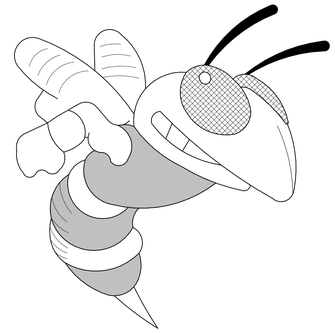
OXNARD HIGH SCHOOL HVAC ADDITION

OXNARD UNION HIGH SCHOOL DISTRICT

3400 W GONZALES RD.
OXNARD, CA 93036
(805) 278-2907



GENERAL NOTES

1. THESE DRAWINGS DO NOT CONTAIN THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.

2. LOCATIONS OF ALL UTILITIES SHOWN ARE APPROXIMATE AND CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID INTERCEPTING EXISTING PIPING OR CONDUITS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE ARCHITECT IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT SHOULD ANY UNIDENTIFIED CONDITIONS BE DISCOVERED. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF THIS WORK.

3. THESE DOCUMENTS AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF WLC ARCHITECTS, INC., AND ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF WLC ARCHITECTS, INC.

4. THE WORK SHOWN ON THESE DRAWINGS AS EXISTING CONDITIONS WAS PREPARED FROM INFORMATION FURNISHED BY THE OWNER. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, WLC ARCHITECTS, INC. IS NOT RESPONSIBLE FOR THE ACCURACY OR ADEQUACY OF ANY WORK SHOWN AS EXISTING NOR IS WLC ARCHITECTS, INC. RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT.

5. EACH BIDDER SHALL POSSESS AT THE TIME OF BID A CLASS B OR THE APPROPRIATE CLASS C CONTRACTOR'S LICENSE PURSUANT TO PUBLIC CONTRACT CODE SECTION 3300 AND BUSINESS AND PROFESSIONS CODE SECTION 7028.15. THE SUCCESSFUL BIDDER MUST MAINTAIN THE LICENSE THROUGHOUT THE DURATION OF THIS CONTRACT.

6. FIRE SAFETY DURING CONSTRUCTION

A. GENERAL: FIRE SAFETY DURING CONSTRUCTION SHALL COMPLY WITH CALIFORNIA FIRE CODE (CFC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 9, CHAPTER 5 AND CHAPTER 33.

B. ACCESS ROADS: FIRE DEPARTMENT ACCESS ROADS SHALL BE ESTABLISHED AND MAINTAINED IN ACCORDANCE WITH CHAPTER 5, SECTION 501.4 AND CHAPTER 33, SECTION 3310.

C. WATER SUPPLY: WATER MAINS AND HYDRANTS SHALL BE OPERATIONAL IN ACCORDANCE WITH CHAPTER 5, SECTION 501.4 AND CHAPTER 33, SECTION 3312.

D. BUILDING ACCESS: ACCESS TO BUILDINGS FOR THE PURPOSE OF FIREFIGHTING SHALL BE PROVIDED. CONSTRUCTION MATERIAL SHALL NOT BLOCK ACCESS TO BUILDINGS, HYDRANTS OR FIRE APPLIANCES.

E. ALTERATIONS OF BUILDINGS: SHALL COMPLY WITH APPLICABLE PROVISIONS OF CHAPTER 33.

F. DEMOLITION OF BUILDINGS: SHALL COMPLY WITH APPLICABLE PROVISIONS OF CHAPTER 33.

G. FIRE WATCH: MAINTAIN FIRE WATCH WHEN REQUIRED BY THE BUILDING OFFICIAL AND WHEN EXISTING FIRE PROTECTION SYSTEMS ARE SHUT DOWN FOR ALTERATIONS IN ACCORDANCE WITH CHAPTER 33, SECTION 3304.5. FIRE WATCH SHALL REMAIN IN EFFECT UNTIL EXISTING FIRE PROTECTION SYSTEMS ARE RETURNED TO SERVICE OR AS ALLOWED BY THE BUILDING OFFICIAL.

7. PENETRATIONS TO FIRE RATED MATERIALS OR ASSEMBLIES SHALL BE RESTORED TO EQUAL RATING. FIRE STOP SYSTEMS AS LISTED BY UNDERWRITERS LABORATORIES SHALL BE INSTALLED PER FIRE RESISTANCE DIRECTORY. FIRE STOP SYSTEMS SHALL BE AS SPECIFIED.

8. NONRESIDENTIAL ENERGY STANDARDS COMPLIANCE STATEMENT (TITLE 24, PART 6):

THE DESIGN INDICATED HEREIN COMPLIES WITH THE REQUIREMENTS OF THE ENERGY CONSERVATION STANDARDS OF TITLE 24, PART 6, CALIFORNIA CODE OF REGULATIONS. THE PROPOSED BUILDING(S) WILL BE IN COMPLIANCE WITH THE ENERGY CONSERVATION STANDARDS PROVIDED IT (THEY) IS (ARE) BUILT ACCORDING TO THESE DRAWINGS AND SPECIFICATIONS AND PROVIDED ANY FUTURE IMPROVEMENTS ARE COMPLETED ACCORDING TO THE REQUIREMENTS OF TITLE 24, PART 6, CALIFORNIA CODE OF REGULATIONS. THESE PLANS AND SPECIFICATIONS HAVE BEEN PREPARED TO INCLUDE ALL SIGNIFICANT ENERGY CONSERVATION FEATURES REQUIRED FOR COMPLIANCE WITH THE STANDARDS. BUILDING AREAS THAT ARE UNCONDITIONED AND/OR NOT SUBJECT TO THE STANDARDS ARE INDICATED ON THE PLANS.

ENVELOPE MANDATORY MEASURES:

A. INSTALLED INSULATING MATERIALS SHALL HAVE BEEN CERTIFIED BY THE MANUFACTURER TO COMPLY WITH THE CALIFORNIA QUALITY STANDARDS FOR INSULATING MATERIAL.

B. ALL INSULATING MATERIALS SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF TITLE 24, PART 2, CALIFORNIA CODE OF REGULATIONS, SECTIONS 720 AND 2603.

C. ALL EXTERIOR JOINTS AND OPENINGS IN THE BUILDING ENVELOPE THAT ARE POTENTIAL AND OBSERVABLE SOURCES OF AIR LEAKAGE SHALL BE CAULKED, GASKETED, WEATHERSTRIPPED OR OTHERWISE SEALED.

D. NOT USED

E. NOT USED

F. NOT USED

G. NOT USED

9. DEFERRED APPROVAL ITEMS:

INSTALLATION OF DEFERRED APPROVAL ITEMS SHALL NOT BE STARTED UNTIL DETAILED PLANS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR ENGINEER IN GENERAL RESPONSIBLE CHARGE OF DESIGN AND SIGNED BY A CALIFORNIA REGISTERED ARCHITECT OR PROFESSIONAL ENGINEER WHO HAS BEEN DELEGATED RESPONSIBILITY COVERING THE WORK SHOWN ON A PARTICULAR PLAN OR SPECIFICATION AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT.

DEFFERED APPROVAL ITEMS SHALL BE SUBMITTED FOR REVIEW NO LATER THAN 60 DAYS AFTER THE NOTICE TO PROCEED.

DEFERRED APPROVAL ITEMS FOR THIS PROJECT ARE THE FOLLOWING ITEMS:

A. [_NONE_]

10. PROOF LOAD TESTS FOR EXPANSION TYPE ANCHOR BOLTS:

A. ANCHOR DIAMETER REFERS TO THE THREAD SIZE FOR THE WEDGE CATEGORY ANCHOR.

B. APPLY PROOF TEST LOADS TO WEDGE ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS OF THE ORIGINAL NUT USING A TORQUE WRENCH AND APPLY LOAD.

C. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURE(S).

D. TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.

E. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:

1. HYDRAULIC RAM METHOD: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. FOR WEDGE TYPE ANCHORS, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE. DROP IN ANCHORS ARE ONLY TO BE TESTED WITH THIS METHOD.

2. TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS FOR WEDGE TYPE ANCHORS: ONE-HALF (1/2) TURN OF THE NUT.

3. IF MANUFACTURERS TORQUE IS LESS THATN SPECIFIES, TEST TORQUE THE MANUFACTURERS LISTED TORQUE SHALL BE USED FOR TESTING.

F. TESTING SHOULD OCCUR 24 HOURS MINIMUM AFTER INSTALLATION OF THE SUBJECT ANCHORS.

G. ALL EXPANSION TYPE ANCHOR BOLTS USED FOR STRUCTURAL APPLICATIONS SHALL BE TESTED. ALL ANCHOR BOLTS OF THE EXPANSION TYPE USED FOR NON-STRUCTURAL APPLICATIONS (LOADED IN EITHER PULLOUT OR SHEAR) SHALL HAVE 50 PERCENT OF THE BOLTS (ALTERNATE BOLTS IN ANY GROUP ARRANGEMENT ALLOWED BY THE TYPE OF SUBSTRATE AND DIAMETER OF BOLT LISTED BELOW UNDER TEST VALUES TABLE) PROOF TESTED IN TENSION TO TWICE THE ALLOWABLE TENSION LOAD. IF THERE ARE ANY FAILURES, THE IMMEDIATELY ADJACENT BOLTS MUST THEN ALSO BE TESTED. [TESTING SHALL BE PERFORMED IN ACCORDANCE WITH TITLE 24, PART 2, SECTION 1910A.5]

H. ALL BOLTS MUST HAVE ICC/ES APPROVAL.

I. ALL ANCHOR BOLTS OF THE EXPANSION TYPE INSTALLED IN CONCRETE SHALL BE ONE OF THE FOLLOWING:

1. ITW RAMSET/REDHEAD-WEDGE ANCHOR-ICC/ES NO. N/A

2. HILTI, INC.-KWIK BOLT TZ-WEDGE ANCHOR-ICC/ES NO. 1917

3. SIMPSON-STONGBOLT 2-WEDGE ANCHOR-ICC/ES NO. 3037

MINIMUM TEST VALUES
NORMALWEIGHT OR LIGHTWEIGHT CONCRETE

ANCHOR	WEDGE					
DIA. (IN)	TENSION LOAD (LBS)	TORQUE (FT-LBS)	EMBEDMENT (IN)	---	---	---
---	---	---	---	---	---	---
3/8	1100	25	2	---	---	---
1/2	2000	50	3-1/4	---	---	---
5/8	2300	80	4-1/4	---	---	---
3/4	3700	150	4-3/4	---	---	---

J. ALL ANCHOR BOLTS OF THE EXPANSION TYPE INSTALLED IN GROUT FILLED MASONRY SHALL BE ONE OF THE FOLLOWING:

1. HILTI, INC.-KWIK BOLT III-WEDGE ANCHOR-ICC/ES NO. 1385

2. SIMPSON-STONGBOLT 2-WEDGE ANCHOR-IAMPO NO. ER-240

MINIMUM TEST VALUES
GROUT FILLED CONCRETE MASONRY

ANCHOR	WEDGE		
DIA. (IN)	TENSION LOAD (LBS)	TORQUE (FT-LBS)	EMBEDMENT (IN)
1/4	1080	4	2
3/8	1564	15	2-1/2
1/2	1810	25	3-1/2
5/8	2484	65	4
3/4	3290	120	4-3/8

11. POWDER DRIVEN CONCRETE FASTENERS:

A. GENERAL: USE OF POWDER DRIVEN CONCRETE FASTENERS FOR TENSION LOADS IS LIMITED TO SUPPORT OF MINOR LOADS LIKE ACOUSTICAL CEILINGS, DUCT WORK, CONDUIT.

B. ALLOWABLE LOADS: IN GENERAL, LOADS SHOULD BE LIMITED TO LESS THAN 90 POUNDS PER ASCE 7, SECTION 13.4.5

C. TESTING: THE OPERATOR, TOOL, AND FASTENER SHALL BE PREQUALIFIED BY THE PROJECT INSPECTOR. HE SHALL OBSERVE THE TESTING OF THE FIRST 10 FASTENER INSTALLATIONS. A TEST "PULL-OUT" LOAD OF NOT LESS THAN TWICE THE DESIGN LOAD, OR 200 POUNDS, WHICHEVER IS GREATER SHALL BE APPLIED TO THE PIN IN SUCH A MANNER AS NOT TO RESIST THE SPALLING TENDENCY OF THE CONCRETE AROUND THE PIN. THEREAFTER, RANDOM TESTS UNDER THE PROJECT INSPECTOR'S SUPERVISION SHALL BE MADE OF APPROXIMATELY 1 IN 10 PINS, EXCEPT THAT WHEN THE DESIGN LOAD EXCEEDS 100 POUNDS, ONE HALF OF THE PINS SHALL BE TESTED. SHOULD FAILURE OCCUR ON ANY PIN TESTED, ALL INSTALLATIONS MUST BE TESTED AND UNFAIR PINS REPLACED.

D. ALL POWDER DRIVEN CONCRETE FASTENERS SHALL BE ONE OF THE FOLLOWING:

1. HILTI, INC.
X-CP 72 PINS - WOOD PLATE - ICC/ES NO. 2379
X-U PINS - STEEL TRACK - ICC/ES NO. 2269

2. ITW RAMSET/REDHEAD
DRIVE PIN - WOOD PLATE - ICC/ES NO. 2690
DRIVE PIN - STEEL TRACK - ICC/ES NO. 1799

3. SIMPSON STRONG-TIE CO., INC.
PDPWL-300MG-WOODPLATE-ICC/ES NO. 2138
PDPA-125-STEEL TRACK-ICC/ES NO. 2138

12. SPECIFICATIONS FOR AUTOMATIC END WELDED STUDS

A. MATERIAL: AUTOMATIC END WELDED STUDS SHALL BE NELSON GRANULAR FLUX-FILLED SHEAR CONNECTOR OR ANCHOR STUDS (OR APPROVED EQUAL). STUDS SHALL BE MANUFACTURED OF C-1010 THROUGH C-1020 COLD DRAWN STEEL WHICH CONFORMS TO ASTM A29. ICC/ES ESR-2856

B. INSTALLATION: THE STUDS SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE STUD AND THE PLATE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE STUD AND THE PLATE. THE STUD SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8" AND UNDER,AND 3/16" FOR OVER 5/8" DIAMETER. WELDING SHALL BE DONE ONLY BY QUALIFIED WELDERS APPROVED BY THE WELDING INSPECTOR.

C. INSPECTION AND TESTS: INSPECTION, IN ACCORDANCE WITH TITLE 24, PART 2, SECTION 2213A.2. ALL THE SHOP AND FIELD WELDING OPERATIONS FOR THE AUTOMATIC END WELDED STUDS SHALL BE MADE BY A QUALIFIED WELDING INSPECTOR (APPROVED BY THE DIVISION OF THE STATE ARCHITECT). THE TYPE AND CAPACITY OF THE WELDING EQUIPMENT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE CHECKED AND APPROVED BY A WELDING INSPECTOR.

D. AT THE BEGINNING OF EACH DAY'S WORK, A MINIMUM OF TWO TEST STUD WELDS SHALL BE MADE WITH THE EQUIPMENT TO BE USED TO METAL WHICH IS THE SAME AS THE ACTUAL WORK PIECE. THE TEST STUDS SHALL BE SUBJECTED TO A 90° BEND TEST BY STRIKING THEM WITH A HEAVY HAMMER. AFTER THE ABOVE TEST, THE WELD SECTION SHALL NOT EXHIBIT ANY TEARING OUT OR CRACKING.

13. INSPECTOR OF RECORD REQUIREMENTS

A. ONE OR MORE INSPECTORS EMPLOYED BY THE OWNER IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS WILL BE ASSIGNED TO THE WORK. THE INSPECTORS DUTIES ARE SPECIFICALLY DEFINED IN SECTION 4-342 OF SAID TITLE 24, PART 1 AND IN ADDITION SHALL BE AS STIPULATED IN INTERPRETATION OF REGULATION DOCUMENT IR A-8.

B. INSPECTOR SHALL BE CERTIFIED AS A CLASS 3 INSPECTOR THROUGH THE DIVISION OF THE STATE ARCHITECT INSPECTOR EXAMINATION PROGRAM. INSPECTOR SHALL ALSO BE SPECIFICALLY APPROVED BY THE DIVISION OF THE STATE ARCHITECT FOR THIS PROJECT AT LEAST 10 DAYS PRIOR TO THE START OF ANY WORK FOR THIS PROJECT.

14. ALL WORK SHOWN ON THESE DRAWINGS SHALL COMPLY WITH THE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

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

16. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

17. DRINKING WATER SHALL COMPLY WITH ALL LOCAL HEALTH DEPARTMENT REQUIREMENTS.

18. FOOD HANDLING FACILITIES SHALL COMPLY WITH ALL LOCAL HEALTH REQUIREMENTS AND THE CALIFORNIA RETAIL FOOD FACILITIES LAW.

19. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ADDITION, ALTERATION OR RECONSTRUCTION IS IN COMPLIANCE WITH THE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONMDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT IDENTIFIED BY THE CONTRACT DOCUMENTS WHERIN THE FINAL WORK WOULD NOT COMPLY WITH THE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND THE ARCHITECT OF THE CONDITION IN WRITING. NECESSARY INFORMATION REQUIRED TO CORRECT THE CONDITIONS ENCOUNTERED WILL BE ISSUED BY THE ARCHITECT. A CHANGE ORDER MAY BE ISSUED TO ADJUST THE CONTRACT SUM OR TIME COMMENSURATE WITH THE AMOUNT OF ADDITIONAL WORK REQUIRED IF ANY. THE CHANGE ORDER SHALL BE APPROVED BY THE DIVISION OF THE STATE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK REQUIRED BY THE CHANGE ORDER.

20. ALL SLOPE AND CROSS SLOPE OF ACCESSIBLE ROUTE PAVING INDICATED ON THESE DRAWINGS WAS DESIGNED IN COMPLIANCE WITH THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE THE ACCESSIBILITY STANDARDS OF THE CALIFORNIA BUILDING CODE, (CBC) TITLE 24, PART 2, CHAPTER 11B OF THE CALIFORNIA CODE OF REGULATIONS (CCR). STRICT EXECUTION OF THE SLOPE AND CROSS SLOPE OF ACCESSIBLE ROUTE PAVING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. SHOULD A CONDITION PRESENT ITSELF THAT WOULD RESULT IN AN INSTALLATION OTHER THAN WHAT IS INDICATED IN THESE DRAWINGS, WLC ARCHITECTS, INC. SHALL BE NOTIFIED IN WRITING AND A COMPLIANT RESOLUTION WILL BE FORMULATED.

PROJECT TEAM

OWNER
OXNARD UNION HIGH SCHOOL DISTRICT
309 X. "K" STREET
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ARCHITECT
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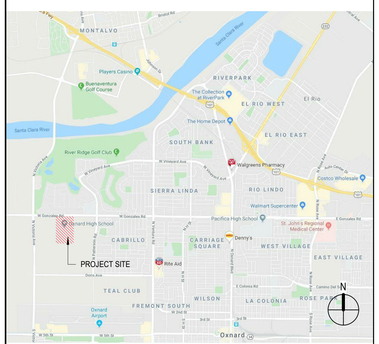
FAX: (909) 477-6916

THE SCOPE OF THE WORK AS STATED BELOW IS FOR DSA PLAN REVIEW PURPOSES ONLY AND DOES NOT CONSTITUTE A DETAILED AND FULL EXPLANATION OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

1. REMOVE EXISTING HEATING REZNOR UNITS AND MISCELLANEOUS HEATING EQUIPMENT, AND REPLACE WITH NEW AIR CONDITIONING UNITS FOR BUILDINGS A, B, C, E, F, G, H, J, K AND N BUILDINGS. REMOVE EXISTING ROOF CURBS AND REPLACE WITH NEW ROOF CURBS. REMOVE PORTIONS OF ROOF TO ADD ADDITIONAL BEAMS TO SUPPORT NEW ROOF CURBS.
2. ADD FIRE ALARM PANEL, POWER SUPPLIES AND CONTROL PANELS.
3. ADD NEW FIRE ALARM DEVICES AS REQUIRED.
4. PATCH BACK ROOFING MATERIAL AS REQUIRED.



SCOPE OF WORK	1 : 1		VICINITY MAP	N.T.S.	

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120526 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/15/2020

ARCHITECTS
WLC
CLIENT FOCUSED • PASSION DRIVEN

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LICENSED ARCHITECT
MARK GRAHAM
C-26046
03-31-21
STATE OF CALIFORNIA

CONSULTANT

BID SET

NO	DATE	BY	DESCRIPTION
#1			REVISIONS

DRAWN: JY	CHECKED: SJ
DATE: 02/26/2020	SCALE: As indicated
PROJECT NUMBER: 1917000	

GENERAL NOTES & PROJECT DIRECTORY

DRAWING NUMBER: **A0.1**

DRAWING INDEX

INDEX TITLE

INDEX ARCHITECTURAL

INDEX ARCHITECTURAL DETAILS

INDEX STRUCTURAL

INDEX MECHANICAL

INDEX ELECTRICAL

TOTAL PAGE NUMBER IN THE INDEX SHEET: 168 PAGES

DRAWING INDEX CODE

DRAWING DISCIPLINE PREFIX INDEX

- A. ARCHITECTURAL
- C. CIVIL
- D. INTERIOR DESIGN / FURNITURE
- E. ELECTRICAL
- F. FIRE PROTECTION / SPRINKLER SYSTEM
- G. GRAPHICS
- H. HAZARDOUS MATERIALS
- K. DIETARY / FOOD SERVICE
- L. LANDSCAPING
- M. MECHANICAL
- P. PLUMBING
- S. STRUCTURAL
- T. TELECOMMUNICATIONS

DRAWING GROUP PREFIX INDEX

- 0. GENERAL INFORMATION
- 1. SITE PLANS
- 2. FLOOR PLANS
- 3. REFLECTED CEILING PLANS
- 4. ROOF PLANS
- 5. EXTERIOR ELEVATIONS / SECTIONS
- 6. ENLARGED FLOOR PLANS
- 7. INTERIOR ELEVATIONS
- 8. CIRCULATION / STAIRS / ELEVATORS
- 9. 3D REPRESENTATIONS

DRAWING NUMBER CODE

AH2.2

- DRAWING NUMBER
- GROUP PREFIX INDEX
- BUILDING IDENTITY
- DISCIPLINE PREFIX INDEX

DISCIPLINE OR DRAWING GROUPS NOT INDICATED IN DRAWING INDEX ARE NOT APPLICABLE OR ARE INCLUDED IN THE 16 DIVISIONAL GROUPING OF THE DETAIL DRAWINGS. BUILDING IDENTITY DESIGNATIONS MAY OR MAY NOT BE UTILIZED. REFER TO KEY PLANS AND DRAWING INDEX FOR APPLICATION OF BUILDING DESIGNATIONS. THE DISCIPLINE AND DRAWING GROUPS ARE INTEGRAL WITH THE DETAIL DRAWINGS AND ARE NOT COMPLETE IN THEMSELVES. IN CASE OF DISCREPANCY BETWEEN THE INDEX AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.

ARCHITECTURAL DETAIL DRAWING PREFIX INDEX

DIVISION 1	-	GENERAL REQUIREMENTS
DIVISION 2	-	SITE WORK
DIVISION 3	-	CONCRETE
DIVISION 4	-	MASONRY
DIVISION 5	-	METALS
DIVISION 6	-	WOOD AND PLASTICS
DIVISION 7	-	THERMAL AND MOISTURE PROTECTION
DIVISION 8	-	DOORS AND WINDOWS
DIVISION 9	-	FINISHES
DIVISION 10	-	SPECIALTIES
DIVISION 11	-	EQUIPMENT
DIVISION 12	-	FURNISHINGS
DIVISION 13	-	SPECIAL CONSTRUCTION
DIVISION 14	-	CONVEYING SYSTEMS
DIVISION 15	-	MECHANICAL - NOT USED
DIVISION 16	-	ELECTRICAL - NOT USED

DETAIL DRAWING CODE

8.4

- DRAWING NUMBER
- DIVISION PREFIX INDEX

THE DIVISION PREFIX NUMBERS ARE THOSE IDENTIFIED BY THE 16 DIVISION GROUPING SYSTEM OF MASTER FORMAT AS PUBLISHED BY THE CONSTRUCTION SPECIFICATION INSTITUTE (CSI) AND SHALL NOT BE SOLEY REPRESENTATIVE OF REQUIREMENTS FOR ANY ONE DIVISION. THOSE DIVISIONS NOTED AS BEING NOT USED OR OMITTED ARE NOT APPLICABLE OR ARE INCLUDED UNDER DISCIPLINE DRAWINGS. IN CASE OF DISCREPANCY BETWEEN THE INDEX AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120526 INC:
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DATE: 06/15/2020

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MARK GRAHAM
C-26046
03-31-21
STATE OF CALIFORNIA

CONSULTANT

BID SET

1	Date 1		Revision 1
NO	DATE	BY	DESCRIPTION
1	REVISIONS		

DRAWN: JY	**CHECKED:** SJ
DATE: 02/26/2020	**SCALE:**
PROJECT NUMBER: 1917000	

DRAWING INDEX

DRAWING NUMBER: **A0.2**

6/12/2020, 1:01:02 PM
C:\Local Revit Files\1917000_Oxnard HS HVAC Addition_Central_CS_rvt

DRAFTING SYMBOLS LEGEND

5461.0' — NEW / REQUIRED POINT ELEVATION (PLAN)

5431.0' — EXISTING POINT ELEVATION (PLAN)

SURFACE DRAINAGE
ARROW INDICATES DIRECTION OF FLOW

E1234 / N1234 — SITE REFERENCE GRID
WORK POINT COORDINATES

N — PROJECT NORTH

2.3 / B — COLUMN REFERENCE GRIDS
B,2.3 = COLUMN DESIGNATION

AA5.1 / 1 — BUILDING ELEVATIONS
AA5.1 = SHEET DESIGNATION
1 = DETAIL DESIGNATION ON SHEET
ARROW INDICATES DIRECTION OF VIEW

1 / 4 AA5.1 2 / 3 — INTERIOR ELEVATIONS
AA5.1 = SHEET DESIGNATION
1, 2, 3, 4 = DETAIL DESIGNATION ON SHEET
ARROW INDICATES DIRECTION OF VIEW

SIM / 1 / A5.2 — BUILDING SECTION
1 = SECTION DESIGNATION
A5.2 = REFERENCE DRAWING NUMBER
ARROW INDICATES DIRECTION OF VIEW

WALL SECTION
SIM / 1 / A5.3
1 = SECTION DESIGNATION
A5.3 = REFERENCE DRAWING NUMBER
ARROW INDICATES DIRECTION OF VIEW

DETAIL
SIM / 1 / 8.3
1 = DETAIL DESIGNATION
8.3 = REFERENCE DRAWING NUMBER

SIM / 1 / 8.3 — SIM / 1 / 8.3

LOBBY / E-1 / 6 / 20 / 900 SF / 45 / * / 76 — AREA IDENTITY/ CODE ANALYSIS
LOBBY = ROOM NAME
E1 = OCCUPANCY GROUP
6 = SPACE USE - REF SPACE USE SCHEDULE
20 = OCCUPANT LOAD FACTOR (CBC TABLE 10-A)
900 = FLOOR AREA - SQUARE FEET
45 = OCCUPANT LOAD (CBC TABLE 10-04.5)
* = OCCUPANT LOAD SIGN REQUIRED WHEN NOTED - (CBC SEC 1004.9) REF SIGN SCHEDULE
76 = ACCUMULATIVE OCCUPANT LOAD OF SPACE

LOBBY / A230 / 150 SF — AREA IDENTITY/ PLAN
LOBBY = ROOM NAME
A230 = AREA IDENTITY
A - BUILDING OR AREA DESIGNATION
2 - FLOOR NUMBER
30 - ROOM NUMBER

1 — REVISION
1 = REVISION NUMBER

123 — EQUIPMENT IDENTIFICATION
123 = EQUIPMENT NUMBER

A — GLAZED OPENING OR WINDOW TYPE
ALPHABETICAL DESIGNATION = GLAZED OPENING
NUMERICAL DESIGNATION = WINDOW TYPE

A250 — DOOR IDENTIFICATION
A = BUILDING DESIGNATION
2 = FLOOR NUMBER
50 = DOOR NUMBER

0654 — REFERENCE NOTE IDENTIFICATION
06 = DIVISIONAL PREFIX
54 = NOTE NUMBER

C42B* — WALL IDENTIFICATION
C = WALL TYPE DESIGNATION - REF SCHEDULE
4 = NOMINAL STUD OR MASONRY SIZE
2 = FIRE RATING IN HOURS
B = ADDITIONAL REMARKS - REF SCHEDULE
* = OPTIONAL CHARACTER

3 A — TOILET ACCESSORY IDENTIFICATION
3 = ACCESSORY NUMBER - REF SCHEDULE
A = ACCESSIBLE WHEN NOTED

100M L — CABINET DESIGNATION
100 = WI CABINET NUMBER
M = MODIFIED AS NOTED
L = LOCK WHEN NOTED

Name / Elevation — LEVEL LINE, CONTROL POINT
FFE 0'-0" = ELEVATION

UP 12R AT 6" / 12T AT 11" — STAIR DIRECTION SYMBOL
NUMBER AND SIZE OF TREADS AND RISERS IN INCHES

MATCH LINE AND AREA DESIGNATOR
SHADED PORTION IS THE SIDE CONSIDERED

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

CENTER LINES, FLOOR LINES AND LEVEL LINES

SECTION LINES

PROPERTY LINES, BOUNDRY LINES AND MATCH LINES

HIDDEN CONSTRUCTION FEATURE

BREAKS OF BUILDING COMPONENTS

MATERIALS INDICATION LEGEND

PLAN / SECTION

- EARTH
- POROUS FILL (STONE, GRAVEL, ETC.)
- ROCK
- ASPHALT PAVING
- CAST-IN-PLACE CONCRETE (OR CONCRETE FILL)
- PRECAST CONCRETE (GLASS FIBER REINFORCED CONCRETE)
- CEMENTITIOUS DECKS & TOPPINGS (GYPSUM, INSULATING CONCRETE)
- BRICK (COMMON OR FACE, LARGE SCALE)
- GLAZED BRICK
- FIRE BRICK
- CONCRETE MASONRY UNITS (CMU, LARGE SCALE CONCRETE BLOCK)
- GLAZED CONCRETE MASONRY UNITS
- GLASS UNIT MASONRY
- GROUT
- CUT STONE (MARBLE, GRANITE, LIMESTONE)
- CAST STONE
- SLATE, SOAPSTONE, FLAGGING
- STRUCTURAL CLAY TILE
- GLAZED STRUCTURAL CLAY TILE
- ALUMINUM (LARGE SCALE)
- STEEL (LARGE SCALE)
- ORNAMENTAL METAL (BRASS, BRONZE)
- METAL (SMALL SCALE, STRUCTURAL OR SHEET)
- PARTICLE BOARD
- PLYWOOD (LARGE SCALE)
- WOOD FINISHED
- 2 / 10 — WOOD ROUGH/CONTINUOUS (2 X 10 - SIZE NOTED)
- 2 / 10 — WOOD ROUGH/BLOCKING (2 X 10 - SIZE NOTED)
- INSULATION (LOOSE OR BATT)
- (RIGID INSULATION)
- GLASS (LARGE SCALE)
- ACOUSTICAL TILE
- CERAMIC TILE
- GYPSUM BOARD
- SAND, CEMENT, ETC.
- METAL LATH AND PLASTER
- RESILIENT FLOORING
- CARPET
- TERRAZZO

ELEVATION

- CONCRETE, PLASTER, GYPSUM BOARD
- MARBLE, FIELD STONE
- MASONRY (BRICK OR CMU)
- GLAZING (CLEAR, TEMPERED, ETC.)
- GLAZING (WIRE, LABELED)
- SHEET METAL
- CERAMIC TILE

WALL MATL.'S LEGEND

PLAN

- EXISTING WALL TO BE REMOVED
- EXISTING WALL TO REMAIN
- STUD WALL - REF SCHEDULE FOR STUD TYPE, SIZE AND SPACING
- BRICK MASONRY WALL - REF SCHEDULE FOR SIZE
- CONCRETE MASONRY WALL (CMU) - REF SCHEDULE FOR TYPE AND SIZE
- COMPOSITE MASONRY WALL - REF SCHEDULE FOR MASONRY TYPES AND SIZES
- COMPOSITE VENEER WALL - REF SCHEDULE FOR MASONRY AND STUD TYPE, SIZE AND SPACING
- SHAFT WALL - REF SCHEDULE FOR STUD TYPE, SIZE AND SPACING
- SOUND RATED WALL - REF SCHEDULE FOR WALL MATERIALS
- CONCRETE WALL - REF SCHEDULE FOR SIZE
- ONE HOUR FIRE RATED WALL - REF PLAN AND SCHEDULE FOR WALL MATERIALS AND UBC/UL/GA LISTING
- TWO HOUR FIRE RATED WALL - REF PLAN AND SCHEDULE FOR WALL MATERIALS AND UBC/UL/GA LISTING

GENERAL NOTES:

1. REFER TO FINISH SCHEDULE FOR WALL FINISHES
2. REFER TO WALL TYPE SCHEDULE FOR WALL DETAILS AND MATERIALS OF CONSTRUCTION
3. ALL WALL DEFINITIONS MAY NOT BE USED, REFER TO FLOOR PLAN(S) FOR APPLICABLE WALL DEFINITIONS USED

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120526 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/15/2020

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03-31-21
STATE OF CALIFORNIA

CONSULTANT

BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN: JY	CHECKED: SJ
DATE: 02/26/2020	SCALE: 1 : 1
PROJECT NUMBER: 1917000	

DRAFTING SYMBOLS AND MATERIALS

DRAWING NUMBER: **A0.3**

ABBREVIATIONS A-D

A/C	- AIR CONDITIONING
A/E	- ARCHITECT / ENGINEER
AB	- ANCHOR BOLT
ABAN	- ABANDON
ABC	- AGGREGATE BASE COURSE
ABV	- ABOVE
AC	- ASPHALTIC CONCRETE
ACC	- ACCESS(IBLE)
ACST	- ACOUSTICAL
ACT	- ACOUSTICAL CEILING TILE
AD	- AREA DRAIN
ADDM	- ADDENDUM
ADH	- ADHESIVE
ADJ	- ADJUSTABLE
ADJC	- ADJACENT
AFF	- ABOVE FINISHED FLOOR
AFG	- ABOVE FINISHED GRADE
AGGR	- AGGREGATE
AHU	- AIR HANDLING UNIT
AL	- ALUMINUM
ALT	- ALTERNATE
ANC	- ANCHOR, ANCHORAGE
APLD	- APPLIED
APPRX	- APPROXIMATE
ARCH	- ARCHITECT(URAL)
ASC	- ABOVE SUSPENDED CEILING
ASPH	- ASPHALT
ASSY	- ASSEMBLY
ASYM	- ASYMMETRICAL
AWG	- AMERICAN WIRE GAUGE
BC	- BACK OF CURB
BD	- BOARD
BITUM	- BITUMINOUS
BLDG	- BUILDING
BLK	- BLOCK
BLKG	- BLOCKING
BLW CLG	- BELOW CEILING
BLW FFLR	- BELOW FINISH FLOOR
BLW	- BELOW
BM	- BENCH MARK
BN	- BOUNDARY NAILING
BOT	- BOTTOM
BRCG	- BRACING
BRDG	- BRIDGING
BRG	- BEARING
BRK	- BRICK
BRKT	- BRACKET
BRS	- BRASS
BRZ	- BRONZE
BS	- BOTH SIDES
BSMT	- BASEMENT
BTWN	- BETWEEN
BUR	- BUILT-UP ROOFING
BW	- BOTH WAYS
C&G	- CURB AND GUTTER
CAB	- CABINET
CAD	- CADMIUM
CB	- CATCH BASIN
CBB	- CEMENTITIOUS BACKER BOARD
CEM	- CEMENT
CER	- CERAMIC
CFCI	- CONTRACTOR FURNISH CONTRACTOR INSTALLED
CFLG	- COUNTERFLASHING
CFOI	- CONTRACTOR FURNISH OWNER INSTALLED
CG	- CORNER GUARD
CHBD	- CHALKBOARD
CHFR	- CHAMFER
CI	- CAST IRON
CIR	- CIRCLE
CIRC	- CIRCULAR, CIRCUMFERENCE
CJ	- CONSTRUCTION JOINT
CL	- CHAIN LINK
CLG	- CEILING
CLJ	- CONTROL JOINT
CLL	- CONTRACT LIMIT LINE
CLOS	- CLOSURE
CLR	- CLEAR(ANCE)
CLRM	- CLASSROOM
CMPST	- COMPOSITION
CMU	- CONCRETE MASONRY UNIT
CNCL	- CONCEALED
CNR	- CORNER
CNTR	- COUNTER
COL	- COLUMN
COM	- COMMON
COMB	- COMBINATION
COMPT	- COMPARTMENT
CONC	- CONCRETE
CONF	- CONFERENCE
CONN	- CONNECTION
CONSTR	- CONSTRUCTION
CONT	- CONTINUOUS (ATION)
CONTR	- CONTRACT(OR)
COORD	- COORDINATE
CORR	- CORRIDOR
CPR	- COPPER
CPRS	- COMPRESS(ED), (ION), (IBLE)
CPT	- CARPET(ED)
CRS	- COLD ROLLED STEEL
CS	- COST STONE
CSG	- CASING
CSK	- COUNTERSUNK
CSMT	- CASEMENT
CSWK	- CASEWORK
CT	- CERAMIC TILE
CTB	- CERAMIC TILE BASE
CTF	- CERAMIC TILE FLOOR
CTG	- COATING
CTR	- CENTER
CUFT	- CUBIC FOOT
CUIN	- CUBIC INCH
CUST	- CUSTODIAN
CUYD	- CUBIC YARD
D	- DRAIN
DA	- DOUBLE ACTING
DBL	- DOUBLE
DEMO	- DEMOLISH, DEMOLITION
DEP	- DEPRESSED
DEPT	- DEPARTMENT
DET	- DETAIL
DF	- DRINKING FOUNTAIN
DH	- DOUBLE HUNG
DIA	- DIAMETER
DIAG	- DIAGONAL
DIFF	- DIFFUSER
DIM	- DIMENSION
DISP	- DISPENSER
DIV	- DIVISION
DMPF	- DAMPPROOFING
DMT	- DEMOUNTABLE
DN	- DOWN
DR	- DOOR
DRB	- DRAINBOARD
DRLV	- DOOR LOUVER
DS	- DOWNSPOUT
DSP	- DRY STANDPIPE
DT	- DRAIN TILE
DVTL	- DOVETAIL
DW	- DISHWASHER
DWG	- DRAWING
DWL	- DOWEL
DWR	- DRAWER

ABBREVIATIONS E-K

E	- EAST
EA	- EACH
EAR	- EXHAUST AIR REGISTER
EB	- EXPANSION BOLT
EE	- EACH END
EF	- EACH FACE
EFS	- EXTERIOR FINISH SYSTEM
EHD	- ELECTRIC HAND DRYER
EIFS	- EXTERIOR INSULATION AND FINISH SYSTEM
EJ	- EXPANSION JOINT
EL	- ELEVATION
ELAST	- ELASTOMERIC
ELEC	- ELECTRIC(AL)
ELEV	- ELEVATOR
EM	- EXPANDED METAL
EMER	- EMERGENCY
EN	- EDGE NAILING
ENCL	- ENCLOSE (URE)
ENGR	- ENGINEER
ENTR	- ENTRANCE
EP	- ELECTRICAL PANELBOARD
EQ	- EQUAL
EQUIP	- EQUIPMENT
ESC	- ESCUTCHEON
ESCL	- ESCALATOR
ESMT	- EASEMENT
EW	- EACH WAY
EWC	- ELECTRIC WATER COOLER
EWH	- ELECTRIC WATER HEATER
EWS	- EYE WASH STATION
EXC	- EXCAVATE
EXG	- EXISTING
EXH	- EXHAUST
EXP	- EXPOSED
EXPN	- EXPANSION
EXS	- EXTRA STRONG
EXT	- EXTERIOR
F/F	- FACE TO FACE
FA	- FIRE ALARM
FAB	- FABRIC
FBD	- FIBERBOARD
FBRK	- FIRE BRICK
FCBRK	- FACE BRICK
FD	- FLOOR DRAIN
FDTN	- FOUNDATION
FE	- FIRE EXTINGUISHER
FEC	- FIRE EXTINGUISHER CABINET
FFA	- FROM FLOOR ABOVE
FFB	- FROM FLOOR BELOW
FFEL	- FINISHED FLOOR ELEVATION
FFL	- FINISHED FLOOR LINE
FGL	- FIBERGLASS
FHC	- FIRE HOSE CABINET
FHMS	- FLATHEAD MACHINE SCREW
FHWS	- FLATHEAD WOOD SCREW
FIN	- FINISH(ED)
FJT	- FLUSH JOINT
FLASH	- FLASH(ING)
FLDG	- FOLDING
FLG	- FLOORING
FLR	- FLOOR
FLUOR	- FLUORESCENT
FN	- FIELD NAILING
FOC	- FACE OF CONCRETE
FOF	- FACE OF FINISH
FOG	- FACE OF GRID
FOM	- FACE OF MASONRY
FOS	- FACE OF STUDS
FPL	- FIREPLACE
FPRF	- FIREPROOF(ING)
FR	- FRAME(D), (ING)
FRG	- FIBER REINFORCED GYPSUM
FRGL	- FIRE RESISTIVE GLAZING
FRP	- FIBERGLASS REINFORCED PLASTIC
FRTD	- FIRE RATED
FRTW	- FIRE RETARDANT TREATED WOOD
FRZ	- FREEZER
FS	- FAR SIDE
FSTN	- FASTEN, FASTNER
FT	- FOOT OR FEET
FTG	- FOOTING
FURG	- FURRED (ING)
FUT	- FUTURE
FWC	- FABRIC WALL COVERING
GA	- GAGE
GAL	- GALLON
GALV	- GALVANIZED
GB	- GRAB BAR
GFRC	- GLASS FIBER REINFORCED CONCRETE
GI	- GALVANIZED IRON
GL	- GLASS
GLU LAM	- GLUE LAMINATED
GLZ	- GLAZING
CLZCMU	- GLAZED CONCRETE MASONRY UNITS
GND	- GROUND
GPC	- GYPSUM PLASTER CEILING
GR LN	- GRADE LINE
GR BM	- GRADE BEAM
GR	- GRADE (ING)
GRBD	- GARBAGE DISPOSER
GSB	- GYPSUM SHEATHING BOARD
GSS	- GALVANIZED STEEL SHEET
GST	- GALVANIZED STRUCTURAL TILE
GT	- GROUT
GVL	- GRAVEL
GYP	- GYPSUM
HB	- HOSE BIB
HC	- HOLLOW CORE
HD	- HEAVY DUTY
HD JT	- HEAD JOINT
HDAS	- HEADED ANCHOR STUD
HDR	- HEADER
HDW	- HARDWARE
HDWD	- HARDWOOD
HEX	- HEXAGONAL
HGR	- HANGER
HLDN	- HOLD DOWN
HM	- HOLLOW METAL
HMD	- HOLLOW METAL DOOR
HMDF	- HOLLOW METAL DOOR AND FRAME
HMF	- HOLLOW METAL FRAME
HNDRL	- HANDRAIL
HORIZ	- HORIZONTAL
HPT	- HIGH POINT
HR	- HOUR
HT	- HEIGHT
HTG	- HEATING
HVAC	- HEATING/VENTILATING/ AIR CONDITIONING
HWH	- HOT WATER HEATER
ID	- INSIDE DIAMETER
INCL	- INCLUDE(D), (ING)
INSTL	- INSTALL
INSUL	- INSULATE(D), (ION)
INT	- INTERIOR
INV	- INVERT
IPS	- IRON PIPE SIZE
JAN	- JANITOR
JST	- JOIST
JT	- JOINT
KIT	- KITCHEN
KO	- KNOCKOUT
KPL	- KICKPLATE

ABBREVIATIONS L-P

LAB	- LABORATORY
LAD	- LADDER
LAM	- LAMINATE(D)
LAV	- LAVATORY
LBL	- LABEL
LBR	- LUMBER
LB	- POUND
LCT	- LINOLEUM COMPOSITE TILE
LDR	- LEADER
LG	- LENGTH
LH	- LEFT HAND
LHR	- LEFT HAND REVERSE
LKNT	- LOCKNUT
LKR	- LOCKER
LLH	- LONG LEG HORIZONTAL
LLV	- LONG LEG VERTICAL
LMST	- LIMESTONE
LNDSCP	- LANDSCAPE(D)
LNTL	- LINTEL
LP	- LIGHTPROOF
LPT	- LOW POINT
LT	- LIGHT
LTWT	- LIGHT WEIGHT
LVL	- LEVEL(ER)
LVR	- LOUVER
LW	- LIGHTWEIGHT CONCRETE
LWIC	- LIGHTWEIGHT INSULATING CONCRETE
MAINT	- MAINTAIN(ANCE)
MAS	- MASONRY
MATL	- MATERIAL
MAX	- MAXIMUM
MB	- MACHINE BOLT
MBR	- MEMBER
MC	- MEDICINE CABINET
MCB	- METAL CORNER BEAD
MDO	- MEDIUM DENSITY OVERLAID
MECH	- MECHANICAL
MED	- MEDIUM
MEMB	- MEMBRANE
MEZZ	- MEZZANINE
MFD	- METAL FLOOR DECKING
MFR	- MANUFACTURE(R)
MH	- MANHOLE
MIN	- MINIMUM
MIRR	- MIRROR
MISC	- MISCELLANEOUS
ML	- METAL LATH
MLDG	- MOLDING
MLWK	- MILLWORK
MO	- MASONRY OPENING
MOD	- MODULE (AR)
MR	- MOISTURE RESISTANT
MRB	- MARBLE
MRD	- METAL ROOF DECKING
MS	- MACHINE SCREW
MTD	- MOUNTED
MTL	- METAL
MTR	- MORTAR
MULL	- MULLION
MVBL	- MOVEABLE
MWP	- MEMBRANE WATER PROOFING
N	- NORTH
NA	- NOT APPLICABLE
NAT	- NATURAL
NCOMBL	- NONCOMBUSTIBLE
NE	- NOT EXCEEDING
NF	- NEAR FACE
NIC	- NOT IN CONTRACT
NLB	- NON LOAD BEARING
NM	- NON METALLIC
NO	- NUMBER
NOM	- NOMINAL
NR	- NOISE REDUCTION
NRC	- NOISE REDUCTION COEFFICENT
NRCA	- NATIONAL ROOFING CONTRACTORS ASSOCIATION
NS	- NEAR SIDE
NTS	- NOT TO SCALE
O/O	- OUT TO OUT
OA	- OVERALL
OBS	- OBSCURE
OC	- ON CENTER(S)
OD	- OUTSIDE DIAMETER
OFCI	- OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	- OWNER FURNISHED OWNER INSTALLED
OFS	- OUTSIDE FACE OF STUD
OHMS	- OVALHEAD MACHINE SCREW
OHWS	- OVALHEAD WOOD SCREW
OPH	- OPPOSITE HAND
OPNG	- OPENING
OPP	- OPPOSITE
OPQ	- OPAQUE
OPR	- OPERABLE
ORD	- OVERFLOW ROOF DRAIN
OVFL	- OVERFLOW
OVHD	- OVERHEAD
PAR	- PARALLEL
PAT	- PATTERN
PB	- PANIC BAR
PBD	- PARTICLE BOARD
PC	- PORTLAND CEMENT
PCC	- PRECAST CONCRETE
PCP	- PORTLAND CEMENT PLASTER
PED	- PEDESTAL
PERF	- PERFORATE(D)
PERIM	- PERIMETER
PERP	- PERPENDICULAR
PGBD	- PEGBOARD
PH	- PHASE
PHS	- PHILLIPS HEAD SCREW
PI	- POINT OF INTERSECTION
PIV	- POST INDICATOR VALVE
PL	- PROPERTY LINE
PLAM	- PLASTIC LAMINATE
PLAS	- PLASTER
PLBG	- PLUMBING
PLYWD	- PLYWOOD
PNEU	- PNEUMATIC
PNL	- PANEL
PNT	- PAINT(ED)
POL	- POLISHED
POLY	- POLYETHYLENE
PORC	- PORCELAIN
PORT	- PORTABLE
PR	- PAIR
PRCST	- PRECAST
PREFAB	- PREFABRICATE(D)
PREFIN	- PREFINISHED
PREFMD	- PREFORMED
PRKG	- PARKING
PRML	- PREMOLDED
PROJ	- PROJECT
PROP	- PROPERTY
PSONC	- PRESTRESSED CONCRETE
PT	- POINT
PTCONC	- POST TENSIONED CONCRETE
PTD	- PAPER TOWEL DISPENSER
PTN	- PARTITION
PTR	- PAPER TOWEL RECEPTOR
PVC	- POLYVINYL CHLORIDE
PVG	- PAVE(D), (ING)
PVMT	- PAVEMENT

ABBREVIATIONS Q-S

QT	- QUARRY TILE
QTB	- QUARRY TILE BASE
QTF	- QUARRY TILE FLOOR
QTR	- QUARTER
QTY	- QUANTITY
R	- RISER
RA	- RETURN AIR
RAB	- RABBET
RAD	- RADIUS
RB	- RESILIENT BASE
RBR	- RUBBER
RCP	- REINFORCED CONCRETE PIPE
RCVR	- RECEIVER
RD	- ROOF DRAIN
RDGINS	- RIGID INSULATION
RDWY	- ROADWAY
REBAR	- REINFORCING STEEL BARS
REC	- RECESSED
RECT	- RECTANGULAR
REF	- REFERENCE
REFL	- REFLECT(ED), (IVE), (OR)
REFR	- REFRIGERATOR
REG	- REGISTER
REINF	- REINFORCE(D), (ING), (MENT)
REM	- REMOVABLE
REP	- REPAIR
REPL	- REPLACE
REQD	- REQUIRED
RESIL	- RESILIENT
RET	- RETURN
REV	- REVISION(S), REVISED
RF	- RESILIENT FLOORING
RFG	- ROOFING
RFH	- ROOF HATCH
RH	- RIGHT HAND
RHMS	- ROUND HEAD MACHINE SCREW
RHR	- RIGHT HAND REVERSE
RHWS	- ROUND HEAD WOOD SCREW
RL	- ROOF LEADER
RLG	- RAILING
RM	- ROOM
RND	- ROUND
RO	- ROUGH OPENING
ROW	- RIGHT OF WAY
RS	- ROUGH SAWN
RTF	- RUBBER TILE FLOORING
RTU	- ROOF TOP UNIT
RV	- ROOF VENT
RVL	- REVEAL
RVS	- REVERSE (SIDE)
RVT	- RIVET(ED)
RWD	- REDWOOD
RWL	- RAIN WATER LEADER
S	- SOUTH
S2S	- SURFACED TWO SIDES
S4S	- SURFACED FOUR SIDES
SA	- SUPPLY AIR
SALV	- SALVAGE
SAT	- SUSPENDED ACOUSTICAL TILE
SB	- SPLASH BLOCK
SBSTR	- SUBSTRATE
SC	- SOLID CORE
SCD	- SEAT COVER DISPENSER
SCHED	- SCHEDULE
SCP	- SCUPPER
SCRN	- SCREEN
SD	- STORM DRAIN
SDBL	- SANDBLAST
SECT	- SECTION
SGL	- SINGLE
SHR	- SHOWER
SHT	- SHEET(ING)
SHTHG	- SHEATHING
SHV	- SHELVES (ING)
SIM	- SIMILAR
SKLT	- SKYLIGHT
SLD	- SEALED
SLDG	- SLIDE (ING)
SLDR	- SOLDER
SLNT	- SEALANT
SLV	- SLEEVE
SMACNA	- SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SMLS	- SEAMLESS
SND	- SANITARY NAPKIN DISPENSER
SNDINS	- SOUND INSULATION
SNDU	- SANITARY NAPKIN DISPOSAL UNIT
SNT	- SEALANT
SPC	- SUSPENEDED PLASTER CEILING
SPD	- SOAP DISPENSER
SPEC	- SPECIFICATION(S) (ED)
SPRT	- SUPPORT
SQ	- SQUARE
SSK	- SERVICE SINK
SST	- STAINLESS STEEL
STA	- STATION
STAG	- STAGGERED
STC	- SOUND TRANSMISSION CLASS
STD	- STANDARD
STG	- SEATING
STIF	- STIFFENER
STIR	- STIRRUP
STL	- STEEL
STOR	- STORAGE
STG	- STRAIGHT
ST	- STREET
STRCT	- STRUCTURAL
STU	- STRUCT
SUSP	- SUSPENDED
SV	- SHEET VINYL
SYMM	- SYMMETRICAL
SYNTH	- SYNTHETIC
SYS	- SYSTEM

ABBREVIATIONS T-Y

T	- TREAD
T & B	- TOP AND BOTTOM
T & G	- TONGUE AND GROOVE
TB	- THRU BOLT
TBE	- THREADED BOTH END
TBM	- TEMPORARY BENCH MARK
TD	- TOWEL DISPENSER
TDR	- TOWEL DISPENSER / RECEPTACLE
TEL	- TELEPHONE
TEMP	- TEMPORARY
TER	- TERRAZZO
TFA	- TO FLOOR ABOVE
TFB	- TO FLOOR BELOW
THD	-THREAD(ED)
THERM	- THERMAL
THK	- THICK(NESS)
THRES	- THRESHOLD
TKBD	- TACKBOARD
TMPD	- TEMPERED
TOB	- TOP OF BEAM
TOC	- TOP OF CURB
TOF	- TOP OF FOOTING
TOFF	- TOP OF FINSH FLOOR
TOJ	- TOP OF JOIST
TOL	- TOLERANCE
TOM	- TOP OF MASONRY
TOP	- TOP OF PARAPET
TOPV	- TOP OF PAVEMENT
TOS	- TOP OF STEEL
TOW	- TOP OF WALL
TPD	- TOILET PAPER DISPENSER
TPTN	- TOILET PARTITION
TS	- TUBE STEEL
TWLB	- TOWEL BAR
TV	- TELEVISION
TYP	- TYPICAL
UC	- UNDERCUT
UGND	- UNDERGROUND
UL	- UNDERWRITERS LABORATORY
UNFIN	- UNFINISHED
UON	- UNLESS OTHERWISE NOTED
UR	- URINAL
VAR	- VARIES
VB	- VINYL BASE
VCT	- VINYL COMPOSITION TILE
VERT	- VERTICAL
VEST	- VESTIBULE
VFAT	- VINYL FACED ACOUSTIC TILE
VIF	- VERIFY IN FIELD
VJ	- V-JOINT(ED)
VNR	- VENEER
VR	- VAPOR RETARDER
VTR	- VENT THROUGH ROOF
VWC	- VINYL WALL COVERING
W/	- WITH
W/W	- WALL TO WALL
W/O	- WITHOUT
W	- WEST
WBL	- WOOD BLOCKING
WC	- WATER CLOSET
WD	- WOOD
WDP	- WOOD PANELING
WDW	- WINDOW
WF	- WIDE FLANGE
WFS	- WOOD FURRING STRIP
WGL	- WIRED GLASS
WH	- WALL HUNG
WI	- WROUGHT IRON
WID	-WIDTH, WIDE
WLD	- WELD(ED)
WM	- WIRE MESH
WP	- WATERPROOF(ING)
WPT	- WORK POINT
WR	- WIRE ROPE
WS	- WOOD SCREW
WSCT	- WAINSCOT
WT	- WEIGHT
WWF	- WELDED WIRE FABRIC
XBRACE	- CROSS BRACE
XFMR	- TRANSFORMER
XSECT	- CROSS SECTION
YCO	- YARD CLEANOUT
YD	- YARD

SYMBOLS

&	- AND
∠	- ANGLE
@	- AT
CL	- CENTERLINE
⊏	- CHANNEL
Ø	- DIAMETER OR ROUND
(E)	- EXISTING
(N)	- NEW
d	- PENNY (NAILS)
⊥	- PERPENDICULAR
PL	- PLATE
#	- POUND OR NUMBER

REFERENCE NOTES

KEYNOTE	DESCRIPTION
0104	DEMO (E) HVAC UNIT, SEE MECH DWGS
0115	(E) ROOF EXHAUST FAN TO REMAIN AND PROTECT IN PLACE
0116	(E) AIR HANDLING UNIT TO REMAIN AND PROTECT IN PLACE
0117	DEMO (E) DUCT SYSTEM, SEE MECH DWGS
0118	(E) FIRE DAMPER TO REMAIN AND PROTECT IN PLACE, SEE MECH DWGS
0119	(E) ROOF HATCH
0120	(E) WALL MOUNTED EXHAUST FAN TO REMAIN AND PROTECT IN PLACE
0750	EXISTING FIRE DAMPER OPENING TO BE FILLED IN PER DTL 5/7.1
1504	(N) DUCT SYSTEM, REF TO MECH DWGS, COLOR TO BE SELECTED BY ARCHITECT
1505	(N) MECH CURB, SEE STRUCT DWGS & REF TO 1/7.1
1508	(N) HEAT PUMP, SEE MECH DWGS
1510	(N) MECH UNIT, SEE MECH DWGS

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ARCHITECTURAL DRAWING ABBREVIATIONS

DRAWING NUMBER: **A0.4**

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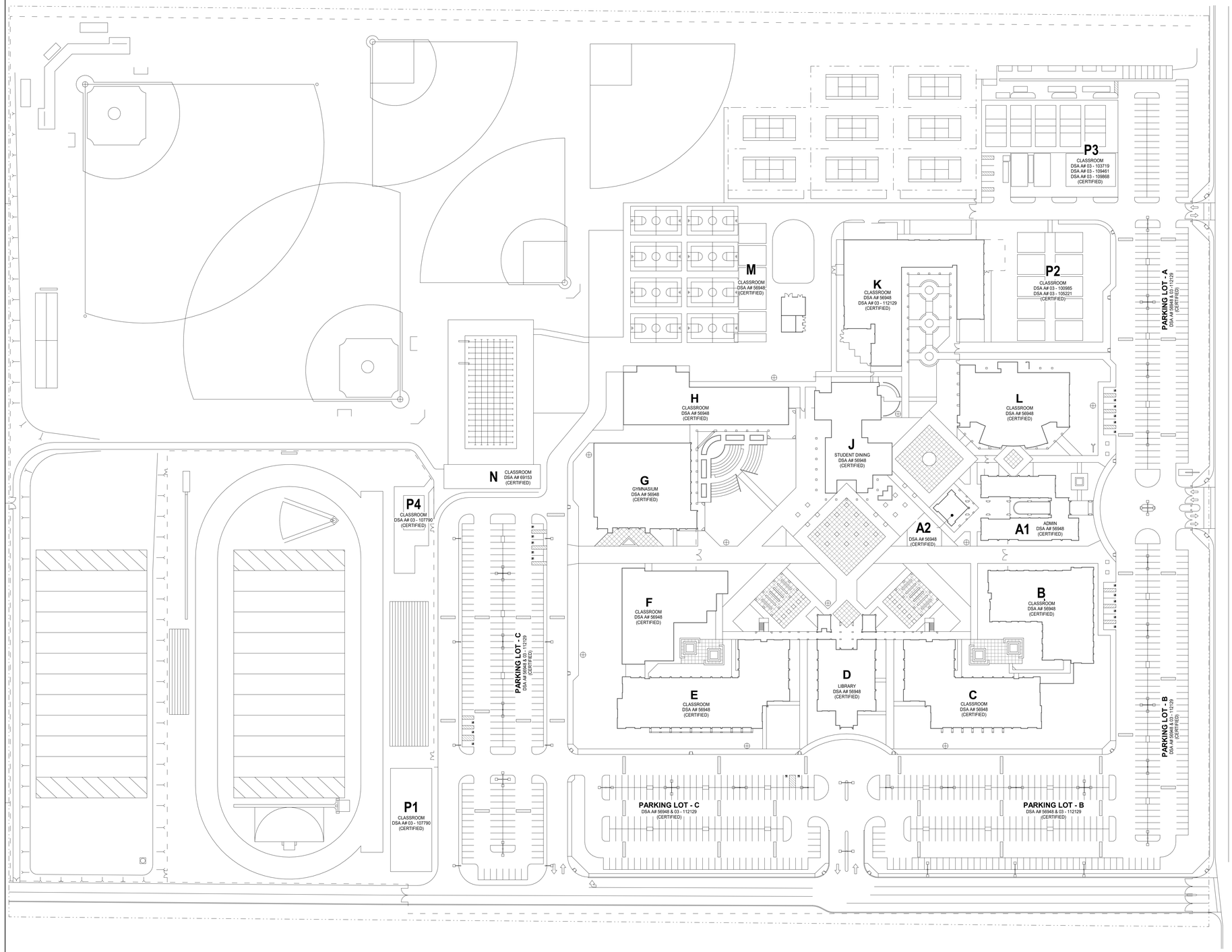

REFERENCE NOTES

KEYNOTE	DESCRIPTION

SITE PLAN | 1" = 60'-0" | 1

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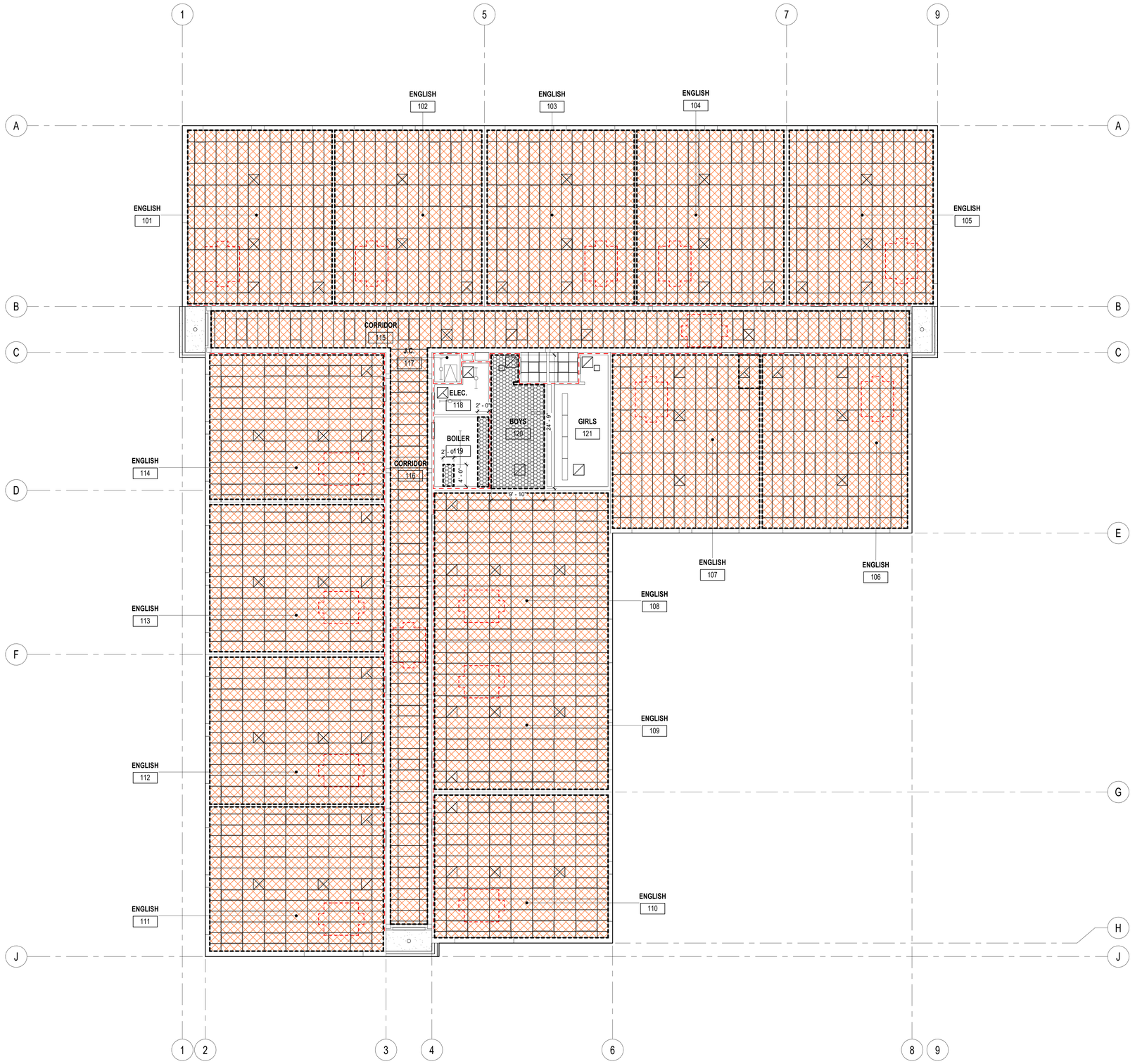
SITE PLAN

DRAWING NUMBER: **A1.1**



REFERENCE NOTES

KEYNOTE	DESCRIPTION
1.	CLEAN BOILER ROOM 119 INCLUDING ALL REMAINING ITEMS. SCRUB FLOOR, WALLS, CEILING W/ TSP, THEN WIPE DOWN EVERYTHING WITH A CLEAN DAMP RAG. PATCH ALL HOLES IN WALLS AND CEILINGS, TEXTURE, PRIME AND PAINT ENTIRE ROOM.

1-HR RATED WALL

DEMO **TYPE 2A**: REMOVE ENTIRE ACCOUSTICAL CEILING TILES AND GRID. REMOVE ALL EXISTING HANGER WIRES, SPLAY WIRES, COMPRESSION POSTS. CONTRACTOR SHALL MAKE NOTE OF THE EXISITNG GRID SPACING CURENLY IN ROOM, AND INSTALL NEW ACT CEILING AT THE SAME GRID INTERVALS - UNLESS NOTED OTHERWISE ON CEILING PLAN. RECYCLE ALL CEILING TILES. KEEP ALL ELECTRICAL ITEMS IN WORKING ORDER, INCLUDING LIGHT FIXTURES, FIRE DEVICES, DATA AND ALL OTHER ITEMS. PROVIDE TEMPORARY SUPPORT AS NEEDED. REMOVE ALL MECHANICAL SUPPLY AND RETURN GRILLS PER MECHANICAL SHEETS.

GYPSUM BOARD TYP.. (THIS DOES NOT SHOW GLUE UP TILES. SEE PLAN FOR LOCATION THAT HAVE THOSE TYPICAL)

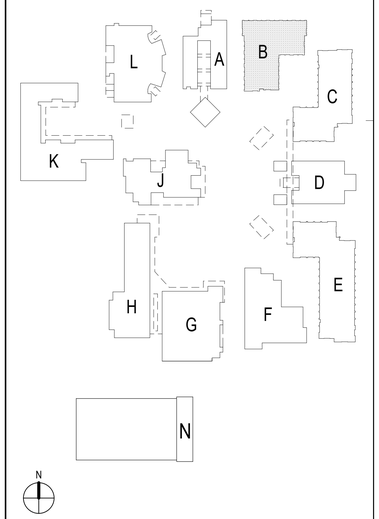
DEMO **TYPE 4**: REMOVE EXISTING GYPSUM BOARD FROM SUSPENDED METAL CEILING. (WHERE OCCURS: REMOVE GLUE UP TILES AS NOTED ON DEMO PLAN OR NOTES BELOW.) SEE DETAIL -/- FOR EXISTING FRAMING CONDITION. NEATLY CUT GYPSUM ON HAT CHANNEL TYPICAL. IF CUT LINE OCCURS WITHIN 6" OF GYP. BRD. SEAM, REMOVE GYP. BOARD TO SEAM TYP.

REMOVE METAL HATCH AND ALL ASSOCIATED ITEMS

1. ALL CLASSROOMS HAVE A METAL HATCH LOCATED IN THE CEILINGS. THESE ITEMS ARE TO BE DEMOLISHED AS PART OF THE MECHANICAL ITEMS AND DISCARDED TYPICAL.

2. CONTRACTOR SHALL REMOVE ALL DEMOSTRATION MIRRORS WHERE OCCURS AND REINSTALL TO EXISTING SUPPORTS ONCE NEW CEILING IS INSTALLED.

LEGEND/NOTES



SITE KEY PLAN

DEMO CEILING PLAN - BLDG B | 1/8" = 1'-0" | 1

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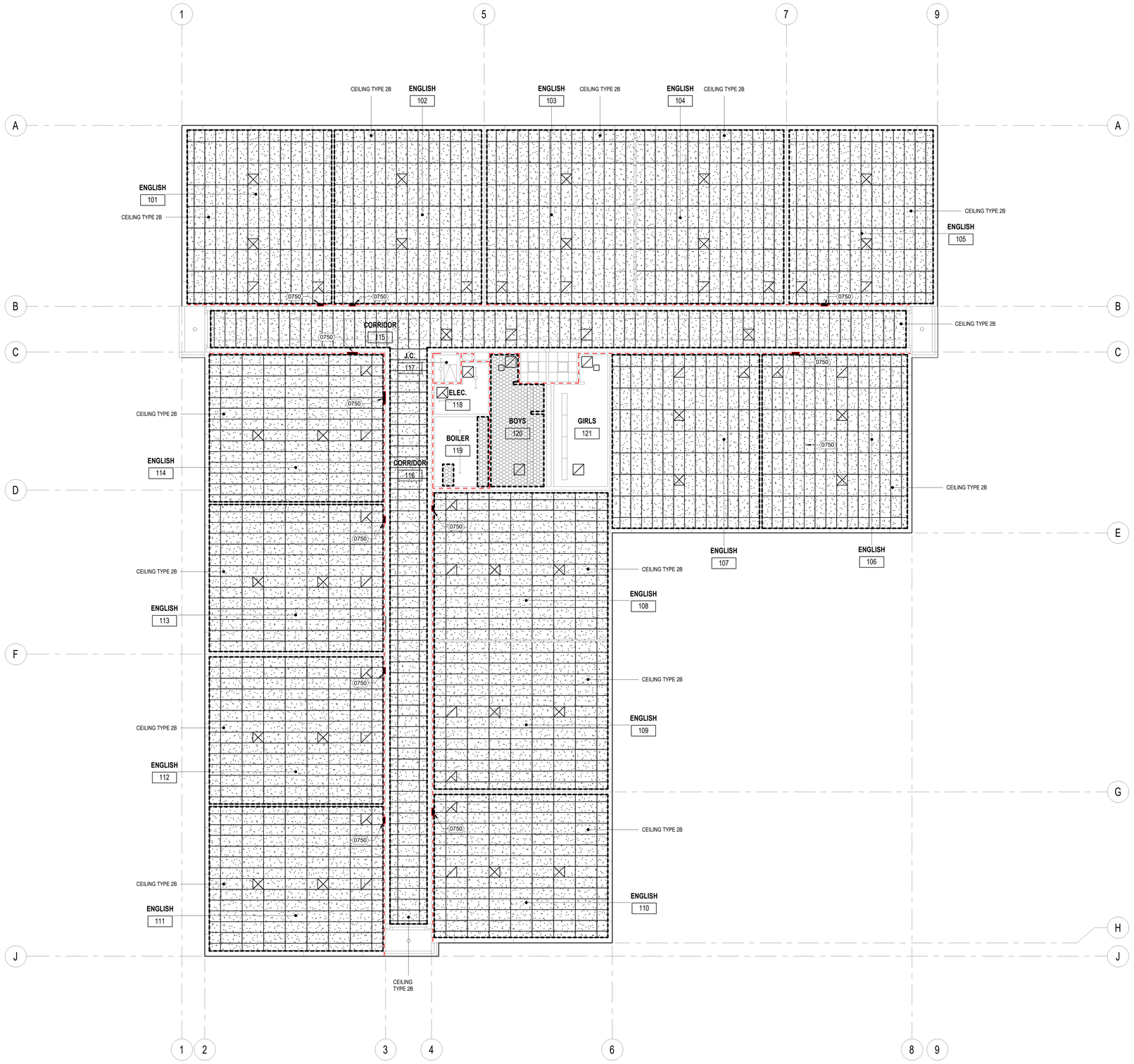
DEMO CEILING PLAN - BLDG B

DRAWING NUMBER: **AB3.0**



REFERENCE NOTES

KEYNOTE	DESCRIPTION
0750	EXISTING FIRE DAMPER OPENING TO BE FILLED IN PER DTL 5/7.1

1-HR RATED WALL

2-HR RATED WALL (WHERE APPLICABLE)

CEILING **TYPE 2A**: INSTALL NEW 2X4 OR 2X2 (SEE PLAN FOR LAYOUT) ACCOUSTICAL CEILING TILE AND GRID. REINSTALL ALL PREVIOUS ELECTRICAL ITEMS:LIGHTING, WAP, FIRE DEVICES, DATA DEVICES, OUTLETS, MISC. ELEC TYPICAL. INSTALL NEW SUPPLY AND RETURN GRILLS. INSTALL CEILING AT SAME HEIGHT AS BEFORE. SEE 9.2 FOR CEILING REQUIREMENTS.

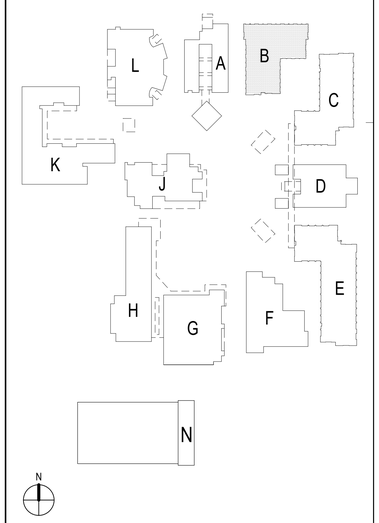
CEILING **TYPE 4**: REINSTALL NEW GYPSUM BOARD ON EXISTING SUSPENDED GRID, TAPE, MUD, TEXTURE, PRIME, AND PAINT TO MATCH EXISTING. REF DTL 14/9.2

FOR SPLICE DTL REF DTL 10/9.2

GYPSUM BOARD TYP.

COMPLETLY INFILL PREVIOUS FIRE DAMPER LOCATION PER 5/7.1

LEGEND



SITE KEY PLAN

NEW CEILING PLAN - BLDG B | 1/8" = 1'-0" | 1

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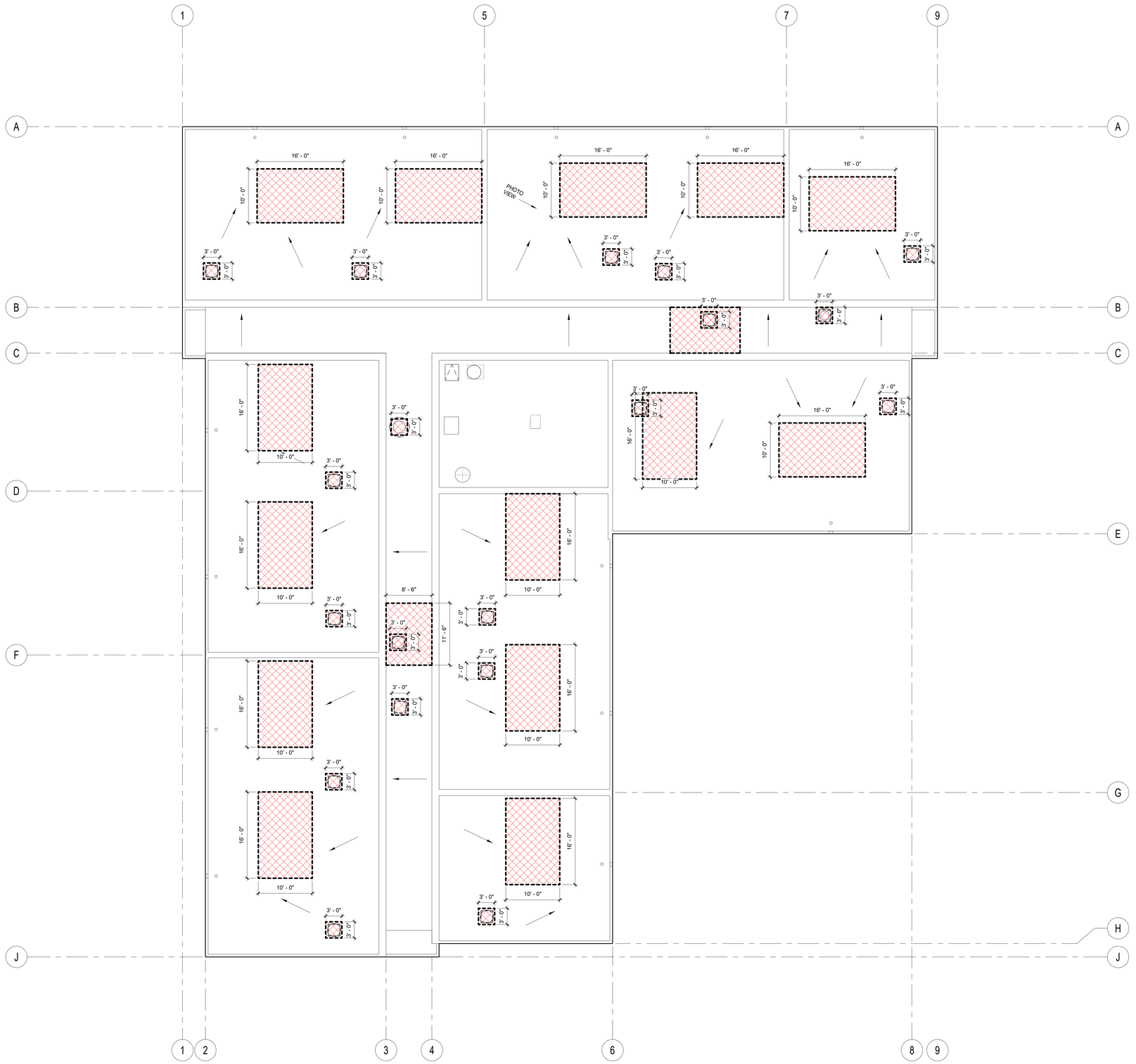
NEW CEILING PLAN - BLDG B

DRAWING NUMBER: **AB3.1**



REFERENCE NOTES

KEYNOTE	DESCRIPTION
1.	EXISTING ROOF IS A BUILT UP ROOF WITH GRAVEL AT MOST LOCATIONS. SEE SPECIFICATION FOR REPAIR REQUIREMENTS.

EXISTING WALKING MATS

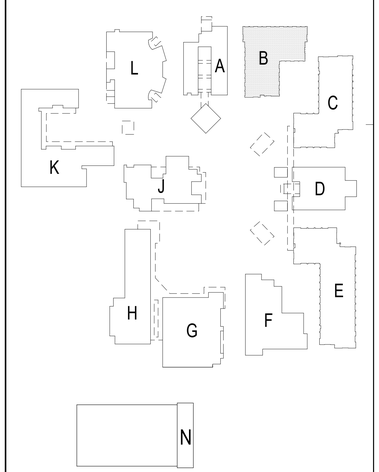
EXISTING EXHAUST FAN TO REMAIN AND PROTECT IN PLACE

DEMO **TYPE 1**: REMOVE ROOFING MATERIAL, SUBSTRATE, STRUCTURAL MEMEBERS AS SHOWN ON STRUCTURAL DRAWINGS, ROOF CURBS, WALKING MATS, AND FLASHINGS AS NEEDED TO ALLOW ACCESS TO PERFORM ALL REQUIRED WORK ON THE NEW UNITS. DEMOLITION SIZES SHOWN ON PLAN ARE APPROXIMATE. CONTRACTOR CAN DETERMINE IN FIELD WHAT IS REQUIRED TO COMPLETE EACH TASK. ANYTHING WITHIN THE HATCH IS TO BE DEMOLISHED WETHER IDENTIFIED OR NOT, EXCEPT THE STRUCTURAL SYSTEM. CUT HOLES IN ROOF AS NEEDED FOR DUCT OR PIPE PENETRATION, NOT SHOWN HERE. SEE MECHANICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

DEMO EXISTING EQUIPMENT TYP. WHERE OCCURS ON ROOF PLAN

1. EXISTING ROOF IS A BUILT UP SYSTEM OVER PLYWOOD

LEGEND / NOTES



SITE KEY PLAN

DEMO ROOF PLAN - BLDG B | 1/8" = 1'-0" | 1

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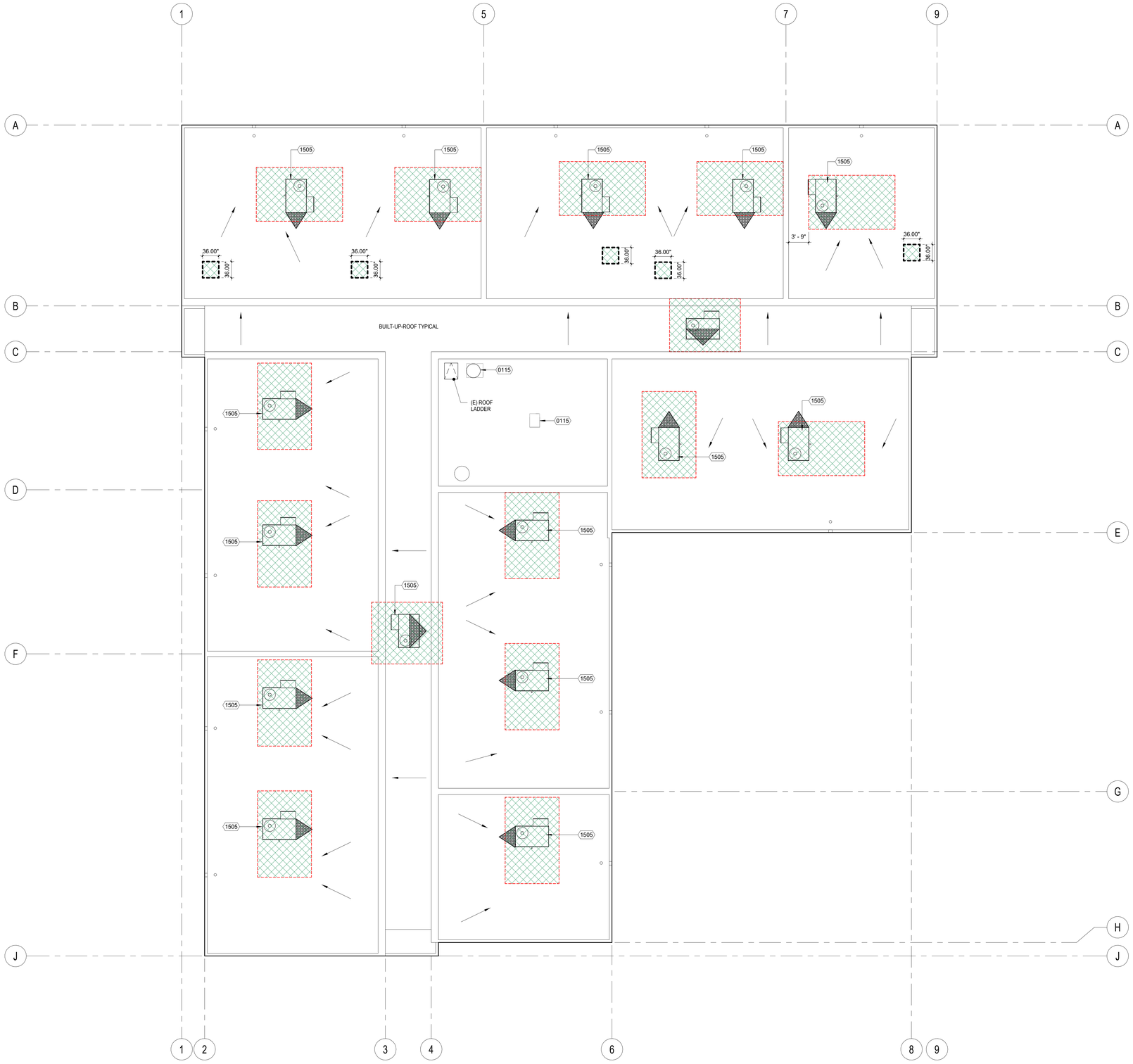
DEMO ROOF PLAN - BLDG B

DRAWING NUMBER: **AB4.0**



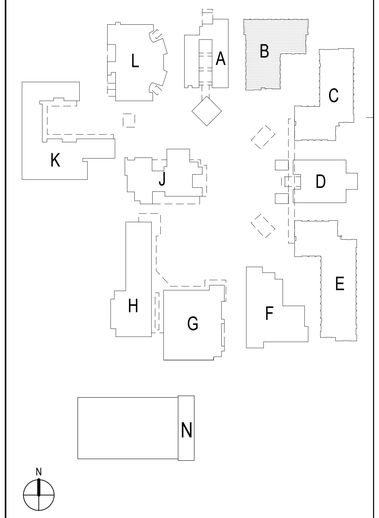
REFERENCE NOTES

KEYNOTE	DESCRIPTION
0115	(E) ROOF EXHAUST FAN TO REMAIN AND PROTECT IN PLACE
1505	(N) MECH CURB, SEE STRUCT DWGS & REF TO 1/7.1

PATCH BACK ROOFING MATERIAL PER DETAIL 12/7.1 AND SPECIFICATION. INFILL DECK PER 13/S0.3. PROVIDE RIGID INSULATION TO MATCH EXISTING

NEW AC UNIT, SEE MECHANICAL DRAWINGS FOR SPECIFIC INFORMATION ON EACH UNIT TYPICAL

LEGEND



SITE KEY PLAN

NEW ROOF PLAN - BLDG B | 1/8" = 1'-0" | 1

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NEW ROOF PLAN - BLDG B

DRAWING NUMBER: **AB4.1**

REFERENCE NOTES

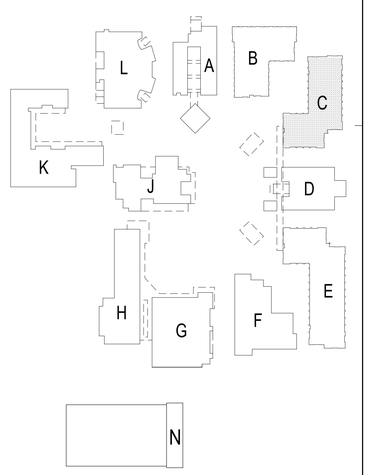
KEYNOTE	DESCRIPTION

1-HR RATED WALL

DEMO **TYPE 1**: REMOVE AND PROTECT ACCOUSTICAL CEILING TILES. REINSTALL UPON COMPLETION OF HVAC WORK. DO NOT TOUCH CEILING GRID. DO NOT REMOVE LIGHT FIXTURES TYPICAL.

REPAIR CEILING GRID WITH NEW T-BAR MEMBERS PER 9.2.& SPECIFICATIONS. INSTALL NINE (9) NEW CEILING TILES AT THESE LOCATIONS. TYP.

LEGEND



N

SITE KEY PLAN

DEMO CEILING PLAN - BLDG C - 1F | 1/8" = 1'-0" | 1

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DEMO FIRST FLOOR CEILING PLAN - BLDG C

DRAWING NUMBER: **AC3.0**

DEMO CEILING PLAN - BLDG C - 2F | 1/8" = 1'-0" | 1

REFERENCE NOTES

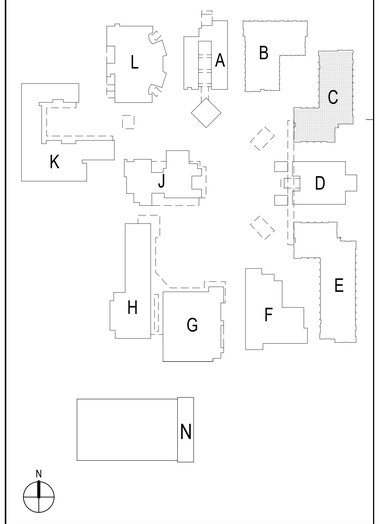
KEYNOTE	DESCRIPTION

1-HR RATED WALL

DEMO TYPE 1. REMOVE AND PROTECT ACCOUSTICAL CEILING TILES. REINSTALL UPON COMPLETION OF HVAC WORK. DO NOT TOUCH CEILING GRID. DO NOT REMOVE LIGHT FIXTURES TYPICAL.

REPAIR CEILING GRID WITH NEW T-BAR MEMBERS PER 9.2 & SPECIFICATIONS. INSTALL NINE (9) NEW CEILING TILES AT THESE LOCATIONS. TYP.

LEGEND



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DEMO SECOND FLOOR CEILING PLAN - BLDG C

DRAWING NUMBER: **AC3.1**

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REFERENCE NOTES

KEYNOTE	DESCRIPTION
1510	(N) MECH UNIT, SEE MECH DWGS

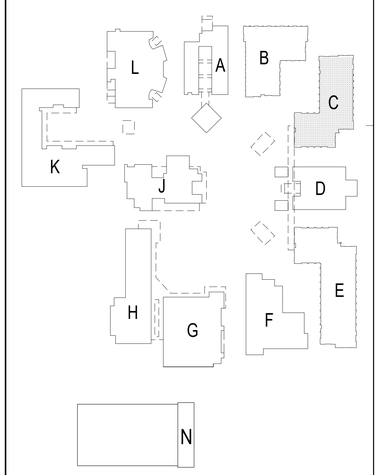
1-HR RATED WALL

2-HR RATED WALL

CEILING **TYPE 1**: REPLACE ALL CEILING TILES BACK TO THEIR ORIGINAL LOCATION. REPLACE ALL BROKEN TILES, WATER STAINED, CHIPPED, DENTED, AND SCRATCHED WITH NEW TILES OF SIMILAR PATTERN, TEXTURE, AND COLOR. FOR BID PURPOSES PROVIDE 8 NEW TILES PER ROOM

LIGHT FIXTURE TYP.

LEGEND



SITE KEY PLAN

NEW CEILING PLAN - BLDG C - 1F | 1/8" = 1'-0" | 1

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NEW FIRST FLOOR CEILING PLAN - BLDG C

DRAWING NUMBER: **AC3.2**

REFERENCE NOTES

KEYNOTE	DESCRIPTION
1510	(N) MECH UNIT, SEE MECH DWGS

NOTES:

1. FOR ROOM 215 ,ONCE ALL EQUIPMENT IS REMOVED, CLEAN ALL WALLS, FLOOR, AND CIELING WITH TSP. PATCH ALL HOLES & CRACKS, TEXTURE BACK WALLS & CEILINGS TO MATCH EXISTING. PRIME & PAINT ALL WALLS AND CEILINGS.

1-HR RATED WALL

2-HR RATED WALL (WHERE APPLICABLE)

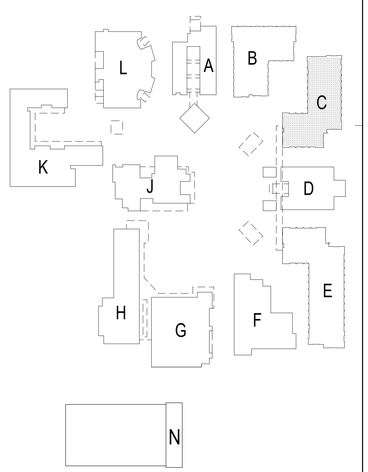
CEILING **TYPE 2A**: INSTALL NEW 2X4 OR 2X2 (SEE PLAN FOR LAYOUT) ACCOUSTICAL CEILING TILE AND GRID. REINSTALL ALL PREVIOUS ELECTRICAL ITEMS:LIGHTING, WAP, FIRE DEVICES, DATA DEVICES, OUTLETS, MISC. ELEC TYPICAL. INSTALL NEW SUPPLY AND RETURN GRILLS. INSTALL CEILING AT SAME HEIGHT AS BEFORE. SEE 9.2 FOR CEILING REQUIREMENTS.

CEILING **TYPE 4**: REINSTALL NEW GYPSUM BOARD ON EXISTING SUSPENDED GRID. TAPE, MUD, TEXTURE, PRIME, AND PAINT TO MATCH EXISTING. REF DTL 14/9.2

FOR SPLICE DTL REF DTL 10/9.2

GYPSUM BOARD TYP.

LEGEND



SITE KEY PLAN

NEW CEILING PLAN - BLDG C - 2F | 1/8" = 1'-0" | 1

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OXNARD HIGH SCHOOL HVAC ADDITION

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OXNARD, CA 93036

LICENSED ARCHITECT
MARK GRAHAM
C-26046
03-31-21
STATE OF CALIFORNIA

CONSULTANT

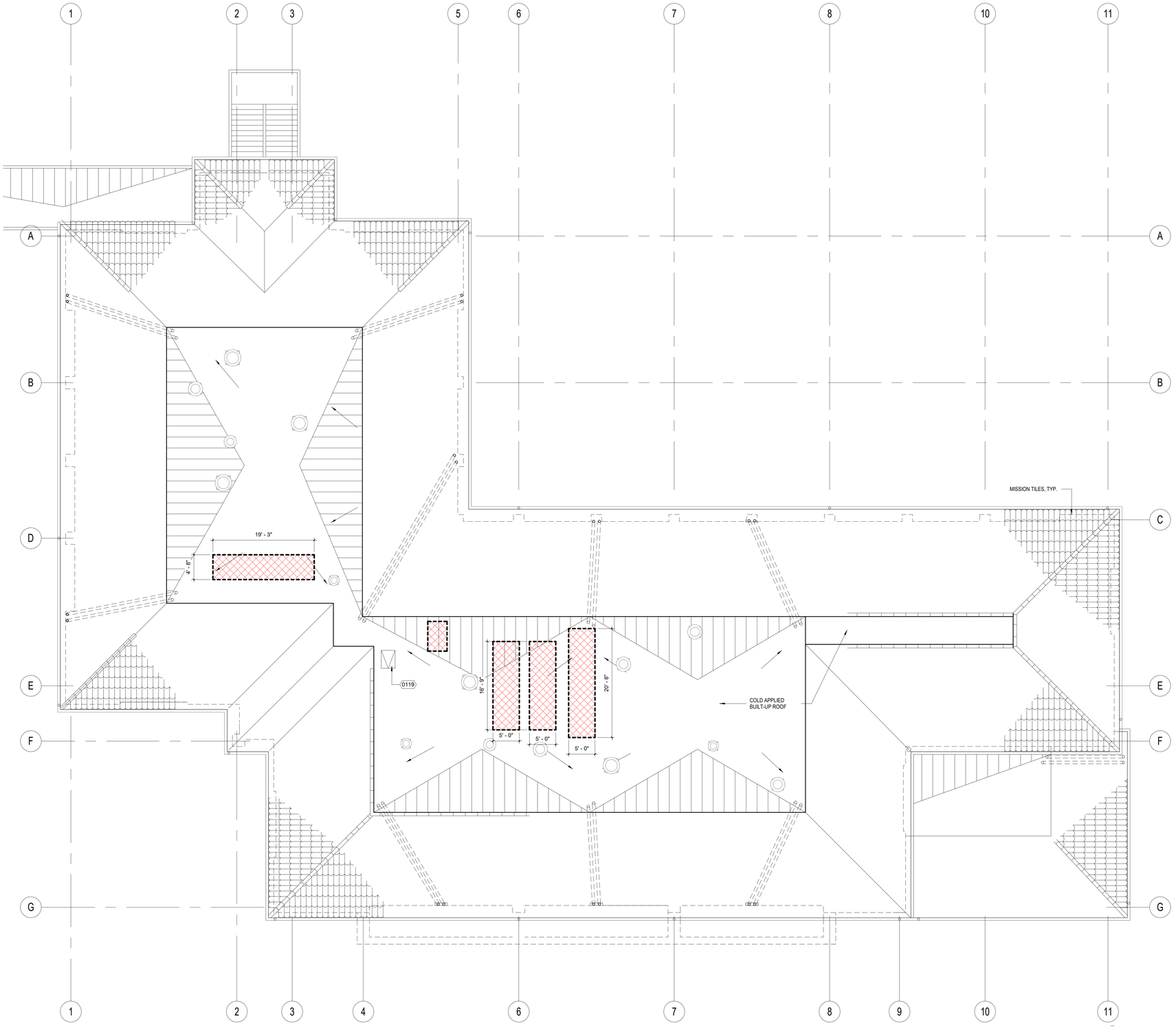
BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN: JY	CHECKED: SJ
DATE: 02/26/2020	SCALE: As indicated
PROJECT NUMBER: 1917000	

NEW SECOND FLOOR CEILING PLAN - BLDG C

DRAWING NUMBER: **AC3.3**



REFERENCE NOTES

KEYNOTE	DESCRIPTION
0119	(E) ROOF HATCH

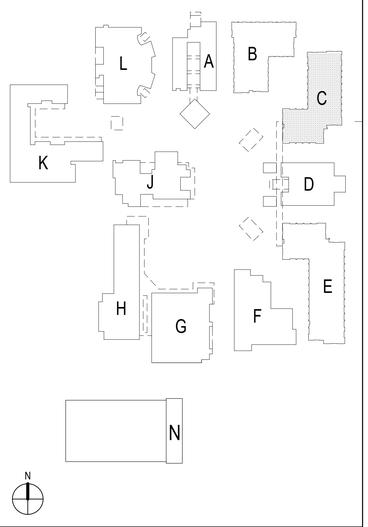
EXISTING WALKING MATS

EXISTING EXHAUST FAN TO REMAIN AND PROTECT IN PLACE

DEMO **TYPE 1**: REMOVE ROOFING MATERIAL, SUBSTRATE, STRUCTURAL MEMEBERS AS SHOWN ON STRUCTURAL DRAWINGS, ROOF CURBS, WALKING MATS, AND FLASHINGS AS NEEDED TO ALLOW ACCESS TO PERFORM ALL REQUIRED WORK ON THE NEW UNITS. DEMOLITION SIZES SHOWN ON PLAN ARE APPROXIMATE, CONTRACTOR CAN DETERMINE IN FIELD WHAT IS REQUIRED TO COMPLETE EACH TASK. ANYTHING WITHIN THE HATCH IS TO BE DEMOLISHED WETHER IDENTIFIED OR NOT, EXCEPT THE STRUCTURAL SYSTEM. CUT HOLES IN ROOF AS NEEDED FOR DUCT OR PIPE PENETRATION, NOT SHOWN HERE. SEE MECHANICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

DEMO EXISTING EQUIPMENT TYP. WHERE OCCURS ON ROOF PLAN

LEGEND



N

SITE KEY PLAN

DEMO ROOF PLAN - BLDG C | 1/8" = 1'-0" | 1

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DEMO ROOF PLAN - BLDG C

DRAWING NUMBER: **AC4.0**

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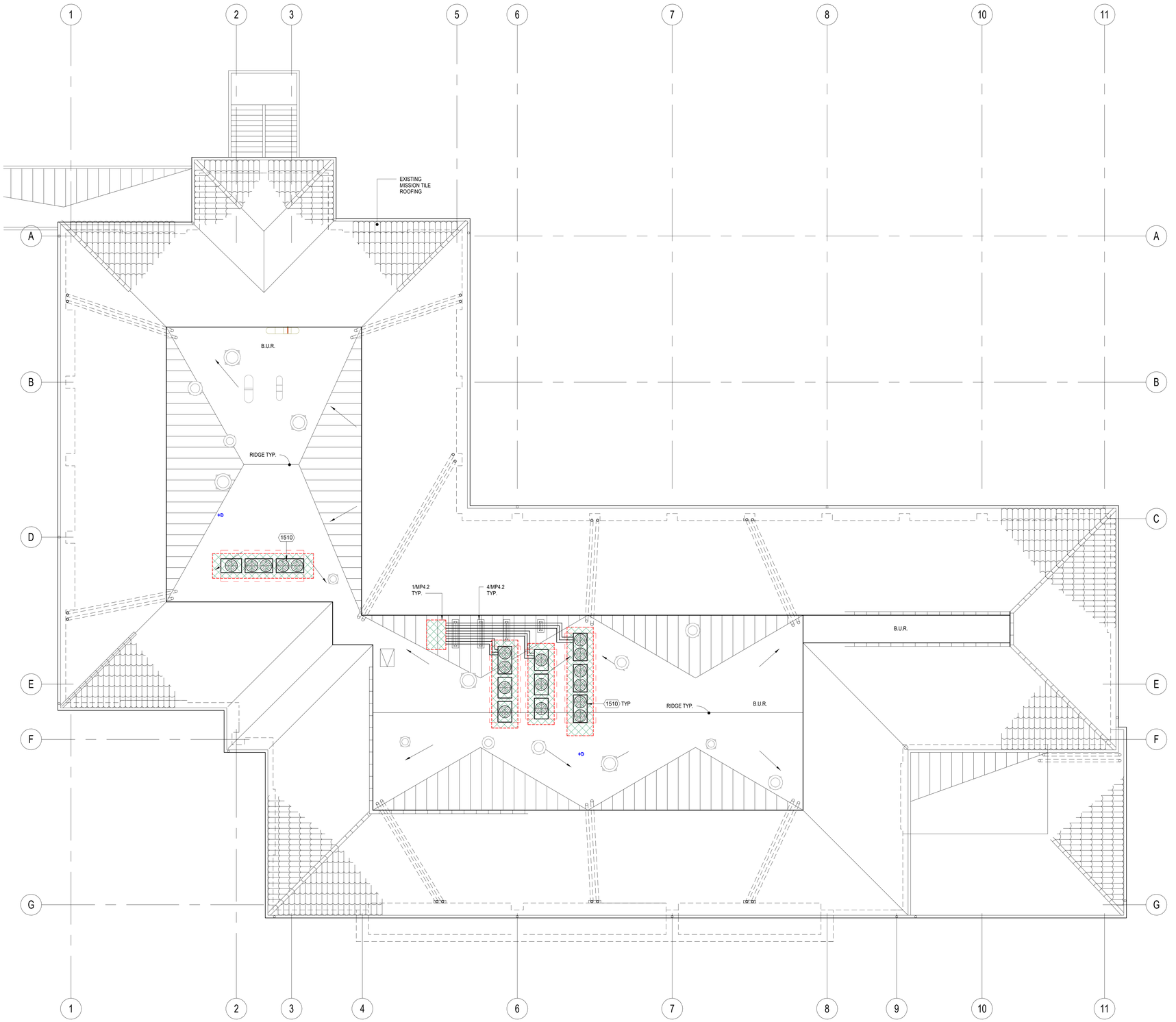


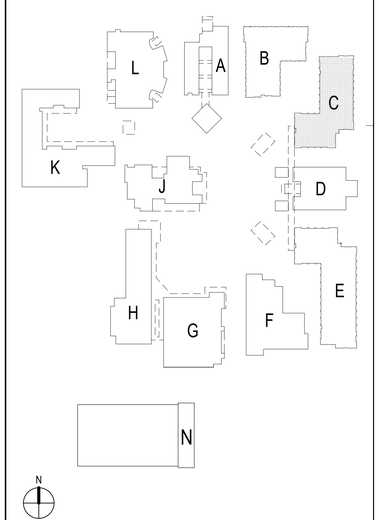
REFERENCE NOTES

KEYNOTE	DESCRIPTION
1510	(N) MECH UNIT, SEE MECH DWGS

PATCH BACK ROOFING MATERIAL PER DETAIL 12/7.1 AND SPECIFICATION. INFILL DECK PER 13/S0.3. PROVIDE RIGID INSULATION TO MATCH EXISTING

NEW AC UNIT, SEE MECHANICAL DRAWINGS FOR SPECIFIC INFORMATION ON EACH UNIT TYPICAL

LEGEND



SITE KEY PLAN

NEW ROOF PLAN - BLDG C | 1/8" = 1'-0" | 1

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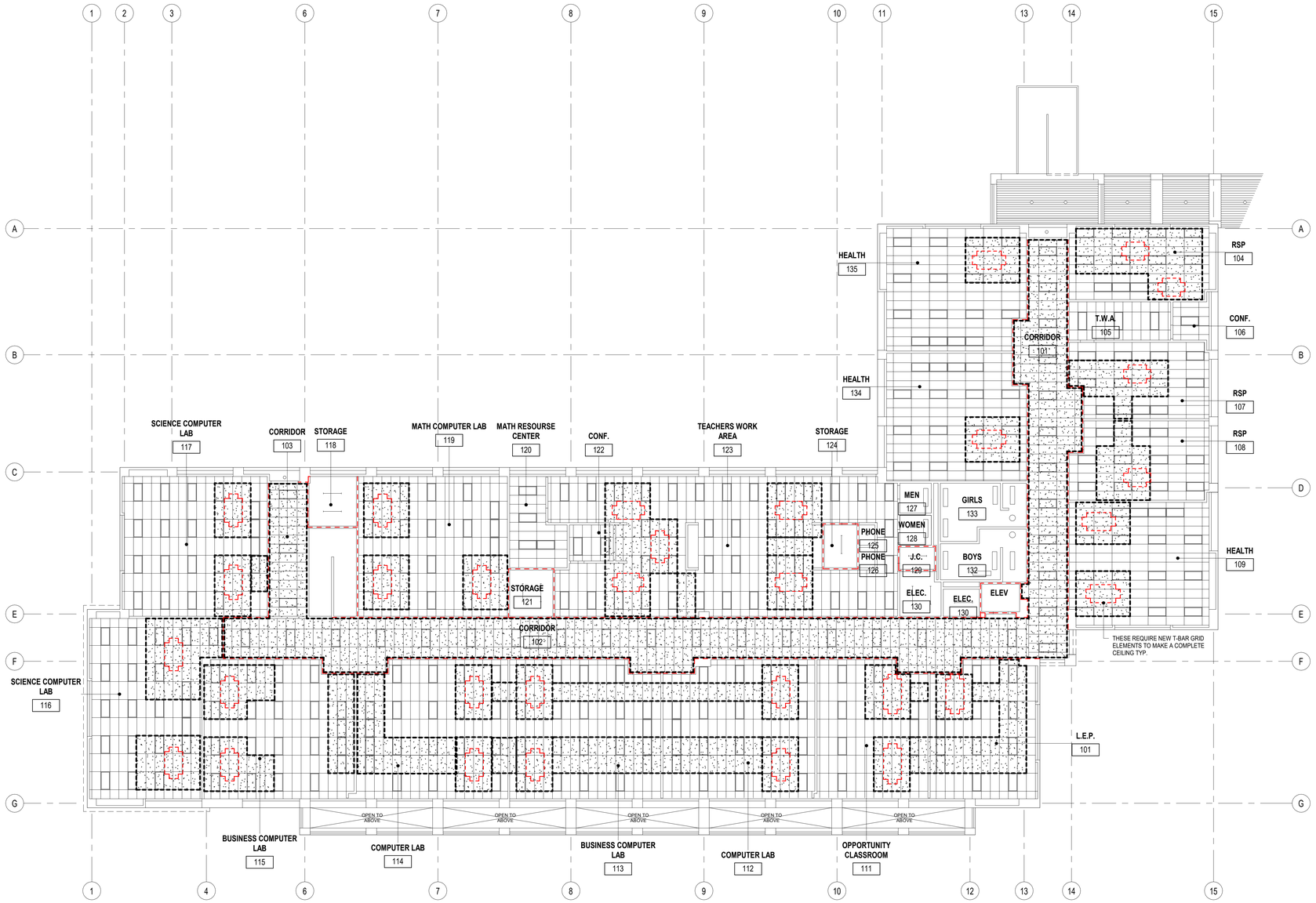
NEW ROOF PLAN - BLDG C

DRAWING NUMBER: **AC4.1**



DEMO CEILING PLAN - BLDG E - 1F | 3/32" = 1'-0" | 1

REFERENCE NOTES

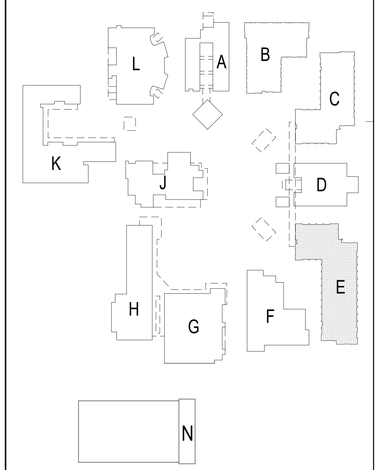
KEYNOTE	DESCRIPTION

1-HR RATED WALL

DEMO **TYPE 1**: REMOVE AND PROTECT ACCOUSTICAL CEILING TILES. REINSTALL UPON COMPLETION OF HVAC WORK. DO NOT TOUCH CEILING GRID. DO NOT REMOVE LIGHT FIXTURES TYPICAL.

REPAIR CEILING GRID WITH NEW T-BAR MEMBERS PER 9.2 & SPECIFICATIONS. INSTALL NINE (9) NEW CEILING TILES AT THESE LOCATIONS. TYP.

LEGEND



SITE KEY PLAN

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DEMO FIRST FLOOR CEILING PLAN - BLDG E

DRAWING NUMBER: **AE3.0**

DEMO CEILING PLAN - BLDG E - 2F | 3/32" = 1'-0" | 1

REFERENCE NOTES

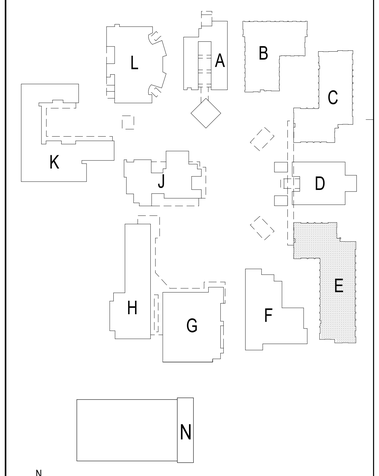
KEYNOTE	DESCRIPTION

1-HR RATED WALL

DEMO **TYPE 1**: REMOVE AND PROTECT ACCOUSTICAL CEILING TILES. REINSTALL UPON COMPLETION OF HVAC WORK. DO NOT TOUCH CEILING GRID. DO NOT REMOVE LIGHT FIXTURES TYPICAL.

REPAIR CEILING GRID WITH NEW T-BAR MEMBERS PER 9.2 & SPECIFICATIONS. INSTALL NINE (9) NEW CEILING TILES AT THESE LOCATIONS. TYP.

LEGEND



SITE KEY PLAN

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DEMO SECOND FLOOR CEILING PLAN - BLDG E

DRAWING NUMBER: **AE3.1**

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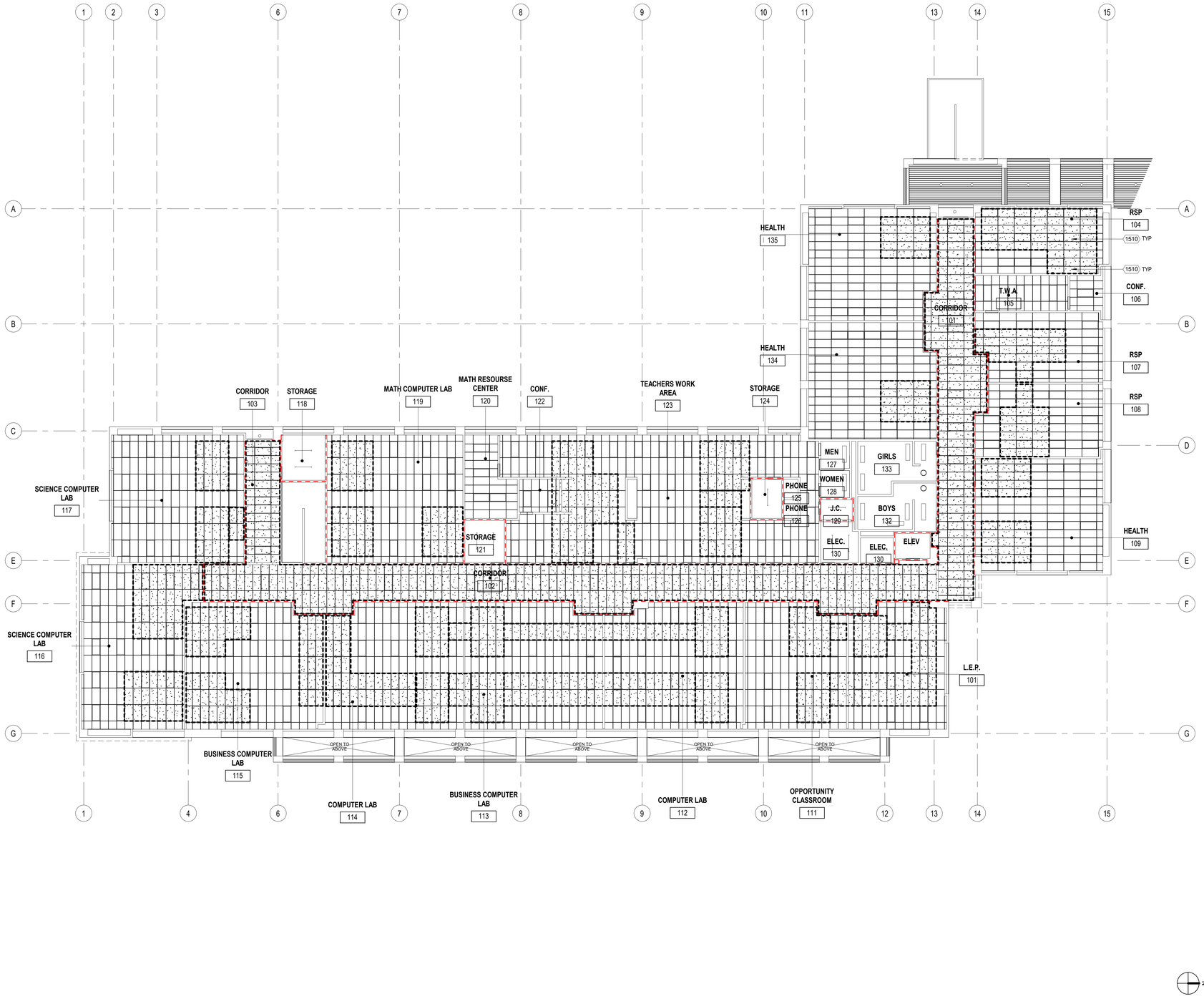


REFERENCE NOTES

KEYNOTE	DESCRIPTION
1510	(N) MECH UNIT, SEE MECH DWGS

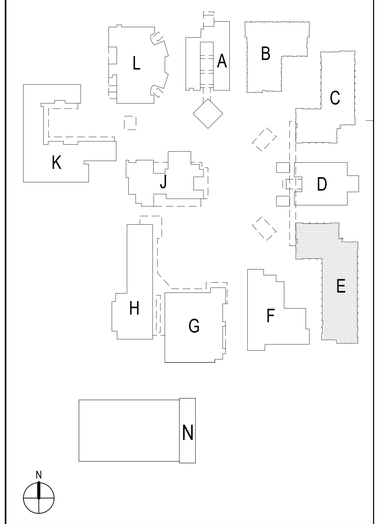
1-HR RATED WALL

2-HR RATED WALL

CEILING **TYPE 1**: REPLACE ALL CEILING TILES BACK TO THEIR ORIGINAL LOCATION. REPLACE ALL BROKEN TILES, WATER STAINED, CHIPPED, DENTED, AND SCRATCHED WITH NEW TILES OF SIMILAR PATTERN, TEXTURE, AND COLOR. FOR BID PURPOSES PROVIDE 8 NEW TILES PER ROOM

LIGHT FIXTURE TYP.

LEGEND



SITE KEY PLAN

NEW CEILING PLAN - BLDG E - 1F | 3/32" = 1'-0" | 1

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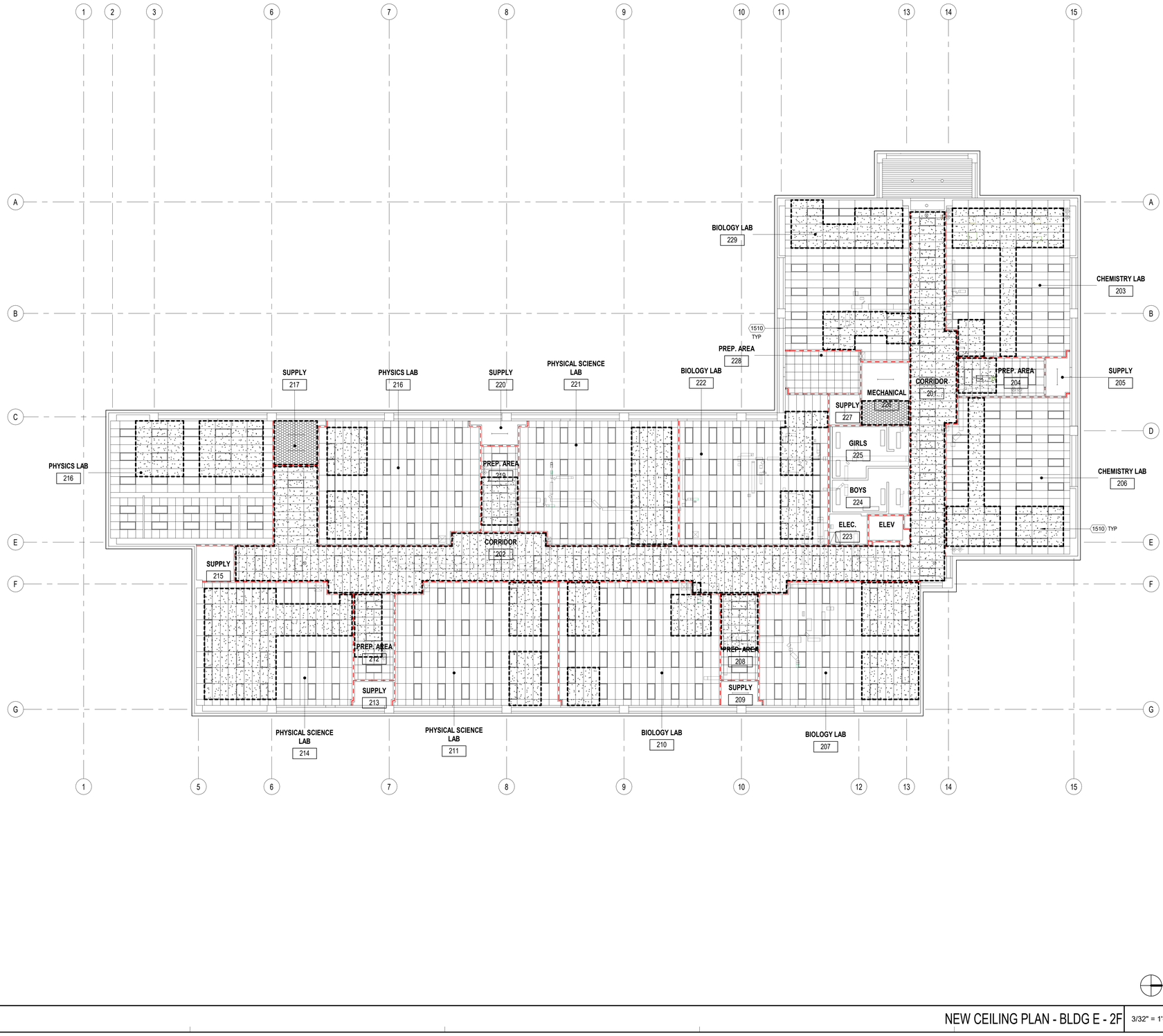
PROJECT NUMBER: 1917000	

NEW FIRST FLOOR CEILING PLAN - BLDG E

DRAWING NUMBER: **AE3.2**



REFERENCE NOTES

KEYNOTE	DESCRIPTION
1510	(N) MECH UNIT, SEE MECH DWGS

1-HR RATED WALL

2-HR RATED WALL

CEILING **TYPE 1**: REPLACE ALL CEILING TILES BACK TO THEIR ORIGINAL LOCATION. REPLACE ALL BROKEN TILES, WATER STAINED, CHIPPED, DENTED, AND SCRATCHED WITH NEW TILES OF SIMILAR PATTERN, TEXTURE, AND COLOR. FOR BID PURPOSES PROVIDE 8 NEW TILES PER ROOM

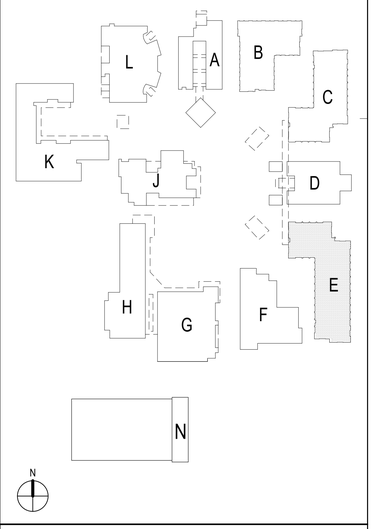
LIGHT FIXTURE TYP.

CEILING **TYPE 4**: REINSTALL NEW GYPSUM BOARD ON EXISTING SUSPENDED GRID. TAPE, MUD, TEXTURE, PRIME, AND PAINT TO MATCH EXISTING. REF DTL 14/9.2

FOR SPLICE DTL REF DTL 10/9.2

GYPSUM BOARD TYP.

LEGEND



SITE KEY PLAN

NEW CEILING PLAN - BLDG E - 2F | 3/32" = 1'-0" | 1

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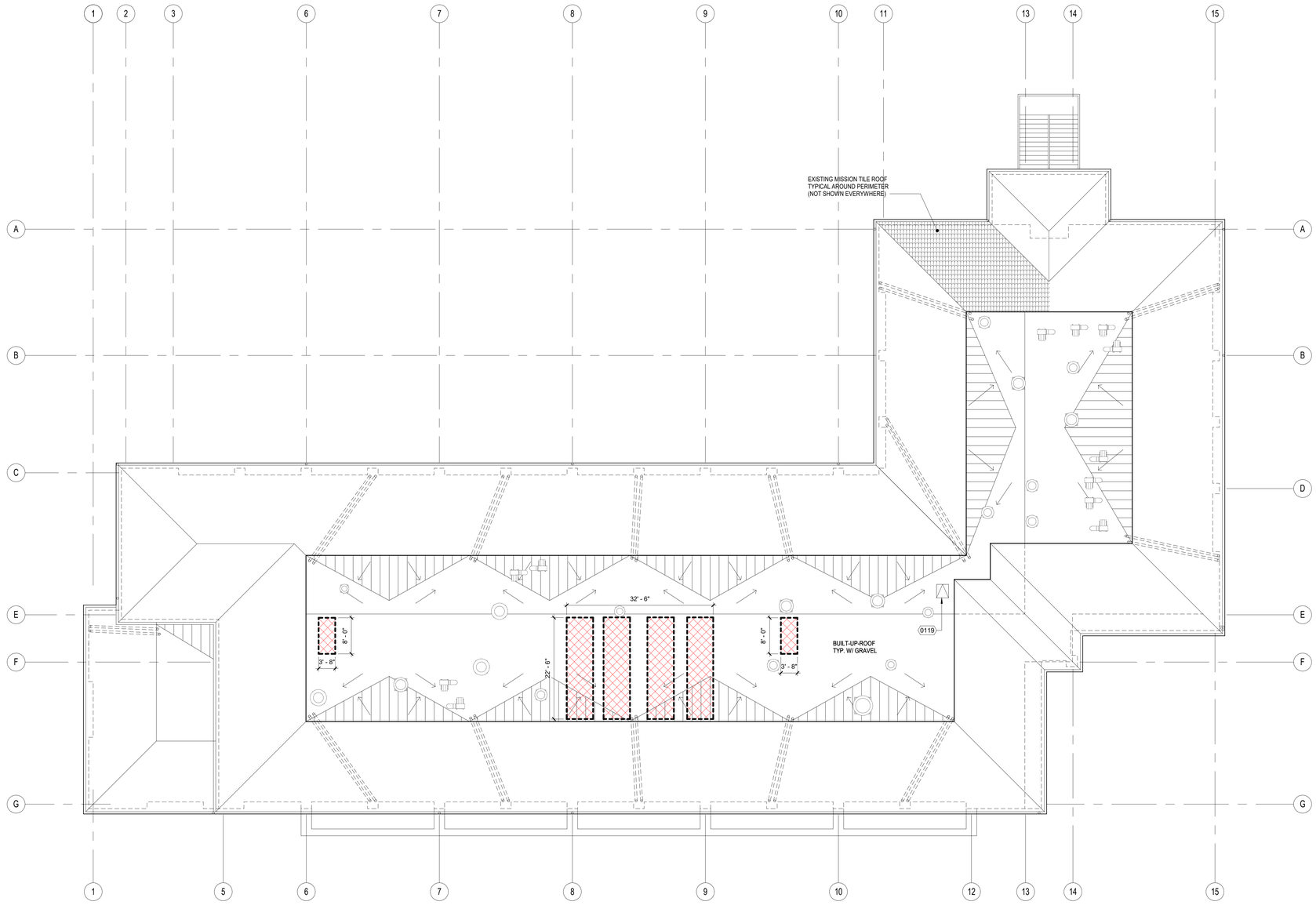
NEW SECOND FLOOR CEILING PLAN - BLDG E

DRAWING NUMBER: **AE3.3**



REFERENCE NOTES

KEYNOTE	DESCRIPTION

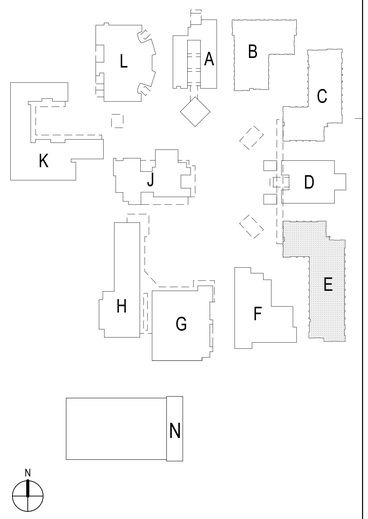
EXISTING WALKING MATS

EXISTING EXHAUST FAN TO REMAIN AND PROTECT IN PLACE

DEMO **TYPE 1**: REMOVE ROOFING MATERIAL, SUBSTRATE, STRUCTURAL MEMEBERS AS SHOWN ON STRUCTURAL DRAWINGS, ROOF CURBS, WALKING MATS, AND FLASHINGS AS NEEDED TO ALLOW ACCESS TO PERFORM ALL REQUIRED WORK ON THE NEW UNITS. DEMOLITION SIZES SHOWN ON PLAN ARE APPROXIMATE. CONTRACTOR CAN DETERMINE IN FIELD WHAT IS REQUIRED TO COMPLETE EACH TASK. ANYTHING WITHIN THE HATCH IS TO BE DEMOLISHED WETHER IDENTIFIED OR NOT, EXCEPT THE STRUCTURAL SYSTEM. CUT HOLES IN ROOF AS NEEDED FOR DUCT OR PIPE PENETRATION, NOT SHOWN HERE. SEE MECHANICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

DEMO EXISTING EQUIPMENT TYP. WHERE OCCURS ON ROOF PLAN

LEGEND



SITE KEY PLAN

DEMO ROOF PLAN - BLDG E | 3/32" = 1'-0" | 1

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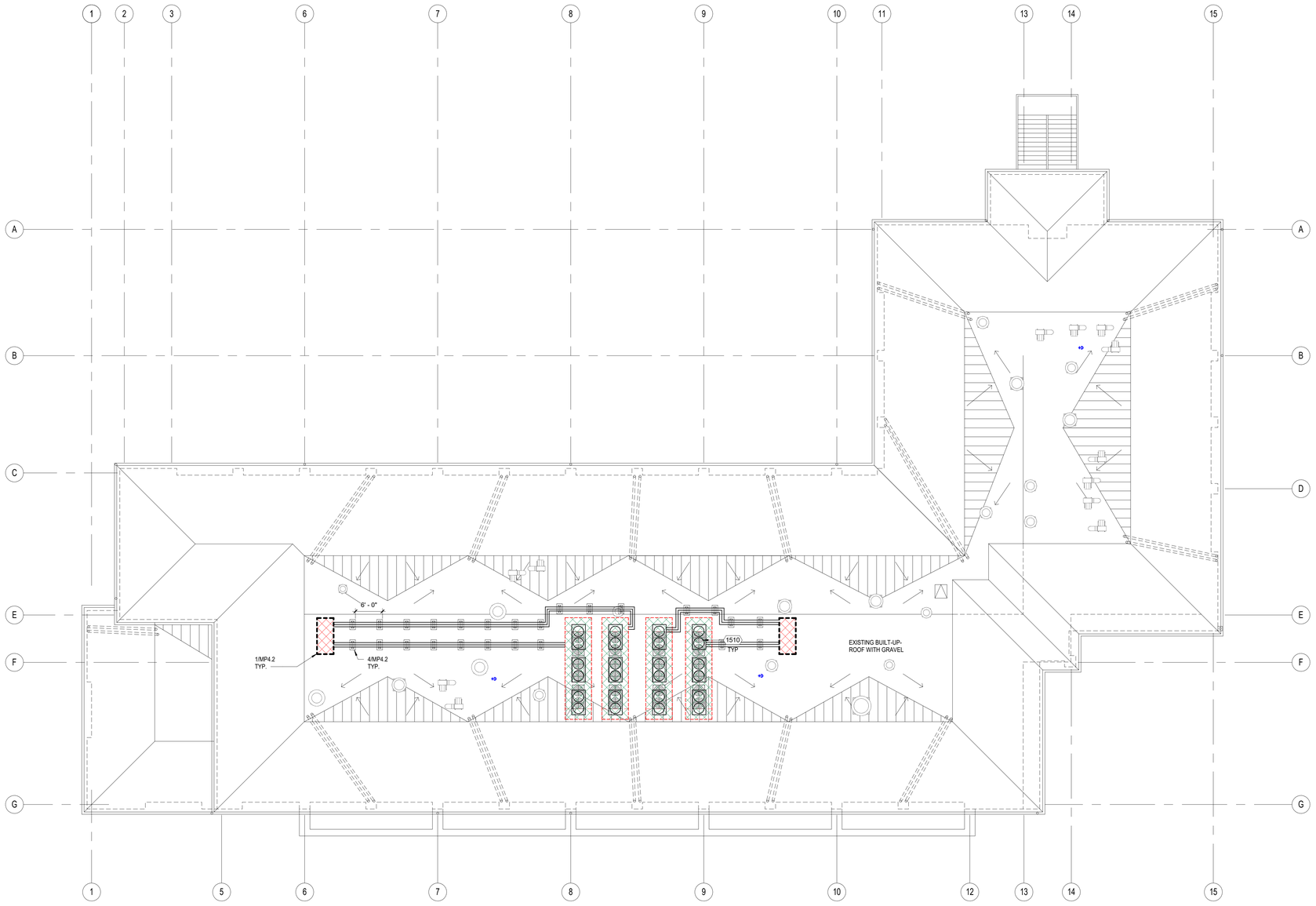
DEMO ROOF PLAN - BLDG E

DRAWING NUMBER: **AE4.0**



N

NEW ROOF PLAN - BLDG E | 3/32" = 1'-0" | 1

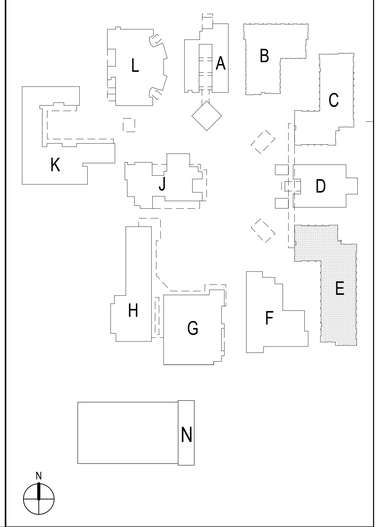
REFERENCE NOTES

KEYNOTE	DESCRIPTION
1510	(N) MECH UNIT, SEE MECH DWGS

PATCH BACK ROOFING MATERIAL PER DETAIL 12/7.1 AND SPECIFICATION. INFILL DECK PER 13/S0.3. PROVIDE RIGID INSULATION TO MATCH EXISTING

NEW AC UNIT, SEE MECHANICAL DRAWINGS FOR SPECIFIC INFORMATION ON EACH UNIT TYPICAL

LEGEND



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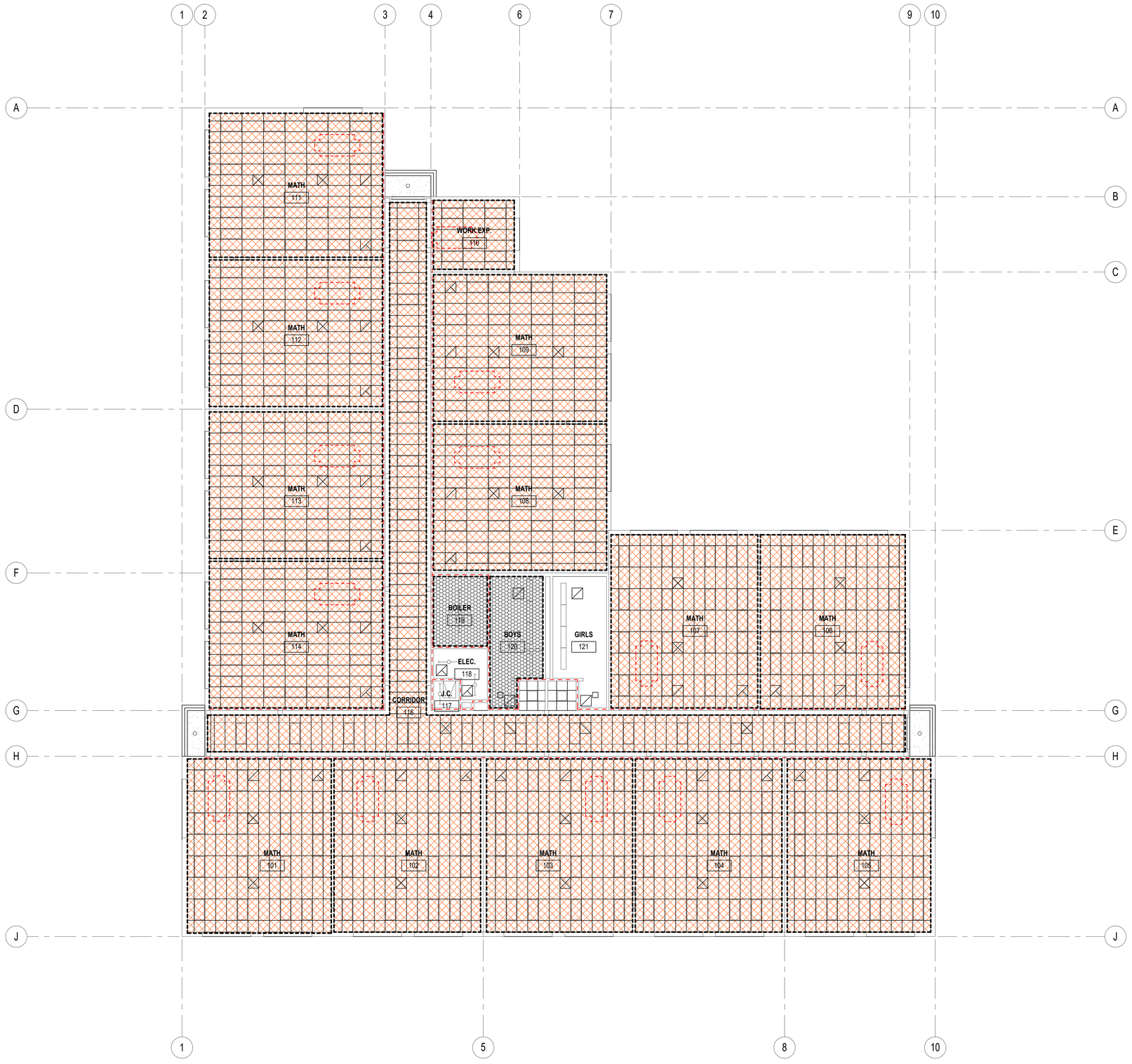
NEW ROOF PLAN - BLDG E

DRAWING NUMBER: **AE4.1**



DEMO CEILING PLAN - BLDG F | 1/8" = 1'-0" | 1

N

REFERENCE NOTES

KEYNOTE	DESCRIPTION

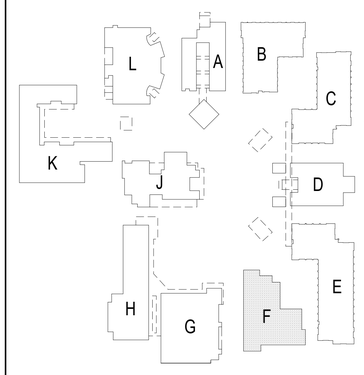
1-HR RATED WALL

DEMO **TYPE 2A**: REMOVE ENTIRE ACCOUSTICAL CEILING TILES AND GRID. REMOVE ALL EXISTING HANGER WIRES, SPLAY WIRES, COMPRESSION POSTS. CONTRACTOR SHALL MAKE NOTE OF THE EXISTING GRID SPACING CURENLY IN ROOM, AND INSTALL NEW ACT CEILING AT THE SAME GRID INTERVALS - UNLESS NOTED OTHERWISE ON CEILING PLAN. RECYCLE ALL CEILING TILES. KEEP ALL ELECTRICAL ITEMS IN WORKING ORDER, INCLUDING LIGHT FIXTURES, FIRE DEVICES, DATA AND ALL OTHER ITEMS. PROVIDE TEMPORARY SUPPORT AS NEEDED. REMOVE ALL MECHANICAL SUPPLY AND RETURN GRILLS PER MECHANICAL SHEETS.

GYPSUM BOARD TYP.. (THIS DOES NOT SHOW GLUE UP TILES. SEE PLAN FOR LOCATION THAT HAVE THOSE TYPICAL)

DEMO **TYPE 4**: REMOVE EXISTING GYPSUM BOARD FROM SUSPENDED METAL CEILING. (WHERE OCCURS: REMOVE GLUE UP TILES AS NOTED ON DEMO PLAN OR NOTES BELOW.) SEE DETAIL +/- FOR EXISTING FRAMING CONDITION. NEATLY CUT GYPSUM ON HAT CHANNEL TYPICAL. IF CUT LINE OCCURS WITHIN 8" OF GYP. BRD. SEAM, REMOVE GYP. BOARD TO SEAM TYP.

LEGEND



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OXNARD, CA 93036

LICENSED ARCHITECT
MARK GRAHAM
C-26046
03-31-21
STATE OF CALIFORNIA

CONSULTANT

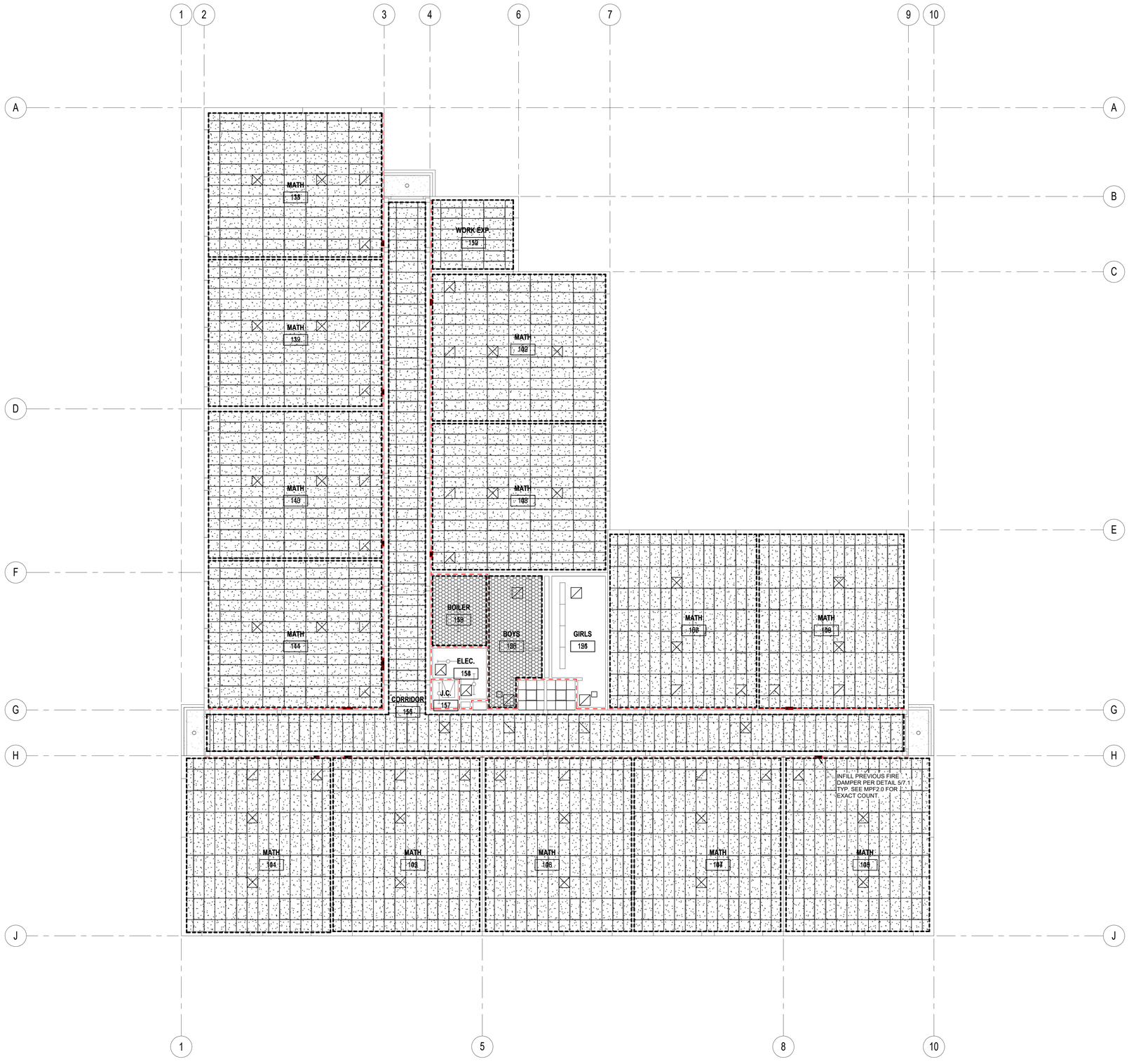
BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN: JY	CHECKED: SJ
DATE: 02/26/2020	SCALE: As indicated
PROJECT NUMBER: 1917000	

DEMO CEILING PLAN - BLDG F

DRAWING NUMBER: **AF3.0**



REFERENCE NOTES

KEYNOTE	DESCRIPTION

1-HR RATED WALL

2-HR RATED WALL (WHERE APPLICABLE)

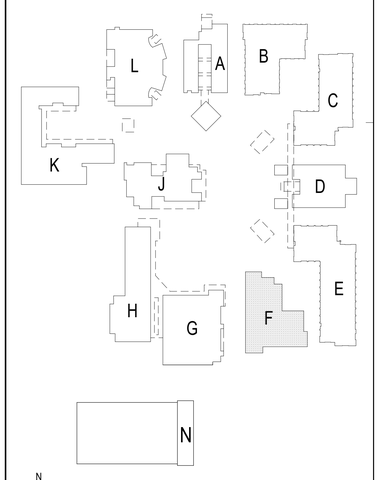
CEILING **TYPE 2A** INSTALL NEW 2X4 OR 2X2 (SEE PLAN FOR LAYOUT) ACCOUSTICAL CEILING TILE AND GRID. REINSTALL ALL PREVIOUS ELECTRICAL ITEMS:LIGHTING, WAP, FIRE DEVICES, DATA DEVICES, OUTLETS, MISC. ELEC TYPICAL. INSTALL NEW SUPPLY AND RETURN GRILLS. INSTALL CEILING AT SAME HEIGHT AS BEFORE. SEE 9.2 FOR CEILING REQUIREMENTS.

CEILING **TYPE 4** REINSTALL NEW GYPSUM BOARD ON EXISTING SUSPENDED GRID. TAPE, MUD, TEXTURE, PRIME, AND PAINT TO MATCH EXISTING. REF DTL 14/9.2

FOR SPLICE DTL REF DTL 10/9.2

GYPSUM BOARD TYP.

LEGEND



SITE KEY PLAN

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1			REVISIONS

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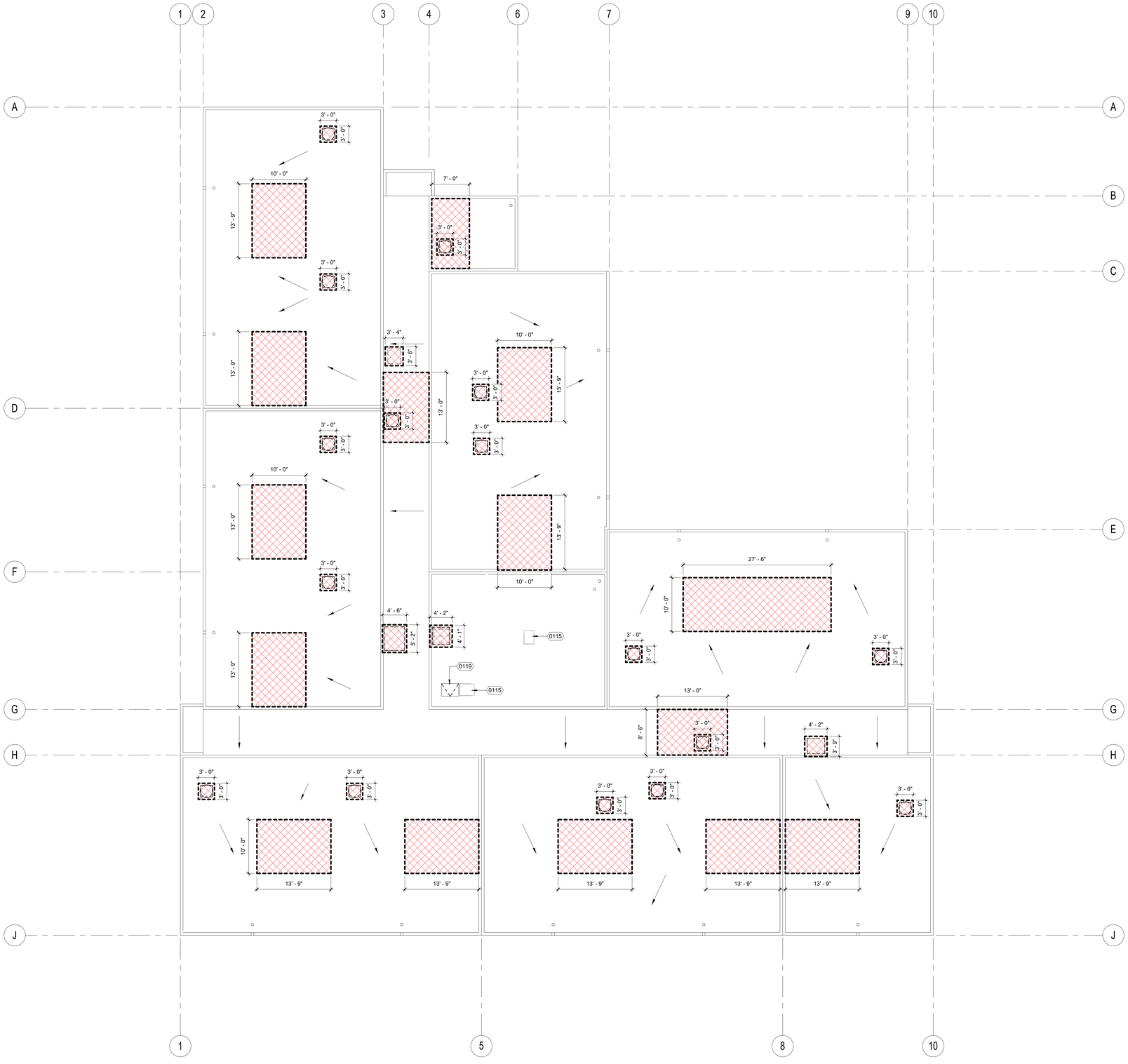
NEW CEILING PLAN - BLDG F

DRAWING NUMBER: **AF3.1**

NEW CEILING PLAN - BLDG F | 1/8" = 1'-0" | 1



REFERENCE NOTES

KEYNOTE	DESCRIPTION
0115	(E) ROOF EXHAUST FAN TO REMAIN AND PROTECT IN PLACE
0119	(E) ROOF HATCH

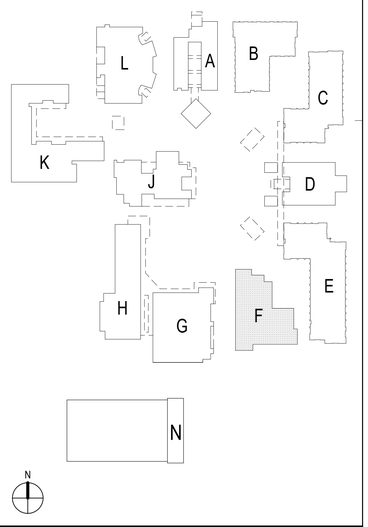
EXISTING WALKING MATS

EXISTING EXHAUST FAN TO REMAIN AND PROTECT IN PLACE

DEMO **TYPE 1**: REMOVE ROOFING MATERIAL, SUBSTRATE, STRUCTURAL MEMEBERS AS SHOWN ON STRUCTURAL DRAWINGS, ROOF CURBS, WALKING MATS, AND FLASHINGS AS NEEDED TO ALLOW ACCESS TO PERFORM ALL REQUIRED WORK ON THE NEW UNITS. DEMOLITION SIZES SHOWN ON PLAN ARE APPROXIMATE. CONTRACTOR CAN DETERMINE IN FIELD WHAT IS REQUIRED TO COMPLETE EACH TASK. ANYTHING WITHIN THE HATCH IS TO BE DEMOLISHED WETHER IDENTIFIED OR NOT, EXCEPT THE STRUCTURAL SYSTEM. CUT HOLES IN ROOF AS NEEDED FOR DUCT OR PIPE PENETRATION, NOT SHOWN HERE. SEE MECHANICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

DEMO EXISTING EQUIPMENT TYP. WHERE OCCURS ON ROOF PLAN

LEGEND



SITE KEY PLAN

DEMO ROOF PLAN - BLDG F | 1/8" = 1'-0" | 1

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DRAWN: JY	CHECKED: SJ
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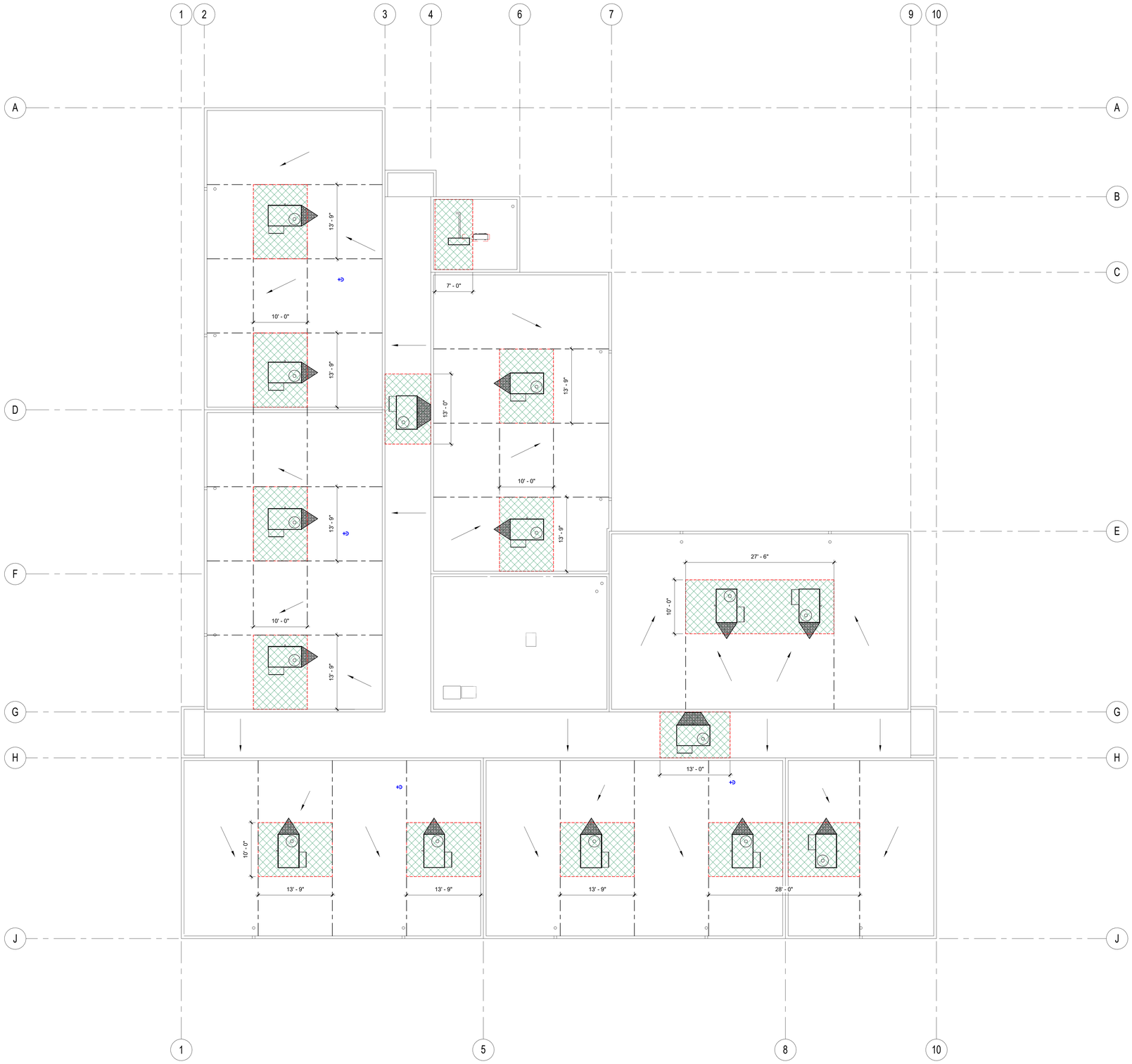
DEMO ROOF PLAN - BLDG F

DRAWING NUMBER: **AF4.0**



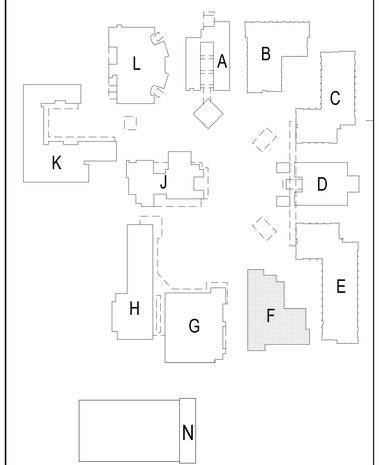
REFERENCE NOTES

KEYNOTE	DESCRIPTION

PATCH BACK ROOFING MATERIAL PER DETAIL 12/7.1 AND SPECIFICATION. INFILL DECK PER 13/S0.3. PROVIDE RIGID INSULATION TO MATCH EXISTING

NEW AC UNIT, SEE MECHANICAL DRAWINGS FOR SPECIFIC INFORMATION ON EACH UNIT TYPICAL

LEGEND



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NO	DATE	BY	DESCRIPTION
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NEW ROOF PLAN - BLDG F

DRAWING NUMBER: **AF4.1**

NEW ROOF PLAN - BLDG F | 1/8" = 1'-0" | 1

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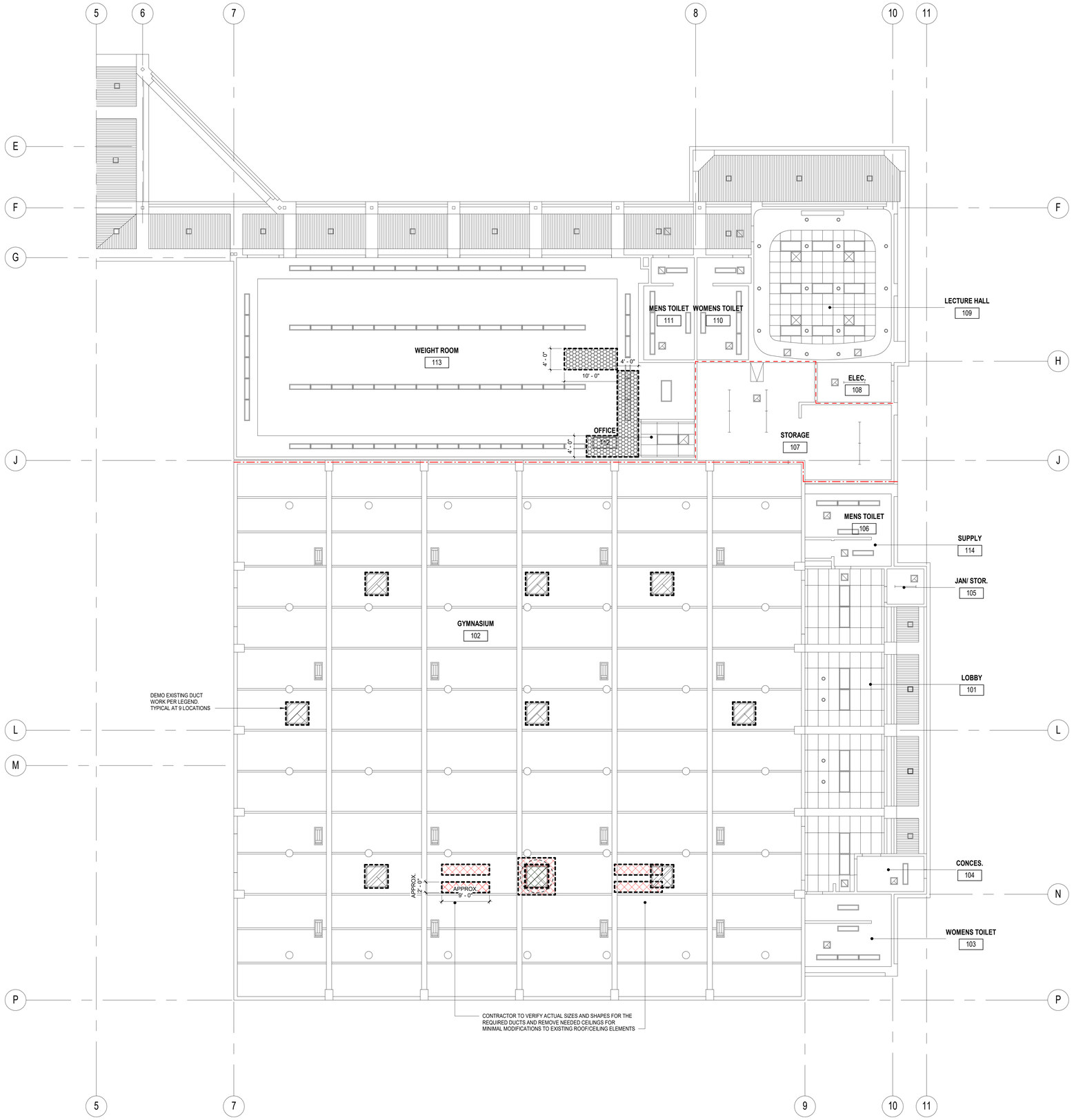


REFERENCE NOTES

KEYNOTE	DESCRIPTION

1-HR RATED WALL

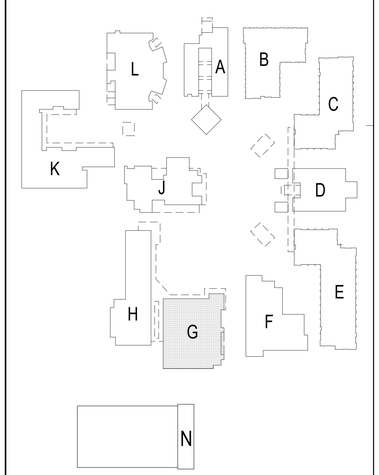
2-HR RATED WALL (WHERE APPLICABLE)

DEMO **TYPE 1**: REMOVE AND PROTECT ACCOUSTICAL CEILING TILES. REINSTALL UPON COMPLETION OF HVAC WORK. DO NOT TOUCH CEILING GRID. DO NOT REMOVE LIGHT FIXTURES TYPICAL.

GYPSUM BOARD TYP.. (THIS DOES NOT SHOW GLUE UP TILES. SEE PLAN FOR LOCATION THAT HAVE THOSE TYPICAL)

DEMO **TYPE 4**: REMOVE EXISTING GYPSUM BOARD FROM SUSPENDED METAL CEILING. (WHERE OCCURS: REMOVE GLUE UP TILES AS NOTED ON DEMO PLAN OR NOTES BELOW.) SEE DETAIL 10/9.2 FOR EXISTING FRAMING CONDITION. NEATLY CUT GYPSUM ON HAT CHANNEL TYPICAL. IF CUT LINE OCCURS WITHIN 6" OF GYP. BRD. SEAM, REMOVE GYP. BOARD TO SEAM TYP.

LEGEND



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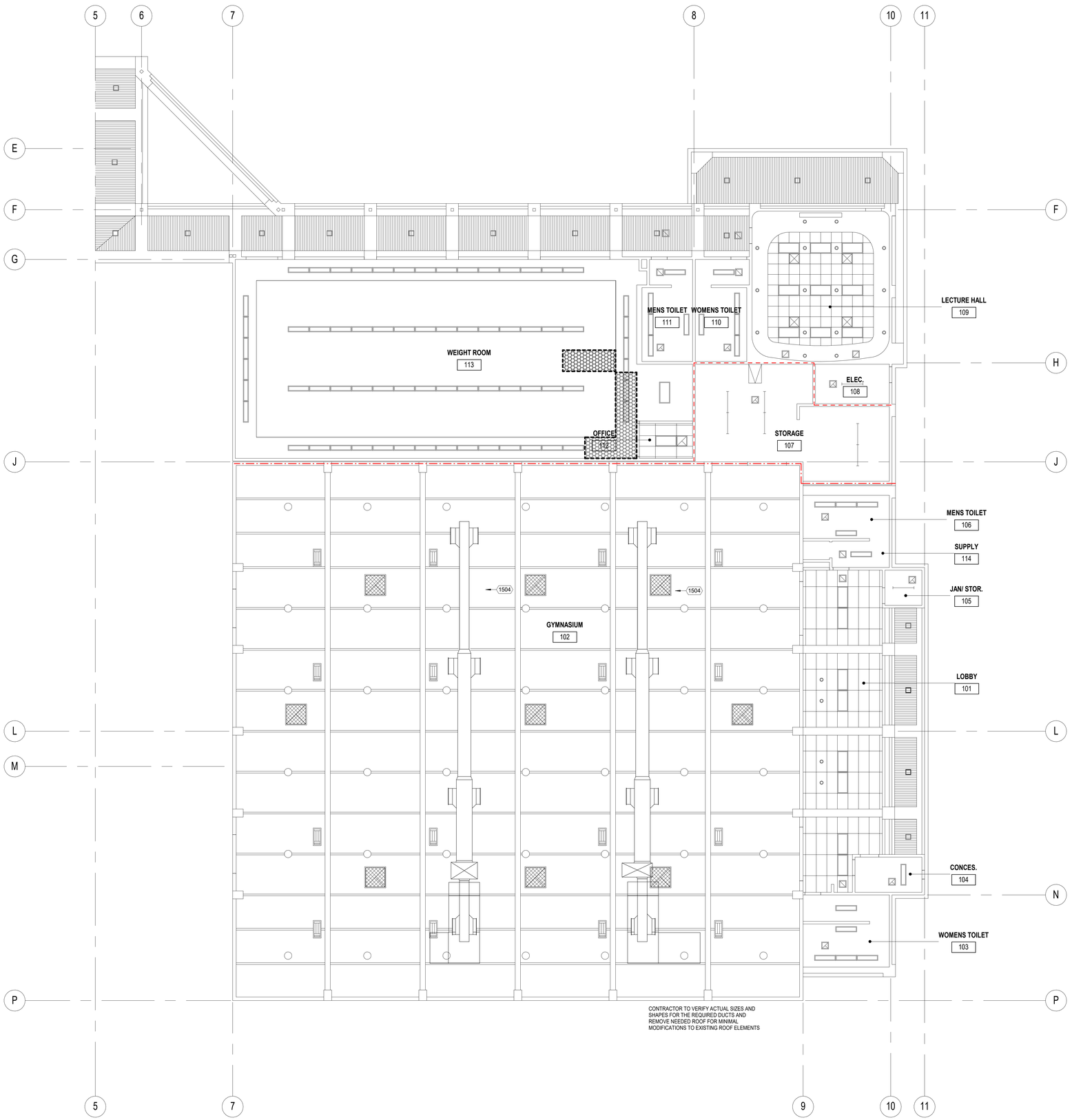
DEMO CEILING PLAN - BLDG G

DRAWING NUMBER: **AG3.0**

DEMO CEILING PLAN - BLDG G | 1/8" = 1'-0" | 1



REFERENCE NOTES

KEYNOTE	DESCRIPTION
1504	(N) DUCT SYSTEM, REF TO MECH DWGS, COLOR TO BE SELECTED BY ARCHITECT

1-HR RATED WALL

NEW ROOF INFILL. PATCH BACK ROOFING MATERIAL

CEILING TYPE 4 REINSTALL NEW GYPSUM BOARD ON EXISTING SUSPENDED GRID. TAPE, MUD, TEXTURE, PRIME, AND PAINT TO MATCH EXISTING. REF DTL 14/9.2

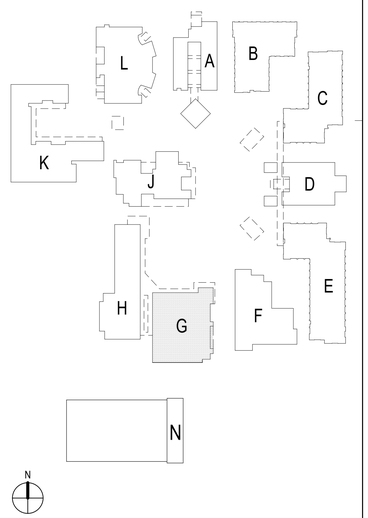
FOR SPLICE DTL REF DTL 10/9.2

GYPSUM BOARD TYP.

NOTES:

1. ALL (N) STEEL, MECHANICAL EQUIPMENT PIPES AND CONDUITS SHALL BE PRIMED AND PAINTED TO MATCH EXISTING COLOR.

LEGEND



SITE KEY PLAN

NEW CEILING PLAN - BLDG G | 1/8" = 1'-0" | 1

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DRAWN: JY	CHECKED: SJ
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PROJECT NUMBER: 1917000	

NEW CEILING PLAN - BLDG G

DRAWING NUMBER: **AG3.1**

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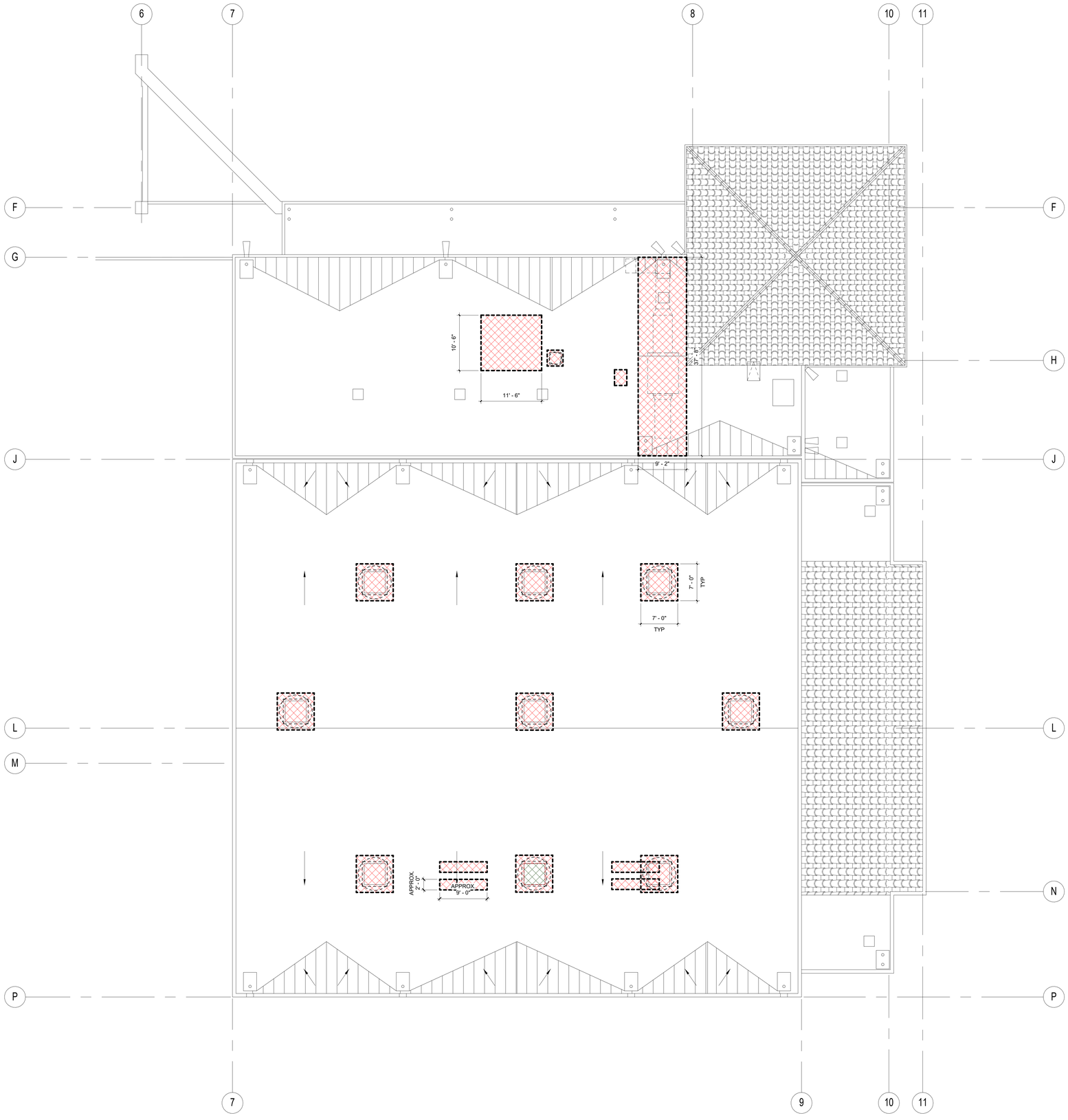


REFERENCE NOTES

KEYNOTE	DESCRIPTION
0104	DEMO (E) HVAC UNIT, SEE MECH DWGS
0115	(E) ROOF EXHAUST FAN TO REMAIN AND PROTECT IN PLACE
0116	(E) AIR HANDLING UNIT TO REMAIN AND PROTECT IN PLACE
0117	DEMO (E) DUCT SYSTEM, SEE MECH DWGS
0119	(E) ROOF HATCH
0120	(E) WALL MOUNTED EXHAUST FAN TO REMAIN AND PROTECT IN PLACE

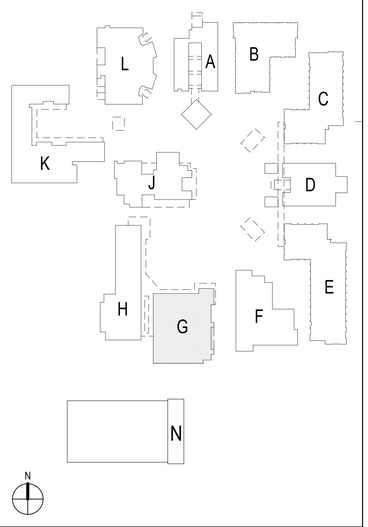
EXISTING WALKING MATS

EXISTING EXHAUST FAN TO REMAIN AND PROTECT IN PLACE

DEMO **TYPE 1**: REMOVE ROOFING MATERIAL, SUBSTRATE, STRUCTURAL MEMEBERS AS SHOWN ON STRUCTURAL DRAWINGS, ROOF CURBS, WALKING MATS, AND FLASHINGS AS NEEDED TO ALLOW ACCESS TO PERFORM ALL REQUIRED WORK ON THE NEW UNITS. DEMOLITION SIZES SHOWN ON PLAN ARE APPROXIMATE. CONTRACTOR CAN DETERMINE IN FIELD WHAT IS REQUIRED TO COMPLETE EACH TASK. ANYTHING WITHIN THE HATCH IS TO BE DEMOLISHED WETHER IDENTIFIED OR NOT, EXCEPT THE STRUCTURAL SYSTEM. CUT HOLES IN ROOF AS NEEDED FOR DUCT OR PIPE PENETRATION, NOT SHOWN HERE. SEE MECHANICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

DEMO EXISTING EQUIPMENT TYP. WHERE OCCURS ON ROOF PLAN

LEGEND



SITE KEY PLAN

DEMO ROOF PLAN - BLDG G | 1/8" = 1'-0" | 1

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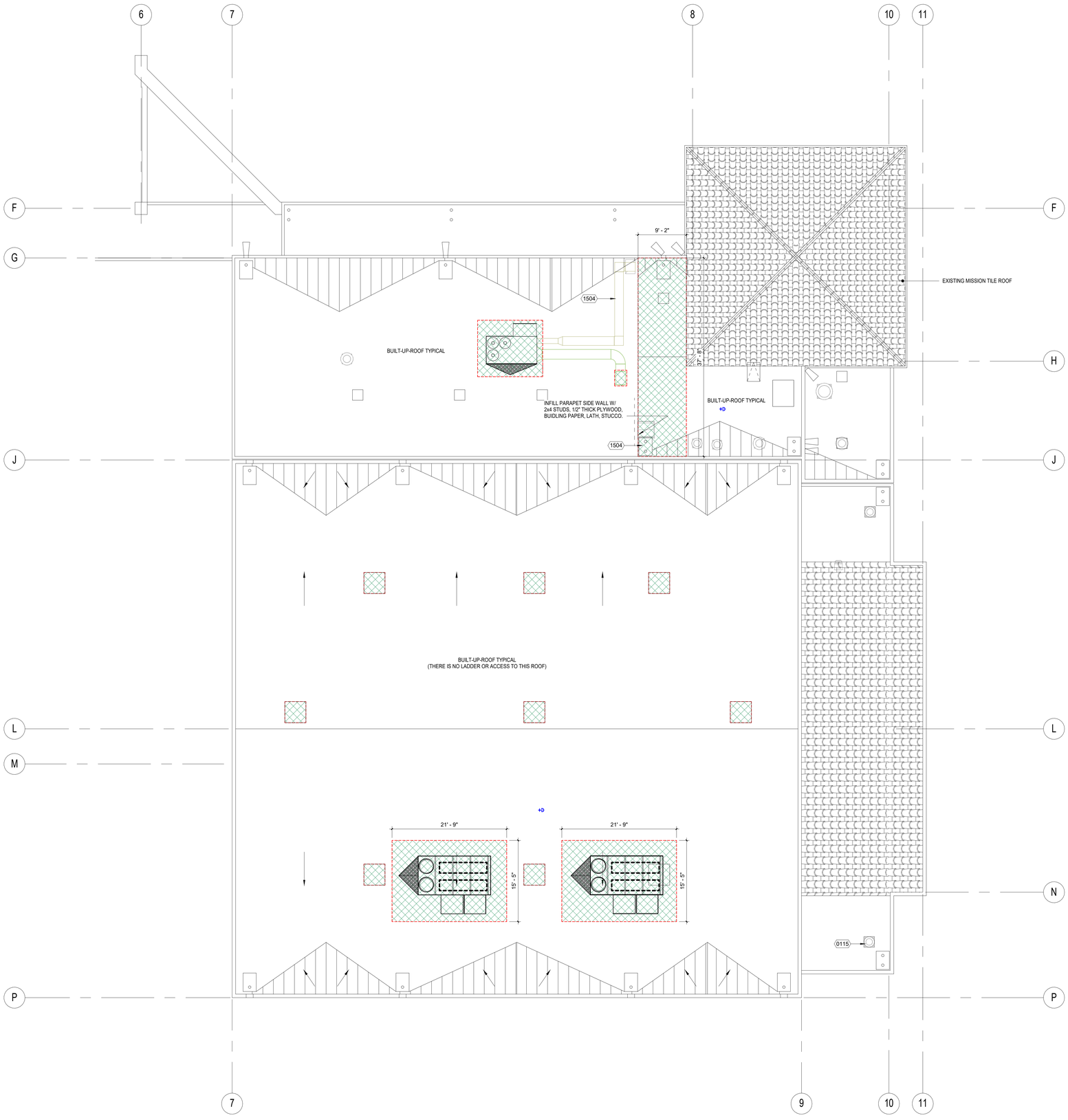
DEMO ROOF PLAN - BLDG G

DRAWING NUMBER: **AG4.0**



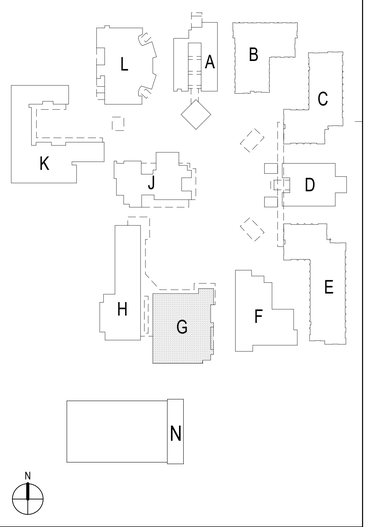
REFERENCE NOTES

KEYNOTE	DESCRIPTION
1504	(N) DUCT SYSTEM, REF TO MECH DWGS, COLOR TO BE SELECTED BY ARCHITECT

PATCH BACK ROOFING MATERIAL PER DETAIL 12/7.1 AND SPECIFICATION. INFILL DECK PER 13/S0.3. PROVIDE RIGID INSULATION TO MATCH EXISTING

NEW AC UNIT, SEE MECHANICAL DRAWINGS FOR SPECIFIC INFORMATION ON EACH UNIT TYPICAL

LEGEND



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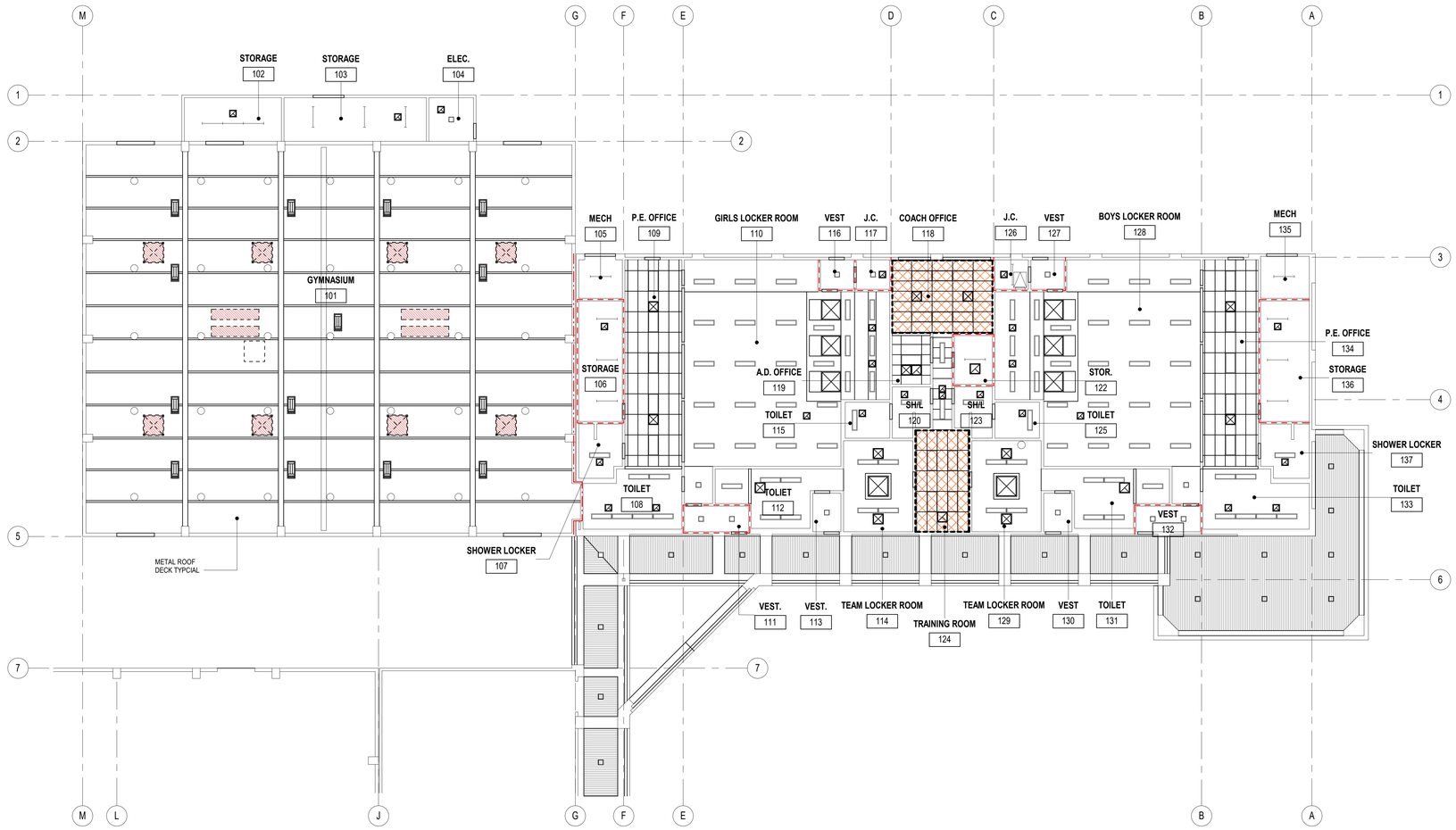
NEW ROOF PLAN - BLDG G

DRAWING NUMBER: **AG4.1**

NEW ROOF PLAN - BLDG G | 1/8" = 1'-0" | 1



REFERENCE NOTES

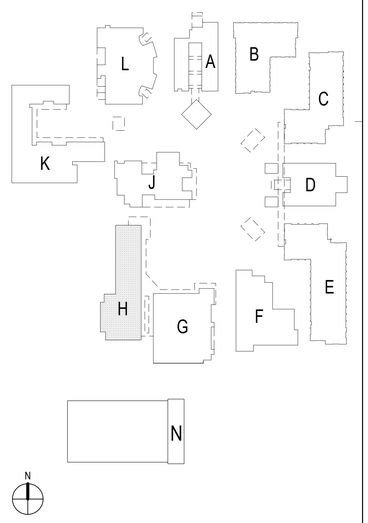
KEYNOTE	DESCRIPTION

1-HR RATED WALL

DEMO **TYPE 2A**: REMOVE ENTIRE ACCOUSTICAL CEILING TILES AND GRID. REMOVE ALL EXISTING HANGER WIRES, SPLAY WIRES, COMPRESSION POSTS. CONTRACTOR SHALL MAKE NOTE OF THE EXISITNG GRID SPACING CURENLY IN ROOM, AND INSTALL NEW ACT CEILING AT THE SAME GRID INTERVALS - UNLESS NOTED OTHERWISE ON CEILING PLAN. RECYCLE ALL CEILING TILES. KEEP ALL ELECTRICAL ITEMS IN WORKING ORDER, INCLUDING LIGHT FIXTURES, FIRE DEVICES, DATA AND ALL OTHER ITEMS. PROVIDE TEMPORARY SUPPORT AS NEEDED. REMOVE ALL MECHANICAL SUPPLY AND RETURN GRILLS PER MECHANICAL SHEETS.

REMOVE EXISTING SUPPLY/ RETURN, EXHAUST AIR GRILLE(S) AND PREP CEILING OPENING FOR NEW SUPPLY/RETURN GRILLES(S), SEE MECH DWG.

LEGEND



SITE KEY PLAN

DEMO CEILING PLAN - BLDG H | 3/32" = 1'-0" | 1

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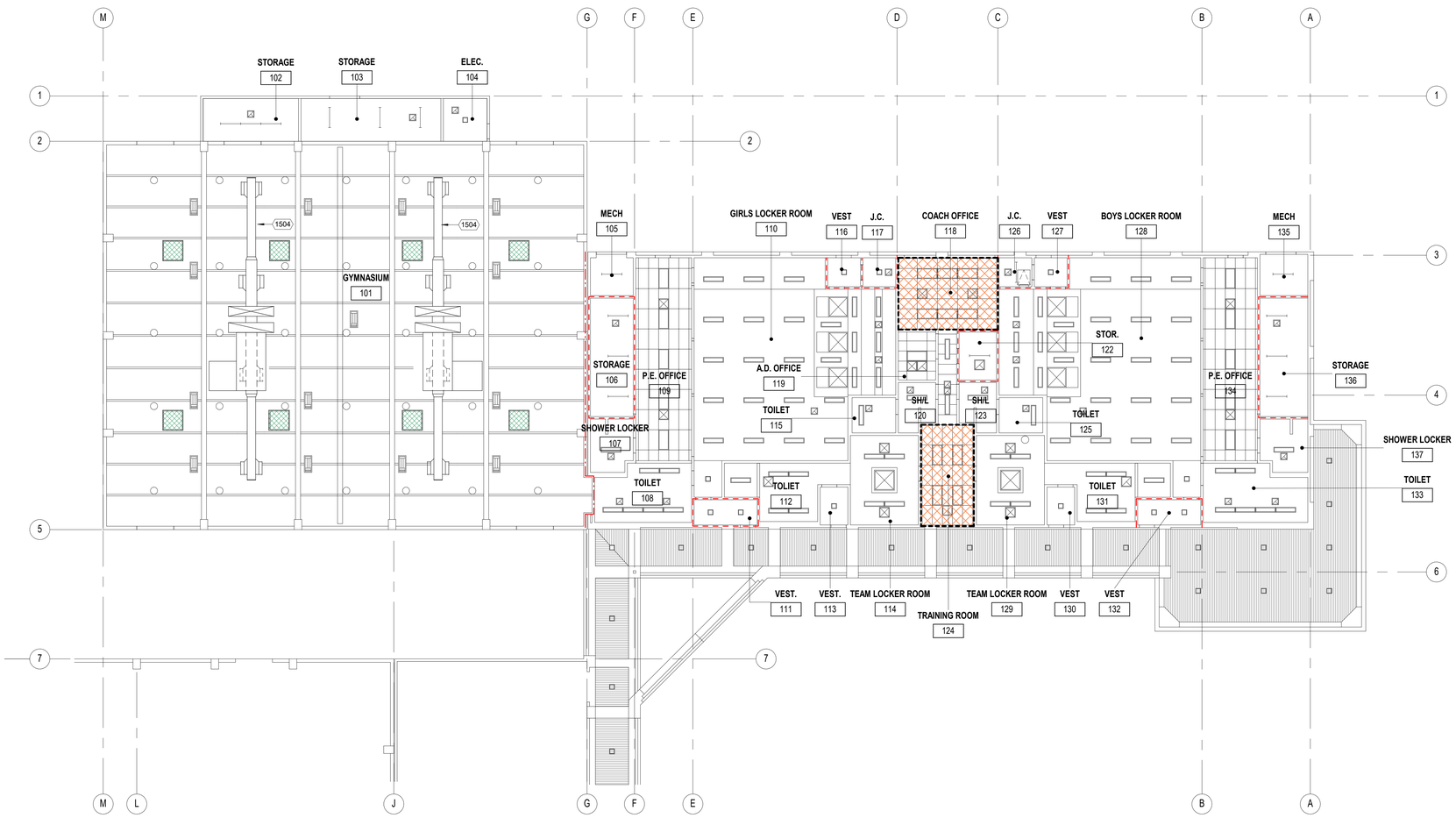
DEMO CEILING PLAN - BLDG H

DRAWING NUMBER: **AH3.0**



REFERENCE NOTES

KEYNOTE	DESCRIPTION
1504	(N) DUCT SYSTEM, REF TO MECH DWGS, COLOR TO BE SELECTED BY ARCHITECT

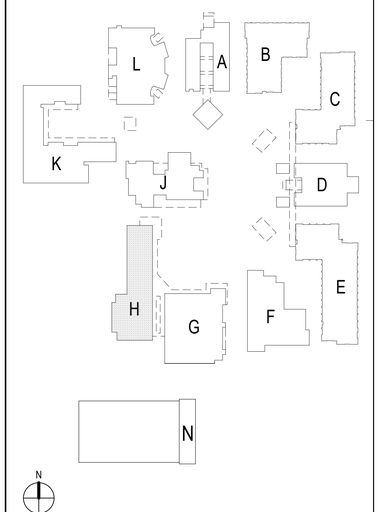
1-HR RATED WALL

2-HR RATED WALL

CEILING **TYPE 2A:** INSTALL NEW 2X4 OR 2X2 (SEE PLAN FOR LAYOUT) ACCOUSTICAL CEILING TILE AND GRID. REINSTALL ALL PREVIOUS ELECTRICAL ITEMS LIGHTING, WAP, FIRE DEVICES, DATA DEVICES, OUTLETS, MISC. ELEC TYPICAL. INSTALL NEW SUPPLY AND RETURN GRILLS.

NEW ROOF INFILL. PATCH BACK ROOFING MATERIAL , METAL DECKING, AND ALL ASSOCIATED ITEMS TO MAKE A COMPLETE WATERPROOF PATCH. PRIME AND PAINT STEEL AND DECK TO MATCH EXISTING.

LEGEND



SITE KEY PLAN

NEW CEILING PLAN - BLDG H | 3/32" = 1'-0" | 1

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SCHOOL SITE (805) 278-2907
3400 W GONZALES RD.
OXNARD, CA 93036

LICENSED ARCHITECT
MARK GRAHAM
C-26046
03-31-21
STATE OF CALIFORNIA

CONSULTANT

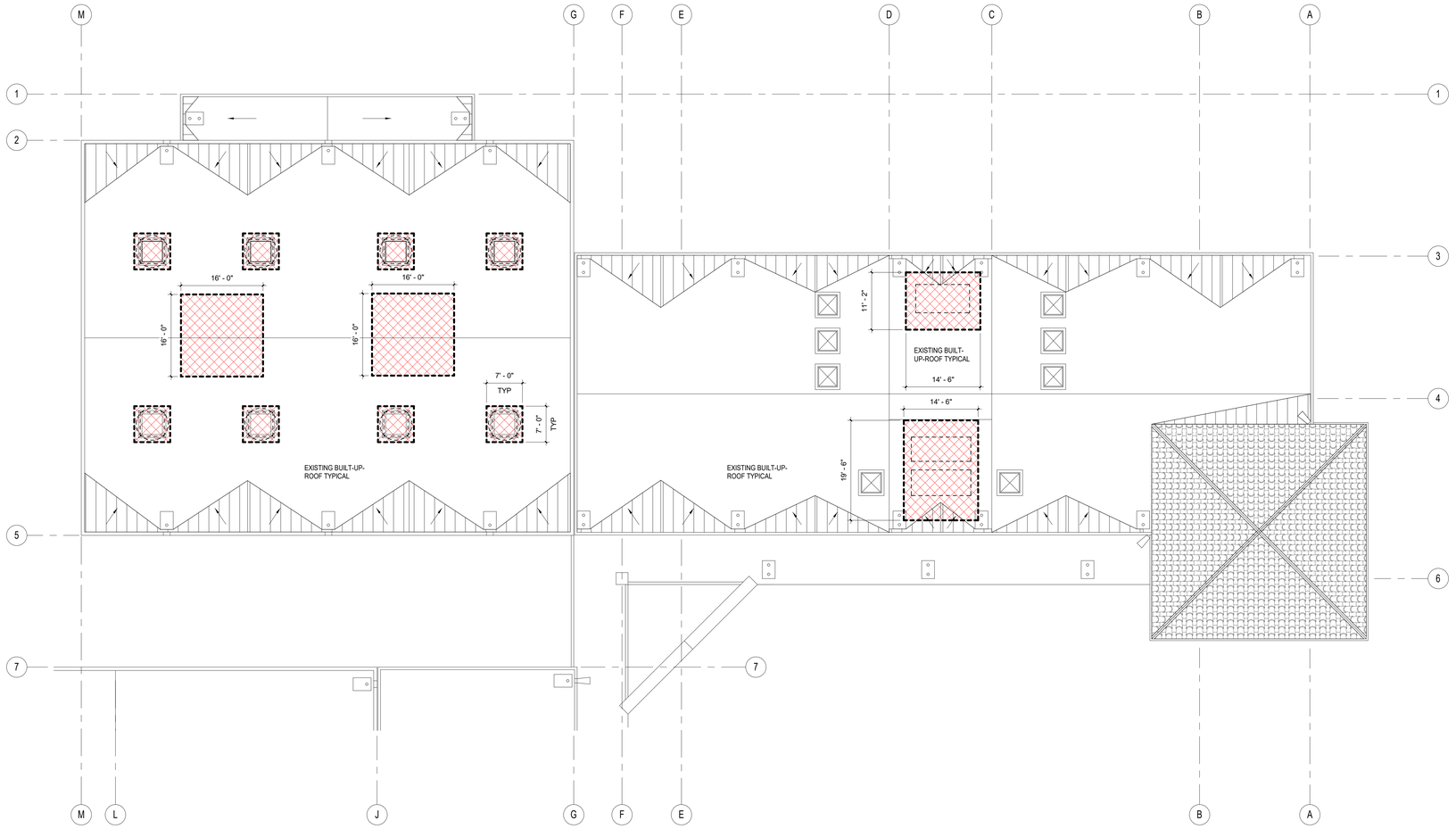
BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN: JY	CHECKED: SJ
DATE: 02/26/2020	SCALE: As indicated
PROJECT NUMBER: 1917000	

NEW CEILING PLAN - BLDG H

DRAWING NUMBER: **AH3.1**



REFERENCE NOTES

KEYNOTE	DESCRIPTION

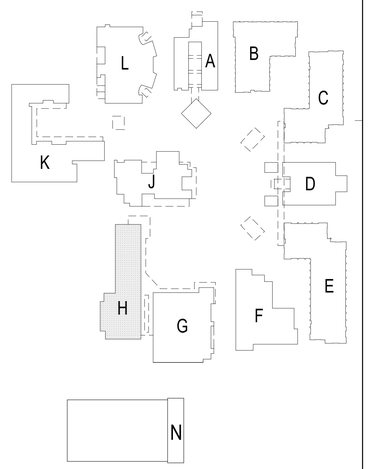
EXISTING WALKING MATS

EXISTING EXHAUST FAN TO REMAIN AND PROTECT IN PLACE

DEMO **TYPE 1**: REMOVE ROOFING MATERIAL, SUBSTRATE, STRUCTURAL MEMEBERS AS SHOWN ON STRUCTURAL DRAWINGS, ROOF CURBS, WALKING MATS, AND FLASHINGS AS NEEDED TO ALLOW ACCESS TO PERFORM ALL REQUIRED WORK ON THE NEW UNITS. DEMOLITION SIZES SHOWN ON PLAN ARE APPROXIMATE. CONTRACTOR CAN DETERMINE IN FIELD WHAT IS REQUIRED TO COMPLETE EACH TASK. ANYTHING WITHIN THE HATCH IS TO BE DEMOLISHED WETHER IDENTIFIED OR NOT, EXCEPT THE STRUCTURAL SYSTEM. CUT HOLES IN ROOF AS NEEDED FOR DUCT OR PIPE PENETRATION, NOT SHOWN HERE. SEE MECHANICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

DEMO EXISTING EQUIPMENT TYP. WHERE OCCURS ON ROOF PLAN

LEGEND



N

SITE KEY PLAN

DEMO ROOF PLAN - BLDG H | 3/32" = 1'-0" | 1

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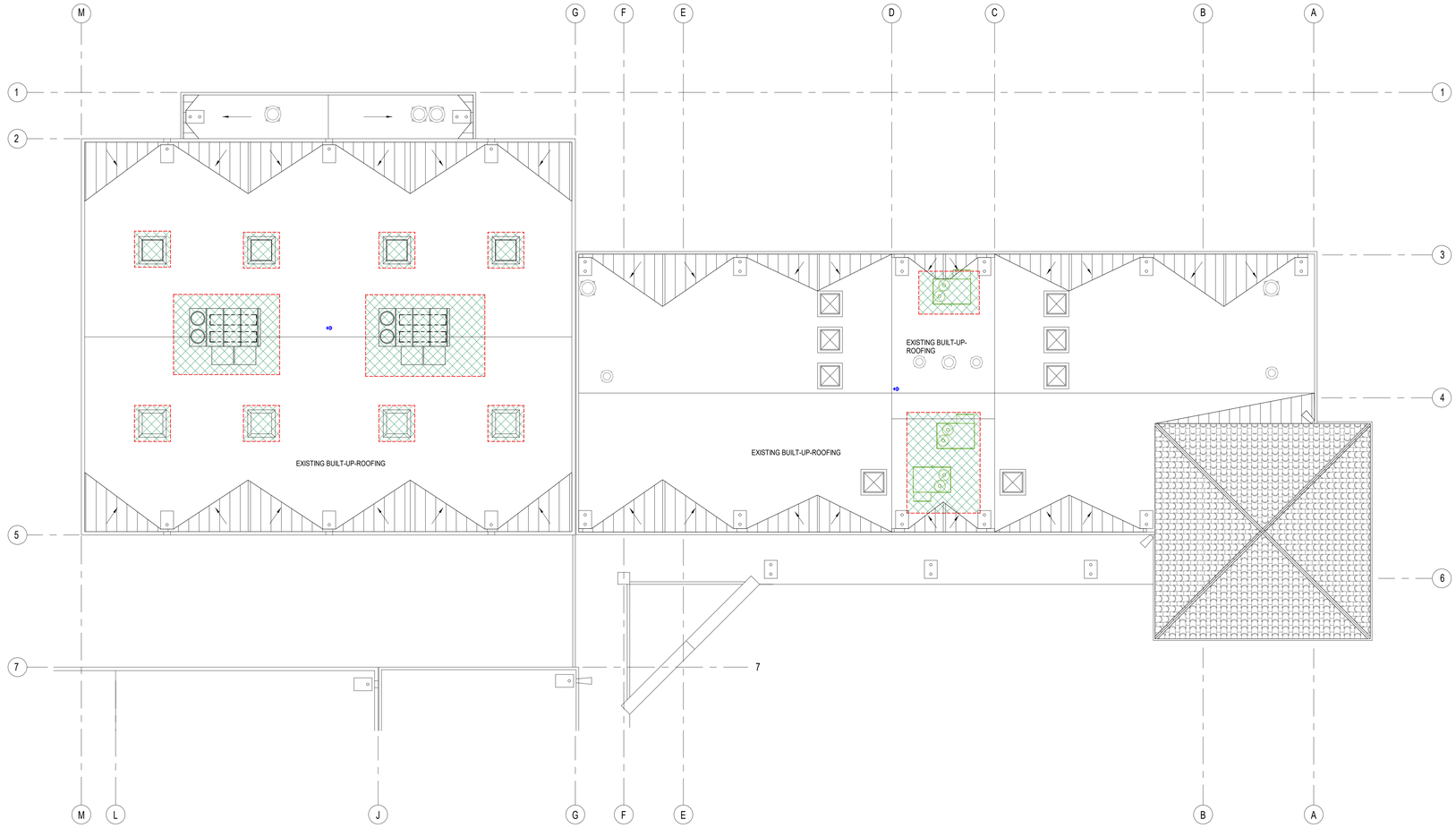
DEMO ROOF PLAN - BLDG H

DRAWING NUMBER: **AH4.0**



NEW ROOF PLAN - BLDG H | 3/32" = 1'-0" | 1

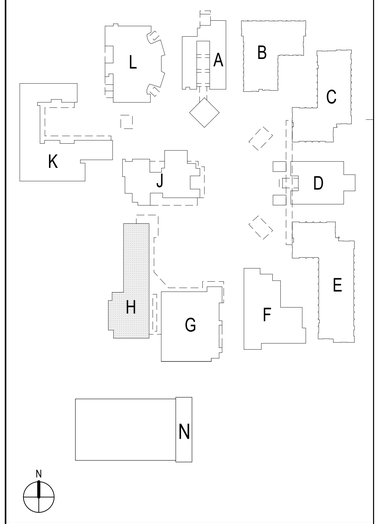
REFERENCE NOTES

KEYNOTE	DESCRIPTION

PATCH BACK ROOFING MATERIAL PER DETAIL 12/7.1 AND SPECIFICATION. INFILL DECK PER 13/S0.3. PROVIDE RIGID INSULATION TO MATCH EXISTING

NEW AC UNIT. SEE MECHANICAL DRAWINGS FOR SPECIFIC INFORMATION ON EACH UNIT TYPICAL

LEGEND



SITE KEY PLAN

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NEW ROOF PLAN - BLDG H

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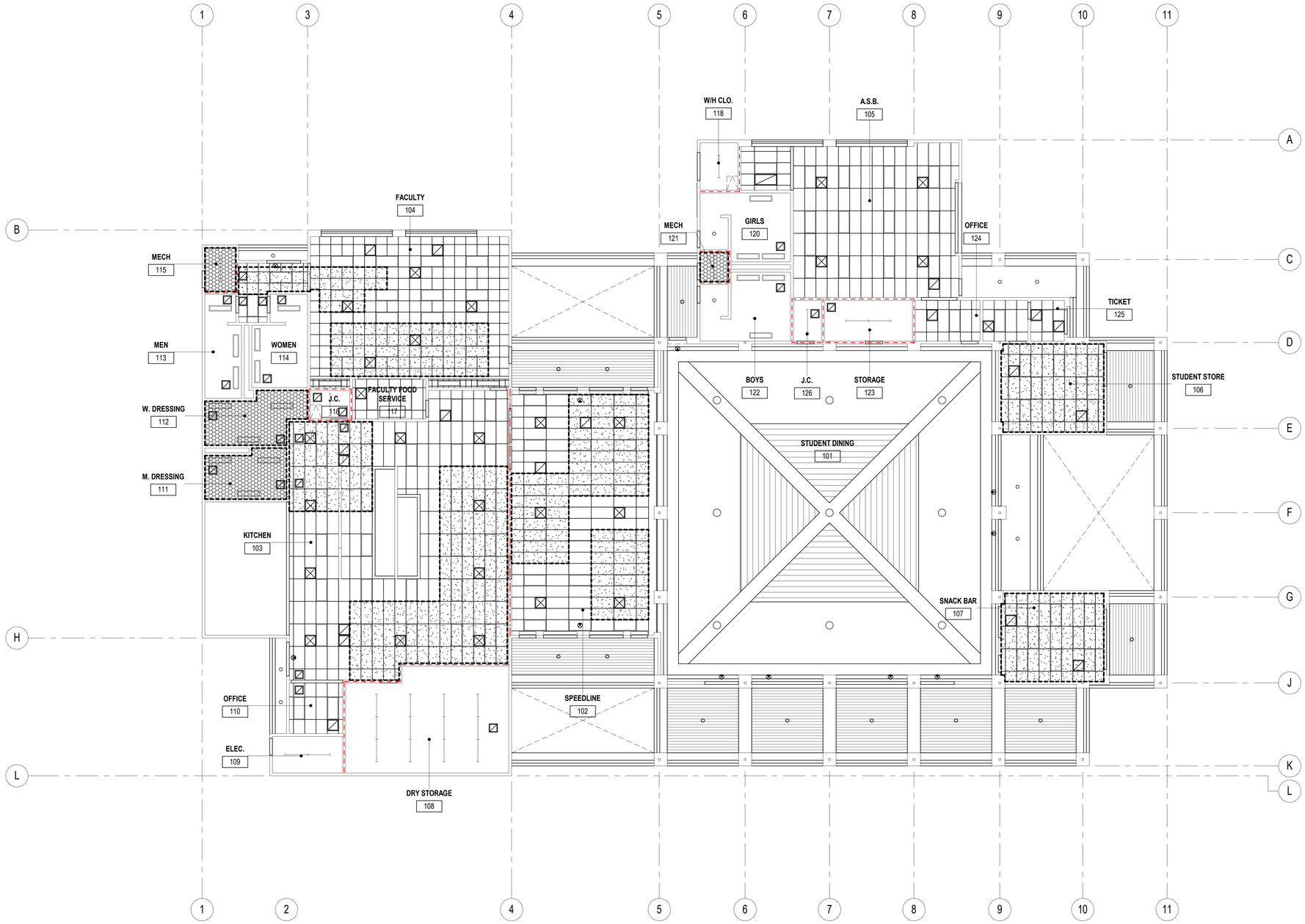


REFERENCE NOTES

KEYNOTE	DESCRIPTION

1-HR RATED WALL

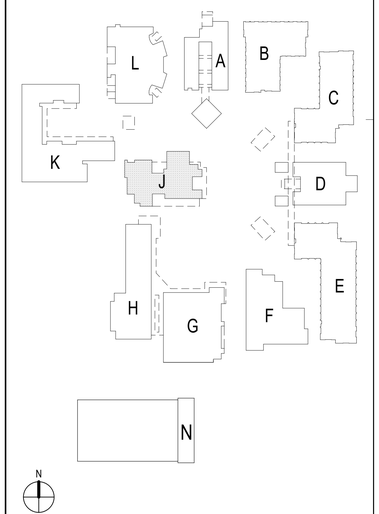
2-HR RATED WALL (WHERE APPLICABLE)

DEMO **TYPE 1**: REMOVE AND PROTECT ACCOUSTICAL CEILING TILES. REINSTALL UPON COMPLETION OF HVAC WORK. DO NOT TOUCH CEILING GRID. DO NOT REMOVE LIGHT FIXTURES TYPICAL.

GYPSUM BOARD TYP.. (THIS DOES NOT SHOW GLUE UP TILES. SEE PLAN FOR LOCATION THAT HAVE THOSE TYPICAL)

DEMO **TYPE 4**: REMOVE EXISTING GYPSUM BOARD FROM SUSPENDED METAL CEILING. (WHERE OCCURS: REMOVE GLUE UP TILES AS NOTED ON DEMO PLAN OR NOTES BELOW.) SEE DETAIL 10/9.2 FOR EXISTING FRAMING CONDITION. NEATLY CUT GYPSUM ON HAT CHANNEL TYPICAL. IF CUT LINE OCCURS WITHIN 6" OF GYP. BRD. SEAM, REMOVE GYP. BOARD TO SEAM TYP.

LEGEND



N

SITE KEY PLAN

N

DEMO CEILING PLAN - BLDG J | 1/8" = 1'-0" | 1

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DEMO CEILING PLAN - BLDG J

DRAWING NUMBER: **AJ3.0**

6/3/2020 1:24:47 PM
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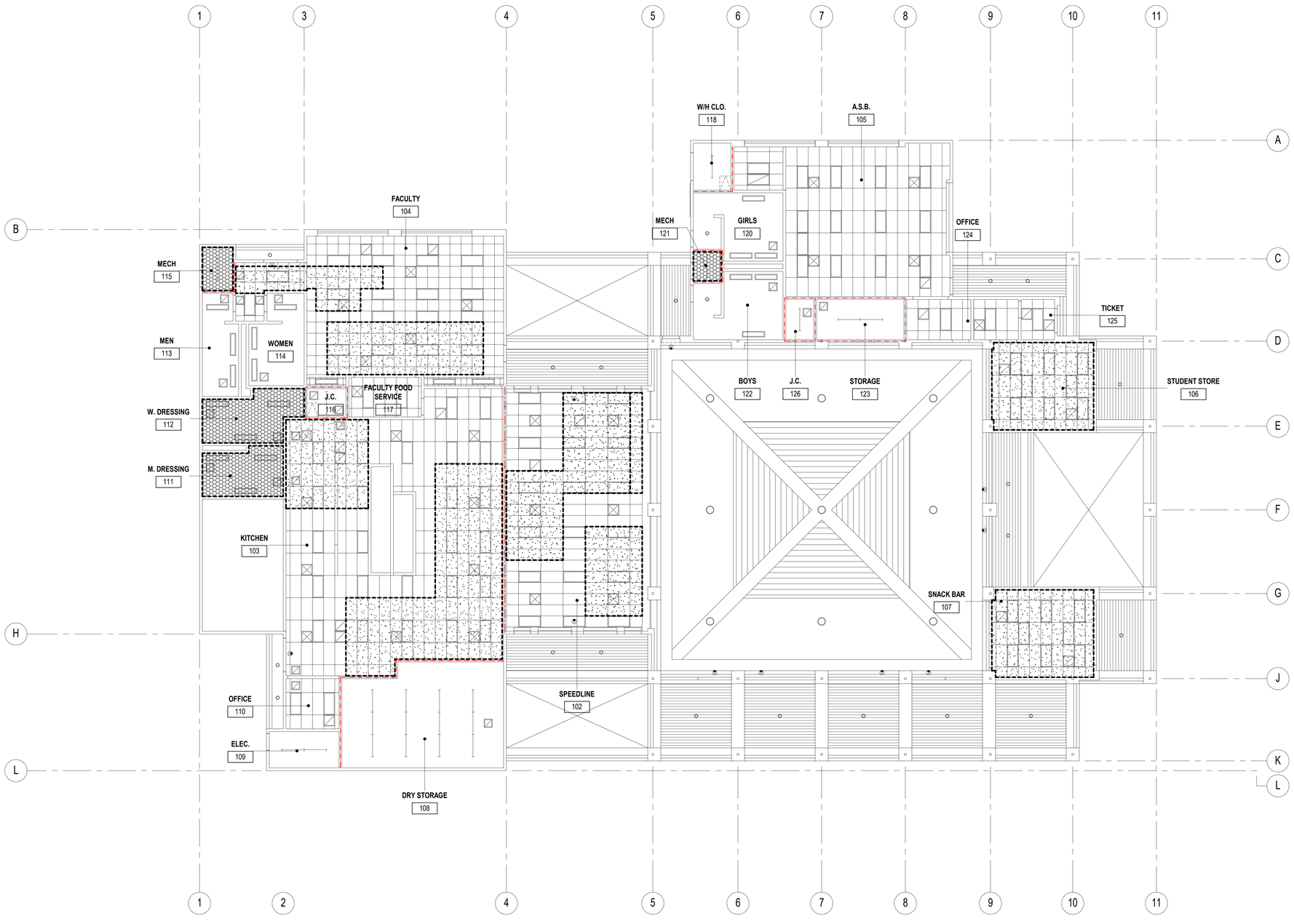


REFERENCE NOTES

KEYNOTE	DESCRIPTION

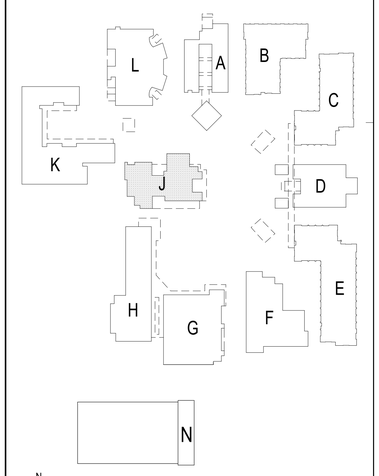
1-HR RATED WALL

2-HR RATED WALL

CEILING **TYPE 1** REPLACE ALL CEILING TILES BACK TO THEIR ORIGINAL LOCATION. REPLACE ALL BROKEN TILES, WATER STAINED, CHIPPED, DENTED, AND SCRATCHED WITH NEW TILES OF SIMILAR PATTERN, TEXTURE, AND COLOR.
LIGHT FIXTURE TYP.

CEILING **TYPE 4** REINSTALL NEW GYPSUM BOARD ON EXISTING SUSPENDED GRID. TAPE, MUD, TEXTURE, PRIME, AND PAINT TO MATCH EXISTING, REF DTL 14/9.2
FOR SPLICE DTL REF DTL 10/9.2
GYPSUM BOARD TYP.

LEGEND



SITE KEY PLAN

NEW CEILING PLAN - BLDG J | 1/8" = 1'-0" | 1

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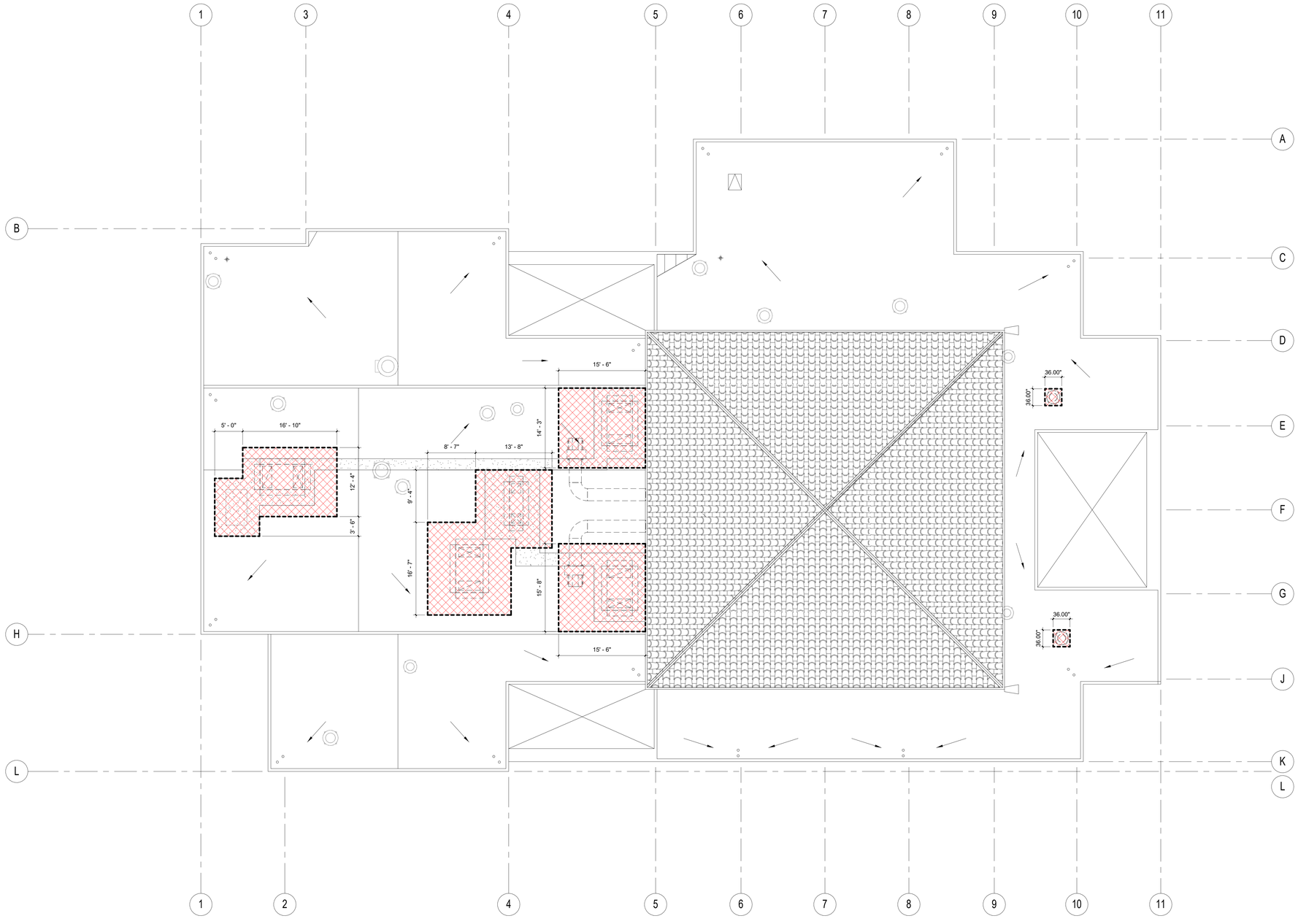
NEW CEILING PLAN - BLDG J

DRAWING NUMBER: **AJ3.1**



REFERENCE NOTES

KEYNOTE	DESCRIPTION

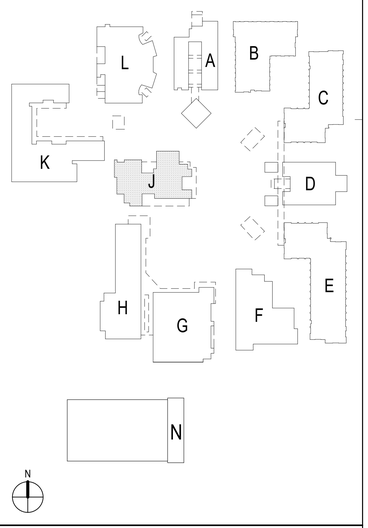
EXISTING WALKING MATS

EXISTING EXHAUST FAN TO REMAIN AND PROTECT IN PLACE

DEMO **TYPE 1**: REMOVE ROOFING MATERIAL, SUBSTRATE, STRUCTURAL MEMEBERS AS SHOWN ON STRUCTURAL DRAWINGS, ROOF CURBS, WALKING MATS, AND FLASHINGS AS NEEDED TO ALLOW ACCESS TO PERFORM ALL REQUIRED WORK ON THE NEW UNITS. DEMOLITION SIZES SHOWN ON PLAN ARE APPROXIMATE. CONTRACTOR CAN DETERMINE IN FIELD WHAT IS REQUIRED TO COMPLETE EACH TASK. ANYTHING WITHIN THE HATCH IS TO BE DEMOLISHED WETHER IDENTIFIED OR NOT, EXCEPT THE STRUCTURAL SYSTEM. CUT HOLES IN ROOF AS NEEDED FOR DUCT OR PIPE PENETRATION, NOT SHOWN HERE. SEE MECHANICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

DEMO EXISTING EQUIPMENT TYP. WHERE OCCURS ON ROOF PLAN

LEGEND



SITE KEY PLAN

DEMO ROOF PLAN - BLDG J | 1/8" = 1'-0" | 1

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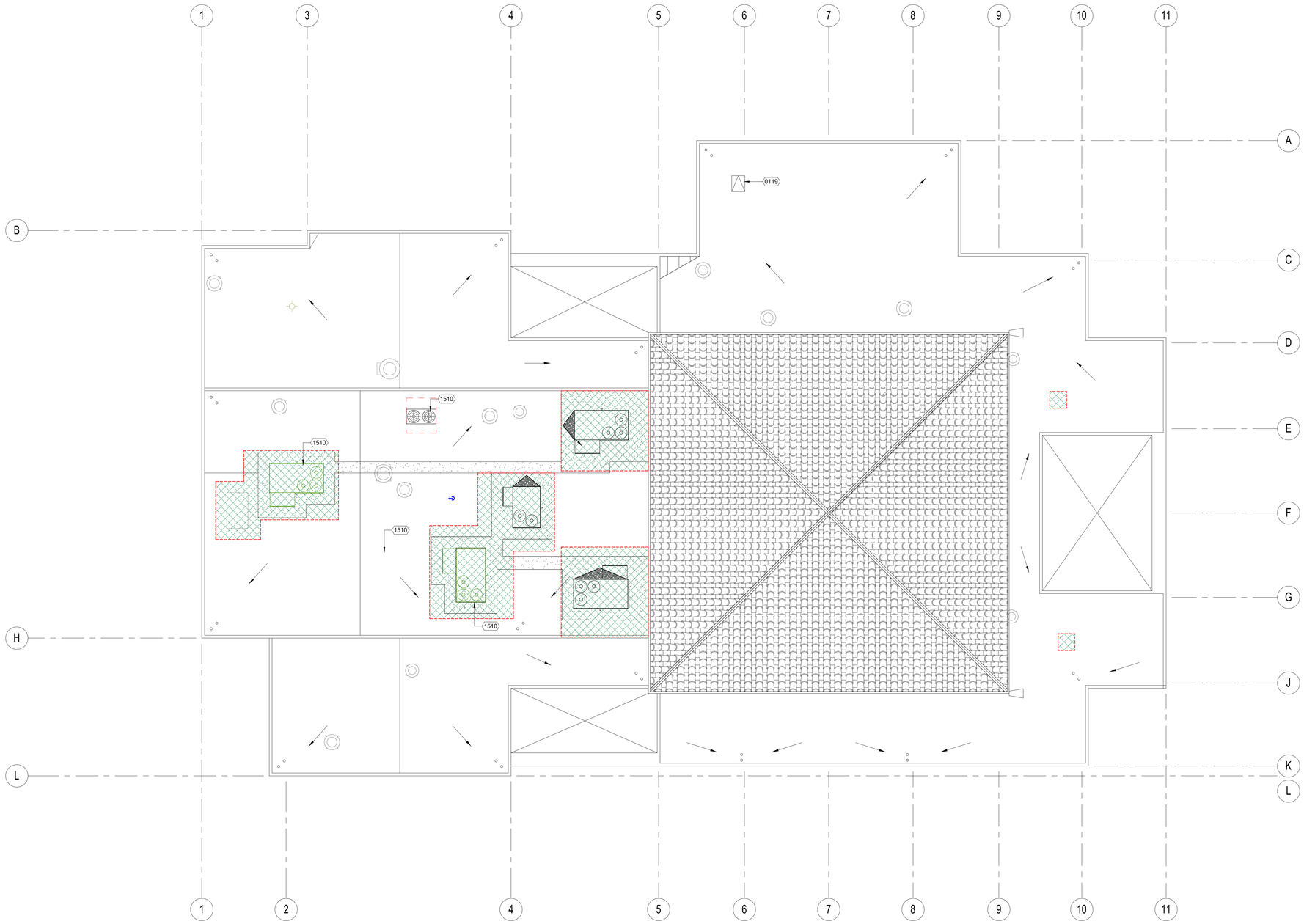
DEMO ROOF PLAN - BLDG J

DRAWING NUMBER: **AJ4.0**



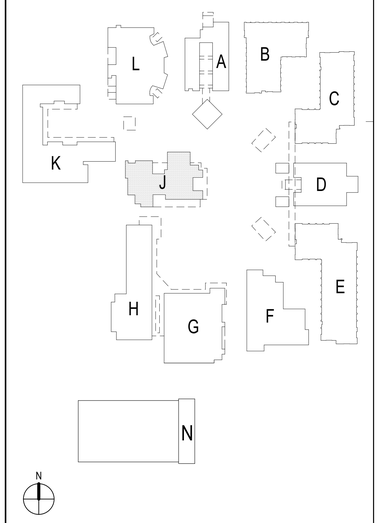
REFERENCE NOTES

KEYNOTE	DESCRIPTION
0119	(E) ROOF HATCH
1510	(N) MECH UNIT, SEE MECH DWGS

PATCH BACK ROOFING MATERIAL PER DETAIL 12/7.1 AND SPECIFICATION. INFILL DECK PER 13/S0.3. PROVIDE RIGID INSULATION TO MATCH EXISTING

NEW AC UNIT, SEE MECHANICAL DRAWINGS FOR SPECIFIC INFORMATION ON EACH UNIT TYPICAL

LEGEND



NEW ROOF PLAN - BLDG J | 1/8" = 1'-0" | 1

SITE KEY PLAN

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NEW ROOF PLAN - BLDG J

DRAWING NUMBER: **AJ4.1**

DEMO CEILING PLAN - BLDG K | 1/8" = 1'-0" | 1

REFERENCE NOTES

KEYNOTE	DESCRIPTION
0118	(E) FIRE DAMPER TO REMAIN AND PROTECT IN PLACE, SEE MECH DWGS

1-HR RATED WALL

2-HR RATED WALL (WHERE APPLICABLE)

DEMO **TYPE 1**: REMOVE AND PROTECT ACCOUSTICAL CEILING TILES. REINSTALL UPON COMPLETION OF HVAC WORK. DO NOT TOUCH CEILING GRID. DO NOT REMOVE LIGHT FIXTURES TYPICAL.

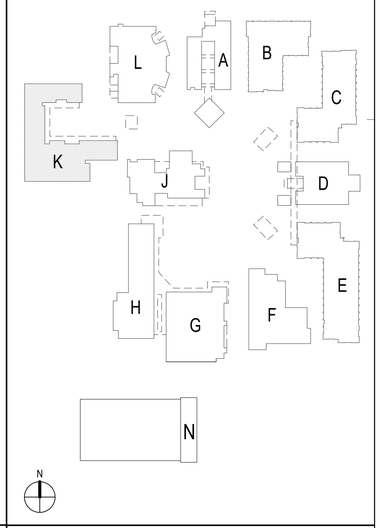
GYPSUM BOARD TYP. (THIS DOES NOT SHOW GLUE UP TILES. SEE PLAN FOR LOCATION THAT HAVE THOSE TYPICAL)

DEMO **TYPE 4**: REMOVE EXISTING GYPSUM BOARD FROM SUSPENDED METAL CEILING. (WHERE OCCURS: REMOVE GLUE UP TILES AS NOTED ON DEMO PLAN OR NOTES BELOW.) SEE DETAIL -/- FOR EXISTING FRAMING CONDITION. NEATLY CUT GYPSUM ON HAT CHANNEL TYPICAL. IF CUT LINE OCCURS WITHIN 6" OF GYP. BRD. SEAM, REMOVE GYP. BOARD TO SEAM TYP.

DEMO **TYPE 5**: REMOVE EXISTING GYPSUM BOARD AND ENTIRE SUSPENDED CEILING GRID.

GYPSUM BOARD TYP.

LEGEND



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DEMO CEILING PLAN - BLDG K

DRAWING NUMBER: **AK3.0**

REFERENCE NOTES

KEYNOTE	DESCRIPTION

1-HR RATED WALL

2-HR RATED WALL

CEILING **TYPE 1**: REPLACE ALL CEILING TILES BACK TO THEIR ORIGINAL LOCATION. REPLACE ALL BROKEN TILES. WATER STAINED, CHIPPED, DENTED, AND SCRATCHED WITH NEW TILES OF SIMILAR PATTERN, TEXTURE, AND COLOR.

LIGHT FIXTURE TYP.

NEW ROOF INFILL. PATCH BACK ROOFING MATERIAL PER -/-

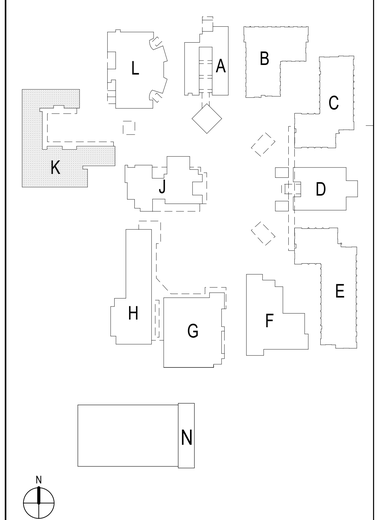
CEILING **TYPE 4**: REINSTALL NEW GYPSUM BOARD ON EXISTING SUSPENDED GRID. TAPE, MUD, TEXTURE, PRIME, AND PAINT TO MATCH EXISTING. REF DTL 14/9.2

FOR SPLICE DTL REF DTL 10/9.2

GYPSUM BOARD TYP.

EXISTING FIRE DAMPER TO REMAIN AND PROTECT IN PLACE

LEGEND



SITE KEY PLAN

NEW CEILING PLAN - BLDG K | 1/8" = 1'-0" | 1

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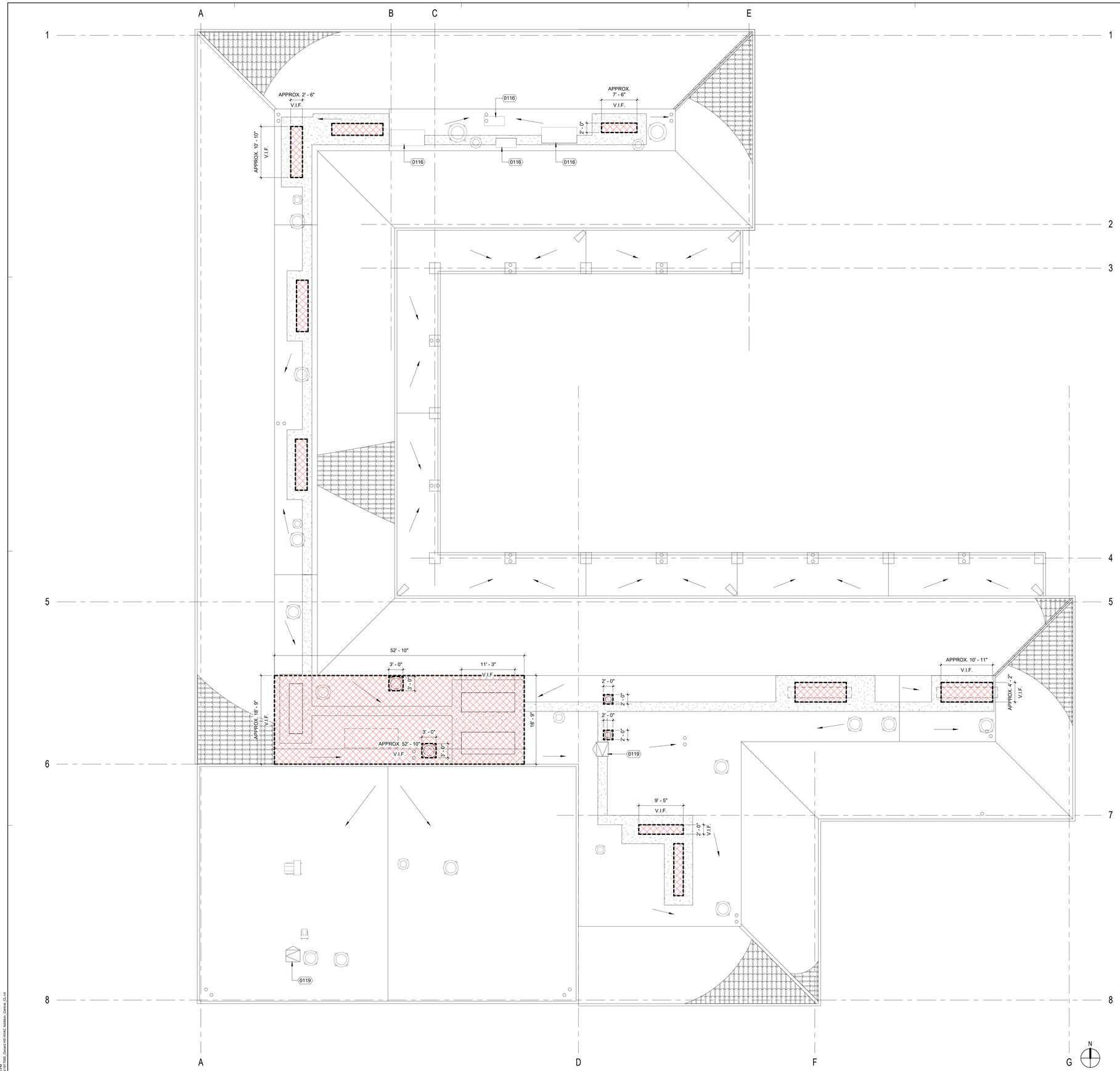


REFERENCE NOTES

KEYNOTE	DESCRIPTION
0116	(E) AIR HANDLING UNIT TO REMAIN AND PROTECT IN PLACE
0119	(E) ROOF HATCH

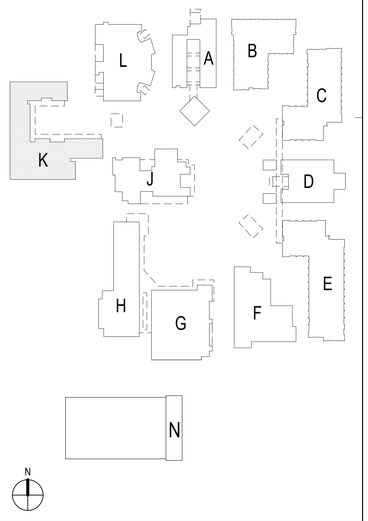
EXISTING WALKING MATS

EXISTING EXHAUST FAN TO REMAIN AND PROTECT IN PLACE

DEMO **TYPE 1**: REMOVE ROOFING MATERIAL, SUBSTRATE, STRUCTURAL MEMEBERS AS SHOWN ON STRUCTURAL DRAWINGS, ROOF CURBS, WALKING MATS, AND FLASHINGS AS NEEDED TO ALLOW ACCESS TO PERFORM ALL REQUIRED WORK ON THE NEW UNITS. DEMOLITION SIZES SHOWN ON PLAN ARE APPROXIMATE. CONTRACTOR CAN DETERMINE IN FIELD WHAT IS REQUIRED TO COMPLETE EACH TASK. ANYTHING WITHIN THE HATCH IS TO BE DEMOLISHED WETHER IDENTIFIED OR NOT, EXCEPT THE STRUCTURAL SYSTEM. CUT HOLES IN ROOF AS NEEDED FOR DUCT OR PIPE PENETRATION. NOT SHOWN HERE. SEE MECHANICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

DEMO EXISTING EQUIPMENT TYP. WHERE OCCURS ON ROOF PLAN

LEGEND



SITE KEY PLAN

DEMO ROOF PLAN - BLDG K | 1/8" = 1'-0" | 1

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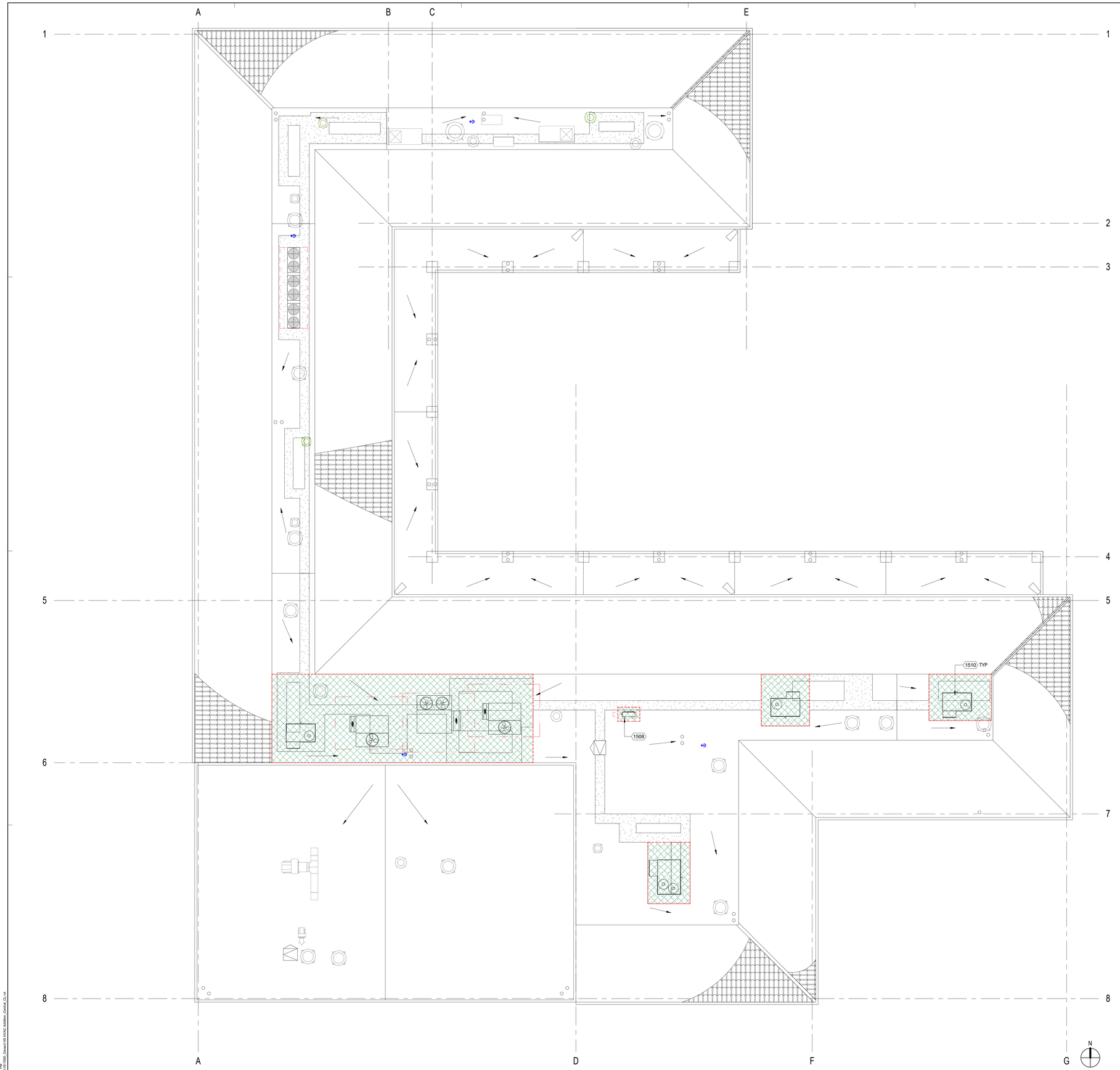
DEMO ROOF PLAN - BLDG K

DRAWING NUMBER: **AK4.0**



REFERENCE NOTES

KEYNOTE	DESCRIPTION
1508	(N) HEAT PUMP, SEE MECH DWGS
1510	(N) MECH UNIT, SEE MECH DWGS

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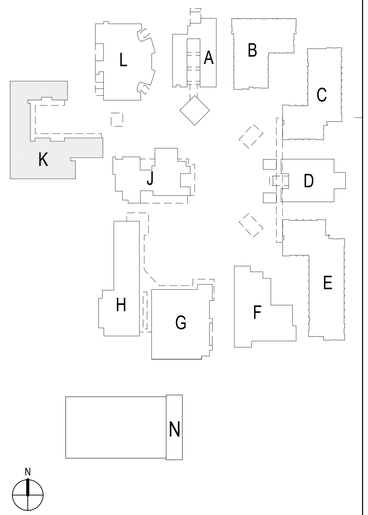
PATCH BACK ROOFING MATERIAL PER DETAIL 12/7.1 AND SPECIFICATION. INFILL DECK PER 13/S0.3. PROVIDE RIGID INSULATION TO MATCH EXISTING

NEW AC UNIT, SEE MECHANICAL DRAWINGS FOR SPECIFIC INFORMATION ON EACH UNIT TYPICAL

LEGEND



SITE KEY PLAN

OXNARD HIGH SCHOOL HVAC ADDITION

OXNARD UNION HIGH SCHOOL DISTRICT
SCHOOL SITE (805) 278-2907
3400 W GONZALES RD.
OXNARD, CA 93036

LICENSED ARCHITECT
MARK GRAHAM
C-28046
03-31-21
STATE OF CALIFORNIA

CONSULTANT

BID SET

NO	DATE	BY	DESCRIPTION
#			REVISIONS

DRAWN: JY	CHECKED: SJ
DATE: 02/26/2020	SCALE: As indicated
PROJECT NUMBER: 1917000	

NEW ROOF PLAN - BLDG K

DRAWING NUMBER: **AK4.1**

NEW ROOF PLAN - BLDG K | 1/8" = 1'-0" | 1

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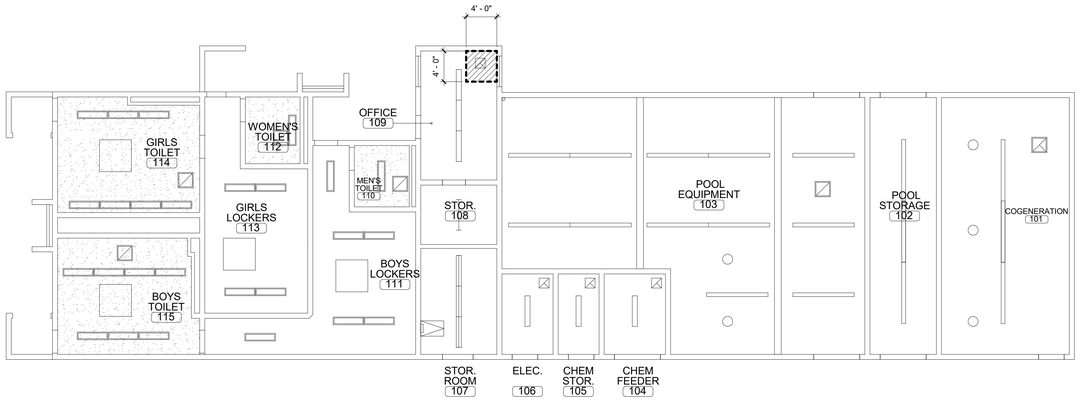
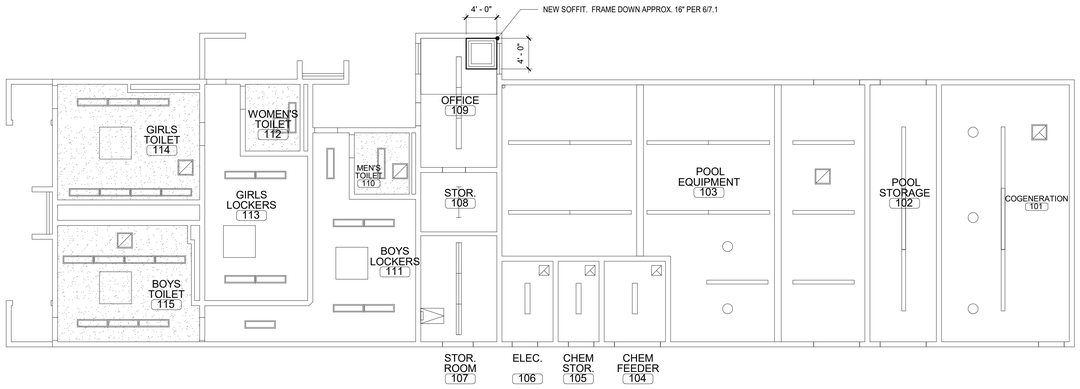


DEMO CEILING PLAN - BLDG N | 1/8" = 1'-0" | 1



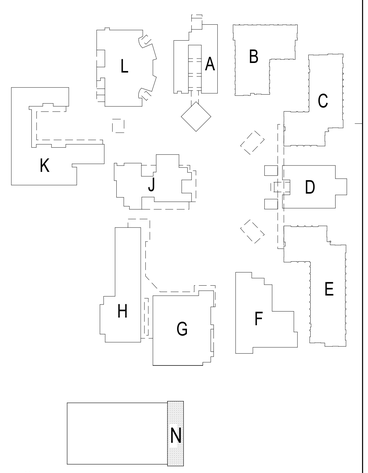
NEW CEILING PLAN - BLDG N | 1/8" = 1'-0" | 2

REFERENCE NOTES

KEYNOTE	DESCRIPTION

DEMO **TYPE 6**: REMOVE EXISTING GYPSUM BOARD AND PLASTER CEILING FROM ROOF STRUCTURE. PREP FOR NEW SOFFIT.

LEGEND



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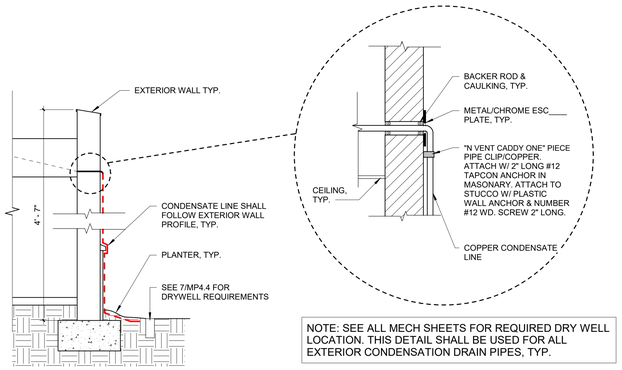
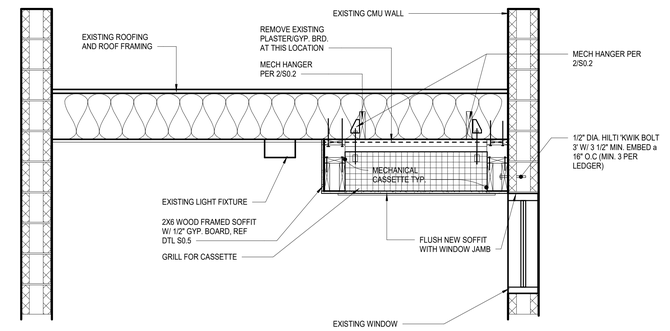
DEMO AND NEW CEILING PLAN - BLDG N

DRAWING NUMBER: **AN3.1**

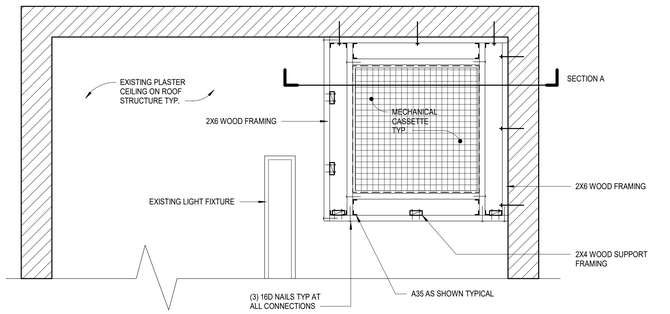


NOTE: SEE ALL MECH SHEETS FOR REQUIRED DRY WELL LOCATION. THIS DETAIL SHALL BE USED FOR ALL EXTERIOR CONDENSATION DRAIN PIPES, TYP.

CONDENSATE DRAIN | 3/4" = 1'-0" | 8

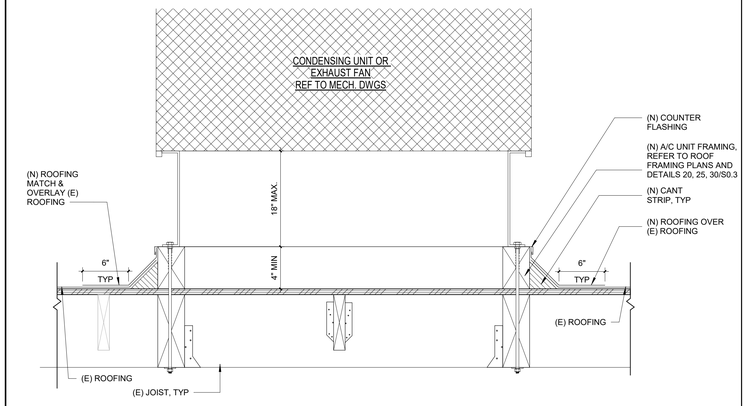


SECTION A

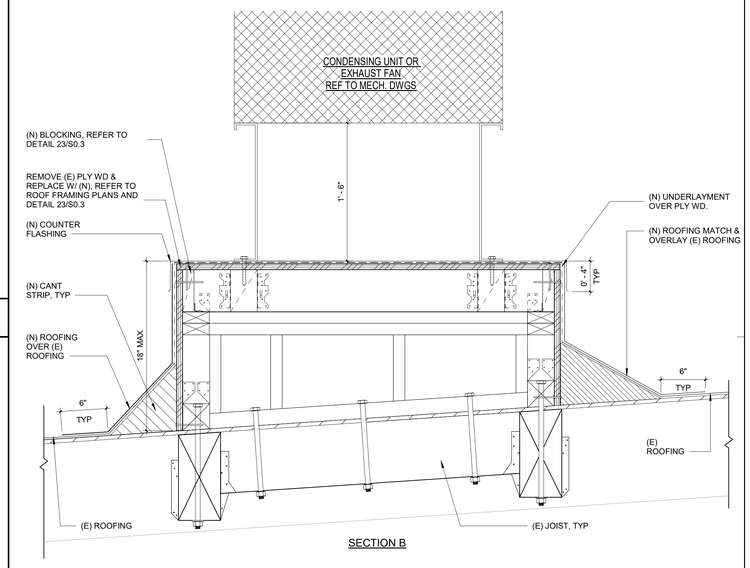


CEILING FRAMING PLAN

SOFFIT AT POOL BLDG. "N" | 3/4" = 1'-0" | 3



TYP FLASHING @ A/C UNIT FRAMING | 1 1/2" = 1'-0" | 1



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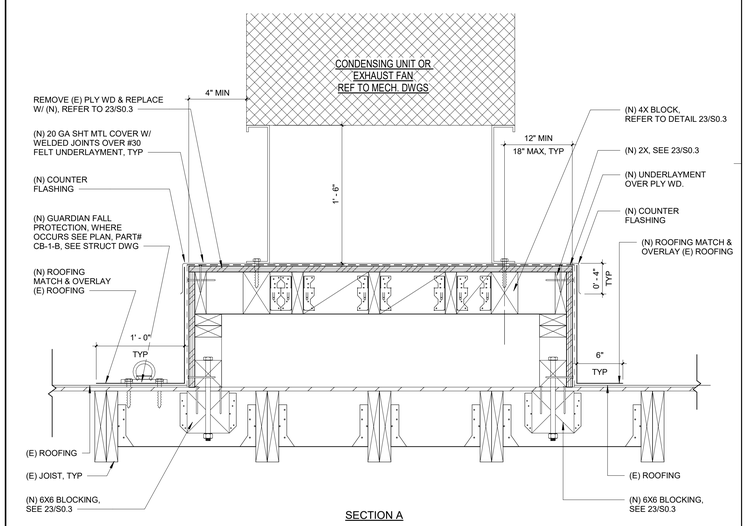
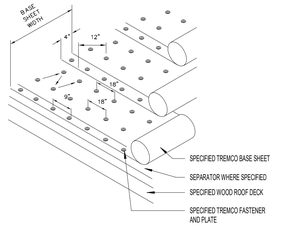


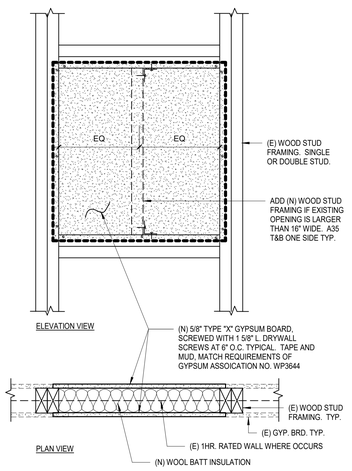
SECTION A



1. ATTACH BASE SHEET TO THE ROOF DECKING WITH APPROVED FASTENERS AND DISCS.
2. SPACE FASTENERS 9 INCHES ON CETER ALONG SIDELAP AND 18 INCHES ON CENTER IN TWO ROWS EQUALLY STAGGERED DOW THT LONGITUDINAL CENTER OF THE SHEET (12 INCHES FROM EACH EDGE).
3. INCREASE PERIMETER EDGE FASTENING BY 70% AND CORNER FASTENING BY 160% PER FM GLOBAL LOSS PREVENTION DATA SHEETS 1-28 AND 1-29.
4. DETERMINE FASTENER DESITY ON A UNIT AREA PER FASTENER BASIS. ADD ADDITINAL ROWS AND INCREASE FASTENERS PER ROW. DO NOT SPACE FASTENERS CLOSER THAN 4 INCHES ON CENTER.
5. INCREASE FASTENERS PER ROW FOR OTHER SUBSTRAITS BESIDES WOOD AS SHOWN HERE. VERIFY REQUIREMENTS PER TREMCO PRODUCT MANUFACTURERS INSTALLATION REQUIREMENTS.

BUILT-UP ROOFING - HOT/COLD BASE SHEET FASTENER PLACEMENT

TREMCO BASE SHEET | 6" = 1'-0" | 6



FIRE DAMPER INFILL | 1 1/2" = 1'-0" | 5

CONDENSING UNIT & EXHAUST FAN CURB | 1 1/2" = 1'-0" | 2

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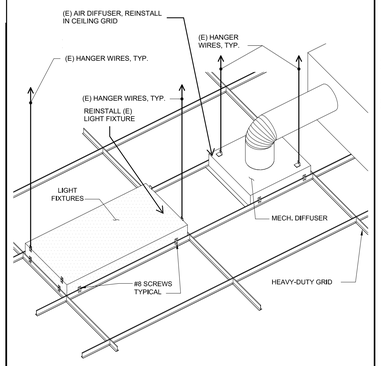
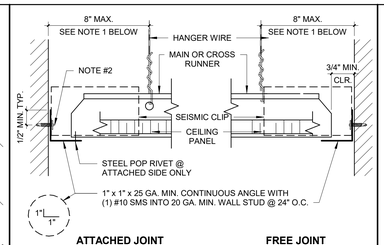
THERMAL AND MOISTURE PROTECTION

DRAWING NUMBER: **7.1**



REINSTALL FIXTURES | NTS | 13

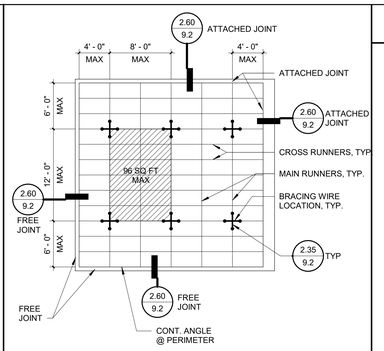


ATTACHED JOINT **FREE JOINT**

NOTE:

1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMERTER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
2. REFER TO GENERAL NOTE 4.08 FOR WALL ANGLE ATTACHMENT
3. SEE DETAIL 12/- FOR SEISMIC CLIP REQUIREMENTS

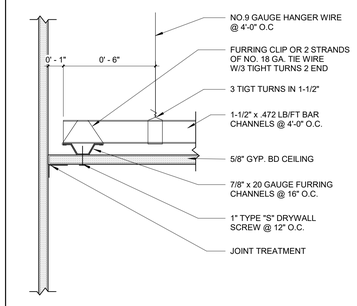
CEILING PERIMETER | 6" = 1'-0" | 2.60



NOTE:

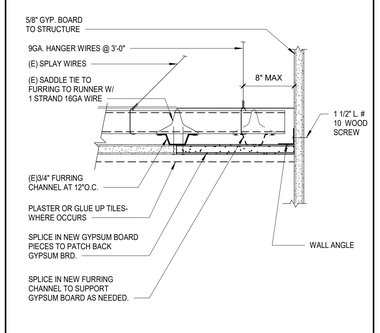
1. BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 96 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.
2. REFERENCE DTL 13/- WHERE EXISTING LIGHT FIXTURES ARE TO REMAIN

8'-0"x12'-0" BRACE ASSEMBLY | 1/8" = 1'-0" | 2.11

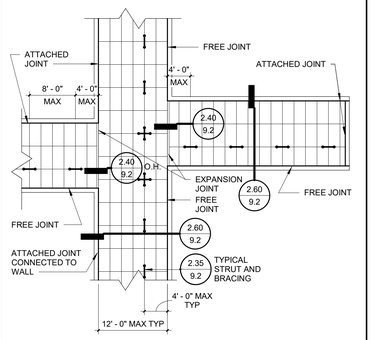


NOTE:
ALL ITEMS ARE EXISTING, EXCEPT GYP BOARD.

(N) GYP BRD ON (E) GRID | 3" = 1'-0" | 14

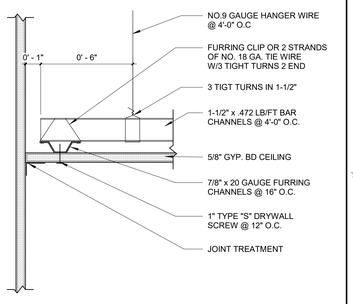


(E) SUSPENDED GYP BRD | 3" = 1'-0" | 10



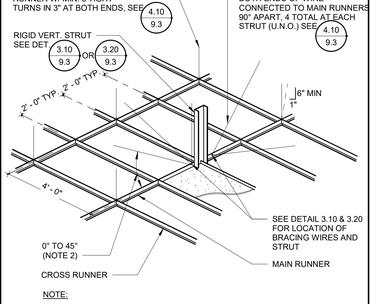
LOCATION OF EXPANSION/SLIP JOINTS IN CORRIDORS

CORRIDOR CEILING PLAN | 3/32" = 1'-0" | 2.30



NOTES:
1. ALL WIRE TO BE SADDLE TIED
2. FOR HANGER WIRE ATTACHMENT TO STRUCT. SEE 9.3 AND 9.4 TYPICAL
3. REFERENCE DTL FOR (N) INSTALLATION OF GYP ON EXISTING CEILING

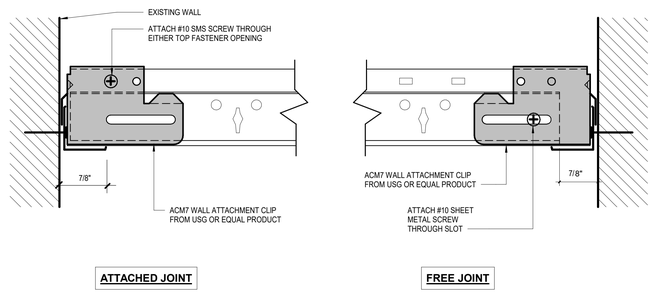
NEW SUS. GYP. BRD CEILING1 | 3" = 1'-0" | 11



NOTE:

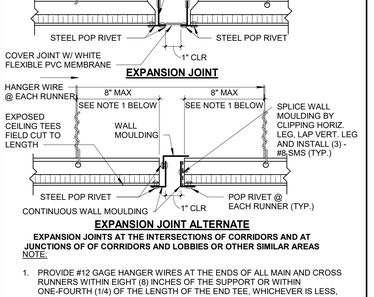
1. STRUTS SHALL NOT REPLACE HANGER WIRES.
2. THE MINIMUM ACCEPTABLE ANGLE IS DETERMINED SUCH THAT THE WIRES DO NOT INTERFERE WITH THE RUNNERS, LIGHT FIXTURES, ETC. AND REMAIN STRAIGHT AND UNOBSTRUCTED.

SUSPENSION AND BRACING | 3/8" = 1'-0" | 2.35



ATTACHED JOINT **FREE JOINT**

SEISMIC CLIP | 1" = 1'-0" | 12



EXPANSION JOINT ALTERNATE

EXPANSION JOINTS AT THE INTERSECTIONS OF CORRIDORS AND AT JUNCTIONS OF OF CORRIDORS AND LOBBIES OR OTHER SIMILAR AREAS

NOTE:

1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.

EXP. JOINT @ INTERSECTIONS | 3" = 1'-0" | 2.40

METAL SUSPENSION SYSTEMS FOR LAY IN PANEL CEILINGS NOTES

1. CEILING SYSTEM GENERAL NOTES:

1.01 CEILING SYSTEM COMPONENTS SHALL COMPLY WITH ASTM C635-07 AND SECTION 5.1 OF ASTM E580-10A.

1.02 THE CEILING GRID SYSTEM MUST BE RATED HEAVY DUTY AS DEFINED BY ASTM C635-08.

1.03 CEILING SYSTEMS. THE FOLLOWING CEILING SYSTEM(S) IS/ARE PART OF THE SCOPE OF THIS PROJECT:

MANUFACTURER	ICC/ES REPORT	MAIN RUNNER	CROSS RUNNER
ARMSTRONG	ESR-1308	7301	XL7341 (1)
CHICAGO METALLIC	ESR-2631	200	1274 (2)
USG INTERIORS (DONN)	ESR-1222	DX26	DX424 (3)
CERTAINTEED	ESR-3336	CS12-12-20	CS4-12-12 (4)

FOOTNOTES:
(1) FOR 2X2 GRID USE XL8320
(2) FOR 2X2 GRID USE 1202
(3) FOR 2X2 GRID USE DX216
(4) FOR 2X2 GRID USE CS2-12-12

1.04 SEISMIC WALL CLIP:

MANUFACTURER	SEISMIC WALL CLIP MODEL NO.
ARMSTONG	BERC 2 / ESR-1308
CHICAGO METALLIC	1496 / ESR-2631
USG INTERIORS (DONN)	ACM7 / ESR-1222
CERTAINTEED	SEISMIC PERIM CLIP / ESR-3336

1.05 CEILING PANELS SHALL NOT SUPPORT ANY LIGHT FIXTURES, AIR TERMINALS OR DEVICES.

1.06 FOR CEILING INSTALLATIONS UTILIZING ACOUSTICAL TILE PANELS OF MINERAL OR GLASS FIBER, IT IS NOT MANDATORY TO PROVIDE 3/4 INCH CLEARANCE BETWEEN THE ACOUSTICAL TILE PANELS AND THE WALL ON THE SIDES OF THE CEILING WHICH ARE FREE TO SLIP. FOR ALL OTHER CEILING PANEL TYPES, PROVIDE 3/4" CLEARANCE BETWEEN THE CEILING PANEL AND THE WALL ON THE SIDES OF THE CEILING FREE TO SLIP.

1.07 SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA OF 144 SQUARE FEET OR LESS, SURROUNDED BY WALLS WHICH CONNECT DIRECTLY TO THE STRUCTURE ABOVE, DO NOT REQUIRE BRACING ASSEMBLIES WHEN ATTACHED TO TWO ADJACENT WALLS.

1.08 EXPANSION JOINTS SHALL BE PROVIDED IN THE CEILING AT INTERSECTIONS OF CORRIDORS AND AT JUNCTIONS OF CORRIDORS AND LOBBIES OR OTHER SIMILAR AREAS.

1.09 FOR CEILING AREAS EXCEEDING 2,500 SQUARE FEET, A SEISMIC SEPERATION JOINT SHALL BE PROVIDED TO DIVIDE THE CEILING INTO SYMETRICAL AREAS NOT EXCEEDING 2,500 SQUARE FEET.

1.10 FOR ACOUSTICAL TILE PANELS OF MINERAL OR GLASS FIBER, IT IS NOT MANDATORY TO PROVIDE A 3/4 INCH CLEARANCE BETWEEN THE TILE PANEL AND THE WALL ON THE FREE ENDS OF THE CEILING WHERE IT IS ALLOWED TO SLIP.

1.11 PANELS WEIGHING MORE THAN ONE-HALF (1/2) PSF, OTHER THAN MINERAL AND GLASS FIBER ACOUSTICAL TILE, AND ALL METAL AND WOOD PANELS SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION RUNNERS BY MECHANICAL MEANS, SUCH AS BOLTS, SCREWS, OR RIVETS, AND EACH ATTACHMENT SHALL HAVE THE ALLOWABLE DESIGN STRENGTH TO SUPPORT 100 PERCENT OF THE WEIGHT OF THE PANEL ACTING IN ANY DIRECTION. A MINIMUM OF TWO (2) ATTACHMENTS ARE REQUIRED FOR EACH PANEL. IT IS ALSO PERMITTED TO PROVIDE A SECONDARY MEANS OF CONNECTING THE PANEL TO THE STRUCTURE ABOVE TO RETAIN THE PANEL FROM DROPPING OUT, CEILING GRID DISTORTION AND THE CEILING GRID BECOMING OUT-OF-LEVEL.

1.12 FREE FLOATING CEILING SHALL BE SUPPORTED BY WIRES AS DETAILED AND SHALL ALSO BE BRACED WITH WIRES AS DETAILED. THE PERIMETER EDGE SHALL BE SUPPORTED BY A CONTINOUS RUNNER AT THE PERIMETER EDGE AND SHALL BE SPLICED IN COMPLIANCE WITH ASTM E580.

1.13 COMPRESSION STRUTS SHALL HAVE A MAXIMUM KL/R NOT TO EXCEED 300. STRUTS SHALL NOT BE MORE THAN ONE (HORIZONTAL) IN SIX (VERTICAL) OUT OF PLUMB.

1.14 DETAILS FOR CEILING SYSTEM INSTALLATION ARE TAKEN FROM DSA IR 25.2.13 AND ARE SUBJECT TO THE CONDITIONS OF USE OF THE CEILING NOTES AND DETAILS AS INDICATED IN ARTICLE 6.2.1 OF SAID IR 25.2.13. DETAIL NUMBERS HAVE NOT BEEN REVISED FROM THOSE IDENTIFIED IN IR 25.2.13 FOR EASE OF THE PLAN REVIEW PROCESS BY DSA. THEREFORE THE DETAIL NUMBERS MAY NOT BE CONSECUTIVE AS ONLY THOSE DETAILS THAT INTEGRATED WITH THE SPECIFIC SCOPE AND REQUIREMENTS OF THIS PROJECT HAVE BEEN SELECTED FOR USE.

2. MATERIALS:

2.01 CEILING WIRE SHALL BE CLASS 1 ZINC COATED (GALVANIZED) CARBON STEEL CONFORMING TO ASTM A641-09A. WIRE SHALL BE #12 GAGE (0.106" DIAMETER) WITH SOFT TEMPER AND MINIMUM TENSILE STRENGTH = 70 KSI.

2.02 GALVANIZED SHEET STEEL (INCLUDING THAT USED FOR METAL STUD AND TRACK COMPRESSION STRUTS/POST) SHALL CONFORM TO ASTM A653-11, OR OTHER EQUIVALENT SHEET STEEL LISTED IN SECTION A2.1 OF THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 2007, INCLUDING SUPPLEMENT 2 DATED 2010 (AISI S100-07/S2-10). MATERIAL 43 MIL (18 GAGE) AND LIGHTER SHALL HAVE MINIMUM YIELD STRENGTH OF 33 KSI. MATERIAL 54 MIL (16 GAGE) AND HEAVIER SHALL HAVE A MINIMUM YIELD STRENGTH OF 50 KSI.

2.03 ELECTRICAL METALLIC TUBE (EMT) SHALL BE ANSI C80.3/UL 797 CARBON STEEL WITH G90 GALVANIZING. EMT SHALL MINIMUM YIELD STRENGTH (FY) OF 30 KSI AND MINIMUM ULTIMATE STRENGTH (FU) OF 48 KSI.

3. ATTACHMENT OF HANGER AND BRACING WIRES:

3.01 SEPARATE ALL CEILING HANGER AND BRACING WIRES AT LEAST SIX (6) INCHES FROM ALL UNBRACED DUCTS, PIPES, CONDUIT, ETC.

3.02 HANGER AND BRACING WIRES SHALL NOT ATTACH TO OR BEND AROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO: PIPING, DUCTWORK, CONDUIT AND EQUIPMENT.

3.03 HANGER WIRES THAT ARE MORE THAN ONE (HORIZONTAL) IN SIX (VERTICAL) OUT OF PLUMB SHALL HAVE COUNTER-SLOPING WIRES.

3.04 SLACK SAFETY WIRES SHALL BE CONSIDERED HANGER WIRES FOR INSTALLATION AND TESTING REQUIREMENTS.

3.05 HANGER AND BRACING WIRE ANCHORAGE TO THE STRUCTURE SHALL BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE ANCHORAGE ALIGNS CLOSELY WITH THE DIRECTION OF THE WIRE. (E.G. BRACING WIRE CEILING CLIPS MUST BE BENT AS SHOWN IN THE DETAILS AND ROTATED AS REQUIRED TO ALIGN CLOSELY WITH THE DIRECTION OF THE WIRE, SCREW EYES IN WOOD MUST BE INSTALLED SO THEY ALIGN CLOSELY WITH THE DIRECTION OF THE WIRE, ETC.)

3.06 FASTEN HANGER WIRES WITH NOT LESS THAN THREE (3) TIGHT TURNS IN THREE (3) INCHES. HANGER WIRE LOOPS SHALL BE TIGHTLY WRAPPED AND SHARPLY BENT TO PREVENT VERTICAL MOVEMENT OR ROTATION WITH IN LOOPS PER ASTM E580.

3.07 FASTEN BRACING WIRES WITH NOT LESS THAN FOUR (4) TIGHT TURNS IN ONE AND ONE-HALF (1-1/2) INCHES.

3.08 WIRE TURNS MADE BY MACHINE WHERE BOTH STRANDS HAVE BEEN DEFORMED OR BENT IN WRAPPING CAN HAVE THE ONE AND ONE-HALF (1-1/2) INCH REQUIREMENT WAIVED, BUT THE NUMBER OF TURNS SHOULD BE MAINTAINED, AND BE AS TIGHT AS POSSIBLE.

3.09 PROVIDE TRAPEZE OR OTHER SUPPLEMENTARY SUPPORT MEMBERS AT OBSTRUCTIONS TO ALLOW TYPICAL HANGER SPACING.

3.10 PROVIDE ADDITIONAL HANGERS, STRUCTS, AND BRACE ASSEMBLIES AS REQUIRED AT ALL CEILING BREAKS, SOFFITS, OR DISCONTINUOUS AREAS.

3.11 SPLICES WILL NOT BE PERMITTED IN ANY HANGER WIRES UNLESS THE SPLICE IS CONSTURCTED ACCORDING TO THE SPECIFIC DETAILS PROVIDED IN THESE DOCUMENTS.

3.12 THE GAGE AND SPACING OF ANY EXISTING WIRE TO BE SPLICED MUST COMPLY WITH CURRENT CODE REQUIREMENTS.

3.12 THE SLOPE OF BRACING WIRES SHALL NOT EXCEED 45 DEGREES FROM THE HORIZONTAL PLANE AND WIRES SHALL BE TAUT.

4. FASTENERS AND WELDING:

4.01 SHEET METAL SCREWS SHALL COMPLY WITH ASTM C1513-10, ASME B18.6.4-89 (R2005). PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHALL NOT BE LESS THAN THREE EXPOSED THREADS.

4.02 EXPANSION ANCHORS SHALL BE: AS LISTED IN THE GENERAL NOTES ON DRAWING A0.1. DIAMETER, EMBEDMENTAND ICC/ES REPORT SHALL BE AS SHOWN ON DRAWING A0.1 AND AS INDICATED ON THE DETAILS.

4.03 POWER-ACTUATED FASTENERS SHALL BE: AS LISTED IN THE GENERAL NOTES ON DRAWING A0.1. DIAMETER, EMBEDMENTAND ICC/ES REPORT SHALL BE AS SHOWN ON DRAWING A0.1 AND AS INDICATED ON THE DETAILS.

4.04 IF NOT OTHERWISE SPECIFIED IN THE EVALUATION REPORT, POWER-ACTUATED FASTENERS INSTALLED IN STEEL SHALL BE INSTALLED SO THE ENTIRE POINTED END OF THE FASTENER IS DRIVEN THROUGH THE STEEL MEMBER.

4.05 POWER-ACTUATED FASTENERS IN CONCRETE ARE NOT PERMITTED FOR BRACING WIRES.

4.06 CONCRETE REINFORCEMENT AND PRESTRESSING TENDONS SHALL BE LOCATED BY NON-DESTRUCTIVE MEANS PRIOR TO INSTALLING POST-INSTALLED ANCHOR.

4.07 WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3 USING E60XX SERIES ELECTRODES.

4.08 ANCHORS FOR WALL ANGLES:

A. AT WOOD STUD WALL: 8D COMMON NAIL AT 16" O.C. INTO SOLID BLOCKING.
B. AT METAL STUD WALL: NO. 10 SMS INTO MIN. 33 MIL THK METAL STUD AT 24" O.C.
C. AT MASONRY WALL: 1/4" DIA X 1-3/4" LONG TAP CON ANCHOR SCREW AT 16" O.C. ICC ESR-1671.

5. TESTING: ALL FIELD TESTING MUST BE PERFORMED IN THE PRESENCE OF THE PROJECT INSPECTOR.

5.01 POST-INSTALLED ANCHORS IN CONCRETE USED TO SUPPORT HANGER WIRES SHALL BE TESTED AT A FREQUENCY OF 10 PERCENT. POWER-ACTUAUTED FASTENERS IN CONCRETE SHALL BE FIELD TESTED FOR 200 LB. IN TENSION. ALL OTHER POST-INSTALLED ANCHORS IN CONCRETE SHALL BE TESTED IN ACCORDANCE WITH CBC SECTION 1913A.7.

5.02 POST-INSTALLED ANCHORS IN CONCRETE USED TO ATTACH BRACING WIRES SHALL BE TESTED AT A FREQUENCY OF 50 PERCENT IN ACCORDANCE WITH CBC SECTION 1913A.7.

5.03 ALL EXISTING CEILING HANGER WIRE/ANCHOR ASSEMBLIES MUST BE TESTED TO 200 LBS.

5.04 ALL EXISTING BRACING WIRE/ANCHOR ASSEMBLIES MUST BE FIELD TESTED TO 440 LB.

5.05 WHERE A NEW WIRE IS SPLICED TO AN EXISTING WIRE, EACH SPLICED WIRE/ANCHOR ASSEMBLY MUST BE FIELD TESTED TO THE LOADS REQUIRED FOR EXISTING CEILING OR BRACE WIRES.

6. LIGHT FIXTURES:

6.01 ALL LIGHT FIXTURES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURE. A MINIMUM OF TWO SCREWS OR APPROVED FASTENERS ARE REQUIRED AT EACH LIGHT FIXTURE, PER ASTM E580, SECTION 5.3.1.

6.02 SURFACE-MOUNTED LIGHT FIXTURES SHALL BE ATTACHED TO THE MAIN RUNNER WITH AT LEAST TWO POSITIVE CLAMPING DEVICES. THE CLAMPING DEVICE SHALL COMPLETELY SURROUND THE SUPPORTING CEILING RUNNER AND BE MADE OF STEEL WITH A MINIMUM THICKNESS OF #14 GAGE. ROTATIONAL SPRING CATCHES DO NOT COMPLY. A #12 GAGE SLACK SAFETY WIRE SHALL BE CONNECTED FROM EACH CLAMPING DEVICE TO THE STRUCTURE ABOVE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE EIGHT (8) FEET OR LONGER OR EXCEED 56 LB. MAXIMUM SPACING BETWEEN SUPPORTS SHALL NOT EXCEED EIGHT (8) FEET.

6.03 LIGHT FIXTURES WEIGHING LESS THAN OR EQUAL TO 10 LB. SHALL HAVE A MINIMUM OF ONE (1) #12 GAGE SLACK SAFETY WIRE CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE.

6.04 LIGHT FIXTURES WEIGHING GREATER THAN 10 LB. BUT LESS THAN OR EQUAL TO 56 LB. MAY BE SUPPORTED DIRECTLY ON THE CEILING RUNNERS, BUT THEY SHALL HAVE A MINIMUM OF TWO (2) #12 GAGE SLACK SAFETY WIRES CONNECTED FROM THE FIXTURE HOUSING AT DIAGONAL CORNERS TO THE STRUCTURE ABOVE.

EXCEPTION: ALL LIGHT FIXTURES GREATER THAN TWO BY FOUR FEET WEIGHING LESS THAN 56 LB. SHALL HAVE A #12 GAGE SLACK SAFETY WIRE AT EACH CORNER.

6.05 ALL LIGHT FIXTURES WEIGHING GREATER THAN 56 LB. SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE HANGER WIRES (ONE AT EACH CORNER) ATTACHED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE OR OTHER APPROVED HANGERS. THE FOUR (4) TAUT #12 GAGE WIRES OR OTHER APPROVED HANGERS, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, SHALL BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE FIXTURE.

6.06 WHERE PENDANT MOUNTED LIGHT FIXTURES ARE INSTALLED IN AN AREA WITH A SUSPENDED CEILING THE LIGHT FIXTURE SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE WITH HANGER WIRES OR CABLE PASSING THRU EACH PENDANT HANGER AND SHALL BE CAPABLE OF SUPPORTING TWO (2) TIMES THE WEIGHT OF THE FIXTURE.

6.07 IF A PENDANT MOUNTED LIGHT FIXTURE IS DIRECTLY AND INDEPENDENTLY BRACED BELOW THE CEILING THEN A BRACE ASSEMBLY IS NOT REQUIRED ABOVE THE THE CEILING.

6.08 IF A PENDANT MOUNTED LIGHT FIXTURE IS FREE TO SWING 45 DEGREES FROM THE VERTICAL IN ALL DIRECTIONS, AND IS NOT DIRECTLY OR INDEPENDENTLY BRACED BELOW THE CEILING, THEN A BRACING ASSEMBLY IS ONLY REQUIRED WHERE THE PENDANT HANGER PENETRATES THE CEILING.

6.09 WHERE THE WEIGHT OF THE PENDANT FIXTURE IS LESS THAN 20 LB. THE VERTICAL COMPONENT OF THE BRACE FORCE NEED NOT BE CONSIDERED. NO COMPRESSION POST/STRUT IS REQUIRED.

7. SERVICES WITHIN THE CEILING:

7.01 ALL FLEXIBLE SPRINKLER HOSE FITTING MOUNTING BRACKETS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS. SCREWS OR APPROVED FASTENERS ARE REQUIRED. A MINIMUM OF TWO ATTACHMENTS ARE REQUIRED AT EACH COMPONENT.

7.02 CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING LESS THAN OR EQUAL TO 20 LB. SHALL HAVE ONE (1) #12 GAGE SLACK SAFETY WIRE ATTACHED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE.

7.03 FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERIVCES WEIGHING MORE THAN 20 LB. BUT LESS THAN OR EQUAL TO 56 LB. SHALL HAVE TWO (2) #12 GAGE SLACK SAFETY WIRES (AT DIAGONAL CORNERS) CONNECTED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE.

7.04 FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERIVCES WEIGHING MORE THAN 56 LB. SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE BY NOT LESS THAN FOUR (4) TAUT #12 GAGE HANGER WIRES ATTACHED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE OR OTHER APPROVED HANGERS.

7.05 PENETRATIONS THRU CEILING PANELS FOR SPRINKLER HEADS AND OTHER SIMILAR DEVICES THAT ARE NOT INTEGRALLY TIED TO THE CEILING SYSTEM SHALL HAVE A TWO (2) INCH OVERSIZED RING OR SLEEVE THRU THE CEILING PANEL TO ALLOW ONE (1) INCH OF MOVEMENT IN ALL HORIZONTAL DIRECTIONS. PENETRATIONS TO BE COVERED WITH AN ESCUTCHEON PLATE. FLEXIBLE SPRINKLER HOSE THAT CAN ACCOMODATE THE ONE (1) INCH OF MOVEMENT SHALL NOT REQUIRE THE OVERSIZED SLEEVE OR ADAPTER.

8. OTHER DEVICES WITHIN THE CEILING:

8.01 ALL LIGHTWEIGHT MISCELLANEOUS DEVICES, SUCH AS STROBE LIGHTS, OCCUPANCY SENSORS, SPEAKERS, EXIT SIGN, ETC., SHALL BE ATTACHED TO THE CEILING GRID. IN ADDITION, DEVICES WEIGHING MORE THAN 10 LB. SHALL HAVE A #12 GAGE SLACK SAFETY WIRE ANCHORED TO THE STRUCTURE ABOVE. DEVICES WEIGHING MORE THAN 20 LB. SHALL BE SUPPORTED INDEPENDENTLY FROM THE STRUCTURE ABOVE.

8.02 ALL AIR TERMINALS AND OTHER DEVICES SHALL BE MOUNTED IN A MANNER THAT WILL NOT COMPROMISE CEILING PERFORMANCE IN ACCORDANCE WITH SECTION 13.5.6.2.2, ITEM 5 OF ASCE 7 AS AMENDED BY CBC SECTION 1616A.120 AND ASTM E580 SECTIONS 5.3 AND 5.4.

8.03 CEILING PANELS SHALL NOT SUPPORT ANY LIGHT FIXTURES, AIR TERMINALS OR OTHER DEVICES.

S_{DS} = 1.226 PER STRUCTURAL SHEET S0.1

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DIV. OF THE STATE ARCHITECT
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REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/15/2020

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LICENSED ARCHITECT
MARK GRAHAM
C-26546
03-31-21
STATE OF CALIFORNIA

CONSULTANT

BID SET

NO	DATE	BY	DESCRIPTION
#1			REVISIONS

DRAWN:	JY	CHECKED:	SJ
DATE:	02/26/2020	SCALE:	As indicated
PROJECT NUMBER:	1917000		

SUSPENDED CEILING DETAILS

DRAWING NUMBER: **9.2**

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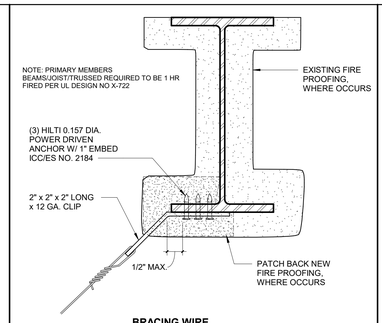
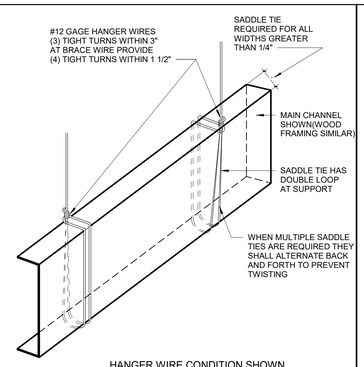


BRACING WIRE

NOTE:

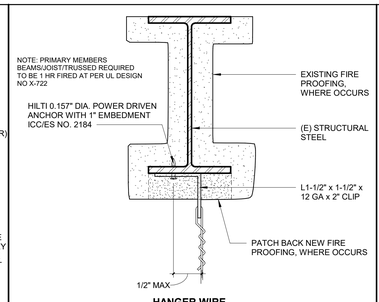
1. BEAM FLANGE THICKNESS SHALL NOT BE LESS THAN 3/16"
2. VERIFY THAT NO PAF IS INSTALLED IN THE PROTECTED ZONE OF ANY STEEL MEMBER. SEE ANSI/AISC 341-10
3. FOR ADDITIONAL INFORMATION REFER TO (4.10 / 9.3)

BRACE TO STRUCT STEEL | 6" = 1'-0" | 4.33



HANGER WIRE CONDITION SHOWN
BRACE WIRE CONDITION SIMILAR

TYPICAL SADDLE TIE | 3" = 1'-0" | 4.29

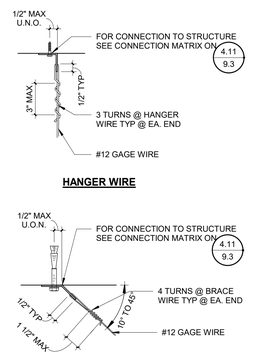


HANGER WIRE

NOTE:

1. BEAM FLANGE THICKNESS SHALL NOT BE LESS THAN 3/16"
2. VERIFY THAT NO PAF IS INSTALLLED IN THE PROTECTED ZONE OF ANY STEEL MEMBER, SEE ANSI/AISC 341-10
3. FOR ADDITIONAL DETAILS REFER TO (4.10 / 9.3)

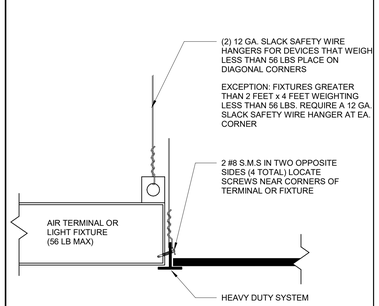
HANGER TO STRUCT STEEL | 6" = 1'-0" | 4.23



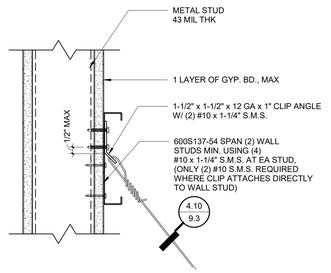
HANGER WIRE

BRACING WIRE

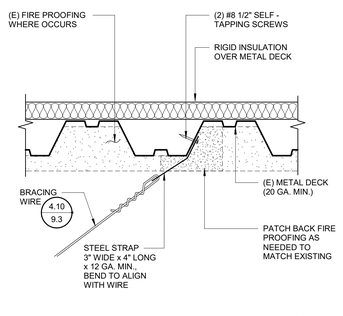
TYPICAL WIRE TURNS | 3" = 1'-0" | 4.10



LIGHT/AIR TERMINAL SUPPORT | 3" = 1'-0" | 2.80



BRACE TO METAL STUD WALL | 3" = 1'-0" | 4.34

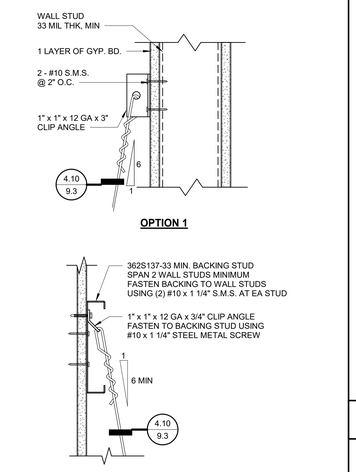


NOTE: ROOF ASSEMBLY REQUIRED TO BE 1 HR FIRE RATED PER UL DESIGN NO N706

NOTE:

1. IF SELF-TAPPING SCREWS ARE USED WITH CONCRETE FILL, SET SCREWS BEFORE PLACING CONCRETE.

BRACE TO METAL DECK | 6" = 1'-0" | 4.30



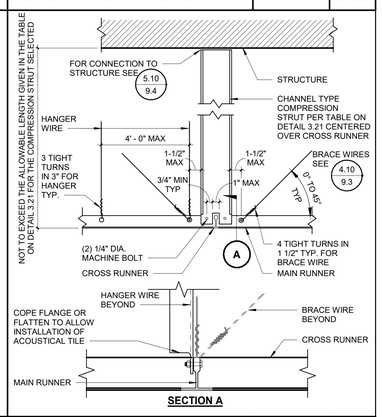
NOTE:

1. THIS IS APPLIED FOR PERIMETER WIRE ATTACHMENT OR WHERE OBSTRUCTION PREVENTS ATTACHEMENT TO STRUCTURE ABOVE

HNGR TO METAL STUD WALL | 3" = 1'-0" | 4.24

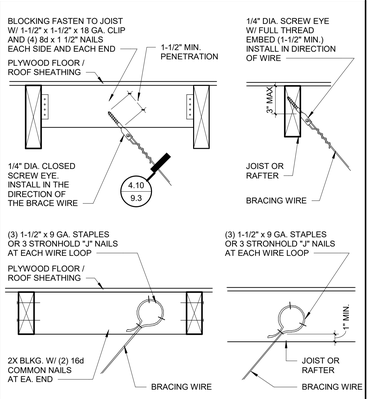
STRUCTURAL CONDITION OF FLOOR/ROOF ABOVE SUSPENDED CEILING	APPLICABLE HANGER WIRE DETAIL	APPLICABLE BRACING WIRE DETAIL
METAL DECK	4.20	4.30
CONCRETE OVER METAL DECK	4.21	4.31
METAL STUD WALL	4.24	4.34
SAWN TIMBER	4.25, 4.29	4.35

HANGER AND BRACE MATRIX | 3" = 1'-0" | 4.11

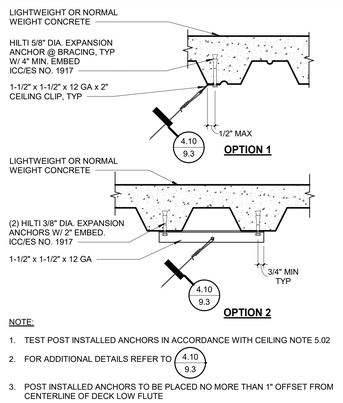


SECTION A

CHANNEL TYPE STRUT | 1 1/2" = 1'-0" | 3.10



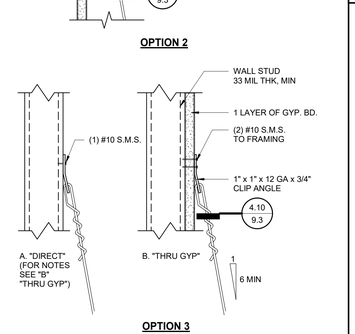
BRACE TO SAWN TIMBER | 1 1/2" = 1'-0" | 4.35



NOTE:

1. TEST POST INSTALLED ANCHORS IN ACCORDANCE WITH CEILING NOTE 5.02
2. FOR ADDITIONAL DETAILS REFER TO (4.10 / 9.3)
3. POST INSTALLED ANCHORS TO BE PLACED NO MORE THAN 1" OFFSET FROM CENTERLINE OF DECK LOW FLUTE

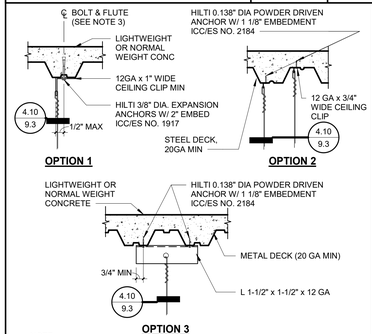
BRACE TO CONC OVER DECK | 1 1/2" = 1'-0" | 4.31



NOTE:

1. THIS IS APPLIED FOR PERIMETER WIRE ATTACHMENT OR WHERE OBSTRUCTION PREVENTS ATTACHEMENT TO STRUCTURE ABOVE

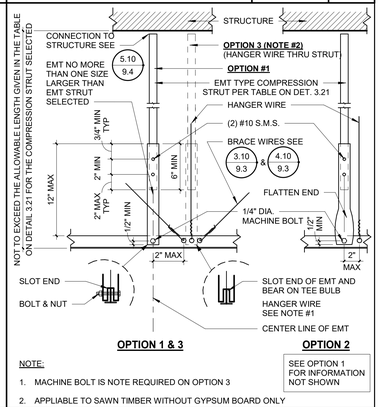
HNGR TO METAL STUD WALL | 3" = 1'-0" | 4.24



NOTE:

1. FOR ADDITIONAL DETAILS REF TO (4.10 / 9.3)
2. POST INSTALLED ANCHORS TO BE PLACED NO MORE THAN 1" OFFSET FROM CENTERLINE OF DECK LOW FLUTE.
3. TEST POST INSTALLED ANCHORS IN ACCORDANCE WITH CEILING NOTE 5.01

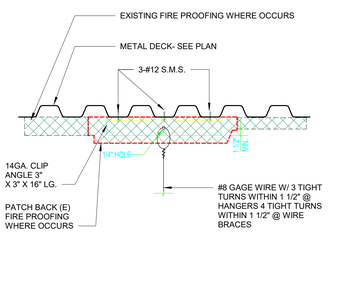
HNGR TO CONC OVER DECK | 1" = 1'-0" | 4.21



NOTE:

1. MACHINE BOLT IS NOTE REQUIRED ON OPTION 3
2. APPLIABLE TO SAWN TIMBER WITHOUT GYPSUM BOARD ONLY

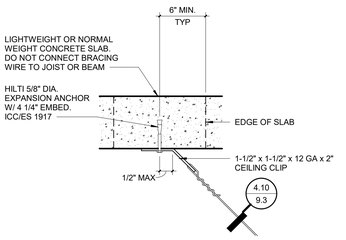
EMT TYPE STRUT | 1 1/2" = 1'-0" | 3.20



NOTE: ROOF ASSEMBLY REQUIRED TO BE 1 HR FIRE RATED PER UL DESIGN NO N706

CEILING HANGER AT ROOF METAL DECK

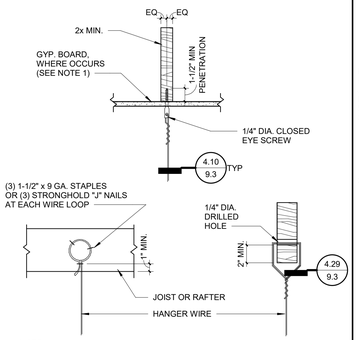
HANGER TO METAL DECK | 1" = 1'-0" | 4.20



NOTE:

1. TEST POST INSTALLED ANCHORS IN ACCORDANCE WITH CEILING NOTE 5.02
2. FOR ADDITIONAL DETAILS REFER TO (4.10 / 9.3)

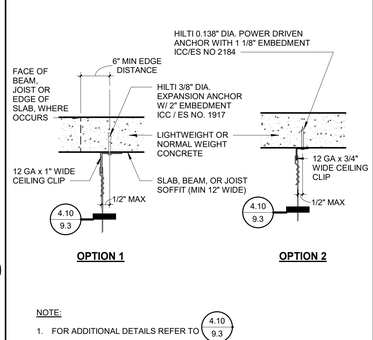
BRACE TO CONC SLAB/BEAM | 1 1/2" = 1'-0" | 4.32



NOTE:

1. WHEN FIRE RATED GYP. BOARD IS INSTALLED ON THE BOTTOM FLANGES, USE SCREW EYES W/ SUFFICIENT LENGTH TO AVOID DAMAGING THE FIRE RATED GYP. BOARD AND MEET MIN. PENETRATION

HANGER TO SAWN TIMBER | 1 1/2" = 1'-0" | 4.25



NOTE:

1. FOR ADDITIONAL DETAILS REFER TO (4.10 / 9.3)
2. TEST POST INSTALLED ANCHORS IN ACCORDANCE WITH CEILING NOTE 5.01

HANGER TO CONC SLAB/BEAM | 1" = 1'-0" | 4.22

EMT COMPRESSION STRUT	MAXIMUM LENGTH
1/2" DIAMETER EMT (0.42" WALL THICKNESS)	5' - 10"
3/4" EMT DIAMETER (0.049" WALL THICKNESS)	7' - 8"
1" EMT DIAMETER (0.057" WALL THICKNESS)	9' - 9"
1 1/4" EMT DIAMETER (0.065" WALL THICKNESS)	12' - 9"
1 1/2" EMT DIAMETER (0.065" WALL THICKNESS)	14' - 9"
2" EMT DIAMETER (0.065" WALL THICKNESS)	18' - 10"

CHANNEL COMPRESSION STRUT	MAXIMUM LENGTH
250S125-33	5' - 0"
250S137-33	6' - 10"
362S137-33	8' - 0"
250S137-43	8' - 10"
400S137-43	10' - 10"

COMPRESSION STRUT TABLE | 3" = 1'-0" | 3.21

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LICENSED ARCHITECT
MARK GRAHAM
C-26546
03-31-21
STATE OF CALIFORNIA

CONSULTANT

BID SET

NO	DATE	BY	DESCRIPTION
#1			REVISIONS

DRAWN: JY | CHECKED: SJ
DATE: 02/26/2020 | SCALE: As indicated
PROJECT NUMBER: 1917000

SUSPENDED CEILING DETAILS

DRAWING NUMBER: **9.3**

6/1/2020 12:46:17 PM
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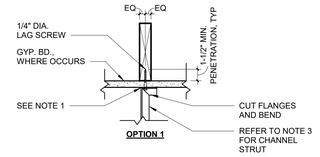
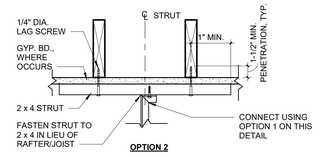
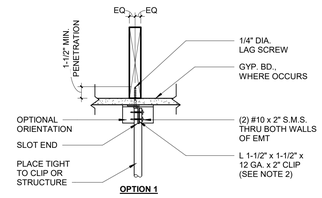


OPTION 1

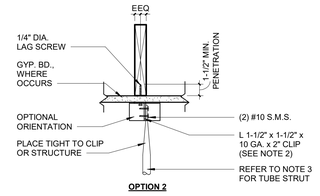


OPTION 2

CHANNEL STRUT



OPTION 1



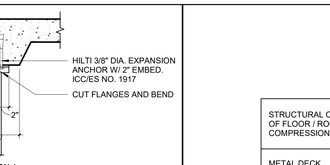
OPTION 2

TUBE STRUT

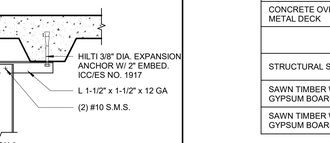
NOTE:

1. WEB OF CHANNEL TO BEAR WITHIN WIDTH OF THE WOOD MEMBER
2. FOR ANGLE ORIENTED IN THE STANDARD POSITION, VERTICAL LEG TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER
3. FOR COMPRESSION STRUT TABLE REFER TO 3.21 / 9.3

STRUT TO TIMBER W/ GYP	1 1/2" = 1'-0"	5.50

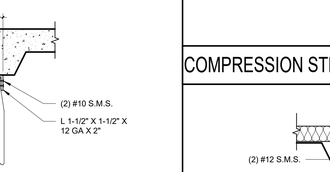


OPTION 1



OPTION 2

CHANNEL STRUT



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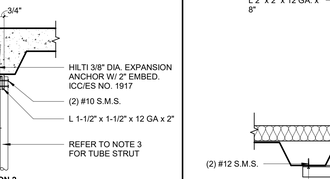


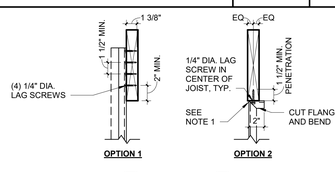
OPTION 2

TUBE STRUT

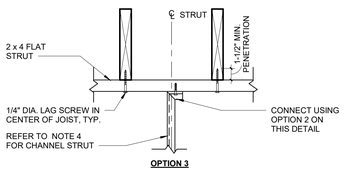
NOTE:

1. POST INSTALLED ANCHORS TO BE PLACED NO MORE THAN 1" OFFSET FROM CENTERLINE OF DECK LOW FLUTE
2. TEST POST INSTALLED ANCHORS IN ACCORDANCE W/ CEILING NOTE 5.01
3. FOR COMPRESSION STRUT TABLE REFER TO 3.21 / 9.3

STRUT TO CONC OVER DECK	1 1/2" = 1'-0"	5.21

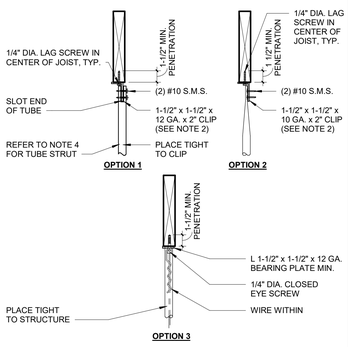


OPTION 1 **OPTION 2**



OPTION 3

CHANNEL STRUT



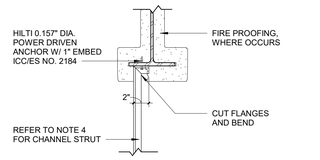
OPTION 1 **OPTION 2** **OPTION 3**

TUBE STRUT

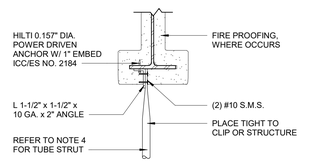
NOTE:

1. WEB OF CHANNEL TO BEAR WITHIN WIDTH OF WOOD MEMBER
2. VERTICAL LEG OF MEMBER TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER
3. FOR ADDITIONAL INFORMATION REFER TO 5.50 / 9.4
4. FOR COMPRESSION STRUT TABLE REFER TO 3.21 / 9.3

STRUT TO TIMBER W/O GYP	1 1/2" = 1'-0"	5.60



CHANNEL STRUT



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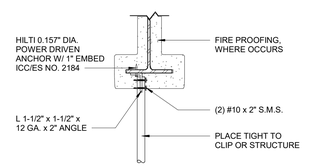


OPTION 2

TUBE STRUT

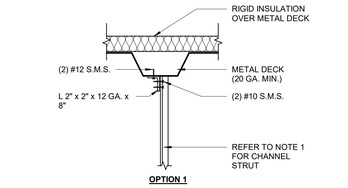
NOTE:

1. STRUCTURAL STEEL MEMBER SHALL NOT BE LESS THAN 3/16"
2. VERIFY THAT NO PAF IS INSTALLED IN THE PROTECTED ZONE OF ANY STEEL MEMBER, SEE ANSI/AISC 341-10
3. FOR ADDITIONAL INFORMATION REFER TO 5.20 / 9.4 AND
4. FOR COMPRESSION STRUT TABLE REFER TO 3.21 / 9.3

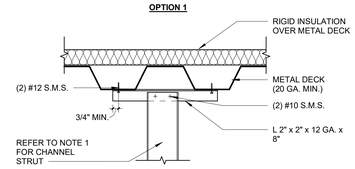
STRUT TO STRUC STEEL	1 1/2" = 1'-0"	5.40

STRUCTURAL CONDITION OF FLOOR / ROOF ABOVE COMPRESSION STRUT	APPLICABLE DETAIL
METAL DECK	5.20
CONCRETE OVER METAL DECK	5.21
STRUCTURAL STEEL	5.40
SAWN TIMBER WITH GYPSUM BOARD	5.50
SAWN TIMBER WITHOUT GYPSUM BOARD	5.60

COMPRESSION STRUT MATRIX	3" = 1'-0"	5.10

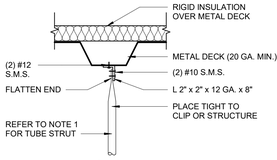


OPTION 1



OPTION 2

CHANNEL STRUT



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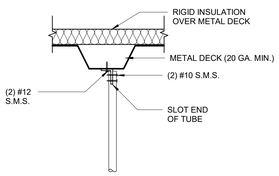


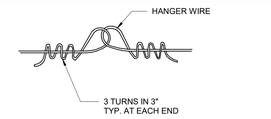
OPTION 2

TUBE STRUT

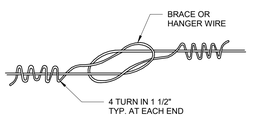
NOTE:

1. FOR COMPRESSION STRUT TABLE REFER TO 3.21 / 9.3

STRUT TO METAL DECK	1 1/2" = 1'-0"	5.20



HANGER WIRE ONLY



HANGER OR BRACE WIRE

NOTE:

1. WIRE SPLICES ARE SHOWN LOOSELY TIED FOR ILLUSTRATIVE PURPOSES ONLY AND SHALL BE DRAWN TIGHT TO COMPLETE INSTALLATION WHEN CONSTRUCTED

CEILING WIRE SPLICES	3" = 1'-0"	6.10

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120526 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/15/2020

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LICENSED ARCHITECT
MARK GRAHAM
C-26046
03-31-21
STATE OF CALIFORNIA

CONSULTANT

BID SET

NO	DATE	BY	DESCRIPTION
#1			REVISIONS

DRAWN: JY	CHECKED: SJ
DATE: 02/26/2020	SCALE: As indicated
PROJECT NUMBER: 1917000	

SUSPENDED CEILING DETAILS

DRAWING NUMBER: **9.4**

PROOF LOAD TESTS FOR EXPANSION TYPE ANCHOR BOLTS

1. ANCHOR DIAMETER REFERS TO THE TREAD SIZE FOR THE WEDGE & SHELL CATEGORIES, AND TO THE ANCHOR OUTSIDE DIAMETER FOR THE SLEEVE CATEGORY.
2. APPLY PROOF TEST LOADS TO WEDGE & SLEEVE ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A TREADED COUPLER TO THE SAME TIGHTNESS AS THE ORIGINAL NUT USING A TORQUE WRENCH TO APPLY THE TEST LOAD.
3. FOR SLEEVE/SHELL INTERNALLY THREATED CATEGORIES, VERIFY THAT THE ANCHOR IS NOT PREVENTED FROM WITHDRAWING BY A BASEPLATE OR OTHER FIXTURES. IF RESTRAINT IS FOUND, LOOSEN AND SHIM OR REMOVE FIXTURE(S) PRIOR TO TESTING.
4. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURE(S).
5. SHELL TYPE ANCHOR SHOULD BE TESTED AS FOLLOWS:
   a. VISUALLY INSPECT 25% FOR FULL EXPANSION AS EVIDENCE BY THE LOCATION OF THE EXPANSION PLUG IN THE ANCHOR BODY. PLUG LOCATION OF A FULLY EXPANDED ANCHOR SHOULD BE AS RECOMMENDED BY THE MANUFACTURER, OR, IN THE ABSENCE OF SUCH RECOMMENDATION, AS DETERMINED ON THE JOB SITE FOLLOWING THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. AT LEAST 5% OF THE ANCHORS SHALL BE PROOF LOADED AS INDICATED IN THE TABLE BELOW, BUT NOT LESS THAN THREE ANCHORS PER DAY FOR EACH DIFFERENT PERSON OR CREW INSTALLING ANCHORS, OR;
   b. TEST INSTALLED ANCHORS PER SECTION 1910A
6. TEST EQUIPMENT (INCLUDING TORQUE WRENCHES) IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.
7. ALTERNATE TORQUE TEST PROCEDURES AND TEST VALUES FOR SHELL TYPE ANCHOR MAY BE SUBMITTED TO THE ENFORCEMENT AGENCY FOR REVIEW AND APPROVAL ON A CASE-BY-CASE BASIS WHEN TEST PROCEDURES ARE SUBMITTED AND APPROVED BY THE ENFORCEMENT AGENCY.
8. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF ANCHORS:
   a. HYDRAULIC RAM METHOD: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT APPLICABLE TEST LOAD. FOR WEDGE AND SLEEVE TYPE ANCHORS, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE.
   b. TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS:
      i. WEDGE OR SLEEVE TYPE: ONE HALF (1/2) TURN OF THE NUT.
      ii ONE-QUARTER (1/4) TURN OF THE NUT FOR THE 3/8". SLEEVE ANCHOR ONLY.
9. IF THE MANUFACTURER'S RECOMMENDED INSTALLATION TORQUE IS LESS THAN THE TORQUE NOTED IN THE TABLE, THE MANUFACTURER'S RECOMMENDED INSTALLATION TORQUE SHOULD BE USED IN LIEU OF THE TABULATED VALUES.
10. TESTING FREQUENCY SHALL BE AS FOLLOWS (1910A.5.3):

a. WHEN POST-INSTALLED ANCHORS ARE USED FOR SILL PLATE BOLTING APPLICATIONS, 10 PERCENTS OF THE ANCHORS SHALL BE TESTED.
b. WHEN POST-INSTALLED ANCHORS ARE USED FOR OTHER STRUCTURAL APPLICATIONS, ALL SUCH ANCHORS SHALL BE TESTED.
c. WHEN POST-INSTALLED ANCHORS ARE USED FOR NONSTRUCTURAL COMPONENTS, SUCH AS EQUIPMENT ANCHORAGE, 50 PERCENT OR ALTERNATE BOLTS IN A GROUP, INCLUDING AT LEAST ONE-HALF THE ANCHORS IN EACH GROUP, SHALL BE TESTED.

11. AVOID DAMAGING EXISTING REINFORCING STEEL.

EXPANSION ANCHORS TEST VALUES
CONCRETE

ANCHOR	WEDGE	
DIA. (in)	LOAD (lbs)	TORQUE (ft-lbs)
1/4"	800	10
5/16"	-	-
3/8"	1100	25
1/2"	2000	50
5/8"	2300	80
3/4"	3700	150
1"	5800	250

COLD-FORMED METAL FRAMING

1. COLD ROLLED STEEL SHEET FOR STRUCTURAL PRODUCTS SHALL CONFORM TO ASTM C635, ASTM A1003-13 GR. 50,36 ASTM A653 SS GR 33,50 AND ICC-ES-ESR-3064P
2. COLD ROLLED STEEL SHEET MUST MEET THE MINIMUM REQUIREMENTS OF ASTM A1003 STRUCTURAL GRADE 50 TYPE H (ST50H) (Fy=50 KSI) FOR 12, 14 AND 16 GAGE STUD MEMBERS WITH A G60 GALVANIZED COATING OR ASTM A653, SS GRADE 33 (Fy=33 KSI).
3. COLD ROLLED STEEL SHEET MUST MEET THE MINIMUM REQUIREMENTS OF ASTM A1003 STRUCTURAL GRADE 33, TYPE H (ST33H) (Fy=33 KSI) FOR 18 GAGE AND LIGHTER STUD MEMBERS WITH A G60 GALVANIZED COATING OR ASTM A653, SS GRADE 50, CLASS 1 (Fy=50 KSI).
4. COLD ROLLED STEEL SHEET FOR CLIPS SHALL MEET THE MINIMUM REQUIREMENTS OF ASTM A653, GRADE 50, CLASS 1 OR 2 WITH G90 GALVANIZED COATING.
5. ALL STRUCTURAL MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" 2007 EDITION.
6. METAL STUDS AND/OR JOISTS:
   a. FOR METAL STUD WALLS, UNLESS OTHERWISE SHOWN ON THE DRAWINGS, PROVIDE STANDARD PUNCHED STEEL MEMBERS OF THE GAUGES REQUIRED PER AISI.
   b. USE ONLY ONE TYPE THROUGHOUT THE WORK, UNLESS OTHERWISE SHOWN ON THE DRAWINGS OR SPECIFICALLY APPROVED IN ADVANCE BY THE ARCHITECT AND ENGINEER.
7. ACCESSORIES: PROVIDE ALL ACCESSORIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, TRACKS, CLIPS, WEB STIFFENERS, ANCHORS, FASTENING DEVICES, RESILIENT CLIPS, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, AND AS RECOMMENDED BY THE MANUFACTURER FOR THE STEEL MEMBERS USED.
8. FASTENING OF COMPONENTS SHALL BE WITH SELF-DRILLING SCREWS OR WELDING AS INDICATED ON DRAWINGS. SCREWS SHALL CONFORM TO ICC-ES ESR-2196 REPORT. ALL WELDS OF GALVANIZED STEEL SHALL BE TOUCHED UP WITH A ZINC-RICH PAINT. ALL WELDS OF CARBON SHEET STEEL SHALL BE TOUCHED UP WITH PAINT. WELDING PER AWS D1.3.
9. COMPLETE, UNIFORM AND LEVEL BEARING SUPPORT SHALL BE PROVIDED FOR THE BOTTOM RUNNER. PROVIDE A GOOD GRADE OF COMMERCIAL GROUT FOR LEVELING THE FLOOR RUNNER MEMBER OF STEEL STUD PARTITIONS AS REQUIRED.
10. EXAMINE THE AREAS AND CONDITIONS UNDER WHICH WORK OF THIS SECTION WILL BE PERFORMED. CORRECT CONDITIONS DETRIMENTAL TO TIMELY AND PROPER COMPLETION OF THE WORK. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED.
11. RUNNERS SHALL BE SECURELY ANCHORED TO THE SUPPORTING STRUCTURE AS SHOWN ON THE DRAWINGS.
12. ABUTTING LENGTHS OF RUNNER SHALL EACH BE SECURELY ANCHORED TO A COMMON STRUCTURAL ELEMENT, BUTT-WELDED, OR SPLICED.
13. STUDS SHALL BE PLUMBED, ALIGNED AND TIGHTLY NESTED IN BOTH UPPER AND LOWER RUNNERS WITH SECURE ATTACHMENT TO THE FLANGES OF EACH RUNNER.
14. JACK STUDS OR CRIPPLES SHALL BE INSTALLED BELOW WINDOW SILLS, ABOVE WINDOW AND DOOR HEADS, AND ELSEWHERE TO FURNISH SUPPORTS, AND SHALL BE SECURELY ATTACHED TO CONNECTING MEMBERS.
15. LATERAL BRACING SHALL BE PROVIDED BY USE OF GYPSUM BOARD AND GYPSUM SHEATHING OR BY HORIZONTAL STRAPS OR COLD-ROLLED CHANNELS. BRACING SHALL CONFORM TO SECTION D3 OF THE AISI SPECIFICATION.
16. PROVISIONS FOR STRUCTURE VERTICAL MOVEMENT SHALL BE PROVIDE WHERE INDICATED ON THE DRAWINGS.
17. HANDLING AND LIFTING OF PREFABRICATED PANELS SHALL BE DONE IN A MANNER SO AS NOT TO CAUSE DISTORTION IN ANY MEMBER.
18. FRAMING OF WALL OPENINGS SHALL INCLUDE HEADERS AND SUPPORTING STUDS AS SHOWN ON THE DRAWINGS OR WHERE NOT INDICATED PER AISI.
19. TEMPORARY BRACING, WHERE REQUIRED, SHALL BE PROVIDED UNTIL ERECTION IS COMPLETED.
19 RESISTANCE TO MINOR-AXIS BENDING AND ROTATION SHALL BE PROVIDED BY GYPSUM BOARD AND GYPSUM SHEATHING OR OTHER APPROVED MATERIALS DESIGNED IN ACCORDANCE WITH SECTION D3 OF AISI SPECIFICATION.
20. DIAGONALLY BRACED STUD WALLS, AS INDICATED ON THE DRAWINGS SHALL BE PROVIDED AT LOCATIONS DESIGNATED AS FOR FRAME STABILITY AND LATERAL LOAD RESISTANCE. ADDITIONAL STUDS, WHEN NECESSARY, SHALL BE POSITIONED AS INDICATED ON THE DRAWINGS TO RESIST THE VERTICAL COMPONENTS.
21. SPLICES IN AXIALLY LOADED STUDS SHALL NOT BE PERMITTED.
22. UNIFORM AND LEVEL JOIST BEARING SHALL BE PROVIDED AT FOUNDATION WALLS BY MEANS OF SHIMS AND/OR NON-SETTING GROUT.
23. JOISTS SHALL BE LOCATED DIRECTLY OVER BEARING STUDS OR A LOAD DISTRIBUTION MEMBER SHALL BE PROVIDED AT THE TOP OF THE BEARING WALL.
24. WEB STIFFENERS SHALL BE PROVIDED AT REACTION POINTS AND/OR AT POINTS OF CONCENTRATED LOADS WHERE INDICATED ON THE DRAWINGS OR AS REQUIRED BY AISI.
25. JOIST BRIDGING SHALL BE PROVIDED WHERE INDICATED ON THE DRAWINGS OR AS REQUIRED BY AISI.
26. ADDITIONAL JOISTS SHALL BE PROVIDED UNDER PARALLEL PARTITIONS WHEN THE PARTITION LENGTH EXCEEDS ONE-HALF THE JOIST SPAN, ALSO AROUND ALL FLOOR AND ROOF OPENINGS WHICH INTERRUPT ONE OR MORE SPANNING MEMBERS UNLESS OTHERWISE NOTED.
27. END BLOCKING SHALL BE PROVIDED WHERE JOIST ENDS ARE NOT OTHERWISE RESTRAINED FROM ROTATION.

ADHESIVE ANCHORS IN CONCRETE
HILTI HIT-HY 200 ADHESIVE ANCHOR (ICC-ES ESR-3187)

REBAR, ASTM A615 GRADE 60				ALLTHREAD ASTM A36/F1554			
REBAR SIZE	HOLE DIA.	MIN. DEPTH U.N.O.	TEST LOAD	ALLTHREAD SIZE	HOLE DIA.	MIN. DEPTH U.N.O.	TEST LOAD
#3	1/2"	2 1/2"	5.3k	3/8"Φ	7/16"	2 1/2"	2.5k
#4	5/8"	3"	9.4k	1/2"Φ	9/16"	3"	4.6k
#5	3/4"	3 1/2"	14.7k	5/8"Φ	3/4"	3 1/2"	7.3k
#6	7/8"	4"	21.2k	3/4"Φ	7/8"	4"	21.2k
#7	1"	4 1/2"	28.8k	7/8"Φ	1"	4 1/2"	28.8k
#8	1 1/8"	5"	37.7k	1"Φ	1 1/8"	5"	37.7k
#9	1 3/8"	6"	47.7k	1 1/4"Φ	1 3/8"	6"	47.7k

1. ALL WORK SHALL BE INSTALLED UNDER CONTINOUS INSPECTION BY INSPECTOR OF RECORD.
   LOAD TEST:
   THE FOLLOWING LOAD TESTING PROCEDURES APPLY TO EACH ANCHOR SIZE AND GROUT PRODUCT PLACED BY EACH INSTALLATION TEAM FOR EACH OF THE FOLLOWING INSTALLATIONS:

a) VERTICAL SET OVERHEAD
b) VERTICAL SET DOWN
c) HORIZONTAL

2. PRIOR TO BEGINNING WORK, PROOF TEST 3 ANCHORS TO A PROOF TEST LOAD OF 125% OF TABULATED TEST LOAD.
3. LOAD TEST INSTALLED ANCHORS AT A RATE OF 100% IN THE PRESENCE OF INSPECTOR OF RECORD (I.O.R.).
4. WHEN TEST LOAD IS NOT ACHIEVED, REPLACE THE DEFICIENT ANCHORS AND RETEST. ASSOCIATED COSTS SHALL BE BORNE BY THE CONTRACTOR.
5. WHERE EMBEDMENT NOTED ON SPECIFIC DETAILS IS LESS THAN EMBEDMENT NOTED ON THIS SCHEDULE, REDUCE TEST LOAD PROPORTIONALLY.
6. UNLESS NOTED OTHERWISE INSTALL ANCHORS PER MANUFACTURER'S RECOMMENDED SPECIFICATIONS.
7. UNLESS NOTED OTHERWISE PROVIDE HOLE OF DEPTH AND DIAMETER AS SCHEDULE.
8. AVOID DAMAGING EXISTING REINFORCING STEEL.

METAL DECKING:

1. STEEL MATERIAL FOR THE DECK UNITS SHALL CONFORM TO ASTM A-653 AND ICC-ES-ESR-1735P

ALL DECK UNITS SHALL BE WITH A (G60) GALVANIZED COATING FOR INTERIOR NOT EXPOSED TO WEATHER AND (G90) FOR EXTERIOR EXPOSED TO WEATHER.

2. WELDING SHALL BE WITH E60 OR E70 ELECTRODE AND PERFORMED BY CERTIFIED, LICENSED LIGHT GAUGE WELDER PER AWS D1.3.

SPECIAL INSPECTION (STEEL):

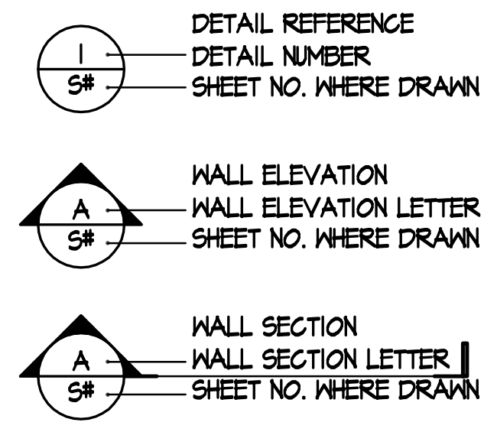
1. SPECIAL INSPECTION OF FABRICATORS PER SECTION 1705A.2.
2. INSPECTION OF ALL SHOP AND FIELD WELDING OPERATIONS, INCLUDING THE INSTALLATION OF AUTOMATIC END-WELDED STUD SHEAR CONNECTORS, SHALL BE MADE BY AN AWS-CERTIFIED WELDING INSPECTOR APPROVED BY THE ENFORCEMENT AGENCY AS DEFINED IN SECTION 1705A.2.2.5.
3. SPECIAL INSPECTION FOR SPRAYED FIRE-RESISTANT MATERIALS PER SECTION 1705A.13
4. SPECIAL INSPECTIONS FOR STEEL CONSTRUCTION SHALL BE AS DEFINED IN C.B.C. SECTION 1705A.11.1 AND TABLE 1705A.2.1 BELOW AND AS NOTED ON THE CONSTRUCTION DOCUMENTS.

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION (TABLE 1705A.2.1)

VERIFICATION AND INSPECTION	CONTINUOUS SPEC. INSP.	PERIODIC SPEC. INSP.	REFERENCED STANDARD[a]	C.B.C. REFERENCE
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:				
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	NO	YES	AISC 360, SECTION A3.3 and APPLICABLE ASTM MATERIAL STANDARDS	---
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	NO	YES	---	---
2. INSPECTION OF HIGH-STRENGTH BOLTING:				
a. SNUG-TIGHT JOINTS.	NO	YES	AISC 360, SECTION M2.5	---
b. PRE-TENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCHMARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION.	NO	YES		
c. PRE-TENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION.	YES	NO		
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD-FORMED STEEL DECK::				
a. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360.	NO	YES	AISC 360, SECTION M5.5	2203A.1
b. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	NO	YES	APPLICABLE ASTM MATERIAL STANDARDS	
c. MANUFACTURER'S CERTIFIED TEST REPORTS.	NO	YES		
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:				
a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.	NO	YES	AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS	---
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	NO	YES	---	---
5. INSPECTION OF WELDING:				
a. STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:				
1) COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS.	YES	NO	AWS D1.1	1705A.2.2
2) MULTIPASS FILLET WELDS.	YES	NO		
3) SINGLE-PASS FILLET WELDS LARGER THAN 5/16"	YES	NO		
4) PLUG AND SLOT WELDS.	YES	NO		
5) SINGLE-PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"	NO	YES		
6) FLOOR AND ROOF DECK WELDS.	NO	YES	AWS D1.3	
b. REINFORCING STEEL:				---
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.	NO	YES	AWS D1.4 ACI 318: SECTION 3.5.2	
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.	YES	NO		
3) SHEAR REINFORCEMENT.	YES	NO		
4) OTHER REINFORCING STEEL.	NO	YES		
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE:				
a. DETAILS SUCH AS BRACING AND STIFFENING.	NO	YES	---	1705A.2.2
b. MEMBER LOCATIONS.	NO	YES		
c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.	NO	YES		

LEGEND

A.B.	ANCHOR BOLT	H.A.B.	HEADED ANCHOR BOLT
BLKG.	BLOCKING	H.D.	HOLD DOWN
BM.	BEAM	HORIZ.	HORIZONTAL
B.N.	BOUNDARY NAILING	H.S.A.	HEADED STUD ANCHOR
B.O.B	BOTTOM OF BEAM	H.S.B.	HIGH STRENGTH BOLT
B.S.	BOUNDARY SCREW	H.S.S.	HOLLOW STRUCTURAL SECTION
C:	CAMBER	JST.	JOIST
C.B.	CARRIAGE BOLT	LT. WT.	LIGHT WEIGHT
CLR.	CLEAR	MAS.	MASONRY
C.J.	CONSTRUCTION JOINT	M.B.	MACHINE BOLT
C.N.	CONT. NAILING	(N)	NEW
COL.	COLUMN	N.S.	NEAR SIDE
CONC.	CONCRETE	N.T.S.	NOT TO SCALE
CONN.	CONNECTION	O.C.	ON CENTER
CONT.	CONTINUOUS	O.H.	OPPOSITE HAND
C.P.	COMPLETE PENETRATION	OPNG.	OPENING
C.P.E.	CONT. PANEL EDGES	P.J.	POUR JOINT
D.B.A.	DEFORMED BAR ANCHOR	PLT.	PLATE
DBL.	DOUBLE	PLYWD.	PLYWOOD
D.B.	DRAG BAR	P.T.	PRESSURE TREATED
DIA.	DIAMETER	REQD.	REQUIRED
DO.	DITTO	REM.	REMAINDER
DRWG.	DRAWING	R.S.	ROUGH SAWN
EA.	EACH	R.H.W.S.	ROUND HEAD WOOD SCREW
ELEV.	ELEVATION	SHTG.	SHEATHING
(E)	EXISTING	S.J.	SEPARATION JOINT
E.J.	EXPANSION JOINT	SQ.	SQUARE
E.N.	EDGE NAILING	SIM.	SIMILAR
E.S.	EDGE SCREW	S.M.	SHEET METAL
EQ.	EQUAL	S.P.	SEE PLAN
EXT.	EXTERIOR	STAGG.	STAGGERED
FDN.	FOUNDATION	STD.	STANDARD
F.G.	FINISH GRADE	STL.	STEEL
F.H.W.S.	FLAT HEAD WOOD SCREWS	STL. JST.	STEEL JOIST
F.N.	FIELD NAILING	T.&B.	TOP AND BOTTOM
F.O.C.	FACE OF CONCRETE	T.O.C.	TOP OF CONCRETE
F.O.M.	FACE OF MASONRY	T.O.M.	TOP OF MASONRY
F.O.S.	FACE OF STUD	T.O.M.D.	TOP OF METAL DECK
F.S.	FAR SIDE	T.O.P.	TOP OF PLYWOOD
FRMG.	FRAMING	T.O.PAR.	TOP OF PARAPET
FTG.	FOOTING	T.O.S.	TOP OF STEEL
GALV.	GALVANIZED	T.S.	TUBE STEEL
GA.	GAUGE	TYP.	TYPICAL
G.L.B.	GLUE LAMINATED BEAM	U.N.O.	UNLESS NOTED OTHERWISE
GYP. BD.	GYPSUM BOARD	VERT.	VERTICAL
		W.P.J.	WEAKENED PLANE JOINT
		W.A.S	WELDED ALL THREAD STUD
		W.W.F.	WELDED WIRE FABRIC
		W.O.	WHERE OCCURS



SPECIAL INSPECTION:

1. GENERAL: THE OWNER SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED UNDER SECTION 1705A. THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS IDENTIFIED IN SECTION 110. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR THE INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
2. REPORT REQUIREMENTS: THE INSPECTOR OF RECORD AND SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE INSPECTOR OF RECORD AND SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AS REQUIRED BY TITLE 24, PART 1. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS AS REQUIRED BY TITLE 24, PARTS 1 AND 2. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED AT A POINT IN TIME AGREED UPON PRIOR TO THE START OF WORK BY THE APPLICANT AND THE BUILDING OFFICIAL.

SPECIAL INSPECTION (CONCRETE):

1. THE SPECIAL INSPECTIONS AND VERIFICATIONS FOR CONCRETE CONSTRUCTION SHALL BE AS REQUIRED BY THE DSA 103 FORM AND TABLE 1705A.3.

LUMBER:

1. ALL STRUCTURAL LUMBER SHALL BE DOUGLAS FIR-LARCH OF THE GRADES INDICATED UNLESS OTHERWISE NOTED:
   SILL PLATES: DOUGLAS FIR PRESSURE TREATED (NO. 2)
   STRUCTURAL FRAMING:
   2"-4" THICK 2" AND WIDER NO. 1
   BEAMS 5" & THICKER: SELECT STRUCT.
   POSTS AND TIMBERS:
   5" x 5" & LARGER SELECT STRUCT.
2. LUMBER SHALL BE KILN-DRY (KD) OR SURFACE-DRY (S-DRY) TO A MAXIMUM MOISTURE CONTENT OF 15 PERCENT FOR 2-INCH NOMINAL THICKNESS OR LESS, 19 PERCENT MAXIMUM FOR MORE THAN 2-INCH NOMINAL THICKNESS.
3. EXPOSED LUMBER SHALL BE PROTECTED FROM RAIN AND SNOW.
4. ALL PRESSURE TREATED LUMBER SHALL BE KILN-DRY (KD) TO A MAXIMUM MOISTURE CONTENT OF 19 PERCENT.
5. ALL LUMBER SHALL BE DRESSED LUMBER, SURFACED FOUR SIDES (S4S) U.N.O.
6. ALL STRUCTURAL LUMBER SHALL BE GRADED IN ACCORDANCE WITH THE STANDARDS OF THE WEST COAST LUMBER INSPECTION BUREAU.
7. ALL WOOD BEARING ON MASONRY OR CONCRETE SHALL BE PRESSURE TREATED DOUGLAS FIR AS OUTLINED IN 2019 C.B.C. SECTION 2303.1.9 AND AWPA STANDARD U1 AND M4.
8. PLYWOOD ROOF AND SHEAR WALL SHEATHING SHALL BE GRADE MARKED STRUCTURAL I OR II (PER PLANS) PS 1-09, WITH EXTERIOR GLUE.
9. BOLTS AND THREADED RODS SHALL BE ASTM A-307. PROVIDE STANDARD CUT WASHER BETWEEN BOLT HEADS AND NUTS AND THE WOOD. WHERE BOLTS ARE IN TENSION PROVIDE MALLEABLE IRON WASHERS.
10. STRUCTURAL LUMBER MEMBERS SHALL NOT BE CUT OR NOTCHED FOR PIPES OR CONDUITS ETC. UNLESS SPECIFICALLY DETAILED OR NOTED.
11. NOTCH, AS REQUIRED, ALL JOISTS AND RAFTERS TO PROVIDE LEVEL, PLATES AND SUPPORTS.
12. JOIST HANGERS TO BE SLOPED AS NEEDED TO PROVIDE FULL BEARING OF JOIST WITH OUT THE NEED TO NOTCH JOIST, U.N.O.
13. BORE HOLES FOR BOLTS 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER.
14. BORED HOLES EXCEEDING ONE THIRD OF THE WIDTH OF THE MEMBER BEING PENETRATED SHALL NOT BE PLACED IN STUDS UNLESS FULLY DETAILED ON THE APPROVED PLANS. HOLES NOT EXCEEDING ONE THIRD OF THE WIDTH SHALL BE NEATLY BORED AND SHALL BE LOCATED IN THE CENTER OF THE MEMBER BEING PENETRATED.
15. RETIGHTEN ALL BOLTS PRIOR TO COVERING, AND MAKING THE BOLTED CONNECTION INACCESSIBLE.
16. ALL NAILS ARE TO BE COMMON NAILS AND ARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.
17. ALL NAILS, LAGS, BOLTS, WASHERS AND NUTS IN CONTACT WITH PRESERVATIVE-TREATED WOOD AND FIRE-RETARDANT-TREATED WOOD IN INTERIOR, EXTERIOR, WET OR DAMP APPLICATIONS SHALL BE HOT DIPPED ZINC-COATED GALVANIZED STEEL PER ASTM A153. ALL OTHER FASTENERS SHALL BE MECHANICALLY DEPOSITED ZINC COATED STEEL PER ASTM B 695, CLASS 55 MINIMUM.
18. SCHEDULE OF ALLOWABLE CEILING JOIST SPANS:

(JOIST)	MAX. SPAN (GYP. BOARD FINISH)	MAX. SPAN (PLASTER FINISH)
2x4 @ 16" O.C.	9'-0"	8'-0"
2x6 @ 16" O.C.	14'-0"	12'-0"
2x8 @ 16" O.C.	16'-0"	14'-0"
2x10 @ 16" O.C.	18'-0"	16'-0"

19. CEILING JOIST NOTE:
    CONTRACTOR SHALL COORDINATE ALL GYPED AND PLASTER CEILING WITH THE ARCHITECTURAL DWGS. CONTRACTOR SHALL PROVIDE CEILING JOISTS AS INDICATED IN CEILING JOIST SCHEDULE ABOVE AND DETAIL 16/S0.4.
    CONTRACTOR SHALL BE COORDINATE ALL OPENINGS IN CEILING IN CEILING FRAMING FOR MECHANICAL REGISTERS, AND RECESSED LIGHTING, ETC. AND FRAME OPENINGS WINDER THE 14 1/2 INCHES PER DETAIL 17/S0.4

NAILING SCHEDULE:

1. ALL NAILS ARE TO BE COMMON NAILS AND ARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.
2. JOIST TO SILL OR GIRDER-TOENAIL - 3-8d
3. SOLE PLATE TO JOIST OR BLOCKING-FACENAIL - - - - - - - - - - - - - - -16d @ 16" O.C.
4. SOLE PLATE TO JOIST OR BLOCKING AT BRACED WALL PANEL:
   AT BLOCKING - - - - - - - - - - 3-16d/BLK.
   AT JOIST - - - - - - - - - - - -16d @ 4" O.C.
5. UPPER DOUBLE TOP PLATE TO LOWER PLATE - - - - - - - - - - - 16d @ 16" O.C. STAGG.
6. LOWER DOUBLE TOP PLATE TO STUD-END NAIL -2-16d
7. STUD TO SOLE PLATE-TOENAIL -4-8d
   END NAIL - - - - - - - - - - 2-16d @ 2x PLT.
   END NAIL - - - 2-20d BOX NAILS @ 3x PLT.
8. DOUBLE STUDS-FACE NAIL - 16d @ 12" O.C.
9. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE:
   EA. END FACE NAIL - - - - - - - - - - 2-10d
   TOENAIL - - - - - - - - - - - - - - - - 3-8d
10. BLOCKING BETWEEN STUDS-TOENAIL -2-16d
11. RIM JOIST TO TOP PLATE-TOENAIL - 8d @ 6" O.C.
12. TOP PLATES, LAPS AND INTERSECTIONS-FACE NAIL - - - - - - - - - - - - - - - - - - 2-16d
13. CONTINUOUS HEADER, TWO PLACES - 16d @ 16" O.C. T&B
14. CEILING JOISTS TO PLATE-TOENAIL - 3-8d
15. CONTINUOUS HEADER TO STUD-TOENAIL - 4-8d
16. CEILING JOISTS, LAPS OVER PARTITIONS-FACE NAIL - - - - - - - - - - - - - - - - - -3-16d
17. CEILING JOISTS TO PARALLEL RAFTERS-FACE NAIL - - - - - - - - - - - - - - - - - -3-16d
18. RAFTER TO PLATE-TOENAIL - 3-8d
19. 1" DIAGONAL BRACE DAPPED INTO EA. STUD AND PLATE - - - - - - - - - - - - - - 2-8d
20. BUILT-UP CORNER STUDS -16d @ 12" O.C.
21. MACHINE APPLIED NAILING:
    USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION AND THE APPROVAL OF THE PROJECT ARCHITECT OR STRUCTURAL ENGINEER AND THE ENFORCEMENT AGENCY. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. IF THE NAIL HEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND-HELD HAMMER, OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY AND MACHINE NAILING SHALL BE DISCONTINUED.
22. FASTENERS AND CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED AND FIRE-RETARDANT-TREATED WOOD LUMBER SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL IN ACCORDANCE WITH ASTM A153. (SECTION 2304.10.5.1 THROUGH 2304.10.5.4)
23. PRE-DRILL PILOT HOLES TO ALL MEMBERS FOR LAG BOLTS LARGER THEN 1/4". PRE-DRILL TO 70% OF DIAMETER OF LAG BOLT.

STRUCTURAL STEEL:

1. STEEL SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING A.S.T.M. DESIGNATIONS.

W SHAPES	ASTM A-992	GRADE 50
GENERAL SHAPES & PLATES	ASTM A-36	
PIPE COLUMNS	ASTM A-53	TYPE E OR S, GRADE B
STEEL TUBE	ASTM A-500	GRADE B, Fy=46 KSI
STEEL DECK	ASTM A-653	GRADE 33
MACHINE BOLTS	ASTM A-307	GRADE A
HIGH STRENGTH BOLTS	ASTM A-325	(TYPE SC)
HEADED STUD ANCHORS	ASTM A29-12	GRADE C-1010 TO C-1020
HEADED ANCHOR RODS IN CONCRETE	ASTM F1554	GRADE 36
UNHEADED ANCHOR RODS IN CONCRETE	ASTM F1554	GRADE 36

2. NO STRUCTURAL STEEL SHALL BE FABRICATED OR ERECTED PRIOR TO REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL ENGINEER.
3. ALL ERECTION AND FABRICATION SHALL COMPLY WITH THE LATEST EDITION OF THE AISC.
4. WELDING SHALL BE PERFORMED ONLY BY CERTIFIED WELDERS. ALL SHOP WELDING SHALL BE DONE IN THE SHOP OF AN APPROVED FABRICATOR.
5. NO FIELD CUTTING OR BURNING OF STRUCTURAL STEEL WILL BE PERMITTED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.
6. ALL C.P. & C.J.P. WELDS TO RECEIVE NON-DESTRUCTIVE WELD TESTING PER DSA-IR 17-2.
7. WELD FILLER SHALL BE E70XX (70ksi).

DESIGN LOADS:

ROOF DESIGN LOADS:
1. ROOF LIVE LOAD (REDUCIBLE PER SECTION 1607A.12.2.1) - - - - - - - 20 P.S.F.
2. ROOF DEAD LOAD (VARIES) - 16 P.S.F. - 65 P.S.F.

WIND DESIGN DATA:
1. BASIC WIND SPEED - 100 M.P.H.
2. RISK CATEGORY - III
3. WIND EXPOSURE - C

SEISMIC DESIGN DATA:
1. RISK CATEGORY - III
2. SEISMIC IMPORTANCE FACTOR - 1.25
3. SITE CLASS - D
4. MAPPED SPECTRAL RESPONSE ACCELERATIONS (S_s) - - - - - - - - - - - 1.839
5. MAPPED SPECTRAL RESPONSE ACCELERATIONS (S_1) - - - - - - - - - - - 0.680
6. SPECTRAL RESPONSE COEFFICIENTS (S_{DS}) - - - - - - - - - - - - - - - 1.226
7. SPECTRAL RESPONSE COEFFICIENTS (S_{D1}) - - - - - - - - - - - - - - - 0.771
8. SEISMIC DESIGN CATEGORY (SDC) - - - - - - - - - - - - - - - - - - - D
9. BASIC SEISMIC FORCE RESISTING SYSTEM:
   BLD'G J AND K - PLYWOOD SHEAR WALLS
   RESPONSE MODIFICATION COEFFICIENT (R) - - - - - - - - - - - - 6
   DEFLECTION AMPLIFICATION FACTOR (C_d)- - - - - - - - - - - - 4
   SEISMIC RESPONSE COEFFICIENT (C_s) - - - - - - - - - - - - 0.17 (ALLOWABLE)
   BLD'G B, C, E, F - ORDINARY MOVEMENT FRAME
   RESPONSE MODIFICATION COEFFICIENT (R) - - - - - - - - - - - - 3.5
   DEFLECTION AMPLIFICATION FACTOR (C_d)- - - - - - - - - - - - 3
   SEISMIC RESPONSE COEFFICIENT (C_s) - - - - - - - - - - - - 0.31 (ALLOWABLE)
   BLD'G G, H, N - ORDINARY REINFORCED MASONRY SHEAR WALL
   RESPONSE MODIFICATION COEFFICIENT (R) - - - - - - - - - - - - 2.0
   DEFLECTION AMPLIFICATION FACTOR (C_d)- - - - - - - - - - - - 2.5
   SEISMIC RESPONSE COEFFICIENT (C_s) - - - - - - - - - - - - 0.55 (ALLOWABLE)
10. ANALYSIS PROCEDURE USED:
    BUILDING SYSTEM:
    EQUIVALENT LATERAL FORCE PROCEDURE (ASCE 7-16 12.8.1)
    MECHANICAL ANCHORAGE
    SEISMIC DESIGN DEMANDS ON NON-STRUCUTRAL COMPONENTS (ASCE 7-16 13.3.1)

GENERAL:

1. ALL CONSTRUCTION SHALL COMPLY WITH THE 2019 C.A.C. TITLE 24, PART 1, AND 2019 C.B.C. TITLE 24, PART 2, FOR DSA/SS.
2. FRAMING CONDITIONS NOT SPECIFICALLY SHOWN OR INDICATED SHALL BE FRAMED SIMILAR TO DETAILS SHOWN FOR THE RESPECTIVE MATERIALS OR CONDITIONS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS BEFORE STARTING WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT.
4. WITHOUT EXCLUSION OF ANY REFERENCE IN THE CONSTRUCTION DOCUMENTS TO ANY RULE OR REGULATION, THE STRUCTURAL ENGINEER IS NOT ASSUMING ANY PROVISIONS OF SUPERVISION OF CONSTRUCTION METHODS OR PROCESSES.
5. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY A CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS DEFINED IN 2019 C.A.C. TITLE 24, PART 1, SECTION 4-338.

STRUCTURAL OBSERVATION:

1. VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM SHALL BE PROVIDED BY THE STRUCTURAL ENGINEER OF RECORD FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE INSPECTION REQUIRED BY SECTION 110, 1705A OR OTHER SECTIONS OF THE CODE. (SECTION 1702A)
2. STRUCTURAL OBSERVATION SHALL BE PROVIDED BY THE STRUCTURAL ENGINEER OF RECORD AT THE FOLLOWING PHASES AS A MINIMUM.
   A. UPON COMPLETION OF FOUNDATION REINFORCEMENT, IMMEDIATELY PRIOR TO CONCRETE POUR.
   B. ADDITIONAL VISITATION AS DEEMED NECESSARY BY THE STRUCTURAL ENGINEER OF RECORD.
3. FOR ALL ITEMS THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER 48 HOURS PRIOR TO COMPLETION OF THE WORK TO BE OBSERVED.

MECHANICAL UNIT FRAMING NOTES

1. THE GENERAL CONTRACTOR SHALL COORDINATE THE MECHANICAL UNIT TYPE AND QUANTITY WITH THE MECHANICAL AND STRUCTURAL DRAWINGS. NOTIFY THE MECHANICAL ENGINEER OF ANY DISCREPANCIES PRIOR TO THE STRUCTURAL STEEL SHOP DRAWING PHASE.
2. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO FULLY COORDINATE THE ANGLE SUPPORT FRAME DIMENSIONS (LENGTH AND WIDTH) WHERE THE NEW MECHANICAL UNIT ATTACHES DIRECTLY TO THE ANGLE SUPPORT FRAMING. NOTIFY THE MECHANICAL ENGINEER OF ANY DISCREPANCIES PRIOR TO THE STRUCTURAL STEEL SHOP DRAWING PHASE.
3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE MECHANICAL SUB-CONTRACTOR AND THE MECHANICAL ENGINEER THE HEIGHT OF THE SUPPORT FRAME SO AS EXISTING DUCT TO NEW DUCT TRANSITIONS HAVE SUFFICIENT VERTICAL CLEARANCES FOR THERE ATTACHMENTS. NOTIFY THE MECHANICAL ENGINEER OF ANY DISCREPANCIES PRIOR TO THE STRUCTURAL STEEL SHOP DRAWING PHASE.
4. MECHANICAL UNIT SUBSTITUTIONS MAY IMPACT THE SUPPORT FRAMING DUE TO UNIT WEIGHT OR SIZE AS SHOWN ON THE MECHANICAL DRAWINGS. ANY COSTS INCURRED FROM ANY SUBSTITUTION MADE BY THE CONTRACTOR WHICH REQUIRES RE-DESIGN OR MODIFICATIONS TO THE CONSTRUCTION DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MAY WISH TO INQUIRE AS TO THE PROBABLE EXTENT OF THESE COSTS PRIOR TO INTRODUCING A SUBSTITUTION.
5. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE AND PROVIDE ALL FLASHING AND ROOFING AS REQUIRED AT ALL MECHANICAL UNIT ROOF ATTACHMENT PENETRATIONS SO AS ROOF WILL BE COMPLETELY SEALED FROM WATER INTRUSION.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120526 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/15/2020

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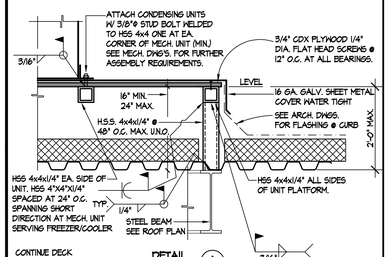
BID SET

NO	DATE	BY	DESCRIPTION
			REVISIONS

DRAWN:
CHECKED:
DATE: 12/08/2019
SCALE: N.T.S.
PROJECT NUMBER: 20-19-06

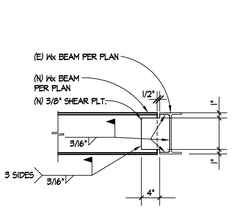
GENERAL NOTES

DRAWING NUMBER: S0.1



TYPICAL CONDENSING UNIT ON METAL ROOF DETAIL 27

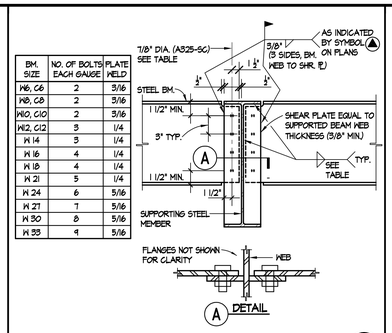
SCALE: N.T.S.



TYPICAL (N) BEAM TO (E) BEAM DETAIL 21

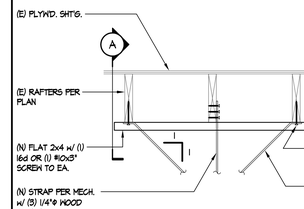
SCALE: N.T.S.

BM. SIZE	NO. OF BOLTS EACH GAUGE	PLATE WELD
W6, C6	2	3/16
W8, C8	2	3/16
W10, C10	2	3/16
W12, C12	3	1/4
W 14	3	1/4
W 16	4	1/4
W 18	4	1/4
W 21	5	1/4
W 24	6	5/16
W 27	7	5/16
W 30	8	5/16
W 33	9	5/16



TYPICAL (N) BEAM TO (N) BEAM CONNECTION DETAIL 16

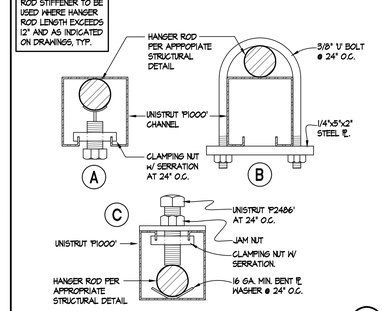
SCALE: 1"=1'-0"



TYPICAL MECHANICAL DUCT HANGER DETAIL 7

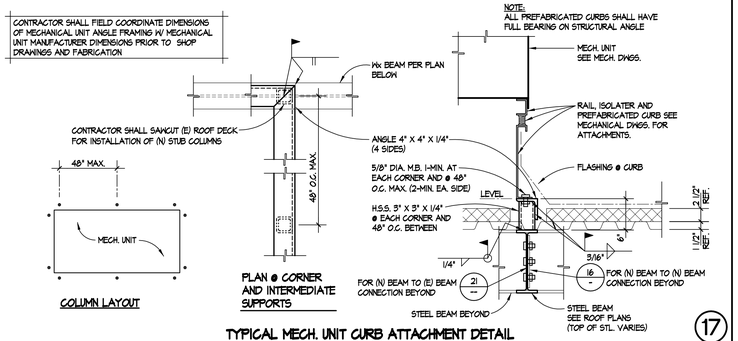
SCALE: N.T.S.

NOTE: ROD STIFFENER TO BE USED WHERE HANGER ROD LENGTH EXCEEDS 12" AND AS INDICATED ON DRAWINGS, TYP.



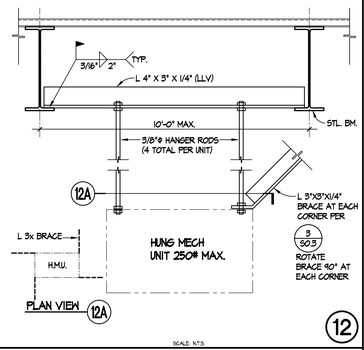
FRAMING CHANNEL/ROD STIFFENER (BY SMACNA) 1

SCALE: N.T.S.



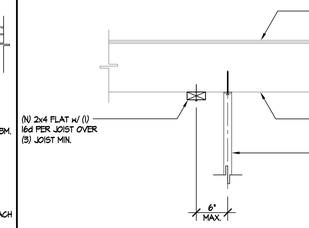
TYPICAL MECH. UNIT CURB ATTACHMENT DETAIL 17

SCALE: N.T.S.

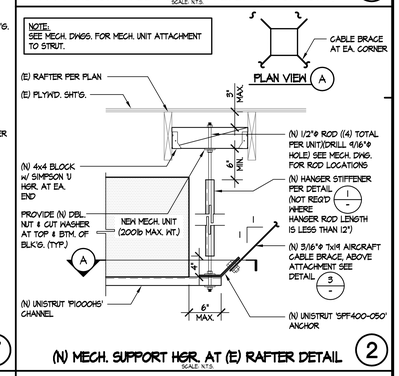


SCALE: N.T.S.

TYPICAL MECH. UNIT CURB ATTACHMENT DETAIL 12

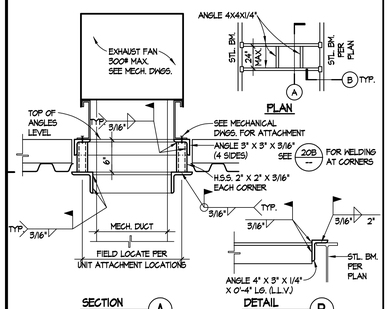


NOTE: SEE MECH. DWGS. FOR MECH. UNIT ATTACHMENT TO STRUT.



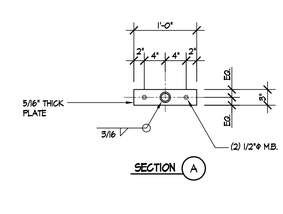
(N) MECH. SUPPORT HGR. AT (E) RAFTER DETAIL 2

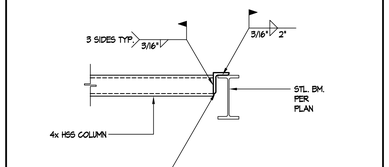
SCALE: N.T.S.



TYPICAL MECH. UNIT PLATFORM PLAN AND DETAILS 28

SCALE: N.T.S.





TYPICAL MECH. UNIT HSS TO Wx BEAM DETAIL 18

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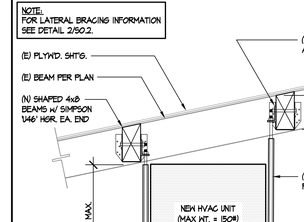
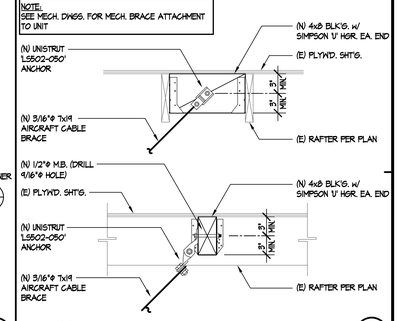


NEW MECH. EQUIP. HUNG UNDER ROOF DETAIL 8

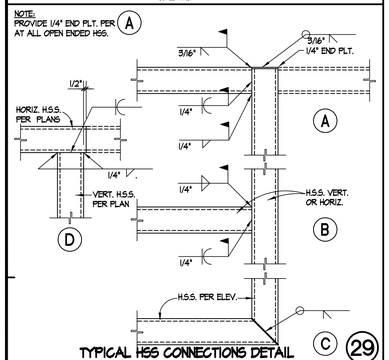
SCALE: N.T.S.

NOTE: SEE MECH. DWGS. FOR MECH. BRACE ATTACHMENT TO UNIT



(N) SEISMIC BRACE CABLE FOR MECH. DETAIL 3

SCALE: N.T.S.



TYPICAL HSS CONNECTIONS DETAIL 29

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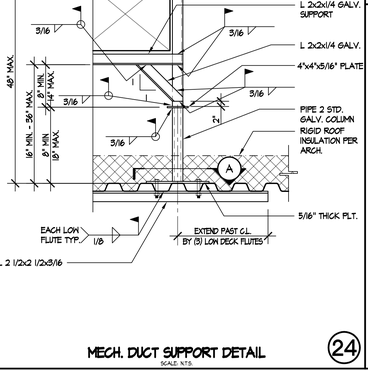
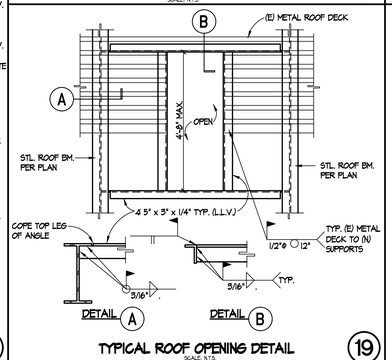


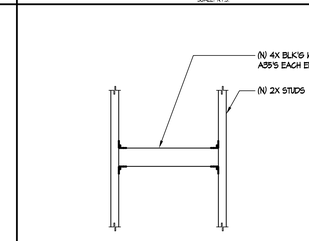
MECH. DUCT SUPPORT DETAIL 24

SCALE: N.T.S.



TYPICAL ROOF OPENING DETAIL 19

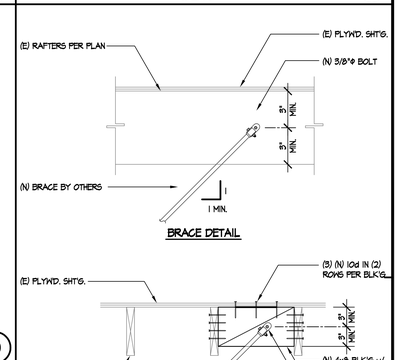
SCALE: N.T.S.

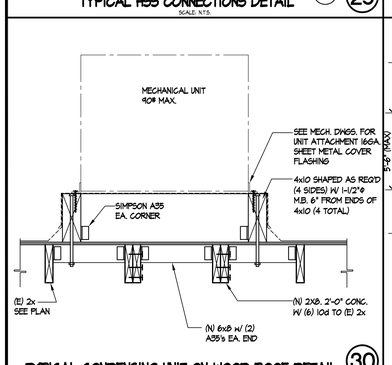


TYPICAL BLOCKING DETAIL FOR EQUIPMENT WALL ATTACHMENT

SCALE: 1"=1'-0"

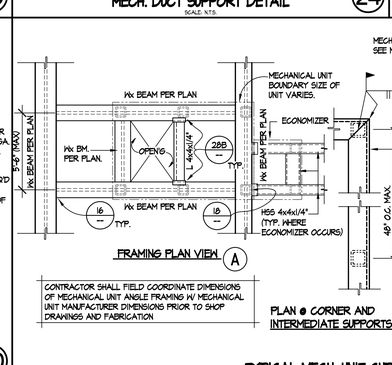
9





TYPICAL CONDENSING UNIT ON WOOD ROOF DETAIL 30

SCALE: N.T.S.



TYPICAL MECH. UNIT CURB ATTACHMENT DETAIL 20

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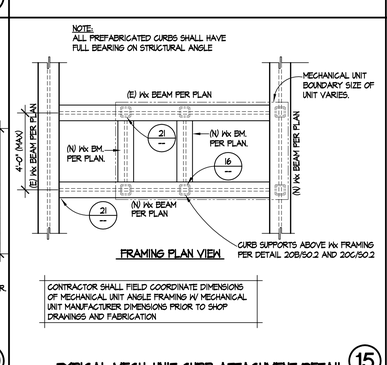

TYPICAL MECH. UNIT CURB ATTACHMENT DETAIL 15

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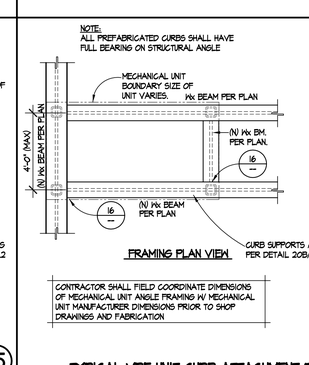
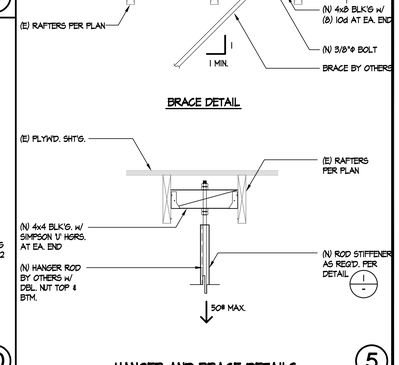


TYPICAL VRF UNIT CURB ATTACHMENT DETAIL 10

SCALE: N.T.S.



HANGER AND BRACE DETAILS 5

SCALE: N.T.S.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120526 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/15/2020

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REGISTERED PROFESSIONAL ENGINEER Peter B. Ravenkamp No. 59471 (Exp. 12/31/20) STRUCTURAL STATE OF CALIFORNIA

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JOB NO. 20-19-06

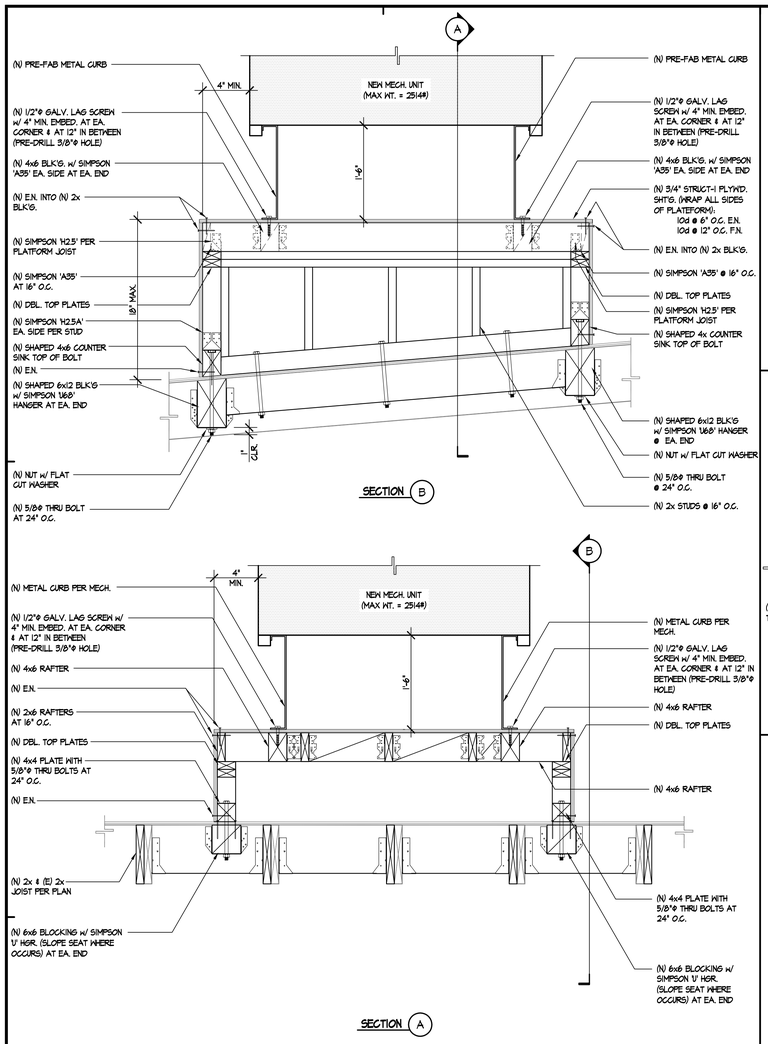
BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN:	CHECKED:
DATE: 12/08/2019	SCALE: N.T.S.
PROJECT NUMBER: 20-19-06	

DETAILS

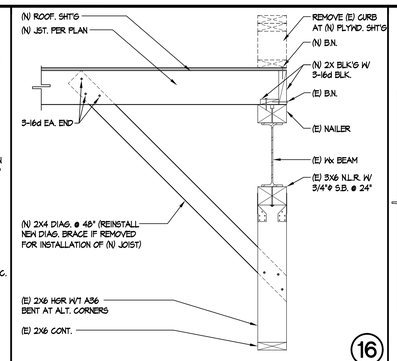
DRAWING NUMBER: S0.2



MECH. PLATFORM AND FRAMING SUPPORT DETAIL

SCALE: 1"=1'-0"

23



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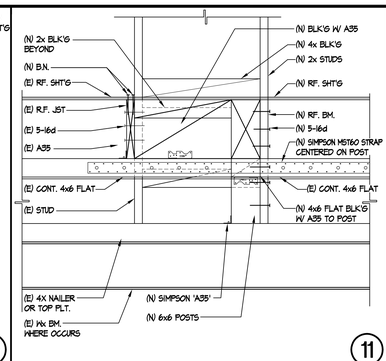

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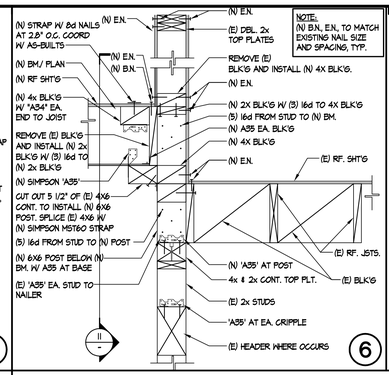

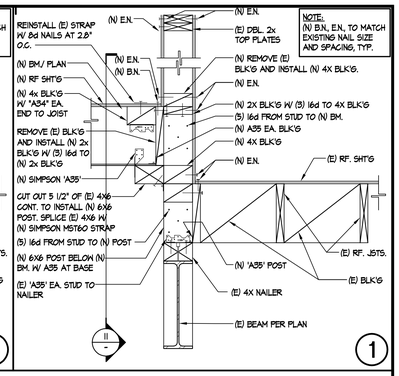

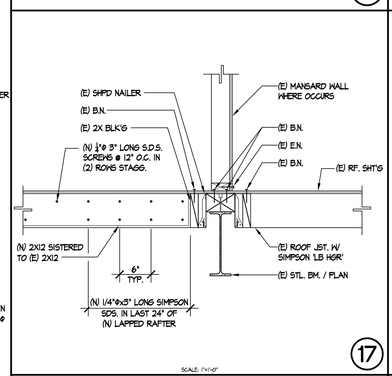

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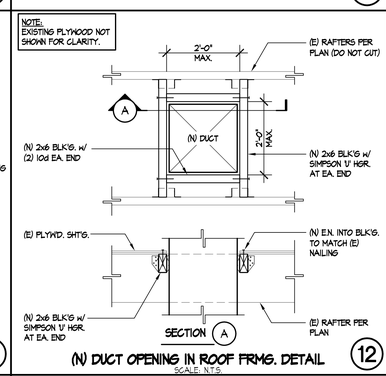


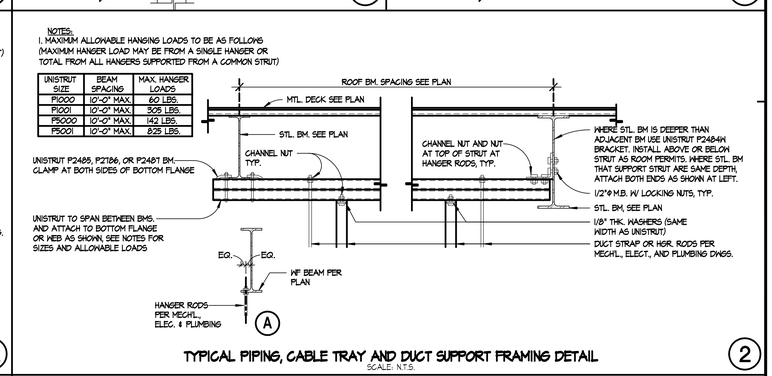
(N) DUCT OPENING IN ROOF FRMG. DETAIL

SCALE: N.T.S.

12

NOTES:
1. MAXIMUM ALLOWABLE HANGING LOADS TO BE AS FOLLOWS (MAXIMUM HANGER LOAD MAY BE FROM A SINGLE HANGER OR TOTAL FROM ALL HANGERS SUPPORTED FROM A COMMON STRUT)

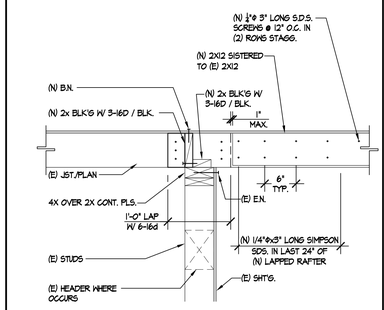
UNISTRUT SIZE	BEAM SPACING	MAX. HANGER LOADS
P1000	10'-0" MAX.	60 LBS.
P1001	10'-0" MAX.	509 LBS.
P5000	10'-0" MAX.	142 LBS.
P5001	10'-0" MAX.	825 LBS.



TYPICAL PIPING, CABLE TRAY AND DUCT SUPPORT FRAMING DETAIL

SCALE: N.T.S.

2



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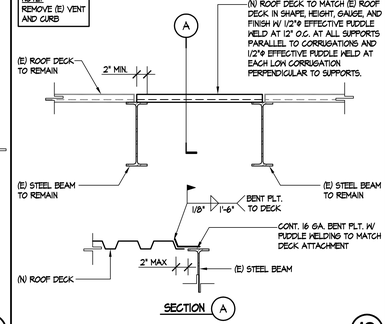
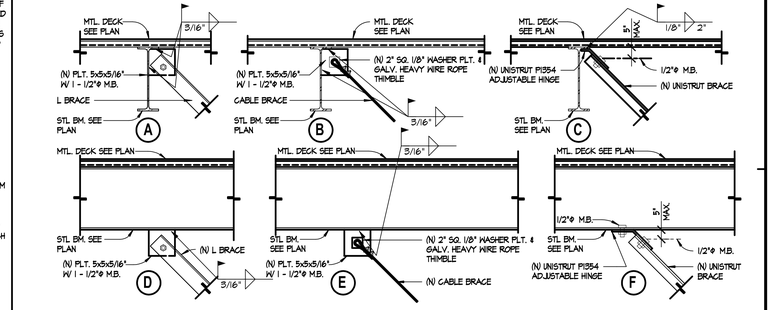


TYPICAL ROOF INFILL DETAIL

SCALE: N.T.S.

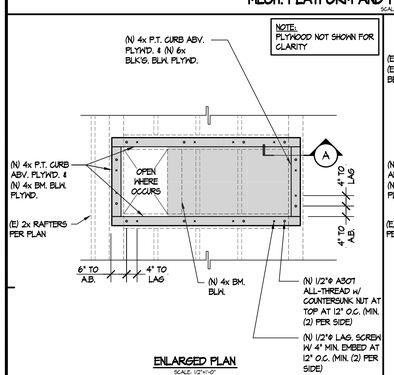
13



SEISMIC BRACE DETAILS OF DUCTS, PIPING AND CABLE TRAYS TO ROOF FRAMING

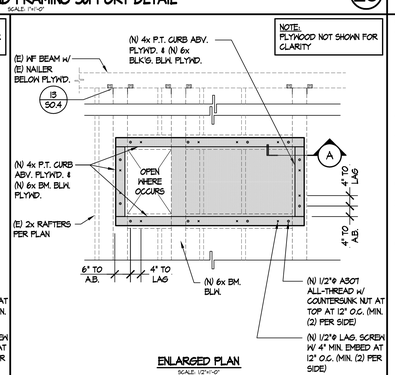
SCALE: N.T.S.

3



ENLARGED PLAN

SCALE: 1"=1'-0"



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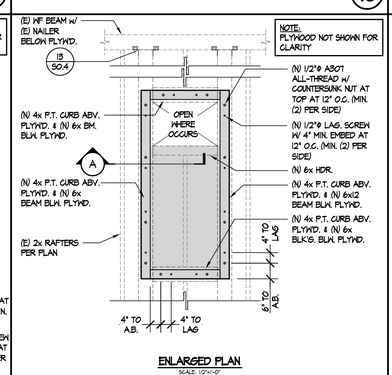

ENLARGED PLAN

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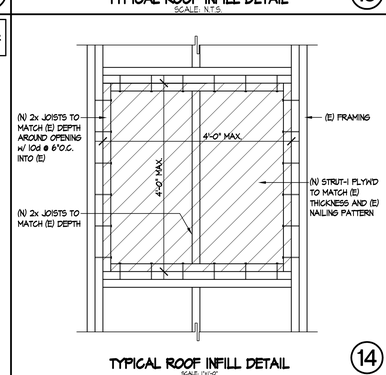
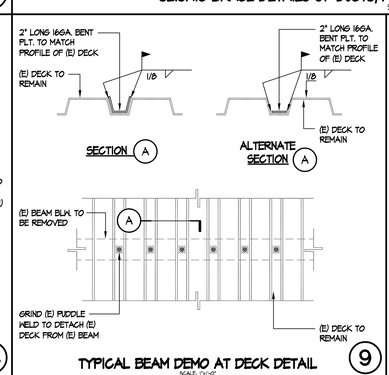


TYPICAL ROOF INFILL DETAIL

SCALE: 1"=1'-0"

14



TYPICAL BEAM DEMO AT DECK DETAIL

SCALE: 1"=1'-0"

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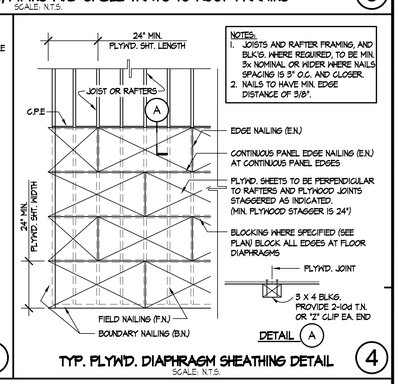
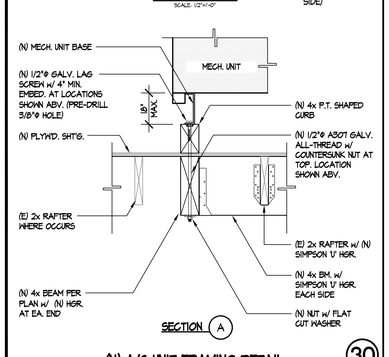


TYP. PLYW'D. DIAPHRAGM SHEATHING DETAIL

SCALE: N.T.S.

4



(N) A/C UNIT FRAMING DETAIL

SCALE: 1"=1'-0"

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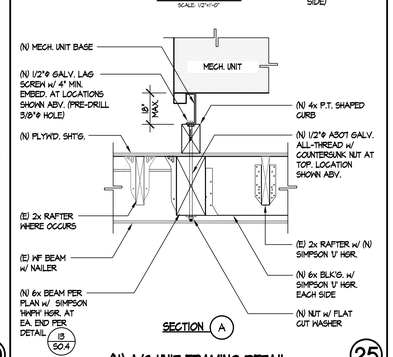

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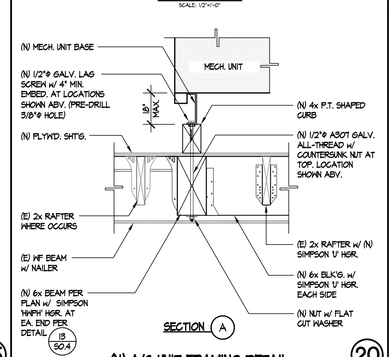

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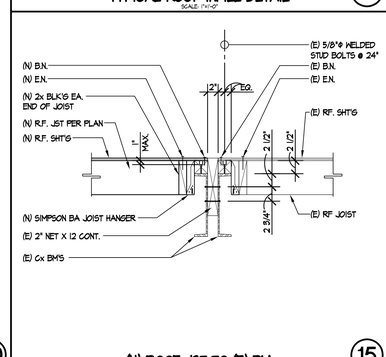
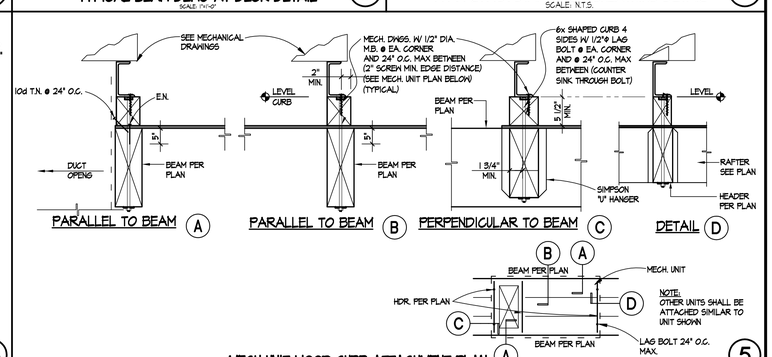


(N) ROOF JST TO (E) BM.

SCALE: 1"=1'-0"

15



MECH UNIT WOOD CURB ATTACHMENT PLAN

SCALE: N.T.S.

5

IDENTIFICATION STAMP
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JOB NO.: 20-19-06

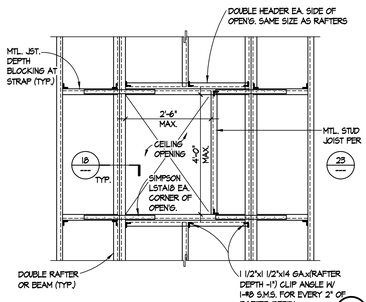
BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN: | CHECKED:
DATE: 12/08/2019 | SCALE: N.T.S.
PROJECT NUMBER: 20-19-06

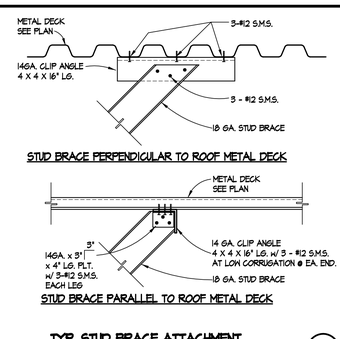
DETAILS

DRAWING NUMBER: S0.3



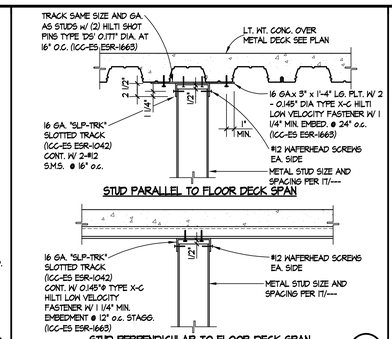
TYPICAL CEILING OPENING DETAIL

FILE: TH5I1 SCALE: 1"=1'-0" — 25



TYP. STUD BRACE ATTACHMENT TO ROOF MTL. DECK

SCALE: 1"=1'-0" — 21



TYP. STEEL STUD ATTACHMENT TO FLOOR MTL. DECK

SCALE: 1"=1'-0" — 16

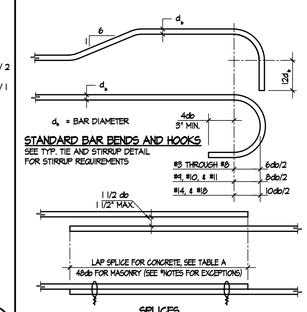


TABLE A

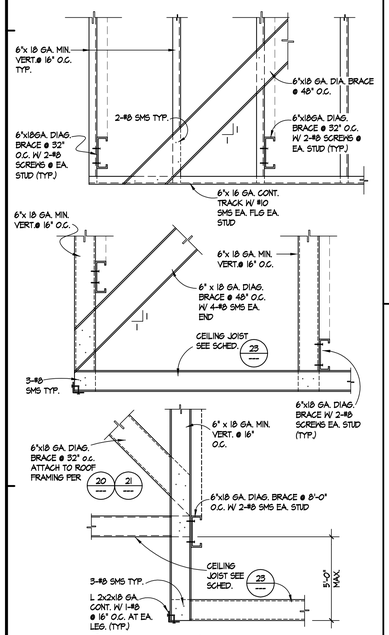
BAR LAP SPLICES IN CONCRETE (CLASS B) 3500 P.S.I.		BAR LAP SPLICES IN CONCRETE (CLASS B) 4000 P.S.I.	
BAR SIZE	BAR LAP	BAR SIZE	BAR LAP
52.0 db: #4	21"	44.4 db: #4	25"
#5	33"	#5	31"
#6	40"	#6	37"
#7	58"	#7	54"
66 db: #8	66"	61.7 db: #8	62"
#9	75"	#9	70"
#10	84"	#10	78"

NOTE:
ALL TABULATED BAR LAPS SHALL BE MULTIPLIED BY 1.3 FOR LIGHT WEIGHT CONCRETE.

* NOTE:
PROVIDE MIN. 72 BAR DIA. LAP SPLICE FOR THE FOLLOWING SPECIFIC MASONRY REINFG. CONDITIONS:
1. ALL JAMB REINFG.
2. VERT. REINFG. SPLICES OCCURRING AT MID 1/3 HEIGHT OF WALL.
3. ALL CHORD REINFG.
4. CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN db, CLEAR COVER NOT LESS THAN db, AND STIRRUPS OR TIES THROUGHOUT Ld NOT LESS THAN THE MINIMUM OR CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN 2db AND CLEAR COVER NOT LESS THAN db.

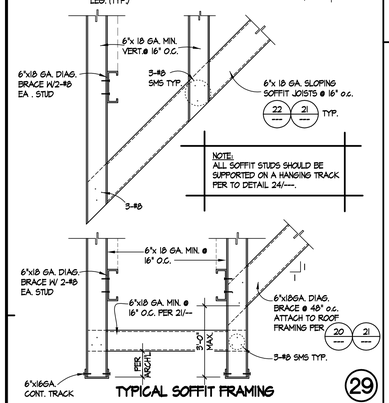
TYPICAL REINFORCING BAR DETAILS

SCALE: 1"=1'-0" — 6



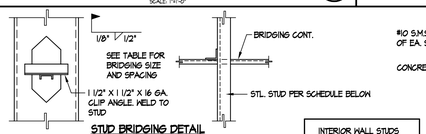
HANGER AT CEILING JOIST DETAIL

SCALE: 1"=1'-0" — 30

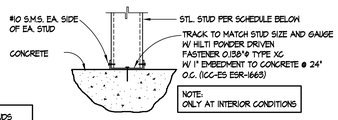


TYPICAL SOFFIT FRAMING

SCALE: 1"=1'-0" — 29



STUD BRIDGING DETAIL



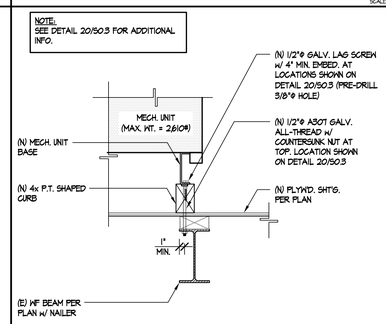
TYP. NON-BEARING STUD CONNECTION (C)

STEEL STUD PROPERTIES (ICC-ES ESR-3064P)					STUD BRIDGING REQUIREMENTS		INTERIOR WALL STUDS ALLOWABLE WALL HEIGHTS L/240 (LAT. LD=5psf NON-BEARING)	
	SIZE / TYPE	GA.	Ix* 4	Sx* 3	SIZE	MAX. O.C. SPACING	STUD 16" O.C.	STUD 12" O.C.
INTERIOR NON-BEARING STUDS	600S162-43(33KSI)	18	1.749	0.548	C 1 1/2" X 16 GA. MIN.	4'-0"	20'-4"	21'-2"
	400S162-43(33KSI)	18	0.842	0.446		4'-0"	20'-1"	22'-8"
TRACKS	600T150-54(33KSI)	16	2.611	0.843				
	400T150-54(33KSI)	16	1.025	0.484				

NOTE: 1. STEEL STUD BRIDGING IS REQUIRED WHEN EITHER STUD FLANGE IS NOT CONTINUOUSLY BRACED BY SOLID SHEATHING SUCH AS GYP. BOARD, PLYWOOD, OR PLASTER.

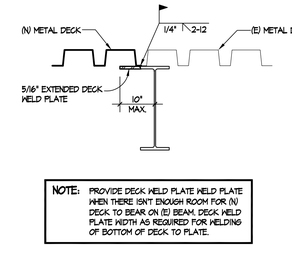
TYPICAL STEEL STUD PROPERTIES AND DETAILS

FILE: TH5IA SCALE: N.T.S. — 17



(N) MECH UNIT TO (E) WF BEAM DETAIL

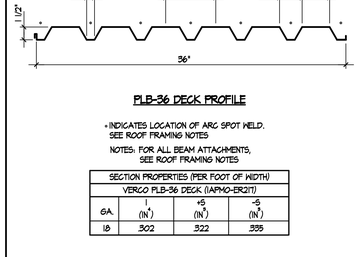
SCALE: 1"=1'-0" — 12



NOTE: PROVIDE DECK WELD PLATE WELD PLATE WHEN THERE ISN'T ENOUGH ROOM FOR (N) DECK TO BEAR ON (E) BEAM. DECK WELD PLATE WIDTH AS REQUIRED FOR WELDING OF BOTTOM OF DECK TO PLATE.

TYPICAL EXTENDED DECK WELD PLATE TO BEAM

SCALE: 1"=1'-0" — 7



PLB-36 DECK PROFILE

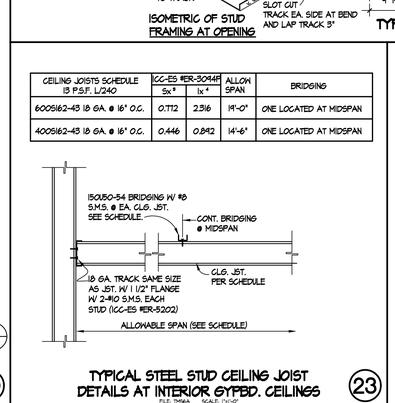
- INDICATES LOCATION OF ARC SPOT WELD. SEE ROOF FRAMING NOTES

NOTES: FOR ALL BEAM ATTACHMENTS, SEE ROOF FRAMING NOTES

SECTION PROPERTIES (PER FOOT OF WIDTH) VERCO PLB-36 DECK (IAPMO-ER217)			
GA.	I (IN⁴)	+S (IN³)	-S (IN³)
18	.302	.322	.335

SECTION PROPERTIES FOR TYPE PLB-36 DECK

SCALE: N.T.S. — 2

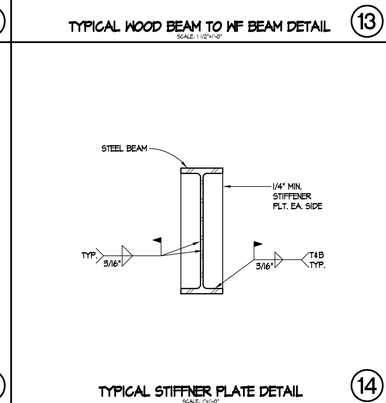


HEADER SCHEDULE		
HEADER SPAN	DOUBLE STUD HEADER	TRACK SIZE
L ≤ 4'-0"	4" X 18 GA.	6" X 18 GA.
L ≤ 8'-0"	6" X 18 GA.	6" X 18 GA.

ISOMETRIC OF STUD FRAMING AT OPENING

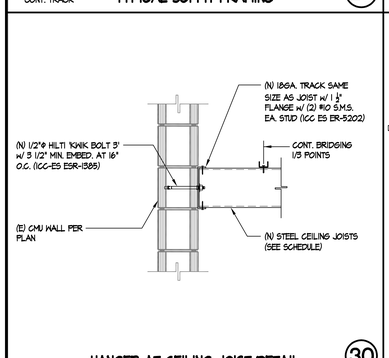
TYPICAL STEEL STUD FRAMING DETAILS

FILE: TH52 SCALE: 1"=1'-0" — 18



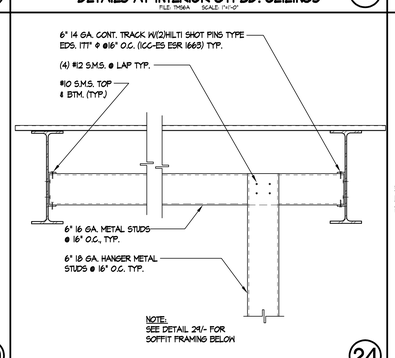
TYP. STUD BRACE ATTACHMENT TO CONC. OVER MTL. DECK

SCALE: 1"=1'-0" — 20



HANGER AT CEILING JOIST DETAIL

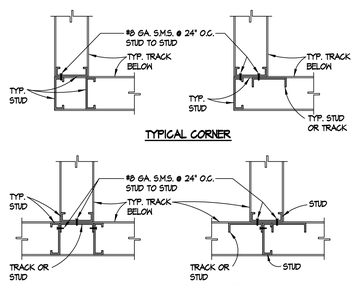
SCALE: 1"=1'-0" — 30



TYPICAL STEEL STUD CEILING JOIST DETAILS AT INTERIOR GYPBD. CEILINGS

FILE: TH54 SCALE: N.T.S. — 23

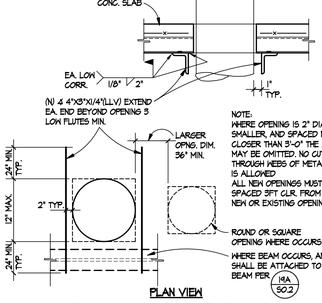
CEILING JOISTS SCHEDULE I.B.C. 15 P.S.F. L/240	ICC-ES #ER-3064P		ALLOW SPAN	BRIDGING
	Sx*	Ix*		
600S162-43 18 GA. @ 16" O.C.	0.712	2.316	14'-0"	ONE LOCATED AT MIDSPAN
400S162-43 18 GA. @ 16" O.C.	0.446	0.842	14'-6"	ONE LOCATED AT MIDSPAN



FILE: TH54 SCALE: N.T.S. — 19

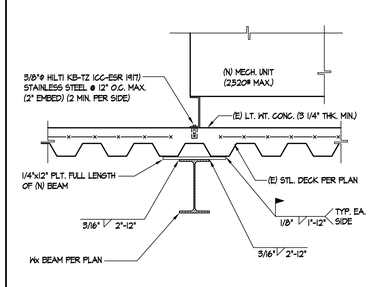
TYPICAL STIFFNER PLATE DETAIL

SCALE: 1"=1'-0" — 14



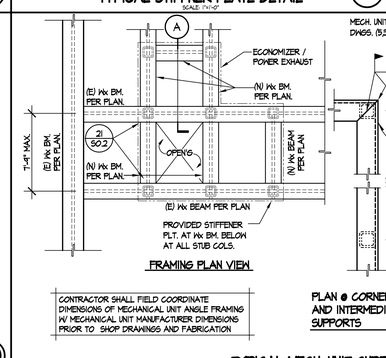
TYPICAL PIPE OR DUCT OPENING THROUGH CONCRETE ON METAL DECK

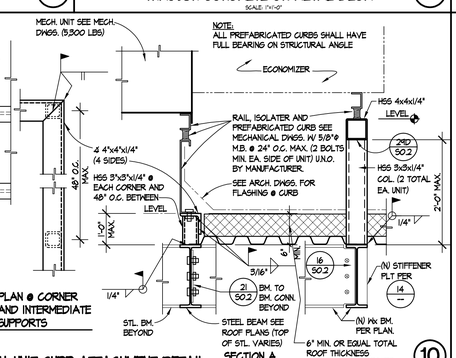
SCALE: 1"=1'-0" — 9

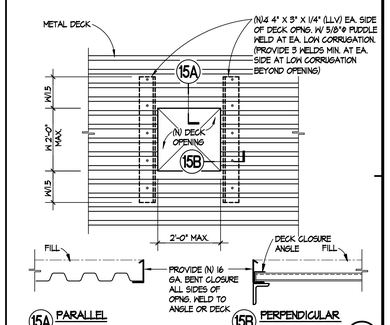


TYPICAL MECH. UNIT CURB ATTACHMENT DETAIL

SCALE: N.T.S. — 10







TYPICAL DECK OPENING DETAIL

SCALE: 1"=1'-0" — 3

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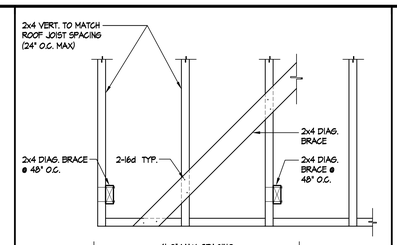
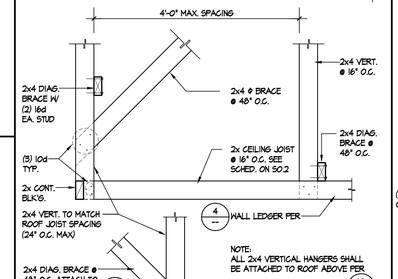
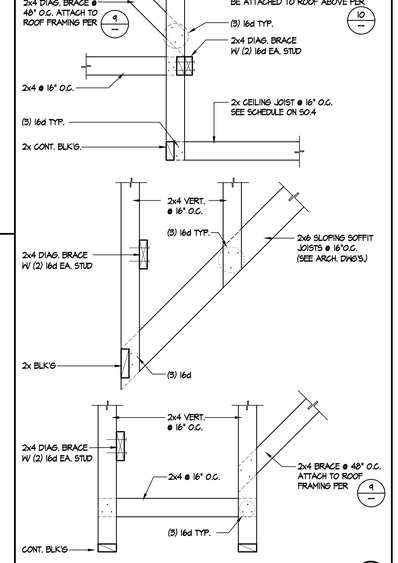
DETAILS

DRAWING NUMBER: S0.4

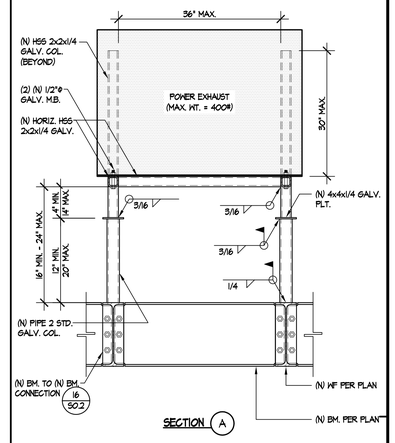




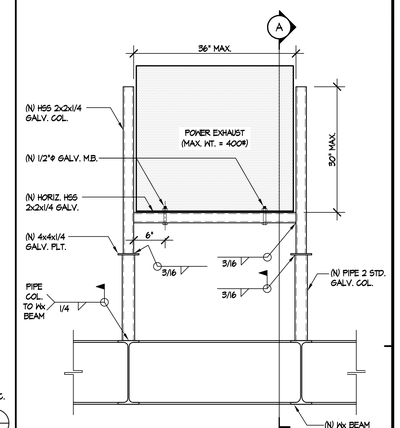


TYPICAL SOFFIT FRAMING
FILE: TYP22 SCALE: 1"=1'-0"

8

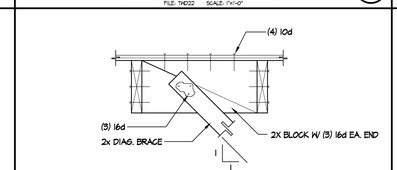


SECTION A

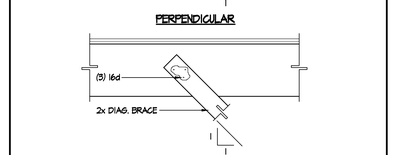


(N) POWER EXHAUST SUPPORT DETAIL
SCALE: 1"=1'-0"

3



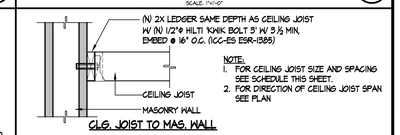
PERPENDICULAR



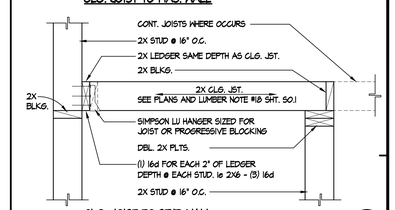
PARALLEL

TYPICAL DIAGONAL BRACE DETAIL
FILE: TYP3A SCALE: 1"=1'-0"

9



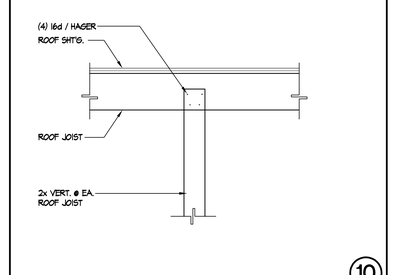
CLG. JOIST TO MAS. WALL



CLG. JOIST TO STUD WALL

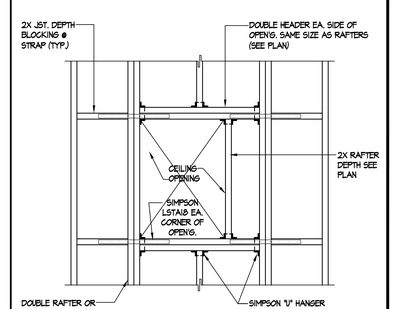
TYPICAL CEILING JOISTS FRAMING DETAIL
FILE: TYP3A SCALE: 1"=1'-0"

4



SCALE: 1"=1'-0"

10



TYPICAL CEILING OPENING DETAIL
FILE: TYP24 SCALE: 1"=1'-0"

5

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DETAILS

DRAWING NUMBER: S0.5

BLDG. 'B' ROOF FRAMING PLAN

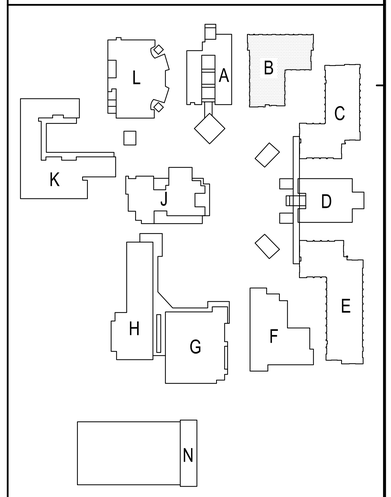
SCALE: 1/8"=1'-0"

ROOF FRAMING NOTES

1. 1/2" STRUCT I PLYWOOD
   10d @ 6" O.C. B.N.
   10d @ 6" O.C. E.N.
   10d @ 12" O.C. F.N.
   BLOCK ALL PLYWOOD EDGES. PER DETAIL 4/503.
2. (N) ROOF INFILLS TO FOLLOW DETAIL 14/503.
3. DEMO ALL EXISTING EQUIPMENT, DUCTING, ELECTRICAL, PLUMBING, ETC. MARKED AS DEMO PRIOR TO INSTALLING (N) ITEMS.
4. COORDINATE ALL MECH UNIT LOCATIONS W/ ARCH AND MECHANICAL DRAWINGS.
5. THE FRAMING IN THE VICINITY OF THE MECHANICAL UNITS WAS DESIGNED FOR THE UNIT SIZE AND WEIGHT AS SHOWN ON THE MECHANICAL DRAWINGS. ANY COSTS INCURRED FROM ANY SUBSTITUTION MADE BY THE CONTRACTOR WHICH REQUIRES RE-DESIGN PR MODIFICATIONS TO THE CONSTRUCTION DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.THE CONTRACTOR MAY WISH TO INQUIRE AS TO THE PROBABLE EXTENT OF THESE COSTS PRIOR TO INTRUDING A SUBSTITUTION.
6. PROVIDE (N) 2x FULL DEPTH BLK'G CONT. EA. END OF (N) JOISTS/BEAMS

HATCH LEGEND

(N) PLYWOOD SHTG TO MATCH SAME PATTERN AND LAYOUT AS (E) SHTG. SEE ROOF FRAMING NOTES #1.



SITE KEY PLAN

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BUILDING B
ROOF FRAMING
PLAN

DRAWING NUMBER: S2.1

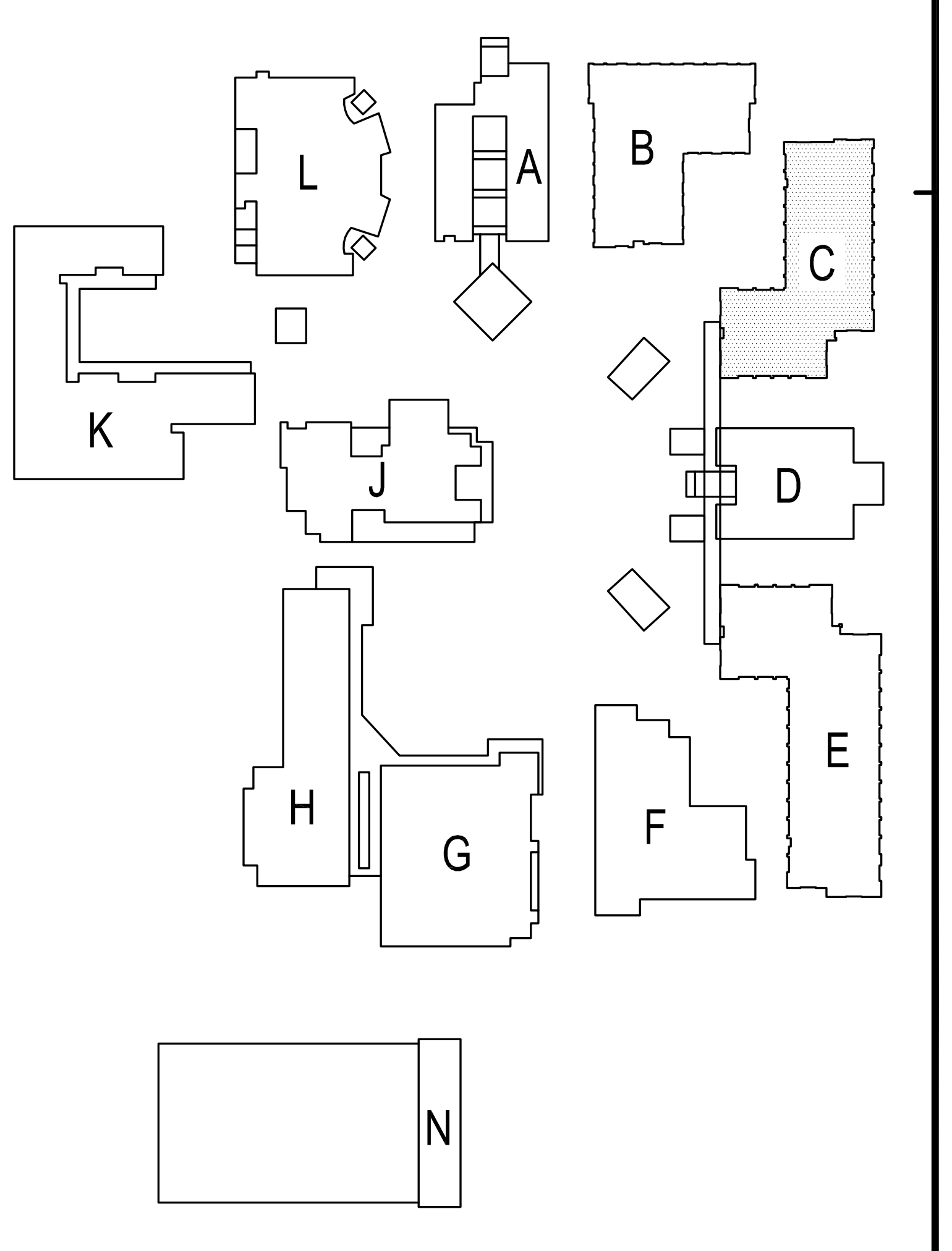
BLDG. 'C' SECOND FLOOR FRAMING PLAN

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

W N E S

SECOND FLOOR FRAMING NOTES

1. 3 1/4" LT. WT. CONC. SLAB W/ FIBER MESH W/ #4 @ 24" O.C. EA. WAY OVER 3"x16 GA. W3 FORMLOK (GALV.) DECK BY VERCO MANUFACTURING CO. 6 1/4" TOTAL THICKNESS (IAPMO ER-217) QUANTITY OF FIBER MESH IN CONC. PER CONC. NOTE.
2. NO FIELD CUTTING OR BURNING OF STRUCTURAL STEEL WLL BE PERMITTED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.
3. HUNG UNITS SHOULD BE FRAMED PER DETAIL 12/S0.2
4. FLOOR PENETRATIONS SHOULD BE FRAMED PER DETAIL 9/S0.4
5. (E) INTERIOR NON-BEARING STUD WALLS TO BE DEMO'D AS NECESSRY TO INSTALL (N) BEAMS/SUPPORTS
6. THE FRAMING IN THE VICINITY OF THE MECHANICAL UNITS WAS DESIGNED FOR THE UNIT SIZE AND WEIGHT AS SHOWN ON THE MECHANICAL DRAWINGS. ANY COSTS INCURRED FROM ANY SUBSTITUTION MADE BY THE CONTRACTOR WHICH REQUIRES RE-DESIGN PR MODIFICATIONS TO THE CONSTRUCTION DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.THE CONTRACTOR MAY WISH TO INQUIRE AS TO THE PROBABLE EXTENT OF THESE COSTS PRIOR TO INTRODUCING A SUBSTITUTION.



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MARK
GRAHAM
C-26046
03-31-21

Peter R. Ravenkamp
No. S6471
Exp. 12/31/20

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JOB NO. 20-19-06

BID SET

NO	DATE	BY	DESCRIPTION

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PROJECT NUMBER: 20-19-06	

BUILDING C
SECOND FLOOR
FRAMING PLAN

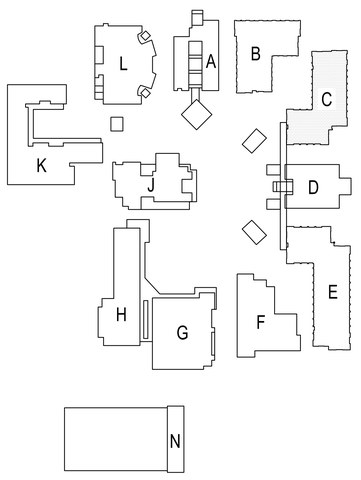
DRAWING NUMBER: S2.2

BLDG. 'C' ROOF FRAMING PLAN

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

ROOF FRAMING NOTES

1. 3 1/4" LT. WT. CONC. SLAB W/ FIBER MESH W/ #4 @ 24" O.C. EA. WAY OVER 3"x16 GA. WB FORMLOK (GALV.) DECK BY VERCO MANUFACTURING CO. 6 1/4" TOTAL THICKNESS (IAPMO ER-217) QUANTITY OF FIBER MESH IN CONC. PER CONC. NOTE.
2. NO FIELD CUTTING OR BURNING OF STRUCTURAL STEEL WILL BE PERMITTED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.
3. (N) ROOF PENETRATIONS PER DETAIL 9/S0.4.
4. (N) ROOF INFILLS TO FOLLOW DETAIL 13/S0.4.
5. (E) INTERIOR NON-BEARING STUD WALLS TO BE DEMO'D AS NECESSARY TO INSTALL (N) BEAMS
6. THE FRAMING IN THE VICINITY OF THE MECHANICAL UNITS WAS DESIGNED FOR THE UNIT SIZE AND WEIGHT AS SHOWN ON THE MECHANICAL DRAWINGS. ANY COSTS INCURRED FROM ANY SUBSTITUTION MADE BY THE CONTRACTOR WHICH REQUIRES RE-DESIGN PR MODIFICATIONS TO THE CONSTRUCTION DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.THE CONTRACTOR MAY WISH TO INQUIRE AS TO THE PROBABLE EXTENT OF THESE COSTS PRIOR TO INTRODUCING A SUBSTITUTION.



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LICENSED ARCHITECT — MARK GRAHAM C-26946 03-31-21 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — Peter R. Rosekamp No. 59871 Exp. 12/31/20 — STRUCTURAL — STATE OF CALIFORNIA

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PROJECT NUMBER: 20-19-06	

BUILDING C
ROOF FRAMING PLAN

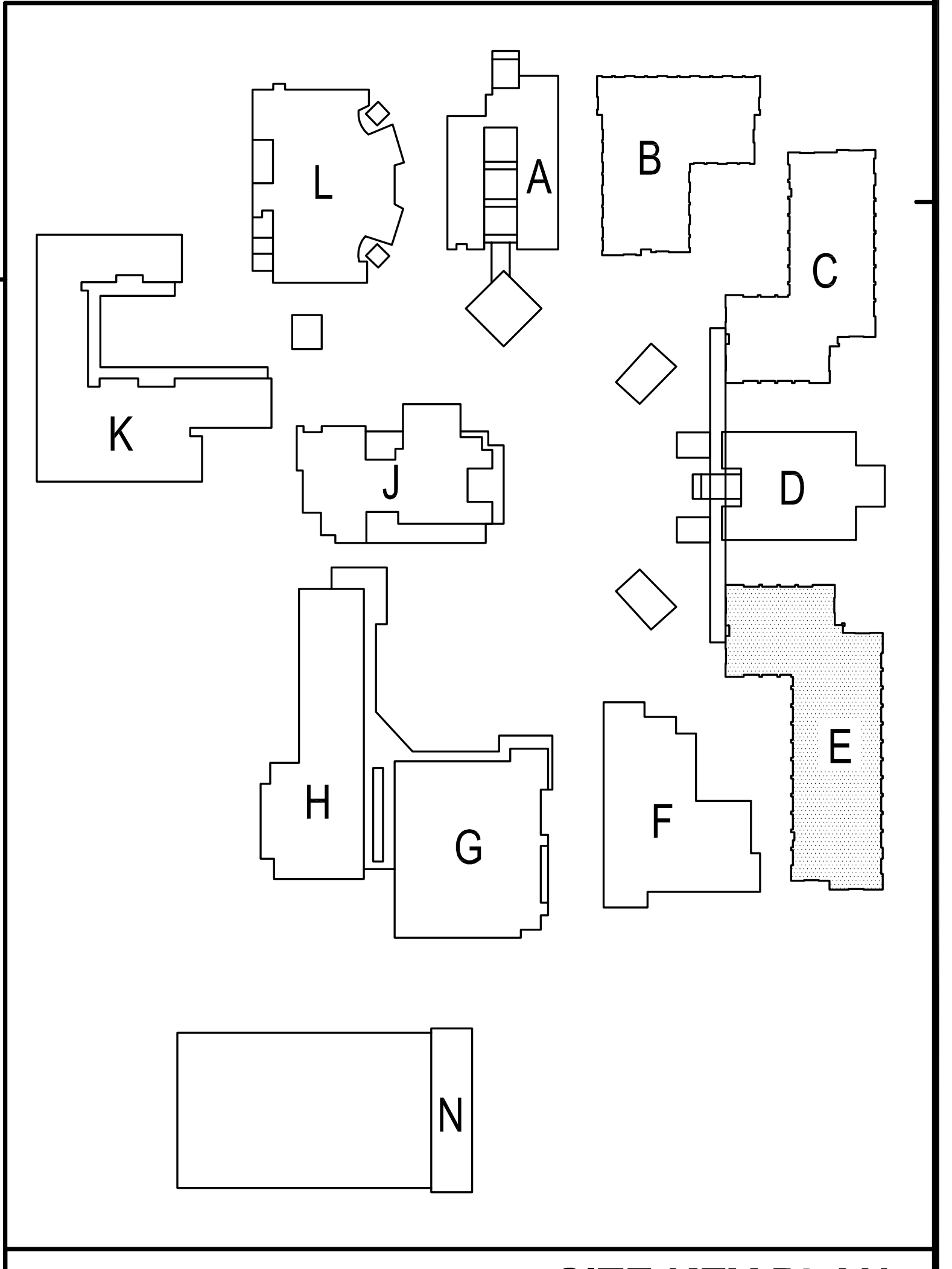
DRAWING NUMBER: S2.3

BLDG. 'E' SECOND FLOOR FRAMING PLAN

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

SECOND FLOOR FRAMING NOTES

1. 3 1/4" LT. WT. CONC. SLAB W/ FIBER MESH W/ #4 @ 24" O.C. EA. WAY OVER 3"x16 GA. W3 FORMLOK (GALV.) DECK BY VERCO MANUFACTURING CO. 6 1/4" TOTAL THICKNESS (IAPMO ER-217) QUANTITY OF FIBER MESH IN CONC. PER CONC. NOTE.
2. NO FIELD CUTTING OR BURNING OF STRUCTURAL STEEL WLL BE PERMITTED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.
3. HUNG UNITS SHOULD BE FRAMED PER DETAIL 12/S0.2
4. FLOOR PENETRATIONS SHOULD BE FRAMED PER DETAIL 9/S0.4
5. (E) INTERIOR NON-BEARING STUD WALLS TO BE DEMO'D AS NECESSRY TO INSTALL (N) BEAMS/SUPPORTS
6. THE FRAMING IN THE VICINITY OF THE MECHANICAL UNITS WAS DESIGNED FOR THE UNIT SIZE AND WEIGHT AS SHOWN ON THE MECHANICAL DRAWINGS. ANY COSTS INCURRED FROM ANY SUBSTITUTION MADE BY THE CONTRACTOR WHICH REQUIRES RE-DESIGN PR MODIFICATIONS TO THE CONSTRUCTION DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.THE CONTRACTOR MAY WISH TO INQUIRE AS TO THE PROBABLE EXTENT OF THESE COSTS PRIOR TO INTRODUCING A SUBSTITUTION.



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BUILDING E
SECOND FLOOR
FRAMING PLAN

DRAWING NUMBER: S2.4

BLDG. 'E' ROOF FRAMING PLAN

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

ROOF FRAMING NOTES

1. 3 1/4" LT. WT. CONC. SLAB W/ FIBER MESH W/ #4 @ 24" O.C. EA. WAY OVER 3"x16 GA. WB FORMLOK (GALV.) DECK BY VERCO MANUFACTURING CO. 6 1/4" TOTAL THICKNESS (IAPMO ER-211) QUANTITY OF FIBER MESH IN CONC. PER CONC. NOTE.
2. NO FIELD CUTTING OR BURNING OF STRUCTURAL STEEL WLL BE PERMITTED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.
3. (N) ROOF PENETRATIONS PER DETAIL 9/S0.4.
4. (N) ROOF INFILLS TO FOLLOW DETAIL 13/S0.4.
5. (E) INTERIOR NON-BEARING STUD WALLS TO BE DEMO'D AS NECESSARY TO INSTALL (N) BEAMS
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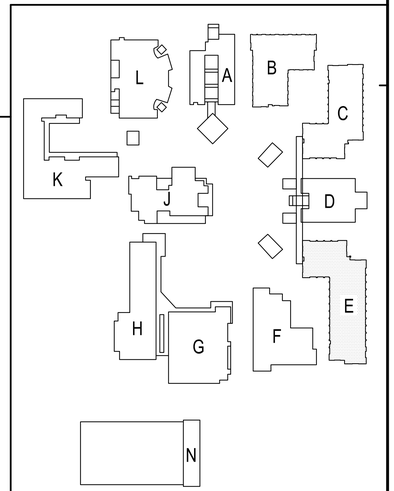

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BUILDING E
ROOF FRAMING PLAN

DRAWING NUMBER: S2.5

BLDG. 'F' ROOF FRAMING PLAN

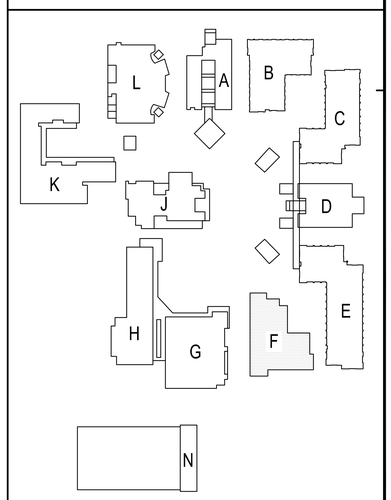
SCALE: 1/8"=1'-0"

ROOF FRAMING NOTES

1. 1/2" STRUCT I PLYWOOD
   10d @ 6" O.C. B.N.
   10d @ 6" O.C. E.N.
   10d @ 12" O.C. F.N.
   BLOCK ALL PLYWOOD EDGES. PER DETAIL 4/503.
2. (N) ROOF INFILLS TO FOLLOW DETAIL 14/503.
3. DEMO ALL EXISTING EQUIPMENT, DUCTING, ELECTRICAL, PLUMBING, ETC. MARKED AS DEMO PRIOR TO INSTALLING (N) ITEMS.
4. COORDINATE ALL MECH UNIT LOCATIONS W/ ARCH AND MECHANICAL DRAWINGS.
5. THE FRAMING IN THE VICINITY OF THE MECHANICAL UNITS WAS DESIGNED FOR THE UNIT SIZE AND WEIGHT AS SHOWN ON THE MECHANICAL DRAWINGS. ANY COSTS INCURRED FROM ANY SUBSTITUTION MADE BY THE CONTRACTOR WHICH REQUIRES RE-DESIGN PR MODIFICATIONS TO THE CONSTRUCTION DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.THE CONTRACTOR MAY WISH TO INQUIRE AS TO THE PROBABLE EXTENT OF THESE COSTS PRIOR TO INTRUDING A SUBSTITUTION.
6. PROVIDE (N) 2x FULL DEPTH BLK'G CONT. EA. END OF (N) JOISTS/BEAMS

HATCH LEGEND

(N) PLYWOOD SHTG TO MATCH SAME PATTERN AND LAYOUT AS (E) SHTG. SEE ROOF FRAMING NOTES #1.



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REGISTERED PROFESSIONAL ENGINEER — Peter R. Rosenkranz No. 59471 Exp. 12/31/20 — STRUCTURAL — STATE OF CALIFORNIA

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BUILDING F
ROOF FRAMING
PLAN

DRAWING NUMBER: S2.6

BLDG. 'G' ROOF FRAMING DEMO PLAN

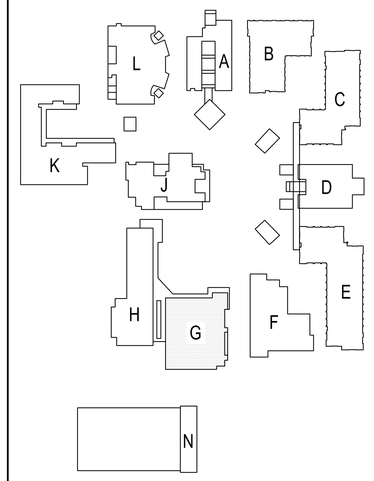
SCALE: 1/8"=1'-0"

ROOF FRAMING DEMO NOTES

1. 1 1/2" DEEP 20/18 GA. VERCO HSB-36 GALV. CD ACOUSTICAL STL. DECK W/ 3/4"ø EFFECTIVE PUDDLE WELD @ 12" O.C. AND AT EA. LOW FLUTE. ATTACH SEAMS W/ TOP SEAM WELD 1 1/2" LONG @ 12" O.C.
2. NO FIELD CUTTING OR BURNING OF STRUCTURAL STEEL WILL BE PERMITTED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.
3. (E) INTERIOR NON-BEARING STUD WALLS AND SOFFITES TO BE DEMO'D AS NECESSARY TO INSTALL (N) BEAMS/SUPPORTS
4. BEAMS LABELED AS "STRUT" TO REMAIN IN PLACE.
5. THE FRAMING IN THE VICINITY OF THE MECHANICAL UNITS WAS DESIGNED FOR THE UNIT SIZE AND WEIGHT AS SHOWN ON THE MECHANICAL DRAWINGS. ANY COSTS INCURRED FROM ANY SUBSTITUTION MADE BY THE CONTRACTOR WHICH REQUIRES RE-DESIGN PR MODIFICATIONS TO THE CONSTRUCTION DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.THE CONTRACTOR MAY WISH TO INQUIRE AS TO THE PROBABLE EXTENT OF THESE COSTS PRIOR TO INTRODUCING A SUBSTITUTION.
6. REMOVE (E) BEAMS & REPAIR (E) DECK PER DETAIL 9/S03. (E) BEAM CONNECTION SHEAR PLATE MAY REMAIN.

DEMO HATCH LEGEND

(E) ELEMENT TO BE REMOVED



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REGISTERED PROFESSIONAL ENGINEER
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Exp. 12/31/20
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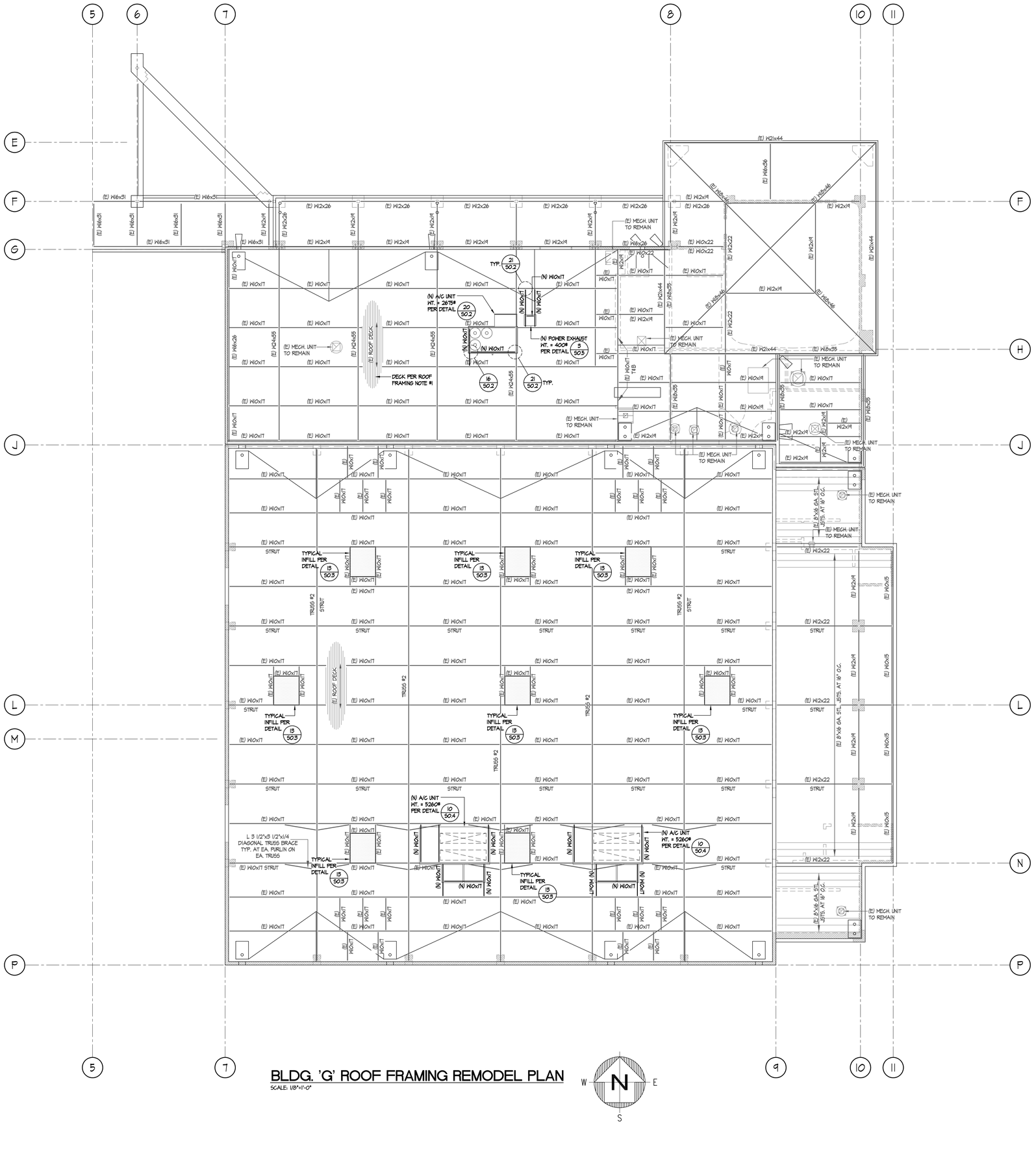
BUILDING G
ROOF FRAMING
DEMO PLAN

DRAWING NUMBER: S2.7



BLDG. 'G' ROOF FRAMING REMODEL PLAN

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

ROOF FRAMING REMODEL NOTES

1A. 1 1/2" DEEP 20/18 GA. VERCO HSB-36 GALV. CD ACOUSTICAL STL. DECK W/ 3/4"ø EFFECTIVE PUDDLE WELD @ 12" O.C. AND AT EA. LOW FLUTE. ATTACH SEAMS W/ TOP SEAM WELD 1 1/2" LONG @ 12" O.C.

1B. 3" DEEP 18 GA. GALV. VEERCO N-24 STL. DECK W/ 3/4"ø EFFECTIVE PUDDLE WELD 12" O.C. AND AT EA. LOW FLUTE. ATTACH SEAMS W/ TOP SEAM WELD 1 1/2" LONG @ 12" O.C.

2. NO FIELD CUTTING OR BURNING OF STRUCTURAL STEEL WILL BE PERMITTED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.

3. (E) INTERIOR NON-BEARING STUD WALLS AND SOFFITS TO BE DEMO'D AS NECESSARY TO INSTALL (N) BEAMS/SUPPORTS

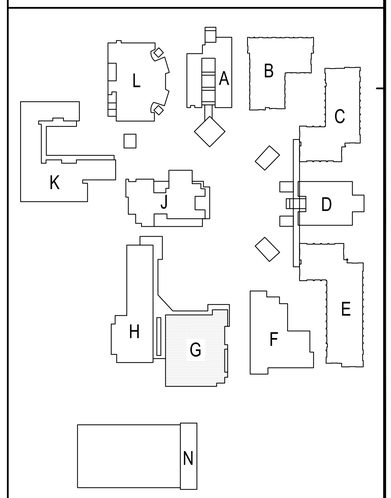
4. BEAMS LABELED AS "STRUT" TO REMAIN IN PLACE.

5. (N) ROOF PENETRATIONS SHOULD BE FRAMED PER DETAIL 14/S0.2

6. THE FRAMING IN THE VICINITY OF THE MECHANICAL UNITS WAS DESIGNED FOR THE UNIT SIZE AND WEIGHT AS SHOWN ON THE MECHANICAL DRAWINGS. ANY COSTS INCURRED FROM ANY SUBSTITUTION MADE BY THE CONTRACTOR WHICH REQUIRES RE-DESIGN PR MODIFICATIONS TO THE CONSTRUCTION DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.THE CONTRACTOR MAY WISH TO INQUIRE AS TO THE PROBABLE EXTENT OF THESE COSTS PRIOR TO INTRODUCING A SUBSTITUTION.

HATCH LEGEND

(N) INFILL SHTG TO MATCH SAME PATTERN AND LAYOUT AS (E) SHTG. SEE DETAIL 13/S0.3



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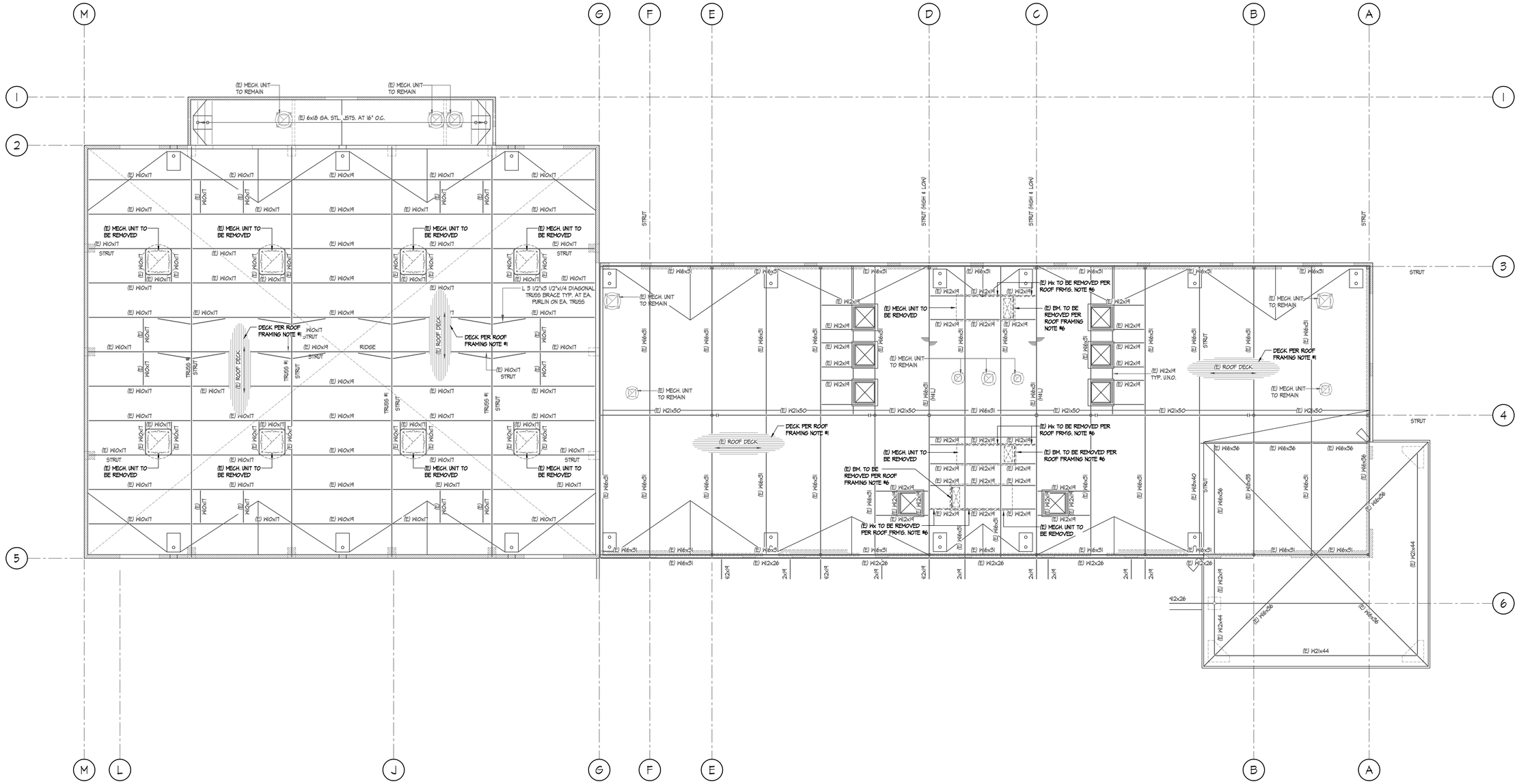
BUILDING G
ROOF FRAMING
REMODEL PLAN

DRAWING NUMBER: S2.8



BLDG. 'H' ROOF FRAMING DEMO PLAN

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

W S N E

DEMO HATCH LEGEND

(E) ELEMENT TO BE REMOVED

ROOF FRAMING DEMO NOTES

1. 1 1/2" DEEP 18 GA. VERCO HSB-36 GALV. STL. DECK W/ 3/4"ø EFFECTIVE PUDDLE WELD @ 12" O.C. AND AT EA. LOW FLUTE. ATTACH SEAMS W/ TOP SEAM WELD 1 1/2" LONG @ 12" O.C.
2. NO FIELD CUTTING OR BURNING OF STRUCTURAL STEEL WILL BE PERMITTED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.
3. (E) INTERIOR NON-BEARING STUD WALLS AND SOFFITES TO BE DEMO'D AS NECESSARY TO INSTALL (N) BEAMS/SUPPORTS
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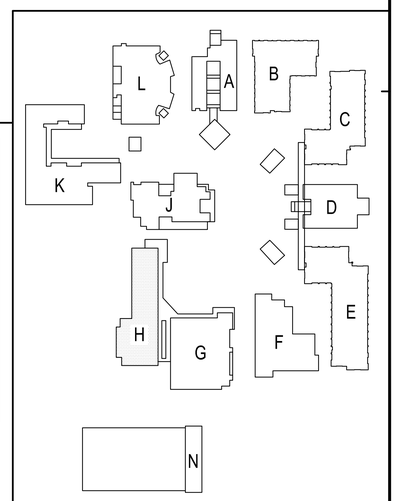
6. REMOVE (E) BEAMS & REPAIR (E) DECK PER DETAIL 9/SO.3. (E) BEAM CONNECTION SHEAR PLATE MAY REMAIN.



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OXNARD, CA 93036

LICENSED ARCHITECT — MARK GRAHAM — C-26046 — 03-31-21 — STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER — Peter R. Rosecrans — No. 58871 — Exp. 12/31/20 — STRUCTURAL — STATE OF CALIFORNIA

CONSULTANT
TLC ENGINEERING, INC.
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P: 951.684.6200
F: 951.684.6226
JOB NO. 20-19-06

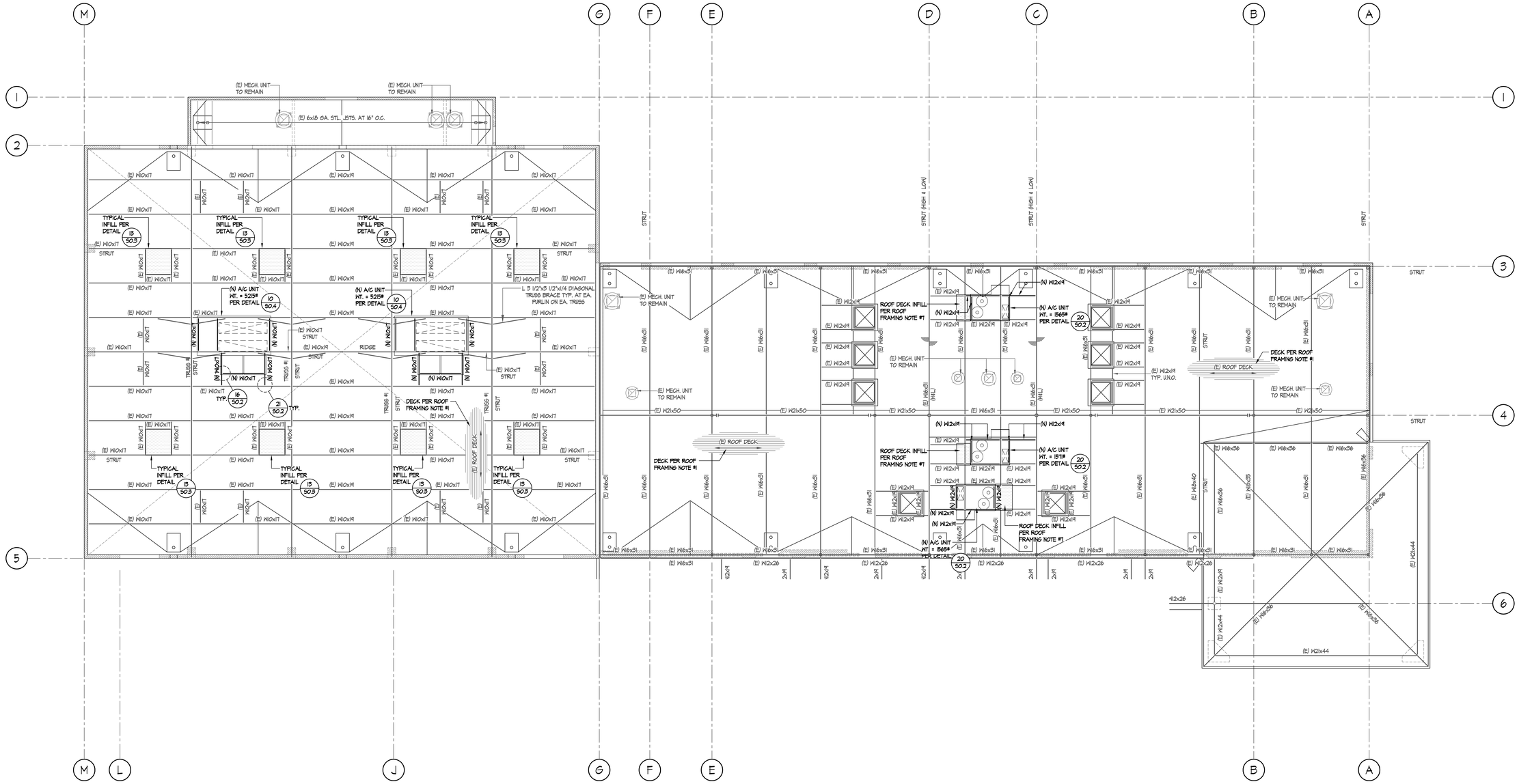
BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN:	CHECKED:
DATE: 12/08/2019	SCALE: N.T.S.
PROJECT NUMBER: 20-19-06	

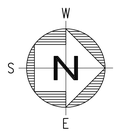
BUILDING H
ROOF FRAMING
DEMO PLAN

DRAWING NUMBER: S2.9



BLDG. 'H' ROOF FRAMING REMODEL PLAN

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



HATCH LEGEND

(N) INFILL SHTG TO MATCH SAME PATTERN AND LAYOUT AS (E) SHTG. SEE DETAIL 13/S03

ROOF FRAMING REMODEL NOTES

1A. 1 1/2" DEEP 20/18 GA. VERCO NSB-36 GALV. CD ACOUSTICAL STL. DECK W/ 3/4"ø EFFECTIVE PUDDLE WELD ● 12" O.C. AND AT EA. LOW FLUTE. ATTACH SEAMS W/ TOP SEAM WELD 1 1/2" LONG ● 12" O.C.

1B. 3" DEEP 18 GA. GALV. VEERCO N-24 STL. DECK W/ 3/4"ø EFFECTIVE PUDDLE WELD 12" O.C. AND AT EA. LOW FLUTE. ATTACH SEAMS W/ TOP SEAM WELD 1 1/2" LONG ● 12" O.C.

2. NO FIELD CUTTING OR BURNING OF STRUCTURAL STEEL WILL BE PERMITTED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.

3. (E) INTERIOR NON-BEARING STUD WALLS AND SOFFITS TO BE DEMO'D AS NECESSARY TO INSTALL (N) BEAMS/SUPPORTS

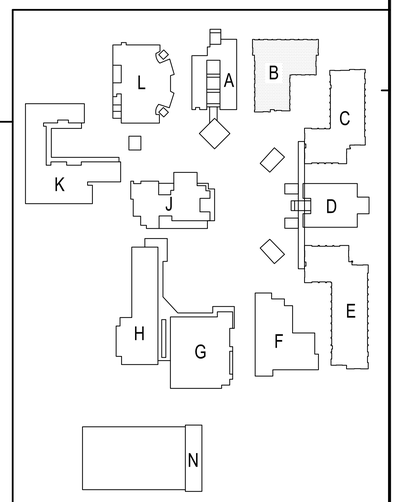
4. BEAMS LABELED AS "STRUT" TO REMAIN IN PLACE.

5. (N) ROOF PENETRATIONS SHOULD BE FRAMED PER DETAIL 19/S02

6. THE FRAMING IN THE VICINITY OF THE MECHANICAL UNITS WAS DESIGNED FOR THE UNIT SIZE AND WEIGHT AS SHOWN ON THE MECHANICAL DRAWINGS. ANY COSTS INCURRED FROM ANY SUBSTITUTION MADE BY THE CONTRACTOR WHICH REQUIRES RE-DESIGN PR MODIFICATIONS TO THE CONSTRUCTION DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.THE CONTRACTOR MAY WISH TO INQUIRE AS TO THE PROBABLE EXTENT OF THESE COSTS PRIOR TO INTRODUCING A SUBSTITUTION.

7. PROVIDE (N) DECK INFILL WITH INSULATION TO MATCH (E) AT LOCATIONS WHERE (E) UNITS ARE BEING REMOVED AND LEAVES AN OPENING IN THE ROOF. (N) DECK INFILL PER DETAIL 13/S03. SEE ARCH. & MECH. DRAWINGS FOR REMAINING INFORMATION.

8. REMOVE (E) BEAMS AND REPAIR (E) DECK PER DETAIL 9/S03.



SITE KEY PLAN

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120526 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/15/2020

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RANCHO CUCAMONGA
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LICENSED ARCHITECT — MARK GRAHAM C-28046 03-31-21 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — Peter R. Rosenberg No. 59671 Exp. 12/31/20 — STRUCTURAL — STATE OF CALIFORNIA

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JOB NO. 20-19-06

BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN:	CHECKED:
DATE: 12/08/2019	SCALE: N.T.S.
PROJECT NUMBER: 20-19-06	

BUILDING H
ROOF FRAMING
REMODEL PLAN

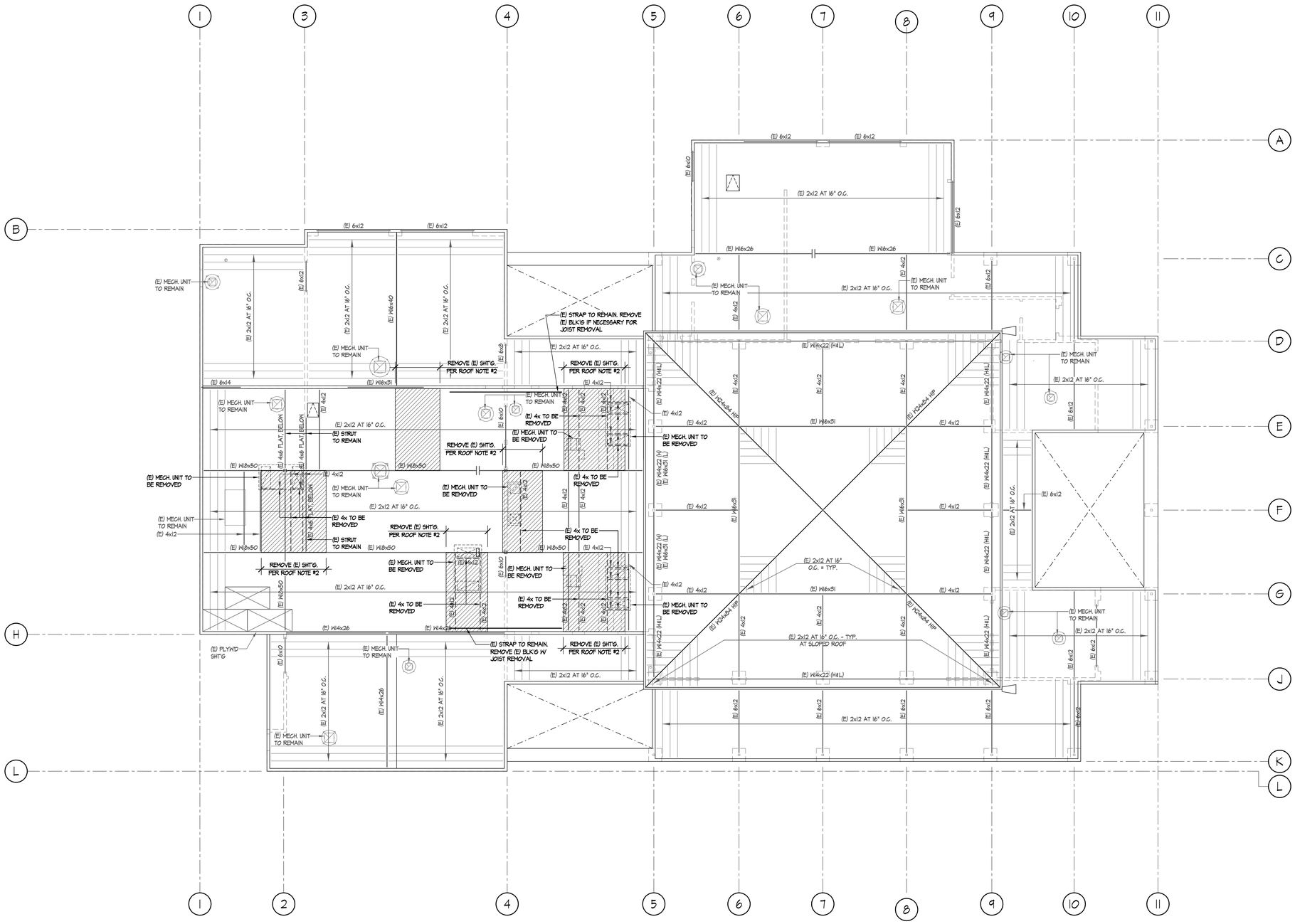
DRAWING NUMBER: S2.10

ROOF FRAMING DEMO NOTES

1. DEMO (E) MECHANICAL PLATFORMS PRIOR TO INSTALLING (N) PLATFORMS/ CURBS.
2. REMOVE (E) PLYWOOD SHTG AND (E) RAFTERS WHERE INSTALLING (N) JOIST AS SHOWN ON S2.12.

DEMO HATCH LEGEND

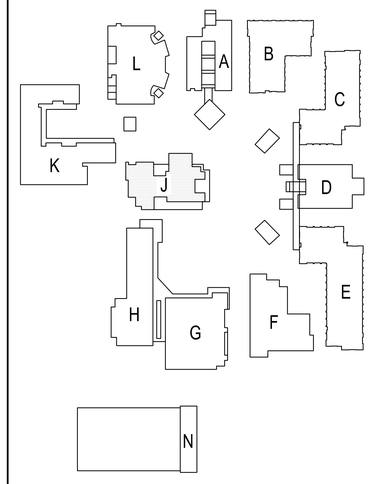
(E) ELEMENT TO BE REMOVED



BLDG. 'J' ROOF FRAMING DEMO PLAN

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

N



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LICENSED ARCHITECT — MARK GRAHAM C-26046 03-31-21 — STATE OF CALIFORNIA

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JOB NO. 20-19-06

BID SET

NO	DATE	BY	DESCRIPTION
			REVISIONS

DRAWN:	CHECKED:
DATE: 12/08/2019	SCALE: N.T.S.
PROJECT NUMBER: 20-19-06	

BUILDING J
ROOF FRAMING
DEMO PLAN

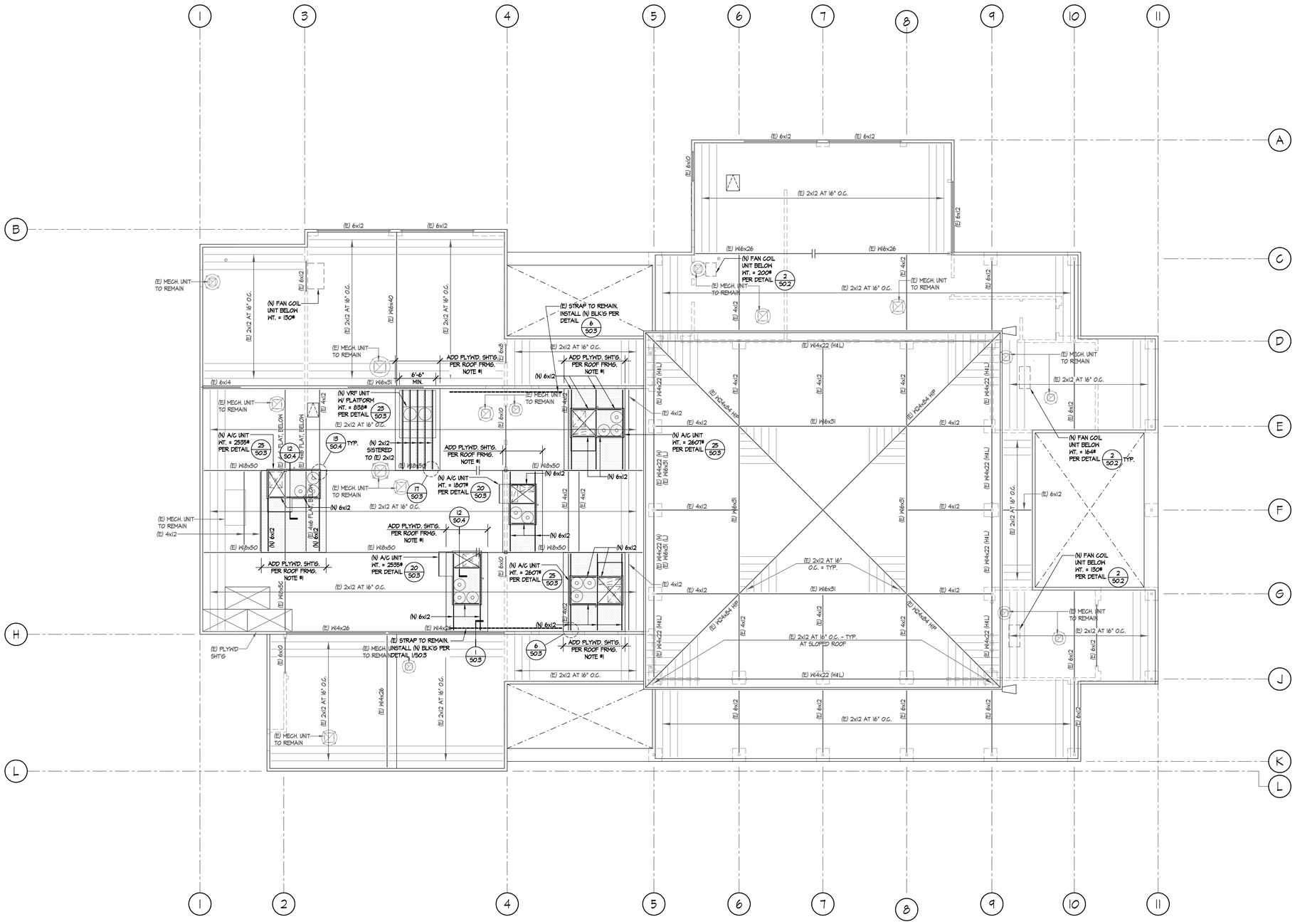
DRAWING NUMBER: S2.11

ROOF FRAMING REMODEL NOTES

1. 1/2" STRUCT I PLYWOOD
   10d @ 6" O.C. B.N.
   10d @ 6" O.C. E.N.
   10d @ 12" O.C. F.N.
   BLOCK ALL PLYWOOD EDGES. PER DETAIL 4/503.
2. ALL RAFTERS DESIGNED AS STRUT SHOULD RECEIVE 2 ROWS 10d NAILS.
3. COORDINATE ALL MECH UNIT LOCATIONS W/ ARCH AND MECHANICAL DRAWINGS.
4. THE FRAMING IN THE VICINITY OF THE MECHANICAL UNITS WAS DESIGNED FOR THE UNIT SIZE AND WEIGHT AS SHOWN ON THE MECHANICAL DRAWINGS. ANY COSTS INCURRED FROM ANY SUBSTITUTION MADE BY THE CONTRACTOR WHICH REQUIRES RE-DESIGN PR MODIFICATIONS TO THE CONSTRUCTION DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.THE CONTRACTOR MAY WISH TO INQUIRE AS TO THE PROBABLE EXTENT OF THESE COSTS PRIOR TO INTRUDING A SUBSTITUTION.
5. PROVIDE (N) 2x FULL DEPTH BLK'G. CONT. EA. END OF (N) JOISTS.

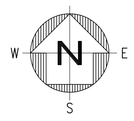
HATCH LEGEND

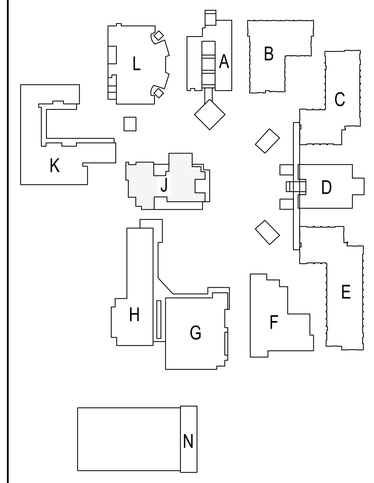
(N) PLYWOOD SHT'G TO MATCH SAME PATTERN AND LAYOUT AS (E) SHT'G. SEE ROOF FRAMING NOTES #1.



BLDG. 'J' ROOF FRAMING REMODEL PLAN

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





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LICENSED ARCHITECT
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C-26046
03-31-21
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
Peter R. Rivenburg
No. 59471
Exp. 12/31/20
STRUCTURAL
STATE OF CALIFORNIA

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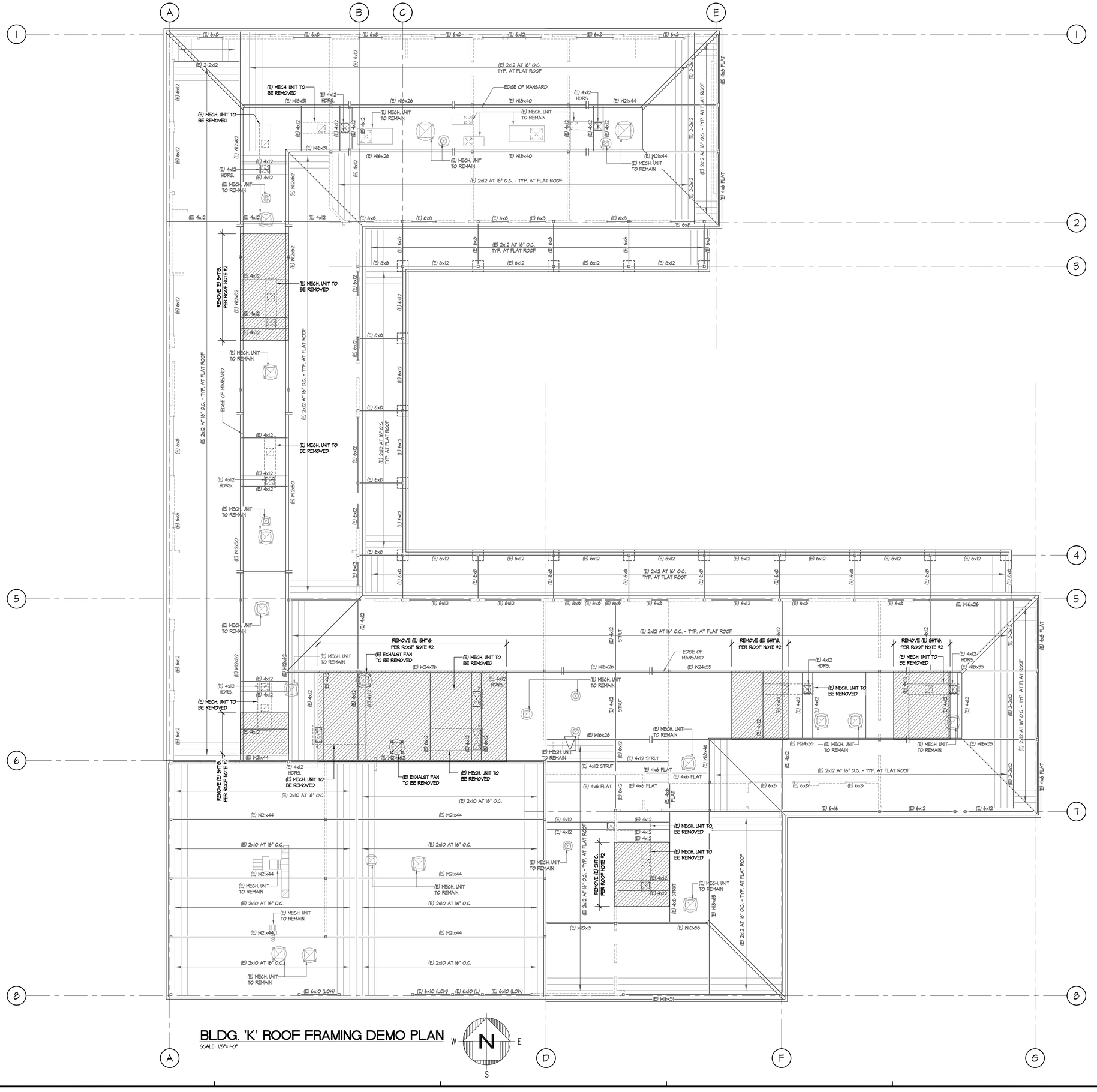
BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN:	CHECKED:
DATE: 12/08/2019	SCALE: N.T.S.
PROJECT NUMBER: 20-19-06	

BUILDING J
ROOF FRAMING
REMODEL PLAN

DRAWING NUMBER: S2.12



BLDG. 'K' ROOF FRAMING DEMO PLAN

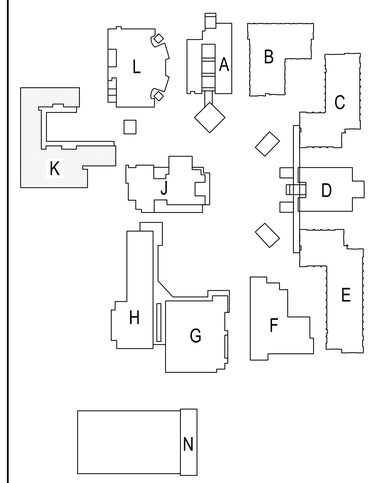
SCALE: 1/8"=1'-0"

ROOF FRAMING DEMO NOTES

1. DEMO (E) MECHANICAL PLATFORMS PRIOR TO INSTALLING (N) PLATFORMS/ CURBS.
2. REMOVE (E) PLYWOOD SHTG AND (E) RAFTERS WHERE INSTALLING (N) JOIST AS SHOWN ON S2.12.

DEMO HATCH LEGEND

(E) ELEMENT TO BE REMOVED



SITE KEY PLAN

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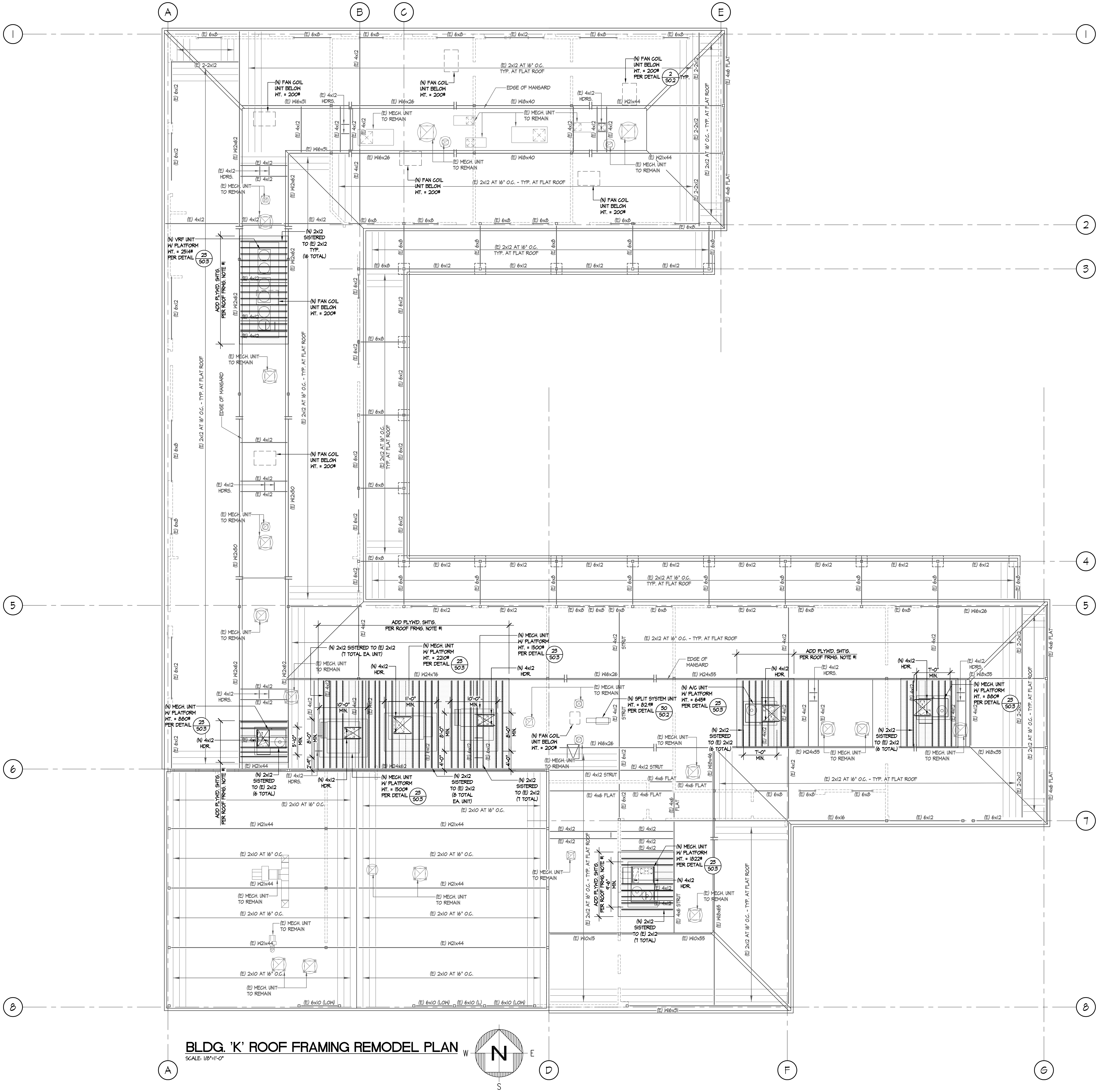
BID SET

NO	DATE	BY	DESCRIPTION
⚠			REVISIONS

DRAWN:	CHECKED:
DATE: 12/08/2019	SCALE: N.T.S.
PROJECT NUMBER: 20-19-06	

BUILDING K
ROOF FRAMING
DEMO PLAN

DRAWING NUMBER: S2.13



BLDG. 'K' ROOF FRAMING REMODEL PLAN

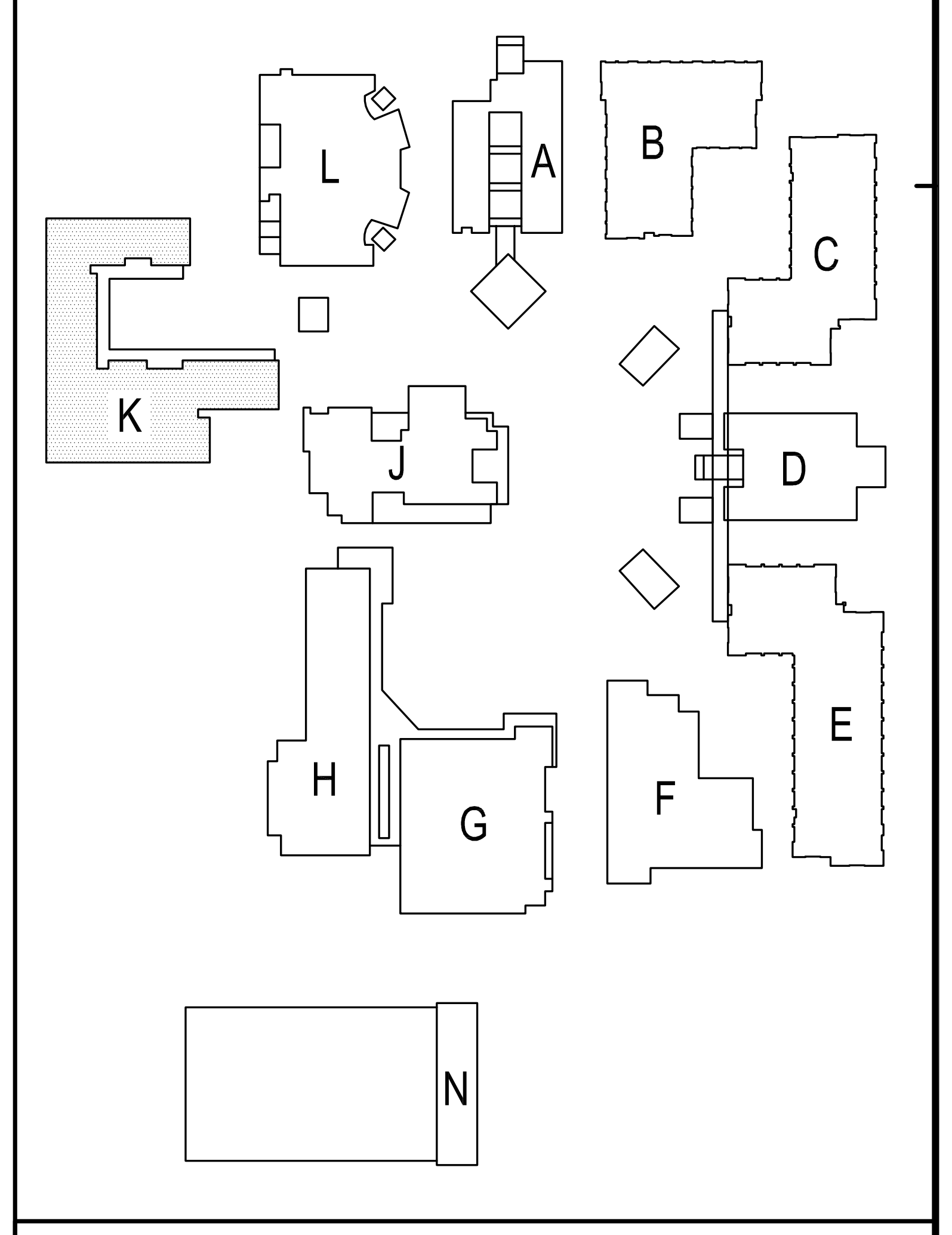
SCALE: 1/8"=1'-0"

ROOF FRAMING REMODEL NOTES

1. 1/2" STRUCT I PLYWOOD
   10d @ 6" O.C. B.N.
   10d @ 6" O.C. E.N.
   10d @ 12" O.C. F.N.
   BLOCK ALL PLYWOOD EDGES. PER DETAIL 4/S0.3.
2. ALL RAFTERS DESIGNED AS STRUT SHOULD RECEIVE 2 ROWS 10d NAILS.
3. COORDINATE ALL MECH UNIT LOCATIONS W/ ARCH AND MECHANICAL DRAWINGS.
4. THE FRAMING IN THE VICINITY OF THE MECHANICAL UNITS WAS DESIGNED FOR THE UNIT SIZE AND WEIGHT AS SHOWN ON THE MECHANICAL DRAWINGS. ANY COSTS INCURRED FROM ANY SUBSTITUTION MADE BY THE CONTRACTOR WHICH REQUIRES RE-DESIGN PR MODIFICATIONS TO THE CONSTRUCTION DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.THE CONTRACTOR MAY WISH TO INQUIRE AS TO THE PROBABLE EXTENT OF THESE COSTS PRIOR TO INTRUDING A SUBSTITUTION.
5. PROVIDE (N) 2x FULL DEPTH BLK'G. CONT. EA. END OF (N) JOISTS.

HATCH LEGEND

▨	(N) PLYWOOD SHT'G TO MATCH SAME PATTERN AND LAYOUT AS (E) SHT'G. SEE ROOF FRAMING NOTES #1.



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MARK GRAHAM
C-26046
03-31-21

Peter R. Ravenkamp
No. S6471
Exp. 12/31/20

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JOB NO. 20-19-06

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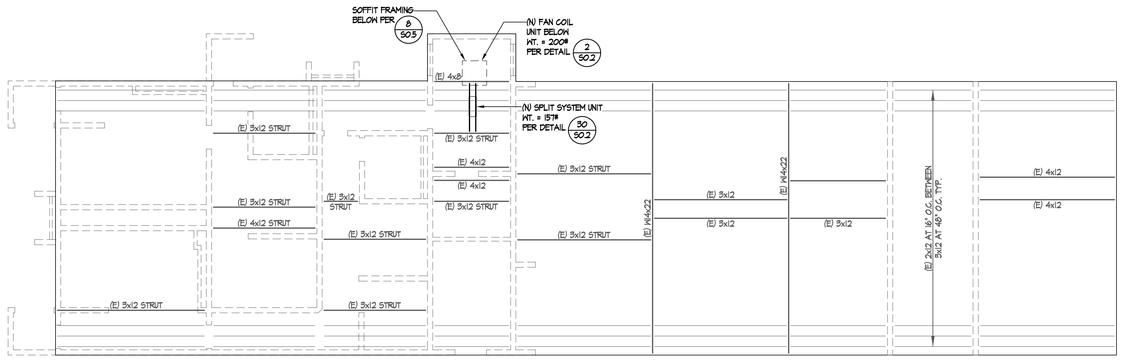
NO	DATE	BY	DESCRIPTION
#	REVISIONS		

DRAWN:	CHECKED:
DATE: 12/08/2019	SCALE: N.T.S.
PROJECT NUMBER: 20-19-06	

BUILDING K
ROOF FRAMING
REMODEL PLAN

DRAWING NUMBER: S2.14

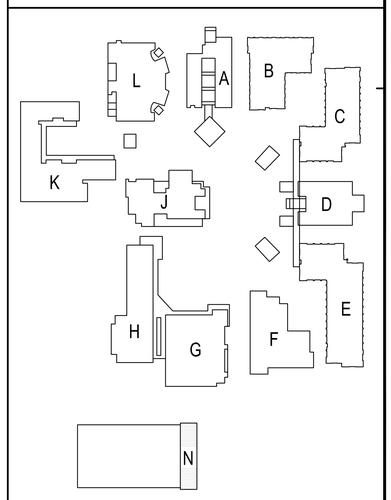


BLDG. 'N' ROOF FRAMING PLAN

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

ROOF FRAMING NOTES

1. 1/2" STRUCT I PLYWOOD
   10d @ 6" O.C. B.N.
   10d @ 6" O.C. E.N.
   10d @ 12" O.C. F.N.
   BLOCK ALL PLYWOOD EDGES. PER DETAIL 4/S03.
2. (N) ROOF INFILLS TO FOLLOW DETAIL 14/S03.
3. DEMO ALL EXISTING EQUIPMENT, DUCTING, ELECTRICAL, PLUMBING, ETC. MARKED AS DEMO PRIOR TO INSTALLING (N) ITEMS.
4. COORDINATE ALL MECH UNIT LOCATIONS W/ ARCH AND MECHANICAL DRAWINGS.
5. THE FRAMING IN THE VICINITY OF THE MECHANICAL UNITS WAS DESIGNED FOR THE UNIT SIZE AND WEIGHT AS SHOWN ON THE MECHANICAL DRAWINGS. ANY COSTS INCURRED FROM ANY SUBSTITUTION MADE BY THE CONTRACTOR WHICH REQUIRES RE-DESIGN FR MODIFICATIONS TO THE CONSTRUCTION DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.THE CONTRACTOR MAY WISH TO INQUIRE AS TO THE PROBABLE EXTENT OF THESE COSTS PRIOR TO INTRUDING A SUBSTITUTION.
6. PROVIDE (N) 2x FULL DEPTH BLK'G CONT. EA. END OF (N) JOISTS/BEAMS



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REGISTERED PROFESSIONAL ENGINEER — Peter R. Rzeszkowski No. S6871 Exp. 12/31/20 — STRUCTURAL — STATE OF CALIFORNIA

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NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN:	CHECKED:
DATE: 12/08/2019	SCALE: N.T.S.
PROJECT NUMBER: 20-19-06	

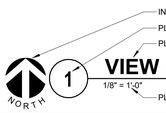
BUILDING N
ROOF FRAMING
PLAN

DRAWING NUMBER: S2.15

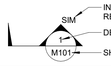
VIEW KEY

NAME
10' - 0"
LEVEL NAME
HEIGHT ABOVE PROJECT 0' - 0"

1
INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL



INDICATES DIRECTION OF TRUE NORTH
PLAN OR DETAIL NUMBER
PLAN OR DETAIL NAME
VIEW NAME
PLAN OR DETAIL SCALE



INDICATES SIMILAR DETAIL REFERENCED IN MULTIPLE LOCATIONS
DETAIL REFERRED TO BY SECTION CUT
SHEET DETAIL IS LOCATED ON

INDICATES SIMILAR DETAIL REFERENCED IN MULTIPLE LOCATIONS
DETAIL REFERRED TO BY ELEVATION
SHEET DETAIL IS LOCATED ON

LINE TYPE KEY:

NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)

NEW WORK BY OTHERS AND/OR EXISTING TO REMAIN (LIGHT SOLID LINE)

EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK SHORT DASHED LINE)

FIRE / SMOKE BARRIER DESIGNATIONS

THE LINE TYPES SHOWN ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY RATINGS WITH THE LATEST SET OF ARCHITECTURAL PLANS AND FURNISH ALL MATERIALS REQUIRED TO COMPLY WITH THOSE RATINGS WHETHER SHOWN OR NOT.

ALL FLOOR, AND WALL ASSEMBLIES SHALL BE DESIGNATED AS 1 HOUR FIRE/SMOKE, BARRIER(S), UNLESS NOTED OTHERWISE ON THE PLANS. RATINGS WERE ACQUIRED FROM THE ARCHITECTURAL PLANS DATED 03/03/2020.

1 HOUR FIRE/SMOKE BARRIER	- - - - - - - - - - - -
1 HOUR FIRE/SMOKE SHAFT ENCLOSURE	- - - - - - - - - - - -

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
C.C.	CIVIL CONTRACTOR
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR

APPLICABLE CODES

- 2019 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1
- 2019 CALIFORNIA BUILDING CODE (CBC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 2 (2018 INTERNATIONAL BUILDING CODE (IBC) W/CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA ELECTRICAL CODE (CEC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3 (2017 NATIONAL ELECTRICAL CODE (NEC) W/CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA MECHANICAL CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 4 (2018 UNIFORM MECHANICAL CODE (UMC) W/CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA PLUMBING CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 5 (2018 UNIFORM PLUMBING CODE (UPC) W/CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA ENERGY EFFICIENCY STANDARDS CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6
- 2019 CALIFORNIA FIRE CODE (CFC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 9 (2018 INTERNATIONAL FIRE CODE (IFC) W/CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA REFERENCED STANDARDS CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12
- AMERICANS WITH DISABILITIES ACT (ADA) TITLE II - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG) 1990 STATE FIRE MARSHAL REGULATIONS AND AMENDMENTS TO-DATE
- CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE ACCESSIBILITY STANDARDS CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19

STANDARDS:

NFPA 13 AUTOMATIC SPRINKLER SYSTEMS (2019)
NFPA 14 STANDPIPE SYSTEMS (2019)
NFPA 17 DRY CHEMICAL EXTINGUISHING SYSTEMS (2017)
NFPA 17a WET CHEMICAL SYSTEMS (2017)
NFPA 20 STATIONARY PUMPS (2019)
NFPA 22 WATER TANKS FOR PRIVATE FIRE PROTECTION (2018)
NFPA 24 PRIVATE FIRE MAINS (2019)
NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (2019)
NFPA 80 FIRE DOORS AND OTHER OPENING PROTECTIVES (2019)
NFPA 92 STANDARD FOR SMOKE CONTROL SYSTEMS (2018)

MECHANICAL SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
D	DRAIN
G	NATURAL GAS
GV	GAS REGULATOR VENT
LIQ	REFRIGERANT LIQUID
SUC	REFRIGERANT SUCTION
	PIPE CAP
	PIPE DOWN
	PIPE UP OR UP/DOWN
	PITCH PIPE IN DIRECTION
	DIRECTION OF FLOW IN PIPE
	NEW CONNECTION
	DIELECTRIC CONNECTION
	UNION/FLANGE
	SHUTOFF VALVE NORMALLY OPEN
	SHUTOFF VALVE NORMALLY CLOSED
	FLEXIBLE CONNECTION
	DIRECTION OF AIR FLOW
	FLEXIBLE DUCT
	MANUAL VOLUME DAMPER
R	RISE IN DIRECTION OF AIR FLOW
D	DROP IN DIRECTION OF AIR FLOW
	DUCT CAP
	DUCT DOWN
	DUCT UP
	SUPPLY/OUTSIDE AIR DUCT SECTION
	RETURN AIR DUCT SECTION
	EXHAUST/RELIEF AIR DUCT SECTION
	4-WAY DIFFUSER WITH BLANKOFF IN ONE DIRECTION
CD-1 6/115	AIR TERMINAL PROPERTIES SYMBOL NECK SIZE/CFM
	OPPOSED BLADE DAMPER (REFER TO SCHEDULE)
	PARALLEL BLADE DAMPER (REFER TO SCHEDULE)
CO_2	CARBON DIOXIDE SENSOR
T	THERMOSTAT/SENSOR
T	THERMOSTAT/SENSOR WITH HEAVY DUTY ENCLOSURE
	POINT OF CONNECTION
	POINT OF REMOVAL

MECHANICAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
C	COMMON
CO	CLEANOUT
CD-E	CEILING DIFFUSER - EXISTING
EA	EXHAUST/RELIEF AIR
EFD	EXISTING FIRE DAMPER
EFSD	EXISTING FIRE SMOKE DAMPER
ESD	EXISTING SMOKE DAMPER
FD	FIRE DAMPER
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FSD	FIRE/SMOKE DAMPER
MA	MIXED AIR
NC	NEW CONNECTION
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
OA	OUTSIDE AIR
RA	RETURN AIR
SA	SUPPLY AIR
SD	SMOKE DAMPER
TD	TRANSFER DUCT
TYP	TYPICAL
UC-1	DOOR UNDERCUT BY OTHERS (1" TYPICAL)
UNO	UNLESS NOTED OTHERWISE

TAB PRE-DEMOLITION NOTES:

1. BEFORE ANY DEMOLITION WORK IS BEGUN A COMPLETE AIR BALANCE TEST SHALL BE PERFORMED BY THE TESTING, ADJUSTING AND BALANCING (TAB) CONTRACTOR ON EXISTING AIR HANDLERS AND EXHAUST FANS SERVING THE AREAS AFFECTED BY CONSTRUCTION. EQUIPMENT TO BE DEMOLISHED DOES NOT REQUIRE TESTING. PROVIDE AIR BALANCE TESTING ONLY ON EQUIPMENT THAT WILL CONTINUE TO BE USED TO SERVE RENOVATED AREAS AFTER THE CONSTRUCTION PHASE IS COMPLETED.
2. PROVIDE DUCT TRAVERSE READINGS AT LOCATIONS DESIGNATED ON THE DRAWINGS BY THE "AIRFLOW MEASEMENT SYMBOL". THOSE MEASUREMENTS SHALL BE INCLUDED IN THE PRE DEMOLITION REPORT AND SHALL BE DESIGNATED WITH THE IDENTIFIER AS MARKED ON THE DRAWINGS. READINGS SHALL BE DESIGNATED WITH THE ROOM NAME AND NUMBER AS MARKED ON THE DRAWINGS. IF FLOOR PLANS DO NOT HAVE UNIQUE ROOM NAMES AND NUMBERS, TAB CONTRACTOR SHALL INCLUDE FLOOR PLAN WITH UNIQUE NUMBER DESIGNATIONS ASSIGNED TO READINGS THAT MATCH THOSE USED IN THE FINAL PRE-DEMOLITION REPORT. DRAWINGS THAT ARE HAND-MARKED WITH RED INK ARE ACCEPTABLE, PROVIDED THEY ARE LEGIBLE.
3. IN THE EVENT A DUCT TRAVERSE LOCATION AS MARKED ON THIS PLAN IS INACCESSIBLE FOR MEASUREMENT, THE TAB CONTRACTOR SHALL PERFORM THE TRAVERSE AT AN ALTERNATE LOCATION OR SHALL TAKE MULTIPLE DUCT TRAVERSES AND/OR READINGS AS REQUIRED TO DETERMINE THE AIRFLOW READING WHERE THE DUCT TRAVERSE SYMBOL IS SHOWN. IN THE EVENT TRAVERSES ARE TAKEN AT ALTERNATE LOCATION(S), TAB CONTRACTOR SHALL INCLUDE A DRAWING THAT SHOWS THE LOCATIONS WHERE THE ACTUAL MEASUREMENTS WERE TAKEN.
4. TAKE A DUCT STATIC PRESSURE READING AT EACH LOCATION WHERE A DUCT TRAVERSE READING IS TAKEN AND INCLUDE IN THE FINAL PRE-DEMOLITION TAB REPORT.
5. TAB CONTRACTOR SHALL COMPILE AND SUBMIT FOUR COPIES OF THE FINAL PRE-DEMOLITION REPORT WITHIN 10 WORKING DAYS AFTER THE FIELD MEASUREMENTS ARE COMPLETED. FINAL TAB REPORT SHALL BE SUBMITTED FOR REVIEW TO THE ARCHITECT/ENGINEER. TESTING SHALL INCLUDE ALL ITEMS REQUIRED IN THE SPECIFICATIONS.
6. TAB CONTRACTOR SHALL PROVIDE DUCT TRAVERSE READINGS AT LOCATIONS DESIGNATED ON THE DRAWINGS BY THE "AIRFLOW MEASUREMENT SYMBOL". THOSE MEASUREMENTS SHALL BE INCLUDED IN THE POST-CONSTRUCTION REPORT AND SHALL BE DESIGNATED WITH THE IDENTIFIER AS MARKED ON THE CONSTRUCTION DRAWINGS. GRILLE AND DIFFUSER READINGS SHALL BE DESIGNATED WITH THE ROOM NAME AND NUMBER AS MARKED ON THE DRAWINGS. IF THE DRAWINGS DO NOT HAVE UNIQUE ROOM NAMES AND NUMBERS, TAB CONTRACTOR SHALL INCLUDE FLOOR PLANS WITH UNIQUE NUMBER DESIGNATIONS ASSIGNED TO TRAVERSES, GRILLES, AND DIFFUSERS THAT MATCH THOSE USED IN THE FINAL PRE-DEMOLITION REPORT. SIMILAR ROOM NAMES, NUMBERS, OR DESIGNATIONS SHALL BE USED TO SIMPLIFY THE CROSS- REFERENCING OF READINGS TAKEN BETWEEN PRE-DEMOLITION AND POST-CONSTRUCTION REPORTS.
7. BALANCING CONTRACTOR SHALL PRE-BALANCE ALL EXISTING SYSTEMS TO REMAIN PER SPECIFICATION SECTION 23 05 93. BALANCE READINGS WILL BE REQUIRED AT AIR OUTLETS AND DUCT TRAVERSES TO VERIFY EXISTING AIRFLOW TO UNAFFECTED SPACES.

MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, PLUMBING, MECHANICAL, AND TEMPERATURE CONTROL.

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
3. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
4. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
5. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
6. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPECIFICATIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
13. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
14. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
15. MAINTAIN MINIMUM 3'-0" CLEARANCE IN FRONT OF ALL ELECTRICAL PANELS, MOTOR STARTERS, SWITCHES, AND DISCONNECTS.
16. PROVIDE CONCRETE EQUIPMENT PADS FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND 6" BEYOND ALL SIDES OF EQUIPMENT.
17. DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

MECHANICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
4. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF HIS/HER WORK AND SHALL NOTIFY THE CONSTRUCTION MANAGER PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO HIS/HER AREA OF WORK.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO BIDDING.
6. WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.

ENERGY COMPLIANCE NOTES:

1. ALL EQUIPMENT INSTALLED AS PART OF THIS PROJECT MUST HAVE EFFICIENCY REQUIREMENTS WHICH MEET THE MANDATORY EFFICIENCY REGULATIONS, TITLE 20 CALIFORNIA CODE OF REGULATIONS, SECTION 1608(e) AND MUST BE LISTED IN THE CALIFORNIA ENERGY COMMISSION'S DATABASE OF CERTIFIED APPLIANCES OR AN EQUIVALENT DIRECTORY PUBLISHED BY A FEDERAL AGENCY, OR AN APPROVED TRADE ASSOCIATION DIRECTORY AS DEFINED IN TITLE 20 CALIFORNIA CODE OF REGULATIONS, SECTION 1606(h).
2. ALL EQUIPMENT INSTALLED AS PART OF THIS PROJECT SHALL MEET OR EXCEED THE MINIMUM EFFICIENCY REQUIREMENTS OF CALIFORNIA ENERGY CODE SECTION 110.2(a)
3. ALL UNITARY HEATING OR COOLING SYSTEMS PART OF THIS PROJECT NOT CONTROLLED BY A CENTRAL ENERGY MANAGEMENT SYSTEM SHALL HAVE A SETBACK THERMOSTAT WITH A CLOCK MECHANISM THAT ALLOWS THE BUILDING OCCUPANTS TO PROGRAM TEMPERATURE SETPOINTS FOR AT LEAST FOUR PERIODS WITHIN 24 HOURS.
4. ALL THERMOSTATS FOR HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATING AS PART OF THIS PROJECT SHALL PREVENT SUPPLEMENTARY HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE.
5. ALL FURNACES WHICH ARE PART OF THIS PROJECT GREATER THAN OR EQUAL TO 225,000 BTUH SHALL HAVE AN INTERMITTENT IGNITION OR INTERRUPTED DEVICE AND POWER VENTING OR FLUE DAMPER.
6. ALL DEMAND CONTROL VENTILATION DEVICES WHICH ARE PART OF THIS PROJECT SHALL COMPLY WITH THE FOLLOWING:
   6.1. THE LESSER OF THE MINIMUM LISTED OUTDOOR AIR VENTILATION RATE OR 3 AIR CHANGES SHALL BE SUPPLIED TO THE ENTIRE BUILDING DURING THE ONE NORMALLY OCCUPIED.
   6.2. THE SYSTEM(S) WHICH ARE PART OF THIS PROJECT REQUIRING DEMAND CONTROL VENTILATION FOR AN OCCUPANT DENSITY OF 40 SQUARE FEET OR LESS PER PERSON SHALL HAVE AN ECONOMIZER AND ARE EITHER SINGLE ZONE OR MULTIPLE ZONE SYSTEMS WITH DIRECT DIGITAL CONTROL SYSTEM TO THE ZONE LEVEL.
   6.3. DEMAND CONTROL VENTILATION DEVICES WHICH ARE PART OF THIS PROJECT SHALL:
      6.3.1. SERVE NO MORE THAN 10,000 SQUARE FEET PER SENSOR.
      6.3.2. BE LOCATED IN THE ROOM BETWEEN 3 AND 6 FEET ABOVE THE FLOOR.
      6.3.3. MAINTAIN CO2 CONCENTRATIONS LESS THAN OR EQUAL TO 600 pp PLUS THE OUTDOOR AIR CO2 CONCENTRATION (ASSUMED TO BE 400 ppm) IN ALL ROOMS WITH CO2 SENSORS DURING THE EXPECTED OCCUANCY TIME(S).
      6.3.4. BE CERTIFIED BY THE MANUFACTURER TO BE ACCURATE WITHIN PLUS OR MINUS 75 ppm AT A 600 AND 1000 ppm CONCENTRATION AND CERTIFIED BY THE MANUFACTURER TO REQUIRE CALIBRATION NO MORE FREQUENTLY THAN ONCE EVERY 5 YEARS.
      6.3.5. UPON DETECTION OF SENSOR FAILURE PROVIDE A SIGNAL WHICH RESETS TO SUPPLY THE MINIMUM QUANTITY OF OUTDOOR AIR LEVELS LISTED FOR EACH SYSTEM DURING OCCUPIED TIME(S).
      6.3.6. CONTINUOUSLY DISPLAY THE CO2 READING AND BE RECORDED ON SYSTEMS WITH DDC CONTROLS.
7. OCCUPANT SENSOR VENTILATION CONTROL DEVICES WHICH ARE PART OF THIS PROJECT SHALL:
   7.1. HAVE SUITABLE COVERAGE AND PLACEMENT TO DETECT OCCUPANTS IN THE ENTIRE SPACE VENTILATED.
   7.2. BE CONTROLLED INDEPENDENT OF ANY LIGHTING CONTROLS.
   7.3. HAVE AN OCCUPANCY SENSOR IN EACH ROOM AND THE ZONE IS NOT CONSIDERED VACANT UNTIL ALL ROOMS IN THE ZONE ARE VACANT WHEN A SINGLE ZONE DAMPER OR SINGLE ZONE SYSTEM SERVES MULTIPLE ROOMS.
   7.4. ALLOW A PRE-OCCUPANCY PURGE ONE HOUR PRIOR TO NORMAL SCHEDULED OCCUPANCY.
   7.5. WITHIN 30 MINUTES AFTER BEING VACANT FOR ALL ROOMS SERVED BY A ZONE DAMPER ON A MULTIPLE ZONE SYSTEM, AND THE SPACE TEMPERATURE IS BETWEEN THE HEATING AND COOLING SETPOINTS, THEN NO OUTSIDE AIR IS REQUIRED AND THE SUPPLY AIR SHALL BE ZERO.
   7.6. WITHIN 30 MINUTES AFTER BEING VACANT FOR ALL ROOMS SERVED BY A SINGLE ZONE SYSTEM CYCLE OFF THE SUPPLY FAN WHEN THE SPACE TEMPERATURE IS BETWEEN THE HEATING AND COOLING SETPOINTS.
   7.7. WHEN VACANT DURING THE HOURS OF EXPECTED OCCUPANCY AND THE OCCUPIED VENTILATION RATE IS NOT PROVIDED, THEN THE SYSTEM OR ZONE CONTROLS SHALL CYCLE OR OPERATE TO MAINTAIN THE AVERAGE OUTDOOR AIR RATE OVER AN AVERAGING PERIOD OF 120 MINUTES EQUAL TO 25 PERCENT OF THE RATE LISTED IN THE SCHEDULE.
8. DAMPERS FOR OUTDOOR AIR SUPPLY AND EXHAUST EQUIPMENT WHICH ARE PART OF THIS PROJECT SHALL BE INSTALLED WITH DAMPERS THAT AUTOMATICALLY CLOSE UPON FAN SHUTDOWN.
9. ALL PROGRAMMABLE THERMOSTATS AND DDC CONTROLS WHICH ARE PART OF THIS PROJECT MUST PROVIDE AUTOMATIC DEMAND SHED CONTROLS COMPLIANT WITH CALIFORNIA ENERGY CODE SECTION 120.2(h).
10. ALL ECONOMIZERS WHICH ARE PART OF THIS PROJECT SHALL INCLUDE A FAULT DETECTION AND DIAGNOSTICS SYSTEM IN ACCORDANCE WITH CALIFORNIA ENERGY CODE SECTIONS 120.2(i)1 THRU 120.2(i)9.
11. ALL DUCTWORK INSULATION WHICH IS PART OF THIS PROJECT SHALL BE MINIMUM R-4.2 VALUE.
12. SUPPLY FAN PRESSURE CONTROLS WHICH ARE PART OF THIS PROJECT SHALL COMPLY WITH CALIFORNIA ENERGY CODE SECTION 140.4(c).
13. SYSTEMS WHICH ARE PART OF THIS PROJECT SHALL HAVE CONTROLS THAT PREVENT REHEATING, RECOOLING, AND SIMULTANEOUS PROVISIONS OF HEATING AND COOLING TO THE SAME ZONE.
14. SUPPLY AIR TEMPERATURE RESET CONTROLS WHICH ARE PART OF THIS PROJECT SHALL BE:
   14.1. IN RESPONSE TO REPRESENTATIVE BUILDING LOADS OR TO OUTDOOR AIR TEMPERATURE OR
   14.2. AT LEAST 25% OF THE DIFFERENCE BETWEEN THE DESIGN SUPPLY AIR TEMPERATURE AND THE DESIGN ROOM AIR TEMPERATURE.

NOTE: ONLY NOTES WHICH APPLY TO THE SCOPE OF WORK FOR THIS PROJECT ARE VALID

PIPING GENERAL NOTES:

1. PIPE DRAIN LINES FROM EQUIPMENT TO NEAREST FLOOR DRAIN.
2. INSTALL ALL REFRIGERANT LIQUID AND SUCTION PIPING SIZED PER EQUIPMENT MANUFACTURER RECOMMENDATIONS.

VENTILATION GENERAL NOTES:

1. ALIGN TEMPERATURE SENSORS WITH LIGHT SWITCHES AND WHEN IN CLOSE PROXIMITY TO EACH OTHER.
2. PROVIDE ACCESS DOORS AT ALL DUCT MOUNTED EQUIPMENT.
3. CONTRACTOR MAY REUSE PORTIONS OF EXISTING DUCT PROVIDED SIZES AND PRESSURE CLASSES ARE CORRECT, DUCT IS THOROUGHLY CLEANED AND FREE OF DEFECTS, AND ALL TRANSVERSE JOINTS, LONGITUDINAL SEAMS, AND DUCT WALL PENETRATIONS ARE SEALED AS SPECIFIED FOR NEW DUCTWORK.

CAL GREEN NOTES:

1. MECHANICAL CONTRACTOR MUST RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 50% OF THE NONHAZARDOUS CONSTRUCTION WASTE UTILIZING ONE OF THE METHODS LISTED BELOW:
   1.1 WHERE A LOCAL JURISDICTION DOES NOT HAVE A CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT ORDINANCE THAT IS MORE STRINGENT, SUBMIT A CONSTRUCTION WASTE MANAGEMENT PLAN THAT:
      1.1.1. IDENTIFIES THE CONSTRUCTION WASTE MATERIALS TO BE DIVERED FROM DISPOSAL BY EFFICIENT USAGE, RECYCLING, REUSE ON THE PROJECT, OR SALVAGE FOR FUTURE USE OR SALE.
      1.1.2. DETERMINES IF CONSTRUCTION WASTE MATERIALS WILL BE SORTED ON SITE (SOURCE SEPARATED) OR BULK MIXED (SINGLE STREAM).
      1.1.3. IDENTIFIES DIVERSION FACILITIES WHERE CONSTRUCTION WASTE MATERIAL COLLECTED WILL BE TAKEN.
      1.1.4. SPECIFIES THAT THE AMOUNT OF CONSTRUCTION WASTE MATERIALS DIVERTED SHALL BE CALCULATED BY WEIGHT OF VOLUME, BUT NOT BY BOTH.
   1.2. UTILIZE A WASTE MANAGEMENT COMPANY THAT CAN PROVIDE VERIFIABLE DOCUMENTATION THAT THE PERCENTAGE OF CONSTRUCTION WASTE MATERIAL DIVERTED FROM THE LANDFILL COMPLIES WITH THIS SECTION.
      1.2.1. NOTE: THE MECHANICAL CONTRACTOR SHALL MAKE THE DETERMINATION IF THE CONSTRUCTION WASTE MATERIAL WILL BE DIVERTED BY A WASTE MANAGEMENT COMPANY.
   1.3. MEET A LOCAL CONSTRUCTION WASTE MANAGEMENT ORDINANCE.
2. MECHANICAL CONTRACTOR SHALL DEVELOP A WRITTEN PLAN OF PROCEDURES FOR TESTING AND ADJUSTING SYSTEMS. SYSTEMS TO BE INCLUDED FOR TESTING AND ADJUSTING SHALL INCLUDE, AS APPLICABLE TO THE PROJECT ALL HVAC SYSTEMS AND CONTROLS.
   2.0.1. MECHANICAL CONTRACTOR SHALL PERFORM TESTING AND ADJUSTING PROCEDURES IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND APPLICABLE STANDARDS ON EACH SYSTEM.
      2.0.1.1. IN ADDITION TO TESTING AND ADJUSTING, BEFORE A NEW SPACE CONDITIONING SYSTEM SERVING A BUILDING IS OPERATED FOR NORMAL USE, BALANCE THE SYSTEM IN ACCORDANCE WITH THE PROCEDURES DEFINED BY THE ASSOCIATED AIR BALANCE COUNCIL NATIONAL STANDARDS OR AS APPROVED BY THE ENFORCING AGENCY.
   2.0.2. AFTER COMPLETION OF TESTING, ADJUSTING AND BALANCING, MECHANICAL CONTRACTOR SHALL PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES
   2.0.3. MECHANICAL CONTRACTOR SHALL PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR, TITLE 8, SECTION 5142, AND OTHER RELATED REGULATIONS.
   2.0.3.1. O&M INSTRUCTIONS SHALL INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY.
3. THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION ADDITIONS OR AREAS OF ALTERATION WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION , MECHANICAL CONTRACTOR SHALL SUPPLY AND INSTALL RETURN AND OUTSIDE AIR FILTERS WITH A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 8, OR AN AVERAGE EFFICIENCY OF 30% BASED ON ASHRAE 52.1-1999. REPLACE ALL FILTERS WITH MINIMUM MERV 8 FILTERS IMMEDIATELY PRIOR TO OCCUPANCY, OR, IF THE BUILDING IS OCCUPIED DURING ALTERATION, AT THE CONCLUSION OF CONSTRUCTION.
4. MECHANICAL CONTRACTOR SHALL AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENC

VRF MODULAR OUTDOOR UNIT SCHEDULE

NOTES:
1.UNITS SHALL BE SELECTED FOR DESIGN COOLING LOAD.
2.COORDINATE ELECTRICAL CONNECTIONS WITH MANUFACTURER UNIT IS SUPPLIED AS MULTIPLE MODULES. EACH MODULE REQUIRES A SEPARATE ELECTRICAL CONNECTION AND DISCONNECT.
3.NOMINAL COOLING CAPACITY RATED AT: INDOOR TEMP = 80°FDB/67°FWB, OUTDOOR TEMP = 95°FDB.
4.DESIGN COOLING CAPACITY SHALL BE RATED AT: INDOOR TEMP = 74°FDB/62.8°FWB, OUTDOOR TEMP = 90°FDB. EFFECTS OF ESTIMATED REFRIGERANT LINE LENGTH SHALL BE INCLUDED IN COMPUTING DESIGN CAPACITY.
5.DESIGN HEATING CAPACITY SHALL BE RATED AT: INDOOR TEMP = 70°FDB, OUTDOOR TEMP = 47°FDB. EFFECTS OF ESTIMATED REFRIGERANT LINE LENGTHS AND DEFROSTING SHALL BE INCLUDED IN COMPUTING DESIGN CAPACITY.
6.REFER TO SPECIFICATION SECTION 23 62 13 FOR ADDITIONAL REQUIREMENTS.
7.OPERATING WEIGHT SHOWN IS THE COMBINATION OF MODULES. FOR INDIVIDUAL MODULE WEIGHT, SEE ANCHORAGE DETAIL.

				COOLING	HEATING			ELECTRICAL													
										MODULE 1		MODULE 2		MODULE 3							
TAG NAME	AREA SERVED	REFRIGERANT	MAX. REFRIGERANT CHARGE	NOMINAL BTUH (NOTE 3)	NOMINAL BTUH (NOTE 5)	NUMBER OF CONNECTED INDOOR UNITS	CONNECTION RATIO %	VOLTAGE	PHASES	MCA	MOCP	MCA	MOCP	MCA	MOCP	SCCR	OPERATING (LBS.) (NOTE 7)	ANCHORAGE DETAIL	MANUFACTURER	MODEL	NOTES
OU-C1	BUILDING C	R-410A	0	384,000	432,000	10	98.4	480	3	23.4 A	30 A	22.0 A	25 A	22.0 A	25 A	5000 A	2206	1/MP4.3	Carrier	MMY-AP3846FT6PUL	
OU-C2	BUILDING C	R-410A	0	360,000	405,000	12	98.3	480	3	22.0 A	25 A	22.0 A	25 A	22.0 A	25 A	5000 A	2052	1/MP4.3	Carrier	MMY-AP3606FT6PUL	
OU-C3	BUILDING C	R-410A	0	408,000	459,000	10	95.6	480	3	23.4 A	30 A	23.4 A	30 A	22.0 A	25 A	5000 A	2360	1/MP4.3	Carrier	MMY-AP4086FT6PUL	
OU-C4	BUILDING C	R-410A	0	456,000	513,000	9	101.3	480	3	29.7 A	35 A	23.4 A	30 A	23.4 A	30 A	5000 A	2514	1/MP4.3	Carrier	MMY-AP4566FT6PUL	
OU-E1	BUILDING E	R-410A	0	456,000	513,000	16	106.6	480	3	29.7 A	35 A	23.4 A	30 A	23.4 A	30 A	5000 A	2514	1/MP4.3	Carrier	MMY-AP4566FT6PUL	
OU-E2	BUILDING E	R-410A	0	456,000	513,000	15	114.5	480	3	29.7 A	35 A	23.4 A	30 A	23.4 A	30 A	5000 A	2514	1/MP4.3	Carrier	MMY-AP4566FT6PUL	
OU-E3	BUILDING E	R-410A	0	456,000	513,000	15	96.1	480	3	29.7 A	35 A	23.4 A	30 A	23.4 A	30 A	5000 A	2514	1/MP4.3	Carrier	MMY-AP4566FT6PUL	
OU-E4	BUILDING E	R-410A	0	432,000	486,000	14	100	480	3	23.4 A	30 A	23.4 A	30 A	23.4 A	30 A	5000 A	2514	1/MP4.3	Carrier	MMY-AP4326FT6PUL	
OU-J1	BUILDING J	R-410A	0	144,000	162,000	4	100	480	3	23.4 A	30 A	N/A	N/A	N/A	N/A	5000 A	838	1/MP4.3	Carrier	MMY-MAP1446FT6PUL	
OU-K1	BUILDING K	R-410A	0	456,000	513,000	7	110.5	480	3	23.4 A	30 A	23.4 A	30 A	23.4 A	30 A	5000 A	2514	1/MP4.3	Carrier	MMY-AP4566FT6PUL	

GRILLES REGISTERS & DIFFUSERS SCHEDULE

NOTES:
1.CONTRACTOR SHALL DETERMINE PROPER MARGIN STYLE TO MATCH CEILING CONSTRUCTION.
2.ALL RUN OUT DUCTWORK TO DIFFUSERS SHALL BE NECK SIZE UNLESS OTHERWISE NOTED.
3.ALL ALUMINUM CONSTRUCTION FOR MRI USE. NON FERROUS FASTENERS ARE REQUIRED.
4.MATCH EXISTING CEILING GRILLES, REGISTERS & DIFFUSERS.

TAG NAME	MATERIAL	CONFIGURATION	MARGIN (NOTE 1)	INLET SIZE (IN.) (NOTE 2)	FACE SIZE (IN.)	VOLUME DAMPER REQUIRED	FINISH	MANUFACTURER	MODEL	NOTES
CD-1	STEEL	PANEL FACE	LAY-IN	VARIES	24x24	NO	MATCH EXISTING	PRICE	PDS	DUCTED SUPPLY, MATCH NEARBY DIFFUSER STYLES (VIF)
DL-1	STEEL	35 DEGREE DEFLECTION	DUCTED MOUNTED	VARIES	INLET + 2	YES	STANDARD	PRICE	HCD	DUCTED SUPPLY, PROVIDE HEAVY DUTY STEEL OPPOSED BLADE DAMPER FOR ADJUSTABLE AIRFLOW, SPIRAL DUCT FRAME. PRIME AND PAINT PER ARCHITECT SPECIFICATIONS.
RG-1	STEEL	PERFORATED FACE	LAY-IN	VARIES	24x24	NO	MATCH EXISTING	PRICE	PDR	DUCTED RETURN, MATCH NEARBY DIFFUSER STYLES (VIF)

PACKAGED ROOFTOP UNIT SCHEDULE – GAS-DX

NOTES:
1.POWER EXHAUST POWERED SEPARATELY.
2.TOTAL OPERATING WEIGHT INCLUDES UNIT, CURB, ACCESSORIES AND UNIT MOUNTED POWER EXHAUST. DUCT MOUNTED ACCESSORIES AND EQUIPMENT ARE NOT INCLUDED. CONTRACTOR IS RESPONSIBLE FOR ALL CHANGES REQUIRED DUE TO ROOFTOP UNIT HEAVIER AND/OR DIFFERENT CHASSIS DIMENSIONS THAN THE BASIS OF DESIGN AT NO ADDITIONAL COST (INCLUDING STRUCTURAL ENGINEERING AND DSA APPROVAL).
3.LAT LISTED IS AT LEAVING SIDE OF COOLING COIL.
4.COMPLETE WITH MERV 13 FILTER.
5.COMPLETE WITH HOT GAS REHEAT.
6.POWERED EXHAUST WEIGHT IS INTEGRATED INTO UNIT WEIGHT.
7.STAGES: DIG = DIGITAL SCROLLS, # = NUMBER OF COMPRESSOR STAGES.
8.FOR AUTOMATIC SMOKE DETECTION SHUTOFF, REFER TO FIRE ALARM DRAWINGS.
9.REFER TO CONTROL DRAWINGS FOR DESCRIPTION OF CONTROL TYPE.

					SUPPLY FAN				UNIT ELECTRICAL DATA					COOLING COIL - DX							HEATING - GAS				POWERED EXHAUST											WEIGHT							
																										POWERED EXHAUST ELECTRICAL DATA															
TAG NAME	AREA SERVED	NOMINAL TONS	MINIMUM OUTSIDE AIR CFM	DCV OA CFM	AIR QUANTITY CFM	EXT. S.P. IN W.C.	R P M	B H P	VOLTAGE	PHASES	MCA	MOCP	SCCR	EAT DB °F	EAT WB °F	LAT DB °F	LAT WB °F	SENSIBLE MBH	TOTAL MBH	AMB TEMP °F	STAGES	MIN EFF AFUE	MAX INPUT MBH	MAX OUTPUT MBH	SEER (EER)	AIR QUANTITY CFM	EXT. S.P. IN W.C.	RPM	MHP	VOLTAGE	PHASES	MCA	MOCP	MANUFACTURER	MODEL	CURB TYPE	UNIT WEIGHT LBS.	CURB WEIGHT LBS.	POWER EXHAUST WEIGHT LBS.	(TOTAL) OPERATING LBS.	AUTOMATIC SMOKE DETECTION SHUTOFF (NOTE 8)	ANCHORAGE DETAIL	MANUFACTURER	MODEL	NOTES
AC-B1	ENGLISH-B101	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B2	ENGLISH-B102	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B3	ENGLISH-B103	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B4	ENGLISH-B104	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B5	ENGLISH-B105	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B6	ENGLISH-B106	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B7	ENGLISH-B107	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B8	ENGLISH-B108	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B9	ENGLISH-B109	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B10	ENGLISH-B110	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B11	ENGLISH-B111	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B12	ENGLISH-B112	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B13	ENGLISH-B113	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B14	ENGLISH-B114	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-B15	CORRIDOR-B115	3	165	N/A	1200	0.5	1597	0.3	480	3	10 A	15 A	5000 A	80.0	67.0	60.3	57.8	25.6	35	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	530	90	0	620	YES	4/MP4.1	Carrier	48GCLM04A2A5-0A0A0	
AC-B16	CORRIDOR-B116	3	260	N/A	1200	0.5	1597	0.3	480	3	10 A	15 A	5000 A	80.0	67.0	60.3	57.8	25.6	35	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	530	90	0	620	YES	4/MP4.1	Carrier	48GCLM04A2A5-0A0A0	
AC-F1	MATH-F101	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-F2	MATH-F102	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-F3	MATH-F103	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-F4	MATH-F104	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-F5	MATH-F105	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-F6	MATH-F106	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-F7	MATH-F107	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-F8	MATH-F108	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-F9	MATH-F109	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-F10	MATH-F111	4	355	145	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-F11	MATH-F112	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-F12	MATH-F113	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-F13	MATH-F114	4	355	140	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-F14	CORRIDOR-F115	3	150	N/A	1200	0.5	1597	0.3	480	3	10 A	15 A	5000 A	80.0	67.0	60.3	57.8	25.6	35	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	530	90	0	620	YES	4/MP4.1	Carrier	48GCLM04A2A5-0A0A0	
AC-F15	CORRIDOR-F116	3	260	N/A	1200	0.5	1597	0.3	480	3	10 A	15 A	5000 A	80.0	67.0	60.3	57.8	25.6	35	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	530	90	0	620	YES	4/MP4.1	Carrier	48GCLM04A2A5-0A0A0	
AC-G1	GYMNASIUM-G102	30	3220	895	12000	1.5	960	9.4	480	3	69 A	80 A	5000 A	78.0	64.8	57.0	55.4	272.3	344	86	4	81	350	284	(9.8)	12000	0.5		6	480	3	8 A	15 A	MICROMETL	1090-1104-3-LA910	11" VIBRATION ISOLATOR	4080	865	315	5260	YES	1/MP4.1	Carrier	48A6V030-N664AEF	
AC-G2	GYMNASIUM-G102	30	3220	895	12000	1.5	960	9.4	480	3	69 A	80 A	5000 A	78.0	64.8	57.0	55.4	272.3	344	86	4	81	350	284	(9.8)	12000	0.5		6	480	3	8 A	15 A	MICROMETL	1090-1104-3-LA910	11" VIBRATION ISOLATOR	4080	865	315	5260	YES	1/MP4.1	Carrier	48A6V030-N664AEF	
AC-G3	WEIGHT ROOM-G113	7.5	480	N/A	3000	1.0	719	1.8	480	3	23 A	25 A	5000 A	80.3	68.9	58.9	58.4	69.3	104	86	3	80	150	120	(12.8)	3000	0.5	859	1	480	3	3.5 A	6.3 A	MICROMETL	PECD-SRT05CA-D2DH-4L1	11" VIBRATION ISOLATOR	1745	535	395	2675	YES	1/MP4.1	Carrier	48LCDA08A2A6	
AC-H1	GYMNASIUM-H101	20	1880	555	8000	1.5	804	4.7	480	3	51 A	60 A	5000 A	77.6	64.5	55.8	53.9	188.7	253	86	3	81	350	284	(10.1)	8000	0.5		4	480	3	8 A	15 A	MICROMETL	1090-1104-LA910	11" VIBRATION ISOLATOR	4050	865	300	5215	YES	1/MP4.1	Carrier	48A6V020-L664AEF	
AC-H2	GYMNASIUM-H101	20	1880	555	8000	1.5	804	4.7	480	3	51 A	60 A	5000 A	77.6	64.5	55.8	53.9	188.7	253	86	3	81	350	284	(10.1)	8000	0.5		4	480	3	8 A	15 A	MICROMETL	1090-1104-LA910	11" VIBRATION ISOLATOR	4050	865	300	5215	YES	1/MP4.1	Carrier	48A6V020-L664AEF	
AC-J1	STUDENT DINING-J101	8.5	925	280	3400	1.0	737	2	480	3	25 A	30 A	5000 A	78.0	64.0	54.3	53.5	87.2	106	86	3	80	150	120	(13.2)	3400	0.75	924	2	480	3	5.6 A	10.1 A	MICROMETL	PECD-SRT05CA-D2DH-4L2	11" VIBRATION ISOLATOR	1706	545	356	2607	YES	3/MP4.1	Carrier	48LCD009J2Q6-4A4A0	
AC-J2	STUDENT DINING-J101	8.5	925	280	3400	1.0	737	2	480	3	25 A	30 A	5000 A	78.0	64.0	54.3	53.5	87.2	106	86	3	80	150	120	(13.2)	3400	0.75	924	2	480	3	5.6 A	10.1 A	MICROMETL	PECD-SRT05CA-D2DH-4L2	11" VIBRATION ISOLATOR	1706	545	356	2607	YES	3/MP4.1	Carrier	48LCD009J2Q6-4A4A0	
AC-J3	SPEEDLINE-J102	6	590	180	2400	1.0	801	1.2	480	3	20 A	25 A	5000 A	78.0	64.0	54.2	53.5	61.8	74	86	3	82	72	59	(13)	2400	0.3	660	0.5	480	3	2.4 A	4.3 A	MICROMETL	PECD-SRT34CA	11" VIBRATION ISOLATOR	1091	446	285	1822	YES	3/MP4.1	Carrier	48LCD007J2Q6-4A4A0	
AC-J4	KITCHEN-J103	12.5	4900	N/A	4900	1.5	0	3.5	480	3	26 A	30 A	5000 A	86.0	68.0	62.0	62.0	124.9	125	86	3	81	194.2	188.9	(12.2)	4900	0.75	993	3	480	3	8.1 A	14.6 A	MICROMETL	PECD-SRT05CA-D2DH-4L3	11" VIBRATION ISOLATOR	1630	545	356	2535	YES	3/MP4.1	Carrier	iAIRE UGC-HC14MKS194M00A-GMVY1	5
AC-J5	KITCHEN-J103	12.5	4900	N/A	4900	1.5	0	3.5	480	3	26 A	30 A	5000 A	86.0	68.0	62.0	62.0	124.9	125	86	3	81	194.2	188.9	(12.2	4900	0.75	993	3	480	3	8.1 A	14.6 A	MICROMETL	PECD-SRT05CA-D2DH-4L3	11" VIBRATION ISOLATOR	1630	545	356	2535	YES	3/MP4.1	Carrier	iAIRE UGC-HC14MKS194M00A-GMVY1	5
AC-K1	POWER TECH. CLASSROOM-K101	5	510	185	2000	0.5	1888	0.7	480	3	13 A	15 A	5000 A	80.0	67.0	57.6	57.1	48.3	63	86	2	81	60	49	16	2000	0.3	781	0.5	480	3	1.8 A	3.2 A	MICROMETL	PECD-SRT12CA-D0DB-4MH-4	11" RIGID	600	90	190	880	YES	4/MP4.1	Carrier	48GCLM06A2A6-0A0A0	
AC-K2	2-D ART CLASSROOM-K117	6	950	205	2400	1.0	803	1.2	480	3	20 A	25 A	5000 A	78.1	64.9	54.9	54.4	59.8	75	86	3	82	72	59	(13)	2400	0.3	660	0.5	480	3	1.8 A	3.2 A	MICROMETL	PECD-SRT12CA-D0DB-4MH-4	11" VIBRATION ISOLATOR	1091	446	285	1822	YES	3/MP4.1	Carrier	48LCD007J2Q6-4A4A0	
AC-K3	2-D ART CLASSROOM-K122	4	530	205	1600	0.5	1712	0.5	480	3	11 A	15 A	5000 A	80.0	67.0	58.6	57.2	37.1	50	86	2	81	60	49	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11" RIGID	555	90	0	645	N/A	4/MP4.1	Carrier	48GCLM05A2A5-0A0A0	
AC-K4	3-D ART CLASSROOM-K124	5	600	220	2000	0.5	1888	0.7	480	3	13 A	15 A	5000 A	80.0	67.0	57.6	57.1	48.3	63	86	2	81	60	49	16	2000	0.3	781	0.5	480	3	1.8 A	3.2 A	MICROMETL	PECD-SRT12CA-D0DB-4MH-4	11" VIBRATION ISOLATOR	600	90	190	880	YES	4/MP4.1	Carrier	48GCLM06A2A6-0A0A0	

DEDICATED OUTDOOR AIR UNIT

NOTES:
1.PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 13.
2.LAT LISTED IS AT LEAVING SIDE OF COOLING COIL.
3.COMPLETE WITH MERV 13 FILTER.
4.INTERLOCK WITH (E) EF-103 AND (E) EF-105.
5.INTERLOCK WITH (E) EF-39.
6.INTERLOCK WITH (E) EF-40.
7.FOR AUTOMATIC SMOKE DETECTION SHUTOFF, REFER TO FIRE ALARM DRAWINGS.

			SUPPLY FAN					HEATING - GAS			HOT GAS REHEAT			COOLING COIL - DX						ELECTRICAL (NOTE 1)					WEIGHT							
TAG NAME	ARE

VRF INDOOR UNIT SCHEDULE

NOTES:
1.INDOOR UNITS SELECTED FOR SPACE PEAK LOADS.
2.PROVIDE MERV-13 FILTERS FOR EACH UNIT. FILTER MAY BE INTEGRAL OR SUITABLE FOR FIELD INSTALLATION IN FABRICATED FILTER ANGLES. FILTER ANGLES PROVIDED BY M.C..
3.UNIT SHALL BE PROVIDED WITH CONDENSATE PUMP.
4.REFER TO SPECIFICATION 23 81 45 FOR DESCRIPTION OF CONTROLS.
5.INDOOR UNIT CFM SELECTED AT HIGH CFM. INDOOR UNIT SHALL HAVE CAPABILITY TO ADJUST CFM FOR FINAL AIR BALANCING UP OR DOWN THROUGH FIELD ADJUSTMENT.
6.DUCTED CONCEALED UNITS SHALL BE PROVIDED WITH SUPPLY AND RETURN DUCT FLANGES.
7.FOR AUTOMATIC SMOKE DETECTION SHUTOFF, REFER TO FIRE ALARM DRAWINGS.
8.COMPLETE WITH CONDENSATE PUMP, DIVERSITECH CP-22.

TAG NAME	AREA SERVED	ASSOCIATED VRF HEAT PUMP	TONS	CFM	OA CFM	DCV CFM	EXT. S.P. IN. W.C.	COOLING CAPACITY BTUH	HEATING CAPACITY BTUH	ELECTRICAL				OPERATING WEIGHT LBS	AUTOMATIC SMOKE DETECTION SHUTOFF (NOTE 7)	ANCHORAGE DETAIL	MANUFACTURER	MODEL	NOTES
										VOLTAGE	PHASES	MCA	MOCP						
FC-C1	WORLD LANGUAGE-C104	OU-C1	4	1440	360	145	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C2	WORLD LANGUAGE-C131	OU-C1	4	1440	350	140	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C3	WORLD LANGUAGE-C105	OU-C1	4	1440	360	145	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C4	WORLD LANGUAGE-C130	OU-C1	3	1130	345	140	1.1	36000	40000	208	1	2.93	15 A	130	N/A	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-C5	CORRIDOR-C101	OU-C1	2.5	1130	205	N/A	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-C6	WORLD LANGUAGE-C106	OU-C1	4	1440	370	145	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C7	TEACHER WORK AREA-C119	OU-C2	3	1130	100	N/A	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-C8	TEACHER WORK AREA-C119	OU-C2	1	480	100	N/A	0.5	12000	13500	208	1	1.90	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0120VHG2UL	8
FC-C9	TEACHER WORK AREA-C119	OU-C2	1	480	70	N/A	0.5	12000	13500	208	1	1.90	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0120VHG2UL	8
FC-C10	TEACHER WORK AREA-C119	OU-C2	3	1130	75	N/A	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-C11	TESTING-C117, CONF.-C118	OU-C2	1	480	65	30	0.5	12000	13500	208	1	1.90	15 A	130	N/A	6/MP4.2	Carrier	MMD-AP0120VHG2UL	8
FC-C12	TEACHER WORK AREA-C119	OU-C2	1	480	80	N/A	0.5	12000	13500	208	1	1.90	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0120VHG2UL	8
FC-C13	SOCIAL SCIENCE-C116	OU-C2	4	1440	355	145	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C14	SPECIAL DAY CLASS-C107	OU-C1	2.5	1130	200	80	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-C15	SPECIAL DAY CLASS-C107	OU-C1	2.5	1130	200	80	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-C16	SPECIAL DAY CLASS-C108	OU-C2	2.5	1130	200	80	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-C17	SPECIAL DAY CLASS-C108	OU-C2	2.5	1130	200	80	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-C18	TWA-C109	OU-C2	1	480	80	15	0.5	12000	13500	208	1	1.90	15 A	130	N/A	6/MP4.2	Carrier	MMD-AP0120VHG2UL	8
FC-C19	SPECIAL EDUCATION-C113	OU-C2	4	1440	325	120	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C20	CORRIDOR-C102	OU-C2	2.5	1130	305	N/A	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-C21	SOCIAL SCIENCE-C114	OU-C2	4	1440	345	140	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C22	SOCIAL SCIENCE-C115	OU-C2	4	1440	345	140	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C23	WORLD LAB-C203	OU-C3	2.5	1130	195	80	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-C24	WORLD LAB-C203	OU-C3	2.5	1130	195	80	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-C25	SOCIAL SCIENCE-C220	OU-C3	4	1440	350	140	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C26	CORRIDOR-C201	OU-C3	2.5	1130	205	N/A	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-C27	SOCIAL SCIENCE-C204	OU-C3	4	1440	340	135	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C28	SOCIAL SCIENCE-C219	OU-C3	4	1440	370	135	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C29	SOCIAL SCIENCE-C205	OU-C3	4	1440	355	140	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C30	SOCIAL SCIENCE-C213	OU-C4	6	2230	345	140	1	72000	81000	208	1	5.70	15 A	220	YES	6/MP4.2	Carrier	MMD-AP0726HPUL	8
FC-C31	ENGLISH-C212	OU-C4	6	2230	345	140	1	72000	81000	208	1	5.70	15 A	220	YES	6/MP4.2	Carrier	MMD-AP0726HPUL	8
FC-C32	READING/WRITING LAB-C211	OU-C4	4	1440	190	75	0.8	48000	54000	208	1	3.65	15 A	155	YES	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C33	READING/WRITING LAB-C211	OU-C4	4	1440	190	75	0.8	48000	54000	208	1	3.65	15 A	155	YES	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C34	ENGLISH COMPUTER LAB-C210	OU-C4	4	1440	200	80	0.8	48000	54000	208	1	3.65	15 A	155	YES	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C35	ENGLISH COMPUTER LAB-C210	OU-C4	4	1440	200	80	0.8	48000	54000	208	1	3.65	15 A	155	YES	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C36	SOCIAL SCIENCE COMPUTER LAB-C206	OU-C3	2.5	1130	200	80	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-C37	SOCIAL SCIENCE COMPUTER LAB-C206	OU-C3	2.5	1130	200	80	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-C38	SOCIAL SCIENCE-C207	OU-C3	4	1440	340	135	0.8	48000	54000	208	1	3.65	15 A	160	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C39	SOCIAL SCIENCE-C208	OU-C4	4	1440	340	135	0.8	48000	54000	208	1	3.65	15 A	160	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-C40	CORRIDOR-C202	OU-C4	2.5	1130	275	N/A	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-C41	SOCIAL SCIENCE-C209	OU-C4	4	1440	345	140	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-E1	HEALTH-E135	OU-E1	4	1440	345	135	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-E2	RSP-E104	OU-E1	2.5	1130	215	85	1.1	30000	34000	208	1	2.93	15 A	130	N/A	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E3	TWA-E105, CONF.-E106	OU-E1	1	480	75	15	0.5	12000	13500	208	1	1.90	15 A	130	N/A	6/MP4.2	Carrier	MMD-AP0120VHG2UL	8
FC-E4	RSP-E107	OU-E1	2	760	200	85	0.8	24000	27000	208	1	2.80	15 A	165	N/A	6/MP4.2	Carrier	MMD-AP0240VHG2UL	8
FC-E5	HEALTH-E134	OU-E1	4	1440	340	135	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-E6	RSP-E108	OU-E1	2	760	210	85	0.8	24000	27000	208	1	2.80	15 A	165	N/A	6/MP4.2	Carrier	MMD-AP0240VHG2UL	8
FC-E7	CORRIDOR-E101	OU-E1	2.5	1130	210	145	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-E8	HEALTH-E109	OU-E1	4	1440	360	140	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-E9	TEACHER WORK AREA-E123	OU-E1	2.5	1130	90	N/A	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-E10	TEACHER WORK AREA-E123	OU-E1	1	480	85	N/A	0.5	12000	13500	208	1	1.90	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0240VHG2UL	8
FC-E11	TEACHER WORK AREA-E123	OU-E1	3	1130	70	N/A	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E12	TEACHER WORK AREA-E123	OU-E1	1	480	75	N/A	0.5	12000	13500	208	1	1.90	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0240VHG2UL	8
FC-E13	TEACHER WORK AREA-E123	OU-E1	1	480	75	N/A	0.5	12000	13500	208	1	1.90	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0240VHG2UL	8
FC-E14	MATH RESOURCE CENTER-E120	OU-E2	1.5	670	95	15	0.5	18000	20000	208	1	2.80	15 A	165	N/A	6/MP4.2	Carrier	MMD-AP0180VHG2UL	8
FC-E15	MATH COMPUTER LAB-E119	OU-E2	3	1130	200	80	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E16	MATH COMPUTER LAB-E119	OU-E2	3	1130	200	80	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E17	SCIENCE COMPUTER LAB-E117	OU-E2	3	1130	205	80	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E18	SCIENCE COMPUTER LAB-E117	OU-E2	3	1130	205	80	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E19	COMPUTER LAB-E116	OU-E2	3	1130	215	85	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E20	COMPUTER LAB-E116	OU-E2	3	1130	215	85	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E21	BUSINESS COMPUTER LAB-E115	OU-E2	3	1130	200	80	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E22	BUSINESS COMPUTER LAB-E115	OU-E2	3	1130	200	80	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E23	COMPUTER LAB-E114	OU-E2	3	1130	205	80	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E24	COMPUTER LAB-E114	OU-E2	3	1130	205	80	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E25	BUSINESS COMPUTER LAB-E113	OU-E2	3	1130	200	80	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E26	BUSINESS COMPUTER LAB-E113	OU-E2	3	1130	200	80	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E27	COMPUTER LAB-E112	OU-E2	3	1130	205	80	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E28	COMPUTER LAB-E112	OU-E2	3	1130	205	80	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E29	CORRIDOR-E102	OU-E1	3	1130	355	N/A	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E30	OPPORTUNITY CLASSROOM-E111	OU-E1	4	1440	295	120	0.8	48000	54000	208	1	3.65	15 A	155	N/A	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-E31	LEP-E110	OU-E1	3	1130	295	120	1.1	36000	40000	208	1	2.93	15 A	130	N/A	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E32	BIOLOGY LAB-E229	OU-E3	2.5	1130	245	100	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-E33	BIOLOGY LAB-E229	OU-E3	2.5	1130	245	100	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-E34	CHEMISTRY LAB-E203	OU-E3	2.5	1130	245	100	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-E35	CHEMISTRY LAB-E203	OU-E3	2.5	1130	245	100	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-E36	CORRIDOR-E201	OU-E3	2.5	1130	205	N/A	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-E37	PREP AREA-E228	OU-E3	1	480	45	N/A	0.5	12000	13500	208	1	1.90	15 A	130	N/A	6/MP4.2	Carrier	MMD-AP0120VHG2UL	8
FC-E38	PREP AREA-E204	OU-E3	1	480	45	N/A	0.5	12000	13500	208	1	1.90	15 A	130	N/A	6/MP4.2	Carrier	MMD-AP0120VHG2UL	8
FC-E39	CHEMISTRY LAB-E206	OU-E3	2.5	1130	245	100	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-E40	CHEMISTRY LAB-E206	OU-E3	2.5	1130	245	100	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-E41	BIOLOGY LAB-E222	OU-E3	3	1130	245	100	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E42	BIOLOGY LAB-E222	OU-E3	3	1130	245	100	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E43	PHYSICAL SCIENCE LAB-E221	OU-E3	3	1130	240	95	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E44	PHYSICAL SCIENCE LAB-E221	OU-E3	3	1130	240	95	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E45	PREP AREA-E219	OU-E4	1	480	45	N/A	0.5	12000	13500	208	1	1.90	15 A	130	N/A	6/MP4.2	Carrier	MMD-AP0120VHG2UL	8
FC-E46	PHYSICAL SCIENCE LAB-E218	OU-E4	3	1130	240	95	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E47	PHYSICAL SCIENCE LAB-E218	OU-E4	3	1130	240	95	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E48	PHYSICS LAB-E216	OU-E4	4	1440	265	105	0.8	48000	54000	208	1	3.65	15 A	155	YES	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-E49	PHYSICS LAB-E216	OU-E4	4	1440	265	105	0.8	48000	54000	208	1	3.65	15 A	155	YES	6/MP4.2	Carrier	MMD-AP0484H2UL	8
FC-E50	PHYSICAL SCIENCE LAB-E214	OU-E4	2.5	1130	245	100	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-E51	PHYSICAL SCIENCE LAB-E214	OU-E4	2.5	1130	245	100	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-E52	PREP AREA-E212	OU-E4	1	480	45	N/A	0.5	12000	13500	208	1	1.90	15 A	130	N/A	6/MP4.2	Carrier	MMD-AP0120VHG2UL	8
FC-E53	CORRIDOR-E202	OU-E4	2	760	300	N/A	0.8	24000	27000	208	1	2.80	15 A	165	YES	6/MP4.2	Carrier	MMD-AP0240VHG2UL	8
FC-E54	PHYSICAL SCIENCE LAB-E211	OU-E4	3	1130	245	100	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E55	PHYSICAL SCIENCE LAB-E211	OU-E4	3	1130	245	100	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E56	BIOLOGY LAB-E210	OU-E4	3	1130	240	95	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E57	BIOLOGY LAB-E210	OU-E4	3	1130	240	95	1.1	36000	40000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0364H2UL	8
FC-E58	PREP AREA-E208	OU-E4	1	480	45	N/A	0.5	12000	13500	208	1	1.90	15 A	130	N/A	6/MP4.2	Carrier	MMD-AP0120VHG2UL	8
FC-E59	BIOLOGY LAB-E207	OU-E3	2.5	1130	245	100	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-E60	BIOLOGY LAB-E207	OU-E3	2.5	1130	245	100	1.1	30000	34000	208	1	2.93	15 A	130	YES	6/MP4.2	Carrier	MMD-AP0304H2UL	8
FC-J1	FACULTY DINING-J104	OU-J1	6	2000	635	180	1	72000	81000	208	1	5.70	15 A	218	YES	6/MP4.2	Carrier	MMD-AP0726HPUL	8
FC-J2	ASB-J105	OU-J1	3.5	1400	370	140	0.5	42000	45000	208	1	6.10	15 A	200	N/A	6/MP4.2	Carrier	MMD-AP0420VHG2UL	8
FC-J3	STUDENT STORE-J106	OU-J1	1.5	670	100	N/A	0.3	18000	20000	208	1	2.80	15 A	164	N/A	6/MP4.2	Carrier	MMD-AP0180VHG2UL	8
FC-J4	SNACK BACK-J107	OU-J1	1	480	50	50	0.3	12000	13500	208	1	1.90	15 A	130	N/A	6/MP4.2	Carrier	MMD-AP0120VHG2UL	8
FC-K1	CHILD CARE-K136	OU-K1	6	2200	515	230	1	72000	81000	208	1	5.70	15 A	218	YES	6/MP4.2	Carrier	MMD-AP0726HPUL	8
FC-K2	FOOD LAB-K138	OU-K1	6	2000	250	95	1	72000	81000	208	1	5.70	15 A	218	YES	6/MP4.2	Carrier	MMD-AP0726HPUL	8
FC-K3	FOOD LAB-K138	OU-K1	6	2000	250	95	1	72000	81000	208	1	5.00	15 A	218	YES	6/MP4.2	Carrier	MMD-AP0726HPUL	8
FC-K4	FOOD LAB-K143	OU-K1	6	2000	250	95	1	72000	81000	208	1	5.70	15 A	218	YES	6/MP4.2	Carrier	MMD-AP0726HPUL	8
FC-K5	FOOD LAB-K143	OU-K1	6	2000	250	95	1	72000	81000	208	1	5.70	15 A	218	YES	6/MP4.2	Carrier	MMD-AP0726HPUL	8
FC-K6	INTERIOR CLOTHING LAB-K135	OU-K1	6	2200	450	180	1	72000	81000	208	1	5.70	15 A	218	YES	6/MP4.2	Carrier	MMD-AP0726HPUL	8
FC-K7	DRAFTING/VISUAL ARTS LAB-K130	OU-K1	6	2200	585	210	1	72000	81000	208	1	5.70	15 A	218	YES	6/MP4.2	Carrier	MMD-AP0726HPUL	8

VRF PORT/FLOW SELECTOR BOXES

NOTES:
1.REFER TO THE PIPING DIAGRAM FOR CONTROLS AND SPECS.

TAG NAME	MANUFACTURER	MODEL	FANCOIL TAG NAME	ELECTRICAL				OPERATING WEIGHT, LBS.	WIRING/PIPING DETAIL	NOTES
				VOLTAGE	PHASES	MCA	MOCP			
FS-C1	Carrier	RBM-Y0964FUL	FC-C30	208	1	1 A	15 A	38	12/MP4.3	POWERED BY INDOOR UNIT
FS-C2	Carrier	RBM-Y0964FUL	FC-C31	208	1	1 A	15 A	38	12/MP4.3	POWERED BY INDOOR UNIT
FS-J1	Carrier	RBM-Y0963FUL	FC-J1	208	1	1 A	15 A	20	12/MP4.3	POWERED BY INDOOR UNIT
FS-J2	Carrier	RBM-Y0613FUL	FC-J2	208	1	1 A	15 A	13	12/MP4.3	POWERED BY INDOOR UNIT
FS-J3	Carrier	RBM-Y0613FUL	FC-J3	208	1	1 A	15 A	13	12/MP4.3	POWERED BY INDOOR UNIT
FS-J4	Carrier	RBM-Y0383FUL	FC-J4	208	1	1 A	15 A	11	12/MP4.3	POWERED BY INDOOR UNIT
FS-K1	Carrier	RBM-Y0964FUL	FC-K1	208	1	1 A	15 A	38	12/MP4.3	POWERED BY INDOOR UNIT
FS-K2	Carrier	RBM-Y0964FUL	FC-K2	208	1	1 A	15 A	38	12/MP4.3	POWERED BY INDOOR UNIT
FS-K3	Carrier	RBM-Y0964FUL	FC-K3	208	1	1 A	15 A	38	12/MP4.3	POWERED BY INDOOR UNIT
FS-K4	Carrier	RBM-Y0964FUL	FC-K4	208	1	1 A	15 A	38	12/MP4.3	POWERED BY INDOOR UNIT
FS-K5	Carrier	RBM-Y0964FUL	FC-K5	208	1	1 A	15 A	38	12/MP4.3	POWERED BY INDOOR UNIT
FS-K6	Carrier	RBM-Y0964FUL	FC-K6	208	1	1 A	15 A	38	12/MP4.3	POWERED BY INDOOR UNIT
FS-K7	Carrier	RBM-Y0964FUL	FC-K7	208	1	1 A	15 A	38	12/MP4.3	POWERED BY INDOOR UNIT
MB-C1	Carrier	RBM-Y0611F6PUL	FC-C1, FC-C2, FC-C3, FC-C4, FC-C5, FC-C6	208	1	1 A	15 A	117	12/MP4.3	
MB-C2	Carrier	RBM-Y0611F4PUL	FC-C14, FC-C15, FC-C16, FC-C17

This certificate of compliance documents 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.

A. GENERAL INFORMATION

01	Project Location (city)	04	Total Conditioned Floor Area
02	Climate Zone	05	Total Unconditioned Floor Area
03	Occupancy Types within Project:	06	# of Stories (Habitable Above Grade)

Oxnard: 15,995; 145; 1

- ☐ Office (B)
- ☐ Hotel/ Motel Guest Rooms (R-1)
- ☐ High-Rise Residential (R-2/R-3)
- ☐ Retail (M)
- ☐ School (F)
- ☐ Relocatable Class Bldg (E)
- ☐ Non-refrigerated Warehouse (S)
- ☐ Healthcare Facility (H)
- ☐ Other (Write In):

FOOTNOTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/Building_climate_zones.html

B. PROJECT SCOPE

Table Instructions: Include any 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.

My project consists of (check all that apply)

01 Air System(s)	02 Wet System Components	03 Dry System Components
☑ Heating Air System	☐ Water Economizer	☐ Air Economizer
☑ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ Hydronic System Piping	☐ Fan Systems
☑ Mechanical Controls	☐ Cooling Towers	☑ Ductwork
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01	02	03	04	05	06	07	08	09
System Summary §110.1, §110.2, §140.4	Pumps §140.4(k)	Fans/ Economizers §140.4(e), §140.4(e)	System Controls §110.2, §120.2, §140.4(f)	Ventilation §120.1	Terminal Box Controls §140.4(d)	Distribution §120.3, §140.4(l)	Cooling Towers §110.2(e)	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	AND	AND	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.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

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

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations.

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

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (Btu/h) §140.4(a)1						
				Heating Output[1,2]			Cooling Output[1,2]		Load Calculations[1,2]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[1] §140.4(a)	Sensible 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)
AC-B01	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		37.1	50	28.3	33.1
AC-B02	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		37.1	50	27.8	31
AC-B03	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		37.1	50	22.9	28
AC-B04	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		37.1	50	20.6	22.8
AC-B05	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		37.1	50	23	28.6
AC-B10	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		37.1	50	28	31.2
AC-B11	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		37.1	50	28.3	35.6
AC-B12	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		37.1	50	23	33.3
AC-B13	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		37.1	50	23	33.3
AC-B14	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		37.1	50	22.8	33.1

Table Continued

Table Continued

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

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (Btu/h) §140.4(a)1						
				Heating Output[1,2]			Cooling Output[1,2]		Load Calculations[1,2]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[1] §140.4(a)	Sensible 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)
AC-B15	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		25.6	35	10.9	9.1
AC-B16	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		25.6	35	18.4	18.3

[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). Healthcare facilities are exempted.*
[2] *It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*
** If equipment is heating only, base cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*
** Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).*

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

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	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency
AC-B1	<65,000				0.81	SEER	13	16
AC-B2	<65,000				0.81	SEER	13	16
AC-B3	<65,000				0.81	SEER	13	16
AC-B4	<65,000				0.81	SEER	13	16
AC-B5	<65,000				0.81	SEER	13	16
AC-B10	<65,000				0.81	SEER	13	16
AC-B11	<65,000				0.81	SEER	13	16
AC-B12	<65,000				0.81	SEER	13	16
AC-B13	<65,000				0.81	SEER	13	16
AC-B14	<65,000				0.81	SEER	13	16
AC-B15	<65,000				0.81	SEER	13	16
AC-B16	<65,000				0.81	SEER	13	16

G. PUMPS

This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS

This Section Does Not Apply

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (h) or sequence requirements in §141.0(b)2F for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(a) & (c)[4], §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(e)	Demand Response §110.12 and §120.2(h)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(e)
AC-B1	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B2	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B3	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B4	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B5	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B6	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B7	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B8	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B9	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B10	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(a) & (c)[4], §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(e)	Demand Response §110.12 and §120.2(h)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(e)
AC-B11	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B12	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B13	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B14	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B15	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-B16	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows

[4] FOOTNOTES: Greenhy 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.
** NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*
Ex. System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d) EXCEPTION 1 to §140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §170.1 and §120.1(a)1iii for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be demonstrated 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 this box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing the table.
02	☐	Check this box if the project includes new or altered high-rise residential dwelling units.
03	☐	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

Table Continued

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07
System Name: AC-B1	System Design OA CFM Air Flow*: 355	System Design Transfer Air CFM: 0	Air Filtration per §120.1(c)1 and §141.0(b)2F*: NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
ENGLISH B101	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4 Occ Sensor: NA: Not required space type

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07
System Name: AC-B2	System Design OA CFM Air Flow*: 355	System Design Transfer Air CFM: 0	Air Filtration per §120.1(c)1 and §141.0(b)2F*: NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
ENGLISH B102	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4 Occ Sensor: NA: Not required space type

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Table Continued

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07
System Name: AC-B3	System Design OA CFM Air Flow*: 355	System Design Transfer Air CFM: 0	Air Filtration per §120.1(c)1 and §141.0(b)2F*: NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
ENGLISH B103	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4 Occ Sensor: NA: Not required space type

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07
System Name: AC-B4	System Design OA CFM Air Flow*: 355	System Design Transfer Air CFM: 0	Air Filtration per §120.1(c)1 and §141.0(b)2F*: NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
ENGLISH B104	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4 Occ Sensor: NA: Not required space type

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07
System Name: AC-B5	System Design OA CFM Air Flow*: 355	System Design Transfer Air CFM: 0	Air Filtration per §120.1(c)1 and §141.0(b)2F*: NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
ENGLISH B105	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4 Occ Sensor: NA: Not required space type

Table Continued

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07
System Name: AC-B6	System Design OA CFM Air Flow*: 355	System Design Transfer Air CFM: 0	Air Filtration per §120.1(c)1 and §141.0(b)2F*: NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
ENGLISH B106	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4 Occ Sensor: NA: Not required space type

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Table Continued

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07
System Name: AC-B7	System Design OA CFM Air Flow*: 355	System Design Transfer Air CFM: 0	Air Filtration per §120.1(c)1 and §141.0(b)2F*: NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
ENGLISH B107	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4 Occ Sensor: NA: Not required space type

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07
System Name: AC-B8	System Design OA CFM Air Flow*: 355	System Design Transfer Air CFM: 0	Air Filtration per §120.1(c)1 and §141.0(b)2F*: NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
ENGLISH B108	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4 Occ Sensor: NA: Not required space type

Table Continued

Table Continued

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07
System Name: AC-B9	System Design OA CFM Air Flow*: 355	System Design Transfer Air CFM: 0	Air Filtration per §120.1(c)1 and §141.0(b)2F*: NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
ENGLISH B109	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4 Occ Sensor: NA: Not required space type

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Table Continued

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07
System Name: AC-B10	System Design OA CFM Air Flow*: 355	System Design Transfer Air CFM: 0	Air Filtration per §120.1(c)1 and §141.0(b)2F*: NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
ENGLISH B110	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4 Occ Sensor: NA: Not required space type

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07
System Name: AC-B11	System Design OA CFM Air Flow*: 355	System Design Transfer Air CFM: 0	Air Filtration per §120.1(c)1 and §141.0(b)2F*: NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
ENGLISH B111	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4 Occ Sensor: NA: Not required space type

Table Continued

Table Continued

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07
System Name: AC-B12	System Design OA CFM Air Flow*: 355	System Design Transfer Air CFM: 0	Air Filtration per §120.1(c)1 and §141.0(b)2F*: NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
ENGLISH B112	Classroom (age

D. EXCEPTIONAL CONDITIONS

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

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

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

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §120.1 and §120.2(a) and prescriptive requirements found in §140.4(k), §140.4(l) and §140.4(n) or §141.0(b) for alterations.

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

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (Btu/h) §140.4 (a&b)						
				Heating Output[1,*]			Cooling Output[1,*]			Load Calculations[2,*]
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[3] §140.4(a)	Sensible 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)
FC-C1	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	41.2	54		37.1	48	26	33.1
FC-C2	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	41.2	54		37.1	48	25.4	30.7
FC-C3	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	41.2	54		37.1	48	22	31.1
FC-C4	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	29.1	40		26.3	36	20.5	23.4

Table Continued

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

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	Min Efficiency Required per Tables 110.2 Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2 Title 20	Design Efficiency
FC-C5	<65,000				3.3	SEER	13	22.45
FC-C6	<65,000				3.3	SEER	13	22.45
FC-C7	<65,000				3.4	SEER	13	23
FC-C8	<65,000				3.4	SEER	13	23
FC-C9	<65,000				3.4	SEER	13	23
FC-C10	<65,000				3.4	SEER	13	23
FC-C11	<65,000				3.4	SEER	13	23
FC-C12	<65,000				3.4	SEER	13	23
FC-C13	<65,000				3.4	SEER	13	23
FC-C14	<65,000				3.3	SEER	13	22.45
FC-C15	<65,000				3.3	SEER	13	22.45
FC-C16	<65,000				3.3	SEER	13	22.45
FC-C17	<65,000				3.3	SEER	13	22.45

FC-C22	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C23	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C24	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C25	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C26	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C27	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C28	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C29	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C30	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C31	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C32	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C33	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C34	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows

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

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (Btu/h) §140.4 (a&b)						
				Heating Output[1,*]			Cooling Output[1,*]			Load Calculations[2,*]
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[3] §140.4(a)	Sensible 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)
FC-C15	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26	34		22.8	30	13.7	16.35
FC-C16	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26	34		22.8	30	13	20.3
FC-C17	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26	34		22.8	30	13	20.3
FC-C18	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	10.5	13.5		9	12	3.2	3.8
FC-C19	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	41.2	54		37.9	48	21.7	33.9
FC-C20	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.3	34		22.7	30	16.8	20.2
FC-C21	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	41.4	54		37.1	48	21	31.2
FC-C22	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	41.4	54		37.1	48	25.7	28
FC-C23	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.5	34		22.8	30	14.15	22.7
FC-C24	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.5	34		22.8	30	14.15	22.7
FC-C25	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	42.4	48		37.1	54	26.8	30.6
FC-C26	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.6	34		22.8	30	16.5	19.6
FC-C27	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	42.3	54		38.3	48	22.5	30.4

FC-C28	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	42.8	54		37.2	48	22.6	24.9
FC-C29	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	42.4	54		37.1	48	27	31.3
FC-C30	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	60.1	81		59.9	72	22	35
FC-C31	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	60.1	81		59.9	72	22.8	37.2
FC-C32	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	39.6	54		36.6	48	12.8	26.3
FC-C33	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	39.6	54		36.6	48	12.8	26.3
FC-C34	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	39.6	54		36.6	48	15.15	24.55
FC-C35	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	39.6	54		36.6	48	15.15	24.55
FC-C36	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.7	34		22.8	30	14.6	22.2
FC-C37	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.7	34		22.8	30	14.6	22.2
FC-C38	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	42.3	54		38.2	48	22.5	32.7
FC-C39	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	40	54		36.8	48	22.4	32.7
FC-C40	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	25.5	34		22.2	30	20.1	15.1

FC-C1	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	41.2	54		37.1	48	26	33.1
FC-C2	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	41.2	54		37.1	48	25.4	30.7
FC-C3	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	41.2	54		37.1	48	22	31.1
FC-C4	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	29.1	40		26.3	36	20.5	23.4

Table Continued

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

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	Min Efficiency Required per Tables 110.2 Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2 Title 20	Design Efficiency
FC-C5	<65,000				3.3	SEER	13	22.45
FC-C6	<65,000				3.3	SEER	13	22.45
FC-C7	<65,000				3.4	SEER	13	23
FC-C8	<65,000				3.4	SEER	13	23
FC-C9	<65,000				3.4	SEER	13	23
FC-C10	<65,000				3.4	SEER	13	23
FC-C11	<65,000				3.4	SEER	13	23
FC-C12	<65,000				3.4	SEER	13	23
FC-C13	<65,000				3.4	SEER	13	23
FC-C14	<65,000				3.3	SEER	13	22.45
FC-C15	<65,000				3.3	SEER	13	22.45
FC-C16	<65,000				3.3	SEER	13	22.45
FC-C17	<65,000				3.3	SEER	13	22.45

FC-C18	<65,000				3.4	SEER	13	23
FC-C19	<65,000				3.4	SEER	13	23
FC-C20	<65,000				3.4	SEER	13	23
FC-C21	<65,000				3.4	SEER	13	23
FC-C22	<65,000				3.4	SEER	13	23
FC-C23	<65,000				3.3	SEER	13	21.75
FC-C24	<65,000				3.3	SEER	13	21.75
FC-C25	<65,000				3.3	SEER	13	21.75
FC-C26	<65,000				3.3	SEER	13	21.75
FC-C27	<65,000				3.3	SEER	13	21.75
FC-C28	<65,000				3.3	SEER	13	21.75
FC-C29	<65,000				3.3	SEER	13	21.75
FC-C30	≥65,000 and <135,000				3.2	EER	11.2	20
FC-C31	≥65,000 and <135,000				3.2	IEER	15.5	20
FC-C32	<65,000				3.2	EER	11.2	20
FC-C33	<65,000				3.2	IEER	15.5	20
						SEER	13	20
FC-C34	<65,000				3.2	SEER	13	20
FC-C35	<65,000				3.2	SEER	13	20
FC-C36	<65,000				3.2	SEER	13	20
FC-C37	<65,000				3.2	SEER	13	20
FC-C38	<65,000				3.2	SEER	13	20
FC-C39	<65,000				3.2	SEER	13	20
FC-C40	<65,000				3.2	SEER	13	20
FC-C41	<65,000				3.2	SEER	13	20
OU-C1	≥240,000		COP		3.3	EER	9.5	10
						IEER	12.7	22.45
OU-C2	≥240,000		COP		3.4	EER	9.5	10
						IEER	12.7	23
OU-C3	≥240,000		COP		3.3	EER	9.5	9.9
						IEER	12.7	21.75
OU-C4	≥240,000		COP		3.2	EER	9.5	9.5
						IEER	12.7	20

G. PUMPS

This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS

This Section Does Not Apply

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (h) or requirements in §141.0(b)2I for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & (c)[4], §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(e)	Demand Response §110.12 and §120.2(h)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(h)
FC-1	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-2	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-3	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-4	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-5	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-6	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-7	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-8	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-9	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-10	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows

Table Continued

FC-C1	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C2	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C3	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C4	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C5	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C6	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C7	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C8	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C9	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C10	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows

Table Continued

FC-C22	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C23	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C24	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C25	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C26	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C27	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C28	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C29	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C30	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C31	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C32	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C33	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C34	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows

FC-C35	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C36	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C37	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C38	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C39	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C40	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-C41	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows

[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.*

[*] *NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*
EX: System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)iii for all nonresidential, high-rise residential and hotel/motel 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 includes new or altered high-rise residential dwelling units.
03	☐	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

Table Continued

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04		05				06		07
System Name:	FC-C1	System Design OA CFM Air Flow*:	360	System Design Transfer Air CFM:	0	Air Filtration per §120.1(c) and §141.0(b)2[4]		
						NA: Not system type specified in Table J footnote 2		

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
C104	Classroom (age 5-18)	939			356.82			DCV: Provided per §120.1(c)6
								Occ Sensor: Provided per §120.1(c)5

17	Total System Required Min OA CFM	356.82	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05				06		07
System Name:	FC-C2	System Design OA CFM Air Flow*:	350	System Design Transfer Air CFM:	0	Air Filtration per §120.1(c) and §141.0(b)2[4]		
						NA: Not system type specified in Table J footnote 2		

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3*
C131	Classroom (age 5-18)	908			345.04			DCV: Provided per §120.1(c)6
								Occ Sensor: Provided per §120.1(c)5

Table Continued

17	Total System Required Min OA CFM	345.04	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05				06		07
System Name:	FC-C3	System Design OA CFM Air Flow*:	360	System Design Transfer Air CFM:	0	Air Filtration per §120.1(c) and §141.0(b)2[4]		
						NA: Not system type specified in Table J footnote 2		

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(

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Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: FC-C19	System Design OA CFM Air Flow[a]: 325				System Design Transfer Air CFM: 0			Air Filtration per §120.3(c) and §141.0(b)2[a] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[a]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[a]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[a]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3[a]
C113	Classroom (age 5-18)	788			299.44			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

17	Total System Required Min OA CFM	299.44	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: FC-C20	System Design OA CFM Air Flow[a]: 305				System Design Transfer Air CFM: 0			Air Filtration per §120.1(c) and §141.0(b)2[a] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[a]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[a]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[a]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3[a]
C102&C103	Corridor	1,659			248.85			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

Table Continued

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17	Total System Required Min OA CFM	139.05	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: FC-C27	System Design OA CFM Air Flow[a]: 340				System Design Transfer Air CFM: 0			Air Filtration per §120.1(c) and §141.0(b)2[a] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[a]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[a]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[a]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3[a]
C204	Classroom (age 5-18)	891			338.58			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

17	Total System Required Min OA CFM	338.58	18	Ventilation for this System Complies?	Yes

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Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: FC-C34	System Design OA CFM Air Flow[a]: 200				System Design Transfer Air CFM: 0			Air Filtration per §120.1(c) and §141.0(b)2[a] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[a]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[a]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[a]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3[a]
C210-HALF	Classroom (age 5-18)	516.5			196.27			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

17	Total System Required Min OA CFM	196.27	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: FC-C35	System Design OA CFM Air Flow[a]: 200				System Design Transfer Air CFM: 0			Air Filtration per §120.1(c) and §141.0(b)2[a] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[a]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[a]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[a]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3[a]
C210-HALF	Classroom (age 5-18)	516.5			196.27			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

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17	Total System Required Min OA CFM	196.27	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: FC-C36	System Design OA CFM Air Flow[a]: 200				System Design Transfer Air CFM: 0			Air Filtration per §120.1(c) and §141.0(b)2[a] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[a]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[a]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[a]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3[a]
C206-HALF	Classroom (age 5-18)	522.5			198.55			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

17	Total System Required Min OA CFM	198.55	18	Ventilation for this System Complies?	Yes

Table Continued

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17	Total System Required Min OA CFM	198.55	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: FC-C37	System Design OA CFM Air Flow[a]: 200				System Design Transfer Air CFM: 0			Air Filtration per §120.1(c) and §141.0(b)2[a] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[a]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[a]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[a]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3[a]
C206-HALF	Classroom (age 5-18)	522.5			198.55			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

17	Total System Required Min OA CFM	198.55	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: FC-C38	System Design OA CFM Air Flow[a]: 340				System Design Transfer Air CFM: 0			Air Filtration per §120.1(c) and §141.0(b)2[a] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[a]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[a]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[a]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3[a]
C207	Classroom (age 5-18)	893			339.34			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

Table Continued

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17	Total System Required Min OA CFM	339.34	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: FC-C39	System Design OA CFM Air Flow[a]: 340				System Design Transfer Air CFM: 0			Air Filtration per §120.1(c) and §141.0(b)2[a] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[a]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[a]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[a]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3[a]
C208	Classroom (age 5-18)	894			339.72			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

17	Total System Required Min OA CFM	339.72	18	Ventilation for this System Complies?	Yes

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Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: FC-C40	System Design OA CFM Air Flow[a]: 275				System Design Transfer Air CFM: 0			Air Filtration per §120.1(c) and §141.0(b)2[a] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[a]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[a]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[a]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3[a]
C202	Corridor	1,476			221.4			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

17	Total System Required Min OA CFM	221.4	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: FC-C41	System Design OA CFM Air Flow[a]: 345				System Design Transfer Air CFM: 0			Air Filtration per §120.1(c) and §141.0(b)2[a] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[a]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[a]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[a]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3[a]
C209	Classroom (age 5-18)	904			343.52			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

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17	Total System Required Min OA CFM	343.52	18	Ventilation for this System Complies?	Yes

[a] *FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.*
[a] *Air filtration requirements apply to the following three system types per §120.1(c)10, 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.*
[a] *Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.*
[a] *See Standards Tables 120.1-A and 120.1-B.*
[a] *For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.*
[a] *§120.2(e)2 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 1,000ft², 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

L. DISTRIBUTION (DUCTWORK AND PIPING)
Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):		Duct leakage testing triggered for these systems?	No

11	No	The scope of the project includes only duct systems serving healthcare facilities.	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.	
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:	
	☐	Outdoors	
	☐	In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces	
	☐	In an unconditioned crawlspace	
	☐	In other unconditioned spaces	

Table Continued

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Table Continued

M. COOLING TOWERS
This Section Does Not Apply

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
Table Instructions: 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/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉		NRCI-MCH-01-E - Must be submitted for all buildings.	☐	☐

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Table Instructions: 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/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉	○	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*	☐	☐
○	◉	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".*	☐	☐
○	◉	NRCA-MCH-04-A Air Distribution Duct Leakage	☐	☐
○	◉	NRCA-MCH-05-A Air Economizer Controls	☐	☐
◉	○	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.	☐	☐
○	◉	NRCA-MCH-07-A Supply Fan Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-08-A Water Leakage Test	☐	☐
○	◉	NRCA-MCH-09-A Supply Water Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-10-A Hydronic System Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-11-A Automatic Demand Shed Controls	☐	☐
○	◉	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	☐	☐
○	◉	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	☐	☐
○	◉	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
○	◉	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-on-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
○	◉	NRCA-MCH-16-A Supply Air Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	☐	☐
◉	○	NRCA-MCH-18 Energy Management Control Systems	☐	☐
◉	○	NRCA-MCH-19 Occupancy Sensor Controls	☐	☐
◉	○	NRCA-MCH-20 Multi-Family Ventilation	☐	☐
○	◉	NRCA-MCH-21 Multi-Family Envelope Leakage	☐	☐

STATE OF CALIFORNIA
Mechanical Systems
MECC-MCH-E (Created 2/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-E
Project Name: OXNARD HS BUILDING C HVAC UPGRADE — Report Page: Page 46 of 47
Project Address: 3400 W GONZALES RD, OXNARD, CA 93036 — Date Prepared: 02/24/2020

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION
Table Instructions: 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 completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
○	◉	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

Q. MANDATORY MEASURES DOCUMENTATION LOCATION
Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:	Yes	01 Plan sheet or construction document location MP0.1, MP0.2, & MP0.3

STATE OF CALIFORNIA
Mechanical Systems
MECC-MCH-E (Created 2/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-E
Project Name: OXNARD HS BUILDING C HVAC UPGRADE — Report Page: Page 47 of 47
Project Address: 3400 W GONZALES RD, OXNARD, CA 93036 — Date Prepared: 02/24/2020

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:		Documentation Author Signature:	JORGE IBARRA
Company:	IMEG CORP	Signature Date:	02/24/2020
Address:	901 VIA PIEMONTE, SUITE 400	City/State/Zip:	CEA/ HERS Certification Identification (if applicable):
		Phone:	(909) 942-5560

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:	ERIC M. DESRUNTER	Responsible Designer Signature:	
Company:	IMEG CORP	Date Signed:	2/25/2020
Address:	901 VIA PIEMONTE, SUITE 400	License:	M-38688
City/State/Zip:	ONTARIO/CA/91764	Phone:	(909) 942-5565

STATE OF CALIFORNIA
Mechanical Systems
MECC-MCH-E (Created 2/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-E
Project Name: OXNARD HS BUILDING E HVAC UPGRADE — Report Page: Page 1 of 45
Project Address: 3400 W GONZALES RD, OXNARD, CA 93036 — Date Prepared: 02/24/2020

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 and §141.0(b)2 for alterations.

A. GENERAL INFORMATION

01	Project Location (city)	OXNARD	04	Total Conditioned Floor Area	37,051
02	Climate Zone	6	05	Total Unconditioned Floor Area	2,141
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	2
☐	Office (B)	☐ Retail (M)	☐	Non-refrigerated Warehouse (S)	
☐	Hotel/ Motel Guest Rooms (R-1)	☑ School (E)	☐	Healthcare Facility (H)	
☐	High-Rise Residential (R-2/R-3)	☐ Relocatable Class Bldg (E)	☐	Other (Describe)	

[a] FOOTNOTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html

B. PROJECT SCOPE
Table Instructions: Include any 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.

My project consists of (check all that apply)		
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	☐ Hydronic System Piping	☐ Fan Systems
☑ Mechanical Controls	☐ Cooling Towers	☑ Ductwork
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS
Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, for guidance.

01	02		03		04		05	06		07		08	09
System Summary §150.2 (b)1G & §140.4	Pumps §140.4(k)	AND	Fans/ Economizers §140.4(c) §140.4(e)	AND	System Controls §150.2 (b)1I & §140.4(d)	AND	Ventilation §120.1	Terminal Box Controls §140.4(m)	AND	Distribution §120.5, §140.4(n)	AND	Cooling Towers §150.2(b)1J	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		AND	Yes		AND	Yes	AND	Yes		COMPLIES
Mandatory Measures Compliance (See Table Q for Details)														COMPLIES

STATE OF CALIFORNIA
Mechanical Systems
MECC-MCH-E (Created 2/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-E
Project Name: OXNARD HS BUILDING E HVAC UPGRADE — Report Page: Page 2 of 45
Project Address: 3400 W GONZALES RD, OXNARD, CA 93036 — Date Prepared: 02/24/2020

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

No exceptional conditions apply to this project.

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

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §120.1 and §120.2(e) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations.

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

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (Btu/h) §150.2 (a)1L						
				Heating Output[a,b]			Cooling Output[a,b]		Load Calculations[a,b]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[a] §140.4(a)	Sensible 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)
FC-E1	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	37.8	54		33.8	48	20.6	28.9
FC-E6

FC-E28	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.8	40		23.6	36	12.5	24.3
FC-E29	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	28	40		24	36	19.3	22.5
FC-E30	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	37.8	54		33.8	48	18.4	27.9
FC-E31	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	28	40		24	36	21.9	22.6
FC-E32	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.4	34		22.4	30	16.9	19.05
FC-E33	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.4	34		22.4	30	16.9	19.05
FC-E34	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.4	34		22.4	30	16.75	16.9
FC-E35	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.4	34		22.4	30	16.75	16.9
FC-E36	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.4	34		22.4	30	16.8	19.3
FC-E37	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	10.5	13.5		9	12	4.4	7.5
FC-E38	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	10.5	13.5		9	12	4.9	4.2
FC-E39	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.4	34		22.4	30	16.9	17.15
FC-E40	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.4	34		22.4	30	16.9	17.15

FC-E41	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	31.1	40		26.7	36	14.95	21.85
FC-E42	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	31.1	40		26.7	36	14.95	21.85
FC-E43	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	31.1	40		26.7	36	15.55	24.65
FC-E44	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	31.1	40		26.7	36	15.55	24.65
FC-E45	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	10.3	13.5		8.8	12	5.9	8.6
FC-E46	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	30.6	40		26.3	36	15.15	23.75
FC-E47	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	30.6	40		26.3	36	15.15	23.75
FC-E48	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	41.4	54		37	48	21.25	28.35
FC-E49	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	41.4	54		37	48	21.25	28.35
FC-E50	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.1	34		22.1	30	16.35	18.45
FC-E51	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.1	34		22.1	30	16.35	18.45
FC-E52	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	10.3	13.5		8.8	12	4.8	6.7
FC-E53	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	20.7	27		17.2	24	16.8	14.3

FC-E54	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	30.6	40		26.3	36	16.4	23.95
FC-E55	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	30.6	40		26.3	36	16.4	23.95
FC-E56	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	30.6	40		26.3	36	15.7	22.45
FC-E57	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	30.6	40		26.3	36	15.7	22.45
FC-E58	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	10.3	13.5		8.8	12	4.8	6.7
FC-E59	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.4	34		22.4	30	16.8	19.4
FC-E60	Variable Refrigerant Flow	VRF air conditioners, air cooled	Yes	26.4	34		22.4	30	16.8	19.4
OU-E1	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	382.2	513		427.4	456	228.8	274.2
OU-E2	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	388.2	513		452.8	456	187.5	303.3
OU-E3	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	383.1	513		429.9	456	221.8	259.3
OU-E4	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	370.4	486		416.2	432	202.1	238.1

† 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). Healthcare facilities are excepted.
** It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*
*** If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*
** Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).*
Table Continued

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Heating Mode: Rating Condition (°F)	Heating Mode: Efficiency Unit	Heating Mode: Min Efficiency Required per Tables 110.2f Title 20	Heating Mode: Design Efficiency	Efficiency Unit	Cooling Mode: Min Efficiency Required per Tables 110.2f Title 20	Cooling Mode: Design Efficiency
FC-E1	<65,000				3.2	SEER	13	20
FC-E2	<65,000				3.2	SEER	13	20
FC-E3	<65,000				3.2	SEER	13	20
FC-E4	<65,000				3.2	SEER	13	20
FC-E5	<65,000				3.2	SEER	13	20
FC-E6	<65,000				3.2	SEER	13	20
FC-E7	<65,000				3.2	SEER	13	20
FC-E8	<65,000				3.2	SEER	13	20
FC-E9	<65,000				3.2	SEER	13	20
FC-E10	<65,000				3.2	SEER	13	20
FC-E11	<65,000				3.2	SEER	13	20
FC-E12	<65,000				3.2	SEER	13	20
FC-E13	<65,000				3.2	SEER	13	20

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Heating Mode: Rating Condition (°F)	Heating Mode: Efficiency Unit	Heating Mode: Min Efficiency Required per Tables 110.2f Title 20	Heating Mode: Design Efficiency	Efficiency Unit	Cooling Mode: Min Efficiency Required per Tables 110.2f Title 20	Cooling Mode: Design Efficiency
FC-E14	<65,000				3.2	SEER	13	20
FC-E15	<65,000				3.2	SEER	13	20
FC-E16	<65,000				3.2	SEER	13	20
FC-E17	<65,000				3.2	SEER	13	20
FC-E18	<65,000				3.2	SEER	13	20
FC-E19	<65,000				3.2	SEER	13	20
FC-E20	<65,000				3.2	SEER	13	20
FC-E21	<65,000				3.2	SEER	13	20
FC-E22	<65,000				3.2	SEER	13	20
FC-E23	<65,000				3.2	SEER	13	20
FC-E24	<65,000				3.2	SEER	13	20
FC-E25	<65,000				3.2	SEER	13	20
FC-E26	<65,000				3.2	SEER	13	20

FC-E27	<65,000				3.2	SEER	13	20				
FC-E28	<65,000				3.2	SEER	13	20				
FC-E29	<65,000				3.2	SEER	13	20				
FC-E30	<65,000				3.2	SEER	13	20				
FC-E31	<65,000				3.2	SEER	13	20				
FC-E32	<65,000				3.2	SEER	13	20				
FC-E33	<65,000				3.2	SEER	13	20				
FC-E34	<65,000				3.2	SEER	13	20				
FC-E35	<65,000				3.2	SEER	13	20				
FC-E36	<65,000				3.2	SEER	13	20				
FC-E37	<65,000				3.2	SEER	13	20				
FC-E38	<65,000				3.2	SEER	13	20				
FC-E39	<65,000				3.2	SEER	13	20				
FC-E40	<65,000				3.2	SEER	13	20				
FC-E41	<65,000				3.2	SEER	13	20				
FC-E42	<65,000				3.2	SEER	13	20				

FC-E43	<65,000				3.2	SEER	13	20				
FC-E44	<65,000				3.2	SEER	13	20				
FC-E45	<65,000				3.2	SEER	13	21.25				
FC-E46	<65,000				3.2	SEER	13	21.25				
FC-E47	<65,000				3.2	SEER	13	21.25				
FC-E48	<65,000				3.2	SEER	13	21.25				
FC-E49	<65,000				3.2	SEER	13	21.25				
FC-E50	<65,000				3.2	SEER	13	21.25				
FC-E51	<65,000				3.2	SEER	13	21.25				
FC-E52	<65,000				3.2	SEER	13	21.25				
FC-E53	<65,000				3.2	SEER	13	21.25				
FC-E54	<65,000				3.2	SEER	13	21.25				
FC-E55	<65,000				3.2	SEER	13	21.25				
FC-E56	<65,000				3.2	SEER	13	21.25				
FC-E57	<65,000				3.2	SEER	13	21.25				
FC-E58	<65,000				3.2	SEER	13	21.25				

FC-E59	<65,000				3.2	SEER	13					
FC-E60	<65,000				3.2	SEER	13	20				
OU-E1	≥240,000	47°F db/43°F wb OSA	COP	3.2	3.2	EER	9.5	9.5				
						IEER	12.7	20				
OU-E2	≥240,000	47°F db/43°F wb OSA	COP	3.2	3.2	EER	9.5	9.5				
						IEER	12.7	20				
OU-E3	≥240,000	47°F db/43°F wb OSA	COP	3.2	3.2	EER	9.5	20				
						IEER	12.7	20				
OU-E4	≥240,000	47°F db/43°F wb OSA	COP	3.2	3.2	EER	9.5	9.9				
						IEER	12.7	21.25				

G. PUMPS
This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS
This Section Does Not Apply

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (h) or requirements in §141.0(b)2E for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & §14 §120.2(a) or §141.0(b)2F	Shut-Off Controls §120.2(a)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(h)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(h)
FC-E1~FC-E60	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA, No operable windows

Table Continued

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & §14 §120.2(a) or §141.0(b)2F	Shut-Off Controls §120.2(a)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(h)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(h)
OU-E1	≥240,000	47°F db/43°F wb OSA	COP 3.2	3.2	EER 9.5	9.5		
					IEER 12.7	20		
OU-E2	≥240,000	47°F db/43°F wb OSA	COP 3.2	3.2	EER 9.5	9.5		
					IEER 12.7	20		
OU-E3	≥240,000	47°F db/43°F wb OSA	COP 3.2	3.2	EER 9.5	20		
					IEER 12.7	20		
OU-E4	≥240,000	47°F db/43°F wb OSA	COP 3.2	3.2	EER 9.5	9.9		
					IEER 12.7	21.25		

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.7(c)10 for all nonresidential, high-rise residential and hotel/motel 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 this 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 includes new or altered high-rise residential dwelling units.
03	☐ Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

Nonresidential and Hotel/ Motel Ventilation Systems

04	05		06		07
System Name:	FC-E1	System Design OA CFM Air Flow¹:	345	System Design Transfer Air CFM:	0

Air Filtration per §120.1(c) and §141.0(b)2ᴵ
NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3ᴵ:					Exh. Vent. per §120.1(c)4				
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths, toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3ᴵ	
E135	Classroom (age 5-18)	895			340.1			DCV	Provided per §120.1(d)4
								Occ Sensor	Provided per §120.1(d)5

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05		06		07
System Name:	FC-E1	System Design OA CFM Air Flow¹:	345	System Design Transfer Air CFM:	0

Air Filtration per §120.1(c) and §141.0(b)2ᴵ
NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3ᴵ:					Exh. Vent. per §120.1(c)4				
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths, toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3ᴵ	
E135	Classroom (age 5-18)	895			340.1			DCV	Provided per §120.1(d)4
								Occ Sensor	Provided per §120.1(d)5

Table Continued

FC-E1	<65,000				3.2	SEER	13	20				
FC-E2	<65,000				3.2	SEER	13	20				
FC-E3	<65,000				3.2	SEER	13	20				
FC-E4	<65,000				3.2	SEER	13	20				
FC-E5	<65,000				3.2	SEER	13	20				
FC-E6	<65,000				3.2	SEER	13	20				
FC-E7	<65,000				3.2	SEER	13	20				
FC-E8	<65,000				3.2	SEER	13	20				
FC-E9	<65,000				3.2	SEER	13	20				
FC-E10	<65,000				3.2	SEER	13	20				
FC-E11	<65,000				3.2	SEER	13	20				
FC-E12	<65,000				3.2	SEER	13	20				
FC-E13	<65,000				3.2	SEER	13	20				

FC-E14	<65,000				3.2	SEER	13	20				
FC-E15	<65,000				3.2	SEER	13	20				
FC-E16	<65,000				3.2	SEER	13	20				
FC-E17	<65,000				3.2	SEER	13	20				
FC-E18	<65,000				3.2	SEER	13	20				
FC-E19	<65,000				3.2	SEER	13	20				
FC-E20	<65,000				3.2	SEER	13	20				
FC-E21	<65,000				3.2	SEER	13	20				
FC-E22	<65,000				3.2	SEER	13	20				
FC-E23	<65,000				3.2	SEER	13	20				
FC-E24	<65,000				3.2	SEER	13	20				
FC-E25	<65,000				3.2	SEER	13	20				
FC-E26	<65,000				3.2	SEER	13	20				

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05		06		07
System Name:	FC-E3	System Design OA CFM Air Flow¹:	75	System Design Transfer Air CFM:	0

Air Filtration per §120.1(c) and §141.0(b)2ᴵ
NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3ᴵ:					Exh. Vent. per §120.1(c)4				
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths, toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3ᴵ	
E105	Office space	208			31.2			DCV	Provided per §120.1(d)4
								Occ Sensor	Provided per §120.1(d)5
E106	Conference/ meeting	85			42.5			DCV	Provided per §120.1(d)4
								Occ Sensor	Provided per §120.1(d)5

17	Total System Required Min OA CFM	73.7	18	Ventilation for this System Complies?	Yes

Table Continued

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05		06		07
System Name:	FC-E4	System Design OA CFM Air Flow¹:	200	System Design Transfer Air CFM:	0

Air Filtration per §120.1(c) and §141.0(b)2ᴵ
NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3ᴵ:					Exh. Vent. per §120.1(c)4				
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths, toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3ᴵ	
E107	Classroom (age 5-18)	526			199.88			DCV	Provided per §120.1(d)4
								Occ Sensor	Provided per §120.1(d)5

17	Total System Required Min OA CFM	199.88	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05		06		07
System Name:	FC-E5	System Design OA CFM Air Flow¹:	340	System Design Transfer Air CFM:	0

Air Filtration per §120.1(c) and §141.0(b)2ᴵ
NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3ᴵ:					Exh. Vent. per §120.1(c)4				
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths, toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3ᴵ	
E134	Classroom (age 5-18)	891			338.58			DCV	Provided per §120.1(d)4
								Occ Sensor	Provided per §120.1(d)5

Table Continued

Table Continued

17	Total System Required Min OA CFM	338.58	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05		06		07
System Name:	FC-E6	System Design OA CFM Air Flow¹:	210	System Design Transfer Air CFM:	0

Air Filtration per §120.1(c) and §141.0(b)2ᴵ
NA: Not system type specified in Table J footnote 2

| 08 | 09 | 10

Table Continued

17	Total System Required Min OA CFM		31.65	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06	07
System Name:	FC-E38	System Design OA CFM Air Flow[1]:	45	System Design Transfer Air CFM:	0	Air Filtration per §120.3(c) and §141.0(b)2[2] NA: Not system type specified in Table J footnote 2

08	09		10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3[3]						Exh. Vent. per §120.1(c)4		Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[6]	
E204	Office space	220		33			DCV	Provided per §120.1(c)4	
							Occ Sensor	Provided per §120.1(c)5	

17	Total System Required Min OA CFM	33	18	Ventilation for this System Complies?	Yes

Table Continued

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06	07
System Name:	FC-E39&FC-E40	System Design OA CFM Air Flow[1]:	490	System Design Transfer Air CFM:	0	Air Filtration per §120.3(c) and §141.0(b)2[2] NA: Not system type specified in Table J footnote 2

08	09		10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3[3]						Exh. Vent. per §120.1(c)4		Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[6]	
E206	Classroom (age 5-18)	1,276			484.88		DCV	Provided per §120.1(c)4	
							Occ Sensor	Provided per §120.1(c)5	

17	Total System Required Min OA CFM	484.88	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06	07
System Name:	FC-E41&FC-E42	System Design OA CFM Air Flow[1]:	490	System Design Transfer Air CFM:	0	Air Filtration per §120.3(c) and §141.0(b)2[2] NA: Not system type specified in Table J footnote 2

08	09		10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3[3]						Exh. Vent. per §120.1(c)4		Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[6]	
E222	Classroom (age 5-18)	1,268			481.84		DCV	Provided per §120.1(c)4	
							Occ Sensor	Provided per §120.1(c)5	

Table Continued

Table Continued

17	Total System Required Min OA CFM	481.84	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06	07
System Name:	FC-E43&FC-E44	System Design OA CFM Air Flow[1]:	480	System Design Transfer Air CFM:	0	Air Filtration per §120.3(c) and §141.0(b)2[2] NA: Not system type specified in Table J footnote 2

08	09		10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3[3]						Exh. Vent. per §120.1(c)4		Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[6]	
E221	Classroom (age 5-18)	1,247			473.86		DCV	Provided per §120.1(c)4	
							Occ Sensor	Provided per §120.1(c)5	

17	Total System Required Min OA CFM	473.86	18	Ventilation for this System Complies?	Yes

Table Continued

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06	07
System Name:	FC-E45	System Design OA CFM Air Flow[1]:	45	System Design Transfer Air CFM:	0	Air Filtration per §120.3(c) and §141.0(b)2[2] NA: Not system type specified in Table J footnote 2

08	09		10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3[3]						Exh. Vent. per §120.1(c)4		Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[6]	
E219	Office space	210			31.5		DCV	Provided per §120.1(c)4	
							Occ Sensor	Provided per §120.1(c)5	

17	Total System Required Min OA CFM	31.5	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06	07
System Name:	FC-E46&FC-E47	System Design OA CFM Air Flow[1]:	480	System Design Transfer Air CFM:	0	Air Filtration per §120.3(c) and §141.0(b)2[2] NA: Not system type specified in Table J footnote 2

08	09		10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3[3]						Exh. Vent. per §120.1(c)4		Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[6]	
E218	Classroom (age 5-18)	1,259			478.42		DCV	Provided per §120.1(c)4	
							Occ Sensor	Provided per §120.1(c)5	

Table Continued

Table Continued

17	Total System Required Min OA CFM	478.42	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06	07
System Name:	FC-E48&FC-E49	System Design OA CFM Air Flow[1]:	530	System Design Transfer Air CFM:	0	Air Filtration per §120.3(c) and §141.0(b)2[2] NA: Not system type specified in Table J footnote 2

08	09		10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3[3]						Exh. Vent. per §120.1(c)4		Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[6]	
E216	Classroom (age 5-18)	1,338			508.44		DCV	Provided per §120.1(c)4	
							Occ Sensor	Provided per §120.1(c)5	

17	Total System Required Min OA CFM	508.44	18	Ventilation for this System Complies?	Yes

Table Continued

Table Continued

17	Total System Required Min OA CFM	33.75	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06	07
System Name:	FC-E53	System Design OA CFM Air Flow[1]:	300	System Design Transfer Air CFM:	0	Air Filtration per §120.3(c) and §141.0(b)2[2] NA: Not system type specified in Table J footnote 2

08	09		10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3[3]						Exh. Vent. per §120.1(c)4		Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[6]	
E202	Corridor	1,807			271.05		DCV	Provided per §120.1(c)4	
							Occ Sensor	Provided per §120.1(c)5	

17	Total System Required Min OA CFM	271.05	18	Ventilation for this System Complies?	Yes

Table Continued

Table Continued

17	Total System Required Min OA CFM	477.66	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06	07
System Name:	FC-E54&FC-E55	System Design OA CFM Air Flow[1]:	490	System Design Transfer Air CFM:	0	Air Filtration per §120.3(c) and §141.0(b)2[2] NA: Not system type specified in Table J footnote 2

08	09		10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3[3]						Exh. Vent. per §120.1(c)4		Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[6]	
E211	Classroom (age 5-18)	1,283			487.54		DCV	Provided per §120.1(c)4	
							Occ Sensor	Provided per §120.1(c)5	

17	Total System Required Min OA CFM	487.54	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06	07
System Name:	FC-E56&FC-E57	System Design OA CFM Air Flow[1]:	480	System Design Transfer Air CFM:	0	Air Filtration per §120.3(c) and §141.0(b)2[2] NA: Not system type specified in Table J footnote 2

08	09		10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3[3]						Exh. Vent. per §120.1(c)4		Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[6]	
E210	Classroom (age 5-18)	1,257			477.66		DCV	Provided per §120.1(c)4	
							Occ Sensor	Provided per §120.1(c)5	

Table Continued

Table Continued

17	Total System Required Min OA CFM	477.66	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06	07
System Name:	FC-E58	System Design OA CFM Air Flow[1]:	45	System Design Transfer Air CFM:	0	Air Filtration per §120.3(c) and §141.0(b)2[2] NA: Not system type specified in Table J footnote 2

08	09		10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3[3]						Exh. Vent. per §120.1(c)4		Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[6]	
E208	Office space	213			31.95		DCV	Provided per §120.1(c)4	
							Occ Sensor	Provided per §120.1(c)5	

17	Total System Required Min OA CFM	31.95	18	Ventilation for this System Complies?	Yes

Table Continued

Table Continued

17	Total System Required Min OA CFM	478.42	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06	07
System Name:	FC-E59&FC-E60	System Design OA CFM Air Flow[1]:	490	System Design Transfer Air CFM:	0	Air Filtration per §120.3(c) and §141.0(b)2[2] NA: Not system type specified in Table J footnote 2

08	09		10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3[3]						Exh. Vent. per §120.1(c)4		Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[6]	
E207	Classroom (age 5-18)	1,283			487.54		DCV	Provided per §120.1(c)4	
							Occ Sensor	Provided per §120.1(c)5	

17	Total System Required Min OA CFM	487.54	18	Ventilation for this System Complies?	Yes

Table Continued

[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 §120.3(c)3i: 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 E30-1-A and E30-1-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 §120.1(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 1,000ft², 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

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):		Duct leakage testing triggered for these systems?	No
11	No	The scope of the project includes only duct systems serving healthcare facilities.	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.	
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:	
		☐ Outdoors	
		☐ In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces	
		☐ In an unconditioned crawlspace	
		☐ In other unconditioned spaces	
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.	
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA6.	
17		Duct system shall be sealed in accordance with the California Mechanical Code.	

M. COOLING TOWERS

This Section Does Not Apply

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: 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/.

YES	NO	Form/Title	Field Inspector Pass	Fail
◉		NRCI-MCH-01-E - Must be submitted for all buildings.	☐	☐

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: 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/.

YES	NO	Form/Title	Field Inspector Pass	Fail
◉		NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*	☐	☐
◯	◉	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".*	☐	☐
◯	◉	NRCA-MCH-04-A Air Distribution Duct Leakage	☐	☐
◯	◉	NRCA-MCH-05-A Air Economizer Controls	☐	☐
◉	◯	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.	☐	☐
◯	◉	NRCA-MCH-07-A Supply Fan Variable Flow Controls	☐	☐
◯	◉	NRCA-MCH-08-A Valve Leakage Test	☐	☐
◯	◉	NRCA-MCH-09-A Supply Water Temperature Reset Controls	☐	☐
◯	◉	NRCA-MCH-10-A Hydronic System Variable Flow Controls	☐	☐
◯	◉	NRCA-MCH-11-A Automatic Demand Shed Controls	☐	☐
◯	◉	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	☐	☐
◯	◉	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	☐	☐
◯	◉	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
◯	◉	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
◯	◉	NRCA-MCH-16-A Supply Air Temperature Reset Controls	☐	☐
◉	◯	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	☐	☐
◉	◯	NRCA-MCH-18 Energy Management Control Systems	☐	☐
◉	◯	NRCA-MCH-19 Occupancy Sensor Controls	☐	☐
◉	◯	NRCA-MCH-20 Multi-Family Ventilation	☐	☐
◯	◉	NRCA-MCH-21 Multi-Family Envelope Leakage	☐	☐

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: 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 completed by a HERS Rater and provided to the building inspector during construction. The field documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/nonresidential_documents/#RCA/.

YES	NO	Form/Title	Field Inspector Pass	Fail
◯	◉	NRCI-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
◯	◉	NRCI-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
◯	◉	NRCI-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
◯	◉	NRCI-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A". any active cells that are left blank will result in non-compliance in Table C.

YES	NO	Form/Title	Field Inspector Pass	Fail	01	02
					Plan sheet or construction document location	
Compliance with Mandatory Measures documented through NCH Mandatory Measures Note Block:					Yes	MP0.1, MP0.2, & MP0.3

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:		Documentation Author Signature:	02/24/2020
Company:	IMEG CORP	Signature Date:	
Address:	901 VIA PIEMONTE, SUITE 400	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	ONTARIO/CA/91764	Phone:	(909) 942-5560

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:	ERIC M. DESPLINTER	Responsible Designer Signature:	02/24/2020
Company:	IMEG CORP	Date Signed:	
Address:	901 VIA PIEMONTE, SUITE 400	License:	M-38688
City/State/Zip:	ONTARIO/CA/91764	Phone:	(909) 942-5565

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards February

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06		07
System Name: AC-F4	System Design OA CFM Air Flow[1]:	355		System Design Transfer Air CFM:	0		Air Filtration per §120.1(c) and §141.0(b)2[4] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people[4]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[4]
MATH F104	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4
								Occ Sensor: N/A: Not required space type

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06		07
System Name: AC-F5	System Design OA CFM Air Flow[1]:	355		System Design Transfer Air CFM:	0		Air Filtration per §120.1(c) and §141.0(b)2[4] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people[4]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[4]
MATH F105	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4
								Occ Sensor: N/A: Not required space type

Table Continued

Table Continued

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06		07
System Name: AC-F6	System Design OA CFM Air Flow[1]:	355		System Design Transfer Air CFM:	0		Air Filtration per §120.1(c) and §141.0(b)2[4] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people[4]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[4]
MATH F106	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4
								Occ Sensor: N/A: Not required space type

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Table Continued

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06		07
System Name: AC-F7	System Design OA CFM Air Flow[1]:	355		System Design Transfer Air CFM:	0		Air Filtration per §120.1(c) and §141.0(b)2[4] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people[4]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[4]
MATH F107	Classroom (age 5-18)	928			352.64			DCV: Provided per §120.1(c)4
								Occ Sensor: N/A: Not required space type

17	Total System Required Min OA CFM	352.64	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06		07
System Name: AC-F8	System Design OA CFM Air Flow[1]:	355		System Design Transfer Air CFM:	0		Air Filtration per §120.1(c) and §141.0(b)2[4] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people[4]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[4]
MATH F108	Classroom (age 5-18)	925			351.5			DCV: Provided per §120.1(c)4
								Occ Sensor: N/A: Not required space type

Table Continued

Table Continued

17	Total System Required Min OA CFM	351.5	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06		07
System Name: AC-F9	System Design OA CFM Air Flow[1]:	355		System Design Transfer Air CFM:	0		Air Filtration per §120.1(c) and §141.0(b)2[4] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people[4]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[4]
MATH F109	Classroom (age 5-18)	930			353.4			DCV: Provided per §120.1(c)4
								Occ Sensor: N/A: Not required space type

17	Total System Required Min OA CFM	353.4	18	Ventilation for this System Complies?	Yes

Table Continued

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06		07
System Name: AC-F10	System Design OA CFM Air Flow[1]:	355		System Design Transfer Air CFM:	0		Air Filtration per §120.1(c) and §141.0(b)2[4] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people[4]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[4]
MATH F111	Classroom (age 5-18)	932			354.16			DCV: Provided per §120.1(c)4
								Occ Sensor: N/A: Not required space type

17	Total System Required Min OA CFM	354.16	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06		07
System Name: AC-F11	System Design OA CFM Air Flow[1]:	355		System Design Transfer Air CFM:	0		Air Filtration per §120.1(c) and §141.0(b)2[4] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people[4]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[4]
MATH F112	Classroom (age 5-18)	931			353.78			DCV: Provided per §120.1(c)4
								Occ Sensor: N/A: Not required space type

Table Continued

Table Continued

17	Total System Required Min OA CFM	353.78	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06		07
System Name: AC-F12	System Design OA CFM Air Flow[1]:	355		System Design Transfer Air CFM:	0		Air Filtration per §120.1(c) and §141.0(b)2[4] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people[4]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[4]
MATH F113	Classroom (age 5-18)	930			353.4			DCV: Provided per §120.1(c)4
								Occ Sensor: N/A: Not required space type

17	Total System Required Min OA CFM	353.4	18	Ventilation for this System Complies?	Yes

Table Continued

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06		07
System Name: FC-F1	System Design OA CFM Air Flow[1]:	260		System Design Transfer Air CFM:	0		Air Filtration per §120.1(c) and §141.0(b)2[4] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people[4]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[4]
WORK EXP F110	Office space	228			34.2			DCV: Provided per §120.1(c)4
								Occ Sensor: Provided per §120.1(c)5

17	Total System Required Min OA CFM	34.2	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)5: 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)1 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 1,000ft², 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

Table Continued

17	Total System Required Min OA CFM	186.6	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06		07
System Name: AC-F15	System Design OA CFM Air Flow[1]:	260		System Design Transfer Air CFM:	0		Air Filtration per §120.1(c) and §141.0(b)2[4] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people[4]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[4]
MATH F116	Corridor	962			144.3			DCV: Provided per §120.1(c)4
								Occ Sensor: Provided per §120.1(c)5

17	Total System Required Min OA CFM	144.3	18	Ventilation for this System Complies?	Yes

Table Continued

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06		07
System Name: FC-F1	System Design OA CFM Air Flow[1]:	260		System Design Transfer Air CFM:	0		Air Filtration per §120.1(c) and §141.0(b)2[4] NA: Not system type specified in Table J footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3[4]				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people[4]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(c)6 & §120.2(e)3[4]
WORK EXP F110	Office space	228			34.2			DCV: Provided per §120.1(c)4
								Occ Sensor: Provided per §120.1(c)5

17	Total System Required Min OA CFM	34.2	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)5: 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)1 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 1,000ft², 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).*

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions. Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):		AC-F1 through AC-F15 and FC-F1	Duct leakage testing triggered for these systems?	No

11	No	The scope of the project includes only duct systems serving healthcare facilities.
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13	No	The space conditioning system serves less than 5,000 ft² of conditioned floor area.
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:
	☐	Outdoors
	☐	In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces
	☐	In an unconditioned crawlspace
	☐	In other unconditioned spaces
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16	Yes	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17		Duct system shall be sealed in accordance with the California Mechanical Code.

M. COOLING TOWERS

This Section Does Not Apply

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

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YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉		NRCI-MCH-01-E - Must be submitted for all buildings.	☐	☐

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: 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/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉	○	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*	☐	☐
○	◉	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".	☐	☐
○	◉	NRCA-MCH-04-A Air Distribution Duct Leakage	☐	☐
○	◉	NRCA-MCH-05-A Air Economizer Controls	☐	☐
◉	○	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.	☐	☐
○	◉	NRCA-MCH-07-A Supply Fan Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-08-A Valve Leakage Test	☐	☐
○	◉	NRCA-MCH-09-A Supply Water Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-10-A Hydronic System Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-11-A Automatic Demand Shed Controls	☐	☐
○	◉	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	☐	☐
○	◉	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	☐	☐
○	◉	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
○	◉	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
○	◉	NRCA-MCH-16-A Supply Air Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	☐	☐
◉	○	NRCA-MCH-18 Energy Management Control Systems	☐	☐
◉	○	NRCA-MCH-19 Occupancy Sensor Controls	☐	☐
◉	○	NRCA-MCH-20 Multi-Family Ventilation	☐	☐
○	◉	NRCA-MCH-21 Multi-Family Envelope Leakage	☐	☐

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: 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 completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
○	◉	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
◉	○	NRCV-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

Table Continued

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

01	02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:	Yes	Plan sheet or construction document location: MP0.1, MP0.2, MP0.3

A. GENERAL INFORMATION

01 Project Location (city)	Oxnard	04 Total Conditioned Floor Area	16,572
02 Climate Zone	6	05 Total Unconditioned Floor Area	831
03 Occupancy Types within Project:		06 # of Stories (Habitable Above Grade)	1

☐ Office (B) ☐ Retail (M) ☐ Non-refrigerated Warehouse (S)
☐ Hotel/ Motel Guest Rooms (R-1) ☑ School (F) ☐ Healthcare Facility (H)
☐ High-Rise Residential (R-2/R-3) ☑ Relocatable Class Bldg (E) ☑ Other (Write-In) GYMNASIUM

[1] HOTTHOTS: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html

B. PROJECT SCOPE

Table Instructions: Include any 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.

My project consists of (check all that apply)

01 Air System(s)	02 Wet System Components	03 Dry System Components
☑ Heating Air System	☐ Water Economizer	☑ Air Economizer
☑ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ Hydronic System Piping	☐ Fan Systems
☑ Mechanical Controls	☐ Cooling Towers	☑ Ductwork
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D for guidance.

01		02		03		04		05		06		07		08		09
System Summary §110.1, §110.2, §140.4	AND	Pumps §140.4(k)	AND	Fans/ Economizers §140.4(l), §140.4(m)	AND	System Controls §110.2, §120.2, §140.4(f)	AND	Ventilation §120.1	AND	Terminal Box Controls §140.4(d)	AND	Distribution §120.5, §140.4(l)	AND	Cooling Towers §110.2(e)3		**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	Yes	AND	Yes	AND	Yes	AND	**COMPLIES**
																Mandatory Measures Compliance [See Table Q for Details]		**COMPLIES**

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)5ii for all nonresidential, high-rise residential and hotel/motel 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, a complete set of outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01

STATE OF CALIFORNIA
Mechanical Systems
MECH-MCH-E (Created 6/20) CALIFORNIA ENERGY COMMISSION NRCC-MCH-E

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: Oxnard High School - Building G Report Page: Page 11 of 13
Project Address: 3400 W. Gonzales Rd, Oxnard, CA 93036 Date Prepared: 2/12/2020

F. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: 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 completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field Inspector Pass	Fail
◯	◉	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
◯	◉	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
◯	◉	NRCV-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
◯	◉	NRCV-MCH-N-1 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

STATE OF CALIFORNIA
Mechanical Systems
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CERTIFICATE OF COMPLIANCE NRCC-MCH-E
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Project Address: 3400 W. Gonzales Rd, Oxnard, CA 93036 Date Prepared: 2/12/2020

G. MANDATORY MEASURES DOCUMENTATION LOCATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

01	02
	Plan sheet or construction document location
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:	Yes	MP0.1, MP0.2, & MP0.3

STATE OF CALIFORNIA
Mechanical Systems
MECH-MCH-E (Created 6/20) CALIFORNIA ENERGY COMMISSION NRCC-MCH-E

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: Oxnard High School - Building G Report Page: Page 13 of 13
Project Address: 3400 W. Gonzales Rd, Oxnard, CA 93036 Date Prepared: 2/12/2020

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Jorge Ibarra	Documentation Author Signature:
Company: IMEG Corp.	Signature Date: 2/12/2020
Address: 901 Via Piemonte Suite 400	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Ontario/CA/91764	Phone: (909) 942-5560

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: Eric M. DeSplinter	Responsible Designer Signature:
Company : IMEG Corp.	Date Signed: 2/12/2020
Address: 901 Via Piemonte Suite 400	License: M-38688
City/State/Zip: Ontario/CA/91764	Phone: (909) 942-5565

STATE OF CALIFORNIA
Mechanical Systems
MECH-MCH-E (Created 6/20) CALIFORNIA ENERGY COMMISSION NRCC-MCH-E

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: OXNARD HIGHSCHOOL BUILDING H Report Page: Page 2 of 16
Project Address: 3400 W. GONZALES RD, OXNARD, CA 93036 Date Prepared: 02/12/2020

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 alternations.

Project Name:	OXNARD HIGHSCHOOL BUILDING H	Report Page:	Page 1 of 17
Project Address:	3400 W. GONZALES RD, OXNARD, CA 93036	Date Prepared:	02/12/2020

A. GENERAL INFORMATION

01 Project Location (city)	Oxnard	04 Total Conditioned Floor Area	15,057
02 Climate Zone	8	05 Total Unconditioned Floor Area	1,006
03 Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade)	1

☐ Office (B) ☐ Retail (M) ☐ Non-refrigerated Warehouse (S)
☐ Hotel/ Motel Guest Rooms (R-1) ☑ School (E) ☐ Healthcare Facility (H)
☐ High-Rise Residential (R-2/R-3) ☐ Relocatable Class Bldg (E) ☐ Other (Write In): GYMNASIUM

** FOOTNOTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html*

B. PROJECT SCOPE

Table Instructions: Include any 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 alternations.

01 Air System(s)	02 Wet System Components	03 Dry System Components
☑ Heating Air System	☐ Water Economizer	☑ Air Economizer
☑ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ Hydronic System Piping	☐ Fan Systems
☑ Mechanical Controls	☐ Cooling Towers	☑ Ductwork
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01 System Summary	AND	02 Pumps	AND	03 Fans/ Economizers	AND	04 System Controls	AND	05 Ventilation	AND	06 Terminal Box Controls	AND	07 Distribution	AND	08 Cooling Towers	AND	09 Compliance Results
§120.1, §120.2, §140.4		§140.4(k)		§140.4(c), §140.4(d)		§120.2, §120.5, §140.4(f)		§120.1		§140.4(d)		§120.3, §140.4(c)		§120.2(h)3		
(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	Yes	AND		AND	**COMPLIES**
																COMPLIES

Mandatory Measures Compliance (See Table G for Details)

STATE OF CALIFORNIA
Mechanical Systems
MECH-MCH-E (Created 6/20) CALIFORNIA ENERGY COMMISSION NRCC-MCH-E

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: OXNARD HIGHSCHOOL BUILDING H Report Page: Page 3 of 16
Project Address: 3400 W. GONZALES RD, OXNARD, CA 93036 Date Prepared: 02/12/2020

Dry System Equipment Efficiency (Includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (Btu/h) §140.4 (a&b)						
				Heating Output[1,2]			Cooling Output[1,2]		Load Calculations[1,2]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[1] §140.4(a)	Sensible 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)
DOAS-H3	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	103	103		36.06	89	62.3	35.4

[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). 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).

D. EXCEPTIONAL CONDITIONS

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

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

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

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alternations.

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

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (Btu/h) §140.4 (a&b)						
				Heating Output[1,2]			Cooling Output[1,2]		Load Calculations[1,2]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[1] §140.4(a)	Sensible 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)
AC-H1	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	120	120		87.2	106	56.6	68.9
AC-H2	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	120	120		87.2	106	56.6	68.9
AC-H3	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	59	59		61.8	74	35.8	50.2
AC-H4	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	188.9	188.9		124.9	125	17.17	91.9

STATE OF CALIFORNIA
Mechanical Systems
MECH-MCH-E (Created 6/20) CALIFORNIA ENERGY COMMISSION NRCC-MCH-E

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: OXNARD HIGHSCHOOL BUILDING H Report Page: Page 4 of 16
Project Address: 3400 W. GONZALES RD, OXNARD, CA 93036 Date Prepared: 02/12/2020

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

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	Min Efficiency Required per Tables 110.1/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.1/ Title 20	Design Efficiency
AC-H1	≥65,000 and <135,000				82	EER	11.2	13.2
						IEER	12.9	12.9
AC-H2	≥135,000 and <240,000				81	EER	11.2	13.2
						IEER	12.9	19.8
AC-H3	≥65,000 and <135,000				81	EER	11.2	13
						IEER	12.9	20.3
AC-H4	≥135,000 and <240,000				81	EER	11	11.5
						IEER	12.4	12.7
AC-H5	≥135,000 and <240,000				81	EER	11	11.5
						IEER	12.4	12.7
OU-H1	≥135,000 and <240,000	47°Fdb/43°Fwb OSA	COP	3.2	3.6	EER	10.6	12.2
						IEER	13.9	25.9
FC-H1	≥65,000 and <135,000					EER	11.2	12.5
						IEER	15.5	25.9
FC-H2	<65,000					SEER	13	13
FC-H3	<65,000					SEER	13	13
FC-H4	<65,000					SEER	13	13

G. PUMPS

This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS

Table Instructions: Complete the following Table for fan systems to demonstrate compliance with prescriptive requirements found in §140.4(c), §140.4(e) and §140.4(m). First document the system details, then add fans within that system to document compliance with fan power requirements. Fan systems serving healthcare facilities, or those serving only process loads, are exempt from these requirements and do not need to be included in Table H.

System Name:	AC-H1	Economizer?	Differential Enthalpy	System Controls:	Designed per §140.4(e) and (m)	System Fan Type:	Variable Air Volume

01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit*	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	
						Device	Design Airflow through Device (CFM)
AC-H1	Supply	1	8,000	Nameplate HP	5	Calculated Adjustment (in H2O)	

Total System Design Supply Airflow (CFM):	8,000	Total System Design (BHP):	5	**Maximum System Fan Power (BHP):**

** FOOTNOTE: Computer room economizers must meet requirements of §140.9(a) and will be documented on the NRCC-PRC-E document.*
** The unit used for HP must be consistent for all fans within a system.*

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (n) or §141.0(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 (ft²)	Thermostats §110.2(k) & (n)¹, §120.2(a) or §141.0(b)2ii	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(h)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
AC-H1	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-H2	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
DOAS-H1	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
DOAS-H2	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows

STATE OF CALIFORNIA
Mechanical Systems
MECH-MCH-E (Created 6/20) CALIFORNIA ENERGY COMMISSION NRCC-MCH-E

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: OXNARD HIGHSCHOOL BUILDING H Report Page: Page 5 of 16
Project Address: 3400 W. GONZALES RD, OXNARD, CA 93036 Date Prepared: 02/12/2020

01	02	03	04	05	06	07	08	09
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit*	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B		
						Device	Design Airflow through Device (CFM)	
AC-H2	Supply	1	8,000	Nameplate HP	5	Calculated Adjustment (in H2O)		

Total System Design Supply Airflow (CFM):	8,000	Total System Design (BHP):	5	**Maximum System Fan Power (BHP):**

** 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.*
** NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*
EX: System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d): EXCEPTION 1 to §140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(i)3§ for all nonresidential, high-rise residential and hotel/motel 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.

☐	Check this box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
☑	Check this box if the project includes new or altered high-rise residential dwelling units.
☐	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

K. TERMINAL BOX CONTROLS

This Section Does Not Apply

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Testing

The answers to the questions below apply to the following duct system(s):	ALL DUCTWORK	Duct leakage testing triggered for these systems?	No

11	No	The scope of the project includes only duct systems serving healthcare facilities.
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13	No	The space conditioning system serves less than 1,000 ft² of conditioned floor area.
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:
		☐ Outdoors
		☐ In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces
		☐ In an unconditioned crawlspace
		☐ In other unconditioned spaces
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16	Yes	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17		Duct system shall be sealed in accordance with the California Mechanical Code.

M. COOLING TOWERS

This Section Does Not Apply

STATE OF CALIFORNIA
Mechanical Systems
MECH-MCH-E (Created 6/20) CALIFORNIA ENERGY COMMISSION NRCC-MCH-E

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: OXNARD HIGHSCHOOL BUILDING H Report Page: Page 6 of 16
Project Address: 3400 W. GONZALES RD, OXNARD, CA 93036 Date Prepared: 02/12/2020

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06		07
System Name:	AC-H1	System Design OA CFM Air Flow*:	1,880	System Design Transfer Air CFM:	0	Air Filtration per §120.1(c) and §141.0(b)2ii*: NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*					Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(d)3, §120.1(d)5 & §120.2(e)3*
H101	Gym/ sports arena (play area)	3,690.5			1,845.25	1,845.25	1,880	DCV: Provided per §120.1(c)4 Occ Sensor: Provided per §120.1(d)5

17	Total System Required Min OA CFM	1,845.25	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06		07
System Name:	AC-H2	System Design OA CFM Air Flow*:	1,880	System Design Transfer Air CFM:	0	Air Filtration per §120.1(c) and §141.0(b)2ii*: NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*					Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(d)3, §120.1(d)5 & §120.2(e)3*
H101	Gym/ sports arena (play area)	3,690.5			1,845.25	1,845.25	1,880	DCV: Provided per §120.1(d)5 Occ Sensor: Provided per §120.1(d)5

STATE OF CALIFORNIA
Mechanical Systems
MECH-MCH-E (Created 6/20) CALIFORNIA ENERGY COMMISSION NRCC-MCH-E

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: OXNARD HIGHSCHOOL BUILDING H Report Page: Page 7 of 16
Project Address: 3400 W. GONZALES RD, OXNARD, CA 93036 Date Prepared: 02/12/2020

Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06		07
System Name:	AC-H1	System Design OA CFM Air Flow*:	1,880	System Design Transfer Air CFM:	0	Air Filtration per §120.1(c) and §141.0(b)2ii*: NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*					Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(d)3, §120.1(d)5 & §120.2(e)3*
H101	Gym/ sports arena (play area)	3,690.5			1,845.25	1,845.25	1,880	DCV: Provided per §120.1(d)5 Occ Sensor: Provided per §120.1(d)5

17	Total System Required Min OA CFM	1,845.25	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06		07
System Name:	AC-H2	System Design OA CFM Air Flow*:	1,880	System Design Transfer Air CFM:	0	Air Filtration per §120.1(c) and §141.0(b)2ii*: NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*					Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(d)3, §120.1(d)5 & §120.2(e)3*
H101	Gym/ sports arena (play area)	3,690.5			1,845.25	1,845.25	1,880	DCV: Provided per §120.1(d)5 Occ Sensor: Provided per §120.1(d)5

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MECH-MCH-E (Created 6/20) CALIFORNIA ENERGY COMMISSION NRCC-MCH-E

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01	02	03	04	05	06	07	08	09
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit*	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B		
						Device	Design Airflow through Device (CFM)	
AC-H2	Supply	1	8,000	Nameplate HP	5	Calculated Adjustment (in H2O)		

Total System Design Supply Airflow (CFM):	8,000	Total System Design (BHP):	5	**Maximum System Fan Power (BHP):**

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (n) or §141.0(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 (ft²)	Thermostats §110.2(k) & (n)¹, §120.2(a) or §141.0(b)2ii	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(h)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
AC-H1	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
AC-H2	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
DOAS-H1	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
DOAS-H2	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows

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01	02	03	04	05	06	07	08	09
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit*	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B		
						Device	Design Airflow through Device (CFM)	
AC-H2	Supply	1	8,000	Nameplate HP	5	Calculated Adjustment (in H2O)		

Total System Design Supply Airflow (CFM):	8,000	Total System Design (BHP):	5	**Maximum System Fan Power (BHP):**

** FOOTNOTE: Computer room economizers must meet requirements of §140.9(a) and will be documented on the NRCC-PRC-E document.*
** The unit used for HP must be consistent for all fans within a system.*

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(i)3§ for all nonresidential, high-rise residential and hotel/motel 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.

☐	Check this box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
☑	Check this box if the project includes new or altered high-rise residential dwelling units.
☐	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

K. TERMINAL BOX CONTROLS

This Section Does Not Apply

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Testing

The answers to the questions below apply to the following duct system(s):	ALL DUCTWORK	Duct leakage testing triggered for these systems?	No

11	No	The scope of the project includes only duct systems serving healthcare facilities.
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13	No	The space conditioning system serves less than 1,000 ft² of conditioned floor area.
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:
		☐ Outdoors
		☐ In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces
		☐ In an unconditioned crawlspace
		☐ In other unconditioned spaces
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16	Yes	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17		Duct system shall be sealed in accordance with the California Mechanical Code.

M. COOLING TOWERS

This Section Does Not Apply

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Mechanical Systems
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Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04		05		06		07
System Name:	DOAS-H3	System Design OA CFM Air Flow*:	3,200	System Design Transfer Air CFM:	0	Air Filtration per §120.1(c) and §141.0(b)2ii*: NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3*					Exh. Vent. per §120.1(c)4		
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showers/baths/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occup

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01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & §[ ]; §120.2(a) or §141.0(b)2I	Shut Off Controls §120.2(e)	Isolation Zone Controls §120.2(e)	Demand Response §110.12 and §120.2(h)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(e)
AC-J5	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-J1	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-J2	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-J3	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows
FC-J4	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA: Single Zone	NA: No operable windows

*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.
* NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
EX: System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)*

I. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)1iB for all nonresidential, high-rise residential and hotel/motel occupancies. For alternations, 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 includes new or altered high-rise residential dwelling units.
03	☐	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

Table Continued

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Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: AC-J1	System Design OA CFM Air Flow*:	925			System Design Transfer Air CFM:		0	Air Filtration per §120.1(c) and §141.0(b)2I* NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
Mechanical Ventilation Required per §120.1(c)3i*					Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3*
J101	Cafeteria/ fast-food dining	1,850			925			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

17	Total System Required Min OA CFM	925	18	Ventilation for this System Complies?	Yes

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: AC-J2	System Design OA CFM Air Flow*:	925			System Design Transfer Air CFM:		0	Air Filtration per §120.1(c) and §141.0(b)2I* NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
Mechanical Ventilation Required per §120.1(c)3i*					Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3*
J101	Cafeteria/ fast-food dining	1,850			925			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

17	Total System Required Min OA CFM	925	18	Ventilation for this System Complies?	Yes

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Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: AC-J3	System Design OA CFM Air Flow*:	590			System Design Transfer Air CFM:		0	Air Filtration per §120.1(c) and §141.0(b)2I* NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
Mechanical Ventilation Required per §120.1(c)3i*					Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(c)5, §120.1(d)5 & §120.2(e)3*
J102	Cafeteria/ fast-food dining	1,180			590			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

17	Total System Required Min OA CFM	590	18	Ventilation for this System Complies?	Yes

Table Continued

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Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: AC-J4	System Design OA CFM Air Flow*:	4,900			System Design Transfer Air CFM:		0	Air Filtration per §120.1(c) and §141.0(b)2I* NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
Mechanical Ventilation Required per §120.1(c)3i*					Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(d)5, §120.1(d)5 & §120.2(e)3*
J103	Kitchen (cooking)	1,867			280.05	1,306.9	5,200	DCV: NA; Not required per §120.1(d)3 Occ Sensor: NA: Not required space type
J110	Office space	98			14.7			DCV: NA; Not required per §120.1(d)3 Occ Sensor: NA: Not required space type
J108	All others	557			83.55			DCV: NA; Not required per §120.1(d)3 Occ Sensor: NA: Not required space type

17	Total System Required Min OA CFM	378.3	18	Ventilation for this System Complies?	Yes

Table Continued

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Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: AC-J5	System Design OA CFM Air Flow*:	4,900			System Design Transfer Air CFM:		0	Air Filtration per §120.1(c) and §141.0(b)2I* NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
Mechanical Ventilation Required per §120.1(c)3i*					Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(d)5, §120.1(d)5 & §120.2(e)3*
J103	Kitchen (cooking)	754			113.1	527.8	5,000	DCV: NA; Not required per §120.1(d)3 Occ Sensor: NA: Not required space type
J111 & J112	Locker room (all others)	294			44.1	73.5	500	DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5
J116	Janitor closet	42			6.3	42	100	DCV: NA; Not required per §120.1(d)3 Occ Sensor: NA: Not required space type

17	Total System Required Min OA CFM	163.5	18	Ventilation for this System Complies?	Yes

Table Continued

*FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.
* 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.
* Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.
* See Standards Tables 130.1-A and 130.1-B
* For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.
* §120.2(e)2 requires systems serving rooms that are required by §130.1(c) to have 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 1,000ft², 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).
* Uniform Code Mandatory Requirements; the most stringent code requirement takes precedence.*

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J. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

01	02
Form/Title	Plan sheet or construction document location
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:	MP0.1, MP2.2, & MP3.1

K. TERMINAL BOX CONTROLS

This Section Does Not Apply

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):		ALL DUCTWORK	Duct leakage testing triggered for these systems?	No
11	No	The scope of the project includes only duct systems serving healthcare facilities.		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	No	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:		
		☐ Outdoors		
		☐ In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)2B or if the roof has fixed vents or openings to the outside/ unconditioned spaces		
		☐ In an unconditioned crawlspace		
		☐ In other unconditioned spaces		
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	Yes	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		Duct system shall be sealed in accordance with the California Mechanical Code.		

M. COOLING TOWERS

This Section Does Not Apply

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: 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 F. 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/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉		NRCI-MCH-01-E - Must be submitted for all buildings.	☐	☐

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: 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 F. 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/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉	○	NRCA-ENV-02-A Outdoor Air must be submitted for all newly installed HVAC units *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing is required.*	☐	☐
○	◉	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".*	☐	☐
○	◉	NRCA-MCH-04-A Air Distribution Duct Leakage	☐	☐
◉	○	NRCA-MCH-05-A Air Economizer Controls	☐	☐
◉	○	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.	☐	☐
○	◉	NRCA-MCH-07-A Supply Fan Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-08-A Valve Leakage Test	☐	☐
○	◉	NRCA-MCH-09-A Supply Water Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-10-A Hydronic System Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-11-A Automatic Demand Shed Controls	☐	☐
◉	○	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	☐	☐
○	◉	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	☐	☐
○	◉	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
○	◉	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
○	◉	NRCA-MCH-16-A Supply Air Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	☐	☐
◉	○	NRCA-MCH-18 Energy Management Control Systems	☐	☐
◉	○	NRCA-MCH-19 Occupancy Sensor Controls	☐	☐
○	◉	NRCA-MCH-20 Multi-Family Ventilation	☐	☐
○	◉	NRCA-MCH-21 Multi-Family Envelope Leakage	☐	☐

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D. EXCEPTIONAL CONDITIONS

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

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

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

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §120.1 and §120.2(e) and prescriptive requirements found in §140.4(k), §140.4(l) and §140.4(f) or §141.0(b)2I for alternations.

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

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (Btu/h) §140.4 (a&b)						
				Heating Output*,†		Cooling Output*,†		Load Calculations*,†		
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available* §140.4(a)	Sensible 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)
AC-K1	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		48.3	63	30.9	42.6
AC-K2	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	59	59		59.8	73	40	46.7
AC-K3	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		37.1	50	25.5	30.2
AC-K4	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		48.3	63	43.9	42.1

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Table Continued

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

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (Btu/h) §140.4 (a&b)						
				Heating Output*,†		Cooling Output*,†		Load Calculations*,†		
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available* §140.4(a)	Sensible 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)
AC-K1	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		48.3	63	30.9	42.6
AC-K2	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	59	59		59.8	73	40	46.7
AC-K3	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		37.1	50	25.5	30.2
AC-K4	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		48.3	63	43.9	42.1

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Table Continued

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

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (Btu/h) §140.4 (a&b)						
				Heating Output*,†		Cooling Output*,†		Load Calculations*,†		
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available* §140.4(a)	Sensible 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)
DOAS-K2	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	49	49		48.3	63	30.9	42.6
DOAS-K3	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	168	168		78.29	78.29	22.6	26.4

*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). Healthcare facilities are exempted.
† If it is common practice to show rated output capacity on the drawing equipment schedule. Sensible cooling output comes from specification sheet tables.
‡ Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).
§ Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).*

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

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	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency
AC-K1	<65,000				B1	SEER	13	16
AC-K2	≥65,000 and <135,000				B2	IEER	12.9	20.3
AC-K3	<65,000				B1	SEER	13	16
AC-K4	<65,000				B1	SEER	13	16
FC-K1	<65,000				3.2	SEER	13	20
FC-K2	<65,000				3.2	SEER	13	20
FC-K3	<65,000				3.2	SEER	13	20

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Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: AC-K3	System Design OA CFM Air Flow*:	510			System Design Transfer Air CFM:		0	Air Filtration per §120.1(c) and §141.0(b)2I* NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
Mechanical Ventilation Required per §120.1(c)3i*					Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(d)5, §120.1(d)5 & §120.2(e)3*
K101	Classroom (age 5-18)	1,203			457.14			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5
K1-2 & K128	Office space	331			49.65			DCV: NA; Not required per §120.1(d)3 Occ Sensor: NA: Not required space type

17	Total System Required Min OA CFM	506.79	18	Ventilation for this System Complies?	Yes

Table Continued

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Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: AC-K2	System Design OA CFM Air Flow*:	950			System Design Transfer Air CFM:		0	Air Filtration per §120.1(c) and §141.0(b)2I* NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
Mechanical Ventilation Required per §120.1(c)3i*					Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(d)5, §120.1(d)5 & §120.2(e)3*
K117	Art Classroom	1,358		203.7	950.6	0		DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5
K118,K119,K121	All others	605		90.75				DCV: NA; Not required per §120.1(d)3 Occ Sensor: NA: Not required space type
K120	Office space	152		22.8				DCV: NA; Not required per §120.1(d)3 Occ Sensor: NA: Not required space type

17	Total System Required Min OA CFM	317.25	18	Ventilation for this System Complies?	Yes

Table Continued

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Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: AC-K4	System Design OA CFM Air Flow*:	600			System Design Transfer Air CFM:		0	Air Filtration per §120.1(c) and §141.0(b)2I* NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
Mechanical Ventilation Required per §120.1(c)3i*					Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(d)5, §120.1(d)5 & §120.2(e)3*
K124	Classroom (age 5-18)	1,456			553.28			DCV: Provided per §120.1(d)4 Occ Sensor: Provided per §120.1(d)5

17	Total System Required Min OA CFM	512.62	18	Ventilation for this System Complies?	Yes

Table Continued

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Table Continued

Nonresidential and Hotel/ Motel Ventilation Systems

04	05				06			07
System Name: DOAS-K1	System Design OA CFM Air Flow*:	3,000			System Design Transfer Air CFM:		0	Air Filtration per §120.1(c) and §141.0(b)2I* NA: Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
Mechanical Ventilation Required per §120.1(c)3i*					Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(d)5, §120.1(d)5 & §120.2(e)3*
K103 & K104	All others	1,146			171.9			DCV: NA; Not required per §120.1(d)3 Occ Sensor: NA: Not required space type

| 17 | Total System Required Min OA CFM | 171.9 | 18 | Vent

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◉	○	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*	☐	☐
○	◉	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".	☐	☐
○	◉	NRCA-MCH-04-A Air Distribution Duct Leakage	☐	☐
◉	○	NRCA-MCH-05-A Air Economizer Controls	☐	☐
◉	○	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand-controlled ventilation (refer to §120.1(c)6) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.	☐	☐
○	◉	NRCA-MCH-07-A Supply Fan Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-08-A Valve Leakage Test	☐	☐
○	◉	NRCA-MCH-09-A Supply Water Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-10-A Hydronic System Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-11-A Automatic Demand Shed Controls	☐	☐
◉	○	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	☐	☐
◉	○	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	☐	☐
○	◉	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
○	◉	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
○	◉	NRCA-MCH-16-A Supply Air Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	☐	☐
◉	○	NRCA-MCH-18 Energy Management Control Systems	☐	☐
◉	○	NRCA-MCH-19 Occupancy Sensor Controls	☐	☐
◉	○	NRCA-MCH-20 Multi-Family Ventilation	☐	☐
○	◉	NRCA-MCH-21 Multi-Family Envelope Leakage	☐	☐

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P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: 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 completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
○	◉	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

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Q. MANDATORY MEASURES DOCUMENTATION LOCATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

01	02
	Plan sheet or construction document location
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:	Yes — MP0.1, MP0.2, & MP0.3

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	SEOKHOON (BRIAN) PARK	Documentation Author Signature:	
Company:	IMEG CORP	Signature Date:	02/24/2020
Address:	901 VIA PIEMONTE, SUITE 400	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	ONTARIO/CA/91764	Phone:	(909) 942-5560

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:	ERIC M. DESPINTER	Responsible Designer Signature:	
Company:	IMEG CORP	Date Signed:	02/24/2020
Address:	901 VIA PIEMONTE, SUITE 400	License:	M-38688
City/State/Zip:	ONTARIO/CA/91764	Phone:	(909) 942-5565

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CERTIFICATE OF COMPLIANCE — NRCC-MCH-E
Project Name: Oxnard High School - Building N — Report Page: Page 1 of 10
Project Address: 3400 W. Gonzales Rd, Oxnard, CA 93036 — Date Prepared: 01/24/2020

A. GENERAL INFORMATION

01	Project Location (city)	OXNARD	04 Total Conditioned Floor Area: 195
02	Climate Zone	6	05 Total Unconditioned Floor Area: 0
03	Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade): 1

☐ Office (B) ☐ Retail (M) ☐ Non-refrigerated Warehouse (S)
☐ Hotel/ Motel Guest Rooms (R-1) ☑ School (F) ☐ Healthcare Facility (H)
☐ High-Rise Residential (R-2/R-3) ☐ Relocatable Class Bldg (E) ☐ Other (Write In):

ADDITIONTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html

B. PROJECT SCOPE

Table Instructions: Include any mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4(e §141.0(b)2 for alterations.

My project consists of (check all that apply)

01 Air System(s)	02 Wet System Components	03 Dry System Components
☑ Heating Air System	☐ Water Economizer	☐ Air Economizer
☑ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ Hydronic System Piping	☐ Fan Systems
☑ Mechanical Controls	☐ Cooling Towers	☑ Ductwork
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01 System Type		02 Pumps §140.4(n)		03 Fans/ Economizers §140.4(e), §140.4(e)		04 System Controls §120.1, §110.2, §140.4		05 Ventilation §160.1		06 Terminal Box Controls §120.1, §140.4(f)		07 Distribution §120.1, §110.2(c)1		08 Cooling Towers §110.2(e)1		09 Compliance Results
Systems	AND	Pumps	AND	Economizers	AND	System Controls	AND	Ventilation	AND	Terminal Box Controls	AND	Distribution	AND	Cooling Towers	AND	
(See Table F)	Yes	(See Table G)	Yes	(See Table H)	Yes	(See Table I)	Yes	(See Table J)	Yes	(See Table K)	Yes	(See Table L)	Yes	(See Table M)	Yes	COMPLIES
																Mandatory Measures Compliance (See Table Q for Details)	**COMPLIES**

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D. EXCEPTIONAL CONDITIONS

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

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

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

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS).

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(b), §140.4(d) and §141.0(b) or §141.0(b)2 for alterations.

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

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (Btu/h) §140.4 (a&b)						
				Heating Output[1,2]			Cooling Output[1,3]		Load Calculations[4]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[5] §140.4(a)	Sensible Per Design (dBtu/h)	Rated (dBtu/h)	Sizes Heating Output (dBtu/h)	Sensible Per Design (dBtu/h)	Rated (dBtu/h)	Total Sensible Load (dBtu/h)	Total Sensible Cooling Load (dBtu/h)
CU-N1	Unitary heat pump	Air cooled, split (1 phase)	Yes	12	12	12	12	9.2	11.4	

[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). Healthcare facilities are exempt.
[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).
Table Continued

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◉	○	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*	☐	☐
○	◉	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".	☐	☐
○	◉	NRCA-MCH-04-A Air Distribution Duct Leakage	☐	☐
◉	○	NRCA-MCH-05-A Air Economizer Controls	☐	☐
◉	○	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand-controlled ventilation (refer to §120.1(c)6) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.	☐	☐
○	◉	NRCA-MCH-07-A Supply Fan Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-08-A Valve Leakage Test	☐	☐
○	◉	NRCA-MCH-09-A Supply Water Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-10-A Hydronic System Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-11-A Automatic Demand Shed Controls	☐	☐
○	◉	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	☐	☐
○	◉	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	☐	☐
○	◉	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
○	◉	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
○	◉	NRCA-MCH-16-A Supply Air Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	☐	☐
◉	○	NRCA-MCH-18 Energy Management Control Systems	☐	☐
◉	○	NRCA-MCH-19 Occupancy Sensor Controls	☐	☐
◉	○	NRCA-MCH-20 Multi-Family Ventilation	☐	☐
○	◉	NRCA-MCH-21 Multi-Family Envelope Leakage	☐	☐

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Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

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	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency
CU-N1	<65,000		HSPF	8.2	10.6	SEER	14	19.5

G. PUMPS

This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS

This Section Does Not Apply

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (n) or requirements in §141.0(b)2f for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §120.2(k)1& 3, §120.2(n) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(h)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
FC-N1/CU-N1	single zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	NA- Single Zone	NA: No operable windows

[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.
** NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*
EX: System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d) EXCEPTION 1 to §140.4(f)

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J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)3B for all nonresidential, high-rise residential and hotel/motel 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 includes new or altered high-rise residential dwelling units.
03	☐	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

Nonresidential and Hotel/ Motel Ventilation Systems

04	05		06		07
System Name: CU-N1	System Design OA CFM Air Flow*:	30	System Design Space Air CFM:	0	Air Filtration per §120.1(c) and §141.0(b)2I*: NA. Not system type specified in Table 1 footnote 2

08	09	10	11	12	13	14	15	16
	Mechanical Ventilation Required per §120.1(c)3				Exh. Vent. per §120.1(c)4			
Space Name or Item Tag	Occupancy Type*	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people*	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	
OFFICE	Office space	195			29.25			DCV or Occupant Sensor Controls per §120.1(d)3, §120.1(d)5 & §120.2(e)3*
								DCV
								Occ Sensor
								Provided per §120.1(d)5

17	Total System Required Min OA CFM:	29.25	18	Ventilation for this System Complies?	Yes

** FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.*
** Air filtration requirements apply to the following three system types per §120.1(c)5b: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems supplying outdoor air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.*
** Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.*
** See Nonresdi Tables 120.1-A and 120.1-B*
** For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.*
** §120.2(e)3 requires systems serving rooms that are required by §120.1(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 1,000ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless exempted by*

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K. TERMINAL BOX CONTROLS

This Section Does Not Apply

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):		Duct leakage testing triggered for these systems?	No
11	No	The scope of the project includes only duct systems serving healthcare facilities.	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.	
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:	
	☐	Outdoors	
	☐	In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces	
	☐	In an unconditioned crawlspace	
	☐	In other unconditioned spaces	
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.	
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA7.	
17		Duct system shall be sealed in accordance with the California Mechanical Code.	

M. COOLING TOWERS

This Section Does Not Apply

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◉	○	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*	☐	☐
○	◉	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".	☐	☐
○	◉	NRCA-MCH-04-A Air Distribution Duct Leakage	☐	☐
◉	○	NRCA-MCH-05-A Air Economizer Controls	☐	☐
◉	○	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand-controlled ventilation (refer to §120.1(c)6) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.	☐	☐
○	◉	NRCA-MCH-07-A Supply Fan Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-08-A Valve Leakage Test	☐	☐
○	◉	NRCA-MCH-09-A Supply Water Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-10-A Hydronic System Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-11-A Automatic Demand Shed Controls	☐	☐
◉	○	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	☐	☐
◉	○	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	☐	☐
○	◉	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
○	◉	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
○	◉	NRCA-MCH-16-A Supply Air Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	☐	☐
◉	○	NRCA-MCH-18 Energy Management Control Systems	☐	☐
◉	○	NRCA-MCH-19 Occupancy Sensor Controls	☐	☐
◉	○	NRCA-MCH-20 Multi-Family Ventilation	☐	☐
○	◉	NRCA-MCH-21 Multi-Family Envelope Leakage	☐	☐

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P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: 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 completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
○	◉	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

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Q. MANDATORY MEASURES DOCUMENTATION LOCATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

01	02
	Plan sheet or construction document location
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:	Yes — MP0.1 & MP0.2

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:		Documentation Author Signature:	
Company:	IMEG CORP	Signature Date:	02/24/2020
Address:	901 VIA PIEMONTE, SUITE 400	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	ONTARIO/CA/91764	Phone:	(909) 942-5560

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:	ERIC M. DESPINTER	Responsible Designer Signature:	
Company:	IMEG CORP	Date Signed:	2/25/2020
Address:	901 VIA PIEMONTE, SUITE 400	License:	M-38688
City/State/Zip:	ONTARIO/CA/91764	Phone:	(909) 942-5565

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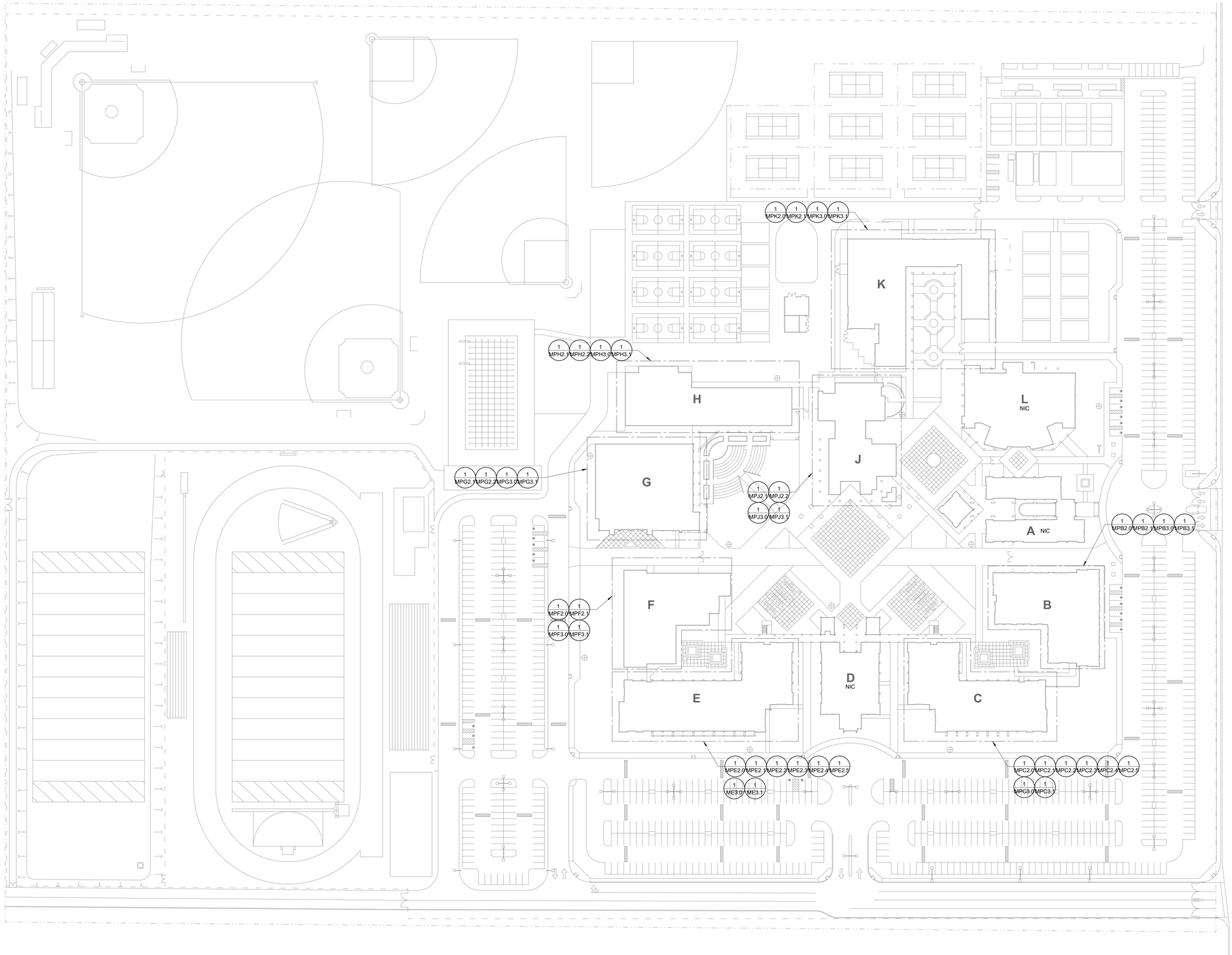

SITE PLAN | 1" = 60'-0" | 1

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38688
Exp. 12/31/21
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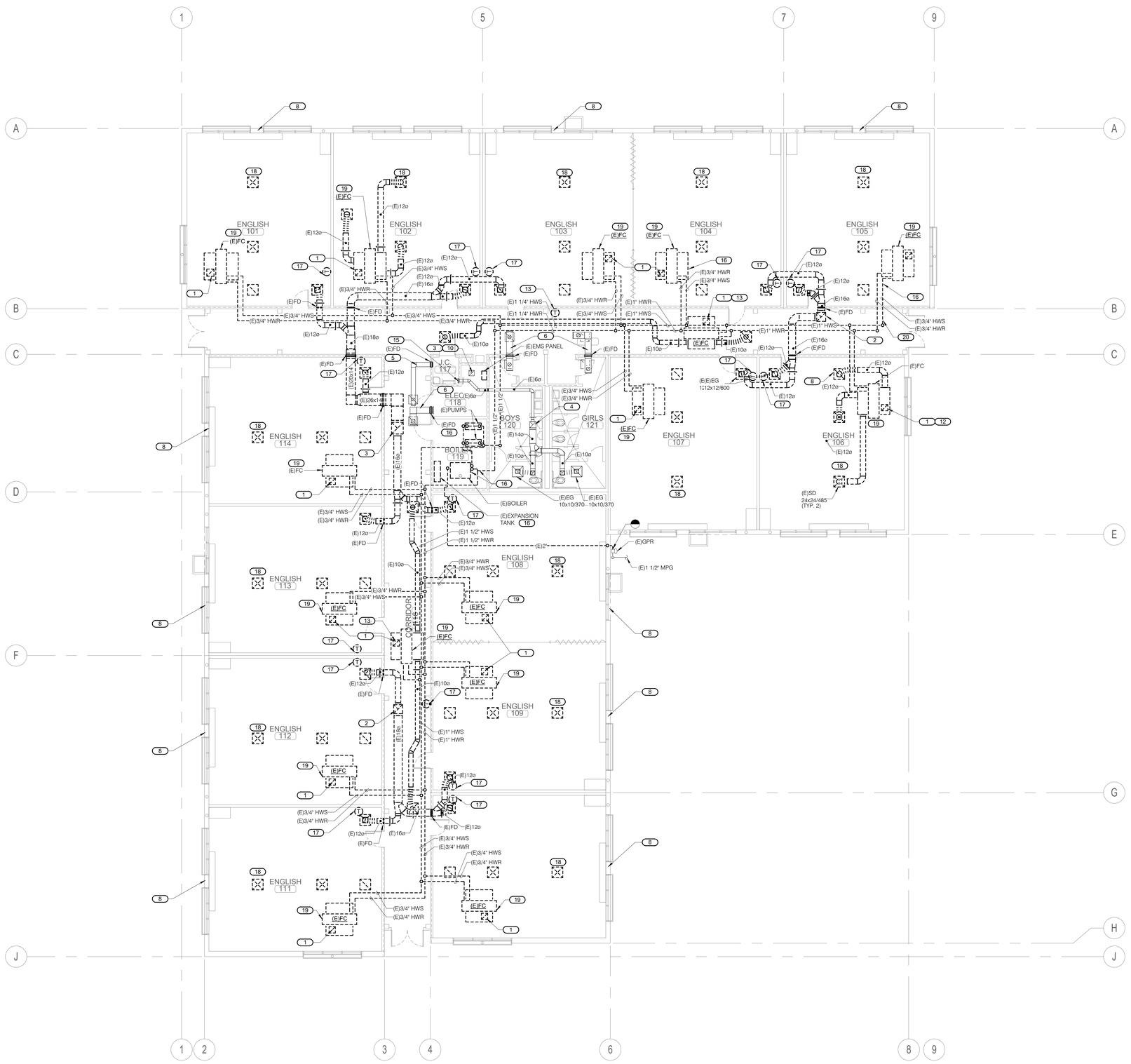
SITE PLAN

DRAWING NUMBER: MP1.1

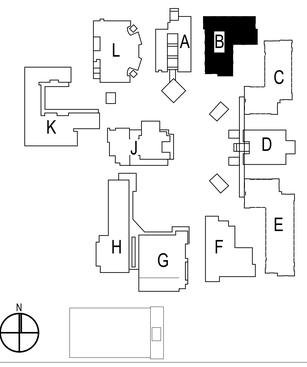


EXISTING KEYNOTES: (#)

1. (E)14x14 U.T.R. TO R.V. AND DN. TO MIXED AIR PLENUM W/ M.V.D. IN DUCT DROP ACCESSIBLE IN ATTIC.
2. (E)20x20 U.T.R.
3. (E)26x26 U.T.R.
4. (E)14x14 U.T.R.
5. (E) 10x5 TRANSFER DUCT W/ (E)8x8 T.G & (E)8x8 SIDEWALL T.G.
6. (E) 14x7 TRANSFER DUCT W/ (E)12x12 T.G & (E)8x8 SIDEWALL T.G.
8. FOR TYP. DUCT LAYOUT, SIZES, NOTES, ETC. SEE RM.#106.
10. (E)12x12 EXH. GRILLE W/ (E)12x12 DUCT U.T.R.
11. T-STAT W/ METAL GUARD.
12. VOLUME DAMPER - 600 CFM.
13. VOLUME DAMPER - 970 CFM.
15. (E)8x8 EXHAUST AIR GRILLE- 50 CFM.

DEMOLITION KEYNOTES: (#)

16. REMOVE EXISTING BOILER, TANKS, PUMPS, PIPING, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING STRUCTURE AND FLOOR/WALL/CEILING. TYPICAL.
17. DEMOLISH EXISTING TEMPERATURE CONTROL DEVICE, WIRING. REFER TO ARCHITECTURAL FOR PATCHING WALL/CEILING. TYPICAL.
18. DEMOLISH EXISTING AIR REGISTERS, DUCTWORK,SUPPORTS AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING,TYPICAL.
19. DEMOLISH EXISTING FAN COIL, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.
20. DEMOLISH EXISTING PIPING, VALVES, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.



SITE KEY PLAN

BUILDING B DEMOLITION FLOOR PLAN | 1/8" = 1'-0" | 1

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BUILDING B DEMOLITION FLOOR PLAN

DRAWING NUMBER: **MPB2.0**

REMODEL KEYNOTES: (#)

1. OFFSET CONDENSATE INTO WALL, INDIRECT TO JANITOR SINK MAINTAIN 1" MIN. AIR GAP ABOVE FLOOD LEVEL OF JANITOR SINK.
2. P.O.C. 3/4"CW LINE TO (E) CW LINE. CHECK DRAWING AND V.I.F. SIZE OF (E) CW PIPE SIZE.

REMODEL GENERAL NOTES:

1. INSTALL NEW TEMPERATURE CONTROL SENSORS AND WIRING, REUSE EXISTING CONDUIT DN WALL.
2. FOR DUCT SUPPORT DETAIL, SEE DETAIL 10/MP4.2
3. FOR DUCT CONNECTION TO CEILING AIR DEVICES, SEE DETAIL 11/MP4.2.
4. FOR VOLUME DAMPER, SEE DETAIL 3/MP4.3.
5. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
6. FOR FIRE/SMOKE DAMPER, SEE DETAIL 6/MP4.3.
7. FOR SINGLE PIPE HANGER, SEE DETAIL 5/MP4.3.
8. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.3.
9. FOR CONDENSATE CONNECTION TO LAVATORY, SEE DETAIL 6/MP4.4.

BUILDING B REMODEL FLOOR PLAN | 1/8" = 1'-0" | 1

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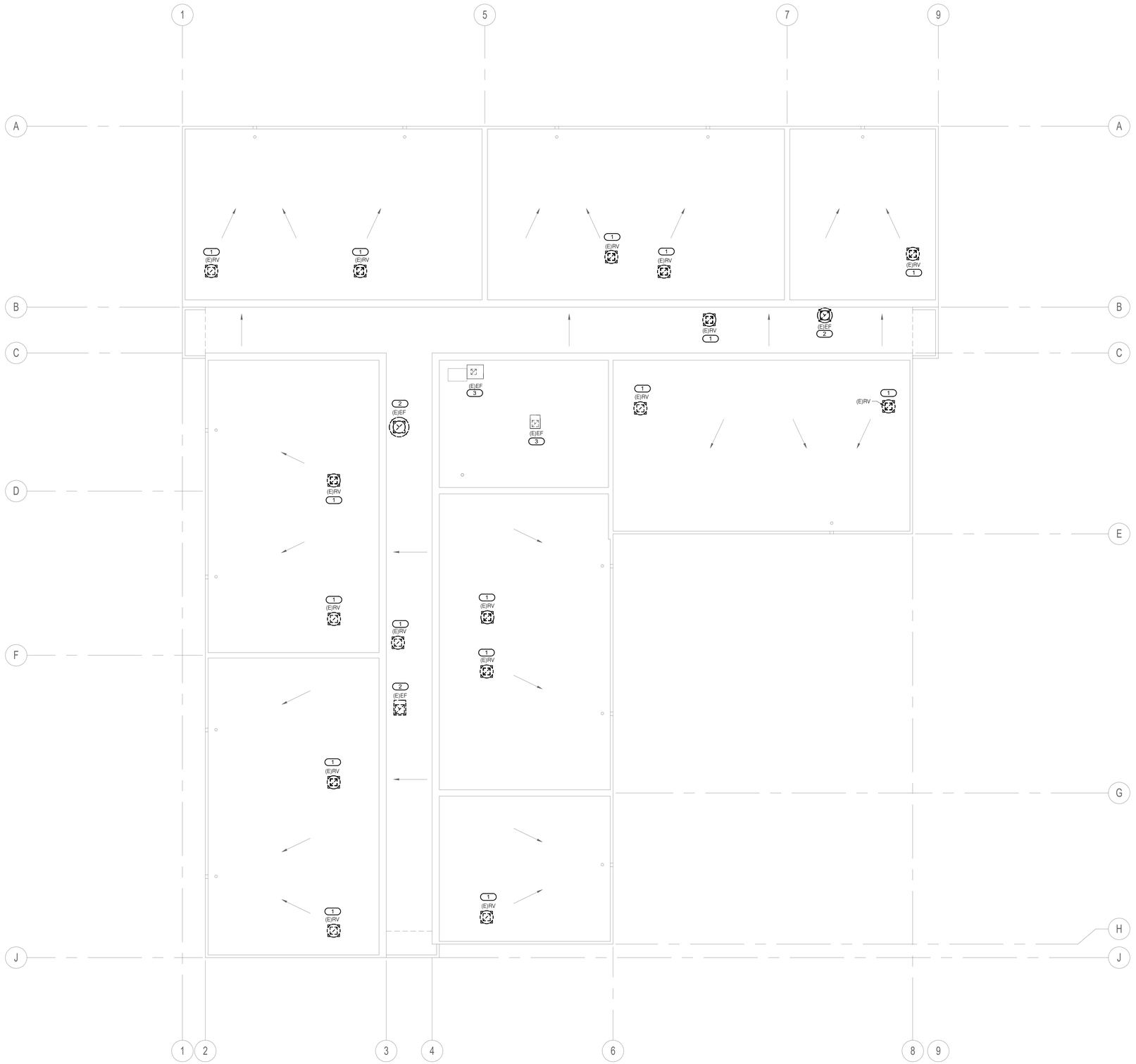
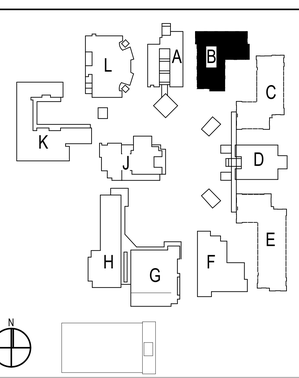
BUILDING B REMODEL FLOOR PLAN

DRAWING NUMBER: **MPB2.1**



DEMOLITION KEYNOTES: (#)

1. DEMOLISH EXISTING ROOF VENTILATOR, CURB, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF STRUCTURE.TYPICAL.
2. DEMOLISH EXISTING ROOF EXHAUST FAN, CURB, AND RELATED APPURTENCANCES. COORDINATE WITH ELECTRICAL CONTRACTOR FOR REMOVAL OF WIRING AND CONDUIT. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF STRUCTURE. TYPICAL.
3. EXISTING EXHAUST FAN TO REMAIN.



SITE KEY PLAN

BUILDING B DEMOLITION ROOF PLAN | 1/8" = 1'-0" | 1

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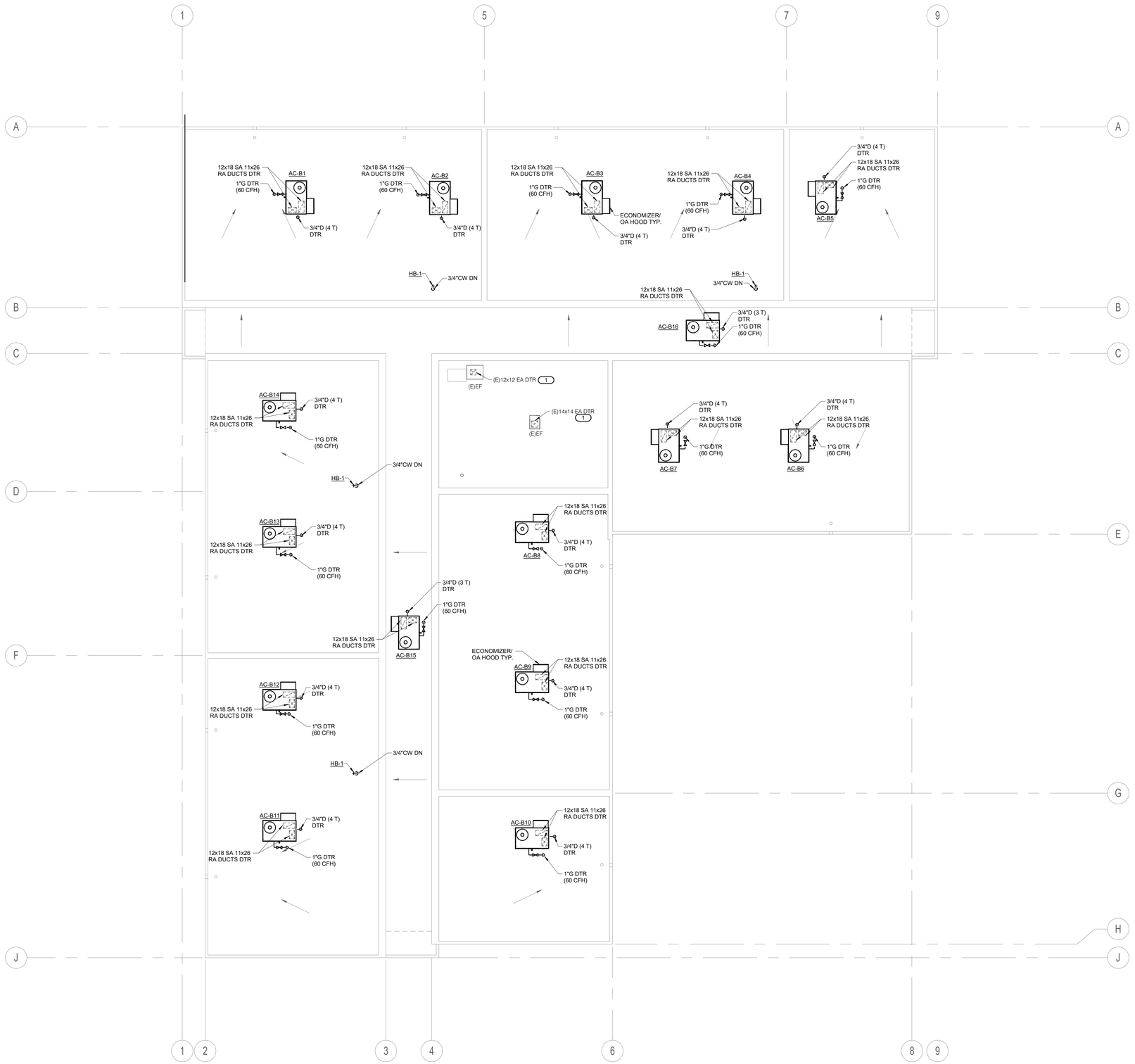
BUILDING B DEMOLITION ROOF PLAN

DRAWING NUMBER: **MPB3.0**

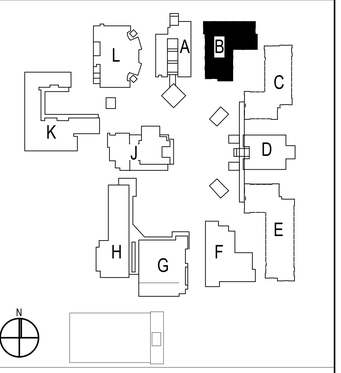


REMODEL KEYNOTES: (#)

1. EXISTING EXHAUST FAN TO REMAIN.

REMODEL GENERAL NOTES:

1. MAINTAIN MIN. 10 FT. FROM OA INTAKES AND PLUMBING VENTS. RELOCATE EXISTING PLUMBING VENTS AS REQUIRED.
2. FOR NATURAL GAS CONNECTION TO THE EQUIPMENT, SEE DETAIL 1/MP4.4.
3. FOR CONDENSATE CONNECTION TO THE EQUIPMENT, SEE DETAIL 2/MP4.4.
4. FOR ROOF MOUNTED HOSE BIBS, SEE DETAIL 4/MP4.4.
5. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.4.



SITE KEY PLAN

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MARK GRAHAM C-26046 03-31-21 — LICENSED ARCHITECT — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — ERIC M. DeSRUYVER — 38688 Exp. 12/31/21 — MECHANICAL — STATE OF CALIFORNIA

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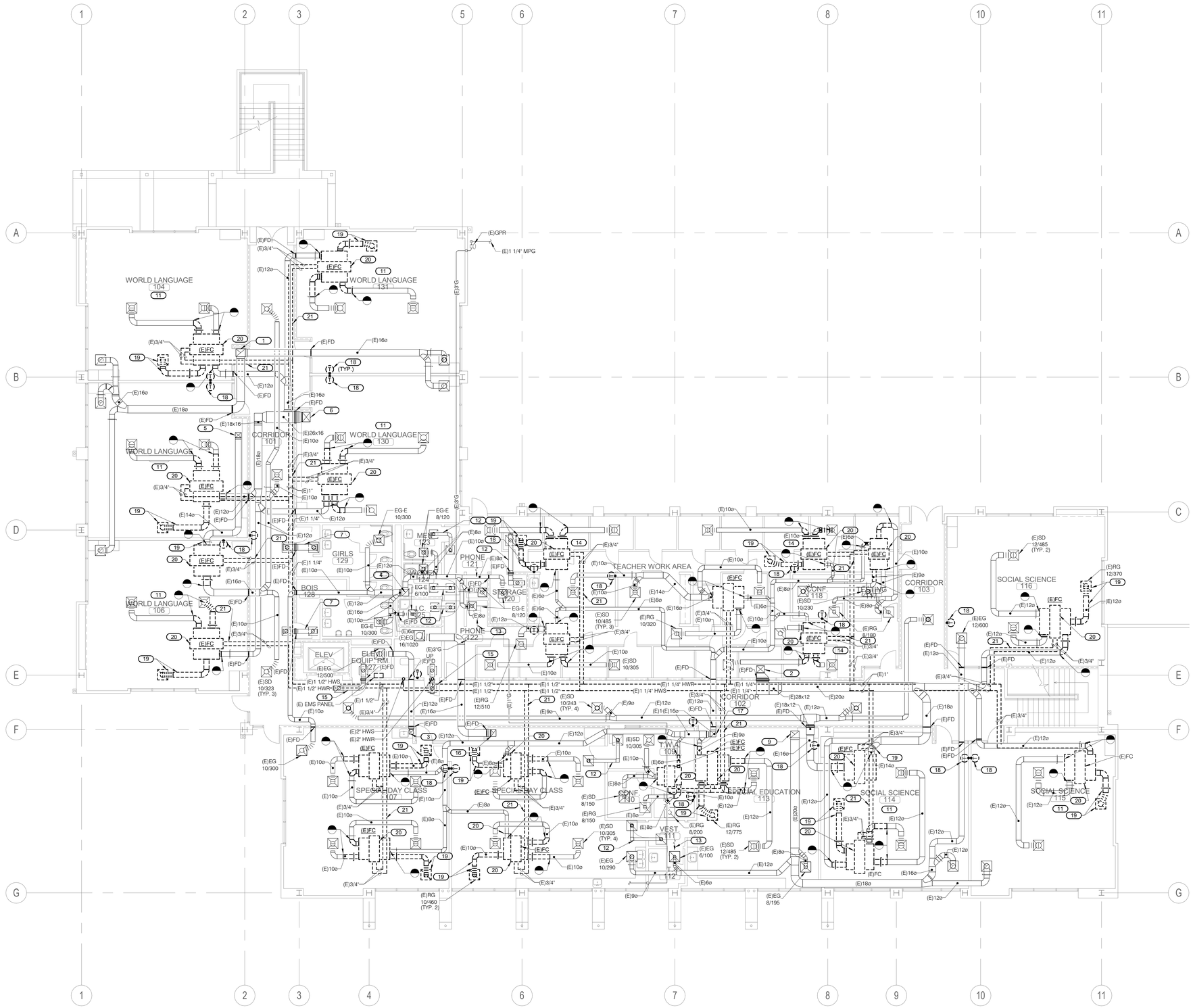
DRAWN: CDG	CHECKED: JMM
DATE: Issue Date	SCALE: 1/8" = 1'-0"
PROJECT NUMBER: Project Number	

BUILDING B REMODEL ROOF PLAN

DRAWING NUMBER: **MPB3.1**

BUILDING B REMODEL ROOF PLAN | 1/8" = 1'-0" | 1



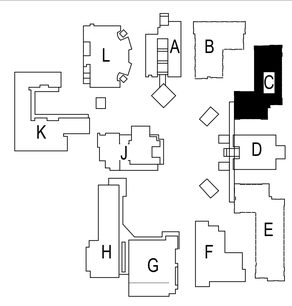
EXISTING KEYNOTES: (#)

1. (E)22x18 E.A. DUCT UP.
2. (E)18x16 O.A. DUCT UP.
3. (E)10x10 E.A. DUCT UP.
4. (E)16x16 E.A. DUCT UP.
5. (E)14x12 O.A. DUCT UP.
6. (E)22x18 O.A. DUCT UP.
7. (E)14x7 TRANSFER DUCT W/(2) (E)12x12 T.G.
8. (E)16x12 O.A. DUCT UP.
9. (E)20x16 E.A. DUCT UP.
11. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#116.
12. (E)7x5 TRANSFER DUCT W/(@) (E)8X8 T.G.
13. DOOR LOUVER- 25 SQ. FT. FREE AREA.
14. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#116.
15. (E)24x12 TRANSFER AIR DUCT W/(2) (E)22x22 T.G.
16. (E)18x12 E.A. DUCT UP TO EXH. FAN.
17. (E)12x12 S.A. DUCT UP TO SUPPLY FAN.

DEMOLITION KEYNOTES: (#)

18. DEMOLISH EXISTING TEMPERATURE CONTROL DEVICE, WIRING. REFER TO ARCHITECTURAL FOR PATCHING WALL/CEILING. TYPICAL.
19. DEMOLISH EXISTING DUCTWORK, SUPPORTS AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING.TYPICAL.
20. DEMOLISH EXISTING FAN COIL, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.
21. DEMOLISH EXISTING PIPING, VALVES, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.

BUILDING C DEMOLITION FIRST FLOOR PLAN | 1/8" = 1'-0" | 1



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REGISTERED PROFESSIONAL ENGINEER
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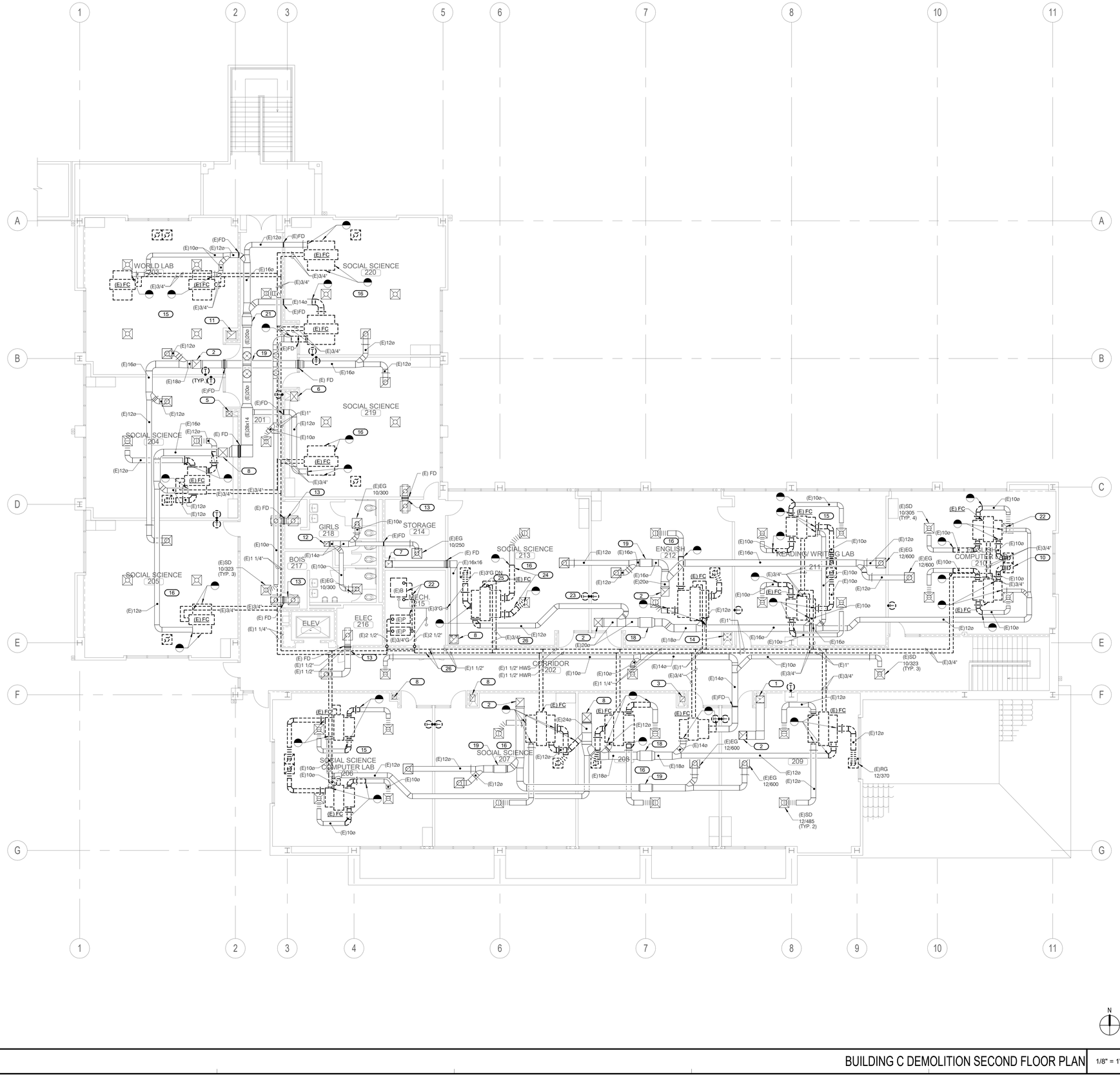
DATE: Issue Date	SCALE: 1/8" = 1'-0"
PROJECT NUMBER:	Project Number

BUILDING C DEMOLITION 1ST FLOOR PLAN

DRAWING NUMBER: **MPC2.0**



BUILDING C DEMOLITION SECOND FLOOR PLAN | 1/8" = 1'-0" | 1

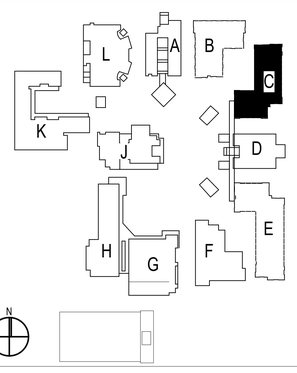
N

EXISTING KEYNOTES: (#)

1. (E)20x16 E.A.D FR. BEL.
2. (E)20x20 U.T.R. TO EXH. FAN.
3. (E)12x12 FR. BEL. W/ (E)14X14 U.T.R.
4. (E)18x16 FR. BEL. W/ (E)20X20 U.T.R.
5. (E)14x12 FR. BEL. W/ (E)12X12 U.T.R.
6. (E)22x18 FR. BEL. W/ (E)20X20 U.T.R.
7. (E)16x16 FR. BEL.
8. (E)22x22 U.T.R. TO EXH. FAN.
9. (E)10x10 E.A.D FR. BEL. & U.T.R.
10. (E) 44x22 R.A.R- 620.
11. (E)22x18 FR. BEL. W/ (E)24x24 U.T.R.
12. (E)12x12 U.T.R. TO EXH. FAN.
13. (E)14x7 TRANSFER DUCT W/(2) 12x12 T.G.
14. (E)18x16 FR. BEL. W/ (E)20x20 U.T.R.
15. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC SEE RM# 210.
16. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC SEE RM# 209.
18. (E)24x12 DUCT TRANSITION BELOW BEAM.
19. (E)18x12 DUCT TRANSITION BELOW BEAM.
20. (E)28x14 DUCT TRANSITION BELOW BEAM.
21. (E)24x14 DUCT TRANSITION BELOW BEAM.

DEMOLITION KEYNOTES: (#)

22. DEMOLISH EXISTING BOILER, TANKS, PUMPS, PIPING, AND RELATED APPURTENANCES. REFER TO ARCHITECTUREAL FOR PATCHING STRUCTURE, FLOOR, WALL, AND CEILING. TYPICAL.
23. DEMOLISH EXISTING TEMPERATURE CONTROL DEVICE, WIRING. REFER TO ARCHITECTURAL FOR PATCHING WALL/CEILING. TYPICAL.
24. DEMOLISH EXISTING DUCTWORK, SUPPORTS AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.
25. DEMOLISH EXISTING FAN COIL, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.
26. DEMOLISH EXISTING PIPING, VALVES, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.



SITE KEY PLAN

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MARK GRAHAM C-26046 03-31-21 LICENSED ARCHITECT STATE OF CALIFORNIA

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DATE: Issue Date	SCALE: 1/8" = 1'-0"
PROJECT NUMBER: Project Number	

BUILDING C DEMOLITION 2ND FLOOR PLAN

DRAWING NUMBER: **MPC2.1**

5/13/2020 9:34:5 AM
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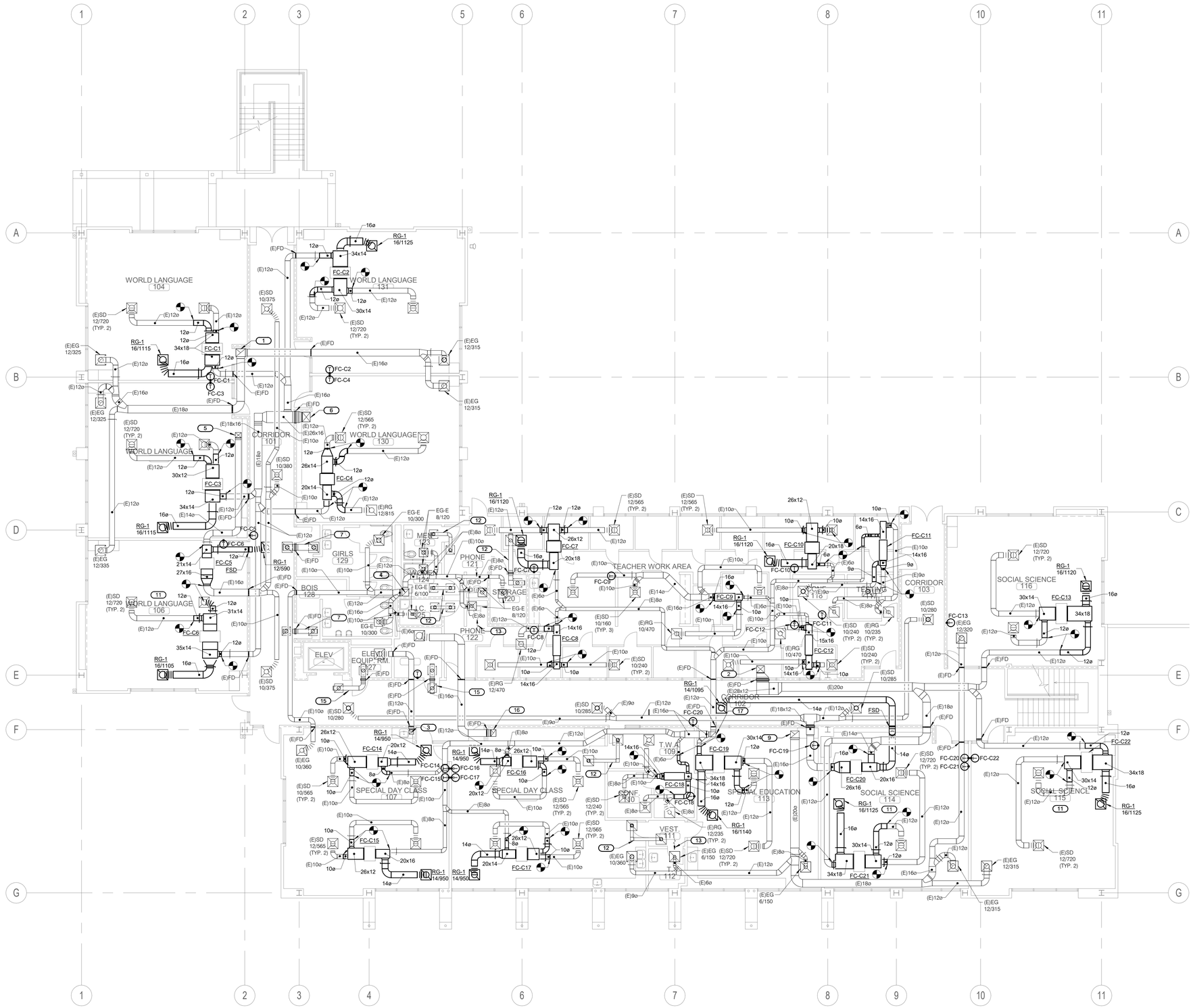
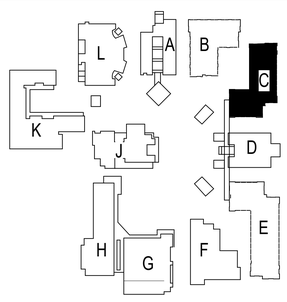


EXISTING KEYNOTES: (#)

1. (E)22x18 E.A. DUCT UP.
2. (E)18x16 O.A. DUCT UP.
3. (E)10x10 E.A. DUCT UP.
4. (E)16x16 E.A. DUCT UP.
5. (E)14x12 O.A. DUCT UP.
6. (E)22x18 O.A. DUCT UP.
7. (E)14x7 TRANSFER DUCT W/(2) (E)12x12 T.G.
8. (E)16x12 O.A. DUCT UP.
9. (E)20x16 E.A. DUCT UP.
11. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#116.
12. (E)7x5 TRANSFER DUCT W/(@) (E)8X8 T.G.
13. DOOR LOUVER- 25 SQ. FT. FREE AREA.
14. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#116.
15. (E)24x12 TRANSFER AIR DUCT W/(2) (E)22x22 T.G.
16. (E)16x12 E.A. DUCT UP TO EXH. FAN.
17. (E)12x12 S.A. DUCT UP TO SUPPLY FAN.
22. REMOTE BULB STAT FOR ON/ OFF CONTROL OF EF-97, INSTANT BULB BEHIND EXHAUST GRILLE, MOUNT CONTROLLER IN ACCESSIBLE AREA IN ATTIC.

REMODEL GENERAL NOTES:

1. BALANCE OUTSIDE AIR DAMPERS TO OA CFM LISTED ON MP0.3.
2. ADJUST AND MAKE REPAIRS TO EXISTING VOLUME DAMPERS AS REQUIRED TO PROVIDE SPECIFIED AIR BALANCE AND MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
3. CONTRACTOR SHALL MAKE REPAIRS TO EXISTING DUCTWORK, DUCTWORK SUPPORTS AND DUCT INSULATION AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
4. CONTRACTOR SHALL ADJUST AND MAKE REPAIRS TO EXISTING AIR DEVICES AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
5. INSTALL NEW TEMPERATURE CONTROL SENSORS AND WIRING, REUSE EXISTING CONDUIT DN WALL.
6. FOR DUCT SUPPORT DETAIL, SEE DETAIL 10/MP4.2.
7. FOR DUCT CONNECTION TO CEILING AIR DEVICES, SEE DETAIL 11/MP4.2.
8. FOR VOLUME DAMPER, SEE DETAIL 3/MP4.3.
9. FOR FIRE/SMOKE DAMPER, SEE DETAIL 6/MP4.3.



SITE KEY PLAN

BUILDING C REMODEL FIRST FLOOR PLAN | 1/8" = 1'-0" | 1

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C-26046
03-31-21
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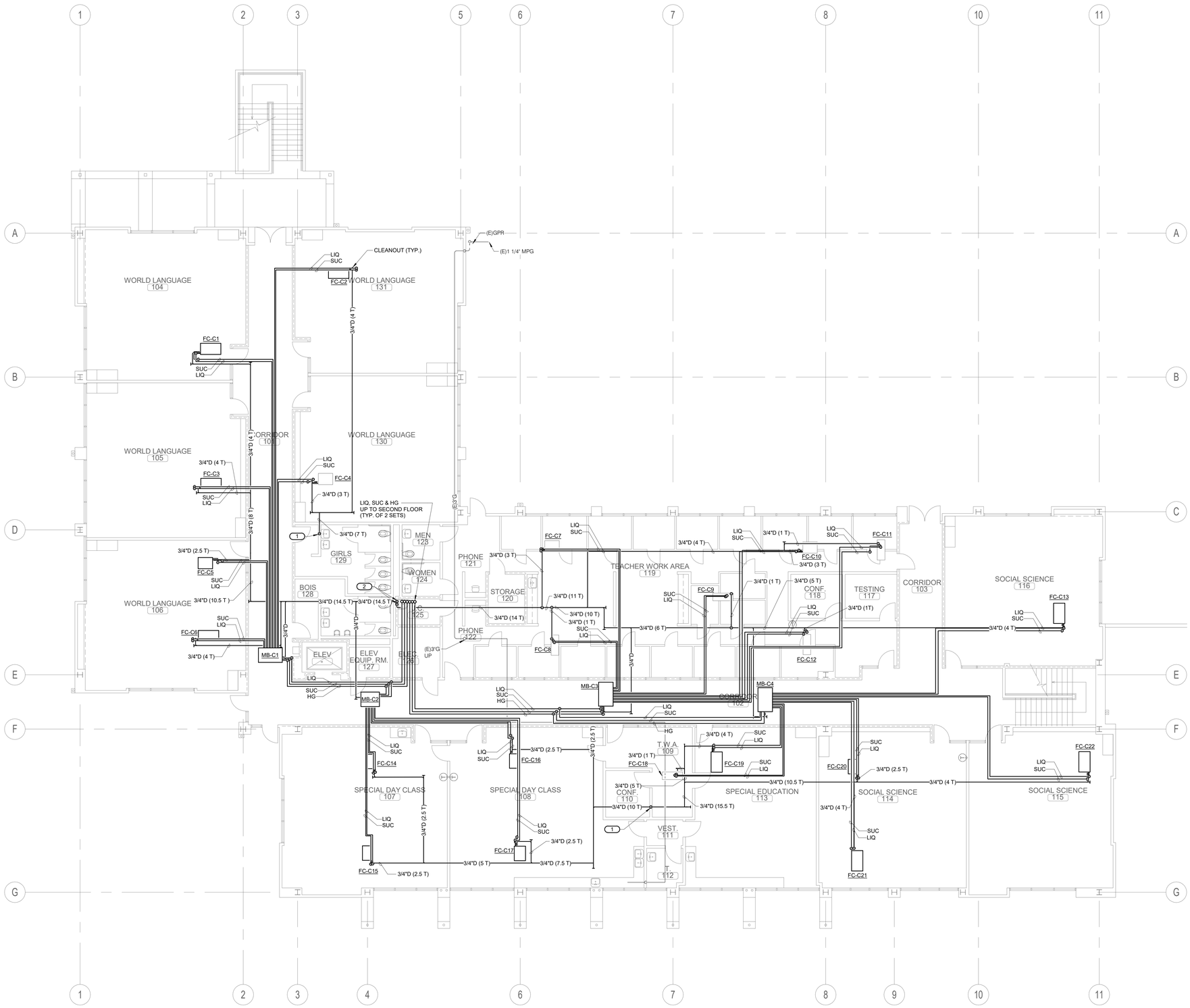
DATE: Issue Date	SCALE: 1/8" = 1'-0"
PROJECT NUMBER:	Project Number

BUILDING C REMODEL 1ST FLOOR PLAN

DRAWING NUMBER: **MPC2.2**

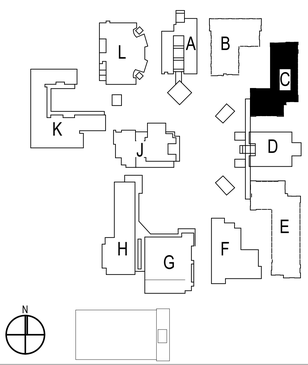


REMODEL KEYNOTES: (#)

1. OFFSET CONDENSATE INTO WALL, INDIRECT TO LAVATORY PER 6/MP4.
2. OFFSET CONDENSATE INTO WALL, INDIRECT TO MOP SINK PER 6/MP4.4.

REMODEL GENERAL NOTES:

1. ALL EQUIPMENT ABOVE CEILING SHALL BE ACCESSIBLE VIA T-BAR OR A MINIMUM 24"x24" ACCESS DOOR WITH THE SAME FIRE RATING AS THE ADJACENT CONSTRUCTION.
2. FOR REFRIGERANT PIPE SUPPORT ON CHASE WALL, SEE DETAIL 5/MP4.2.
3. FOR REFRIGERANT PIPING SUPPORT SUSPENDED, SEE DETAIL 9/MP4.2.
4. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
5. FOR PORT BOX MOUNTING, SEE DETAIL 8/MP4.2.
6. FOR SINGLE PIPE HANGER, SEE DETAIL 5/MP4.4.
7. FOR CONDENSATE CONNECTION TO LAVATORY, SEE DETAIL 6/MP4.4.



SITE KEY PLAN

BUILDING C REMODEL PIPING FIRST FLOOR PLAN | 1/8" = 1'-0" | 1

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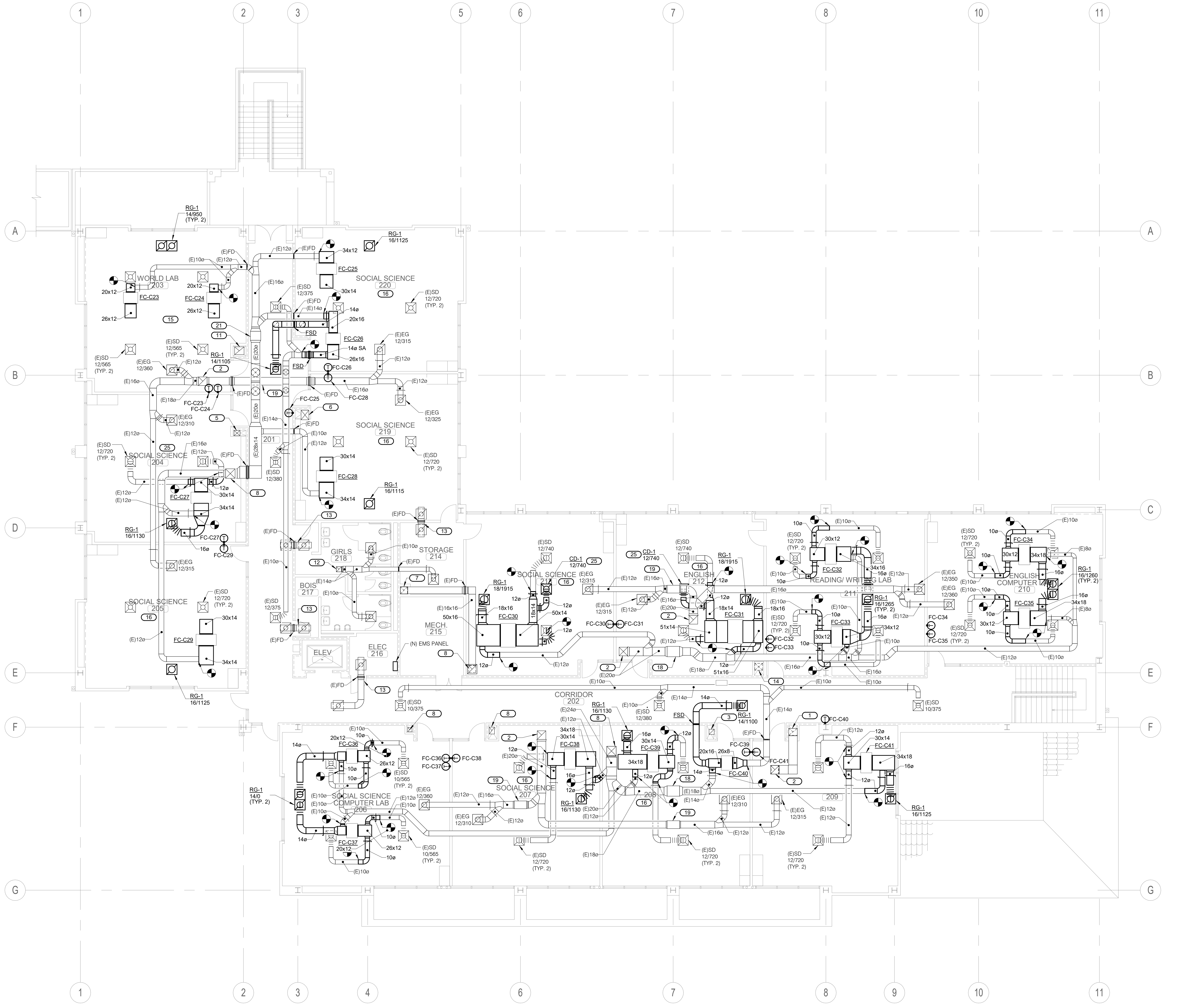
BUILDING C REMODEL PIPING 1ST FLOOR PLAN

DRAWING NUMBER: **MPC2.3**



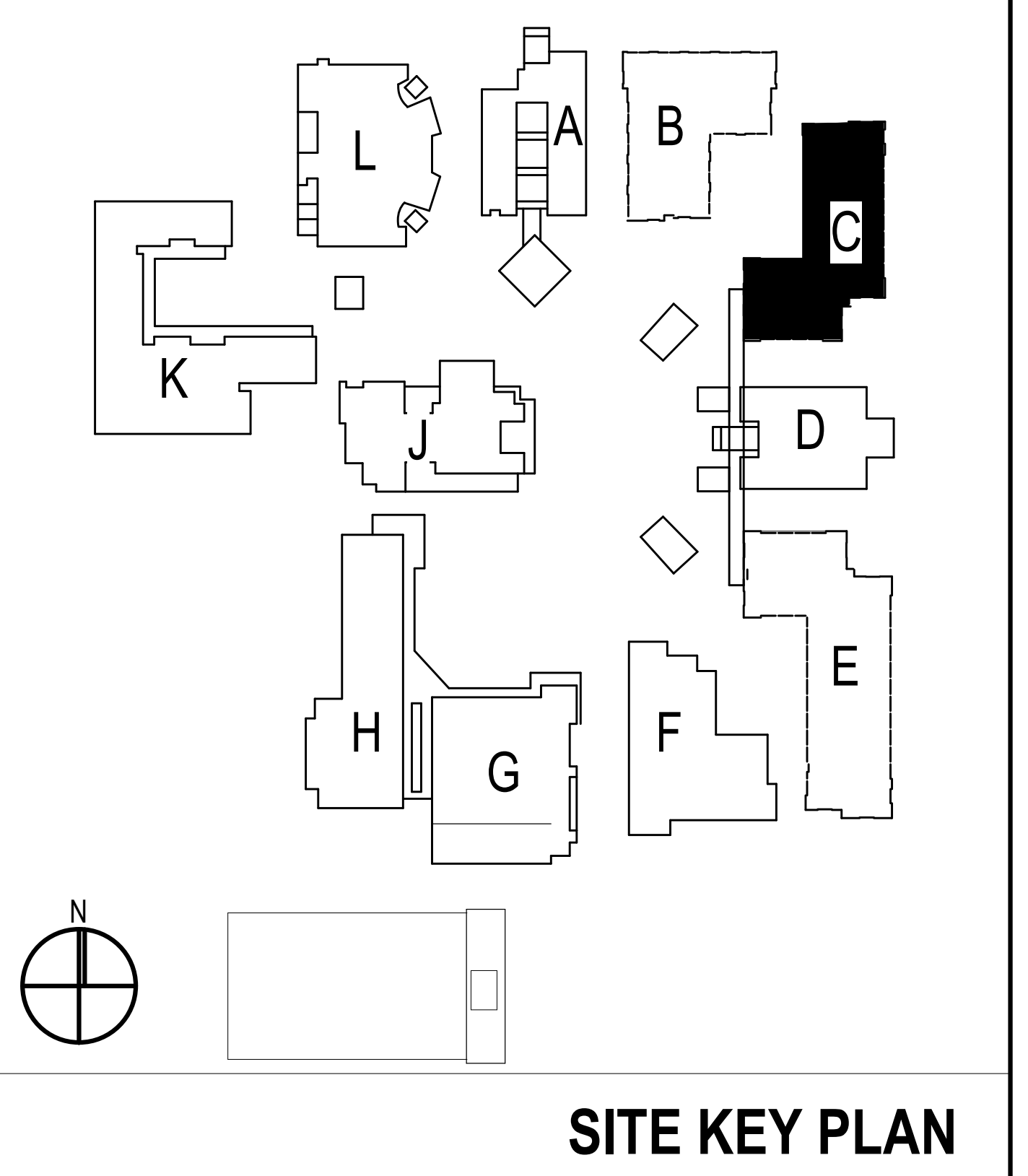
BUILDING C REMODEL SECOND FLOOR PLAN 1/8" = 1'-0" 1

EXISTING & REMODEL KEYNOTES: #

1. (E)20x16 E.A.D FR. BEL.
2. (E)20x20 U.T.R. TO EXH. FAN.
3. (E)12x12 FR. BEL. W/ (E)14X14 U.T.R.
4. (E)18x16 FR. BEL. W/ (E)20X20 U.T.R.
5. (E)14x12 FR. BEL. W/ (E)12X12 U.T.R.
6. (E)22x18 FR. BEL. W/ (E)20X20 U.T.R.
7. (E)16x16 FR. BEL.
8. (E)22x22 U.T.R. TO EXH. FAN.
9. (E)10x10 E.A.D FR. BEL. & U.T.R.
10. (E) 44x22 R.A.R- 620.
11. (E)22x18 FR. BEL. W/ (E)24x24 U.T.R.
12. (E)12x12 U.T.R. TO EXH. FAN.
13. (E)14x7 TRANSFER DUCT W/(2) 12x12 T.G.
14. (E)18x16 FR. BEL. W/ (E)20x20 U.T.R.
15. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC SEE RM# 210.
16. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC SEE RM# 209.
18. (E)24x12 DUCT TRANSITION BELOW BEAM.
19. (E)18x12 DUCT TRANSITION BELOW BEAM.
20. (E)28x14 DUCT TRANSITION BELOW BEAM.
21. (E)24x14 DUCT TRANSITION BELOW BEAM.
25. MATCH NEW SUPPLY DIFFUSER WITH EXISTING DIFFUSERS.

REMODEL GENERAL NOTES:

1. BALANCE OUTSIDE AIR DAMPERS TO OA CFM LISTED ON MP0.3.
2. ADJUST AND MAKE REPAIRS TO EXISTING VOLUME DAMPERS AS REQUIRED TO PROVIDE SPECIFIED AIR BALANCE AND MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
3. CONTRACTOR SHALL MAKE REPAIRS TO EXISTING DUCTWORK, DUCTWORK SUPPORTS AND DUCT INSULATION AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
4. CONTRACTOR SHALL ADJUST AND MAKE REPAIRS TO EXISTING AIR DEVICES AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
5. INSTALL NEW TEMPERATURE CONTROL SENSORS AND WIRING, REUSE EXISTING CONDUIT DN WALL.
6. FOR DUCT SUPPORT DETAIL, SEE DETAIL 10/MP4.2.
7. FOR DUCT CONNECTION TO CEILING AIR DEVICES, SEE DETAIL 11/MP4.2.
8. FOR PORT BOX MOUNTING, SEE DETAIL 8/MP4.2.
9. FOR VOLUME DAMPER, SEE DETAIL 3/MP4.3.
10. FOR FIRE/SMOKE DAMPER, SEE DETAIL 6/MP4.3.



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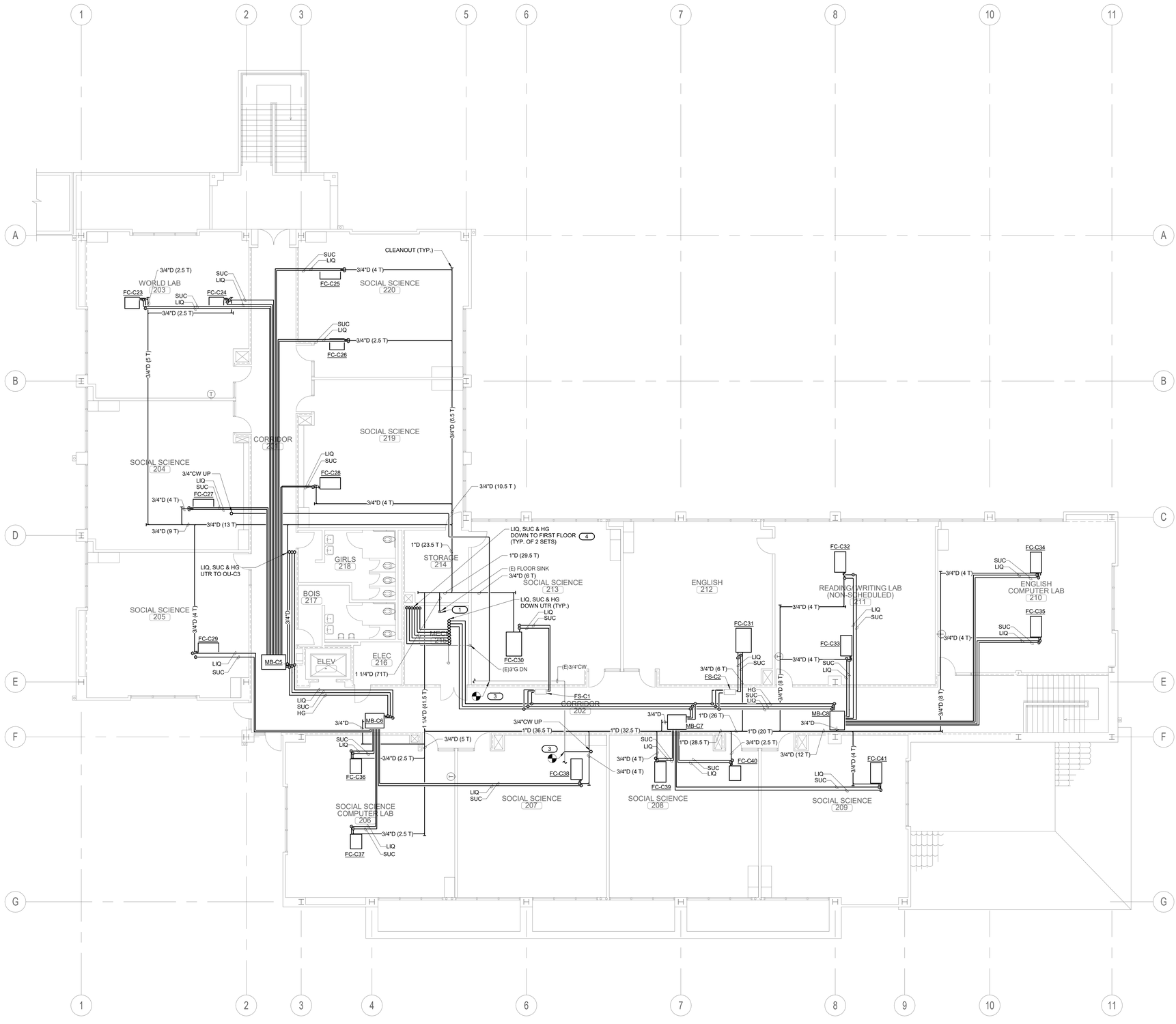
PROJECT NUMBER: Project Number	

BUILDING C REMODEL 2ND FLOOR PLAN

DRAWING NUMBER: **MPC2.4**

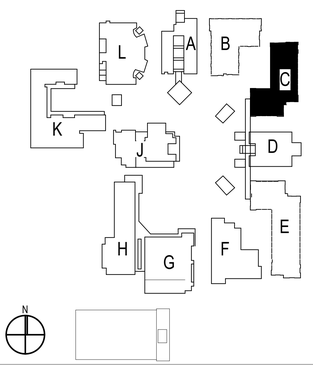


REMODEL KEYNOTES: (#)

1. OFFSET CONDENSATE DN WALL, INDIRECT TO FLOOR SINK. MAINTAIN 1" MIN. AIR GAP ABOVE FLOOD LEVEL OF FLOOR SINK.
2. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
3. P.O.C. 3/4"CW LINE TO (E) CW LINE. CHECK DRAWING AND V.I.F. SIZE OF (E) CW PIPE SIZE.
4. FOR OPENINGS IN THE FLOOR, REFER TO STRUCTURAL DRAWINGS.

REMODEL GENERAL NOTES:

1. ALL EQUIPMENT ABOVE CEILING SHALL BE ACCESSIBLE VIA T-BAR OR A MINIMUM 24"x24" ACCESS DOOR WITH THE SAME FIRE RATING AS THE ADJACENT CONSTRUCTION.
2. FOR REFRIGERANT PIPE THRU ROOF, SEE DETAIL 1/MP4.2.
3. FOR REFRIGERANT PIPE SUPPORT ON CHASE WALL, SEE DETAIL 5/MP4.2.
4. FOR REFRIGERANT PIPING SUPPORT SUSPENDED, SEE DETAIL 9/MP4.2.
5. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
6. FOR PORT BOX MOUNTING, SEE DETAIL 8/MP4.2.
7. FOR SINGLE PIPE HANGER, SEE DETAIL 5/MP4.4.
8. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.4.
9. FOR CONDENSATE CONNECTION TO LAVATORY, SEE DETAIL 6/MP4.4.



SITE KEY PLAN

BUILDING C REMODEL PIPING SECOND FLOOR PLAN | 1/8" = 1'-0" | 1

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C-26046
03-31-21
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Exp. 12/31/21
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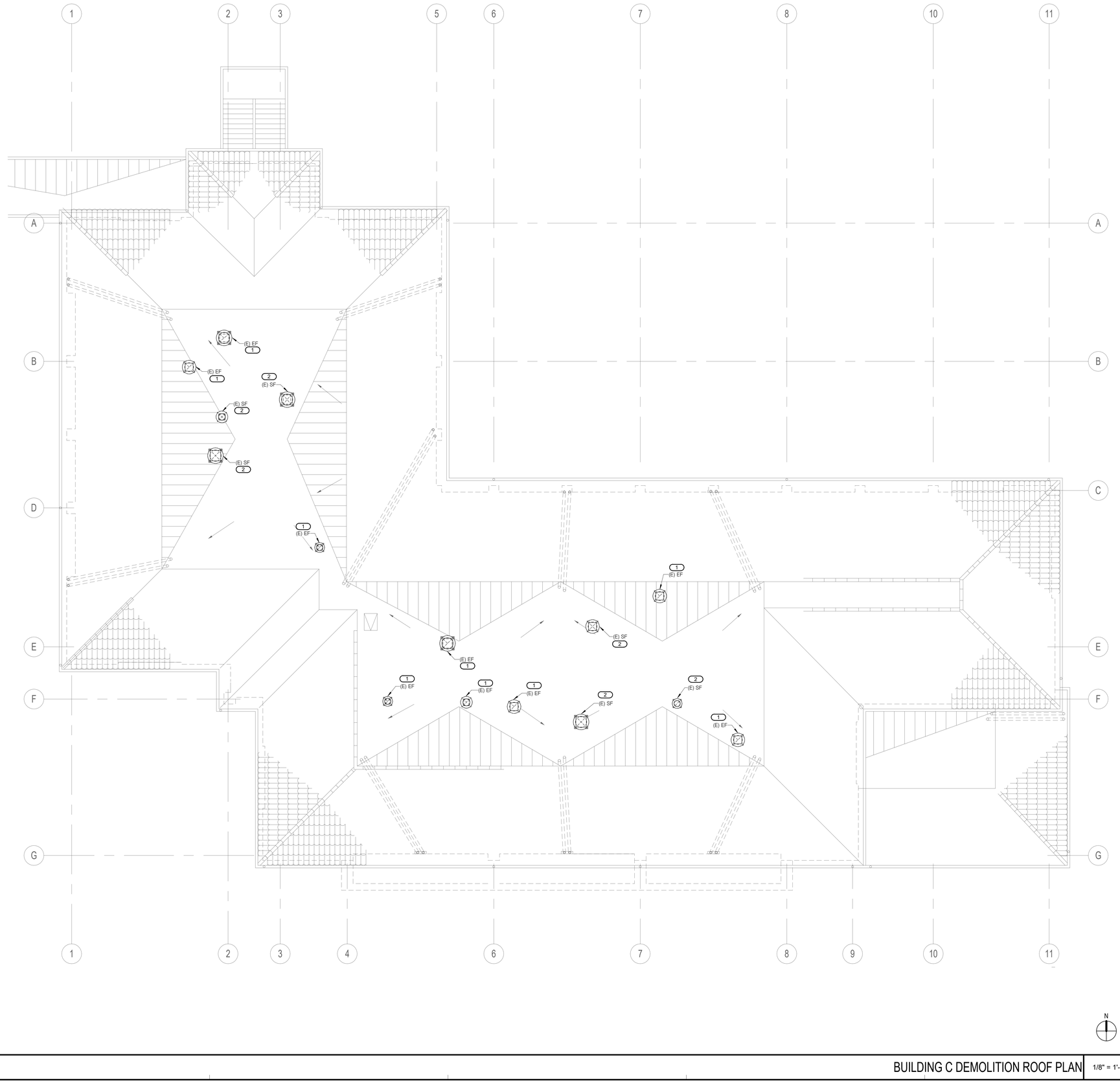
PROJECT NUMBER: Project Number	

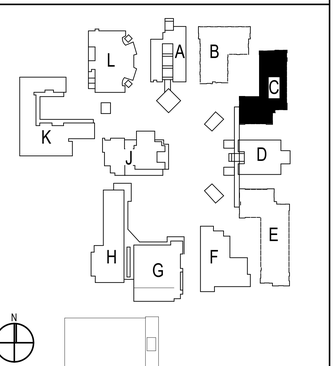
BUILDING C REMODEL PIPING 2ND FLOOR PLAN

DRAWING NUMBER: **MPC2.5**



DEMOLITION KEYNOTES: (#)

1. EXISTING EXHAUST FAN TO REMAIN.
2. EXISTING SUPPLY FAN TO REMAIN.



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PROJECT NUMBER: Project Number	

BUILDING C DEMOLITION ROOF PLAN

DRAWING NUMBER: **MPC3.0**

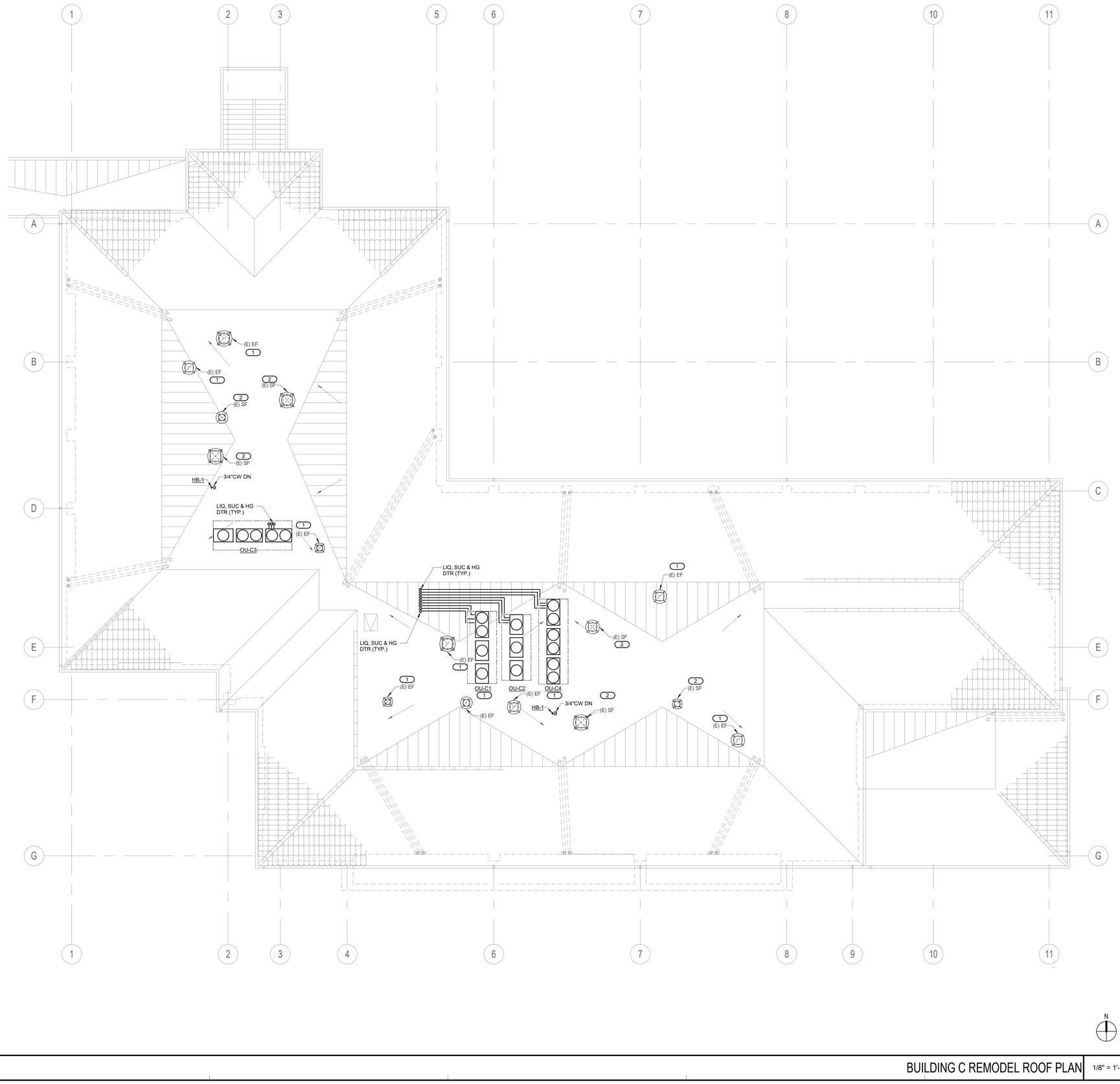
BUILDING C DEMOLITION ROOF PLAN | 1/8" = 1'-0" | 1

REMODEL KEYNOTES: (#)

1. EXISTING EXHAUST FAN TO REMAIN. REBALANCE, ADJUST SHEAVES, AND PROVIDE NEW BELTS FOR (E) EXHAUST FAN TO NEW AIRFLOW REQUIREMENTS.
2. EXISTING SUPPLY FAN TO REMAIN. REBALANCE, ADJUST SHEAVES, AND PROVIDE NEW BELTS FOR (E) SUPPLY FAN TO NEW AIRFLOW REQUIREMENTS.

REMODEL GENERAL NOTES:

1. FOR REFRIGERANT PIPE THRU ROOF, SEE DETAIL 1/MP4.2.
2. FOR REFRIGERANT PIPE SUPPORT ON ROOF, SEE DETAIL 4/MP4.2.
3. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
4. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.4.
5. FOR ROOF MOUNTED HOSE BIBS, SEE DETAIL 4/MP4.4.



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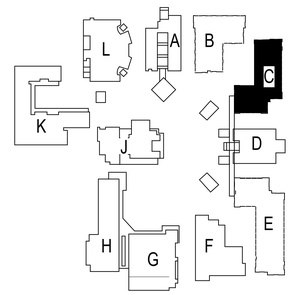
BUILDING C REMODEL ROOF PLAN | 1/8" = 1'-0" | 1



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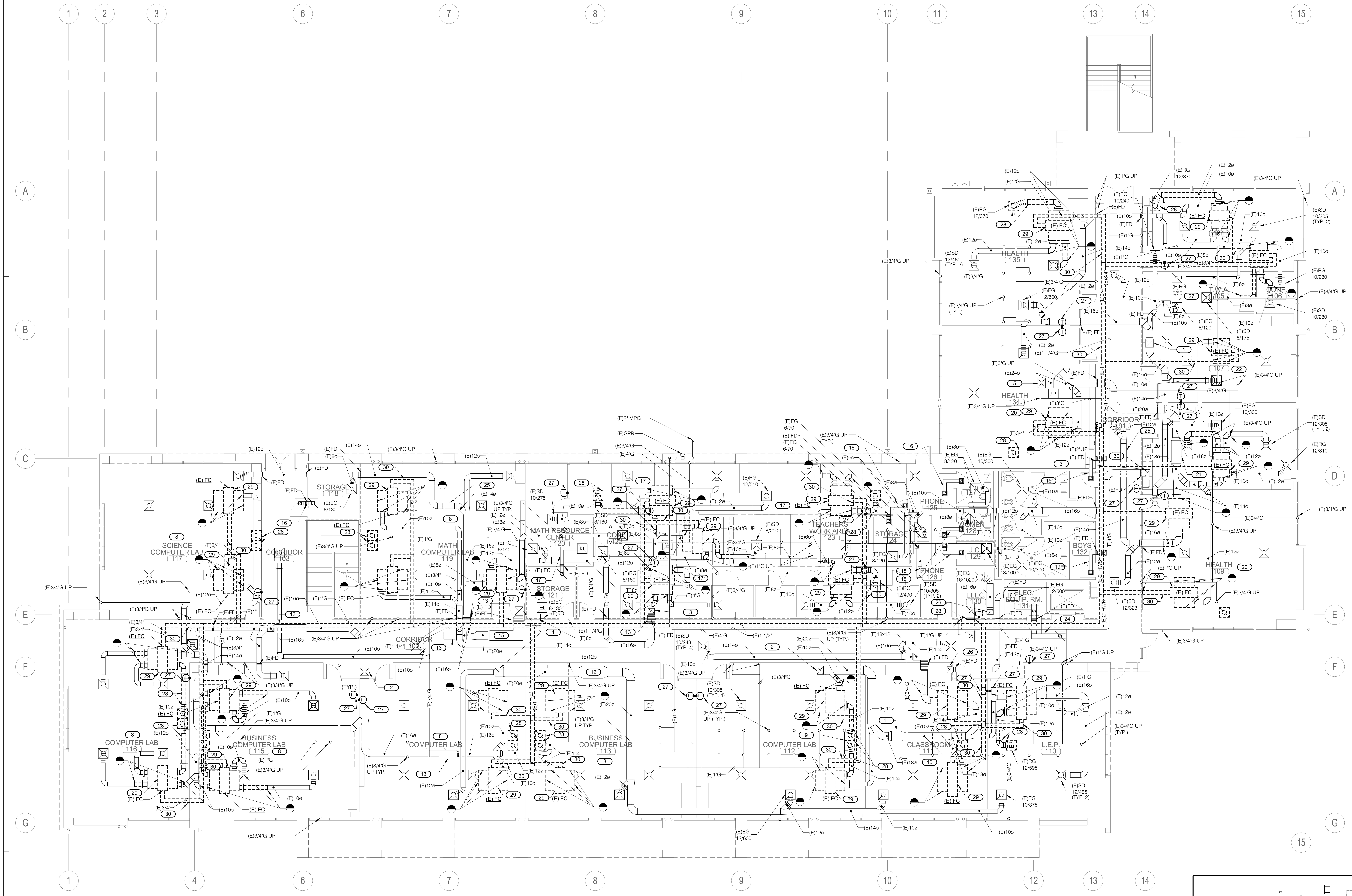
BUILDING C REMODEL ROOF PLAN

DRAWING NUMBER: **MPC3.1**



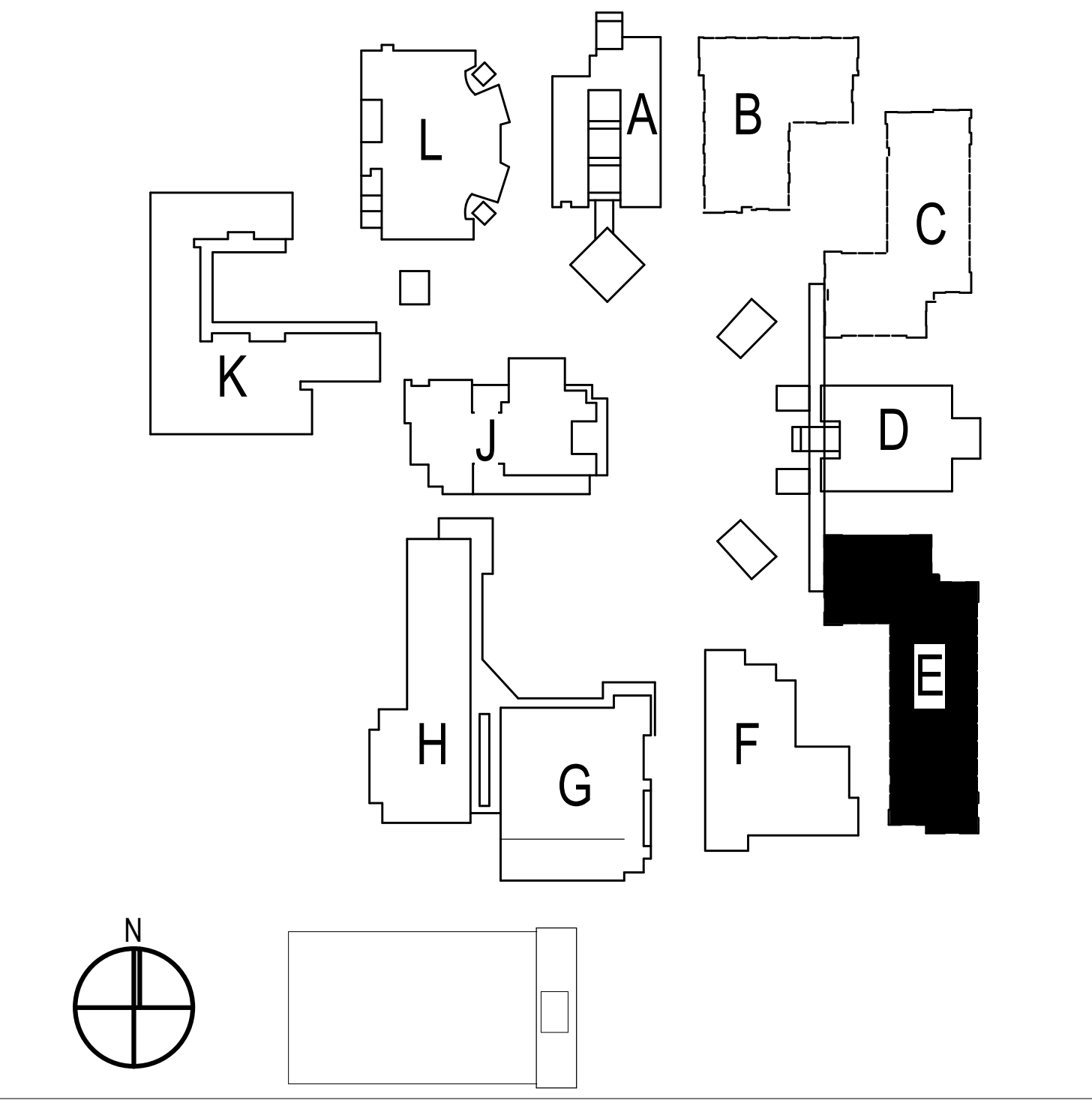
BUILDING E DEMOLITION FIRST FLOOR PLAN 1/8" = 1'-0" 1

EXISTING KEYNOTES: #

1. (E)20x20 E.A. DUCT UP.
2. (E)20x20 O.A. DUCT UP.
3. (E)16x12 E.A. DUCT UP.
4. (E)10x10 E.A. DUCT UP.
5. (E)24x18 O.A. DUCT UP.
6. (E)20x16 O.A. DUCT UP.
8. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#112.
9. (E)44x22 R.A.R. -620.
10. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#110.
11. (E)24x12 DUCT TRANS. BELOW BM.
12. (E)30x12 DUCT TRANS. BELOW BM.
13. (E)18x12 DUCT TRANS. BELOW BM.
14. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#108.
15. (E)24x12 DUCT TRANS. BELOW BM.
16. (E)8x8 TRANSFER AIR DUCT W/(2) (E)8x8 T.G.
17. FOR TYPICAL DUCT, GRILLE SIZES SEE FC/96.
18. 1" DOOR UNDER CUT(TYP.2).
19. (E)14x8 TRANSFER AIR DUCT W/(2) (E)10X10 T.G.
20. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#135.
21. (E)24x12 DUCT TRANS. BELOW BM.
22. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#108.
23. (E)18x12 TRANSFER AIR DUCT W/(2) (E)20x20 T.G.
24. (E)12x10 TRANSFER AIR DUCT W/(2) (E)16x16 T.G.
25. (E)14x12 DUCT TRANS. BELOW BM.
26. (E)16x12 E.A.D. UP W/ (E)22x22 U.T.R.

DEMOLITION KEYNOTES: #

26. DEMOLISH EXISTING TEMPERATURE CONTROL DEVICE, WIRING. REFER TO ARCHITECTURAL FOR PATCHING WALL/CEILING. TYPICAL.
27. DEMOLISH EXISTING DUCTWORK, SUPPORTS AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.
28. DEMOLISH EXISTING FAN COIL, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.
29. DEMOLISH EXISTING PIPING, VALVES, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.



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Mark Graham

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#	**REVISIONS**		

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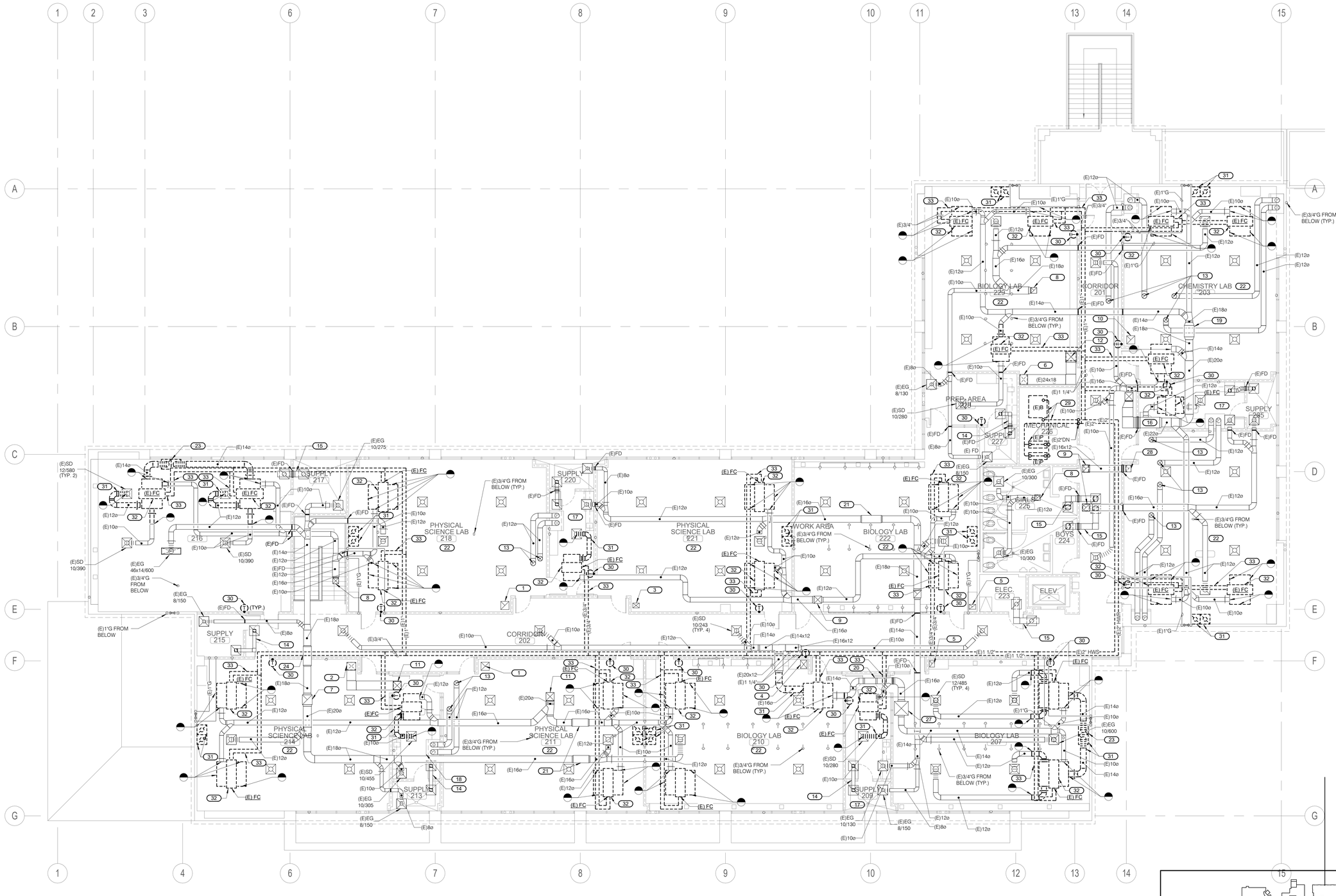
PROJECT NUMBER: Project Number	

BUILDING E DEMOLITION 1ST FLOOR PLAN

DRAWING NUMBER: **MPE2.0**



EXISTING KEYNOTES: (#)

1. (E)20x20 E.A.D FR. BEL. W/ (E)20x20 U.T.R.
2. (E)22x18 O.A. DUCT DN.
3. (E)16x12 E.A.D FR. BEL.
4. (E)20x16 O.A. DUCT DN. W/
5. (E)16x12 E.A.D FR. BEL. W/ (E)22x22 U.T.R.
6. (E)24x18 O.A. DUCT DN.
7. (E)24x24 E.A.D. U.T.R.
8. (E)14x14 U.T.R.
9. (E)18x18 U.T.R.
10. (E)20x18 E.A.D FR. BEL. W/ (E)24x24 U.T.R.
11. (E)20x20 U.T.R.
12. (E)26x26 U.T.R.
13. (E)12"ø U.T.R.
14. (E)8x6 TRANSFER DUCT W/(2) 8x8 T.G.
15. (E)14x8 TRANSFER DUCT W/(2) 10x10 T.G.
16. (E)26x18 DUCT TRANSITION BELOW BEAM.
17. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC SEE RM# 212 & #213.
18. FUME HOOD(TYP.)
19. (E)24x12 DUCT TRANSITION BELOW BEAM.
20. (E)14x12 DUCT TRANSITION BELOW BEAM.
21. (E)18x12 DUCT TRANSITION BELOW BEAM.
22. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC SEE RM# 207.
23. (E)44x22 R.A.R- 1340.
24. (E)28x14 DUCT TRANSITION BELOW BEAM.

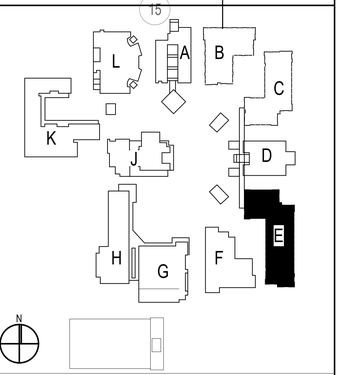
EXISTING KEYNOTES: (#)

26. (E)28x8 EXH. AIR GRILLE -600 CFM.
27. (E)34x34 S.A. DUCT U.T.R.
28. (E)16x12 EXH. DUCT F.R. BEL.

DEMOLITION KEYNOTES: (#)

29. DEMOLISH EXISTING BOILER, TANKS, PUMPS, PIPING, AND RELATED APPURTENANCES. REFER TO ARCHITECTUREAL FOR PATCHING STRUCTURE,FLOOR, WALL, AND CEILING. TYPICAL.
30. DEMOLISH EXISTING TEMPERATURE CONTROL DEVICE, WIRING. REFER TO ARCHITECTURAL FOR PATCHING WALL/CEILING. TYPICAL.
31. DEMOLISH EXISTING DUCTWORK, SUPPORTS AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.
32. DEMOLISH EXISTING FAN COIL, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.
33. DEMOLISH EXISTING PIPING, VALVES, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.

BUILDING E DEMOLITION SECOND FLOOR PLAN | 1/8" = 1'-0" | 1



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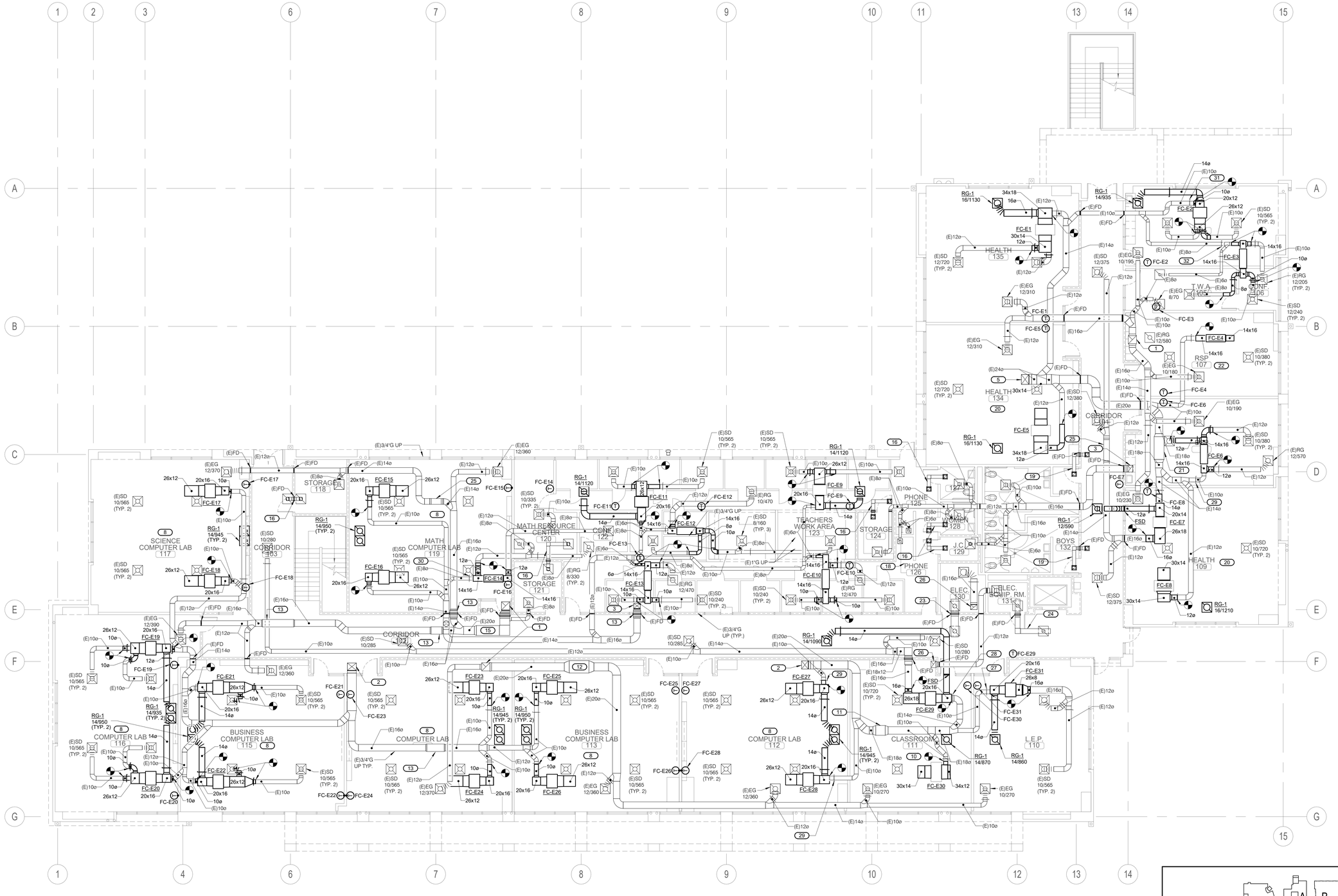
BUILDING E DEMOLITION 2ND FLOOR PLAN

DRAWING NUMBER: **MPE2.1**



EXISTING KEYNOTES: (#)

1. (E)20x20 E.A. DUCT UP.
2. (E)20x20 O.A. DUCT UP.
3. (E)16x12 E.A. DUCT UP.
4. (E)10x10 E.A. DUCT UP.
5. (E)24x18 O.A. DUCT UP.
6. (E)20x16 O.A. DUCT UP.
8. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#112.
9. (E)44x22 R.A.R. -620.
10. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#110.
11. (E)24x12 DUCT TRANS. BELOW BM.
12. (E)30x12 DUCT TRANS. BELOW BM.
13. (E)18x12 DUCT TRANS. BELOW BM.
14. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#108.
15. (E)24x12 DUCT TRANS. BELOW BM.
16. (E)8x8 TRANSFER AIR DUCT W/(2) (E)8x8 T.G.
17. FOR TYPICAL DUCT, GRILLE SIZES SEE FC/96.
18. 1" DOOR UNDER CUT(TYP.2).
19. (E)14x8 TRANSFER AIR DUCT W/(2) (E)10X10 T.G.
20. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#135.
21. (E)24x12 DUCT TRANS. BELOW BM.
22. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC. SEE RM#108.
23. (E)18x12 TRANSFER AIR DUCT W/(2) (E)20x20 T.G.
24. (E)12x10 TRANSFER AIR DUCT W/(2) (E)16x16 T.G.
25. (E)14x12 DUCT TRANS. BELOW BM.

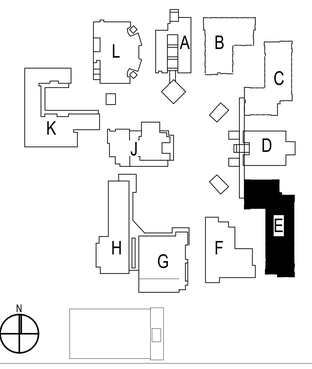
EXISTING KEYNOTES: (#)

26. (E)16x12 E.A.D. UP W/ (E)22x22 U.T.R.

REMODEL GENERAL NOTES:

1. BALANCE OUTSIDE AIR DAMPERS TO OA CFM LISTED ON MP0.3.
2. ADJUST AND MAKE REPAIRS TO EXISTING VOLUME DAMPERS AS REQUIRED TO PROVIDE SPECIFIED AIR BALANCE AND MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
3. CONTRACTOR SHALL MAKE REPAIRS TO EXISTING DUCTWORK. DUCTWORK SUPPORTS AND DUCT INSULATION AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
4. CONTRACTOR SHALL ADJUST AND MAKE REPAIRS TO EXISTING AIR DEVICES AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
5. INSTALL NEW TEMPERATURE CONTROL SENSORS AND WIRING, REUSE EXISTING CONDUIT DN WALL.
6. FOR DUCT SUPPORT DETAIL, SEE DETAIL 10/MP4.2.
7. FOR DUCT CONNECTION TO CEILING AIR DEVICES, SEE DETAIL 11/MP4.2.
8. FOR VOLUME DAMPER, SEE DETAIL 3/MP4.3.
9. FOR FIRE/SMOKE DAMPER, SEE DETAIL 6/MP4.3.

BUILDING E REMODEL FIRST FLOOR PLAN | 1/8" = 1'-0" | 1



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BUILDING E REMODEL 1ST FLOOR PLAN

DRAWING NUMBER: **MPE2.2**

6/12/2020 8:29:47 AM
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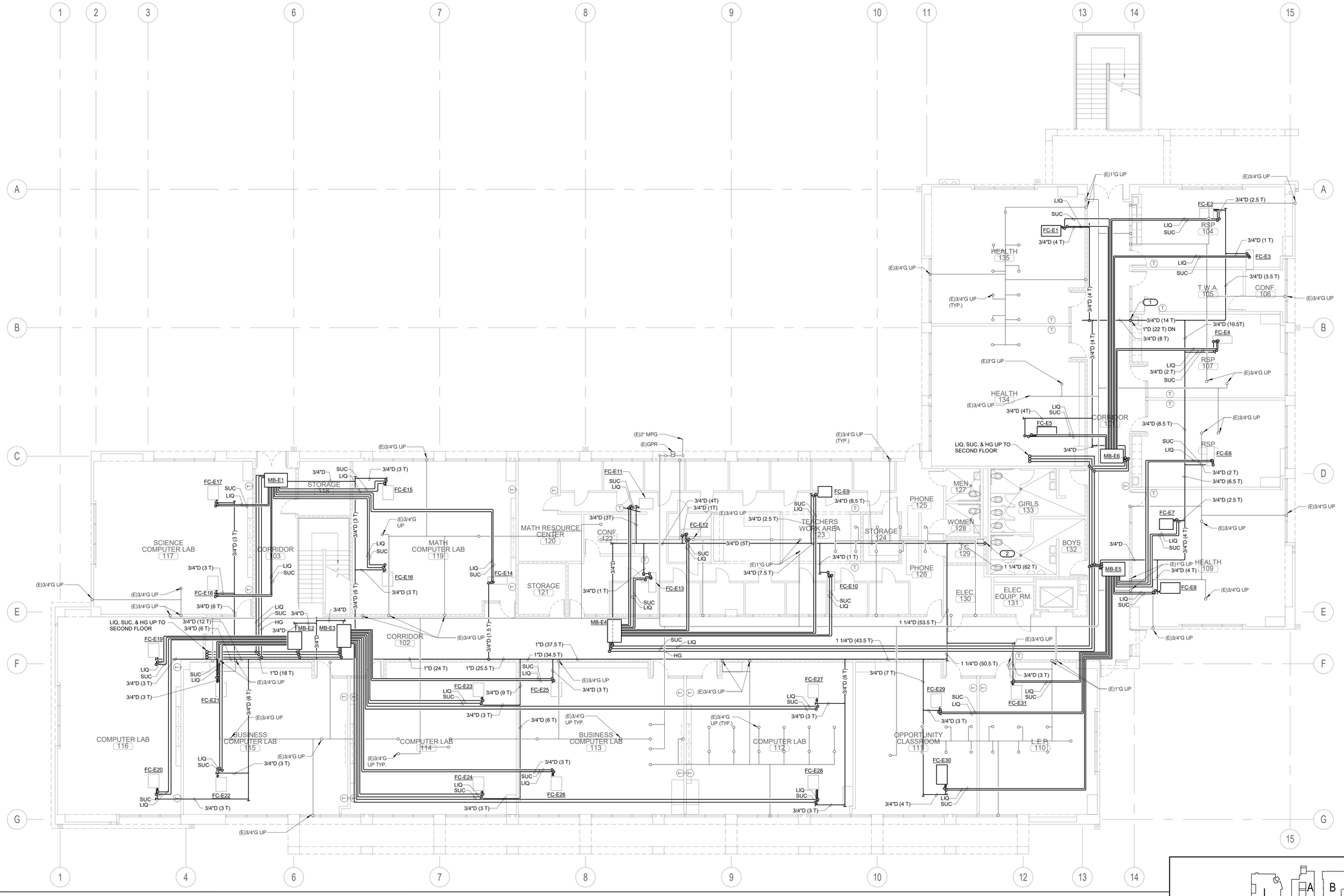


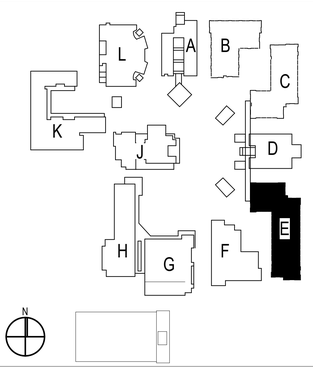
REMODEL KEYNOTES: (#)

1. OFFSET CONDENSATE INTO WALL, INDIRECT TO LAVATORY PER 6/MP4.4.
2. OFFSET CONDENSATE DN WALL, INDIRECT TO MOP SINK. MAINTAIN 1" MIN. AIR GAP ABOVE FLOOD LEVEL OF FLOOR SINK.

REMODEL GENERAL NOTES:

1. ALL EQUIPMENT ABOVE CEILING SHALL BE ACCESSIBLE VIA T-BAR OR A MINIMUM 24"x24" ACCESS DOOR WITH THE SAME FIRE RATING AS THE ADJACENT CONSTRUCTION.
2. FOR REFRIGERANT PIPE SUPPORT ON CHASE WALL, SEE DETAIL 5/MP4.2.
3. FOR REFRIGERANT PIPING SUPPORT SUSPENDED, SEE DETAIL 9/MP4.2.
4. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
5. FOR PORT BOX MOUNTING, SEE DETAIL 8/MP4.2.
6. FOR SINGLE PIPE HANGER, SEE DETAIL 5/MP4.4.
7. FOR CONDENSATE CONNECTION TO LAVATORY, SEE DETAIL 6/MP4.4.

BUILDING E REMODEL PIPING FIRST FLOOR PLAN | 1/8" = 1'-0" | 1



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STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
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DATE: Issue Date	SCALE: 1/8" = 1'-0"
PROJECT NUMBER: Project Number	

BUILDING E REMODEL PIPING 1ST FLOOR PLAN

DRAWING NUMBER: **MPE2.3**

EXISTING **KEYNOTES:** (#)

1. (E)20x20 E.A.D FR. BEL. W/ (E)20x20 U.T.R.
2. (E)22x18 O.A. DUCT DN.
3. (E)16x12 E.A.D FR. BEL.
4. (E)20x16 O.A. DUCT DN. W/
5. (E)16x12 E.A.D FR. BEL. W/ (E)22x22 U.T.R.
6. (E)24x18 O.A. DUCT DN.
7. (E)24x24 E.A.D. U.T.R.
8. (E)14x14 U.T.R.
9. (E)18x18 U.T.R.
10. (E)20x18 E.A.D FR. BEL. W/ (E)24x24 U.T.R.
11. (E)20x20 U.T.R.
12. (E)26x26 U.T.R.
13. (E)12"ø U.T.R.
14. (E)8x6 TRANSFER DUCT W/(2) 8x8 T.G.
15. (E)14x8 TRANSFER DUCT W/(2) 10x10 T.G.
16. (E)26x18 DUCT TRANSITION BELOW BEAM.
17. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC SEE RM# 212 & #213.
18. FUME HOOD(TYP.)
19. (E)24x12 DUCT TRANSITION BELOW BEAM.
20. (E)14x12 DUCT TRANSITION BELOW BEAM.
21. (E)18x12 DUCT TRANSITION BELOW BEAM.
22. FOR TYPICAL DUCT, GRILLE SIZES, NOTES, ETC SEE RM# 207.
23. (E)44x22 R.A.R- 1340.
24. (E)28x14 DUCT TRANSITION BELOW BEAM.

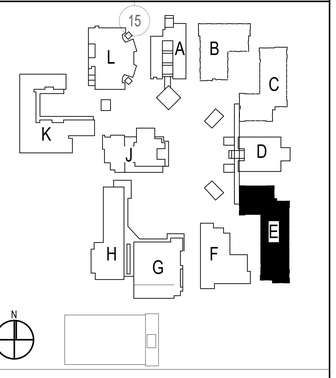
EXISTING KEYNOTES: (#)

26. (E)28x8 EXH. AIR GRILLE -600 CFM.
27. (E)34x34 S.A. DUCT U.T.R.
32. (E)16x12 EXH. DUCT F.R. BEL.

REMODEL GENERAL NOTES:

1. BALANCE OUTSIDE AIR DAMPERS TO OA CFM LISTED ON MP0.3.
2. ADJUST AND MAKE REPAIRS TO EXISTING VOLUME DAMPERS AS REQUIRED TO PROVIDE SPECIFIED AIR BALANCE AND MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
3. CONTRACTOR SHALL MAKE REPAIRS TO EXISTING DUCTWORK, DUCTWORK SUPPORTS AND DUCT INSULATION AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
4. CONTRACTOR SHALL ADJUST AND MAKE REPAIRS TO EXISTING AIR DEVICES AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
5. INSTALL NEW TEMPERATURE CONTROL SENSORS AND WIRING, REUSE EXISTING CONDUIT DN WALL.
6. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.

BUILDING E REMODEL SECOND FLOOR PLAN | 1/8" = 1'-0" | 1



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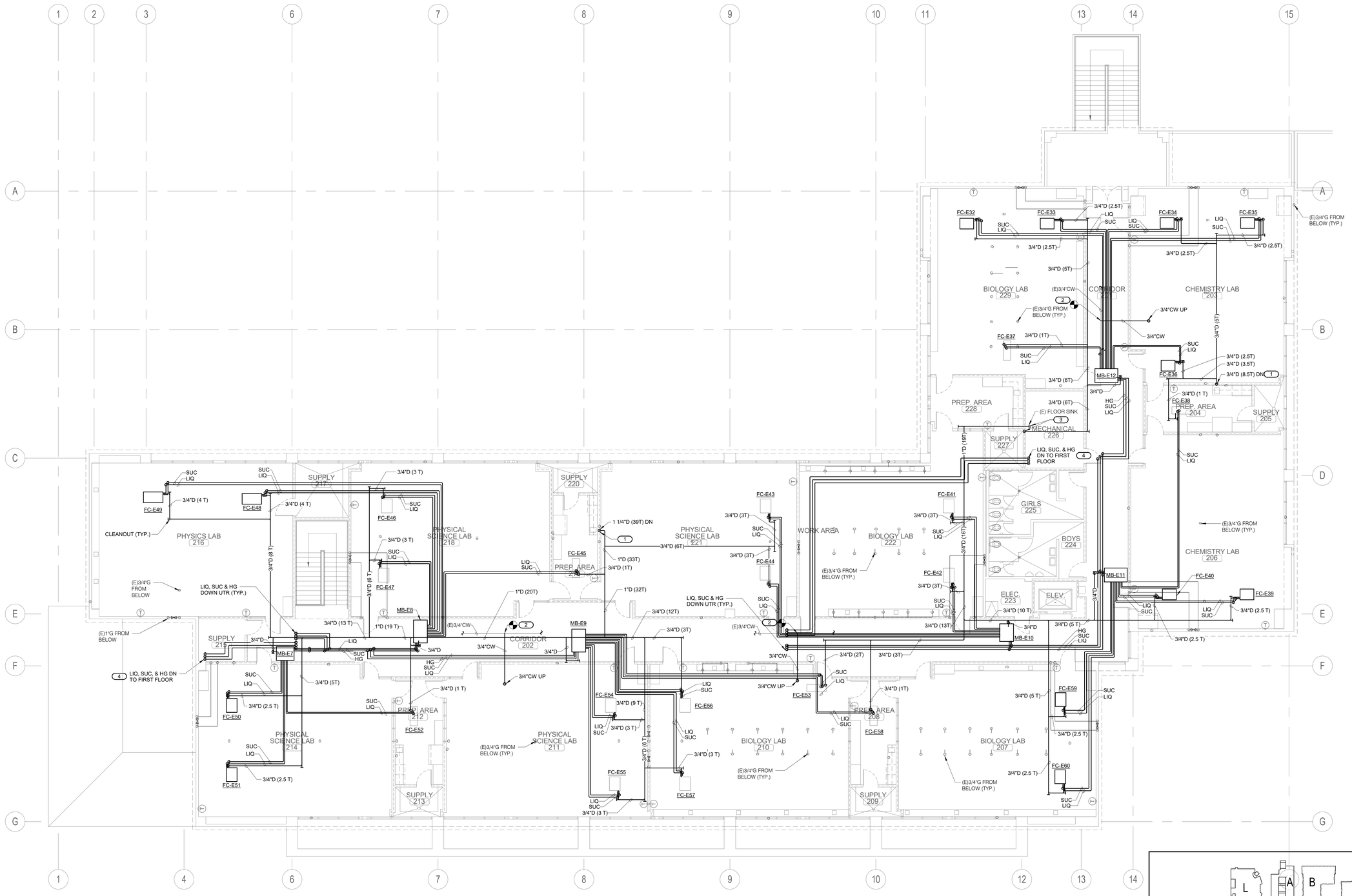
PROJECT NUMBER:	Project Number		

BUILDING E REMODEL 2ND FLOOR PLAN

DRAWING NUMBER: **MPE2.4**



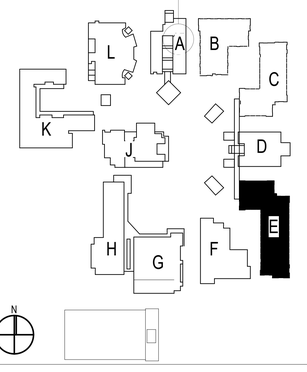
REMODEL KEYNOTES: (#)

1. OFFSET CONDENSATE INTO WALL, INDIRECT TO LAVATORY PER 6/MP4.4.
2. P.O.C. 3/4"CW LINE TO (E) CW LINE. CHECK DRAWING AND V.I.F. SIZE OF (E) CW PIPE SIZE.
3. OFFSET CONDENSATE DN WALL, INDIRECT TO FLOOR SINK. MAINTAIN 1" MIN. AIR GAP ABOVE FLOOD LEVEL OF FLOOR SINK.
4. FOR OPENINGS IN THE FLOOR, REFER TO STRUCTURAL DRAWINGS.

REMODEL GENERAL NOTES:

1. ALL EQUIPMENT ABOVE CEILING SHALL BE ACCESSIBLE VIA T-BAR OR A MINIMUM 24"x24" ACCESS DOOR WITH THE SAME FIRE RATING AS THE ADJACENT CONSTRUCTION.
2. FOR REFRIGERANT PIPE THRU ROOF, SEE DETAIL 1/MP4.2.
3. FOR REFRIGERANT PIPE SUPPORT ON CHASE WALL, SEE DETAIL 5/MP4.2.
4. FOR REFRIGERANT PIPING SUPPORT SUSPENDED, SEE DETAIL 9/MP4.2.
5. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
6. FOR PORT BOX MOUNTING, SEE DETAIL 8/MP4.2.
7. FOR SINGLE PIPE HANGER, SEE DETAIL 5/MP4.4.
8. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.4.
9. FOR CONDENSATE CONNECTION TO LAVATORY, SEE DETAIL 6/MP4.4.

BUILDING E REMODEL PIPING SECOND FLOOR PLAN | 1/8" = 1'-0" | 1



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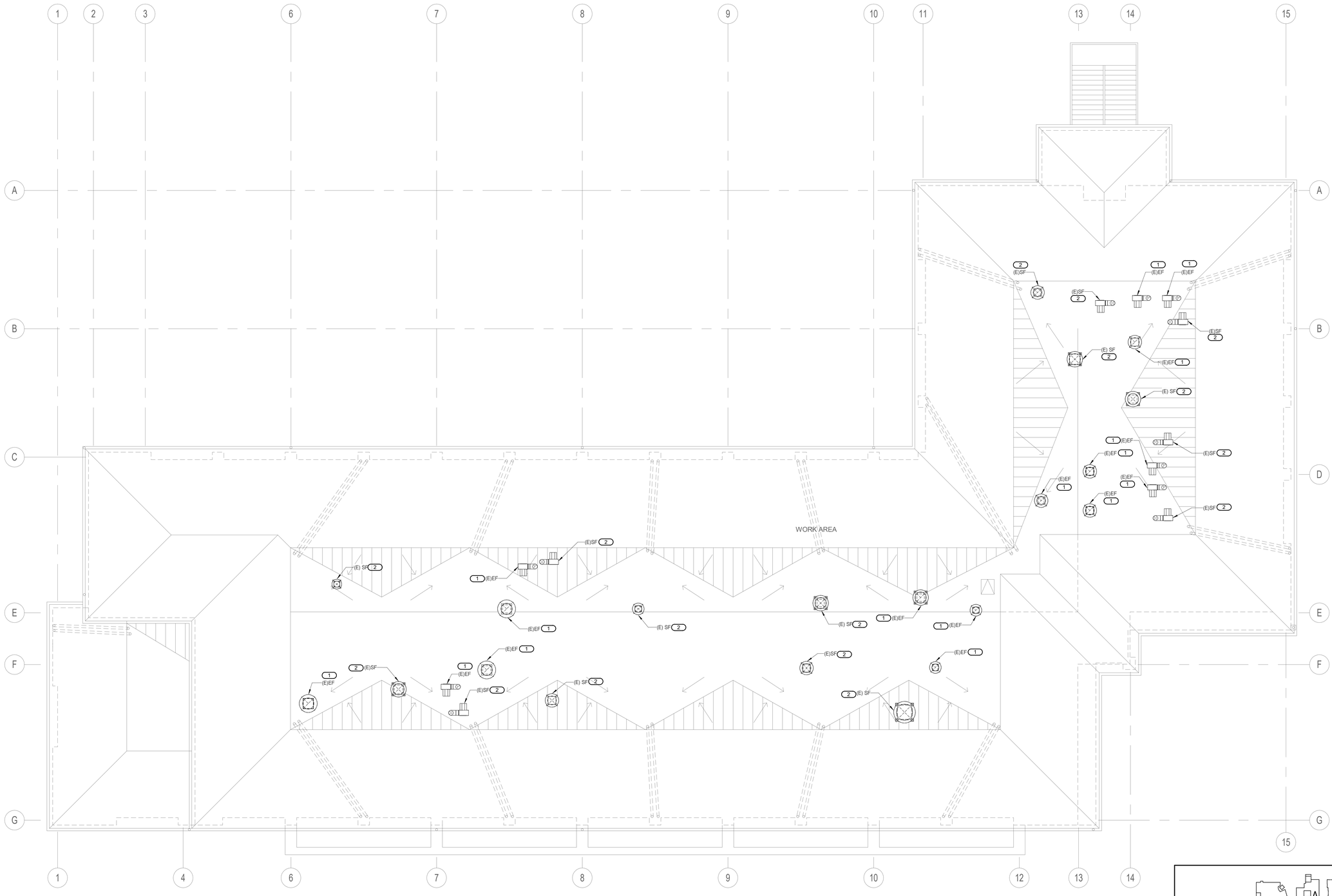
BUILDING E REMODEL PIPING 2ND FLOOR PLAN

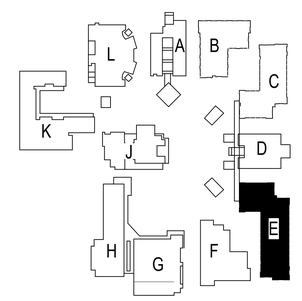
DRAWING NUMBER: **MPE2.5**



DEMOLITION KEYNOTES: (#)

1. EXISTING EXHAUST FAN TO REMAIN.
2. EXISTING SUPPLY FAN TO REMAIN.

BUILDING E DEMOLITION ROOF PLAN | 1/8" = 1'-0" | 1



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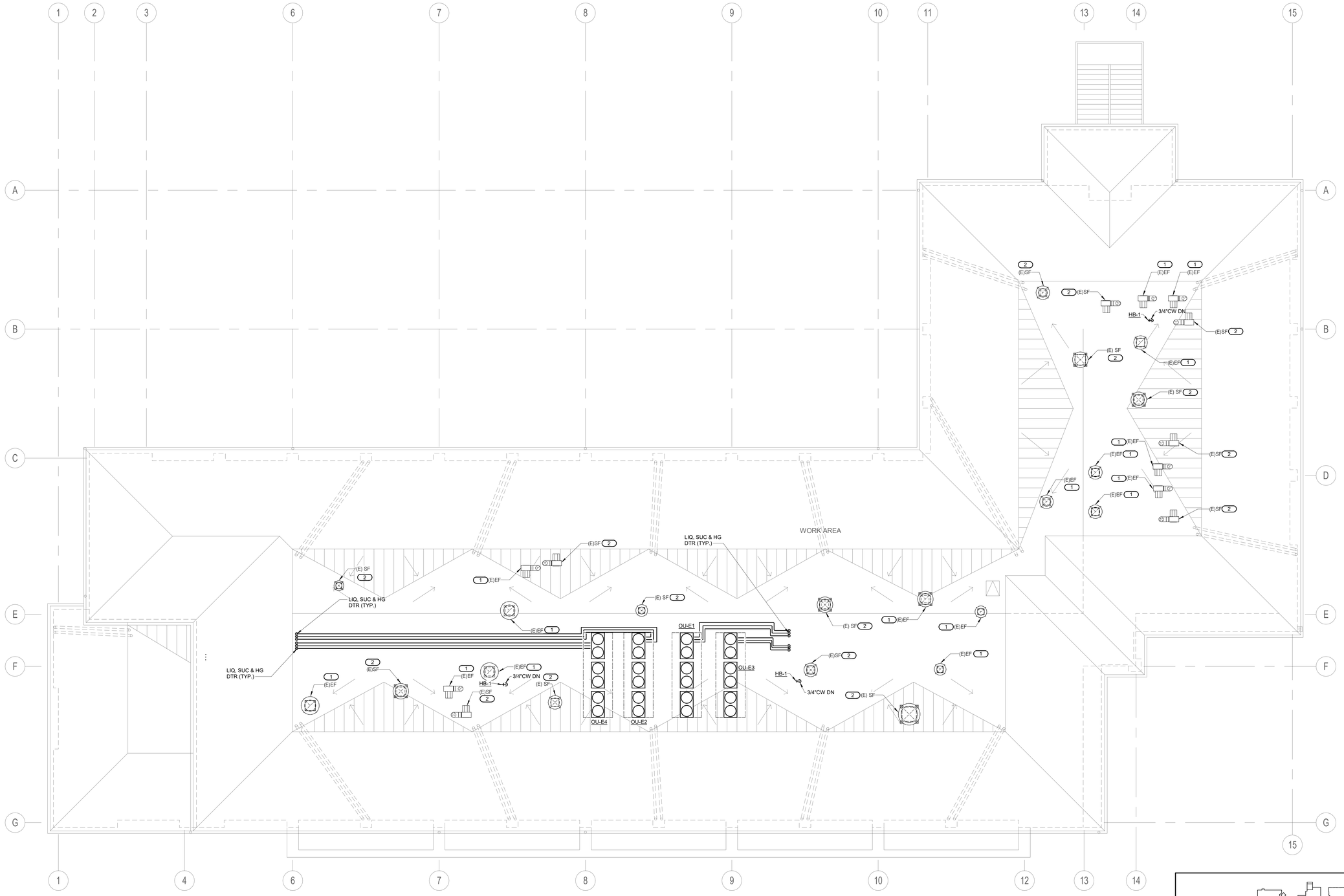
BUILDING E DEMOLITION ROOF PLAN

DRAWING NUMBER: **MPE3.0**



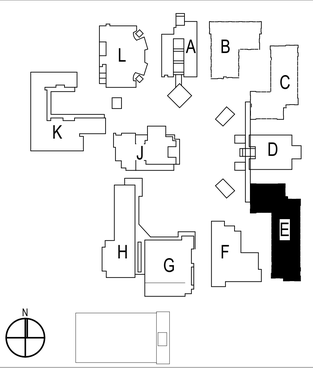
REMODEL KEYNOTES: (#)

1. EXISTING EXHAUST FAN TO REMAIN. REBALANCE, ADJUST SHEAVES, AND PROVIDE NEW BELTS FOR (E) EXHAUST FAN TO NEW AIRFLOW REQUIREMENTS.
2. EXISTING SUPPLY FAN TO REMAIN. REBALANCE, ADJUST SHEAVES, AND PROVIDE NEW BELTS FOR (E) SUPPLY FAN TO NEW AIRFLOW REQUIREMENTS.

REMODEL GENERAL NOTES:

1. FOR REFRIGERANT PIPE THRU ROOF, SEE DETAIL 1/MP4.2.
2. FOR REFRIGERANT PIPE SUPPORT ON ROOF, SEE DETAIL 4/MP4.2.
3. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
4. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.4.
5. FOR ROOF MOUNTED HOSE BIBS, SEE DETAIL 4/MP4.4.

BUILDING E REMODEL ROOF PLAN | 1/8" = 1'-0" | 1



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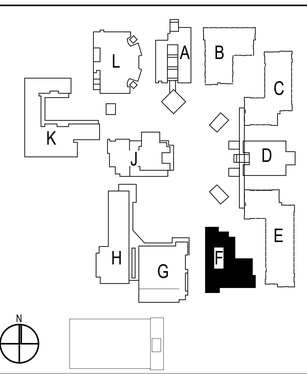
BUILDING E REMODEL ROOF PLAN

DRAWING NUMBER: **MPE3.1**

EXISTING **KEYNOTES:** (#)

1. (E)14x14 U.T.R. TO R.V. AND DN. TO MIXED AIR LENUM W/ M.V.D. IN DUCT DROP ACCESSIBLE IN ATTIC.
2. (E)20x20 U.T.R.
3. (E)26x26 U.T.R.
4. (E)14x14 U.T.R.
5. (E) 10x5 TRANSFER DUCT W/ (E)8x8 T.G & (E)8x8 SIDEWALL T.G.
6. (E) 14x7 TRANSFER DUCT W/ (E)12x12 T.G & (E)8x8 SIDEWALL T.G.
8. FOR TYP. DUCT LAYOUT, SIZES, NOTES, ETC. SEE RM.#106.
10. (E)12x12 EXH. GRILLE W/ (E)12x12 DUCT U.T.R.
11. T-STAT W/ METAL GUARD.
12. (E)8x8 EXHAUST AIR GRILLE- 50 CFM.
13. REMOVE EXISTING BOILER, TANKS, PUMPS, PIPING, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING STRUCTURE, FLOOR, WALL, AND CEILING, TYPICAL.
14. DEMOLISH EXISTING TEMPERATURE CONTROL DEVICE, WIRING. REFER TO ARCHITECTURAL FOR PATCHING WALL/CEILING, TYPICAL.
15. DEMOLISH EXISTING AIR REGISTERS, DUCTWORK,SUPPORTS AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING,TYPICAL.
16. DEMOLISH EXISTING FAN COIL, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.
17. DEMOLISH EXISTING PIPING, VALVES, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.



SITE KEY PLAN

BUILDING F DEMOLITION FLOOR PLAN | 1/8" = 1'-0" | 1

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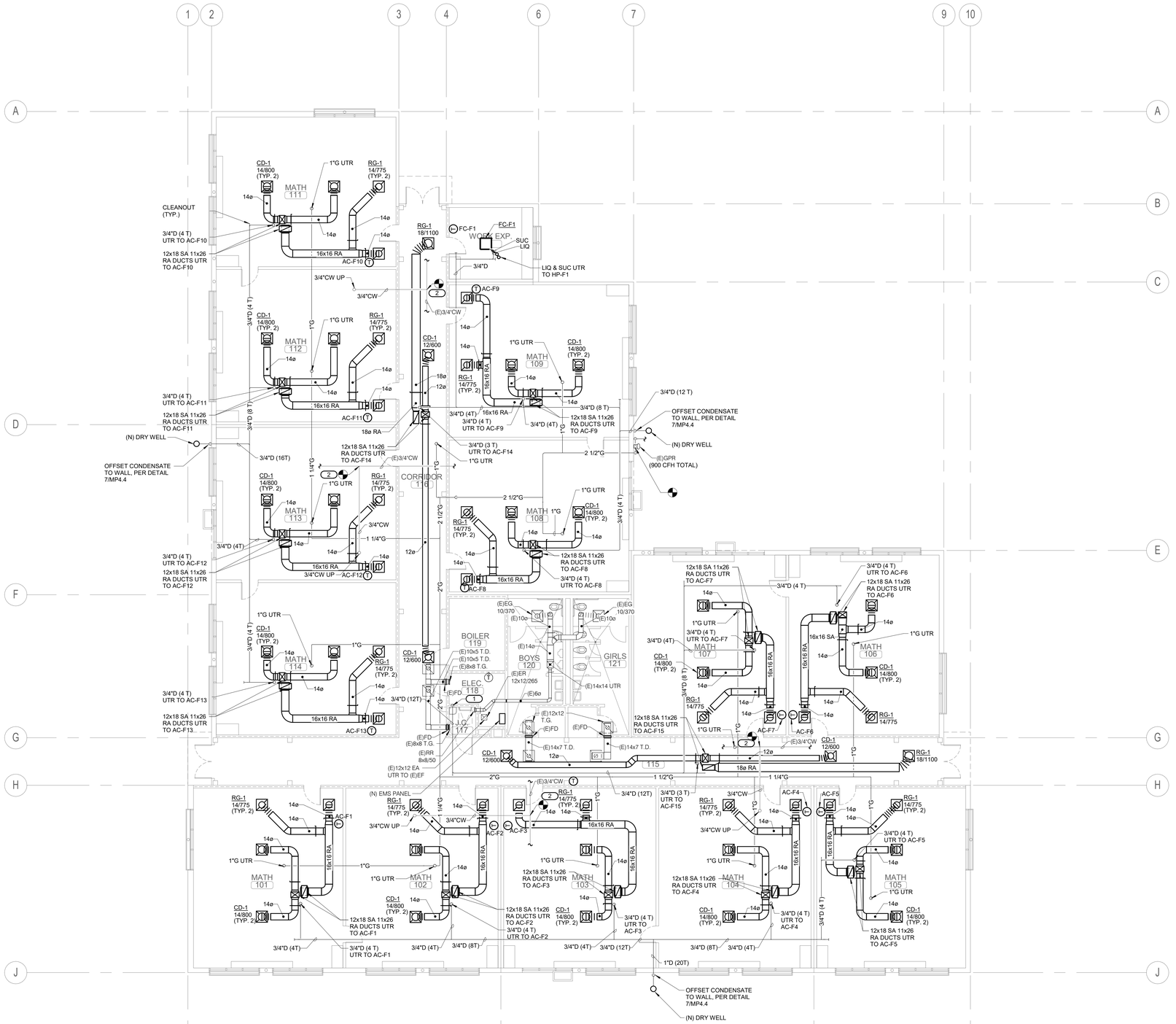
BUILDING F DEMOLITION FLOOR PLAN

DRAWING NUMBER: **MPF2.0**

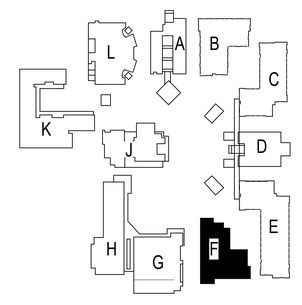


REMODEL KEYNOTES: (#)

1. OFFSET CONDENSATE INTO WALL,TIE INTO SINK TAIL PIECE. MAINTAIN 1" MIN. AIR GAP ABOVE FLOOD LEVEL OF JANITOR SINK.
2. P.O.C. 3/4"CW LINE TO (E) CW LINE. CHECK DRAWING AND V.I.F. SIZE OF (E) CW PIPE SIZE.

REMODEL GENERAL NOTES:

1. INSTALL NEW TEMPERATURE CONTROL SENSORS AND WIRING, REUSE EXISTING CONDUIT DN WALL.
2. FOR DUCT SUPPORT DETAIL, SEE DETAIL 10/MP4.2
3. FOR DUCT CONNECTION TO CEILING AIR DEVICES, SEE DETAIL 11/MP4.2.
4. FOR VOLUME DAMPER, SEE DETAIL 3/MP4.3.
5. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
6. FOR FIRE/SMOKE DAMPER, SEE DETAIL 6/MP4.3.
7. FOR SINGLE PIPE HANGER, SEE DETAIL 5/MP4.3.
8. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.3.
9. FOR CONDENSANCE CONNECTION TO LAVATORY, SEE DETAIL 6/MP4.4.



SITE KEY PLAN

BUILDING F REMODEL FLOOR PLAN | 1/8" = 1'-0" | 1

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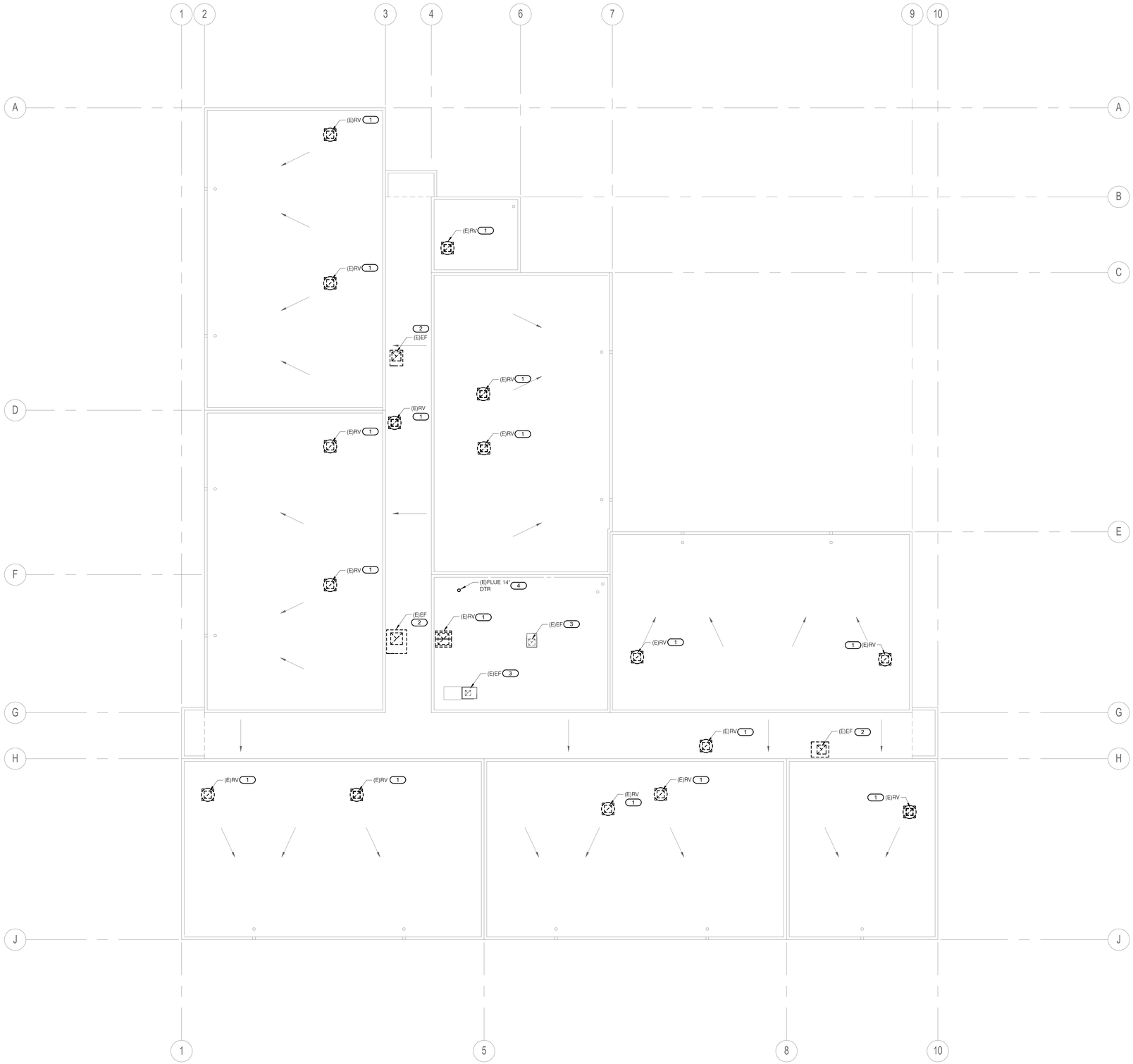
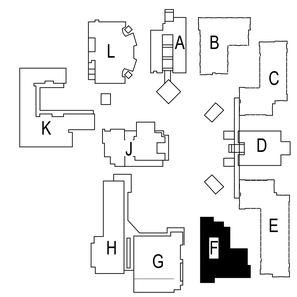
BUILDING F REMODEL FLOOR PLAN

DRAWING NUMBER: **MPF2.1**



DEMOLITION KEYNOTES: (#)

1. DEMOLISH EXISTING ROOF VENTILATOR, CURB, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF STRUCTURE. TYPICAL.
2. DEMOLISH EXISTING ROOF EXHAUST FAN, CURB, AND RELATED APPURTENCANCES. COORDINATE WITH ELECTRICAL CONTRACTOR FOR REMOVAL OF WIRING AND CONDUIT. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF STRUCTURE. TYPICAL.
3. EXISTING EXHAUST FAN TO REMAIN.
4. DEMOLISH EXISTING FLUE, CURB, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF STRUCTURE.



SITE KEY PLAN

BUILDING F DEMOLITION ROOF PLAN | 1/8" = 1'-0" | 1

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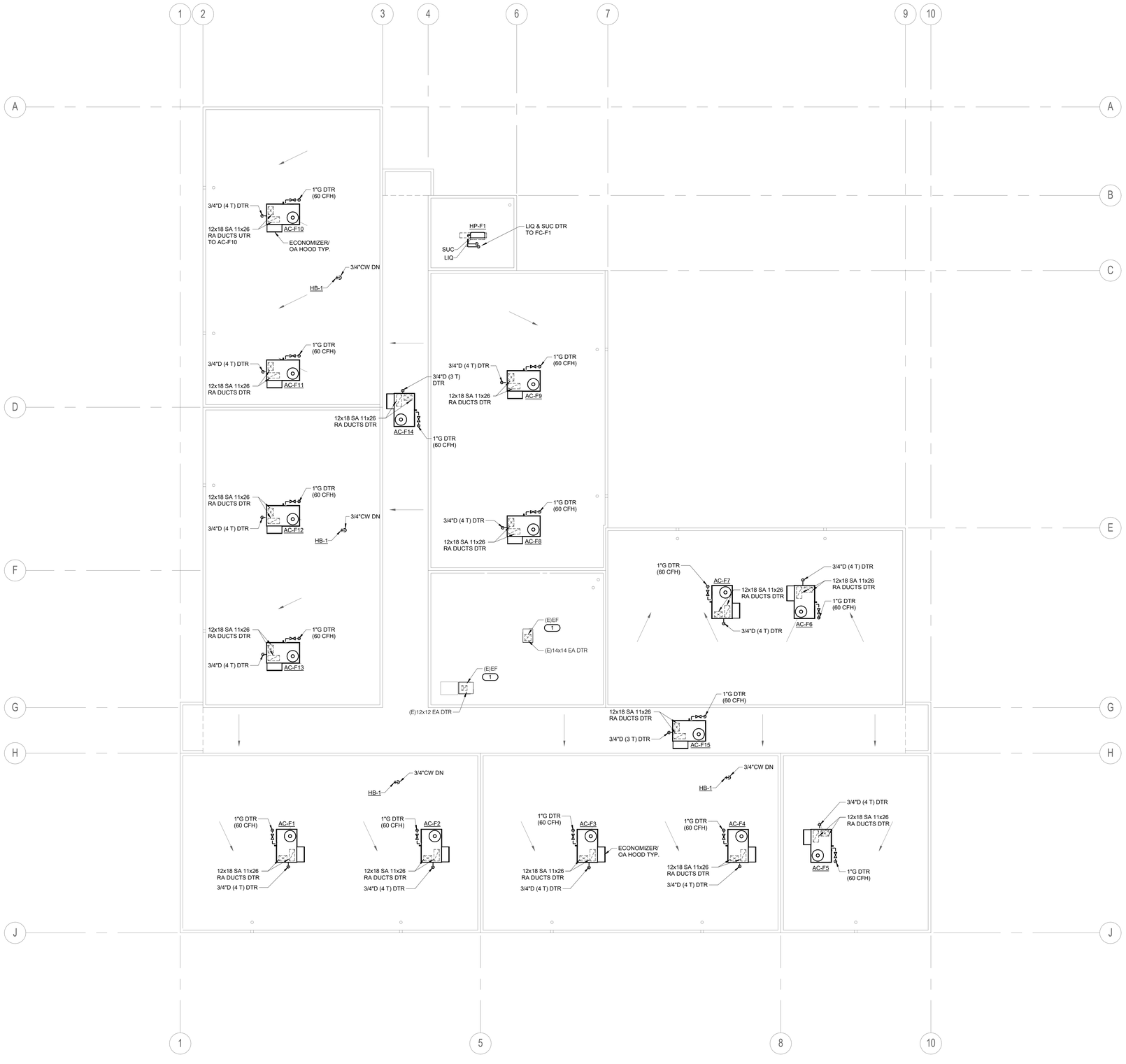
BUILDING F DEMOLITION ROOF PLAN

DRAWING NUMBER: **MPF3.0**



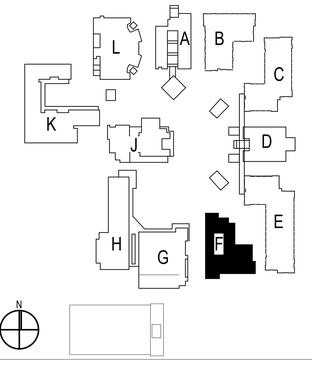
REMODEL KEYNOTES: (#)

1. EXISTING EXHAUST FAN TO REMAIN.

REMODEL GENERAL NOTES:

1. MAINTAIN MIN. 10 FT. FROM OA INTAKES AND PLUMBING VENTS. RELOCATE EXISTING PLUMBING VENTS AS REQUIRED.
2. FOR NATURAL GAS CONNECTION TO THE EQUIPMENT, SEE DETAIL 1/MP4.4.
3. FOR CONDENSATE CONNECTION TO THE EQUIPMENT, SEE DETAIL 2/MP4.4.
4. FOR ROOF MOUNTED HOSE BIBS, SEE DETAIL 4/MP4.4.
5. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.4.

BUILDING F REMODEL ROOF PLAN | 1/8" = 1'-0" | 1



SITE KEY PLAN

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C-26046
03-31-21
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REGISTERED PROFESSIONAL ENGINEER
ERIC M. DeSPLINTER
38688
Exp. 12/31/21
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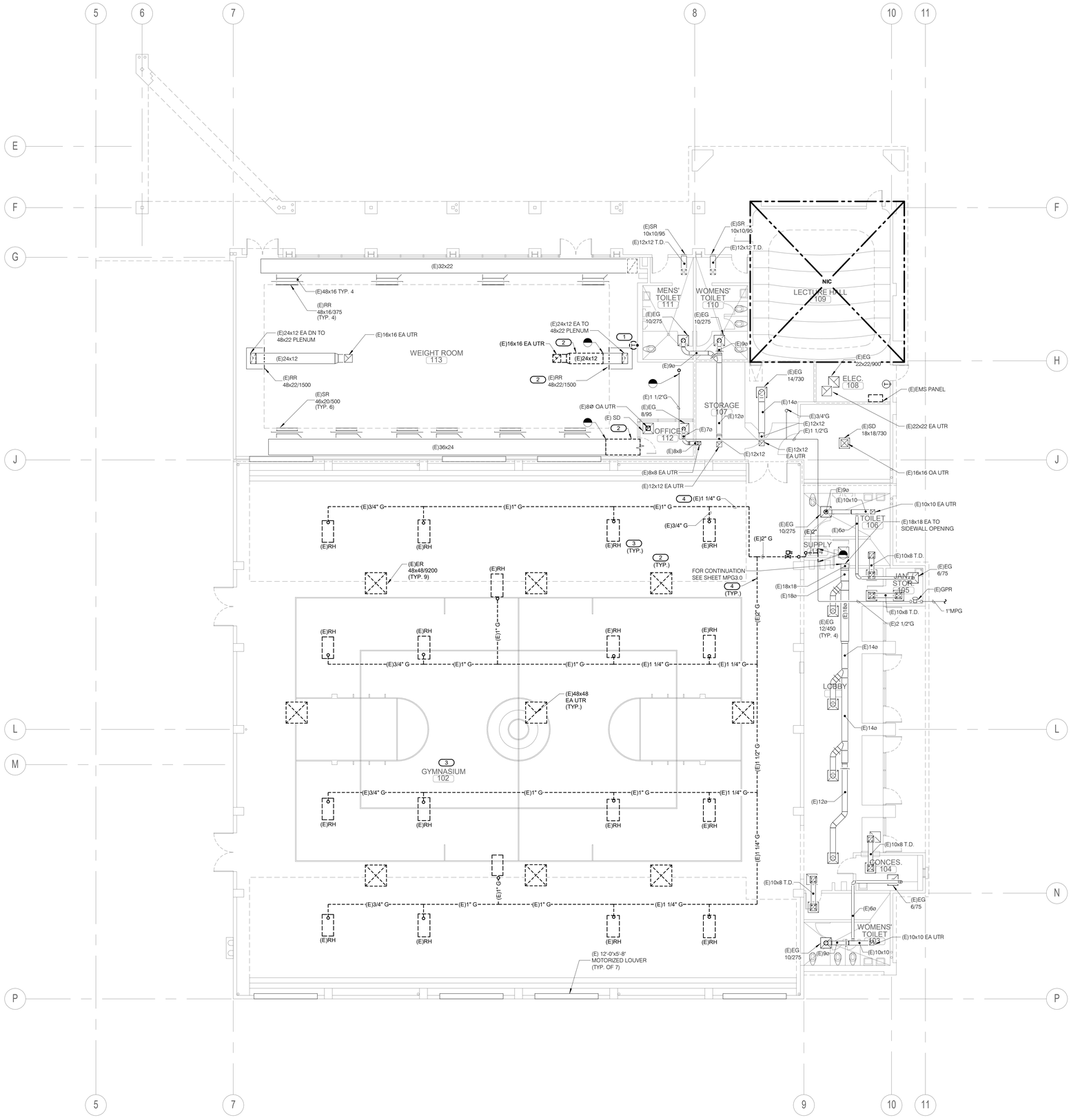
PROJECT NUMBER:	Project Number		

BUILDING F REMODEL ROOF PLAN

DRAWING NUMBER: MPF3.1



DEMOLITION KEYNOTES: (#)

1. DEMOLISH EXISTING TEMPERATURE CONTROL DEVICE, WIRING. REFER TO ARCHITECTURAL FOR PATCHING WALL/CEILING. TYPICAL.
2. DEMOLISH EXISTING AIR REGISTERS, DUCTWORK, SUPPORTS AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING.TYPICAL.
3. DEMOLISH EXISTING RADIANT HEATERS, SUPPORTS, AND RELATED APPURTENANCES.
4. DEMOLISH EXISTING PIPING, VALVES, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.

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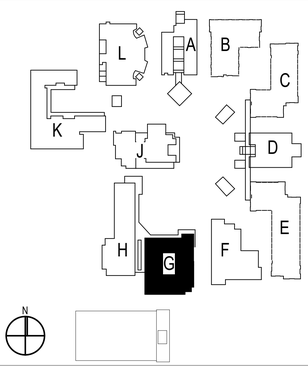
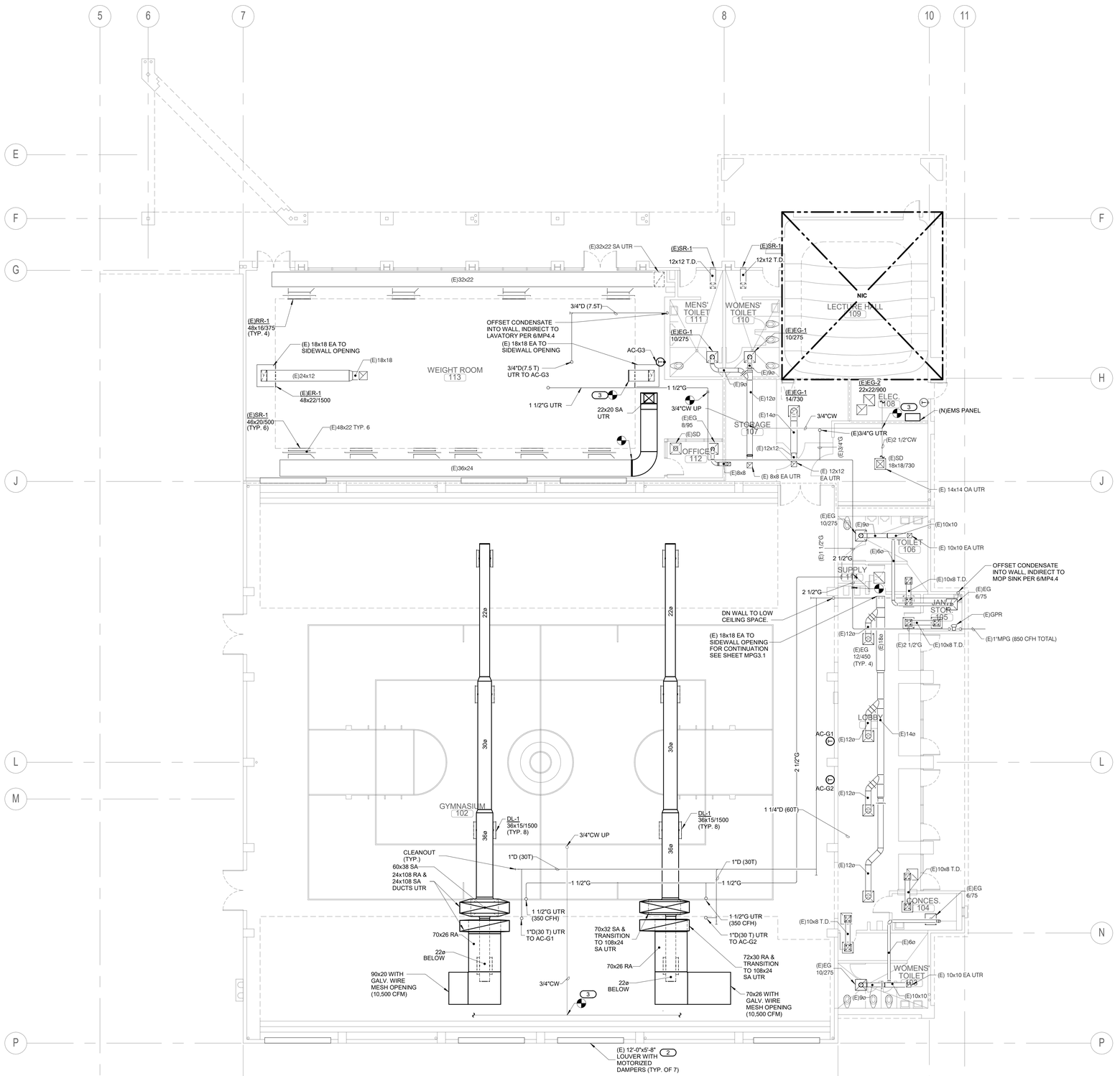
PROJECT NUMBER: Project Number	

BUILDING G DEMOLITION FLOOR PLAN

DRAWING NUMBER: **MPG2.1**



SITE KEY PLAN

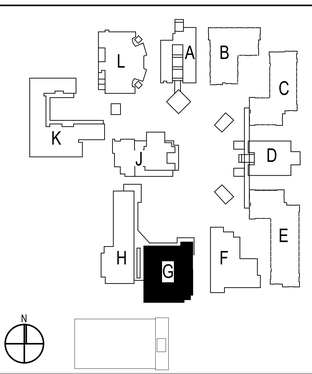


KEYNOTES: (#)

1. CAP AND SEAL EXISTING EXHAUST DUCT.
2. CLOSE AND LOCK EXISTING DAMPERS.
3. P.O.C. 3/4"CW LINE TO (E) CW LINE. CHECK DRAWING AND V.I.F. SIZE OF (E) CW PIPE SIZE.

REMODEL GENERAL NOTES:

1. INSTALL NEW TEMPERATURE CONTROL SENSORS AND WIRING, REUSE EXISTING CONDUIT DN WALL.
2. FOR DUCT SUPPORT DETAIL, SEE DETAIL 10/MP4.2.
3. FOR DUCT MOUNTED REGISTER, SEE DETAIL 4/MP4.2.
4. FOR VOLUME DAMPER, SEE DETAIL 3/MP4.3.
5. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
6. FOR FIRE/SMOKE DAMPER, SEE DETAIL 6/MP4.3.
7. FOR SINGLE PIPE HANGER, SEE DETAIL 5/MP4.3.
8. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.3.
9. FOR CONDENSATE CONNECTION TO LAVATORY, SEE DETAIL 6/MP4.4.
10. FOR DUCT THRU METAL ROOF, SEE DETAIL 3/MP4.2.



SITE KEY PLAN

BUILDING G REMODEL FLOOR PLAN | 1/8" = 1'-0" | 1

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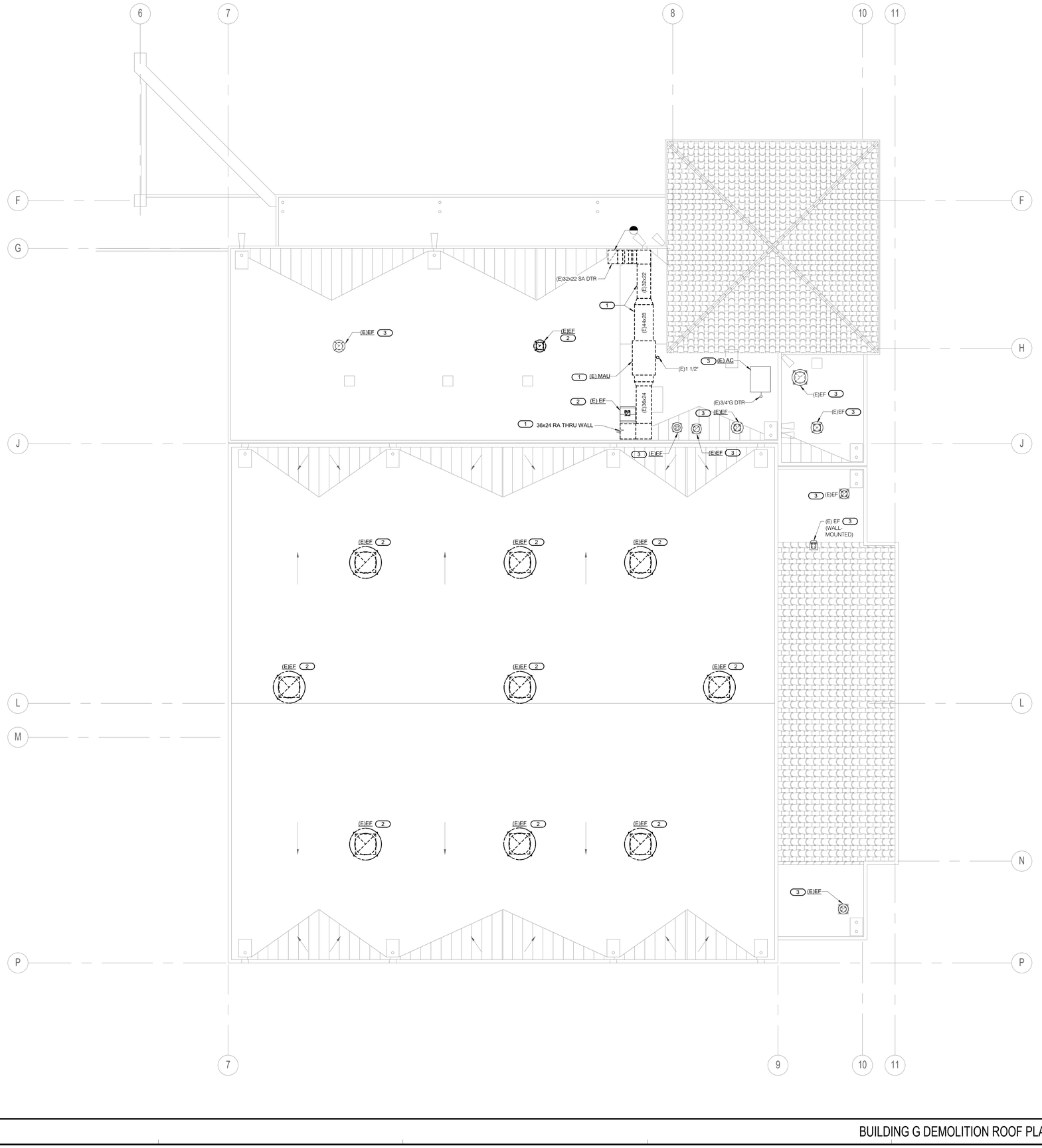
PROJECT NUMBER: Project Number	

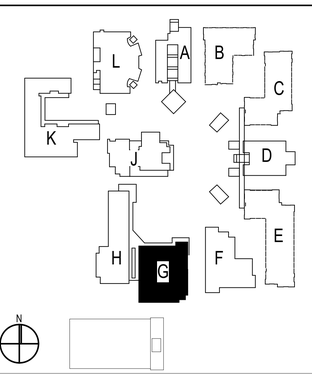
BUILDING G REMODEL FLOOR PLAN

DRAWING NUMBER: **MPG2.2**



DEMOLITION KEYNOTES: (#)

1. DEMOLISH EXISTING MAKE-UP AIR UNIT, CURB, DUCTWORK, GAS PIPING AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF/WALL STRUCTURE.
2. DEMOLISH EXISTING ROOF EXHAUST FAN, CURB, AND RELATED APPURTENCANCES. COORDINATE WITH ELECTRICAL CONTRACTOR FOR REMOVAL OF WIRING AND CONDUIT. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF STRUCTURE. TYPICAL.
3. EXISTING EXHAUST FAN AND AC TO REMAIN.



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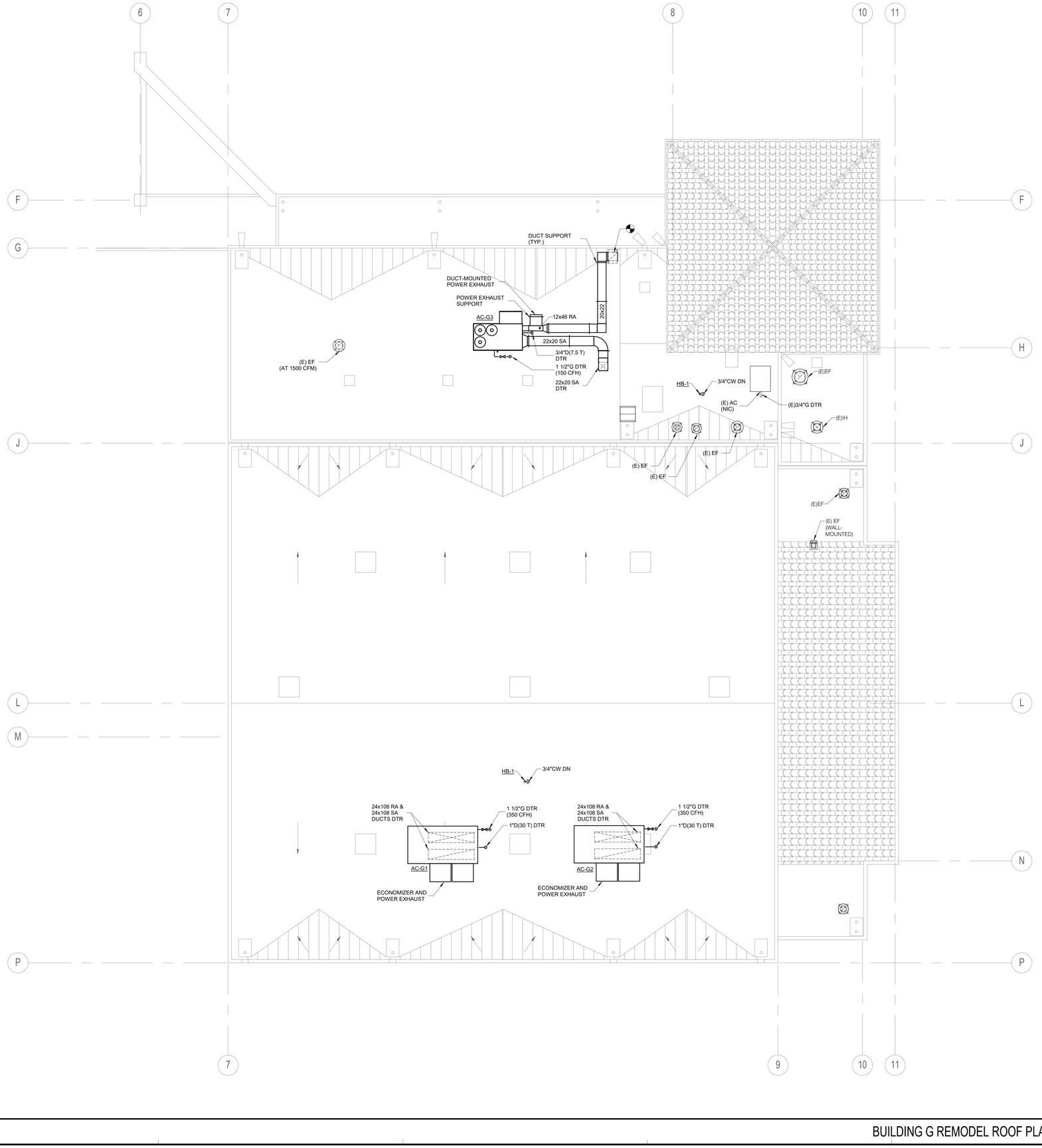
BUILDING G DEMOLITION ROOF PLAN

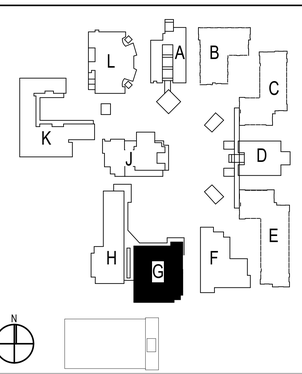
DRAWING NUMBER: **MPG3.0**

BUILDING G DEMOLITION ROOF PLAN | 1/8" = 1'-0" | 1



REMODEL GENERAL NOTES:

1. MAINTAIN MIN. 10 FT. FROM OA INTAKES AND PLUMBING VENTS. RELOCATE EXISTING PLUMBING VENTS AS REQUIRED.
2. FOR NATURAL GAS CONNECTION TO THE EQUIPMENT, SEE DETAIL 1/MP4.4.
3. FOR CONDENSATE CONNECTION TO THE EQUIPMENT, SEE DETAIL 2/MP4.4.
4. FOR ROOF MOUNTED HOSE BIBS, SEE DETAIL 4/MP4.4.
5. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.4.
6. FOR DUCT THRU METAL ROOF, SEE DETAIL 3/MP4.2.
7. FOR DUCT SUPPORT ON ROOF, SEE DETAIL 7/MP4.1.
8. FOR DUCTED POWER EXHAUST SUPPORT ON ROOF, SEE DETAIL 6/MP4.1.
9. FOR FLEXIBLE DUCT CONNECTION AT ROOF, SEE DETAIL 5/MP4.1.



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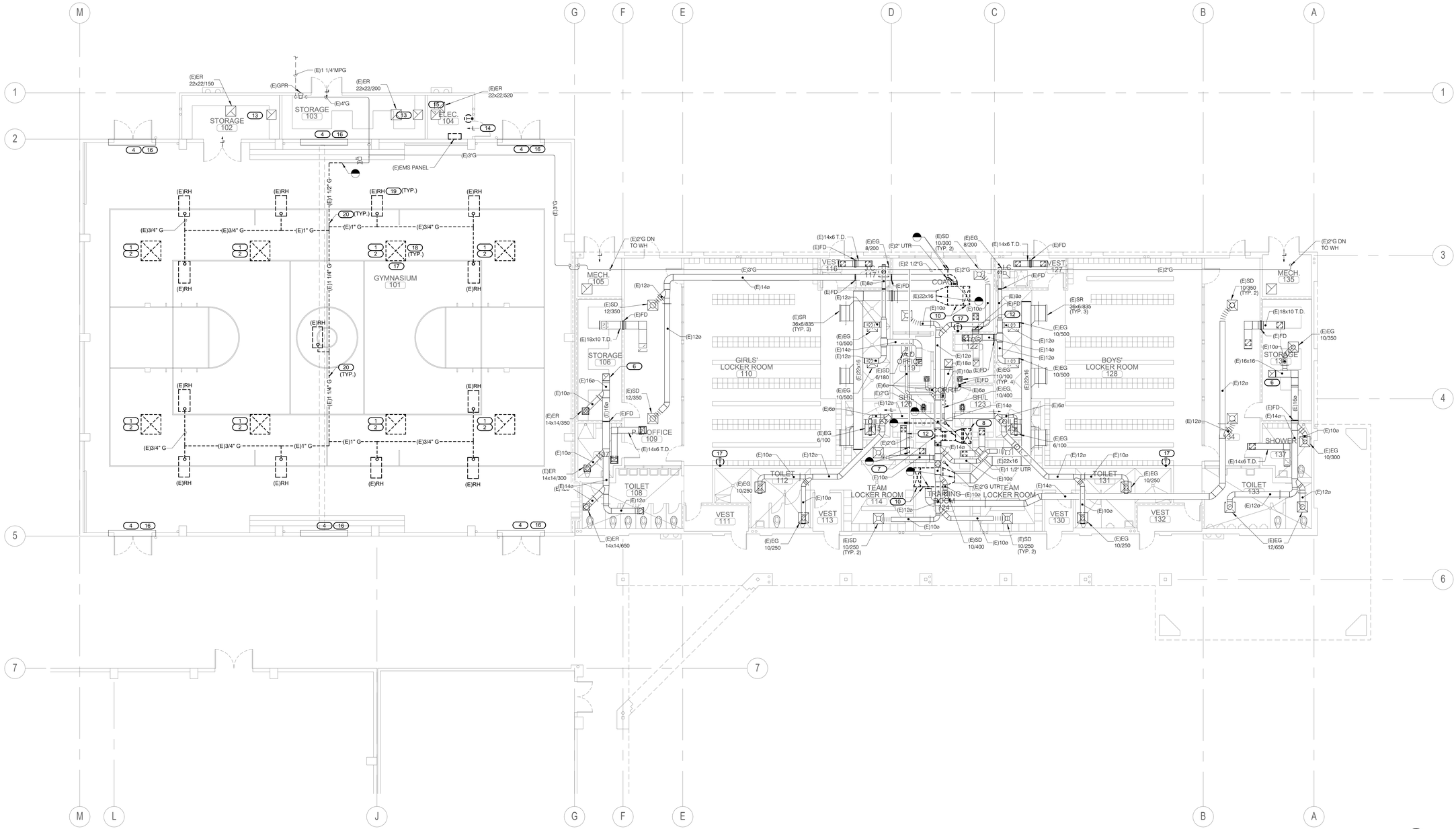
PROJECT NUMBER: Project Number	

BUILDING G REMODEL ROOF PLAN

DRAWING NUMBER: **MPG3.1**



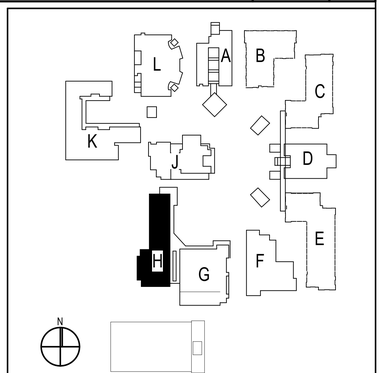
BUILDING H DEMOLITION FLOOR PLAN | 1/8" = 1'-0" | 1

EXISTING KEYNOTES: (#)

1. (E)48x48 DUCT UP TO SOUND CURB (E)46x46 ROOF OPENING.
2. (E)48x48 EXHAUST AIR REGISTER 9200 CFM 25 FT. ABOVE.
4. (E)BALL PROTECTOR SCREEN W/ACCESSIBLE MOTORIZED DAMPER.
6. (E)16x16 EXHAUST AIR UP TO (E)18 1/2"x18 1/2" ROOF OPENING.
7. (E)22x16 SA DUCT W/11x16 EQUAL SPLIT & TURNS TO 14ø
8. (E)34x18 UP TO MAKE UP UNIT.
10. (E)44x16 ELBOW TO (E)44x18 UTR.
12. (E)14x6 T.D. W/(2)10x10 T.G.
13. (E)8x8 EXHAUST AIR DUCT UP TO EF ON ROOF.
14. (E)DOOR LOUVER.
15. (E)22x22 EXHAUST GRILLE P.O.C. TO (E)22x22 DUCT UTR TO EF W/BACKCDRAFT DAMPER.

DEMOLITION KEYNOTES: (#)

16. CLOSE AND LOCK EXISTING DAMPERS SHUT.
17. DEMOLISH EXISTING TEMPERATURE CONTROL DEVICE, WIRING. REFER TO ARCHITECTURAL FOR PATCHING WALL/CEILING. TYPICAL.
18. DEMOLISH EXISTING AIR REGISTERS, DUCTWORK, SUPPORTS AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.
19. DEMOLISH EXISTING RADIANT HEATERS, SUPPORTS, AND RELATED APPURTENANCES.
20. DEMOLISH EXISTING PIPING, VALVES, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.



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REGISTERED PROFESSIONAL ENGINEER — ERIC M. DeSRUYNER — 38688 — Exp. 12/31/21 — MECHANICAL — STATE OF CALIFORNIA

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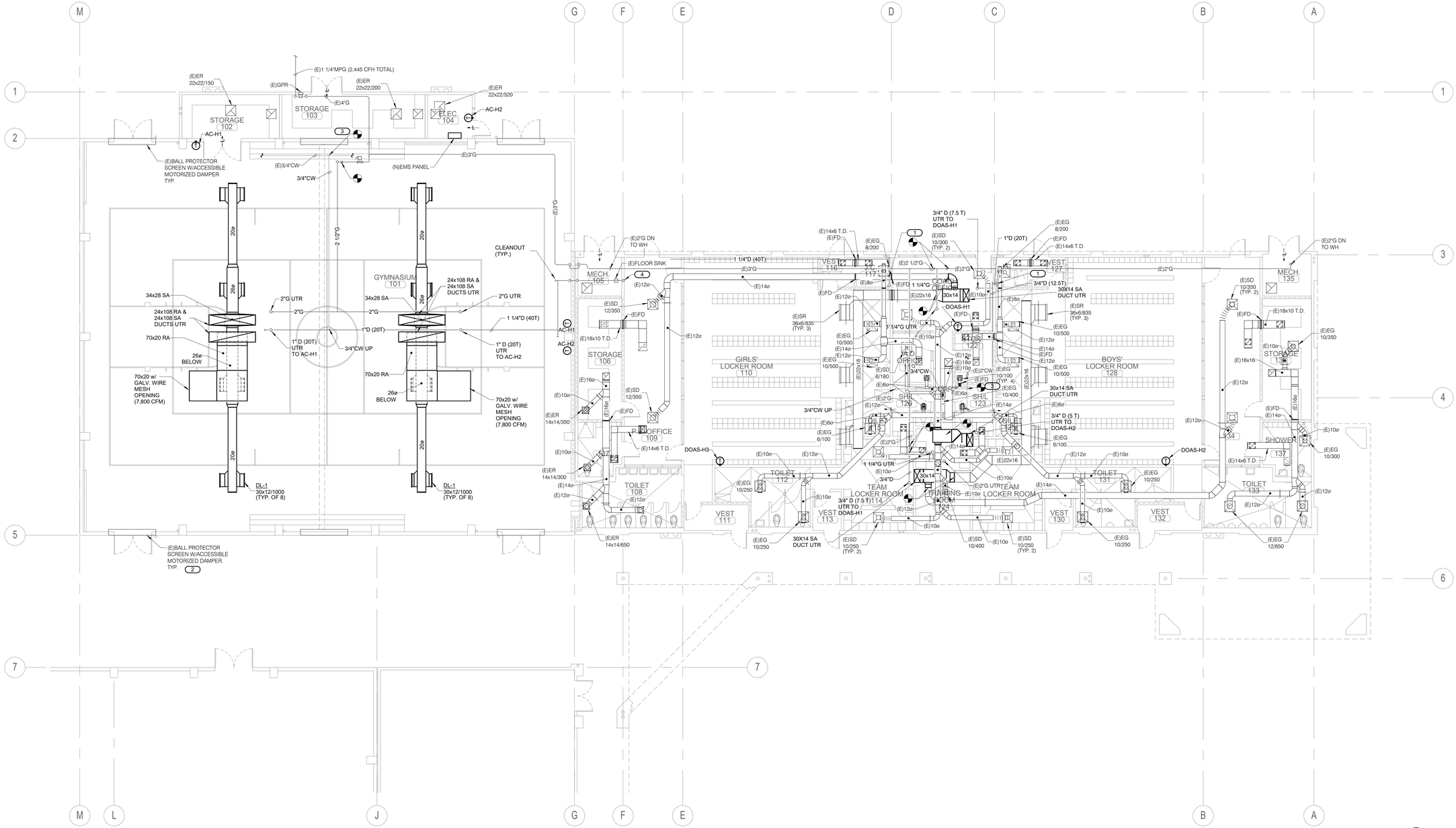
BUILDING H DEMOLITION FLOOR PLAN

DRAWING NUMBER: **MPH2.1**



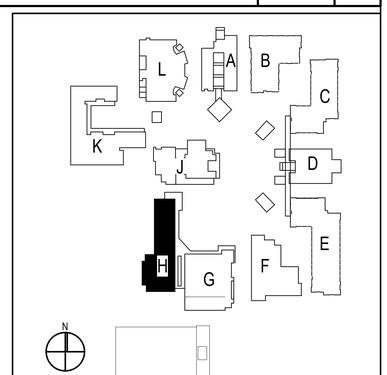
BUILDING H REMODEL FLOOR PLAN | 1/8" = 1'-0" | 1

REMODEL KEYNOTES: (#)

1. OFFSET CONDENSATE INTO WALL, INDIRECT TO MOP SINK PER 6/MP4.4
2. CLOSE AND LOCK EXISTING DAMPERS SHUT.
3. P.O.C. 3/4"CW LINE TO (E) CW LINE. CHECK DRAWING AND V.I.F. SIZE OF (E) CW PIPE SIZE.
4. OFFSET CONDENSATE INTO WALL, INDIRECT TO FLOOR SINK.

REMODEL GENERAL NOTES:

1. INSTALL NEW TEMPERATURE CONTROL SENSORS AND WIRING, REUSE EXISTING CONDUIT DN WALL.
2. FOR DUCT SUPPORT DETAIL, SEE DETAIL 10/MP4.2
3. FOR DUCT MOUNTED REGISTER, SEE DETAIL 4/MP4.2.
4. FOR VOLUME DAMPER, SEE DETAIL 3/MP4.3.
5. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
6. FOR FIRE/SMOKE DAMPER, SEE DETAIL 6/MP4.3.
7. FOR SINGLE PIPE HANGER, SEE DETAIL 5/MP4.3.
8. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.3.
9. FOR CONDENSATE CONNECTION TO LAVATORY, SEE DETAIL 6/MP4.4.



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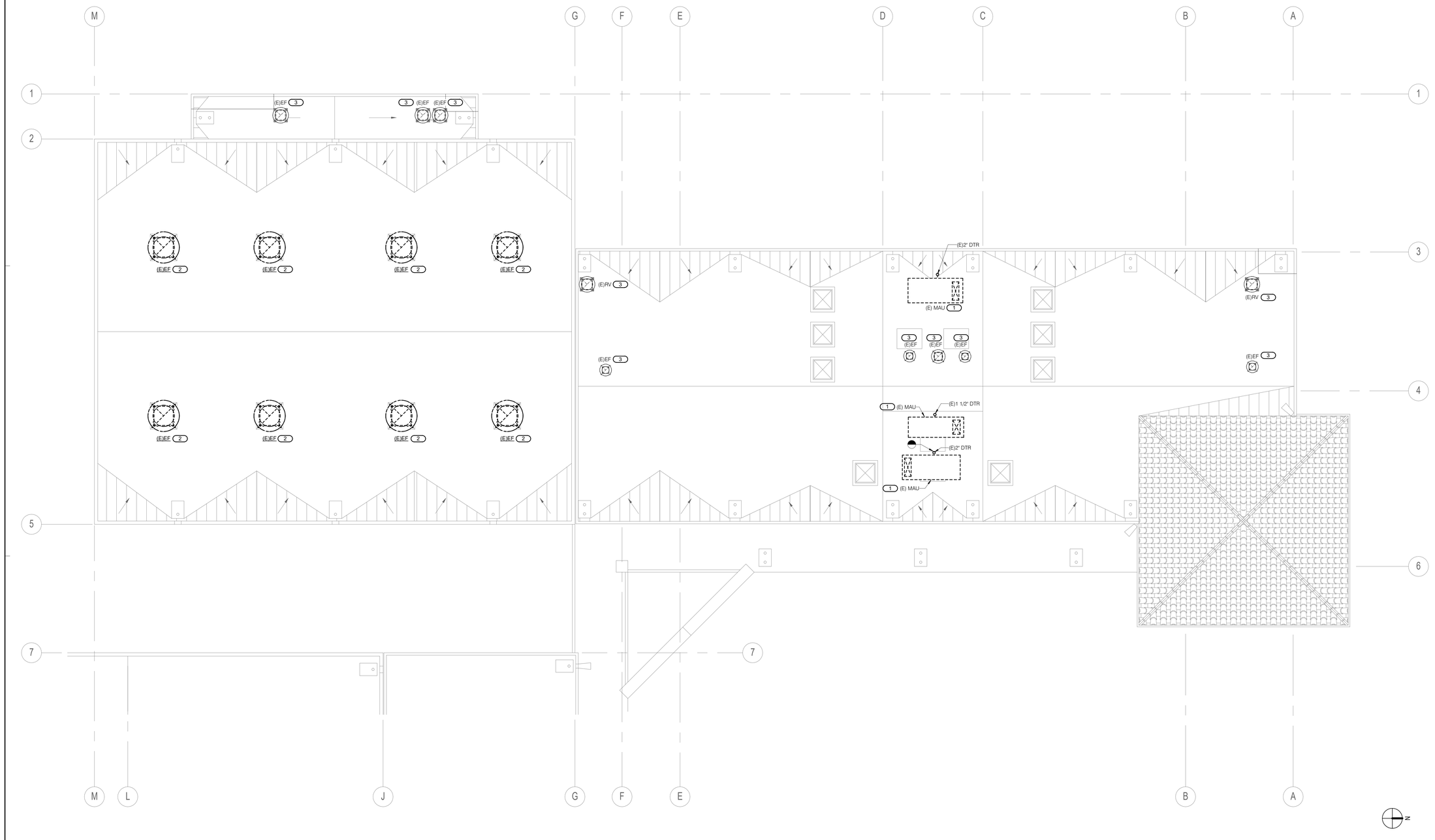
BUILDING H REMODEL FLOOR PLAN

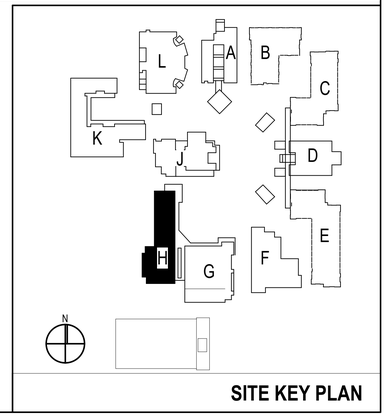
DRAWING NUMBER: **MPH2.2**



BUILDING H DEMOLITION ROOF PLAN | 1/8" = 1'-0" | 1

DEMOLITION KEYNOTES: (#)

1. DEMOLISH EXISTING MAKE-UP AIR UNIT, CURB, DUCTWORK, GAS PIPING AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF/WALL STRUCTURE.
2. DEMOLISH EXISTING ROOF EXHAUST FAN, CURB, AND RELATED APPURTENCANCES. COORDINATE WITH ELECTRICAL CONTRACTOR FOR REMOVAL OF WIRING AND CONDUIT. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF STRUCTURE. TYPICAL.
3. EXISTING EXHAUST FAN AND VENTILATOR TO REMAIN.



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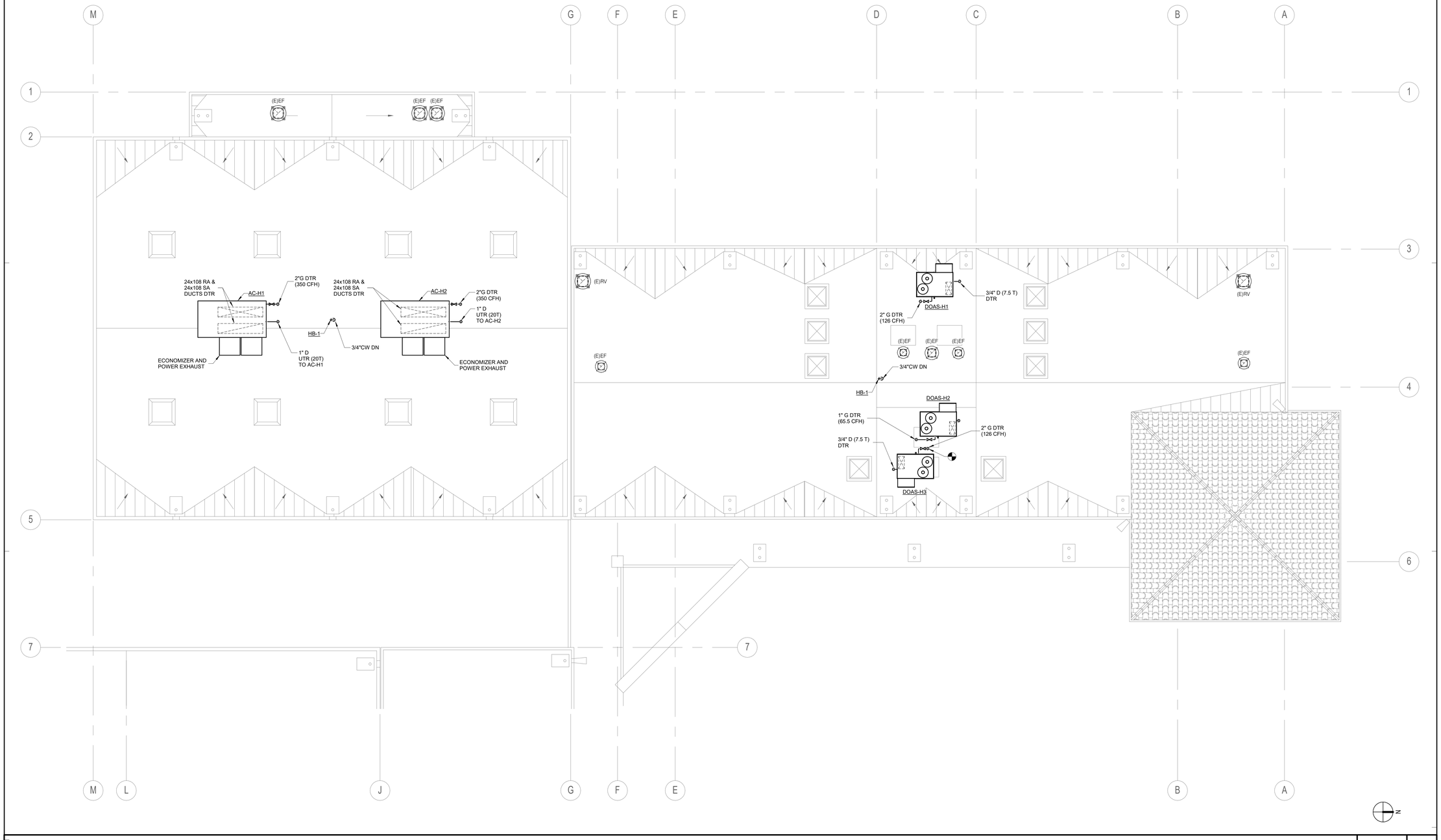
BUILDING H DEMOLITION ROOF PLAN

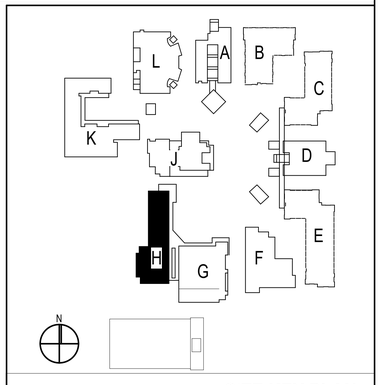
DRAWING NUMBER: **MPH3.0**



BUILDING H REMODEL ROOF PLAN | 1/8" = 1'-0" | 1

REMODEL GENERAL NOTES:

1. MAINTAIN MIN. 10 FT. FROM OA INTAKES AND PLUMBING VENTS. RELOCATE EXISTING PLUMBING VENTS AS REQUIRED.
2. FOR NATURAL GAS CONNECTION TO THE EQUIPMENT, SEE DETAIL 1/MP4.4.
3. FOR CONDENSATE CONNECTION TO THE EQUIPMENT, SEE DETAIL 2/MP4.4.
4. FOR ROOF MOUNTED HOSE BIBS, SEE DETAIL 4/MP4.4.
5. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.4.



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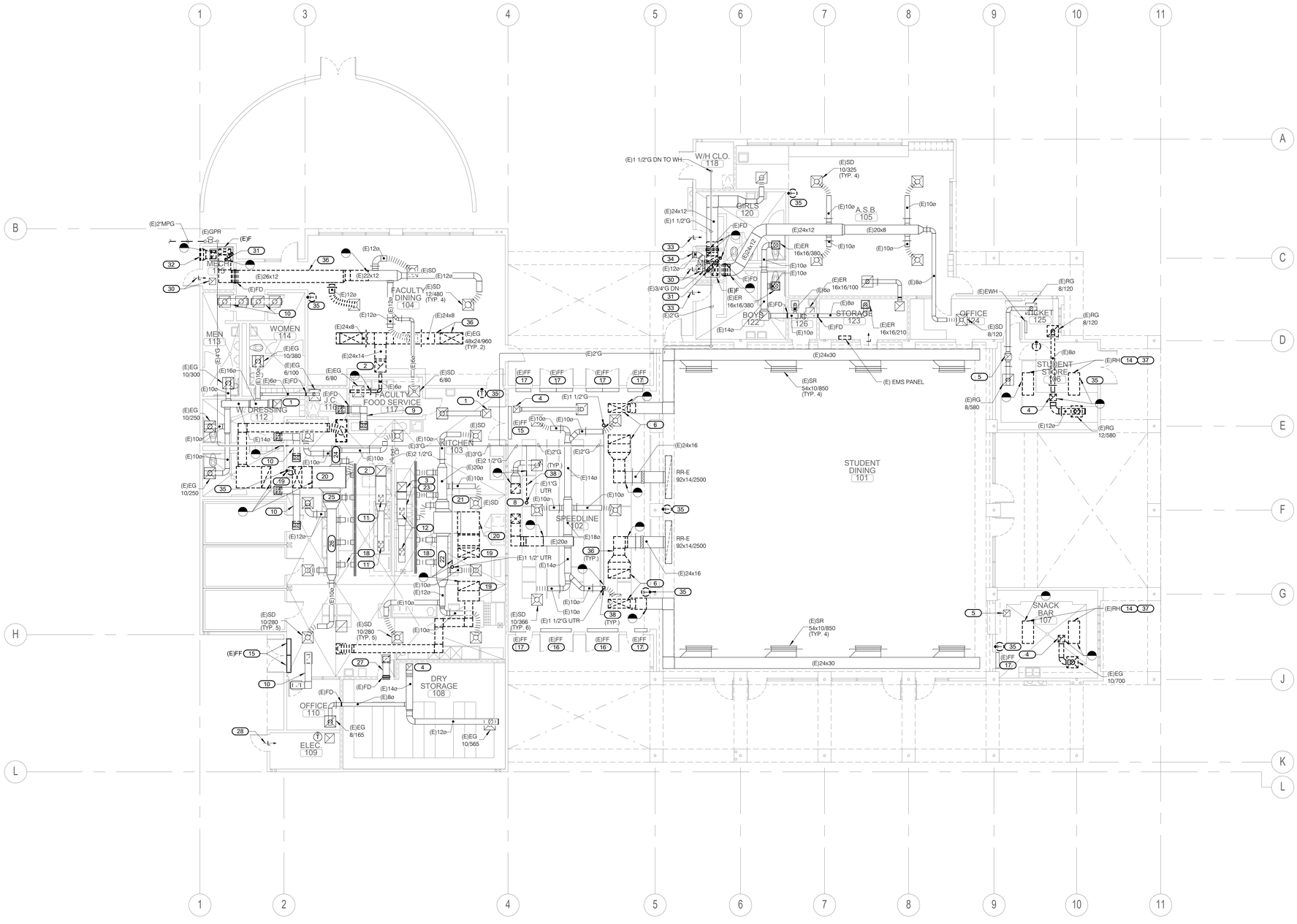
DATE: Issue Date	SCALE: 1/8" = 1'-0"
PROJECT NUMBER: Project Number	

BUILDING H REMODEL ROOF PLAN

DRAWING NUMBER: **MPH3.1**



EXISTING KEYNOTES: (#)

1. (E)18x18 EA DUCT UTR TO EXH. FAN.
2. (E)22x22 EA DUCT UTR TO EXH. FAN.
3. (E)20x20 EA DUCT UTR TO EXH. FAN.
4. (E)14x14 EA DUCT UTR TO EXH. FAN.
5. (E)14x14 UTR TO RELIEF VENT.
6. (E)47x19 SA & RA DUCT UTR.
8. (E)17x19 SA & RA DUCT UTR.
9. (E)10x5 T.D. W/(2)8x8 T.G.'S.
10. (E)14x8 T.D. W/(2)12x12 T.G.'S.
11. (E)20x10 EXH. DUCT DN TO RANGE HOOD.
12. (E)14x10 EXH. DUCT DN TO RANGE HOOD.
14. (E)CEILING RADIANT HEATER PANEL.
15. (E)AIR CURTAIN FAN.
16. SAME AS NOTE 15 EXCEPT MODEL 72C.
17. (E)AIR CURTAIN FAN.
19. (E)46x20 DUCT UTR & FLEX CONN. TO MAKE - UP AIR UNIT.
20. (E)46x14 LINED S.A. DUCT.
21. (E)28x14 LINED S.A. DUCT.
22. (E)24x14 LINED S.A. DUCT.
23. (E)22x20 EXHAUST AIR DUCT TRANS. TO (E)20x14.
24. (E)18x12 LINED S.A. DUCT.
25. (E)36x14 LINED S.A. DUCT.
26. (E)20x12 LINED S.A. DUCT.
27. (E)14x12 TRANSFER DUCT W/18x14 SIDEWALL GRILLE.
28. (E)DOOR LOUVER.
30. (E)COMBUSTION AIR OPENINGS - DOOR LOUVER.
31. (E)5ø FLUE UTR.
32. (E)O.S.A. LOUVER.
33. (E)DOOR LOUVER.
34. (E)O.S.A. LOUVER.

DEMOLITION KEYNOTES: (#)

35. DEMOLISH EXISTING TEMPERATURE CONTROL DEVICE, WIRING, REFER TO ARCHITECTURAL FOR PATCHING WALL/CEILING, TYPICAL.
36. DEMOLISH EXISTING AIR REGISTERS, DUCTWORK, SUPPORTS AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.
37. DEMOLISH EXISTING RADIANT HEATERS, SUPPORTS, AND RELATED APPURTENANCES.
38. DEMOLISH EXISTING PIPING, VALVES, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.

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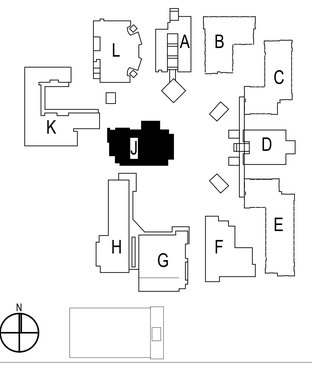
PROJECT NUMBER: Project Number	

BUILDING J DEMOLITION FLOOR PLAN

DRAWING NUMBER: **MPJ2.1**



SITE KEY PLAN

BUILDING J DEMOLITION FLOOR PLAN | 1/8" = 1'-0" | 1

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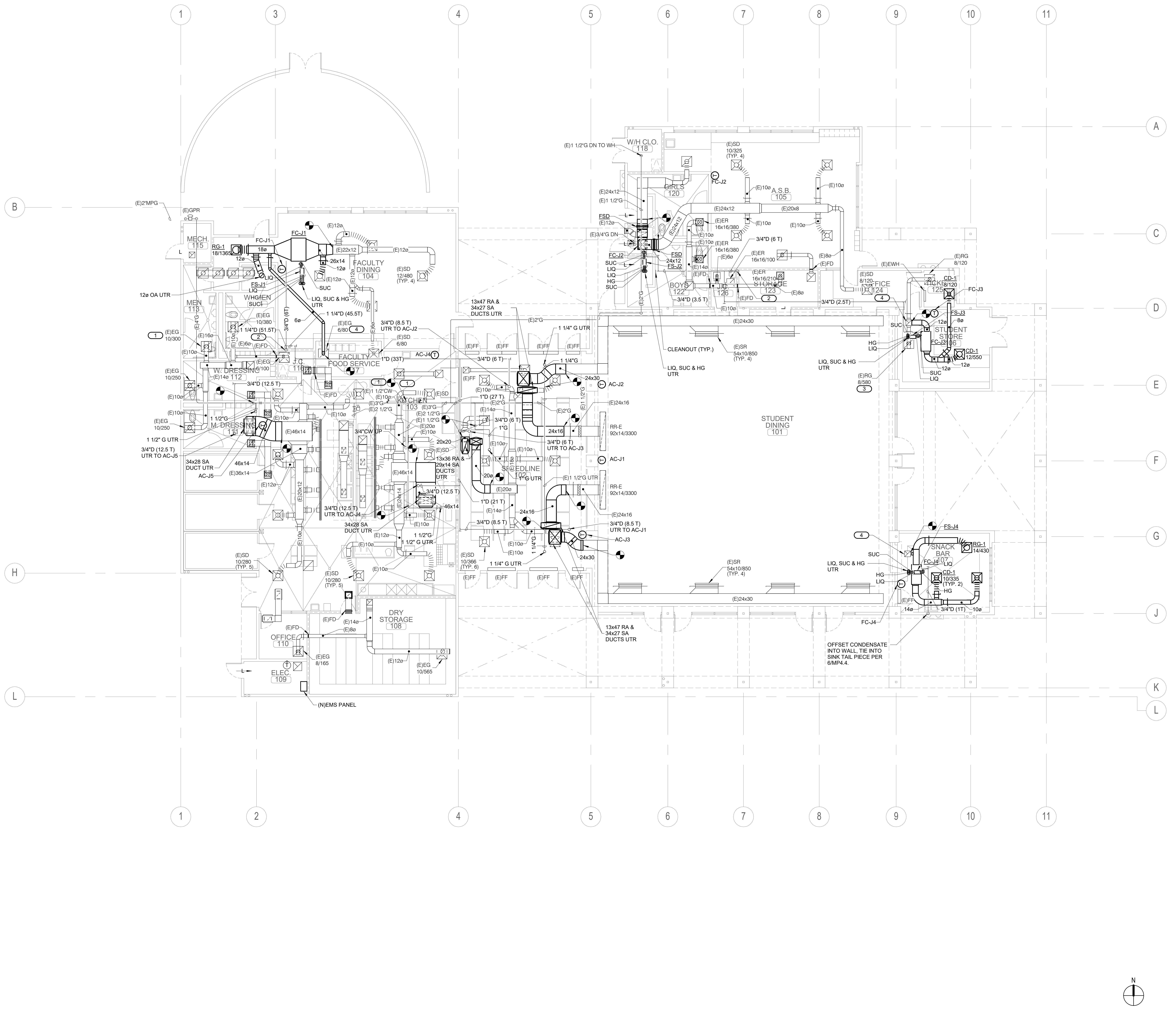


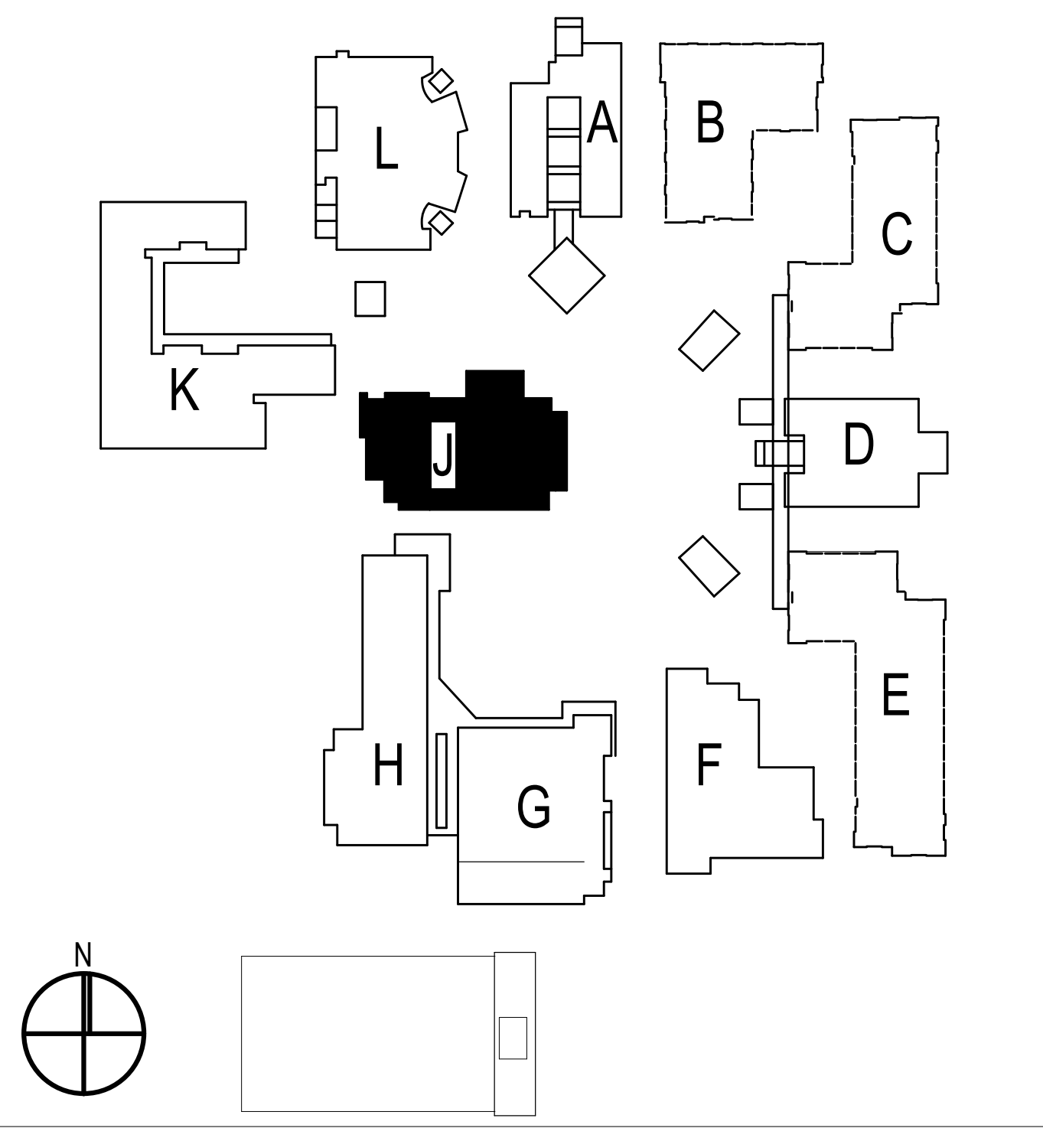
BUILDING J REMODEL FLOOR PLAN | 1/8" = 1'-0" | 1

REMODEL KEY NOTES: #

1. P.O.C. 3/4"CW LINE TO (E) CW LINE. CHECK DRAWING AND V.I.F. SIZE OF (E) CW PIPE SIZE.
2. OFFSET CONDENSATE INTO WALL, INDIRECT TO MOP SINK PER 6/MP4.4
3. EXISTING RV TO ACT AS A OUTSIDE AIR VENTILATION.
4. REUSE EXISTING EXHAUST GRILLE AS PART OF THE RETURN AIR SYSTEM FOR FC-J1

REMODEL GENERAL NOTES:

1. BALANCE OUTSIDE AIR DAMPERS TO OA CFM LISTED ON MP0.3.
2. ADJUST AND MAKE REPAIRS TO EXISTING VOLUME DAMPERS AS REQUIRED TO PROVIDE SPECIFIED AIR BALANCE AND MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
3. CONTRACTOR SHALL MAKE REPAIRS TO EXISTING DUCTWORK, DUCTWORK SUPPORTS AND DUCT INSULATION AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
4. CONTRACTOR SHALL ADJUST AND MAKE REPAIRS TO EXISTING AIR DEVICES AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
5. INSTALL NEW TEMPERATURE CONTROL SENSORS AND WIRING, REUSE EXISTING CONDUIT DN WALL.
6. FOR DUCT SUPPORT DETAIL, SEE DETAIL 10/MP4.2
7. FOR DUCT CONNECTION TO CEILING AIR DEVICES, SEE DETAIL 11/MP4.2.
8. FOR VOLUME DAMPER, SEE DETAIL 3/MP4.3.
9. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
10. FOR FIRE/SMOKE DAMPER, SEE DETAIL 6/MP4.3.
11. FOR SINGLE PIPE HANGER, SEE DETAIL 5/MP4.3.
12. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.3.
13. FOR CONDENSATE CONNECTION TO LAVATORY, SEE DETAIL 6/MP4.4.



SITE KEY PLAN

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BUILDING J REMODEL FLOOR PLAN

DRAWING NUMBER: **MPJ2.2**

6/12/2020 9:27:31 AM
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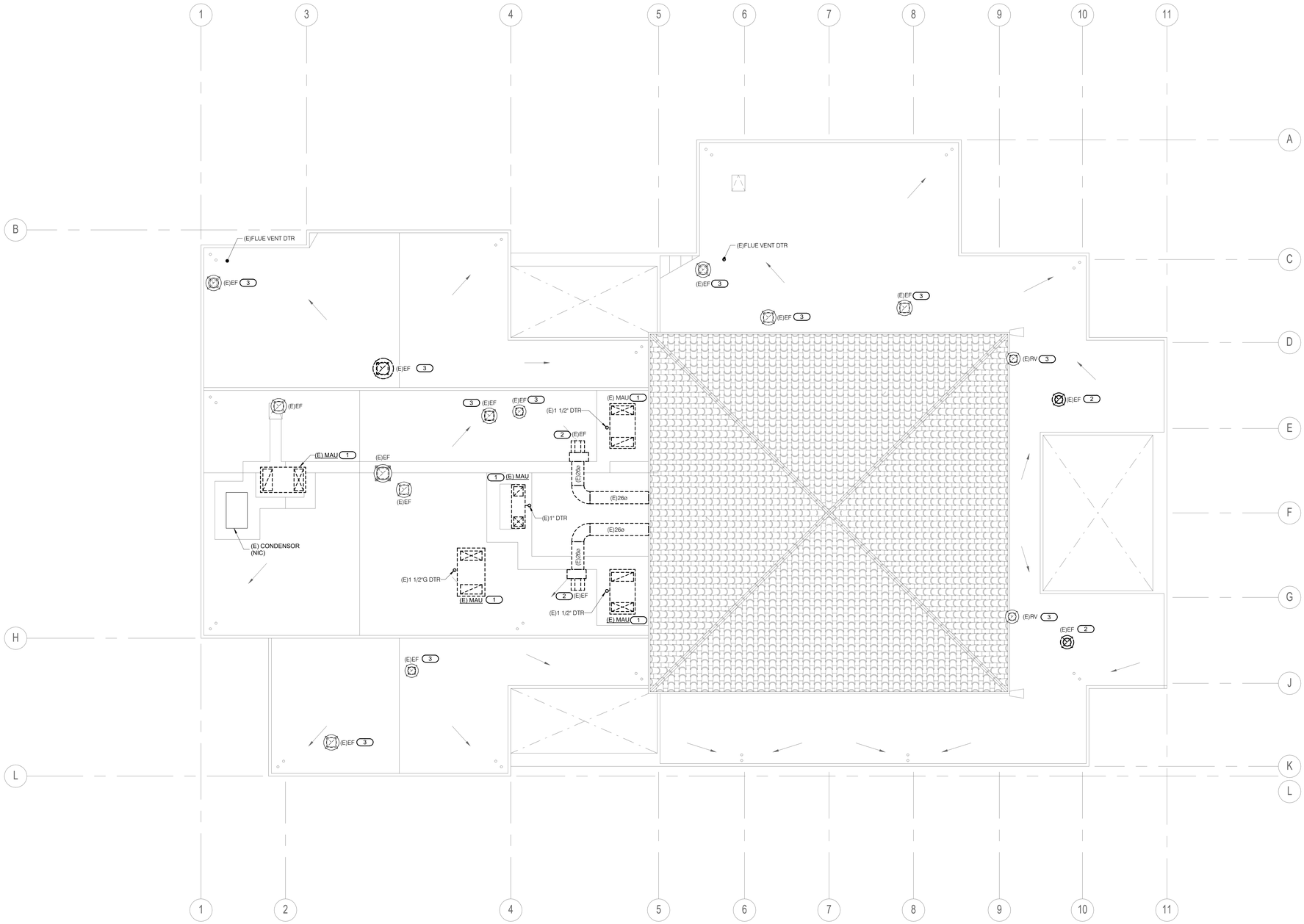
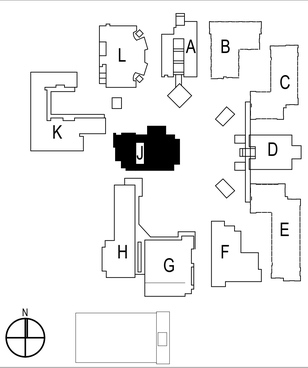
DEMOLITION KEYNOTES: (#)

1. DEMOLISH EXISTING MAKE-UP AIR UNIT, CURB, DUCTWORK, GAS PIPING AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF/WALL STRUCTURE.
2. DEMOLISH EXISTING ROOF EXHAUST FAN, CURB, AND RELATED APPURTENCANCES. COORDINATE WITH ELECTRICAL CONTRACTOR FOR REMOVAL OF WIRING AND CONDUIT. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF STRUCTURE. TYPICAL.
3. EXISTING EXHAUST FAN AND VENTILATOR TO REMAIN.



BUILDING J DEMOLITION ROOF PLAN | 1/8" = 1'-0" | 1



SITE KEY PLAN

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BUILDING J DEMOLITION ROOF PLAN

DRAWING NUMBER: **MPJ3.0**

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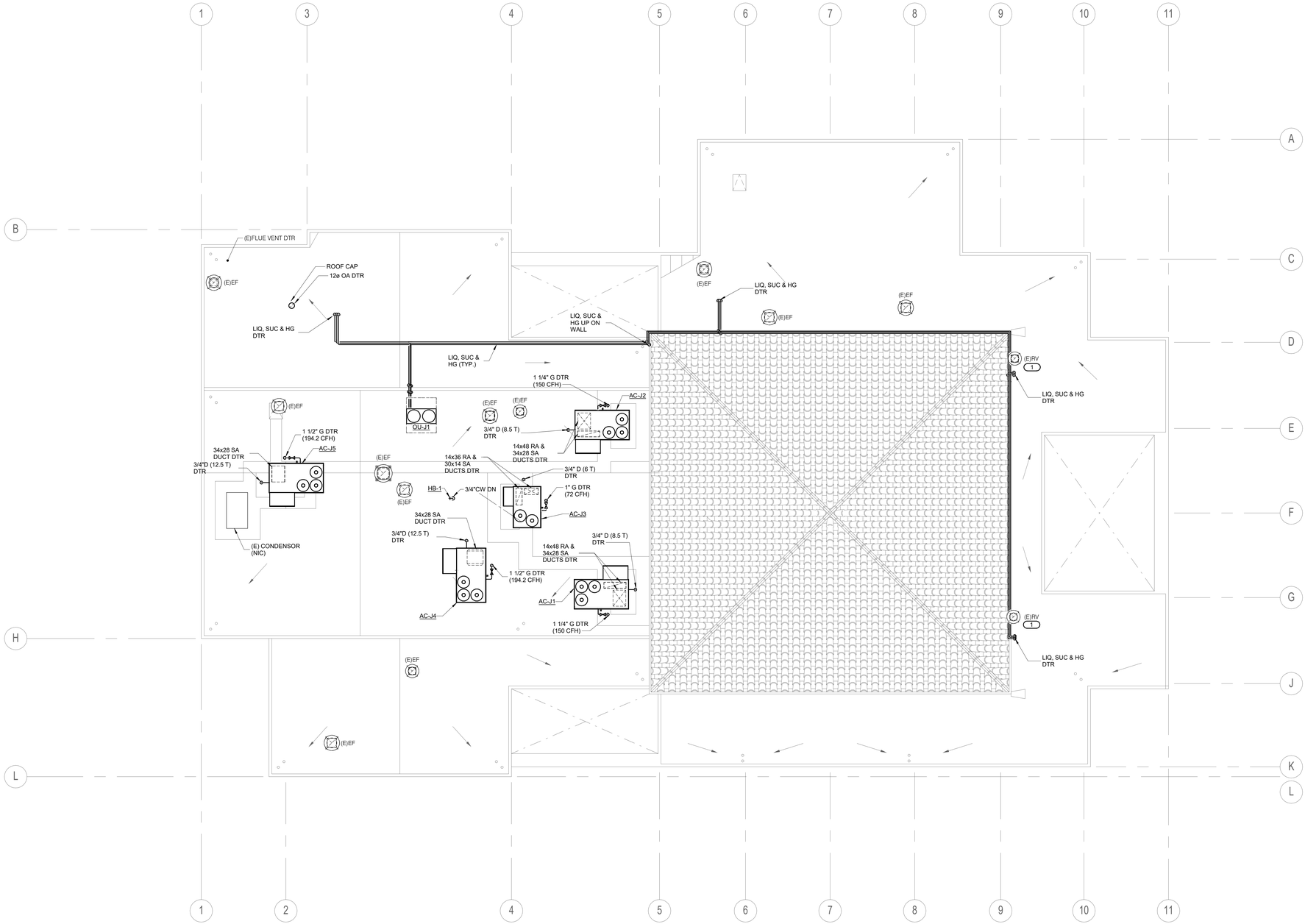
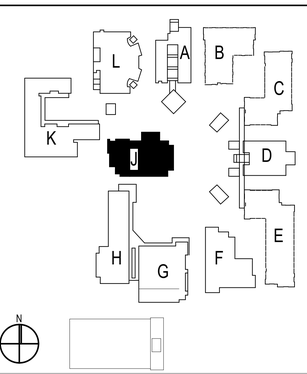


REMODEL KEY NOTES: (#)

1. EXISTING RV TO ACT AS A OUTSIDE AIR VENTILATION

REMODEL GENERAL NOTES:

1. MAINTAIN MIN. 10 FT. FROM OA INTAKES AND PLUMBING VENTS. RELOCATE EXISTING PLUMBING VENTS AS REQUIRED.
2. FOR NATURAL GAS CONNECTION TO THE EQUIPMENT, SEE DETAIL 1/MP4.4.
3. FOR CONDENSATE CONNECTION TO THE EQUIPMENT, SEE DETAIL 2/MP4.4.
4. FOR ROOF MOUNTED HOSE BIBS, SEE DETAIL 4/MP4.4.
5. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.4.
6. FOR REFRIGERANT PIPE SUPPORT ON ROOF, SEE DETAIL 4/MP4.2.
7. FOR REFRIGERANT PIPE THRU ROOF, SEE DETAIL 2/MP4.2.
8. FOR ROOF CAP MOUNTING DETAIL, SEE DETAIL 9/MP4.1.



SITE KEY PLAN

BUILDING J REMODEL ROOF PLAN | 1/8" = 1'-0" | 1

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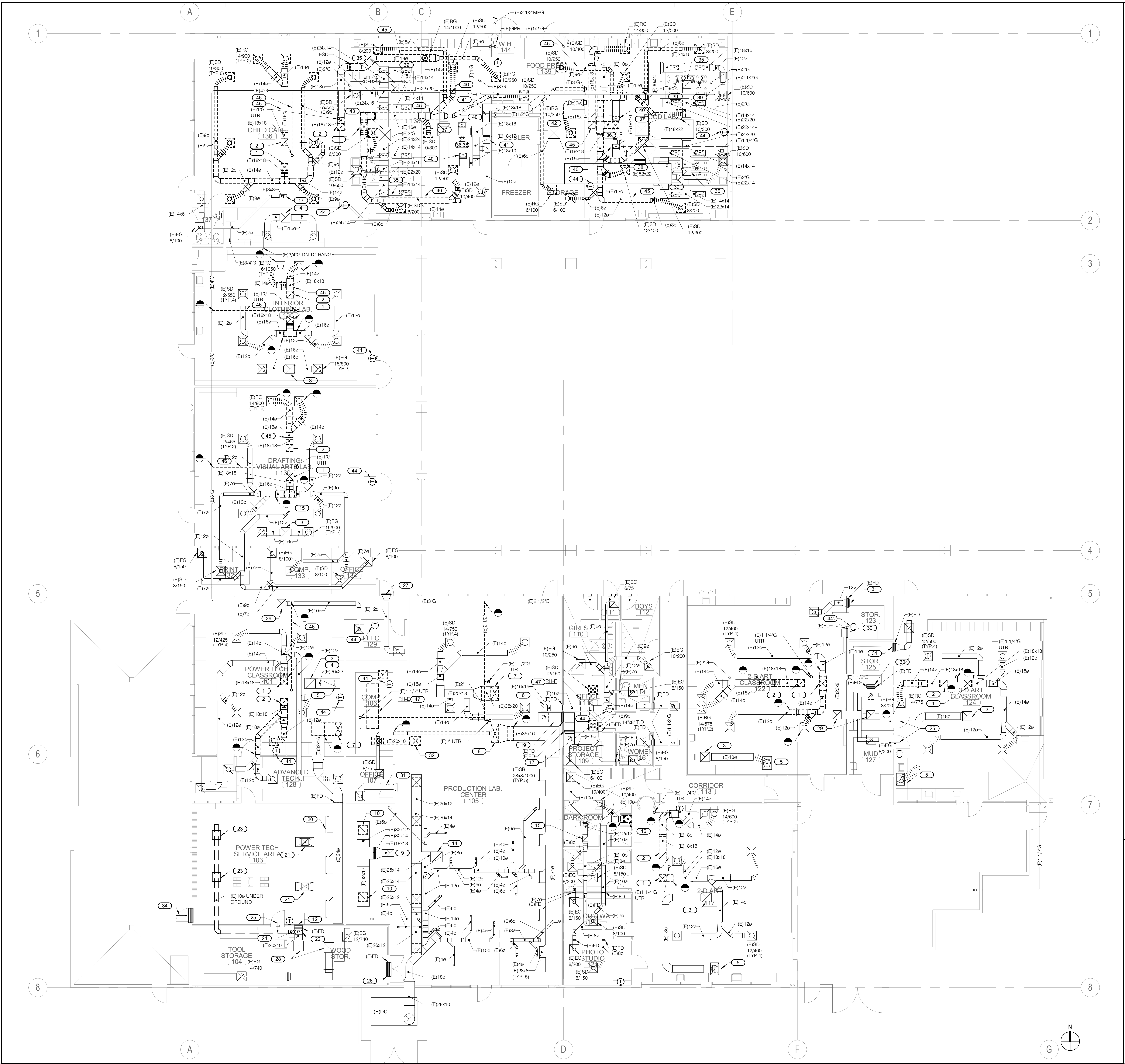
BUILDING J REMODEL ROOF PLAN

DRAWING NUMBER: **MPJ3.1**



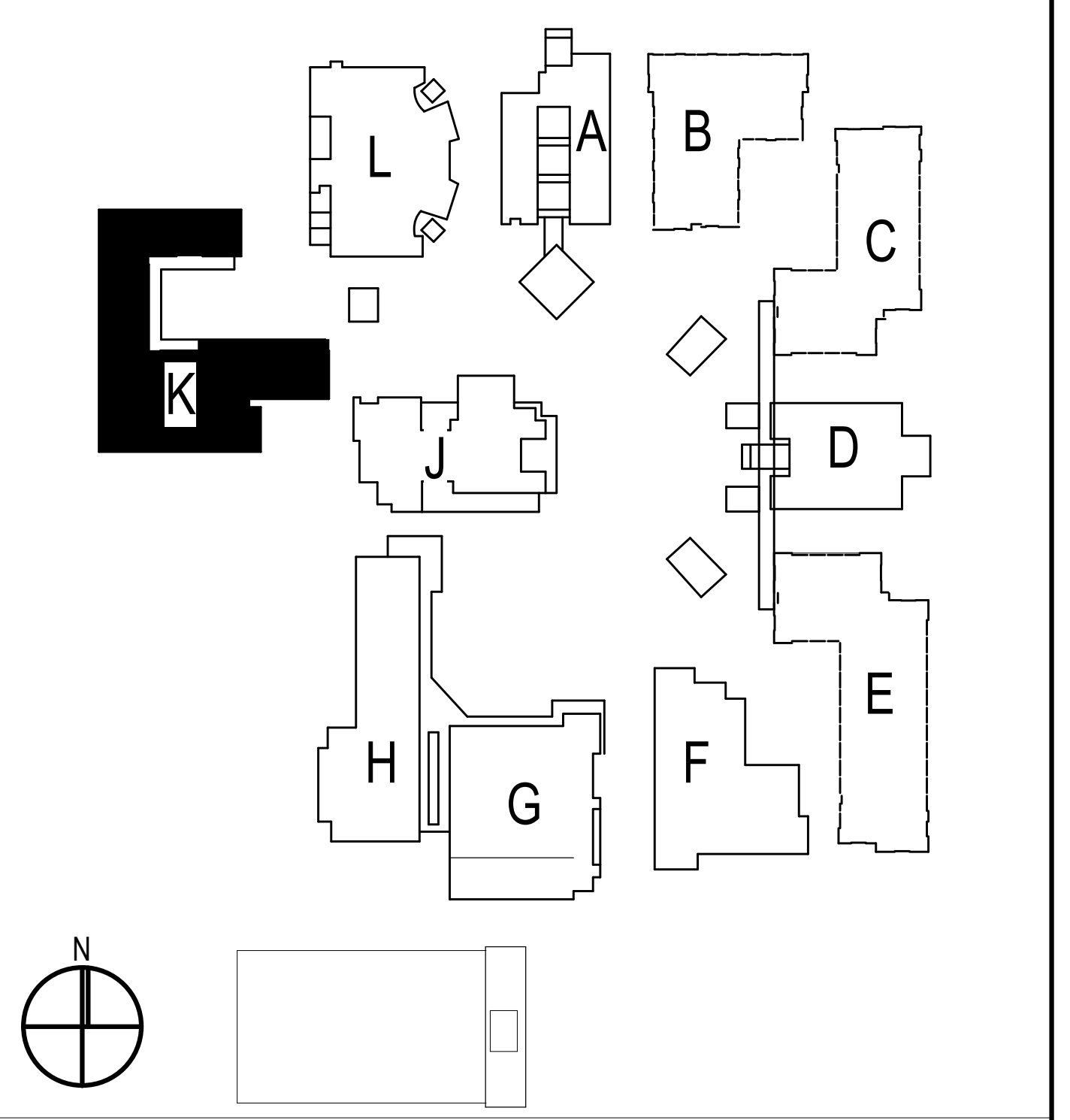
BUILDING K DEMOLITION FLOOR PLAN 1/8" = 1'-0" 1

EXISTING KEYNOTES: #

1. (E)18x18 SA DUCT UTR UP TO MAKE - UP UNIT.
2. (E)18x18 RA DUCT UTR UP TO MAKE - UP UNIT.
3. (E)GRAVITY RELIEF VENTILATOR 24x24 THROAT SIZE WITH PRE-FAB ROOF CURB & BACK DRAFT DAMPER.
4. (E)24x24 DUCT DOWN TO PLENUM.
5. (E)32x22 RETURN AIR GILLE.
6. (E)16x16 EA DUCT UTR TO EF ON ROOF.
7. (E)36x20 SA DUCT UTR UP TO MAKE - UP UNIT.
8. (E)48x20 SA DUCT UTR UP TO MAKE - UP UNIT.
9. (E)18x18 EA DUCT UTR TO EF ON ROOF.
10. (E)30x30 EXHAUST AIR REGISTER.
12. (E)32x20 EXHAUST AIR REGISTER.
14. (E)26x26 EA DUCT UTR TO EF ON ROOF.
15. (E)12x12 EA DUCT UTR TO EF ON ROOF.
16. (E)18x18 SA DUCT UP TO UNIT.
17. (E)8x8 EA DUCT UTR TO EF ON ROOF.
19. (E)24x10 TRANSFER DUCT.
20. (E)42x8 SUPPLY AIR REGISTER 1000 CFM (TYP.3).
21. (E)48x24 EXHAUST AIR GRILLE.
22. (E)20x10 EA DUCT DOWN.
23. (E)CAR - MON DUAL FLOOR RECEPTACLE NO. 66D.
24. (E)10"ø EXHAUST UTR.
25. (E)DOOR LOUVER.
26. (E)36x10T.G. BOTH SIDES W/FIRE DAMPER.
27. (E)TRANSFER AIR LOUVER ABOVE DOOR.
28. (E)26x26 EXHAUST DUCT UTR.
29. (E)22x22 EXHAUST DUCT UTR.
30. (E)20x8 EXHAUST AIR GRILLE 250 CFM.
31. (E)20x8 TRANSFER AIR GRILLE.
32. (E)GRAVITY INTAKE HOOD 14x14 THROAT SIZE W/PREFAB ROOF CURB.
34. (E)MOTORIZED LOUVER - MIN. 4ø FREE AREA PROVIDE W/PROTECTOR SCREEN.
35. (E)20x20 16 GAUGEMINIMUM, ALL WELDED EXHAUST DUCT DOWN TO KITCHEN HOOD EXHAUST CONNECTION. BALANCE TO 5500 CFM.
36. (E)16x10 16 GAUGEMINIMUM, ALL WELDED EXHAUST DUCT DOWN TO KITCHEN HOOD EXHAUST CONNECTION. BALANCE TO 2000 CFM.
37. (E)32x32 16 GAUGE ALL WELDED EXHAUST DUCT UP.
38. (E)16x10 16 GAUGE ALL WELDED EXHAUST DUCT UP.
39. (E)22x12 MUA DUCT CONNECTION TO KITCHEN HOOD.
40. (E)18x10 MUA DUCT CONNECTIO TO KITCHEN HOOD.
41. (E)18x18 MAKE - UP AIR DUCT UP TO ROOF.
42. (E)30x30 MAKE - UP AIR DUCT UP TO ROOF.
43. (E)30x30 TO (E)30x20 RADIUS TEE.

DEMOLITION KEYNOTES #

44. DEMOLISH EXISTING TEMPERATURE CONTROL DEVICE, WIRING. REFER TO ARCHITECTURAL FOR PATCHING WALL/CEILING. TYPICAL.
45. DEMOLISH EXISTING AIR REGISTERS, DUCTWORK, SUPPORTS AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.
46. DEMOLISH EXISTING PIPING, VALVES, SUPPORTS, AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL FOR PATCHING. TYPICAL.
47. DEMOLISH EXISTING RADIANT HEATERS, SUPPORTS, AND RELATED APPURTENANCES.



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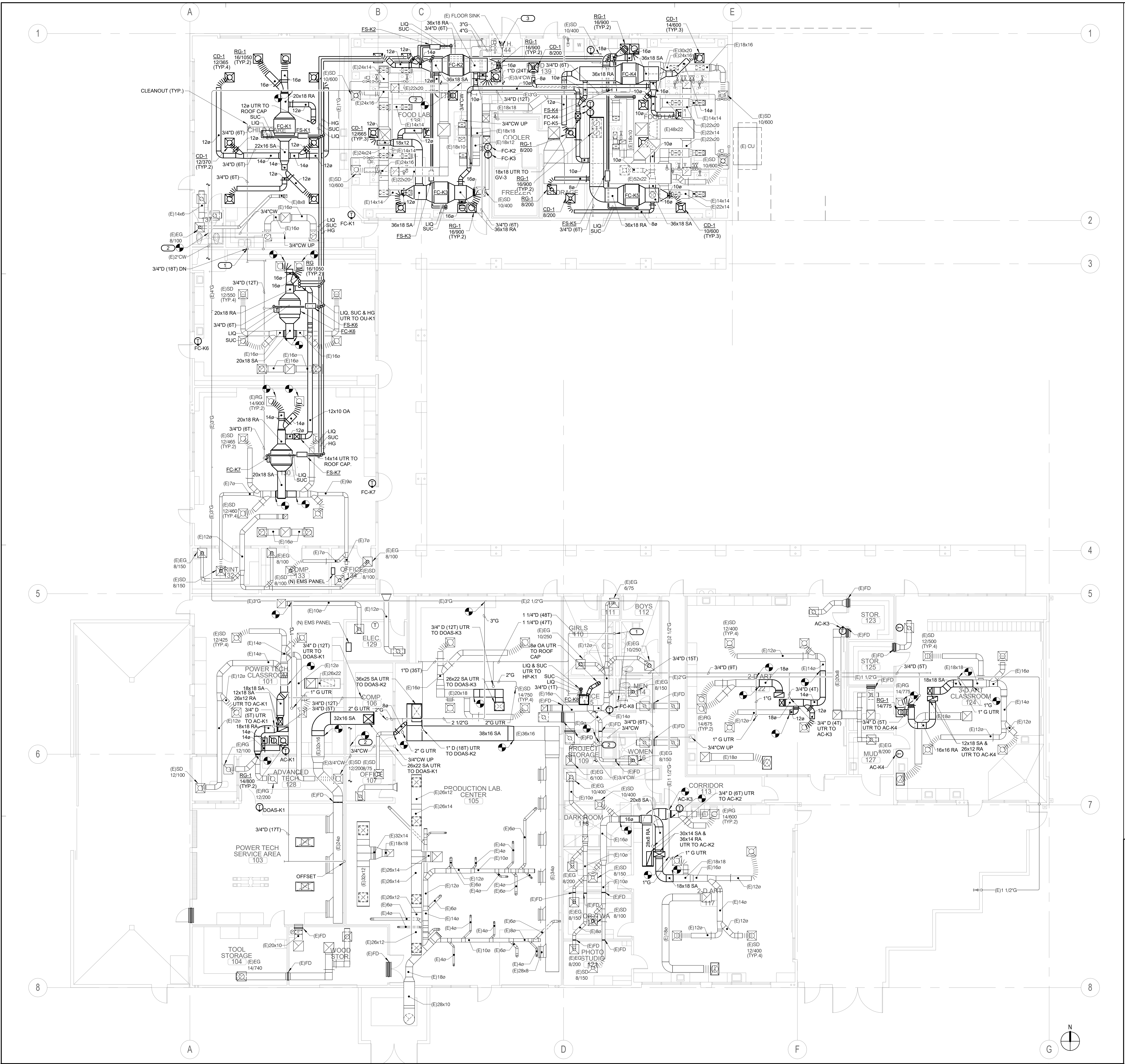
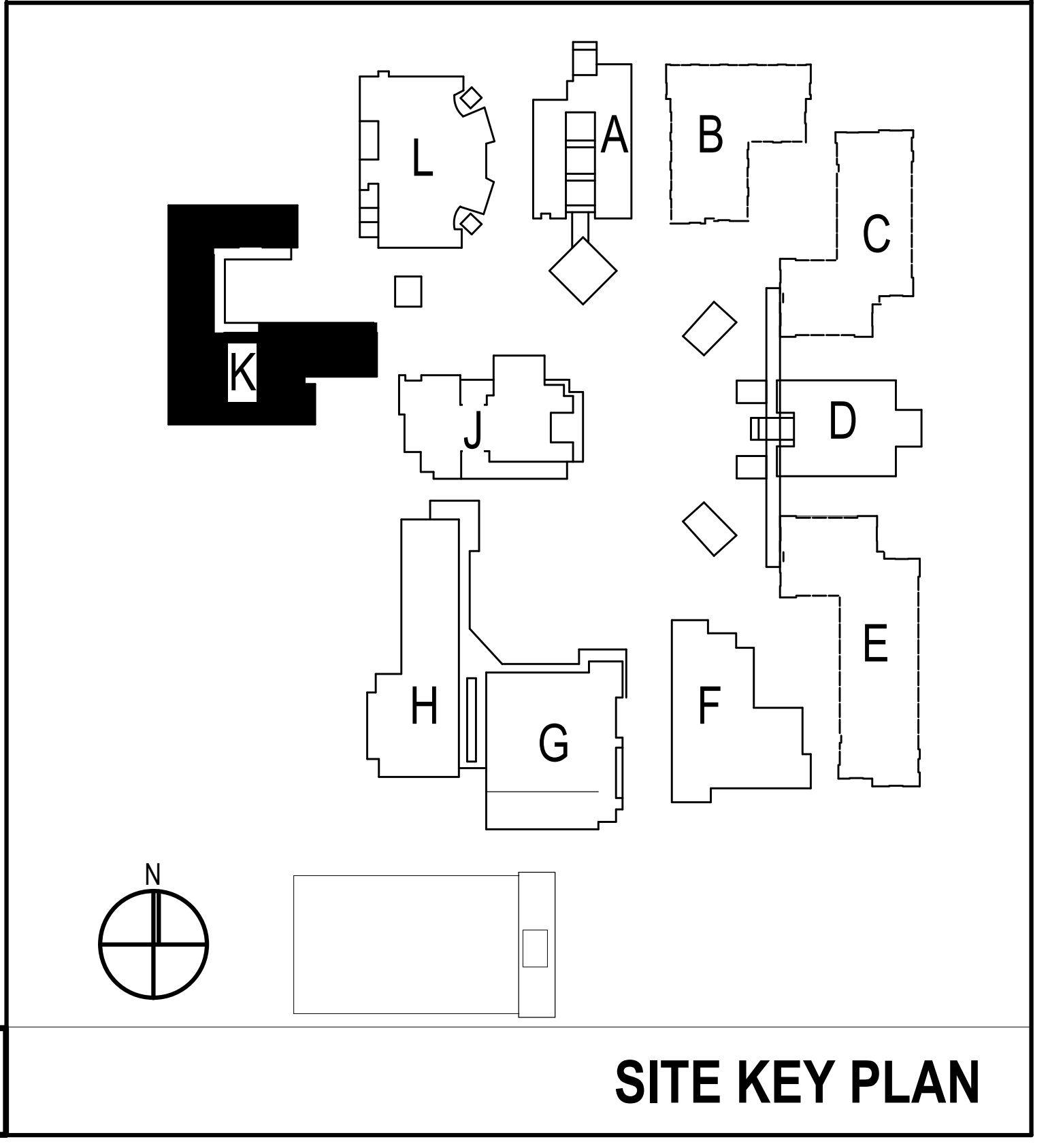
BUILDING K DEMOLITION FLOOR PLAN

DRAWING NUMBER: MPK2.0





REMODEL KEYNOTES: #

1. OFFSET CONDENSATE INTO WALL, INDIRECT TO MOP SINK PER 6/MP4.4
2. P.O.C. 3/4"CW LINE TO (E) CW LINE. CHECK DRAWING AND V.I.F. SIZE OF (E) CW PIPE SIZE.
3. 3. OFFSET CONDENSATE INTO WALL, INDIRECT TO FLOOR SINK.

REMODEL GENERAL NOTES:

1. BALANCE OUTSIDE AIR DAMPERS TO OA CFM LISTED ON MP0.3.
2. ADJUST AND MAKE REPAIRS TO EXISTING VOLUME DAMPERS AS REQUIRED TO PROVIDE SPECIFIED AIR BALANCE AND MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
3. CONTRACTOR SHALL MAKE REPAIRS TO EXISTING DUCTWORK, DUCTWORK SUPPORTS AND DUCT INSULATION AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
4. CONTRACTOR SHALL ADJUST AND MAKE REPAIRS TO EXISTING AIR DEVICES AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL.
5. INSTALL NEW TEMPERATURE CONTROL SENSORS AND WIRING, REUSE EXISTING CONDUIT DN WALL.
6. FOR DUCT SUPPORT DETAIL, SEE DETAIL 10/MP4.2
7. FOR DUCT CONNECTION TO CEILING AIR DEVICES, SEE DETAIL 11/MP4.2.
8. FOR VOLUME DAMPER, SEE DETAIL 3/MP4.3.
9. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
10. FOR FIRE/SMOKE DAMPER, SEE DETAIL 6/MP4.3.
11. FOR SINGLE PIPE HANGER, SEE DETAIL 5/MP4.3.
12. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.3.
13. FOR CONDENSATE CONNECTION TO LAVATORY, SEE DETAIL 6/MP4.4.

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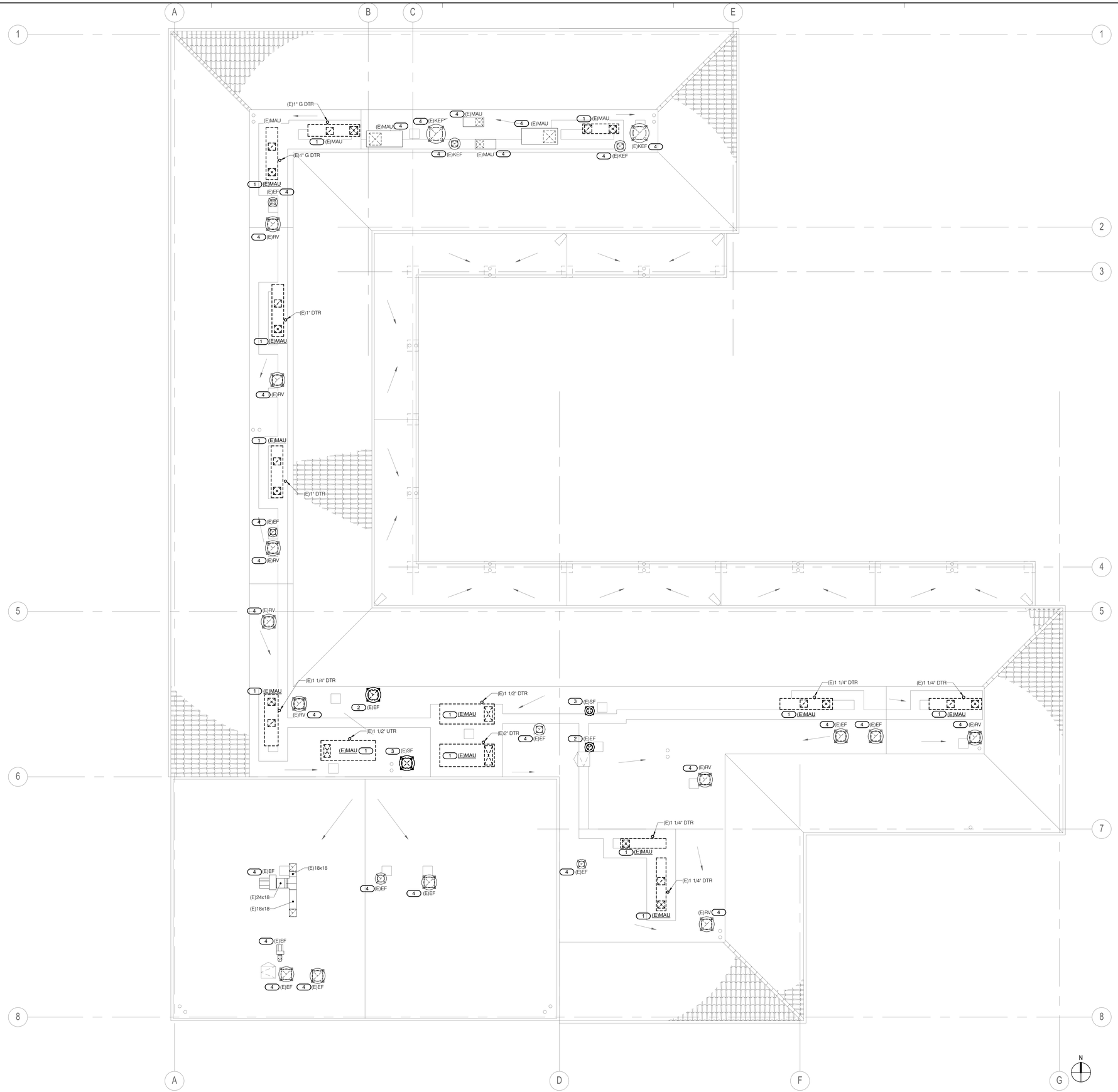
PROJECT NUMBER: Project Number

BUILDING K REMODEL FLOOR PLAN

DRAWING NUMBER: **MPK2.1**

BUILDING K REMODEL FLOOR PLAN 1/8" = 1'-0" 1

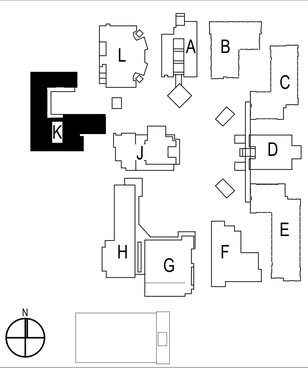
SITE KEY PLAN



DEMOLITION KEYNOTES: (#)

1. DEMOLISH EXISTING MAKE-UP AIR UNIT, CURB, DUCTWORK, GAS PIPING AND RELATED APPURTENANCES. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF/WALL STRUCTURE.
2. DEMOLISH EXISTING ROOF EXHAUST FAN, CURB, AND RELATED APPURTENCANCES. COORDINATE WITH ELECTRICAL CONTRACTOR FOR REMOVAL OF WIRING AND CONDUIT. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF STRUCTURE. TYPICAL.
3. DEMOLISH EXISTING ROOF SUPPLY FAN, CURB, AND RELATED APPURTENCANCES. COORDINATE WITH ELECTRICAL CONTRACTOR FOR REMOVAL OF WIRING AND CONDUIT. REFER TO ARCHITECTURAL AND STRUCTURAL FOR PATCHING OF ROOF STRUCTURE. TYPICAL.
4. EXISTING EXHAUST FAN, RELIEF VENTILATOR, AND MAKE-UP AIR UNIT TO REMAIN.

BUILDING K DEMOLITION ROOF PLAN | 1/8" = 1'-0" | 1



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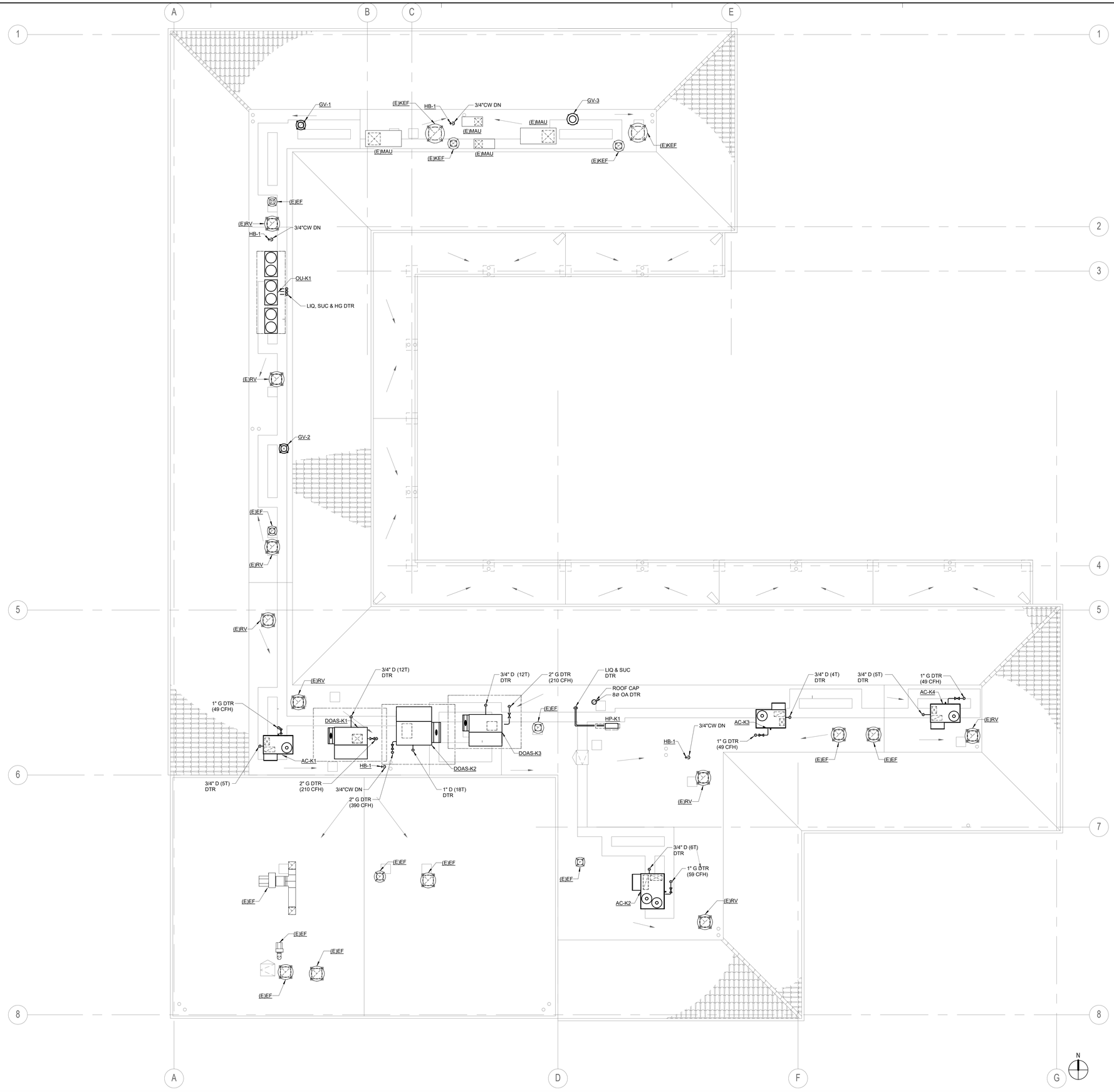
BUILDING K DEMOLITION ROOF PLAN

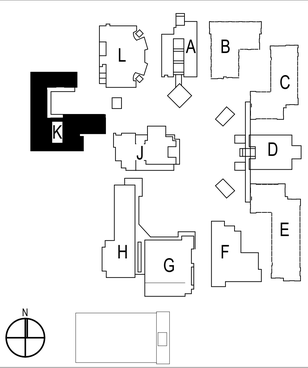
DRAWING NUMBER: **MPK3.0**



REMODEL GENERAL NOTES:

1. MAINTAIN MIN. 10 FT. FROM OA INTAKES AND PLUMBING VENTS. RELOCATE EXISTING PLUMBING VENTS AS REQUIRED.
2. FOR NATURAL GAS CONNECTION TO THE EQUIPMENT, SEE DETAIL 1/MP4.4.
3. FOR CONDENSATE CONNECTION TO THE EQUIPMENT, SEE DETAIL 2/MP4.4.
4. FOR ROOF MOUNTED HOSE BIBS, SEE DETAIL 4/MP4.4.
5. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.4.
6. FOR REFRIGERANT PIPE SUPPORT ON ROOF, SEE DETAIL 4/MP4.2.
7. FOR REFRIGERANT PIPE THRU ROOF, SEE DETAIL 2/MP4.2.
8. FOR ROOF CAP MOUNTING DETAIL, SEE DETAIL 9/MP4.1.

BUILDING K REMODEL ROOF PLAN | 1/8" = 1'-0" | 1



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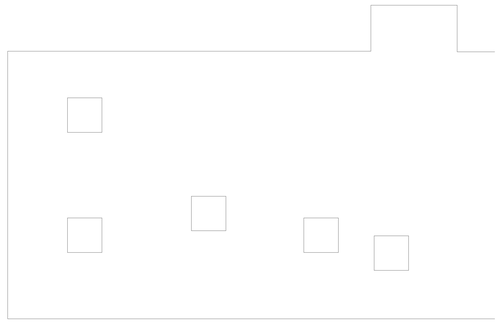
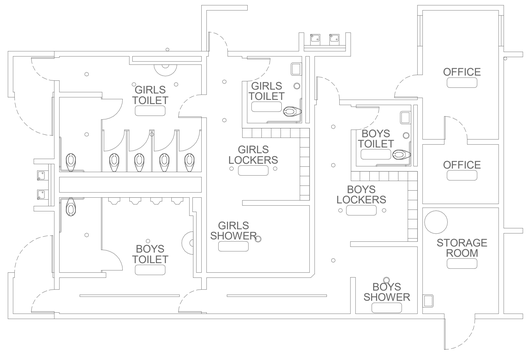
BUILDING K REMODEL ROOF PLAN

DRAWING NUMBER: **MPK3.1**



N

BUILDING N DEMOLITION ROOF PLAN | 1/8" = 1'-0" | 3

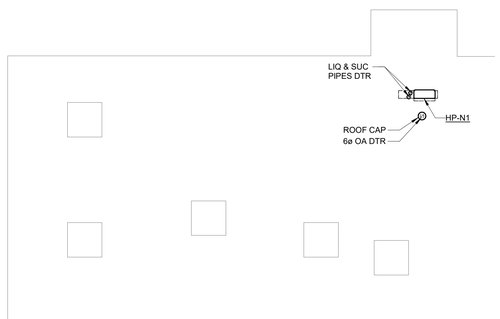


N

BUILDING N DEMOLITION FLOOR PLAN | 1/8" = 1'-0" | 1

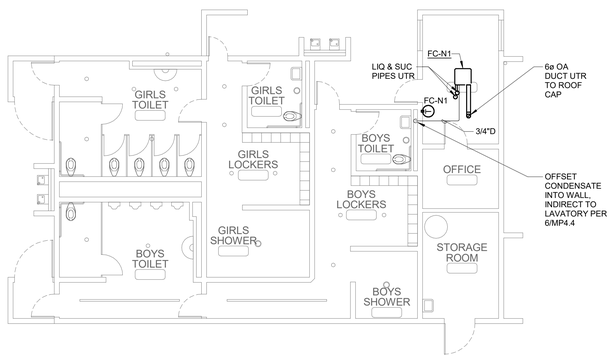
REMODEL GENERAL NOTES:

1. BALANCE OUTSIDE AIR DAMPERS TO OA CFM LISTED ON MP0.3.
2. INSTALL NEW TEMPERATURE CONTROL SENSORS AND WIRING, REUSE EXISTING CONDUIT DN WALL.
3. FOR REFRIGERANT PIPE THRU ROOF, SEE DETAIL 2/MP4.2.
4. FOR REFRIGERANT PIPE SUPPORT ON ROOF, SEE DETAIL 4/MP4.2.
5. FOR REFRIGERANT PIPE SUPPORT ON CHASE WALL, SEE DETAIL 5/MP4.2.
6. FOR REFRIGERANT PIPING SUPPORT SUSPENDED, SEE DETAIL 9/MP4.2.
7. FOR PIPE THROUGH RATED WALL, REFER TO DETAIL 5/MP4.3.
8. FOR SINGLE PIPE HANGER, SEE DETAIL 5/MP4.3.
9. FOR PIPE THRU ROOF, SEE DETAIL 3/MP4.3.
10. FOR CONDENSATE CONNECTION TO LAVATORY, SEE DETAIL 6/MP4.4.
11. FOR ROOF CAP MOUNTING DETAIL, SEE DETAIL 9/MP4.1.



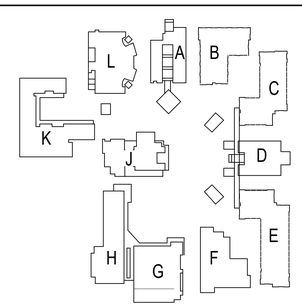
N

BUILDING N REMODEL ROOF PLAN | 1/8" = 1'-0" | 4



N

BUILDING N REMODEL FLOOR PLAN | 1/8" = 1'-0" | 2



N

N

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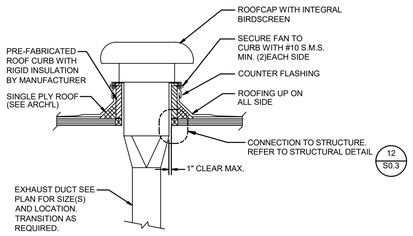
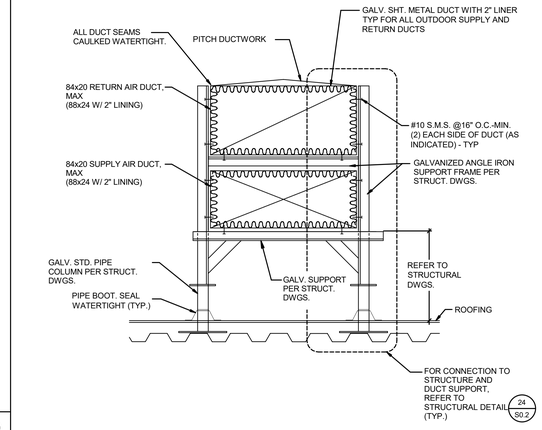
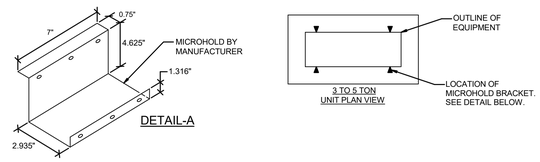
BUILDING N DEMOLITION AND REMODEL PLANS

DRAWING NUMBER: **MPN2.1**



ROOF CAP MOUNTING DETAIL (WOOD ROOF) | NTS | 9

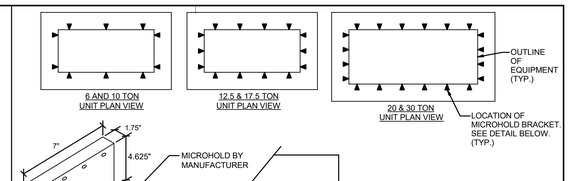




NOTES:

1. FILL ENTIRE VOID SPACE IN ROOF CURB WITH BATT. INSULATION.
2. SEE STRUCTURAL DETAILS FOR FRAMING AROUND (E) ROOF OPENINGS.
3. FOR NUMBER OF HOLDOWNS REQUIRED, REFER TO MANUFACTURER'S INSTALLATION MANUAL

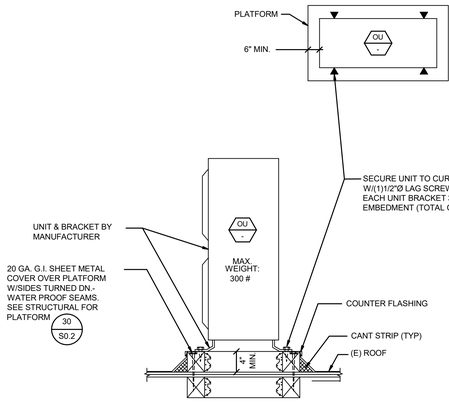
ROOFTOP AC UNIT MOUNTING RIGID CURB (WOOD ROOF) | NTS | 4



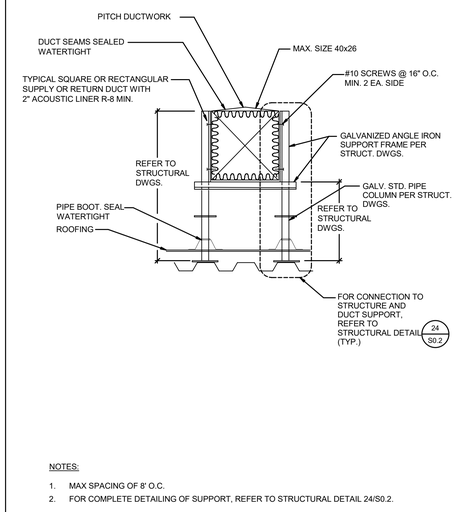
NOTES:

1. FILL ENTIRE VOID SPACE IN ROOF CURB WITH R30 BATT. INSULATION.
2. SEE STRUCTURAL DETAILS FOR FRAMING AROUND ROOF OPENINGS.

ROOFTOP AC UNIT MOUNTING - VIBRATION ISOLATOR CURB | NTS | 1



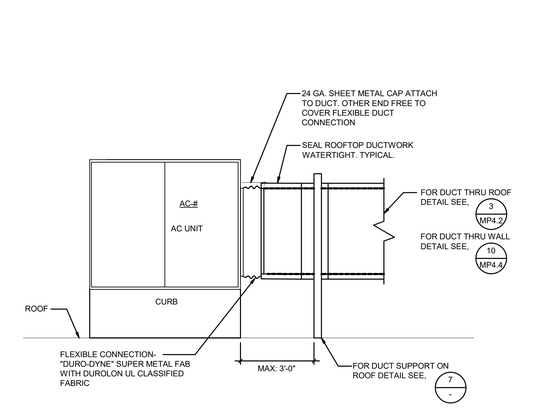
SPLIT SYSTEM OUTDOOR UNIT MOUNTING (METAL ROOF) | NTS | 10



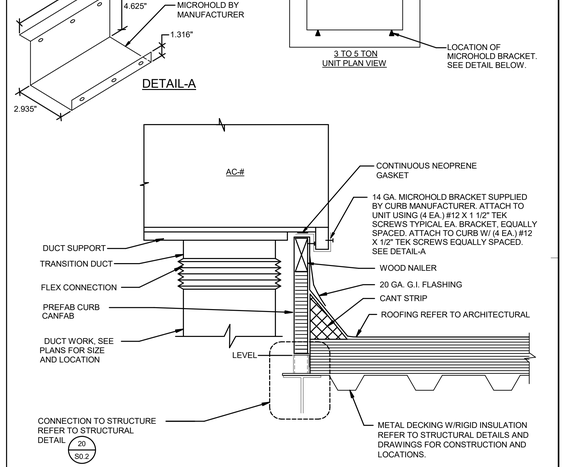
NOTES:

1. MAX SPACING OF 8' O.C.
2. FOR COMPLETE DETAILING OF SUPPORT, REFER TO STRUCTURAL DETAIL 24/S0.2.

DUCT SUPPORT ON ROOF | NTS | 7



FLEXIBLE DUCT CONNECTION AT ROOF | NTS | 5

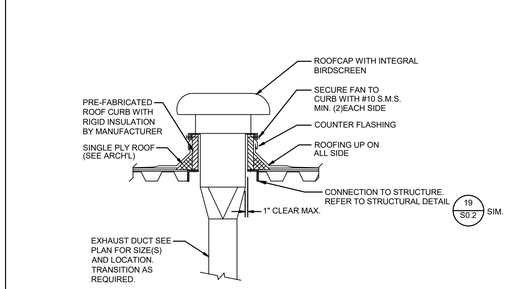


NOTES:

1. FILL ENTIRE VOID SPACE IN ROOF CURB WITH R30 BATT. INSULATION.
2. SEE STRUCTURAL DETAILS FOR FRAMING AROUND ROOF OPENINGS.

ROOFTOP AC UNIT MOUNTING - RIGID CURB | NTS | 2

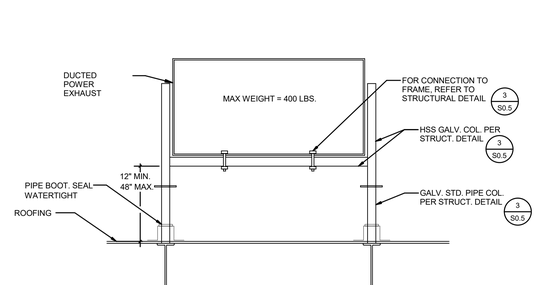
CONDENSING UNIT ON ROOF (WOOD ROOF) | NTS | 11



NOTES:

1. ALL EXHAUST OUTLETS SHALL BE 10'-0" FROM ANY AIR INTAKES.
2. SEE MANUFACTURER'S INSTALLATION MANUAL FOR ADDITIONAL INFORMATION.

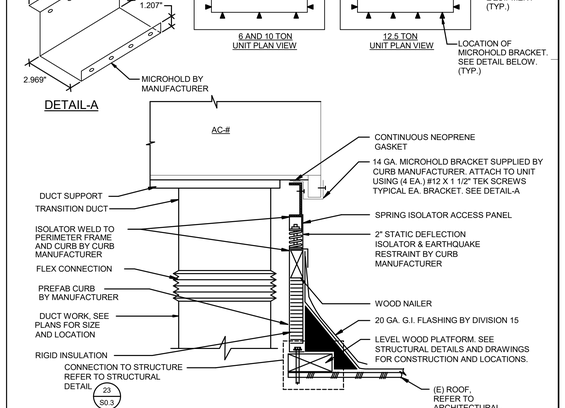
ROOF CAP MOUNTING (METAL ROOF) | NTS | 8



NOTES:

1. FOR COMPLETE DETAILING OF SUPPORT, REFER TO STRUCTURAL DETAIL 8/S0.2.

DUCTED POWER EXHAUST SUPPORT ON ROOF | NTS | 6



NOTES:

1. FILL ENTIRE VOID SPACE IN ROOF CURB WITH BATT. INSULATION.
2. SEE STRUCTURAL DETAILS FOR FRAMING AROUND (E) ROOF OPENINGS.
3. FOR NUMBER OF HOLDOWNS REQUIRED, REFER TO MANUFACTURER'S INSTALLATION MANUAL

ROOFTOP AC UNIT MOUNTING - VIBRATION ISOLATOR CURB (WOOD ROOF) | NTS | 3

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DETAILS

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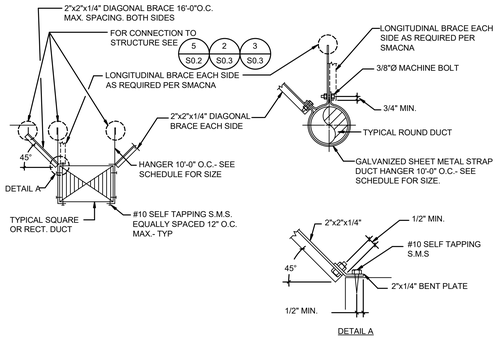
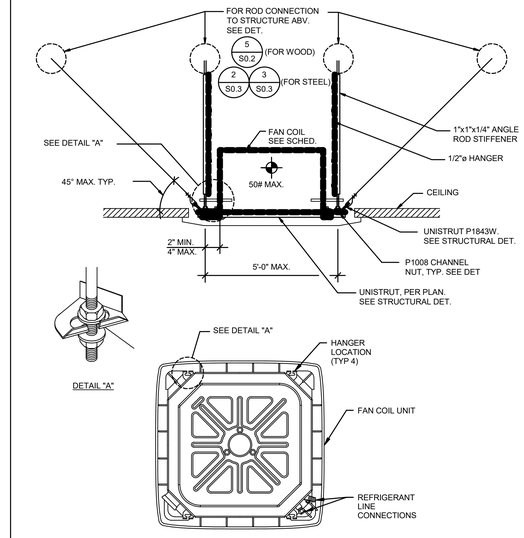


RECTANGULAR DUCT			ROUND DUCT		
MAX. OF DUCT PERIMETER/IN.	STRAP	MAX. LOAD EACH HANGER/LBS.	DIAMETER /INCHES	STRAP	MAX. LOAD EACH HANGER/LBS.
P/2 =72	1"X 20 GA.	20	UP TO 20"	1"X 20 GA.	20
P/2 =96	1"X 18 GA.	30	21" TO 36"	1"X 18 GA.	30

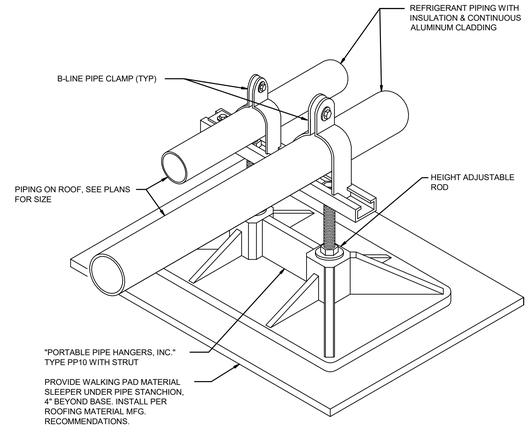
NOTE:

1. NO BRACING REQUIRED IF DUCT IS SUSPENDED 12 INCHES OR LESS IN LENGTH.
2. FOR TRANSVERSE AND LONGITUDINAL BRACING, FOLLOW 2008 "SMACNA" SEISMIC RESTRAINT MANUAL GUIDELINES (TABLE 8)

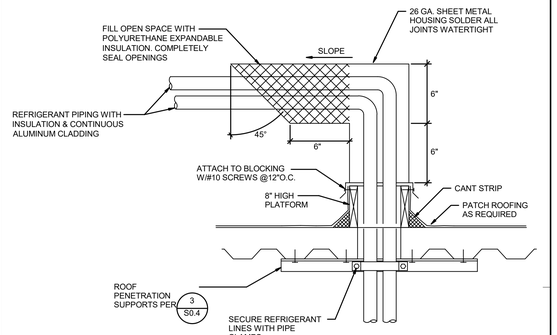
DUCT SUPPORT DETAIL — NTS — 10



CEILING MOUNTED FAN COIL UNIT — NTS — 7

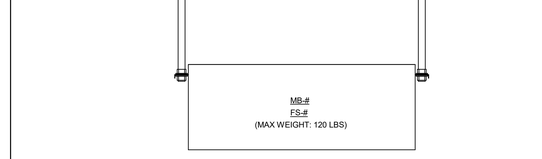


REFRIGERANT PIPE SUPPORT ON ROOF — NTS — 4



REFRIGERANT PIPE THRU ROOF (METAL) — NTS — 1

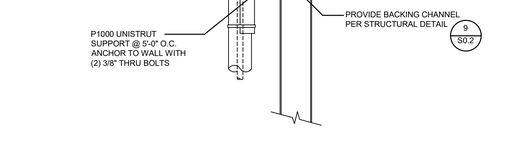
TOP CONN. TO CEILING CD/CR — NTS — 11



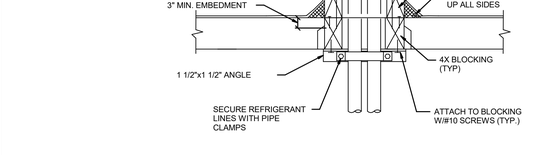
NOTES:

1. REFER TO MANUFACTURER'S INSTALLATION MANUAL.
2. FOR PORT BOX REFRIGERANT PIPING DETAILING AND WIRING DIAGRAM, REFER TO 12/MP4.3.

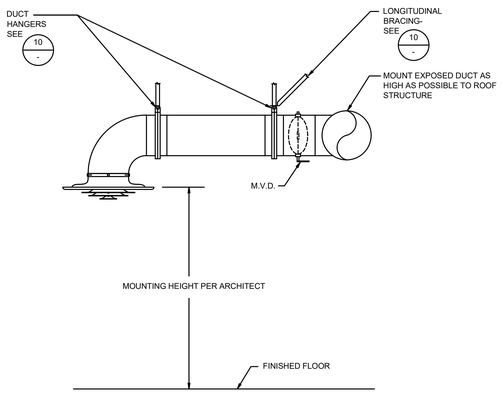
PORT BOX MOUNTING DETAIL — NTS — 8



REFRIGERANT PIPE SUPPORT ON CHASE WALL — NTS — 5



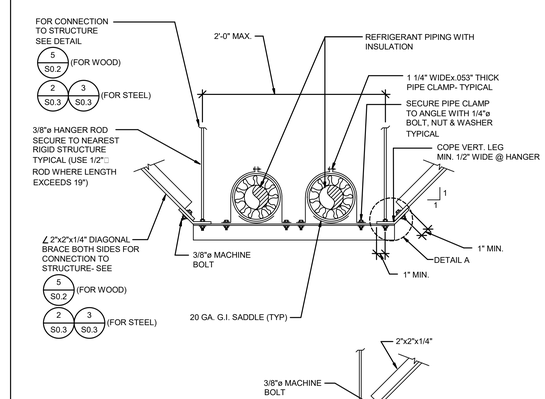
REFRIGERANT PIPE THRU ROOF (WOOD) — NTS — 2



NOTES:

1. FOR SUPPORT AND BRACING OF DUCT SYSTEMS ABOVE CEILINGS SEE "SMACNA" SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS.
2. PROVIDE VERTICAL SUPPORTS AS WELL AS TRANSVERSE BRACING AT ALL DUCT TURNS, OFFSETS AND DUCT ENDS. INSTALL LONGITUDINAL BRACING, AT LEAST ONE BRACE PER DUCT RUN, AS TYPICAL.

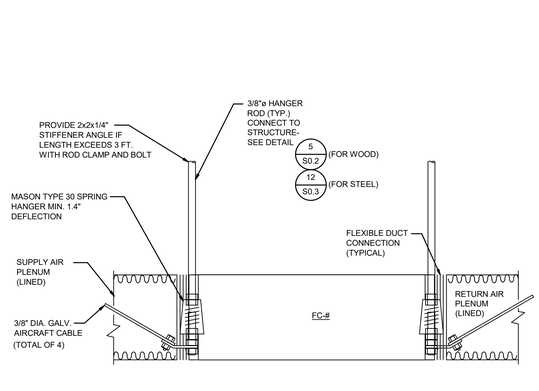
EXPOSED ROUND DIFFUSER DETAIL — NTS — 12



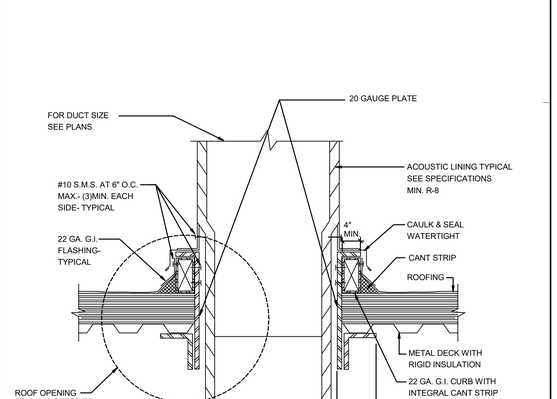
NOTE:

FOR MAXIMUM SPACING REQUIREMENTS, SEE SPECS 23 05 29 SECTION 3.1H SCHEDULES.

REFRIGERANT PIPING SUPPORT SUSPENDED — NTS — 9



FAN COIL UNIT MOUNTING DETAIL — NTS — 6



DUCT THRU METAL ROOF — NTS — 3

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DETAILS

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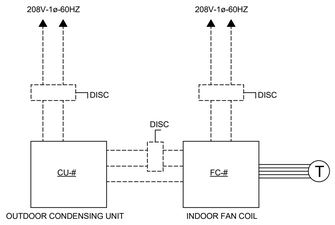
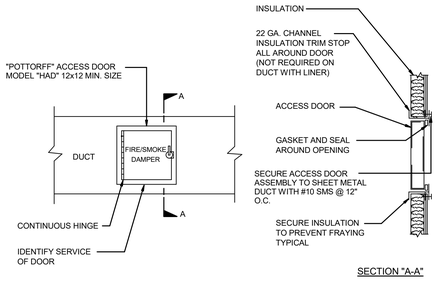


NOTES:

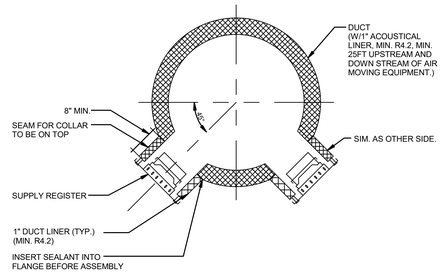
1. FOR WIRING NOTES, SEE LEGEND #1 ON THIS SHEET

SPLIT SYSTEM CONTROL WIRING DIAGRAM | NTS | 10

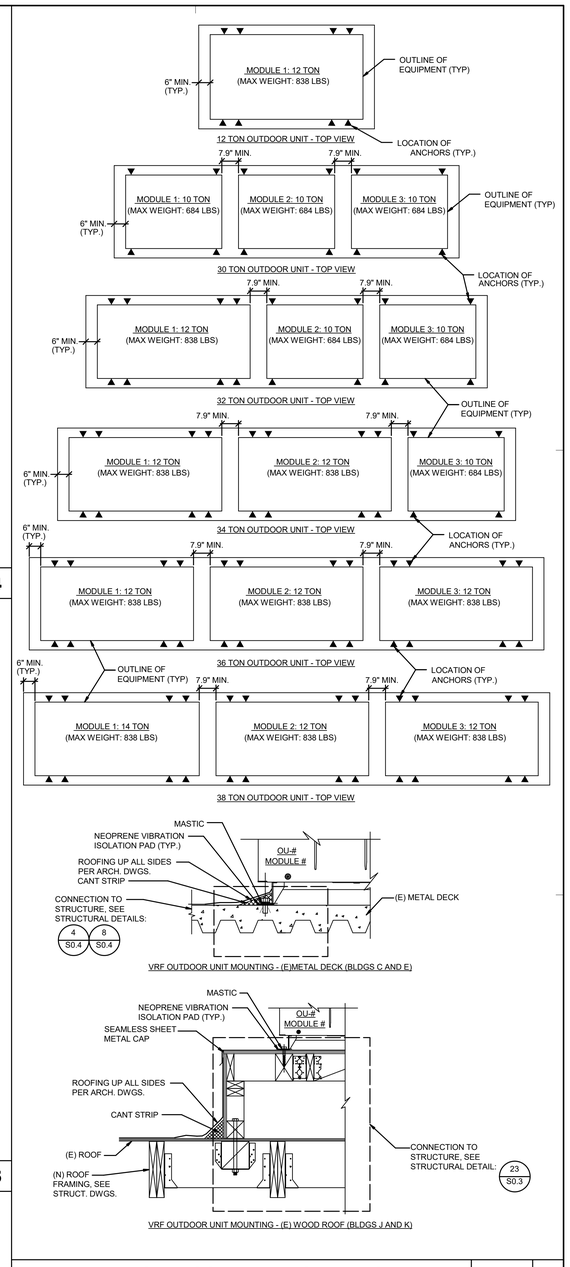


SECTION "A-A"

ACCESS DOOR DETAIL | NTS | 7



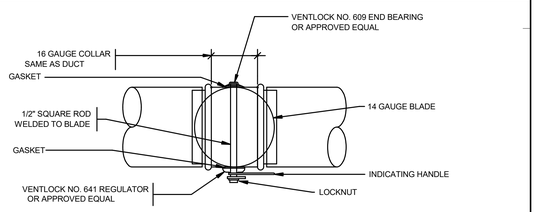
DUCT MOUNTED REGISTER DETAIL | NTS | 4



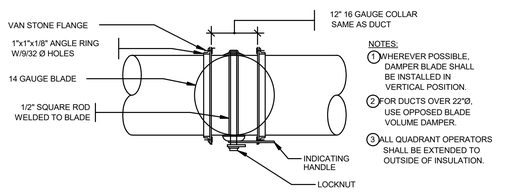
VRF OUTDOOR UNIT MOUNTING - (E)METAL DECK (BLDGS C AND E)

VRF OUTDOOR UNIT MOUNTING - (E) WOOD ROOF (BLDGS J AND K)

VRF OUTDOOR UNIT MOUNTING | NTS | 1



DUCTS UP TO 14"Ø

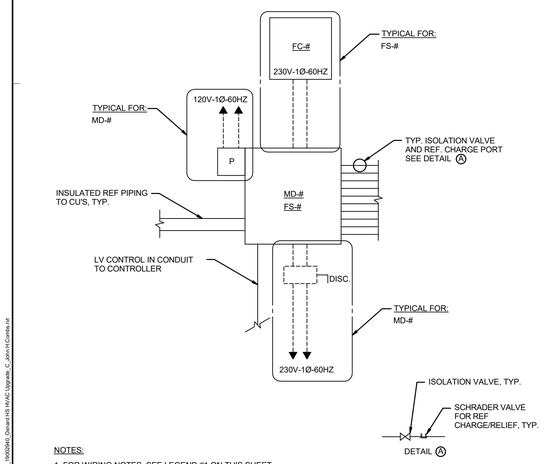


DUCTS 16"Ø TO 22"Ø

NOTES:

1. WHEREVER POSSIBLE, DAMPER BLADE SHALL BE INSTALLED IN VERTICAL POSITION.
2. FOR DUCTS OVER 22"Ø, USE OPPOSED BLADE VOLUME DAMPER.
3. ALL QUADRANT OPERATORS SHALL BE EXTENDED TO OUTSIDE OF INSULATION.

VOLUME DAMPER DETAIL | NTS | 3



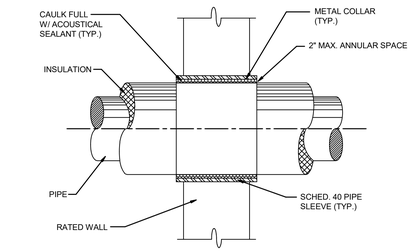
NOTES:

1. FOR WIRING NOTES, SEE LEGEND #1 ON THIS SHEET

VRF WIRING DIAGRAM | NTS | 11

- EQUIPMENT FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR (DIVISION 26).
- EQUIPMENT FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR (DIVISION 23).
- LINE VOLTAGE WIRING AND CONDUIT FURNISHED BY ELECTRICAL CONTRACTOR.
- LOW VOLTAGE CONTROL WIRING AND CONDUIT FURNISHED AND INSTALLED UNDER DIVISION 23. SEE SPECIFICATION SECTIONS 260519 AND 260533 FOR CONDUIT & WIRING REQUIREMENTS. (ALL LOW VOLTAGE WIRING TO BE IN CONDUIT)
- DISC. DISCONNECT SWITCH
- C.B. CIRCUIT BREAKER
- AA AREA SMOKE DETECTION UNDER DIVISION 26
- S SPACE SENSOR BY CONTROLS CONTRACTOR
- T CARRIER I-VU TEMPERATURE SENSOR
- P CONDENSATE PUMP

CONTROL WIRING LEGEND | NTS | 8



NOTE:

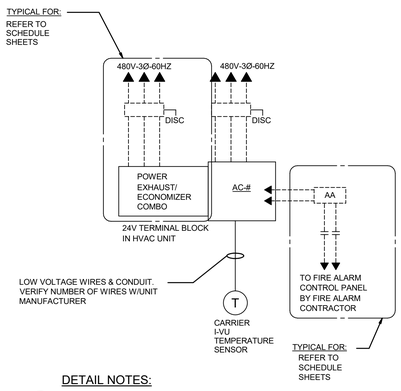
1. ALL PENETRATIONS THROUGH FIRE RATED WALL SHALL BE SLEEVED WITH A NON-COMBUSTABLE METAL SLEEVE. ALL SUCH PENETRATIONS SHALL BE FIRE STOPPED. 3M FIRE BARRIER (U.L. FILE R-9269-3) CAULK C 25N/S WITH A MINIMUM 1" DEPTH FOR A RATING OF 3 HOURS. THE FIRE STOP MATERIAL SHALL MEET ASTM, UL, & FACTORY MUTUAL SYSTEM APPROVAL, ALONG WITH CALIFORNIA STATE FIRE MARSHAL (APPROVAL #4485941:100), THE CITY OF LOS ANGELES (APPROVAL #PR24463 & I.C.B.O., N.E.R., #243).
2. PENETRATIONS IN SMOKE BARRIERS SHALL BE PROTECTED BY AN APPROVED THROUGH PENETRATION FIRESTOP SYSTEM AND TESTED IN ACCORDANCE WITH SECTION 714.5.

PIPE W/INSULATION THRU RATED WALL DETAIL | NTS | 5

NOTES:

1. FOR WIRING NOTES, SEE LEGEND #1 ON THIS SHEET

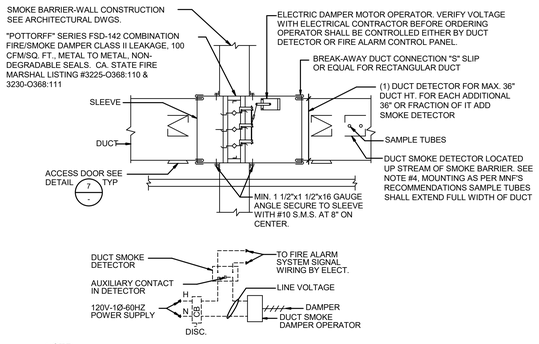
MULTIPORT CONTROLLER REF. PIPING & WIRING DIAGRAM | NTS | 12



DETAIL NOTES:

1. SEE CONTROL WIRING LEGEND #1 THIS SHEET.
2. INTERLOCKED FANS TO HAVE CONTINUOUS FAN OPERATION WHILE BUILDING IS OCCUPIED.

AC UNIT CONTROL WIRING DIAGRAM | NTS | 9



NOTE:

1. FIRE/SMOKE DAMPERS SHALL BE STATE FIRE MARSHALL APPROVED AND INSTALLED STRICTLY PER MANUFACTURER'S PRINTED INSTRUCTION. MANUFACTURER'S INSTALLATION INSTRUCTION SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITIES.
2. DAMPER SHALL BE NORMALLY CLOSED WITHOUT POWER.
3. INTERLOCK SMOKE DAMPER TO RELATED AIR HANDLING UNIT AND SHUT DOWN UNIT UPON SMOKE DETECTION
4. DUCT SMOKE DETECTORS SUPPLIED BY FIRE ALARM CONTRACTOR, SEE FIRE ALARM DWGS. FOR ADDITIONAL INFORMATION
5. PROVIDE SQUARE DAMPERS WITH ROUND COLLAR FOR ALL ROUND DUCTS. SIZE OF DUCT AS INDICATED ON DRAWING.

FIRE/SMOKE DAMPER DETAIL | NTS | 6

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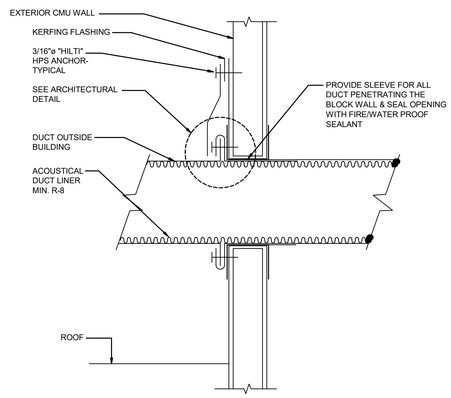
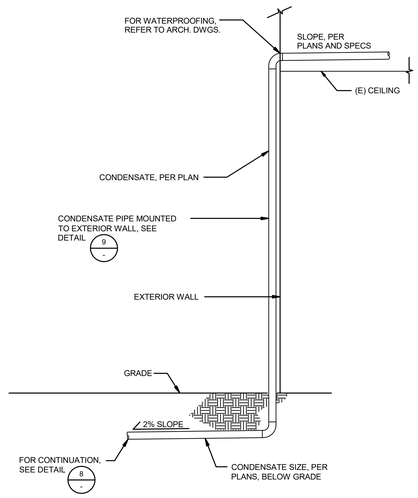
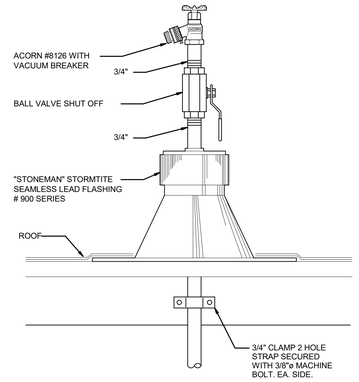


DUCT THRU WALL | NTS | 10

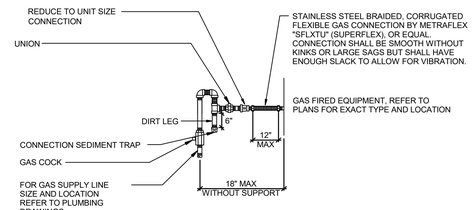


CONDENSATE PIPE DOWN WALL | NTS | 7



NOTE:
SECURE RISER TO ROOF STRUCTURE BELOW ROOF.

HOSE BIBB ROOF MOUNTED | NTS | 4

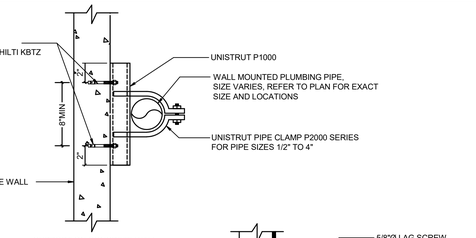


PRIME AND PAINT ALL EXPOSED BLACK STEEL PIPING TO MATCH BUILDING

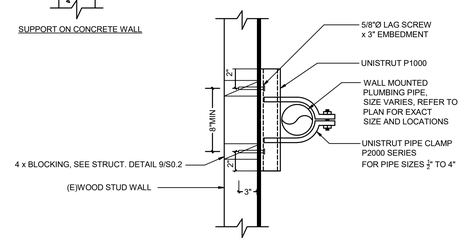
EQUIPMENT NATURAL GAS CONNECTION | NTS | 1

NOT USED | NTS | 11

NOT USED | NTS | 12



SUPPORT ON CONCRETE WALL

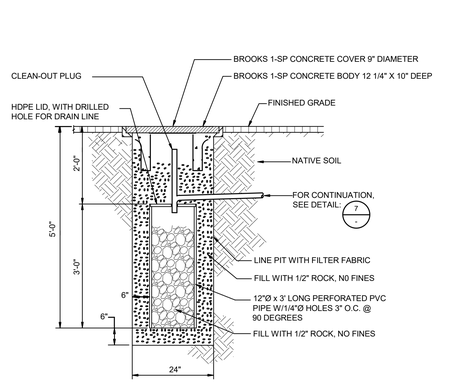


SUPPORT ON WOOD STUD WALL

NOTE:
DO NOT CUT OR DAMAGE ANY EXISTING REINFORCING WHEN INSTALLING EXPANSION BOLTS.

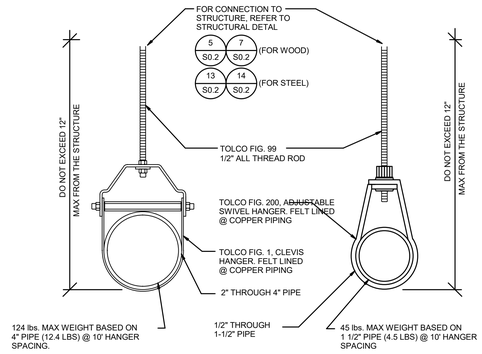
THE MAXIMUM SPACING OF THE SUPPORTS SHALL NOT EXCEED 15 FEET AND SHALL NOT EXCEED THE MAXIMUM SPACING ALLOWED BY THE CPC.

PIPE WALL SUPPORT | NTS | 9

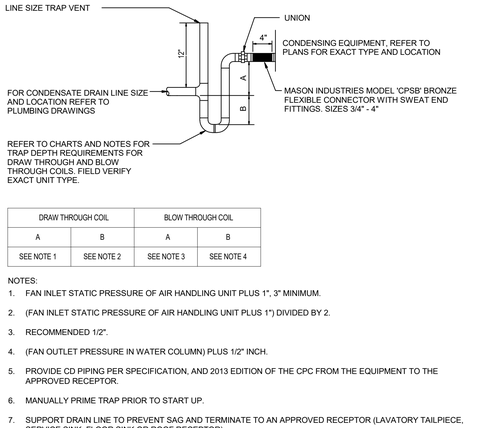


NOTE:
1. INSTALL DRYWELL 5 FT FROM THE BUILDING.

DRYWELL | NTS | 8



SINGLE PIPE HANGER DETAIL | NTS | 5

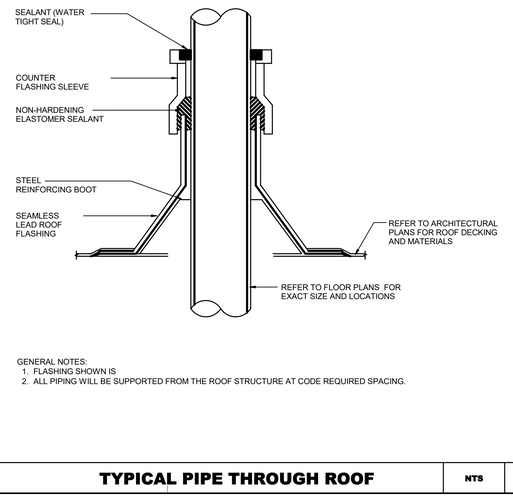


DRAW THROUGH COIL		BLOW THROUGH COIL	
A	B	A	B
SEE NOTE 1	SEE NOTE 2	SEE NOTE 3	SEE NOTE 4

NOTES:
1. FAN INLET STATIC PRESSURE OF AIR HANDLING UNIT PLUS 1", 3" MINIMUM.
2. (FAN INLET STATIC PRESSURE OF AIR HANDLING UNIT PLUS 1") DIVIDED BY 2.
3. RECOMMENDED 1/2".
4. (FAN OUTLET PRESSURE IN WATER COLUMN) PLUS 1/2" INCH.
5. PROVIDE CD PIPING PER SPECIFICATION, AND 2013 EDITION OF THE CPC FROM THE EQUIPMENT TO THE APPROVED RECEPTOR.
6. MANUALLY PRIME TRAP PRIOR TO START UP.
7. SUPPORT DRAIN LINE TO PREVENT SAG AND TERMINATE TO AN APPROVED RECEPTOR (LAVATORY TAILPIECE, SERVICE SINK, FLOOR SINK OR ROOF RECEPTOR).
8. INSTALL ALL CONDENSATE PIPING LOCATED WITHIN THE STRUCTURE.

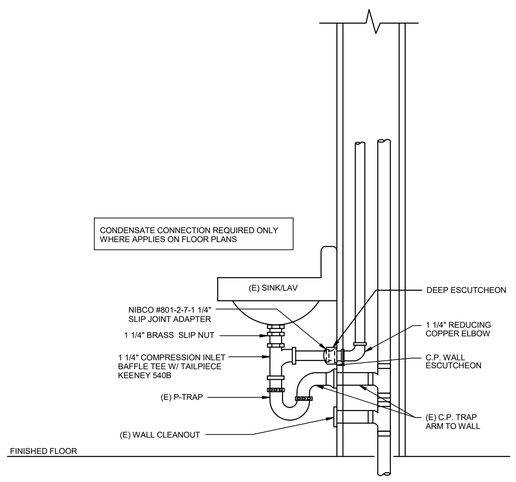
EQUIPMENT CONDENSATE CONNECTION | NTS | 2

CONDENSATE CONNECTION TO LAVATORY | NTS | 6



GENERAL NOTES:
1. FLASHING SHOWN IS
2. ALL PIPING WILL BE SUPPORTED FROM THE ROOF STRUCTURE AT CODE REQUIRED SPACING.

TYPICAL PIPE THROUGH ROOF | NTS | 3



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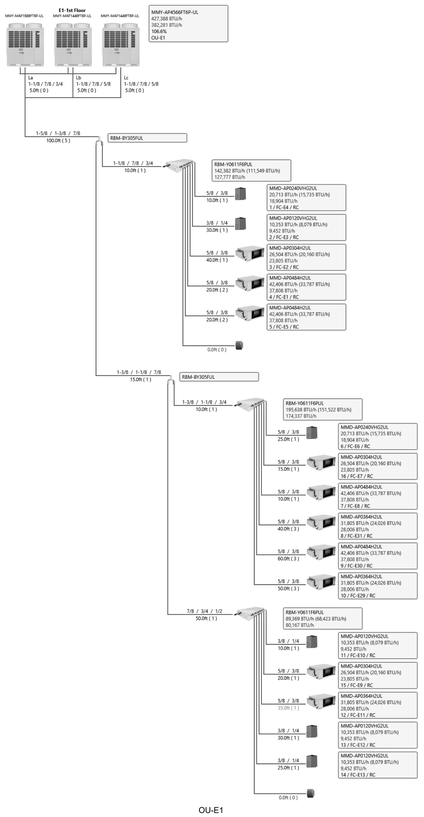

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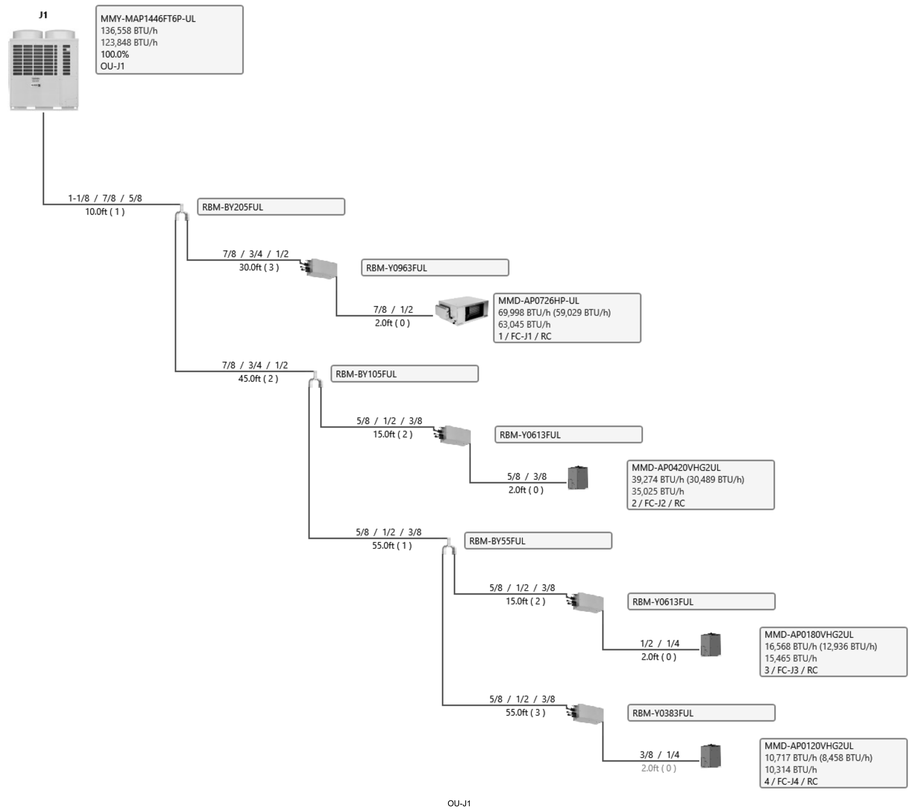
REFRIGERANT PIPING DIAGRAMS

DRAWING NUMBER: **MP4.5**



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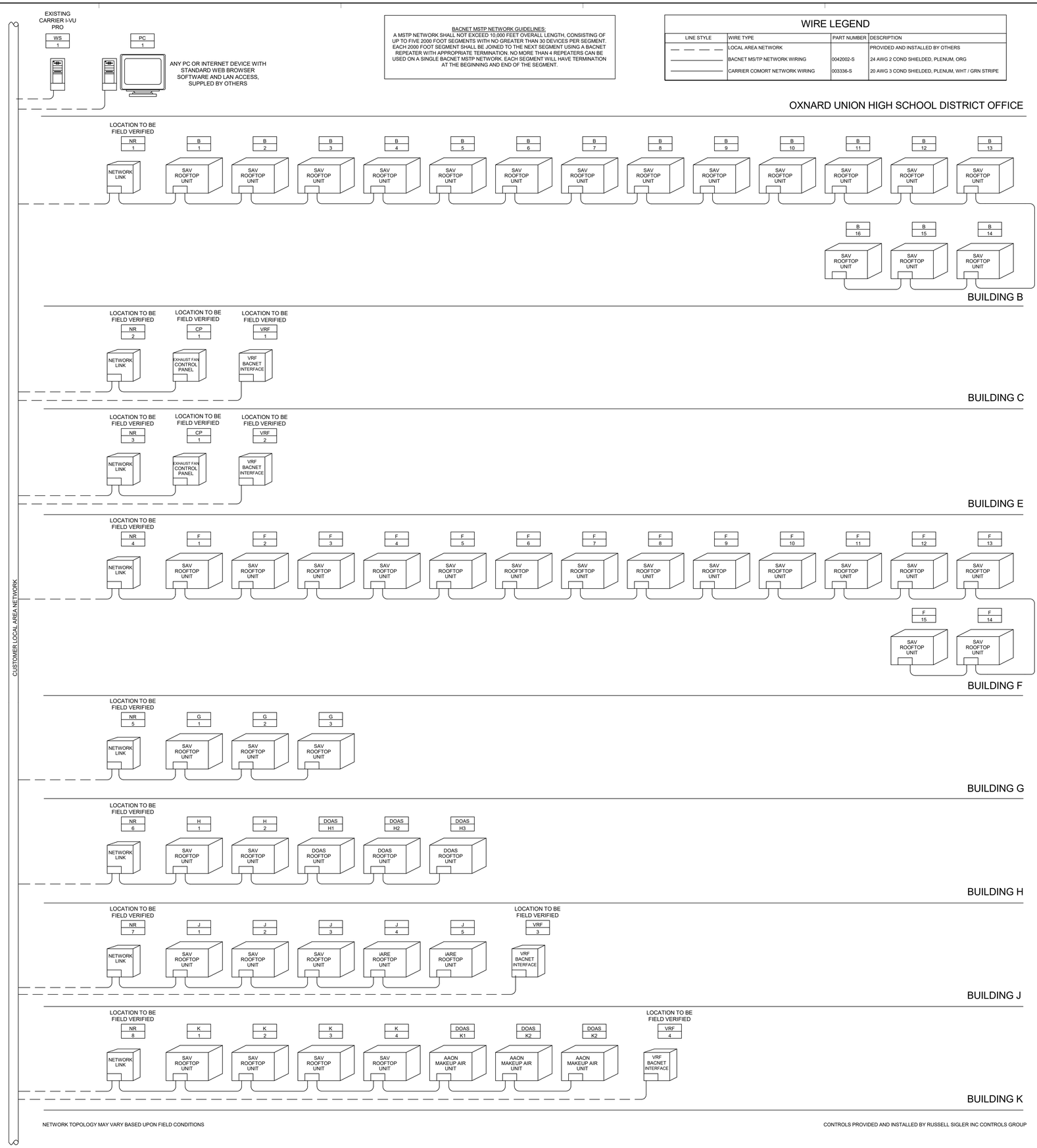
REFRIGERANT PIPING DIAGRAMS

DRAWING NUMBER: **MP4.6**



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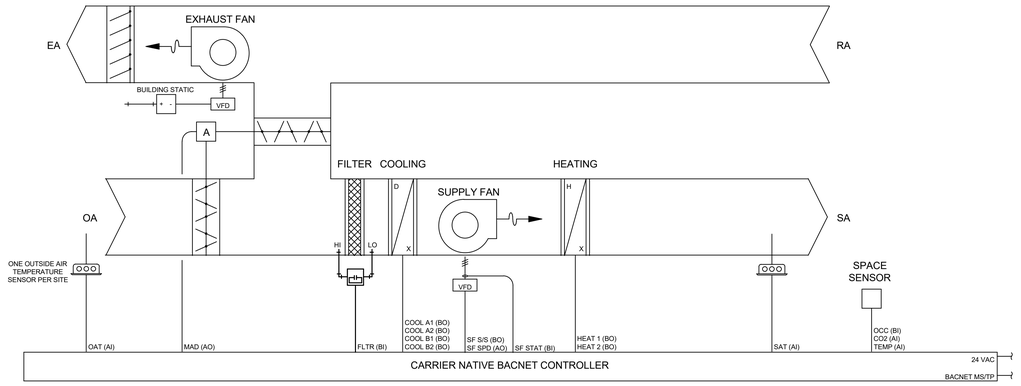
CONTROLS

DRAWING NUMBER: MP5.1



CONTROLS PROVIDED AND INSTALLED BY RUSSELL SIGLER INC CONTROLS GROUP

SEQUENCE OF OPERATION:
THE TCC SHALL EXTEND THE FMCS NETWORK TO THE RTU UNITARY CONTROLLER PER THE PROTOCOL SPECIFIED IN SECTION 23 09 00. THE TCC SHALL PROVIDE ALL ADDITIONAL CONTROL COMPONENTS REQUIRED TO ACCOMPLISH THE SEQUENCE OF OPERATION LISTED BELOW.

WHEN RTU IS INDEXED TO RUN, THE FOLLOWING SHALL OCCUR:
SUPPLY FAN SHALL BE ENABLED TO RUN. WHEN THE SUPPLY FAN HAS STARTED THE INTERLOCKED EXHAUST FANS SHALL START AS SHOWN IN THE FAN INTERLOCK SCHEDULE.

BUILDING OCCUPANCY SCHEDULING:
FMCS SHALL BE PROGRAMMED WITH THE FOLLOWING TENTATIVE OCCUPANCY SCHEDULE.
COORDINATE SPECIFIC SCHEDULE WITH OWNER.

MORNING START-UP MODE:	MONDAY THROUGH FRIDAY	6:00AM-7:00AM (ADJ)
OCCUPIED MODE:	MONDAY THROUGH FRIDAY	7:00AM-5:00PM (ADJ)
UNOCCUPIED MODE:	MONDAY THROUGH FRIDAY SATURDAY THROUGH SUNDAY	5:00PM-6:00AM (ADJ) ALL DAY

SUPPLY FAN CONTROL:
DURING OCCUPIED MODE THE SUPPLY FAN SHALL MODULATE WITH THE HEATING AND COOLING AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AND ENSURE PROPER AIRFLOW ACROSS COIL. DURING UNOCCUPIED MODE THE SUPPLY FAN SHALL BE OFF.

VENTILATION AIR CONTROL:
DURING OCCUPIED MODE THE OUTSIDE AIR DAMPER SHALL BE OPEN TO MAINTAIN THE MINIMUM SCHEDULED OUTSIDE AIR.

DEMAND CONTROL VENTILATION:
DURING OCCUPIED MODE, THE MINIMUM OA FLOW RATE SHALL NOT FALL BELOW THE SCHEDULED DCV MIN OA RATE. IF THE SPACE HAS A CO2 CONCENTRATION ABOVE SETPOINT, THE MINIMUM OA SETPOINT SHALL INCREASE UNTIL THE CO2 SETPOINT IS SATISFIED OR UNTIL THE SCHEDULED DESIGN MIN OA IS REACHED. IF THE CO2 CONCENTRATION DROPS BELOW SETPOINT, THE MINIMUM OA SHALL BE RESET LOWER UNTIL THE CO2 CONCENTRATION REACHES SETPOINT OR UNTIL THE UNIT OA FLOW RATE REACHES THE SCHEDULED DCV OA RATE. THE CO2 CONCENTRATION SETPOINT SHALL BE 1000 PPM (ADJ).

OCCUPANCY SENSOR:
WHEN THE OCCUPANCY SENSOR DETECTS THE SPACE IS UNOCCUPIED THE FOLLOWING SHALL OCCUR:
SPACE TEMPERATURE SETPOINT SHALL SETBACK BY 2°F.

COOLING MODE:
THE COOLING SETPOINT SHALL BE 74°F (ADJ). IF SPACE TEMPERATURE RISES ABOVE SETPOINT ENABLE STAGES OF COOLING TO SATISFY SETPOINT.

HEATING MODE:
THE HEATING SETPOINT SHALL BE 70°F (ADJ). IF SPACE TEMPERATURE FALLS BELOW SETPOINT ENABLE STAGES OF HEATING TO SATIFY SETPOINT.

ECONOMIZER:
WHEN THE OA DRY BULB TEMPERATURE LESS THAN 74°F (ADJ) THE FMCS SHALL ENABLE ECONOMIZER CONTROLS. WHEN THE OA DRY BULB TEMPERATURE IS ABOVE 74°F (ADJ) FOR 10 MINUTES THE FMCS SHALL DISABLE ECONOMIZER CONTROLS AND SHALL RETURN THE UNIT TO MINIMUM OUTSIDE AIR MODE. ONCE ECONOMIZER CONTROLS HAVE BEEN ENABLED OR DISABLED, THE UNIT SHALL CONTINUE TO OPERATUE IN THAT MODE FOR A MINIMUM OF 10 MINUTES (ADJ) BEFORE BEING ALLOWED TO SWITCH BACK (TO PREVENT SHORT CYCLING).

POWER EXHAUST:
WHEN THE RTU IS ENABLED TO RUN THE POWER EXHAUST SHALL MODULATE AS REQUIRED TO MAINTAIN +0.05" (ADJ) W.C. BUILDING PRESSURE.

MORNING START-UP OPERATION:
THE FMCS SHALL MEASURE THE SPACE TEMPERATURE AND OUTSIDE AIR TEMPERATURE TO DETERMINE THE MINIMUM RUNTIME TO WARM/COOL THE SPACES TO THEIR SETPOINT. WHEN THE COMPUTED START TIME IS REACHED THE FMCS SHALL ENABLE THE RTU.

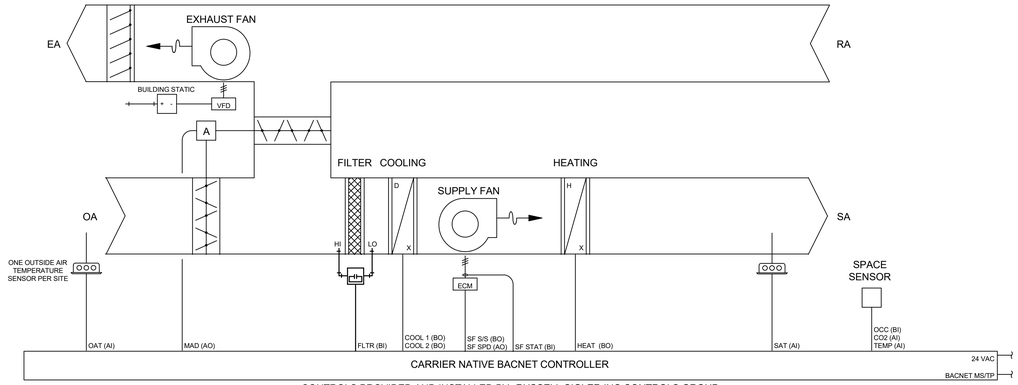
ALARMS, INTERLOCKS, AND SAFETIES:
THE FOLLOWING SAFETIES SHALL BE INSTALLED BY THE TCC IN THE FIELD:
FIRE ALARM RELAY
SUPPLY FAN FAULT
RELIEF FAN FAULT
DIRTY FILTERS (WHEN FILTER PRESSURE DROP EXCEEDS 0.6" W.C. (ADJ)
IF DISCHARGE AIR TEMPERATURE IS MORE THAN 10°F (ADJ) ABOVE OR BELOW SETPOINT
IF THE FIRE ALARM SYSTEM IS ACTIVATED

ANY ASSOCIATED INTERLOCKED EXHAUST FANS SHALL OPERATE WHEN THE RTU IS OCCUPIED
PER THE ABOVE BUILDING SCHEDULE.

GRAPHICAL DISPLAY:

DISPLAY THE GLOBAL OA TEMPERATURE AND HUMIDITY ON GRAPHIC PAGE. DISPLAY GRAPHICS OF EACH RTU USING INFORMATION RECEIVED FROM BACNET INTERFACE AND PROVIDED SENSORS. INFORMATION SHALL INCLUDE COOLING STATUS, HEATING STATUS, FAN STATUS, UNIT STATUS, SPACE TEMPERATURE, SUPPLY AIR TEMPERATURE, FAULT CODE, FILTER STATUS, OCCUPANCY, SPACE PRESSURE, AND GENERAL ALARM.

STAGED AIR VOLUME RTU DETAIL (G-1, G-2, H-1 & H-2) — NTS — 3



CONTROLS PROVIDED AND INSTALLED BY RUSSELL SIGLER INC CONTROLS GROUP

SEQUENCE OF OPERATION:
THE TCC SHALL EXTEND THE FMCS NETWORK TO THE RTU UNITARY CONTROLLER PER THE PROTOCOL SPECIFIED IN SECTION 23 09 00. THE TCC SHALL PROVIDE ALL ADDITIONAL CONTROL COMPONENTS REQUIRED TO ACCOMPLISH THE SEQUENCE OF OPERATION LISTED BELOW.

WHEN RTU IS INDEXED TO RUN, THE FOLLOWING SHALL OCCUR:
SUPPLY FAN SHALL BE ENABLED TO RUN. WHEN THE SUPPLY FAN HAS STARTED THE INTERLOCKED EXHAUST FANS SHALL START AS SHOWN IN THE FAN INTERLOCK SCHEDULE.

BUILDING OCCUPANCY SCHEDULING:
FMCS SHALL BE PROGRAMMED WITH THE FOLLOWING TENTATIVE OCCUPANCY SCHEDULE.
COORDINATE SPECIFIC SCHEDULE WITH OWNER.

MORNING START-UP MODE:	MONDAY THROUGH FRIDAY	6:00AM-7:00AM (ADJ)
OCCUPIED MODE:	MONDAY THROUGH FRIDAY	7:00AM-5:00PM (ADJ)
UNOCCUPIED MODE:	MONDAY THROUGH FRIDAY SATURDAY THROUGH SUNDAY	5:00PM-6:00AM (ADJ) ALL DAY

SUPPLY FAN CONTROL:
DURING OCCUPIED MODE THE SUPPLY FAN SHALL MODULATE WITH THE HEATING AND COOLING AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AND ENSURE PROPER AIRFLOW ACROSS COIL. DURING UNOCCUPIED MODE THE SUPPLY FAN SHALL BE OFF.

VENTILATION AIR CONTROL:
DURING OCCUPIED MODE THE OUTSIDE AIR DAMPER SHALL BE OPEN TO MAINTAIN THE MINIMUM SCHEDULED OUTSIDE AIR.

DEMAND CONTROL VENTILATION:
DURING OCCUPIED MODE, THE MINIMUM OA FLOW RATE SHALL NOT FALL BELOW THE SCHEDULED DCV MIN OA RATE. IF THE SPACE HAS A CO2 CONCENTRATION ABOVE SETPOINT, THE MINIMUM OA SETPOINT SHALL INCREASE UNTIL THE CO2 SETPOINT IS SATISFIED OR UNTIL THE SCHEDULED DESIGN MIN OA IS REACHED. IF THE CO2 CONCENTRATION DROPS BELOW SETPOINT, THE MINIMUM OA SHALL BE RESET LOWER UNTIL THE CO2 CONCENTRATION REACHES SETPOINT OR UNTIL THE UNIT OA FLOW RATE REACHES THE SCHEDULED DCV OA RATE. THE CO2 CONCENTRATION SETPOINT SHALL BE 1000 PPM (ADJ).

OCCUPANCY SENSOR:
WHEN THE OCCUPANCY SENSOR DETECTS THE SPACE IS UNOCCUPIED THE FOLLOWING SHALL OCCUR:
SPACE TEMPERATURE SETPOINT SHALL SETBACK BY 2°F.

COOLING MODE:
THE COOLING SETPOINT SHALL BE 74°F (ADJ). IF SPACE TEMPERATURE RISES ABOVE SETPOINT ENABLE STAGES OF COOLING TO SATISFY SETPOINT.

HEATING MODE:
THE HEATING SETPOINT SHALL BE 70°F (ADJ). IF SPACE TEMPERATURE FALLS BELOW SETPOINT ENABLE STAGES OF HEATING TO SATIFY SETPOINT.

ECONOMIZER:
WHEN THE OA DRY BULB TEMPERATURE LESS THAN 74°F (ADJ) THE FMCS SHALL ENABLE ECONOMIZER CONTROLS. WHEN THE OA DRY BULB TEMPERATURE IS ABOVE 74°F (ADJ) FOR 10 MINUTES THE FMCS SHALL DISABLE ECONOMIZER CONTROLS AND SHALL RETURN THE UNIT TO MINIMUM OUTSIDE AIR MODE. ONCE ECONOMIZER CONTROLS HAVE BEEN ENABLED OR DISABLED, THE UNIT SHALL CONTINUE TO OPERATUE IN THAT MODE FOR A MINIMUM OF 10 MINUTES (ADJ) BEFORE BEING ALLOWED TO SWITCH BACK (TO PREVENT SHORT CYCLING).

POWER EXHAUST:
WHEN THE RTU IS ENABLED TO RUN THE POWER EXHAUST SHALL MODULATE AS REQUIRED TO MAINTAIN +0.05" (ADJ) W.C. BUILDING PRESSURE.

MORNING START-UP OPERATION:
THE FMCS SHALL MEASURE THE SPACE TEMPERATURE AND OUTSIDE AIR TEMPERATURE TO DETERMINE THE MINIMUM RUNTIME TO WARM/COOL THE SPACES TO THEIR SETPOINT. WHEN THE COMPUTED START TIME IS REACHED THE FMCS SHALL ENABLE THE RTU.

ALARMS, INTERLOCKS, AND SAFETIES:
THE FOLLOWING SAFETIES SHALL BE INSTALLED BY THE TCC IN THE FIELD:
FIRE ALARM RELAY
SUPPLY FAN FAULT
RELIEF FAN FAULT
DIRTY FILTERS (WHEN FILTER PRESSURE DROP EXCEEDS 0.6" W.C. (ADJ)
IF DISCHARGE AIR TEMPERATURE IS MORE THAN 10°F (ADJ) ABOVE OR BELOW SETPOINT
IF THE FIRE ALARM SYSTEM IS ACTIVATED

ANY ASSOCIATED INTERLOCKED EXHAUST FANS SHALL OPERATE WHEN THE RTU IS OCCUPIED
PER THE ABOVE BUILDING SCHEDULE.

GRAPHICAL DISPLAY:

DISPLAY THE GLOBAL OA TEMPERATURE AND HUMIDITY ON GRAPHIC PAGE. DISPLAY GRAPHICS OF EACH RTU USING INFORMATION RECEIVED FROM BACNET INTERFACE AND PROVIDED SENSORS. INFORMATION SHALL INCLUDE COOLING STATUS, HEATING STATUS, FAN STATUS, UNIT STATUS, SPACE TEMPERATURE, SUPPLY AIR TEMPERATURE, FAULT CODE, FILTER STATUS, OCCUPANCY, SPACE PRESSURE, AND GENERAL ALARM.

STAGED AIR VOLUME RTU DETAIL (K-1 & K-4) — NTS — 1

DDC POINTS LIST				
DESCRIPTION	INPUTS		OUTPUTS	
	ANALOG	BINARY	ANALOG	BINARY
FAN_STATUS_AV		X		
UNIT_CONTROL				X
EA_TEMP	X			
COOLING_1				X
COOLING_2 (WHERE APPLICABLE)				X
COOLING_3 (WHERE APPLICABLE)				X
COOLING_4 (WHERE APPLICABLE)				X
HEATING_1				X
HEATING_2 (WHERE APPLICABLE)				X
HEATING_3 (WHERE APPLICABLE)				X
DA_TEMP	X			
ROOM_TEMP_STP	X			
DIRTY_FILTER		X		
BAS_VFD_SPEED_COOL				X
FAN_STATUS_BV		X		
BAS_VFD_SPEED_HEAT				X
DAMPER_POSITION			X	
BAS_DAMPER_POSITION			X	

SEQUENCE OF OPERATION:
THE TEMPERATURE CONTROLS CONTRACTOR (TCC) SHALL EXTEND THE FMCS NETWORK TO THE RTU UNITARY CONTROLLER PER THE PROTOCOL SPECIFIED IN SECTION 23 09 00. THE TCC SHALL PROVIDE ALL ADDITIONAL CONTROL COMPONENTS REQUIRED TO ACCOMPLISH THE SEQUENCE OF OPERATION LISTED BELOW.

WHEN RTU IS INDEXED TO RUN, THE FOLLOWING SHALL OCCUR:
SUPPLY FAN SHALL BE ENABLED TO RUN. WHEN THE SUPPLY FAN HAS STARTED THE INTERLOCKED EXHAUST FANS SHALL START.

BUILDING OCCUPANCY SCHEDULING:
FMCS SHALL BE PROGRAMMED WITH THE FOLLOWING TENTATIVE OCCUPANCY SCHEDULE.
COORDINATE SPECIFIC SCHEDULE WITH OWNER.

MORNING START-UP MODE:	MONDAY THROUGH FRIDAY	6:00AM-7:00AM (ADJ)
OCCUPIED MODE:	MONDAY THROUGH FRIDAY	7:00AM-5:00PM (ADJ)
UNOCCUPIED MODE:	MONDAY THROUGH FRIDAY SATURDAY THROUGH SUNDAY	5:00PM-6:00AM (ADJ) ALL DAY

SUPPLY FAN CONTROL:
DURING OCCUPIED MODE THE SUPPLY FAN SHALL OPERATE CONTINUOUSLY WITH THE HEATING AND COOLING AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AND ENSURE PROPER AIRFLOW ACROSS COIL. DURING UNOCCUPIED MODE THE SUPPLY FAN SHALL BE OFF.

VENTILATION AIR CONTROL:
DURING OCCUPIED MODE THE OUTSIDE AIR DAMPER SHALL BE OPEN TO MAINTAIN THE MINIMUM SCHEDULED OUTSIDE AIR.

COOLING MODE:
THE COOLING SETPOINT SHALL BE 74°F (ADJ). IF SPACE TEMPERATURE RISES ABOVE SETPOINT ENABLE STAGES OF COOLING TO SATISFY SETPOINT.

HEATING MODE:
THE HEATING SETPOINT SHALL BE 70°F (ADJ). IF SPACE TEMPERATURE FALLS BELOW SETPOINT ENABLE STAGES OF HEATING TO SATIFY SETPOINT.

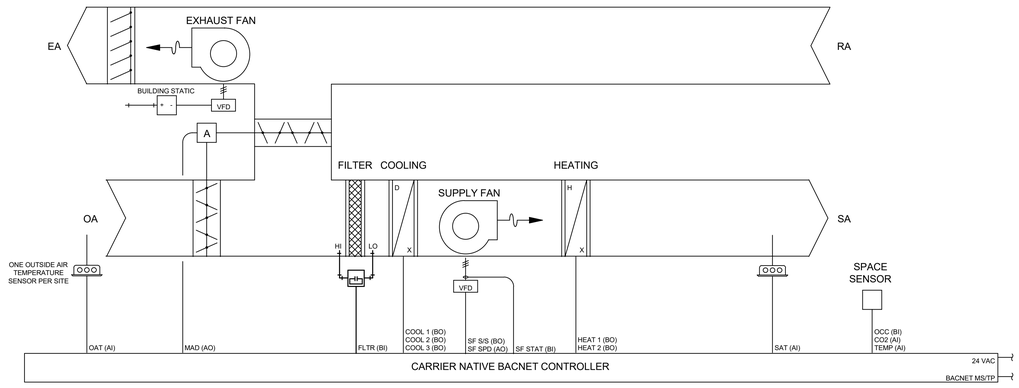
MORNING START-UP OPERATION:
THE FMCS SHALL MEASURE THE SPACE TEMPERATURE AND OUTSIDE AIR TEMPERATURE TO DETERMINE THE MINIMUM RUNTIME TO WARM/COOL THE SPACES TO THEIR SETPOINT.
WHEN THE COMPUTED START TIME IS REACHED THE FMCS SHALL ENABLE THE RTU.

ALARMS, INTERLOCKS, AND SAFETIES:
THE FOLLOWING SAFETIES SHALL BE INSTALLED BY THE TCC IN THE FIELD:
FIRE ALARM RELAY
SUPPLY FAN FAULT
RELIEF FAN FAULT
DIRTY FILTERS (WHEN FILTER PRESSURE DROP EXCEEDS 0.6" W.C. (ADJ)
IF DISCHARGE AIR TEMPERATURE IS MORE THAN 10°F (ADJ) ABOVE OR BELOW SETPOINT
IF THE FIRE ALARM SYSTEM IS ACTIVATED

ANY ASSOCIATED INTERLOCKED EXHAUST FANS SHALL OPERATE WHEN THE RTU IS OCCUPIED
PER THE ABOVE BUILDING SCHEDULE.

GRAPHICAL DISPLAY:
DISPLAY THE GLOBAL OA TEMPERATURE AND HUMIDITY ON GRAPHIC PAGE. DISPLAY GRAPHICS OF EACH RTU USING INFORMATION RECEIVED FROM BACNET INTERFACE AND PROVIDED SENSORS. INFORMATION SHALL INCLUDE COOLING STATUS, HEATING STATUS, FAN STATUS, UNIT STATUS, SPACE TEMPERATURE, FAULT CODE, FILTER STATUS, OCCUPANCY, SPACE PRESSURE, AND GENERAL ALARM.

IAIRE DOAS UNITS (AC- J4, AC-J5, DOAS-H1, DOAS-H2, DOAS-H3) — NTS — 4



CONTROLS PROVIDED AND INSTALLED BY RUSSELL SIGLER INC CONTROLS GROUP

SEQUENCE OF OPERATION:
THE TCC SHALL EXTEND THE FMCS NETWORK TO THE RTU UNITARY CONTROLLER PER THE PROTOCOL SPECIFIED IN SECTION 23 09 00. THE TCC SHALL PROVIDE ALL ADDITIONAL CONTROL COMPONENTS REQUIRED TO ACCOMPLISH THE SEQUENCE OF OPERATION LISTED BELOW.

WHEN RTU IS INDEXED TO RUN, THE FOLLOWING SHALL OCCUR:
SUPPLY FAN SHALL BE ENABLED TO RUN. WHEN THE SUPPLY FAN HAS STARTED THE INTERLOCKED EXHAUST FANS SHALL START AS SHOWN IN THE FAN INTERLOCK SCHEDULE.

BUILDING OCCUPANCY SCHEDULING:
FMCS SHALL BE PROGRAMMED WITH THE FOLLOWING TENTATIVE OCCUPANCY SCHEDULE.
COORDINATE SPECIFIC SCHEDULE WITH OWNER.

MORNING START-UP MODE:	MONDAY THROUGH FRIDAY	6:00AM-7:00AM (ADJ)
OCCUPIED MODE:	MONDAY THROUGH FRIDAY	7:00AM-5:00PM (ADJ)
UNOCCUPIED MODE:	MONDAY THROUGH FRIDAY SATURDAY THROUGH SUNDAY	5:00PM-6:00AM (ADJ) ALL DAY

SUPPLY FAN CONTROL:
DURING OCCUPIED MODE THE SUPPLY FAN SHALL MODULATE WITH THE HEATING AND COOLING AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AND ENSURE PROPER AIRFLOW ACROSS COIL. DURING UNOCCUPIED MODE THE SUPPLY FAN SHALL BE OFF.

VENTILATION AIR CONTROL:
DURING OCCUPIED MODE THE OUTSIDE AIR DAMPER SHALL BE OPEN TO MAINTAIN THE MINIMUM SCHEDULED OUTSIDE AIR.

DEMAND CONTROL VENTILATION:
DURING OCCUPIED MODE, THE MINIMUM OA FLOW RATE SHALL NOT FALL BELOW THE SCHEDULED DCV MIN OA RATE. IF THE SPACE HAS A CO2 CONCENTRATION ABOVE SETPOINT, THE MINIMUM OA SETPOINT SHALL INCREASE UNTIL THE CO2 SETPOINT IS SATISFIED OR UNTIL THE SCHEDULED DESIGN MIN OA IS REACHED. IF THE CO2 CONCENTRATION DROPS BELOW SETPOINT, THE MINIMUM OA SHALL BE RESET LOWER UNTIL THE CO2 CONCENTRATION REACHES SETPOINT OR UNTIL THE UNIT OA FLOW RATE REACHES THE SCHEDULED DCV OA RATE. THE CO2 CONCENTRATION SETPOINT SHALL BE 1000 PPM (ADJ).

OCCUPANCY SENSOR:
WHEN THE OCCUPANCY SENSOR DETECTS THE SPACE IS UNOCCUPIED THE FOLLOWING SHALL OCCUR:
SPACE TEMPERATURE SETPOINT SHALL SETBACK BY 2°F.

COOLING MODE:
THE COOLING SETPOINT SHALL BE 74°F (ADJ). IF SPACE TEMPERATURE RISES ABOVE SETPOINT ENABLE STAGES OF COOLING TO SATISFY SETPOINT.

HEATING MODE:
THE HEATING SETPOINT SHALL BE 70°F (ADJ). IF SPACE TEMPERATURE FALLS BELOW SETPOINT ENABLE STAGES OF HEATING TO SATIFY SETPOINT.

ECONOMIZER:
WHEN THE OA DRY BULB TEMPERATURE LESS THAN 74°F (ADJ) THE FMCS SHALL ENABLE ECONOMIZER CONTROLS. WHEN THE OA DRY BULB TEMPERATURE IS ABOVE 74°F (ADJ) FOR 10 MINUTES THE FMCS SHALL DISABLE ECONOMIZER CONTROLS AND SHALL RETURN THE UNIT TO MINIMUM OUTSIDE AIR MODE. ONCE ECONOMIZER CONTROLS HAVE BEEN ENABLED OR DISABLED, THE UNIT SHALL CONTINUE TO OPERATUE IN THAT MODE FOR A MINIMUM OF 10 MINUTES (ADJ) BEFORE BEING ALLOWED TO SWITCH BACK (TO PREVENT SHORT CYCLING).

POWER EXHAUST:
WHEN THE RTU IS ENABLED TO RUN THE POWER EXHAUST SHALL MODULATE AS REQUIRED TO MAINTAIN +0.05" (ADJ) W.C. BUILDING PRESSURE.

MORNING START-UP OPERATION:
THE FMCS SHALL MEASURE THE SPACE TEMPERATURE AND OUTSIDE AIR TEMPERATURE TO DETERMINE THE MINIMUM RUNTIME TO WARM/COOL THE SPACES TO THEIR SETPOINT. WHEN THE COMPUTED START TIME IS REACHED THE FMCS SHALL ENABLE THE RTU.

ALARMS, INTERLOCKS, AND SAFETIES:
THE FOLLOWING SAFETIES SHALL BE INSTALLED BY THE TCC IN THE FIELD:
FIRE ALARM RELAY
SUPPLY FAN FAULT
RELIEF FAN FAULT
DIRTY FILTERS (WHEN FILTER PRESSURE DROP EXCEEDS 0.6" W.C. (ADJ)
IF DISCHARGE AIR TEMPERATURE IS MORE THAN 10°F (ADJ) ABOVE OR BELOW SETPOINT
IF THE FIRE ALARM SYSTEM IS ACTIVATED

ANY ASSOCIATED INTERLOCKED EXHAUST FANS SHALL OPERATE WHEN THE RTU IS OCCUPIED
PER THE ABOVE BUILDING SCHEDULE.

GRAPHICAL DISPLAY:

DISPLAY THE GLOBAL OA TEMPERATURE AND HUMIDITY ON GRAPHIC PAGE. DISPLAY GRAPHICS OF EACH RTU USING INFORMATION RECEIVED FROM BACNET INTERFACE AND PROVIDED SENSORS. INFORMATION SHALL INCLUDE COOLING STATUS, HEATING STATUS, FAN STATUS, UNIT STATUS, SPACE TEMPERATURE, SUPPLY AIR TEMPERATURE, FAULT CODE, FILTER STATUS, OCCUPANCY, SPACE PRESSURE, AND GENERAL ALARM.

STAGED AIR VOLUME RTU DETAIL (G-3, J-1, J-2, J-3, K-2 & K-3) — NTS — 2

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BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

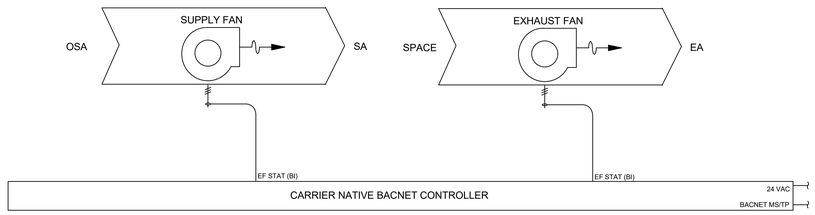
DRAWN: CDG	CHECKED: JMM
DATE: Issue Date	SCALE:
PROJECT NUMBER:	Project Number

CONTROLS

DRAWING NUMBER: MP5.2

BUILDING C:
EF (QTY. 9)
SF (QTY. 6)

BUILDING E:
EF (QTY. 10)
SF (QTY. 10)



CONTROLS PROVIDED AND INSTALLED BY RUSSELL SIGLER INC CONTROLS GROUP

CONTROL PANEL SHALL CONFORM TO UL 508A STANDARDS

SEQUENCE OF OPERATION:
THE TCC SHALL EXTEND THE FMCS NETWORK TO THE ERV CONTROLLER PER THE PROTOCOL SPECIFIED IN SECTION 23 09 00. THE TCC SHALL PROVIDE ALL ADDITIONAL CONTROL COMPONENTS REQUIRED TO ACCOMPLISH THE SEQUENCE OF OPERATION LISTED BELOW.

WHEN SUPPLY FAN/EXHAUST FAN IS INDEXED TO RUN, THE FOLLOWING SHALL OCCUR:
SUPPLY FAN AND EXHAUST FAN SHALL BE ENABLED TO RUN.

BUILDING OCCUPANCY SCHEDULING:
FMCS SHALL BE PROGRAMMED WITH THE FOLLOWING TENTATIVE OCCUPANCY SCHEDULE. COORDINATE SPECIFIC SCHEDULE WITH OWNER.

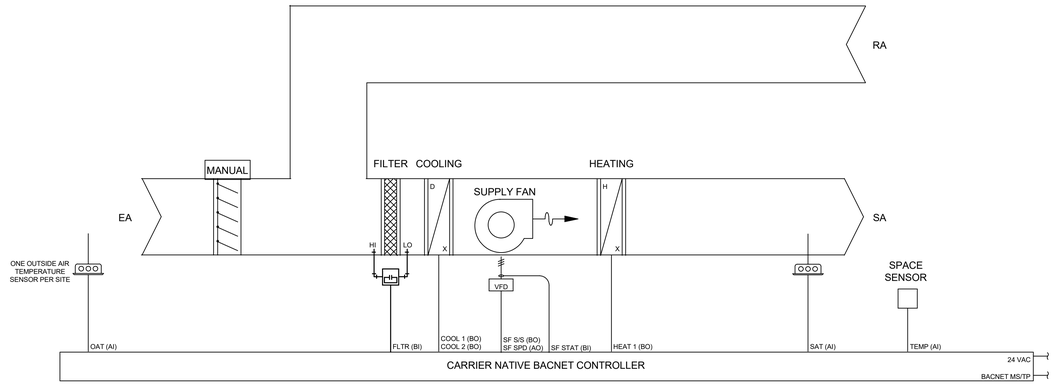
OCCUPIED MODE: 7:00AM-5:00PM (ADJ)	MONDAY THROUGH FRIDAY	
UNOCCUPIED MODE: 5:00PM-6:00AM (ADJ)	MONDAY THROUGH FRIDAY	
	SATURDAY THROUGH SUNDAY	ALL DAY

ALARMS, INTERLOCKS, AND SAFETIES:
THE FOLLOWING SAFETIES SHALL BE INSTALLED BY THE TCC IN THE FIELD:
FIRE ALARM RELAY
SUPPLY FAN FAULT
RELIEF FAN FAULT
IF THE FIRE ALARM SYSTEM IS ACTIVATED

GRAPHICAL DISPLAY:
DISPLAY THE GLOBAL OA TEMPERATURE AND HUMIDITY ON GRAPHIC PAGE. DISPLAY GRAPHICS OF EACH RTU USING INFORMATION RECEIVED FROM BACNET INTERFACE AND PROVIDED SENSORS. INFORMATION SHALL INCLUDE FAN STATUS, SUPPLY AIR TEMPERATURE, FAULT CODE, OCCUPANCY, SPACE PRESSURE, AND GENERAL ALARM.

TYPICAL EXHAUST FAN CONTROL PANEL DETAIL

NTS | 3



CONTROLS PROVIDED AND INSTALLED BY RUSSELL SIGLER INC CONTROLS GROUP

SEQUENCE OF OPERATION:
THE TCC SHALL EXTEND THE FMCS NETWORK TO THE RTU UNITARY CONTROLLER PER THE PROTOCOL SPECIFIED IN SECTION 23 09 00. THE TCC SHALL PROVIDE ALL ADDITIONAL CONTROL COMPONENTS REQUIRED TO ACCOMPLISH THE SEQUENCE OF OPERATION LISTED BELOW.

WHEN RTU IS INDEXED TO RUN, THE FOLLOWING SHALL OCCUR:
SUPPLY FAN SHALL BE ENABLED TO RUN. WHEN THE SUPPLY FAN HAS STARTED THE INTERLOCKED EXHAUST FANS SHALL START AS SHOWN IN THE FAN INTERLOCK SCHEDULE.

BUILDING OCCUPANCY SCHEDULING:
FMCS SHALL BE PROGRAMMED WITH THE FOLLOWING TENTATIVE OCCUPANCY SCHEDULE. COORDINATE SPECIFIC SCHEDULE WITH OWNER.

MORNING START-UP MODE:	MONDAY THROUGH FRIDAY	6:00AM-7:00AM (ADJ)
OCCUPIED MODE:	MONDAY THROUGH FRIDAY	7:00AM-5:00PM (ADJ)
UNOCCUPIED MODE:	MONDAY THROUGH FRIDAY	5:00PM-6:00AM (ADJ)
	SATURDAY THROUGH SUNDAY	ALL DAY

SUPPLY FAN CONTROL:
DURING OCCUPIED MODE THE SUPPLY FAN SHALL MODULATE WITH THE HEATING AND COOLING AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AND ENSURE PROPER AIRFLOW ACROSS COIL. DURING UNOCCUPIED MODE THE SUPPLY FAN SHALL BE OFF.

VENTILATION AIR CONTROL:
DURING OCCUPIED MODE THE OUTSIDE AIR DAMPER SHALL BE OPEN TO MAINTAIN THE MINIMUM SCHEDULED OUTSIDE AIR.

COOLING MODE:
THE COOLING SETPOINT SHALL BE 74°F (ADJ). IF SPACE TEMPERATURE RISES ABOVE SETPOINT ENABLE STAGES OF COOLING TO SATISFY SETPOINT.

HEATING MODE:
THE HEATING SETPOINT SHALL BE 70°F (ADJ). IF SPACE TEMPERATURE FALLS BELOW SETPOINT ENABLE STAGES OF HEATING TO SATIFY SETPOINT.

MORNING START-UP OPERATION:
THE FMCS SHALL MEASURE THE SPACE TEMPERATURE AND OUTSIDE AIR TEMPERATURE TO DETERMINE THE MINIMUM RUNTIME TO WARM/COOL THE SPACES TO THEIR SETPOINT.
WHEN THE COMPUTED START TIME IS REACHED THE FMCS SHALL ENABLE THE RTU.

ALARMS, INTERLOCKS, AND SAFETIES:
THE FOLLOWING SAFETIES SHALL BE INSTALLED BY THE TCC IN THE FIELD:
FIRE ALARM RELAY
SUPPLY FAN FAULT
DIRTY FILTERS (WHEN FILTER PRESSURE DROP EXCEEDS 0.6" W.C. (ADJ)
IF DISCHARGE AIR TEMPERATURE IS MORE THAN 10°F (ADJ) ABOVE OR BELOW SETPOINT
IF THE FIRE ALARM SYSTEM IS ACTIVATED

ANY ASSOCIATED INTERLOCKED EXHAUST FANS SHALL OPERATE WHEN THE RTU IS OCCUPIED PER THE ABOVE BUILDING SCHEDULE.

GRAPHICAL DISPLAY:

DISPLAY THE GLOBAL OA TEMPERATURE AND HUMIDITY ON GRAPHIC PAGE. DISPLAY GRAPHICS OF EACH RTU USING INFORMATION RECEIVED FROM BACNET INTERFACE AND PROVIDED SENSORS. INFORMATION SHALL INCLUDE COOLING STATUS, HEATING STATUS, FAN STATUS, UNIT STATUS, SPACE TEMPERATURE, SUPPLY AIR TEMPERATURE, FAULT CODE, FILTER STATUS, OCCUPANCY, SPACE PRESSURE, AND GENERAL ALARM.

STAGED AIR VOLUME RTU NO POWER EXHAUST OR ECONOMIZER DETAIL (B-1 THRU B-16, F-1 THRU F-15)

NTS | 1

NOT USED

NTS | 4

DDC POINTS LIST

DESCRIPTION	INPUTS		OUTPUTS	
	ANALOG	BINARY	ANALOG	BINARY
SUPPLY AIR TEMPERATURE	X			
SPACE TEMPERATURE	X			
OUTDOOR AIR TEMPERATURE	X			
OUTDOOR AIR HUMIDITY	X			
BUILDING PRESSURE	X			
CARBON DIOXIDE LEVEL	X			
COOLING				X
SUPPLY FAN START/STOP				X
SUPPLY FAN STATUS		X		
HEATING				X
FILTER STATUS		X		
OUTSIDE AIR DAMPER			X	

SEQUENCE OF OPERATION:
THE TEMPERATURE CONTROLS CONTRACTOR (TCC) SHALL EXTEND THE FMCS NETWORK TO THE RTU UNITARY CONTROLLER PER THE PROTOCOL SPECIFIED IN SECTION 23 09 00. THE TCC SHALL PROVIDE ALL ADDITIONAL CONTROL COMPONENTS REQUIRED TO ACCOMPLISH THE SEQUENCE OF OPERATION LISTED BELOW.

WHEN RTU IS INDEXED TO RUN, THE FOLLOWING SHALL OCCUR:
SUPPLY FAN SHALL BE ENABLED TO RUN. WHEN THE SUPPLY FAN HAS STARTED THE INTERLOCKED EXHAUST FANS SHALL START.

BUILDING OCCUPANCY SCHEDULING:
FMCS SHALL BE PROGRAMMED WITH THE FOLLOWING TENTATIVE OCCUPANCY SCHEDULE. COORDINATE SPECIFIC SCHEDULE WITH OWNER.

MORNING START-UP MODE:	MONDAY THROUGH FRIDAY	6:00AM-7:00AM (ADJ)
OCCUPIED MODE:	MONDAY THROUGH FRIDAY	7:00AM-5:00PM (ADJ)
UNOCCUPIED MODE:	MONDAY THROUGH FRIDAY	5:00PM-6:00AM (ADJ)
	SATURDAY THROUGH SUNDAY	ALL DAY

SUPPLY FAN CONTROL:
DURING OCCUPIED MODE THE SUPPLY FAN SHALL OPERATE CONTINUOUSLY WITH THE HEATING AND COOLING AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AND ENSURE PROPER AIRFLOW ACROSS COIL. DURING UNOCCUPIED MODE THE SUPPLY FAN SHALL BE OFF.

VENTILATION AIR CONTROL:
DURING OCCUPIED MODE THE OUTSIDE AIR DAMPER SHALL BE OPEN TO MAINTAIN THE MINIMUM SCHEDULED OUTSIDE AIR.

COOLING MODE:
THE COOLING SETPOINT SHALL BE 74°F (ADJ). IF SPACE TEMPERATURE RISES ABOVE SETPOINT ENABLE STAGES OF COOLING TO SATISFY SETPOINT.

HEATING MODE:
THE HEATING SETPOINT SHALL BE 70°F (ADJ). IF SPACE TEMPERATURE FALLS BELOW SETPOINT ENABLE STAGES OF HEATING TO SATIFY SETPOINT.

MORNING START-UP OPERATION:
THE FMCS SHALL MEASURE THE SPACE TEMPERATURE AND OUTSIDE AIR TEMPERATURE TO DETERMINE THE MINIMUM RUNTIME TO WARM/COOL THE SPACES TO THEIR SETPOINT.
WHEN THE COMPUTED START TIME IS REACHED THE FMCS SHALL ENABLE THE RTU.

ALARMS, INTERLOCKS, AND SAFETIES:
THE FOLLOWING SAFETIES SHALL BE INSTALLED BY THE TCC IN THE FIELD:
FIRE ALARM RELAY
SUPPLY FAN FAULT
DIRTY FILTERS (WHEN FILTER PRESSURE DROP EXCEEDS 0.6" W.C. (ADJ)
IF DISCHARGE AIR TEMPERATURE IS MORE THAN 10°F (ADJ) ABOVE OR BELOW SETPOINT
IF THE FIRE ALARM SYSTEM IS ACTIVATED

ANY ASSOCIATED INTERLOCKED EXHAUST FANS SHALL OPERATE WHEN THE RTU IS OCCUPIED PER THE ABOVE BUILDING SCHEDULE.

GRAPHICAL DISPLAY:
DISPLAY THE GLOBAL OA TEMPERATURE AND HUMIDITY ON GRAPHIC PAGE. DISPLAY GRAPHICS OF EACH RTU USING INFORMATION RECEIVED FROM BACNET INTERFACE AND PROVIDED SENSORS. INFORMATION SHALL INCLUDE COOLING STATUS, HEATING STATUS, FAN STATUS, UNIT STATUS, SPACE TEMPERATURE, SUPPLY AIR TEMPERATURE, FAULT CODE, FILTER STATUS, OCCUPANCY, SPACE PRESSURE, AND GENERAL ALARM.

AAON MAKEUP AIR UNITS (DOAS-K1 DOAS-K2 & DOAS-K3)

NTS | 2

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DIV. OF THE STATE ARCHITECT
APP. 03-120526 INC:
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SS ☑ FLS ☑ ACS ☐
DATE: 06/15/2020

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BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN: CDG	CHECKED: JMM
DATE: Issue Date	SCALE:
PROJECT NUMBER: Project Number	

CONTROLS

DRAWING NUMBER: MP5.3

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
GB	GB	26 05 26	GROUND BUS
IBT	IBT	26 05 26	INTERSYSTEM BONDING TERMINATION
E / E	ECONN	26 05 33	ELECTRICAL CONNECTION
J / J	JB	26 05 33	JUNCTION BOX
	FB-#	26 27 26	FLOOR BOX - DUPLEX RECEPTACLE
	FB-#	26 27 26	FLOOR BOX - DUAL COMPARTMENT
	FB-#	26 27 26	FLOOR BOX - MULTI SERVICE
SV	FB-#	26 27 26	FLOOR - SERVICE FITTING
RI	RI-TECH	26 05 33	TECHNOLOGY OUTLET ROUGH-IN
RI	RI-TECH-C	26 05 33	TECHNOLOGY ROUGH-IN, CEILING
W/RI	RI-TECH-W	26 05 33	TECHNOLOGY ROUGH-IN, WALL PHONE
TV	RI-TV	26 05 33	TV ANTENNA OUTLET ROUGH-IN
	WM-#	26 05 35	MULTI OUTLET SYSTEM
	WW-#	26 05 35	ELECTRICAL WIREWAY w/ DEVICES SHOWN
DEM	DEM	26 09 13	ENERGY METER
DPM	DPM	26 09 13/ 26 24 13	DIGITAL POWER METER
ITDM	ITDM	26 24 13	IMPULSE-TOTALIZING DEMAND
EEM	EEM	26 09 13	EXTERNAL ENERGY METER
PQM	PQM	26 09 13	POWER QUALITY METER
CPC	CPC	26 09 16	CONTROL POWER CABINET
ES	ES	26 09 16	EMERGENCY STOP, N.C. CONTACT
EPO	EPO	26 09 16 26 32 13	EMERGENCY STOP, N.O. CONTACT
LA	FA-LA	26 09 16	LAMP ANNUNCIATOR
PB	PB	26 09 16	MOMENTARY PUSHBUTTON OPERATOR
	PANEL '###'	26 24 16	PANELBOARD - RECESS MOUNT
	PANEL '###'	26 24 16	PANELBOARD - SURFACE MOUNT
	MX-#/MS-# /CB-#/CS-#	26 24 19	MANUAL SWITCH / STARTER / COMBINATION STARTER/ CIRCUIT BREAKER. REFER TO DISC/STA SCHEDULE
	IPP-#	26 24 21	ISOLATED POWER PANEL
MG	MG	26 24 21	MASTER GROUND STATION MODULE
PM	PM	26 24 21	OPERATING ROOM POWER MODULE
RIM	RIM	26 24 21	REMOTE LINE ISOLATION MONITOR
RAS	RAS	26 24 21	REMOTE ANNUNCIATOR STATION
	IPC-#	26 24 22	INTEGRATED POWER CENTER
	TR-#/DTR-#	26 22 00	TRANSFORMER. REFER TO TRANSFORMER SCHEDULE
	MPC-#	26 24 23	PACKAGED POWER CENTER
	CB-#	26 28 16	CIRCUIT BREAKER - SURFACE MOUNTED. REFER TO DISC/STA SCHEDULE
	CB-#	26 28 16	CIRCUIT BREAKER - FLUSH MOUNTED. REFER TO DISC/STA SCHEDULE
	DS-#/FDS-#/DSS-#	26 28 16	DISCONNECT. REFER TO DISC/STA SCHEDULE
	MD-SD-#	26 28 16	MOBILE DIAGNOSTICS SERVICE DISCONNECT. REFER TO DISC/STA SCHEDULE
	BD-#	26 25 00	BUSWAY
	BCS-#	26 25 00	BUSS PLUG - COMBINATION STARTER. REFER TO DISC/STA SCHEDULE
	BP-#	26 25 00	BUSS PLUG - CIRCUIT BREAKER. REFER TO DISC/STA SCHEDULE
	BFP-#	26 25 00	BUSS PLUG - FUSIBLE DISCONNECT. REFER TO DISC/STA SCHEDULE
#	BD-REC-#	26 25 00	BUSSWAY RECEPTACLE UNIT. REFER TO DISC/STA SCHEDULE

NOT ALL SYMBOLS USED

EQUIPMENT ANCHORAGE NOTES:

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 2019 CBC SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-16 CHAPTERS 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOVABLE 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 RECEPTABLES 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 CONECTIONS MUST ALLOW MOVEMENT IN BOTH 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 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.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTES.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2019 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 SYSTEM ARE AS NOTED BELOW, WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G. OSHPD OPM for 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

MP☐ MD☐ PP☒ E☐ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP☐ MD☐ PP☐ E☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) _____.

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
S	SW-1P	26 09 33	SWITCH - SINGLE POLE
S_{60}	SW-1P-060	26 09 33	SWITCH - LOCAL TIMER - SPRING WOUND
S_T	SW-1P-ADJ	26 09 33	SWITCH - LOCAL TIMER - USER ADJUSTABLE
S_J	SW-1P-DJ	26 09 33	SWITCH - DOOR JAMB
S_E	SW-1P-EM	26 09 33	SWITCH - EMERGENCY
S_X	SW-1P-EX	26 09 33	SWITCH - EXPLOSION PROOF
S_K	SW-1P-K	26 09 33	SWITCH - SINGLE POLE - KEY LOCK
S_L	SW-1P-LH	26 09 33	SWITCH - LIGHTED HANDLE
S_M	SW-1P-M	26 09 33	SWITCH - MOMENTARY CONTACT
S_P	SW-1P-PL	26 09 33	SWITCH - PILOT LIGHT
S_W	SW-1P-WP	26 09 33	SWITCH - WEATHERPROOF
S_2	SW-2P	26 09 33	SWITCH - TWO POLE
S_{K2}	SW-2P-K	26 09 33	SWITCH - TWO POLE - KEY LOCK
S_3	SW-3W	26 09 33	SWITCH - THREE WAY
S_{3E}	SW-3W-EM	26 09 33	SWITCH - THREE WAY - EMERGENCY
S_{K3}	SW-3W-K	26 09 33	SWITCH - THREE WAY - KEY LOCK
S_4	SW-4W	26 09 33	SWITCH - FOUR WAY
S_{4E}	SW-4W-EM	26 09 33	SWITCH - FOUR WAY - EMERGENCY
S_{K4}	SW-4W-K	26 09 33	SWITCH - FOUR WAY - KEY LOCK
S_C	SW-A-TPCO	26 09 33	SWITCH - THREE POSITION-CENTER OFF
S	SW-COMB	26 09 33	COMBINATION SWITCH AND RECEPTACLE
D_8	SW-D-8	26 09 33	DIMMER - 600 WATT
D_{10}	SW-D-10	26 09 33	DIMMER - 1000 WATT
D_{15}	SW-D-15	26 09 33	DIMMER - 1500 WATT
D_{20}	SW-D-20	26 09 33	DIMMER - 2000 WATT
D_F	SW-D-FL	26 09 33	DIMMER - FLUORESCENT BALLAST
D_D	SW-D-LED	26 09 33	DIMMER - LED
D_E	SW-D-LVE	26 09 33	DIMMER - ELECTRONIC BALLAST
D_L	SW-D-LVM	26 09 33	DIMMER - MAGNETIC BALLAST
$D3_6$	SW-D3-6	26 09 33	DIMMER - 600 WATT - 3 WAY
$D3_{10}$	SW-D3-10	26 09 33	DIMMER - 1000 WATT - 3 WAY
$D3_{15}$	SW-D3-15	26 09 33	DIMMER - 1500 WATT - 3 WAY
$D3_{20}$	SW-D3-20	26 09 33	DIMMER - 2000 WATT - 3 WAY
D_{D3}	SW-D3-LED	26 09 33	DIMMER - LED - 3-WAY
D_O	SW-OD	26 09 33	DIMMER - WALL DIMMER OCCUPANCY SENSOR
LS	SW-LS	26 09 33	DAYLIGHT LEVEL SENSOR
LS_3	SW-LS-3Z	26 09 33	DAYLIGHT LEVEL SENSOR - 3 ZONE
LS_D	SW-LS-D	26 09 33	DAYLIGHT LEVEL SENSOR - 1 ZONE DIMMING
LS_{3D}	SW-LS-D-3Z	26 09 33	DAYLIGHT LEVEL SENSOR - 3 ZONE DIMMING
PC	SW-LS-PC	26 09 33	PHOTOCELL
OC	SW-OC-D	26 09 33	OCCUPANCY SENSOR - DUAL TECHNOLOGY
OC_D	SW-OC-D-W	26 09 33	OCCUPANCY SENSOR - DUAL TECHNOLOGY - WALL MOUNTED
OC_{HA}	SW-OC-P-HA	26 09 33	OCCUPANCY SENSOR - HIGH BAY AISLE COVERAGE
OC_{HB}	SW-OC-P-HB	26 09 33	OCCUPANCY SENSOR - HIGH BAY
S_O	SW-OC-P-O	26 09 33	SWITCH - OCCUPANCY SENSOR WALL SWITCH
S_{O2}	SW-OC-P-O2	26 09 33	SWITCH - OCCUPANCY SENSOR AND DUAL SWITCH
OC P	SW-OC-P-P	26 09 33	OCCUPANCY SENSOR - PASSIVE INFRARED 360 DEGREE COVERAGE
OC_{P2}	SW-OC-P-P2	26 09 33	OCCUPANCY SENSOR - PASSIVE INFRARED 100 DEGREE COVERAGE
OC_P	SW-OC-P-W	26 09 33	OCCUPANCY SENSOR - PASSIVE INFRARED - WALL MOUNTED
OC U	SW-OC-U	26 09 33	OCCUPANCY SENSOR - ULTRASONIC 360 DEGREE COVERAGE
OC_{U2}	SW-OC-U2	26 09 33	OCCUPANCY SENSOR - ULTRASONIC 35'X30' HAND MOTION COVERAGE
OC_A	SW-OC-U-A	26 09 33	OCCUPANCY SENSOR - ULTRASONIC TWO SIDED CORRIDOR COVERAGE
OC_U	SW-OC-U-W	26 09 33	OCCUPANCY SENSOR - ULTRASONIC - WALL MOUNTED
SW	SW	26 09 33	WALL CONTROL STATION
TC	TC-#	26 09 33	TIME SWITCH
#B	SW-DCS	26 09 33	DIMMER CONTROL STATION
#BF	SW-LCS	26 09 33	DIMMER CONTROL STATION WITH FADERS
S_{LV}	SW-LV	26 09 33	CENTRAL CONTROL - STATION
	LCS-#	26 09 33	LIGHTING CONTROL STATION
LCD	SW-LCD	26 09 33	LIGHTING CONTROL LCD STATION
NLC	SW-NLC	26 09 33	NURSE CALL LIGHTING CONTOLLER
ETD	ETD	26 09 33	EMERGENCY LIGHTING CONTROL - 2A
ETD_2	ETD-2	26 09 33	EMERGENCY LIGHTING CONTROL - 1000W

NOT ALL SYMBOLS USED

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
	FAP-#	28 31 00	FIRE ALARM CONTROL PANEL
	FA-110	28 31 00	FIRE FIGHTERS PHONE
SD	FA-120	28 31 00	FIRE ALARM SMOKE DETECTOR - CEILING MOUNTED
SD BT / SD BR	FA-121	28 31 00	FIRE ALARM PROJECTED BEAM SMOKE DETECTOR
SD	FA-122	28 31 00	FIRE ALARM DUCT SMOKE DETECTOR
SD	FA-123	28 31 00	FIRE ALARM IN DUCT SMOKE DETECTOR
F	FA-130	28 31 00	FIRE ALARM MANUAL PULL STATION
FT	FA-131	28 31 00	FIRE ALARM MANUAL PULL STATION W/ COVER
H	FA-140	28 31 00	FIRE ALARM HEAT DETECTOR
HF	FA-141	28 31 00	HEAT DETECTOR - 200 DEGREE
HX	FA-142	28 31 00	HEAT DETECTOR - EXPLOSION PROOF
CO	FA-150	28 31 00	FIRE ALARM CARBON MONOXIDE/HEAT/SMOKE DETECTOR
FD	FA-151	28 31 00	FIRE ALARM FLAME DETECTOR
MM	FA-160	28 31 00	FIRE ALARM ADDRESSABLE MONITOR MODULE
AR	FA-161	28 31 00	FIRE ALARM RELAY
SD B	FA-170	28 31 00	SMOKE DETECTOR - STAND ALONE
SD Y	FA-171	28 31 00	SMOKE DETECTOR - STAND ALONE 177 CANDELA
V1 V3 V7 VH VS	FA-200	28 31 00	FIRE ALARM VISUAL NOTIFICATION DEVICE - WALL MOUNTED
V1 V3 V7 VH VS	FA-201	28 31 00	FIRE ALARM VISUAL NOTIFICATION DEVICE - CEILING MOUNTED
V11 V33 V77 VHH	FA-202	28 31 00	EMERGENCY NOTIFICATION - VISUAL - WALL MOUNTED
V W	FA-203	28 31 00	FIRE ALARM VISUAL NOTIFICATION DEVICE - WALL MOUNTED - WEATHERPROOF
A	FA-210	28 31 00	FIRE ALARM AUDIO NOTIFICATION DEVICE - WALL MOUNTED
A1 A3 A7 AH AS	FA-211	28 31 00	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE - WALL MOUNTED
A W	FA-212	28 31 00	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE - WALL MOUNTED - WEATHERPROOF
A11 A33 A77 AHH AS#	FA-220	28 31 00	EMERGENCY NOTIFICATION - AUDIO/VISUAL - WALL MOUNTED
K11 K33 K77 A99 AHH AS#	FA-221	28 31 00	EMERGENCY NOTIFICATION - AUDIO/VISUAL - CEILING MOUNTED
V11 V33 V77 V99 VS#	FA-222	28 31 00	EMERGENCY NOTIFICATION - VISUAL ONLY - CEILING MOUNTED
A	FA-230	28 31 00	FIRE ALARM AUDIO NOTIFICATION DEVICE - CEILING MOUNTED
A1 A3 A7 AH AS	FA-231	28 31 00	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE - CEILING MOUNTED
S	FA-232	28 31 00	FIRE ALARM CM LOUD SPEAKER
MH	FA-233	28 31 00	FIRE ALARM AUDIO NOTIFICATION DEVICE - WALL MOUNTED - MINI-HORN
RTS/I	FA-242	28 31 00	FIRE ALARM REMOTE INDICATOR AND TEST SWITCH
RI	FA-241	28 31 00	FIRE ALARM REMOTE INDICATOR
SD	FA-250	28 31 00	FIRE ALARM SMOKE DAMPER
ARD	FA-251	28 31 00	SMOKE OR FIRE DAMPER CONTROLLER
HD	FA-252	28 31 00	FIRE ALARM HOISTWAY DAMPER
HDS #	FA-253	28 31 00	FIRE ALARM HOISTWAY DAMPER SWITCH
SD	FA-254	28 31 00	FIRE ALARM SMOKE DAMPER WITH DUCT DETECTOR AND ADDRESSABLE RELAY
FS	FA-260	28 31 00	FIRE ALARM FLOW SWITCH TO MONITOR FIRE PROTECTION SYSTEM
MS	FA-261	28 31 00	FIRE ALARM MONITOR SWITCH TO MONITOR FIRE PROTECTION SYSTEM
PIV	FA-262	28 31 00	FIRE ALARM POST INDICATOR VALVE CONNECTION
EB	FA-263	28 31 00	FIRE ALARM ELECTRONIC BELL FOR SPRINKLER SYSTEM
DH	FA-270	28 31 00	FIRE ALARM ELECTROMAGNETIC DOOR HOLD DEVICE
DH PD	FA-272	28 31 00	FIRE ALARM HOLD OPEN OVERRIDE CONNECTION
IM	FA-280	28 31 00	ISOLATION MODULE
DB	DB	ARCH	DOOR BELL
HD	HD	ARCH	HAND DRYER
PP	PP	ARCH	PUSH PAD

NOT ALL SYMBOLS USED

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
O	REC-DUP-O	26 27 26	DUPLEX RECEPTACLE CONTROLLED BY OCCUPANCY
O	REC-QUAD-O	26 27 26	QUAD RECEPTACLE CONTROLLED BY OCCUPANCY
	REC-DUP	26 27 26	DUPLEX RECEPTACLE, 125V
	REC-DUP-GFI	26 27 26	DUPLEX GFI RECEPTACLE, 125V
G	REC-DUP-GFI-R	26 27 26	GROUND FAULT DEVICE
W	REC-DUP-WP	26 27 26	DUPLEX GFI WEATHERPROOF RECEPTACLE 125V
X	REC-DUP-XP	26 27 26	DUPLEX RECEPTACLE, EXPLOSION PROOF, 125V
	REC-ISO	26 27 26	ISOLATED GROUND RECEPTACLE, 125V
S	REC-ISO-SUR	26 27 26	ISOLATED GROUND RECEPTACLE WITH SURGE SUPPRESSION, 125V
S	REC-ISO-SUR-QUAD	26 27 26	ISOLATED GROUND QUAD RECEPTACLE WITH SURGE SUPPRESSION, 125V
U	REC-USB	26 27 26	DUPLEX RECEPTACLE, USB CHARGING
	REC-ARC	26 27 26	ARC FAULT CIRCUIT INTERRUPTER RECEPT 125V
	REC-SIM-520R	26 27 26	SIMPLEX RECEPTACLE, 125V
	REC-SIM-530R	26 27 26	RECEPTACLE, 125V
	REC-SIM-550R	26 27 26	RECEPTACLE 125V, 50A, 125V
	REC-SIM-620R	26 27 26	RECEPTACLE, 6-20R, 250V
	REC-SIM-630R	26 27 26	RECEPTACLE, 6-30R, 250V
	REC-SIM-650R	26 27 26	RECEPTACLE, 6-50R, 250V
	REC-SIM-720R	26 27 26	RECEPTACLE, 7-20R, 277V
	REC-SIM-730R	26 27 26	RECEPTACLE, 7-30R, 277V
	REC-SIM-750R	26 27 26	RECEPTACLE, 7-50R, 277V
	REC-SIM-1420R	26 27 26	RECEPTACLE, 14-20R, 125/250V
	REC-SIM-1430R	26 27 26	RECEPTACLE, 14-30R, 125/250V
	REC-SIM-1450R	26 27 26	RECEPTACLE, 14-50R, 125/250V
	REC-SIM-1460R	26 27 26	RECEPTACLE, 14-60R, 125/250V
	REC-SIM-1520R	26 27 26	RECEPTACLE, 15-20R, 250V, 3PH
	REC-SIM-1530R	26 27 26	RECEPTACLE, 15-30R, 250V, 3PH
	REC-SIM-1550R	26 27 26	RECEPTACLE, 15-50R, 250V, 3PH
	REC-SIM-1560R	26 27 26	RECEPTACLE, 15-60R, 250V, 3PH
	REC-SIM-L520R	26 27 26	RECEPTACLE, LOCKING TYPE, L5-20R, 125V
	REC-SIM-L530R	26 27 26	RECEPTACLE, LOCKING TYPE, L5-30R, 125V
	REC-SIM-L620R	26 27 26	RECEPTACLE, LOCKING L6-20R, 250V
	REC-SIM-L630R	26 27 26	RECEPTACLE, LOCKING L6-30R, 250V
	REC-SIM-L720R	26 27 26	RECEPTACLE, LOCKING L7-20R, 277V
	REC-SIM-L730R	26 27 26	RECEPTACLE, LOCKING L7-30R, 277V
	REC-SIM-L1420R	26 27 26	RECEPTACLE, LOCKING L14-20R, 125/250V
	REC-SIM-L1430R	26 27 26	RECEPTACLE, LOCKING L14-30R, 125/250V
	REC-SIM-L1520R	26 27 26	RECEPTACLE, LOCKING L15-20R, 250V, 3PH
	REC-SIM-L1530R	26 27 26	RECEPTACLE, LOCKING L15-30R, 250V, 3PH
	REC-SIM-L1620R	26 27 26	RECEPTACLE, L16-20R, 480V, 3PH
	REC-SIM-L1630R	26 27 26	RECEPTACLE, L16-30R, 480V, 3PH
	REC-SIM-L2120R	26 27 26	RECEPTACLE, LOCKING L21-20R, 120/208V, 3PH
	REC-SIM-L2130R	26 27 26	RECEPTACLE, LOCKING L21-30R, 120/208V, 3PH
X	REC-SIM-XP	26 27 26	RECEPTACLE, EXPLOSION PROOF, 125V
	REC-TAMP	26 27 26	DUPLEX RECEPTACLE, TAMPERPROOF, 125V
	REC-TAMP-GFI	26 27 26	GFI DUPLEX RECEPTACLE, TAMPERPROOF, 125V
	REC-TAMP-QUAD	26 27 26	QUAD RECEPTACLE, TAMPERPROOF, 125V
	REC-QUAD	26 27 26	QUAD RECEPTACLE, 125V
	REC-QUAD-GFI	26 27 26	QUAD GFI RECEPTACLE, 125V
U	REC-QUAD-USB	26 27 26	QUAD RECEPTACLE, USB 125V
W	REC-QUAD-WP	26 27 26	QUAD GFI WEATHERPROOF RECEPTACLE, 125V
	REC-DUP-PED	26 05 33	RECEPTACLE - PEDESTAL STYLE
	REC-PED-QUAD	26 05 33	RECEPTACLE - PEDESTAL STYLE
#	REC-FB-#	26 27 26	FLOOR BOX - POKE THRU, 125V
#	REC-Z#	26 27 26	IEC PIN AND SLEEVE RECEPTACLE, 600V
	PP#	26 27 23	POWER POLE

NOT ALL SYMBOLS USED

ELECTRICAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
C	CONDUIT
GFI	GROUND FAULT INTERRUPTER
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
SV	SOLENOID VALVE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

ELECTRICAL SHEET INDEX

GRAND TOTAL: 25

ELECTRICAL INSTALLATION NOTES:

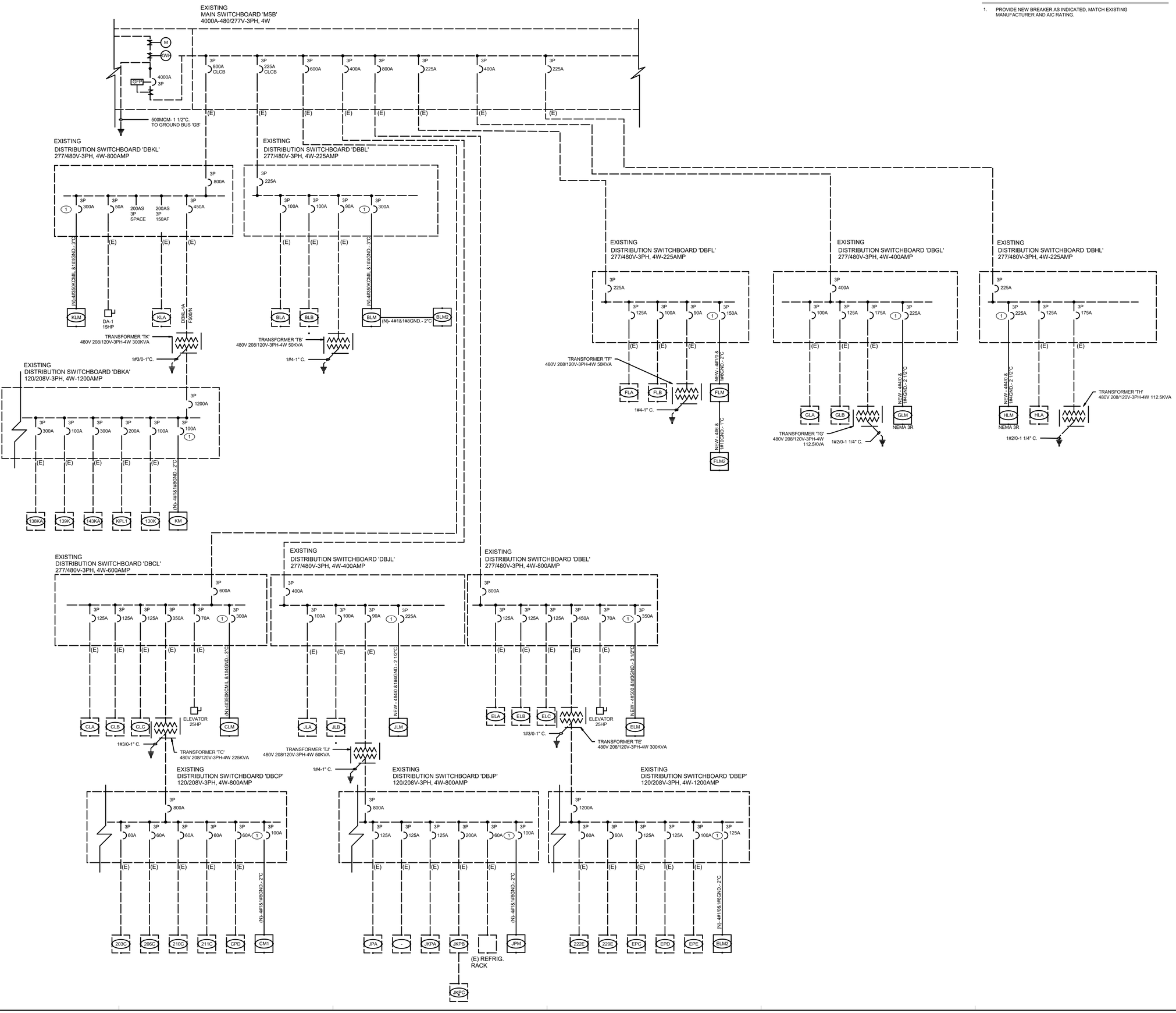
1. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN. REFER TO THE ADA GUIDELINES FOR ALL CONFIGURATION DETAILS ON THIS PAGE FOR ADDITIONAL INFORMATION.
2. CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL PROVIDED. COMMON NEUTRALS MAY NOT BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH PHASE.
3. **[EMERGENCY, LEGALLY REQUIRED, OPTIONAL STANDBY] [LIFE SAFETY, CRITICAL, EQUIPMENT]** BRANCH WIRING FOR FEEDERS AND BRANCH CIRCUITS SHALL BE ROUTED IN SEPARATE RACEWAY, JUNCTION BOXES, PULL BOXES, AND CABINETS. WIRING FOR EACH BRANCH SHALL BE INDEPENDENT FROM OTHER BRANCHES, INCLUDING THE NORMAL BRANCH.
4. FLUSH MOUNT ALL LIGHTING CONTROL DEVICES AT +42" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. DEVICES MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED.
5. FLUSH MOUNT ALL DUPLEX RECEPTACLES AND TECHNOLOGY OUTLETS AT +18" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. RECEPTACLES AND OUTLETS MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED.
6. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS. REFER TO [27 05 03 AND 28 05 03] [DIVISION 7] [26 05 03] FOR ADDITIONAL INFORMATION AND REQUIREMENTS SPECIFIC TO FIRESTOPPING.
7. CONNECTION FOR ELECTRIC WATER COOLERS (EWC) SHALL BE A JUNCTION BOX CONCEALED BEHIND WATER COOLER ACCESS PLATE OR BE A GFI RECEPTACLE LOCATED DIRECTLY BELOW AND CENTERED ON EWC. CONTRACTOR SHALL VERIFY TYPE OF EWC TO BE INSTALLED.
8. MOUNT ALL FIRE ALARM PULL STATIONS AT +42" FROM FLOOR (CENTERLINE DIMENSION) EXCEPT WHERE OTHERWISE NOTED.
9. INSTALL ALL WALL MOUNTED FIRE ALARM NOTIFICATION DEVICES AT 90" ABOVE FINISHED FLOOR OR 6" BELOW THE CEILING, WHICHEVER IS LOWER, EXCEPT WHERE OTHERWISE NOTED. HEIGHT SHALL BE MEASURED TO THE TOP OF THE DEVICE.
10. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING MOUNTED DEVICES AND EQUIPMENT WITH LUMINAIRES, SPRINKLER, AND CEILING DIFFUSERS. CENTER ALL DEVICES IN CEILING TILE PATTERN. SMOKE DETECTORS AND OCCUPANCY/VACANCY SENSORS SHALL BE LOCATED NO CLOSER THAN 3 FEET TO AN AIR SUPPLY DIFFUSER OR RETURN GRILLE.
11. CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION, THIS CONTRACTOR SHALL ADJUST RECEPTACLES, OUTLETS, OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
12. ELECTRICAL AND TECHNOLOGY EQUIPMENT SHALL BE MOUNTED TO AVOID IMPEDANCE OF, OPERATION OF, AND/OR ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT, ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR, SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
14. CONTRACTOR SHALL REMOVE AND REINSTALL ALL CEILING TILES AS REQUIRED FOR THE EXECUTION OF ELECTRICAL WORK. CONTRACTOR SHALL REPLACE CEILING TILES WITH IDENTICAL MATERIAL WHERE DAMAGED BY THIS CONTRACTOR.
15. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER ELECTRICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
16. ELECTRICAL INDENTIFICATION. REFER TO SPECIFICATION SECTION **[16195][26 05 53]** FOR COLOR/LABEL REQUIREMENTS FOR CONDUIT, BOX, CABLE/WIRE, AND EQUIPMENT.

ELECTRICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL ELECTRICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, LIGHTING, POWER

KEYED NOTES

1. PROVIDE NEW BREAKER AS INDICATED, MATCH EXISTING MANUFACTURER AND AIC RATING.



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APP. 03-120526 INC:
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DATE: 06/15/2020

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NESTOR C. IGNACIO, JR.
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BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN: Author	CHECKED: Checker
DATE: Issue Date	SCALE:
PROJECT NUMBER: Project Number	

SINGLE LINE DIAGRAM

DRAWING NUMBER: **E0.2**

PANEL NAME: CLM

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 231.6 kVA
MAIN:
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
DEMAND: 231.6 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION AMPS	P	LOAD DESCRIPTION	CKT NO.
1	OU-C1 MODULE #1	30 A	3		6.48	6.48			3	30 A	OU-C3 MODULE #1	2
3	--	--	--	--		6.48	6.48	--	--	--	--	4
5	--	--	--	--			6.48	6.48	--	--	--	6
7	OU-C1 MODULE #2	25 A	3		6.09	6.48			3	30 A	OU-C3 MODULE #2	8
9	--	--	--	--		6.09	6.48		--	--	--	10
11	--	--	--	--			6.09	6.48	--	--	--	12
13	OU-C1 MODULE #3	25 A	3		6.09	6.09			3	25 A	OU-C3 MODULE #3	14
15	--	--	--	--		6.09	6.09		--	--	--	16
17	--	--	--	--			6.09	6.09	--	--	--	18
19	OU-C2 MODULE #1	25 A	3		6.09	8.23			3	35 A	OU-C4 MODULE #1	20
21	--	--	--	--		6.09	8.23		--	--	--	22
23	--	--	--	--			6.09	8.23	--	--	--	24
25	OU-C2 MODULE #2	25 A	3		6.09	6.48			3	20 A	OU-C4 MODULE #2	26
27	--	--	--	--		6.09	6.48		--	--	--	28
29	--	--	--	--			6.09	6.48	--	--	--	30
31	OU-C2 MODULE #3	25 A	3		6.09	6.48			3	20 A	OU-C4 MODULE #3	32
33	--	--	--	--		6.09	6.48		--	--	--	34
35	--	--	--	--			6.09	6.48	--	--	--	36
37	SPARE	20 A	1	--	0	0			1	20 A	SPARE	38
39	SPARE	20 A	1	--			0	0	1	20 A	SPARE	40
41	SPARE	20 A	1	--				0	1	20 A	SPARE	42
	Total Load:				77.2 kVA	77.2 kVA	77.2 kVA					
	Total Amps:				278.7	278.7	278.7					

[Key*:]

PANEL NAME: BLM

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 144.6 kVA
MAIN:
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
DEMAND: 149.16 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	AC-B1	15 A	3		3.05	3.05			3	15 A	AC-B8	2
3	--	--	--	--		3.05	3.05		--	--	--	4
5	--	--	--	--			3.05	3.05	--	--	--	6
7	AC-B2	15 A	3		3.05	3.05			3	15 A	AC-B9	8
9	--	--	--	--		3.05	3.05		--	--	--	10
11	--	--	--	--			3.05	3.05	--	--	--	12
13	AC-B3	15 A	3		3.05	3.05			3	15 A	AC-B10	14
15	--	--	--	--		3.05	3.05		--	--	--	16
17	--	--	--	--			3.05	3.05	--	--	--	18
19	AC-B4	15 A	3		3.05	3.05			3	15 A	AC-B11	20
21	--	--	--	--		3.05	3.05		--	--	--	22
23	--	--	--	--			3.05	3.05	--	--	--	24
25	AC-B5	15 A	3		3.05	3.05			3	15 A	AC-B12	26
27	--	--	--	--		3.05	3.05		--	--	--	28
29	--	--	--	--			3.05	3.05	--	--	--	30
31	AC-B6	15 A	3		3.05	3.05			3	15 A	AC-B13	32
33	--	--	--	--		3.05	3.05		--	--	--	34
35	--	--	--	--			3.05	3.05	--	--	--	36
37	AC-B7	15 A	3		3.05	8.59			3	100 A	BLM2	38
39	--	--	--	--		3.05	8.59		--	--	--	40
41	--	--	--	--			3.05	8.59	--	--	--	42
	Total Load:				48.2 kVA	48.2 kVA	48.2 kVA					
	Total Amps:				174	174	174					

[Key*:]

PANEL NAME: CM1

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 27.7 kVA
MAIN:
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 27.65 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	FC-C1, FC-C2, FC-C3	15 A	2		1.14	1.19			2	15 A	FC-C30, FC-C31	2
3	--	--	--	--		1.14	1.19	--	--	--	--	4
5	FC-C4, FC-C5, FC-C6	15 A	2				0.99	0.76	2	15 A	FC-C32, FC-C33	6
7	--	--	--	--	0.99	0.76		--	--	--	--	8
9	FC-C7, FC-C8, FC-C9, FC-C10	15 A	2			1	0.38		2	15 A	FC-C34, FC-C35	10
11	--	--	--	--			1	0.38	--	--	--	12
13	FC-C11, FC-C12, FC-C13	15 A	2		0.77	0.99			2	15 A	FC-C36, FC-C37, FC-C38	14
15	--	--	--	--		0.77	0.99		--	--	--	16
17	FC-C14, FC-C15, FC-C16, FC-C17	15 A	2				1.22	1.06	2	20 A	FC-C39, FC-C40, FC-C41	18
19	--	--	--	--	1.22	1.06			--	--	--	20
21	FC-C18, FC-C19, FC-C20, FC-C21	15 A	2			1.26	0		1	20 A	FLOW SELECTOR SWITCHS...	22
23	--	--	--	--			1.26	0.1	1	20 A	FDSD CORRIDOR 101	24
25	FC-22	15 A	2		0.38	0.1			1	20 A	FDSD CORRIDOR 102	26
27	--	--	--	--		0.38	0.1		1	20 A	FIRE ALARM RPSC1	28
29	FC-C23, FC-C24, FC-25, FC-C26	15 A	2				1.29	0.1	1	20 A	FLOW SELECTOR SWITCHS...	30
31	--	--	--	--	1.29	0.1			1	20 A	FIRE ALARM RPSC2	32
33	FC-C27, FC-C28, FC-C29	15 A	2			1.14						34
35	--	--	--	--			1.14					36
37	SPARE	20 A	1	--	0							38
39	SPARE	20 A	1	--		0						40
41	SPARE	20 A	1	--			0					42
	Total Load:				9.99 kVA	8.35 kVA	9.31 kVA					
	Total Amps:				84.5	69.6	78.8					

[Key*:] 1. PROVIDE LOCK-ON DEVICE

WHERE LOCK-ON DEVICE IS PROVIDED
- BREAKER SHALL BE RED IN COLOR
- IDENTIFIED AS FIRE ALARM CIRCUIT
- LOCATION OF CB SHALL BE PERMANENTLY IDENTIFIED AT FIRE ALARM CONTROL UNIT

PANEL NAME: BLM2

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 25.8 kVA
MAIN:
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
DEMAND: 28.05 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	AC-B14	15 A	3		3.05	0			--	1	20 A	SPARE	2
3	--	--	--	--		3.05	0		--	1	20 A	SPARE	4
5	--	--	--	--			3.05	0	--	1	20 A	SPARE	6
7	AC-B15	15 A	3		2.77	0			--	1	20 A	SPARE	8
9	--	--	--	--		2.77	0		--	1	20 A	SPARE	10
11	--	--	--	--			2.77	0	--	1	20 A	SPARE	12
13	AC-B16	15 A	3		2.77	0			--	1	20 A	SPARE	14
15	--	--	--	--		2.77	0		--	1	20 A	SPARE	16
17	--	--	--	--			2.77	0	--	1	20 A	SPARE	18
19	SPARE	20 A	1	--	0	0			--	1	20 A	SPARE	20
21	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	22
23	SPARE	20 A	1	--				0	0	--	1	20 A	SPARE	24
25	SPARE	20 A	1	--	0	0			--	1	20 A	SPARE	26
27	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	28
29	SPARE	20 A	1	--				0	0	--	1	20 A	SPARE	30
31	SPARE	20 A	1	--	0	0			--	1	20 A	SPARE	32
33	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	34
35	SPARE	20 A	1	--				0	0	--	1	20 A	SPARE	36
37	SPARE	20 A	1	--	0	0			--	1	20 A	SPARE	38
39	SPARE	20 A	1	--		0	0		--	1	20 A	SPARE	40
41	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	42
	Total Load:				8.59 kVA	8.59 kVA	8.59 kVA					
	Total Amps:				31	31	31					

[Key*:]

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BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN: Author | CHECKED: Checker
DATE: Issue Date | SCALE:
PROJECT NUMBER: Project Number

PANEL SCHEDULES

DRAWING NUMBER: **E0.3**

PANEL NAME: FLM

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 80.6 kVA
MAIN:
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
DEMAND: 84.97 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	AC-F1	15 A	3		3.05 0				3	15 A	AC-F8	2
3	--	--	--	--		3.05 0		--	--	--	--	4
5	--	--	--	--			3.05 0	--	--	--	--	6
7	AC-F2	15 A	3		3.05 0				3	15 A	AC-F9	8
9	--	--	--	--		3.05 0		--	--	--	--	10
11	--	--	--	--			3.05 0	--	--	--	--	12
13	AC-F3	15 A	3		3.05 0				3	15 A	AC-F10	14
15	--	--	--	--		3.05 0		--	--	--	--	16
17	--	--	--	--			3.05 0	--	--	--	--	18
19	AC-F4	15 A	3		3.05 0				3	20 A	AC-F11	20
21	--	--	--	--		3.05 0		--	--	--	--	22
23	--	--	--	--			3.05 0	--	--	--	--	24
25	AC-F5	15 A	3		3.05 0				3	20 A	AC-F12	26
27	--	--	--	--		3.05 0		--	--	--	--	28
29	--	--	--	--			3.05 0	--	--	--	--	30
31	AC-F6	15 A	3		3.05 0				3	20 A	AC-F13	32
33	--	--	--	--		3.05 0		--	--	--	--	34
35	--	--	--	--			3.05 0	--	--	--	--	36
37	AC-F7	15 A	3		3.05 5.54				3	50 A	FLM2	38
39	--	--	--	--		3.05 5.54		--	--	--	--	40
41	--	--	--	--			3.05 5.54	--	--	--	--	42
		Total Load:			26.87 kVA	26.87 kVA	26.87 kVA					
		Total Amps:			97	97	97					

[Key*:]

PANEL NAME: ELM

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 249 kVA
MAIN:
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
DEMAND: 255.22 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	OU-E1 MODULE #1	35 A	3		8.23 8.23				3	35 A	OU-E3 MODULE #1	2
3	--	--	--	--		8.23 8.23		--	--	--	--	4
5	--	--	--	--			8.23 8.23	--	--	--	--	6
7	OU-E1 MODULE #2	30 A	3		6.48 6.48				3	30 A	OU-E3 MODULE #2	8
9	--	--	--	--		6.48 6.48		--	--	--	--	10
11	--	--	--	--			6.48 6.48	--	--	--	--	12
13	OU-E1 MODULE #3	30 A	3		6.48 6.48				3	30 A	OU-E3 MODULE #3	14
15	--	--	--	--		6.48 6.48		--	--	--	--	16
17	--	--	--	--			6.48 6.48	--	--	--	--	18
19	OU-E2 MODULE #1	35 A	3		8.23 6.48				3	30 A	OU-E4 MODULE #1	20
21	--	--	--	--		8.23 6.48		--	--	--	--	22
23	--	--	--	--			8.23 6.48	--	--	--	--	24
25	OU-E2 MODULE #2	30 A	3		6.48 6.48				3	30 A	OU-E4 MODULE #2	26
27	--	--	--	--		6.48 6.48		--	--	--	--	28
29	--	--	--	--			6.48 6.48	--	--	--	--	30
31	OU-E2 MODULE #3	30 A	3		6.48 6.48				3	30 A	OU-E4 MODULE #3	32
33	--	--	--	--		6.48 6.48		--	--	--	--	34
35	--	--	--	--			6.48 6.48	--	--	--	--	36
37					0			--	1	20 A	SPARE	38
39	SPARE	20 A	1	--		0 0		--	1	20 A	SPARE	40
41	SPARE	20 A	1	--			0 0	--	1	20 A	SPARE	42
		Total Load:			83.02 kVA	83.02 kVA	83.02 kVA					
		Total Amps:			299.7	299.7	299.7					

[Key*:]

PANEL NAME: FLM2

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 16.6 kVA
MAIN:
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
DEMAND: 18.7 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	AC-F14	15 A	3		2.77 0			--	1	20 A	SPARE	2
3	--	--	--	--		2.77 0		--	1	20 A	SPARE	4
5	--	--	--	--			2.77 0	--	1	20 A	SPARE	6
7	AC-F15	15 A	3		2.77 0			--	1	20 A	SPARE	8
9	--	--	--	--		2.77 0		--	1	20 A	SPARE	10
11	--	--	--	--			2.77 0	--	1	20 A	SPARE	12
13	SPARE	20 A	1	--	0 0			--	1	20 A	SPARE	14
15	SPARE	20 A	1	--		0 0		--	1	20 A	SPARE	16
17	SPARE	20 A	1	--			0 0	--	1	20 A	SPARE	18
19	SPARE	20 A	1	--	0 0			--	1	20 A	SPARE	20
21	SPARE	20 A	1	--		0 0		--	1	20 A	SPARE	22
23	SPARE	20 A	1	--			0 0	--	1	20 A	SPARE	24
25	SPARE	20 A	1	--	0 0			--	1	20 A	SPARE	26
27	SPARE	20 A	1	--		0 0		--	1	20 A	SPARE	28
29	SPARE	20 A	1	--			0 0	--	1	20 A	SPARE	30
31	SPARE	20 A	1	--	0 0			--	1	20 A	SPARE	32
33	SPARE	20 A	1	--		0 0		--	1	20 A	SPARE	34
35	SPARE	20 A	1	--			0 0	--	1	20 A	SPARE	36
37	SPARE	20 A	1	--	0 0			--	1	20 A	SPARE	38
39	SPARE	20 A	1	--		0 0		--	1	20 A	SPARE	40
41	SPARE	20 A	1	--			0 0	--	1	20 A	SPARE	42
		Total Load:			5.54 kVA	5.54 kVA	5.54 kVA					
		Total Amps:			20	20	20					

[Key*:]

PANEL NAME: ELM2

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 35.8 kVA
MAIN:
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 35.83 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	FC-E1, FC-E2, FC-E3, FC-E4	15 A	2		1.17 0.81				2	15 A	FC-E32, FC-33, FC-37	2
3	--	--	--	--		1.17 0.81		--	--	--	--	4
5	FC-E5, FC-E6	15 A	2				0.67 1.11		2	15 A	FC-E34, FC-E35. FC-E36, FC-E38	6
7	--	--	--	--	0.67 1.11			--	--	--	--	8
9	FC-E7, FC-E8	15 A	2			0.68 1.22			2	15 A	FC-E39, FC-E40, FC-E41, FC-E42	10
11	--	--	--	--			0.68 1.22	--	--	--	--	12
13	FC-E9, FC-E10, FC-E11, FC-E12,...	15 A	2		1.2 0.81				2	15 A	FC-E43, FC-E44, FC-E45	14
15	--	--	--	--		1.2 0.81		--	--	--	--	16
17	FC-E14, FC-E15, FC-E16	15 A	2				0.9 0.61		2	15 A	FC-E46, FC-E47	18
19	--	--	--	--	0.9 0.61			--	--	--	--	20
21	FC-E17, FC-E18, FC-E19, FC-E20	15 A	2			1.22 0.76			2	15 A	FC-E48, FC-E49	22
23	--	--	--	--			1.22 0.76	--	--	--	--	24
25	FC-E21, FC-E22, FC-E23, FC-E24	15 A	2		1.22 0.81				2	15 A	FC-E50, FC-E51, FC-E52	26
27	--	--	--	--		1.22 0.81		--	--	--	--	28
29	FC-E25, FC-E26, FC-E27, FC-E28	15 A	2				1.22 0.61		2	15 A	FC-E54, FC-E55	30
31	--	--	--	--	1.22 0.61			--	--	--	--	32
33	FC-E29, FC-E30, FC-E31	20 A	2			0.99 0.9			2	15 A	FC-E53, FC-E56, FC-E57	34
35	--	--	--	--			0.99 0.9	--	--	--	--	36
37	Flow Selector Boxes E1-E6	20 A	1		0.1 0.81				2	15 A	FC-E58, FC-E59, FC-E60	38
39	FDSD	20 A	1			0.1 0.81		--	--	--	--	40
41	Flow Selector Boxes E7-E12	20 A	1				0.1 0.1		1	20 A	FIRE ALARM RPS-E1	42
		Total Load:			12.04 kVA	12.69 kVA	11.09 kVA					
		Total Amps:			101.58	107	92.43					

[Key*:] 1. PROVIDE LOCK-ON DEVICE

WHERE LOCK-ON DEVICE IS PROVIDED
- BREAKER SHALL BE RED IN COLOR
- IDENTIFIED AS FIRE ALARM CIRCUIT
- LOCATION OF CB SHALL BE PERMANENTLY IDENTIFIED AT FIRE ALARM CONTROL UNIT

PANEL NAME: EPC

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 0.2 kVA
MAIN:
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 0.2 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	EXISTING CIRCUIT	--	--	--	0 0			--	--	--	EXISTING CIRCUIT	2
3	EXISTING CIRCUIT	--	--	--		0 0		--	--	--	EXISTING CIRCUIT	4
5	EXISTING CIRCUIT	--	--	--			0 0	--	--	--	EXISTING CIRCUIT	6
7	EXISTING CIRCUIT	--	--	--	0 0			--	--	--	EXISTING CIRCUIT	8
9	EXISTING CIRCUIT	--	--	--		0 0		--	--	--	EXISTING CIRCUIT	10
11	EXISTING CIRCUIT	--	--	--			0 0	--	--	--	EXISTING CIRCUIT	12
13	EXISTING CIRCUIT	--	--	--	0 0			--	--	--	EXISTING CIRCUIT	14
15	EXISTING CIRCUIT	--	--	--		0 0		--	--	--	EXISTING CIRCUIT	16
17	EXISTING CIRCUIT	--	--	--			0 0	--	--	--	EXISTING CIRCUIT	18
19	EXISTING CIRCUIT	--	--	--	0 0			--	--	--	EXISTING CIRCUIT	20
21	EXISTING CIRCUIT	--	--	--		0 0		--	--	--	EXISTING CIRCUIT	22
23	EXISTING CIRCUIT	--	--	--			0 0	--	--	--	EXISTING CIRCUIT	24
25	EXISTING CIRCUIT	--	--	--	0 0			--	--	--	EXISTING CIRCUIT	26
27	EXISTING CIRCUIT	--	--	--		0 0		--	--	--	EXISTING CIRCUIT	28
29	EXISTING CIRCUIT	--	--	--			0 0	--	--	--	EXISTING CIRCUIT	30
31	EXISTING CIRCUIT	--	--	--	0 0			--	--	--	EXISTING CIRCUIT	32
33	EXISTING CIRCUIT	--	--	--		0 0		--	--	--	EXISTING CIRCUIT	34
35	EXISTING CIRCUIT	--	--	--			0 0	--	--	--	EXISTING CIRCUIT	36
37	FDSD	20 A	1		0.1 0			--	--	--	EXISTING CIRCUIT	38
39	FIRE ALARM RPS-E2	20 A	1			0.1 0		--	--	--	EXISTING CIRCUIT	40
41												42
		Total Load:			0.1 kVA	0.1 kVA	0 kVA					
		Total Amps:			0.96	0.96	0					

[Key*:] 1. PROVIDE LOCK-ON DEVICE

WHERE LOCK-ON DEVICE IS PROVIDED
- BREAKER SHALL BE RED IN COLOR
- IDENTIFIED AS FIRE ALARM CIRCUIT
- LOCATION OF CB SHALL BE PERMANENTLY IDENTIFIED AT FIRE ALARM CONTROL UNIT

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BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN: Author	CHECKED: Checker
DATE: Issue Date	SCALE:
PROJECT NUMBER: Project Number	

PANEL SCHEDULES

DRAWING NUMBER: **E0.4**

PANEL NAME: JLM

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 145.6 kVA
MAIN:
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
DEMAND: 145.59 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION AMPS	P	LOAD DESCRIPTION	CKT NO.
1	OU-J1 MODULE #1	30 A	3		6.48 7.2			--	3	30 A	AC-J4	2
-- 3	--	--	--	--		6.48 7.2		--	--	--	--	4 --
-- 5	--	--	--	--			6.48 7.2	--	--	--	--	6 --
7	AC-J1	30 A	3		6.93 2.24				3	15 A	AC-J4 POWER EXHAUST	8
-- 9	--	--	--	--		6.93 2.24		--	--	--	--	10 --
-- 11	--	--	--	--			6.93 2.24	--	--	--	--	12 --
13	AC-J1 POWER EXHAUST	15 A	3		1.55 7.2			3	30 A	AC-J5		14
-- 15	--	--	--	--		1.55 7.2		--	--	--	--	16 --
-- 17	--	--	--	--			1.55 7.2	--	--	--	--	18 --
19	AC-J2	30 A	3		6.93 2.24			3	15 A	AC-J5 POWER EXHAUST		20
-- 21	--	--	--	--		6.93 2.24		--	--	--	--	22 --
-- 23	--	--	--	--			6.93 2.24	--	--	--	--	24 --
25	AC-J2 POWER EXHAUST	15 A	3		1.55 0			--	1	20 A	SPARE	26
-- 27	--	--	--	--		1.55 0		--	1	20 A	SPARE	28
-- 29	--	--	--	--			1.55 0	--	1	20 A	SPARE	30
31	AC-J3	25 A	3		5.54 0			--	1	20 A	SPARE	32
-- 33	--	--	--	--		5.54 0		--	1	20 A	SPARE	34
-- 35	--	--	--	--			5.54 0	--	1	20 A	SPARE	36
37	AC-J3 POWER EXHAUST	15 A	3		0.66 0			--	1	20 A	SPARE	38
-- 39	--	--	--	--		0.66 0		--	1	20 A	SPARE	40
-- 41	--	--	--	--			0.66 0	--	1	20 A	SPARE	42
		Total Load:			48.53 kVA	48.53 kVA	48.53 kVA					
		Total Amps:			175.2	175.2	175.2					

[Key*:]

PANEL NAME: GLM

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 150 kVA
MAIN:
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
DEMAND: 164.33 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	AC-G1	80 A	3		19.11 0			--	1	20 A	SPARE	2
-- 3	--	--	--	--		19.11 0		--	1	20 A	SPARE	4
-- 5	--	--	--	--			19.11 0	--	1	20 A	SPARE	6
7	AC-G1 POWER EXHAUST	15 A	3		2.22 0			--	1	20 A	SPARE	8
-- 9	--	--	--	--		2.22 0		--	1	20 A	SPARE	10
-- 11	--	--	--	--			2.22 0	--	1	20 A	SPARE	12
13	AC-G2	80 A	3		19.11 0			--	1	20 A	SPARE	14
-- 15	--	--	--	--		19.11 0		--	1	20 A	SPARE	16
-- 17	--	--	--	--			19.11 0	--	1	20 A	SPARE	18
19	AC-G2 POWER EXHAUST	20 A	3		2.22 0			--	1	20 A	SPARE	20
-- 21	--	--	--	--		2.22 0		--	1	20 A	SPARE	22
-- 23	--	--	--	--			2.22 0	--	1	20 A	SPARE	24
25	AC-G3	25 A	3		6.37 0			--	1	20 A	SPARE	26
-- 27	--	--	--	--		6.37 0		--	1	20 A	SPARE	28
-- 29	--	--	--	--			6.37 0	--	1	20 A	SPARE	30
31	AC-G3 POWER EXHAUST	15 A	3		0.97 0			--	1	20 A	SPARE	32
-- 33	--	--	--	--		0.97 0		--	1	20 A	SPARE	34
-- 35	--	--	--	--			0.97 0	--	1	20 A	SPARE	36
37	SPARE	20 A	1	--	0 0			--	1	20 A	SPARE	38
39	SPARE	20 A	1	--		0 0		--	1	20 A	SPARE	40
41	SPARE	20 A	1	--			0 0	--	1	20 A	SPARE	42
		Total Load:			50 kVA	50 kVA	50 kVA					
		Total Amps:			180.5	180.5	180.5					

[Key*:]

PANEL NAME: JPM

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 3.6 kVA
MAIN:
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 3.63 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	FC-J1	15 A	2		0.59 0			--	1	20 A	SPARE	2
-- 3	--	--	--	--		0.59 0		--	1	20 A	SPARE	4
5	FC-J2	15 A	2				0.63 0	--	1	20 A	SPARE	6
-- 7	--	--	--	--	0.63 0			--	1	20 A	SPARE	8
9	FC-J3	15 A	2			0.29 0		--	1	20 A	SPARE	10
-- 11	--	--	--	--			0.29 0	--	1	20 A	SPARE	12
13	FC-J4	15 A	2		0.2 0			--	1	20 A	SPARE	14
-- 15	--	--	--	--		0.2 0		--	1	20 A	SPARE	16
17	SPARE	20 A	1	--			0 0	--	1	20 A	SPARE	18
19	SPARE	20 A	1	--	0 0			--	1	20 A	SPARE	20
21	SPARE	20 A	1	--		0 0		--	1	20 A	SPARE	22
23	SPARE	20 A	1	--			0 0	--	1	20 A	SPARE	24
25	SPARE	20 A	1	--	0 0			--	1	20 A	SPARE	26
27	SPARE	20 A	1	--		0 0		--	1	20 A	SPARE	28
29	SPARE	20 A	1	--			0 0	--	1	20 A	SPARE	30
31	SPARE	20 A	1	--	0 0			--	1	20 A	SPARE	32
33	SPARE	20 A	1	--		0 0		--	1	20 A	SPARE	34
35	SPARE	20 A	1	--			0 0	--	1	20 A	SPARE	36
37	SPARE	20 A	1	--	0 0			--	1	20 A	SPARE	38
39	SPARE	20 A	1	--		0 0.1		--	1	20 A	Power	40
41	SPARE	20 A	1	--			0 0.1	--	1	20 A	FIRE ALARM RPS-J	42
		Total Load:			1.43 kVA	1.18 kVA	1.03 kVA					
		Total Amps:			12.08	10.05	8.55					

[Key*:] 1. PROVIDE LOCK-ON DEVICE

PANEL NAME: GEP

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 0 kVA
MAIN: 100
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 0 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
-- 1	EXISTING LOAD	--	--	--	0 0			--	--	--	EXISTING LOAD	2 --
-- 3	EXISTING LOAD	--	--	--		0 0		--	--	--	EXISTING LOAD	4 --
-- 5	EXISTING LOAD	--	--	--			0 0	--	--	--	EXISTING LOAD	6 --
-- 7	EXISTING LOAD	--	--	--	0 0			--	--	--	SPACE	8 --
-- 9	SPACE	--	--	--		0 0		--	--	--	SPACE	10 --
-- 11	SPACE	--	--	--			0 0	--	--	--	SPACE	12 --
-- 13	SPACE	--	--	--	0 0			--	--	--	SPACE	14 --
-- 15	SPACE	--	--	--		0 0		--	--	--	SPACE	16 --
-- 17	SPACE	--	--	--			0 0	--	--	--	SPACE	18 --
-- 19	SPACE	--	--	--	0 0			--	--	--	SPACE	20 --
-- 21	SPACE	--	--	--		0 0		--	--	--	SPACE	22 --
-- 23	SPACE	--	--	--			0 0	--	--	--	SPACE	24 --
-- 25	SPACE	--	--	--	0 0			--	--	--	SPACE	26 --
-- 27	SPACE	--	--	--		0 0		--	--	--	SPACE	28 --
-- 29	SPACE	--	--	--			0 0	--	1	20 A	FIRE ALARM RPS-G	24 1
		Total Load:			0 kVA	0 kVA	0 kVA					
		Total Amps:			0	0	0					

[Key*:] 1. PROVIDE LOCK-ON DEVICE

PANEL NAME: HLM

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 142.9 kVA
MAIN:
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
DEMAND: 153.53 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	AC-H1	60 A	3		14.13 0			--	1	20 A	SPARE	2
-- 3	--	--	--	--		14.13 0		--	1	20 A	SPARE	4
-- 5	--	--	--	--			14.13 0	--	1	20 A	SPARE	6
7	AC-H1 POWER EXHAUST	15 A	3		2.22 0			--	1	20 A	SPARE	8
-- 9	--	--	--	--		2.22 0		--	1	20 A	SPARE	10
-- 11	--	--	--	--			2.22 0	--	1	20 A	SPARE	12
13	AC-H2	60 A	3		14.13 0			--	1	20 A	SPARE	14
-- 15	--	--	--	--		14.13 0		--	1	20 A	SPARE	16
-- 17	--	--	--	--			14.13 0	--	1	20 A	SPARE	18
19	AC-H2 POWER EXHAUST	15 A	3		2.22 0			--	1	20 A	SPARE	20
-- 21	--	--	--	--		2.22 0		--	1	20 A	SPARE	22
-- 23	--	--	--	--			2.22 0	--	1	20 A	SPARE	24
25	DOAS-H1	25 A	3		5.26 0			--	1	20 A	SPARE	26
-- 27	--	--	--	--		5.26 0		--	1	20 A	SPARE	28
-- 29	--	--	--	--			5.26 0	--	1	20 A	SPARE	30
31	DOAS-H2	20 A	3		4.43 0			--	1	20 A	SPARE	32
-- 33	--	--	--	--		4.43 0		--	1	20 A	SPARE	34
-- 35	--	--	--	--			4.43 0	--	1	20 A	SPARE	36
37	Power	20 A	3		5.26 0			--	1	20 A	SPARE	38
-- 39	--	--	--	--		5.26 0		--	1	20 A	SPARE	40
-- 41	--	--	--	--			5.26 0	--	1	20 A	SPARE	42
		Total Load:			47.64 kVA	47.64 kVA	47.64 kVA					
		Total Amps:			172	172	172					

[Key*:]

WHERE LOCK-ON DEVICE IS PROVIDED
- BREAKER SHALL BE RED IN COLOR
- IDENTIFIED AS FIRE ALARM CIRCUIT
- LOCATION OF CB SHALL BE PERMANENTLY IDENTIFIED AT FIRE ALARM CONTROL UNIT

PANEL NAME: HEP

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 0.1 kVA
MAIN: 100
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 0.1 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
-- 1	EXISTING LOAD	--	--	--	0 0			--	--	--	EXISTING LOAD	2 --
-- 3	EXISTING LOAD	--	--	--		0 0		--	--	--	EXISTING LOAD	4 --
-- 5	EXISTING LOAD	--	--	--			0 0	--	--	--	EXISTING LOAD	6 --
-- 7	EXISTING LOAD	--	--	--	0 0			--	--	--	EXISTING LOAD	8 --
-- 9	EXISTING LOAD	--	--	--		0 0		--	--	--	EXISTING LOAD	10 --
-- 11	EXISTING LOAD	--	--	--			0 0	--	--	--	EXISTING LOAD	12 --
-- 13	EXISTING LOAD	--	--	--	0 0			--	--	--	EXISTING LOAD	14 --
-- 15	EXISTING LOAD	--	--	--		0 0		--	--	--	EXISTING LOAD	16 --
-- 17	EXISTING LOAD	--	--	--			0 0	--	--	--	SPACE	18 --
-- 19	SPACE	--	--	--	0 0			--	--	--	SPACE	20 --
-- 21	SPACE	--	--	--		0 0		--	--	--	SPACE	22 --
-- 23	SPACE	--	--	--			0 0	--	--	--	SPACE	24 --
-- 25	SPACE	--	--	--	0 0			--	--	--	SPACE	26 --
-- 27	SPACE	--	--	--		0 0		--	--	--	SPACE	28 --
-- 29	SPACE	--	--	--			0 0.1	--	1	20 A	FIRE ALARM RPS-H	30 1
		Total Load:			0 kVA	0 kVA	0.1 kVA					
		Total Amps:			0	0	0.83					

[Key*:] 1. PROVIDE LOCK-ON DEVICE

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PANEL SCHEDULES

DRAWING NUMBER: **E0.5**

PANEL NAME: FPA

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 0 kVA
MAIN:
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 0 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	EXISTING LOAD	--	--	--	0	0		--	--	--	EXISTING LOAD	2
3	EXISTING LOAD	--	--	--		0	0	--	--	--	EXISTING LOAD	4
5	EXISTING LOAD	--	--	--			0	0	--	--	EXISTING LOAD	6
7	EXISTING LOAD	--	--	--	0	0		--	--	--	EXISTING LOAD	8
9	EXISTING LOAD	--	--	--		0	0	--	--	--	EXISTING LOAD	10
11	EXISTING LOAD	--	--	--			0	0	--	--	EXISTING LOAD	12
13	EXISTING LOAD	--	--	--	0	0		--	--	--	EXISTING LOAD	14
15	EXISTING LOAD	--	--	--		0	0	--	--	--	EXISTING LOAD	16
17	EXISTING LOAD	--	--	--			0	0	--	--	EXISTING LOAD	18
19	EXISTING LOAD	--	--	--	0	0		--	--	--	EXISTING LOAD	20
21	EXISTING LOAD	--	--	--		0	0	--	--	--	EXISTING LOAD	22
23	EXISTING LOAD	--	--	--			0	0	--	--	EXISTING LOAD	24
25	EXISTING LOAD	--	--	--	0	0		--	--	--	EXISTING LOAD	26
27	EXISTING LOAD	--	--	--		0	0	--	--	--	EXISTING LOAD	28
29	EXISTING LOAD	--	--	--			0	0	--	--	EXISTING LOAD	30
31	EXISTING LOAD	--	--	--	0	0		--	--	--	EXISTING LOAD	32
33	EXISTING LOAD	--	--	--		0	0	--	--	--	EXISTING LOAD	34
35	EXISTING LOAD	--	--	--			0	0	--	--	EXISTING LOAD	36
37	EXISTING LOAD	--	--	--	0	0		3	20 A		FPA2	38
39	EXISTING LOAD	--	--	--		0	0	--	--	--	--	40
41	EXISTING LOAD	--	--	--			0	0	--	--	--	42
		Total Load:			0 kVA	0 kVA	0 kVA					
		Total Amps:			0	0	0					

[Key*:]

PANEL NAME: KLM

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 192.5 kVA
MAIN:
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
DEMAND: 203.47 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	OU-K1 MODULE #1	30 A	3		6.48	5.54				3	25 A	AC-K3	2
3	--	--	--	--			6.48	5.54		--	--	--	4
5	--	--	--	--					6.48	5.54	--	--	6
7	OU-K1 MODULE #2	30 A	3		6.48	0.5				3	15 A	AC-K3 POWER EXHAUST	8
9	--	--	--	--			6.48	0.5		--	--	--	10
11	--	--	--	--					6.48	0.5	--	--	12
13	OU-K1 MODULE #3	30 A	3		6.48	3.05				3	20 A	AC-K4	14
15	--	--	--	--			6.48	3.05		--	--	--	16
17	--	--	--	--					6.48	3.05	--	--	18
19	AC-K1	15 A	3		3.6	3.6				3	20 A	AC-K5	20
21	--	--	--	--			3.6	3.6		--	--	--	22
23	--	--	--	--					3.6	3.6	--	--	24
25	AC-K1 POWER EXHAUST	15 A	3		0.5	0.5				3	20 A	AC-K5 POWER EXHAUST	26
27	--	--	--	--			0.5	0.5		--	--	--	28
29	--	--	--	--					0.5	0.5	--	--	30
31	AC-K2	15 A	3		2.77	9.97				3	45 A	DOAS-K1	32
33	--	--	--	--			2.77	9.97		--	--	--	34
35	--	--	--	--					2.77	9.97	--	--	36
37	SPARE	20 A	1	--	0	14.68				3	60 A	DOAS-K2	38
39	SPARE	20 A	1	--			0	14.68		--	--	--	40
41	SPARE	20 A	1	--					0	14.68	--	--	42
		Total Load:			64.15 kVA		64.15 kVA			64.15 kVA			
		Total Amps:			231.6		231.6			231.6			

[Key*:]

PANEL NAME: FPA2

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 0 kVA
MAIN: 100
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 0 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.	
1	RE-LOCATED LOAD FRM FPA	20 A	1	--	0	0			1	20 A	FIRE ALARM RPS-F	2	1
3	RE-LOCATED LOAD FRM FPA	20 A	1	--		0						4	
5	RE-LOCATED LOAD FRM FPA	20 A	1	--			0					6	
7												8	
9												10	
11												12	
13												14	
15												16	
17												18	
19												20	
21												22	
23												24	
25												26	
27												28	
29												30	
		Total Load:			0 kVA	0 kVA	0 kVA						
		Total Amps:			0	0	0						

[Key*:] 1. PROVIDE LOCK-ON DEVICE

WHERE LOCK-ON DEVICE IS PROVIDED
- BREAKER SHALL BE RED IN COLOR
- IDENTIFIED AS FIRE ALARM CIRCUIT
- LOCATION OF CB SHALL BE PERMANENTLY IDENTIFIED AT FIRE ALARM CONTROL UNIT

PANEL NAME: KM

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION:

SOLID NEUTRAL
GROUND BUS

CONNECTED 10.1 kVA
MAIN:
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 10.13 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.	
1	FC-K1	15 A	2		0.59	0				1	20 A	SPARE	2	
3	--	--	--	--		0.59	0			1	20 A	SPARE	4	
5	FC-K2	15 A	2				0.59	0		1	20 A	SPARE	6	
7	--	--	--	--	0.59	0				1	20 A	SPARE	8	
9	FC-K3	15 A	2			0.52	0			1	20 A	SPARE	10	
11	--	--	--	--			0.52	0		1	20 A	SPARE	12	
13	FC-K4	15 A	2		0.59	0				1	20 A	SPARE	14	
15	--	--	--	--		0.59	0			1	20 A	SPARE	16	
17	FC-K5	15 A	2				0.59	0		1	20 A	SPARE	18	
19	--	--	--	--	0.59	0				1	20 A	SPARE	20	
21	FC-K6	15 A	2			0.59	0			1	20 A	SPARE	22	
23	--	--	--	--			0.59	0		1	20 A	SPARE	24	
25	FC-K7	15 A	2		0.59	0				1	20 A	SPARE	26	
27	--	--	--	--		0.59	0			1	20 A	SPARE	28	
29	HP-K1	15 A	2				0.94	0		1	20 A	SPARE	30	
31	--	--	--	--	0.94	0				1	20 A	SPARE	32	
33	SPARE	20 A	1	--		0	0			1	20 A	SPARE	34	
35	SPARE	20 A	1	--			0	0		1	20 A	SPARE	36	
37	SPARE	20 A	1	--	0	0				1	20 A	SPARE	38	
39	SPARE	20 A	1	--		0	0			1	20 A	SPARE	40	
41	SPARE	20 A	1	--			0	0.1		1	20 A	FIRE ALARM RPS-K	42	1
		Total Load:			3.9 kVA		2.89 kVA			3.33 kVA				
		Total Amps:			33.07		24.09			28.35				

[Key*:] 1. PROVIDE LOCK-ON DEVICE

WHERE LOCK-ON DEVICE IS PROVIDED
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- LOCATION OF CB SHALL BE PERMANENTLY IDENTIFIED AT FIRE ALARM CONTROL UNIT

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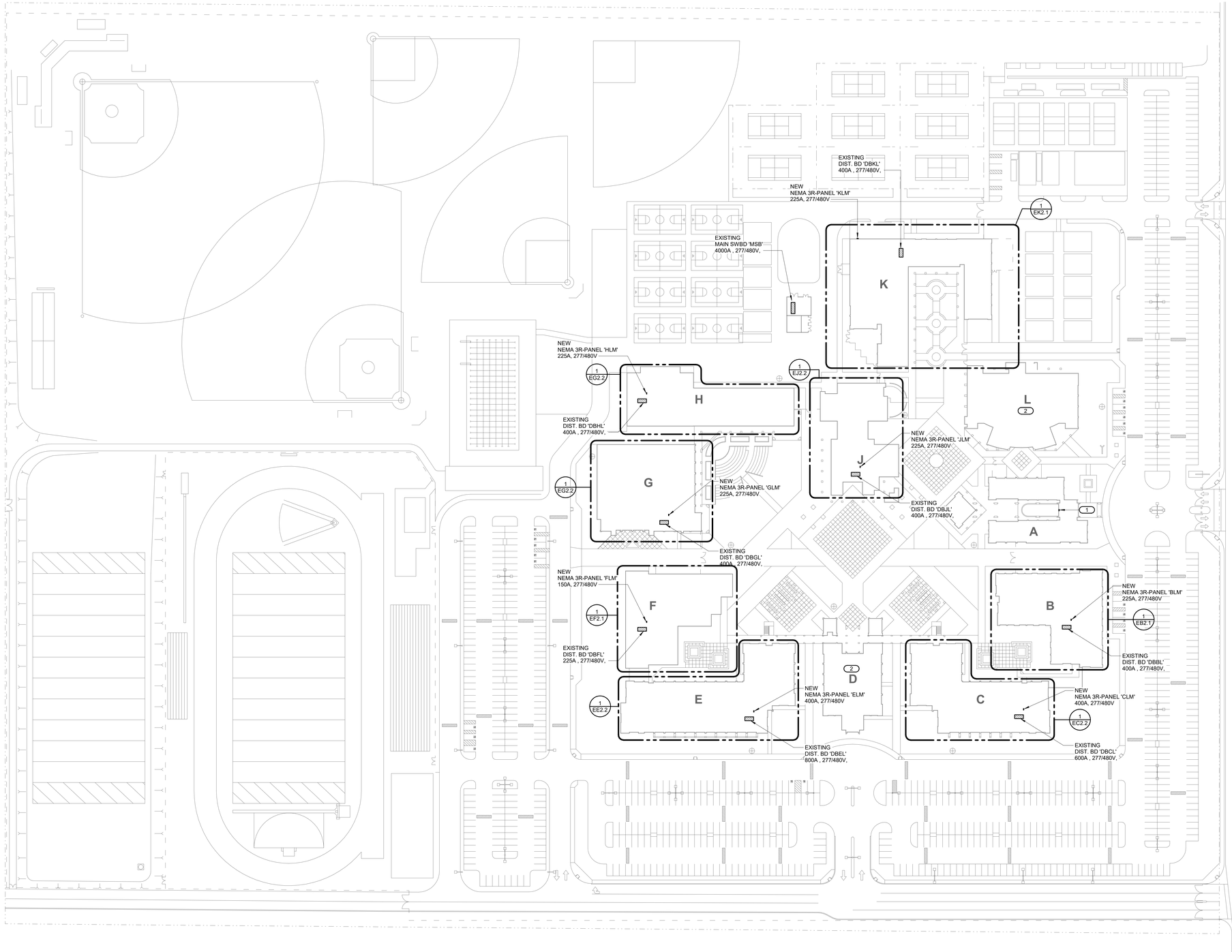
PROJECT NUMBER: Project Number			

PANEL SCHEDULES

DRAWING NUMBER: **E0.6**

KEYED NOTES

1. REPLACE EXISTING FIRE ALARM WITH NEW CSFM LISTED 4100 PANEL. REFERENCE FIRE ALARM PLANS FOR MORE INFORMATION.
2. BUILDING NOT PART OF THIS PERMIT.



SITE PLAN | 1" = 60'-0" | 1

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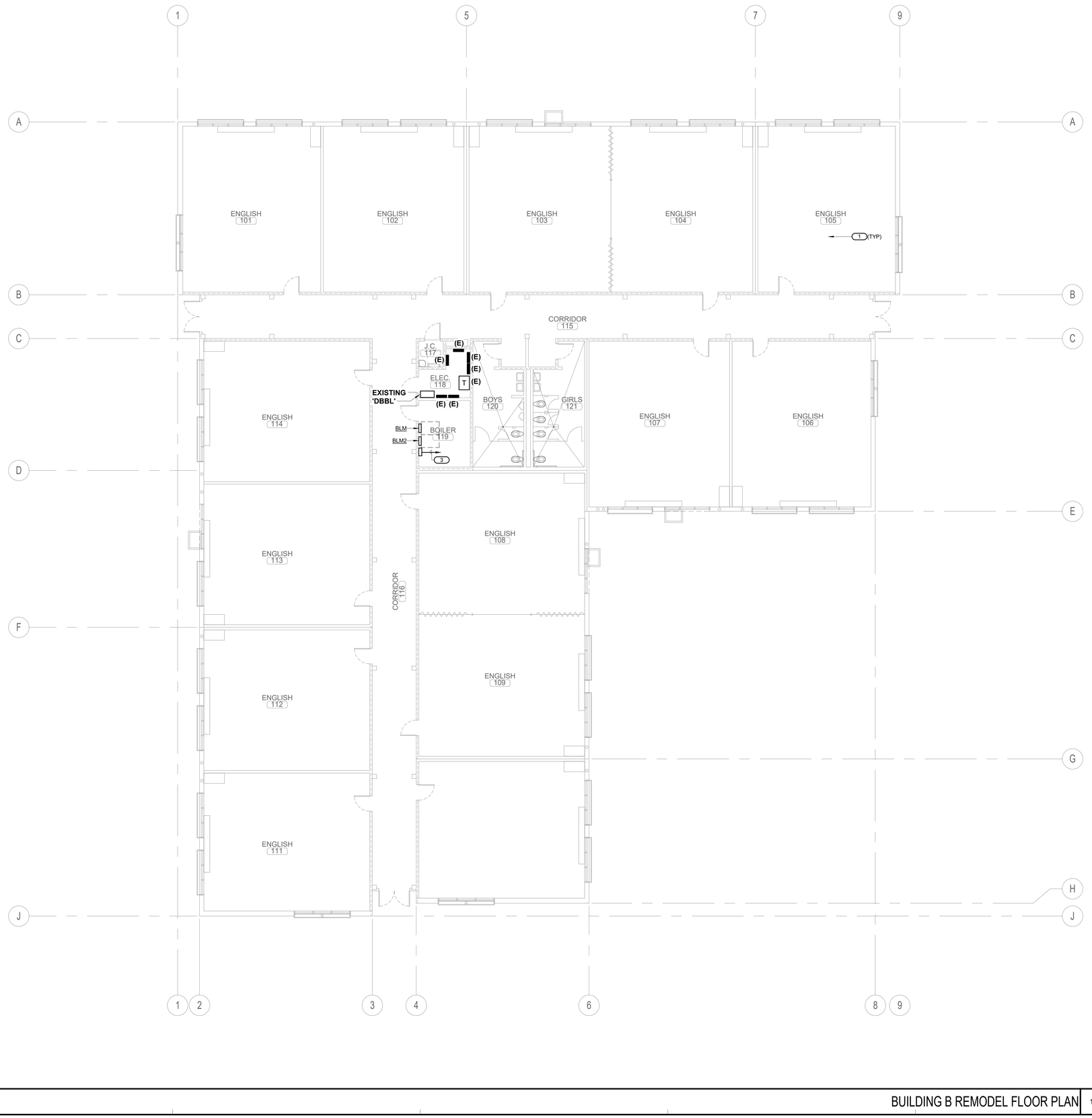
SITE PLAN

DRAWING NUMBER: **E1.1**

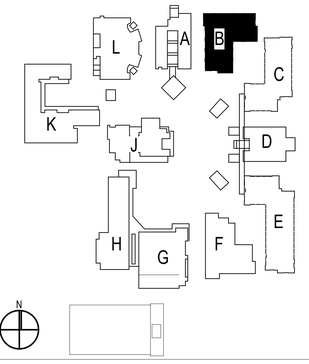


BUILDING B REMODEL FLOOR PLAN | 1/8" = 1'-0" | 1

N

KEYED NOTES

1. PROVIDE NEW UL AND CSFM LISTED,CARBON MONOXIDE/SMOKE DETECTOR COMBO UNIT WHERE NATURAL GAS BURNING APPLIANCE IS UTILIZED. REFERENCE FIRE ALARM PLANS FOR MORE INFORMATION.
2. CONTRACTOR TO INTERCEPT AND EXTEND EXISTING CIRCUIT FEEDING THE EXISTING FIRE ALARM PANEL AND REUSE CIRCUIT TO FEED THE NEW FIRE ALARM PANEL. REFER TO FIRE ALARM PLANS FOR LOCATION OF EQUIPMENT. CONTRACTOR TO VERIFY FINAL LOCATION PRIOR TO ROUGH-IN.
3. PROVIDE DEDICATED 120V CIRCUIT POWER SOURCE TO NEAREST AVAILABLE CIRCUIT. PROVIDE "LOCK-ON" DEVICE TO BREAKER AND RED LABEL, INDICATING 'FIRE ALARM TO CIRCUIT ID.



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BUILDING B REMODEL FLOOR PLAN

DRAWING NUMBER: EB2.1

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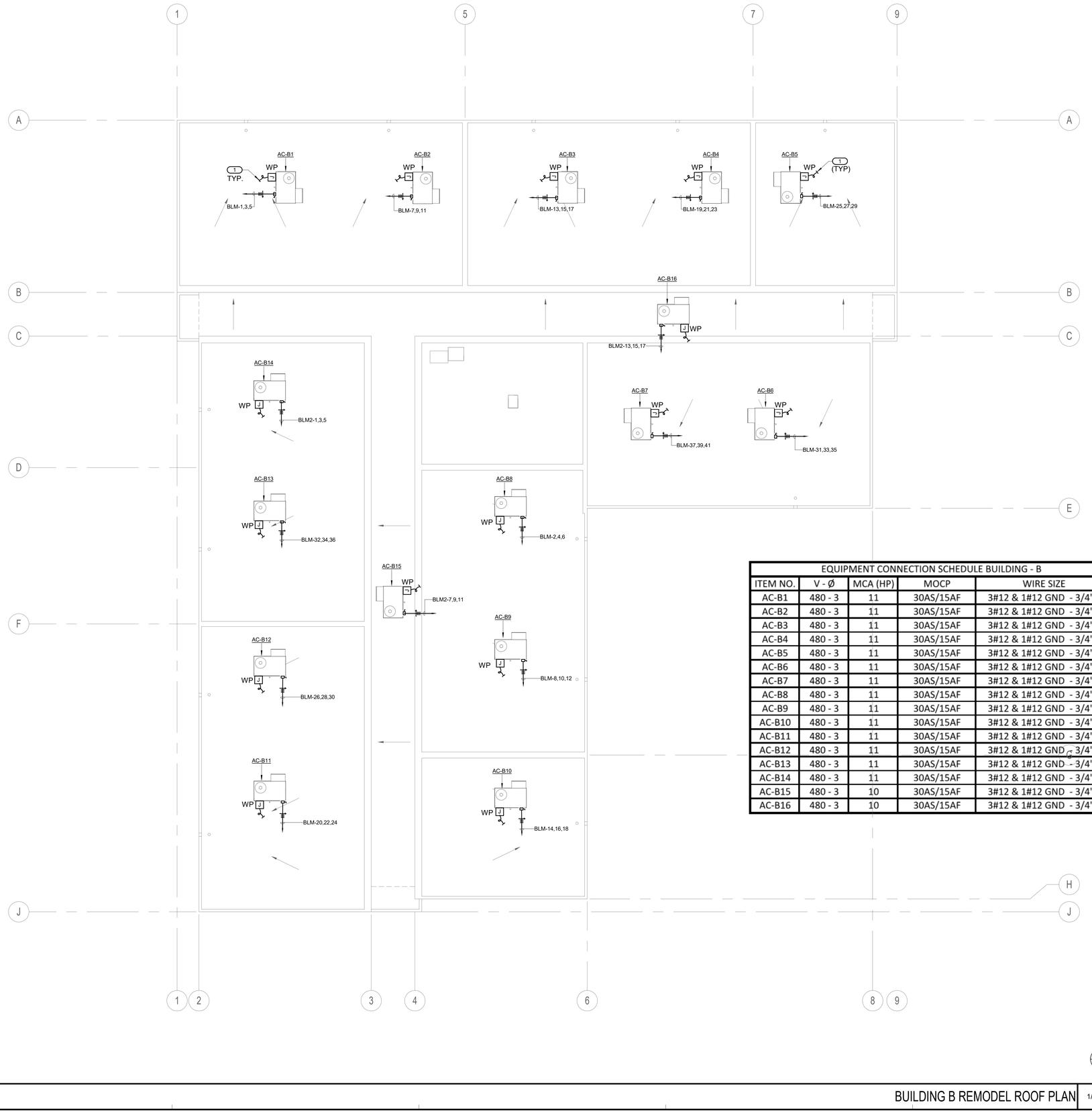
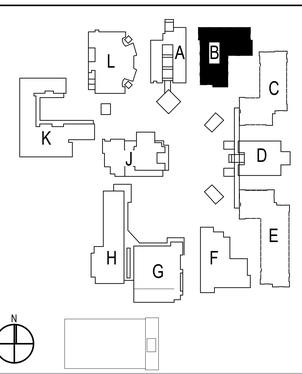


KEYED NOTES

1. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.

EQUIPMENT CONNECTION SCHEDULE BUILDING - B

ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
AC-B1	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B2	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B3	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B4	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B5	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B6	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B7	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B8	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B9	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B10	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B11	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B12	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B13	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B14	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B15	480 - 3	10	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-B16	480 - 3	10	30AS/15AF	3#12 & 1#12 GND - 3/4"C



SITE KEY PLAN

BUILDING B REMODEL ROOF PLAN | 1/8" = 1'-0" | 1

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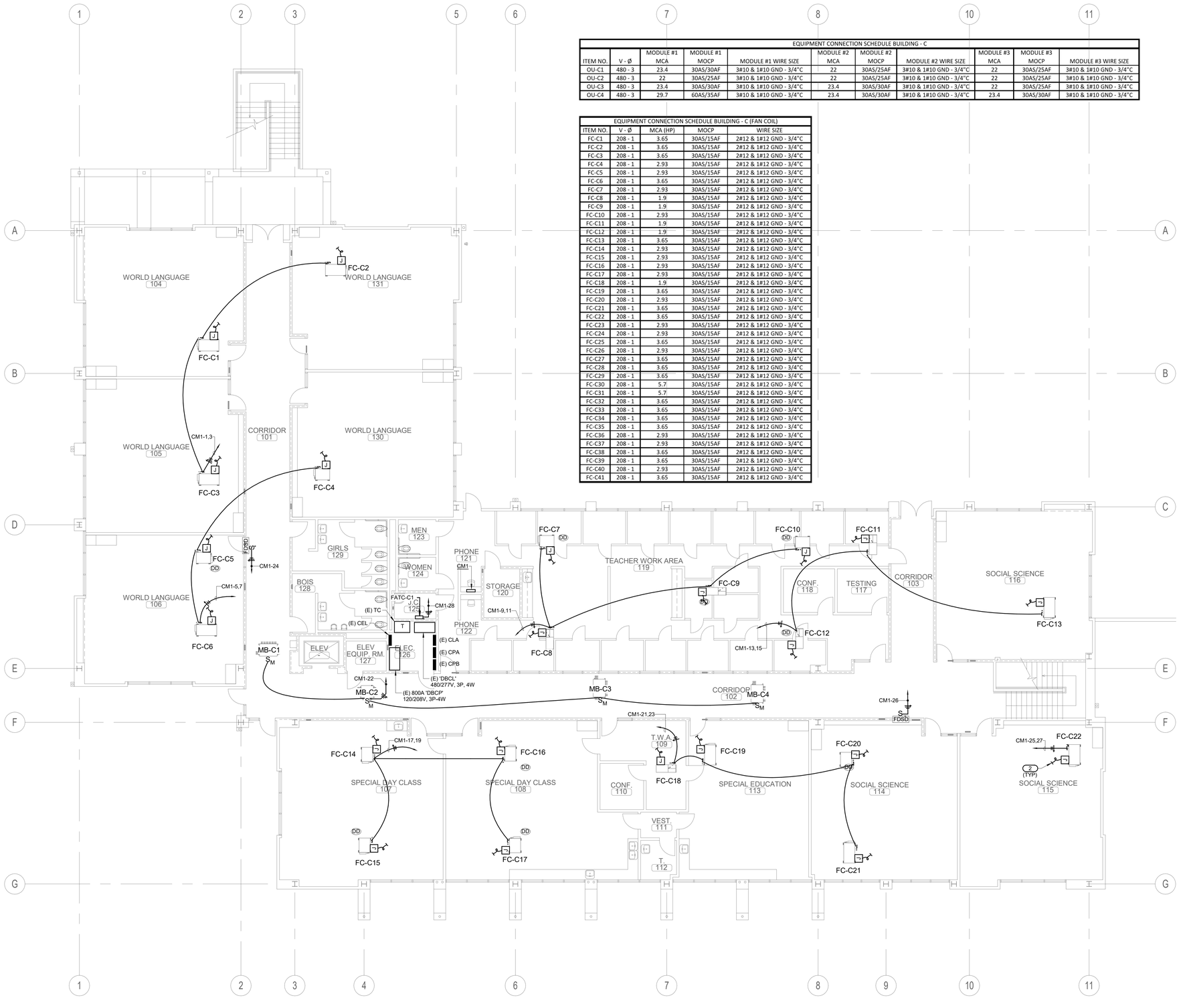
BUILDING B REMODEL ROOF PLAN

DRAWING NUMBER: **EB3.1**

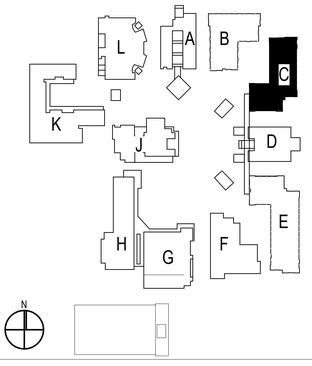


EQUIPMENT CONNECTION SCHEDULE BUILDING - C										
ITEM NO.	V - Ø	MODULE #1 MCA	MODULE #1 MOCP	MODULE #1 WIRE SIZE	MODULE #2 MCA	MODULE #2 MOCP	MODULE #2 WIRE SIZE	MODULE #3 MCA	MODULE #3 MOCP	MODULE #3 WIRE SIZE
OU-C1	480 - 3	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C
OU-C2	480 - 3	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C
OU-C3	480 - 3	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C
OU-C4	480 - 3	29.7	60AS/35AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - C (FAN COIL)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
FC-C1	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C2	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C3	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C4	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C5	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C6	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C7	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C8	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C9	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C10	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C11	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C12	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C13	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C14	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C15	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C16	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C17	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C18	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C19	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C20	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C21	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C22	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C23	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C24	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C25	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C26	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C27	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C28	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C29	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C30	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C31	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C32	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C33	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C34	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C35	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C36	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C37	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C38	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C39	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C40	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C41	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C

KEYED NOTES

1. NOT USED.
2. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.
3. CONTRACTOR TO INTERCEPT AND EXTEND EXISTING CIRCUIT FEEDING THE EXISTING FIRE ALARM PANEL AND REUSE CIRCUIT TO FEED THE NEW FIRE ALARM PANEL. REFER TO FIRE ALARM PLANS FOR LOCATION OF EQUIPMENT. CONTRACTOR TO VERIFY FINAL LOCATION PRIOR TO ROUGH-IN.



SITE KEY PLAN

BUILDING C REMODEL FIRST FLOOR PLAN | 1/8" = 1'-0" | 1

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LICENSED ARCHITECT
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03-31-21
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
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Lic. E16934
Exp. 8-30-2021
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www.imegcorp.com # 19002940.00

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1			REVISIONS

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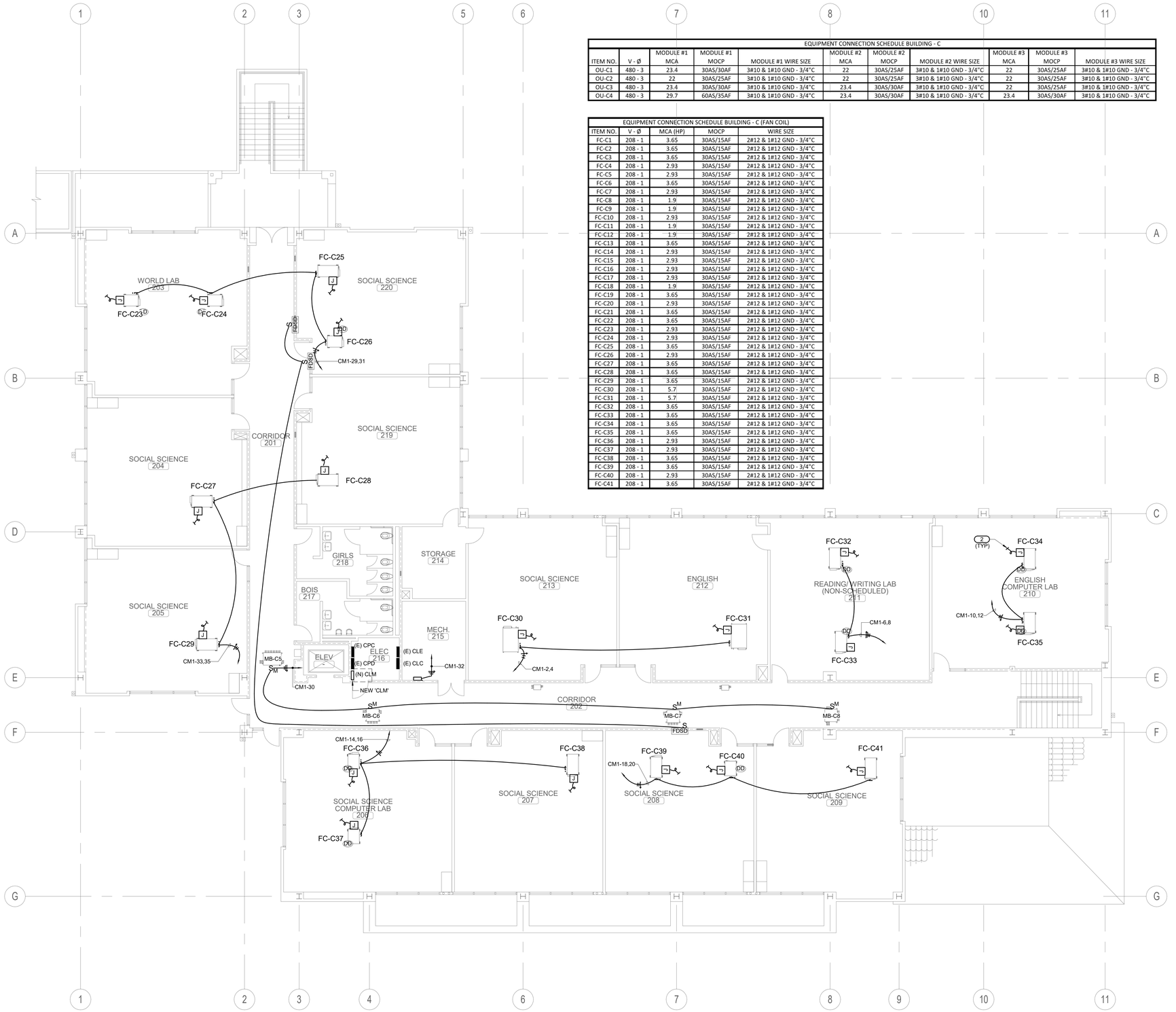
DATE: Issue Date	SCALE: 1/8" = 1'-0"
PROJECT NUMBER: Project Number	

BUILDING C REMODEL 1ST FLOOR PLAN

DRAWING NUMBER: EC2.2



EQUIPMENT CONNECTION SCHEDULE BUILDING - C

ITEM NO.	V - Ø	MODULE #1 MCA	MODULE #1 MOCP	MODULE #1 WIRE SIZE	MODULE #2 MCA	MODULE #2 MOCP	MODULE #2 WIRE SIZE	MODULE #3 MCA	MODULE #3 MOCP	MODULE #3 WIRE SIZE
OU-C1	480 - 3	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C
OU-C2	480 - 3	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C
OU-C3	480 - 3	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C
OU-C4	480 - 3	29.7	60AS/35AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C

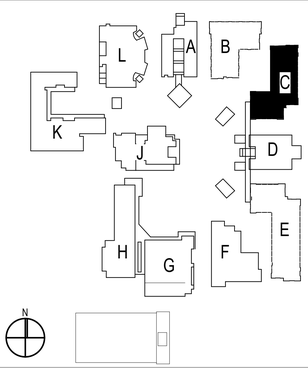
EQUIPMENT CONNECTION SCHEDULE BUILDING - C (FAN COIL)

ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
FC-C1	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C2	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C3	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C4	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C5	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C6	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C7	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C8	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C9	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C10	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C11	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C12	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C13	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C14	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C15	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C16	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C17	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C18	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C19	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C20	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C21	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C22	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C23	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C24	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C25	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C26	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C27	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C28	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C29	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C30	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C31	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C32	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C33	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C34	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C35	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C36	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C37	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C38	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C39	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C40	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C41	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C

KEYED NOTES

1. NOT USED.
2. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.
3. CONTRACTOR TO INTERCEPT AND EXTEND EXISTING CIRCUIT FEEDING THE EXISTING FIRE ALARM PANEL AND REUSE CIRCUIT TO FEED THE NEW FIRE ALARM PANEL. REFER TO FIRE ALARM PLANS FOR LOCATION OF EQUIPMENT. CONTRACTOR TO VERIFY FINAL LOCATION PRIOR TO ROUGH-IN.

BUILDING C REMODEL SECOND FLOOR PLAN | 1/8" = 1'-0" | 1



SITE KEY PLAN

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BID SET

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PROJECT NUMBER: Project Number	

BUILDING C REMODEL 2ND FLOOR PLAN

DRAWING NUMBER: **EC2.3**

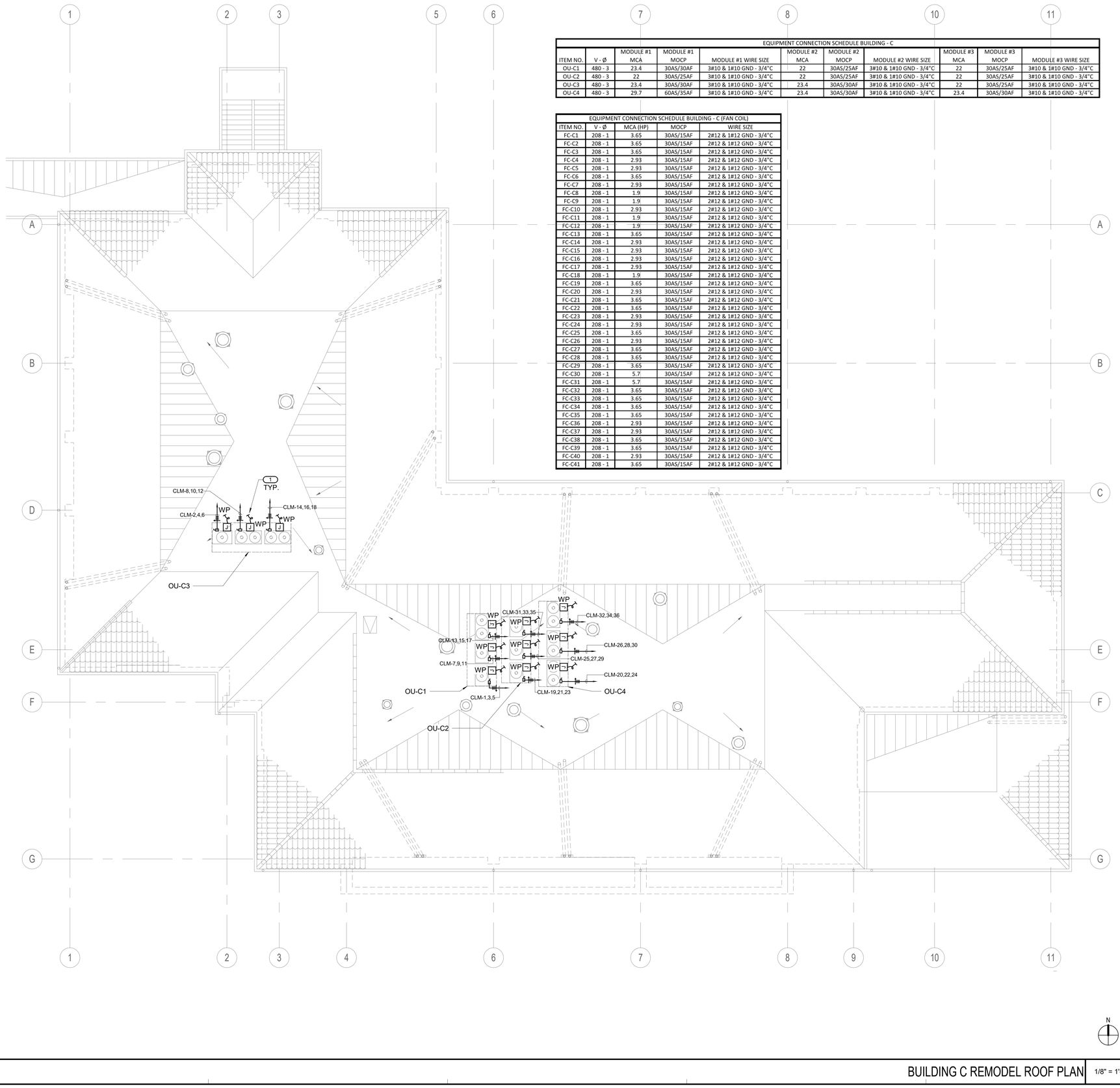
6/12/2020 8:00:02 AM
C:\Revit Local Files\19_19002940_Oxnard HS HVAC Upgrade_C_John.rvt Contributor

KEYED NOTES

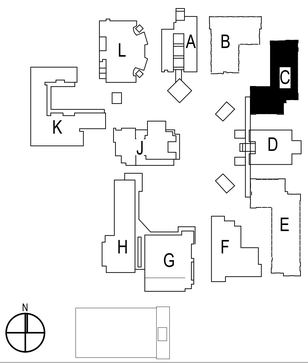
1. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.

EQUIPMENT CONNECTION SCHEDULE BUILDING - C										
ITEM NO.	V - Ø	MODULE #1 MCA	MODULE #1 MOCP	MODULE #1 WIRE SIZE	MODULE #2 MCA	MODULE #2 MOCP	MODULE #2 WIRE SIZE	MODULE #3 MCA	MODULE #3 MOCP	MODULE #3 WIRE SIZE
OU-C1	480 - 3	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C
OU-C2	480 - 3	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C
OU-C3	480 - 3	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	22	30AS/25AF	3#10 & 1#10 GND - 3/4"C
OU-C4	480 - 3	29.7	60AS/35AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - C (FAN COIL)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
FC-C1	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C2	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C3	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C4	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C5	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C6	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C7	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C8	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C9	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C10	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C11	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C12	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C13	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C14	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C15	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C16	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C17	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C18	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C19	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C20	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C21	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C22	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C23	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C24	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C25	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C26	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C27	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C28	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C29	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C30	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C31	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C32	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C33	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C34	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C35	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C36	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C37	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C38	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C39	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C40	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-C41	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C



BUILDING C REMODEL ROOF PLAN | 1/8" = 1'-0" | 1



SITE KEY PLAN

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OXNARD, CA 93036

MARK GRAHAM C-26046 03-31-21 LICENSED ARCHITECT STATE OF CALIFORNIA
NESTOR C. IQUICO JR. Lic. E16934 Exp. 6-30-2021 REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

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IMEG
901 VIA PIEMONTE SUITE 400
ONTARIO, CA 91764
909.477.6915 FAX: 909.477.6916
www.imegcorp.com # 19002940.00

BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

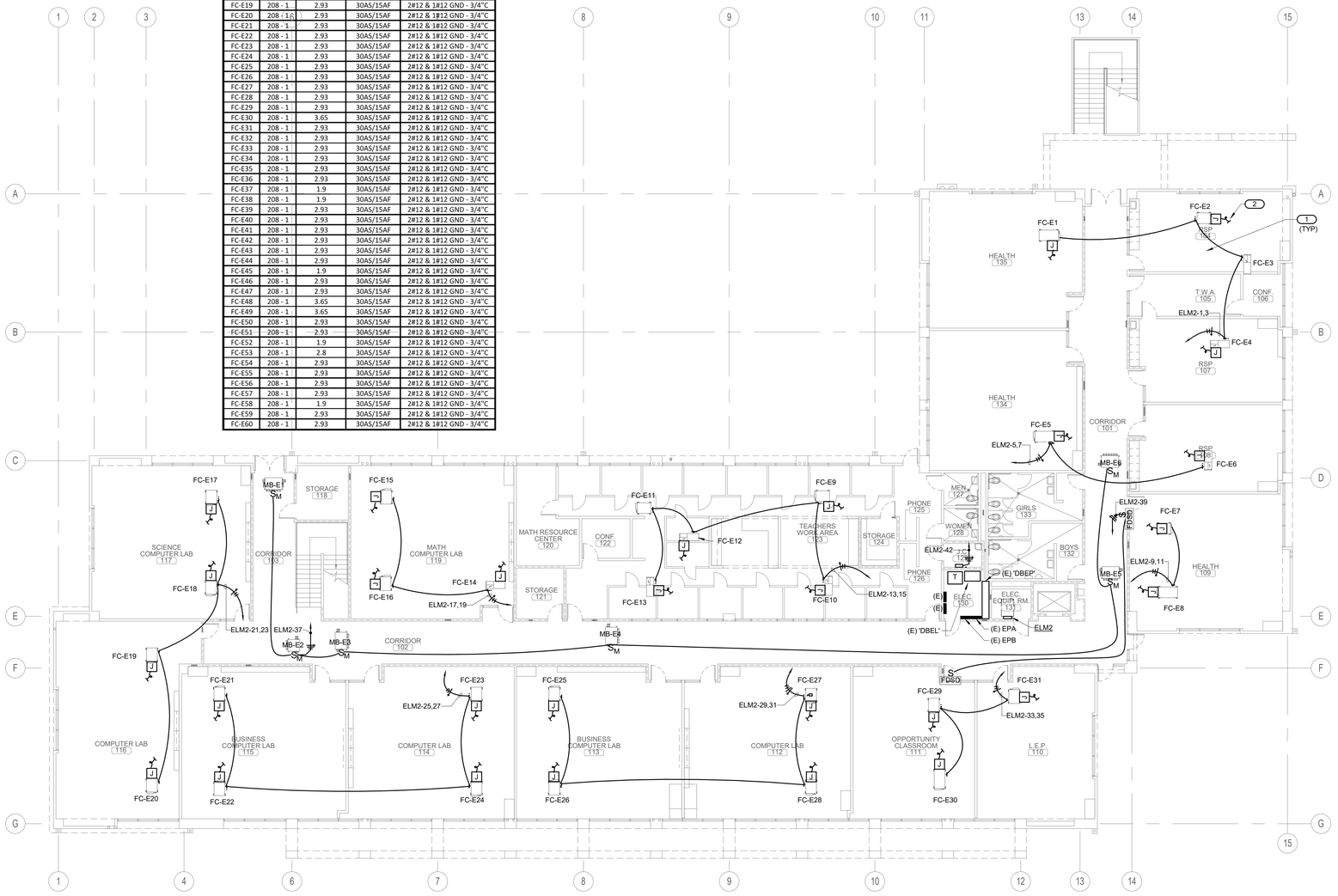
DRAWN: Author	CHECKED: Checker
DATE: Issue Date	SCALE: 1/8" = 1'-0"
PROJECT NUMBER: Project Number	

BUILDING C REMODEL ROOF PLAN

DRAWING NUMBER: **EC3.1**

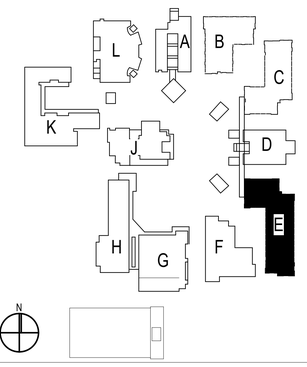
EQUIPMENT CONNECTION SCHEDULE BUILDING - E											
ITEM NO.	V - Ø	MODULE #1 MCA (HP)	MODULE #1 MOCP	MODULE #1 WIRE SIZE	MODULE #2 MCA	MODULE #2 MOCP	MODULE #2 WIRE SIZE	MODULE #3 MCA	MODULE #3 MOCP	MODULE #3 WIRE SIZE
OU-E1	480 - 3	29.7	30AS/35AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C
OU-E2	480 - 3	29.7	30AS/35AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C
OU-E3	480 - 3	29.7	30AS/35AF	3#8 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C
OU-E4	480 - 3	23.4	60AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - E (FAN COIL)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
FC-E1	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E2	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E3	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E4	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E5	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E6	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E7	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E8	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E9	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E10	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E11	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E12	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E13	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E14	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E15	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E16	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E17	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E18	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E19	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E20	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E21	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E22	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E23	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E24	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E25	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E26	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E27	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E28	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E29	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E30	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E31	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E32	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E33	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E34	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E35	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E36	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E37	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E38	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E39	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E40	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E41	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E42	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E43	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E44	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E45	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E46	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E47	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E48	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E49	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E50	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E51	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E52	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E53	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E54	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E55	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E56	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E57	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E58	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E59	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E60	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C



KEYED NOTES

1. PROVIDE NEW UL AND CSFM LISTED,CARBON MONOXIDE/SMOKE DETECTOR COMBO UNIT WHERE NATURAL GAS BURNING APPLIANCE IS UTILIZED. REFERENCE FIRE ALARM PLANS FOR MORE INFORMATION.
2. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.
3. CONTRACTOR TO INTERCEPT AND EXTEND EXISTING CIRCUIT FEEDING THE EXISTING FIRE ALARM PANEL AND REUSE CIRCUIT TO FEED THE NEW FIRE ALARM PANEL. REFER TO FIRE ALARM PLANS FOR LOCATION OF EQUIPMENT. CONTRACTOR TO VERIFY FINAL LOCATION PRIOR TO ROUGH-IN.



SITE KEY PLAN

BUILDING E REMODEL FIRST FLOOR PLAN | 3/32" = 1'-0" | 1

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120526 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/15/2020

ARCHITECTS
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NO	DATE	BY	DESCRIPTION
1			REVISIONS

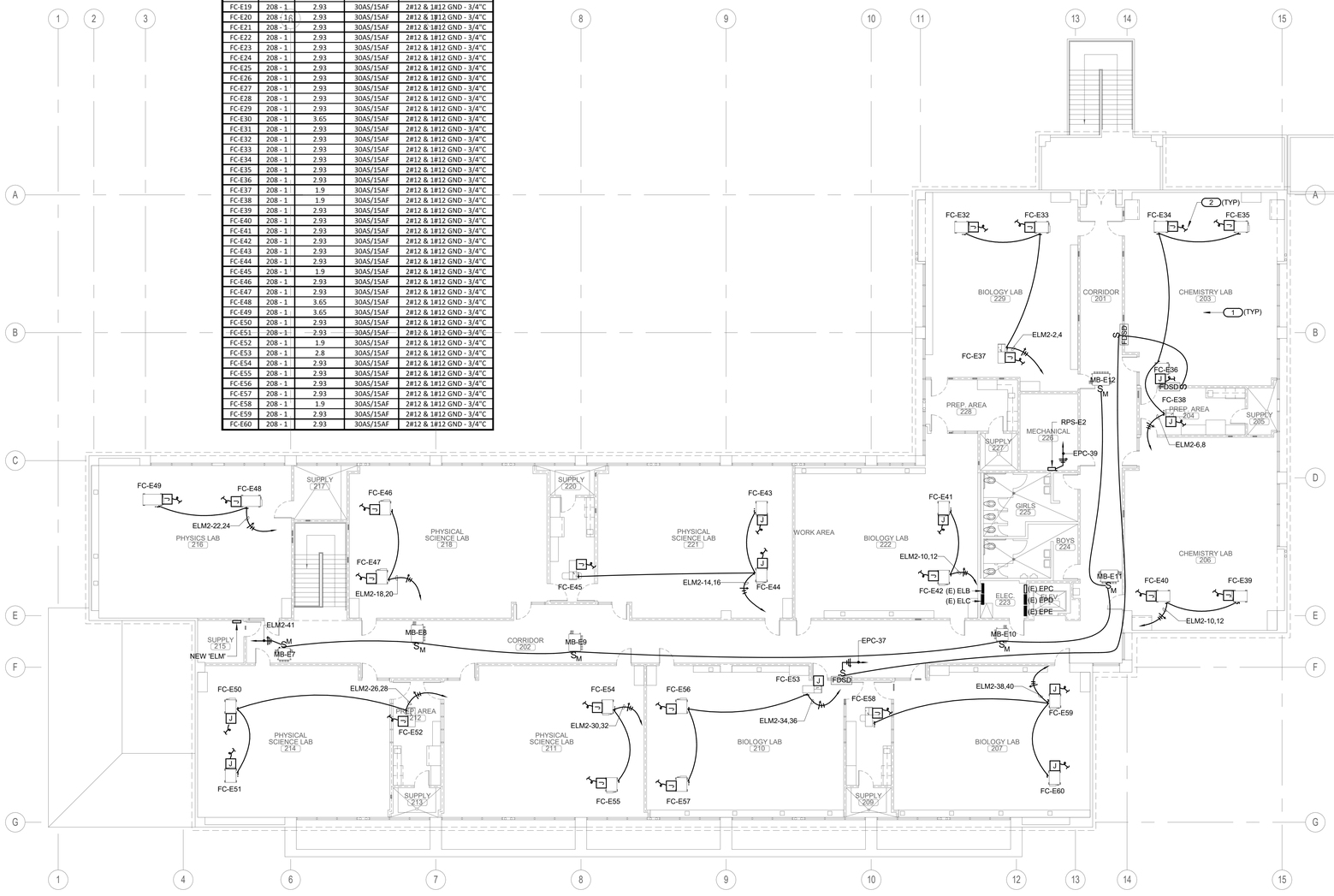
DRAWN: Author	CHECKED: Checker
DATE: Issue Date	SCALE: 3/32" = 1'-0"
PROJECT NUMBER: Project Number	

BUILDING E REMODEL 1ST FLOOR PLAN

DRAWING NUMBER: EE2.2

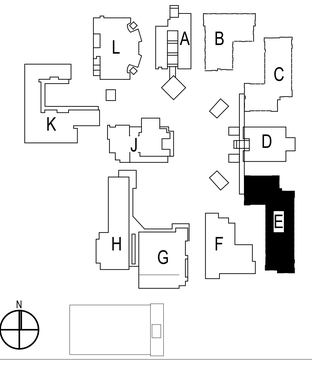
EQUIPMENT CONNECTION SCHEDULE BUILDING - E											
ITEM NO.	V - Ø	MODULE #1 MCA (HP)	MODULE #1 MOCP	MODULE #1 WIRE SIZE	MODULE #2 MCA	MODULE #2 MOCP	MODULE #2 WIRE SIZE	MODULE #3 MCA	MODULE #3 MOCP	MODULE #3 WIRE SIZE
OU-E1	480 - 3	29.7	30AS/35AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C
OU-E2	480 - 3	29.7	30AS/35AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C
OU-E3	480 - 3	29.7	30AS/35AF	3#8 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C
OU-E4	480 - 3	23.4	60AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - E (FAN COIL)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
FC-E1	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E2	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E3	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E4	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E5	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E6	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E7	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E8	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E9	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E10	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E11	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E12	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E13	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E14	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E15	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E16	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E17	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E18	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E19	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E20	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E21	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E22	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E23	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E24	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E25	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E26	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E27	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E28	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E29	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E30	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E31	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E32	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E33	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E34	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E35	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E36	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E37	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E38	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E39	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E40	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E41	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E42	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E43	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E44	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E45	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E46	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E47	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E48	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E49	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E50	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E51	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E52	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E53	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E54	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E55	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E56	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E57	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E58	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E59	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E60	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C



KEYED NOTES

1. NOT USED.
2. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.
3. CONTRACTOR TO INTERCEPT AND EXTEND EXISTING CIRCUIT FEEDING THE EXISTING FIRE ALARM PANEL AND REUSE CIRCUIT TO FEED THE NEW FIRE ALARM PANEL. REFER TO FIRE ALARM PLANS FOR LOCATION OF EQUIPMENT. CONTRACTOR TO VERIFY FINAL LOCATION PRIOR TO ROUGH-IN.



SITE KEY PLAN

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120526 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/15/2020

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Exp. 6-30-2021
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BID SET

NO	DATE	BY	DESCRIPTION
1			REVISIONS

DRAWN: Author	CHECKED: Checker
DATE: Issue Date	SCALE: 3/32" = 1'-0"
PROJECT NUMBER: Project Number	

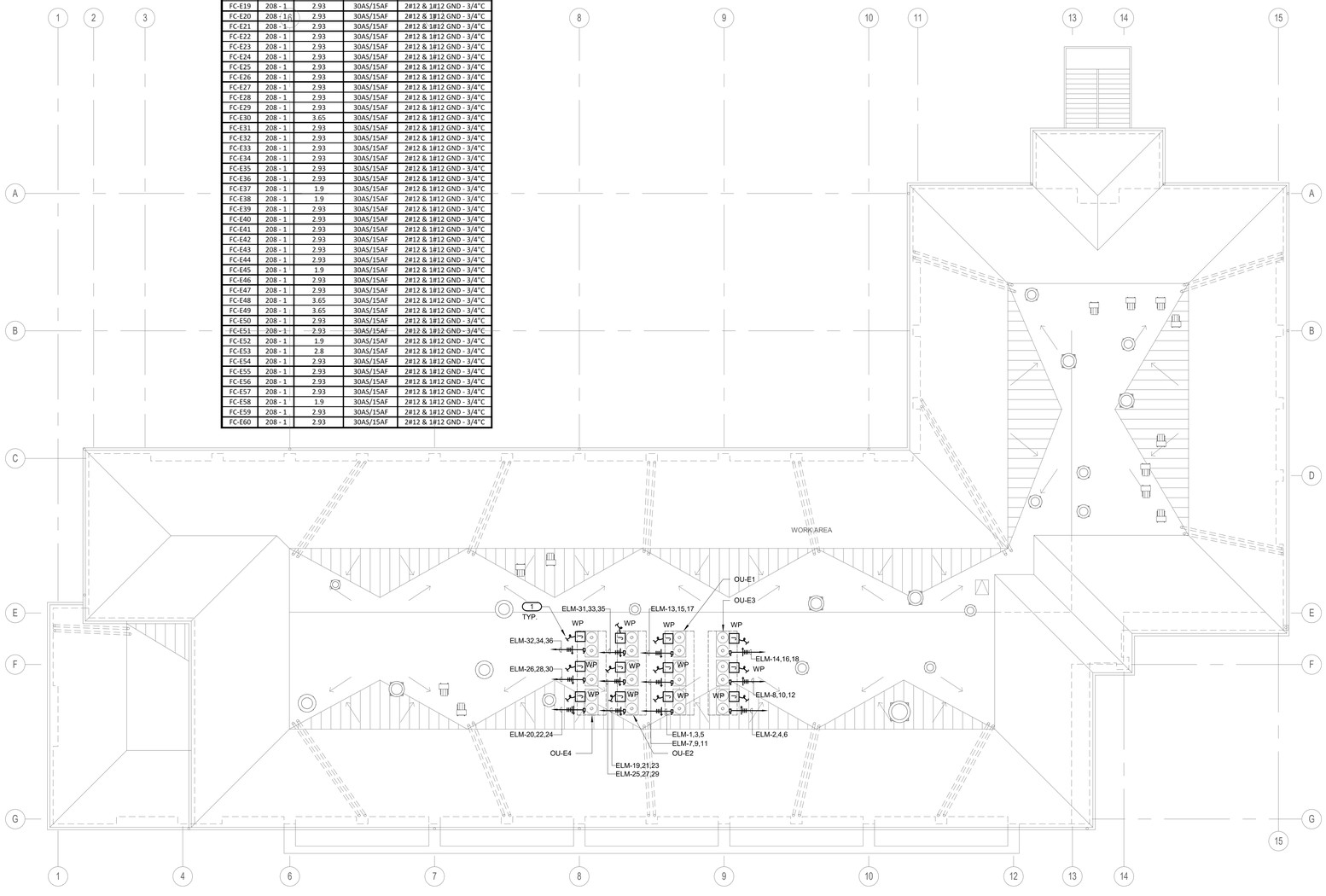
BUILDING E REMODEL 2ND FLOOR PLAN

DRAWING NUMBER: EE2.3

BUILDING E REMODEL SECOND FLOOR PLAN | 3/32" = 1'-0" | 1

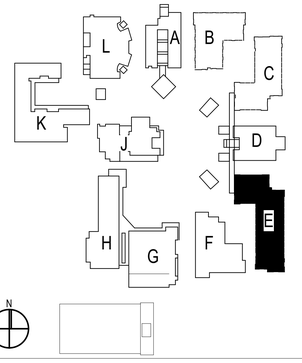
EQUIPMENT CONNECTION SCHEDULE BUILDING - E											
ITEM NO.	V - Ø	MODULE #1 MCA (HP)	MODULE #1 MOCP	MODULE #1 WIRE SIZE	MODULE #2 MCA	MODULE #2 MOCP	MODULE #2 WIRE SIZE	MODULE #3 MCA	MODULE #3 MOCP	MODULE #3 WIRE SIZE
OU-E1	480 - 3	29.7	30AS/35AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C
OU-E2	480 - 3	29.7	30AS/35AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C
OU-E3	480 - 3	29.7	30AS/35AF	3#8 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C
OU-E4	480 - 3	23.4	60AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - E (FAN COIL)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
FC-E1	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E2	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E3	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E4	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E5	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E6	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E7	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E8	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E9	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E10	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E11	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E12	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E13	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E14	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E15	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E16	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E17	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E18	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E19	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E20	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E21	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E22	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E23	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E24	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E25	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E26	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E27	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E28	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E29	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E30	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E31	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E32	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E33	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E34	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E35	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E36	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E37	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E38	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E39	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E40	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E41	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E42	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E43	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E44	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E45	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E46	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E47	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E48	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E49	208 - 1	3.65	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E50	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E51	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E52	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E53	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E54	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E55	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E56	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E57	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E58	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E59	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-E60	208 - 1	2.93	30AS/15AF	2#12 & 1#12 GND - 3/4"C



KEYED NOTES

1. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.



SITE KEY PLAN

BUILDING E REMODEL ROOF PLAN | 3/32" = 1'-0" | 1

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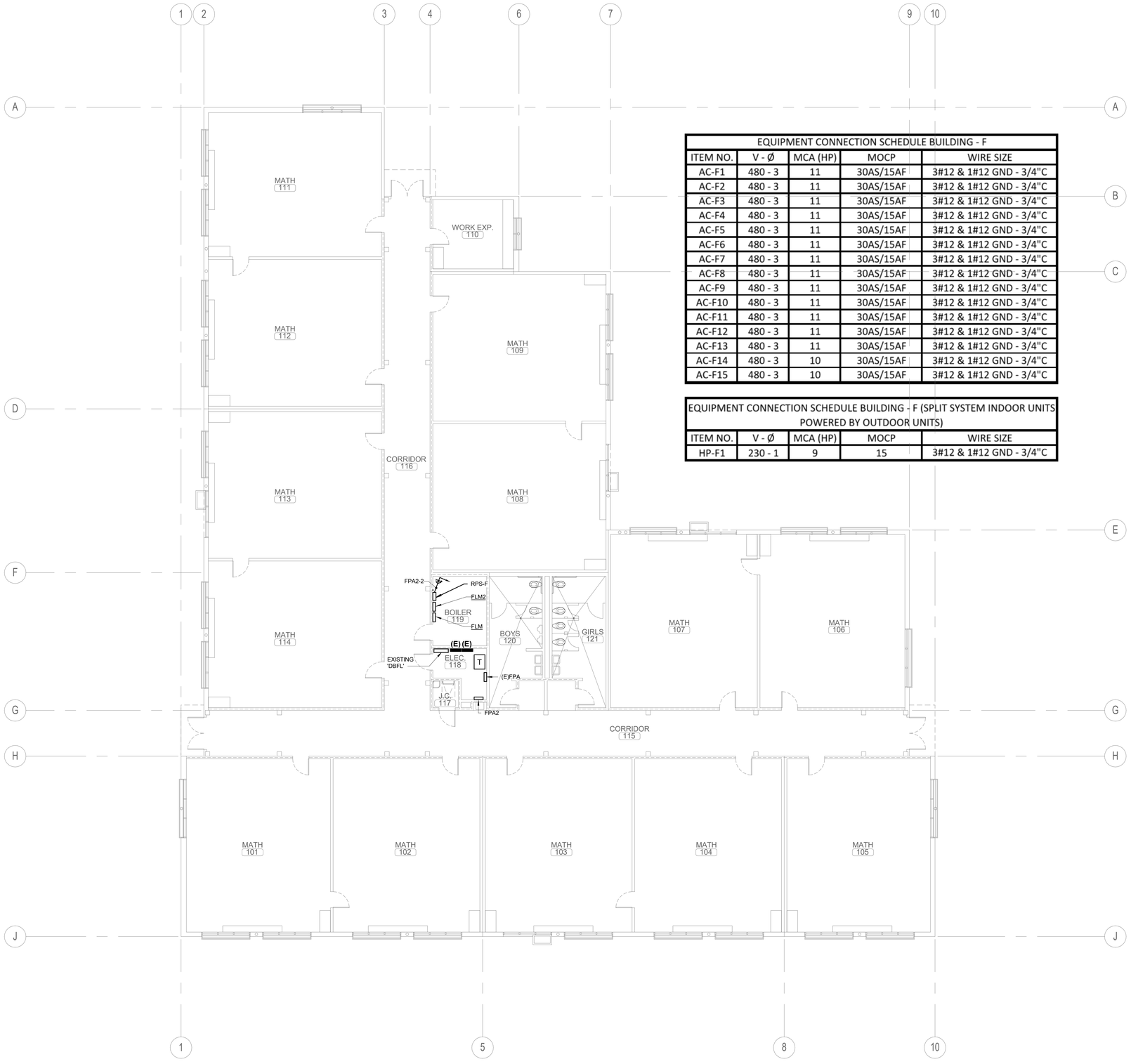
BUILDING E REMODEL ROOF PLAN

DRAWING NUMBER: **EE3.1**

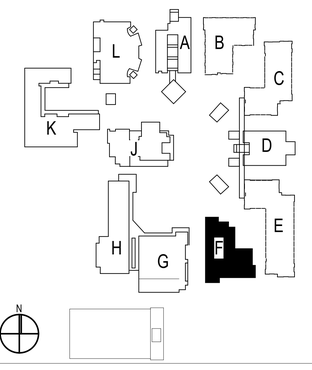


EQUIPMENT CONNECTION SCHEDULE BUILDING - F				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
AC-F1	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F2	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F3	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F4	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F5	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F6	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F7	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F8	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F9	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F10	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F11	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F12	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F13	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F14	480 - 3	10	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F15	480 - 3	10	30AS/15AF	3#12 & 1#12 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - F (SPLIT SYSTEM INDOOR UNITS POWERED BY OUTDOOR UNITS)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
HP-F1	230 - 1	9	15	3#12 & 1#12 GND - 3/4"C

KEYED NOTES

1. PREPARE TO CONNECT SUB-PANEL EPA2 TO FPA, SAFE OFF, DISCONNECT CIRCUITS 38,40,42. CONNECT NEW SUB-PANEL FPA2 TO SPARE CIRCUITS AND RELOCATE EXISTING CIRCUITS 38,40,42 TO NEW PANEL.
2. CONTRACTOR TO INTERCEPT AND EXTEND EXISTING CIRCUIT FEEDING THE EXISTING FIRE ALARM PANEL AND REUSE CIRCUIT TO FEED THE NEW FIRE ALARM PANEL. REFER TO FIRE ALARM PLANS FOR LOCATION OF EQUIPMENT. CONTRACTOR TO VERIFY FINAL LOCATION PRIOR TO ROUGH-IN.



SITE KEY PLAN

BUILDING F REMODEL FLOOR PLAN | 1/8" = 1'-0" | 1

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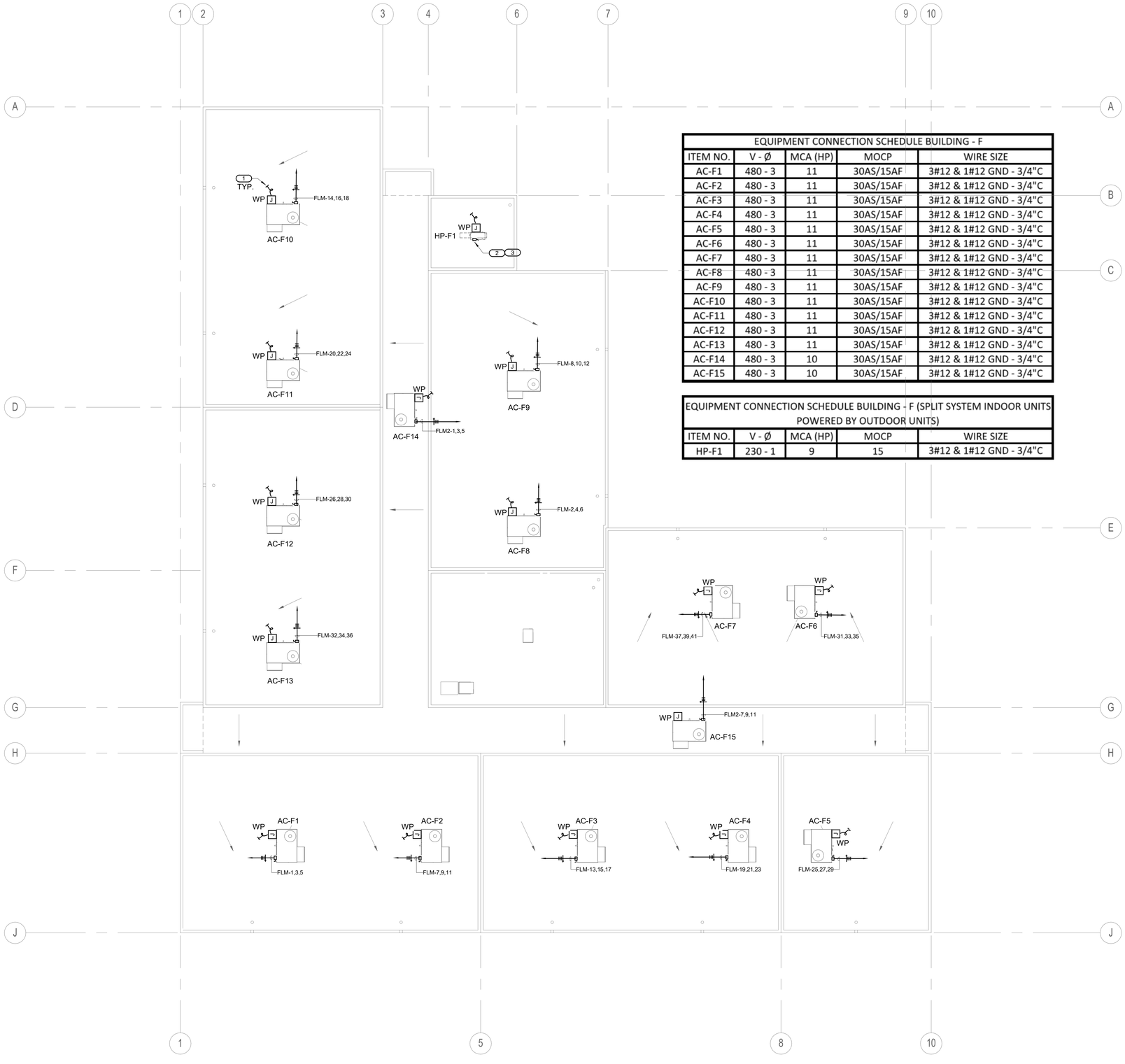
BUILDING F REMODEL FLOOR PLAN

DRAWING NUMBER: EF2.1

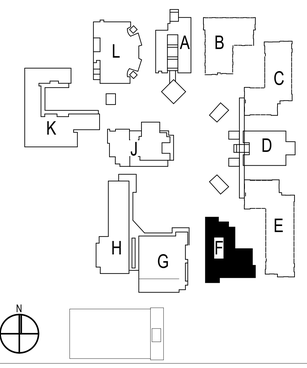


KEYED NOTES ' ⬭ '

1. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.
2. INTERCONNECT WITH ASSOCIATED INDOOR UNIT. REFER TO MECHANICAL WIRING DIAGRAMS.
3. CONTRACTOR TO PROVIDE A 208V, 1 PHASE, 15A BREAKER FROM ANY EXISTING 120/208V EXISTING PANELS WITH SPARE/SPACE TO FEED "HP-F1" LOCATED ON ROOF. REFER TO MECHANICAL PLANS FOR ADDITIONAL INFORMATION.

EQUIPMENT CONNECTION SCHEDULE BUILDING - F				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
AC-F1	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F2	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F3	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F4	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F5	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F6	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F7	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F8	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F9	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F10	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F11	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F12	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F13	480 - 3	11	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F14	480 - 3	10	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-F15	480 - 3	10	30AS/15AF	3#12 & 1#12 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - F (SPLIT SYSTEM INDOOR UNITS POWERED BY OUTDOOR UNITS)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
HP-F1	230 - 1	9	15	3#12 & 1#12 GND - 3/4"C



SITE KEY PLAN

BUILDING F REMODEL ROOF PLAN | 1/8" = 1'-0" | 1

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BUILDING F REMODEL ROOF PLAN

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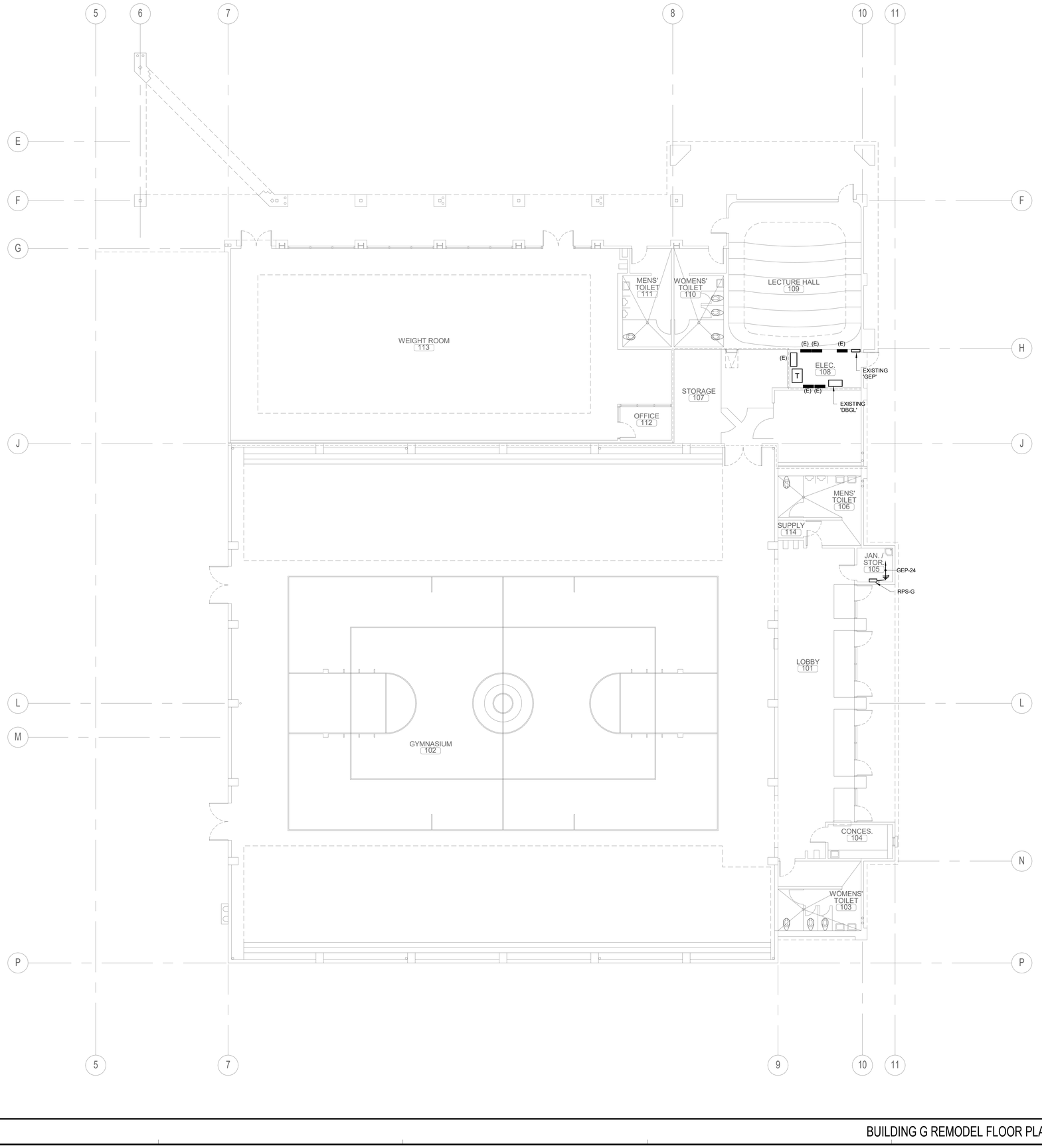
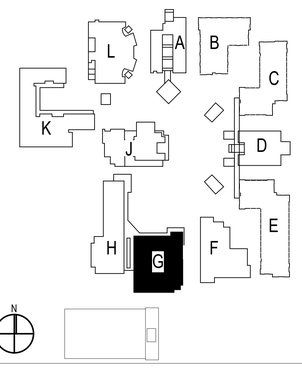


KEYED NOTES

1. NOT USED.
2. CONTRACTOR TO INTERCEPT AND EXTEND EXISTING CIRCUIT FEEDING THE EXISTING FIRE ALARM PANEL AND REUSE CIRCUIT TO FEED THE NEW FIRE ALARM PANEL. REFER TO FIRE ALARM PLANS FOR LOCATION OF EQUIPMENT. CONTRACTOR TO VERIFY FINAL LOCATION PRIOR TO ROUGH-IN.

BUILDING G REMODEL FLOOR PLAN | 1/8" = 1'-0" | 1



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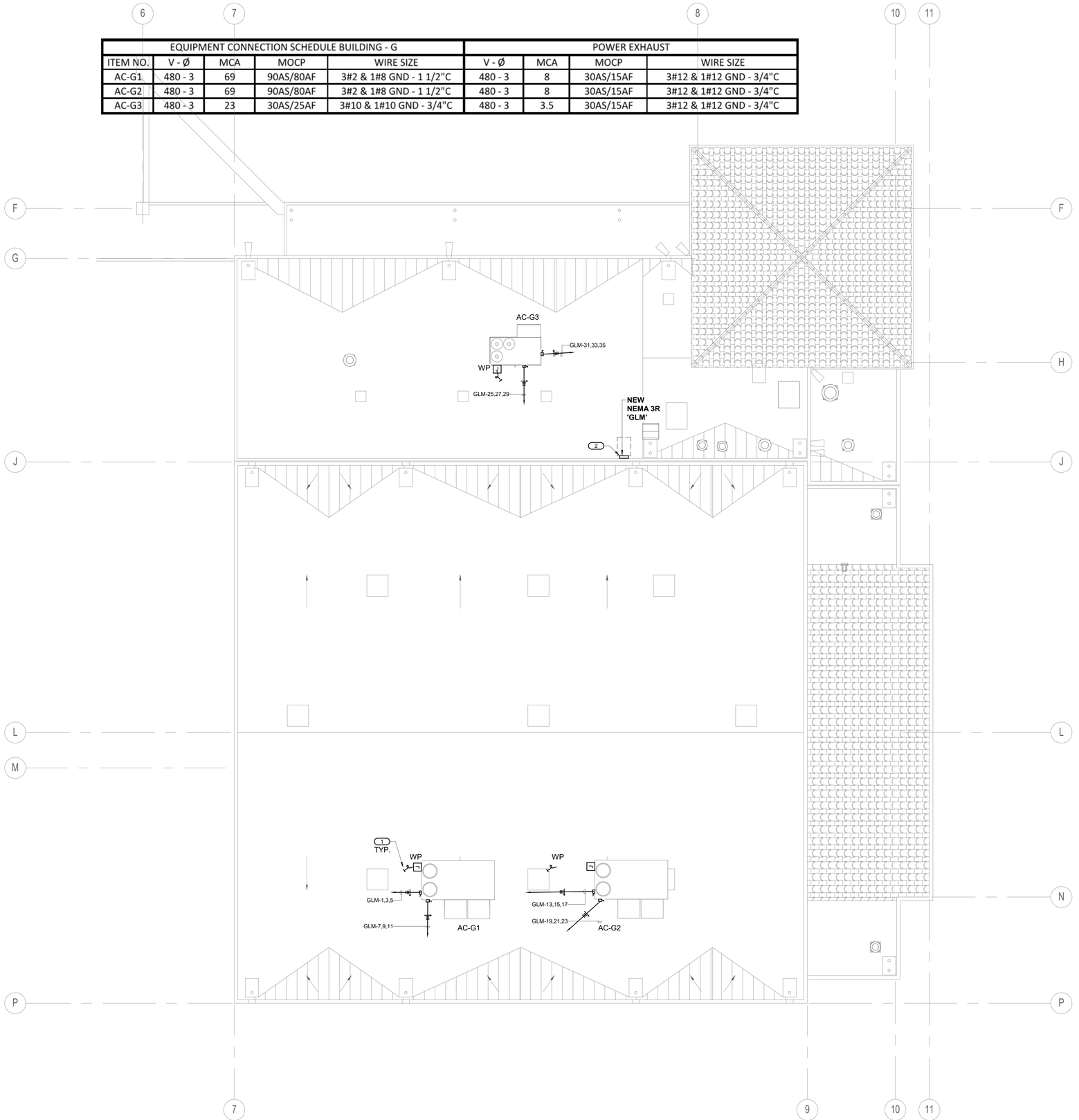
BUILDING G REMODEL FLOOR PLAN

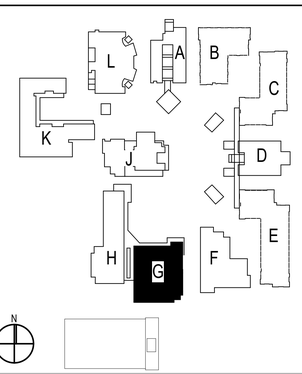
DRAWING NUMBER: EG2.2

EQUIPMENT CONNECTION SCHEDULE BUILDING - G					POWER EXHAUST			
ITEM NO.	V - Ø	MCA	MOCP	WIRE SIZE	V - Ø	MCA	MOCP	WIRE SIZE
AC-G1	480 - 3	69	90AS/80AF	3#2 & 1#8 GND - 1 1/2"C	480 - 3	8	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-G2	480 - 3	69	90AS/80AF	3#2 & 1#8 GND - 1 1/2"C	480 - 3	8	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-G3	480 - 3	23	30AS/25AF	3#10 & 1#10 GND - 3/4"C	480 - 3	3.5	30AS/15AF	3#12 & 1#12 GND - 3/4"C



KEYED NOTES

1. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.
2. CONTRACTOR TO PROVIDE AMBIENT COMPENSATED BREAKERS.



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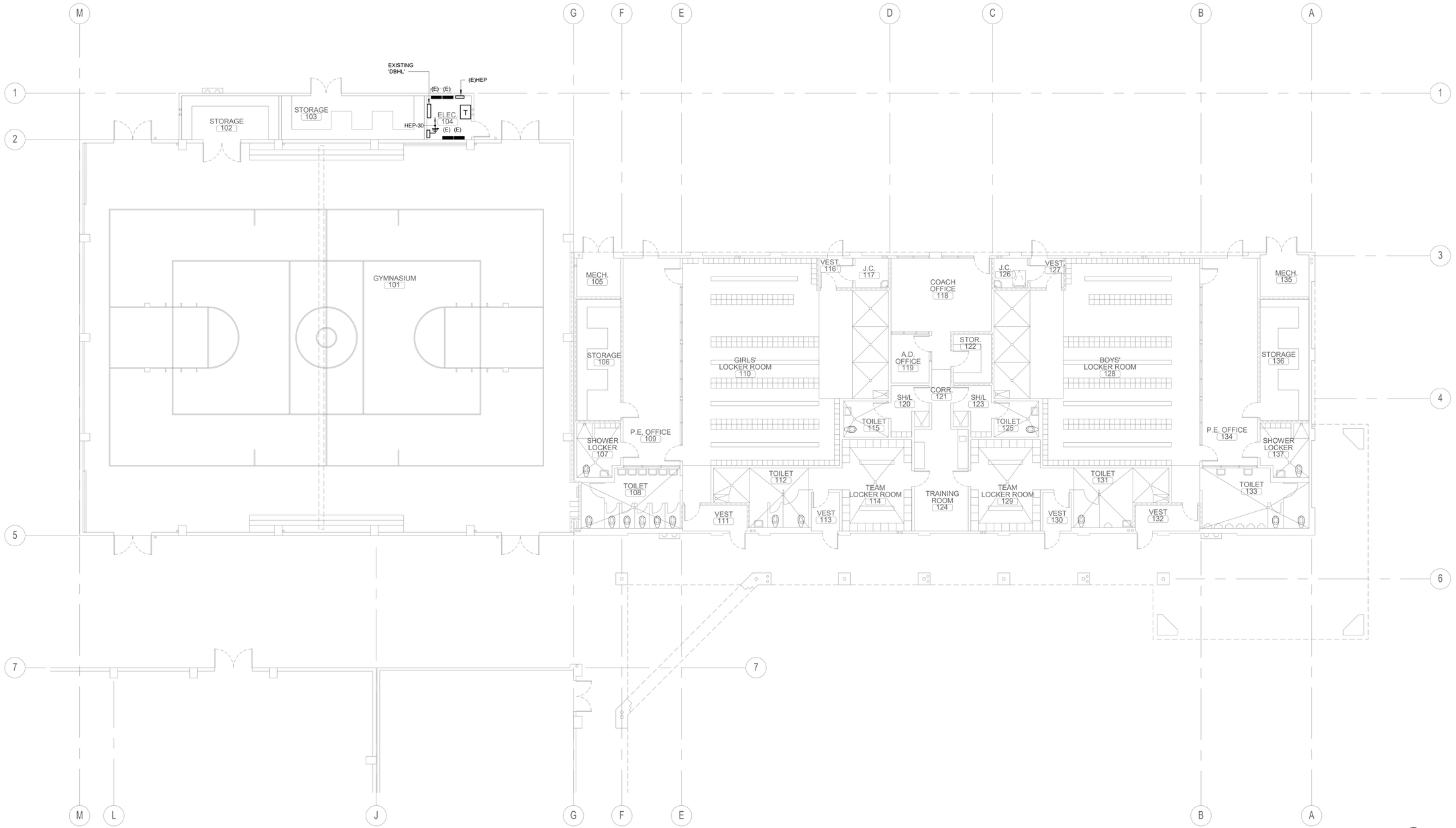
BUILDING G REMODEL ROOF PLAN

DRAWING NUMBER: **EG3.1**



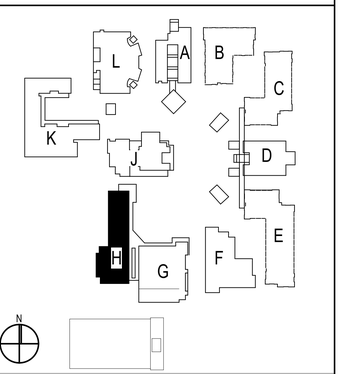
BUILDING H REMODEL FLOOR PLAN | 1/8" = 1'-0" | 1

EQUIPMENT CONNECTION SCHEDULE BUILDING - H					POWER EXHAUST			
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE	V - Ø	MCA (HP)	MOCP	WIRE SIZE
AC-H1	480 - 3	51	60AS/60AF	3#4 & 1#10 GND - 1 1/4"C	480 - 3	8	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-H2	480 - 3	51	60AS/60AF	3#4 & 1#10 GND - 1 1/4"C	480 - 3	8	30AS/15AF	3#12 & 1#12 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - H (DOAS UNITS)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
DOAS-H1	480 - 3	19	30AS/25AF	3#12 & 1#12 GND - 3/4"C
DOAS-H2	480 - 3	16	30AS/20AF	3#12 & 1#12 GND - 3/4"C
DOAS-H3	480 - 3	19	30AS/25AF	3#12 & 1#12 GND - 3/4"C

KEYED NOTES ' ⬭ '

1. NOT USED.
2. CONTRACTOR TO INTERCEPT AND EXTEND EXISTING CIRCUIT FEEDING THE EXISTING FIRE ALARM PANEL AND REUSE CIRCUIT TO FEED THE NEW FIRE ALARM PANEL. REFER TO FIRE ALARM PLANS FOR LOCATION OF EQUIPMENT. CONTRACTOR TO VERIFY FINAL LOCATION PRIOR TO ROUGH-IN.



SITE KEY PLAN

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REGISTERED PROFESSIONAL ENGINEER
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Exp. 6-30-2021
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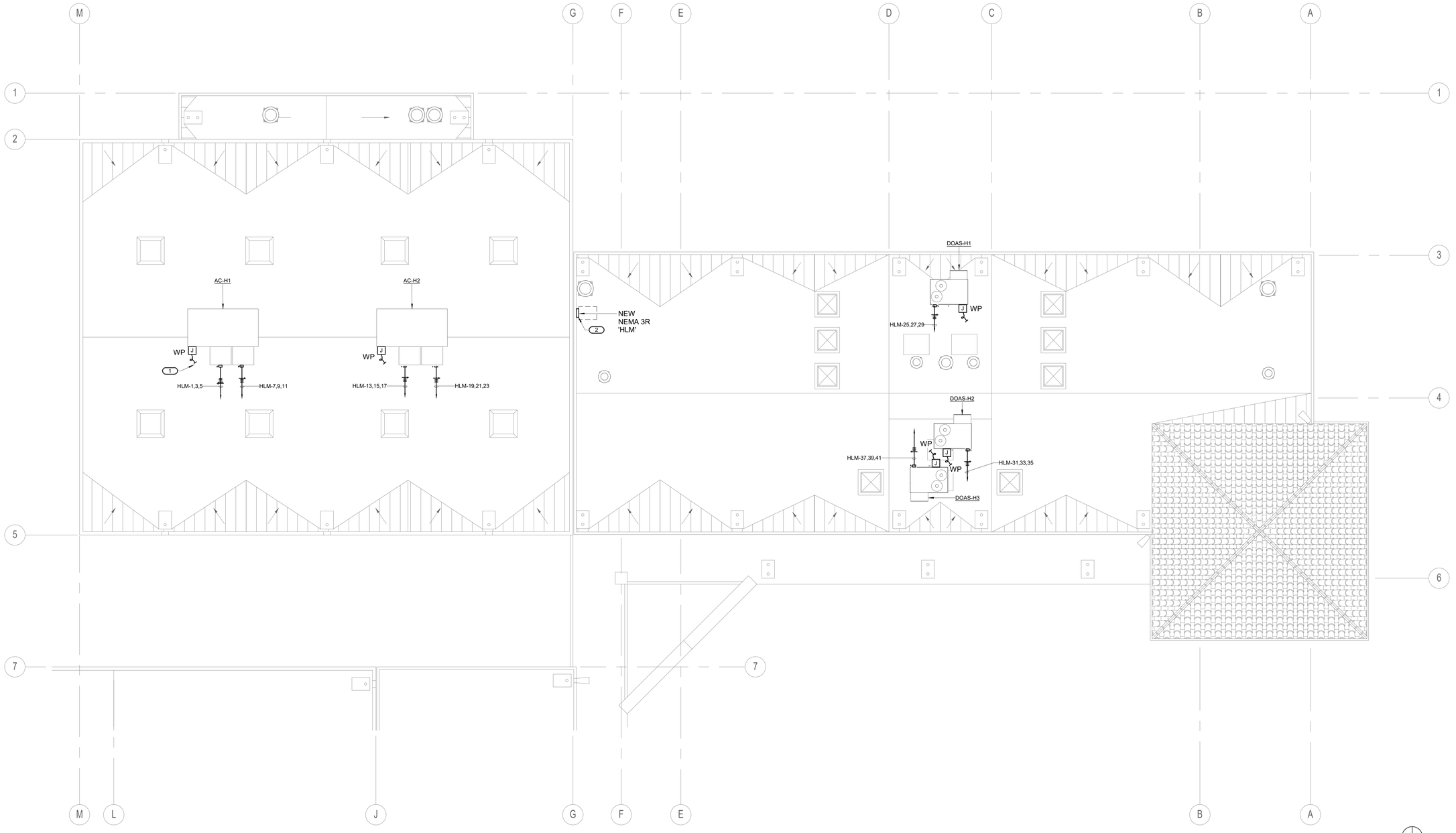
PROJECT NUMBER: Project Number	

BUILDING H REMODEL FLOOR PLAN

DRAWING NUMBER: EH2.2



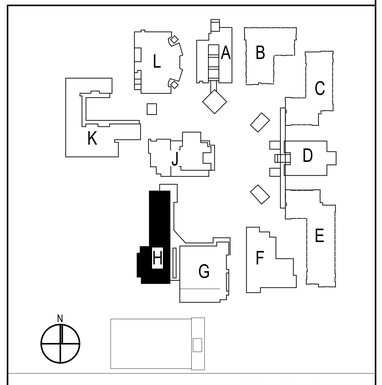
BUILDING H REMODEL ROOF PLAN | 1/8" = 1'-0" | 1

EQUIPMENT CONNECTION SCHEDULE BUILDING - H					POWER EXHAUST			
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE	V - Ø	MCA (HP)	MOCP	WIRE SIZE
AC-H1	480 - 3	51	60AS/60AF	3#4 & 1#10 GND - 1 1/4"C	480 - 3	8	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-H2	480 - 3	51	60AS/60AF	3#4 & 1#10 GND - 1 1/4"C	480 - 3	8	30AS/15AF	3#12 & 1#12 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - H (DOAS UNITS)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
DOAS-H1	480 - 3	19	30AS/25AF	3#12 & 1#12 GND - 3/4"C
DOAS-H2	480 - 3	16	30AS/20AF	3#12 & 1#12 GND - 3/4"C
DOAS-H3	480 - 3	19	30AS/25AF	3#12 & 1#12 GND - 3/4"C

KEYED NOTES ' ⬭ '

1. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.
2. CONTRACTOR TO PROVIDE AMBIENT COMPENSATED BREAKERS.



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BUILDING H REMODEL ROOF PLAN

DRAWING NUMBER: EH3.1

6/12/2020 8:03:37 AM
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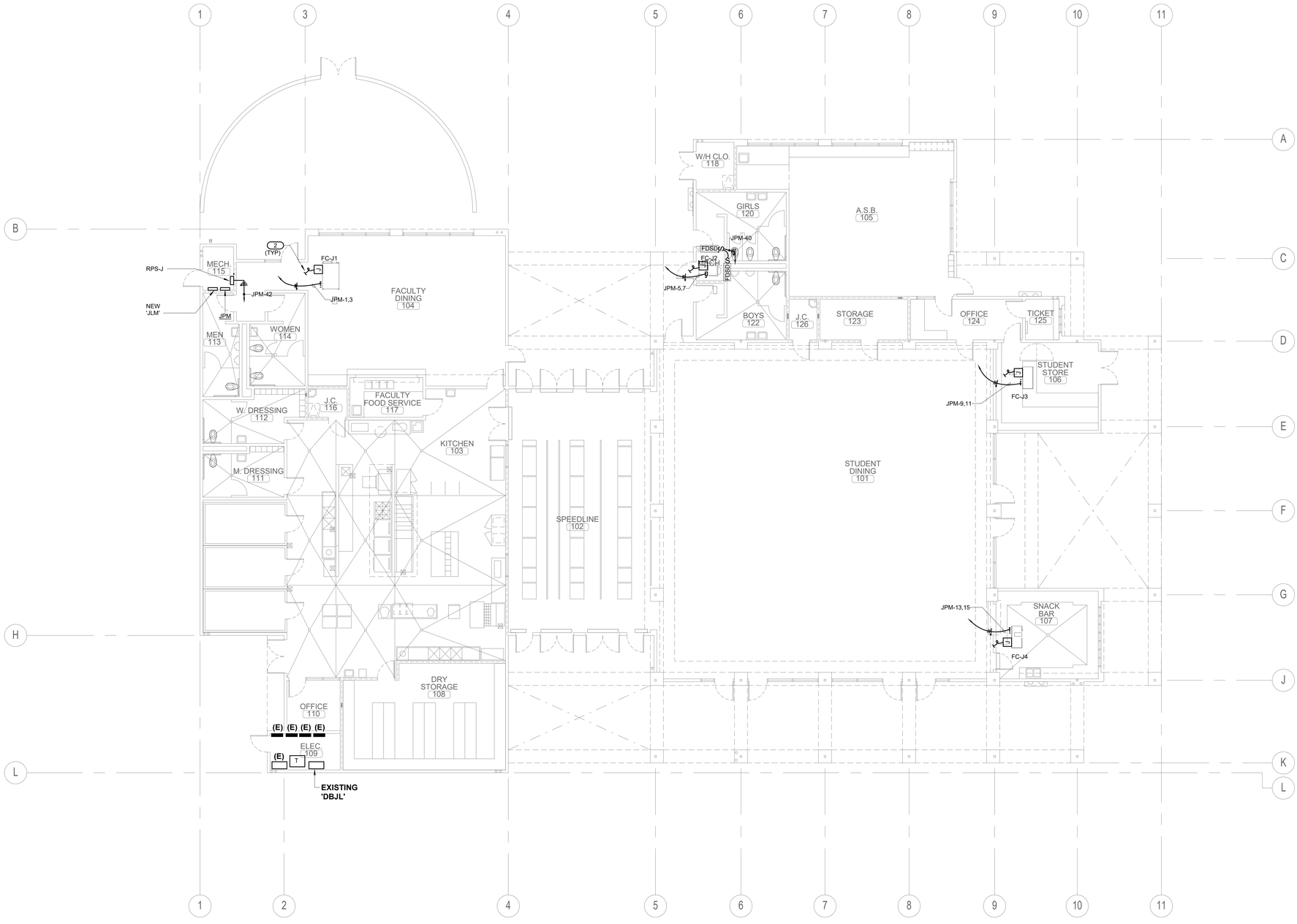


KEYED NOTES

1. NOT USED.
2. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.
3. CONTRACTOR TO INTERCEPT AND EXTEND EXISTING CIRCUIT FEEDING THE EXISTING FIRE ALARM PANEL AND REUSE CIRCUIT TO FEED THE NEW FIRE ALARM PANEL. REFER TO FIRE ALARM PLANS FOR LOCATION OF EQUIPMENT. CONTRACTOR TO VERIFY FINAL LOCATION PRIOR TO ROUGH-IN.

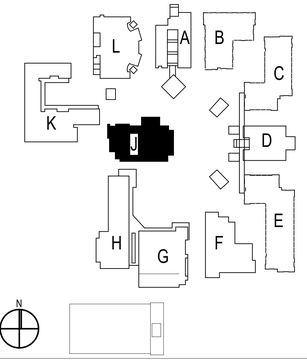
EQUIPMENT CONNECTION SCHEDULE BUILDING - J					POWER EXHAUST			
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE	V - Ø	MCA (HP)	MOCP	WIRE SIZE
AC-J1	480 - 3	25	30AS/30AF	3#10 & 1#10 GND - 3/4"C	480 - 3	5.6	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-J2	480 - 3	25	30AS/30AF	3#10 & 1#10 GND - 3/4"C	480 - 3	5.6	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-J3	480 - 3	20	30AS/25AF	3#10 & 1#10 GND - 3/4"C	480 - 3	2.4	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-J4	480 - 3	26	30AS/30AF	3#10 & 1#10 GND - 3/4"C	480 - 3	8.1	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-J5	480 - 3	26	30AS/30AF	3#10 & 1#10 GND - 3/4"C	480 - 3	8.1	30AS/15AF	3#12 & 1#12 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - J				
ITEM NO.	V - Ø	MODULE #1 MCA (HP)	MODULE #1 MOCP	MODULE #1 WIRE SIZE
OU-J1	480 - 3	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - J (FAN COIL)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
FC-J1	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-J2	208 - 1	6.1	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-J3	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-J4	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C

N

BUILDING J REMODEL FLOOR PLAN | 1/8" = 1'-0" | 1



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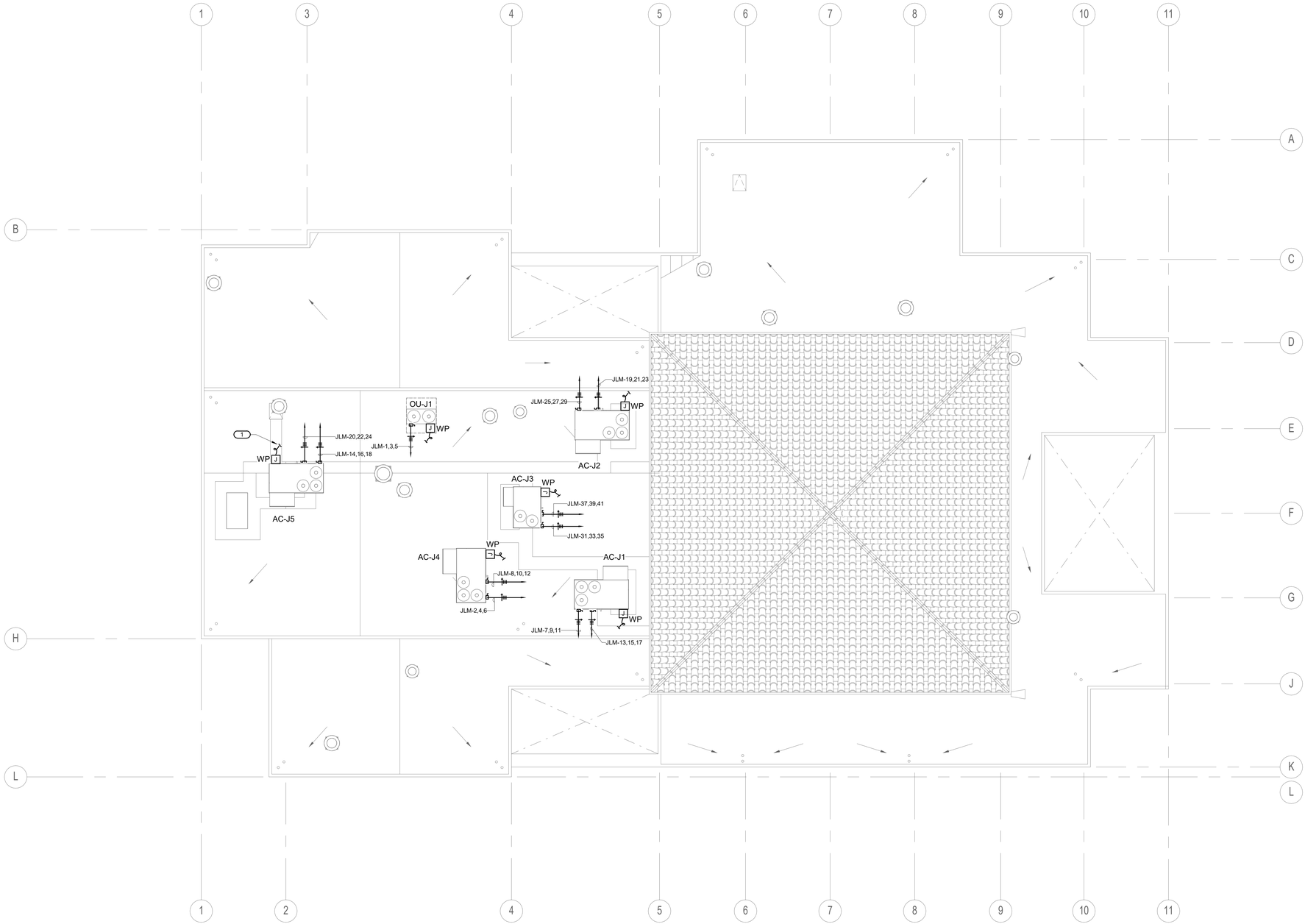
BUILDING J REMODEL FLOOR PLAN

DRAWING NUMBER: EJ2.2



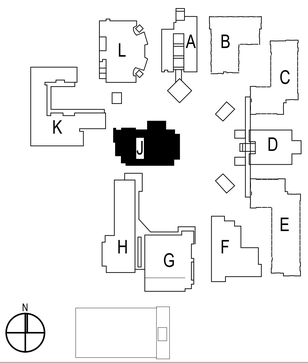
EQUIPMENT CONNECTION SCHEDULE BUILDING - J					POWER EXHAUST			
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE	V - Ø	MCA (HP)	MOCP	WIRE SIZE
AC-J1	480 - 3	25	30AS/30AF	3#10 & 1#10 GND - 3/4"C	480 - 3	5.6	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-J2	480 - 3	25	30AS/30AF	3#10 & 1#10 GND - 3/4"C	480 - 3	5.6	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-J3	480 - 3	20	30AS/25AF	3#10 & 1#10 GND - 3/4"C	480 - 3	2.4	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-J4	480 - 3	26	30AS/30AF	3#10 & 1#10 GND - 3/4"C	480 - 3	8.1	30AS/15AF	3#12 & 1#12 GND - 3/4"C
AC-J5	480 - 3	26	30AS/30AF	3#10 & 1#10 GND - 3/4"C	480 - 3	8.1	30AS/15AF	3#12 & 1#12 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - J				
ITEM NO.	V - Ø	MODULE #1 MCA (HP)	MODULE #1 MOCP	MODULE #1 WIRE SIZE
OU-J1	480 - 3	23.4	30AS/30AF	3#10 & 1#10 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - J (FAN COIL)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
FC-J1	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-J2	208 - 1	6.1	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-J3	208 - 1	2.8	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-J4	208 - 1	1.9	30AS/15AF	2#12 & 1#12 GND - 3/4"C

KEYED NOTES

1. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.



SITE KEY PLAN

BUILDING J REMODEL ROOF PLAN | 1/8" = 1'-0" | 1

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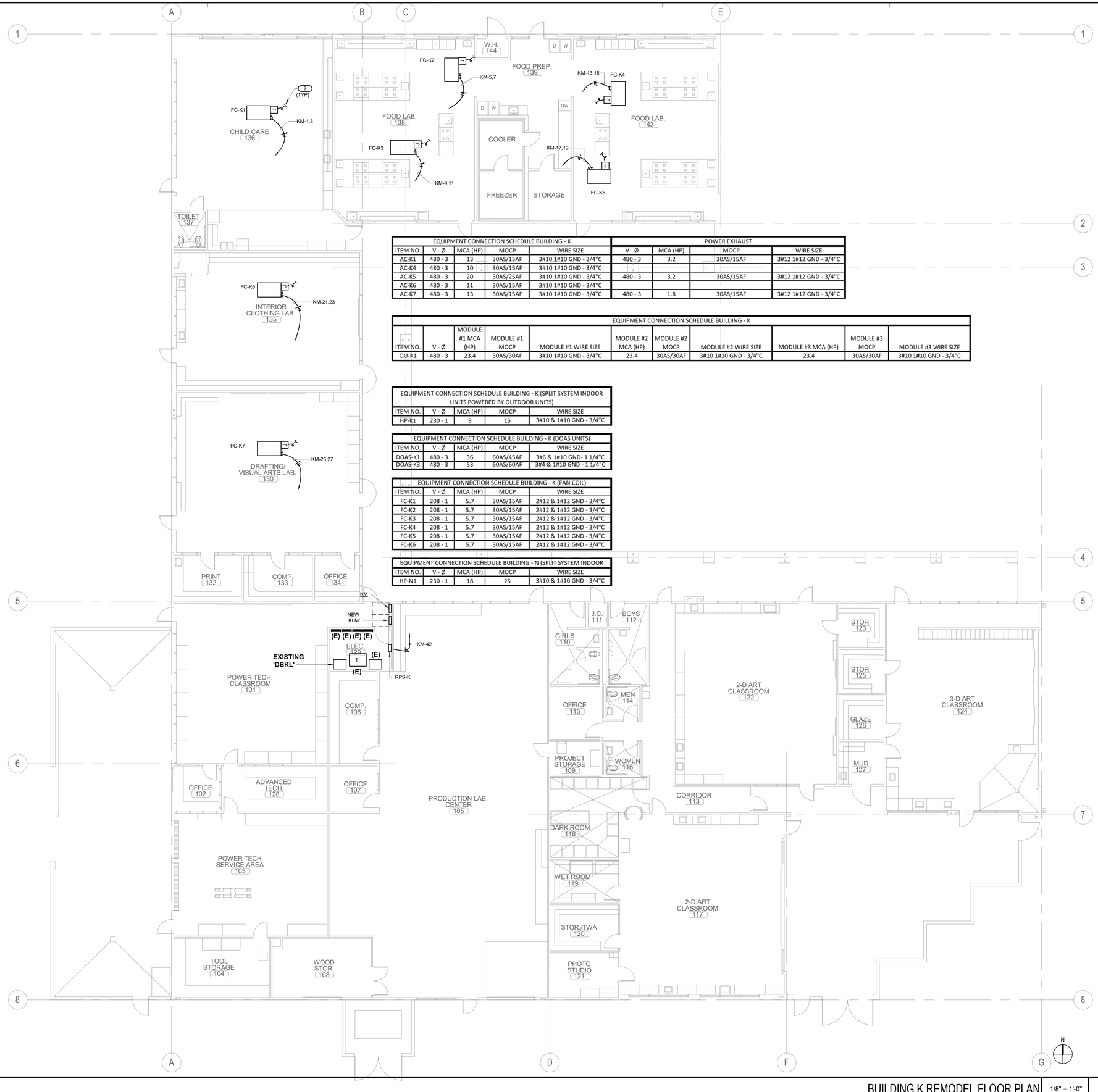
PROJECT NUMBER: Project Number	

BUILDING J REMODEL ROOF PLAN

DRAWING NUMBER: **EJ3.1**



EQUIPMENT CONNECTION SCHEDULE BUILDING - K					POWER EXHAUST			
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE	V - Ø	MCA (HP)	MOCP	WIRE SIZE
AC-K1	480 - 3	13	30AS/15AF	3#10 1#10 GND - 3/4"C	480 - 3	3.2	30AS/15AF	3#12 1#12 GND - 3/4"C
AC-K4	480 - 3	10	30AS/15AF	3#10 1#10 GND - 3/4"C				
AC-K5	480 - 3	20	30AS/25AF	3#10 1#10 GND - 3/4"C	480 - 3	3.2	30AS/15AF	3#12 1#12 GND - 3/4"C
AC-K6	480 - 3	11	30AS/15AF	3#10 1#10 GND - 3/4"C				
AC-K7	480 - 3	13	30AS/15AF	3#10 1#10 GND - 3/4"C	480 - 3	1.8	30AS/15AF	3#12 1#12 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - K										
ITEM NO.	V - Ø	MODULE #1 MCA (HP)	MODULE #1 MOCP	MODULE #1 WIRE SIZE	MODULE #2 MCA (HP)	MODULE #2 MOCP	MODULE #2 WIRE SIZE	MODULE #3 MCA (HP)	MODULE #3 MOCP	MODULE #3 WIRE SIZE
OU-K1	480 - 3	23.4	30AS/30AF	3#10 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 1#10 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - K (SPLIT SYSTEM INDOOR UNITS POWERED BY OUTDOOR UNITS)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
HP-K1	230 - 1	9	15	3#10 & 1#10 GND - 3/4"C

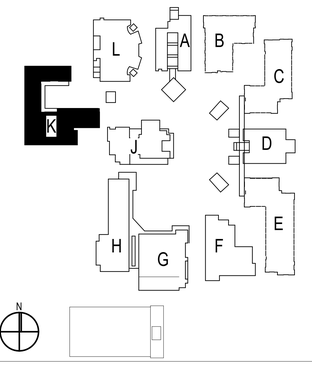
EQUIPMENT CONNECTION SCHEDULE BUILDING - K (DOAS UNITS)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
DOAS-K1	480 - 3	36	60AS/45AF	3#6 & 1#10 GND- 1 1/4"C
DOAS-K3	480 - 3	53	60AS/60AF	3#4 & 1#10 GND - 1 1/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - K (FAN COIL)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
FC-K1	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-K2	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-K3	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-K4	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-K5	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-K6	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - N (SPLIT SYSTEM INDOOR				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
HP-N1	230 - 1	18	25	3#10 & 1#10 GND - 3/4"C

KEYED NOTES

1. NOT USED.
2. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.
3. CONTRACTOR TO INTERCEPT AND EXTEND EXISTING CIRCUIT FEEDING THE EXISTING FIRE ALARM PANEL AND REUSE CIRCUIT TO FEED THE NEW FIRE ALARM PANEL. REFER TO FIRE ALARM PLANS FOR LOCATION OF EQUIPMENT. CONTRACTOR TO VERIFY FINAL LOCATION PRIOR TO ROUGH-IN.



SITE KEY PLAN

BUILDING K REMODEL FLOOR PLAN | 1/8" = 1'-0" | 1

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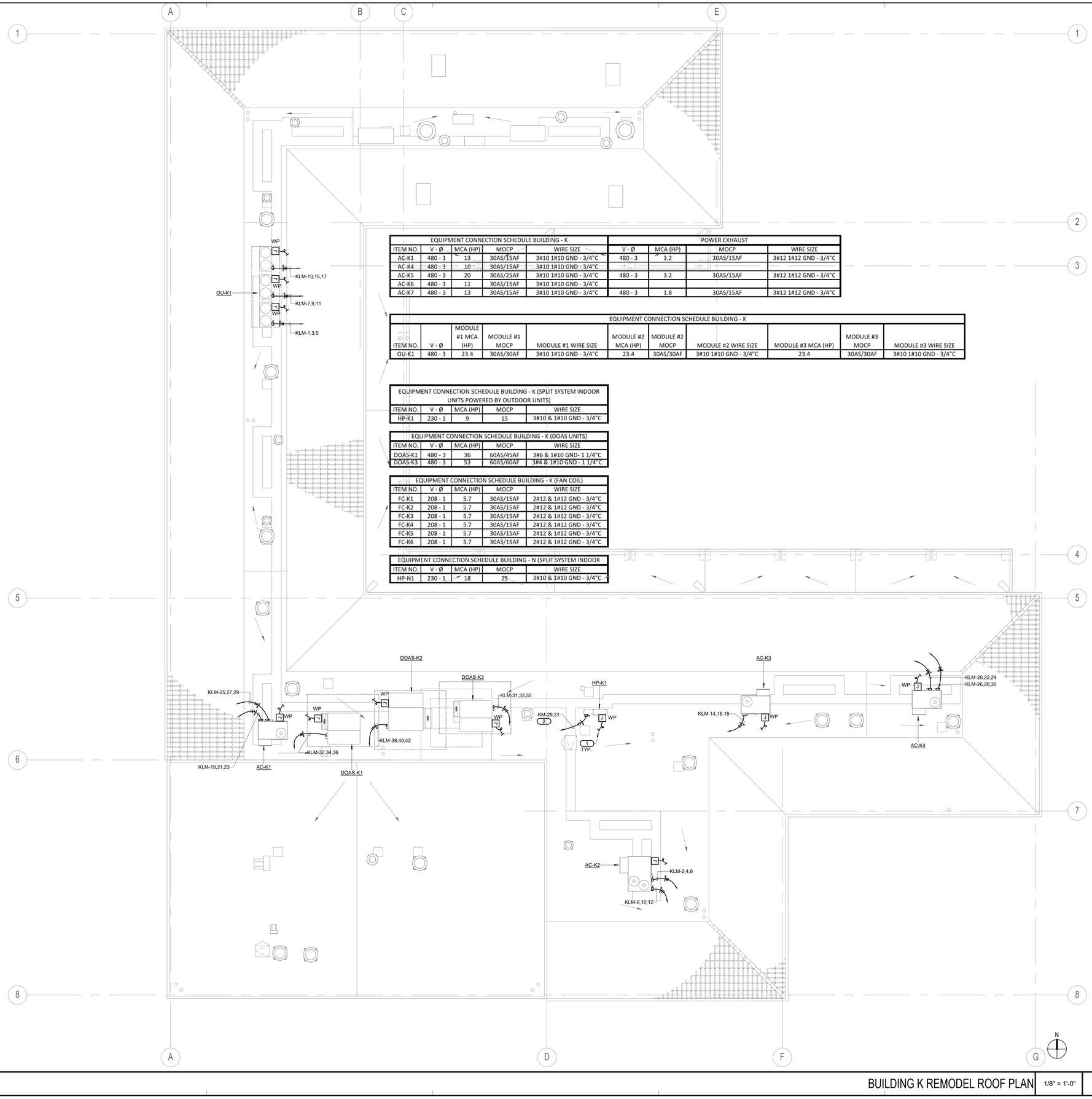
PROJECT NUMBER: Project Number	

BUILDING K REMODEL FLOOR PLAN

DRAWING NUMBER: EK2.1



EQUIPMENT CONNECTION SCHEDULE BUILDING - K					POWER EXHAUST			
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE	V - Ø	MCA (HP)	MOCP	WIRE SIZE
AC-K1	480 - 3	13	30AS/15AF	3#10 1#10 GND - 3/4"C	480 - 3	3.2	30AS/15AF	3#12 1#12 GND - 3/4"C
AC-K4	480 - 3	10	30AS/15AF	3#10 1#10 GND - 3/4"C				
AC-K5	480 - 3	20	30AS/25AF	3#10 1#10 GND - 3/4"C	480 - 3	3.2	30AS/15AF	3#12 1#12 GND - 3/4"C
AC-K6	480 - 3	11	30AS/15AF	3#10 1#10 GND - 3/4"C				
AC-K7	480 - 3	13	30AS/15AF	3#10 1#10 GND - 3/4"C	480 - 3	1.8	30AS/15AF	3#12 1#12 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - K										
ITEM NO.	V - Ø	MODULE #1 MCA (HP)	MODULE #1 MOCP	MODULE #1 WIRE SIZE	MODULE #2 MCA (HP)	MODULE #2 MOCP	MODULE #2 WIRE SIZE	MODULE #3 MCA (HP)	MODULE #3 MOCP	MODULE #3 WIRE SIZE
OU-K1	480 - 3	23.4	30AS/30AF	3#10 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 1#10 GND - 3/4"C	23.4	30AS/30AF	3#10 1#10 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - K (SPLIT SYSTEM INDOOR UNITS POWERED BY OUTDOOR UNITS)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
HP-K1	230 - 1	9	15	3#10 & 1#10 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - K (DOAS UNITS)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
DOAS-K1	480 - 3	36	60AS/45AF	3#6 & 1#10 GND- 1 1/4"C
DOAS-K3	480 - 3	53	60AS/60AF	3#4 & 1#10 GND - 1 1/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - K (FAN COIL)				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
FC-K1	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-K2	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-K3	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-K4	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-K5	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C
FC-K6	208 - 1	5.7	30AS/15AF	2#12 & 1#12 GND - 3/4"C

EQUIPMENT CONNECTION SCHEDULE BUILDING - N (SPLIT SYSTEM INDOOR				
ITEM NO.	V - Ø	MCA (HP)	MOCP	WIRE SIZE
HP-N1	230 - 1	18	25	3#10 & 1#10 GND - 3/4"C

KEYED NOTES

1. PROVIDE 3/4"C.O.(S) TO RESPECTIVE DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON MECHANICAL PLANS.
2. INTERCONNECT WITH ASSOICATED INDOOR UNIT. REFER TO MECHANICAL WIRING DIAGRAMS.

BUILDING K REMODEL ROOF PLAN | 1/8" = 1'-0" | 1

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PROJECT NUMBER: Project Number	

BUILDING K REMODEL ROOF PLAN

DRAWING NUMBER: **EK3.1**

FIRE ALARM NOTES

1. THIS IS A COMPLETE AUTOMATIC FIRE ALARM SYSTEM PLAN SUBMITTAL PER 2019 CFC 907.2.3 AND 2013 CBC 907.2.3.
2. THE NEW FIRE ALARM SYSTEM EXTENSION IS CONFIGURED TO A FULLY AUTOMATIC SYSTEM, AS IS THE EXISTING INSTALLATION.
3. THE FIRE ALARM SYSTEM INDICATED ON THESE DRAWINGS IS APPROVED BY CALIFORNIA STATE FIRE MARSHAL AND SHALL BE INSTALLED AS DESCRIBED ON THESE DRAWINGS AND AS NOTED IN THE SPECIFICATIONS. ANY CHANGES TO THESE PLANS, I.E., DELETION, RELOCATION OR ADDING OF DEVICES SHALL BE RESUBMITTED TO THE STATE FIRE MARSHAL FOR APPROVAL.

   INSTALLATION OF FIRE ALARM SYSTEM MAY START AFTER IMEG RECEIVES THESE APPROVED DRAWINGS. A.O.R. SHALL STAMP AND SIGN ALL DRAWINGS.
4. ALL WIRING AND INITIATING DEVICES SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION (F/A PANEL TO SUPERVISE ALL CIRCUITS AND INITIATING DEVICES).
5. WIRING SHALL NOT BE LOOPED THROUGH DEVICES; WIRE MUST BE CUT FOR IN AND FOR OUT.
6. ALL WIRING TO BE IN CONDUIT.
7. ALL TERMINATIONS IN JUNCTION BOXES, PULL BOXES AND TERMINAL CABINETS SHALL BE ON BOX MOUNTED TERMINAL BLOCKS. DO NOT USE WIRE NUTS FOR SPLICING. DO NOT SPLICE WIRES IN ANY BOXES.
8. ALL CONDUIT SIZES INDICATED IN DRAWINGS ARE MINIMUM. CONTRACTOR TO ADJUST SIZE FOR FIELD CONDITIONS BUT SHALL NOT BE SMALLER THAN 3/4 INCH.
9. ALL FIRE ALARM WIRING MUST TEST FREE OF OPENS, SHORTS AND GROUNDS.
10. FIRE ALARM DRAWINGS ARE SCHEMATIC IN NATURE ONLY. CONTRACTOR TO ROUTE CONDUIT AS FIELD CONDITIONS INDICATE.
11. CONDUIT AND JUNCTION/BACK BOXES ARE NOT TO BE USED FOR UNRELATED WIRING.
12. THE SYSTEM SHALL CONFORM TO TITLES 19 AND 24 AS APPLICABLE TO THIS PROJECT.
13. UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF, AND IN A MANNER ACCEPTABLE TO, THE ENFORCING AGENCY.
14. THE CONTRACTOR SHALL REPROGRAM AND CERTIFY ADDRESSABLE FIRE ALARM CONTROL PANEL TO ACCOMMODATE ADDITIONAL DEVICES.
15. FIRE ALARM SYSTEM SHALL BE INSTALLED BY FACTORY AUTHORIZED REPRESENTATIVE.
16. CONDUCTOR LENGTHS AND DEVICE QUANTITIES ARE SHOWN SOLELY FOR CALCULATION PURPOSES ONLY, AND SHALL NOT BE USED FOR BID TAKE-OFF.
17. THE FIRE ALARM SYSTEM SHALL CONFORM TO ARTICLE 760 OF CALIFORNIA ELECTRICAL CODE. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND SPECIFICATIONS, INCLUDING CALIFORNIA STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAVE BEEN APPROVED BY DSA-ORS. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE FIRE AUTHORITY HAVING JURISDICTION.
18. PENETRATIONS OF PIPES, CONDUITS, ETC., IN WALLS REQUIRING PROTECTED OPENINGS SHALL BE FIRE STOPPED. FIRE STOP MATERIAL SHALL BE A TEST ASSEMBLY ACCEPTABLE TO DSA-ORS.
19. ALL FIRE ALARM AND COMMUNICATIONS WIRES AND CABLES SHALL BE ONE CONTINUOUS LENGTH FROM A BUILDING TERMINAL CABINET TO ANOTHER BUILDING TERMINAL CABINET OR JUNCTION BOX. ABSOLUTELY NO SUBGRADE SPLICES WILL BE PERMITTED! PROVIDE TERMINAL BLOCKS WITH MOUNTING IN TERMINAL CABINETS ONLY AS REQUIRED.
20. EVERY ALARM SIGNALING DEVICE INSTALLED SHALL BE OF THE SAME BASIC TYPE (BELLS, HORNS, CHIMES, SPEAKERS, ETC.) AS ALL OTHER SIGNALING DEVICES IN THE FACILITY. (EXCEPTION: ANY SIGNALING DEVICES REQUIRED FOR THE DEAF OR HEARING IMPAIRED PER 2019 NFPA-72.
21. INSULATED CONDUCTORS USED IN WET LOCATIONS SHALL BE (1) LEAD-COVERED, (2) TYPES RHW,TW, THW, THHW, THWN, XHHW; OR (3) OF A TYPE LISTED FOR USE IN WET LOCATIONS. CABLES OF ONE OR MORE CONDUCTORS USED IN WET LOCATIONS SHALL BE OF A TYPE LISTED FOR USE IN WET LOCATIONS. CONDUCTORS USED FOR DIRECT BURIAL APPLICATIONS SHALL BE OF A TYPE LISTED FOR SUCH USE (PER 2019 CEC ARTICLE 310).
22. THE FIRE ALARM DEVICE SUPPLIER SHALL FURNISH ALL SURFACE MOUNT ENCLOSURES FOR PULLSTATIONS AND SKIRTS FOR ALL VISUAL AND AUDIO VISUAL DEVICES TO CONCEAL 4S BACK BOXES.
23. AFTER THE SYSTEM IS COMPLETED, ALL ADDRESSABLE DEVICES SHALL BE PROGRAMMED AT THE FACP ACCORDING TO THE ACTUAL BUILDING ROOM NUMBER. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE SCHOOL DISTRICT TO OBTAIN ACCURATE ROOM NUMBER INFORMATION.
24. POWER SERVICES SHALL BE ON A DEDICATED BRANCH CIRCUIT WITH A RED MARKING & LOCKING DEVICE AND IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL".
25. PROVIDE CALIFORNIA TEMPORAL-THREE TONE DISTINCTIVE FIRE ALARM SOUND. (2019 CFC SEC. 907.6.2.1.3 & 2019 NFPA 72 SEC. 18.4.2.1)
26. AUDIBLE FIRE ALARM SOUND LEVEL SHALL BE AT LEAST 15 dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL IN ALL OCCUPIABLE AREAS (2019 NFPA 72 SEC. 18.4.3.1) (i.e. CLASSROOM AVERAGE AMBIENT ROOM NOISE IS45dBA PLUS 15dBA EQUAL = 60dBA MINIMUM ALARM TONE REQUIRED)
27. STROBES SHALL FLASH AT A RATE NOT EXCEEDING TWO FLASHES PER SECOND NOR BE LESS THAN ONE FLASH EVERY SECOND. (2019 NFPA 72 SEC. 18.5.3.1)
28. FINAL FIRE ALARM TEST SHALL BE MADE WITH THE DSA INSPECTOR OF RECORD (IOR). LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL ALARM TESTING AND SHALL ASSIST/WITNESS SUCH TESTING WHEN ABLE.
29. FIRE ALARM CONTRACTOR SHALL PROVIDE A "RECORD OF COMPLETION" TO THE INSPECTOR OF RECORD (IOR)DSA AFTER COMPLETION OF OPERATION ACCEPTANCE TEST. (2019 NFPA 72 SEC. 7.5.6. & 2019 CFC 901.6.2)
30. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED, NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.
31. THE INSTALLING CONTRACTOR SHALL PROVIDE A STATEMENT OF COMPLIANCE ALONG WITH THE REQUEST FOR ACCEPTANCE TESTING PER 2019 NFPA-72.
32. OCCUPANCY OF THE BUILDINGS IS PROHIBITED UNTIL THE FIRE ALARM SYSTEM IS COMPLETED, TESTED, AND APPROVED PER 2019 NFPA 72.
33. SMOKE DETECTORS SHALL BE TESTED PER THE METHOD SHOWN IN 2019 CFC.
34. REACCEPTANCE TESTING SHALL BE PERFORMED AS REQUIRED BY 2019 NFPA 72.
35. ALL BACKUP BATTERIES FOR FIRE ALARM SYSTEM EQUIPMENT SHALL BE VISUALLY CHECKED FOR DATE OF INSTALLATION. ALL BATTERIES OVER 5 YEARS OLD SHALL BE REPLACED WITH NEW BATTERIES OF THE SAME MANUFACTURER, TYPE, AND AMP-HOUR RATING.
36. FIRE ALARM SYSTEMS SHALL BE SUPERVISED BY AN APPROVED UL LISTED CENTRAL STATION, OR REMOTE STATION (UUFX) MONITORING COMPANY (UUJS) (2019 CFC, 907.2.3.5, 907.6.5.3.)
37. A SINGLE FAULT ON A PATHWAY CONNECTED TO THE ADDRESSABLE DEVICES SHALL NOT CAUSE THE LOSS OF MORE THAN 50 ADDRESSABLE DEVICES (2019 NFPA 72 SECTION 23.6.1)
38. THE DISTRICT SHALL RETAIN RECORD DRAWINGS ON THE PREMISES FOR A MINIMUM OF 3 YEARS, IN A DEDICATED FIRE ALARM RECORD DOCUMENT CABINET IN ACCORDANCE WITH NFPA 72, 7.7.2.
    - EVERY NEW FIRE ALARM SYSTEM SHALL PROVIDE A DOCUMENTATION CABINET, INSTALLED AT THE SYSTEM CONTROL PANEL OR OTHER APPROVED LOCATION.
    - THE DOCUMENTATION CABINET SHALL BE PROMINENTLY LABELED, "SYSTEM RECORD DOCUMENTS".
    - ALL RECORED AND TESTING DOCUMENTATION SHALL BE STORED IN THE CABINET.
    - CONTENTS SHALL BE ACCESSIBLE BY AUTHORIZED PERSONNEL ONLY.
    - WHERE CABINET IS INSTALLED IN A LOCATION OTHER THAN THE SYSTEM CONTROL UNIT, ITS LOCATION SHALL BE IDENTIFIED AT THE SYSTEM CONTROL UNIT.

    SYSTEM DOCUMENTS AS APPLICABLE:

    - RECORD DRAWINGS/AS-BUILTS
    - EQUIPMENT CUT SHEETS & CA SFM LISTINGS
    - ALTERNATIVE MEANS AND METHODS
    - PERFORMANCE BASED DESIGN DOCUMENTATION (NFPA 72, 7.3.7)
    - SYSTEM RECORED OF COMPLETION & ANY SUPPLEMENTAL INSPECTION AND TESTING DOCUMENTATION (NFPA 72, 7.8.2)
    - EMERGENCY RESPONSE PLAN (NFPA 72, 7.3.8)
    - EVALUATION DOCUMENTATION (NFPA 72, 7.3.9)
    - SOFTWARE & FIRMWARE CONTROL DOCUMENTATION (NFPA 72, 23.2.2)
39. EXTRA DEVICES

    DUE TO UNFORESEEN CONDITION, THE FOLLOWING EXTRA DEVICES SHALL BE INCLUDED IN THE CONTRACTORS BID:

    a. CO/SMOKE DETECTORS 10 EACH
    b. DUCT DETECTORS 10 EACH

    FOR BID PURPOSES, ALLOW TWENTY (20) FEET OF CONDUIT AND ITS SUPPORT SYSTEM TO INCLUDE FITTINGS, WIRES AND LABOR FOR EACH OF THE DEVICES LISTED ABOVE.
40. EXISTING FIRE ALARM SYSTEM SHALL REMAIN OPERATIONAL UNTIL THE NEW FIRE ALARM SYSTEM IS INSTALLED AND TESTED BY THE SCHOOL DISTRICT; OTHERWIRE 24-HOURS FIRE WATCH SHALL BE PROVIDED BY THE FIRE ALARM CONTRACTOR, PER CFC SECTION 901.4.

SCOPE OF WORK

THE SCOPE OF THE WORK AS STATED BELOW IS FOR DSA PLAN REVIEW PURPOSE ONLY AND DOES NOT CONSTITUTE A DETAILED AND FULL EXPLANATION OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

1. REMOVE EXISTING HEAT REZNOR UNITS AND MISCELLANEOUS HEATING EQUIPMENT, AND REPLACE WITH NEW AIR CONDITIONING UNITS FOR BUILDINGS A,B,C,D,E,F,G,H AND J. REMOVE EXISTING ROOF CURBS AND REPLACE WITH NEW ROOF CURBS. REMOVE PORTIONS OF ROOF TO ADD ADDITIONAL BEAMS TO SUPPORT NEW ROOF CURBS.
2. PATCH BACK ROOFING MATERIAL AS REQUIRED.
3. ADD NEW FIRE ALARM DEVICES AS REQUIRED. CO/SMOKE DETECTORS WHERE GAS BURNING UNIT OCCURS, DUCT DETECTOR FOR HVAC UNIT SHUTDOWN OVER 2000 CFM, AND FIRE SMOKE DAMPERS.

FIRE ALARM SYMBOL LIST

SYMBOL	MFG.	PART NO.	DESCRIPTION	REMARKS	CSFM LISTING NO.
FACP-A	SIMPLEX	4010	EXISTING FIRE ALARM CONTROL PANEL A # 56948	PROVIDE WITH BATTERY CABINET SIZED PER BATTERIES SHOWN PROVIDE WITH FLUSH CABINET. PROVIDE ALL THE REQUIRED COMPONENTS FOR NETWORKING AND CABLINGS BETWEEN THE (E) FACP AND THE NEW MAIN FIRE ALARM CONTROL PANEL.	-
FACP-A	SILENT KNIGHT	6820EVS	FIRE ALARM CONTROL PANEL WITH EMERGENCY EVACUATION, DIGITAL ALARM COMMUNICATOR TRANSMITTER, UDACT AND IPDACT2		7165-0559:0500
DCC	SILENT KNIGHT	HWF2-COM	DIGITAL CELLULAR COMMUNICATOR		7300-1645:0511
FAA	SILENT KNIGHT	6860	FIRE ALARM REMOTE ANNUNCIATOR		7165-0559:0500
RPS	SILENT KNIGHT	5496 6A	REMOTE POWER SUPPLY		7300-1645:0171
FATC	-	-	FIRE ALARM TERMINAL CABINET	24"x36"x6"	-
FADC	SPACE AGE	-	FIRE ALARM DOCUMENT CABINET	12"x13"x2 1/4"D	-
	SILENT KNIGHT	SK-FIRE-CO-W B200S-WH	CARBON MONOXIDE DETECTOR SOUNDER DETECTOR BASE		7272-0559:0517 7300-1653:0213
	SILENT KNIGHT	SK-DUCT	DUCT SMOKE DETECTOR WITH REMOTE INDICATOR LIGHTS AND TOGGLE SWITCH FOR DAMPERS	WITH FCP-951 AND SAMPLING TUBE	3242-0559:0162
C	SILENT KNIGHT	SK-CONTROL	CONTROL MODULE		7300-0559:0155
R	SILENT KNIGHT	SK-RELAY	RELAY MODULE		7300-0559:0155
M	SILENT KNIGHT	SK-MONITOR	MONITOR MODULE		7300-0559:0155
FDSD	POTTORFF	FSD-142	FIRE DAMPER SMOKE DAMPER		3225-0368:110 3225-0368:111
———		WESTPENN	FIRE ALARM CONDUIT RUN. 3/4"C. MIN. UNLESS INDICATED OTHERWISE IN THE DWGS. REFER TO DWGS. & SPECS. REQUIRED WIRING.		7160-0859:0103 7160-0859:0102 7161-0859:0101
			END OF LINE RESISTOR "EOLR"		

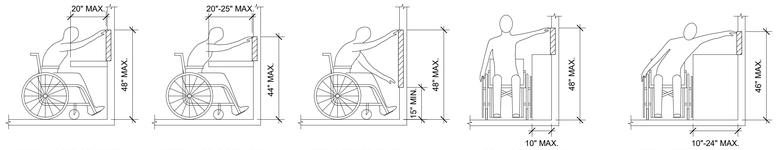
FIRE ALARM WIRE DESIGNATION CHART

SYMBOL	DESCRIPTION	NUMBER OF CONDUCTORS	SIZE	TYPE
D	SIGNALING LINE CIRCUIT (SLC) - ABOVE GRADE	UNSHIELDED PAIR	#16	WEST PENN #0990 WEST PENN #0991
DD	SIGNALING LINE CIRCUIT (SLC) - BELOW GRADE	AQUA SEAL TWISTED UNSHIELDED PAIR	#16	WEST PENN #AQC225
SS	VOICE EVAC. CIRCUIT - BELOW GRADE	AQUA SEAL TWISTED SHIELDED PAIR	#16	WEST PENN #AQC224
P	24 POWER	TWO	#16	THHN/THWN
T	COMMUNICATION CABLING	TWO	#18	CAT 5

NOTE: 1. SYMBOL INDICATES QTY & I.D. OF CIRCUIT. I.E. 2N2, INDICATES (2) 2#12 CI CABLE FOR N CIRCUIT 2.
2. ALL CONDUIT USED FOR FIRE ALARM SHALL BE 3/4" MINIMUM ABOVE GRADE AND 1" MINIMUM BELOW GRADE UNLESS NOTED OTHERWISE.
3. ALL WIRING USED IN UNDERGROUND CONDUITS SHALL BE LISTED FOR WET AREA APPLICATION, IN IN ACCORDANCE WITH CEC 760.

SEQUENCE OF OPERATION

	BUILDING POWER FAILURE	CO DETECTOR	OPEN SHORT OR GROUND	DUCT DETECTOR
ANNUNCIATE AT FIRE CONTROL PANEL (ALARM)	NO	NO	YES	YES
ANNUNCIATE AT FIRE CONTROL PANEL (SUPERVISION)	NO	YES	NO	NO
ANNUNCIATE AT FIRE CONTROL PANEL (TROUBLE)	YES	NO	NO	NO
SOUND CONTROL PANEL TROUBLE BUZZER	NO	NO	YES	YES
ACTIVATE AUDIBLE ALARM SIGNALS (UNTIL SILENCE)	NO	NO	NO	YES
ACTIVATE VISUAL ALARM SIGNALS (UNTIL RESET)	NO	NO	NO	YES
ACTIVATE EMERGENCY VOICE SYSTEM SIGNALS (UNTIL RESET)	NO	NO	NO	YES
REPORT TO CENTRAL STATION	YES	YES	NO	YES
ANNUNCIATE AT REMOTE ANNUNCIATOR PANEL (ALARM)	NO	NO	YES	YES
ANNUNCIATE AT REMOTE ANNUNCIATOR PANEL (SUPERVISION)	NO	YES	NO	NO
ANNUNCIATE AT REMOTE ANNUNCIATOR PANEL (TROUBLE)	YES	NO	NO	NO
CLOSE FIRE-SMOKE DAMPERS	NO	NO	NO	YES
SHUTDOWN HVAC UNIT	NO	NO	NO	YES
SOUND LOCAL ALARM	NO	YES	NO	NO



INSTALL ABOVE COUNTER DEVICE AT 44" ABOVE FINISHED FLOOR.
INSTALL ABOVE COUNTER DEVICE AT 40" ABOVE FINISHED FLOOR.
INSTALL DEVICE AT 18" ABOVE FINISHED FLOOR.
ADA GUIDELINES - FRONT ACCESS
INSTALL DEVICE AT 44" ABOVE FINISHED FLOOR.
INSTALL DEVICE AT 42" ABOVE FINISHED FLOOR.
ADA GUIDELINES - SIDE ACCESS

ADA STANDARDS FOR ACCESSIBLE DESIGN

FIRE ALARM SHEET INDEX

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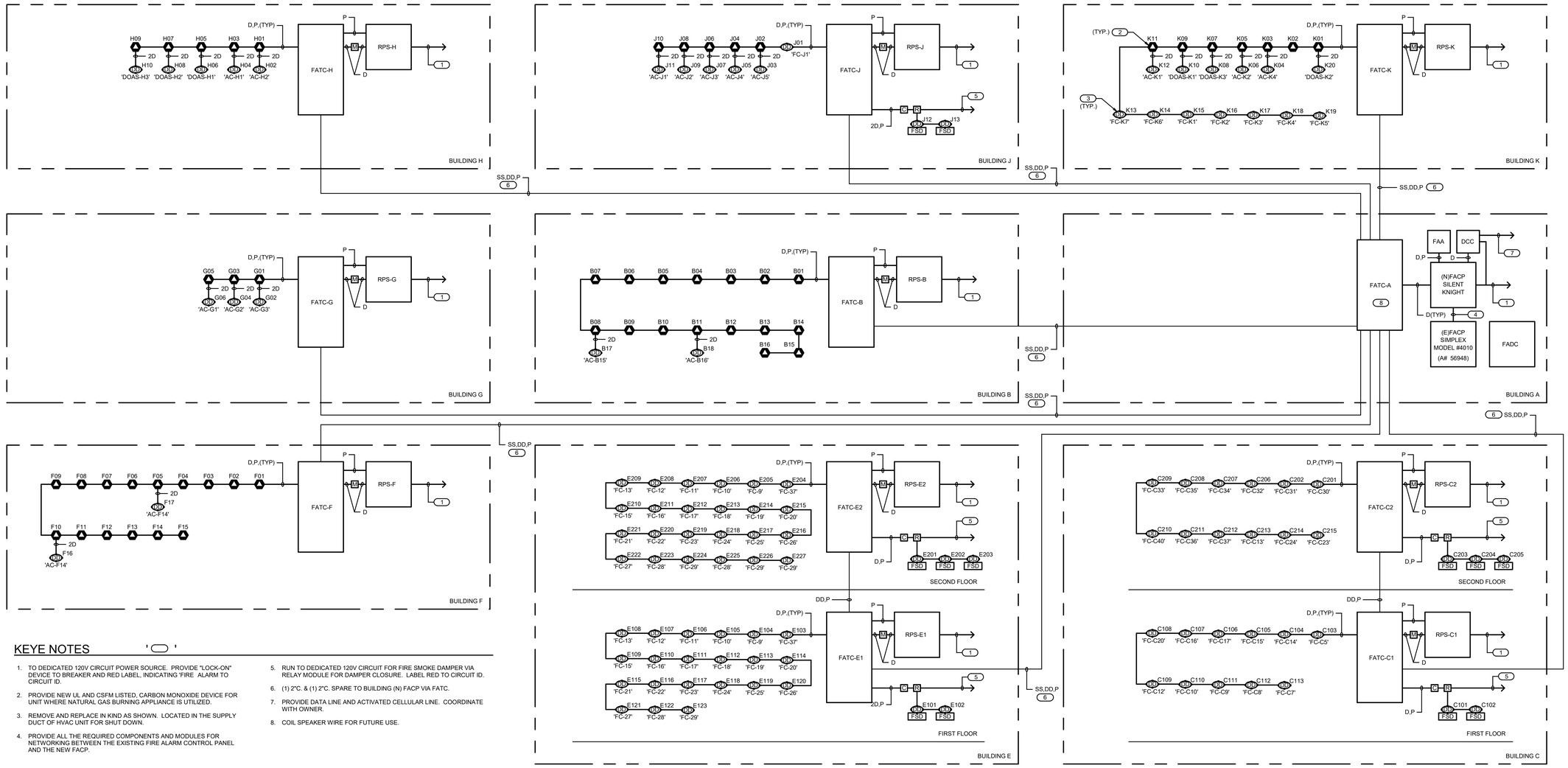
FIRE ALARM COVERSHEET

DRAWING NUMBER: **FA0.1**



KEYE NOTES '⬭'

1. TO DEDICATED 120V CIRCUIT POWER SOURCE. PROVIDE "LOCK-ON" DEVICE TO BREAKER AND RED LABEL, INDICATING 'FIRE ALARM TO CIRCUIT ID.
2. PROVIDE NEW UL AND CSFM LISTED, CARBON MONOXIDE DEVICE FOR UNIT WHERE NATURAL GAS BURNING APPLIANCE IS UTILIZED.
3. REMOVE AND REPLACE IN KIND AS SHOWN. LOCATED IN THE SUPPLY DUCT OF HVAC UNIT FOR SHUT DOWN.
4. PROVIDE ALL THE REQUIRED COMPONENTS AND MODULES FOR NETWORKING BETWEEN THE EXISTING FIRE ALARM CONTROL PANEL AND THE NEW FACP.
5. RUN TO DEDICATED 120V CIRCUIT FOR FIRE SMOKE DAMPER VIA RELAY MODULE FOR DAMPER CLOSURE. LABEL RED TO CIRCUIT ID.
6. (1) 2"C. & (1) 2"C. SPARE TO BUILDING (N) FACP VIA FATC.
7. PROVIDE DATA LINE AND ACTIVATED CELLULAR LINE. COORDINATE WITH OWNER.
8. COIL SPEAKER WIRE FOR FUTURE USE.

BATTERY CALCULATION FOR FIRE ALARM CONTROL PANEL AND REMOTE POWER SUPPLIES

DESCRIPTION	(N)FACP					RPS-B					RPS-C1					RPS-C2					RPS-E1					RPS-E2				
		SUPERVISORY CURRENT		ALARM CURRENT			SUPERVISORY CURRENT		ALARM CURRENT			SUPERVISORY CURRENT		ALARM CURRENT			SUPERVISORY CURRENT		ALARM CURRENT			SUPERVISORY CURRENT		ALARM CURRENT			SUPERVISORY CURRENT		ALARM CURRENT	
	QTY	UNIT	TOTAL	UNIT	TOTAL	QTY	UNIT	TOTAL	UNIT	TOTAL	QTY	UNIT	TOTAL	UNIT	TOTAL	QTY	UNIT	TOTAL	UNIT	TOTAL	QTY	UNIT	TOTAL	UNIT	TOTAL	QTY	UNIT	TOTAL	UNIT	TOTAL
FACP/VECP	1	0.190000	0.190000	0.250000	0.250000																									
DIGITAL CELLULAR COMMUNICATOR	1	0.020000	0.020000	0.025000	0.025000																									
FIRE ALARM ANNUNCIATOR	1	0.020000	0.020000	0.025000	0.025000																									
REMOTE POWER SUPPLY						1	0.01000	0.01000	0.01000	0.01000	1	0.01000	0.01000	0.01000	0.01000	1	0.01000	0.01000	0.01000	0.01000	1	0.01000	0.01000	0.01000	0.01000	1	0.01000	0.01000	0.01000	0.01000
CO DETECTOR	51	0.000200	0.010200	0.002000	0.102000	16	0.000200	0.003200	0.002000	0.032000	0	0.000200	0.000000	0.002000	0.000000	0	0.000200	0.000000	0.002000	0.000000	0	0.000200	0.000000	0.002000	0.000000	0	0.000200	0.000000	0.002000	0.000000
DUCT DETECTOR	111	0.000300	0.033300	0.006500	0.721500	2	0.000300	0.000600	0.006500	0.013000	13	0.000300	0.003900	0.006500	0.084500	15	0.000300	0.004500	0.006500	0.097500	23	0.000300	0.006900	0.006500	0.149500	27	0.000300	0.008100	0.006500	0.175500
MONITOR MODULE	10	0.002400	0.024000	0.002400	0.002400																									
CONTROL MODULE	5	0.000375	0.001875	0.006500	0.032500																									
RELAY MODULE	5	0.000375	0.001875	0.006500	0.032500																									
TOTAL			0.280		1.191			0.014		0.055			0.014		0.095			0.015		0.108			0.017		0.160			0.018		0.186
		0.280 A		1.191 A			0.014 A		0.055 A			0.014 A		0.095 A			0.015 A		0.108 A			0.017 A		0.160 A			0.018 A		0.186 A	
		x 24 H		x 0.25 H			x 24 H		x 0.25 H			x 24 H		x 0.25 H			x 24 H		x 0.25 H			x 24 H		x 0.25 H			x 24 H		x 0.25 H	
		6.712 AH		0.298 AH			0.331 AH		0.014 AH			0.334 AH		0.024 AH			0.348 AH		0.027 AH			0.406 AH		0.040 AH			0.434 AH		0.046 AH	
FIRE ALARM DEVICE QUANTITIES ARE		6.712 AH, STANDBY					0.331 AH, STANDBY					0.334 AH, STANDBY					0.348 AH, STANDBY					0.406 AH, STANDBY					0.434 AH, STANDBY			
SHOWN SOLELY FOR ENGINEERING		0.298 AH, ALARM					0.014 AH, ALARM					0.024 AH, ALARM					0.027 AH, ALARM					0.040 AH, ALARM					0.046 AH, ALARM			
CALCULATIONS. IT SHALL NOT BE USED		7.009 AH, TOTAL					0.345 AH, TOTAL					0.357 AH, TOTAL					0.375 AH, TOTAL					0.445 AH, TOTAL					0.481 AH, TOTAL			
FOR BID QUANTITY TAKEOFFS.																														
		26 AH, BATTERY CAPACITY					7 AH, BATTERY CAPACITY					7 AH, BATTERY CAPACITY					7 AH, BATTERY CAPACITY					7 AH, BATTERY CAPACITY					7 AH, BATTERY CAPACITY			
		18.991 AH, SPARE CAPACITY					6.655 AH, SPARE CAPACITY					6.643 AH, SPARE CAPACITY					6.625 AH, SPARE CAPACITY					6.555 AH, SPARE CAPACITY					6.519 AH, SPARE CAPACITY			

BATTERY CALCULATION FOR FIRE ALARM CONTROL PANEL AND REMOTE POWER SUPPLIES

DESCRIPTION	RPS-F					RPS-G					RPS-H					RPS-J					RPS-K				
		SUPERVISORY CURRENT		ALARM CURRENT			SUPERVISORY CURRENT		ALARM CURRENT			SUPERVISORY CURRENT		ALARM CURRENT			SUPERVISORY CURRENT		ALARM CURRENT			SUPERVISORY CURRENT		ALARM CURRENT	
	QTY	UNIT	TOTAL	UNIT	TOTAL	QTY	UNIT	TOTAL	UNIT	TOTAL	QTY	UNIT	TOTAL	UNIT	TOTAL	QTY	UNIT	TOTAL	UNIT	TOTAL	QTY	UNIT	TOTAL	UNIT	TOTAL
FACP/VECP																									
DIGITAL CELLULAR COMMUNICATOR																									
FIRE ALARM ANNUNCIATOR																									
REMOTE POWER SUPPLY	1	0.01000	0.01000	0.01000	0.01000	1	0.01000	0.01000	0.01000	0.01000	1	0.01000	0.01000	0.01000	0.01000	1	0.01000	0.01000	0.01000	0.01000	1	0.01000	0.01000	0.01000	0.01000
CO DETECTOR	15	0.000200	0.003000	0.002000	0.030000	3	0.000200	0.000600	0.002000	0.006000	5	0.000200	0.001000	0.002000	0.010000	5	0.000200	0.001000	0.002000	0.010000	7	0.000200	0.001400	0.002000	0.014000
DUCT DETECTOR	2	0.000300	0.000600	0.006500	0.013000	3	0.000300	0.000900	0.006500	0.019500	5	0.000300	0.001500	0.006500	0.032500	8	0.000300	0.002400	0.006500	0.052000	13	0.000300	0.003900	0.006500	0.084500
MONITOR MODULE																									
CONTROL MODULE																									
RELAY MODULE																									
TOTAL			0.014		0.053			0.012		0.036			0.013		0.053			0.013		0.072			0.015		0.109
		0.014 A		0.053 A			0.012 A		0.036 A			0.013 A		0.053 A			0.013 A		0.072 A			0.015 A		0.109 A	
		x 24 H		x 0.25 H			x 24 H		x 0.25 H			x 24 H		x 0.25 H			x 24 H		x 0.25 H			x 24 H		x 0.25 H	
		0.326 AH		0.013 AH			0.276 AH		0.009 AH			0.300 AH		0.013 AH			0.322 AH		0.018 AH			0.367 AH		0.027 AH	
FIRE ALARM DEVICE QUANTITIES ARE		0.326 AH, STANDBY					0.276 AH, STANDBY					0.300 AH, STANDBY					0.322 AH, STANDBY					0.367 AH, STANDBY			
SHOWN SOLELY FOR ENGINEERING		0.013 AH, ALARM					0.009 AH, ALARM					0.013 AH, ALARM					0.018 AH, ALARM					0.027 AH, ALARM			
CALCULATIONS. IT SHALL NOT BE USED		0.340 AH, TOTAL					0.285 AH, TOTAL					0.313 AH, TOTAL					0.340 AH, TOTAL					0.394 AH, TOTAL			
FOR BID QUANTITY TAKEOFFS.																									
		7 AH, BATTERY CAPACITY					7 AH, BATTERY CAPACITY					7 AH, BATTERY CAPACITY					7 AH, BATTERY CAPACITY					7 AH, BATTERY CAPACITY			
		6.660 AH, SPARE CAPACITY					6.715 AH, SPARE CAPACITY					6.687 AH, SPARE CAPACITY					6.660 AH, SPARE CAPACITY					6.606 AH, SPARE CAPACITY			

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RISER DIAGRAMS AND CALCULATIONS

DRAWING NUMBER: FA0.2

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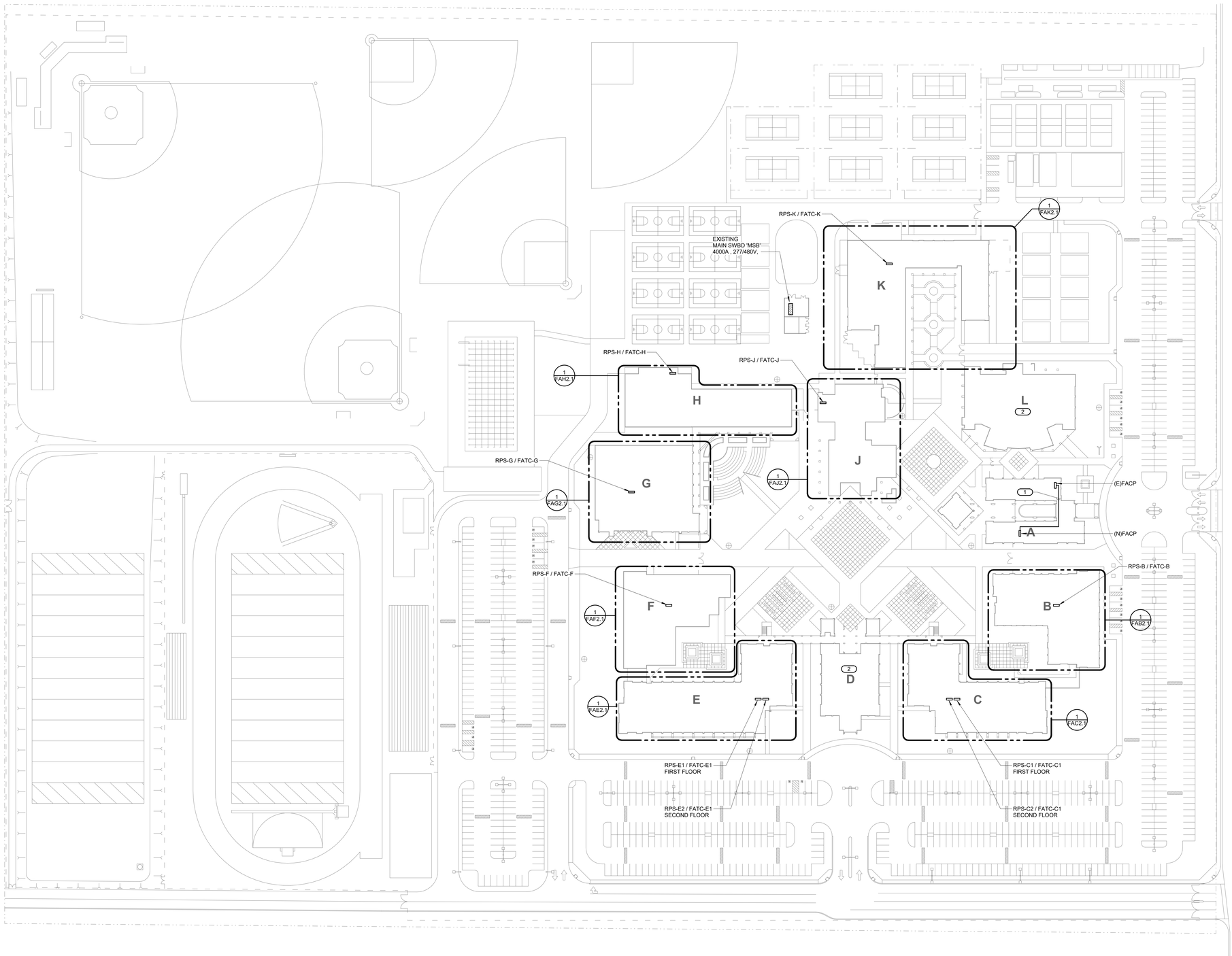
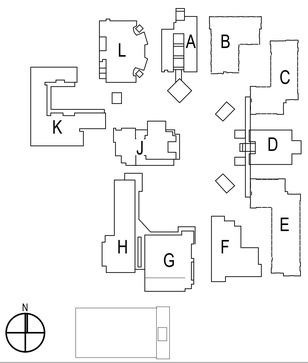


KEYED NOTES

1. PROVIDE ALL THE REQUIRED MODULES/COMPONENTS AND PROGRAMMING/NETWORKING FOR INTERCONNECTING (OR CROSS-TRIP) BETWEEN THE EXISTING AND THE NEW FIRE ALARM CONTROL PANELS (FACP).
2. BUILDING NOT PART OF THIS PERMIT.
3. (1) 2"C. & (1) 2"C. SPARE TO BUILDING (N) FACP VIA FATC.

SITE PLAN - FIRE ALARM | 1" = 60'-0" | 1



SITE KEY PLAN

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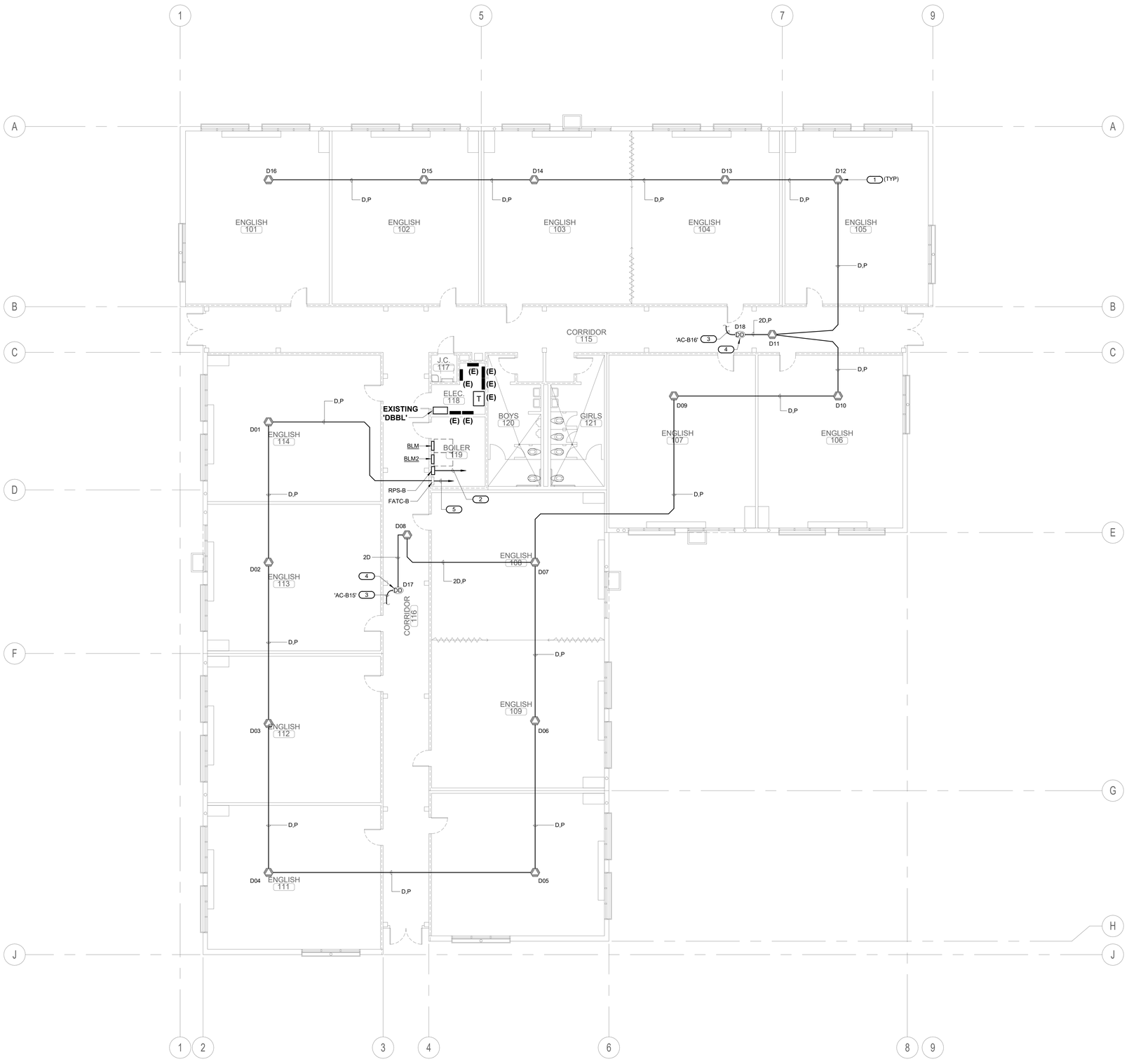
PROJECT NUMBER: Project Number	

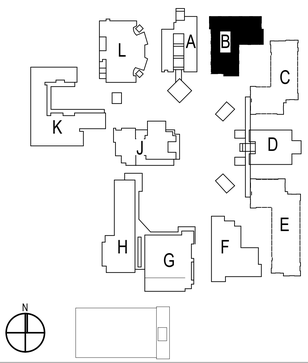
SITE PLAN

DRAWING NUMBER: FA1.1



KEYED NOTES

1. PROVIDE NEW UL AND CSFM LISTED, CARBON MONOXIDE DEVICE FOR UNIT WHERE NATURAL GAS BURNING APPLIANCE IS UTILIZED.
2. TO DEDICATED 120V CIRCUIT POWER SOURCE. PROVIDE "LOCK-ON" DEVICE TO BREAKER AND RED LABEL, INDICATING 'FIRE ALARM TO CIRCUIT ID.
3. TO HVAC UNIT FOR SHUT-DOWN.
4. REMOVE AND REPLACE IN KIND AS SHOWN. LOCATED IN THE SUPPLY DUCT OF HVAC UNIT.
5. TO (N) FACP LOCATED IN THE ADMIN BUILDING VIA FATC.



SITE KEY PLAN

BUILDING B REMODEL FLOOR PLAN - FA | 1/8" = 1'-0" | 1

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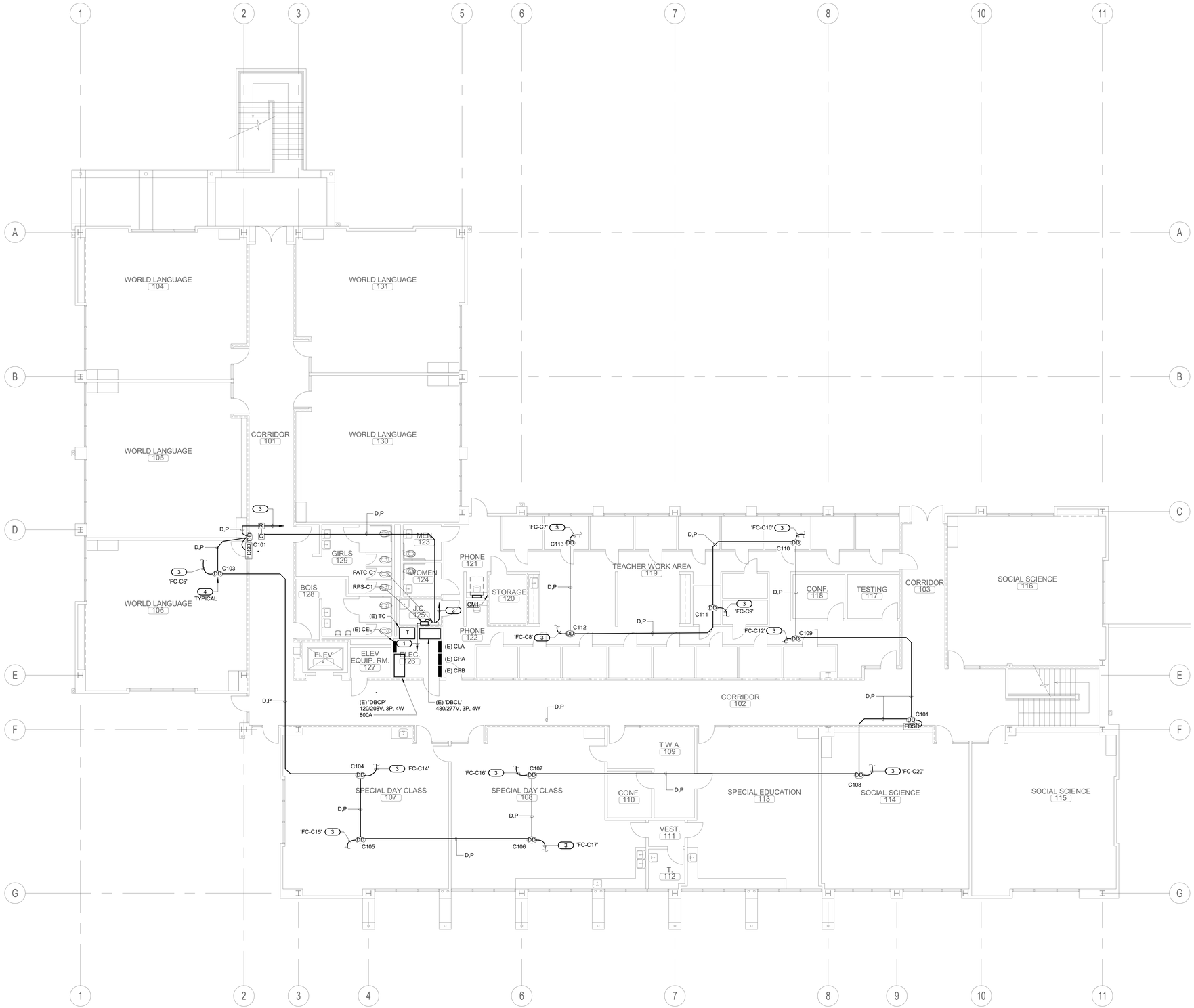
PROJECT NUMBER: Project Number	

BUILDING B REMODEL FLOOR PLAN

DRAWING NUMBER: **FAB2.1**

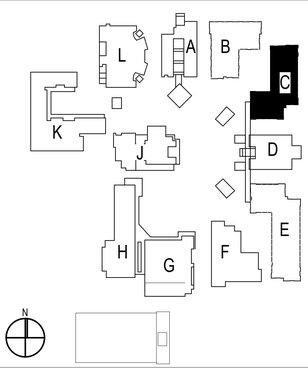


KEYED NOTES

1. TO DEDICATED 120V CIRCUIT POWER SOURCE. PROVIDE "LOCK-ON" DEVICE TO BREAKER AND RED LABEL, INDICATING 'FIRE ALARM" TO CIRCUIT ID.
2. TO (N) FACP LOCATED IN THE ADMIN BUILDING VIA FATC.
3. RUN TO DEDICATED 120V CIRCUIT FOR FIRE SMOKE DAMPER VIA RELAY MODULE FOR DAMPER CLOSURE. LABEL RED TO CIRCUIT ID.
4. TO HVAC UNIT FOR SHUT-DOWN.
5. REMOVE AND REPLACE IN KIND AS SHOWN. LOCATED IN THE SUPPLY DUCT OF HVAC UNIT.

NO GAS BURNING HVAC UNIT IN THIS BUILDING.
CO DETECTOR NOT REQUIRED.

BUILDING C REMODEL FIRST FLOOR PLAN - FA | 1/8" = 1'-0" | 1



SITE KEY PLAN

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BUILDING C REMODEL 1ST FLOOR PLAN

DRAWING NUMBER: FAC2.1

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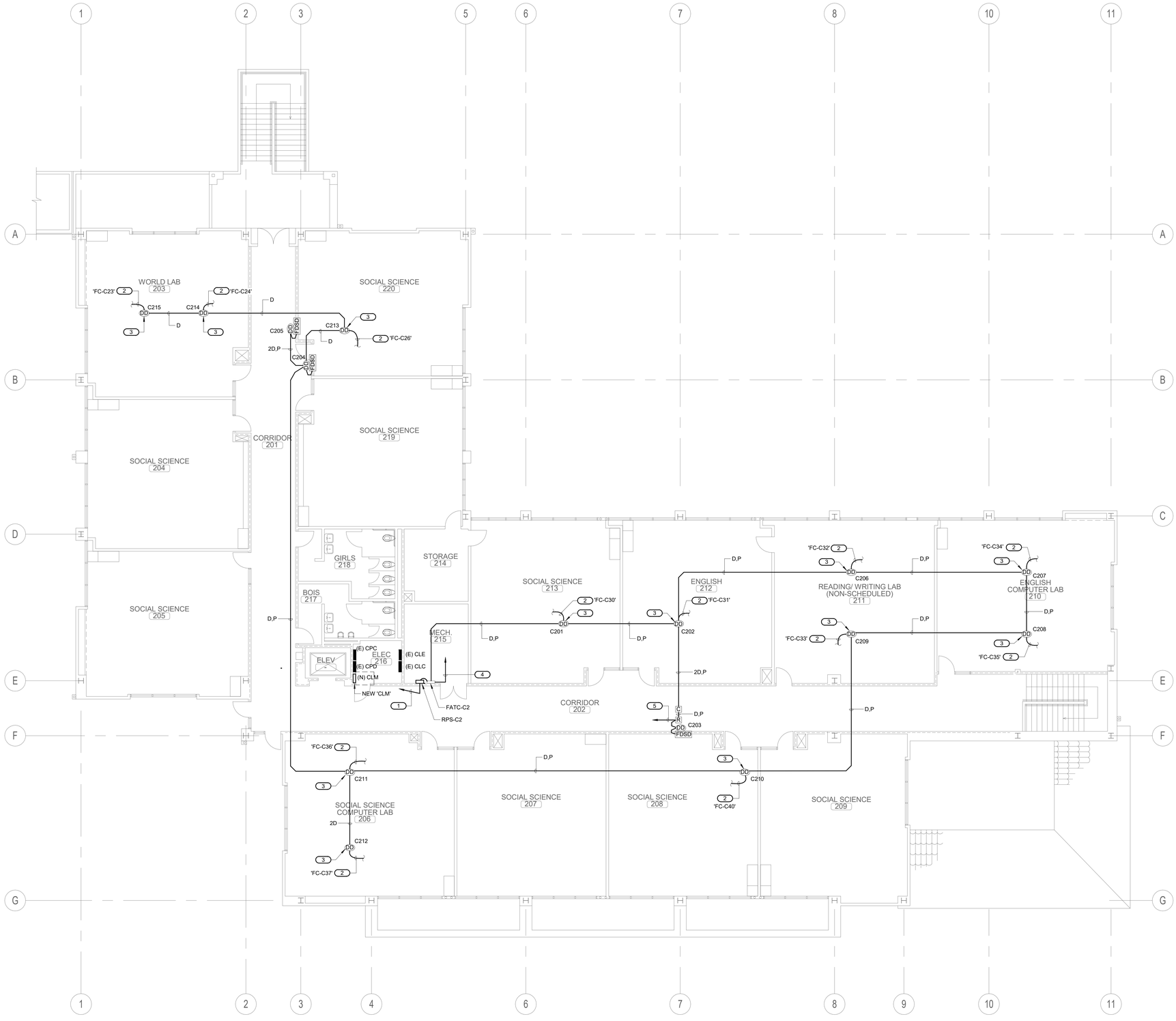
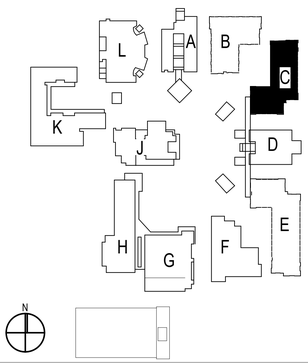


KEYED NOTES

1. TO DEDICATED 120V CIRCUIT POWER SOURCE. PROVIDE "LOCK-ON" DEVICE TO BREAKER AND RED LABEL, INDICATING 'FIRE ALARM TO CIRCUIT ID.
2. TO HVAC UNIT FOR SHUT-DOWN.
3. REMOVE AND REPLACE IN KIND AS SHOWN. LOCATED IN THE SUPPLY DUCT OF HVAC UNIT.
4. TO (N) FACP LOCATED IN THE ADMIN BUILDING VIA FATC.
5. RUN TO DEDICATED 120V CIRCUIT FOR FIRE SMOKE DAMPER VIA RELAY MODULE FOR DAMPER CLOSURE. LABEL RED TO CIRCUIT ID.

NO GAS BURNING HVAC UNIT IN THIS BUILDING.
CO DETECTOR NOT REQUIRED.



SITE KEY PLAN

BUILDING C REMODEL SECOND FLOOR PLAN - FA | 1/8" = 1'-0" | 1

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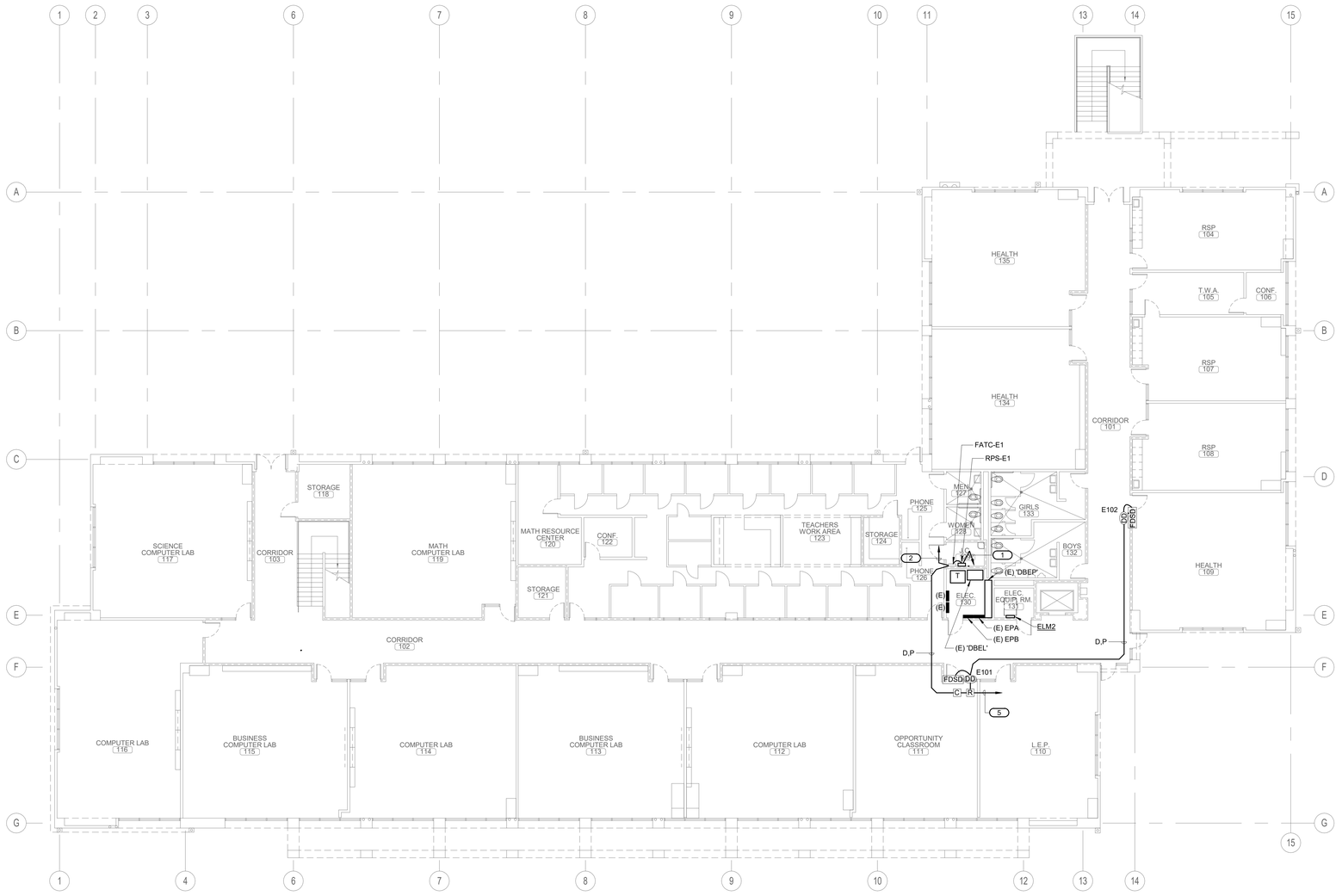
BUILDING C REMODEL 2ND FLOOR PLAN

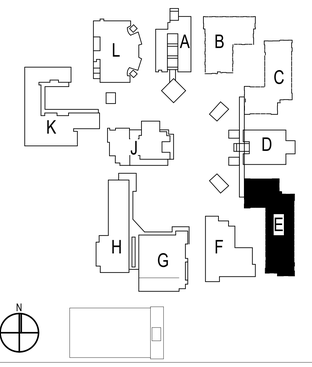
DRAWING NUMBER: FAC2.2



KEYED NOTES

1. TO DEDICATED 120V CIRCUIT POWER SOURCE. PROVIDE "LOCK-ON" DEVICE TO BREAKER AND RED LABEL, INDICATING 'FIRE ALARM TO CIRCUIT ID.
2. TO (N) FACP LOCATED IN THE ADMIN BUILDING VIA FATC.
3. TO HVAC UNIT FOR SHUT-DOWN.
4. REMOVE AND REPLACE IN KIND AS SHOWN. LOCATED IN THE SUPPLY DUCT OF HVAC UNIT.
5. RUN TO DEDICATED 120V CIRCUIT FOR FIRE SMOKE DAMPER VIA RELAY MODULE FOR DAMPER CLOSURE. LABEL RED TO CIRCUIT ID.

NO GAS BURNING HVAC UNIT IN THIS BUILDING.
CO DETECTOR NOT REQUIRED.



SITE KEY PLAN

BUILDING E REMODEL FIRST FLOOR PLAN - FA | 3/32" = 1'-0" | 1

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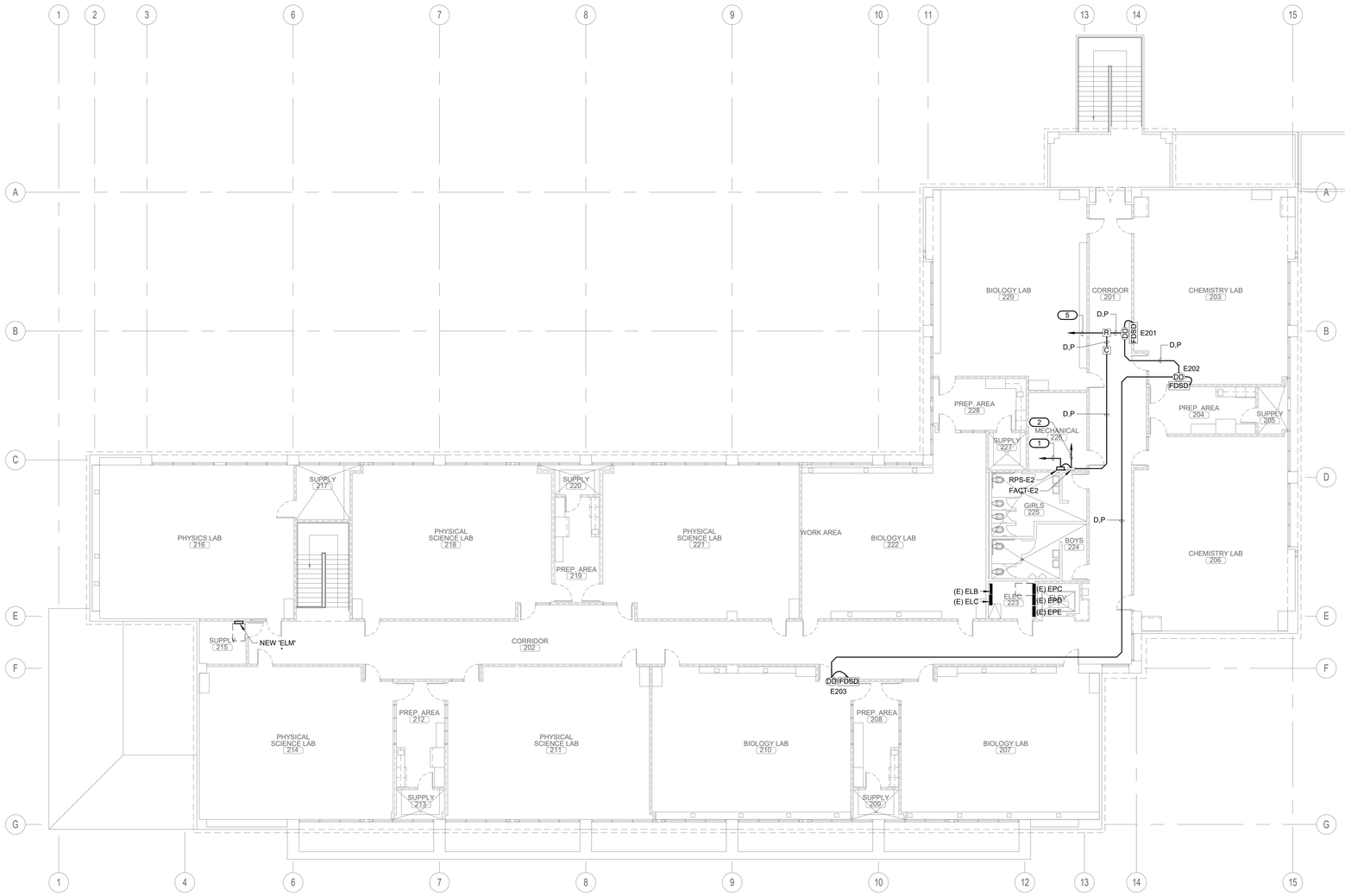
BUILDING E REMODEL 1ST FLOOR PLAN

DRAWING NUMBER: **FAE2.1**



KEYED NOTES

1. TO DEDICATED 120V CIRCUIT POWER SOURCE. PROVIDE "LOCK-ON" DEVICE TO BREAKER AND RED LABEL, INDICATING 'FIRE ALARM TO CIRCUIT ID.
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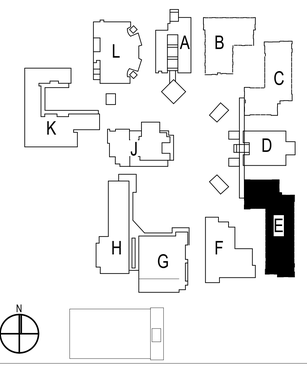
CO DETECTOR NOT REQUIRED.



SITE KEY PLAN

BUILDING E REMODEL SECOND FLOOR PLAN - FA | 3/32" = 1'-0" | 1

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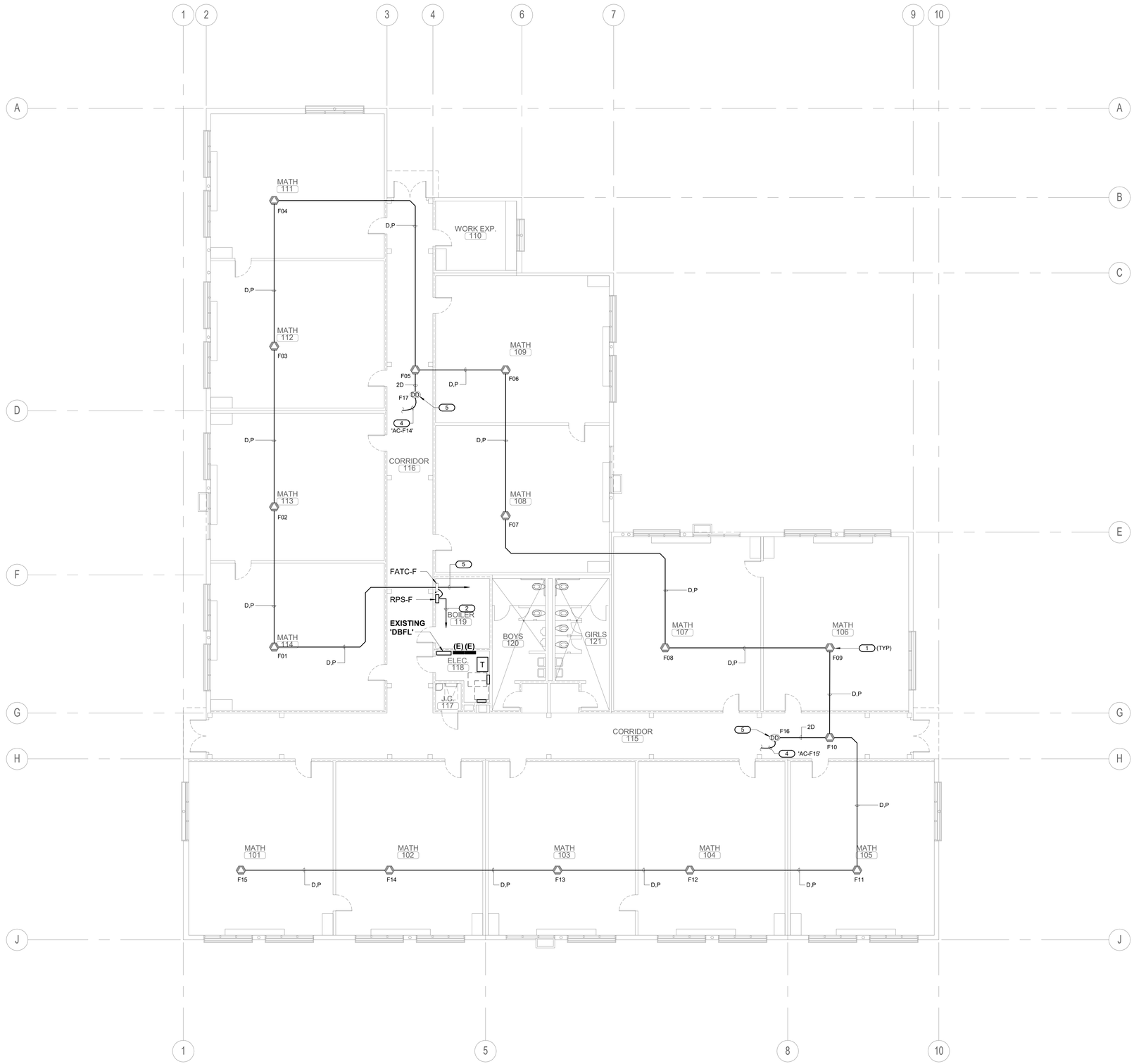
BUILDING E REMODEL 2ND FLOOR PLAN

DRAWING NUMBER: FAE2.2



KEYED NOTES

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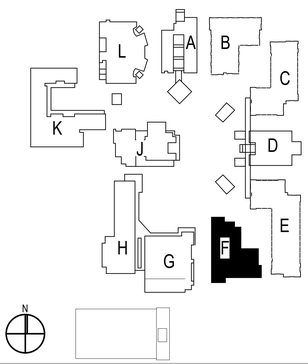

SITE KEY PLAN

BUILDING F REMODEL FLOOR PLAN - FA | 1/8" = 1'-0" | 1

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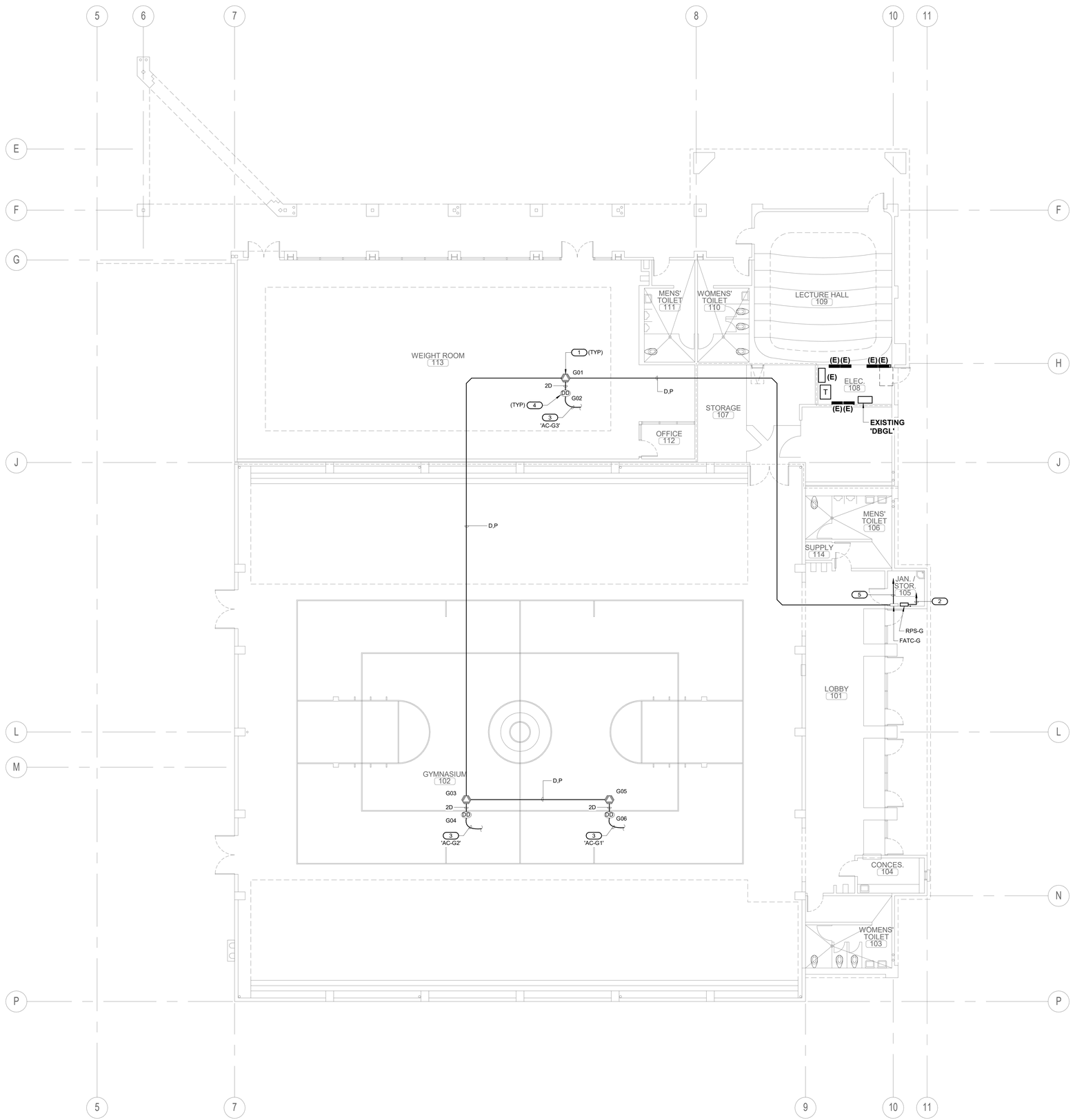
BUILDING F REMODEL FLOOR PLAN

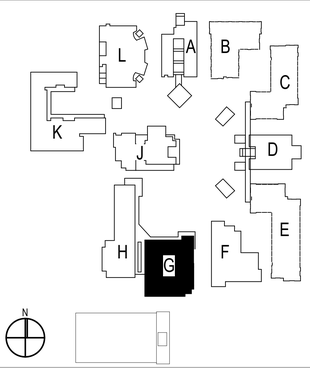
DRAWING NUMBER: **FAF2.1**



KEYED NOTES

1. PROVIDE NEW UL AND CSFM LISTED, CARBON MONOXIDE DEVICE FOR UNIT WHERE NATURAL GAS BURNING APPLIANCE IS UTILIZED.
2. TO DEDICATED 120V CIRCUIT POWER SOURCE. PROVIDE "LOCK-ON" DEVICE TO BREAKER AND RED LABEL, INDICATING 'FIRE ALARM TO CIRCUIT ID.
3. TO HVAC UNIT FOR SHUT-DOWN.
4. REMOVE AND REPLACE IN KIND AS SHOWN. LOCATED IN THE SUPPLY DUCT OF HVAC UNIT.
5. TO (N) FACP LOCATED IN THE ADMIN BUILDING VIA FATC.

BUILDING G REMODEL FLOOR PLAN - FA | 1/8" = 1'-0" | 1



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BUILDING G REMODEL FLOOR PLAN

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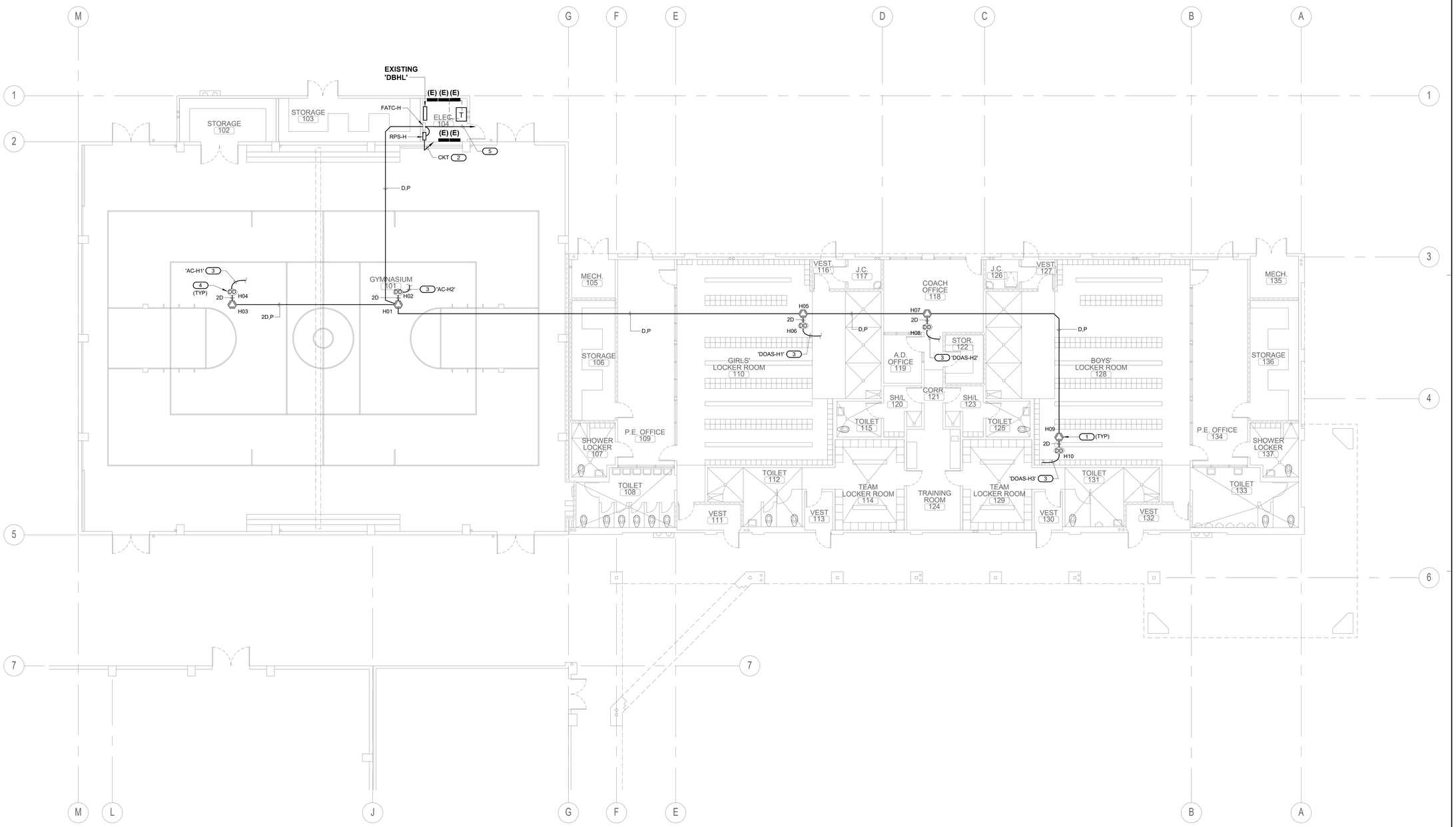

BUILDING H REMODEL FLOOR PLAN - FA | 1/8" = 1'-0" | 1

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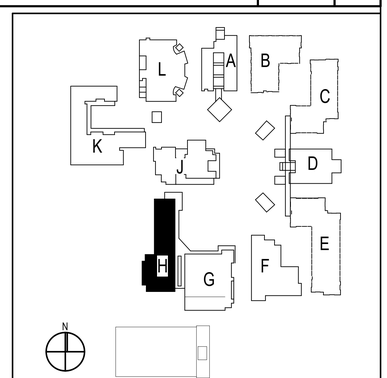
3. TO HVAC UNIT FOR SHUT-DOWN.
4. REMOVE AND REPLACE IN KIND AS SHOWN. LOCATED IN THE SUPPLY DUCT OF HVAC UNIT.
5. TO (N) FACP LOCATED IN THE ADMIN BUILDING VIA FATC.



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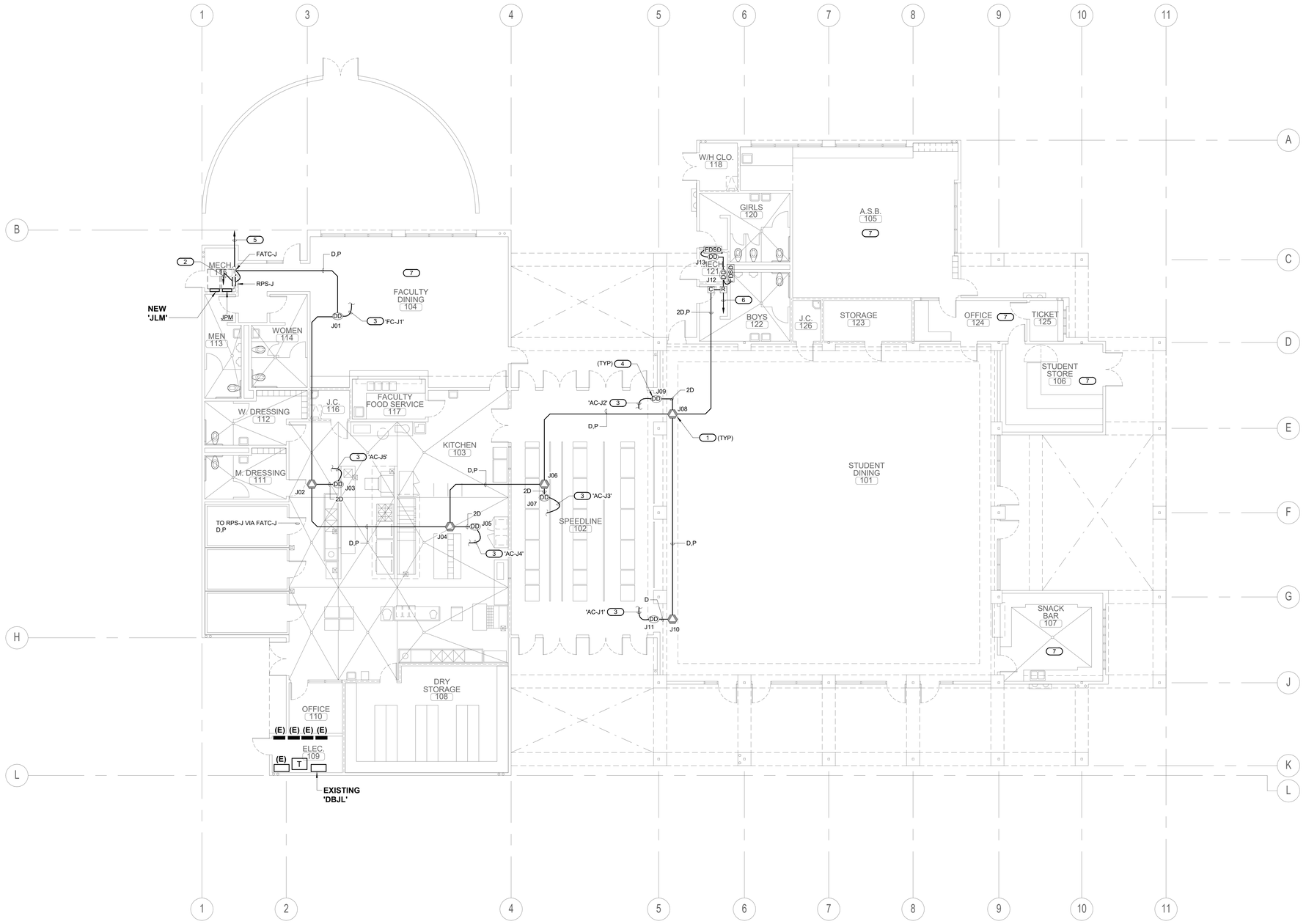
BUILDING H REMODEL FLOOR PLAN

DRAWING NUMBER: **FAH2.1**



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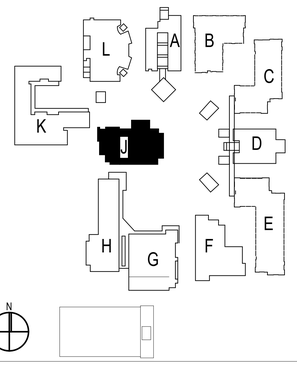
3. TO HVAC UNIT FOR SHUT-DOWN.
4. REMOVE AND REPLACE IN KIND AS SHOWN. LOCATED IN THE SUPPLY DUCT OF HVAC UNIT.
5. TO (N) FACP LOCATED IN THE ADMIN BUILDING VIA FATC.
6. RUN TO DEDICATED 120V CIRCUIT FOR FIRE SMOKE DAMPER VIA RELAY MODULE FOR DAMPER CLOSURE. LABEL RED TO CIRCUIT ID.
7. NO GAS BURNING UNIT IN THIS AREA. CO DETECTOR NOT REQUIRED.



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BUILDING J REMODEL FLOOR PLAN - FA | 1/8" = 1'-0" | 1

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BUILDING J REMODEL FLOOR PLAN

DRAWING NUMBER: FAJ2.1

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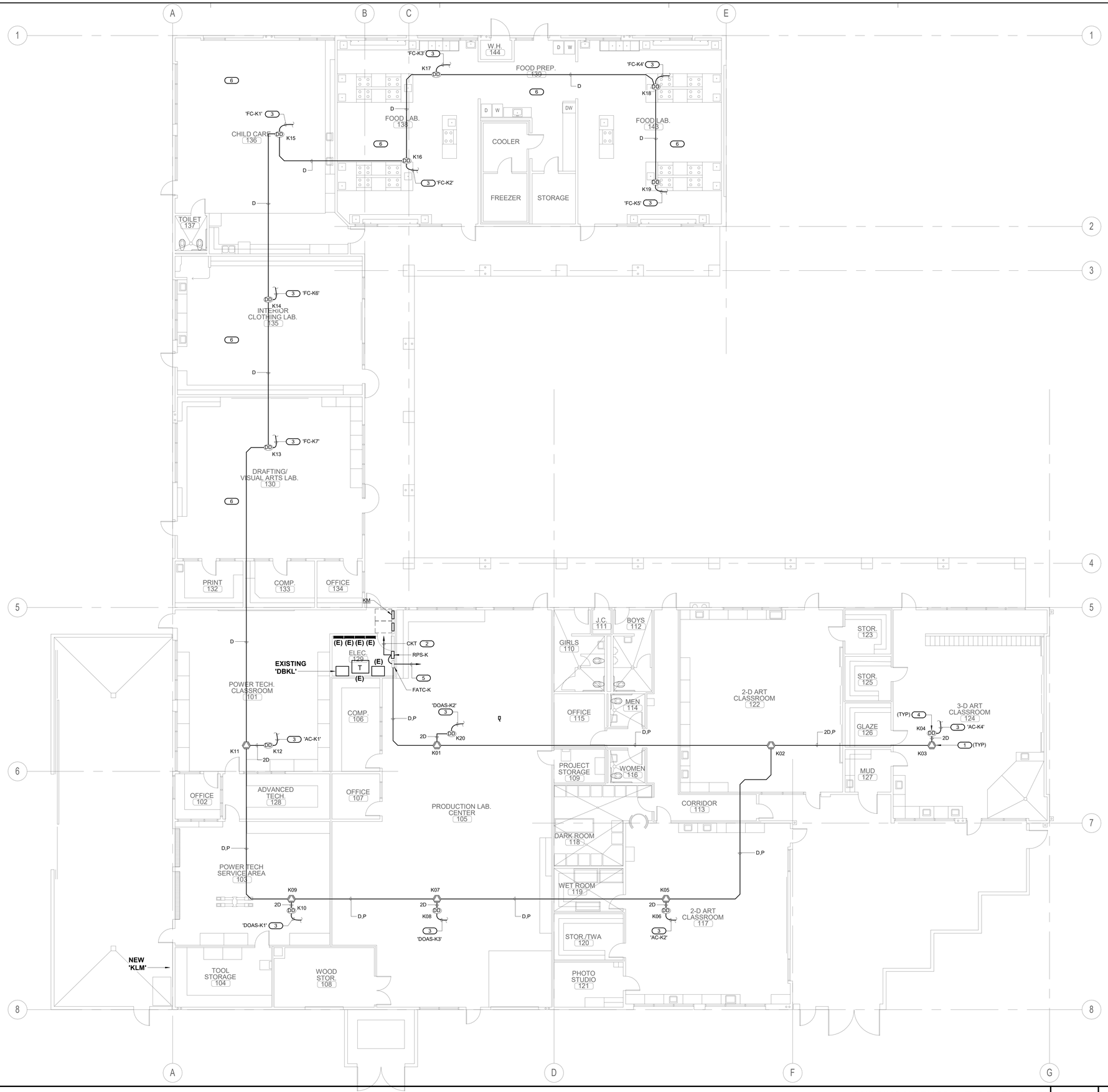

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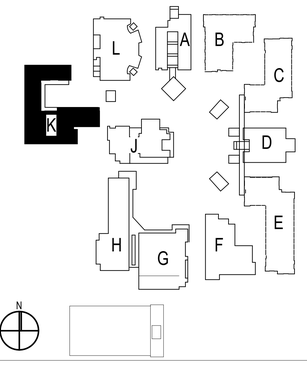
3. TO HVAC UNIT FOR SHUT-DOWN.
4. REMOVE AND REPLACE IN KIND AS SHOWN. LOCATED IN THE SUPPLY DUCT OF HVAC UNIT.
5. TO (N) FACP LOCATED IN THE ADMIN BUILDING VIA FATC.
6. NO GAS BURNING UNIT IN THIS AREA. CO DETECTOR NOT REQUIRED.

BUILDING K REMODEL FLOOR PLAN - FA | 1/8" = 1'-0" | 1



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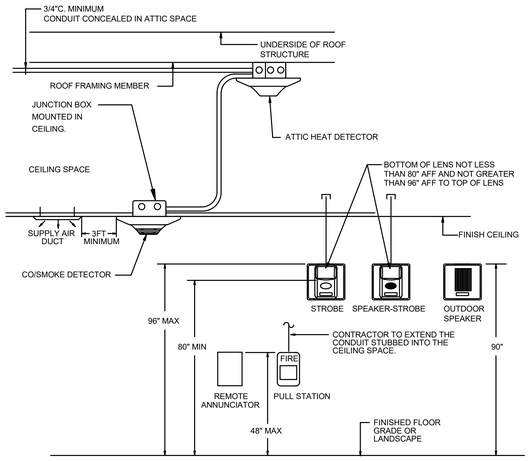
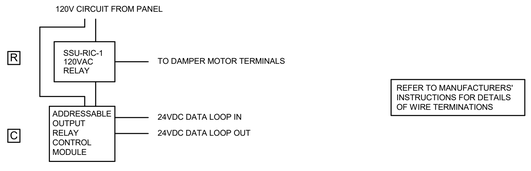
BUILDING K REMODEL FLOOR PLAN

DRAWING NUMBER: **FAK2.1**



FIRE ALARM DEVICE ELEVATION | NTS | 7



1. UPON ACTIVATION OF THE NOTED AREA SMOKE DETECTOR
   a) THE AREA SMOKE DETECTOR INITIATES AN ALARM CONDITION AT THE FACP
   b) THE DATA LOOP OF THE FACP ENERGIZES THE CONTROL RELAY ASSOCIATED WITH ALL THE FIRE SMOKE DAMPERS IN THE BUILDING.
   c) CONTACTS IN THE 120V RELAY CLOSE TO ALLOW VOLTAGE TO THE DAMPER MOTOR.

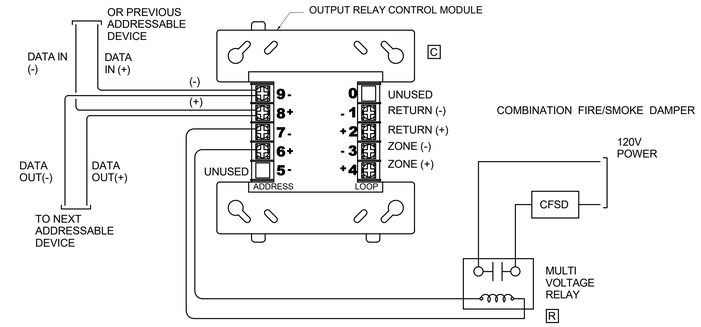
FIRE-SMOKE DAMPER OPERATION | NTS | 8

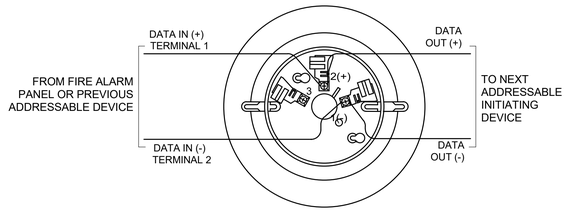
UNIT SHUTDOWN

1. UPON ACTIVATION OF THE NOTED AREA SMOKE DETECTOR
   a) THE AREA SMOKE DETECTOR INITIATES AN ALARM CONDITION AT THE FACP
   b) WIRING FROM THE OUTPUT TERMINALS OF THE FACP ENERGIZES THE CONTROL MODULE ASSOCIATED WITH THE HVAC UNIT SERVING THE AREA.
   c) CONTACTS IN THE CONTROL MODULE CLOSE TO ALLOW VOLTAGE TO THE HVAC UNIT SHUTDOWN TERMINALS.

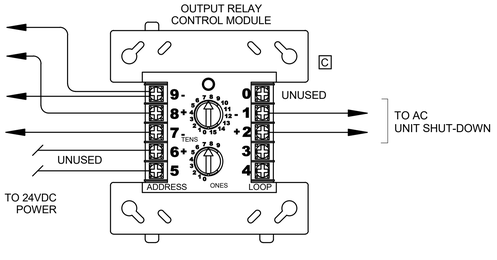
HVAC SHUTDOWN | NTS | 9

- | NTS | 5

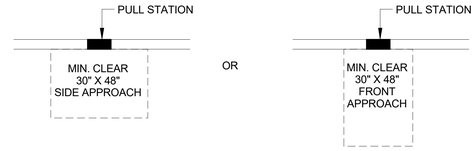




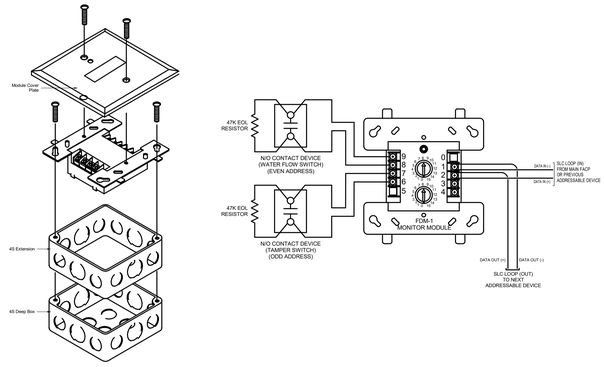
ADDRESSABLE SMOKE DETECTOR OR ADDRESSABLE HEAT DETECTOR



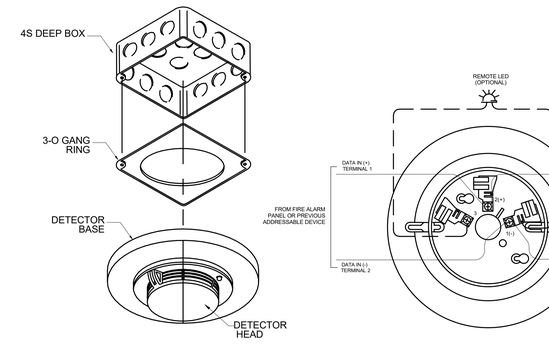
TYPICAL FIRE ALARM DEVICE WIRING DETAIL | NTS | 6



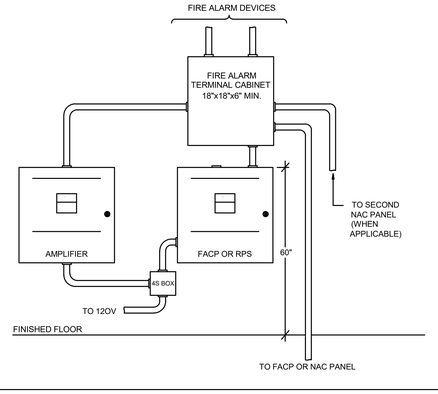
CLEAR SPACE REQUIREMENTS AT FIRE ALARM PULL STATION | NTS | 1



MONITOR MODULE WIRING DETAIL | NTS | 2



SMOKE/HEAT DETECTOR BASE WIRING DETAIL | NTS | 3



TYPICAL POWER SUPPLY LAYOUT | NTS | 4

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