

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
311	(5)L	LASALLE	7	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 66768		

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**

**PROPOSED**  
**HIGHWAY PLANS**

**FAP ROUTE 311 (IL 71)**  
**SECTION (5)L**  
**PROJECT HSIP-0311(034)**  
**LASALLE COUNTY**

**C-93-062-08**

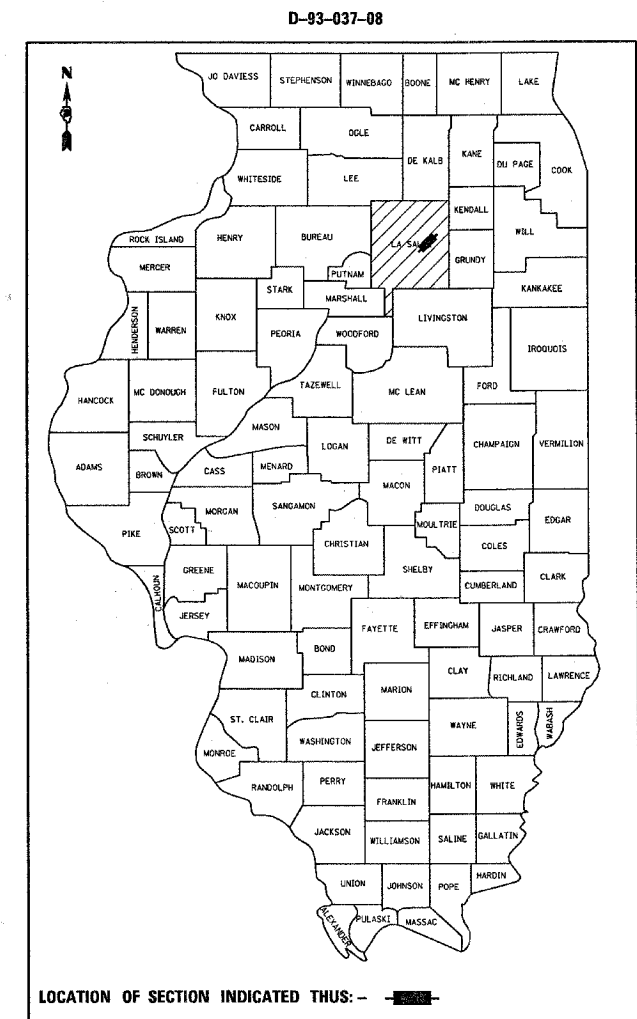
**HIGHWAY LIGHTING AT DAYTON ROAD (CH 18) &**  
**WEDRON ROAD (CH 21)**

**INDEX OF SHEETS**

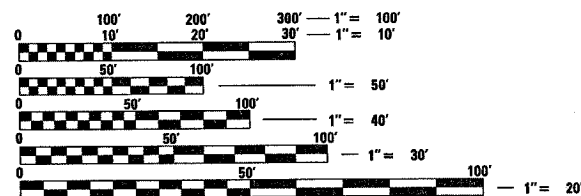
- 1 COVER SHEET
- 2 GENERAL NOTES & SUMMARY OF QUANTITIES
- 3 - 4 PLAN VIEWS - DAYTON AND WEDRON ROADS
- 5 - 7 LIGHTING DETAILS

**STANDARDS**

- 000001-05 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 701001-01 OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 4.5 m (15') AWAY
- 701006-02 OFF-ROAD OPERATIONS 2L, 2W, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
- 701011-01 OFF-ROAD MOVING OPERATIONS 2L, 2W, DAY ONLY
- 701201-02 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
- 701301-02 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701901 TRAFFIC CONTROL DEVICES



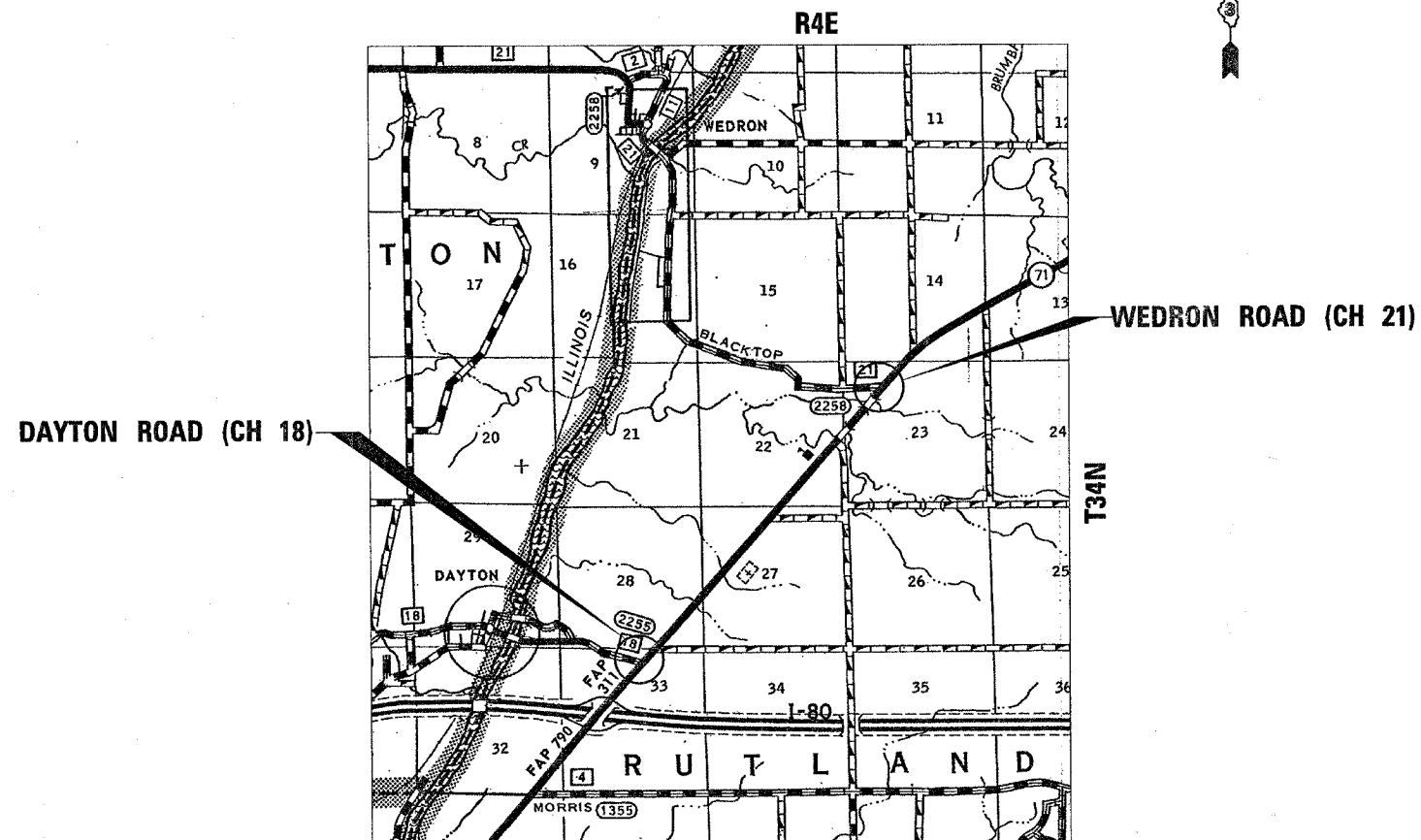
**TRAFFIC DATA**  
**EXISTING ADT (IL 71) = 6400 (2005)**



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

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

**PROJECT ENGINEER: DAVE BROVIAK**  
**UNIT CHIEF: BRAD DUNCAN**  
 DISTRICT 3 NO. (815) 434-6131  
 CONTRACT NO. 66768



**NOT TO SCALE**

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED March 31 20 08

Dave Broviak  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 9, 20 08  
Eric E. Hark  
 INTERIM ENGINEER OF DESIGN AND ENVIRONMENT

May 9, 20 08  
Christine M. Reed  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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**OF THE STATE OF ILLINOIS**

GENERAL NOTES

SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.

THE CONTRACTOR SHALL CONTACT JULIE PRIOR TO ANY EXCAVATION.

COMMITMENTS

NONE

SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES				90% FED. 10% STATE
CONSTRUCTION CODE TYPE: Y030-1E				
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	
67100100	MOBILIZATION	L SUM	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
80400100	ELECTRIC SERVICE INSTALLATION	EACH	2	2
81018600	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	108	108
81603010	UNIT DUCT, 600V, 2-1C NO.10, 1/C NO.10 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	210	210
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	75	75
82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	2	2
82500605	LIGHTING CONTROLLER PHOTOCELL RELAY	EACH	2	2
83009600	LIGHT POLE, ALUMINUM, 45 FT. M.H., 15 FT. MAST ARM	EACH	2	2
83600355	LIGHT POLE FOUNDATION METAL, 15" BOLT CIRCLE, 8" X 6'	EACH	2	2
83800650	BREAKAWAY DEVICE, COUPLING, WITH STAINLESS STEEL SCREEN	EACH	8	8

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DISTRICT THREE

PREPARED BY: Rob Powell  
DISTRICT STUDIES & PLANS ENGINEER

DATE: 3-31-08





EXAMINED BY: Richard K...  
DISTRICT CONSTRUCTION ENGINEER

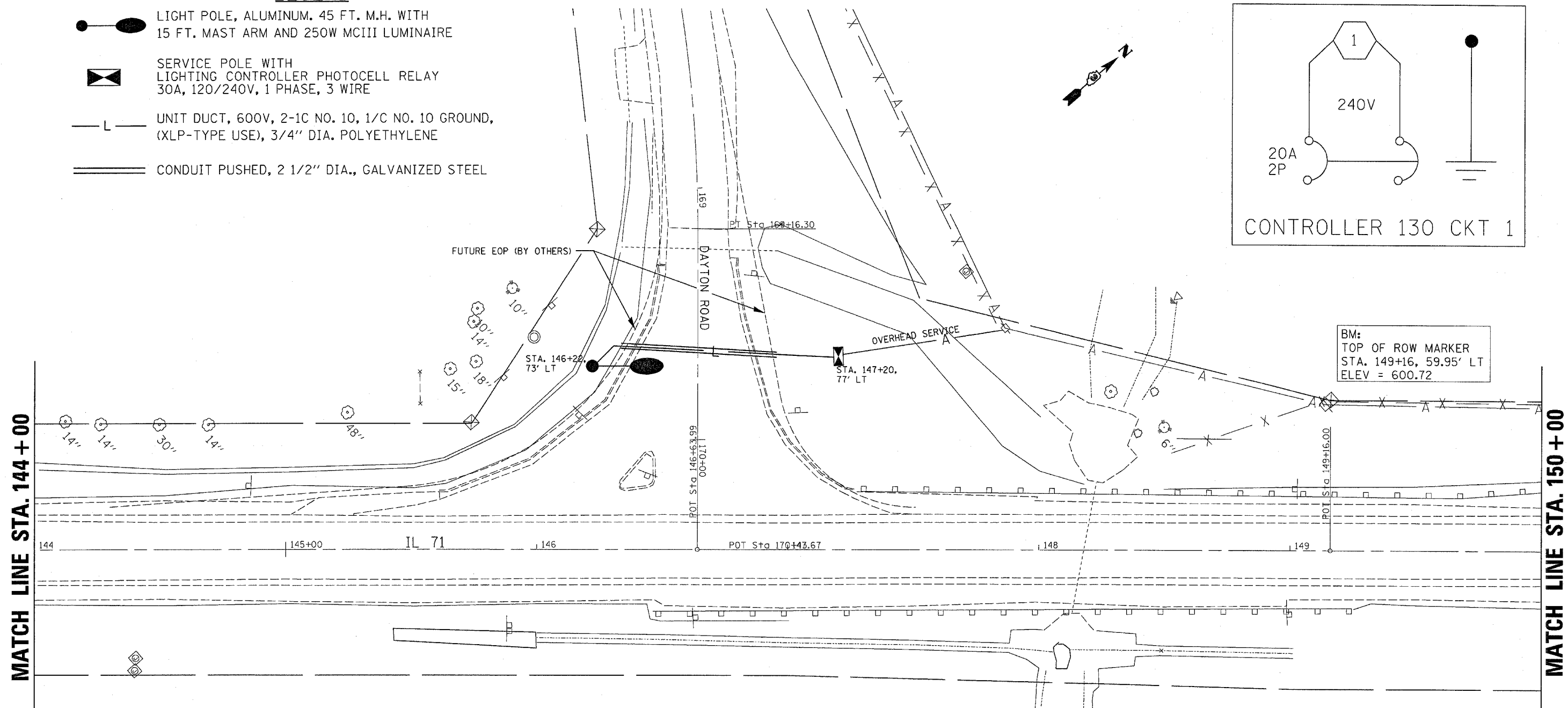
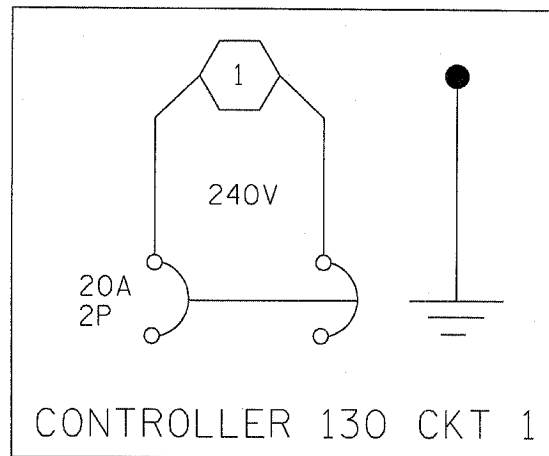
J...  
DISTRICT MATERIALS ENGINEER

...  
DISTRICT OPERATIONS ENGINEER

FILE NAME = c:\projects\0082689\details.dgn	USER NAME = duncanbd	DESIGNED - DRAWN -	REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES & SUMMARY OF QUANTITIES	F.A.P. RTE. 311	SECTION (5)L	COUNTY LASALLE	TOTAL SHEETS 7	SHEET NO. 2
PLOT SCALE = 50,0000' / IN.	CHECKED -	REVISED -	SCALE:			SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 66768
PLOT DATE = Mar 29, 2008 - 02:10:29 PM	DATE -	REVISED -								

**LEGEND**

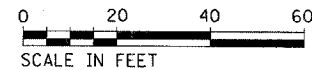
-  LIGHT POLE, ALUMINUM, 45 FT. M.H. WITH 15 FT. MAST ARM AND 250W MCIII LUMINAIRE
-  SERVICE POLE WITH LIGHTING CONTROLLER PHOTOCELL RELAY 30A, 120/240V, 1 PHASE, 3 WIRE
-  UNIT DUCT, 600V, 2-1C NO. 10, 1/C NO. 10 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE
-  CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL



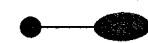

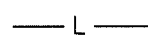
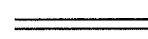
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TOP OF ROW MARKER  
STA. 149+16, 59.95' LT  
ELEV = 600.72

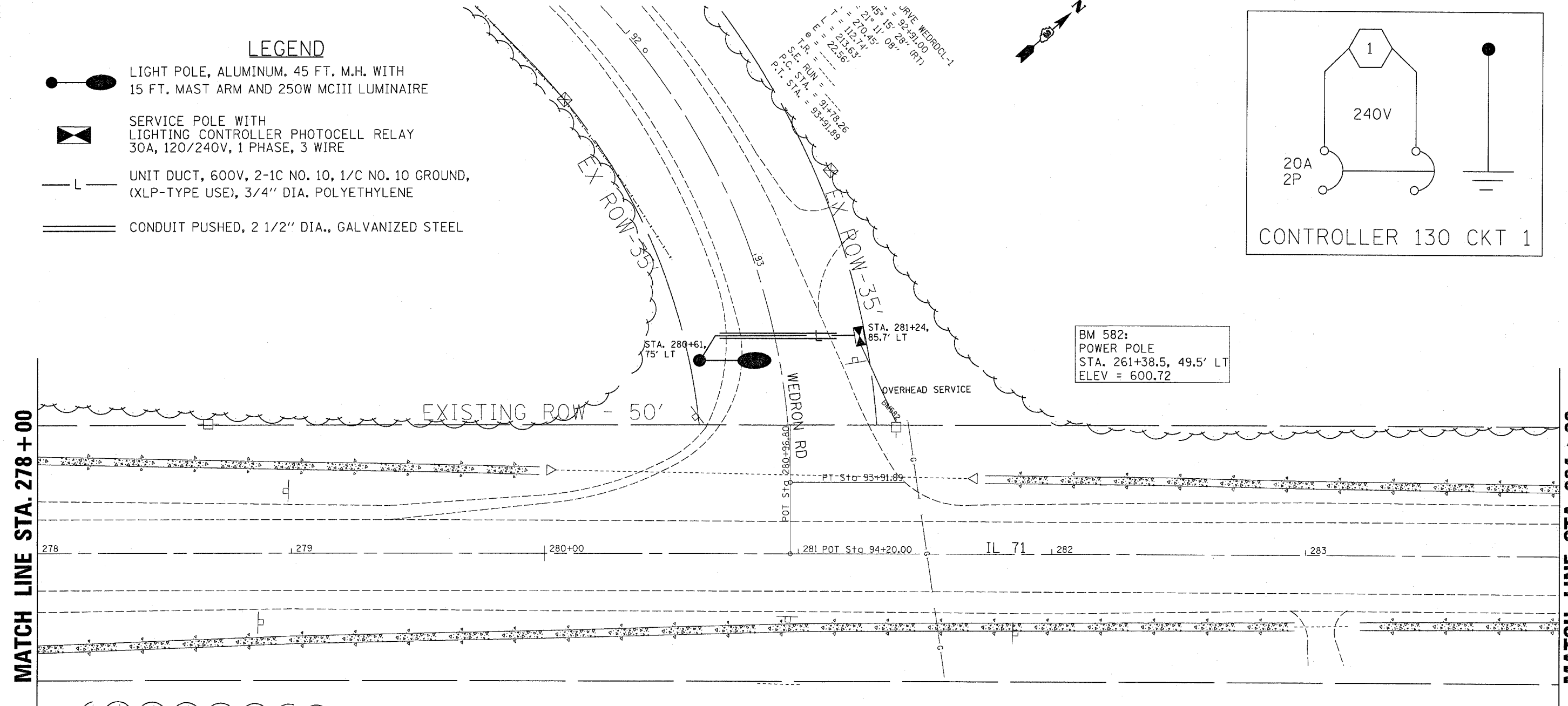
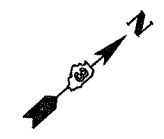
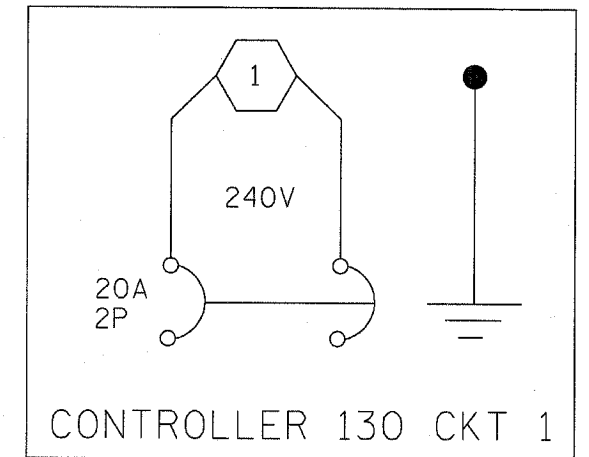
**BILL OF MATERIALS**

DAYTON ROAD		QUANTITY
ELECTRIC SERVICE INSTALLATION	EACH	1
CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	62
UNIT DUCT, 600V, 2-1C NO. 10, 1/C NO. 10 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	115
TRENCH & BACKFILL FOR ELECTRICAL WORK	FOOT	41
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT 250 WATT	EACH	1
LIGHTING CONTROLLER PHOTOCELL RELAY	EACH	1
LIGHT POLE, ALUMINUM, 45 FT. M.H., 15 FT. MAST ARM	EACH	1
LIGHT POLE FOUNDATION METAL, 15" BOLT CIRCLE, 8" X 6"	EACH	1
BREAKAWAY DEVICE, COUPLING, WITH STAINLESS STEEL SCREEN	EACH	4



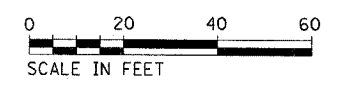
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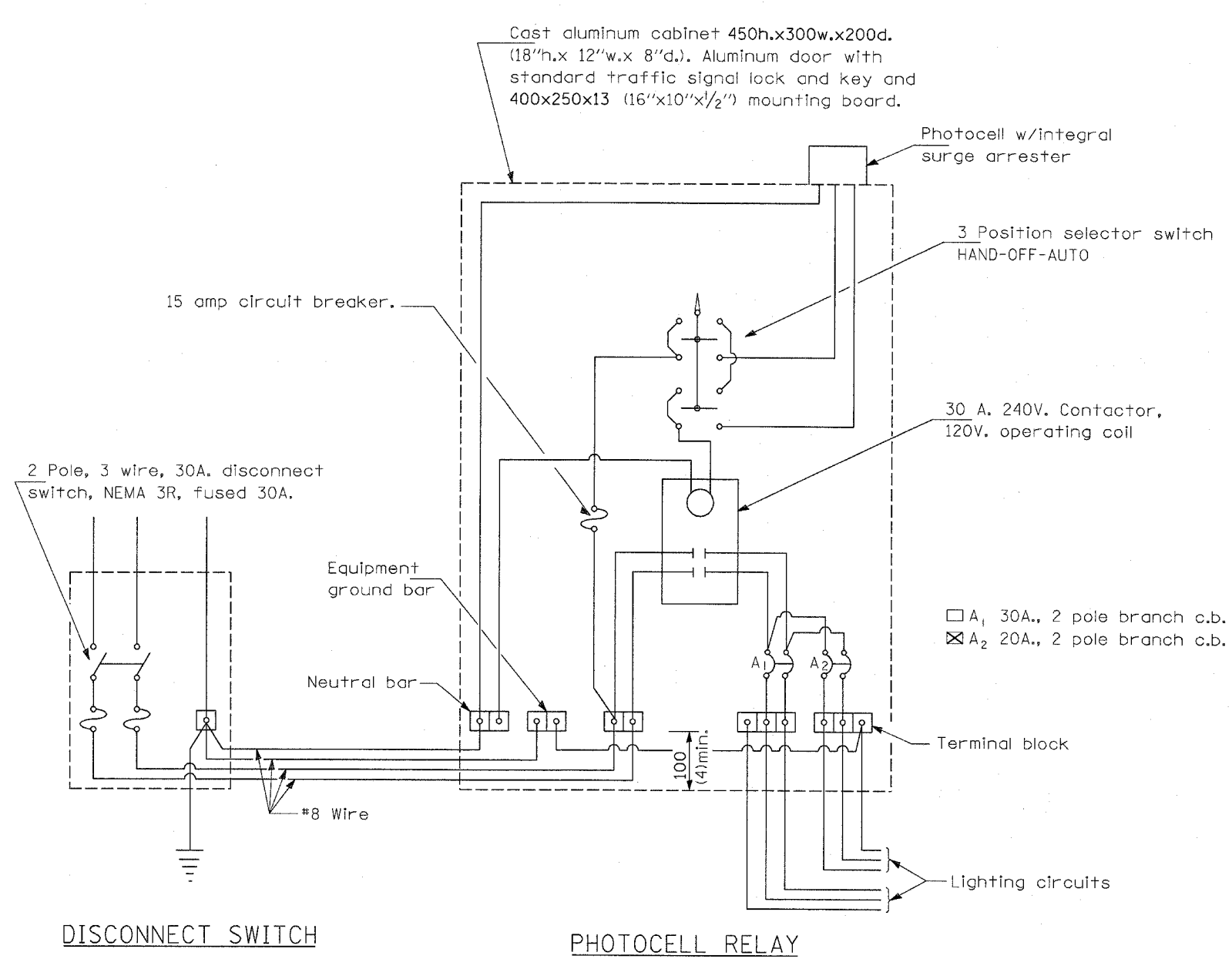
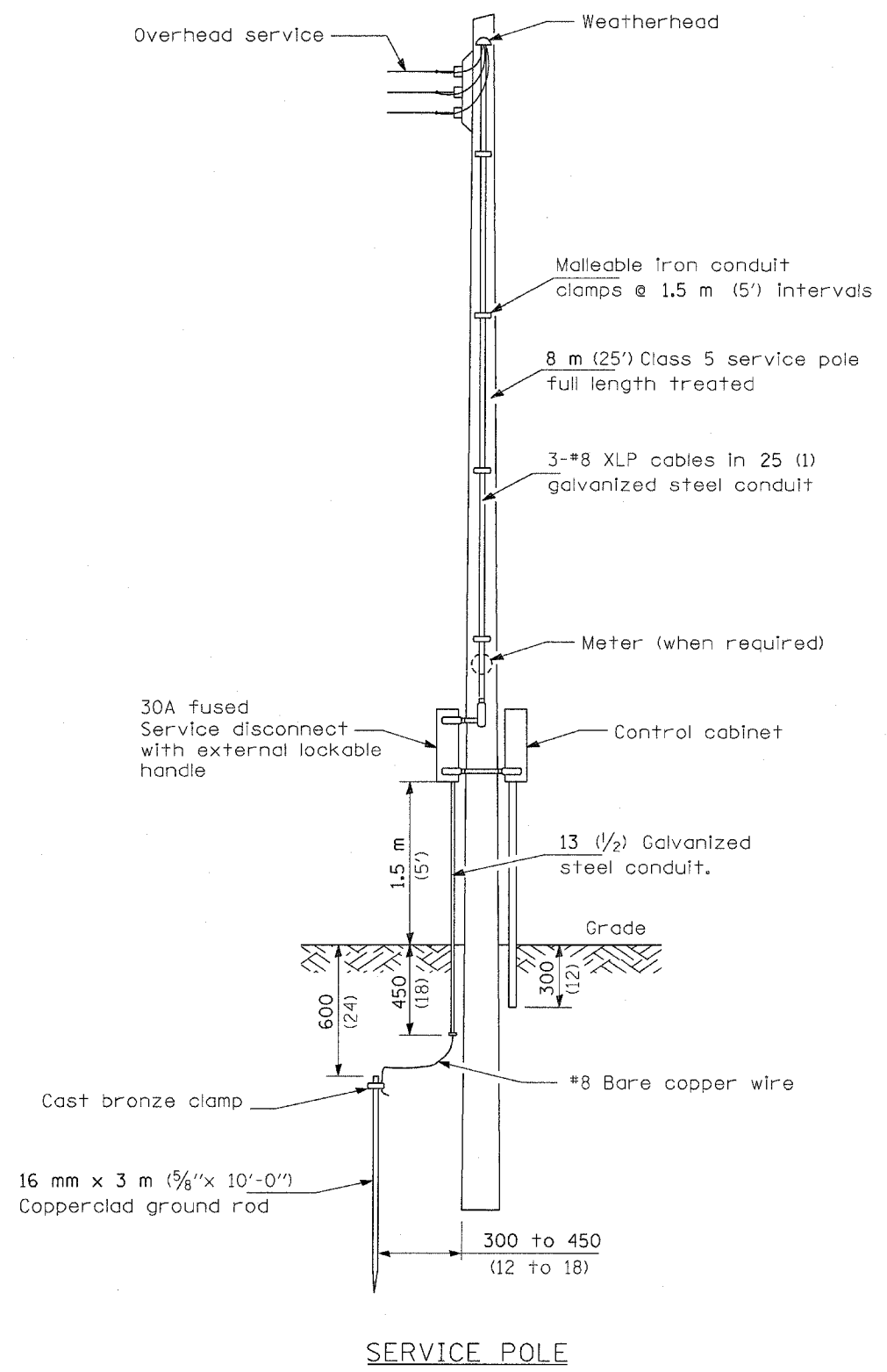
-  LIGHT POLE, ALUMINUM, 45 FT. M.H. WITH 15 FT. MAST ARM AND 250W MCIII LUMINAIRE
-  SERVICE POLE WITH LIGHTING CONTROLLER PHOTOCELL RELAY 30A, 120/240V, 1 PHASE, 3 WIRE
-  UNIT DUCT, 600V, 2-1C NO. 10, 1/C NO. 10 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE
-  CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL



**BILL OF MATERIALS**

WEDRON ROAD		QUANTITY
ELECTRIC SERVICE INSTALLATION	EACH	1
CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	46
UNIT DUCT, 600V, 2-1C NO. 10, 1/C NO. 10 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	95
TRENCH & BACKFILL FOR ELECTRICAL WORK	FOOT	34
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT 250 WATT	EACH	1
LIGHTING CONTROLLER PHOTOCELL RELAY	EACH	1
LIGHT POLE, ALUMINUM, 45 FT. M.H., 15 FT. MAST ARM	EACH	1
LIGHT POLE FOUNDATION METAL, 15" BOLT CIRCLE, 8" X 6'	EACH	1
BREAKAWAY DEVICE, COUPLING, WITH STAINLESS STEEL SCREEN	EACH	4





**GENERAL NOTES**

All equipment shall be U.L. Listed.  
 All dimensions are in millimeters unless otherwise shown.

DATE	REVISIONS	CONTROL INSTALLATION SERVICE POLE MOUNTED			
		120/240V., 1 PHASE, 3 WIRE SERVICE			
		LG003.M32			
		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
		311	(5)L	LASALLE	7
		CONTRACT NO. 66768			

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PLOT DATE = Mar 28, 2008 - 01:34:03 PM	DATE -	CHECKED -	REVISIONS -

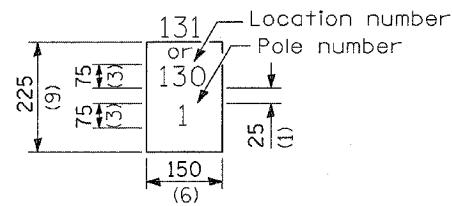
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

DETAILS				
SCALE:	SHEET NO.	OF	SHEETS	STA. TO STA.

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

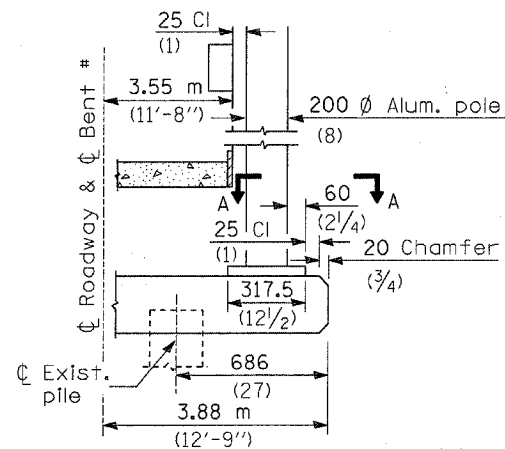
"Install and orient arm bracket over pole tenon and firmly hand tighten the two set screws. Use third hole in arm bracket as a guide to drill a 8.3 (1/4) diameter hole through tenon. Install and tighten self-tapping screw. Tighten set screws an additional (1/4 to 3/8) turn with hex key (not provided). Install locknuts on set screws if threaded projection allows."

Pole shall meet AASHTO Standard Specifications for 128.72 km (80 mph) wind loading and 40.82 kg (90 lb.), .37 m<sup>2</sup> (4.0 sq. ft.) E.P.A. luminaire.

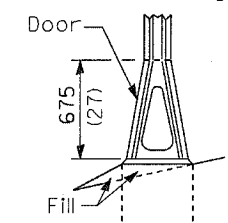


The contractor shall furnish and install a light pole identification of each new light pole, as shown above, incidental to the respective light pole pay item. The numerals shall be 75 (3) series "D", black, screened on silver-white type B pressure sensitive reflective sheeting conforming to the requirements of section T602.01 of the Standard Specifications for Traffic Control Items. The numerals shall conform to the FHWA "Standard Alphabets for Highway Signs".

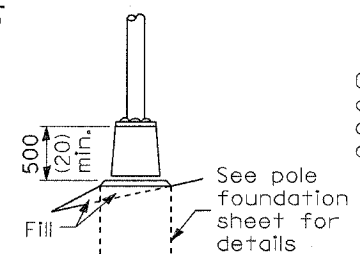
The light pole identification shall be applied to sign base material as specified in section 1085.05 of the Standard Specifications, approximately 180 (7) above the adjacent pavement grade visible to approaching traffic in accordance with Highway Standard 2319.



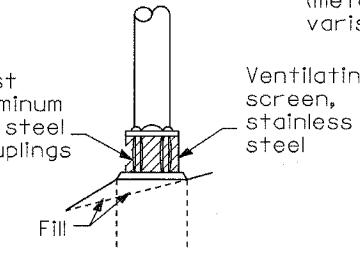
**BENT #**  
(Looking )



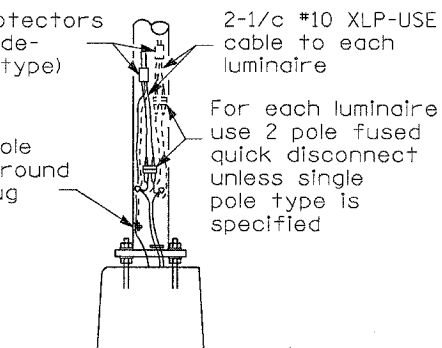
**STAINLESS STEEL FLAIR BASE**



**TRANSFORMER BASE**



**BREAKAWAY COUPLING**

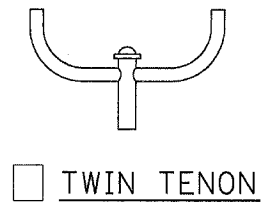


**ANCHOR**

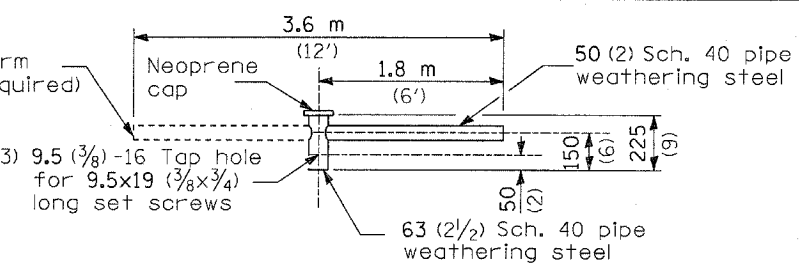
**FRANGIBLE**

**METAL** OR  **CONCRETE**

Details for underground distribution if required

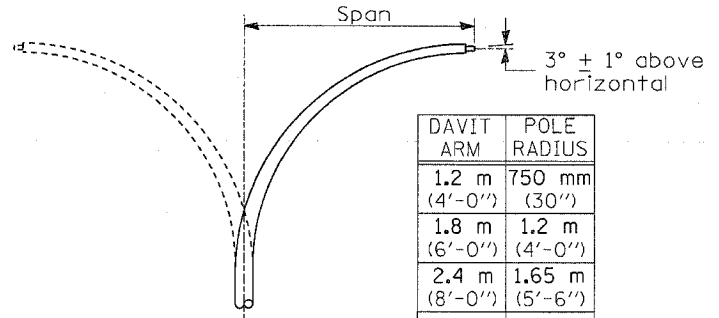


**TWIN TENON**



**TENON MOUNT BRACKET ARM**

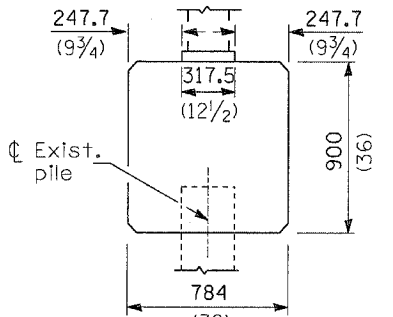
NOTE: Single or twin arm assembly shall be tilted 3° above horizontal.



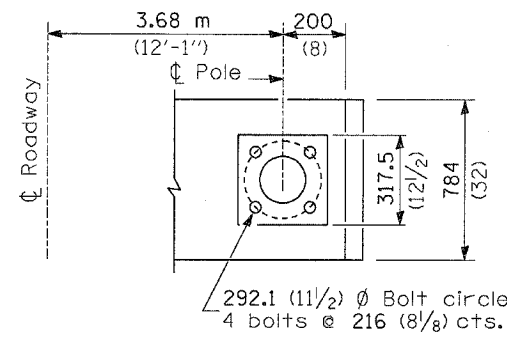
**DAVIT ARM**

**DAVIT ARM-TWIN**

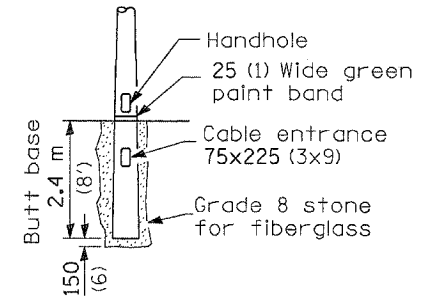
DAVIT ARM	POLE RADIUS
1.2 m (4'-0")	750 mm (30")
1.8 m (6'-0")	1.2 m (4'-0")
2.4 m (8'-0")	1.65 m (5'-6")
3.6 m (12'-0")	1.65 m (5'-6")



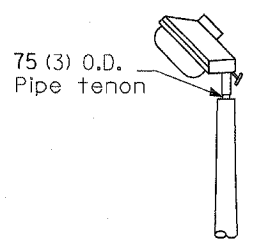
**BRIDGE PIER MOUNT**



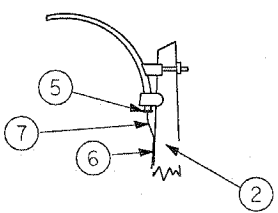
**SECTION A-A**



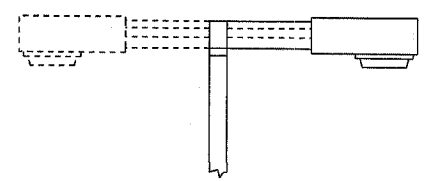
**BUTT BASE**



**TENON**

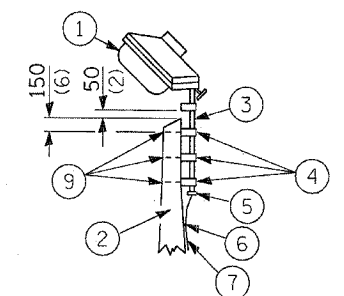


**MAST ARM**



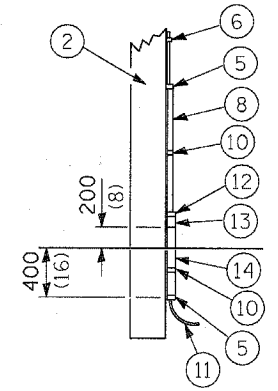
**SHORT BRACKET**

**SHORT BRACKET - TWIN**



**TENON**

- ① Luminaire
- ② Wood pole, class 3 or better
- ③ 63 (2 1/2) Galv. steel conduit
- ④ Single offset pole band
- ⑤ Conduit bushing
- ⑥ Cable clamps on 600 (24) centers
- ⑦ 2/c #12 Type use cable
- ⑧ 25 (1) Galv. steel conduit 3.0 m (10') in length
- ⑨ 16 (5/8) Ø hot dipped galvanized bolt with flat washer & locknut (3 req'd)
- ⑩ Conduit clamps on 900 (36) centers
- ⑪ Unit duct
- ⑫ Threaded reducer
- ⑬ "C" Condulet, threaded
- ⑭ 40 (1 1/2) Galv. steel conduit for 1 unit duct or 75 (3) galv. steel conduit for 2 or 3 unit ducts.



**POLE, WOOD**

POLE LENGTH	DEPTH IN GROUND
19.8 m (65')	3.6 m (12')
18.0 m (60')	3.0 m (10')
16.8 m (55')	2.7 m (9')
16.0 m (50')	2.4 m (8')
13.7 m (45')	2.1 m (7')
12.0 m (40')	2.0 m (6.5')
10.7 m (35')	1.8 m (6')
9.0 m (30')	1.7 m (5.5')

All dimensions are in millimeters (inches) unless otherwise shown.

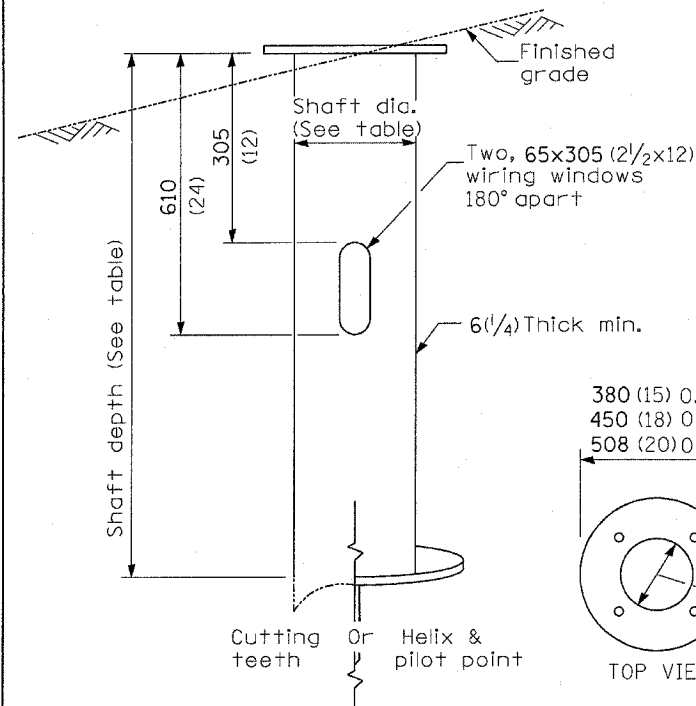
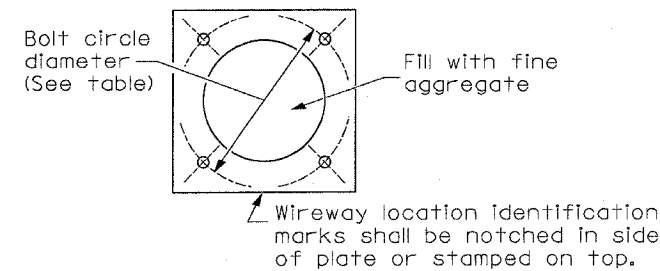
DATE	REVISIONS

**POLE STANDARDS**

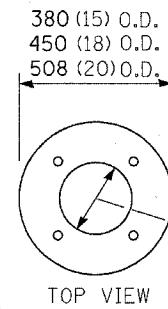
LGTO08.M32

LIGHT POLE MOUNTING HEIGHT	BOLT CIRCLE DIAMETER	STEEL FOUNDATION			CONCRETE FOUNDATION		
		SHAFT DIAMETER	SHAFT DEPTH	TOP PLATE (min)	SHAFT DIAMETER	SHAFT DEPTH	ANCHOR ROD LENGTH ①
< 9.1 m (30')	292 (11.5)	220 (8 5/8)	1.83 m (6')	300 x 300 x 25 12 x 12 x 1	610 (24)	1.52 m (5'-0")	1.45 m (4'-9")
9.4 m - 10.7 m (31'-35')	292 (11.5)	220 (8 5/8)	1.83 m (6')	300 x 300 x 25 12 x 12 x 1	610 (24)	1.67 m (5'-6")	1.60 m (5'-3")
10.9 m - 12.2 m (36'-40')	381 (15) ③	220 (8 5/8)	1.83 m (6') ②	375 x 375 x 31 15 x 15 x 1 1/4	762 (30)	1.83 m (6'-0")	1.75 m (5'-9")
12.5 m - 13.7 m (41'-45')	381 (15) ③	220 (8 5/8)	1.83 m (6') ②	375 x 375 x 31 15 x 15 x 1 1/4	762 (30)	1.98 m (6'-6")	1.90 m (6'-3")
14.0 m - 15.2 m (46'-50')	381 (15) ③	220 (8 5/8)	2.44 m (8')	375 x 375 x 31 15 x 15 x 1 1/4	762 (30)	2.13 m (7'-0")	2.00 m (6'-9")

- ① Length does not include 100(4)hook
- ② 220 mm x 2.44 m (8 5/8" x 8'-0") for Twin luminaires
- ③ Bolt circle diam. shall be 430 (17) when a TB3-17 transformer base is used



**STEEL FOUNDATION**



**RING PLATE DETAIL**

(When rock is encountered and foundation is shallower)

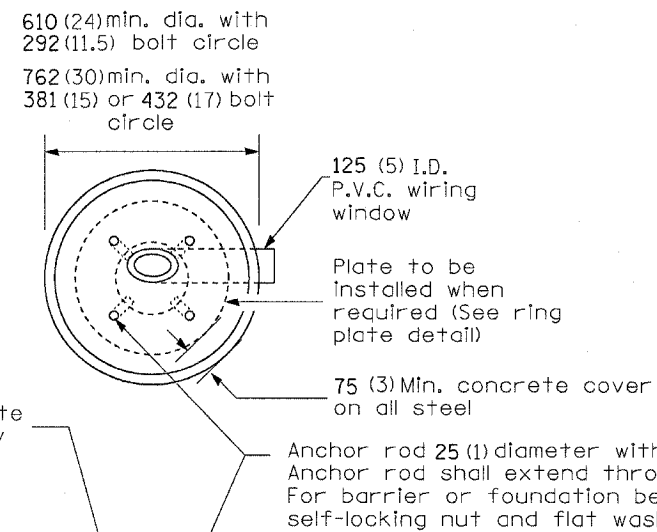
Length above foundation shall be adjusted to accommodate breakaway devices furnished by the contractor for a specific installation.

Use dirt removed from foundation to meet 1.52m (5 ft.) chord fill around foundation top. Grade dirt level with bottom of concrete chamfer.

- ④ If the required anchor rod length above top of foundation is less than 75 (3), anchor rods may be lowered below 150 (6).

Cast bronze clamp  
16 mm x 3 m (5/8" x 10')  
Copperclad grounding electrode. When foundation is set in rock, install ground electrode in cable trench.

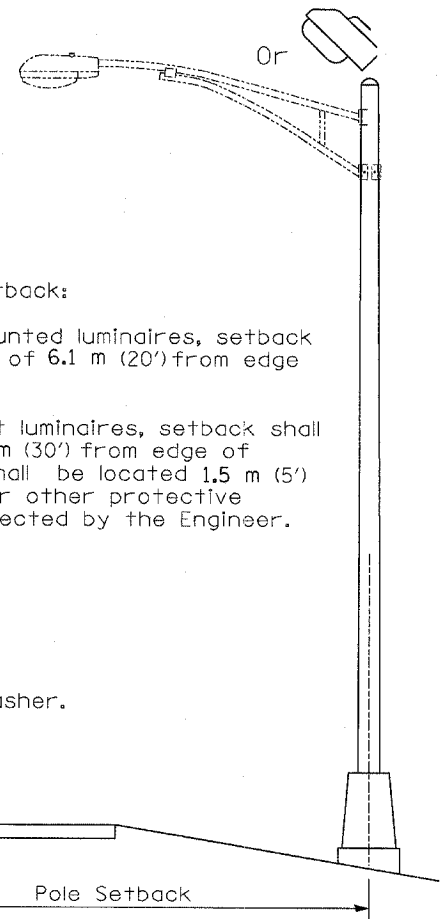
**CONCRETE FOUNDATION**



**Notes:**

- 1) Wireway may be on front, back or side of foundation as required by the trenching. Place door of transformer base on wireway side to minimize the number of unit duct bends.
- 2) Top of schedule 40 125 (5) I.D. PVC wiring window, shall be flush with the top of foundation for drainage.
- 3) All foundations are designed to be located on slopes not exceeding 2:1 where soils have an unconfined compressive strength of at least 1.0 TSF. The contractor shall verify the soil strength during drilling for concrete foundations or by monitoring installation resistance on steel foundations and notify the engineer if other conditions are encountered.
- 4) Anchor rod shall be increased to 31 (1 1/4) diameter for 15.24 (50') mounting height or above.
- 5) TB3-17 transformer base is not to be used on metal foundation

All dimensions are in millimeters (inches) unless otherwise shown.



DATE	REVISIONS
10/7/02	Bridge Office depth calc.

**LIGHT POLE FOUNDATION**

LGT007-836