

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

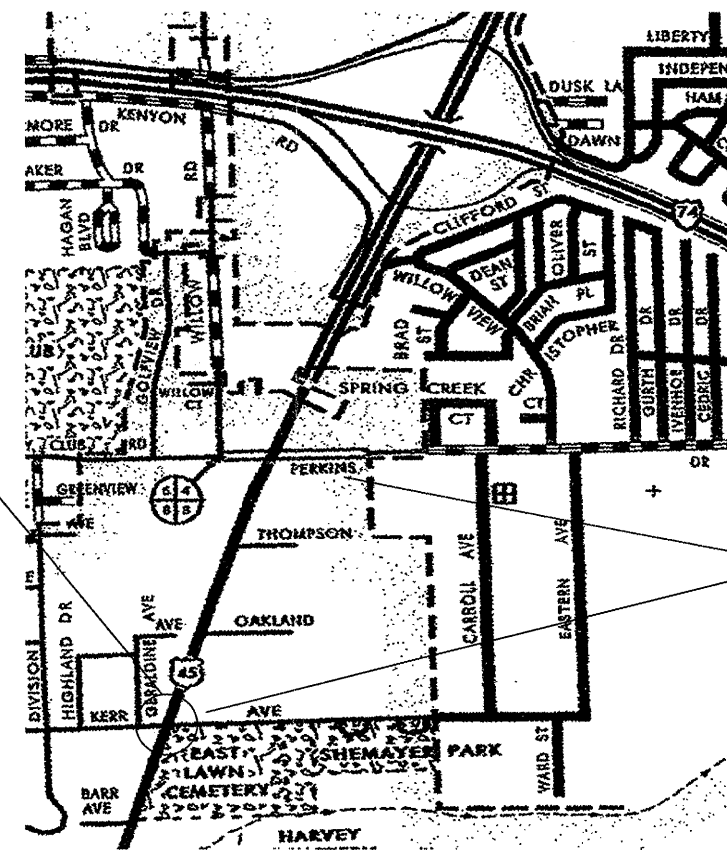
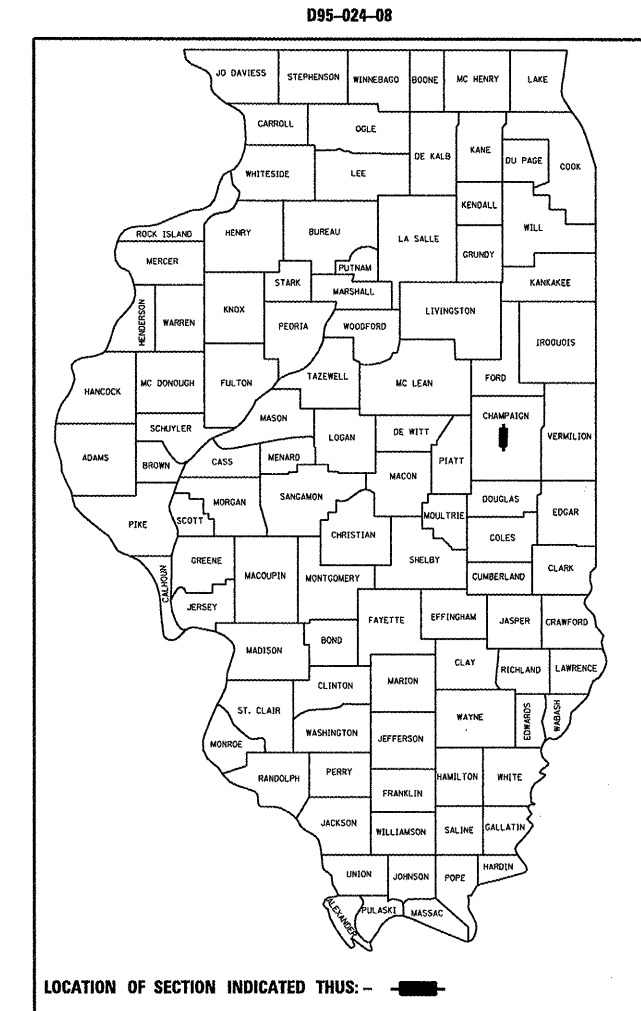
**PROPOSED
 HIGHWAY PLANS**

FAP ROUTE 800 (U.S. ROUTE 45)
 SECTION (28X)TS
 TRAFFIC SIGNAL MODERNIZATION
 CHAMPAIGN COUNTY

C95-024-08

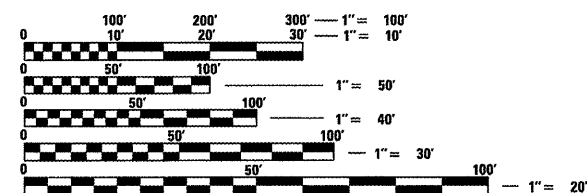
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
800	(28X)TS	CHAMPAIGN		1
		ILLINOIS	CONTRACT NO. 70735	

FOR INDEX OF SHEETS, SEE SHEET NO. 2



F.A.P. 800 (U.S. 45) & KERR AVE.
 TRAFFIC SIGNAL MODERNIZATION

FIBER OPTIC INTERCONNECT
 KERR AVE. TO PERKINS RD.



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

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

PROJECT ENGINEER: SCOTT NEIHART
 DESIGNER: ROGER BIGGS

CONTRACT NO. 70735

CITY OF URBANA

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED 3/26 20 10
Joseph B. Coover
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 7 20 10
Scott E. Still P.E. I.C.
 Acting ENGINEER OF DESIGN AND ENVIRONMENT

May 7 20 10
Christine M. Reed I.C.
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

GENERAL NOTES

G.N.-100

ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-105.07

EXISTING STATE-OWNED AND MAINTAINED UTILITY LINES ARE SHOWN ON THE PLANS TO INDICATE THEIR PRESENCE AND APPROXIMATE LOCATION. THE CONTRACTOR SHALL NOTIFY THE DISTRICT OPERATIONS ENGINEER TWO WEEKS PRIOR TO COMMENCING ANY EXCAVATION IN THE VICINITY OF THESE LINES. THE STATE WILL THEN LOCATE AND MARK THE HORIZONTAL LOCATIONS OF THE LINES AND PROVIDE ANY AVAILABLE INFORMATION AS TO THEIR DEPTH. SHOULD ANY OF THE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATION, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF THE ENGINEER AND AT NO COST TO THE STATE.

ALSO THERE MAY BE UTILITIES PRESENT WHICH WERE INSTALLED BY THE STATE BUT ARE MAINTAINED BY OTHERS (CITY, TOWN, ETC.) THE APPROXIMATE LOCATIONS OF THESE LINES ARE ALSO SHOWN ON THE PLANS ALONG WITH THE NAME OF THE MAINTAINING AGENCY. THE CONTRACTOR SHALL COORDINATE THE LOCATING OF THESE LINES WITH THE LOCAL AGENCY PRIOR TO COMMENCING ANY EXCAVATION OR BORING IN THEIR VICINITY. SHOULD THESE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF, AND AT NO COST TO, THE LOCAL AGENCY AND THE STATE.

G.N.-107.31

UTILITY LINES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED (QUALITY LEVEL C &/OR QUALITY LEVEL D) AND THE ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY.

UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED. J.U.L.I.E. - JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800)892-0123 OR 811.

G.N.-1004.01

COARSE AGGREGATE GRADATION CA-10 MAY BE USED WHENEVER COARSE AGGREGATE CA-6 IS SPECIFIED IN THE STANDARD SPECIFICATIONS.

STANDARDS IN THE PLANS

STANDARD	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
424001-05	CURB RAMPS FOR SIDEWALK
701602-04	URBAN LANE CLOSURE, MULTILANE, 2 WAY WITH BIDIRECTIONAL LEFT TURN LANE
701701-06	URBAN CLOSURE MULTILANE INTERSECTION
701801-04	LANE CLOSURE MULTILANE, CROSSWALK OR SW
701901-01	TRAFFIC CONTROL DEVICES
720016-02	MAST ARM MOUNTED STREET NAME SIGNS
805001-01	ELECTRIC SERVICE INSTALLATION DETAILS
814001-02	HANDHOLES
814006-02	DOUBLE HANDHOLES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCE
873001-02	TRAFFIC SIGNAL GROUNDING AND BONDING
876001-01	PEDESTRIAN PUSH BUTTON POST
877001-04	STEEL MAST ARM ASSEMBLY AND POLE
878001-08	CONCRETE FOUNDATION DETAILS
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS - POST AND BRACKET MOUNT
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES, STANDARDS IN THE PLANS, INDEX
- 3 - 5 SUMMARY OF QUANTITIES
- 6 - 9 TRAFFIC SIGNAL PLAN SHEETS
- 10 TRAFFIC SIGNAL MODERNIZATION PLANS
- 11 - 13 FIBER OPTIC INTERCONNECT PLAN SHEETS

GENERAL NOTES

- LOOPS A4, 45, B4, B5, SHALL PROVIDE DILEMMA ZONE PROTECTION DURING PHASE GREEN AND SERVE AS COUNTERS TO EXTEND INITIAL GREEN DURING PHASE RED.
- THE FINAL LOCATIONS OF ALL TRAFFIC CONTROL ITEMS SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.
- COMBINATION MAST ARM ASSEMBLIES SHALL BE FURNISHED WITH 15' LUMINAIRE TRUSSW ARMS WITH A MOUNTED LUMINAIRE HEIGHT OF 35 FT.
- ALL TRAFFIC SIGNAL MAST ARMS MUST BE DESIGNED FOR THE LOADINGS SHOWN ON THE HIGHWAY STANDARDS OR THESE SIGNAL PLANS, WHICHEVER IS GREATER.
- TIMINGS SHOWN ARE FOR INITIAL OPERATION AND MAY BE ADJUSTED TO REFLECT SITE CONDITIONS PER APPROVAL OF THE TRAFFIC OPERATIONS ENGINEER.
- SIGNAL FACES FOR THE NORTH APPROACH ARE NOTED AS "A", "B" FOR THE SOUTH APPROACH, "C" FOR THE WEST APPROACH, AND "D" FOR THE EAST APPROACH.
- ITEMS REMOVED WILL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED ON THE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ELECTRICAL SERVICE FOR THE TRAFFIC SIGNALS. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY PRIOR TO COMMENCEMENT OF WORK TO OBTAIN UTILITY COMPANY REQUIREMENTS FOR THE SERVICE INSTALLATION

FILE NAME :	USER NAME = biggsrd	DESIGNED - RDB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pwork\p1001\B10GSRD\dms85573\70735.signals.dgn	DRAWN - RDB	REVISED -	800		(28)TS	CHAMPAIGN	13	2	
PLOT SCALE = 20.0000' / 1" =	CHECKED -	REVISED -	SCALE: SHEET NO. OF SHEETS STA. TO STA.						
PLOT DATE = 3/26/2010	DATE -	REVISED -	ILLINOIS FED. AID PROJECT CONTRACT NO. 70735						

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	LOCATION OF WORK:	FAP 800	INTERCONNECT	FAP 800
			CONSTRUCTION TYPE CODE:	U.S. 45 & Kerr Ave.	U.S. 45 & Kerr Ave. to Perkins Rd.	U.S. 45 & Kerr Ave.
			URBAN	100% STATE Y031-1F	100% STATE Y031-1F	100% CITY Y031-1F
			TOTAL QUANTITY	QUANTITY	QUANTITY	QUANTITY
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	882.0	882.0		
42400610	TEMPORARY SIDEWALK	SQ FT	460.0	460.0		
42400800	DETECTABLE WARNINGS	SQ FT	27.0	27.0		
44000600	SIDEWALK REMOVAL	SQ FT	892.0	892.0		
67100100	MOBILIZATION	L SUM	1.0	1.0		
70102632	TRAFFIC CONTROL AND PROTECTION, STANDARD 701602	L SUM	1.0	1.0		
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1.0	1.0		
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1.0	1.0		
80500100	SERVICE INSTALLATION, TYPE A	EACH	1.0	1.0		
81012300	CONDUIT IN TRENCH, 1" DIA., PVC	FOOT	103.0	103.0		
81012600	CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	52.0	52.0		
81012700	CONDUIT IN TRENCH, 2 1/2" DIA., PVC	FOOT	60.0	60.0		
81012800	CONDUIT IN TRENCH, 3" DIA., PVC	FOOT	5.0	5.0		
81013200	CONDUIT IN TRENCH, 6" DIA., PVC	FOOT	4.0	4.0		
81021550	CONDUIT, AUGERED 2" DIA., PVC	FOOT	2,116.0	597.0	1,519.0	
81021570	CONDUIT, AUGERED 3" DIA., PVC	FOOT	158.0	158.0		
81021590	CONDUIT, AUGERED 4" DIA., PVC	FOOT	65.0	65.0		
81400100	HANDHOLE	EACH	13.0	7.0	6.0	
81400300	DOUBLE HANDHOLE	EACH	1.0	1.0		
81500130	GULFBOX JUNCTION REMOVAL	EACH	7.0	4.0	3.0	
81702100	ELECTRIC CABLE IN CONDUIT, 600V(XLP-TYPE USE) 1/C NO. 12	FOOT	2,434.0		2,434.0	
81702110	ELECTRIC CABLE IN CONDUIT, 600V(XLP-TYPE USE) 1/C NO. 10	FOOT	1,172.0			1,172.0

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	PLOT SCALE = 20,0000' / IN.	CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT											
	PLOT DATE = 3/25/2010	DATE -	REVISED -													

SUMMARY OF QUANTITIES (cont.)

CODE NO	ITEM	UNIT	LOCATION OF WORK:			
			CONSTRUCTION TYPE CODE:	FAP 800 U.S. 45 & Kerr Ave.	INTERCONNECT U.S. 45 Kerr Ave. to Perkins Rd.	FAP 800 U.S. 45 & Kerr Ave.
			URBAN TOTAL QUANTITY	100% STATE Y031-1F QUANTITY	100% STATE Y031-1F QUANTITY	100% CITY Y031-1F QUANTITY
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1,371.0	224.0	1,147.0	
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1.0	1.0		
86400100	TRANSCEIVER - FIBER OPTIC	EACH	1.0		1.0	
87100140	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 12F	FOOT	2,531.0		2,531.0	
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,559.0	1,559.0		
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,004.0	1,004.0		
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	940.0	940.0		
87301515	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 18 3 PAIR	FOOT	1,438.0	1,438.0		
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	169.0	169.0		
87502700	TRAFFIC SIGNAL POST, ALUMINUM 16 FT.	EACH	3.0	3.0		
87600200	PEDESTRIAN PUSH-BUTTON POST, TYPE II	EACH	3.0	3.0		
87702870	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT.	EACH	1.0	1.0		
87702880	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT.	EACH	1.0	1.0		
87702910	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.	EACH	1.0	1.0		
87702970	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT.	EACH	1.0	1.0		
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	9.3	9.3		
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	3.5	3.5		
87800400	CONCRETE FOUNDATION, TYPE E30-INCH DIAMETER	FOOT	20.0	20.0		
87800415	CONCRETE FOUNDATION, TYPE E36-INCH DIAMETER	FOOT	24.0	24.0		
88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2.0	2.0		
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	8.0	8.0		

FILE NAME =	USER NAME = biggsrd	DESIGNED - RDB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A.P. RTE. 800	SECTION (28X)TS	COUNTY CHAMPAIGN	TOTAL SHEETS 13	SHEET NO. 4	
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SUMMARY OF QUANTITIES (cont.)

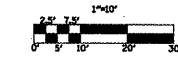
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			CONSTRUCTION TYPE CODE:	FAP 800 U.S. 45 & Kerr Ave.	INTERCONNECT U.S. 45 Kerr Ave. to Perkins Rd.
			100% STATE Y031-1F	100% STATE Y031-1F	100% CITY Y031-1F
			URBAN TOTAL	QUANTITY	QUANTITY
88040160	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2.0	2.0	
88040260	SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 1-3-SECTION, 1-5-SECTION, BRACKET MOUNTED	EACH	2.0	2.0	
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	6.0	6.0	
88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1.0	1.0	
88200100	TRAFFIC SIGNAL BACKPLATE	EACH	10.0	10.0	
88500100	INDUCTIVE LOOP DETECTOR	EACH	8.0	8.0	
88600100	DETECTOR LOOP, TYPE I	FOOT	880.0	880.0	
88700200	LIGHT DETECTOR	EACH	2.0		2.0
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1.0		1.0
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1.0	1.0	
89502380	REMOVE EXISTING HANDHOLE	EACH	6.0	6.0	
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	10.0	10.0	
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	638.0	638.0	
X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	465.0		465.0
X8800101	PEDESTRIAN PUSH-BUTTON, SPECIAL	EACH	8.0	8.0	
82106825	LUMINAIRE, METAL HALIDE HORIZONTAL MOUNT 400 WATT	EACH	4.0		4.0

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	PLOT DATE = 3/25/2010	DATE -	REVISED -		ILLINOIS FED. AID PROJECT					

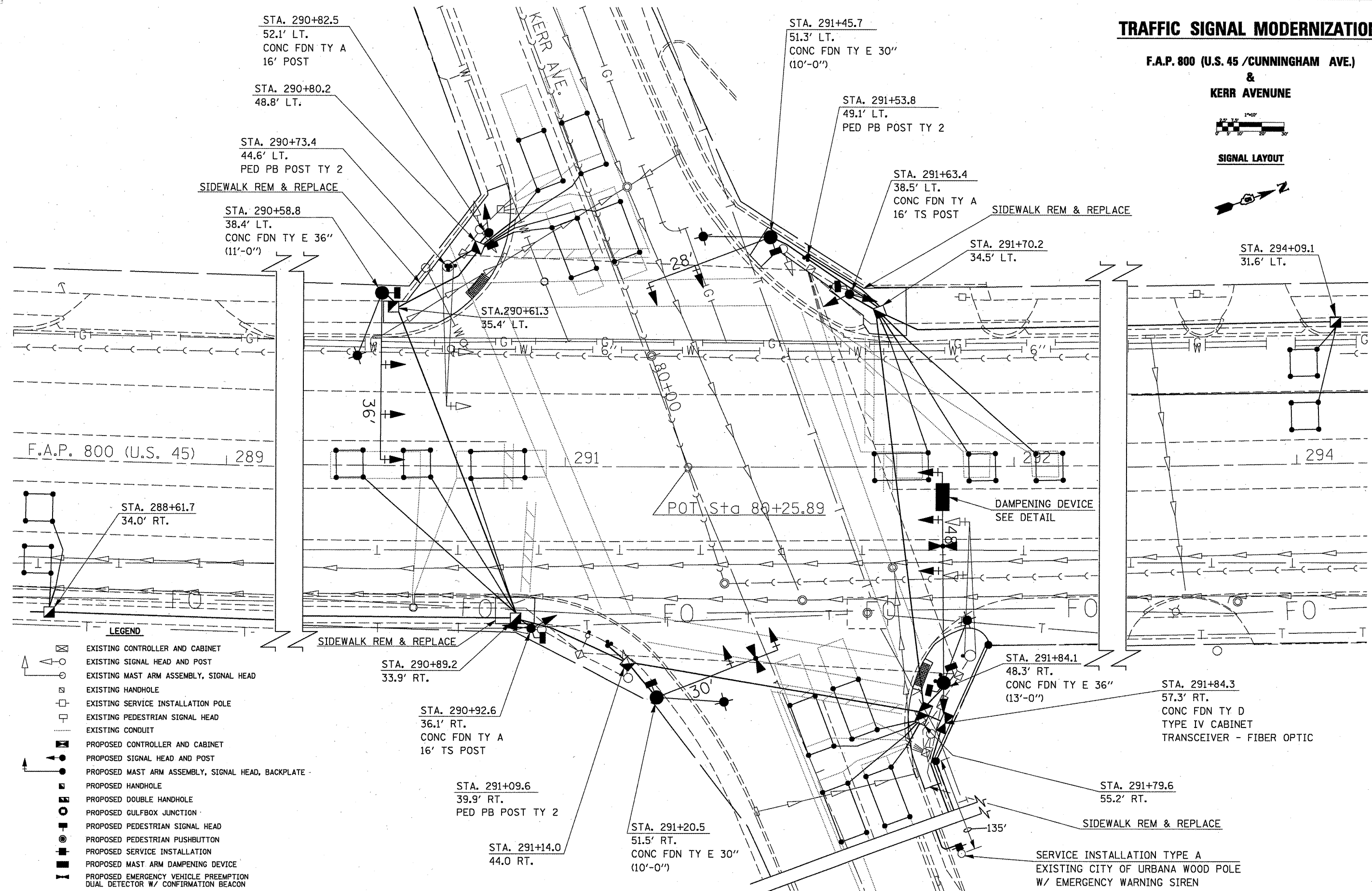
TRAFFIC SIGNAL MODERNIZATION

F.A.P. 800 (U.S. 45 /CUNNINGHAM AVE.)

&
KERR AVENUE



SIGNAL LAYOUT



LEGEND

- EXISTING CONTROLLER AND CABINET
- EXISTING SIGNAL HEAD AND POST
- EXISTING MAST ARM ASSEMBLY, SIGNAL HEAD
- EXISTING HANDHOLE
- EXISTING SERVICE INSTALLATION POLE
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING CONDUIT
- PROPOSED CONTROLLER AND CABINET
- PROPOSED SIGNAL HEAD AND POST
- PROPOSED MAST ARM ASSEMBLY, SIGNAL HEAD, BACKPLATE
- PROPOSED HANDHOLE
- PROPOSED DOUBLE HANDHOLE
- PROPOSED GULFBOX JUNCTION
- PROPOSED PEDESTRIAN SIGNAL HEAD
- PROPOSED PEDESTRIAN PUSHBUTTON
- PROPOSED SERVICE INSTALLATION
- PROPOSED MAST ARM DAMPENING DEVICE
- PROPOSED EMERGENCY VEHICLE PREEMPTION DUAL DETECTOR W/ CONFIRMATION BEACON

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

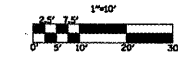
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
800	(28X)TS	CHAMPAIGN	13	6
CONTRACT NO. 70735				
ILLINOIS FED. AID PROJECT				

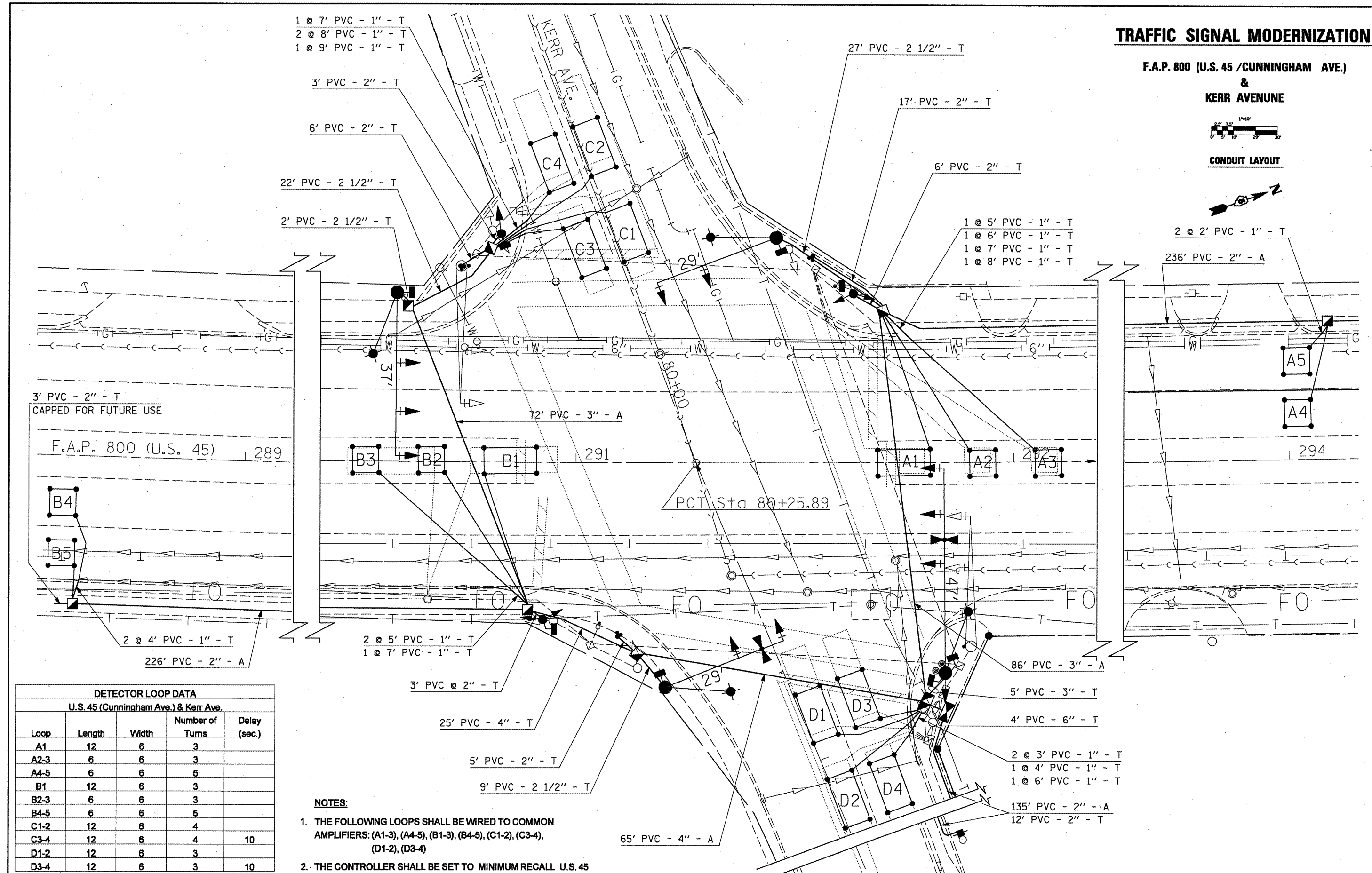
TRAFFIC SIGNAL MODERNIZATION

F.A.P. 800 (U.S. 45 /CUNNINGHAM AVE.)

&
KERR AVENUE



CONDUIT LAYOUT



3' PVC - 2" - T
CAPPED FOR FUTURE USE

F.A.P. 800 (U.S. 45) | 289

POT Sta 80+25.89

DETECTOR LOOP DATA				
U.S. 45 (Cunningham Ave.) & Kerr Ave.				
Loop	Length	Width	Number of Turns	Delay (sec.)
A1	12	6	3	
A2-3	6	6	3	
A4-5	6	6	5	
B1	12	6	3	
B2-3	6	6	3	
B4-5	6	6	5	
C1-2	12	6	4	
C3-4	12	6	4	10
D1-2	12	6	3	
D3-4	12	6	3	10

- NOTES:**
- THE FOLLOWING LOOPS SHALL BE WIRED TO COMMON AMPLIFIERS: (A1-3), (A4-5), (B1-3), (B4-5), (C1-2), (C3-4), (D1-2), (D3-4)
 - THE CONTROLLER SHALL BE SET TO MINIMUM RECALL U.S. 45

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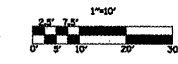
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

F.A.P. RTE. 800	SECTION (28X)TS	COUNTY CHAMPAIGN	TOTAL SHEETS 13	SHEET NO. 7
CONTRACT NO. 70735				
ILLINOIS FED. AID PROJECT				

TRAFFIC SIGNAL MODERNIZATION

F.A.P. 800 (U.S. 45 /CUNNINGHAM AVE.)
&
KERR AVENUE

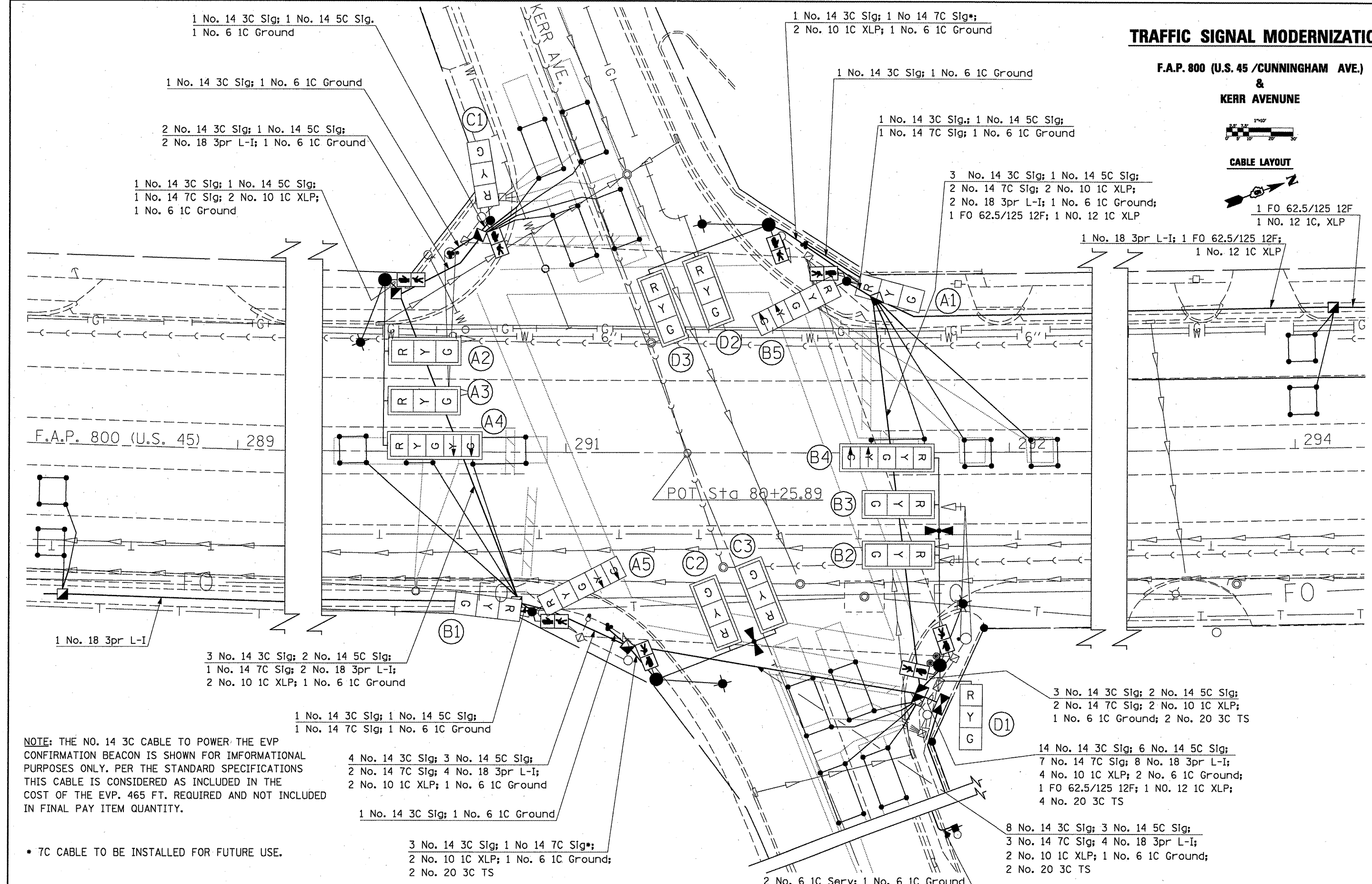


CABLE LAYOUT



1 FO 62.5/125 12F
1 NO. 12 1C, XLP

1 No. 18 3pr L-I; 1 FO 62.5/125 12F;
1 No. 12 1C XLP



1 No. 14 3C Sig; 1 No. 14 5C Sig;
1 No. 6 1C Ground

1 No. 14 3C Sig; 1 No. 6 1C Ground

2 No. 14 3C Sig; 1 No. 14 5C Sig;
2 No. 18 3pr L-I; 1 No. 6 1C Ground

1 No. 14 3C Sig; 1 No. 14 5C Sig;
1 No. 14 7C Sig; 2 No. 10 1C XLP;
1 No. 6 1C Ground

1 No. 14 3C Sig; 1 No. 14 7C Sig*;
2 No. 10 1C XLP; 1 No. 6 1C Ground

1 No. 14 3C Sig; 1 No. 6 1C Ground

1 No. 14 3C Sig; 1 No. 14 5C Sig;
1 No. 14 7C Sig; 1 No. 6 1C Ground

3 No. 14 3C Sig; 1 No. 14 5C Sig;
2 No. 14 7C Sig; 2 No. 10 1C XLP;
2 No. 18 3pr L-I; 1 No. 6 1C Ground;
1 FO 62.5/125 12F; 1 NO. 12 1C XLP

F.A.P. 800 (U.S. 45) | 289

291

POT Sta 80+25.89

294

1 No. 18 3pr L-I

3 No. 14 3C Sig; 2 No. 14 5C Sig;
1 No. 14 7C Sig; 2 No. 18 3pr L-I;
2 No. 10 1C XLP; 1 No. 6 1C Ground

1 No. 14 3C Sig; 1 No. 14 5C Sig;
1 No. 14 7C Sig; 1 No. 6 1C Ground

4 No. 14 3C Sig; 3 No. 14 5C Sig;
2 No. 14 7C Sig; 4 No. 18 3pr L-I;
2 No. 10 1C XLP; 1 No. 6 1C Ground

1 No. 14 3C Sig; 1 No. 6 1C Ground

3 No. 14 3C Sig; 1 No. 14 7C Sig*;
2 No. 10 1C XLP; 1 No. 6 1C Ground;
2 No. 20 3C TS

3 No. 14 3C Sig; 2 No. 14 5C Sig;
2 No. 14 7C Sig; 2 No. 10 1C XLP;
1 No. 6 1C Ground; 2 No. 20 3C TS

14 No. 14 3C Sig; 6 No. 14 5C Sig;
7 No. 14 7C Sig; 8 No. 18 3pr L-I;
4 No. 10 1C XLP; 2 No. 6 1C Ground;
1 FO 62.5/125 12F; 1 NO. 12 1C XLP;
4 No. 20 3C TS

8 No. 14 3C Sig; 3 No. 14 5C Sig;
3 No. 14 7C Sig; 4 No. 18 3pr L-I;
2 No. 10 1C XLP; 1 No. 6 1C Ground;
2 No. 20 3C TS

2 No. 6 1C Serv; 1 No. 6 1C Ground

NOTE: THE NO. 14 3C CABLE TO POWER THE EVP CONFIRMATION BEACON IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. PER THE STANDARD SPECIFICATIONS THIS CABLE IS CONSIDERED AS INCLUDED IN THE COST OF THE EVP. 465 FT. REQUIRED AND NOT INCLUDED IN FINAL PAY ITEM QUANTITY.

* 7C CABLE TO BE INSTALLED FOR FUTURE USE.

FILE NAME =	USER NAME = buggerd	DESIGNED - RDB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.P. RTE. 800	SECTION (28X)ITS	COUNTY CHAMPAIGN	TOTAL SHEETS 13	SHEET NO. 8
CONV. WORK\PW\DOT\BIGGS\RD\dms85573\78735.sigs.dgn		DRAWN - RDB	REVISED -		SCALE:				
PLOT SCALE = 28.0000' / IN.		CHECKED -	REVISED -		SHEET NO. OF SHEETS	STA.	TO STA.		
PLOT DATE = 4/28/2010		DATE -	REVISED -		ILLINOIS FED. AID PROJECT CONTRACT NO. 70735				

SCHEDULES

PC CONC SIDEWALK

SW QUAD	348	SQ FT.
NW QUAD	203	SQ FT.
SE QUAD	47	SQ FT.
NE QUAD	284	SQ FT.
TOTAL =	882	SQ FT.

SIDEWALK REMOVAL

SW QUAD	343	SQ FT.
NW QUAD	206	SQ FT.
SE QUAD	52	SQ FT.
NE QUAD	291	SQ FT.
TOTAL =	892	SQ FT.

HANDHOLE

TRAFFIC SIGNALS

STA. 290+61.3; 35.4' LT.	1 EA.
STA. 290+89.2; 33.9' RT.	1 EA.
STA. 291+14.0; 44.0' RT.	1 EA.
STA. 290+80.2; 48.8' LT.	1 EA.
STA. 291+70.2; 34.5' LT.	1 EA.
STA. 288+61.7; 34.0' RT.	1 EA.
STA. 294+09.1; 31.6' LT.	1 EA.
TOTAL =	13 EACH

INTERCONNECT

STA. 298+89.1; 30.7' LT	1 EA.
STA. 303+69.1; 30.7' LT.	1 EA.
STA. 108+51.7; 35.9' LT.	1 EA.
STA. 108+51.7; 48.4' RT.	1 EA.
STA. 110+10.1; 52.3' RT.	1 EA.
STA. 111+47.6; 50.9' RT.	1 EA.
TOTAL =	6 EACH

TRAFFIC SIGNAL POST, ALUMINUM 16 FT.

STA. 290+82.5; 52.1' LT.	1 EACH
STA. 290+92.6; 36.1' RT.	1 EACH
STA. 291+63.4; 38.5' LT.	1 EACH
TOTAL =	3 EACH

CONCRETE FOUNDATION, TYPE A

STA. 290+82.5; 52.1' LT.	3.1 FT.
STA. 290+92.6; 36.1' RT.	3.1 FT.
STA. 291+63.4; 38.5' LT.	3.1 FT.
TOTAL =	9.3 FT.

CONCRETE FOUNDATION, TY E, 30"

STA. 291+20.5; 51.5' RT.	10.0 FT.
STA. 291+45.7; 51.3' LT.	10.0 FT.
TOTAL =	20.0 FT.

CONCRETE FOUNDATION, TY E, 36"

STA. 290+58.8; 38.4' LT.	11.0 FT.
STA. 291+84.1; 48.3' RT.	13.0 FT.
TOTAL =	24.0 FT.

REMOVE EXISTING HANDHOLE

STA. 290+76.8; 47.4' LT.	1 EA.
STA. 290+85.2; 57.3' LT.	1 EA.
STA. 291+03.4; 41.9' RT.	1 EA.
STA. 291+80.0; 64.0' RT.	1 EA.
STA. 291+87.4; 46.7' RT.	1 EA.
STA. 291+54.7; 44.1' LT.	1 EA.
TOTAL =	6 EACH

BILL OF MATERIALS

Interconnect - Kerr Ave. to Perkins Rd.

ITEM	UNIT	QUANTITY
CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	1147
CONDUIT, AUGERED 2" DIA., PVC	FOOT	372
HANDHOLE	EACH	6
GULFBOX JUNCTION REMOVAL	EACH	3
ELECTRIC CABLE IN CONDUIT, 600V(XLP-TYPE USE) 1/C NO. 12	FOOT	2434
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1147
TRANSCEIVER-FIBER OPTIC	EACH	1
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 12F	FOOT	2531

BILL OF MATERIALS

Traffic Signal Modernization
U.S. 45 (Cunningham Ave.) & Kerr Avenue

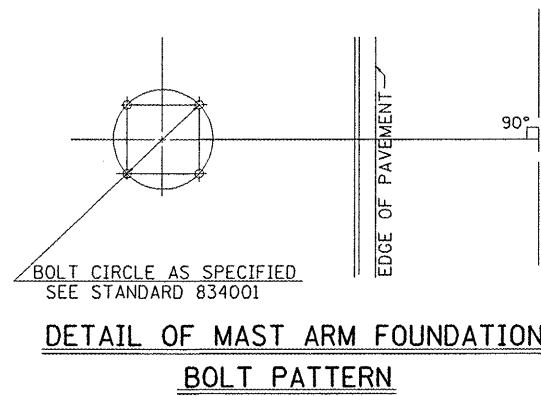
ITEM	UNIT	QUANTITY
SERVICE INSTALLATION, TYPE A	EACH	1
CONDUIT IN TRENCH, 1" DIA., PVC	FOOT	103
CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	52
CONDUIT IN TRENCH, 2 1/2" DIA., PVC	FOOT	60
CONDUIT IN TRENCH, 3" DIA., PVC	FOOT	5
CONDUIT IN TRENCH, 6" DIA., PVC	FOOT	4
CONDUIT, AUGERED 2" DIA., PVC	FOOT	597
CONDUIT, AUGERED 3" DIA., PVC	FOOT	158
CONDUIT, AUGERED 4" DIA., PVC	FOOT	65
HANDHOLE	EACH	7
DOUBLE HANDHOLE	EACH	1
GULFBOX JUNCTION REMOVAL	EACH	4
ELECTRIC CABLE IN CONDUIT, 600V(XLP-TYPE USE) 1/C NO. 10	FOOT	1172
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	212
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNALNO. 14 3C	FOOT	1559
ELECTRIC CABLE IN CONDUIT, SIGNALNO. 14 5C	FOOT	1004
ELECTRIC CABLE IN CONDUIT, SIGNALNO. 14 7C	FOOT	940
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 18 3 PAIR	FOOT	1438
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	169
TRAFFIC SIGNAL POST, ALUMINUM 16 FT.	EACH	3
PEDESTRIAN PUSH-BUTTON POST, TYPE II	EACH	3
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	9.3
CONCRETE FOUNDATION, TYPE D	FOOT	3.5
CONCRETE FOUNDATION, TYPE E30-INCH DIAMETER	FOOT	20
CONCRETE FOUNDATION, TYPE E36-INCH DIAMETER	FOOT	24
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	8
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2
SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 1-3-SECTION, 1-5-SECTION, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	6
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1
TRAFFIC SIGNAL BACKPLATE	EACH	10
INDUCTIVE LOOP DETECTOR	EACH	8
DETECTOR LOOP, TYPE I	FOOT	880
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	6
REMOVE EXISTING CONCRETE FOUNDATION	EACH	10
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	638
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	465
PEDESTRIAN PUSH-BUTTON SPECIAL	EACH	8
LUMINAIRE, METAL HALIDE, HORIZONTAL MOUNT 400 WATT	EACH	4

FILE NAME : c:\p\work\p\WIDOT\BIGGSRD\dms85573\70735.sgn	USER NAME : biggsrd	DESIGNED - RDB	REVISED -
PLOT SCALE = 20.0000' / IN.	CHECKED -	DATE -	REVISED -
PLOT DATE = 3/26/2010	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

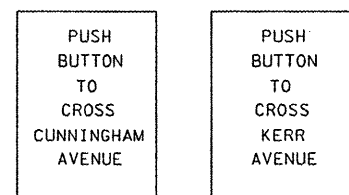
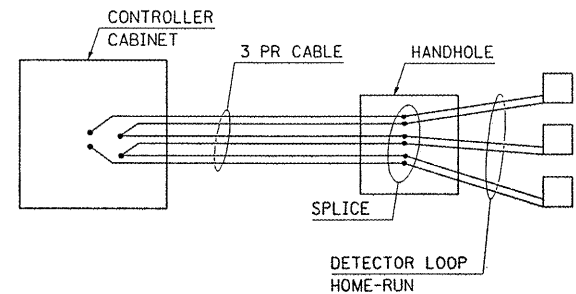
SCALE:	SHEET NO. OF SHEETS	STA. TO STA.
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F.A.P. RTE. 800	SECTION (28X)TS	COUNTY CHAMPAIGN	TOTAL SHEETS 13	SHEET NO. 9
CONTRACT NO. 70735				
ILLINOIS FED. AID PROJECT				



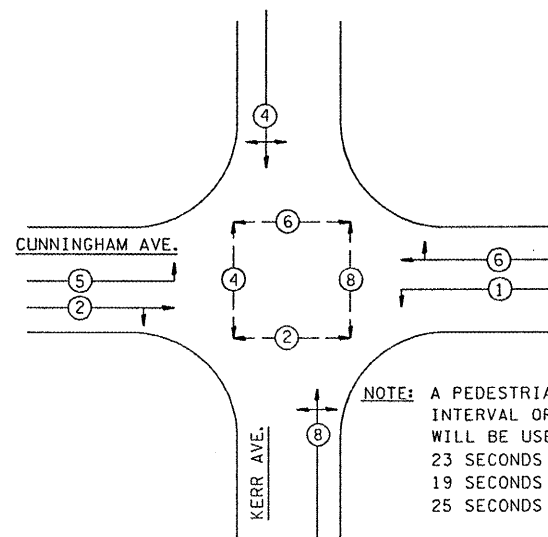
DETAIL OF DETECTOR LOOP WIRING

WIRED IN SERIES WITH MULTI-PAIR CABLE



PEDESTRIAN PUSH-BUTTON SIGNS

PHASE DESIGNATION DIAGRAM



NOTE: A PEDESTRIAN CLEARANCE INTERVAL OF 19 SECONDS WILL BE USED FOR Ø2, 23 SECONDS FOR Ø4, 19 SECONDS FOR Ø6, 25 SECONDS FOR Ø8,

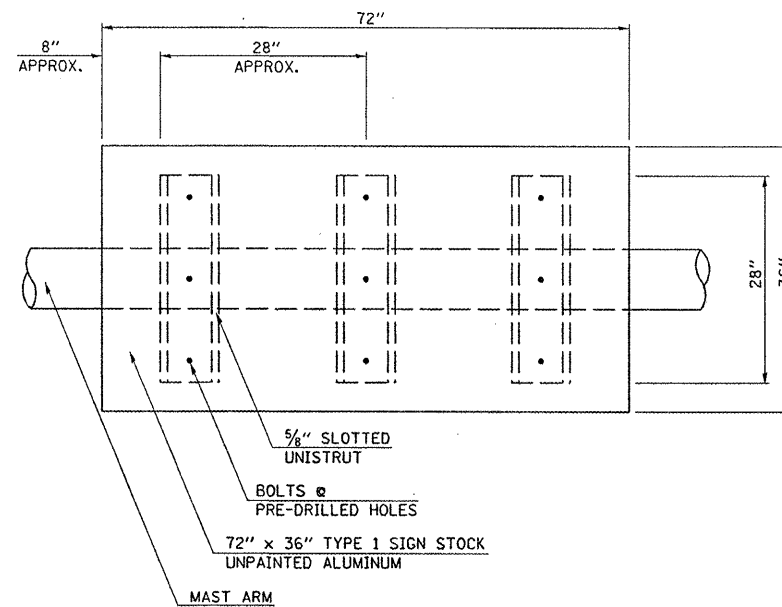
GENERAL NOTES

1. THE FOLLOWING SIGNAL HEADS SHALL BE WIRED IN PARALLEL AT THE MAST POLE HANDHOLE: (A2, A3), (B2, B3), (C2, C3), (D2, D3) - EACH MAST ARM MOUNTED SIGNAL HEAD SHALL HAVE ITS OWN INDIVIDUAL CABLE FROM THE MAST POLE HANDHOLE TO THE SIGNAL HEAD.
2. THE ACTUAL LOCATION OF ALL SIGNAL FOUNDATIONS, HANDHOLES, AND TRAFFIC CONTROLLER WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. POST MOUNTED SIGNALS SHALL BE INSTALLED SO THAT NO PART OF THE SIGNAL HEAD IS WITHIN 2 FT. OF THE FACE OF CURB.
4. ALL MAST ARM POLES SHALL BE A MINIMUM OF 6 FT. FROM THE CENTER OF THE POLE TO THE FACE OF CURB (ON THE MAST ARM SIDE) OR AS SHOWN ON THE PLANS.
5. ALIGN ADJACENT RED INDICATIONS TO SAME HEIGHT ABOVE PAVEMENT.
6. THE BASE FOR A TRAFFIC SIGNAL POST SHALL BE SITUATED SUCH THAT THE HANDHOLE IS LOCATED ON A SIDE AWAY FROM A TRAVELED LANE.
7. PEDESTRIAN PUSHBUTTON SIGNAL SIGNS SHALL BE MOUNTED ABOVE THE APPROPRIATE PEDESTRIAN PUSHBUTTON.
8. THE ANTI-BACKUP FEATURE SHALL BE HARDWIRED ON THE BACKPANEL OF THE CONTROLLER CABINET.

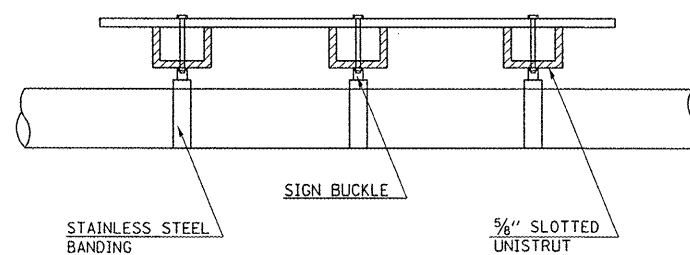
ITEMS TO BE RETURNED TO THE CITY OF URBANA

ITEM	QUANTITY
TS POST UNFINISHED ALUM. (SE QUAD)	1 EA.
LED MODULES	36 EA.
PEDESTRIAN PUSH-BUTTONS	4 EA.
LIGHT DETECTOR / BEACON	1 EA.
LIGHT DETECTOR AMPLIFIER	1 EA.
CONTROLLER	1 EA.
CONFLICT MONITOR	1 EA.

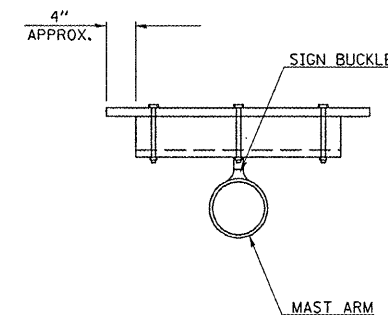
MAST ARM DAMPENING DEVICE MOUNTING DETAIL



PLAN VIEW



ELEVATION



CROSS SECTION

NOTE: PAINT ENDS OF UNISTRUT WITH SPRAY ON GALVANIZED PAINT

FILE NAME =	USER NAME = biggsrd	DESIGNED - RDB	REVISED -
at:\pwork\k\p\WID01\816GSRD\dms85573\7073	5.signals.dgn	DRAWN - RDB	REVISED -
	PLOT SCALE = 20.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/25/2010	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

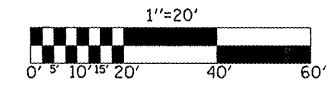
F.A.P. RTE. 800	SECTION (28X)TS	COUNTY CHAMPAIGN	TOTAL SHEETS 13	SHEET NO. 10
CONTRACT NO. 70735				
ILLINOIS FED. AID PROJECT				

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

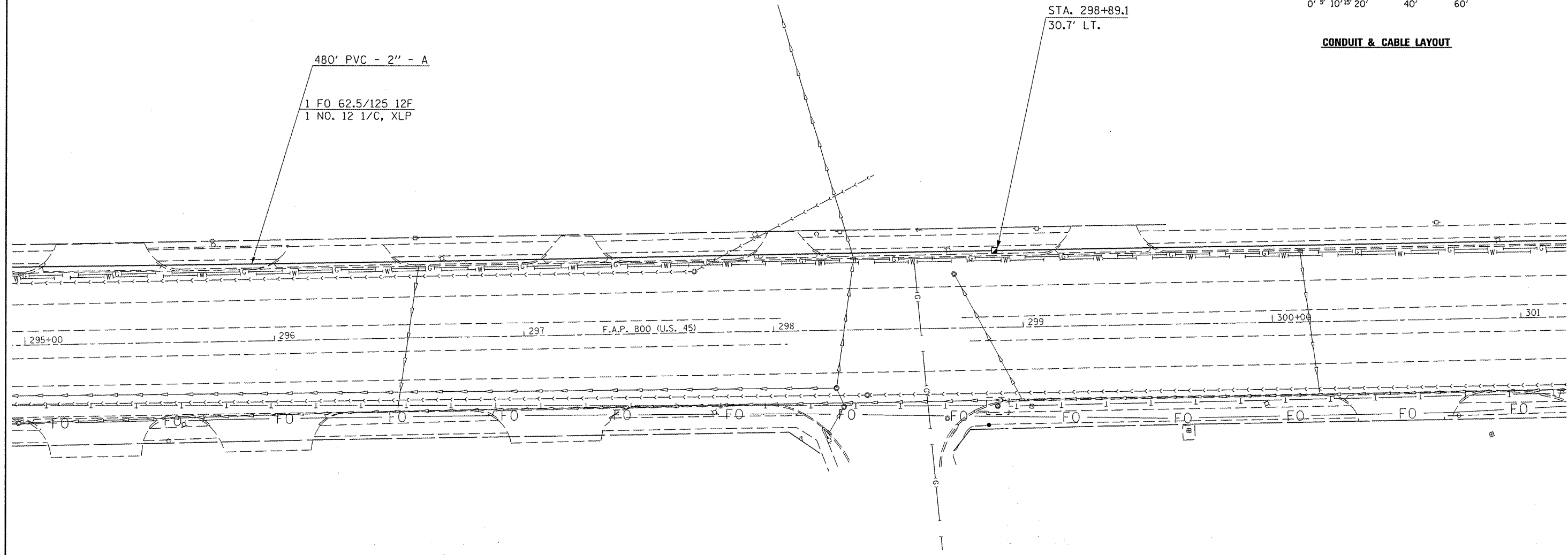
FIBER OPTIC INTERCONNECT INSTALLATION

F.A.P. 800 (U.S. 45 /CUNNINGHAM AVE.)

KERR AVENUE TO PERKINS ROAD



CONDUIT & CABLE LAYOUT



FILE NAME : c:\pwwork\p\w\DOT\B10GSRD\dms85573\70735_signals.dgn	USER NAME : biggard	DESIGNED - RDB	REVISED -
PLOT SCALE = 40.0000' / IN.		DRAWN - RDB	REVISED -
PLOT DATE = 4/20/2010		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

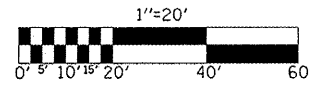
SCALE:	SHEET NO. OF SHEETS	STA. TO STA.
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F.A.P. RTE. 800	SECTION (28X)TS	COUNTY CHAMPAIGN	TOTAL SHEETS 13	SHEET NO. 11
CONTRACT NO. 70735				ILLINOIS FED. AID PROJECT

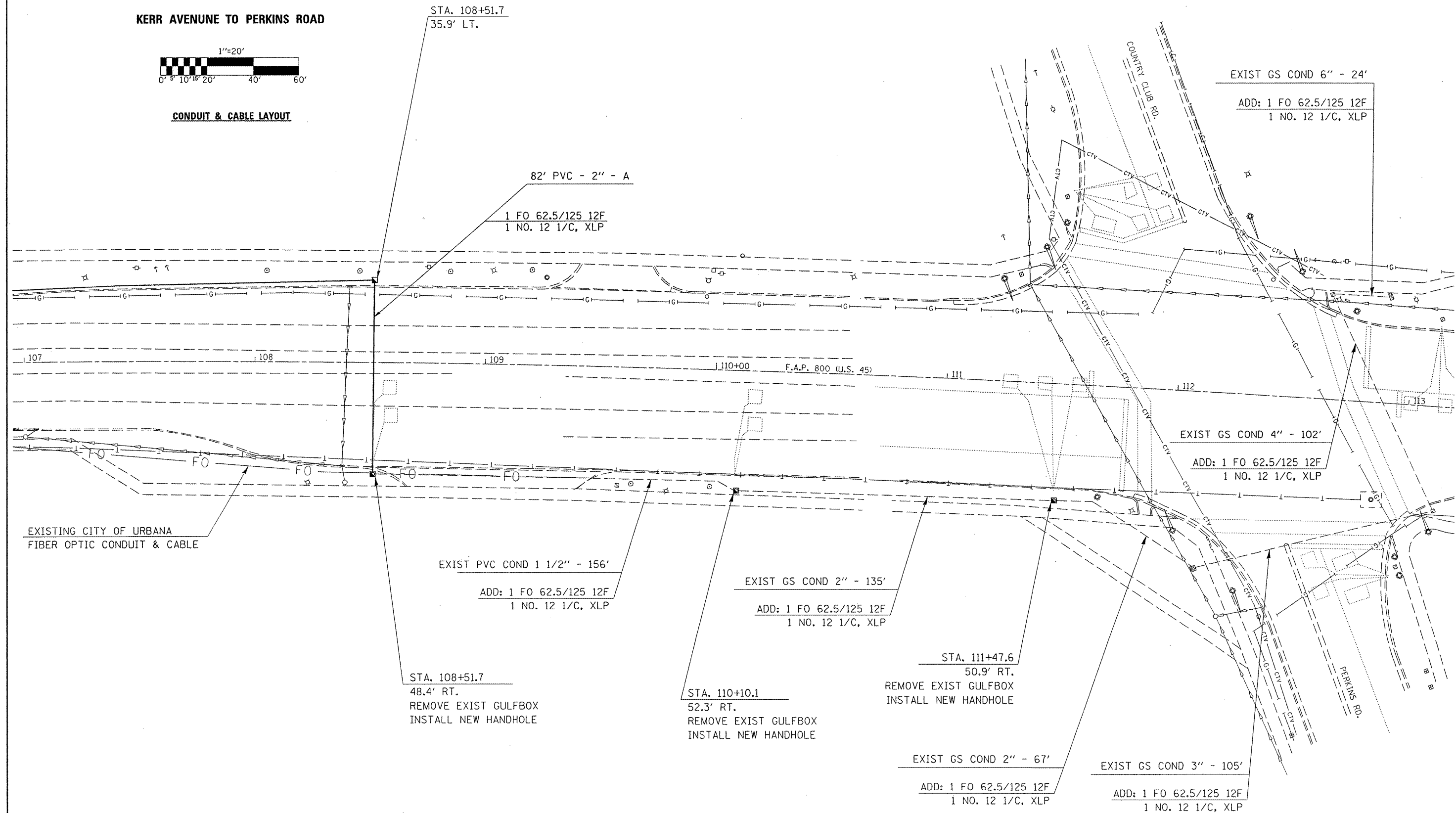
FIBER OPTIC INTERCONNECT INSTALLATION

F.A.P. 800 (U.S. 45 /CUNNINGHAM AVE.)

KERR AVENUE TO PERKINS ROAD



CONDUIT & CABLE LAYOUT



FILE NAME =	USER NAME = biggs-d	DESIGNED - RDB	REVISED -
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PLOT SCALE = 40.0000' / IN.		CHECKED -	REVISED -
PLOT DATE = 3/26/2010		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
800	(28X)TS	CHAMPAIGN	13	13
CONTRACT NO. 70735				
ILLINOIS FED. AID PROJECT				