

1-20-2012 LETTING ITEM 130

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

F.A.P. ROUTE 804 (U.S. ROUTE 150)  
SECTION 32TS

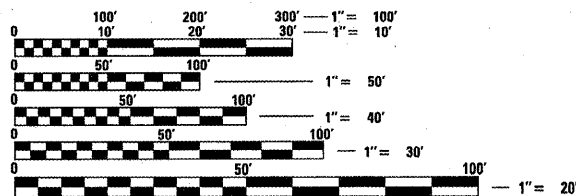
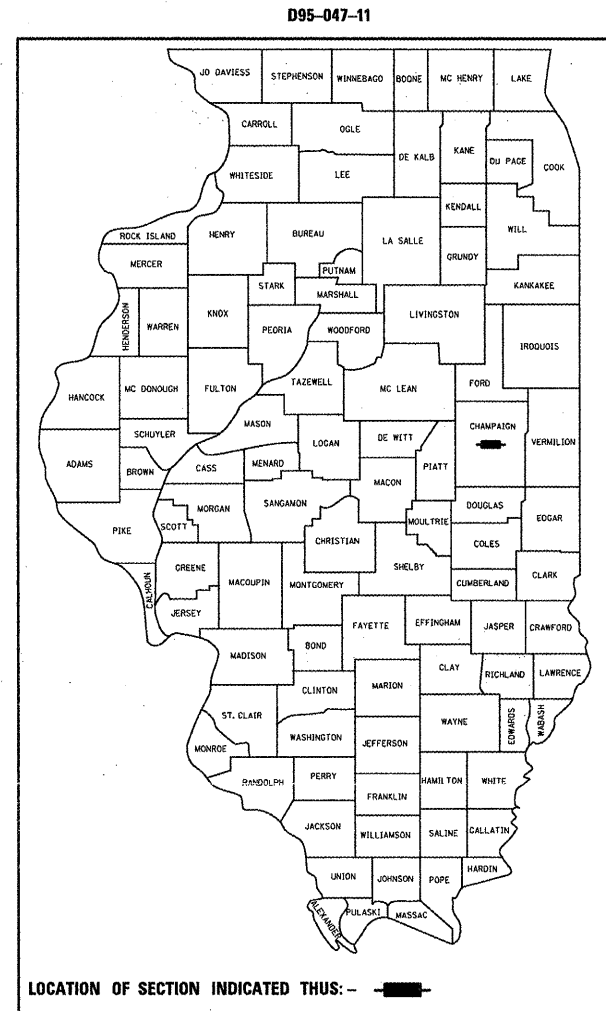
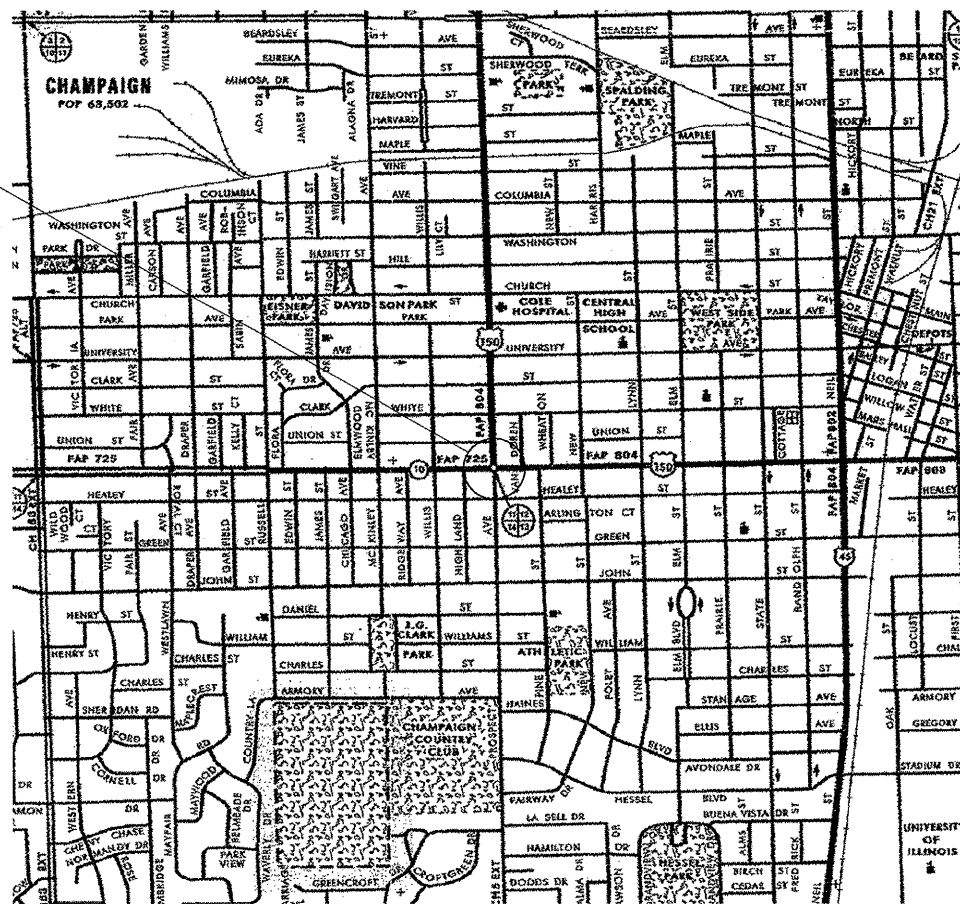
**TRAFFIC SIGNAL MODERNIZATION  
CHAMPAIGN COUNTY**

C-95-047-11

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
804	32TS	CHAMPAIGN	11	1
		ILLINOIS	CONTRACT NO. 70938	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

F.A.P. 804 (U.S. 150 /SPRINGFIELD AVE.) &  
F.A.P. 804 (U.S. 150 /PROSPECT AVE.)



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  
PROJECT MANAGER: ROGER BIGGS

CONTRACT NO. 70938

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED October 21, 20 11

*Joseph E. Crowe*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
December 9, 20 11

*Scott E. Stitt* P.E.  
acting ENGINEER OF DESIGN AND ENVIRONMENT  
December 9, 20 11

*William Z. Fleenor*  
DIRECTOR OF HIGHWAYS-CHIEF ENGINEER

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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

<u>STANDARD</u>	<u>DESCRIPTION</u>
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
424006	DIAGONAL CURB RAMPS
424011	CORNER PARALLELL CURB RAMPS
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701502-04	URBAN LANE CLOSURE 2L-2W, BIDIRECTIONAL LEFT TURN LANE
701602-05	URBAN LANE CLOSURE MULTI-LANE, BIDIRECTIONAL LEFT TURN LANE
701701-08	URBAN CLOSURE MULTILANE INTERSECTION
701801-05	LANE CLOSURE MULTILANE, CROSSWALK OR SW
701901-02	TRAFFIC CONTROL DEVICES
720016-03	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
862001-01	UNINTERRUPTABLE POWER SUPPLY (UPS)
873001-02	TRAFFIC SIGNAL GROUNDING AND BONDING
876001-02	PEDESTRIAN PUSH BUTTON POST
877001-05	STEEL MAST ARM ASSEMBLY AND POLE
877011-05	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE
878001-09	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 SCHEDULE OF QUANTITIES / BILL OF MATERIALS
- 11 TRAFFIC SIGNAL DETAILS AND GENERAL NOTES

GENERAL NOTES

- 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 TRUSS 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.
- 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 = biggrd	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -			<b>CONTRACT NO. 70938</b>					
	PLOT DATE = 11/8/2011	DATE -	REVISED -			<small>ILLINOIS FED. AID PROJECT</small>					

# SUMMARY OF QUANTITIES

LOCATION OF WORK:

FAP 804  
U.S. 150  
&  
Prospect Ave.  
95% State  
5% City  
0021

FAP 804  
U.S. 150  
&  
Prospect Ave.  
100% City  
0021

CONSTRUCTION TYPE CODE:

URBAN

CODE NO	ITEM	UNIT	TOTAL QUANTITY	0700 QUANTITY	0700 QUANTITY
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	1,070.0	1,070.0	
42400800	DETECTABLE WARNINGS	SQ FT	57.0	57.0	
44000600	SIDEWALK REMOVAL	SQ FT	1,119.0	1,119.0	
67100100	MOBILIZATION	L SUM	1.0	1.0	
70100620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1.0	1.0	
70102622	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	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	
81028320	UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	164.0	164.0	
81028340	UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	742.0	742.0	
81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	113.0	113.0	
81028360	UNDERGROUND CONDUIT, PVC, 2 1/2" DIA.	FOOT	75.0	75.0	
81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	105.0	105.0	
81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	179.0	179.0	
81028400	UNDERGROUND CONDUIT, PVC, 5" DIA.	FOOT	28.0	28.0	
81400100	HANDHOLE	EACH	11.0	11.0	
81400300	DOUBLE HANDHOLE	EACH	1.0	1.0	
81500130	GULFBOX JUNCTION REMOVAL	EACH	4.0	4.0	
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1051.0		1051.0
82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	3.0		3.0
85100500	PAINT NEW TRAFFIC SIGNAL POST	EACH	5.0		5.0

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	PLOT DATE : 10/31/2011	DATE - _____	REVISED - _____		ILLINOIS FED. AID PROJECT						

# SUMMARY OF QUANTITIES

LOCATION OF WORK:

FAP 804 U.S. 150 & Prospect Ave. 95% State 5% City 0021	FAP 804 U.S. 150 & Prospect Ave. 100% City 0021
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CONSTRUCTION TYPE CODE:

URBAN

CODE NO	ITEM	UNIT	TOTAL QUANTITY	QUANTITY	QUANTITY
85100600	PAINT NEW MAST ARM AND POLE, UNDER 40 FOOT	EACH	1.0		1.0
85100800	PAINT NEW COMBINATION MAST ARM AND POLE, UNDER 40 FOOT	EACH	3.0		3.0
85700300	FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1.0	1.0	
86200200	UNINTERRUPTABLE POWER SUPPLY, STANDARD	EACH	1.0	1.0	
86400100	TRANSCEIVER - FIBER OPTIC	EACH	1.0	1.0	
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	<del>821</del>	587.0	<del>234</del>
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2,026.0	2,026.0	
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2,234.0	2,234.0	
87301515	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 18 3 PAIR	FOOT	2,701.0	2,701.0	
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	6.0	6.0	
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	624.0	624.0	
87502640	TRAFFIC SIGNAL POST, ALUMINUM 10 FT.	EACH	1.0	1.0	
87502680	TRAFFIC SIGNAL POST, ALUMINUM 14 FT.	EACH	1.0	1.0	
87502700	TRAFFIC SIGNAL POST, ALUMINUM 16 FT.	EACH	3.0	3.0	
87600200	PEDESTRIAN PUSH-BUTTON POST, TYPE II	EACH	3.0	3.0	
87700210	STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1.0	1.0	
87702910	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	2.0	2.0	
87702920	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT.	EACH	1.0	1.0	
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	15.5	15.5	
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	3.5	3.5	
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	54.0	54.0	
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6.0	6.0	

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PLOT DATE : 10-31-2011		DATE -	REVISED -		STA. _____ TO STA. _____					

# SUMMARY OF QUANTITIES

LOCATION OF WORK:

FAP 804  
U.S. 150  
&  
Prospect Ave.  
95% State  
5% City  
0021

FAP 804  
U.S. 150  
&  
Prospect Ave.  
100% City  
0021

CONSTRUCTION TYPE CODE:

URBAN

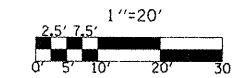
CODE NO	ITEM	UNIT	TOTAL QUANTITY	QUANTITY	QUANTITY
88040160	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	6.0	6.0	
88040260	SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 1-3-SECTION, 1-5-SECTION, BRACKET MOUNTED	EACH	2.0	2.0	
88040290	SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2.0	2.0	
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8.0	8.0	
88200100	TRAFFIC SIGNAL BACKPLATE	EACH	12.0	12.0	
88500100	INDUCTIVE LOOP DETECTOR	EACH	20.0	20.0	
88600100	DETECTOR LOOP, TYPE I	FOOT	1,110.0	1,110.0	
89502350	REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	105.0	105.0	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1.0	1.0	
89502380	REMOVE EXISTING HANDHOLE	EACH	4.0	4.0	
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	9.0	9.0	
X0326225	PAINT NEW PEDESTRIAN PUSH-BUTTON POST	EACH	3.0	3.0	
X8050115	SERVICE INSTALLATION, TYPE A (MODIFIED)	EACH	1.0	1.0	
X8100105	CONDUIT SPLICE	EACH	1.0	1.0	
X8800101	PEDESTRIAN PUSH-BUTTON, SPECIAL	EACH	8.0	8.0	
XX005937	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4.0		4.0
XX007251	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	1.0	1.0	
XX008154	RELOCATE EXISTING RADIO INTERCONNECT SYSTEM	EACH	1.0	1.0	
Z0007430	TEMPORARY SIDEWALK	SQ FT	750.0	750.0	

FILE NAME =	USER NAME = biggsrd	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT DATE = 10/31/2011	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

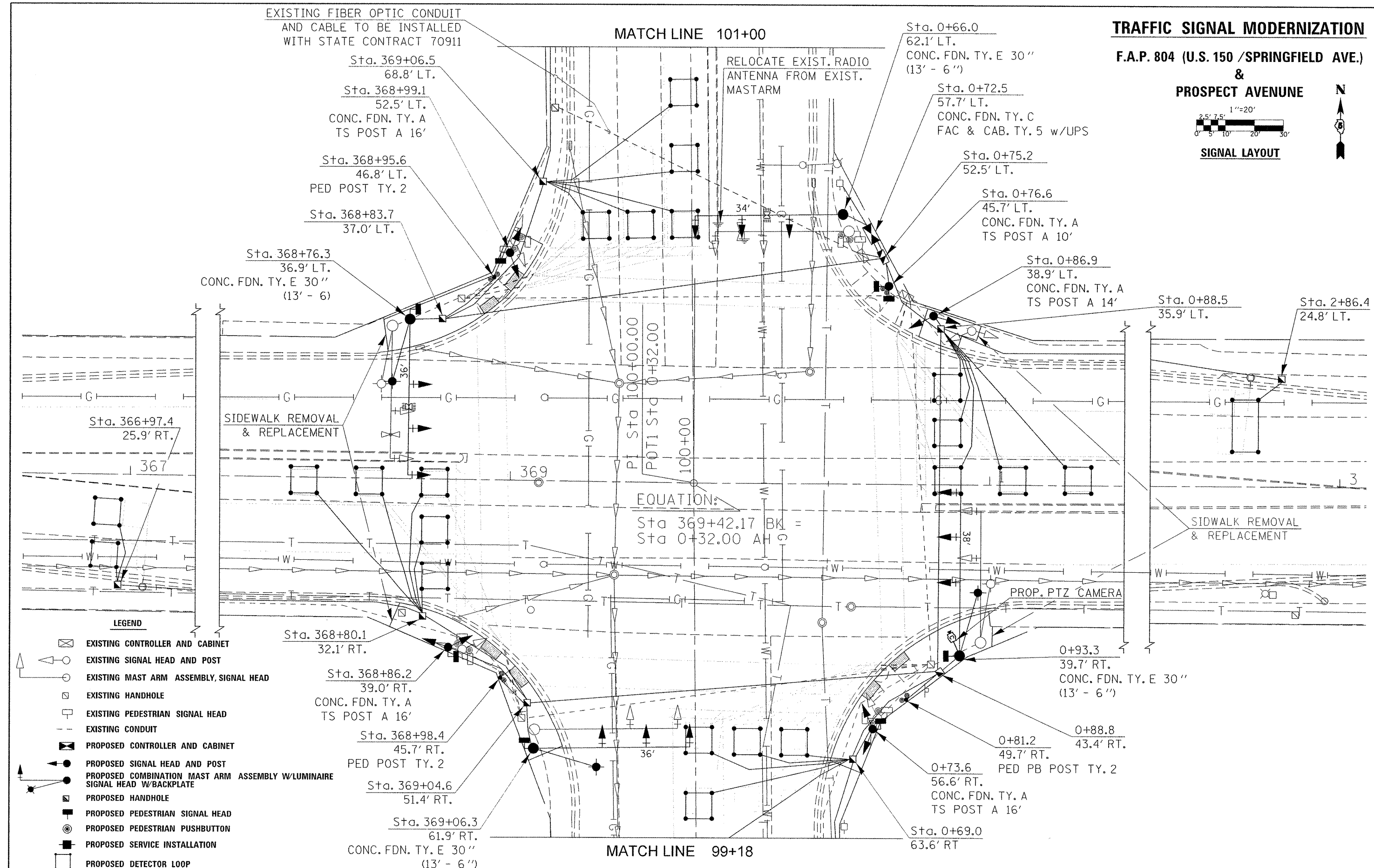
# TRAFFIC SIGNAL MODERNIZATION

F.A.P. 804 (U.S. 150 /SPRINGFIELD AVE.)

&  
PROSPECT AVENUE



SIGNAL LAYOUT



**LEGEND**

- EXISTING CONTROLLER AND CABINET
- EXISTING SIGNAL HEAD AND POST
- EXISTING MAST ARM ASSEMBLY, SIGNAL HEAD
- EXISTING HANDHOLE
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING CONDUIT
- PROPOSED CONTROLLER AND CABINET
- PROPOSED SIGNAL HEAD AND POST
- PROPOSED COMBINATION MAST ARM ASSEMBLY W/LUMINAIRE SIGNAL HEAD W/BACKPLATE
- PROPOSED HANDHOLE
- PROPOSED PEDESTRIAN SIGNAL HEAD
- PROPOSED PEDESTRIAN PUSHBUTTON
- PROPOSED SERVICE INSTALLATION
- PROPOSED DETECTOR LOOP

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		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

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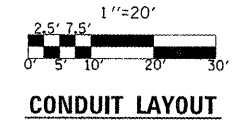
F.A.P. RTE. 804	SECTION 32TS	COUNTY CHAMPAIGN	TOTAL SHEETS 11	SHEET NO. 6
CONTRACT NO. 70938				
ILLINOIS FED. AID PROJECT				



**TRAFFIC SIGNAL MODERNIZATION**

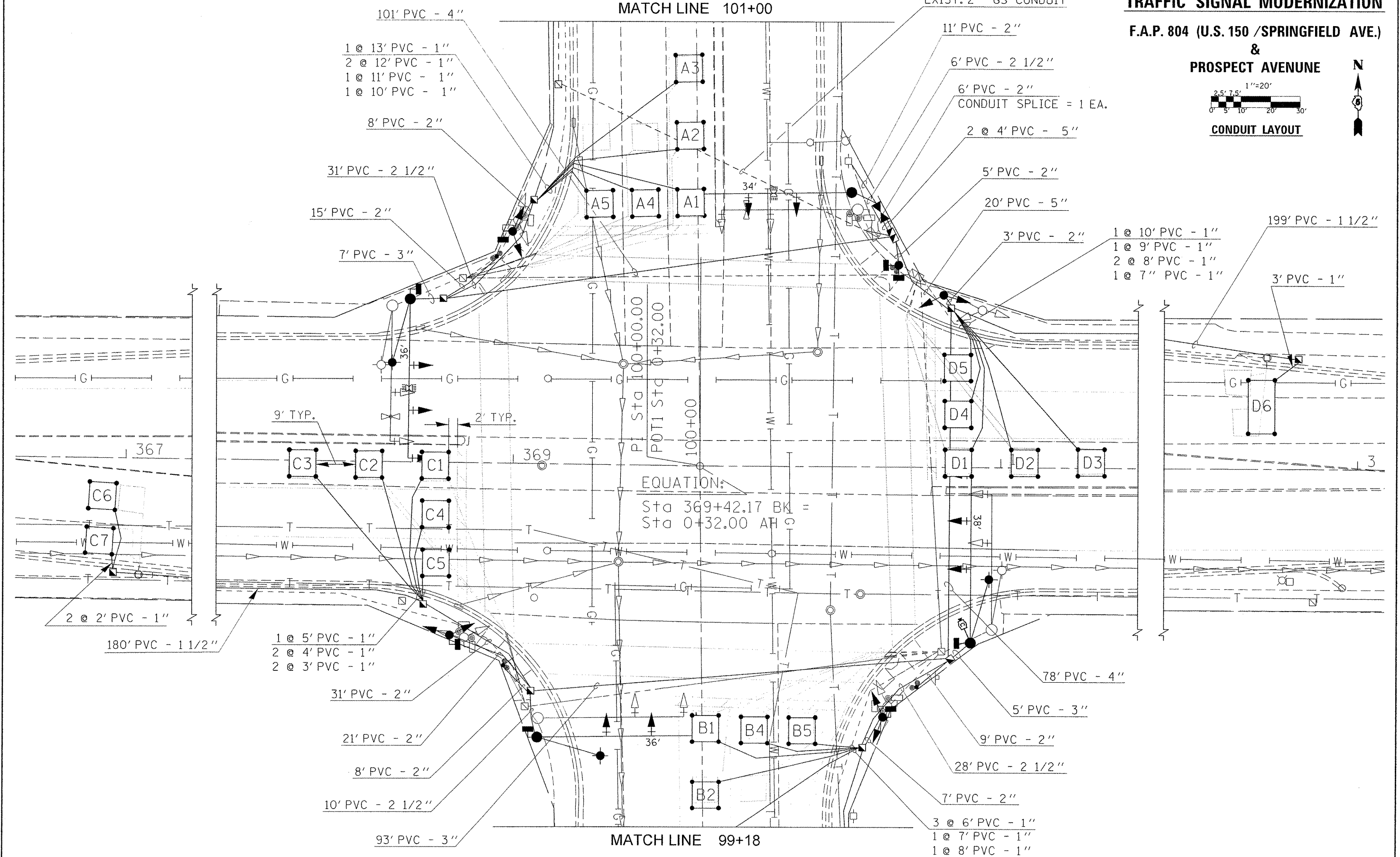
F.A.P. 804 (U.S. 150 /SPRINGFIELD AVE.)

&  
**PROSPECT AVENUE**



MATCH LINE 101+00

EXIST. 2" GS CONDUIT



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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

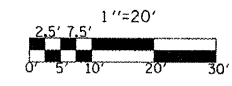
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
804	32TS	CHAMPAIGN	11	7
CONTRACT NO. 70938				
ILLINOIS FED. AID PROJECT				

**TRAFFIC SIGNAL MODERNIZATION**

**F.A.P. 804 (U.S. 150 /SPRINGFIELD AVE.)**

**&  
PROSPECT AVENUE**



**CABLE LAYOUT**



MATCH LINE 101+00

MATCH LINE 99+18

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

2 No. 14 5C, Sig.; 1 No. 14 7C, Sig.;  
1 No. 6 1C, Ground

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

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

1 No. 6 2C, Service  
1 No. 14 3C, Sig.; 1 No. 14 5C, Sig.;  
1 No. 14 7C, Sig.; 1 No. 6 1C, Ground  
REM & RE ELCBL FR CON  
1 FO 62.5/125 12SM 12MM  
1 NO. 12 1C, TRACER

6 No. 14 3C, Sig.; 10 No. 14 5C, Sig.;  
12 No. 14 7C, Sig.; 12 No. 18 3pr., L-I;  
2 No. 10 1C, XLP; 2 No. 6 1C, Ground;  
1 CAT. 5 Ethernet

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

2 No. 14 3C, Sig.; 6 No. 14 5C, Sig.;  
8 No. 14 7C, Sig.; 9 No. 18 3pr., L-I;  
2 No. 10 1C, XLP; 1 No. 6 1C, Ground;  
1 CAT. 5 Ethernet

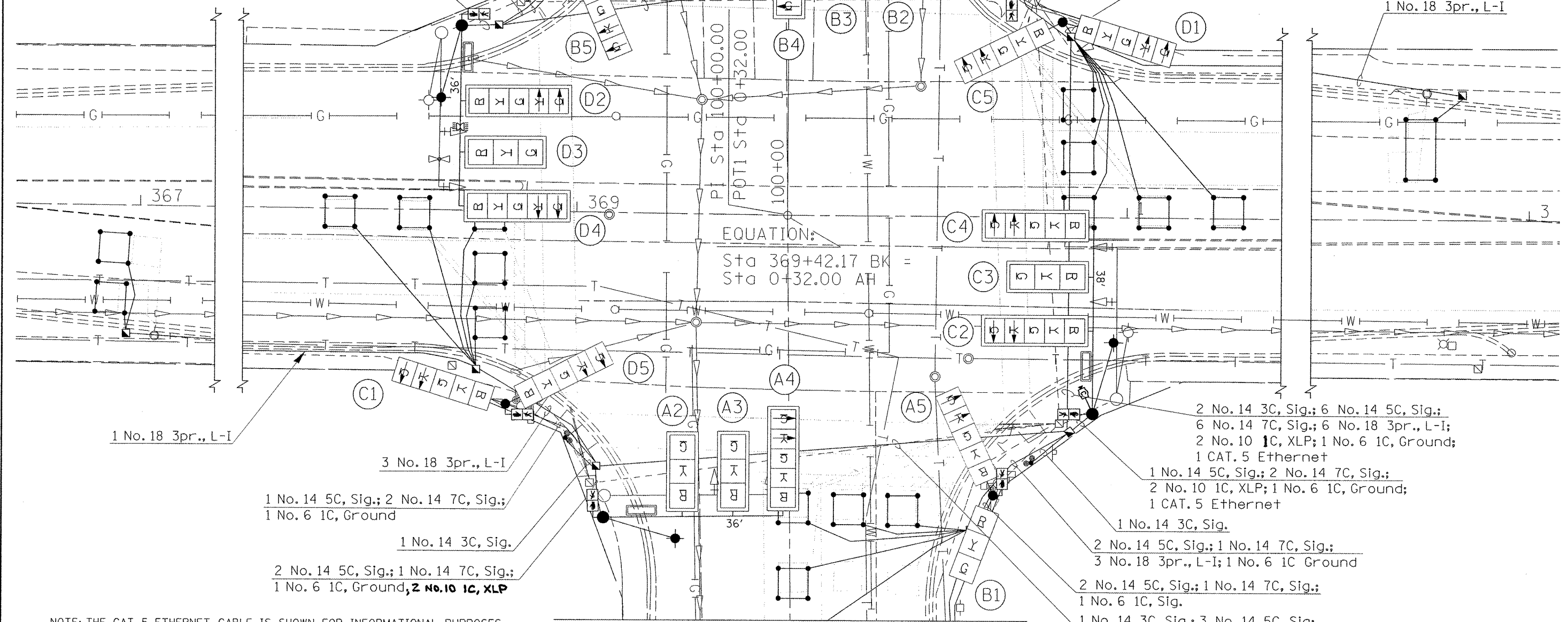
2 No. 14 7C, Sig.; 1 No. 6 1C, Ground

1 No. 18 3pr., L-I

EQUATION:

$$\text{Sta } 369+42.17 \text{ BK} =$$

$$\text{Sta } 0+32.00 \text{ AH}$$



1 No. 18 3pr., L-I

3 No. 18 3pr., L-I

1 No. 14 5C, Sig.; 2 No. 14 7C, Sig.;  
1 No. 6 1C, Ground

1 No. 14 3C, Sig.

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

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

1 No. 14 5C, Sig.; 2 No. 14 7C, Sig.;  
2 No. 10 1C, XLP; 1 No. 6 1C, Ground;  
1 CAT. 5 Ethernet

1 No. 14 3C, Sig.

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

2 No. 14 5C, Sig.; 1 No. 14 7C, Sig.;  
1 No. 6 1C, Sig.

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

NOTE: THE CAT 5 ETHERNET CABLE IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. THE CABLE IS CONSIDERED INCLUDED IN THE COST OF THE PTZ CAMERA SYSTEM AND IS NOT PAID FOR SEPARATELY.

FILE NAME =	USER NAME = biggsrd	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	F.A.P. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pw\work\pav\d01\biggsrd\d027\321\05704	38-Design.dgn	DRAWN -	REVISED -		804	32TS	CHAMPAIGN	11	8
PLOT SCALE = 20.0000 1/2 in.	CHECKED -	REVISED -	REVISED -		CONTRACT NO. 70938				
PLOT DATE = 10/31/2011	DATE -	REVISED -	REVISED -		ILLINOIS FED. AID PROJECT				
					SCALE: _____	SHEET _____	OF _____	SHEETS	STA. _____



Sta. 102+45  
26.5' LT.

2 @ 2' PVC - 1"

175' PVC - 1 1/2"  
1 No. 18 3pr., L-I

MATCH LINE 101+00

MATCH LINE 99+18

188' PVC - 1 1/2"  
1 No. 18, 3pr., L-I

2 @ 2' PVC - 1"

Sta. 97+48  
26' RT.

FILE NAME = e:\pvc\work\pvidot\biggs\d\0277321\0570	USER NAME = biggs-d 38-Design.dgn	DESIGNED - DRAWN -	REVISED - REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____	F.A.P. RTE. 804	SECTION 32TS	COUNTY CHAMPAIGN	TOTAL SHEETS 11	SHEET NO. 9
PLOT SCALE = 20,0000 1/2 in.	CHECKED -	REVISED -	CONTRACT NO. 70938							
PLOT DATE = 10/31/2011	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							

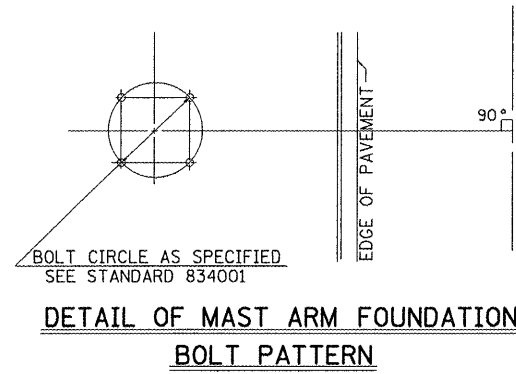
**SCHEDULES**

PC CONC SIDWALK 5"			REMOVE EXISTING CONCRETE FOUNDATION		
NW QUAD	300	SQ FT	Sta. 368+72.2; 35.3' LT	1	EA.
NE QUAD	70	SQ FT	Sta. 369+00.3; 55.1' LT.	1	EA.
SE QUAD	365	SQ FT	Sta. 368+89.4; 39.5' RT.	1	EA.
SW QUAD	335	SQ FT	Sta. 369+06.4; 57.5' RT.	1	EA.
TOTAL =	1070	SQ FT	Sta. 0+74.7; 54.1' RT.	1	EA.
SIDEWALK REMOVAL			Sta. 0+98.1; 36.6' RT.	1	EA.
NW QUAD	314		Sta. 0+67.3; 58.3' LT.	1	EA.
NE QUAD	75		Sta. 0+70.6; 52.7' LT.	1	EA.
SE QUAD	395		Sta. 0+95.6; 35.5' LT.	1	EA.
SW QUAD	335		TOTAL =	9	EA.
TOTAL =	1119	SQ FT	HANDHOLE		
CONCRETE FOUNDATION, TYPE A			Sta. 366+97.4; 25.9' RT.	1	EA.
Sta. 368.86.2; 39.0 RT.	3.1	FT.	Sta. 368+80.1; 32.1' RT.	1	EA.
Sta. 368+99.1; 52.5' LT.	3.1	FT.	Sta. 368+83.7; 37.0' LT.	1	EA.
Sta. 0+73.6; 56.6' RT.	3.1	FT.	Sta. 369+04.6; 51.4' RT.	1	EA.
Sta. 0+76.6; 47.5' LT.	3.1	FT.	Sta. 369+06.5; 68.8' LT.	1	EA.
Sta. 0+86.9; 39.8' LT	3.1	FT.	Sta. 0+69.0; 63.6' RT.	1	EA.
TOTAL =	15.5	FT.	Sta. 0+88.8; 43.4' RT.	1	EA.
CONCRETE FOUNDATION, TYPE E 30 INCH DIA.			Sta. 0+88.5; 35.9' LT.	1	EA.
Sta. 368+76.3; 36.9' LT.	13.5	FT.	Sta. 2+86.4; 24.8' LT.	1	EA.
Sta. 369+06.3; 61.9' LT.	13.5	FT.	Sta. 102+45; 26.5' LT.	1	EA.
Sta. 0+66.0; 62.1' LT	13.5	FT.	Sta. 97+48; 26.0' RT.	1	EA.
Sta. 0+93.3; 39.7' LT.	13.5	FT.	TOTAL =	11	EA.
TOTAL =	54.0	FT.	DOUBLE HANDHOLE		
REMOVE EXISTING HANDHOLE			Sta. 0+75.2; 52.5	1	EA.
Sta. 368+75.4; 31.4' RT.	1	EA.	TRAFFIC SIGNAL POST, ALUMINUM, 10 FT.		
Sta. 368+88.0; 41.8' LT.	1	EA.	Sta. 0+76.6; 45.7' LT.		
Sta. 0+80.6; 43.5' LT.	1	EA.	TRAFFIC SIGNAL POST, ALUMINUM, 14 FT.		
Sta. 0+86.8; 41.7' RT.	1	EA.	Sta. 0+86.9; 38.9' LT.	1	EA.
TOTAL =	4	EA.	TRAFFIC SIGNAL POST, ALUMINUM, 16 FT.		
GULFBOX JUNCTION REMOVAL			Sta. 368+86.2; 39.0' RT	1	EA.
Sta. 367+03.2; 26.3' RT.	1	EA.	Sta. 369+99.1; 68.8' LT.	1	EA.
Sta. 102+18.7; 28.6' LT.	1	EA.	Sta. 0+73.6; 56.6' RT.	1	EA.
Sta. 97+82.8; 28.6' RT.	1	EA.	TOTAL =	3	EA.
Sta. 2+79.3; 25.2' LT.	1	EA.	PEDESTRIAN PUSH-BUTTON POST, TYPE 2		
TOTAL =	4	EA.	Sta. 369+95.6; 46.8' LT.	1	EA.
			Sta. 368+98.4; 45.7' RT.	1	EA.
			Sta. 0+81.2; 49.7' RT.	1	EA.
			TOTAL =	3	EA.

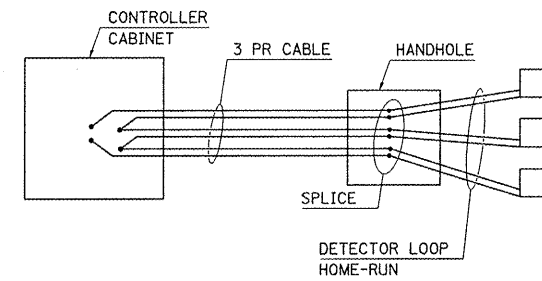
**BILL OF MATERIALS**

U.S. 150 (SPRINGFIELD AVENUE) & PROSPECT AVE.

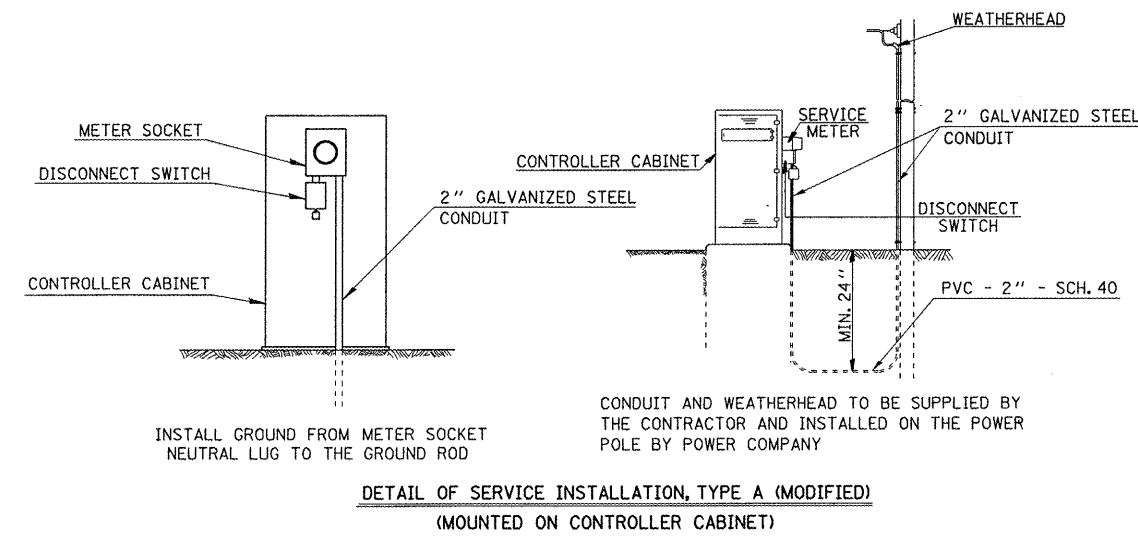
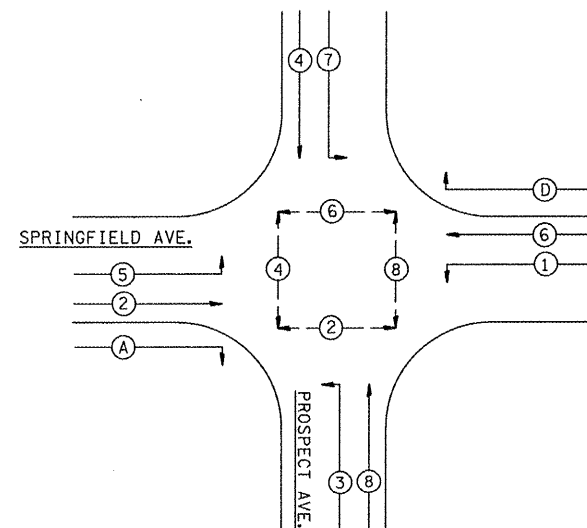
ITEM	UNIT	QUANTITY
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	1070
DETECTABLE WARNINGS	SQ FT	57
SIDEWALK REMOVAL	SQ FT	1119
UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	164
UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	742
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	113
UNDERGROUND CONDUIT, PVC, 2 1/2" DIA.	FOOT	75
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	105
UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	179
UNDERGROUND CONDUIT, PVC, 5" DIA.	FOOT	28
HANDHOLE	EACH	11
DOUBLE HANDHOLE	EACH	1
GULFBOX JUNCTION REMOVAL	EACH	4
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1051
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	3
PAINT NEW TRAFFIC SIGNAL POST	EACH	5
PAINT NEW MAST ARM AND POLE, UNDER 40 FOOT	EACH	1
PAINT NEW COMBINATION MAST ARM AND POLE, UNDER 40 FOOT	EACH	3
FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1
UNINTERRUPTABLE POWER SUPPLY, STANDARD	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	821
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2026
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2234
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 18 3 PAIR	FOOT	2701
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	6
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	624
TRAFFIC SIGNAL POST, ALUMINUM 10 FT.	EACH	1
TRAFFIC SIGNAL POST, ALUMINUM 14 FT.	EACH	1
TRAFFIC SIGNAL POST, ALUMINUM 16 FT.	EACH	3
PEDESTRIAN PUSH-BUTTON POST, TYPE II	EACH	3
STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	2
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	15.5
CONCRETE FOUNDATION, TYPE C	FOOT	3.5
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	54
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	6
SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 1-3-SECTION, 1-5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE	EACH	12
INDUCTIVE LOOP DETECTOR	EACH	20
DETECTOR LOOP, TYPE I	FOOT	1110
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	105
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	4
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
PAINT NEW PEDESTRIAN PUSH-BUTTON POST	EACH	3
SERVICE INSTALLATION, TYPE A (MODIFIED)	EACH	1
CONDUIT SPLICE	EACH	1
PEDESTRIAN PUSH-BUTTON, SPECIAL	EACH	8
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	1
RELOCATE EXISTING RADIO INTERCONNECT SYSTEM	EACH	1
TEMPORARY SIDEWALK	SQ FT	750



DETAIL OF DETECTOR LOOP WIRING  
WIRED IN SERIES WITH MULTI-PAIR CABLE



PHASE DESIGNATION DIAGRAM



DETECTOR LOOP DATA

Loop	Size	Turns	Mode	Delay / Ext.	Loop Output	Veh. Phase
A1-2	6' x 6'	4	PRESENCE		VD 7	7
A3	6' x 6'	4	PRESENCE		PD 7	7
A4	6' x 6'	4	PRESENCE		SD 3	4
A5	6' x 6'	4	PRESENCE	10 /	SD 4	4
A6-7	6' x 6'	5	PRESENCE	/ 5	VD 4	4
B1-2	6' x 6'	4	PRESENCE		VD 3	3
B3	6' x 6'	4	PRESENCE		PD 3	3
B4	6' x 6'	4	PRESENCE		SD 7	8
B5	6' x 6'	4	PRESENCE	10 /	SD 8	8
B6-7	6' x 6'	5	PRESENCE	/ 5	VD 8	8
C1-2	6' x 6'	5	PRESENCE		VD 5	5
C3	6' x 6'	5	PRESENCE		PD 5	5
C4	6' x 6'	5	PRESENCE		SD 1	2
C5	6' x 6'	5	PRESENCE	10 /	SD 2	2
C6-7	6' x 6'	6	PRESENCE	/ 5	VD 2	2
D1-2	6' x 6'	3	PRESENCE		VD 1	1
D3	6' x 6'	3	PRESENCE		PD 1	1
D4	6' x 6'	3	PRESENCE		SD 5	6
D5	6' x 6'	3	PRESENCE	10 /	SD 6	6
D6	6' x 10'	4	PRESENCE	/ 5	VD 6	6

LOOPS SHALL BE WIRED TO COMMON AMPLIFIERS AS LISTED ABOVE.

THE FOLLOWING LOOP SHALL SERVE AS TRAFFIC COUNT LOOPS:  
A3, A4, A5, B3, B4, B5, C3, C4, C5, D3, D4, D5

20 AMPLIFIERS TOTAL REQUIRED

ITEMS TO BE RETURNED TO THE CITY OF CHAMPAIGN

- ALL TRAFFIC SIGNAL HEADS
- ALL PEDESTRIAN SIGNAL HEADS
- CONTROLLER CABINET AND ALL PERIPHERAL EQUIPMENT
- CONTROLLER
- GPS EMERGENCY VEHICLE PRIORITY EQUIPMENT
- UNINTERRUPTABLE POWER SUPPLY

GENERAL NOTES

- THE ACTUAL LOCATION OF ALL SIGNAL FOUNDATIONS, HANDHOLES, AND TRAFFIC CONTROLLER WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- POST MOUNTED SIGNALS SHALL BE INSTALLED SO THAT NO PART OF THE SIGNAL HEAD IS WITHIN 2 FT. OF THE FACE OF CURB.
- 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.
- ALL MAST ARM MOUNTED SIGNAL INDICATIONS SHALL BE MOUNTED OVER THE MIDDLE OF THE RESPECTIVE LANE. AS LOOKING ALONG THE CENTERLINE OF EACH STREET, A MINIMUM 2 FT. HORIZONTAL SEPARATION SHALL BE PLACED BETWEEN THE OUTSIDE SIGNAL HEADS OF EACH OPPOSING MASTARM TO PREVENT MASKING.
- ALIGN ADJACENT RED INDICATIONS TO SAME HEIGHT ABOVE PAVEMENT.
- THE BASE FOR A TRAFFIC SIGNAL POST SHALL BE SITUATED SUCH THAT THE HANDHOLE IS LOCATED ON A SIDE AWAY FROM A TRAVELED LANE.
- THE ANTI-BACKUP FEATURE SHALL BE HARDWIRED ON THE BACKPANEL OF THE CONTROLLER CABINET.
- THE TRAFFIC SIGNAL INSTRUCTION SIGN APPLICABLE TO PEDESTRIANS SHALL BE NATIONAL MUTCD 10-3. THE SIGN SHALL BE MOUNTED DIRECTLY OVER THE APPROPRIATE PEDESTRIAN PUSH-BUTTON.