

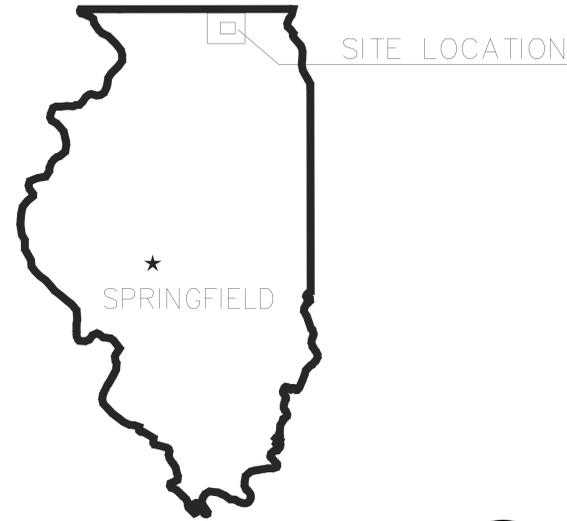
CDB – PROJECT NUMBER 810-066-016
 KJWW – PROJECT NUMBER 12.0616.00

UPGRADE EXTERIOR LIGHTING
 McHENRY COUNTY COLLEGE
 8900 U.S. HIGHWAY 14
 CRYSTAL LAKE, ILLINOIS 60012

FOR:
 STATE OF ILLINOIS
 CAPITAL DEVELOPMENT BOARD

USING AGENCY:
 ILLINOIS COMMUNITY COLLEGE BOARD

BY:
 KJWW ENGINEERING CONSULTANTS d/b/a
 KJWW PC
 1100 WARRENVILLE RD.
 SUITE 400W
 NAPERVILLE, ILLINOIS 60563
 PH: 630-527-2320



STATE LOCATION PLAN
 NO SCALE



INDEX OF DRAWINGS

REFER TO SHEET G1.01
 TOTAL # OF DRAWINGS: 15

CDB BUILDING INVENTORY NUMBERS (BIN)

- BUILDING A – JC27A
- BUILDING B – JC27B
- BUILDING C – JC27C
- BUILDING D – JC27D
- BUILDING E – JC27E
- BUILDING F – JC27F



BUILDING LOCATION PLAN
 NO SCALE



NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS			DRAWN	PREPARED	MEP ENGINEER OF RECORD	 CAPITAL Development BOARD Building a Better Illinois	State of Illinois Pat Quinn, Governor	COVER SHEET McHENRY COUNTY COLLEGE UPGRADE EXTERIOR LIGHTING 8900 ROUTE 14 CRYSTAL LAKE, ILL. 60014	PROJECT NO.
NO.	DATE	REMARKS	JJC	DEK OFF.					810-066-016
			TRACED	APPROVED	KJWW ENGINEERING 1100 Warrenville Road, Suite 400W Naperville, Illinois 60563 USA (tel) (630) 527 2320 (fax) (630) 527 2321 www.kjww.com				DATE
			TB	•					MARCH 22, 2013
			CHECKED	APPROVED					SHEET NO.
			JML	•					G1.00

SHEET INDEX

G1.00	COVER SHEET
G1.01	SHEET INDEX AND ASHRAE 90.1 COMPLIANCE FORMS
G1.02	AREA OF WORK
E0.00	ELECTRICAL COVER SHEET
ED1.01	SITE PLAN - LOT A - ELECTRICAL DEMOLITION
ED1.02	SITE PLAN - LOT C - ELECTRICAL DEMOLITION
E1.01	SITE PLAN - LOT A - LIGHTING
E1.02	SITE PLAN - LOT C - LIGHTING
E2.01	BUILDING A - EXTERIOR LIGHTING REPLACEMENT - ALTERNATE BID #1
E2.02	BUILDING A, & B - EXTERIOR LIGHTING REPLACEMENT - ALTERNATE BID #1
E2.03	BUILDING C & D - EXTERIOR LIGHTING REPLACEMENT - ALTERNATE BID #1
E2.04	BUILDING E - EXTERIOR LIGHTING REPLACEMENT - ALTERNATE BID #1
E2.05	ENLARGED ELECTRICAL ROOMS & WIRING DETAILS
E3.00	ELECTRICAL DETAILS
E4.00	PARTIAL ONE - LINE DIAGRAM



COMcheck Software Version 3.9.1 Exterior Lighting Compliance Certificate

90.1 (2010) Standard

Section 1: Project Information

Project Type: Alteration
 Project Title: McHenry County College - Upgrade Exterior Lighting
 Exterior Lighting Zone: 3 (Other)

Construction Site: 8900 Route 14, Crystal Lake, IL 60014
 Owner/Agent: Capital Development Board
 Designer/Contractor: KJWW Engineering Consultants, 1100 Warrenville Rd, Suite 400W, Naperville, IL 60563, 630-527-2320

Section 2: Exterior Lighting Area/Surface Power Calculation

A Exterior Area/Surface	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B x C)	F Proposed Watts
Walkway >= 10 feet wide	22842 ft2	0.16	Yes	3655	7970
Illuminated length of facade wall or surface	335 ft	3.75	No	1259	512
Parking area	404867 ft2	0.1	Yes	40487	11021
Driveway	23481 ft2	0.1	Yes	2348	721
Total Tradable Watts*				46490	19712
Total Allowed Watts*				47746	
Total Allowed Supplemental Watts**				750	

* Wattage tradeoffs are only allowed between tradable areas/surfaces.
 ** A supplemental allowance equal to 5% of total allowed wattage may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Section 3: Exterior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Walkway >= 10 feet wide (22842 ft2): Tradable Wattage				
HID 1: F1: 14" RETROFIT DOWNLIGHT INDUCTIO / Other / Standard	1	75	85	6375
HID 2: F2: 10" RETROFIT DOWNLIGHT INDUCTIO / Other / Standard	1	29	55	1595
Illuminated length of facade wall or surface (335 ft): Non-tradable Wattage				
LED 1: F3: TRAPEZOIDAL WALL PACK / Other	1	6	51	306
LED 2: F4: WALL MOUNTED SITE LUMINAIRE / Other	1	2	103	206
Parking area (404867 ft2): Tradable Wattage				
LED 3: S1: SITE LIGHTING TYPE4 POLE 30' / Other	1	12	206	2472
LED 4: S1A: SITE LIGHTING TYPE4 EXIST. POLE / Other	1	8	206	1648
LED 5: S1B: SITE LIGHTING TYPE4 POLE 20' / Other	1	1	206	206
LED 5: S2: SITE LIGHTING TYPE4 POLE 30' / Other	1	12	412	4944
LED 6: S2A: SITE LIGHTING TYPE4 EXIST. POLE / Other	1	2	412	824
LED 7: S3: SITE LIGHTING TYPE4 POLE 15' / Other	1	1	103	103
LED 8: S3A: SITE LIGHTING TYPE4 EXIST. POLE / Other	1	1	103	103
LED 9: S4A: SITE LIGHTING TYPE 5MQ EX. POLE / Other	1	2	103	206
LED 10: S6: SITE LIGHTING TYPE3 POLE 30' / Other	1	3	103	309
LED 11: S7: SITE LIGHTING TYPE 5MQ 30' POLE / Other	1	1	206	206

Project Title: McHenry County College - Upgrade Exterior Lighting
 Data filename: C:\Users\koscade\Desktop\12.0616.00 - ComCheck.cck
 Report date: Page 1 of 2

Driveway (23481 ft2): Tradable Wattage	1	3	103	309
LED 12: S5: SITE LIGHTING TYPE2 POLE 30' / Other	1	2	206	412
LED 13: S6: SITE LIGHTING TYPE 3 30' POLE / Other	1	2	206	412
Total Tradable Proposed Watts =				19712

Section 4: Requirements Checklist

Exterior Lighting PASSES. Design 58% better than code.

Lighting Wattage:

1. Within each non-tradable area/surface, total proposed watts must be less than or equal to total allowed watts. Across all tradable areas/surfaces, total proposed watts must be less than or equal to total allowed watts.

Compliance: Passes.

Controls, Switching, and Wiring:

2. All exemption claims are associated with fixtures that have a control device independent of the control of the nonexempt lighting.
 3. All lighting fixtures are controlled by a photosensor or astronomical time switch that is capable of automatically turning off the fixture when sufficient daylight is available or the lighting is not required.

Exceptions:

4. Covered vehicle entrance/exit areas requiring lighting for safety, security and eye adaptation.
 4. Lighting control devices and control systems are tested to ensure that control hardware and software are calibrated, adjusted, programmed, and in proper working condition. When occupant sensors, time switches, programmable schedule controls, or photosensors are installed, at a minimum, the following procedures have been performed:
 a. Confirm that the placement, sensitivity and time-out adjustments for occupant sensors yield acceptable performance.
 b. Confirm that the time switches and programmable schedule controls are programmed to turn the lights off.
 c. Confirm that photosensor controls reduce electric light levels based on the amount of usable daylight in the space. Construction documents identify the party responsible for the functional testing. The party responsible for the functional testing is not directly involved in the project.

5. Lighting control devices and control systems not associated with facade or landscaping have controls that reduce the connected power by 30% during non-operating hours or during vacancy periods of <= 15 minutes.

Exterior Lighting Efficacy:

6. All exterior building grounds luminaires that operate at greater than 100W have minimum efficacy of 60 lumen/watt.

Exceptions:

- Lighting that has been claimed as exempt and is identified as such in Section 3 table above.
 Lighting that is specifically designated as required by a health or life safety statute, ordinance, or regulation.
 Emergency lighting that is automatically off during normal building operation.
 Lighting that is controlled by motion sensor.

Section 5: Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 90.1 (2010) Standard requirements in COMcheck Version 3.9.1 and to comply with the mandatory requirements in the Requirements Checklist.

TOMASZ BALA - ELEC. ENG. [Signature] 02/14/2013
 Name - Title Signature Date

Section 5: Post Construction Compliance Statement

Record Drawings and Operating and Maintenance Manuals:

1. Construction documents with record drawings and operating and maintenance manuals provided to the owner.

Lighting Designer or Contractor Name Signature Date

Project Title: McHenry County College - Upgrade Exterior Lighting
 Data filename: C:\Users\koscade\Desktop\12.0616.00 - ComCheck.cck
 Report date: Page 2 of 2

NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS

NO.	DATE	REMARKS

DRAWN JJC	PREPARED DEK OFF.	MEP ENGINEER OF RECORD KJWW ENGINEERING 1100 Warrenville Road, Suite 400W Naperville, Illinois 60563 USA (tel) (630) 527 2320 (fax) (630) 527 2321 www.kjww.com
TRACED TB	APPROVED •	
CHECKED JML	APPROVED •	

PROJECT NO. 810-066-016	DATE MARCH 22, 2013	SHEET NO. G1.01
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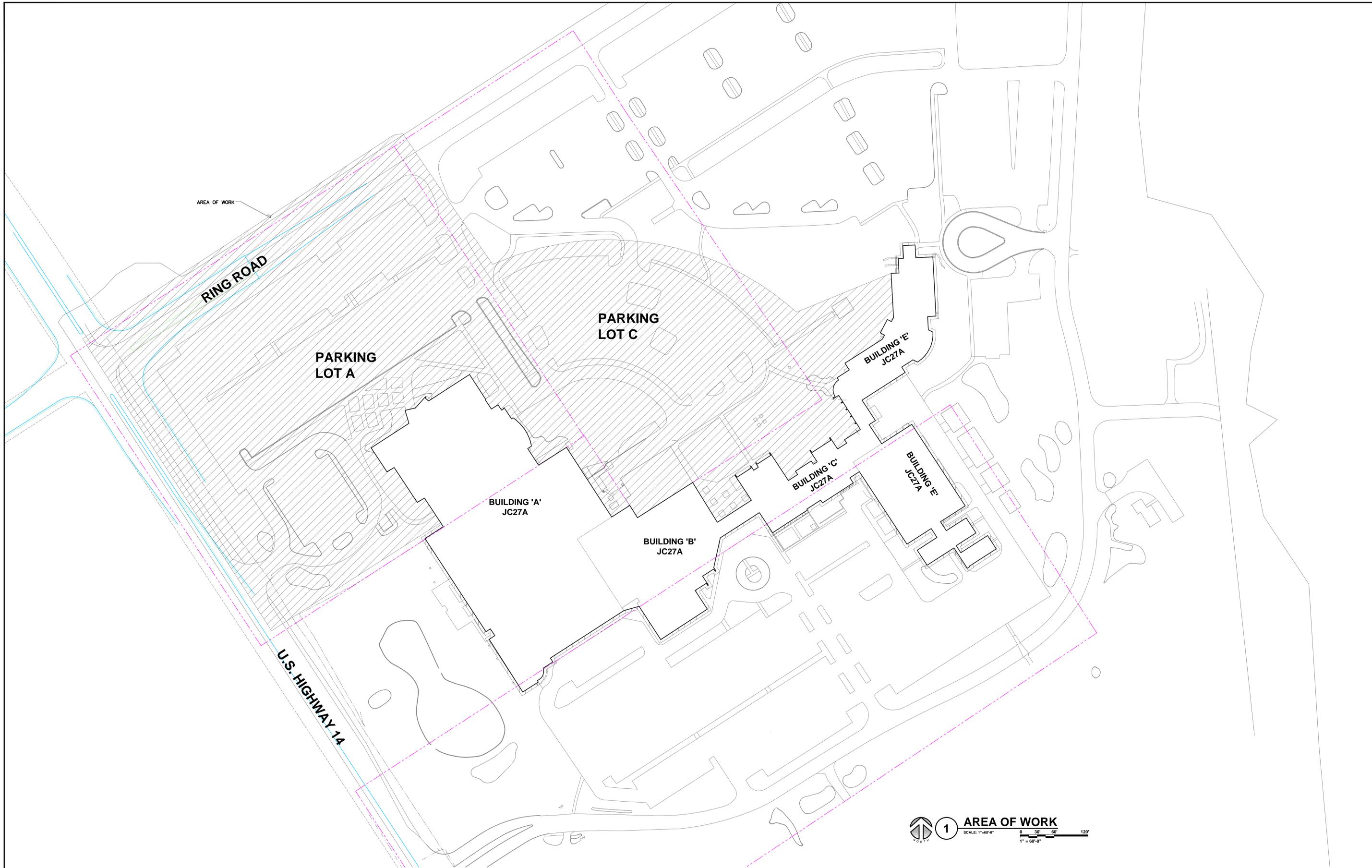
State of Illinois
 Pat Quinn, Governor

SHEET INDEX AND ASHRAE 90.1 COMPLIANCE FORMS

McHENRY COUNTY COLLEGE
 UPGRADE EXTERIOR LIGHTING
 8900 ROUTE 14
 CRYSTAL LAKE, ILL. 60014

G1.01

K:\DWG\12.0616.00 - CCG DATA CENTER RENOVATION - 1/5" = 1'-0" Thursday, March 21, 2013 - 1:48pm By: ccoj



NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS		
NO.	DATE	REMARKS

DRAWN JC	PREPARED DEK OFF.
TRACED TB	APPROVED •
CHECKED JML	APPROVED •

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State of Illinois
Pat Quinn, Governor

AREA OF WORK

McHENRY COUNTY COLLEGE
UPGRADE EXTERIOR LIGHTING
8900 ROUTE 14
CRYSTAL LAKE, ILL. 60014

PROJECT NO.
810-066-016

DATE
MARCH 22, 2013
SHEET NO.

G102

ELECTRICAL DEMOLITION NOTES:

- THE ELECTRICAL DRAWINGS INDICATE EXISTING ELECTRICAL ITEMS TO BE REMOVED. THE DRAWINGS ARE INTENDED TO INDICATE THE SCOPE OF WORK REQUIRED AND DO NOT INDICATE EVERY BOX, CONDUIT, OR WIRE THAT MUST BE REMOVED. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID AND VERIFY EXISTING CONDITIONS.
- ELECTRICAL ITEMS (i.e., LIGHTING FIXTURES, ETC.) REMOVED AND NOT RELOCATED REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF MATERIAL THE OWNER DOES NOT WANT TO REUSE OR RETAIN (i.e., FOR MAINTENANCE PURPOSES).
- THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE OWNER BEFORE TURNING OFF POWER TO CIRCUITS, FEEDERS, PANELS, ETC. COORDINATE ALL OUTAGES WITH OWNER. CONDUIT CONCEALED IN WALL CONSTRUCTION MAY BE ABANDONED IN PLACE IF NOT AFFECTED BY OTHER CONSTRUCTION.
- EXISTING CONDUIT IN GOOD CONDITION, MAY BE REUSED IN PLACE. RELOCATED EXISTING CONDUIT SHALL NOT BE ALLOWED. BONDING CONDUCTORS SHALL BE INSTALLED IN ALL REUSED CONDUIT TO ASSURE PROPER GROUND PATH.
- EQUIPMENT REMOVAL IN CERTAIN LOCATIONS MAY REQUIRE THE INSTALLATION OF A JUNCTION BOX TO RECONNECT CIRCUITS THAT REMAIN IN OPERATION. EXTEND CONDUIT AND WIRING AS REQUIRED TO MAINTAIN POWER TO REMAINING EQUIPMENT.
- CONTRACTOR SHALL REMOVE AND INSTALL ALL CEILING TILES AS REQUIRED FOR THE EXECUTION OF ELECTRICAL WORK THAT IS OUTSIDE THE CONTRACT LIMITS OF CONSTRUCTION. CONTRACTOR SHALL REPLACE CEILING TILES WITH IDENTICAL MATERIAL WHERE DAMAGED BY THIS CONTRACTOR.
- BALLASTS MANUFACTURED PRIOR TO 1980 CONTAIN PCBs AND SHALL BE DISPOSED OF BY A FEDERAL OR STATE E.P.A. APPROVED METHOD AND IN ACCORDANCE WITH SPECIFICATIONS.
- HID AND FLUORESCENT LAMPS CONTAIN MERCURY AND SHALL BE DISPOSED OF BY A FEDERAL OR STATE E.P.A. APPROVED METHOD AND IN ACCORDANCE WITH SPECIFICATIONS.

GENERAL ELECTRICAL NOTES:

- "1/E1.01" INDICATES DETAIL NUMBER/SHEET NUMBER.
- ### INDICATES ELECTRICAL EQUIPMENT DEFINED IN ELECTRICAL SCHEDULES. REFER TO DRAWINGS CONTAINING ELECTRICAL SCHEDULES. PERMANENT NAMEPLATE SHALL MATCH FINAL EQUIPMENT NOMENCLATURE, NOT ELECTRICAL EQUIPMENT TAG NAME, REFER TO SPECIFICATIONS.
- INDICATES KEYED NOTE USED TO DESCRIBE ADDITIONAL INFORMATION OF WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL IT IS SHOWN WITH.
- ALL ELECTRICAL CONDUCTORS SHALL BE COPPER.
- INDICATES NUMBER OF WIRES IN CONDUIT.
GROUND WIRE
NEUTRAL WIRE
PHASE WIRE
- ABBREVIATION KEY:
E.C. ELECTRICAL CONTRACTOR
C CONDUIT
TYP TYPICAL
- LINE TYPE KEY:
NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)
NEW WORK UNDERFLOOR OR UNDERGROUND BY THIS CONTRACTOR (DARK LONG DASHED LINE)
NEW WORK BY OTHERS AND/OR EXISTING TO REMAIN (LIGHT SOLID LINE)
EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK SHORT DASHED LINE)

ELECTRICAL INSTALLATION NOTES:

- CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL PROVIDED. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH PHASE.
- CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, ABOVE CEILING, AND BELOW GRADE, ETC. UNLESS OTHERWISE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS. CONDUIT IN MECHANICAL ROOMS, AND STORAGE ROOMS WITHOUT CEILINGS MAY BE EXPOSED ON BUILDING STRUCTURE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.

ELECTRICAL DEMOLITION SYMBOL LIST

SYMBOL:	DESCRIPTION:
---	INDICATES EXISTING TO REMAIN
- - - - -	INDICATES EXISTING TO BE REMOVED.
□	POLE MOUNTED LUMINAIRE - (1) HEAD
□ □	POLE MOUNTED LUMINAIRE - (2) HEAD
⊕	ELECTRICAL CONNECTION TO EQUIPMENT
○	DOWN LIGHT
□	EXTERIOR WALL-PACK LUMINAIRE
ⓧ	LOT LETTER SIGN
ⓧ	EMERGENCY PHONE STATION

GENERAL ELECTRICAL EQUIPMENT SCHEDULE

THE SYMBOLS AND THE EQUIPMENT SCHEDULE ARE FOR THE CONVENIENCE OF THE CONTRACTOR. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF QUANTITIES AND SHALL FURNISH ALL MATERIAL REQUIRED, WHETHER SPECIFIED OR NOT, TO PRODUCE A SATISFACTORY WORKING SYSTEM.

CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE BUT ARE GIVEN ONLY TO AID THE CONTRACTOR IN THE SEARCH FOR MATERIAL. NO MATERIAL SHALL BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. EACH CONTRACTOR SHALL FIRST READ THE COMPLETE DESCRIPTION OF THE MATERIAL ON THESE DRAWINGS AND SPECIFICATIONS. THE FIRST MANUFACTURER LISTED IS THE "BASIS OF DESIGN." "STANDARD COLOR" INDICATES FACTORY FINISH AVAILABLE AT NO ADDITIONAL CHARGE.

ITEM NO.	SYMBOL	DESCRIPTION	APPROVED MANUFACTURERS
1	IC-1 IC-2	TIME SWITCH, 7 DAY, 2 CHANNEL, ELECTRONIC, TWO SPDT 15 AMP CONTACTS, TWO SEPARATE PROGRAMS WITH 16 SET POINTS AVAILABLE, L.C.D. DISPLAY, 12 OR 24 HOUR FORMAT, MINIMUM 100 HOURS CARRY-OVER, U.L. LISTED.	PARAGON EC72 TORK DTS 200A INTERMATIC ET70215C
2	LC-A LC-C LC-BOARD LC-NL A & C	LIGHTING CONTACTOR, ELECTRICALLY HELD, 120 VOLT COIL, 300 VOLT 30 AMP CONTINUOUS CONTACTS, 4 POLE, N.E.M.A. 1 ENCLOSURE.	SQUARE D CLASS 8903 SIEMENS LEN SERIES CUTLER HAMMER CN350G
3	⊕ ⓧ	ELECTRICAL CONNECTION TO EQUIPMENT AND MOTORS, SIZE PER N.E.C. COORDINATE REQUIREMENTS WITH CONTRACTOR FURNISHING EQUIPMENT OR MOTOR. REFER TO SPECIFICATIONS AND GENERAL INSTALLATION NOTES FOR TERMINATIONS TO MOTORS.	REFER TO SPECIFICATIONS
4	PANEL 'SI'	PANELBOARD, SURFACE MOUNT, 480/277 VOLT, 3 PHASE, 4 WIRE, S/N, GROUND BUS, COPPER BUS, BOLT-ON BREAKERS, NEMA 1 ENCLOSURE, REFER TO SCHEDULES FOR SIZE AND CONFIGURATION, REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.	SQUARE D NF SERIES SIEMENS P1 SERIES CUTLER-HAMMER PRL2 SERIES
5	HH-1	HANDHOLE, COMPOSITE POLYMER CONCRETE BODY AND COVER. STAINLESS STEEL HARDWARE. BOLTED NON-SKID COVER RATED FOR 20,000 LB. DESIGN LOAD OCCASIONAL NON-DELIBERATE VEHICULAR TRAFFIC. STACK UNITS TO ACHIEVE DEPTH SHOWN ON PLANS. UNITS IN LANDSCAPED AREAS SHALL BE GREEN IN COLOR. 11"W, 18"L, 18"D OR DIMENSIONS AS SHOWN ON PLANS "ELECTRICAL"	HUBBELL/QUAZITE PG SERIES CARSON INDUSTRIES H SERIES ARMORCAST HIGHLINE PRODUCTS SYNERTECH
6	HH-2	HANDHOLE, COMPOSITE POLYMER CONCRETE BODY AND COVER. STAINLESS STEEL HARDWARE. BOLTED NON-SKID COVER RATED FOR 20,000 LB. DESIGN LOAD OCCASIONAL NON-DELIBERATE VEHICULAR TRAFFIC. STACK UNITS TO ACHIEVE DEPTH SHOWN ON PLANS. UNITS IN LANDSCAPED AREAS SHALL BE GREEN IN COLOR. 11"W, 18"L, 18"D OR DIMENSIONS AS SHOWN ON PLANS "TECHNOLOGY"	HUBBELL/QUAZITE PG SERIES CARSON INDUSTRIES H SERIES ARMORCAST HIGHLINE PRODUCTS SYNERTECH

LUMINAIRE SCHEDULE

ITEM	DESCRIPTION	SIZE	MTG	TYPE	LAMPS	QUANTITY & SIZE	VOLTS	UL	APPROVED MANUFACTURER
S1	SITE LIGHTING LUMINAIRE, SINGLE HEAD, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS, TYPE 4 DISTRIBUTION, LED DRIVER, 18W TRANSIENT LINE SURGE PROTECTOR, BRONZE FINISH. POLE: 30' HEIGHT, 6" SQUARE STRAIGHT ALUMINUM WITH INTERNAL VIBRATION DAMPER	15 1/2" W 28 3/4" L 4" H	FL	LED	1 206 WATT	277V	0	REFER TO S1	MCGRAW-EDISON GLEON-AA-04-E1-T4 BETA LIGHTING ARE-EDG-AM-DA-20-D-UL LITHONIA DSX2 LED
S1A	SIMILAR TO S1, ATTACH POLE TO EXISTING POLE BASE. VERIFY EXISTING BOLT PATTERN PRIOR TO ORDERING.	15 1/2" W 28 3/4" L 4" H	FL	LED	1 206 WATT	277V	0	REFER TO S1	
S1B	SIMILAR TO S1, WITH 20' HEIGHT POLE, 4" SQUARE STRAIGHT, ATTACH POLE TO EXISTING POLE BASE. VERIFY EXISTING BOLT PATTERN PRIOR TO ORDERING.	15 1/2" W 28 3/4" L 4" H	FL	LED	1 206 WATT	277V	0	REFER TO S1	
S2	SITE LIGHTING LUMINAIRE, DUAL HEADS, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS, TYPE 4 DISTRIBUTION, LED DRIVER, 18W TRANSIENT LINE SURGE PROTECTOR, BRONZE FINISH. POLE: 30' HEIGHT, 6" SQUARE STRAIGHT ALUMINUM WITH INTERNAL VIBRATION DAMPER	15 1/2" W 28 3/4" L 4" H	FL	LED	2 206 WATT	277V	0	REFER TO S2	MCGRAW-EDISON GLEON-AA-04-E1-T4 BETA LIGHTING ARE-EDG-AM-DA-20-D-UL LITHONIA DSX2 LED
S2A	SIMILAR TO S2, ATTACH POLE TO EXISTING POLE BASE. VERIFY EXISTING BOLT PATTERN PRIOR TO ORDERING.	15 1/2" W 28 3/4" L 4" H	FL	LED	2 206 WATT	277V	0	REFER TO S2	
S3	SITE LIGHTING LUMINAIRE, SINGLE HEAD, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS, TYPE 4 DISTRIBUTION, LED DRIVER, 18W TRANSIENT LINE SURGE PROTECTOR, BRONZE FINISH. POLE: 15' HEIGHT, 4" SQUARE STRAIGHT ALUMINUM	15 1/2" W 28 3/4" L 4" H	FL	LED	1 103 WATT	277V	0	REFER TO S3	MCGRAW-EDISON GLEON-AA-04-E1-T4 BETA LIGHTING ARE-EDG-AM-DA-10-D-UL LITHONIA DSX1 LED
S3A	SIMILAR TO S3, ATTACH TO EXISTING POLE. PROVIDE ALL REQUIRED MOUNTING HARDWARE.	15 1/2" W 28 3/4" L 4" H	FL	LED	1 103 WATT	277V	0	REFER TO S3	
S4	SITE LIGHTING LUMINAIRE, SINGLE HEAD, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS, TYPE 8WQ DISTRIBUTION, LED DRIVER, 18W TRANSIENT LINE SURGE PROTECTOR, BRONZE FINISH. ATTACH TO EXISTING POLE. PROVIDE ALL REQUIRED MOUNTING HARDWARE.	15 1/2" W 28 3/4" L 4" H	FL	LED	1 103 WATT	277V	0	REFER TO S4	MCGRAW-EDISON GLEON-AA-02-E1-8WQ BETA LIGHTING ARE-EDG-8W-DA-10-D-UL LITHONIA DSX1 LED
S5	SITE LIGHTING LUMINAIRE, SINGLE HEAD, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS, TYPE 2 DISTRIBUTION, LED DRIVER, 18W TRANSIENT LINE SURGE PROTECTOR, BRONZE FINISH. POLE: 30' HEIGHT, 6" SQUARE STRAIGHT ALUMINUM WITH INTERNAL VIBRATION DAMPER. BREAKAWAY TRANSFORMER BASE.	15 1/2" W 28 3/4" L 4" H	FL	LED	1 103 WATT	277V	0	REFER TO S5	MCGRAW-EDISON GLEON-AA-02-E1-T2 BETA LIGHTING ARE-EDG-2M-DA-10-D-UL LITHONIA DSX1 LED
S6	SITE LIGHTING LUMINAIRE, SINGLE HEAD, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS, TYPE 3 DISTRIBUTION, LED DRIVER, 18W TRANSIENT LINE SURGE PROTECTOR, BRONZE FINISH. POLE: 30' HEIGHT, 6" SQUARE STRAIGHT ALUMINUM WITH INTERNAL VIBRATION DAMPER	15 1/2" W 28 3/4" L 4" H	FL	LED	1 103 WATT	277V	0	REFER TO S6	MCGRAW-EDISON GLEON-AA-02-E1-T3 BETA LIGHTING ARE-EDG-3M-DA-10-D-UL LITHONIA DSX1 LED
S7	SITE LIGHTING LUMINAIRE, SINGLE HEAD, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS, TYPE 8WQ DISTRIBUTION, LED DRIVER, 18W TRANSIENT LINE SURGE PROTECTOR, BRONZE FINISH. POLE: 30' HEIGHT, 6" SQUARE STRAIGHT ALUMINUM WITH INTERNAL VIBRATION DAMPER	15 1/2" W 28 3/4" L 4" H	FL	LED	1 206 WATT	277V	0	REFER TO S7	MCGRAW-EDISON GLEON-AA-04-E1-8WQ BETA LIGHTING ARE-EDG-8M-DA-20-D-UL LITHONIA DSX2 LED
S8	SITE LIGHTING LUMINAIRE, SINGLE HEAD, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS, TYPE 3 DISTRIBUTION, LED DRIVER, 18W TRANSIENT LINE SURGE PROTECTOR, BRONZE FINISH. POLE: 30' HEIGHT, 6" SQUARE STRAIGHT ALUMINUM WITH INTERNAL VIBRATION DAMPER. BREAKAWAY TRANSFORMER BASE.	15 1/2" W 28 3/4" L 4" H	FL	LED	1 206 WATT	277V	0	REFER TO S8	MCGRAW-EDISON GLEON-AA-04-E1-T3 BETA LIGHTING ARE-EDG-3M-DA-20-D-UL LITHONIA DSX2 LED
F1	CUSTOM OPEN RETROFIT TYPE DOWNLIGHT, 14" EXISTING OPENING, INDUCTION LAMP AND REMOTE MOUNTED BALLAST, ALUMINUM SPECULAR REFLECTOR, 4000K COLOR TEMPERATURE, ETL LISTED, SUITABLE FOR DAMP LOCATION, 4 FT. WIRE/CONDUIT WHIP. PROVIDE MOCKUP PRIOR TO PURCHASE.	18.75" DIA 15" H	RE	O	1 85 WATT	277V	0	REFER TO F1	ESCO LIGHTING CUSTOM RETRO-FIT SPECTRUM LIGHTING CUSTOM RETRO-FIT SERIES ECLIPSE CUSTOM RETRO-FIT
F2	CUSTOM OPEN RETROFIT TYPE DOWNLIGHT, 10" EXISTING OPENING, INDUCTION LAMP AND REMOTE MOUNTED BALLAST, ALUMINUM SPECULAR REFLECTOR, 4000K COLOR TEMPERATURE, ETL LISTED, SUITABLE FOR DAMP LOCATION, 4 FT. WIRE/CONDUIT WHIP. PROVIDE MOCKUP PRIOR TO PURCHASE.	11" DIA 15" H	RE	O	1 55 WATT	277V	0	REFER TO F2	ESCO LIGHTING CUSTOM RETRO-FIT SPECTRUM LIGHTING CUSTOM RETRO-FIT SERIES ECLIPSE CUSTOM RETRO-FIT
F3	TRAPEZOIDAL WALL PACK, DIE-CAST ALUMINUM, LED LIGHTBAR, TYPE 3 DISTRIBUTION, BRONZE FINISH.	16 1/2" W 9" L 7" H	WL	LED	1 51 WATT	277V	0	REFER TO F3	MCGRAW-EDISON BT-802-LED-E1-BL3-B2 LITHONIA WST LED
F4	SITE LIGHTING LUMINAIRE, SINGLE HEAD, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS, TYPE 4 DISTRIBUTION, LED DRIVER, 18W TRANSIENT LINE SURGE PROTECTOR, BRONZE FINISH, WALL MOUNTING HARDWARE.	15 1/2" W 28 3/4" L 4" H	WL	LED	1 103 WATT	277V	0	REFER TO F4	MCGRAW-EDISON GLEON-AA-02-E1-T4 BETA LIGHTING ARE-EDG-AM-DA-10-D-UL LITHONIA DSX1 LED

NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS

NO.	DATE	REMARKS

DRAWN	PREPARED
JJC	DEK OFF.
TRACED	APPROVED
TB	•
CHECKED	APPROVED
JML	•

MEP ENGINEER OF RECORD
KJWW ENGINEERING 1100 Warrenville Road, Suite 400W Naperville, Illinois 60563 USA (tel) (630) 527 2320 (fax) (630) 527 2321 www.kjww.com



State of Illinois
Pat Quinn, Governor

ELECTRICAL COVER SHEET

McHENRY COUNTY COLLEGE
UPGRADE EXTERIOR LIGHTING
8900 ROUTE 14
CRYSTAL LAKE, ILL. 60014

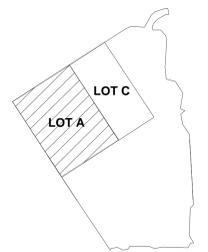
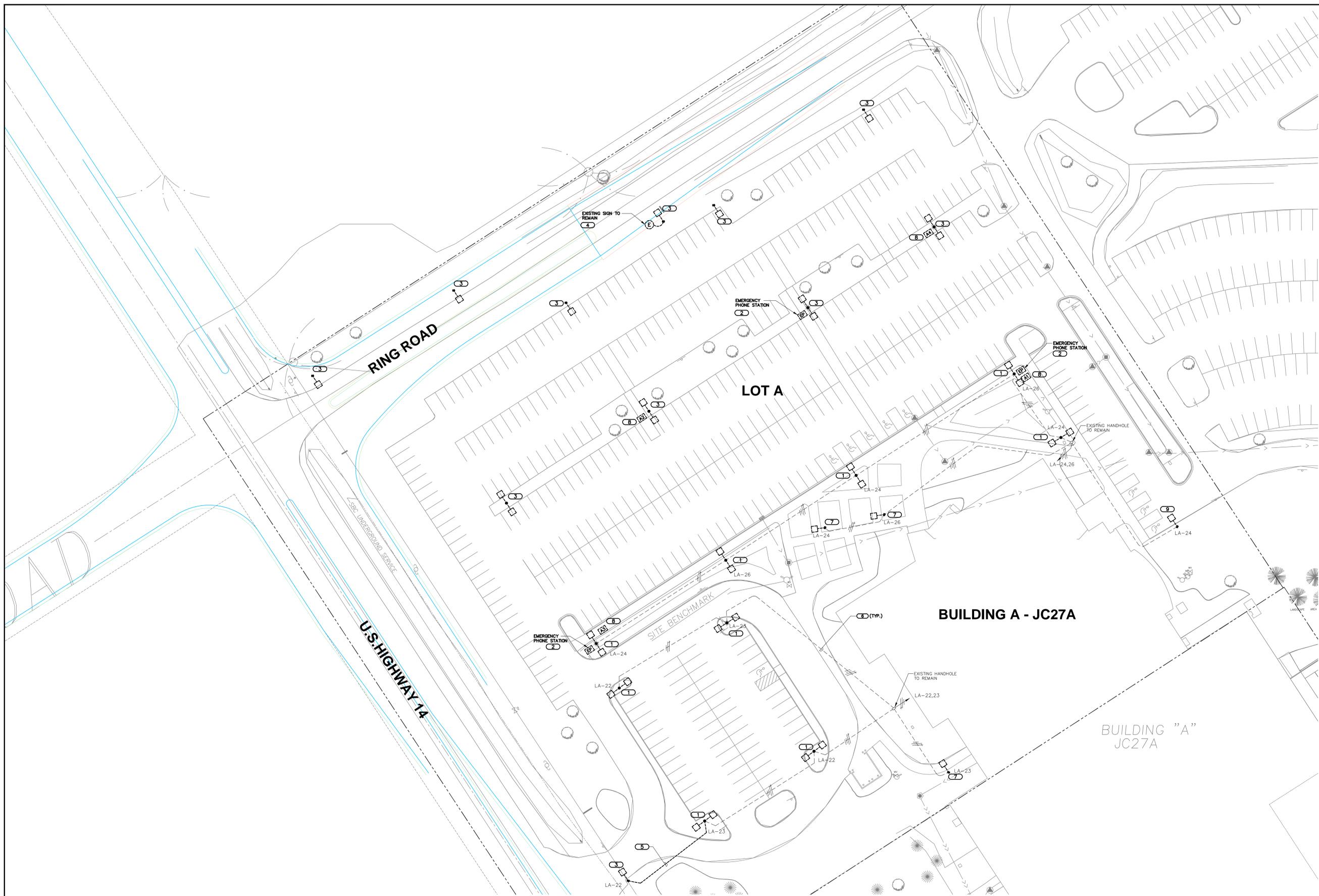
PROJECT NO.
810-066-016

DATE
MARCH 22, 2013

SHEET NO.
E0.00

GENERAL SHEET NOTES

1. REFER TO SHEET E0.00 FOR ELECTRICAL DEMOLITION NOTES AND ELECTRICAL DEMOLITION SYMBOL LIST.
 2. EXISTING CONDUIT NOT BEING REUSED MAY BE ABANDONED IN PLACE IF NOT AFFECTED BY OTHER CONSTRUCTION.
- KEYNOTES**
1. REMOVE LUMINAIRE AND POLE. POLE BASE, BOLTS AND WIRING SHALL REMAIN FOR REUSE. REFER TO DRAWING E1.01 FOR NEW WORK REQUIRED.
 2. REMOVE EXISTING SOLAR POWERED, WIRELESS EMERGENCY PHONE STATION AND ASSOCIATED PHOTOVOLTAIC PANEL MOUNTED TO POLE. DEVICE CONTAINS BATTERY AND SHALL BE PROPERLY DISPOSED.
 3. REMOVE LUMINAIRE, POLE, POLE BASE AND WIRING. BACK FILL AND RESTORE GRADE TO MATCH SURROUNDING CONDITIONS.
 4. DISCONNECT CIRCUIT TO THE SIGN. REFER TO SHEET E1.01 FOR NEW WORK.
 5. EXISTING WIRE TO BE REMOVED. CONDUIT TO BE ABANDONED IN PLACE.
 6. EXISTING CONDUIT AND CIRCUITING TO REMAIN.
 7. REMOVE LUMINAIRE, POLE, POLE BASE AND WIRING SHALL REMAIN FOR REUSE. REFER TO DRAWING E1.01 FOR NEW WORK REQUIRED.
 8. REMOVE PARKING LOT LETTER SIGN.
 9. REMOVE LUMINAIRE, POLE AND POLE BASE. WIRING TO BE REMOVED BACK TO THE HAND HOLE. REFER TO E1.01 FOR NEW WORK REQUIRED.



1 SITE PLAN - LOT A - ELECTRICAL DEMOLITION
 SCALE: 1"=30'-0"
 0 15' 30' 60'
 1"=30'-0"

NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS			DRAWN	PREPARED	MEP ENGINEER OF RECORD KJWW ENGINEERING 1100 Warrenville Road, Suite 400W Naperville, Illinois 60563 USA (tel) (630) 527 2320 (fax) (630) 527 2321 www.kjww.com
NO.	DATE	REMARKS	JJC	DEK OFF.	
			TRACED	APPROVED	
			TB	•	
			CHECKED	APPROVED	
			JML	•	



State of Illinois
 Pat Quinn, Governor

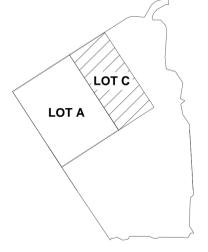
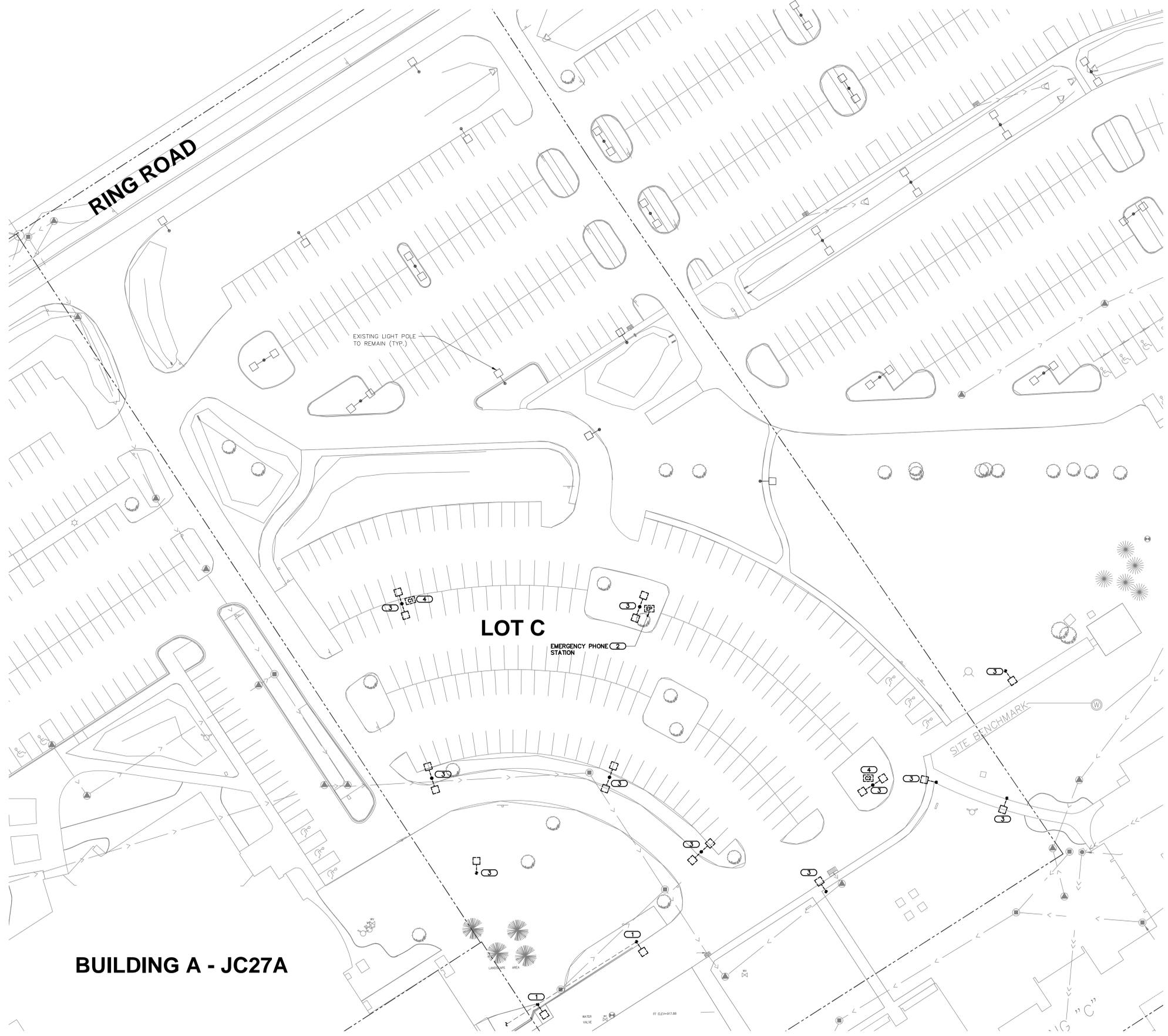
SITE PLAN - LOT A - ELECTRICAL DEMOLITION		PROJECT NO. 810-066-016
McHENRY COUNTY COLLEGE UPGRADE EXTERIOR LIGHTING 8900 ROUTE 14 CRYSTAL LAKE, ILL. 60014		DATE MARCH 22, 2013
		SHEET NO. ED.01

GENERAL SHEET NOTES

1. REFER TO SHEET E0.00 FOR ELECTRICAL DEMOLITION NOTES AND ELECTRICAL DEMOLITION SYMBOL LIST.
2. EXISTING CONDUIT NOT BEING REUSED MAY BE ABANDONED IN PLACE IF NOT AFFECTED BY OTHER CONSTRUCTION.

KEYNOTES

1. REMOVE LUMINAIRE, POLE AND WRING, POLE BASE AND BOLTS TO REMAIN. REFER TO SHEET E1.02 FOR NEW WORK REQUIRED.
2. REMOVE EXISTING SOLAR POWERED, WIRELESS EMERGENCY PHONE STATION AND ASSOCIATED PHOTOVOLTAIC PANEL MOUNTED TO POLE. DEVICE CONTAINS BATTERY AND SHALL BE PROPERLY DISPOSED.
3. REMOVE LUMINAIRE, POLE, POLE BASE AND WRING, BACK FILL AND RESTORE GRADE TO MATCH SURROUNDING CONDITIONS.
4. REMOVE PARKING LOT LETTER SIGN.



1 SITE PLAN - LOT C - ELECTRICAL DEMOLITION
 SCALE: 1"=30'-0"
 0 15' 30' 60'
 1" = 30'-0"

NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS			DRAWN	PREPARED	MEP ENGINEER OF RECORD
NO.	DATE	REMARKS	JC	DEK OFF.	
			TRACED	APPROVED	KJWW ENGINEERING 1100 Warrenville Road, Suite 400W Naperville, Illinois 60563 USA (tel) (630) 527 2320 (fax) (630) 527 2321 www.kjww.com
			TB		
			CHECKED	APPROVED	
			JML		



State of Illinois
 Pat Quinn, Governor

SITE PLAN - LOT C - ELECTRICAL DEMOLITION		PROJECT NO. 810-066-016
McHENRY COUNTY COLLEGE UPGRADE EXTERIOR LIGHTING 8900 ROUTE 14 CRYSTAL LAKE, ILL. 60014		DATE MARCH 22, 2013
		SHEET NO. ED102

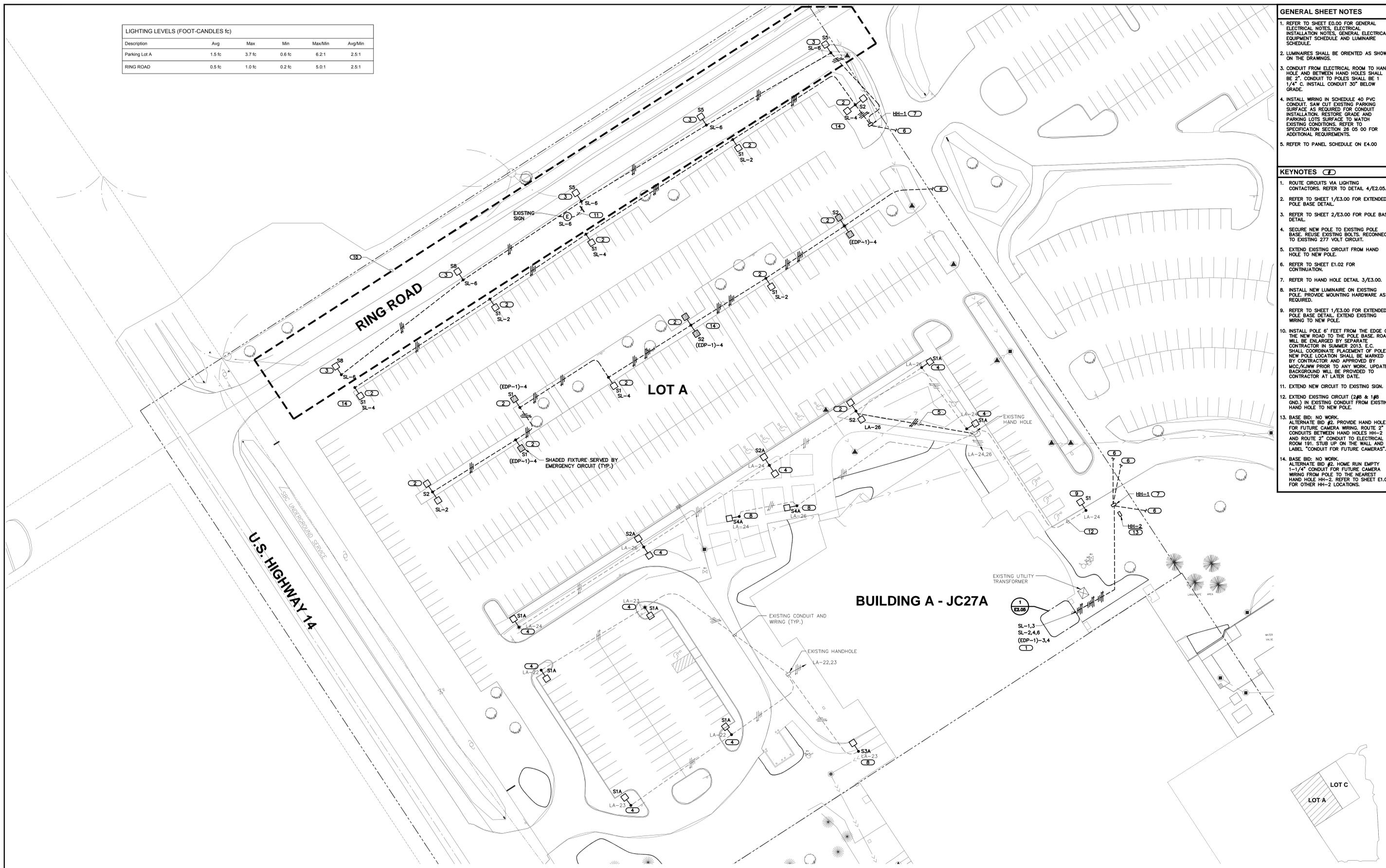
LIGHTING LEVELS (FOOT-CANDLES fc)					
Description	Avg	Max	Min	Max/Min	Avg/Min
Parking Lot A	1.5 fc	3.7 fc	0.6 fc	6.2:1	2.5:1
RING ROAD	0.5 fc	1.0 fc	0.2 fc	5.0:1	2.5:1

GENERAL SHEET NOTES

- REFER TO SHEET E0.00 FOR GENERAL ELECTRICAL NOTES, ELECTRICAL INSTALLATION NOTES, GENERAL ELECTRICAL EQUIPMENT SCHEDULE AND LUMINAIRE SCHEDULE.
- LUMINAIRES SHALL BE ORIENTED AS SHOWN ON THE DRAWINGS.
- CONDUIT FROM ELECTRICAL ROOM TO HAND HOLE AND BETWEEN HAND HOLES SHALL BE 2" CONDUIT TO POLES SHALL BE 1 1/4" C. INSTALL CONDUIT 30" BELOW GRADE.
- INSTALL WIRING IN SCHEDULE 40 PVC CONDUIT. SAW CUT EXISTING PARKING SURFACE AS REQUIRED FOR CONDUIT INSTALLATION. RESTORE GRADE AND PARKING LOTS SURFACE TO MATCH EXISTING CONDITIONS. REFER TO SPECIFICATION SECTION 28 05 00 FOR ADDITIONAL REQUIREMENTS.
- REFER TO PANEL SCHEDULE ON E4.00

KEYNOTES

- ROUTE CIRCUITS VIA LIGHTING CONTACTORS. REFER TO DETAIL 4/E2.05.
- REFER TO SHEET 1/E3.00 FOR EXTENDED POLE BASE DETAIL.
- REFER TO SHEET 2/E3.00 FOR POLE BASE DETAIL.
- SECURE NEW POLE TO EXISTING POLE BASE. REUSE EXISTING BOLTS. RECONNECT TO EXISTING 277 VOLT CIRCUIT.
- EXTEND EXISTING CIRCUIT FROM HAND HOLE TO NEW POLE.
- REFER TO SHEET E1.02 FOR CONTINUATION.
- REFER TO HAND HOLE DETAIL 3/E3.00.
- INSTALL NEW LUMINAIRE ON EXISTING POLE. PROVIDE MOUNTING HARDWARE AS REQUIRED.
- REFER TO SHEET 1/E3.00 FOR EXTENDED POLE BASE DETAIL. EXTEND EXISTING WIRING TO NEW POLE.
- INSTALL POLE 6' FEET FROM THE EDGE OF THE NEW ROAD TO THE POLE BASE. ROAD WILL BE ENLARGED BY SEPARATE CONTRACTOR IN SUMMER 2013. E.C. SHALL COORDINATE PLACEMENT OF POLES. NEW POLE LOCATION SHALL BE MARKED BY CONTRACTOR AND APPROVED BY MCC/KJWW PRIOR TO ANY WORK. UPDATED BACKGROUND WILL BE PROVIDED TO CONTRACTOR AT LATER DATE.
- EXTEND NEW CIRCUIT TO EXISTING SIGN.
- EXTEND EXISTING CIRCUIT (2# & 1#8 GND.) IN EXISTING CONDUIT FROM EXISTING HAND HOLE TO NEW POLE.
- BASE BID: NO WORK. ALTERNATE BID #2. PROVIDE HAND HOLE FOR FUTURE CAMERA WIRING. ROUTE 2" CONDUITS BETWEEN HAND HOLES HH-2 AND ROUTE 2" CONDUIT TO ELECTRICAL ROOM 191. STUB UP ON THE WALL AND LABEL "CONDUIT FOR FUTURE CAMERAS".
- BASE BID: NO WORK. ALTERNATE BID #2. HOME RUN EMPTY 1-1/4" CONDUIT FOR FUTURE CAMERA WIRING FROM POLE TO THE NEAREST HAND HOLE HH-2. REFER TO SHEET E1.02 FOR OTHER HH-2 LOCATIONS.



1 SITE PLAN - LOT A - LIGHTING
SCALE: 1"=30'-0"

NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS			DRAWN	PREPARED	MEP ENGINEER OF RECORD
NO.	DATE	REMARKS	JC	DEK OFF.	
			TRACED	APPROVED	KJWW ENGINEERING 1100 Warrenville Road, Suite 400W Naperville, Illinois 60563 USA (tel) (630) 527 2320 (fax) (630) 527 2321 www.kjww.com
			TB		
			CHECKED	APPROVED	
			JML		



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SITE PLAN - LOT A - LIGHTING		PROJECT NO.
McHENRY COUNTY COLLEGE UPGRADE EXTERIOR LIGHTING 8900 ROUTE 14 CRYSTAL LAKE, ILL. 60014		810-066-016
		DATE MARCH 22, 2013
		SHEET NO. E1.01

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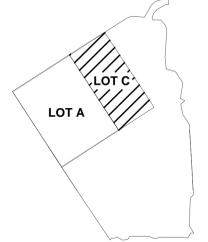
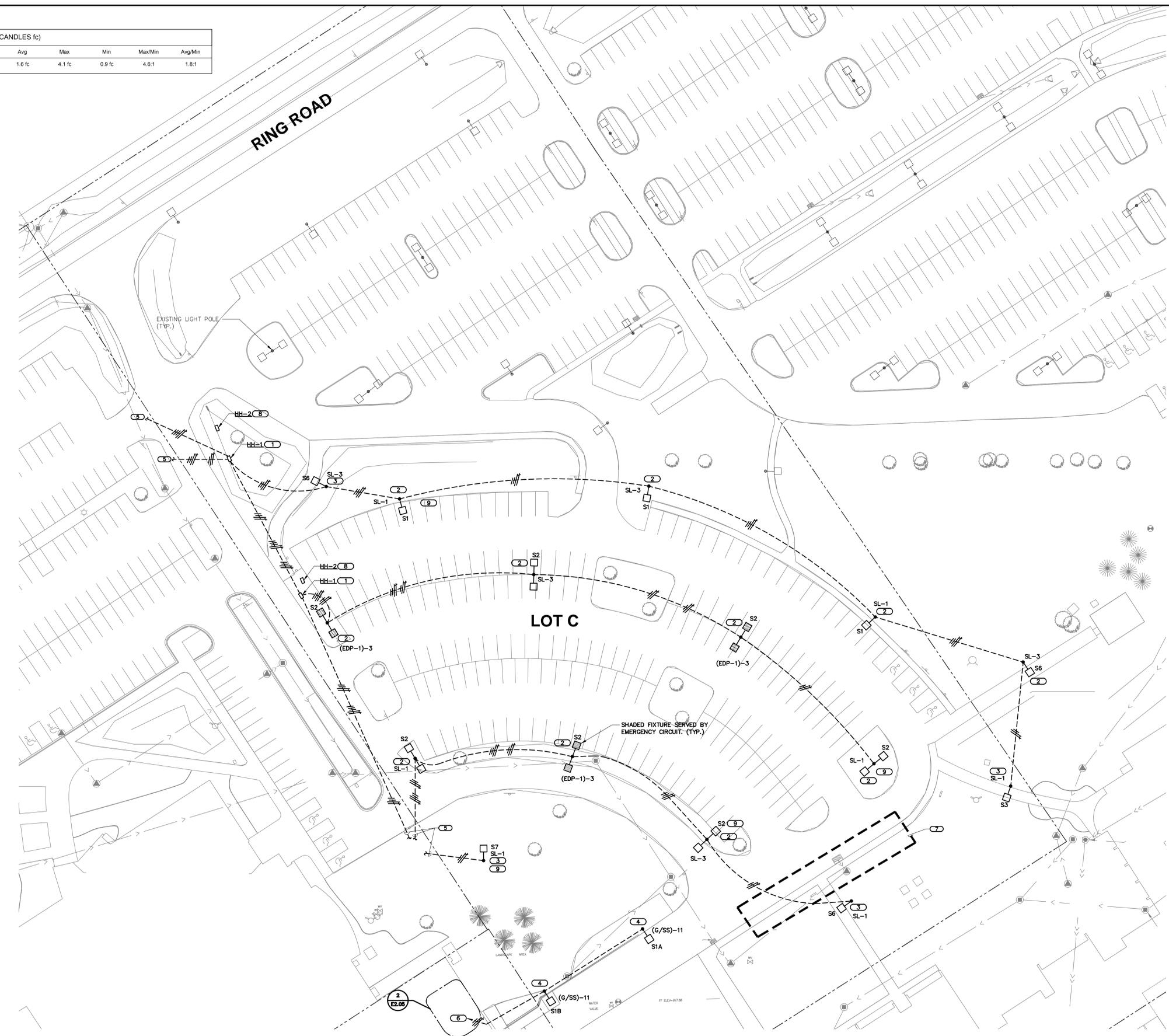
LIGHTING LEVELS (FOOT CANDLES fc)					
Description	Avg	Max	Min	Max/Min	Avg/Min
Parking Lot C	1.6 fc	4.1 fc	0.9 fc	4.6:1	1.8:1

GENERAL SHEET NOTES

- REFER TO SHEET E0.00 FOR GENERAL ELECTRICAL NOTES, ELECTRICAL INSTALLATION NOTES, GENERAL ELECTRICAL EQUIPMENT SCHEDULE AND LUMINAIRE SCHEDULE.
- LUMINAIRES SHALL BE ORIENTED AS SHOWN ON THE DRAWINGS.
- CONDUIT FROM ELECTRICAL ROOM TO HAND HOLE AND BETWEEN HAND HOLES SHALL BE 2" CONDUIT TO POLES SHALL BE 1 1/4" C. INSTALL CONDUIT 30" BELOW GRADE.
- INSTALL WIRING IN SCHEDULE 40 PVC CONDUIT. SAW CUT EXISTING PARKING SURFACE AS REQUIRED FOR CONDUIT INSTALLATION. RESTORE GRADE AND PARKING LOTS SURFACE TO MATCH EXISTING CONDITIONS. REFER TO SPECIFICATION SECTION 28 05 00 FOR ADDITIONAL REQUIREMENTS.
- REFER TO PANEL SCHEDULE ON E4.00

KEYNOTES

- REFER TO HAND HOLE DETAIL 3/E3.00.
- REFER TO SHEET 1/E3.00 FOR EXTENDED POLE BASE DETAIL.
- REFER TO SHEET 2/E3.00 FOR POLE BASE DETAIL.
- SECURE NEW POLE TO EXISTING POLE BASE. REUSE EXISTING BOLTS.
- REFER TO SHEET E1.01 FOR CONTINUATION.
- ROUTE CIRCUIT (2Ø & 1Ø GND.) IN EXISTING CONDUIT TO EXISTING PANEL (G/SS) CIRCUIT 11 VIA EXISTING LIGHTING CONTACTOR "PARKING LOT". REFER TO 2/E2.05 FOR EQUIPMENT LOCATIONS AND 3/E2.05 FOR WIRING DIAGRAM.
- FUTURE DROP - OFF AREA. THIS WORK WILL BE PERFORMED IN SUMMER 2013 BY A SEPARATE CONTRACTOR. CONTRACTOR TO COORDINATE THE LOCATION OF THE ADJACENT LIGHTING POLE. MARK LOCATION FOR APPROVAL FROM MCC/KJWW.
- BASE BID: NO WORK. ALTERNATE BID #2: PROVIDE HAND HOLE FOR FUTURE CAMERA WIRING. ROUTE 2" CONDUIT BETWEEN HAND HOLES HH-2.
- BASE BID: NO WORK. ALTERNATE BID #2: HOME RUN EMPTY 1-1/4" CONDUIT FOR FUTURE CAMERA WIRING FROM POLE TO THE NEAREST HAND HOLE HH-2. REFER TO E1.01 FOR OTHER HH-2 LOCATIONS.



1 SITE PLAN - LOT C - LIGHTING
SCALE: 1" = 30'-0"

NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS		
NO.	DATE	REMARKS

DRAWN JJC	PREPARED DEK OFF.	MEP ENGINEER OF RECORD KJWW ENGINEERING 1100 Warrenville Road, Suite 400W Naperville, Illinois 60563 USA (tel) (630) 527 2320 (fax) (630) 527 2321 www.kjww.com
TRACED	APPROVED	
TB	•	
CHECKED JML	APPROVED •	



State of Illinois
Pat Quinn, Governor

SITE PLAN - LOT C - LIGHTING	PROJECT NO. 810-066-016
McHENRY COUNTY COLLEGE UPGRADE EXTERIOR LIGHTING 8900 ROUTE 14 CRYSTAL LAKE, ILL. 60014	DATE MARCH 22, 2013
	SHEET NO. E1.02

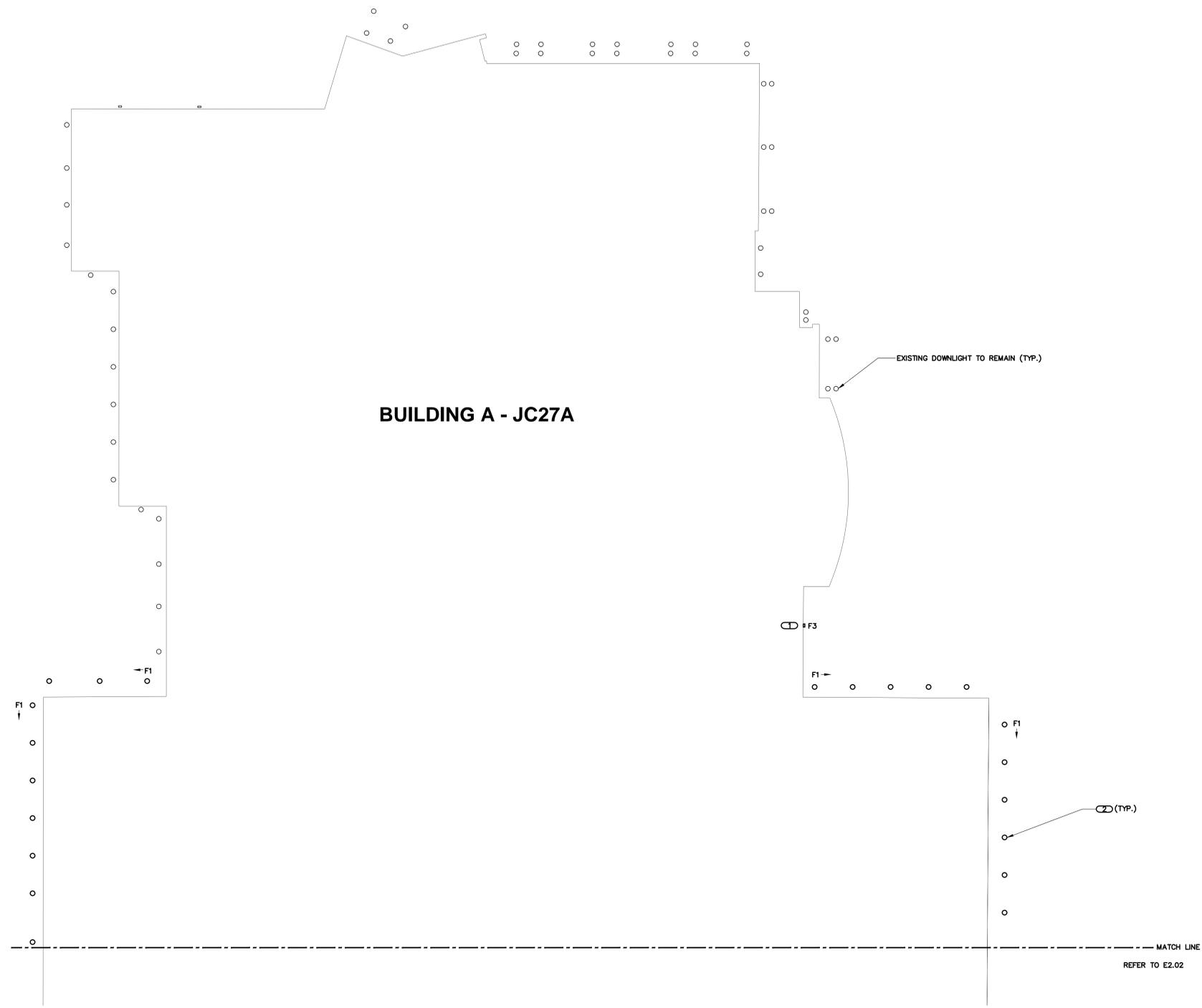
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GENERAL SHEET NOTES

- REFER TO SHEET E0.00 FOR ELECTRICAL DEMOLITION NOTES, ELECTRICAL DEMOLITION SYMBOL LIST, GENERAL ELECTRICAL NOTES AND LUMINAIRE SCHEDULE.
- DOWNLIGHTS ARE LOCATED IN THE FIRST AND SECOND FLOOR SOFFIT.

KEYNOTES

- REMOVE EXISTING WALL PACK AND REPLACE WITH NEW. RECONNECT TO EXISTING 277 VOLT CIRCUIT.
- REMOVE EXISTING 175W OR 250 MERCURY VAPOR DOWN-LIGHT INCLUDING BALLAST AND REPLACE WITH NEW. RECONNECT NEW DOWNLIGHT TO EXISTING 277 VOLT CIRCUIT. DOWNLIGHTS ARE ONLY ACCESSIBLE FROM BELOW. INSTALL REMOTE BALLAST ABOVE THE SOFFIT NEXT TO THE DOWNLIGHT.



BUILDING A - JC27A

EXISTING DOWNLIGHT TO REMAIN (TYP.)

(TYP.)

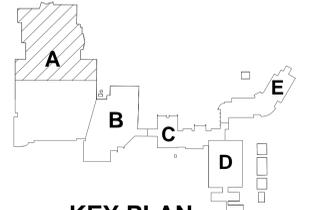
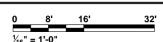
MATCH LINE
REFER TO E2.02



1

BUILDING A - EXTERIOR LIGHTING REPLACEMENT - ALTERNATE BID #1

SCALE: 1/16"=1'-0"



KEY PLAN

NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS		
NO.	DATE	REMARKS

DRAWN JC	PREPARED DEK OFF.
TRACED TB	APPROVED •
CHECKED JML	APPROVED •

MEP ENGINEER OF RECORD
KJWW ENGINEERING
1100 Warrenville Road, Suite 400W
Naperville, Illinois
60563 | USA
(tel) (630) 527 2320
(fax) (630) 527 2321
www.kjww.com



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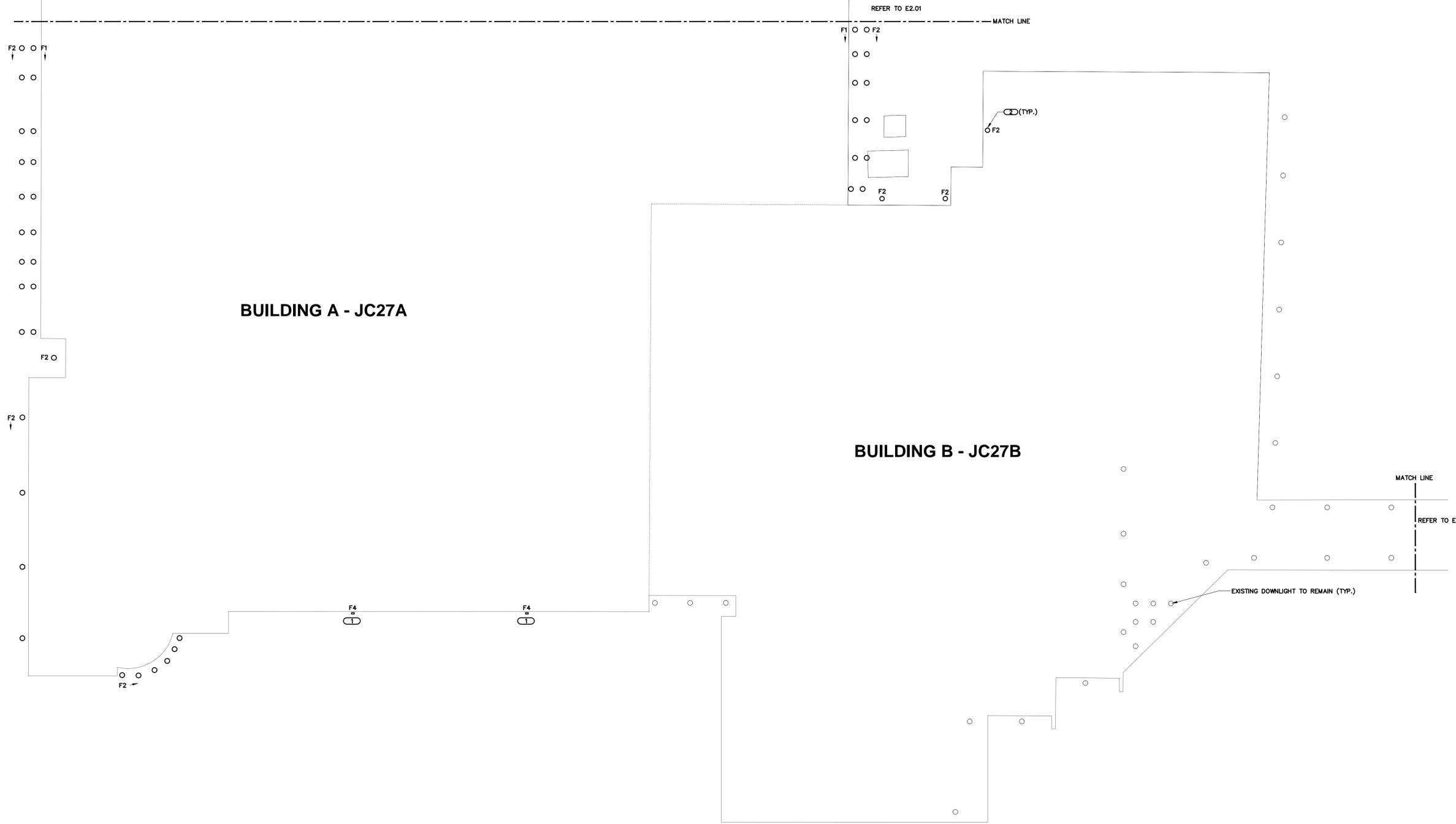
BUILDING A - EXTERIOR LIGHTING REPLACEMENT - ALTERNATE BID #1	PROJECT NO. 810-066-016
McHENRY COUNTY COLLEGE UPGRADE EXTERIOR LIGHTING 8900 ROUTE 14 CRYSTAL LAKE, ILL. 60014	DATE MARCH 22, 2013
	SHEET NO. E2.01

GENERAL SHEET NOTES

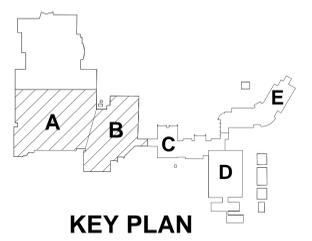
1. REFER TO SHEET E0.00 FOR ELECTRICAL DEMOLITION NOTES, ELECTRICAL DEMOLITION SYMBOL LIST, GENERAL ELECTRICAL NOTES AND LUMINAIRE SCHEDULE.
2. DOWNLIGHTS ARE LOCATED IN THE FIRST AND SECOND FLOOR SOFFIT.

KEYNOTES

1. REMOVE EXISTING WALL PACK AND REPLACE WITH NEW. RECONNECT TO EXISTING 277 VOLT CIRCUIT.
2. REMOVE EXISTING 175W OR 250 MERCURY VAPOR DOWN-LIGHT INCLUDING BALLAST AND REPLACE WITH NEW. RECONNECT NEW DOWNLIGHT TO EXISTING 277 VOLT CIRCUIT. DOWNLIGHTS ARE ONLY ACCESSIBLE FROM BELOW. INSTALL REMOTE BALLAST ABOVE THE SOFFIT NEXT TO THE DOWNLIGHT.



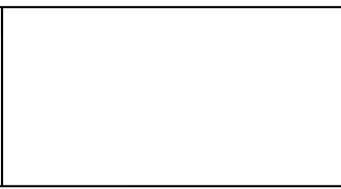
1 BUILDING A & B - EXTERIOR LIGHTING REPLACEMENT - ALTERNATE BID #1
 SCALE: 1/16"=1'-0"
 0 8' 16' 32'
 1/16" = 1'-0"



NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS		
NO.	DATE	REMARKS

DRAWN JJC	PREPARED DEK OFF.	MEP ENGINEER OF RECORD KJWW ENGINEERING 1100 Warrenville Road, Suite 400W Naperville, Illinois 60563 USA (tel) (630) 527.2320 (fax) (630) 527.2321 www.kjww.com
TRACED TB	APPROVED •	
CHECKED JML	APPROVED •	



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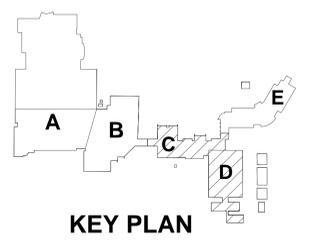
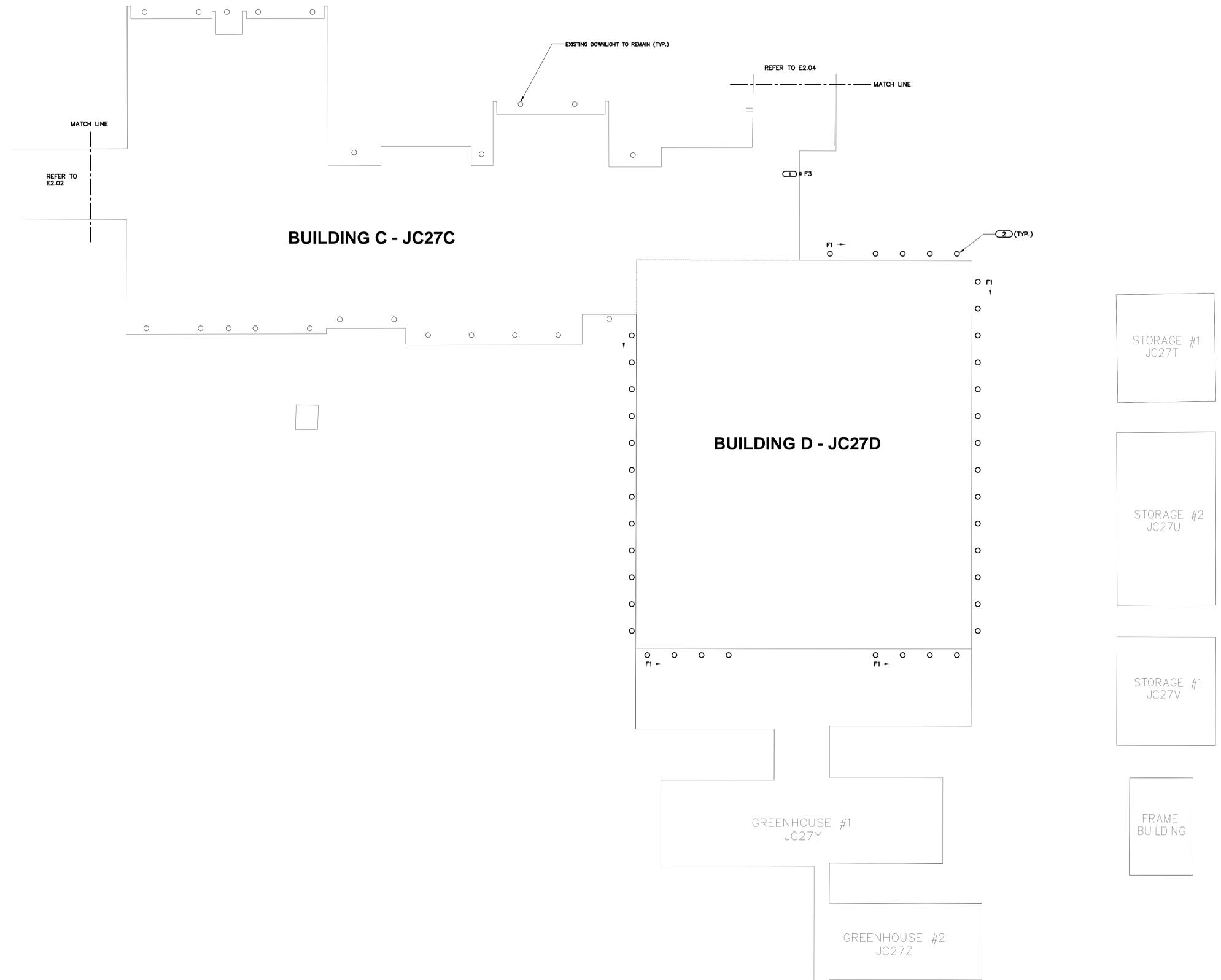
BUILDING A & B - EXTERIOR LIGHTING REPLACEMENT - ALTERNATE BID #1	PROJECT NO. 810-066-016
McHENRY COUNTY COLLEGE UPGRADE EXTERIOR LIGHTING 8900 ROUTE 14 CRYSTAL LAKE, ILL. 60014	DATE MARCH 22, 2013
	SHEET NO. E2.02

GENERAL SHEET NOTES

- REFER TO SHEET E0.00 FOR ELECTRICAL DEMOLITION NOTES, ELECTRICAL DEMOLITION SYMBOL LIST, GENERAL ELECTRICAL NOTES AND LUMINAIRE SCHEDULE.
- DOWNLIGHTS ARE LOCATED ON THE SECOND FLOOR SOFFIT.

KEYNOTES

- REMOVE EXISTING WALL PACK AND REPLACE WITH NEW. RECONNECT TO EXISTING 277 VOLT CIRCUIT.
- REMOVE EXISTING 175W OR 250 MERCURY VAPOR DOWN-LIGHT INCLUDING BALLAST AND REPLACE WITH NEW. RECONNECT NEW DOWNLIGHT TO EXISTING 277 VOLT CIRCUIT. DOWNLIGHTS ARE ONLY ACCESSIBLE FROM BELOW. INSTALL REMOTE BALLAST ABOVE THE SOFFIT NEXT TO THE DOWNLIGHT.

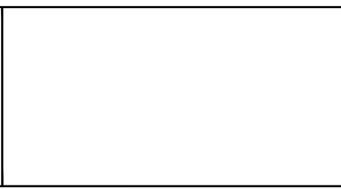


1 BUILDING C & D - EXTERIOR LIGHTING REPLACEMENT - ALTERNATE BID #1
 SCALE: 1/16"=1'-0"
 0 8' 16' 32'
 1/16" = 1'-0"

NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS		
NO.	DATE	REMARKS

DRAWN JC	PREPARED DEK OFF.	MEP ENGINEER OF RECORD KJWW ENGINEERING 1100 Warrenville Road, Suite 400W Naperville, Illinois 60563 USA (tel) (630) 527.2320 (fax) (630) 527.2321 www.kjww.com
TRACED TB	APPROVED •	
CHECKED JML	APPROVED •	



State of Illinois
Pat Quinn, Governor

BUILDING C & D - EXTERIOR LIGHTING REPLACEMENT - ALTERNATE BID #1	PROJECT NO. 810-066-016
McHENRY COUNTY COLLEGE UPGRADE EXTERIOR LIGHTING 8900 ROUTE 14 CRYSTAL LAKE, ILL. 60014	DATE MARCH 22, 2013
	SHEET NO. E2.03

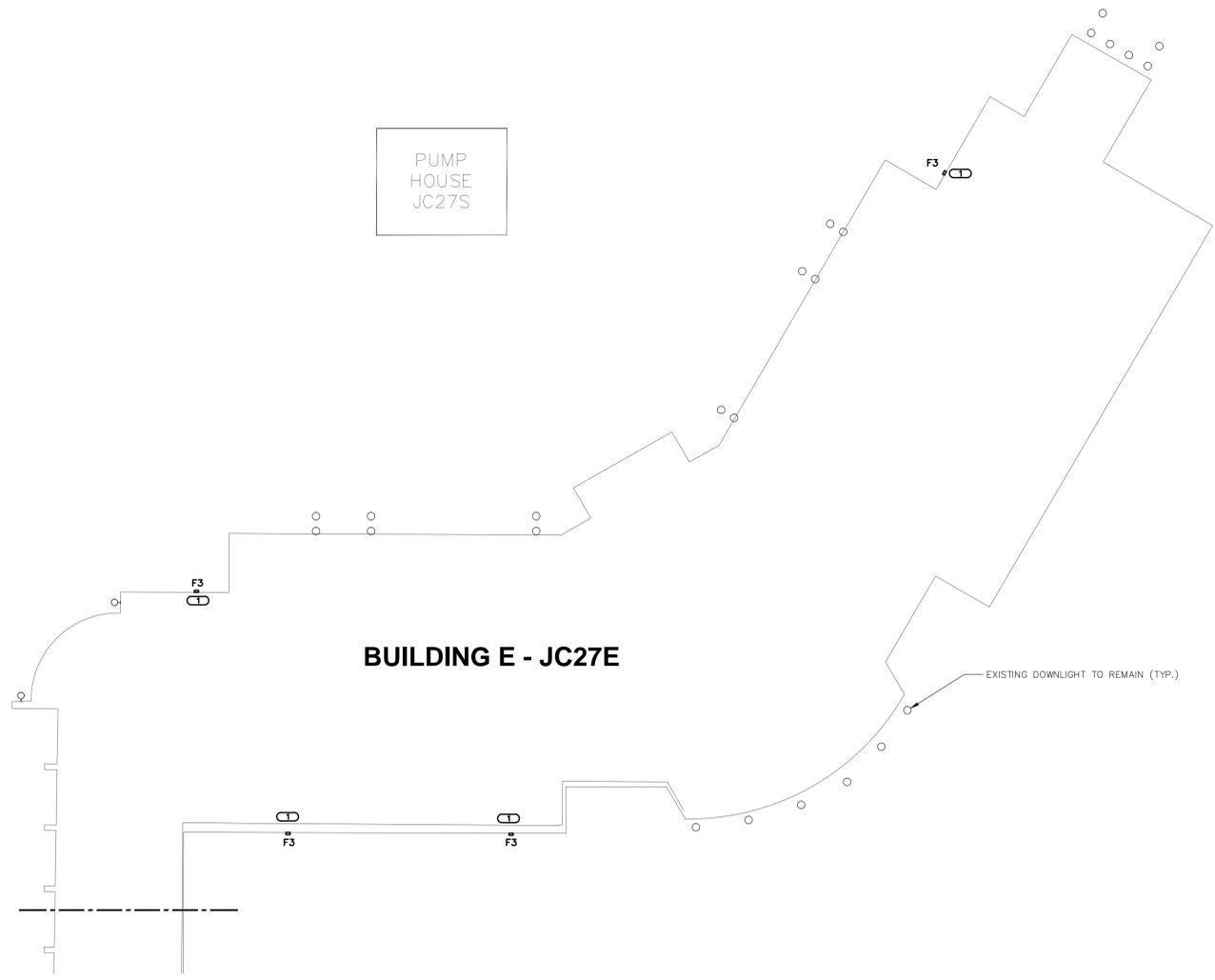
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GENERAL SHEET NOTES

1. REFER TO SHEET E0.00 FOR ELECTRICAL DEMOLITION NOTES, ELECTRICAL DEMOLITION SYMBOL LIST, GENERAL ELECTRICAL NOTES AND LUMINAIRE SCHEDULE.

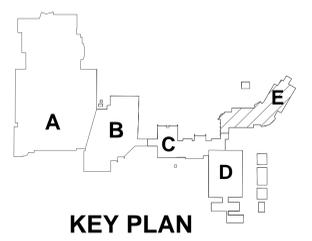
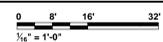
KEYNOTES

1. REMOVE EXISTING WALL PACK AND REPLACE WITH NEW. RECONNECT TO EXISTING 277 VOLT CIRCUIT.



1 BUILDING E - EXTERIOR LIGHTING REPLACEMENT - ALTERNATE BID #1

SCALE: 1/16" = 1'-0"



KEY PLAN

NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS		
NO.	DATE	REMARKS

DRAWN JC	PREPARED DEK OFF.
TRACED TB	APPROVED •
CHECKED JML	APPROVED •

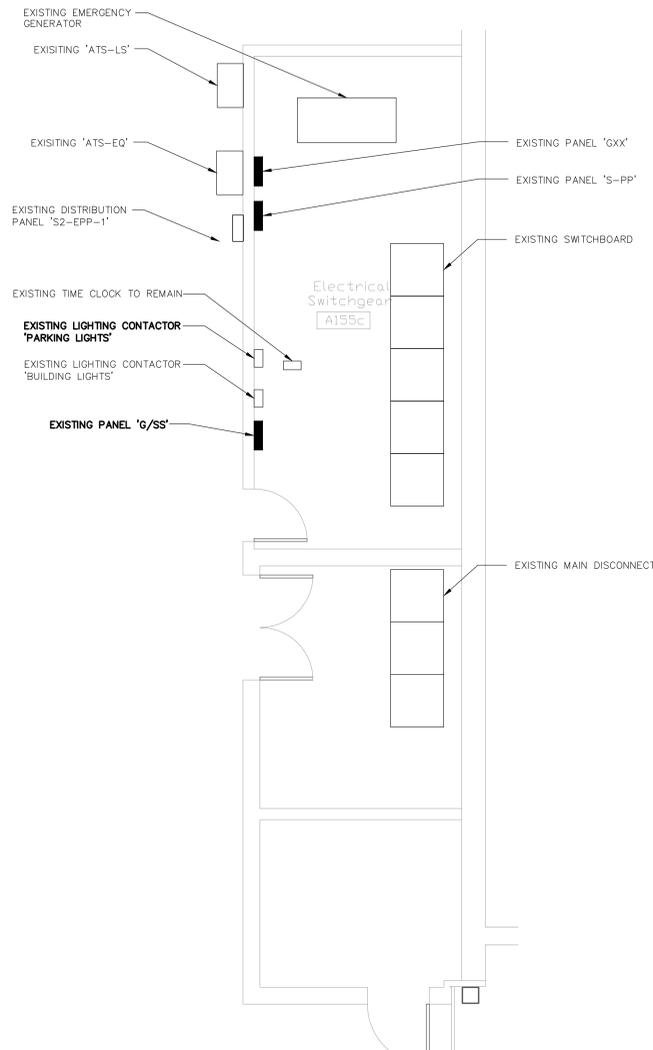
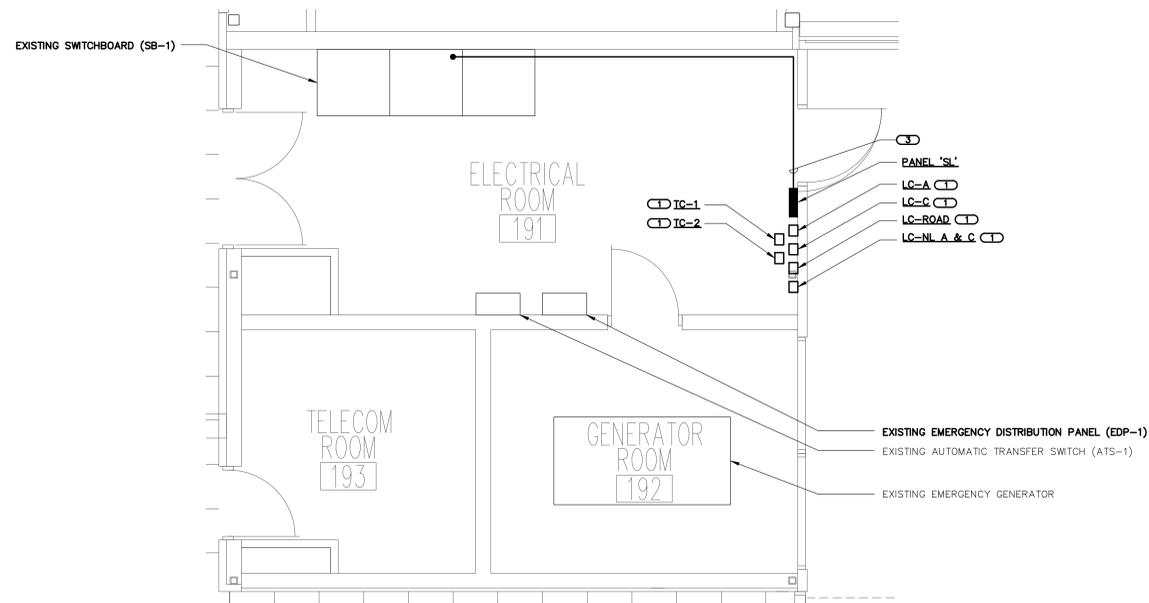
MEP ENGINEER OF RECORD
KJWW ENGINEERING
1100 Warrenville Road, Suite 400W
Naperville, Illinois
60563 | USA
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State of Illinois
Pat Quinn, Governor

BUILDING E - EXTERIOR LIGHTING REPLACEMENT - ALTERNATE BID #1	PROJECT NO. 810-066-016
McHENRY COUNTY COLLEGE UPGRADE EXTERIOR LIGHTING 8900 ROUTE 14 CRYSTAL LAKE, ILL. 60014	DATE MARCH 22, 2013
	SHEET NO. E2.04

K:\DWG\12.0616.00 - CDC DATA CENTER RENOVATION - K:\DWG\12.0616.00\12.04.dwg 1/1"=4" = 1'-0" Thursday, March 21, 2013 - 1:55pm By: ccsk



GENERAL SHEET NOTES

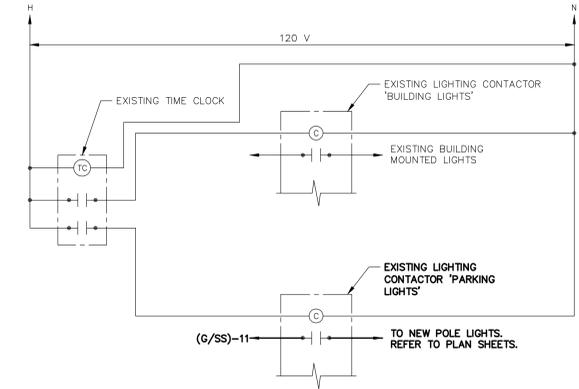
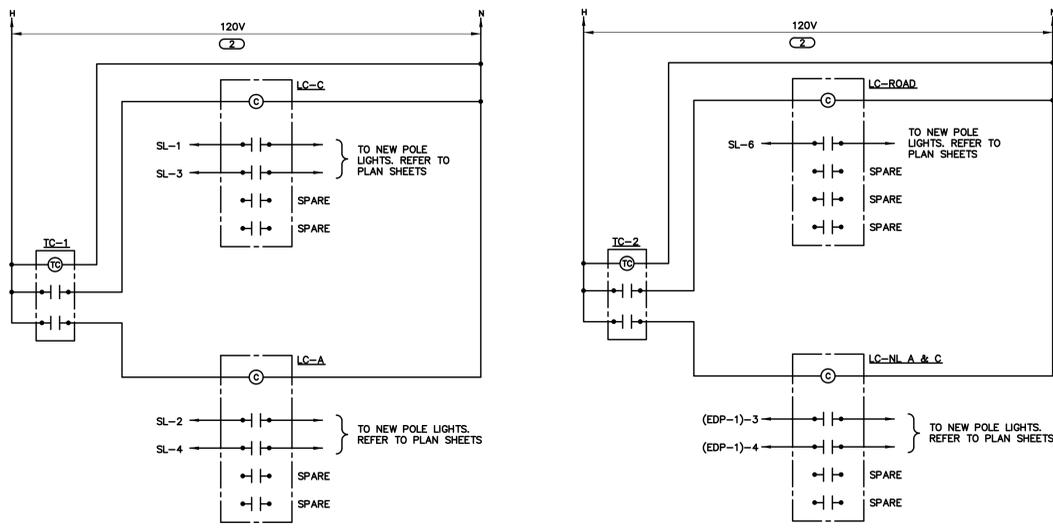
- REFER TO SHEET E0.00 FOR GENERAL ELECTRICAL NOTES, ELECTRICAL INSTALLATION NOTES, GENERAL ELECTRICAL EQUIPMENT SCHEDULE.

KEYNOTES

- REFER TO WIRING DETAIL 4/E2.05.
- EXTEND EXISTING 120V RECEPTACLE CIRCUIT PA-68 SERVING ROOM 191.
- PANEL FEEDER, REFER TO ONE LINE DIAGRAM 1/E4.00.

1 BUILDING A - ENLARGED ELECTRICAL ROOM 191
SCALE: 1/4"=1'-0"

2 BUILDING A - ENLARGED ELECTRICAL ROOM A155C
SCALE: 1/4"=1'-0"



4 EXTERIOR LIGHTING CONTROL WIRING - ROOM 191
NO SCALE

NOTES:
1. POST AS-CONSTRUCTED WIRING DIAGRAM AT CONTACTORS.

3 EXTERIOR LIGHTING CONTROL WIRING - ROOM A155C
NO SCALE

NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS		
NO.	DATE	REMARKS

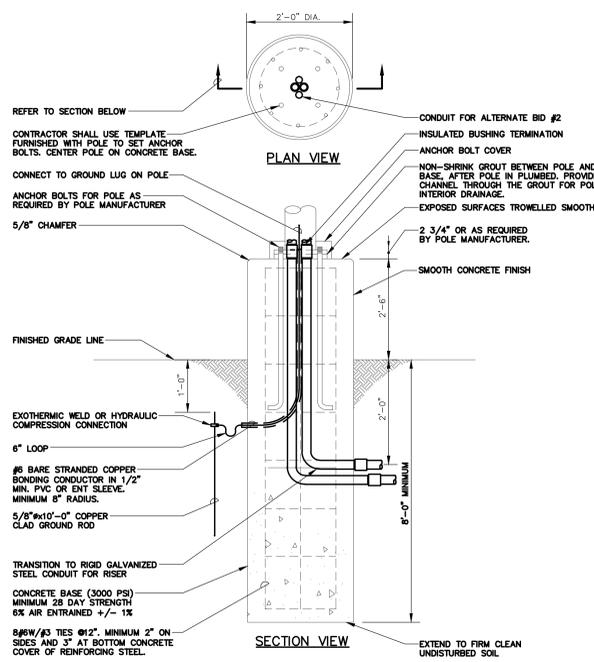
DRAWN JJC	PREPARED DEK OFF.	MEP ENGINEER OF RECORD KJWW ENGINEERING 1100 Warrenville Road, Suite 400W Naperville, Illinois 60563 USA (tel) (630) 527 2320 (fax) (630) 527 2321 www.kjww.com
TRACED TB	APPROVED	
CHECKED JML	APPROVED	



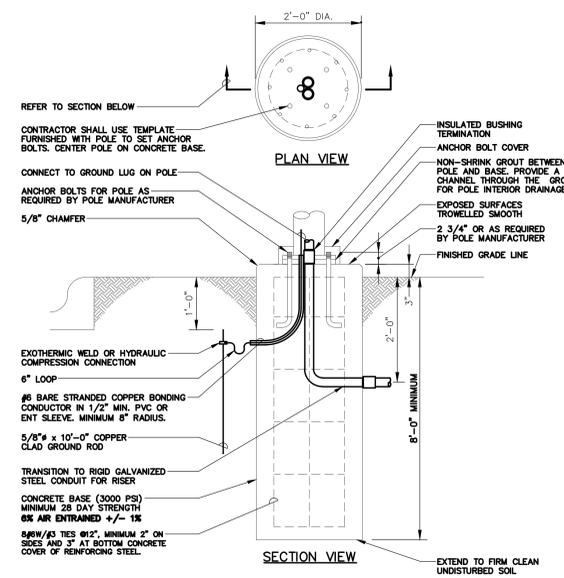
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ENLARGED ELECTRICAL ROOMS & WIRING DETAILS	PROJECT NO. 810-066-016
McHENRY COUNTY COLLEGE UPGRADE EXTERIOR LIGHTING 8900 ROUTE 14 CRYSTAL LAKE, ILL. 60014	DATE MARCH 22, 2013
	SHEET NO. E2.05

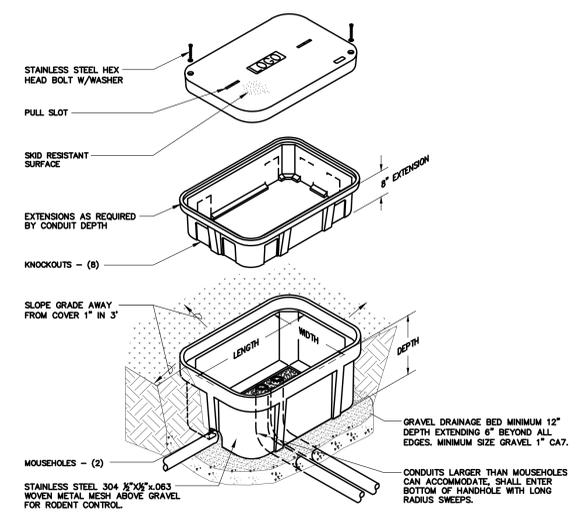
K:\DWG\12.0616.00 - CCG DATA CENTER RENOVATION - K:\DWG\12.0616.00\12.0616.dwg 1/8" = 1'-0" Thursday, March 21, 2013 - 1:51pm By: ccskjl



1 EXTENDED POLE BASE DETAIL
NO SCALE



2 POLE BASE DETAIL
NO SCALE



3 EXTERIOR HANDHOLE DETAIL
NO SCALE

- NOTES**
1. ALL DIMENSIONS ARE NOMINAL INSIDE CLEARANCES.
 2. ALL SPLICES OR DEVICES IN HANDHOLE SHALL BE UL LISTED FOR SUBMERSIBLE APPLICATIONS.

NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS		
NO.	DATE	REMARKS

DRAWN	PREPARED
JJC	DEK
TRACED	APPROVED
TB	•
CHECKED	APPROVED
JML	•

MEP ENGINEER OF RECORD
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ELECTRICAL DETAILS

McHENRY COUNTY COLLEGE
UPGRADE EXTERIOR LIGHTING
8900 ROUTE 14
CRYSTAL LAKE, ILL. 60014

PROJECT NO.	810-066-016
DATE	MARCH 22, 2013
SHEET NO.	E3.00

GENERAL SHEET NOTES

1. REFER TO SHEET E0.00 FOR GENERAL ELECTRICAL NOTES, ELECTRICAL INSTALLATION NOTES, GENERAL ELECTRICAL EQUIPMENT SCHEDULE AND LUMINAIRE SCHEDULE.

KEYNOTES

1. INSTALL NEW CIRCUIT BREAKER IN EXISTING SPACE. MATCH EXISTING CIRCUIT BREAKER TYPE AND AIC RATING. PROVIDE ALL REQUIRED MOUNTING ACCESSORIES.

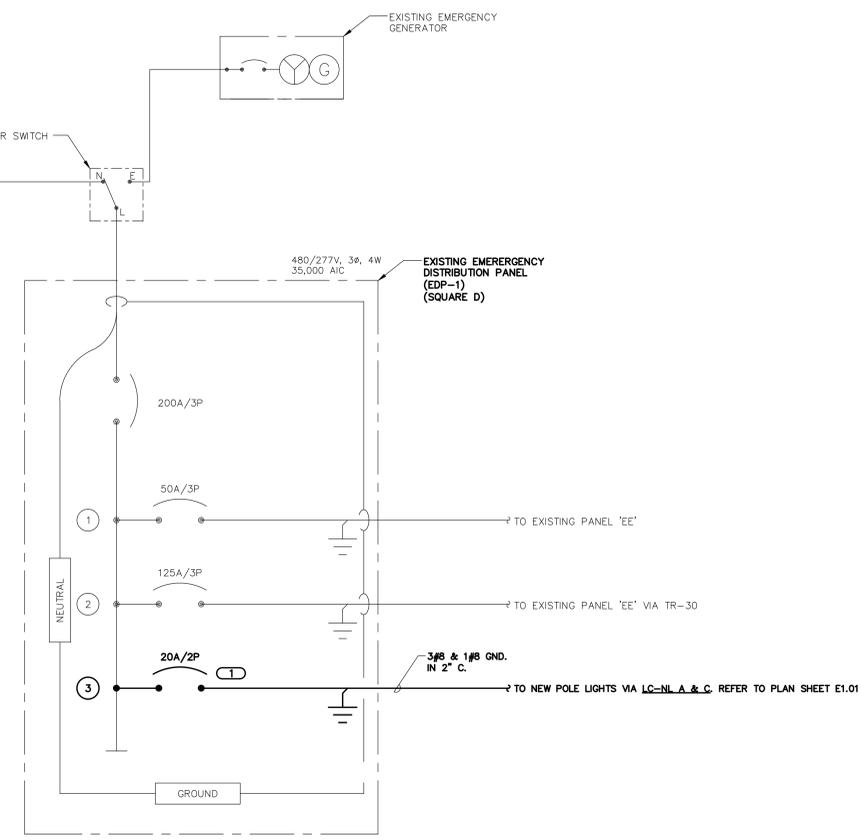
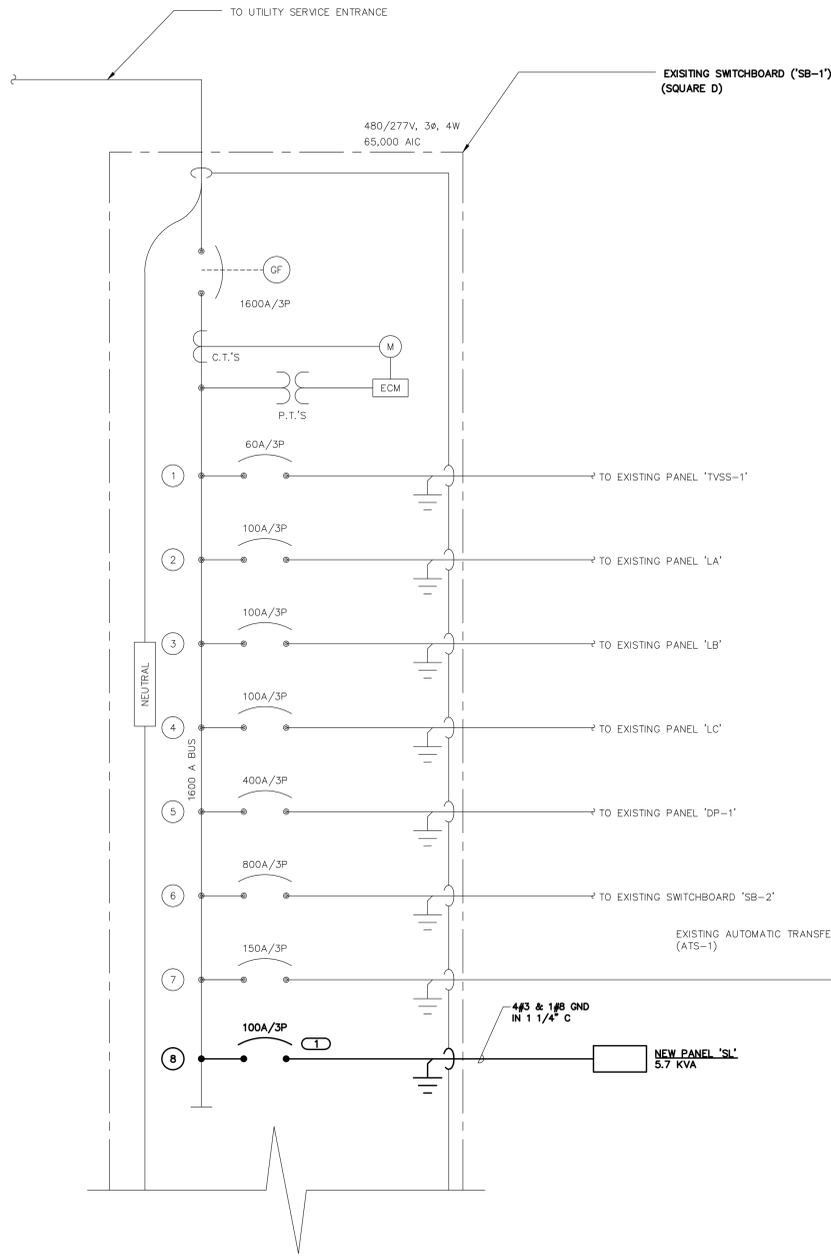
ONE LINE DIAGRAM NOTES:

1. SCRR AND 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".
2. INDICATES DIRECT CONNECTION OF GROUND CONDUCTOR TO GROUND BUS.
3. INDICATES O.Z. GEDNEY OR EQUAL GROUND BUSHING BONDED TO GROUND BUS WITH CONDUCTOR SIZED TO MAXIMUM FEEDER GROUND CAPACITY.
4. ALL WIRE SHALL BE TYPE "THWN" ABOVE GRADE. FEEDERS LOCATED BELOW FLOOR SLAB OR UNDERGROUND SHALL BE TYPE "THWN".

TYPE: BOLT-ON		PANEL NAME: SL		CONNECTED 5.7 KVA	
MOUNTING SURFACE	SOLID NEUTRAL	MAIN:	100A LUGS		
FED FROM: EXISTING SWITCHBOARD (SB-1)	GROUND BUS	VOLTS:	480Y / 277		
SCCR: 18,000		PHASE:	3		
		WIRE:	4		

CKT NO.	LOAD DESCRIPTION	WIRE SIZE	LOAD KVA	BREAKER AMP	BREAKER P	LOAD KVA	WIRE SIZE	LOAD DESCRIPTION	CKT NO.		
1	SITE LIGHTING LOT C	8	1.7	20	2	20	3	1.1	8	SITE LIGHTING LOT A	2
3	SITE LIGHTING LOT C	8	1.3	--	--	--	--	1.1	8	SITE LIGHTING LOT A	4
5	SPARE			20	1	--	--	0.6	8	SITE LIGHTING RING ROAD	6
7	SPARE			20	1	20	1			SPARE	8
9	SPARE			20	1	20	1			SPARE	10
11	SPACE									SPACE	12
13	SPACE									SPACE	14
15	SPACE									SPACE	16
17	SPACE									SPACE	18
19	SPACE									SPACE	20
21	SPACE									SPACE	22
23	SPACE									SPACE	24
25	SPACE									SPACE	26
27	SPACE									SPACE	28
29	SPACE									SPACE	30

KEY: *C=THRU CONTACTOR



1 PARTIAL ONE - LINE DIAGRAM
NO SCALE

NOTE: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND BE FULLY RESPONSIBLE FOR SAME.

REVISIONS			DRAWN	PREPARED	MEP ENGINEER OF RECORD
NO.	DATE	REMARKS	JJC	DEK OFF.	
			TRACED	APPROVED	KJWW ENGINEERING 1100 Warrenville Road, Suite 400W Naperville, Illinois 60563 USA (tel) (630) 527 2320 (fax) (630) 527 2321 www.kjww.com
			TB		
			CHECKED	APPROVED	
			JML		

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PARTIAL ONE - LINE DIAGRAM	
McHENRY COUNTY COLLEGE UPGRADE EXTERIOR LIGHTING 8900 ROUTE 14 CRYSTAL LAKE, ILL. 60014	

PROJECT NO.	810-066-016
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