11-06-09 Letting, Item 108

F. A. U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1583	08-00086-00-LT	COOK	11	1
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-9003 (087)		

CONTRACT #63270

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

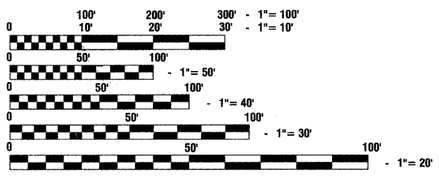
F.A.U. ROUTE 1583 - 115TH STREET
STREET LIGHTING
RIDGELAND AVENUE TO CENTRAL AVENUE
L.A. SECTION NO.: 08-00086-00-LT
PROJECT NO.: M-9003 (087)
STATE JOB NO.: C-91-013-09
VILLAGE *of* ALSIP,
COOK COUNTY

INDEX OF SHEETS

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

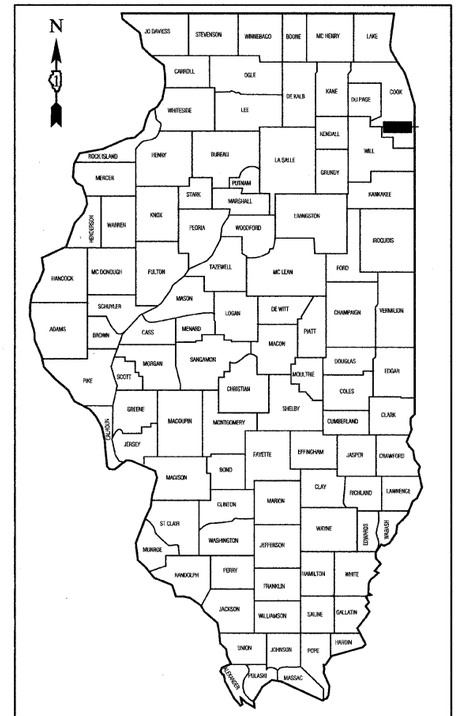
SCALES
- PLAN - 1"=50'
- PROFILE HORIZ. - 1"=50'
- PROFILE VERT. - 1"=5'
- CROSS SECTIONS - 1"=10'



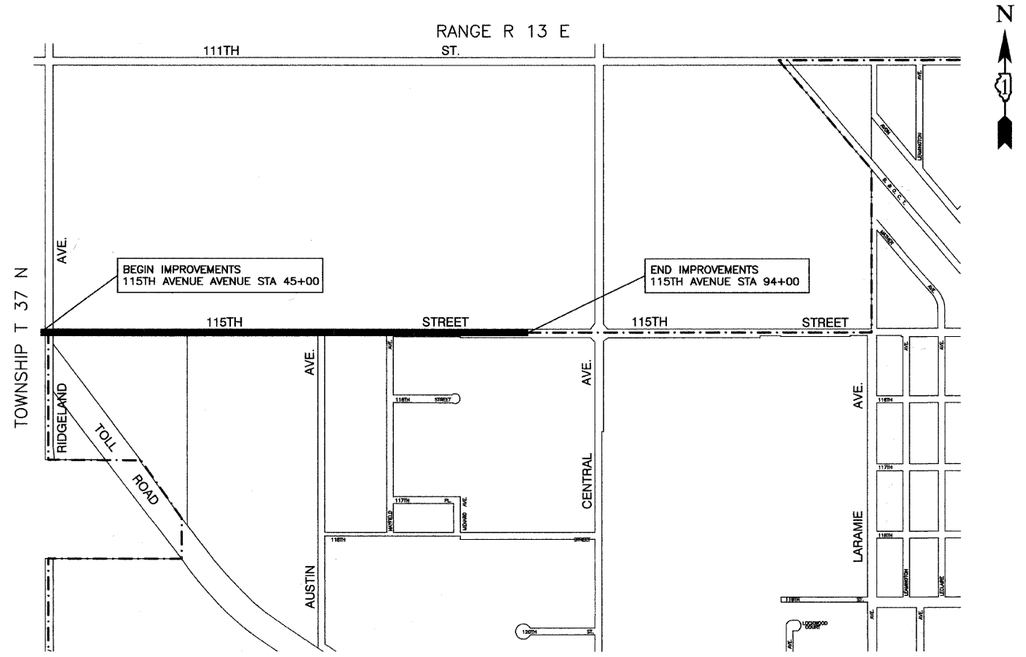
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

CONTRACT NO. 63270



LOCATION OF SECTION INDICATED THUS: -



LOCATION MAP

GROSS LENGTH=4,900 FEET=0.93 MILES
NET LENGTH=4,900 FEET=0.93 MILES

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Approved 8-10-09
Patrick E. Hutchinson
President, Village of Alsip

Passed SEPTEMBER 1, 2009
Herman Holt
District 1 Engineer of Local Roads & Streets

Released for Bid Based on Limited Review SEPTEMBER 1, 2009
Diane M. O'Keefe
Deputy Director of Highways, Region 1 Engineer

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PREPARED BY OR UNDER THE DIRECT SUPERVISION OF:

Edward J. Tunkieus
8-10-2009

EDWARD J. TUNKIEWICZ
62-38326
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS

LICENSE EXPIRES: 11/30/09

I.D.O.T. 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	PAVEMENT	LANDSCAPE	LIGHTS
					CONSTRUCTION TYPE CODE		
					I000	Y003	Y030–1E
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	800		800	
	21300010	EXPLORATION TRENCH, SPECIAL	FOOT	200			200
	25200200	SUPPLEMENTAL WATERING	UNIT	120		120	
	25200650	SODDING, SALT TOLERANT (SPECIAL)	SQ YD	800		800	
	44004610	SIDEWALK REMOVAL AND REPLACEMENT (SPECIAL)	SQ FT	100	100		
	67100100	MOBILIZATION	L SUM	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	1			1
	80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1			1
	81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	50			50
	81018700	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	1195			1195
	81603090	UNIT DUCT, 600V, 3–1/C NO. 4 AND 1/C NO. 6 GROUND, (XLP–TYPE USE), 1 1/4" DIA., POLYETHYLENE	FOOT	10655			10655
	81702440	ELECTRIC CABLE IN CONDUIT, 600V (XLP–TYPE USE), 3–1/C NO. 1/0	FOOT	120			120
	82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	37			37
	82102310	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 310 WATT	EACH	4			4
	83002300	LIGHT POLE, ALUMINUM, 40 FT. M.H., 8 FT. DAVIT ARM	EACH	21			21
	83002400	LIGHT POLE, ALUMINUM, 40 FT. M.H., 10 FT. DAVIT ARM	EACH	7			7
	83002500	LIGHT POLE, ALUMINUM, 40 FT. M.H., 12 FT. DAVIT ARM	EACH	12			12
	83002600	LIGHT POLE, ALUMINUM, 40 FT. M.H., 15 FT. DAVIT ARM	EACH	1			1
	83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	266			266
	83600215	LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	FOOT	21			21
	83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE	EACH	41			41
	XX001399	UNIT DUCT, BORED AND PULLED	FOOT	9000			9000
	XX006937	GROUND ROD, 5/8" DIA. X 10 FT.	EACH	41			41
	XX008189	LIGHTING CONTROLLER, CONSOLE TYPE 100 AMP–480 VOLT	EACH	1			1

* – INDICATES SPECIALTY ITEMS

GENERAL NOTES :

1. ALL WORK TO CONFORM TO THE NATIONAL ELECTRICAL CODE AND ANY APPLICABLE LOCAL CODES.
2. CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES BEFORE TRENCHING OR AUGERING.
3. BEFORE INSTALLING STANDARDS NEAR OVERHEAD FACILITIES CALL CE Co. FOR APPROVAL OF LOCATION.
4. FOR LOCATION OF EXISTING UNDERGROUND ELECTRICAL CABLE CALL CE Co.
5. ALL CONDUIT TO BE 2" DIAMETER UNLESS OTHERWISE SPECIFIED.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. NO POLES SHALL BE ERECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED, AS APPROVED BY THE ENGINEER.
13. THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR WIRE MARKERS AND SHALL TAG ALL WIRE MARKERS AND SHALL TAG ALL WIRE ACCORDINGLY.
14. EQUIPMENT GROUND CONDUCTORS SHALL BE SPLICED AND BONDED AT EACH LIGHT POLE OR OTHER PIECE OF EQUIPMENT.
15. CONDUIT AND UNIT DUCT MUST BE POSITIONED IN THE FIELD TO AVOID CONFLICT WITH TREES, BUSHES, DRAINS AND OTHER UTILITIES AND LANDSCAPING.
16. 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.
17. 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.

Robinson ENGINEERING

FILE NAME = 08295-QUAN-01 - P01	USER NAME =	DESIGNED — PAP	REVISED —
		CHECKED — EJT	REVISED —
	PLOT SCALE = N/A	DRAWN — MJD	REVISED —
	PLOT DATE = 07-01-09	CHECKED — DWS	REVISED —

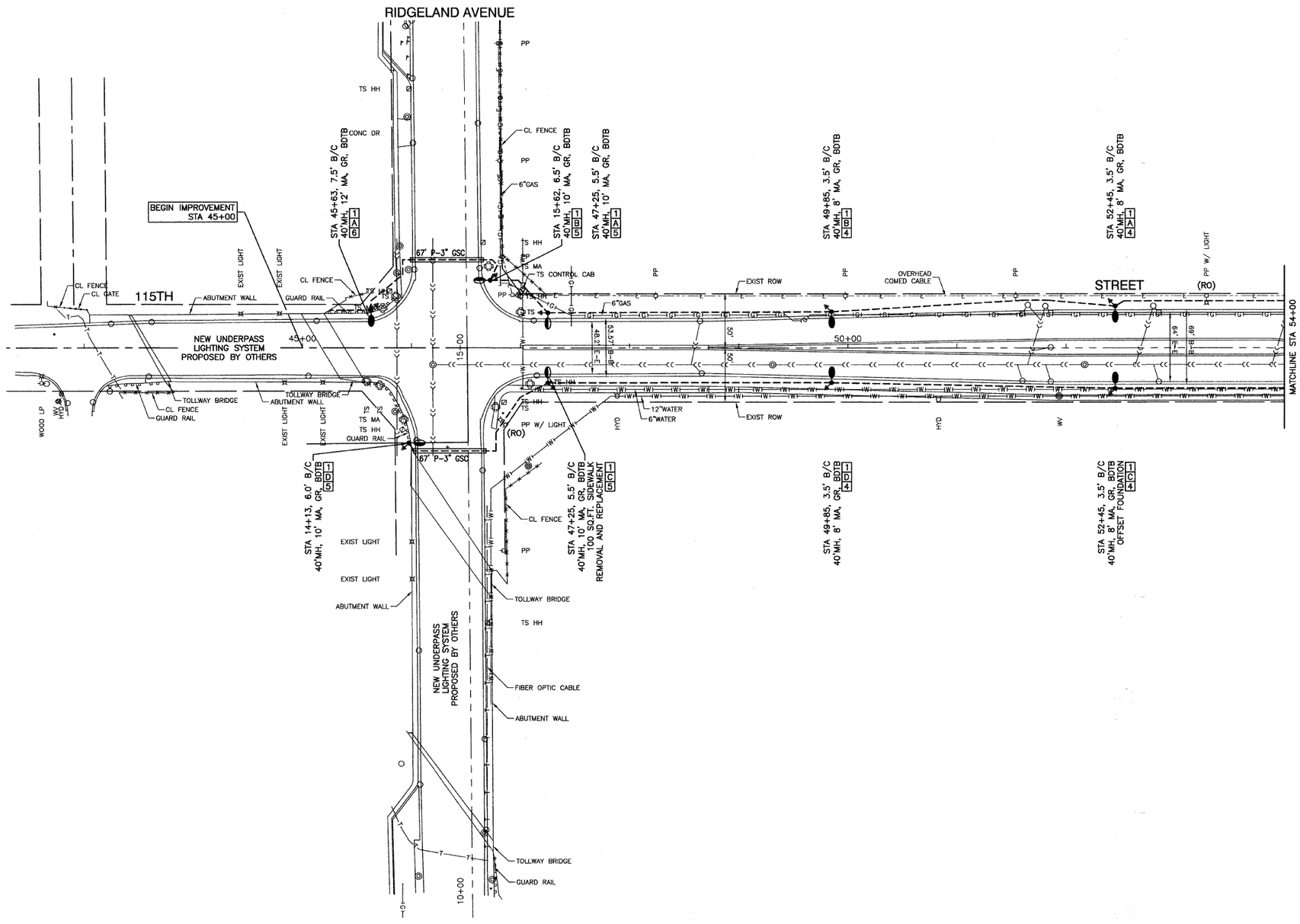
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

115TH STREET
RIDGELAND AVENUE TO CENTRAL AVENUE
QUANTITIES AND GENERAL NOTES

SCALE: N/A | SHEET NO. 2 OF 11 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1583	08-00086-00-LT	COOK	11	2
		CONTRACT NO. 63270		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-9003 (087)		

SECTION 20, TOWNSHIP 37, RANGE 13



LEGEND:

- EXISTING STREET LIGHT – 250W HPS
- PROPOSED STREET LIGHT – 310W HPS
- PROPOSED STREET LIGHT–250W HPS
- P — PROPOSED CONTROLLER
- P — CONDUIT, PUSHED, GALVANIZED STEEL
- T — CONDUIT, TRENCHED, GALVANIZED STEEL
- UNIT DUCT, 3–1/C, NO.4 AWG AND NO.8 GROUND, 600V IN 1–1/4" DUCT
- SERVICE WIRE, 3–1/C, NO. 1/0 AWG. (SEE LIGHTING CONTROLLER PLAN)
- GR — GROUND ROD, 5/8" DIA. x 10'
- (R) — REMOVAL OF EXISTING STREET LIGHT
- (RO) — REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
- LT — LEFT
- RT — RIGHT
- MH — MOUNTING HEIGHT
- MA — MAST ARM
- B/C — BACK OF CURB
- BDTB — BREAKAWAY DEVICE, TRANSFORMER BASE
- R&R — REMOVE AND REPLACE EXISTING STREET LIGHT

POLE IDENTIFICATION

1 – C – 1
- C — CABINET NUMBER
- 1 — CIRCUIT
- 1 — POLE POSITION

Robinson ENGINEERING

FILE NAME = 08295_02-PLAN-01 - LGHT01	USER NAME =	DESIGNED — PAP	REVISED —	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED — EJT	REVISED —	
	PLOT SCALE = 1"=50'	DRAWN — MJD	REVISED —	
	PLOT DATE = 07-01-09	CHECKED — DWS	REVISED —	

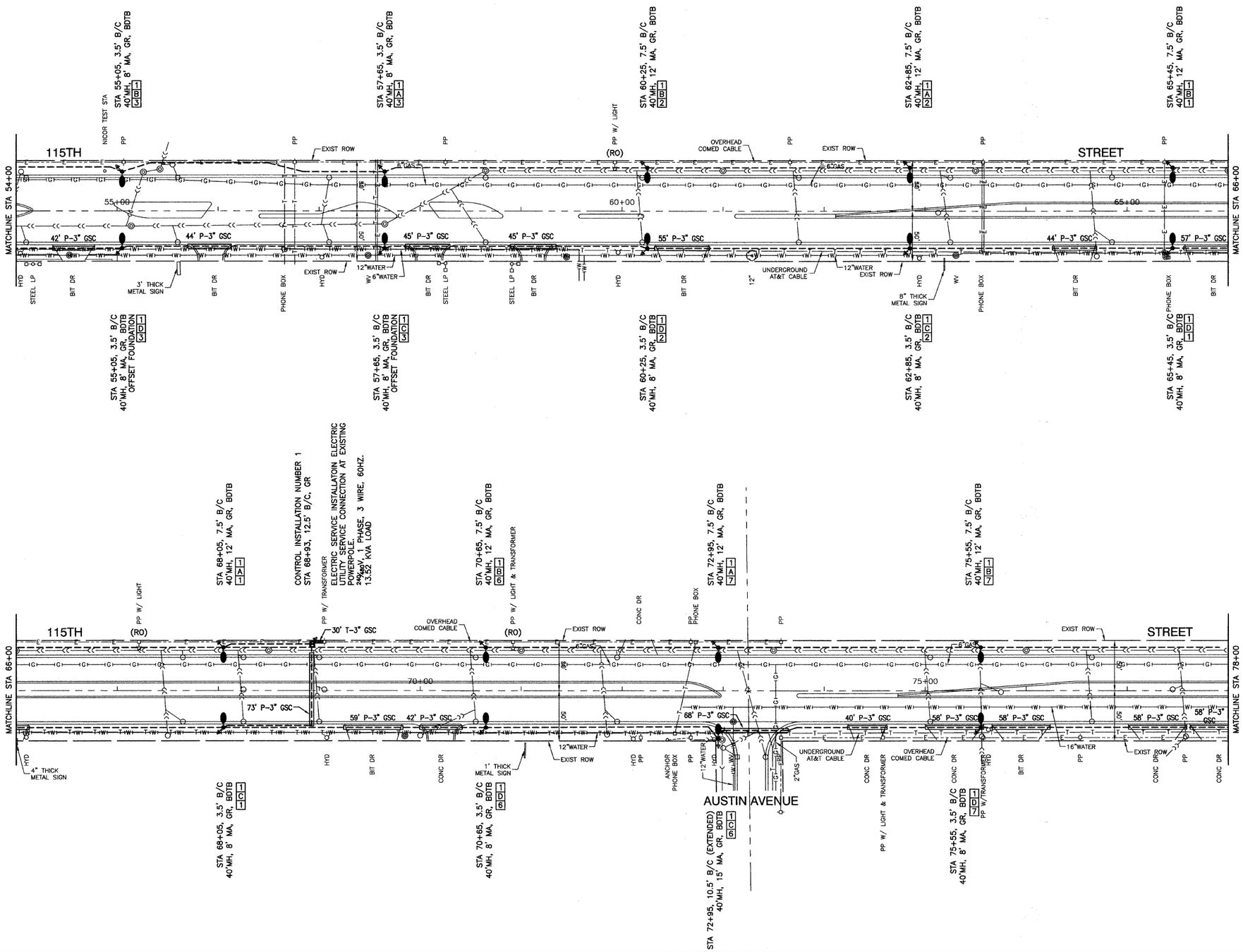
115TH STREET
RIDGELAND AVENUE TO CENTRAL AVENUE
STREET LIGHTING PLANS

SCALE: 1"=50' | SHEET NO. 3 OF 11 SHEETS | STA. 45+00 | TO STA. 54+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1583	08-00086-00-LT	COOK	11	3
		CONTRACT NO. 63270		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-9003 (087)

SECTION 20, TOWNSHIP 37, RANGE 13



LEGEND:

- EXISTING STREET LIGHT – 250W HPS
- PROPOSED STREET LIGHT – 310W HPS
- PROPOSED STREET LIGHT–250W HPS
- PROPOSED CONTROLLER
- P — CONDUIT, PUSHED, GALVANIZED STEEL
- T — CONDUIT, TRENCHED, GALVANIZED STEEL
- UNIT DUCT, 3–1/C, NO.4 AWG AND NO.8 GROUND, 600V IN 1–1/4" DUCT
- SERVICE WIRE, 3–1/C, NO. 1/0 AWG. (SEE LIGHTING CONTROLLER PLAN)
- GR — GROUND ROD, 5/8" DIA. x 10'
- (R) — REMOVAL OF EXISTING STREET LIGHT
- (RO) — REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
- LT — LEFT
- RT — RIGHT
- MH — MOUNTING HEIGHT
- MA — MAST ARM
- B/C — BACK OF CURB
- BDTB — BREAKAWAY DEVICE, TRANSFORMER BASE
- R&R — REMOVE AND REPLACE EXISTING STREET LIGHT

POLE IDENTIFICATION

- CABINET NUMBER
- CIRCUIT
- POLE POSITION

Robinson ENGINEERING

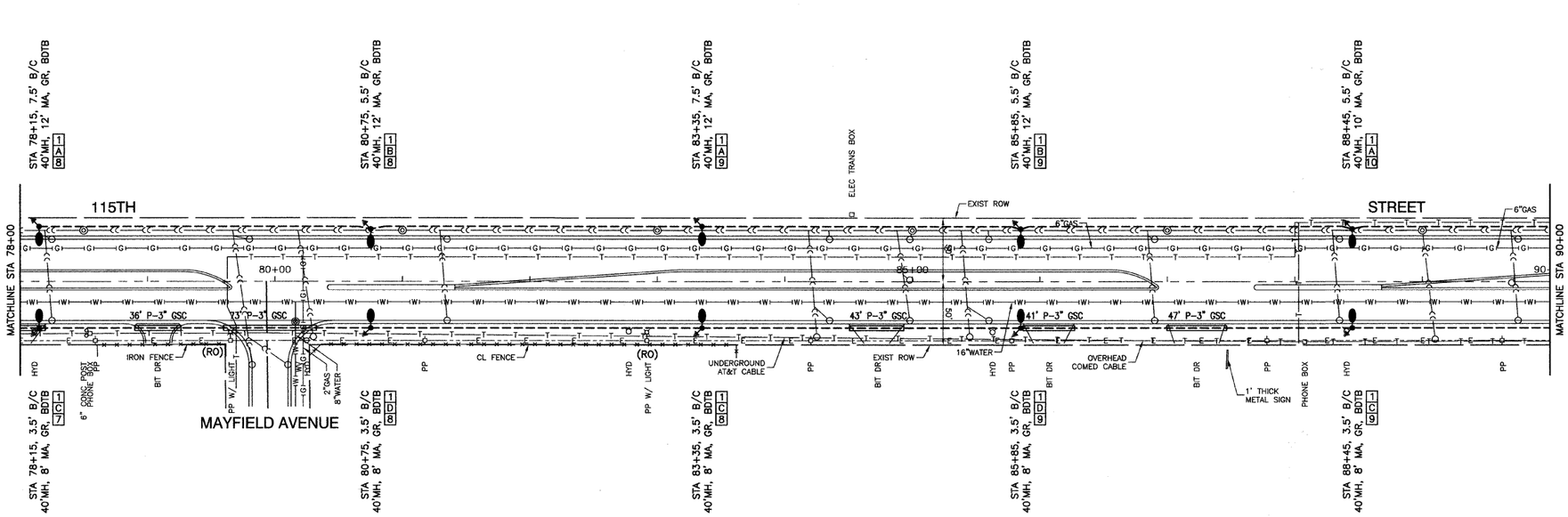
FILE NAME = 08295_02-PLAN-01 - LGHT02	USER NAME =	DESIGNED — PAP	REVISED —	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED — EJT	REVISED —	
	PLOT SCALE = 1"=50'	DRAWN — MJD	REVISED —	
	PLOT DATE = 07-01-09	CHECKED — DWS	REVISED —	

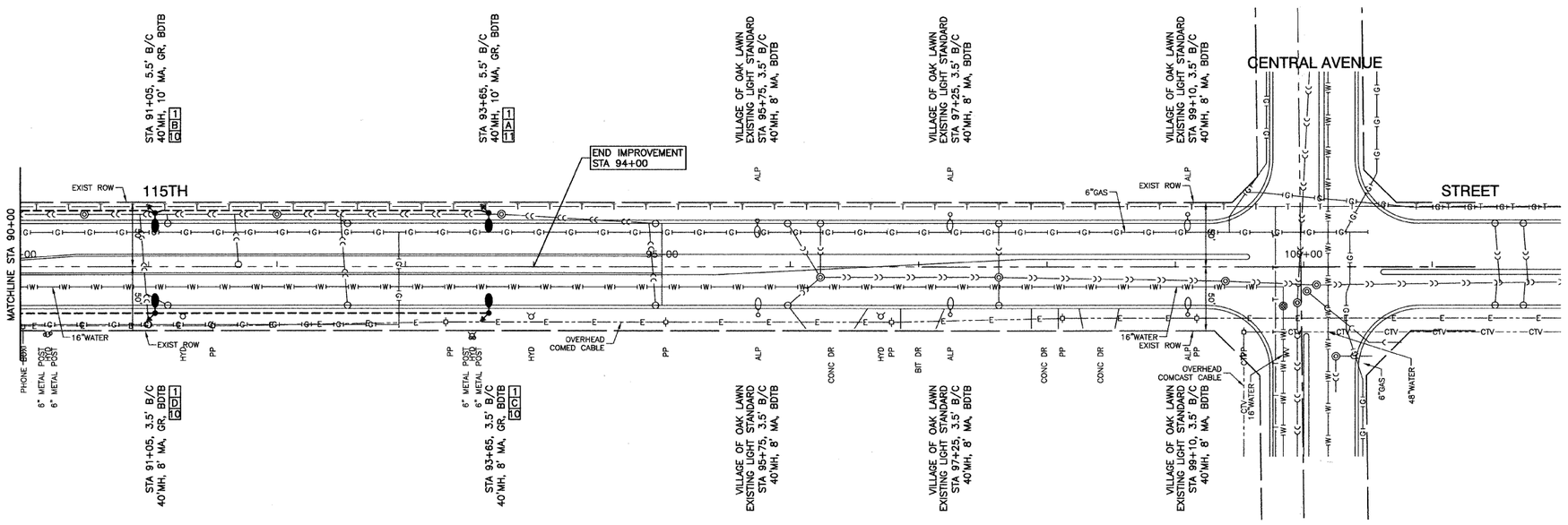
115TH STREET
RIDGELAND AVENUE TO CENTRAL AVENUE
STREET LIGHTING PLANS

SCALE: 1"=50' | SHEET NO. 4 OF 11 SHEETS | STA. 54+00 TO STA. 78+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1583	08-00086-00-LT	COOK	11	4
		CONTRACT NO. 63270		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-9003 (087)		

SECTION 20, TOWNSHIP 37, RANGE 13





LEGEND:

	EXISTING STREET LIGHT – 250W HPS
	PROPOSED STREET LIGHT – 310W HPS
	PROPOSED STREET LIGHT–250W HPS
C	PROPOSED CONTROLLER
P	CONDUIT, PUSHED, GALVANIZED STEEL
T	CONDUIT, TRENCHED, GALVANIZED STEEL
	UNIT DUCT, 3–1/C, NO.4 AWG AND NO.8 GROUND, 600V IN 1–1/4" DUCT
	SERVICE WIRE, 3–1/C, NO. 1/0 AWG. (SEE LIGHTING CONTROLLER PLAN)
GR	GROUND ROD, 5/8" DIA. x 10'
(R)	REMOVAL OF EXISTING STREET LIGHT
(RO)	REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
LT	LEFT
RT	RIGHT
MH	MOUNTING HEIGHT
MA	MAST ARM
B/C	BACK OF CURB
BDTB	BREAKAWAY DEVICE, TRANSFORMER BASE
R&R	REMOVE AND REPLACE EXISTING STREET LIGHT

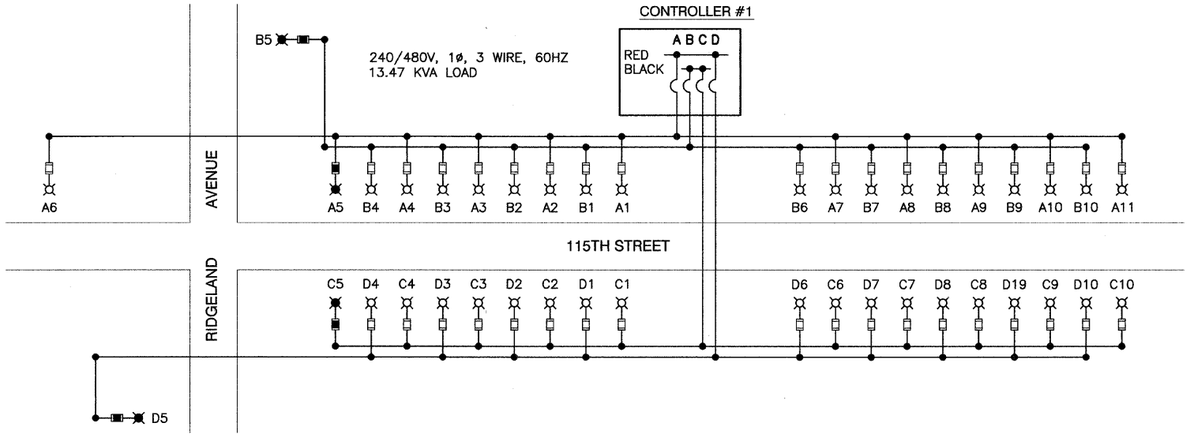
POLE IDENTIFICATION

1 C 1
- CABINET NUMBER
- CIRCUIT
- POLE POSITION

Robinson ENGINEERING

FILE NAME = 08295_02-PLAN-01 - LGHT03	USER NAME =	DESIGNED — PAP	REVISED —	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	115TH STREET RIDGELAND AVENUE TO CENTRAL AVENUE STREET LIGHTING PLANS
		CHECKED — EJT	REVISED —		
	PLOT SCALE = 1"=50'	DRAWN — MJD	REVISED —		
	PLOT DATE = 07-01-09	CHECKED — DWS	REVISED —		SCALE: 1"=50' SHEET NO. 5 OF 11 SHEETS STA. 78+00 TO STA. 94+00

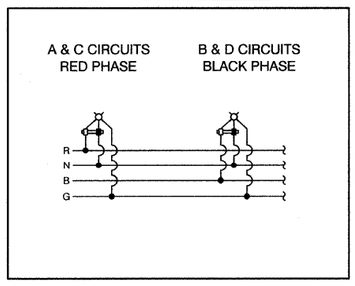
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1583	08-00086-00-LT	COOK	11	5
		CONTRACT NO. 63270		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-9003 (087)		



LOAD TABULATIONS CONTROLLER #1			
CIRCUIT	WATTS	AMPS @ 240V	
		RED PHASE	BLACK PHASE
A	3,262	14.50	
B	2,972		13.20
C	2,972	13.20	
D	2,972		13.20
E	0	0.00	
F	0		0.00
G	0	0.00	
H	0		0.00
SUBTOTAL	12,178	27.70	26.40
TOTAL AMPS @ 240 V			54.10

N

TYPICAL POLE WIRING

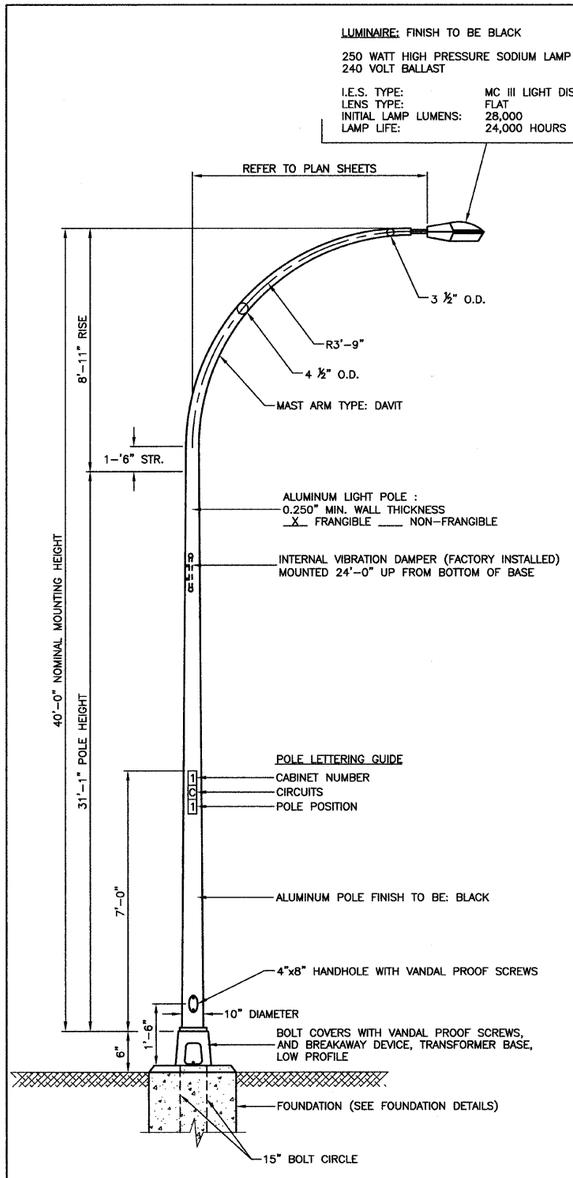


LEGEND

- LUMINAIRE, 250W HPS, 240V
- LUMINAIRE, 310W HPS, 240V
- FUSE, 3.5 AMP
- FUSE, 4.0 AMP
- A1 LUMINAIRE CIRCUIT
- CIRCUIT BREAKER
- CONNECTION

Robinson ENGINEERING

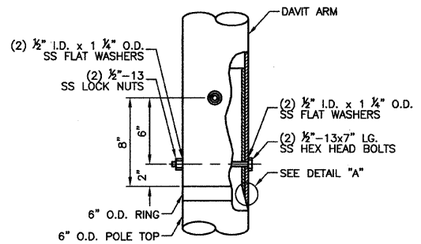
FILE NAME = 08295_02-DTLS-01 - P01	USER NAME =	DESIGNED — PAP	REVISED —	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	115TH STREET RIDGELAND AVENUE TO CENTRAL AVENUE SINGLE LINE WIRING DIAGRAM			F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED — EJT	REVISED —					1583	08-00086-00-LT	COOK	11	6
	PLOT SCALE = N/A	DRAWN — MJD	REVISED —							CONTRACT NO. 63270		
	PLOT DATE = 08-10-09	CHECKED — DWS	REVISED —		SCALE: N/A	SHEET NO. 6 OF 11 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-9003 (087)		



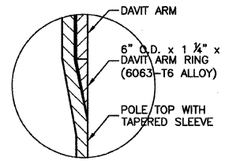
NOTES:

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.

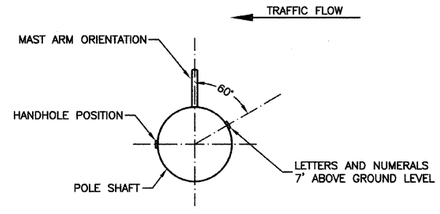
TYPICAL POLE INSTALLATION (40' MH)



CONNECTION DETAIL



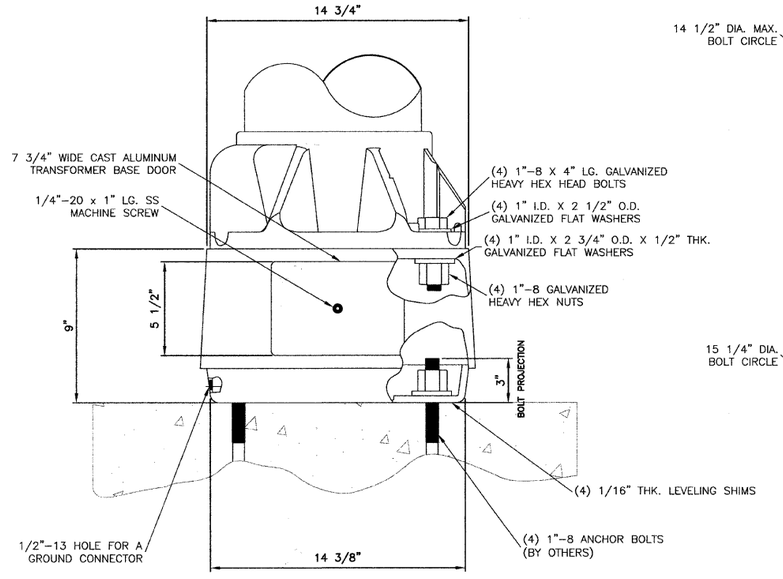
DETAIL "A"

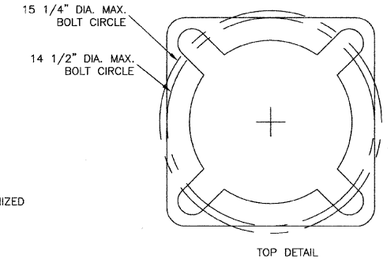


POSITION OF HANDHOLE AND NUMERALS ON POLE

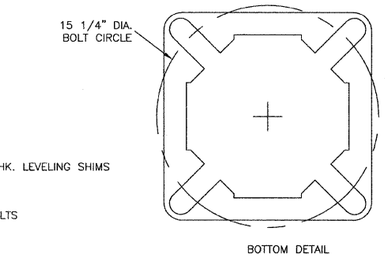
IMPORTANT NOTE:

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





TOP DETAIL

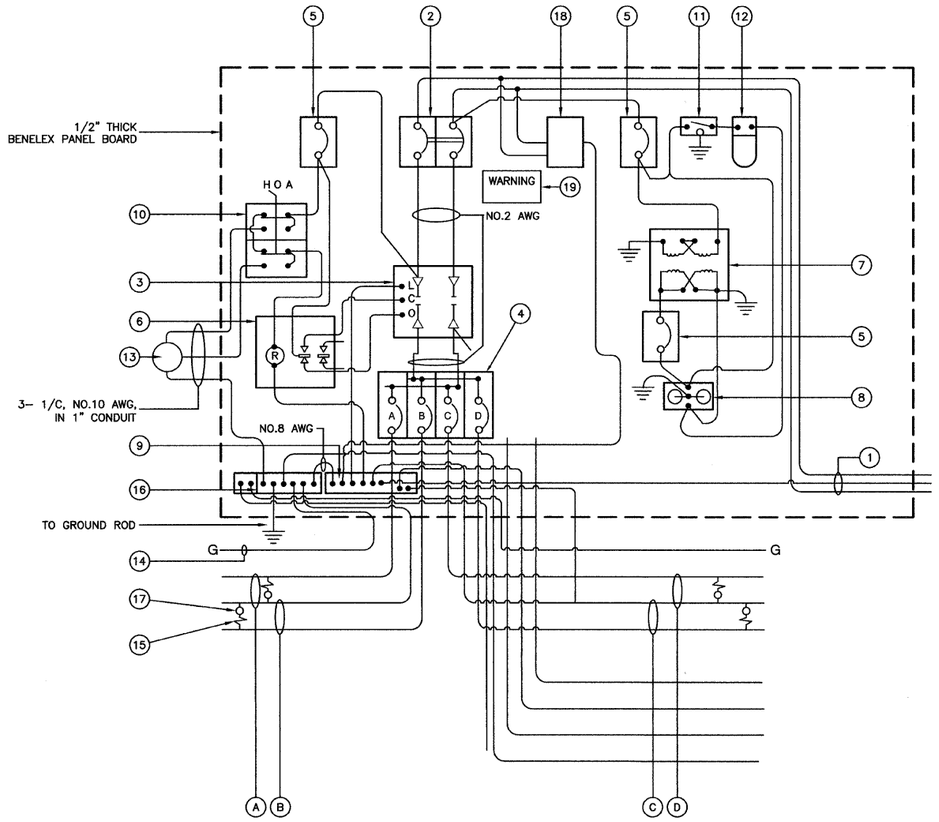


BOTTOM DETAIL

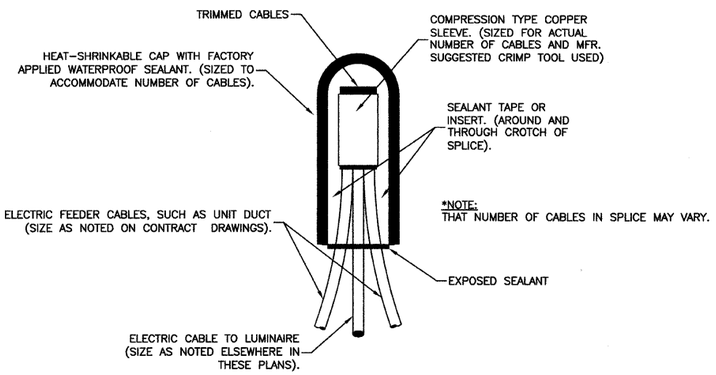
TRANSFORMER BASE DETAIL

Robinson ENGINEERING

FILE NAME = 08295_02-DTLS-01 - P02	USER NAME =	DESIGNED — PAP	REVISED —	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	115TH STREET RIDGELAND AVENUE TO CENTRAL AVENUE STREET LIGHTING DETAILS			F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED — EJT	REVISED —					1583	08-00086-00-LT	COOK	11	7
	PLOT SCALE = N/A	DRAWN — MJD	REVISED —							CONTRACT NO. 63270		
	PLOT DATE = 08-10-09	CHECKED — DWS	REVISED —		SCALE: N/A	SHEET NO. 7 OF 11 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-9003 (087)		



CONTROLLER WIRING DIAGRAM



SPLICING ELECTRIC CABLES
BASIC MATERIALS AND METHODS

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 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 CONTACTOR SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, 600 VOLT
4. (4) 30 AMP CIRCUIT BREAKER, 1 POLE, 240 VOLT, 100 AMP BASE, NON-INTER-CHANGEABLE 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. PHOTOCELL MOUNTED TO CABINET, 120 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
19. 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)

GENERAL NOTES FOR CONTROL CABINET

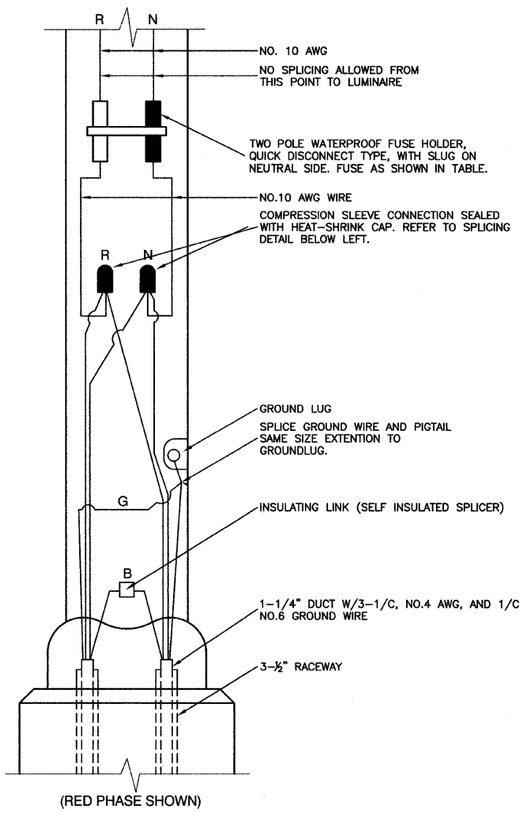
1. ENTIRE CONTROL CABINET SHALL BE GROUNDED.
2. ALL WIRING SHALL BE TAGGED WITH SELF-STICKING WIRE MARKERS.
3. GROUND BUS TO BE COLOR CODED GREEN, NEUTRAL BUS WHITE, AND BONDED TO CABINET ENCLOSURE, BY LISTED PRESSURE CONNECTORS OR LISTED CLAMPS.
4. ALL INTERNAL CONTROLLER WIRING TO BE NO.12 AWG UNLESS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

LIGHTING GENERAL NOTES

1. ALL WORK TO CONFORM TO THE MOST RECENT NATIONAL ELECTRICAL CODE AND ANY APPLICABLE LOCAL CODES.
2. CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES BEFORE TRENCHING OR AUGERING.
3. BEFORE INSTALLING STANDARDS NEAR OVERHEAD FACILITIES CALL C.E. Co. FOR APPROVAL OF LOCATION.
4. FOR LOCATION OF EXISTING UNDERGROUND ELECTRICAL CABLE CALL C.E. Co.
5. 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.
6. 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.
7. 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.
8. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE ESTABLISHMENT OF FINISHED GRADE. THE RESIDENT ENGINEER MAY ASSIST THE CONTRACTOR, AS APPLICABLE, BUT THE RESPONSIBILITY FOR CORDINATING THE FINISHED GRADE ELEVATION WITH THE TOP OF THE FOUNDATION HEIGHTS AND THE LIGHT SHALL REMAIN WITH THE CONTRACTOR.
9. NO POLES SHALL BE ERECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED, AS APPROVED BY THE ENGINEER.
10. THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR WIRE MARKERS AND SHALL TAG ALL WIRE ACCORDINGLY.
11. EQUIPMENT GROUND CONDUCTORS SHALL BE SPLICED AND BONDED AT EACH LIGHT POLE OR OTHER PIECE OF EQUIPMENT.
12. UNDERGROUND SPLICES OF LIGHTING CONDUCTORS WILL NOT BE ALLOWED EXCEPT AT LIGHT POLE BASE.
13. CONDUITS AND UNIT DUCTS MUST BE POSITIONED IN THE FIELD TO AVOID CONFLICT WITH TREE, BUSHES, DRAINS AND OTHER UTILITIES.
14. THE CONTROLLER SHALL BE UL LISTED, NEMA 3R, AND BE SUITABLE FOR USE AS SERVICE ENTRANCE RATED.

NOMINAL WATTAGE	FUSE SIZE
250	3.5 AMP
310	4.0 AMP

LUMINAIRE FUSE SIZE TABLE



(RED PHASE SHOWN)

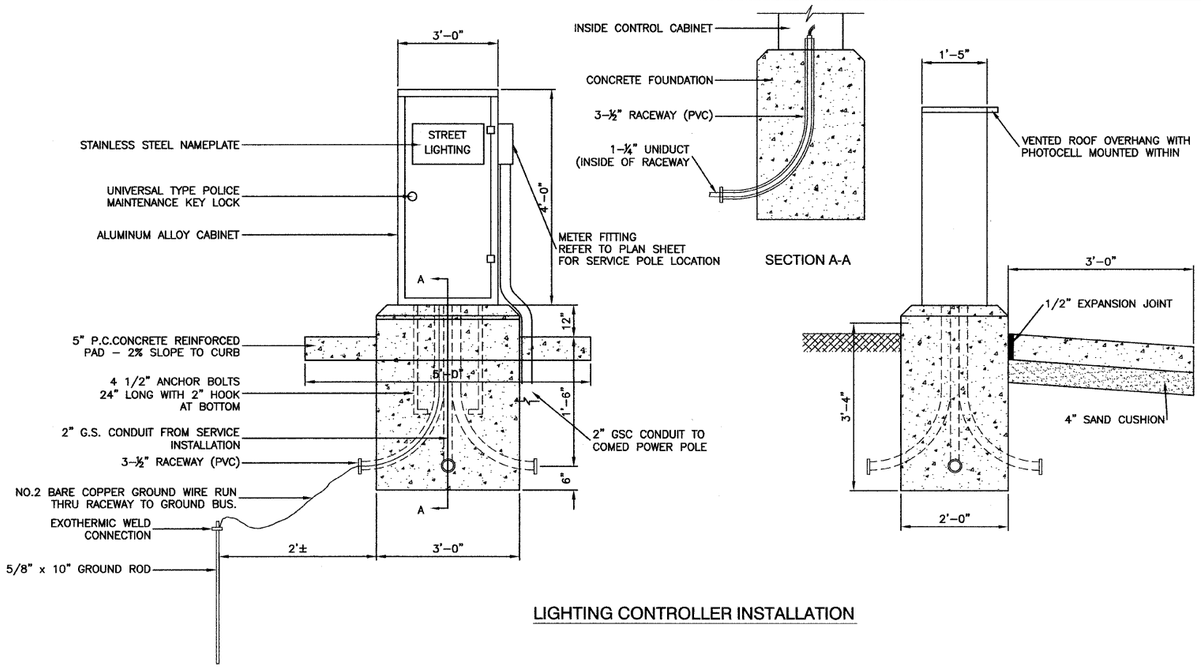
POLE HANDHOLE WIRING DIAGRAM

(TYPICAL FOR SINGLE LUMINAIRE INSTALLATION)

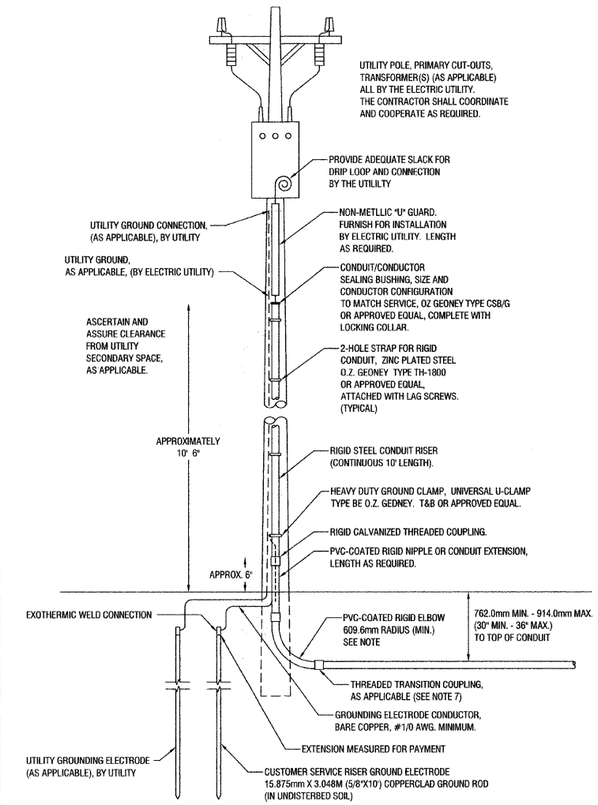
NOTE:
ALLOW 36" LOOP OF CABLES TO INSURE SUFFICIENT SLACK FOR WITHDRAWAL OF THE CONNECTORS OUTSIDE OF THE POLE HANDHOLE.

Robinson ENGINEERING

FILE NAME = 08295_02-DTLS-01 - P03	USER NAME =		DESIGNED — PAP	REVISED —	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	115TH STREET RIDGELAND AVENUE TO CENTRAL AVENUE STREET LIGHTING DETAILS			F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			CHECKED — EJT	REVISED —					1583	08-00086-00-LT	COOK	11	8
	PLOT SCALE = N/A		DRAWN — MJD	REVISED —							CONTRACT NO. 63270		
	PLOT DATE = 08-10-09		CHECKED — DWS	REVISED —		SCALE: N/A	SHEET NO. 8 OF 11 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-9003 (087)		



LIGHTING CONTROLLER INSTALLATION

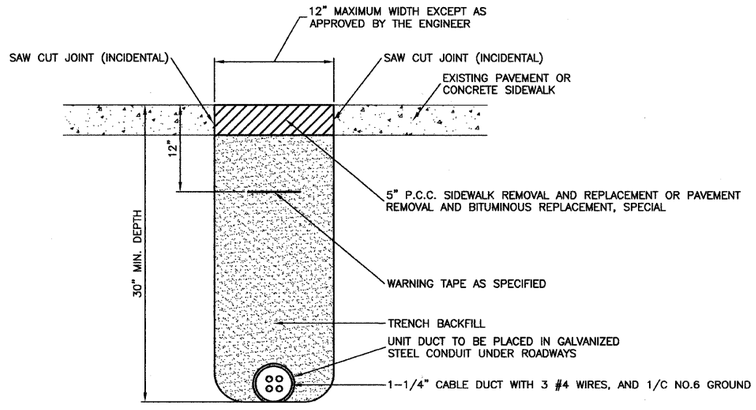


240/480 VOLT, 1Ø, 3 WIRE, 60HZ SERVICE
13.52 KVA LOAD, CONTROLLER #1

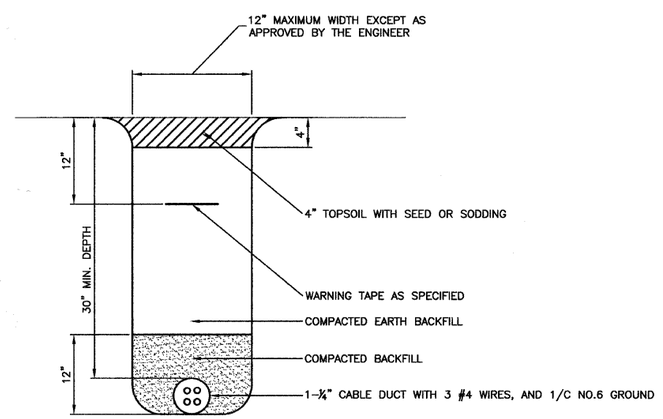
NOTES:

1. SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
2. UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF ELECTRIC UTILITY SERVICE INSTALLATION.
3. CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED.
4. 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.
5. 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 "U" GUARD INSTALLATION AND SERVICE CONNECTION.
6. 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.
7. 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 METALIC TO NON-METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
8. 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 PROVISION 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 CONTROLLER NO.1



HOT-MIX ASPHALT PAVEMENT OR CONCRETE SIDEWALK REMOVAL AND REPLACEMENT



TRENCH DETAIL

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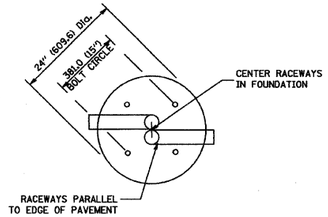
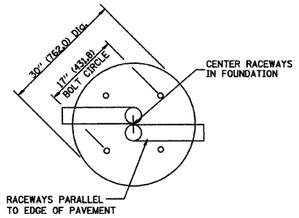
FILE NAME = 08295_02-DTLS-01 - P04	USER NAME =	DESIGNED — PAP	REVISED —	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	115TH STREET RIDGELAND AVENUE TO CENTRAL AVENUE STREET LIGHTING DETAILS			F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED — EJT	REVISED —					1583	08-00086-00-LT	COOK	11	9
	PLOT SCALE = N/A	DRAWN — MJD	REVISED —							CONTRACT NO. 63270		
	PLOT DATE = 08-10-09	CHECKED — DWS	REVISED —		SCALE: N/A	SHEET NO. 9 OF 11 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-9003 (087)		

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

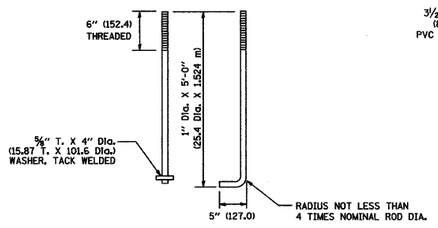
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-6" (2.09 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND ϕ = 34°	9'-0" (2.74 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)



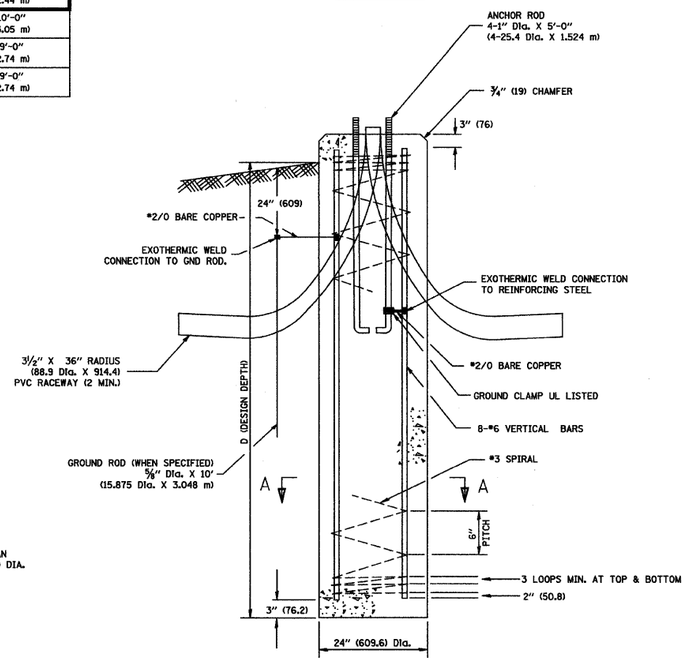
TOP VIEW



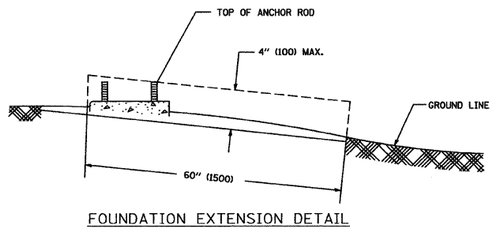
TOP VIEW



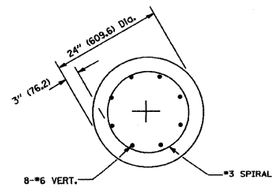
ANCHOR ROD DETAIL



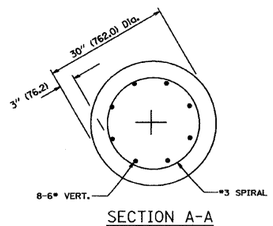
FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SECTION A-A

NOTES

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IN PLACED.
3. 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.
4. 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.
5. 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 ¾-IN. (20 mm).
6. THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
7. 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.
8. 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.
9. 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 UM(6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
10. 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.
11. ANCHOR RODS SHALL PROJECT 2¾" (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.
12. 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.
13. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
14. THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.

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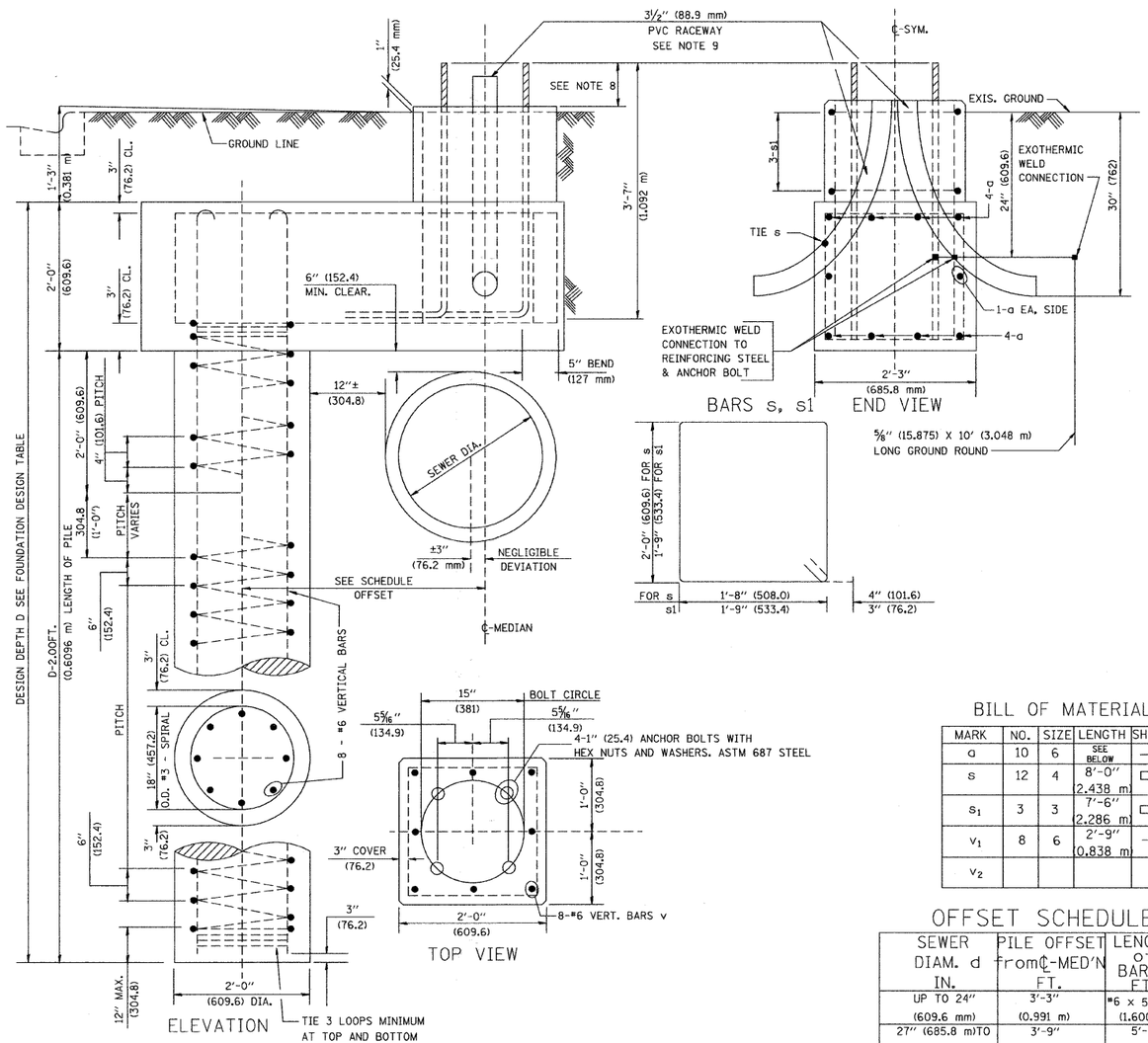
FILE NAME = 08295_02-DTLS-01 - P05	USER NAME =	DESIGNED — PAP	REVISED —	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	115TH STREET RIDGELAND AVENUE TO CENTRAL AVENUE STREET LIGHTING DETAILS		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED — EJT	REVISED —				1583	08-00086-00-LT	COOK	11	10
	PLOT SCALE = N/A	DRAWN — MJD	REVISED —						CONTRACT NO. 63270		
	PLOT DATE = 08-10-09	CHECKED — DWS	REVISED —		SCALE: N/A	SHEET NO. 10 OF 11 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-9003 (087)		

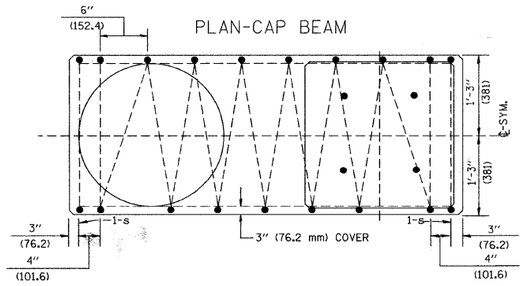
FOUNDATION DESIGN TABLE

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

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. THE ENGINEER SHALL DETERMINE THE CLASS OF SOIL DURING EXCAVATION AND SELECT THE DESIGN DEPTH OF FOUNDATION FROM THE DESIGN TABLE.
3. EXCAVATION OF THE POLE FOUNDATION SHALL BE MADE WITH AN AUGER, 24″ (609.6 mm) OR 30″ (762.0 mm) IN DIAMETER.
4. 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.
5. THE ANCHOR BOLTS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORM.
6. 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.
7. 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 2¾″ (69.9 mm) ABOVE TOP OF THE FOUNDATION. THE CONTRACTOR SHALL CONFIRM ANCHOR BOLT EXTENTION WITH ENGINEER.
8. RACEWAYS SHALL PROJECT 1″ (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.
9. THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE LIGHT IS ERECTED.





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℄-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 m)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)

Robinson ENGINEERING

FILE NAME = 08295_02-DTLS-01 - P06	USER NAME =	DESIGNED — PAP	REVISED —	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	115TH STREET RIDGELAND AVENUE TO CENTRAL AVENUE STREET LIGHTING DETAILS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED — EJT	REVISED —			1583	08-00086-00-LT	COOK	11	11
	PLOT SCALE = N/A	DRAWN — MJD	REVISED —					CONTRACT NO. 63270		
	PLOT DATE = 08-10-09	CHECKED — DWS	REVISED —		SCALE: N/A SHEET NO. 11 OF 11 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-9003 (087)		