

**1 ONE LINE DIAGRAM ELLINWOOD 2**  
NO SCALE

**PANEL NAME: ELLINWOOD 2** CONNECTED 17.1 KVA

TYPE: BOLT-ON  
MOUNTING: SURFACE - INTERIOR ONLY  
FED FROM: UTILITY  
AIC RATING: 14,000

SOLID NEUTRAL  
GROUND BUS

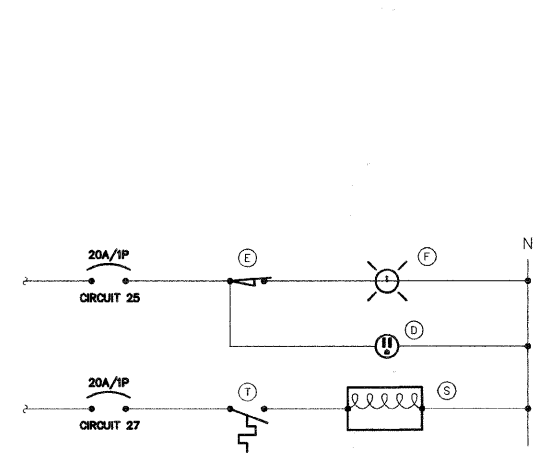
MAIN: 200A MCB  
VOLTS: 240/120  
PHASE: 1  
WIRE: 3

CKT NO.	LOAD DESCRIPTION	WIRE SIZE	LOAD KVA	BREAKER AMP	BREAKER P	LOAD KVA	WIRE SIZE	LOAD DESCRIPTION	CKT NO.
1	A 4F1, 2F2, 3F3	*S 3.1	30	2	20	1	0.6	*S X1 3 RECEPT.	2
3					20	1	0.6	*S X2 3 RECEPT.	4
5	B 1F1, 2F2, 3F3	*S 2.8	30	2	20	1	0.6	*S Y1 3 RECEPT.	6
7					20	1	0.6	*S Y2 3 RECEPT.	8
9	SURGE ARRESTOR	*O 0.1	30	2	20	1	0.6	*S Z1 3 RECEPT.	10
11					20	1	0.6	*S Z2 3 RECEPT.	12
13	PANEL 'E1'	2	6.7	100	2	20	1		14
15					20	1		SPARE	16
17	SPACE				20	1		SPARE	18
19	SPACE				20	1		SPARE	20
21	SPACE							SPACE	22
23	SPACE							SPACE	24
25	LGT. RECEPT. IN CABINET	12	0.3	20	1			SPACE	26
27	CABINET HEATER	12	0.4	20	1			SPACE	28
29	LGT CONTROL	12	0.1	20	1			SPACE	30

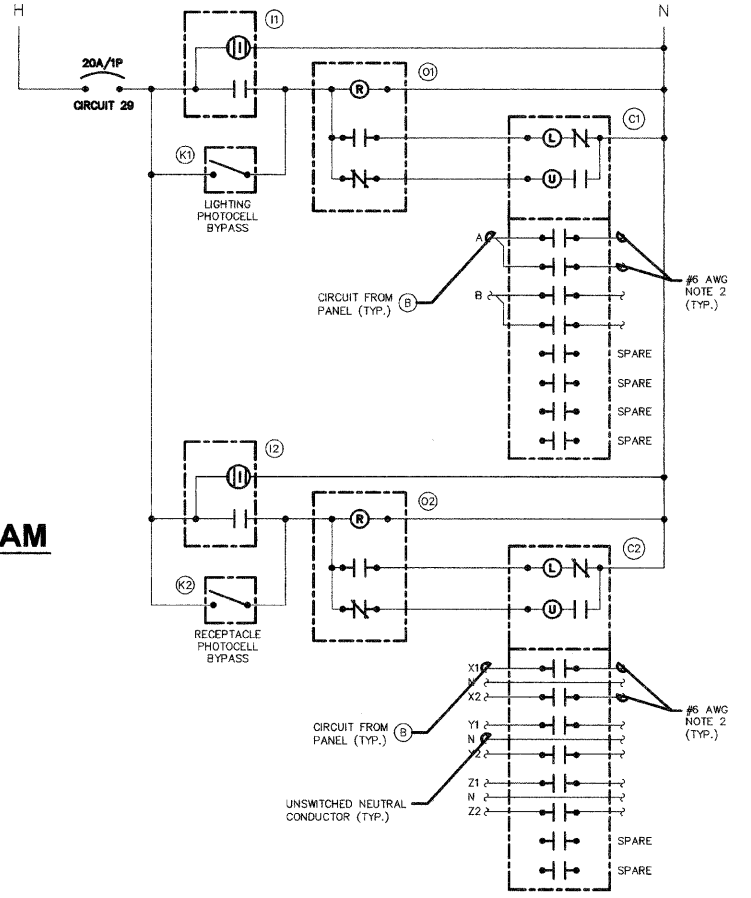
NOTES: \*S = REFER TO SHEET E3 FOR WIRE SIZE. \*O = REFER TO ONE LINE DIAGRAM ON SHEET E8 FOR WIRE SIZE.

**ONE-LINE DIAGRAM NOTES**

- AIC RATINGS LISTED FOR EQUIPMENT ARE MINIMUM REQUIREMENTS FOR BUS BRACING AND DEVICE RATING. ALL EQUIPMENT SHALL BE FULLY RATED UNLESS SPECIFICALLY NOTED AS SERIES RATED.
- ALL FUSES FROM 0 AMPERE TO 200 AMPERE SHALL BE DUAL ELEMENT, CLASS RK-5 UNLESS NOTED OTHERWISE.
- INDICATES DIRECT CONNECTION OF GROUND CONDUCTOR TO GROUND BUS.



**3 CABINET ELEMENTARY DIAGRAM**  
NO SCALE

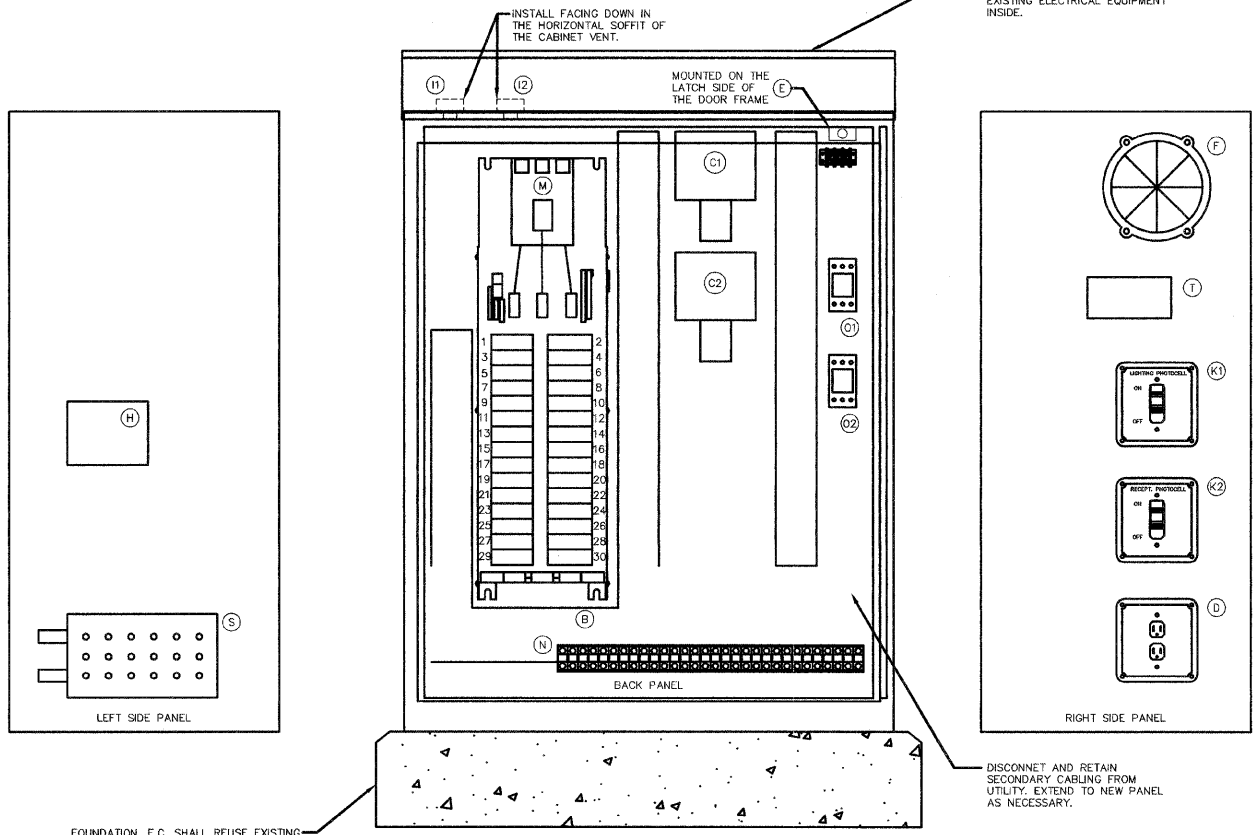


**4 LIGHTING CONTROL ELEMENTARY DIAGRAM**  
NO SCALE

NOTES:  
1. ALL CABINET INTERIOR WIRING SHALL BE STRANDED COPPER #12 AWG THWN UNLESS NOTED OTHERWISE.  
2. ROUTE TO STREET LIGHTING LUMINAIRES VIA TERMINAL BLOCK. (N)

**BILL OF MATERIALS FOR LIGHTING CONTROLLER "E2"**

ITEM #	QUANTITY	DESCRIPTION
B	1	BRANCH CIRCUIT PANEL INTERIOR, 200A COPPER BUS, 240/120 VOLT, MOLDED CASE THERMAL MAGNETIC CIRCUIT BREAKERS, BOLT ON TYPE, AIC RATING OF 14,000 AMPS AT 240 VOLTS; SQUARE D 1630-ND20, G.E. AQ, SIEMENS P1, OR CUTLER HAMMER PRL1.
C1 C2	2	MECHANICAL CONTACTOR, 8 POLE, 30 AMP, 120V COIL, SQUARE D 8903-LGX40V02, G.E. CR360ML2, CUTLER HAMMER C30B. PROVIDE WITH TWO-WIRE CONTROL FOR PHOTOCELL INTERFACE.
D	1	GF1 RECEPTACLE 120V, 20A, SPECIFICATION GRADE, NEMA 5-20R IN WEATHER-PROOF BOX WITH FLAP-TYPE COVER, HUBBELL GF5322A WITH WP26 COVER, LEVITON, PASS & SEYMOUR, OR COPPER.
E	1	20A SPOT MICRO SWITCH (MOUNT WITH ACTUATOR TO SWITCH WHEN DOOR OPENED), 120 VOLT, 15 AMP CONTACTS, SQUARE D XCK1110, G.E., CUTLER HAMMER, OR SIEMENS.
F	1	60 WATT LIGHT FIXTURE, VAPOR TIGHT WITH GLOBE AND GUARD AND MOUNTING BOX. LAMP PROVIDED WITH FIXTURE.
H	1	SURGE ARRESTOR, BRACKET MOUNTED, 120/240 VOLT SERVICE, SQUARE D S2SA1175, G.E., CUTLER HAMMER.
I1 I2	2	PHOTOCELL, 120V, 1500 VA RATED, SINGLE POLE, SINGLE THROW CONTACT, WEATHERPROOF AND CORROSION PROOF ENCLOSURE, U.L. LISTED, TORK 3000, PARADON, OR INTERMATIC.
J	1	E.C. SHALL REUSE EXISTING CABINET IF POSSIBLE. ENCLOSURE PAD MOUNTED, STAINLESS STEEL, N.E.M.A. 4 CONSTRUCTION WITH KEY LOCKING DOOR. KEY CYLINDER SHALL MATCH EXISTING VILLAGE LIGHTING CONTROLLER LOCKS. HOFFMAN, OR APPROVED EQUAL. 30"W, 48"H, 18"D
K1 K2	2	TOGGLE SWITCH, SPDT, 20 AMP, 240 VOLT, SPECIFICATION GRADE MOUNTED IN SURFACE BOX, HUBBELL HBL1221, LEVITON 1221-2, PASS & SEYMOUR PS20ACT, OR COPPER 2221.
M	1	MAIN CIRCUIT BREAKER, MOLDED CASE THERMAL MAGNETIC, SERVICE ENTRANCE DUTY RATED 240 VOLT, 200 AMP, 2 POLE, AIC RATING OF 14,000 AMPS AT 240 VOLTS. INTEGRAL TO BRANCH PANEL.
N	1	COPPER LOAD TERMINAL BLOCK FOR AWG#6 AND AWG#12
O1 O2	2	FORM TYPE C RELAY, ELECTRICALLY HELD, ONE NORMALLY OPEN (N.O.) AND ONE NORMALLY CLOSED (N.C.) CONTACTS, 600V CONTINUOUS DUTY COIL, 30 AMP CONTACT RATING, SQUARE D CLASS 8501, G.E., OR CUTLER HAMMER.
T	1	THERMOSTAT, 40-80 DEGREE RANGE, CHROMALOX WR80, TRANE, MODINE, OR REZNOR.
S	1	HEATER, 120 VOLT, 375 WATT, 40-80 DEGREE THERMOSTAT, CHROMALOX 276-10, TRANE, MODINE, OR REZNOR.



**2 LIGHTING CONTROL CABINET**  
NO SCALE  
U.L. LISTED  
IDOT APPROVED

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REFERENCE SCALE IN INCHES  
0 1 2 3

PLANS PREPARED BY:  
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REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**EB: ONE LINE DIAGRAM & SCHEDULES**

**DES PLAINES LIGHTING IMPROVEMENTS AND STREETScape**  
DES PLAINES, ILLINOIS

SCALE: NTS  
DATE: 8-14-2009

DRAWN BY: JOP  
DESIGNED BY: MCK  
CHECKED BY: MCK