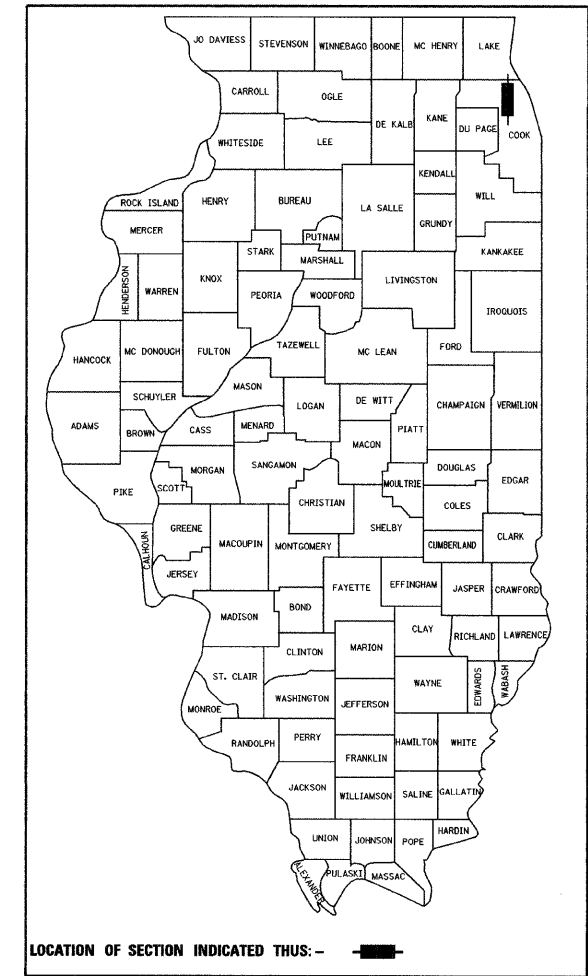


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR

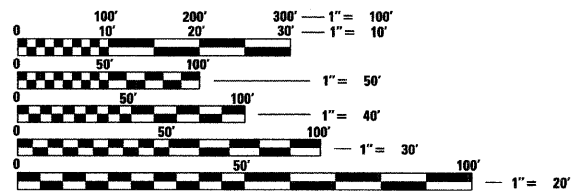
PROPOSED FEDERAL-AID HIGHWAY
F.A.P. ROUTE 348 WAUKEGAN ROAD (IL 43)
MAIN STREET TO F.A.U. ROUTE 1324 DEMPSTER STREET (IL 58)
STREET LIGHTING
SECTION 07-00102-00-LT
PROJECT NO: HSIP-8003 (913)
VILLAGE OF MORTON GROVE
COOK COUNTY
C-91-113-08

F.A.P. RTE. 348	SECTION 07-00102-00-LT	COUNTY COOK	TOTAL SHEETS 23	SHEET NO. 1
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63099	

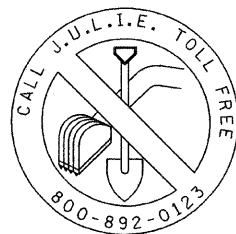


ASSOCIATE FIELD ENGINEER: KEVIN STALLWORTH (847) 705-4169
CONSULTANT: CIORBA GROUP, INC. (773) 775-4009

FOR INDEX OF SHEETS, SEE SHEET NO. 2

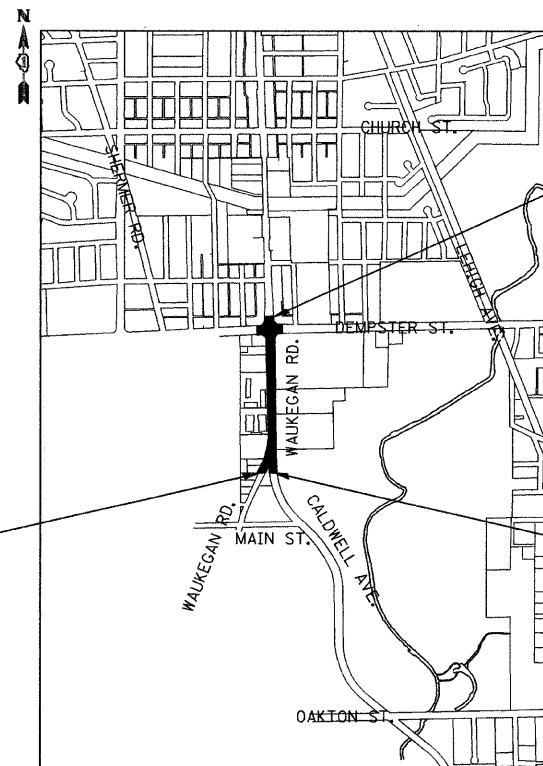


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.



CONTRACT NO: 63099

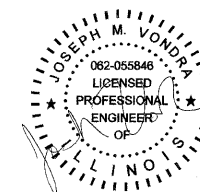
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123



BEGIN PROJECT
STA. 10+65

END PROJECT
STA. 35+75

BEGIN PROJECT
STA. 51+09



DATE: 12/18/2008
SEAL EXPIRES: 11/30/2009

APPROVED *[Signature]*
VILLAGE OF MORTON GROVE, DIRECTOR OF PUBLIC WORKS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PASSED DECEMBER 29, 2008
[Signature]
DISTRICT 1 ENGINEER OF LOCAL ROAD & STREETS

RELEASING FOR BID
BASED ON LIMITED
REVIEW DECEMBER 30, 2008
[Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

PLANS PREPARED BY: CIORBA GROUP

Ciorba Group, Inc.

DESIGN FIRM
REGISTRATION NUMBER

184-001016

CONSULTING ENGINEERS
SUITE 402, 5507 NORTH CUMBERLAND AVE.
CHICAGO, ILLINOIS 60656 # (773) 775-4009

LOCATION MAP
T 41N. R 13E (NILES TOWNSHIP)
GROSS LENGTH OF PROJECT=3650 FT=0.69 MI
NET LENGTH OF PROJECT=3650 FT=0.69 MI

INDEX OF SHEETS

- 1 TITLE SHEET
- 2 INDEX OF SHEETS AND GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- 4-9 PROPOSED LIGHTING PLAN
- 10-11 ONE LINE DIAGRAMS
- 12-22 ELECTRICAL DETAILS
- 23 TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTION AND DRIVEWAYS (TC-10)

LIST OF HIGHWAY STANDARDS

- 000001-05 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 701602-04 URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
- 701606-06 URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
- 701801-04 LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
- 701901-01 TRAFFIC CONTROL DEVICES

GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS AS WELL AS:
ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS ADOPTED JANUARY 1, 2007.
ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (LATEST EDITION IN EFFECT ON THE DATE OF INVITATION FOR BIDS)
NATIONAL ELECTRIC CODE, 2008 EDITION.
DISTRICT ONE RECURRING SPECIAL PROVISIONS FOR ROADWAY LIGHTING, ADOPTED: JANUARY 1, 2008.
- 2. ALL UNDERGROUND UTILITY LOCATIONS, INCLUDING SANITARY SEWERS, STORM SEWERS, WATER MAINS, AND THEIR SERVICE LINES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE THE RESPECTIVE UTILITY COMPANIES FIELD-LOCATE ALL UTILITIES, ASCERTAIN THEIR STATUS AND ADJUST OR RELOCATE THESE UTILITIES, AS NECESSARY, PRIOR TO STARTING CONSTRUCTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. THE CONTRACTOR SHALL NOTIFY ALL PUBLIC AND PRIVATE UTILITIES BEFORE STARTING CONSTRUCTION, INCLUDING, BUT NOT LIMITED TO:

- NICOR GAS
1844 FERRY ROAD
NAPERVILLE, IL 60563
(630) 388-2362
- COMED
1500 FRANKLIN BLVD
LIBERTYVILLE, IL 60048
(630) 437-2236
- AT&T
2004 MINER STREET
DES PLAINES, IL 60016
(847) 759-5581
- COMCAST
688 INDUSTRIAL DRIVE
ELMHURST, IL 60126
(630) 600-6352
- VILLAGE OF MORTON GROVE PUBLIC WORKS
7840 NAGLE AVE.
MORTON GROVE, IL 60053
(847) 470-5235

- 3. THE VILLAGE OF MORTON GROVE DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- 4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCING CONSTRUCTION.
- 5. THE DIMENSIONS AND LOCATIONS OF UTILITY FACILITIES AS SHOWN ON THESE PLANS ARE AN ESTIMATE FOR DESIGN PURPOSES ONLY, AND ARE NOT INTENDED FOR USE AS FIELD LOCATIONS FOR CONSTRUCTION. BEFORE BEGINNING ANY DIGGING OR EXCAVATION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT J.U.L.I.E. AT 1-800-892-0123 TO VERIFY UTILITY LOCATIONS.

- 6. THE CONTRACTOR SHALL MAINTAIN A SET OF CONSTRUCTION RECORD DRAWINGS NOTING ALL CHANGES TO THE PLANS AND THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES ENCOUNTERED. A MYLAR REPRODUCIBLE AS-BUILT DRAWING AND TWO (2) PAPER SETS MUST BE SUBMITTED TO VILLAGE OF MORTON GROVE DEPARTMENT OF PUBLIC WORKS FOR REVIEW AND APPROVAL UPON COMPLETION OF THE PROJECT. THIS WORK WILL BE CONSIDERED INCIDENTAL TO THIS CONTRACT.
- 7. ANY SIGN LOCATED IN THE PUBLIC RIGHT-OF-WAY WHICH INTERFERES WITH THE CONSTRUCTION OF THE PROPOSED LIGHTING SYSTEM SHALL BE REMOVED AND RE-ERECTED. ALL WORK INVOLVING SIGN REMOVAL AND RE-ERECTION SHALL BE GOVERNED BY THE FOLLOWING REQUIREMENTS:
 - A. A SIGN LOG SHALL BE CREATED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. A COPY SHALL BE GIVEN TO THE ENGINEER FOR REVIEW. UPON REVIEW BY THE ENGINEER, THE CONTRACTOR SHALL PROVIDE A COPY TO THE VILLAGE OF MORTON GROVE PUBLIC WORKS DEPARTMENT.
 - B. SIGNS SHALL NOT BE MOVED UNTIL PROGRESS OF WORK NECESSITATES IT.
 - C. EVERY SIGN REMOVED MUST BE RE-ERECTED AT A TEMPORARY LOCATION IN A WORKMANLIKE MANNER AND BE VISIBLE TO TRAFFIC FOR WHICH IT WAS INTENDED. ALL SUCH SIGNS MUST BE MAINTAINED STRAIGHT AND CLEAN FOR THE DURATION OF THE TEMPORARY SETTING.
 - D. ALL SIGNS SHALL BE RE-ERECTED IN THE ORIGINAL LOCATION AS THE IMPROVEMENTS ARE COMPLETED.
 - E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SIGNS DAMAGED BY HIS/HER CONSTRUCTION ACTIVITIES AND WILL REPLACE THEM AT NO COST TO THE VILLAGE. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT.

- 8. NOMINAL QUANTITIES FOR THE FOLLOWING PAY ITEMS HAVE BEEN INCLUDED IN THE PLANS AND SHALL BE UTILIZED AS DIRECTED BY THE ENGINEER:

PCC DRIVEWAY PAVEMENT, 8 INCH, SPECIAL	20	SQ. YD.
PCC SIDEWALK, 5"	500	SQ. FT.
SIDEWALK REMOVAL	500	SQ. FT.
LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	220	FOOT
TEST HOLES	16	EACH

- 9. THE CONTRACTOR WILL CONFINE HIS OPERATIONS TO WITHIN THE AREAS DESIGNATED BY THE ENGINEER IN THE FIELD. DAMAGE TO PROPERTY OUTSIDE OF THESE LIMITS WILL BE RESTORED TO THE CONDITION THAT EXISTED PRIOR TO THE PROJECT AND SHALL BE INCIDENTAL TO THE CONTRACT. ANY AREAS WITHIN THE VILLAGE RIGHT OF WAY SHALL BE REPLACED WITH SOD.

- 10. THE CONTRACTOR SHALL PROTECT ALL TREES AND SHRUBS ADJACENT TO THE PROJECT DURING CONSTRUCTION OPERATIONS, IN ACCORDANCE WITH SECTION 201 OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS AND AS INDICATED ON THE PLAN.

- 11. ALL TREE TRIMMING WILL BE COMPLETED BY THE VILLAGE OF MORTON GROVE.

- 12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN SATISFACTORY DRAINAGE OF THE PROJECT SITE AND THOSE AREAS THAT PRESENTLY DRAIN THROUGH THE PROJECT SITE AT ALL TIMES DURING THE CONSTRUCTION PERIOD. THE COST OF PROVIDING, INSTALLING AND MAINTAINING THESE MEASURES SHALL BE INCIDENTAL TO THE COST OF THE CONTRACT.

- 13. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ALL DRAINAGE STRUCTURES OF ALL DEBRIS ACCUMULATED DURING CONSTRUCTION OPERATIONS. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

- 14. NO CONSTRUCTION MATERIALS OR EQUIPMENT SHALL BE STORED IN OR MOVED THROUGH THE DRIPLINE OF ANY PARKWAY TREE. IF THIS CLEARANCE CANNOT BE MAINTAINED, THE FORESTRY SUPERINTENDANT MUST BE NOTIFIED PRIOR TO CONSTRUCTION.

ROADWAY LIGHTING NOTES

- 1. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO ARTICLE 801.04 OF THE STANDARD SPECIFICATIONS REGARDING THE PROPOSED LOCATIONS OF THE LIGHTING SYSTEM. ADDITIONALLY, THE UNIT DUCT ROUTING SHOWN ON THE PLANS IS MAINLY INTENDED TO SHOW ELECTRICAL CIRCUITRY. AN EFFORT HAS BEEN MADE TO AVOID UTILITY CONFLICTS BUT THE EXACT LOCATION OF ELECTRICAL CABLES AND CONDUITS SHOULD BE APPROVED BY THE ENGINEER AFTER THE UNDERGROUND UTILITIES HAVE BEEN LOCATED BY IT'S OWNER.

ALL PROPOSED LIGHT POLE LOCATIONS SHALL BE STAKED BY THE CONTRACTOR AND BE APPROVED BY THE VILLAGE PRIOR TO EXCAVATION. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR THIS STAKING.

- 2. THE CONTRACTOR SHALL KEEP DEVIATIONS FROM THE UNIT DUCT ROUTING SHOWN ON THE PLANS TO A MINIMUM. MAJOR DEVIATIONS SHALL BE REPORTED TO AND APPROVED BY THE ENGINEER BEFORE INSTALLATION.

SHORT RUNS OF UNIT DUCT (FOR ROADWAY LIGHTING) MAY BE TRENCHED AT THE DISCRETION OF THE VILLAGE. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR TRENCHING THE UNIT DUCT.

- 4. WEEKDAY CONSTRUCTION ACTIVITY THAT WILL NECESSITATE LANE CLOSURE IN ACCORDANCE WITH STANDARD 701606 OR STANDARD 701801 MUST BE LIMITED TO THE HOURS BETWEEN 9:00 A.M. AND 3:00 P.M. IN ORDER TO AVOID THE PEAK RUSH HOURS.

- 5. THE AREA OF SIDEWALK TO BE REMOVED AND REPLACED HAS BEEN ESTIMATED. THESE LIMITS AND LOCATIONS ARE SUBJECT TO CHANGE AS DIRECTED BY THE ENGINEER. THE REMOVAL LIMITS SHOULD BE LOCATED AT AN EXISTING JOINT IN THE SIDEWALK. THE EXACT LIMITS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

- 6. REMOVAL OF THE EXISTING LIGHTING SYSTEM SHALL NOT BEGIN BEFORE THE PROPOSED LIGHTING SYSTEM IS OPERATIONAL. THE CONTRACTOR SHALL NOTIFY COMMONWEALTH EDISON WHEN THE PROPOSED LIGHTING SYSTEM WILL BE OPERATIONAL SO REMOVAL OF COMMONWEALTH EDISON LUMINAIRES AND MAST ARMS MAY COMMENCE.

- 7. WITHIN THIRTY (30) DAYS AFTER THE CONTRACT IS SIGNED AND BEFORE ANY WORK IS AUTHORIZED BY THE ENGINEER, THE CONTRACTOR SHALL SUBMIT MANUFACTURER'S LITERATURE PERTAINING TO LIGHTING WORK FOR THE ELECTRICAL ENGINEER'S REVIEW AND APPROVAL.

- 8. THE ENGINEER SHALL APPROVE THE LOCATION OF ALL PUSH PITS.

- 9. NO POLES SHALL BE ERECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED.

- 10. NO UNDERGROUND SPLICES ARE ALLOWED.

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CG Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel. 773.775.4000 Fax 773.775.4014

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

WAUKEGAN ROAD LIGHTING IMPROVEMENTS
INDEX OF SHEETS AND GENERAL NOTES

SCALE: N/A SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	07-00102-00-LT	COOK	23	2
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63099	

Y030-1E

CODE NUMBER	DESCRIPTION	UNIT	QUANTITY
25200200	SUPPLEMENTAL WATERING	UNIT	2
25200700	SODDING, SPECIAL	SQ YD	550
42300800	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH, SPECIAL	SQ YD	20
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	500
44000600	SIDEWALK REMOVAL	SQ FT	500
67100100	MOBILIZATION	L SUM	1
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1
70102632	TRAFFIC CONTROL AND PROTECTION, STANDARD 701602	L SUM	1
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1
80400100	ELECTRIC SERVICE INSTALLATION	EACH	2
80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1
81018600	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	200
81018700	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	2,950
81603210	UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (EPR-TYPE RHW),1 1/4" DIA. POLYETHYLENE	FOOT	4,600
81603225	UNIT DUCT, 600V, 4-1C NO.4, 1/C NO.6 GROUND, (EPR-TYPE RHW),1 1/2" DIA. POLYETHYLENE	FOOT	4,800
81700120	ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW) 1/C NO. 6	FOOT	400
81700125	ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW) 1/C NO. 4	FOOT	1,600
81702170	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 2/0	FOOT	850
82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT 250 WATT	EACH	30

* - SPECIALTY ITEM

CODE NUMBER	DESCRIPTION	UNIT	QUANTITY
82102310	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT 310 WATT	EACH	26
82500505	LIGHTING CONTROLLER, SPECIAL	EACH	1
82500540	LIGHTING CONTROLLER TYPE CB-RCS 100AMP - 480VOLT	EACH	1
83007400	LIGHT POLE, ALUMINUM, 35 FT. M.H., 10 FT. MAST ARM	EACH	30
83050800	LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 12 FT. MAST ARM	EACH	18
83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	260
83600215	LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	FOOT	220
83800105	BREAKAWAY DEVICE, TRANSFORMER BASE, 11.5 INCH BOLT CIRCLE	EACH	30
83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	11
84200600	REMOVAL OF EXISTING LIGHTING UNIT, NO SALVAGE	EACH	10
87900200	DRILL EXISTING HANDHOLE	EACH	4
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1,800
X0324387	LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	26
X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	500
X8420110	REMOVE LIGHT POLE FOUNDATION, PARTIAL	EACH	10
XX003338	TEST HOLE	EACH	16
XX006937	GROUND ROD, 5/8" DIA. X 10 FT.	EACH	48

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Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60658
Tel. 773.775.4009 Fax 773.775.4014

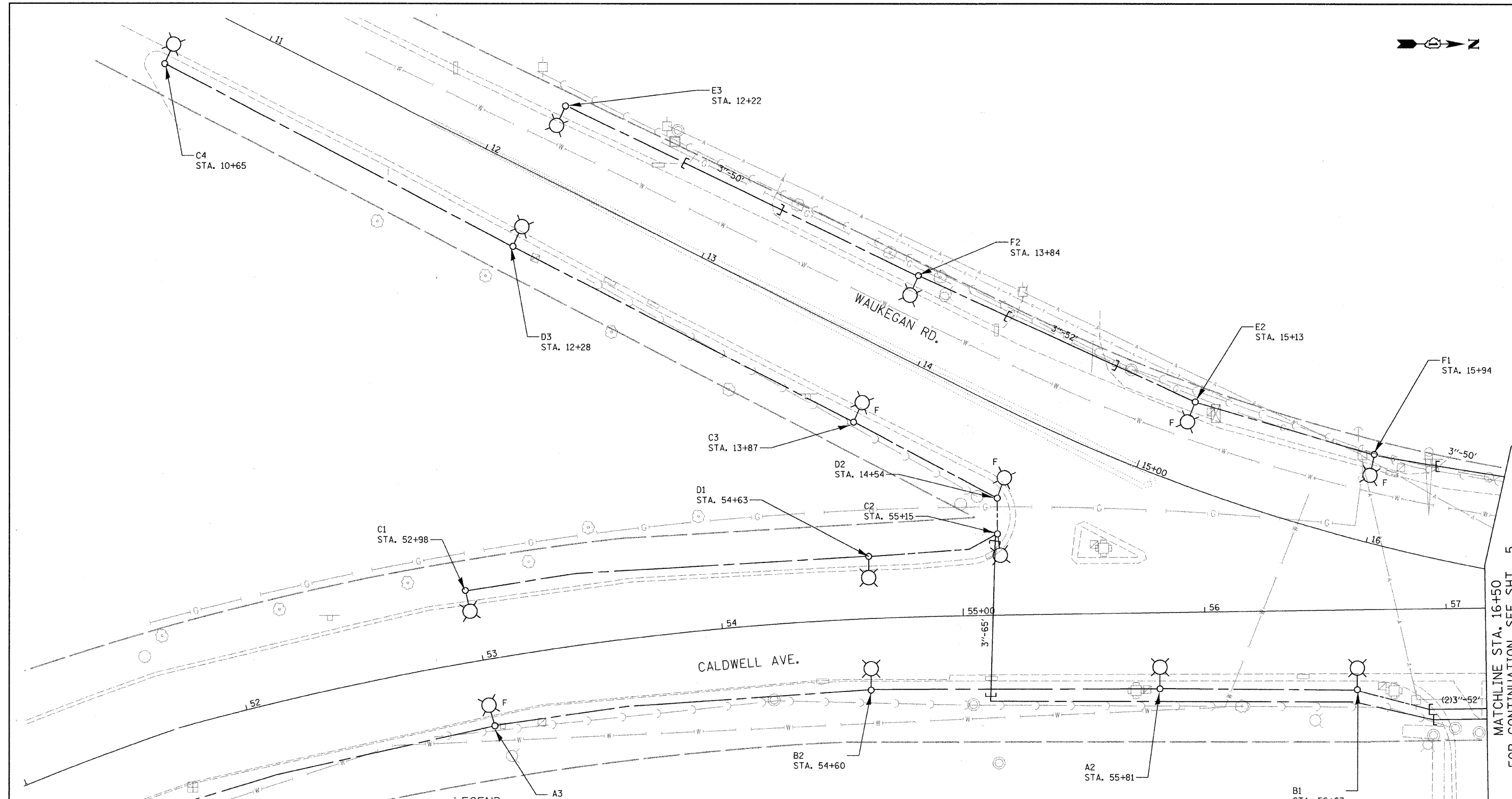
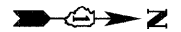
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WAUKEGAN ROAD LIGHTING IMPROVEMENTS
SUMMARY OF QUANTITIES**







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



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	07-00102-00-LT	COOK	23	3
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63099	



MATCHLINE STA. 16+50
FOR CONTINUATION, SEE SHT. 5

LEGEND

-  INSTALL LIGHT POLE, ALUMINUM, 35' M.H., 10' MAST ARM AND 250W HPS LUMINAIRE
-  INSTALL LIGHT POLE, ALUMINUM, 47.5' M.H., 12' MAST ARM AND 310W HPS LUMINAIRE WITH LUMINAIRE SAFETY CABLE ASSEMBLY
-  PROPOSED LIGHTING CONTROLLER, SIZE AS NOTED
-  UNIT DUCT, WITH 3-1/4 NO. 4 AND 1/4 NO. 6 GROUND, 600V (EPR-TYPE RHW) 1 1/4" DIA. POLYETHYLENE
-  UNIT DUCT, WITH 4-1/4 NO. 4 AND 1/4 NO. 6 GROUND, 600V (EPR-TYPE RHW) 1 1/2" DIA. POLYETHYLENE
-  GALVANIZED STEEL CONDUIT, PUSHED, DIAMETER AND LENGTH AS NOTED

-  ① EXISTING MAST ARM AND LUMINAIRE (TO BE REMOVED BY OTHERS)
-  ② EXISTING WOOD POLE, MAST ARM AND LUMINAIRE (TO BE REMOVED BY OTHERS)
-  REMOVAL OF EXISTING LIGHTING, NO SALVAGE. REMOVE LIGHT POLE FOUNDATION, PARTIAL
-  F OFFSET POLE FOUNDATION
-  EXISTING LIGHTING UNIT TO REMAIN
-  EXISTING ORNAMENTAL LIGHTING UNIT TO REMAIN

NOTES:

1. ALL POLES SHALL BE OFFSET 3' FROM BACK OF CURB TO FACE OF POLE, UNLESS OTHERWISE NOTED.
2. EXISTING LUMINAIRES SHALL REMAIN IN USE UNTIL THE NEW LIGHTING SYSTEM IS OPERATIONAL.

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Ciorba Group, Inc.
CONSULTING ENGINEERS
6507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60655
Tel. 773.775.4009 Fax 773.775.4014

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	DATE - DECEMBER 2008	REVISED -

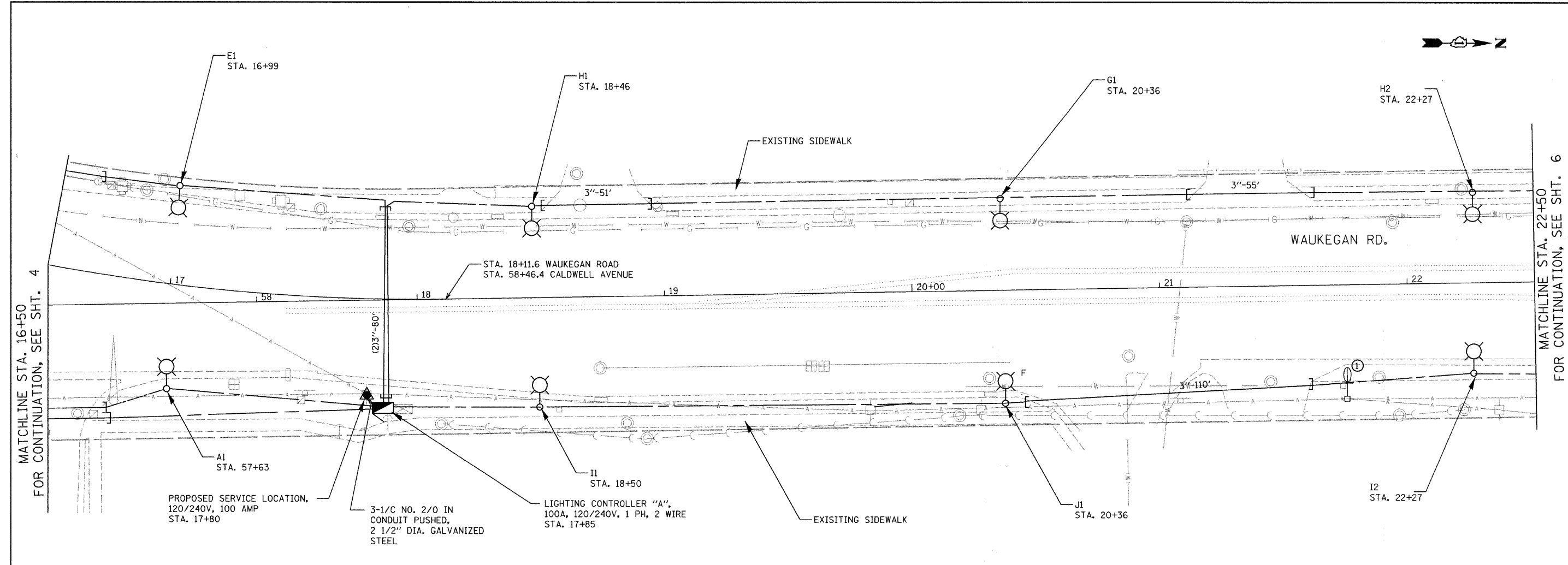
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WAUKEGAN ROAD LIGHTING IMPROVEMENTS
PROPOSED LIGHTING PLAN**

SCALE: 1"=20' SHEET NO. 1 OF 6 SHEETS STA. TO STA.

F.A.P. RTE. 348	SECTION 07-00102-00-LT	COUNTY COOK	TOTAL SHEETS 23	SHEET NO. 4
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT		CONTRACT NO. 63099		

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MATCHLINE STA. 16+50
FOR CONTINUATION, SEE SHT. 4

MATCHLINE STA. 22+50
FOR CONTINUATION, SEE SHT. 6

LEGEND

- INSTALL LIGHT POLE, ALUMINUM, 35' M.H., 10' MAST ARM AND 250W HPS LUMINAIRE
- INSTALL LIGHT POLE, ALUMINUM, 47.5' M.H., 12' MAST ARM AND 310W HPS LUMINAIRE WITH LUMINAIRE SAFETY CABLE ASSEMBLY
- PROPOSED LIGHTING CONTROLLER, SIZE AS NOTED
- UNIT DUCT, WITH 3-1/2" NO. 4 AND 1/2" NO. 6 GROUND, 600V (EPR-TYPE RHW) 1 1/4" DIA. POLYETHYLENE
- UNIT DUCT, WITH 4-1/2" NO. 4 AND 1/2" NO. 6 GROUND, 600V (EPR-TYPE RHW) 1 1/2" DIA. POLYETHYLENE
- GALVANIZED STEEL CONDUIT, PUSHED, DIAMETER AND LENGTH AS NOTED
- ① EXISTING MAST ARM AND LUMINAIRE (TO BE REMOVED BY OTHERS)
- ② EXISTING WOOD POLE, MAST ARM AND LUMINAIRE (TO BE REMOVED BY OTHERS)
- REMOVAL OF EXISTING LIGHTING, NO SALVAGE. REMOVE LIGHT POLE FOUNDATION, PARTIAL
- F OFFSET POLE FOUNDATION
- EXISTING LIGHTING UNIT TO REMAIN
- EXISTING ORNAMENTAL LIGHTING UNIT TO REMAIN

NOTES:

1. ALL POLES SHALL BE OFFSET 3' FROM BACK OF CURB TO FACE OF POLE, UNLESS OTHERWISE NOTED.
2. EXISTING LUMINAIRES SHALL REMAIN IN USE UNTIL THE NEW LIGHTING SYSTEM IS OPERATIONAL.

Ciorba Group, Inc.
CONSULTING ENGINEERS
6507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel. 773.775.4000 Fax 773.775.4014

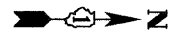
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DATE - DECEMBER 2008	REVISIONS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WAUKEGAN ROAD LIGHTING IMPROVEMENTS
PROPOSED LIGHTING PLAN**

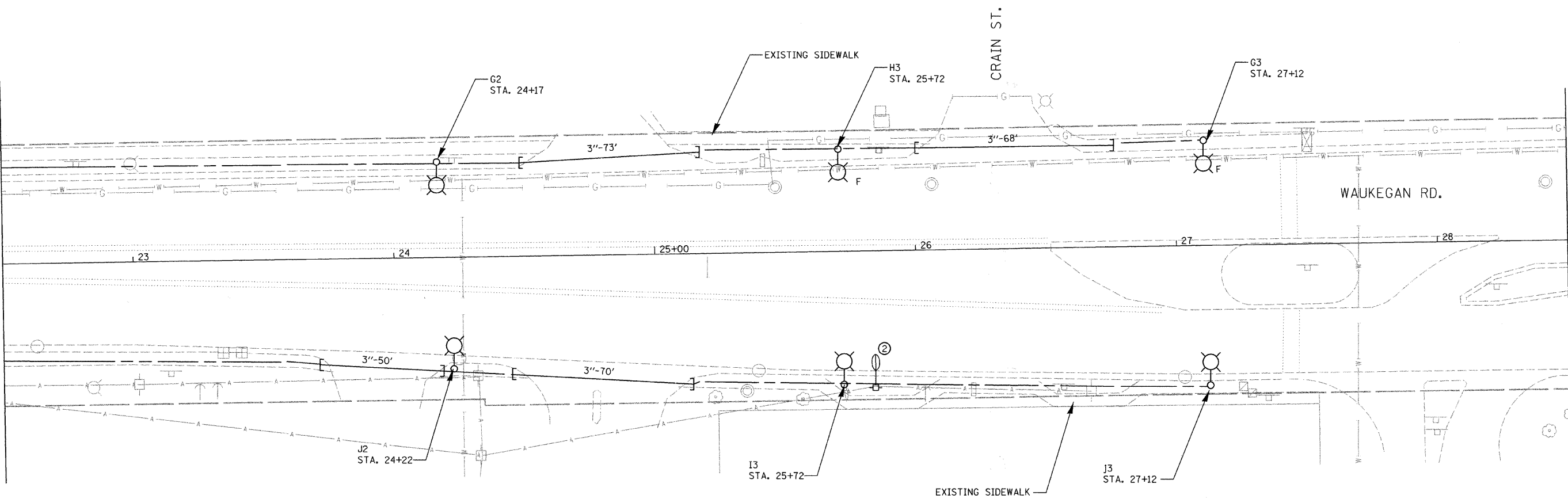
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F.A.P. RTE. 348	SECTION 07-00102-00-LT	COUNTY COOK	TOTAL SHEETS 23	SHEET NO. 5
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				
CONTRACT NO. 63099				



MATCHLINE STA. 22+50
FOR CONTINUATION, SEE SHT. 5

MATCHLINE STA. 28+50
FOR CONTINUATION, SEE SHT. 7



LEGEND

- INSTALL LIGHT POLE, ALUMINUM, 35' M.H., 10' MAST ARM AND 250W HPS LUMINAIRE
- INSTALL LIGHT POLE, ALUMINUM, 47.5' M.H., 12' MAST ARM AND 310W HPS LUMINAIRE WITH LUMINAIRE SAFETY CABLE ASSEMBLY
- PROPOSED LIGHTING CONTROLLER, SIZE AS NOTED
- UNIT DUCT, WITH 3-1/2" NO. 4 AND 1/2" NO. 6 GROUND, 600V (EPR-TYPE RHW) 1 1/4" DIA. POLYETHYLENE
- UNIT DUCT, WITH 4-1/2" NO. 4 AND 1/2" NO. 6 GROUND, 600V (EPR-TYPE RHW) 1 1/2" DIA. POLYETHYLENE
- GALVANIZED STEEL CONDUIT, PUSHED, DIAMETER AND LENGTH AS NOTED
- ① EXISTING MAST ARM AND LUMINAIRE (TO BE REMOVED BY OTHERS)
- ② EXISTING WOOD POLE, MAST ARM AND LUMINAIRE (TO BE REMOVED BY OTHERS)
- REMOVAL OF EXISTING LIGHTING, NO SALVAGE. REMOVE LIGHT POLE FOUNDATION, PARTIAL
- F OFFSET POLE FOUNDATION
- EXISTING LIGHTING UNIT TO REMAIN
- EXISTING ORNAMENTAL LIGHTING UNIT TO REMAIN

NOTES:

1. ALL POLES SHALL BE OFFSET 3' FROM BACK OF CURB TO FACE OF POLE, UNLESS OTHERWISE NOTED.
2. EXISTING LUMINAIRES SHALL REMAIN IN USE UNTIL THE NEW LIGHTING SYSTEM IS OPERATIONAL.

FILE NAME = c:\p\6839\design\lighting\6839-03-prop-1.tpdgn

Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue, Suite 402
 Chicago, Illinois 60656
 Tel. 773.775.4009 Fax 773.775.4014

USER NAME = jvondra	DESIGNED - MLB	REVISED -
PLOT SCALE = 20.0000' / IN.	DRAWN - MLB	REVISED -
PLOT DATE = 12/29/2008	CHECKED - JMV	REVISED -
	DATE - DECEMBER 2008	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WAUKEGAN ROAD LIGHTING IMPROVEMENTS
PROPOSED LIGHTING PLAN**

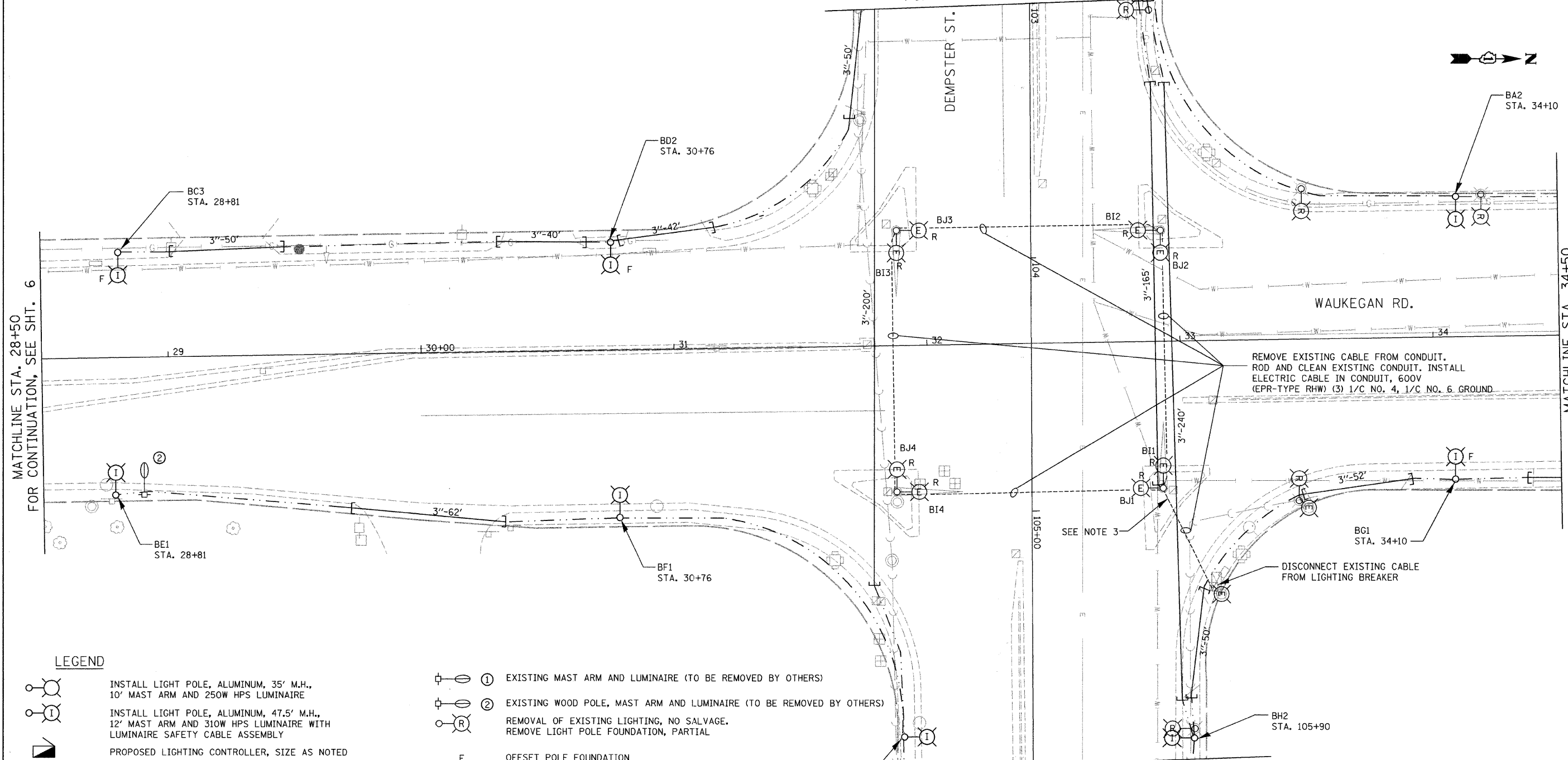
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F.A.P. RTE. 348	SECTION 07-00102-00-LT	COUNTY COOK	TOTAL SHEETS 23	SHEET NO. 6
FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT CONTRACT NO. 63099	

MATCHLINE STA. 103+00
FOR CONTINUATION, SEE SHT. 9

MATCHLINE STA. 28+50
FOR CONTINUATION, SEE SHT. 6

MATCHLINE STA. 34+50
FOR CONTINUATION SEE SHT. 8



REMOVE EXISTING CABLE FROM CONDUIT. ROD AND CLEAN EXISTING CONDUIT. INSTALL ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW) (3) 1/C NO. 4, 1/C NO. 6 GROUND

SEE NOTE 3

DISCONNECT EXISTING CABLE FROM LIGHTING BREAKER

LEGEND

- INSTALL LIGHT POLE, ALUMINUM, 35' M.H., 10' MAST ARM AND 250W HPS LUMINAIRE
- INSTALL LIGHT POLE, ALUMINUM, 47.5' M.H., 12' MAST ARM AND 310W HPS LUMINAIRE WITH LUMINAIRE SAFETY CABLE ASSEMBLY
- PROPOSED LIGHTING CONTROLLER, SIZE AS NOTED
- UNIT DUCT, WITH 3-1/C NO. 4 AND 1/C NO. 6 GROUND, 600V (EPR-TYPE RHW) 1 1/4" DIA. POLYETHYLENE
- UNIT DUCT, WITH 4-1/C NO. 4 AND 1/C NO. 6 GROUND, 600V (EPR-TYPE RHW) 1 1/2" DIA. POLYETHYLENE
- GALVANIZED STEEL CONDUIT, PUSHED, DIAMETER AND LENGTH AS NOTED

- EXISTING MAST ARM AND LUMINAIRE (TO BE REMOVED BY OTHERS)
- EXISTING WOOD POLE, MAST ARM AND LUMINAIRE (TO BE REMOVED BY OTHERS)
- REMOVAL OF EXISTING LIGHTING, NO SALVAGE. REMOVE LIGHT POLE FOUNDATION, PARTIAL
- OFFSET POLE FOUNDATION
- EXISTING LIGHTING UNIT TO REMAIN
- EXISTING ORNAMENTAL LIGHTING UNIT TO REMAIN
- REPLACE EXISTING LUMINAIRE WITH LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT 310 WATT AND LUMINAIRE SAFETY CABLE ASSEMBLY

NOTES:

1. ALL POLES SHALL BE OFFSET 3' FROM BACK OF CURB TO FACE OF POLE, UNLESS OTHERWISE NOTED.
2. EXISTING LUMINAIRES SHALL REMAIN IN USE UNTIL THE NEW LIGHTING SYSTEM IS OPERATIONAL.
3. EXISTING FEED FROM TRAFFIC SIGNAL CONTROLLER TO BE REMOVED AFTER CONNECTION TO THE NEW LIGHTING CONTROLLER.
4. THE CONTRACTOR SHALL REMOVE THE CABLE BETWEEN COMBO POLES AND EXISTING LUMINAIRES, THEN INSTALL NEW LUMINAIRES AND CABLE AND RECONNECT TO THE EXISTING LIGHTING CONTROLLER DURING THE SAME DAY SO THAT THE INTERSECTION REMAINS LIT DURING ALL EVENING HOURS. UPON COMPLETION OF THE NEW LIGHTING CONTROLLER, THESE NEW LUMINAIRES SHALL BE DISCONNECTED FROM THE EXISTING LIGHTING CONTROLLER AND CONNECTED TO THE NEW CONTROLLER. THIS WORK SHALL BE INCIDENTAL TO LIGHTING CONTROLLER TYPE CB-RCS 100AMP - 480 VOLT.

FILE NAME = m:\proj\66838\dwg\lighting\66838_84_prop_1.tg.dgn

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014

USER NAME = jvondra	DESIGNED - MLB	REVISED -
PLOT SCALE = 20.0000' / IN.	DRAWN - MLB	REVISED -
PLOT DATE = 12/29/2008	CHECKED - JMW	REVISED -
DATE - DECEMBER 2008	REVISIONS -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

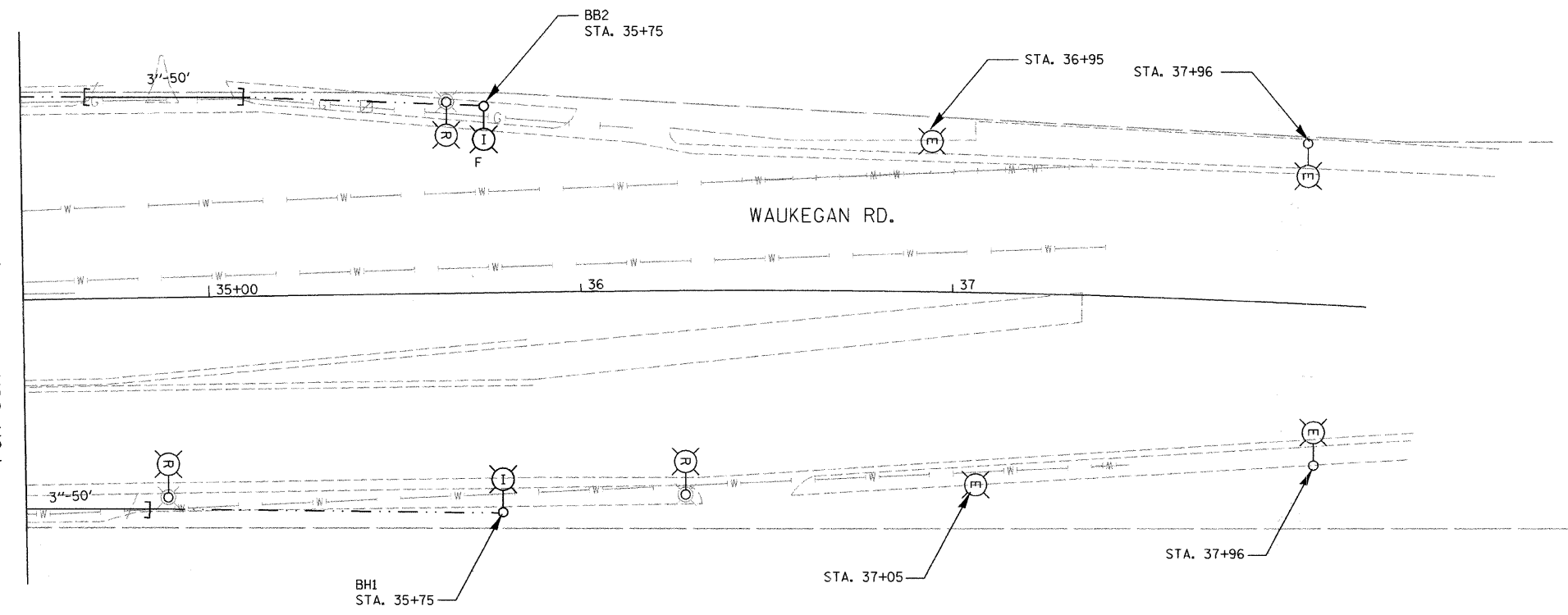
**WAUKEGAN ROAD LIGHTING IMPROVEMENTS
PROPOSED LIGHTING PLAN**

SCALE: 1"=20' SHEET NO. 4 OF 6 SHEETS STA. TO STA.

F.A.P. RTE. 348	SECTION 07-00102-00-LT	COUNTY COOK	TOTAL SHEETS 23	SHEET NO. 7
CONTRACT NO. 63099				
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				



MATCHLINE STA. 34+50
FOR CONTINUATION, SEE SHT. 7.



LEGEND

- | | | | |
|--|--|--|---|
| | INSTALL LIGHT POLE, ALUMINUM, 35' M.H., 10' MAST ARM AND 250W HPS LUMINAIRE | | ① EXISTING MAST ARM AND LUMINAIRE (TO BE REMOVED BY OTHERS) |
| | INSTALL LIGHT POLE, ALUMINUM, 47.5' M.H., 12' MAST ARM AND 310W HPS LUMINAIRE WITH LUMINAIRE SAFETY CABLE ASSEMBLY | | ② EXISTING WOOD POLE, MAST ARM AND LUMINAIRE (TO BE REMOVED BY OTHERS) |
| | PROPOSED LIGHTING CONTROLLER, SIZE AS NOTED | | REMOVAL OF EXISTING LIGHTING, NO SALVAGE. REMOVE LIGHT POLE FOUNDATION, PARTIAL |
| | UNIT DUCT, WITH 3-1/4" NO. 4 AND 1/C NO. 6 GROUND, 600V (EPR-TYPE RHW) 1 1/4" DIA. POLYETHYLENE | | F OFFSET POLE FOUNDATION |
| | UNIT DUCT, WITH 4-1/4" NO. 4 AND 1/C NO. 6 GROUND, 600V (EPR-TYPE RHW) 1 1/2" DIA. POLYETHYLENE | | EXISTING LIGHTING UNIT TO REMAIN |
| | GALVANIZED STEEL CONDUIT, PUSHED, DIAMETER AND LENGTH AS NOTED | | EXISTING ORNAMENTAL LIGHTING UNIT TO REMAIN |

NOTES:

- ALL POLES SHALL BE OFFSET 3' FROM BACK OF CURB TO FACE OF POLE, UNLESS OTHERWISE NOTED.
- EXISTING LUMINAIRES SHALL REMAIN IN USE UNTIL THE NEW LIGHTING SYSTEM IS OPERATIONAL.
- REPLACE EXISTING WIRING FOR EXISTING LIGHTING ON COMBINATION POLES WITH NEW (3) 1/C NO. 4, 1/C NO. 6 GROUND AND TIED IN TO NEW UNIT DUCT FROM PROPOSED LIGHTING CONTROLLER "B" TO THE HANDHOLE IN FRONT OF EXISTING SERVICE.

FILE NAME = m:\p2\66838\design\lighting\66838_05_prop...1.dgn

Ciorba Group, Inc.
CONSULTING ENGINEERS
6507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel. 773.775.4000 Fax 773.775.4014

USER NAME = jvondra	DESIGNED - MLB	REVISED -
PLOT SCALE = 28.0000' / IN.	DRAWN - MLB	REVISED -
PLOT DATE = 12/29/2008	CHECKED - JMW	REVISED -
	DATE - DECEMBER 2008	REVISED -

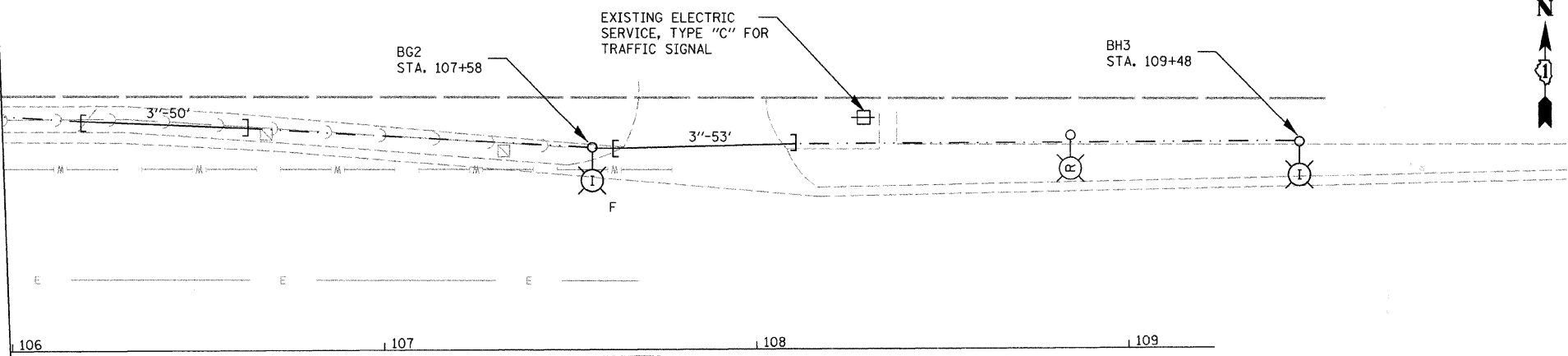
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WAUKEGAN ROAD LIGHTING IMPROVEMENTS
PROPOSED LIGHTING PLAN**

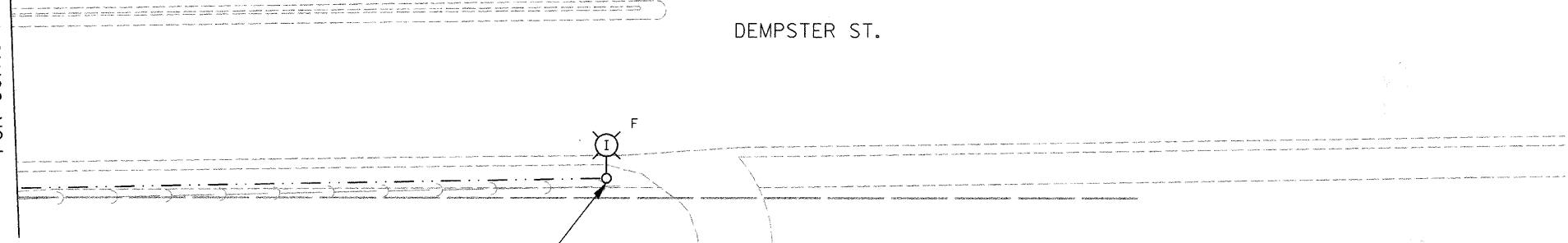
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F.A.P. RTE. 348	SECTION 07-00102-00-LT	COUNTY COOK	TOTAL SHEETS 23	SHEET NO. 8
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63099	

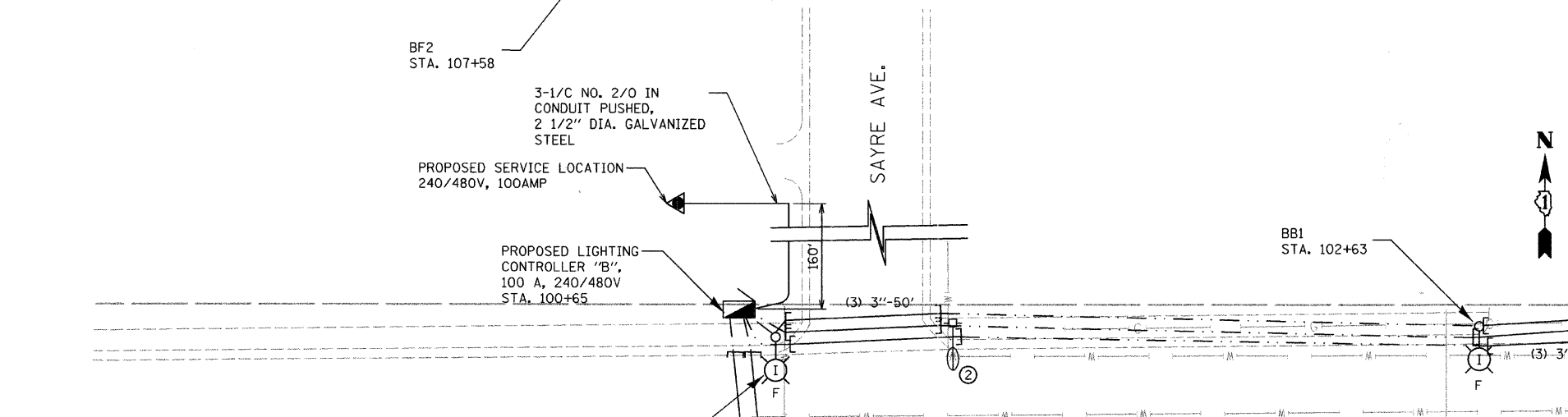
MATCHLINE STA. 106+00
FOR CONTINUATION, SEE SHT. 7.



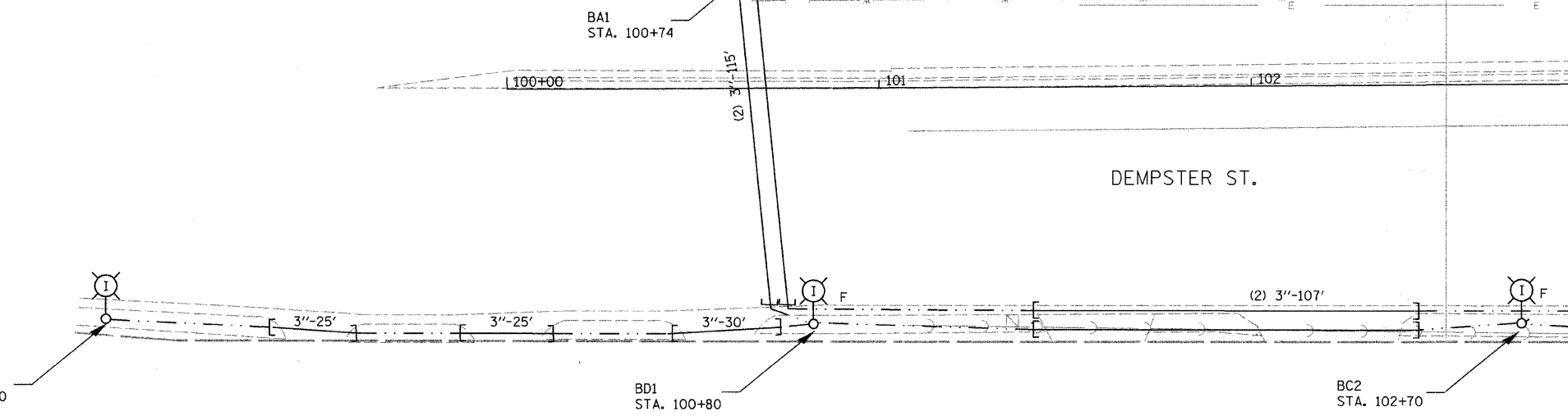
DEMPSTER ST.



SAYRE AVE.



DEMPSTER ST.



BC1
STA. 98+90

BD1
STA. 100+80

BC2
STA. 102+70

MATCHLINE STA. 103+00
FOR CONTINUATION, SEE SHT. 7

LEGEND

- INSTALL LIGHT POLE, ALUMINUM, 35' M.H., 10' MAST ARM AND 250W HPS LUMINAIRE
- INSTALL LIGHT POLE, ALUMINUM, 47.5' M.H., 12' MAST ARM AND 310W HPS LUMINAIRE WITH LUMINAIRE SAFETY CABLE ASSEMBLY
- PROPOSED LIGHTING CONTROLLER, SIZE AS NOTED
- UNIT DUCT, WITH 3-1/4 NO. 4 AND 1/4 NO. 6 GROUND, 600V (EPR-TYPE RHW) 1 1/4" DIA. POLYETHYLENE
- UNIT DUCT, WITH 4-1/4 NO. 4 AND 1/4 NO. 6 GROUND, 600V (EPR-TYPE RHW) 1 1/2" DIA. POLYETHYLENE
- GALVANIZED STEEL CONDUIT, PUSHED, DIAMETER AND LENGTH AS NOTED
- ① EXISTING MAST ARM AND LUMINAIRE (TO BE REMOVED BY OTHERS)
- ② EXISTING WOOD POLE, MAST ARM AND LUMINAIRE (TO BE REMOVED BY OTHERS)
- (R) REMOVAL OF EXISTING LIGHTING, NO SALVAGE. REMOVE LIGHT POLE FOUNDATION, PARTIAL
- F OFFSET POLE FOUNDATION
- (I) EXISTING LIGHTING UNIT TO REMAIN
- (E) EXISTING ORNAMENTAL LIGHTING UNIT TO REMAIN

NOTES:

1. ALL POLES SHALL BE OFFSET 3' FROM BACK OF CURB TO FACE OF POLE, UNLESS OTHERWISE NOTED.
 2. EXISTING LUMINAIRES SHALL REMAIN IN USE UNTIL THE NEW LIGHTING SYSTEM IS OPERATIONAL.
- UNIT DUCT TO BE INSTALLED IN THE PARKWAY. THEY ARE SHOWN IN THE ROAD ONLY TO CLARIFY THE INTENDED ROUTING.

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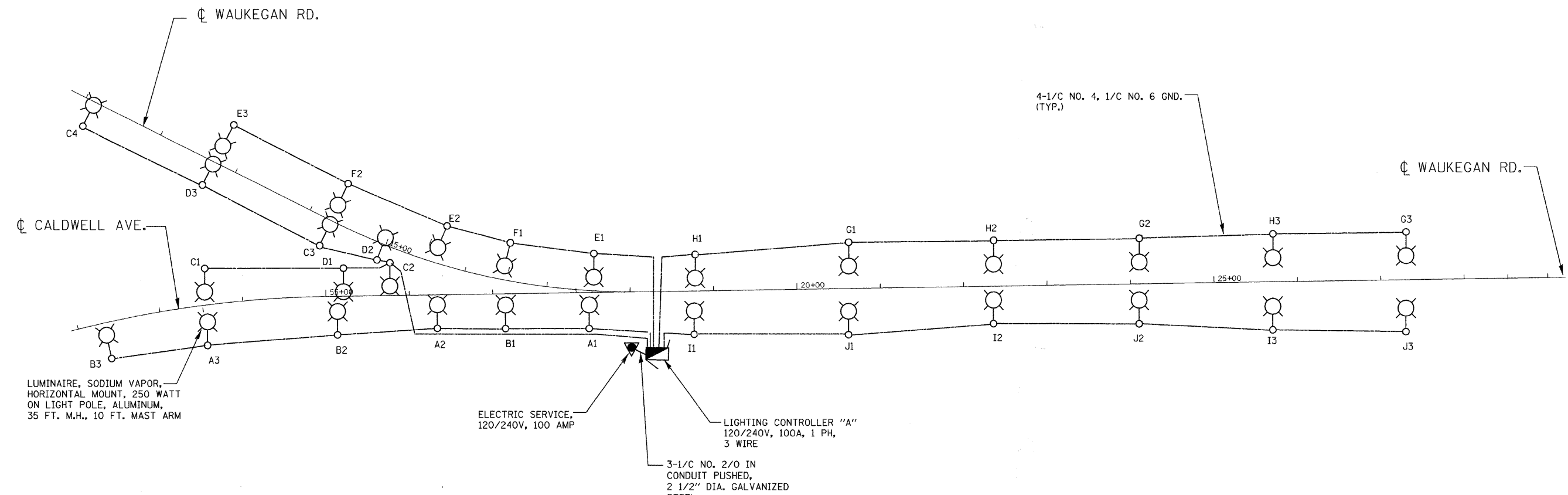
Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014

USER NAME = jvondra	DESIGNED - MLB	REVISED -
PLOT SCALE = 20.0000' / IN.	DRAWN - MLB	REVISED -
PLOT DATE = 12/29/2008	CHECKED - JMV	REVISED -
	DATE - DECEMBER 2008	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WAUKEGAN ROAD LIGHTING IMPROVEMENTS
PROPOSED LIGHTING PLAN
SCALE: 1"=20'
SHEET NO. 6 OF 6 SHEETS
STA. TO STA.

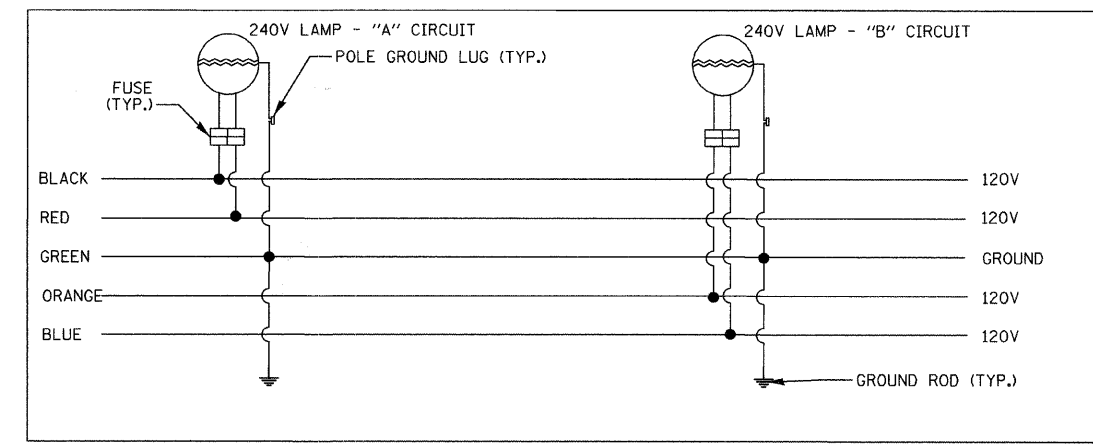
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FED. ROAD DIST. NO. - ILLINOIS		FED. AID PROJECT		



LOAD TABULATION FOR CONTROLLER "A"

CKT. #	LOAD DESCRIPTION	PHASE A	PHASE B
A	3-250W HPS	3.9	3.9
B	3-250W HPS	3.9	3.9
C	4-250W HPS	5.2	5.2
D	3-250W HPS	3.9	3.9
E	3-250W HPS	3.9	3.9
F	2-250W HPS	2.6	2.6
G	3-250W HPS	3.9	3.9
H	3-250W HPS	3.9	3.9
I	3-250W HPS	3.9	3.9
J	3-250W HPS	3.9	3.9
TOTAL		39.0	39.0

LOAD WAS CALCULATED BASED ON 1.3A PER 250W LUMINAIRE AT 240V



TYPICAL POLE WIRING DIAGRAM

FILE NAME = m:\p\c2\63099\design\lighting\63099-01.dgn

CG Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60655
Tel. 773.775.4009 Fax 773.775.4014

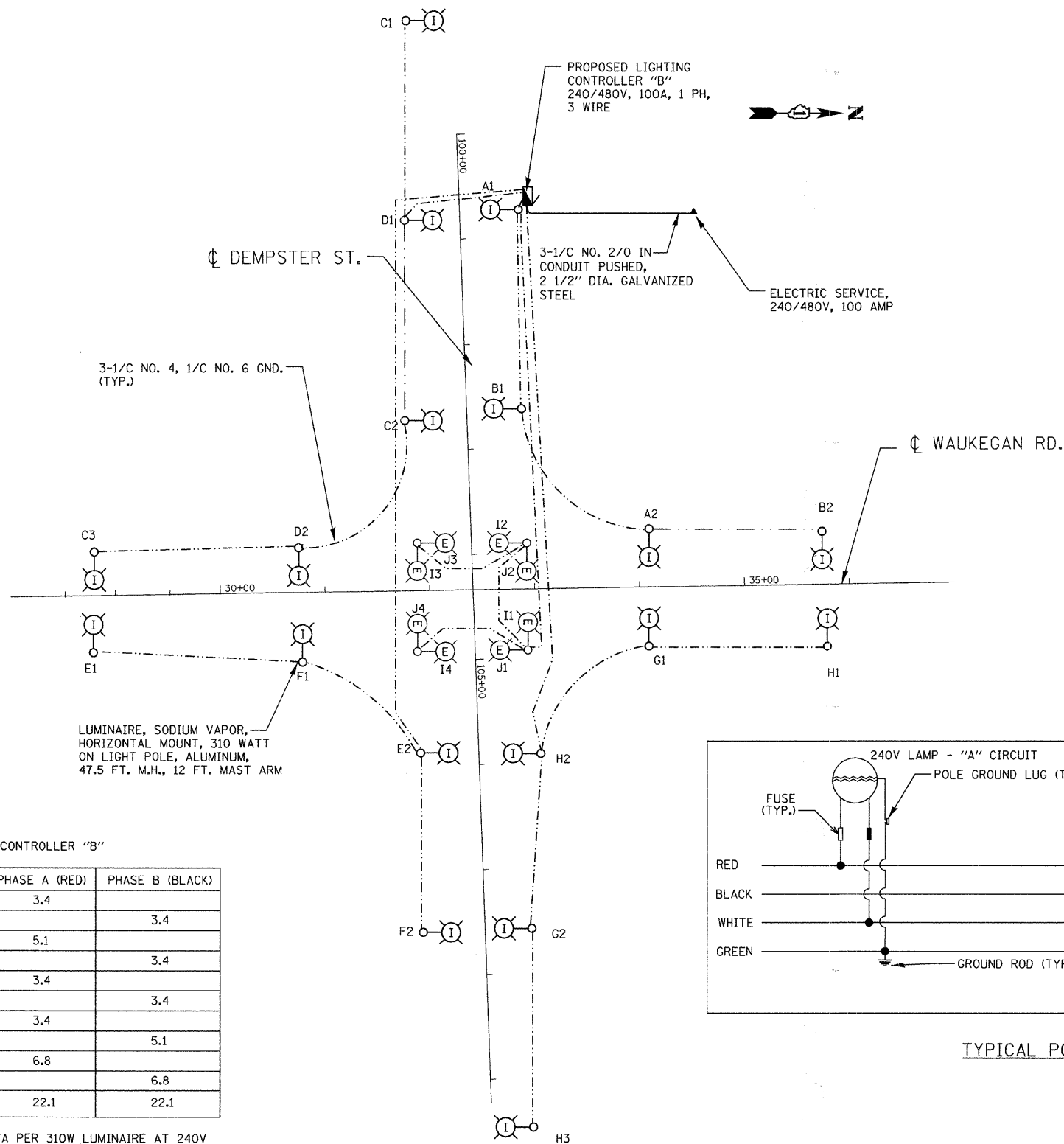
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PLOT DATE = 12/29/2008	CHECKED - JMV	REVISED -
	DATE - DECEMBER 2008	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WAUKEGAN ROAD LIGHTING IMPROVEMENTS
LIGHTING CONTROLLER "A" ONE LINE DIAGRAM**

SCALE: N/A SHEET NO. 1 OF 1 SHEETS STA. TO STA.

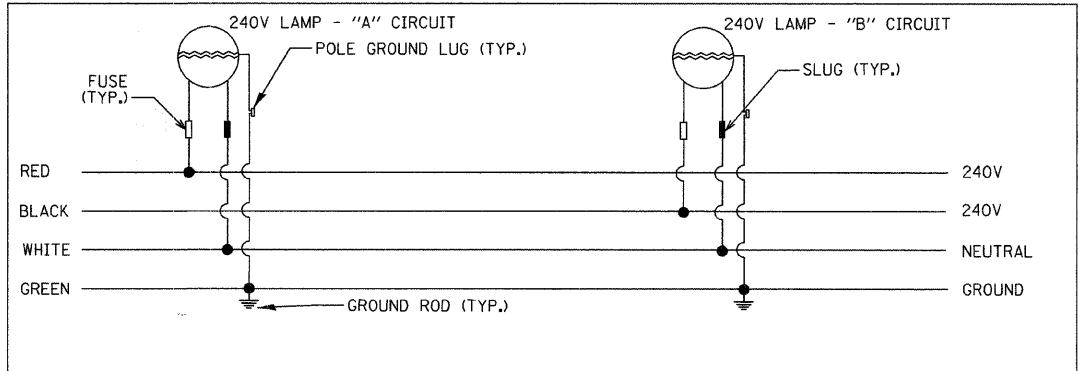
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FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT CONTRACT NO. 63099				



LOAD TABULATION FOR CONTROLLER "B"

CKT. #	LOAD DESCRIPTION	PHASE A (RED)	PHASE B (BLACK)
A	2-310W HPS	3.4	
B	2-310W HPS		3.4
C	3-310W HPS	5.1	
D	2-310W HPS		3.4
E	2-310W HPS	3.4	
F	2-310W HPS		3.4
G	2-310W HPS	3.4	
H	3-310W HPS		5.1
I	4-310W HPS	6.8	
J	4-310W HPS		6.8
TOTAL		22.1	22.1

LOAD WAS CALCULATED BASED ON 1.7A PER 310W LUMINAIRE AT 240V



TYPICAL POLE WIRING DIAGRAM

FILE NAME = n:\p\03\66030\design\lighting\66030_08_cenline.dgn

Ciorba Group, Inc.
 CONSULTING ENGINEERS
 6507 North Cumberland Avenue, Suite 402
 Chicago, Illinois 60656
 Tel. 773.775.4009 Fax 773.775.4014

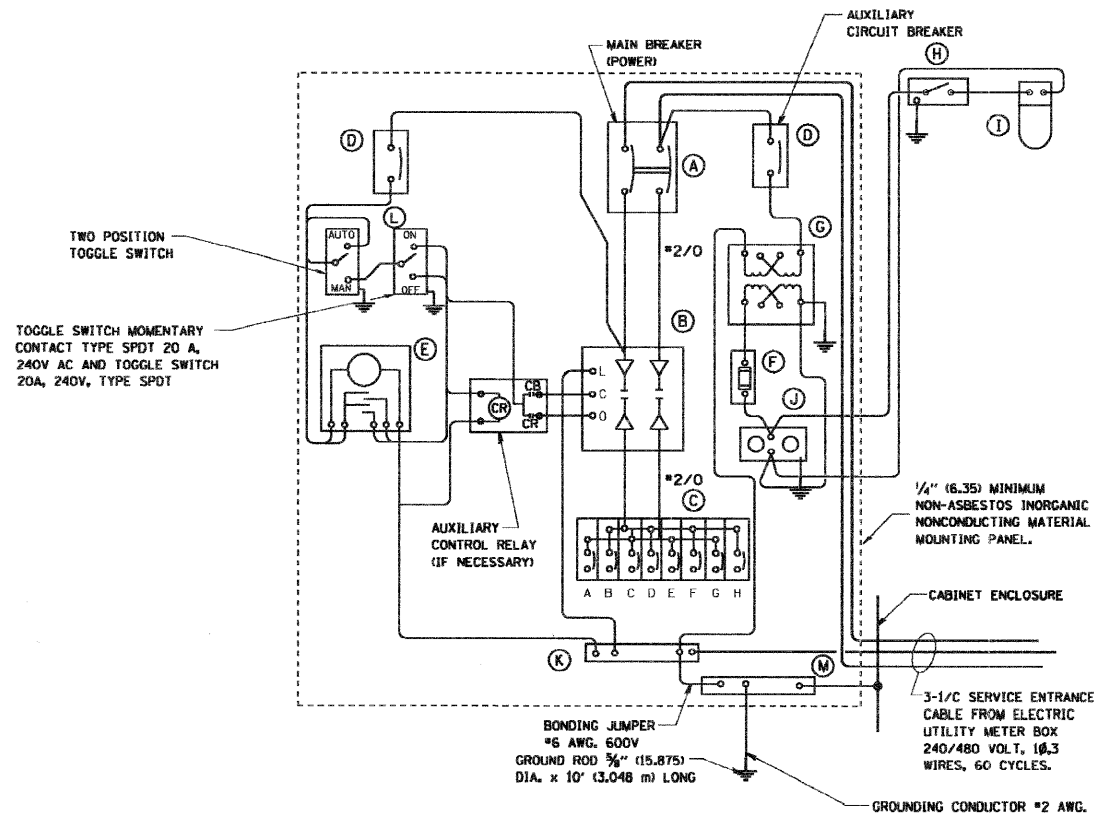
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PLOT DATE = 12/29/2008	CHECKED - JMV	REVISED -
	DATE - DECEMBER 2008	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**WAUKEGAN ROAD LIGHTING IMPROVEMENTS
 LIGHTING CONTROLLER "B" ONE LINE DIAGRAM**

SCALE: N/A SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. 348	SECTION 07-00102-00-LT	COUNTY COOK	TOTAL SHEETS 23	SHEET NO. 11
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT CONTRACT NO. 63099				



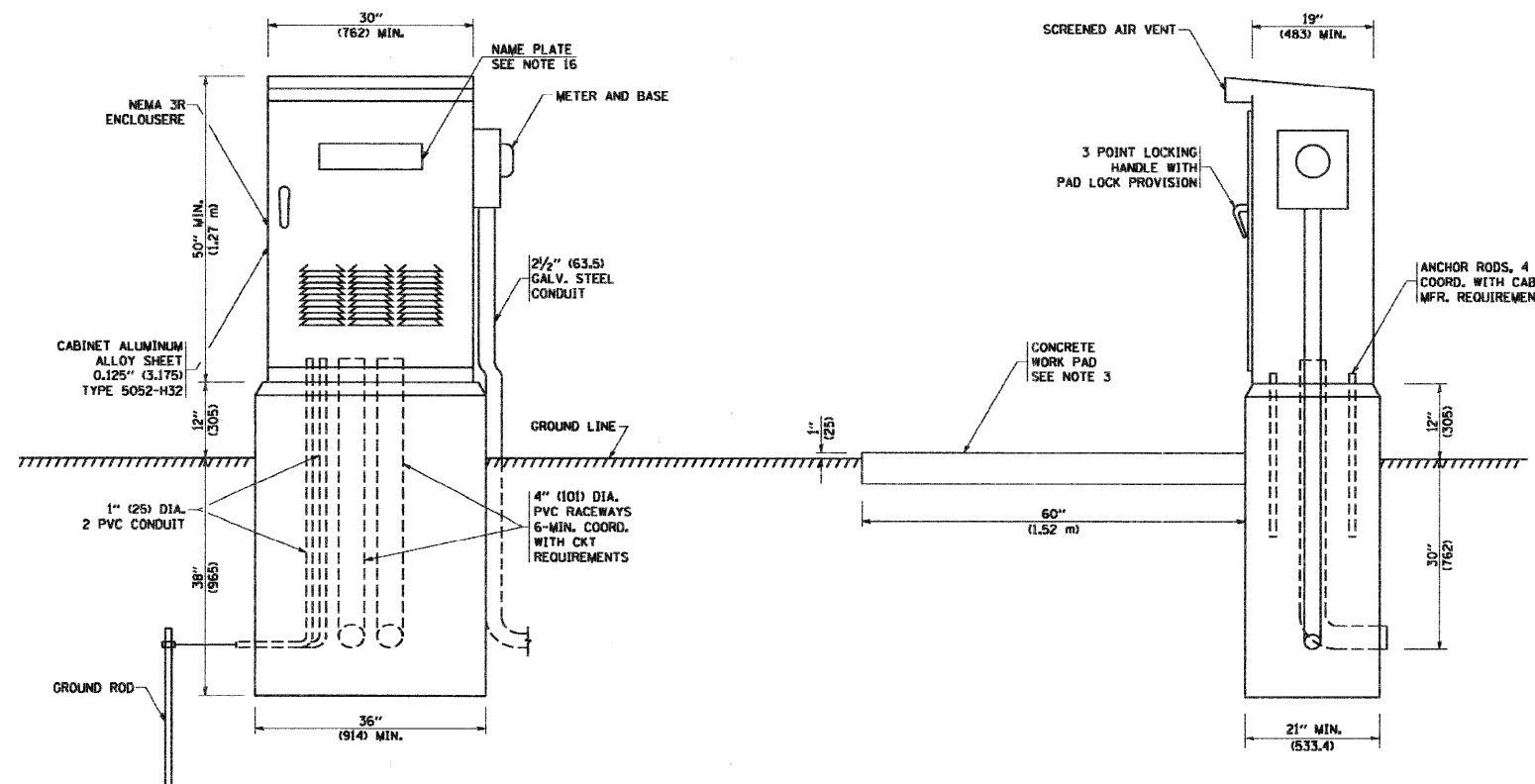
PANEL WIRING DIAGRAM

PANEL EQUIPMENT

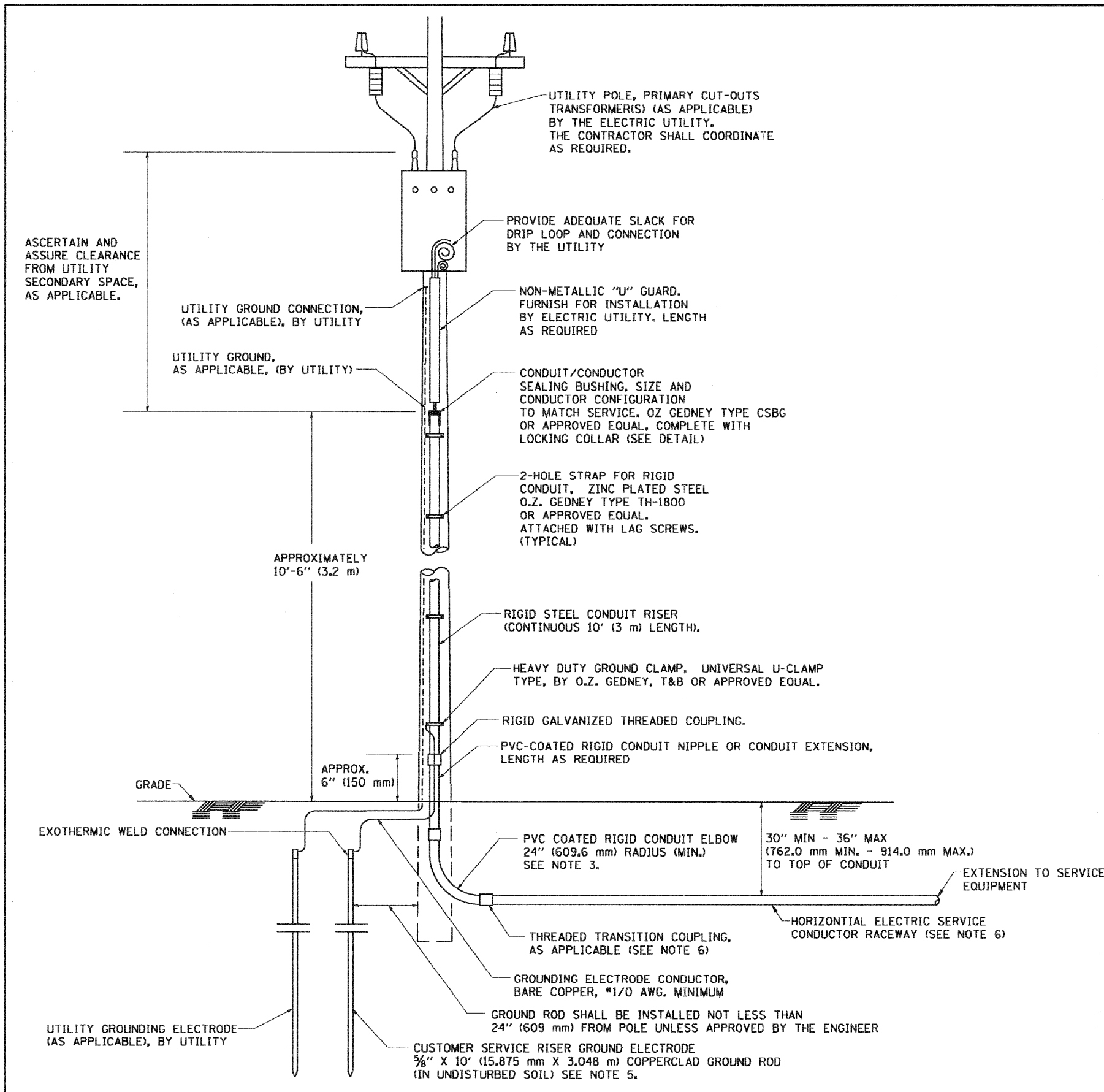
BILL OF MATERIAL		
ITEM	QUANTITY	DESCRIPTION
A	1	MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT, 100 AMP. FRAME, 100 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 480 VOLT.
B	1	REMOTE CONTROL SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, SINGLE THROW, 100 AMP., 600 VOLTS CONTROL CIRCUIT 240 VOLT.
C	8	CIRCUIT BREAKERS, 1 POLE, 100AMP. FRAME, 50 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-10,000 AMP. AT 240 V.
D	2	CONTROL CIRCUIT-CIRCUIT BREAKER, 1 POLE, 240 V., 100 AMP. FRAME, 15 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-5000 AMP. AT 240 V.
E	1	ASTRONOMIC MICROPROCESSOR-BASED 2-CHANNEL CONTROLLER [TIME SWITCH].
F	1	20 A., 120 V. FUSE.
G	1	1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240 X 480 / 120 X 240 VOLT, 60 HZ.
H	1	SPST 20A SWITCH ON DOOR, TO TURN LIGHT ON WHEN DOOR IS OPEN.
I	1	INCANDESCENT LIGHTING FIXTURE ENCLOSED AND GASKETED WITH 60 WATT, 120 V. LAMP.
J	1	20 A., 120 V., DUPLEX RECEPTACLE, GFCI.
K	1	COPPER GROUND BUS 1/4" (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS
L	1	TOGGLE SWITCHES MOUNTED IN 4" (101.6) X 4" (101.6 mm) BOX.
M	1	COPPER GROUND BUS 1/4" (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND SPARE LUGS

NOTES:

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
- IN FRONT OF CONTROL CABINET DOOR, REMOVE VEGETATION AND 2" (50.8 mm) TOP SOIL, LEVEL THE AREA AND ON TOP, PLACE LENGTH WISE PARALLEL TO CONTROL CABINET, A CONCRETE PAD 36" (914.4 mm) X 60" (1524 mm) X 4" (101 mm) MIN. SIZE. THE COST OF LABOR AND MATERIALS ARE INCLUDED IN THE COST OF THE CONTROLLER.
- DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
- DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
- DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1/4" (6.35 mm) DIA. STAINLESS STEEL HINGE PIN.
- ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
- CONTROL WIRING TO BE #12 AWG, 600V, TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED COPPER.
- METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET, NEAR TO THE SERVICE POLE.
- CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED.
- THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
- ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED.
R = RED BL = BLUE W = WHITE
B = BLACK Y = YELLOW G = GREEN
- PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
- ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
- THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".
- 12" (304.8) X 16" (406.4 mm) STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED TO "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.



FILE NAME = W:\data\22x34\be215.dgn	USER NAME = gggj\enabt	DESIGNED -	REVISED - 08-20-04	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING CONTROLLER SINGLE DOOR			F.A. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PLOT SCALE = 5/8"=1'-0"	DRAWN -	CHECKED -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	348	07-00102-00-LT	COOK	23	12
PLOT DATE = 1/4/2008	DATE -	REVISD -	REVISD -					BE-215		CONTRACT NO.			
								FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

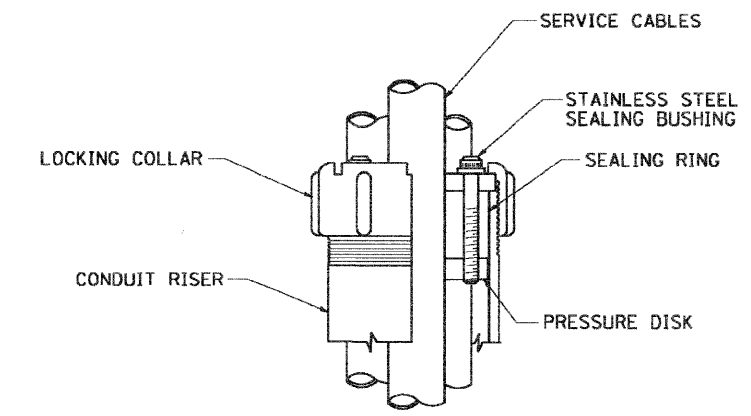


APPLICATION

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY-MOUNTED SERVICE EQUIPMENT.

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 THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
- CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
- PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR 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 "U" GUARD INSTALLATION AND SERVICE CONNECTION.
- THE HORIZONTAL ELECTRIC 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.
- 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 IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.

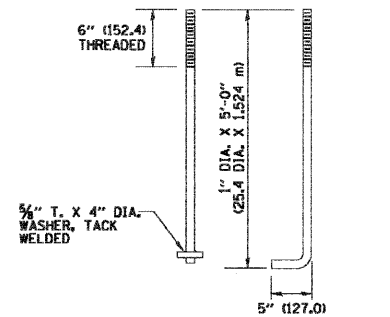
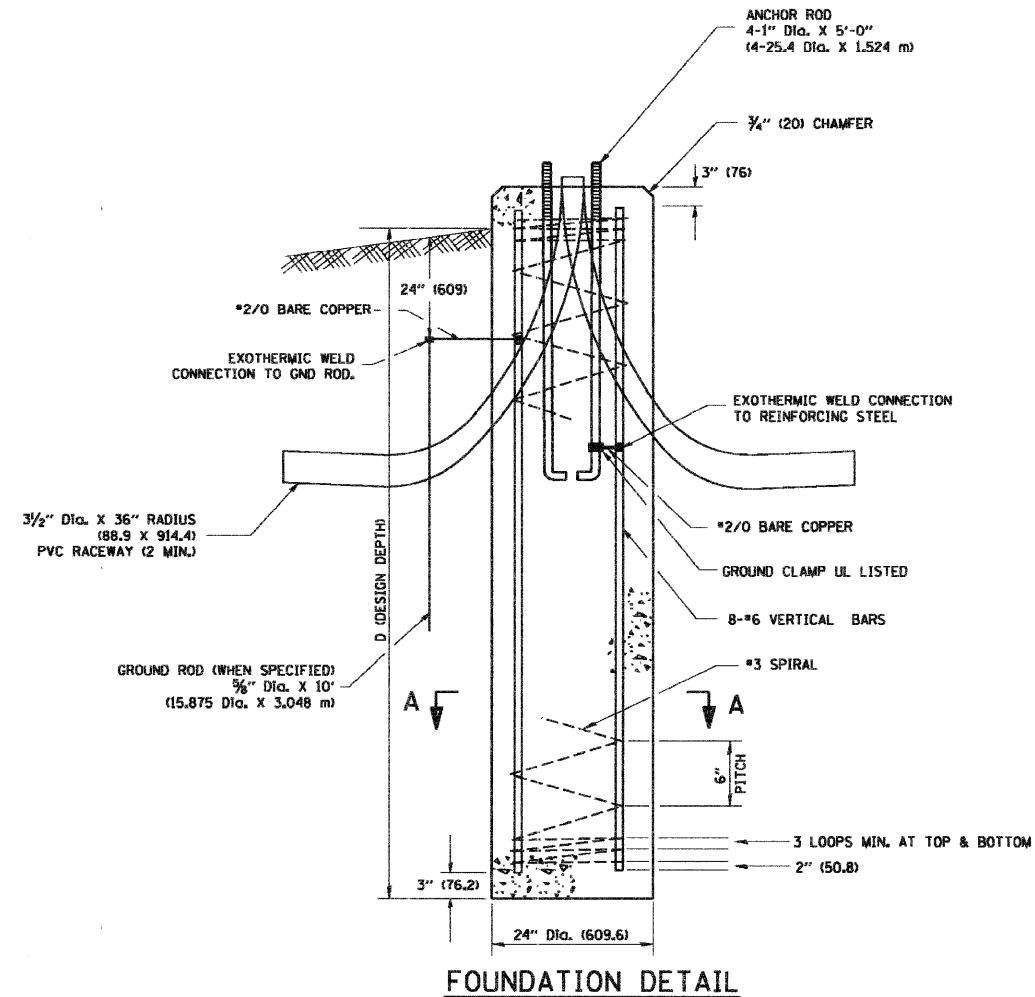
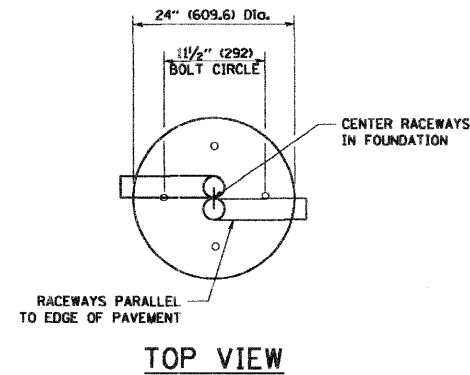


SEALING BUSHING DETAIL

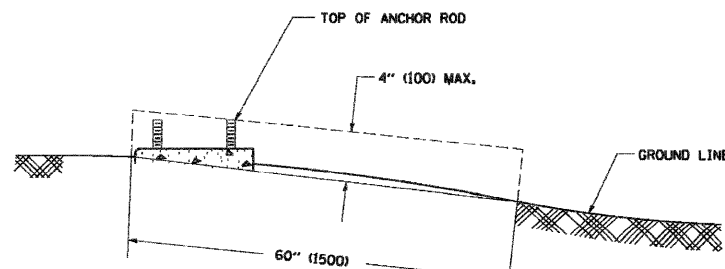
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PLOT SCALE = 50.0000' / IN.	CHECKED - MEA	DRAWN -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	BE-220		CONTRACT NO.		
PLOT DATE = 1/4/2008	DATE -	REVISOR -	REVISOR -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							

LIGHT POLE FOUNDATION DEPTH TABLE
30 FT. (9.144 m) TO 35 FT. (10.668 m) MOUNTING HEIGHT

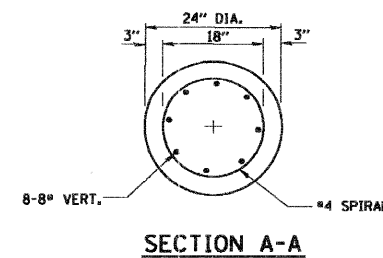
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SO. FT.	11'-0" (3.35 m)	12'-8" (3.85 m)
MEDIUM CLAY Qu = 0.75 TON/SO.FT	9'-0" (2.74 m)	14'-10" (4.52 m)
STIFF CLAY Qu = 1.50 TON/SO. FT.	7'-6" (2.29 m)	8'-7" (2.61 m)
LOOSE SAND φ = 34°	9'-6" (2.90 m)	10'-7" (3.22 m)
MEDIUM SAND φ = 37.5°	9'-0" (2.74 m)	9'-10" (2.99 m)
DENSE SAND φ = 40°	8'-3" (2.51 m)	9'-7" (2.91 m)



ANCHOR BOLT DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A

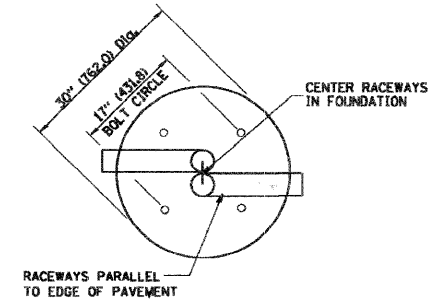
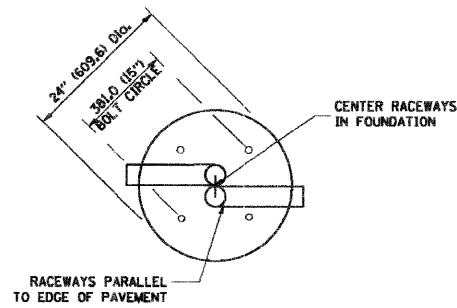
NOTES

- 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 4 IN. (100 mm) 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 S1. 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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		DRAWN -	REVISED -		30' (9.144 m) TO 35' (10.668 m) M.H. 1 1/2" (292 mm) BOLT CIRCLE				348	07-00102-00-LT	COOK	23	14
		CHECKED -	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.				BE-300 CONTRACT NO.				
		DATE -	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT								

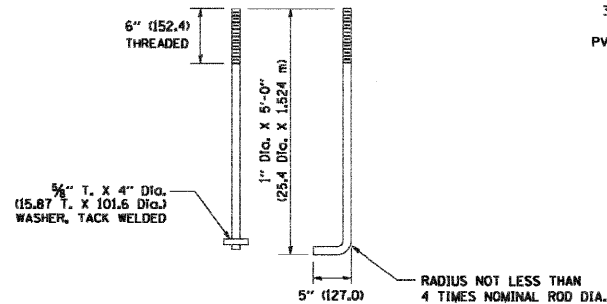
LIGHT POLE FOUNDATION DEPTH TABLE
40 FT. (12.192 m) TO 47.5 FT. (14.478 m) MOUNTING HEIGHT

SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SO. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SO. FT.	9'-6" (2.93 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SO. 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)

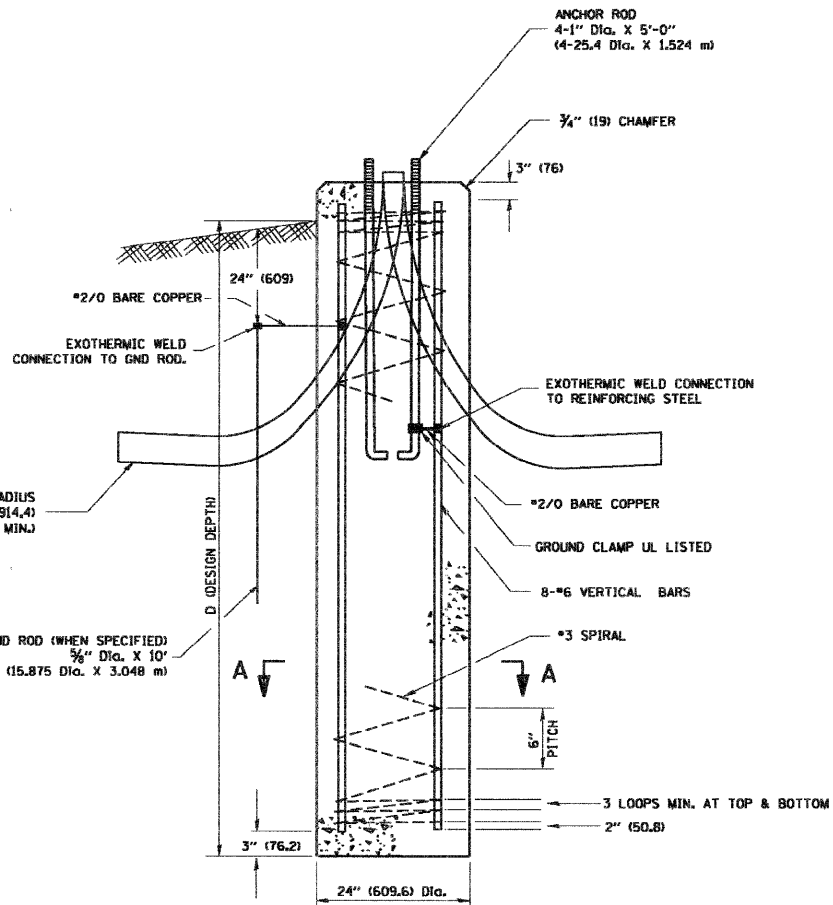


TOP VIEW

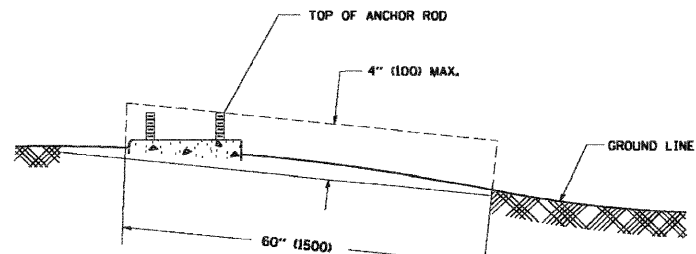
TOP VIEW



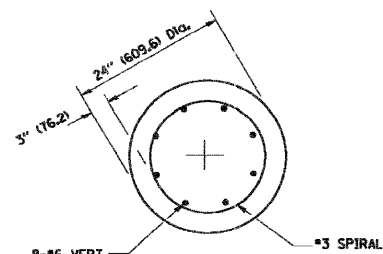
ANCHOR ROD DETAIL



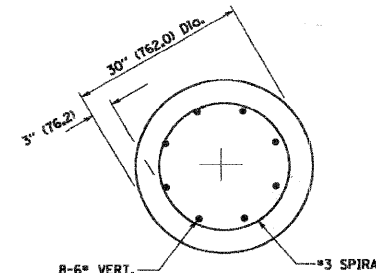
FOUNDATION DETAIL



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 S1. 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 UM(6 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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USER NAME = gegljanobt
PLOT SCALE = 50.0000 ' / IN.
PLOT DATE = 1/4/2008

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DATE -

REVISED - 04-22-02
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHT POLE FOUNDATION
40' (12.192 m) TO 47 1/2' (14.478 m) M.H. 15" (381 mm) BOLT CIRCLE
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

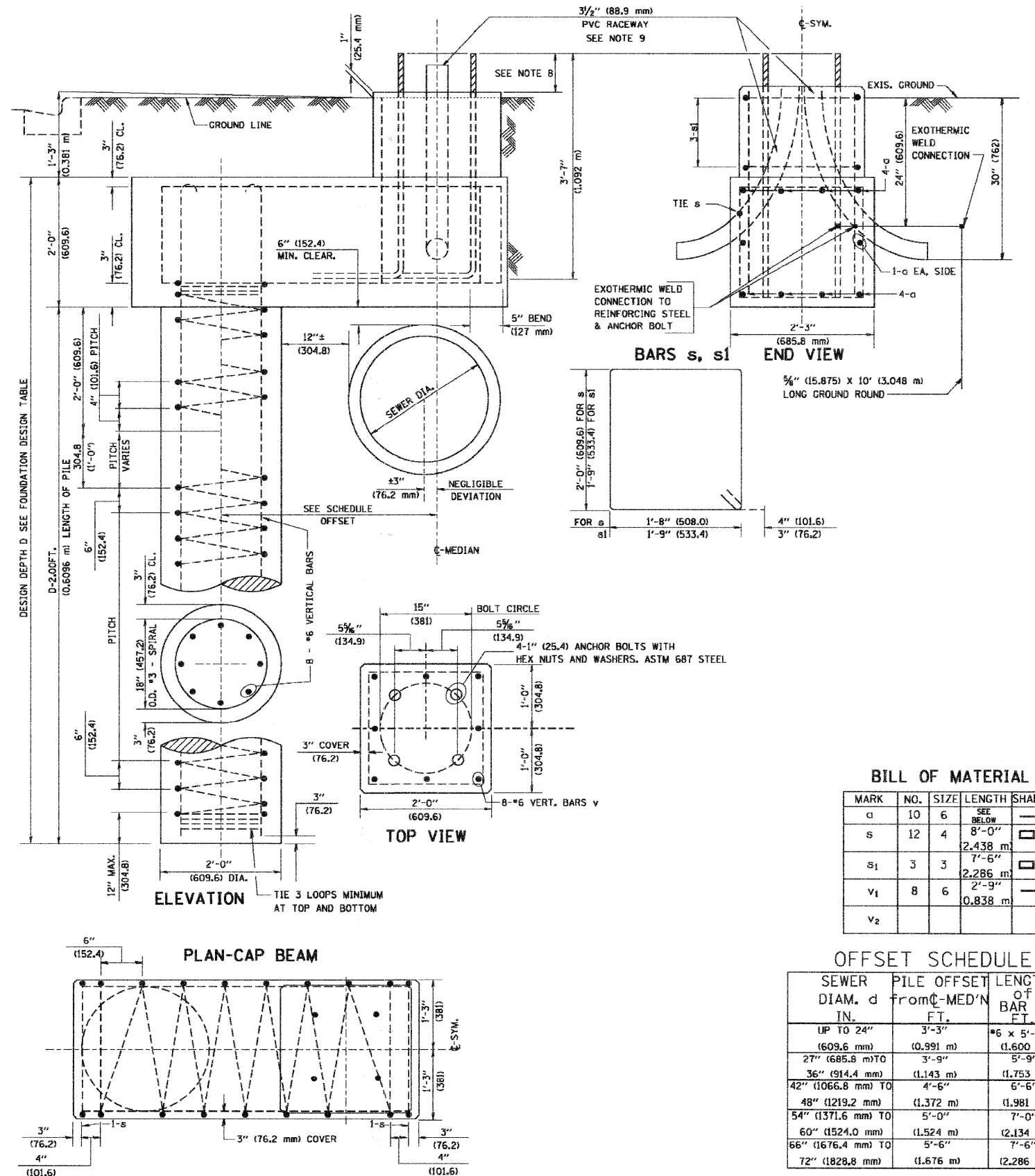
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	07-00102-00-LT	COOK	23	15
BE-301		CONTRACT NO.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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 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

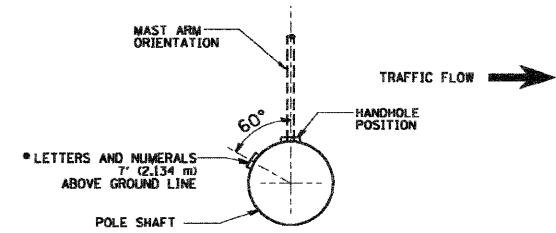
SEWER DIAM. d IN.	PILE OFFSET FROM C-MED'N FT.	LENGTH OF BAR OF BAR FT.
UP TO 24" (609.6 mm)	3'-3" (0.991 m)	*6 x 5'-3" (1.600 m)
27" (685.8 mm) TO	3'-9" (1.143 m)	5'-9" (1.753 m)
36" (914.4 mm)	(1.143 m)	(1.753 m)
42" (1066.8 mm) TO	4'-6" (1.372 m)	6'-6" (1.981 m)
48" (1219.2 mm)	(1.372 m)	(1.981 m)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

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		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

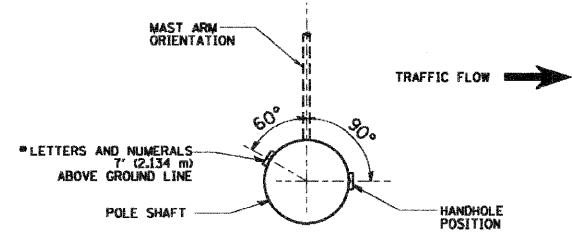
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

LIGHT POLE FOUNDATION OFFSET 40" (12.192 m) TO 47 1/2" (14.478 m) M.H. 15" (381 mm) BOLT CIRCLE

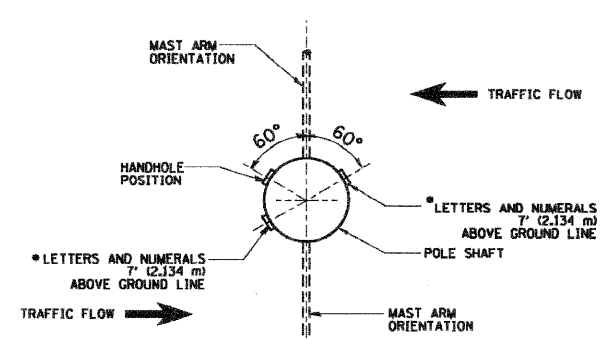
F.A. RTE. 348	SECTION 07-00102-00-LT	COUNTY COOK	TOTAL SHEETS 23	SHEET NO. 16
BE-310		CONTRACT NO.		
ILLINOIS FED. AID PROJECT				



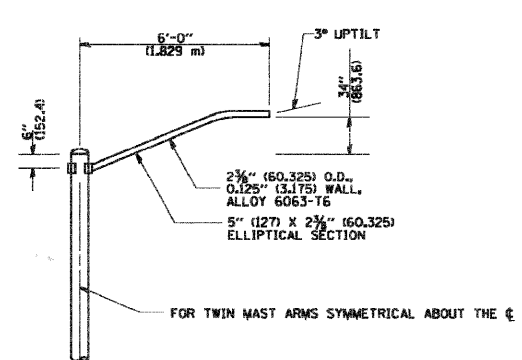
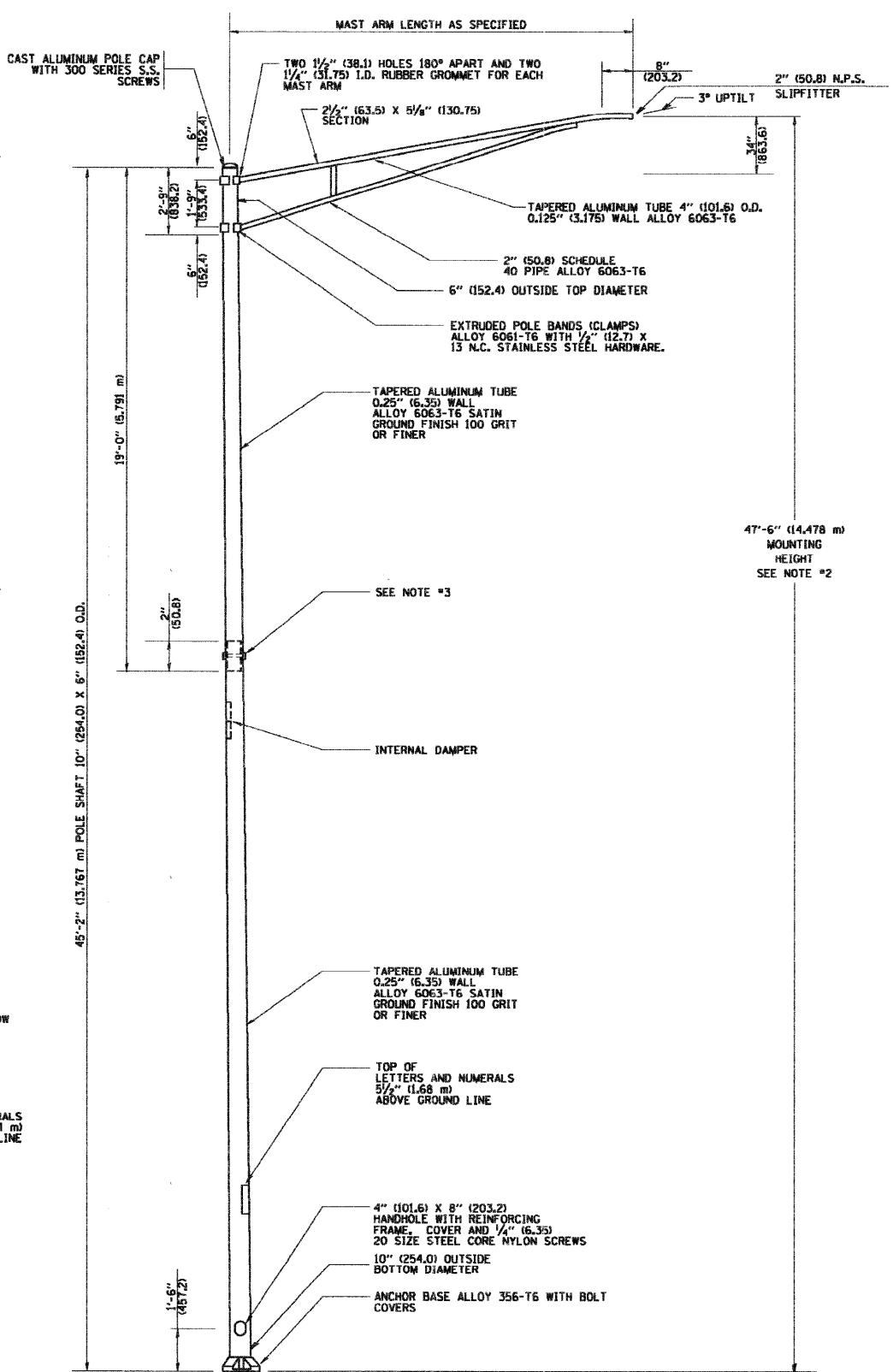
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL



POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES

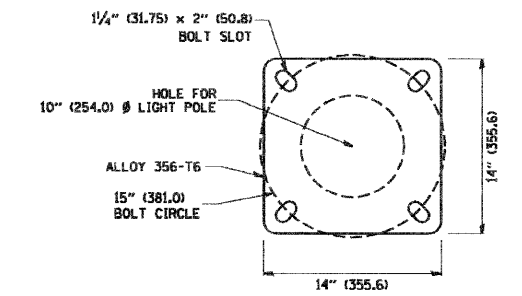


POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES

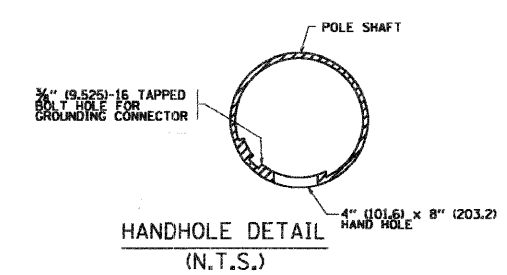


6' (1.8 m) SINGLE MEMBER MAST ARM (N.T.S.)

- NOTES:
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
 2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
 3. TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
 4. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
 5. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR, BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.
 6. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
 7. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
 8. LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.

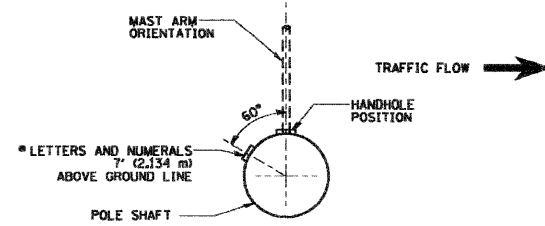


LIGHT POLE BASE PLATE DETAIL
15 INCH (381.0) BOLT CIRCLE

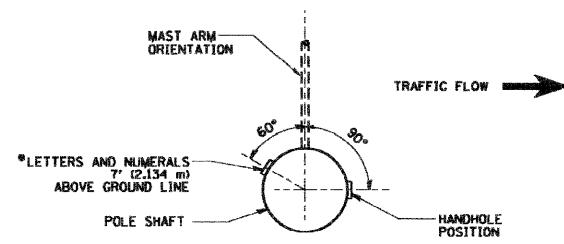


HANDHOLE DETAIL (N.T.S.)

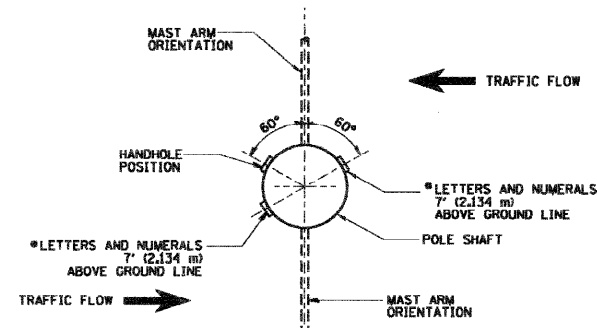
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PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED - R. TOMSONS 09-03-03	SCALE: NONE		SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	BE-400		CONTRACT NO.		
PLOT DATE = 1/4/2008	DATE -	REVISED -			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT						



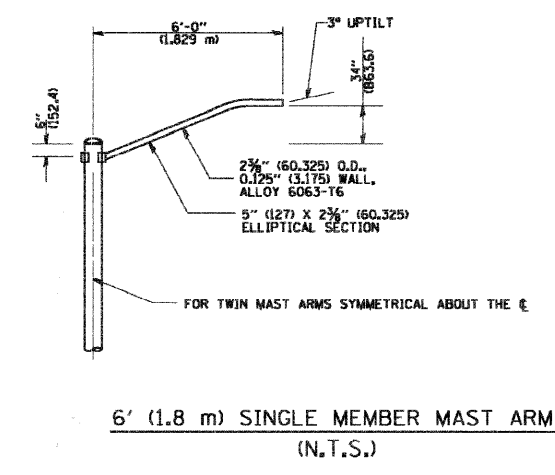
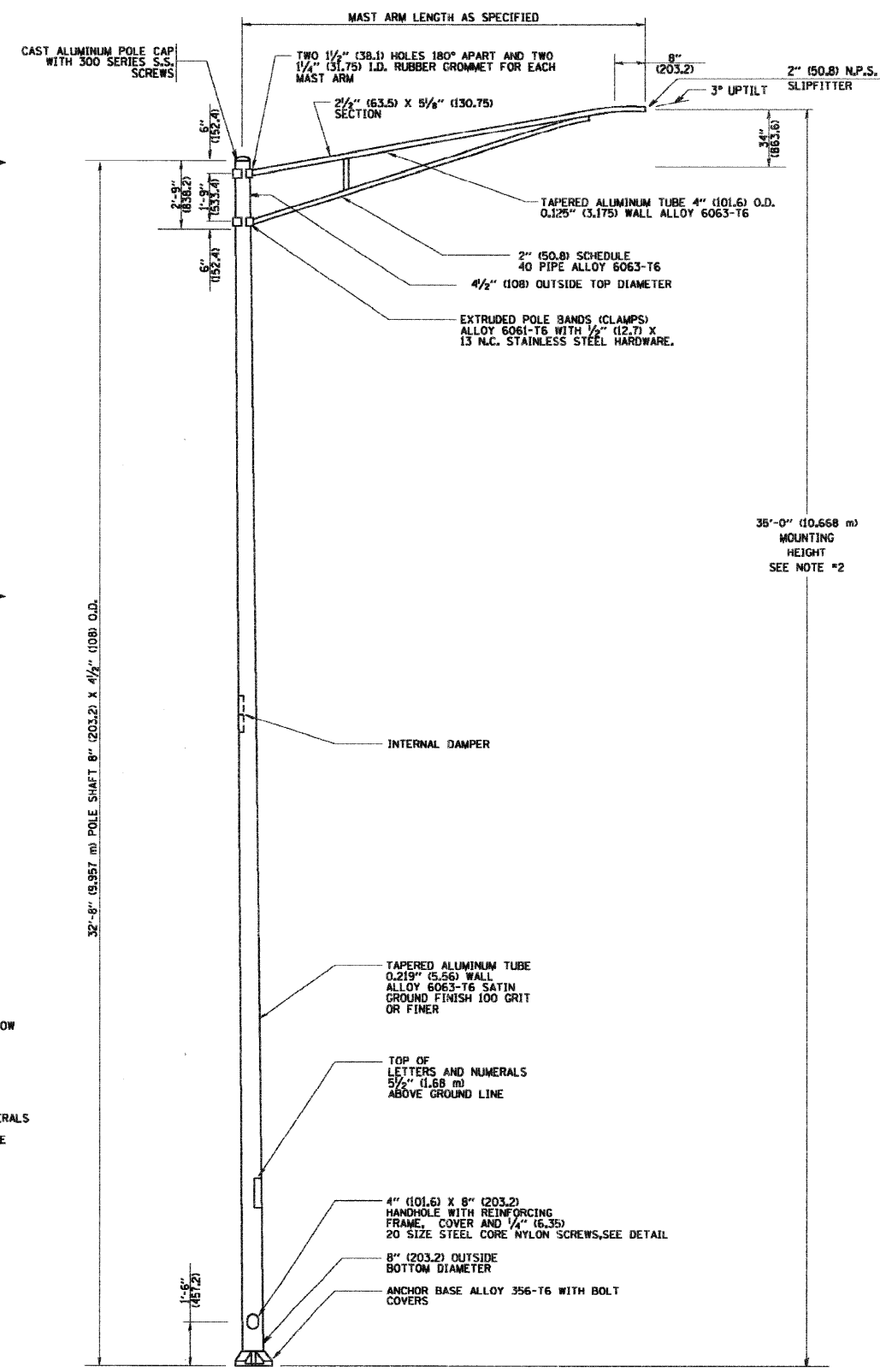
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL



POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES

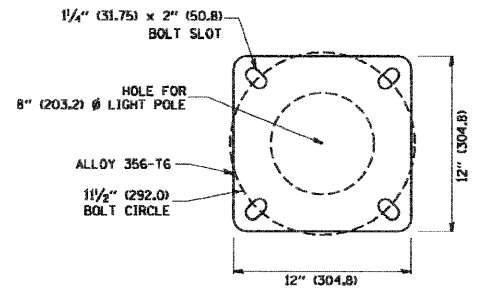


POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES

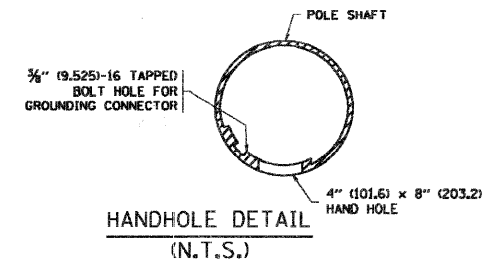


6' (1.8 m) SINGLE MEMBER MAST ARM (N.T.S.)

- NOTES:
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
 2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
 3. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
 4. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR, BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.
 5. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
 6. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
 7. LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.

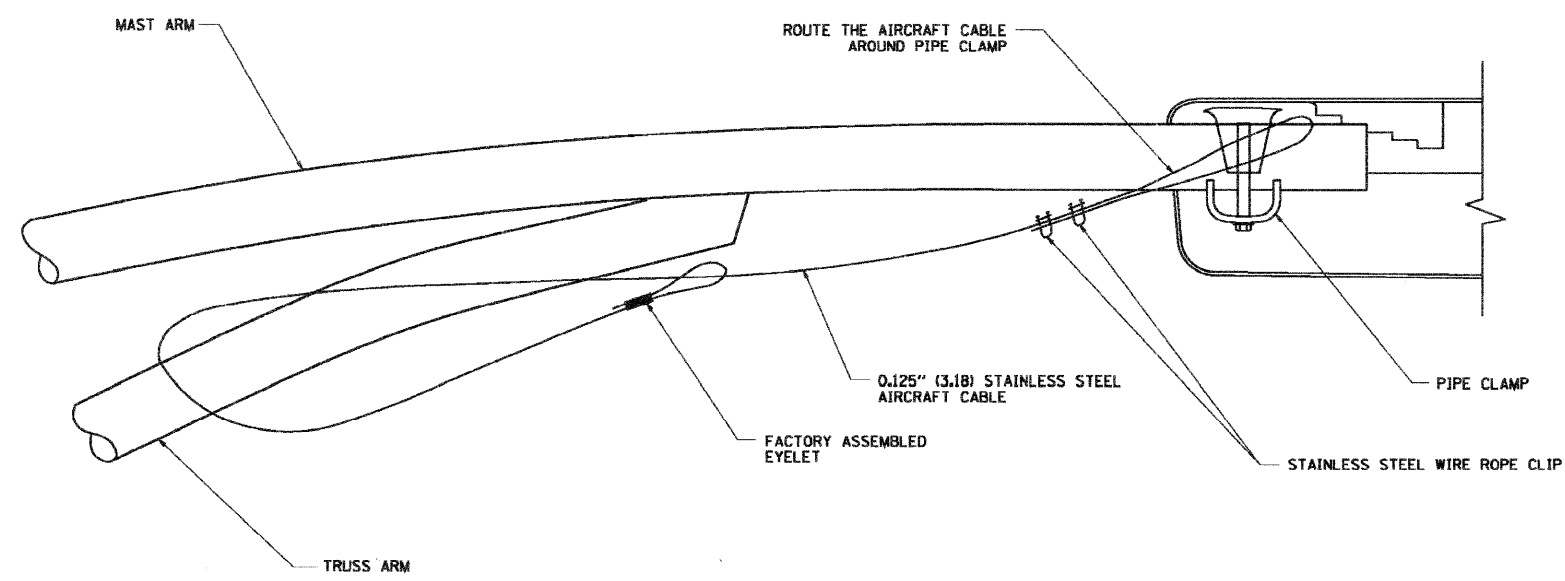


LIGHT POLE BASE PLATE DETAIL
1 1/2" (292.0) BOLT CIRCLE

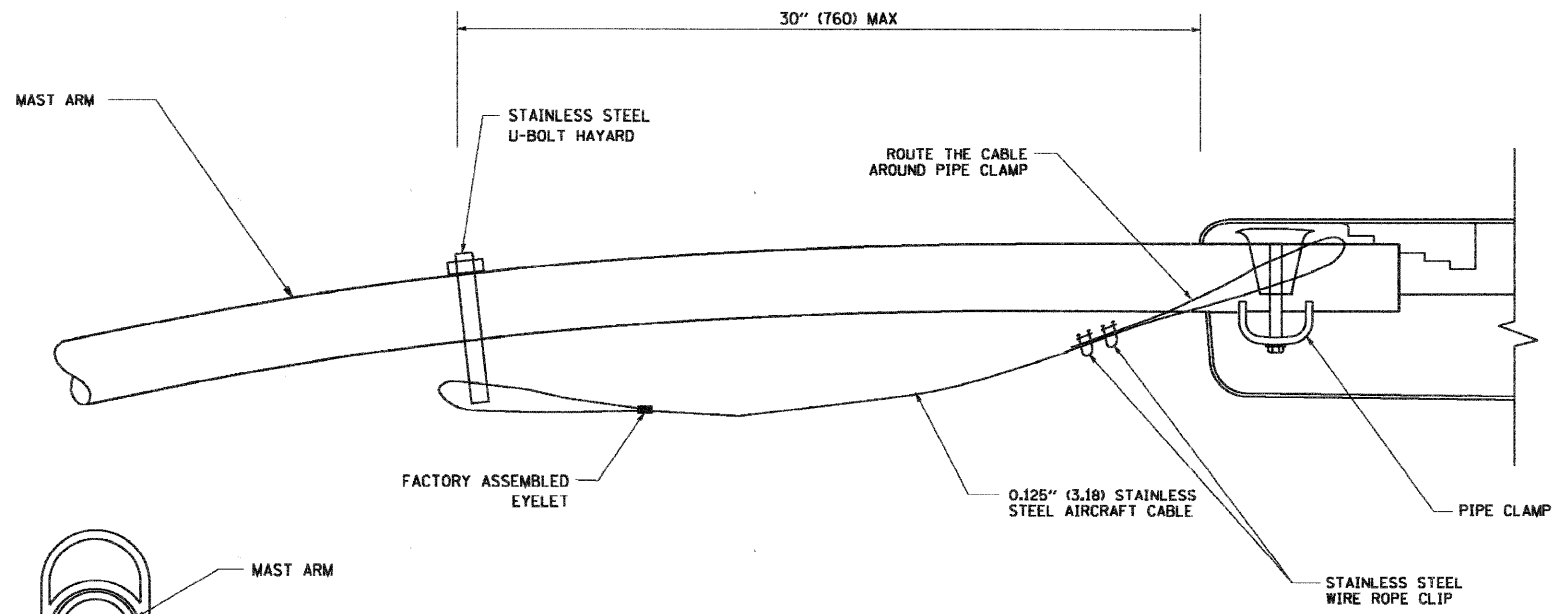


HANDHOLE DETAIL (N.T.S.)

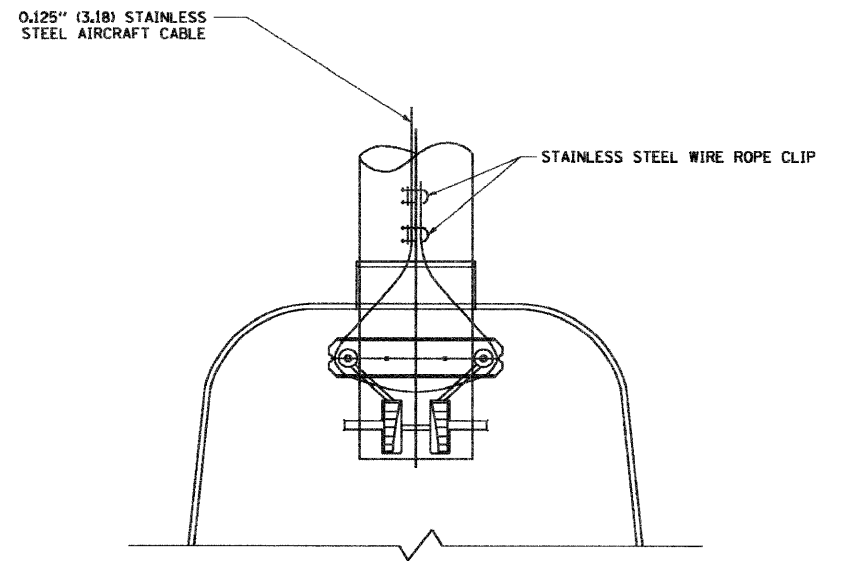
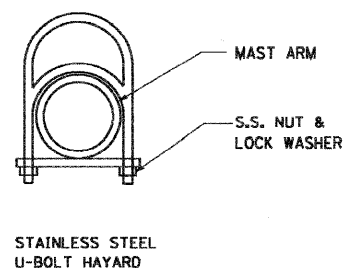
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PLOT SCALE = 5/8" = 1' IN.	CHECKED -	REVISD -	REVISD -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	BE-402		CONTRACT NO.
PLOT DATE = 1/4/2008	DATE -	REVISD -	REVISD -						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		



SIDE VIEW (TRUSS ARM)
N.T.S.



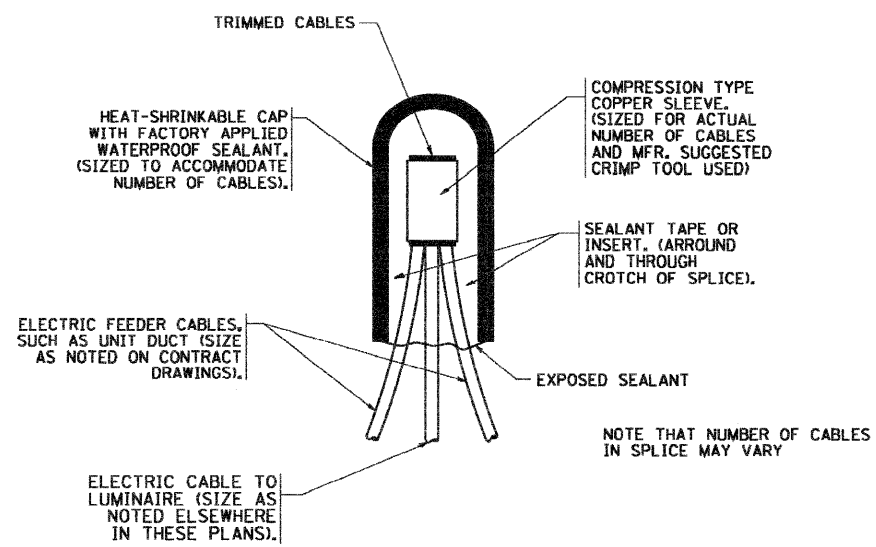
SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)
N.T.S.



BOTTOM VIEW
N.T.S.

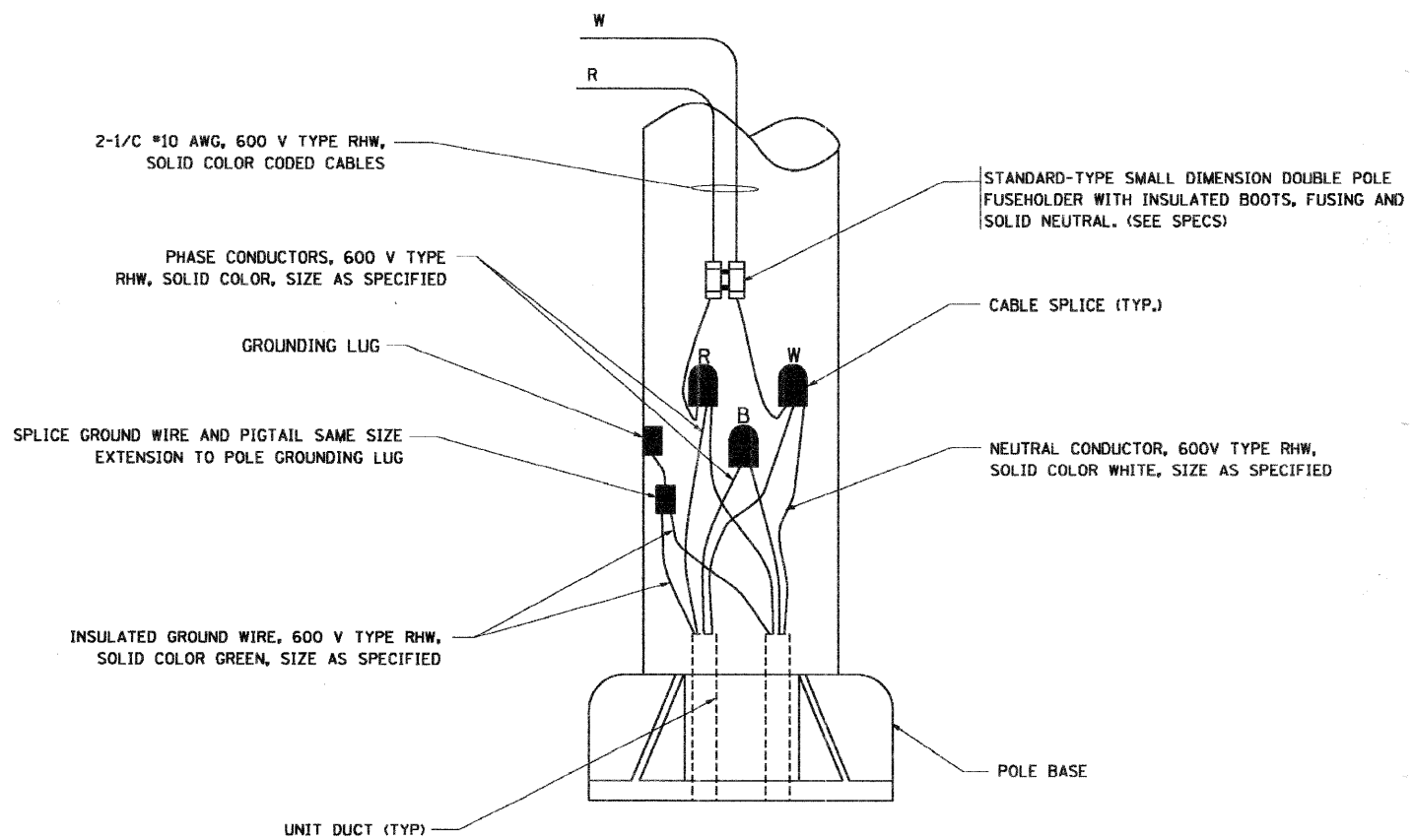
- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
 2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
 3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
 4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

FILE NAME = W:\distatd\22x34\ba701.dgn	USER NAME = gog\vanobt	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LUMINAIRE SAFETY CABLE ASSEMBLY			F.A. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.000 1 / IN.	DRAWN -	REVISED -		348	07-00102-00-LT	COOK	23	19			
	PLOT DATE = 1/4/2008	CHECKED -	REVISED -		BE-701			CONTRACT NO.				
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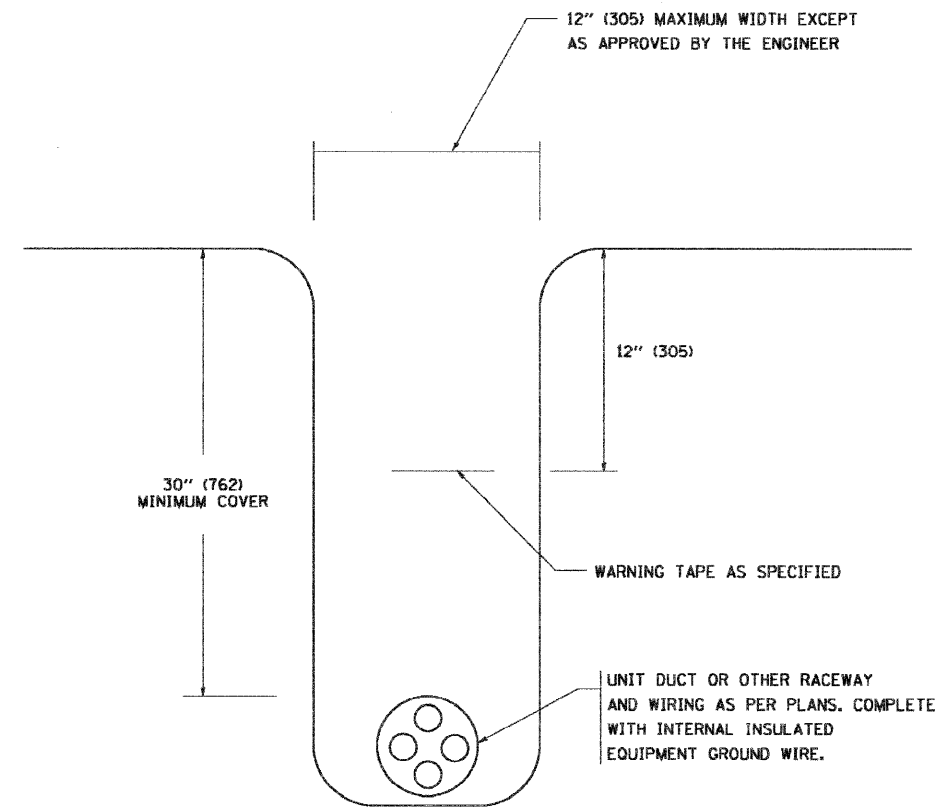
TYPICAL SPLICE DETAIL

N.T.S.



POLE WIRING DETAIL

N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

N.T.S.

FILE NAME =
M:\distatd\22x34\ba702.dgn

USER NAME = gnglunobt

PLOT SCALE = 58.000' / IN.

PLOT DATE = 1/4/2008

DESIGNED -

DRAWN -

CHECKED -

DATE -

REVISED - 08-08-03

REVISED -

REVISED -

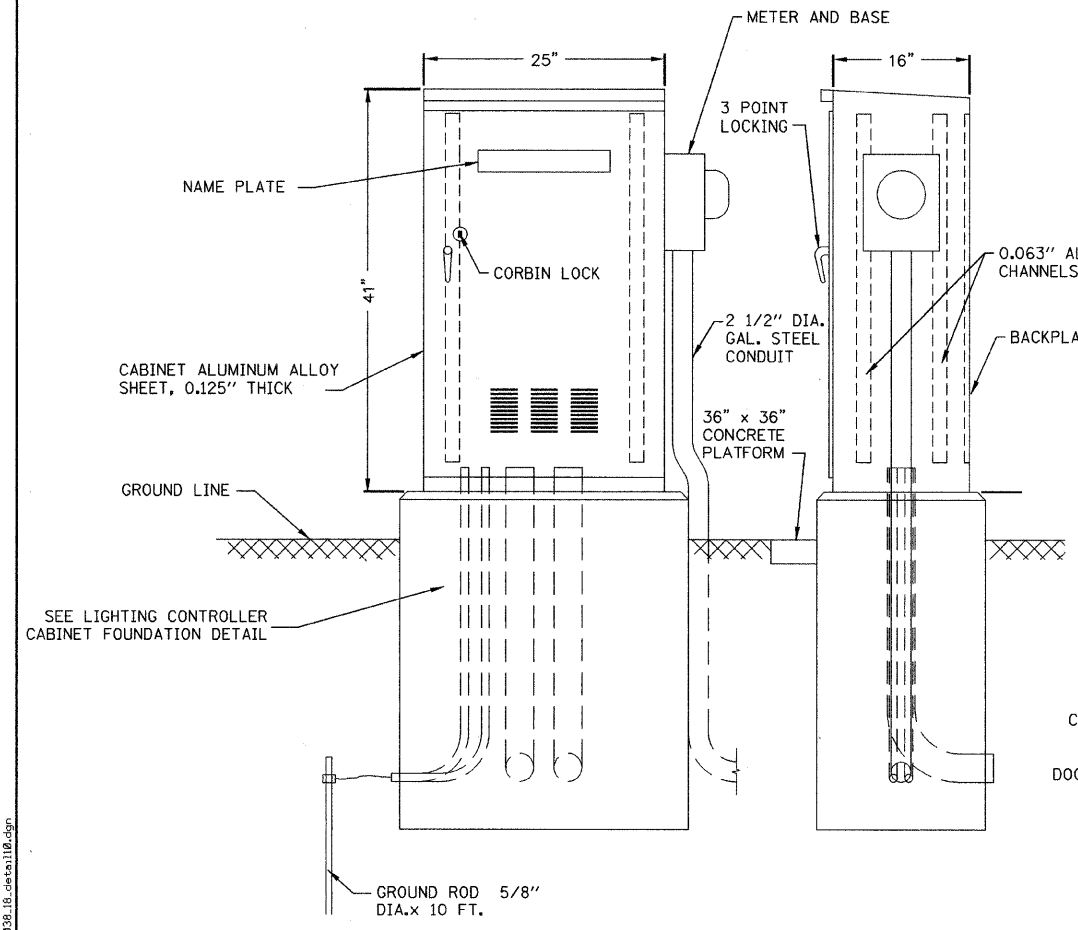
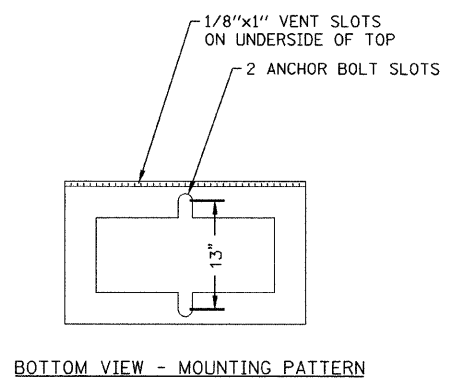
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

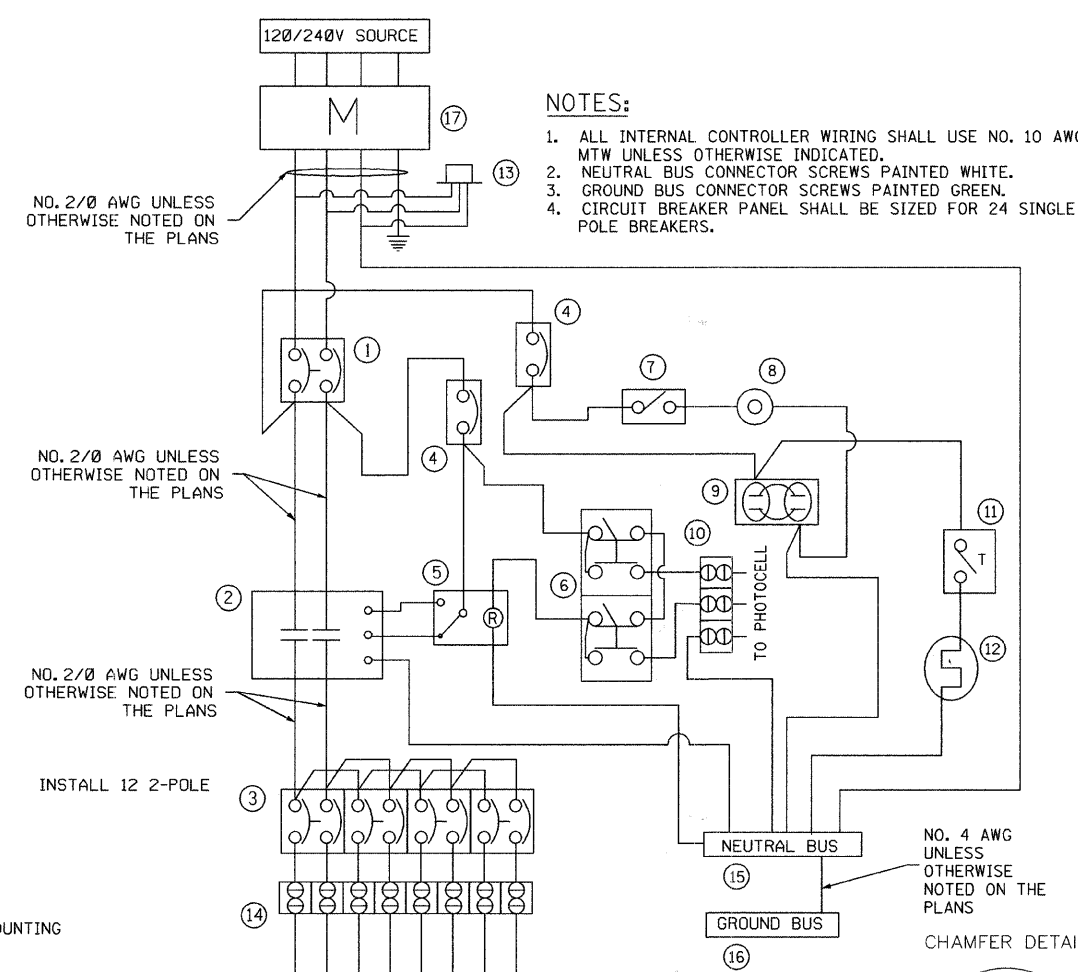
MISC. ELECTRICAL DETAILS
SHEET A

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	07-00102-00-LT	COOK	23	20
BE-702			CONTRACT NO.	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



LIGHTING CONTROLLER CABINET
NOT TO SCALE



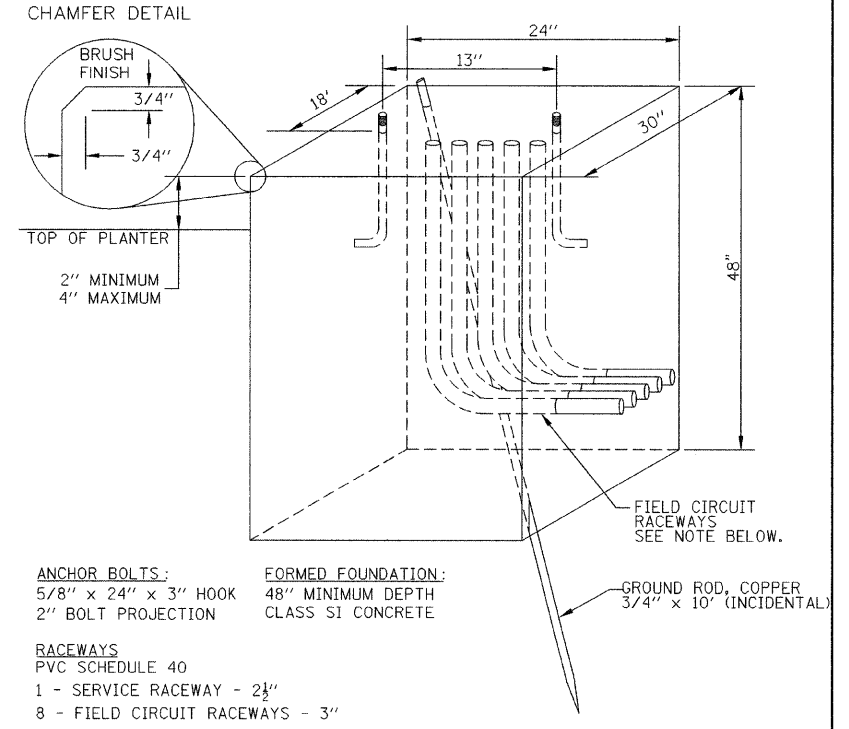
LIGHTING CONTROLLER SPECIAL WIRING DIAGRAM
NOT TO SCALE

- NOTES:
1. ALL INTERNAL CONTROLLER WIRING SHALL USE NO. 10 AWG MTW UNLESS OTHERWISE INDICATED.
 2. NEUTRAL BUS CONNECTOR SCREWS PAINTED WHITE.
 3. GROUND BUS CONNECTOR SCREWS PAINTED GREEN.
 4. CIRCUIT BREAKER PANEL SHALL BE SIZED FOR 24 SINGLE POLE BREAKERS.

- SCHEDULE OF DEVICES
1. MAIN BREAKER 2P, 100A, 12 KAIC
 2. CONTACTOR 2P, 100A, 120V
 3. BRANCH BREAKERS, 2P, 30A, 240V
 4. CONTROL BREAKER 1P, 20A, 120V
 5. CONTROL RELAY 20A, 120V, ON-DELAY
 6. H-O-A SWITCH, 120V
 7. LIGHT SWITCH
 8. LIGHT FIXTURE
 9. DUPLEX RECEPTACLE, 20A, GFCI
 10. TERMINAL BLOCK
 11. THERMOSTAT
 12. HEATER STRIP, 150W
 13. SURGE SUPPRESSOR
 14. TERMINAL BLOCK
 15. NEUTRAL BUS
 16. GROUND BUS
 17. CECHA APPROVED METER HOUSING. CONTRACTOR SHALL COORDINATE WITH COMED FOR PROPER LOCATION AND SIZING.

LIGHTING CONTROLLER CABINET NOTES

- PERFORMANCE - THE ENCLOSURE WILL MEET OR EXCEED THE REQUIREMENTS OF A NEMA 3R RATING AND SHALL BE U.L. LISTED.
- MATERIAL - CABINET AND DOOR TO BE CONSTRUCTED FROM 5052 H32 SHEET ALUMINUM ALLOY WITH A THICKNESS OF .125". ALL WELDS TO BE HELIARC AND SHALL BE FORMED AND FREE OF CRACKS, BLOW HOLES, AND OTHER DEFECTS. ALL EDGES TO BE FREE OF BURRS.
- CABINET FEATURES - CABINET TOP SLOPES 1/2" TO THE REAR, WITH 1/8" x 1" SLOTS UNDER FRONT OVERHANG.
- DOOR AND HARDWARE - THE CABINET DOOR SHALL BE HINGED ON THE RIGHT SIDE WHEN FACING THE FRONT OF THE CABINET AND HAS A CELLULAR NEOPRENE GASKET, WHICH IS WEATHER TIGHT. THE DOOR IS ALSO EQUIPPED WITH A TWO POSITION DOOR STOP, ONE AT 90 DEGREES AND ONE AT 120 DEGREES. HINGE IS 2" OPEN AND IS CONTINUOUS 14 GAUGE STAINLESS STEEL WITH A 1/4" DIA. PIN AND IS CAPPED AT THE TOP TO RENDER IT TAMPER PROOF. THE HINGE IS SECURED WITH 1/4-20 STAINLESS STEEL CARRIAGE BOLTS AND ESNA LOCK NUTS. THE LATCHING MECHANISM IS A THREE POINT DRAW ROLLER TYPE WHICH SECURES THE DOOR AT THE TOP, CENTER, AND BOTTOM. LOCKING RODS ARE 1/4" x 3/4" ALUMINUM TURNED EDGEWISE WITH 1" NYLON ROLLERS AND THE CENTER CATCH IS STAINLESS STEEL. THE DOOR HANDLE IS 3/4" DIA. STAINLESS STEEL AND HAS A PADLOCK HASP. AN ALL BRASS CORBIN LOCK WITH TWO KEYS IS ALSO FURNISHED. LOUVER INCLUDED IN LOWER HALF OF THE DOOR FOR VENTILATION.
- EQUIPMENT MOUNTING - THE CABINET SHALL BE EQUIPPED WITH TWO ADJUSTABLE "L" MOUNTING CHANNELS WELDED TO EACH SIDE WALL AND THE BACK WALL ALLOWING FULL ADJUSTMENT OF SHELVES OR PANELS.
- CABINET FINISH - THE OUTSIDE SURFACE OF THE CABINET SHALL HAVE A BLACK POWDER COAT FINISH.



LIGHTING CONTROLLER CABINET FOUNDATION
NOT TO SCALE

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Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014

USER NAME = jvondra	DESIGNED - MLB	REVISED -
PLOT SCALE = 1:10000' / IN.	DRAWN - MLB	REVISED -
PLOT DATE = 12/29/2008	CHECKED - JMV	REVISED -
	DATE - DECEMBER 2008	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WAUKEGAN ROAD LIGHTING IMPROVEMENTS
LIGHTING CONTROLLER, SPECIAL
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

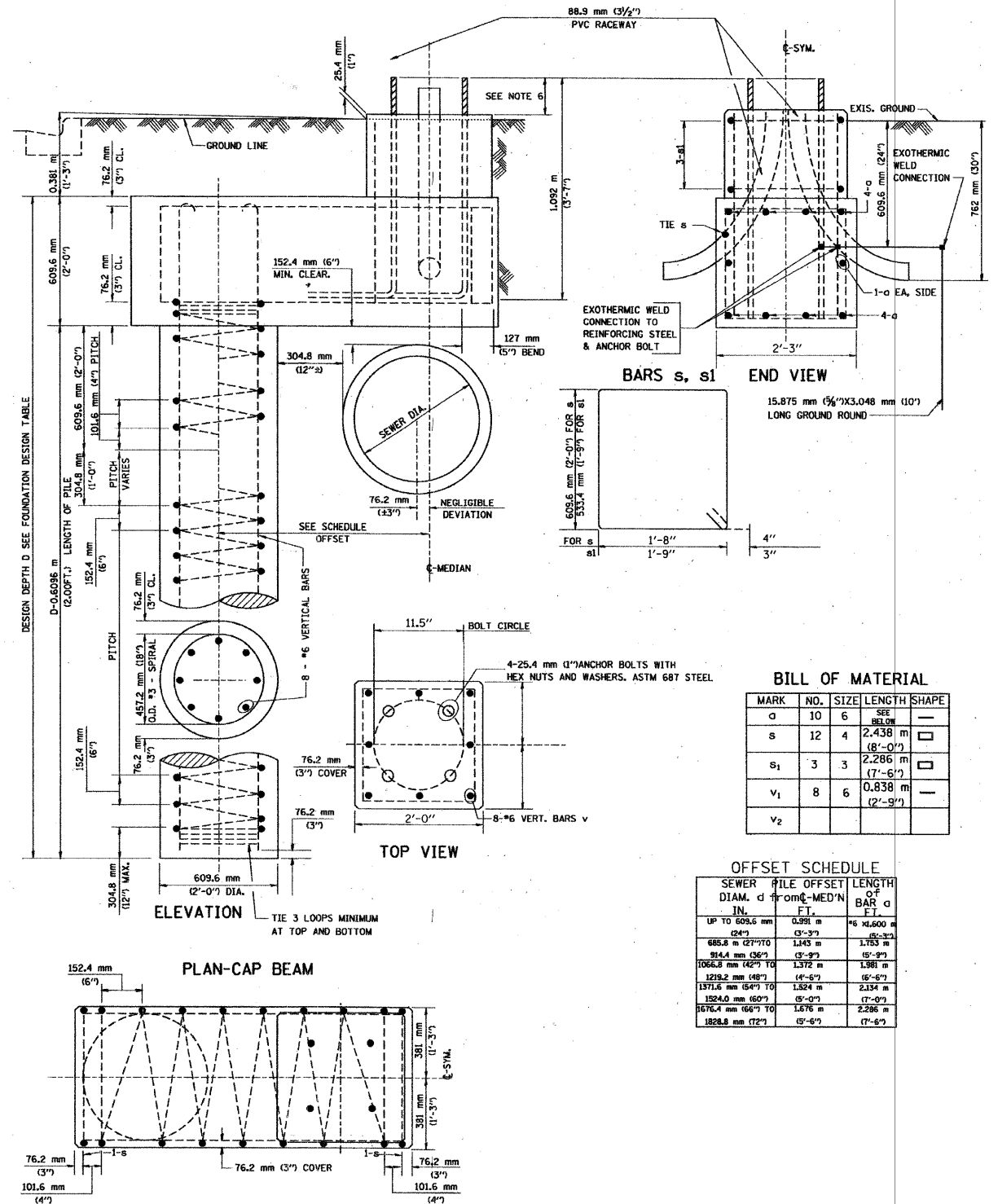
F.A.P. RTE. 348	SECTION 07-00102-00-LT	COUNTY COOK	TOTAL SHEETS 23	SHEET NO. 21
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 63099	

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	3.962 m (13'-0")	4.572 m (15'-0")	8-#6X3.810 m (12'-6")	#3X37.186 m (122')	8-#6X4.343 m (14'-3")	#3X42.977 m (141')
MEDIUM CLAY	2.896 m (9'-6")	3.277 m (10'-9")	8-#6X2.743 m (9'-0")	#3X27.432 m (90')	8-#6X3.048 m (10'-0")	#3X30.480 m (100')
STIFF CLAY	2.134 m (7'-0")	2.438 m (8'-0")	8-#6X1.981 m (6'-6")	#3X20.112 m (66')	8-#6X2.286 m (7'-6")	#3X23.165 m (76')
LOOSE SAND	2.743 m (9'-0")	3.048 m (10'-0")	8-#6X2.591 m (8'-6")	#3X25.908 m (85')	8-#6X2.896 m (9'-6")	#3X28.651 m (94')
MEDIUM SAND	2.515 m (8'-3")	2.743 m (9'-0")	8-#6X2.438 m (8'-0")	#3X23.774 m (78')	8-#6X2.591 m (8'-6")	#3X25.908 m (85')
DENSE SAND	2.362 m (7'-9")	2.743 m (9'-0")	8-#6X2.286 m (7'-6")	#3X22.250 m (73')	8-#6X2.591 m (8'-6")	#3X25.908 m (85')
ROCK OR SOLIDIFIED SLAG	1.524 m (5'-0")	1.524 m (5'-0")	NONE	NONE	NONE	NONE

NOTES

- THE ENGINEER WILL DETERMINE THE CLASS OF SOIL DURING EXCAVATION AND SELECT THE DESIGN DEPTH OF THE FOUNDATION FROM THE DESIGN TABLE.
- EXCAVATION OF THE POLE FOUNDATION MUST BE MADE WITH AN AUGER, 24" OR 30" IN DIAMETER.
- THE ANCHOR MUST BE A TACK WELDED TYPE BOLT OR HOOK TYPE BOLT. COLD BENDING OF THE HOOK BOLT IS NOT ALLOWED.
- THE ANCHOR BOLTS AND RACEWAYS MUST BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORM.
- THE ENTIRE LENGTH OF THE ANCHOR BOLTS, AS WELL AS THE NUTS AND WASHERS, MUST BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM DESIGNATION A 153.
- THE CONTRACTOR MUST COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE THE TOP OF FOUNDATION WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS. IF LIGHT POLE IS MOUNTED WITHOUT A BREAKAWAY DEVICE, ANCHOR BOLTS MUST COORDINATE WITH THE POLE MANUFACTURER'S REQUIREMENTS.
- THE CONTRACTOR MUST COORDINATE THE ANCHOR BOLT CIRCLE WITH THE LIGHT POLE MANUFACTURER'S RECOMMENDATIONS.
- RACEWAYS MUST PROJECT 1" ABOVE THE TOP OF FOUNDATION.
- CONCRETE SHALL BE CLASS "SI". CONCRETE FOUNDATIONS MUST BE CURED FOR TEN (10) DAYS BEFORE THE LIGHT STANDARD IS ERECTED.
- THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE LIGHT STANDARD IS ERECTED.



BILL OF MATERIAL

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

OFFSET SCHEDULE

SEWER DIA. IN.	PILE OFFSET FROM MED'N FT.	LENGTH OF BAR FT.
UP TO 609.6 mm (24")	0.991 m (3'-3")	#6 x1.600 m (5'-3")
609.6 mm (24") TO 914.4 mm (36")	1.243 m (4'-1")	#6 x1.778 m (5'-8")
914.4 mm (36") TO 1066.8 mm (42")	1.372 m (4'-6")	#6 x1.981 m (6'-6")
1066.8 mm (42") TO 1371.6 mm (54")	1.584 m (5'-2")	#6 x2.134 m (7'-0")
1371.6 mm (54") TO 1524.0 mm (60")	1.676 m (5'-6")	#6 x2.286 m (7'-6")
1524.0 mm (60") TO 1828.8 mm (72")	1.876 m (6'-2")	#6 x2.591 m (8'-6")

FILE NAME = n:\projects\design\lighting\66038_18_detaill1.dgn

CG **Ciorba Group, Inc.**
 CONSULTING ENGINEERS
 6507 North Cumberland Avenue, Suite 402
 Chicago, Illinois 60658
 Tel. 773.775.4009 Fax 773.775.4014

USER NAME = jvandre	DESIGNED - MLB	REVISED -
PLOT SCALE = 1:8000 / 1" IN.	DRAWN - MLB	REVISED -
PLOT DATE = 12/29/2008	CHECKED - JMV	REVISED -
	DATE - DECEMBER 2008	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WAUKEGAN ROAD LIGHTING IMPROVEMENTS
LIGHT POLE FOUNDATION, OFFSET
35' M.H., 11.5" BOLT CIRCLE

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. 348	SECTION 07-00102-00-LT	COUNTY COOK	TOTAL SHEETS 23	SHEET NO. 22
FED. ROAD DIST. NO. - ILLINOIS		FED. AID PROJECT		
CONTRACT NO. 63099				

