

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00032-00-LT	COOK	8	1
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

83870

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY**

**88TH AVENUE ROADWAY LIGHTING**  
MFT Section No.: 05-00032-00-LT  
Project No.: M-8003 (489)  
**87TH STREET TO 79TH STREET**  
**VILLAGE OF JUSTICE, COOK COUNTY**  
JOB No.: C-91-144-05

FAU ROUTE 2731

**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES & SUMMARY OF QUANTITIES
3	ROADWAY LIGHTING PLAN-1
4	ROADWAY LIGHTING PLAN-2
5	ROADWAY LIGHTING DETAILS-1
6	ROADWAY LIGHTING DETAILS-2
7	ROADWAY LIGHTING DETAILS-3
8	ROADWAY LIGHTING DETAILS-4

**LIST OF STATE STANDARDS**

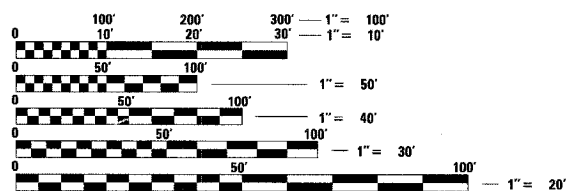
STANDARD NO.	DESCRIPTION
000001-04	STANDARD ABBREVIATIONS AND SYMBOLS
701301-02	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701602-02	URBAN LANE CLOSURE, MULTILANE, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
702001-06	TRAFFIC CONTROL DEVICES
814001	CONCRETE HANDHOLES



**PROJECT LOCATED IN THE VILLAGE OF JUSTICE**

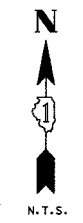
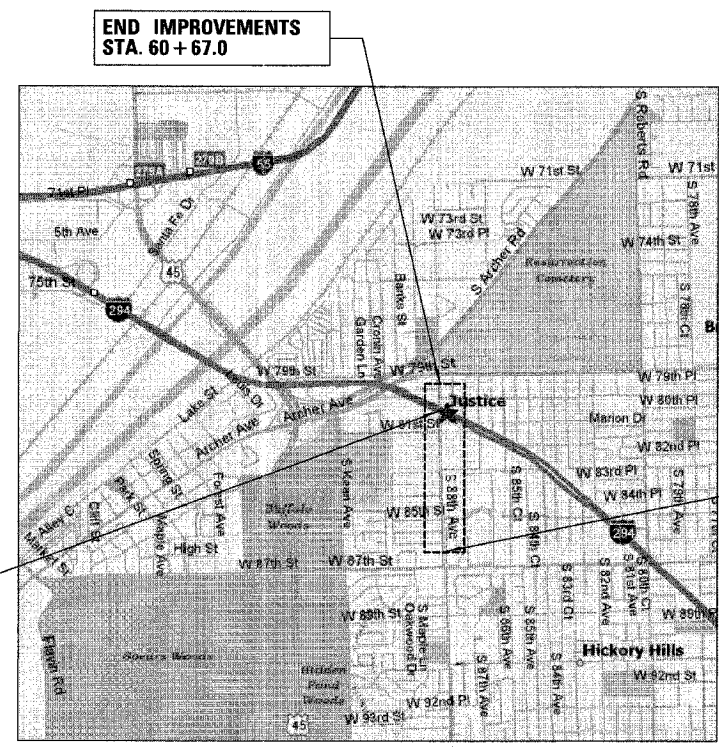
**THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AS WELL AS SUPERVISION/DIRECTION AND MEANS/METHODS OF CONSTRUCTION.**

CALL JULIE 1-800-892-0123 WITH THE FOLLOWING:  
COUNTY COOK  
CITY-TOWNSHIP JUSTICE - LYONS  
SEC. & 1/4 SEC. NO. = T38N R12E SEC34.35  
**48 HOURS BEFORE YOU DIG.**  
EXCLUDING SAT., SUN., & HOLIDAYS



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.

**CONTRACT NO. # 83870**



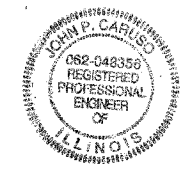
**LOCATION MAP**

GROSS LENGTH OF PROJECT=0.87 MILES (4592 FEET)  
NET LENGTH OF PROJECT=0.81 MILES (4277 FEET)

BEGIN IMPROVEMENTS STA. 14 + 75.0

END IMPROVEMENTS STA. 60 + 67.0

OMISSION STA. 51 + 52 TO STA. 54 + 67



August 21, 2006

**JOHN P. CARUSO**  
ILLINOIS REGISTRATION No. 062-048356 ENGINEER  
EXPIRATION DATE: 11/30/2007

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

APPROVED AUGUST 31 2006  
Will DeDora  
VILLAGE OF JUSTICE President  
TITLE

PASSED SEPTEMBER 05 2006  
Christopher Holt  
DISTRICT 1 ENGINEER OF LOCAL ROADS AND STREETS  
RELEASING FOR BID BASED ON LIMITED REVIEW Sept 11 2006  
Diane O'Keefe  
DEP. UTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

**CHRISTOPHER B. BURKE**  
ENGINEERING LTD.  
9575 West Higgins Road, Suite 600  
Rosemont, Illinois 60018  
(847) 823-0500

PROFESSIONAL DESIGN FIRM NO.: 184-001175  
EXPIRATION DATE: APRIL 30, 2007

FEDERAL AID COORDINATOR: PHIL MARCYN 847 705 4189

P.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00032-00-LT	COOK	8	2
CONTRACT NO. 83870				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		














### GENERAL NOTES

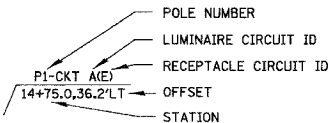
- PLACE A GROUND ROD  $\frac{5}{8}$ " IN DIAMETER BY 10 FEET IN LENGTH APPROXIMATELY 2 FEET FROM EVERY CONCRETE POLE FOUNDATION AND CONNECT TO THE POLE GROUNDING LUG VIA A #6 SOLID COPPER WIRE WITH A MECHANICAL CONNECTION AT THE GROUND ROD AND PIGTAIL SPLICE INSIDE THE POLE HANDHOLE.
- ALL POLE HANDHOLES SHALL FACE AWAY FROM TRAFFIC.
- UNIT DUCT SHALL BE 1" DIAMETER WITH 3/C #8 XLP, 1/C #8 XLP NEUTRAL & 1/C #8 XLP GROUND, OR 1 1/2" DIAMETER WITH 4/C #6 XLP, 2/C #4 XLP, 1/C #4 XLP NEUTRAL & 1/C #4 XLP GROUND TYPE-USE WIRE.
- LUMINAIRES SHALL BE LEVEL & HAVE A TIGHT FIT ON MAST ARMS TO THE OWNER'S SATISFACTION. THIS WORK SHALL INCLUDE FIELD ADJUSTING OF THE LUMINAIRE WHICH WILL BE INCIDENTAL TO THE "LUMINAIRE" PAY ITEM.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A PERMIT FROM THE VILLAGE OF JUSTICE BEFORE THE START OF WORK.
- ALL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE AND ANY APPLICABLE CODES.
- ALL LIGHT STANDARDS SHALL BE LOCATED 4'-0" BEHIND BACK OF CURB OR AS SHOWN ON THE PLANS.
- NO POLES SHALL BE ERRECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED, AS APPROVED BY THE ENGINEER.
- TO MAINTAIN THE STRUCTURAL INTEGRITY OF LIGHT POLES WITH MAST ARMS, THEY SHALL NOT BE ERRECTED AND LEFT TO STAND WITHOUT LUMINAIRES. NOTE THAT THE CONTRACTOR SHALL NOT BE PAID FOR POLES UNTIL LUMINAIRES ARE INSTALLED.
- ALL POLES SHALL BE PROVIDED WITH A BREAKAWAY DEVICE AS SPECIFIED.
- BEFORE INSTALLING LIGHT STANDARDS NEAR OVERHEAD UTILITIES CALL COM ED FOR LOCATION APPROVAL.
- NO MATERIALS SHALL BE DELIVERED TO THE JOB SITE UNTIL ALL PERTINENT EQUIPMENT SUBMITTALS HAVE BEEN APPROVED BY THE OWNER.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MARK THE PROPOSED LOCATIONS OF ALL LIGHT POLES AND LIGHTING CONTROLLERS FOR EXAMINATION AND CONFIRMATION WITH THE RESIDENT ENGINEER AT THE PRECONSTRUCTION INSPECTION. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO AUGERING FOR LIGHT POLE FOUNDATIONS. THE EXACT LOCATIONS OF ALL ITEMS SHALL BE CONFIRMED WITH THE RESIDENT ENGINEER PRIOR TO STARTING WORK.
- THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR GROUNDING. GROUNDING CONNECTIONS AT THE FOUNDATION SHALL BE MECHANICAL TYPE UL LISTED FOR DIRECT BURIAL USE, AS SPECIFIED, AND SHALL BE INSPECTED AND APPROVED BY THE RESIDENT ENGINEER PRIOR TO POURING CONCRETE OR BACKFILLING, AS APPLICABLE.
- 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 REVIEWED 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 FOUNDATIONS HEIGHTS AND THE LIGHT SHALL REMAIN WITH THE CONTRACTOR.
- THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR THE ELECTRICAL SERVICE FOR THE PROPOSED ROADWAY LIGHTING. IT IS THE CONTRACTOR'S RESPONSIBILITY FOR TIMELY NOTIFICATION AND COORDINATION WITH THE ELECTRICAL UTILITY COMPANY.
- 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.
- THE LIGHTING CONTROLLER SHALL BE CONSTRUCTED TO UL STANDARDS 508 AND 508A, AND BEAR THE LABEL "INDUSTRIAL CONTROL PANEL".
- 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 STATE, THE COUNTY OR THE VILLAGE.
- CONDUIT AND UNIT DUCT MUST BE POSITIONED IN THE FIELD TO AVOID CONFLICT WITH TREES, BUSHES, DRAINS AND OTHER UTILITIES AND LANDSCAPING.
- ALL DISTURBED AREA 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.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS INCLUDING ALL ABOVE AND BELOW GRADE APPURTENANCES. THE CONTRACTOR SHALL REPAIR ALL DAMAGE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

### SUMMARY OF QUANTITIES

CODE NO.	DESCRIPTION	UNIT	QUANTITY
21101610	TOPSOIL FURNISH AND PLACE, 3"	SQ YD	309
25000400	NITROGEN FERTILIZER NUTRIENT	LB	6
25000500	PHOSPHORUS FERTILIZER NUTRIENT	LB	6
25000600	POTASSIUM FERTILIZER NUTRIENT	LB	6
25200110	SODDING, SALT TOLERANT	SQ YD	309
25200200	SUPPLEMENTAL WATERING	UNIT	13
42400200	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	SQ FT	200
44000600	SIDEWALK REMOVAL	SQ FT	200
67100100	MOBILIZATION	L SUM	1
70102632	TRAFFIC CONTROL AND PROTECTION, STANDARD 701602	L SUM	1
80400100	ELECTRIC SERVICE INSTALLATION	EACH	2
80700140	GROUND ROD, $\frac{5}{8}$ " DIA. x 10FT.	EACH	34
81018600	CONDUIT PUSHED, 2 1/2" DIA. GALV. STEEL	FOOT	1020
81400400	CONCRETE HANDHOLE	EACH	1
82102250	LUMINAIRE, SODIUM VAPOR, MULTI-MOUNT, 250 WATT	EACH	28
82500510	LIGHTING CONTROLLER TYPE CB-RCS 60AMP-240VOLT	EACH	1
82500530	LIGHTING CONTROLLER TYPE CB-RCS 100AMP-240VOLT	EACH	1
83008600	LIGHT POLE, ALUMINUM, 40 FT. M.H., 15 FT. MAST ARM	EACH	23
83050810	LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 15 FT. MAST ARM	EACH	5
83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	280
83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE	EACH	28
	UNIT DUCT, BORED AND PULLED, 1" HDPE, WITH 3/C #8, 1/C #8 NEUTRAL & 1/C #8 GND XLP TYPE USE, 600V	FOOT	800
	UNIT DUCT, BORED AND PULLED, 1 1/2" HDPE, WITH 4/C #6, 2/C #4, 1/C #4 NEUTRAL & 1/C #4 GND XLP TYPE USE, 600V	FOOT	4320

### LEGEND

-  1 PROPOSED POLE TYPE 1 - 40' ALUMINUM POLE WITH A 250 WATT MCIII COBRA HEAD TYPE LUMINAIRE ON A 15' MAST ARM
-  2 PROPOSED POLE TYPE 2 - 47.5' ALUMINUM POLE WITH A 250 WATT MCIII COBRA HEAD TYPE LUMINAIRE ON A 15' MAST ARM
-  EXISTING 40' ALUMINUM POLE WITH A 200 OR 250 WATT MCIII COBRA HEAD TYPE LUMINAIRE ON AN 8' OR 12' MAST ARM
-  PROPOSED CONCRETE HANDHOLE
-  PROPOSED 120/240V-1Ø LIGHTING CONTROLLER
-  PROPOSED CABLES IN UNIT DUCT (SIZES AS SHOWN)
-  PROPOSED UNIT DUCT IN RIGID GALVANIZED STEEL CONDUIT PUSHED UNDER PAVEMENT (SIZES AS SHOWN)
-  PROPOSED CABLES IN RIGID GALVANIZED STEEL CONDUIT (SIZES AS SHOWN)
-  POLE NUMBER
-  LUMINAIRE CIRCUIT ID
-  RECEPTACLE CIRCUIT ID
-  OFFSET
-  STATION

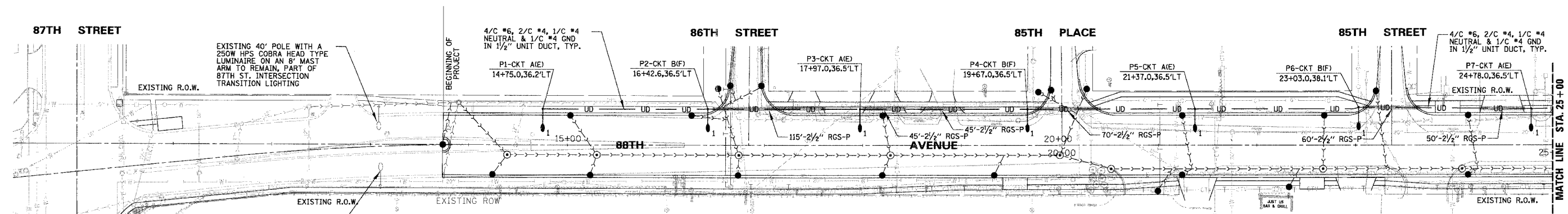
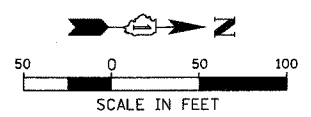


REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<b>88TH AVENUE</b> <b>GENERAL NOTES AND</b> <b>SUMMARY OF QUANTITIES</b> SCALE: NO SCALE DATE: 8/22/2006

DRAWN BY A/JD  
DESIGN BY A/JD  
CHECKED BY JPC

**COOK COUNTY**  
**LYONS TOWNSHIP**  
**VILLAGE OF JUSTICE**

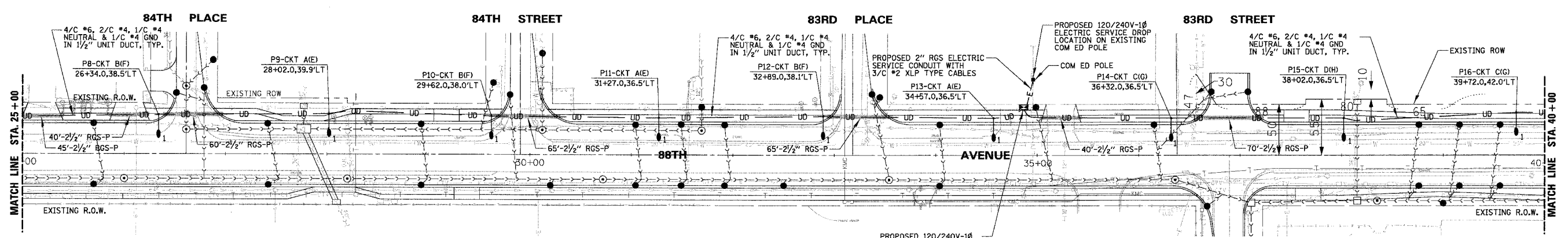
F.A.I.D. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
05-00032-00-LT	COOK	8	3	
CONTRACT NO. 83870				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



**LEGEND**

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- POLE NUMBER
- LUMINAIRE CIRCUIT ID
- RECEPTACLE CIRCUIT ID
- OFFSET
- STATION

**COOK COUNTY**  
**LYONS TOWNSHIP**  
**VILLAGE OF JUSTICE**



**CAUTION**  
**NOTICE TO CONTRACTOR**

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THE LOCATION AND/OR ELEVATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THESE PLANS. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM ENGINEER OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**88TH AVENUE**  
**ROADWAY LIGHTING PLAN-1**  
**STA. 14 + 75 TO STA. 40 + 00**

SCALE: 50'  
 DATE: 8/22/2006  
 DRAWN BY: AJD  
 DESIGN BY: AJD  
 CHECKED BY: JPC

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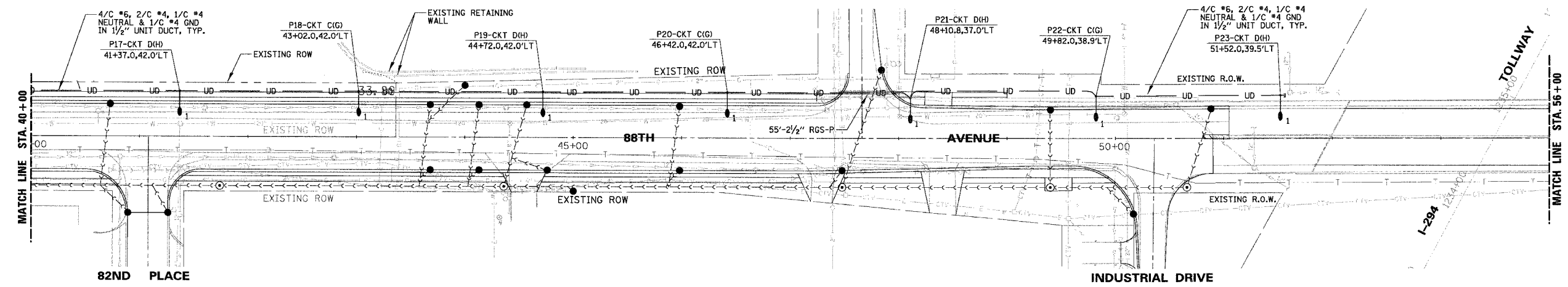
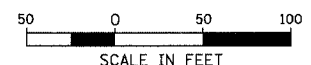
COOK COUNTY

LYONS TOWNSHIP

VILLAGE OF JUSTICE

81ST STREET

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00032-00-LT	COOK	8	4
CONTRACT NO. 83870				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



COOK COUNTY

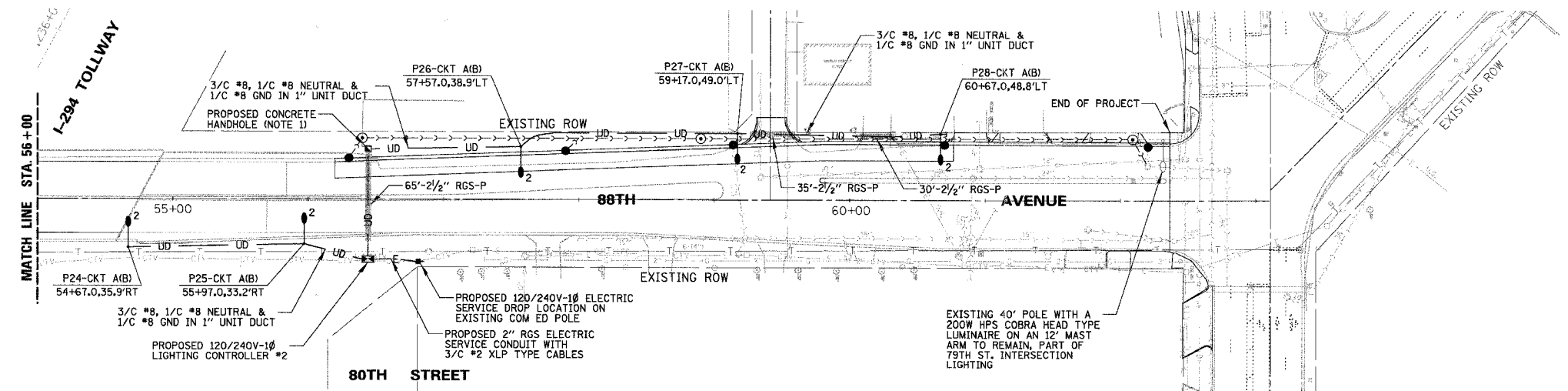
LYONS TOWNSHIP

VILLAGE OF JUSTICE

79TH PLACE

79TH STREET

CORK AVENUE



LEGEND

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- POLE NUMBER
- LUMINAIRE CIRCUIT ID
- RECEPTACLE CIRCUIT ID
- OFFSET
- STATION

NOTES:  
1. NO SPLICING SHALL BE ALLOWED IN CONCRETE HANDHOLES. SPLICING ALLOWED IN POLE HANDHOLES ONLY.

CAUTION  
NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THE LOCATION AND/OR ELEVATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THESE PLANS. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM ENGINEER OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS.

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**88TH AVENUE  
ROADWAY LIGHTING PLAN-2  
STA. 40+00 TO STA. 60+67**

SCALE: 50'  
DATE: 8/22/2006

DRAWN BY: AJD  
DESIGN BY: AJD  
CHECKED BY: JPC

SPENTBL\$

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00032-00-LT	COOK	8	5
CONTRACT NO.			83870	
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

ITEM	SPECIFICATION	MANUFACTURER/MODEL NO. OR EQUAL
1 MAIN CIRCUIT BREAKER	100 AMPERE, 2 P., 240 V RATING, 22K AIC	SIEMENS NO. ED42B100
2 LAMPHOLDER CIRCUIT BREAKER	20 AMPERE, 1 P., 120 V RATING, 22K AIC	SIEMENS NO. ED41B020
3 PHOTOELECTRIC CONTROL CIRCUIT BREAKER	15 AMPERE, 1 P., 120 V RATING, 22K AIC	SIEMENS NO. ED41B015
4 AUXILIARY RELAY	120 V OPERATED SPST 60 HZ COIL 600V NORMALLY OPEN CONTACTS	MAGNECRAFT NO. W389ACX-9
5 CABINET RECEPTACLE AND BOX	COMMERCIAL GRADE GFCI 20A/120V, MOUNTED IN A WEATHERPROOF CAST ALUMINUM SINGLE GANG BOX WITH WEATHERPROOF COVER	RECEPTACLE: LEVITON NO. 8899, BOX: APPLETON NO. WSM150 COVER: APPLETON NO. WHG1
6 CABINET LIGHT AND BOX	120V WEATHERPROOF LAMPHOLDER MOUNTED IN A CAST ALUMINUM BOX & EXT. GRADE 100W LAMP	LIGHT & BOX: RAB NO. VX100DG
7 CONTACTOR	100 AMPERE, 2 POLE, 120 V COIL, MECH HELD	SQUARE D NO. 8903 SQD 10 V02
8 BRANCH LINE CIRCUIT BREAKERS	7- 30 AMPERE, 2 P., 240 V RATING, 22K AIC	SIEMENS NO. ED42B030
9 POWER DISTRIBUTION BLOCK	600 VOLT, INSULATED, SIZE AS REQUIRED	MARATHON
10 SERVICE CABLES	3-600V (XLP-TYPE USE) NO. 2	N/A
11 LAMPHOLDER WIRE	2-600V XLP NO. 12	N/A
12 CONTROL WIRE	2-600V XLP NO. 12	N/A
13 SURGE ARRESTOR	10 K AMPERE RATING	SQUARE D NO. SDSA 1175
14 PHOTOELECTRIC CONTROL WIRE	3-600V XLP NO. 12	3-600V XLP NO. 12
15 DOOR SWITCH	20A/120V, DOOR MOUNTED SNAP ACTION TYPE PLUNGER SWITCH	OMRON NO. A-20GQ-K
16 HAND-AUTO-OFF CONTROL SWITCH	20 A, 3 POS. MTD IN CAST ALUM. ENCLOSURE	SQUARE D NO. 9001 KYK 111
17 PHOTOCCELL	120V, MTD. ON CABINET, DELAY TYPE, SPST-NC	FISHER PIERCE NO. FFFA-105

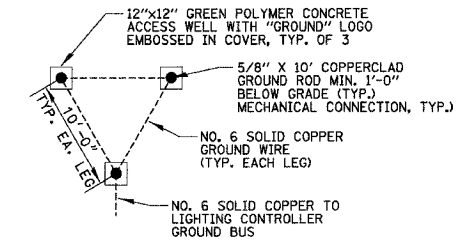
NOTES:

- ALL ITEMS LISTED IN LIGHTING CONTROLLER #1 COMPONENT SCHEDULE SHALL BE CONSIDERED INCIDENTAL TO THE PRICE BID FOR "STREET LIGHTING CONTROLLER" INCLUDING CABINET AND FOUNDATION.
- THE LIGHTING CONTROLLER TOGETHER WITH ALL OF ITS COMPONENTS SHALL BE LISTED AS AN "ENCLOSED INDUSTRIAL CONTROL PANEL" UNDER UL508A.

**LIGHTING CONTROLLER #1 COMPONENT SCHEDULE**

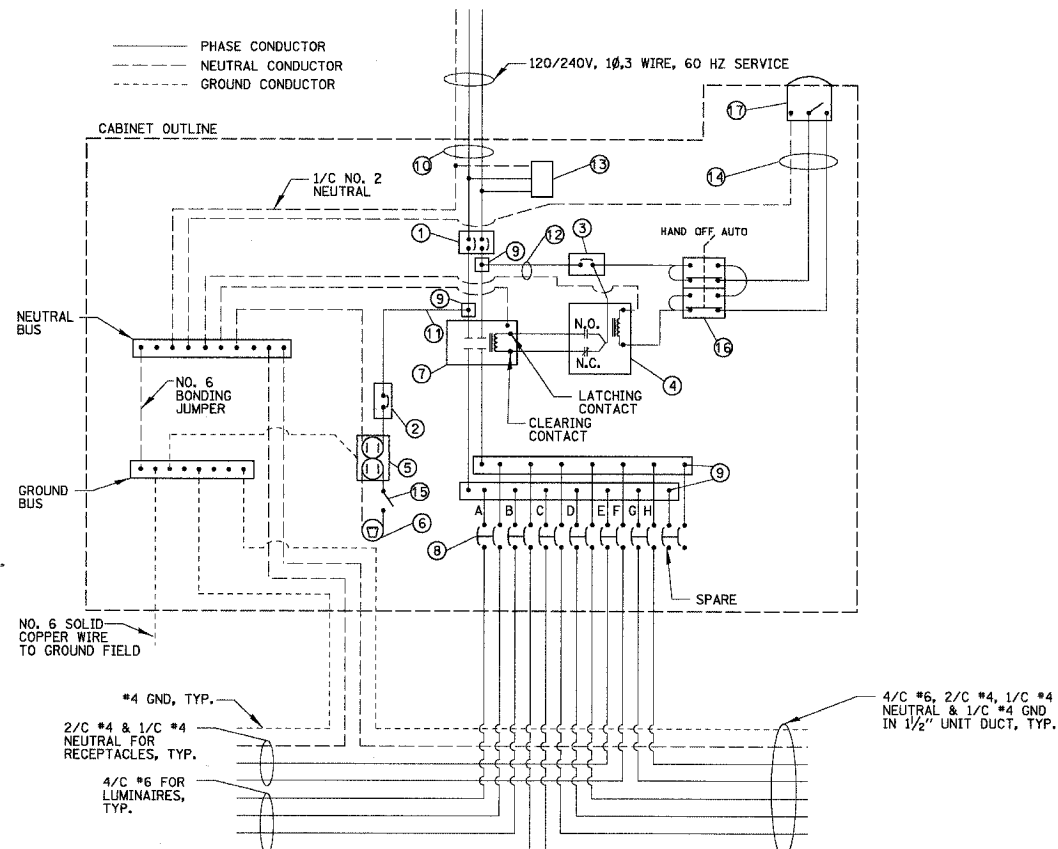
CIRCUIT ID	250W LUMINAIRE		POLE MOUNTED RECEPTACLE		TOTAL CIRCUIT LOAD (WATTS)
	QUANTITY	LOAD/POLE (WATTS)	QUANTITY	LOAD/POLE (WATTS)	
A	7	304W	-	180W	2128 W
B	6	304W	-	180W	1824 W
C	5	304W	-	180W	1520 W
D	5	304W	-	180W	1520 W
E	-	304W	7	180W	1260 W
F	-	304W	6	180W	1080 W
G	-	304W	5	180W	900 W
H	-	304W	5	180W	900 W
TOTAL	23	N/A	23	N/A	11.1 KW

**LIGHTING CONTROLLER #1  
CIRCUIT WATTAGE LOADS**



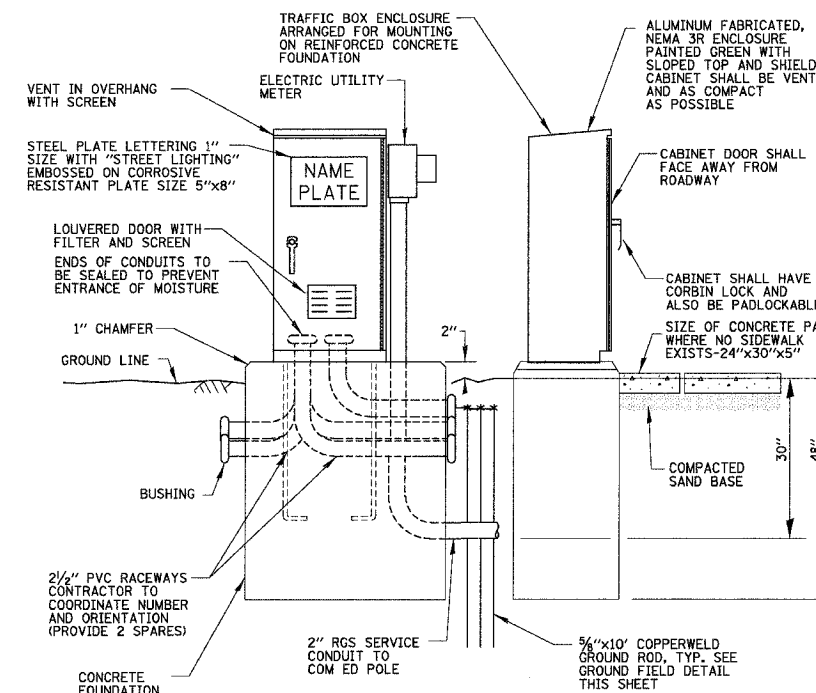
**GROUND FIELD DETAIL (TYP.)**

N.T.S.



**LIGHTING CONTROLLER #1 WIRING DETAIL**

N.T.S.



NOTE:  
ALL ITEMS SHOWN ABOVE INCLUDING FOUNDATION SHALL BE INCLUDED IN THE PRICE BID FOR "STREET LIGHTING CONTROLLER", EXCEPT FOR THE SERVICE CONDUIT AND GROUND RODS WHICH WILL BE PAID FOR SEPARATELY.

**PROPOSED LIGHTING CONTROLLER #1  
CABINET AND FOUNDATION**

N.T.S.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**88TH AVENUE  
ROADWAY LIGHTING DETAILS-1**

SCALE: NO SCALE

DRAWN BY: AJD  
DESIGN BY: AJD  
CHECKED BY: JPC

DATE: 8/22/2006

ITEM	SPECIFICATION	MANUFACTURER/MODEL NO. OR APPROVED EQUAL
1 MAIN CIRCUIT BREAKER	60 AMPERE, 2 P, 240 V RATING, 22K AIC	SIEMENS NO. ED42B060
2 LAMPHOLDER CIRCUIT BREAKER	20 AMPERE, 1 P, 120 V RATING, 22K AIC	SIEMENS NO. ED41B020
3 PHOTOELECTRIC CONTROL CIRCUIT BREAKER	15 AMPERE, 1 P, 120 V RATING, 22K AIC	SIEMENS NO. ED41B015
4 AUXILIARY RELAY	120 V OPERATED SPST 60 HZ COIL 600V NORMALLY OPEN CONTACTS	MAGNECRAFT NO. W389ACX-9
5 CABINET RECEPTACLE AND BOX	COMMERCIAL GRADE GFCI 20A/120V, MOUNTED IN A WEATHERPROOF CAST ALUMINUM SINGLE GANG BOX WITH WEATHERPROOF COVER	RECEPTACLE: LEVITON NO. 8899, BOX: APPLETON NO. WSM150 COVER: APPLETON NO. WHG1
6 CABINET LIGHT AND BOX	120V WEATHERPROOF LAMPHOLDER MOUNTED IN A CAST ALUMINUM BOX & EXT. GRADE 100W LAMP	LIGHT & BOX: RAB NO. VX100DG
7 CONTACTOR	60 AMPERE, 2 POLE, 120 V COIL, MECH HELD	SQUARE D NO. 8903 SPD 10 V02
8 LIGHTING CIRCUIT BREAKERS RECEPTACLE CIRCUIT BREAKERS	2- 20 AMPERE, 2 P, 240 V RATING, 22K AIC 2- 20 AMPERE, 1 P, 120 V RATING, 22K AIC	SIEMENS NO. ED42B020 SIEMENS NO. ED41B020
9 POWER DISTRIBUTION BLOCK	600 VOLT, INSULATED, SIZE AS REQUIRED	MARATHON
10 SERVICE CABLES	3-600V (XLP-TYPE USE) NO. 6	N/A
11 LAMPHOLDER WIRE	2-600V XLP NO. 12	N/A
12 CONTROL WIRE	2-600V XLP NO. 12	N/A
13 SURGE ARRESTOR	10 K AMPERE RATING	SQUARE D NO. SDSA 1175
14 PHOTOELECTRIC CONTROL WIRE	3-600V XLP NO. 12	3-600V XLP NO. 12
15 DOOR SWITCH	20A/120V, DOOR MOUNTED SNAP ACTION TYPE PLUNGER SWITCH	OMRON NO. A-20GQ-K
16 HAND-AUTO-OFF CONTROL SWITCH	20 A, 3 POS. MTD IN CAST ALUM. ENCLOSURE	SQUARE D NO. 9001 KYK 111
17 PHOTOCCELL	120V, MTD. ON CABINET, DELAY TYPE, SPST-NC	FISHER PIERCE NO. FFFA-105

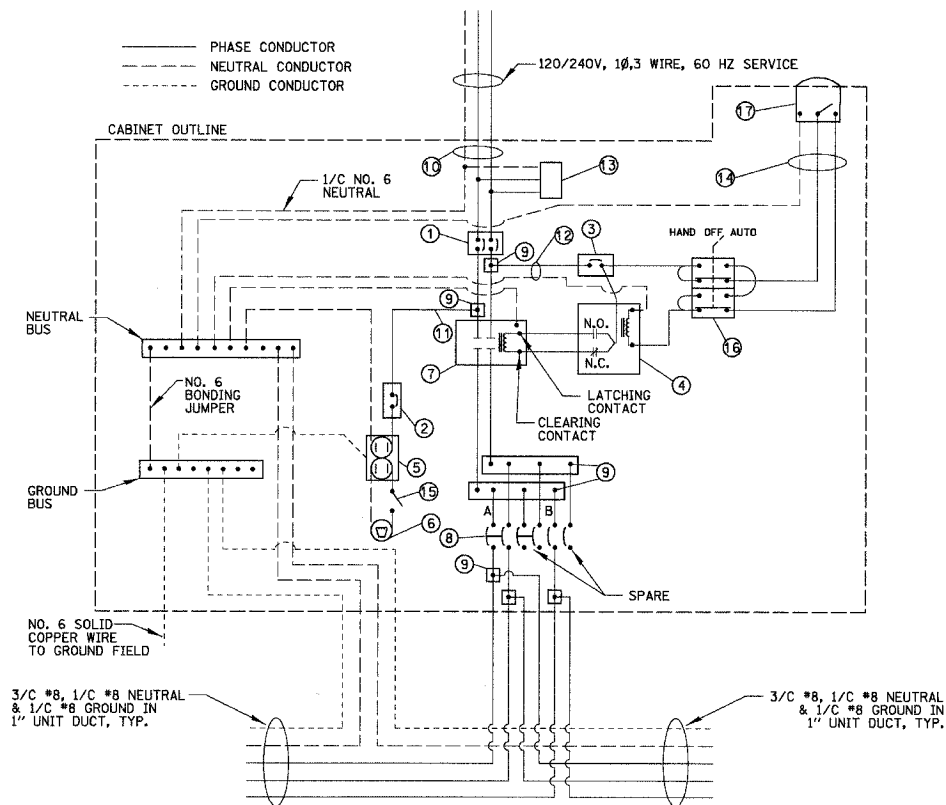
CIRCUIT ID	250W LUMINAIRE		POLE MOUNTED RECEPTACLE		TOTAL CIRCUIT LOAD (WATTS)
	QUANTITY	LOAD/POLE (WATTS)	QUANTITY	LOAD/POLE (WATTS)	
A	5	304W	-	180W	1520 W
B	-	304W	5	180W	900 W
TOTAL	5	N/A	5	N/A	2420 W

**LIGHTING CONTROLLER #2  
CIRCUIT WATTAGE LOADS**

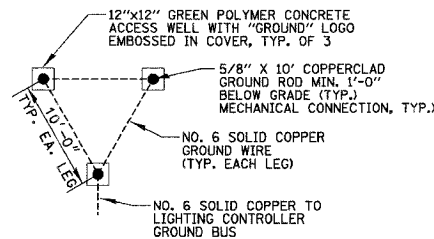
**NOTES:**

- ALL ITEMS LISTED IN LIGHTING CONTROLLER #2 COMPONENT SCHEDULE SHALL BE CONSIDERED INCIDENTAL TO THE PRICE BID FOR "STREET LIGHTING CONTROLLER" INCLUDING CABINET AND FOUNDATION.
- THE LIGHTING CONTROLLER TOGETHER WITH ALL OF ITS COMPONENTS SHALL BE UL LISTED AS AN "ENCLOSED INDUSTRIAL CONTROL PANEL" UNDER UL508A.

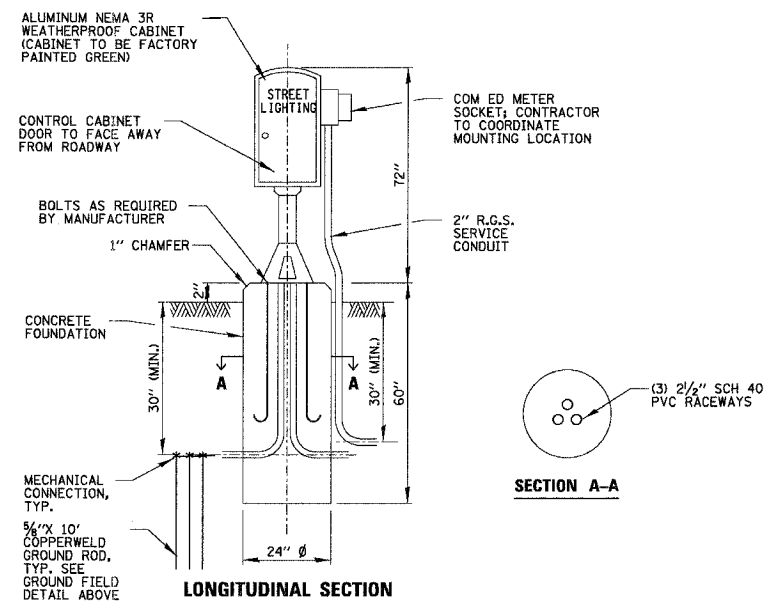
**LIGHTING CONTROLLER #2 COMPONENT SCHEDULE**



**LIGHTING CONTROLLER #2 WIRING DETAIL**  
N.T.S.

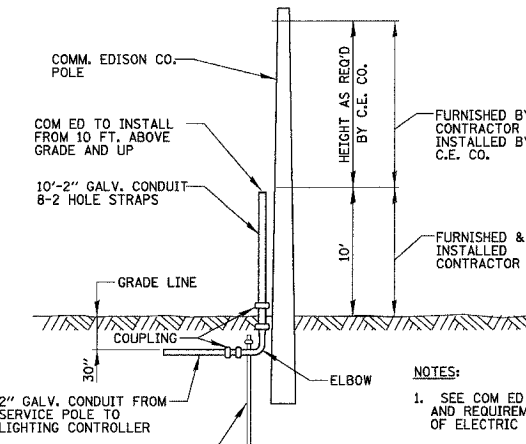


**GROUND FIELD DETAIL (TYP.)**  
N.T.S.



NOTE: ALL ITEMS SHOWN ABOVE INCLUDING FOUNDATION SHALL BE INCLUDED IN THE PRICE BID FOR "STREET LIGHTING CONTROLLER", EXCEPT FOR THE SERVICE CONDUIT AND GROUND RODS WHICH WILL BE PAID FOR SEPARATELY.

**LIGHTING CONTROLLER #2  
CABINET AND FOUNDATION**  
N.T.S.



NOTES:  
1. SEE COM ED BOOK OF INFORMATION AND REQUIREMENTS FOR THE SUPPLY OF ELECTRIC SERVICE  
2. ALL MATERIAL ABOVE EXCEPT FOR POLE SHALL BE INCLUDED IN THE PRICE BID FOR "ELECTRIC SERVICE INSTALLATION" INCLUDING ANY UTILITY CONNECTION FEES.

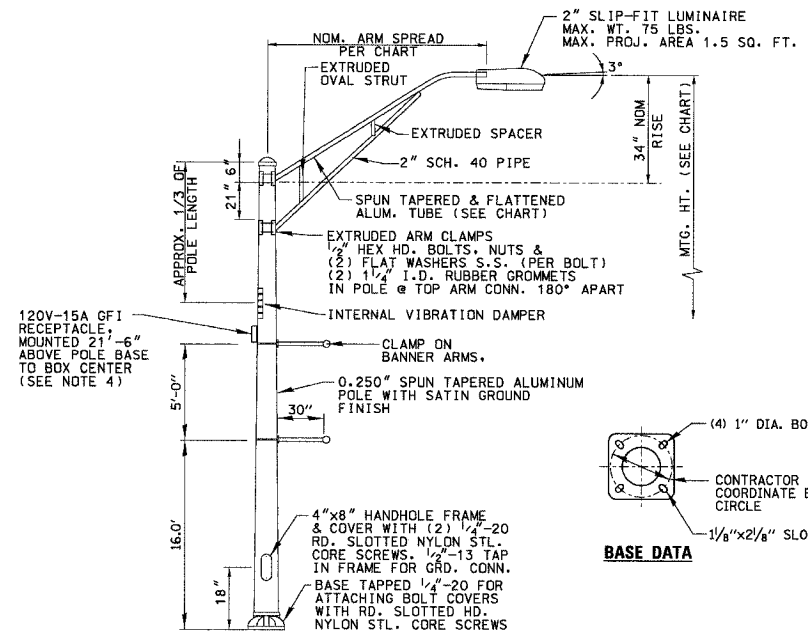
**COM ED OVERHEAD CONNECTION POLE**  
N.T.S.

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**88TH AVENUE  
ROADWAY LIGHTING DETAILS-2**

SCALE: NO SCALE  
DATE: 8/22/2006

DRAWN BY: AJD  
DESIGN BY: AJD  
CHECKED BY: JPC

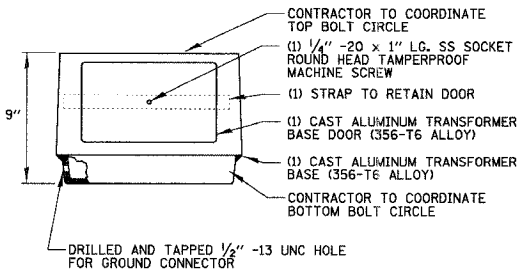


MATERIAL SPECIFICATIONS	
POLE & ARM TUBES	6063-T6
ANCHOR BASE & TRANSFORMER BASE	AA356-T6
SMALL HARDWARE	AISI 300 SERIES STN. STL.
EXTRUSIONS	6063-T6
T-BASE CONN HRDW	ASTM-A307
H.H. FRAME	AA356-T6
BOLT COVERS	ASTM-825(AA356)

POLE TYPE	MTG. HT. INC. T-BASE	POLE SIZE	ARM SPREAD	ARM TUBE SIZE
1	40'-9"	.250"-10.0"x6.0"x37'-8"	15 FT.	0.125"W-4.0" O.D.
2	48'-3"	.250"-10.0"x6.0"x45'-2"	15 FT.	0.125"W-4.0" O.D.

- NOTES:
- LIGHTPOLES SHALL MEET WIND LOADING & VIBRATION REQUIREMENTS ACCORDING TO AASHTO STANDARDS. SEE ARTICLE 1069.01 IN STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL STEEL SHALL BE FROM A DOMESTIC SOURCE.
  - THE LIGHT STANDARD SHALL MEET THE ILLUMINATION REQUIREMENTS AS SPECIFIED IN THE LUMINAIRE PERFORMANCE TABLES IN THE SPECIFICATIONS. ALL LUMINAIRES SHALL HAVE A MULTITAP BALLAST WIRED FOR 240 VOLT OPERATION.
  - ALL LIGHT POLES SHALL BE FROM THE SAME MANUFACTURER, AND ALL LUMINAIRES SHALL BE FROM THE SAME MANUFACTURER.
  - GFI RECEPTACLE SHALL HAVE A DIE CAST IN USE RATED COVER. COVER TO BE INTERMATIC MODEL NO. WP1010MC OR APPROVED EQUAL.

**LIGHT STANDARD DETAIL**  
N.T.S.



- NOTES:
- BEFORE INSTALLATION OF BREAKAWAY BASE, USER SHOULD CONSULT WITH AUTHORIZED DISTRIBUTOR REGARDING USERS PROPOSED APPLICATION, LOAD REQUIREMENTS AND INSTALLATION METHODS. FAILURES CAN RESULT FROM USERS MISAPPLICATION OR IMPROPER INSTALLATION. TO APPROACH OPTIMUM STATIC LOADS, USE THE LARGEST POSSIBLE BOLT CIRCLES. SHIMS SHALL NOT BE USED.

**BREAKAWAY TRANSFORMER BASE**  
N.T.S.

LUMINAIRE TABLE				
POLE TYPE	WATTAGE	PHOTOMETRIC	MANUFACTURER	MODEL NUMBER
1	250 W	MC3	A	G.E. MDCL 2550A22FMC32
			B	HUBBELL RMC-3, RMD-25S38-3
2	250 W	MC3	A	G.E. MDCL 2550A22FMC32
			B	HUBBELL RMC-3, RMD-25S38-3

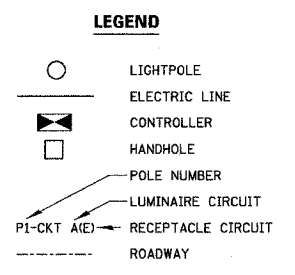
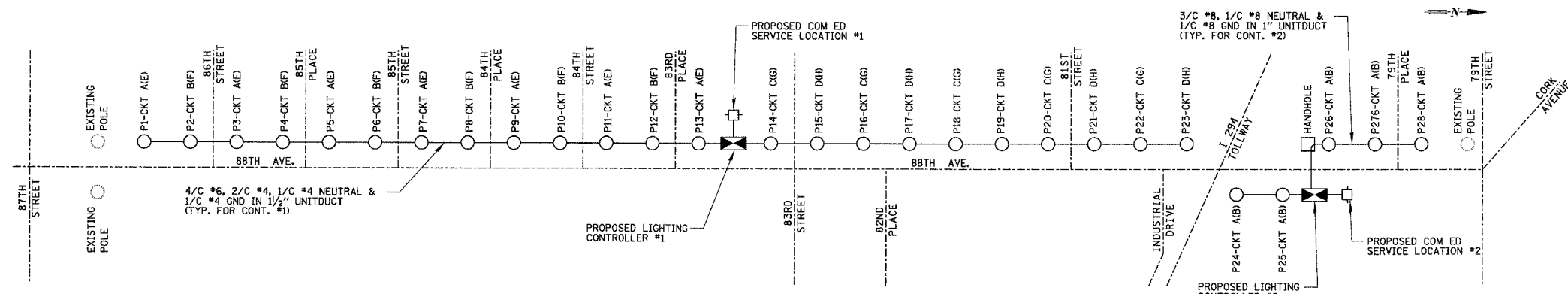
**LUMINAIRE AND POLE SCHEDULE**

LIGHT POLE IDENTIFIER	LIGHT POLE SYMBOL/TYPE	LUMINAIRE MTG. HEIGHT	POLE ARM LENGTH	LUMINAIRE WATTAGE	LUMINAIRE CIRCUIT NO.	RECEPTACLE CIRCUIT NO.	CONTROLLER NUMBER
P1	●-1	40'-0"	15'-0"	250W	A	E	1
P2	●-1	40'-0"	15'-0"	250W	B	F	1
P3	●-1	40'-0"	15'-0"	250W	A	E	1
P4	●-1	40'-0"	15'-0"	250W	B	F	1
P5	●-1	40'-0"	15'-0"	250W	A	E	1
P6	●-1	40'-0"	15'-0"	250W	B	F	1
P7	●-1	40'-0"	15'-0"	250W	A	E	1
P8	●-1	40'-0"	15'-0"	250W	B	F	1
P9	●-1	40'-0"	15'-0"	250W	A	E	1
P10	●-1	40'-0"	15'-0"	250W	B	F	1
P11	●-1	40'-0"	15'-0"	250W	A	E	1
P12	●-1	40'-0"	15'-0"	250W	B	F	1
P13	●-1	40'-0"	15'-0"	250W	A	E	1
P14	●-1	40'-0"	15'-0"	250W	C	G	1
P15	●-1	40'-0"	15'-0"	250W	D	H	1
P16	●-1	40'-0"	15'-0"	250W	C	G	1
P17	●-1	40'-0"	15'-0"	250W	D	H	1
P18	●-1	40'-0"	15'-0"	250W	C	G	1
P19	●-1	40'-0"	15'-0"	250W	D	H	1
P20	●-1	40'-0"	15'-0"	250W	C	G	1
P21	●-1	40'-0"	15'-0"	250W	D	H	1
P22	●-1	40'-0"	15'-0"	250W	C	G	1
P23	●-1	40'-0"	15'-0"	250W	D	H	1
P24	●-2	47'-6"	15'-0"	250W	A	B	2
P25	●-2	47'-6"	15'-0"	250W	A	B	2
P26	●-2	47'-6"	15'-0"	250W	A	B	2
P27	●-2	47'-6"	15'-0"	250W	A	B	2
P28	●-2	47'-6"	15'-0"	250W	A	B	2

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**88TH AVENUE ROADWAY LIGHTING DETAILS-3**  
 SCALE: NO SCALE  
 DATE 8/22/2006  
 DRAWN BY AJD  
 DESIGN BY AJD  
 CHECKED BY JPC

SPEN1BLS



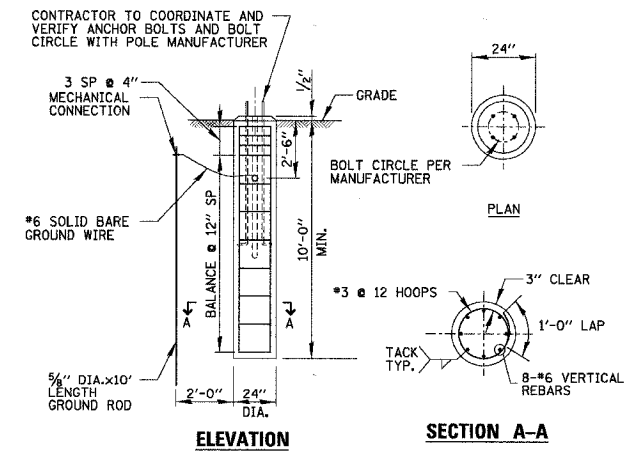
**NOTE:**  
 ALL CONDUCTORS IN THE UNIT DUCT RUNS SHALL HAVE COLOR CODED INSULATION THROUGHOUT THE ENTIRE LENGTH OF THE CONDUCTOR. THE COLOR IDENTIFICATION FOR THE SYSTEM GROUND SHALL BE GREEN. THE PHASE CONDUCTORS SHALL BE PER IDOT STANDARD 1066.02 (A).

**ONE LINE CIRCUIT DIAGRAM**  
 N.T.S.

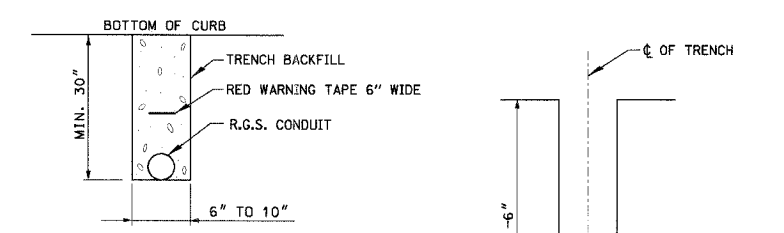
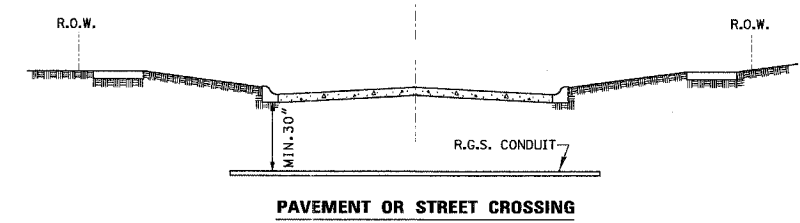
**24 IN. DIA. FOUNDATION DEPTH TABLE**  
**DESIGN BASE ON 80 M.P.H. AASHTO WIND LOADING**

TYPE OF SOIL	FOUNDATION DEPTH D	REINFORCEMENT IN FOUNDATION	
		VERTICAL BARS	HORIZONTAL BARS
ROCK OR SOLIDIFIED SLAG	5'-0"	NONE	NONE
DENSE SAND	7'-9"	8-#6 x 7'-4"	#3 x 73'
MEDIUM SAND	8'-3"	8-#6 x 7'-10"	#3 x 78'
LOOSE SAND	9'-0"	8-#6 x 8'-7"	#3 x 85'
STIFF CLAY	7'-0"	8-#6 x 6'-7"	#3 x 66'
MEDIUM CLAY	9'-6"	8-#6 x 9'-1"	#3 x 90'
SOFT CLAY	13'-0"	8-#6 x 12'-7"	#3 x 122'

NOTE: CONTRACTOR TO VERIFY FOUNDATIONS DEPTH WITH EXISTING SOIL CONDITIONS.

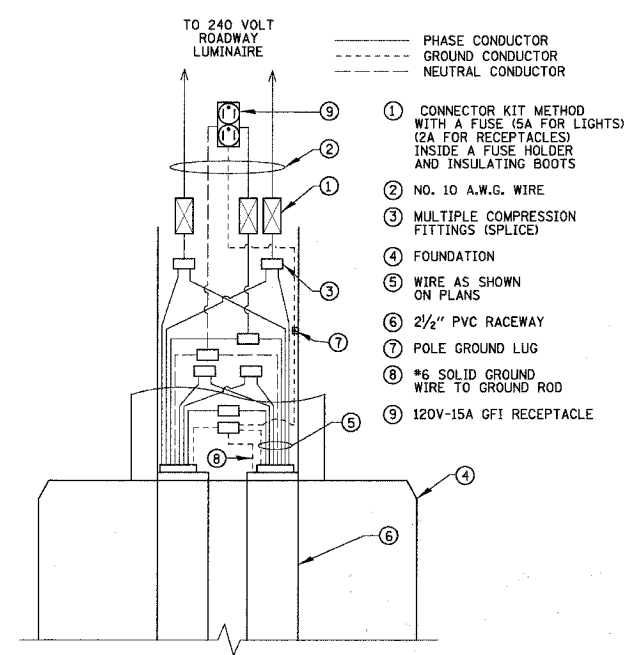


**CONCRETE FOUNDATION DETAIL**  
 N.T.S.



- TRENCH SECTION**
- ① CONDUIT SHALL BE RIGID GALVANIZED STEEL (R.G.S.)
  - ② CONDUIT SHALL EXTEND A MINIMUM OF 2 FT. BEYOND BACK OF CURB OR EDGE OF PAVEMENT.
  - ③ CONDUIT SHALL BE A MINIMUM OF 2.5 FT. BELOW CURB BOTTOM.
- ELECTRIC CONDUIT UNDER PAVEMENT**
- TRENCH CROSS SECTION**

**TYPICAL CONDUIT INSTALLATION DETAILS**  
 N.T.S.



**POLE HANDHOLE WIRING DIAGRAM**  
 N.T.S.

**REVISIONS**

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**88TH AVENUE**  
**ROADWAY LIGHTING DETAILS-4**

SCALE: NO SCALE  
 DATE: 8/22/2006

DRAWN BY: AJD  
 DESIGN BY: AJD  
 CHECKED BY: JPC