

PROJECT NAME: IN076 ICTC– REPLACE BACKUP CHILLER & UPS UNITS
OWNER NAME: INDIANA UNIVERSITY
IU PROJECT NO. 20231522 / CES PROJECT NO. 2024-007.ICT
ADDENDUM NO. 2
DATED: NOVEMBER 26, 2024

This Addendum consists of 1 Addendum page and 1 attachment pages totaling 2 pages. This Addendum shall supplement, amend, and become part of the Bid Documents. All Bids shall be based on these modifications. Bidders shall acknowledge the receipt of this addendum on their Bid Form.

PART 1 - CHANGES TO THE PROJECT MANUAL

Modifications described herein shall be incorporated in the Project Manual. All other Work shall remain unchanged.

PART 2 - CHANGES TO THE DRAWINGS

Modifications described herein shall be incorporated in the Drawings. All other Work shall remain unchanged.

2.1 E-SERIES DRAWINGS

A. Drawing Number EP101

1. DELETE AND REPLACE Drawing in its entirety.

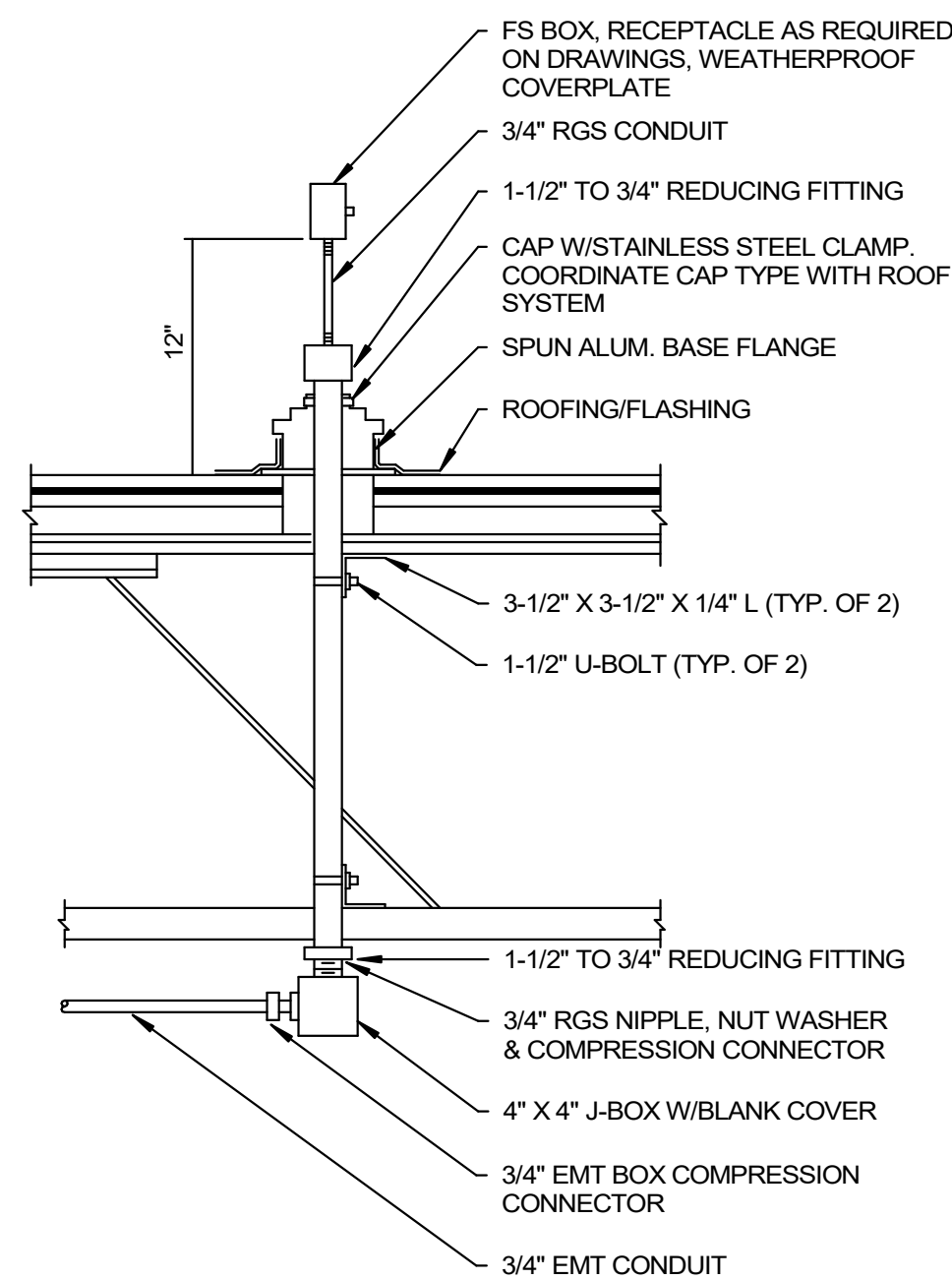
Added general note to coordinate with Schneider Electric and provide a complete and operational system.

END OF ADDENDUM NO. 1

ENCLOSED SWITCHES & CIRCUIT BREAKERS SCHEDULE										
LABEL	EQUIPMENT SERVED	EQUIPMENT RATINGS				ACCESSORIES		REMARKS		
		VOLTAGE	POLES	AMPERAGE	FUSED	FUSE SIZE	NEMA ENCL.			
DS-1	CH-1	600 V	3	600 A	Yes	450		(1) N.O. / N.C.	No	DISCONNECT BY MANUFACTURE. COORDINATE FUSE SIZE AND TYPE WITH MANUFACTURE.
DS-2	CU-1A	600 V	3	30 A	Yes	30	3R	(1) N.O. / N.C.	No	DISCONNECT BY MANUFACTURE. COORDINATE FUSE SIZE AND TYPE WITH MANUFACTURE.
DS-3	CU-1B	600 V	3	30 A	Yes	30	3R	(1) N.O. / N.C.	No	DISCONNECT BY MANUFACTURE. COORDINATE FUSE SIZE AND TYPE WITH MANUFACTURE.
DS-4	CU-1C	600 V	3	30 A	Yes	30	3R	(1) N.O. / N.C.	No	DISCONNECT BY MANUFACTURE. COORDINATE FUSE SIZE AND TYPE WITH MANUFACTURE.
DS-5	EF-CH1	600 V	3	30 A	Yes	20	3R	(1) N.O. / N.C.	No	DISCONNECT BY MANUFACTURE. COORDINATE FUSE SIZE AND TYPE WITH MANUFACTURE.

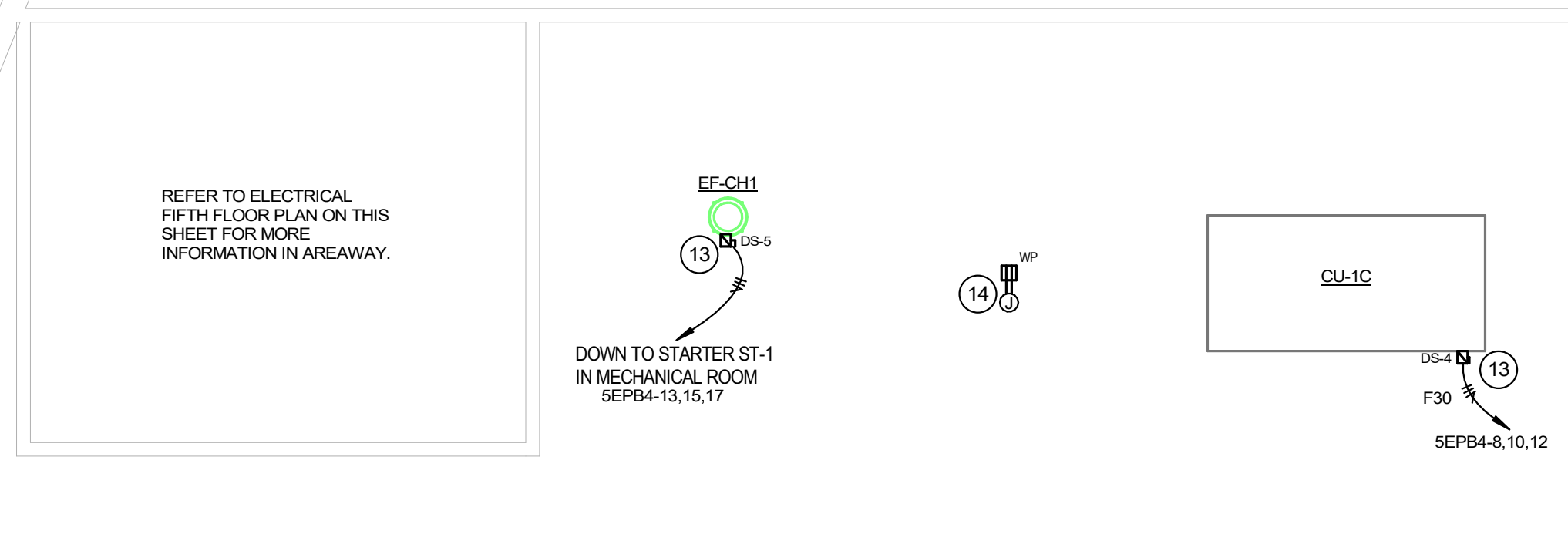
ENCLOSED & VARIABLE-FREQUENCY MOTOR CONTROLLERS SCHEDULE										
LABEL	EQUIPMENT SERVED	EQUIPMENT RATINGS				STARTER	DISCONNECT SWITCH		REMOTE CAPACITOR	REMARKS
		VOLTAGE	PHASE	HP	FLA	NEMA ENCL.	TYPE	NEMA SIZE	FUSE SIZE	
ST-1	EF-CH1	480 V	3	3/4	1.6 A	1	FVNR	1	3.2	

BRANCH PANELBOARD SCHEDULE												
CKT NO.	DESCRIPTION	ROOM #	TRIP	P	VOLTS: 480Y/277 V			P	TRIP	ROOM #	DESCRIPTION	CKT NO.
					A	B	C					
X 11	CH-1	MECHA...	450 A	3	104.48	5.82			3	30 A	AREA...	CU-1A
-- 3	--	--	--	--	104.48	5.82			--	--	--	4
-- 5	--	--	--	--	104.48	5.82			--	--	--	6
7	CU-1B	AREA...	30 A	3	5.82	5.82			3	30 A	ROOF	CU-1C
-- 9	--	--	--	--	5.82	5.82			--	--	--	10
-- 11	--	--	--	--	5.82	5.82			--	--	--	12
13	EF-1	MECHA...	20 A	3	0.44	0.00			3	20 A		SPARE
-- 15	--	--	--	--	0.44	0.00			--	--	--	16
-- 17	--	--	--	--	--	--			--	--	--	18
TOTAL LOAD:					122.38 kVA	122.38 kVA		0.44	0.00			
TOTAL AMPS:					442 A	442 A						
TOTAL CONNECTED LOAD:					367.14 kVA				367.14 kVA	TOTAL DEMAND LOAD:		
TOTAL CONNECTED AMPS:					442 A				442 A	TOTAL DEMAND AMPS:		
PANELBOARD & CIRCUIT BREAKER OPTIONS					LOAD CLASSIFICATION		CONNECTED LOAD (VA)		DEMAND FACTOR		ESTIMATE DEMAND (VA)	
C CONTACTOR CONTROLLED					Mechanical - Motor		367139 VA		100.00%		367139 VA	
G GFCI PROTECTED												
P HANDLE LOCKING DEVICE												
S SHUNT TRIP												
X 80% RATED CIRCUIT BREAKER WITH LSI												
Y 100% RATED CIRCUIT BREAKER WITH LSI												
Z 100% RATED CIRCUIT BREAKER WITH LSI												
No FEED THROUGH LUGS (FTL)												
SUB FEED LUGS (SFL)												

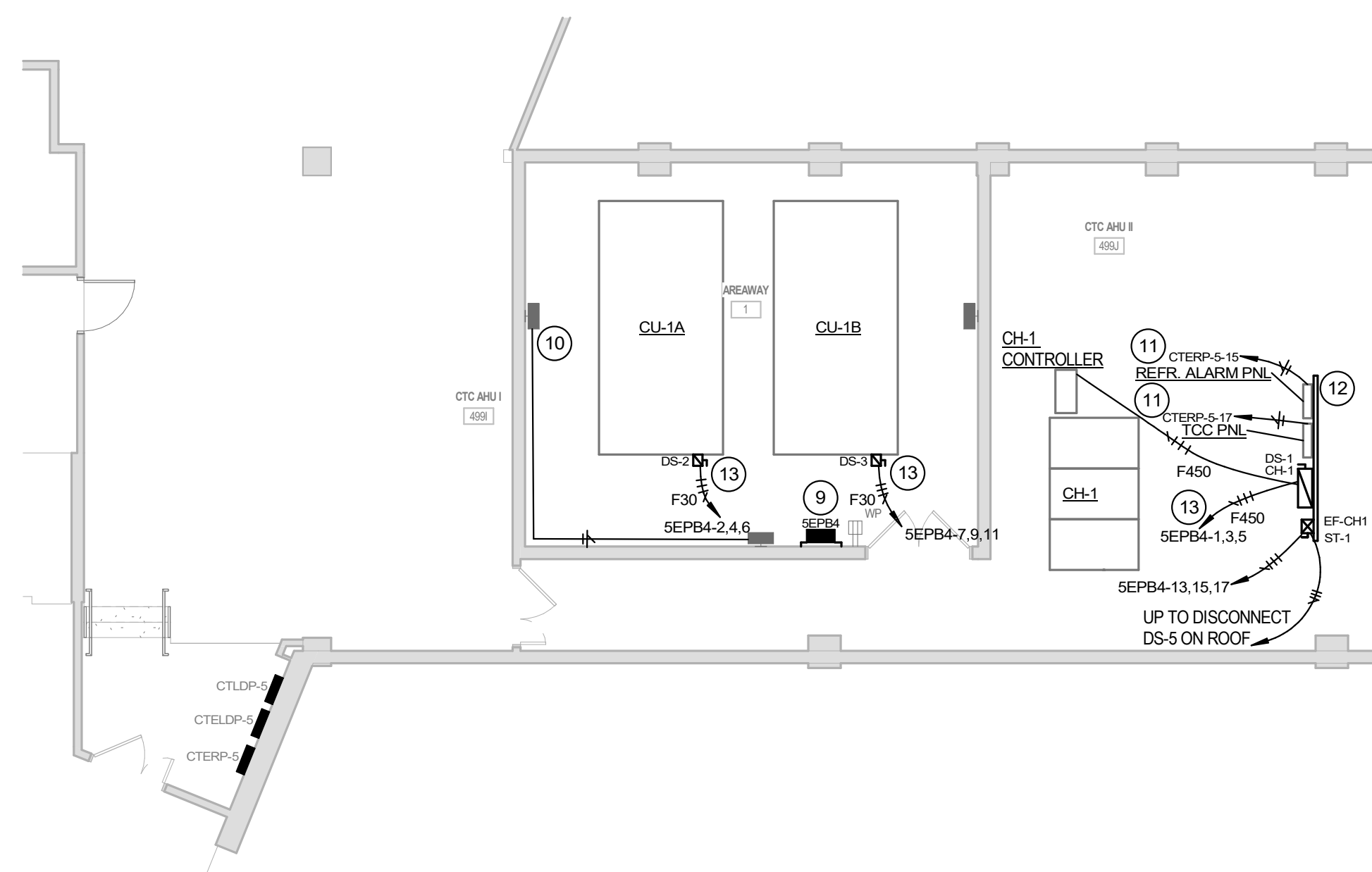


NOTE:
STRUCTURAL DETAIL SHOWN IS TO BE REPRESENTATIVE ONLY. REFER TO ARCHITECTURAL DRAWINGS AND STRUCTURAL DRAWINGS FOR ACTUAL CONDITIONS ON THIS PROJECT.

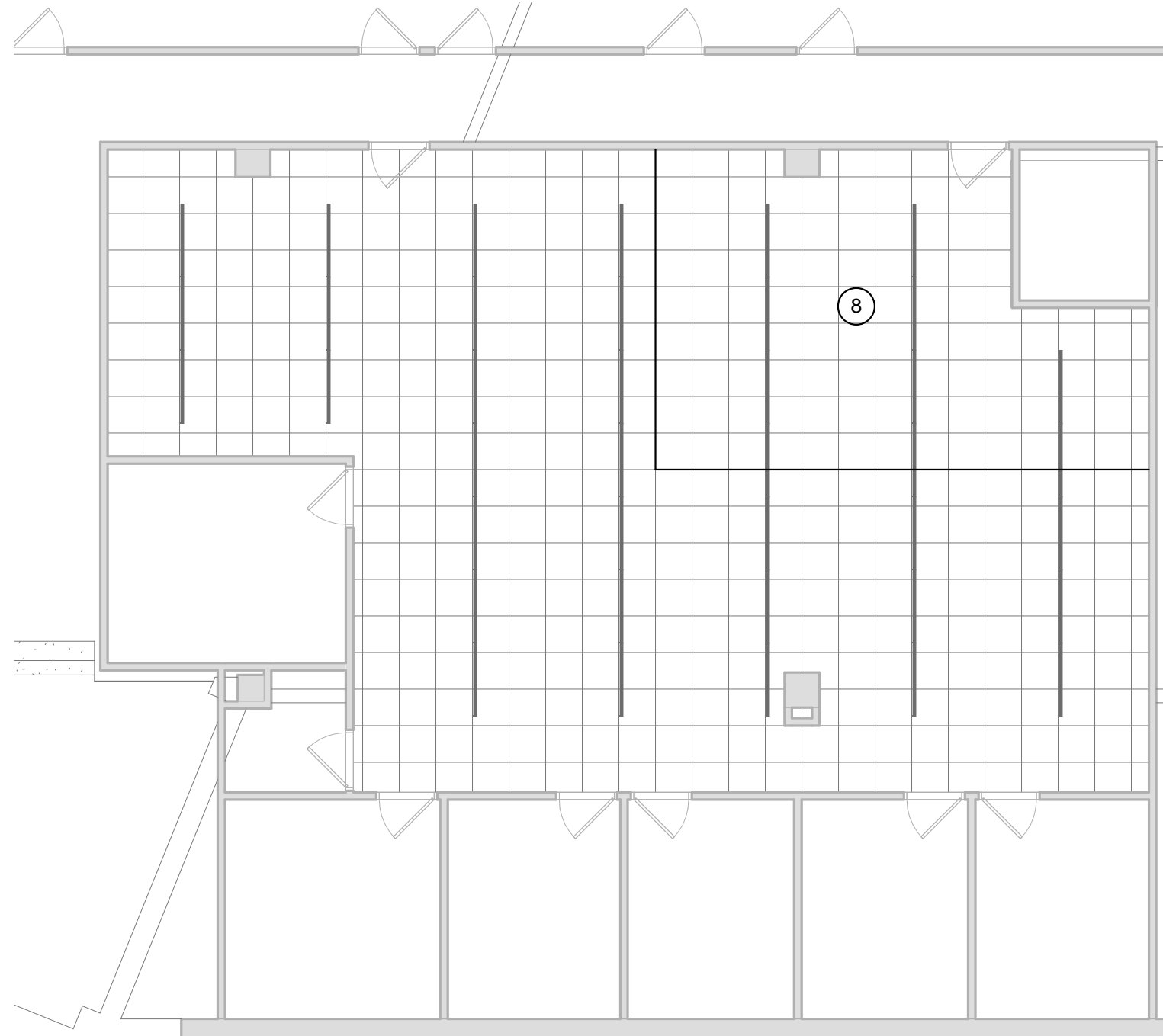
6 ROOF MOUNTED RECEPTACLE MOUNTING DETAIL
1/8" = 1'-0"



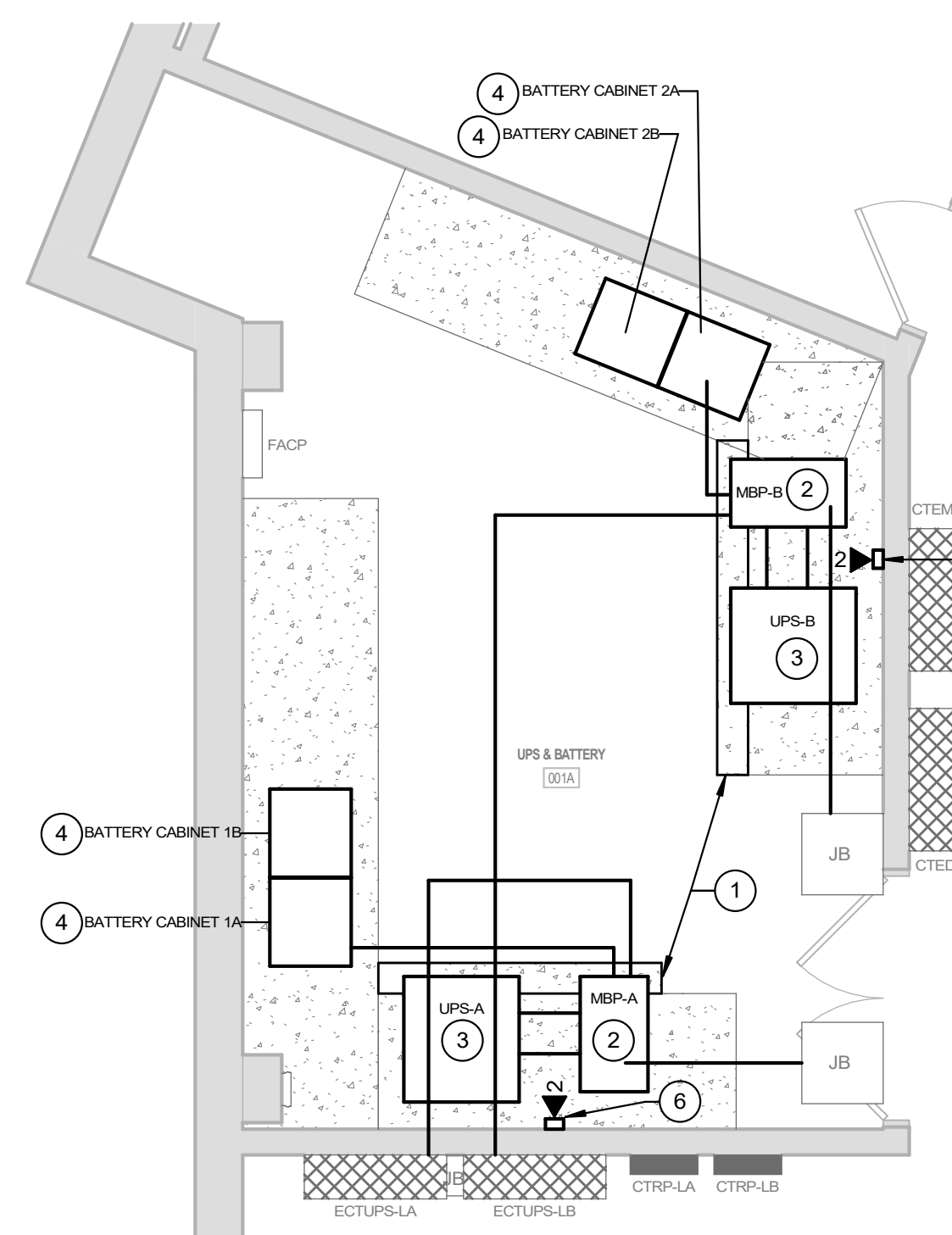
5 ELECTRICAL ROOF PLAN
1/8" = 1'-0"



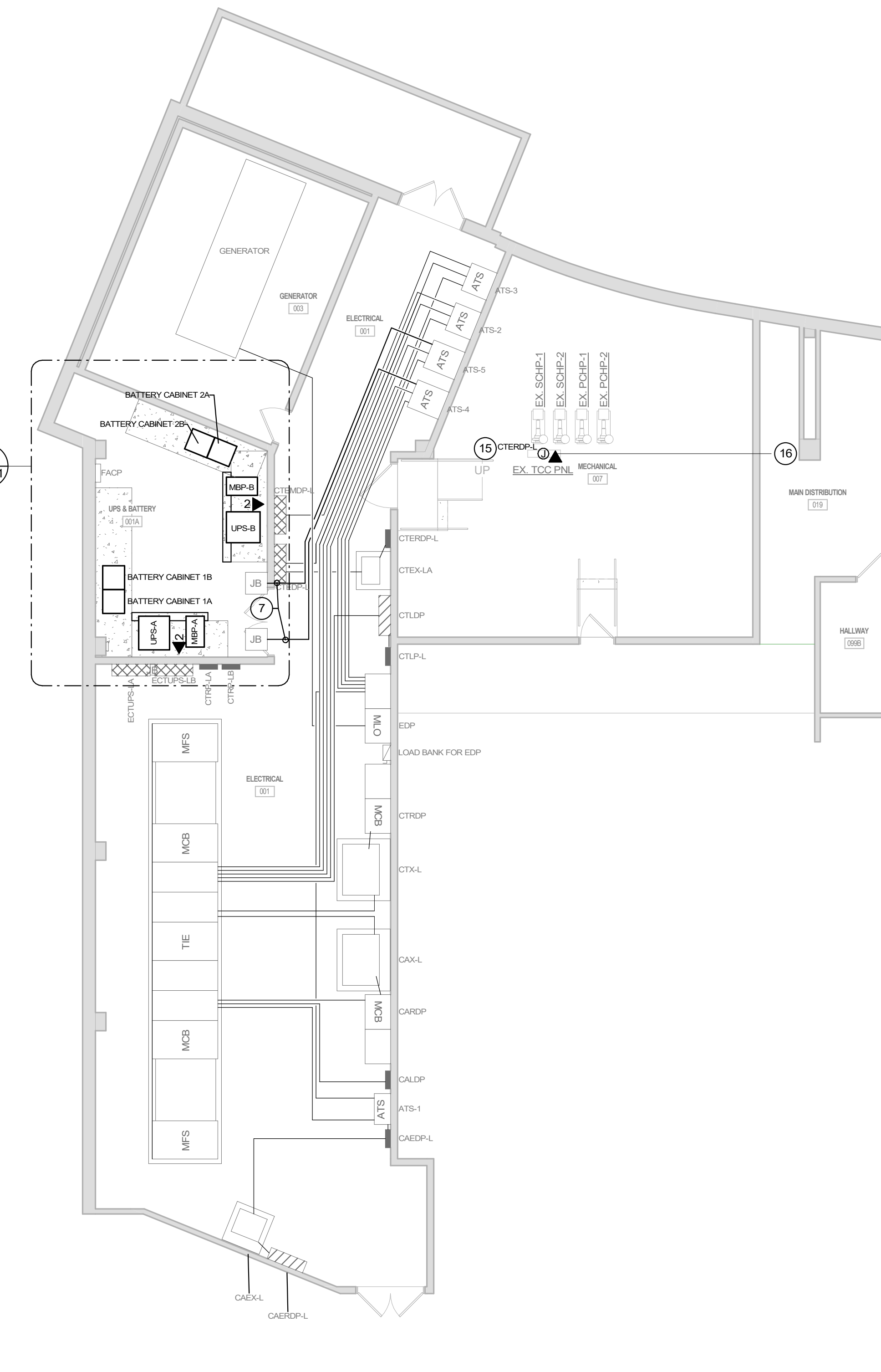
4 ELECTRICAL FIFTH FLOOR PLAN
1/8" = 1'-0"



3 ELECTRICAL FOURTH FLOOR PLAN
1/8" = 1'-0"



2 ELECTRICAL GROUND FLOOR UPS AND BATTERY ROOM PLAN
1/4" = 1'-0"



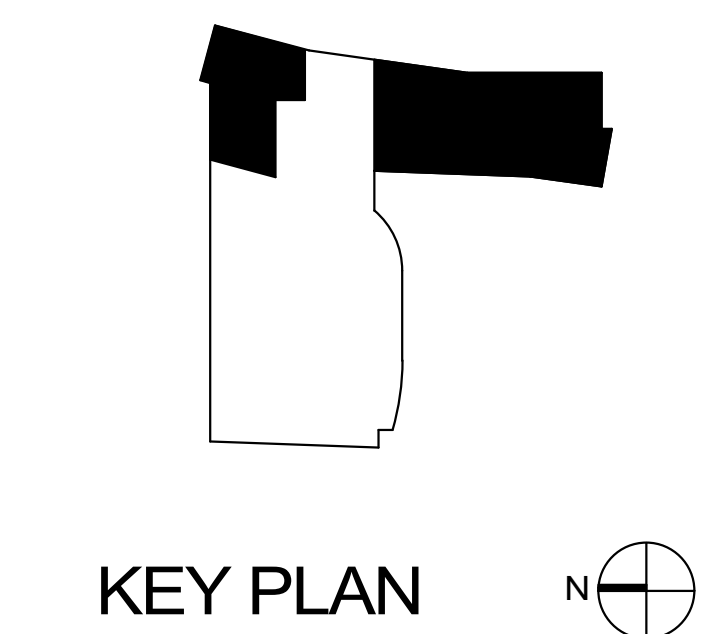
1 ELECTRICAL GROUND FLOOR PLAN
1/8" = 1'-0"

- ### GENERAL POWER NOTES
- REFER TO ELECTRICAL SYMBOLS AND ABBREVIATIONS SHEET E-001 FOR ADDITIONAL INFORMATION.
 - PROVIDE A GEAR SUBMITTAL FOR GENERAL APPROVAL PRIOR TO CONDUCTING STUDIES. IMPLEMENT RECOMMENDATIONS TO ELECTRICAL GEAR FOR FINAL APPROVAL AFTER STUDIES ARE COMPLETED AND APPROVED.
 - DESIGN IS ASSIGNED BY CM BUCK. COORDINATE WITH DAVE BUNCH AT DBUNCH@CMBUCK.COM. RESPONSIBLE FOR ALL COORDINATION AND ADJUSTMENTS AS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.
 - COORDINATE WITH SCHNEIDER ELECTRIC THE INTEGRATION OF THIS PROJECT WITH EPMS AT BLOOMINGTON. PROVIDE ALL NECESSARY HARDWARE, INSTALLATION, SOFTWARE MODIFICATIONS, AND UPDATE ALL EXISTING SYSTEM DRAWINGS IN BID.
- ### POWER PLAN NOTES
- EXTEND CONCRETE PAD WITH FIBERGLASS REINFORCED CONCRETE. DRILL INTO EXISTING CONCRETE PAD FOR PINS AND EPOXY. MATCH LEVEL OF EXISTING CONCRETE PAD TO NEW CONCRETE. COORDINATE SIZE OF CONCRETE PAD EXTENSION WITH APPROVED SUBMITTALS.
 - PROVIDE FLOOR MOUNTED EXTERNAL MAINTENANCE BYPASS BY ASCO GALAXY VI SERIES 400KW RATED OR EQUAL. PROVIDE MAXIMUM MONITORING POINTS.
 - PROVIDE FLOOR MOUNTED UPS BY ASCO GALAXY VI SERIES 400KW RATED OR EQUAL. PROVIDE A 1-1/2" CONDUIT FROM UPS TO DATA CENTER WITH CONDUCTORS FOR COMMUNICATION. COORDINATE LOCATION AND MONITORING POINTS WITH OWNER FOR UP TO 150 FEET. PROVIDE MAXIMUM MONITORING POINTS.
 - PROVIDE FLOOR MOUNTED LITHIUM ION BATTERY BY ASCO GALAXY VI SERIES 400KW RATED OR EQUAL. COMMUNICATIONS SHALL BE MODBUS AND ETHERNET. COORDINATE COMMUNICATION PROTOCOLS WITH OWNER. PROVIDE MAXIMUM MONITORING POINTS.
 - LEVEL EDGE OF CONCRETE EQUIPMENT PAD TO MATCH EXISTING CONCRETE EQUIPMENT PAD.
 - PROVIDE SURFACE MOUNTED DATA OUTLET FOR MONITORING UPS. CONNECT TO TELECOM ROOM ON FIRST FLOOR UP TO 200 FEET.
 - PROVIDE CONDUCTORS IN EXISTING CONDUIT.
 - REINSTALL CEILING MOUNTED DEVICES IN NEW CEILING.
 - PROVIDE PANELBOARD. INSTALL PANELBOARD ON UNISTRUT. EXTEND CONDUIT AND CONDUCTORS FROM REMOVED DISCONNECT TO PANELBOARD.
 - PROVIDE POWER CONNECTION TO LIGHT FIXTURE.
 - PROVIDE POWER CONNECTION. COORDINATE WITH SPARE CIRCUIT BREAKER IN PANELBOARD INDICATED.
 - PROVIDE UNISTRUT RACK. COORDINATE SIZE WITH EQUIPMENT INDICATED.
 - PROVIDE POWER CONNECTION. COORDINATE LOCATION OF DISCONNECT WITH EQUIPMENT.
 - PROVIDE SERVICE RECEPTACLE. CONNECT TO GENERAL PURPOSE RECEPTACLE CIRCUIT IN MECHANICAL ROOM BELOW. REFER TO DETAIL 6 ON THIS SHEET FOR MORE INFORMATION.
 - PROVIDE POWER CONNECTION TO TEMPERATURE CONTROL PANEL. COORDINATE LOCATION FOR POWER CONNECTION WITH DIVISION 23. PROVIDE 20A/120V CIRCUIT BREAKER IN PANELBOARD INDICATED.
 - PROVIDE 1-1/4" EMT CONDUIT FROM TCC PANEL TO CABLE TRAY IN MDF 010. COORDINATE TERMINATION OF HORIZONTAL CABLING WITH DATA CENTER.



20231522 - IN076 ICTC - REPLACE BACKUP CHILLER & UPS UNITS
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#	REVISION	DATE
2	ADDENDUM 2	11/26/2024

JOB NO. 2024-007.1CT
PRODUCED BY B.J. / D.L.J.
DATE 10/23/2024