

LIGHTING CONTROL PANEL LCP				
LIGHTING CONTROL PANEL SHALL BE GREENGATE LITEKEEPER 32				
DESCRIPTION	CIRCUIT NUMBER	CONTROL	LOW VOLTAGE SWITCH CONTROL ZONE	RELAY NUMBER
SALES AREA LIGHTING	HA-1	TIME CLOCK ON/OFF	KP1-Z1/KP2-Z1	1
SALES AREA LIGHTING	HA-3	TIME CLOCK ON/OFF	KP1-Z2/KP2-Z2	2
SALES AREA LIGHTING	HA-5	TIME CLOCK ON/OFF	KP1-Z1/KP2-Z1	3
SALES AREA LIGHTING	HA-7	TIME CLOCK ON/OFF	KP1-Z2/KP2-Z2	4
SALES AREA LIGHTING	HA-9	TIME CLOCK ON/OFF	KP1-Z1/KP2-Z1	5
SALES AREA LIGHTING	HA-11	TIME CLOCK ON/OFF	KP1-Z2/KP2-Z2	6
SALES AREA LIGHTING	HA-13	TIME CLOCK ON/OFF	KP1-Z1/KP2-Z1	7
SALES AREA LIGHTING	HA-15	TIME CLOCK ON/OFF	KP1-Z2/KP2-Z2	8
CLEARANCE ROOM LIGHTING	HA-17	TIME CLOCK ON/OFF	KP1-Z1/KP2-Z1	9
SALES AREA COVE LIGHTING	HA-19	TIME CLOCK ON/OFF	KP1-Z3/KP2-Z3	10
FRONT SIGN	LA-1	TIME CLOCK ON/OFF	KP1-Z5	11
FRONT SIGN	LA-23	TIME CLOCK ON/OFF	KP1-Z5	12
FRONT TRACK LIGHTING	LA-3	TIME CLOCK ON/OFF	KP1-Z4/KP2-Z4	13
FRONT DOWN LIGHTS	LA-5	TIME CLOCK ON/OFF	KP1-Z4/KP2-Z4	14
SIDE TRACK LIGHTING	LA-7	TIME CLOCK ON/OFF	KP1-Z4/KP2-Z4	15
CABINET LIGHTING	LA-9	TIME CLOCK ON/OFF	KP1-Z4/KP2-Z4	16
EXTERIOR CANDORY LIGHTING	HA-21	PHOTO CELL ON/TIME CLOCK OFF	KP1-Z6	17
SPARE				18
SPARE				19
SPARE				20
SPARE				21
SPARE				22
SPARE				23
SPARE				24
SPARE				25
SPARE				26
SPARE				27
SPARE				28
SPARE				29
SPARE				30
SPARE				31
SPARE				32

NOTES:  
1. CONTRACTOR TO COORDINATE WITH LIGHTING CONTROL PANEL VENDOR/OWNER FOR EXACT PROGRAMING OF TIME SCHEDULE AND OTHER REQUIREMENTS PRIOR TO INSTALLATION.  
2. DIGITAL KEYPADS SHALL BE PROGRAMMED TO TURN OFF LIGHTS DURING WORKING HOURS AND TO OPERATE AS AN OVERRIDE SWITCHES FOR A MAXIMUM OF 2 HOURS DURING AFTERHOURS.

NEW PANELBOARD SCHEDULE HA																
VOLTAGE	PHASE	WIRE	MCB (A)	MLO (A)	AIC	MOUNTING SURFACE	MANUFAC.	NEMA ENCLOSURE								
277/480	3	4	400		22,000			1								
TYPE LEGEND																
L	LIGHTING	K	KITCHEN EQUIP	PROVIDE EQUIPMENT GROUND BUS												
R	RECEPTACLES	E	EXISTING	PROVIDE FEED THRU AND/OR SUB FEED LEGS FOR MULTI-SECTION PANEL												
M	MECH EQUIP	O	OTHER													
CKT #	LOAD SERVED	TYPE	WIRE	CONDUIT	BREAKER	LOAD (VA)		BREAKER	CONDUIT	WIRE	TYPE	LOAD SERVED	CT #			
						LOAD (VA)	PHASE									
1	SALES AREA LIGHTING	L	#10	3/4"	20A	1	1982	A	1820	1	20A+ 3/4"	#10	L	NIGHT LIGHTING	2	
3	SALES AREA LIGHTING	L	#10	3/4"	20A	1	1982	B	400	1	20A+ 3/4"	#10	L	EMERGENCY LIGHTS	4	
5	SALES AREA LIGHTING	L	#10	3/4"	20A	1	1982	C	1600	1	20A 3/4"	#12	L	CORE ROOMS LIGHTING	6	
7	SALES AREA LIGHTING	L	#10	3/4"	20A	1	1982	A	22170	3	100A	1-1/4"	#2	M	RTU-1	8
9	SALES AREA LIGHTING	L	#10	3/4"	20A	1	1982	B	22170	1						10
11	SALES AREA LIGHTING	L	#10	3/4"	20A	1	1982	C	22170	1						12
13	SALES AREA LIGHTING	L	#10	3/4"	20A	1	1982	A	22170	3	100A	1-1/4"	#2	M	RTU-2	14
15	SALES AREA LIGHTING	L	#10	3/4"	20A	1	1982	B	22170	1						16
17	CLEARANCE RM LIGHTING	L	#12	3/4"	20A	1	488	C	22170	1						18
19	COVE LIGHTING	L	#12	3/4"	20A	1	400	A	6650	3	30A 3/4"	#10	M			20
21	CANOPY LIGHTS	L	#10	3/4"	20A	1	300	B	6650	1						22
23	SPARE				20A	1	0	C	6650	1						24
25	SPARE				20A	1	0	A	3000	1	20A 3/4"	#12	O	EW-H1		26
27	SPARE				20A	1	0	B	0	1	20A					28
29	SPARE				20A	1	0	C	0	1	20A					30
31	SPARE				20A	1	0	A	0	1	20A					32
33	SPARE				20A	1	0	B	0	1	20A					34
35	SPARE				20A	1	0	C	0	1	20A					36
37	SPACE				20A	1	0	A	3	70A	SEE RISSER	O		45KVA XFMR		38
39	SPACE				20A	1	0	B								40
41	SPACE				20A	1	0	C								42

CONNECTED LOAD (VA)				
A	B	C	TOTAL	
62156	57636	157040	176832	
LOAD (VA)	SUBLOADS (VA)	CONN (VA)	SIZING (VA)	SIZING (VA)
20562	3910	-	24772	125%
RECEPTACLES	0	7700	-	7700
MECH EQUIP	152970	0	-	152970
KITCHEN EQUIP	0	0	-	0
# OF KITCH EQ	0	0	-	0
EXISTING	0	0	-	0
OTHER	3400	3400	-	6800
TOTAL CONNECTED (VA)			198353	SIZING TOTAL (VA) PER NEC
CONNECTED AMPACITY (A)			238.20	SIZING AMPACITY (A)
TOTAL DEMAND (VA)			191842	
DEMAND AMPACITY (A)			230.75	

NEW PANELBOARD SCHEDULE LA															
VOLTAGE	PHASE	WIRE	MCB (A)	MLO (A)	AIC	MOUNTING SURFACE	MANUFAC.	NEMA ENCLOSURE							
120/208	3	4	150		10,000			1							
TYPE LEGEND															
L	LIGHTING	K	KITCHEN EQUIP	PROVIDE EQUIPMENT GROUND BUS											
R	RECEPTACLES	E	EXISTING	PROVIDE FEED THRU AND/OR SUB FEED LEGS FOR MULTI-SECTION PANEL											
M	MECH EQUIP	O	OTHER												
CKT #	LOAD SERVED	TYPE	WIRE	CONDUIT	BREAKER	LOAD (VA)		BREAKER	CONDUIT	WIRE	TYPE	LOAD SERVED	CT #		
						LOAD (VA)	PHASE								
1	FRONT SIGN	L	#8	3/4"	20A	1	800	A	400	1	20A 3/4"	#12	L	RESTROOM LTR/FANS	2
3	FRONT TRACK LIGHTING	L	#10	3/4"	20A	1	600	B	600	1	20A 3/4"	#12	O	72" JB AT KIDS AREA	4
5	FRONT DOWN LIGHTS	L	#10	3/4"	20A	1	368	C	600	1	20A 3/4"	#12	O	72" JB AT KIDS AREA	6
7	SIDE TRACK LIGHTING	L	#10	3/4"	20A	1	400	A	500	1	20A 3/4"	#12	R	TV AT KIDS AREA	8
9	CABINET LIGHTING	L	#10	3/4"	20A	1	200	B	500	1	20A 3/4"	#10	R	TV AT MENS LOUNGE	10
11	CASHWRAP DOWN LIGHTS	L	#10	3/4"	20A	1	342	C	400	1	20A 3/4"	#10	R	CASHWRAP RECEIPT	12
13	GEN RECEIPT	R	#12	3/4"	20A	1	720	A	400	1	20A 3/4"	#10	R	CASHWRAP RECEIPT	14
15	GEN RECEIPT	R	#12	3/4"	20A	1	540	B	800	1	20A 3/4"	#12	O	SECURITY CONTROL PANEL	16
17	GEN RECEIPT	R	#10	3/4"	20A	1	540	C	200	1	20A 3/4"	#12	R	MANAGER DESK RECEIPT	18
19	GEN RECEIPT	R	#12	3/4"	20A	1	540	A	500	1	20A 3/4"	#12	R	MANAGER DESK RECEIPT	20
21	GEN RECEIPT	R	#10	3/4"	20A	1	540	B	500	1	20A 3/4"	#12	R	RESTROOM GFI RECEIPT	22
23	FRONT SIGN	L	#8	3/4"	20A	1	800	C	800	1	20A 3/4"	#12	O	TELE/DATE EQUIPMENT	24
25	KIDS SIGN	R	#12	3/4"	20A	1	200	A	600	1	20A 3/4"	#12	O	WATER FOUNTAIN	26
27	FRONT STORE RECEIPT	R	#10	3/4"	20A	1	400	B	0	1	20A			SPARE	28
29	96" RECEPTACLE	R	#10	3/4"	20A	1	500	C	0	1	20A			SPARE	30
31	ROOF TOP RECEIPT	R	#10	3/4"	20A	1	540	A	0	1	20A			SPARE	32
33	GEN RECEIPT	R	#12	3/4"	20A	1	180	B	0	1	20A			SPARE	34
35	SPARE				20A	1	0	C	0	1	20A			SPARE	36
37	SPARE				20A	1	0	A	0	1	20A			SPARE	38
39	SPARE				20A	1	0	B	0	1	20A			SPARE	40
41	SPARE				20A	1	0	C	0	1	20A			SPARE	42

CONNECTED LOAD (VA)				
A	B	C	TOTAL	
5600	4880	4550	15010	
LOAD (VA)	SUBLOADS (VA)	CONN (VA)	SIZING (VA)	SIZING (VA)
2770	3910	-	4688	125%
RECEPTACLES	7700	-	7700	
MECH EQUIP	0	-	0	100%
KITCHEN EQUIP	0	-	0	100%
# OF KITCH EQ	0	-	0	
EXISTING	0	-	0	125%
OTHER	3400	3400	-	6800
TOTAL CONNECTED (VA)			15010	SIZING TOTAL (VA) PER NEC
CONNECTED AMPACITY (A)			41.66	SIZING AMPACITY (A)
TOTAL DEMAND (VA)			15010	
DEMAND AMPACITY (A)			41.66	

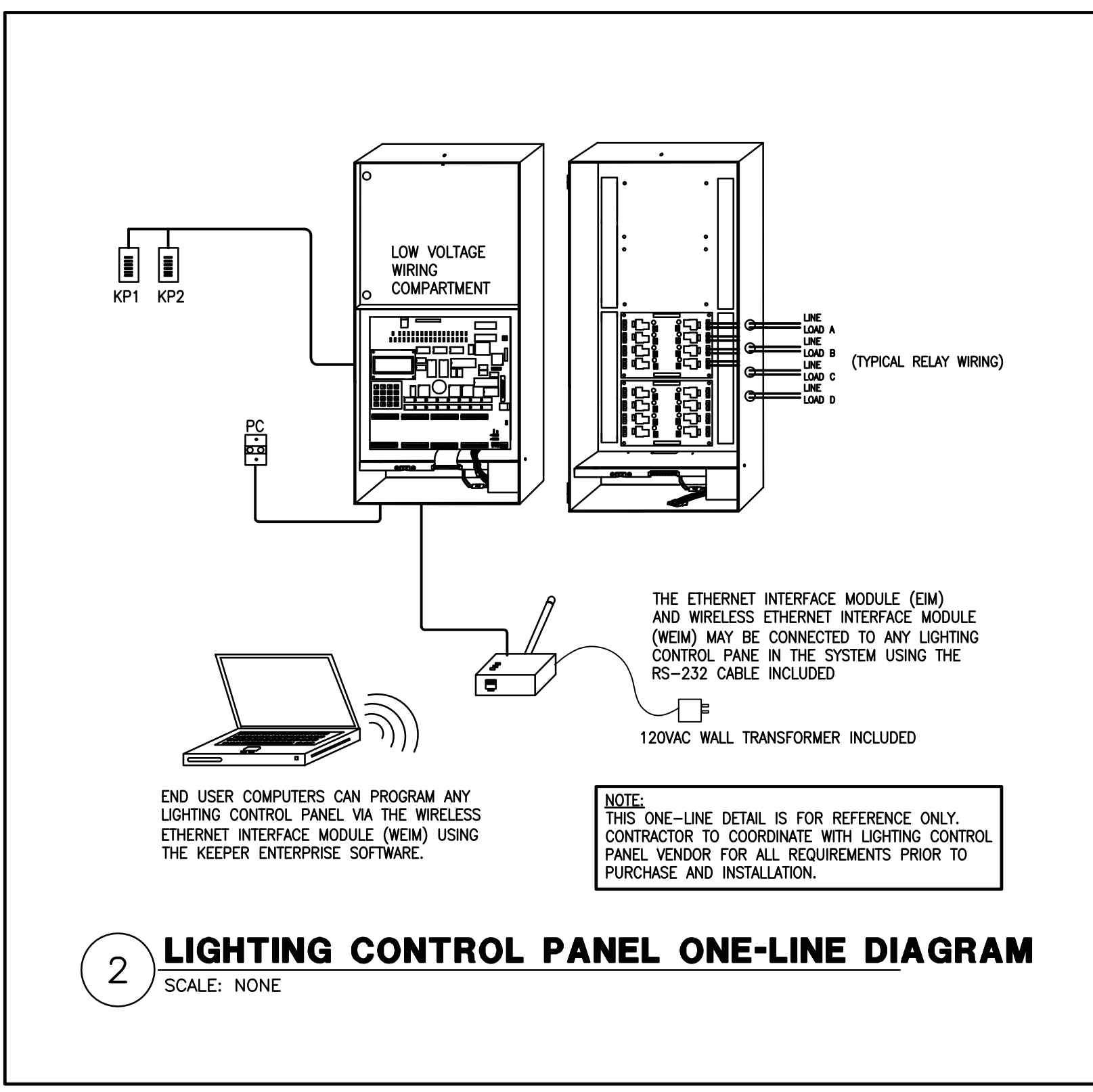
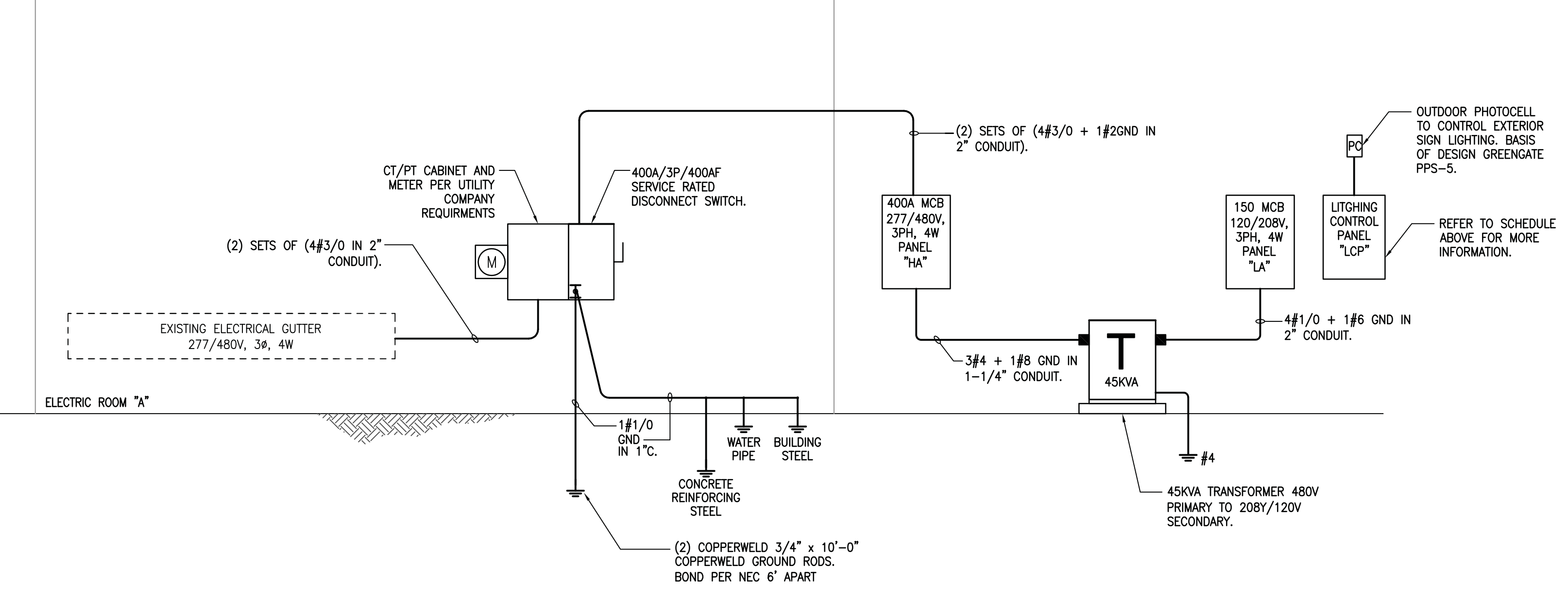
ELECTRICAL SERVICE LOAD ANALYSIS	
BUILDING/SPACE	SQUARE FOOTAGE
12173.00	
LOAD DESCRIPTION	(KVA)
ESTIMATED LIGHTING PER NEC TABLE 220.12	53.28
RECEPTACLES @ 125% PER NEC	30.97
RECEPTACLES @ (10KVA + 50%) PER NEC	7.70
HVAC @ 100% PER NEC	146.57
KITCHEN EQUIPMENT @ 65% PER NEC	0.00
MISCELLANEOUS @ 100% PER NEC	3.40
WATER HEATING @ 100%	3.00
LARGEST MOTOR @ 25%	6.40
TOTAL (KVA)	198.04
TOTAL (AMPS)	238.20
SERVICE SHALL BE 400A, 277/480V, 3PH, 4W	

CONTRACTOR TO VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF THERE ARE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND THE ONE-LINE DIAGRAM SHOWN BELOW PRIOR TO COMMENCEMENT OF WORK.

VERIFY LOCATION OF ALL WIREWAYS, PANELS, ETC. WITH UTILITY COMPANIES/OWNER PRIOR TO INSTALLATION.

ALL EXTERIOR EQUIPMENT TO BE IN NEMA 3R ENCLOSURES.

ALL CONDUCTORS TO BE THIN/THIN 75 DEG C INSULATION TYPE UNLESS SPECIFICALLY NOTED OTHERWISE.



SYMBOL SCHEDULE	
SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE)	
—	FLORESCENT FIXTURE
—	FLORESCENT FIXTURE ON EMERGENCY CIRCUIT
—	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT
—	LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT
—	EXIT LIGHT-CEILING MTD WITH DIRECTIONAL ARROWS AS REQUIRED
SWITCHES	
—	SINGLE POLE SWITCH
—	WALL TIME SWITCH, BASIS OF DESIGN TORK A SERIES.
—	3-WAY SWITCH
—	LOW VOLTAGE DIGITAL SWITCH.
—	WALL MOUNTED OCCUPANCY SENSOR (GREENGATE #OSW-DT-0601-MV-SPECIFY)
—	CEILING MOUNTED OCCUPANCY SENSOR WITH ASSOCIATED POWER PACK.
RECEPTACLES AND OUTLETS	
—	DUPLEX RECEPTACLE
—	ISOLATED GROUND DUPLEX RECEPTACLE
—	DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE
—	JUNCTION BOX
—	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
—	REMOTE GROUND FAULT CIRCUIT INTERRUPTER
COMMUNICATION, SECURITY, AND FIRE ALARM EQUIPMENT	
—	SINGLE GANG OUTLET BOX AND TWO PORT COVER PLATE WITH BLANKS W/EMPTY 1-1/4" C. TO ACCESSIBLE AREA ABOVE CEILING FOR DATA OUTLET
—	SINGLE GANG OUTLET BOX AND SINGLE PORT COVER PLATE WITH BLANK W/EMPTY 1-1/4" C. TO ACCESSIBLE AREA ABOVE CEILING FOR PHONE OUTLET
—	TWO GANG OUTLET BOX WITH TWO PORTS COVER PLATE AND (1) EMPTY 1-1/4" C. WITH RING AND STRING TO ACCESSIBLE AREA ABOVE CEILING FOR TELE/DATE OUTLETS.
—	SINGLE GANG OUTLET BOX AND SINGLE PORT COVER PLATE, PROVIDE 1-1/2" EMPTY CONDUIT TO ACCESSIBLE AREA ABOVE CEILING FOR TV CABLING.
MOTOR CONTROLLERS AND EQUIPMENT	
—	MOTOR, MAKE FINAL MOTOR CONNECTION
—	DISCONNECT SWITCH AS REQUIRED
—	COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED
ELECTRICAL EQUIPMENT	
—	277/480 VOLT DISTRIBUTION OR PANELBOARD
—	120/208 VOLT PANELBOARD
—	TELEPHONE CABINET
—	PLYWOOD TELEPHONE BACKBOARD
—	DRY TYPE TRANSFORMER
CIRCUITING	
—	CONDUIT
—	CONDUIT BELOW FLOOR, SLAB, OR GRADE
—	3/4" C. UNLESS OTHERWISE NOTED; LONG HATCH, NEUTRAL; SHORT HATCH, PHASE; "Z" HATCH, INSULATED GROUND. NO HATCHES INDICATES 2 CONDUCTORS. ARROW INDICATES HOMERUN.
—	PARTIAL ELECTRICAL HOME RUN
SUBSCRIPTS AND ABBREVIATIONS	
WP	INDICATES WEATHERPROOF
WG	INDICATES WIREGUARD
(E)	INDICATES EXISTING TO REMAIN
(R)	INDICATES RELOCATED DEVICE/EQUIPMENT
NL	LIGHT FIXTURE ON NIGHT LIGHT CIRCUIT
U.O.N.	UNLESS OTHERWISE NOTED
NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL, MILLWORK DRAWINGS AND OTHER TRADES	
GENERAL NOTE: ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-3R MINIMUM.	

### SPECIFICATIONS

**GENERAL**

- VERIFY ALL DIMENSIONS AT THE JOB SITE AND FROM THE ARCHITECTURAL PLANS.
- UNLESS OTHERWISE NOTED, CONTRACTOR AND SUBCONTRACTOR SHALL PAY FOR ALL PERMITS AND CHARGES REQUIRED AND SHALL COMPLY WITH ALL GOVERNING CODES AND ORDINANCES AND AUTHORITY HAVING JURISDICTION.
- VISITING THE SITE: EACH BIDDER SHALL VISIT THE SITE OF THE PROPOSED WORK AND SHALL FULLY INFORM HIMSELF REGARDING THE FACILITIES. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR WORK OR MATERIAL OMITTED FROM THE BIDDER'S CONTRACT PROPOSAL DUE TO HIS FAILURE TO SO INFORM HIMSELF BY SUCH INVESTIGATION.
- ALL