

Ishpeming Housing Commission

Ishpeming, Michigan

Pioneer Bluff Apartments

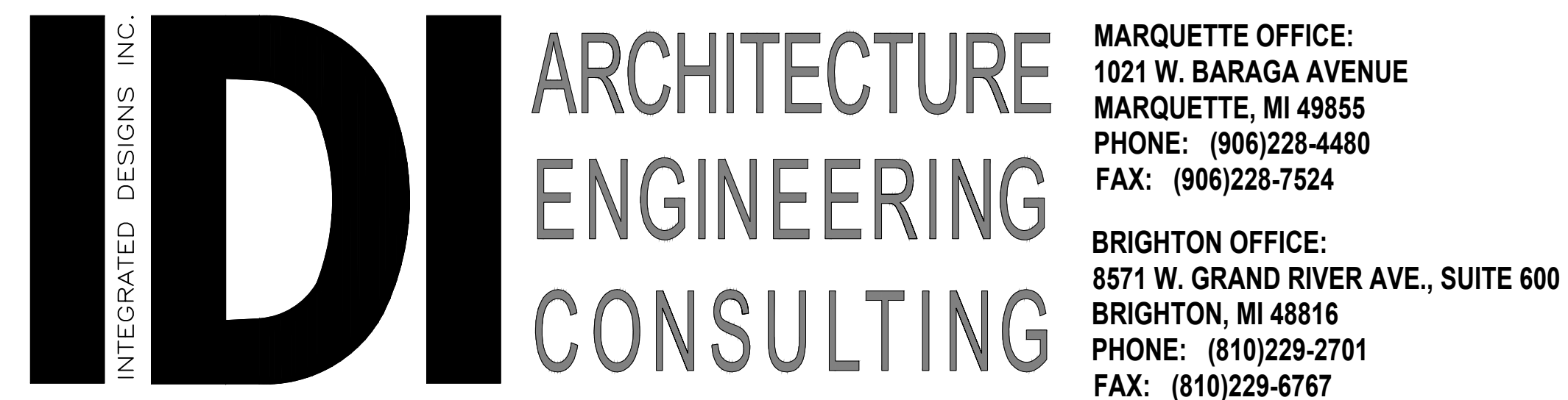
Generator Installation

Project Location: 111 Bluff Street, Ishpeming, MI 49849

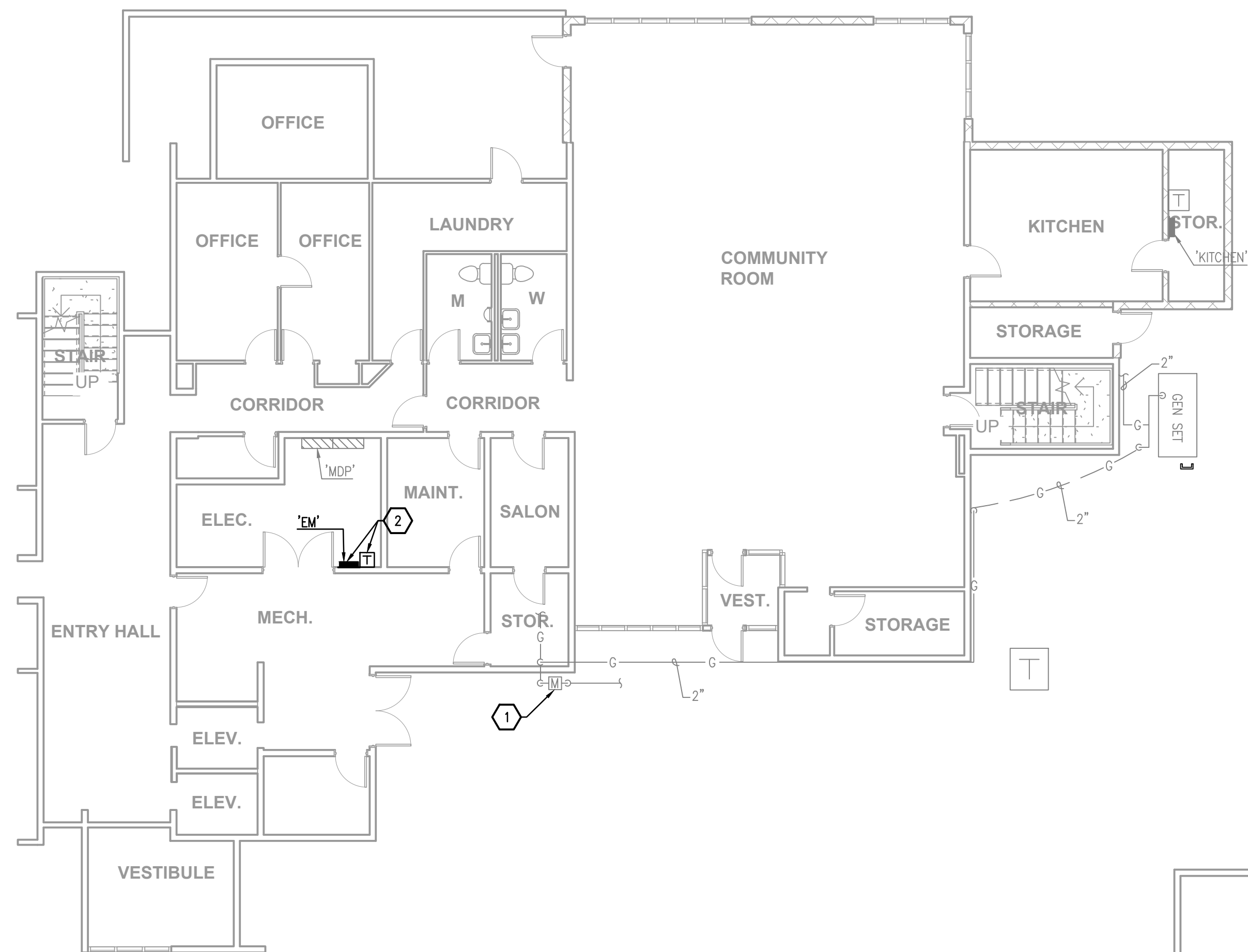
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COVER	
ME1.0	LOWER LEVEL MECHANICAL – ELECTRICAL PLAN
ME2.0	MECHANICAL – ELECTRICAL SCHEDULES AND DETAILS

Issued for Bids: June 8, 2022

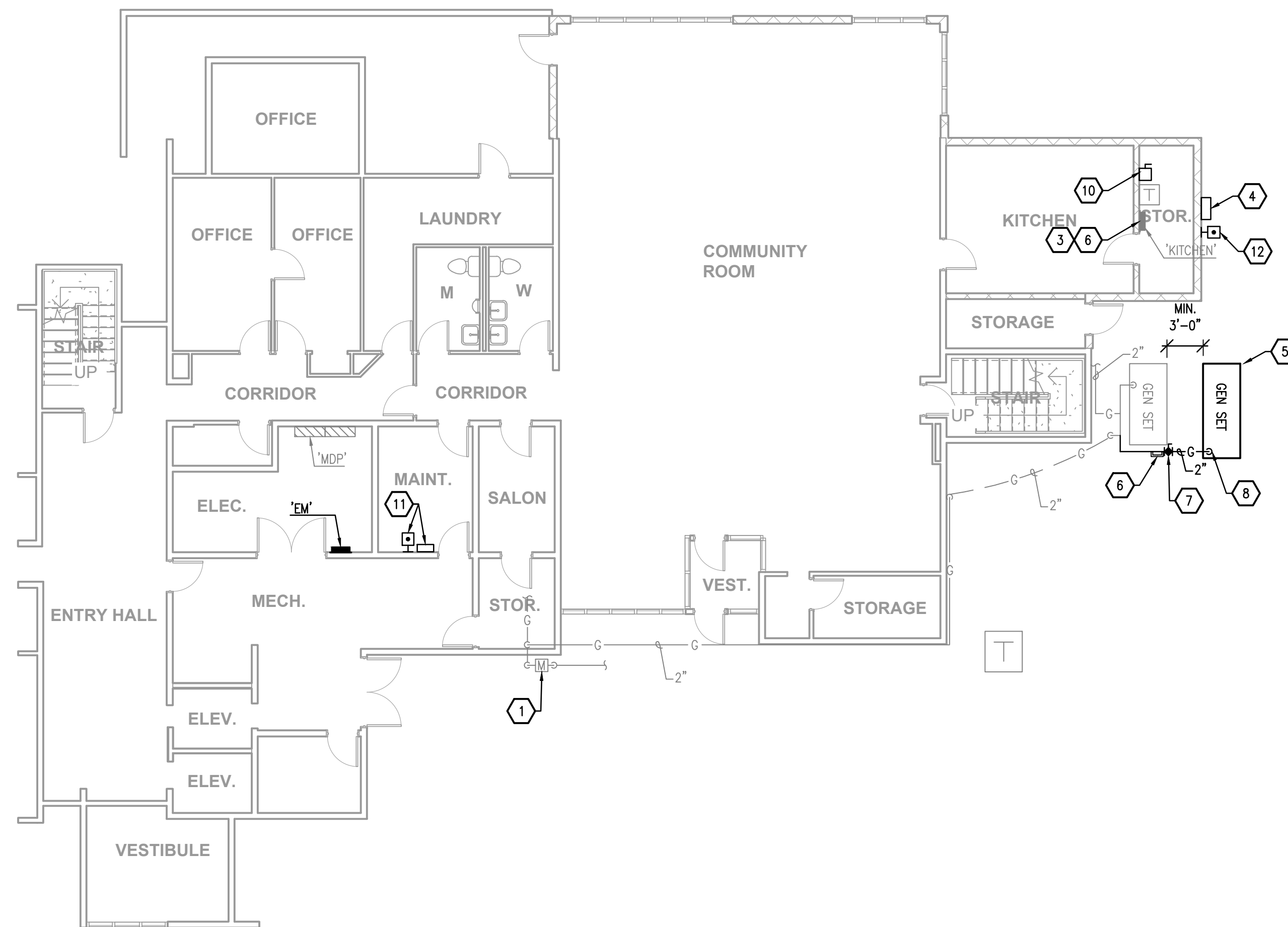
Prepared By:



IDI Project No: 21-969



GROUND FLOOR MECHANICAL - ELECTRICAL DEMO PLAN
SCALE: 1/8" = 1'-0"



GROUND FLOOR MECHANICAL - ELECTRICAL PLAN (NEW WORK)
SCALE: 1/8" = 1'-0"

KEYNOTES

- EXISTING NATURAL GAS METER LOCATION.
- REMOVE EXISTING PANEL 'EM' AND 15 KVA TRANSFORMER MOUNTED ON WALL. SEE NEW WORK PLAN AND PANELBOARD SCHEDULES FOR REPLACEMENT REQUIREMENTS. ALL EXISTING CIRCUITS IN PANEL SHALL BE TRANSFERRED INTO NEW REPLACEMENT PANEL.
- PROVIDE NEW TVSS UNIT IN EXISTING PANEL. SEE ALSO SPECIFICATIONS.
- NEW NEMA 3R RATED ATS LOCATION. SEE ALSO SPECIFICATIONS AND PARTIAL POWER RISER DIAGRAM ON SHEET ME2.0.
- PROVIDE 6" THICK, 4,000 PSI, REINFORCED CONCRETE SLAB TO SUPPORT NEW GENERATOR. PLACE #4 REBAR 12" O.C. EACH WAY. SLAB MUST EXTEND MINIMUM OF 4" FROM GENERATOR ENCLOSURE ON SIDES. TOP OF SLAB SHALL BE 2" ABOVE EXISTING FINISHED GRADE TO ACT AS CURB.
- USE EXISTING SPARE 20A/1P BRANCH CIRCUIT BREAKERS IN EXISTING PANEL TO FEED NEW GENERATOR ENGINE BLOCK HEATER AND BATTERY CHARGER. SEE ALSO PANELBOARD SCHEDULE ON SHEET ME2.0.
- INSTALL 2" SHUT-OFF VALVE NEAR CONNECTION OF NEW GAS PIPE TO EXISTING GAS PIPE.
- MAKE CONNECTION TO NEW GENERATOR PER DETAIL ON SHEET ME2.0 AND GENERATOR MANUFACTURER REQUIREMENTS.
- SUPPORT GAS PIPING BY USING GALVANIZED UNISTRUT OR OTHER MEANS TO SPAN ACROSS TO NEW GENERATOR.
- PROVIDE 100A/3P, 600V FUSED DISCONNECT SWITCH MOUNTED WITHIN SIGHT OF EXISTING 75KVA TRANSFORMER IN STORAGE ROOM. PROVIDE (3) 100A FUSES, SEE ALSO PARTIAL RISER DIAGRAM ON SHEET ME2.0.
- REMOTE GENERATOR STATUS PANEL AND E-STOP.
- GENERATOR E-STOP SWITCH, PROVIDE WEATHERPROOF ENCLOSURE/COVER.

GENERAL NOTES

- UNLESS NOTED OTHERWISE, ALL LIGHTING, DEVICES, EQUIPMENT, CIRCUITRY, ETC. DENOTED WITH BOLD (DARK) LINES REPRESENT WORK TO BE PERFORMED. ALL LIGHTING, DEVICES, EQUIPMENT, CIRCUITRY, ETC. DENOTED WITH LIGHT (SCREENED) LINES REPRESENT EXISTING TO REMAIN AND BE MAINTAINED.
- INSTALL GAS PIPING IN ACCORDANCE WITH THE 2015 INTERNATIONAL FUEL GAS CODE.
- NEW CONDUIT(S) INSTALLED IN EXISTING FINISHED AREAS SHALL BE PAINTED TO MATCH EXISTING FINISH IN ROOM.

ARCHITECTURE
ENGINEERING
CONSULTING

ISHPEMING HOUSING COMMISSION
PIONEER BLUFF APT. - GENERATOR INSTALLATION
ISHPEMING, MICHIGAN
PROJECT NO. 21-969

NO.	REVISIONS	DATE
0	ISSUED FOR BIDS	6/8/22

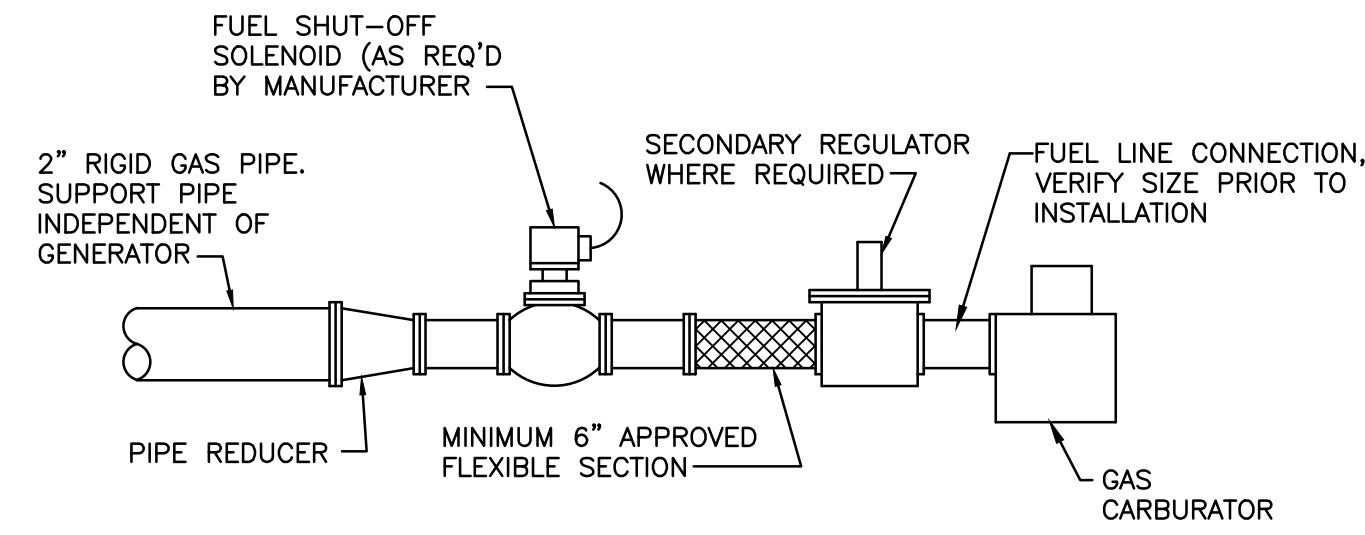
BY	DATE	NO.	REVISIONS
AJM	4/1/22	0	ISSUED FOR BIDS
AJM	4/1/22		
AJM	6/8/22		
AJM	6/8/22		

DESIGN DRAWN
CHECKED
APPROVED

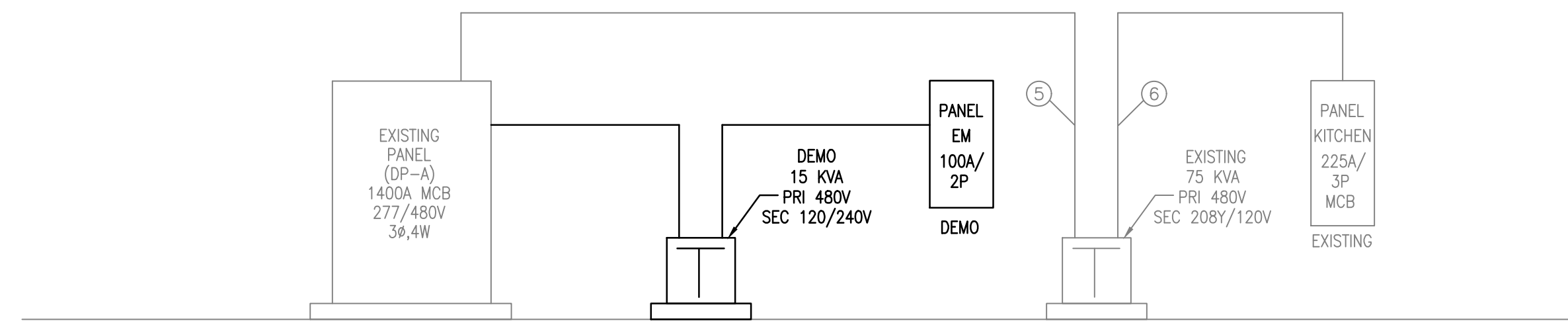
GROUND FLOOR
MECHANICAL - ELECTRICAL
PLAN

ME1.0

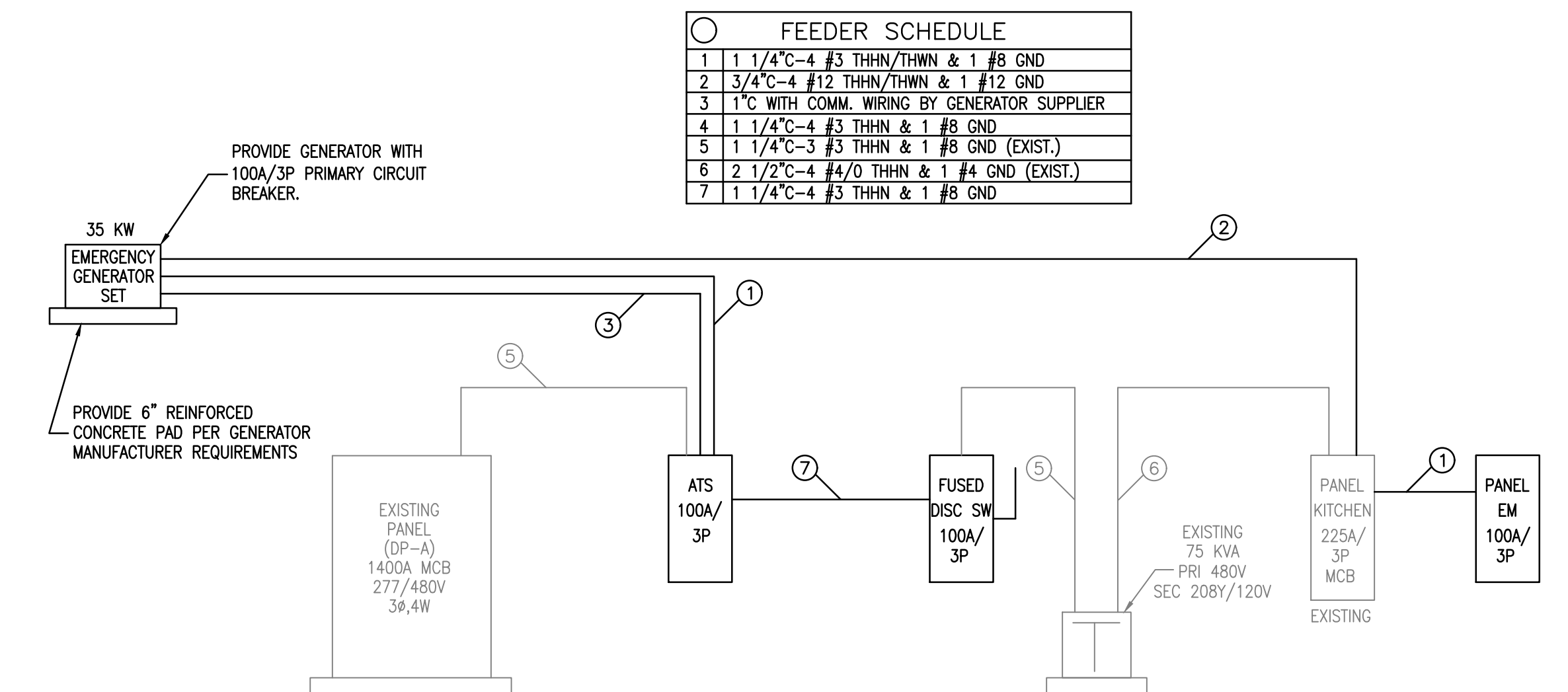
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GENERATOR NATURAL GAS PIPING
N.T.S.



PARTIAL POWER RISER DIAGRAM (DEMOLITION)
N.T.S.



PARTIAL POWER RISER DIAGRAM (NEW WORK)
N.T.S.

FEEDER SCHEDULE	
1	1 1/4" C-4 #3 THHN/THWN & 1 #8 GND
2	3/4" C-4 #12 THHN/THWN & 1 #12 GND
3	1" C WITH COMM. WIRING BY GENERATOR SUPPLIER
4	1 1/4" C-4 #3 THHN & 1 #8 GND
5	1 1/4" C-3 #3 THHN & 1 #8 GND (EXIST.)
6	2 1/2" C-4 #4/0 THHN & 1 #4 GND (EXIST.)
7	1 1/4" C-4 #3 THHN & 1 #8 GND

PANELBOARD SCHEDULE
PANEL 'KITCHEN'

225A, 120/208V, 3ø, 4W, MCB, SURF. MTD, 72 POLE (EXISTING PANEL TO REMAIN) EATON POW-R-LINE TYPE PRL1A

DESCRIPTION	CONN KVA	CCT BRKR AMP/POLES	CCT. NO.	CCT. NO.	CCT BRKR AMP/POLES	CONN KVA	DESCRIPTION
SHUNT KITCHEN HOOD RECEP	.18	20/2	1A	2A	20/2	.18	SHUNT KITCHEN HOOD RECEP
SHUNT KITCHEN HOOD RECEP	.18	-	3B	4B	-	.18	SHUNT KITCHEN HOOD RECEP
SHUNT KITCHEN HOOD RECEP	.18	20/2	5C	6C	20/1	.70	COOLER #2
SHUNT KITCHEN HOOD RECEP	.18	-	7A	8A	20/1	.70	COOLER #1
KITCHEN ROOF RECEP	.18	20/1	9B	10B	20/1	.10	HEATING CONTACTOR
ELECT RM RECEP	.18	20/1	11C	12C	20/1	.18	OUTSIDE RECEP
COMMUNITY RM RECEP	.54	20/1	13A	14A	20/1	.54	SERVERY RECEP
SPARE	-	20/3	15B	16B	20/1	.36	KITCHEN HALF WALL RECEP
SPARE	-	-	17C	18C	20/1	.36	KITCHEN HALF WALL RECEP
SPARE	-	-	19A	20A	20/3	1.20	MUA AND EXHAUST FAN
KITCHEN, ENTRY, HOOD LIGHTS	.50	20/1	21B	22B	-	1.20	MUA AND EXHAUST FAN
ANSUL SYSTEM	.10	20/1	23C	24C	-	1.20	MUA AND EXHAUST FAN
CU #3	1.65	25/2	25A	26A	35/2	1.90	DISHWASHER
CU #3	1.65	-	27B	28B	-	1.90	DISHWASHER
CU #4	.75	15/2	29C	30C	20/1	.70	COMMUNITY RM LIGHTS
CU #4	.75	-	31A	32A	20/1	.36	NORTH WALL KITCHEN RECEP
CU #1	1.65	25/2	33B	34B	20/2	.18	SHUNT TRIP HOOD
CU #1	1.65	-	35C	36C	-	.18	SHUNT TRIP HOOD
CU #2	1.65	25/2	37A	38A	20/2	1.00	COMMUNITY RM ELECT HEAT #1
CU #2	1.65	-	39B	40B	-	1.00	COMMUNITY RM ELECT HEAT #1
ENTRY HEATER	.50	20/2	41C	42C	20/2	1.00	COMMUNITY RM ELECT HEAT #2
ENTRY HEATER	.50	-	43A	44A	-	1.00	COMMUNITY RM ELECT HEAT #2
ELEC HEAT ELECTRICAL ROOM	.50	20/2	45B	46B	20/2	1.00	COMMUNITY RM ELECT HEAT #3
ELEC HEAT ELECTRICAL ROOM	.50	-	47C	48C	-	1.00	COMMUNITY RM ELECT HEAT #3
SPARE	-	20/1	49A	50A	20/1	-	SPARE
SPARE	-	20/1	51B	52B	20/1	.18	SERVERY RECEP
SPARE	-	20/1	53C	54C	20/1	.50	EXISTING CIRCUITRY
SPARE	-	20/1	55A	56A	20/1	.50	EXISTING CIRCUITRY
SPARE	-	20/1	57B	58B	30/3	1.00	EXISTING CIRCUITRY
SPARE	-	20/1	59C	60C	-	1.00	EXISTING CIRCUITRY
PANEL 'EM'	3.45	100/3	61A	62A	-	1.00	EXISTING CIRCUITRY
PANEL 'EM'	2.95	-	63B	64B	20/1	.50	GENERATOR BATTERY CHARGER
PANEL 'EM'	1.80	-	65C	66C	20/1	1.20	GENERATOR ENGINE BLOCK HEATER
TVSS	-	30/3 *	67A	68A	20/1	-	SPARE
TVSS	-	-	69B	70B	-	-	SPACE
TVSS	-	-	71C	72C	-	-	SPACE

* PROVIDE NEW BRANCH CIRCUIT BREAKER TO MATCH EXISTING IN PANEL

CONNECTED LOAD PHASE A 17.28 KVA
PHASE B 16.86 KVA
PHASE C 13.68 KVA
TOTAL 47.82 KVA
47.82 KVA / [(208V)(√3) / 1000] = 132.74 A

PANELBOARD SCHEDULE
PANEL 'EM'

100A, 120/208V, 3ø, 4W, MLO, SURF. MTD, 30 POLE (NEW PANEL)

DESCRIPTION	CONN KVA	CCT BRKR AMP/POLES	CCT. NO.	CCT. NO.	CCT BRKR AMP/POLES	CONN KVA	DESCRIPTION
STAIRWAY E. LITES	.75	20/1	1A	2A	20/1	.75	STAIRWAY W. LITES
STAIRWAY N. LITES	.75	20/1	3B	4B	20/1	.25	EXIT LITES
SECOND FLR. LITES	.75	20/1	5C	6C	20/1	.75	THIRD FLR. LITES
FOURTH FLR. LITES	.75	20/1	7A	8A	20/1	.75	FIFTH FLR. LITES
SIXTH FLR. LITES	.75	20/1	9B	10B	20/1	.75	FIRST FLR. LITES
FIRE ALARM	.10	20/1	11C	12C	20/1	.10	EM. CALL ELEVATOR SMOKE DET.
NITE LITE GARBAGE ROOM	.15	20/1	13A	14A	20/1	.30	TELEPHONE OUTLET TV
ELECTRIC ROOM LITES	.30	20/1	15B	16B	20/1	.15	ELEVATOR RM. LITES, ELE ROOM
AC CONTROLLERS	.10	20/1	17C	18C	20/1	-	SPARE
SPARE	-	20/1	19A	20A	20/1	-	SPARE
SPARE	-	20/1	21B	22B	-	-	SPACE
SPACE	-	-	23C	24C	-	-	SPACE
SPACE	-	-	25A	26A	-	-	SPACE
SPACE	-	-	27B	28B	-	-	SPACE
SPACE	-	-	29C	30C	-	-	SPACE

CONNECTED LOAD PHASE A 3.45 KVA
PHASE B 2.95 KVA
PHASE C 1.80 KVA
TOTAL 8.20 KVA
8.20 KVA / [(208V)(√3) / 1000] = 22.76 A

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ISHPEMING HOUSING COMMISSION
PIONEER BLUFF APT. - GENERATOR INSTALLATION
ISHPEMING, MICHIGAN
PROJECT NO. 21-969

NO.	REVISIONS	DATE
0	ISSUED FOR BIDS	6/8/22
1		
2		
3		
4		
5		
6		
7		

MECHANICAL - ELECTRICAL
DETAILS & SCHEDULES

DESIGN A/JM 4/1/22
DRAWN A/JM 4/1/22
CHECKED A/JM 6/8/22
APPROVED A/JM 6/8/22

BY DATE