

**PANEL WIRING DIAGRAM**

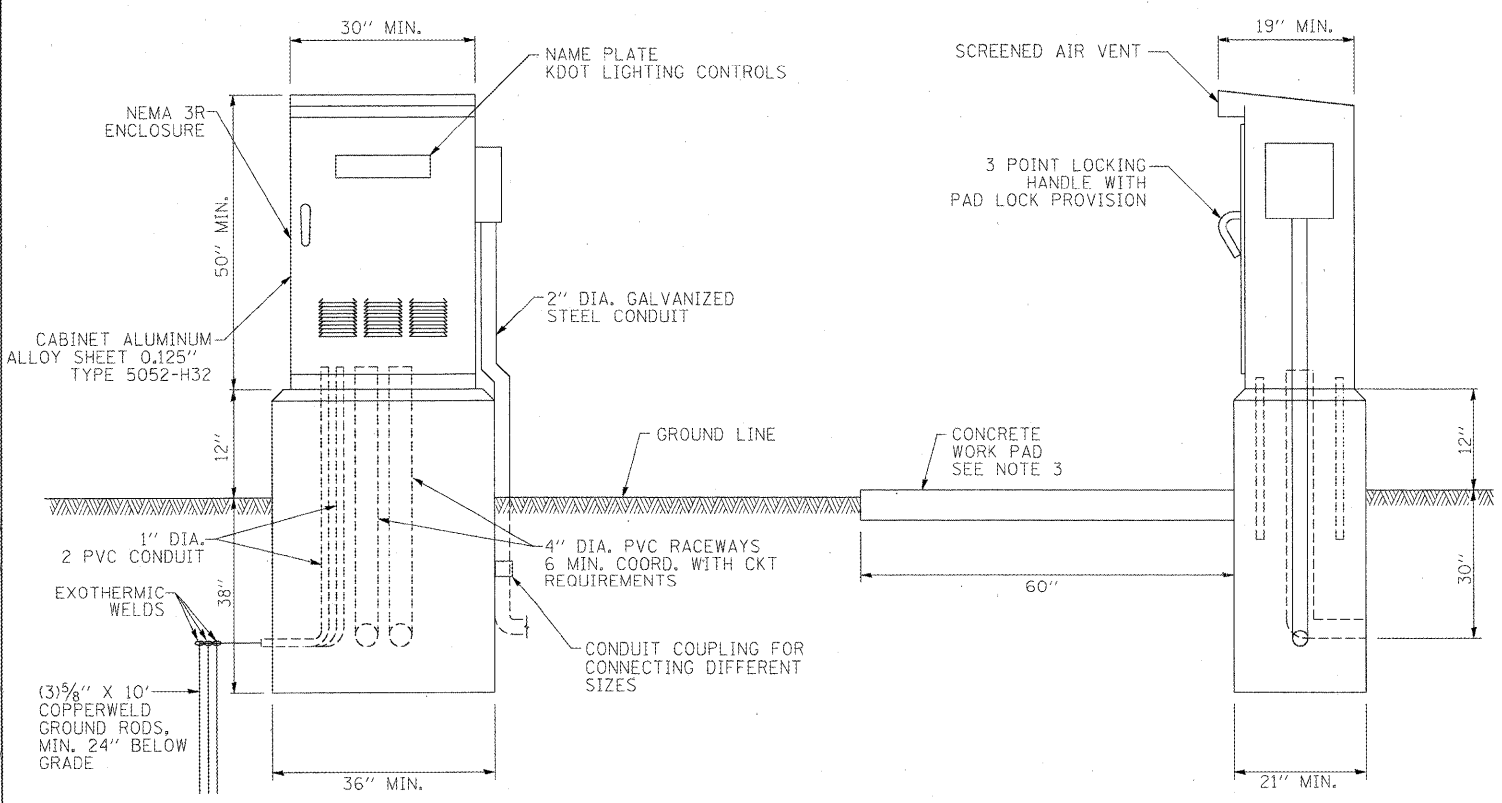
**PANEL EQUIPMENT**

**BILL OF MATERIAL**

ITEM	QUANTITY	DESCRIPTION
A	1	MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT 40 AMP, FRAME, 100 AMP, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP, AT 480 VOLT.
B	2	REMOTE CONTROL SWITCH, ELECTRICALLY OPERATED MECHANICALLY HELD, 2 POLE, SINGLE THROW, 100 AMP., 600 VOLTS CONTROL CIRCUIT 120 VOLT.
C	8	CIRCUIT BREAKERS, 1-POLE, 100 AMP, FRAME, 30 AMP, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-10,000 AMP, AT 240 V.
D	2	CONTROL CIRCUIT-CIRCUIT BREAKER, 1-POLE, 120 V., 100 AMP, FRAME 30 AMP, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-5000 AMP, AT 240 V.
E	1	ASTRONOMIC MICROPROCESSOR-BASED 2-CHANNEL CONTROLLER (TIME SWITCHED)
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 NEUTRAL BUS 1/4" X 1" X 12" LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS
L	2	SPDT TOGGLE SWITCHES MOUNTED IN 4" X 4" BOX.
M	1	COPPER GROUND BUS 1/4" X 1" X 12" LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS
N	1	THE SURGE PROTECTION MUST BE SUITABLE FOR 240/120 VOLT SINGLE PHASE 60HZ AC ELECTRICAL SERVICE, WITH A SURGE ENERGY CAPABILITY OF 2160 JOULES OR BETTER AT 8/20 MICRO SECONDS RATED -40 TO 60 DEGREES C., WITH LED OPERATING INDICATORS, AND MUST BE UL LISTED PER UL 1449, CUTLER-HAMMER CMOV230L065XST OR APPROVED EQUAL.

**NOTES:**

- ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.
- FOUNDATION SIZE MUST BE COORDINATED WITH CABINET SIZE AND MFR.
- IN FRONT OF CONTROL CABINET DOOR, REMOVE VEGETATION AND 2" TOP SOIL. LEVEL THE AREA AND ON TOP, PLACE LENGTH WISE PARALLEL TO CONTROL CABINET, A CONCRETE PAD 36" X 60" X 4" MIN. SIZE, THE COST OF LABOR AND MATERIALS ARE INCLUDED IN THE COST OF THE CONTROLLER.
- DOOR WILL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
- DOOR WILL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP AND THE BOTTOM.
- DOOR HINGE WILL BE A HEAVY GAUGE CONTINUOUS HINGE WITH 1/4" DIA. STAINLESS STEEL HINGE PIN.
- ALL EXTERNAL HARDWARE WILL BE STAINLESS STEEL.
- CONTROL WIRING TO BE #12 AWG, 600V. TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED COPPER.
- METER BOX WILL BE MOUNTED ON THE SIDE OF CONTROL CABINET, NEAR TO THE SERVICE POLE. (NOT REQUIRED ON UNMETERED SERVICES OR AS REQUIRED BY THE ELECTRIC UTILITY).
- CABINETS WILL BE PRIMED AND PAINTED AS SPECIFIED.
- THE HEADS OF CONNECTORS SCREWS WILL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
- ALL WIRING WITHIN THE CABINET MUST 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 WILL BE NEATLY DRESSED AND SUPPORTED.
- THE CONTROLLER MUST BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".
- 12" X 16" STAINLESS STEEL EXTERIOR NAMEPLATE WILL BE ENGRAVED TO "KANE COUNTY LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.
- CIRCUITS A AND C SHALL RUN CONTINUOUSLY. CIRCUITS B AND D SHALL TURN OFF DURING THE NON-OPERATING HOURS OF THE FORREST PRESERVE.



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FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - GHT	REVISED - ADDENDUM 6/5/09
		DRAWN - VLM	REVISED -
PLOT SCALE = 50.0000' / IN.		CHECKED - GHT	REVISED -
PLOT DATE = 6/4/2009		DATE - 3/31/09	REVISED -

**KANE COUNTY  
DIVISION OF TRANSPORTATION**

**LIGHTING CONTROLLER  
DETAIL  
(TYPE CB-RCS 60A-240V)**

SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	F.A. RTE. 361	SECTION 06-00214-15-BR	COUNTY KANE/DUPAGE	TOTAL SHEETS 545	SHEET NO. 274
			FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT CONTRACT NO. 63074		