

1-18-13 LETTING ITEM 060

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	3-2,8X-1,4-2L-1	SALINE	8	1
		ILLINOIS	CONTRACT NO. 78330	

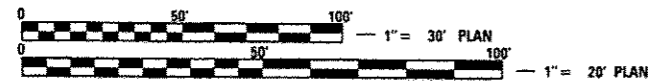
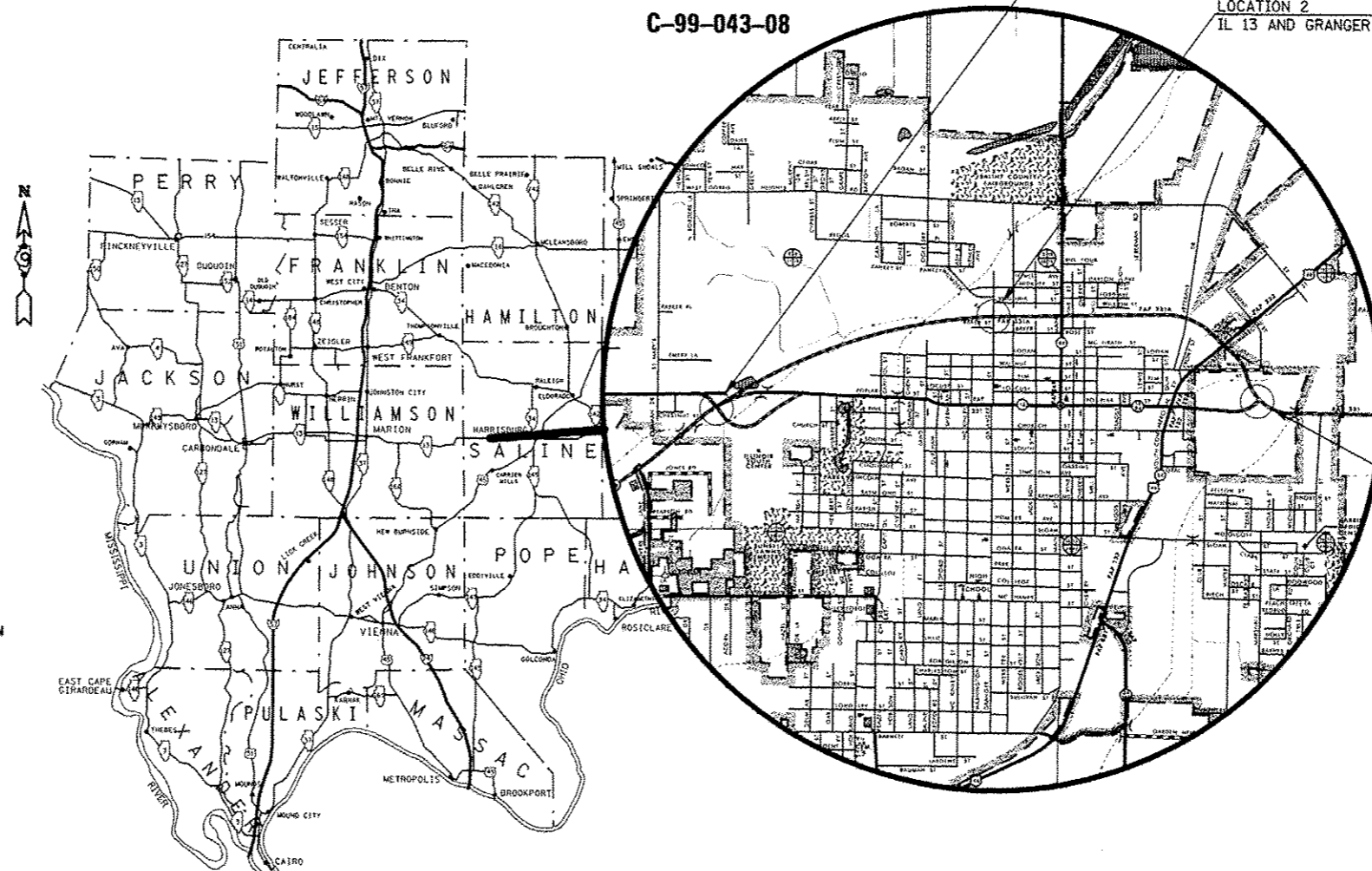
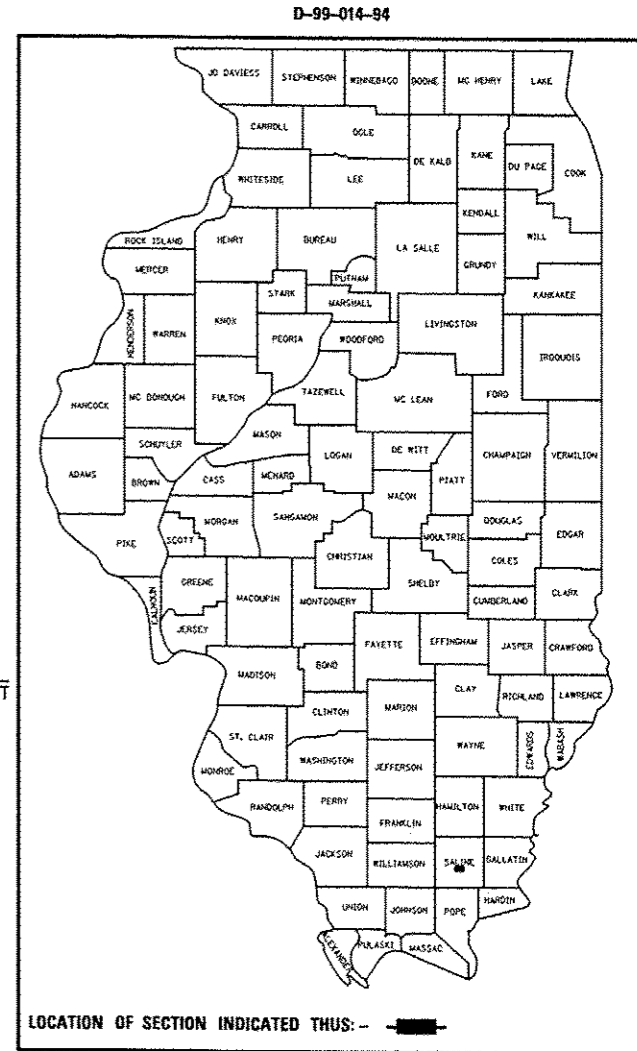
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET 3

LOCATION	ADT(2011)	SU	MU
IL 13 (FAP 331)	3400	275	600

**PROPOSED
HIGHWAY PLANS**

IL 13 (FAP 331)
SECTION (3-2,8X-1,4-2)L-1
PROJECT ESP-0331(048)
LIGHTING IMPROVEMENTS
SALINE COUNTY

C-99-043-08



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

PROJECT ENGINEER SUSAN POE
PROJECT MANAGER SUSAN POE

CONTRACT NO. 78330

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Oct 15 2012
Anna Amman
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Dec 7 2012
John D. Casamelli, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

Dec 7 2012
William B. Frey, Jr.
acting DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

INDEX OF SHEETS

SHT NO	DESCRIPTION
1	COVER SHEET
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4	LOCATION 1 - IL 13/WEST POPLAR STREET LAYOUT AND CIRCUIT DIAGRAM
5	LOCATION 2 - IL 13/GRANGER STREET LAYOUT AND CIRCUIT DIAGRAM
6	LOCATION 3 - IL 13/EAST POPLAR STREET LAYOUT AND CIRCUIT DIAGRAM
7	DETAIL - POLE HANDHOLE WIRING AND DETAIL FOR NIGHTTIME LIGHTING INSPECTION
8	LUMINAIRE PERFORMANCE TABLE

STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-04	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701101-03	OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
825001-01	LIGHTING CONTROLLER, POLE MOUNTED, 240V
830021-01	LIGHT POLE STEEL TENON TOP
836001-02	LIGHT POLE FOUNDATION

GENERAL NOTES

- ALL PROPOSED LIGHTING UNITS SHALL BE LABELED ACCORDING TO THE STANDARD SPECIFICATIONS, WITH POLE NUMBERS ATTACHED WITH STAINLESS STEEL BANDING. LIGHTING UNIT NUMBERING SHALL BE AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ELECTRICAL WORK WITH OTHER TRADES.
- LIGHT POLE FOUNDATIONS SHALL BE INSTALLED PLUMB AND FLUSH WITH THE PROPOSED GRADE AND SHALL MEET THE HEIGHT REQUIREMENTS OF ARTICLE 836.03 OF THE STANDARD SPECIFICATIONS. AFTER UNIT DUCT IS INSTALLED, FOUNDATIONS SHALL BE FILLED WITH FINE AGGREGATE ACCORDING TO ARTICLE 836.03. WASHERS USED TO INSTALL THE POLE SHALL BE LARGE ENOUGH TO FULLY COVER THE SLOTTED HOLES IN THE POLE BASE PLATE.
- CONTRACTOR SHALL INSTALL LIGHT POLES AT THE LOCATIONS INDICATED ON THE PLANS, MAINTAINING ADEQUATE CLEARANCE FROM UTILITY LINES. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY CLEARANCES PER THE NATIONAL ELECTRICAL SAFETY CODE AND/OR THE REQUIREMENTS OF THE UTILITY COMPANIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL CONFLICTS BETWEEN PROPOSED LIGHTING POLE LOCATIONS AND UTILITY LINES. THE LOCATION OF BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE SHOWN FOR INFORMATION ONLY. REROUTING, DISCONNECTION, RELOCATION, PROTECTION ETC., OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THE COST OF THIS WORK IS TO BE INCLUDED WITH THE APPLICABLE UNIT DUCT OR UNDERGROUND CONDUIT PAY ITEM.
- THE CONTRACTOR SHALL INSTALL MULTI-MOUNT LUMINAIRES WITH OPTICS SET PERPENDICULAR TO THE CENTERLINE OF THE ROADWAY.
- UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2 1/2" DIA. SHALL BE SCHEDULE 80 AS NOTED IN THE PLANS.
- THE CONTRACTOR SHALL FURNISH AND INSTALL A CONCRETE WORK PAD IN FRONT OF THE LIGHTING CONTROLLER PER SECTION 825 OF THE STANDARD SPECIFICATIONS.

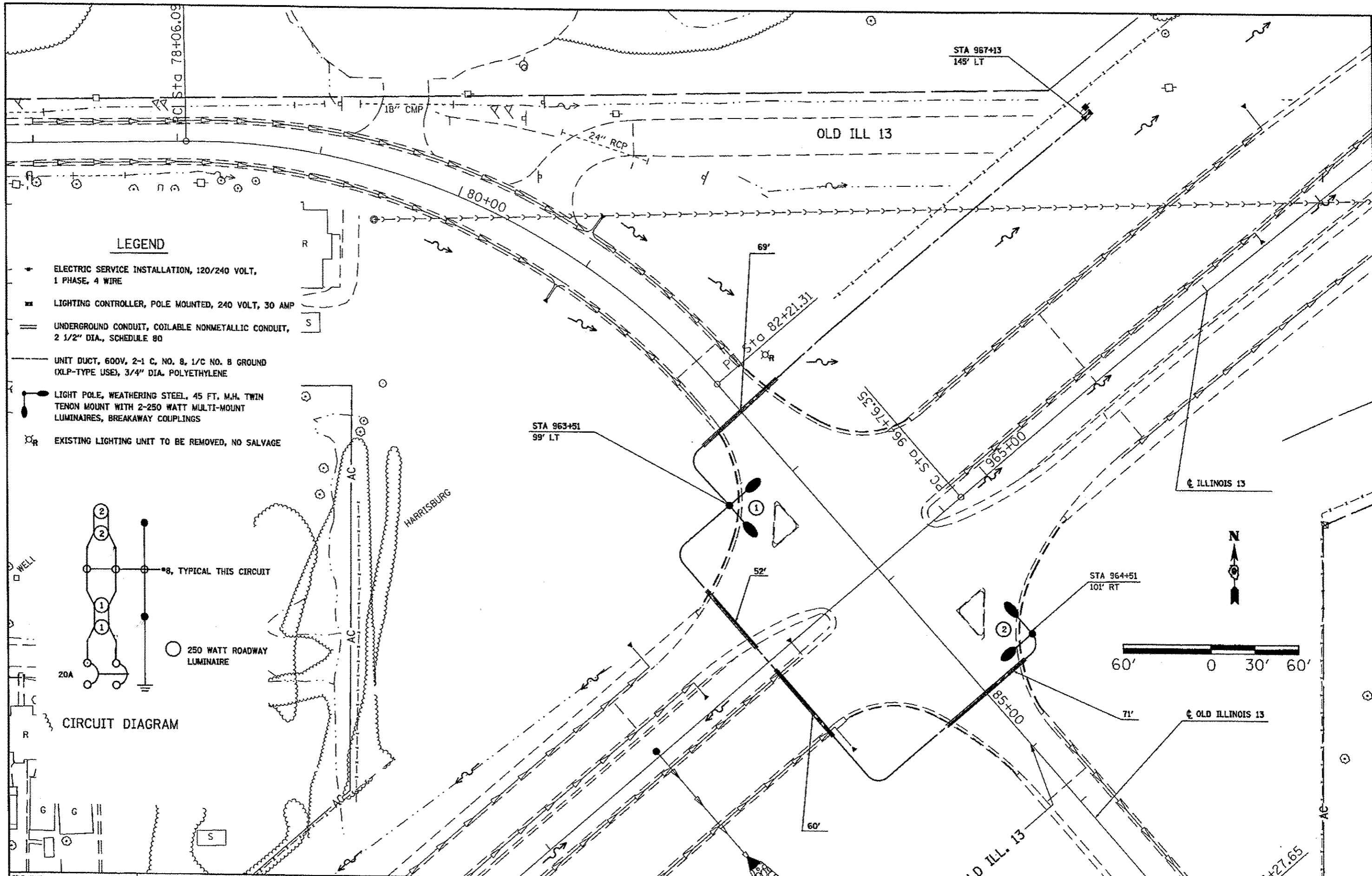
Prepared By:	<i>Joe G. Hanley</i> DISTRICT STUDIES & PLANS ENGINEER
Examined By:	<i>James E. Eggen</i> DISTRICT LAND ACQUISITION ENGINEER
Examined By:	<i>Cassie Miller</i> DISTRICT PROGRAM DEVELOPMENT ENGINEER
Examined By:	<i>Keel Kelly</i> DISTRICT OPERATIONS ENGINEER
Examined By:	<i>Chris</i> DISTRICT PROJECT IMPLEMENTATION ENGINEER
Examined By:	<i>Douglas J. Miller</i> DISTRICT CONSTRUCTION ENGINEER
Examined By:	<i>Brucetta</i> DISTRICT MATERIALS ENGINEER
Approved By:	<i>Ames Amman</i> DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER Oct 15 2012 DATE

FILE NAME =	USER NAME = p001	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS STANDARDS, GENERAL NOTES				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pe_work\p001\p001\0315148\78330-1-1-plan.dgn		DRAWN -	REVISED -		331	(3-2,8X-1,4-2IL-1	SALINE	8	2				
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PLOT DATE = 10/4/2012		DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.		

SUMMARY OF QUANTITIES

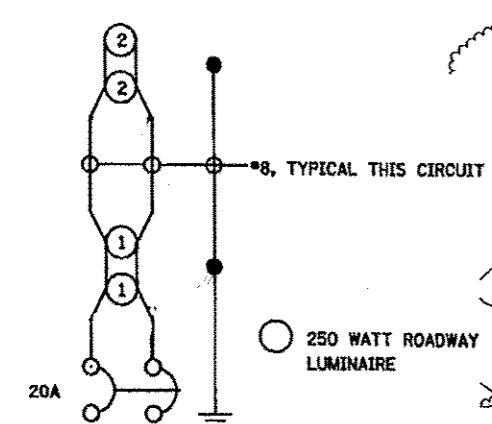
CODE NO.	ITEM	URBAN		100% FEDERAL		
		CONSTRUCTION TYPE CODE		0021		
		UNIT	TOTAL QUANTITY	LOCATION 1 IL 13/OLD IL 13	LOCATION 2 IL 13/GRANGER ST	LOCATION 3 IL 13/E POPLAR ST
67100100	MOBILIZATION	L SUM	1	0.3	0.3	0.3
80400100	ELECTRIC SERVICE INSTALLATION	EACH	3	1	1	1
81028760	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2 1/2" DIA.	FOOT	453	252	142	59
81603000	UNIT DUCT, 600V, 2-1C NO. 8, 1/C NO. 8 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	2003	852	416	735
82103900	LUMINAIRE, SODIUM VAPOR, MULTI-MOUNT, 250 WATT	EACH	10	4	4	2
82500300	LIGHTING CONTROLLER, POLE MOUNTED, 240VOLT, 30AMP	EACH	3	1	1	1
83062735	LIGHT POLE, WEATHERING STEEL, 45 FT. M. H., TENON MOUNT - TWIN	EACH	5	2	2	1
83600357	LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 8" X 8'	EACH	5	2	2	1
83800650	BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH	20	8	8	4
84200600	REMOVAL OF LIGHTING UNIT, NO SALVAGE	EACH	1	1		

FILE NAME *	USER NAME * poest	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.P RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
or\p-work\pms\pms1\00315146\78330-	st-plan.dgn	DRAWN -	REVISED -			331	(3-2,8X-1,4-2IL-1	SALINE	8	3	
WHEELNAME	PLOT SCALE = 1/8"=1'-0"	CHECKED -	REVISED -			CONTRACT NO. 78330					
	PLOT DATE = 10/15/2012	DATE -	REVISED -			SCALE:	SHEET	OF	SHEETS	STA.	TO STA.



LEGEND

- ⚡ ELECTRIC SERVICE INSTALLATION, 120/240 VOLT, 1 PHASE, 4 WIRE
- ☐ LIGHTING CONTROLLER, POLE MOUNTED, 240 VOLT, 30 AMP
- ══ UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2 1/2" DIA., SCHEDULE 80
- UNIT DUCT, 600V, 2-1 C, NO. 8, 1/C NO. 8 GROUND (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE
- ☉ LIGHT POLE, WEATHERING STEEL, 45 FT. M.H. TWIN TENON MOUNT WITH 2-250 WATT MULTI-MOUNT LUMINAIRES, BREAKAWAY COUPLINGS
- ☉r EXISTING LIGHTING UNIT TO BE REMOVED, NO SALVAGE



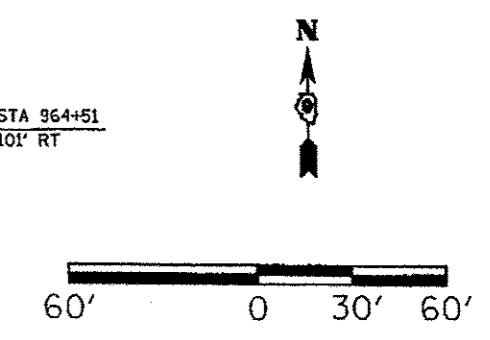
CIRCUIT DIAGRAM

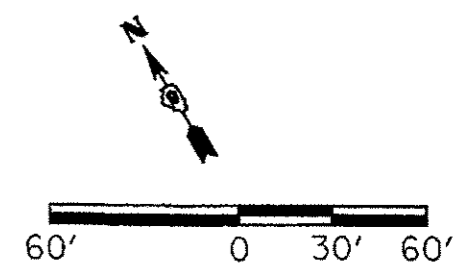
FILE NAME =	USER NAME = p001	DESIGNED -	REVISED -
ca\p\work\p001\p001\10310146\78330	10/15/2012	DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**LOCATION 1 - IL 13W POPLAR ST
LAYOUT AND CIRCUIT DIAGRAM**

F.A.P. RTE. 331	SECTION 13-2, 8X-1, 4-2R-1	COUNTY SALINE	TOTAL SHEETS 8	SHEET NO. 4
SCALE: SHEET OF SHEETS STA. TO STA.			CONTRACT NO. 78330	

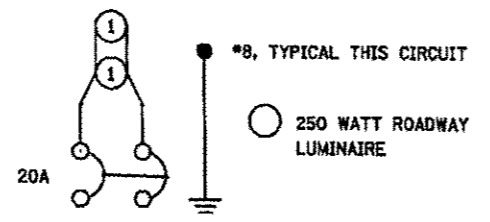




PROP. CURVE 453
 PI STA. = 1087+85.30
 $\Delta = 73^\circ 28' 29''$ (LT)
 $D = 7^\circ 16' 49''$
 $R = 787.00'$
 $T = 587.41'$
 $L = 1,009.23'$
 $E = 195.05'$
 $e =$
 $T.R. =$
 $S.E. RUN = 1081+97.89$
 $P.C. STA. = 1092+07.12$

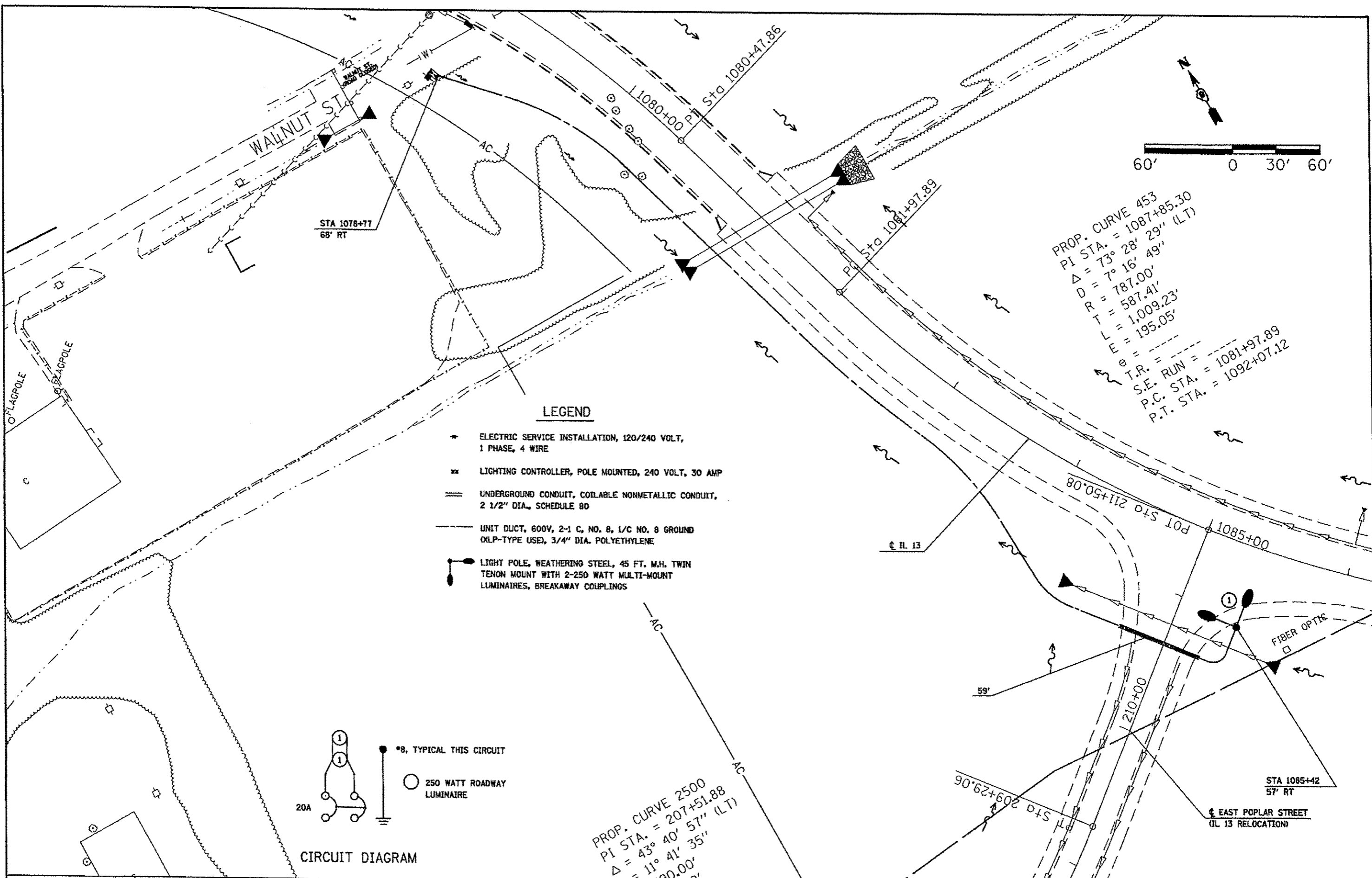
LEGEND

- ELECTRIC SERVICE INSTALLATION, 120/240 VOLT, 1 PHASE, 4 WIRE
- LIGHTING CONTROLLER, POLE MOUNTED, 240 VOLT, 30 AMP
- UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2 1/2" DIA., SCHEDULE 80
- UNIT DUCT, 600V, 2-1 C, NO. 8, 1/C NO. 8 GROUND (KLP-TYPE USE), 3/4" DIA. POLYETHYLENE
- LIGHT POLE, WEATHERING STEEL, 45 FT. M.H. TWIN TENON MOUNT WITH 2-250 WATT MULTI-MOUNT LUMINAIRES, BREAKAWAY COUPLINGS



CIRCUIT DIAGRAM

PROP. CURVE 2500
 PI STA. = 207+51.88
 $\Delta = 43^\circ 40' 57''$ (LT)
 $D = 11^\circ 41' 35''$
 $R = 490.00'$



FILE NAME =	USER NAME = poosl	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LOCATION 3 - IL 13E POPLAR ST LAYOUT AND CIRCUIT DIAGRAM		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca\pwwork\pwwork\poosl\108315448\78330	10/15/2012	DRAWN -	REVISED -				331	(3-2,8X-1,4-2IL-1	SALINE	B	6
#MODELNAME#	PLOT SCALE = 60.0000 / 1 in.	CHECKED -	REVISED -				CONTRACT NO, 78330				
		DATE -	REVISED -				ILLINOIS FED. AID PROJECT				

ILLINOIS DEPARTMENT OF TRANSPORTATION
250W LUMINAIRE PERFORMANCE TABLE

GIVEN CONDITIONS

ROADWAY DATA:	PAVEMENT WIDTH	48 FT
	NUMBER OF LANES (IN DIRECTION OF TRAVEL)	4
	MEDIAN WIDTH	N/A
	IES SURFACE CLASSIFICATION	R3
	Q-ZERO VALUE	0.07
LIGHT POLE DATA:	MOUNTING HEIGHT	45 FT
	MAST ARM LENGTH	N/A
	POLE SET-BACK FROM EDGE OF PAVEMENT	30 FT
LUMINAIRE DATA:	LAMP TYPE	HPS
	LAMP LUMENS	28500
	IES VERTICAL DISTRIBUTION	L
	IES CONTROL OF DISTRIBUTION	NC
	IES LATERAL DISTRIBUTION	4
	TOTAL LIGHT LOSS FACTOR	0.684
LAYOUT DATA:	SPACING	130 FT
	CONFIGURATION	SINGLE SIDE
	LUMINAIRE OVERHANG OVER EDGE OF PAVEMENT LANE	-30 FT

NOTE: VARIATIONS FROM THE ABOVE SPECIFIED IES DISTRIBUTION PATTERN MAY BE REQUESTED AND ACCEPTANCE OF VARIATIONS WILL BE SUBJECT TO REVIEW BY THE ENGINEER BASED ON HOW WELL THE PERFORMANCE REQUIREMENTS ARE MET.

PERFORMANCE REQUIREMENTS

NOTE: THESE PERFORMANCE REQUIREMENTS SHALL BE THE MINIMUM ACCEPTABLE STANDARDS OF PHOTOMETRIC PERFORMANCE FOR THE LUMINAIRE, BASED ON THE GIVEN CONDITIONS LISTED ABOVE.

ILLUMINATION:	AVERAGE HORIZONTAL ILLUMINATION (E_{AVE})	0.9 Fc
	UNIFORMITY RATIO, (E_{AVE}/E_{MIN})	3.0
LUMINANCE:	AVERAGE LUMINANCE (L_{AVE})	0.6 cd/m ²
	UNIFORMITY RATIO, (L_{AVE}/L_{MIN})	3.5
	(L_{MAX}/L_{MIN})	6.0
	MAXIMUM VEILING	
	LUMINANCE RATIO: (L_v/L_{AVE})	0.3

FILE NAME =	USER NAME = pose1	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LUMINAIRE PERFORMANCE TABLE	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ca:\pwr_work\pwrdat\pose1\0315140\78330-ht-plan.dgn		DRAWN -	REVISED -			331	(3-2.8X-1,4-2H-1)	SALTINE	8	8	
#MODELNAME#	PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 78330					
	PLOT DATE = 10/4/2012	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
						SCALE:	SHEET	OF	SHEETS	STA. TO STA.	