

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI RATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	1
ILLINOIS			CONTRACT NO. 68E72	

D-94-007-19

INDEX OF SHEETS:
SEE SHEET 2 FOR INDEX OF SHEETS

PROPOSED HIGHWAY PLANS

FAI 74 (I-74)
PROJECT NUMBER: HSIP-ZD5E(422)
SECTION D4 DYNAMIC MESSAGE SIGNS 2020
DYNAMIC MESSAGE SIGN INSTALLATION
PEORIA & TAZEWELL COUNTY



DMS LOCATION #1
I-74 EB AT NEBRASKA AVE.

C-94-010-19

DMS LOCATION #2
I-74 EB AT GLEN OAK AVE.

HIGHWAY STANDARDS:
SEE SHEET 2 FOR A LIST OF
APPLICABLE HIGHWAY STANDARDS

PROJECT DESCRIPTION:
INSTALLATION OF DYNAMIC MESSAGE SIGNS AND
ASSOCIATED WORK AT FOUR LOCATIONS ALONG
I-74 IN PEORIA AND TAZEWELL COUNTY



DMS LOCATION #3
I-74 WB AT IL 116 (MAIN ST.)

DMS LOCATION #4
I-74 WB AT WASHINGTON ST.

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

PROJECT ENGINEER : ERIC HOWALD (309) 671-4481
PROJECT MANAGER : BEN TELLEFSON (309) 671-4477
CATALOG NO. 03523-03D
CONTRACT NO. 68E72

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Dec 13 20 19
Kense A. Darnie **REG. 1560**
REGIONAL ENGINEER

Jan 31 20 20
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

Jan 31 20 20
[Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

NO COMMITMENTS HAVE BEEN MADE IN CONJUNCTION WITH THIS PROJECT.

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701428-01	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY / EXPRESSWAY
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873001-02	TRAFFIC SIGNAL GROUNDING & BONDING

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USER NAME = hansontj PLOT SCALE = 81.9197' / in. PLOT DATE = 12/13/2019	DESIGNED - DRAWN - CHECKED - DATE -	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	COMMITMENTS, INDEX OF SHEETS, AND HIGHWAY STANDARDS	F.A.I. RTE: 74 SECTION: D4 DYNAMIC MESSAGE SIGNS 2020 COUNTY: PEORIA & TAZEWELL TOTAL SHEETS: 43 SHEET NO.: 2 CONTRACT NO. 68E72 ILLINOIS FED. AID PROJECT
SCALE:			SHEET OF SHEETS STA. TO STA.		

CONSTRUCTION NOTES

1.	THE LOCATION OF ALL UTILITIES AND PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE INSTALLATION OF ANY COMPONENTS.
2.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING IDOT ELECTRICAL FACILITIES AT HIS/HER OWN EXPENSE IF REQUIRED. THE CONTRACTOR SHALL ALSO BE LIABLE FOR ANY DAMAGE TO IDOT FACILITIES RESULTING FROM INACCURATE LOCATING.
3.	ELECTRICAL WORK SHALL CONFORM WITH NATIONAL, STATE, AND LOCAL CODES.
4.	THE LOCATIONS FOR HANDHOLES AND CONCRETE FOUNDATIONS ARE PROVIDED FOR REFERENCE ONLY. THE ENGINEER OF TRAFFIC SHALL BE NOTIFIED FOR LOCATION VERIFICATION BEFORE INSTALLATION.
5.	ALL STRUCTURES, METALLIC CONDUITS, AND HANDHOLES SHALL BE BONDED IN ACCORDANCE WITH NEC REQUIREMENTS. THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C" AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS (INCLUDING CLAMPS, HARDWARE, ELECTRICAL CABLE, AND ALL OTHER ITEMS REQUIRED TO BOND THE STRUCTURES).
6.	THE CONTRACTOR SHALL PROVIDE ELECTRICAL CABLE SLACK IN ACCORDANCE WITH ARTICLE 873.03.
7.	ELECTRICAL CABLE WILL BE MEASURED FOR PAYMENT IN ACCORDANCE WITH ARTICLE 873.04.
8.	THE CCTV CAMERA SHALL BE INSTALLED AT A MINIMUM MOUNTING HEIGHT OF 43 FT.
9.	THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BIDDING. THERE WILL BE NO ADDITIONAL COMPENSATION PAID FOR CLAIMS THAT ARISE FROM A FAILURE TO FULLY INVESTIGATE EXISTING FIELD CONDITIONS.
10.	THE HANDHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE FRAME WILL BE FLUSH WITH THE SURFACE OF THE SHOULDER OR GROUND LINE.
11.	ALL SURPLUS MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS.
12.	COILABLE POLYETHYLENE DUCT MAY BE SUBSTITUTED FOR PVC PUSHED OR TRENCHED.
13.	NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT AT GREATER THAN 2 FT. MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.
14.	THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THIS COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES FOR THE CONDUITS.
15.	THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF DRILLED SHAFT FOUNDATIONS WITH THE RESIDENT ENGINEER PRIOR TO CONSTRUCTION.
16.	THE CONTRACTOR SHALL LOCATE THE ACCESS DOOR AND WALKWAY ON THE SIDE OF THE DYNAMIC MESSAGE SIGN THAT IS FURTHEST FROM INTERSTATE TRAFFIC.
17.	THE STEP-DOWN TRANSFORMER AT DMS LOCATION #4 SHALL BE INSTALLED 3 FT. BEHIND THE CONCRETE FOUNDATION FOR THE DMS STRUCTURE, IN THE LOCATION THAT IS BEST PROTECTED BY THE IMPACT ATTENUATOR AS SHOWN IN THE PLANS.
18.	ALL REINFORCEMENT BARS SHALL BE EPOXY COATED.
19.	SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.
20.	ALL EXCAVATED MATERIAL, WHICH INCLUDES DIGGING OR GRADING OF ANY SOIL OR FILL MATERIAL, WITH THE EXCEPTION OF AGGREGATE FILLS, MUST BE INCORPORATED WITHIN THE IDOT RIGHT OF WAY DUE TO ENVIRONMENTAL DOCUMENTATION REQUIREMENTS.

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CONSTRUCTION NOTES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68E72	

SUMMARY OF QUANTITIES

				URBAN	PEORIA COUNTY CONST. TYPE CODE 0021 SAFETY FUNDS 90% FEDERAL 10% STATE	TAZEWELL COUNTY CONST. TYPE CODE 0021 SAFETY FUNDS 90% FEDERAL 10% STATE
CODE	ITEM DESCRIPTION	UNIT	TOTAL QTY.	QTY.	QTY.	
20200100	EARTH EXCAVATION	CU YD	18.5	18.5		
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	75.0	75.0		
* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1.0	1.0		
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1.0	1.0		
64300450	IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	1.0		1.0	
64301090	ATTENUATOR BASE	SQ YD	9.5		9.5	
67100100	MOBILIZATION	L SUM	1.0	0.5	0.5	
* 72000300	SIGN PANEL - TYPE 3	SQ FT	332.5	178.5	154.0	
72700100	STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	3503.5	1642.3	1861.2	
73301805	OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE III-F-A	FOOT	154.8	77.4	77.4	
73301900	OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY, TYPE A	FOOT	25.2	12.6	12.6	
73400100	CONCRETE FOUNDATIONS	CU YD	7.6	3.8	3.8	
* 73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	29.8	15.6	14.2	
73700200	REMOVE CONCRETE FOUNDATION - GROUND MOUNT	EACH	6.0	3.0	3.0	
* 81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	205.0	60.0	145.0	
* 81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	1375.0	422.0	953.0	
* 81400200	HEAVY-DUTY HANDHOLE	EACH	2.0		2.0	
* 81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1.0	1.0		
* 81603078	UNIT DUCT, 600V, 3-1C NO.2, 1/C NO.2 GROUND, (XLP-TYPE USE), 1 1/2" DIA. POLYETHYLENE	FOOT	2660.0		2660.0	
* 81702130	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	2844.0	1525.0	1319.0	
* 83600355	LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 8" X 6'	EACH	2.0	2.0		
* 87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1020.0	534.5	485.5	
* 87900100	DRILL EXISTING FOUNDATION	EACH	1.0		1.0	

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	4
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				

* = SPECIALTY ITEM

REV. 1/15/20

SUMMARY OF QUANTITIES

				URBAN	PEORIA COUNTY CONST. TYPE CODE 0021 SAFETY FUNDS 90% FEDERAL 10% STATE	TAZEWELL COUNTY CONST. TYPE CODE 0021 SAFETY FUNDS 90% FEDERAL 10% STATE
CODE	ITEM DESCRIPTION	UNIT	TOTAL QTY.	QTY.	QTY.	
* 87900200	DRILL EXISTING HANDHOLE	EACH	6.0	4.0	2.0	
* X0320023	CLOSED CIRCUIT TELEVISION DOME CAMERA, HD	EACH	11.0	8.0	3.0	
* X0320024	ETHERNET MANAGE SWITCH	EACH	5.0	5.0		
X0323388	TRAFFIC COUNTER	EACH	6.0	5.0	1.0	
X0323914	FIBER OPTIC CABLE SPLICE - LATERAL	EACH	1.0		1.0	
X0323920	POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	4.0	2.0	2.0	
X0323923	SUPPORT EQUIPMENT AND MAINTENANCE	L SUM	1.0	0.5	0.5	
* X0324597	CLOSED CIRCUIT TELEVISION CABINET	EACH	1.0	1.0		
* X0325485	TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	4.0	2.0	2.0	
X0325941	ACCESS LADDER	EACH	4.0	2.0	2.0	
* X0326812	CAT 5 ETHERNET CABLE	FOOT	514.0	427.0	87.0	
X0326952	STEP-DOWN TRANSFORMER	EACH	1.0		1.0	
X0327466	TRAFFIC COUNTER POST, GALVANIZED STEEL	EACH	2.0	2.0		
* X0327739	MISCELLANEOUS ELECTRICAL WORK	L SUM	1.0	0.5	0.5	
* X1400222	BLUETOOTH DETECTOR	EACH	8.0	7.0	1.0	
X6010005	SHOULDER REMOVAL AND REPLACEMENT FOR ELECTRICAL WORK	FOOT	10.0	10.0		
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1.0	0.5	0.5	
X7240205	REMOVE SIGN COMPLETE	EACH	2.0	1.0	1.0	
* X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	1890.0	838.0	1052.0	
* X8710050	FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	5.0	3.0	2.0	
X8780107	CONCRETE FOUNDATION (SPECIAL)	FOOT	4.5		4.5	
Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	25.0	25.0		

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES - CONTINUED

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	5
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				

*= SPECIALTY ITEM

ITEM DESCRIPTION	UNIT	TOTAL QTY.	PROPOSED DMS LOCATION #1 I-74 EB AT NEBRASKA AVE.	PROPOSED DMS LOCATION #2 I-74 EB AT GLEN OAK AVE.	PROPOSED DMS LOCATION #1 I-74 WB AT IL 116 (MAIN ST.)	PROPOSED DMS LOCATION #4 I-74 WB AT WASHINGTON ST.	I-74 @ STERLING AVE.	I-74 @ DRIES LN.	I-74 @ FORREST HILL AVE.	I-74 @ UNIVERSITY ST.	I-74 @ SHERIDAN AVE.	I-74 @ IL 40 (KNOXVILLE AVE./ PENNSYLVANIA AVE.)	I-74 @ IL 29 (JEFFERSON ST.)	I-74 WB RAMP @ WASHINGTON ST.	I-74 @ PINECREST OVERPASS
EARTH EXCAVATION	CU YD	18.5		18.5											
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	75.0		75.0											
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1.0		1.0											
TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1.0		1.0											
IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	1.0				1.0									
ATTENUATOR BASE	SQ YD	9.5				9.5									
MOBILIZATION	L SUM	1.0	0.2	0.2	0.2	0.3					0.1				
SIGN PANEL - TYPE 3	SQ FT	332.5	178.5		154.0										
STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	3503.5	1642.3		1861.2										
OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE III-F-A	FOOT	154.8	38.7	38.7	38.7	38.7									
OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY, TYPE A	FOOT	25.2	6.3	6.3	6.3	6.3									
CONCRETE FOUNDATIONS	CU YD	7.6	3.8		3.8										
DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	29.8	7.8	7.8	7.8	6.4									
REMOVE CONCRETE FOUNDATION - GROUND MOUNT	EACH	6.0	3.0		3.0										
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	205.0				145.0					60.0				
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	1375.0	25.0	397.0	460.0	493.0									
HEAVY-DUTY HANDHOLE	EACH	2.0			1.0	1.0									
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1.0		1.0											
UNIT DUCT, 600V, 3-1C NO.2, 1/C NO.2 GROUND, (XLP-TYPE USE), 1 1/2" DIA. POLYETHYLENE	FOOT	2660.0				2660.0									
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	2844.0	224.0	1301.0	1319.0										
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1020.0	112.0	422.5	485.5										
DRILL EXISTING FOUNDATION	EACH	1.0				1.0									

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**STATE OF ILLINOIS
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SCHEDULE OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	6
CONTRACT NO. 68E72			ILLINOIS FED. AID PROJECT	

ITEM DESCRIPTION	UNIT	TOTAL QTY.	PROPOSED DMS LOCATION #1 I-74 EB AT NEBRASKA AVE.	PROPOSED DMS LOCATION #2 I-74 EB AT GLEN OAK AVE.	PROPOSED DMS LOCATION #1 I-74 WB AT IL 116 (MAIN ST.)	PROPOSED DMS LOCATION #4 I-74 WB AT WASHINGTON ST.	I-74 @ STERLING AVE.	I-74 @ DRIES LN.	I-74 @ FORREST HILL AVE.	I-74 @ UNIVERSITY ST.	I-74 @ SHERIDAN AVE.	I-74 @ IL 40 (KNOXVILLE AVE.)/ PENNSYLVANIA AVE.	I-74 @ IL 29 (JEFFERSON ST.)	I-74 WB RAMP @ WASHINGTON ST.	I-74 @ PINECREST OVERPASS
DRILL EXISTING HANDHOLE	EACH	6.0	1.0	1.0	1.0	1.0					2.0				
CLOSED CIRCUIT TELEVISION DOME CAMERA, HD	EACH	11.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0
ETHERNET MANAGE SWITCH	EACH	5.0	1.0	1.0	1.0		1.0				1.0				
TRAFFIC COUNTER	EACH	6.0	1.0				1.0		1.0		2.0				1.0
FIBER OPTIC CABLE SPLICE - LATERAL	EACH	1.0				1.0									
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	4.0	1.0	1.0	1.0	1.0									
CLOSED CIRCUIT TELEVISION CABINET	EACH	1.0									1.0				
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	4.0	1.0	1.0	1.0	1.0									
ACCESS LADDER	EACH	4.0	1.0	1.0	1.0	1.0									
CAT 5 ETHERNET CABLE	FOOT	514.0	17.0	52.0	35.0	35.0	17.0		17.0	17.0	307.0				17.0
STEP-DOWN TRANSFORMER	EACH	1.0				1.0									
TRAFFIC COUNTER POST, GALVANIZED STEEL	EACH	2.0									2.0				
MISCELLANEOUS ELECTRICAL WORK	L SUM	1.0	0.3	0.2	0.2	0.3									
HELIX FOUNDATION AND BREAKAWAY DEVICE	EACH	2.0									2.0				
BLUETOOTH DETECTOR	EACH	8.0	1.0	1.0			1.0		1.0	1.0	2.0				1.0
SHOULDER REMOVAL AND REPLACEMENT FOR ELECTRICAL WORK	FOOT	10.0									10.0				
TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1.0	0.2	0.2	0.2	0.3					0.1				
REMOVE SIGN COMPLETE	EACH	2.0	1.0		1.0										
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	1890.0	149.0	689.0	701.0	351.0									
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	5.0	1.0	1.0	1.0	1.0			1.0						
CONCRETE FOUNDATION (SPECIAL)	FOOT	4.5				4.5									
GUARDRAIL AGGREGATE EROSION CONTROL	TON	25.0		25.0											

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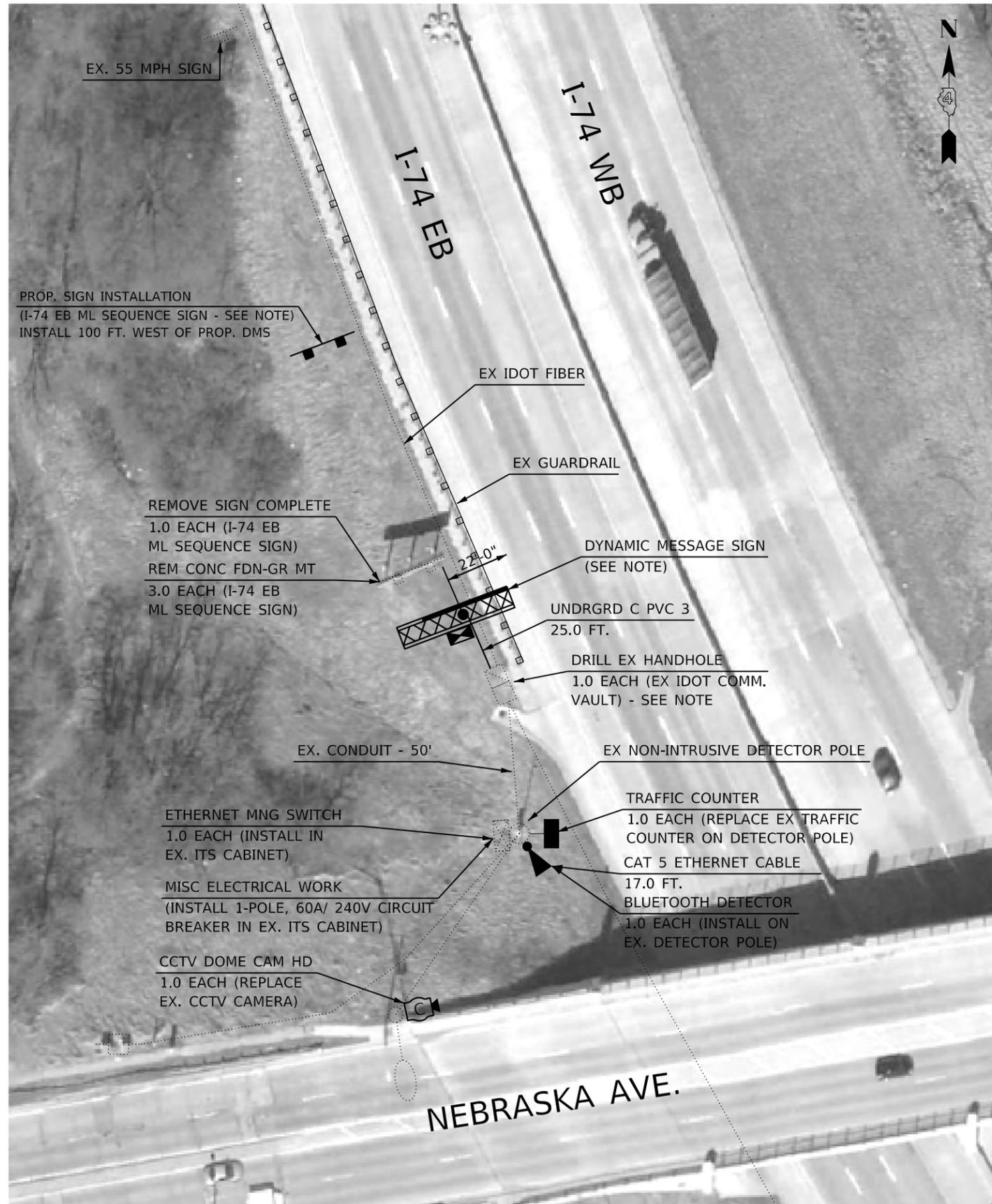
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PLOT DATE = 12/13/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES - CONTINUED

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	7
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68E72	



BILL OF MATERIALS		
ITEM DESCRIPTION	UNIT	QTY.
SIGN PANEL - TYPE 3	SQ FT	178.5
STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	1642.3
OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE III-F-A	FOOT	38.7
OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY, TYPE A	FOOT	6.3
CONCRETE FOUNDATIONS	CU YD	3.8
DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	7.8
REMOVE CONCRETE FOUNDATION - GROUND MOUNT	EACH	3.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	25.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	224.0
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	112.0
DRILL EXISTING HANDHOLE	EACH	1.0
TRAFFIC COUNTER	EACH	1.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, HD	EACH	1.0
ETHERNET MANAGE SWITCH	EACH	1.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
ACCESS LADDER	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	17.0
BLUETOOTH DETECTOR	EACH	1.0
REMOVE SIGN COMPLETE	EACH	1.0
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	149.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	1.0

NOTES:

1. THE CONTRACTOR SHALL RE-GRADE AROUND THE EXISTING IDOT COMMUNICATIONS VAULT, TO MATCH THE SURROUNDING GRADE. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE BID PRICE FOR DRILL EXISTING HANDHOLE.
2. THE CENTER OF THE PROPOSED CONCRETE FOUNDATION SHALL BE PLACED 22'-0" FROM THE I-74 EB EDGE OF THE TRAVELED WAY.
3. REFER TO SHEETS 21-34 FOR THE DYNAMIC MESSAGE SIGN DETAILS.
4. THE CONTRACTOR SHALL LOCATE THE ACCESS DOOR AND WALKWAY ON THE RIGHT SIDE OF THE DMS STRUCTURE (FURTHEST AWAY FROM TRAFFIC.)
5. THE CONTRACTOR HAS THE OPTION OF REMOVING SECTIONS OF EXISTING GUARDRAIL IF NECESSARY TO ACCESS THE FOUNDATION LOCATION AT NO ADDITIONAL COST TO THE DEPARTMENT. ANY RAIL ELEMENTS THAT ARE REMOVED SHALL BE RE-ERECTED BEFORE THE END OF THE WORK DAY. ANY GUARDRAIL REMOVED SHALL BE STORED IN A SAFE AND SECURE LOCATION. DAMAGED GUARDRAIL SECTIONS OR POSTS WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
6. THE CONTRACTOR SHALL VERIFY PRESENCE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK.
7. THE CONTRACTOR SHALL DELIVER THE REMOVED SIGN PANELS TO THE IDOT TRAFFIC BUILDING AT 1025 W. DETWEILLER DR. PEORIA 61615.

PROPOSED SIGN INSTALLATION
I-74 EB ML SEQUENCE SIGN INSTALLATION INCLUDES:
SIGN PANEL T3 - QTY. 178.5 SQ FT
STR STL SIN SUP BA - QTY. 1642.3 POUND
CONC FOUNDATION - QTY. 3.8 CU YD

COMMUNICATIONS VAULT SLACK
ELECTRIC CABLE - 13.0 FT.

FIBER OPTIC CABLE SLACK
DOUBLE HANDHOLE - 30 FT.
HANDHOLE - 10 FT.
CABINET - 10 FT.
COMMUNICATIONS VAULT - 50 FT.

DYNAMIC MESSAGE SIGN INSTALLATION INCLUDES:
OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE III-F-A - QTY. 38.7 FT.
OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY, TYPE A - QTY. 6.3 FT.
DRILLED SHAFT CONCRETE FOUNDATIONS - QTY. 7.8 CU. YD.
POLE MOUNTED EQUIPMENT CABINET, TYPE B - QTY. 1.0 EACH
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN - QTY. 1.0 EACH
ACCESS LADDER - QTY. 1.0 EACH
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH - QTY. 1.0 EACH

LEGEND	
	PROP. DMS ASSEMBLY
	PROP. TRAFFIC COUNTER
	PROP. BLUETOOTH DETECTOR
	PROP. SIGN
	PROP. PVC CONDUIT
	PROP. CCTV CAMERA
	PROP. POLE MOUNTED EQUIPMENT CABINET, TYPE B
	EX. ITS CABINET
	EX. LIGHT POLE
	EX. SIGN
	EX. COMMUNICATIONS VAULT
	EX. GUARDRAIL
	EX. CONDUIT
	EX. DETECTOR POLE
	EX. SERVICE INSTALLATION

NOT TO SCALE

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	DRAWN -	REVISED -
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PLOT DATE = 12/13/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

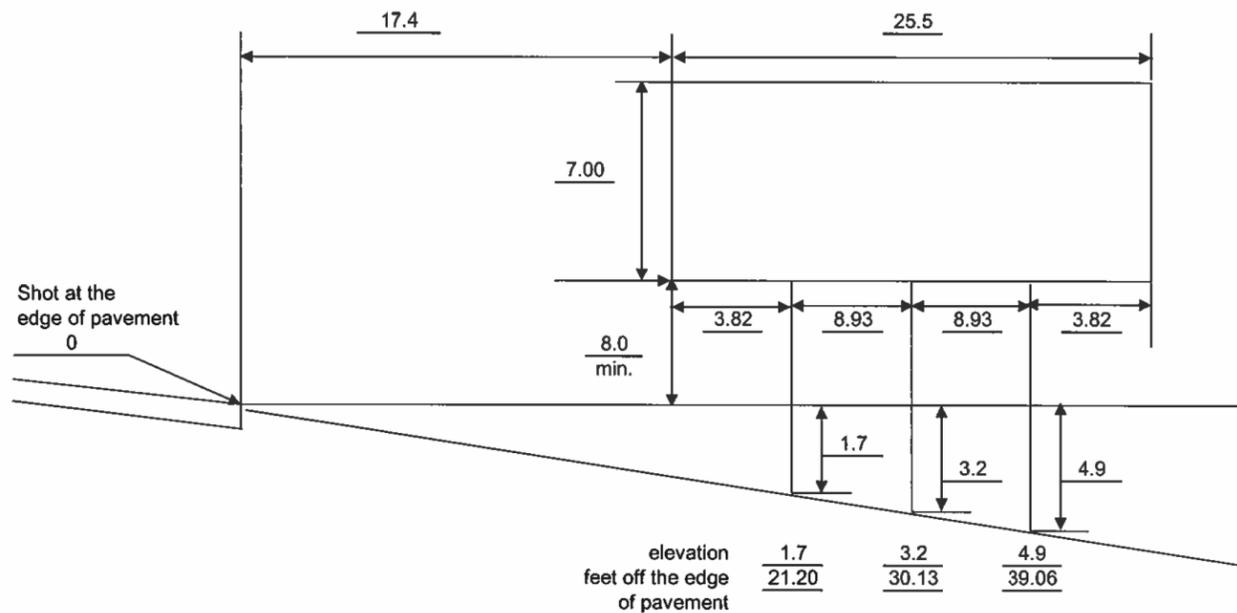
**PROPOSED DMS LOCATION #1
I-74 EB AT NEBRASKA AVE. - PEORIA COUNTY**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA	43	8
ILLINOIS / FED. AID PROJECT			CONTRACT NO. 68E72	

SIGN DETAIL SHEET

District: 4 Direction of Travel: EB
 Route: I-74 Station Number: _____
 Exit No. _____ Milepost Number: _____
 County: Peoria Offset from Edge of Pavement: 17.38
 Sign Code No(s): _____



* May not represent actual ground contour

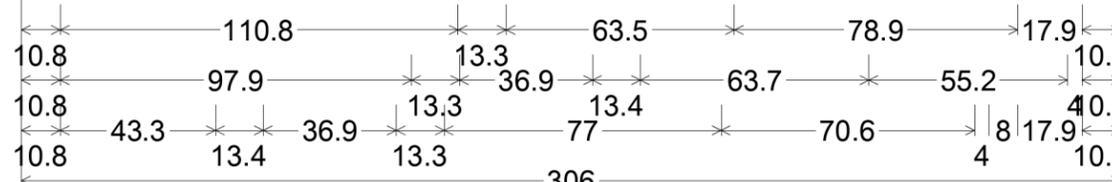
LENGTH OF POST 1 - 7 FT 0 IN + 9 FT 8 IN - 2.5 IN = 16 FT 6 IN
 LENGTH OF POST 2 - 7 FT 0 IN + 11 FT 2 IN - 2.5 IN = 18 FT 0 IN
 LENGTH OF POST 3 - 7 FT 0 IN + 12 FT 11 IN - 2.5 IN = 19 FT 8 IN

Sign Panel(s) = 178.50 sq. ft.
 Post Size = W 10 X 26
 Concrete foundations = 1.27 cu. Yd. Each
 3.81 cu. Yd. Total

L1 (Excluding Stub Post) = 16 FT. 6 IN.
 L2 (Excluding Stub Post) = 18 FT. 0 IN.
 L3 (Excluding Stub Post) = 19 FT. 8 IN.
 Stub Post lengths = 3 FT. 0 IN.

Total Post Weight (including Stub Posts) = 1642.33 lbs.

Signed *Mary Barrett* Date 10/25/19



12.0" Radius, 2.0" Border, White on Green;
 "University Street" E Mod 2K; "1/4" E Mod 2K;
 "Knoxville Ave NORTH" E Mod 2K; "1" E Mod 2K;
 "Glen Oak Avenue" E Mod 2K; "1 1/4" E Mod 2K;
 Table of distances between letter and object lefts.

10.8	U	n	i	v	e	r	s	i	t	y						
	15.3	14.2	6.5	12.9	13.0	8.4	12.9	6.5	9.8							
		S	t	r	e	e	t	1/4								
	24.6	13.5	11.2	8.7	11.7	11.5	85.8	17.9	10.8							
10.8	K	n	o	x	v	i	l	i	e	A	v	e				
	13.9	12.9	12.0	13.3	14.2	8.0	8.0	6.8	22.1	15.2	12.9					
		N	O	R	T	H	I									
	22.2	14.0	14.4	12.2	12.3	66.0	4.0	10.8								
10.8	G	l	e	n	O	a	k	A	v	e	n	u	e	1	1/4	
	14.8	6.8	12.9	22.2	14.0	14.1	22.1	15.2	13.0	12.9	14.1	13.0	79.4	12.0	17.9	10.8

NOT TO SCALE

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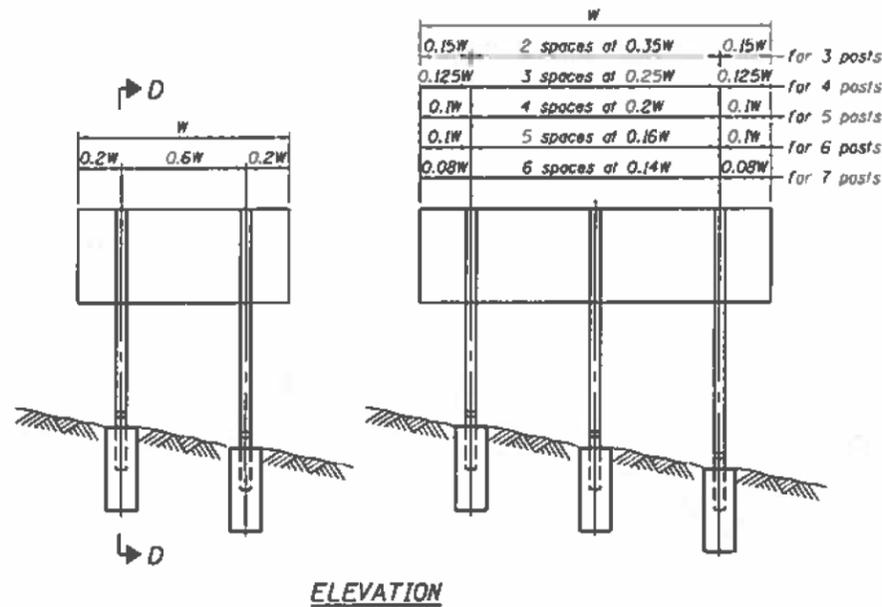
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	DRAWN -	REVISED -
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PLOT DATE = 12/13/2019	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

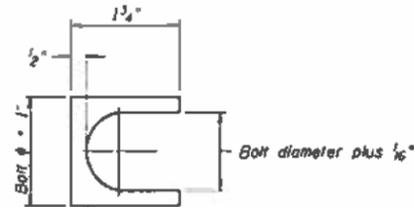
**PROPOSED SIGN INSTALLATION DETAILS
 I-74 EB AT NEBRASKA AVE. - PEORIA COUNTY**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA	43	9
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68E72	

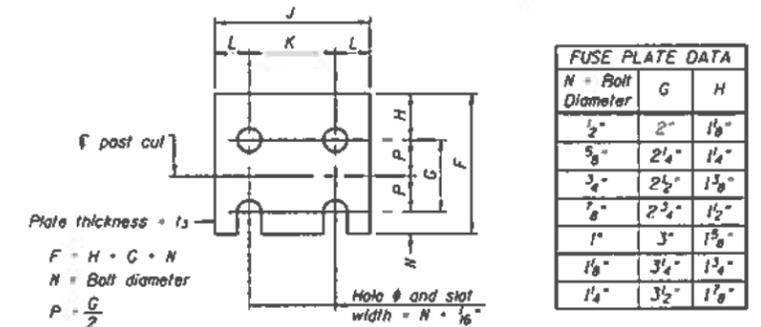


ELEVATION



SHIM DETAIL

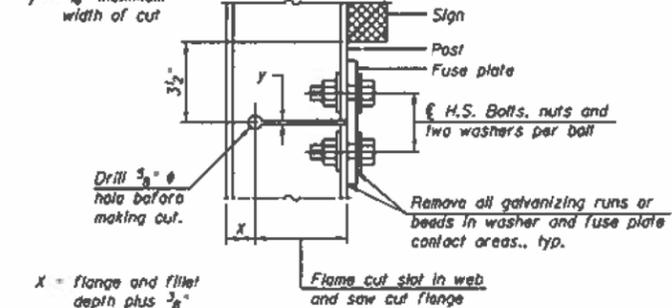
Furnish two 0.01" thick and two 0.03" thick stainless steel or brass (ASTM B36) shims per post.



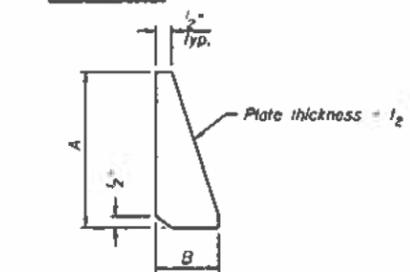
FUSE PLATE DETAIL

(Install with notches down.)

$F = H + C + N$
 $N = \text{Bolt diameter}$
 $P = \frac{C}{2}$



DETAIL H



STIFFENER PLATE DETAIL

GENERAL NOTES

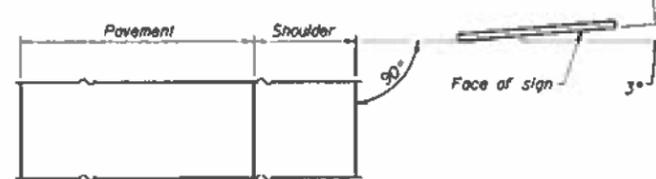
Posts shall be plumbed by using shims with post-to-stub post connection bolts snug tight only. Final tightening of all High Strength Bolts shall be in accordance with Article 727.05 and threads at the junction of the bolt and nut shall be burred or center punched to prevent the nut from loosening.

LOADING: 80 m.p.h. wind with 30% gust factor, normal to sign.

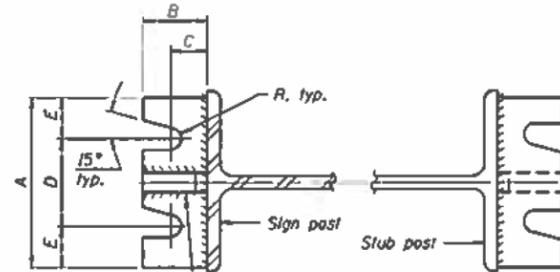
DESIGN STRESSES:
 Structural steel - 20,000 p.s.i.
 Reinforcing steel - 20,000 p.s.i.
 Concrete - 1,400 p.s.i.
 Footing soil pressure - 2,000 p.s.f.

After fabrication, the post, fuse plate and upper 5", min. of the stub post shall be hot-dip galvanized in accordance with AASHTO M11. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M232.

Work this sheet with Base Sheet BAW A 2.

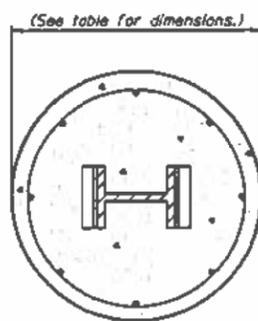


LOCATION SKETCH

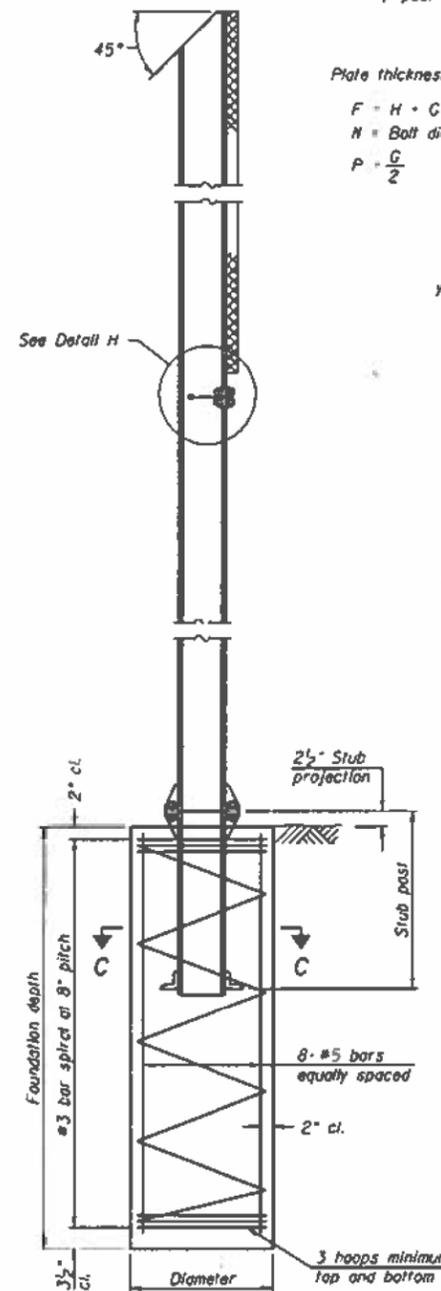


SECTION A-A

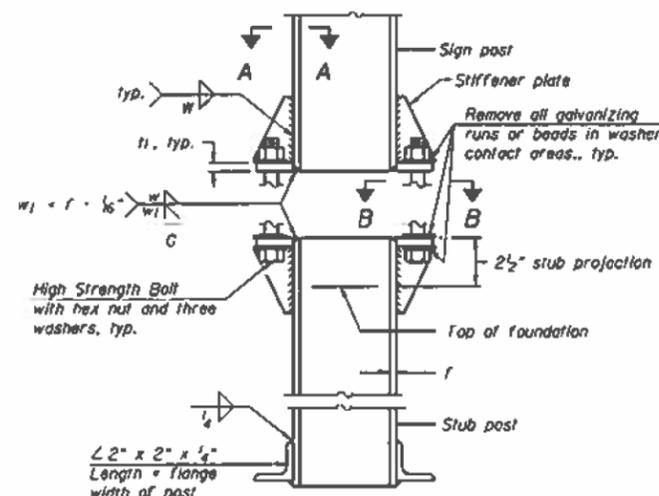
SECTION B-B



SECTION C-C



SECTION D-D



ELEVATION
SIGN POST & STUB POST

BAW-A-1

6-1-12

(Sheet 1 of 2)

FILE NAME	USER NAME	DESIGNED	REVISOR
		CHECKED	REVISION
		DRAWN	REVISION
		CHECKED	REVISION
		DRAWN	REVISION
		CHECKED	REVISION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BREAK-AWAY WIDE FLANGE
STEEL SIGN POST DETAILS

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED SIGN INSTALLATION DETAILS - CONTINUED
I-74 EB AT NEBRASKA AVE. - PEORIA COUNTY

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA	43	10
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				

NOT TO SCALE

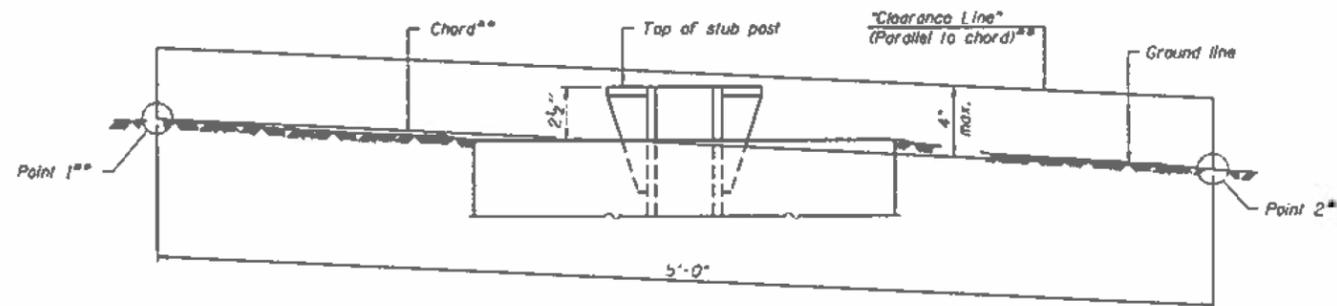
POST	CONCRETE FOUNDATION TABLE								POST TO STUB POST CONNECTION DATA										FUSE PLATE DATA			
	Foundation			Reinforcement			Stub Post Length	Bolt Size	A	B	C	D	E	F ₁	F ₂	R	W	J	K	L	I ₃	
	Diameter	Minimum Depth	Concrete (cu. yds.) ①	Vertical Bars Length	Bar Spirals Diameter	Bar Spirals Length																lbs. ②
W6x9	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-3"	3/8" x 3 1/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1 1/2"	1/4"	4"	2 1/4"	7/8"	1/4"
W6x15	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	3/8" x 3 1/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1 1/2"	1/4"	6"	3 1/2"	1 1/4"	3/8"
W8x18	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	3/8" x 3 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	1 1/2"	3/8"	5 1/4"	2 3/4"	1 1/4"	3/8"
W10x22	2'-6"	6'-6"	1.18	6'-3"	2'-2 1/2"	105'-0"	92	3'-0"	3/4" x 3 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	1 1/2"	3/8"	5 3/4"	2 3/4"	1 1/2"	1/2"
W10x26	2'-6"	7'-0"	1.27	6'-9"	2'-2 1/2"	112'-0"	98	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	5/8"	3/8"	5 3/4"	2 3/4"	1 1/2"	3/8"
W12x26	2'-6"	7'-9"	1.41	7'-6"	2'-2 1/2"	119'-0"	107	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	5/8"	3/8"	6 1/2"	3 1/2"	1 1/2"	3/8"
W14x30	3'-0"	7'-3"	1.90	7'-0"	2'-8 1/2"	145'-0"	113	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	5/8"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"
W14x38	3'-0"	8'-0"	2.09	7'-9"	2'-8 1/2"	153'-0"	122	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	1 1/2"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"
W16x45	3'-0"	8'-6"	2.23	8'-3"	2'-8 1/2"	162'-0"	130	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	1 1/2"	3/8"	7"	3 1/2"	1 3/4"	1/2"

*Dimensional changes required for varying site conditions shall be approved by the Engineer.

PROP. SIGN POST (W10X26)

POST	FUSE PLATE BOLT SIZE																				
	Sign Height																				
	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"	22'-0"	23'-0"	24'-0"
W6x9	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W6x15	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	---	---	---	---	---	---	---	---	---	---	---						
W8x18	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	---	---	---	---	---	---	---	---	---	---	---						
W10x22	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2 1/4"	---	---	---	---	---	---	---						
W10x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/2"	---	---	---	---	---	---							
W12x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/2"	---	---	---	---	---								
W14x30	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/2"													
W14x38	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/2"														
W16x45	---	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/2"													

PROP. SIGN POST (W10X26)



**ELEVATION
GROUND LINE & STUB POST**
 ** For all "Point 1" and "Point 2" locations, "Clearance Line" must be at or above top of stub post.

- ① Quantity includes all concrete necessary for one foundation.
- ② Includes reinforcement bars and spiral hooping for one foundation.

BAW-A-2

6-1-12

(Sheet 2 of 2)

FILE NAME	USER NAME	DESIGNED	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BREAK-AWAY WIDE FLANGE STEEL SIGN POST TABLES	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PLOT SCALE	CHECKED	REVISED									
PLOT DATE	DRAWN	REVISED									
	CHECKED	REVISED									

MODEL: Default
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	DRAWN -	REVISED -
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PLOT DATE = 12/13/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED SIGN INSTALLATION DETAILS - CONTINUED
I-74 EB AT NEBRASKA AVE. - PEORIA COUNTY**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA	43	11
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				

NOT TO SCALE

BILL OF MATERIALS		
ITEM DESCRIPTION	UNIT	QTY.
EARTH EXCAVATION	CU YD	18.5
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	75.0
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1.0
TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1.0
OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE III-F-A	FOOT	38.7
OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY, TYPE A	FOOT	6.3
DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	7.8
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	397.0
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	1301.0
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	422.5
DRILL EXISTING HANDHOLE	EACH	1.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, HD	EACH	1.0
ETHERNET MANAGE SWITCH	EACH	1.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
ACCESS LADDER	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	52.0
BLUETOOTH DETECTOR	EACH	1.0
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	689.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	1.0
GUARDRAIL AGGREGATE EROSION CONTROL	TON	25.0

- NOTES:
- THE CENTER OF THE PROPOSED CONCRETE FOUNDATION SHALL BE PLACED 22'-0" FROM THE RAMP F-2 EDGE OF TRAVELED WAY AND 34'-0" FROM THE RAMP F-3 EDGE OF TRAVELED WAY.
 - THE PROPOSED DMS SHALL BE PLACED 100 FT DOWNSTREAM OF THE EXISTING SIGN AT STA. 149+340.
 - REFER TO SHEETS 21-34 FOR THE DYNAMIC MESSAGE SIGN DETAILS.
 - THE CONTRACTOR SHALL LOCATE THE ACCESS DOOR AND WALKWAY ON THE RIGHT SIDE OF THE DMS STRUCTURE (FURTHEST AWAY FROM RAMP F-2 TRAFFIC.)
 - THE CONTRACTOR SHALL VERIFY PRESENCE AND LOCATION OF ANY AND ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK.
 - THE GUARDRAIL SHALL BE INSTALLED PRIOR TO STARTING WORK ON THE SIGN FOUNDATION.

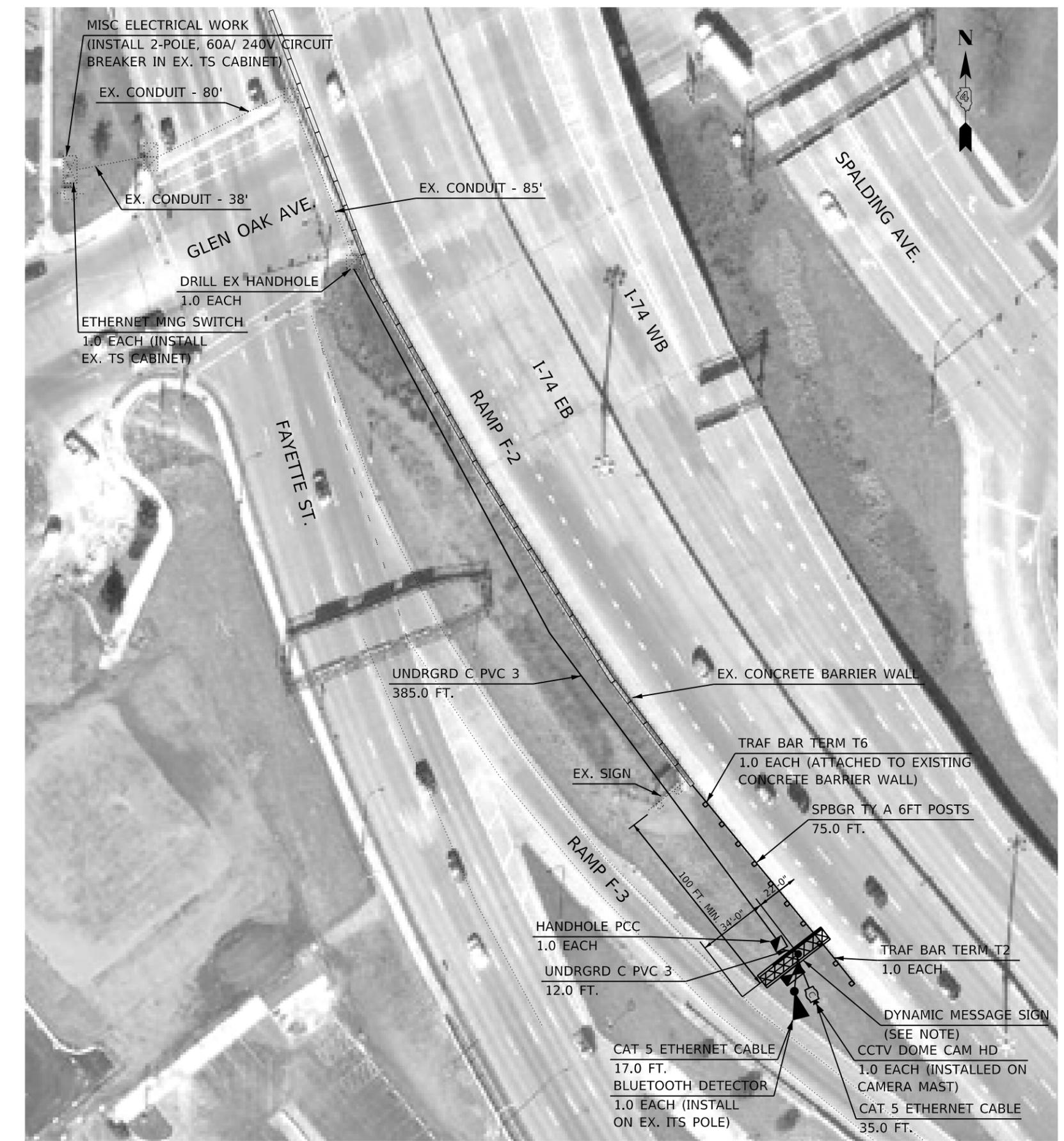
DYNAMIC MESSAGE SIGN INSTALLATION INCLUDES:

- OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE III-F-A - QTY. 38.7 FT.
- OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY, TYPE A - QTY. 6.3 FT.
- DRILLED SHAFT CONCRETE FOUNDATIONS - QTY. 7.8 CU. YD.
- POLE MOUNTED EQUIPMENT CABINET, TYPE B - QTY. 1.0 EACH
- TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN - QTY. 1.0 EACH
- ACCESS LADDER - QTY. 1.0 EACH
- FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH - QTY. 1.0 EACH

FIBER OPTIC CABLE SLACK
 DOUBLE HANDHOLE - 30 FT.
 HANDHOLE - 10 FT.
 CABINET - 10 FT.
 COMMUNICATIONS VAULT - 50 FT.

LEGEND

	PROP. DMS ASSEMBLY		EX. CONCRETE BARRIER
	PROP. HANDHOLE		EX. DOUBLE HANDHOLE
	PROP. GUARDRAIL		EX. HANDHOLE
	PROP. PVC CONDUIT		EX. TRAFFIC SIGNAL CABINET
	PROP. CCTV CAMERA		EX. CONDUIT
	PROP. BLUETOOTH DETECTOR		EX. SIGN
	PROP. POLE MOUNTED EQUIPMENT CABINET, TYPE B		EX. ELECTRICAL SERVICE



MODEL: Default
 FILE: \\nas01\c\COMMON\GEN\TRANSFER - buras\68E72 - DMS (FINAL 12-13-19).dgn

USER NAME = hansonj	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 81.9197' / in.	CHECKED -	REVISED -
PLOT DATE = 12/13/2019	DATE -	REVISED -

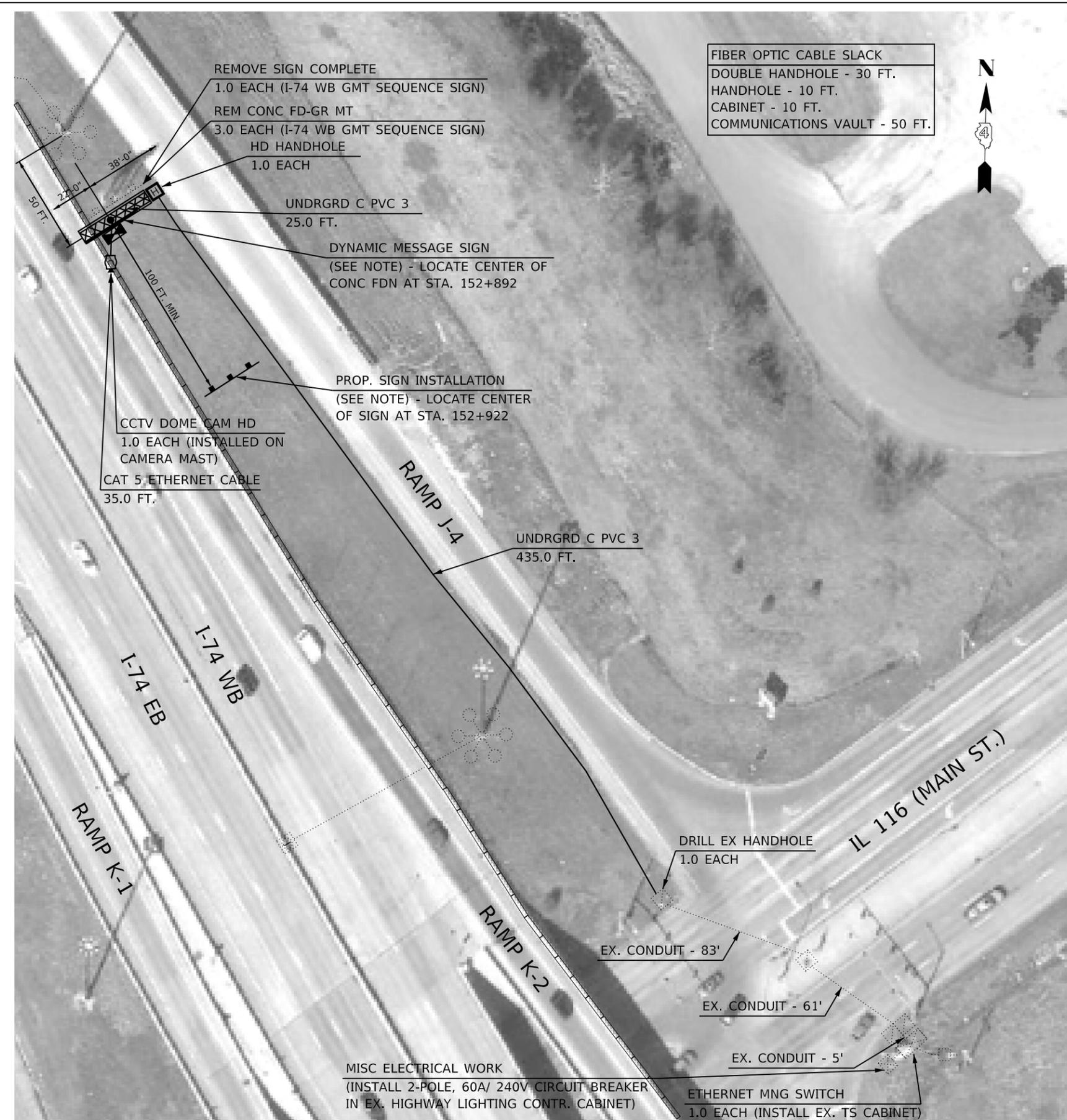
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED DMS LOCATION #2
 I-74 EB AT GLEN OAK AVE. - PEORIA COUNTY**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA	43	12
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68E72	

NOT TO SCALE



FIBER OPTIC CABLE SLACK
 DOUBLE HANDHOLE - 30 FT.
 HANDHOLE - 10 FT.
 CABINET - 10 FT.
 COMMUNICATIONS VAULT - 50 FT.



BILL OF MATERIALS		
ITEM DESCRIPTION	UNIT	QTY.
SIGN PANEL - TYPE 3	SQ FT	154.0
STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	1861.2
OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE III-F-A	FOOT	38.7
OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY, TYPE A	FOOT	6.3
CONCRETE FOUNDATIONS	CU YD	3.8
DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	7.8
REMOVE CONCRETE FOUNDATION - GROUND MOUNT	EACH	3.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	460.0
HEAVY-DUTY HANDHOLE	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	1319.0
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	485.5
DRILL EXISTING HANDHOLE	EACH	1.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, HD	EACH	1.0
ETHERNET MANAGE SWITCH	EACH	1.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
ACCESS LADDER	EACH	1.0
REMOVE SIGN COMPLETE	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	35.0
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	701.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	1.0

- NOTES:
1. THE CENTER OF THE PROPOSED CONCRETE FOUNDATION SHALL BE PLACED 22'-0" FROM THE RAMP J-4 EDGE OF TRAVELED WAY AND 38'-0" FROM THE RAMP K-2 EDGE OF TRAVELED WAY.
 2. THE PROPOSED DMS SHALL BE PLACED 50 FT UPSTREAM OF THE EXISTING HIGH MAST LIGHT TOWER JAB-2, IN THE SAME LOCATION AS THE EXISTING SIGN TO BE REMOVED.
 3. REFER TO SHEETS 21-34 FOR THE DYNAMIC MESSAGE SIGN DETAILS.
 4. THE CONTRACTOR SHALL LOCATE THE ACCESS DOOR AND WALKWAY ON THE RIGHT SIDE OF THE DMS STRUCTURE (FURTHEST AWAY FROM RAMP K-2 TRAFFIC.)
 5. THE CONTRACTOR SHALL VERIFY PRESENCE AND LOCATION OF ANY AND ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK.
 6. THE CONTRACTOR SHALL DELIVER THE REMOVED SIGN PANELS TO THE IDOT TRAFFIC BUILDING AT 1025 W. DETWEILLER DR. PEORIA 61615.

PROPOSED SIGN INSTALLATION
 I-74 WB GMT SEQUENCE SIGN INSTALLATION INCLUDES:
 SIGN PANEL T3 - QTY. 154.0 SQ FT
 STR STL SIN SUP BA - QTY. 1861.2 POUND
 CONC FOUNDATION - QTY. 3.8 CU YD

LEGEND

	PROP. DMS ASSEMBLY		EX. CONCRETE BARRIER
	PROP. HEAVY-DUTY HANDHOLE		EX. DOUBLE HANDHOLE
	PROP. GUARDRAIL		EX. HANDHOLE
	PROP. PVC CONDUIT		EX. TRAFFIC SIGNAL CABINET
	PROP. CCTV CAMERA		EX. HIGH MAST LIGHT TOWER
	PROP. SIGN		EX. ELECTRICAL SERVICE
	PROP. POLE MOUNTED EQUIPMENT CABINET, TYPE B		EX. JUNCTION BOX
			EX. LIGHTING CONTROLLER
			EX. SIGN
			EX. CONDUIT

DYNAMIC MESSAGE SIGN INSTALLATION INCLUDES:
 OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE III-F-A - QTY. 38.7 FT.
 OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY, TYPE A - QTY. 6.3 FT.
 DRILLED SHAFT CONCRETE FOUNDATIONS - QTY. 7.8 CU. YD.
 POLE MOUNTED EQUIPMENT CABINET, TYPE B - QTY. 1.0 EACH
 TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN - QTY. 1.0 EACH
 ACCESS LADDER - QTY. 1.0 EACH
 FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH - QTY. 1.0 EACH

NOT TO SCALE

MODEL: Default
 FILE: \\nas0101\COMMON\GEN\Transfer - Bureau\68E72 - Final_Plan\68E72 - DMS (FINAL 12-13-19).dgn

USER NAME = hansonj	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 81.9197 ' / in.	CHECKED -	REVISED -
PLOT DATE = 12/13/2019	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PROPOSED DMS LOCATION #3
 I-74 WB AT IL 116 (MAIN ST.) - TAZEWELL COUNTY

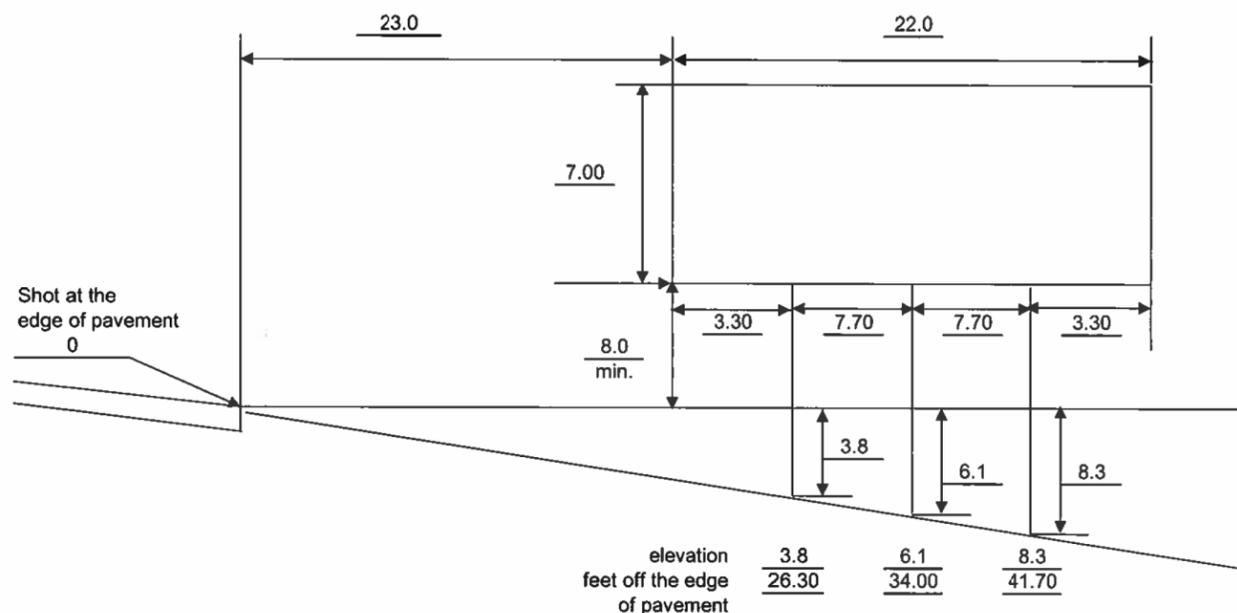
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	TAZEWELL	43	13
ILLINOIS			FED. AID PROJECT	

SCALE: SHEET OF SHEETS STA. TO STA.

SIGN DETAIL SHEET

District: 4
 Route: I-74
 Exit No. _____
 County: Tazewell
 Sign Code No(s): _____

Direction of Travel: WB
 Station Number: _____
 Milepost Number: 94.72
 Offset from Edge of Pavement: 23



* May not represent actual ground contour

LENGTH OF POST 1 - 7 FT 0 IN + 11 FT 10 IN - 2.5 IN = 18 FT 7 IN

LENGTH OF POST 2 - 7 FT 0 IN + 14 FT 1 IN - 2.5 IN = 20 FT 11 IN

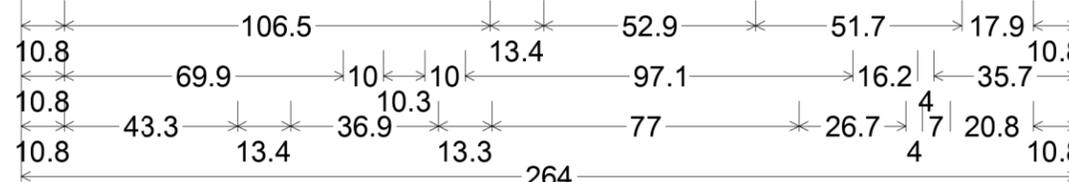
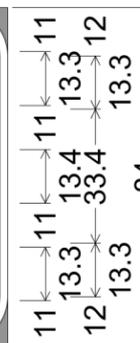
LENGTH OF POST 3 - 7 FT 0 IN + 16 FT 4 IN - 2.5 IN = 23 FT 1 IN

Sign Panel(s) = 154.00 sq. ft.
 Post Size = W 10 X 26
 Concrete foundations = 1.27 cu. Yd. Each
3.81 cu. Yd. Total

L1 (Excluding Stub Post) = 18 FT. 7 IN.
 L2 (Excluding Stub Post) = 20 FT. 11 IN.
 L3 (Excluding Stub Post) = 23 FT. 1 IN.
 Stub Post lengths = 3 FT. 0 IN.

Total Post Weight (including Stub Posts) = 1861.17 lbs.

Signed Marcy Baur Date 10/25/19



12.0" Radius, 2.0" Border, White on Green;
 "Riverfront Drive" E Mod 2K; "Adams / Jefferson" E Mod 2K;
 "Glen Oak Avenue" E Mod 2K; "1/4" E Mod 2K; "1 1/4" E Mod 2K;
 "1 3/4" E Mod 2K;

Table of distances between letter and object lefts.

10.8	R	i	v	e	r	f	r	o	n	t	D	r	i	v	e
10.8	14.4	6.5	13.0	12.9	8.5	9.8	8.6	13.2	12.7	20.3	14.8	9.8	6.6	12.9	
	60.5	1/4	17.9	10.8											
10.8	A	d	a	m	s	/	J	e	f	f	e	r	s	o	n
10.8	15.5	12.9	14.1	18.6	18.8	20.3	13.5	11.6	8.4	8.5	12.9	8.4	11.8	13.2	
	25.0	1	1/4	17.9	10.8										
10.8	G	l	e	n	O	a	k	A	v	e	n	u	e	l	
10.8	14.8	6.8	12.9	22.2	14.0	14.1	22.1	15.2	13.0	12.9	14.1	13.0	35.5		
	11.0	3/4	20.8	10.8											

NOT TO SCALE

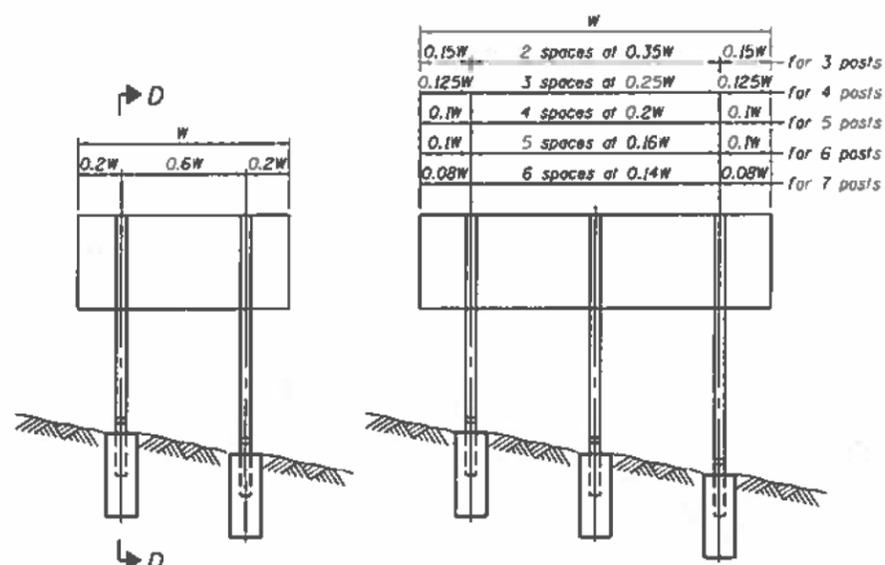
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USER NAME = hansonj	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 81.9197 ' / in.	CHECKED -	REVISED -
PLOT DATE = 12/13/2019	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

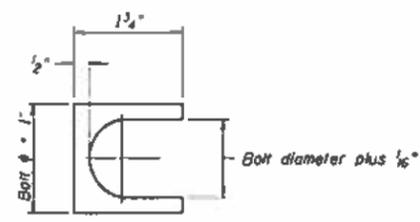
PROPOSED SIGN INSTALLATION DETAILS
 I-74 WB AT IL 116 (MAIN ST.) - TAZEWELL COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	TAZEWELL	43	14
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				



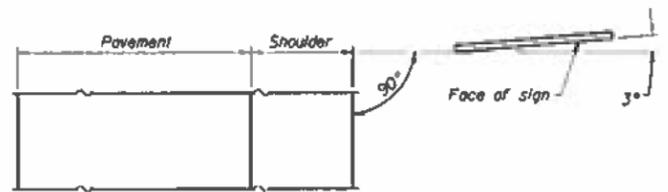
ELEVATION

0.15W	2 spaces of 0.35W	0.15W	for 3 posts
0.125W	3 spaces of 0.25W	0.125W	for 4 posts
0.1W	4 spaces of 0.2W	0.1W	for 5 posts
0.1W	5 spaces of 0.15W	0.1W	for 6 posts
0.08W	6 spaces of 0.14W	0.08W	for 7 posts

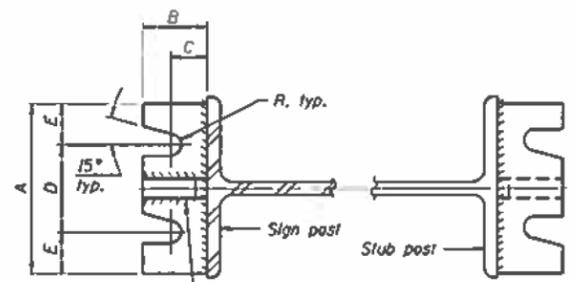


SHIM DETAIL

Furnish two 0.01" thick and two 0.03" thick stainless steel or brass (ASTM B36) shims per post.

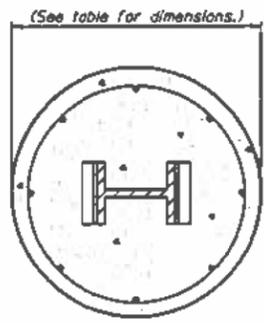


LOCATION SKETCH

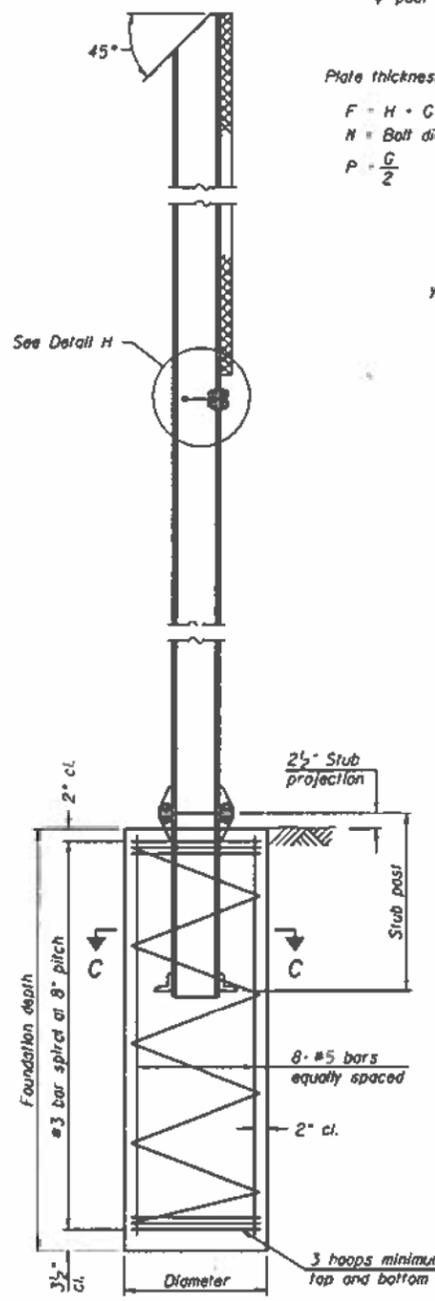


SECTION A-A

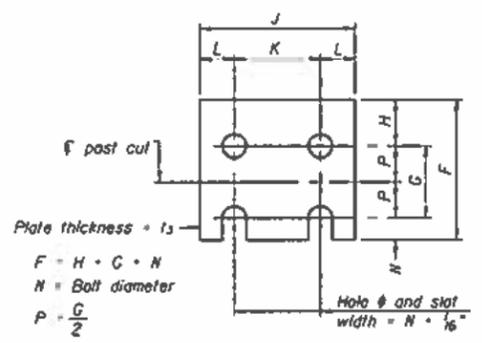
SECTION B-B



SECTION C-C



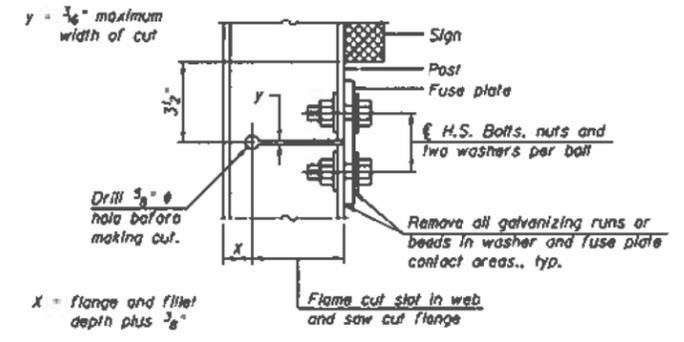
SECTION D-D



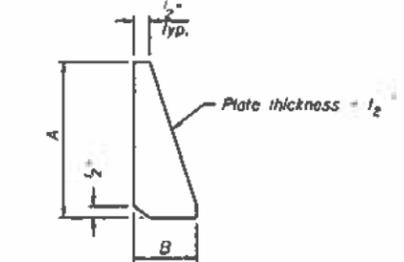
FUSE PLATE DETAIL

(Install with notches down.)

N = Bolt Diameter	G	H
1/2"	2"	1 1/8"
5/8"	2 1/4"	1 1/4"
3/4"	2 1/2"	1 1/2"
7/8"	2 3/4"	1 5/8"
1"	3"	1 3/4"
1 1/8"	3 1/4"	1 7/8"
1 1/4"	3 1/2"	1 7/8"



DETAIL H



STIFFENER PLATE DETAIL

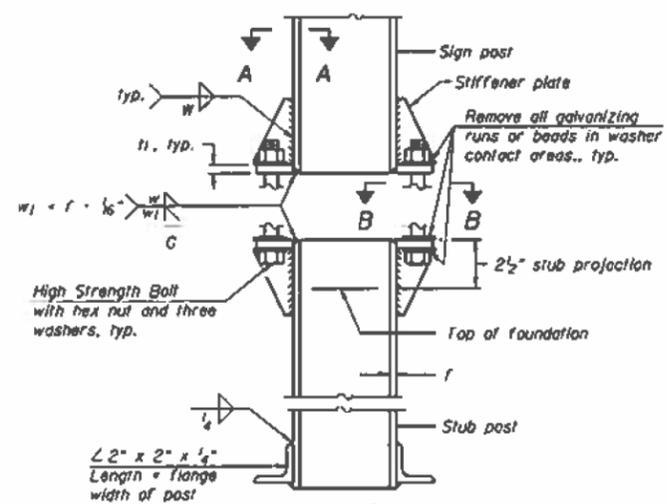
GENERAL NOTES

Posts shall be plumbed by using shims with post-to-stub post connection bolts snug tight only. Final tightening of all High Strength Bolts shall be in accordance with Article 727.05 and threads at the junction of the bolt and nut shall be burred or center punched to prevent the nut from loosening.

LOADING: 80 m.p.h. wind with 30% gust factor, normal to sign.

DESIGN STRESSES:
 Structural steel - 20,000 p.s.i.
 Reinforcing steel - 20,000 p.s.i.
 Concrete - 1,400 p.s.i.
 Footing soil pressure - 2,000 p.s.f.

After fabrication, the post, fuse plate and upper 5", min. of the stub post shall be hot-dip galvanized in accordance with AASHTO M11. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M232.



ELEVATION SIGN POST & STUB POST

BAW-A-1

6-1-12

(Sheet 1 of 2)

FILE NAME	USER NAME	DESIGNED	REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED							
		DRAWN							
		CHECKED							
		DRAWN							
		CHECKED							
		DRAWN							
		CHECKED							
		DRAWN							
		CHECKED							

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED SIGN INSTALLATION DETAILS - CONTINUED
 I-74 WB AT IL 116 (MAIN ST.) - TAZEWELL COUNTY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	TAZEWELL	43	15
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				

NOT TO SCALE

MODEL: Default; FILE: \\nas01\c:\common\gen\transfer - burdau\68E72 - Final Plans\68E72 - DMS (FINAL) 12-13-10.dwg

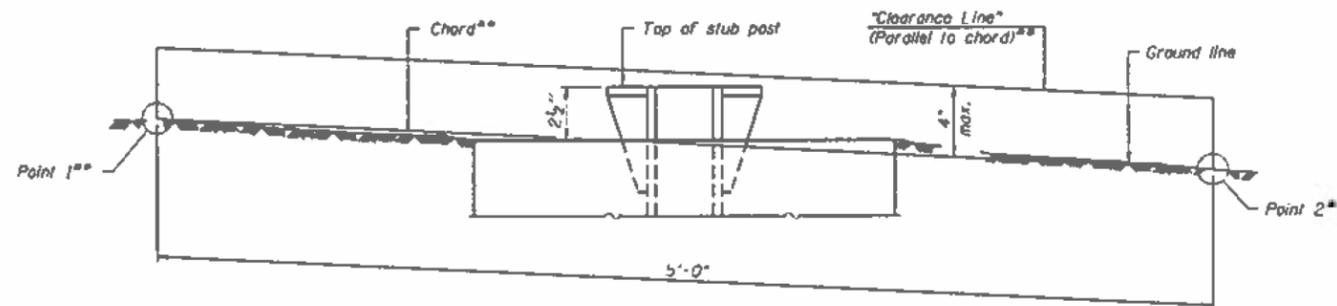
POST	CONCRETE FOUNDATION TABLE								POST TO STUB POST CONNECTION DATA										FUSE PLATE DATA			
	Foundation			Reinforcement			Stub Post Length	Bolt Size	A	B	C	D	E	I ₁	I ₂	R	W	J	K	L	I ₃	
	Diameter	Minimum Depth	Concrete (cu. yds.) ①	Vertical Bars Length	Bar Spirals Diameter	Bar Spirals Length																lbs. ②
W6x9	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-3"	3/8" x 3/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1 1/2"	1/4"	4"	2 1/4"	7/8"	1/4"
W6x15	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	3/8" x 3/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1 1/2"	1/4"	6"	3 1/2"	1 1/4"	3/8"
W8x18	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	3/8" x 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	1 1/2"	3/8"	5 1/4"	2 3/4"	1 1/4"	3/8"
W10x22	2'-6"	6'-6"	1.18	6'-3"	2'-2 1/2"	105'-0"	92	3'-0"	3/4" x 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	1 1/2"	3/8"	5 3/4"	2 3/4"	1 1/2"	1/2"
W10x26	2'-6"	7'-0"	1.27	6'-9"	2'-2 1/2"	112'-0"	98	3'-0"	3/4" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	5/8"	3/8"	5 3/4"	2 3/4"	1 1/2"	3/8"
W12x26	2'-6"	7'-9"	1.41	7'-6"	2'-2 1/2"	119'-0"	107	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	5/8"	3/8"	6 1/2"	3 1/2"	1 1/2"	3/8"
W14x30	3'-0"	7'-3"	1.90	7'-0"	2'-8 1/2"	145'-0"	113	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	5/8"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"
W14x38	3'-0"	8'-0"	2.09	7'-9"	2'-8 1/2"	153'-0"	122	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	1/2"	7"	6 3/4"	3 1/2"	1 5/8"	1/2"
W16x45	3'-0"	8'-6"	2.23	8'-3"	2'-8 1/2"	162'-0"	130	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	1/2"	7"	7"	3 1/2"	1 3/4"	1/2"

*Dimensional changes required for varying site conditions shall be approved by the Engineer.

PROP. SIGN POST (W10X26)

POST	FUSE PLATE BOLT SIZE																				
	Sign Height																				
	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"	22'-0"	23'-0"	24'-0"
W6x9	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W6x15	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2"	---	---	---	---	---	---	---	---	---	---	---
W8x18	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2"	---	---	---	---	---	---	---	---	---	---	---
W10x22	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2 1/4"	---	---	---	---	---	---	---					
W10x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/2"	---	---	---									
W12x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/2"													
W14x30	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2 1/4"													
W14x38	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/2"													
W16x45	---	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/2"										

PROP. SIGN POST (W10X26)



**ELEVATION
GROUND LINE & STUB POST**
** For all "Point 1" and "Point 2" locations, "Clearance Line" must be at or above top of stub post.

- ① Quantity includes all concrete necessary for one foundation.
- ② Includes reinforcement bars and spiral hooping for one foundation.

BAW-A-2

6-1-12

(Sheet 2 of 2)

FILE NAME	USER NAME	DESIGNED	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BREAK-AWAY WIDE FLANGE STEEL SIGN POST TABLES	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED	REVISED								
PLOT SCALE		DRAWN	REVISED			CONTRACT NO.					
PLOT DATE		CHECKED	REVISED			SHEET NO. OF SHEETS					

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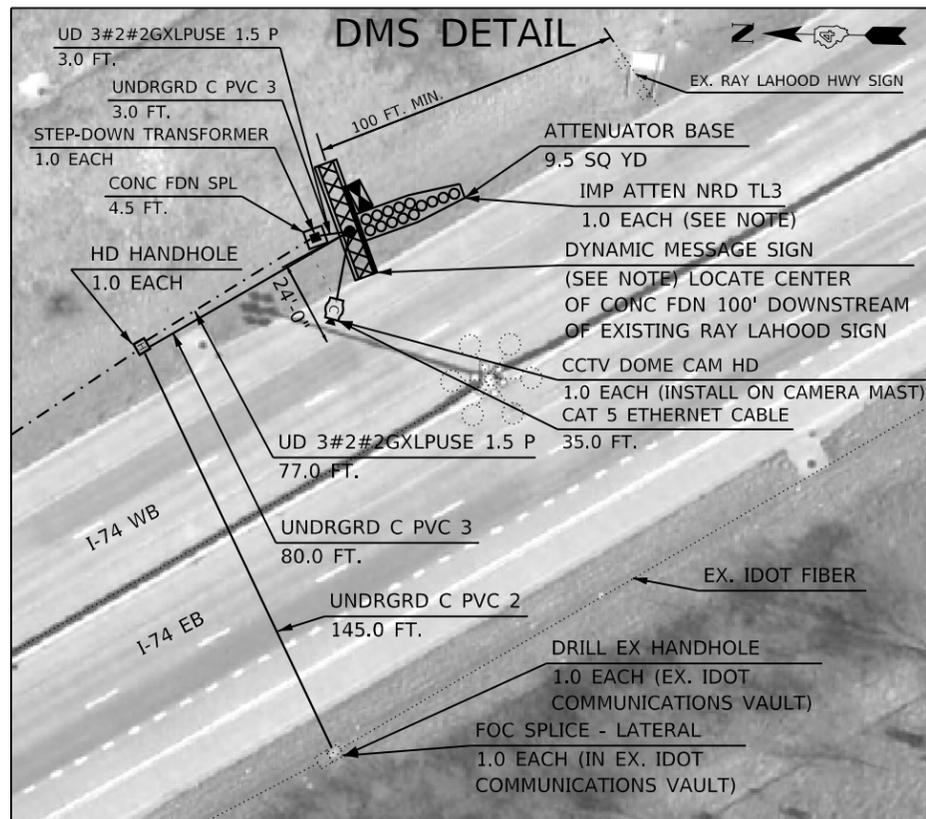
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED SIGN INSTALLATION DETAILS - CONTINUED
I-74 WB AT IL 116 (MAIN ST.) - TAZEWELL COUNTY

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	TAZEWELL	43	16
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				

NOT TO SCALE



NOTES:

1. THE CENTER OF THE PROPOSED CONCRETE FOUNDATION SHALL BE PLACED 24'-0" FROM I-74 WB EDGE OF TRAVELED WAY. THE PROPOSED CONCRETE FOUNDATION SHALL BE LOCATED TO AVOID THE EXISTING STORM SEWER.
2. THE PROPOSED DMS SHALL BE PLACED 100 FT DOWNSTREAM OF THE EXISTING RAY LAHOOD HIGHWAY SIGN.
3. REFER TO SHEETS 21-34 FOR THE DYNAMIC MESSAGE SIGN DETAILS.
4. THE CONTRACTOR SHALL LOCATE THE ACCESS DOOR AND WALKWAY ON THE RIGHT SIDE OF THE DMS STRUCTURE (FURTHEST AWAY FROM I-74 WB TRAFFIC.)
5. THE CONTRACTOR SHALL VERIFY PRESENCE AND LOCATION OF ANY AND ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK.
6. THE IMPACT ATTENUATOR SHALL BE INSTALLED ACCORDING TO THE HIGHWAY STANDARD 643001-02 AND GRADING DETAILS ON SHEET 19.
7. THE STEP-DOWN TRANSFORMER SHALL BE INSTALLED 3 FT. BEHIND THE CONCRETE FOUNDATION FOR THE DMS STRUCTURE, IN THE LOCATION THAT IS BEST PROTECTED BY THE IMPACT ATTENUATOR.
8. WORK REQUIRED TO MAINTAIN FLOW OF WATER AROUND THE PROPOSED DMS AND ATTENUATOR ARRAY WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE BID PRICE OF THE ATTENUATOR BASE.
9. ATTENUATOR ARRAY AND BASE SHALL BE INSTALLED PRIOR TO STARTING WORK ON THE SIGN FOUNDATION.

REFER TO STEP-DOWN TRANSFORMER DETAIL ON SHEET 20

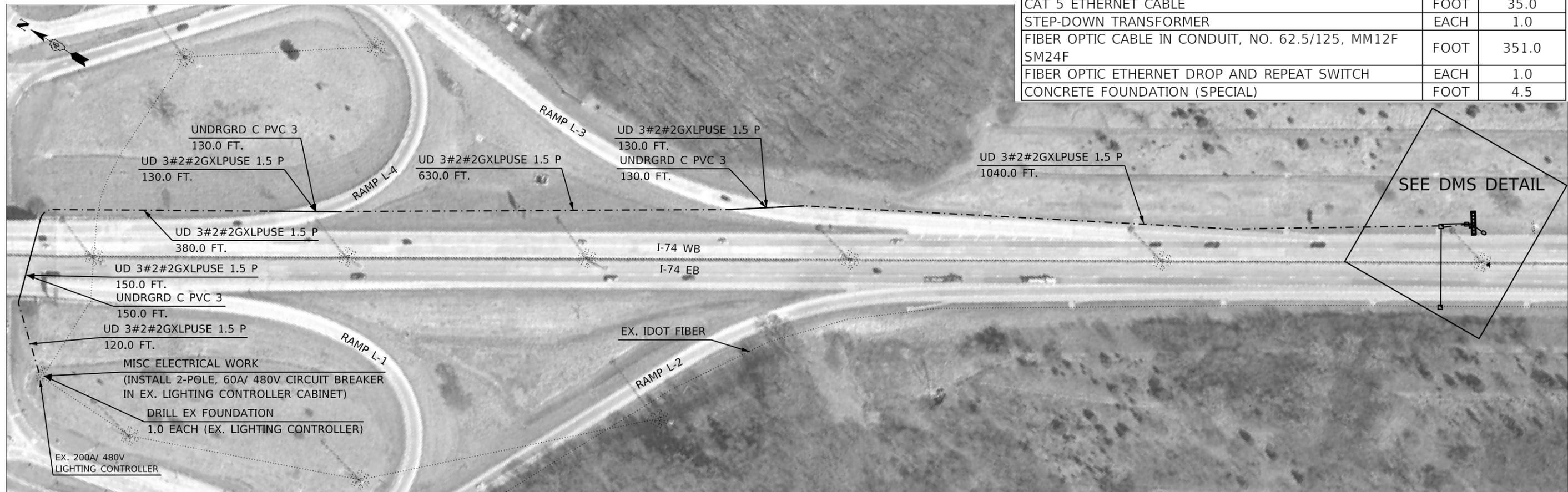
FIBER OPTIC CABLE SLACK
DOUBLE HANDHOLE - 30 FT.
HANDHOLE - 10 FT.
CABINET - 10 FT.
COMMUNICATIONS VAULT - 100 FT.

LEGEND

	PROP. DMS ASSEMBLY		PROP. UNIT-DUCT
	PROP. IMPACT ATTENUATOR & ATTENUATOR BASE		PROP. PVC CONDUIT + FIBER
	PROP. HEAVY-DUTY HANDHOLE		EX. LIGHTING CONTROLLER
	PROP. CCTV CAMERA		EX. COMMUNICATION VAULT
	PROP. STEP-DOWN TRANSFORMER & CONCRETE FOUNDATION		EX. CONDUIT
	PROP. PVC CONDUIT		EX. SIGN
	PROP. POLE MOUNTED EQUIPMENT CABINET, TYPE B		EX. HIGH MAST LIGHT TOWER
			EX. ELECTRICAL SERVICE

DYNAMIC MESSAGE SIGN INSTALLATION INCLUDES:	
OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE III-F-A	- QTY. 38.7 FT.
OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY, TYPE A	- QTY. 6.3 FT.
DRILLED SHAFT CONCRETE FOUNDATIONS	- QTY. 6.4 CU. YD.
POLE MOUNTED EQUIPMENT CABINET, TYPE B	- QTY. 1.0 EACH
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	- QTY. 1.0 EACH
ACCESS LADDER	- QTY. 1.0 EACH
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	- QTY. 1.0 EACH

BILL OF MATERIALS		
ITEM DESCRIPTION	UNIT	QTY.
IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	1.0
ATTENUATOR BASE	SQ YD	9.5
OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE III-F-A	FOOT	38.7
OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY,	FOOT	6.3
DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	6.4
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	145.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	493.0
HEAVY-DUTY HANDHOLE	EACH	1.0
UNIT DUCT, 600V, 3-1C NO.2, 1/C NO.2 GROUND, (XLP-TYPE USE), 1 1/2" DIA. POLYETHYLENE	FOOT	2660.0
DRILL EXISTING FOUNDATION	EACH	1.0
DRILL EXISTING HANDHOLE	EACH	1.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, HD	EACH	1.0
FIBER OPTIC CABLE SPLICE - LATERAL	EACH	1.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
ACCESS LADDER	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	35.0
STEP-DOWN TRANSFORMER	EACH	1.0
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	351.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	1.0
CONCRETE FOUNDATION (SPECIAL)	FOOT	4.5



NOT TO SCALE

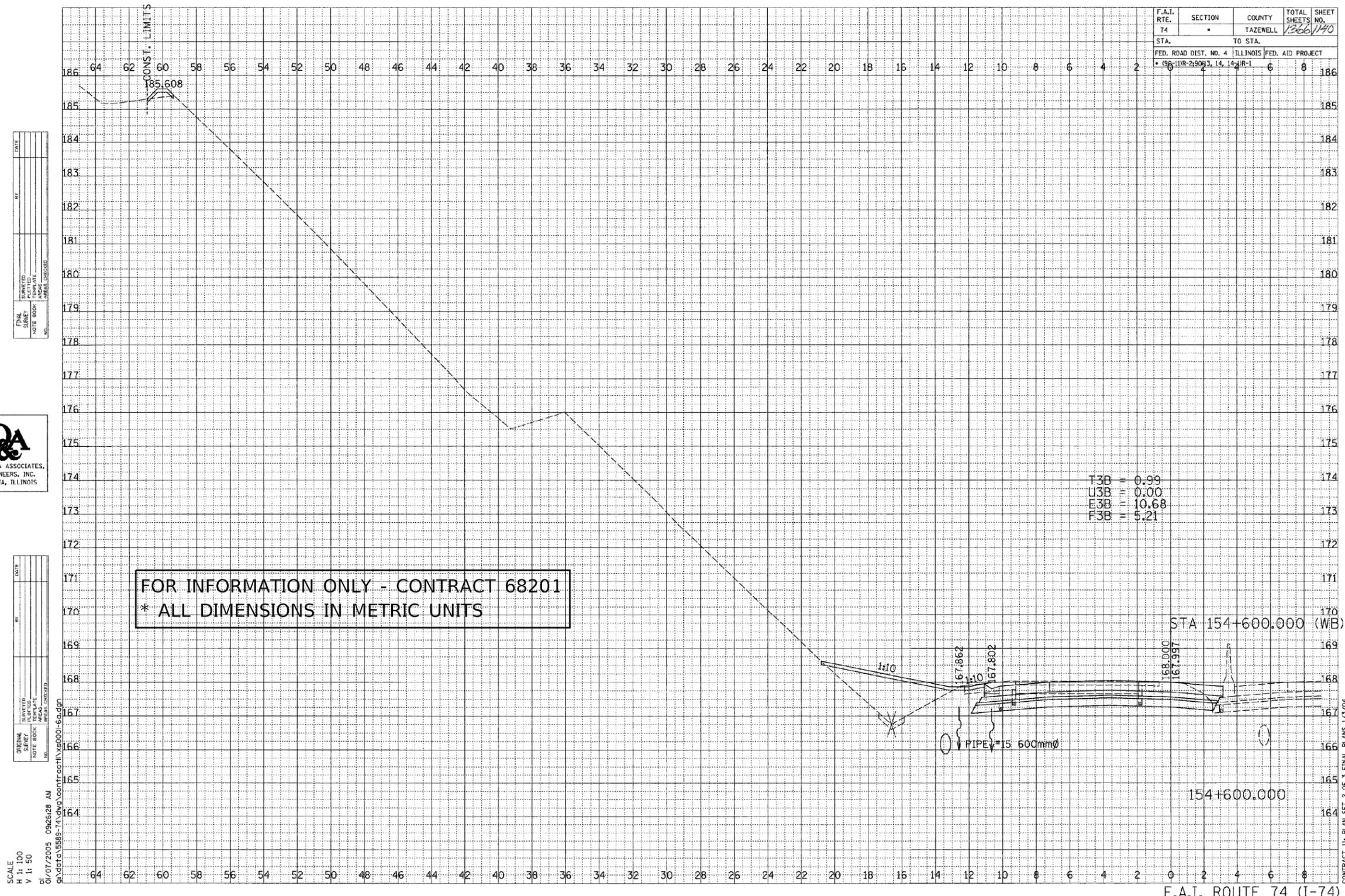
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS LOCATION #4			
I-74 WB AT WASHINGTON ST. - TAZEVELL COUNTY			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	TAZEVELL	43	17
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				



DATE	BY
DATE	BY



DATE	BY
DATE	BY

SCALE
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET NO.
74	*	TAZEWELL	1266/140	
STA.		TO STA.		
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	
* 96-10R-29043, 14, 14R-1		6	8	186

FOR INFORMATION ONLY - CONTRACT 68201
* ALL DIMENSIONS IN METRIC UNITS

T3B = 0.99
U3B = 0.00
E3B = 10.68
F3B = 5.21

STA 154+600.000 (WB)
154+600.000
F.A.I. ROUTE 74 (I-74)

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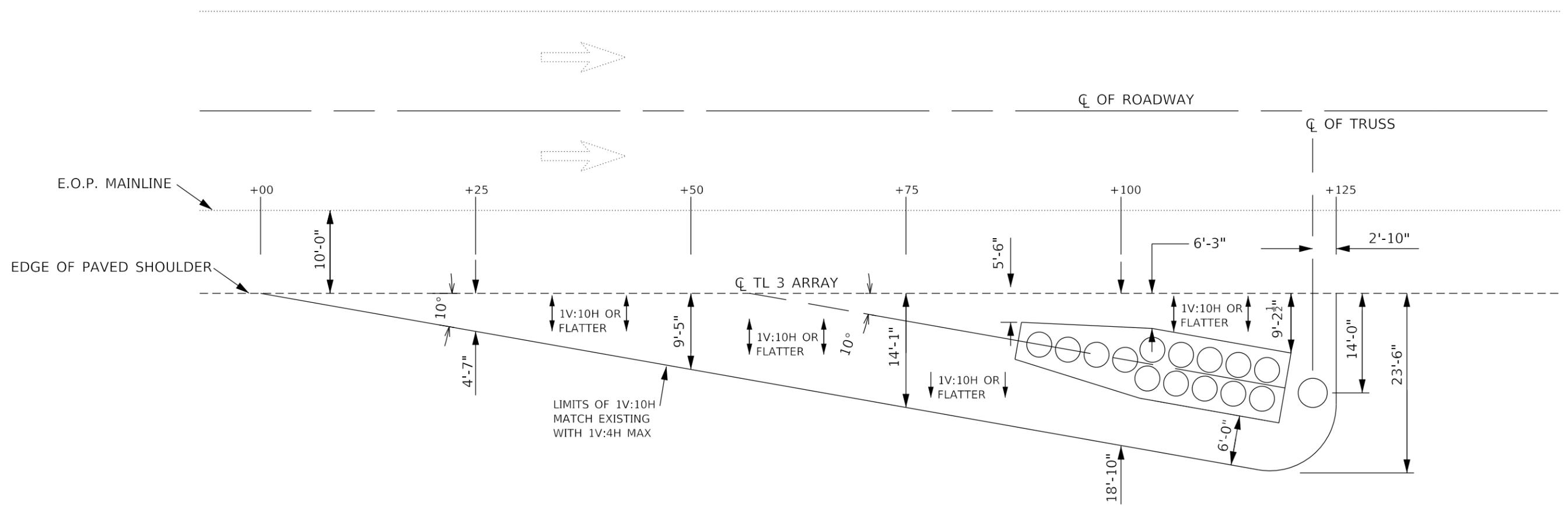
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PLOT DATE = 12/13/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING CROSS SECTION			
I-74 WB AT WASHINGTON ST. - TAZEWELL COUNTY			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	TAZEWELL	43	18
CONTRACT NO. 68E72				
ILLINOIS		FED. AID PROJECT		

NOT TO SCALE



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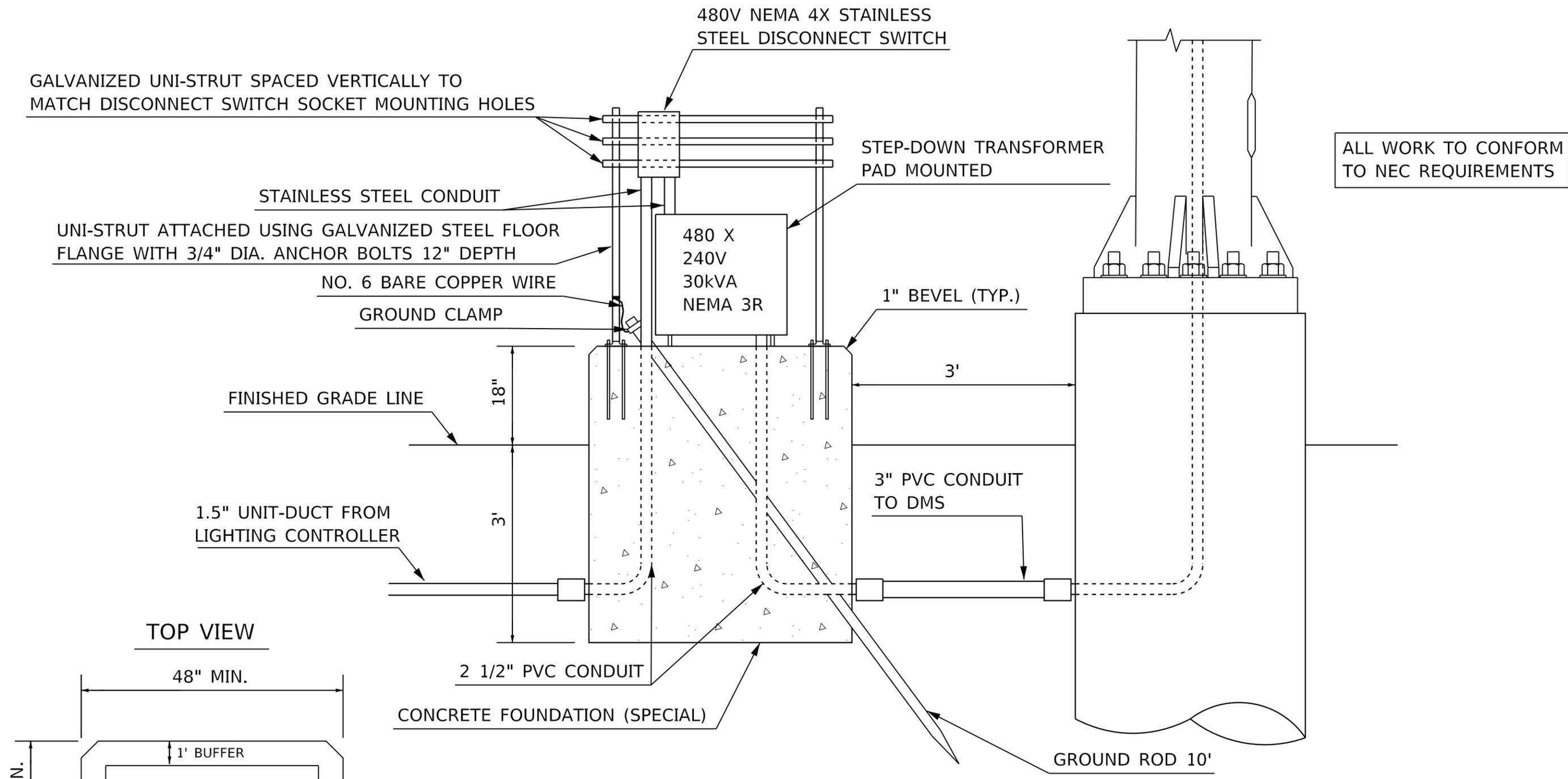
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3
GRADING PLAN (PROPOSED DMS LOCATION #4)**

SCALE: SHEET OF SHEETS STA. TO STA.

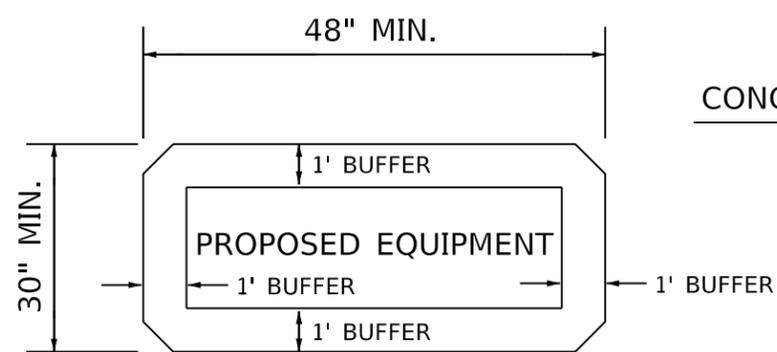
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	TAZEWELL	43	19
CONTRACT NO. 68E72			ILLINOIS FED. AID PROJECT	

STEP-DOWN TRANSFORMER & CONCRETE FOUNDATION (SPECIAL) DETAIL



ALL WORK TO CONFORM TO NEC REQUIREMENTS

TOP VIEW



FOUNDATION SHALL BE SIZED AS REQUIRED TO ACCOMODATE PROPOSED EQUIPMENT

- NOTES:
1. THE STEP-DOWN TRANSFORMER SHALL BE INSTALLED 3 FT. BEHIND THE CONCRETE FOUNDATION FOR THE DMS STRUCTURE, IN THE LOCATION THAT IS BEST PROTECTED BY THE IMPACT ATTENUATOR.
 2. THE COSTS OF THE CONDUITS EMBEDDED IN THE FOUNDATION WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE BID PRICE OF THE CONCRETE FOUNDATION (SPECIAL.)
 3. CONCRETE FOUNDATION (SPECIAL) SHALL BE MEASURED AND PAID FOR PER FOOT INSTALLED, BOTH ABOVE GRADE AND BELOW GRADE.

NOT TO SCALE

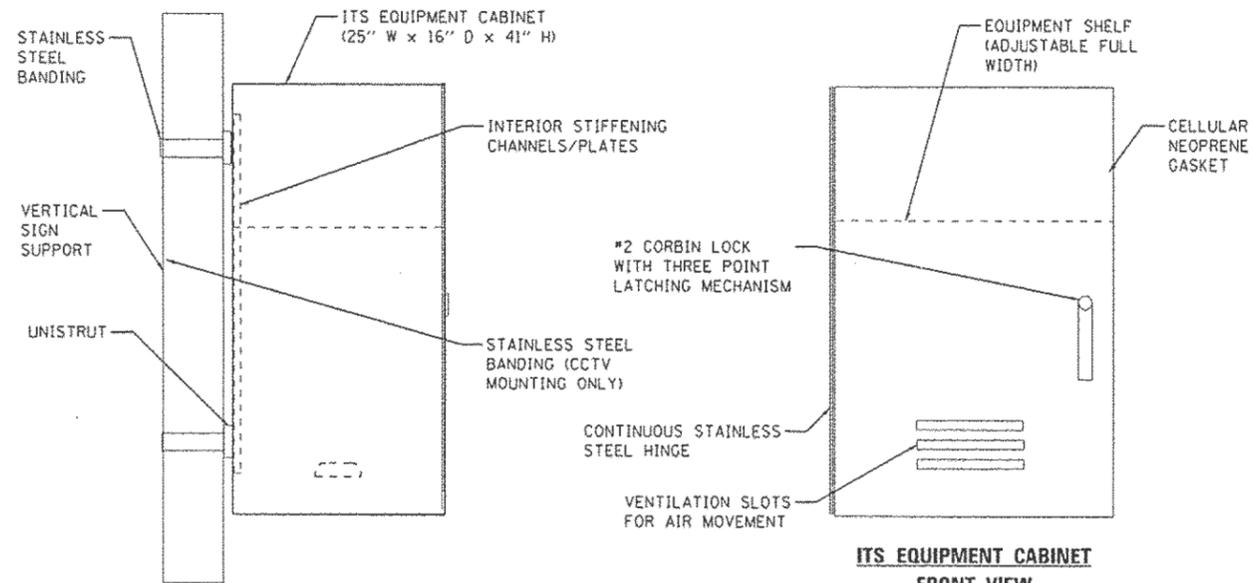
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STEP-DOWN TRANSFORMER DETAIL & CONCRETE FOUNDATION (SPECIAL) DETAIL	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	TAZEWELL	43	20
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				



ITS EQUIPMENT CABINET FRONT VIEW

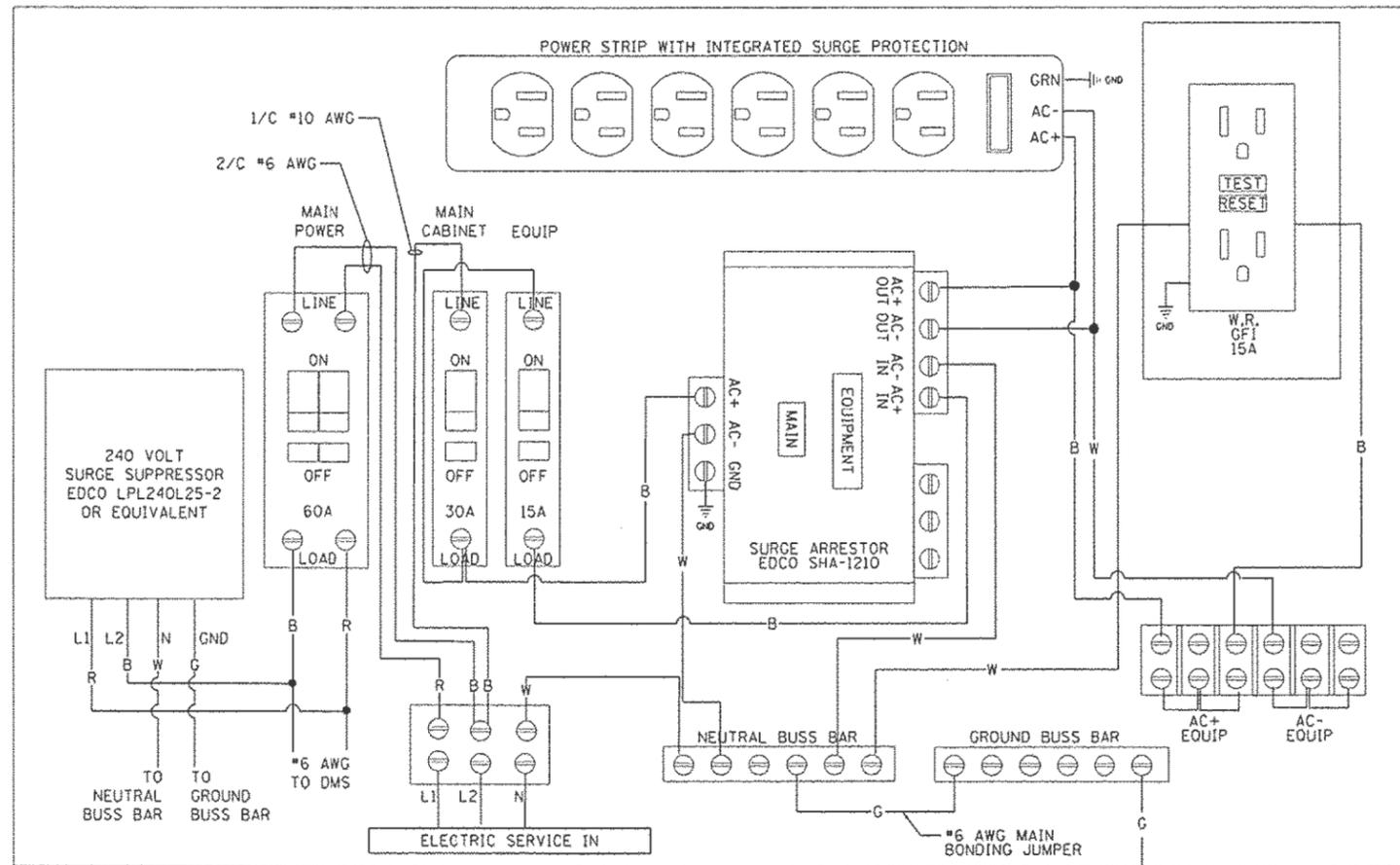
ITS EQUIPMENT CABINET SIDE VIEW

CABINET TO BE EQUIPPED WITH 19" RACK ASSEMBLY FOR EQUIPMENT

45W INDUSTRIAL DIN RAIL MOUNT POWER SUPPLY (INCLUDED WITH CELLULAR MODEM PAY ITEM)

24 FIBER PANEL (CORNING WIC-24 WITH 24 SM ST FERRULES)

ITS EQUIPMENT CABINET INSIDE VIEW



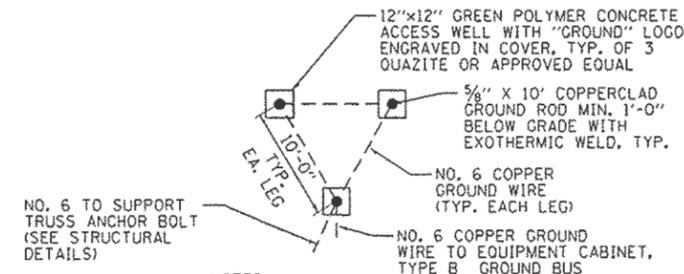
ITS EQUIPMENT CABINET POWER PANEL DETAIL (POWER PANEL TO BE EQUIPPED WITH PLEXI-GLASS SAFETY SHIELD)

NOTES:

1. THE ITS EQUIPMENT CABINET SHALL BE A NEMA TYPE 3R CABINET WITH MINIMUM OUTSIDE DIMENSIONS OF 41" (H) X 25" (W) X 16" (D). THE CABINET SHALL BE CONSTRUCTED FROM .125" THICK ALUMINUM AND HAVE A NATURAL FINISH.
2. THE CABINET SHALL BE FURNISHED WITH ONE ADJUSTABLE HEIGHT SHELF, THREE POSITION DOOR STOP (90,120,180 DEGREES), NEOPRENE DOOR GASKET, AIR VENT LOUVERS, CONTINUOUS STAINLESS STEEL DOOR HINGE, INTERIOR STIFFENERS FOR MOUNTING, THREE POINT LATCHING MECHANISM WITH #2 CORBIN LOCK, 24 FIBER INTERCONNECT CENTER, POWER PANEL, AND ALL STAINLESS STEEL HARDWARE.
3. THE CABINET SHALL BE EQUIPPED WITH A THERMOSTATICALLY CONTROLLED VENTILATION FAN, 250 WATT HEATER STRIP (WITH GUARD), AND DELUXE PLEATED AIR FILTER.
4. THE CONTRACTOR SHALL INSTALL ALL DIN RAIL MOUNTED EQUIPMENT IN THE CABINET.
5. ALL ITEMS SHOWN ON THIS DRAWING (EXCEPT CELLULAR MODEM) SHALL BE INCLUDED IN THE EQUIPMENT CABINET PAY ITEM (INCLUDING ALL UNISTRUT, MTG. BRACKETS, CONDUIT/WIRE ATTACHED TO STRUCTURE & METER FITTING).
6. ALL CONTROL CABINET ITEMS SHALL HAVE SUITABLE IDENTIFICATION. OPEN CIRCUIT BREAKERS, CONTACTORS AND OTHER OPEN DEVICES SHALL HAVE PERMANENT SELF STICKING TAGS. DEVICES IN ENCLOSURES SHALL HAVE ENGRAVED 2-COLOR LAMINATED PLASTIC NAMEPLATES ATTACHED TO ENCLOSURES WITH SCREWS. NAMEPLATES SHALL BE ENGRAVED TO CORRESPOND TO DESIGNATIONS ON THE DRAWINGS. INTERNAL CABINET WIRING SHALL BE IDENTIFIED AS INDICATED OR AS DIRECTED BY THE ENGINEER BY MEANS OF SELF-STICKING TAGS APPLIED AT EACH CONNECTED END. IDENTIFICATION SHALL BE MADE BY THE CABINET MANUFACTURER.

7. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:
R = REDBL = BLUEW = WHITEB = BLACKY = YELLOWG = GREEN
8. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
9. ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE #12AWG STRANDED UNLESS OTHERWISE INDICATED.
10. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
11. THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".

POLE MOUNTED EQUIPMENT CABINET, TYPE B
NOT TO SCALE



NOTES:

1. ACCESS WELLS SHALL BE INCLUDED IN THE EQUIPMENT CABINET PAY ITEM.

GROUND FIELD DETAIL (TYP.)

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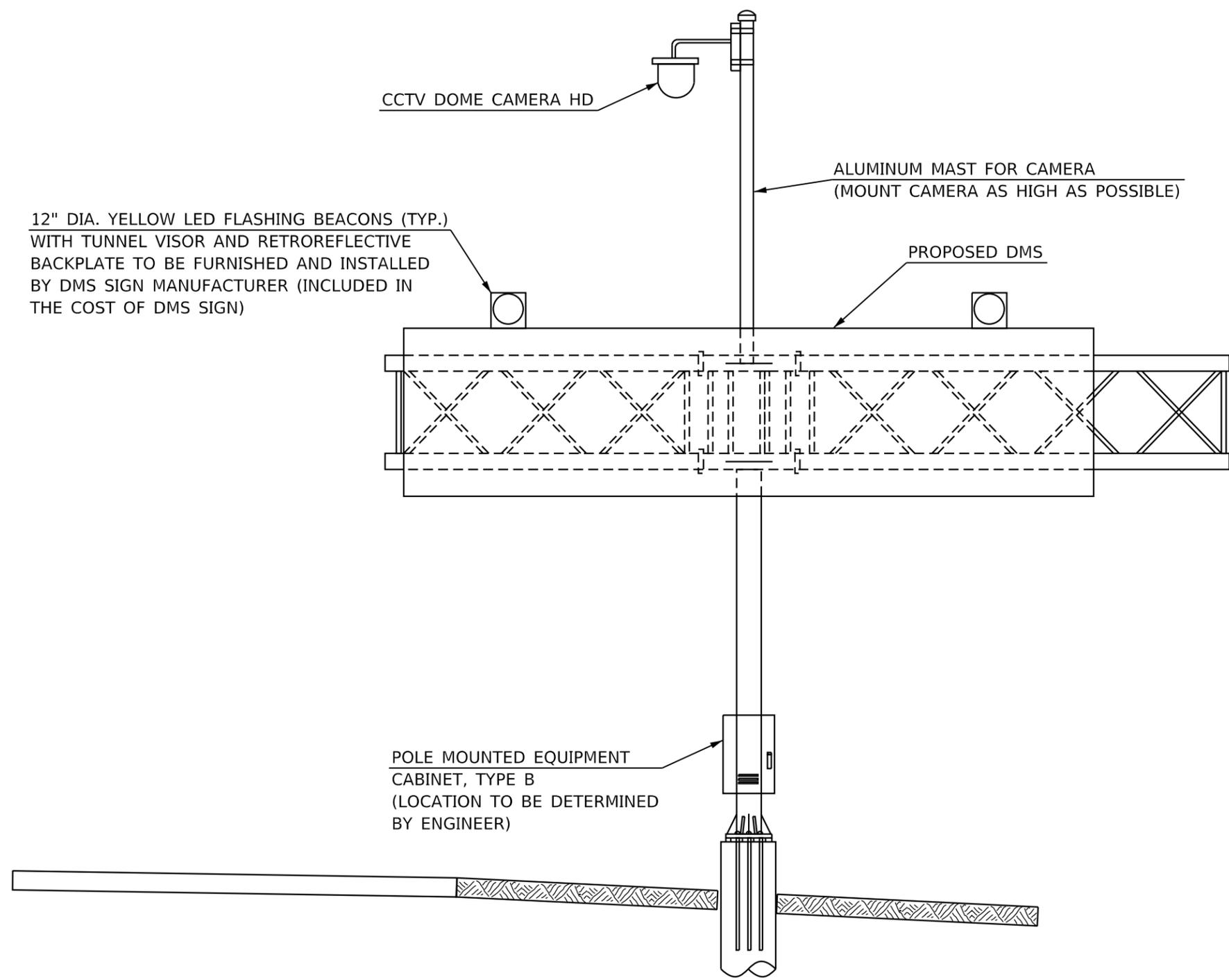
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

POLE MOUNTED EQUIPMENT CABINET, TYPE B

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	21
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				



ELEVATION

CCTV CAMERA PLACEMENT (TYP.)
BUTTERFLY SIGN STRUCTURES (TYP.)

NOTES:

1. THE CONTRACTOR SHALL SUBMIT COMPLETE ELECTRICAL DESIGN DETAILS AND CALCULATIONS SEALED BY AN ILLINOIS LICENSED ELECTRICAL AND STRUCTURAL ENGINEER TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.
2. THE TRUSS EXTENSION FOR MOUNTING WALKWAY SHALL BE LOCATED ON THE SIDE FURTHEST FROM THE INTERSTATE (AS SHOWN IN THE PLANS) AND VERIFIED BY THE ENGINEER OF TRAFFIC PRIOR TO CONSTRUCTION.

NOT TO SCALE

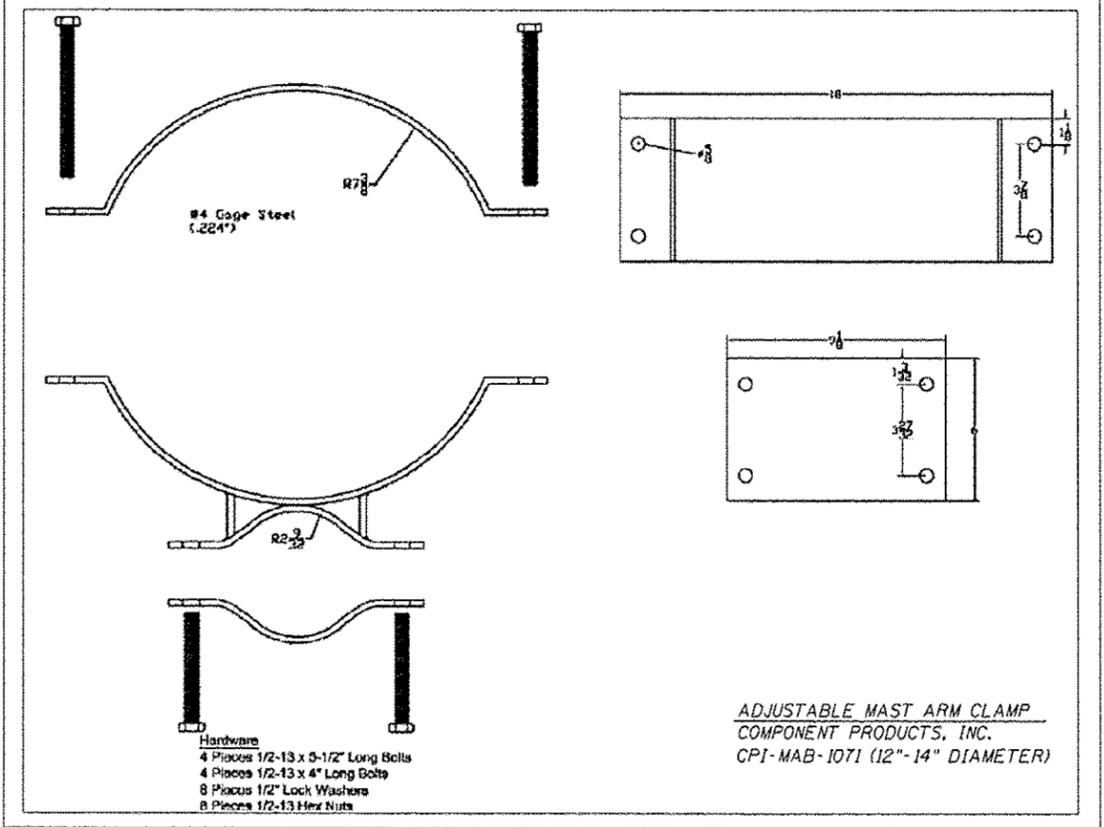
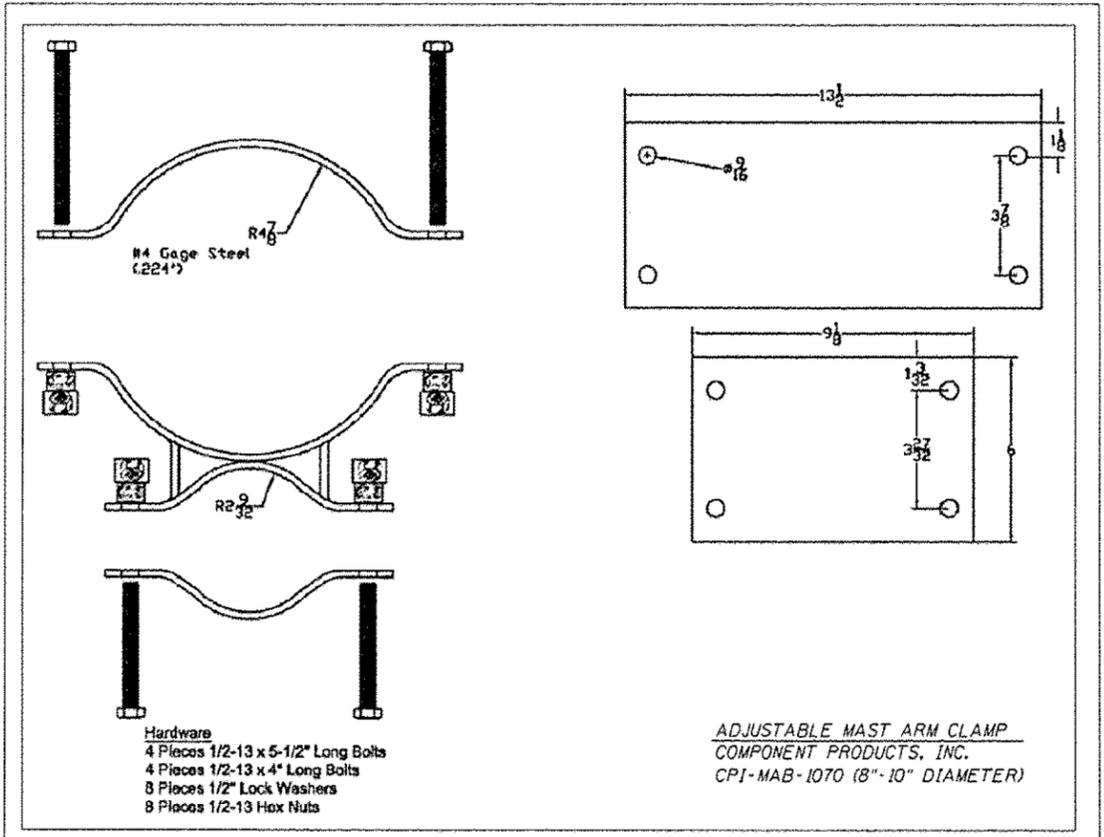
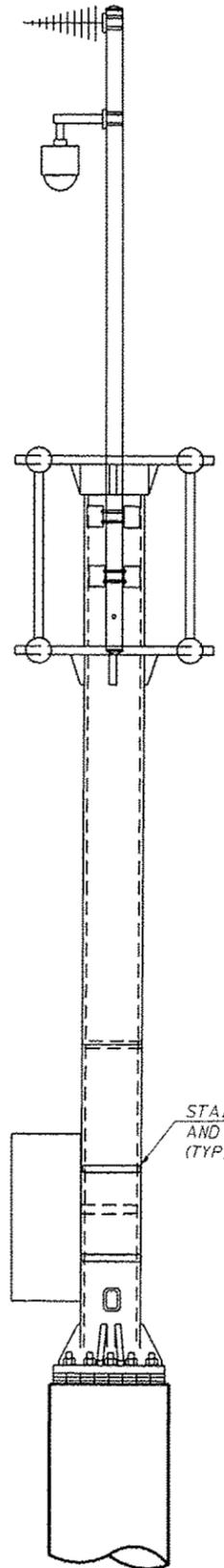
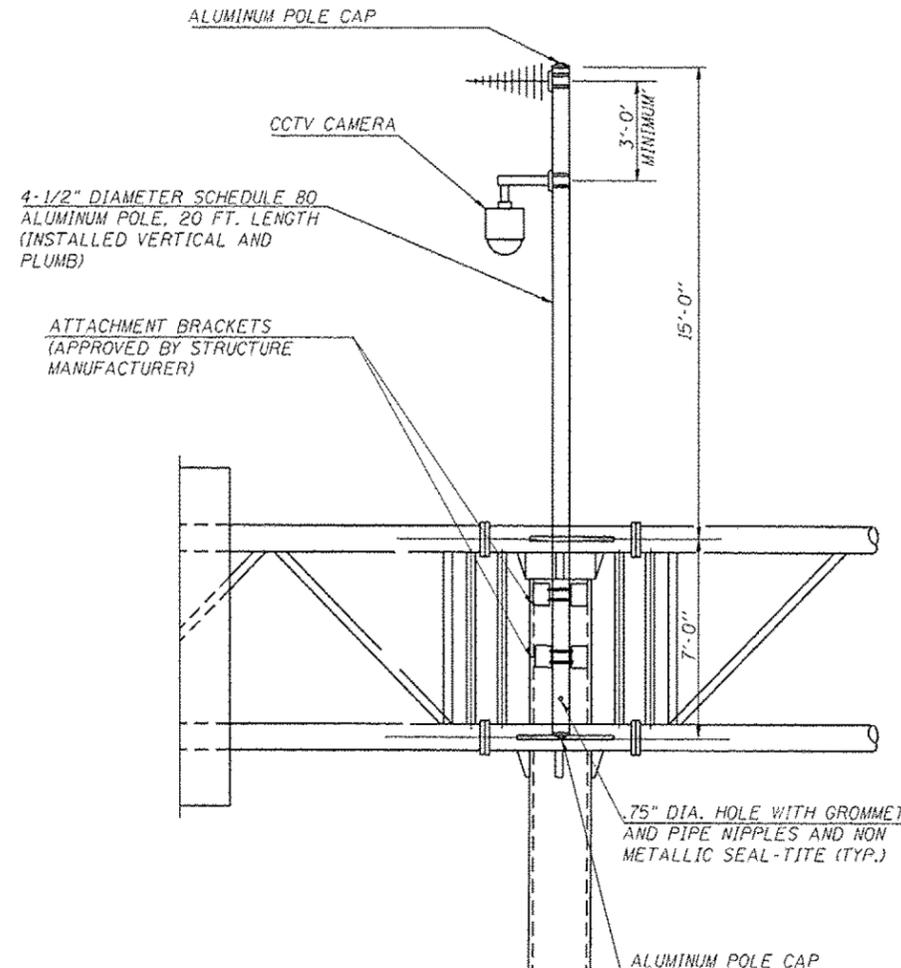
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BUTTERFLY TRUSS SIGN STRUCTURE - DMS AND CCTV CAMERA DETAILS	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	22
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				



THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE CAMERA MAST COMPONENTS FIT CORRECTLY AND ARE COMPATIBLE WITH THE SIGN STRUCTURE. THE MANUFACTURER OF THE SIGN STRUCTURE SHALL APPROVE THE CAMERA MAST DESIGN. THE COST OF FURNISHING AND INSTALLING THE CAMERA MAST SHALL BE INCLUDED IN THE COST OF THE SIGN STRUCTURE.

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GALVANIZED STEEL UNISTRUT, BRACKETING AND HARDWARE REQUIRED FOR CABINET INSTALLATION ONTO THE SIGN STRUCTURE VERTICAL SUPPORT. THE CONTRACTOR SHALL SUBMIT CATALOG CUT SHEETS FOR ALL MATERIALS AND DETAIL DRAWINGS FOR PROPOSED MOUNTING METHODS PRIOR TO COMMENCING WORK. ALL MATERIAL SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF THE EQUIPMENT CABINET.

FRONT ELEVATION

SIDE ELEVATION

CCTV POLE CLAMPS
NOT TO SCALE

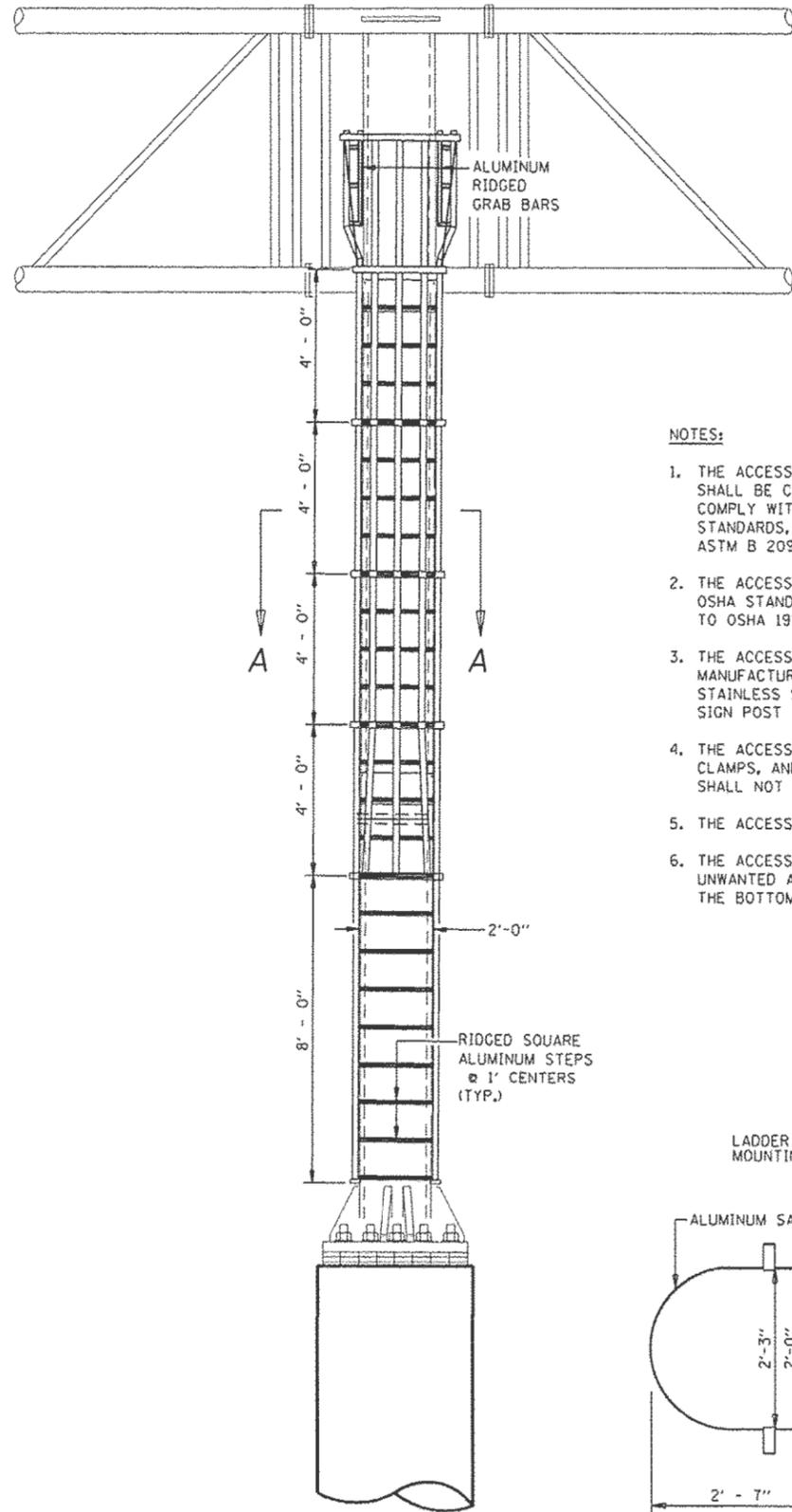
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	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTTERFLY SIGN STRUCTURES - TYPE II-F-A & III-F-A
TRUSS SUPPORT POST - ALUMINUM TRUSS & STEEL POST
SCALE: SHEET OF SHEETS STA. TO STA.

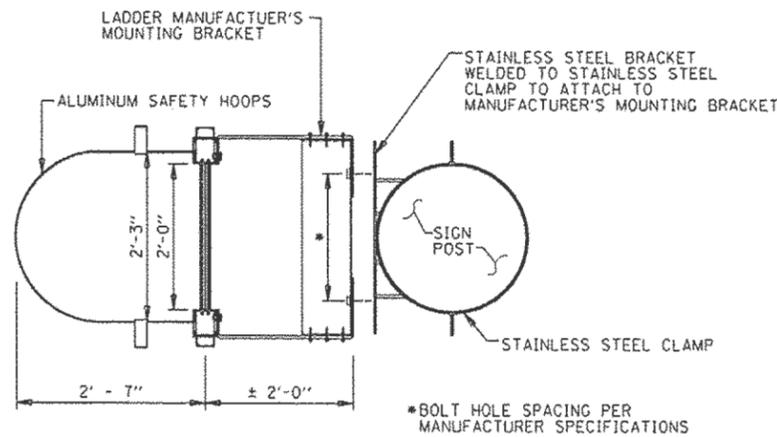
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	23
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				



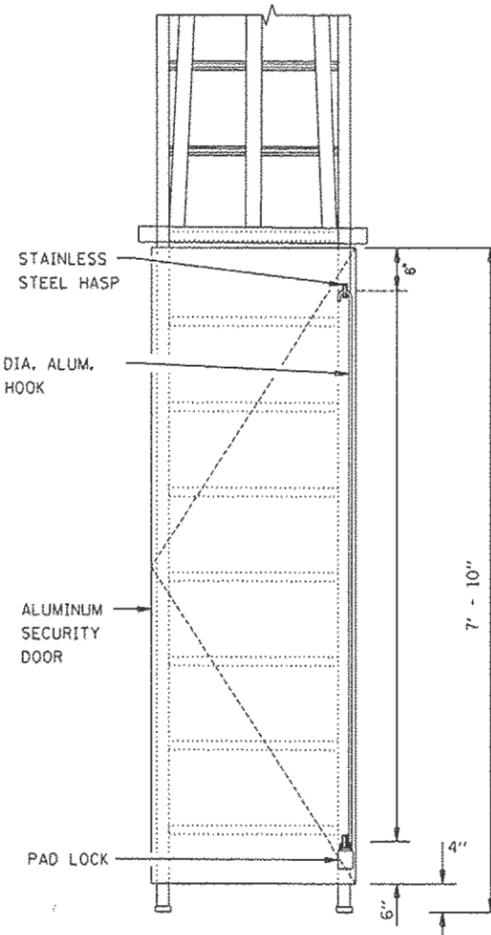
BACK ELEVATION

NOTES:

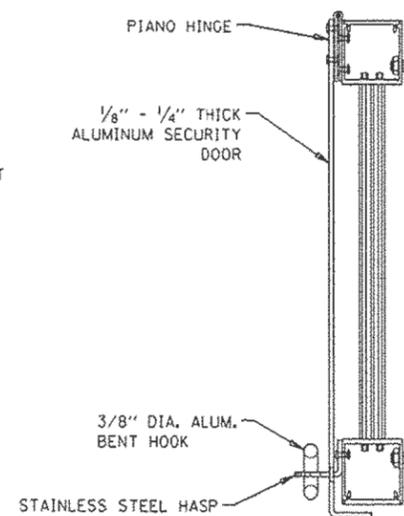
1. THE ACCESS LADDER AND SECURITY DOOR SHALL BE CONSTRUCTED OF ALUMINUM AND COMPLY WITH THE RELEVANT ASTM STANDARDS, INCLUDING BUT NOT LIMITED TO ASTM B 209 AND ASTM B 211.
2. THE ACCESS LADDER SHALL MEET THE RELEVANT OSHA STANDARDS, INCLUDING BUT NOT LIMITED TO OSHA 1910.27
3. THE ACCESS LADDER SHALL BE SECURED VIA THE MANUFACTURER'S MOUNTING BRACKET ATTACHED TO STAINLESS STEEL CLAMPS SECURED AROUND THE SIGN POST
4. THE ACCESS LADDER, SECURITY DOOR, BRACKETS, CLAMPS, AND ANY RELATIVE COMPONENTS SHALL NOT EXCEED 350 POUNDS IN WEIGHT.
5. THE ACCESS LADDER SHALL BE INSTALLED PLUMB
6. THE ACCESS LADDER SHALL BE SECURED FROM UNWANTED ACCESS BY SECURITY DOOR PLACED OVER THE BOTTOM 8' PORTION OF THE LADDER.



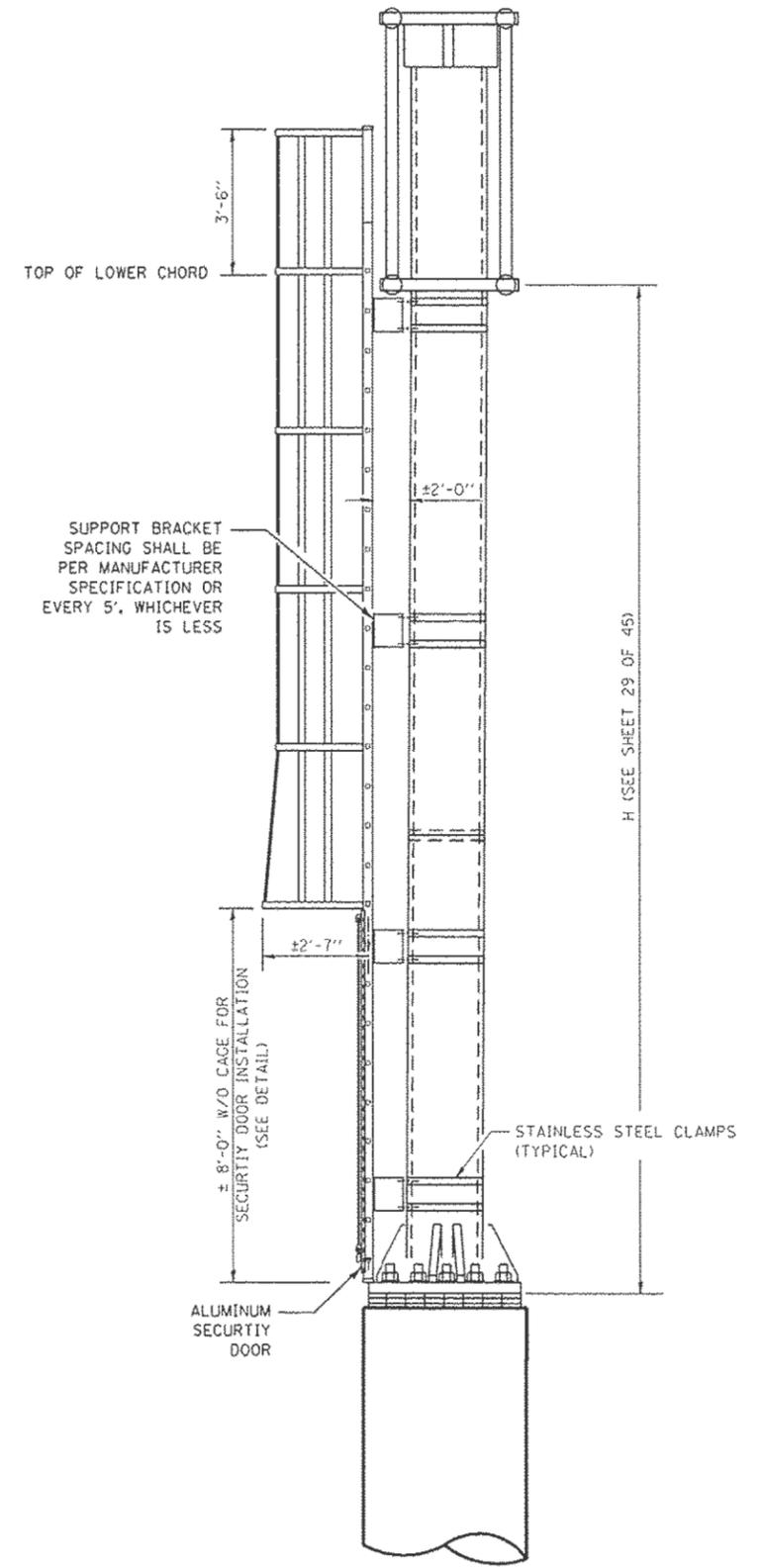
SECTION A-A



SECURITY DOOR DETAILS



SECURITY DOOR PLAN



SIDE ELEVATION

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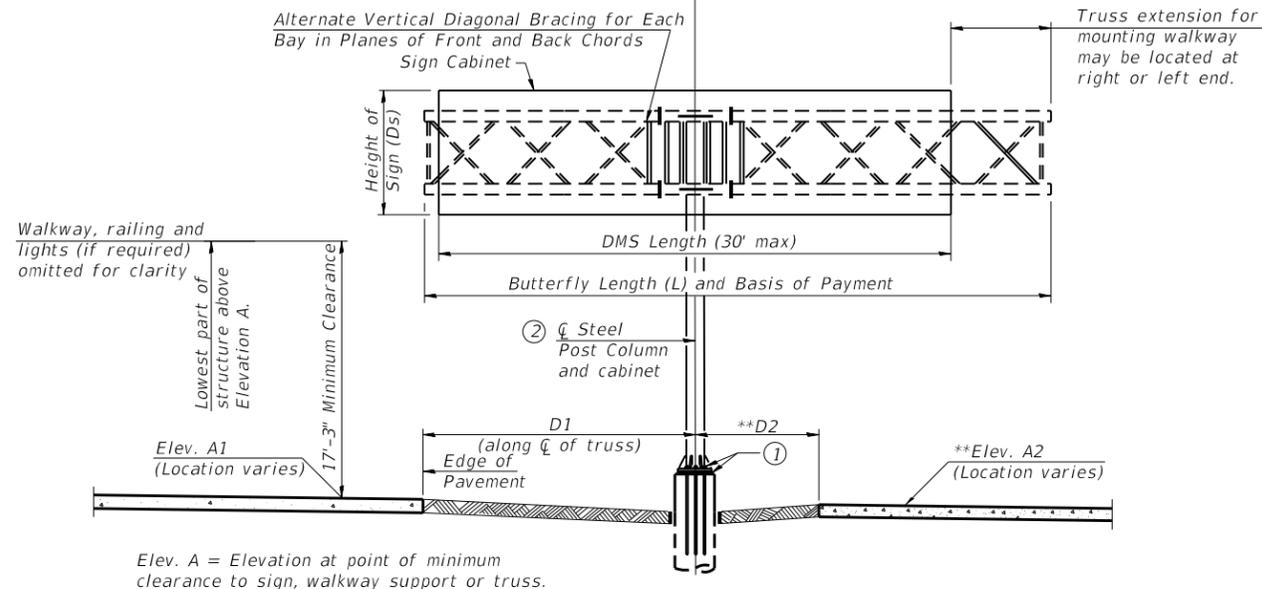
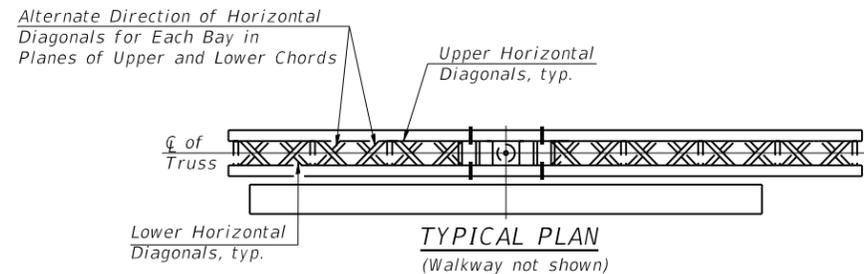
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED ACCESS LADDER DETAIL FOR
BUTTERFLY TRUSS SIGN STRUCTURE

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	24
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				



** Elevation A2 and dimension D2 not used when butterfly structure is mounted on right side of the shoulder.

Sign support structures may be subject to damaging vibrations and oscillations when signs 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.

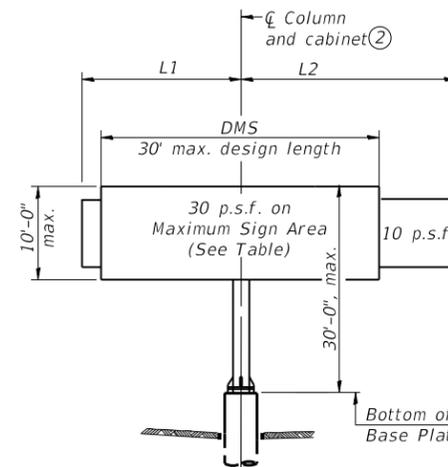
Structure Number	Station (m)	Total Butterfly Length (L)	Elev. A1 (ft)	Elev. A2 (ft)	Dim. D1	Dim. D2	Ds	Total Sign Area	Access door and walkway location (Right or Left end)
4F0721074R090.9	146+410	38'-8"	558.76	**	22'-0"	**	10'-0"	300 SQ FT	RIGHT
4F0721074R092.8	149+350	38'-8"	555.22	540.38	22'-0"	34'-0"	10'-0"	300 SQ FT	RIGHT
4F0901074L094.9	152+900	38'-8"	490.47	477.65	22'-0"	38'-0"	10'-0"	300 SQ FT	RIGHT
4F0901074L096.1	154+600	38'-8"	550.53	**	24'-0"	**	10'-0"	300 SQ FT	RIGHT

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE BUTTERFLY TYPE III-F-A	Foot	154.7
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	Foot	25.4
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	29.8

TRUSS TYPE	MAXIMUM TOTAL DMS SIGN CABINET AREA
III-F-A	300 Sq. Ft.

Maximum DMS weight = 5000 LB.



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.

Note: 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.

- ① After adjustments to level truss and insure adequate vertical clearance, all top and bottom 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.
 - ② Centerline cabinet must be located at centerline of column.
- * 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.

NOTE:

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- THE CONTRACTOR SHALL FIELD VERIFY ALL STATIONS AND ELEVATIONS AND CONSULT WITH THE RESIDENT ENGINEER PRIOR TO ORDERING MATERIALS.

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
WIND LOADING: 30 p.s.f. normal to DMS Cabinet Area and truss elements not behind sign Loading Diagram.
WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (reinforcement)

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

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W* (M183, M223 Gr. 50, or M222). 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.

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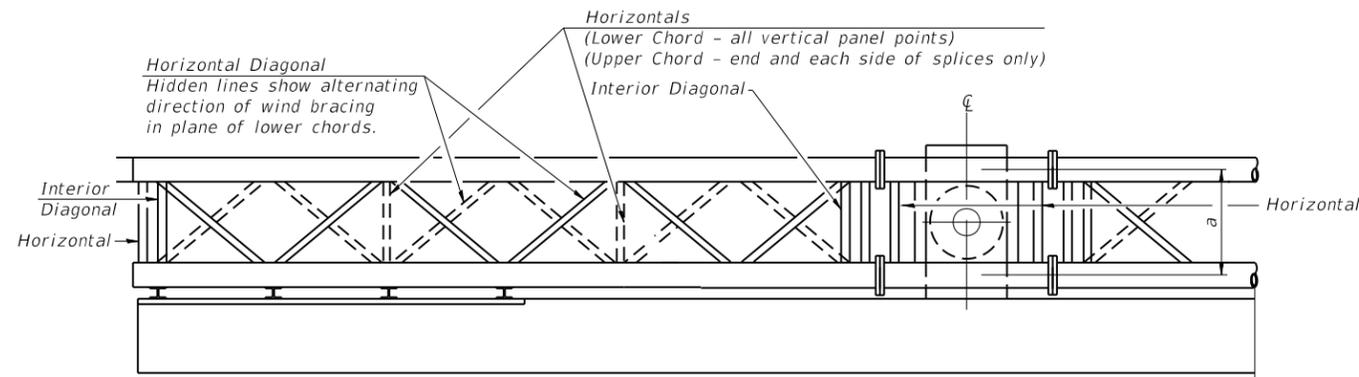
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTTERFLY SIGN STRUCTURES - ALTERNATE PLAN & ELEVATION
FOR DMS - ALUMINUM TRUSS & STEEL POST**

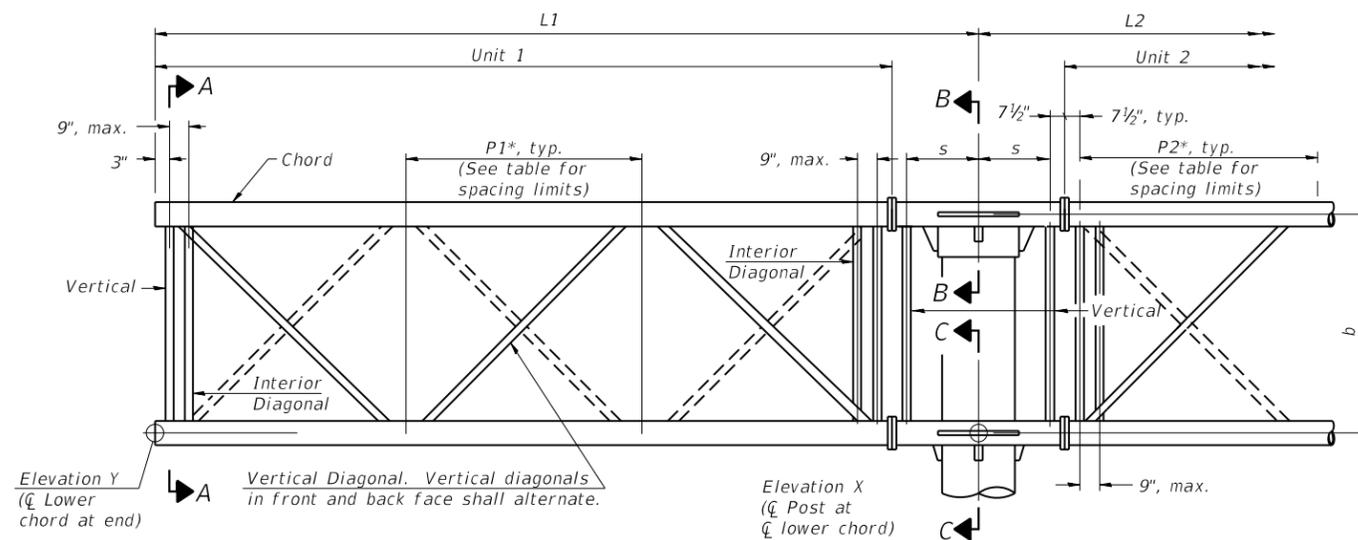
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	25
ILLINOIS			CONTRACT NO. 68E72	
FED. AID PROJECT				



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

PLAN
(Walkway not shown)



ELEVATION
(Sign and walkway omitted for clarity)

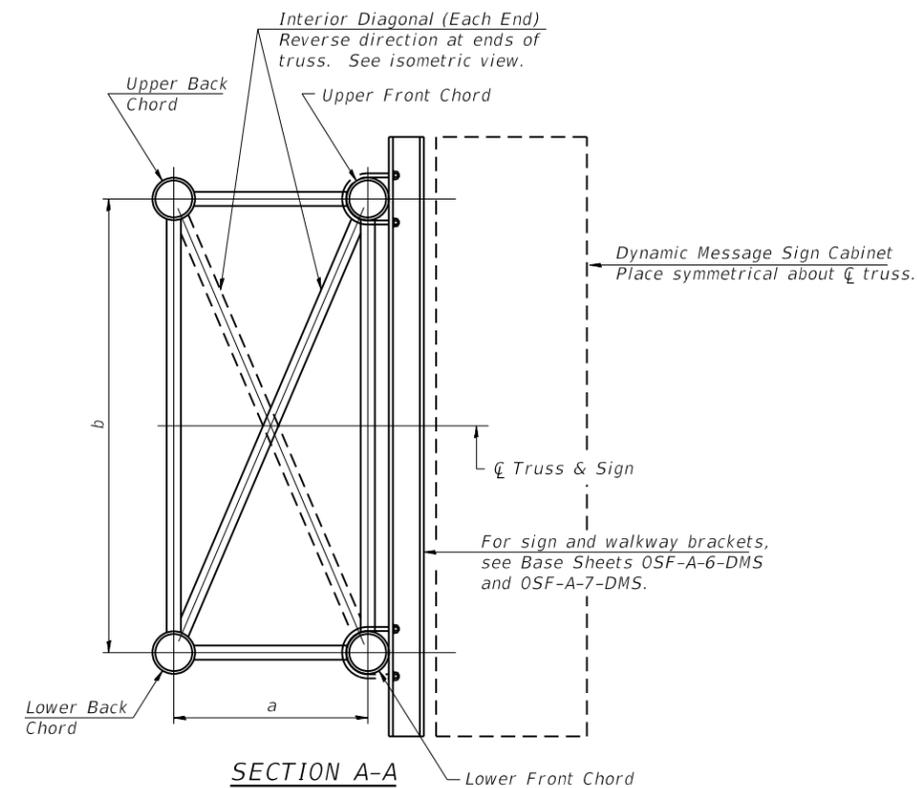
TYPICAL TRUSS UNIT

For Section B-B and Section C-C, see Base Sheet OSF-A-3-DMS

TRUSS UNIT TABLE

Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord O.D. Wall		Verticals; Horizontals; Vertical Horizontals; and Interior Diagonals	
III-F-A	36"	84"	21"	48" min. to 66" max.	7"	3/8"	3 1/2"	3/8"

$$*P = \frac{L-s-1'-6"}{\# \text{ Panels}}$$



Structure Number	Station (m)	Truss Type	L1	L2	Number of Panels Unit 1	Panel Length (P1)*	Number of Panels Unit 2	Panel Length (P2)*
4F0721074R090.9	146+410	III-F-A	17'-4"	21'-4"	4	54"	3	56"
4F0721074R092.8	149+350	III-F-A	17'-4"	21'-4"	4	54"	3	56"
4F0901074L094.9	152+900	III-F-A	17'-4"	21'-4"	4	54"	3	56"
4F0901074L096.1	154+600	III-F-A	17'-4"	21'-4"	4	54"	3	56"

NOTE:

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OSF-A-2-DMS 2-17-2017

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PLOT DATE = 12/13/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTTERFLY SIGN STRUCTURES - ALTERNATE TRUSS DETAILS FOR DMS
ALUMINUM TRUSS & STEEL POST**

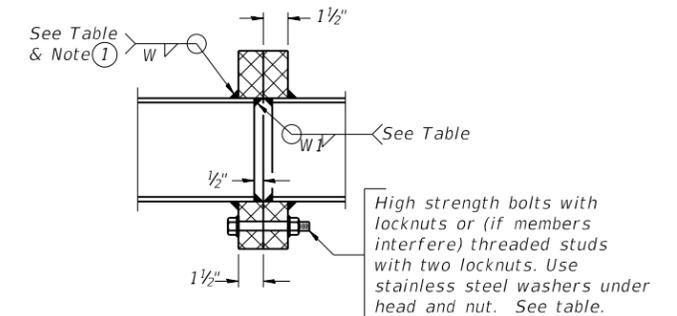
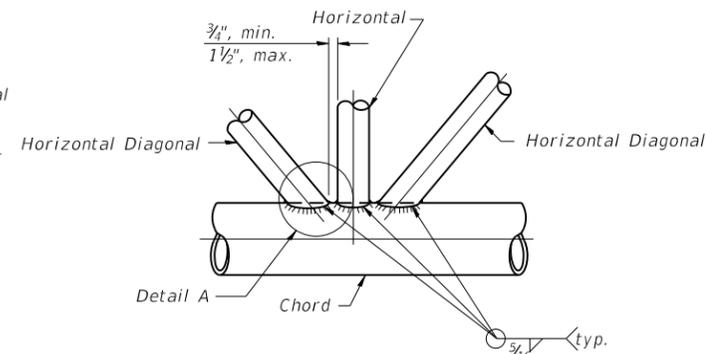
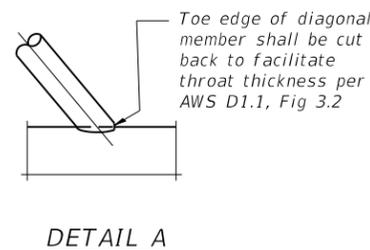
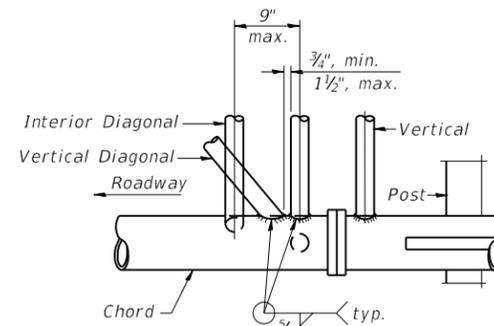
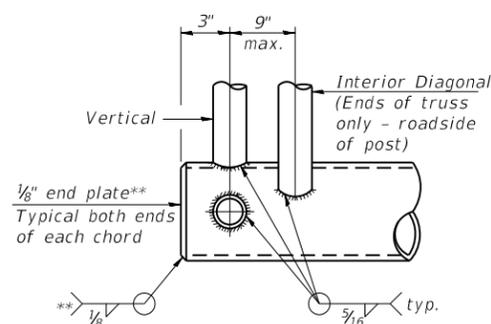
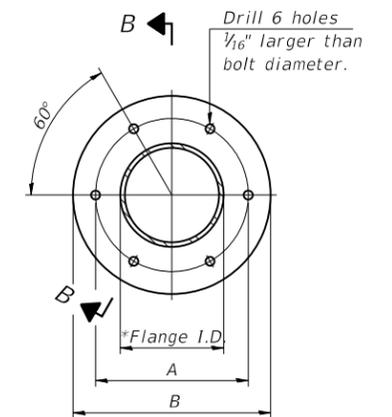
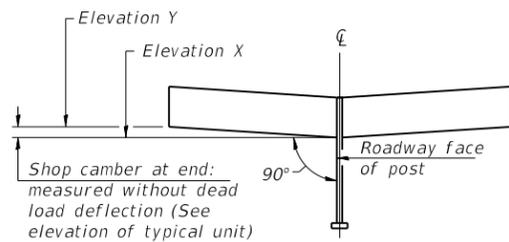
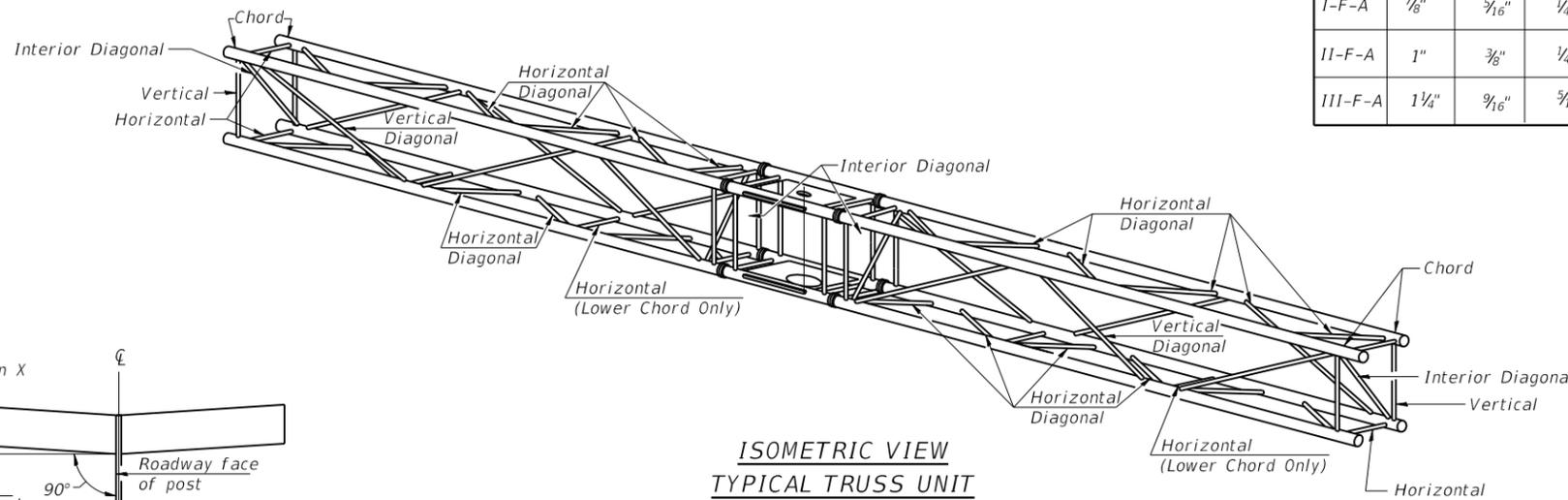
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	26
CONTRACT NO. 68E72				
ILLINOIS		FED. AID PROJECT		

SHOP CAMBER TABLE

Unit Length L1 or L2	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"

Truss Type	Bolts		Weld Sizes		A	B
	Di.	W	W1			
I-F-A	7/8"	5/16"	1/4"		8 3/4"	11 3/4"
II-F-A	1"	3/8"	1/4"		11"	14 1/2"
III-F-A	1 1/4"	9/16"	3/16"		11 1/2"	15"



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.

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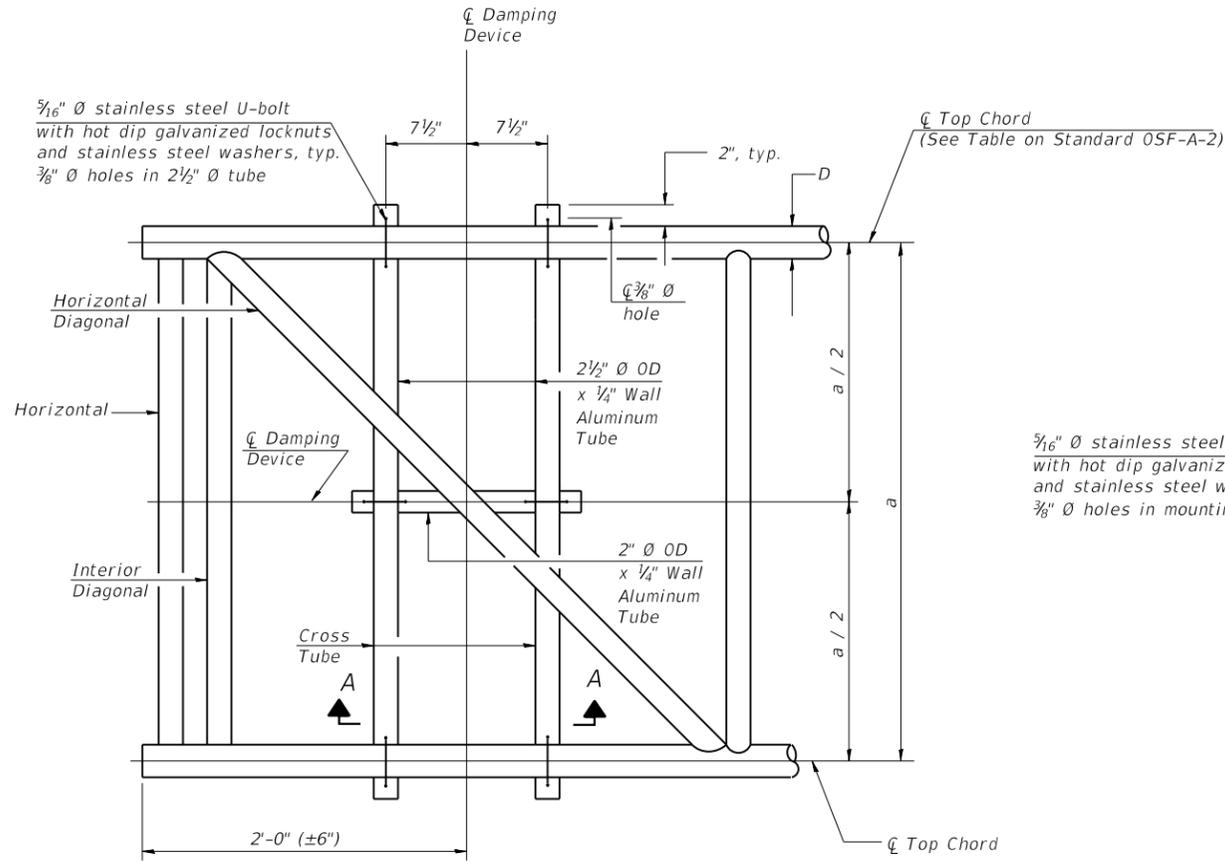
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DEPARTMENT OF TRANSPORTATION**

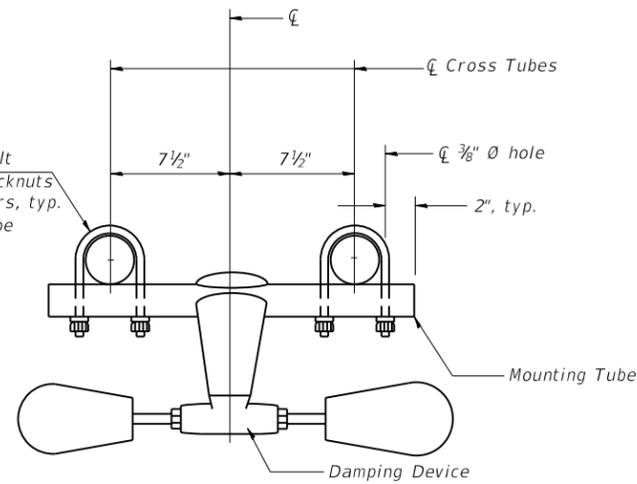
**BUTTERFLY SIGN STRUCTURES - TRUSS DETAILS
ALUMINUM TRUSS & STEEL POST**

SCALE: SHEET OF SHEETS STA. TO STA.

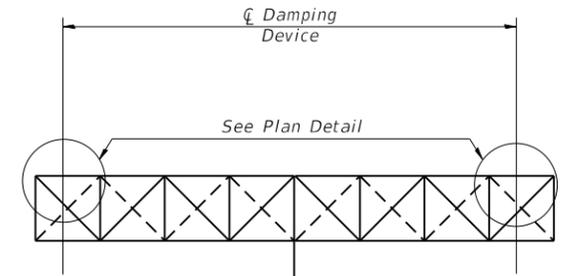
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CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				



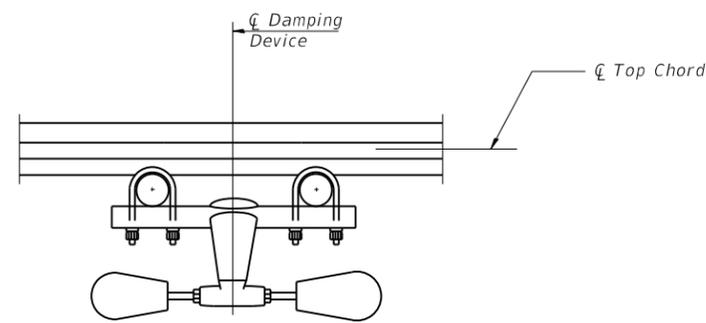
PLAN DETAIL



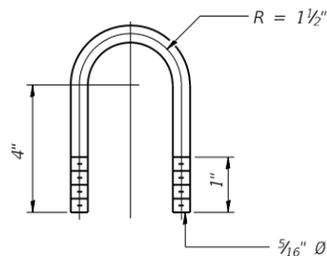
TRUSS DAMPING DEVICE CONNECTION DETAIL



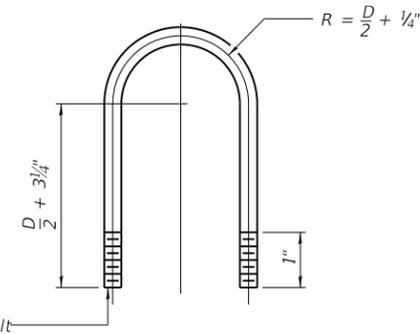
ELEVATION
Aluminum Butterfly Sign Structure



SECTION A-A



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)



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

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

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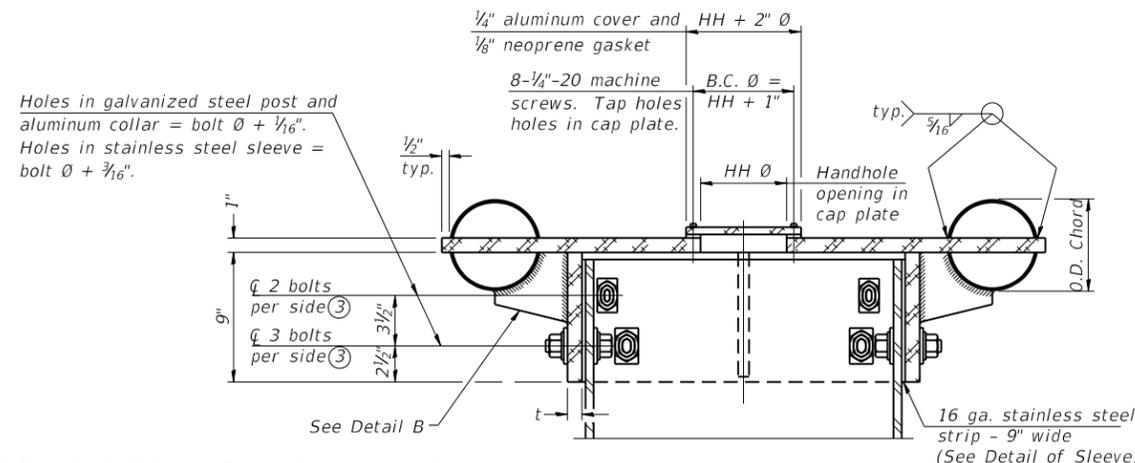
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DEPARTMENT OF TRANSPORTATION

BUTTERFLY SIGN STRUCTURE
DAMPING DEVICE

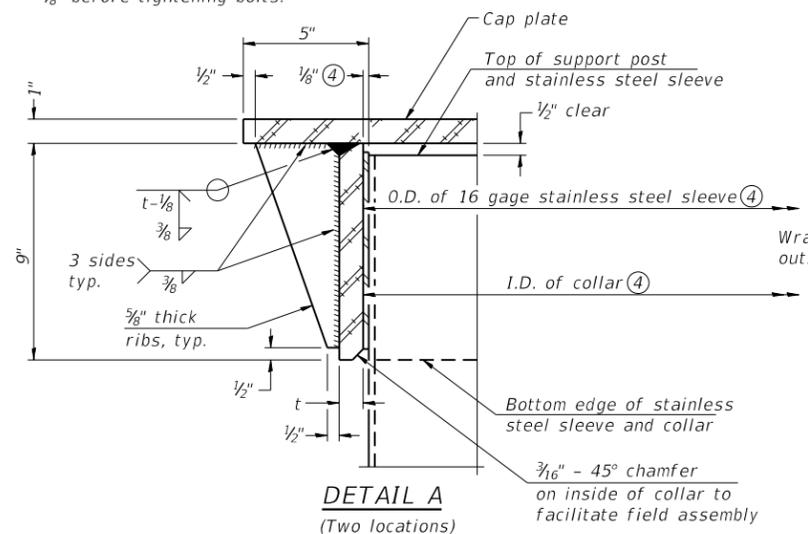
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 68E72	

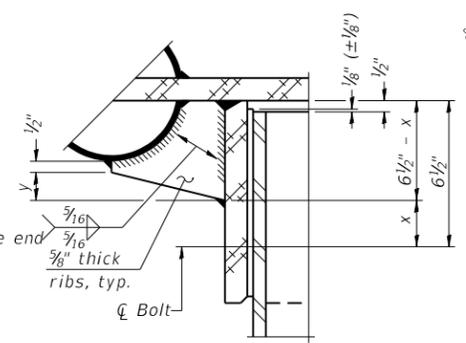


④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus 1/8" (±1/16"). Maximum gap between post and collar at any location equals 1/8" before tightening bolts.

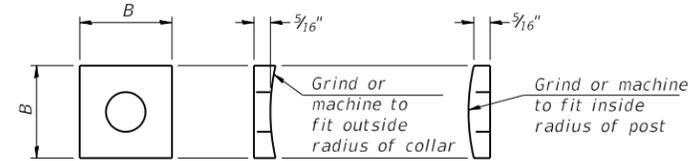
SECTION B-B
Bolts, washers (including contoured washers), and locknuts shall be stainless steel.



DETAIL A
(Two locations)

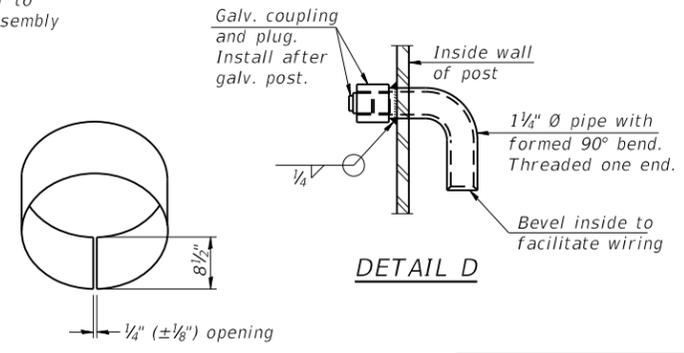


DETAIL B
Two locations
(For details not shown, see Detail C)



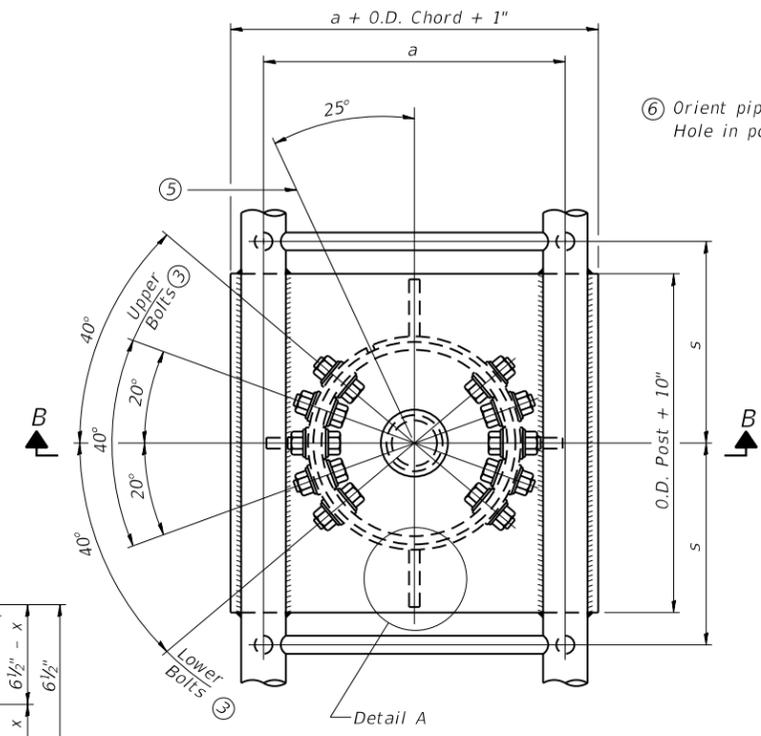
CONTOURED WASHERS

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"

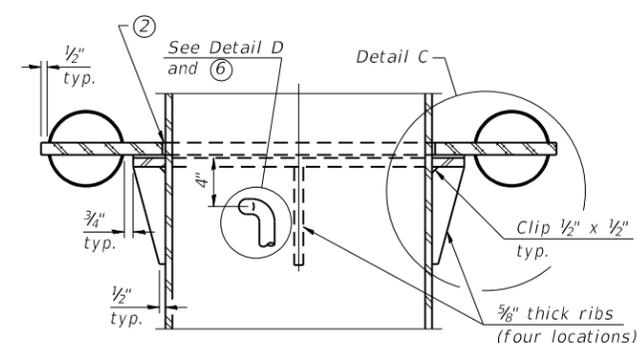


DETAIL OF STAINLESS STEEL SLEEVE

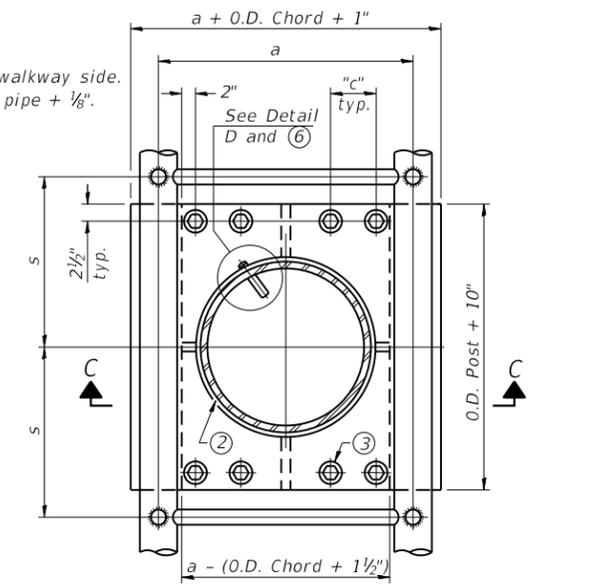
Weld to post after galvanizing. (Prepare post surface to insure tight, uniform fit and allow welding.) Welds to be 1 1/2" long at 6" cts. along top edge and at 1/4" opening.



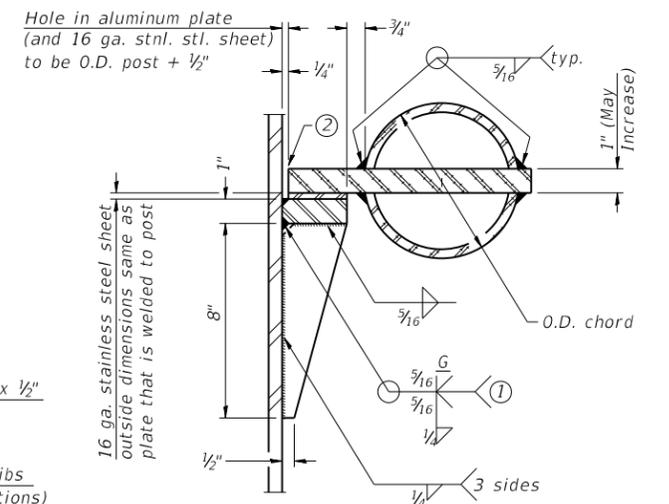
PLAN VIEW - TOP OF COLUMN
⑤ Optional full penetration weld in collar. (Two locations maximum... (180° apart)... X-ray or UT 100%)



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 Butterfly.

③ Upper and lower connection bolts in collar and bolts at lower chord connection must be high strength with matching locknuts. Connection bolts shall have two 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-F-A	16" Ø (83#/')	7/8"	3 1/4"	8"	5/8"	1 3/4"	2 1/4"
II-F-A	24" Ø (125#/')	1"	3 1/2"	12"	7/8"	2"	1 1/4"
III-F-A	24" Ø (125#/')	1 1/4"	3 1/2"	12"	7/8"	2"	1"

OSF-A-3 2-17-2017

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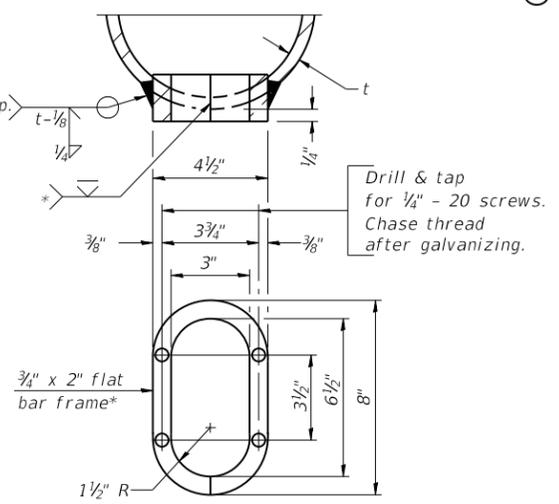
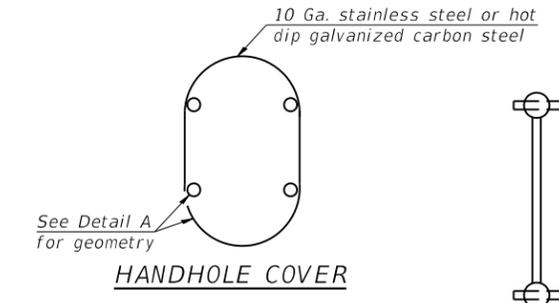
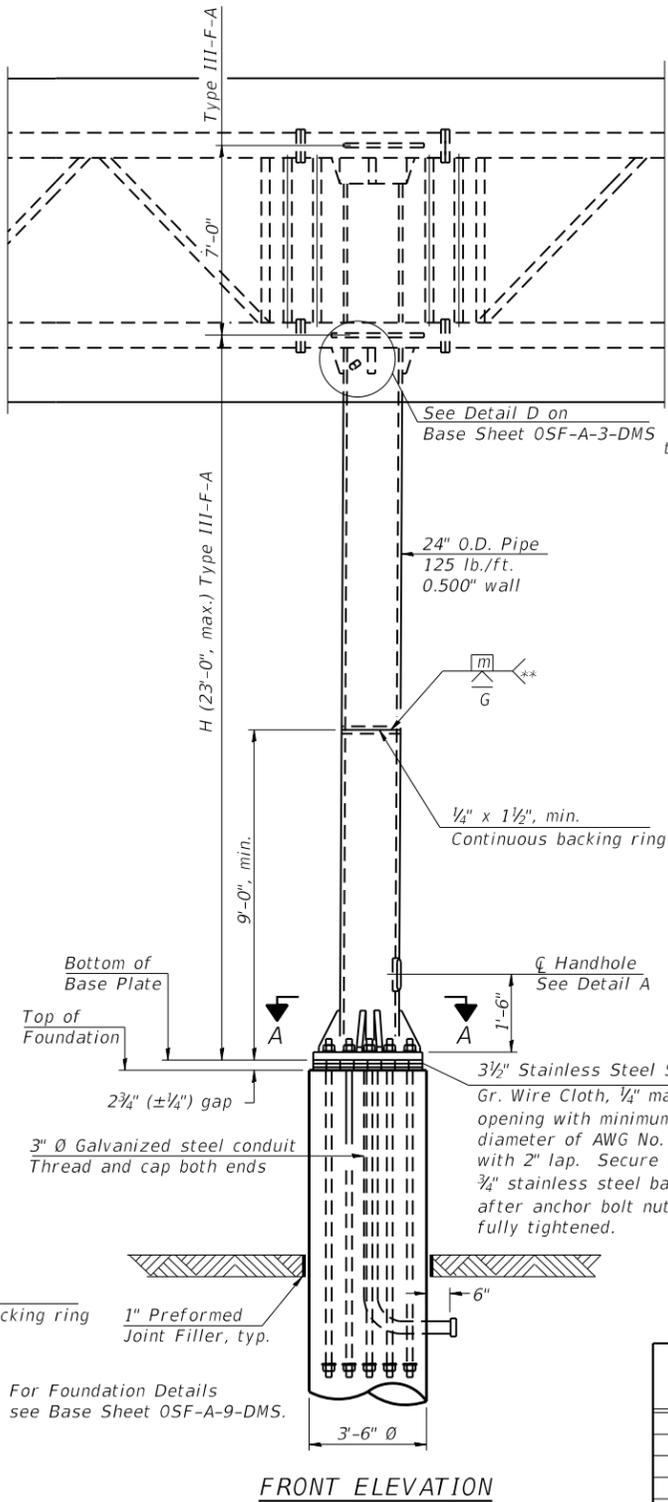
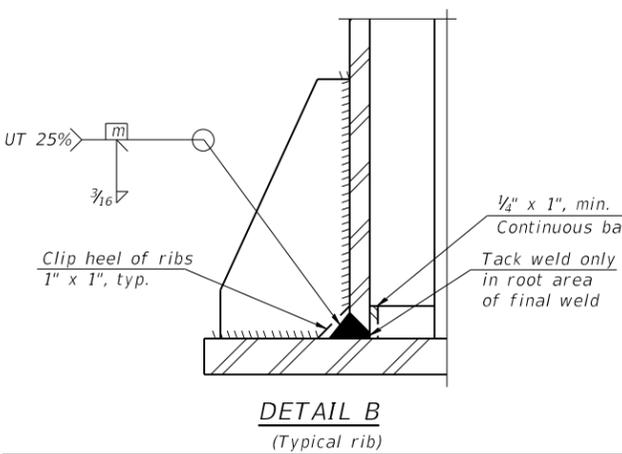
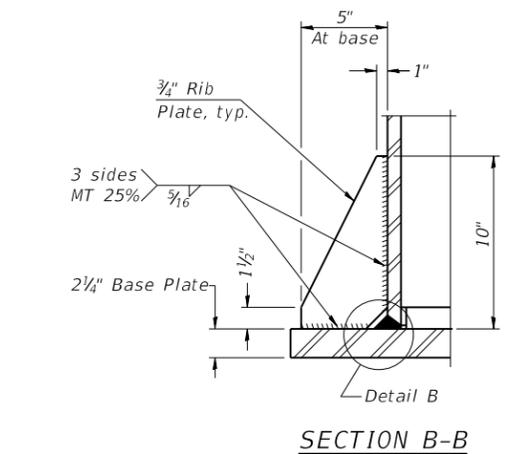
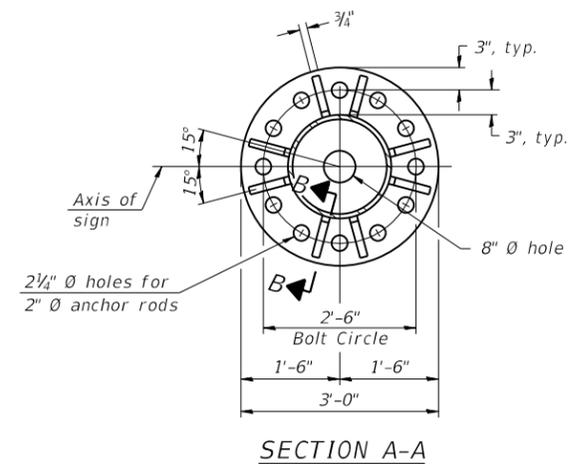
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTTERFLY SIGN STRUCTURES - JUNCTURE DETAILS
ALUMINUM TRUSS & STEEL POST

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	29
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				

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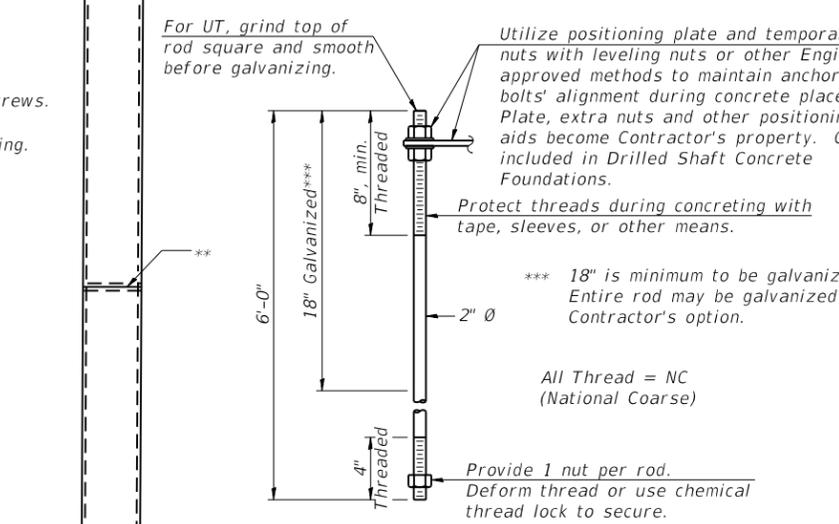
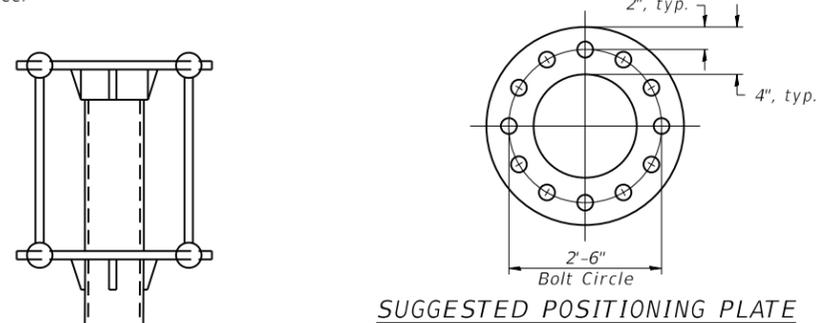


Provide 8" x 4 1/2" cover. Outside corners = 2 1/4" radius. Provide 4-3/16" Ø holes in for 1/4" - 20 round head hot dip galvanized or stainless steel machine screws. (See cover details.)

* 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 500µ in or less.

** Butt welded joint in post 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.

Structure Number	Station (m)	H
4F0721074R090.9	146+410	23'-0"
4F0721074R092.8	149+350	23'-0"
4F0901074L094.9	152+900	23'-0"
4F0901074L096.1	154+600	23'-0"



For UT, grind top of rod square and smooth before galvanizing.

Utilize positioning plate and temporary nuts with leveling nuts or other Engineer approved methods to maintain anchor bolts' alignment during concrete placement. Plate, extra nuts and other positioning aids become Contractor's property. Cost included in Drilled Shaft Concrete Foundations.

Protect threads during concreting with tape, sleeves, or other means.

*** 18" is minimum to be galvanized. Entire rod may be galvanized at Contractor's option.

All Thread = NC (National Coarse)

Provide 1 nut per rod. Deform thread or use chemical thread lock to secure.

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OSF-A-5-DMS 2-17-2017

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

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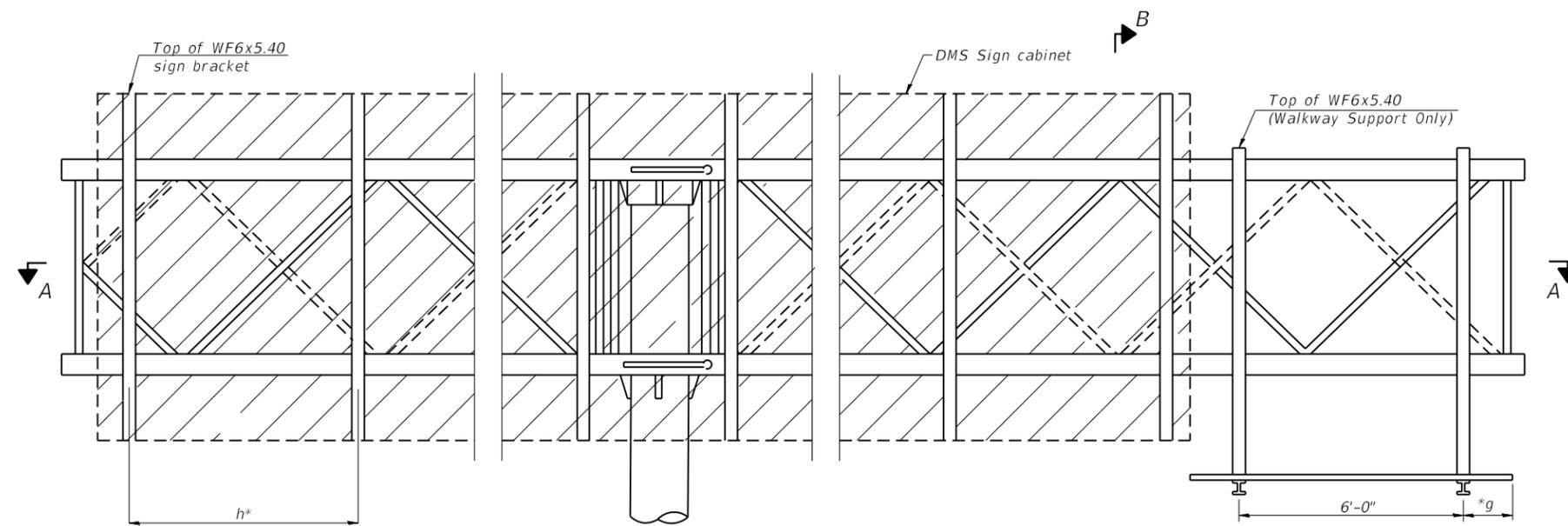
USER NAME	DESIGNED	REVISION
= hansonj	-	-
	DRAWN -	REVISION -
	CHECKED -	REVISION -
	DATE -	REVISION -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTTERFLY SIGN STRUCTURES - TYPE II-F-A TRUSS SUPPORT POST
FOR DMS ALUMINUM TRUSS & STEEL POST**

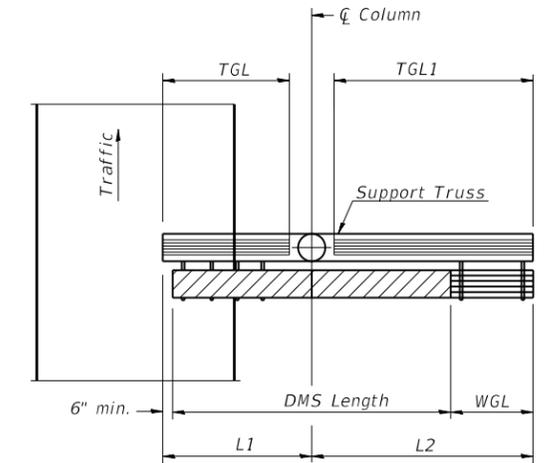
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	30
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET OF SHEETS STA. TO STA.



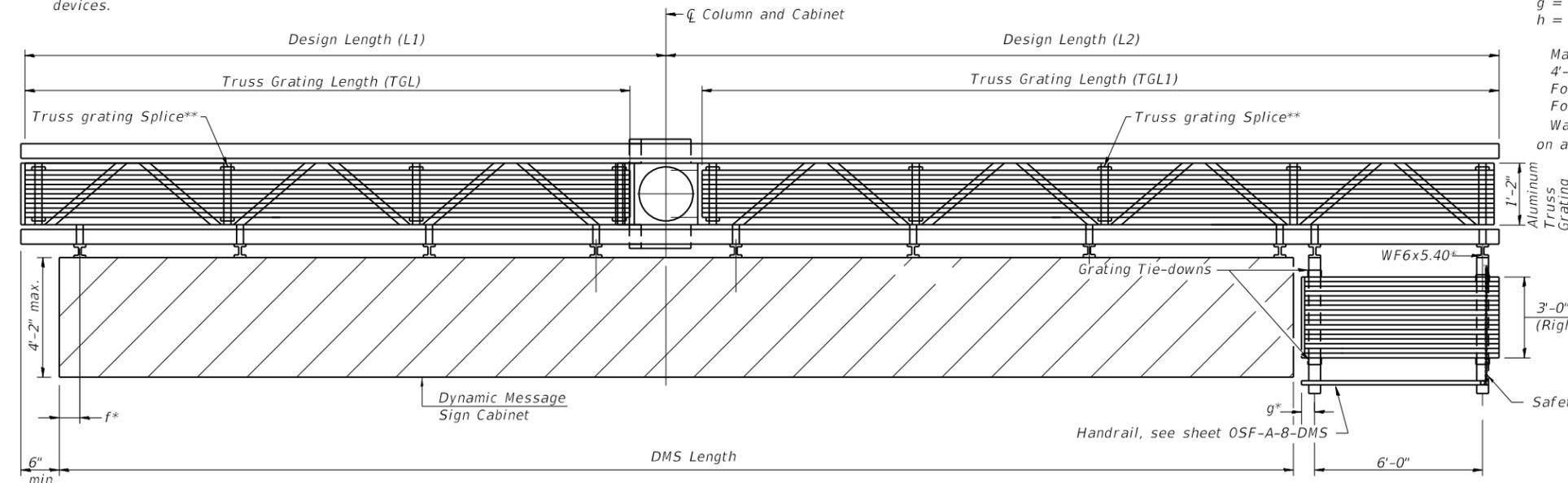
Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturer's mounting devices.

TYPICAL FRONT ELEVATION
With handrail omitted for clarity.
For section B-B see base sheet OSF-A-7-DMS



PLAN WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)
Butterfly may be located in shoulder area.
Walkway may be located at right or left end of truss.

Notes:
Space walkway brackets and sign brackets WF6x5.40 for efficiency and within limits shown:
 $f = 12''$ maximum, $4''$ minimum (End of sign to C of nearest bracket)
 $g = 12''$ maximum, $4''$ minimum (End of walkway grating to C of nearest support bracket)
 $h = 6'-0''$ maximum (C to C 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 OSF-A-7-DMS.
For Handrail Splice Details, see Base Sheet OSF-A-8-DMS.
Walkway and truss grating width dimensions are nominal and may vary $\pm 1/2''$ based on available standard width.

BRACKET TABLE

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

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 splices and handrail joints placed as needed.
Truss grating to facilitate inspection shall run full length (center to center of support frames) $\pm 12''$ on overhead trusses. Cost of truss grating is included in Butterfly Sign Structure.

$$TGL = L1 \text{ (or } L2) - \left(\frac{\text{Post O.D.} + 6''}{2} \right)$$

Structure Number	Station (m)	DMS Length	TGL	TGL1	Walkway Location (Right or Left end of Truss)
4F0721074R090.9	146+410	30'-0"	15'-10"	19'-10"	RIGHT
4F0721074R092.8	149+350	30'-0"	15'-10"	19'-10"	RIGHT
4F0901074L094.9	152+900	30'-0"	15'-10"	19'-10"	RIGHT
4F0901074L096.1	154+600	30'-0"	15'-10"	19'-10"	RIGHT

NOTE:
1. ALL STATIONS ALONG I-74 ARE DESCRIBED USING METRIC UNITS. ELEVATIONS AND ALL OTHER DIMENSIONS ARE IN US CUSTOMARY UNITS.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL STATIONS AND ELEVATIONS AND CONSULT WITH THE RESIDENT ENGINEER PRIOR TO ORDERING MATERIALS.

OSF-A-6-DMS 2-17-2017

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PLOT DATE = 12/13/2019	DATE -	REVISED -

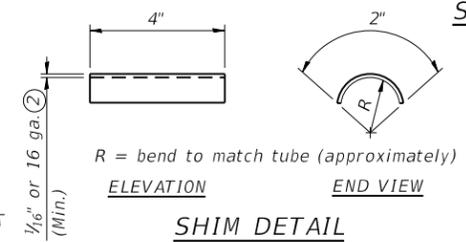
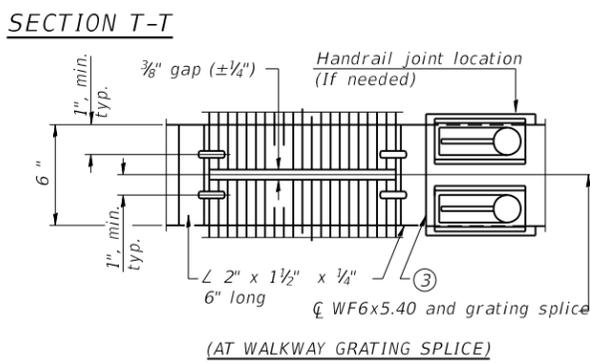
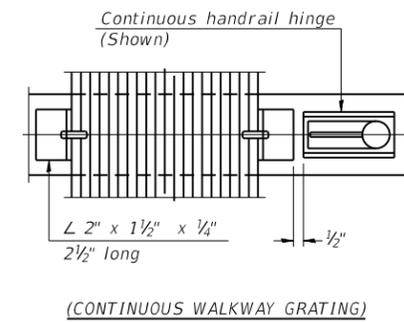
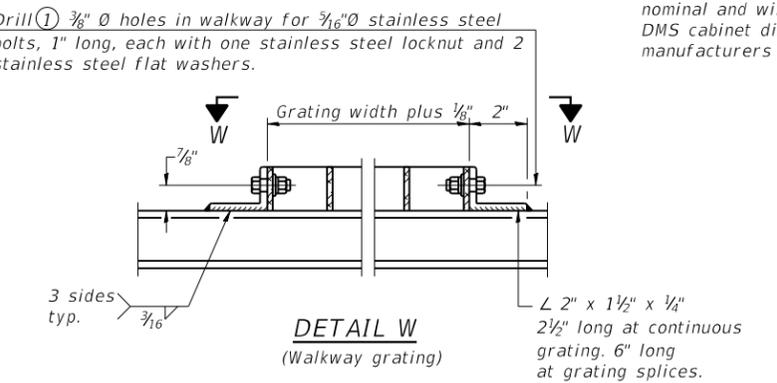
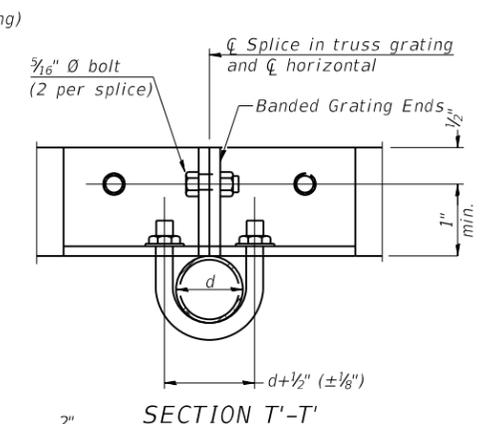
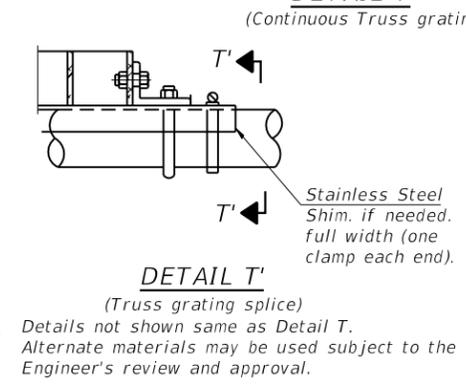
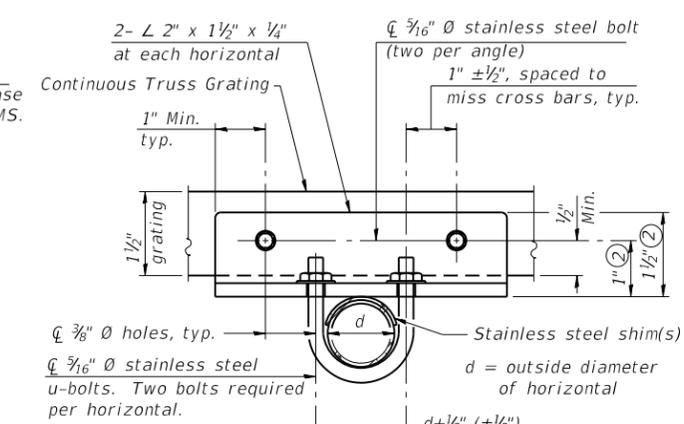
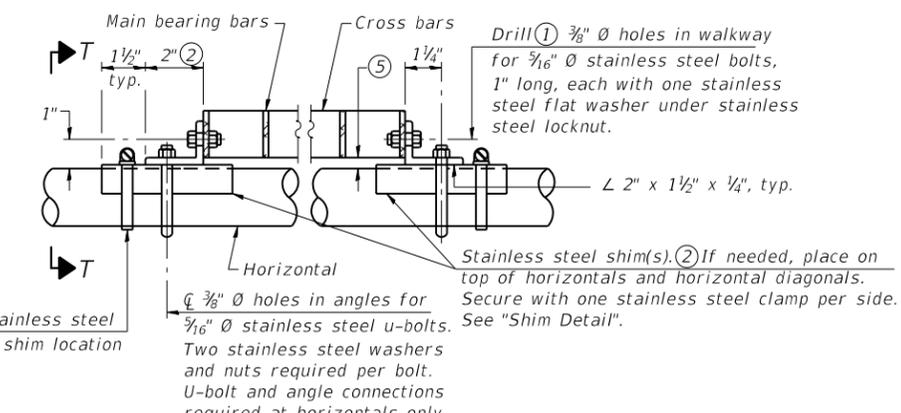
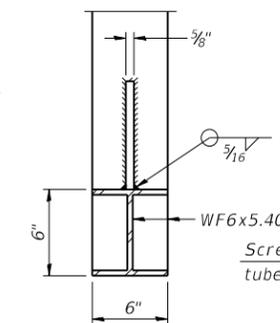
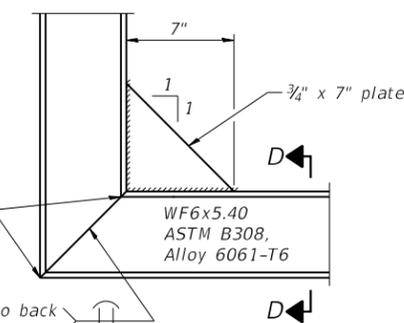
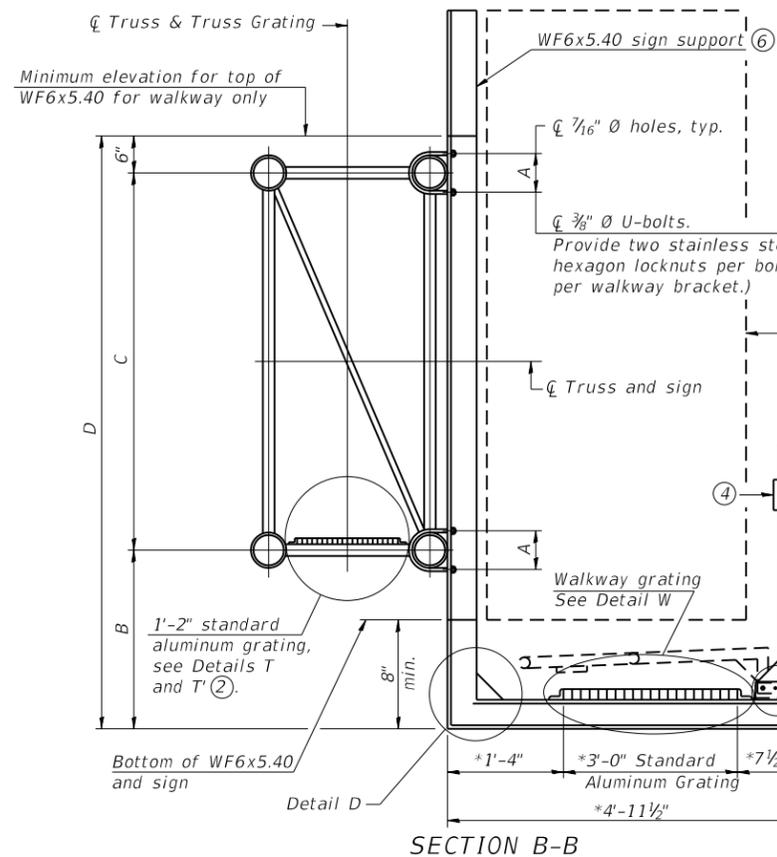
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTTERFLY SIGN STRUCTURES - ALTERNATE
ALUMINUM WALKWAY DETAILS FOR DMS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	31
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE: \\nas016.ccs.commonwealth.com\GEN\Transfer - Bureau\68E72 - Final Plans\68E72 - DMS (FINAL 12-13-19).dgn



SPECIFICATIONS FOR STANDARD ALUMINUM GRATING
 Main Bearing Bars (MBB) shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B211 Alloy 6061-T6.
 Cross bars (CB) 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.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.
 Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

- ① Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- ② Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- ③ If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OSF-A-8)
- ④ R 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- ⑤ Tube to grating gap may vary from 0 to 1/2" max. to align walkway, allow for camber, etc.
- ⑥ 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.
- ⑦ Based on actual sign height, Ds, given on OSF-A-1-DMS.

Structure Number	Station (m)	A	⑦ B	C	⑦ D
4F0721074R090.9	146+410	7 1/4"	0'-10"	7'-0"	8'-4"
4F0721074R092.8	149+350	7 1/4"	0'-10"	7'-0"	8'-4"
4F0901074L094.9	152+900	7 1/4"	0'-10"	7'-0"	8'-4"
4F0901074L096.1	154+600	7 1/4"	0'-10"	7'-0"	8'-4"

NOTE:
 1. ALL STATIONS ALONG I-74 ARE DESCRIBED USING METRIC UNITS. ELEVATIONS AND ALL OTHER DIMENSIONS ARE IN US CUSTOMARY UNITS.
 2. THE CONTRACTOR SHALL FIELD VERIFY ALL STATIONS AND ELEVATIONS AND CONSULT WITH THE RESIDENT ENGINEER PRIOR TO ORDERING MATERIALS.

OSF-A-7-DMS 2-17-2017

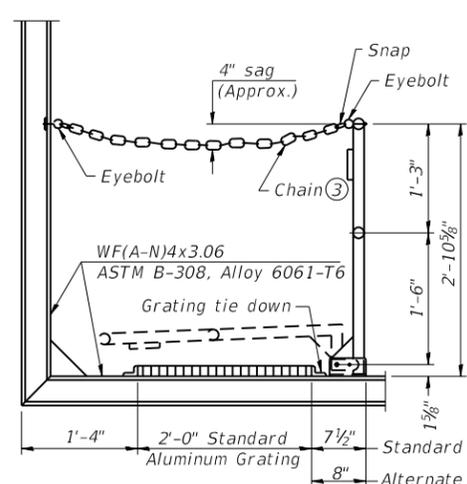
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PLOT DATE = 12/13/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

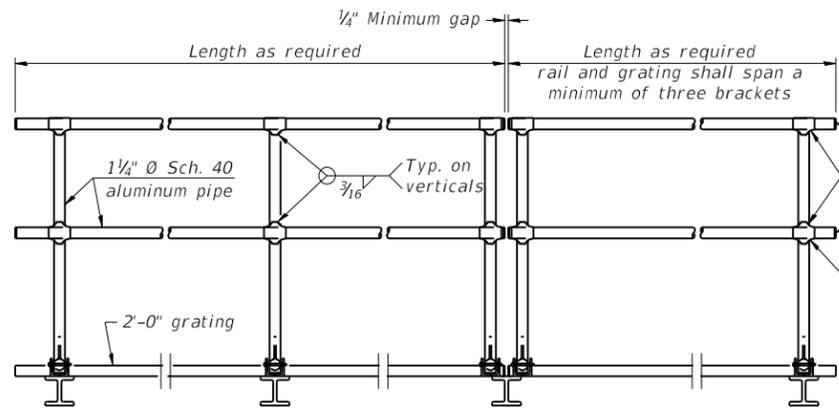
BUTTERFLY SIGN STRUCTURES - ALTERNATE WALKWAY
 DETAILS FOR DMS - ALUMINUM TRUSS & STEEL POST

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	32
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				

MODEL: Default
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SIDE ELEVATION
(Showing Safety Chain W/O Sign)



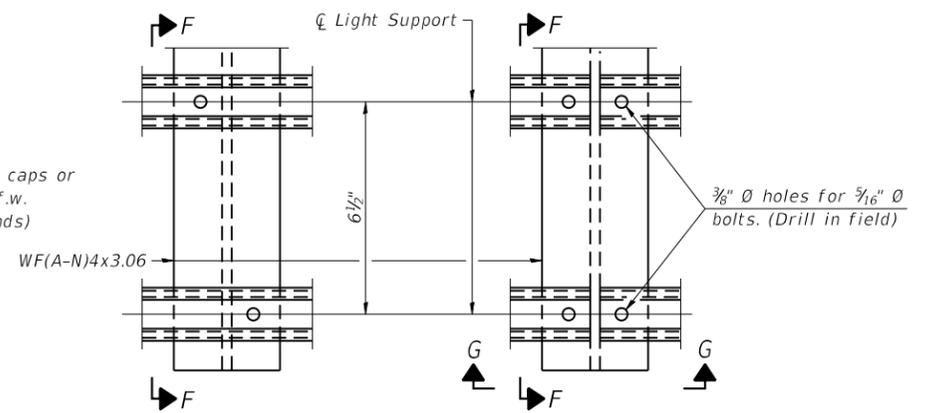
FRONT ELEVATION

HANDRAIL DETAILS

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

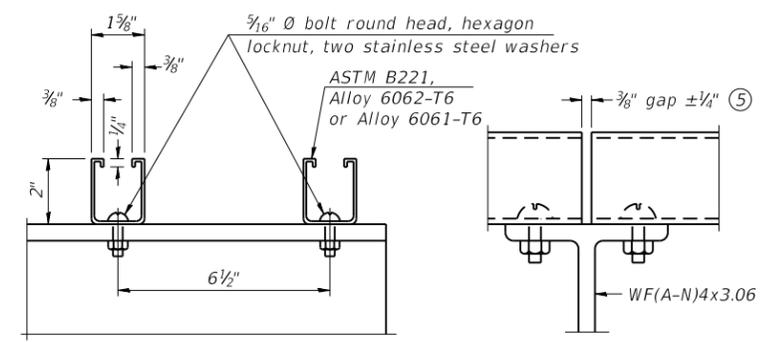
① Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)

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



DETAIL F

DETAIL G

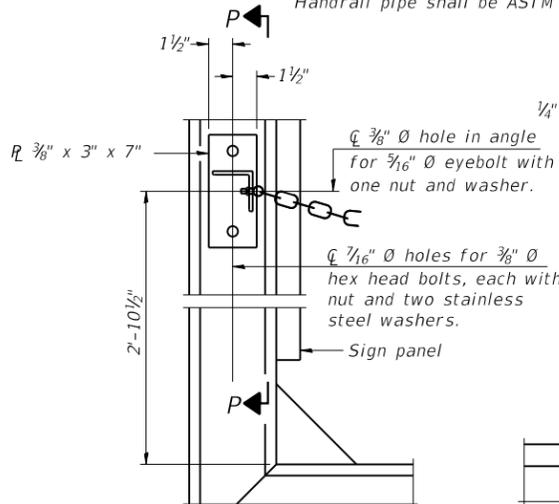


SECTION F-F

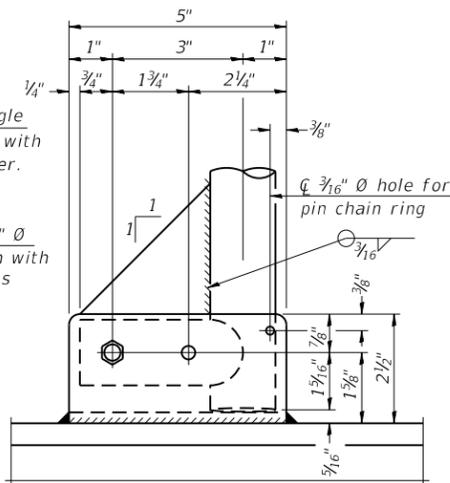
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LIGHTING FIXTURE MOUNTS (IF REQUIRED)

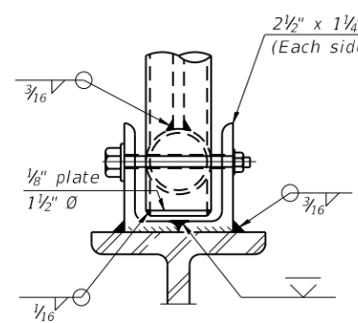
⑤ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



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

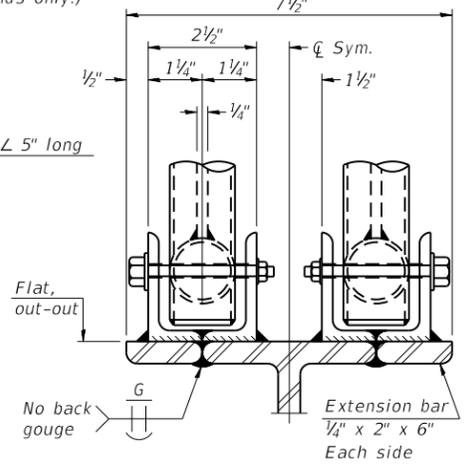


SIDE ELEVATION



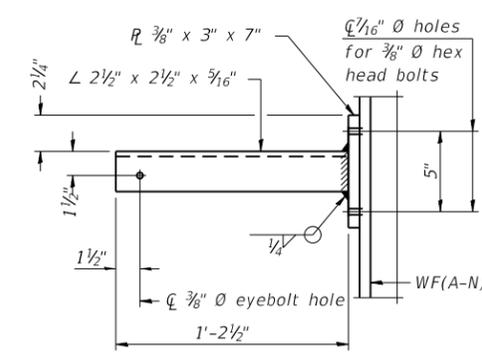
FRONT ELEVATION

Details not shown same as "ELEVATION" at right.

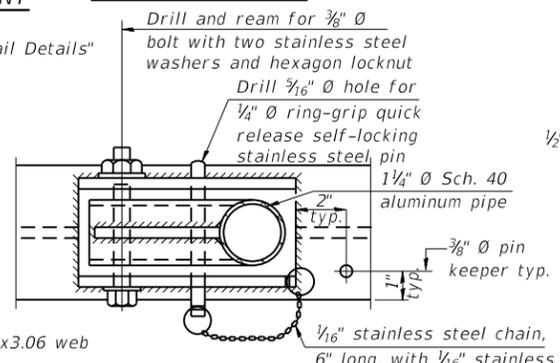


ELEVATION AT HANDRAIL JOINT

Details not shown same as "FRONT ELEVATION"

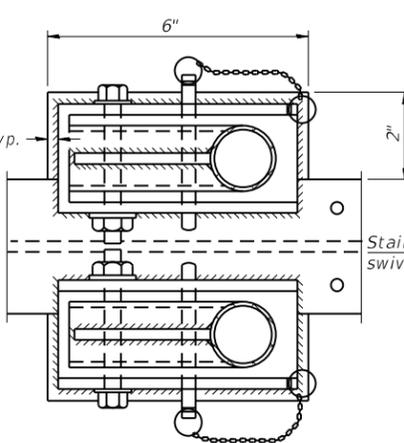


SECTION P-P



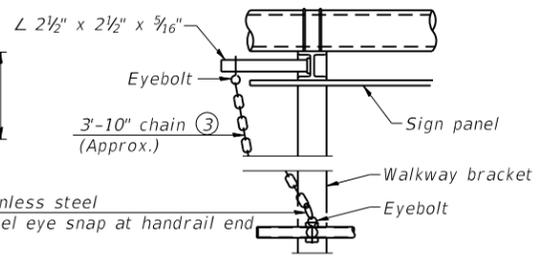
PLAN

DETAIL E HANDRAIL HINGE



PLAN AT HANDRAIL JOINT

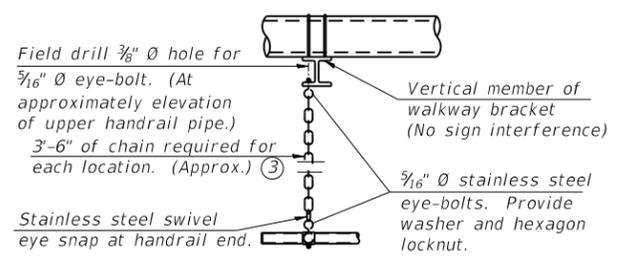
Details not shown same as "PLAN"



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

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

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



SAFETY CHAIN

One required for each end of each walkway.

OSF-A-8 2-17-2017

USER NAME = hansonj	DESIGNED -	REVISED -
PLOT SCALE = 81.9197' / in.	DRAWN -	REVISED -
PLOT DATE = 12/13/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

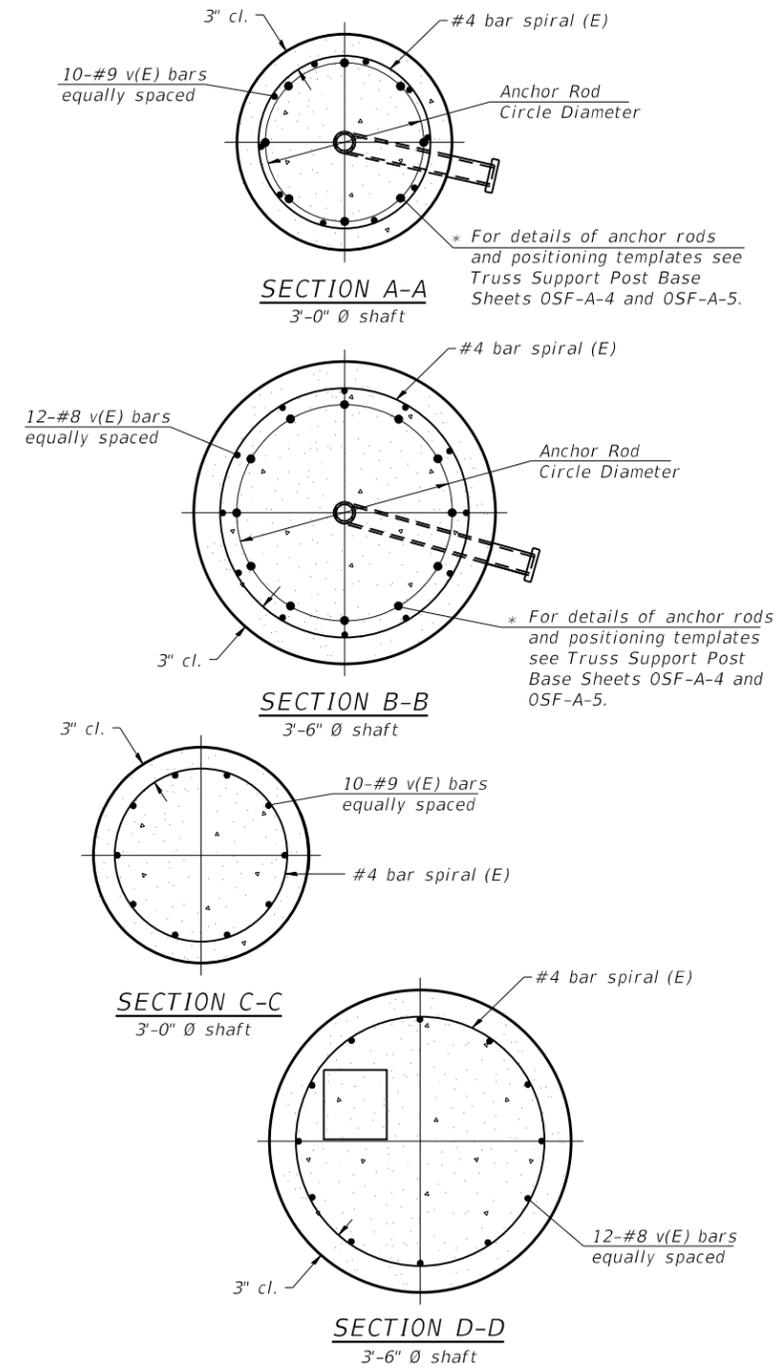
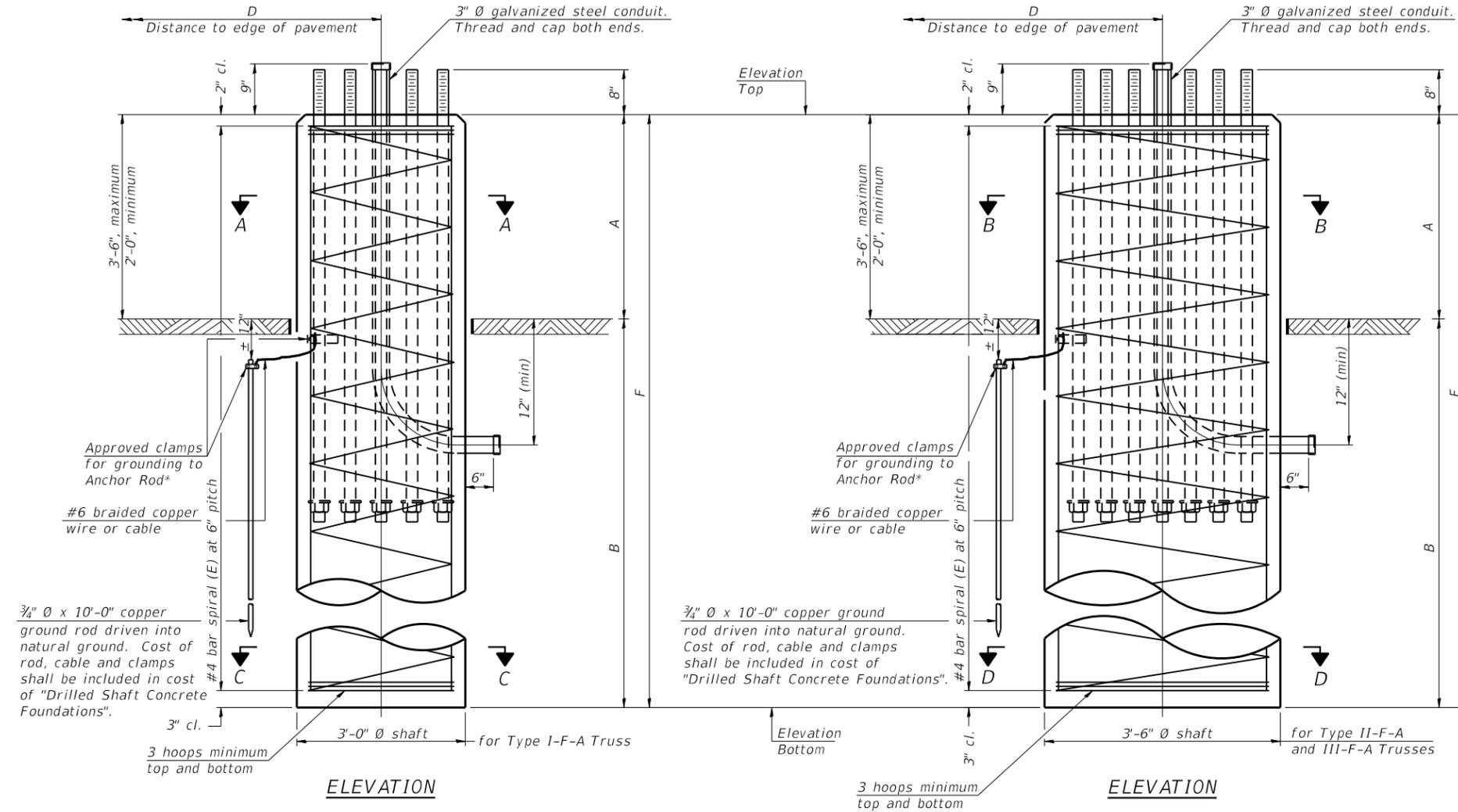
**BUTTERFLY SIGN STRUCTURES - HANDRAIL DETAILS
ALUMINUM TRUSS & STEEL POST**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	33
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				

MODEL: Default FILE: \\nas0101\COMMON\GEN\TRANSFER - burrows\68E72 - Final Plans\68E72 - DMS (FINAL 12-13-19).dgn

* Grind anchor rod to bright finish at ground clamp location before installing clamp.



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

Truss Type	Post Base Sheet	Maximum Cantilever Length (ft)	Maximum Total Sign Area (sq ft)	Shaft Diameter (in)	Anchor Rods		Anchor Rod Circle Diameter (in)
					No.	Diameter (in)	
I-F-A	OSF-A-4	25	200	3.0	8	2	22
II-F-A	OSF-A-5	30	400	3.5	12	2	30
III-F-A	OSF-A-5	35	400	3.5	12	2	30

Structure Number	Station (m)	Truss Type	Shaft Diameter	Elevation Top (ft)	Elevation Bottom (ft)	A	B	F	Class DS Concrete Cubic Yards
4F0721074R090.9	146+410	III-F-A	3'-6"	557.38	535.38	2'-0"	20'-0"	22'-0"	7.8
4F0721074R092.8	149+350	III-F-A	3'-6"	552.97	530.97	2'-0"	20'-0"	22'-0"	7.8
4F0901074L094.9	152+900	III-F-A	3'-6"	488.42	466.42	2'-0"	20'-0"	22'-0"	7.8
4F0901074L096.1	154+600	III-F-A	3'-6"	554.93	536.93	2'-0"	16'-0"	18'-0"	6.4

NOTE:
 1. ALL STATIONS ALONG I-74 ARE DESCRIBED USING METRIC UNITS. ELEVATIONS AND ALL OTHER DIMENSIONS ARE IN US CUSTOMARY UNITS.
 2. THE CONTRACTOR SHALL FIELD VERIFY ALL STATIONS AND ELEVATIONS AND CONSULT WITH THE RESIDENT ENGINEER PRIOR TO ORDERING MATERIALS.

OSF-A-9 2-17-2017

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PLOT DATE = 12/13/2019	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BUTTERFLY SIGN STRUCTURES - DRILLED SHAFT
 ALUMINUM TRUSS & STEEL POST
 SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	34
CONTRACT NO. 68E72				
ILLINOIS FED. AID PROJECT				

MODEL: Default FILE: \\nas010\COMMON\GEN\Transfer - Bureau\68E72 - Final Plans\68E72 - DHS (FINAL) 12-13-19.dwg

PROPOSED DMS LOCATION: STA. 146+410* 72.0 FT RT.



Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 6/3/02

ROUTE FAI-74 DESCRIPTION High Mast Light Pole Foundation LOGGED BY DBR

SECTION 72-6,7,8,9-1,90-11,90-12,13,14 LOCATION SEC. TWP. RNG. Latitude Longitude

COUNTY Peoria & Tazewell DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. Station	DEPTH ft	BLOW S (/6")	UCS Qu (tsf)	MOIST T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft
BORING NO. HMSB-041 Station 146+349 Offset 13.1 ft Lt of EB BL Ground Surface Elev. 551.34					Groundwater Elev.: First Encounter none ft Upon Completion none ft After 24 Hrs. not taken ft
No Sample Taken	549.84				
Brown Fine SAND w/ trace of gravel	8 10 7			7	
547.34					
Brown / Gray SANDY GRAVEL w/ trace of clay	13 -5 21 50			7	
544.84					
Gray / Dark Gray GRAVEL w/ some silty clay / silt	36 27 31			3	
542.34					
Light Brown / Gray SILTY CLAY w/ some sand	11 -10 14 15		1.0 P	11	
539.84					
Brown CLAY LOAM	6 8 10		2.3 S	11	
537.34					
Brown / Gray CLAY LOAM	1 -15 5 13		1.2 S	15	
535.84					
End of Boring	-20				

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, form 137 (Rev. 8-99)

*STATIONING ALONG I-74 IS IN METRIC UNITS



Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 5/30/02

ROUTE FAI-74 DESCRIPTION High Mast Light Pole Foundation LOGGED BY DH, DLR

SECTION 72-6,7,8,9-1,90-11,90-12,13,14 LOCATION SEC. TWP. RNG. Latitude Longitude

COUNTY Peoria & Tazewell DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. Station	DEPTH ft	BLOW S (/6")	UCS Qu (tsf)	MOIST T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft
BORING NO. HMSB-042 Station 146+487.5 Offset 9.8 ft Lt of EB BL Ground Surface Elev. 559.00					Groundwater Elev.: First Encounter none ft Upon Completion none ft After 24 Hrs. not taken ft
No Sample Taken	558.00				
Brown SANDY LOAM	2 3 3			10	
thin clay loam seam @ 2.5'(.76m)	9 13 -5 15			9	
551.50					
Gray CLAY LOAM TILL	2 5 4			14	
	6 4 -10 6		1.9 S	12	
	1 3 5		2.1 B	13	
	2 2 -15 4		1.9 B	14	
	2 3 4		2.1 B	13	
	2 3 5		3.7 B	14	
539.00	-20				

End of Boring
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, form 137 (Rev. 8-99)

*STATIONING ALONG I-74 IS IN METRIC UNITS

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	DRAWN -	REVISED -
PLOT SCALE = 81.9197' / in.	CHECKED -	REVISED -
PLOT DATE = 12/13/2019	DATE -	REVISED -

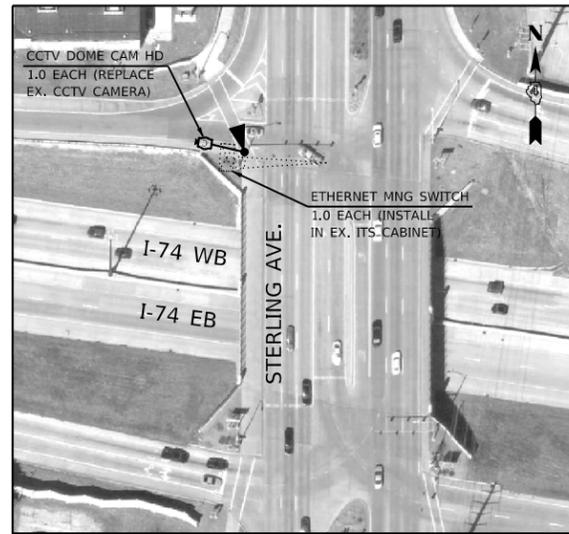
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - PROPOSED DMS LOCATION #1
I-74 & NEBRASKA AVE. DMS

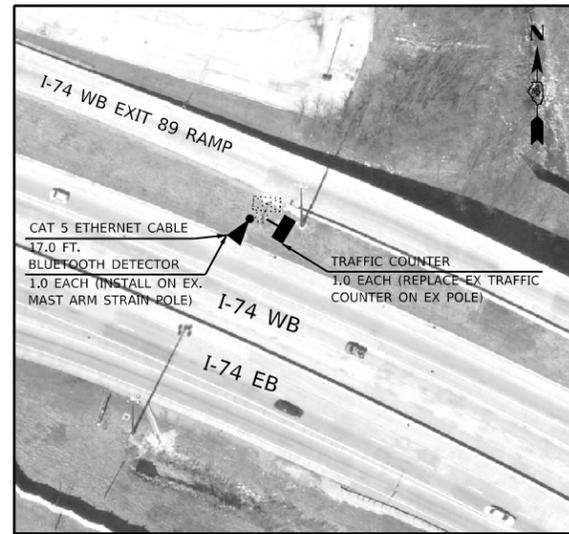
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	35
CONTRACT NO. 68E72			ILLINOIS FED. AID PROJECT	

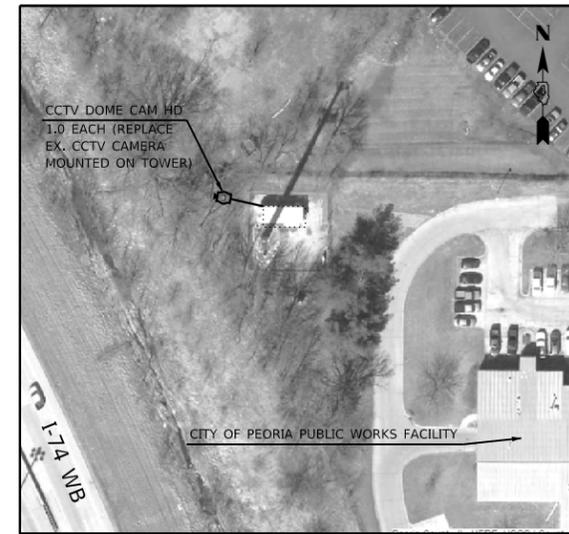
I-74 @ STERLING AVE.



I-74 @ STERLING AVE. ITS CABINET



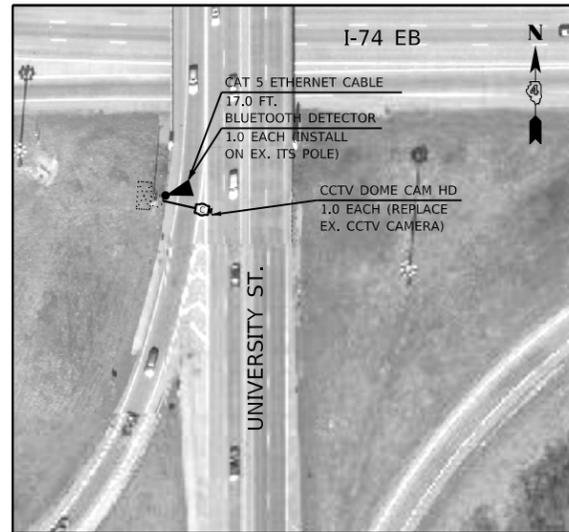
I-74 @ DRIES LN. TOWER



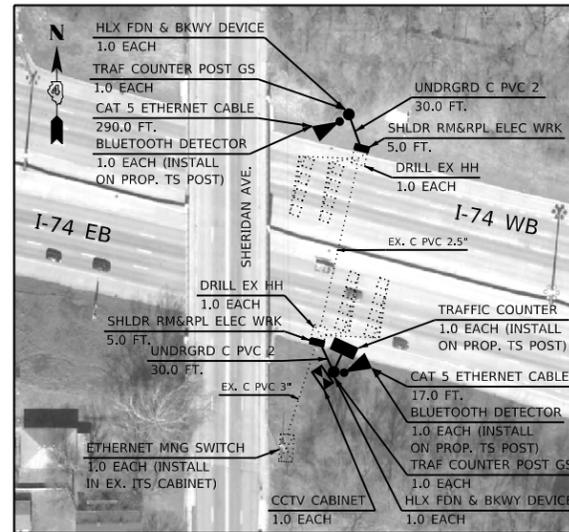
I-74 @ FORREST HILL AVE.



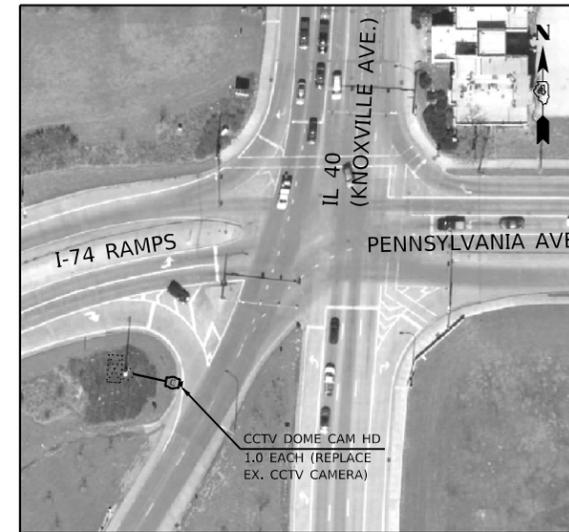
I-74 @ UNIVERSITY ST.



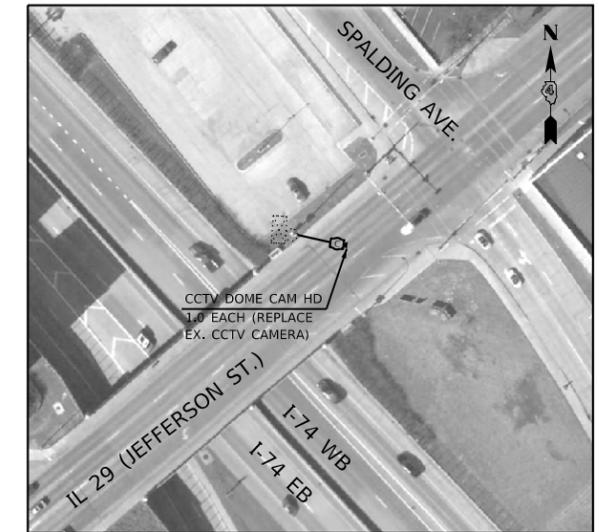
I-74 @ SHERIDAN AVE.



I-74 @ IL 40 (KNOXVILLE AVE.) PENNSYLVANIA AVE.



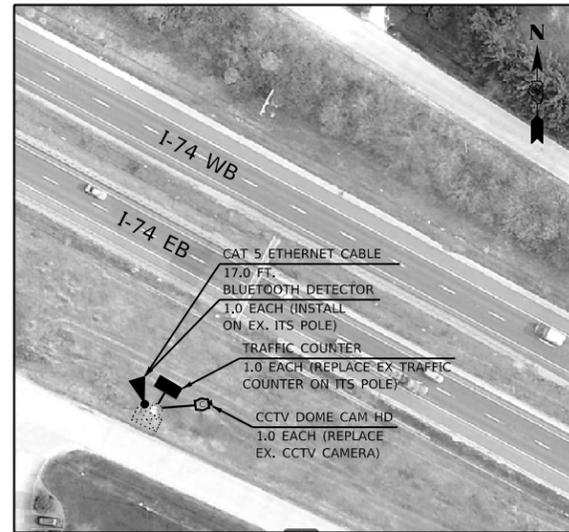
I-74 @ IL 29 (JEFFERSON ST.)



I-74 WB RAMP @ WASHINGTON ST.



I-74 @ PINECREST OVERPASS



BILL OF MATERIALS		
ITEM DESCRIPTION	UNIT	QTY.
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	60.0
DRILL EXISTING HANDHOLE	EACH	2.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, HD	EACH	7.0
TRAFFIC COUNTER	EACH	5.0
CLOSED CIRCUIT TELEVISION CABINET	EACH	1.0
ETHERNET MANAGE SWITCH	EACH	2.0
TRAFFIC COUNTER POST, GALVANIZED STEEL	EACH	2.0
CAT 5 ETHERNET CABLE	FOOT	375.0
HELIX FOUNDATION AND BREAKAWAY DEVICE	EACH	2.0
BLUETOOTH DETECTOR	EACH	6.0
SHOULDER REMOVAL AND REPLACEMENT FOR ELECTRICAL WORK	FOOT	10.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	1.0

NOTES:

- THE CONTRACTOR SHALL DELIVER ALL EXISTING CCTV CAMERAS AND TRAFFIC COUNTERS TO THE IDOT TRAFFIC BUILDING AT 1025 W. DETWEILLER DR. PEORIA 61615. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE BID PRICE FOR THE PROPOSED CCTV CAMERAS AND TRAFFIC COUNTERS.

LEGEND	
	PROP. CCTV CAMERA
	PROP. TRAFFIC COUNTER
	PROP. BLUETOOTH DETECTOR
	PROP. SHOULDER REMOVAL & REPLACEMENT FOR ELECTRICAL WORK
	PROP. CONDUIT PVC
	EX. TRAFFIC SIGNAL MAST ARM
	EX. ITS CABINET
	EX. DETECTOR LOOP
	EX. HANDHOLE
	EX. CONDUIT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

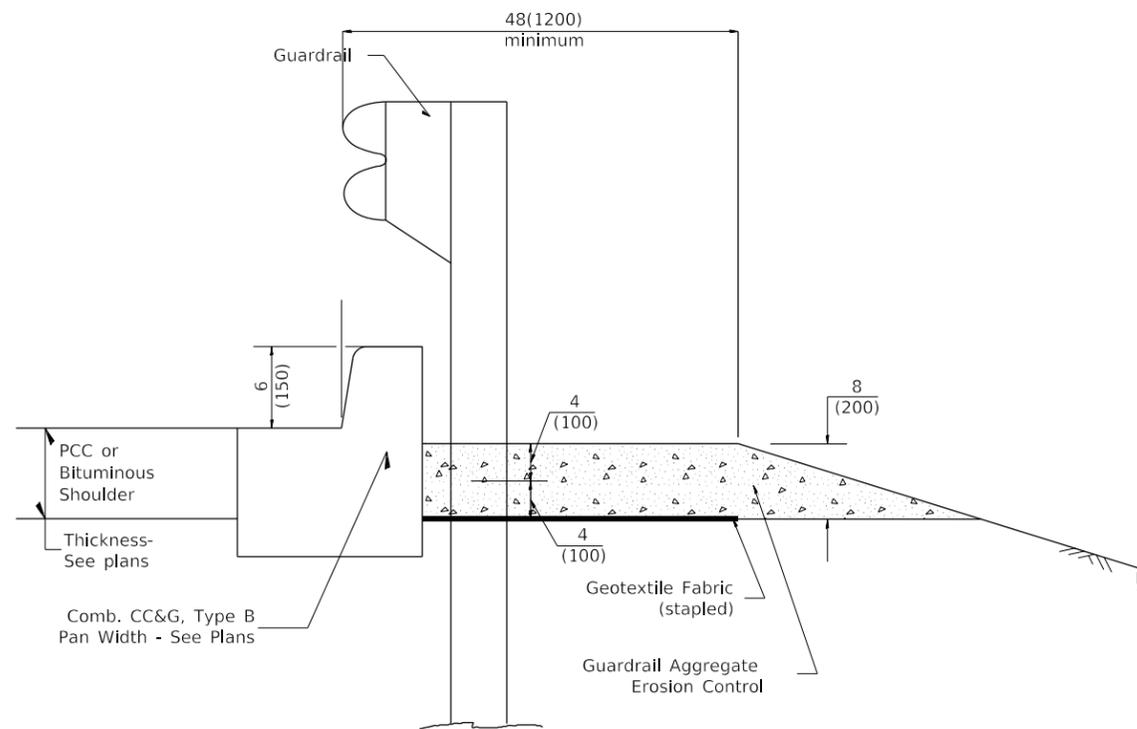
PROPOSED ITS EQUIPMENT INSTALLATION
VARIOUS LOCATIONS

SCALE: SHEET OF SHEETS STA. TO STA.

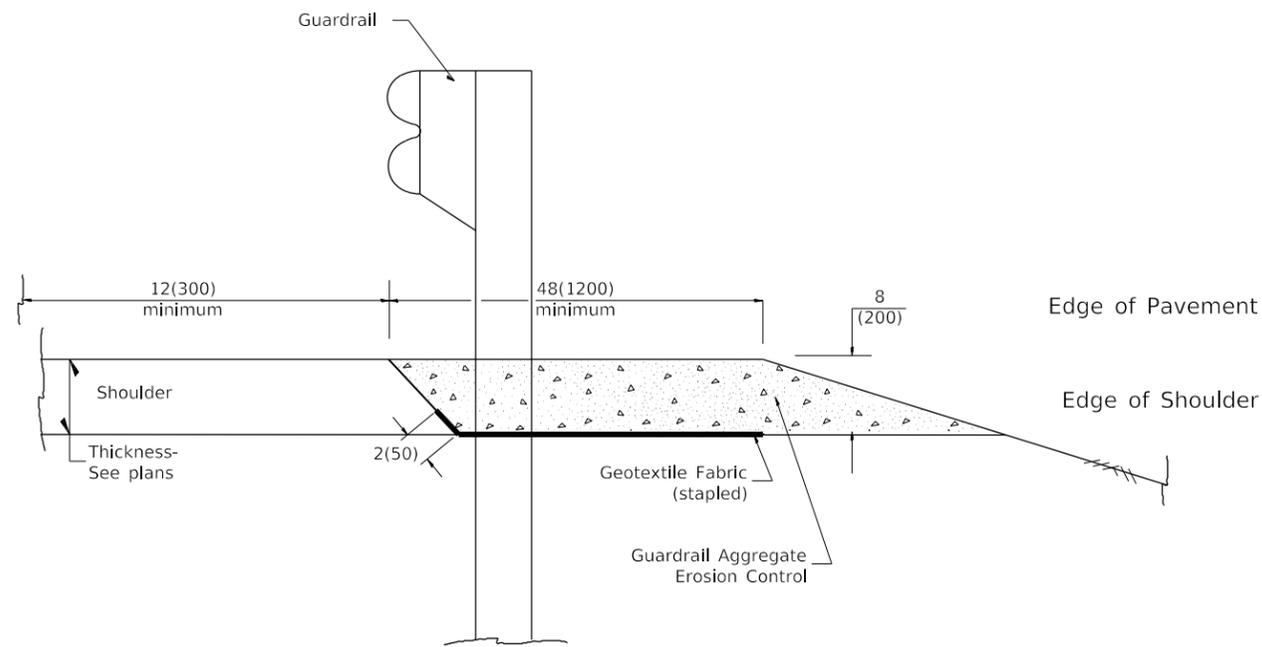
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	39
CONTRACT NO. 68E72				
ILLINOIS		FED. AID PROJECT		

NOT TO SCALE

USER NAME = hansonj	DESIGNED -	REVISED -
PLOT SCALE = 81.9197 ' / in.	DRAWN -	REVISED -
PLOT DATE = 12/13/2019	CHECKED -	REVISED -
	DATE -	REVISED -



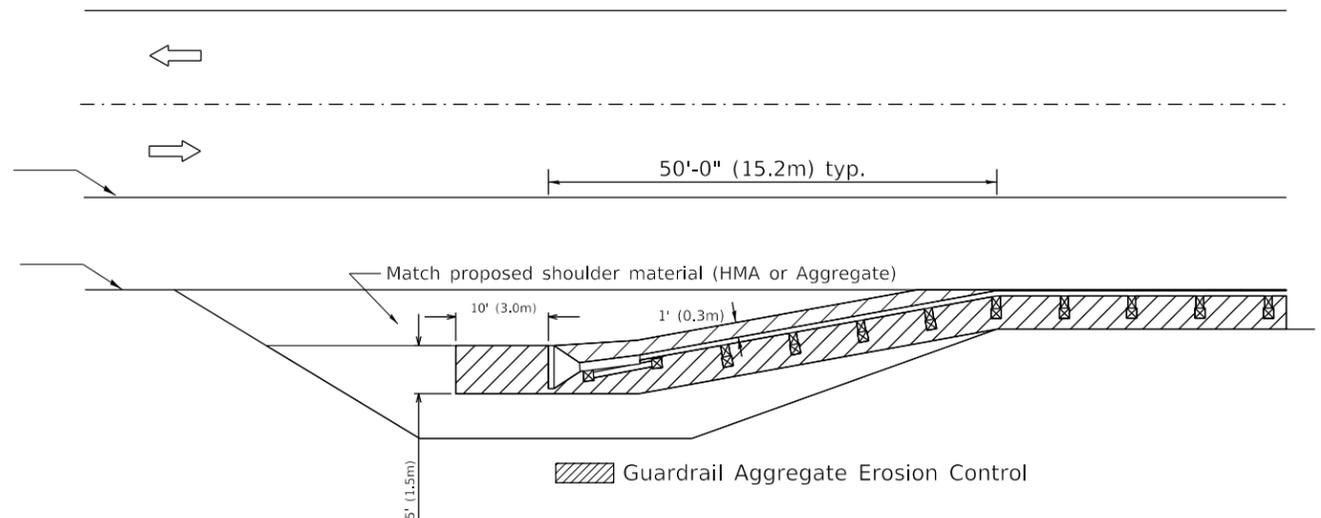
TYPICAL SECTION WITH COMBINATION CONCRETE CURB & GUTTER



TYPICAL SECTION WITHOUT EROSION CONTROL CURB

GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.
2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.
3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.
4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.
5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.
6. Materials shall meet the following requirements:
 - A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.
 - B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.



All dimensions are in inches (millimeters) unless otherwise noted.

03-07-11	ADDED DETAIL SHOWING PLAN VIEW	R.D.	5-30-18	CHANGE B CURB TO CC&G	R.D.
08-10-12	REVISED CURB "B" AND AGGREGATE	R.D.	07-16-19	SPELLING CORRECTIONS	R.D.
07-15-15	ADDRESSED SHOULDER INLET CURB	R.D.			
01-26-17	REVISED	R.D.			

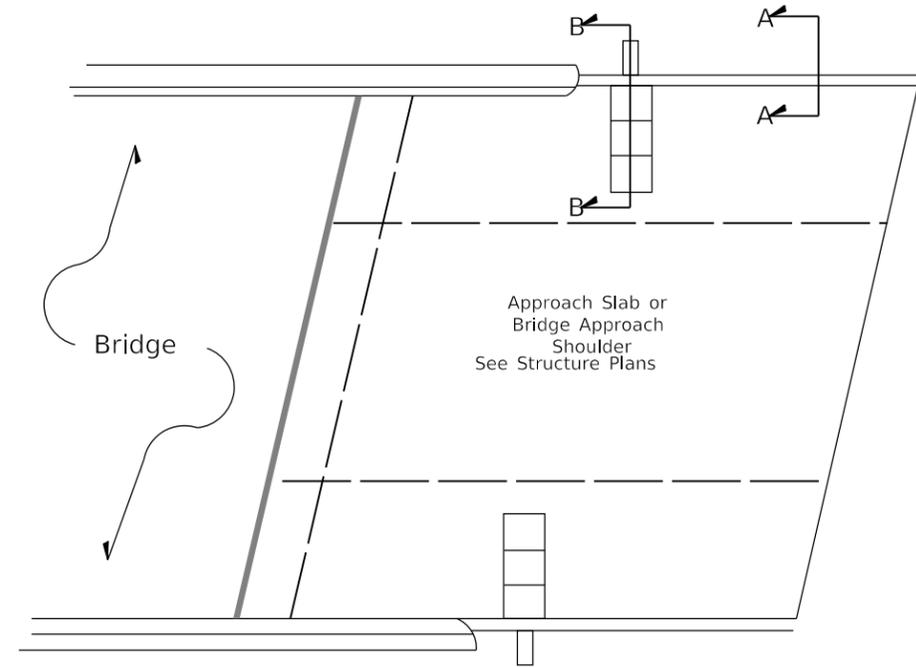
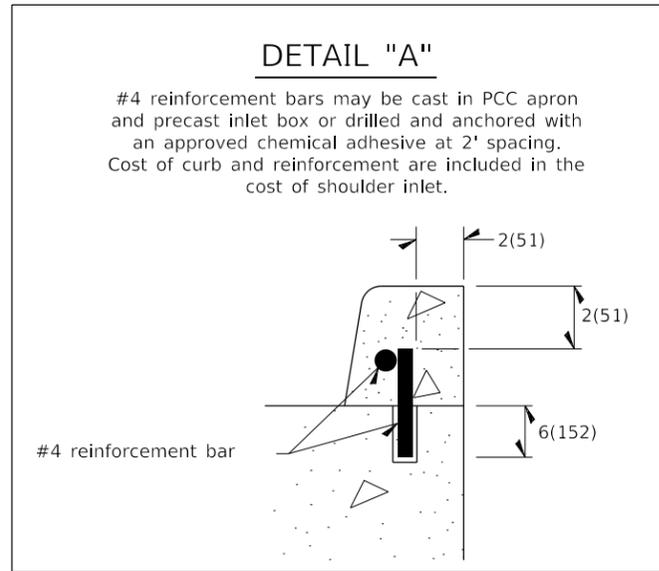
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL EROSION CONTROL TREATMENTS

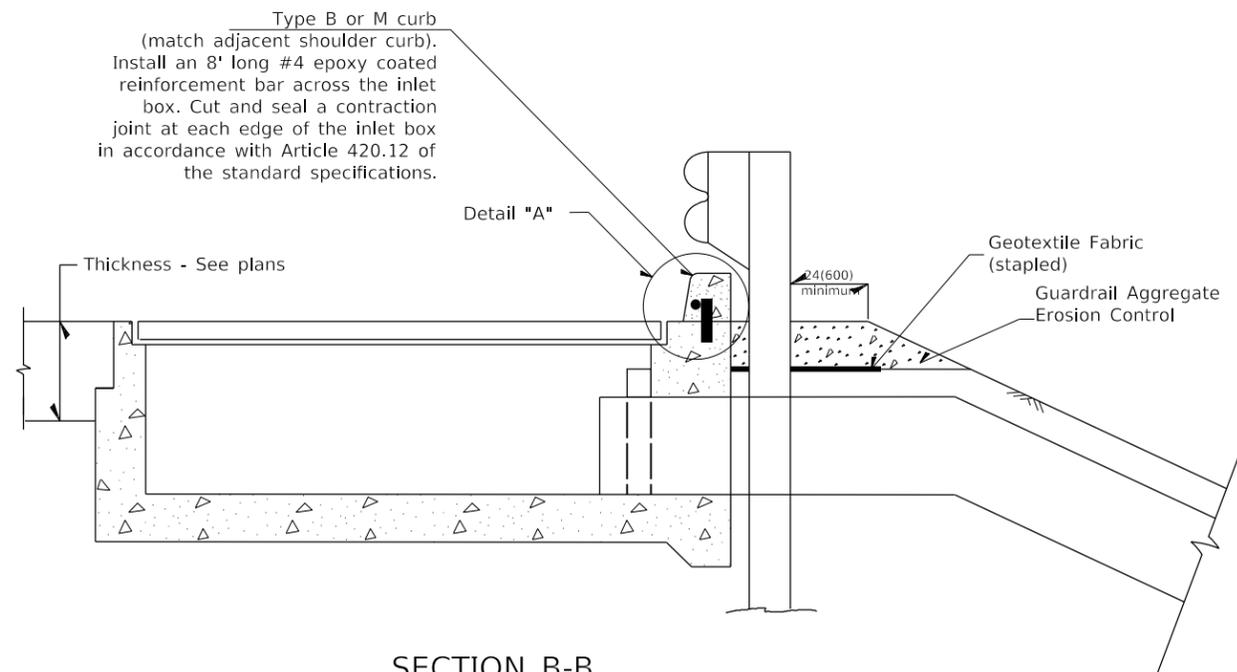
NOT TO SCALE

SHT. 1 OF 2
CADD STD. 630101-D4

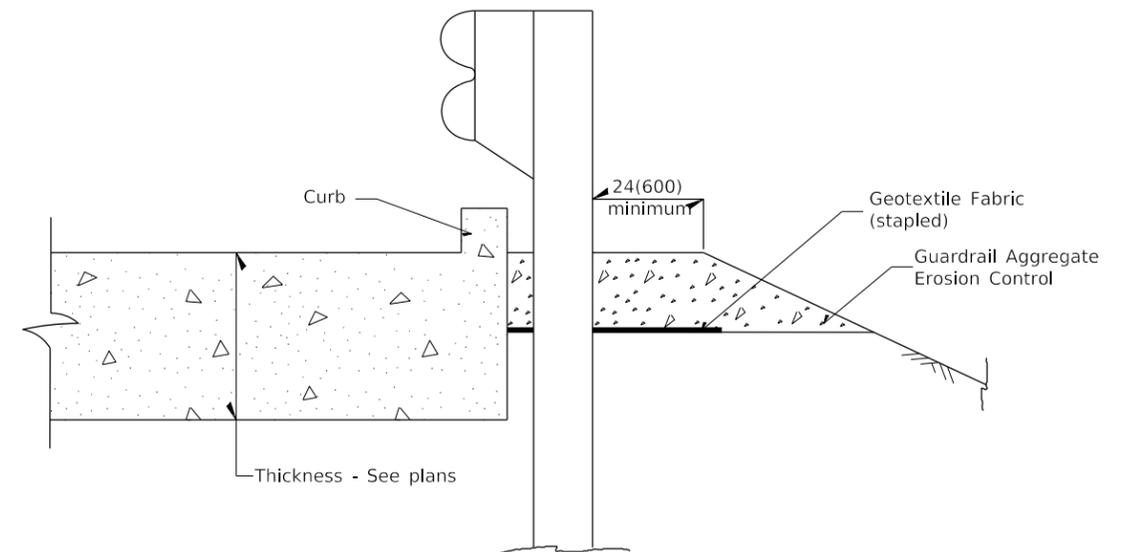
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	40
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68E72	



PLAN VIEW
APPROACH SLAB OR SHOULDER PLACEMENT



SECTION B-B
TYPICAL SECTION AT INLETS
TYPE E, F & G (HIGHWAY STANDARD 610001)



SECTION A-A
TYPICAL SECTION WITH BRIDGE APPROACH CURB

All dimensions are in inches (millimeters) unless otherwise noted.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				GUARDRAIL EROSION CONTROL TREATMENTS				SHT. 2 OF 2 CADD STD. 630101-D4		CONTRACT NO. 68E72	
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.							
74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA & TAZEWELL	43	41							
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT							

**MICROWAVE DETECTOR
INSTALLATION DETAILS**

HORIZONTAL OFFSET FT (M)	MOUNTING HEIGHT FT (M)		
	MINIMUM	MAXIMUM	RECOMMENDED
10.0 (3.0)	17.0 (5.2)	20.0 (6.1)	17.0 (5.2)
15.0 (4.6)	17.0 (5.2)	20.0 (6.1)	17.0 (5.2)
20.0 (6.1)	17.0 (5.2)	20.0 (6.1)	17.0 (5.2)
25.0 (7.6)	17.0 (5.2)	25.0 (7.6)	20.0 (6.1)
30.0 (9.1)	23.0 (7.0)	25.0 (7.6)	23.0 (7.0)
35.0 (10.7)	25.0 (7.6)	25.0 (7.6)	25.0 (7.6)
40.0 (12.2)	25.0 (7.6)	25.0 (7.6)	25.0 (7.6)
45.0 (13.7)	25.0 (7.6)	25.0 (7.6)	25.0 (7.6)
50.0 (15.2)	25.0 (7.6)	25.0 (7.6)	25.0 (7.6)

DIMENSIONS REFERENCED FROM THE EDGE OF PAVEMENT.

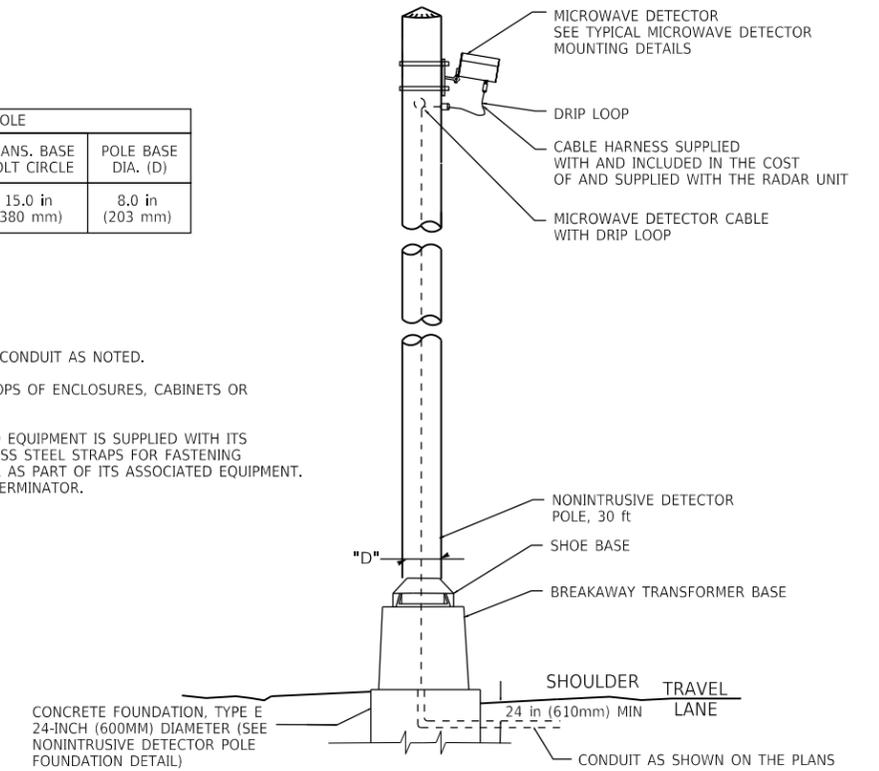
NOTES:

DETECTOR UNIT TO BE AIMED AT CENTER OF DETECTION ZONE. WHEN TWO DETECTORS ARE USED IN TANDEM AT A GIVEN LOCATION, DETECTION ZONE SHALL INCLUDE ALL TRAVEL LANES IN A SINGLE DIRECTION NEAREST EACH DETECTOR. WHEN A SINGLE DETECTOR IS USED AT A GIVEN LOCATION, THE DETECTOR ZONE SHALL INCLUDE ALL TRAVEL LANES IN BOTH DIRECTIONS. FINAL SETUP AND CALIBRATION TO BE PERFORMED BY MANUFACTURER'S FIELD REPRESENTATIVE IN CONJUNCTION WITH THE SYSTEMS INTEGRATOR.

DETECTOR POLE			
SHAFT LENGTH	SHOE BASE BOLT CIRCLE	TRANS. BASE BOLT CIRCLE	POLE BASE DIA. (D)
28 ft (8.5 m)	11.0 in (280 mm)	15.0 in (380 mm)	8.0 in (203 mm)

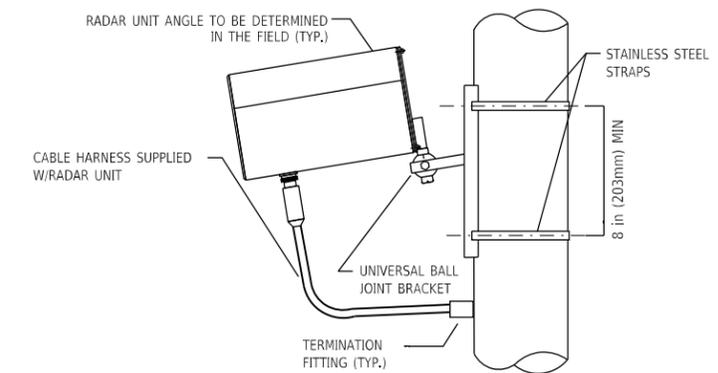
NOTES:

- ALL CABLES TO BE INSTALLED WITHIN CONDUIT AS NOTED.
- CABLE/CONDUITS SHALL NOT ENTER TOPS OF ENCLOSURES, CABINETS OR PULL/JUNCTION BOXES.
- CABLE HARNESS FROM POLE MOUNTED EQUIPMENT IS SUPPLIED WITH ITS ASSOCIATED EQUIPMENT. ALL STAINLESS STEEL STRAPS FOR FASTENING CABLES BRACKETS, ETC. ARE PAID FOR AS PART OF ITS ASSOCIATED EQUIPMENT. PROVIDE DRIP LOOP AT EACH CABLE TERMINATOR.



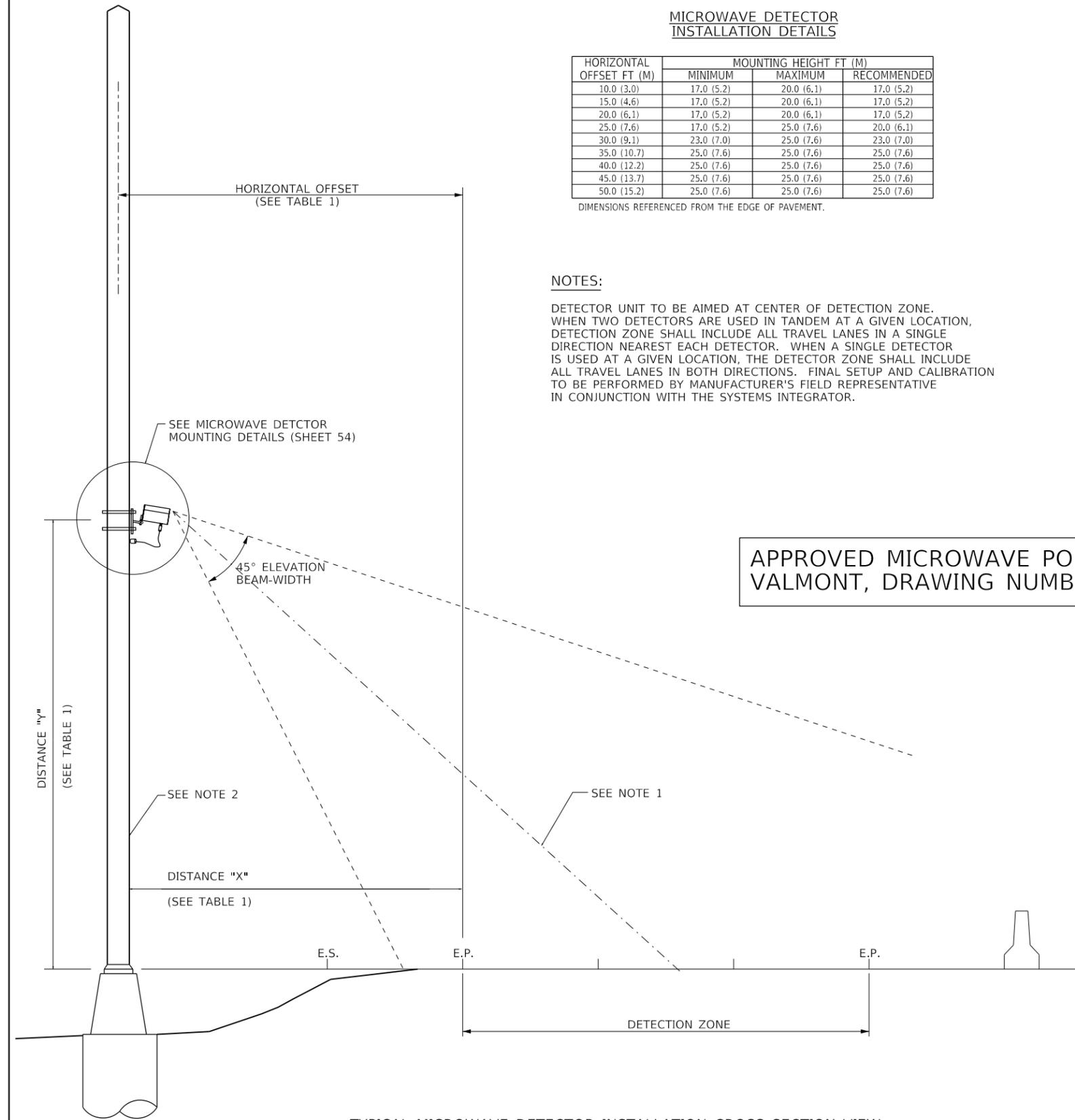
MICROWAVE DETECTOR POLE MOUNTING DETAIL

SEE MICROWAVE DETECTOR INSTALLATION
TABLE FOR POLE OFFSET AND MOUNTING HEIGHT



MOUNTED TO VERTICAL POLE

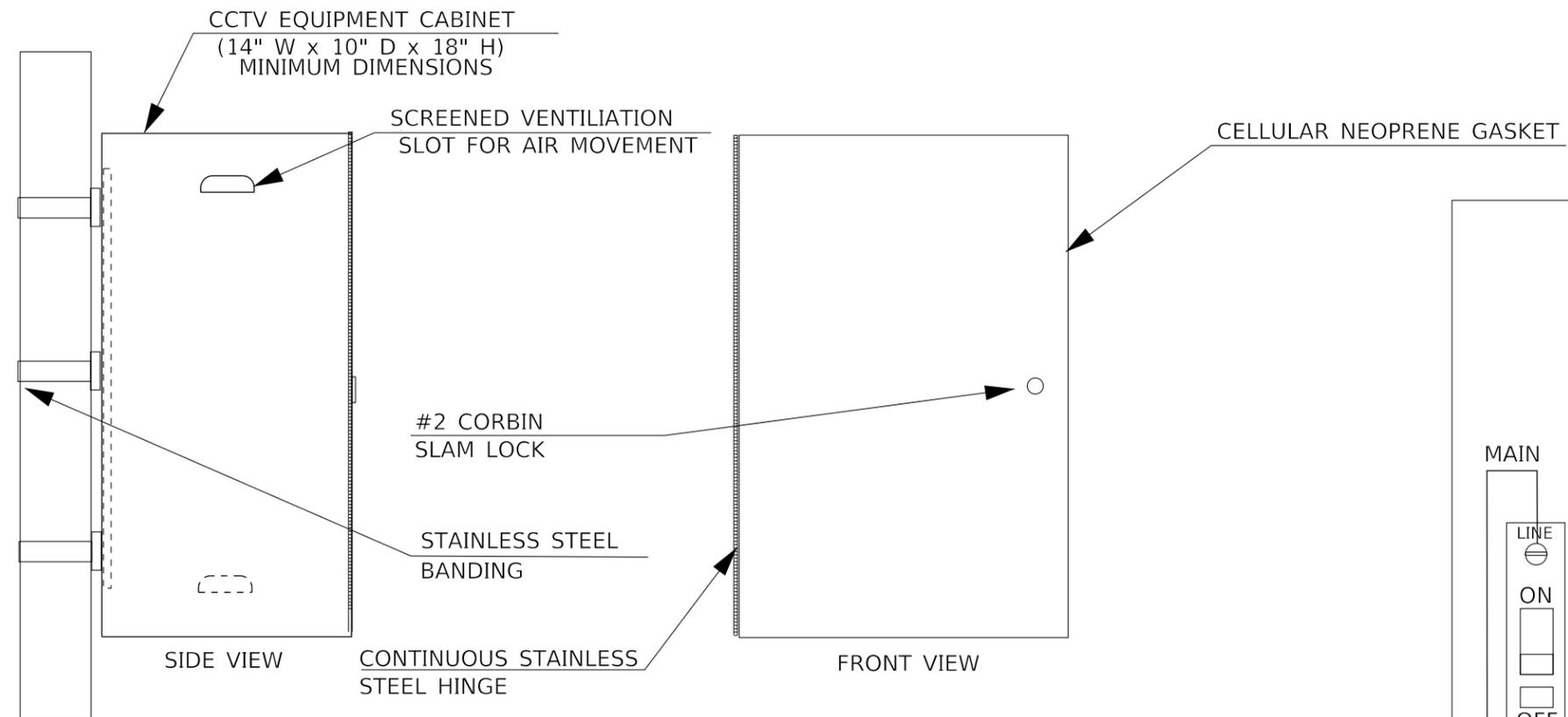
MICROWAVE DETECTOR MOUNTING DETAILS



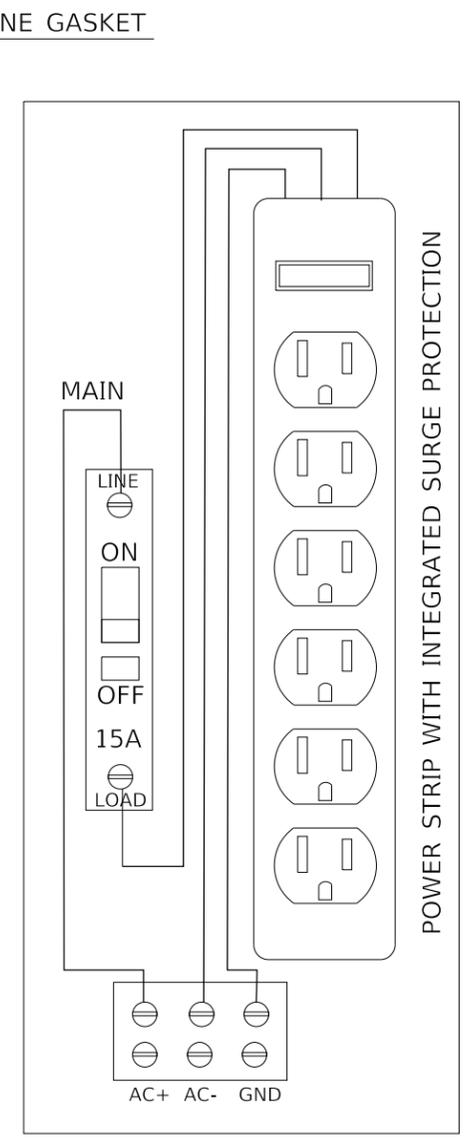
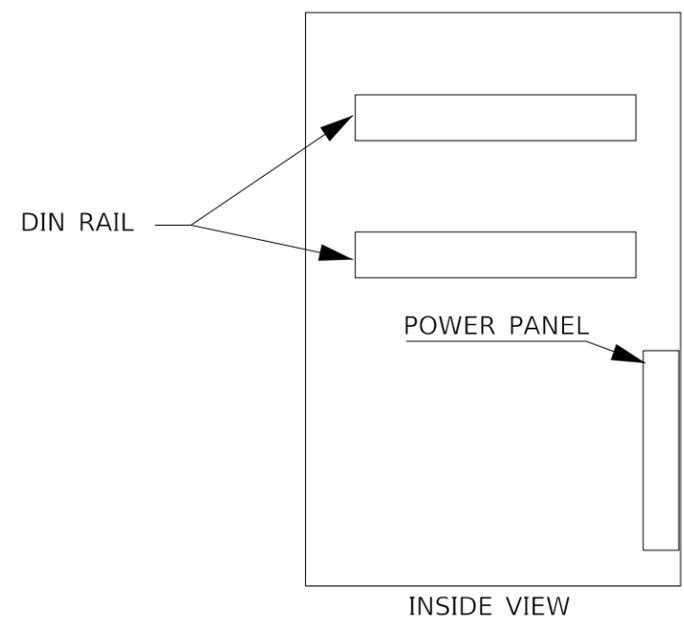
TYPICAL MICROWAVE DETECTOR INSTALLATION CROSS SECTION VIEW

**APPROVED MICROWAVE POLE DRAWING:
VALMONT, DRAWING NUMBER IL4894404**

FILE NAME =	USER NAME = hansonj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MICROWAVE DETECTOR INSTALLATION AND POLE DETAILS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
O:\common\GEM\Transfer - bureaus\68E72 - Final Plans\68E72 - DMS (FINAL 12-13-19).dgn		DRAWN -	REVISED -			74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA	43	42
PLOT SCALE = 81.9197 ' / in.		CHECKED -	REVISED -			CONTRACT NO. 68E72				
PLOT DATE = 12/13/2019		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				



THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GALVANIZED STEEL BRACKETING AND HARDWARE REQUIRED FOR CABINET INSTALLATION ON THE PROPOSED CAMERA POLES



ITS EQUIPMENT CABINET POWER PANEL DETAIL
(TERMINAL STRIP TO BE EQUIPPED WITH PLEXI-GLASS SAFETY SHIELD)

NOTES

1. THE ITS EQUIPMENT CABINET SHALL BE A NEMA TYPE 3R CABINET WITH MINIMUM OUTSIDE DIMENSIONS OF 20" (H) X 14" (W) X 10" (D) (NOMINAL). THE CABINET SHALL BE CONSTRUCTED FROM .125" THICK ALUMINUM AND HAVE A NATURAL FINISH.
2. THE CABINET SHALL BE EQUIPPED WITH A #2 CORBIN (OR SKELETON KEY) SLAM LOCK, AND ALL STAINLESS STEEL HARDWARE.

FILE NAME =	USER NAME = hansomj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CLOSED CIRCUIT TELEVISION CABINET DETAIL	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\common\GEM\Transfer - bureaus\68E72 - Final Plans\68E72 - DMS (FINAL 12-13-19).dgn		DRAWN -	REVISED -			74	D4 DYNAMIC MESSAGE SIGNS 2020	PEORIA	43	43
PLOT SCALE = 81.9197 ' / in.		CHECKED -	REVISED -			CONTRACT NO. 68E72				
PLOT DATE = 12/13/2019		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				