

ADDENDUM E-1

January 7, 2025

Ramsey County Courthouse
Electrical System Upgrade
Devils Lake, ND

Project #24062

PRAIRIE ENGINEERING, P.C.
1905 17th Street SE
MINOT, NORTH DAKOTA

THIS ADDENDUM SHALL BECOME A PART OF THE PLANS AND SPECIFICATIONS AND ITS RECEIPT SHALL BE NOTED ON THE BID FORM.

ATTACHMENTS: This Addendum includes the following attached Drawings:

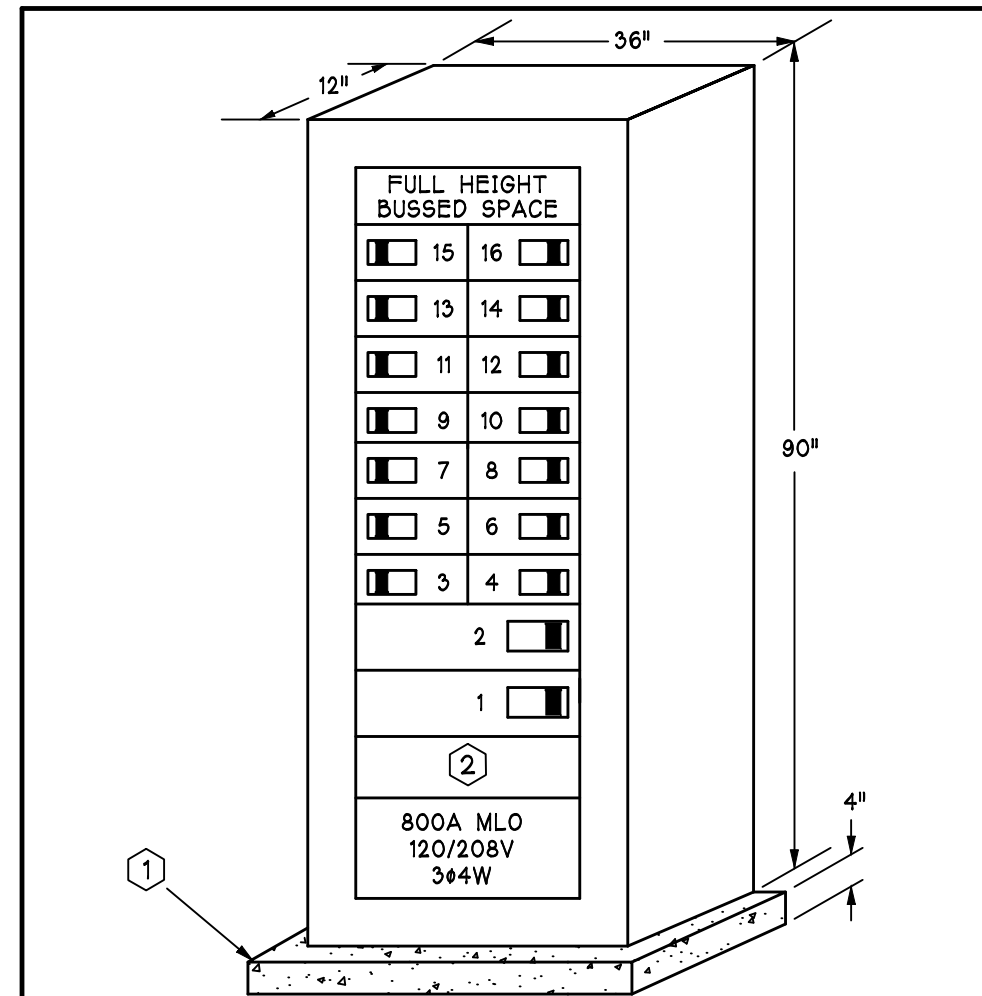
1. E2.1
2. E2.2

DRAWING ITEM #1. Detail 1/E2.1 and 1/E2.2

- A. Existing feeder to Chilled Water Pumps 1&2 from Unit Sub shall be refed from new MDP. Pumps are located in the Maintenance Room.

DRAWING ITEM #2. Detail 3/E2.1

- A. Change Circuit Breaker #1 to 700/3 in lieu of 600/3.
- B. Add Circuit Breaker #15 – 100/3 spare.
- C. Add Circuit Breaker #16 – 70/3 Chilled Water Pumps 1&2.



MDP ELEVATION
NO SCALE

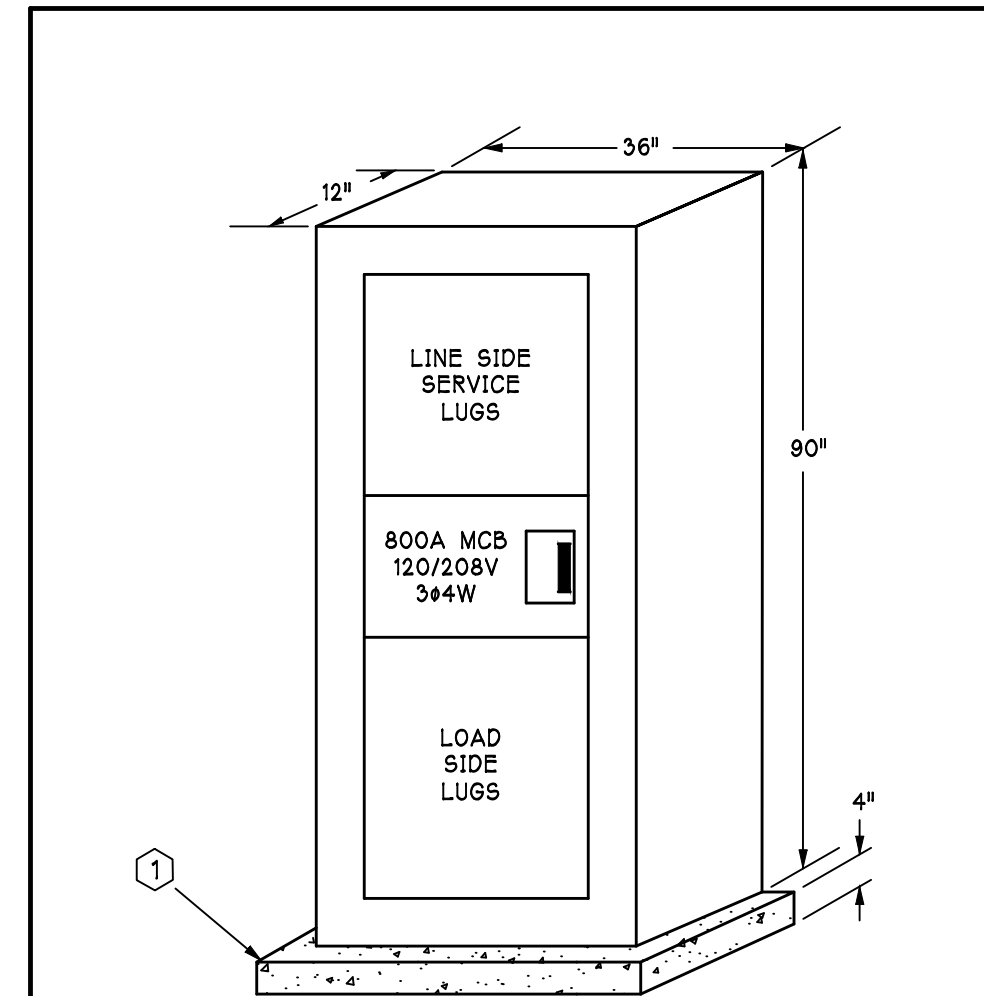
- NOTES:**
- ① CONCRETE PAD AS PER SPECIFICATION 262416.
 - ② INTEGRAL 160ka SPD.

MDP SCHEDULE
EATON POW-R-LINE 4

DESIG.	LOAD SERVED	TYPE	SIZE
1	CHILLER	CB	700/3
2	PANEL L	CB	400/3
3	PANEL A	CB	200/3
4	PANEL B	CB	200/3
5	PANEL F	CB	200/3
6	PANEL H	CB	200/3
7	SPARE	CB	200/3
8	SPARE	CB	200/3
9	PANEL C	CB	100/3
10	PANEL D	CB	125/3
11	PANEL E	CB	100/3
12	PANEL G	CB	100/3
13	PANEL J	CB	100/3
14	SPARE	CB	100/3
15	SPARE	CB	100/3
16	CWP-12	CB	70/3

PANEL A SCHEDULE
120/208 VOLTS 3 PH 4 W 225 A MLO SURFACE MOUNTED
EATON POW-R-LINE SERIES

DESCRIPTION	CKT BKR	GF CI	QTY #	PH	CKT BKR	GF CI	QTY #	PH	DESCRIPTION
EXISTING	20/1	1	A	2	20/1				EXISTING
EXISTING	20/1	3	B	4	20/1				EXISTING
EXISTING	20/1	5	C	6	20/1				EXISTING
EXISTING	20/1	7	A	8	20/1				EXISTING
EXISTING	20/1	9	B	10	20/1				EXISTING
EXISTING	20/1	11	C	12	20/1				EXISTING
EXISTING	20/1	13	A	14	20/1				EXISTING
EXISTING	19/3	15	B	16	20/1				EXISTING
EXISTING	-	17	C	18	30/2				EXISTING
EXISTING	-	19	A	20	-				EXISTING
EXISTING PNL X	20/2	21	B	22	15/1				EXISTING PNL A1
EXISTING PNL X	-	23	C	24	25/1				EXISTING PNL A1
EXISTING PNL X	20/1	25	A	26	20/1				EXISTING PNL A1
EXISTING PNL X	20/1	27	B	28	20/1				EXISTING PNL A1
PUMP 1	20/3	29	C	30	20/1				EXISTING PNL A1
PUMP 1	-	31	A	32	20/1				SPARE
PUMP 1	-	33	B	34	20/1				SPARE
SPARE	20/1	35	C	36	20/1				SPARE
SPARE	20/1	37	A	38	20/1				SPARE
SPARE	20/1	39	B	40	20/1				SPARE
SPARE	20/1	41	C	42	20/1				SPARE

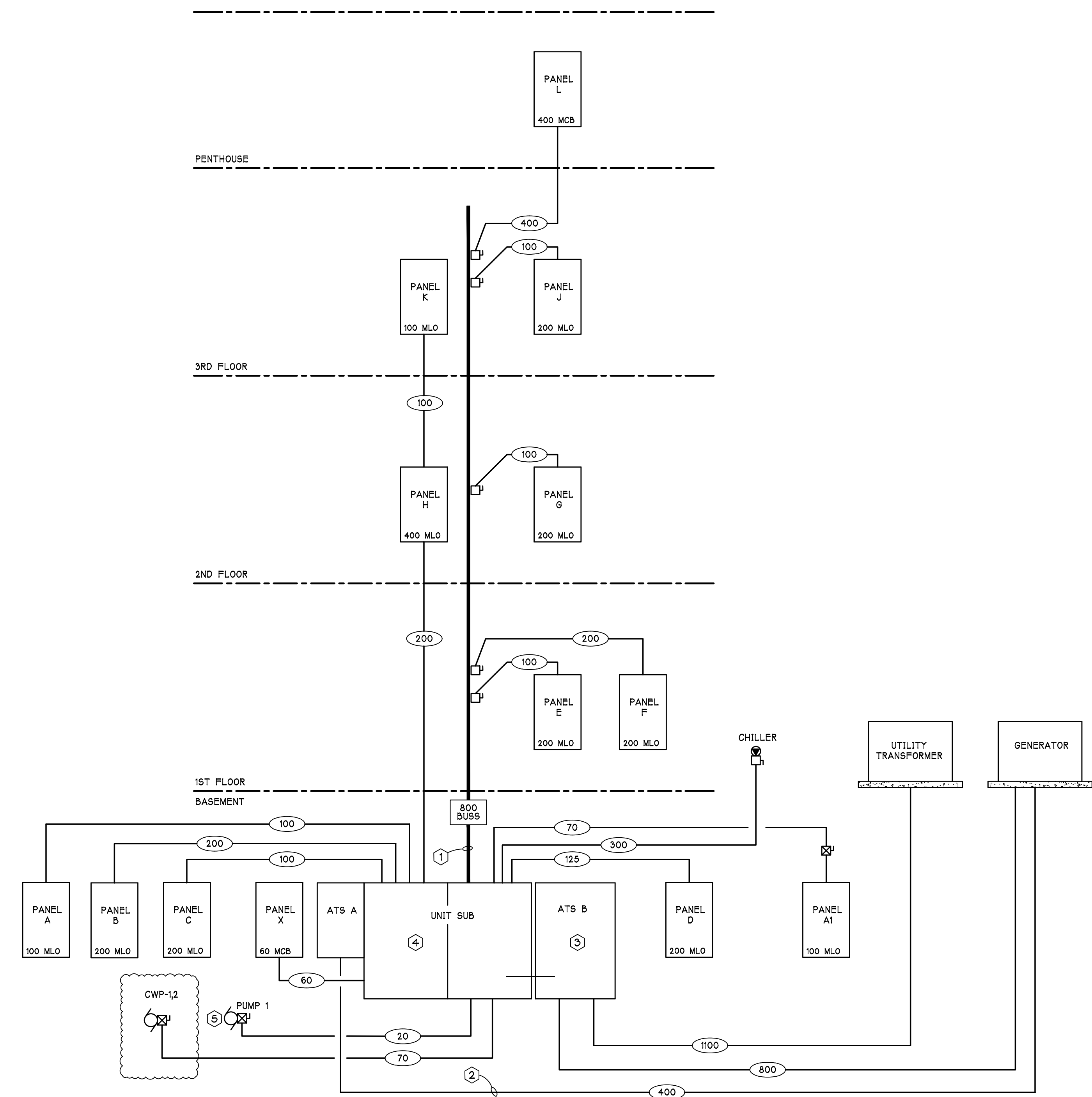


MCB ELEVATION
NO SCALE

- NOTES:**
- ① CONCRETE PAD AS PER SPECIFICATION 262416.

PANEL H SCHEDULE
120/208 VOLTS 3 PH 4 W 225 A MLO SURFACE MOUNTED
AMERICAN MIDWEST POWER RETROFIT
INTO EXISTING RECESSED BACKBOX

DESCRIPTION	CKT BKR	GF CI	QTY #	PH	CKT BKR	GF CI	QTY #	PH	DESCRIPTION
SPARE	20/1	1	A	2	100/3				PANEL K
SPARE	20/1	3	B	4	-				PANEL K
EXISTING	20/1	5	C	6	-				PANEL K
EXISTING	20/1	7	A	8	20/1				EXISTING
EXISTING	20/1	9	B	10	20/1				EXISTING
EXISTING	20/1	11	C	12	20/1				EXISTING
EXISTING	20/1	13	A	14	20/1				EXISTING
EXISTING	20/1	15	B	16	20/1				EXISTING
EXISTING	20/1	17	C	18	20/1				EXISTING
EXISTING	20/1	19	A	20	20/1				EXISTING
EXISTING	20/1	21	B	22	20/1				EXISTING
EXISTING	20/1	23	C	24	25/1				EXISTING
EXISTING	20/1	25	A	26	20/1				EXISTING
EXISTING	20/1	27	B	28	20/1				EXISTING
EXISTING	20/1	29	C	30	20/1				EXISTING
EXISTING	20/1	31	A	32	20/1				EXISTING
EXISTING	20/1	33	B	34	20/1				EXISTING
EXISTING	20/1	35	C	36	20/1				EXISTING
EXISTING	20/1	37	A	38	20/1				EXISTING
EXISTING	20/1	39	B	40	20/1				EXISTING
EXISTING	20/1	41	C	42	20/1				EXISTING



EXISTING RISER
NO SCALE

- NOTES:**
- ① COMPLETELY REMOVE BUSS DUCT SYSTEM AFTER THE PANELS HAVE BEEN RE-FED FROM THE NEW MDP.
 - ② REMOVE ATS-A GENERATOR FEEDER TO GREATEST EXTENT POSSIBLE. ELIMINATE ANY ASSOCIATED GENERATOR CONTROL WIRING.
 - ③ RELOCATE ATS-B. SEE DETAIL 1/E2.2. EXTEND ALL GENERATOR CONTROL CIRCUITRY AS REQUIRED.
 - ④ COMPLETELY REMOVE UNIT SUB, MCB, ATS-A, AND OTHER ASSOCIATED EQUIPMENT AFTER THE DISTRIBUTION SYSTEM HAS BEEN RE-FED FROM THE NEW MDP.
 - ⑤ RE-FED PUMP 1 FROM NEW PANEL A.

DRAWN BY JLH
CHECKED BY JLH
JOB NO. 24062
DATE DEC. 2024

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RAMSEY COUNTY COURTHOUSE
ELECTRICAL SYSTEM UPGRADE
DEVILS LAKE, NORTH DAKOTA

EXISTING RISER

- SUGGESTED CONSTRUCTION SEQUENCE**
1. SET THE NEW MCB AND MDP IN PLACE ON NEW HOUSEKEEPING PAD.
 2. SCHEDULED OUTAGE #1:
 - DE-ENERGIZE ELECTRIC SERVICE. DISCONNECT SERVICE FEEDER FROM UNIT SUB AND RE-TERMINATE IN MCB.
 - RELOCATE ATS-B.
 - INSTALL NEW FEEDERS BETWEEN ATS-B, MCB, AND MDP.
 - RE-TERMINATE GENERATOR FEEDER TO ATS-B.
 - PROVIDE TEMPORARY WIRING FROM MDP TO UNIT SUB.
 - RE-ENERGIZE ELECTRIC SERVICE.
 NOTE: IT MAY BE POSSIBLE TO UTILIZE ATS-A TO KEEP PART OF THE BUILDING OPERATIONAL DURING THIS OUTAGE.
 3. ONCE THE NEW MDP IS ON-LINE, COORDINATE LOCALIZED OUTAGES WITH THE OWNER FOR EXTENDING EACH INDIVIDUAL DISTRIBUTION FEEDER FROM THE UNIT SUB AND BUSS DUCT TO THE MDP, ONE-BY-ONE.
 4. AFTER ALL DISTRIBUTION SYSTEM EQUIPMENT HAS BEEN TRANSFERRED OVER TO THE NEW MDP, SCHEDULE A SHORT OUTAGE TO REMOVE THE TEMPORARY FEEDER.
 5. REMOVE THE OLD EQUIPMENT NO LONGER IN USE.

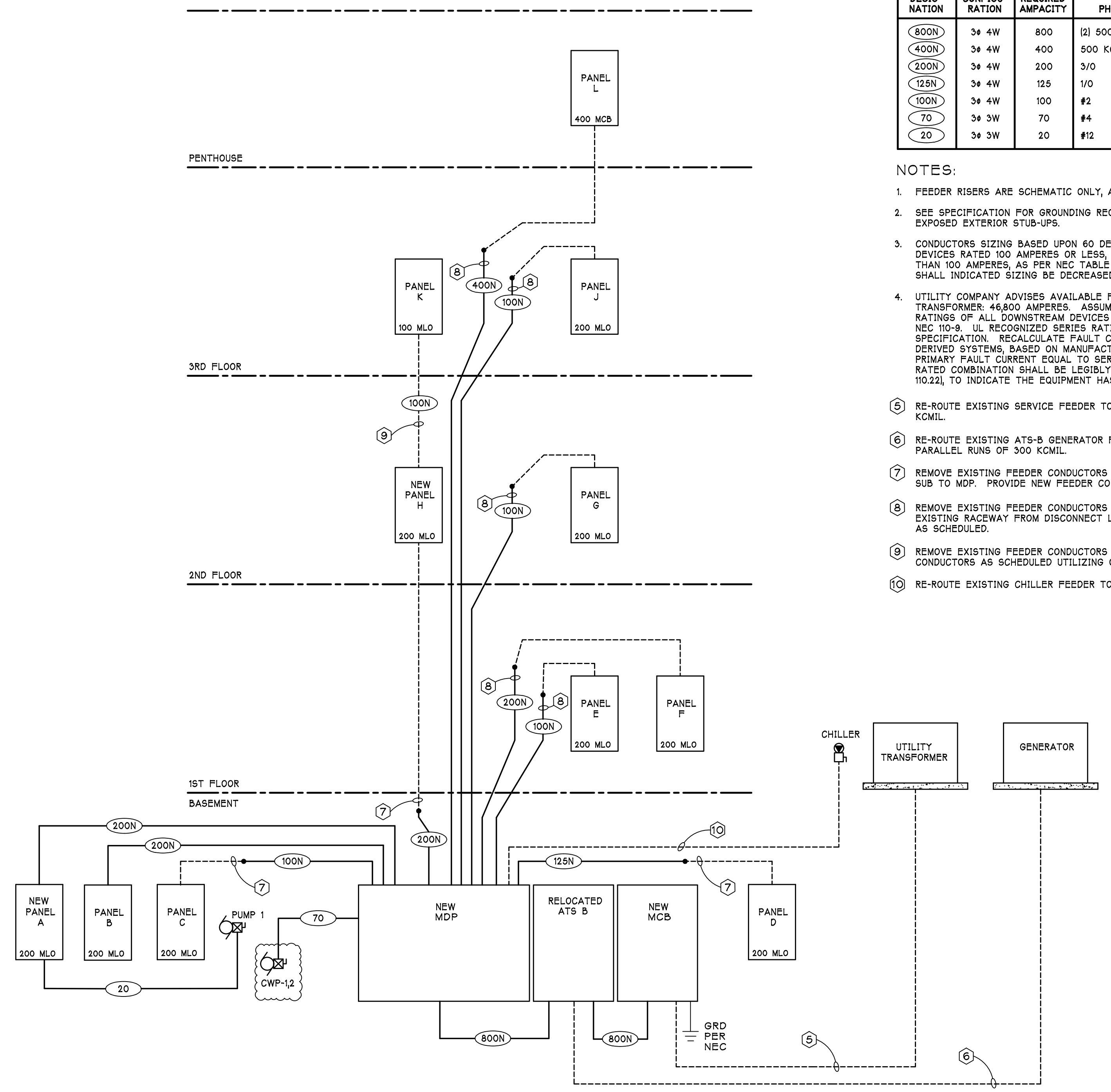
FEEDER SCHEDULE

DESIGNATION	CONFIGURATION	REQUIRED AMPACITY	CONDUCTOR SIZE (NOTE 3)			CONDUIT
			PHASE	NEUTRAL	EGC	
(800N)	3ø 4W	800	(2) 500 KCMIL	(2) 500 KCMIL	(2) #3	(2) 3-1/2"
(400N)	3ø 4W	400	500 KCMIL	500 KCMIL	#3	3-1/2"
(200N)	3ø 4W	200	3/0	3/0	#6	2"
(125N)	3ø 4W	125	1/0	1/0	#6	1-1/2"
(100N)	3ø 4W	100	#2	#2	#8	1-1/4"
(70)	3ø 3W	70	#4	NR	#8	1"
(20)	3ø 3W	20	#12	NR	#12	3/4"

NOMENCLATURE:
 400 N S - 1
 AMPACITY
 N - NEUTRAL REQ'D
 BLANK NOT REQ'D
 SPECIALTY INDICATOR
 S - SERVICE FEEDER
 1- SINGLE PHASE
 BLANK3-PHASE

NOTES:

1. FEEDER RISERS ARE SCHEMATIC ONLY, AND NOT INTENDED TO INFER LUG ARRANGEMENTS.
 2. SEE SPECIFICATION FOR GROUNDING REQUIREMENTS, ALLOWABLE PVC USAGE, AND ALLOWABLE EXPOSED EXTERIOR STUB-UPS.
 3. CONDUCTORS SIZING BASED UPON 60 DEGREE TERMINATIONS FOR OVERCURRENT PROTECTIVE DEVICES RATED 100 AMPERES OR LESS, AND 75 DEGREE TERMINATIONS FOR RATINGS GREATER THAN 100 AMPERES, AS PER NEC TABLE 310.16, 240.4, 310.15(B2), AND 310.15(B4). IN NO CASE SHALL INDICATED SIZING BE DECREASED.
 4. UTILITY COMPANY ADVISES AVAILABLE FAULT CURRENT AT SECONDARY TERMINALS OF THEIR TRANSFORMER: 46,800 AMPERES. ASSUME SAME RATING AT SERVICE MAIN. SIZE INTERRUPTING RATINGS OF ALL DOWNSTREAM DEVICES IN ACCORDANCE WITH AVAILABLE FAULT CURRENT AS PER NEC 110-8. UL RECOGNIZED SERIES RATINGS ACCEPTABLE WITH MINIMUM RATINGS AS PER SPECIFICATION. RECALCULATE FAULT CURRENT AT SECONDARY TERMINALS OF SEPARATELY DERIVED SYSTEMS, BASED ON MANUFACTURERS TRANSFORMER IMPEDANCE ASSUMING AVAILABLE PRIMARY FAULT CURRENT EQUAL TO SERVICE MAIN. EQUIPMENT THAT IS PART OF A SERIES RATED COMBINATION SHALL BE LEGIBLY MARKED IN THE FIELD BY THE CONTRACTOR AS PER NEC 110.22), TO INDICATE THE EQUIPMENT HAS BEEN APPLIED WITH A SERIES COMBINATION RATING.
- (5) RE-ROUTE EXISTING SERVICE FEEDER TO NEW MCB. FEEDER IS 3 PARALLEL RUNS OF 500 KCMIL.
 (6) RE-ROUTE EXISTING ATS-B GENERATOR FEEDER TO NEW ATS-B LOCATION. FEEDER IS 3 PARALLEL RUNS OF 300 KCMIL.
 (7) REMOVE EXISTING FEEDER CONDUCTORS COMPLETELY. EXTEND EXISTING RACEWAY FROM UNIT SUB TO MDP. PROVIDE NEW FEEDER CONDUCTORS AS SCHEDULED.
 (8) REMOVE EXISTING FEEDER CONDUCTORS FROM BUSS DUCT DISCONNECT TO PANEL. EXTEND EXISTING RACEWAY FROM DISCONNECT LOCATION TO MDP. PROVIDE NEW FEEDER CONDUCTORS AS SCHEDULED.
 (9) REMOVE EXISTING FEEDER CONDUCTORS FROM BOTH RACEWAYS AND PROVIDE NEW FEEDER CONDUCTORS AS SCHEDULED UTILIZING ONE EXISTING RACEWAY.
 (10) RE-ROUTE EXISTING CHILLER FEEDER TO NEW MDP LOCATION. FEEDER IS 2 PARALLEL RUNS.



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UPGRADED RISER