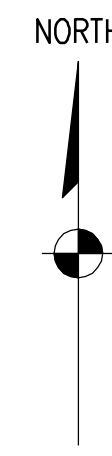


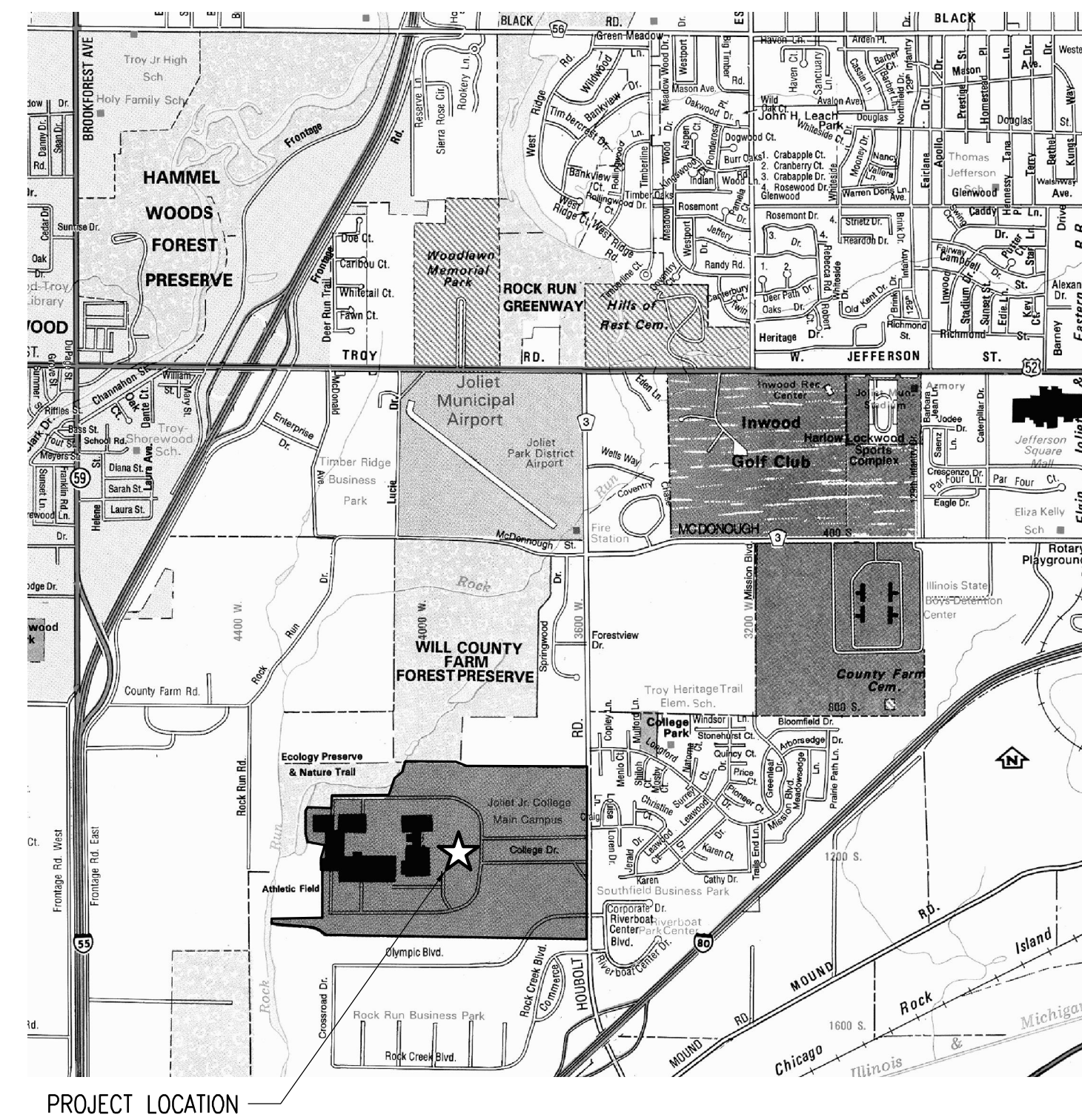
# JOLIET JUNIOR COLLEGE MAIN CAMPUS SUB C MCC REPLACEMENT JOLIET, ILLINOIS



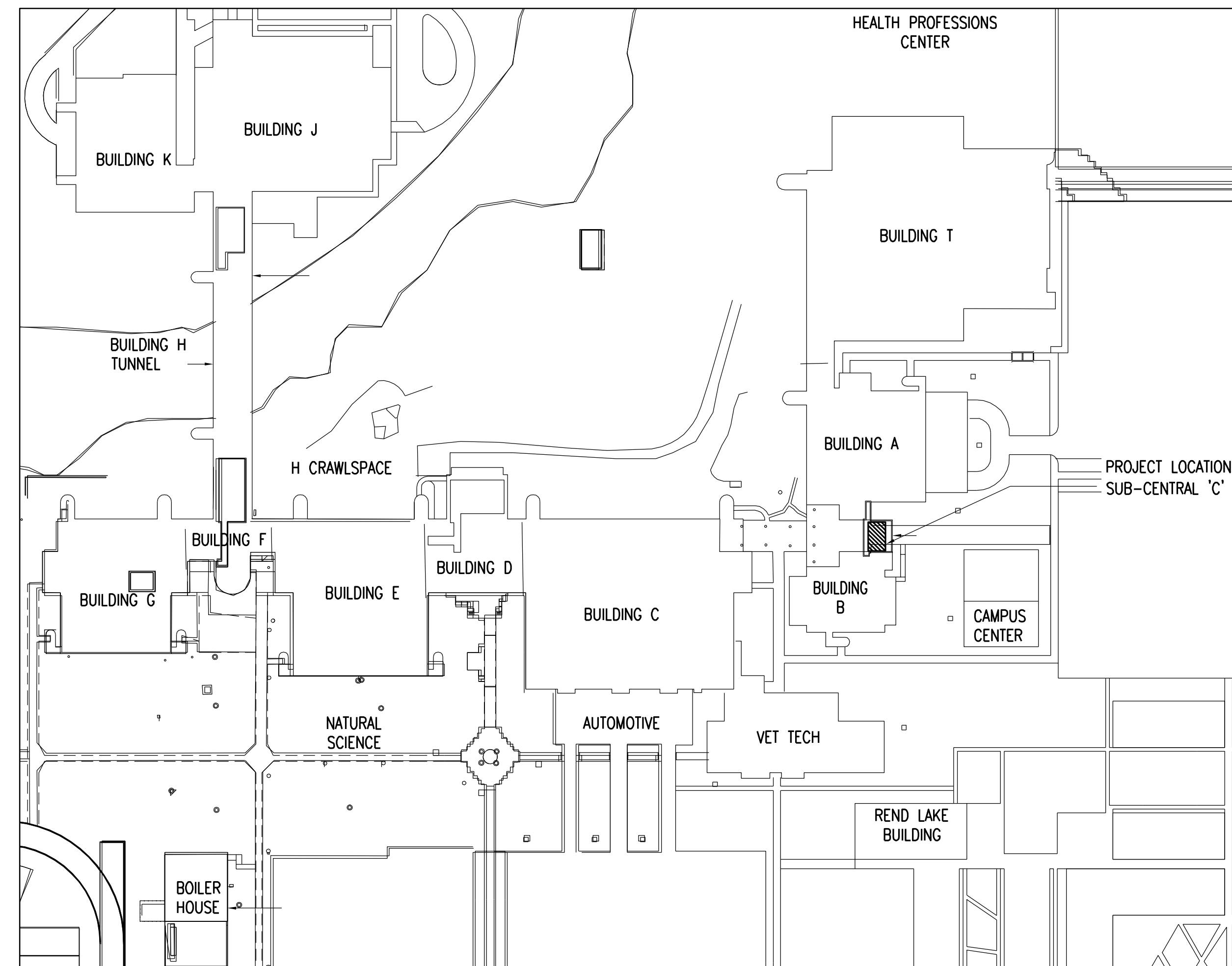
DRAWING LIST	
DRAWING NO.	DRAWING DESCRIPTION
GG01	COVER SHEET
EG01	ELECTRICAL NOTES, SYMBOLS, & LEGEND
E001	ONE LINE AND DETAILS
EP01	ELECTRICAL PLANS

### NOTE TO BIDDERS:

INCLUDE AN ALLOWANCE OF THREE-THOUSAND FIVE HUNDRED DOLLARS (\$3,500.00) IN THE BASE BID FOR MISCELLANEOUS UNFORESEEN ADDITIONAL WORK ONLY AS DIRECTED AND APPROVED BY THE JOLIET JUNIOR COLLEGE CONSTRUCTION MANAGER. ANY CHARGES TO THE ALLOWANCE WILL BE FOR MATERIALS AND LABOR ONLY. OVERHEAD AND PROFIT SHALL BE INCLUDED IN THE BASE BID. THIS ALLOWANCE SHALL NOT BE INVOICED IF NOT APPROVED. CONTRACTOR SHALL NOT BE ENTITLED TO ANY UNSPENT BALANCE.



AREA MAP



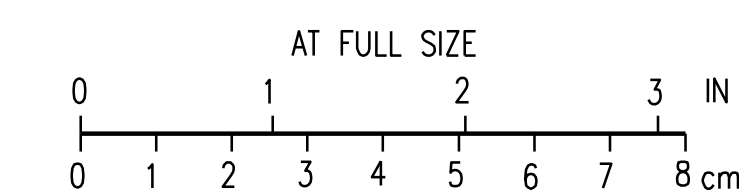
CAMPUS MAP



EXP. 11-30-2013

*Steven R. Koss*

NO.	REVISIONS	DSGN	CHKD	APVD	DATE
 <b>Stanley Consultants INC.</b> <small>8501 West Higgins Road, Suite 730, Chicago, Illinois 60631-2801 www.stanleyconsultants.com</small>					
JOLIET JUNIOR COLLEGE SUB C MCC REPLACEMENT JOLIET, ILLINOIS					
<b>COVER SHEET</b>					
Illinois Firm Registration No.: 184-001533					
DESIGNED	S. KOSS	SCALE: NO SCALE			
DRAWN	B. KOWALCZYKOWSKA	NO. 23778.02.00		REV.	
CHECKED	M. ZARGAR	GG01		0	
APPROVED	M. ZARGAR				
APPROVED					
DATE	12-16-2011				



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CADD: D:1-183

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### ONE-LINE AND RISER

**POWER TRANSFORMER**  
KVA, CLG HV-LV Z

**LOW VOLTAGE CIRCUIT BREAKER**  
E.O. = ELECTRICALLY OPERATED  
G = GROUND  
I = INSTANTANEOUS  
IA = INSTANTANEOUS AMPS  
LT = LONG TIME  
M.O. = MANUALLY OPERATED  
ST = SHORT TIME  
S = SENSOR RATING

**MOLDED CASE CIRCUIT BREAKER**

**FUSED CUT OUT SWITCH**

**FUSED DISCONNECT SWITCH**

**NON-FUSED DISCONNECT SWITCH**

**COMBINATION DISCONNECT WITH STARTER**

**COMBINATION CIRCUIT BREAKER WITH STARTER**  
AF AT SIZE \*

**PANELBOARD**

**TRANSFER SWITCH (AUTOMATIC OR MANUAL)**

**MOTOR** HP

**ELECTRICAL POWER METER** KW

**GROUND**

**DELTA**

**SOLID GROUNDED WYE**

**VOLTAGE TRANSFORMER** (QTY) PRI/SEC ACCUR

**CURRENT TRANSFORMER** (QTY) PRI/SEC ACCUR ■ INDICATES POLARITY

### RACEWAY AND LINE TYPES

**CONDUIT:**

----- EMBEDDED OR HIDDEN

\_\_\_\_\_ EXPOSED

C CONDUIT TURN-DOWN

O CONDUIT TURN-UP

⊙ JUNCTION BOX

### ELECTRICAL DEVICE MOUNTING HEIGHT

6'-6" (to top of panel)

5'-4" (to top of breaker)

4'-0" (to top of switch)

1'-6" (to top of meter)

FINISHED FLOOR

### PLAN VIEW

T TRANSFORMER

□ NON-FUSED DISCONNECT SWITCH

⊠ FUSED DISCONNECT SWITCH

⊠ COMBINATION DISCONNECT WITH STARTER

▱ PANELBOARD

ATS AUTOMATIC TRANSFER SWITCH

(MTR) MOTOR

⊠ LOCAL CONTROL PANEL

### VIEW MARKERS

**SECTION** A-SF1  
SF1, SF2  
VIEW IDENTIFICATION NUMBER  
DRAWING NUMBER(S) ON WHICH VIEW IS CALLED OUT

**ELEVATION** B-SF1  
SF1, SF2

**DETAIL** C-SF1  
SF1, SF2

A-SF1 DESIGNATES CUTTING PLANE OF SECTION

B-SF1 DESIGNATES DIRECTION FROM WHICH PLAN OR ELEVATION IS VIEWED

C-SF1 DESIGNATES LOCATION OF DETAIL

### GENERAL SYMBOLS

\_\_\_\_\_ BOLD LINE TYPES AND TEXT DEFINE NEW WORK TO BE BID AND CONSTRUCTED UNDER THIS CONTRACT.

\_\_\_\_\_ LIGHT LINE TYPES AND TEXT DEFINE EXISTING CONDITIONS. NOT ALL EXISTING CONDITIONS MAY BE SHOWN ON THESE DRAWINGS. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY THE EXISTING CONDITIONS IN ALL AREAS OF WORK.

////// ITEMS TO BE DEMOLISHED/REMOVED

⚠ REVISION IDENTIFICATION SYMBOL: THE NUMBER IN THE TRIANGLE INDICATES THE REVISION NUMBER IDENTIFIED.

☁ WORK WITHIN BUBBLED AREAS IDENTIFY CHANGES TO THE BID/CONSTRUCTION DRAWINGS

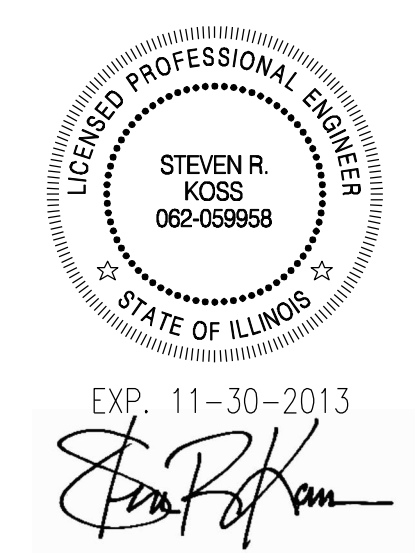
### LEGEND GENERAL NOTES

1. ALL SYMBOLS AND ABBREVIATIONS SHOWN ON THIS LEGEND MAY NOT APPEAR ON THIS SET OF DRAWINGS.

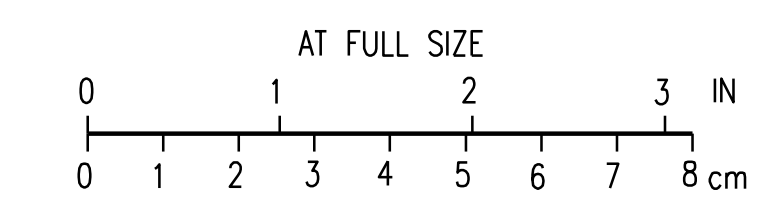
### ELECTRICAL GENERAL NOTES

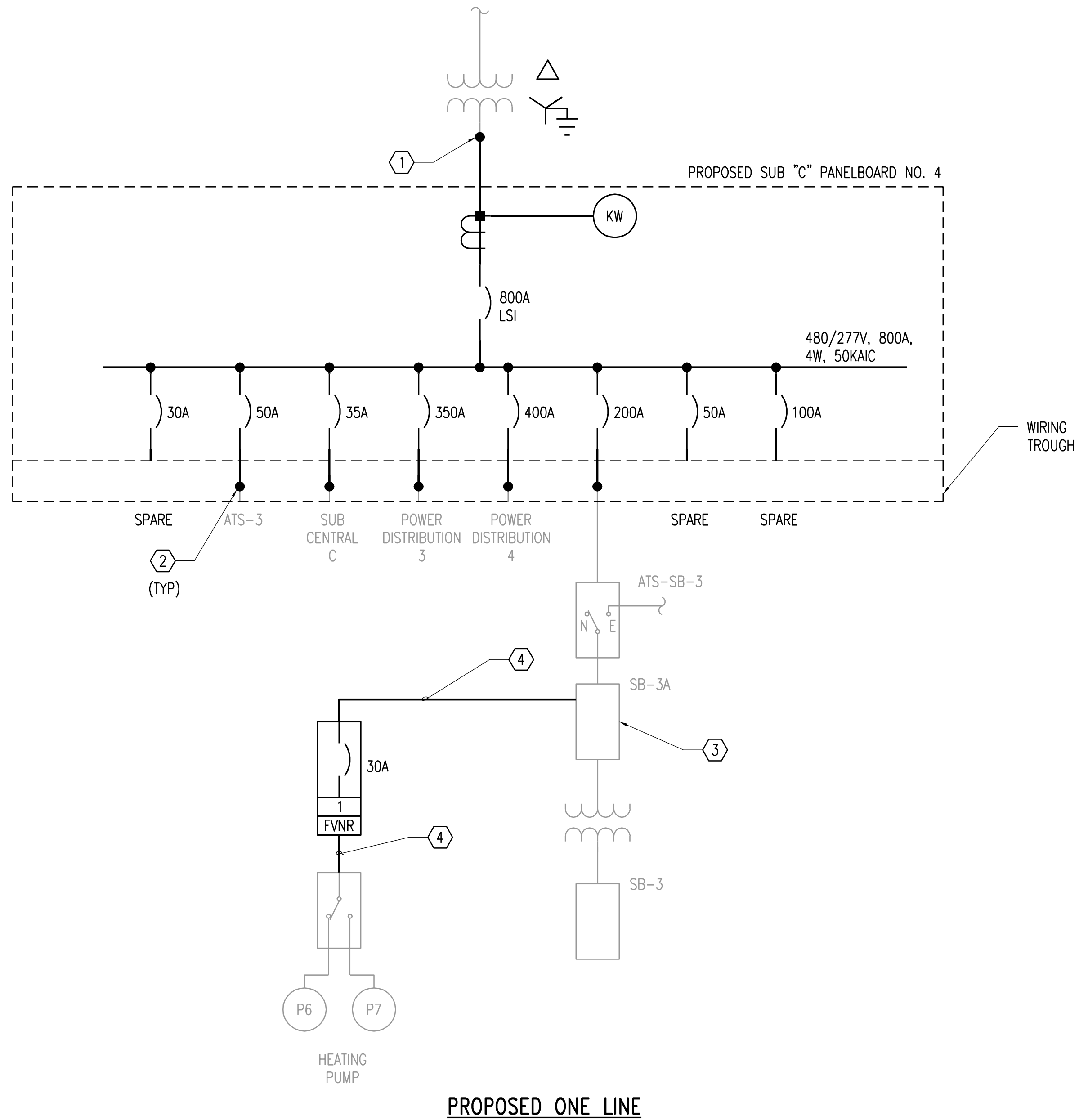
**ELECTRICAL GENERAL NOTES**

- GENERAL
  - ALL DIMENSIONS OF EXISTING CONSTRUCTION ARE APPROXIMATE. CONTRACTOR SHALL MAKE ALL NECESSARY FIELD MEASUREMENTS OF EXISTING STRUCTURES AND EQUIPMENT TO VERIFY DIMENSIONS SHOWN ON DRAWINGS AND TO PROVIDE DIMENSIONS NOT SHOWN PRIOR TO FABRICATION. COSTS FOR MODIFICATIONS OF NEW CONSTRUCTION DUE TO LACK OF CONFIRMATION BY CONTRACTOR OF DIMENSIONS BY FIELD MEASUREMENTS SHALL BE BORNE BY THE CONTRACTOR.
  - THE CONTRACTOR SHALL NOT PERFORM ANY ELECTRICAL WORK UNTIL SHOP DRAWINGS FOR SUCH WORK ARE COMPLETED, REVIEWED BY THE ENGINEER/OWNER, AND RETURNED TO THE CONTRACTOR. ANY SUCH WORK INSTALLED BY THE CONTRACTOR PRIOR TO THIS REVIEW WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND ANY MODIFICATION OF THE ELECTRICAL WORK NECESSARY TO MEET THE EQUIPMENT REQUIREMENTS SHALL BE MADE WITHOUT ADDITIONAL COMPENSATION.
  - INSTALLATION OF ELECTRICAL SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE, NATIONAL ELECTRIC SAFETY CODE, OCCUPATIONAL SAFETY AND HEALTH ACT, AND APPLICABLE LOCAL CODES AND REGULATIONS.
  - WHERE FINISH OF THE EQUIPMENT OR STRUCTURE IS DAMAGED DURING CONSTRUCTION IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. FOR PAINTED SURFACES APPLY TWO COATS OF ORIGINAL PAINT.
  - PROVIDE TWO HARD COPY AND ONE SOFT COPY OF RECORD DRAWINGS AND O&M MANUALS THAT SHALL INCLUDE BUT NOT BE LIMITED TO WIRING DIAGRAMS, CONDUIT ROUTINGS, EQUIPMENT DETAILS, AND DEVIATIONS FROM THE CONSTRUCTION DRAWINGS. SOFT COPY FILES SHALL INCLUDE BOTH PDF AND AUTOCAD FORMATS AS APPLICABLE.
  - ELECTRICAL LAYOUT DRAWINGS ARE PARTIALLY DIAGRAMMATIC. INSTALL THE ELECTRICAL SYSTEMS WITHOUT INTERFERING WITH DUCTS, PIPES, STRUCTURAL STEEL OR OTHER SYSTEMS.
- EQUIPMENT
  - PROVIDE ADDITIONAL SUPPORTS FOR SWITCHES, PANELS, RACEWAYS AND OTHER ELECTRICAL EQUIPMENT WHEREVER THE BUILDING STRUCTURE IS NOT SUITABLE FOR DIRECT MOUNTING.
  - ALL MATERIAL AND ELECTRICAL EQUIPMENT SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
  - ALL SHOP PRIMED SURFACES SHALL BE THOROUGHLY CLEANED, AND SHALL BE TOUCHED UP WHERE DAMAGED OR MARKED, USING COMPATIBLE PRIMER.
  - PROVIDE THE VARIOUS SYSTEMS OF ELECTRICAL WORK SPECIFIED AND INDICATED ON THE DRAWINGS. THE SPECIFICATIONS AND DRAWINGS ARE NOT INTENDED TO COVER EVERY EQUIPMENT DETAIL. THE CONTRACTOR SHALL, HOWEVER FURNISH AND INSTALL ALL DEVICES AND APPURTENANCES WHICH ARE NECESSARY TO FULLY COMPLETE THE WORK EVEN IF SAID DETAILS ARE NOT SHOWN OR ARE NOT SPECIFIED IN DETAIL.
  - COORDINATE PANELBOARD COVER KEY REQUIREMENTS WITH COLLEGE LOCK SHOP PRIOR TO ORDER.
- WIRING METHODS
  - SIZE ALL PULL AND JUNCTION BOXES PER THE LATEST EDITION OF THE NEC. SIZE AND PROVIDE ALL PULLBOXES OR JUNCTION BOXES AS REQUIRED BY THE NEC.
  - COORDINATE PENETRATIONS AND ROUTINGS FOR CONDUITS WITH EQUIPMENT PROVIDED.
  - ALL OPEN ENDS OF CONDUITS WHERE WATER AND OTHER FOREIGN MATTER CAN ENTER INTO THE CONDUIT SYSTEM SHALL BE CAPPED UNTIL FINAL CONDUIT CONNECTIONS ARE COMPLETED. UNUSED CONDUIT OR CABLE ENTRIES IN EQUIPMENT, FITTINGS, JUNCTION BOXES, PULL BOXES, MANHOLES AND HANDHOLES SHALL BE CAPPED OR PLUGGED IN A MANNER CONSISTENT WITH THE AREA CLASSIFICATION IN WHICH THE ITEM IS LOCATED.
  - INSTALL ALL CABLING WITHIN MANUFACTURER'S PULLING TENSIONS AND RECOMMENDED INSTALLATION PROCEDURES. ANY CABLE FOUND DAMAGED AND/OR FAILING TO PERFORM TO MANUFACTURER'S SPECIFICATIONS SHALL BE REPLACED BY CONTRACTOR AT NO COST TO OWNER.
  - WHERE CONDUIT AND WIRING HAS NOT BEEN SHOWN, ON THE DRAWINGS THE ARRANGEMENT AND ROUTING OF ALL CIRCUITS WILL BE AT THE CONTRACTOR'S DISCRETION IN ACCORDANCE WITH GENERALLY ACCEPTED GOOD PRACTICES AND NEC REQUIREMENTS. ALL CONDUITS SHALL BE RUN PARALLEL AND PERPENDICULAR TO WALLS AND CEILING.
  - ALL RGS, IMC, AND EMT CONDUIT ENDS SHALL BE WELL REAMED AND BUSHINGS SHALL BE INSTALLED TO PREVENT DAMAGE TO WIRES. NEWLY CUT THREADS SHALL BE RE-GALVANIZED USING ZINC-RICH PAINT; SUCH PAINT SHALL BE APPLIED IMMEDIATELY AFTER CUTTING AND CLEANING THE THREADS.
- COORDINATION
  - COORDINATE ALL ELECTRICAL REQUIREMENT CHANGES FOR EQUIPMENT PROVIDED THAT IS DIFFERENT FROM THE BASIS OF DESIGN.
  - ALL REQUIRED POWER OUTAGES SHALL BE COORDINATED WITH OWNER AND UTILITY, AND WILL REQUIRE OVERTIME AND NON-STANDARD OR WEEKEND HOURS. BID SHALL INCLUDE PREMIUM AS REQUIRED. SHUTDOWNS SHALL BE ON WEEKDAYS BETWEEN 10PM AND 6AM OR ON WEEKENDS.
  - COORDINATE WORK PHASING WITH THE OWNER PRIOR TO ANY START OF CONSTRUCTION.
  - FURNISH, INSTALL, AND MAINTAIN ALL TEMPORARY POWER AND LIGHTING SYSTEMS NEEDED FOR CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER. THIS TEMPORARY SYSTEM SHALL INCLUDE WEATHER PROOF PANEL(S) FOR THE MAIN BREAKERS AND DISTRIBUTION SYSTEM. GROUND FAULT INTERRUPTING EQUIPMENT SHALL BE INSTALLED. ALL CONNECTIONS SHALL BE WATERTIGHT WITH WIRING INSTALLED USING TYPE SO PORTABLE CABLE. AFTER CONSTRUCTION IS COMPLETED, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY POWER EQUIPMENT AND DEVICES. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY POWER COST.
- FIELD ADJUST EXACT ROUTING OF CONDUIT TO COORDINATE WITH EXISTING UTILITIES, BUILDING FACILITIES, AND SITE OBSTRUCTIONS AS REQUIRED. DOCUMENT ALL ADJUSTMENTS ON THE AS-BUILT DRAWINGS.

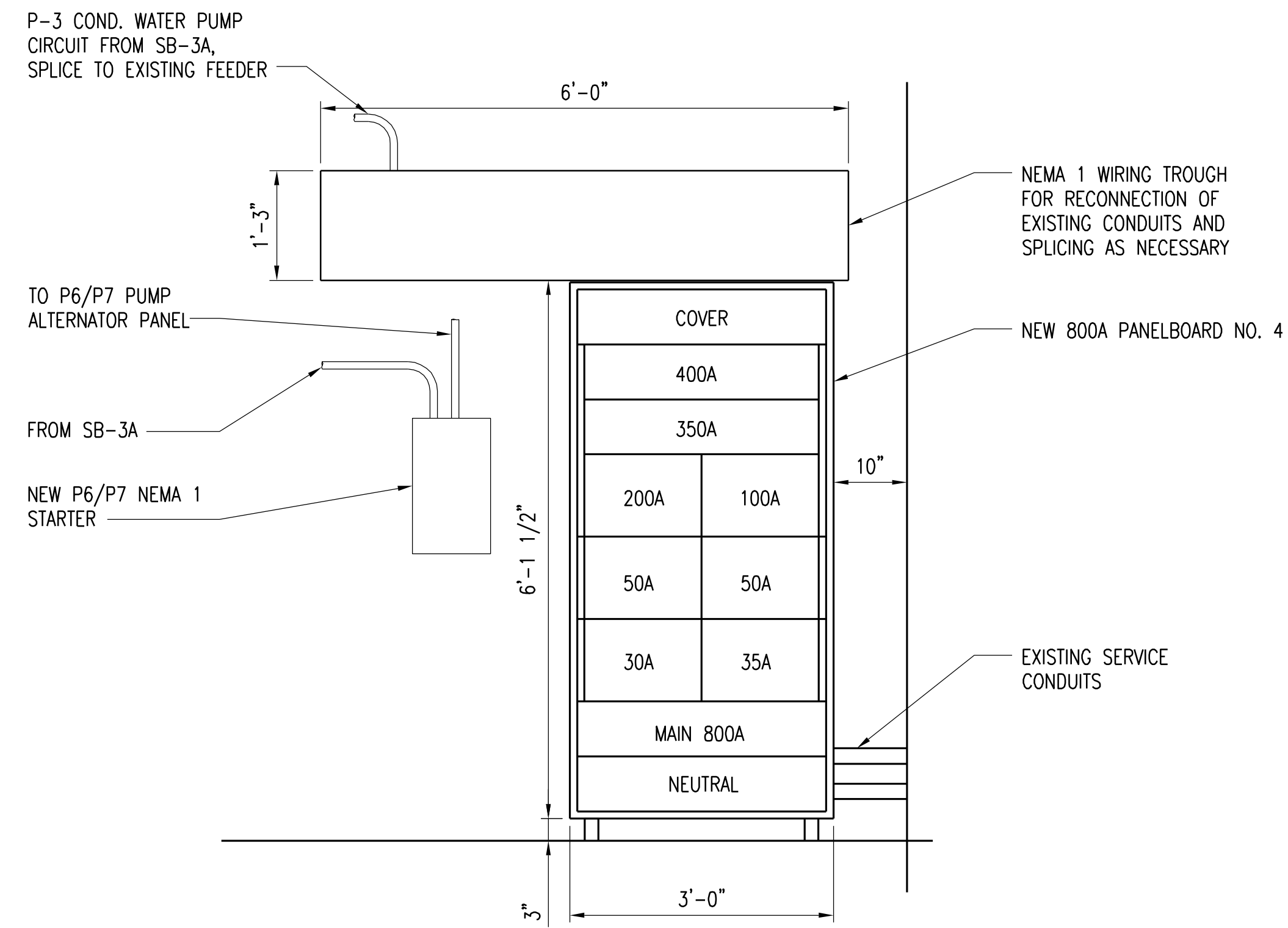


NO.	REVISIONS	DSGN	CHKD	APVD	DATE
<p><b>Stanley Consultants Inc.</b> 8501 West Higgins Road, Suite 730, Chicago, Illinois 60631-2801 www.stanleyconsultants.com</p>					
JOLIET JUNIOR COLLEGE SUB C MCC REPLACEMENT JOLIET, ILLINOIS					
<b>ELECTRICAL NOTES, SYMBOLS, &amp; LEGEND</b>					
Illinois Firm Registration No.: 184-001533					
DESIGNED	S. KOSS	SCALE: NO SCALE			
DRAWN	B. KOWALCZYKOWSKA	NO. 23778.02.00		REV.	
CHECKED	M. ZARGAR	EG01		0	
APPROVED	M. ZARGAR				
DATE	12-16-2011				





PROPOSED ONE LINE



SECTION A-E001  
EP01

SCALE: 3/4" = 1'-0"

KEYED NOTES:

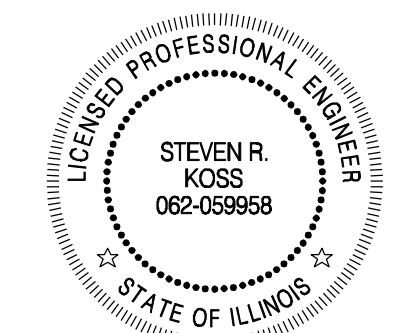
1. PROVIDE 2 SETS OF 4-1/C 500kcmil THHN IN EXISTING CONDUIT TO TRANSFORMER SECONDARY TERMINALS. PROVIDE CORE DRILL IN TRANSFORMER VAULT SLAB, GROUND ROD, AND 1/0 INSULATED COPPER GROUNDING ELECTRODE CONDUCTOR FOR BONDING TRANSFORMER NEUTRAL AS NECESSARY.
2. CONNECT AND SPLICE EXISTING FEEDERS INTO NEW WIRING TROUGH ABOVE NEW PANELBOARD. UTILIZE SAME CONDUIT AND WIRE SIZE AS EXISTING.
3. RELOCATE THREE FEEDERS TO PANELBOARD SB-3A. NEW CONDUIT SHALL BE 3/4" EMT AND #10 THHN WIRE. USE EXISTING 3-POLE BREAKERS.
4. PROVIDE NEW FEEDER FROM SB-3A (PER KEYED NOTE 3) TO LOCALLY MOUNTED NEMA 1 FVNR STARTER. STARTER SHALL HAVE A RED RUNNING PILOT LIGHT, PUSH BUTTON START, AND HAND-OFF-AUTO SWITCH.

PANEL: EXISTING SB-3A		LOCATION: SUB CENTRAL PLANT C	
VOLTAGE (V): 480Y/277		PHASE: 3	
BUS RATING (A):		WIRE SERVICE: 4	
MAIN BREAKER (A): YES		ENCLOSURE TYPE: 1	
MINIMUM AIC (kA):		MOUNTING: SURFACE	
		IG BUS: NO	
		SERVICE ENTRANCE: NO	
		FEED THRU LUGS: NO	
		PANEL SOURCE: SB-3A	
		SOURCE LOCATION: TRANSFER SW	
		SPD (L-N, L-G, N-G): NO	

NOTES	WIRING REQUIREMENT	BRANCH CIRCUIT LOAD DESCRIPTION	CONN. LOAD (VA)	CIRCUIT BREAKERS			CONN. LOAD (VA)	BRANCH CIRCUIT LOAD DESCRIPTION	WIRING REQUIREMENT	NOTES				
				CB	SPACE#	CB								
③	3-#10, #10 GND	P-6 HEATING WATER PUMP		30/3	1 A	2	30/3	P-3 CONDENSING WATER PUMP	3-#10, #10 GND	③				
				3	B	4								
				5	C	6								
③	3-#10, #10 GND	AIR COMPRESSOR		30/3	7 A	8	100/3	SPARE (PREV. GREENHOUSE)						
				9	B	10								
				11	C	12								
				13	A	14								
		TRANSFORMER SB-3		100/3	13 A	14	30/3	DRIER (FUTURE)						
				15	B	16								
				17	C	18								
				19	A	20								
				20/1	21 B	22					20/1	SPARE		
				20/1	23 C	24								
				20/1	25 A	26								
				27	B	28								
				29	C	30								
						SPARE						31	A	32
33	B	34												
35	C	36												
37	A	38												
39	B	40												
		SPARE		41	C	42								
				TOTAL (KVA)										
SUB-TOTAL LEFT SIDE (KVA)							SUB-TOTAL RIGHT SIDE (KVA)							

RELOCATION OF 3 CIRCUITS TO PANEL SB-3A



EXP. 11-30-2013

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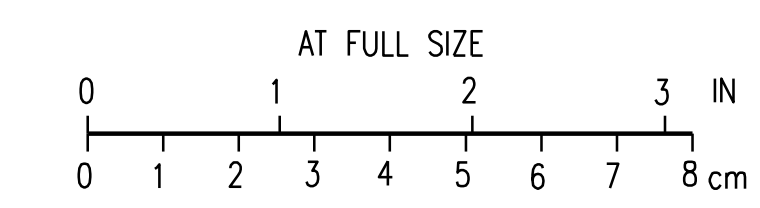
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

JOLIET JUNIOR COLLEGE  
SUB C MCC REPLACEMENT  
JOLIET, ILLINOIS

ONE LINE AND DETAILS

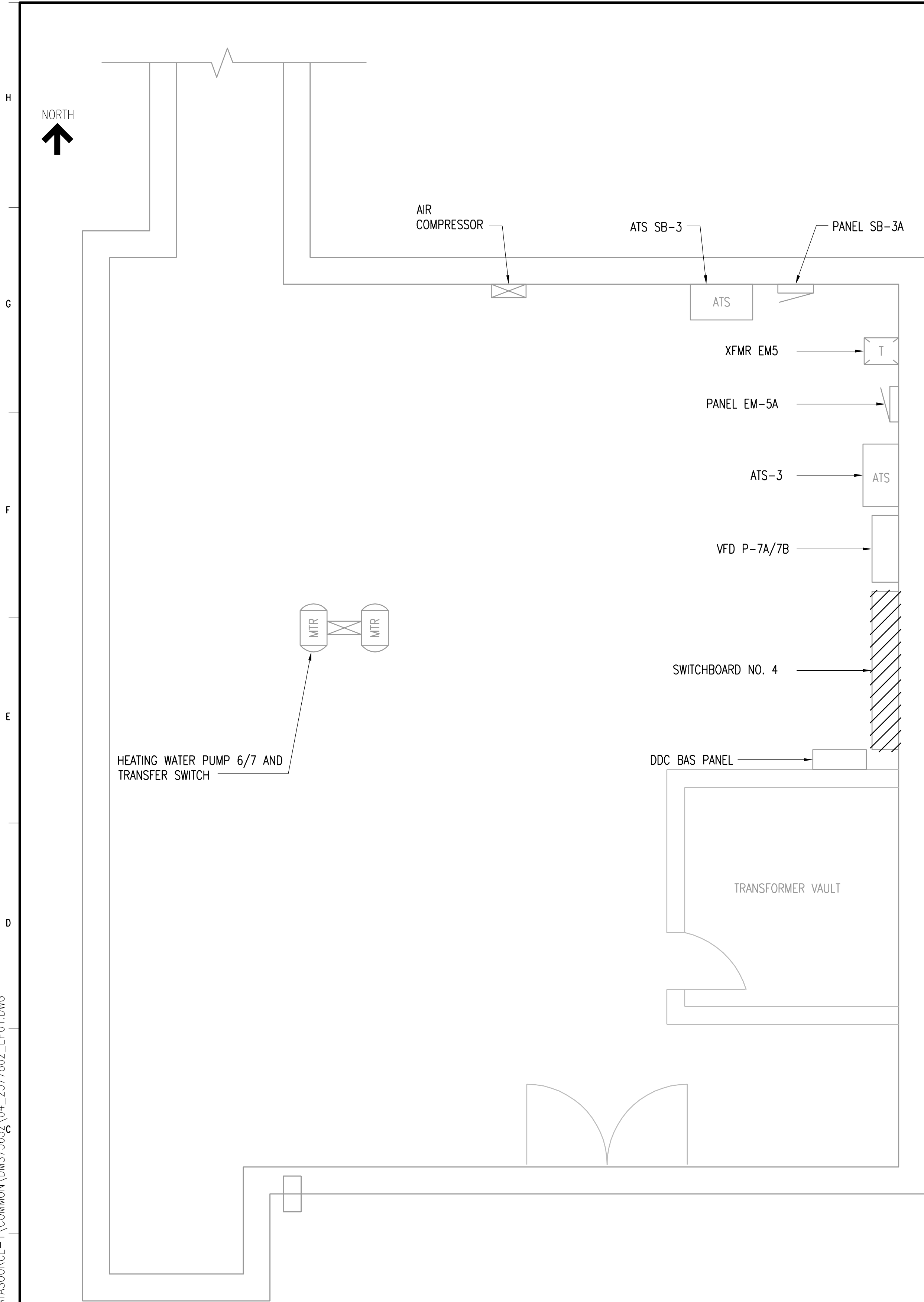
Illinois Firm Registration No.: 184-001533

DESIGNED: S. KOSS	SCALE: AS NOTED
DRAWN: B. KOWALCZYKOWSKA	NO. 23778.02.00
CHECKED: M. ZARGAR	REV. 0
APPROVED: M. ZARGAR	
DATE: 12-16-2011	

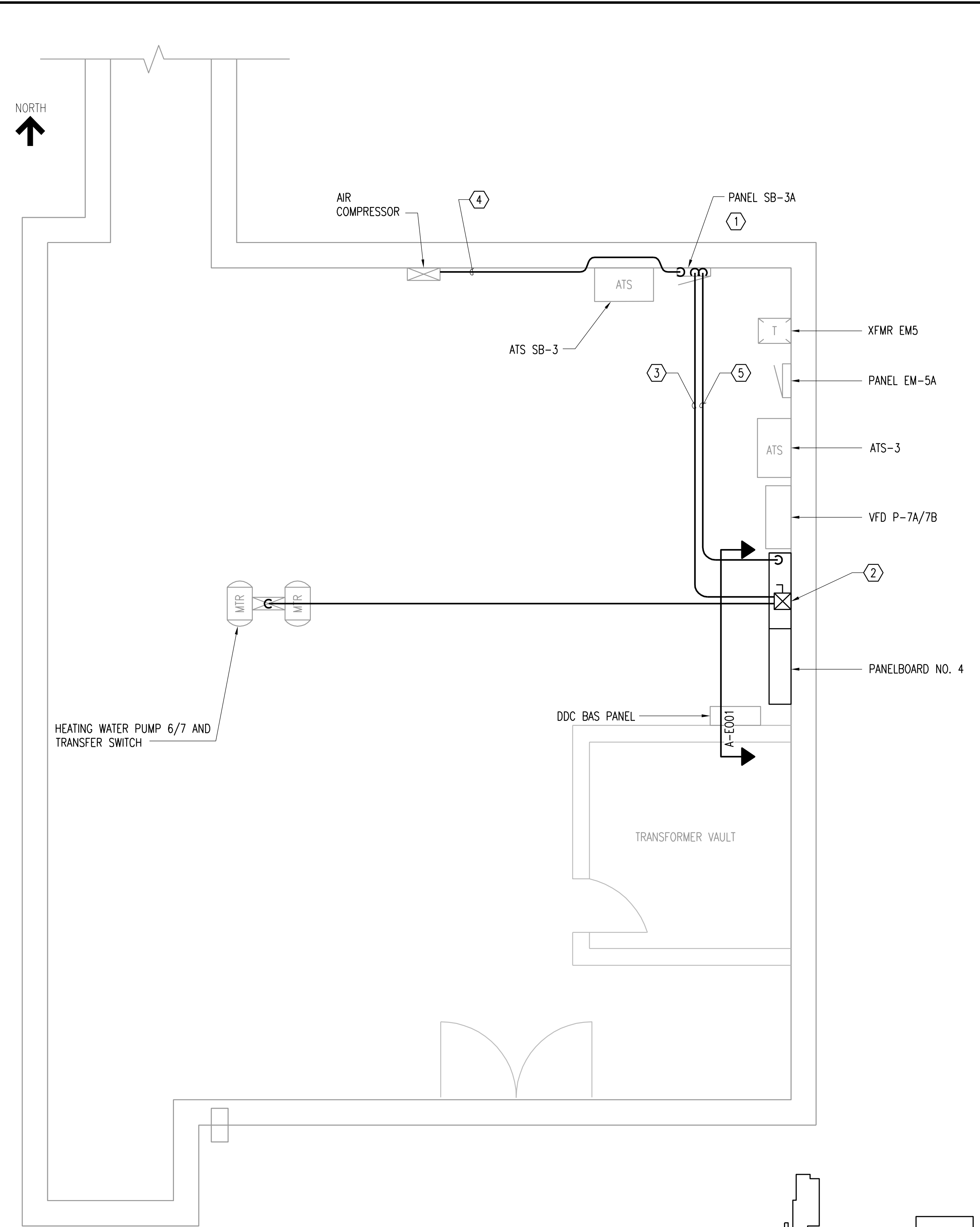


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**SUB CENTRAL PLANT "C" - DEMOLITION**  
SCALE: 3/8" = 1'-0"

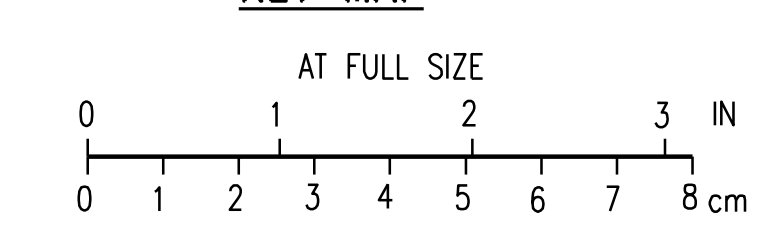
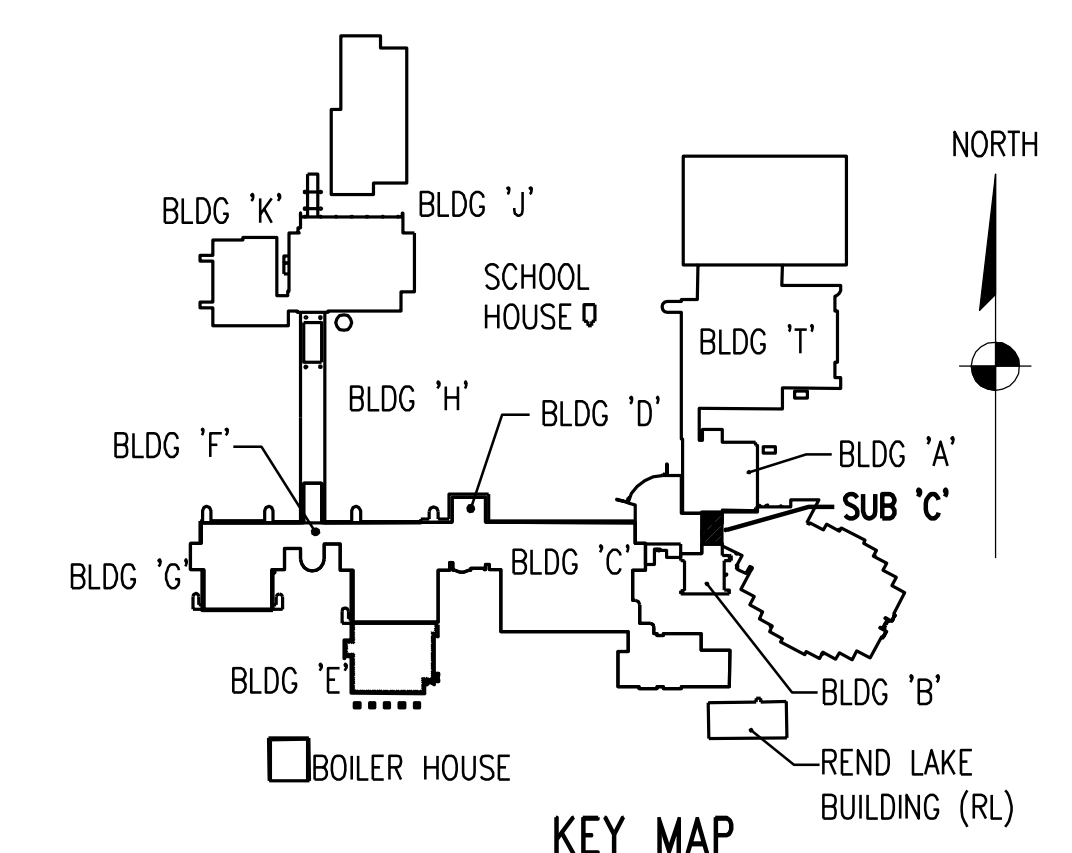


**SUB CENTRAL PLANT "C" - PROPOSED**  
SCALE: 3/8" = 1'-0"

- KEYED NOTES:**
1. RELOCATE THREE FEEDERS TO PANEL SB-3A.
  2. PROVIDE NEW LOCAL STARTER FOR PUMP 6/7.
  3. PROVIDE NEW FEEDER FROM PANEL SB-3A TO NEW LOCAL STARTER.
  4. PROVIDE NEW FEEDER FROM PANEL SB-3A TO AIR COMPRESSOR.
  5. PROVIDE NEW FEEDER FROM PANEL SB-3A TO WIRING TROUGH. SPLICE TO EXISTING CONDENSING PUMP P-3 CIRCUIT.



EXP. 11-30-2013  
*Steven R. Koss*



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 SUB C MCC REPLACEMENT  
 JOLIET, ILLINOIS**

**ELECTRICAL PLANS**

Illinois Firm Registration No.: 184-001533

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