

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

F.A.I. ROUTE 80 (INTERSTATE 80)
SECTION 99(5&5-1) Y-1
PROJECT: ACIM-080-4(190)142
NORFOLK SOUTHERN RAILROAD TO U.S. ROUTE 45
ADDITIONAL LANES, SIGNING & SURVEILLANCE
WILL COUNTY
C-91-141-11

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	99(5&5-1) Y-1	WILL	309*	1
ILLINOIS CONTRACT NO. 60M59				

*309+1=310
*310+21=331
D-91-046-10

FOR INDEX OF SHEETS, SEE SHEET NO. 2

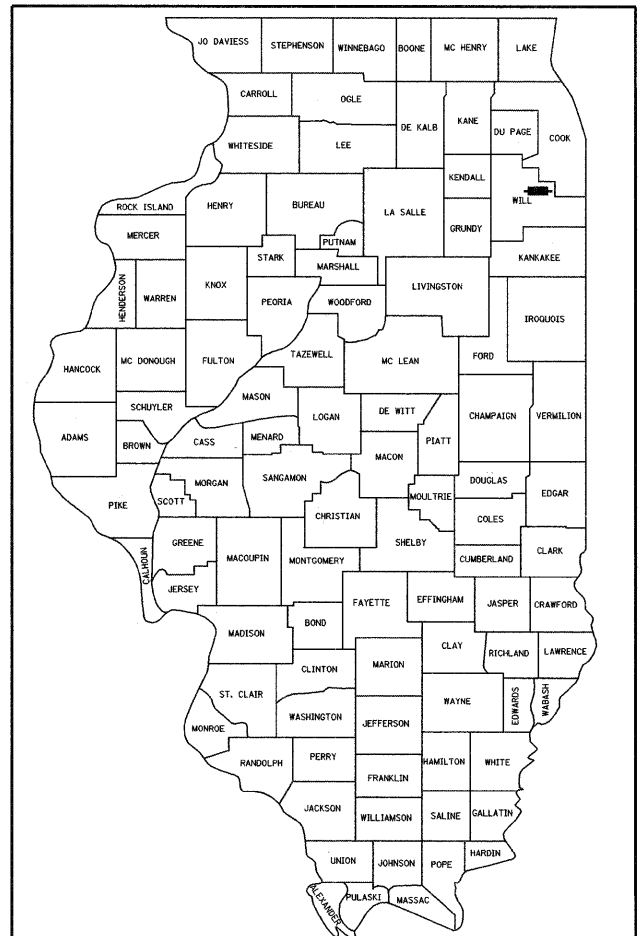
TRAFFIC DATA

ADT (2008):
I-355 TO US ROUTE 45 = 80,500

ADT (2030):
I-355 TO US ROUTE 45 = 125,000

POSTED SPEED = 65 mph

PROJECT LOCATED IN THE VILLAGES
OF MOKENA & ORLAND PARK



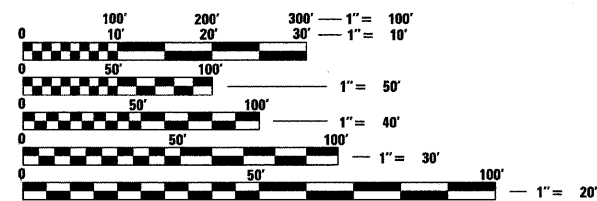
LOCATION OF SECTION INDICATED THIS: - [shaded box]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED October 27, 2010
Diana M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 10, 2010
Scott E. Stitt, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

December 10, 2010
Christine M. Roedler
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER



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

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

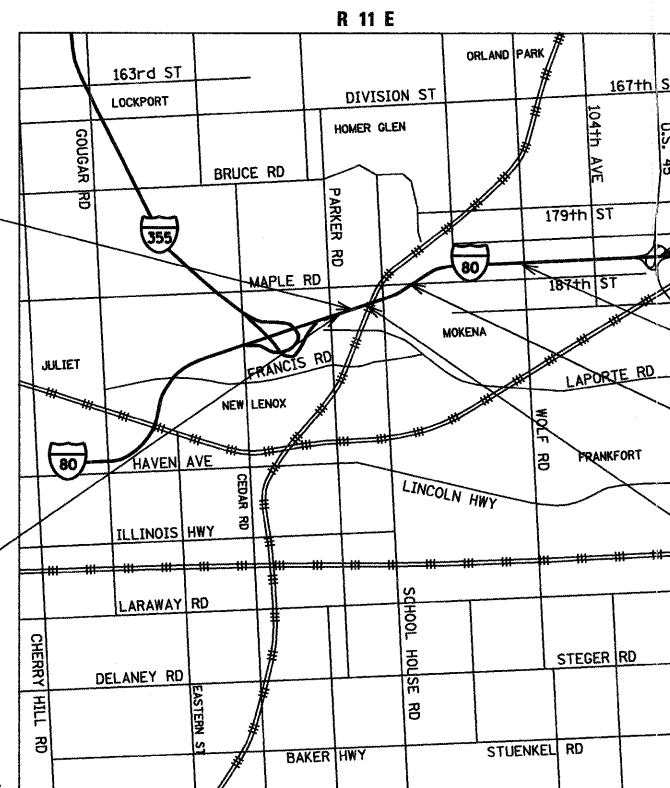
PROJECT ENGINEER: SUNG BYUN
PROJECT MANAGER: KIM HARVEY

CONTRACT NO. 60M59

STEPHEN N. SUG
062-044117
LICENSED
PROFESSIONAL
ENGINEER
OF
ILLINOIS
DATE: 10/20/2010
SEAL EXPIRES: 11/30/2011

SALVATORE C. DI BERNARDO
081-005930
LICENSED
STRUCTURAL
ENGINEER
STATE OF
ILLINOIS
DATE: 10/20/2010
SEAL EXPIRES: 11/30/2012

FRED M. LYNCH
062-056704
LICENSED
PROFESSIONAL
ENGINEER
OF
ILLINOIS
DATE: 10/20/2010
SEAL EXPIRES: 11/30/2011
SHEETS: 113 - 137



LOCATION MAP
NOT TO SCALE

GROSS LENGTH = 23,950 FT. = 4.54 MILE
NET LENGTH = 23,950 FT. = 4.54 MILE



S.N. 099-2002
I-80 OVER MARLEY CREEK

I-80
STA. 882 + 50
PROJECT BEGINS

I-80
STA. 1122 + 00
PROJECT ENDS

S.N. 099-0192
WOLF ROAD OVER I-80

S.N. 099-0198
MAPLE AVENUE OVER I-80

S.N. 099-0070 (EB)
S.N. 099-0071 (WB)
I-80 OVER NS RAILROAD
STRUCTURE WIDENING
I-80 & STA. 898 + 75.42
STRUCTURE LENGTH = 211'-4"

Ciorba Group, Inc.

DESIGN FIRM
REGISTRATION NUMBER
184-001016

CONSULTING ENGINEERS
SUITE 402, 5507 NORTH CUMBERLAND AVE
CHICAGO, ILLINOIS 60656 ☎ (773) 775-4009

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

Rev. 1-4-2011

CONSULTANT PROJECT MANAGER - KIM HARVEY, (847) 705-4055, DISTRICT 1

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS & STATE STANDARDS
3	GENERAL NOTES AND DRAINAGE GENERAL NOTES
4 - 11	SUMMARY OF QUANTITIES
12 - 15	TYPICAL SECTIONS
16 - 27	SCHEDULE OF QUANTITIES
28 - 34	ALIGNMENTS, TIES, AND BENCHMARKS
35 - 47	ROADWAY PLAN & PROFILE
48 - 61	SOIL BORING LOCATION PLANS & SOIL PROFILES
62 - 87	STAGING AND TRAFFIC CONTROL PLANS
88 - 96	EROSION AND SEDIMENT CONTROL PLANS
97 - 110	PROPOSED DRAINAGE PLAN & PROFILE
111 - 112	SIGNING SCHEDULE
113 - 120	PAVEMENT MARKING AND SIGNING PLANS
121 - 137	SIGNING DETAILS
138 - 147	LANDSCAPING PLANS
148 - 165	SURVEILLANCE PLANS
166 - 188	SURVEILLANCE DETAILS
189 - 215	STRUCTURAL PLANS
216	CONCRETE BARRIER TRANSITION DETAIL
217	DRAINAGE CONNECTION DETAILS
218	DETAIL OF CONNECTION TO EXISTING CULVERT
219	STATION 889+40 OUTFALL DETAIL
220	STATION 902+00 OUTFALL DETAIL
221	SEDIMENT BASIN DETAIL
222	(BD12) MANHOLE WITH RESTRICTOR PLATE
223	(BD27) CONCRETE BARRIER TRANSITION, GENERAL DETAILS AND CONCRETE BARRIER BASE
224 - 227	(BM21) REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL
228	(TC08) FREEWAY ENTRANCE AND EXIT RAMP CLOSURE DETAILS
229	(TC09) TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE & MULTI-LANE WEAVE
230 - 231	(TC11) RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
232	(TC12) MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS
233	(TC17) TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES
234	(TC18) SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS
235	(TC25) TRAFFIC CONTROL DETAILS FOR FREEWAY CENTER LANE CLOSURE SHOULDER LANE
236	(TC27) MILE POST MARKERS - GORE SIGNS - MAJOR GUIDE SIGN LAYOUT - ARROWS
237 - 309	CROSS SECTIONS

* Added 179A - 179B.
* Added 188A - 188B.

LIST OF STATE STANDARDS

STD. NO.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
420101-04	24' JOINTED PCC PAVEMENT
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
442001-04	CLASS A PATCHES
483001-04	PCC SHOULDER
515001-03	NAME PLATE FOR BRIDGES
542106-02	REINFORCED CONCRETE END SECTIONS FOR MULTIPLE PIPE CULVERTS, 42" (1000 MM) THRU 60" (1500 MM) DIAMETER AT RIGHT ANGLES WITH ROADWAY
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
542311-02	GRATING FOR CONCRETE FLARED END SECTION (FOR 24" THROUGH 54" PIPE)
601001-04	SUB-SURFACE DRAINS
602001-02	CATCH BASIN, TYPE A
602401-03	MANHOLE, TYPE A
602406-04	MANHOLE, TYPE A 6' DIAMETER
602601-02	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
602701-02	MANHOLE STEPS
604001-03	FRAME AND LIDS TYPE 1
604071-04	FRAME AND GRATE TYPE 20
604076-04	FRAME AND GRATE TYPE 21
609001-05	BRIDGE APPROACH SHOULDER PAVEMENT AND DRAIN
609006-05	BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)
630001-09	STEEL PLATE BEAM GUARDRAIL
631033-04	TRAFFIC BARRIER TERMINAL, TYPE 6B
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
635001-01	DELINEATORS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
637006-02	CONCRETE BARRIER, DOUBLE FACE, 42 IN. (1065 mm) HEIGHT
642001-01	SHOULDER RUMBLE STRIP
667001-01	DRAINAGE MARKERS
667101-01	PERMANENT SURVEY MARKERS
701101-02	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24' (600 mm) FROM EDGE OF PAVEMENT
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY
701400-05	APPROACH TO LANE CLOSURE FREEWAY/EXPRESSWAY
701401-06	LANE CLOSURE, FREEWAY/EXPRESSWAY
701411-07	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > OR = 45 MPH
701426-04	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS > OR = 45 MPH
701446-02	TWO LANE CLOSURE FREEWAY/EXPRESSWAY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720006-02	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
720021-02	SIGN PANELS EXTRUDED ALUMINUM TYPE
728001-01	TELESCOPING STEEL SIGN SUPPORT
729001-01	APPLICATION OF TYPES A AND B METAL POSTS
731001-01	BASE FOR TELESCOPING STEEL SIGN SUPPORT
878001-08	CONCRETE FOUNDATION DETAILS
B.L.R. 26-2	STEEL PLATE BEAM GUARDRAIL 27 1/2" (700mm) HEIGHT

c:\p\3384\3-east\design\misc\sheet\3384E-Index.dgn

ENGINEERING CONSULTANT
 **Ciorba Group, Inc.**
 CONSULTING ENGINEERS
 5087 North Cicero Avenue, Suite 402
 Chicago, Illinois 60630
 Tel: 773.775.4009 Fax: 773.775.4014
 Email: Chicago@ciorba.com

USER NAME = j.jeliman	DESIGNED - CRC	REVISED -
PLOT SCALE = 1.0000' / IN.	DRAWN - JMK	REVISED -
PLOT DATE = 10/28/2010	CHECKED - MRJ	REVISED -
	DATE = 10/27/2010	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**F.A.I. 80 FROM NS RAILROAD TO US 45
INDEX OF SHEETS AND STANDARDS**

SCALE: 1" = 50'	SHEET NO. OF	SHEETS	STA.	TO STA.
-----------------	--------------	--------	------	---------

Rev. 01-05-2011

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	99(5&S-1) Y-1	WILL	309	2
CONTRACT NO. 60M59			ILLINOIS FED. AID PROJECT	

90% FED.
10% STATE

CODE NO.	ITEM	UNIT	URBAN TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	245			245
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	203			203
20101300	TREE PRUNING (1 TO 10 INCH DIAMETER)	EACH	76			76
20101350	TREE PRUNING (OVER 10 INCH DIAMETER)	EACH	53			53
20200100	EARTH EXCAVATION	CU YD	18,059	18,059		
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	13,034	13,034		
20800150	TRENCH BACKFILL	CU YD	11,907	11,907		
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	3,960	3,960		
21101605	TOPSOIL FURNISH AND PLACE, 2"	SQ YD	112,500			112,500
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	19,360			19,360
25000210	SEEDING, CLASS 2A	ACRE	1.36			1.36
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	187			187
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	187			187
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	187			187
25000750	MOWING	ACRE	40			40

90% FED.
10% STATE

CODE NO.	ITEM	UNIT	URBAN TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
25100105	MULCH, METHOD 1	ACRE	4.36			4.36
25100115	MULCH, METHOD 2	ACRE	3			3
25100630	EROSION CONTROL BLANKET	SQ YD	6,278	6,278		
28000305	TEMPORARY DITCH CHECKS	FOOT	735	735		
28000400	PERIMETER EROSION BARRIER	FOOT	3,597	3,597		
28000500	INLET AND PIPE PROTECTION	EACH	225	225		
28100101	STONE RIPRAP, CLASS A1	SQ YD	230	230		
28100107	STONE RIPRAP, CLASS A4	SQ YD	230	230		
28200200	FILTER FABRIC	SQ YD	230	230		
31200502	STABILIZED SUBBASE - HOT-MIX ASPHALT, 4 1/2"	SQ YD	54,580	54,580		
42001300	PROTECTIVE COAT	SQ YD	16,650	16,650		
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	823	823		
44001980	CONCRETE BARRIER REMOVAL	FOOT	47	47		
44000100	PAVEMENT REMOVAL	SQ YD	445	445		
44004250	PAVED SHOULDER REMOVAL	SQ YD	11	11		
44213000	PATCHING REINFORCEMENT	SQ YD	180	180		
44213200	SAW CUTS	FOOT	780	780		

* DENOTES SPECIALTY ITEM
 Δ Non-Participating

N:\PROJECTS\3384A\3_1\Drawings\MiscSheets\3384E-50001.dgn

ENGINEERING CONSULTANT
Giorgio Group, Inc.
 CONSULTING ENGINEERS
 6007 North Campbell Avenue, Suite 402
 Chicago, Illinois 60630
 Tel: 773.754.1100 Fax: 773.754.1014
 Email: ggiorgio@giorgio.com

USER NAME = jk.jellman
 PLOT SCALE = 1:80000' / IN.
 PLOT DATE = 10/28/2010

DESIGNED - CRC
 DRAWN - JMK
 CHECKED - MRJ
 DATE - 10/27/2010

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**F.A.I. 80 FROM NS RAILROAD TO US 45
 SUMMARY OF QUANTITIES**

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

Rev. 01-05-2011

F.A.I. FILE:	SECTION	COUNTY	TOTAL SHEET NO.
80	99(5&5-1) Y-1	WILL	309 4
			CONTRACT NO. 60M59
ILLINOIS FED. AID PROJECT			

90% FED.
10% STATE
URBAN

CODE NO.	ITEM	UNIT	TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
44213204	TIE BARS 3/4"	EACH	220	220		
48101200	AGGREGATE SHOULDERS, TYPE B	TON	1,028	1,028		
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	488	488		
48300705	PORTLAND CEMENT CONCRETE SHOULDERS 12 1/4"	SQ YD	48,542	48,542		
50102400	CONCRETE REMOVAL	CU YD	214.4		214.4	
50104400	CONCRETE HEADWALL REMOVAL	EACH	1	1		
50157300	PROTECTIVE SHIELD	SQ YD	197		197	
50300100	FLOOR DRAINS	EACH	12		12	
50300225	CONCRETE STRUCTURES	CU YD	56.2	15	41.2	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	426.8		426.8	
50300300	PROTECTIVE COAT	SQ YD	551		551	
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1	
50500505	STUD SHEAR CONNECTORS	EACH	2,748		2,748	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	118,450	900	117,550	
50800515	BAR SPLICERS	EACH	156		156	

* DENOTES SPECIALTY ITEM

90% FED.
10% STATE
URBAN

CODE NO.	ITEM	UNIT	TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
51500100	NAME PLATES	EACH	2		2	
52000110	PERFORMED JOINT STRIP SEAL	FOOT	364		364	
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	8		8	
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	4		4	
52100520	ANCHOR BOLTS, 1"	EACH	24		24	
52100530	ANCHOR BOLTS, 1 1/4"	EACH	8		8	
54213669	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	1	1		
54213675	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 30"	EACH	1	1		
54213681	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 36"	EACH	2	2		
54215442	CAST-IN-PLACE REINFORCED CONCRETE END SECTIONS 42"	EACH	3	3		
54247130	GRATING FOR CONCRETE FLARED END SECTION 24"	EACH	1	1		
54247150	GRATING FOR CONCRETE FLARED END SECTION 30"	EACH	1	1		
54247170	GRATING FOR CONCRETE FLARED END SECTION 36"	EACH	2	2		
550A0340	STORM SEWERS, CLASS A, TYPE 2 12"	FOOT	733	733		
550A0360	STORM SEWERS, CLASS A, TYPE 2 15"	FOOT	945	945		

D:\proj\3384\3 east\design\sumsheet\3384-50022.dgn



USER NAME = jk.jellman	DESIGNED - CRC	REVISED -
PLOT SCALE = 1/8" = 1' IN.	DRAWN - JMK	REVISED -
PLOT DATE = 10/28/2010	CHECKED - MRJ	REVISED -
	DATE = 10/27/2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. 80 FROM NS RAILROAD TO US 45
SUMMARY OF QUANTITIES

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

Rev. 01-05-2011

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	99(5&S-1) Y-1	WILL	309	5
CONTRACT NO. 60M59			ILLINOIS FED. AID PROJECT	

90% FED.
10% STATE

CODE NO.	ITEM	UNIT	URBAN TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
550A0380	STORM SEWERS, CLASS A, TYPE 2 18"	FOOT	2,285	2,285		
550A0400	STORM SEWERS, CLASS A, TYPE 2 21"	FOOT	750	750		
550A0410	STORM SEWERS, CLASS A, TYPE 2 24"	FOOT	3,251	3,251		
550A0430	STORM SEWERS, CLASS A, TYPE 2 30"	FOOT	3,333	3,333		
550A0450	STORM SEWERS, CLASS A, TYPE 2 36"	FOOT	3,484	3,484		
550A0470	STORM SEWERS, CLASS A, TYPE 2 42"	FOOT	1,105	1,105		
550A0480	STORM SEWERS, CLASS A, TYPE 2 48"	FOOT	1,280	1,280		
55200900	STORM SEWERS JACKED IN PLACE, 24"	FOOT	91	91		
55201100	STORM SEWERS JACKED IN PLACE, 30"	FOOT	83	83		
55201300	STORM SEWERS JACKED IN PLACE, 36"	FOOT	270	270		
55201500	STORM SEWERS JACKED IN PLACE, 42"	FOOT	307	307		
58600100	SAND BACKFILL	CU YD	35	35		
58700300	CONCRETE SEALER	SQ FT	2,815		2,815	
59000200	EPOXY CRACK INJECTION	FOOT	120		120	
60107700	PIPE UNDERDRAINS 6"	FOOT	36,410	36,410		

* DENOTES SPECIALTY ITEM

90% FED.
10% STATE

CODE NO.	ITEM	UNIT	URBAN TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
60108200	PIPE UNDERDRAINS 6" (SPECIAL)	FOOT	528	528		
60201310	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 20 FRAME AND GRATE	EACH	90	90		
60201320	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 21 FRAME AND GRATE	EACH	6	6		
60219510	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 20 FRAME AND GRATE	EACH	19	19		
60221100	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	9	9		
60222210	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 20 FRAME AND GRATE	EACH	67	67		
60224035	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 20 FRAME AND GRATE	EACH	15	15		
60500050	REMOVING CATCH BASINS	EACH	7	7		
60500060	REMOVING INLETS	EACH	4	4		
60618320	CONCRETE MEDIAN SURFACE, 6 INCH	SQ FT	325	325		
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	1,138	1,138		
* X6300130	STEEL PLATE BEAM GUARD RAIL, TYPE A (SPECIAL)	FOOT	38	38		
* 63100089	TRAFFIC BARRIER TERMINAL, TYPE 6B	EACH	2	2		
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4		
* X6310176	TRAFFIC BARRIER TERMINAL, TYPE 2 (SPECIAL)	EACH	1	1		
63200310	GUARDRAIL REMOVAL	FOOT	1,300	1,300		

Rev. 01-05-2011



USER NAME = jkellman	DESIGNED - CRC	REVISED -
PLLOT SCALE = 1/8" = 1' IN.	DRAWN - JMK	REVISED -
PLLOT DATE = 10/28/2010	CHECKED - MRJ	REVISED -
	DATE = 10/27/2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. 80 FROM NS RAILROAD TO US 45
SUMMARY OF QUANTITIES

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	99(5&S-1) Y-1	WILL	309	6
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60M59	

90% FED.
10% STATE

CODE NO.	ITEM	UNIT	URBAN TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
63301210	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	150	150		
X6350120	DELINEATOR REMOVAL	EACH	40	40		
63700175	CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT	FOOT	141	141		
63700275	CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT	FOOT	10,260	10,260		
X6370279	CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL)	FOOT	141	141		
63700805	CONCRETE BARRIER TRANSITION	FOOT	174	174		
63700900	CONCRETE BARRIER BASE	FOOT	18,041	18,041		
64200105	SHOULDER RUMBLE STRIPS	FOOT	49,630	49,630		
66700205	PERMANENT SURVEY MARKERS, TYPE I	EACH	4	4		
66700705	FURNISHING AND ERECTING DRAINAGE MARKERS	EACH	7	7		
67100100	MOBILIZATION	L SUM	1	1		
X7010218	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	EACH	6	6		
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1		
X70104205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401, LOCATION 1	EACH	2	2		
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	25	25		
X70104210	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401, LOCATION 2	EACH	2	2		
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	85,460	85,460		
X70104215	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401, LOCATION 3	EACH	2	2		
70300550	PAVEMENT MARKING TAPE, TYPE III 8"	FOOT	1,810	1,810		

* DENOTES SPECIALTY ITEM

90% FED.
10% STATE

CODE NO.	ITEM	UNIT	URBAN TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
70300560	PAVEMENT MARKING TAPE, TYPE III 12"	FOOT	210	210		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	29,903	29,903		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	43,055	43,055		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	3,500	3,500		
70400500	TEMPORARY CONCRETE BARRIER (STATE OWNED)	FOOT	522	522		
70400600	RELOCATE TEMPORARY CONCRETE BARRIER (STATE OWNED)	FOOT	18,410	18,410		
* 72000100	SIGN PANEL-TYPE 1	SQ FT	13	13		
* 72000200	SIGN PANEL-TYPE 2	SQ FT	466	466		
* 72000300	SIGN PANEL-TYPE 3	SQ FT	1,980	1,980		
* 72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	10	10		
* 72400200	REMOVE SIGN PANEL ASSEMBLY - TYPE B	EACH	18	18		
* 72400320	REMOVE SIGN PANEL - TYPE 2	SQ FT	22	22		
* 72400330	REMOVE SIGN PANEL - TYPE 3	SQ FT	2,013	2,013		
* 72600100	MILEPOST MARKER ASSEMBLY	EACH	16	16		
* 72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	76	76		

n:\p\proj\3384\3_road\design\sumofqs_3384-50094.dgn



ENGINEERING CONSULTANT	USER NAME = jk_jellman	DESIGNED - CRC	REVISED -
		DRAWN - JMK	REVISED -
	PLOT SCALE = 1/8" = 1.0000' / IN.	CHECKED - MRJ	REVISED -
	PLOT DATE = 10/28/2010	DATE = 10/21/2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. 80 FROM NS RAILROAD TO US 45
SUMMARY OF QUANTITIES

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

Rev. 01-05-2011

Rev.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	99(5&5-D Y-1	WILL	309	7
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60M59	

90% FED.
10% STATE
URBAN

90% FED.
10% STATE
URBAN

CODE NO.	ITEM	UNIT	TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
73000100	WOOD SIGN SUPPORT	FOOT	506	506		
73100100	REMOVE GROUND MOUNTED SIGN SUPPORT	EACH	2	2		
73100100	BASE FOR TELESCOPING STEEL SIGN SUPPORT	EACH	1	1		
73100200	REMOVE CONCRETE FOUNDATION - GROUND MOUNT	EACH	2	2		
• 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	75,031	75,031		
73300300	OVERHEAD SIGN STRUCTURE - SPAN, TYPE III - A (5'-0" x 7'-0")	FOOT	290	290		
• 78008220	POLYUREA PAVEMENT MARKING TYPE I - LINE 5"	FOOT	19,225	19,225		
73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	126	126		
• 78008240	POLYUREA PAVEMENT MARKING TYPE I - LINE 8"	FOOT	6,792	6,792		
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	77.8	77.8		
• 78008250	POLYUREA PAVEMENT MARKING TYPE I - LINE 12"	FOOT	3,628	3,628		
• 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	925	925		
• 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	25	25		
• 78100300	REPLACEMENT REFLECTOR	EACH	154	154		
• 78200100	MONODIRECTIONAL PRISMATIC BARRIER REFLECTOR	EACH	95	95		
• 78200410	GUARDRAIL MARKERS, TYPE A	EACH	104	104		
• 78200530	BARRIER WALL MARKERS, TYPE C	EACH	3,083	3,083		
• 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	3	3		
78300100	PAVEMENT MARKING REMOVAL	SQ FT	26,705	26,705		
* 80400100	ELECTRIC SERVICE INSTALLATION	EACH	3	3		
• 80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1	1		

* DENOTES SPECIALTY ITEM

CODE NO.	ITEM	UNIT	TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
• 81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	1,095	1,095		
* 81000500	CONDUIT IN TRENCH, 1 1/2" DIA., GALVANIZED STEEL	FOOT	90	90		
• 81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	275	275		
* 81012600	CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	1,235	1,235		
• 81013000	CONDUIT IN TRENCH, 4" DIA., PVC	FOOT	18,200	18,200		
• 81018600	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	1,380	1,380		
• 81018700	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	1,210	1,210		
* 81200230	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	40	40		
• 81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	430	430		
• 81101005	CONDUIT ATTACHED TO STRUCTURE, 4" DIA., PVC COATED GALVANIZED STEEL	FOOT	220	220		
• 81300960	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 42" X 36" X 12"	EACH	2	2		
• 81400200	HEAVY-DUTY HANDHOLE	EACH	20	20		
* 81702400	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 2	FOOT	1,200	1,200		
• 81603037	UNIT DUCT, 600V, 2-1/C NO. 6, 1/C NO. 6 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	1,600	1,600		
* 81702415	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 6	FOOT	535	535		
• 81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	23,050	23,050		
* 81702460	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 3/0	FOOT	1,250	1,250		
• 83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	100	100		
* 81800300	AERIAL CABLE, 3-1/C NO. 2 WITH MESSENGER WIRE	FOOT	250	250		
• 83800105	BREAKAWAY DEVICE, TRANSFORMER BASE, 11.5 INCH BOLT CIRCLE	EACH	10	10		
* 84200600	REMOVAL OF LIGHTING UNIT, NO SALVAGE	EACH	3	3		
• 87800200	CONCRETE FOUNDATION, TYPE D	FOOT	40	40		
* 87301715	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 18 6 PAIR	FOOT	150	150		
• 89502200	MODIFY EXISTING CONTROLLER	EACH	2	2		

N:\PROJECTS\3384\3_East\Drawings\MainSheets\3384E-50005.dgn

ENGINEERING CONSULTANT

 USER NAME = coornwell
 PLOT SCALE = 1:8000 ' / IN.
 PLOT DATE = 10/28/2010

DESIGNED - CRC
 DRAWN - JMK
 CHECKED - MRJ
 DATE - 10/27/2010

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**F.A.I. 80 FROM NS RAILROAD TO US 45
 SUMMARY OF QUANTITIES**

Rev. 01-05-2011
 F.A.I. RTE. 80 SECTION 99(5&5-1) Y-1 COUNTY WILL TOTAL SHEETS 309 SHEET NO. 8
 CONTRACT NO. 60M59
 ILLINOIS FED. AID PROJECT

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

90% FED.
10% STATE

CODE NO.	ITEM	UNIT	URBAN TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
K0029618	WEED CONTROL, BROADLEAF IN TURF	GALLON	23			23
K0029632	WEED CONTROL, NON-SELECTIVE AND NON-RESIDUAL	GALLON	25			25
K0029624	WEED CONTROL, TEASEL	GALLON	7.5			7.5
Δ K1003660	MOWING CYCLES	EACH	2			2
K1005418	TEMPORARY SEEDING	ACRE	7			7
* X0300247	REMOVE WOOD POST	EACH	3	3		
X0320532	CONCRETE BRIDGE DECK SCARIFICATION (3/8 INCH)	SQ YD	2,491		2,491	
X0321750	REMOVE TEMPORARY CONCRETE BARRIER, STATE OWNED	FOOT	18,442	18,442		
X0322118	REMOVE CONCRETE FLARED END SECTIONS	EACH	9	9		
* X0322446	CABINET HOUSING EQUIPMENT, TYPE III	EACH	8	8		
X0322944	BRIDGE DECK THIN POLYMER OVERLAY 3/8"	SQ YD	3,520		3,520	
X0323260	SEDIMENT BASIN	EACH	3	3		
* X0323898	CLOSED CIRCUIT TELEVISION DOME CAMERA	EACH	5	5		
* X0323914	FIBER OPTIC CABLE SPLICE - LATERAL	EACH	14	14		Δ
* X0327130	DMS FRONT ACCESS, FULL MATRIX, NTCIP 1203 V2 - COLOR	EACH	3	3		Δ
* X0323957	FIBER OPTIC CABLE SPLICE - MAINLINE	EACH	6	6		

* DENOTES SPECIALTY ITEM
Δ NON-PARTICIPATING

90% FED.
10% STATE

CODE NO.	ITEM	UNIT	URBAN TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
* X0325040	FIBER OPTIC INNERDUCT 1 1/4" DIA.	FOOT	48,150	48,150		Δ
X0325222	WEED CONTROL, BASAL TREATMENT	GALLON	10			10
X0325748	ACRYLIC COATING	SQ YD	16		16	
X0325749	FIBER WRAP	SQ FT	260		260	
* X0325815	REMOVE EXISTING CABLE	FOOT	250	250		Δ
X0300355	WET REFLECTIVE TEMPORARY TAPE TYPE III, 5 INCH	FOOT	1,930	1,930		
* X0326266	ETHERNET SWITCH	EACH	9	9		
X0326445	CONCRETE BARRIER, DOUBLE FACE (SPECIAL)	FOOT	1,087	1,087		
* X0326465	MODIFICATION OF EXISTING VIDEO DISTRIBUTION SYSTEM	L SUM	1	1		
* X0326945	CLOSED CIRCUIT TELEVISION CAMERA EQUIPMENT	EACH	5	5		
* X0326946	CLOSED CIRCUIT TELEVISION CAMERA INSTALLATION	EACH	5	5		
* X0326948	CLOSED CIRCUIT TELEVISION CAMERA STRUCTURE, 50 FT. MOUNTING HEIGHT	EACH	5	5		
* X0326949	CLOSED CIRCUIT TELEVISION CAMERA STRUCTURE FOUNDATION, 30" DIAMETER	FOOT	80	80		
* X0326964	FIBER OPTIC INTERCONNECT CABINET	EACH	1	1		
X2020110	GRADING AND SHAPING SHOULDERS	UNIT	278	278		
X2501800	SEEDING, CLASS 4 (MODIFIED)	ACRE	3			3

N:\PROJ\3384\3_East\Drawings\Misc\Shanna\3384E-50006.dgn



USER NAME = coornwell	DESIGNED - CRC	REVISED -
PLOT SCALE = 1:8000' / 1" IN.	DRAWN - JMK	REVISED -
PLOT DATE = 10/28/2010	CHECKED - MRJ	REVISED -
	DATE - 10/27/2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. 80 FROM NS RAILROAD TO US 45
SUMMARY OF QUANTITIES

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

Rev. 01-05-2011

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	99(5&5-1) Y-1	WILL	309	9
CONTRACT NO. 60M59				
ILLINOIS FED. AID PROJECT				

90% FED.
10% STATE

CODE NO.	ITEM	UNIT	URBAN TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
50105220	PIPE CULVERT REMOVAL	FOOT	15	15		
X6370250	CONCRETE BARRIER, VARIABLE CROSS-SECTION 42" HEIGHT	FOOT	6,380	6,380		
X6700410	ENGINEER'S FIELD OFFICE, TYPE A (SPECIAL)	CAL MO	12	12		
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1		
* X8050010	SERVICE INSTALLATION - GROUND MOUNTED	EACH	3	3		
* X8130360	JUNCTION BOX, COMPOSITE CONCRETE, EMBEDDED IN STRUCTURE, 20" X 13" X 12"	EACH	2	2		
* X8360105	LIGHT POLE FOUNDATION, INTEGRAL WITH BARRIER WALL, 24" DIAMETER	FOOT	70	70		
* X8710035	FIBER OPTIC CABLE 96 FIBERS, SINGLE MODE	FOOT	53,500	53,500		
* X8710036	FIBER OPTIC CABLE 12 F SM	FOOT	4,650	4,650		
Z0001050	AGGREGATE SUBGRADE 12"	SQ YD	51,210	51,210		
Z0012710	CONCRETE HEADWALL FOR PIPE UNDERDRAIN REMOVAL	EACH	61	61		
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES SQ FT)		24		24	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
Δ Z0014800	CULVERT TO BE CLEANED	FOOT	1,714	1,714		
Z0023600	FILLING EXISTING CULVERTS	EACH	2	2		

* DENOTES SPECIALTY ITEM
Δ NON-PARTICIPATING

90% FED.
10% STATE

CODE NO.	ITEM	UNIT	URBAN TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
Z0029999	IMPACT ATTENUATOR REMOVAL	EACH	1	1		
Z0030030	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2		
* Z0030130	IMPACT ATTENUATORS (PARTIALLY REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	7	7		
* Z0033028	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	10	10		
Z0042002	POROUS GRANULAR EMBANKMENT, SUBGRADE	CU YD	595	595		
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1		
Z0056220	SAND MODULE IMPACT ATTENUATOR TO BE REMOVED	EACH	2	2		
Z0064800	SELECTIVE CLEARING	UNIT	998			998
Z0065700	SLOPE WALL REPAIR	SQ YD	108		108	
* X0327129	DYNAMIC MESSAGE SIGN POWER CABINET, COMPLETE IN PLACE	EACH	3	3		
Z0076600	TRAINEES	HOUR				
Z0076870	UNDERDRAIN CONNECTION TO STRUCTURE	EACH	88	88		
44200577	CLASS A PATCHES, TYPE II, 12 INCH	SQ YD	40	40		
44200581	CLASS A PATCHES, TYPE III, 12 INCH	SQ YD	140	140		
Δ X2503110	MOWING (SPECIAL)	ACRE	0.25			0.25
X2503315	INTERSEEDING, CLASS 4 (MODIFIED)	ACRE	23			23

Rev. 01-05-2011

Rev.



ENGINEERING CONSULTANT	USER NAME = jk.jellman	DESIGNED - CRC	REVISED -
		DRAWN - JMK	REVISED -
	PLOT SCALE = 1/8" = 1' IN.	CHECKED - MRJ	REVISED -
	PLOT DATE = 10/28/2010	DATE = 10/27/2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. 80 FROM NS RAILROAD TO US 45
SUMMARY OF QUANTITIES

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	99(5&S-1) Y-1	WILL	309	10
			CONTRACT NO. 60M59	
ILLINOIS FED. AID PROJECT				

90% FED.
10% STATE

CODE NO.	ITEM	UNIT	URBAN TOTAL	ROADWAY 0003	STRUCTURAL 0013	LANDSCAPING 0031
60200600	REMOVAL OF LIGHTING, NO SALVAGE	EACH	3	3		
60222220	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 21 FRAME AND GRATE	EACH	6	6		
X0327113	MANHOLE CONNECTION OVER EXISTING CULVERT	EACH	5	5		
X6020091	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 20 FRAME AND GRATE, RESTRICTOR PLATE	EACH	7	7		
Z0033052	COMMUNICATIONS VAULT	EACH	30	30		
X8710054	FIBER OPTIC TERMINATION PANEL, 12 F OR 24 F	EACH	8	8		
X0327114	RADAR VEHICLE SENSING SYSTEM	EACH	16	16		
X0327115	RS 232 TO ETHERNET CONVERTER	EACH	16	16		
X0327116	SOLAR POWER ASSEMBLY	EACH	8	8		
X0327117	ATMS SYSTEM INTEGRATION	L SUM	1	1		
X0327119	RADAR VEHICLE SENSING DEVICE POLE ON BARRIER WALL	EACH	7	7		
X0327118	SOLAR PANEL, RADAR VEHICLE SENSING DEVICE AND SPREAD SPECTRUM RADIO ANTENNA POLE	EACH	10	10		

• DENOTES SPECIALTY ITEM

n:\pco\3384\3_eat\design\msc\sheet\3384-50028.dgn

ENGINEERING CONSULTANT
 **Clorba Group, Inc.**
 CONSULTING ENGINEERS
 6907 North Cumberland Avenue, Suite 402
 Chicago, Illinois 60630
 Tel: 773-775-0033 Fax: 773-775-0014
 Email: ckg@clorba.com

USER NAME = jk.jellman	DESIGNED - CRC	REVISED -
	DRAWN - JMK	REVISED -
PLOT SCALE = 1:2000' / IN.	CHECKED - MRJ	REVISED -
PLOT DATE = 10/28/2010	DATE = 10/27/2010	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

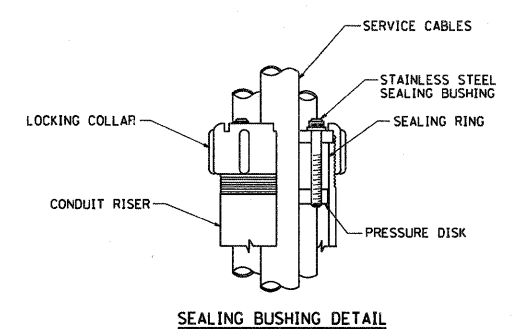
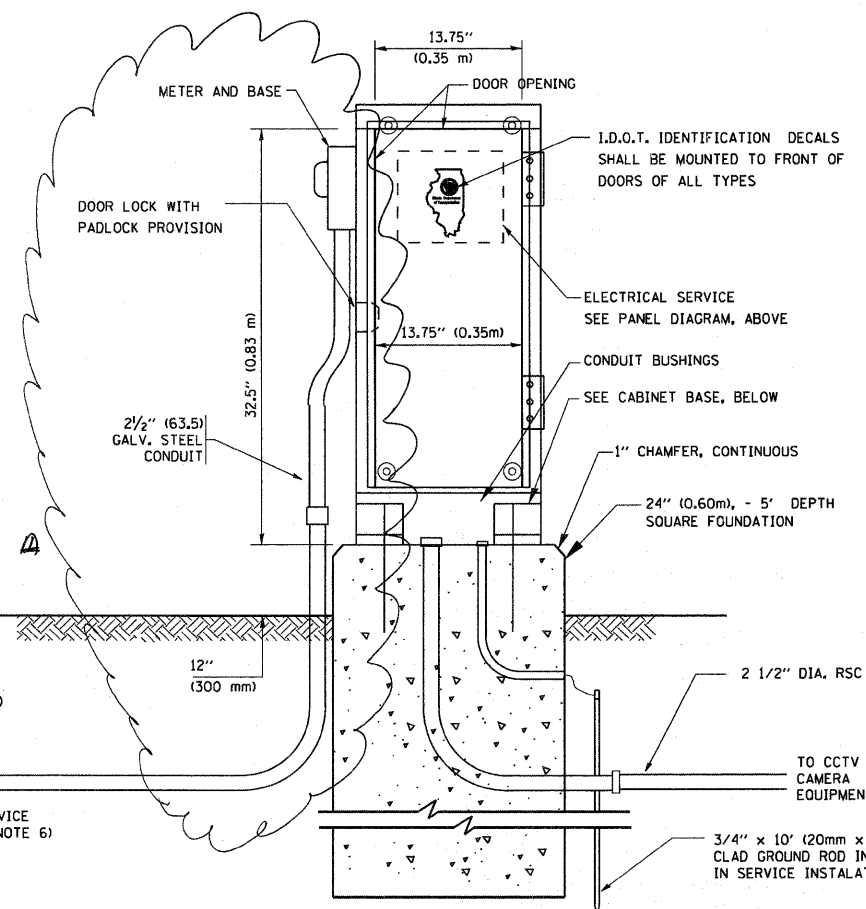
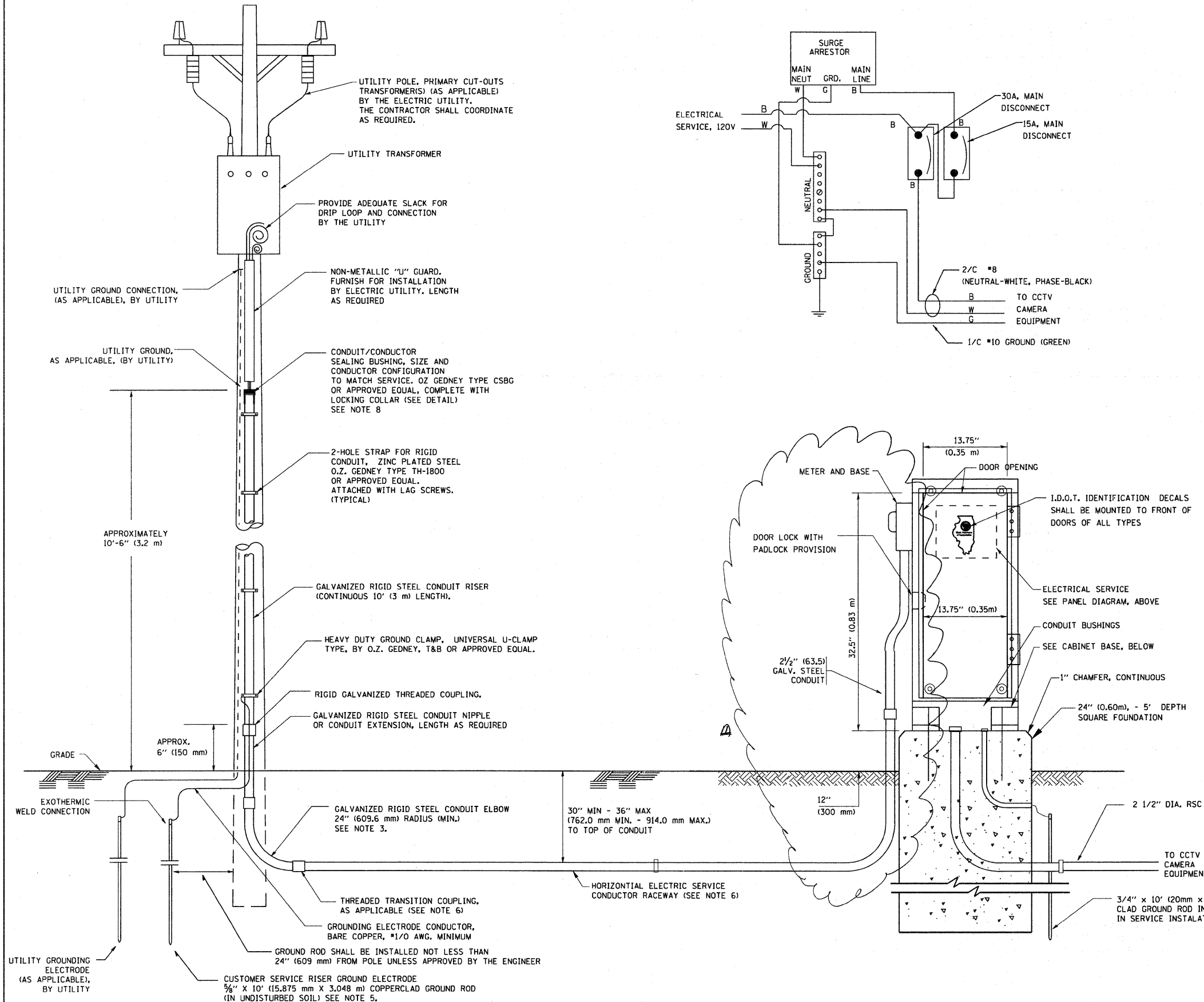
**F.A.I. 80 FROM NS RAILROAD TO US 45
SUMMARY OF QUANTITIES**

SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	F.A.I. RTE. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			80 99(5&5-1) Y-1	WILL	309	11
					CONTRACT NO. 60M59	
ILLINOIS FED. AID PROJECT						

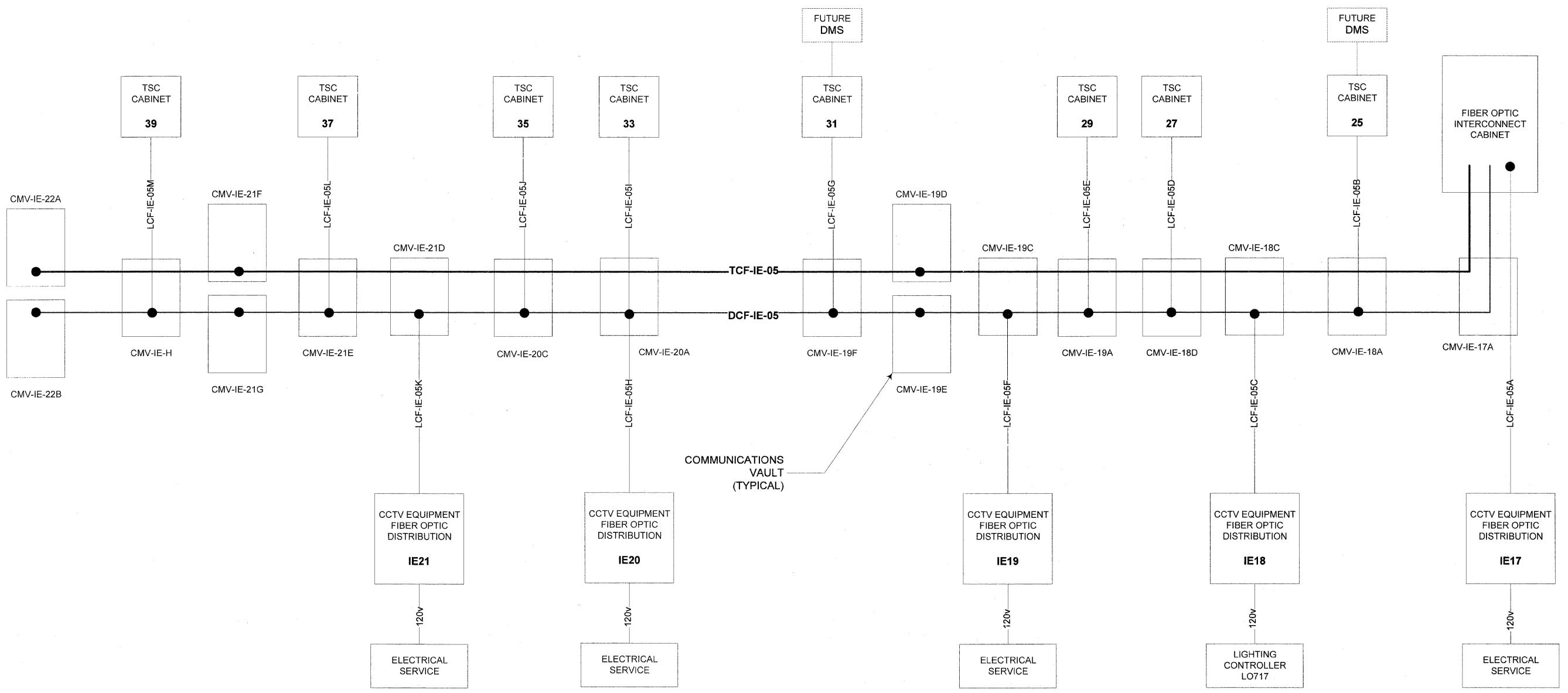
Rev.

NOTES

- SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
- UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
- CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
- THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
- THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALLIC TO NON METALLIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
- PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS PROVIDED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
- THE CONTRACTOR SHALL SCHEDULE THE WORK SUCH THAT THE ENGINEER SHALL WITNESS THE INSTALLATION OF THE RISER SEALING BUSHING AND GROUND ROD EXOTHERMIC WELDS. THE CONTRACTOR SHALL OBTAIN A CERTIFICATION SIGNED BY THE ENGINEER THAT THIS WORK WAS WITNESSED.



FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED - 12/22/10	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ELECTRIC SERVICE INSTALLATION SERVICE INSTALLATION - GROUND MOUNTED			F.A. RTE. 80	SECTION 99 (5 & 5-1) Y-1	COUNTY WILL	TOTAL SHEETS 309	SHEET NO. 175
#FILE#	PLOT SCALE = #SCALE#	DRAWN - MEA	REVISOR -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	BE-240		CONTRACT NO. 60M59		
	PLOT DATE = #DATE#	CHECKED -	REVISOR -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							
		DATE -	REVISOR -									



187th STREET

NEAR WEIGH STATION

WOLF ROAD

EAST OF 104TH AVENUE

WEST OF LAGRANGE ROAD (US 45)

ITEM	ADDRESS
MEDIA CONV	192. _____
CODEC	192. _____
CAMERA	_____

ITEM	ADDRESS
MEDIA CONV	192. _____
CODEC	192. _____
CAMERA	_____

ITEM	ADDRESS
MEDIA CONV	192. _____
CODEC	192. _____
CAMERA	_____

ITEM	ADDRESS
MEDIA CONV	192. _____
CODEC	192. _____
CAMERA	_____

ITEM	ADDRESS
MEDIA CONV.	192. _____
CODEC	192. _____
CAMERA	_____

FILE NAME	USER NAME	DESIGNED	REVISED
		DRAWN	REVISED
		CHECKED	REVISED
		DATE	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

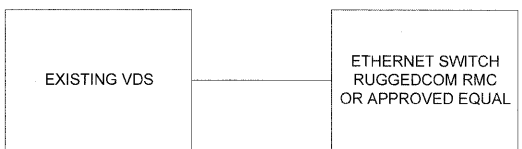
**FIBER OPTIC CABLE
SINGLE LINE DIAGRAM**

SCALE: NONE SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____

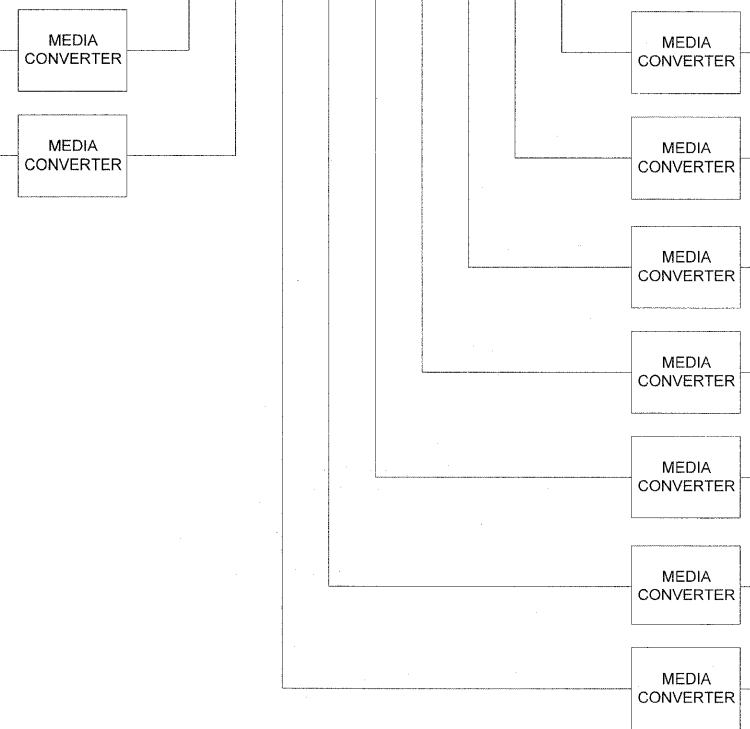
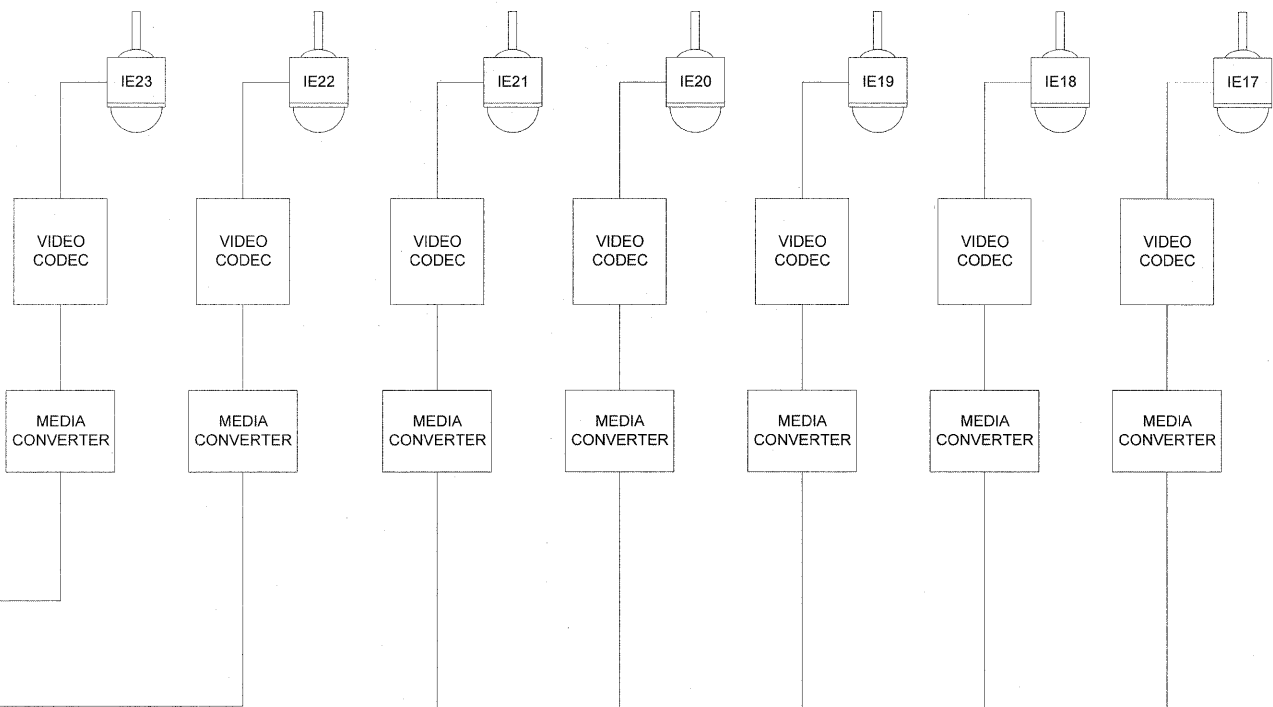
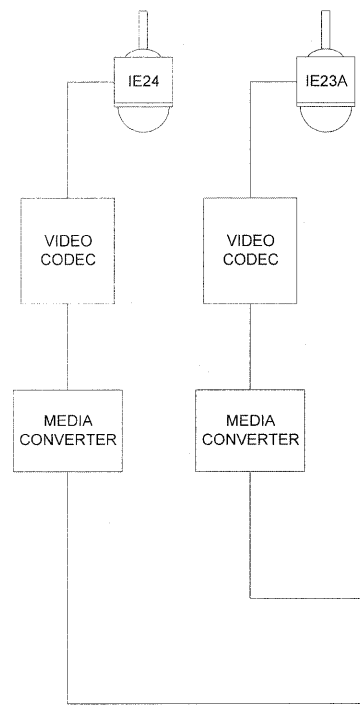
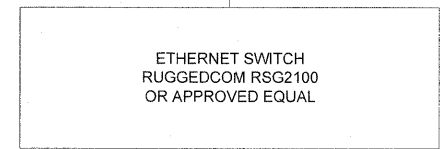
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 80	99(5&5-1)Y-1	WILL	309	179A
CONTRACT NO.			60M59	
ILLINOIS FED. AID PROJECT				

Added Sheet 1-3-11

DISTRICT 1 HEADQUARTERS - SCHAUMBURG



FIBER OPTIC INTERCONNECT CABINET



FILE NAME	USER NAME	DESIGNED	REVISED
		DRAWN	REVISED
		CHECKED	REVISED
		DATE	REVISED

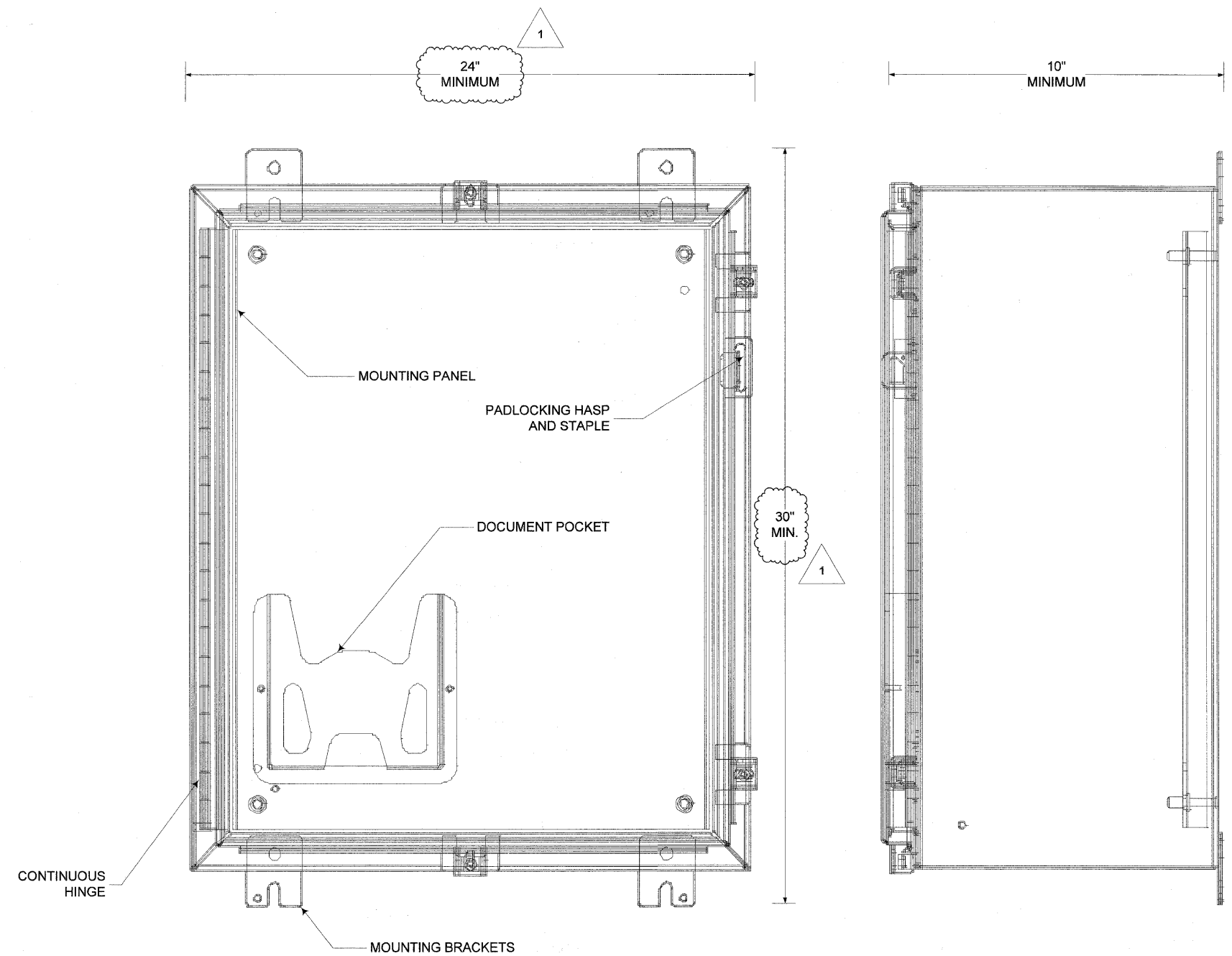
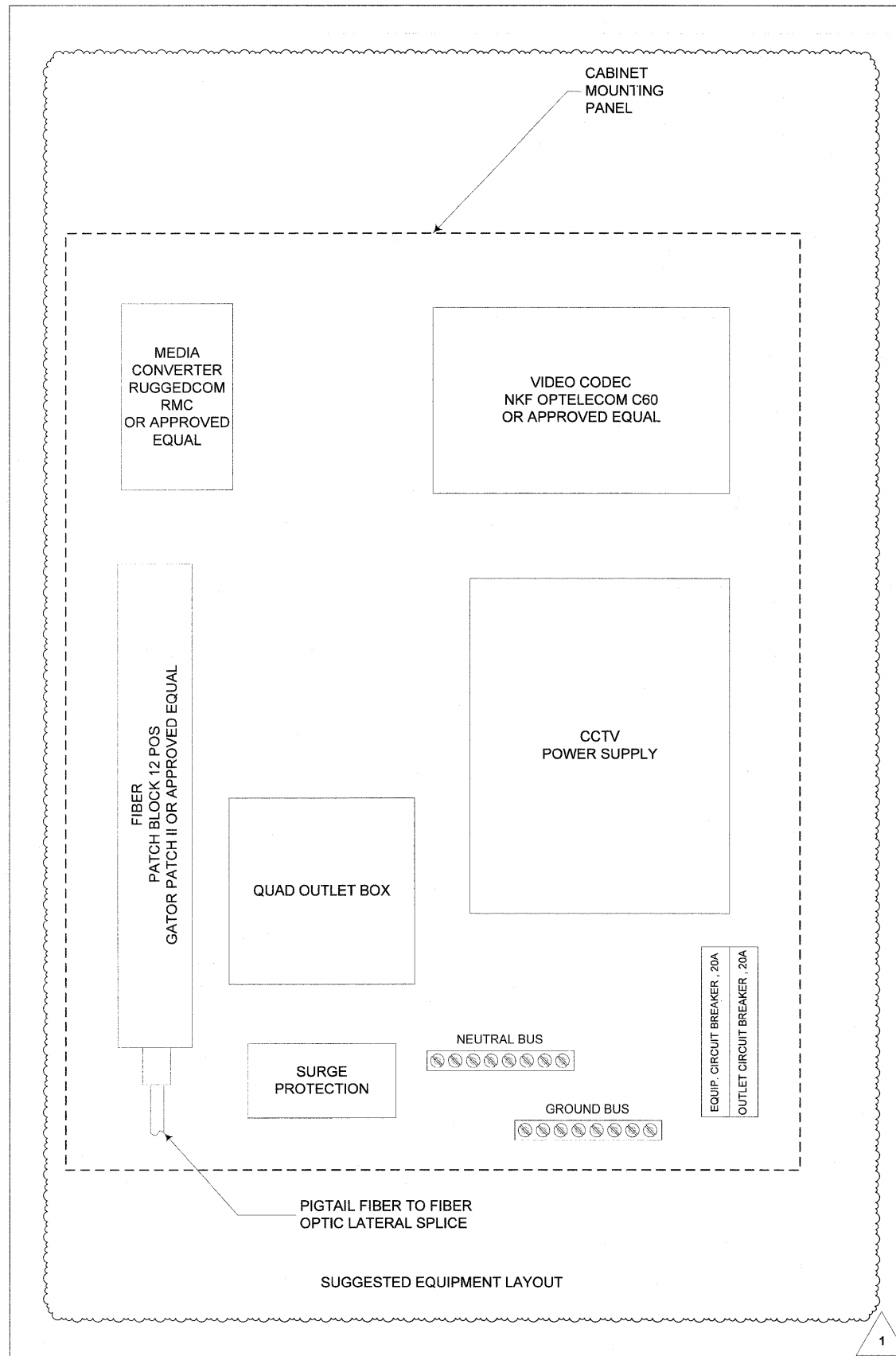
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CCTV SYSTEM
DIAGRAM

SCALE: NONE SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____

Added Sheet 1-3-11

FA RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA180	99(5&5-1)Y-1	WILL.	309	179B
CONTRACT NO.			60M59	
ILLINOIS FED. AID PROJECT				



FILE NAME	USER NAME	DESIGNED	REVISED 12/22/10
		DRAWN	REVISED
	PLOT SCALE	CHECKED	REVISED
	PLOT DATE	DATE	REVISED

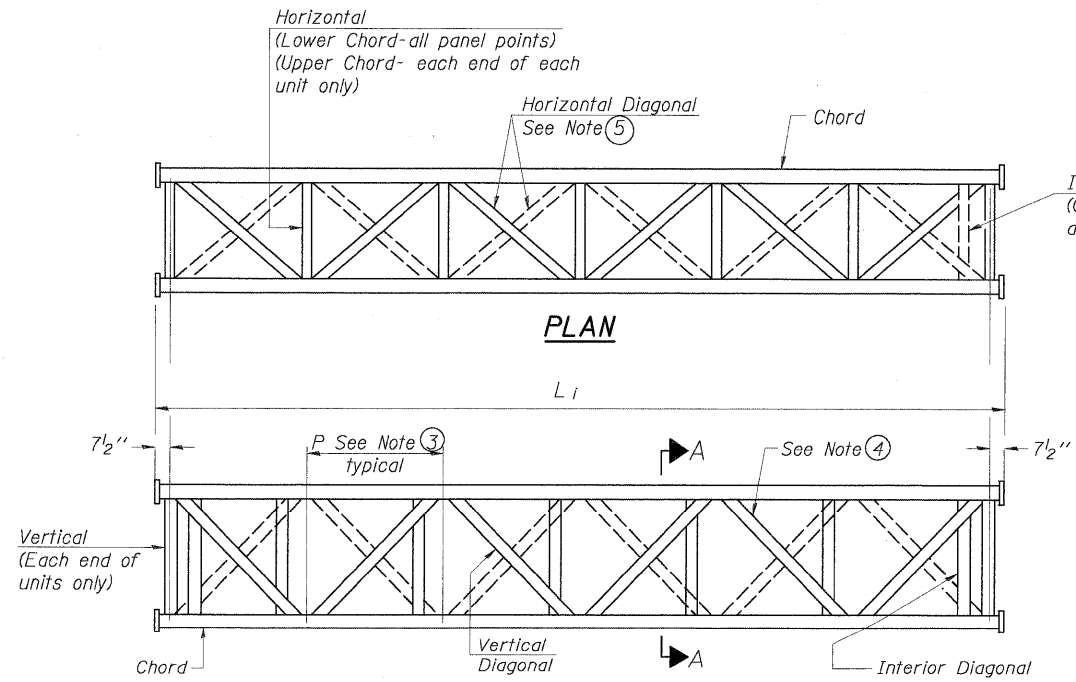
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CCTV EQUIPMENT CABINET
FIBER OPTIC DISTRIBUTION**

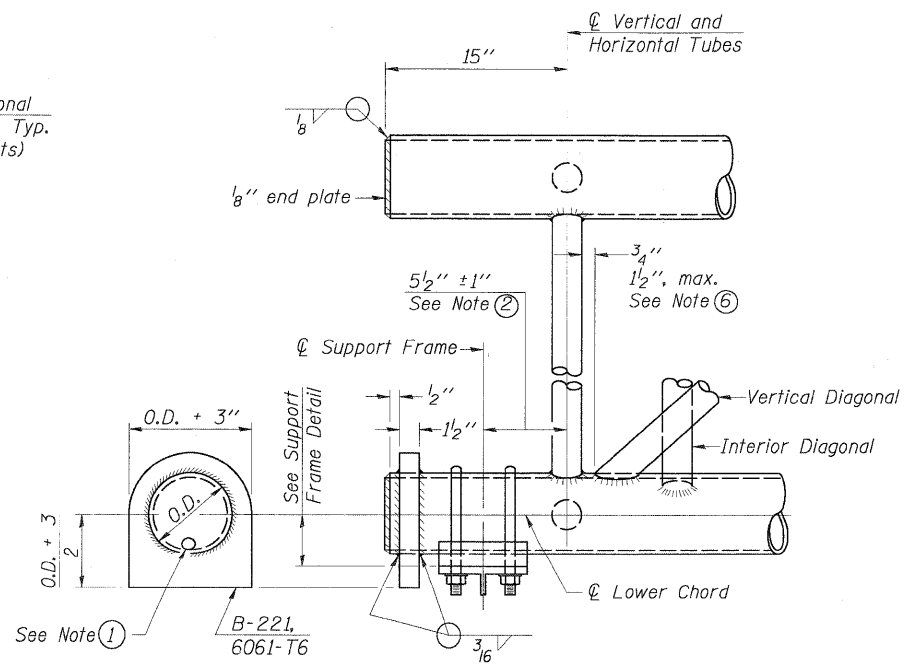
SCALE: NONE SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____

FA RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 80	99(5&5-1)Y-1	WILL	309	186
CONTRACT NO.			60M59	
ILLINOIS FED. AID PROJECT				

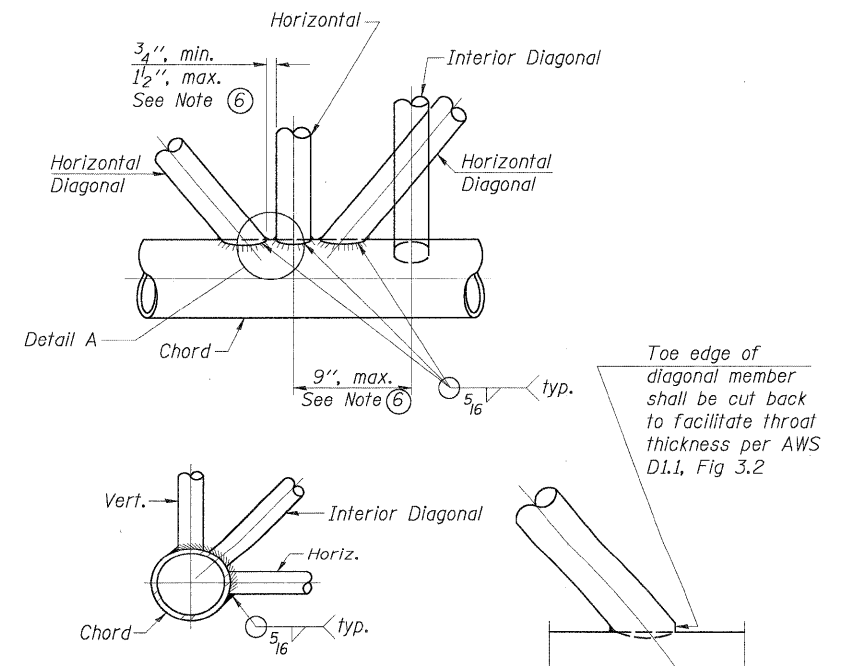
△ Added Sheet 1-3-11



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

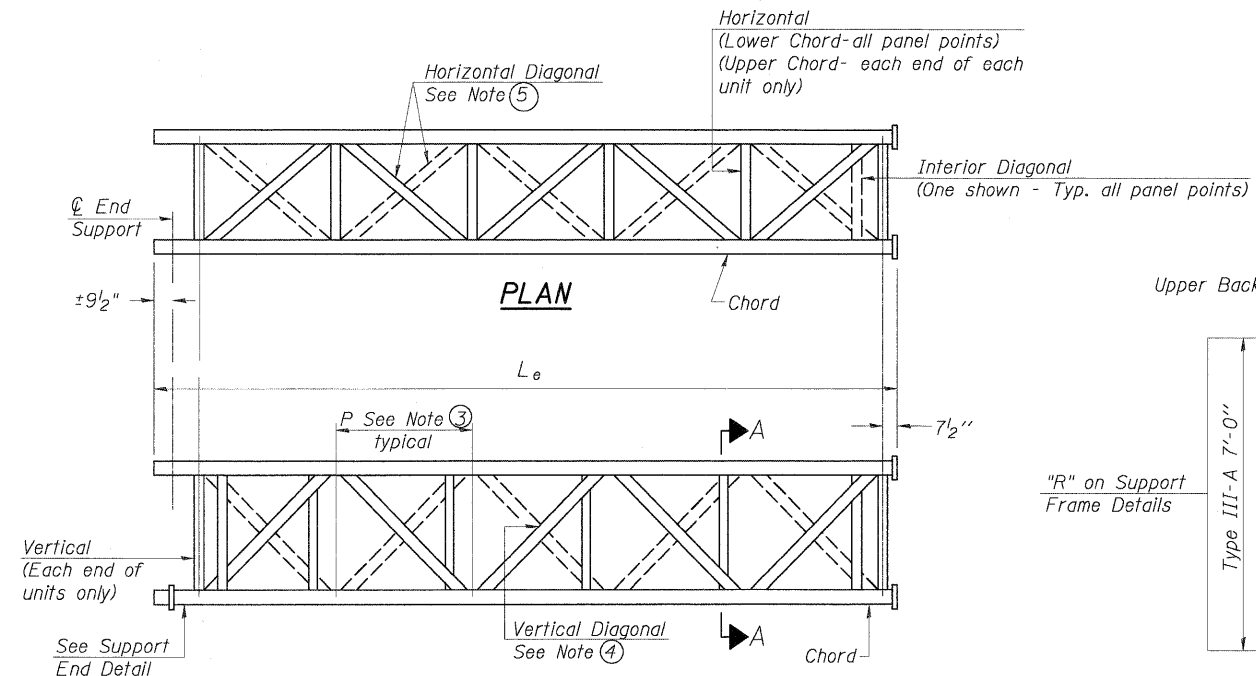


SUPPORT END DETAIL FOR EXTERIOR UNIT

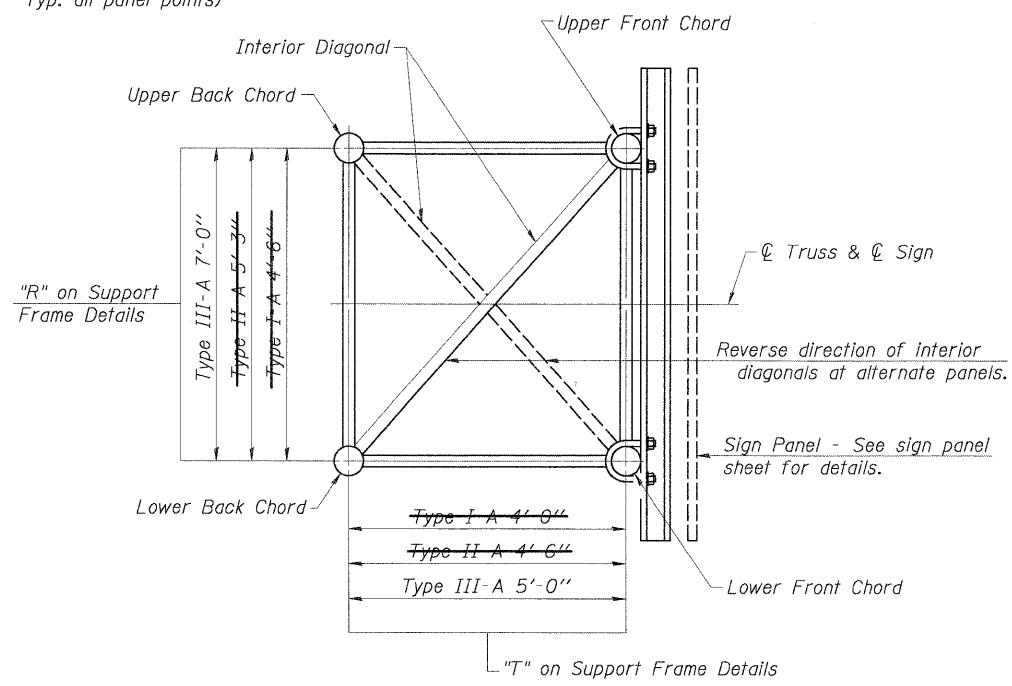


TYPICAL JOINT DETAILS

DETAIL A



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



SECTION A-A

NOTES

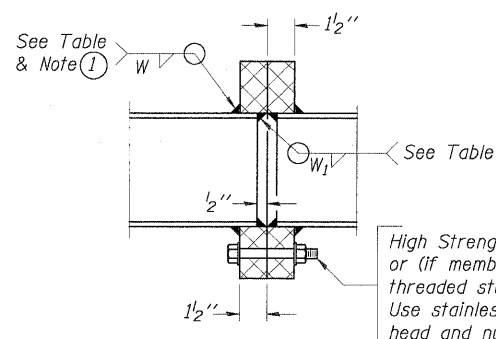
- ① Contractor may alternatively use standard aluminum drive-fit cap to close end. 1/2" φ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ② 5 1/2" end dimension may vary by ±1" to provide uniform panel spacing (P).
- ③ Panel spacing (P) shall be uniform for entire truss and between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

N:\Ideas\0710122-000023\Structure\0710122-52.SHT

<p>CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 W. Higgins Road, Suite 600 Rosemont, Illinois 60018 (847) 823-0500</p>	USER NAME = PRAZALAN	DESIGNED - JMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.I. 80 FOR NS RAILROAD TO US 45 OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS FOR TRUSS TYPES I-A, II-A AND III-A				F.A.I. RTE. 80	SECTION 99 (5&5-1) Y-1	COUNTY WILL	TOTAL SHEETS 180	SHEET NO. 180
	PLOT SCALE = 1'	DRAWN - PDR	REVISED -		SCALE:	SHEET NO. OF SHEETS STA. TO STA.	CONTRACT NO. 60M59		ILLINOIS FED. AID PROJECT				
	PLOT DATE = 12/23/2010	CHECKED - MM	REVISED -										
	DATE = 12/23/2010	DATE = 12/23/2010	REVISED -										

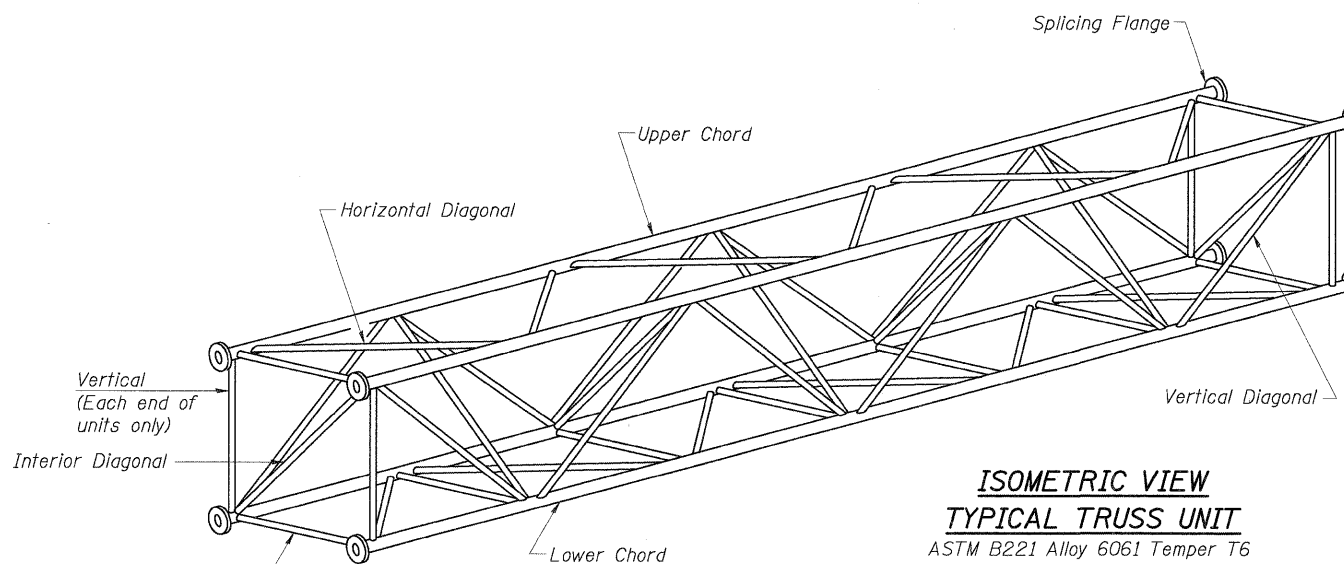
TRUSS UNIT TABLE

Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(L _e)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L _i)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	W ₁		
IS0991080R013.0	570+00 EB 180	S	5	28'-11 1/2"	5'-5"	1	6	33'-9"	5'-5"	7	5/16"	3 1/4"	5/16"	1.8"	6	1"	7/16"	5/16"	11 1/2"	15"
IS0991080L020.9	1010+00 WB 180	S	6	34'-1 1/2"	5'-4 1/2"	1	6	33'-6"	5'-4 1/2"	7	5/16"	3 1/4"	5/16"	2.3"	6	1"	7/16"	5/16"	11 1/2"	15"
IS0991080R022.2	1080+00 EB 180	S	6	34'-1 1/2"	5'-4 1/2"	1	6	33'-6"	5'-4 1/2"	7	5/16"	3 1/4"	5/16"	2.3"	6	1"	7/16"	5/16"	11 1/2"	15"

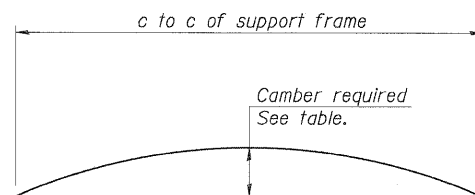


SECTION B-B

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



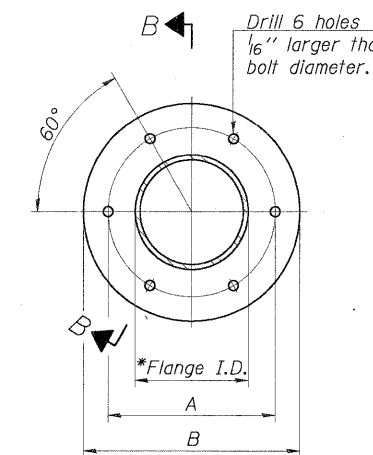
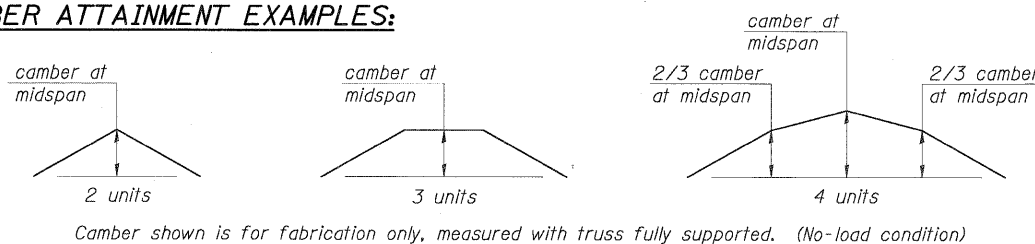
Note:
Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection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



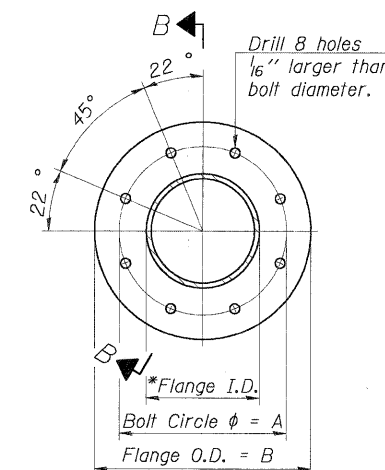
CAMBER DIAGRAM

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

CAMBER ATTAINMENT EXAMPLES:



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



TRUSS TYPES II-A & III-A

SPLICING FLANGES

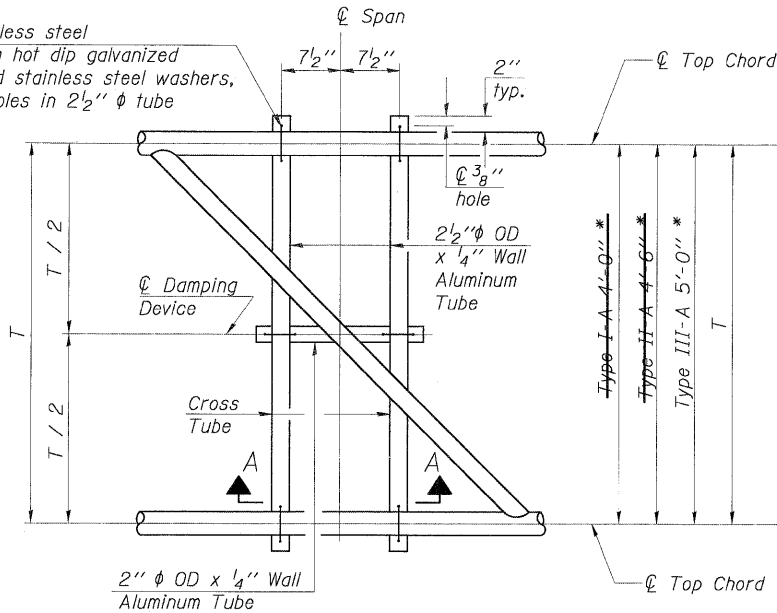
ASTM B221, Alloy 6061-T6 or ASTM B209, Alloy 6061-T651

*To fit O.D. of Chord with maximum gap of 1/16".

N:\des\1080\122-002023-Struct\1080122-53.dwg

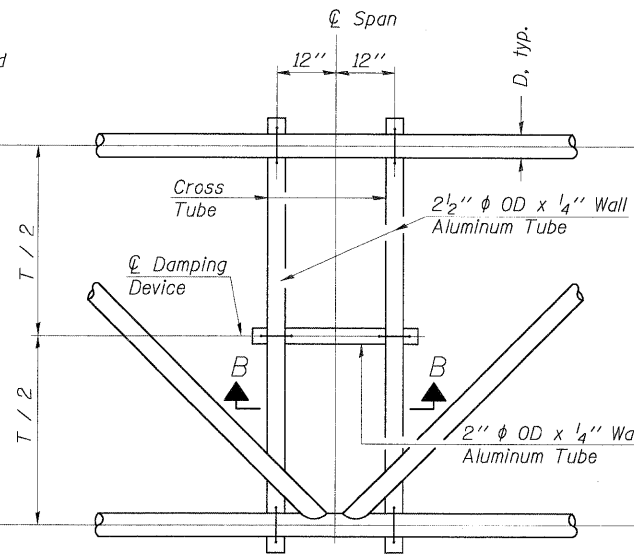
<p>CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 W. Higgins Road, Suite 600 Rosemont, Illinois 60018 (847) 823-0500</p>	USER NAME = PRAZALAN	DESIGNED - JMB	REVISED -	<p align="center">STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p>	<p align="center">F.A.I. 80 FOR NS RAILROAD TO US 45 OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS FOR TRUSS TYPES I-A, II-A AND III-A</p>				F.A.I. RTE. 80	SECTION 99 (5&5-1) Y-1	COUNTY WILL	TOTAL SHEETS 108K.	SHEET NO. 108K.
	PLOT SCALE = 1'	DRAWN - PDR	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 60M59					
	PLOT DATE = 12/23/2010	CHECKED - MM	REVISED -			ILLINOIS FED. AID PROJECT							
	DATE - 12/23/2010	DATE - 12/23/2010	REVISED -		S-3 OF S-11								

5/16" φ stainless steel
U-bolt with hot dip galvanized
locknuts and stainless steel washers,
typ. 3/8" φ holes in 2 1/2" φ tube



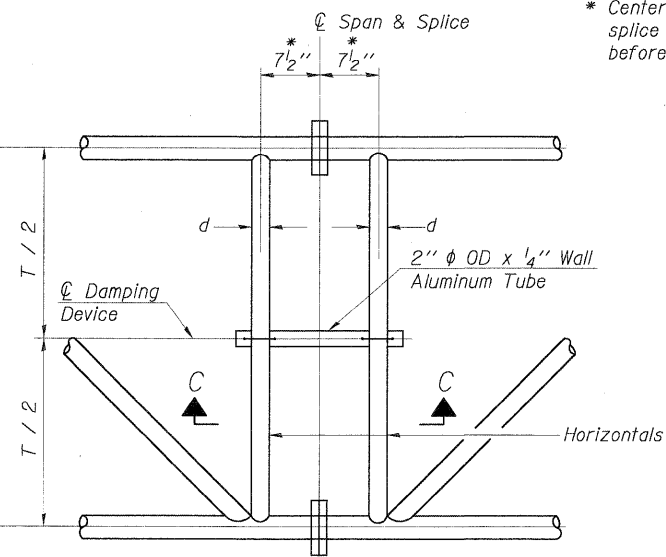
PLAN DETAIL "A"

Span between Panel Points



PLAN DETAIL "B"

Span at Panel Point



PLAN DETAIL "C"

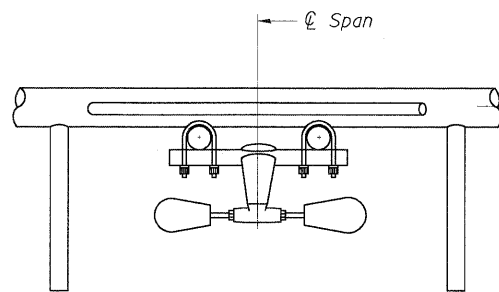
Span at Chord Splice

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

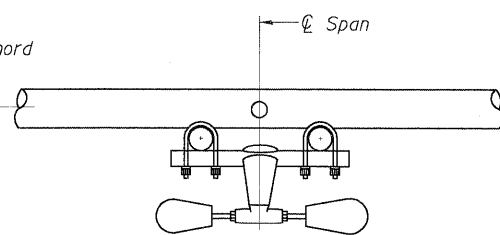
NOTES

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

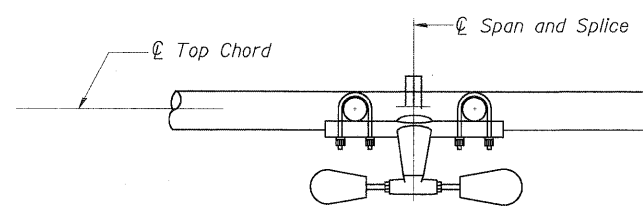
Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



SECTION A-A

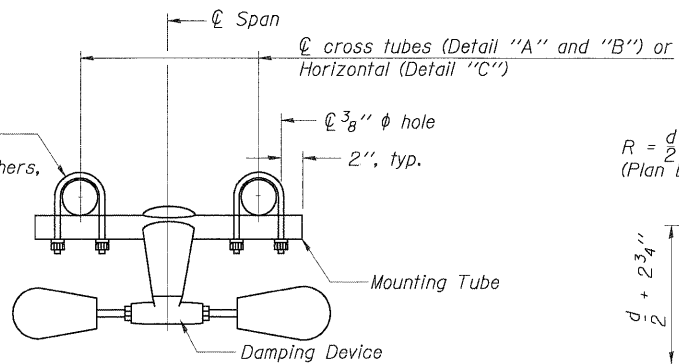


SECTION B-B

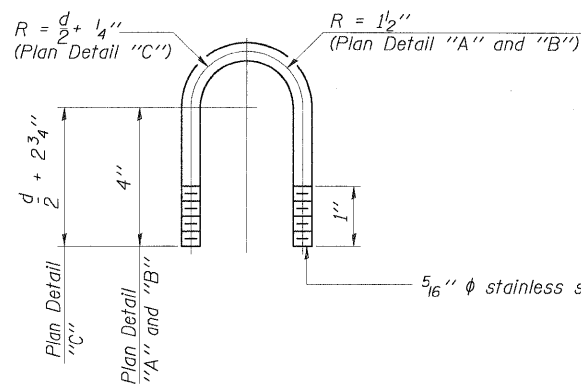


SECTION C-C

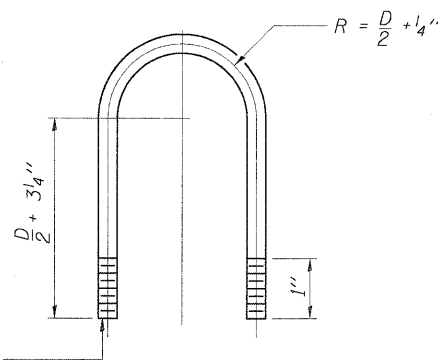
5/16" φ stainless steel
U-bolt with hot dip galvanized
locknuts and stainless steel washers,
typ. 3/8" φ holes in mounting tube



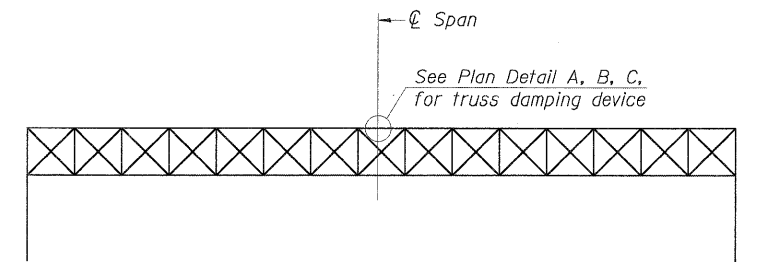
**TRUSS DAMPING
DEVICE CONNECTION DETAIL**
(Typical)



**DAMPING DEVICE MOUNTING
TUBE U-BOLT DETAIL**
(Typical)



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

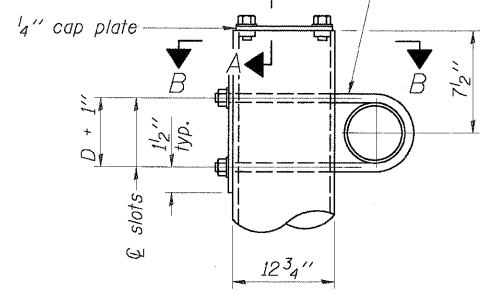


ELEVATION
Aluminum Overhead
Sign Truss

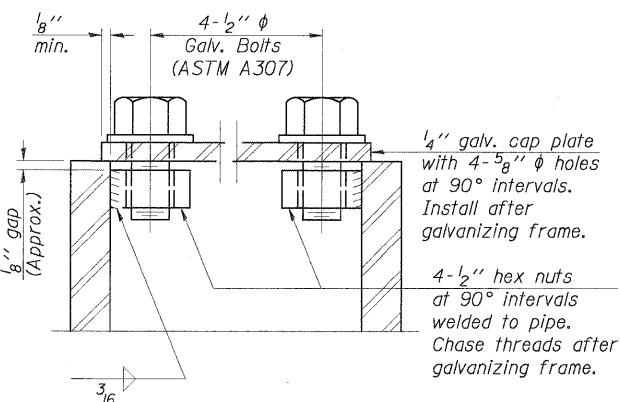
N:\Tides\070122_070203\Structure\09122-94.SHT

<p>CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 W. Higgins Road, Suite 600 Rosemont, Illinois 60018 (847) 823-0500</p>	USER NAME = PRAZALAN	DESIGNED - JMB	REVISED -	<p>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p>	<p>F.A.I. 80 FOR NS RAILROAD TO US 45 OVERHEAD SIGN STRUCTURE DAMPING DEVICE</p>			F.A.I. RTE. 80	SECTION 99 (5&5-1) Y-1	COUNTY WILL	TOTAL SHEETS 188	SHEET NO. 188L
	PLOT SCALE = 1"	CHECKED - MM	REVISED -					CONTRACT NO. 60M59				
	PLOT DATE = 12/23/2010	DATE - 12/23/2010	REVISED -					ILLINOIS FED. AID PROJECT				
								SCALE:	SHEET NO. OF SHEETS	STA. TO STA.		

3/4" φ stainless steel U-bolt.
Provide two washers and two hexagon locknuts. (4)
13/16" x 2" slots on 12" φ pipe.
(4 slots required per pipe)

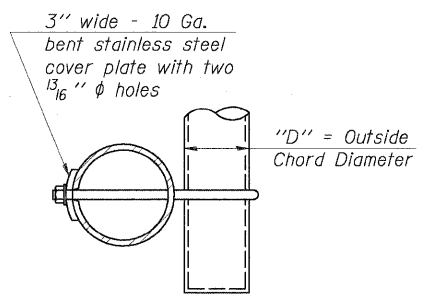


DETAIL A

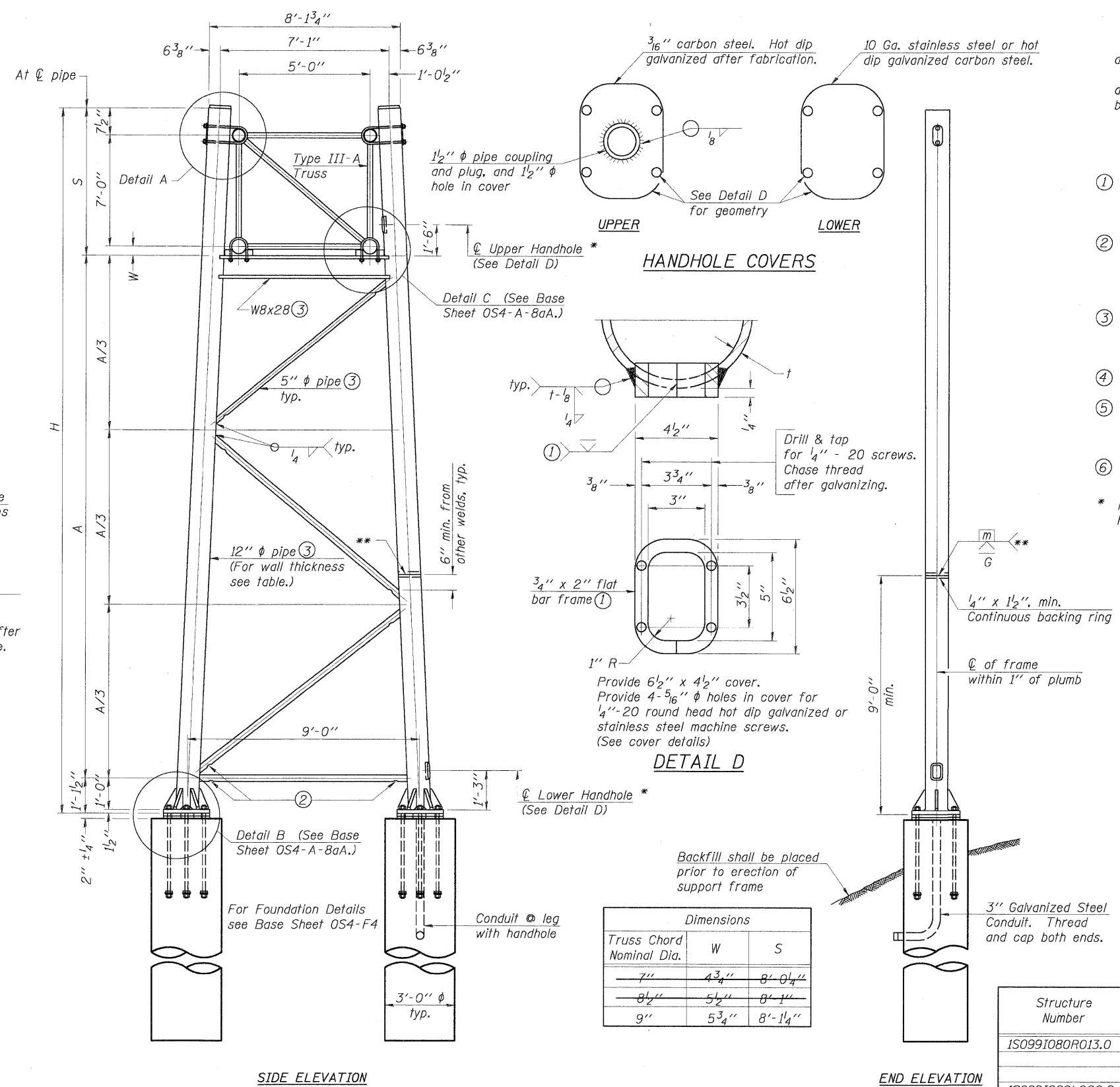


SECTION A-A

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



SECTION B-B



SIDE ELEVATION

END ELEVATION

TRUSS SUPPORT DETAILS

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

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

- ① In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μ in or less.
 - ② Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
 - ③ Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Sheet S-1.
 - ④ See General Notes for Fasteners.
 - ⑤ Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
 - ⑥ "H" based on 15'-0" or actual sign height, whichever is greater.
- * For dynamic message sign installations, provide upper and lower handholes in both legs of each support frame.

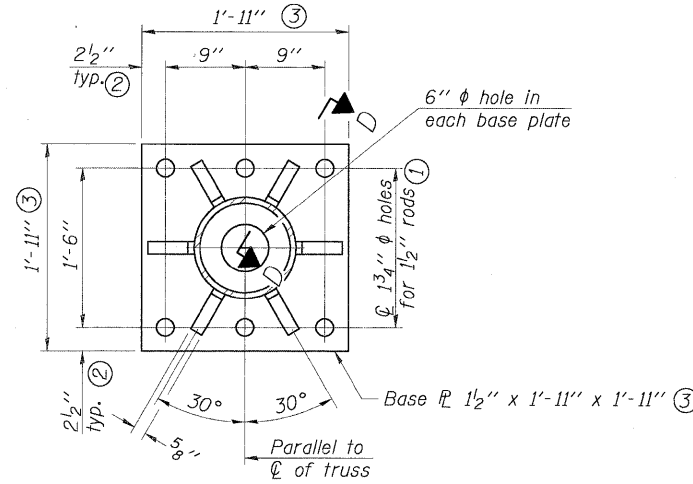
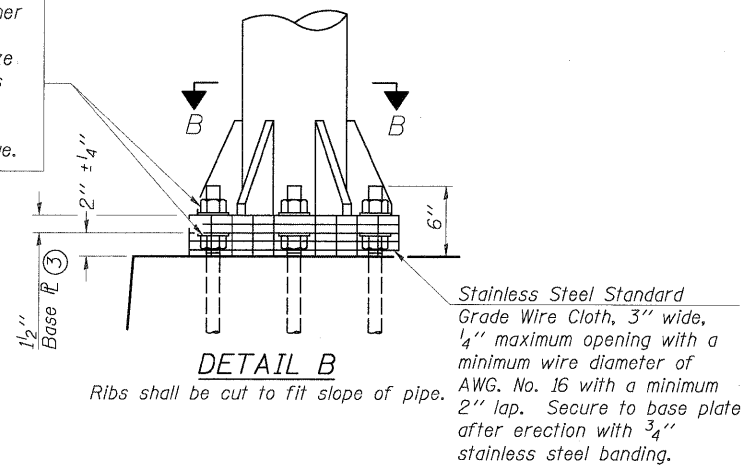
Structure Number	Station	Support		Pipe Wall Thickness	H (6)	A
		Left	Right			
IS0991080R013.0	570+00 EB I80	X		0.33	30'-3 1/2"	21'-1 3/4"
			X	0.33	30'-0 3/4"	20'-10 7/8"
IS0991080L020.9	1010+00 WB I80	X		0.33	26'-9 1/4"	17'-7 1/2"
			X	0.33	27'-10 3/8"	18'-8 5/8"
IS0991080R022.2	1080+00 EB I80	X		0.33	26'-7 3/8"	17'-5 5/8"
			X	0.33	33'-5 5/8"	24'-4 5/8"

NOTE: Left Support Is The Median Support.

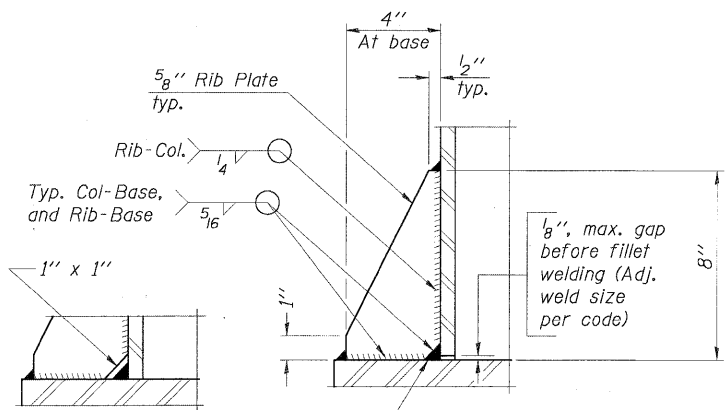
N:\Lds\109122_000025\15-struct\109122-55.SHT

<p>CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 W. Higgins Road, Suite 600 Rosemont, Illinois 60018 (847) 623-0500</p>	USER NAME = PRAZALAN	DESIGNED - JMB	REVISED -	<p align="center">STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p>	<p align="center">F.A.I. 80 FOR NS RAILROAD TO US 45 OVERHEAD SIGN STRUCTURES - SUPPORT FRAME FOR TYPE III-A ALUMINUM TRUSS</p>	F.A.I. RTE. 80	SECTION 99 (S&S-1) Y-1	COUNTY WILL	TOTAL SHEETS 188M.	SHEET NO. 188M.
	PLOT SCALE = 1"	CHECKED - MM	REVISED -			SCALE:	SHEET NO. OF SHEETS STA. TO STA.	CONTRACT NO. 60M59		
	PLOT DATE = 12/23/2010	DATE - 12/23/2010	REVISED -			ILLINOIS FED. AID PROJECT				

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



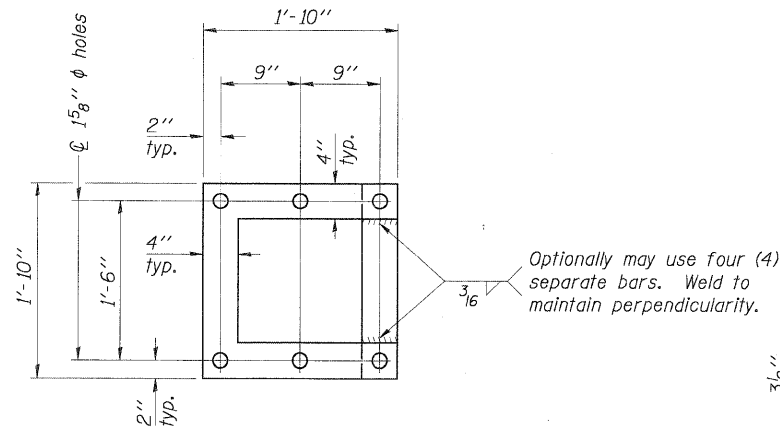
SECTION B-B



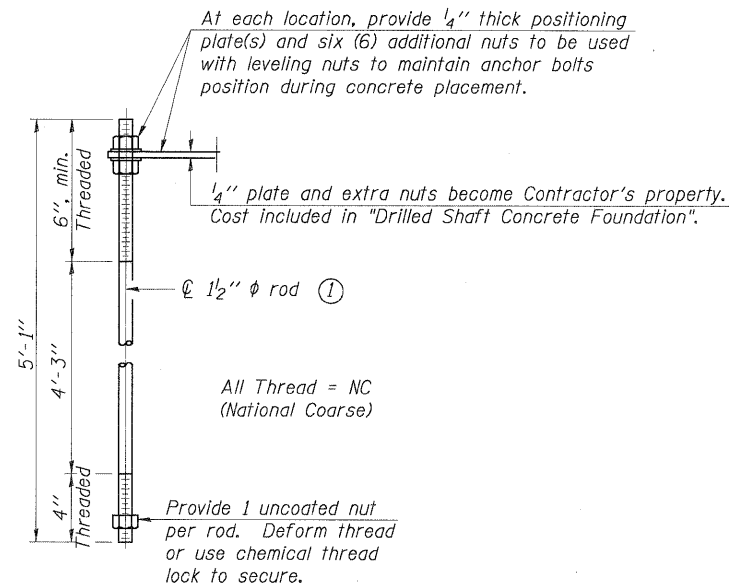
SECTION D-D

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

No snip req'd. at rib inside corner if placed before col. to base plate welding.**



POSITIONING PLATE(S)



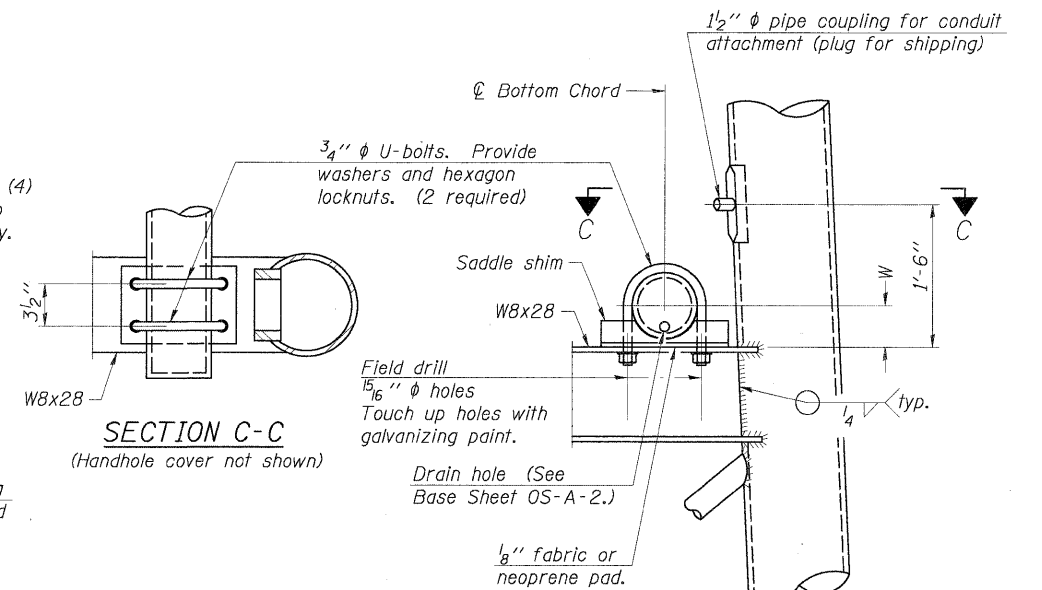
ANCHOR ROD DETAIL

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

**TYPE III-A TRUSS
12" φ PIPE SUPPORT FRAME DETAILS**

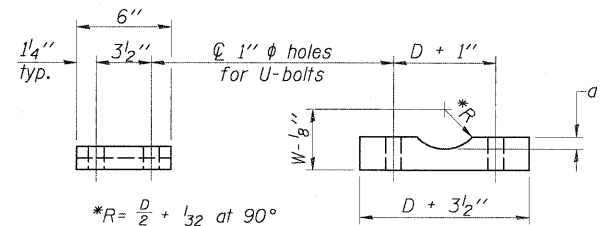
Notes:
For Type III-A Truss spans greater than 150 ft. and up to 160 ft.:

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



SECTION C-C

(Handhole cover not shown)



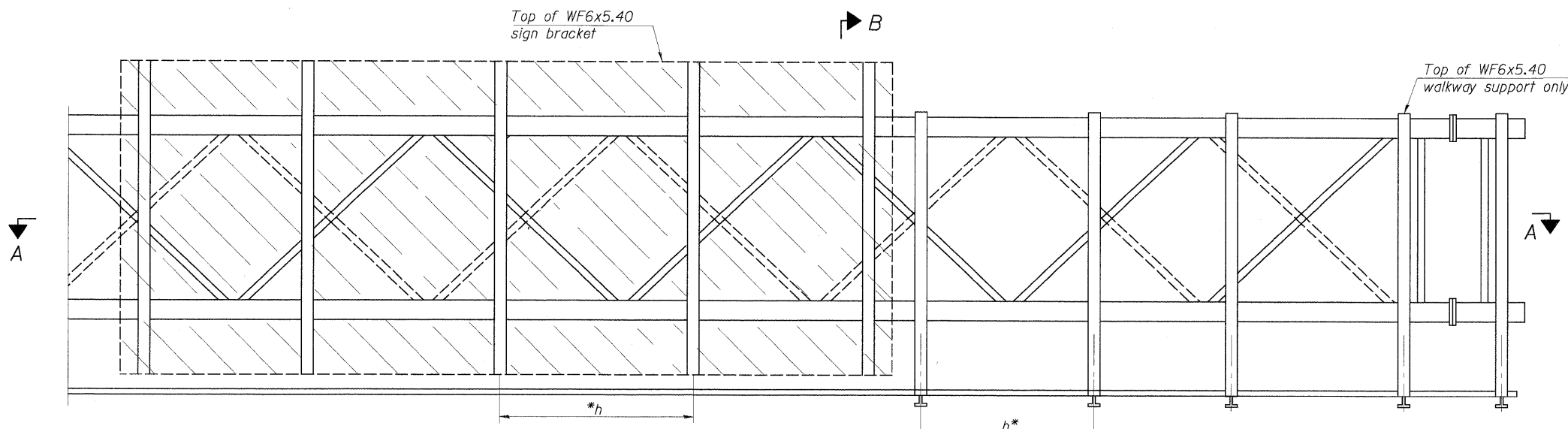
*R = $\frac{D}{2} + \frac{1}{32}$ at 90°
D = Outside Diameter of Chord.
For W, see Base Sheet OS-A-6.

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

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

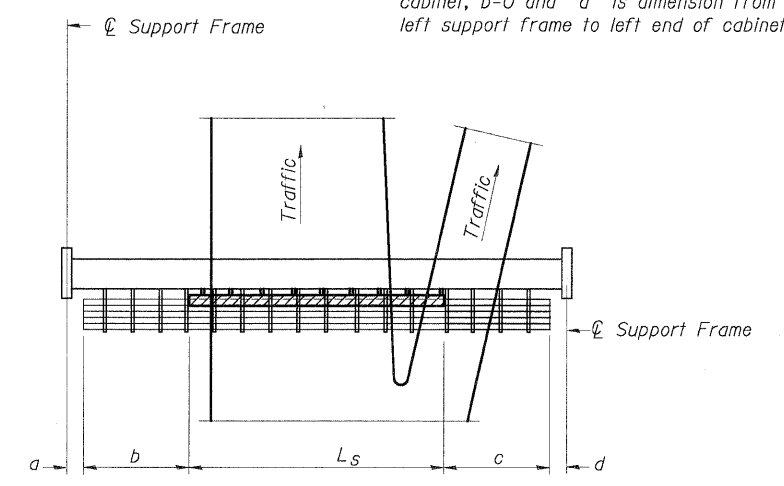
N:\ides\p122-000025-Struct\p122-565.SHT

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

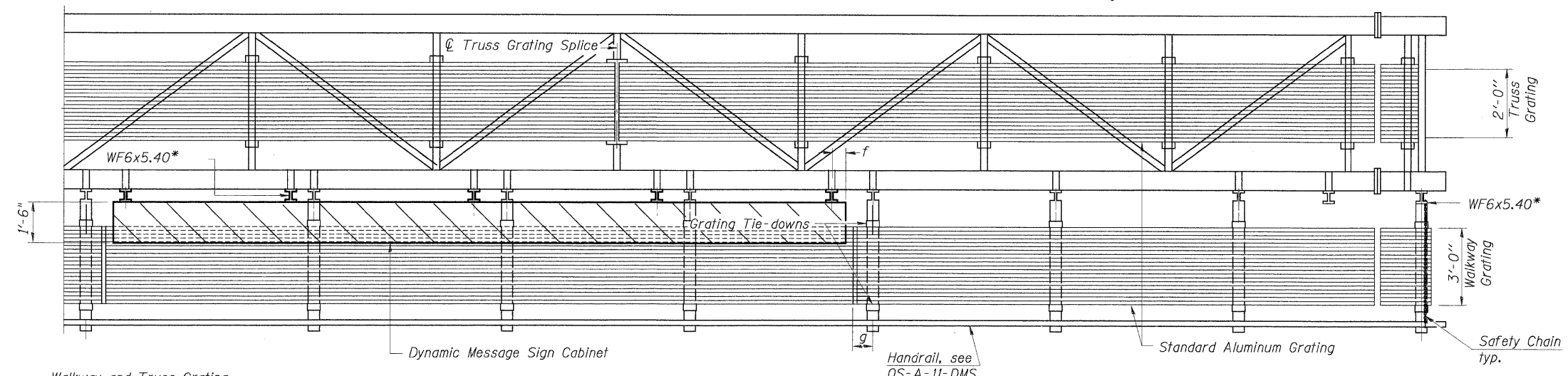


TYPICAL FRONT ELEVATION
With handrail omitted for clarity.

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



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



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

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

SECTION A-A

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

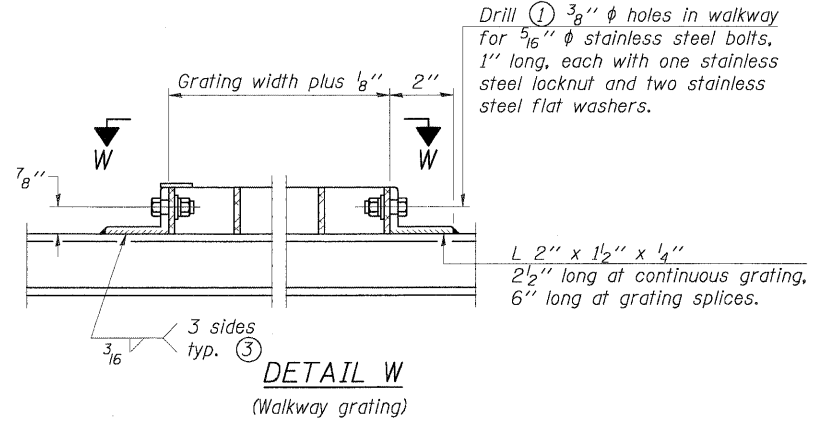
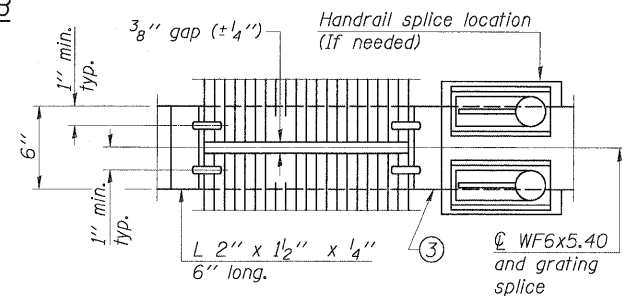
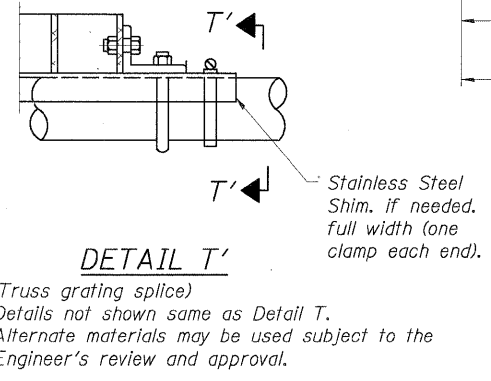
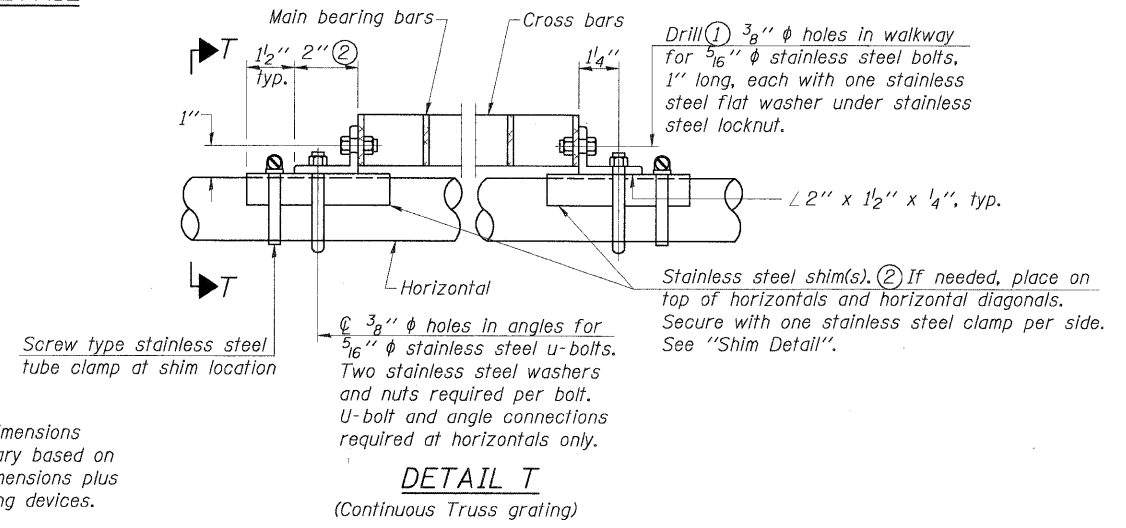
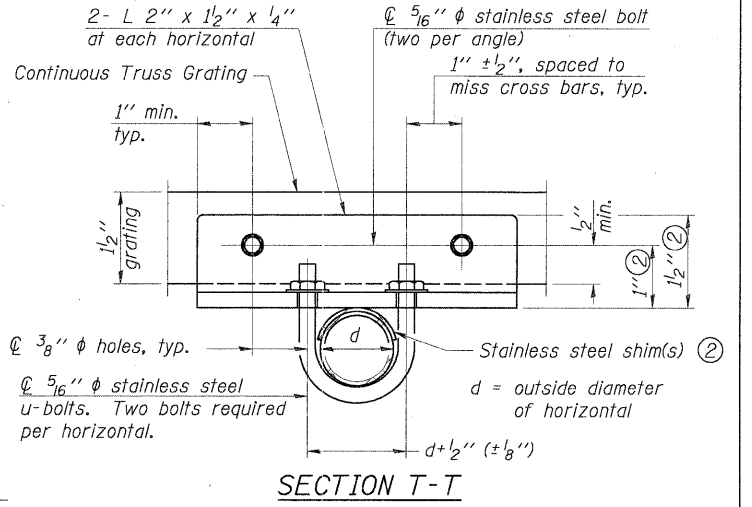
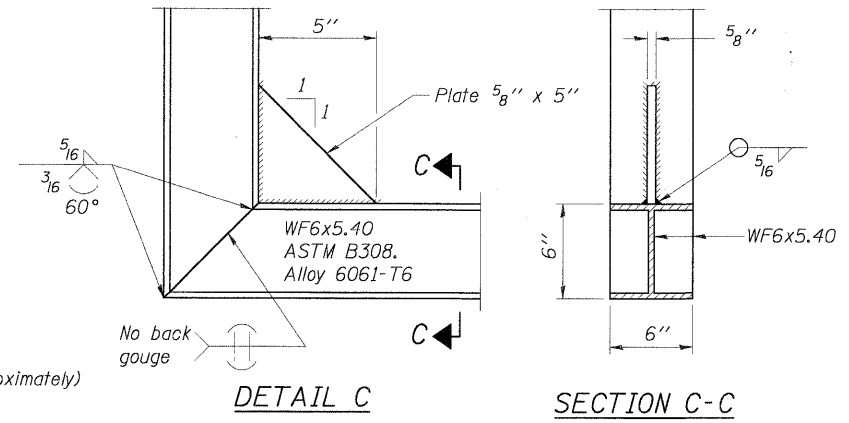
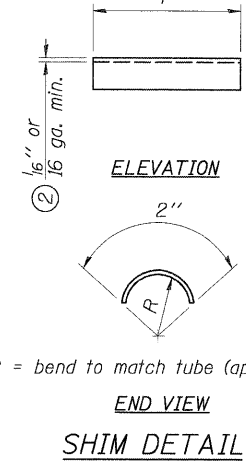
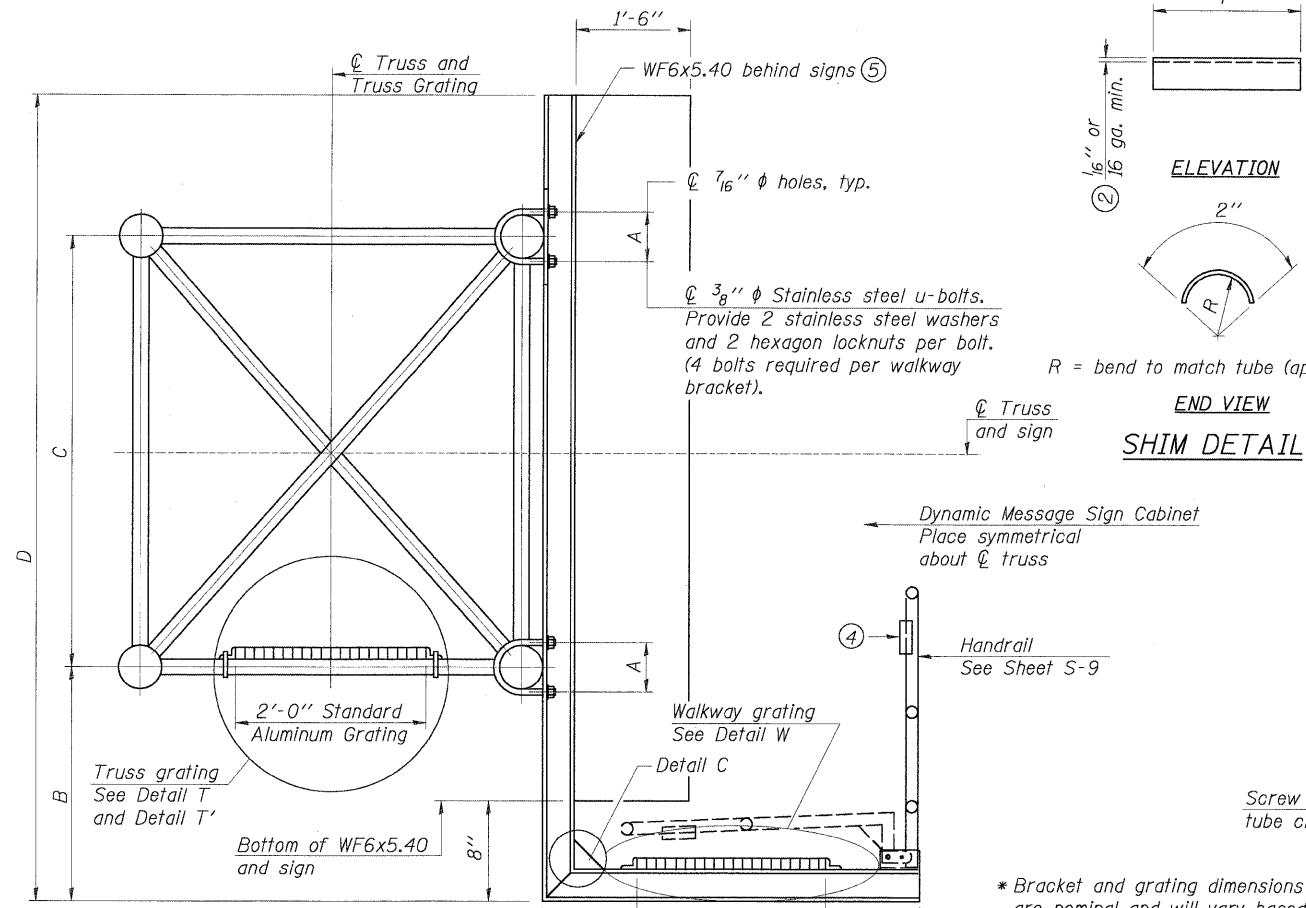
BRACKET TABLE

WF6x5.40 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
8'-0"	8'-0"	2
14'-0"	14'-0"	3
20'-0"	20'-0"	4
26'-0"	26'-0"	5
32'-0"	32'-0"	6

Notes:
 * Space walkway brackets WF6x5.40 for efficiency and within limits shown:
 f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
 g = 12" maximum, 4" minimum (End of walkway grating to center of nearest support bracket)
 h = 6'-0" maximum (center to center of sign and/or walkway support brackets, WF6x5.40)
 Maximum DMS weight = 5000 lbs. 4'-2" maximum cabinet depth includes depth of cabinet plus connection to WF6x5.40.
 For Section B-B and Grating Splice Details, see Sheet S-8.
 For Handrail Splice Details, see Sheet S-9.

Structure Number		a	b	c	d	L _s	Walkway Grating and Handrail Lengths
IS0991080R013.0	570+00 EB I80	25'-0"	4'-0"	4'-0"	27'-0"	30'-0"	38'-0"
IS0991080L020.9	1010+00 WB I80	9'-6"	7'-0"	7'-0"	46'-6"	30'-0"	44'-0"
IS0991080R022.2	1080+00 EB I80	9'-6"	7'-0"	7'-0"	46'-6"	30'-0"	44'-0"

N:\data\1010122\00003 Structures\1010122-57.SHT



SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

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

OR

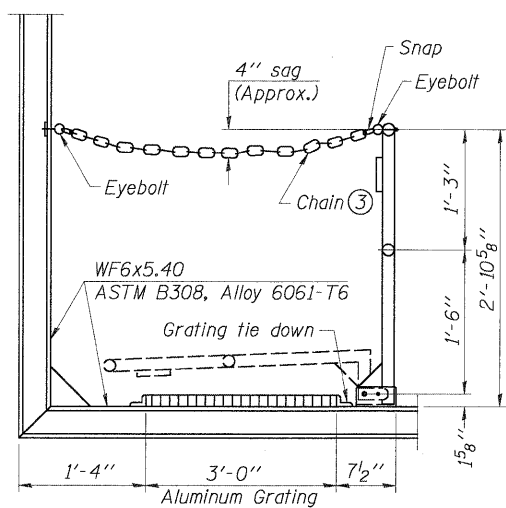
Aluminum Grating with modified "T" sections for main bearing bars shall meet the following requirements:

Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in. per bar, a depth of 1 1/2", spaced on 1 3/16" centers.
 Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

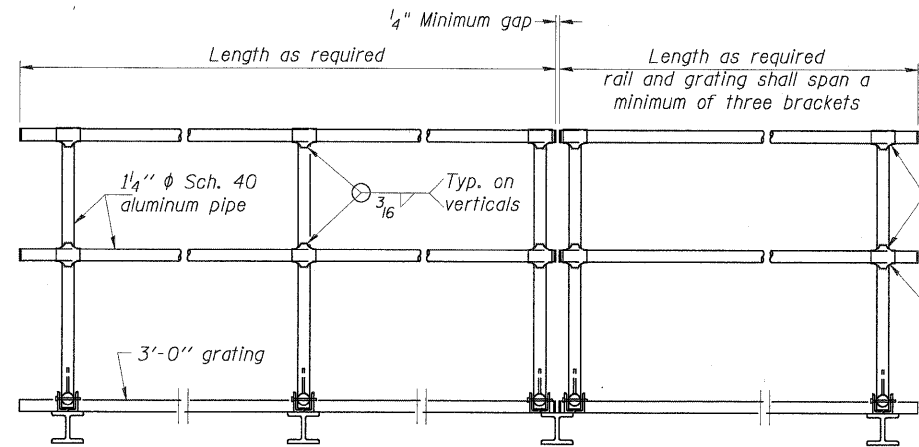
Structure Number	Station	A	⑥ B	C	⑥ D
ISO991080R013.0	570+00 EB 180	7 1/2"	1'-2"	7'-0"	8'-8"
ISO991080L020.9	1010+00 WB 180	7 1/2"	1'-2"	7'-0"	8'-8"
ISO991080R022.2	1080+00 EB 180	7 1/2"	1'-2"	7'-0"	8'-8"

- 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 Sheet S-9.)
- ④ L 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- ⑤ 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.
- ⑥ Based on actual height of tallest sign given on S-1.

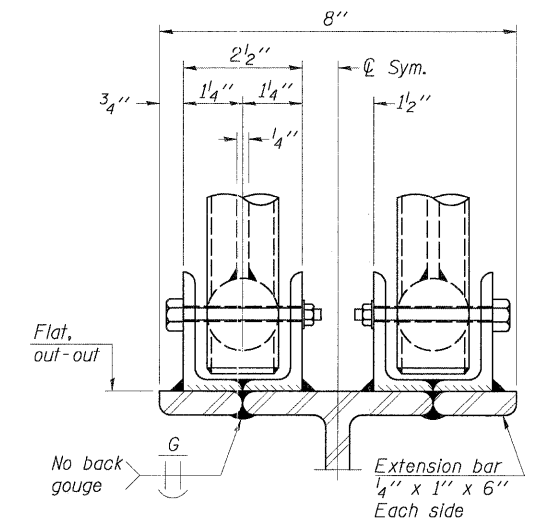
N:\data\10122_000025\Structure\10122-58.SHT



SIDE ELEVATION
(Showing safety chain w/o sign)



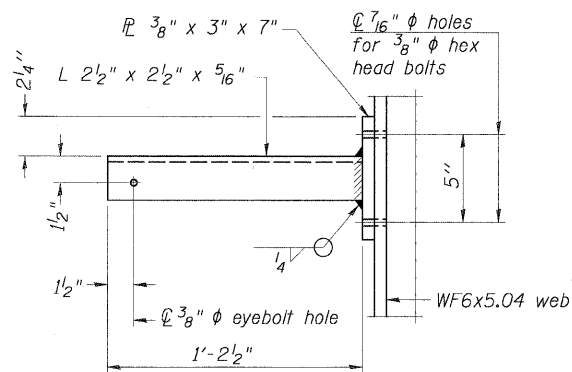
FRONT ELEVATION



ELEVATION AT HANDRAIL JOINT (4)

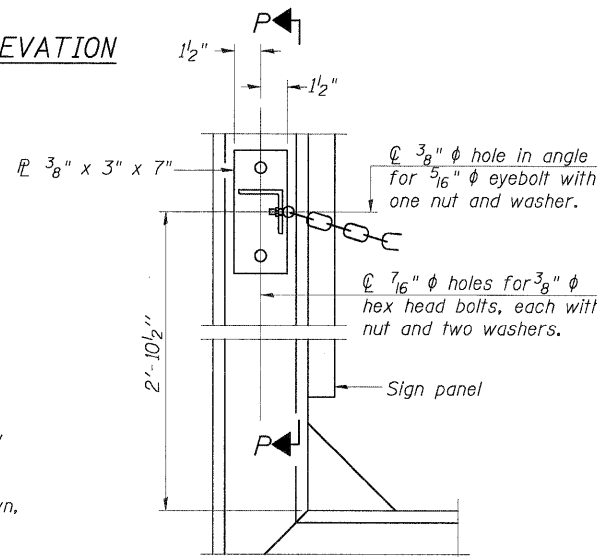
HANDRAIL DETAILS

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



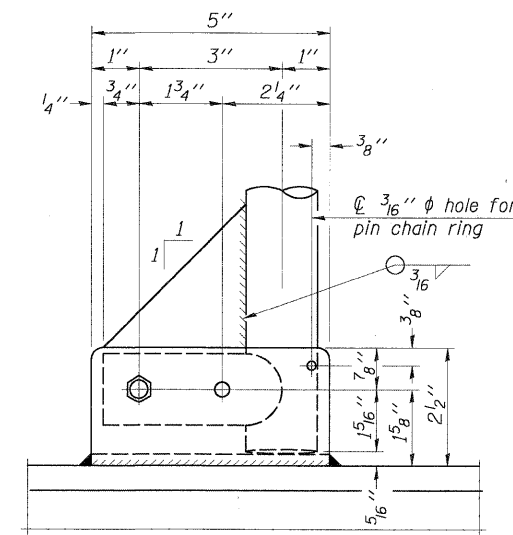
SECTION P-P

- (2) Horizontal handrail member shall be continuous thru fitting. Provide 7/16\"/>
- (3) 3/16\"/>
- (4) Extrusions may be used in lieu of the details shown, with approval of the Engineer.

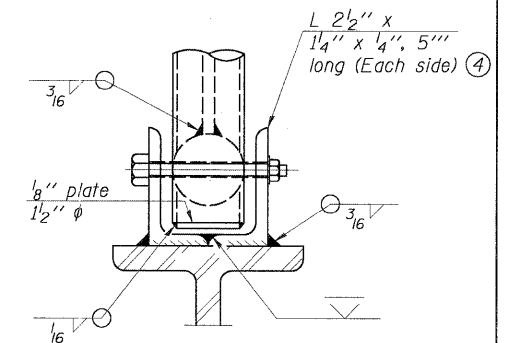


ALTERNATE SAFETY CHAIN ATTACHMENT

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

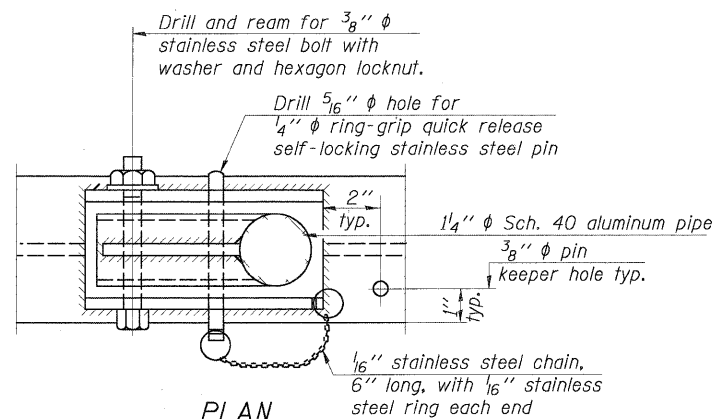


SIDE ELEVATION

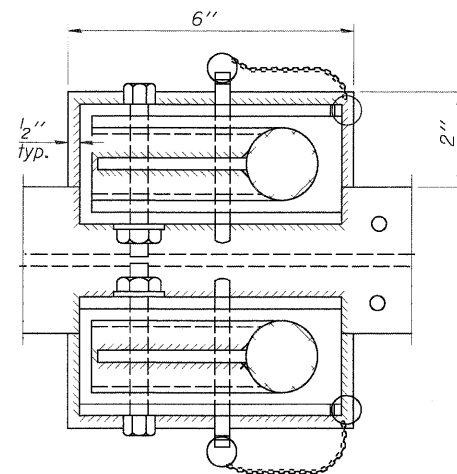


FRONT ELEVATION

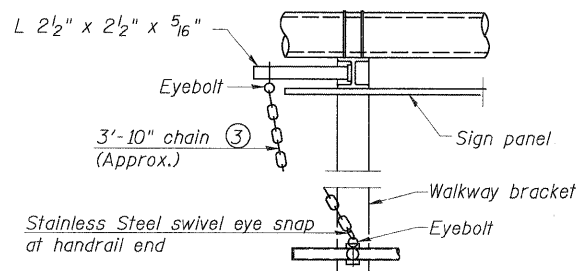
See "ELEVATION" at right for dimensions.



PLAN
DETAIL E HANDRAIL HINGE

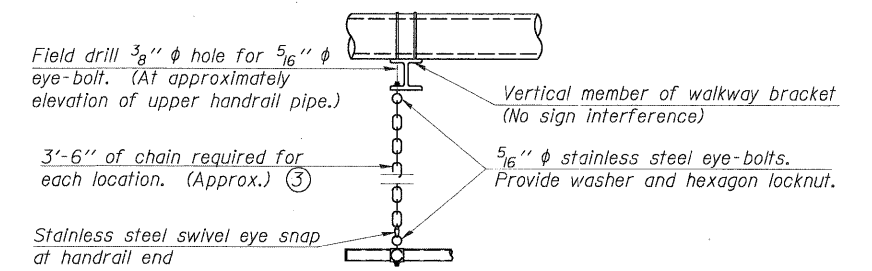


PLAN AT HANDRAIL JOINT
Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT

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



SAFETY CHAIN

One required for each end of each walkway.

N:\1000\1000122\000003\Structure\1000122-57.dwg

<p>CHRISTOPHER B. BURKE ENGINEERING, LTD. 8575 W. Higgins Road, Suite 600 Rosemont, Illinois 60018 (847) 823-0500</p>	USER NAME = PRAZALAN PLOT SCALE = 1' PLOT DATE = 12/23/2010	DESIGNED - JMB DRAWN - PDR CHECKED - MM DATE - 12/23/2010	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.I. 80 FOR NS RAILROAD TO US 45 OVERHEAD SIGN STRUCTURES ALTERNATE ALUMINUM HANDRAIL DETAILS FOR DMS	F.A.I. RTE. 80 SECTION 99 (S&S-1) Y-1 COUNTY WILL CONTRACT NO. 60M59	TOTAL SHEETS 108 SHEET NO. 9
	SCALE: SHEET NO. OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT				

BAR LIST - EACH FOUNDATION

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

NOTES:

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

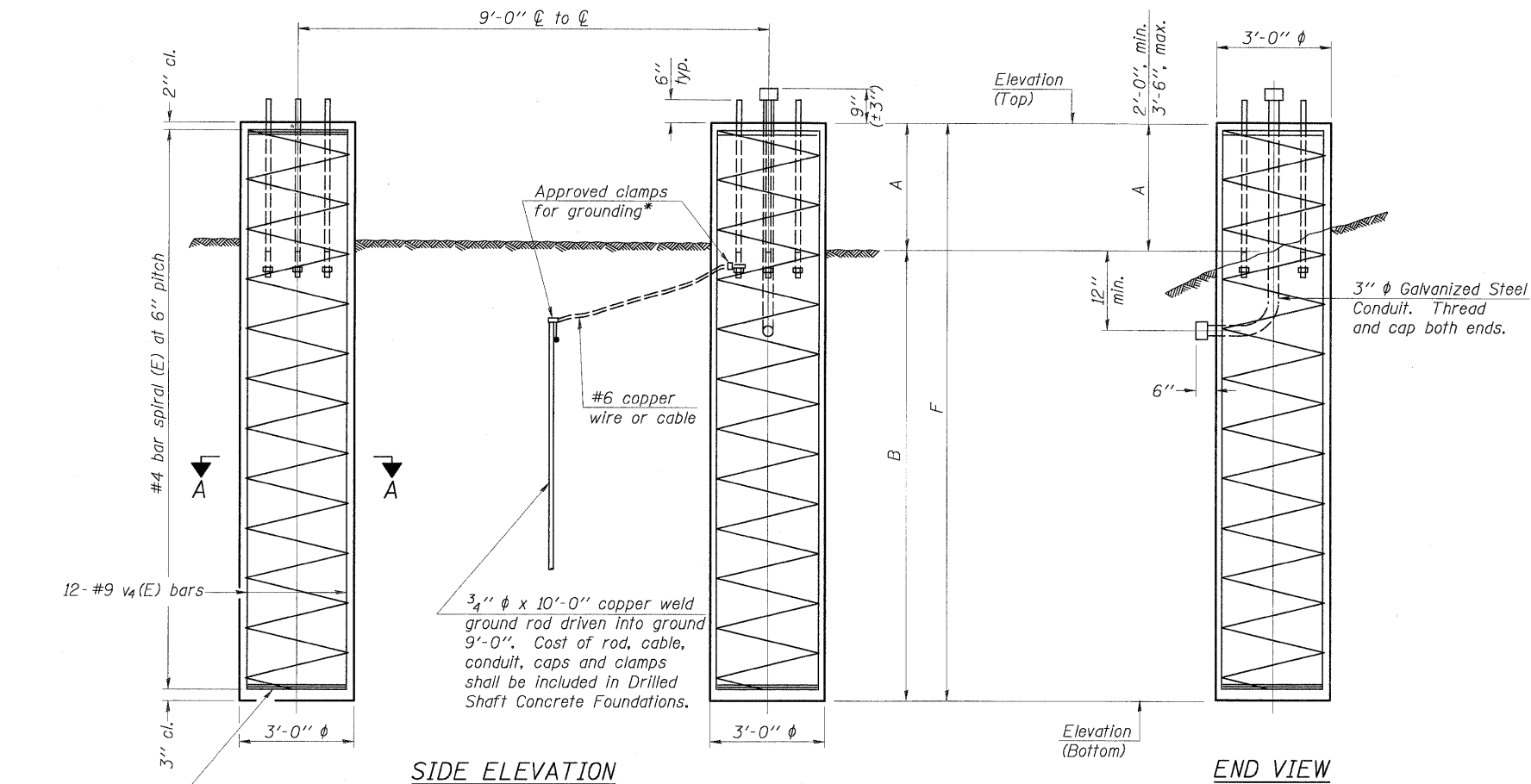
If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District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

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

Concrete shall be placed monolithically, without construction joints.

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

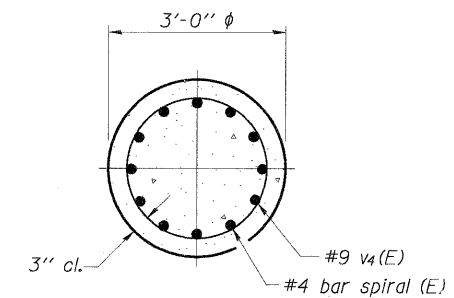
A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



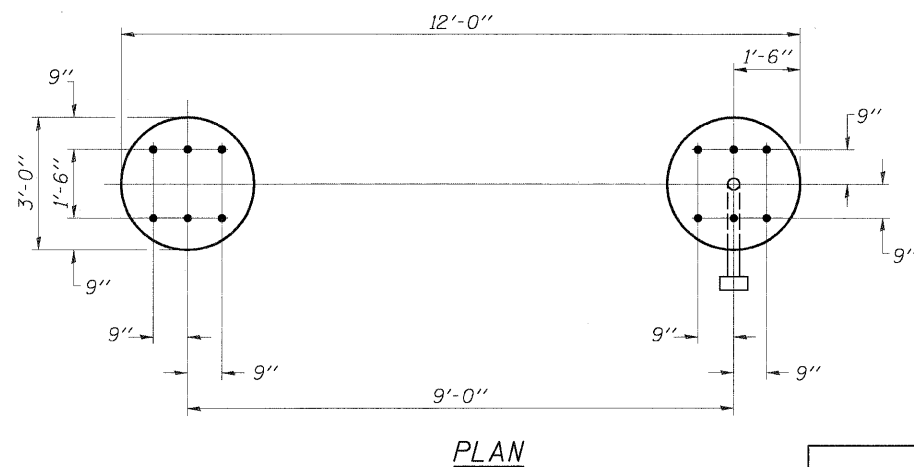
3 hoops minimum top and bottom

SIDE ELEVATION

END VIEW



SECTION A-A



PLAN

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

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

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

Structure Number	Station	Left Foundation					Right Foundation					Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	
IS099I080R013.0	570+00 EB I80	647.51	626.51	3'-0"	18'-0"	21'-0"	647.75	626.75	3'-0"	18'-0"	21'-0"	22.0
IS099I080L020.9	1010+00 WB I80						727.64	706.64	3'-0"	18'-0"	21'-0"	11.0
IS099I080R022.2	1080+00 EB I80						692.47	671.47	3'-0"	18'-0"	21'-0"	11.0

NOTE: Left Foundation Is Median Foundation.

N:\data\1091022\00003 Structures\1091022-S10-SHT

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

USER NAME = PRAZALAN
 DESIGNED - JMB
 DRAWN - PDR
 CHECKED - MM
 DATE - 12/23/2010

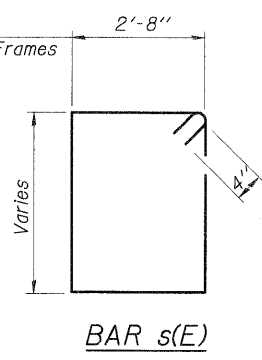
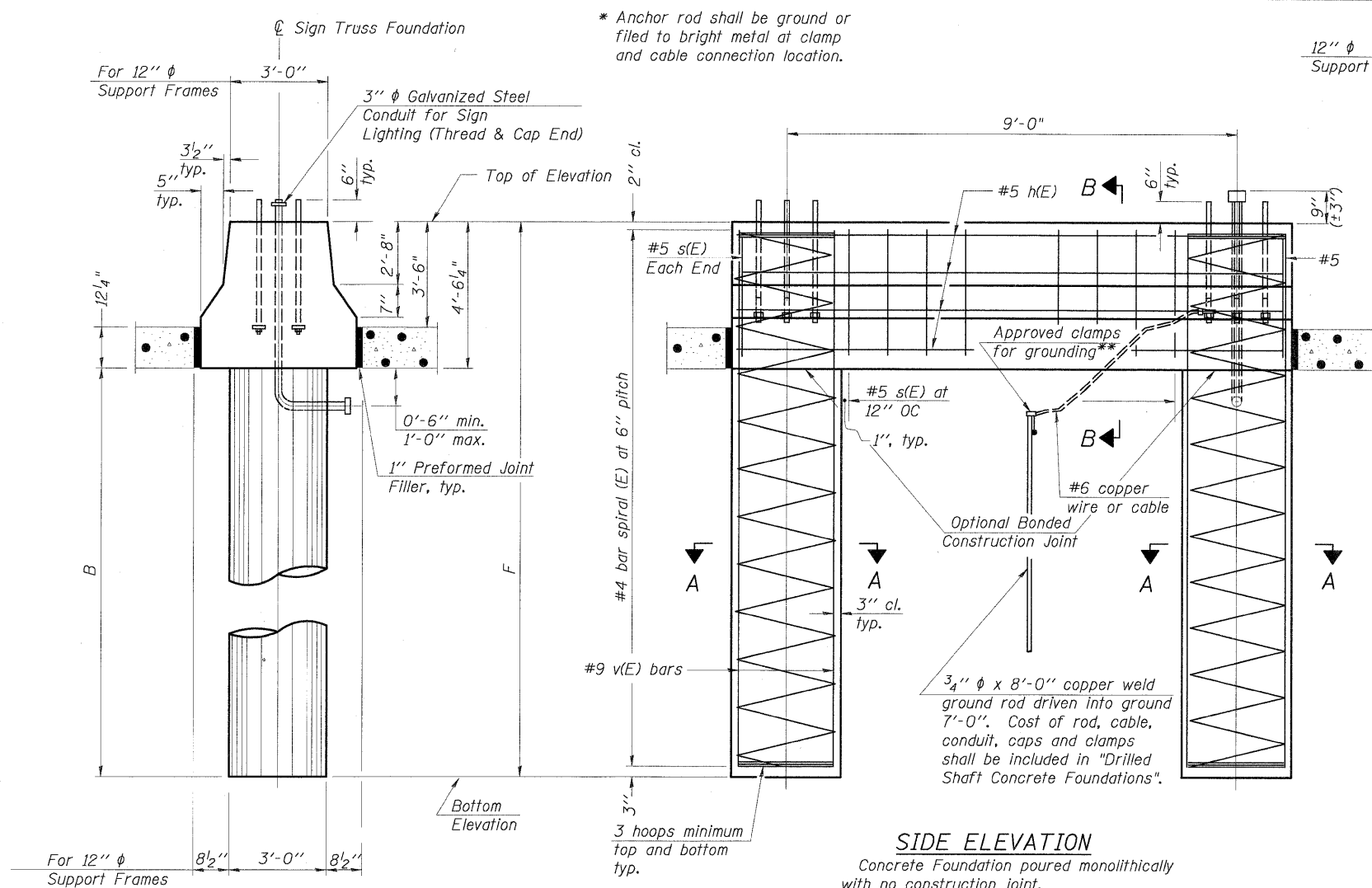
REVISER -
 REVISER -
 REVISER -
 REVISER -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

F.A.I. 80 FOR NS RAILROAD TO US 45
 OVERHEAD SIGN STRUCTURES
 DRILLED SHAFT DETAILS

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

F.A.I. RTE. 80 SECTION 99 (S&S-1) Y-1 COUNTY WILL TOTAL SHEETS 188 R. SHEET NO. 188 R. CONTRACT NO. 60M59 ILLINOIS FED. AID PROJECT



NOTES:

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

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

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

Concrete shall be placed monolithically, without construction joints.

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

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

BAR LIST - EACH FOUNDATION

Pipe Support Frames	cc	M	a	a/2
6" ϕ	7'-0"	9'-6"	0'-11"	5 1/2"
8" ϕ	7'-8"	10'-0"	1'-12"	6 3/4"
10" ϕ	8'-3"	11'-3"	1'-3"	7 1/2"
12" ϕ	9'-0"	12'-0"	1'-6"	9"

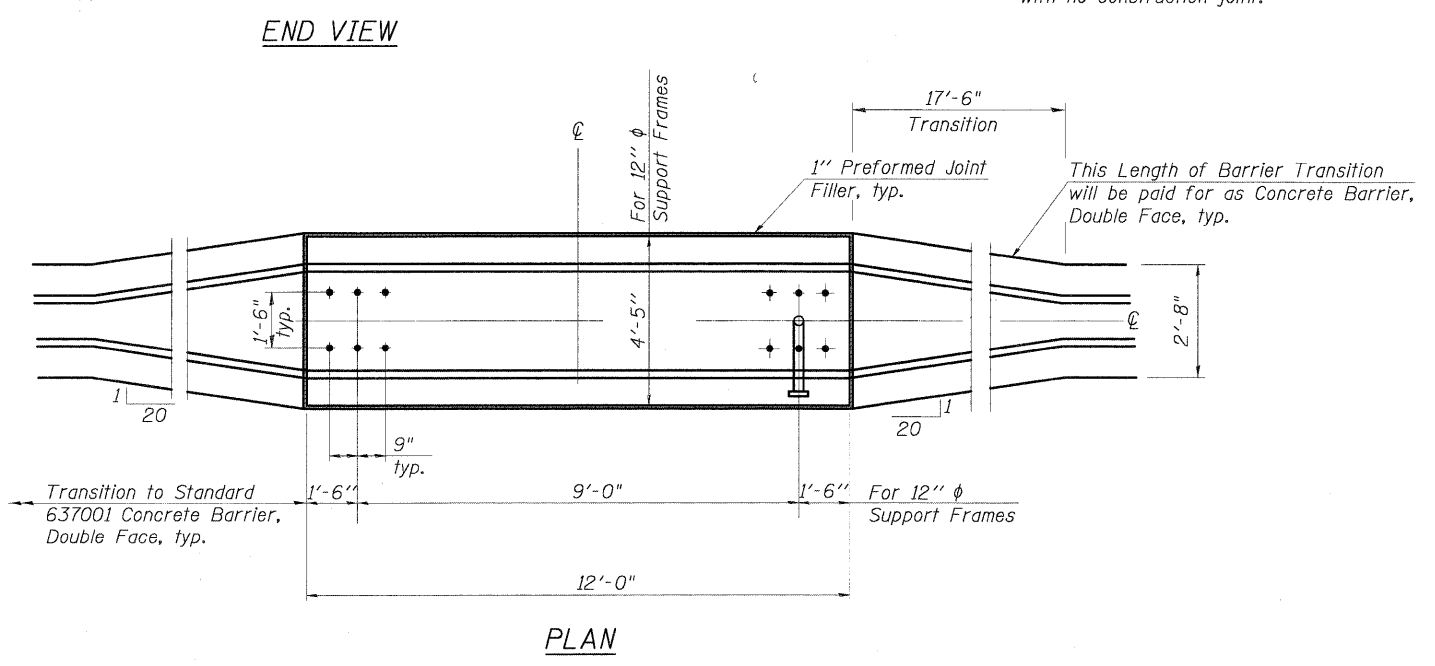
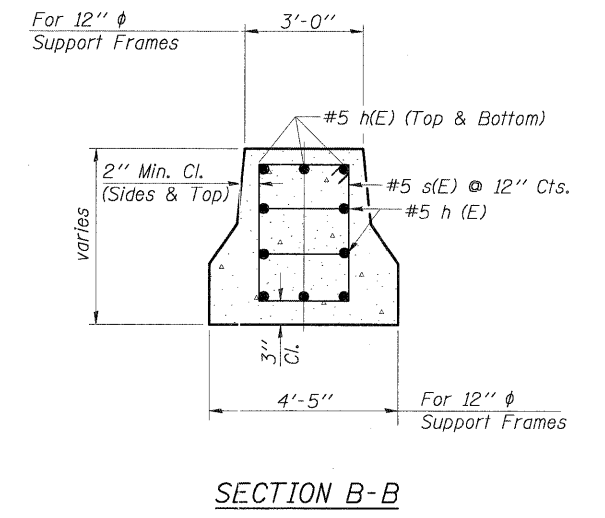
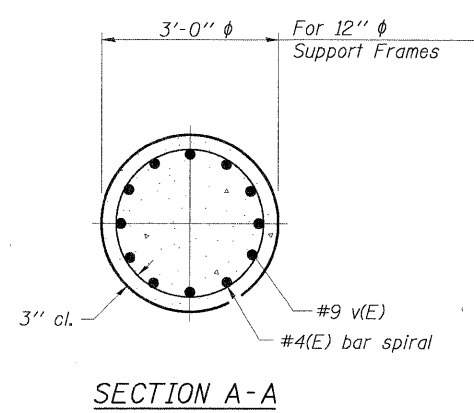
Bar	Number	Size	Length	Shape
h(E)	10	#5	M less 4"	—
s(E)	Varies	#5	Varies	□
v(E)	16	#9	F less 0'-5"	—
v(E)	24	#9	F less 0'-5"	—

#4(E) bar spiral - see Side Elevation

6" ϕ and 8" ϕ Support Frame

10" ϕ and 12" ϕ Support Frame

All dimensions in parenthesis are for 42" high barrier.



Structure Number	Station	Left Foundation				Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	B	F	
IS099I080L020.9	1010+00 WB 180	728.73	706.21	18'-0"	22'-6 1/4"	16.9
IS099I080R022.2	1080+00 EB 180	699.34	676.82	18'-0"	22'-6 1/4"	16.9

N:\Users\p1910122\000003\5\p1910122-5115H1

CHRISTOPHER B. BURKE ENGINEERING, LTD.
 9575 W. Higgins Road, Suite 800
 Rosemont, Illinois 60018
 (847) 823-0500

USER NAME = PRAZALAN	DESIGNED - JMB	REVISED -
PLOT SCALE = 1'	DRAWN - PDR	REVISED -
PLOT DATE = 12/23/2010	CHECKED - MM	REVISED -
	DATE - 12/23/2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. 80 FOR NS RAILROAD TO US 45
OVERHEAD SIGN STRUCTURES
MEDIAN SUPPORT FOUNDATION DETAILS

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

F.A.I. RTE. 80	SECTION 99 (5&S-1) Y-1	COUNTY WILL	TOTAL SHEETS 188	SHEET NO. 188
CONTRACT NO. 60M59				ILLINOIS FED. AID PROJECT

CODE NO.	ITEM	UNIT	TOTAL	CHERRY HILL ROAD	WOLF ROAD	LAGRANGE ROAD
* 20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	30	10	10	10
* 20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	30	10	10	10
* 20100110	TREE PRUNING (1 TO 10 INCH DIAMETER)	EACH	30	10	10	10
* 20101350	TREE PRUNING (OVER 10 INCH DIAMETER)	EACH	30	10	10	10
2101605	TOPSOIL FURNISH AND PLACE, 2"	SQ YD	1600	650	300	650
2500020	SEEDING, CLASS 2A	ACRE	0.36	0.13	0.10	0.13
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	97	35	27	35
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	97	35	27	35
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	97	35	27	35
25100105	MULCH, METHOD 1	ACRE	0.36	0.13	0.10	0.13
25100630	EROSION CONTROL BLANKET	SQ YD	1600	650	300	650
44001980	CONCRETE BARRIER REMOVAL	FOOT	47	0	0	47
44001250	PAVED SHOULDER REMOVAL	SQ YD	11	0	0	11
48300705	PORTLAND CEMENT CONCRETE SHOULDERS 12 1/4"	SQ YD	5	0	0	5
50300225	CONCRETE STRUCTURES	CU YD	15	15	0	0
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	900	900	0	0
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	275	275	0	0
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE T1 SPECIAL, TANGENT	EACH	1	1	0	0
* 63100175	TRAFFIC BARRIER TERMINAL, TYPE 2 (SPECIAL)	EACH	1	1	0	0
63700275	CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT	FOOT	35	0	0	35
63700900	CONCRETE BARRIER BASE	FOOT	35	0	0	35
70101805	TRAFFIC CONTROL AND PROTECTION, (SPECIAL), STANDARD 701101	EACH	3	1	1	1
70104205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401, LOCATION 1	EACH	2	2	0	0
70104210	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401, LOCATION 2	EACH	2	0	2	0
70104215	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401, LOCATION 2	EACH	2	0	0	2
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	18	6	6	6
70400100	TEMPORARY CONCRETE BARRIER	FOOT	975	325	325	325
73300300	OVERHEAD SIGN STRUCTURE - SPAN, TYPE III-A (5'-0" X 7'-0")	FOOT	290	90	100	100

* DENOTES SPECIALTY ITEM ** SEE DETAILS IN PLANS

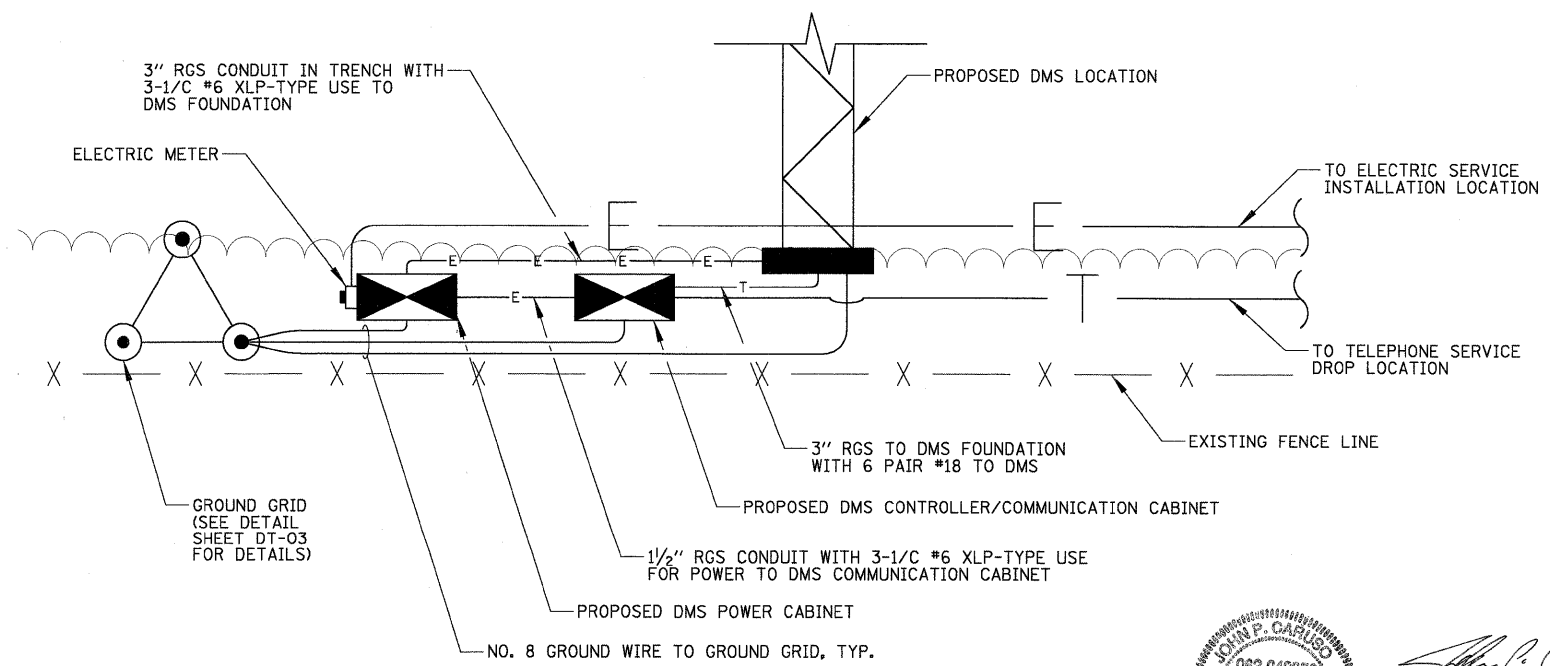
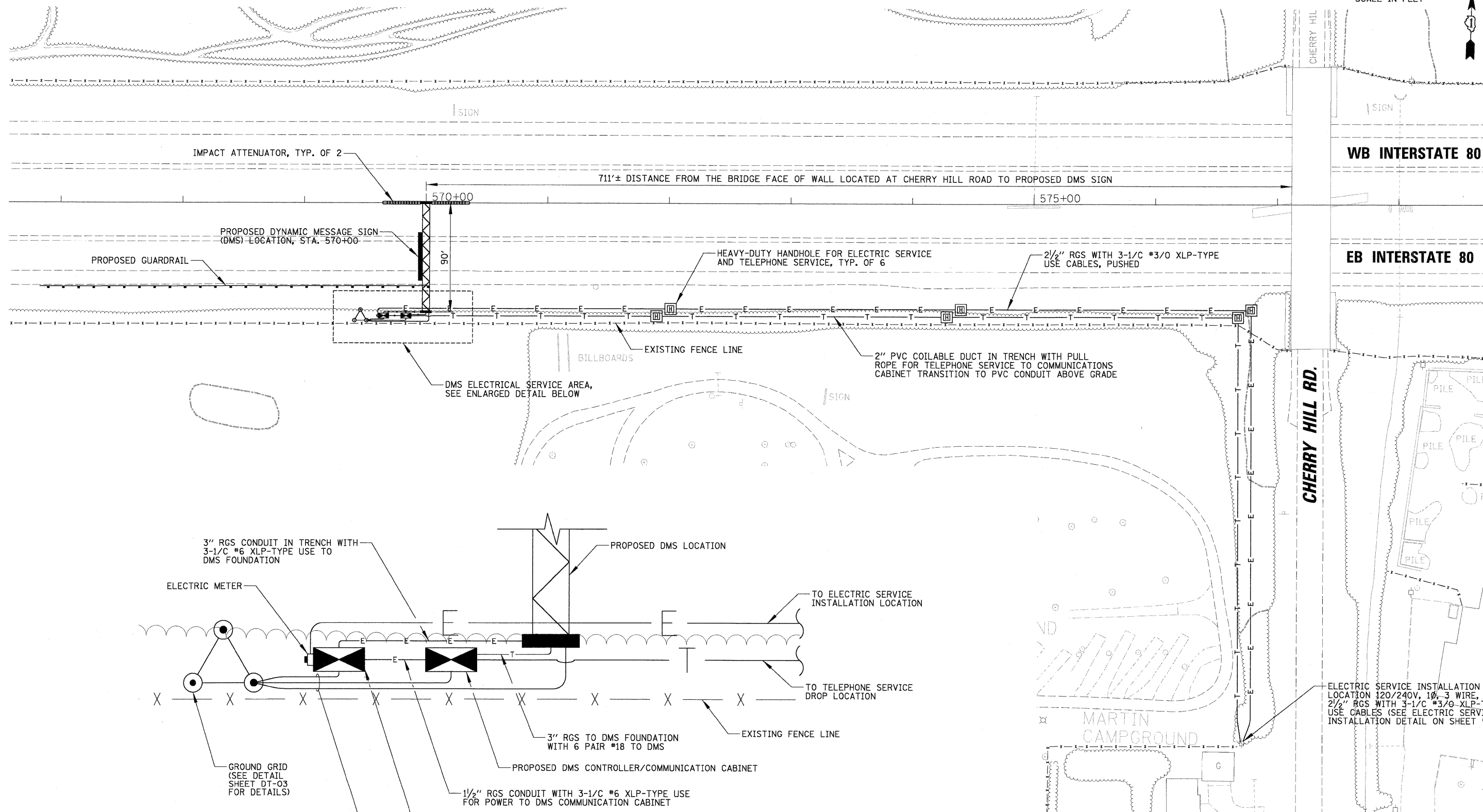
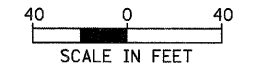
CODE NO.	ITEM	UNIT	TOTAL	CHERRY HILL ROAD	WOLF ROAD	LAGRANGE ROAD
73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	126	38	44	44
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	77.8	22.0	27.9	27.9
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	54	54	0	0
* 78200530	BARRIER WALL MARKERS, TYPE C	EACH	123	41	41	41
* 80400100	ELECTRIC SERVICE INSTALLATION	EACH	3	1	1	1
* 81000500	CONDUIT IN TRENCH, 1 1/2" DIA., GALVANIZED STEEL	FOOT	90	30	30	30
* 81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	765	0	150	615
* 81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	150	50	50	50
* 81012600	CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	1235	1235	0	0
* 81018600	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	1205	1205	0	0
* 81200230	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	40	0	0	40
* 81400200	HEAVY-DUTY HANDHOLE	EACH	9	6	1	2
* 81702400	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 2	FOOT	1200	0	200	1000
* 81702415	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 6	FOOT	535	165	170	200
* 81702460	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 3/0	FOOT	1250	1250	0	0
* 81800300	AERIAL CABLE, 3-1/C NO. 2 WITH MESSENGER WIRE	FOOT	250	0	0	250
* 81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	4150	2500	650	1000
* 87301715	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 18 6 PAIR	FOOT	150	150	0	0
* X0323314	FIBER OPTIC CABLE SPLICE - LATERAL	EACH	2	0	1	1
* X0324435	DMS FRONT ACCESS, FULL MATRIX, NTCIP 1203 V2 - COLOR	EACH	3	1	1	1
* X0325040	FIBER OPTIC INNERDUCT 1 1/4" DIA.	FOOT	1350	0	350	1000
* X0325815	REMOVE EXISTING CABLE	FOOT	250	0	0	250
X701015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	0.33	0.33	0.33
* X8710036	FIBER OPTIC CABLE 12 F SM	FOOT	1350	0	350	1000
Z003798	CONSTRUCTION LAYOUT	L SUM	1	0.33	0.33	0.33
* Z0080130	IMPACT ATTENUATORS (PARTIALLY REDIRECTIVE), TEST LEVEL 3	EACH	2	2	0	0
* Z0083023	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	6	0	0	6
* N/A	DYNAMIC MESSAGE SIGN POWER CABINET, COMPLETE IN PLACE **	EACH	3	1	1	1

THESE QUANTITIES ARE IN ADDITION TO BASE CONTRACT QUANTITIES AND APPLY TO THE INSTALLATION OF THE DYNAMIC MESSAGE SIGNS

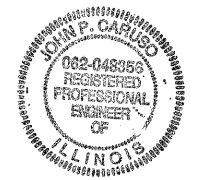
Added Sheet 1-3-11

N:\1000\1010122_000003_Mech\010122_03_00_500.dwg

CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 W. Higgins Road, Suite 600 Rosemont, Illinois 60018 (647) 823-0500	USER NAME = KBALDWIN	DESIGNED - GAH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.I. 80 FOR NS RAILROAD TO US 45 DMS BILL OF MATERIALS	F.A.I. RTE. 80	SECTION 99 (5&5-1) Y-1	COUNTY WILL	TOTAL SHEETS 188A	SHEET NO. 188A
	PLOT SCALE = 1"	CHECKED - JPC	REVISED -			SCALE: N.T.S.	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 60M59	
	PLOT DATE = 12/23/2010	DATE - 12/23/2010	REVISED -							



ENLARGED DETAIL
N.T.S.

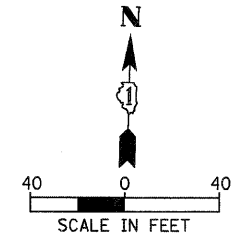
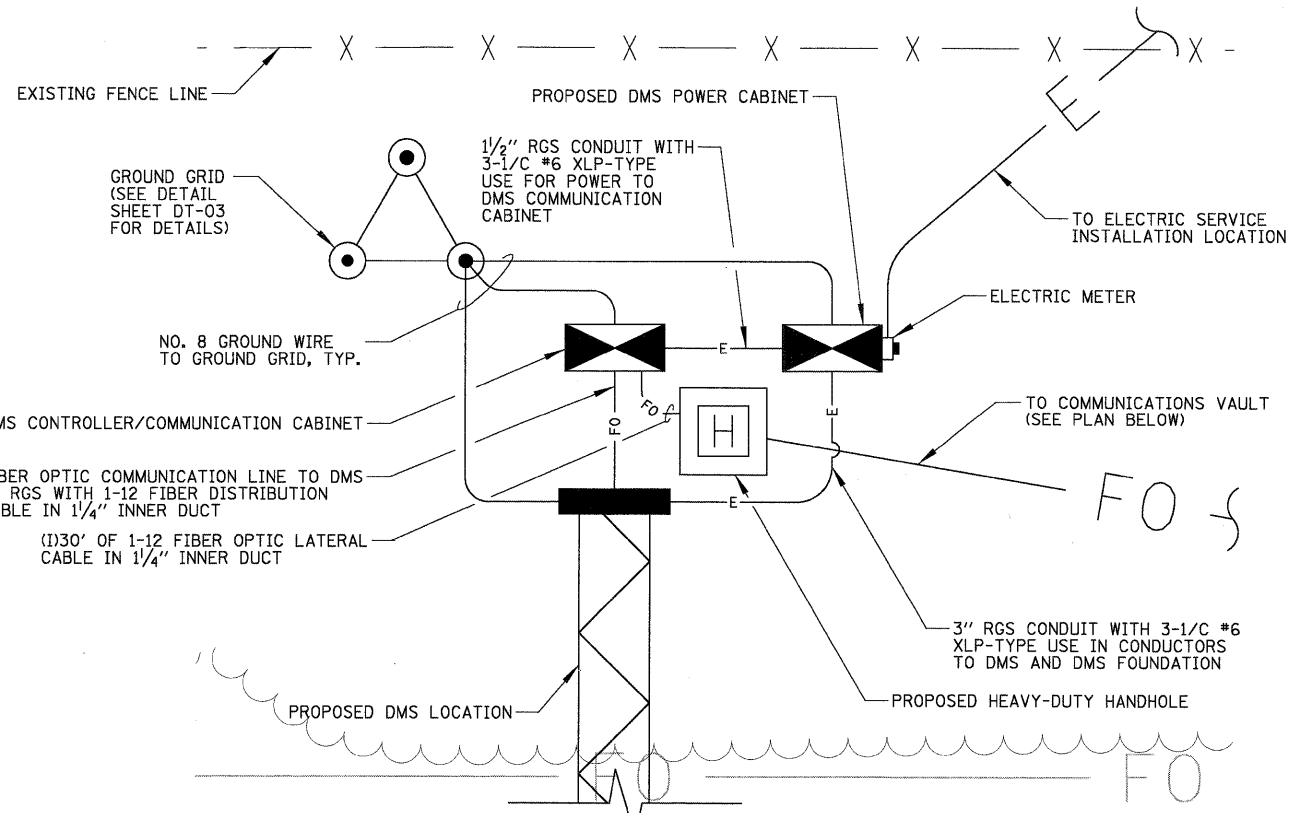


John P. Caruso 12/23/2010
JOHN P. CARUSO
 ILLINOIS REGISTRATION No. 062-048356 PROFESSIONAL ENGINEER
 EXPIRATION DATE: 11/30/2011

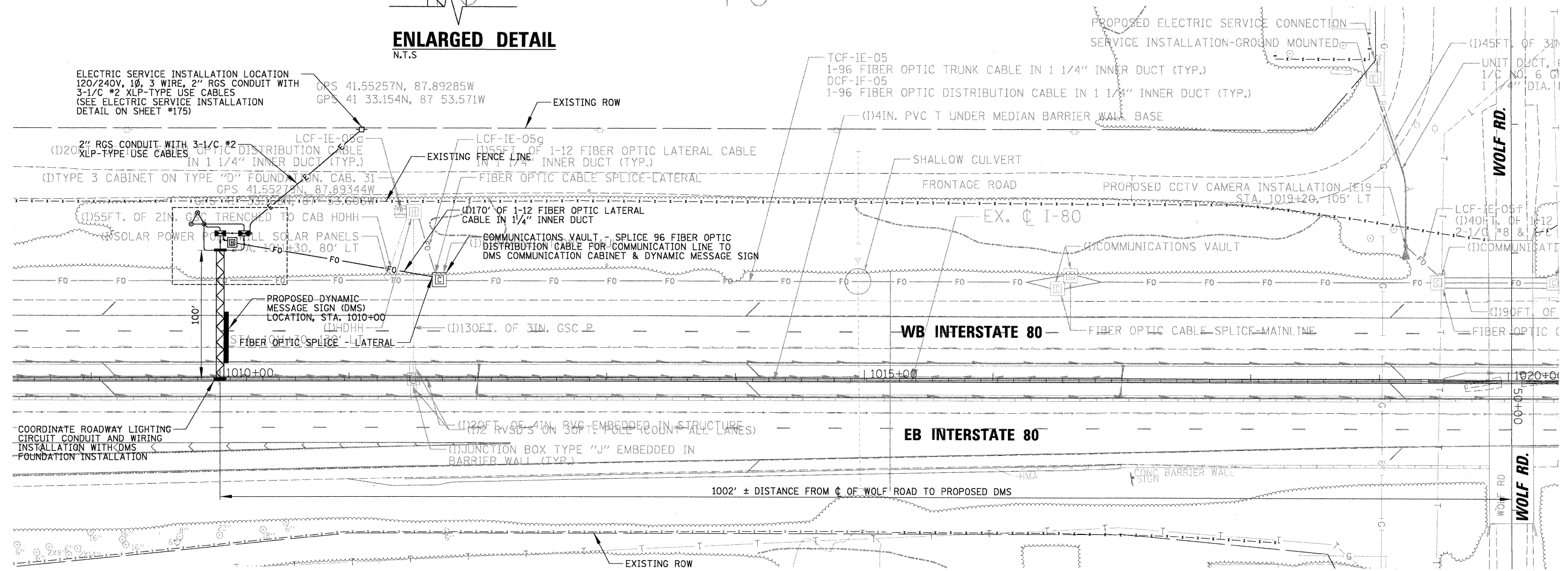
Added Sheet 1-3-11

NA:\dca\0990122_090003_Mech\090122_03_01_PLN.dwg

CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 W. Higgins Road, Suite 600 Rosemont, Illinois 60018 (847) 823-0500	USER NAME = KBALDWIN	DESIGNED - GAH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.I. 80 FOR NS RAILROAD TO US 45 DMS POWER AND COMMUNICATION CABINET LAYOUT PLAN CHERRY HILL ROAD	F.A.I. RTE. 80	SECTION 99 (5&5-1) Y-1	COUNTY WILL	TOTAL SHEETS 188B.	SHEET NO. 188B.
	PLOT SCALE = 40'	CHECKED - JPC	REVISED -			SCALE: 1" = 40'	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 60M59	
	PLOT DATE = 12/23/2010	DATE = 12/23/2010	REVISED -							



ENLARGED DETAIL
N.T.S.



N:\1\cbs\1019122_000023_Mech\018122_03_02_Plan.dwg
 12/23/2010 10:58:00 AM

CHRISTOPHER B. BURKE ENGINEERING, LTD.
 9575 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

USER NAME = KBALDWIN	DESIGNED - GAH	REVISED -
PLOT SCALE = 48"	DRAWN - KWB/GF	REVISED -
PLOT DATE = 12/23/2010	CHECKED - JPC	REVISED -
	DATE - 12/23/2010	REVISED -

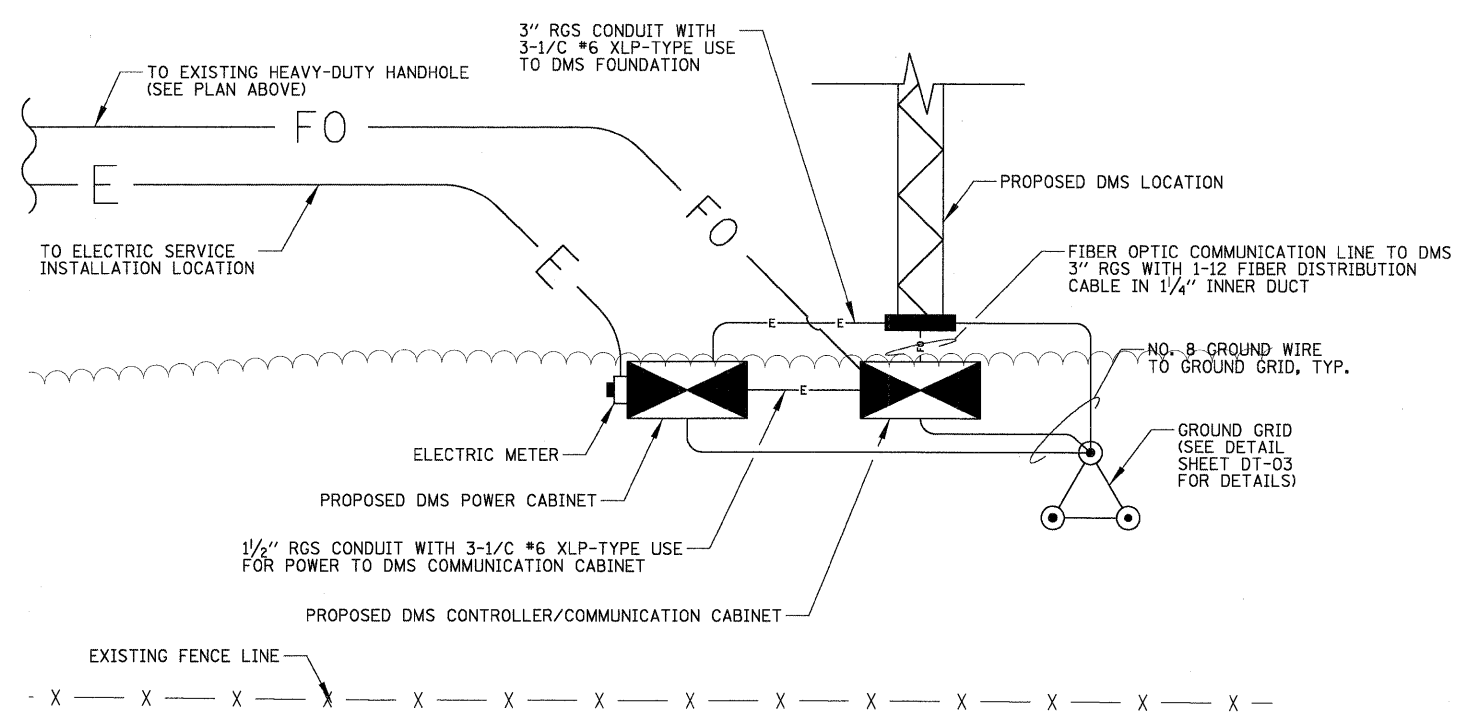
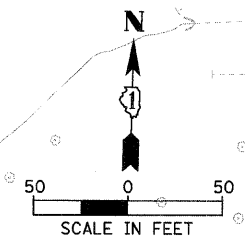
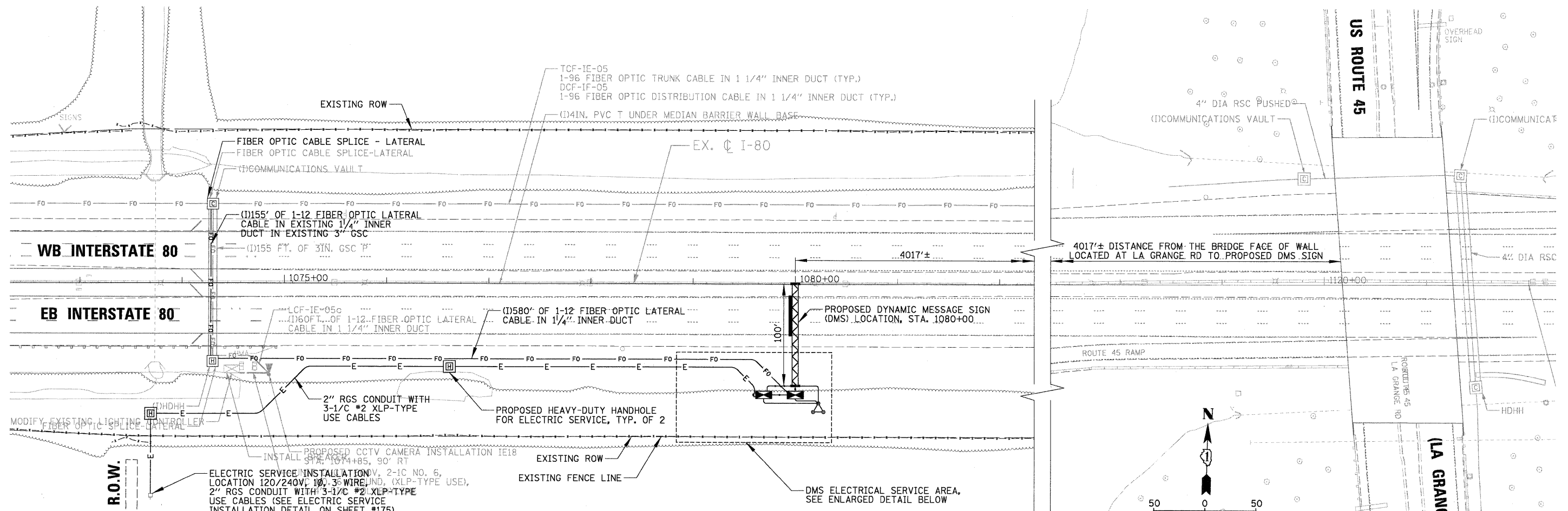
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. 80 FOR NS RAILROAD TO US 45
DMS POWER AND COMMUNICATION CABINET LAYOUT PLAN
WOLF ROAD

SCALE: 1" = 40' SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE. 80	SECTION 99 (5&5-1) Y-1	COUNTY WILL	TOTAL SHEETS 100C.	SHEET NO. 100C.
CONTRACT NO. 60M59				ILLINOIS FED. AID PROJECT

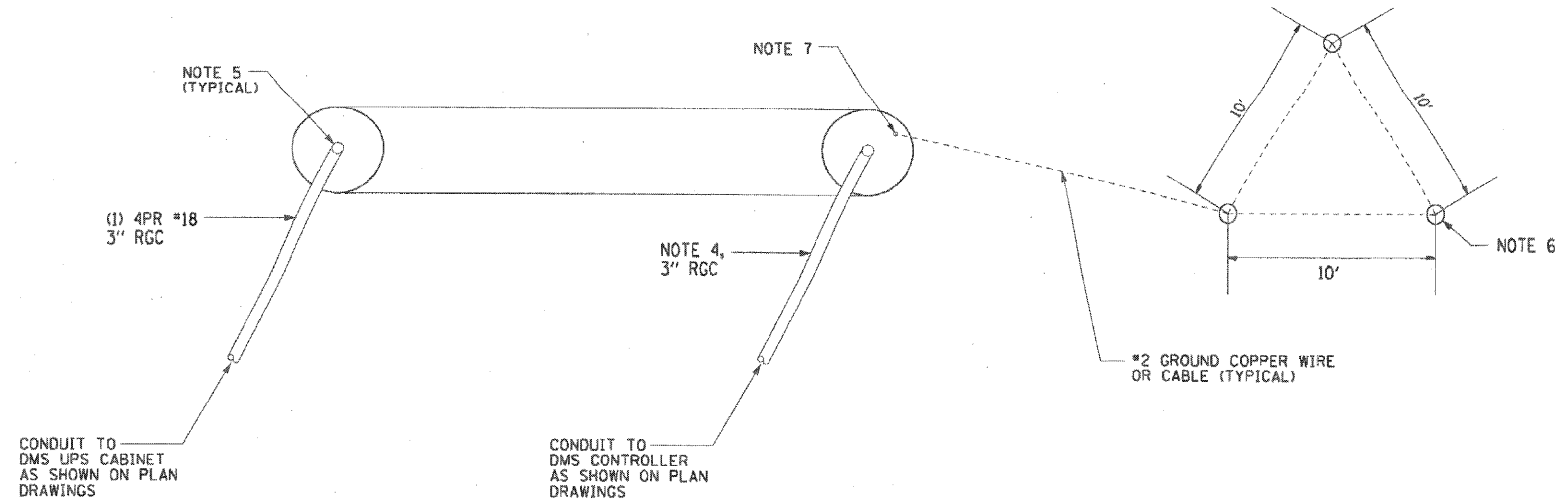
Added Sheet 1-3-11



ENLARGED DETAIL
N.T.S.

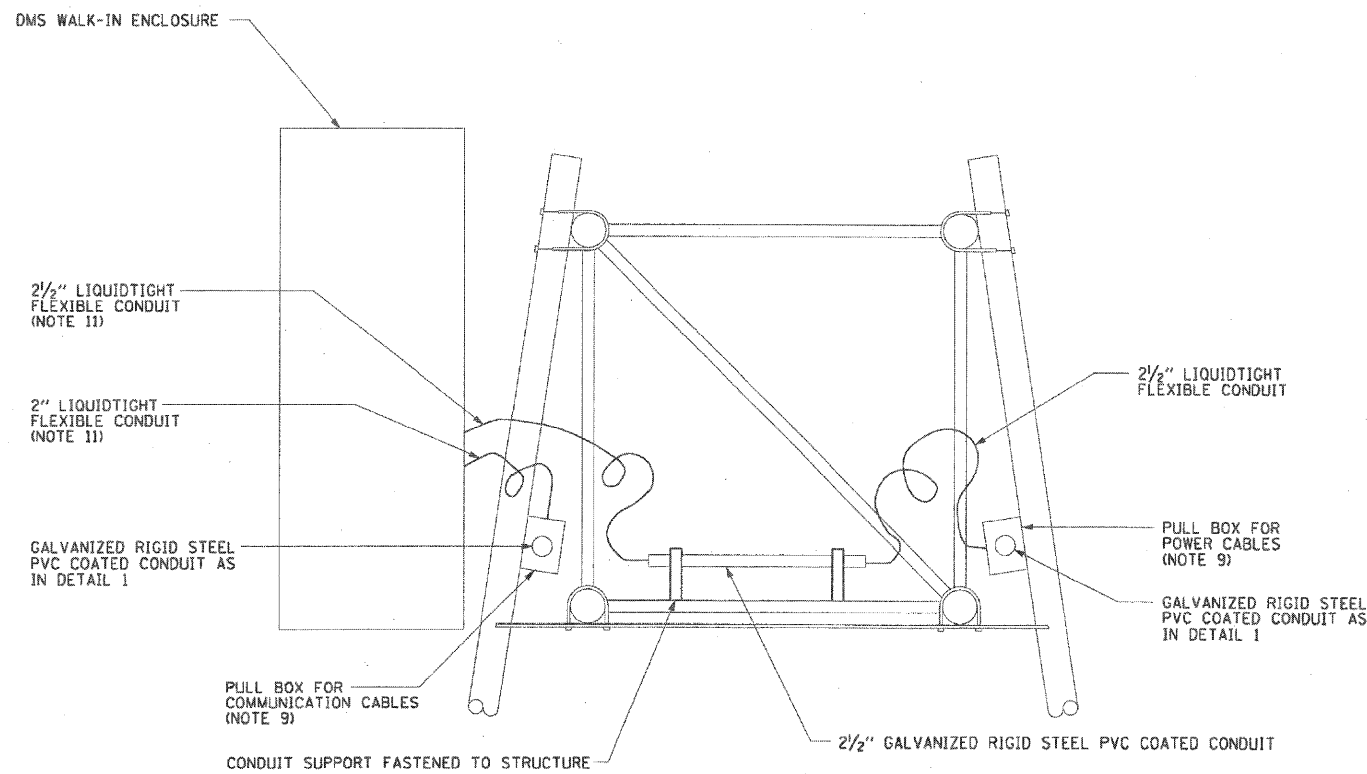
N:\Idea\101122-000003\Mech\101122-003.dwg, P1, N.dwg

<p>CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 W. Higgins Road, Suite 600 Rosemont, Illinois 60018 (847) 823-0500</p>	USER NAME = KBDLWIN	DESIGNED - GAH	REVISED -	<p align="center">STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p>	<p align="center">F.A.I. 80 FOR NS RAILROAD TO US 45 DMS POWER AND COMMUNICATION CABINET LAYOUT PLAN LA GRANGE ROAD</p>			F.A.I. RTE. 80	SECTION 99 (5&5-1) Y-1	COUNTY WILL	TOTAL SHEETS 188	SHEET NO. 188
	PLOT SCALE = 50'	CHECKED - JPC	REVISED -		SCALE: 1" = 50'	SHEET NO. OF SHEETS	STA. TO STA.	<p align="right">CONTRACT NO. 60M59 ILLINOIS FED. AID PROJECT</p>				
PLOT DATE = 12/23/2010	DATE = 12/23/2010	REVISED -					<p align="right">Added Sheet 1-3-11</p>					

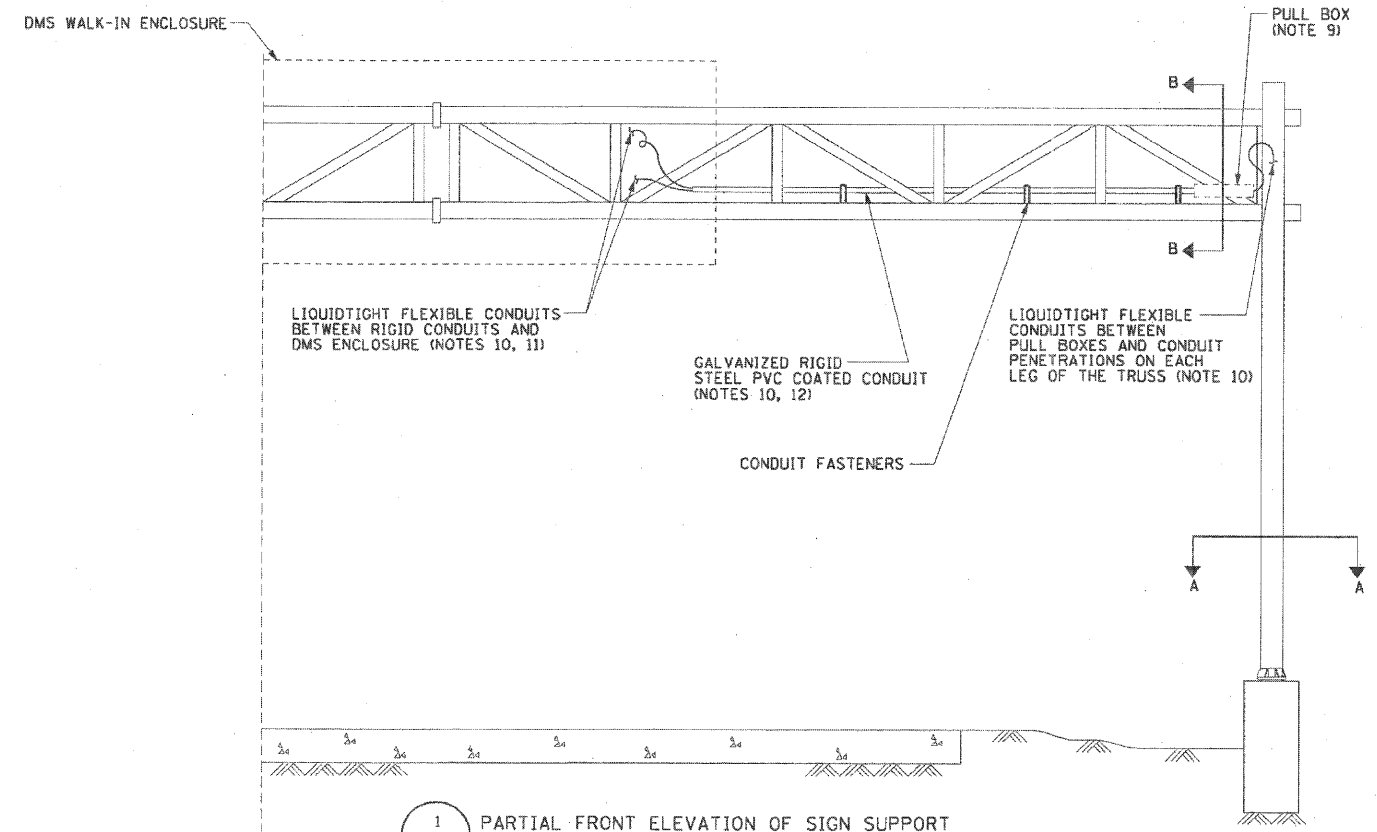


2 SECTION A-A, CONDUIT STUB-UP AT DMS FOUNDATION
DT-03 NOTE 8

- NOTES:**
- SEE DRAWINGS ME-01 AND ME-02 FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.
 - UNLESS OTHERWISE STATED, ALL CONDUIT TO BE FURNISHED AND INSTALLED BY OTHERS UNDER A SEPARATE CONTRACT.
 - UNLESS OTHERWISE STATED, ALL ELECTRIC CABLE TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT.
 - POWER CABLES MUST BE AS SHOWN ON DRAWINGS, DMS-01 THROUGH DMS-08.
 - CONDUITS MUST BE STUBBED UP 6" INSIDE THE HOLLOW TRUSS SUPPORT. CABLES MUST BE PULLED TO THE TOP OF THE TRUSS SUPPORT THROUGH THE HOLLOW TRUSS. SEE DETAIL "3" ON THIS DRAWING. PULL WIRE MUST BE INSTALLED IN EACH OF THE SPARE CONDUITS. SPARE CONDUITS MUST BE CAPPED INSIDE THE TRUSS.
 - 3/4" X 10' LONG, COPPER WELD GROUND ROD DRIVEN INTO GROUND 9' (TYPICAL FOR 3).
 - GROUND COPPER WIRE MUST BE TERMINATED TO THE ANCHOR ROD USING APPROVED CLAMPS FOR GROUNDING. THE ANCHOR ROD MUST BE GROUND OR FILED TO BRIGHT METAL AT CLAMP AND CABLE CONNECTION LOCATION. GROUNDING BUSHING MUST BE INSTALLED ON EACH CONDUIT AND TIED TO THE GROUNDING SYSTEM AT THE TRUSS SUPPORT FOUNDATION.
 - ALL RODS, CABLES, CONDUITS, CAPS, AND CLAMPS ASSOCIATED WITH THE GROUNDING SYSTEM AT THE SUPPORT FOUNDATION WILL BE FURNISHED AND INSTALLED BY OTHERS UNDER A SEPARATE CONTRACT.
 - 6" X 6" X 40" STAINLESS STEEL PULL BOX, WITH CONTINUOUS HINGED COVER (TYPICAL).
 - CONDUITS MUST BE 2 1/2" FOR POWER CABLES AND 2" FOR COMMUNICATIONS CABLES.
 - THE DYNAMIC MESSAGE SIGN MUST BE PENETRATED FROM THE BACK THROUGH THE OPENINGS PROVIDED BY THE DMS ENCLOSURE MANUFACTURER. CONNECTION BETWEEN THE CONDUIT AND THE DMS ENCLOSURE MUST BE LIQUIDTIGHT FLEXIBLE CONDUIT.
 - CONDUITS MUST BE ROUTED LOW AND AS CLOSE AS POSSIBLE TO THE TRUSS SUPPORT, AND MUST BE FASTENED TO THE SUPPORT ON THE INSIDE.
 - THE COST OF FURNISHING AND INSTALLING CONDUITS, CABLES, FASTENERS, PULL BOXES, AND LIQUIDTIGHT FLEXIBLE CONDUITS IS CONSIDERED INCIDENTAL TO THE COST OF DMS INSTALLATION.



3 SECTION B-B, PARTIAL SIDE ELEVATION OF SIGN SUPPORT
DT-03



1 PARTIAL FRONT ELEVATION OF SIGN SUPPORT
DT-03

N:\Ideas\050122\000023\Mech\090122_03_DET_03.rvt

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(647) 823-0500

USER NAME = KBALDWIN	DESIGNED - GAH	REVISED -
PLOT SCALE = 1'	DRAWN - FPB	REVISED -
PLOT DATE = 12/23/2010	CHECKED - JPC	REVISED -
	DATE - 12/23/2010	REVISED -

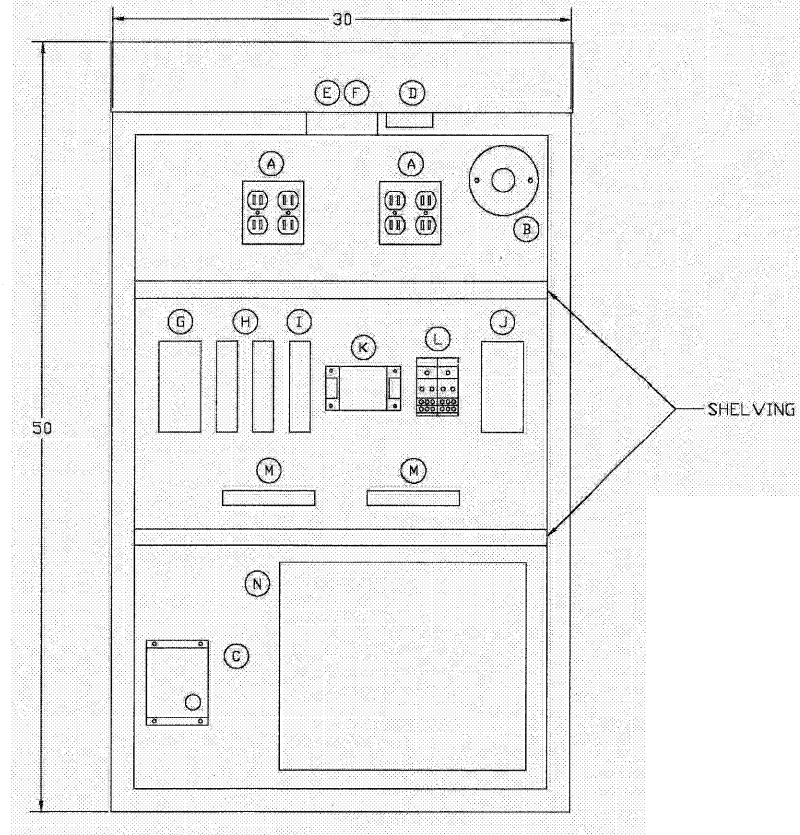
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

F.A.I. 80 FOR NS RAILROAD TO US 45 DUCT AND MOUNTING DETAILS FOR FULL SPAN TRUSS MOUNTED DMS			
SCALE: N.T.S.	SHEET NO. OF SHEETS	STA. TO STA.	

Added sheet 1-3-11

F.A.I. RTE. 80	SECTION 99 (5&5-1) Y-1	COUNTY WILL	TOTAL SHEETS 108E	SHEET NO. 108E
CONTRACT NO. 60M59				ILLINOIS FED. AID PROJECT

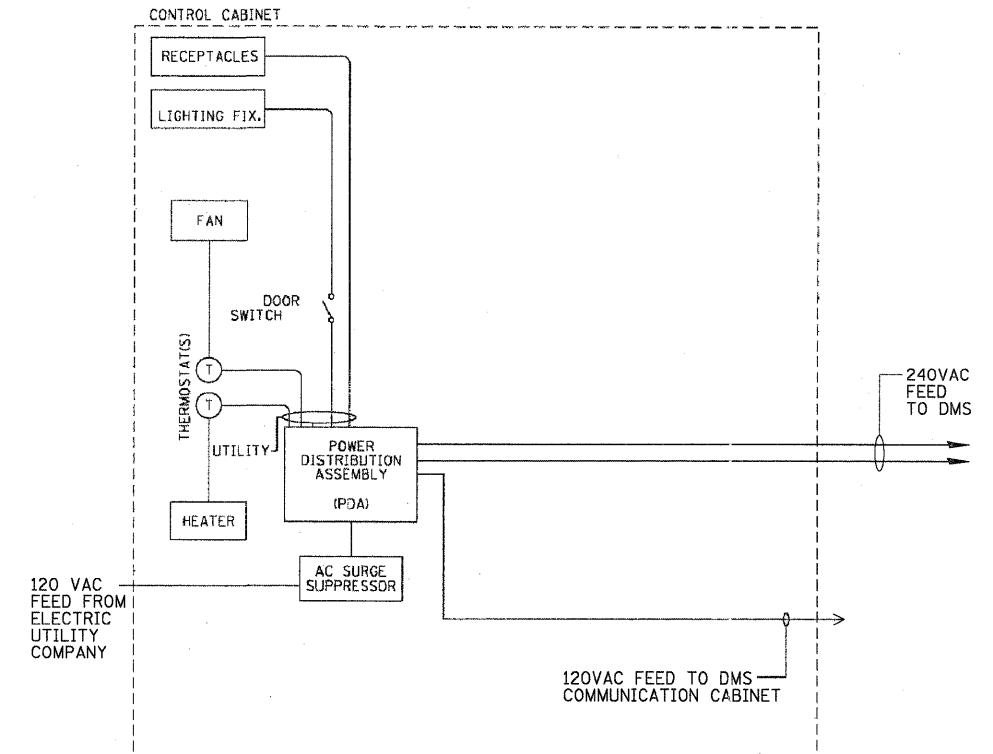
DT-03



BILL OF MATERIALS

ITEM	QTY	DESCRIPTION
A	4	HUBBELL 5362A RECPT
B	1	LEVITON 9726-C LIGHT FIXTURE
C	1	HOFFMAN DAH2001A HEATER
D	1	GRAINGER 2E370-8 FAN CONTROL
E	1	GRAINGER 4WT47-1 FAN
F	1	GRAINGER 4YDB7-3 FAN GUARD
G	1	C/H FDB2020 2P 20A BREAKER
H	2	C/H EHD1030 1P 30A BREAKERS
I	1	C/H EHD1010 1P 10A BREAKER
J	1	C/H EHD2040 2P 40A BREAKER
K	1	MCG 407 SURGE
L	2	AUXEL 38032 SPLICE BLOCKS
M	2	ILSCO NB-120 GROUND/NEUTRAL BUS
N	1	JEFFERSON 411-0131-000 7.5KVA XFORMER
D	1	LITTLEFUSE V10E130P VARISTOR (NOT SHOWN)

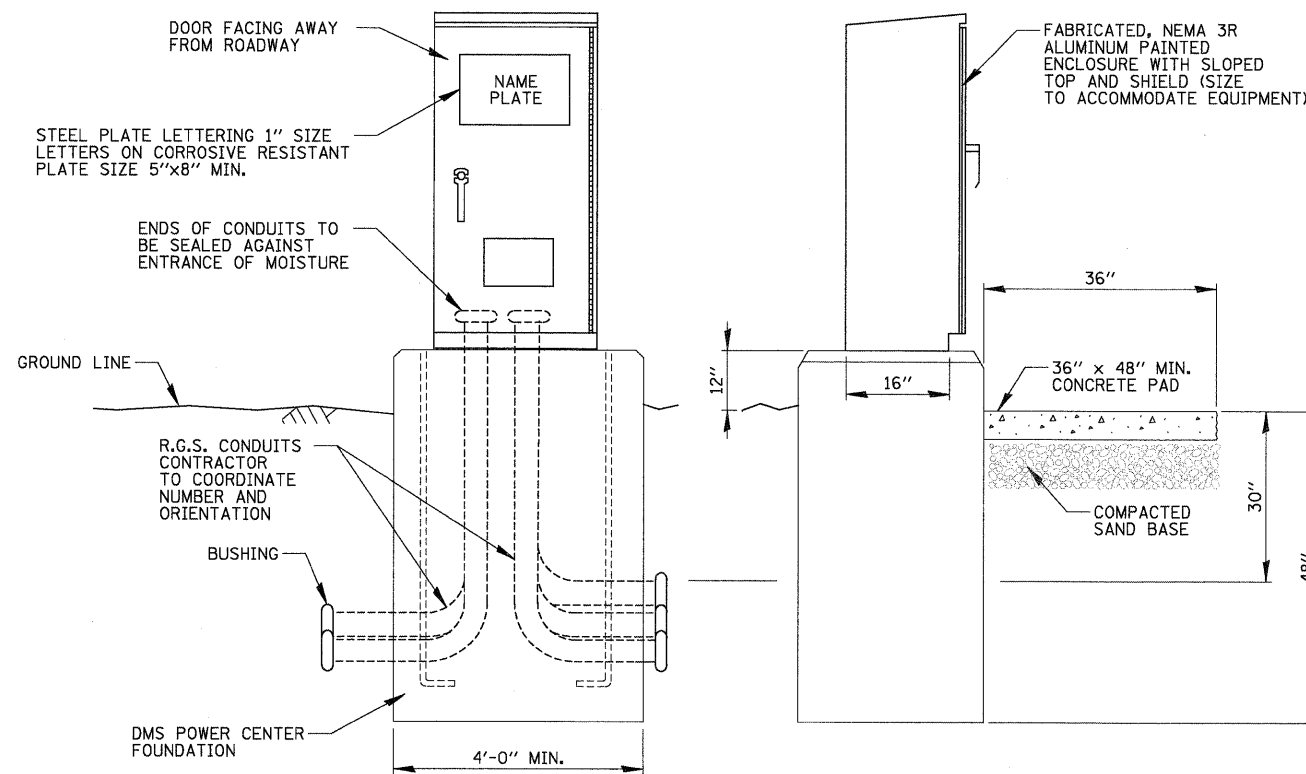
POWER CABINET EQUIPMENT LAYOUT PLAN



NOTES:

1. SEE DRAWING NO. 148 ELECTRICAL SYMBOLS AND ABBREVIATIONS.
2. FIBER OPTIC CABLE AND TERMINATIONS AS SHOWN ON COMM PLANS AND DETAIL SHEETS.

POWER CABINET SINGLE LINE DIAGRAM (TYPICAL)



DMS POWER CABINET AND FOUNDATION
N.T.S.

N:\Ideas\090122_000003\Mech\090122_03_DET_05.dwg

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0900

USER NAME = KBALDWIN	DESIGNED - GAH	REVISED -
PLOT SCALE = 1'	DRAWN - FPB	REVISED -
PLOT DATE = 12/23/2010	CHECKED - JPC	REVISED -
	DATE - 12/23/2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. 80 FOR NS RAILROAD TO US 45
DYNAMIC MESSAGE SIGN
POWER CABINET DETAILS

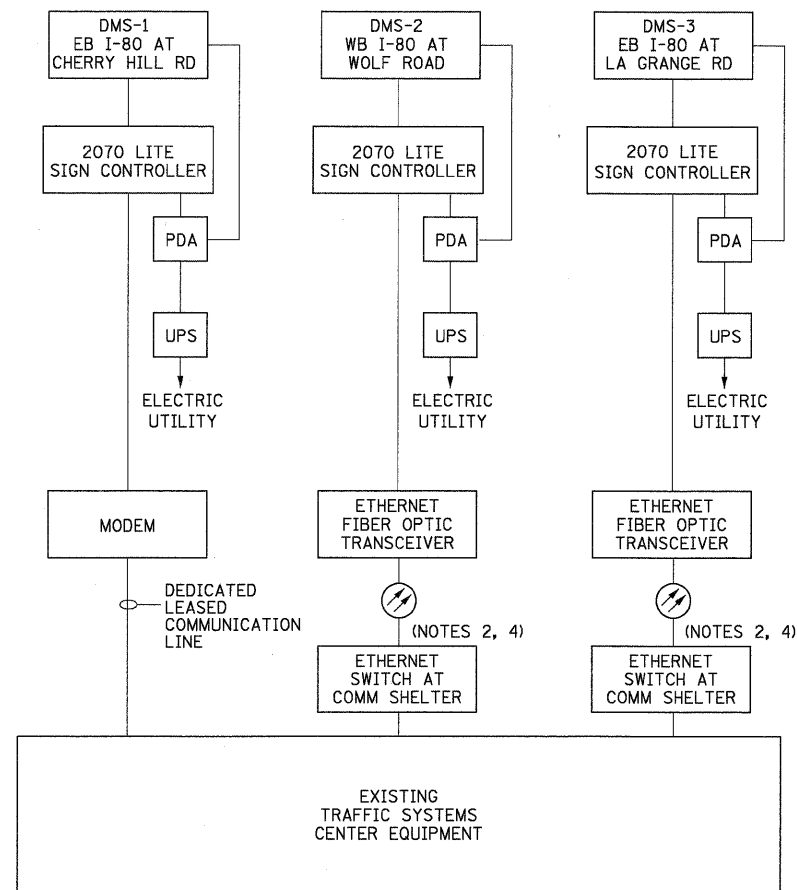
SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

DT-05

Added Sheet 1-3-11

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	99 (5&5-1) Y-1	WILL		100F
CONTRACT NO. 60M59				
ILLINOIS FED. AID PROJECT				

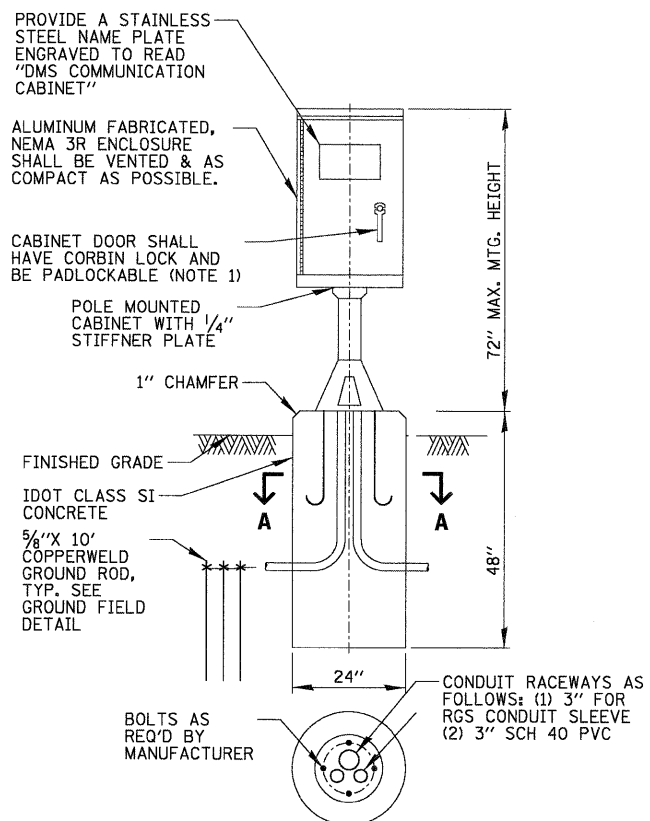
DMS-5 OF DMS-7



NOTES:

- SEE DRAWING No. 148 FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.
- FIBER OPTIC CABLES AND SWITCHES MUST BE SHOWN IN THE COMMUNICATIONS DRAWINGS AND SPECIFICATIONS.
- SEE DRAWINGS No. DYNAMIC MESSAGE SIGN SITE LAYOUT FOR CONDUIT AND CABLE SIZES.
- A DEDICATED LEASED LINE CONNECTION AND MODEM WILL BE TEMPORARILY USED FOR SIGN DMS-1. TEMPORARY CONNECTIONS WILL REQUIRE FIBER OPTIC DATA TRANSCEIVERS ONCE THE COMMUNICATION NETWORK IS IN PLACE.

DMS COMMUNICATION INTERFACE DETAILS

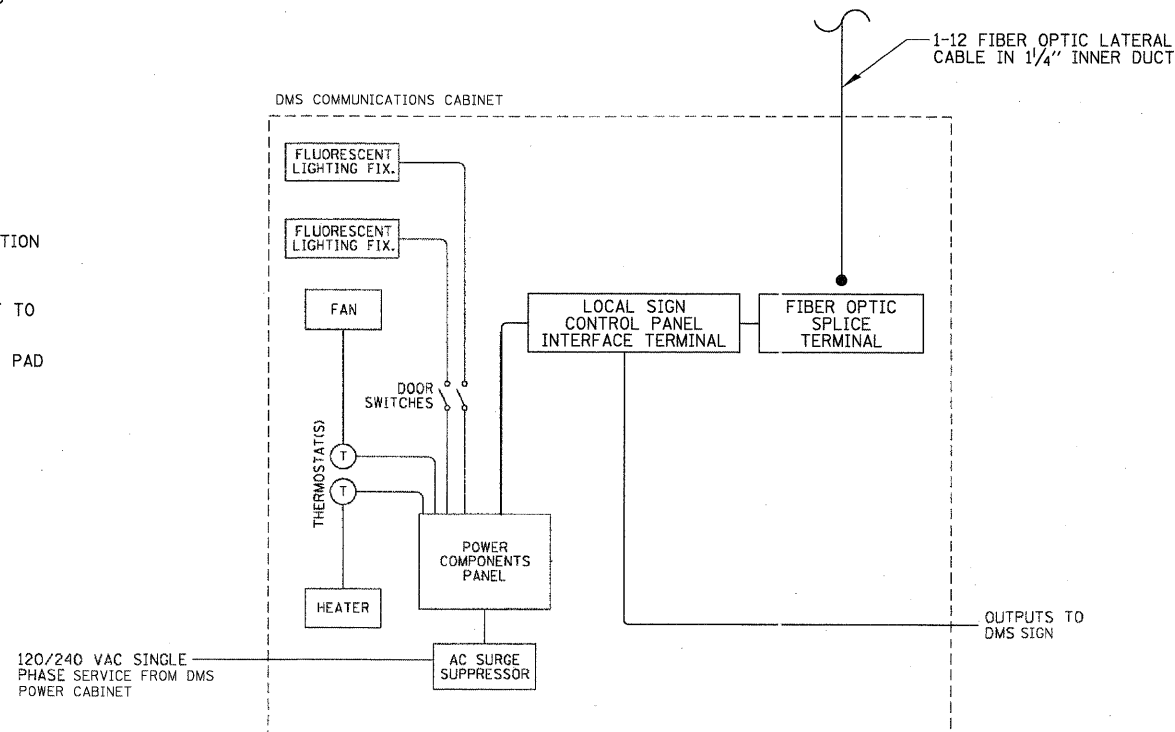


NOTES:

- SEE PLAN DRAWINGS FOR DOOR ORIENTATION.
- ITEMS SHOWN ABOVE INCLUDING CABINET, CONCRETE FOUNDATION SHALL BE INCLUDED IN THE PAY ITEM FOR DMS SIGN.
- SEE SPECIFICATION FOR VMS-55-06 DMS FRONT ACCESS, FULL MATRIX, NTCIP 1203 V2 COLOR (IDOT) FOR EQUIPMENT TO BE INSTALLED INSIDE CABINET.
- WHERE NO SIDEWALK EXISTS, A 24"x30"x5" CONCRETE WORK PAD SHALL BE PROVIDED IN FRONT OF THE CABINET.

DMS COMMUNICATION CABINET AND FOUNDATION

N.T.S.



NOTES:

- SEE DRAWING No. << >> FOR DYNAMIC MESSAGE SIGN SITE LAYOUT, FOR CONDUIT AND CABLE SIZES.
- SEE DRAWING DT-05 FOR CONNECTION TO DMS POWER CABINETS.

DMS COMMUNICATION CABINET LINE DIAGRAM (TYPICAL)

(FOR INFORMATION ONLY, SEE SPECIFICATIONS FOR EQUIPMENT LIST)

N:\aest\090122_000033\Mech\090122_03_DET_065.dwg

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 623-0500

USER NAME = KBALOWIN	DESIGNED - GAH	REVISED -
PLOT SCALE = 1'	DRAWN - FPB	REVISED -
PLOT DATE = 12/23/2010	CHECKED - JPC	REVISED -
	DATE - 12/23/2010	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 80 FOR NS RAILROAD TO US 45 DYNAMIC MESSAGE SIGN COMMUNICATION CABINET DETAILS

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

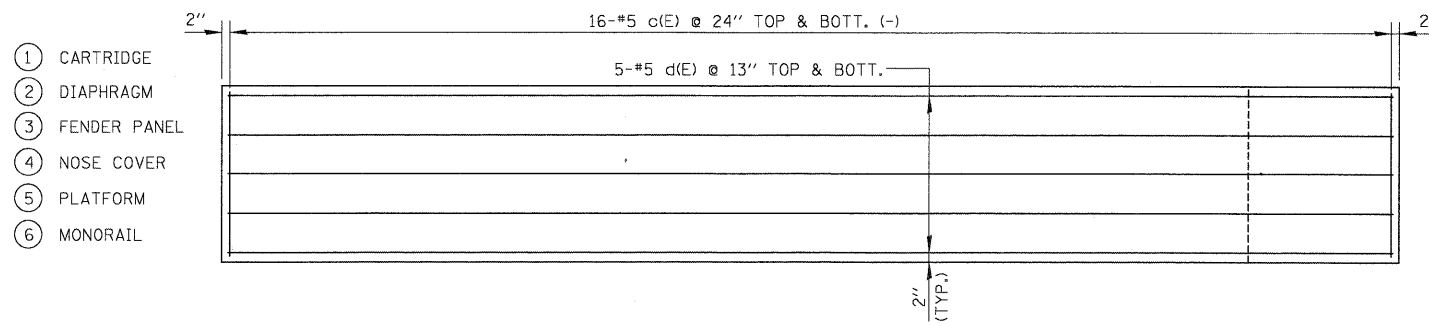
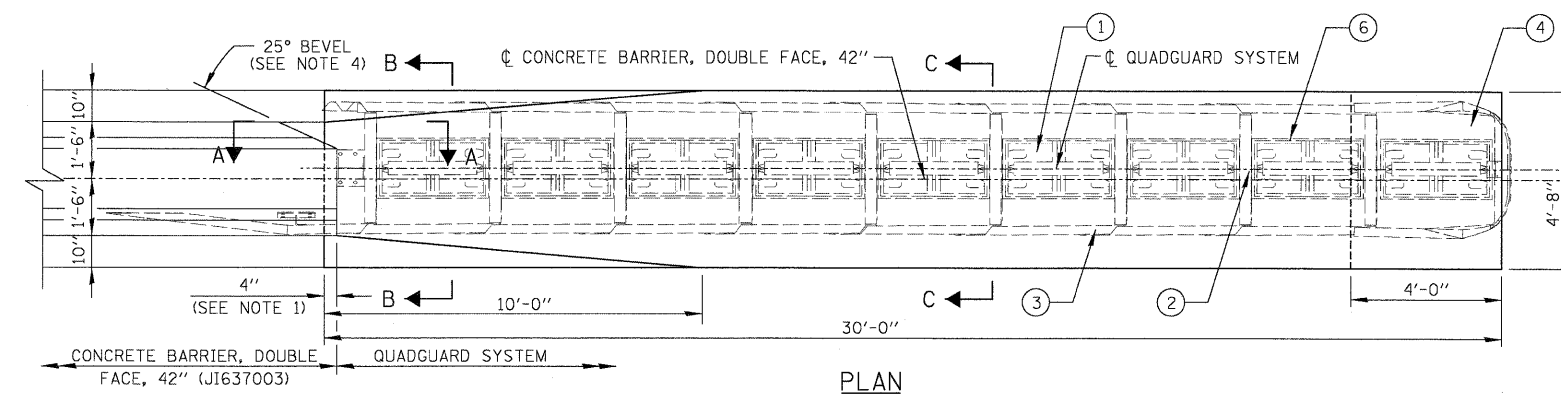
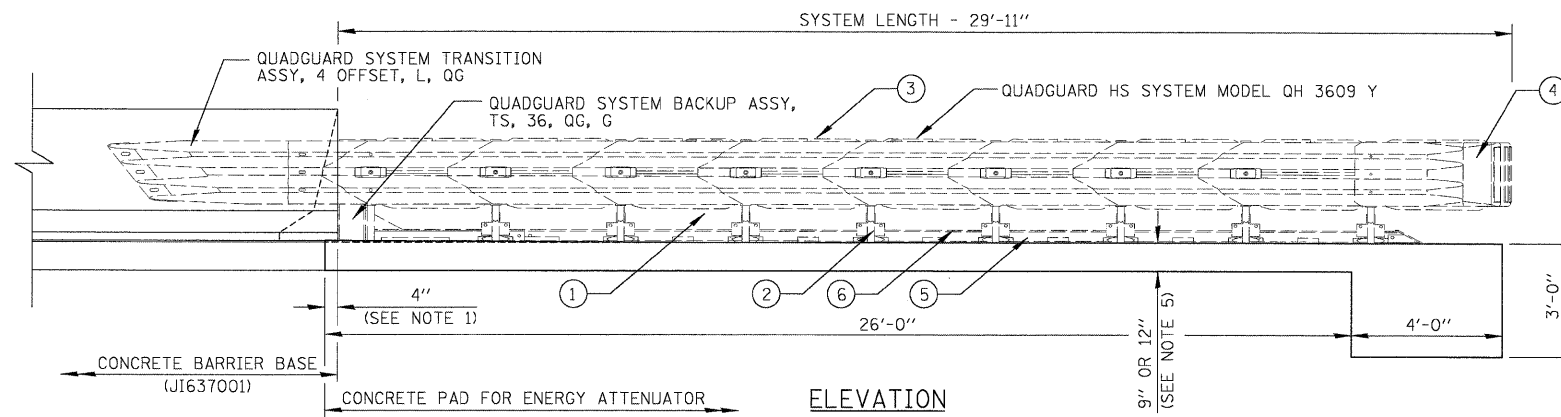
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	99 (5&5-1) Y-1	WILL	1000	1000
CONTRACT NO. 60M59				ILLINOIS FED. AID PROJECT

Added Sheet 1-3-10

DT-06
DT-07

ENERGY ATTENUATOR LOCATIONS:

STATION 3362+10 &
STATION 3363+01

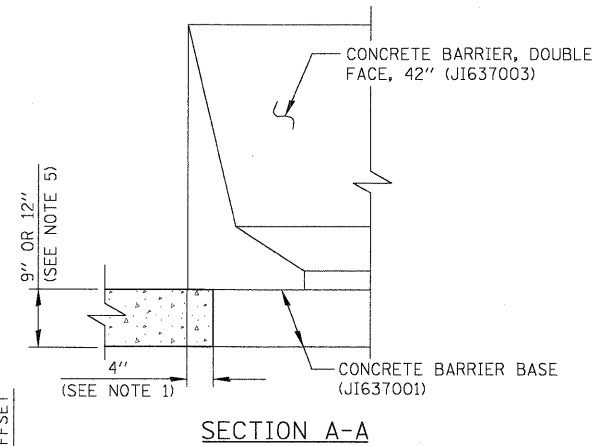


REINFORCING PLAN

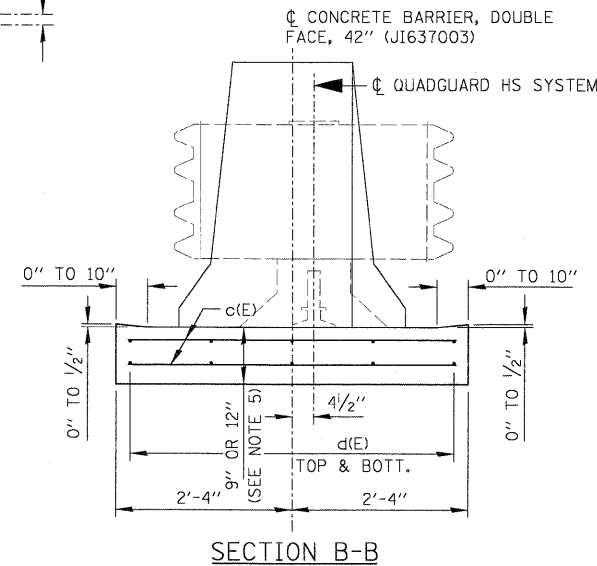
BILL OF MATERIALS (EACH)			
ITEM	UNIT	QUANTITY	PAD THICKNESS
CONCRETE STRUCTURES	CJ. YD.	5	9"
REINFORCING STEEL, EPOXY COATED	LB.	450	

BAR SCHEDULE				
BAR	NO.	SIZE	LENGTH	SHAPE
c(E)	32	#5	4'-4"	—
d(E)	10	#5	29''-8''	—

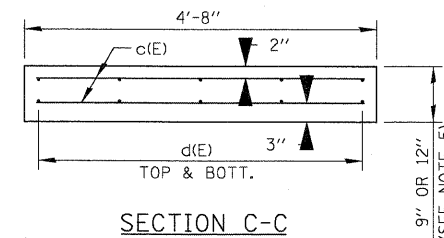
CONCRETE PAD FOR ENERGY ATTENUATORS



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

- CONCRETE BARRIER, DOUBLE FACE, 42" EXTENDS 4" ONTO CONCRETE BASE FOR ENERGY ATTENUATOR.
- CONTRACTOR SHALL USE THE QUADGUARD SYSTEM AS SHOWN OR APPROVED EQUAL.
- QUAD GUARD HS SYSTEM MODEL QH 3609 Y; QUADGUARD SYSTEM BACK-UP ASSY, TS, 36, QG, G; QUADGUARD SYSTEM TRANSITION ASSEMBLY, 4 OFFSET, L, QG; AND ALL HARDWARE REQUIRED FOR ASSEMBLY AND INSTALLATION TO BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH AS ENERGY ATTENUATOR (JS120710).
- 25° BEVEL ON RIGHT FACE APPROACHING CONCRETE BARRIER SHALL BE FORMED DURING CONSTRUCTION OF CONCRETE BARRIER. THIS WORK WILL BE INCIDENTAL TO CONCRETE BARRIER, DOUBLE FACE, 42" AND NO ADDITIONAL COMPENSATION WILL BE PAID.
- THE CONCRETE PAD FOR ENERGY ATTENUATOR WILL BE 12" THICK WHEN ADJACENT TO P.C.C. PAVEMENT AND 9" THICK ADJACENT TO BITUMINOUS SHOULDERS. USE A PREFORMED EXPANSION JOINT AROUND PERIMETER OF PAD WHEN ADJACENT TO P.C.C. PAVEMENT.
- REINFORCEMENT BARS DESIGNATED "E" SHALL BE EPOXY COATED.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GR60 (IL MODIFIED). SEE SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL SUBMIT FOR APPROVAL, SHOP DRAWINGS AND DETAILED INSTALLATION DRAWINGS THAT ACCURATELY DEPICT ALL DETAILS NECESSARY FOR COMPLETING THE INSTALLATION.
- THE QUADGUARD SYSTEM OR APPROVED EQUAL, SHALL BE DESIGNED FOR A 70 MPH DESIGN SPEED.
- ALL MATERIAL AND WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- THE QUADGUARD OR APPROVED EQUAL, MOUNTING HARDWARE, REINFORCED CONCRETE PAD, REINFORCEMENT IN CONCRETE BARRIER BASE AND ANCHOR BLOCK SHALL BE PAID FOR AS ENERGY ATTENUATOR (JS120710) EACH. BILL OF MATERIALS AND BAR SCHEDULE ARE FOR INFORMATION ONLY.

N:\Info\3\091122_000003_Mech\091122_03_DET_07.sht

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 623-0500

USER NAME = KBALDWIN	DESIGNED - GAH	REVISED -
PLOT SCALE = 1'	DRAWN - FPB	REVISED -
PLOT DATE = 12/23/2010	CHECKED - JPC	REVISED -
	DATE - 12/23/2010	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**F.A.I. 80 FOR NS RAILROAD TO US 45
IMPACT ATTENUATOR (PARTIALLY REDIRECTIVE)
DETAILS**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

Added Sheet 1-3-10		DT-07	
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS
80	99 (5&5-1) Y-1	WILL	188 H.
			CONTRACT NO. 60M59
ILLINOIS FED. AID PROJECT			

GENERAL NOTES

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

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

LOADING: 90 M.P.H. WIND VELOCITY

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

DESIGN STRESSES:
Field Units
F_c = 3,500 p.s.i.
f_y = 60,000 p.s.i. (reinforcement)

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

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. 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 AASHTO M314 Gr. 36, 55 or 105 with a minimum Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F.

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

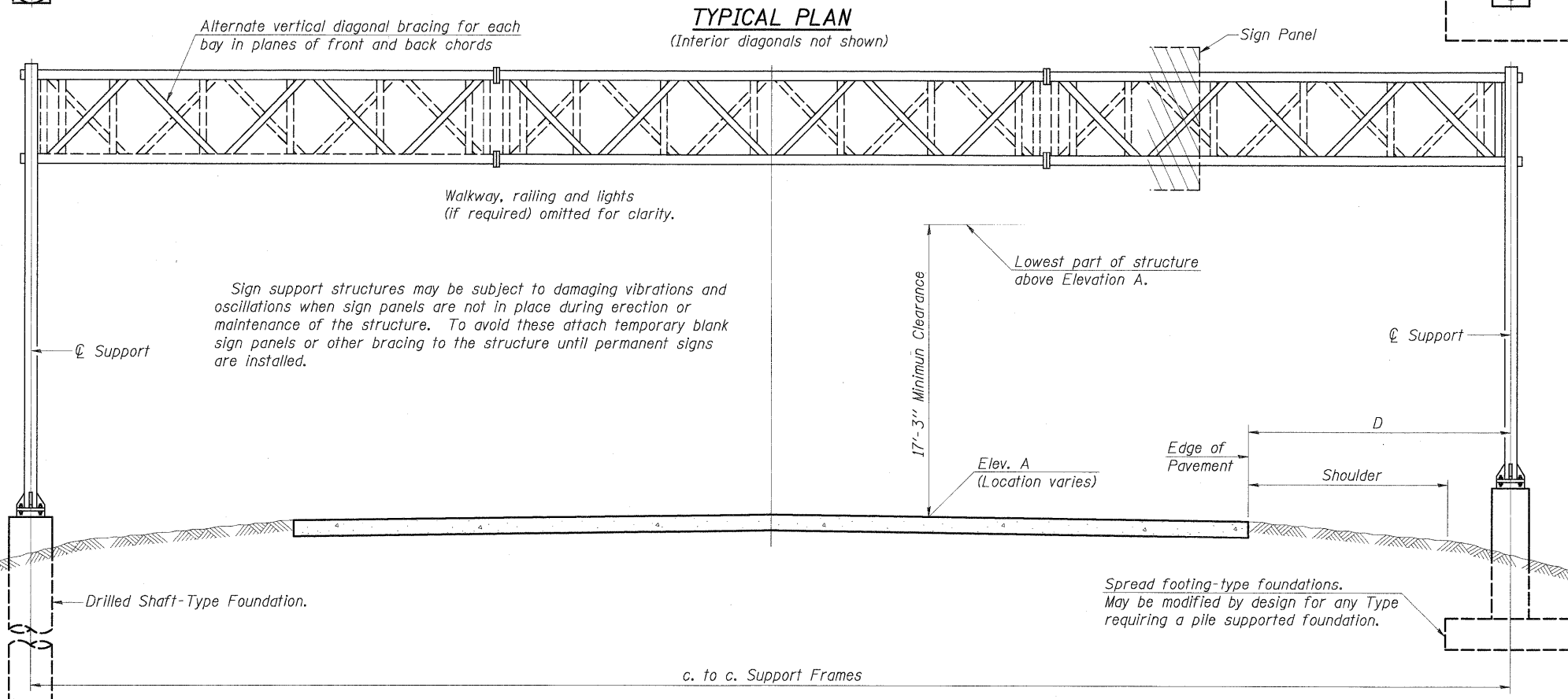
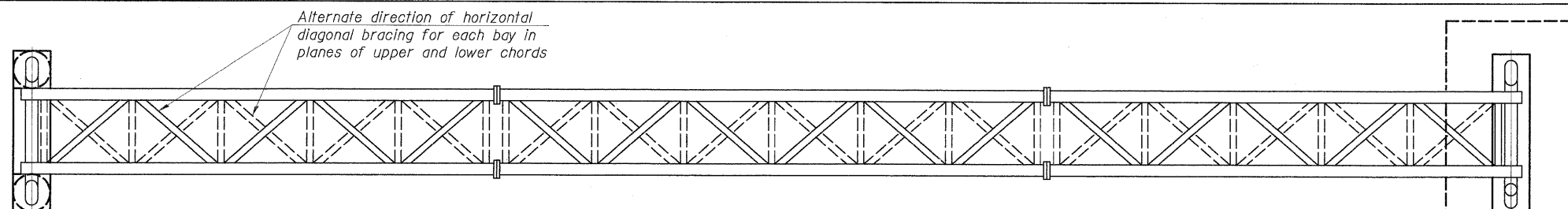
REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

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

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
CONCRETE BARRIER REMOVAL	FOOT	47
PAVED SHOULDER REMOVAL	SQ YD	11
PORTLAND CEMENT CONCRETE SHOULDERS 12 1/2"	SQ YD	5
CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT	FOOT	35
CONCRETE BARRIER BASE	FOOT	35
OVERHEAD SIGN STRUCTURE - SPAN, TYPE III-A (5'-0" X 7'-0")	FOOT	290
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	126
DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	77.8

Added sheet 1-3-11



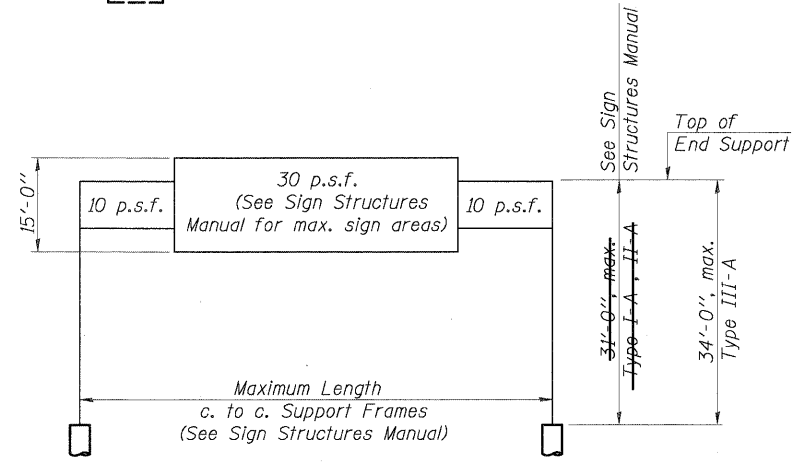
TYPICAL ELEVATION
(Looking at Face of Signs**)

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

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
IS0991080R013.0	570+00 EB I80	S	90	648.43	34.2'	8	240
IS0991080L020.9	1010+00 WB I80	S	100	726.13	50.5'	8	240
IS0991080R022.2	1080+00 EB I80	S	100	696.58	50.0'	8	240

**Looking upstation for structures with signs both sides.

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



DESIGN WIND LOADING DIAGRAM

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



Majid Mobasseri
MAJID MOBASSERI
ILLINOIS REGISTRATION No. 081-005058 STRUCTURAL ENGINEER
EXPIRATION DATE: 11/30/12

12/23/2010

CHRISTOPHER B. BURKE ENGINEERING, LTD.
8575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

USER NAME = JBARNETT	DESIGNED - JMB	REVISED -
PLOT SCALE = 1"	DRAWN - PDR	REVISED -
PLOT DATE = 12/23/2010	CHECKED - MM	REVISED -
	DATE - 12/23/2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. 80 FOR NS RAILROAD TO US 45
OVERHEAD SIGN STRUCTURES - GENERAL PLAN & ELEVATION - ALUMINUM TRUSS & STEEL SUPPORTS

F.A.I. RTE. 80	SECTION 99 (5&5-1) Y-1	COUNTY WILL	TOTAL SHEETS 1881	SHEET NO. 1881
CONTRACT NO. 60M59			ILLINOIS FED. AID PROJECT	