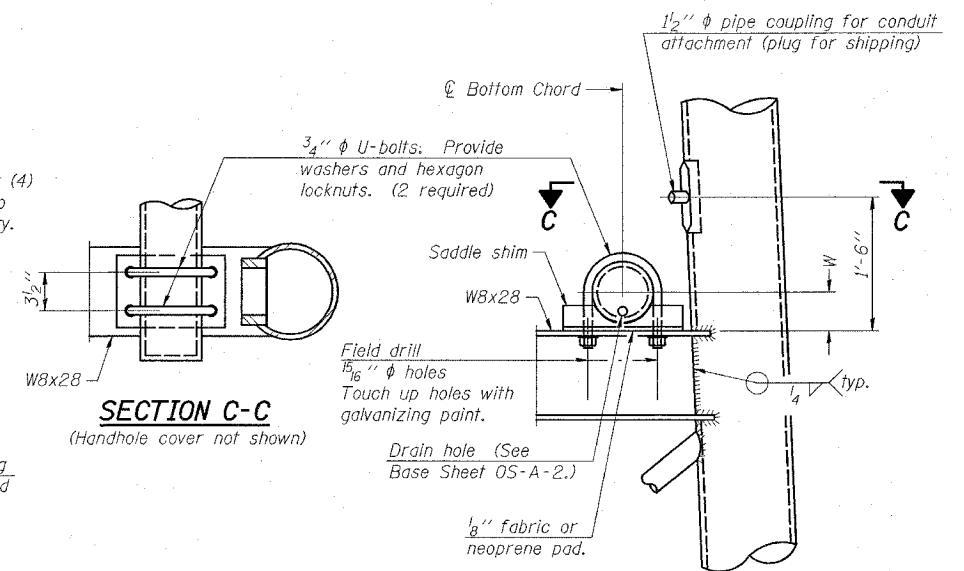
Anchor rods shall conform to AASHTO M314 Grade 36 or 55 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. Galvanize upper 12" per AASHTO M232. No welding shall be permitted on rods.

TYPE III-A TRUSS

12" ϕ PIPE SUPPORT FRAME DETAILS

Notes:
For Type III-A Truss spans greater than 150 ft. and up to 160 ft.:

- ① 1 3/4" ϕ rod, 2" ϕ holes
- ② 2 3/4" edge distance
- ③ Base Pl. 1 5/8" x 1'-11 1/2" x 1'-11 1/2"



Truss Chord Nominal Dia.	a
7"	1"
8 1/2"	1 1/4"
9"	1 3/8"

SADDLE SHIM DETAIL
ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T6S1
(4 required per sign truss)

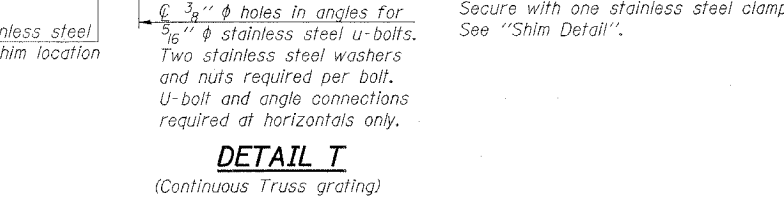
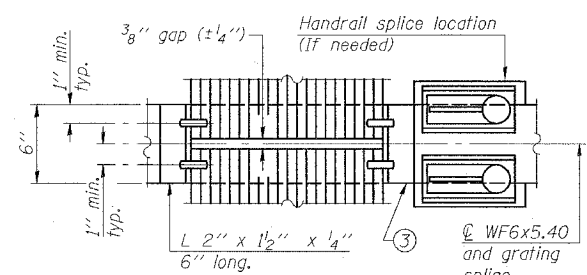
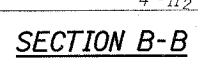
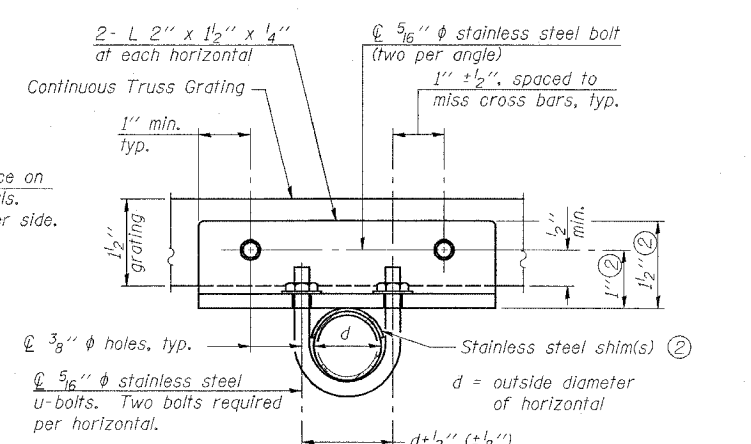
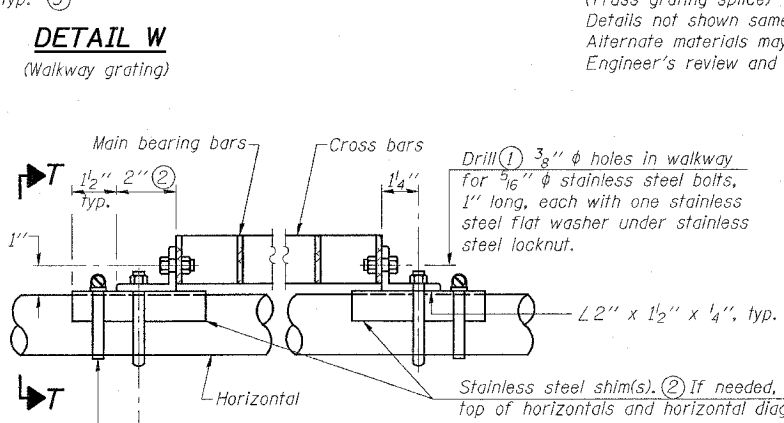
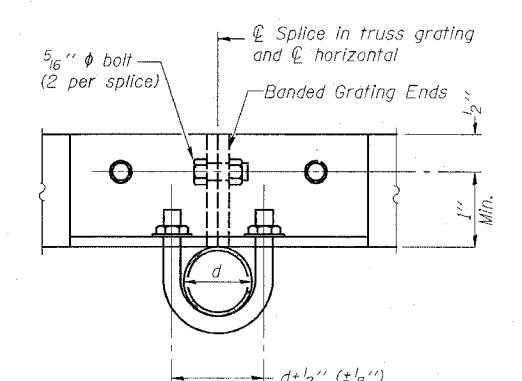
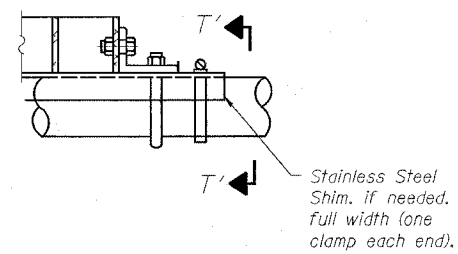
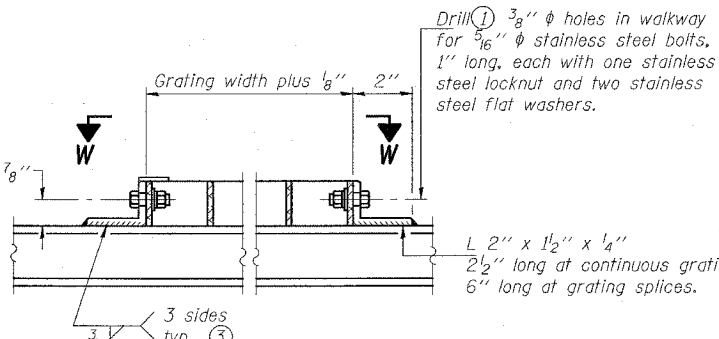
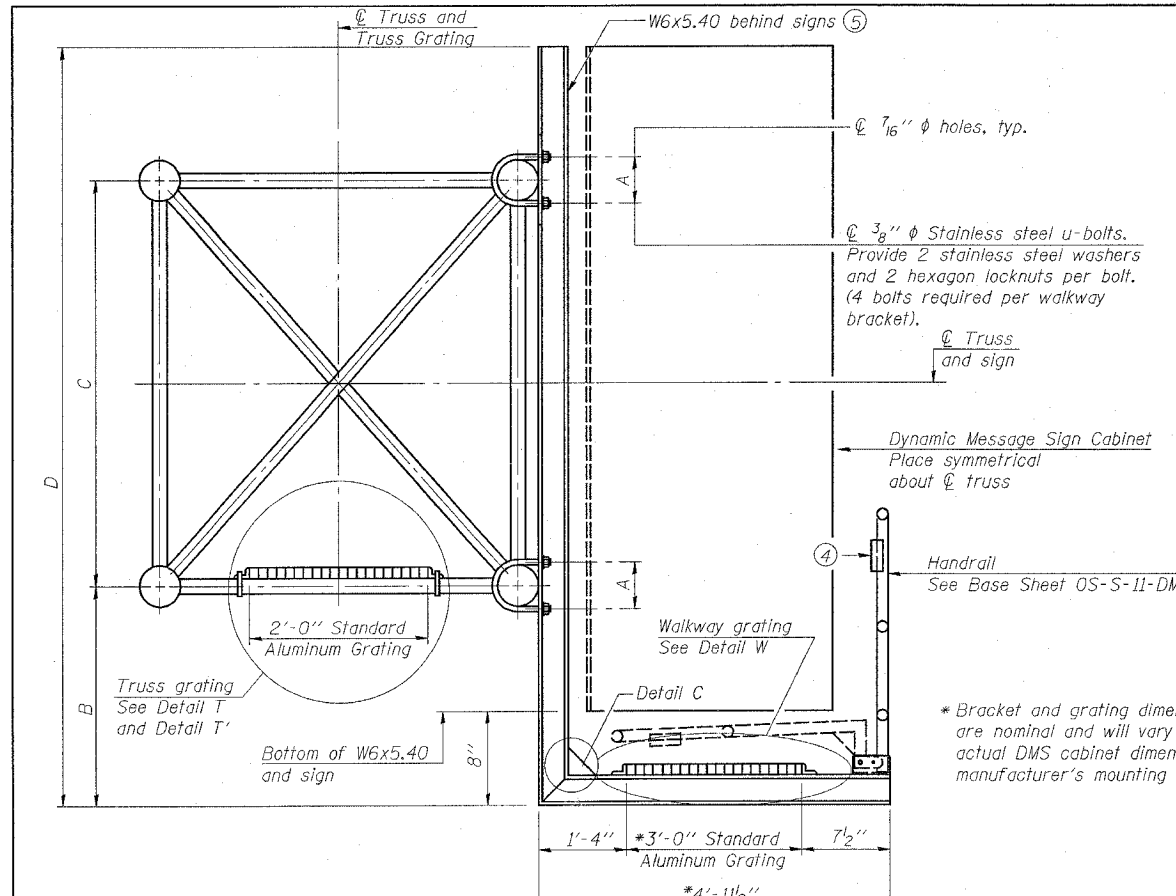
NUMBER	REVISION	DATE

**OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR
TYPE III-A ALUMINUM TRUSS**

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. ROUTE 55/70
SECTION 82-4I-1
ST. CLAIR COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-4I-1	ST. CLAIR	19	14
STA.		TO STA.		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B211 Alloy 6061-T6.
 Cross bars shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

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

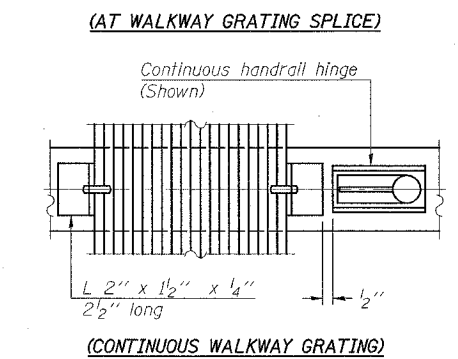
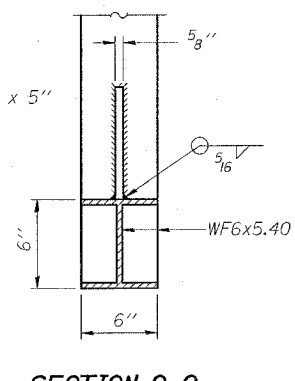
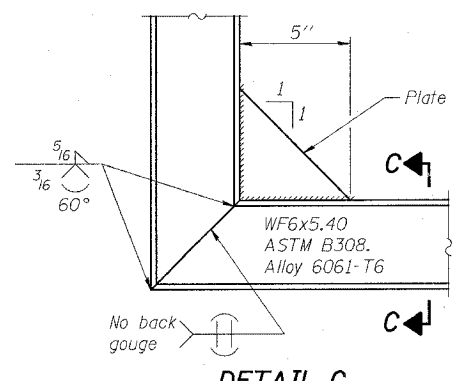
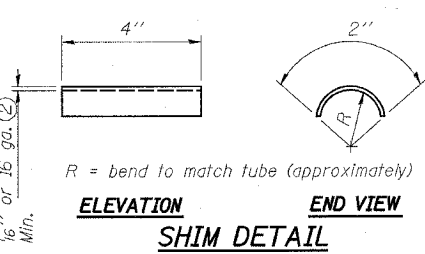
Structure Number	Station	A	B	C	D
850821055R001.4	105+67.6	7 1/2"	18"	7'	9'8"

- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-11.)
- 8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- Cabinet manufacturer must design and supply hardware for connection of cabinet to WF6's. Bolts must be stainless steel or hot dip galvanized high strength per IDOT specifications.

**OVERHEAD SIGN STRUCTURES
 ALTERNATE ALUMINUM WALKWAY DETAILS
 FOR DMS**

ILLINOIS DEPARTMENT OF TRANSPORTATION

**F.A.I. ROUTE 55/70
 SECTION 82-4I-1
 ST. CLAIR COUNTY**

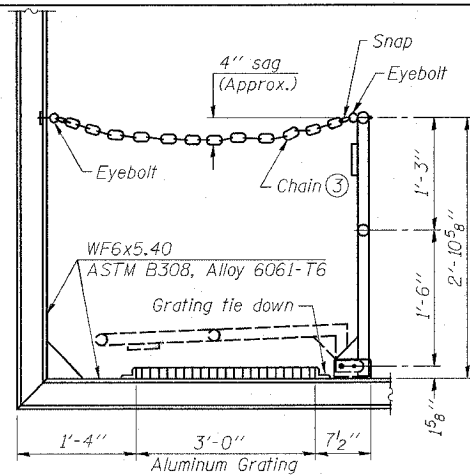


NUMBER	REVISION	DATE

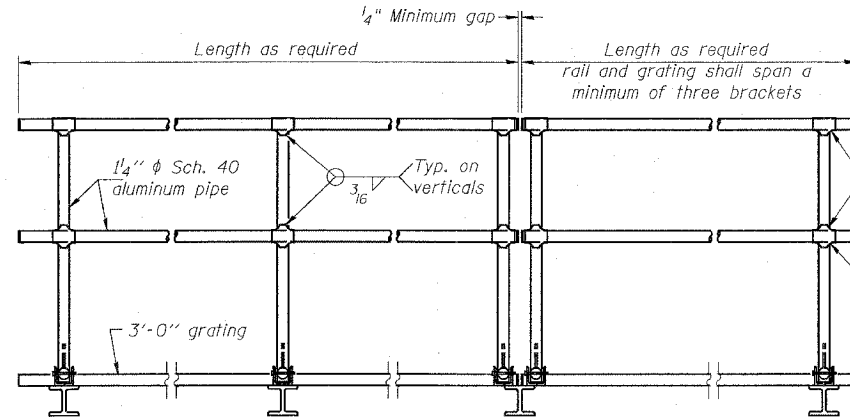
PLOT DATE: 7/01/2006
 FILE NAME: OS-A-10-DMS
 PLOT SCALE: 1/8" = 1'-0"
 REFERENCE: 7/01/2006

OS-A-10-DMS 7/01/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-41-1	ST. CLAIR	19	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



SIDE ELEVATION
(Showing safety chain w/o sign)



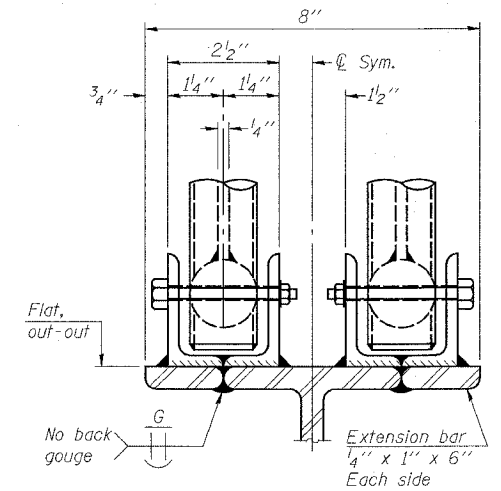
FRONT ELEVATION

HANDRAIL DETAILS

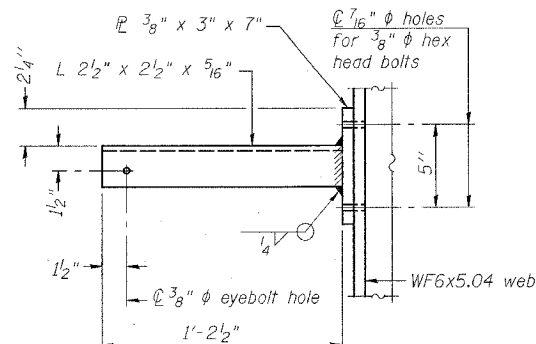
Handrail pipe shall be ASTM B241, Alloy 6063-T6 or Alloy 6061-T6.

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

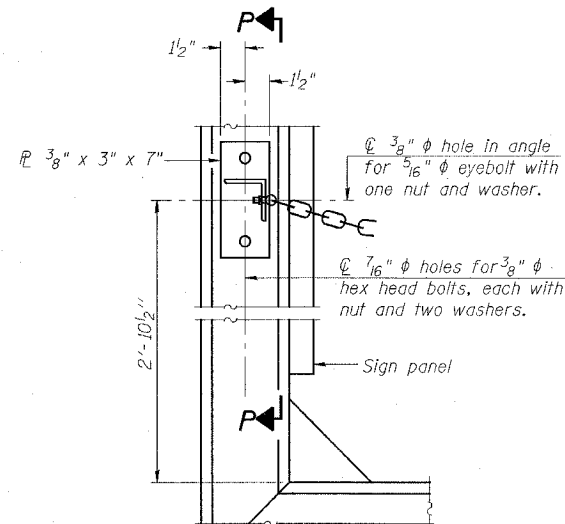
① Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)



ELEVATION AT HANDRAIL JOINT ④

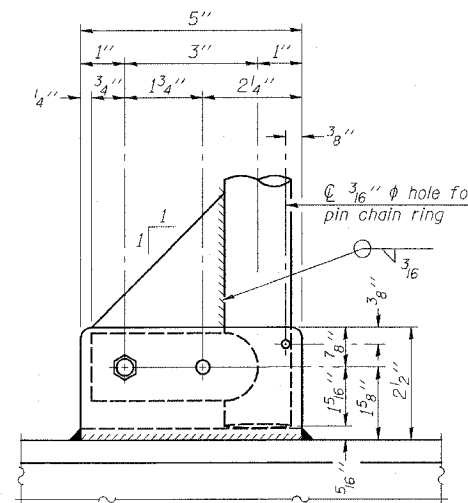


SECTION P-P

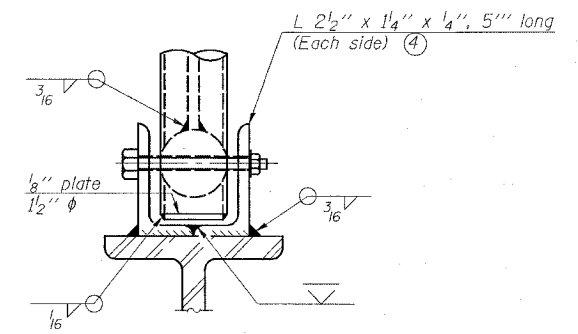


ALTERNATE SAFETY CHAIN ATTACHMENT

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

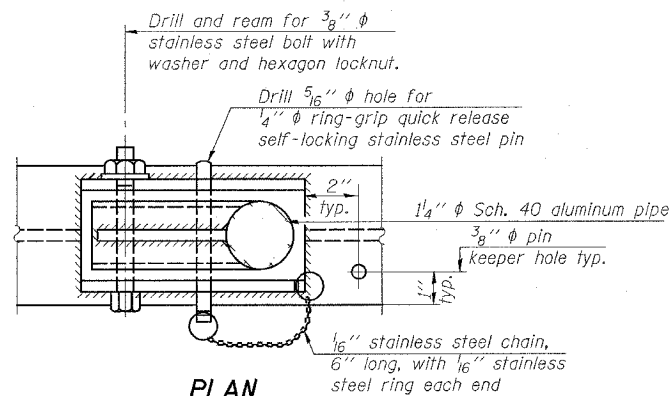


SIDE ELEVATION

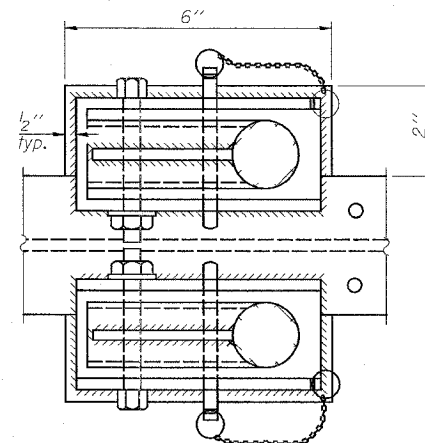


FRONT ELEVATION

See "ELEVATION" at right for dimensions.

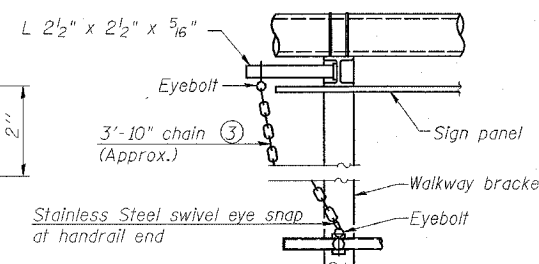


PLAN
DETAIL E HANDRAIL HINGE



PLAN AT HANDRAIL JOINT

Details not shown same as "PLAN"

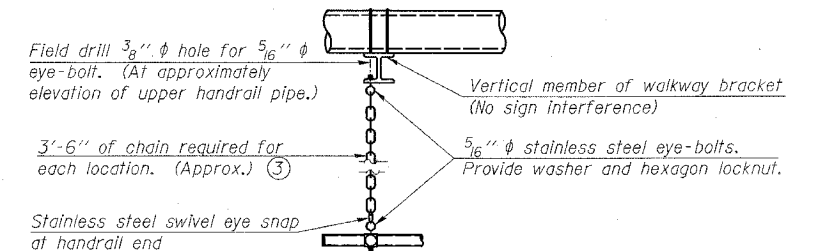


ALTERNATE SAFETY CHAIN ATTACHMENT

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

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

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



SAFETY CHAIN

One required for each end of each walkway.

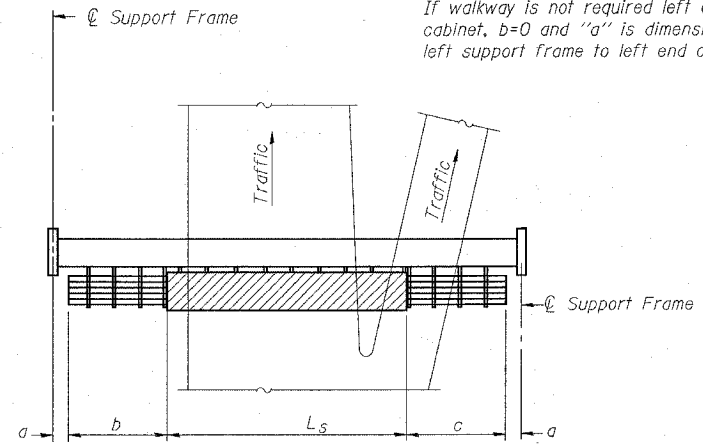
OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM HANDRAIL DETAILS
FOR DMS
ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. ROUTE 55/70
SECTION 82-41-1
ST. CLAIR COUNTY

NUMBER	REVISION	DATE

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-4I-1	ST. CLAIR	19	16
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

① If walkway is required left of the DMS cabinet, a=1'-6" and b=walkway lengths. If walkway is not required left of the DMS cabinet, b=0 and "a" is dimension from left support frame to left end of cabinet.

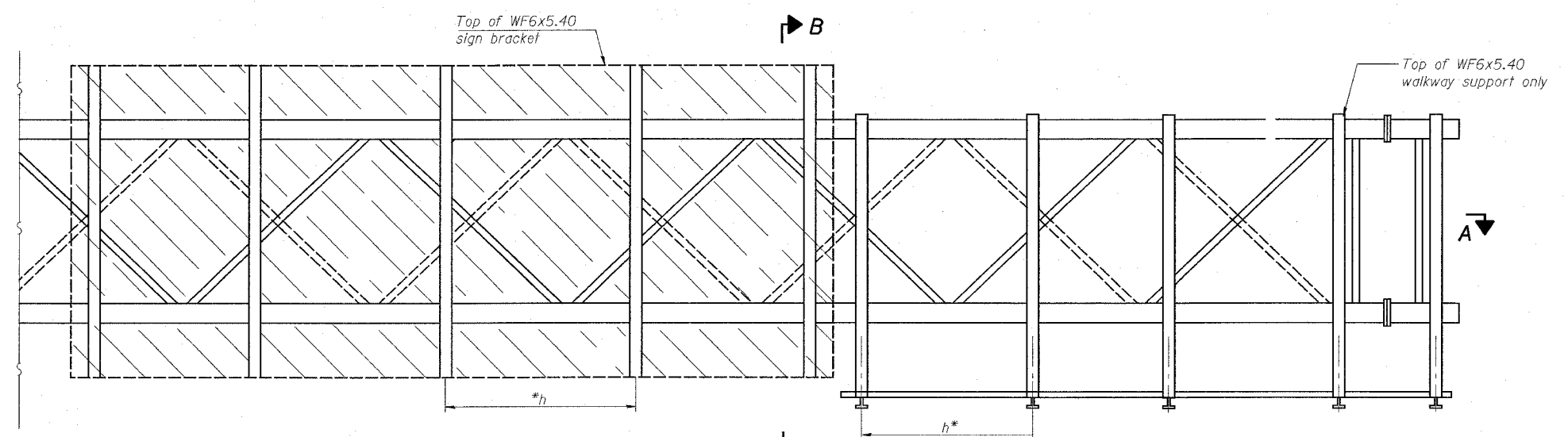


PLAN WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)

BRACKET TABLE

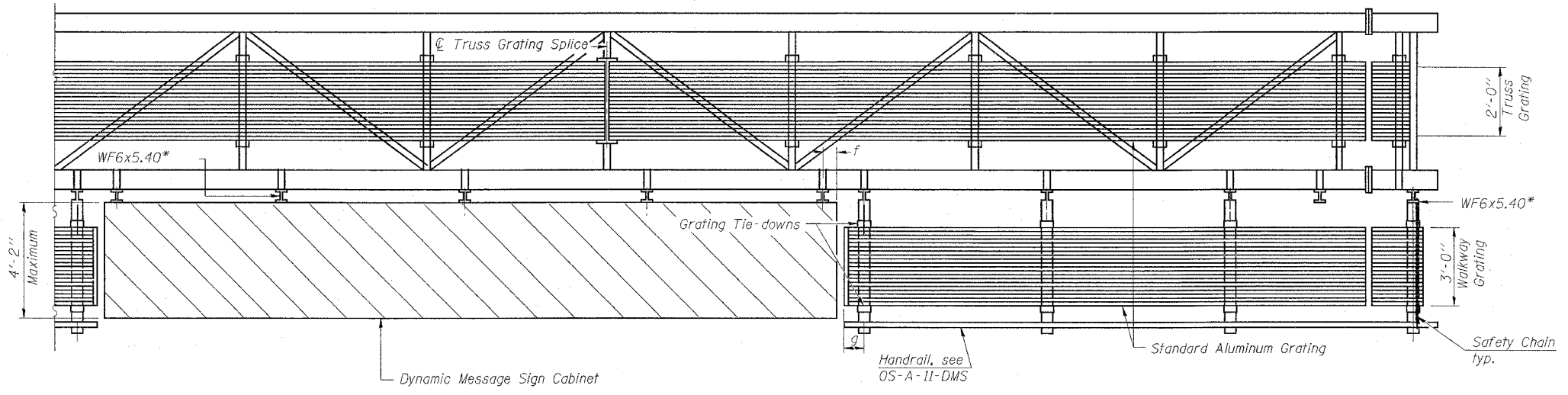
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

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



TYPICAL FRONT ELEVATION
With handrail omitted for clarity.

Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturer's mounting devices.



SECTION A-A

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

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

Notes:

- *Space walkway brackets WF6x5.40 for efficiency and within limits shown:
- f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
- g = 12" maximum, 4" minimum (End of walkway grating to center of nearest support bracket)
- h = 6'-0" maximum (center to center of sign and/or walkway support brackets, WF6x5.40)

Maximum DMS weight = 5000 lbs. 4'-2" maximum cabinet depth includes depth of cabinet plus connection to WF6x5.40.
For Section B-B and Grating Splice Details, see Base Sheet OS-A-10-DMS.
For Handrail Splice Details, see Base Sheet OS-A-11-DMS.

Structure Number	Station	a	b	c	L _s	Walkway Grating and Handrail Lengths
8S0821055R001.4	105+67.6	27' 6"	0	26'	31'	26'

NUMBER	REVISION	DATE

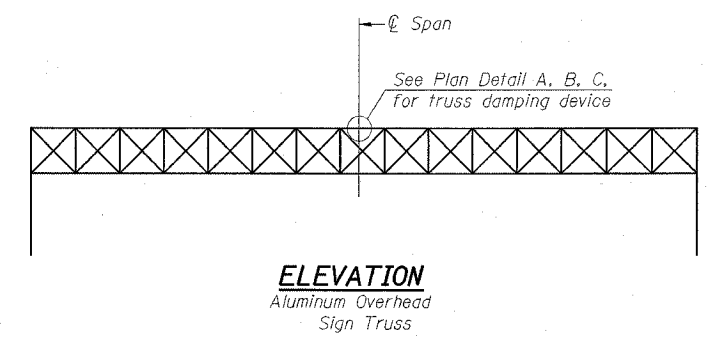
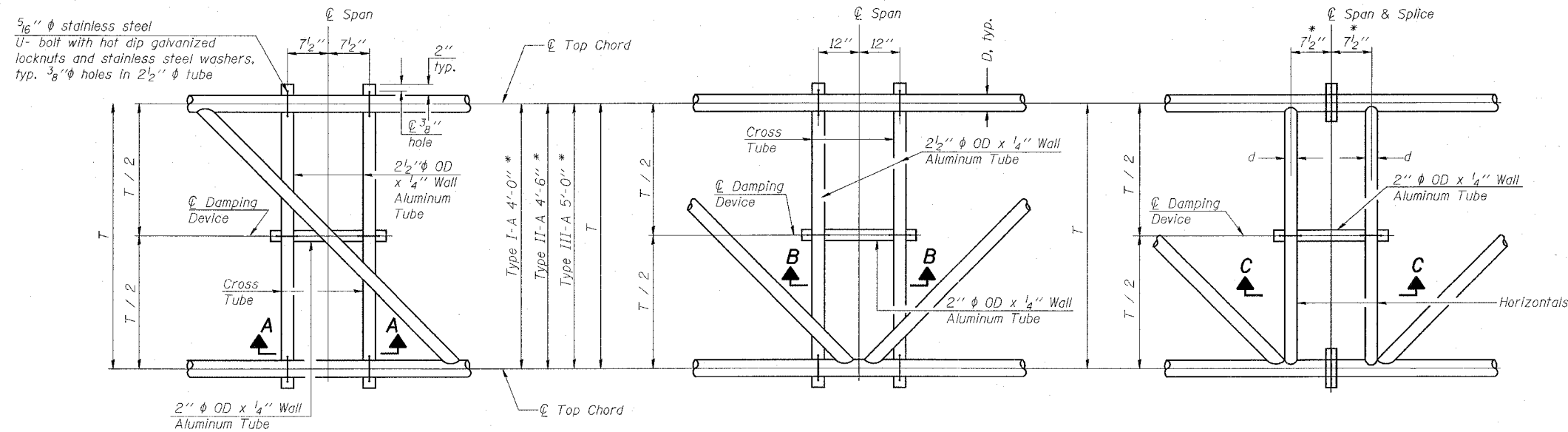
**OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM WALKWAY DETAILS
FOR DMS**
ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. ROUTE 55/70
SECTION 82-4I-1
ST. CLAIR COUNTY

PLT DATE = *DATE*
FILE NAME = *FILE*
PLT SCALE = *SCALE*
REFERENCE = *REF*

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-4I-1	ST. CLAIR	19	17
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT				

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

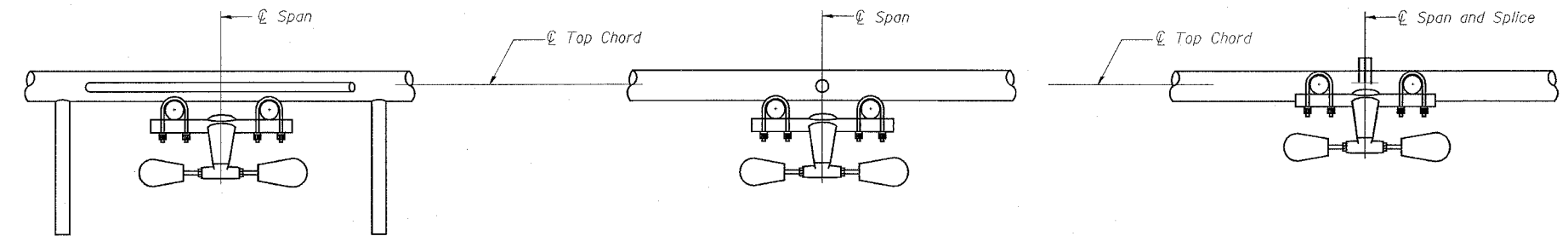


NOTES
 Damper: One damper per truss. (31 lbs. Stockbridge-Type Aluminum)
 Cost included in Overhead Sign Structure...
 Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...

PLAN DETAIL "A"
 Span between Panel Points

PLAN DETAIL "B"
 Span at Panel Point

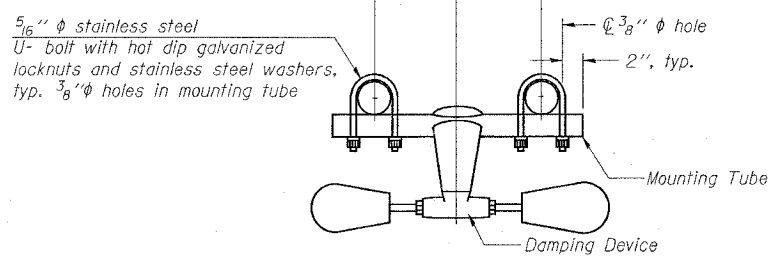
PLAN DETAIL "C"
 Span at Chord Splice



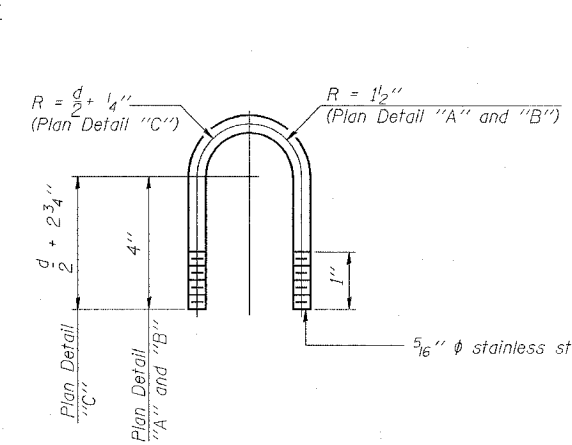
SECTION A-A

SECTION B-B

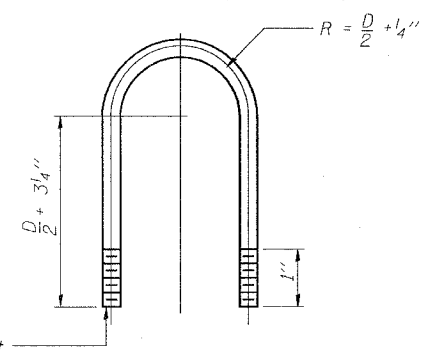
SECTION C-C



TRUSS DAMPING DEVICE CONNECTION DETAIL
 (Typical)



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
 (Typical)



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

OVERHEAD SIGN STRUCTURE DAMPING DEVICE
 ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 55/70
 SECTION 82-4I-1
 ST. CLAIR COUNTY

DATE: 7/01/2006
 DRAWN BY: OS-A-D
 CHECKED BY: _____
 APPROVED BY: _____

OS-A-D

7/01/2006

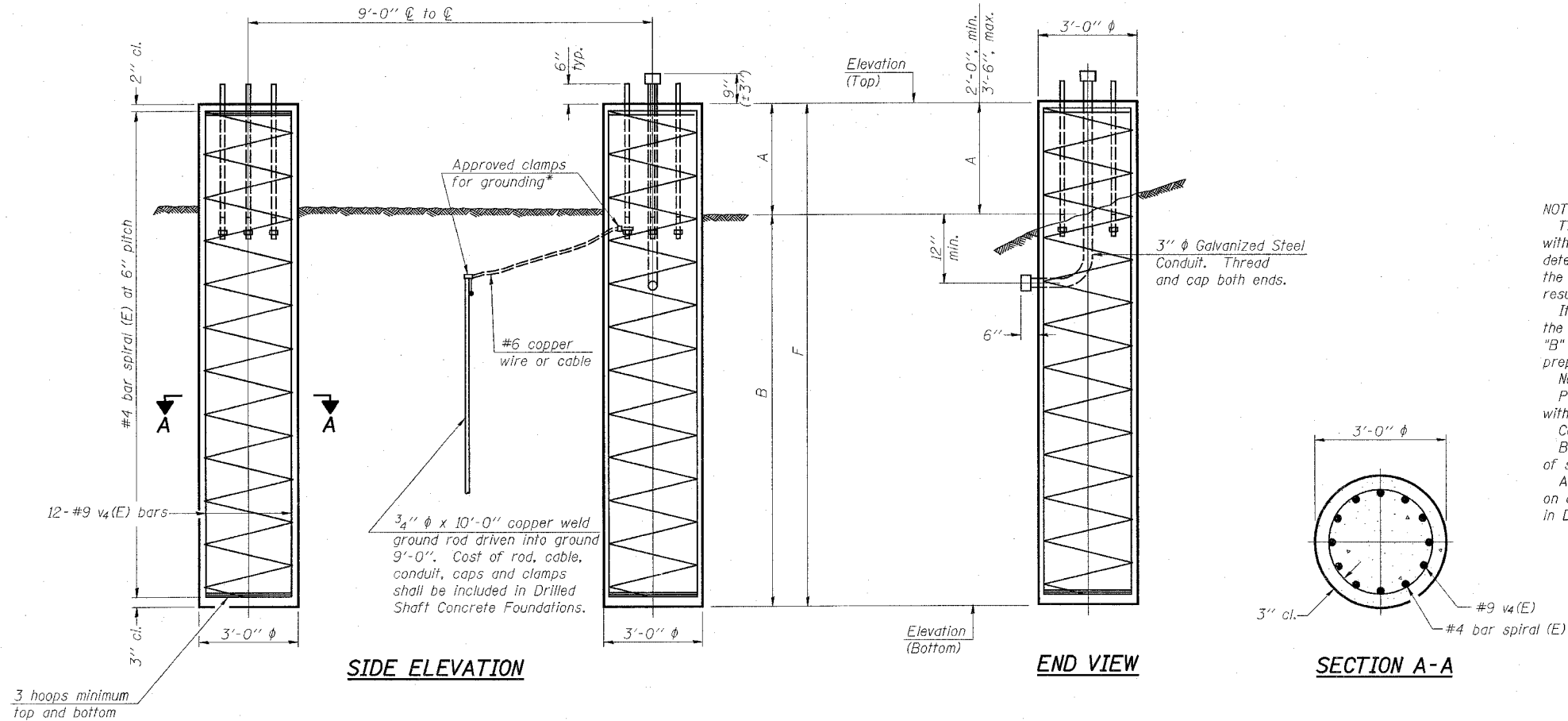
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70	82-41-1	ST. CLAIR	19	18
STA.		TO STA.		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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

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

BAR LIST - EACH FOUNDATION

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



NOTES:

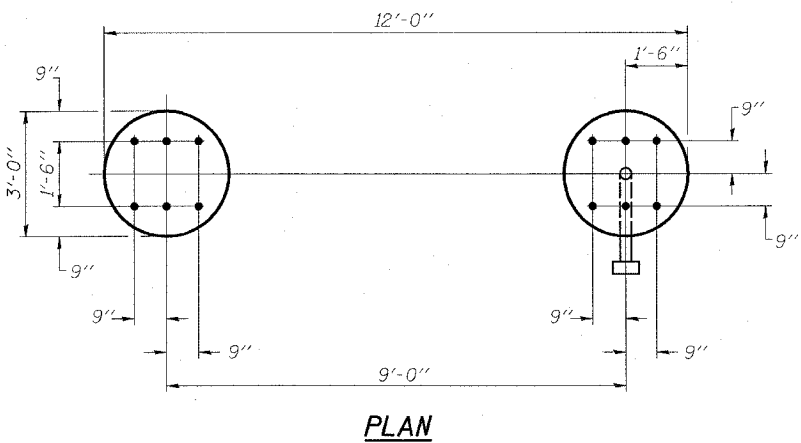
The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included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

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

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints. Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

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



Structure Number	Station	Left Foundation					Right Foundation					Class SI Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	
8S0821055R001.4	105+67.6	442.497	421.843	2.654	18.00	20.654	439.612	418.994	2.617	18.000	20.617	21.6

PLAN

NUMBER	REVISION	DATE

DETAILS FOR 12" Ø SUPPORT FRAME TYPE III-A TRUSS

**OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS**

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. ROUTE 55/70
SECTION 82-41-1
ST. CLAIR COUNTY

PLOT DATE = #02/05
FILE NAME = #171121
PLOT SCALE = #SCALE
REFERENCE = #REF

OS4-F4

1-7-05

