

CIVIC ADDRESS:
500 MARINER WAY, COQUITLAM, BC

DRAWING LIST:	SCALE
E-101 - SITE PLAN	AS SHOWN
E-201 - LEVEL 1 DEMOLITION PLAN	1:100
E-202 - LEVEL 1 LIFE SAFETY PLAN	1:100
E-203 - LEVEL 2 LIFE SAFETY PLAN	1:100
E-204 - LEVEL 1 POWER PLAN	1:100
E-205 - LEVEL 2 POWER PLAN	1:100
E-206 - LEVEL 1 LIGHTING AND MECHANICAL PLAN	1:100
E-207 - ROOF PLAN	1:100
E-301 - ONE LINE DIAGRAM	N.T.S.
E-401 - SCHEDULES	N.T.S.
E-501 - SPECIFICATIONS	N.T.S.

NOTE:
THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, INTERIOR DESIGN, AND MECHANICAL DRAWINGS INCLUDING DETAIL BOOKS. DETAILS MAY VARY TO WHAT IS SHOWN. ADJUST TO SUIT THE DETAILED FINISH DRAWINGS. SITE CONDITIONS WHICH MAY PROHIBIT THE EXACT POSITIONING OF LIGHT FIXTURES AND OTHER ELECTRICAL DEVICES SHALL BE REPORTED TO THE APPROPRIATE CONSULTANT IMMEDIATELY FOR FURTHER INSTRUCTIONS.

ELECTRICAL POWER, LIGHTING, OTHER EQUIPMENT DESIGN ENERGY

ELECTRICAL DESIGN:
 ENERGY STANDARD/CODE: ASHRAE 90.1-2016
 POWER COMPLIANCE PATH: PRESCRIPTIVE
 IN ACCORDANCE WITH: SECTION 8 (NC AND FIRST TI)
 LIGHTING COMPLIANCE PATH: PRESCRIPTIVE
 LIGHTING DESIGN METHOD: SPACE-BY-SPACE METHOD
 IN ACCORDANCE WITH: SECTION 9 (NC AND FIRST TI)
 OTHER EQUIPMENT PATH: N/A (NO OTHER EQUIP WORK)
 IN ACCORDANCE: N/A

Issue Date	Issue For	GLOBAL REVISIONS LIST*
OCTOBER 2024		
NO.	DATE	DESCRIPTION
1	2024-10-23	ISSUED FOR REVIEW
2	2024-10-31	ISSUED FOR COC REVIEW
3	2024-11-22	ISSUED FOR BP REVIEW
4	2024-12-04	ISSUED FOR BP
5	2024-12-18	ISSUED FOR TENDER REVIEW
6	2024-12-18	ISSUED FOR TENDER REVIEW
7	2025-01-24	ISSUED FOR RFP

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1 **SITE PLAN**
E-101 SCALE: 1:500



Project Number	51104 - FMB Repurpose
Drawn By	RB
Checked By	KK
Sheet Number	E-101
Drawing	SITE PLAN

Issue Date: OCTOBER 2024

GLOBAL REVISIONS LIST	NO.	DATE	DESCRIPTION
1	2024-10-23	ISSUED FOR REVIEW	
2	2024-10-31	ISSUED FOR C/C REVIEW	
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5	2024-12-18	ISSUED FOR TENDER REVIEW	
6	2024-12-18	ISSUED FOR TENDER REVIEW	
7	2025-01-24	ISSUED FOR BFP	

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DEMOLITION NOTES

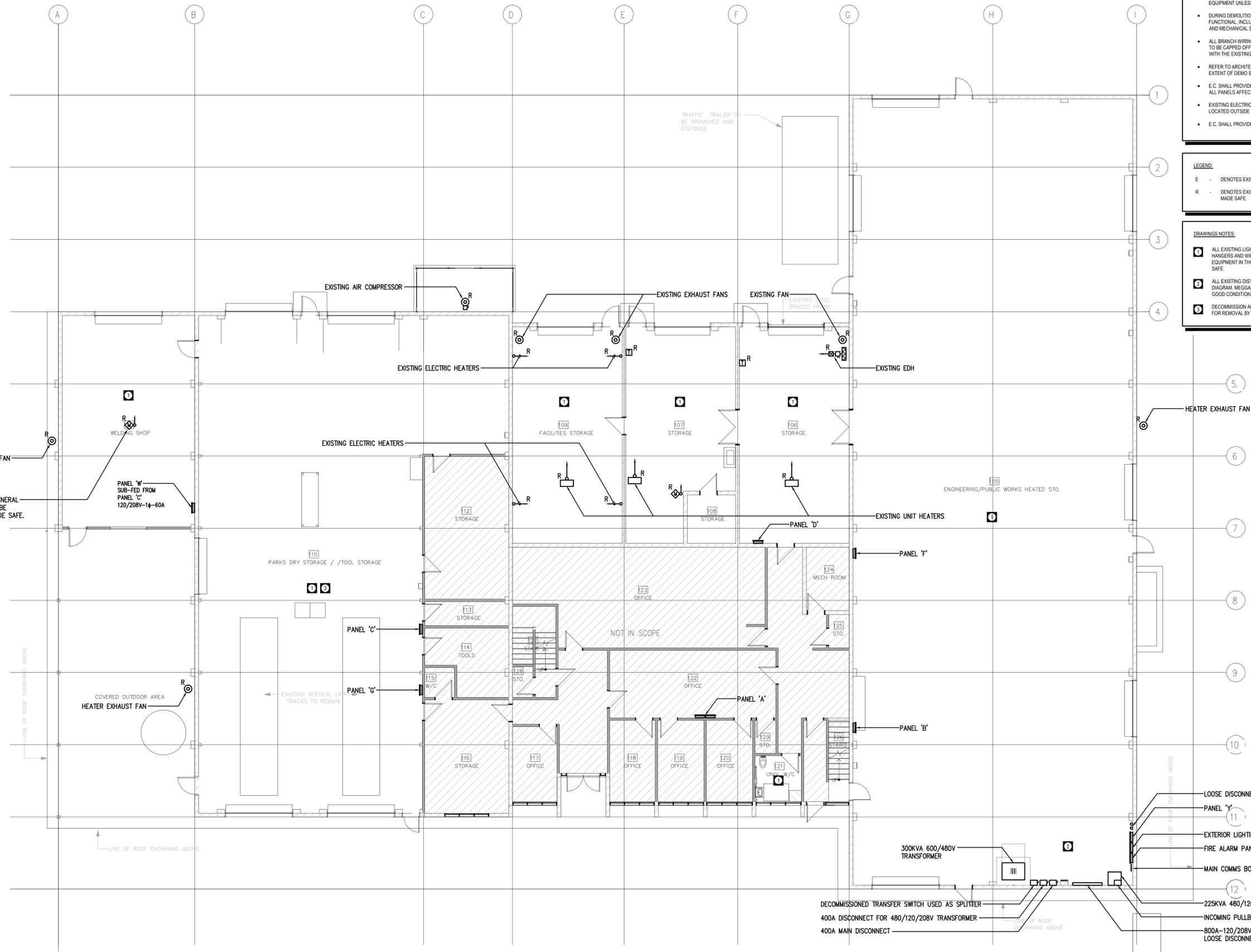
- ELECTRICAL TRADE BIDDING THE DEMO WORK SHALL SITE VERIFY THE EXISTING CONDITION AND EXTENT OF REQUIRED WORK.
- CONTRACTOR SHALL ALLOW FOR THE DISPOSAL OF ALL REMOVED EQUIPMENT UNLESS NOTED OTHERWISE.
- DURING DEMOLITION WORK OF ALL BUILDING SYSTEMS ARE TO REMAIN FUNCTIONAL, INCLUDING THE LIGHTING, FIRE ALARM SYSTEM, SECURITY, AND MECHANICAL SYSTEM.
- ALL BRANCH WIRING AND HOME RUN CIRCUITS FEEDING THE DEMO AREA TO BE CAPPED OFF IN SURFACE MOUNTED JUNCTION BOXES AND LABELED WITH THE EXISTING CIRCUIT NUMBERS AS REQUIRED.
- REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR THE FULL EXTENT OF DEMO SCOPE.
- E.C. SHALL PROVIDE UPDATED PANEL DIRECTORIES IN PRINTED FORM FOR ALL PANELS AFFECTED BY THE DEMO WORK.
- EXISTING ELECTRICAL DEVICES ON THE SAME CIRCUITRY THAT ARE LOCATED OUTSIDE DEMO AREA WILL BE KEPT AND REMAIN ENERGIZED.
- E.C. SHALL PROVIDE TEMPORARY LIGHTING AND POWER AS REQUIRED.

LEGEND:

E - DENOTES EXISTING DEVICE TO REMAIN
R - DENOTES EXISTING DEVICE TO BE REMOVED AND MADE SAFE.

DRAWINGS NOTES:

- ALL EXISTING LIGHTING IN THIS SPACE IS TO BE REMOVED. EXISTING HANGERS AND WIRING MAY BE REUSED. ALL MECHANICAL HVAC EQUIPMENT IN THIS SPACE TO BE DISCONNECTED AND WIRING MADE SAFE.
- ALL EXISTING DISTRIBUTION TO BE REPLACED PER NEW SINGLE LINE DIAGRAM. MEGGAR EXISTING FEEDERS AND RE-USED IF THEY ARE IN GOOD CONDITION.
- DECOMMISSION AND MAKE SAFE 'VEHICLE LIFT CONTROLS STATION' FOR REMOVAL BY OTHERS.



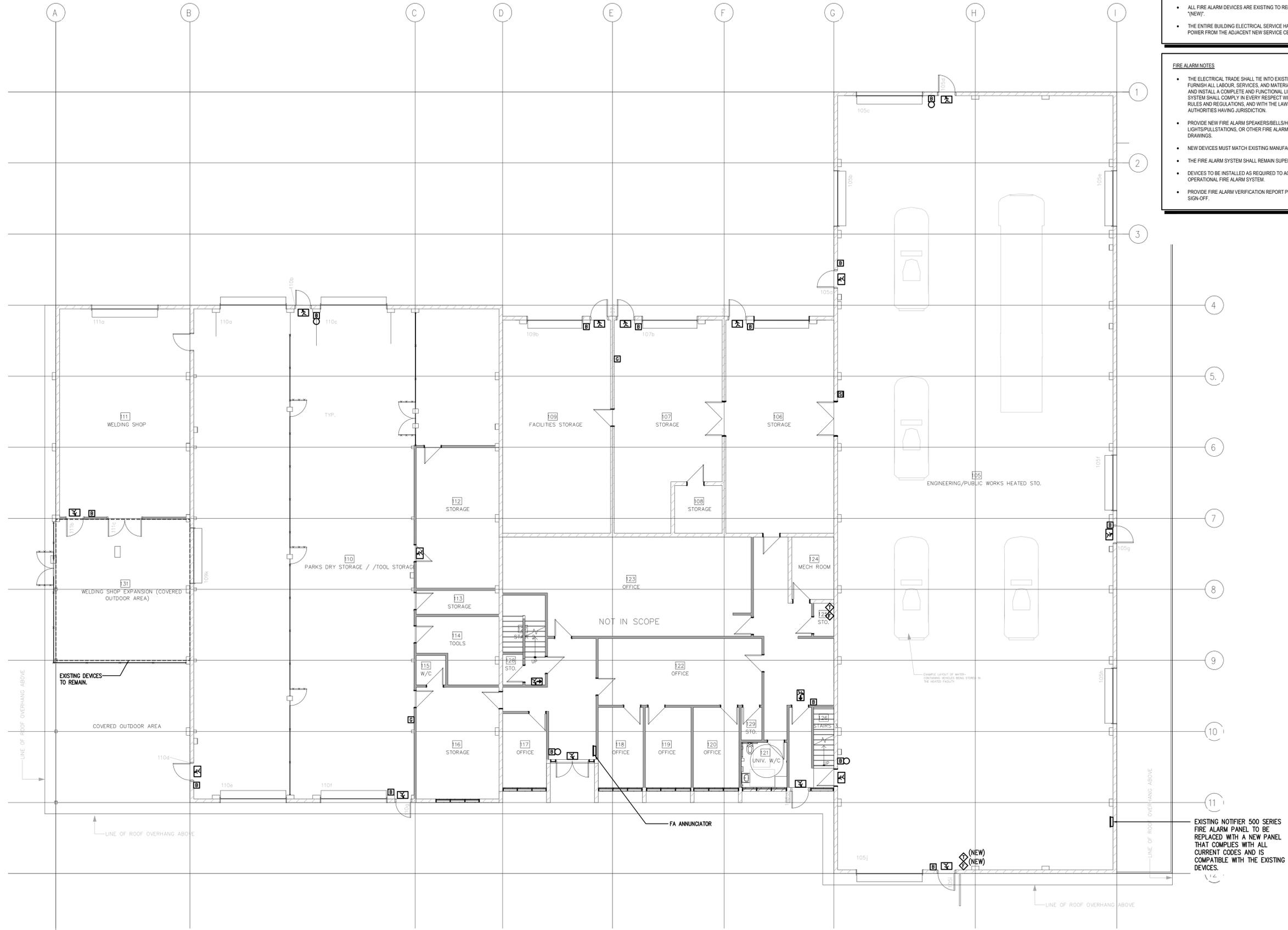
- LOOSE DISCONNECTS
- PANEL 'Y'
- EXTERIOR LIGHTING CONTACTOR
- FIRE ALARM PANEL
- MAIN COMMS BOARD
- 225KVA 480/120/208V TRANSFORMER
- INCOMING PULLBOX 400A-600V
- 800A-120/208V SPLITTER C/W LOOSE DISCONNECT SWITCHES

1 LEVEL 1 DEMOLITION PLAN
E-201 SCALE: 1:100

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Project	51104 - FMB Repurpose
Project Number	15428
Drawn By	RB
Checked By	KK
Sheet Number	E-201
Drawing	LEVEL 1 DEMOLITION PLAN





GENERAL NOTES

- ALL EMERGENCY AND EXIT LIGHTING SHALL HAVE A MINIMUM 120-MINUTE RUN-TIME.
- ALL EXISTING EXIT SIGNS TO BE REPLACED WITH NEW RUNNING MAN SIGNS.
- ALL FIRE ALARM DEVICES ARE EXISTING TO REMAIN UNLESS NOTED AS "NEW".
- THE ENTIRE BUILDING ELECTRICAL SERVICE HAS GENERATOR BACK UP POWER FROM THE ADJACENT NEW SERVICE CENTRE BUILDING.

FIRE ALARM NOTES

- THE ELECTRICAL TRADE SHALL TIE INTO EXISTING FIRE ALARM SYSTEM. FURNISH ALL LABOUR, SERVICES, AND MATERIALS NECESSARY TO PROVIDE AND INSTALL A COMPLETE AND FUNCTIONAL LIFE SAFETY FIRE SYSTEM. THE SYSTEM SHALL COMPLY IN EVERY RESPECT WITH ALL PERTINENT CODES, RULES AND REGULATIONS, AND WITH THE LAWS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
- PROVIDE NEW FIRE ALARM SPEAKERS/BELLS/HORN/SSTROBE LIGHTS/PULLSTATIONS, OR OTHER FIRE ALARM DEVICES SHOWN ON THE DRAWINGS.
- NEW DEVICES MUST MATCH EXISTING MANUFACTURER AND MODELS.
- THE FIRE ALARM SYSTEM SHALL REMAIN SUPERVISED AND MONITORED.
- DEVICES TO BE INSTALLED AS REQUIRED TO ACHIEVE A FULLY OPERATIONAL FIRE ALARM SYSTEM.
- PROVIDE FIRE ALARM VERIFICATION REPORT PRIOR TO ENGINEER SIGN-OFF.

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1	2024-10-23	ISSUED FOR REVIEW
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Project: 51104 - FMB Repurpose
Drawing: LEVEL 1 LIFE SAFETY PLAN
Sheet Number: E-202

Project Number: 15428
Drawn By: RB
Checked By: KK

1 LEVEL 1 LIFE SAFETY PLAN
E-202 SCALE: 1:100



EXISTING NOTIFIER 500 SERIES FIRE ALARM PANEL TO BE REPLACED WITH A NEW PANEL THAT COMPLIES WITH ALL CURRENT CODES AND IS COMPATIBLE WITH THE EXISTING DEVICES.

NOT IN SCOPE

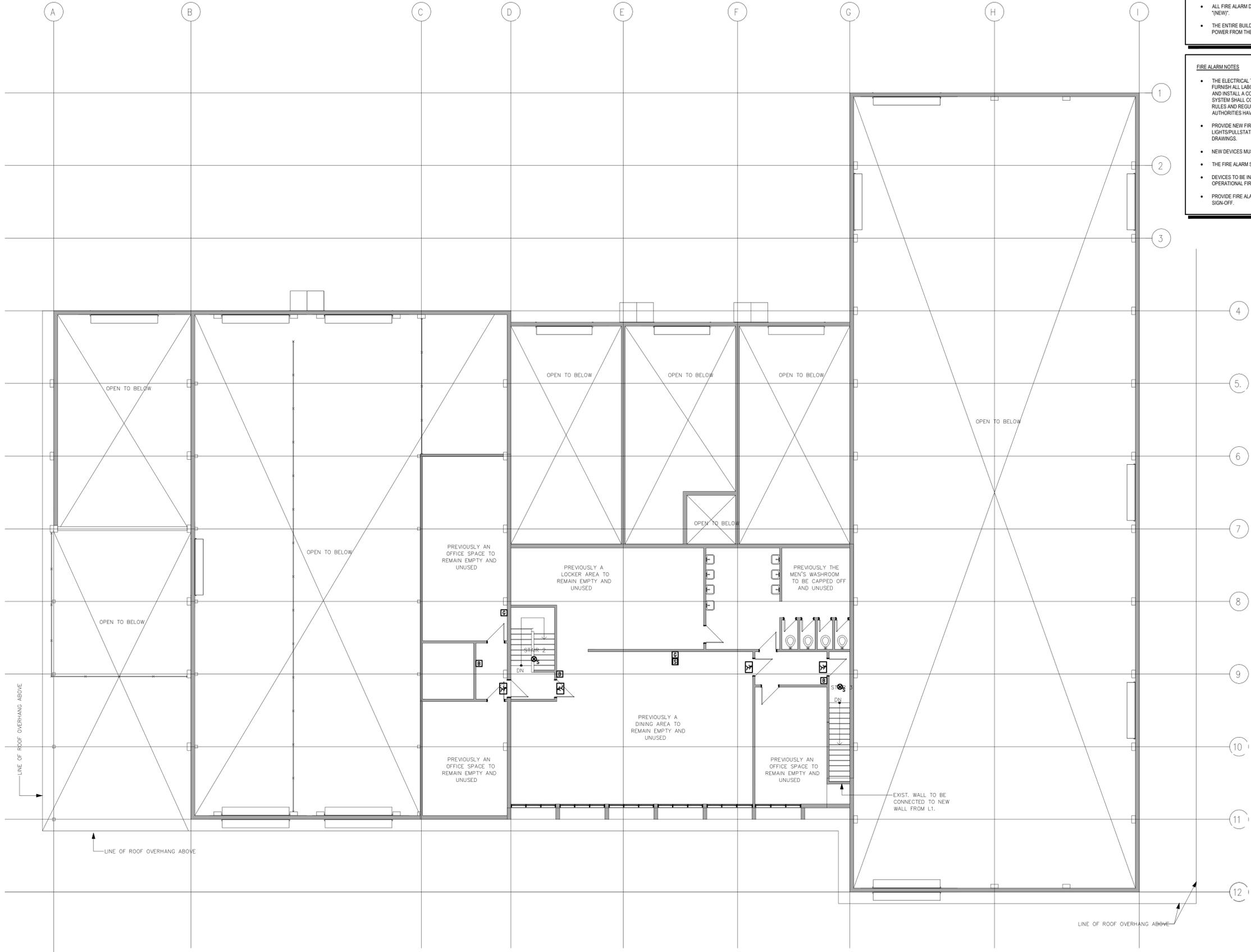
EXAMPLE LAYOUT OF WATER-COVERING SPRINKLER BEING STORIED IN THE HEATED FACILITY

EXISTING DEVICES TO REMAIN

LINE OF ROOF OVERHANG ABOVE

COVERED OUTDOOR AREA

LINE OF ROOF OVERHANG ABOVE



GENERAL NOTES

- ALL EMERGENCY AND EXIT LIGHTING SHALL HAVE A MINIMUM 120-MINUTE RUN-TIME.
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FIRE ALARM NOTES

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- NEW DEVICES MUST MATCH EXISTING MANUFACTURER AND MODELS.
- THE FIRE ALARM SYSTEM SHALL REMAIN SUPERVISED AND MONITORED.
- DEVICES TO BE INSTALLED AS REQUIRED TO ACHIEVE A FULLY OPERATIONAL FIRE ALARM SYSTEM.
- PROVIDE FIRE ALARM VERIFICATION REPORT PRIOR TO ENGINEER SIGN-OFF.

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Project Number	51104 - FMB Repurpose
Drawn By	RB
Checked By	KK
Sheet Number	E-203
Project	LEVEL 2 LFIE SAFETY PLAN

1 LEVEL 2 LIFE SAFETY PLAN
SCALE: 1:100



Issue For	Issue Date	Issue Description
GLOBAL REVISIONS LIST*		
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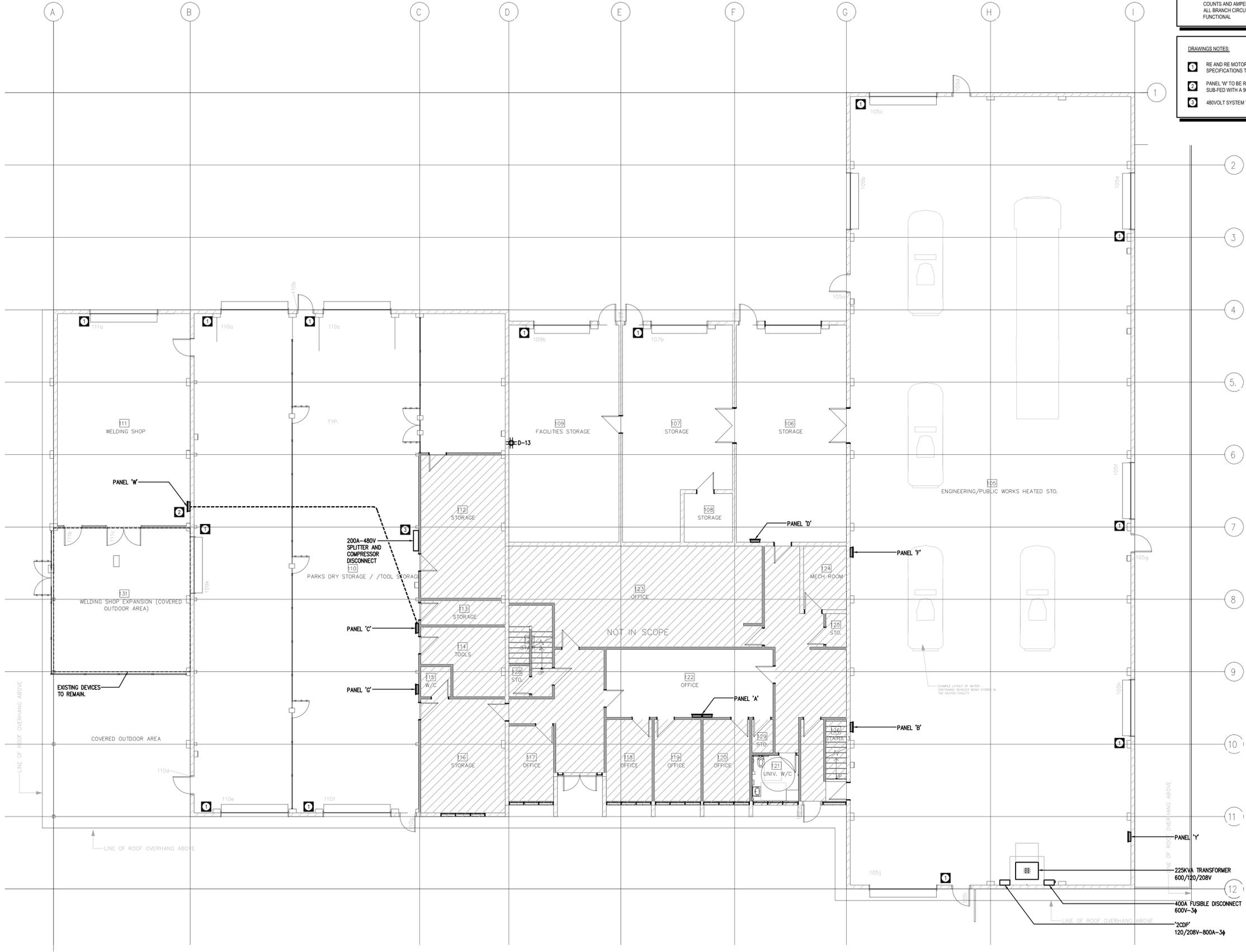
Project	51104 - FMB Repurpose
Project Number	15428
Drawn By	RB
Checked By	KK
Sheet Number	E-204
Project	51104 - FMB Repurpose
Project Number	15428
Drawn By	RB
Checked By	KK
Sheet Number	E-204

GENERAL NOTES

- ALL EXISTING ELECTRICAL DISTRIBUTION IS TO BE REPLACED WITH NEW PER NEW ONE-LINE DIAGRAM UNLESS NOTED OTHERWISE.
- ALL REPLACEMENT ELECTRICAL PANELS ARE TO HAVE THE SAME BREAKER COUNTS AND AMPERAGE RATINGS AS THE ORIGINAL EXISTING PANELS AND ALL BRANCH CIRCUITRY IS TO BE RE-CONNECTED AND TESTED AS FUNCTIONAL.

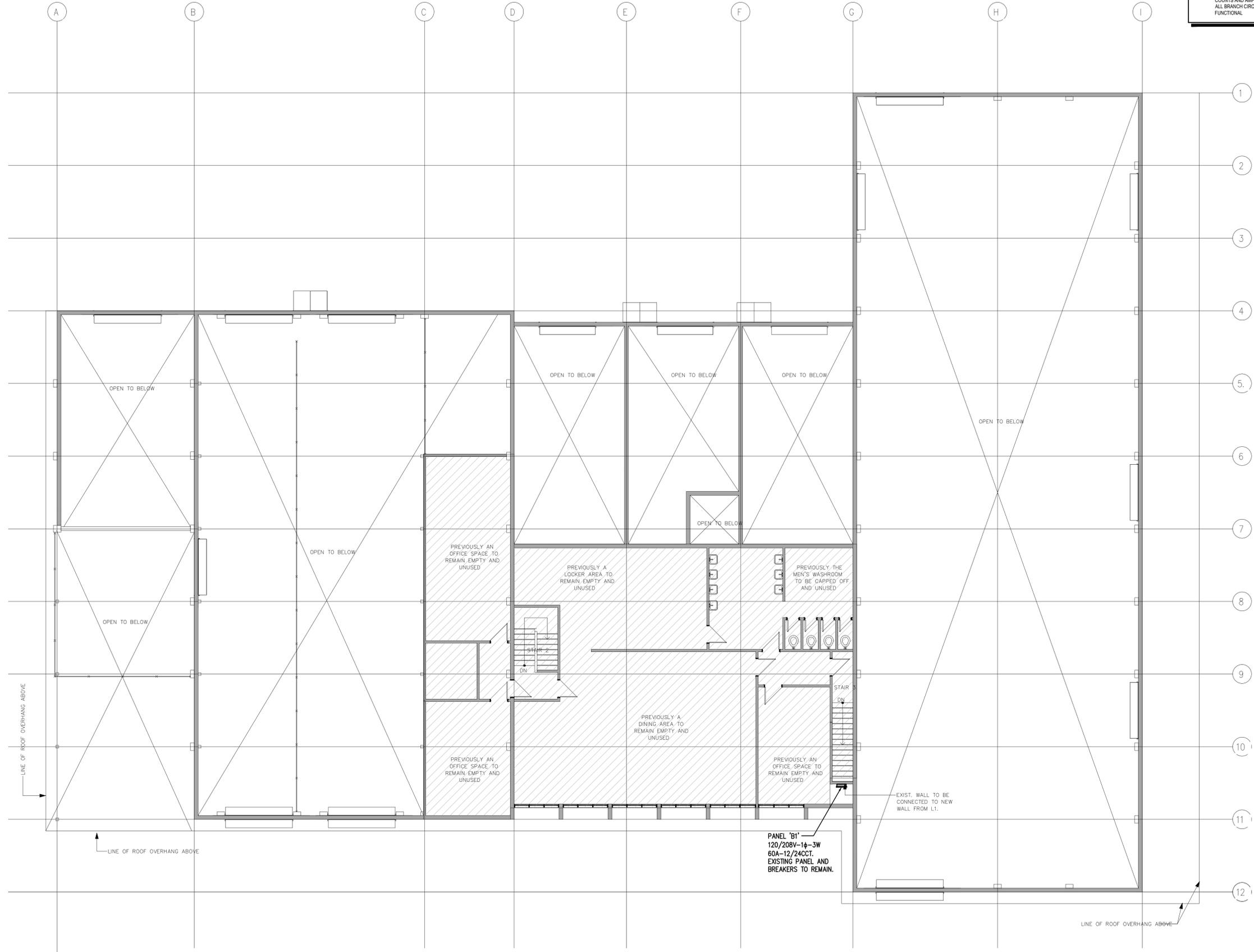
DRAWINGS NOTES

- RE AND RE-MOTORIZED DOOR POWER COORDINATE WITH NEW SPECIFICATIONS TBC.
- PANEL 'W' TO BE REPLACED WITH A 100A-3P-4W-42CCT PANEL AND SUB-FED WITH A 90A BREAKER OUT OF PANEL 'C'.
- 480VOLT SYSTEM TO BE DE-COMMISSIONED AND MADE SAFE.



1 LEVEL 1 POWER PLAN
E-204 SCALE: 1:100





GENERAL NOTES

- ALL EXISTING ELECTRICAL DISTRIBUTION IS TO BE REPLACED WITH NEW PER NEW ONE-LINE DIAGRAM UNLESS NOTED OTHERWISE.
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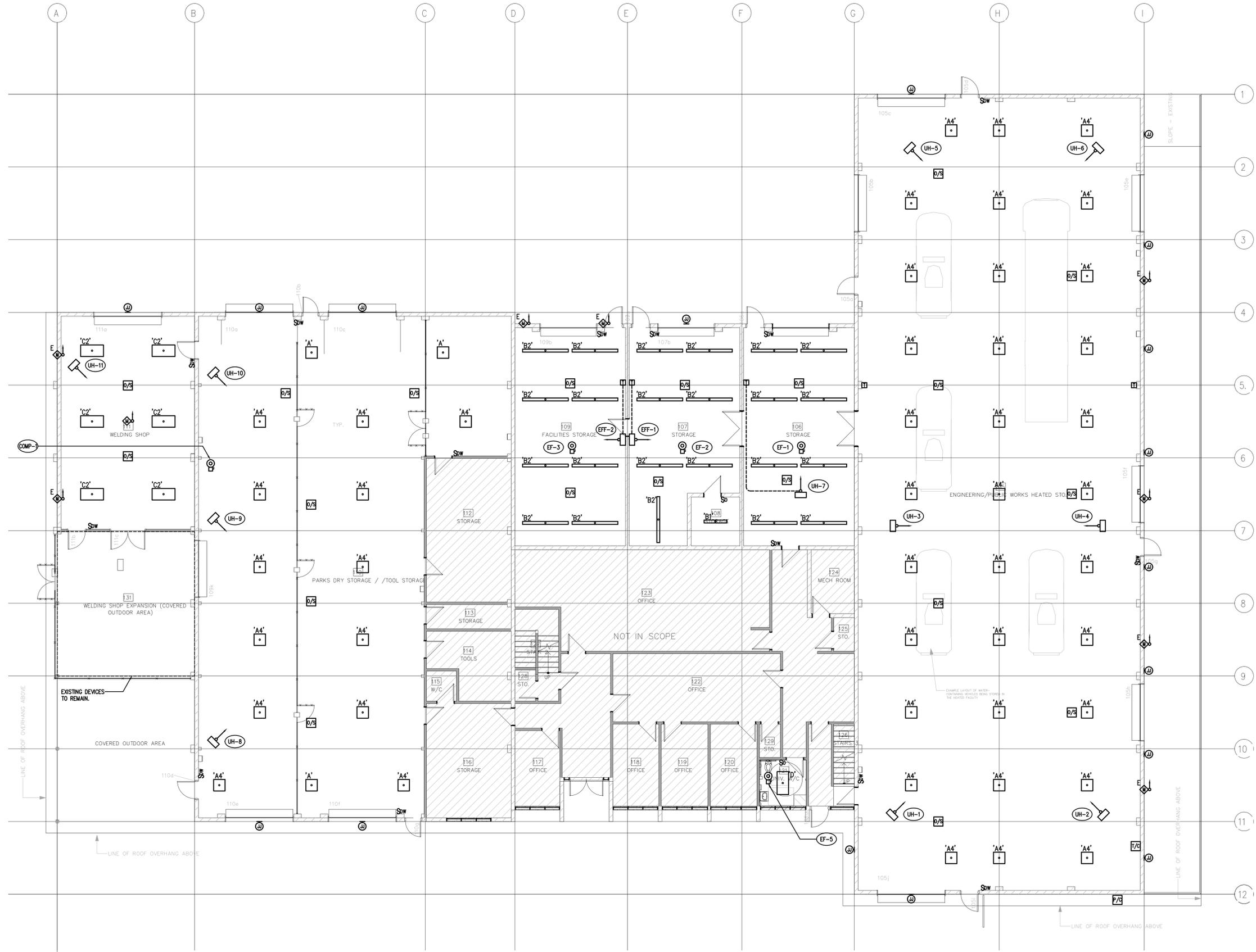


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Project	51104 - FMB Repurpose
Project Number	15428
Drawn By	RB
Checked By	KK
Sheet Number	E-205
Drawing	LEVEL 2 POWER PLAN

1 LEVEL 2 POWER PLAN
 SCALE: 1:100





LEGEND:
 E - DENOTES EXISTING DEVICE TO REMAIN.

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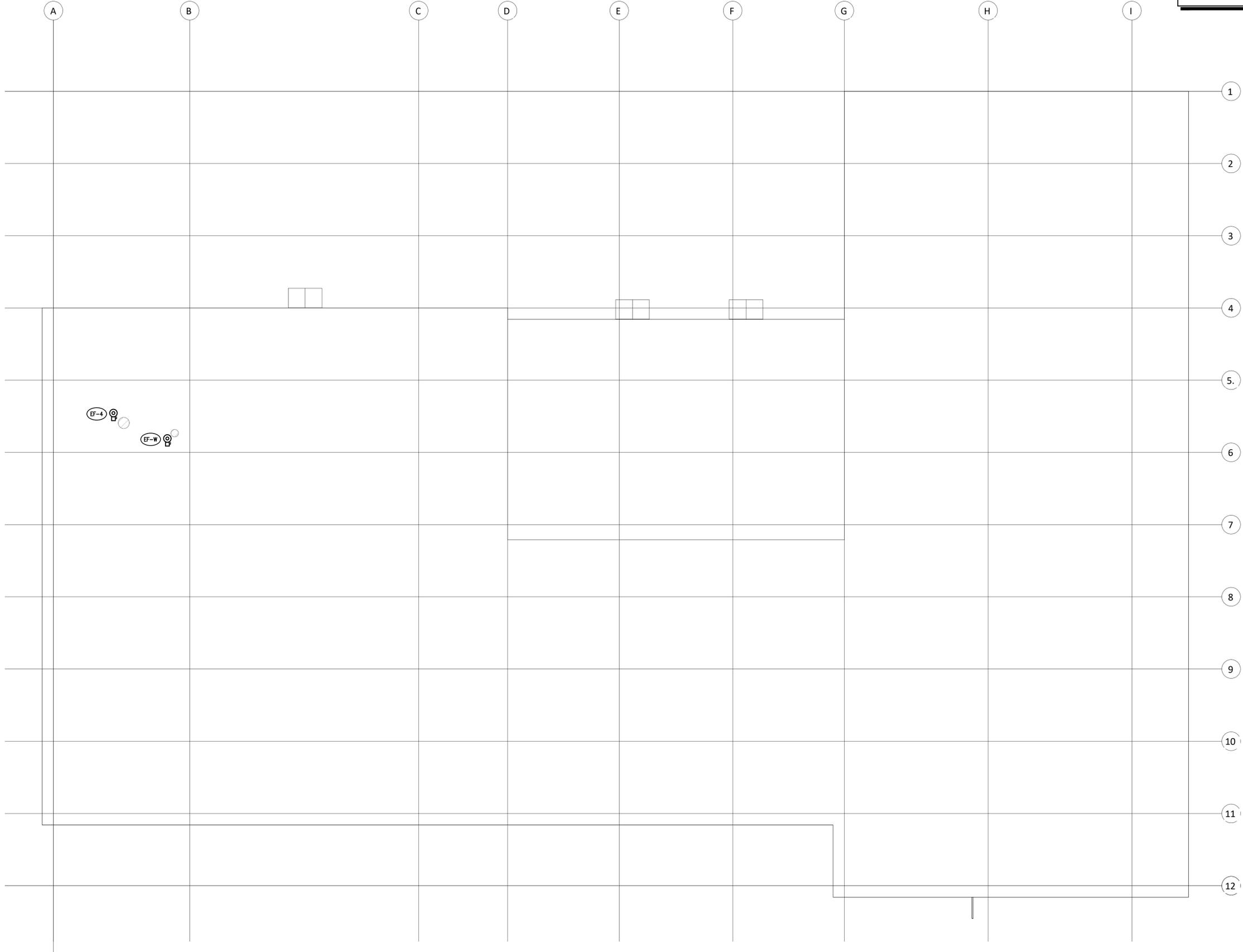


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1 LEVEL 1 LIGHTING AND MECHANICAL PLAN
 SCALE: 1:100



Project Number	51104 - FMB Repurpose
Drawn By	RB
Checked By	KK
Sheet Number	E-206
Project	LEVEL 1 LIGHTING AND MECHANICAL PLAN



DRAWINGS NOTES:

☐ ROOF TOP SERVICE RECEPTACLE, 120V-20A-GFCI RECEPTACLE CW WEATHERPROOF BOX AND BUBBLE COVER EQUAL TO HUBBELL MMS10C, MOUNT TO SIDE OF RTU AT 75MM AFF. CONNECT TO PANEL WITH SEPARATE CIRCUIT.

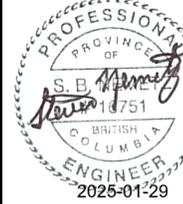
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Project Number	51104 - FMB Repurpose
Drawn By	RB
Checked By	KK
Sheet Number	E-207
Project	ROOF PLAN

1 ROOF PLAN
 SCALE: 1:100



NOTE OLN-001:

GROUNDING TO BE PROVIDED AS REQUIRED BY CEC SECTIONS 10 AND 36.

GENERAL NOTES

- CONFIRM METERING ARRANGEMENT WITH THE POWER SUPPLY AUTHORITY. REFER TO ELECTRICAL SPECIFICATIONS AND ALL POWER AUTHORITY METERING GUIDELINES.
- WIRE SIZED FOR RW90 COPPER.
- CMDB BOARD OR CUTTER AND SWITCHES ACCEPTABLE AS SPACE AND/OR BUS BRACING ALLOWS.
- ✓ DENOTES THAT CIRCUIT BREAKER TO HOLD LOCKED ROTOR CURRENT FOR INDEFINITE.
- * DENOTES TIME DELAY BUSS FRRR FUSE FOR 600V DISTRIBUTIONS AND BUSS FRRR FUSE FOR 250V DISTRIBUTIONS.
- FP BREAKER TO BE SPECIFICALLY APPROVED AND DESIGNED FOR FIRE PUMP SERVICE AND BE LABELED SPECIFICALLY AS FIRE PUMP SERVICE AS PER CEC SECTION 32.

6A. FUSE SPECIFICATION 208/120 240/120 VOLTS

i. MAINS AND FEEDERS

- SERVICE ENTRANCE MAINS AND FEEDER FUSES OVER 800 AMPERES SHALL BE BUSSMANN HRC-L TYPE KRP-C WITH 'O' RING SEAL BETWEEN THE END BELLS AND THE GLASS MELAMINE FUSE BARREL. TERMINALS OF FUSE TO BE GLASS PEENED.
- ALL MAINS AND FEEDERS, 70 THROUGH 800 AMPERES, PROTECTING CIRCUIT BREAKERS, SHALL BE BUSSMANN HRC-T TYPE JLN. THE FUSES AND BREAKERS SHALL BE A CSA APPROVED SERIES TESTED COMBINATION. LABELING OF THE EQUIPMENT MUST BE APPLIED PER CEC SECTION 14.
- ALL OTHER MAINS AND FEEDERS, 15 AMPS THROUGH 600 AMPS, OTHER THAN THOSE PROTECTING CIRCUIT BREAKERS, SHALL BE HRC-J TIME-DELAY TYPE PJ-AMPS SP.
- ALL FUSE SHALL BE OF THE SAME MANUFACTURER TO FACILITATE SELECTIVE COORDINATION OF THE SYSTEM.

ii. MOTORS

ALL MOTORS SHALL BE PROTECTED BY BUSSMANN HRC-J TIME-DELAY TYPE LPJ-AMPS SP HRC J FUSES. THESE FUSES SHALL BE SIZED AT 150% OF MOTOR FULL LOAD AMPERES FOR STANDARD DUTY, AND 175% FOR HEAVY DUTY. FUSES SHALL PROVIDE 'NO DAMAGE' PROTECTION TO THE MOTOR STARTER FOR ALL SHORT CIRCUIT CURRENTS UP TO 100,000 AMPERES RMS.

ALLOW FOR A DISCONNECT AND TYPE J FUSE FOR MOTORS RATED OVER 60HP FOR FAULT CURRENT PROTECTION.

6B. FUSE SPECIFICATION 600/347 VOLTS

i. MAINS AND FEEDERS

- SERVICE ENTRANCE MAINS AND FEEDER FUSES OVER 600 AMPERES SHALL BE BUSSMANN HRC-L TYPE KRP-C WITH 'O' RING SEAL BETWEEN THE END BELLS AND THE GLASS MELAMINE FUSE BARREL. TERMINALS OF FUSE TO BE GLASS PEENED.
- ALL MAINS AND FEEDERS, 15 THROUGH 400 AMPERES, PROTECTING CIRCUIT BREAKERS, SHALL BE BUSSMANN HRC-L TYPE LPJ. THE FUSES AND BREAKERS SHALL BE A CSA APPROVED SERIES TESTED COMBINATION LABELING OF THE EQUIPMENT MUST BE APPLIED PER CEC SECTION 14.
- ALL OTHER MAINS AND FEEDERS, 15 AMPS THROUGH 600 AMPS, OTHER THAN THOSE PROTECTING CIRCUIT BREAKERS, SHALL BE HRC-J TIME-DELAY TYPE LPJ-AMPS SP.

ii. MOTORS

ALL MOTORS SHALL BE PROTECTED BY BUSSMANN HRC-J TIME-DELAY TYPE LPJ-AMPS SP HRC J FUSES. THESE FUSES SHALL BE SIZED AT 150% OF MOTOR FULL LOAD AMPERES FOR STANDARD DUTY, AND 175% FOR HEAVY DUTY. FUSES SHALL PROVIDE 'NO DAMAGE' PROTECTION TO THE MOTOR STARTER ALL SHORT CIRCUIT CURRENTS UP TO 100,000 AMPERES RMS.

THE PRIMARY FUSES PROTECTING 600 TO 208/120 VOLT, OR 600 TO 240/120 VOLT TRANSFORMERS, SHALL BE BUSSMANN TYPE HRC-1-R, DUAL ELEMENT, TIME DELAY TYPE FRR-R FUSES. THE FUSES SHALL BE SIZED AT 125% OF THE TRANSFORMER FULL LOAD CURRENT IN ACCORDANCE WITH THE CEC SECTION 26. THE FUSE SHALL BE CAPABLE OF HANDLING 20 TIMES THE TRANSFORMER FULL LOAD CURRENT FOR 1 SECOND.

ALLOW FOR A DISCONNECT AND TYPE J FUSE FOR MOTORS RATED OVER 60HP FOR FAULT CURRENT PROTECTION.

6C. GROUND FAULT RELAYS

GROUND FAULT RELAYS (One level)

THE MAIN GROUND FAULT RELAY SHALL BE VERY INVERSE TIME BAND SET AT 1200 AMPERES ONE SECOND INVERSE TIME. ALL FEEDERS RATED 1000 AMPERES & GREATER AT 600 VOLTS AND 2000 AMPERES & GREATER AT 208 VOLTS SHALL BE EQUIPPED WITH GROUND FAULT RELAYS SET AT 1200 AMPERES 1 SECOND INVERSE TIME BAND. ALL FEEDER SWITCHES 600 AMP AND SMALLER SHALL BE EQUIPPED WITH BUSSMANN FUSES TYPE LPJ WHICH MEET THE GROUND FAULT REQUIREMENTS OF THE CEC SECTION 14.

GROUND FAULT RELAYS THAT ARE AN INTEGRAL PART OF OVER CURRENT RELAYS WILL NOT BE ACCEPTABLE BECAUSE OF THEIR INABILITY TO SELECTIVELY COORDINATE WITH DOWNSTREAM PROTECTIVE DEVICES.

PROVIDE ZERO SEQUENCE CURRENT TRANSFORMERS ENCIRCLING ALL PHASES AND NEUTRAL CONDUCTORS. GROUND STRAP CURRENT TRANSFORMERS ARE NOT ACCEPTABLE AS UNDER CODE THEY RESTRICT THE MAXIMUM RELAY SETTINGS TO 1000 AMPERES.

(VERY INVERSE TIME) GROUND FAULT RELAY OR APPROVE EQUAL RELAY MUST BE OF A VERY INVERSE CHARACTERISTIC AND BE CAPABLE OF BEING SET AT 1200 AMPS PICKUP AT 1 SECOND. SETTING CLEAR THE FAULT AT 1000 AMPS.

7. ONLY "APPROVED" SERIES RATED COMBINATION TO BE USED.

7A. THE DISTRIBUTION SHOP DRAWINGS SUBMISSION MUST INCLUDE THE ENGINEERS SIGNED LETTER 'APPENDIX E' FROM THE ELECTRICAL SPECIFICATION, ASSURING THAT THE FAULT LIMITATION COMPLIANCE AND COORDINATION IS PROVIDED.

8. THE DISTRIBUTION SHOP DRAWINGS SUBMISSION MUST INCLUDE THE ENGINEERS SIGNED LETTER 'APPENDIX E' FROM THE ELECTRICAL SPECIFICATION, ASSURING THAT THE FAULT LIMITATION COMPLIANCE AND COORDINATION IS APPROVED.

8A. ANY REQUEST FOR USE OF ALTERNATE PROTECTIVE DEVICES SHALL BE ACCOMPANIED BY A FULL COORDINATION STUDY AND FAULT CURRENT CALCULATION ONE FULL CALENDAR WEEK PRIOR TO CLOSE OF TENDER FOR REVIEW BY THE ENGINEER.

8B. DENOTES MANUFACTURER'S SUGGESTED BREAKER SIZES. CONTRACTOR TO COORDINATE BREAKER SIZES WITH MANUFACTURER'S OVERCURRENT PROTECTION SPECIFICATIONS AND CONFIRM WITH LOCAL AUTHORITIES AND MECHANICAL SHOP DRAWINGS PRIOR TO INSTALLATION.

9. DENOTES MANUFACTURER'S SUGGESTED BREAKER SIZES. CONTRACTOR TO COORDINATE BREAKER SIZES WITH MANUFACTURER'S OVERCURRENT PROTECTION AND CONFIRM WITH THE LOCAL AUTHORITIES AND MECHANICAL SHOP DRAWINGS PRIOR TO INSTALLATION.

10. MINIMUM TRANSFORMER IMPEDANCE TO BE 6%.

11. : PROVIDE CABINET CW REMOVABLE SIDE FOR FUTURE METERING AND LAMCOOD LABEL TO READ "CHECK METER PROVISIONS".

12. : GROUND FAULT RELAY SYSTEM

13. : POWER AUTHORITY CONSUMPTION METER

14. PROVIDE SPARE FUSE CABINET AND THREE SPARE FOR EACH TYPE AND SIZE.

15. THE FAULT LIMITATIONS FOR SERIES RATED COMBINATIONS MUST COMPLY WITH CEC SECTION 14.

16. ALL COMPONENTS CONNECTED TO THE ELECTRICAL DISTRIBUTION SYSTEM SHALL MEET OR EXCEED THE AVAILABLE FAULT LEVELS. THIS INCLUDES ALL TRANSFER SWITCHES, TRANSFORMERS, MECHANICAL EQUIPMENT, ETC.

17. : DENOTES CURRENT TRANSFORMERS

18. : DENOTES INFORMATION METER

19. : DENOTES MEASUREMENTS CANADA CERTIFIED REVENUE GRADE ELECTRONIC METER

20. ELECTRICAL CONTRACTOR TO ALLOW FOR CONNECTIONS TO ELEVATOR CONTROLLER AND TRANSFORMER AS PER SELECTED ELEVATOR SUPPLIER.

21. ONE LINE POSTING

THE ELECTRICAL CONTRACTOR IS TO PROVIDE AN "AS BUILT" ONE LINE, FULL SIZED PRINTS IN AN ACRYLIC FRAME OR PLASTIC ENVELOPE, PERMANENTLY MOUNTED ON THE WALL OF THE MAIN ELECTRICAL ROOM. PRIOR TO OCCUPANCY INSPECTION CALL. THIS ONE LINE MUST DETAIL THE FUSE SIZES AND TYPES AS WELL AS BREAKER SIZES AND TYPES, ALL AS PER THE ONE LINE PROVIDED BY THE DISTRIBUTION EQUIPMENT SUPPLIER AND AS PER APPENDIX 'E'.

BASE FEEDER SCHEDULE

- EXCEPT AS NOTED ON THE ONE LINE, THE FOLLOWING BASE FEEDERS SHOULD BE PROVIDED.
- ALL CONDUCTORS ARE TO BE DERATED AS PER CEC SECTION 4 & APPENDIX B.

FUSE/BREAKER SIZE:	CONDUIT & WIRE SIZE:
30A	16mm(3/4") 4F10 RW90
40A	16mm(3/4") 4F8 RW90
50/60A	35mm(1 1/2") 4F8 RW90
70/80A	41mm(1 1/2") 4F8 RW90
100A	41mm(1 1/2") 4F3 RW90
125A	53mm(2") 4F1 RW90
150A	53mm(2") 4F1 RW90
175A	53mm(2") 4F1 RW90
200A	53mm(2") 4F3 RW90
250A	78mm(3") 4F50MCM RW90
300A	2 X 53mm(2") 4F10 RW90
400A	2 X 53mm(2") 4F10 RW90
500A	2 X 78mm(3") 4F50MCM RW90
600A	2 X 78mm(3") 4F50MCM RW90
700A	2 X 103mm(4") 4F50MCM RW90
800A	2 X 103mm(4") 4F50MCM RW90
1000A	3 X 103mm(4") 4F50MCM RW90
1200A	4 X 103mm(4") 4F50MCM RW90
1400A	4 X 103mm(4") 4F50MCM RW90
1600A	4 X 103mm(4") 4F50MCM RW90
2000A	6 X 103mm(4") 4F50MCM RW90

- CONDUCTOR SIZE FOR HYDRAULIC ELEVATORS TO BE 200% OF THE LISTED CEC, UNLESS OTHERWISE NOTED.

FEEDERS AND DISTANCES

DISTANCE	FEEDER
0-0.28m(0-7.5 FT)	BASE
28-46m(75-150 FT)	INCREASE ONE SIZE FROM BASE
46-60m(150-200 FT)	INCREASE TWO SIZES FROM BASE

FEEDERS LONGER THAN 200 FEET LONG APPLY VOLTAGE DROP AS PER CEC

THREE-PHASE

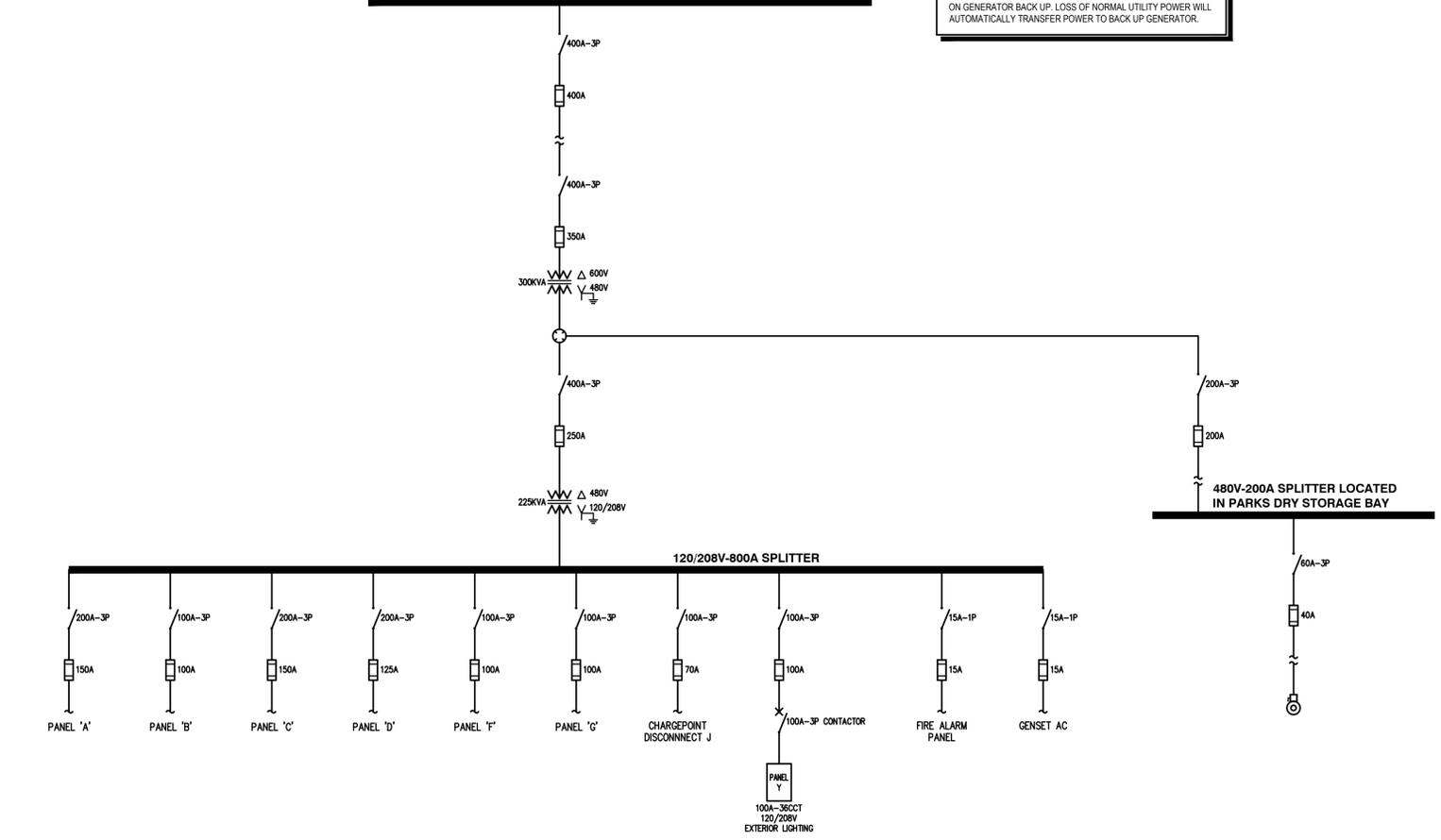
KVA	MINIMUM LOW VOLTAGE, V	1.2 KV CLASS, % EFFICIENCY AT .35 PER UNIT NAME-PLATE LOAD	BIL. 20-150KV, % EFFICIENCY AT 5 PER UNIT NAME-PLATE LOAD
15	208/120V	97.89	97.90
30	208/120V	98.23	97.90
45	208/120V	98.49	98.10
75	208/120V	98.60	98.33
112.5	208/120V	98.74	98.52
150	208/120V	98.83	98.65
225	208/120V	98.94	98.82
300	208/120V	99.02	98.93
500	208/120V	99.14	99.09
750	208/120V	99.23	99.21
1000	208/120V	99.28	99.28
1500	480/277V	-	99.37
2000	480/277V	-	99.43
2500	480/277V	-	99.47
3000	600/347V	-	99.47
3750	4160/2400V	-	99.47
5000	4160/2400V	-	99.47
7500	4160/2400V	-	99.48

NOTE: *ALL DRY TYPE TRANSFORMERS MUST MEET THE CAN/CANULC-C602 (LATEST EDITION) STANDARDS*

NOTE: SINGLE WOUND DUAL VOLTAGE SECONDARY TRANSFORMERS ARE NOT ACCEPTABLE

600V-600A MAIN DISTRIBUTION AT NEW SERVICE CENTRE

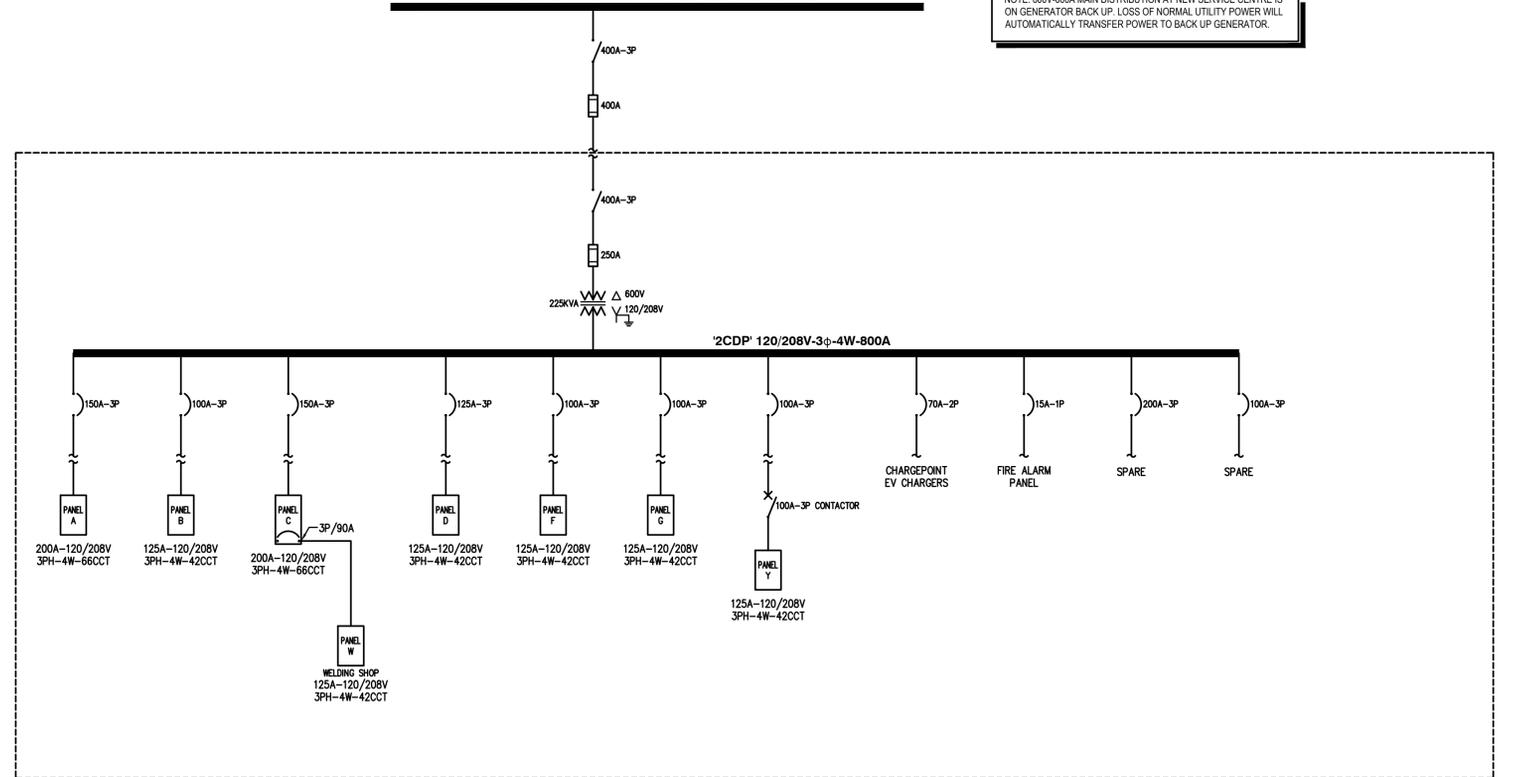
NOTE: 600V-600A MAIN DISTRIBUTION AT NEW SERVICE CENTRE IS ON GENERATOR BACK UP. LOSS OF NORMAL UTILITY POWER WILL AUTOMATICALLY TRANSFER POWER TO BACK UP GENERATOR.



EXISTING SINGLE LINE DIAGRAM - OLD FLEET SERVICE BUILDING

600V-600A MAIN DISTRIBUTION AT NEW SERVICE CENTRE

NOTE: 600V-600A MAIN DISTRIBUTION AT NEW SERVICE CENTRE IS ON GENERATOR BACK UP. LOSS OF NORMAL UTILITY POWER WILL AUTOMATICALLY TRANSFER POWER TO BACK UP GENERATOR.



NEW SINGLE LINE DIAGRAM - OLD FLEET SERVICE BUILDING (ALL EQUIPMENT TO BE NEW)

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PROJECT NO. PRACTICE NUMBER: 103340

Issue For	Issue Date	GLOBAL REVISIONS LIST
	1	2024-10-23
	2	2024-10-31
	3	2024-11-22
	4	2024-12-04
	5	2024-12-18
	6	2025-01-02
	7	2025-01-24

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Project Number	51104 - FMB Repurpose
Drawn By	RB
Checked By	KK
Sheet Number	E-301
Project	ONE LINE DIAGRAM

S-001: ELECTRICAL SPECIFICATIONS: (031424)

1. GENERAL

- 1 THE ELECTRICAL CONTRACTOR IS TO SUPPLY AND INSTALL ALL LABOUR AND MATERIALS NECESSARY TO PROVIDE A COMPLETE AND OPERATING ELECTRICAL SYSTEM AS SPECIFIED OR INDICATED ON THE DRAWINGS. ANY WORK, EVEN IF NOT SHOWN OR SPECIFIED, WHICH ARE OBVIOUSLY NECESSARY OR REASONABLY IMPLIED TO COMPLETE THE WORK, ARE TO BE DONE AS IF IT WERE BOTH SHOWN OR SPECIFIED.
- 2 THE RESPONSIBILITY AS TO WHICH SUB-TRADE PROVIDES ARTICLES OR MATERIALS RESTS SOLELY WITH THE PRIME CONTRACTOR. EXTRAS WILL NOT BE CONSIDERED BASED ON GROUNDS OF DIFFERENCE IN INTERPRETATION OF DRAWINGS OR NOTES AS TO WHICH TRADE INVOLVED IS TO PROVIDE CERTAIN SPECIALTIES OR MATERIALS.
- 3 THE DRAWINGS OF THE DIVISION ARE PERFORMANCE DRAWINGS AND INDICATE THE GENERAL ARRANGEMENT OF WORK. THEY ARE DIAGRAMMATIC AND DO NOT SHOW ALL THE EXISTING STRUCTURAL AND CONSTRUCTION DETAILS. ANY INFORMATION INVOLVING ACCURATE MEASUREMENTS AND EXISTING CONDITIONS SHALL BE VERIFIED ON SITE. ALL NECESSARY ADJUSTMENTS, CHANGES, AND ADDITIONS TO CARRY OUT THE DESIGN INTENT IS TO BE MADE WITHOUT ADDITIONAL CHARGE.
- 4 CONTRACTOR TO VISIT SITE AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO TENDER. NO EXTRAS WILL BE ALLOWED FOR FAILURE TO DO SO.
- 5 THE CONTRACTOR IS TO PROVIDE "AS-BUILT" MARK UPS UPON COMPLETION AND TO ALLOW FOR CAD PROJECTS ARE \$450 AND REVIT ARE \$750 PER SHEET FOR THE CONSULTANT TO UPDATE THE FILES FOR THE OWNER'S RECORD.

2. CODES, PERMITS AND INSPECTION

- 1 THE INSTALLATION IS TO COMPLY WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE CANADIAN ELECTRICAL CODE AND THE REGULATIONS OF THE ELECTRICAL INSPECTION AUTHORITY HAVING JURISDICTION. THESE DOCUMENTS ARE NOT INTENDED TO REITERATE ANY CODES OR REGULATIONS. ALL CONTRACTORS AND THEIR RESPECTIVE TRADES PEOPLE ARE TO BE LICENSED AND QUALIFIED TO PERFORM THIS TYPE OF WORK. NO ALLOWANCE WILL BE MADE FOR THE FAILURE OF THE CONTRACTOR TO PROVIDE SUITABLE GROUNDING, ACCESS PANELS, WIRING METHODS, ETC. TO THE SATISFACTION OF THE APPLICABLE CODES AND INTENT OF THESE DOCUMENTS.
- 2 THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR THE COMPLETION OF THE JOB. AND PROVIDE DRAWINGS TO THE POWER AUTHORITY AS REQUIRED BY THE GOVERNING RULES AND REGULATIONS.

3. STANDARDS OF MATERIAL AND QUALITY OF INSTALLATION

- 1 ALL MATERIALS ARE TO BE NEW, UNLESS OTHERWISE INDICATED, OF MINIMUM QUALITY SPECIFIED, AND ARE TO CONFORM TO THE REQUIREMENTS OF THE CANADIAN STANDARDS ASSOCIATION (CSA) FOR THE INTENDED APPLICATION. WHERE EQUIPMENT OR MATERIAL IS SPECIFIED BY TECHNICAL DESCRIPTION ONLY, IT IS TO BE OF THE BEST COMMERCIAL QUALITY OBTAINABLE FOR THE PURPOSE.
- 2 ALL WORK TO BE LAID OUT IN A NEAT AND ORGANIZED MANNER.
- 3 WHERE WIRING IS EXPOSED, IT SHALL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.

4. ALTERNATES

- 1 ALTERATIONS ENTAILING ADDITIONAL WORK OR DELETIONS ARE TO BE CARRIED OUT ONLY UPON THE WRITTEN REQUEST OF THE PRIME CONSULTANT.
- 2 ANY PRICES SUBMITTED BY THE ELECTRICAL CONTRACTOR FOR ADDITIONAL WORK OR ALTERATIONS ARE TO INCLUDE A PRICE BREAKDOWN FOR ALL LABOUR AND MATERIALS. WHERE REQUIRED, PRICING FOR LABOUR AND MATERIALS WILL BE CHECKED BY INVOICES, TIME SHEETS, ETC. NO EXTRAS WILL BE ALLOWED WITHOUT PRIOR WRITTEN AUTHORIZATION.

5. SHOP DRAWINGS AND APPROVALS

- 1 THE ELECTRICAL CONTRACTOR IS TO SUBMIT TO THE ENGINEER FOR APPROVAL A COMPLETE LIST OF ALL EQUIPMENT PROPOSED TO BE USED ON THE PROJECT, IDENTIFYING NAME OF MANUFACTURER, RATING, TECHNICAL DESCRIPTION AND CATALOGUE NUMBER. ALL SUBMISSIONS ARE TO BE MADE DIGITALLY AS A PDF AND PROVIDED WITH SUFFICIENT ROOM FOR ALL APPROVAL STAMPS. SHOP DRAWINGS WILL NOT BE REVIEWED UNTIL BOTH THE ELECTRICAL CONTRACTOR AND GENERAL (PRIME) CONTRACTOR HAVE REVIEWED, STAMPED AND SIGNED OFF THE RESPECTIVE DRAWINGS.

6. SETTING OUT WORK

- 1 THE ELECTRICAL CONTRACTOR IS TO THOROUGHLY EXAMINE THE SITE AND DRAWINGS AND REPORT ANY DISCREPANCIES, ERRORS OR OMISSIONS TO THE ENGINEER PRIOR TO TENDER. THE ELECTRICAL CONTRACTOR IS TO GIVE THE WORK PERSONAL SUPERVISION. LAYOUT THE WORK, DO ALL NECESSARY LEVELING AND MEASURING, OR EMPLOY A COMPETENT ENGINEER TO DO SO. FIGURES, FULL SIZE AND DETAILED DRAWINGS ARE TO TAKE PRECEDENCE OVER SCALE MEASUREMENTS OF THE DRAWINGS.
- 2 THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR CORRECTING ALL WORK COMPLETED CONTRARY TO THE INTENT OF THE DRAWINGS AND IS TO BEAR ALL COSTS OF SAME. WHERE THE INTENT OF THE DRAWINGS IS NOT CLEAR, OBTAIN CLARIFICATION FROM THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- 3 IT IS THE INTENT OF THESE DRAWINGS TO PROVIDE FOR AN ELECTRICAL INSTALLATION COMPLETE AND IN OPERATING CONDITION AND THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE SUPPLY AND INSTALLATION OF ALL MATERIALS NECESSARY TO ACCOMPLISH THIS.
- 4 THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY THE IMPROPER LOCATION OR CARRYING OUT OF THEIR WORK.
- 5 THE ELECTRICAL CONTRACTOR IN SETTING OUT THE WORK IS TO MAKE REFERENCE TO THE ELECTRICAL, MECHANICAL, STRUCTURAL AND ARCHITECTURAL DRAWINGS. CONSULT WITH THE RESPECTIVE TRADES IN SETTING OUT LOCATIONS FOR CONDUIT CONDUITS, LIGHTING FIXTURES, PANEL ASSEMBLIES, ETC. SO THAT CONFLICTS ARE AVOIDED AND SYMMETRICAL EVEN SPACING IS MAINTAINED.
- 6 CONDUIT IS TO BE LAID OUT TO AVOID INTERFERENCE WITH OTHER TRADES AND IS TO MAINTAIN MAXIMUM HEADROOM WITH THE MINIMUM NUMBER OF CROSSOVERS.
- 7 SWITCH MOUNTING HEIGHTS ARE TO BE CO-ORDINATED WITH THE ARCHITECTURAL DETAILS AND ARE TO BE ADJUSTED AS NECESSARY TO CO-ORDINATE WITH PANELING, MASONRY COURSE LINE, ETC. CONFIRM WITH ARCHITECT BEFORE INSTALLATION.
- 8 BEFORE INSTALLING WALL OUTLET BOXES, THE ELECTRICAL CONTRACTOR IS TO CHECK THE ARCHITECTURAL DRAWINGS FOR ROOM DETAILS, DOOR SWINGS, BUILT-IN UNITS, ETC. AND IS TO ADJUST OUTLET POSITIONS TO CO-ORDINATE WITH SUCH ITEMS. CONFIRM WITH ARCHITECT BEFORE INSTALLATION.
- 9 THE ELECTRICAL CONTRACTOR IS TO REFER TO MECHANICAL DRAWINGS FOR LOCATION OF THERMOSTATS, RADIATION CABINETS, ETC. OUTLETS ARE TO BE ADJUSTED IN THESE AREAS TO CO-ORDINATE WITH THE MECHANICAL EQUIPMENT. CONFIRM WITH ARCHITECT BEFORE INSTALLATION.
- 10 WHERE SWITCHES, RECEPTACLES, ETC. ARE SHOWN IN THE SAME GENERAL LOCATIONS, THESE OUTLETS ARE TO BE LINED UP VERTICALLY.
- 11 THE ELECTRICAL CONTRACTOR IS TO COORDINATE WITH ALL EQUIPMENT SUPPLIERS FOR THE EXACT LOCATION AND ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT PRIOR TO ROUGH-IN.

7. NAMETAGS

- 1 NAMETAGS ARE TO BE SUPPLIED AND INSTALLED WHERE CALLED FOR ON THE DRAWINGS AND IN THESE SPECIFICATIONS. ALL MOTOR STARTERS, MOTOR PROTECTION SWITCHES AND MANUAL CONTROL STATIONS ARE TO BE PROVIDED WITH NAMETAGS. AT ALL DISTRIBUTION CENTRES, ETC., NAMETAGS ARE TO BE PROVIDED FOR ALL BREAKERS, SWITCHES, ETC. EACH DISTRIBUTION CENTRE, PANEL BOARD AND TERMINAL CABINET IS TO BE PROVIDED WITH NAMETAGS GIVING THE CENTRE AND PANEL DESIGNATION NAME OF LETTER AND VOLTAGE OR TYPE OF TERMINAL PANEL. LETTERS ON NAMETAGS ARE NOT TO BE LESS THAN 3/8 INCHES HIGH.
- 2 NAMETAGS ARE TO BE THREE LAYER LAMINATED PLASTIC BLACK WITH BLACK WITH ETCHED LETTERS TO GIVE WHITE LETTERS ON BLACK BACKGROUND. EDGES ARE TO BE BEVELLED. EMBOSSED ADHESIVE BACKED DYMO NAMETAGS ARE NOT TO BE USED FOR PANEL BOARDS, MOTOR STARTERS, DISTRIBUTION CENTRES, ETC.

8. TESTING

- 1 ALL PORTIONS OF THE ELECTRICAL WORK IS TO BE TESTED AND CHECKED FOR SATISFACTORY OPERATION.
- 2 UPON COMPLETION OF THE WORK AND IMMEDIATELY PRIOR TO FINAL INSPECTION AND TAKEOVER THE ELECTRICAL CONTRACTOR IS TO CHECK THE LOAD BALANCE ON ALL FEEDER, DISTRIBUTION CENTRES, PANELS, ETC. TESTS ARE TO BE CARRIED OUT BY TURNING ON ALL POSSIBLE LOADS IN THE PROJECT AND CHECKING THE LOAD CURRENT BALANCE. IF LOAD UNBALANCE EXCEEDS 15 PERCENT, RECONNECT THE CIRCUITS TO BALANCE THE LOAD.

9. CO-ORDINATION BETWEEN TENANT AND BASE BUILDING

- 1 CHECK AND CO-ORDINATE ALL SYSTEMS IN THE TENANT AREAS WHICH ARE EXTENDED TO BASE BUILDING SYSTEMS TO ENSURE THEIR PROPER OPERATION.
- 2 PROVIDE INTERFACING COMPONENTS BETWEEN NEW AND EXISTING SYSTEMS AS NECESSARY FOR PROPER PERFORMANCE AND OPERATION.

10. USE OF BASE BUILDING MATERIAL AND EQUIPMENT

- 1 TEST BASE BUILDING EQUIPMENT WHICH IS TO REMAIN IN AREAS BEING RENOVATED FOR PROPER OPERATION AND REPAIR AS NECESSARY.
- 2 CLEAN, TEST FOR PROPER OPERATION, AND REPAIR AS NECESSARY BEFORE BEING PUT BACK INTO SERVICE. BASE BUILDING EQUIPMENT TO BE RELOCATED OR RE-USED.
- 3 UNLESS NOTED OTHERWISE, BASE BUILDING WIRING MATERIAL MAY BE RE-USED IF ACCEPTABLE TO THE INSPECTION AUTHORITIES.
- 4 REPAIR OR REPLACE WITHOUT ADJUSTMENT TO THE CONTRACT PRICE ALL BASE BUILDING EQUIPMENT WHICH IS DAMAGED IN THE PROCESS OR RELOCATION.
- 5 UNLESS NOTED OTHERWISE, PROVIDE ADDITIONAL EQUIPMENT OF THE SAME TYPE AND MANUFACTURE WHERE REQUIRED TO SUPPLEMENT EXISTING EQUIPMENT.

11. SALVAGE MATERIALS

- 1 ALL EXISTING MATERIALS IN THE TENANT AREAS OF THE BASE BUILDING WHICH ARE NOT TO REMAIN OR BE RE-USED IS TO REMAIN THE PROPERTY OF THE BUILDING OWNER UNLESS NOTED OTHERWISE.

12. BASE BUILDING SERVICES

- 1 DISCONNECT AND REMOVE ALL BASE BUILDING SERVICES WHICH ARE ABANDONED.
- 2 REMOVE ALL CONDUIT WORK WHICH IS ABANDONED EXCEPT CUT FLUSH WHERE EMBEDDED IN STRUCTURE.
- 3 WHERE BASE BUILDING WIRING DEVICES ARE ABANDONED BUT OUTLET BOXES ARE TO REMAIN, PROVIDE BLANK PLATES OF MATERIAL AS SPECIFIED.
- 4 MAKE SAFE ALL CIRCUIT WIRING LEFT FOR FUTURE USE.

13. INTERRUPTION AND SERVICES

- 1 ALL INTERRUPTIONS OF BASE BUILDING SERVICES (POWER, WATER, ETC.) ARE TO BE CO-ORDINATED THROUGH THE BUILDING OWNER AND TO BE EFFECTED ONLY AS DIRECTED BY THE BUILDING OWNER.

14. PREMIUM TIME

- 1 INCLUDE COST OF PREMIUM TIME IN TENDER PRICE FOR WORK DURING NIGHTS, WEEKENDS OR OTHER TIME OUTSIDE NORMAL WORKING HOURS NECESSARY TO MAINTAIN ALL ELECTRICAL SERVICES IN OPERATION.

15. CONDUIT

- 1 PROVIDE STEEL GALVANIZED CONDUIT (EMT) IN CEILING SPACES AND SERVICE SPACES. ALL CONDUIT TO BE CONCEALED EXCEPT FOR ELECTRICAL ROOMS. BX MAY BE USED IN FINAL CONNECTION TO LUMINARIES. ALL WIRING IS TO BE IN CONDUIT AND THERE ARE NO EXCEPTIONS EVEN FOR LOW TENSION CIRCUITS.
- 2 SUPPORT MULTIPLE RUNS OF CONDUIT ON CHANNEL WITH ROD HANGERS.
- 3 PROVIDE CONDUIT EXPANSION JOINTS WHERE CONDUITS CROSS BUILDING EXPANSION JOINTS, AND IN STRAIGHT RUNS OF CONDUIT 30 M (100') OR LONGER.
- 4 SIZE CONDUITS TO CODE REQUIREMENTS, PROVIDE LARGER SIZE WHERE NOTED.
- 5 ALL CONDUIT IS TO BE TESTED FOR CLEAR BORE.
- 6 INSTALL A CONTINUOUS NYLON CORD IN EACH CONDUIT LEFT EMPTY.
- 7 ALL CONDUITS ROUTED IN CONCRETE SLABS ARE TO HAVE AN APPROPRIATELY SIZED GROUNDING CONDUCTOR PULLED IN WITH THE MOTORS AS SUPPLIED ON THE JOB. SUPPLY AND INSTALL NAMETAGS FOR ALL MOTOR PROTECTION SWITCHES, CONTROL STATIONS, CONTROL DEVICES, ETC. IN FINISHED AREAS, SUCH NAMETAGS ARE TO BE LAMINATED. IN MECHANICAL ROOMS AND SIMILAR AREAS, LAMINATED TAGS ARE ALSO TO BE USED.

16. OUTLET BOXES

- 1 OUTLET BOXES ARE TO BE 100 MM SQUARE TYPE (S2-151), NO OTHER BOX TYPES WILL BE ACCEPTED WITHOUT ENGINEER'S APPROVAL. BOXES USED WITH SURFACE MOUNTED EMT ARE TO BE STANDARD SHEET METAL TYPE. PROVIDE PLASTER RINGS FOR ALL BOXES FOR SWITCHES, RECEPTACLES, TELEPHONE OUTLETS, ETC. CONFIRM WITH ARCHITECT BEFORE INSTALLATION.
- 2 OUTLET BOXES IN SOUND ATTENUATING PARTITIONS ARE TO BE OFFSET TO AVOID UNDUE TRANSMISSION OF SOUND BETWEEN THE PARTITION ELEMENTS.

17. WIRE AND CABLE

- 1 INSTALL ALL WIRING IN CONDUIT UNLESS OTHERWISE NOTED. ALL WIRING IS TO BE COPPER WITH RW90 INSULATION. USE SOLID CONDUCTORS #10 AWG AND SMALLER. USE STRANDED CONDUCTORS FOR #6 AWG AND LARGER. NO CONDUCTOR SMALLER THAN #12 AWG IS TO BE USED EXCEPT FOR CONTROL WIRING WHICH IS TO BE #14 AWG FOR 120 VOLT AND #16 AWG FOR 24 VOLT CONTROL.

18. ACCESS PANELS AND DOORS

- 1 PROVIDE ACCESS PANELS OR DOORS TO ALLOW READY ACCESS TO ALL CONCEALED ELECTRICAL JUNCTION BOXES AND/OR PRODUCTS REQUIRING ADJUSTMENTS OR MAINTENANCE.

19. POWER PANELS

- 1 PANELS ARE TO HAVE DOORS WITH CONCEALED HINGES AND COMBINED LOCK AND LATCH, OPERATED BY THE BASE BUILDING MASTER KEY.
- 2 PANELS ARE TO HAVE MAINS, BRANCH CIRCUITS, ETC. OF SIZE AND TYPE AS NOTED ON DRAWINGS. BREAKERS ARE TO HAVE BOLTED MAINS.
- 3 EXTERIOR LIGHTING MAY BE CONNECTED TO EXISTING CONTROLS WHERE POSSIBLE. OTHERWISE PROVIDE NEW TIME CLOCK, PHOTO CELL AND RELAYS AS REQUIRED.

20. DISTRIBUTION EQUIPMENT

- 1 DISTRIBUTION EQUIPMENT CONSISTS OF ELECTRICAL COMPONENTS AS DETAILED ON DRAWINGS.

20.1 MANUFACTURE OF SWITCHGEAR

- 1 NEW OR ADDED DISTRIBUTION EQUIPMENT SHALL COMPLY WITH ALL EXISTING SHORT CIRCUIT COORDINATION STUDIES AND ARC FLASH HAZARD ANALYSIS AS APPLIED TO THE FACILITY.
- 2 THE CONTRACTOR IS TO ENSURE THAT ALL INSTALLATIONS COMPLY WITH THE CEC AND ALL LOCAL CODES AS REQUIRED BY THE AHJ.

21. WIRING DEVICES

- 1 SWITCHES: QUIET, SLOW MAKE, SLOW BREAK DESIGN, TOGGLE HANDLE, WITH TOTALLY ENCLOSED CASE RATED AT 15 AMP, 120 VOLT, AC TYPE WITH WIDE FACE BODY AND FULL GANG MOUNTING TYPE. SWITCH AND PILOT LIGHT, PUSH ACTION TYPE WITH RED HANDLE, INTEGRAL LONG-LIFE PILOT LIGHT, RATED AS SPECIFIED ABOVE OR CALLED FOR ON THE DRAWINGS. COLOUR: PROVIDE IVORY BAKELITE SWITCHES IN ALL AREAS, UNLESS DIRECTED OTHERWISE BY THE OWNER.
- 2 RECEPTACLES: FULL GANG SIZE, U-GROUNDING TYPE, RATED AT 15 AMP, 120 VOLT WITH PARALLEL SLOTS. SLOTS HAVING DOUBLE OR TRIPLE WIRE JAWS COMPLETE WITH SADDLE MOUNTING STRIP AROUND BACK OF BODY. ABUSE-RESISTANT HIGH IMPACT NYLON TOP FACE. SPECIAL RECEPTACLES: SEE DRAWINGS FOR SPECIAL RECEPTACLE SIZES. COLOUR: PROVIDE IVORY BAKELITE RECEPTACLES IN ALL AREAS, UNLESS DIRECTED OTHERWISE BY THE OWNER.
- 3 DIMMERS: ALL DIMMERS ARE TO BE DERATED 20%, PROVIDE SEPARATE AND INDEPENDENT NEUTRAL CONDUITS TO EACH DIMMING CIRCUIT. ENSURE THAT ALL DIMMERS ARE RATED FOR LED DIMMING AS APPLICABLE.
- 4 HUBBEL, BRYANT OR APPROVED EQUAL.

22. COVER PLATES

- 1 A FULL COMPLIMENT OF COVER PLATES ARE TO BE PROVIDED FOR ALL SWITCHES RECEPTACLES, TELEPHONE OUTLETS, LOW TENSION OUTLETS, ETC. PLATES FOR ALL FLUSH MOUNTING DEVICES ARE TO BE AS PER SYMBOL SCHEDULE.

23. TELEPHONE SYSTEM

- 1 SUPPLY AND INSTALL A TELEPHONE DISTRIBUTION SYSTEM AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN. ALL TELEPHONE CABLING TERMINATIONS AND CONNECTIONS WILL BE THE RESPONSIBILITY OF THE SUPPLY AUTHORITY. ALL TELEPHONE CONDUIT IS TO BE THOROUGHLY SWABBED OUT AND CLEANED AND A SUBSTANTIAL CORROSION-RESISTANT PULL WIRE INSTALLED.

24. FIRE ALARM SYSTEM

- 1 CONNECT FIRE ALARM DEVICES TO EXISTING FIRE ALARM SYSTEM IN ACCORDANCE WITH LOCAL AUTHORITY FIRE REGULATIONS. CONTRACTOR TO ASCERTAIN REQUIREMENTS PRIOR TO TENDER AND INCLUDE THESE ITEMS IN COST.
- 2 PROVIDE ALL MATERIALS AND COMPONENTS REQUIRED AND APPROVED BY THE GOVERNING CODES AND AUTHORITIES HAVING JURISDICTION FOR FIRE ALARM SYSTEMS. ALL DEVICES USED FOR THE DETECTION AND INITIATION OF ALARM CIRCUITS ARE TO BE OF THE RESETTING TYPE AND OF THE HIGHEST COMMERCIAL GRADE AVAILABLE FOR THE PURPOSE.
- 3 PROVIDE TESTING AND VERIFICATION OF THE COMPLETED AND FULLY OPERATIONAL SYSTEM. THE VERIFICATION OF THIS SYSTEM IS TO SATISFY THE MINIMUM STANDARDS AS DICTATED BY (CANULC-S537) AND THE CANADIAN ELECTRICAL CODE. THE VERIFICATION IS TO BE RECORDED AND UNDERTAKEN BY AN APPROVED FIRE ALARM TESTING ORGANIZATION. ALL INSTALLATION AND TESTING PROCEDURES ARE TO MEET WITH AND SATISFY THE ENGINEER AND THE AUTHORITIES HAVING JURISDICTION.
- 4 THE AUDIBLE EVACUATION DEVICES FOR THIS SYSTEM ARE TO BE SPEAKER/STROBES OR HORN/STROBES AS NOTED ON THE DRAWINGS. MOUNTING OF THESE DEVICES ARE TO BE SURFACE AND SHALL NOT BE MOUNTED WITHIN 4" (100MM) FROM ANY PHYSICAL OBSTRUCTIONS.
- 5 PROVIDE DETAILED MANUFACTURE SHOP DRAWINGS OF ALL COMPONENTS TO BE USED.
- 6 ALL WIRING FOR THIS SYSTEM IS TO BE CLASS "A" TYPE, E.O.L. DEVICES ARE TO BE MOUNTED IN THE FIRE ALARM CONTROL PANEL.
- 7 MATERIALS TO BE BUILDING STANDARD MAKE AND TYPE.

25. WIRING FOR MECHANICAL TRADE

- 1 MOTORS AND AUTOMATIC CONTROL DEVICES SUCH AS THERMOSTATS, PRESSURE SWITCHES, ETC. WILL BE SUPPLIED BY THE MECHANICAL TRADE AND ARE TO BE INSTALLED BY THE ELECTRICAL TRADE. THE ELECTRICAL CONTRACTOR IS TO SUPPLY AND INSTALL ALL MOTOR PROTECTION SWITCHES, ALL MANUAL CONTROL STATIONS SUCH AS SWITCHES AND PILOT LIGHTS, PUSHBUTTONS AND PILOT LIGHTS, ETC. THE ELECTRICAL CONTRACTOR IS TO SUPPLY AND INSTALL DISCONNECT SWITCHES WHERE INDICATED ON THE DRAWINGS. THE ELECTRICAL CONTRACTOR IS TO CONFIRM WITH THE MECHANICAL TRADE THE SIZE, ELECTRICAL CHARACTERISTICS AND LOCATION OF ALL MECHANICAL EQUIPMENT BEFORE INSTALLATION OF CONDUIT OR OUTLETS. ALL MAJOR STARTER HEATERS ARE TO BE SELECTED TO SUIT MOTORS AS SUPPLIED ON THE JOB. SUPPLY AND INSTALL NAMETAGS FOR ALL MOTOR PROTECTION SWITCHES, CONTROL STATIONS, CONTROL DEVICES, ETC. IN FINISHED AREAS, SUCH NAMETAGS ARE TO BE LAMINATED. IN MECHANICAL ROOMS AND SIMILAR AREAS, LAMINATED TAGS ARE ALSO TO BE USED.

26. LUMINARIES (LIGHTING FIXTURES)

- 1 PROVIDE ALL LIGHTING FIXTURES COMPLETE WITH LAMPS AS INDICATED ON DRAWINGS.
- 2 INSTALL ALL FIXTURES IN THE STANDARD MANNER FOR THE TYPE OF FIXTURE AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- 3 SUPPORT ALL FIXTURES FROM STRUCTURAL MEMBERS EXCEPT THAT FIXTURES INSTALLED IN SUSPENDED CEILINGS MAY BE SUPPORTED BY THE CEILING PROVIDED THE SUPPORTS ARE REINFORCED TO CARRY THE ADDITIONAL LOAD.

27. EXIT LIGHTS

- 1 REFER TO SYMBOL SCHEDULE FOR SPECIFICATION.

28. EMERGENCY LIGHTING

- 1 SUPPLY AND INSTALL EMERGENCY LIGHTING EQUIPMENT FOR AUTOMATIC OPERATION ON POWER FAILURE. UNITS TO BE INSTALLED IN ACCORDANCE WITH CSA C22-141. UNITS ARE TO BE EMERGLITE "JS" SERIES, 12 VOLT MODEL, 4 WATT LED LAMPS, REMOTE HEADS (AS REQUIRED) TO BE OF THE MATCHING SERIES. PROVIDE CONNECTION TO EXIT LIGHTS USING NO SMALLER CONDUCTORS THAN #10 AWG, RW90 CU IN A 12 MM (1/2") EMT CONDUIT.

27. EXIT LIGHTS

- 1 REFER TO SYMBOL SCHEDULE FOR SPECIFICATION.

28. EMERGENCY LIGHTING

- 1 SUPPLY AND INSTALL EMERGENCY LIGHTING EQUIPMENT FOR AUTOMATIC OPERATION ON POWER FAILURE. UNITS TO BE INSTALLED IN ACCORDANCE WITH CSA C22-141. REFER TO THE SYMBOL SCHEDULE AND PLANS FOR REMOTE HEAD AND BATTERY PACK PERFORMANCE DETAILS. PROVIDE CONNECTION TO EXIT LIGHTS USING NO SMALLER CONDUCTORS THAN #10 AWG, RW90 CU IN A 12 MM (1/2") EMT CONDUIT.

29. LOCAL AUTHORITY INSPECTION REPORTS

- 1 SUBMIT ALL COPIES OF THE LOCAL AUTHORITY INSPECTION REPORTS TO THE ENGINEER FOR REVIEW. PHOTOCOPIES ARE ACCEPTABLE.

30. MAINTENANCE MANUALS AND "FIELD RECORD" DRAWINGS

- 1 THE ELECTRICAL CONTRACTOR IS TO PROVIDE THE OWNER WITH TWO (2) COMPLETE MAINTENANCE MANUALS (COMPLETE WITH LIGHTING FIXTURE INFORMATION AND SHOP DRAWINGS, ETC.) AND TWO (2) COMPLETE SETS OF BLUE LINE PRINTS MARKED "FIELD RECORD DRAWINGS" INDICATING ALL CHANGES MADE DURING CONSTRUCTION. THE ELECTRICAL CONTRACTOR IS TO MAINTAIN, AT ALL TIMES, ON THE SITE, A COMPLETE SET OF CLEAN ELECTRICAL DRAWINGS RECORDING THE ACTUAL PROGRESS OF THE ELECTRICAL INSTALLATION INDICATING ALL VARIATIONS FROM THE TENDER DRAWINGS. ALL SUBMITTALS ARE TO BE MADE AVAILABLE IN HARD COPY AND PDF FORMAT.

31. GUARANTEE

- 1 THE ELECTRICAL CONTRACTOR IS TO GUARANTEE THE SATISFACTORY OPERATION OF ALL WORK AND APPARATUS INSTALLED UNDER THIS CONTRACT AND IS TO REPLACE FORTHWITH, AT THEIR OWN EXPENSE, ANY PART WHICH MAY FAIL OR PROVE DEFECTIVE WITHIN A PERIOD OF TWELVE (12) MONTHS AFTER FINAL ACCEPTANCE OF THE COMPLETE CONTRACT. ALWAYS PROVIDED THAT SUCH FAILURE IS NOT CAUSED BY IMPROPER USAGE OR ORDINARY WEAR AND TEAR. THE PERIOD OF THIS GUARANTEE SPECIFIED ABOVE IS TO IN NO WAY SUPPLANT ANY OTHER GUARANTEE OF A LONGER PERIOD BUT IS TO BE BINDING ON ALL WORK, NOT OTHERWISE COVERED.

32. ADDITIONAL CONDITIONS

- 1. ALL UNUSED OUTLETS AND WIRES TO BE TAPED AND BLANK PLATES INSTALLED.
- 2. ALL UNUSED ELECTRICAL MATERIALS TO BE REMOVED FROM SITE.
- 3. ANY UNUSED FIXTURES TO BE HANDED OVER TO OWNER.
- 4. INSTALLATION AND SCHEDULE TO BE COORDINATED WITH BUILDING OWNER AND TENANTS.
- 5. ADDITIONAL CIRCUITS THAT CAN NOT BE ACCOMMODATED BY THE EXISTING POWER GRID SHALL BE RUN STRAIGHT TO EXISTING PANEL. ADD ADDITIONAL TUB AS SPECIFIED AND MAKE GOOD EXISTING CONDUIT AND WIRING. IF ADDITIONAL WIRING IS REQUIRED, NEMETZ AND ASSOCIATES SHALL BE NOTIFIED FOR PROPER INSTRUCTIONS HOW TO PROCEED WITH THIS WORK.)
- 6. ELECTRICAL CONTRACTOR SHALL VISIT SITE DURING PRICING.
- 7. ELECTRICAL CONTRACTOR SHALL REVIEW CURRENT BUILDING GUIDELINES.
- 8. ALL ELECTRICAL CHANGES MUST BE TYPED ONTO PANEL DIRECTORIES ON COMPLETION OF WORK.
- 9. GROUND WIRES FOR TELEPHONE EQUIPMENT WITHIN THE TELEPHONE ROOM MUST BE FED THROUGH CONDUIT.
- 10. UNUSED WIRING IS TO BE REMOVED FROM THE CONDUIT SYSTEM WHEN NEW LINES ARE INSTALLED.
- 11. SUPPLY AND INSTALL ALL SWITCHES, WALL OUTLETS AND TELEPHONE OUTLETS. WIRE AS REQUIRED AND INDICATED ON DRAWINGS.
- 12. ALL POWER, COMPUTER AND TELEPHONE OUTLETS TO BE LOCATED IN ONE STUD SPACE ON A HORIZONTAL BAR WHEN THEY ARE INDICATED IN CLOSE PROXIMITY. USE COMBINED FACE PLATES WHERE POSSIBLE.
- 13. ALL ELECTRICAL PRODUCTS TO BE BUILDING STANDARD AND OF THE SAME MAKE WHERE PRACTICAL.
- 14. CIRCUIT NUMBERS ARE FROM THE BASE BUILDING AND SHOULD BE VERIFIED IN THE FIELD.
- 15. ELECTRICAL CONTRACTOR TO X-RAY SLAB FOR ALL FLOOR CORED HOLES, NOTIFY STRUCTURAL ENGINEER PRIOR TO CORING.
- 16. ALL UNUSED WIRING TO BE CLEARED BACK TO GRID JUNCTION BOXES.
- 17. ALL OUTLET LOCATIONS TO BE APPROVED BY THE ARCHITECT BEFORE PROCEEDING WITH INSTALLATION.
- 18. ELECTRICAL CONTRACTOR TO INDICATE THE FOLLOWING:
 - A) BASE BUILDING FIXTURES REMAINING.
 - B) BASE BUILDING FIXTURES RELOCATED.
 - C) BASE BUILDING FIXTURES RETURNED TO OWNER.
 - D) NEW FIXTURES PROVIDED AND INSTALLED.
- 19. ALL PARTITIONS TO CLEAR LIGHT FIXTURES.
- 20. THE ELECTRICAL CONTRACTOR SHALL ALLOW FOR REMOVING AND REPLACEMENT OF ALL LIGHT FIXTURES ADJACENT TO WALLS BEING REMOVED, RELOCATED OR ADDED AS REQUIRED DURING THE COURSE OF CONSTRUCTION. CARE SHALL BE TAKEN NOT TO DAMAGE ANY FIXTURES DURING THIS PROCESS.
- 21. ALL WALL MOUNTED OUTLETS TO BE 12" ON CENTRE ABOVE FINISHED FLOOR UNLESS SHOWN OTHERWISE.
- 22. COMPUTER AND GENERAL RECEPTACLES TO BE CLEARLY LABELLED WITH A "C" FOR COMPUTER POWER AND "G" FOR GENERAL POWER. DIFFERENT COLOURED RECEPTACLES MAY BE USED IF APPROVED BY INTERIOR DESIGNER.
- 23. CONTRACTOR TO REMOVE ALL UNUSED TELEPHONE WIRING UNDER THE SUPERVISION OF THE SUPPLY AUTHORITY.
- 24. CONTRACTOR TO REMOVE ALL UNUSED DATA CABLING.
- 25. CONTRACTOR TO REMOVE ALL UNUSED POWER WIRING. ANY POWER WIRING EXISTING IN CONDUIT SYSTEM WHICH IS SUITABLE FOR USE MAY BE REUSED BUT SHALL BE SUBJECT TO A MEGGER TEST FOR INSULATING RESISTANCE. THE ABOVE TESTS ARE TO BE WITNESSED BY THE ENGINEER.
- 26. THE FOLLOWING SEISMIC REQUIREMENTS SHALL APPLY UNLESS APPROVAL IN WRITING IS OBTAINED FROM THE AUTHORITY HAVING JURISDICTION TO WAIVE PART OR ALL SAID REQUIREMENTS.

33. SEISMIC RESTRAINT NOTES

- 1. THE CONTRACTOR SHALL EMPLOY A SEISMIC CONSULTANT AT THE BEGINNING OF THE PROJECT. THE SAID CONSULTANT SHALL:
 - A) SUBMIT ASSURANCE LETTER FOR "ASSURANCE OF PROFESSIONAL DESIGN AND COMMITMENT FOR FIELD REVIEW" AS DESIGNATED BY THE LOCAL PERMIT AUTHORITY, AT THE BEGINNING OF THE PROJECT.
 - B) PROVIDE DRAWINGS SEALED BY A PROFESSIONAL ENGINEER.
 - C) INCLUDE WRITTEN VERIFICATION OF SITE INSPECTION OF THE FIELD INSTALLATION AND A SIGNED AND SEALED LETTER OF ASSURANCE OF "ASSURANCE OF PROFESSIONAL FIELD REVIEW AND COMPLIANCE", AT SUBSTANTIAL PERFORMANCE.

- 2. ALL ELECTRICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE FOLLOWING CRITERIA:
 - A) FIXED EQUIPMENT ON GRADE - USE 33% OF OPERATING WEIGHT AT THE CENTER OF GRAVITY.
 - B) FIXED EQUIPMENT ON STRUCTURE - USE 50% OF OPERATING WEIGHT AT THE CENTER OF GRAVITY.
 - C) EMERGENCY POWER AND COMMUNICATION EQUIPMENT ON STRUCTURE - USE 75% OF OPERATING WEIGHT AT THE CENTER OF GRAVITY.
 - D) EMERGENCY AND POWER COMMUNICATION EQUIPMENT ON STRUCTURE - USE 75% OF OPERATING HEIGHT OR CENTER OF GRAVITY IF HIGHER.
 - E) FLEXIBLY MOUNTED EQUIPMENT - USE 2 TIMES THE ABOVE VALUES.
 - F) SIMULTANEOUS VERTICAL FORCE - USE 10 TIMES THE HORIZONTAL FORCE.

- 3. HORIZONTAL SEISMIC FORCES SHALL BE DETERMINED FROM THE APPLICABLE EQUATIONS OF THE GOVERNING CODE.

- 4. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON DRAWINGS FOR FLOOR, WALL, CEILING OR ROOF MOUNTED EQUIPMENT WEIGHING LESS THAN 100 LB, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF A STRUCTURAL ENGINEER RETAINED BY THE ELECTRICAL CONTRACTOR. STRUCTURAL ENGINEER TO PROVIDE APPROPRIATE LETTER OF ASSURANCE.
- 5. PROVIDE ALL REQUIRED SEISMIC BRACING, SUPPORTS, BOLTS, WASHERS, NUTS, ETC. FOR CONDUITS AND CONDUIT SUPPORTS.
- 6. PROVIDE A SYSTEM TO SECURE ALL RECESSED LIGHTING FIXTURES. FIXTURES SHALL BE SUPPORTED DIRECTLY AND LATERALLY FROM THE BUILDING STRUCTURE ABOVE, USING NO. 12 GAUGE WIRE MINIMUM. THE CEILING SUSPENSION SYSTEM SHALL NOT BE USED FOR DIRECT SUPPORT.

34. FIRE ALARM, EXIT & EMERGENCY LIGHTING VERIFICATION

- 1. CONTRACTOR SHALL RETAIN A PROFESSIONAL ELECTRICAL ENGINEER REGISTERED IN JURISDICTION OF WORK, CANADA TO PROVIDE VERIFICATIONS OF THE FIRE ALARM SYSTEM AND THE INSTALLATION OF EXIT AND EMERGENCY LIGHTING SYSTEM IN ACCORDANCE ALL CODES AND BYLAWS. ALL COST ASSOCIATED WITH THE PERFORMANCE OF THIS ITEM SHALL BE INCLUDED.

35. FIRESTOP COMPLIANCE ALLOWANCE

- 1. THE CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER IN JURISDICTION OF WORK WITHIN CANADA, THE SAID CONSULTANT SHALL:
 - A. SUBMIT ASSURANCE LETTER FOR "ASSURANCE OF PROFESSIONAL DESIGN AND COMMITMENT FOR FIELD REVIEW" S 6 AS DESIGNATED BY THE LOCAL PERMIT AUTHORITY AT THE BEGINNING OF THE PROJECT.
 - B. REVIEW AND STAMP RELATED SUBMITTALS.
 - C. INCLUDE WRITTEN VERIFICATION OF SITE INSPECTION OF THE FIELD INSTALLATION AND A SIGNED AND SEALED LETTER OF ASSURANCE OF "ASSURANCE OF PROFESSIONAL FIELD REVIEW AND COMPLIANCE" S-C AT SUBSTANTIAL PERFORMANCE.
 - D. ALL COSTS ASSOCIATED WITH THE PERFORMANCE OF THIS ITEM SHALL BE INCLUDED.
- 2. REQUIREMENTS FOR CONTRACTOR RETAINED ENGINEERS:
 - A. PROFESSIONAL ENGINEERS RETAINED TO PERFORM CONSULTING SERVICES WITH REGARD TO PROJECT WORK, ARE TO BE MEMBERS IN GOOD STANDING WITH THE LOCAL ASSOCIATION OF PROFESSIONAL ENGINEERS, AND ARE TO CARRY AND PAY FOR ERRORS AND OMISSIONS PROFESSIONAL LIABILITY INSURANCE IN COMPLIANCE WITH THE REQUIREMENT OF GOVERNING AUTHORITIES IN THE LOCATION OF THE WORK.
 - B. RETAINED ENGINEER'S PROFESSIONAL LIABILITY INSURANCE IS TO PROTECT CONTRACTOR'S CONSULTANTS AND AND THEIR RESPECTIVE SERVANTS, AGENTS, AND EMPLOYEES AGAINST ANY LOSS OR DAMAGE RESULTING FROM PROFESSIONAL SERVICES RENDERED BY AFOREMENTIONED CONSULTANTS AND THEIR RESPECTIVE SERVANTS, AGENTS, AND EMPLOYEES IN REGARDS TO THE WORK OF THIS CONTRACT.
 - C. UNLESS OTHERWISE SPECIFIED, LIABILITY INSURANCE REQUIREMENTS ARE AS FOLLOWS:
 - 1. COVERAGE IS TO BE MINIMUM OF \$1,000,000.00 CDN INCLUSIVE OF ANY ONE OCCURRENCE.
 - 2. INSURANCE POLICY IS NOT TO BE CANCELLED OR CHANGED IN ANY WAY WITHOUT THE INSURER GIVING THE OWNER A MINIMUM OF THIRTY DAYS WRITTEN NOTICE.

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PERMIT TO PRACTICE NUMBER: 103650

Issue Date	Issue Date	Issue Date	Issue Date	Issue Date	Issue Date	Issue Date	Issue Date
2024-10-01	2024-10-01	2024-10-01	2024-10-01	2024-10-01	2024-10-01	2024-10-01	2024-10-01
GLOBAL REVISIONS LIST	DESCRIPTION	ISSUED FOR REVIEW	ISSUED FOR COC REVIEW	ISSUED FOR BP REVIEW	ISSUED FOR BP REVIEW	ISSUED FOR TENDER REVIEW	ISSUED FOR BFP
1	2024-10-03	2024-10-03	2024-10-03	2024-11-22	2024-11-22	2024-12-04	2024-12-04
2	2024-11-22	2024-11-22	2024-11-22	2024-12-04	2024-12-04	2024-12-04	2024-12-04
3	2024-11-22	2024-11-22	2024-11-22	2024-12-04	2024-12-04	2024-12-04	2024-12-04
4	2024-11-22	2024-11-22	2024-11-22	2024-12-04	2024-12-04	2024-12-04	2024-12-04
5	2024-11-22	2024-11-22	2024-11-22	2024-12-04	2024-12-04	2024-12-04	2024-12-04
6	2024-11-22	2024-11-22	2024-11-22	2024-12-04	2024-12-04	2024-12-04	2024-12-04
7	2024-11-22	2024-11-22	2024-11-22	2024-12-04	2024-12-04	2024-12-04	2024-12-04

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2025-01-29</