MOORPARK COLLEGE
LM BUILDING HVAC REPLACEMENT PROJECT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-125525 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 11/12/2025

GENERAL NOTES

1. CUTTING, BORING SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED ON THE DRAWINGS OR ACCEPTED BY THE ARCHITECT WITH THE APPROVAL OF DSA REPRESENTATIVE.
2. ALL WELDING SHALL BE SPECIALLY INSPECTED BY AN AWS-CWI QUALIFIED INSPECTOR APPROVED BY DSA/ORS.
3. ALL BRACING OF DUCTS AND PIPINGS SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA GUIDELINES AS APPROVED BY DSA/ORS.

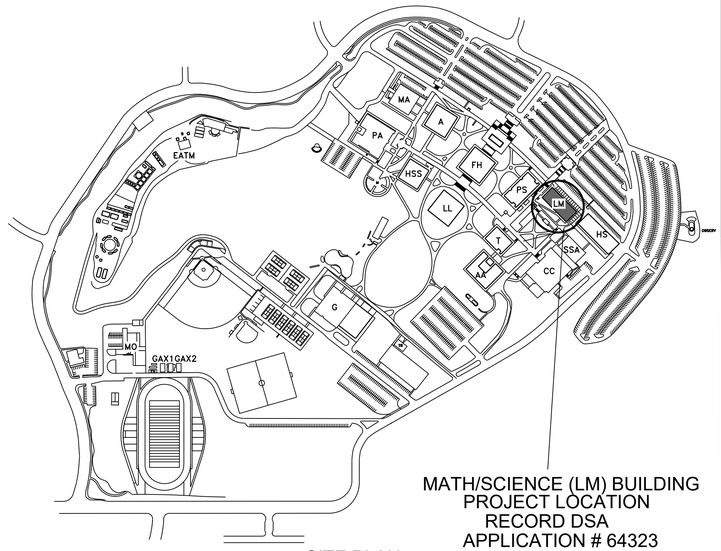
WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER AND DSA FIELD ENGINEER.

A COPY OF THE GUIDELINES PUBLISHED BY SMACNA AND APPROVED BY DSA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB AT ALL TIMES.

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24 CCR.

A CLASS 3 DSA CERTIFIED INSPECTOR SHALL BE EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR)

THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24 CALIFORNIA CODE OF REGULATIONS (CCR). SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN FINISHED WORK WILL NOT COMPLY WITH TITLE 24 CCR, A CONSTRUCTION CHANGE DOCUMENT, OR SEPARATE SET OF PLANS AND SPECS DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT BEFORE PROCEEDING WITH THE WORK. REF. SEC. 4-317(c) CALIF. BUILDING STANDARDS ADMIN. CODE (PART1, TITLE 24,CCR)



MATH/SCIENCE (LM) BUILDING
PROJECT LOCATION
RECORD DSA
APPLICATION # 64323

SITE PLAN

CAMPUS L E G E N D

ADMINISTRATION	A	GAX2	GYM AUXILIARY 2
APPLIED ARTS	AA	HS	HEALTH SCIENCE
TRAILER ANNEX	AX	LL	LIBRARY
CREATIVE ARTS	CA	LM	LIFE SCIENCE, MATHEMATICS BUILDING
CAMPUS CENTER	CC	M	MUSIC
COMMUNICATIONS	COM	MO	MAINTENANCE & OPERATIONS
EXOTIC ANIMAL TRAINING	EATM	OBSERV	OBSERVATORY
FOUNTAIN HALL	FH	PS	SCIENCE
GYMNASIUM	G	SSA	STUDENT SERVICES ANNEX
GYM AUXILIARY 1	GAX1	T	PHYSICAL TECHNOLOGY
		TR	CAMPUS POLICE
		PA	PERFORMING ARTS

APPLICABLE CODES

LIST OF CALIFORNIA CODE OF REGULATIONS

LIST OF CALIFORNIA CODE OF REGULATIONS
APPLICABLE CODES AS OF JAN. 1ST, 2020
ALL WORK SHALL CONFORM TO 2019 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)

2022 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 CCR
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
2022 CALIFORNIA ELECTRIC CODE (CEC), PART 3, TITLE 24 CCR
2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
2022 CALIFORNIA REFERENCED STANDARDS CODE (CRSC) PART 12, TITLE 24 CCR
2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11 TITLE 24 CCR
2022 CALIFORNIA EXISTING BUILDING CODE, CEBC, PART 10 TITLE 24 CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHALL REGULATIONS
PARTIAL LIST OF APPLICABLE NFPA STANDARDS
NFPA 90A STANDARD FOR THE INSTALLATION OF AIR CONDITIONING SYSTEMS 2021 EDITION

SHEET INDEX

TOTAL SHEET COUNT: 19

SCOPE OF WORK

1. REMOVE THREE MULTI-ZONE TRIPLE DECK AIR HANDLERS.
2. INSTALL THREE MULTI-ZONE TRIPLE DECK HEAT PUMP AIR HANDLERS.
3. INSTALL TWO 20" Ø FLEXIBLE DUCTS FOR IMPROVED RETURN AIR FLOW
4. UPGRADE CONTROLS
5. AIR BALANCE EXISTING AIR DISTRIBUTION SYSTEMS
6. CLEAN EXISTING DUCTING.
7. REMOVE AND RE-INSTALL EXISTING UV LIGHT ASSEMBLIES

CONTACT INFORMATION

OWNER CONTACT INFORMATION
JOHN SINUTKO DIRECTOR FACILITIES MAINTAINENCE & OPERATIONS
7075 CAMPUS ROAD MOORPARK, CA. 93021
805 378-1454 jsinutko@vcccd.edu

ENGINEER OF RECORD
HUGH MCTERNAN AE GROUP MECHANICAL ENGINEERS
838 E. FRONT ST. VENTURA, CA. 93001
805 653-1722 hugh@aegroupme.com

STRUCTURAL ENGINEER
LARRY HAUER
275 SO. LAUREL ST. #A, VENTURA, CA. 93001
805 653-1743 lrhauer@earthlink.net

ELECTRICAL ENGINEER
KEN LUCCI
3251 CORTE MALPASO #511
CAMARILLO, CA. 93012
805 389-6520 KEN@LUCCILAND.COM

APPLICABLE CODE: 2022 CBC PER IR 16-13.

MEP DISTRIBUTION SYSTEM BRACING NOTE FOR PIPING, DUCTWORK, AND ELECTRICAL CONDUIT:

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7 SECTION 13.3 AS DEFINED IN ASCE 7 SECTIONS 13.6.5, 13.6.6, 13.6.7, AND 13.6.8; AND 2022 CBC, SECTION 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW AND SHALL BE IN ACCORDANCE WITH DSA IR 16-13.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

☒ MD ☒ PP ☒ E ☐ - IR 16-13 SECTION 2.1: PROJECT-SPECIFIC DESIGN
SHEET NUMBERS_____
☐ MD ☐ PP ☐ E ☐ - IR 16-13 SECTION 2.2: DESIGN BASED ON OSHPD OPM, PART OF PROJECT SUBMITTAL
OPM NUMBERS:_____
SHEET NUMBERS:_____
☐ MD ☐ PP ☐ E ☐ - IR 16-13 SECTION 2.2.6 DESIGN BASED ON OSHPD OPM, DEFERRED APPROVAL

APPLICABLE CODE: 2022 CBC
MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC SECTION 1617A 1.18 THROUGH 1617A 1.26 AND ASCE 7-16 CHAPTERS 13, ,26, AND 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE, OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARDWIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS, OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220/VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE, OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND THE ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH THE TRANSVERSE AND LONGITUDINAL DIRECTIONS.

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH AR SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AN ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

CAMPUS MAP

CEC SECTION 4-309C EVALUATION

PER CAC SECTIOM 4-309C.1 AIR CONDITIONING EQUIPMENT SHALL NOT BE INCLUDED IN THE CALCUALTIONS. THIS IS A 100% AIR CONDITIONING EQUIPMENT PROJECT SO THEREFORE REHABILITATION IS NOT REQUIRED.

BUILDING NAME AS ORIGINALLY SUBMITTED:
MATH SCIENCE BUILDING
REVISED NAME ON CAMPUS AND FOR THIS SUBMITTAL
LM BUILDING

ORIGINAL DSA APPLICATION # 64323 - CERTIFIED 1999
NOTICE OF COMPLETION DATE - 1999
OCCUPANCY - A3/B2
BUILDING TYPE III 1HOUR NOT SPRINKLERED
1ST FLOOR 13,752 FT2 2ND FLOOR 18,693 FT2
TOTAL 32,445 FT2
CLIMATE ZONE - 9
EXISTING BUILDING PLANS ARE AVAILABLE
AT MOORPARK COLLEGE MAINTENANCE OFFICE

REGISTERED PROFESSIONAL ENGINEER
HUGH A. McTERNAN
M030626
Ren. 6/30/2026
MECHANICAL
STATE OF CALIFORNIA

REV.	DATE

AE Group
Mechanical Engineers
838 East Front Street
Ventura, California 93001-2925
(805) 653-1722
hugh@aegroupme.com

MOORPARK COLLEGE
7075 CAMPUS ROAD, MOORPARK, CALIFORNIA 93021
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

DEPARTMENT OF MAINTENANCE & OPERATIONS
7075 CAMPUS RD.
MOORPARK, CA. 93021
PHONE: (805) 378-1454 FAX: (805) 378-1593

SCALE: AS SHOWN
DATE: 9-3-25
BLDG. NO.

LM BUILDING
HVAC REPLACEMENT PROJECT
TITLE SHEET
SHEET NO. T1.0

NEW MULTI-ZONE A/C UNIT SCHEDULE

SYMBOL	MAKE & MODEL	AREA SERVED	LOCATION	SUPPLY AIR (CFM)	SUPPLY AIR FAN H.P.	E.S.P. "W.C.	RETURN AIR (CFM)	RETURN AIR FAN H.P.	E.S.P. "W.C.	COOLING TOTAL	COOLING SENSIBLE	ENT. F DB	ENT. F WB	LVG F DB	LVG F WB	HOT DECK CFM	HEATING TOTAL	ENT.VG F DB	F DB	MIN. O.S.A. (CFM)	FILTER	ROOF CURB (LBS.)	(E) AH WEIGHT (LBS.)	PER ORIGINAL PLAN (*) (LBS.)	(N) WEIGHT (LBS.)	ELECTRICAL UNIT MCA	MOCP	VOLTS	PH	ELECTRICAL LIGHTS AND CONTROLS VOLTS	AMPS	# OF ZONES	NOTES FOR ALL UNITS	FIRE ALARM SHUTDOWN
AH-1	BARNHART-TAYLOR	1ST FLOOR	ROOF	14,035	15	4.0	12,710	10	1.0	464,493	383,514	80.2	64.5	55.2	53.3	14,035	803,344	40	92.3	4760	2" MERV 8	1,000	16,070	13,500	12,750	120	125	460	3	120	20	11	SINGLE POINT POWER CONNECTION FOR UNIT, 5000 HOUR SALT SPRAY COATING, TRIPLE DECK BELIMO ACTUATORS, PROVIDE INTERIOR CONDUITS FOR CONTROL ELEMENTS, T. COATED EVAPORATOR AND CONDENSOR COILS. ABB VARIABLE FREQUENCY DRIVES	SYSTEM SENSOR DUCT SMOKE DETECTOR AT SUPPLY PLENUM AFTER FANS.
	MULTI-ZONE																				4" MERV 13													
AH-2	BARNHART-TAYLOR	2ND FLOOR	ROOF	14,545	15	4.0	6,555	10	1.00	507,326	431,893	85.7	66.7	57.5	56.1	14,545	768,535	40	88.3	8200	2" MERV 8	1,000	16,070	14,900	14,150	120	125	460	3	120	20	10		
	MULTI-ZONE																				4" MERV 13													
AH-3	BARNHART-TAYLOR	1ST &	ROOF	9,130	15	4.0	8,674	7.5	1.00	315,400	234,105	77.9	64.5	56.2	55.2	9,130	533,240	40	93.4	1660	2" MERV 8	1,000	15,590	13,400	12,650	99	100	460	3	120	20	13		
	MULTI-ZONE	2ND FLOOR																			4" MERV 13													

OUTDOOR CONDITIONS

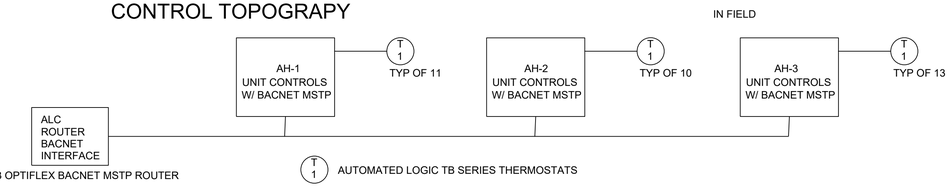
SUMMER
OUTDOOR DRY BULB 105 F
OUTDOOR WET BULB 65 F

WINTER
OUTDOOR DRY BULB 30 F

(*) THIS IS THE WEIGHT SHOWN ON THE ORIGINAL PERMITTED MECHANICAL SCHEDULE;

VERIFY ZONE HEAD DIMENSIONS

CONTROL TOPOGRAPHY



CONTROLS

1. ZONE THERMOSTAT SHALL BE AUTOMATED LOGIC TB SERIES THERMOSTATS. BACNET MSTP
2. JOHNSON CONTROLS SHALL BE USED FOR AIR HANDLER FANS, OA, RA, EA DAMPERS, ZONE CONTROL DAMPERS, FANS, AND COMPRESSORS
3. BACNET INTERFACE SHALL BE INSTALLED BETWEEN ALC CONTROLS AND JOHNSON CONTROLS
4. POWER FOR CONTROLS SHALL BE FROM 110 VOLT POWER.

MECHANICAL NOTES

1. SCOPE OF WORK: WORK INCLUDES THE FOLLOWING: FURNISH AND INSTALL ALL EQUIPMENT AND CONTROLS SHOWN ON THE ARCHITECTURAL, AND MECHANICAL DRAWINGS AND DESCRIBED IN THESE NOTES, THE BOOK SPECIFICATIONS AND THE CONTRACT DOCUMENTS. WORK INCLUDES BUT IS NOT LIMITED TO: DEMOLITION OF MULTIPLE AIR HANDLERS AND THE INSTALLATION OF NEW TRIPLE DECK MULTI-ZONE HEAT PUMP AIR HANDLERS, AND CONTROLS, AND STARTUP AND COMMISSIONING OF REPLACED MECHANICAL AND CONTROL SYSTEMS AS DESCRIBED IN THE CONTRACT DOCUMENTS. INCLUDED ARE ALL DEVICES NEEDED TO MAKE COMPLETE AND FUNCTIONAL SPACE CONDITIONING SYSTEMS AND CONTROLS. CONTRACTOR SHALL FURNISH AND INSTALL, MAKE OPERABLE, AND TEST ALL SYSTEMS AND MECHANICAL EQUIPMENT SHOWN ON THE PLANS AND DESCRIBED IN THE SPECIFICATIONS AND CONTRACT DOCUMENTS. IN CONNECTION THEREWITH, CONTRACTOR SHALL ALSO FURNISH AND INSTALL ALL NECESSARY DEVICES, HARDWARE, AND SYSTEMS REQUIRED TO MAKE SAID EQUIPMENT PROPERLY AND SAFELY OPERABLE, INCLUDING BUT NOT LIMITED TO, WELDING, MOUNTING HARDWARE, FILTERS, AND FUNCTIONAL TESTING.

2. INTERPRETATION OF DRAWINGS, SPECIFICATIONS OR CONTRACT DOCUMENTS. IF ANY BIDDER IS IN DOUBT AS TO THE TRUE MEANING OF ANY PART OF THE DRAWINGS, THE SPECIFICATIONS OR OTHER PORTIONS OF THE CONTRACT DOCUMENTS; FINDS DISCREPANCIES, ERRORS OR OMISSIONS THEREIN; OR FINDS VARIANCES IN ANY OF THE CONTRACT DOCUMENTS WITH APPLICABLE RULES, REGULATIONS, ORDINANCES AND/OR LAWS, A WRITTEN REQUEST FOR AN INTERPRETATION OR CORRECTION THEREOF MAY BE SUBMITTED TO THE ENGINEER. IT IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE BIDDER TO SUBMIT SUCH REQUEST IN SUFFICIENT TIME FOR THE PREPARATION OF A RESPONSE THERETO AND DELIVERY OF SUCH RESPONSE TO ALL BIDDERS PRIOR TO THE SCHEDULED CLOSING FOR RECEIPT OF BID PROPOSALS. ANY REQUEST OF ANY BIDDER, PURSUANT TO THE FOREGOING SENTENCE THAT IS MADE LESS THAN SEVEN DAYS PRIOR TO THE SCHEDULED CLOSING DATE FOR THE RECEIPT OF BID PROPOSALS SHALL BE DEEMED UNTIMELY. ANY INTERPRETATION OR CORRECTION OF THE CONTRACT DOCUMENTS WILL BE MADE ONLY BY WRITTEN ADDENDUM DULY ISSUED BY THE OWNER OR THE ENGINEER. A COPY OF ANY SUCH ADDENDUM WILL BE MAILED OR OTHERWISE DELIVERED TO EACH BIDDER RECEIVING A SET OF THE CONTRACT DOCUMENTS. NO PERSON IS AUTHORIZED TO RENDER AN ORAL INTERPRETATION OR CORRECTION OF ANY PORTION OF THE CONTRACT DOCUMENTS TO ANY BIDDER, AND NO BIDDER IS AUTHORIZED TO RELY ON ANY SUCH ORAL INTERPRETATION OR CORRECTION. FAILURE TO REQUEST INTERPRETATION OR CLARIFICATION OF THE DRAWINGS, THE SPECIFICATIONS OR OTHER PORTIONS OF THE CONTRACT DOCUMENTS PURSUANT TO THE FOREGOING SHALL BE DEEMED TO BE A WAIVER OF ANY DISCREPANCY, DEFECT, OR CONFLICT THEREIN.

3. DIMENSIONS. ALL DIMENSIONS SHALL HAVE PREFERENCE OVER SCALE. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN ARCHITECTURAL AND ENGINEERING DRAWINGS BEFORE PROCEEDING WITH WORK. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON WORKING DRAWINGS. ALL SIZES OF EQUIPMENT AND MATERIALS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER.

4. CODES AND STANDARDS: ALL WORK SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA), 2022 CALIFORNIA BUILDING CODE, THE 2022 CALIFORNIA MECHANICAL CODE, THE 2022 CALIFORNIA PLUMBING CODE, 2022 CALIFORNINA FIRE CODE, THE NATIONAL ELECTRIC CODE, THE STATE OF CALIFORNIA, EQUIPMENT MANUFACTURER'S RECOMMENDED PROCEDURES, AND STANDARD CONSTRUCTION PRACTICES. NOTE: WHERE TWO OR MORE CODES CONFLICT, THE MOST RESTRICTIVE SHALL APPLY. NOTHING IN THESE PLANS AND SPECIFICATIONS SHALL BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO APPLICABLE CODES.

5. SUBMITTALS REQUIRED: PRIOR TO ORDERING EQUIPMENT AND MATERIALS, CONTRACTOR SHALL FURNISH TO ENGINEER / OWNER SUBMITTALS AND SHOP DRAWINGS OF ALL EQUIPMENT AND MATERIALS PROPOSED FOR USE IN THIS PROJECT. ORDERING OF EQUIPMENT AND MATERIALS SHALL ONLY PROCEED AFTER SATISFACTORY REVIEW OF ALL SUBMITTALS BY CONTRACTOR / ENGINEER / OWNER. COPIES OF ALL OWNER'S MANUALS, WARRANTIES AND OTHER WRITTEN INFORMATION REGARDING SYSTEMS SHALL BE PRESENTED TO OWNER PRIOR TO THE COMPLETION OF THE PROJECT.

6. CONSTRUCTION OBSERVATION: IN ADDITION TO THE REQUIREMENT FOR OBTAINING INSPECTIONS BY THE LOCAL JURISDICTION, CONTRACTOR SHALL NOTIFY ENGINEER AT APPROPRIATE TIMES DURING THE CONSTRUCTION PROCESS SO THAT ENGINEER CAN VISIT SITE TO BECOME GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF CONTRACTOR'S WORK AND TO DETERMINE IF THE WORK IS PROCEEDING IN GENERAL ACCORDANCE WITH THE CONTRACT DOCUMENTS.

7. UNIT LOCATIONS: EQUIPMENT AND SYSTEM LOCATIONS SHOWN ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL STRUCTURAL MEMBERS AND EXISTING CONDITIONS IN THE FIELD, AND LOCATE UNITS AND DUCTWORK TO AVOID INTERFERENCE. ANY SIGNIFICANT DEVIATIONS FROM THE PLANS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER. ALLOW CLEARANCE FOR DUCTWORK AND PIPING. ALL CLEARANCES REQUIRED BY UNIT MANUFACTURER SHALL BE MAINTAINED. ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH CODES AND THE RECOMMENDED INSTALLATION PROCEDURES PUBLISHED BY THE MANUFACTURER.

8. BALANCING: FOLLOWING INSTALLATION, CONTRACTOR SHALL START UP AND BALANCE ALL HVAC SYSTEMS TO CONFORM TO AIR VOLUMES INDICATED ON PLANS. ADJUST SUPPLY & RETURN GRILLES AND REGISTERS FOR OPTIMAL AIR DISTRIBUTION. COPIES OF BALANCING RECORDS SHALL BE FURNISHED TO BUILDING OWNER AND PROJECT ENGINEER. UNIT FANS SHALL OPERATE AT CONSTANT SPEED.

9. CLEANUP: EVERY DAY, AND AFTER ALL WORK HAS BEEN COMPLETED, CONTRACTOR SHALL CLEAN ENTIRE JOB-SITE OF ALL DEBRIS ASSOCIATED WITH MECHANICAL SYSTEMS. EXPOSED PARTS WHICH ARE TO BE PAINTED SHALL BE THOROUGHLY CLEANED READY FOR PAINTING.

10. WIRING: ALL WIRING SHALL BE PERFORMED IN ACCORDANCE WITH NEC REQTS. ALL WIRING SHALL BE IN CONDUIT. ALL INTERIOR LOW VOLTAGE AND CONTROL WIRING SHALL BE IN WIREMOLD AND IN FAN ROOMS SHALL BE IN CONDUIT. EXPOSED CONDUIT SHALL BE INSTALLED IN A SQUARE, PLUMB, AND LEVEL MANNER WITH THOUGHT GIVEN TO THE FINAL APPEARANCES. PROVIDE TO ENGINEER SHOP DRAWING FOR CONTROL TRANSFORMER CONFIGURATIONS DETAILING CIRCUITS TO BE USED, LOAD CALCULATIONS, WIRE SIZES, AND LOCATIONS. WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT NATIONAL ELECTRICAL CODE.AND ELECTRICAL SPECIFICATIONS. ALL TRANSFORMERS SHALL BE PROTECTED BY PROPERLY SIZED CIRCUIT BREAKER OR FUSE(S). ALL TRANSFORMERS SHALL HAVE RESETABLE BREAKER ON THE LOAD SIDE. ALL LOW VOLTAGE CONTROL & COMMUNICATIONS WIRING SHALL BE DONE ACCORDING TO MANUFACTURERS INSTALLATION MANUAL. PROVIDE SUBMITTALS ON WIRE AND ENCLOSURES.

11. COORDINATION DURING CONSTRUCTION: THE CONTRACTOR SHALL COORDINATE ANY NECESSARY CHANGES IN WORK SCHEDULING WITH THE COLLEGE TO MINIMIZE THE DISRUPTION. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY HIS WORK TO BUILDING(S) AND EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER.

12. CORRECTION OF WORK: THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK THE OWNER FINDS DEFECTIVE OR FAILING TO CONFORM TO THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BEAR ALL COSTS REQUIRED BY THE CONTRACT DOCUMENTS, IF ANY OF THE WORK IS FOUND TO BE DEFECTIVE OR NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL CORRECT IT PROMPTLY AFTER RECEIPT OF A WRITTEN NOTICE FROM THE OWNER TO DO SO.

13. LABEL WITH PERMANENT SETON LABELS ALL ROOFTOP EQUIPMENT WITH EQUIPMENT NUMBER AND SERVICE AREA

BUILDING NOTES

1. ALL WORK SHALL CONFORM WITH THE 2022 CALIFORNIA BUILDING CODE, (CBC), AND ALL LOCAL ORDINANCES.

2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO STARTING CONSTRUCTION AND BRING TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES OR INCONSISTENCIES.

3. NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED, BORED OR OTHER-WISE WEAKENED EXCEPT AS BY APPROVED BY THE STRUCTURAL ENGINEER.

4. THE ENGINEER SHALL BE NOTIFIED OF ANY UNUSUAL OR UNFORSEEN CONDITION WHICH EFFECTS THE STRUCTURAL STABILITY OF THE BUILDING PRIOR TO CONTINUING WITH CONSTRUCTION. SHOULD ANY CONDITION ARISE WHERE THERE APPEARS TO BE AN ERROR ON THE DRAWINGS OR A DISCREPANCY BETWEEN THE DRAWINGS AND CONDITIONS IN THE FIELD, THE ENGINEER SHALL BE NOTIFIED PRIOR TO CONTINUING WITH THE WORK.

5. IN THE CASE WHERE TWO OR MORE DETAILS APPLYING TO THE SAME PART OF THE WORK ARE IN CONFLICT, THE MOST RESTRICTIVE SHALL GOVERN UNLESS CLARIFIED OR OTHERWISE APPROVED BY THE ENGINEER.

6. REVIEW OF SHOP DRAWINGS MEANS REVIEW OF GENERAL METHOD OF FABRICATION ONLY. DIMENSIONS AND QUANTITIES MAY NOT BE CHECKED, AND REVIEW OF THE SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS UNLESS SPECIFICALLY SO INDICATED IN THE REVIEW.

7. THE ENGINEER HAS NOT BEEN RETAINED FOR SUPERVISION OR INSPECTION DURING CONSTRUCTION, BUT WILL RESOLVE STRUCTURAL ITEMS BROUGHT TO HIS ATTENTION DURING CONSTRUCTION.

8. COMPLY WITH 2022 CALIFORNIA FIRE CODE CHAPTER 333 - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

9. RENEW ANY FIRE PROTECTION COATING ON STRUCTURAL ELEMENTS IMPACTED BY THIS CONSTRUCTION.

ENERGY NOTES

THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALL EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH THE ENERGY CODE.

LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED LIGHTING CONTORLS ACCEPTANCE TEST TECHNICIAN (ATT).

MECHANICAL SYSTEM ACCEPTANCE TEST MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1, 2021.

ENVELOPE AND PROCESS EQUIPMENT ACCEPTANCE TESTS SHALL BE PERFORMED BY THE INSTALL CONTRACTOR, ENGINEER/ARCHITECT OF RECORD, OR THE OWNER'S AGENT.

A LISTING OF CERTIFIED ATT CAN BE FOUND AT:
https://www.energy.ca.gov/programs-and-topics/programs/acceptance-test-technician-certification-provider-program/acceptance.

THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR UNTI THE CONSTRUCTION/INSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA.

PROJECT INSPECTORS WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TEST HAVE BEEN COMPLETED.

REGISTERED PROFESSIONAL ENGINEER
HUGH A. MCTERNAN
M030626
Ren. 6/30/2026
MECHANICAL
STATE OF CALIFORNIA

REV.	DATE

AE Group
Mechanical Engineers
838 East Front Street
Ventura, California 93001-2925
(805) 653-1722
hugh@aegroupme.com

MOORPARK COLLEGE
7075 CAMPUS ROAD, MOORPARK, CALIFORNIA 93021
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

DEPARTMENT OF MAINTENANCE & OPERATIONS
7075 CAMPUS RD.
MOORPARK, CA. 93021
PHONE: (805) 378-1454 FAX: (805) 378-1593

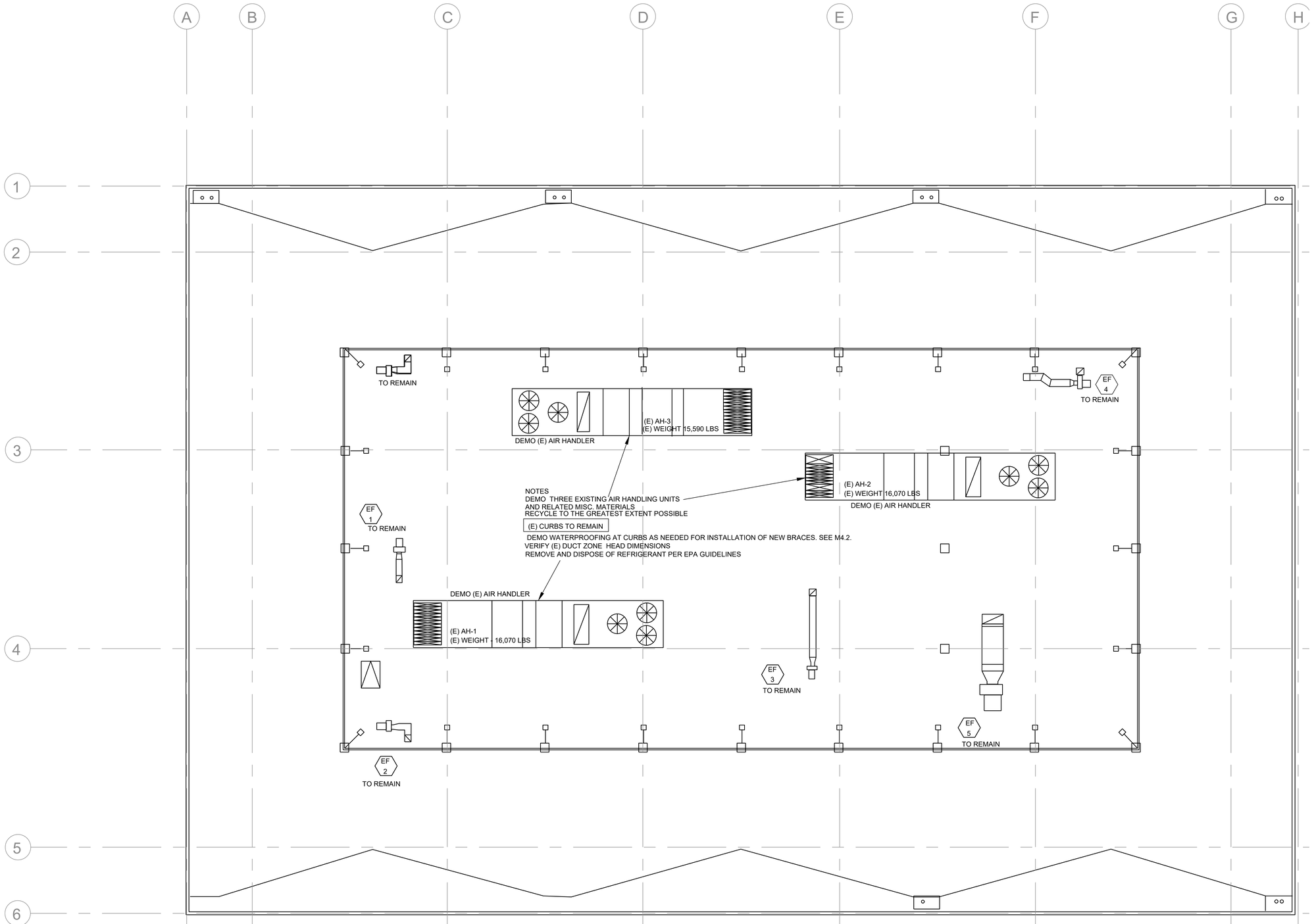
SCALE: AS SHOWN
DATE: 9-3-25
BLDG. NO.

LM BUILDING
HVAC REPLACEMENT PROJECT

NOTES, CONTROLS, & SCHEDULE

SHEET NO. M1.0

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-125525 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 11/12/2025



MECHANICAL ROOF DEMOLITION PLAN
SCALE:1/8"=1'0"

N W E S

REGISTERED PROFESSIONAL ENGINEER
HUGH A. McTERNAN
M030626
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PHONE: (805) 378-1454 FAX: (805) 378-1593

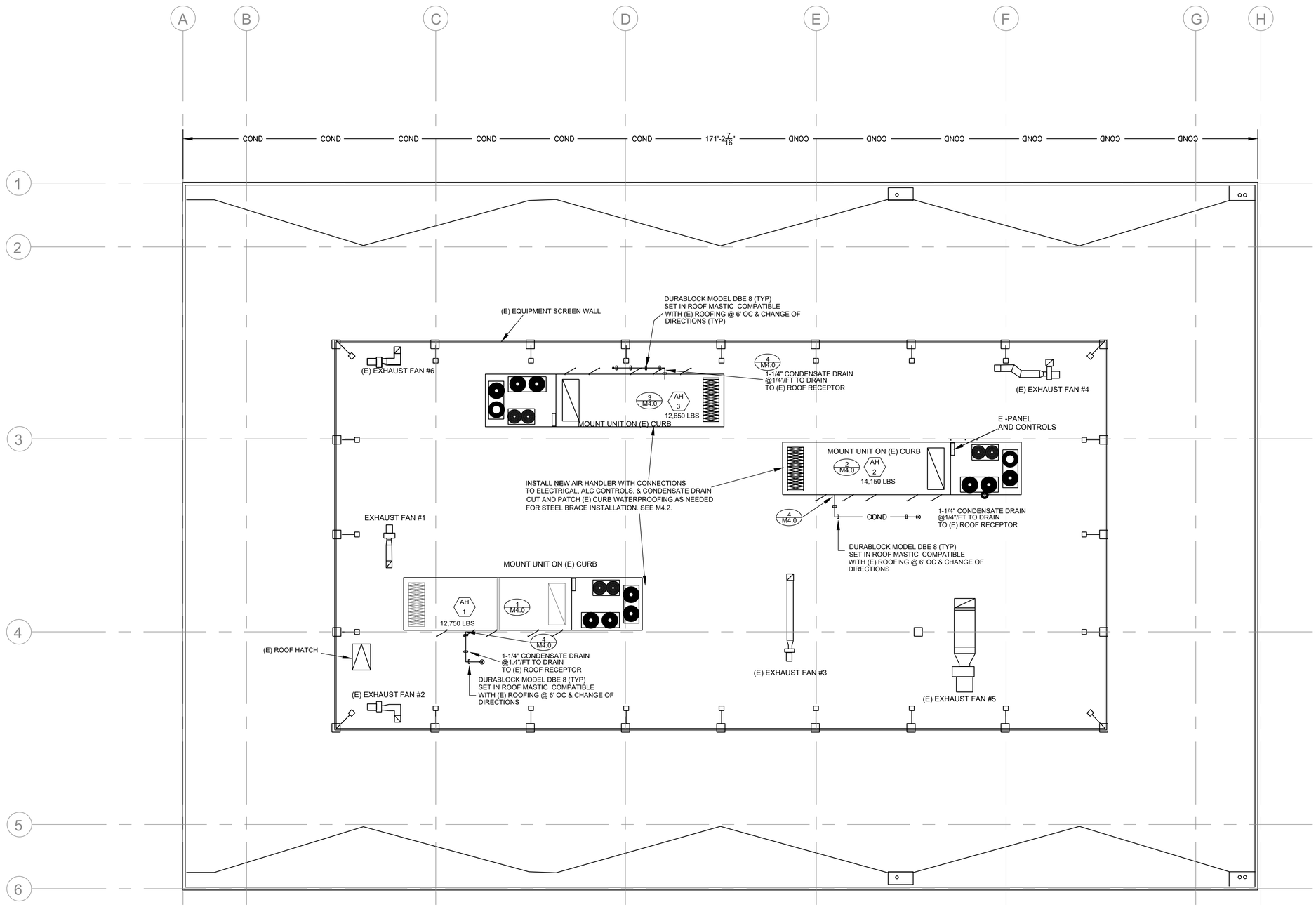
SCALE: AS SHOWN
DATE: 9-3-25
BLDG. NO.

LM BUILDING
HVAC REPLACEMENT PROJECT

MECHANICAL ROOF
DEMOLTION PLAN

SHEET NO. M2.0

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-125525 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 11/12/2025



MECHANICAL ROOF PLAN
SCALE:1/8"=1'0"

N
W
E
S

REGISTERED PROFESSIONAL ENGINEER
HUGH A. McTERNAN
M030626
Ren. 6/30/2026
MECHANICAL
STATE OF CALIFORNIA

REV.	DATE

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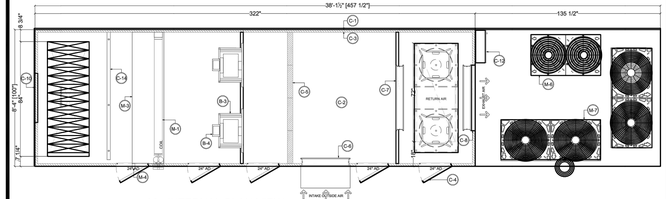
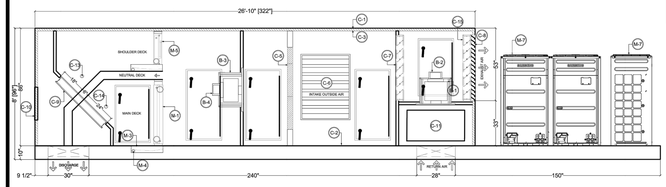
SCALE: AS SHOWN
DATE: 9-3-25
BLDG. NO.

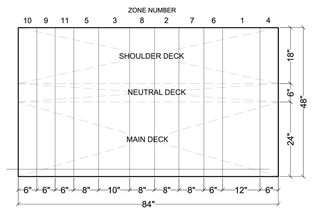
LM BUILDING
HVAC REPLACEMENT PROJECT
MECHANICAL ROOF PLAN
SHEET NO. M3.0



BT-1 INTERNAL PLAN VIEW



BT-2 FRONT CROSS SECTION - MOTOR & BLOWER



BT-2 TRIPLE DECK DAMPER

1 M4.0 AHU 2 NO SCALE

SECT.	ITEM	QTY.	DESCRIPTION
MEDIA SECTION	M-1	1	MAIN COIL 464 MBH
	M-2	2 SET	COIL SUPPLY/RETURN CONNECTIONS
	M-3	2	CONDENSATE WATER COLLECTION TRAY
	M-4	2	1 1/2" NPT DRAIN CONNECTION
	M-5	1	SHOULDER COIL: 123MBH
	M-6	1	SAMSUNG CONDENSER UNIT AM096BXVGJH/AA
	M-7	2	SAMSUNG CONDENSER UNIT AM240BXVGJH/AA
BLOWER SECTION	B-1	2	EXHAUST FAN: GR56I-ZID.GQ.CR
	B-2	2	EC MOTORS: TOTAL INSTALLED CAPACITY: 10.4 kW. .....ACTUAL INPUT POWER: 4.14 kW.
	B-3	2	SUPPLY FAN: GR50I-ZID.GQ.CR
	B-4	2	EC MOTORS: TOTAL INSTALLED CAPACITY: 12 kW. .....ACTUAL INPUT POWER: 10.58 kW.
CASING & OTHERS	C-1	1	CASING: SHEET METAL, GALVANIZED GAUGE 18
	C-2	1	FLOOR: TREADPLATE ALUMINUM WITH 2" FOAMBOARD AND LINER GALVANIZED GA. 20
	C-3	1	LINER: 2" FIBERGLASS AND STAINLESS STEEL 304 GA.22
	C-4	6	DOOR: DOUBLE WALL, HEAVY DUTY HINGES AND LATCHES (QTY 5 - 24"W x 50"H),(QTY 1 - 24"W x 40"H)
	C-5	1 SET	4" FILTERS PREPLEAT MERV 13
	C-6	1	OUTSIDE AIR DAMPER 48"W x 36"H
	C-7	1	RETURN AIR DAMPER 36"W x 48"H
	C-8	1	3" DEEP LOUVERS: SHEET METAL, GAUGE 20
	C-9	1	TRIPLE DECK DAMPER 84"W X 48"H
	C-10	1	REMOVABLE PANEL FOR ACTUATOR ACCESS
	C-11	1	REMOVABLE PANEL FOR EXHAUST FAN ACCESS
	C-12	1	ELECTRICAL PANEL
	C-13	1	SHOULDER DECK AFMS
	C-14	1	MAIN DECK AFMS
	C-15	1	EXHAUST AIR DAMPER 36"W X 48"H

BARNHART TAYLOR
BARNHART - TAYLOR MEXICO
AIR HANDLING AND EVAPORATIVE COOLING SYSTEMS

PROJECT: MOOR PARK COLLEGE
CLIENT: US AIR CONDITIONING DISTRIBUTORS
QUANTITY: 1 UNIT
SYMBOL: AC-1
DATE: JULY 15, 2025
CAPACITY (CFM): 14,035
STATIC PRESSURE (i.w.c.) I.S.P. E.S.P. T.S.P. SEE BELOW

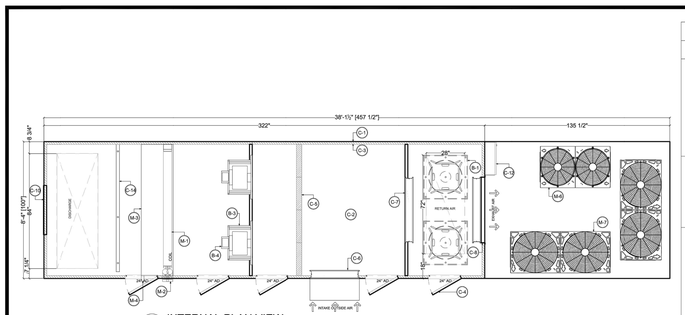
MODEL DESCRIPTION: SBD-464/123-ORE-28
- 464 → MEDIA FACE AREA IN SQUARED FEET (FT²)
- O → EXHAUST AIR
- R → RETURN AIR
- O → OUTSIDE AIR
- 123 → HEATING CAPACITY (MBH)
- 28 → COOLING CAPACITY (MBH)
- E → AIR DISCHARGE: E=DOWN
- B → BLOW THROUGHT
- SMARTZONE

SCALE: PAPER SIZE: 11 X 17
DWG. NO.: BT-4060-25
DWG. BY.: JUAN P. OAXACA S.
NOTES: DRAWING ONLY FOR REFERENCE (PRELIMINARY SUBMITTAL)

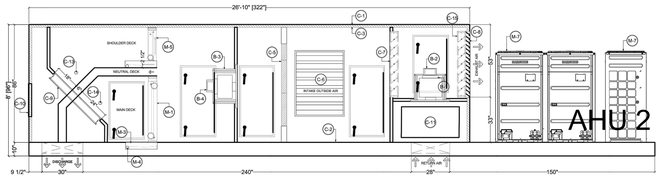
SUPPLY
STATIC PRESSUERE (in.W.C)
I.S.P.: 2.70"
E.S.P.: 1.30"
T.S.P.: 4.00"

EXHAUST
STATIC PRESSUERE (in.W.C)
I.S.P.: 0.021"
E.S.P.: 1.879"
T.S.P.: 1.90"

WEIGHT: 12,750 LBS



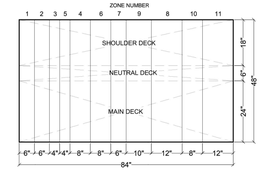
BT-1 INTERNAL PLAN VIEW



BT-2 FRONT CROSS SECTION - MOTOR & BLOWER

AHU 2

SECT.	ITEM	QTY.	DESCRIPTION
MEDIA SECTION	M-1	1	MAIN COIL 507 MBH
	M-2	2 SET	COIL SUPPLY/RETURN CONNECTIONS
	M-3	2	CONDENSATE WATER COLLECTION TRAY
	M-4	2	1 1/2" NPT DRAIN CONNECTION
	M-5	1	SHOULDER COIL: 123MBH
	M-6	1	SAMSUNG CONDENSER UNIT AM096BXVGJH/AA
	M-7	2	SAMSUNG CONDENSER UNIT AM240BXVGJH/AA
BLOWER SECTION	B-1	2	EXHAUST FAN: GR56I-ZID.GQ.CR
	B-2	2	EC MOTORS: TOTAL INSTALLED CAPACITY: 10.4 kW. .....ACTUAL INPUT POWER: 4.21 kW.
	B-3	2	SUPPLY FAN: GR50I-ZID.GQ.CR
	B-4	2	EC MOTORS: TOTAL INSTALLED CAPACITY: 12 kW. .....ACTUAL INPUT POWER: 11.1 kW.
CASING & OTHERS	C-1	1	CASING: SHEET METAL, GALVANIZED GAUGE 18
	C-2	1	FLOOR: TREADPLATE ALUMINUM WITH 2" FOAMBOARD AND LINER GALVANIZED GA. 20
	C-3	1	LINER: 2" FIBERGLASS AND STAINLESS STEEL 304 GA.22
	C-4	6	DOOR: DOUBLE WALL, HEAVY DUTY HINGES AND LATCHES (QTY 5 - 24"W x 50"H),(QTY 1 - 24"W x 40"H)
	C-5	1 SET	4" FILTERS PREPLEAT MERV 13
	C-6	1	OUTSIDE AIR DAMPER 48"W x 36"H
	C-7	1	RETURN AIR DAMPER 36"W x 48"H
	C-8	1	3" DEEP LOUVERS: SHEET METAL, GAUGE 20
	C-9	1	TRIPLE DECK DAMPER 84"W X 48"H
	C-10	1	REMOVABLE PANEL FOR ACTUATOR ACCESS
	C-11	1	REMOVABLE PANEL FOR EXHAUST FAN ACCESS
	C-12	1	ELECTRICAL PANEL
	C-13	1	SHOULDER DECK AFMS
	C-14	1	MAIN DECK AFMS
	C-15	1	EXHAUST AIR DAMPER 36"W X 48"H



BT-2 TRIPLE DECK DAMPER

2 M4.0 AHU 2 NO SCALE

BARNHART TAYLOR
BARNHART - TAYLOR MEXICO
AIR HANDLING AND EVAPORATIVE COOLING SYSTEMS

PROJECT: MOOR PARK COLLEGE
CLIENT: US AIR CONDITIONING DISTRIBUTORS
QUANTITY: 1 UNIT
SYMBOL: AC-2
DATE: JULY 15, 2025
CAPACITY (CFM): 14,545
STATIC PRESSURE (i.w.c.) I.S.P. E.S.P. T.S.P. SEE BELOW

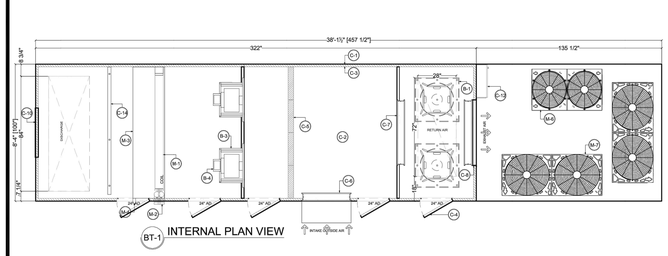
MODEL DESCRIPTION: SBD-507/123-ORE-28
- 507 → MEDIA FACE AREA IN SQUARED FEET (FT²)
- O → EXHAUST AIR
- R → RETURN AIR
- O → OUTSIDE AIR
- 123 → HEATING CAPACITY (MBH)
- 28 → COOLING CAPACITY (MBH)
- E → AIR DISCHARGE: E=DOWN
- B → BLOW THROUGHT
- SMARTZONE

SCALE: PAPER SIZE: 11 X 17
DWG. NO.: BT-4060-25
DWG. BY.: JUAN P. OAXACA S.
NOTES: DRAWING ONLY FOR REFERENCE (PRELIMINARY SUBMITTAL)

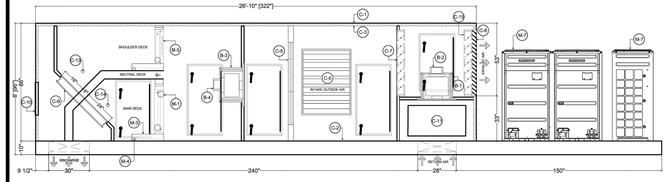
SUPPLY
STATIC PRESSUERE (in.W.C)
I.S.P.: 2.70"
E.S.P.: 1.30"
T.S.P.: 4.00"

EXHAUST
STATIC PRESSUERE (in.W.C)
I.S.P.: 0.022"
E.S.P.: 1.878"
T.S.P.: 1.90"

WEIGHT: 14,150 LBS



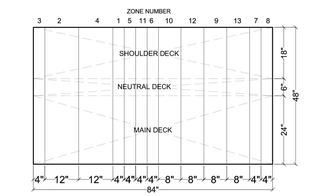
BT-1 INTERNAL PLAN VIEW



BT-2 FRONT CROSS SECTION - MOTOR & BLOWER

3 M4.0 AHU 3 NO SCALE

SECT.	ITEM	QTY.	DESCRIPTION
MEDIA SECTION	M-1	1	MAIN COIL 315 MBH
	M-2	2 SET	COIL SUPPLY/RETURN CONNECTIONS
	M-3	2	CONDENSATE WATER COLLECTION TRAY
	M-4	2	1 1/2" NPT DRAIN CONNECTION
	M-5	1	SHOULDER COIL: 123MBH
	M-6	1	SAMSUNG CONDENSER UNIT AM096BXVGJH/AA
	M-7	2	SAMSUNG CONDENSER UNIT AM240BXVGJH/AA
BLOWER SECTION	B-1	2	EXHAUST FAN: GR56I-ZID.GQ.CR
	B-2	2	EC MOTORS: TOTAL INSTALLED CAPACITY: 10.4 kW. .....ACTUAL INPUT POWER: 2.59 kW.
	B-3	2	SUPPLY FAN: GR50I-ZID.GQ.CR
	B-4	2	EC MOTORS: TOTAL INSTALLED CAPACITY: 12 kW. .....ACTUAL INPUT POWER: 7.1 kW.
CASING & OTHERS	C-1	1	CASING: SHEET METAL, GALVANIZED GAUGE 18
	C-2	1	FLOOR: TREADPLATE ALUMINUM WITH 2" FOAMBOARD AND LINER GALVANIZED GA. 20
	C-3	1	LINER: 2" FIBERGLASS AND STAINLESS STEEL 304 GA.22
	C-4	6	DOOR: DOUBLE WALL, HEAVY DUTY HINGES AND LATCHES (QTY 5 - 24"W x 50"H),(QTY 1 - 24"W x 40"H)
	C-5	1 SET	4" FILTERS PREPLEAT MERV 13
	C-6	1	OUTSIDE AIR DAMPER 48"W x 36"H
	C-7	1	RETURN AIR DAMPER 36"W x 48"H
	C-8	1	3" DEEP LOUVERS: SHEET METAL, GAUGE 20
	C-9	1	TRIPLE DECK DAMPER 84"W X 48"H
	C-10	1	REMOVABLE PANEL FOR ACTUATOR ACCESS
	C-11	1	REMOVABLE PANEL FOR EXHAUST FAN ACCESS
	C-12	1	ELECTRICAL PANEL
	C-13	1	SHOULDER DECK AFMS
	C-14	1	MAIN DECK AFMS
	C-15	1	EXHAUST AIR DAMPER 36"W X 48"H



BT-2 TRIPLE DECK DAMPER

BARNHART TAYLOR
BARNHART - TAYLOR MEXICO
AIR HANDLING AND EVAPORATIVE COOLING SYSTEMS

PROJECT: MOOR PARK COLLEGE
CLIENT: US AIR CONDITIONING DISTRIBUTORS
QUANTITY: 1 UNIT
SYMBOL: AC-3
DATE: JULY 15, 2025
CAPACITY (CFM): 9,130
STATIC PRESSURE (i.w.c.) I.S.P. E.S.P. T.S.P. SEE BELOW

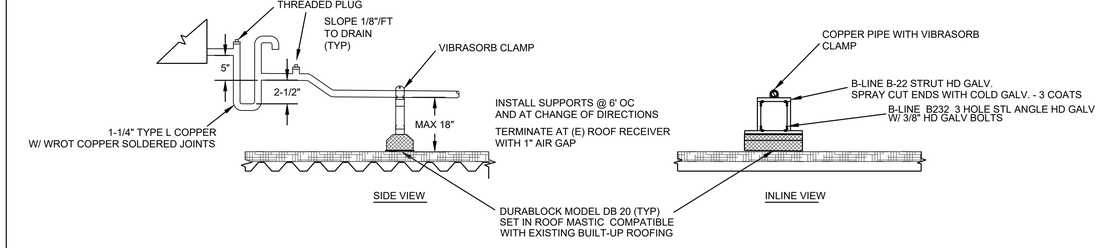
MODEL DESCRIPTION: SBD-315/123-ORE-20
- 315 → MEDIA FACE AREA IN SQUARED FEET (FT²)
- O → EXHAUST AIR
- R → RETURN AIR
- O → OUTSIDE AIR
- 123 → HEATING CAPACITY (MBH)
- 20 → COOLING CAPACITY (MBH)
- E → AIR DISCHARGE: E=DOWN
- B → BLOW THROUGHT
- SMARTZONE

SCALE: PAPER SIZE: 11 X 17
DWG. NO.: BT-4060-25
DWG. BY.: JUAN P. OAXACA S.
NOTES: DRAWING ONLY FOR REFERENCE (PRELIMINARY SUBMITTAL)

SUPPLY
STATIC PRESSUERE (in.W.C)
I.S.P.: 2.70"
E.S.P.: 1.30"
T.S.P.: 4.00"

EXHAUST
STATIC PRESSUERE (in.W.C)
I.S.P.: 0.009"
E.S.P.: 1.891"
T.S.P.: 1.90"

WEIGHT: 12,650 LBS



4 M4.0 CONDENSATE DRAIN NO SCALE

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PHONE: (805) 378-1454 FAX: (805) 378-1593

SCALE: AS SHOWN
DATE: 9-3-25
BLDG. NO.

LM BUILDING
HVAC REPLACEMENT PROJECT
AHU DETAILS
SHEET NO. M4.0

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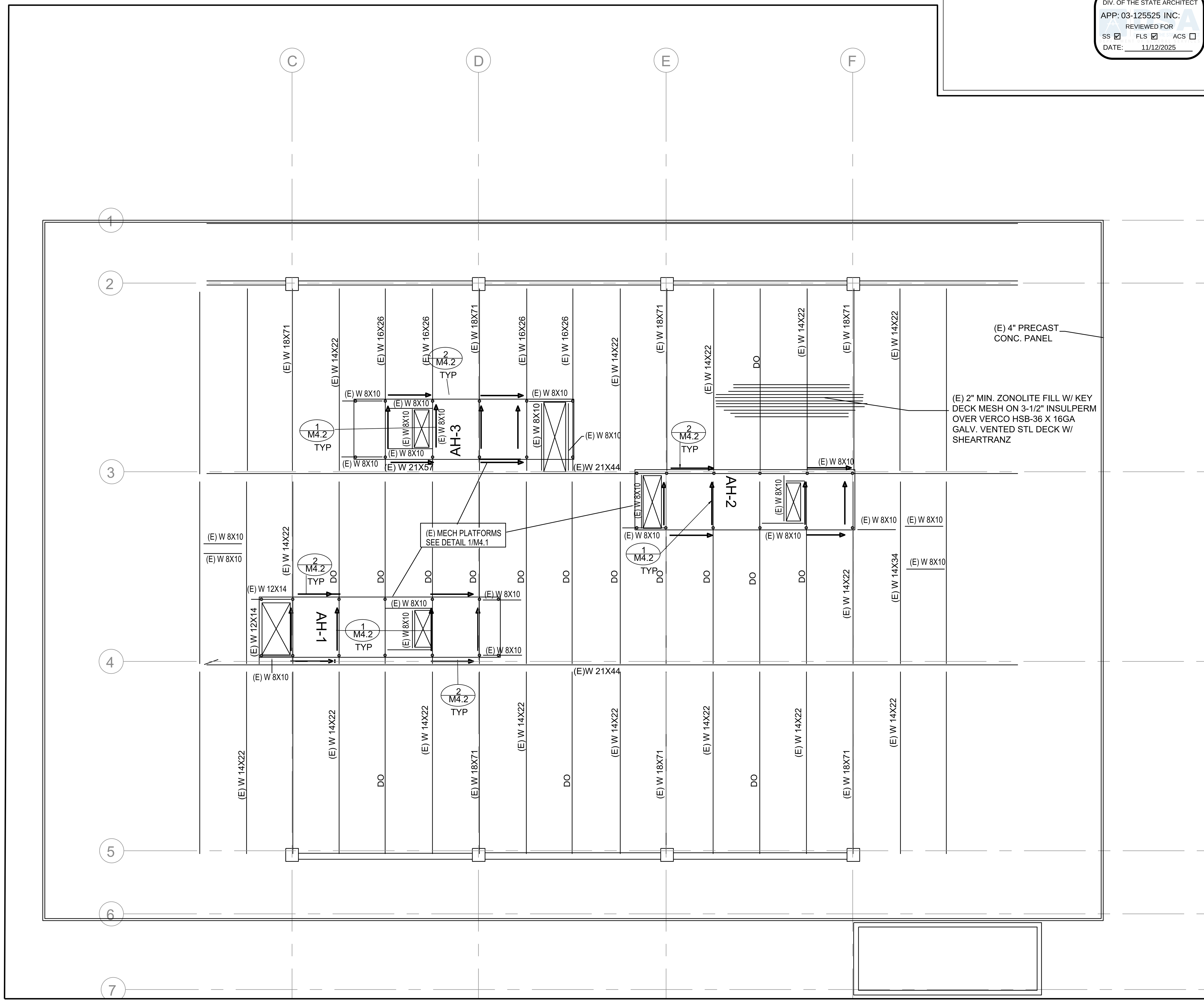
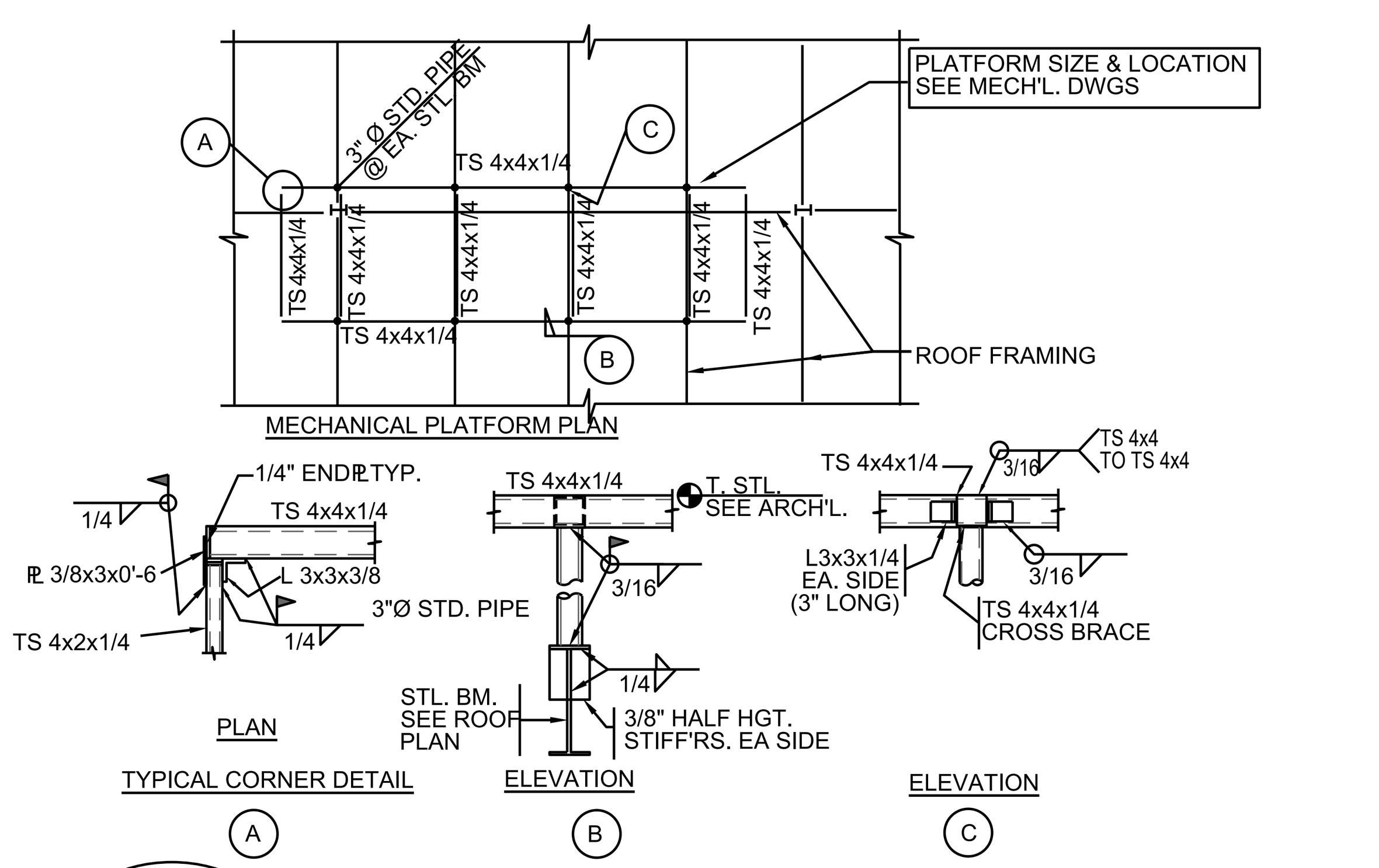


PARTIAL ROOF FRAMING PLAN
NO SCALE

STRUCTURAL SCOPE OF WORK

1. INSTALL 8 CROSS BRACES AT EACH AIR HANDLER FOR ADDITIONAL LATERAL BRACING OF EXISTING STRUCTURAL STEEL CURB SUPPORT. INSTALL AFTER REMOVING AIR HANDLERS.
2. STITCH WELD (E) CURB TO (E) 4x4 SQ. TUBE TO IMPROVE CONNECTION.



1/M4.1 EXISTING MECHANICAL PLATFORM DETAILS PER ORIGINAL STRUCTURAL DWGS (DETAIL 17/ST-3 PER DSA A#64323) (FOR REFERENCE)

REV. DATE

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hugh@aegroupme.com

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7075 CAMPUS ROAD, MOORPARK, CALIFORNIA 93021
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

DEPARTMENT OF MAINTENANCE & OPERATIONS
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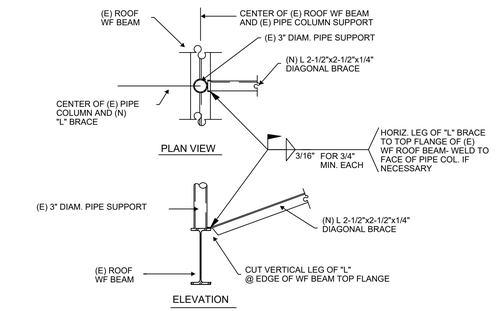
MOORPARK, CA. 93021
PHONE: (805) 378-1454 FAX: (805) 378-1593

SCALE:	AS SHOWN
DATE:	9-3-25
BLDG. NO.	

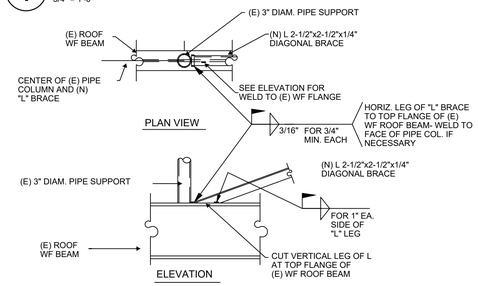
LM BUILDING HVAC REPLACEMENT PROJECT

PARTIAL ROOF FRAMING PLAN

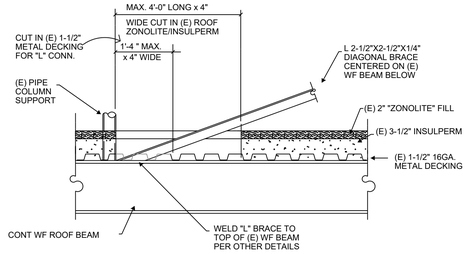
SHEET NO. M4.1



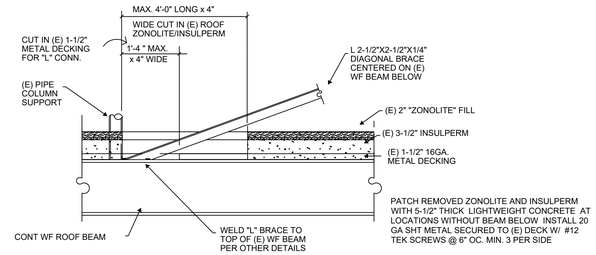
1 ADDED BRACING RUNNING PERPINDICULAR TO ROOF BEAM
3/4" = 1'-0"



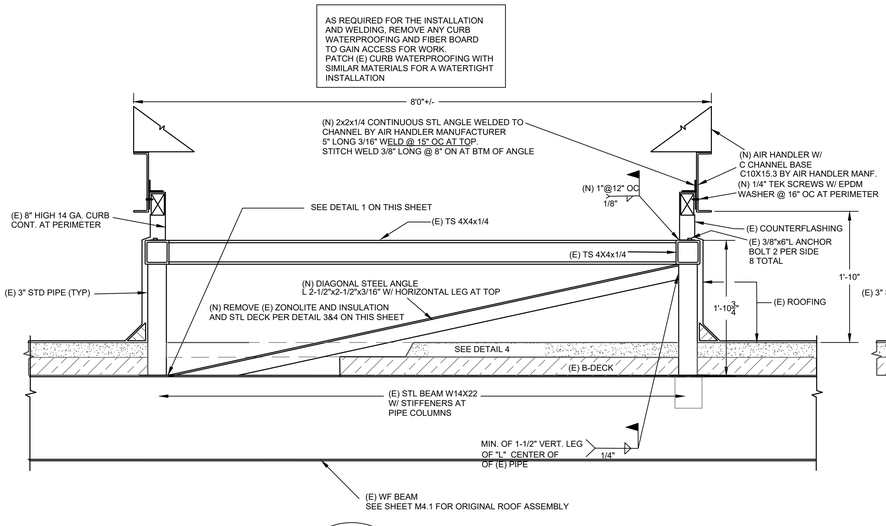
2 ADDED BRACING RUNNING PARALLEL TO ROOF BEAM
3/4" = 1'-0"



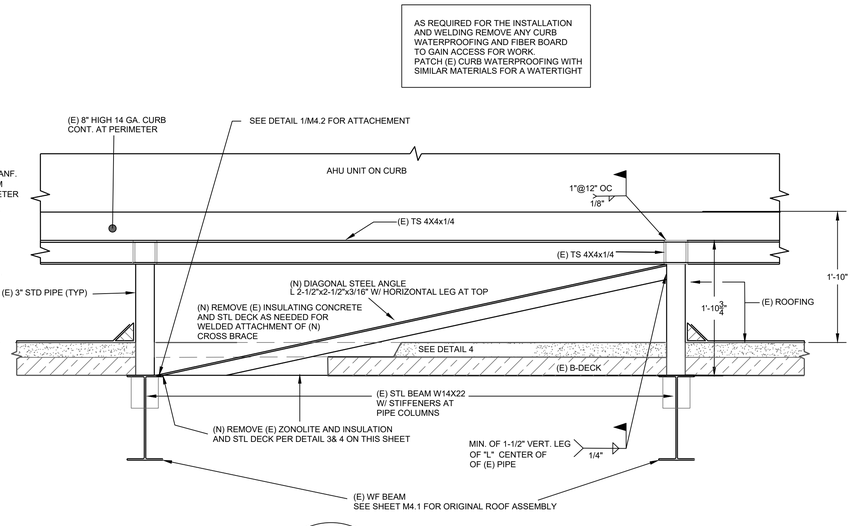
3 PENETRATION OF (N) ANGLE BRACE THROUGH (E) ROOFING PERPINDICULAR TO METAL DECKING
3/4" = 1'-0"



4 PENETRATION OF (N) ANGLE BRACE THROUGH (E) ROOFING PARALLEL TO METAL DECKING
3/4" = 1'-0"



1 M4.2 DETAIL A
SCALE 1"=1'0"



2 M4.2 DETAIL B
SCALE 1"=1'0"

NEW CURB BRACING DETAILS

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36 EXCEPT FOR WIDE FLANGE SHAPES WHICH SHALL CONFORM TO ASTM A-992, GRADE 50. SEE NOTE "2" BELOW FOR PIPES AND TUBE SHAPES.
2. STEEL PIPE SHALL CONFORM TO ASTM A-53, GRADE "B" AND TUBULAR STEEL MEMBERS SHALL CONFORM TO ASTM A-500, GRADE "B".
3. ALL WELDING SHALL BE PERFORMED WITH E70XX ELECTRODES CONFORMING TO AWS D1.1, LATEST EDITION. PROVIDE BACKING PLATES AS REQUIRED FOR FULL PENETRATION WELDS.
4. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS BY THE A.I.S.C., LATEST EDITION.
5. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS IN THE SHOP OF A FABRICATOR APPROVED BY THE DIVISION OF THE STATE ARCHITECT FOR WELDING IN THE SHOP. FOR SHOPS NOT APPROVED, WELDING SHALL BE CONTINUOUSLY INSPECTED BY A LICENSED DEPUTY INSPECTOR PER SECTION 1704A.2. OF THE CBC.
6. CONTINUOUS INSPECTION BY A LICENSED DEPUTY INSPECTOR IS REQUIRED FOR ALL FIELD WELDING PER SEC. 1704A.3 OF THE CBC, EXCEPT MINOR ITEMS WHEN APPROVED BY THE ENGINEER AND INSPECTOR OF RECORD.
7. ALL FABRICATED ITEMS SHALL BE SHOP PAINTED WITH ONE COAT OF SHOP PRIMER EXCEPT FOR ITEMS ENCASED IN CONCRETE AND SURFACES TO BE WELDED.
8. BOLT HOLES SHALL BE 1/16 INCH LARGER THAN BOLT DIAMETER UNLESS SLOTTED HOLES ARE INDICATED IN DETAILS. BOLT HOLES SHALL BE PUNCHED OR DRILLED, BURNED HOLES ARE NOT PERMITTED.
9. BOLT HEADS OR NUTS BEARING ON SLOPING SURFACES SHALL BE EQUIPPED WITH BEVELED WASHERS.
10. MACHINE BOLTS SHALL CONFORM TO ASTM A-307 AND ANCHOR BOLTS TO ASTM F 1554 UNLESS OTHERWISE NOTED ON PLANS.
11. ALL WELDING SHALL BE SPECIALLY INSPECTED BY AN AWS-CW1 QUALIFIED INSPECTOR APPROVED BY DSA.

DESIGN CRITERIA:

ALL WORK SHALL CONFORM TO 2022 TITLE 24, CALIFORNIA BUILDING CODE OF REGULATIONS AND ASCE CODE.

EQUIPMENT DESIGN LOADS/CALCULATIONS:

CBC 1603A.1.4 WIND DESIGN DATA:

BASIC WIND SPEED V = 93 MPH w/ V ASD=72 MPH
RISK CATAGORY: III
WIND EXPOSURE: C
DESIGN WIND PRESSURE: 35 PSF ASD

CBC 1603A.1.5 EARTHQUAKE DESIGN DATA:

SEISMIC IMPORTANCE FACTOR.....1.25
OCCUPANCY CATEGORY.....I I
SHORT PERIOD SPECTRAL RESPONSE, Ss:.....2.25g
SITE CLASS.....DEFAULT
1 SECOND SPECTRAL RESPOSNE, S1:..... 0.75g
SEISMIC DESIGN CATEGORY.....E
BASIC SEISMIC FORCE RESISTING SYSTEM: EQUIPMENT ANCHORAGE PER

DESIGN BASE SHEAR, (ASD): 0.71W (0.99/1.4) BASED ON ASCE EQUATION 13.3-1
VERTICAL ACCELERATION (ASD): 0..23W (0.32/1.4) BASED ON ASCE SEC. 13.3.1.2

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-125525 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 11/12/2025

REGISTERED PROFESSIONAL ENGINEER HUGH A. METERMAN M030626 Ren. 6/30/2026 MECHANICAL STATE OF CALIFORNIA

REV.	DATE

AE Group
Mechanical Engineers
838 East Front Street
Ventura, California 93001-2925
(805) 653-1722
hugh@aegroupme.com

MOORPARK COLLEGE
7075 CAMPUS ROAD, MOORPARK, CALIFORNIA 93021
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

DEPARTMENT OF MAINTENANCE & OPERATIONS
7075 CAMPUS RD.
MOORPARK, CA. 93021
PHONE: (805) 378-1454 FAX: (805) 378-1593

SCALE: AS SHOWN
DATE: 9-3-25
BLDG. NO.

LM BUILDING
HVAC REPLACEMENT PROJECT

CURB DETAILS

SHEET NO. M4.2

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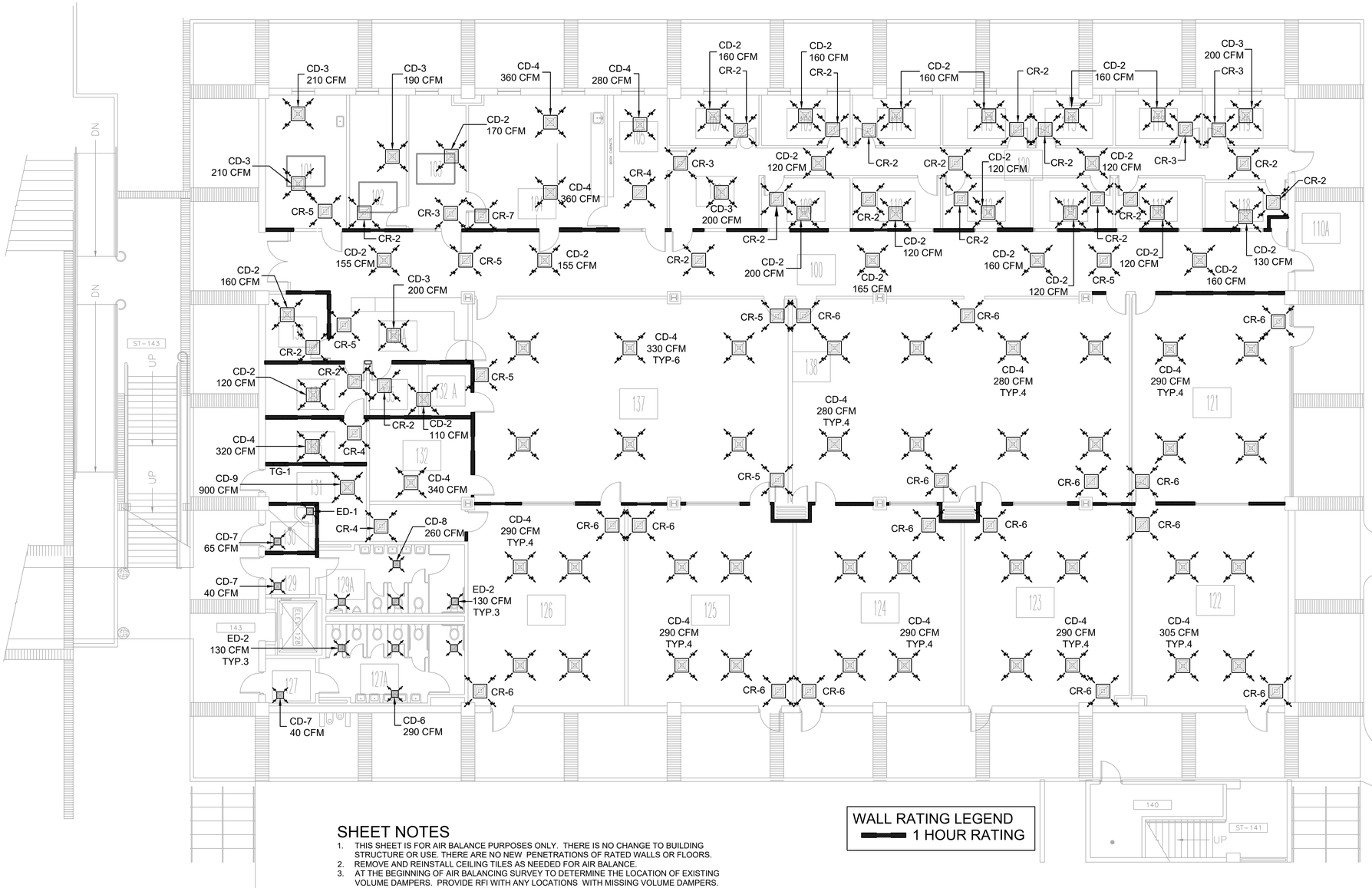
DIV. OF THE STATE ARCHITECT
APP: 03-125525 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 11/12/2025



SHEET NOTES

1. THIS SHEET IS FOR AIR BALANCE PURPOSES ONLY. THERE IS NO CHANGE TO BUILDING STRUCTURE OR USE. THERE ARE NO NEW PENETRATIONS OF RATED WALLS OR FLOORS.
2. REMOVE AND REINSTALL CEILING TILES AS NEEDED FOR AIR BALANCE.
3. AT THE BEGINNING OF AIR BALANCING SURVEY TO DETERMINE THE LOCATION OF EXISTING VOLUME DAMPERS. PROVIDE RFI WITH ANY LOCATIONS WITH MISSING VOLUME DAMPERS. NEEDED FOR AIR BALANCING PURPOSES

WALL RATING LEGEND
1 HOUR RATING

FIRST FLOOR AIR BALANCE PLAN
SCALE:1/8"=1'0"

N
W E
S

REGISTERED PROFESSIONAL ENGINEER
HUGH A. McTERMAN
M030626
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REV.	DATE

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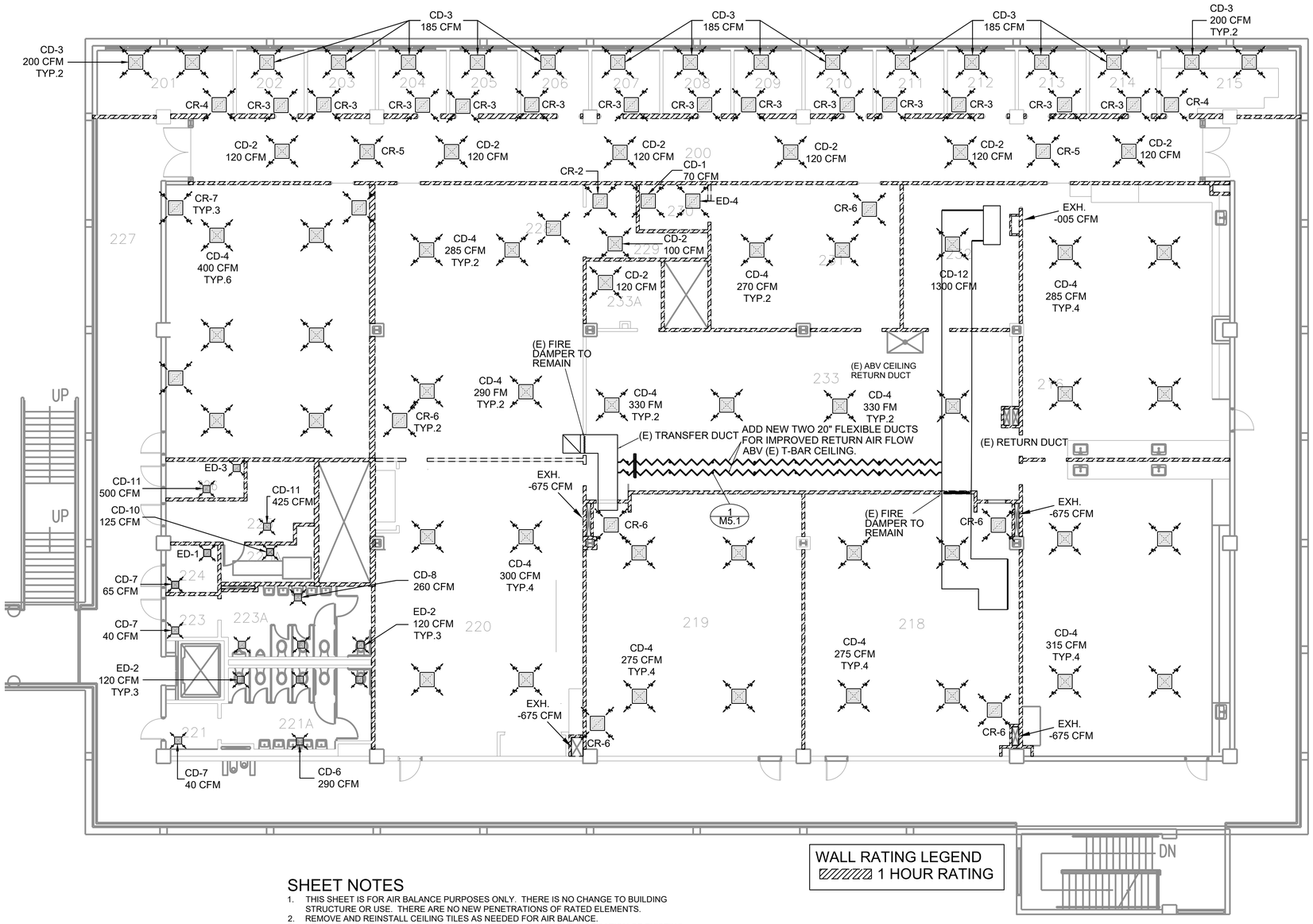
SCALE: AS SHOWN
DATE: 9-3-25
BLDG. NO.

LM BUILDING
HVAC REPLACEMENT PROJECT
FIRST FLOOR AIR BALANCE PLAN
SHEET NO. M5.0

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-125525 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 11/12/2025

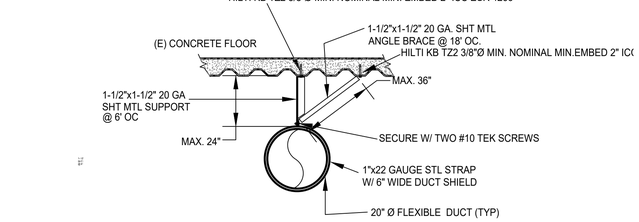


WALL RATING LEGEND
1 HOUR RATING

SHEET NOTES

1. THIS SHEET IS FOR AIR BALANCE PURPOSES ONLY. THERE IS NO CHANGE TO BUILDING STRUCTURE OR USE. THERE ARE NO NEW PENETRATIONS OF RATED ELEMENTS.
2. REMOVE AND REINSTALL CEILING TILES AS NEEDED FOR AIR BALANCE.
3. AT THE BEGINNING OF AIR BALANCING SURVEY TO DETERMINE THE LOCATION OF EXISTING VOLUME DAMPERS. PROVIDE RFI WITH ANY LOCATIONS WITH MISSING VOLUME DAMPERS. NEEDED FOR AIR BALANCING PURPOSES

SECOND FLOOR AIR BALANCE PLAN
SCALE:1/8"=1'0"



1 / M5.1 FLEXIBLE DUCT SUPPORT DETAIL
NO SCALE

REGISTERED PROFESSIONAL ENGINEER
HUGH A. McTERNAN
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STATE OF CALIFORNIA

REV.	DATE

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MOORPARK, CA. 93021
PHONE: (805) 378-1454 FAX: (805) 378-1593

SCALE: AS SHOWN
DATE: 9-3-25
BLDG. NO.

LM BUILDING
HVAC REPLACEMENT PROJECT
SECOND FLOOR AIR BALANCE PLAN
SHEET NO. M5.1

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-125525 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☐
DATE: 11/12/2025

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.			
Project Name:	MPC LM Building HVAC Retrofit Project	**Report Page:**	**(Page 1 of 14)**
Project Address:	7075 Campus Road	**Date Prepared:**	8/18/2025

A. GENERAL INFORMATION

01	Project Location (city)	Moorpark	04	Total Conditioned Floor Area	28281
02	Climate Zone	9	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

- Classroom
- Office

B. PROJECT SCOPE

This table Includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01	02	03
Air System(s)	Wet System Components	Dry System Components
☒ Heating Air System	☐ Water Economizer	☐ Air Economizer
☒ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ System Piping	☒ Fan Systems
☒ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☐ Ductwork (existing to remain, altered or new)
	☐ Chillers	☒ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	MPC LM Building HVAC Retrofit Project	**Report Page:**	**(Page 2 of 14)**
		Date Prepared:	8/18/2025

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.

01		02		03		04		05		06		07		08	09
System Summary 110.1, 110.2, 140.4, 170.2(c)	AND	Pumps 140.4(k), 170.2(c)4I	AND	Fans/ Economizers 140.4(c), 140.4(e), 170.2(c)	AND	System Controls 110.2, 120.2, 140.4(f), 170.2(c)	AND	Ventilation 120.1, 160.2	AND	Terminal Box Controls 140.4(d), 170.2(c)4B	AND	Distribution 120.3, 140.4(l), 160.2, 160.3	AND	Cooling Towers 110.2(e)2	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND		AND		COMPLIES
Mandatory Measures Compliance (See Table Q for Details)										COMPLIES					

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
AH-1	1	Single zone	Alteration		☐
AH-2	1	Single zone	Alteration		☐
AH-3	1	Single zone	Alteration		☐

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CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Compliance ID: EnergyPro-20275-0825-0275 Report Generated: 2025-08-18 10:19:59

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	MPC LM Building HVAC Retrofit Project	**Report Page:**	**(Page 3 of 14)**
		Date Prepared:	8/18/2025

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3aii	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available[1] 140.4(a) and 170.2(c)1	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
AH-1	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Altered per 141.0(b)2E and 180.2(b)2	628.97	803.34	0	439.09	383.51	239.23	445.79
AH-2	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Altered per 141.0(b)2E and 180.2(b)2	601.72	768.54	0	496.78	431.89	480.99	746.45
AH-3	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Altered per 141.0(b)2E and 180.2(b)2	417.5	533.24	0	266.32	234.1	159.55	336

[1]FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are excepted.
[2]It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.
[3] If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.
[4] Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).

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STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	MPC LM Building HVAC Retrofit Project	**Report Page:**	**(Page 4 of 14)**
		Date Prepared:	8/18/2025

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
		Heating Mode				Cooling Mode		
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
AH-1	>=240,000		COP	3.2	3.2	EER IEER	9.5 12.5	10.5 20
AH-2	>=240,000		COP	3.2	3.2	EER IEER	9.5 12.5	10.6 22
AH-3	>=240,000		COP	3.2	3.2	EER IEER	9.5 12.5	10.6 22

G. PUMPS

This section does not apply to this project.

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STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	MPC LM Building HVAC Retrofit Project	**Report Page:**	**(Page 5 of 14)**
		Date Prepared:	8/18/2025

H. FAN SYSTEMS & AIR ECONOMIZERS

This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(e), 140.4(m), 170.2(c)3, and 170.2(c)4A for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name	AH-1	Quantity	1	Fan System Status	Alteration	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	14,035	Site Elevation	513	Economizer	NA: Special OA filtration

01	02	03	04	05	06	07	08	09	10	11
						Allowance		Design		
Fan Name or Item Tag	Fan Type	Qty	Component	Airflow through Component (%)	Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method	Motor Nameplate Horsepower	Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away	100		3312		Manufacturer provided		8.16
			MERV 13-16 Filter upstream of thermal conditioning equipment	100		1502				
			Hydronic/DX cooling coil or heat pump coil	100		1502				
			Supply Fan System	100		1502				
RF	Return	1	Exhaust System Base Allowance	100		2667		Manufacturer provided		2.95
			Exhaust/Relief/Return/Transfer Fan System	100		772				
Supply Fan Base Allowance (kW)		Exhuast/Return/Relief/Transfer Fan Base Allowance(kW)				Fan System Allowance (kW)[3]		11.26	Fan System Electrical Output (kW)	11.1

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STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	MPC LM Building HVAC Retrofit Project	**Report Page:**	**(Page 6 of 14)**
		Date Prepared:	8/18/2025

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	AH-2	Quantity	1	Fan System Status	Alteration	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	14,545	Site Elevation	513	Economizer	NA: Special OA filtration

01	02	03	04	05	06	07	08	09	10	11
						Allowance		Design		
Fan Name or Item Tag	Fan Type	Qty	Component	Airflow through Component (%)	Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method	Motor Nameplate Horsepower	Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away	100		3433		Manufacturer provided		8.56
			MERV 13-16 Filter upstream of thermal conditioning equipment	100		1556				
			Hydronic/DX cooling coil or heat pump coil	100		1556				
			Supply Fan System	100		1556				
RF	Return	1	Exhaust System Base Allowance	100		2764		Manufacturer provided		2.95
			Exhaust/Relief/Return/Transfer Fan System	100		800				
Supply Fan Base Allowance (kW)		Exhuast/Return/Relief/Transfer Fan Base Allowance(kW)				Fan System Allowance (kW)[3]		11.67	Fan System Electrical Output (kW)	11.51

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STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	MPC LM Building HVAC Retrofit Project	**Report Page:**	**(Page 7 of 14)**
		Date Prepared:	8/18/2025

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	AH-3	Quantity	1	Fan System Status	Alteration	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	9,130	Site Elevation	513	Economizer	NA: Special OA filtration

01	02	03	04	05	06	07	08	09	10	11
						Allowance		Design		
Fan Name or Item Tag	Fan Type	Qty	Component	Airflow through Component (%)	Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method	Motor Nameplate Horsepower	Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away	100		2337		Manufacturer provided		5.34
			MERV 13-16 Filter upstream of thermal conditioning equipment	100		1096				
			Hydronic/DX cooling coil or heat pump coil	100		1096				
			Supply Fan System	100		1096				
RF	Return	1	Exhaust System Base Allowance	100		1680		Manufacturer provided		2.1
			Exhaust/Relief/Return/Transfer Fan System	100		566				
Supply Fan Base Allowance (kW)		Exhuast/Return/Relief/Transfer Fan Base Allowance(kW)				Fan System Allowance (kW)[3]		7.87	Fan System Electrical Output (kW)	7.45

[1] FOOTNOTES: Fans serving spaces with design background noise goals below NC35
[2] Low-turndown single-zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed loads.
[3] Fan system allowance includes fan system base allowance.
[4] Filter pressure loss can only be counted once per fan system.
[5] Complex Fan System means a fan system that combines a single cabinet fan system with other supply fans, exhaust fans, or both.

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STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	MPC LM Building HVAC Retrofit Project	**Report Page:**	**(Page 8 of 14)**
		Date Prepared:	8/18/2025

H. FAN SYSTEMS & AIR ECONOMIZERS

[6] Computer room economizers must meet requirements of 140.9(a) and will be documented on the NRCC-PRC-E document..

H. EXHAUST AIR HEAT RECOVERY 140.4(q), 170.2(c)4O

01	02	03	04	05	06	07	08	09	10	11
Fan System Name	Qty	Hours of Operation per Year	Design Supply Airflow Rate	Outdoor Airflow	% Outdoor Air at Full Design Airflow	Exemptions to Exhaust Air Heat Recovery Requirement per 140.4(q) & 170.2(c)4O	Exhaust Air Heat Recovery 140.4(q) & 170.2(c)4O	Type Of Heat Recovery Rating	Required Recovery Ratio	Energy Recovery Bypass

Fan Energy Index (FEI)

01	02	03
Name or Item Tag	FEI Exception	FEI
AH-1	None Applies	1
AH-2	None Applies	1
AH-3	None Applies	1

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Project Name:	MPC LM Building HVAC Retrofit Project	**Report Page:**	**(Page 9 of 14)**
		Date Prepared:	8/18/2025

I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft^2)	Thermostats 110.2(b) & (c)[1], 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	Shut-Off Controls 120.2(e) & 160.3(a)2D	Isolation Zone Controls 120.2(g) & 160.3(a)2F	Demand Response 110.12 120.2(b) & 160.3(a)2B	Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	Window Interlocks per 140.4(n) & 170.2(c)4D
AH-1	Single zone	<= 25,000 ft^2	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided
AH-2	Single zone	<= 25,000 ft^2	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided
AH-3	Single zone	<= 25,000 ft^2	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided

[1]FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(e)3B 140.4(p) and 140.4(q) for all nonresidential and hotel/motel and d:t24refnolink/]160.2, 160.3(a)3D, 170.2(a)4N, 170.2(a)4O for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☐	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☒	Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces
	☐	
03	☐	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)2.
Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems		

Generated Date/Time: Documentation Software: EnergyPro
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Compliance ID: EnergyPro-20275-0825-0275 Report Generated: 2025-08-18 10:19:59

REGISTERED PROFESSIONAL ENGINEER
HUGH A. McTERNAN
M030626
Ren. 6/30/2026
MECHANICAL
STATE OF CALIFORNIA

REV.	DATE

AE Group
Mechanical Engineers
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M O O R P A R K   C O L L E G E
7075 CAMPUS ROAD, MOORPARK, CALIFORNIA 93021
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

DEPARTMENT OF MAINTENANCE & OPERATIONS
7075 CAMPUS RD.
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PHONE: (805) 378-1454 FAX: (805) 378-1593

SCALE: AS SHOWN	LM BUILDING HVAC REPLACEMENT PROJECT		
DATE: 9-3-25	ENERGY NOTES	SHEET NO.	EN1.0
BLDG. NO.			

J. VENTILATION AND INDOOR AIR QUALITY

04		05			06			07	
System Name	AH-1	System Design OA CFM Airflow[1]		4755	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
First Floor	All others	8968		317	4755	8968	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				4755	18	Ventilation for this System Complies?		Yes

04		05			06			07	
System Name	AH-2	System Design OA CFM Airflow[1]		8205	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Second Floor	All others	10957		547	8205	10957	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				8205	18	Ventilation for this System Complies?		Yes

J. VENTILATION AND INDOOR AIR QUALITY

04		05			06			07	
System Name	AH-3	System Design OA CFM Airflow[1]		1680	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
FIRST FLR	Office space	4346		56	840	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
2ND FLR	Office space	4010		56	840	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				1680	18	Ventilation for this System Complies?		Yes

[1] FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system

[2] Air filtration requirements apply to the following three system types per 120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.

[3] Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.

[4] See Standards Tables 120.1-A and 120.1-B.

[5] For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.

[6] 120.2(e)3 requires systems serving rooms that are required by 130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by 130.1(c).

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)

This section does not apply to this project.

M. COOLING TOWERS

This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title
NRCI-MCH-01-E - Must be submitted for all buildings

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	AH-1; AH-2; AH-3;
NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	AH-1; AH-2; AH-3;
NRCA-MCH-11-A Automatic Demand Shed Controls	AH-1; AH-2; AH-3;
NRCA-MCH-16-A Supply Air Temperature Reset Controls	AH-1; AH-2; AH-3;
NRCA-MCH-18-A Energy Management Control Systems	AH-1; AH-2; AH-3;

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01		02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	Yes	Plan sheet or construction document location
		M-Sheets

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Jose Sanchez	
Company:	Signature Date:
AE Group Mechanical Engineers, Inc.	2025-08-18
Address:	CEA/ HERS Certification Identification (if applicable):
838 E Front St	
City/State/Zip:	Phone:
Ventura Ca 93001	8056531722

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Responsible Designer Signature:
Hugh McTernan	
Company:	Date Signed:
AE Group Mechanical Engineers, Inc	2025-08-18
Address:	License:
838 E Front St	M30626
City/State/Zip:	Phone:
Ventura Ca 93001	8056531722

REGISTERED PROFESSIONAL ENGINEER
HUGH A. McTERNAN
M030626
Ren. 6/30/2026
MECHANICAL
STATE OF CALIFORNIA

REV.	DATE

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PHONE: (805) 378-1454 FAX: (805) 378-1593

SCALE: AS SHOWN
DATE: 9-3-25
BLDG. NO.

LM BUILDING
HVAC REPLACEMENT PROJECT

ENERGY NOTES

SHEET NO. EN1.1

TIME: 9:15 am DATE: 27 October 2025 PATHNAME: D:\ACADSUP_TEMP\AcPublish_18252 DRAWING FILENAME: 25-118 E100 DRAFTER: CM02

Drafter:CM02 Paper Size: 12.9
Drawing:D:\ACADSUP_TEMP\AcPublish_18252\25-118 E100.dwg
Oct 27, 2025, 9:15am
Attached XREFS:
XREF:G:\25\118\EL\Xrefs\25-118TB.dwg
XREF:G:\25\118\AR\Xrefs\BACKGROUND_DATE\BG from 24-819 Fountain Hall\A101.dwg
XREF: G:\25\118\ME\Xrefs\title.dwg

GENERAL NOTES

A. GENERAL

1. SCOPE
THE DRAWINGS AND THESE GENERAL NOTES DESCRIBE THE SCOPE OF WORK AND SYSTEMS. THE MATERIAL REQUIRED FOR THE WORK SHALL BE CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED, UNLESS SPECIFICALLY NOTED OTHERWISE. THE WORK INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING PRINCIPAL SYSTEMS AND EQUIPMENT. ALL ITEMS NOTED ON THE PLAN WHICH ARE NOT EXPLICITLY STATED AS EXISTING SHALL BE NEW.

2. PERMITS AND CHARGES
OBTAIN AND PAY FOR ALL NECESSARY CONSTRUCTION PERMITS, INSPECTION FEES, AND OTHER CHARGES BY AGENCIES HAVING JURISDICTION.

3. REGULATIONS AND CODES
PROVIDE AND INSTALL ALL MATERIALS IN CONFORMANCE WITH THE 2022 C.E.C., CALIFORNIA ADMINISTRATIVE CODE TITLE 8, AND OTHER CODES AND REGULATIONS HAVING JURISDICTION. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE INSPECTING AUTHORITY AND THE MANUFACTURERS RECOMMENDATIONS.

4. VERIFYING EXISTING CONDITIONS
BEFORE SUBMITTING BID, BECOME THOROUGHLY FAMILIAR WITH ACTUAL EXISTING CONDITIONS AT THE BUILDING. THE INTENT OF THE WORK IS SHOWN ON THE DRAWINGS AND DESCRIBED HEREINAFTER. BY THE ACT OF SUBMITTING A BID PROPOSAL FOR THE WORK, THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE SUCH STUDY AND EXAMINATION AND TO ACCEPT ALL CONDITIONS PRESENT AT THE SITE. NO REQUEST FOR ADDITIONAL PAYMENT WILL BE CONSIDERED AS VALID, DUE TO FAILURE TO ALLOW FOR CONDITIONS WHICH MAY EXIST.

5. COORDINATION
COORDINATE ALL WORK WITH OTHER TRADES. OBTAIN ALL DRAWINGS THAT WILL REQUIRE COORDINATION AND PROVIDE ALL ELECTRICAL CONNECTION REQUIRED WHETHER SHOWN ON ELECTRICAL DRAWINGS OR NOT. ELECTRICAL EQUIPMENT LOCATIONS INDICATED ARE SHOWN DIAGRAMMATICALLY, EXACT LOCATION SHALL BE VERIFIED. SCALING OFF OF DRAWINGS SHALL BE DONE AT CONTRACTORS RISK. DO NOT SCALE DEVICES, LIGHTING FIXTURES OR ANY EQUIPMENT FROM PLANS. LIGHTING FIXTURE QUANTITIES AND LENGTHS SHALL BE CONTRACTORS RESPONSIBILITY. FIXTURES ARE SHOWN FOR CIRCUITING ONLY. CONTRACTOR TO VERIFY SIZES & QUANTITIES PRIOR TO BID.

6. SERVICE CONTINUITY
UNINTERRUPTED EXISTING ELECTRICAL POWER SHALL BE MAINTAINED TO OTHER TRADES FOR TEMPORARY POWER AREAS OF THE SITE DURING CONSTRUCTION. PROVIDE ANY TEMPORARY SERVICES AS MAY BE REQUIRED. IDENTIFY AT BID TIME, ALL WORK TO BE DONE ON PREMIUM TIME AND THE TOTAL OVERTIME MAN-HOURS REQUIRED FOR COMPLETION.

7. AS BUILT
PROVIDE RECORD DRAWINGS IN ACAD TO THE OWNER WITH ALL CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT. RECORD DRAWINGS SHALL BE SIGNED AND DATED BY CONTRACTOR PRIOR TO RELEASE OF FINAL RETENTION OF ALL MONIES.

8. GUARANTEE
CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL LABOR AND MATERIALS ON ALL WORK AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR.

9. SHOP DRAWINGS
SUBMIT SHOP DRAWINGS AND MATERIAL LIST FOR REVIEW PRIOR TO COMMENCING ANY WORK. ALL EQUIPMENT TO BEAR U.L. LABEL OR THAT OF ANOTHER ACCEPTABLE TESTING LABORATORY. SHOP DRAWINGS MUST BE STAMPED BY THE CONTRACTOR FOR CONFORMANCE PRIOR TO SUBMITTAL. SUBMIT THREE HARD COPY SETS OF SHOP DRAWINGS FOR REVIEW PRIOR TO PURCHASING ALL BREAKER MOUNTING HARDWARE, DISCONNECT SWITCHES, FUSES, CONTROLLERS, LIGHTING FIXTURES, LIGHT SWITCHES, RECEPTACLES, ETC.

10. CONTRACTOR BID
CONTRACTOR'S BID SHALL BE BASED ON ALL WORK SHOWN ON THE PLANS AND AS SPECIFIED. IF CONTRACTOR PROPOSES TO SUBSTITUTE FOR EQUIPMENT SPECIFIED, HE SHALL SUBMIT HIS REQUEST FOR CONSIDERATION OF THE OWNER AND ENGINEER PRIOR TO BID IN WRITING. ALL SUBSTITUTIONS MUST BE REVIEWED BY THE ENGINEER IN WRITING. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS, AND THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS OWN EXPENSE FOR ANY CHARGES RESULTING FROM HIS PROPOSED SUBSTITUTIONS WHICH AFFECT OTHER PARTS OF HIS OWN WORK, THE OWNER, ENGINEER OF RECORD OR THE WORK OF OTHER CONTRACTORS.

B. MATERIAL AND INSTALLATION
ALL WORK AND MATERIAL SHALL CONFORM TO THE LATEST RULES OF THE GOVERNING ELECTRICAL CODE AND INSTALLATION SHALL BE OF THE LATEST INDUSTRY STANDARDS OF WORKMANSHIP.

ALL INSTALLED MATERIALS AND EQUIPMENT SHALL BE LISTED U.L., NRTL OR LISTED AND APPROVED BY AN APPROVED TESTING LABORATORY.

1. CONDUITS
CONDUIT SHALL BE EMT, PVC, IMC, RIGID OR FLEXIBLE STEEL TYPE. CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH UL-1. A GROUND WIRE IS REQUIRED IN ALL FLEXIBLE CONDUIT AND UNDERGROUND CONDUIT. BUSHINGS SHALL BE INSTALLED ON ALL COMMUNICATION, TELEPHONE & SPEAKER CONDUITS. PROVIDE 3/16" NYLON PULL STRING IN ALL EMPTY CONDUITS. NO MC, BX OR AC90 SHALL BE PERMITTED. FLEXIBLE STEEL CONDUIT RUNS SHALL BE LIMITED TO A MAXIMUM LENGTH OF 6 FOOT. ALL CONNECTIONS SHALL BE COMPRESSION & NOT SCREW TYPE.

2. SWITCHES AND RECEPTACLES
PROVIDE 20AMP NEMA RATED SWITCHES AND RECEPTACLES OF SPECIFICATION GRADE. ALL SWITCHES SHALL BE RATED FOR 120 AND/OR 277 VOLT AND RECEPTACLES SHALL BE NEMA 5-20R. IN ALL OFFICES AND OFFICE AREAS DEVICES SHALL BE DECORA SERIES TYPE WITH COLOR SELECTION BY CONTRACTOR/OWNERS REPRESENTATIVE.

3. FEEDERS AND BRANCH CIRCUITS IDENTIFICATION
IDENTIFY FEEDERS WITH THE CORRESPONDING CIRCUIT DESIGNATION AT THE OVER-CURRENT DEVICE, LOAD END, AND IN PULL BOXES WITH E-Z CODE OR OTHER APPROVED WIRE MARKER. IDENTIFY BRANCH CIRCUITS WITH I.D. MARKERS, THE CORRESPONDING CIRCUIT DESIGNATION AT THE OVER-CURRENT DEVICE, AT ALL SPLICES, IN JUNCTION BOXES, AND IN OUTLETS. USE PLASTIC COATED SELF-STICKING MARKERS SUCH AS THOMAS & BETTS E-Z CODE FOR IDENTIFICATION OF CONDUCTORS. IDENTIFY SIGNAL & COMMUNICATION CABLES AT TERMINAL AND OUTLET UNIQUELY WITH PERMANENT LABELING.

4. CONDUCTORS
DELIVER ALL CONDUCTORS TO THE JOB SITE IN ORIGINAL UNBROKEN CARTON OR REEL, PROPERLY TAGGED WITH U.L. LABEL, SIZE, TYPE, MANUFACTURER, TRADE NAME AND THE DATE OF MANUFACTURE. (MUST BE MANUFACTURED WITHIN 6 MONTHS) PROVIDE COPPER CONDUCTORS #12 AWG MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. PROVIDE STRANDED COPPER CONDUCTORS FOR ALL WIRING. USE CONDUCTORS WITH 90°C THHN/THWN 600 VOLTS INSULATION, UNLESS OTHERWISE NOTED. CONDUCTOR SIZE NO.1 AWG AND SMALLER WITH 90 DEGREE C INSULATION ARE TO USE THE 60 DEGREE COLUMN OF THE CODE, TABLE 310-16, TO DETERMINE AMPACITY. CONDUCTORS #1/0 AWG AND LARGER WITH 75 DEGREE AND 90 DEGREE INSULATION ARE TO USE THE 75 DEGREE COLUMN OF CODE, TABLE 310-16, TO DETERMINE AMPACITY. (110.14C) WHERE THE NUMBER OF CONDUCTORS IN A RACEWAY OR CABLE EXCEEDS THREE, THE ALLOWABLE AMPACITY OF EACH CONDUCTOR SHALL BE REDUCED PER TABLE 310.15(B)(3)(a).

5. LIGHTING FIXTURES
PROVIDE LIGHTING FIXTURES WITH ELECTRONIC DRIVERS PER SCHEDULE. NO SUBSTITUTIONS OF FIXTURES SHALL BE PROVIDED WITHOUT THE APPROVAL OF THE ENGINEER -OF-RECORD.

6. PANELBOARDS (BID SQUARE D)
DISTRIBUTION AND LIGHTING PANELBOARDS WITHIN PROJECT AREA SHALL BE OF THE COPPER BUS THREE PHASE, FOUR WIRE DISTRIBUTED PHASING TYPE. CIRCUITING SHALL BE ARRANGED TO PROVIDE, AS NEARLY AS POSSIBLE, AN EVENLY BALANCED LOAD ON ALL PHASES. PANELBOARDS SHALL BE BOLT-ON CIRCUIT BREAKER TYPE. AVAILABLE FAULT CURRENT IS STATED ON PANELBOARD SCHEDULE. PROVIDE PANEL IDENTIFICATION NAMEPLATE (ENGRAVED ON-ADHESIVE 1/2" MINIMUM LETTERS) AND TYPEWRITTEN LIST OF CIRCUITS IN THE DIRECTORY FRAME. PROVIDE HINGED PANEL COVERS.

7. STRUCTURAL SUPPORT
EACH SECTION OF FLOOR MOUNTED SWITCHBOARD, DISTRIBUTION BOARD, MCC, ETC. SHALL BE BOLTED TO THE CONCRETE HOUSEKEEPING PAD USING (6) 3/4"-10 GRADE 2 BOLTS AND CONICAL WASHERS TORQUED TO 70LB-FT. PROVIDE MINIMUM 4000 PSI STRENGTH CONCRETE BELOW ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT. TIE THE TOP OF ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT TO THE BUILDING STRUCTURE IN A SEISMICALLY APPROVED MANNER.

8. ELECTRICAL CERTIFICATION
"ELECTRICIANS" PERFORMING WORK ON THIS PROJECT SHALL BE CURRENTLY CERTIFIED IN ACCORDANCE WITH THE STATE OF CALIFORNIA AB931 AND THE DIVISION OF APPRENTISHIP STANDARDS SECTION 3099.

C. DEMOLITION
1. NOTIFY THE OWNER IMMEDIATELY WHEREVER EXISTING EQUIPMENT IS ENCOUNTERED WHICH MUST BE RELOCATED DUE TO THE NEW CONSTRUCTION, AND WHICH IS NOT INDICATED ON THE PLANS.
2. ALL REMOVED MATERIALS AND EQUIPMENT WHICH ARE SALVAGEABLE SHALL REMAIN THE PROPERTY OF THE OWNER. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON THE PREMISES AS DIRECTED BY OWNER, AND NEATLY PILE OR STORE THEM AND PROTECT FROM DAMAGE. REMOVE FROM PREMISES AND DISPOSE OF ALL MATERIALS CONSIDERED BY THE OWNER TO BE SCRAP.
3. ALL DEVICES, CIRCUITS CONDUCTORS, FEEDERS ETC., WHEN NOTED TO BE REMOVED, SHALL BE REMOVED TO THE LAST ACTIVE DEVICE. ALL OVER-CURRENT PROTECTION AND DISCONNECT DEVICES NO LONGER UTILIZED BUT REMAINING AS LAST ACTIVE DEVICE SHALL BE LABELED AS 'SPARE'. COORDINATE ALL OUTAGES WITH OWNERS REPRESENTATIVE.
4. DISCONNECT AND MAKE SAFE ALL ELECTRICAL SYSTEMS ON SITE AND IN WALL, FLOORS, AND CEILINGS SCHEDULED FOR REMOVAL.
5. REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION.
6. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY AND RE-LABEL DEVICES AS SPARES.
7. REMOVE ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. CUT CONDUIT FLUSH WITH WALLS AND FLOOR, AND PATCH SURFACES.
8. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVE. PROVIDE BLANK COVER FOR ABANDONED OUTLETS WHICH ARE NOT REMOVED.
9. DISCONNECT AND REMOVE ABANDONED LUMINAIRES. REMOVE BRACKETS, STEMS, HANGERS, AND OTHER
10. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK
11. MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS WHICH REMAIN ACTIVE. MODIFY INSTALLATION OR PROVIDE ACCESS PANEL AS APPROPRIATE.
12. BEGINNING OF DEMOLITION MEANS CONTRACTOR ACCEPTS EXISTING CONDITIONS.

D. EXECUTION
1. CAREFULLY PROTECT ALL WALLS, TRIM, FLOORS, EQUIPMENT UTILITY LINES AND MATERIALS. WHEN WORKING ON FINISHED SURFACES, LIMIT DAMAGE TO THE CONFINES AS MUCH AS POSSIBLE AND RESTORE TO THE ORIGINAL CONDITION ALL SURFACES WHICH ARE DAMAGED BECAUSE OF THE INSTALLATION OF THIS WORK.
2. EQUIPMENT, MATERIALS AND SUPPLIES REMOVED FOR PROTECTION SHALL BE REPLACED IN ORIGINAL LOCATIONS. ANY MATERIALS DAMAGED SHALL BE REPLACED WITH NEW MATERIALS OF LIKE KIND AND QUALITY.
3. DO ALL DRILLING, CUTTING, CHANNELING AND PATCHING REQUIRED TO INSTALL ELECTRICAL WORK AS INDICATED OR HEREIN SPECIFIED. ALL HOLES, CURBS, ETC., IN FLOORS, CEILINGS AND WALLS SHALL BE PATCHED, UNLESS INDICATED OTHERWISE. PAINT ALL NEW ELECTRICAL RACEWAYS, CABINETS, ENCLOSURES AND FITTINGS PENETRATING INTO FIRE RATED ENVELOPES, SPACES, ETC.

3. ALL CONDUIT RUNS SHALL BE CONCEALED, UNLESS SHOWN OTHERWISE. PROVIDE A PULL WIRE IN ALL EMPTY CONDUITS.
4. EXISTING CONDITION SHOWN IS FROM AVAILABLE RECORD DRAWINGS AND VISUAL FIELD SURVEY AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITION AT SITE.
5. ALL WORK SHOWN IS NEW UNLESS SPECIALLY INDICATED AS EXISTING (X). ALL ELECTRICAL EQUIPMENT MOUNTING AND ANCHORAGE MUST CONFORM WITH LOCAL AND STATE SEISMIC CODES.

F. GROUNDING & BONDING
FURNISH AND INSTALL COMPLETE BONDING AND GROUNDING SYSTEM AS REQUIRED BY CODES. CONTINUITY OF GROUNDING SHALL BE MAINTAINED MECHANICALLY AND ELECTRICALLY THROUGHOUT THE SYSTEM. A GREEN GROUNDING CODE SIZED CONDUCTOR SHALL BE CARRIED IN ALL CONDUITS.

G. INSTALLATION
1. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT A COMPLETE AND WORKABLE ELECTRICAL INSTALLATION BE PROVIDED FOR ALL THE EQUIPMENT DESCRIBED OR SHOWN AS BEING IN THIS CONTRACT. TOWARD THIS END FURNISH ALL LABOR AND TOOLS NECESSARY AND FURNISH AND INSTALL ALL APPARATUS, MATERIALS AND EQUIPMENT IN A FASHION COMPLYING WITH ALL APPLICABLE CODES, INCLUDING ITEMS REQUIRED BUT NOT NORMALLY SHOWN, SUCH AS LAMPS, COUPLINGS, HANGERS, BRACKETS, CLAMPS, BOXES, CONNECTORS AND HARDWARE. REFER ALSO TO WRITTEN SPECIFICATIONS FOR GENERAL, MECHANICAL AND ELECTRICAL SECTIONS.
2. DETERMINE EXACT ROUTING OF CONCEALED FEEDERS AND BRANCH HOMERUNS IN COOPERATION WITH OTHER TRADES TO SIMPLIFY INSTALLATION WHEREVER POSSIBLE BUT SUBJECT TO APPROVAL OF ARCHITECT FOR VISUAL AND STRUCTURAL REASONS.
3. PROVIDE A CODE APPROVED DISCONNECT SWITCH OR BREAKER WITHIN SIGHT OF EVERY MOTOR AND FEED MOTORS NOT EQUIPPED WITH "BUILT IN" PROTECTION THROUGH A MAGNETIC OR MANUAL STARTER WITH OVERLOAD HEATERS SIZED TO COMPLY WITH MOTOR MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE CODES.
4. FOR CONNECTIONS TO EXHAUST FANS, PUMPS, COMPRESSORS, SPACE HEATERS, WATER HEATERS, AQUASTATS, SOLENOID VALVES AND OTHER MECHANICAL EQUIPMENT AND FOR CONDUITS AND WIRE REQUIRED BUT NOT NECESSARILY SHOWN ON THESE DRAWINGS REFER TO MECHANICAL PLANS AND DETERMINE EXACT LOCATIONS UNDER DIRECTION OF HEATING AND VENTILATING CONTRACTOR.
5. SIZE OUTLET BOXES IN CONFORMITY WITH CODE FOR NUMBER AND GAUGE OF CONDUCTORS THEREIN, EXCEPT WHERE NOTED TO BE LARGER. MINIMUM BOX SIZE SHALL BE 4" SQUARE BY 1-1/2" DEEP.
6. ALL ELECTRICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING AND REPAIRING. ALL CONDUIT SHALL BE CONCEALED WHERE POSSIBLE. EXPOSED CONDUIT SHALL BE IN STRAIGHT LINES PARALLEL WITH, OR AT RIGHT ANGLES TO, COLUMN LINES OR BEAMS AND SEPARATED BY AT LEAST THREE (3) INCHES FROM WATER LINES WHENEVER THEY RUN LONG SIDE OR ACROSS SUCH LINES. CONDUIT SHALL NOT BE RUN BELOW CABLE TRAYS OR LIGHT FIXTURES WITHOUT SPECIFIC APPROVAL OF THE OWNERS REPRESENTATIVE. HANGERS SHALL BE FASTENED TO STEEL, CONCRETE OR MASONRY, BUT NOT TO PIPING. HANGERS AND SUPPORT SYSTEMS ARE AN INTEGRAL PART OF THE VISUAL ENVIRONMENT. ALL HANGERS AND SUPPORTS EXPOSED TO PUBLIC VIEW MUST BE SHOWN IN DETAIL ON PLANS SUBMITTED TO ENGINEER FOR APPROVAL OF APPEARANCE. ALL HANGERS MUST BE UNIFORMLY SPACED AND NEATLY INSTALLED WITH NO EXCESS MATERIAL BEYOND WHAT IS REQUIRED FOR THE SUPPORT FUNCTION. CONTRACTOR SHALL SELECT ACCESSORIES AND HARDWARE WITH A SMOOTH, NEAT FINISHED APPEARANCE AND PAINT ALL EXPOSED CONDUIT HANGERS TO MATCH THE ADJACENT FINISHES.
7. ALL RECEPTACLES SHALL BE MOUNTED AT 18" PER ADA REQUIREMENTS UNLESS NOTED OTHERWISE, MEASURED FROM BOTTOM OF BOX.
8. CONTRACTOR SHALL EXAMINE PLANS AND VERIFY IN FIELD LOCATIONS OF ALL FIRE RATED WALLS, CEILINGS AND FLOORS. CONTRACTOR SHALL SEAL ALL ELECTRICAL SYSTEM PENETRATIONS THROUGH FIRE RATED WALLS, CEILINGS AND FLOORS WITH U.L. LISTED MATERIAL APPROVED BY THE AUTHORITY HAVING JURISDICTION.
9. PANEL CIRCUIT DIRECTORY SHALL COMPLY WITH CEC 408.4.

H. ADDITIONAL NOTES
1. PROVIDE SWITCH AND RECEPTACLE HEIGHTS PER STATE OF CALIFORNIA ACCESSIBLE REQUIREMENTS.
2. THE ISSUANCE OF A PERMIT SHALL NOT PREVENT THE BUILDING OFFICIAL FROM REQUIRING THE CORRECTION OF ERRORS ON THESE PLANS OR FROM PREVENTING ANY VIOLATION OF THE CODES ADOPTED BY THE CITY, RELEVANT LAWS, ORDINANCES, RULES AND/OR REGULATIONS.
3. FOR FIRE RATED WALL/CEILING PENETRATION AND/OR MEMBRANE PENETRATION, COMPLETE NRTL CLASSIFICATION SHEETS SHALL BE PROVIDED TO THE INSPECTOR AT THE TIME OF INSPECTION FOR THE LISTED RATED ASSEMBLY.
4. EACH MULTIWIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS THAT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE PANELBOARD WHERE THE BRANCH CIRCUIT ORIGINATES. (210.4)
5. MULTIWIRE BRANCH CIRCUITS SUPPLYING POWER TO THE PARTITION SHALL BE PROVIDED WITH A MEAN TO DISCONNECT SIMULTANEOUSLY ALL UNGROUNDED CONDUCTORS AT THE PANELBOARD WHERE THE BRANCH CIRCUIT ORIGINATES. (605.7)
6. ALL NEW OVERCURRENT DEVICES INSTALLED IN EXISTING PANELS/SWITCHBOARDS SHALL MATCH THE MAKE, MODEL AND INTERRUPTING CAPACITY OF THE EXISTING OVERCURRENT DEVICES.
7. RACEWAY SEALS. CONDUITS OR RACEWAYS THROUGH WHICH MOISTURE MAY CONTACT LIVE PARTS SHALL BE SEALED OR PLUGGED AT EITHER OR BOTH ENDS.
8. PROVIDE LOCAL DISCONNECTS FOR ALL HARDWIRED EQUIPMENT THAT IS NOT "WITHIN SIGHT" OF THE SOURCE PANEL.
9. MULTIPLE RACEWAYS CONTAINING MORE THAN 3 CURRENT CARRYING CONDUCTORS SHALL COMPLY WITH [2016 CEC, 310.15(B)(2)(A)].
10. THE IDENTIFICATION OF EVERY CIRCUIT OF A PANEL BOARD AND SWITCHBOARD SHALL BE LEGIBLY IDENTIFIED AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE AND SHALL INCLUDE SUFFICIENT DETAIL TO ALLOW EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHERS. 2016 C.E.C 408.4 - PROVIDE MORE DETAIL ON PANEL SCHEDULE CIRCUIT DESCRIPTIONS.
11. A SINGLE RECEPTACLE INSTALLED ON AN INDIVIDUAL BRANCH CIRCUIT SHALL HAVE AN AMPERE RATING OF NOT LESS THAN THAT OF THE BRANCH CIRCUIT. INDICATE THE RECEPTACLE RATING. (210.21(B)(1))
12. WHERE THE DISCONNECTS ARE NOT PROVIDED WITHIN SIGHT FROM THE EQUIPMENT IT SUPPLIES, THE SWITCH OR CIRCUIT BREAKER MUST INCLUDE PROVISIONS FOR ADDING A LOCK, AND THESE PROVISIONS MUST REMAIN WITH THE EQUIPMENT. THESE LOCKING PROVISIONS HAVE TO BE PART OF THE EQUIPMENT, EITHER INHERENT TO THE EQUIPMENT DESIGN OR AS A ACCESSORY FEATURE THAT CAN BE INSTALLED ON THE EQUIPMENT. [410.141(B), 422.31(B), 424.19, 440.14 EXCEPTION NO. 1, 600.6(A)(2)(3), 620.51(A) EXCEPTION NO. 1, 620.53, 620.55]
13. STANDARD NON-LOCKING STRAIGHT-BLADE RECEPTACLES IN 120- AND 250-VOLT CONFIGURATION AT WET/DAMP LOCATION ARE REQUIRED TO BE LISTED WEATHER-RESISTANT TYPE. [CEC 406.8(A)].

APPLICABLE CODE: 2022 CBC

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVEABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G., HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

APPLICABLE CODE: 2022 CBC PER IR 16-13.

MEP DISTRIBUTION SYSTEM BRACING NOTE FOR PIPING, DUCTWORK, AND ELECTRICAL CONDUIT

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7 SECTION 13.3 AS DEFINED IN ASCE 7 SECTIONS 13.6.5, 13.6.6, 13.6.7, AND 13.6.8; AND 2022 CBC SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEMS ARE AS NOTED BELOW. THE MEP DESIGN PROFESSIONAL ENGINEER RESPONSIBLE FOR CONTENT ON THESE SHEETS HAS VERIFIED THAT THE DESIGN METHODS IDENTIFIED BELOW ARE IN ACCORDANCE WITH DSA IR 16-13.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP☐ MD☐ PP☐ E☒ OPTION 1: PROJECT-SPECIFIC DESIGN.

MP☐ MD☐ PP☐ E☐ OPTION 2: DESIGN BASED ON HCAI (OSHPD) OPM, WITHIN PROJECT SUBMITTAL.

MP☐ MD☐ PP☐ E☐ OPTION 3: DESIGN BASED ON HCAI (OSHPD) OPM, DEFERRED SUBMITTAL.

SYMBOLS

- GFCI RECEPTACLE AT 42" AFF TO BOTTOM OF DEVICE
- DUPLEX RECEPTACLE, WALL MOUNTED @ +18" AFF TO BOTTOM OF DEVICE, NEMA 5-20R U.O.N.
- SPECIAL OUTLET, TYPE AS REQUIRED BY EQUIPMENT.
- (J) JUNCTION BOX (CEILING MTD.) SIZE PER TABLE AND NEC ARTICLE 314
- (J) JUNCTION BOX (WALL MTD.) SIZE PER TABLE AND NEC ARTICLE 314
- (T) THERMOSTAT - 36" TO 48" AFF, BOTTOM & TOP OF BOX RESPECTIVELY
- [T] TRANSFORMER
- BRANCH CIRCUIT PANELBOARD - 240/120V, 1Ø, 3W OR 3Ø, 3W, 240VAC OR 120/208VAC, 3Ø, 4W.
- CONDUIT RUN CONCEALED ABOVE CEILING OR IN WALLS,
- CONDUIT RUN CONCEALED BELOW FLOOR OR UNDERGROUND
- — 0-10 — LIGHTING CONTROL 0-10V (PURPLE GRAY)
- — C5 — LOW VOLTAGE CABLE & CONDUIT 3/4"C-1#CAT5 U.O.N. (PER nLIGHT REQUIREMENTS)
- — E — EMERGENCY CIRCUIT
- — P — POWER CONDUIT & CONDUCTORS
- FLEXIBLE CONDUIT (WITH GROUND CONDUCTOR, PROVIDE LIQUID TIGHT CONDUIT IN ALL EXPOSED AREAS)
- #10 HASH MARKS INDICATE QUANTITY OF #12 CONDUCTORS. NO HASH MARKS INDICATE (2)#12AWG. (PROVIDE GROUND CONDUCTOR IN ALL CONDUITS.) WHERE NO NUMBER IS INDICATED, THE CONDUCTORS ARE #12AWG(MIN.) CONDUIT SIZE IS AS REQUIRED BY ELECTRICAL CODE. (3/4" CONDUIT MINIMUM).
- 2LA 1-3-5,7 INDICATES A HOMERUN TO PNL 2LA, CKTS 1-3-5 WITH SHARED NEUTRAL & CKT 7 WITH DEDICATED NEUTRAL.
- 3/4"C-2#12 & 1#12 GND
- 3/4"C-3#12 & 1#12 GND
- 3/4"C-4#12 & 1#12 GND
- 3/4"C-5#12 & 1#12 GND
- #10 3/4"C-2#10 & 1#10 GND
- #10 3/4"C-3#10 & 1#10 GND
- #10 3/4"C-4#10 & 1#10 GND
- #10 3/4"C-5#10 & 1#10 GND

(The above conductor entries:) 1" CONDUIT MINIMUM IF UNDERGROUND (CONTRACTOR TO PROVIDE DEDICATED NEUTRALS FOR CIRCUITS WHICH DO NOT HAVE COMMON CIRCUIT HANDLE TIES ON BREAKERS FEEDING THE CIRCUITS)

- 1 SEE KEY NOTE #1 AS INDICATED ON DRAWING
- $ P SWITCH WITH PILOT LIGHT @ 42"AFF
- $ 3ab 3-WAY SWITCH, a & b INDICATES LIGHT FIXTURE TO BE SWITCHED (EACH A 3-WAY) MOUNTED @ 42" AFF
- $ SWITCH MOUNTED @ +42" AFF
- $ M MOTOR RATED SWITCH
- $ a,b,c,d CIRCUIT SWITCH LEGS; WALL SWITCHES
- 60AS 35AF 3P DISCONNECT SWITCH, 60AMP SWITCH, 35 AMP FUSE, 3 POLE W/ OVERCURRENT PROTECTION U.O.N.
- (M) 100A UTILITY METER (OR AS NOTED)
- 3P 100AS 60AF FUSED DISCONNECT SWITCH 100AMP SWITCH RATING WITH 60 AMP FUSES, 3 POLE
- 200AF 150AT 3P MOLDED CASE CIRCUIT BREAKER 200 AMP FRAME, 150 AMP TRIP RATING, 3 POLE

COLOR CODE FOR CONDUCTORS

PROVIDE CONDUCTOR COLOR CODE AS FOLLOWS:
120/208VAC,3Ø,4W: BLUE,BLACK,RED FOR PHASE CONDUCTORS AND WHITE FOR NEUTRAL, GREEN FOR GROUND.
277/480VAC,3Ø,4W: ORANGE,BROWN,YELLOW FOR PHASE CONDUCTORS AND WHITE FOR NEUTRAL, GREEN FOR GROUND.

DERATING TABLE

NEC #310-8 ADJUSTMENT FACTORS

(a) MORE THAN THREE CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE. WHERE THE NUMBER OF CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE EXCEEDS THREE, THE ALLOWABLE AMPACITIES SHALL BE REDUCED AS SHOWN IN THE FOLLOWING TABLE:

NUMBER OF CURRENT-CARRYING CONDUCTORS	PERCENT OF VALUES IN TABLES AS ADJUSTED FOR AMBIENT TEMPERATURE IF NECESSARY
4 THROUGH 6	80
7 THROUGH 9	70
10 THROUGH 20	50
21 THROUGH 30	45
31 THROUGH 40	40
41 AND ABOVE	35

WHERE SINGLE CONDUCTORS OR MULTICONDUCTOR CABLES ARE STACKED OR BUNDLED LONGER THAN 24 INCHES (610 mm) WITHOUT MAINTAINING SPACING AND ARE NOT INSTALLED IN RACEWAYS, THE ALLOWABLE AMPACITY OF EACH CONDUCTOR SHALL BE REDUCED AS SHOWN IN THE ABOVE TABLE.

EXCEPTION NO. 1: WHERE CONDUCTORS OF DIFFERENT SYSTEMS, AS PROVIDED IN SECTION 300-3, ARE INSTALLED IN A COMMON RACEWAY OR CABLE, THE DERATING FACTORS SHOWN ABOVE SHALL APPLY TO THE NUMBER OF POWER AND LIGHTING (ARTICLES 210, 215, 220, AND 230) CONDUCTORS ONLY.

EXCEPTION NO. 2: FOR CONDUCTORS INSTALLED IN CABLE TRAYS, THE PROVISIONS OF SECTION 318-11 SHALL APPLY.

EXCEPTION NO. 3: DERATING FACTORS SHALL NOT APPLY TO CONDUCTORS IN NIPPLES HAVING A LENGTH NOT EXCEEDING 24 INCHES (610mm).

EXCEPTION NO. 4: DERATING FACTORS SHALL NOT APPLY TO UNDERGROUND CONDUCTORS ENTERING OR LEAVING AN OUTDOOR TRENCH IF THOSE CONDUCTORS HAVE PHYSICAL PROTECTION IN THE FORM OF RIGID METAL CONDUIT, INTERMEDIATE METAL CONDUIT, OR RIGID NONMETALLIC CONDUIT HAVING A LENGTH NOT EXCEEDING 10 FEET (3.05m) ABOVE GRADE AND THE NUMBER OF CONDUCTORS DOES NOT EXCEED FOUR.

EXCEPTION NO. 5: FOR OTHER LOADING CONDITIONS, ADJUSTMENT FACTORS AND AMPACITIES SHALL BE PERMITTED TO BE CALCULATED UNDER SECTION 310-15(b)

(FNC): SEE APPENDIX B, TABLE B-310-11 FOR ADJUSTMENT FACTORS FOR MORE THAN THREE CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE WITH LOAD DIVERSITY.

(b) MORE THAN ONE CONDUIT, TUBE, OR RACEWAY. SPACING BETWEEN CONDUITS, TUBING, OR RACEWAYS SHALL BE MAINTAINED.

EXISTING BUILDING PLANS ARE AVAILABLE AT MOORPARK COLLEGE MAINTENANCE OFFICE

ORIGINAL DSA APPLICATION # 64323
CONSTRUCTION DATE - 1966
OCCUPANCY - A3/B2
BUILDING TYPE 2 NR NOT SPRINKLED
1ST FLOOR 21,081 FT2
2ND FLOOR 22,354 FT2
TOTAL 43,435 FT2

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-125525 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 11/12/2025

LIST OF DRAWINGS

SHEET #	SHEET DESCRIPTION	SHEET #	SHEET DESCRIPTION
E100	GENERAL NOTES, ABBREVIATIONS, SYMBOLS & DRAWING LIST	E400	FIRST FLOOR POWER PLAN
E140	ROOF HVAC POWER DEMOLITION PLAN	E401	SECOND FLOOR POWER PLAN
E141	ROOF HVAC POWER NEW WORK PLAN	E420	ELECTRICAL SCHEDULE FOR MECHANICAL EQUIPMENT
E200	ELECTRICAL SINGLE LINE DIAGRAM AND PANEL SCHEDULE	E600	ELECTRICAL DETAILS

SCOPE OF WORK

1. REMOVE EXISTING ELECTRICAL POWER & CONTROL TO THREE MULTI-ZONE TRIPLE DECK AIR HANDLERS.
2. INSTALL NEW POWER & CONTROL TO THREE MULTI-ZONE TRIPLE DECK HEAT PUMP AIR HANDLERS.
3. UPGRADE CONTROLS WITH NEW POWER & CONDUIT.
4. RECONNECT EXISTING FA TO NEW AIR HANDLER.
5. REMOVE EXISTING UV LIGHT ASSEMBLIES POWER & RECONNECT NEW POWER TO UL LIGHT ASSEMBLIES.

LIST OF APPLICABLE CODES

LIST OF CALIFORNIA CODE OF REGULATIONS

LIST OF CALIFORNIA CODE OF REGULATIONS
APPLICABLE CODES AS OF JAN. 1ST, 2020
ALL WORK SHALL CONFORM TO 2019 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS

2025 BUILDING STANDARDS ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR

2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR

2022 CALIFORNIA ELECTRIC CODE (CEC), PART 3, TITLE 24 CCR

2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR

2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR

2022 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 CCR

2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR

2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR

2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE NFPA STANDARDS

NFPA 90A STANDARD FOR THE INSTALLATION OF AIR CONDITIONING SYSTEMS 2021 EDITION

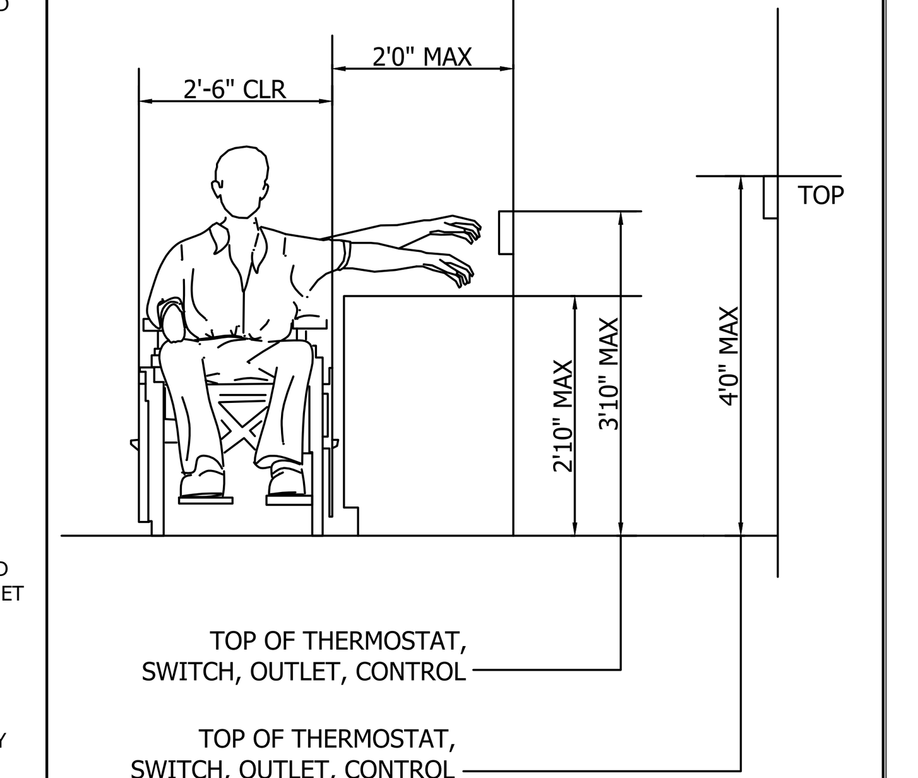
APPLICABLE STANDARDS

FOR A LIST OF APPLICABLE STANDARDS, INCLUDING CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80.

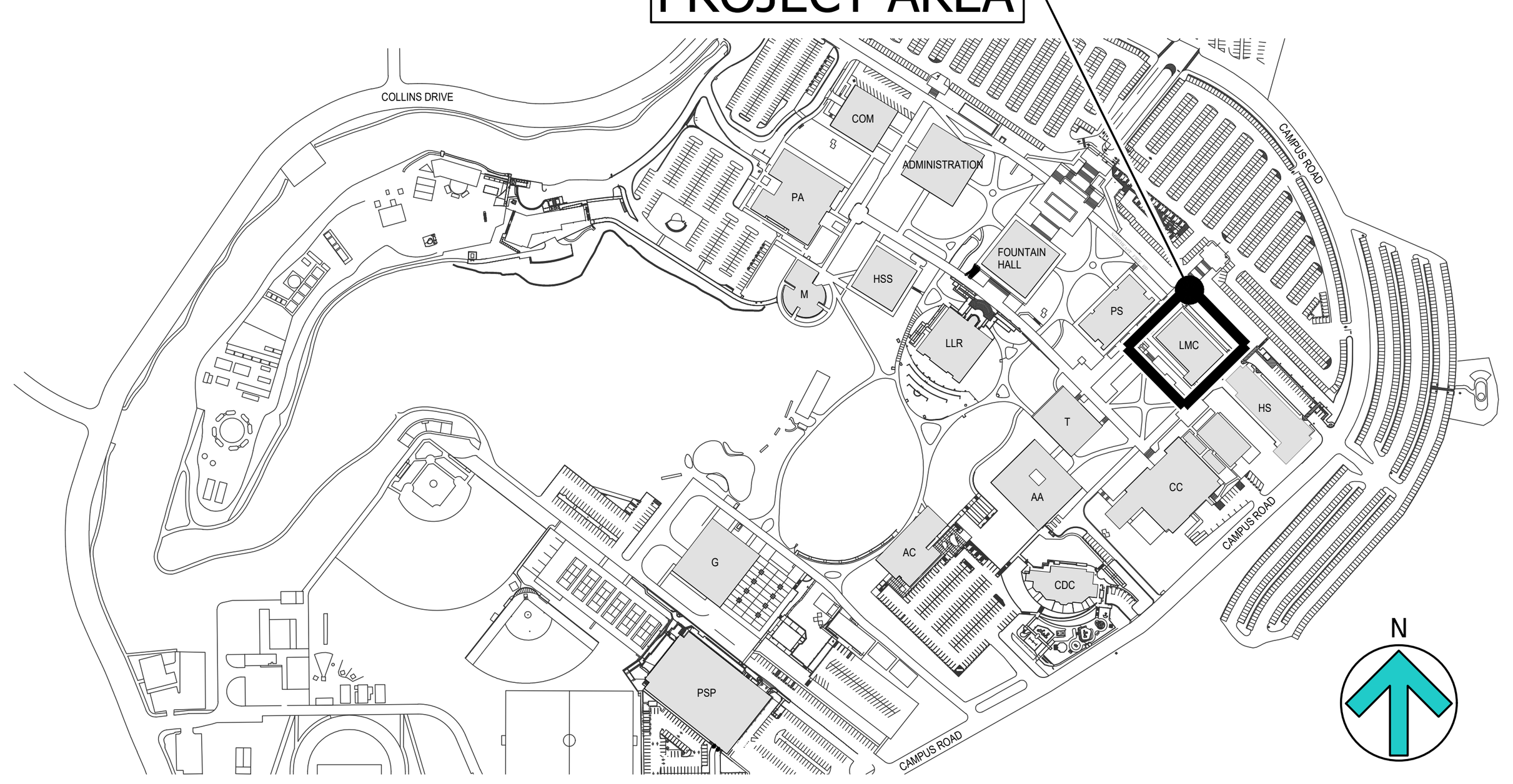
ABBREVIATIONS

A	AMPERES	KVA	KILO VOLT AMPS=1000VA
AF	AMP FRAME/AMP FUSE	LC	LIGHTING CONTACTOR
AFC	AVAILABLE FAULT CURRENT	LCL	LONG CONTINUOUS LOAD
AFF	ABOVE FINISHED FLOOR	LV	LOW VOLTAGE
AIC	AMP INTERRUPTING CURRENT	M	METER
ARCH	ARCHITECT	MC	METAL CLAD
AS	AMP SWITCH	MDF	MAIN DISTRIBUTION FRAME
ASTM	AMERICAN SOCIETY OF TESTING MATERIAL(S)	MIN.	MINIMUM
		MTD	MOUNTED
AT	AMP TRIP	MTB	MAIN TELEPHONE BACKBOARD
ATS	AUTOMATIC TRANSFER SWITCH	MTG	MOUNTING
AWG	AMERICAN WIRE GAGE	MV	MEDIUM VOLTAGE
BKBD	BACKBOARD	MH	MAN HOLE
BW	BOTH WAYS	MFG	MANUFACTURER
C	CONDUIT OR CEILING	NEC	NATIONAL ELECTRICAL CODE
CB	CIRCUIT BREAKER	(N)	NEW
CONT	CONTINUATION	NIC	NOT IN CONTRACT
CKT	CIRCUIT	NL	NIGHT LIGHT
CLG	CEILING	NO	NORMALLY OPEN
CO	CONDUIT ONLY	NC	NORMALLY CLOSED
COM	COMMUNICATIONS	OH	OVERHEAD
CTV	CABLE TELEVISION	P	POWER OR POLE
(CU)	COPPER	PBO	PROVIDED BY OTHERS
CW	COLD WATER PIPE	PNL	PANEL
DIS	DISCONNECT	PV	PHOTO VOLTAIC
DS	DISCONNECT SWITCH	(R)	REMOVED
DWG	DRAWING	RGS	RIGID GALVANIZED STEEL CONDUIT
(E)	EXISTING		
ECD	ELECTRICAL CONTRACTOR	RM	ROOM
EM	EMERGENCY LIGHT/FEEDER	SN	SYSTEM NEUTRAL
EMT	ELECTRICAL METAL TUBING	SPD	SURGE PROTECTION DEVICE
EOR	ENGINEER OF RECORD	TC	TIME CLOCKS
EPR	ETHYLENE PROPYLENE RUBBER	TTB	TELEPHONE TERMINAL BOARD
ERMS	ENERGY REDUCTION METHOD SWITCH	TTC	TELEPHONE TERMINAL CABINET
		TR	TRANSFORMER
EVCS	ELECTRIC VEHICLE CHARGING STATION	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
(F)	FRONT	TYP	TYPICAL
FA	FIRE ALARM	UG	UNDERGROUND
FS	SHALLOW FLOOR BOX	UL	UNDERWRITERS LABORATORY
FT	FEET	UON	UNLESS OTHERWISE NOTED
GC	GENERAL CONTRACTOR	UNSW	UNSWITCHED
GFI	GROUND FAULT INTERRUPTER	V	VOLTS/VOLTAGE
GND	GROUND	VA	VOLT AMPS
HP	HORSEPOWER	VD	VOLTAGE DROP
ID	IDENTIFICATION	W	WATTS/WATTAGE OR WIRE
IDF	INTERMEDIATE DISTRIBUTION FRAME	WP	WEATHERPROOF
		W/	WITH
IG	ISOLATED GROUND	(X)	EXISTING
JB	JUNCTION BOX	ϕ	PHASE
K	KILO		

MOUNTING HEIGHT OVER OBSTRUCTION



SITE/AREA MAP



REGISTERED PROFESSIONAL ENGINEER HUGH A. McTERNAN M030626 Ren. 6/30/26 MECHANICAL STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER KENNETH W. LUCCI No. E 8340 Exp. 09/30/2026 ELECTRICAL STATE OF CALIFORNIA

REV.	DATE

LUCCI & ASSOCIATES INC.
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MOORPARK COLLEGE
7075 CAMPUS ROAD, MOORPARK, CALIFORNIA 93021
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

DEPARTMENT OF MAINTENANCE & OPERATIONS
7075 CAMPUS RD.
MOORPARK, CA. 93021
PHONE: (805) 378-1454 FAX: (805) 378-1593

SCALE: AS SHOWN
DATE: 9–3–25
BLDG. NO.

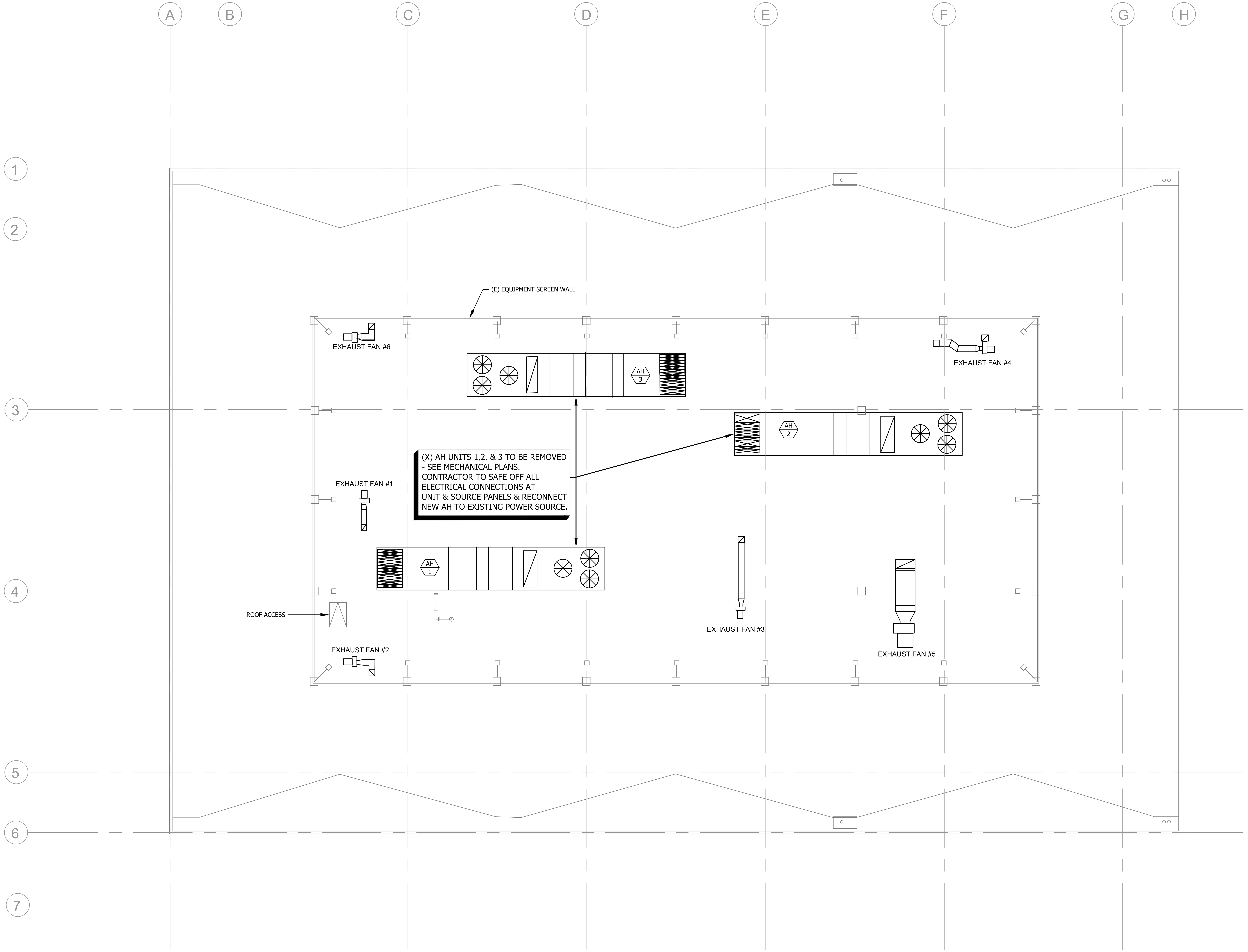
LM BUILDING
HVAC REPLACEMENT PROJECT

GENERAL NOTES, ABBREVIATIONS, SYMBOLS & DRAWING LIST

SHEET NO. E100 OF 5

 L.A.I.# 25-118 PAPER SIZE 36"x24"

DRAFTER: CM02 DRAWING FILENAME: 25-118 E140 PATHNAME: G:\25\118\EL\Sheets DATE: 27 October 2025 TIME: 9:15 am



SHEET NOTES:

1. SCOPE: PROVIDE AND PERFORM DEMOLITION, PREPARATORY AND MISCELLANEOUS WORK IN AREAS AS INDICATED AND SPECIFIED, COMPLETE.
2. DEMOLITION AND REMOVAL OF EXISTING ELECTRICAL CONDUIT, WIRING AND EQUIPMENT REQUIRED TO COMPLETE THE PROJECT.
3. PREPARATION OF THE EXISTING BUILDING TO RECEIVE & CONNECT THE NEW WORK.
4. MISCELLANEOUS DEMOLITION, CUTTING, ALTERATION, AND REPAIR WORK IN THE EXISTING BUILDING NECESSARY FOR THE COMPLETION OF THE ENTIRE PROJECT.
5. DISCONNECTING AND RECONNECTION OF ELECTRICAL EQUIPMENT AS REQUIRED BY THE CONSTRUCTION MODIFICATIONS.
6. EXISTING CONDITIONS: PRIOR TO BID MAKE A DETAILED SURVEY OF THE EXISTING CONDITIONS PERTAINING TO THE WORK. CHECK THE LOCATIONS OF ALL EXISTING STRUCTURES, EQUIPMENT AND WIRING (BRANCH CIRCUITING AND CONTROLS). CHECK FOR ANY HAZARDOUS MATERIALS WHICH MAY REQUIRE SPECIAL HANDLING.
7. SALVAGE AND DISPOSAL: ALL REMOVED MATERIAL OTHER THAN ITEMS TO BE REUSED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF IN ACCORDANCE WITH INSTRUCTIONS FROM THE OWNER'S REPRESENTATIVE. DISPOSAL SHALL BE DONE IN ACCORDANCE WITH EPA AND GOVERNING BODY REQUIREMENTS AND REGULATIONS. CONTRACTOR SHALL PAY ALL FEES AND CHARGES FOR DISPOSAL.
8. SCHEDULE ALL WORK AND OUTAGES WITH OWNERS WRITTEN APPROVAL.
9. CONTRACTOR SHALL LEAVE ALL CIRCUITS ENERGIZED TO DEVICES IN AREAS OUTSIDE OF DEMOLITION AREA EVEN IF FEEDERS ARE ROUTED THROUGH DEMOLITION AREA.

SCALE: 1/8"=1'-0" (0 4' 8' 16')

ROOF HVAC POWER DEMOLITION PLAN 1 / E140

SCALE: 1/8"=1'-0"

N

REV.	DATE

LUCCI & ASSOCIATES INC.
CONSULTING ELECTRICAL ENGINEERS
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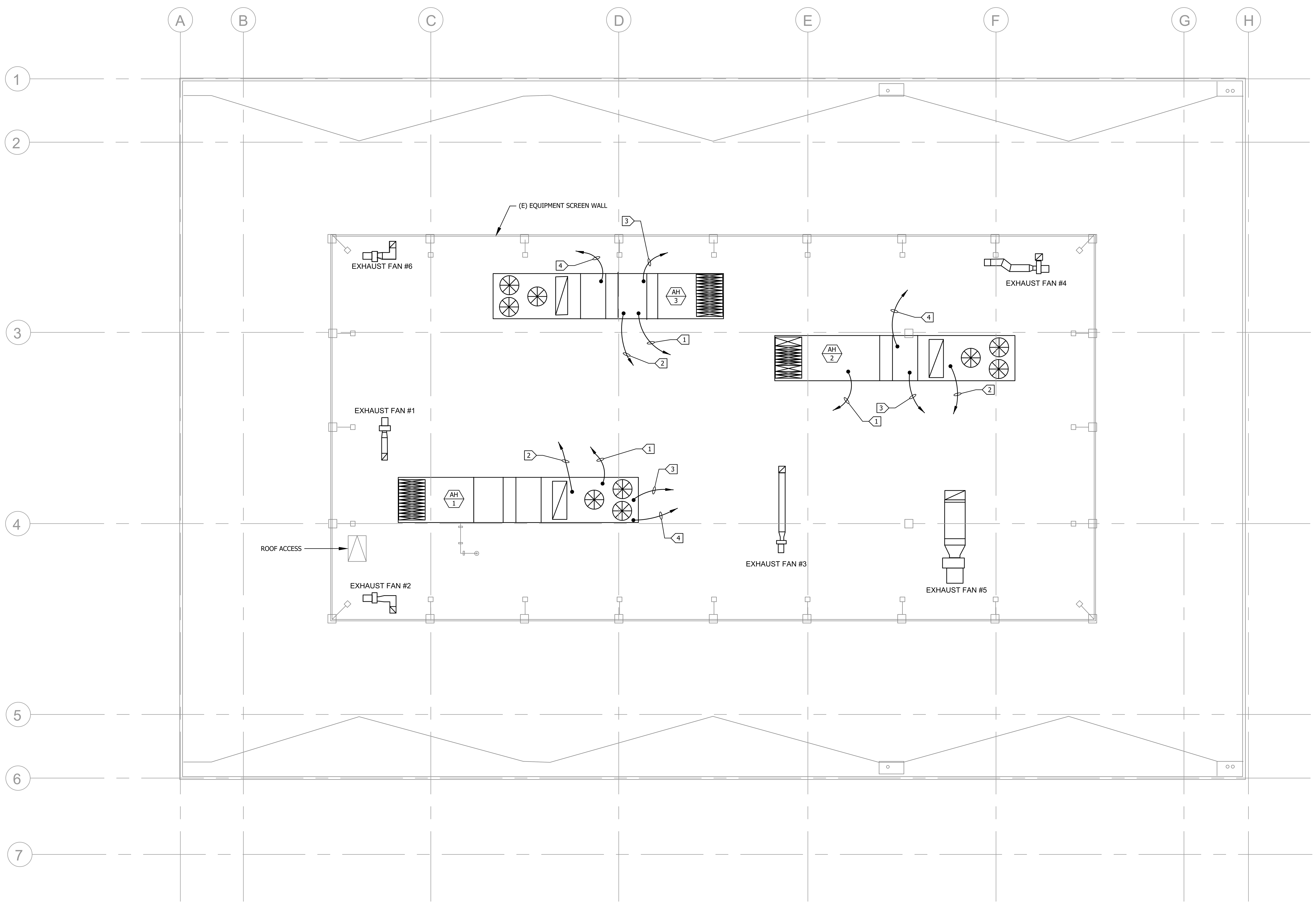
SCALE: AS SHOWN	LM BUILDING HVAC REPLACEMENT PROJECT	
DATE: 9-3-25	ROOF HVAC POWER DEMOLITION PLAN	SHEET NO. OF 5
BLDG. NO.		E140

 L.A.I.# 25-118 PAPER SIZE 36"x24"

TIME: 9:15 am
DATE: 27 October 2025
PATHNAME: G:\25\118\EL\Sheets
DRAWING FILENAME: 25-118 E141
DRAFTER: CM02

PROVIDE REINSTALLATION & CONNECTION OF EXISTING FA DEVICES & RECONNECT/PROGRAM TO EXISTING FACP.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-125525 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 11/12/2025



SHEET NOTES:

1. SCOPE: PROVIDE AND PERFORM DEMOLITION, PREPARATORY AND MISCELLANEOUS WORK IN AREAS AS INDICATED AND SPECIFIED, COMPLETE.
2. DEMOLITION AND REMOVAL OF EXISTING ELECTRICAL CONDUIT, WIRING AND EQUIPMENT REQUIRED TO COMPLETE THE PROJECT.
3. PREPARATION OF THE EXISTING BUILDING TO RECEIVE & CONNECT THE NEW WORK.
4. MISCELLANEOUS DEMOLITION, CUTTING, ALTERATION, AND REPAIR WORK IN THE EXISTING BUILDING NECESSARY FOR THE COMPLETION OF THE ENTIRE PROJECT.
5. DISCONNECTING AND RECONNECTION OF ELECTRICAL EQUIPMENT AS REQUIRED BY THE CONSTRUCTION MODIFICATIONS.
6. EXISTING CONDITIONS: PRIOR TO BID MAKE A DETAILED SURVEY OF THE EXISTING CONDITIONS PERTAINING TO THE WORK. CHECK THE LOCATIONS OF ALL EXISTING STRUCTURES, EQUIPMENT AND WIRING (BRANCH CIRCUITING AND CONTROLS). CHECK FOR ANY HAZARDOUS MATERIALS WHICH MAY REQUIRE SPECIAL HANDLING.
7. SALVAGE AND DISPOSAL: ALL REMOVED MATERIAL OTHER THAN ITEMS TO BE REUSED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF IN ACCORDANCE WITH INSTRUCTIONS FROM THE OWNER'S REPRESENTATIVE. DISPOSAL SHALL BE DONE IN ACCORDANCE WITH EPA AND GOVERNING BODY REQUIREMENTS AND REGULATIONS. CONTRACTOR SHALL PAY ALL FEES AND CHARGES FOR DISPOSAL.
8. SCHEDULE ALL WORK AND OUTAGES WITH OWNERS WRITTEN APPROVAL.
9. CONTRACTOR SHALL LEAVE ALL CIRCUITS ENERGIZED TO DEVICES IN AREAS OUTSIDE OF DEMOLITION AREA EVEN IF FEEDERS ARE ROUTED THROUGH DEMOLITION AREA.

KEY NOTES:

1. PROVIDE CONNECTION FOR EXISTING POWER TO AH FROM EXISTING FEEDER PER E140. EXTEND FEEDER TO NEW DISCONNECT PER E200 & FEEDER FROM DISCONNECT TO AH UNIT PER NEW FEEDER NOTED ON E420.
2. PROVIDE NEW FEEDER 3/4"C - 2 #12 & 1 #12 GND FOR POWER & LIGHTING IN AH TO PANEL 2P3A PER SCHEDULE, PROVIDE NON-FUSED 20A, 120VAC DISCONNECT INTEGRATED TO AH.
3. PROVIDE NEW FEEDER 3/4"C - 2 #12 & 12 GND TO PANEL 2P3A FOR UV SYSTEM, PROVIDE NEW MOTOR RATED DISCONNECT.
4. RECONNECT DDC CONTROLS FROM EXISTING AH TO NEW UNITS.
5. PROVIDE POWER FROM PANEL 2P3A TO DDC CONTROLS VIA 3/4"C - 2 #12 & 1 #12 GND.

SCALE: 1/8"=1'-0"
0 4' 8' 16'

ROOF HVAC POWER NEW WORK PLAN

1 / E141

SCALE: 1/8"=1'-0"

N

REGISTERED PROFESSIONAL ENGINEER HUGH A. McTERNAN M030626 Ren. 6/30/26 MECHANICAL STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER KENNETH W. LUCCI No. E 8340 Exp. 09/30/2026 ELECTRICAL STATE OF CALIFORNIA

REV.	DATE

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SCALE: AS SHOWN
DATE: 9-3-25
BLDG. NO.

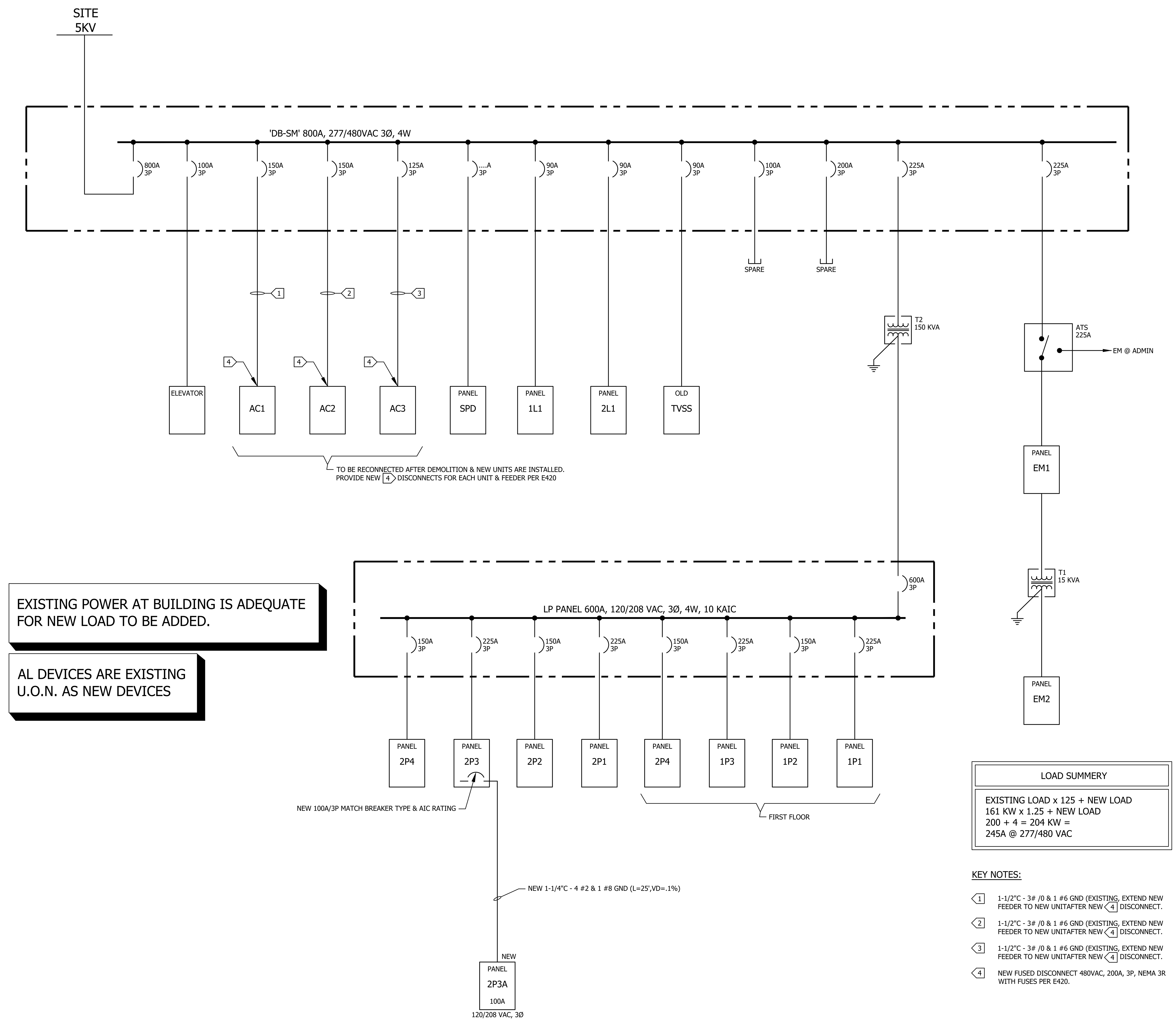
LM BUILDING
HVAC REPLACEMENT PROJECT

ROOF HVAC POWER
NEW WORK PLAN

SHEET NO. E141
OF 5

L.A.I.# 25-118 PAPER SIZE 36"x24"

ROOF HVAC POWER DEMOLITION PLAN



LOAD SUMMERY

EXISTING LOAD x 125 + NEW LOAD
161 KW x 1.25 + NEW LOAD
200 + 4 = 204 KW =
245A @ 277/480 VAC

KEY NOTES:

1. 1-1/2"C - 3# /0 & 1 #6 GND (EXISTING, EXTEND NEW FEEDER TO NEW UNITAFTER NEW 4 DISCONNECT.
2. 1-1/2"C - 3# /0 & 1 #6 GND (EXISTING, EXTEND NEW FEEDER TO NEW UNITAFTER NEW 4 DISCONNECT.
3. 1-1/2"C - 3# /0 & 1 #6 GND (EXISTING, EXTEND NEW FEEDER TO NEW UNITAFTER NEW 4 DISCONNECT.
4. NEW FUSED DISCONNECT 480VAC, 200A, 3P, NEMA 3R WITH FUSES PER E420.

ELECTRICAL SINGLE LINE DIAGRAM 2

SCALE: NONE - E200

KEY NOTES:

1. ADD 100A/3P BREAKER HERE & REMOVE LOAD & MOVE TO NEW PANEL 2P3A.
2. REROUTE 2P3 LOADS TO THIS LOCATION WITH NEW 1"C - 6 #10 & 3 #10 GNDS

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NEW PANEL

PANEL NUMBER 2P3A VOLTAGE 120/208 PHASE 3 WIRE 4
SOURCE 2P3 A.I.C. 10 K
PANEL LOCATION ELECTRICAL ROOM BUS AMPERE RATING 100

■ NEMA 1 ■ COPPER BUSS
■ MAIN LUGS ONLY
■ SURFACE MOUNTING

LCL	MISC	RCPT	LITE	CIRCUIT DESCRIPTION	LOAD(VA) A	LOAD(VA) B	LOAD(VA) C	BRKR POLE	BRKR AMP	CKT	PHASE A B C	CKT	BRKR AMP	BRKR POLE	LOAD(VA) A	LOAD(VA) B	LOAD(VA) C	CIRCUIT DESCRIPTION	MISC	RCPT	LITE	LCL
				UV-AC-1	500			1	20	1		2	20	1	200			DDC - AC1				
				UV-AC-2		500		1	20	3		4	20	1		200		DDC - AC2				
				UV-AC-3			500	1	20	5		6	20	1			200	DDC - AC3				
				SPARE	·			1	20	7		8	20	1	50			DUCT DETECTOR				
				SPARE		·		1	20	9		10	20	1		·		SPARE				
				SPARE			·	1	20	11		12	20	1			·	SPARE				
				SPARE	·			1	20	13		14	20	1	·			SPARE				
				SPARE		·		1	20	15		16	20	1		·		SPARE				
				SPARE			·	1	20	17		18	20	1			·	SPARE				
				LIGHT/RECEPT AC-1	300			1	20	19		20	20	1	·			SPARE				
				LIGHT/RECEPT AC-2		300		1	20	21		22	20	1		·		SPARE				
				LIGHT/RECEPT AC-3			300	1	20	23		24	20	1			·	SPARE				
				CONTROLS AC-1	200			1	20	25		26	20	1	·			SPARE				
				CONTROLS AC-2		200		1	20	27		28	20	1		·		SPARE				
				CONTROLS AC-3			200	1	20	29		30	20	1			·	SPARE				
				TOTALS	1000	1000	1000								250	200	200	TOTALS				

(DDC - AC1 to DDC - AC3: note 2; DUCT DETECTOR: ✱)

L.C.L. VOLT AMPS: . PHASE A . PHASE B . PHASE C .
TOTAL VOLT AMPS: 3650 PHASE A 1250 PHASE B 1200 PHASE C 1200
TOTAL AMPS: 10 PHASE A 11 PHASE B 10 PHASE C 10

✱ LOCK ON DEVICE

EXISTING PANEL

PANEL NUMBER 2P3 VOLTAGE 120/208 PHASE 3 WIRE 4
SOURCE · A.I.C. 10,000
PANEL LOCATION 2ND FLOOR ELECT ROOM BUS AMPERE RATING 225

■ NEMA 1 ■ COPPER BUSS
■ MAIN LUGS ONLY
■ SURFACE MOUNTING

LCL	MISC	RCPT	LITE	CIRCUIT DESCRIPTION	LOAD(VA) A	LOAD(VA) B	LOAD(VA) C	BRKR POLE	BRKR AMP	CKT	PHASE A B C	CKT	BRKR AMP	BRKR POLE	LOAD(VA) A	LOAD(VA) B	LOAD(VA) C	CIRCUIT DESCRIPTION	MISC	RCPT	LITE	LCL
				ELEV LITES	·			1	20	1		2	20	1	·			RM 219/223 AV				
				CIR PUMP		·		1	20	3		4	20	1		·		RM 219				
				DDC COMP			·	1	20	5		6	20	1			·	RM 219				
				DDC COMP	·			1	20	7		8	20	1	·			RM 219				
				DOOR CLOSER		·		1	20	9		10	20	1		·		RM 219				
				CU-1			·		20	11		12	20	1			·	RM 219				
				CU-1	·			2		13		14	20	1	·			RM 219				
				FA SMOKE DETECTOR		·		1	20	15		16	20	1		·		1/2 HP COMPRESSOR				
				COMP LAB AC			·		15	17		18	20	1			·	FUME HOOD				
				COMP LAB AC	·			2		19		20	20	1	·			RM 221, 222				
				RM 233		·			60	21		22	20	1		·		GARBAGE DISPOSAL				
				RM233			·	2		23		24	20	1			·	DISHWASHER				
				AUTOCLAVE	·				100	25		26	20	1	·			RM 221, 222, 228				
				AUTOCLAVE		·				27		28	20	1		·		RM 221, 222, 228				
				AUTOCLAVE			·	3		29		30	20	1			·	EF 3				
				RM 217 CONFERENCE	·				30	31		32	20	1	·			EF1				
				RM 217 CONFERENCE		·				33		34	20	1		·		EF 2				
				AUTOCLAVE			·	3		35		36	20	1			·	EF 4				
				COMPUTER LAB	·				60	37		38	20	1	·			DDC-AC1				
				COMPUTER LAB		·				39		40	20	1		·		DDC-AC2				
				COMPUTER LAB			·	3		41		42	20	1			·	DDC-AC3				
				TOTALS	·	·	·								·	·	·	TOTALS				

(DDC-AC1 to DDC-AC3: note 1)

L.C.L. VOLT AMPS: . PHASE A . PHASE B . PHASE C .
TOTAL VOLT AMPS: . PHASE A . PHASE B . PHASE C .
TOTAL AMPS: . PHASE A . PHASE B . PHASE C .

PANEL SCHEDULES 1

SCALE: NONE - E200

REGISTERED PROFESSIONAL ENGINEER HUGH A. McTERNAN M030626 Ren. 6/30/26 MECHANICAL STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER KENNETH W. LUCCI No. E 8340 Exp. 09/30/2026 ELECTRICAL STATE OF CALIFORNIA

REV.	DATE

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SCALE: AS SHOWN
DATE: 9–3–25
BLDG. NO.

LM BUILDING
HVAC REPLACEMENT PROJECT

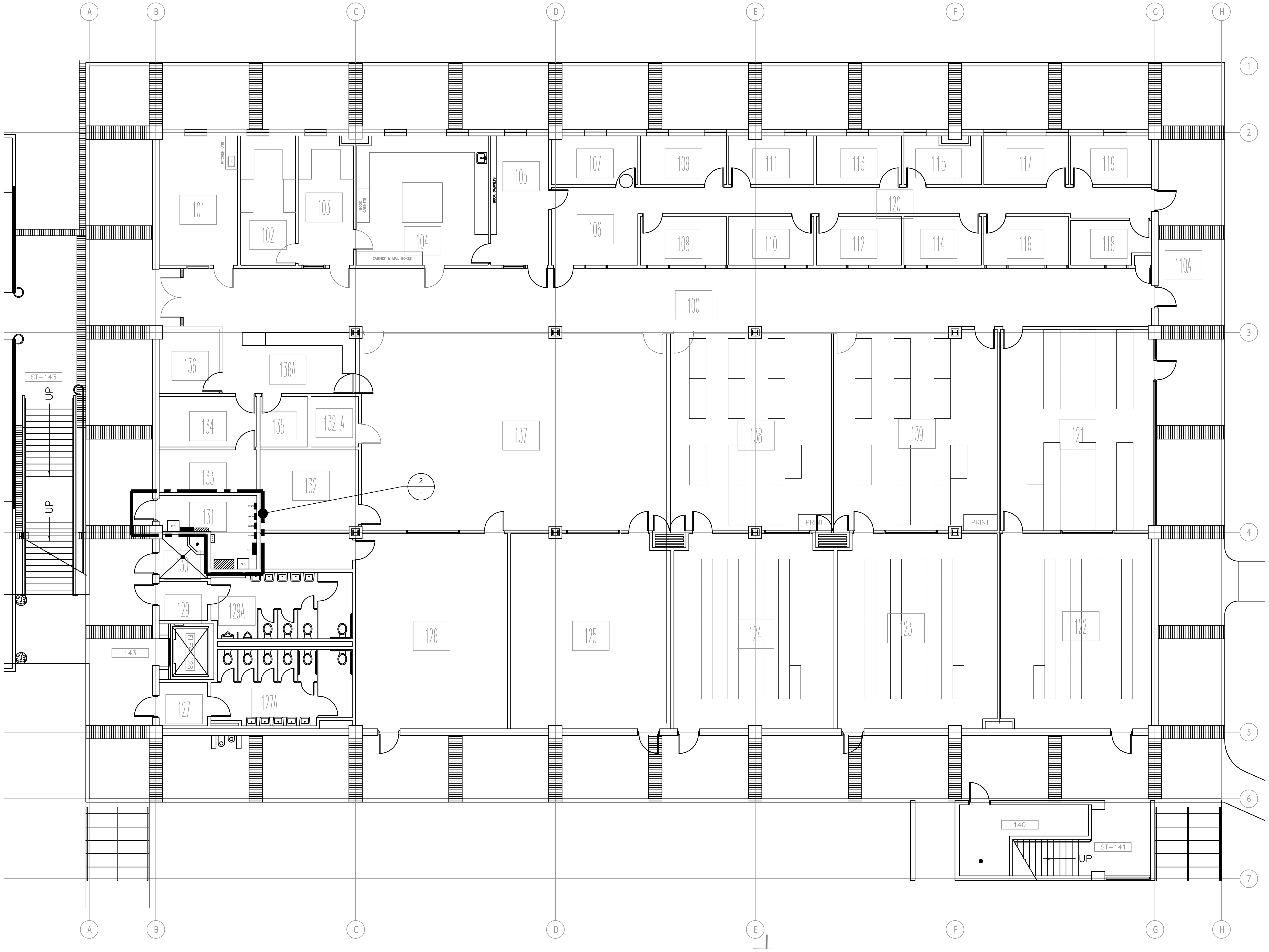
ELECTRICAL SINGLE LINE DIAGRAM AND PANEL SCHEDULE

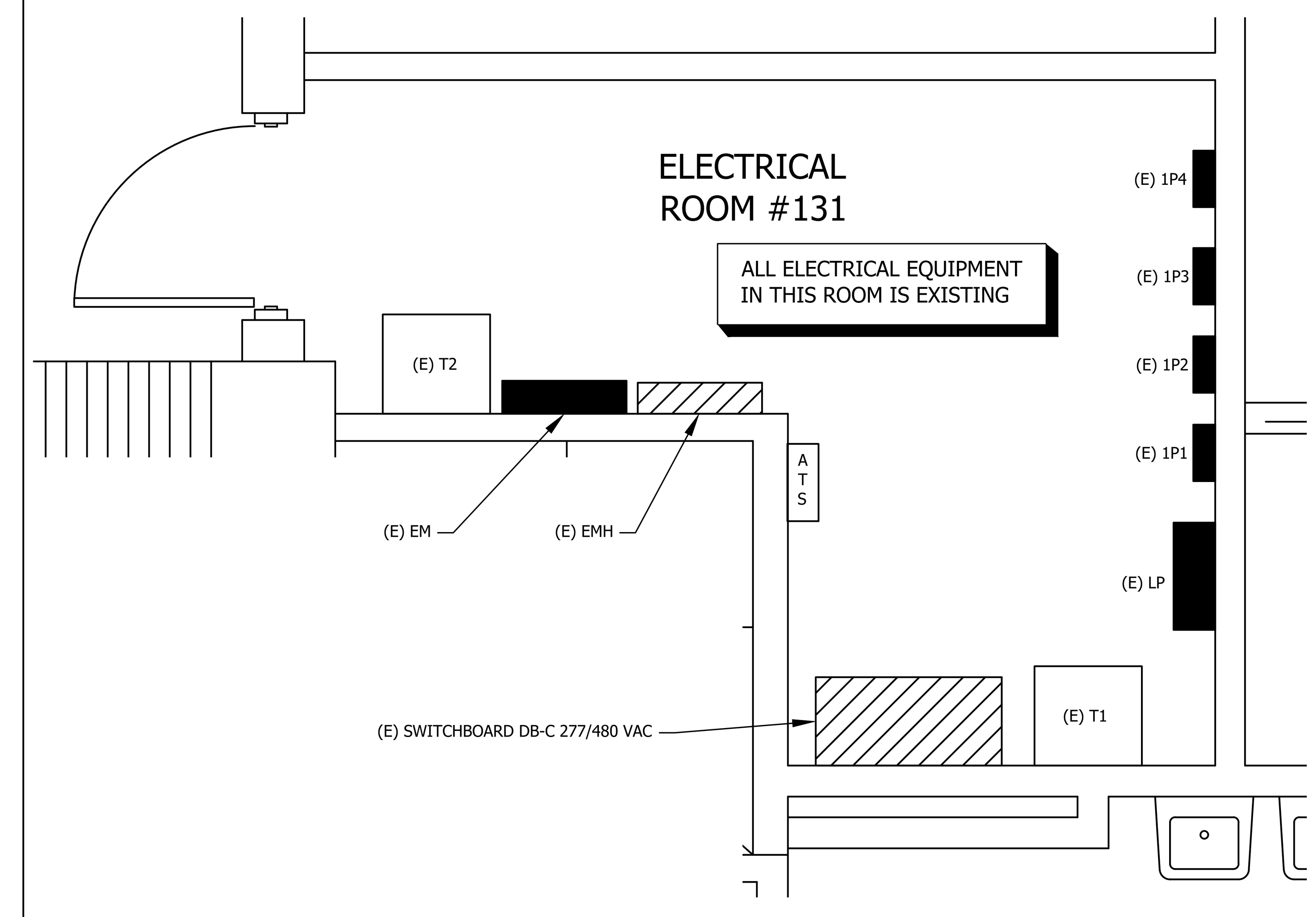
SHEET NO. OF 5

E200

 L.A.I.# 25-118 PAPER SIZE 36"x24"

DRAFTER: CM02
DRAWING FILENAME: 25-118 E400
PATHNAME: G:\25\118\EL\Sheets
DATE: 27 October 2025
TIME: 9:16 am





1/2" - 1'-0"

ELECTRICAL ROOM 2

SCALE: 1/2"=1'-0" EXISTING CONDITION E400

SCALE: 1/8"=1'-0"

FIRST FLOOR POWER PLAN 1

SCALE: 1/8"=1'-0" E400

M030626
Ren. 6/30/26
No. E 8340
Exp. 09/30/2026

REV.	DATE

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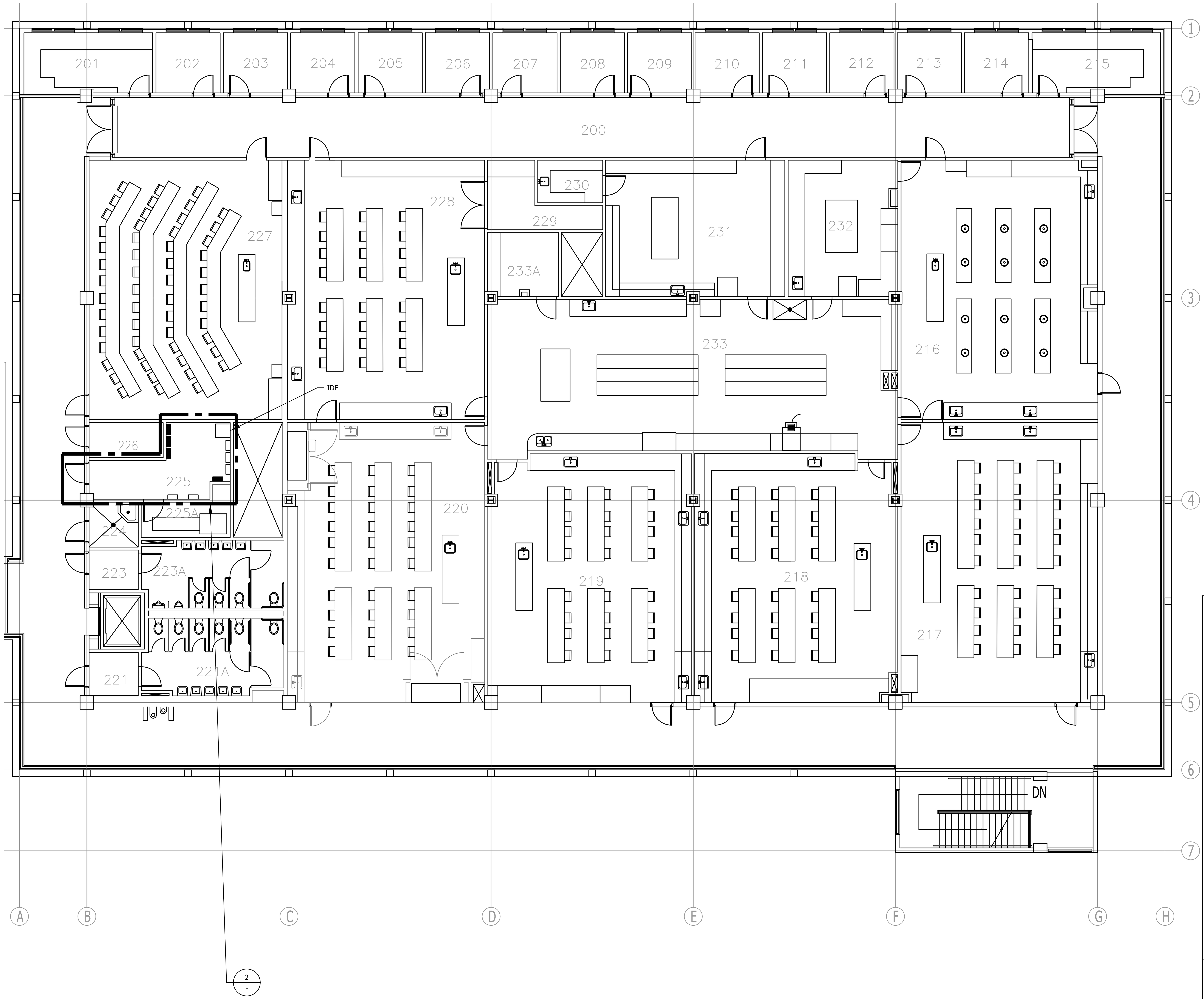
LM BUILDING
HVAC REPLACEMENT PROJECT
FIRST FLOOR POWER PLAN

SHEET NO.
E400
OF 5

 L.A.I.# 25-118 PAPER SIZE 36"x24"

SHEET NOTES:

1. CONTRACTOR SHALL FIELD VERIFY LOCATION & REQUIREMENTS OF ALL DEVICES REQUIRING ELECTRICAL CONNECTION PRIOR TO BID PROPOSAL, ROUGH-IN AND FINISH.
2. CONTRACTOR SHALL, IN ROUTING ALL CIRCUITS, INCREASE CONDUCTOR & CONDUIT SIZE TO ALLOW FOR VOLTAGE DROP SHOULD THE CONTRACTOR EXCEED ROUTING INDICATED ON DRAWING. ENGINEER OF RECORD MUST BE NOTIFIED PRIOR TO ANY DEVIATIONS FROM APPROVED PLAN CHECK (PERMIT SET) DRAWINGS.
3. COORDINATE WORK WITH OTHER TRADES. OBTAIN ALL DRAWINGS THAT WILL REQUIRE COORDINATION AND PROVIDE ALL ELECTRICAL CONNECTIONS, DEVICES, AND WIRING REQUIRED WHETHER SHOWN ON ELECTRICAL DRAWINGS OR NOT.
4. CONTRACTOR SHALL FURNISH AND INSTALL PULL BOXES AS REQUIRED TO INSTALL CONDUCTORS PER CONDUCTOR MANUFACTURERS RECOMMENDATIONS, PER THE NATIONAL ELECTRICAL CODE AND PER LOCAL AUTHORITIES HAVING JURISDICTION.
5. 3/4" CONDUIT MINIMUM U.O.N.
6. PROVIDE CODE SIZE EQUIPMENT GROUNDING CONDUCTORS IN ALL OCCUPIED CONDUITS.
7. PROVIDE CONTROLS FOR MECHANICAL EQUIPMENT PER MECHANICAL DOCUMENTS. VERIFY LOCATION AND REQUIREMENTS OF MECHANICAL EQUIPMENT ON MECHANICAL DOCUMENTS.



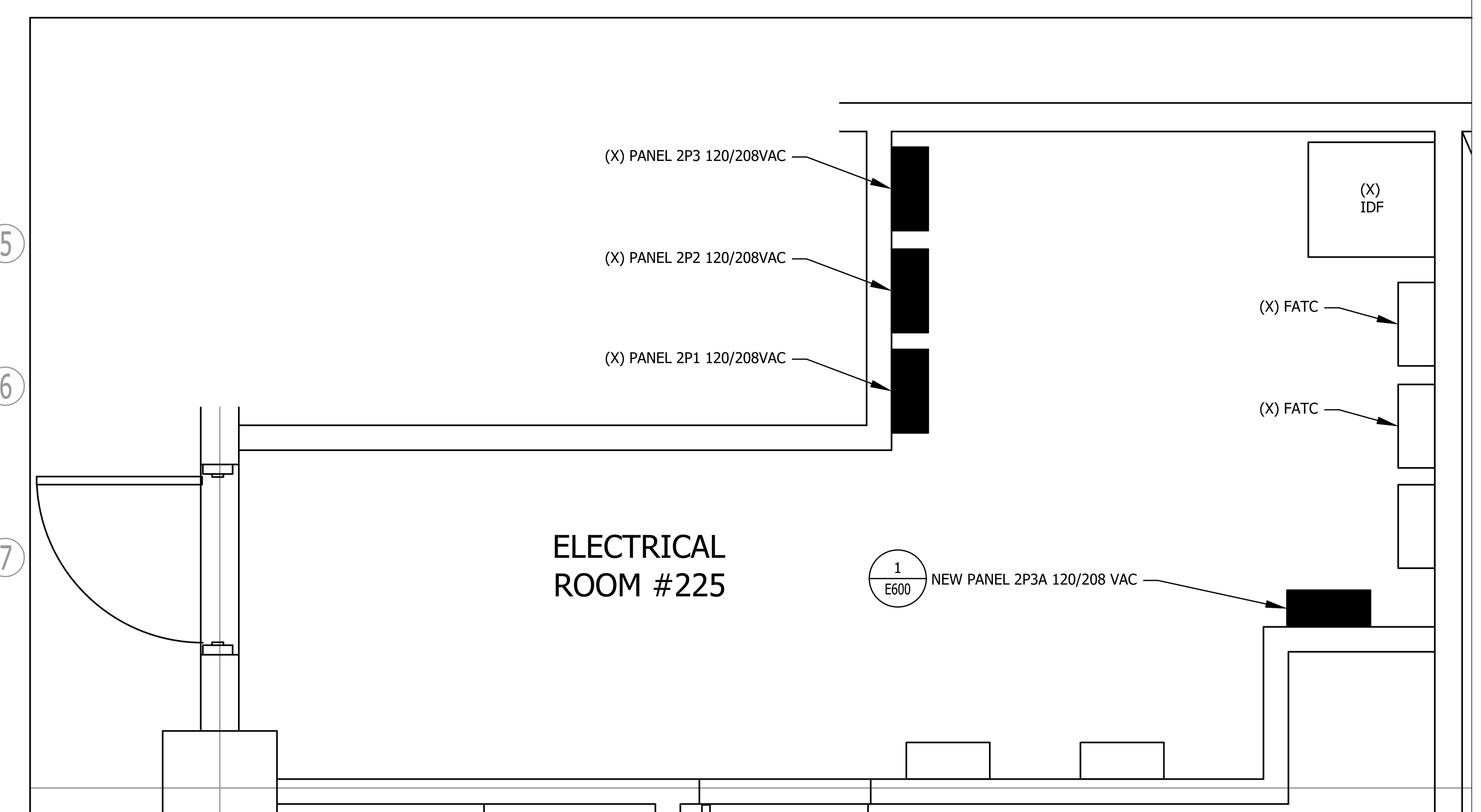
SCALE: 1/8"=1'-0"

0 4' 8' 16'

SECOND FLOOR POWER PLAN 1 - E401

SCALE: 1/8"=1'-0"

N



SCALE: 1/8"=1'-0"

0 4' 8' 16'

SECOND FLOOR POWER PLAN 2 - E401

SCALE: 1/8"=1'-0"

N

TIME: 9:16 am
DATE: 27 October 2025
PATHNAME: G:\25\118\EL\Sheets
DRAWING FILENAME: 25-118 E401
DRAFTER: CM02

REGISTERED PROFESSIONAL ENGINEER
HUGH A. McTERNAN
M030626
Ren. 6/30/26
MECHANICAL
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REGISTERED PROFESSIONAL ENGINEER
KENNETH W. LUCCI
No. E 8340
Exp. 09/30/2026
ELECTRICAL
STATE OF CALIFORNIA

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LM BUILDING
HVAC REPLACEMENT PROJECT
SECOND FLOOR POWER PLAN

SHEET NO.
OF 5

E401

 L.A.I.# 25-118 PAPER SIZE 36"x24"

DRAFTER: CM02 DRAWING FILENAME: 25-118 E420 PATHNAME: G:\25\118\EL\Sheets DATE: 27 October 2025 TIME: 9:16 am

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ELECTRICAL SCHEDULE FOR MECHANICAL EQUIPMENT (NEMA 3R ON ALL EXTERIOR EQUIPMENT)

TAG #	DESCRIPTION	SUPPLY FAN H.P.	RETURN FAN H.P.	MCA	MAX OCP	VOLTAGE	PHASE	NEMA STARTER SIZE OR VFD	DISCONNECT	RECOMMENDED FUSE SIZE/TYPE *	ELECTRICAL LIGHTS & CONTROLS VOLTS AMPS	PANEL/CIRCUIT NO.	FEEDER
AH 1	MULTI-ZONE A/C UNIT SERVES 1ST FLOOR LOCATED ON ROOF	15	10	120	125	460	3	..	..	..	120 20	..	..
AH 2	MULTI-ZONE A/C UNIT SERVES 2ND FLOOR LOCATED ON ROOF	15	10	120	125	460	3	..	..	..	120 20	..	..
AH 3	MULTI-ZONE A/C UNIT SERVES 1ST & 2ND FLOOR LOCATED ON ROOF	15	7.5	99	100	460	3	..	..	..	120 20	..	..

* ALL FUSES BY BUSSMAN AND SHALL BE SIZED PER MANUFACTURERS RECOMMENDATION.

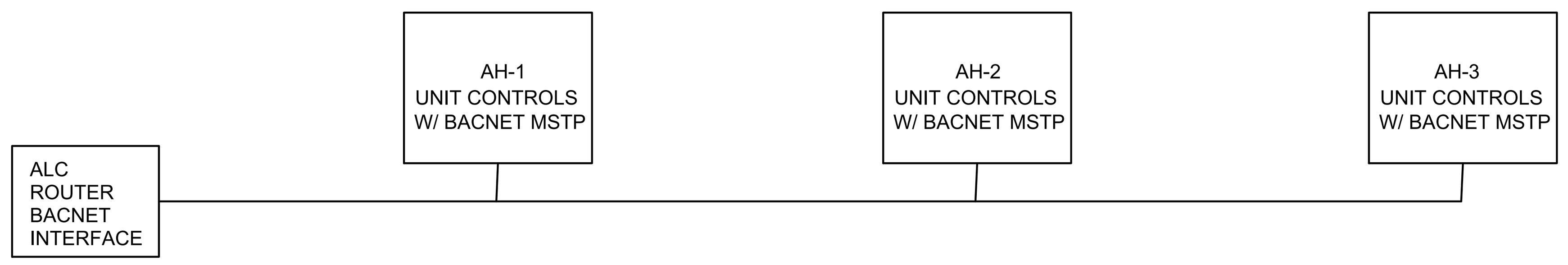
ELECTRICAL NOTES FOR ALL UNITS

SINGLE POINT POWER CONNECTION FOR UNIT. PROVIDE INTERIOR CONDUITS FOR CONTROL ELEMENTS, ABB VARIABLE FREQUENCY DRIVES.

FIRE ALARM VIA SYSTEM SENSOR DUCT SMOKE DETECTOR AT SUPPLY PLENUM AFTER FANS.

LM BUILDING FA CERTIFICATION #03-102075 CLOSED 8-19-2003

CONTROL TOPOGRAPHY



AUTOMATED LOGIC TB SERIES THERMOSTATS
AUTOMATED LOGIC TB OPTIFLEX BACNET MSTP ROUTER

CONTROLS

1. ZONE CONTROLS SHALL BE AUTOMATED LOGIC TB SERIES THERMOSTATS. BACNET MSTP
2. JOHNSON CONTROLS SHALL BE USED FOR AIR HANDLER FANS, OA, RA, EA, DAMPERS , FANS, AND COMPRESSORS
3. BACNET INTERFACE SHALL BE INSTALLED BETWEEN ALC CONTROLS AND JOHNSON CONTROLS
4. POWER FOR CONTROLS SHALL BE FROM 110 VOLT POWER.

SHEET NOTES:

1. FIELD VERIFY MECHANICAL EQUIPMENT LOCATIONS.
2. SEE ELECTRICAL SCHEDULE FOR MECHANICAL EQUIPMENT FOR ELECTRICAL REQUIREMENTS.
3. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES.
4. THE LOCATION OF ALL ROOF PENETRATIONS SHALL BE COORDINATED WITH THE ARCHITECTURAL, MECHANICAL, AND STRUCTURAL DRAWINGS.
5. PROVIDE ROOF JACKS AND PROPERLY SEAL ALL ROOF PENETRATIONS TO A LEAK FREE CONDITION.
6. THE FINAL CONNECTIONS TO EQUIPMENT SHALL BE LIQUIDTIGHT FLEXIBLE METAL CONDUIT. INSTALL WITH ENOUGH SLACK TO PRECLUDE VIBRATION TRANSMISSION. SUPPORT SHALL BE PER N.E.C. ARTICLE 351-8
7. PROVIDE WEATHERPROOF AND EXTERIOR RATED DEVICES IN ALL EXTERIOR AREAS.
8. PROVIDE ALL DEVICES AS REQUIRED ON MECHANICAL CONTRACTOR SHOP DRAWINGS AND APPROVED SUBMITTALS.
9. NO CONDUIT/FEEDER SHALL BE PERMITTED ON THE ROOF WITH CRIPPLES,ALL FEEDERS SHALL BE RUN BENEATH THE ROOF.
10. ALL DISCONNECTS SHALL BE MOUNTED ON UNISTRUT ON AH UNIT.
11. CONTRACTOR SHALL VERIFY LOCATION & REQUIREMENTS OF ALL ELECTRICAL DEVICES PRIOR TO BID, ROUGH-IN & INSTALLATION.
12. CONTRACTOR SHALL, IN ROUTING ALL CIRCUITS, INCREASE CONDUCTOR & CONDUIT SIZE TO ALLOW FOR VOLTAGE DROP SHOULD THE CONTRACTOR EXCEED ROUTING INDICATED ON DRAWING. ENGINEER OF RECORD MUST BE NOTIFIED PRIOR TO ANY DEVIATIONS FROM APPROVED PLAN CHECK (PERMIT SET) DRAWINGS.
13. EACH DISCONNECT OR STARTER AND A SPARE SET OF FUSES SHALL BE CONTRACTOR PROVIDED.

KEY NOTES:

1. FOR FEEDER AND DISCONNECT INFORMATION SEE ELECTRICAL SCHEDULE FOR MECHANICAL EQUIPMENT THIS SHEET.
2. PROVIDE 3/4"C & CONTROLS PER MECHANICAL.
3. W.P. GFCI.

REV.	DATE

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SCALE: AS SHOWN
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LM BUILDING
HVAC REPLACEMENT PROJECT

ELECTRICAL SCHEDULE FOR MECHANICAL EQUIPMENT

SHEET NO. E420 OF 5

 L.A.I.# 25-118 PAPER SIZE 36"x24"

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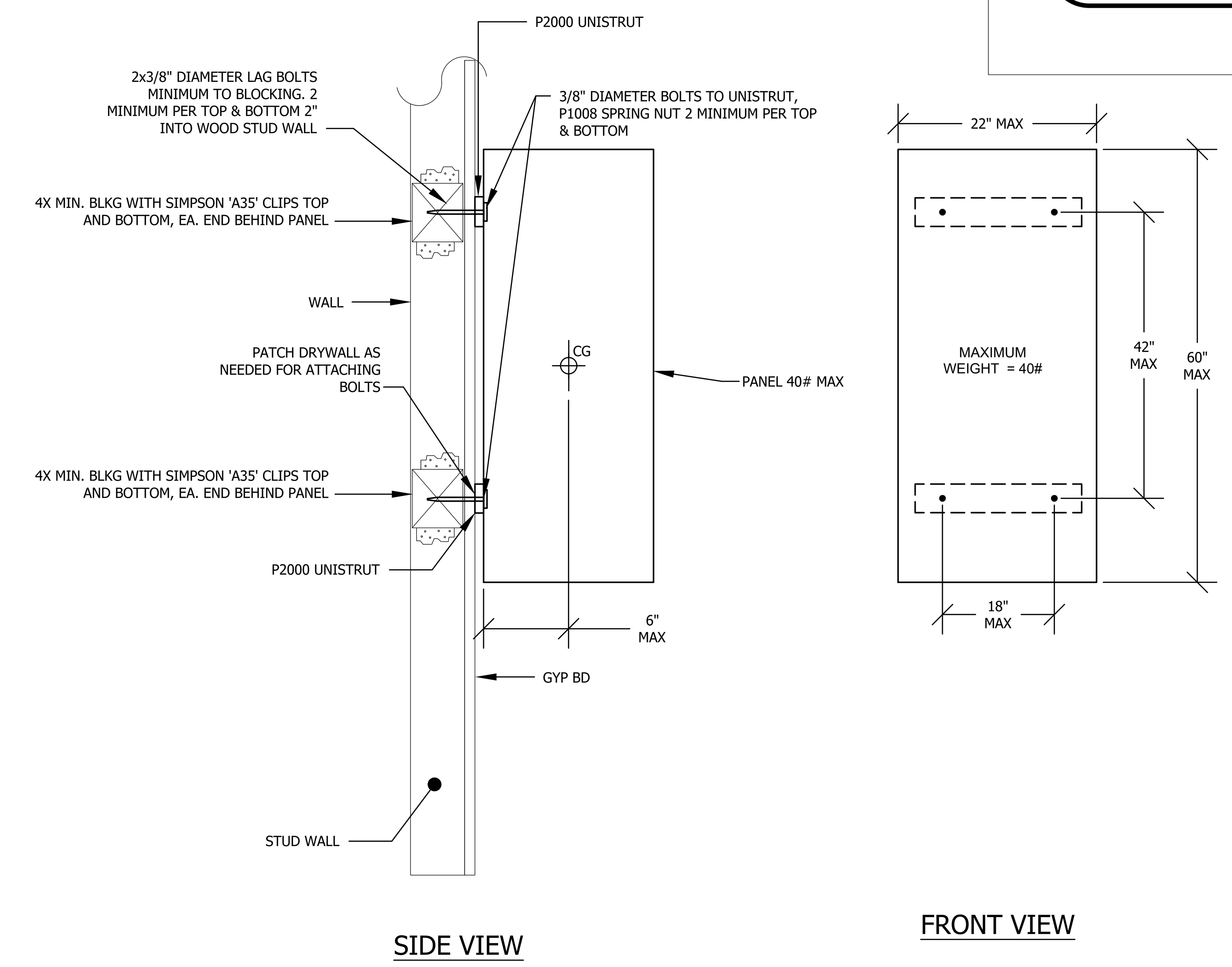
APP: 03-125525 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 11/12/2025



PANELBOARD ANCHORAGE WOODEN WALL - SURFACE

SCALE: NONE

1 - E600

DRAFTER: CM02 DRAWING FILENAME: 25-118 E600 PATHNAME: G:\25\118\EL\Sheets DATE: 27 October 2025 TIME: 9:16 am

REGISTERED PROFESSIONAL ENGINEER HUGH A. McTERNAN M030626 Ren. 6/30/26 MECHANICAL STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER KENNETH W. LUCCI No. E 8340 Exp. 09/30/2026 ELECTRICAL STATE OF CALIFORNIA

REV.	DATE

LUCCI & ASSOCIATES INC.
CONSULTING ELECTRICAL ENGINEERS
3251 CORTE MALPASO, #511
CAMARILLO, CA 93012-8094
PHONE (805) 389-6520 FAX (805) 389-6519

AE Group
Mechanical Engineers
838 East Front Street
Ventura, California 93001-2925
(805) 653-1722
hugh@aegroupme.com

M O O R P A R K C O L L E G E
7 0 7 5 C A M P U S R O A D , M O O R P A R K , C A L I F O R N I A 9 3 0 2 1
V E N T U R A C O U N T Y C O M M U N I T Y C O L L E G E D I S T R I C T

DEPARTMENT OF MAINTENANCE & OPERATIONS
7075 CAMPUS RD.
MOORPARK, CA. 93021
PHONE: (805) 378-1454 FAX: (805) 378-1593

SCALE: AS SHOWN
DATE: 9-3-25
BLDG. NO.

LM BUILDING
HVAC REPLACEMENT PROJECT
ELECTRICAL DETAILS

SHEET NO. E600 OF 5

L.A.I.# 25-118 PAPER SIZE 36"x24"