

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

F. A. U. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1597	09-00119-00-LT	COOK	12	1
STA. 11+00		TO STA. 81+00		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT AREA - 9003 (334)		

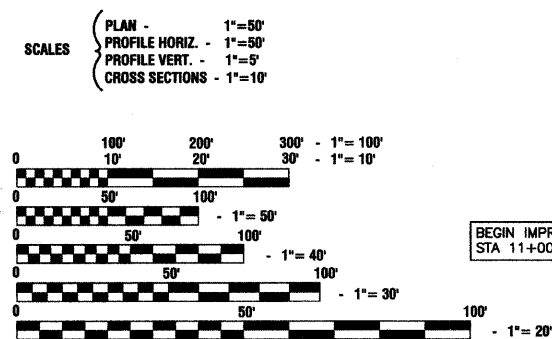
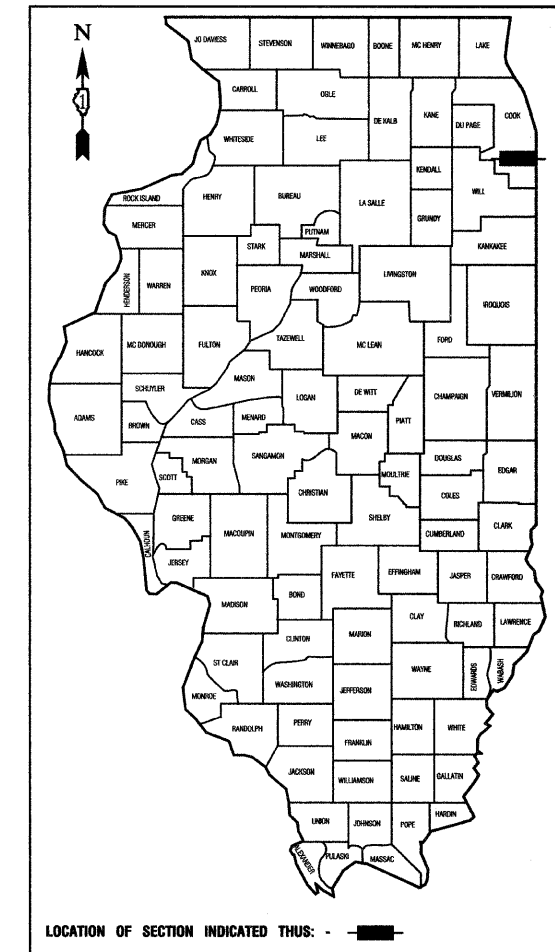
CONTRACT #63287

- INDEX OF SHEETS
1. COVER SHEET
 2. SUMMARY OF QUANTITIES
 - 3.-6. STREET LIGHTING PLANS
 7. SINGLE LINE DIAGRAM
 - 8.-12. DETAIL DRAWINGS

FAU 1597 (138TH STREET)
STREET LIGHTING
HALSTED STREET (FAU 3730) TO INDIANA AVENUE (FAU 2906)
SECTION NO.: 09-00119-00-LT
C-91-651-09
VILLAGE of RIVERDALE
COOK COUNTY
ARA-9003 (334)

STATE STANDARDS

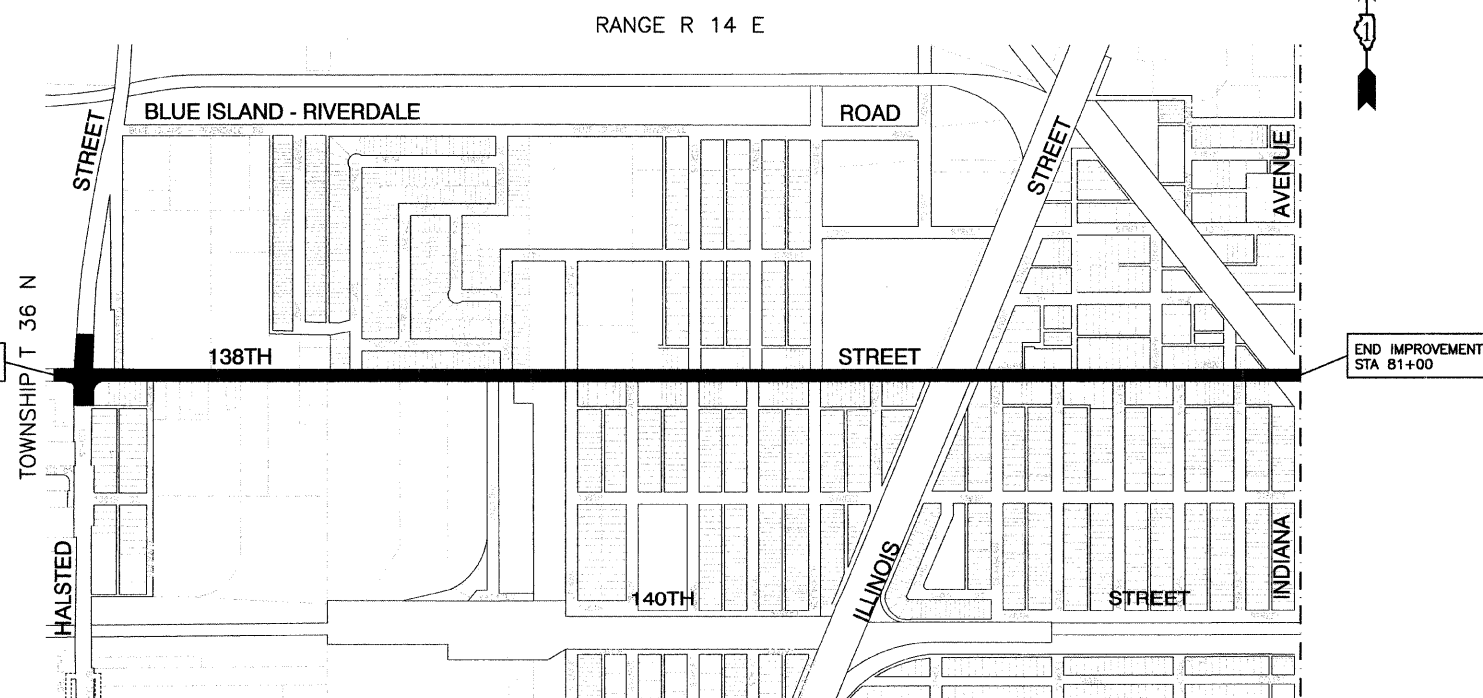
- 000001-05 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 701501-05 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
- 701606-06 URBAN LANE CLOSURE, MULTILANE, 2W, WITH MOUNTABLE MEDIAN
- 701701-06 URBAN LANE CLOSURE, MULTILANE INTERSECTION
- 701801-04 LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
- 701901-01 TRAFFIC CONTROL DEVICES



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

CONTRACT NO. 63287



LOCATION MAP

GROSS LENGTH=7,000 FEET=1.33 MILES
NET LENGTH=7,000 FEET=1.33 MILES



STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

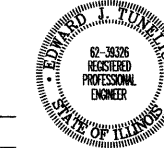
Approved: 10/15/2009
[Signature]
President, Village of Riverdale

Passed: OCTOBER 27, 2009
[Signature]
District 1 Engineer of Local Roads & Streets

Released for Bid Based on Limited Review: OCTOBER 24, 2009
[Signature]
Deputy Director of Highways, Region 1 Engineer

PRINTED BY THE AUTHORITY OF
THE STATE OF ILLINOIS

PREPARED BY OR UNDER THE DIRECT SUPERVISION OF:
[Signature]
10/16/09



LICENSE EXPIRES: 11/30/11

FIELD ENGINEER: MELCHOR MANGOBA 847-705-4408
CONSULTANTS: ROBINSON ENGINEERING, LTD. 708-331-6700

SUMMARY OF QUANTITIES

S.I.	CODE NO.	PAY ITEM	UNIT	QUAN	CONSTRUCTION TYPE CODE		LIGHTS
						Y030-1E	
	21300010	EXPLORATION TRENCH, SPECIAL	FOOT	100			100
	25200650	SODDING, SALT TOLERANT, SPECIAL	SQ YD	480			480
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	200			200
	44000600	SIDEWALK REMOVAL	SQ FT	200			200
	67100100	MOBILIZATION	L SUM	1			1
	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1			1
	70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1			1
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1			1
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1			1
	80400100	ELECTRIC SERVICE INSTALLATION	EACH	2			2
	80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1			1
	81018600	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	1065			1065
	81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	215			215
	81603090	UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	7840			7840
	81702440	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 1/0	FOOT	300			300
	81800230	AERIAL CABLE, 2-1/C NO. 6 WITH MESSENGER WIRE	FOOT	210			210
	81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	850			850
	82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	39			39
	82102400	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	6			6
	83008400	LIGHT POLE, ALUMINUM, 40 FT. M.H., 10 FT. MAST ARM	EACH	39			39
	83050800	LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 12 FT. MAST ARM	EACH	6			6
	83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	430			430
	83600215	LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	FOOT	20			20
	83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	45			45
	84200600	REMOVAL OF EXISTING LIGHTING UNIT, NO SALVAGE	EACH	41			41
	84200700	LIGHTING FOUNDATION REMOVAL	EACH	41			41
	XX001399	UNIT DUCT, BORED AND PULLED	FOOT	5500			5500
	XX006937	GROUND ROD, 5/8" DIA. X 10 FT.	EACH	47			47
	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1			1
	XX008189	LIGHTING CONTROLLER, CONSOLE TYPE, 100 AMP - 480 VOLT	EACH	1			1
	XX008242	LIGHTING CONTROLLER, CONSOLE TYPE, 60 AMP - 480 VOLT	EACH	1			1

GENERAL NOTES :

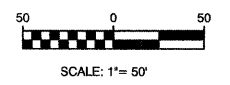
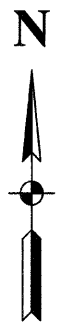
- ALL WORK TO CONFORM TO THE NATIONAL ELECTRICAL CODE AND ANY APPLICABLE LOCAL CODES.
- CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES BEFORE TRENCHING OR AUGERING.
- BEFORE INSTALLING STANDARDS NEAR OVERHEAD FACILITIES CALL CE Co. FOR APPROVAL OF LOCATION.
- FOR LOCATION OF EXISTING UNDERGROUND ELECTRICAL CABLE CALL CE Co.
- ALL CONDUIT TO BE 2.5" DIAMETER UNLESS OTHERWISE SPECIFIED.
- ANY TREE TRIMMING REQUIRED AS DIRECTED BY THE ENGINEER SHALL BE PERFORMED BY THE CONTRACTOR, AND THE COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO RESTORE ANY SPECIALIZED LANDSCAPING, (i.e. DECORATIVE ROCKS, SHRUBS, PLANTS, ETC.) OR SHALL REPLACE IT, THE COST OF WHICH SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- A PERMIT FOR THIS PROJECT WILL BE REQUIRED FROM THE COOK COUNTY HIGHWAY DEPARTMENT. THE PERMIT HAS BEEN APPLIED FOR BUT THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING THIS PERMIT, PERMIT BOND AND ANY OTHER ASSOCIATED FEES BEFORE CONSTRUCTION BEGINS.
- CARE IS TO BE TAKEN AS NOT TO DAMAGE ANY OF THE EXISTING TRAFFIC SIGNAL CONDUITS, DETECTORS AND EQUIPMENT. IF ANY OF THE TRAFFIC SIGNAL CONDUIT AND/OR EQUIPMENT IS DAMAGED, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE THE CONDUIT AND/OR EQUIPMENT AT NO COST TO THE COUNTY, STATE, OR THE VILLAGE.
- THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENT FOR BURIED WARNING TAPE, SPECIFIED AS PART OF "TRENCH AND BACKFILL FOR ELECTRICAL WORK". THE INSTALLATION OF THE TAPE SHALL BE INSPECTED AND APPROVED BY THE RESIDENT ENGINEER PRIOR TO BACKFILLING OR DURING PLOWING OPERATIONS, AS APPLICABLE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT OF FINISHED GRADE. THE RESIDENT ENGINEER MAY ASSIST THE CONTRACTOR, AS APPLICABLE, BUT THE RESPONSIBILITY FOR COORDINATING THE FINISHED GRADE ELEVATION WITH THE TOP OF THE FOUNDATION HEIGHTS AND THE LIGHT SHALL REMAIN WITH THE CONTRACTOR.
- NO POLES SHALL BE ERECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED, AS APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR WIRE MARKERS AND SHALL TAG ALL WIRE MARKERS AND SHALL TAG ALL WIRE ACCORDINGLY.
- EQUIPMENT GROUND CONDUCTORS SHALL BE SPLICED AND BONDED AT EACH LIGHT POLE OR OTHER PIECE OF EQUIPMENT.
- CONDUIT AND UNIT DUCT MUST BE POSITIONED IN THE FIELD TO AVOID CONFLICT WITH TREES, BUSHES, DRAINS AND OTHER UTILITIES AND LANDSCAPING.
- ALL DISTURBED AREAS WHERE RESTORATION IS NOT COVERED BY APPLICABLE SECTIONS OF THE SPECIAL PROVISIONS MUST BE RESTORED TO THE SATISFACTION OF THE ENGINEER. THE WORK MUST BE CONSIDERED INCIDENTAL TO THE CONTRACT. SEPARATE PAYMENT WILL NOT BE MADE.
- THE EXACT LOCATIONS OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY COMPONENTS OF THE LIGHTING SYSTEM. FOR THE LOCATIONS OF THE UTILITIES, CALL JULIE TOLL FREE AT 1-800-892-0123. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE EXISTING TRAFFIC SIGNAL CABLES AND CONDUITS.

* - INDICATES SPECIALTY ITEMS



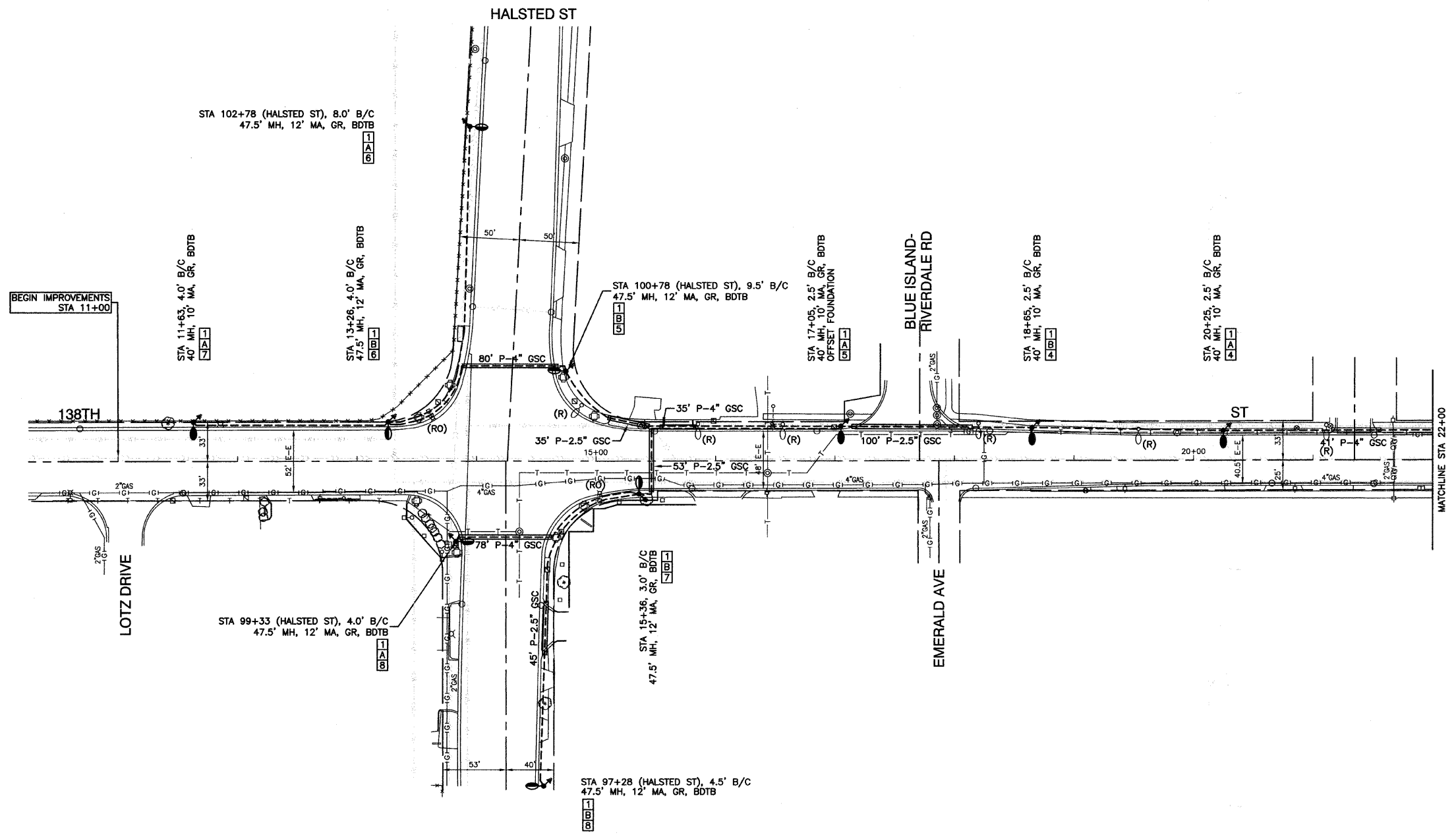
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DATE	BY	REVISION	PLANNED	ALIGNED	CHECKED	GOOD FILE NAME



PLAN	REVISIONS	DATE
	BY	
PROFILE	DESIGNED	DWS
	CHECKED	EJT
LEGEND	DRAWN	MJD
	CHECKED	PAP

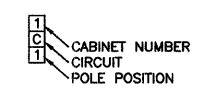
PLAN	REVISIONS	DATE
	BY	
PROFILE	DESIGNED	DWS
	CHECKED	EJT
LEGEND	DRAWN	MJD
	CHECKED	PAP



LEGEND:

- EXISTING STREET LIGHT-250W HPS
- PROPOSED STREET LIGHT-400W HPS
- PROPOSED STREET LIGHT-250W HPS
- EXISTING CONTROLLER
- PROPOSED CONTROLLER, CONSOLE TYPE
- COMED POWER POLE FOR SERVICE CONNECTION
- CONDUIT, PUSHED, GALVANIZED STEEL
- CONDUIT, TRENCHED, GALVANIZED STEEL
- UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1-1/4" DIA., POLYETHYLENE
- ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 1/0
- ⊗ GR GROUND ROD, 5/8" DIA. x 10'
- (R) REMOVAL OF EXISTING STREET LIGHT (NO SALVAGE)
- (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
- LT LEFT
- RT RIGHT
- MH MOUNTING HEIGHT
- MA MAST ARM
- B/C BACK OF CURB
- B/EP BEHIND EDGE OF PAVEMENT
- BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

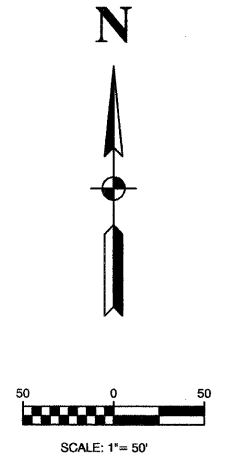
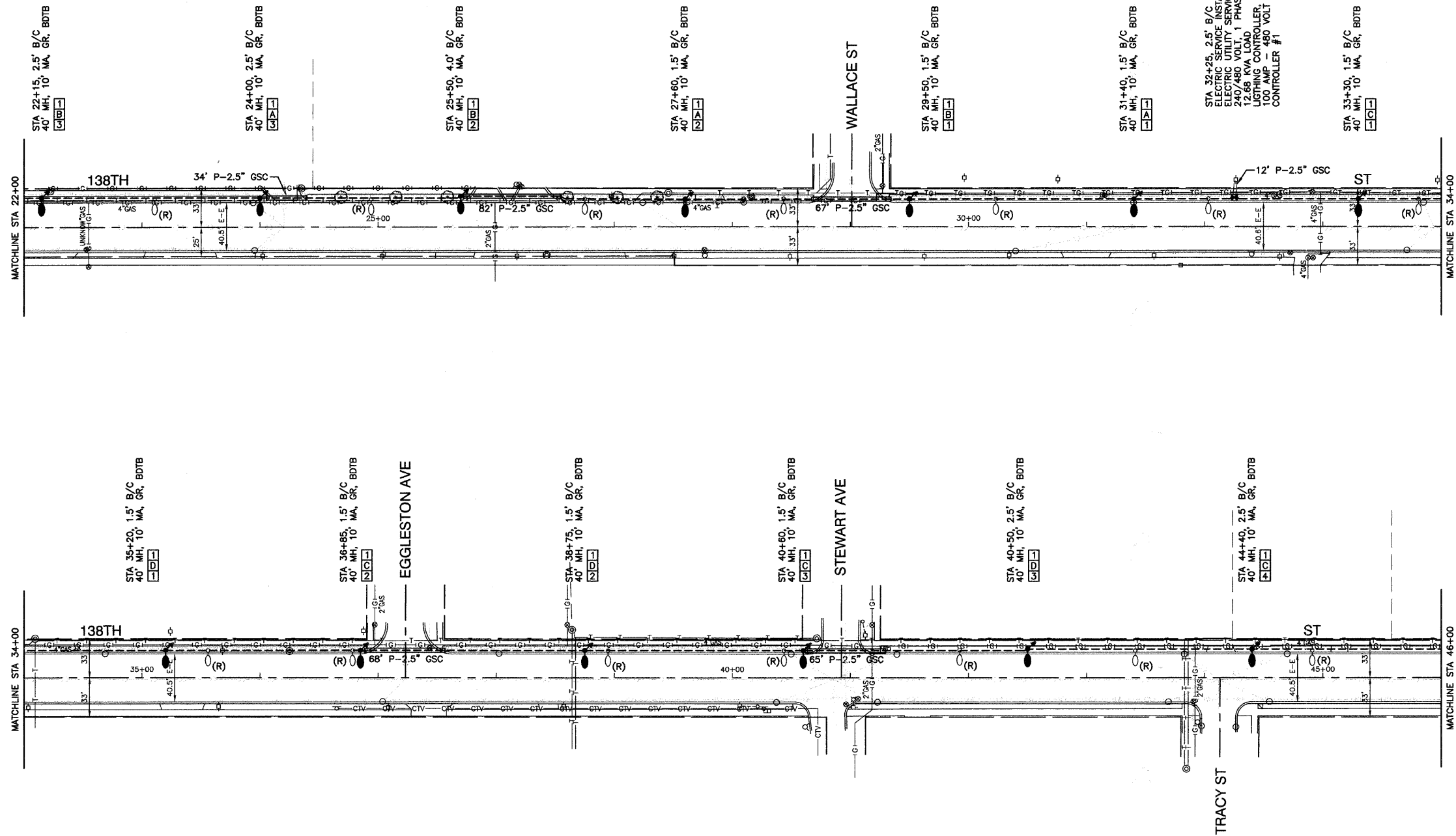
POLE IDENTIFICATION



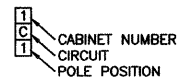
FILE NAME = 06306-PLAN-01 - IDOT P01	USER NAME =	DESIGNED -- DWS	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	138TH STREET STREET LIGHTING PLAN SHEET	F.A.U. RTE. 1597	SECTION 09-00119-00-LT	COUNTY COOK	TOTAL SHEETS 12	SHEET NO. 3		
PLOT SCALE = 1"=50'	DRAWN -- MJD	REVISOR --	REVISOR --			SCALE: 1"=50'	SHEET NO. 3 OF 12 SHEETS	STA. 11+00	TO STA. 22+00	CONTRACT NO. 63287		
PLOT DATE = 10-15-09	CHECKED -- PAP	REVISOR --	REVISOR --			FED. ROAD DIST. NO. 1			ILLINOIS	FED. AID PROJECT ARA - 9003 (334)		

PLAN	REVISIONS	DATE
NO.	BY	
	CHECKED	
	FILE NAME	

PROFILE	REVISIONS	DATE
NO.	BY	
	CHECKED	
	FILE NAME	



POLE IDENTIFICATION



- EXISTING STREET LIGHT-250W HPS
- PROPOSED STREET LIGHT-400W HPS
- PROPOSED STREET LIGHT-250W HPS
- EXISTING CONTROLLER
- PROPOSED CONTROLLER, CONSOLE TYPE
- COMED POWER POLE FOR SERVICE CONNECTION
- P — CONDUIT, PUSHED, GALVANIZED STEEL
- T — CONDUIT, TRENCHED, GALVANIZED STEEL
- U — UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1-1/4" DIA., POLYETHYLENE
- E — ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 1/0

LEGEND:

- GR GROUND ROD, 5/8" DIA. x 10'
- (R) REMOVAL OF EXISTING STREET LIGHT (NO SALVAGE)
- (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
- LT LEFT
- RT RIGHT
- MH MOUNTING HEIGHT
- MA MAST ARM
- B/C BACK OF CURB
- B/EP BEHIND EDGE OF PAVEMENT
- BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

FILE NAME = 09309-PLAN-01 - IDOT P02

USER NAME =	DESIGNED — DWS	REVISED —
	CHECKED — EJT	REVISED —
PLOT SCALE = 1"=50'	DRAWN — MJD	REVISED —
PLOT DATE = 10-15-09	CHECKED — PAP	REVISED —

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

138TH STREET
STREET LIGHTING
PLAN SHEET

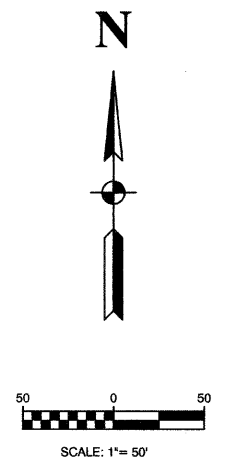
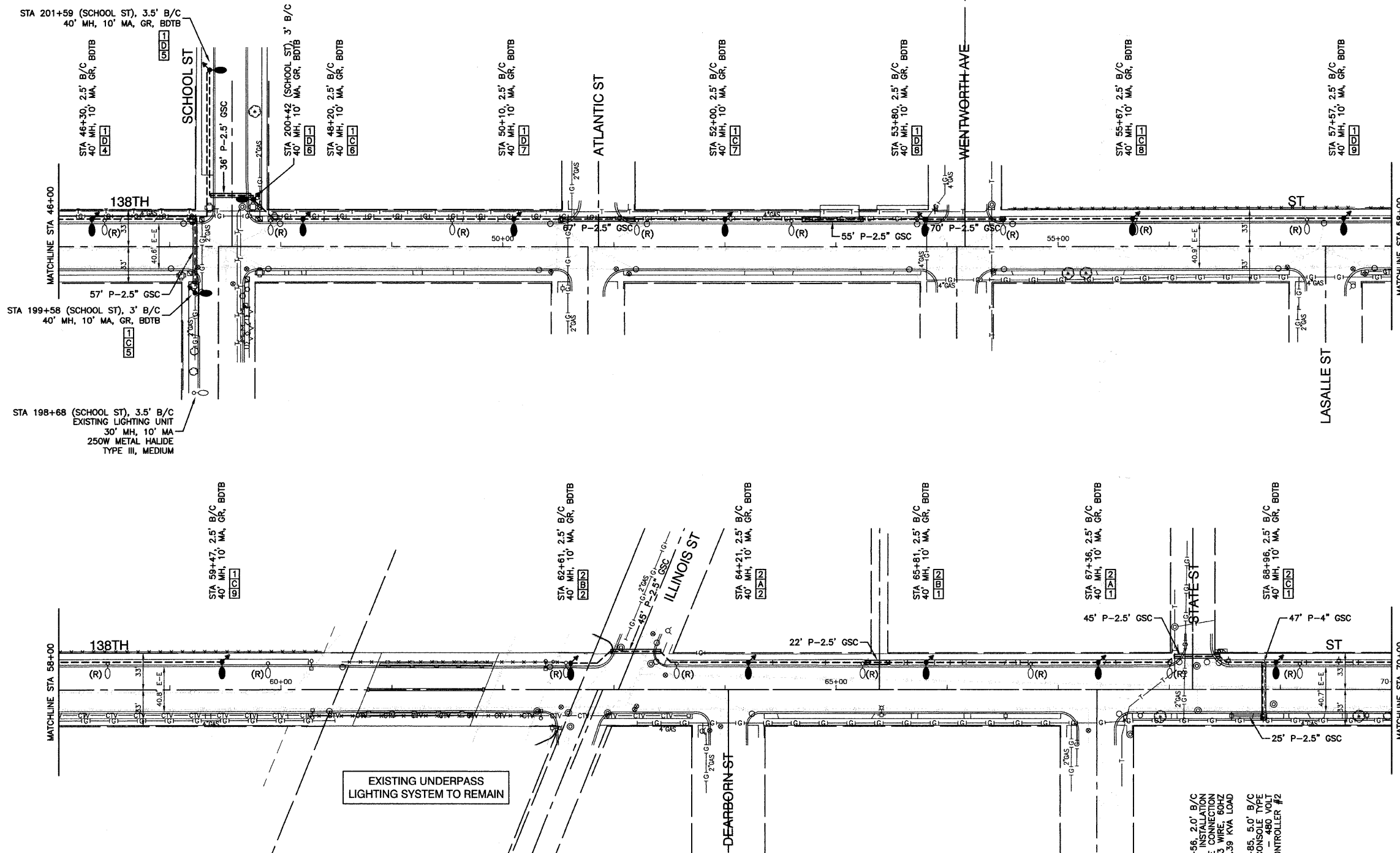
SCALE: 1"=50' SHEET NO. 4 OF 12 SHEETS STA. 22+00 TO STA. 46+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1597	09-00119-00-LT	COOK	12	4
CONTRACT NO. 63287				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ARA - 9003 (334)				



PLAN	REVISIONS	DATE
NO.	BY	
NOTE BOOK	DESIGNED	
ALIGNED	CHECKED	
CADD FILE NAME	PLOTTED	

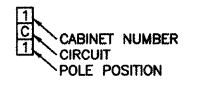
PROFILE	REVISIONS	DATE
NO.	BY	
NOTE BOOK	DESIGNED	
GRADES CHECKED	CHECKED	
BAL. NOTED	PLOTTED	



EXISTING UNDERPASS
LIGHTING SYSTEM TO REMAIN

- LEGEND:**
- EXISTING STREET LIGHT-250W HPS
 - PROPOSED STREET LIGHT-400W HPS
 - PROPOSED STREET LIGHT-250W HPS
 - EXISTING CONTROLLER
 - PROPOSED CONTROLLER, CONSOLE TYPE
 - COMED POWER POLE FOR SERVICE CONNECTION
 - - - CONDUIT, PUSHED, GALVANIZED STEEL
 - - - CONDUIT, TRENCHED, GALVANIZED STEEL
 - - - UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1-1/4" DIA., POLYETHYLENE
 - - - ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 1/0
 - GR GROUND ROD, 5/8" DIA. x 10'
 - (R) REMOVAL OF EXISTING STREET LIGHT (NO SALVAGE)
 - (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
 - LT LEFT
 - RT RIGHT
 - MH MOUNTING HEIGHT
 - MA MAST ARM
 - B/C BACK OF CURB
 - B/E/P BEHIND EDGE OF PAVEMENT
 - BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

POLE IDENTIFICATION



STA 68+56, 2.0' B/C
ELECTRIC SERVICE CONNECTION
ELECTRIC SERVICE CONNECTION
240/480VOLT, 1 PHASE, 3 WIRE, 60HZ
3.39 KVA LOAD

STA 68+85, 5.0' B/C
LIGHTING CONTROLLER, CONSOLE TYPE
60 AMP - 480 VOLT
CONTROLLER #2

FILE NAME = 09309-PLAN-01 - IDOT P03

USER NAME =	DESIGNED -- DWS	REVISED --
	CHECKED -- EJT	REVISED --
PLOT SCALE = 1"=50'	DRAWN -- MJD	REVISED --
PLOT DATE = 10-15-09	CHECKED -- PAP	REVISED --

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

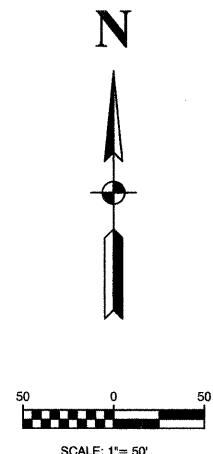
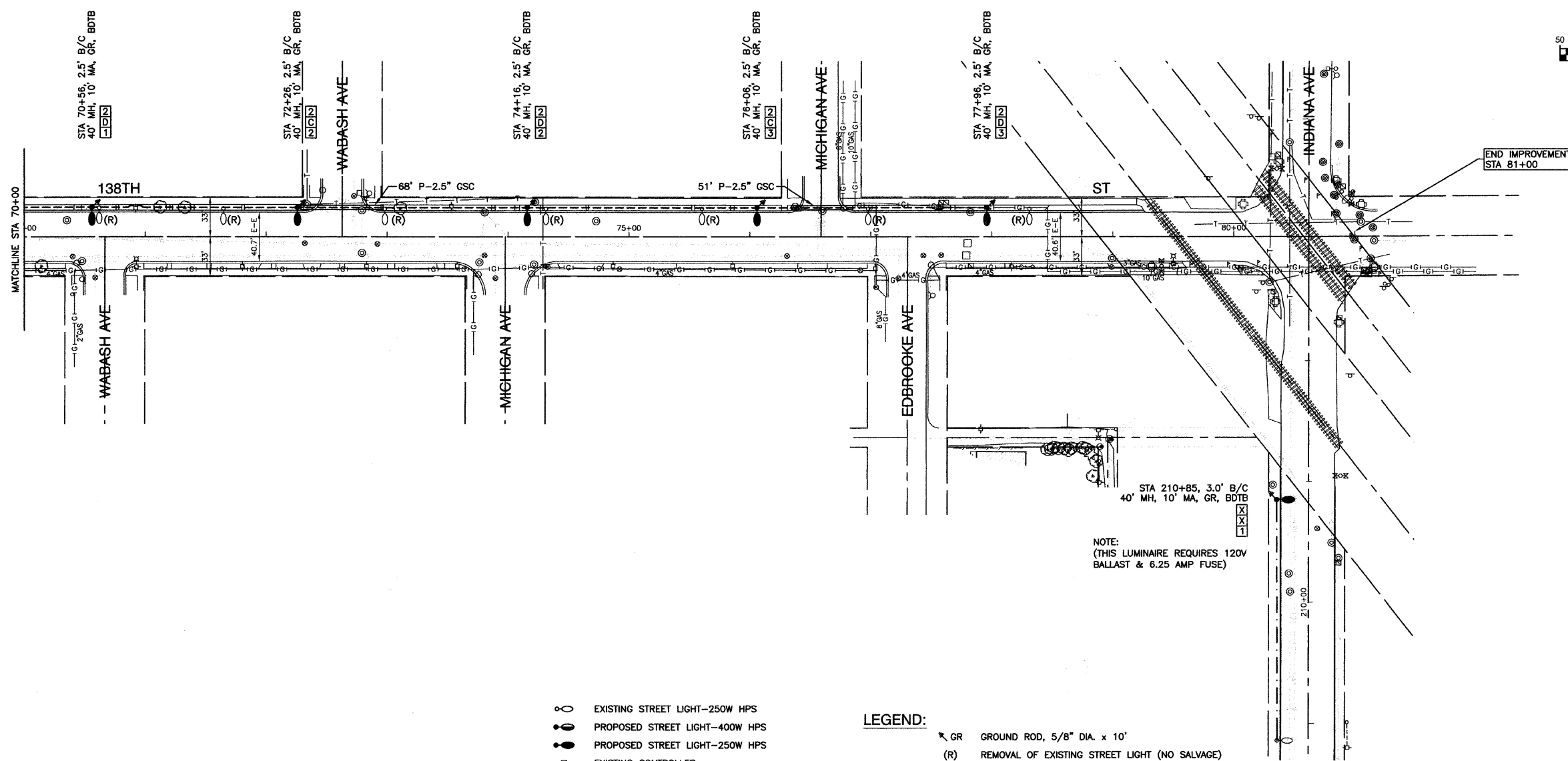
138TH STREET STREET LIGHTING PLAN SHEET	
SCALE: 1"=50'	SHEET NO. 5 OF 12 SHEETS
STA. 46+00	TO STA. 70+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1597	09-00119-00-LT	COOK	12	5
CONTRACT NO. 63287				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ARA - 9003 (334)				



PLAN	REVISIONS	DATE
NO.	PLOTTED	
NOTE BOOK	ALIGNED	
CHECKED	CHECKED	
FILE NAME	FILE NAME	

PROFILE	REVISIONS	DATE
NO.	PLOTTED	
NOTE BOOK	GRADES CHECKED	
CHECKED	B.M. NOTED	

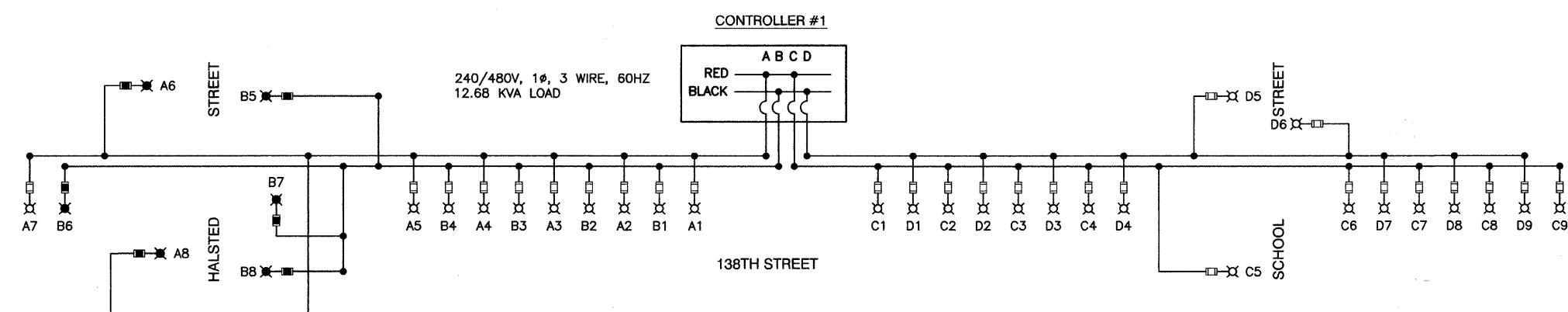


- POLE IDENTIFICATION**
- CABINET NUMBER
CIRCUIT
POLE POSITION
 - EXISTING STREET LIGHT-250W HPS
 - PROPOSED STREET LIGHT-400W HPS
 - PROPOSED STREET LIGHT-250W HPS
 - EXISTING CONTROLLER
 - PROPOSED CONTROLLER, CONSOLE TYPE
 - COMED POWER POLE FOR SERVICE CONNECTION
 - CONDUIT, PUSHED, GALVANIZED STEEL
 - CONDUIT, TRENCHED, GALVANIZED STEEL
 - UNIT DUCT, 600V, 3-1/C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1-1/4" DIA., POLYETHYLENE
 - AERIAL CABLE, 2-1/C NO. 6 WITH MESSENGER WIRE
 - ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 1/0

- LEGEND:**
- GR GROUND ROD, 5/8" DIA. x 10'
 - (R) REMOVAL OF EXISTING STREET LIGHT (NO SALVAGE)
 - (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
 - LT LEFT
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 - B/C BACK OF CURB
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 - BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

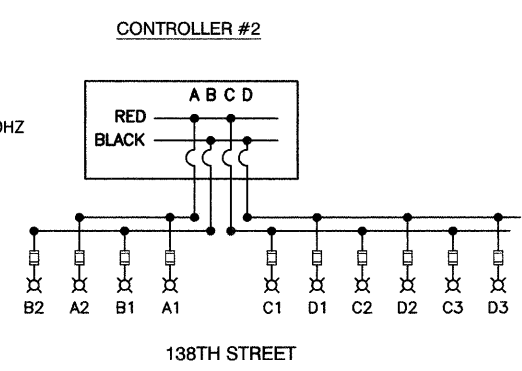


FILE NAME = 09009-PLAN-01 - IDOT P04	USER NAME =	DESIGNED -- DWS	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	138TH STREET STREET LIGHTING PLAN SHEET		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1"=50'	CHECKED -- EJT	REVISED --		SCALE: 1"=50'	1597	09-00119-00-LT	COOK	12	6	
PLOT DATE = 10-15-09	DRAWN -- MJD	REVISED --		SHEET NO. 6 OF 12 SHEETS	STA. 70+00 TO STA. 81+00	CONTRACT NO. 63287		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ARA - 9003 (334)			
	CHECKED -- PAP	REVISED --									

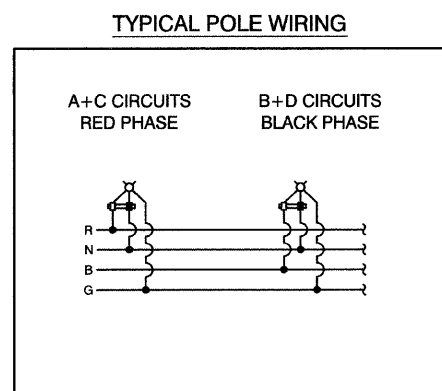


CIRCUIT	WATTS	AMPS @ 240V	
		RED PHASE	BLACK PHASE
A	2,786	11.80	
B	3,132		13.20
C	2,745	11.70	
D	2,745		11.70
SUBTOTAL	11,408	23.50	24.90
TOTAL AMPS @ 240 V		48.40	

CIRCUIT	WATTS	AMPS @ 240V	
		RED PHASE	BLACK PHASE
A	610	2.60	
B	610		2.60
C	915	3.90	
D	915		3.90
SUBTOTAL	3,050	6.50	6.50
TOTAL AMPS @ 240 V		13.00	



- LEGEND**
- ⊗ LUMINAIRE, 250W HPS, 240V
 - ⊗ LUMINAIRE, 400W HPS, 240V
 - FUSE, 3.5 AMP
 - FUSE, 6.0 AMP
 - A1 LUMINAIRE CIRCUIT
 - { CIRCUIT BREAKER
 - CONNECTION



DATE	
BY	
REVISION	
PLANNED	
ALIGNED	
CHECKED	
CADD FILE NAME	
NO.	
PLAN	
NOTE BOOK	
NO.	

DATE	
BY	
REVISION	
PLANNED	
GRADES CHECKED	
S.M. NOTED	
PROFILE	
NOTE BOOK	
NO.	

FILE NAME = 09309-DTSL-01 - P01	USER NAME =	DESIGNED -- DWS	REVISION --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	138TH STREET STREET LIGHTING SINGLE LINE WIRING DIAGRAM			F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = N/A	CHECKED -- EJT	REVISION --		SCALE: N/A	SHEET NO. 7 OF 12 SHEETS	STA. N/A	TO STA. N/A	1597	09-00119-00-LT	COOK	12	7
	PLOT DATE = 10-15-09	DRAWN -- MJD	REVISION --							CONTRACT NO. 63287			
		CHECKED -- PAP	REVISION --							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ARA - 9003 (334)			

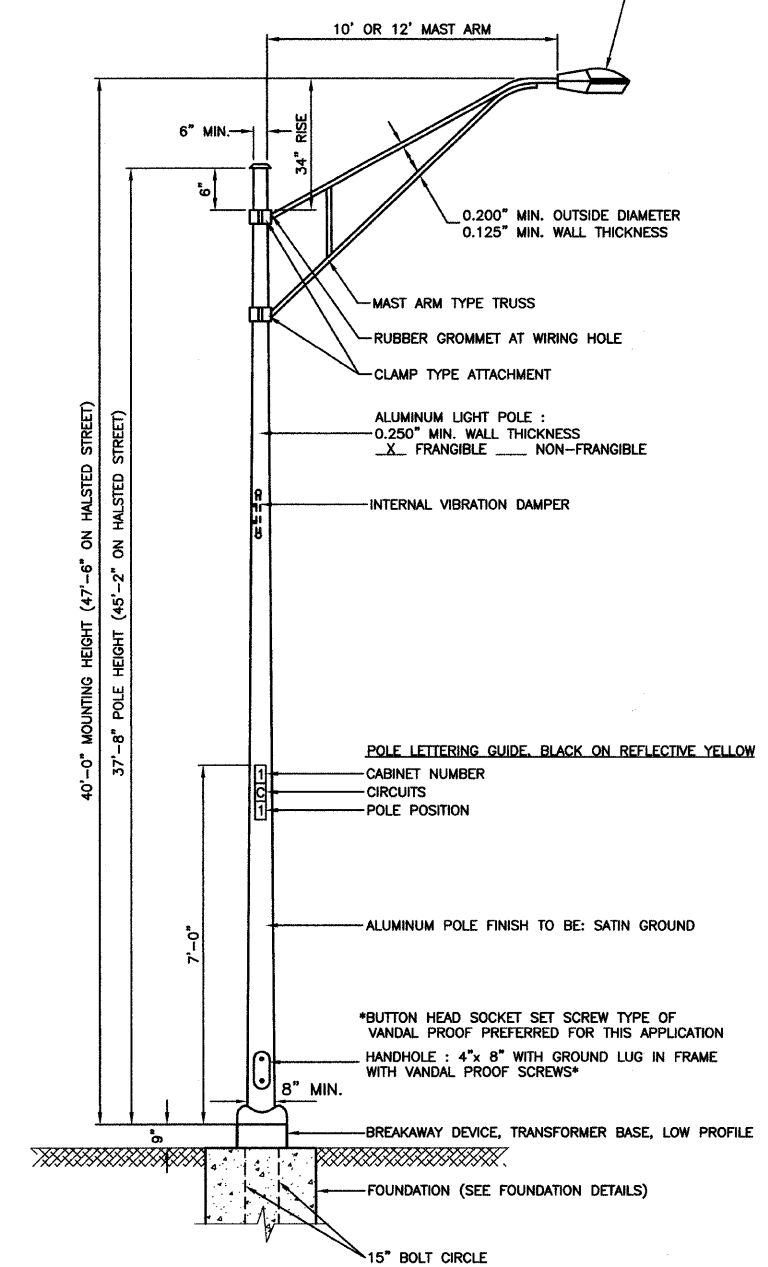


LUMINAIRE:		LUMINAIRE:	
400 WATT HIGH PRESSURE SODIUM LAMP 240 VOLT BALLAST		250 WATT HIGH PRESSURE SODIUM LAMP 240 VOLT BALLAST	
I.E.S. TYPE:	MC III LIGHT DISTRIBUTION, FULL CUTOFF	OR	MC III LIGHT DISTRIBUTION, FULL CUTOFF
LENS TYPE:	FLAT		FLAT
INITIAL LAMP LUMENS:	50,000		28,000
LAMP LIFE:	24,000 HOURS		24,000 HOURS

IMPORTANT NOTE:
TRANSFORMER BASE AND LIGHTPOLE
TO BE LEVELED AS ONE UNIT. USING
LEVELING SHIMS IF REQUIRED.

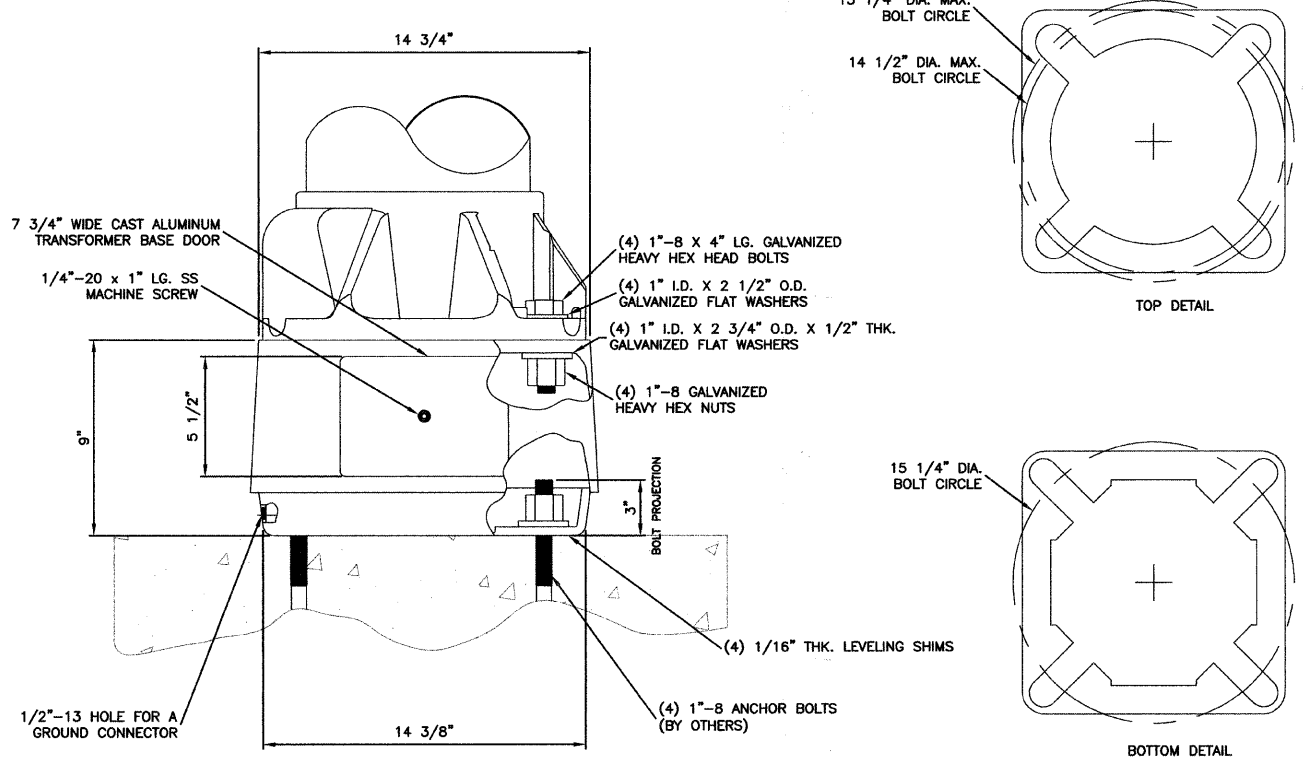
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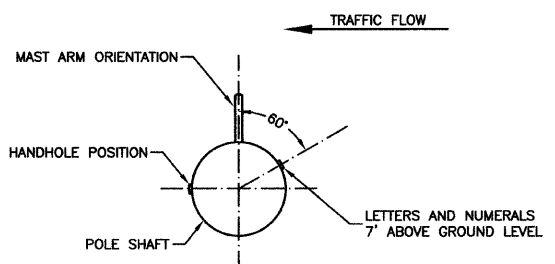


- NOTES:**
1. THE LIGHTING UNITS SHALL MEET AASHTO DESIGN CRITERIA. DESIGN FOR 90 M.P.H. WIND WITH 30% GUST AND 75 POUND LUMINAIRE HAVING AN E.P.A. OF 1.6 SQ. FT. AND PROPER ICE LOADING.
 2. ALUMINUM ALLOY 6063-T6 SHALL BE USED.
 3. LIGHT POLE AND ASSOCIATED EQUIPMENT TO BE U.L. LISTED

TYPICAL POLE INSTALLATION



BREAKAWAY TRANSFORMER BASE DETAIL



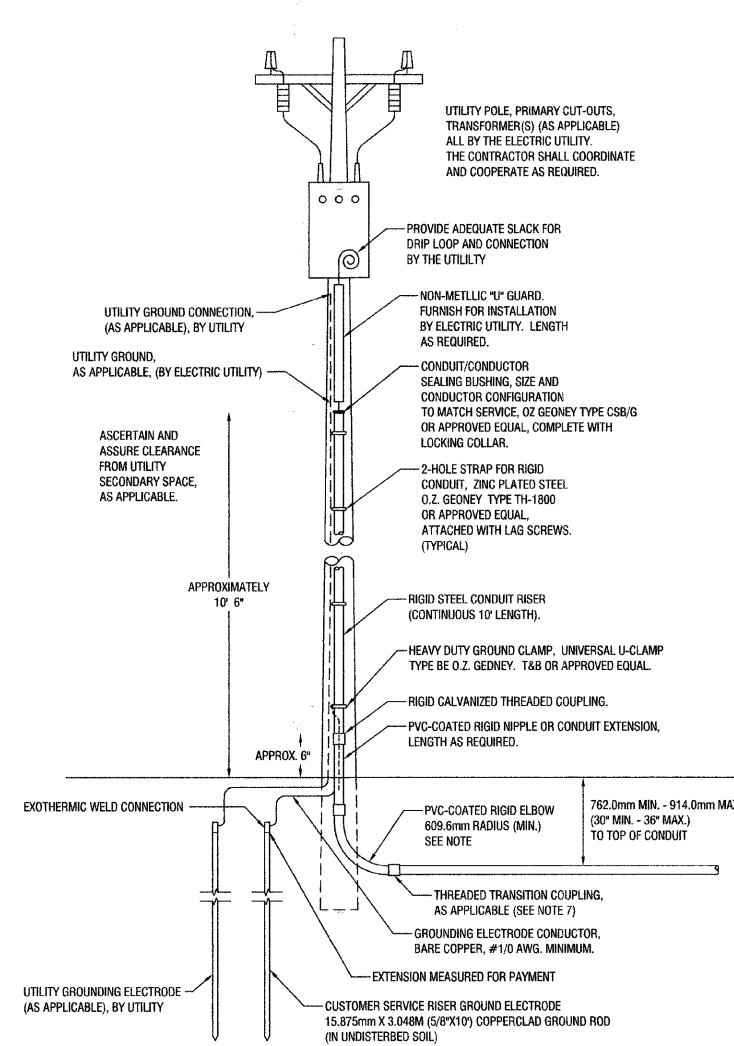
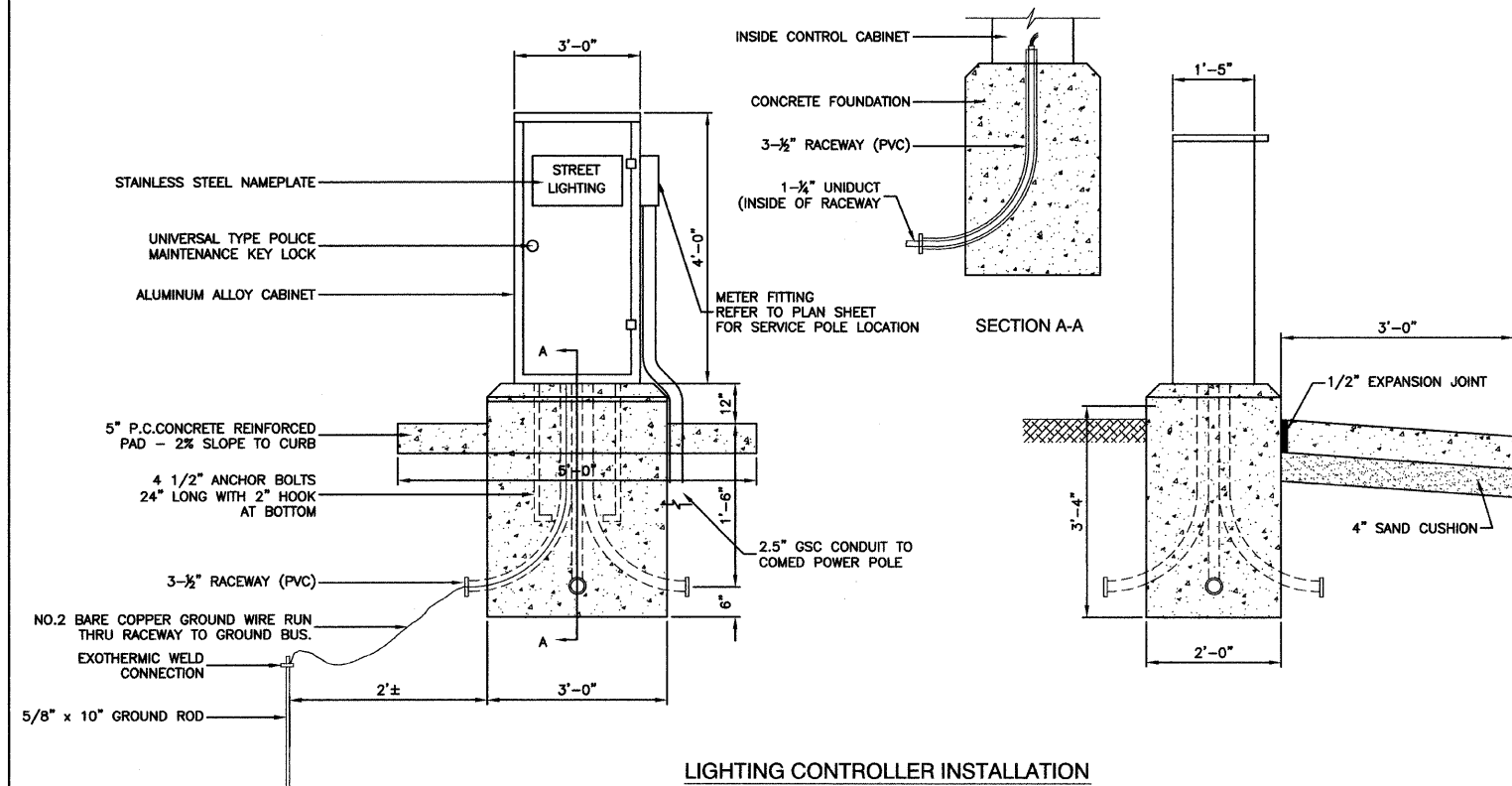
POSITION OF HANDHOLE AND NUMERALS ON POLE



FILE NAME = 09309-DT1S-01 - P02	USER NAME =	DESIGNED -- DWS	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	138TH STREET STREET LIGHTING STREET LIGHTING DETAILS				F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 10-15-09	DRAWN -- MJD	REVISED --		SHEET NO. 8 OF 12 SHEETS	STA. N/A	TO STA. N/A	CONTRACT NO. 63287					
		CHECKED -- PAP	REVISED --		FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT ARA - 9003 (334)						

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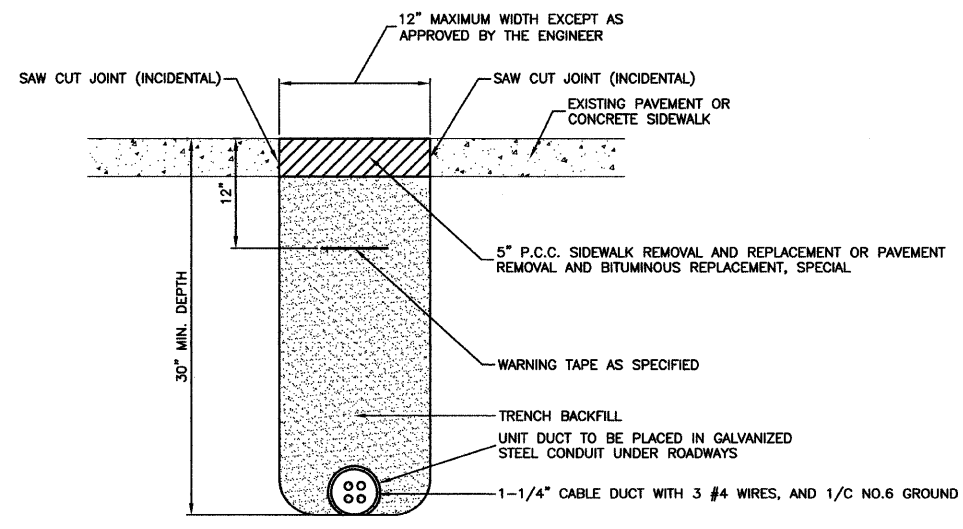


240/480 VOLT, 1Ø, 3 WIRE, 60HZ SERVICE
12.68 KVA LOAD, CONTROLLER #1

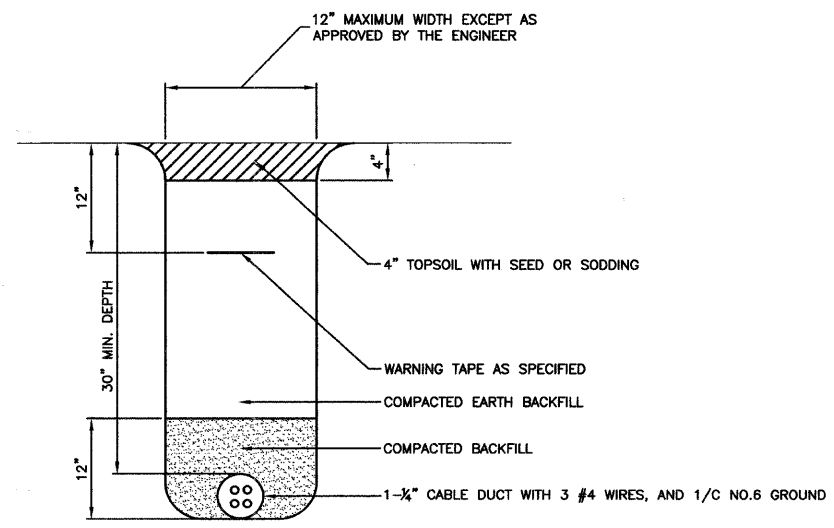
240/480 VOLT, 1Ø, 3 WIRE, 60HZ SERVICE
3.39 KVA LOAD, CONTROLLER #2

- NOTES:
- SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
 - UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF ELECTRIC UTILITY SERVICE INSTALLATION.
 - CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED.
 - PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MF RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
 - THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY 1/4" GUARD INSTALLATION AND SERVICE CONNECTION.
 - THE SERVICE METER SOCKET, AS APPLICABLE, MOUNTED ELSEWHERE AS INCLUDED SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRICAL UTILITY SERVICE INSTALLATION PAY ITEM.
 - THE SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALLIC TO NON-METALLIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
 - PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT. AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION.

SERVICE CONNECTION FOR ALL CONTROLLERS



HOT-MIX ASPHALT PAVEMENT OR CONCRETE SIDEWALK REMOVAL AND REPLACEMENT



TRENCH DETAIL



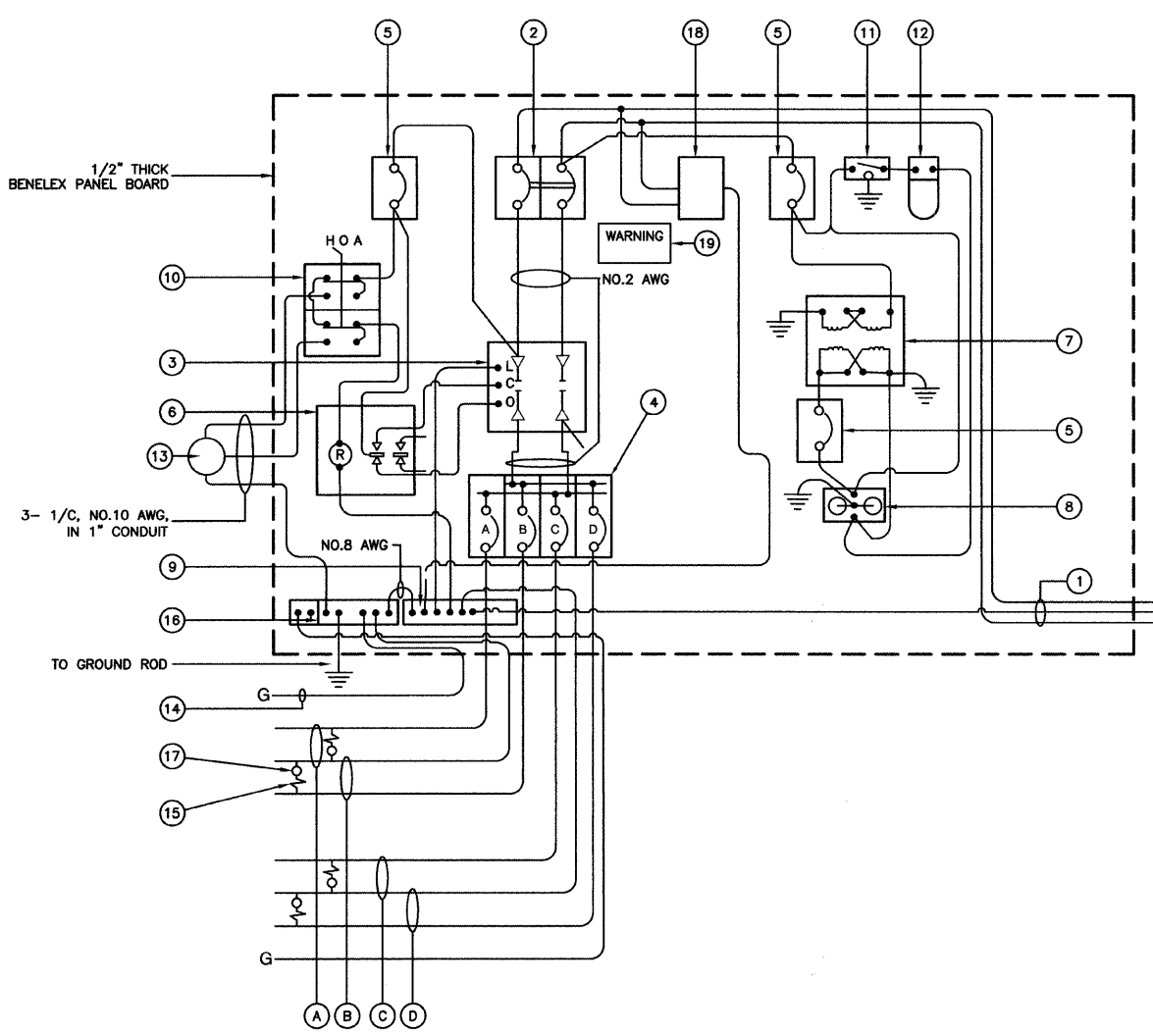
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	CHECKED -- EJT	REVISIONS --	1597			09-00119-00-LT	COOK	12	9	
PLOT SCALE = N/A	DRAWN -- MJD	REVISIONS --	CONTRACT NO. 63287							
PLOT DATE = 10-15-09	CHECKED -- PAP	REVISIONS --	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ARA - 9003 (334)							

NOMINAL WATTAGE	FUSE SIZE
400	6.0 AMP
250	3.5 AMP

LUMINAIRE FUSE SIZE TABLE

CONTROLLER WIRING DIAGRAM LEGEND

- ① 3-1/C, NO. 1/0 600V SERVICE WIRE IN 2" DIA GALVANIZED STEEL CONDUIT FOR 240/480 VOLT, 1Ø, 3 WIRE, 60HZ. SERVICE.
 - ② (1) 100 AMP (60 AMP FOR CONTROLLER #2) MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT, 100 AMP BASE, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA - 14000 AMP AT 480 V.
 - ③ (1) 100 AMP (60 AMP FOR CONTROLLER #2) CONTACTOR SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, 600 VOLT
 - ④ (4) 30 AMP CIRCUIT BREAKER, 1 POLE, 240 VOLT, 100 AMP BASE, NON-INTERCHANGEABLE TRIP RATING NEMA - 14000 AMP AT 240 VOLTS.
 - ⑤ (3) 20 AMP CONTROL CIRCUIT-CIRCUIT BREAKER, 1 POLE, 240 VOLT, 100 AMP BASE, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA 14000 AMP AT 240 V.
 - ⑥ (1) 20 AMP, 1 POLE DOUBLE THROW, 240 VOLT RELAY
 - ⑦ (1) 1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240 X 480/120 X 240 VOLT, 60HZ.
 - ⑧ (1) 20 AMP, 120 VOLT DUPLEX GFCI RECEPTACLE.
 - ⑨ NEUTRAL BUS BAR, 1/4"x1"x12" LONG MOUNTED ON PANEL WITH TAPS.
 - ⑩ 3 POSITION SELECTOR SWITCH
 - ⑪ SWITCH FOR LIGHTING FIXTURE MOUNTED IN BOX.
 - ⑫ WEATHER-PROOF INCANDESCENT LIGHTING FIXTURE WITH 60 WATT, 120 V LAMP.
 - ⑬ PHOTOCCELL MOUNTED TO TOP OF NEAREST LIGHT POLE, 240 V.
 - ⑭ NO.2 AWG INSULATED GROUND WIRE
 - ⑮ IN-LINE FUSEHOLDER WITH FUSE AS NOTED IN FUSE TABLE
 - ⑯ GROUND BUS BAR 1/4"x1"x12" MINIMUM LENGTH MOUNTED ON PANEL WITH TAPS.
 - ⑰ LUMINAIRE
 - ⑱ WARNING PLATE TO READ: WARNING, MAINTENANCE CIRCUIT IS LIVE WHEN MAIN BREAKER IS SWITCHED OFF.
- (A) CIRCUIT (RED)
 - (B) CIRCUIT (BLACK)
 - (C) CIRCUIT (RED)
 - (D) CIRCUIT (BLACK)



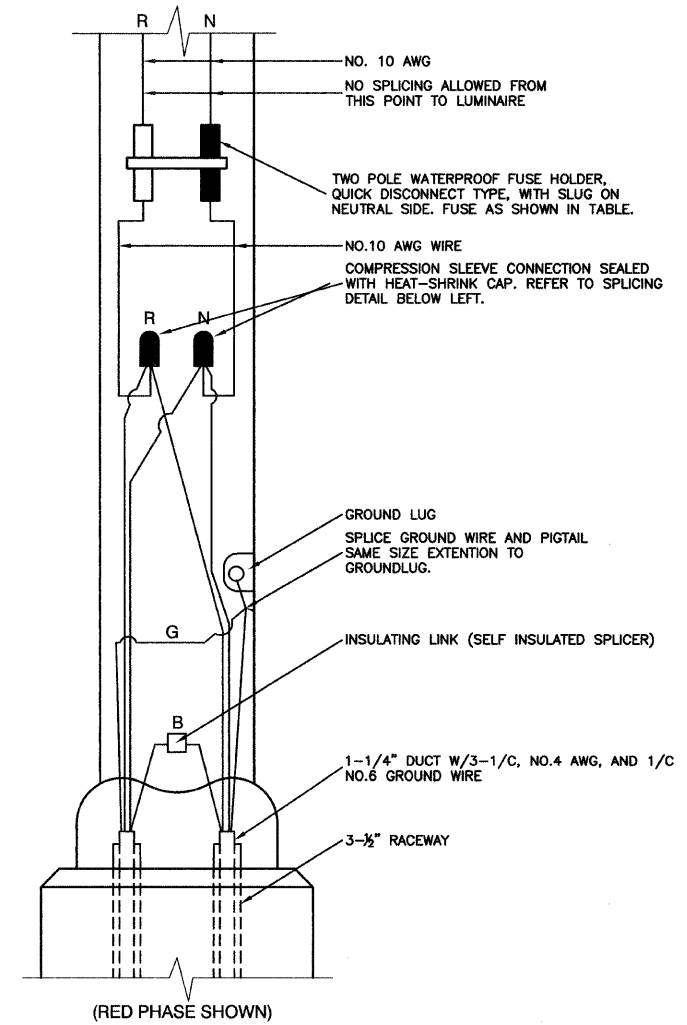
CONTROLLER WIRING DIAGRAM

GENERAL NOTES FOR CONTROL CABINET

- ENTIRE CONTROL CABINET SHALL BE GROUNDED.
- ALL WIRING SHALL BE TAGGED WITH SELF-STICKING WIRE MARKERS.
- GROUND BUS TO BE COLOR CODED GREEN, NEUTRAL BUS WHITE, AND BONDED TO CABINET ENCLOSURE, BY LISTED PRESSURE CONNECTORS OR LISTED CLAMPS.
- ALL INTERNAL CONTROLLER WIRING TO BE NO.12 AWG UNLESS OTHERWISE SPECIFIED.
- CABINET WIRING INSULATION TO BE TYPE XHHW OR APPROVED EQUAL.

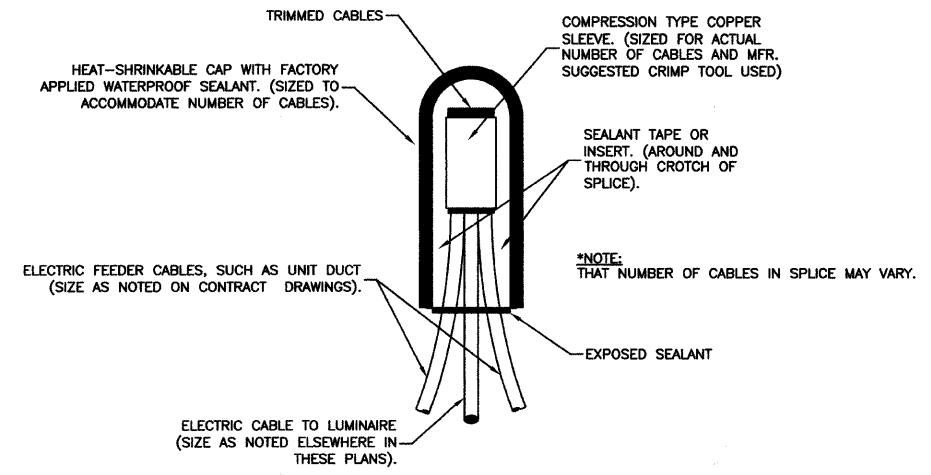
LIGHTING GENERAL NOTES

- ALL WORK TO CONFORM TO THE MOST RECENT NATIONAL ELECTRICAL CODE AND ANY APPLICABLE LOCAL CODES.
- CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES BEFORE TRENCHING OR AUGERING.
- BEFORE INSTALLING STANDARDS NEAR OVERHEAD FACILITIES CALL C.E. CO. FOR APPROVAL OF LOCATION.
- FOR LOCATION OF EXISTING UNDERGROUND ELECTRICAL CABLE CALL C.E. Co.
- CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO RESTORE ANY SPECIALIZED LANDSCAPING, (i.e. DECORATIVE ROCKS, SHRUBS, PLANTS, ECT.) OR SHALL REPLACE IT, THE COST OF WHICH SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- CARE IS TO BE TAKEN AS NOT TO DAMAGE ANY OF THE EXISTING TRAFFIC SIGNAL CONDUIT, MAGNETIC DETECTORS AND EQUIPMENT. IF ANY OF THE TRAFFIC SIGNAL CONDUIT AND/OR EQUIPMENT IS DAMAGED, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE THE CONDUIT AND/OR EQUIPMENT AT NO COST TO THE CITY OR STATE.
- THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENT FOR BURIED WARNING TAPE, SPECIFIED AS PART OF "TRENCH AND BACK FILL FOR ELECTRICAL WORK". THE INSTALLATION OF THE TAPE SHALL BE INSPECTED AND APPROVED BY THE RESIDENT ENGINEER PRIOR TO BACKFILLING OR DURING PLOWING OPERATIONS, AS APPLICABLE.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR THE ESTABLISHMENT OF FINISHED GRADE. THE RESIDENT ENGINEER MAY ASSIST THE CONTRACTOR, AS APPLICABLE, BUT THE RESPONSIBILITY FOR COORDINATING THE FINISHED GRADE ELEVATION WITH THE TOP OF THE FOUNDATION HEIGHTS AND THE LIGHT SHALL REMAIN WITH THE CONTRACTOR.
- NO POLES SHALL BE ERECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED, AS APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR WIRE MARKERS AND SHALL TAG ALL WIRE ACCORDINGLY.
- EQUIPMENT GROUND CONDUCTORS SHALL BE SPLICED AND BONDED AT EACH LIGHT POLE OR OTHER PIECE OF EQUIPMENT.
- UNDERGROUND SPLICES OF LIGHTING CONDUCTORS WILL NOT BE ALLOWED EXCEPT AT LIGHT POLE BASE.
- CONDUITS AND UNIT DUCTS MUST BE POSITIONED IN THE FIELD TO AVOID CONFLICT WITH TREE, BUSHES, DRAINS AND OTHER UTILITIES.
- THE CONTROLLER SHALL BE UL LISTED, NEMA 3R, AND BE SUITABLE FOR USE AS SERVICE ENTRANCE RATED.



POLE HANDHOLE WIRING DIAGRAM
(TYPICAL FOR SINGLE LUMINAIRE INSTALLATION)

NOTE:
ALLOW 36" LOOP OF CABLES TO INSURE SUFFICIENT SLACK FOR WITHDRAWAL OF THE CONNECTORS OUTSIDE OF THE POLE HANDHOLE.



SPLICING ELECTRIC CABLES
BASIC MATERIALS AND METHODS

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FILE NAME = 09309-DTLS-01 - P04	USER NAME =	DESIGNED -- DWS	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	138TH STREET STREET LIGHTING STREET LIGHTING DETAILS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED -- EJT	REVISED --				1597	09-00119-00-LT	COOK	12	10	
PLOT SCALE = N/A	DRAWN -- MJD	REVISED --				CONTRACT NO. 63287					
PLOT DATE = 10-15-09	CHECKED -- PAP	REVISED --				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ARA - 9003 (334)					

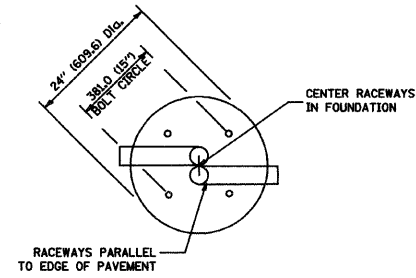


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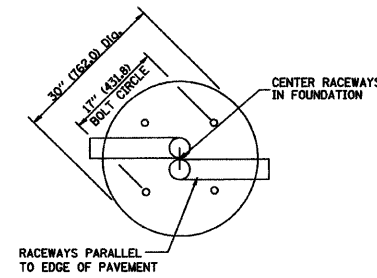
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LIGHT POLE FOUNDATION DEPTH TABLE
40 FT. (12.192 m) TO 47.5 FT. (14.478 m) MOUNTING HEIGHT

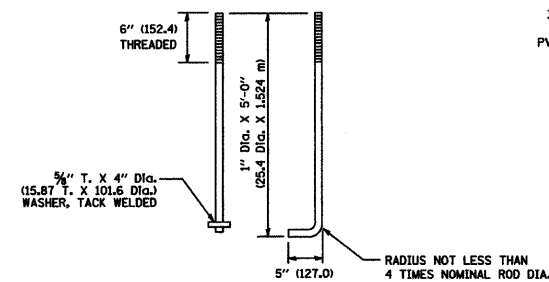
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-6" (2.93 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND φ = 34°	9'-0" (2.74 m)	10'-0" (3.05 m)
MEDIUM SAND φ = 37.5°	8'-3" (2.52 m)	9'-0" (2.74 m)
DENSE SAND φ = 40°	7'-9" (2.36 m)	9'-0" (2.74 m)



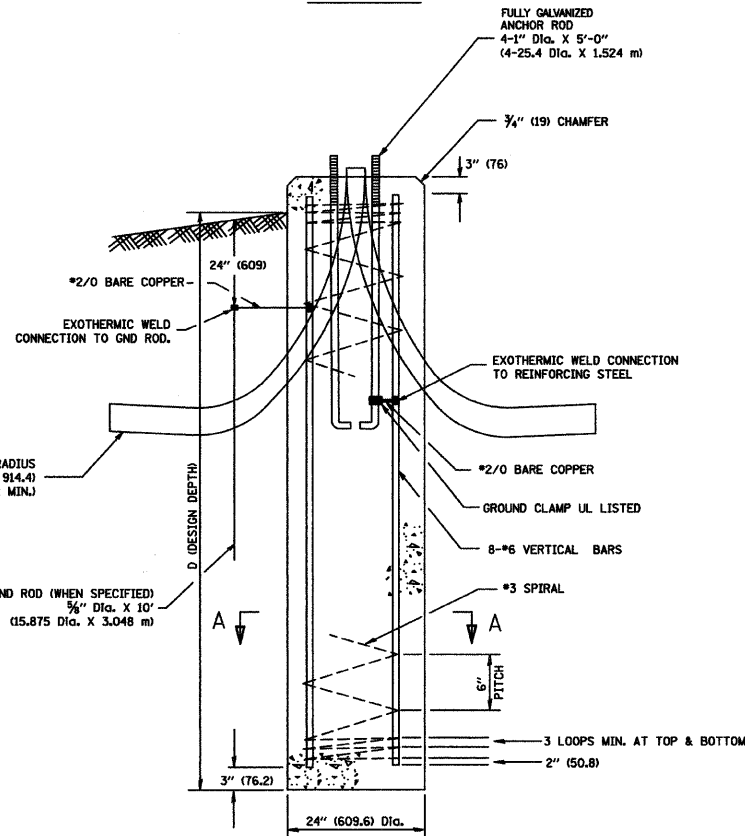
TOP VIEW



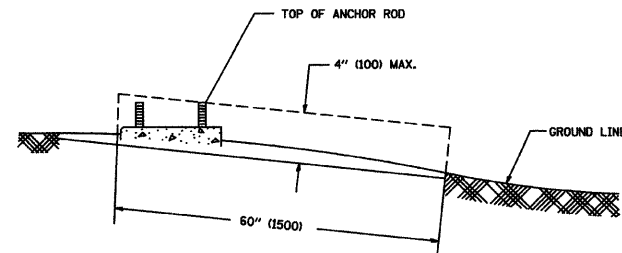
TOP VIEW



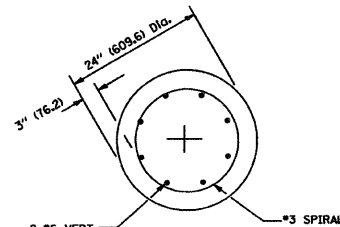
ANCHOR ROD DETAIL



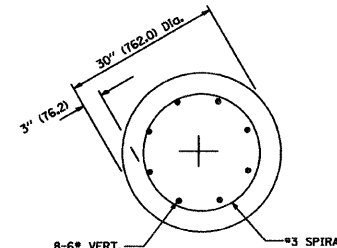
FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SECTION A-A

NOTES

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
- THE CONCRETE SHALL BE CLASS SL. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UMG MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- ANCHOR RODS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.



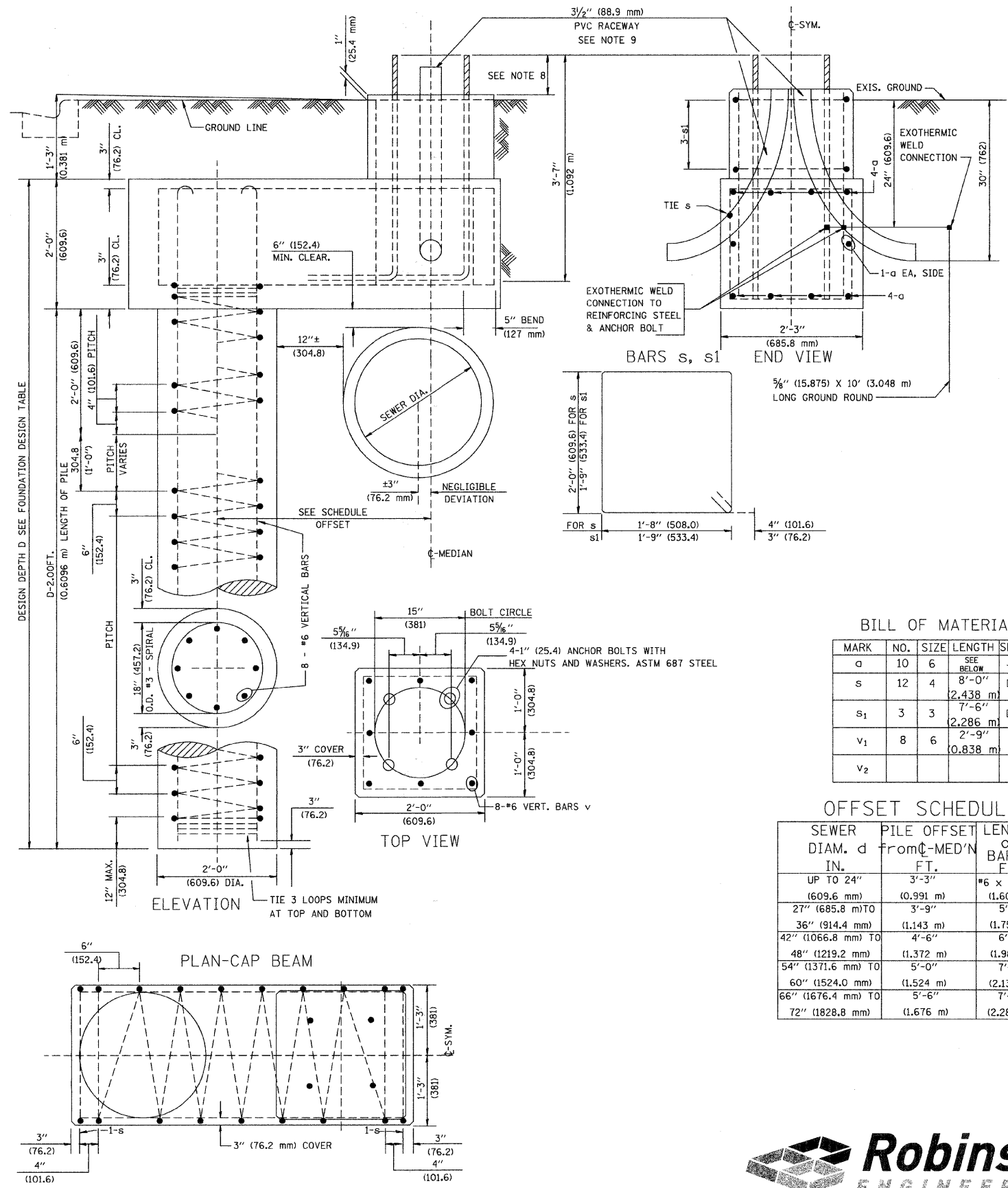
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	CHECKED -- EJT	REVISIONS				1597	09-00119-00-LT	COOK	12	11	
PLOT SCALE = N/A	DRAWN -- MJD	REVISIONS				CONTRACT NO. 63287					
PLOT DATE = 10-15-09	CHECKED -- PAP	REVISIONS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ARA - 9003 (334)					
				SCALE: N/A	SHEET NO. 11 OF 12 SHEETS	STA. N/A	TO STA. N/A				

FOUNDATION DESIGN TABLE

TYPE OF SOIL	DESIGN DEPTH OF FOUNDATION		REINFORCEMENT IN FOUNDATION			
	SINGLE ARM D	TWIN ARM D	SINGLE ARM		TWIN ARM	
			VERT BARS	SPIRAL	VERT BARS	SPIRAL
SOFT CLAY	13'-0" (3.962 m)	15'-0" (4.572 m)	8-#6X12'-6" (3.810 m)	#3X122' (37.186 m)	8-#6X14'-3" (4.343 m)	#3X141' (42.977 m)
MEDIUM CLAY	9'-6" (2.896 m)	10'-9" (3.277 m)	8-#6X9'-0" (2.743 m)	#3X90' (27.432 m)	8-#6X10'-0" (3.048 m)	#3X100' (30.480 m)
STIFF CLAY	7'-0" (2.134 m)	8'-0" (2.438 m)	8-#6X6'-6" (1.981 m)	#3X66' (20.112 m)	8-#6X7'-6" (2.286 m)	#3X76' (23.165 m)
LOOSE SAND	9'-0" (2.743 m)	10'-0" (3.048 m)	8-#6X8'-6" (2.591 m)	#3X85' (25.908 m)	8-#6X9'-6" (2.896 m)	#3X94' (28.651 m)
MEDIUM SAND	8'-3" (2.515 m)	9'-0" (2.743 m)	8-#6X8'-0" (2.438 m)	#3X78' (23.774 m)	8-#6X8'-6" (2.591 m)	#3X85' (25.908 m)
DENSE SAND	7'-9" (2.362 m)	9'-0" (2.743 m)	8-#6X7'-6" (2.286 m)	#3X73' (22.250 m)	8-#6X8'-6" (2.591 m)	#3X85' (25.908 m)
ROCK OR SOLIDIFIED SLAG	5'-0" (1.524 m)	5'-0" (1.524 m)	NONE	NONE	NONE	NONE

NOTES

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ENGINEER SHALL DETERMINE THE CLASS OF SOIL DURING EXCAVATION AND SELECT THE DESIGN DEPTH OF FOUNDATION FROM THE DESIGN TABLE.
- EXCAVATION OF THE POLE FOUNDATION SHALL BE MADE WITH AN AUGER, 24" (609.6 mm) OR 30" (762.0 mm) IN DIAMETER.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- THE ANCHOR BOLTS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORM.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF FOUNDATION WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS. IF LIGHT POLE IS MOUNTED WITHOUT BREAKAWAY DEVICE, ANCHOR BOLTS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE TOP OF THE FOUNDATION. THE CONTRACTOR SHALL CONFIRM ANCHOR BOLT EXTENTION WITH ENGINEER.
- RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.
- THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE LIGHT IS ERCTED.



BILL OF MATERIAL

MARK	NO.	SIZE	LENGTH	SHAPE
a	10	6	SEE BELOW	—
s	12	4	8'-0" (2.438 m)	□
s ₁	3	3	7'-6" (2.286 m)	□
v ₁	8	6	2'-9" (0.838 m)	—
v ₂				

OFFSET SCHEDULE

SEWER DIAM. d IN.	PILE OFFSET from C-MED'N FT.	LENGTH of BAR a FT.
UP TO 24" (609.6 mm)	3'-3" (0.991 m)	#6 x 5'-3" (1.600 m)
27" (685.8 mm) TO 36" (914.4 mm)	3'-9" (1.143 m)	5'-9" (1.753 m)
42" (1066.8 mm) TO 48" (1219.2 mm)	4'-6" (1.372 m)	6'-6" (1.981 m)
54" (1371.6 mm) TO 60" (1524.0 mm)	5'-0" (1.524 m)	7'-0" (2.134 m)
66" (1676.4 mm) TO 72" (1828.8 mm)	5'-6" (1.676 m)	7'-6" (2.286 m)

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