

FOR INDEX OF SHEETS, SEE SHEET NO. 2

HIGHWAY CLASSIFICATION
PRINCIPAL ARTERIAL

DESIGN DESIGNATION
3800(20) ARTERIAL 23.39 (PCC-20)

TRAFFIC DATA
CUMBERLAND AVENUE
2010 ADT = 45,500
2030 ADT = 47,000

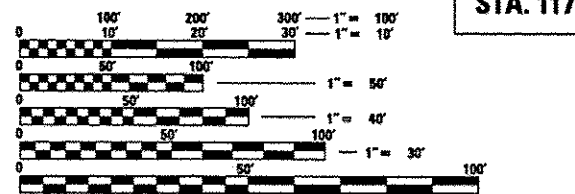
POSTED SPEED LIMIT=35 MPH
DESIGN SPEED=40 MPH

PROJECT DESCRIPTION

THE PROPOSED IMPROVEMENT CONSISTS OF THE RECONSTRUCTION, RESURFACING AND WIDENING OF CUMBERLAND AVENUE, BRIDGE REPLACEMENT, RETAINING WALLS, AND TRAFFIC SIGNAL MODERNIZATION.

RETAINING WALL
SN: 016-W004

PROJECT LOCATED IN
THE CITY OF CHICAGO
AND VILLAGE OF PARK RIDGE



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
DIGGER - CHICAGO UTILITY ALERT NETWORK
1-312-744-7000

DISTRICT 1 - DESIGN/CONSULTANT SERVICES SECTION
BRIAN KUTTAB (847) 705-4431

CONTRACT NO. 60J14

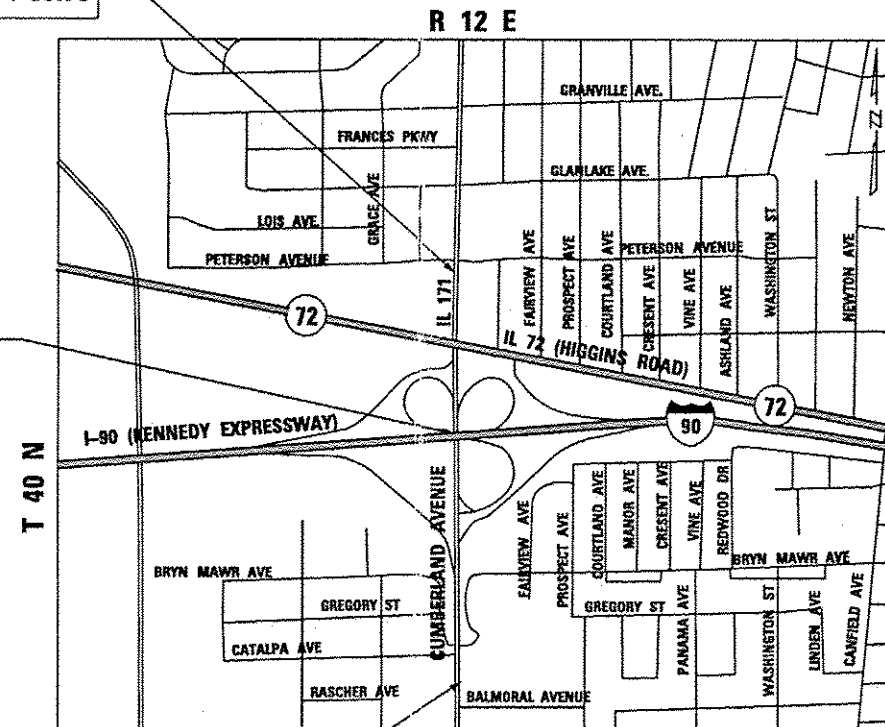
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED HIGHWAY

I-90 AT CUMBERLAND AVENUE (I-90)
BRIDGE REPLACEMENT, INTERSECTION IMPROVEMENT,
DRAINAGE, TRAFFIC SIGNALS, SURVEILLANCE,
STORM SEWER JACKING, AND LIGHTING

SECTION 1616B
PROJECT NO. ACNHPP-0090(400)
COOK COUNTY
C-91-186-10

END PROJECT
STATION 132+00.73



BEGIN PROJECT
STATION 94+99.21

LOCATION MAP
SCALE
1" = 1000'

GROSS LENGTH CUMBERLAND AVE = 3,701.52 FEET = 0.7 MILES
NET LENGTH CUMBERLAND AVE = 3,701.52 FEET = 0.7 MILES

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2746	1616B	COOK	404	1

CONTRACT NO. 60J14
* 404 * 16 = 414

D-91-186-10



LOCATION OF SECTION INDICATED THUS: -

JARROD J. CEBULSKI, P.E.
062-050473
EXP. DATE: 11/30/13

ATILAY YAROLIOGLU, S.E.
081-005358
EXP. DATE: 11/30/14

RICHARD A. YOUNG, P.E.
062-054605
EXP. DATE: 11/30/13

PATRICK ENGINEERING INC.
4970 VARSITY DRIVE
LISLE, IL 60532
patrickengineering.com

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SUBMITTED December 5, 2012
John Fortman, Jr.
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
March 22, 2013
John D. Baranzelli, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT
March 22, 2013
Omer Oshan, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

Rev. 4-11-13

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VOLUME 1

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LIST OF STATE STANDARDS

000001 - 04	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
202001 - 01	EARTH MEDIAN DITCH CHECK
280001 - 07	TEMPORARY EROSION CONTROL SYSTEMS
420001 - 07	PAVEMENT JOINTS
420106 - 04	36' JOINTED PCC PAVEMENT
420111 - 03	PCC PAVEMENT ROUNDOUTS
420401 - 09	BRIDGE APPROACH PAVEMENT
424001 - 07	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424011 - 01	CORNER PARALLEL CURB RAMPS FOR SIDEWALKS
424021 - 01	DEPRESSED CORNER FOR SIDEWALK
515001 - 03	NAME PLATE FOR BRIDGES
542301 - 03	PRECAST REINFORCED CONCRETE FLARED END SECTION
542301 - 04	GRATING FOR CONCRETE FLARED END SECTION FOR 24" THRU 54" PIPE
602001 - 02	CATCH BASIN, TYPE A
602011 - 02	CATCH BASIN, TYPE C
602301 - 03	INLET, TYPE A
602401 - 03	MANHOLE, TYPE A
602601 - 02	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
602701 - 02	MANHOLE STEPS
604001 - 03	FRAMES AND LIDS, TYPE 1
604046 - 02	FRAME AND GRATE TYPE 10
604091 - 02	FRAME AND GRATE TYPE 24
606001 - 04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
606201 - 02	TYPE B GUTTER (INLET, OUTLET, & ENTRANCE)
606301 - 04	PC CONCRETE ISLANDS AND MEDIANS
606306 - 03	CORRUGATED PC CONCRETE MEDIANS
630001 - 10	STEEL PLATE BEAM GUARDRAIL
631026 - 05	TRAFFIC BARRIER TERMINAL, TYPE 5
631031 - 11	TRAFFIC BARRIER TERMINAL, TYPE 6
635006 - 03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011 - 02	REFLECTOR MARKER AND MOUNTING DETAILS
638001 - 02	GLARE SCREEN BLADES
701101 - 03	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701400 - 06	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701402 - 09	LANE CLOSURE FREEWAY/EXPRESSWAY WITH BARRIER
701411 - 08	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS >= 45 MPH
701427 - 01	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION FOR SPEEDS <= 40 MPH
701601 - 08	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701606 - 08	URBAN LANE CLOSURE MULTILANE 2W WITH MOUNTABLE MEDIAN
701701 - 08	URBAN LANE CLOSURE, MULTILANE, INTERSECTION
701801 - 05	LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901 - 02	TRAFFIC CONTROL DEVICES
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720001 - 01	SIGN PANEL MOUNTING DETAILS
720006 - 03	SIGN PANEL ERECTION DETAILS
720011 - 01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
728001 - 01	TELESCOPING STEEL SIGN SUPPORT
729001 - 01	APPLICATION OF TYPE A AND B METAL POSTS (FOR SIGNS & MARKERS)
731001 - 01	BASE FOR TELESCOPING STEEL SIGN SUPPORT
814001 - 02	HANDHOLES
814006 - 02	DOUBLE HANDHOLES
857001 - 01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001 - 01	UNINTERRUPTABLE POWER SUPPLY (UPS)
873001 - 02	TRAFFIC SIGNAL GROUNDING & BONDING
877001 - 05	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
877002 - 02	STEEL MAST ARM ASSEMBLY AND POLE 56' THROUGH 75'
878001 - 09	CONCRETE FOUNDATION DETAILS
880001 - 01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006 - 01	TRAFFIC SIGNAL MOUNTING DETAILS
886001 - 01	DETECTOR LOOP INSTALLATIONS

Rev. 4-11-13

PATRICK ENGINEERING	PATRICK ENGINEERING INC. 4970 VARSITY DRIVE LISLE, IL 60532 patrickengineering.com	USER NAME : koeppen@dev.lisle	DESIGNED : CPK	REVISED :	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS AND STATE STANDARDS	SCALE: NA	SHEET	STA.	TO STA.	F.A.U. RTE. 2745	SECTION 1616B	COUNTY COOK	TOTAL SHEETS 404	SHEET NO. 2
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SUMMARY OF QUANTITIES			UNIT	URBAN 90% FED. 10% STATE TOTAL	CONSTRUCTION CODE				
CODE NO.	ITEM DESCRIPTION	0003			0010	0021	0031	0040	
		RDWY			BRIDGE	SIGNALS LIGHTING	LNDSCP	RET. WALL	
44004000	PAVED DITCH REMOVAL	FOOT	665	665					
44004250	PAVED SHOULDER REMOVAL	SQ YD	1,943	1,943					
44201771	CLASS D PATCHES, TYPE IV, 10 INCH	SQ YD	114	114					
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	2,063	2,063					
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	2		1			1	
50104650	SLOPE WALL REMOVAL	SQ YD	831		831				
50157300	PROTECTIVE SHIELD	SQ YD	2,530		2,530				
50200100	STRUCTURE EXCAVATION	CU YD	5,295		4,206			1,089	
50300225	CONCRETE STRUCTURES	CU YD	2164.4	⚠	1,602.8			561.6	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	660.3		660.3				
50300260	BRIDGE DECK GROOVING	SQ YD	4,176		4,176				
50300280	CONCRETE ENCASEMENT	CU YD	14.0		14.0				

• SPECIALTY ITEM

 PATRICK ENGINEERING INC. 4670 VARSITY DRIVE LISLE, IL 60532 patrickengineering.com	USER NAME = kwoopon@dy.Lisle	DESIGNED - CPK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES				F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
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Rev. 4-11-13

SUMMARY OF QUANTITIES		UNIT	CONSTRUCTION CODE					
CODE NO.	ITEM DESCRIPTION		URBAN 90% FED. 10% STATE TOTAL	0003	0010	0021	0031	0040
				RDWY	BRIDGE	SIGNALS LIGHTING	LNDSCP	RET. WALL
50300300	PROTECTIVE COAT	SQ YD	5,641		5,369			272
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1			
50500505	STUD SHEAR CONNECTORS	EACH	22,500		22,500			
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	658,060	⚠	610,570			47,490
50800515	BAR SPLICERS	EACH	2,834		2,834			
50800530	MECHANICAL SPLICERS	EACH	504		504			
50901730	BRIDGE FENCE RAILING	FOOT	645		645			
51100100	SLOPE WALL, 4"	SQ YD	562		562			
51201600	FURNISHING STEEL PILES, HP 12X53	FOOT	7,308		7,308			
51202305	DRIVING PILES	FOOT	7,308		7,308			
51203600	TEST PILE STEEL, HP 12X53	EACH	4		4			
51500100	NAME PLATES	EACH	1		1			

• SPECIALTY ITEM

 PATRICK ENGINEERING	PATRICK ENGINEERING INC. 4970 VARSITY DRIVE USLE, IL 60532 patrickengineering.com	USER NAME = skoeppe(Rdwg.Lislo)	DESIGNED - CPK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.U RTE. 2746	SECTION 1616B	COUNTY COOK	TOTAL SHEETS 404	SHEET NO. 9
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Rev. 4-11-13

SUMMARY OF QUANTITIES			UNIT	CONSTRUCTION CODE				
CODE NO.	ITEM DESCRIPTION	URBAN 90% FED. 10% STATE TOTAL		0003	0010	0021	0031	0040
				RDWY	BRIDGE	SIGNALS LIGHTING	LNDSCP	RET. WALL
60500070	REMOVING MANHOLES TO MAINTAIN FLOW	EACH	12	12				
60500090	REMOVING INLETS TO MAINTAIN FLOW	EACH	5	5				
60602800	CONCRETE GUTTER, TYPE B	FOOT	610.0	610.0				
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	4,371.0	4,371.0				
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	5,092.0	5,092.0				
60608600	COMBINATION CONCRETE CURB AND GUTTER, TYPE M-6.06	FOOT	73.0	73.0				
60610400	COMBINATION CONCRETE CURB AND GUTTER, TYPE M-6.24	FOOT	112.0	112.0				
60618300	CONCRETE MEDIAN SURFACE, 4 INCH	SQ FT	7,947	7,947				
60619200	CONCRETE MEDIAN, TYPE SB-6.06	SQ FT	34	34				
60619600	CONCRETE MEDIAN, TYPE SB-6.12	SQ FT	10,692	10,692				
60624600	CORRUGATED MEDIAN	SQ FT	590	590				
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	1,212.5			1,212.5		

• SPECIALTY ITEM

 PATRICK ENGINEERING INC. 4970 VARSITY DRIVE Lisle, IL 60532 patrickengineering.com	USER NAME = ksoopner(Rdwy.Lis16)	DESIGNED - CPK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	SCALE: NA SHEET 500-11 OF 36 STA. TO STA.	F.A.U. RTE. 2746	SECTION 1616B	COUNTY COOK	TOTAL SHEETS 404	SHEET NO. 14
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Rev. 4-11-13

SUMMARY OF QUANTITIES		UNIT	CONSTRUCTION CODE					
CODE NO.	ITEM DESCRIPTION		URBAN 90% FED. 10% STATE TOTAL	0003 RDWY	0010 BRIDGE	0021 SIGNALS LIGHTING	0031 LNDSCP	0040 RET. WALL
70300100	SHORT TERM PAVEMENT MARKING	FOOT	28,131	28,131				
70300210	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	1,384	1,384				
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	42,860	42,860				
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	10,512	10,512				
70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	341	341				
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	1,233	1,233				
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	57,250	57,250				
70400100	TEMPORARY CONCRETE BARRIER	FOOT	3,475.0	3,475.0				
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	6,237.5	6,237.5				
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE,NARROW), TEST LEVEL 3	EACH	5	5				
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW),TEST LEVEL 3	EACH	8	8				
72000100	SIGN PANEL - TYPE 1	SQ FT	617	617				

• SPECIALTY ITEM

 PATRICK ENGINEERING	PATRICK ENGINEERING INC 4970 VARSITY DRIVE LISLE, IL 60532 patrickengineering.com	USER NAME * kjoepfen@dwg.lisle	DESIGNED - CPK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES				F.A.D RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		PLOT CONFIG * PDF (Gray, Small, Plot)	DRAWN - MJP	REVISED -						2746	1616B	COOK	404	16
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Rev. 4-11-13

SUMMARY OF QUANTITIES		UNIT	URBAN 90% FED. 10% STATE TOTAL	CONSTRUCTION CODE				
CODE NO.	ITEM DESCRIPTION			0003 RDWY	0010 BRIDGE	0021 SIGNALS LIGHTING	0031 LNDSCP	0040 RET. WALL
* 72000200	SIGN PANEL - TYPE 2	SQ FT	187			187		
* 72000300	SIGN PANEL - TYPE 3	SQ FT	1245			1245		
* 72700100	STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	2370			2370		
* 72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	862			862		
* 73000100	WOOD SIGN SUPPORT	FOOT	32			32		
* 73100100	BASE FOR TELESCOPING STEEL SIGN SUPPORT	EACH	75			75		
* 73302210	OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE III - C-A (36" x 7'-0")	FOOT	40			40		
* 73304000	OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED	FOOT	62			62		
* 73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	17.3			17.3		
* 73602000	REMOVE OVERHEAD SIGN STRUCTURE- BRIDGE MOUNTED	EACH	3			3		
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	2645	2645				
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	28,203	28,203				
* 78000300	THERMOPLASTIC PAVEMENT MARKING - LINE 5"	FOOT	3,398	3,398				
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	14,117	14,117				

Δ NON-PARTICIPATING (100% STATE)

• SPECIALTY ITEM

 PATRICK ENGINEERING	PATRICK ENGINEERING INC. 4970 VARSITY DRIVE LISLE, IL 60532 patrickengineering.com	USER NAME = thospen@rdwy.lisle	DESIGNED - CPK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES				F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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G:\1001\21858.886.CumberlandAve\Drawings\CADD Sheets\0160J14-S00.01.dgn														

Δ REV. 4-11-13

SUMMARY OF QUANTITIES			CONSTRUCTION CODE					
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL					
				RDWY	BRIDGE	SIGNALS LIGHTING	LNDSCP	RET. WALL
* 78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	5238	5238				
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	1982	1982				
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	1,304	1,304				
* 78005100	EPOXY PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	1,456	1,456				
* 78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	15,275	15,275				
* 78005130	EPOXY PAVEMENT MARKING - LINE 6"	FOOT	8,855	8,855				
* 78005150	EPOXY PAVEMENT MARKING - LINE 12"	FOOT	1,090	1,090				
* 78005180	EPOXY PAVEMENT MARKING - LINE 24"	FOOT	772	772				
* 78008200	POLYUREA PAVEMENT MARKING TYPE I - LETTERS AND SYMBOLS	SQ FT	474	474				
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	982	982				
* 78008230	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	FOOT	2,445	2,445				
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	847	847				

• SPECIALTY ITEM

PATRICK ENGINEERING PATRICK ENGINEERING INC. 4970 VARSITY DRIVE LISLE, IL 60532 patrickengineering.com	USER NAME : skoeppe@dy.Lisle	DESIGNED : CPK	REVISED :	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.U. RTE. 2746	SECTION 1616B	COUNTY COOK	TOTAL SHEETS	SHEET NO.
	PLOT CONFIG : PDF (reg. Small).plt	DRAWN : MJP	REVISED :								404	18
	PLOT SCALE : 1:100	CHECKED : JAH	REVISED :								60	J14
	PLOT DATE : 2/18/2013 4:36:22 PM	DATE : 2/18/2013	REVISED :								60J14	
SCALE: NA SHEET 500-15 OF 36 STA. TO STA.				FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								

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Rev. 4-11-13

SUMMARY OF QUANTITIES			CONSTRUCTION CODE					
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL	0003	0010	0021	0031	0040
				RDWY	BRIDGE	SIGNALS LIGHTING	LNDSCP	RET. WALL
* 81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	2,016			2,016		
* 81028350	UNDERGROUND CONDUIT, PVC, 2" DIA	FOOT	252			252		
* 81028370	UNDERGROUND CONDUIT, PVC, 3" DIA	FOOT	1804			1804		
* 81100320	CONDUIT ATTACHED TO STRUCTURE, 1" DIA., PVC COATED GALVANIZED STEEL	FOOT	1,350			1,350		
* 81100705	CONDUIT ATTACHED TO STRUCTURE, 2 1/2" DIA., PVC COATED GALVANIZED STEEL	FOOT	1,335			1,335		
* 81100805	CONDUIT ATTACHED TO STRUCTURE, 3" DIA., PVC COATED GALVANIZED STEEL	FOOT	30			30		
* 81101005	CONDUIT ATTACHED TO STRUCTURE, 4" DIA., PVC COATED GALVANIZED STEEL	FOOT	267	267				
* 81200230	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA. PVC	FOOT	1,185			1,185		
* 81300220	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 6" X 4"	EACH	16			16		
* 81300530	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 10" X 6"	EACH	20			20		
* 81300550	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 6"	EACH	4			4		
* 81300730	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 16" X 14" X 6"	EACH	2			2		

URBAN
90% FED.
10% STATE

• SPECIALTY ITEM

 PATRICK ENGINEERING INC. 4970 VARSITY DRIVE LISLE, IL 60532 patrickengineering.com	USER NAME * koeppen(Rdy.Lis)le	DESIGNED - CPK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES				F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT CONFIG * PDF(Grey.Small).plt	DRAWN - MJP	REVISED -						2746	1616B	COOK	404	20
	PLOT SCALE = 1:100	CHECKED - JAH	REVISED -		60J14								
	PLOT DATE = 2/18/2013 4:26:07 PM	DATE = 2/18/2013	REVISED -		SCALE: NA	SHEET	500-17 OF 36	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	
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Rev. 4-11-13

SUMMARY OF QUANTITIES			CONSTRUCTION CODE					
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL					
				0003	0010	0021	0031	0040
				RDWY	BRIDGE	SIGNALS LIGHTING	LNDSCP	RET. WALL
* 87301805	ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 2C	FOOT	329			329		
* 87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	3,443			3,443		
* 87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	2			2		
* 87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	10			10		
* 87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4			4		
* 87502710	TRAFFIC SIGNAL POST, ALUMINUM 17 FT.	EACH	16			16		
* 87700130	STEEL MAST ARM ASSEMBLY AND POLE, 18 FT.	EACH	1			1		
* 87700160	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	2			2		
* 87700180	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1			1		
* 87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	2			2		
* 87700230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1			1		
* 87700250	STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	1			1		

• SPECIALTY ITEM

	PATRICK ENGINEERING INC. 4970 VARSITY DRIVE LISLE, IL 60532 patrickengineering.com	USER NAME = kwoopentrdwy.lisle	DESIGNED - CPK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	SCALE: NA	SHEET	S00-21 OF 36	STA.	TO STA.	F.A.J. RTE. 2746	SECTION 1616B	COUNTY COOK	TOTAL SHEETS 404	SHEET NO. 24			
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	PLOT SCALE = 1:1000		CHECKED - JAH	REVISED -															
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Rev. 4-11-13

SUMMARY OF QUANTITIES		UNIT	LIRBON 90% FED. 10% STATE TOTAL	CONSTRUCTION CODE				
CODE NO.	ITEM DESCRIPTION			0003 RDWY	0010 BRIDGE	0021 SIGNALS LIGHTING	0031 LNDSCL	0040 RET. WALL
* 87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	127			127		
* 87800420	CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER	FOOT	46			46		
* 87900200	DRILL EXISTING HANDHOLE	EACH	28			28		
* 88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	29			29		
* 88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	11			11		
* 88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4			4		
* 88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	15			15		
* 88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1			1		
* 88030310	SIGNAL HEAD, LED, 3-FACE, 3 SECTION, BRACKET MOUNTED	EACH	1			1		
* 88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	17			17		
* 88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	24			24		
* 88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	3			3		

• SPECIALTY ITEM

 PATRICK ENGINEERING INC. 4970 VARSITY DRIVE LISLE, IL 60532 patrickengineering.com	USER NAME = thaoan@dwg.lisle)	DESIGNED - CPK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES				F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.								
	PLOT CONFIG = PDFI0reg-Small.plt	DRAWN - MJP	REVISED -		2746	1616B	COOK	404	26												
	PLOT SCALE = 1:100	CHECKED - JAH	REVISED -																		
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Q:\100T\21859_886_Cumberland\Drawings\CADD Sheets\0160J14-S00_B1.dgn														SCALE: NA	SHEET	S00-23 OF 36	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

Rev. 4-11-13

SUMMARY OF QUANTITIES			UNIT	TOTAL	CONSTRUCTION CODE				
CODE NO.	ITEM DESCRIPTION	0003			0010	0021	0031	0040	
		RDWY			BRIDGE	SIGNALS LIGHTING	LNDSCP	RET. WALL	
* X0322445	TONE EQUIPMENT MOUNTING FRAME	EACH	4			4			
X0322446	CABINET HOUSING EQUIPMENT, TYPE III	EACH	4			4			
* X0322689	POLE, STEEL, ANCHOR BASE, 10" DIA., 7-GAUGE, 34'-6"	EACH	3			3			
X0322690	POLE, STEEL, ANCHOR BASE, 10" DIA., 3-GAUGE, 34'-6"	EACH	3			3			
* X0322713	FLASHING BEACON, BRACKET MOUNTED	EACH	2			2			
* 81028730	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 1 1/4" DIA.	FOOT	355			355			
X0323160	VIDEO INSPECTION OF STORM SEWER	FOOT	12,221	12,221					
* X0324571	MAINTENANCE OF STREET LIGHTING SYSTEM (CITY OF CHICAGO)	L SUM	1			1			
* X0326326	CABLE IN CONDUIT, TRIPLEX, 2-1/C NO. 6 AND 1-1/C NO. 8 GROUND	FOOT	5,266			5,266			
X0326401	BARRIER WALL REMOVAL	FOOT	96	96					
* X0326451	VIDEO SYSTEM DETECTION CAMERA	EACH	13			13			
X0326694	PLUG EXISTING STORM SEWERS	CU YD	1	1					

• SPECIALTY ITEM

 PATRICK ENGINEERING	PATRICK ENGINEERING INC. 4970 VARSITY DRIVE LISLE, IL 60532 patrickengineering.com	USER NAME = koeppen@dy-lisle	DESIGNED - CPK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES				F.A.U. RTE.				SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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0:\1001\21050.000\Cumberland\Drawings\CADD Sheets\01000\14-500.01.dgn					SCALE: NA	SHEET	500-26 OF 36	STA.	TO STA.	FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT							

SUMMARY OF QUANTITIES			CONSTRUCTION CODE					
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL					
				RDWY	BRIDGE	SIGNALS LIGHTING	LNDSCP	RET. WALL
* X7330310	OVERHEAD SIGN STRUCTURE - SPAN, DUAL MONOTUBE	FOOT	42			42		
* X8040100	ELECTRIC CONNNECTION TO SIGN STRUCTURE	EACH	1			1		
* X8040310	ELECTRIC SERVICE DISCONNECT	EACH	1			1		
* X8210055	FLUORESCENT LUMINAIRE FOR SIGN LIGHTING	EACH	4			4		
* X8251388	LIGHTING CONTROLLER, BASE MOUNTED, 480 VOLT, 200 AMP (DUAL), RADIO SCADA	EACH	1			1		
* X8850102	INDUCTION LOOP	FOOT	468			468		
* X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	3			3		
* X8570231	FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	EACH	1			1		
* X8620200	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL	EACH	4			4		
* X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	6,663			6,663		
* X8800101	PEDESTRIAN PUSH-BUTTON, SPECIAL	EACH	11			11		
* X8950077	REMOVE AND RELOCATE EXISTING LIGHTING CONTROLLER	EACH	2			2		

• SPECIALTY ITEM

 PATRICK ENGINEERING 4970 VARSITY DRIVE LISLE, IL 60532 patrickengineering.com	USER NAME = koeppen(Rdy-Lisle) PLOT CONFIG = POFI(Grey, Small).plt PLOT SCALE = 1:1000 PLOT DATE = 2/18/2013 4:09:43 PM	DESIGNED - CPK DRAWN - MJP CHECKED - JAH DATE - 2/18/2013	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES SCALE: NA SHEET 500-29 OF 36 STA. TO STA.	F.A.U. RTE. 2746 SECTION 1616B COUNTY COOK TOTAL SHEETS 404 SHEET NO. 32 60J14
	Rev. 4-11-13					
	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
	G:\1001\21050_096_Cumberland\Drawings\CADD Sheets\0160J14-500.01.dgn					

SUMMARY OF QUANTITIES			UNIT	CONSTRUCTION CODE				
CODE NO.	ITEM DESCRIPTION	TOTAL		0003	0010	0021	0031	0040
				RDWY	BRIDGE	SIGNALS LIGHTING	LNDSCP	RET. WALL
Z0013797	STABILIZED CONSTRUCTION ENTRANCE	SQ YD	436	436				
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1				
Z0018004	DRAINAGE SCUPPERS, DS-12	EACH	10		10			
Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	58	58				
Z0018800	DRAINAGE SYSTEM	L SUM	1		1			
Z0021904	SILICONE JOINT SEALER, 1"	FOOT	335		335			
Z0026407	TEMPORARY SHEET PILING	SQ FT	1,248		1,248			
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	982	982				
* Z0033020	LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	55			55		
* Z0033028	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	16			16		
* Z0033046	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	2			2		
* Z0033050	COAXIAL CABLE IN CONDUIT	FOOT	2768			2768		⚠

• SPECIALTY ITEM

 PATRICK ENGINEERING INC. 4970 VARSITY DRIVE LISLE, IL 60532 patrickengineering.com	USER NAME = thoeppen@dwg.lisla PLOT CONFIG = PDF (Gray, Small) .plt PLOT SCALE = 1/8"=1'-0" PLOT DATE = 2/18/2013 4:39:48 PM	DESIGNED - CPK DRAWN - MJP CHECKED - JAH DATE - 2/18/2013	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES SCALE: NA SHEET 500-30 OF 36 STA. TO STA.	P.A.U. RTE. 2746	SECTION 1616B	COUNTY COOK	TOTAL SHEETS 404	SHEET NO. 33

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Rev. 4-11-13

SUMMARY OF QUANTITIES		UNIT	URBAN 90% FED. 10% STATE TOTAL	CONSTRUCTION CODE				
CODE NO.	ITEM DESCRIPTION			0003	0010	0021	0031	0040
				RDWY	BRIDGE	SIGNALS LIGHTING	LNDSCP	RET. WALL
	ADVANCED TRANSPORTATION							
X0370050	CONTROLLER, TRAFFIC, 16 LOAD BAY, "P" CABINET (CDOT)	EACH	4			4		
X0370010	COAXIAL JUMPER CABLE (CDOT)	EACH	4			4		
X0370013	CONCRETE FOUNDATION FOR TYPE "P" BASE MOUNTED TRAFFIC SIGNAL CONTROLLER (CDOT)	EACH	4			4		
X0370014	CONCRETE FOUNDATION, 20" DIAMETER, 3/4" ANCHOR RODS, 13" BOLT CIRCLE (CDOT)	EACH	10			10		
X0370068	CONCRETE FOUNDATION, 24" DIAMETER, 1 1/4" ANCHOR RODS, 15" BOLT CIRCLE (CDOT)	EACH	29			29		
X0370015	CONCRETE FOUNDATION, 30" DIAMETER, 1 1/2" ANCHOR RODS, 16 1/2" BOLT CIRCLE (CDOT)	EACH	10			10		
X0370016	CONCRETE FOUNDATION, 30" DIAMETER, 1 1/4" ANCHOR RODS, 17 1/4" BOLT CIRCLE (CDOT)	EACH	2			2		
X0370051	CUT OFF POLE AND INSTALL CAP (CDOT)	EACH	1			1		
X0370018	ELECTRIC CABLE IN CONDUIT NO. 14 19/C (CDOT)	FOOT	5320			5320		
X0370052	ELECTRIC CABLE IN CONDUIT NO. 4 2/C (CDOT)	FOOT	577			577		
X0370053	ELECTRIC CABLE NO. 14 3/C, SHIELDED (CDOT)	FOOT	2768			2768		
X0370021	ELECTRICAL HANDHOLE, 30", 24" FRAME AND LID (CDOT)	EACH	4			4		

• SPECIALTY ITEM

 PATRICK ENGINEERING	PATRICK ENGINEERING INC 4070 VARSITY DRIVE LISLE, IL 60532 patrickengineering.com	USER NAME = kwoepfen@dyg-lisle1	DESIGNED - CPK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES				F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT CONFIG = PDFIGray_small.plt	DRAWN - MJP	REVISED -	2746						1616B	COOK	404	36	
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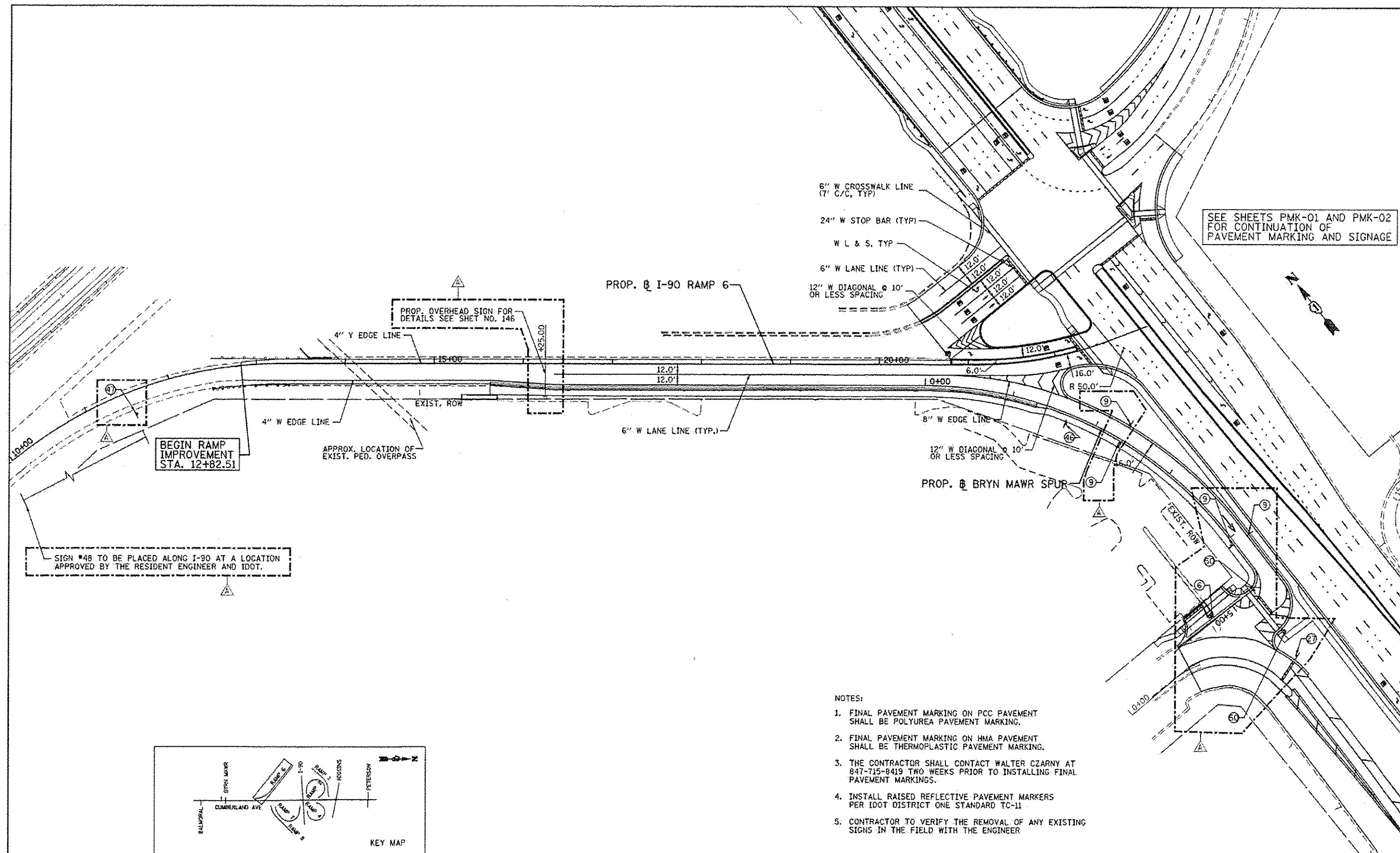
Rev. 4-11-13

PROPOSED DRAINAGE STRUCTURES

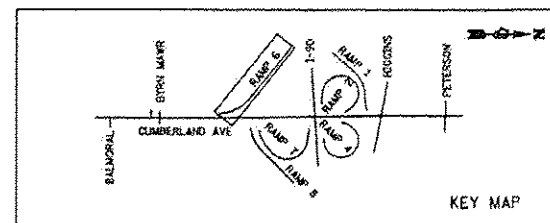
101 STA 97+29, 41' LT INLETS TA T24F&G RIM = 634.16 N INV = 631.76 102 STA 7+18, 65' RT CB TC T24F&G RIM = 633.65 NE INV = 630.70 103 STA 6+61, 60' RT CB TC T24F&G RIM = 633.06 NE INV = 628.81 104 STA 101+40, 53' LT CB TC T24F&G RIM = 633.79 E INV = 631.46 105 STA 102+83, 53' LT CB TC T24F&G RIM = 633.27 E INV = 630.94 106 STA 104+27, 53' LT CB TC T24F&G RIM = 632.95 NE INV = 630.62 107 STA 106+27, 48' LT INLETS TA T24F&G RIM = 632.35 W INV = 629.56 108 STA 106+52, 48' LT INLETS TA T24F&G RIM = 632.66 N INV = 629.82 109 STA 106+86, 47' LT CB TA 4 DIA T24F&G RIM = 632.85 W INV = 628.08 S INV = 629.68 N INV = 629.68 110 NOT USED 111 STA 8+70, 28' RT CB TC T24F&G RIM = 633.71 NW INV = 629.29 112 STA 8+71, 29' LT CB TC T24F&G RIM = 633.72 W INV = 626.75 113 STA 111+61, 60' LT INLETS TA T24F&G RIM = 644.65 N INV = 641.60	114 STA 111+79, 59' LT CB TA 4 DIA T24F&G RIM = 644.45 W INV = 641.28 (EXIST S.S.) S INV = 641.28 115 STA 112+48, 65' LT CB TA 4 DIA T24F&G RIM = 645.75 S INV = 641.21 (EXIST S.S.) N INV = 641.81 116 STA 113+00, 65' LT CB TA 4 DIA T24F&G RIM = 647.08 W INV = 643.58 N INV = 643.58 S INV = 643.57 116A STA 113+00, 80' LT INLET TA T8G RIM = 647.02 E INV = 643.71 117 STA 113+98, 64' LT CB TA 4 DIA T24F&G RIM = 650.93 S INV = 646.91 N INV = 647.01 118 STA 115+52, 60' LT INLETS TA T24F&G RIM = 656.51 S INV = 652.25 119 STA 111+97, 15' RT INLETS TA T24F&G RIM = 646.13 E INV = 640.87 120 STA 114+56, 11' RT INLETS TA T24F&G RIM = 654.49 NE INV = 650.18 120A STA 110+41, 106' RT INLETS TA T24F&G RIM = 642.60 W INV = 634.57 121 STA 111+77, 83' RT INLETS TA T24F&G RIM = 644.15 NW INV = 637.82 122 STA 112+00, 65' RT CB TA 4 DIA T24F&G RIM = 644.79 NE INV = 637.68 (EXIST S.S.) SE INV = 637.68 W INV = 637.68 123 STA 112+66, 53' RT CB TA 4 DIA T24F&G RIM = 646.45 SE INV = 639.62 (EXIST S.S.) N INV = 640.62 124 STA 114+86, 56' RT CB TA 4 DIA T24F&G RIM = 654.87 S INV = 649.63 SW INV = 649.63	125 STA 119+56, 59' LT INLETS TA T24F&G RIM = 644.45 W INV = 641.28 N INV = 649.12 126 STA 121+29, 75' LT CB TA 4 DIA T24F&G RIM = 645.85 NW INV = 640.50 S INV = 642.00 127 STA 122+14, 138' LT MAN TA 4 DIA TIF CL RIM = 643.18 SW INV = 634.80 SE INV = 635.80 127A STA 123+02, 87' LT CB TA 4 DIA T8G RIM = 635.41 SW INV = 629.70 SE INV = 629.52 128 STA 123+79, 67' LT INLET TA T24F&G RIM = 636.36 S INV = 632.86 129 STA 119+61, 59' RT INLETS TA T24F&G RIM = 653.29 N INV = 647.50 130 STA 121+12, 71' RT CB TA 4 DIA T24F&G RIM = 646.84 N INV = 640.60 S INV = 640.80 131 STA 122+66, 54' RT CB TA 4 DIA T24F&G RIM = 640.64 SE INV = 636.08 S INV = 638.64 (UNDERDRAIN OUTLET) N INV = 638.64 (UNDERDRAIN CLEANOUT) 132 STA 122+22, 78' RT CB TA 5 DIA TIF CL (CONC. FLAT SLAB TOP) RIM = 641.69 NW INV = 635.84 S INV = 637.30 NE INV = 633.34 SE INV = 633.24 133 STA 124+37, 110' RT CB TC T24F&G RIM = 635.90 N INV = 632.10 SW INV = 633.90 (UNDERDRAIN OUTLET) 134 STA 124+80, 86' LT CB TA 4 DIA T24F&G RIM = 636.04 N INV = 632.26 135 STA 125+82, 117' LT INLETS TA T24F&G RIM = 635.84 S INV = 630.05 136 STA 126+71, 52' LT CB TC T24F&G RIM = 635.75 E INV = 631.78 S INV = 633.66 (UNDERDRAIN OUTLET) N INV = 633.66 (UNDERDRAIN CLEANOUT)	137 STA 127+63, 45' LT CB TC T24F&G RIM = 635.58 E INV = 631.82 S INV = 633.31 (PIPE UNDERDRAIN OUTLET) 201 STA 11+35, 40' LT CB TC T24F&G RIM = 635.70 SW INV = 625.36 202 STA 12+38, 40' LT CB TC T24F&G RIM = 635.50 S INV = 632.09 203 STA 13+31, 36' RT CB TC T24F&G RIM = 636.03 N INV = 631.03 (EXIST S.S.) 204 STA 12+16, 36' RT CB TC T24F&G RIM = 635.92 N INV = 630.87 (EXIST S.S.) 205 STA 7+57, 48' RT CB TC T24F&G RIM = 635.65 N INV = 630.65 (EXIST S.S.) 206 STA 6+83, 48' RT CB TC T24F&G RIM = 635.27 N INV = 630.97 (EXIST S.S.) 207 STA 5+41, 48' RT CB TC T24F&G RIM = 634.42 N INV = 631.11 208 STA 4+58, 44' RT CB TC T24F&G RIM = 633.93 N INV = 630.14 209 STA 3+67, 36' RT CB TC T24F&G RIM = 633.59 N INV = 630.69 301 STA 18+42, 25.5' RT INLETS TA T10F&G RIM = 635.87 NW INV = 633.31 *BOT STR = 631.15 302 STA 17+02, 25.5' RT CB TC T10F&G RIM = 635.44 NW INV = 632.69 SE INV = 632.69 *BOT STR = 630.60 303 STA 15+63, 21' RT CB TC T10F&G RIM = 635.02 NW INV = 632.18 SE INV = 632.18 *BOT STR = 630.79	304 NOT USED 305 NOT USED 306 NOT USED 307 NOT USED 308 NOT USED 309 STA 21+61, 21' LT CONC. HOWL FOR P DRAIN RIM = 639.95 E INV = 634.34 310 STA 21+76, 21' LT CB TA 4 DIA T24F&G RIM = 639.86 W INV = 634.20 N INV = 634.50 S INV = 634.10 310A STA 110+47, 85' LT INLETS TA T24F&G RIM = 643.00 S INV = 635.10 311 STA 2+29, 0' RT CB TA 4 DIA T24F&G RIM = 634.99 N INV = 631.45 S INV = 631.35 312 STA 4+07, 0' RT CB TA 4 DIA T24F&G RIM = 632.25 N INV = 627.75 S INV = 627.65 E INV = 627.75 313 STA 4+22, 0' RT CB TA 4 DIA T24F&G RIM = 632.23 N INV = 627.35 SW INV = 623.56 313A STA 4+38, 6' RT MAN TYPE B T IF CL (CHCO) RIM = 632.70 E INV = 623.24 W INV = 623.24 NE INV = 623.24 401 STA 1+07, 51' LT PRC FLAR END SEC 12
--	--	--	---	---

- BOTTOM OF STRUCTURE ELEVATION PROVIDED FOR MINIMUM 6" CLEARANCE ABOVE THE PROPOSED RETAINING WALL FOOTING

NOTE:
THE FINAL RIM ELEVATION OF ALL
PROPOSED, ADJUSTED, OR RECONSTRUCTED
DRAINAGE STRUCTURES SHALL BE
DETERMINED FROM THE FINISHED GRADES
OF THE PROPOSED PAVEMENT SURFACE
AND CUTTER. IT SHALL BE THE
CONTRACTOR'S RESPONSIBILITY TO
VERIFY THE FINAL RIM ELEVATION OF
ALL DRAINAGE STRUCTURES PRIOR TO
STARTING ANY DRAINAGE WORK.



- NOTES:
1. FINAL PAVEMENT MARKING ON PCC PAVEMENT SHALL BE POLYUREA PAVEMENT MARKING.
 2. FINAL PAVEMENT MARKING ON HMA PAVEMENT SHALL BE THERMOPLASTIC PAVEMENT MARKING.
 3. THE CONTRACTOR SHALL CONTACT WALTER CZARNY AT 847-715-8419 TWO WEEKS PRIOR TO INSTALLING FINAL PAVEMENT MARKINGS.
 4. INSTALL RAISED REFLECTIVE PAVEMENT MARKERS PER IDOT DISTRICT ONE STANDARD TC-11
 5. CONTRACTOR TO VERIFY THE REMOVAL OF ANY EXISTING SIGNS IN THE FIELD WITH THE ENGINEER



 PATRICK ENGINEERING INC. 4070 VARSITY DRIVE Lisle, IL 60532 patrickengineering.com	USER NAME = john@dwg.com	DESIGNED - CPK	REVISED - 4/01/2013 JAC	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING AND SIGNING PLAN I-90 RAMP 6	F.A.U. RTE. 2746	SECTION 1616B	COUNTY COOK	TOTAL SHEETS 404	SHEET NO. 140
	PLOT CONFIG = PMK05-05.dwg	DRAWN - MJP	REVISED -							
	PLOT SCALE = 1"=80'	CHECKED - JAH	REVISED -							
	PLOT DATE = 4/1/2013 10:57:17 AM	DATE = 2/18/2013	REVISED -							
SCALE: 1"=80' SHEET PMK-05 OF 9 STA. TO STA.					FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT 60J14					

G:\DOT\21050_050_CumberlandAve\Drawings\CADD Sheets\0160J14-shs-pmk-ramp6.dgn



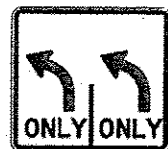
①
R4-7
(24" x 30")



②
R3-5 R
(30" x 36")



③
R3-5
(24" x 30")



④
CUSTOM
(30" x 30")



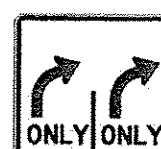
⑤
R10-11B
(36" x 36")



⑥
R3-2
(36" x 36")



⑦
R5-1
(36" x 36")



⑧
CUSTOM
(30" x 30")



⑨
R5-1A
(42" x 30")



⑩
M1-1100
(30" x 24")



⑪
R2-1
(30" x 36")



⑫
M3-1
(24" x 12")



⑬
M3-3
(24" x 12")



⑭
CUSTOM
(36" x 30")



⑮
R3-7R
(36" x 36")



⑯
W11-2
(48" x 48")



⑰
W16-7P L
(30" x 18")



⑱
W16-7P R
(30" x 18")



⑲
W9-1
(36" x 36")



⑳
CUSTOM
(66" x 8")



㉑
CUSTOM
(54" x 8")



㉒
W1-6 R
(48" x 24")



㉓
W1-8 R
(24" x 30")



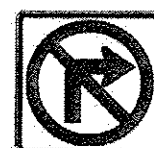
㉔
M1-1
(24" x 24")



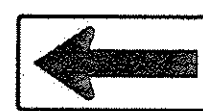
㉕
M2-1
(21" x 15")



㉖
M5-6
(24" x 18")



㉗
R3-1
(36" x 36")



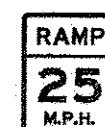
㉘
W1-6 L
(48" x 24")



㉙
M1-1100
(24" x 24")



㉚
CUSTOM
(24" x 8")



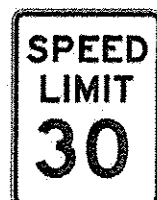
㉛
W13-3
(24" x 30")



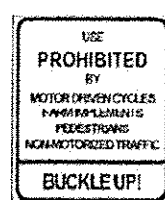
㉜
M5-2 R
(21" x 15")



㉝
M3-4
(24" x 12")



㉞
R2-1
(30" x 36")



㉟
R5-1100
(40" x 48")

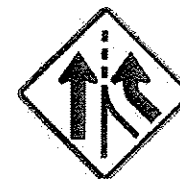
⑬③
FOR DETAILS SEE
SIGN LEGEND SHEET 2



㉡
M3-4
(24" x 12")



㉢
M4-14
(24" x 12")



㉣
W4-3
(36" x 36")



㉤
M4-5
(24" x 12")



㉥
M5-1 R
(24" x 15")



㉦
R9-3
(30" x 30")



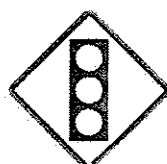
㉧
R6-2
(30" x 36")



㉨
R9-3
(18" x 18")



㉩
R7-1
(12" x 18")



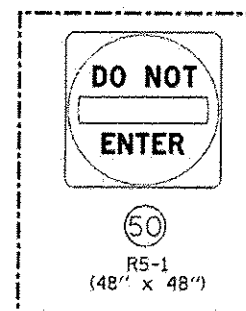
㉪
W3-3
(48" x 48")

⑬④
FOR DETAILS SEE
SIGN LEGEND SHEET 2

⑬⑤
FOR DETAILS SEE
SIGN LEGEND SHEET 2



㉫
R1-1
(30" x 30")

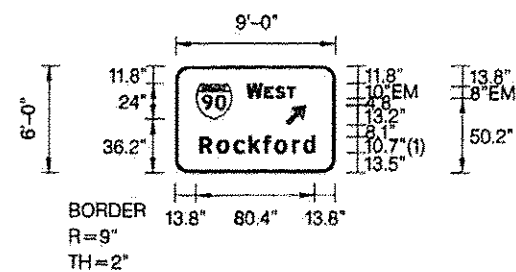


㉬
R5-1
(48" x 48")



	PATRICK ENGINEERING INC. 4070 VARSITY DRIVE LIBLE, IL 60032 patrickengineering.com	USER NAME: jch@rdwy.com PLOT CONFIG: PKGGray_Small1.plt PLOT SCALE: 1/4"=1'	DESIGNED - CPK DRAWN - MJP CHECKED - JAH DATE - 2/10/2013	REVISED - 8/14/2012 REVISED - 4/01/2013 JAC REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING AND SIGNING PLAN SIGN LEGEND	SCALE: NA	SHEET PKM-08 OF 9	STA. TO STA.	F.A.U. RTE. 2746	SECTION 16168	COUNTY COOK	TOTAL SHEETS 404	SHEET NO. 143

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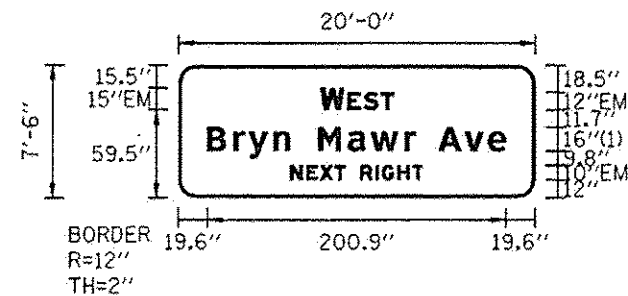
FONT:
(1) ClearviewHwy-5-W

SIGN NUMBER	name
WIDTH x HGT.	8'-6" x 6'-0"
BORDER WIDTH	2"
CORNER RADIUS	9"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: Color 24
LEGEND/BORDER	TYPE: Reflective COLOR: Color 100/Color 100

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	14.1	34.2	24	24
AR_Type A	315	74.8	30.3	10.6	16.8

LETTER POSITIONS (X)																LENGTH	SERIES/SIZE
W	E	S	T														EM 2000
48.1	60.1	67.5	75.1													33	10.8
R	o	c	k	f	o	r	d										EM 2000
14.1	24.6	34.2	44.6	53.9	60.7	71.2	78.2									71.2	10.78

SIGN NUMBER 36



FONT:
(1) ClearviewHwy-5-W

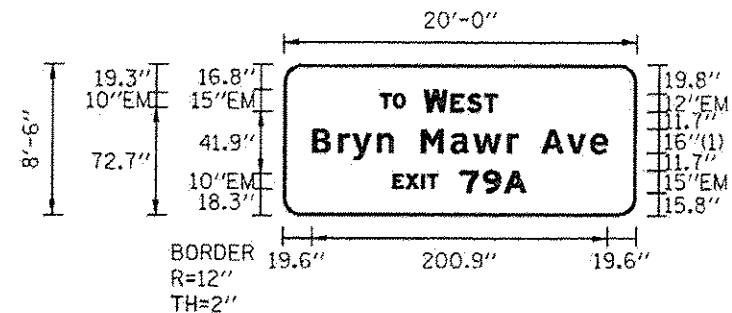
Panel Style: guide_fwy_intermediate.ssi
M.U.T.C.D.: 2009 Edition

SIGN NUMBER	name
WIDTH x HGT.	20'-0" x 7'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: Color 24
LEGEND/BORDER	TYPE: Reflective COLOR: Color 100/Color 100

SYMBOL	ROT	X	Y	WID	HT

LETTER POSITIONS (X)																LENGTH	SERIES/SIZE
W	E	S	T														EM 2000
95.2	113.3	124.4	135.9													49.6	15.12
B	r	y	n		M	a	w	r		A	v	e					ClearviewHwy-5-W
19.6	37.2	47.3	64	75.1	94.1	114.1	129.3	162.1	159.5	175.3	192.9	208.7				200.9	1613
N	E	X	T		R	I	G	H	T								EM 2000
75.4	86.3	95.1	104.9	112.3	122.3	132.5	136.9	147.4	157.3							69.3	10

SIGN NUMBER 47



FONT:
(1) ClearviewHwy-5-W

Panel Style: guide_fwy_intermediate.ssi
M.U.T.C.D.: 2009 Edition

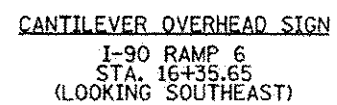
SIGN NUMBER	name
WIDTH x HGT.	20'-0" x 8'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: Color 24
LEGEND/BORDER	TYPE: Reflective COLOR: Color 100/Color 100

SYMBOL	ROT	X	Y	WID	HT

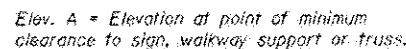
LETTER POSITIONS (X)														LENGTH	SERIES/SIZE
T	O													EM 2000	
65.8	74.6												17.2	10	
W	E	S	T											EM 2000	
95.6	113.7	124.8	136.3										49.5	15,12	
B	r	y	n		M	a	w	r		A	v	e		ClearviewHwy-5-W	
19.6	37.2	47.3	64	75.1	94.1	114.1	129.3	152.1	159.5	175.3	192.9	208.7	200.9	1613	
E	X	I	T	7	9	A								EM 2000	
74.8	83.6	94.4	98.2	120.6	135.8	150							90.4	10,15	

SIGN NUMBER 48

NOTE:
FONT:
(1) ClearviewHwy-5-W
(2) SEE PAVEMENT MARKING AND SIGNING PLAN
FOR PLACEMENT INFORMATION



 PATRICK ENGINEERING INC. 4070 VARIETY DRIVE LISLE, IL 60532 pat@patrickeng.com 630-582-8800	USER NAME = jacob@dwg.lisle	DESIGNED - CPK	REVISED - <u>A</u> 4/01/2013 JAC	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURE SIGN DETAILS				F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT CONFIG = PDF(Dwg,Small)ps	DRAWN - MJP	REVISED -						2746	1616B	COOK	404	145
	PLOT SCALE = 1/10	CHECKED - JAH	REVISED -		60J14								
	PLOT DATE = 4/2/2013 10:21:33 AM	DATE = 2/18/2013	REVISED -										
OR: T007:24290_006-CumberlandAveDrawings\CADD Sheets\0160J14-shr-sign_Details.dgn				SCALE: NA	SHEET	SGN-1 OF 10	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



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

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



Parameters shown are basis for I.D.G.T. Standards
Installations not within dimensional limits shown
require special analysis for all components.

Notes:

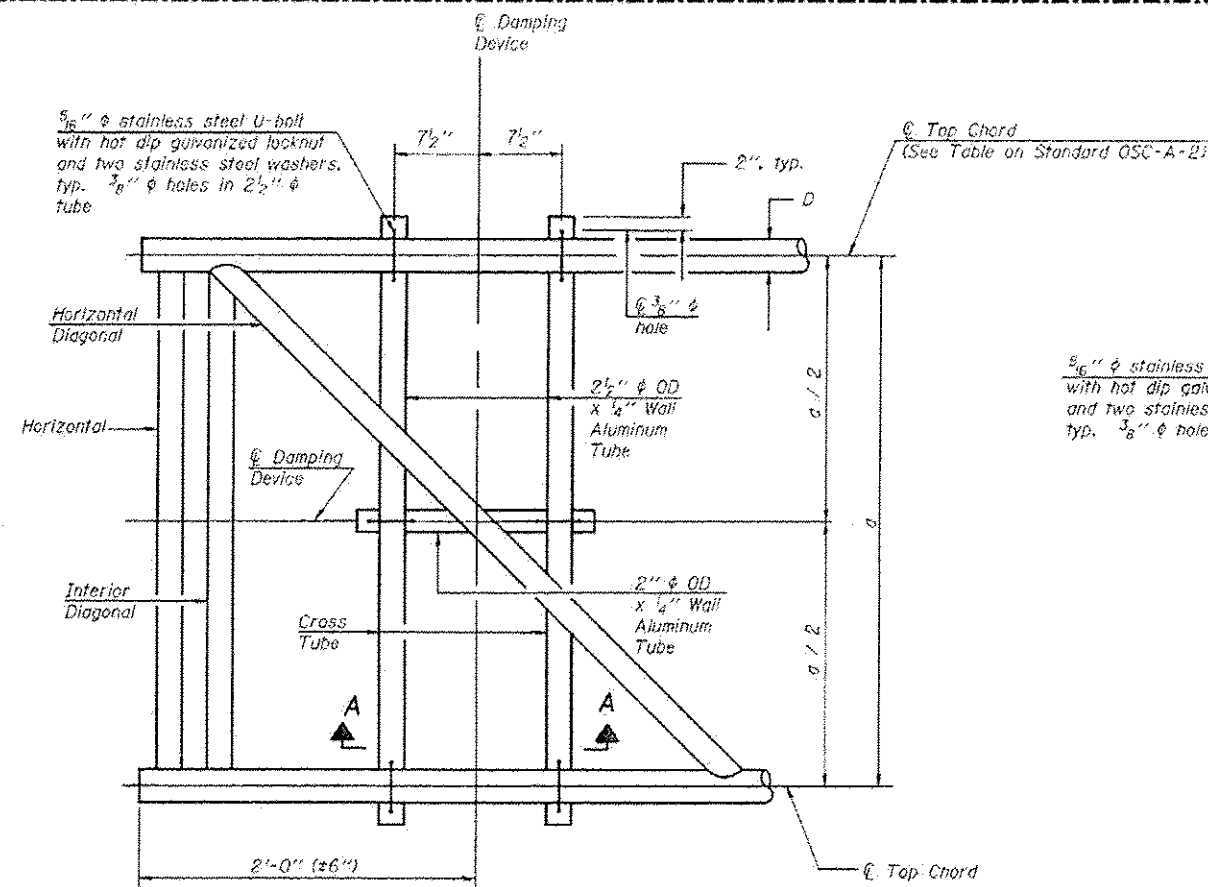
Trusses shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The contractor is responsible for maintaining the configuration and protection of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

- ① After adjustments to level truss and insure adequate vertical clearance, all top and leveling nuts shall be tightened against the base plate with a minimum torque of 200 lb.-ft. Stainless steel mesh shall then be placed around the perimeter of the base plate. Secure to base plate with stainless steel banding.
- * 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.

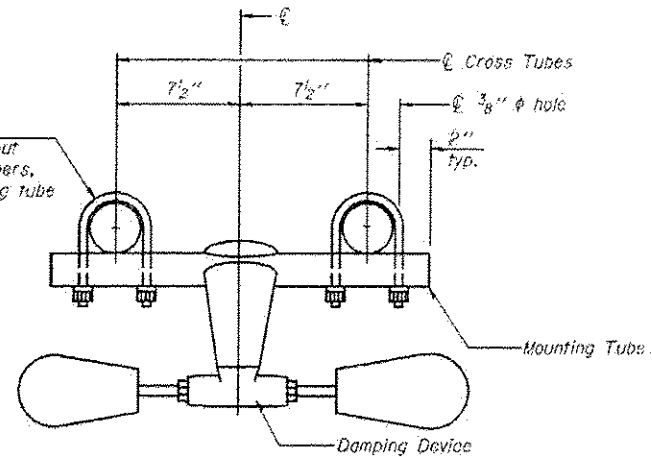
△ ENTIRE SHEET REVISED

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

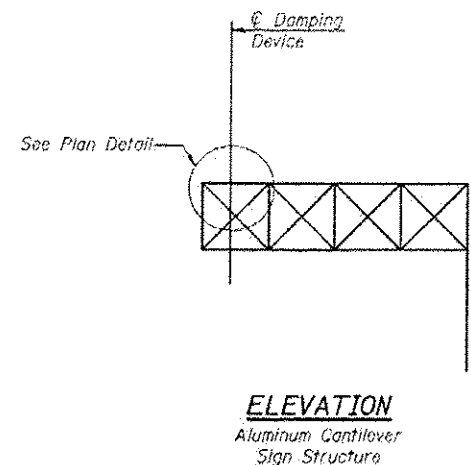
ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE I-C-A	Foot	
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE II-C-A	Foot	
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE III-C-A	Foot	40.0
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	Foot	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	12.2



PLAN DETAIL



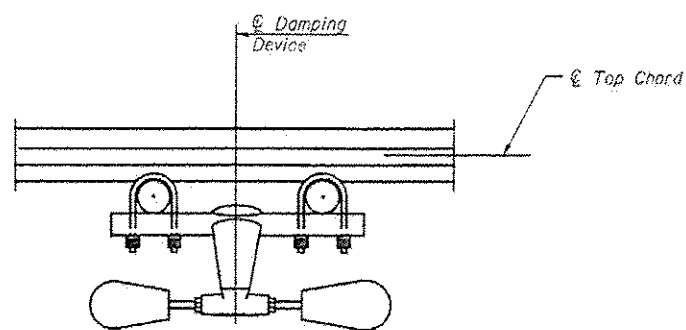
TRUSS DAMPING
DEVICE CONNECTION DETAIL



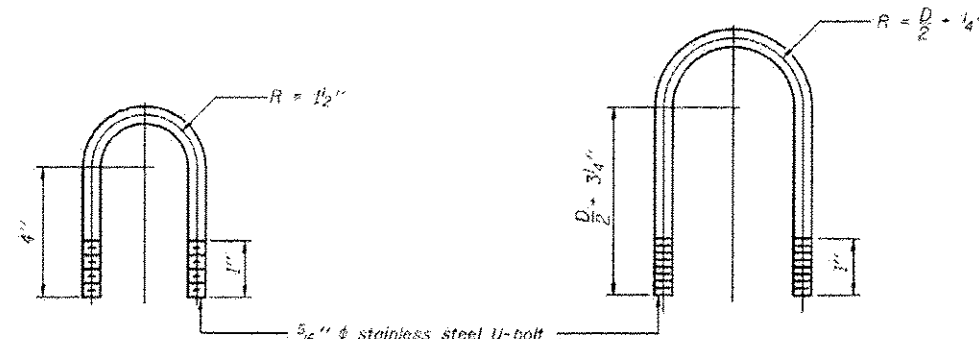
ELEVATION
Aluminum Cantilever
Sign Structure

GENERAL NOTES

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



SECTION A-A



DAMPING DEVICE MOUNTING
TUBE U-BOLT DETAIL
(Typical)

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

OSC-A-D

6-1-12



PATRICK ENGINEERING INC.
4070 VARSITY DRIVE
LISLE, IL 60532
patrickengineering.com

USER NAME	DESIGNED - CPK
DESIGNED	DRAWN - MJP
FLAT SCALE	CHECKED - JAH
FLAT DATE	DATE - 2/18/2013

DESIGNED	4/1/2013 AY
REVISOR	
REVISOR	
REVISOR	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

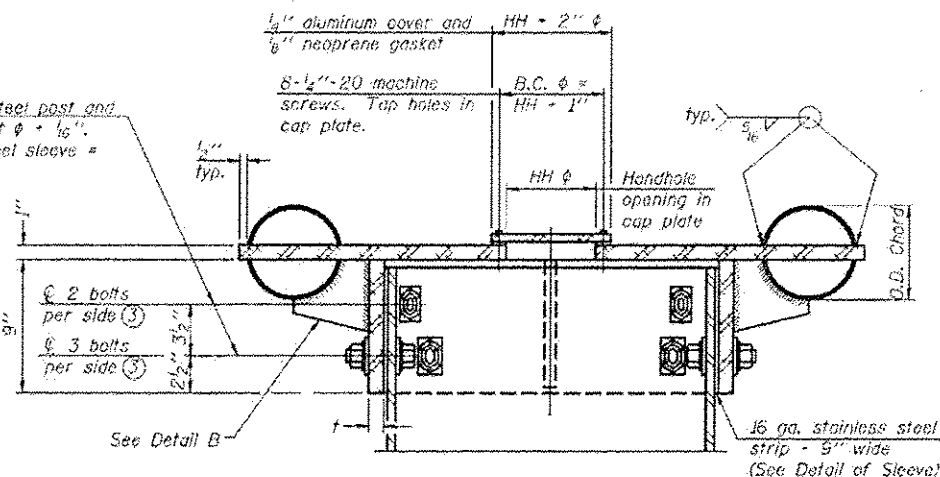
CANTILEVER SIGN STRUCTURE
DAMPING DEVICE

SCALE: SHEET NO. 50N-3J OF 10 SHEETS

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2746	1616B	COOK	404	147J
CONTRACT NO. 60J14				
ILLINOIS FED. AID PROJECT				

ADDED SHEET

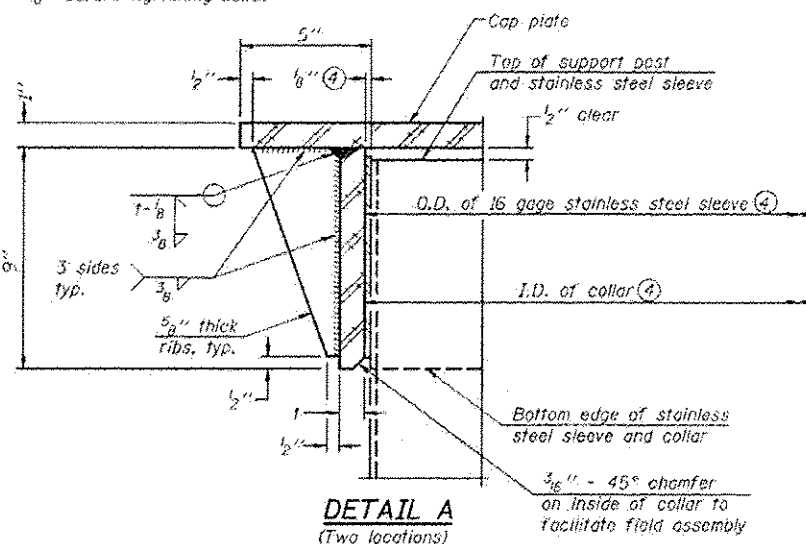
Holes in galvanized steel post and aluminum collar = bolt $\phi = \frac{1}{8}"$.
Holes in stainless steel sleeve = bolt $\phi = \frac{3}{16}"$.



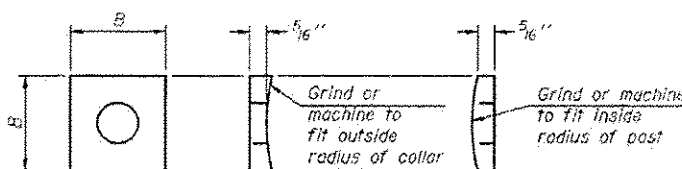
- ① Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus $\frac{1}{8}"$ ($\pm \frac{1}{16}"$). Maximum gap between post and collar at any location equals $\frac{1}{8}"$ before tightening bolts.

SECTION B-B

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



DETAIL A (Two locations)

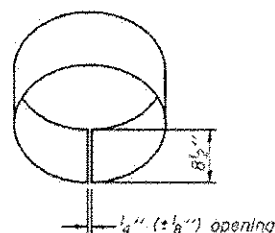


CONTOURED WASHERS

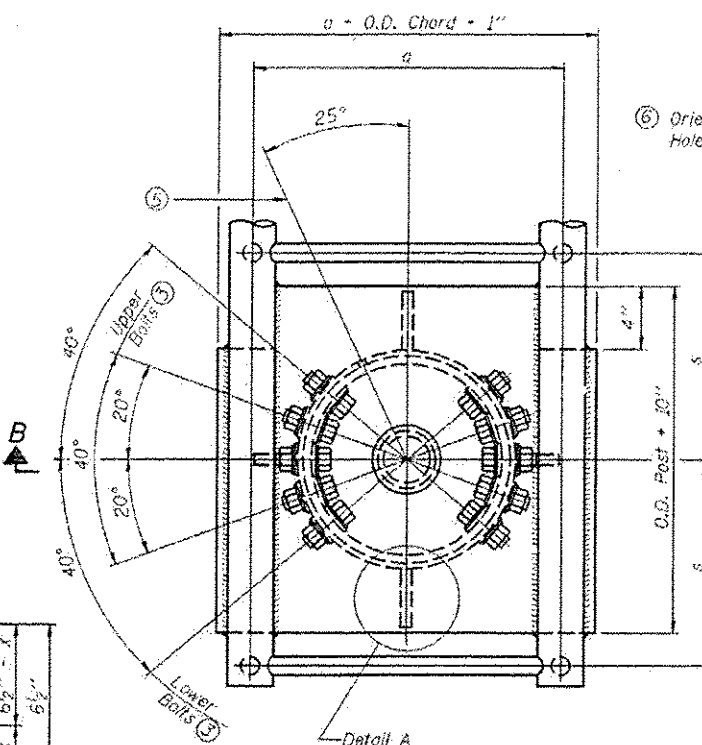
Bolt Size	Contoured Washers	
	Hole Dia.	B
7/8"	1"	2 1/2"
1"	1 1/8"	3"
1 1/4"	1 3/8"	3 1/4"

DETAIL OF STAINLESS STEEL SLEEVE

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

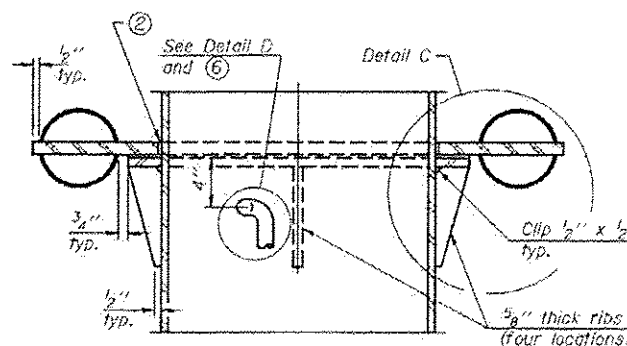


DETAIL D

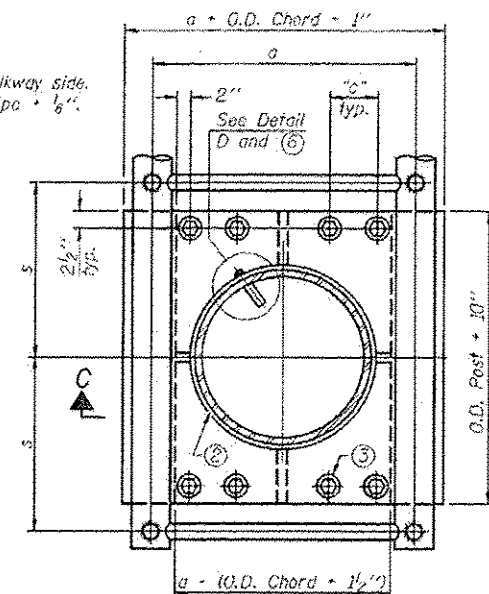


PLAN VIEW - TOP OF COLUMN

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

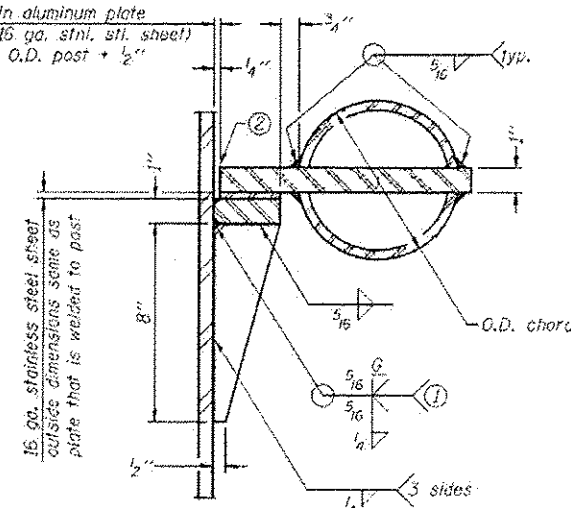


SECTION C-C



SECTION THRU POST ABOVE LOWER CHORDS

Hole in aluminum plate (and 16 ga. stnl. stl. sheet) to be O.D. post + 1/2"



DETAIL C

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

ADDED SHEET

OSC-A-3

6-1-12

PATRICK ENGINEERING INC.
4070 VARSITY DRIVE
LISLE, IL 60532
patrickengineering.com

USER NAME
DESIGNED - CPK
DRAWN - MJP
CHECKED - JAH
DATE - 2/18/2013

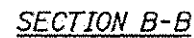
REVISIONS
4/1/2013 AY
REVISIONS
REVISIONS
REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

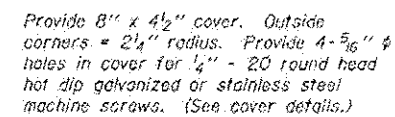
CANTILEVER SIGN STRUCTURES - JUNCTURE DETAILS
ALUMINUM TRUSS & STEEL POST

SCALE: SHEET NO. 30N-38 OF 10 SHEETS

F.A.U. R.T.E. SECTION COUNTY TOTAL SHEET NO.
2746 16168 404 1478
CONTRACT NO. 60J14
ILLINOIS FED. AID PROJECT



HANDHOLE COVER



DETAIL A

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



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

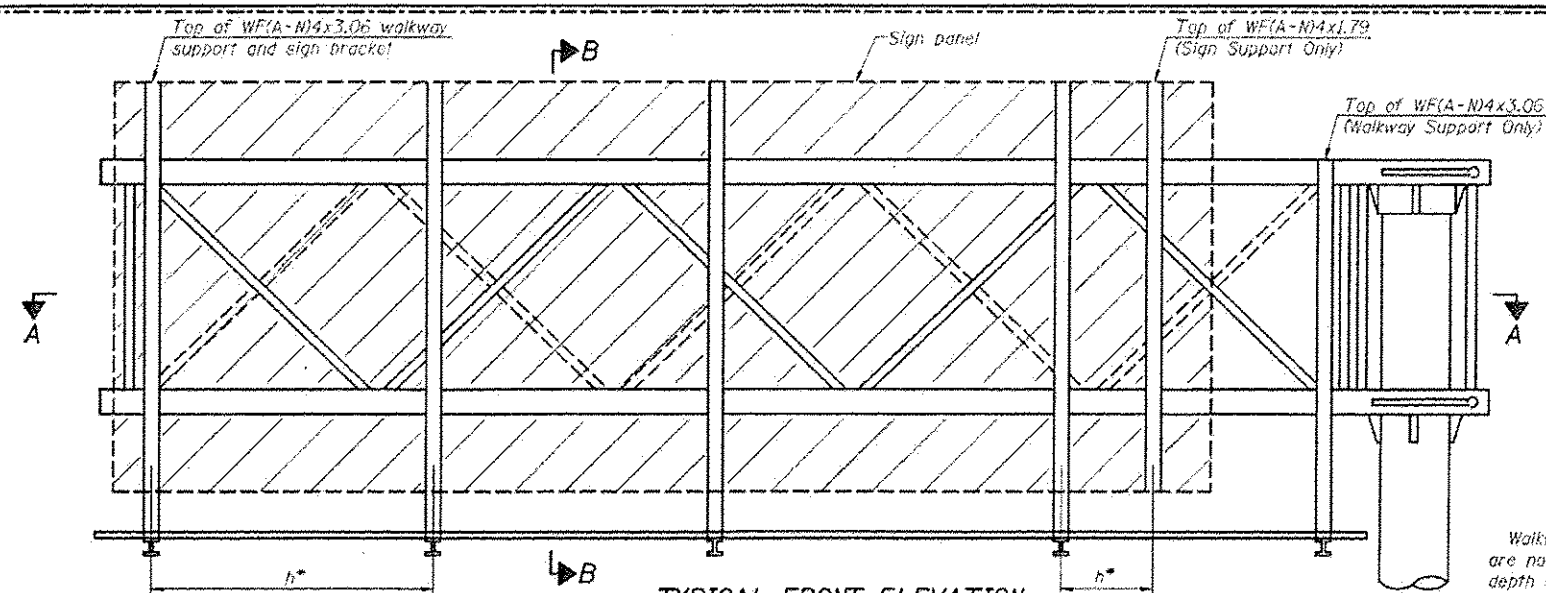
ANCHOR ROD DETAIL

OSC-A-4

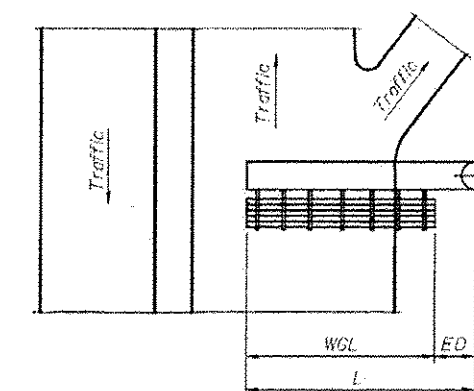
6-1-12

F.A.U. RTE.					SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2746					16160	COOR	404	147C
						CONTRACT NO. 60JL4		
IN REPLY, PLEASE REFER TO PROJECT								

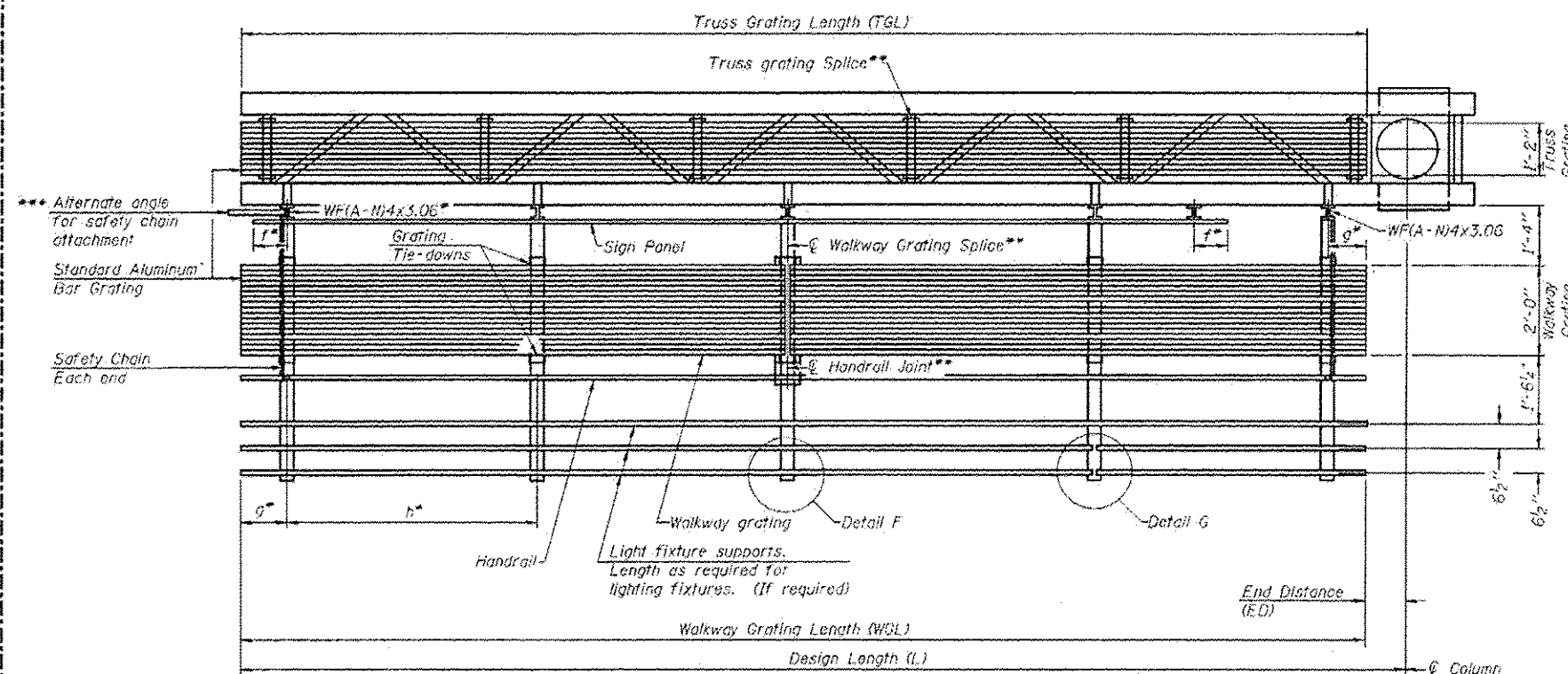
 ADDED SHEET



TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.



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



SECTION A-A

Truss grating to facilitate inspection shall run full length of cantilevers. Cost of truss grating is included in Overhead Sign Structure Cantilever.

Handrail and walkway grating shall span a minimum of three brackets between splices.
** Use and location of handrail joints or grating splices are optional, based on lengths needed and material availability.

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

Structure Number	Station	WGL	ED	TGL
1C061190R000.6	16+25.00 Ramp 6	---	---	36'-6"

- Notes:
- Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:
 - f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
 - g = 12" maximum, 4" minimum (End of walkway to center of nearest bracket)
 - h = 6'-0" maximum (center to center sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
 - *** If walkway bracket at safety chain location is behind sign, add angle to bracket. See alternate safety chain attachment on base sheet OSC-A-B.
 - For details of sign placement, sign/walkway brackets, truss and walkway gratings, grating splices and Section B-B, see Base Sheet OSC-A-7.
 - For details of handrail, handrail joint, safety chain and Details F and G, see Base Sheet OSC-A-8.

BRACKET TABLE

WF(A-N)4x1.79 or WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
8'-0"	8'-0"	2
14'-0"	14'-0"	3
20'-0"	20'-0"	4
26'-0"	26'-0"	5
32'-0"	32'-0"	6

OSC-A-6

6-1-12

PATRICK ENGINEERING INC. 1870 VARSITY DRIVE Lisle, IL 60532 patrickengineering.com	DESIGNED -	CPK	REVISED -	4/1/2013 AY
	DRAWN -	MJP	REVISED -	
	CHECKED -	JAH	REVISED -	
	DATE -	2/18/2013	REVISED -	

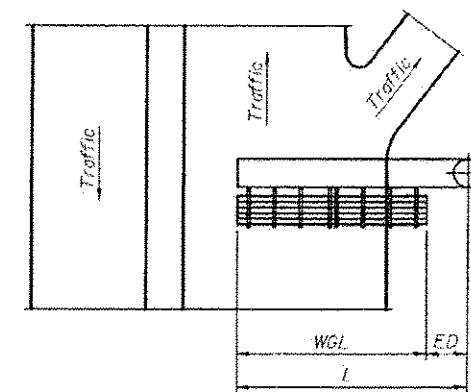
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CANTILEVER SIGN STRUCTURES - ALUMINUM WALKWAY
DETAILS - ALUMINUM TRUSS & STEEL POST**

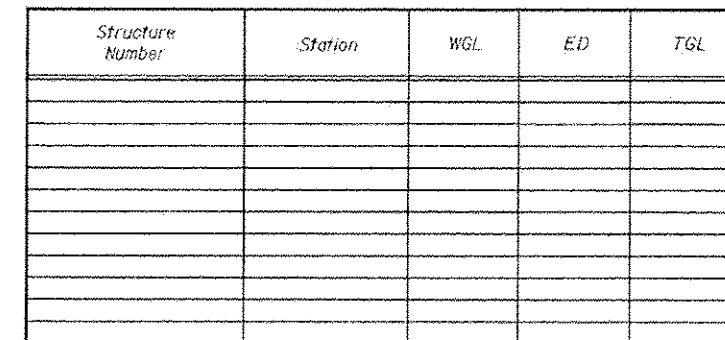
SCALE: SHEET NO. 30N-3E OF 10 SHEETS

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1616B	COOK	404	147E
CONTRACT NO. 60J14			
ILLINOIS FED. AID PROJECT			

3/1/13



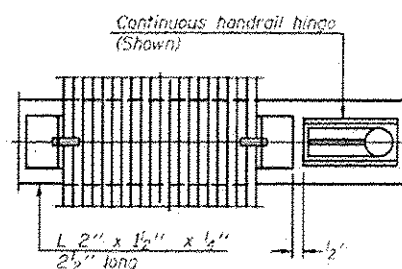
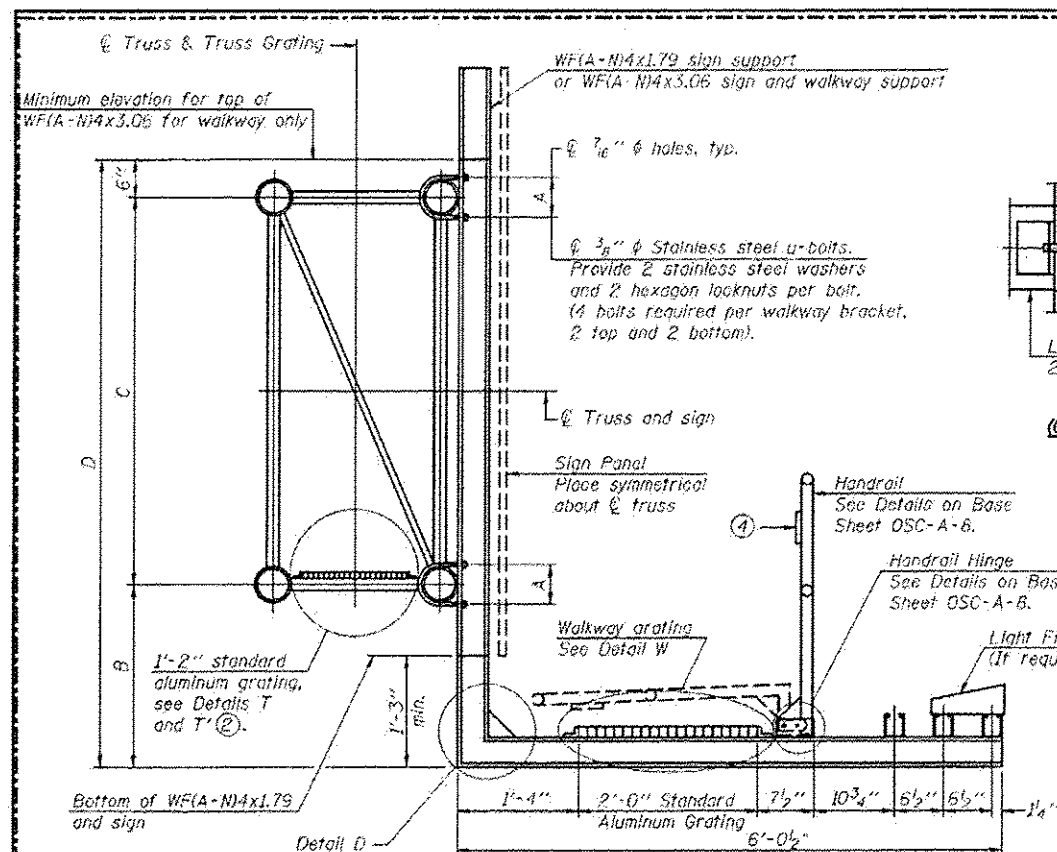
PLAN
WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)



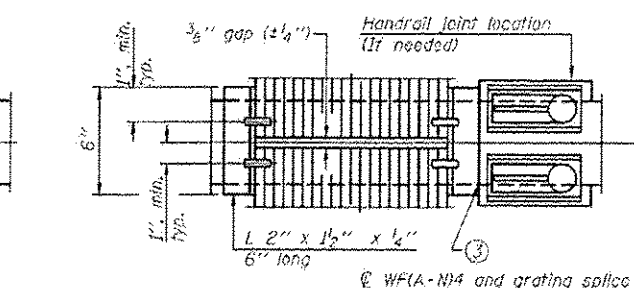
For details of handrail, handrail joint, safety chain and Details F and G, see Base Sheet QSC-A-8.

WF(A-N)4x1.79 or WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

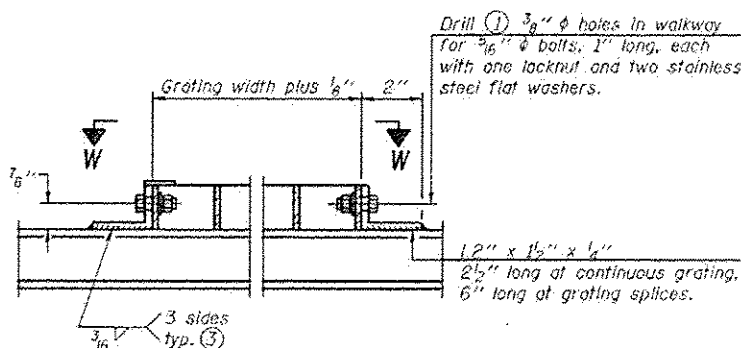
A ADDED SHEET



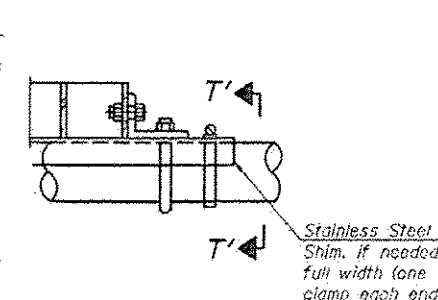
(CONTINUOUS WALKWAY GRATING)



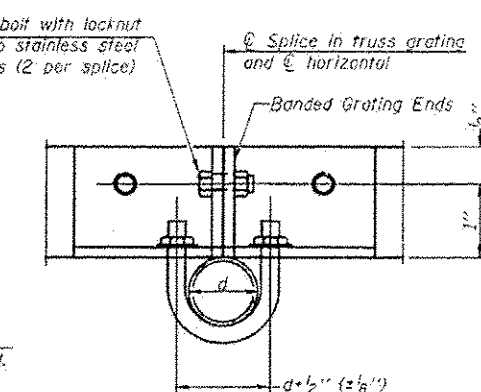
SECTION W-W



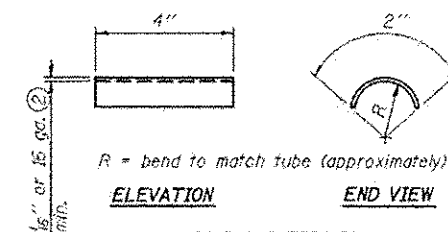
DETAIL W



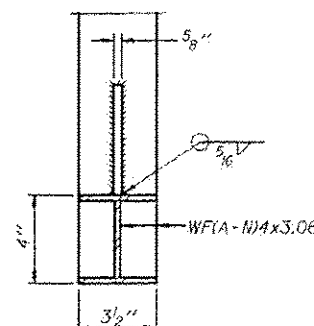
DETAIL T'



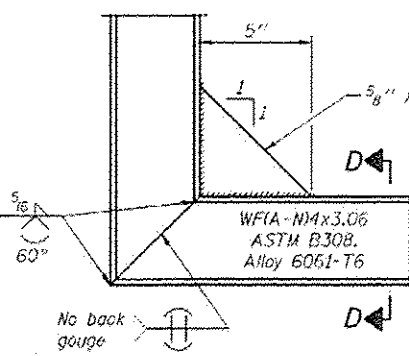
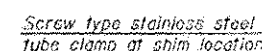
SECTION T'-T'



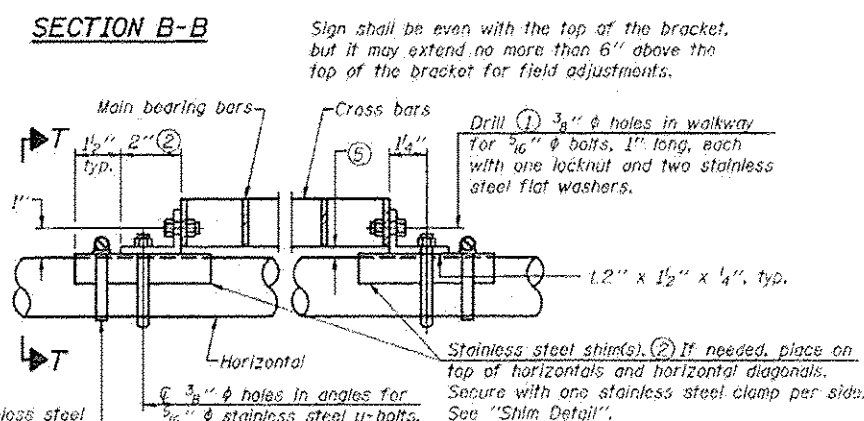
SHIM DETAIL



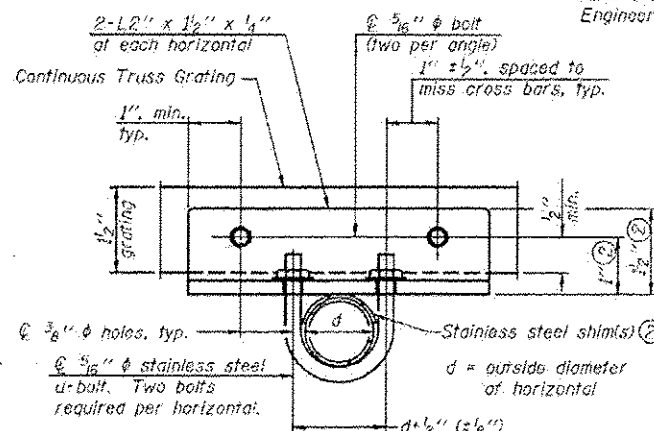
SECTION D-D



DETAIL D



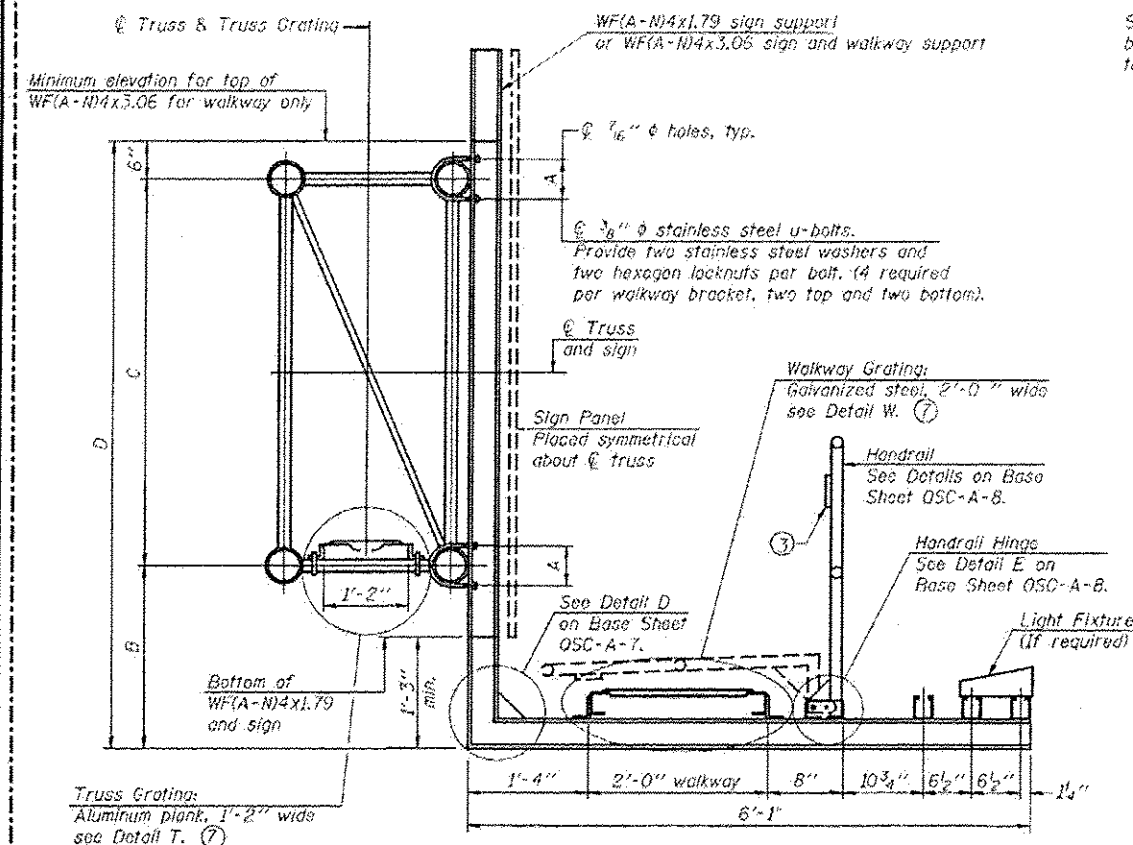
SECTION B-B



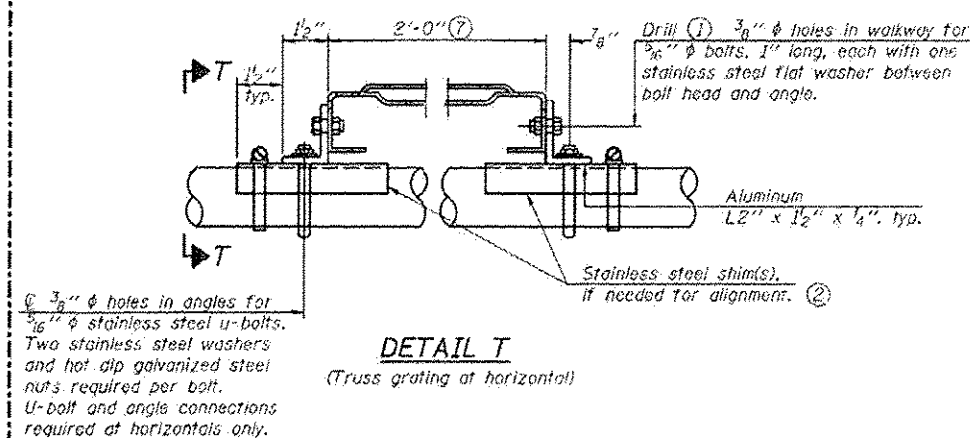
SECTION T-T

[illegible]

- 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 WFA-N)4 and $\frac{1}{4}$ " extension bars. (See Base Sheet OSC-A-8.)
- ④ R. $\frac{1}{8}$ " x $\frac{1}{2}$ " x 2" welded to handrail posts to protect locations that contact grating.
- ⑤ Tube to grating gap may vary from 0 to $\frac{1}{2}$ ", max. to align walkway, allow for camber, etc.
- ⑥ Based on actual sign height. Ds. given on OSC-A-1.

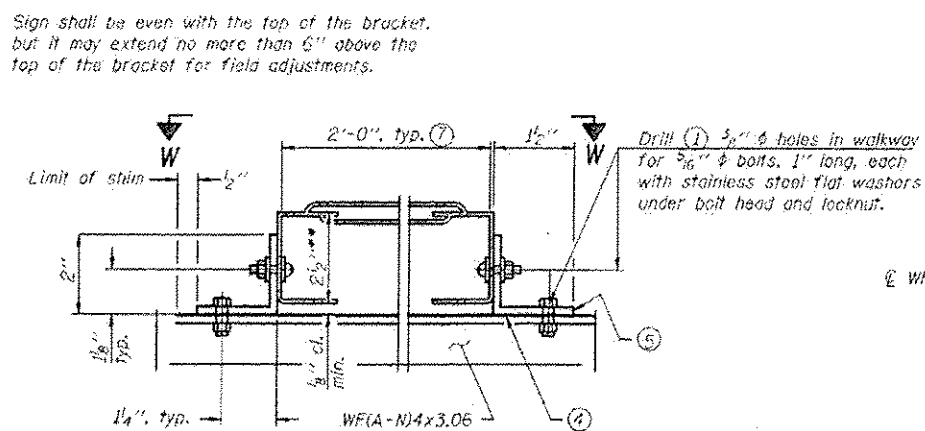


SECTION B-B

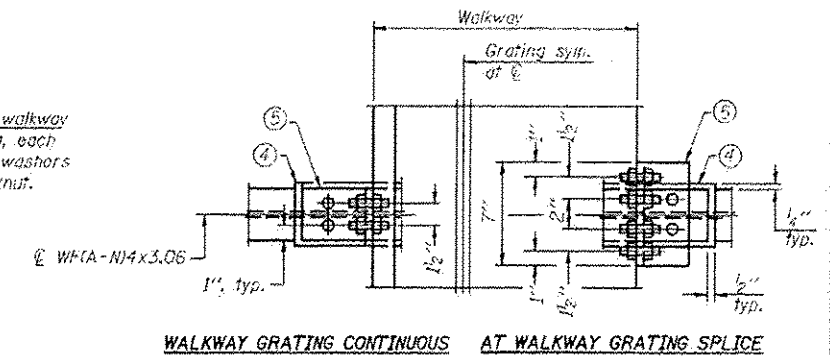


DETAIL T

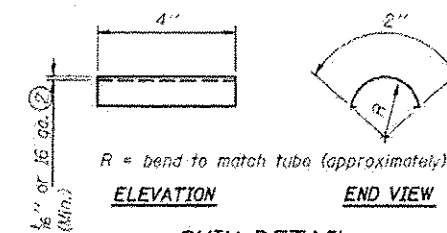
(Truss grating at horizontal)



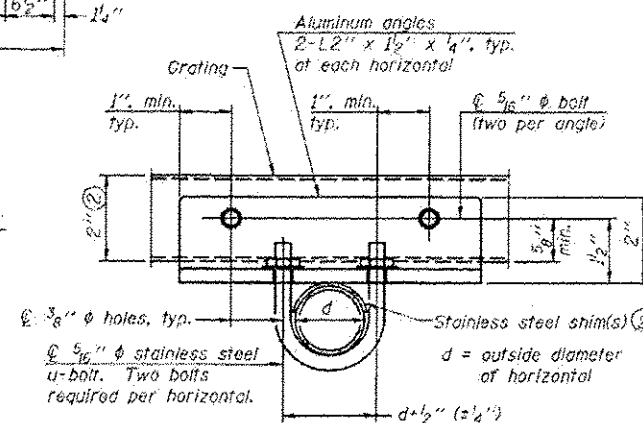
DETAIL W
GALVANIZED STEEL WALKWAY GRATING



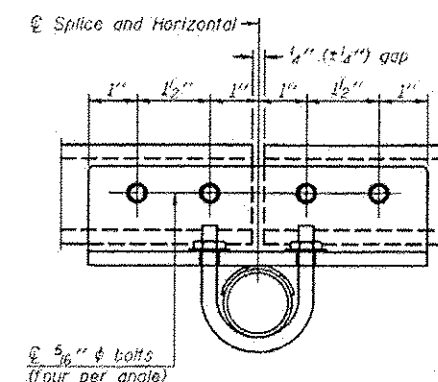
SECTION W-W



SHIM DETAIL



SECTION T-T
Truss Grating Continuous



SECTION T-T

(Truss Gating Splice)

Alternate splice details and locations may be used
subject to the Engineer's review and approval.

- 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 under angles at horizontals and horizontal diagonals if needed to compensate for alignment variations and differences in horizontal diagonal pipe sizes beyond adjustment provided by angles. Secure with one stainless steel clamp per location, see "Shim Detail". Thicker shim plates may be used when needed subject to shims performing properly.
- ③ $R \frac{1}{8}'' \times \frac{1}{2}'' \times 2''$ welded to handrail posts to protect locations that contact grating.
- ④ $\frac{1}{16}''$ (or 16 ga.) $\times 2\frac{1}{2}'' \times 4''$ stainless steel shim adhered to top of WFLA-W4x3.06 beneath each galvanized angle, typ. Adhesives for shims shall be suitable for materials joined and full exposure conditions.
- ⑤ Galvanized steel $L2'' \times 2'' \times \frac{1}{4}''$, $3\frac{1}{2}''$ long with continuous grating, $7''$ long at grating splice.
- ⑥ Details shown are considered equal alternatives to Aluminum Walkway Details and may be substituted by Contractor at no charge in contract cost.
- ⑦ Perforated or expanded metal grating providing a skid resistant (non-serrated) surface and capable of supporting a 500 pound concentrated load with a $6'-0''$ clear span. Walkway and truss grating dimensions are nominal and may vary (width $\pm \frac{1}{2}''$, depth $\frac{1}{2}''$) based on available standard sizes. Cut ends of grating shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.
- ⑧ Based on actual sign height, D_s , given on OSC-A-1.

[illegible]

△ ADDED SHEET

ELEVATION

ELEVATION

NOTES:

The foundation dimensions shown in the Foundation Design Table are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (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 in the Foundation Data Table will be the result of site specific designs.

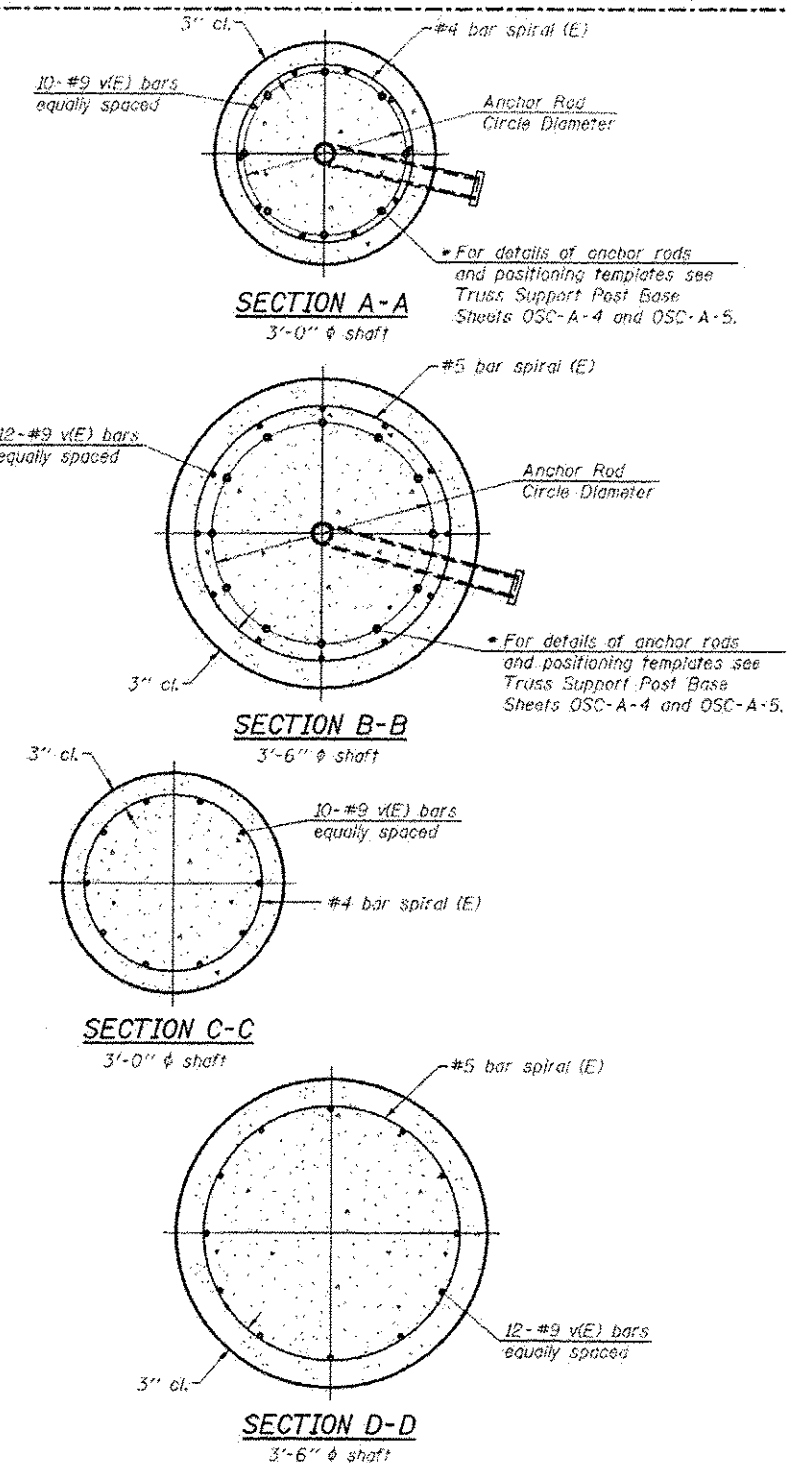
If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District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

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 Seal Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in "Drilled Shaft Concrete Foundation".



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

[illegible]

A ADDED SHEET

OSC-A-9 6-1-12

PATRICK ENGINEERING, INC.
4070 VARSITY DRIVE
LESLIE, IL 60032
patrickengineering.com

USER NAME	*
PLOT SCALE	*
PLOT DATE	*

DESIGNED	-	CPK
DRAWN	-	MJP
CHECKED	-	JAH
DATE	-	2/18/2013

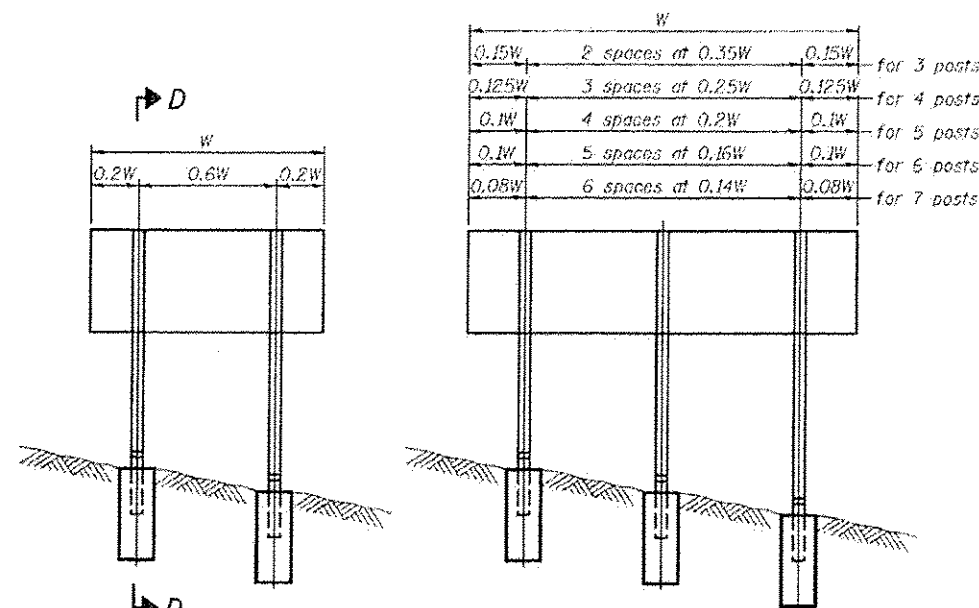
REVISED	4/1/2013	AY
REVISED		
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

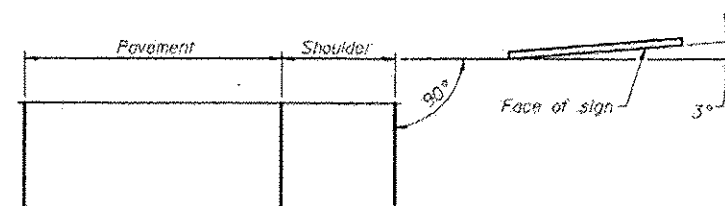
**CANTILEVER SIGN STRUCTURES - DRILLED SHAFT
ALUMINUM TRUSS & STEEL POST**

SCALE: SHEET NO. SGN-31 OF 10 SHEETS

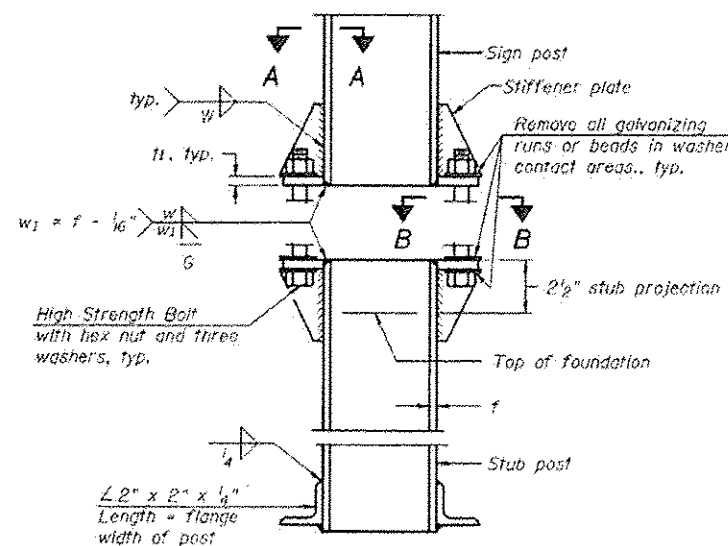
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2746	16168	COOK	404	1471
		CONTRACT NO. 60J14		
IN 1/2005 PER \$10,000.00				



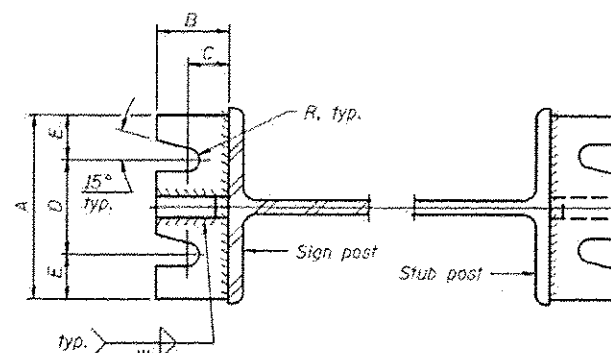
ELEVATION



LOCATION SKETCH

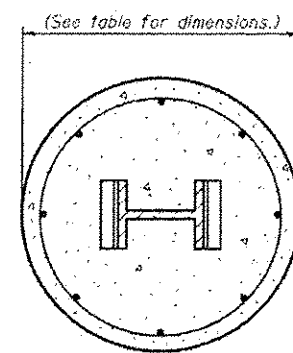


ELEVATION
SIGN POST & STUB POST

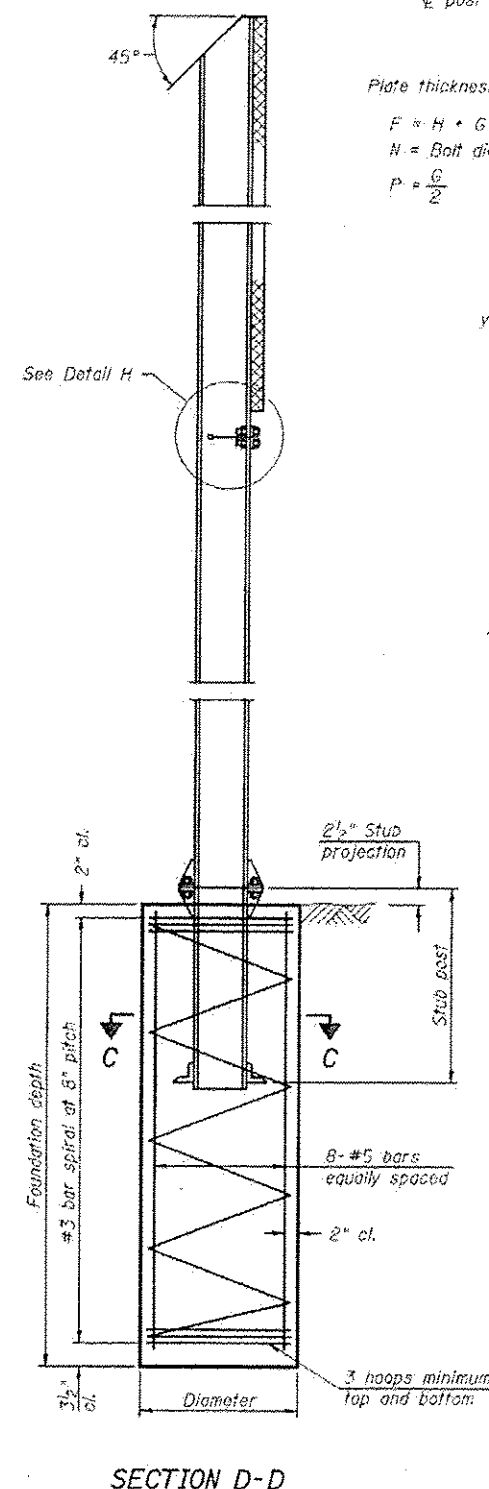


SECTION A-A

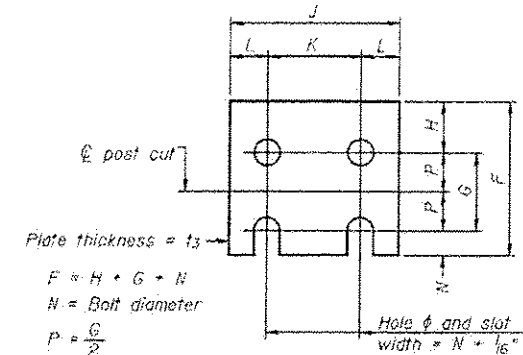
SECTION B-B



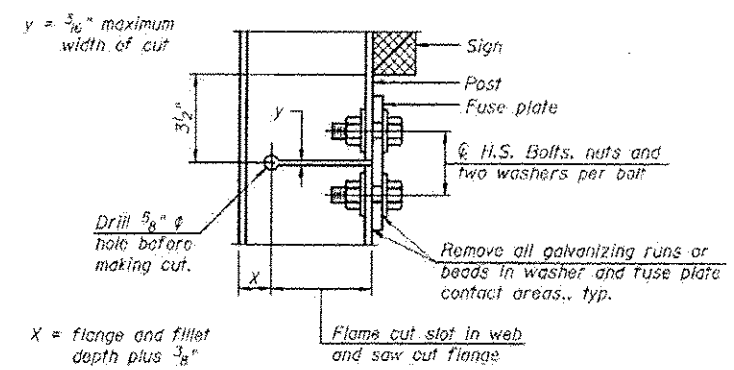
SECTION C-C



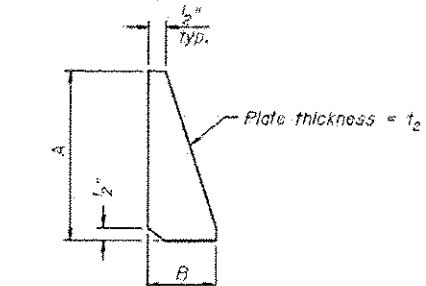
SECTION D-D



FUSE PLATE DETAIL



DETAIL H



STIFFENER PLATE DETAIL

GENERAL NOTES

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

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

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

After fabrication, the post, fuse plate and upper 6", min. of the stub post shall be hot-dip galvanized in accordance with AASHTO M11. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M232.

Work this sheet with Base Sheet BAW-A-2.

BAW-A-1

6-1-12

PATRICK ENGINEERING INC. 4070 VARSITY DRIVE LIBLE, IL 60532 patrickengineering.com	DESIGNED - CPK DRAWN - NJP CHECKED - JAH DATE - 2/18/2013	REVISED - 4/1/2013 AY REVISED REVISED REVISED
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BREAK-AWAY WIDE FLANGE
STEEL SIGN POST DETAILS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2746	1616B	COOK	404	148
CONTRACT NO. 60J14				

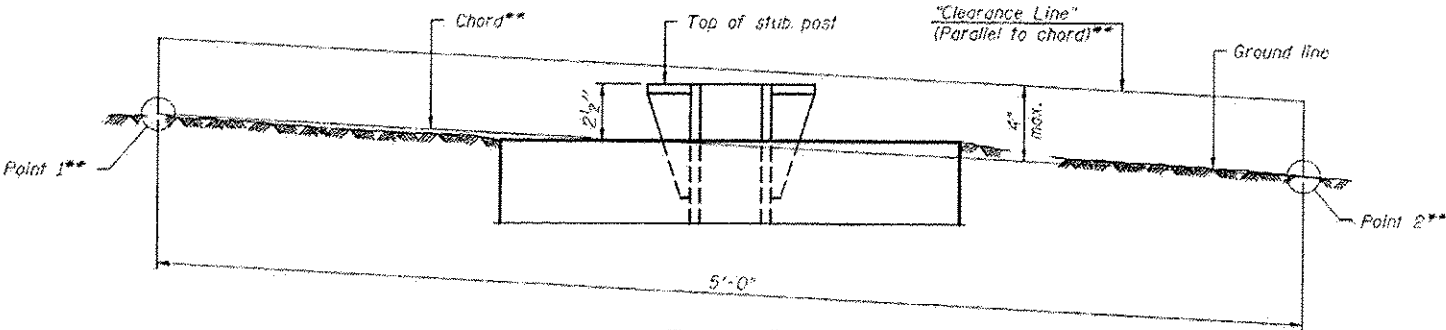
SCALE: SHEET NO. 50N-4 OF 10 SHEETS

ILLINOIS FED. AID PROJECT

POST	CONCRETE FOUNDATION TABLE								POST TO STUB POST CONNECTION DATA										FUSE PLATE DATA				
	Foundation			Reinforcement				Stub Post Length	Bolt Size	A	B	C	D	E	t ₁	t ₂	R	W	J	K	L	t ₃	
	Diameter	Minimum Depth	Concrete (cu. yds.) ①	Vertical Bars Length	Bar Diameter	Spirals Length	lbs. ②																
W6x9	2'-0"	6'-0"	0.70	5'-9"	1'-8½"	79'-0"	78	2'-3"	5⁄8" x 3⁄4"	6"	2¼"	1¼"	3½"	1¼"	¾"	½"	1½"	1⁄4"	4"	2¼"	7⁄8"	¼"	
W6x15	2'-0"	6'-0"	0.70	5'-9"	1'-8½"	79'-0"	78	2'-6"	5⁄8" x 3⁄4"	6"	2¼"	1¼"	3½"	1¼"	¾"	½"	1½"	1⁄4"	6"	3½"	1¼"	3⁄8"	
W8x18	2'-0"	6'-0"	0.70	5'-9"	1'-8½"	79'-0"	78	2'-6"	3⁄4" x 3⁄4"	6"	2½"	1⅜"	3½"	1⅜"	1"	½"	1½"	5⁄16"	5½"	2¾"	1½"	3⁄8"	
W10x22	2'-6"	6'-6"	1.18	6'-3"	2'-2½"	105'-0"	92	3'-0"	3⁄4" x 3⁄4"	6"	2½"	1⅜"	3½"	1⅜"	1"	½"	1½"	5⁄16"	5¾"	2¾"	1½"	½"	
W10x26	2'-6"	7'-0"	1.27	6'-9"	2'-2½"	112'-0"	98	3'-0"	7⁄8" x 4"	7"	2¾"	1½"	4"	1½"	1"	¾"	1½"	5⁄16"	5¾"	2¾"	1½"	5⁄8"	
W12x26	2'-6"	7'-9"	1.41	7'-6"	2'-2½"	119'-0"	107	3'-0"	7⁄8" x 4"	7"	2¾"	1½"	4"	1½"	1"	¾"	1½"	5⁄16"	6½"	3½"	1½"	5⁄8"	
W14x30	3'-0"	7'-3"	1.90	7'-0"	2'-8½"	145'-0"	113	3'-0"	7⁄8" x 4"	7"	2¾"	1½"	4"	1½"	1"	¾"	1½"	5⁄16"	6¾"	3½"	1⅝"	½"	
W14x38	3'-0"	8'-0"	2.09	7'-9"	2'-8½"	153'-0"	122	3'-6"	1" x 4½"	7½"	3"	1¾"	4"	1¾"	1¼"	¾"	1½"	5⁄16"	6¾"	3½"	1⅝"	½"	
W16x45	3'-0"	8'-6"	2.23	8'-3"	2'-8½"	162'-0"	130	3'-6"	1" x 4½"	7½"	3"	1¾"	4"	1¾"	1½"	¾"	1½"	5⁄16"	7"	3½"	1¾"	½"	

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

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



ELEVATION
GROUND LINE & STUB POST

** For all "Point 1" and "Point 2" locations, "Clearance Line" must be at or above top of stub post.

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

BAW-A-2

6-1-12

PATRICK ENGINEERING INC.
4970 VARSITY DRIVE
LIBLE, IL 60532
patrickengineering.com

DESIGNED -	CPK	REVISED	4/1/2013 AY
DRAWN -	MJP	REVISED	
CHECKED -	JAH	REVISED	
DATE -	2/18/2013	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ENTIRE SHEET REVISED

BREAK-AWAY WIDE FLANGE
STEEL SIGN POST TABLES

SCALE: SHEET NO. SON-5 OF 10 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2746	1616B	COOK	404	149
CONTRACT NO. 60J14				
ILLINOIS FED. AID PROJECT				

CDOT TRAFFIC SIGNALS SCHEDULE OF QUANTITIES

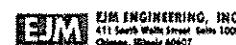
ITEM	UNIT	CUMBERLAND @ CATHERINE	CUMBERLAND @ BRYN MAWR	BRYN MAWR @ I-90 EB RAMP SPUR	CUMBERLAND @ CTA/I-90 EB RAMP	INTERCONNECT
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	200				
SIDEWALK REMOVAL	SQ FT	75				
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT		6	58		
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT		0	235	17	
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	242	210	118	390	844
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT			4	7	1045
TRAFFIC SIGNAL POST, ALUMINUM 17 FT.	EACH	3	2	4		
DRILL EXISTING HANDHOLE	EACH	18		4		2
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	5		4	8	
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	7	4	3	10	
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH		2	1		
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH		2	1		
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH		4		3	
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH		4			
OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	2				
OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2				
OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	2				
PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER	EACH	8	4	4	12	
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1	1		1	
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT					252
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	1		1	
REMOVE EXISTING HANDHOLE	EACH		4		5	
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9	8		10	
POLE, STEEL, ANCHOR BASE, 10" DIA., 7-GAUGE, 34'-6"	EACH		2		1	
POLE, STEEL, ANCHOR BASE, 10" DIA., 3-GAUGE, 34'-6"	EACH	3				
FLASHING BEACON, BRACKET MOUNTED	EACH		2			
VIDEO SYSTEM DETECTION CAMERA	EACH	2	4	2	5	
JUNCTION BOX, POLE OR POST MOUNTED	EACH	8	8	3	12	
PEDESTRIAN PUSH-BUTTON, SPECIAL	EACH	4	2	2	3	
COAXIAL CABLE IN CONDUIT	FOOT	347	965	541	915	
ATC CONTROLLER, TRAFFIC, 16 LOAD BAY, "P" CABINET	EACH	1	1	1	1	
COAXIAL JUMPER CABLE	EACH	1	1	1	1	
CONCRETE FOUNDATION FOR TYPE "P" BASE MOUNTED TRAFFIC SIGNAL CONTROLLER	EACH	1	1	1	1	
CONCRETE FOUNDATION, 20" DIAMETER, 3/4" ANCHOR RODS, 13" BOLT CIRCLE (CDOT)	EACH	3	2	4	7	
CONCRETE FOUNDATION, 24" DIAMETER, 1 1/4" ANCHOR RODS, 15" BOLT CIRCLE	EACH	3	2		1	
CONCRETE FOUNDATION, 30" DIAMETER, 1 1/2" ANCHOR RODS, 16 1/2" BOLT CIRCLE (CDOT)	EACH	2	4	1	3	
CONCRETE FOUNDATION, 30" DIAMETER, 1 1/4" ANCHOR RODS, 17 1/4" BOLT CIRCLE (CDOT)	EACH			1	1	
CUT OFF POLE AND INSTALL CAP	EACH	1				
ELECTRIC CABLE IN CONDUIT NO. 14 19/C	FOOT	1141	1380	638	2161	
ELECTRIC CABLE IN CONDUIT NO. 4 2/C	FOOT	188	243	101	45	
ELECTRIC CABLE NO. 14 3/C, SHIELDED	FOOT	347	965	541	915	
ELECTRICAL HANDHOLE, 30", 24" FRAME AND LID	EACH		0	1	2	1
ELECTRICAL HANDHOLE, 36", 24" FRAME AND LID	EACH		4	1	4	
ELECTRICAL MANHOLE, 3' X 4' X 4', 24" FRAME AND LID	EACH		1	1	1	
FIBER OPTIC ADD-IN FOR LOCAL CONTROLLER	EACH		1			
FIBER OPTIC ADD-IN FOR MASTER CONTROLLER	EACH				1	
FIBER OPTIC HYBRID CABLE IN CONDUIT	FOOT					1045
FIBER OPTIC STAR MODEM	EACH		1		1	
HARNESS CABLE, #16, 8/C	FOOT	443	582	186	613	
INTERFACE PANEL, 2 CAMERA	EACH	1		1		
INTERFACE PANEL, 4 CAMERA	EACH		1			
INTERFACE PANEL, 8 CAMERA	EACH				1	
MAST ARM, STEEL, MONOTUBE 16 FT.	EACH	1				
MAST ARM, STEEL, MONOTUBE 20 FT.	EACH	1				
MAST ARM, STEEL, MONOTUBE 26 FT.	EACH	2				
MAST ARM, STEEL, MONOTUBE 30 FT.	EACH			1	1	
MAST ARM, STEEL, MONOTUBE 35 FT.	EACH	1		1		
MAST ARM, STEEL, MONOTUBE 40 FT.	EACH		1	0	3	
MAST ARM, STEEL, MONOTUBE 44 FT.	EACH	1	3			
POLE, STEEL, ANCHOR BASE, 11" DIA., 3-GAUGE, 34'-6"	EACH			1	1	
POLE, STEEL, ANCHOR BASE, 12-1/2" DIA., 3-GAUGE, 34'-6"	EACH	2	4	1	3	
SERVICE INSTALLATION, 100 AMPERE	EACH		1	1		
UNDERGROUND CONDUIT, PVC, 3" DIA. (SCHEDULE 80)	FOOT		1579	585	1588	0
VIDEO CABLE HARNESS	EACH	2	4	2	5	
VIDEO DETECTION CARD RACK, 4 CAMERA	EACH		1			
VIDEO DETECTION CARD RACK, 8 CAMERA	EACH				1	
VIDEO DETECTION POWER SUPPLY	EACH	1	1	1	1	
VIDEO PROCESSOR CARD	EACH		1		1	
VIDEO PROCESSOR CARD AND RACK	EACH	1		1		

A

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3/29/2013

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DRANN - GR	CHECKED - CO	REVISED -
DATE - 2/18/2013	DATE -	REVISED -



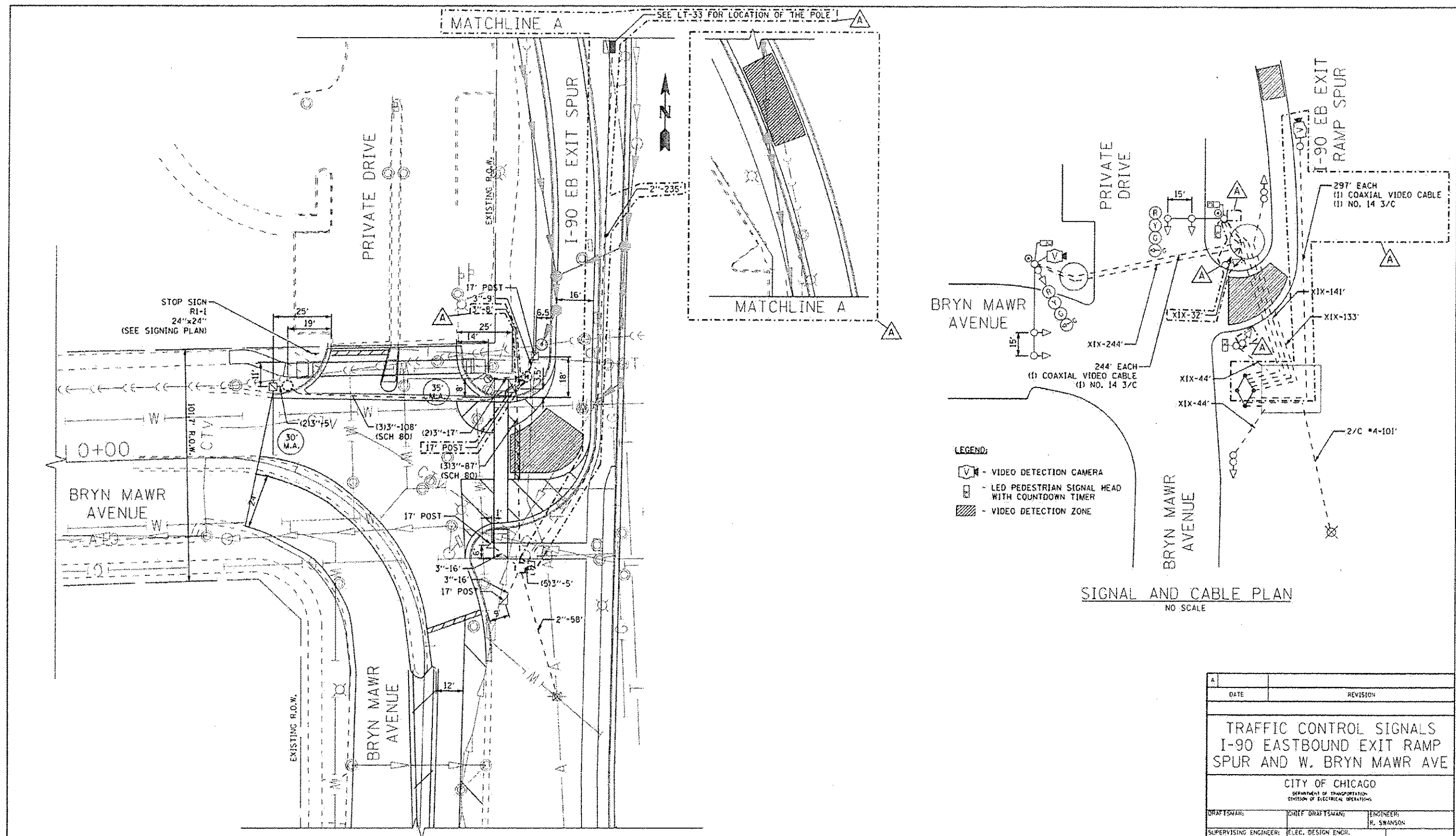
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CDOT TRAFFIC SIGNAL SCHEDULE OF QUANTITIES
CUMBERLAND AVENUE OVER I-90

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

F.A.U. RTE. 274G	SECTION 1616B	COUNTY COOK	TOTAL SHEETS 404	SHEET NO. 199
CONTRACT NO. 60J14				
ILLINOIS FED. AID PROJECT				

TS-40



FOUNDATION AND CONDUIT PLAN

SCALE: 1" = 20'

SIGNAL AND CABLE PLAN

NO SCALE

A	
DATE	REVISION
TRAFFIC CONTROL SIGNALS I-90 EASTBOUND EXIT RAMP SPUR AND W. BRYN MAWR AVE	
CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION DIVISION OF ELECTRICAL OPERATIONS	
DRAFTSMAN:	ENGINEER:
SUPERVISING ENGINEER:	ELEC. DESIGN ENGR.
ENGINEER OF ELECTRICITY:	DWG. NO.
GEN'L SUPT. OF ELECTRICITY:	23974
DEPUTY COMMISSIONER:	
SIZE:	DATE:
SCALE: AS NOTED	
F.A.U. B.T.C.	SECTION
2746	1616B
COUNTY	TOTAL SHEETS
COOK	404
CONTRACT NO. 60J14	
ILLINOIS FED. AID PROJECT	

TS-50

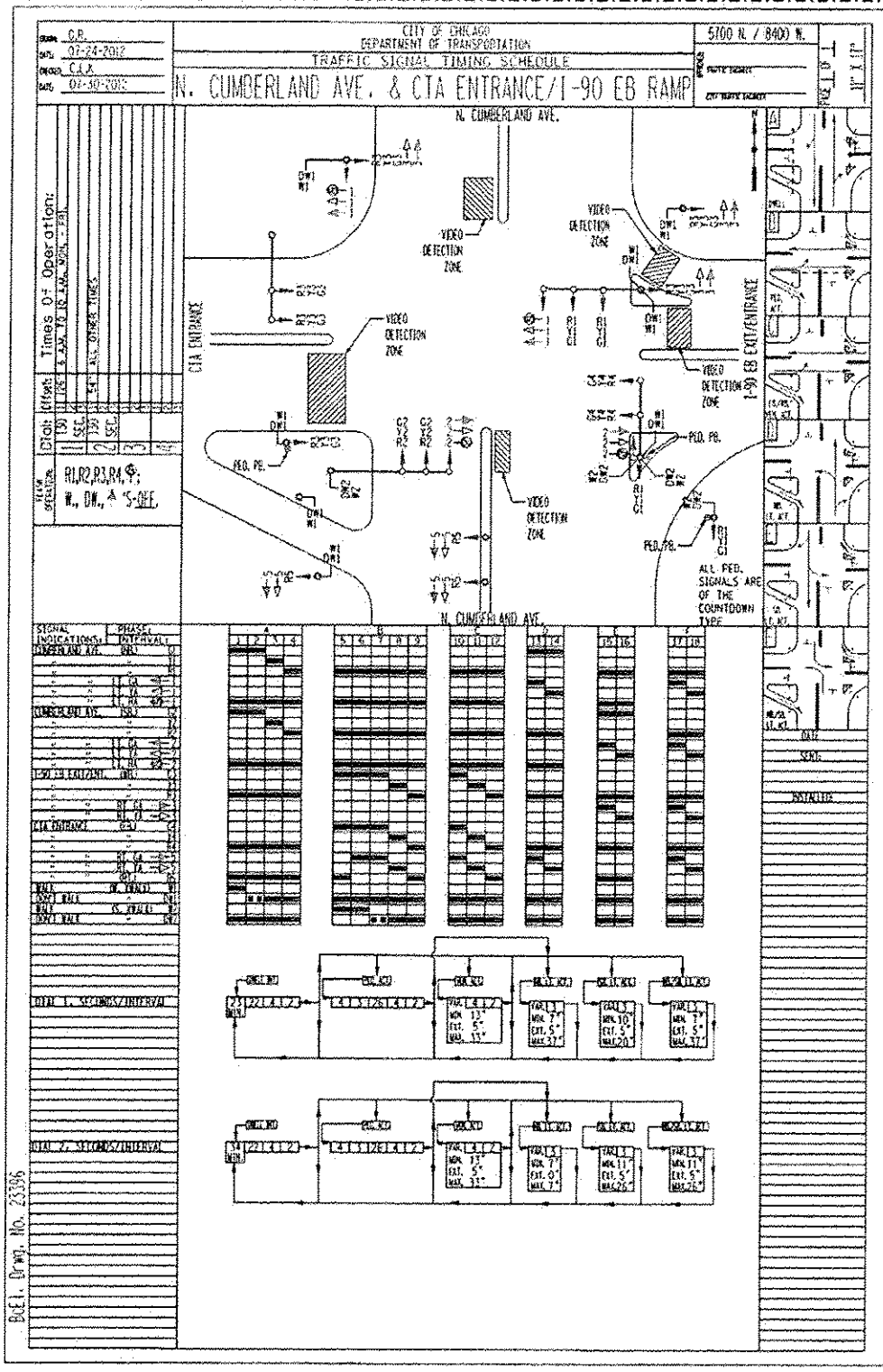
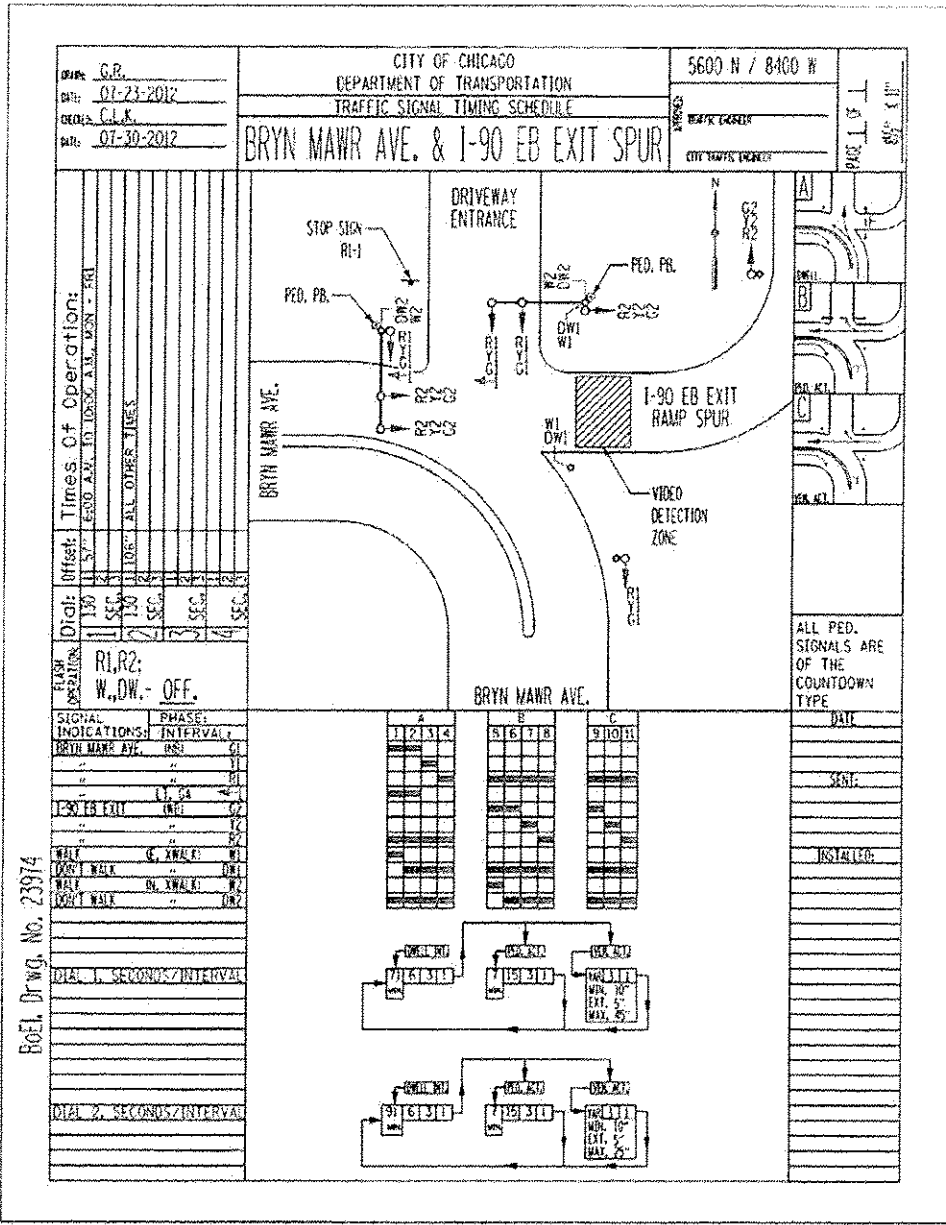
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	DRAWN - GR	REVISED -
PLOT SCALE *	CHECKED - CC	REVISED -
PLOT DATE *	DATE - 12-10-2012	REVISED -

EJM EJM ENGINEERING, INC.
411 South Wacker Drive, Suite 1000
Chicago, Illinois 60607

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

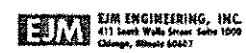
TRAFFIC CONTROL SIGNALS
BRYN MAWR AVENUE AT I-90 EASTBOUND
EXIT RAMP SPUR

SCALE: AS NOTED SHEET NO. 1 OF 1 SHEETS STA. TO STA.



DATE		REVISION	
SUPERSEDES DRAWING NO. 23396 DATED: 10-14-1987			
PROPOSED TRAFFIC SIGNAL TIMING SCHEDULES			
CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION DIVISION OF ELECTRIC OPERATIONS			
DRAWN BY:	CHIEF DRAFTSMAN:	ENGINEER:	
SUPERVISING ENGINEER:	ELEC. DESIGN ENGR.	R. SWANSON	
ENGINEER OF ELECTRICITY:	DWG. NO.		
DEVL. SUPV. OF ELECTRICITY:			
DEPUTY COMMISSIONER:			
SIZE:	SCALE: AS NOTED	DATE:	
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS
2746	1616B	COOK	404 218
CONTRACT NO. 60J14			
ILLINOISPEC. AND PROJECT			

USER NAME *	DESIGNED - GR	REVISED - A 3/25/2013 SA
PLOT SCALE *	DRAWN - GR	REVISED -
PLOT DATE *	CHECKED - CC	REVISED -
	DATE - 12-10-2012	REVISED -

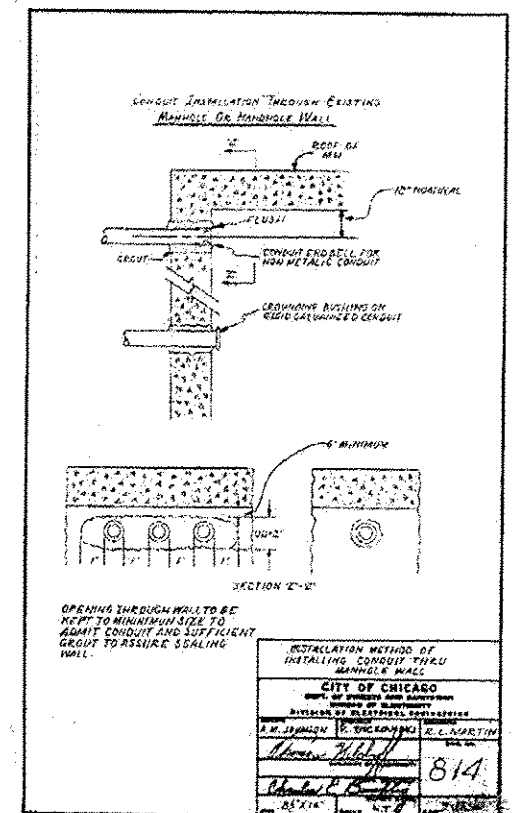
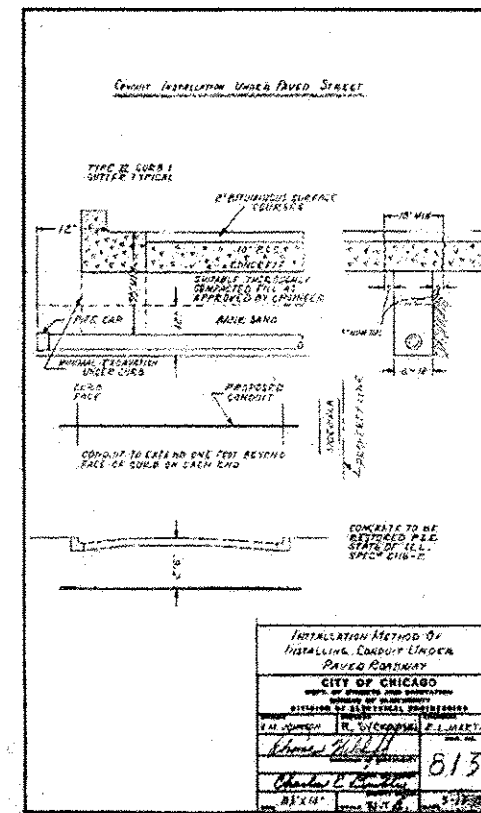
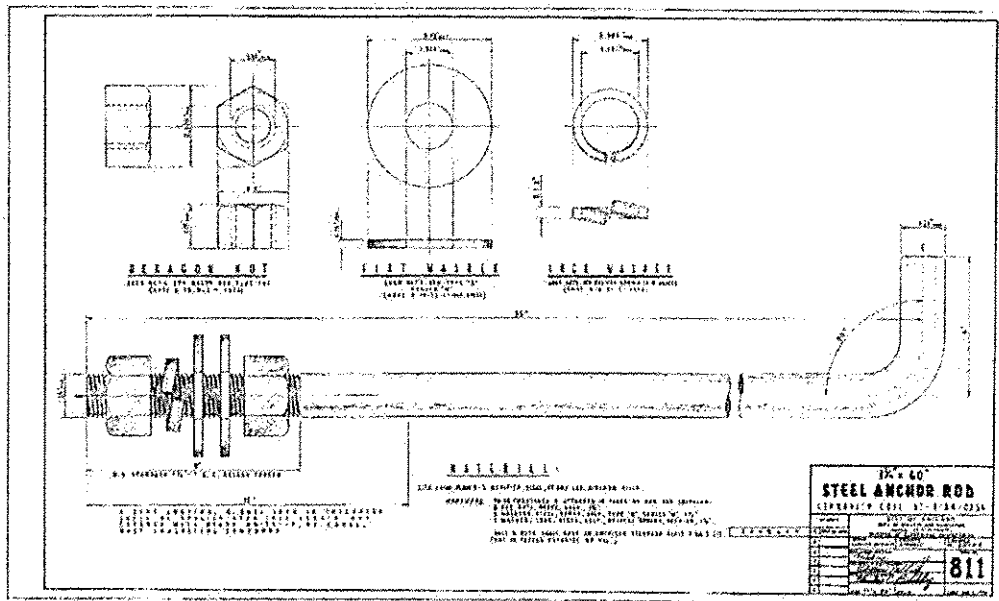
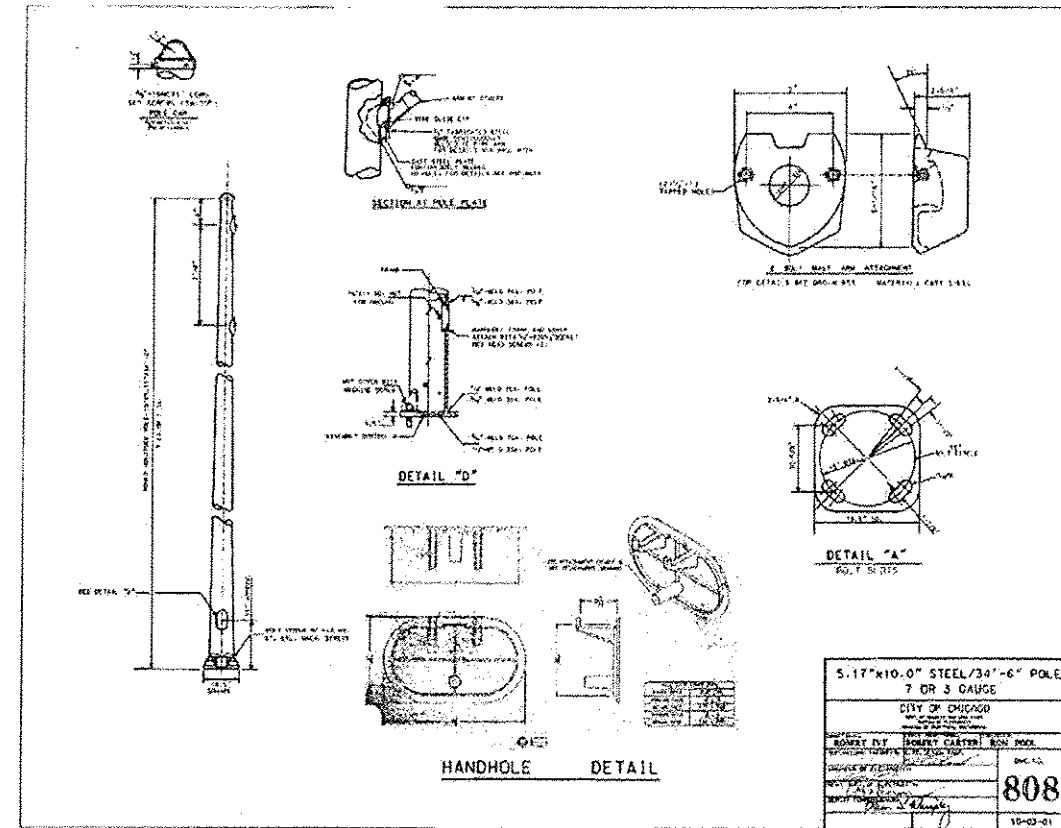
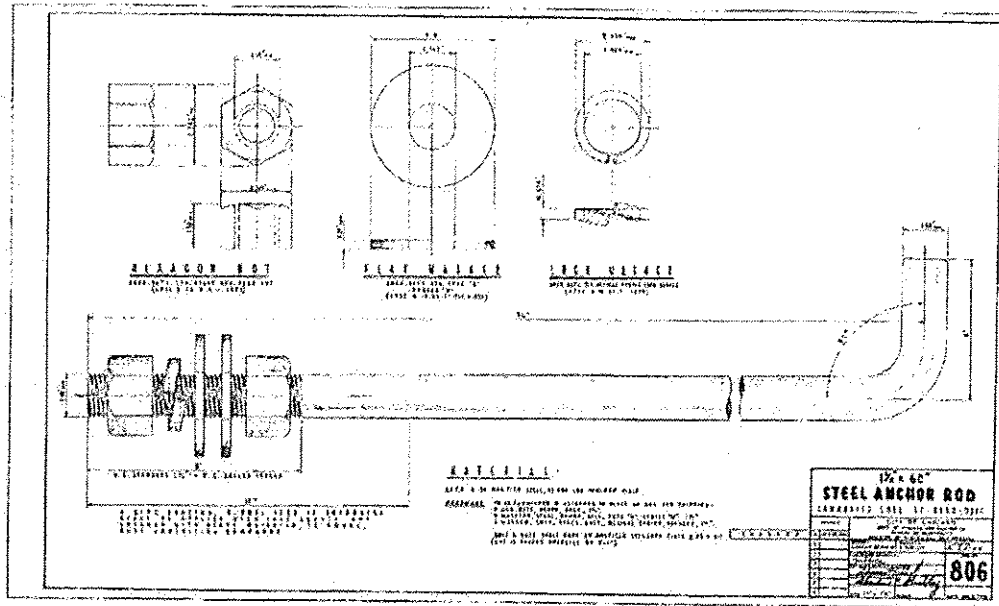


**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PROPOSED TRAFFIC SIGNAL TIMING SCHEDULES

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

TS-59



4/4/2013 11:52:56 AM sheet\DI60J14-shs-55.dgn

USER NAME	DESIGNED	CR	REVISED	4/1/2013 CLG
	DRAWN	CR	REVISED	
PLOT SCALE	CHECKED	CC	REVISED	
PLOT DATE	DATE	2/18/2013	REVISED	

EJM EJM ENGINEERING, INC.
 871 South Wells Street Suite 1000
 Chicago, Illinois 60607

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

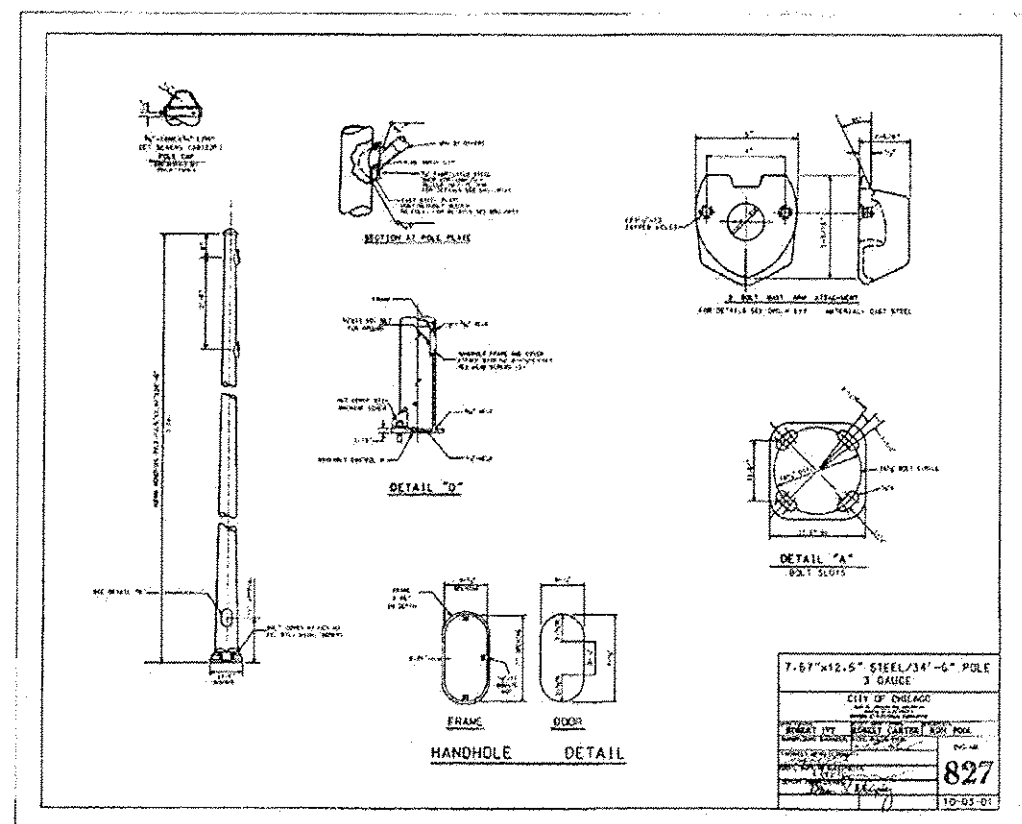
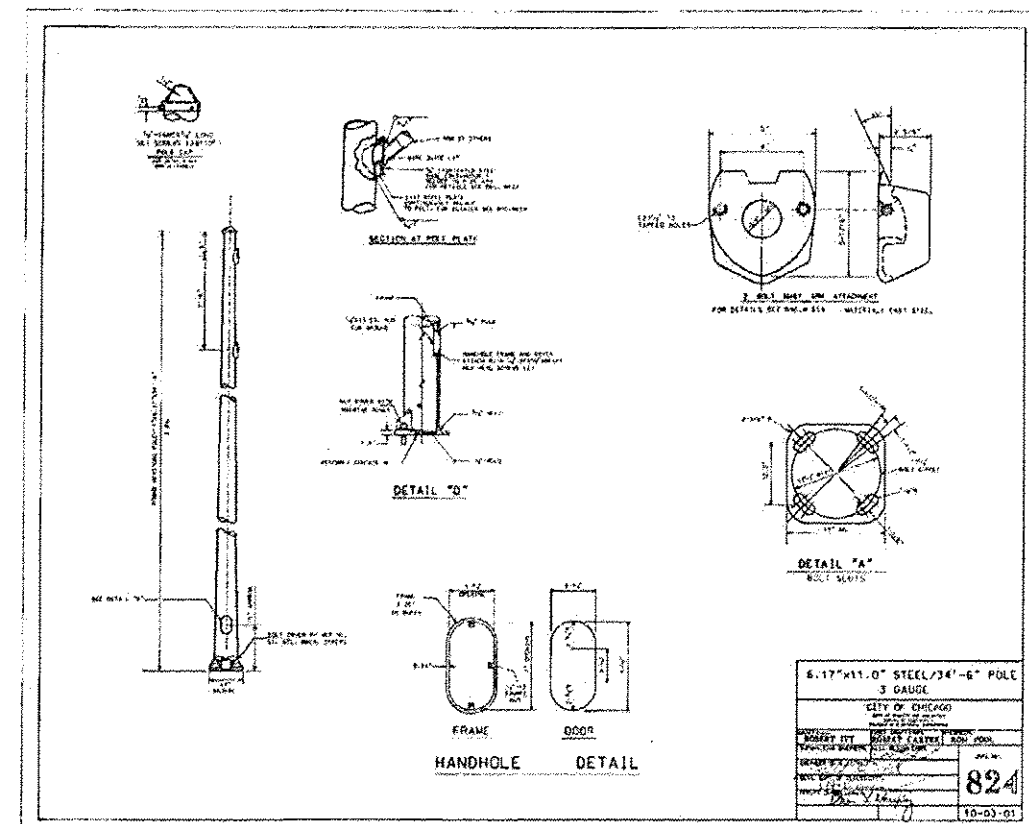
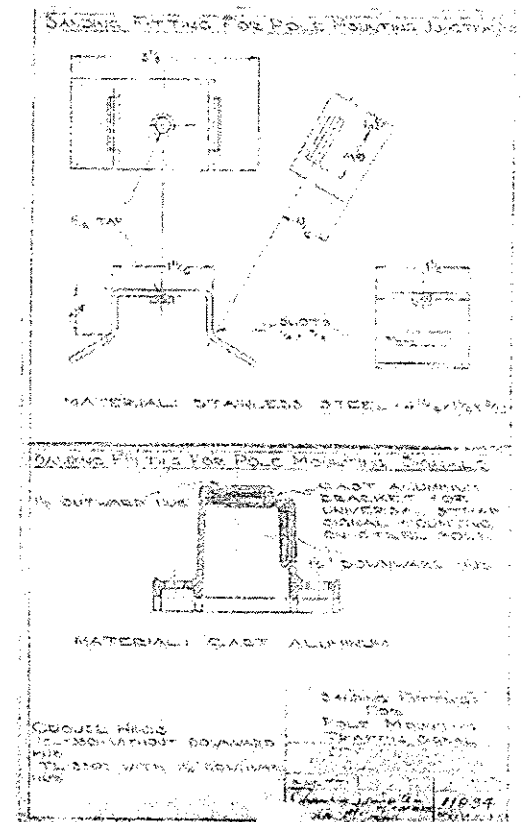
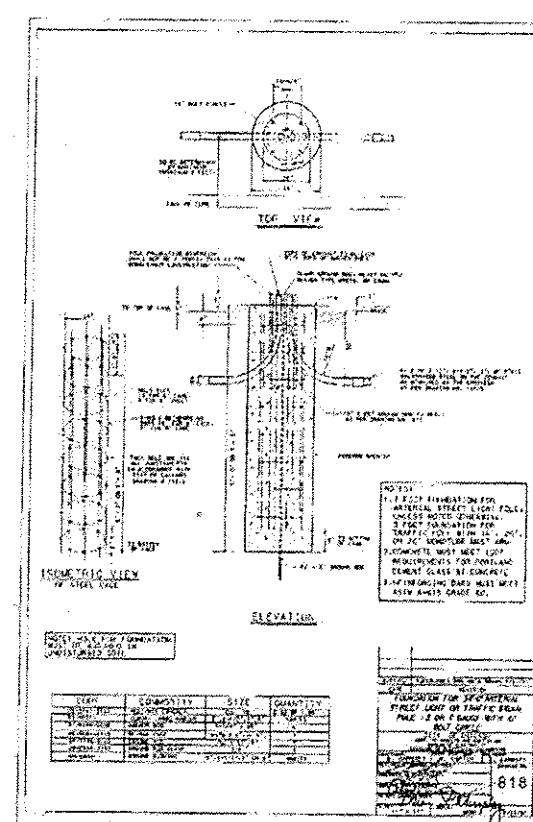
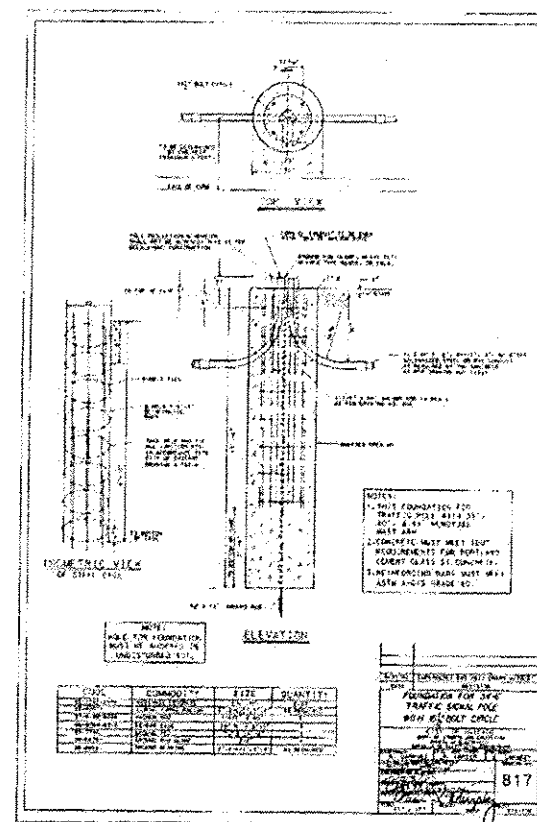
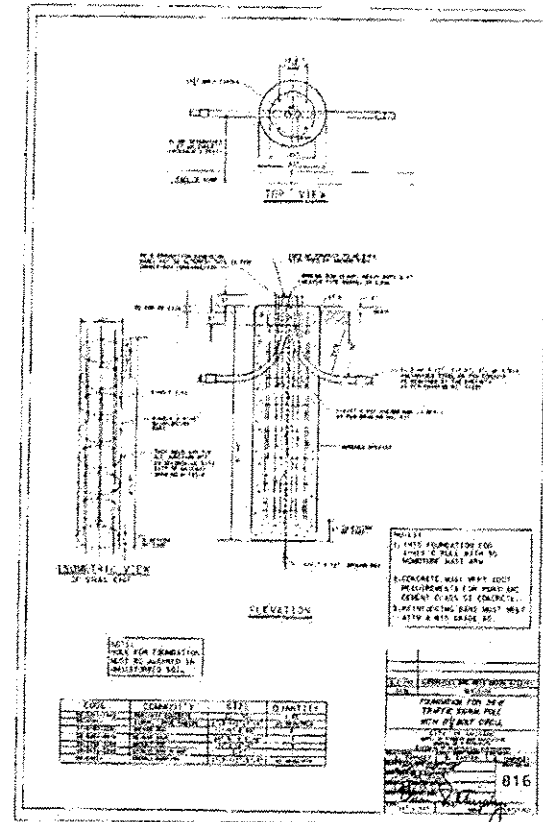
COOT STANDARD CODE FOR
TRAFFIC SIGNALS/STREET LIGHTING

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
2746	1616B	COOK	404
			222
			CONTRACT NO. 60J14

ILLINOIS FED. AID PROJECT

TS-63



...sheet\0180J14-sheet-56.dgn

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4/4/2013

USER NAME *	DESIGNED - GR	REVISED - A 4/1/2013 CLG
PLOT SCALE *	DRAWN - GR	REVISED -
PLOT DATE *	CHECKED - CG	REVISED -
	DATE - 2/18/2013	REVISED -

EJM EJM ENGINEERING, INC.
411 South Wells Street Suite 1000
Chicago, Illinois 60607

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

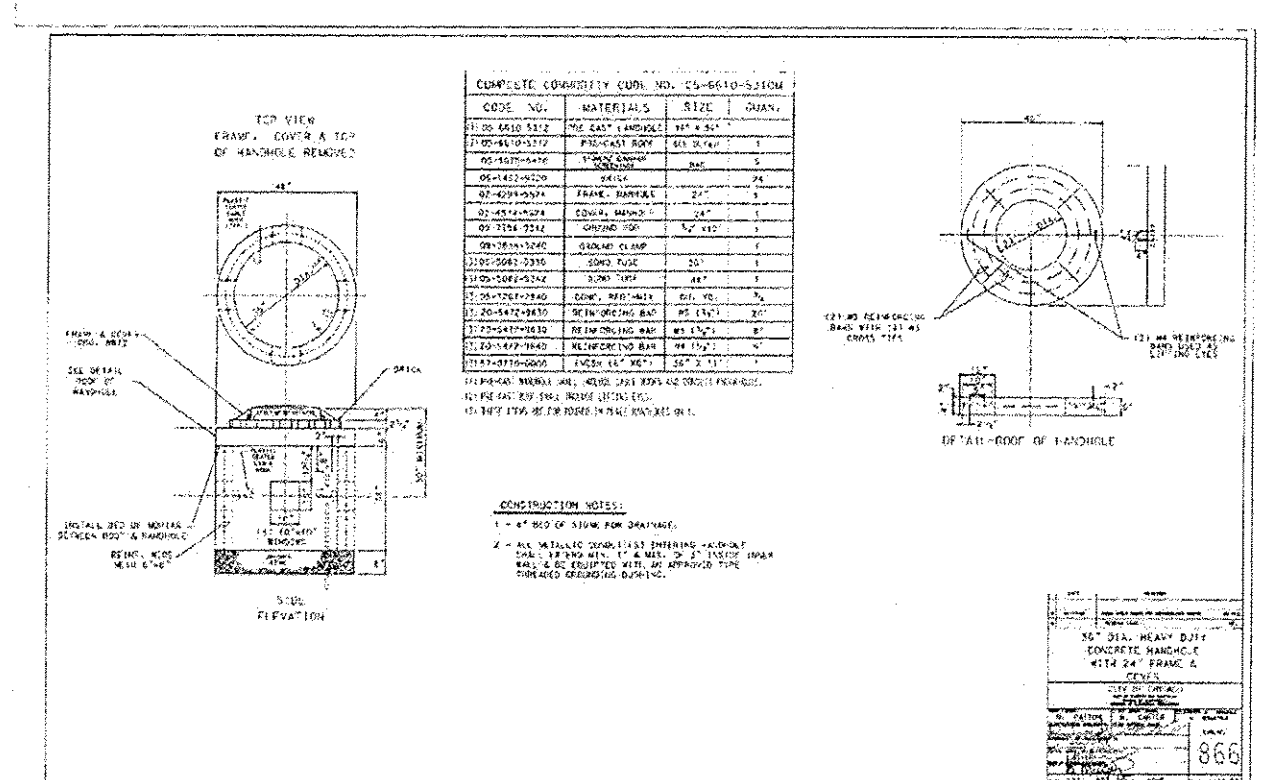
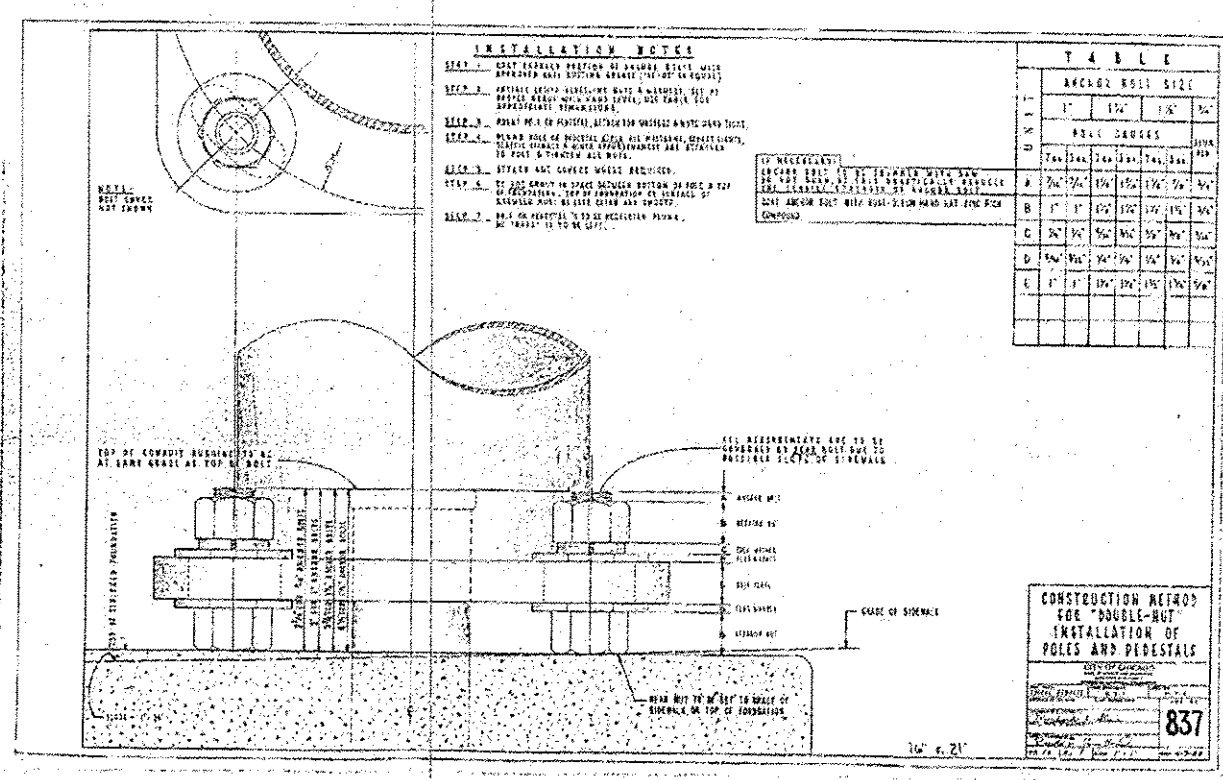
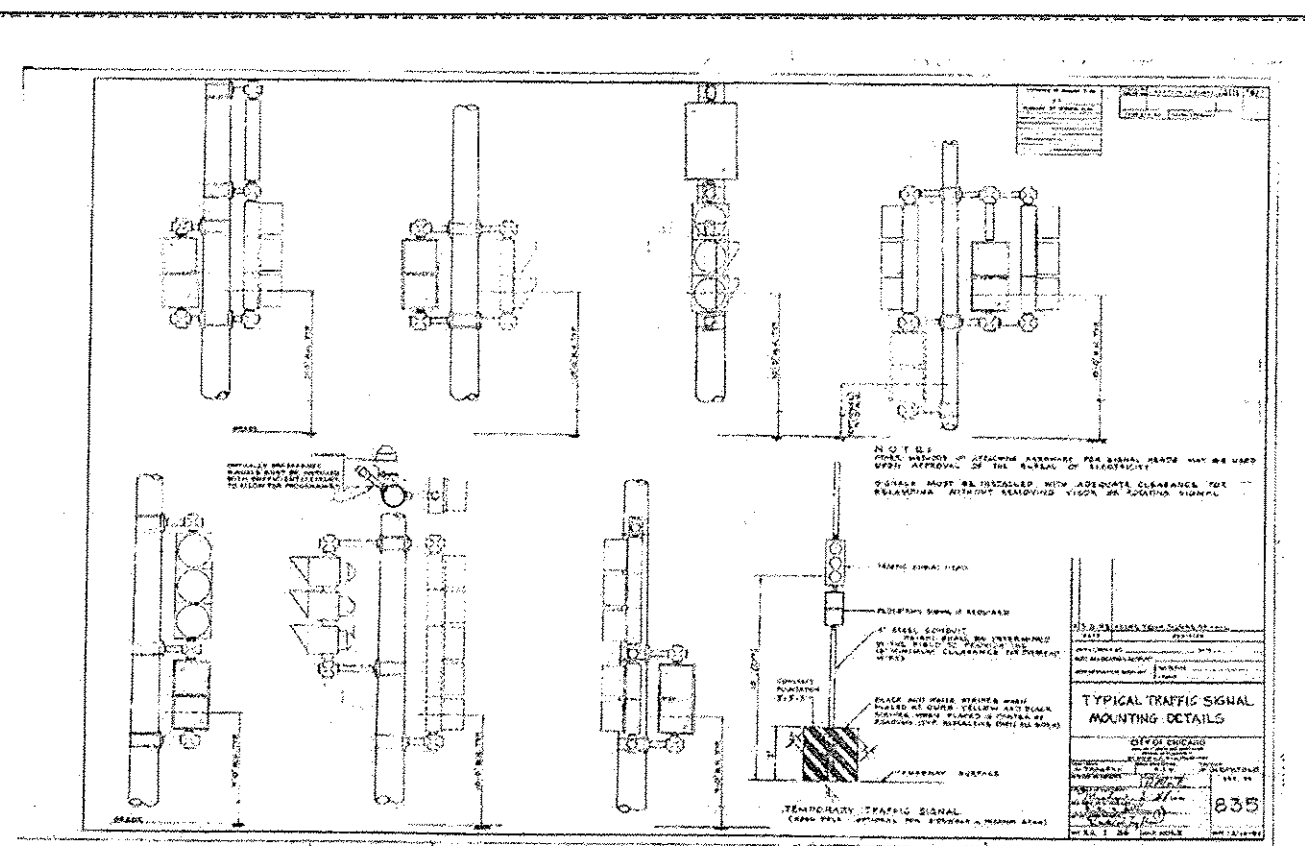
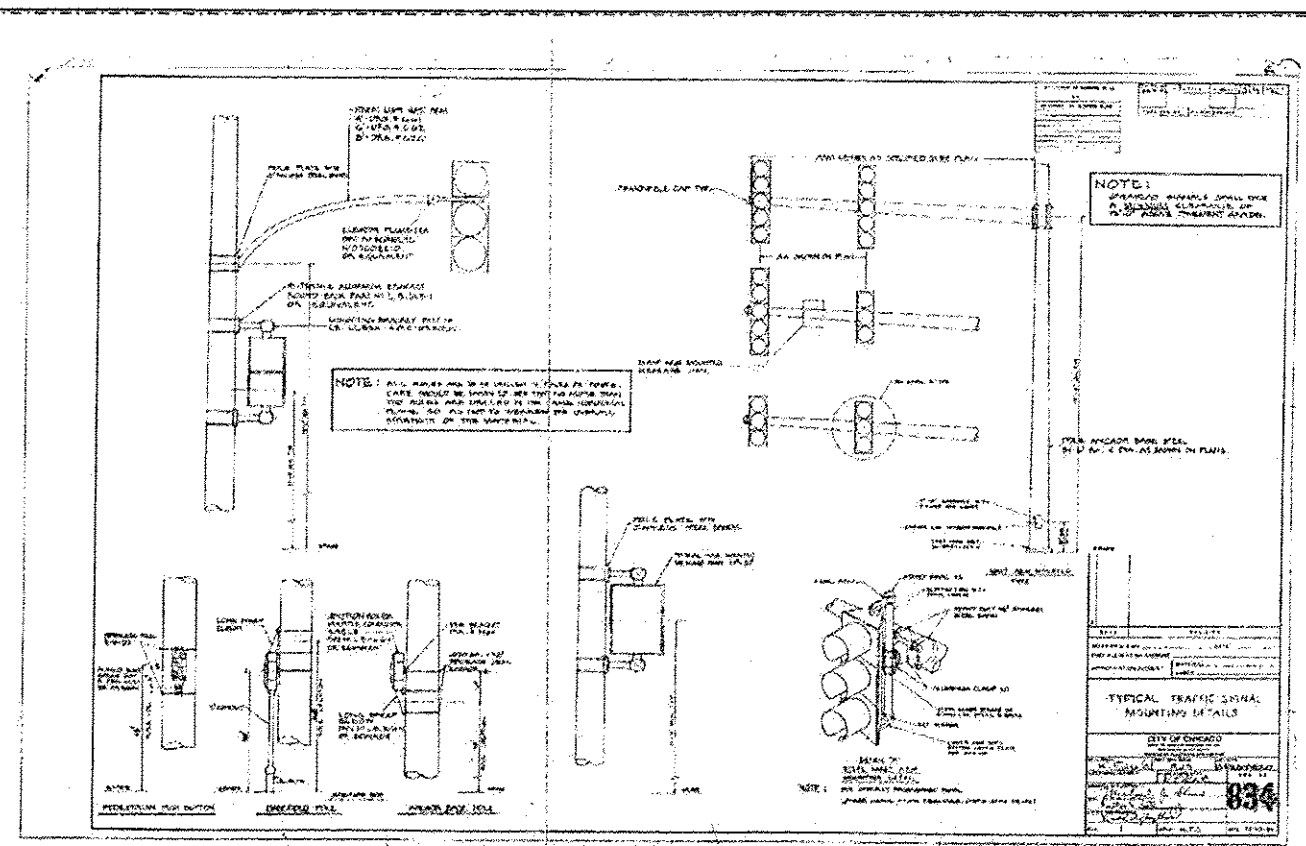
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TRAFFIC SIGNALS/STREET LIGHTING

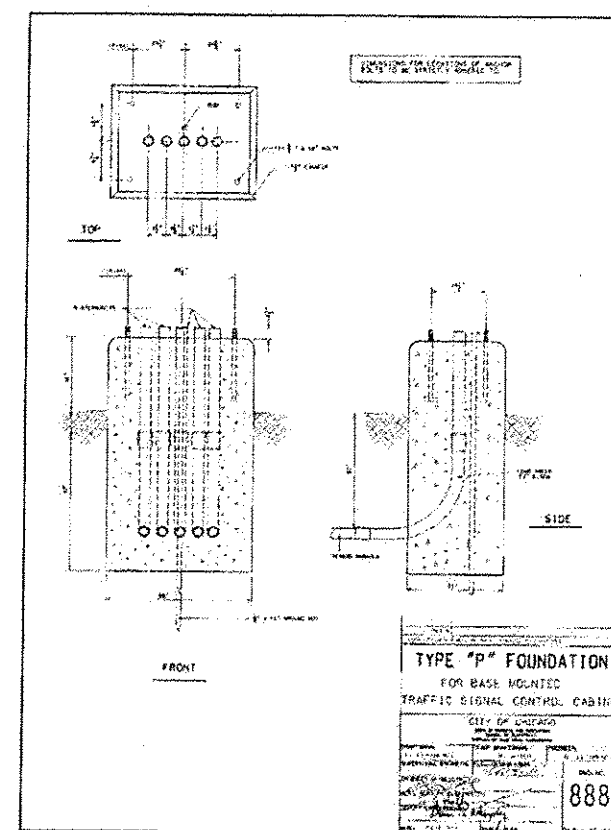
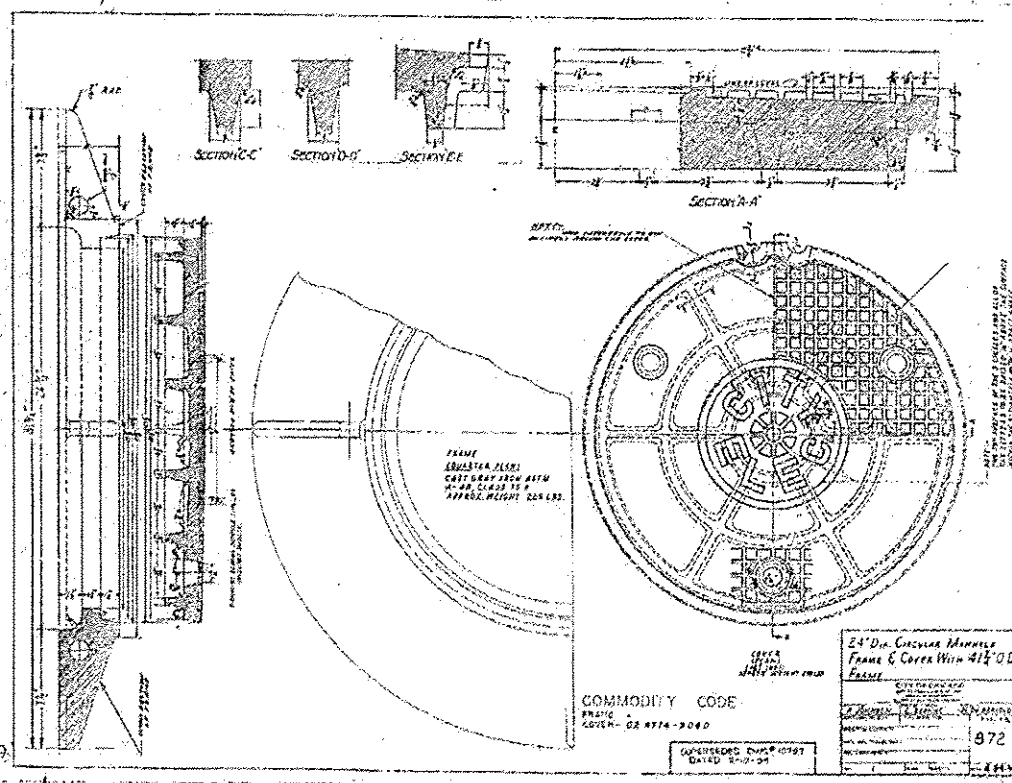
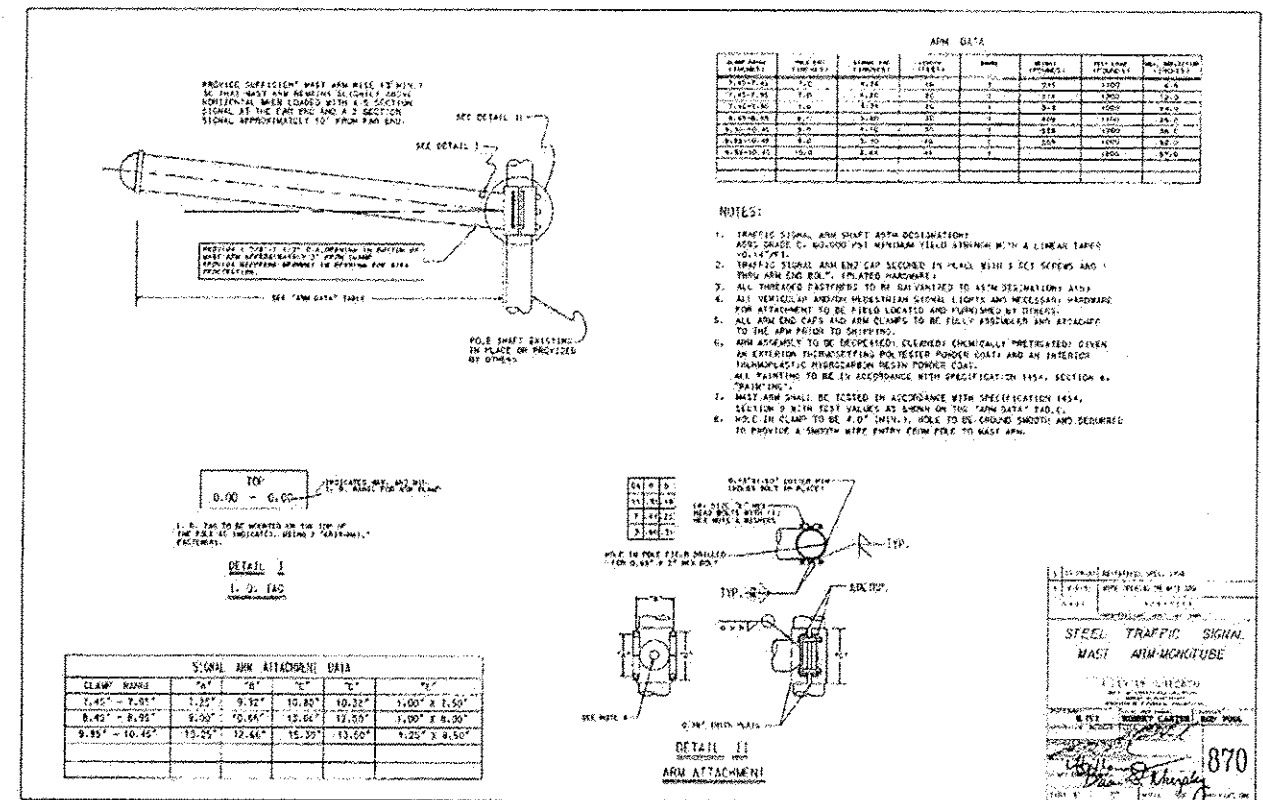
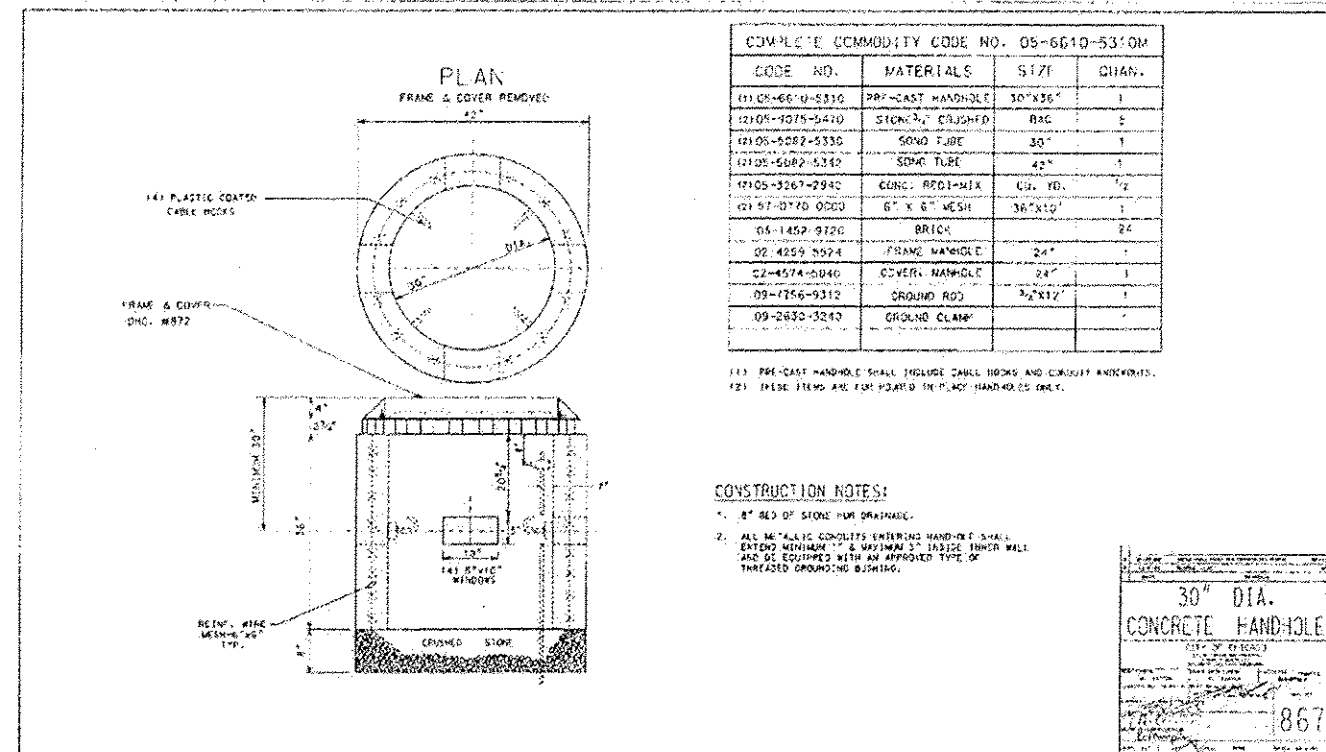
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F.A.U. R.T.C.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2746	1616B	COOK	404	223
CONTRACT NO. 60J14				
(ILLINOIS) FED. AID PROJECT				

TS-64

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4/4/2013

USER NAME *	DESIGNED - GR	REVISED - 4/1/2013 CLG
PLOT SCALE *	DRAWN - GR	REVISED -
PLOT DATE *	CHECKED - CG	REVISED -
	DATE - 2/18/2013	REVISED -

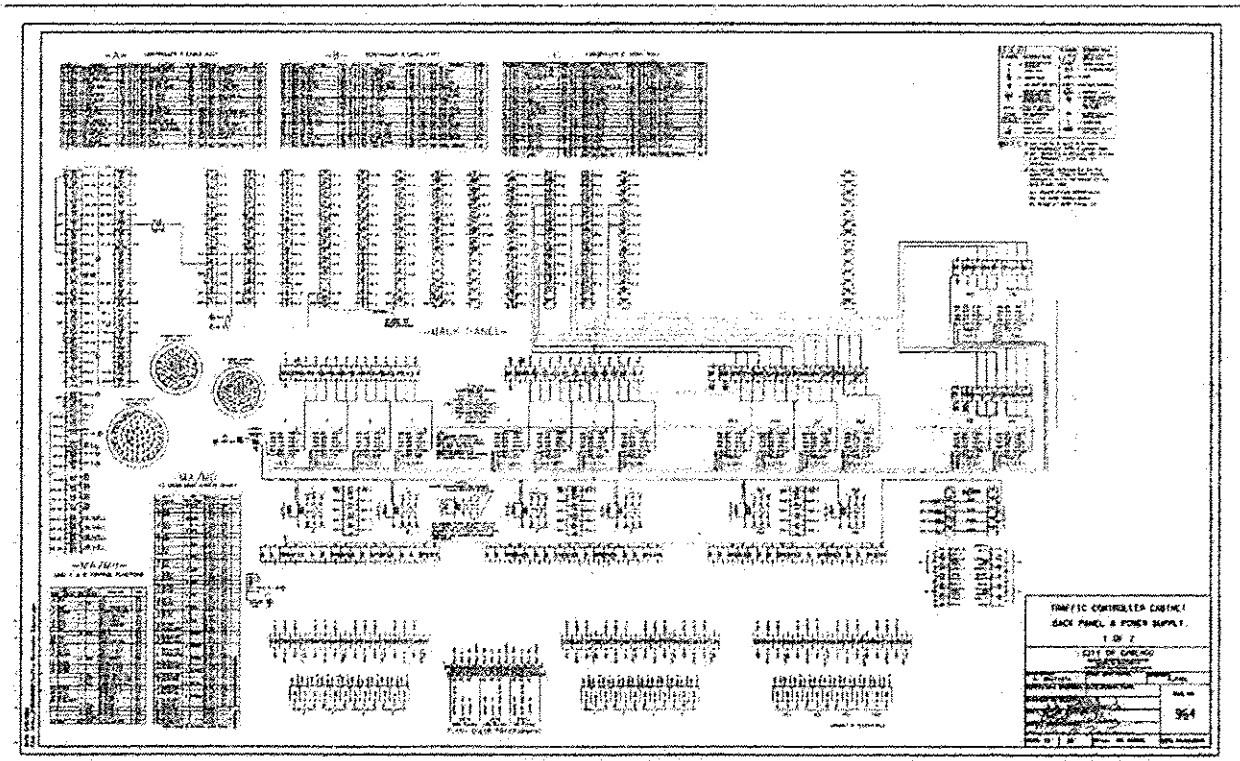
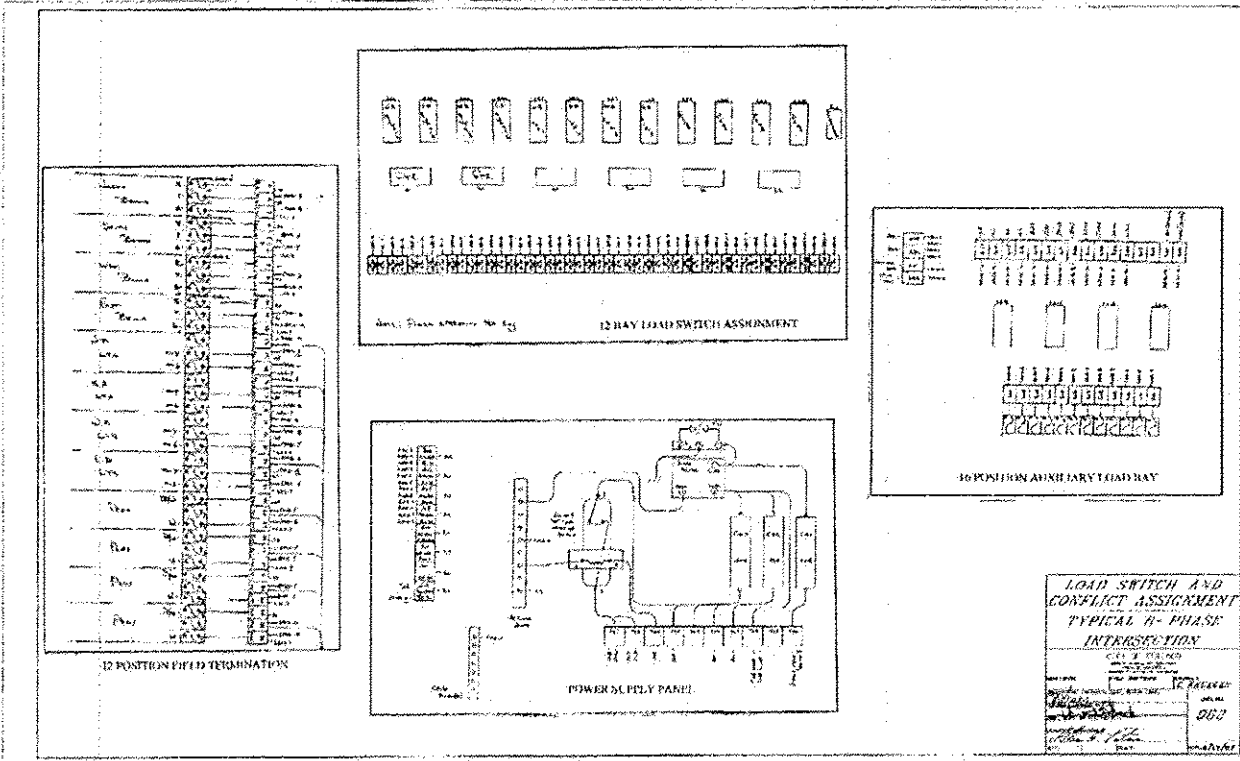
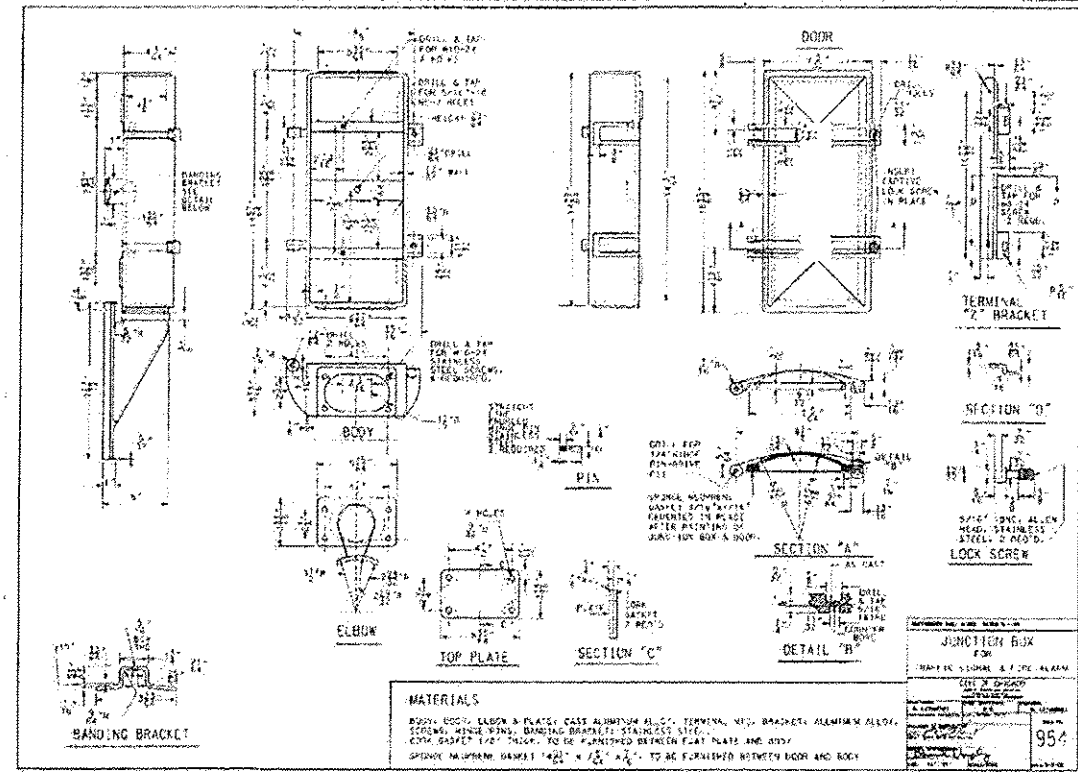
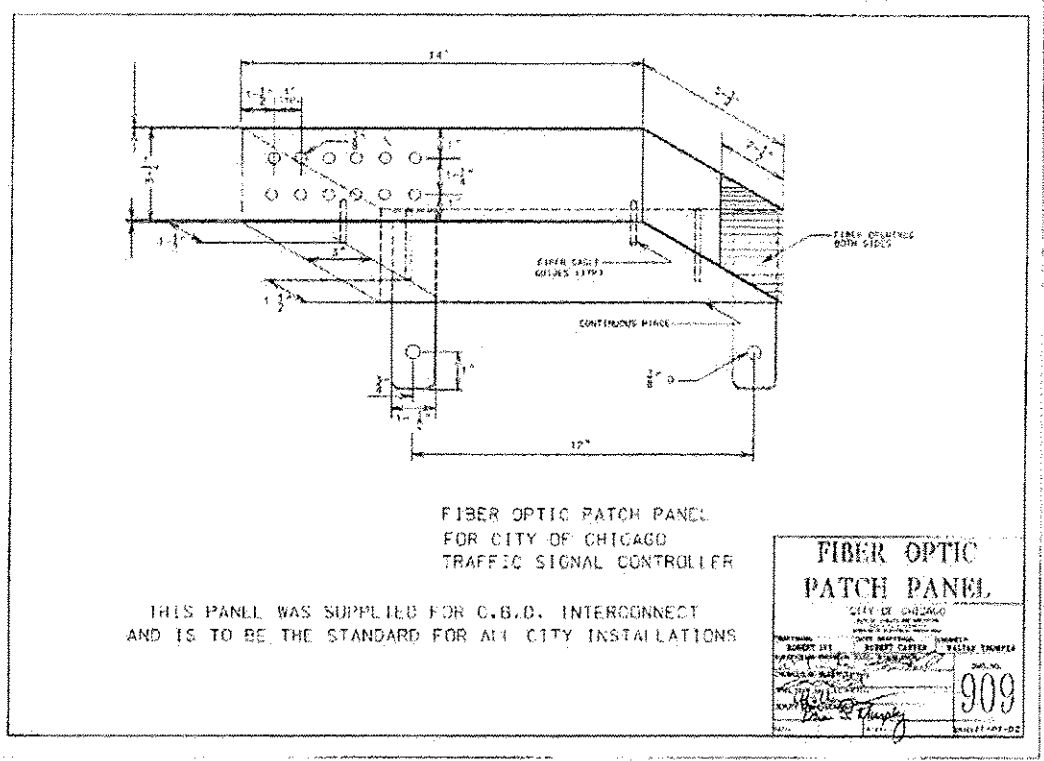
EJM EJM ENGINEERING, INC.
411 South Wabash Street Suite 1000
Chicago, Illinois 60607

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

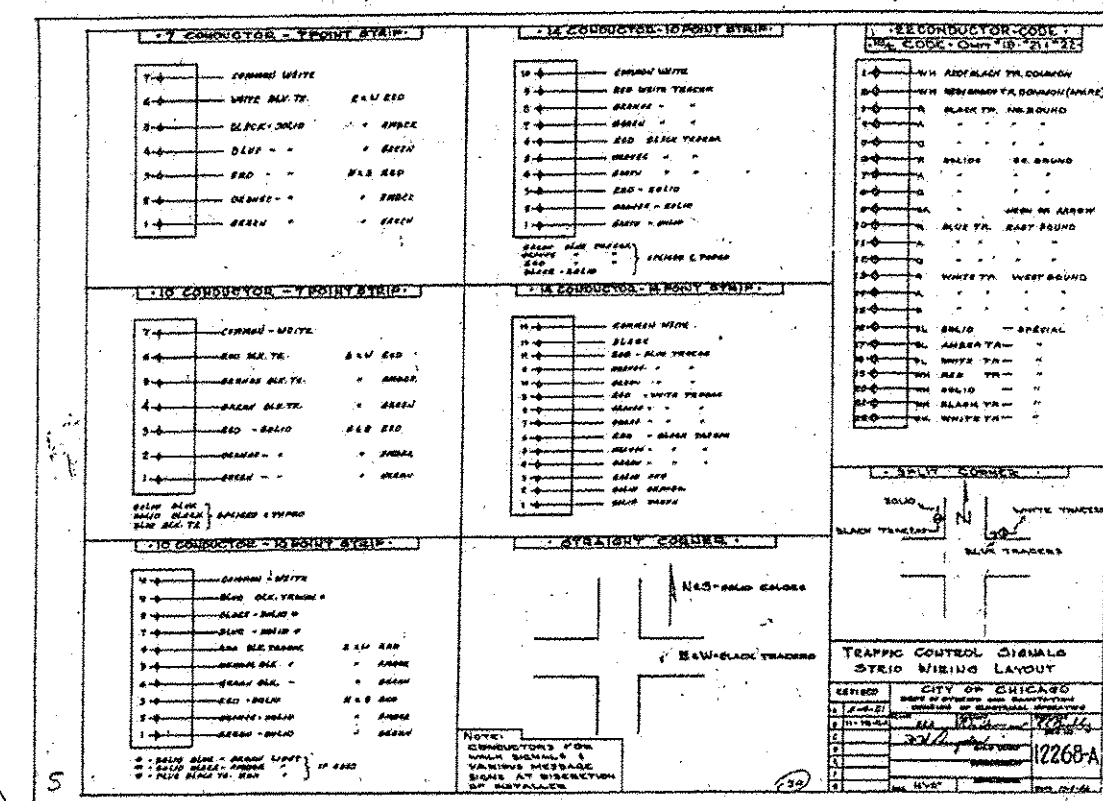
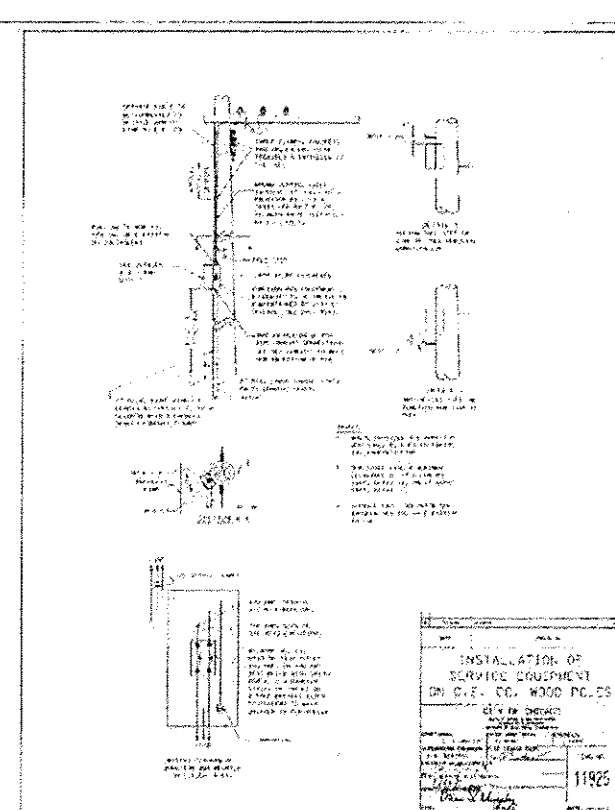
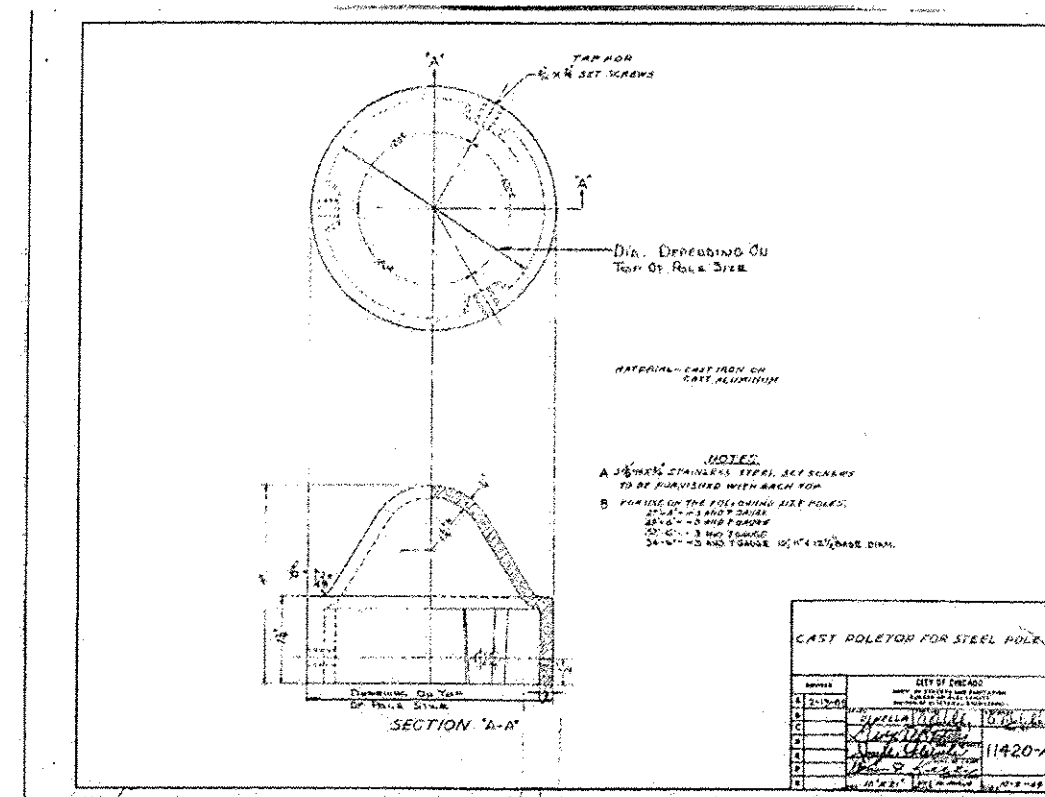
CDOT STANDARD CODE FOR
TRAFFIC SIGNALS/STREET LIGHTING

F.U.D. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2746	1616B	COOK	404	225
			CONTRACT NO. 60J14	

TS-66



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4/4/2013

IDOT LIGHTING LEGEND

	PROPOSED UNDERPASS LUMINAIRE 100 WATT HPS, TYPE IV
	EXISTING UNDERPASS LUMINAIRE TO BE REMOVED
	PROPOSED JUNCTION BOX, AS SPECIFIED IN PLANS
	PROPOSED UNIT DUCT, AS SPECIFIED IN PLANS
	PROPOSED CONDUIT ATTACHED TO STRUCTURE, AS SPECIFIED IN PLANS
	PROPOSED UNDERGROUND CONDUIT, AS SPECIFIED IN PLANS
	EXISTING UNDERGROUND CONDUIT, AS SPECIFIED IN PLANS
	PROPOSED DUPLEX TYPE LIGHTING CONTROLLER
	PROPOSED LIGHT POLE AND LUMINAIRE (47.5' M.H., 8' MAST ARM, 250W MCII LUMINAIRE U.N.O.)
	LIGHT POLE DESIGNATION
	CIRCUIT DESIGNATION
	CONTROLLER DESIGNATION
	PROPOSED COMBINATION MAST ARM POLE AND LUMINAIRE 45' M.H., 12' MAST ARM(S) (U.N.O.) 400W MCIII LUMINAIRE
	EXISTING LIGHT POLE AND LUMINAIRE TO BE REMOVED
	EXISTING LIGHT POLE AND LUMINAIRE TO REMAIN
	EXISTING LIGHT POLE AND LUMINAIRE TO BE RELOCATED
	TEMPORARY LIGHTING UNIT 47.5' M.H., 15' MAST ARM, 400W MCIII LUMINAIRE, 60' WOOD POLE (U.N.O.)
	TEMPORARY WOOD POLE, 60 FOOT, CLASS 4
	TEMPORARY AERIAL CABLE 3-1/2" NO. 2 WITH MESSENGER WIRE
	EXISTING HANDHOLE TO BE REMOVED
	PROPOSED HEAVY-DUTY HANDHOLE

IDOT LIGHTING SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	4316
CONDUIT ATTACHED TO STRUCTURE, 1" DIA., PVC COATED GALVANIZED STEEL	FOOT	1350
CONDUIT ATTACHED TO STRUCTURE, 2 1/2" DIA., PVC COATED GALVANIZED STEEL	FOOT	1335
CONDUIT ATTACHED TO STRUCTURE, 3" DIA., PVC COATED GALVANIZED STEEL	FOOT	30
CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	1185
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 6" X 4"	EACH	16
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 10" X 6"	EACH	20
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 10" X 14" X 6"	EACH	2
HEAVY-DUTY HANDHOLE	EACH	4
UNIT DUCT, 600V, 3-1/2" NO. 2, 1/2" NO. 4 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	28828
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/2" NO. 10	FOOT	5341
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/2" NO. 4	FOOT	1074
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/2" NO. 2	FOOT	3222
ELECTRIC CABLE IN CONDUIT, 800V (XLP-TYPE USE) 1/2" 350MCM	FOOT	1275
AERIAL CABLE, 3-1/2" NO. 2 WITH MESSENGER WIRE	FOOT	6663
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	7
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	48
UNDERPASS LUMINAIRE, 100 WATT, HIGH PRESSURE SODIUM VAPOR	EACH	16
LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 8 FT. MAST ARM	EACH	23
LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 10 FT. MAST ARM	EACH	11
LIGHT POLE, WOOD, 60 FOOT, CLASS 4, WITH 15FT MAST ARM	EACH	7
LIGHT POLE, WOOD, 90 FOOT, CLASS 3, WITH 15FT MAST ARM	EACH	4
LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	352
BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	25
REMOVAL OF TEMPORARY LIGHTING UNIT	EACH	18
REMOVAL OF LIGHTING UNIT, NO SALVAGE	EACH	24
REMOVAL OF POLE FOUNDATION	EACH	11
RELOCATE EXISTING LIGHTING UNIT	EACH	3
REMOVAL OF LIGHTING CONTROLLER	EACH	1
DRILL EXISTING HANDHOLE	EACH	4
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	3570
REMOVE EXISTING HANDHOLE	EACH	2
WOOD POLE, 60 FT, CLASS 4	EACH	9
ELECTRIC CONNECTION TO SIGN STRUCTURE	EACH	1
FLUORESCENT LUMINAIRE FOR SIGN LIGHTING	EACH	4
LIGHTING CONTROLLER, BASE MOUNTED, 480VOLT, 200AMP (DUAL), RADIO SCADA	EACH	1
LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	55
MAINTENANCE OF LIGHTING SYSTEM	CAL MO	16
JUNCTION BOX, NON-METALLIC, EMBEDDED IN STRUCTURE, 21" X 11" X 7"	EACH	6
MAST ARM, STREET LIGHTING, 10'	EACH	8
MAST ARM, STREET LIGHTING, 12'	EACH	2
REMOVE AND REPLACE FUSE KIT	EACH	82

GENERAL NOTES

- THE CONTRACTOR SHALL VERIFY ALL OF THE INFORMATION SHOWN ON THE CONTRACT DRAWINGS WHICH WOULD AFFECT THE WORK UNDER THIS CONTRACT.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS PROJECT, SPECIFICALLY AS THEY RELATE TO LUMP SUM ITEMS.
- ALL NEW CONDUITS, UNIT DUCTS, DIRECT BURIAL CABLES, AND APPURTENANCES ARE INDICATED DIAGRAMMATICALLY ON THE DRAWINGS. THE ACTUAL LOCATIONS IN THE FIELD SHALL MEET WITH APPROVAL OF THE ENGINEER.
- THE ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ASSOCIATED SUPPLEMENTAL CONDITIONS (LATEST EDITION).
- THE SCALE SHOWN ON PLAN DRAWINGS APPLIES ONLY TO THE FULL SIZE PLANS AND NOT TO REDUCED SIZE PLANS.
- THE CONTRACTOR SHALL FURNISH AND INSTALL LUMINAIRE LAMPS IN ACCORDANCE WITH THE SUPPLIER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE SPECIFICATIONS. THE COST OF THIS WORK AND MATERIAL SHALL BE INCLUDED IN THE APPLICABLE LUMINAIRE PAY ITEM. SEPARATE PAYMENT WILL NOT BE MADE.
- ALL LUMINAIRES SHALL BE ORIENTED WITH THE OPTICS PERPENDICULAR TO THE ROADWAY UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE APPLICABLE LUMINAIRE PAY ITEMS. SEPARATE PAYMENT WILL NOT BE MADE.
- CONDUITS AND UNIT DUCTS SHALL BE INSTALLED AT A MINIMUM 30" DEPTH BELOW GRADE AND POSITIONED IN THE FIELD TO AVOID CONFLICT WITH ROADWAY UNDERDRAINS AND OTHER EXISTING AND PROPOSED UTILITIES. THE CONTRACTOR SHALL INCREASE DEPTH OF UNIT DUCT AND CONDUIT AS REQUIRED AT NO ADDITIONAL COST TO THE STATE. THE CONTRACTOR SHALL COORDINATE RACEWAY DEPTH WITH THE ELECTRICAL DETAILS AND THE ENGINEER.
- WHERE THE CONTRACTOR'S EXCAVATION MEETS AN OBSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR DIRECTION IN WRITING PRIOR TO EXCAVATION. THE CONTRACTOR SHALL RESTORE ANY DAMAGE TO EXISTING SYSTEMS OR UTILITIES AND REMOVE EXISTING OBSTRUCTIONS AND FOUNDATIONS TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE PAY ITEM.
- WHEREVER TEMPORARY AERIAL CABLE IS REQUIRED TO CROSS AN EXISTING AND/OR PROPOSED ROADWAY, THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 20 FEET OF VERTICAL CLEARANCE OVER THE ROADWAY AT ALL TIMES.
- IDOT LIGHT POLE SETBACKS ARE MEASURED FROM CENTER OF POLE TO BACK OF CURB IN CURBED AREAS CENTER OF POLE TO EDGE OF TRAVELED PAVEMENT IN NON-CURBED AREAS.
- NO UNDERGROUND SPLICING IS PERMITTED. HANDHOLES ARE TO BE USED FOR CABLE PULLING PURPOSES ONLY.
- EXPANSION/DEFLECTION COUPLINGS FOR EMBEDDED CONDUITS SHALL BE INSTALLED AT ALL STRUCTURE EXPANSION JOINTS. THE COST OF THIS WORK IS INCLUDED IN THE PRICE OF THE CONDUIT EMBEDDED IN STRUCTURE.
- LOCATIONS OF LIGHTING CONDUITS AND FOUNDATIONS IN CLOSE PROXIMITY TO EXISTING CHICAGO DEPARTMENT OF WATER MANAGEMENT FACILITIES MUST BE COORDINATED IN THE FIELD WITH A DEPARTMENT OF WATER MANAGEMENT REPRESENTATIVE. ALL EXCAVATION IN THESE LOCATIONS MUST BE PERFORMED BY HAND.

ABBREVIATIONS

A.R.	ANCHOR RODS
A.T.S.	ATTACHED TO STRUCTURE
B.C.	BOLT CIRCLE
CKT.	CIRCUIT
GALV.	GALVANIZED
GND.	GROUND
GRSC.	GALVANIZED RIGID STEEL CONDUIT
HPS.	HIGH PRESSURE SODIUM
JB.	JUNCTION BOX
LFMC.	LIGHT TIGHT FLEXIBLE METALLIC CONDUIT
M.H.	MOUNTING HEIGHT
PVCC.	PVC COATED
U.N.O.	UNLESS NOTED OTHERWISE
W.	WATT



USER NAME *	DESIGNED - RAS	REVISED - 4/1/2013 CLG
	DRAWN - RAS	REVISED -
PLOT SCALE *	CHECKED - MKR	REVISED -
PLOT DATE *	DATE - 2/18/2013	REVISED -



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IDOT ROADWAY LIGHTING GENERAL NOTES,
LEGEND, AND SCHEDULE OF QUANTITIES
CUMBERLAND AVENUE

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

F.A.U. RTE. 2746	SECTION 1616B	COUNTY COOK	TOTAL SHEETS 404	SHEET NO. 233
CONTRACT NO. 60J14				
ILLINOIS FED. AID PROJECT				

LT-01

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CDOT LIGHTING SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	574
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	2835
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	60
REMOVAL OF LIGHTING UNIT, NO SALVAGE	EACH	10
REMOVAL OF POLE FOUNDATION	EACH	26
RELOCATE EXISTING LIGHTING UNIT	EACH	16
REMOVAL OF LIGHTING CONTROLLER FOUNDATION	EACH	2
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	10634
MAINTENANCE OF STREET LIGHTING SYSTEM (CITY OF CHICAGO)	L SUM	1
CABLE IN CONDUIT, TRIPLEX, 2-1/C NO. 6 AND 1-1/C NO. 8 GROUND	FOOT	5266
REMOVE AND RELOCATE EXISTING LIGHTING CONTROLLER	EACH	2
CONCRETE FOUNDATION, 20" DIAMETER, 3/4" ANCHOR RODS, 13" BOLT CIRCLE (CDOT)	EACH	2
CONCRETE FOUNDATION, 24" DIAMETER, 1 1/4" ANCHOR RODS, 15" BOLT CIRCLE	EACH	23
ELECTRIC CABLE IN CONDUIT NO. 2/0 3/C	FOOT	776
INSTALL LIGHT POLE, MAST ARM, AND LUMINAIRE (CHICAGO)	EACH	7
REMOVE AND RELOCATE EXISTING LUMINAIRE AND MAST ARM	EACH	10
SERVICE INSTALLATION, 200 AMPERE	EACH	2
UNDERGROUND CONDUIT, PVC, 2" DIA. (SCHEDULE 80)	FOOT	96
UNDERGROUND CONDUIT, PVC, 3" DIA. (SCHEDULE 80)	FOOT	480



ABBREVIATIONS

A.R.	ANCHOR RODS
B.C.	BOLT CIRCLE
CKT	CIRCUIT
DOEO	DIVISION OF ELECTRICAL OPERATIONS
GALV.	GALVANIZED
GND	GROUND
GRSC	GALVANIZED RIGID STEEL CONDUIT
HPS	HIGH PRESSURE SODIUM
JB	JUNCTION BOX
LFMC	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT
PVCC	PVC COATED
U.N.O.	UNLESS NOTED OTHERWISE
W	WATT

GENERAL NOTES

1. A NOMINAL QUANTITY IS PROVIDED FOR REPLACEMENT OF EXISTING POLES WITH NEW CITY-FURNISHED POLES. THE FINAL QUANTITY OF POLES TO BE REPLACED IN LIEU OF RELOCATION SHALL BE AS DETERMINED BY THE ENGINEER.
2. REMOVAL OF EXISTING AERIAL CABLES CONNECTED TO LIGHT POLES TO BE RELOCATED OR REMOVED IS INCIDENTAL TO THE LIGHT POLE RELOCATION OR REMOVAL, AS APPLICABLE.
3. LOCATIONS OF LIGHTING CONDUITS AND FOUNDATIONS IN CLOSE PROXIMITY TO EXISTING CHICAGO DEPARTMENT OF WATER MANAGEMENT FACILITIES MUST BE COORDINATED IN THE FIELD WITH A DEPARTMENT OF WATER MANAGEMENT REPRESENTATIVE. ALL EXCAVATION IN THESE AREAS MUST BE PERFORMED BY HAND.

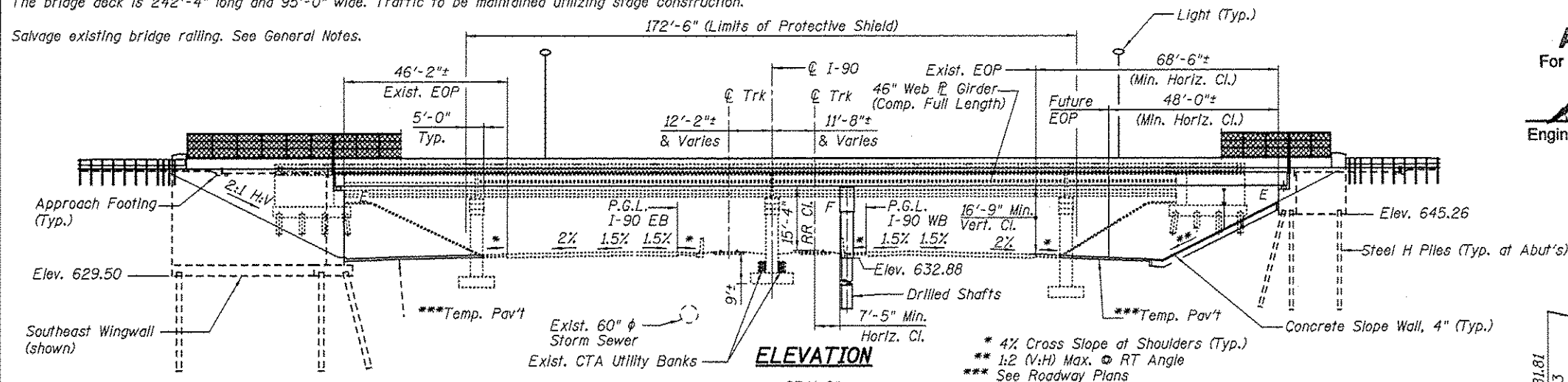
LT-28

USER NAME *	DESIGNED - RAS	REVISED -  3/29/2013 RAS	 EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CDOT ROADWAY LIGHTING GENERAL NOTES AND SCHEDULE OF QUANTITIES CUMBERLAND AVENUE	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEET SHEETS NO.	
PLOT SCALE *	DRAWN - RAS	REVISED -				2746	1616B	COOK	404	260
PLOT DATE *	CHECKED - MKR	REVISED -				CONTRACT NO. 60JJ4				
	DATE - 2/18/2013	REVISED -				ILLINOIS FED. AID PROJECT				
						SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	

Bench Mark: PK nail on shoulder, 162' north of the center pier, Sta. 119+42.50 Offset 46.5' RT, Elev. 653.65.

Existing Structure: S.N. 016-0700 built as F.A.U. 2746 under Sec. 267-1616 F-15D in 1958. The existing bridge has four simple spans which consist of a 7" reinforced concrete deck slab resting on 48" PPC I-beams. Span lengths are 31'-9", 81'-9", 81'-9", and 38'-3". The bridge deck is 242'-4" long and 95'-0" wide. Traffic to be maintained utilizing stage construction.

Salvage existing bridge railing. See General Notes.



APPROVED
For Structural Adequacy Only

De Carol Kung
Engineer of Bridges & Structures

DESIGN SPECIFICATIONS
2010 AASHTO LRFD Bridge Design Specifications
with 2010 Interims
LOADING HL-93
Allow 50#/#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

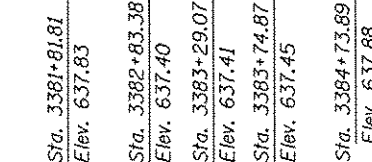
$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acc. at 0.2 sec (SDS) = 0.145g
Design Spectral Acc. at 1.0 sec (SD1) = 0.084g
Soil Site Class = D

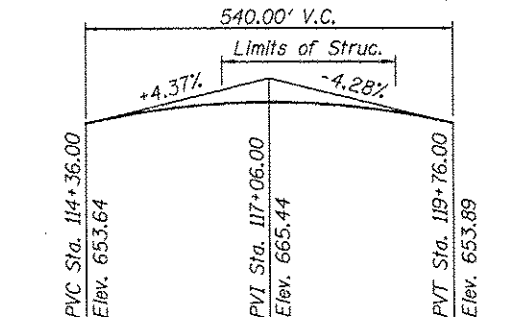
TOP OF RAIL ELEVATIONS

(Along @ I-90 - Existing from CTA Rail Survey)

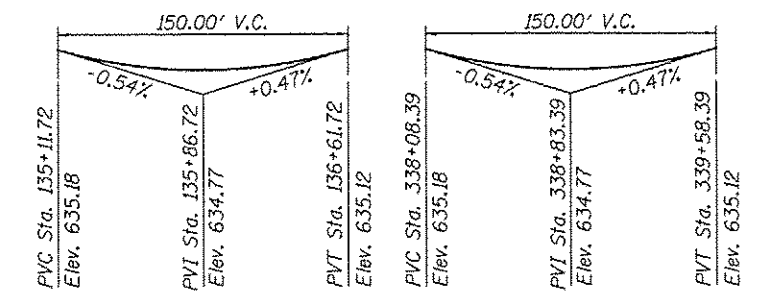


PROF. GRADE- CUMBERLAND AVE.

(along PGL Cumberland Avenue)

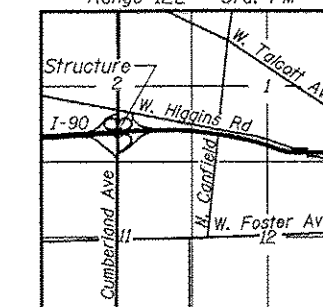


EB
PROFILE GRADE- KENNEDY EXPWY.
(Along PGL I-90 - Existing from Survey Elevations)



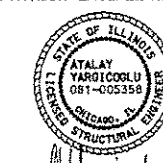
WB

Range 12E - 3rd. PM



LOCATION SKETCH

PATRICK ENGINEERING, INC.



ATALAY YARGICOGLU, S.E.
081-005358
EXP 11/30/2014
DATE 2/18/2013

LEGEND

- ◆ Soil Boring
- >--->---> Exist. Sewer
- ==== CTA Track
- Exist. Light Pole
- >---> Exist. Drain

GENERAL PLAN
IL ROUTE 171 (CUMBERLAND AVENUE) OVER
INTERSTATE 90 (KENNEDY EXPRESSWAY)
COOK COUNTY
STATION 117+78.10
STRUCTURE NO. 016-1250

	PATRICK ENGINEERING INC. 4970 VARSITY DRIVE LISLE, IL 60532 patrickengineering.com		DESIGNED - AY		REVISED		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		GENERAL PLAN STRUCTURE NO. 016-1250		F.A.U. RTE. 2746		SECTION 1616B		COUNTY COOK		TOTAL SHEETS 404		SHEET NO. 270	
	PLOT SCALE =		DRAWN - AY		REVISOR						SCALE: NONE		SHEET NO. S1 OF 559		SHEETS					
	PLOT DATE =		CHECKED - RLD		REVISED															
			DATE - 2/18/2013		REVISED															

INDEX OF SHEETS

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S2	GENERAL NOTES, INDEX OF SHEETS, AND TOTAL B.O.M.
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S4	STAGE CONSTRUCTION
S5	REMOVAL DETAILS
S6	TEMPORARY SHEET PILING AND SOIL RETENTION SYSTEM
S7	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
S8	TOP OF SLAB ELEVATIONS LAYOUT
S9	TOP OF SLAB ELEVATIONS (1 OF 8)
S10	TOP OF SLAB ELEVATIONS (2 OF 8)
S11	TOP OF SLAB ELEVATIONS (3 OF 8)
S12	TOP OF SLAB ELEVATIONS (4 OF 8)
S13	TOP OF SLAB ELEVATIONS (5 OF 8)
S14	TOP OF SLAB ELEVATIONS (6 OF 8)
S15	TOP OF SLAB ELEVATIONS (7 OF 8)
S16	TOP OF SLAB ELEVATIONS (8 OF 8)
S17	APPROACH SLAB ELEVATIONS
S18	DECK PLAN AND SECTION
S19	DECK DETAILS I
S20	DECK DETAILS II
S21	PERFORMED JOINT STRIP SEAL
S22	BRIDGE APPROACH SLAB
S23	BRIDGE APPROACH SLAB DETAILS
S24	FRAMING PLAN
S25	GIRDER ELEVATION (GIRDERS 1 THRU 9 & 12 THRU 20)
S26	GIRDER ELEVATION (GIRDERS 10 & 11)
S27	MOMENT AND REACTION TABLES
S28	DIAPHRAGM DETAILS
S29	FIELD SPLICE (GIRDERS 1 THRU 9 & 12 THRU 20)
S30	FIELD SPLICE (GIRDERS 10 & 11)
S31	BEARING DETAILS (GIRDERS 1 THRU 9 & 12 THRU 20)
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S33	SOUTH ABUTMENT PLAN
S34	SOUTH ABUTMENT ELEVATION
S35	SOUTH ABUTMENT DETAILS I
S36	SOUTH ABUTMENT DETAILS II
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S38	NORTH ABUTMENT ELEVATION
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S43	BARRIER WALL
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S45	BRIDGE RAILING DETAILS
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S50	SOIL BORING LOGS (2 OF 11)
S51	SOIL BORING LOGS (3 OF 11)
S52	SOIL BORING LOGS (4 OF 11)
S53	SOIL BORING LOGS (5 OF 11)
S54	SOIL BORING LOGS (6 OF 11)
S55	SOIL BORING LOGS (7 OF 11)
S56	SOIL BORING LOGS (8 OF 11)
S57	SOIL BORING LOGS (9 OF 11)
S58	SOIL BORING LOGS (10 OF 11)
S59	SOIL BORING LOGS (11 OF 11)

GENERAL NOTES

- Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts - 7/8 in. ϕ , holes - 15/16 in. ϕ , unless otherwise noted.
- Calculated weight of Structural Steel:
Grade 50 = 1,346,830 pounds
Grade 36 = 149,390 pounds (includes wt. of bolts)
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars designated (E) shall be epoxy coated.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
- Concrete Sealer shall be applied to the designated areas of the abutment backwalls, bridge seats, and front faces of pile caps, and all exposed surface areas of the pier.
- The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G 4/8.
- All work to be done on or adjacent to the CTA's right-of-way will require a work plan submitted by the General Contractor to CTA for review and approval prior to the start of work. The Contractor must provide a five (5) week look-ahead schedule to the CTA Rail Operations Department. Shoring or support of excavation adjacent to the CTA right-of-way shall be designed by an Illinois licensed S.E. General contractor to submit signed and sealed ERS drawings and calculations to CTA for review and approval prior to the start of work. See the special provision "CTA Coordination".

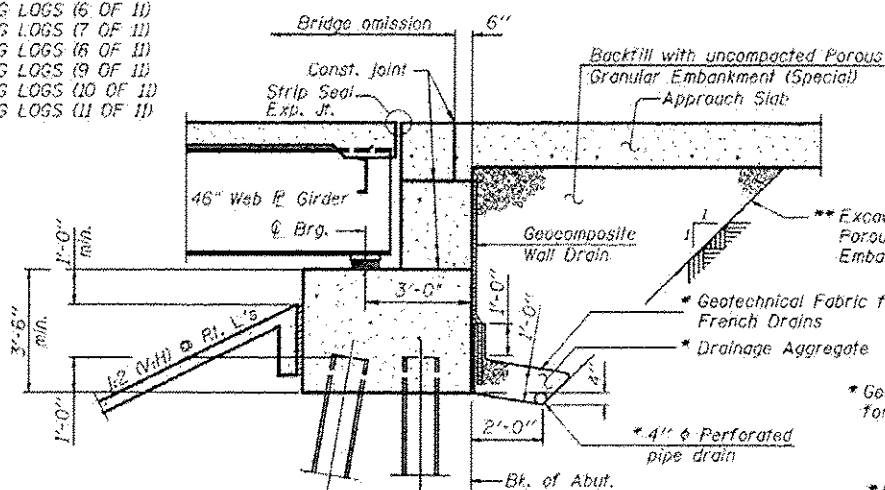
- The existing bridge railing shall be salvaged and delivered to IDOT's maintenance facility at the following address:
1101 Biesterfeld Road, Elk Grove Village, IL 60007
Cost to be included with Removal of Existing Structures.

STATION 117+78.10
BUILT 2014 BY
STATE OF ILLINOIS
IL RT. 171 SEC. 1616B
LOADING HL-93
STR. NO. 016-1250

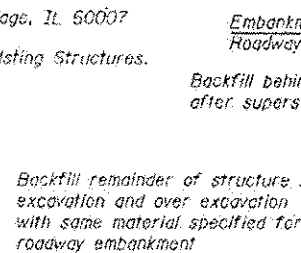
NAME PLATE
See Std. 515001

TOTAL BILL OF MATERIAL

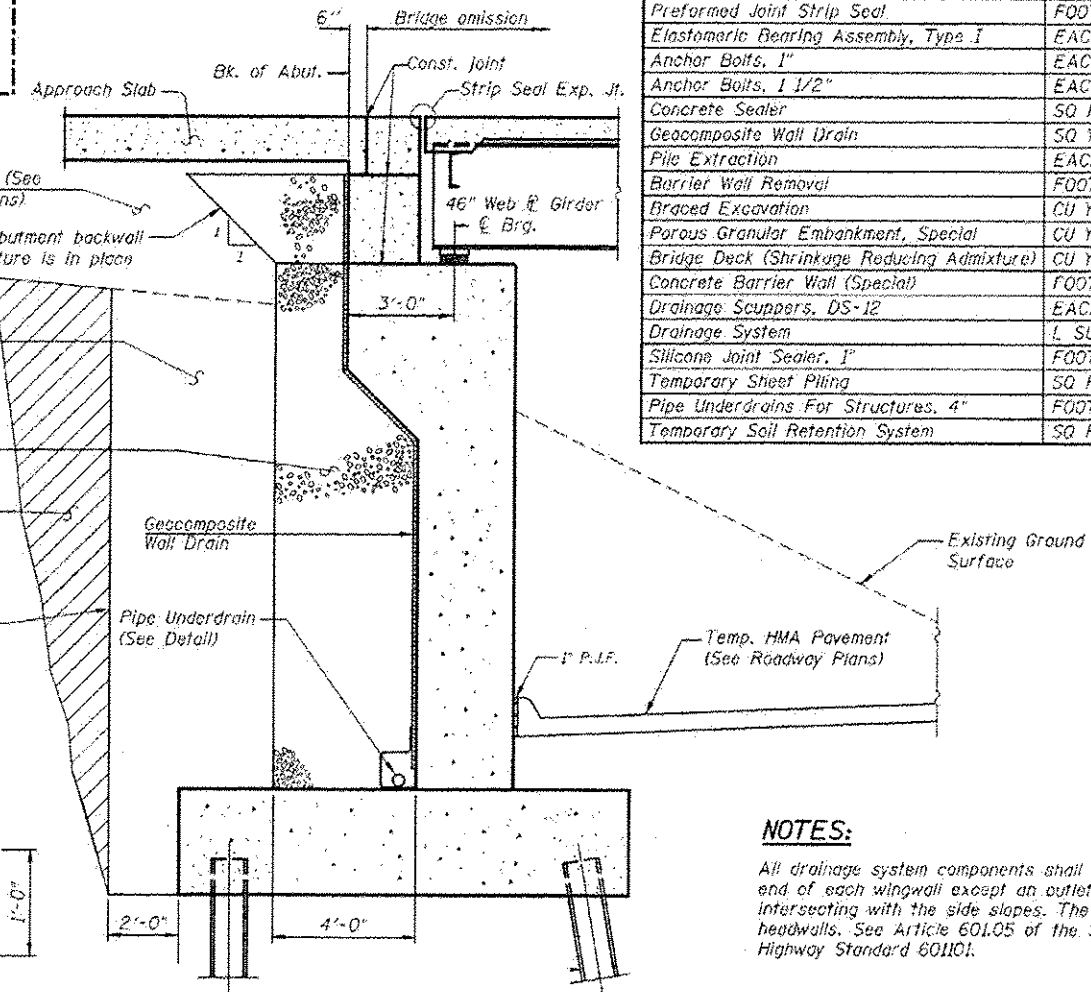
ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	EACH	1		1
Slope Wall Removal	SQ YD		831	831
Protective Shield	SQ YD	2,530		2,530
Structure Excavation	CU YD		4,206	4,206
Concrete Structures	CU YD		1,602.8	1,602.8
Concrete Superstructure	CU YD	660.3		660.3
Bridge Deck Grooving	SQ YD	4,176		4,176
Concrete Encasement	CU YD		14.0	14.0
Protective Coat	SQ YD	5,369		5,369
Furnishing and Erecting Structural Steel	L SUM	1		1
Stud Shear Connectors	EACH	22,500		22,500
Reinforcement Bars, Epoxy Coated	POUND	351,280	259,290	610,570
Bar Splacers	EACH	2,038	796	2,834
Mechanical Splacers	EACH		504	504
Bridge Fence Railing	FOOT	645		645
Slope Wall 4"	SQ YD		562	562
Furnishing Steel Piles, HP12x53	FOOT		7,308	7,308
Driving Piles	FOOT		7,308	7,308
Test Pile Steel, HP 12x53	EACH		4	4
Name Plates	EACH	1		1
Permanent Casing	FOOT		1,093	1,093
Drilled Shaft In Soil	CU YD		389.5	389.5
Drilled Shaft In Rock	CU YD		44.0	44.0
Performed Joint Strip Seal	FOOT	282		282
Elastomeric Bearing Assembly, Type I	EACH	40		40
Anchor Bolts, 1"	EACH	80		80
Anchor Bolts, 1 1/2"	EACH	40		40
Concrete Sealer	SQ FT		12,025	12,025
Geocomposite Wall Drain	SQ YD		841	841
Pile Extraction	EACH		96	96
Barrier Wall Removal	FOOT		185	185
Graced Excavation	CU YD		87	87
Porous Granular Embankment, Special	CU YD		1,047	1,047
Bridge Deck (Shrinkage Reducing Admixture)	CU YD	966.6		966.6
Concrete Barrier Wall (Special)	FOOT		47	47
Drainage Scuppers, DS-12	EACH	10		10
Drainage System	L SUM	1		1
Silicone Joint Sealer, 1"	FOOT	335		335
Temporary Sheet Piling	SQ FT		1,248	1,248
Pipe Underdrains For Structures, 4"	FOOT		430	430
Temporary Soil Retention System	SQ FT		1,908	1,908



SECTION THRU NORTH ABUTMENT
(Horiz. dim. @ Rt. L's)



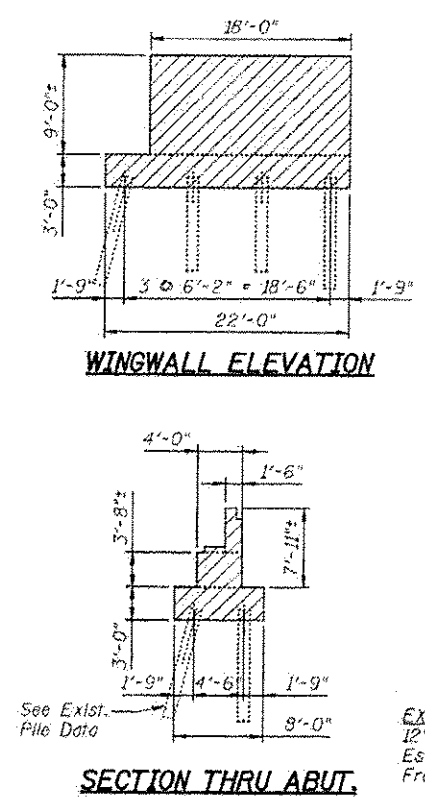
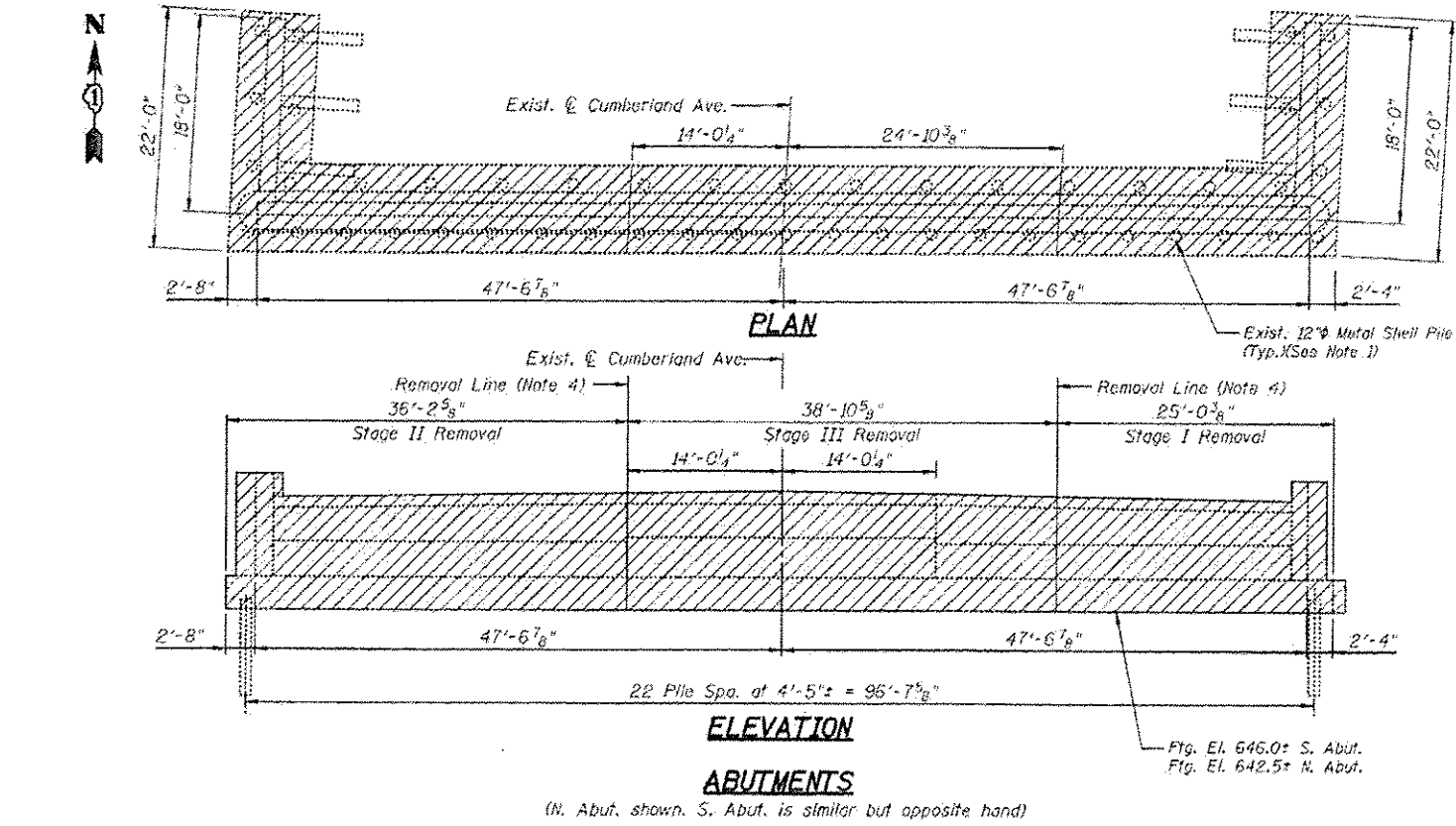
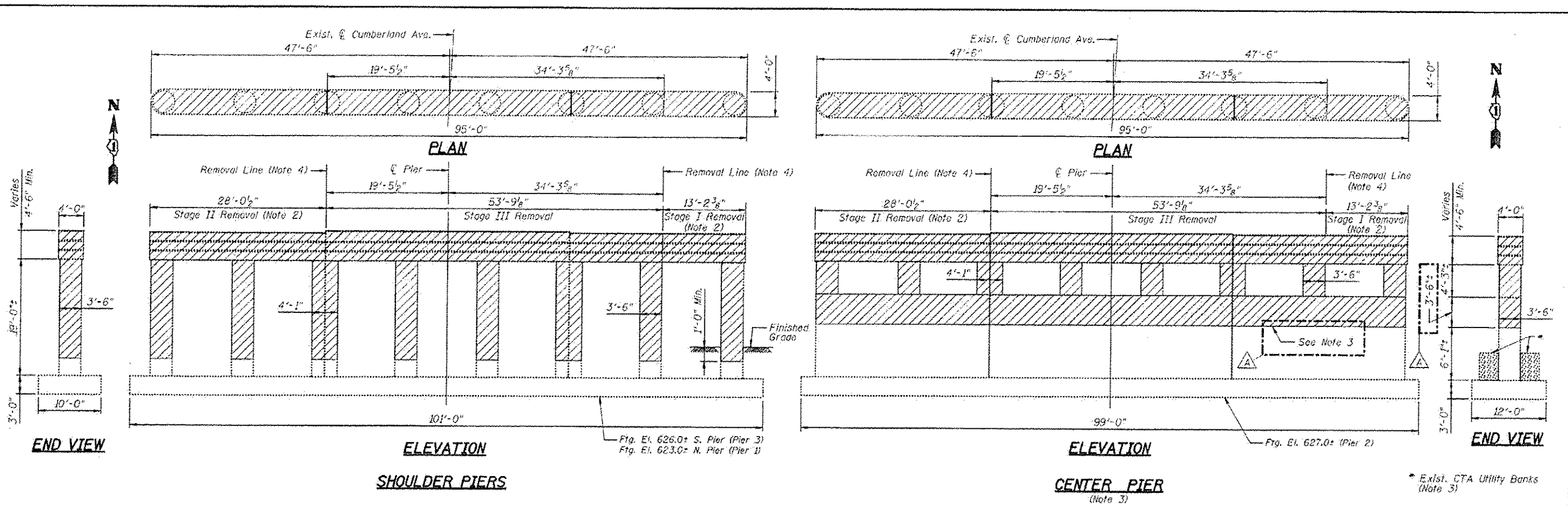
PIPE UNDERDRAIN DETAIL



SECTION THRU SOUTH ABUTMENT
(Horiz. dim. @ Rt. L's)

NOTES:

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipe shall drain into concrete headwalls. See Article 601.05 of the Standard Specifications and Highway Standard 601101.

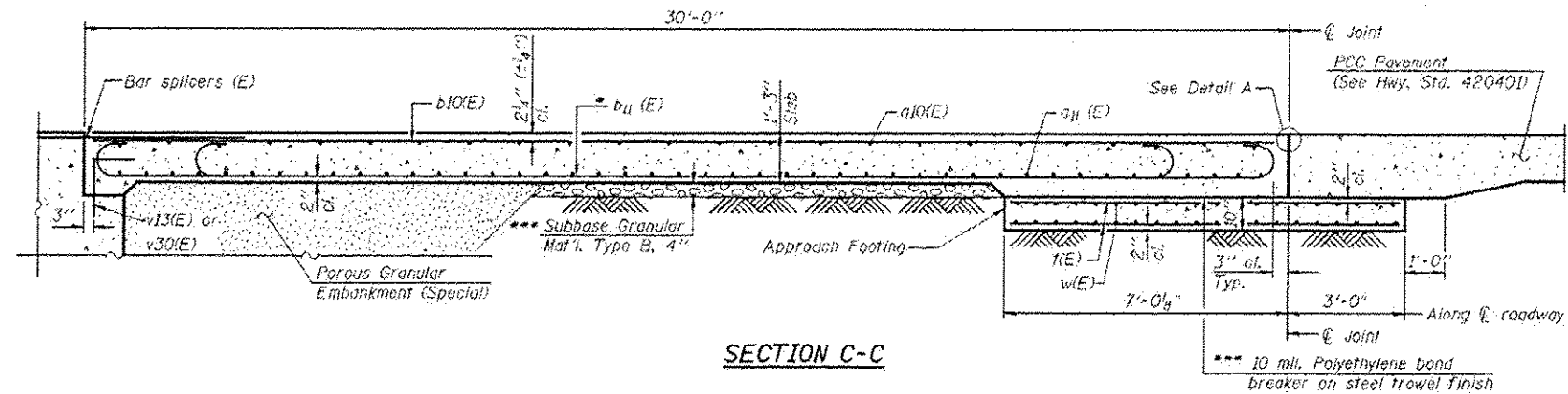


- LEGEND**
- Structure Removal
- NOTES:**
- Existing Metal Shell Piles at the abutments shall be removed. See the special provision "Pile Extraction".
 - Portions of the existing piers that do not interfere with Stage I and Stage II of the proposed construction may be removed in Stage III as directed by the Engineer.
 - The existing center pier shall be removed to an elevation 2'-6" above top of existing ballast. The existing CTA track components and utility banks shall be protected. See the General Note 8 on Sheet S2 of S59.
 - Removal and stage construction lines are different for the superstructure and substructure.

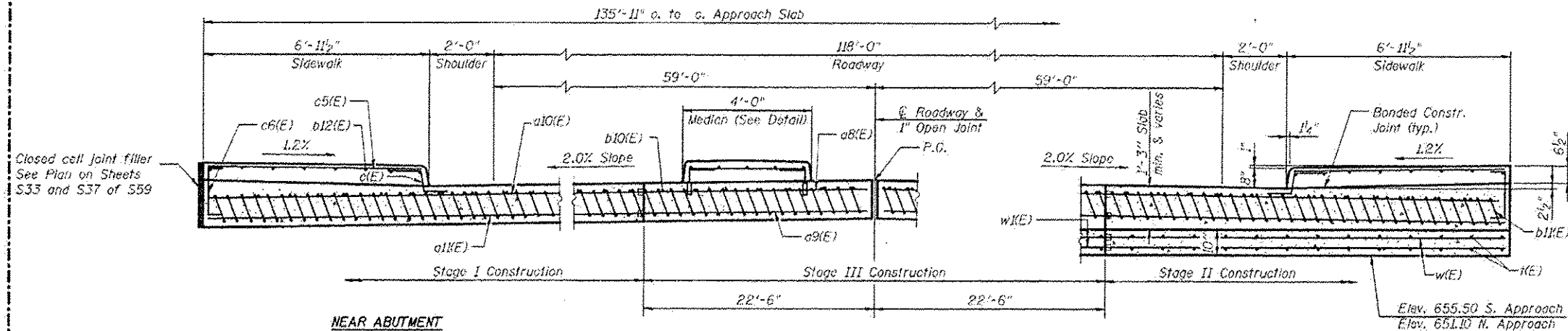
BILL OF MATERIAL

Item	Unit	Total
Pile Extraction	Each	96

EXIST. PIPE DATA:
 12" Metal Shell Piles
 Est. Length = 34 ft.
 Front Pile Batter = 1:4

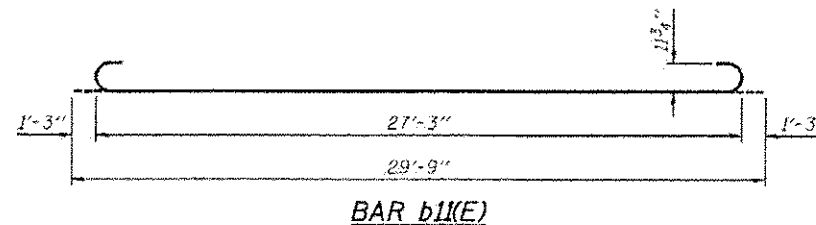
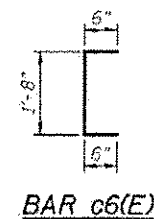
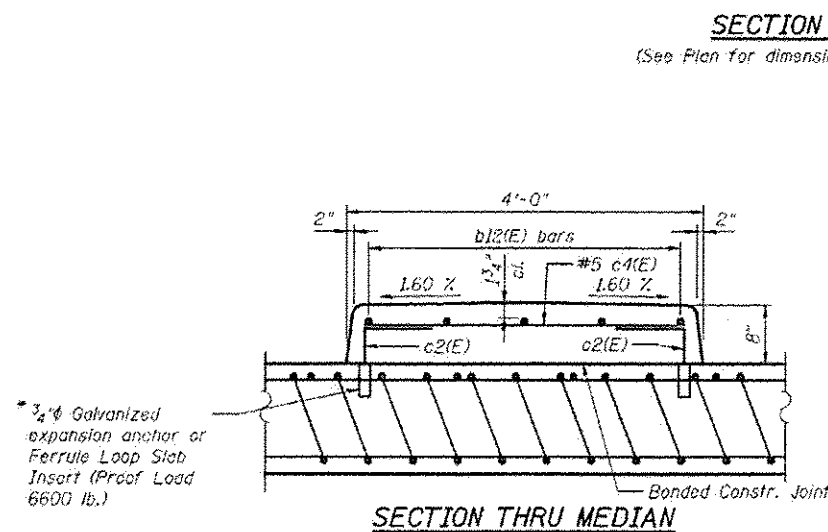


Notes:
See sheet S22 of S59 for Detail A and View B-B.
Approach slab, sidewalk and median shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v13(E) and v30(E) bar details, see sheets S34 and S39 of S59.
The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
For bar splicer details, see sheet S48 of S59.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet S2 of S59.



TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a8(E)	100	#4	22'-2"	—
a9(E)	184	#5	22'-2"	—
a10(E)	200	#4	23'-6"	—
a11(E)	184	#5	45'-2"	—
b10(E)	220	#4	29'-8"	—
b11(E)	656	#9	29'-9"	—
b12(E)	42	#5	29'-8"	—
c1(E)	124	#5	2'-4"	⌋
c2(E)	124	#5	1'-5"	⌋
c4(E)	62	#5	3'-5"	—
c5(E)	124	#5	6'-6"	—
c6(E)	124	#5	2'-8"	⌋
k(E)	552	#4	9'-8"	—
w1(E)	160	#5	45'-2"	—
w1(E)	80	#5	44'-8"	—
Concrete Superstructure			Cu. Yd.	455.6
Concrete Structures			Cu. Yd.	84.0
Bridge Deck Grooving			Sq. Yd.	760
Protective Coat			Sq. Yd.	923
Reinforcement Bars, Epoxy Coated			Pound	106,280
Silicone Joint sealer, 1"			Foot	60
Bar Splicers			Each	444



ENTIRE SHEET REVISED

 PATRICK ENGINEERING INC. 1670 VARSITY DRIVE LISLE, IL 60532 pat@patrickeng.com	USER NAME *	DESIGNED - AD	REVISED - 4/1/2013 AY	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 016-1250	F.A.U. R.T.E. 27-45	SECTION	COUNTY	TOTAL SHEETS
	PLOT SCALE *	DRAWN - AD	REVISED				16108	BOOK	404 292
	PLOT DATE *	CHECKED - RLD	REVISED					CONTRACT NO.	60J14
		DATE - 2/18/2013	REVISED					ILLINOIS FED. AID PROJECT	

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHE NO.
2746	18182	COOK	404	31
		CONTRACT NO. 60J1		
ILLINOIS FED. AID PROJECT				

Benchmark: Cut Cross on bolt for traffic signal at northeast corner of Cumberland Avenue and the ramp from northbound Cumberland to Eastbound I-90. Mark is 40 feet north of centerline of the intersection. Elevation 645.68.
No Salvage.

INDEX OF SHEETS

- SA-1 General Plan & Elevation
- SA-2 Plan & Elevation 1
- SA-3 Plan & Elevation 2
- SA-4 Plan & Elevation 3
- SA-5 Plan & Elevation 4
- SA-6 Wall Details & Bill of Materials
- SA-7 Boring Logs 1
- SA-8 Boring Logs 2

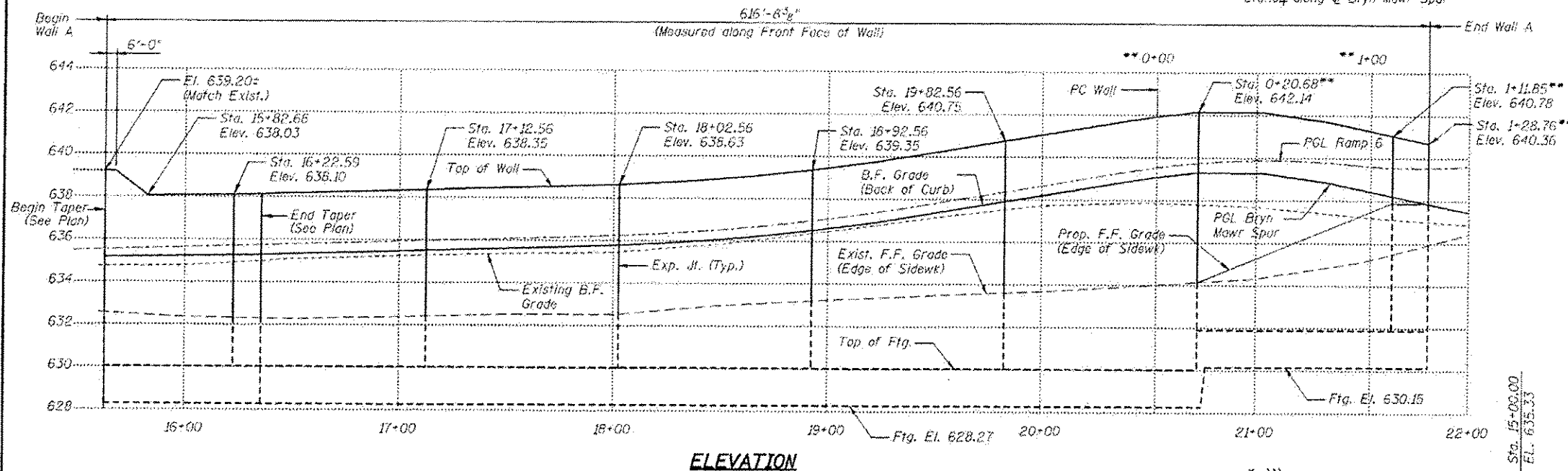
DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications, 5th Ed.
with 2010 Interims

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

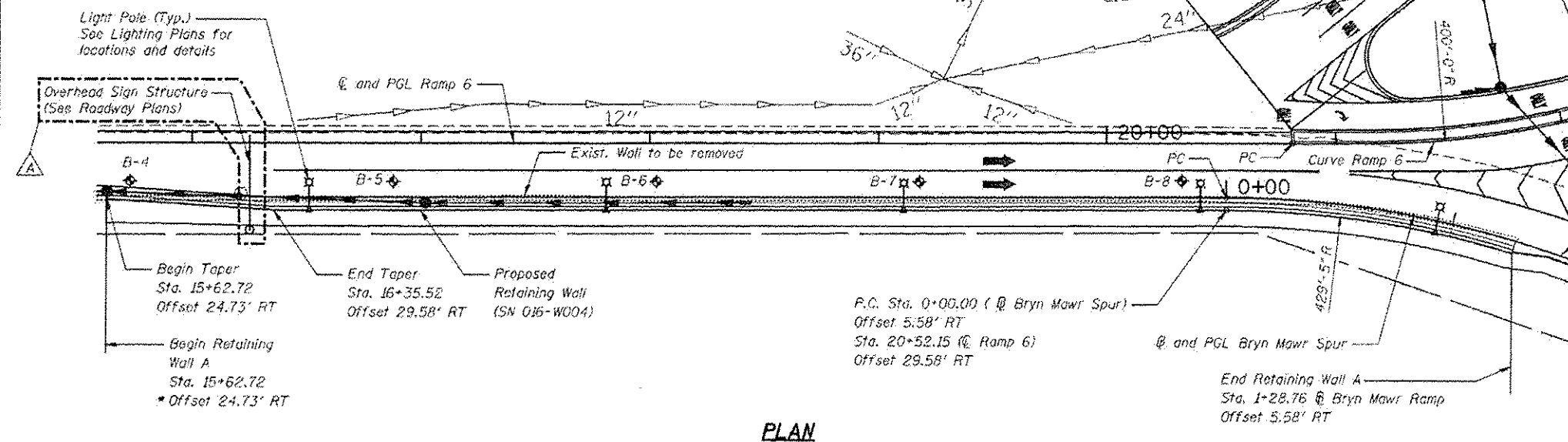


LEGEND

- ◆ Soil Boring
- F.F. Front Face of Wall
- B.F. Back Face of Wall

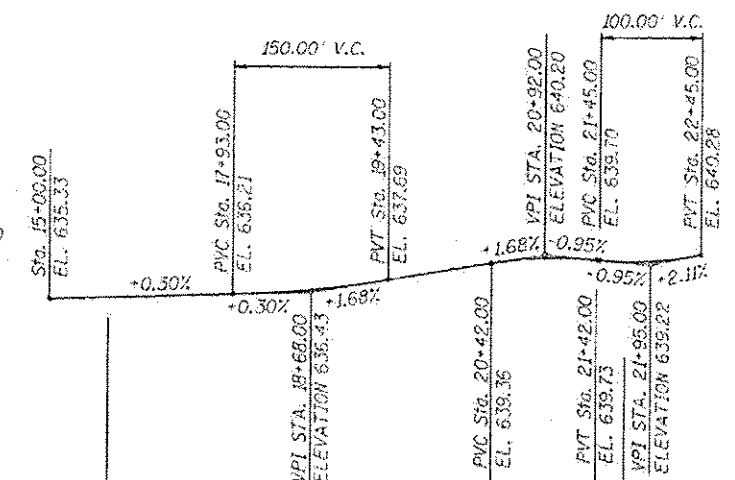
PROP. CURVE RAMP 6	PROP. CURVE BRYN MAWR SPUR
PI STA. = 21+86.97	PI STA. = 1+93.02
$\Delta = 20^\circ 51' 00''$ (LT)	$\Delta = 47^\circ 51' 25''$ (RT)
$D = 14^\circ 19' 26''$	$D = 13^\circ 10' 17''$
$R = 400.00'$	$R = 435.00'$
$T = 73.59'$	$T = 193.02'$
$L = 145.56'$	$L = 363.34'$
$E = 6.71'$	$E = 40.90'$
P.C. STA. = 21+13.38	P.C. STA. = 0+00.00
P.T. STA. = 22+58.94	P.T. STA. = 3+63.34

HORIZONTAL CURVE DATA

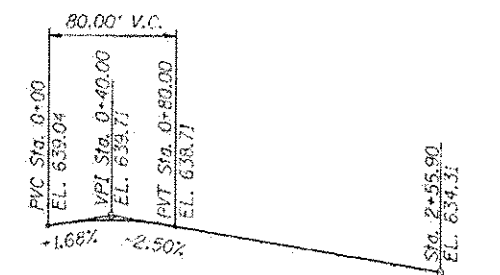


PLAN

* All offsets are to the front face of wall.



PROFILE GRADE OF RAMP 6



PROFILE GRADE OF BRYN MAWR SPUR

PATRICK ENGINEERING, INC.

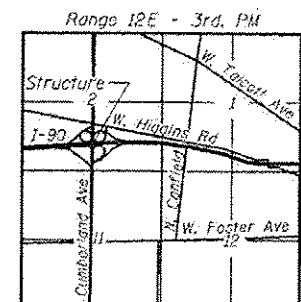


ATALAY YARGICOGLU, S.E.

* 081-005358

EXP 11/30/2014

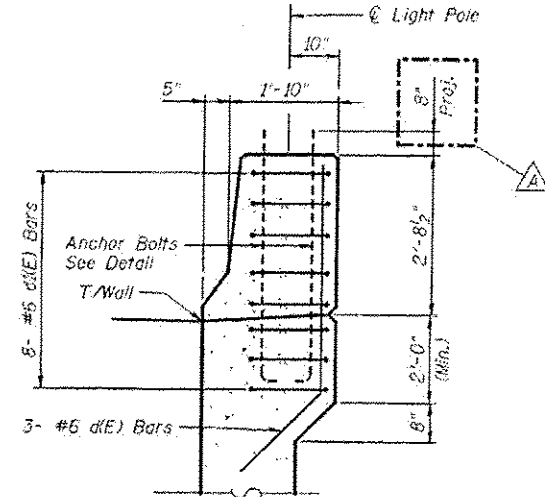
DATE 2/18/2013



LOCATION SKETCH

	USER NAME: * DESIGNED: AY DRAWN: AY CHECKED: AD DATE: 2/18/2013	REVISED: 04/01/2013 AY REVISED: REVISED:	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION RETAINING WALL A STRUCTURE NO. 016-W004 SCALE: NONE SHEET NO. SA1 OF SA8 SHEETS	F&D RTE. 2746 SECTION 16000 COUNTY 404 TOTAL SHEETS 328 CONTRACT NO. 60J14

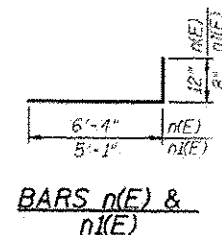
Bar	No.	Size	Length	Shape
d1(E)	15	#6	6'-6"	
d4(E)	40	#6	8'-11"	
h2(E)	146	#4	29'-8"	
h3(E)	270	#4	32'-3"	
h4(E)	20	#4	16'-4"	
h5(E)	2	#4	20'-7"	
h6(E)	2	#4	13'-2"	
n(E)	617	#6	7'-4"	
n4(E)	617	#4	5'-9"	
tf(E)	1234	#6	5'-11"	
u(E)	20	#4	7'-0"	
w1(F)	7	#4	5'-2"	
w4(E)	7	#4	6'-0"	
w2(E)	280	#4	32'-1"	
w3(E)	14	#4	16'-6"	
v(E)	347	#6	7'-9"	
v4(E)	120	#6	8'-9"	
v2(F)	90	#6	9'-8"	
v3(E)	60	#6	10'-8"	
v4(E)	317	#4	7'-8"	
v5(F)	150	#4	8'-7"	
v6(E)	90	#4	9'-11"	
v7(E)	60	#4	10'-11"	
Removal of Existing Structures			L. Sum	1
Structure Excavation			Cu. Yd.	1,089
Concrete Structures			Cu. Yd.	561.6
Protective Coat			Sq. Yd.	272
Reinforcement Bars, Epoxy Coated			Pound	47,490
Geocomposite Wall Drain			Sq. Yd.	341
Porous Granular Embankment, Special			Cu. Yd.	227
Pipe Underdrains for Structures, 4"			Foot	620



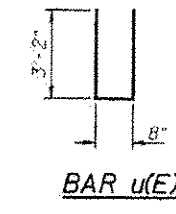
Notes:

1. For light pole locations and details, see Lighting Plans.
2. Cost of anchor bolts, nuts, washers, lighting conduit and expansion couplings is included in Concrete Structures.

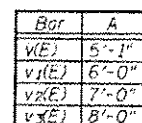
#4 Bars = 2'-1"
#6 Bars = 3'-1"



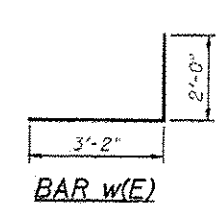
BAR v(E) THRU
v3(E)



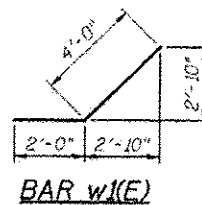
BAR $u(E)$



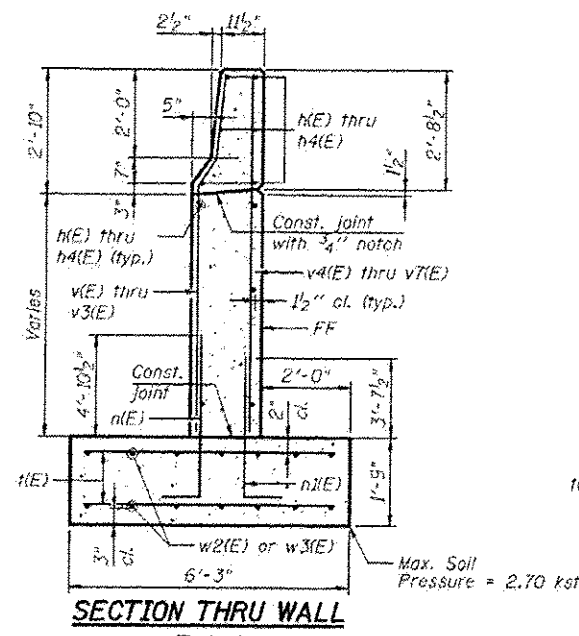
DIM A



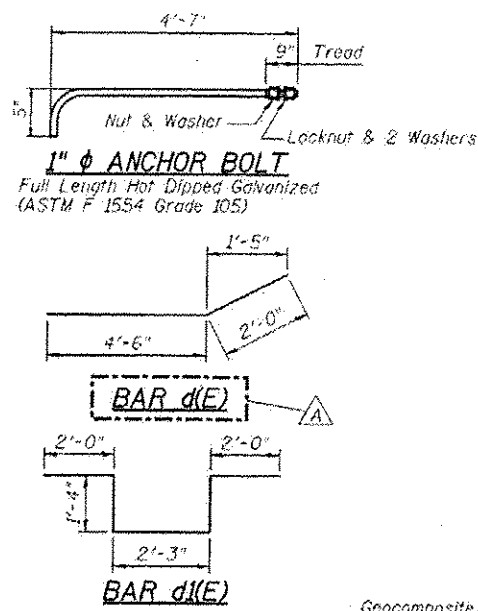
BAR $w(E)$



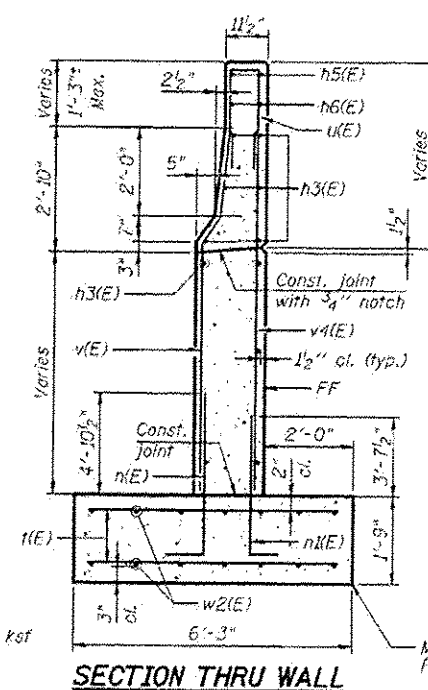
BAR w1(E)



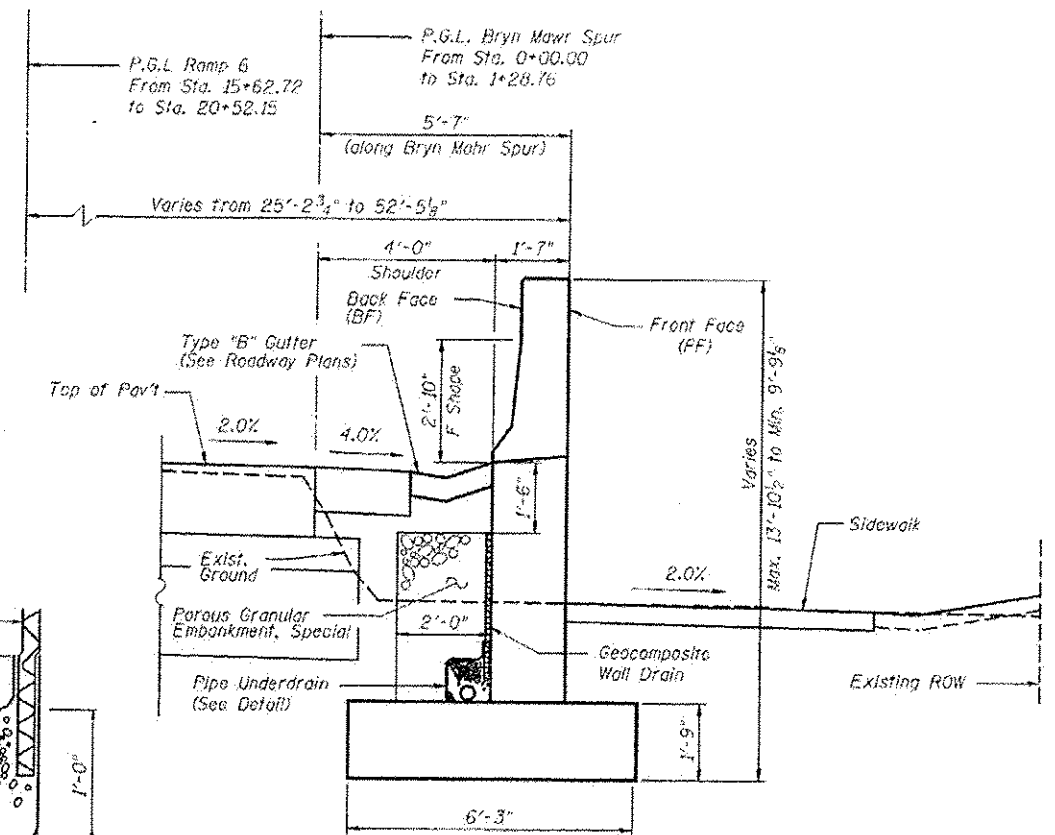
SECTION THRU WALL



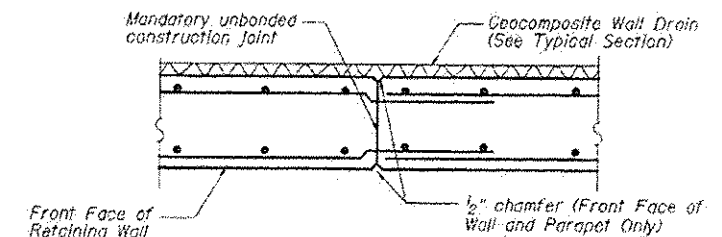
A cross-sectional diagram of a geocomposite wall drain. The diagram shows a vertical wall on the right, labeled '1'-0"'. To the left of the wall is a layer of 'Geocomposite Fabric For French Drains'. Below this fabric is a layer of 'CA 5 or CA 7 Coarse Aggregate'. At the bottom of the aggregate layer is a 'Perforated Pipe Underdrain, 4"'. The top of the aggregate layer is labeled '4"'. The entire assembly is labeled 'Geocomposite Wall Drain' at the top.



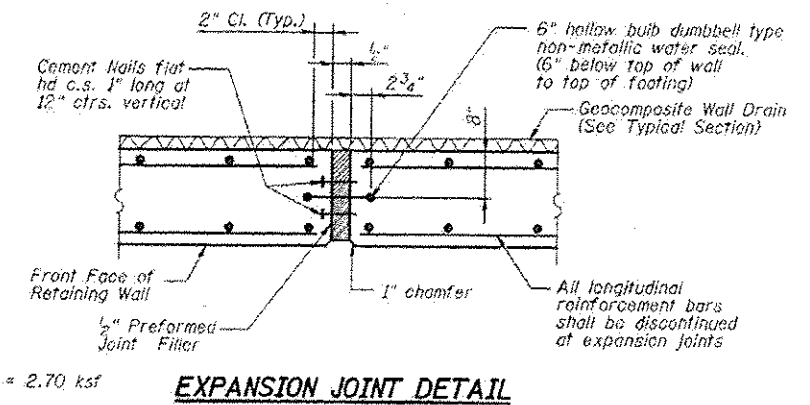
SECTION THRU WALL



CROSS SECTION OF ROADWAY AND WALL



CONSTRUCTION JOINT DETAIL



EXPANSION JOINT DETAIL