TOVASHAL ELEMENTARY SCHOOL - HVAC REPLACEMENT MURRIETA VALLEY UNIFIED SCHOOL DISTRICT 23801 SAINT RAPHAEL DRIVE, MURRIETA, CA 92562

GENERAL NOTES

1.	THESE DRAWINGS DO NOT CONTAIN THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.	8. (CONT) E	NVELOPE MANDATOR
2.	LOCATIONS OF ALL UTILITIES SHOWN ARE APPROXIMATE AND	А.	INSTALLED INSUL CERTIFIED BY TH
	CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID INTERCEPTING EXISTING		CALIFORNIA QUAI
	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 SHOW		ALL INSULATING N COMPLIANCE WIT DENSITY REQUIRI CODE OF REGULA
	OR DETAILED AND INSTALLED BY ANY OTHER CONTRACT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT SHOULD ANY UNIDENTIFIED CONDITIONS BE DISCOVERED. THE CONTRACTO SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIE OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION	C.	ALL EXTERIOR JO ENVELOPE THAT OF AIR LEAKAGE WEATHERSTRIPP
_	WITH THE EXECUTION OF THIS WORK.	D.	SITE CONSTRUCT
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		BE WEATHERSTR AND FIRE DOORS
4.	WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITT AUTHORIZATION OF WLC ARCHITECTS, INC. THE WORK SHOWN ON THESE DRAWINGS AS EXISTING CONDITIONS	EN E.	MANUFACTURED AIR INFILTRATION ACCORDANCE WI REGULATIONS, SE
	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 RESULT.	F.	MANUFACTURED OF THE BUILDING SLIDING GLASS D WALLS, AND GARI IN ACCORDANCE RATING COUNCIL
5.	EACH BIDDER SHALL POSSESS AT THE TIME OF BID A CLASS B OR THI APPROPRIATE CLASS C CONTRACTOR'S LICENSE PURSUANT TO PUB CONTRACT CODE SECTION 3300 AND BUSINESS AND PROFESSIONS		DEMISING WALL II OPAQUE PORTION
	CODE SECTION 7028.15. THE SUCCESSFUL BIDDER MUST MAINTAIN T LICENSE THROUGHOUT THE DURATION OF THIS CONTRACT.	THE 9. PRO	OF LOAD TESTS FOR
6.	FIRE SAFETY DURING CONSTRUCTION	Α.	ANCHOR DIAMETE WEDGE CATEGOF
	A. GENERAL: FIRE SAFETY DURING CONSTRUCTION SHALL COMPLY WITH CALIFORNIA FIRE CODE (CFC) CALIFORNIA COE OF REGULATIONS (CCR) TITLE 24, PART 9, CHAPTER 5 AND CHAPTER 33.	B.	APPLY PROOF TE REMOVING THE N INSTALL A THREA THE ORIGINAL NU
	B. ACCESS ROADS: FIRE DEPARTMENT ACCESS ROADS SHALL E ESTABLISHED AND MAINTAINED IN ACCORDANCE WITH CHAPT		REACTION LOADS

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

5, SECTION 501.4 AND CHAPTER 33, SECTION 3310

- ALTERATIONS OF BUILDINGS: SHALL COMPLY WITH APPLICABLE **PROVISIONS OF CHAPTER 33**
- DEMOLITION OF BUILDINGS: SHALL COMPLY APPLICABLE PROVISIONS OF CHAPTER 33.
- 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.
- 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.
- 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.

ORY MEASURES:

- JLATING MATERIALS SHALL HAVE BEEN HE MANUFACTURER TO COMPLY WITH THE ALITY STANDARDS FOR INSULATING MATERIAL
- 6 MATERIALS SHALL BE INSTALLED IN ITH THE FLAME SPREAD RATING AND SMOKE REMENTS OF TITLE 24, PART 2, CALIFORNIA LATIONS, SECTIONS 720 AND 2603.
- OINTS AND OPENINGS IN THE BUILDING FARE POTENTIAL AND OBSERVABLE SOURCES E SHALL BE CAULKED, GASKETED, PED OR OTHERWISE SEALED.
- CTED DOORS, WINDOWS, AND SKYLIGHTS SHALL TWEEN THE UNIT AND THE BUILDING. AND SHALL RIPPED (EXCEPT FOR UNFRAMED GLASS DOORS
- D DOORS AND WINDOWS INSTALLED SHALL HAVE ON RATES CERTIFIED BY THE MANUFACTURER IN VITH TITLE 24, PART 6, CALIFORNIA CODE OF SECTION 110.6.
- D FENESTRATION PRODUCTS IN THE ENVELOPE IG, INCLUDING, BUT NOT LIMITED TO, WINDOWS DOORS, FRENCH DOORS, SKYLIGHTS, CURTAIN RDEN WINDOWS MUST BE LABELED FOR U-VALUE E WITH THE (NFRC) NATIONAL FENESTRATION L'S INTERIM U-VALUE RATING PROCEDURE.
- INSULATION SHALL BE INSTALLED IN ALL ONS OF FRAMED WALLS (EXCEPT DOORS).
- OR EXPANSION TYPE ANCHOR BOLTS:
- TER REFERS TO THE THREAD SIZE FOR THE ORY ANCHOR.
- FEST LOADS TO WEDGE ANCHORS WITHOUT NUT IF POSSIBLE. IF NOT, REMOVE NUT AND ADED COUPLER TO THE SAME TIGHTNESS OF NUT USING A TORQUE WRENCH AND APPLY LOAD.
- IS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURE(S)
- TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED D. TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.
- 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 ANCHORS: ONE-HALF (1/2) TURN OF THE NUT.

5/8

3/4

IF MANUFACTURERS TORQUE IS LESS THAN SPECIFIED TEST TORQUE THE MANUFACTURERS LISTED TORQUE SHALL BE USED FOR TESTING.

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

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 IMMEDIATEL ADJACENT BOLTS MUST THEN ALSO BE TESTED. TESTING SHALL BE PERFORMED IN ACCORDANCE WITH TITLE 24. PART 2. SECTION 1910A.5.

ALL BOLTS MUST HAVE ICC/ES APPROVAL

- ALL ANCHOR BOLTS OF THE EXPANSION TYPE INSTALLED IN Κ. CONCRETE SHALL BE ONE OF THE FOLLOWING:
- 1. ITW RAMSET/REDHEAD-WEDGE ANCHOR-ICC/ES NO. 2427 2. HILTI, INC.- QWIK BOLT TZ -WEDGE ANCHOR-ICC/ES NO. 1917 3. SIMPSON - STRONGBOLT 2 - WEDGE ANCHOR - ICC/ES NO. 3037 MIMIMUM TEST VALUES

	NORMALWEIGHT OR LIGHTWEIGHT CONCRETE										
ANC	HOR	WEI	DGE								
dia. (IN)	TENSION LOAD (LBS)	TORQUE (FT-LBS)	EMBED MENT (IN)								
3/8	1,100	25	2								
1/2	2,000	50	3-1/4								

4-1/4 2,300 80 ------3,700 150 4-3/4 ---------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-STRONGBOLT 2-WEDGE ANCHOR-IAMPO NO. ER-240

MIMIMUM TEST VALUES GROUT FILLED CONCRETE MASONRY

	0				1	
ANC	HOR	WEI	DGE			
DIA. (IN)			EMBED MENT (IN)			
1/4	1,080	4	2			
3/8	1,564	15	2-1/2			
1/2	1,810	25	3-1/2			
5/8	2,484	65	4			
3/4	3,290	120	4-3/8			

11. POWDER DRIVEN CONCRETE FASTENERS:

Α

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

- ALLOWABLE LOADS: IN GENERAL, LOADS SHOULD BE LIMITED TO LESS THAN 100 POUNDS. HOWEVER, GREATER LOADS MAY BE PERMITTED FOR SPECIAL CASES WHEN APPROVED BY THE CHECKING SUPERVISOR OR FIELD ENGINEER.
- 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 WOOD PLATE ICC/ES NO. 2138 PDPA-125- STEEL TRACK - ICC/ES NO. 2138

SPECIFICATIONS FOR AUTOMATIC END WELDED STUDS

- 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,
- 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 WEI DED 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 VELDERS APPROVED BY THE WELDING INSPECTOR
- 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.
- 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 DEGREE BEND TEST BY STRIKING THEM WITH A HEAVY HAMMER. AFTER THE ABOVE TEST, THE WELD SECTION SHALL NOT EXHIBIT ANY TEARING OUT OR CRACKING.
- INSPECTOR OF RECORD REQUIREMENTS
- 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.
- **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.
- ALL WORK SHOWN ON THESE DRAWINGS SHALL COMPLY WITH THE REQUIREMENTS OF TITLE 24. CALIFORNIA CODE OF REGULATIONS (CCR)
- 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.
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIROMENTAL HEALTH CONCIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- DRINKING WATER SHALL COMPLY WITH ALL LOCAL HEALTH DEPARTMENT REQUIREMENTS
- FOOD HANDLING FACILITIES SHALL COMPLY WITH ALL LOCAL HEALTH REQUIREMENTS AND THE CALIFORNIA RETAIL FOOD FACILITIES LAW.
- 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 CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT IDENTIFIED BY THE CONTRACT DOCUMENTS WHEREIN 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. A CONSTRUCTION CHANGE DOCUMENT SHALL BE APPROVED BY THE DIVISION OF THE STATE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK REQUIRED BY THE CHANGE ORDER.
- 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 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

PROJECT ADDRESS

TOVASHAL ELEMENTARY SCHOOL 23801 SAINT RAPHAEL DRIVE MURRIETA, CA 92562 PHONE: 909-987-0909

OWNER

MURRIETA VALLEY UNIFIED SCHOOL DISTRICT 41870 MCALBY COURT MURRIETA, CA 92562 PHONE: 909-987-0909

ARCHITECT

WLC ARCHITECTS, INC. 8163 ROCHESTER AVE., SUITE 100 RANCHO CUCAMONGA. CA 91730 PHONE: 909-987-0909

FAX: 909-980-9980

FAX: 909-980-9980

FAX: 909-980-9980

GOVERNING CODES & AGENCY

STRUCTURAL ENGINEER

MECHANICAL ENGINEER

ELECTRICAL ENGINEER

JOHNSON CONSULTING ENGINEERS

12875 BROOKPRINTER PLACE #300

KNA STRUCTURAL ENGINEERS

DUFOE CONSULTING ENGINEERS

10680 TREENA STREET #163

SAN DIEGO, CA 92131

PHONE: 858-368-8630

POWAY, CA 92064

PHONE: 858-679-4030

9931 MUIRLANDS BLVD

PHONE: 949-462-3200

IRVINE, CA 92618

2019 CALIFORNIA FIRE CODE (CFC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 9

2019 CALIFORNIA EXISTING **BUILDING CODE** CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 10

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CAL GREEN) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 11

2019 CALIFORNIA REFERENCED STANDARDS CODE -CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12

2010 AMERICANS WITH DISABILITY ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN (ADAS)

APPLICABLE NFPA, UL AND ICC STANDARDS NFPA 72 - NATIONAL FIRE ALARM CODE, 2016 EDITION UL 464 AUDIBLE SIGNAL APPLIANCES, 2003 EDITION NOTE: ALL NFPA STANDARDS AS LISTED ARE TO CONFORM TO THE EDITION AS LISTED WITH THE LATEST CALIFORNIA AMENDMENTS. REFERENCE THE 2019 CBC, TITLE 24, PART 2 - CHAPTER 35 FOR ADDITIONAL APPLICABLE NFPA, UL. STANDARDS AND ANY CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

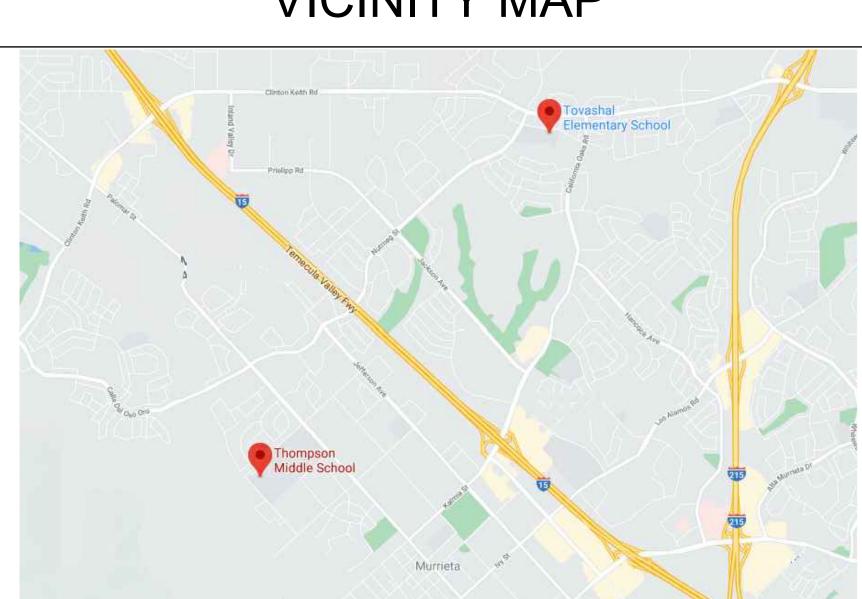
GOVERNING AGENCY: DIVISION OF THE STATE ARCHITECT STRUCTURAL SAFETY SECTION (DSA/SSS) ACCESS COMPLIANCE (DSA/AC) FIRE AND LIFE SAFETY SECTION (DSA/FLS) 10920 VIA FRONTERA, SUITE 300 SAN DIEGO, CALIFORNIA 92127 (858) 674-5400

(2018 INTERNATIONAL FIRE CODE (IFC) W/ CALIFORNIA AMENDMENTS)

(2018 INTERNATIONAL EXISTING BUILDING CODE (IEBC) W/ CALIFORNIA AMENDMENTS)

1990 STATE FIRE MARSHAL **REGULATIONS (AS AMENDED** TO DATE) CALIFORNIA CODE O **REGULATIONS (CCR) TITLE 19**

THIS PROJECT A# 04-119843 WILL NOT BE CERTIFIED UNITL ASSOCIATED VICINITY MAP



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

2019 CALIFORNIA ELECTRICAL CODE (CEC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3

2019 CALIFORNIA MECHANICAL CODE (CMC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 4

2019 CALIFORNIA PLUMBING CODE (CPC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 5

SCOPE OF WORK

THE SCOPE OF THE WORK AS STATED BELOW IS FOR DSA PLAN REVIEW

EXPLANATION OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

GENERAL ALTERATION TO BUILDINGS A. B. C. D. E1 AND E2: REPLACEMENT OF

PURPOSES ONLY AND DOES NOT CONSTITUTE A DETAILED AND FULL

2019 CALIFORNIA ENERGY CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6

ALL ROOFTOP HVAC PACKAGE UNITS.

PROJECT A# 04-68344 IS CERTIFIED BY DSA

AMENDMENTS) (2017 NATIONAL ELECTRIC CODE (NEC) W/ CALIFORNIA

(2018 INTERNATIONAL BUILDING

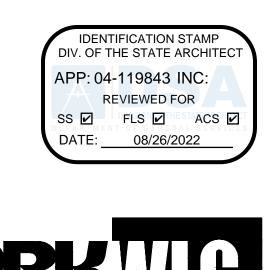
CODE (IBC) W/ CALIFORNIA

AMENDMENTS) (2018 UNIFORM MECHANICAL CODE (UMC) W/ CALIFORNIA AMENDMENTS)

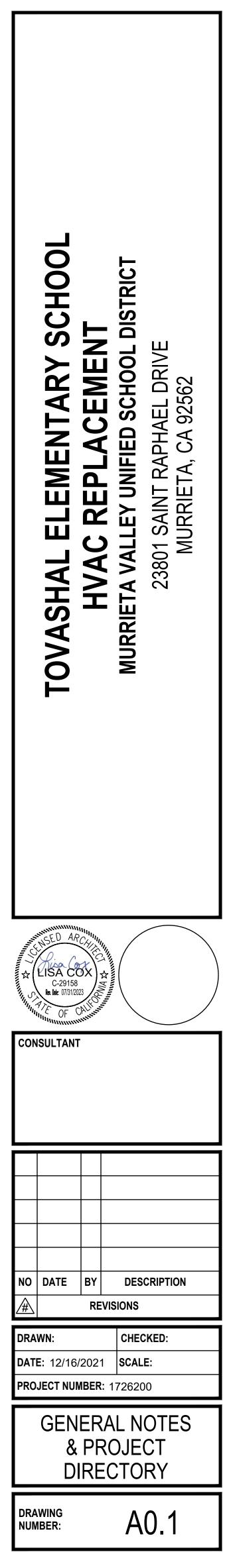
(2018 UNIFORM PLUMBING CODE (UPC) W/ CALIFORNIA AMENDMENTS)

FAX: 866-517-3293

FAX: 858-513-0559

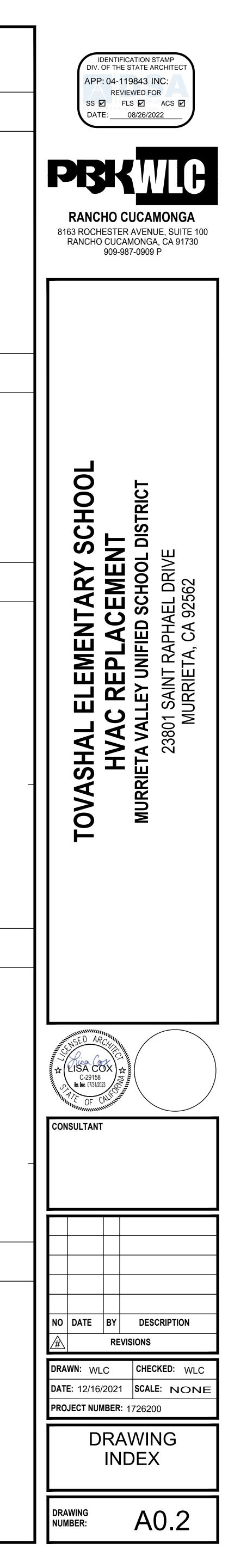


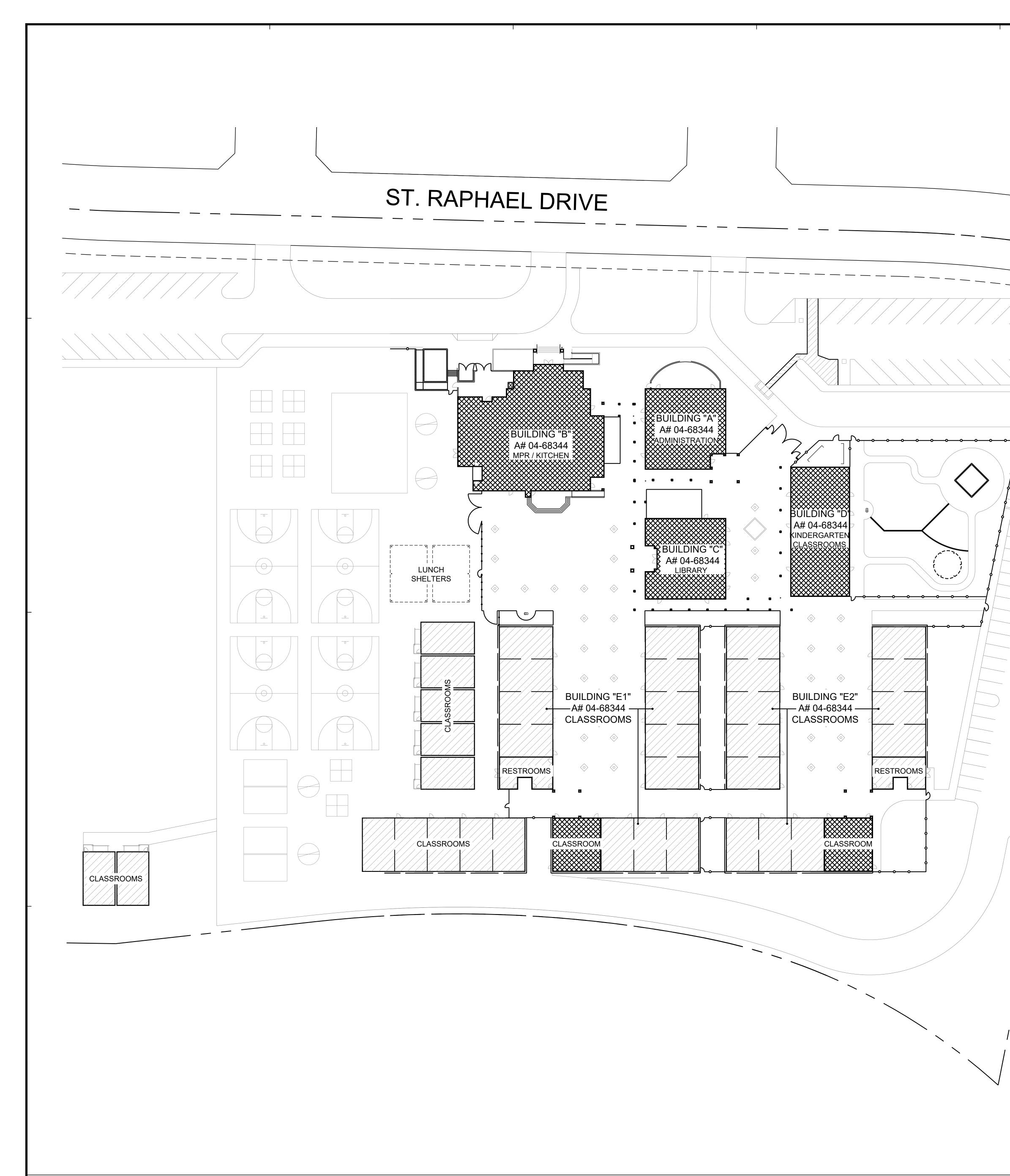
RANCHO CUCAMONGA 3163 ROCHESTER AVENUE, SUITE 10 RANCHO CUCAMONGA, CA 91730 909-987-0909 P



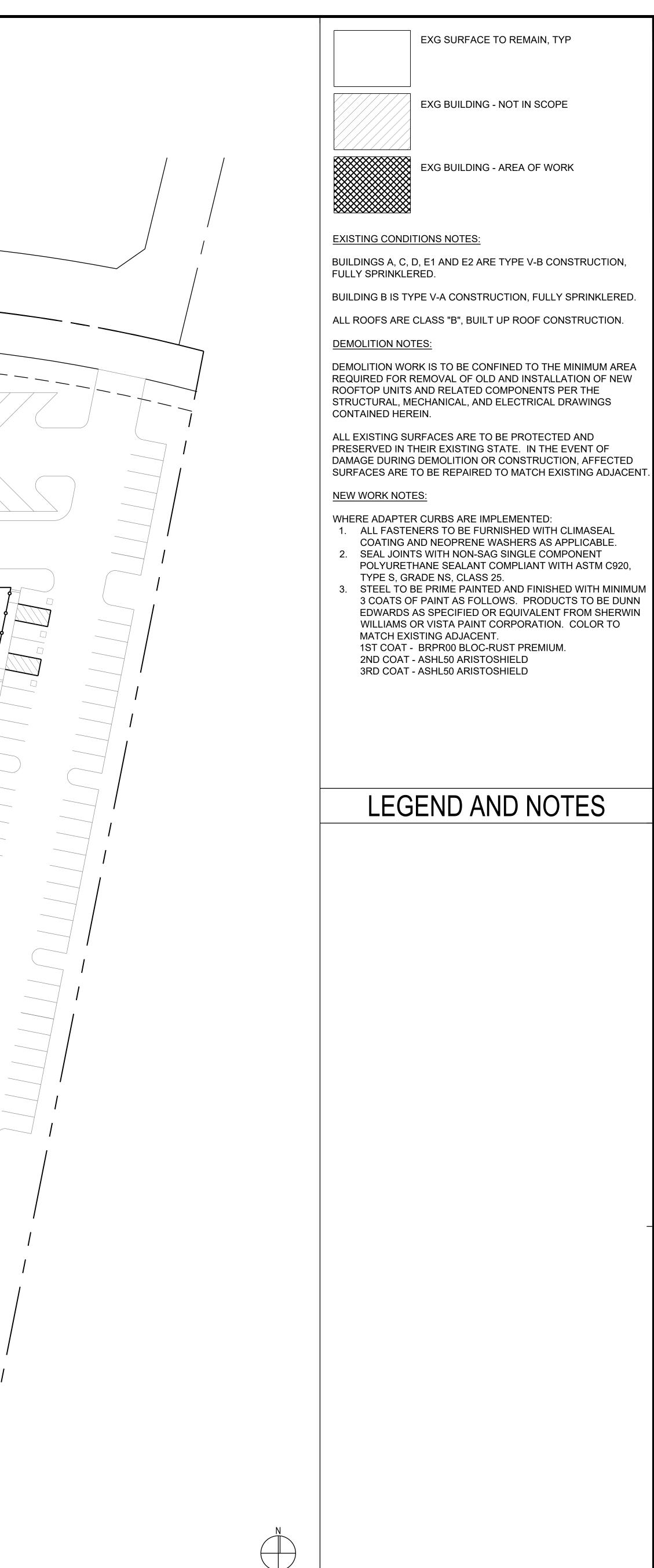
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DRAWING REF NO	DESCRIPTION	DRAWING REF NO	DESCRIPTION	DRAWING REF NO	DESCRIPTION	DRAWING REF NO						
	ARCHITECTURAL		MECHANICAL		ELECTRICAL							
A0.1	GENERAL NOTES / PROJECT DIRECTORY	M-0.1	MECHANICAL LEGEND & GENERAL NOTES	E-1.0	ELECTRICAL LEGEND & NOTES		TOTAL SH					
A0.2	DRAWING INDEX	M-0.2	MECHANICAL TITLE 24 CALCULATIONS	E-6.1	ELECTRICAL ROOF PLAN - BLDG A							
A1.1	OVERALL SITE PLAN - FOR REFERENCE ONLY	M-0.3	MECHANICAL TITLE 24 CALCULATIONS	E-6.2	ELECTRICAL ROOF PLAN - BLDG B							
		M-1.1	MECHANICAL SCHEDULES	E-6.3	ELECTRICAL ROOF PLAN - BLDG C							
		M-2.A M-2.B	MECHANICAL ROOF PLAN - BLDG A MECHANICAL ROOF PLAN - BLDG B	E-6.4 E-6.5	ELECTRICAL ROOF PLAN - BLDG D ELECTRICAL ROOF PLAN - BLDG E1							
S-0.1	STRUCTURAL GENERAL NOTES	M-2.D	MECHANICAL ROOF PLAN - BLDG B MECHANICAL ROOF PLAN - BLDG C	E-6.6	ELECTRICAL ROOF PLAN - BLDG E1							
S-2.A	BLDG A ROOF FRAMING PLAN	M-2.D	MECHANICAL ROOF PLAN - BLDG D	E-6.7	MECHANICAL EQUIPMENT SCHEDULE							
S-2.B	BLDG B ROOF FRAMING PLAN	M-2.E1	MECHANICAL ROOF PLAN - BLDG E1									
S-2.C	BLDG C ROOF FRAMING PLAN	M-2.E2	MECHANICAL ROOF PLAN - BLDG E2									
S-2.D	BLDG D ROOF FRAMING PLAN	M-5.1	MECHANICAL DETAILS									
S-2.E1	BLDG E1 ROOF FRAMING PLAN											
S-2.E2	BLDG E2 ROOF FRAMING PLAN											
S-3.1	DETAILS											
					1							

	DRAWING INDEX CODE
DESCRIPTION	DRAWING DISCIPLINE PREFIX INDEX
SHEET COUNT: 30	 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
	ORAWING 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
	AH2.2 DRAWING NUMBER GROUP PREFIX INDEX BUILDING IDENTITY 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 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 DESIGNATIONS. THE DISCIPLINE AND DRAWING GROUPS ARE INTEGRAL WITH THE DESIGNATIONS. THE DISCIPLINE AND DRAWING GROUPS ARE INTEGRAL WITH THE DESIGNATIONS. THE DISCIPLINE AND DRAWING GROUPS ARE INTEGRAL WITH THE DESIGNATIONS. THE DISCIPLINE AND DRAWING GROUPS ARE INTEGRAL WITH THE DESIGNATIONS. THE DISCIPLINE AND DRAWING GROUPS ARE INTEGRAL WITH THE DESIGNATIONS. THE DISCIPLINE AND DRAWING GROUPS ARE INTEGRAL WITH THE
	DETAIL DRAWING PREFIX INDEX
	DIVISION 1-GENERAL REQUIREMENTSDIVISION 2-SITE WORKDIVISION 3-CONCRETEDIVISION 4-MASONRYDIVISION 5-METALSDIVISION 6-WOOD AND PLASTICSDIVISION 7-THERMAL AND MOISTURE PROTECTIONDIVISION 8-DOORS AND WINDOWSDIVISION 9-FINISHESDIVISION 10-SPECIALTIESDIVISION 11-EQUIPMENTDIVISION 12-FURNISHINGSDIVISION 13-SPECIAL CONSTRUCTIONDIVISION 14-CONVEYING SYSTEMSDIVISION 15-MECHANICALDIVISION 16-ELECTRICAL
	DETAIL DRAWING CODE
	8.4 DRAWING NUMBER DIVISION PREFIX NUMBERS ARE THOSE IDENTIFIED BY THE 16 DIVISION GROUPING SYSTEM OF MASTER FORMAT AS PUBLISHED BY THE 16 DIVISION SPECIFICATION INSTITUTE (CSI) AND SHALL NOT BE SOLEY REPRESENTATIVE OF REQUIREMENTS FOR ANY ONE DIVISION. THOSE DIVISIONS NOTED AS BEING OMITTED ARE NOT APPLICABLE OR ARE INCLUDED UNDER DISCIPLINE DRAWINGS. IN CASE OF DISCREPANCY BETWEEN THE INDEX AND THE DRAWINGS.
	IN CASE OF DISCREPANCY BETWEEN THE INDEX AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.



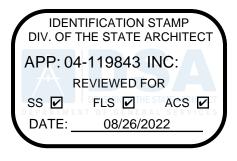


OVERALL SITE PLAN



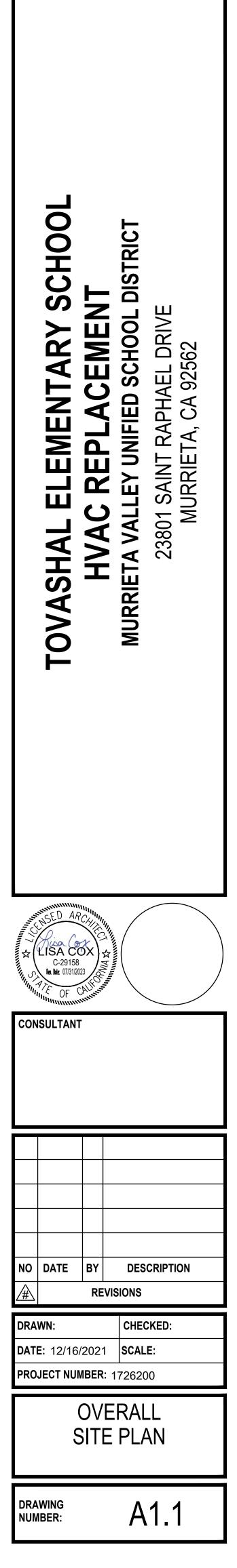
1" = 30'-0" **1**

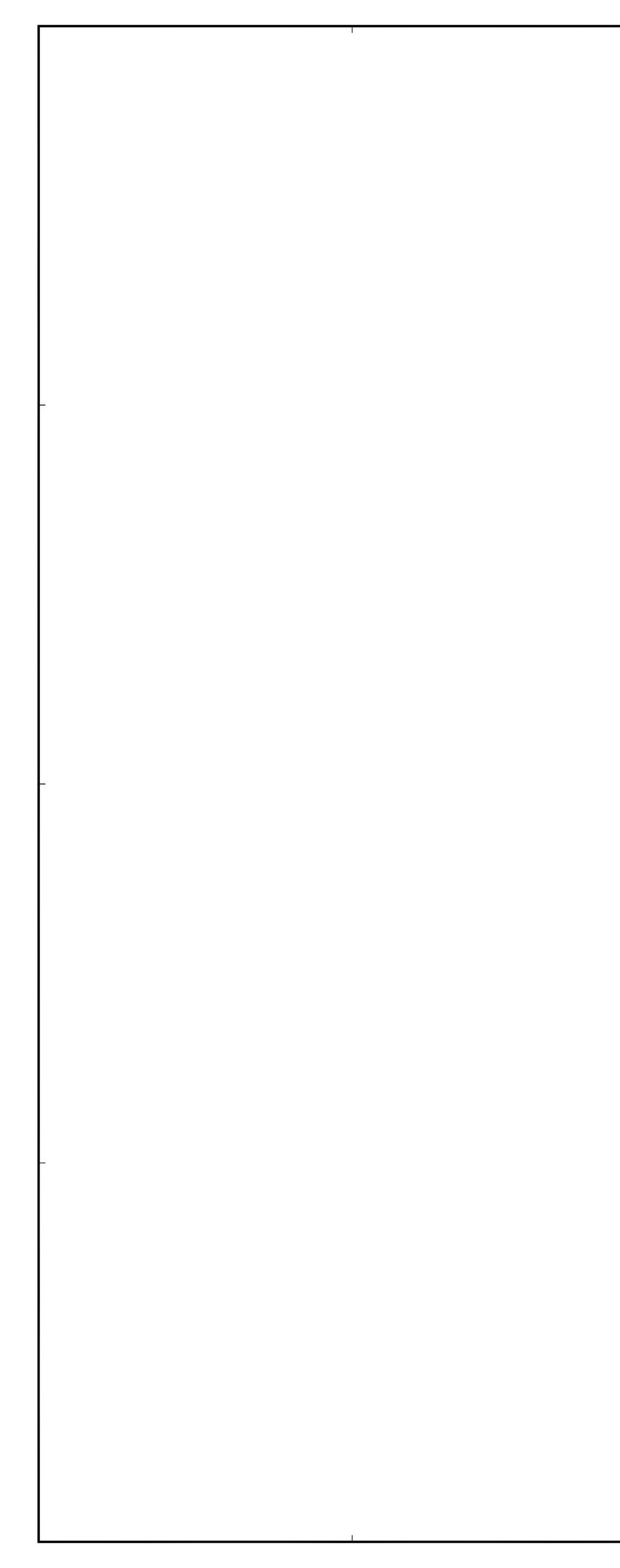
REFERENCE NOTES





8163 ROCHESTER AVENUE, SUITE 100 RANCHO CUCAMONGA, CA 91730 909-987-0909 P





LIST OF /	ABBREVIATIONS	LISTOF	ABBREVIATIO
ADD'L. ALT. ACI	ADDITIONAL ALTERNATE AMERICAN CONCRETE INSTITUTE	RO. R.O.	ROUGH ROUGH OPENING
APA ASTM	AMERICAN PLYWOOD ASSOCIATION AMERICAN SOCIETY FOR TESTING AND MATERIALS	SCHED. SEC.	SCHEDULE SECTION
AWS A.B.	AMERICAN WELDING SOCIETY ANCHOR BOLT(S)	SEL. SEP.	SELECT SEPARATION
APPROX. ARCH.	APPROXIMATELY ARCHITECT / ARCHITECTURAL	SFRS. SHTG. SHT.	STRUCTURAL FORCE RES SHEATHING SHEET
@ 3. PL.	AT BASE PLATE	S.M. SMS	SHEET METAL SHEET METAL SCREWS
B. PL. BM. BRG.	BASE PLATE BEAM BEARING	SIM. SIMP.	SIMILAR SIMPSON
BTWN. BLK.	BETWEEN BLOCK	SPCG. SPECS.	SPACING SPECIFICATION
BLKG. B.E.	BLOCKING BOTH ENDS	SQ. STGR. S.S.	SQUARE STAGGER STAINLESS STEEL
BOT. OR BOTT. B.N. BLDG.	BOTTOM BOUNDARY NAILS BUILDING	SPC STD.	STANDARD PIPE COLUMN STANDARD
оция. С	CAMBER	STL. STIFF.	STEEL STIFFENER
CBC CIP	CALIFORNIA BUILDING CODE CAST IN PLACE	STIRR. STRUCT.	STIRRUP STRUCTURAL
CLG. CJ	CEILING CEILING JOIST OR CONSTRUCTION JOINT OR CONTROL JOINT	SYM. TSG	SYMMETRICAL TAPERED STEEL GIRDER
CJP ≩ CLR.	COMPLETE JOINT PENETRATION WELD CENTER LINE CLEAR	THK. K OR KIP	THICK 1,000 POUNDS
COL. COL.	COLUMN CONCRETE	THRU TN	THROUGH TOE NAIL
CMU COND.	CONCRETE MASONRY UNIT CONDITION	T&G T&B T.O.F.	TONGUE AND GROOVE TOP AND BOTTOM TOP OF FOOTING
CONN. CONSTR.	CONNECTION CONSTRUCTION	T.O.F. T.O.L. T.O.S.	TOP OF FOOTING TOP OF LEDGER TOP OF STEEL OR TOP
CONT'D CONT.	CONTINUED CONTINUOUS	T.O.W. TL	TOP OF WALL TOTAL LOAD
CONTR. CSK.	CONTRACTOR COUNTERSINK	TS TYP.	TUBE STEEL TYPICAL
)L)P.	DEAD LOAD DEEP	U.N.O.	UNLESS NOTED OTHERW
DEMO. DTL. OR DET.	DEMOLISH DETAIL	VIF VERT.	VERIFY IN FIELD VERTICAL
DIAG. DIA. OR Ø	DIAGONAL DIAMETER	WT.	WEIGHT
DIM. DO	DIMENSION DITTO DOUBLE	WWF W/	WELDED WIRE FABRIC WITH
)BL.).F.)WL.	DOUBLE DOUGLAS FIR DOWEL	W/O WD.	WITHOUT WOOD
PWL. DN. DWG.	DOWEL DOWN DRAWING	WIJ WP	WOOD-I-JOIST WORK POINT
Α.	EACH	W.S.	WOOD SCREW
I.F. I.S.	EACH FACE EACH SIDE		A 1
I.W. I.N.	EACH WAY EDGE NAIL(S)	GENER	AL
ELEC. ELEV.	ELECTRICAL ELEVATION		TURAL DRAWINGS AND SPECIFICA LLECTIVELY "THE PLANS") INCORF
EMBED. ENG. EQ.	EMBEDMENT ENGINEER EQUAL	REQUIREMENTS	S AND STANDARDS INCLÚDING WI
LQ. EQUIP. EXCAV.	EQUAL EQUIPMENT EXCAVATION		ORNIA CODE OF REGULATIONS, 1 ATIVE CODE), 2019 EDITION.
E) EXP.	EXISTING EXPANSION	• THE CALIF	ORNIA CODE OF REGULATIONS, 1
EJ ES	EXPANSION JOINT EVALUATION SERVICE		CODE), 2019 EDITION.
SR XT.	EVALUATION SERVICE REPORT EXTERIOR	OF THE W	GULATING AGENCIES WHICH MAY ORK, INCLUDING THE STATE OF
	FACE OF CONCRETE	SAFETY, A SPECIFICA	ND THOSE CODES AND STANDAR TIONS.
.0.M. .0.S. .S.	FACE OF MASONRY FACE OF STUD OR FACE OF SLAB FAR SIDE		TIONALITY STANDARDS SET FORT E (THE □RIGHT TO REPAIR ACT□
	FINISH FINISHED FLOOR		IFACTURER'S REQUIREMENTS OR
THWS TR.	FLAT HEAD WOOD SCREW FLOOR		ATED PRODUCTS.
TD TG.	FLOOR DRAIN FOOTING		CURRENT APPROVED ISSUES O DARDS, INCLUDING SUPPLEMENTS
NDN. RMG.	FOUNDATION FRAMING		EPRESENT ONLY THE FINISHED S
GALV. GA.	GALVANIZE GAUGE	TECHNIQUES,	INDICATE OR REQUIRE ANY CONS SEQUENCES OR PROCEDURES. IE CONTRACTOR SHALL BE FULLY
GLU-LAM GLB	GLUED LAMINATED GLUED LAMINATED BEAM	ANY AND ALL	EXCAVATION, DEMOLITION, SHORE ALL SAFETY PROGRAMS AND PR
GR.	GRADE		PLANS FOR BIDDING OR CONST
IGR. IR	HANGER HARDROCK	DOCUMENTS A	IS REQUIRED TO REVIEW ALL OF IS A WHOLE IN ORDER TO IDENT
IDR. IT.	HEADER HEIGHT	REQUIREMENTS	INDIRECTLY AFFECT ITS PORTION 5 LOCATED IN SECTIONS DESIGNA
HD HSS HORIZ.	HOLD DOWN HOLLOW STRUCTURAL SECTION HORIZONTAL	DIRECTION FR	CASE OF CONFLICTS, THE CONTR OM AN APPROPRIATE OWNER REF RINGENT REQUIREMENT.
NFO.	INFORMATION		NG THE PLANS, THE FOLLOWING
.D. NT.	INSIDE DIAMETER INTERIOR		DIMENSIONS SHALL TAKE PRECED
BC CC	INTERNATIONAL BUILDING CODE INTERNATIONAL CODE COUNCIL		NOTES AND DETAILS SHALL TAKE
NV.	INVERT		CAL DETAILS.
IST. KP	JOIST KING POST		T PARTICULARLY SHOWN OR SPE ARTS THAT ARE SHOWN OR SPE
KF KSI	KIPS PER SQUARE INCH		IMENSIONS AND GRAPHICALLY SH
AM. DGR.	LAMINATED LEDGER		ED ONLY APPROXIMATE. ING THE PLANS, THE FOLLOWING
T. WT. OR LW L	LIGHT WEIGHT LIVE LOAD	BECAUSE	THE PLANS ARE INTENDED TO S
_G. _LH	LONG OR LENGTH LONG LEG HORIZONTAL	CONSTRUC DETAIL, AN	TION IN ONLY AN INDUSTRY-STAND THEREFORE ARE INTENDED
LV O—HY	LONG LEG VERTICAL LOW HYDROGEN	APPROPRI OMISSIONS	ATE REQUESTS FOR CLARIFICATIO 3 ARE TO BE EXPECTED AND AN
1.B. /FR.	MACHINE BOLT(S) MANUFACTURER	AND TO E	TO CAREFULLY REVIEW THE PLA RING THESE ERRORS AND OMIS: ATE OWNER REPRESENTATIVE IN
1/R. 1AS. 1.0.	MANUFACTURER MASONRY MASONRY OPENING	THE RISK	ATE OWNER REPRESENTATIVE IN OF THE CONSEQUENCES OF FA E PROCEEDING.
IATL. IAX.	MASONRT OPENING MATERIAL MAXIMUM		RACTOR SHALL REVIEW AND VEF
ИЕСН. ИTL.	MECHANICAL METAL	STARTING	CONSTRUCTION, AND NOTIFY THE
/IN. /ISC.	MINIMUM MISCELLANEOUS	6. SUBMITTALS W	ILL BE REVIEWED BY THE STRU
	MECHANICAL UNIT	PURSUANT TO A201, AND IN	THE INDUSTRY-STANDARD PRO NO EVENT WILL THE SUBMITTA
N.F. N.S. NSA	NEAR FACE NEAR SIDE NELSON STUD ANCHOR	LESSEN THE SUBMITTAL.	SUBMITTING CONTRACTOR'S RESF
NSA (N) NIC.	NELSON STUD ANCHOR NEW NOT IN CONTRACT		WILL ANY SITE VISITS BY THE S MEANS AND METHODS OR COI
NC. NTS. NO. OR #	NOT IN CONTRACT NOT TO SCALE NUMBER		L REMAIN THE SOLE RESPONSI
	ON CENTER	THE SAME PR	E PLANS PROVIDED IN ANY ELE
DPNG. DPP.	OPENING OPPOSITE	OR ON BEHAL LIMITATION TH	F OF STRUCTURAL ENGINEER FO E ENGINEER'S COMMON LAW, ST
D.H. D.D.	OPPOSITE HAND OUTSIDE DIAMETER	RIGHTS, INCLU TRANSFERABLI	IDING COPYRIGHTS. A RECIPIEN E NONEXCLUSIVE LICENSE TO RE
PHWS	PAN HEAD WOOD SCREW	THE USE OF	POSES; AND NO RECIPIENT IS A ALL OR ANY PORTION OF THESE
² .J. d PIL.	PANEL JOINT PENNY PILASTER	PLAGIARISM.	FOR ANY OTHER PURPOSE WO STRUCTURAL ENGINEER PROVIDE N ITS STANDARD FORMATS AND
PL. OR PL. PL. OR PL PLY.	PILASTER PLATE (STEEL OR WOOD) PLYWOOD	GUARANTEE O	N ITS STANDARD FORMATS AND F COMPATIBILITY WITH ANY RECI S WITH OR CONVERSION TO OTH
PLY. PWJ PCF	PLYWOOD PLYWOOD WEB JOIST POUNDS PER CUBIC FOOT		ANY PARTICULAR SOFTWARE O
PCF PSF PSI	POUNDS PER CUBIC FOOT POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH	JULL KISK.	
PT PTDF	PRESSURE TREATED PRESSURE TREATED DOUGLAS FIR		
	PROPERTY LINE		
RAD.	RADIUS RAFTER		
RFTR.			
REF. REINF.	REFERENCE REINFORCING		
REF.			

LIST OF ABBREVIATIONS (CONT'D)

ION RAL FORCE RESISTING SYSTEM

IETAL METAL SCREWS

CATION

D PIPE COLUMN

RAL

OUNDS

AND GROOVE

BOTTOM FOOTING

LEDGER STEEL OR TOP OF SHEATHING WALL

NOTED OTHERWISE IN FIELD

WIRE FABRIC

-JOIST OINT CREW

AND SPECIFICATIONS, INCLUDING ANY PLANS") INCORPORATE ALL LEGAL AND INDUSTRY DS INCLUDING WITHOUT LIMITATION THE FOLLOWING:

REGULATIONS, TITLE 24, PART 1 (CALIFORNIA 19 EDITION.

REGULATIONS, TITLE 24, PART 2 (CALIFORNIA ITION.

IES WHICH MAY HAVE AUTHORITY OVER ANY PORTION THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL S AND STANDARDS LISTED IN THESE NOTES AND

ARDS SET FORTH IN TITLE 7 OF THE CALIFORNIA

QUIREMENTS OR RECOMMENDATIONS FOR ANY

OVED ISSUES OF ANY NOTED SPECIFICATIONS, CODES NG SUPPLEMENTS, UNLESS NOTED OTHERWISE.

THE FINISHED STRUCTURE, AND THEY ARE NOT QUIRE ANY CONSTRUCTION MEANS, METHODS, PROCEDURES. IN PARTICULAR AND WITHOUT SHALL BE FULLY AND SOLELY RESPONSIBLE FOR MOLITION, SHORING AND ERECTION PROCEDURES AND OGRAMS AND PRECAUTIONS.

DING OR CONSTRUCTION PURPOSES. THE REVIEW ALL OF THE PROJECT'S CONSTRUCTION DRDER TO IDENTIFY ALL REQUIREMENTS THAT CT ITS PORTION OF THE STRUCTURAL WORK, EVEN CTIONS DESIGNATED AS APPLICABLE TO OTHER CTS, THE CONTRACTOR SHALL EITHER OBTAIN IATE OWNER REPRESENTATIVE OR OTHERWISE APPLY FMFNT.

THE FOLLOWING GENERAL RULES APPLY: L TAKE PRECEDENCE OVER SCALED DRAWINGS. AILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES

SHOWN OR SPECIFIED SHALL BE THE SAME AS SHOWN OR SPECIFIED.

GRAPHICALLY SHOWN LOCATIONS ARE TO BE (IMATE. THE FOLLOWING GENERAL RULES APPLY:

INTENDED TO SET FORTH THE REQUIREMENTS FOR N INDUSTRY-STANDARD LEVEL OF QUALITY AND ARE INTENDED TO BE SUPPLEMENTED BY OR CLARIFICATION AND INFORMATION, ERRORS AND PECTED AND ANTICIPATED; AND THE CONTRACTOR IS REVIEW THE PLANS FOR ERRORS AND OMISSIONS RORS AND OMISSIONS TO THE ATTENTION OF AN

RESENTATIVE IN A TIMELY MANNER AND ASSUMES QUENCES OF FAILING TO DO SO BEFORE BIDDING OR

REVIEW AND VERIFY ALL DIMENSIONS PRIOR TO AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY SISTENCIES.

BY THE STRUCTURAL ENGINEER, IF AT ALL, ONLY STANDARD PROTOCOL SET FORTH IN AIA DOCUMENT THE SUBMITTAL REVIEW PROCESS RELIEVE OR RACTOR'S RESPONSIBILITY FOR AN INAPPROPRIATE

ISITS BY THE STRUCTURAL ENGINEER CONCERN ETHODS OR CONSTRUCTION SAFETY, AND ALL SUCH SOLE RESPONSIBILITY OF THE CONTRACTOR.

DED IN ANY ELECTRONIC FORM ARE SUBJECT TO OTHER INSTRUMENTS OF SERVICE PREPARED BY AL ENGINEER FOR THE PROJECT, INCLUDING WITHOUT OMMON LAW, STATUTORY OR OTHER RESERVED S. A RECIPIENT IS GRANTED AT MOST A LICENSE TO REUSE THE PLANS SOLELY FOR RECIPIENT IS AUTHORIZED TO USE OR TO ALLOW RTION OF THESE PLANS FOR ANY OTHER PURPOSE, R PURPOSE WOULD CONSTITUTE ACTIONABLE GINEER PROVIDES DOCUMENTS IN AN ELECTRONIC FORMATS AND CONVENTIONS AND WITH NO WITH ANY RECIPIENT'S SOFTWARE OR HARDWARE,

ERSION TO OTHER FORMATS OR CONVENTIONS, OR AR SOFTWARE OR HARDWARE, IS AT THE RECIPIENT'S

PROJECT DESIGN CRITERIA

1. BASIC DESIGN LIVE LOADS:

ROOF LIVE LOAD: 20 PSF (REDUCIBLE) (E) ROOF DEAD LOAD, BLDG A, B, C, D, E1, & E2: 13 PSF 2. RAIN LOADS

RAIN INTNESITY, i = 2.50 IN/HR

3. SNOW LOADS

GROUND SNOW LOAD, $P_G = 0$

4. WIND LOADS RISK CATEGORY: III

EXPOSURE CATEGORY: C BASIC DESIGN WIND SPEED (3-SECOND GUST), V = 102 MPH VELOCITY PRESSURE EXPOSURE COEFFICIENT, $K_Z = 0.85 (0-15 \text{ FT})$ TOPOGRAPHIC FACTOR, $K_{zt} = 1.0$ WIND DIRECTIONALITY FACTOR, $K_d = 0.85$ GROUND ELEVATION FACTOR, Ke = 1.00GUST EFFECT FACTOR, G = 0.85

A. WIND ON ROOFTOP EQUIPMENT (ASCE 7–16, CH. 29)

- $q_h = 0.00256 K_Z K_{Zt} K_d V_{ULT}^2 = 19.24 PSF$
- $F_h = q_h$ (GCr) Af = 36.56 PSF x Af LATERAL = 28.86 PSF x Af UPLIFT

COEFFICIENT FOR LATERAL, (GCr) = 1.9COEFFICIENT FOR UPLIFT, (GCr) = 1.5

5. EARTHQUAKE LOADS

SEISMIC DESIGN CRITERIA

$S_{S} = 1.535$ $S_{I} = 0.575$ SITE CLASS: $F_{A} = 1.2$ $F_{A} = 1.25$	D
$F_V = 1.725$ $S_{DS} = 1.228$	
$S_{D1} = 0.661$	

RISK CATEGORY: III SEISMIC DESIGN CATEGORY: D

SEISMIC DESIGN REQUIREMENTS

NON-STRUCTURAL COMPONENTS

SEISMIC DESIGN FORCE

04a_pS_{DS}W_P

 $F_{\rm P} = ----(1+2\frac{z}{h})$ (Rp/lp)

FP IS NOT REQUIRED TO BE TAKEN AS GREATER THAN $F_P = 1.6S_{DS}I_PW_P$

AND FP SHALL NOT BE TAKEN AS LESS THAN

$F_P = 0.3S_{DS}I_PW_P$ DIMENSIONS

- 1. DIMENSIONS SHALL BE DEFINED TO INCLUDE BOTH HORIZONTAL DIMENSIONS AND VERTICAL DIMENSIONS (ELEVATIONS).
- 2. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DRAWINGS.
- 3. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT NOTED ON STRUCTURAL
- DRAWINGS. 4. SEE ARCHITECTURAL AND/OR CIVIL DRAWINGS FOR FINISH FLOOR ELEVATIONS.
- 5. SEE ARCHITECTURAL DRAWINGS FOR ALL TOP OF SHEATHING AND/OR ROOF
- ELEVATIONS.
- 6. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES OR INCONSISTENCIES.

EXISTING CONDITIONS

- 1. ALL INFORMATION SHOWN ON THE PLANS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE FROM PLANS SUPPLIED BY THE OWNER, BUT WITHOUT GUARANTEE OF ACCURACY.
- 2. WHERE ACTUAL CONDITIONS ARE NOT IN ACCORDANCE WITH THE INFORMATION PRESENTED, THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY. NO MODIFICATIONS OF THE PLANS FOR NEW CONSTRUCTION SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.
- 3. PER AS-BUILTS, ALL (E) STRUCTURAL LUMBER IS DOUGLAS FIR OF THE FOLLOWING GRADES: 2X4 AND 3X4 NO. 2X6 AND LARGER NO. 1
- 4. PER AS-BUILTS, (E) STRUCTURAL STEEL PROPERTIES CONFORM TO THE FOLLOWING: STRUCTURAL STEEL ASTM A-36 BOLTS ASTM A307

STRUCTURAL STEEL AND MISCELLANEOUS METAL

- 1. ALL PORTIONS OF WORK PERTAINING TO STRUCTURAL STEEL CONSTRUCTION SHALL CONFORM TO TITLE 24, PART 2, CHAPTER 22A.
- 2. BOLTS SHALL CONFORM TO THE FOLLOWING, UNLESS NOTED OTHERWISE: MISCELLANEOUS CONNECTIONS: ASTM A-307
- 3. SQUARE AND RECTANGULAR HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO ASTM A-500, GRADE B.
- 4. STRUCTURAL STEEL SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR
- REVIEW AND APPROVAL PRIOR TO FABRICATION. 5. ALL WELDING SHALL CONFORM TO THE STRUCTURAL WELDING CODE - STEEL. AWS D1.1 AND <u>STRUCTURAL WELDING CODE SEISMIC</u> SUPPLEMENT AWS D1.8, BY THE AMERICAN WELDING SOCIETY. WELDING RODS SHALL BE E70XX.
- 6. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS.
- 7. ALL STRUCTURAL STEEL AND MISCELLANEOUS METAL ITEMS, INCLUDING CONNECTORS, EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED, AFTER FABRICATION.

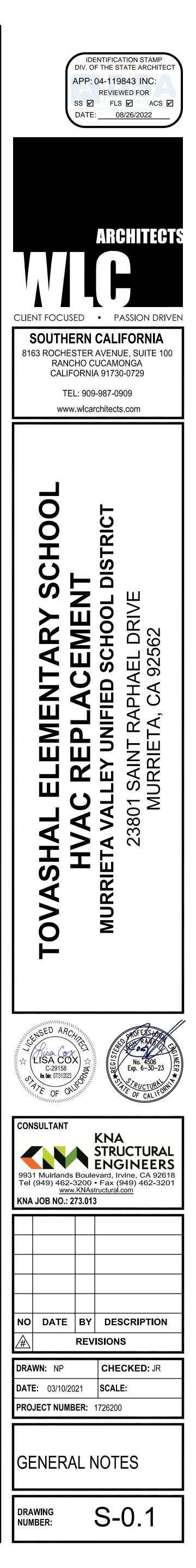
COLD-FORMED STEEL FRAMING

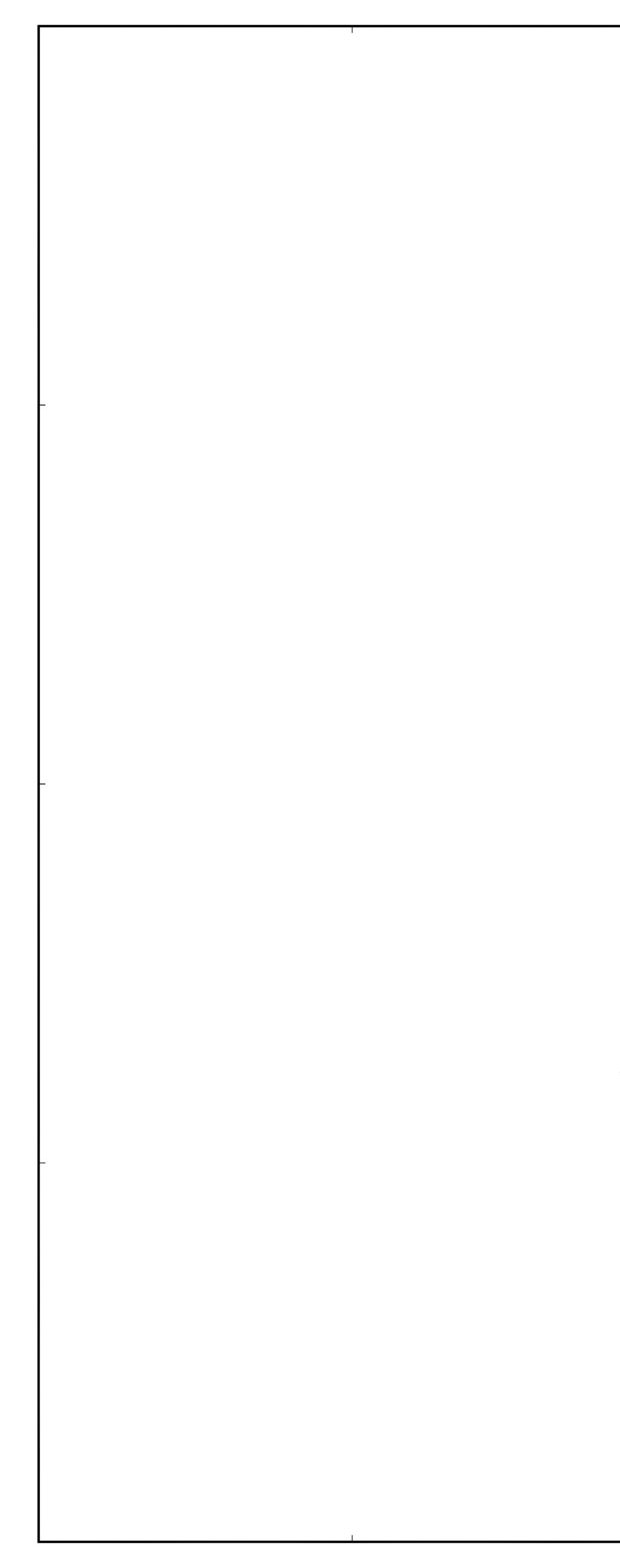
1. ALL PORTIONS OF WORK PERTAINING TO COLD-FORMED STEEL CONSTRUCTION SHALL CONFORM TO TITLE 24, PART 2, CHAPTER 22A.

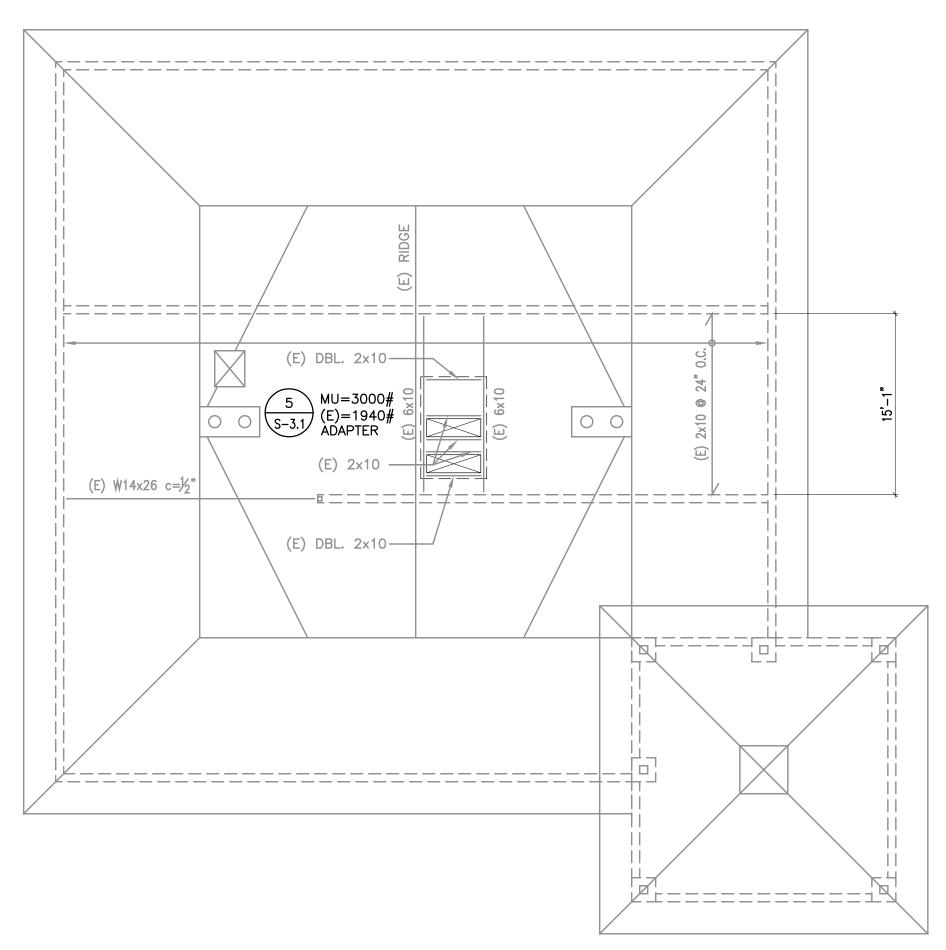
- 2. ALL SHEET METAL SCREWS SHALL PROTRUDE 3 EXPOSED THREADS MINIMUM THROUGH BASE METAL FRAMING. SHEET METAL SCREWS SHALL BE PER ICC ESR-3223 OR EQUIVALENT.
- 3. ALL LIGHT GUAGE METAL FRAMING SHALL BE GALVANIZED AND SHALL CONFORM TO ASTM A-653 SS, GRADE 50, CLASS 1, WITH A MINIMUM YIELD STRENGTH OF 50 KSI FOR 16 GUAGE AND HEAVIER FRAMING, AND ASTM A-653 SS, GRADE 33, WITH A MINIMUM YIELD STRENGTH OF 33 FOR 18 GAUGE AND LIGHTER FRAMING.
- 4. WELDING SHALL BE IN ACCORDANCE WITH THE STRUCTURAL WELDING CODE SHEET STEEL, AWS D1.3, BY THE AMERICAN WELDING SOCIETY.

WOOD

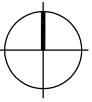
- 1. ALL PORTIONS OF WORK PERTAINING TO WOOD CONSTRUCTION SHALL CONFORM TO TITLE 24, PART 2, CHAPTER 23, INCLUDING ADDITIONAL REQUIREMENTS AND EXCEPTIONS, AS APPLICABLE.
- 2. LUMBER SHALL BE GRADED IN ACCORDANCE WITH THE STANDARD GRADING RULES NO. 17 OF THE WEST COAST LUMBER INSPECTION BUREAU, OR THE STANDARD GRADING RULES OF THE WESTERN WOOD PRODUCTS ASSOCIATION.
- 3. DIMENSION LUMBER SHALL BE DOUGLAS FIR-LARCH, NO. 1 AND BETTER GRADE, UNLESS NOTED OTHERWISE. TIMBERS SHALL BE DOUGLAS FIR LARCH, NO. 1 GRADE, UNLESS NOTED OTHERWISE. MOISTURE CONTENT AT TIME OF INSTALLATION SHALL BE 19% OR LESS.







BUILDING A - ROOF FRAMING PLAN



SCALE: $\frac{1}{8}$ " = 1'-0"

ROOF FRAMING PLAN NOTES

1. SEE SHEET SO.1 FOR GENERAL NOTES.

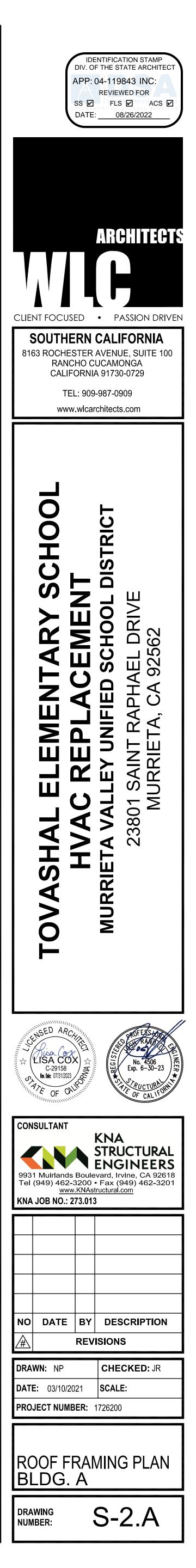
- 2. MU INDICATES NEW MECHANICAL UNIT. EXISTING WEIGHT OF UNIT BEING REPLACED IS SHOWN. USE OF ADAPTER CURB WHERE APPLICABLE IS INDICATED. WEIGHT INCLUDES NEW UNIT PLUS ACCESSORIES AND ADAPTER CURB WHERE OCCURS. FOR WEIGHT OF (E) CURB, SEE MECHANICAL DRAWINGS.
- 3. SEE MECHANICAL DRAWINGS FOR ADDITIONAL UNIT INFORMATION.

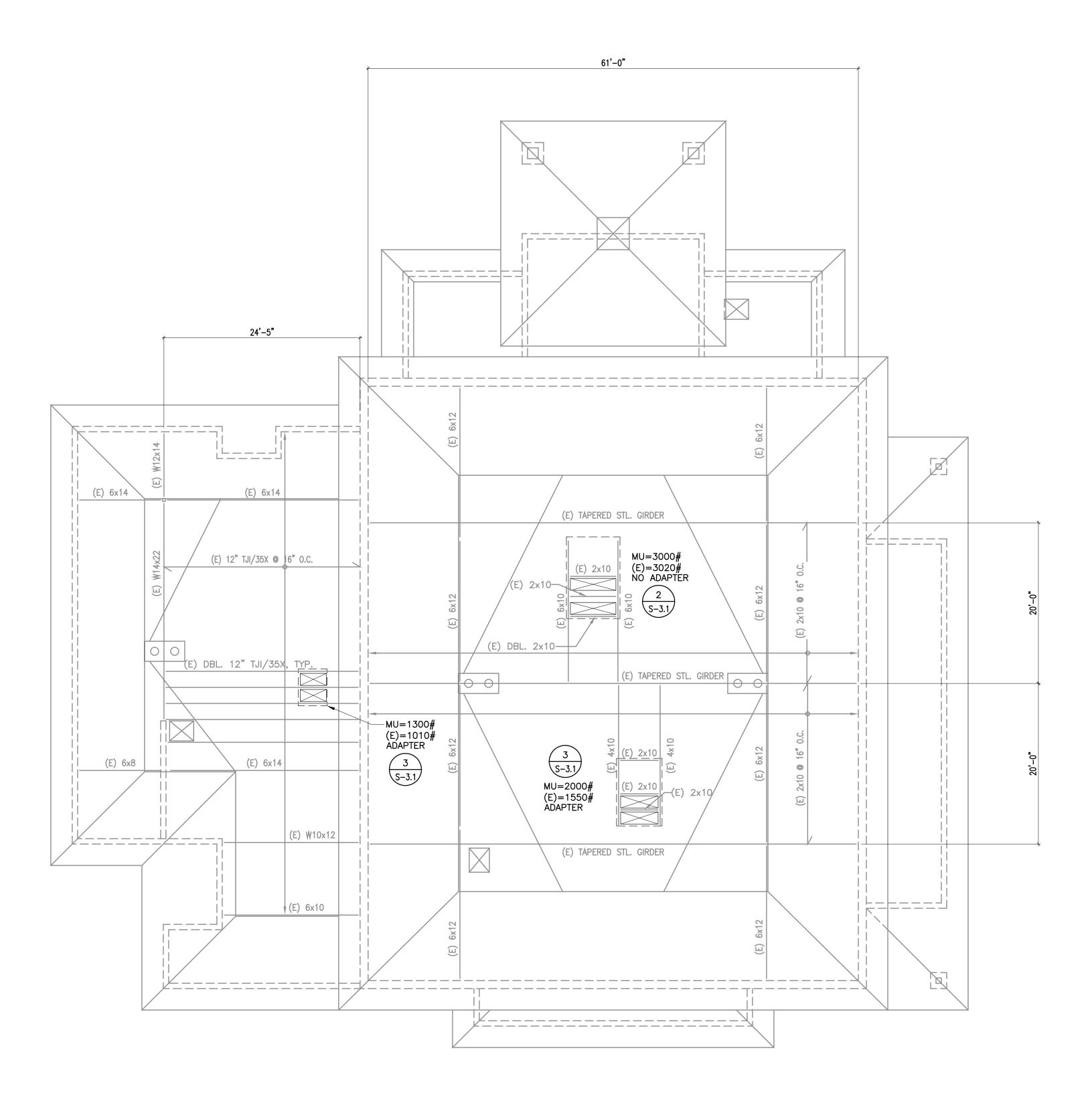
ALL FRAMING IS EXISTING. ANY DIMENSIONS NOTED ARE FOR INFORMATION ONLY AND SUBJECT TO FIELD VERIFICATION.

LEGEND

______ : INDICATES EXISTING SPAN OF JOISTS

------ : INDICATES EXISTING EXTENT OF JOISTS.







BUILDING B - ROOF FRAMING PLAN SCALE: $\frac{1}{8}$ " = 1'-0"

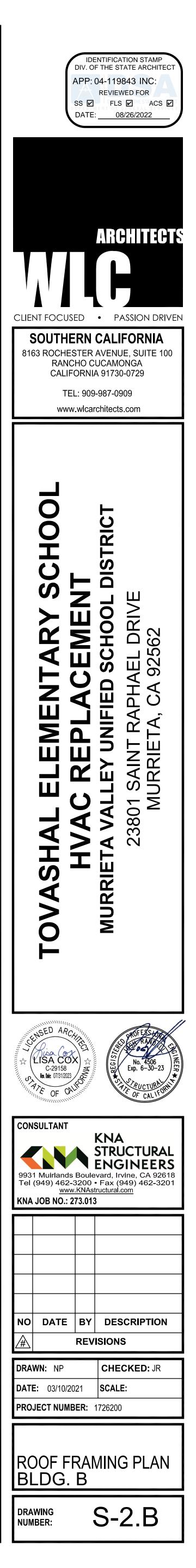
ROOF FRAMING PLAN NOTES

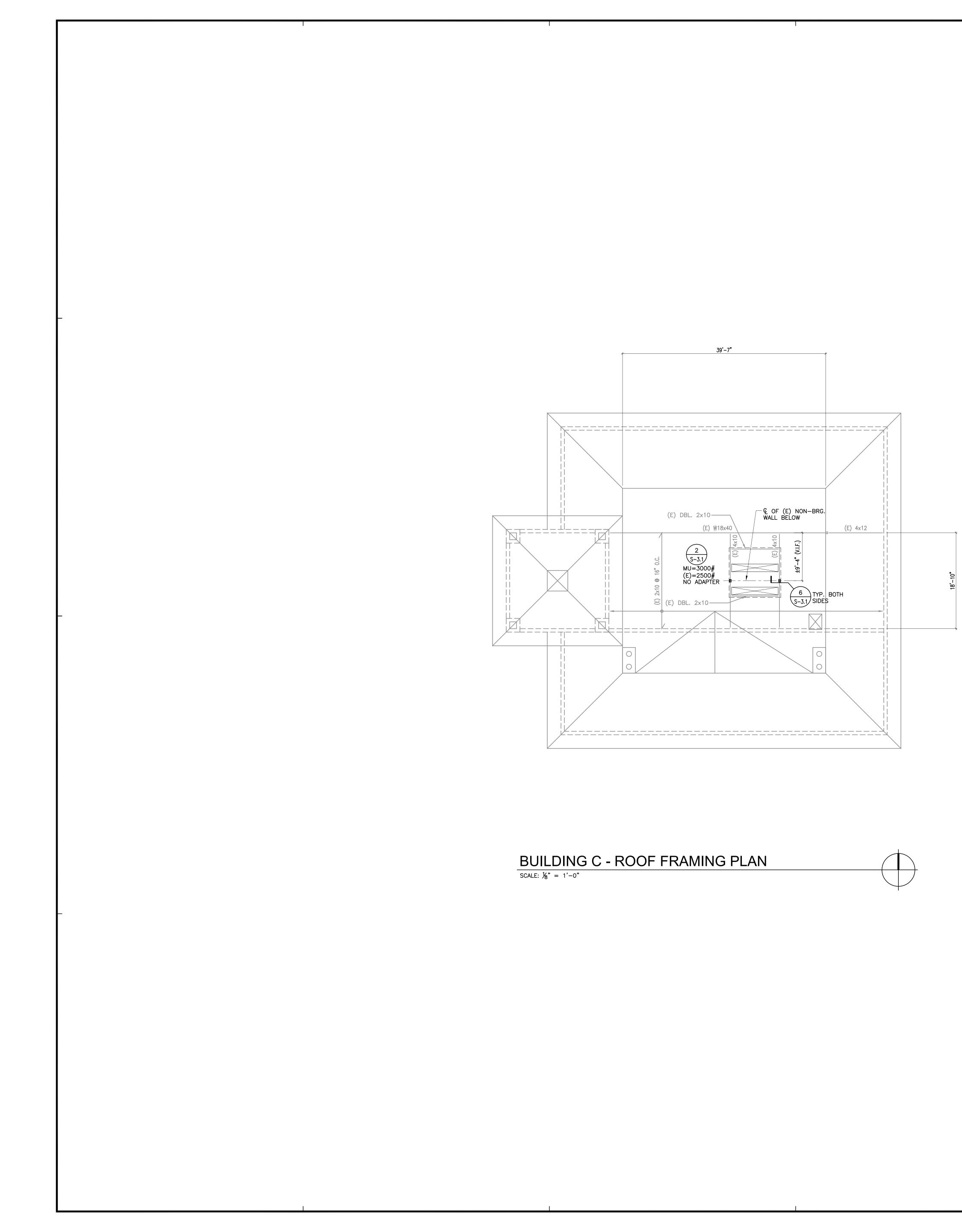
- 1. SEE SHEET SO.1 FOR GENERAL NOTES.
- 2. MU INDICATES NEW MECHANICAL UNIT. EXISTING WEIGHT OF UNIT BEING REPLACED IS SHOWN. USE OF ADAPTER CURB WHERE APPLICABLE IS INDICATED. WEIGHT INCLUDES NEW UNIT PLUS ACCESSORIES AND ADAPTER CURB WHERE OCCURS. FOR WEIGHT OF (E) CURB, SEE MECHANICAL DRAWINGS.
- 3. SEE MECHANICAL DRAWINGS FOR ADDITIONAL UNIT INFORMATION.
- ALL FRAMING IS EXISTING. ANY DIMENSIONS NOTED ARE FOR INFORMATION ONLY AND SUBJECT TO FIELD VERIFICATION.

LEGEND

______ : INDICATES EXISTING SPAN OF JOISTS

------ : INDICATES EXISTING EXTENT OF JOISTS.





ROOF FRAMING PLAN NOTES

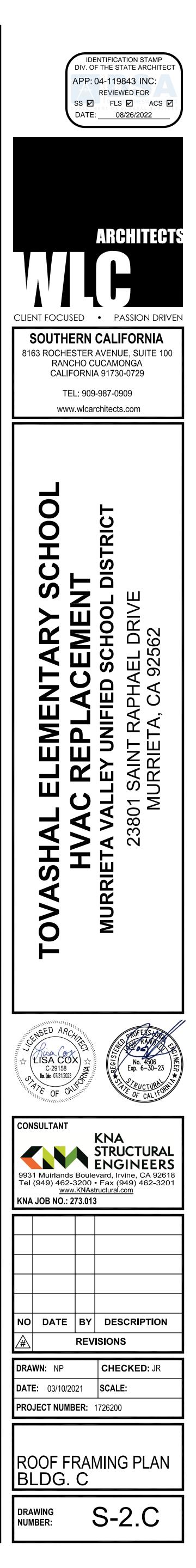
1. SEE SHEET SO.1 FOR GENERAL NOTES.

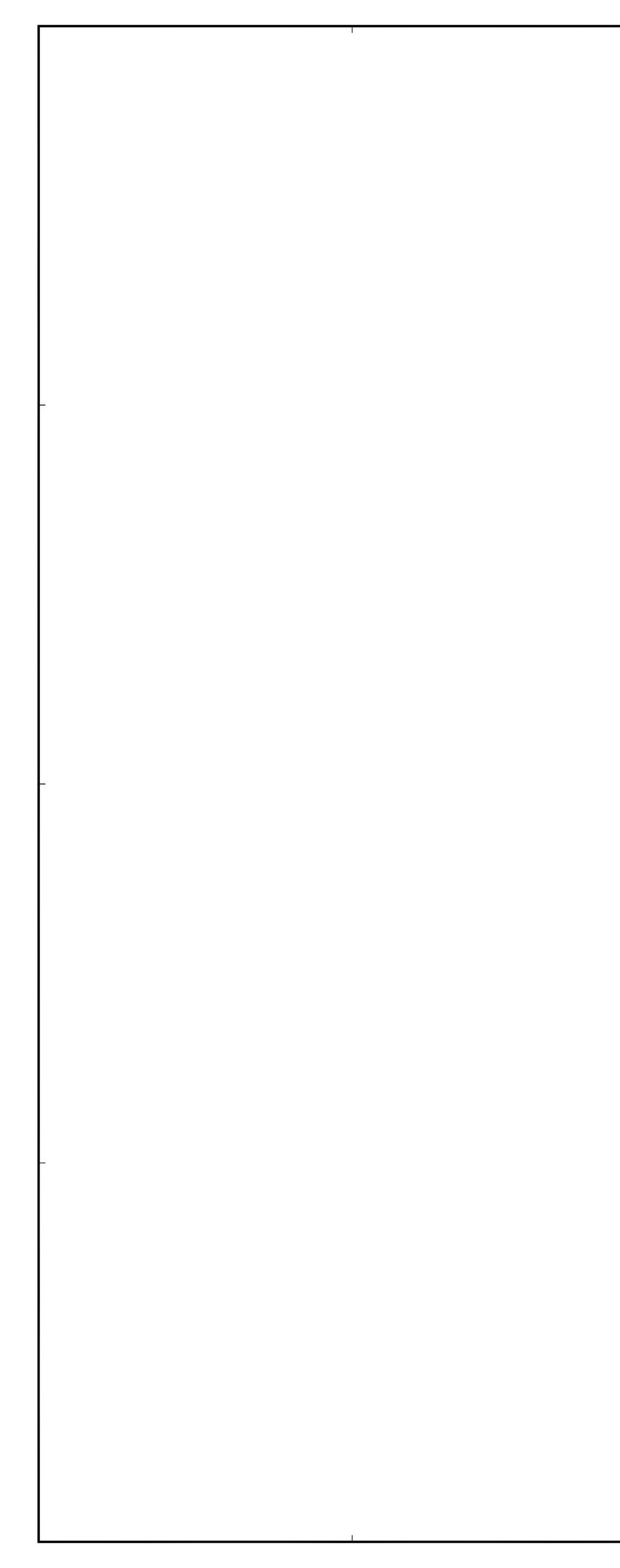
- MU INDICATES NEW MECHANICAL UNIT. EXISTING WEIGHT OF UNIT BEING REPLACED IS SHOWN. USE OF ADAPTER CURB WHERE APPLICABLE IS INDICATED. WEIGHT INCLUDES NEW UNIT PLUS ACCESSORIES AND ADAPTER CURB WHERE OCCURS. FOR WEIGHT OF (E) CURB, SEE MECHANICAL DRAWINGS.
- 3. SEE MECHANICAL DRAWINGS FOR ADDITIONAL UNIT INFORMATION.
- 4. ALL FRAMING IS EXISTING. ANY DIMENSIONS NOTED ARE FOR INFORMATION ONLY AND SUBJECT TO FIELD VERIFICATION.

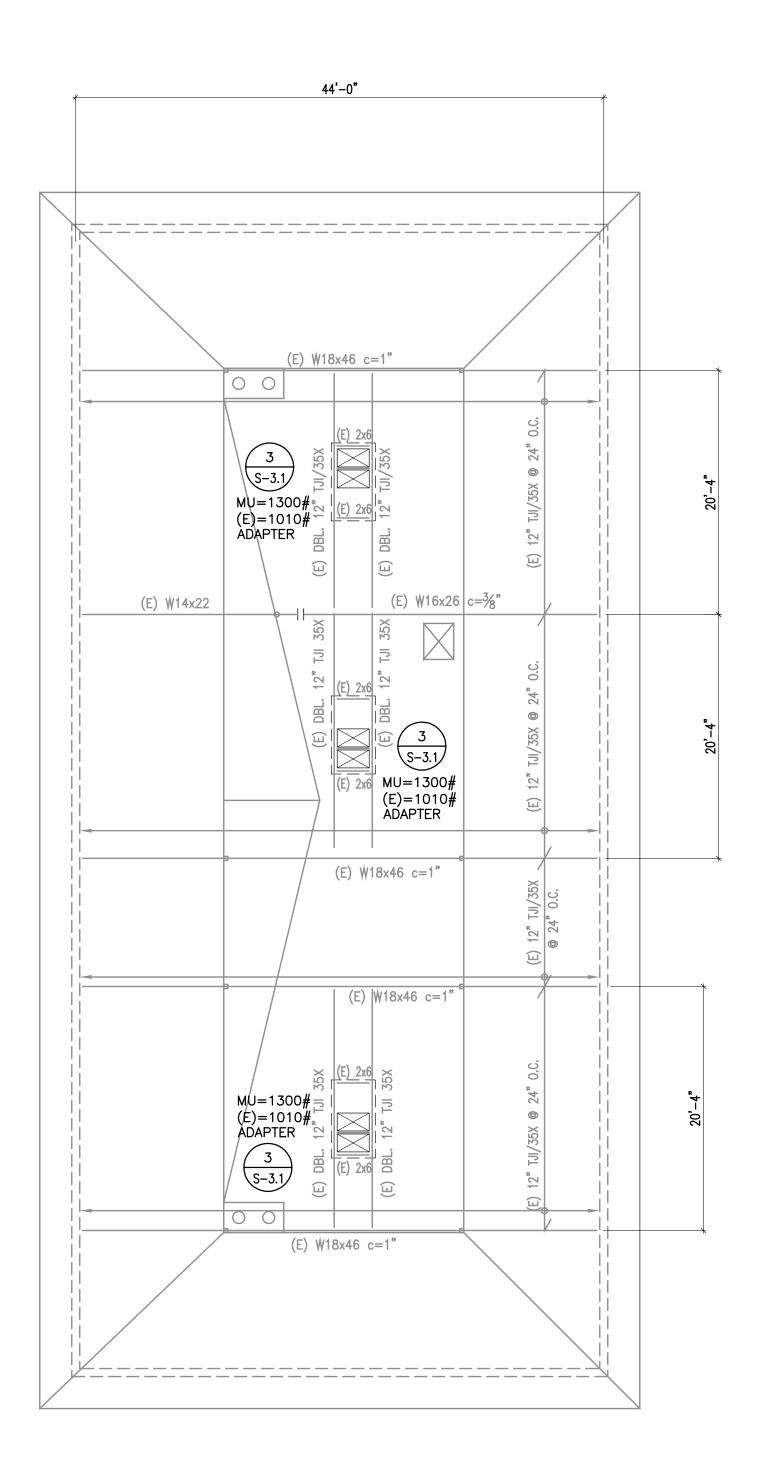
LEGEND

. INDICATES EXISTING SPAN OF JOISTS

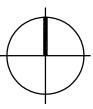
INDICATES (N) 4x POST UNDER (E) BEAM. SEE 6/S-3.1 FOR ADD'L. INFORMATION.







BUILDING D - ROOF FRAMING PLAN SCALE: $\frac{1}{8}$ " = 1'-0"

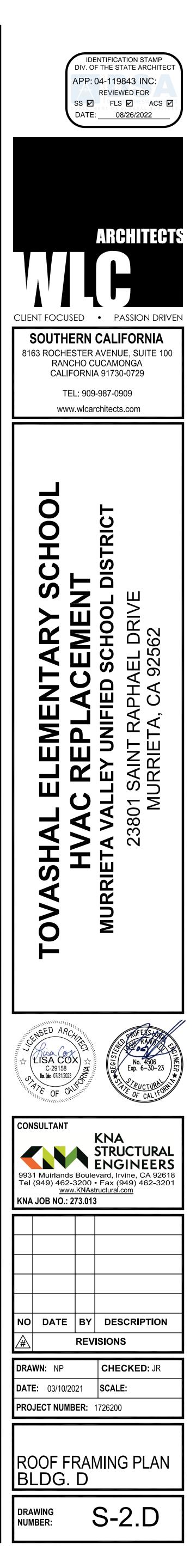


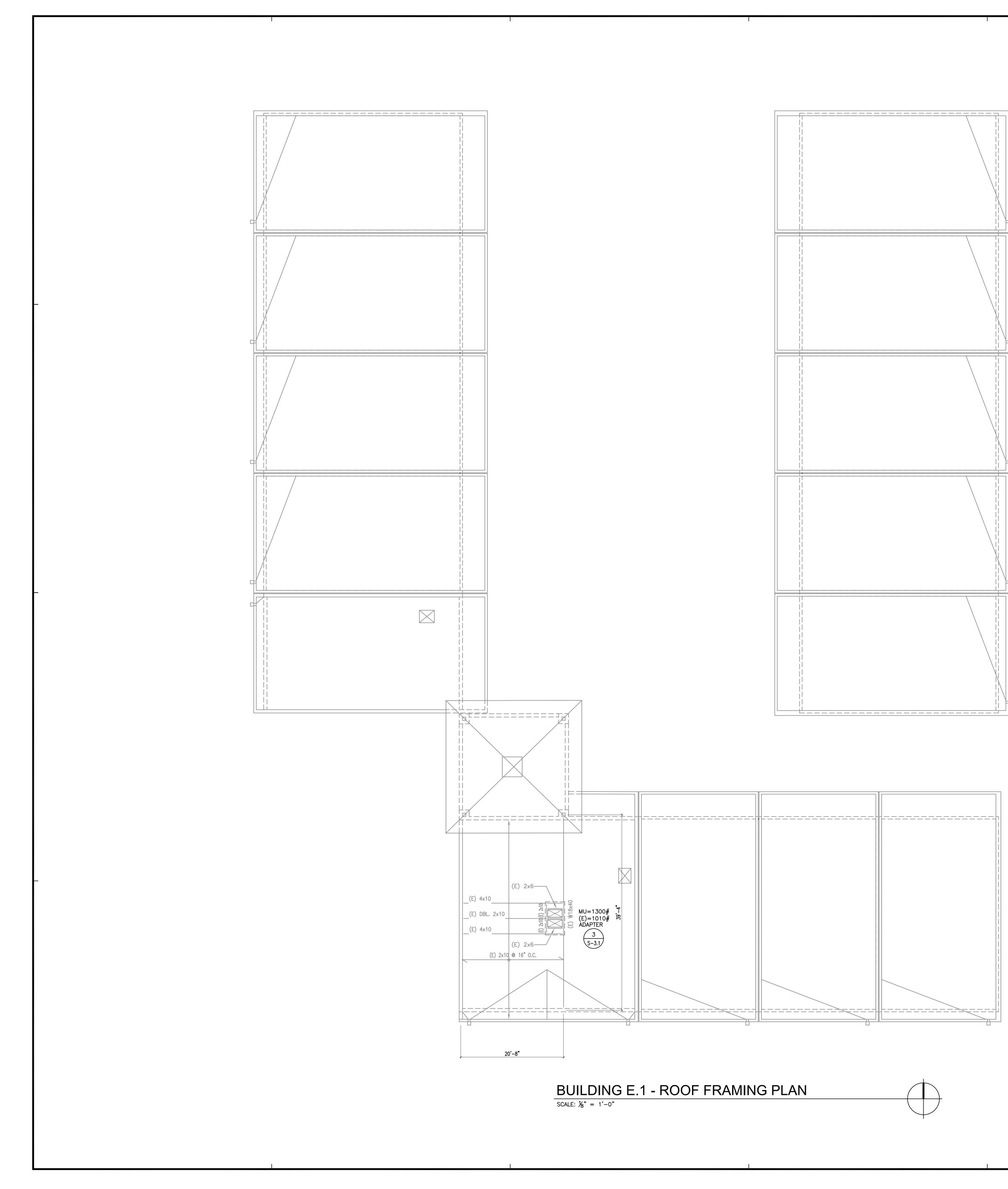
ROOF FRAMING PLAN NOTES

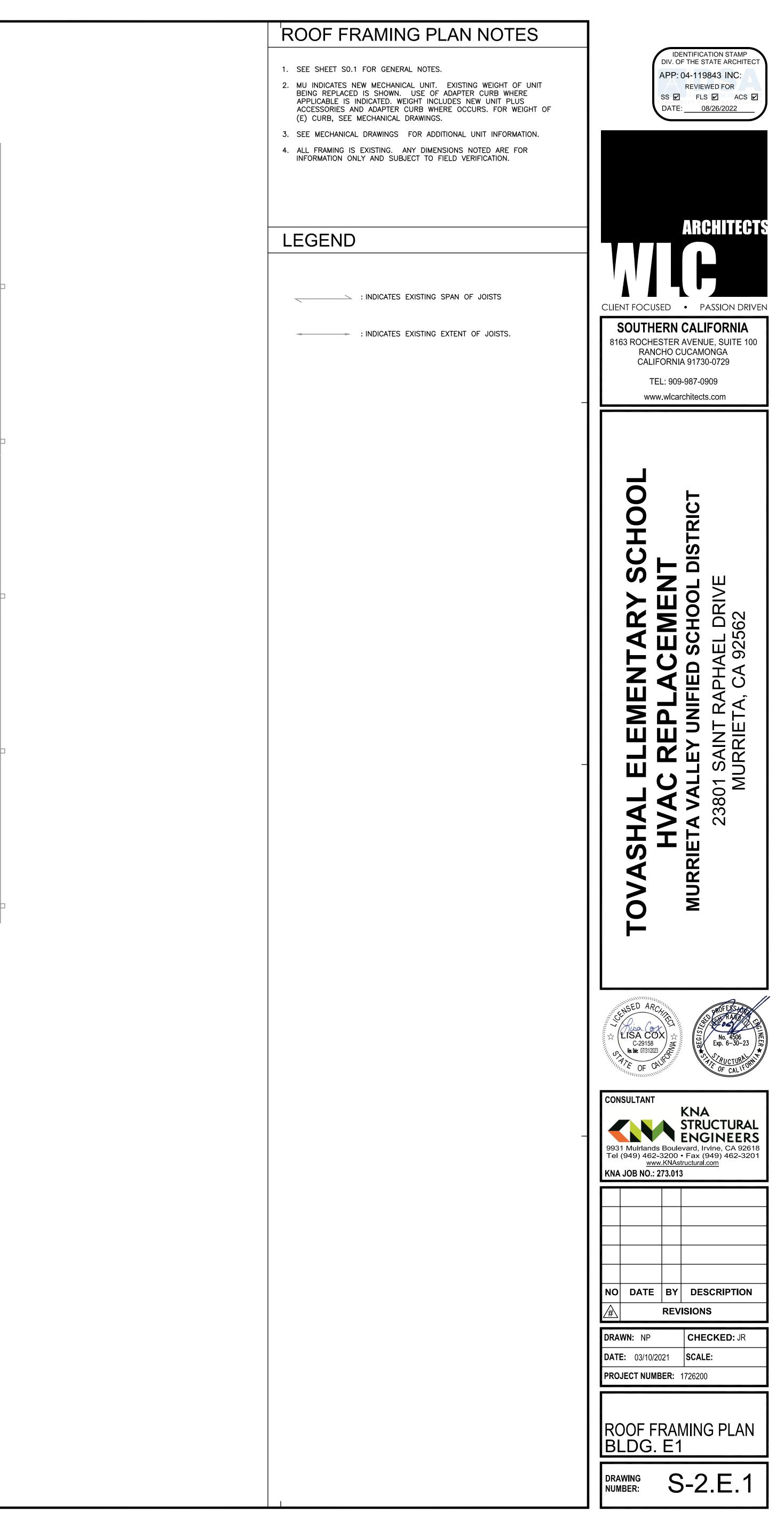
- 1. SEE SHEET SO.1 FOR GENERAL NOTES.
- 2. MU INDICATES NEW MECHANICAL UNIT. EXISTING WEIGHT OF UNIT BEING REPLACED IS SHOWN. USE OF ADAPTER CURB WHERE APPLICABLE IS INDICATED. WEIGHT INCLUDES NEW UNIT PLUS ACCESSORIES AND ADAPTER CURB WHERE OCCURS. FOR WEIGHT OF (E) CURB, SEE MECHANICAL DRAWINGS.
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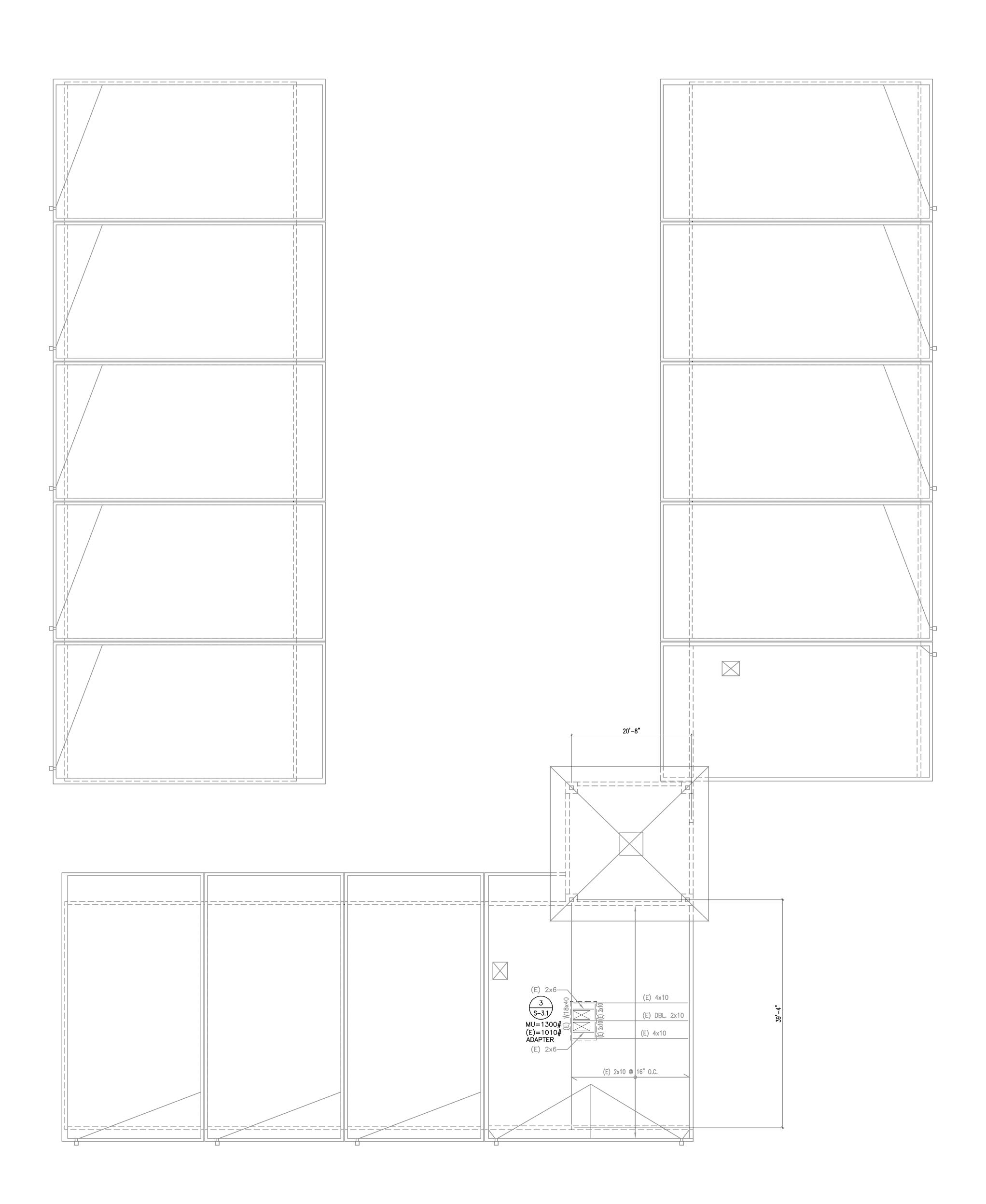
LEGEND

. INDICATES EXISTING SPAN OF JOISTS



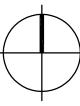






SCALE: $\frac{1}{8}$ " = 1'-0"





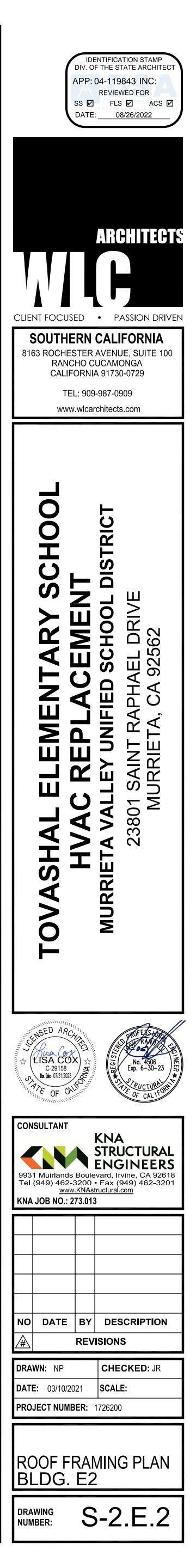
ROOF FRAMING PLAN NOTES

- 1. SEE SHEET SO.1 FOR GENERAL NOTES.
- 2. MU INDICATES NEW MECHANICAL UNIT. EXISTING WEIGHT OF UNIT BEING REPLACED IS SHOWN. USE OF ADAPTER CURB WHERE APPLICABLE IS INDICATED. WEIGHT INCLUDES NEW UNIT PLUS ACCESSORIES AND ADAPTER CURB WHERE OCCURS. FOR WEIGHT OF (E) CURB, SEE MECHANICAL DRAWINGS.
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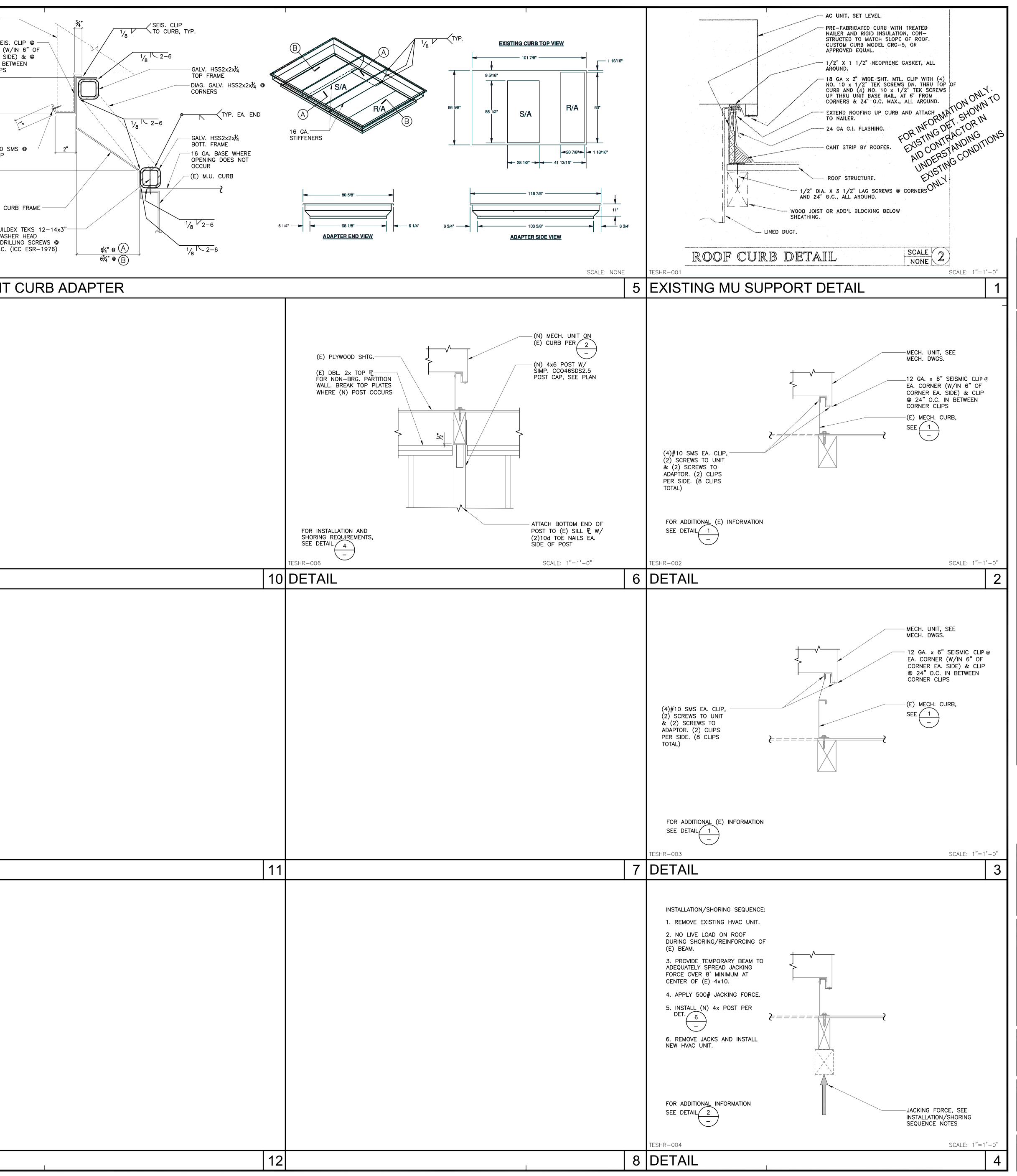
LEGEND

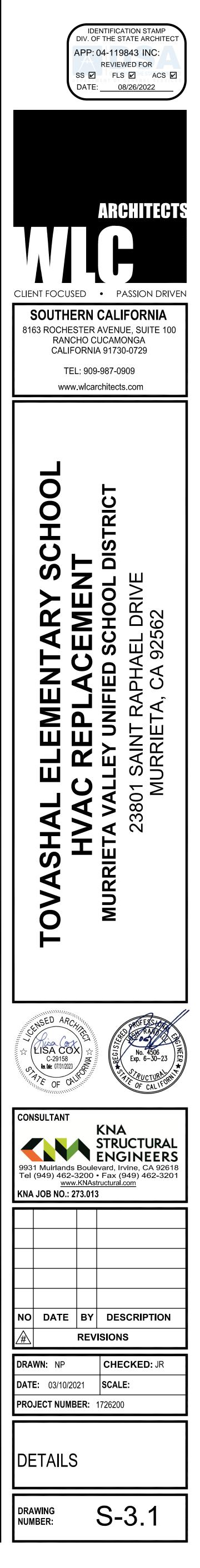
______ : INDICATES EXISTING SPAN OF JOISTS

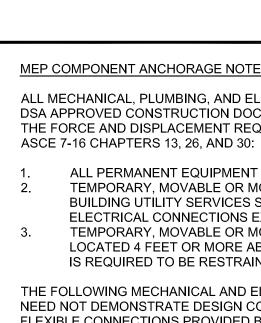
------ : INDICATES EXISTING EXTENT OF JOISTS.



	MECH. UNIT,— SEE MECH'L.
	12 GA.x6" SEI EA. CORNER (CORNER EA. S 24" O.C. IN B CORNER CLIPS
	37°
	(2) #10 EA. CLIP
	16 GA. (
	ITW BUIL HFX WA
	ITW BUIL HEX WA SELF—DI 12"O.C
	TESHR-005
13	EQUIPMEN
14	
15	
16	







BRACE LOADS.

DSA 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 1617A.1.18 THROUGH 1617A.1.26 AND

ALL PERMANENT EQUIPMENT AND COMPONENTS. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED." SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE. 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 MATTER APPROVED BY DSA.

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

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND 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 NOTE

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 SECTIONS 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

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 MP E - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM#) #0052-13 (B-LINE /

TOLCO).

PROJECT SHEET INDEX

M-0.1	MECHANICAL LEGEND, NOTES AND SHEET INDEX
M-0.2	MECHANICAL TITLE 24 CALCULATIONS
M-0.3	MECHANICAL TITLE 24 CALCULATIONS
M-1.1	MECHANICAL SCHEDULES
M-2.A	MECHANICAL ROOF PLAN - BLDG A
M-2.B	MECHANICAL ROOF PLAN - BLDG B
M-2.C	MECHANICAL ROOF PLAN - BLDG C
M-2.D	MECHANICAL ROOF PLAN - BLDG D
M-2.E1	MECHANICAL ROOF PLAN - BLDG E1
M-2.E2	MECHANICAL ROOF PLAN - BLDG E2
M-5.1	MECHANICAL DETAILS

	GENERAL NO
	ALL WORK SHALL BE DONE IN ACCORDANCE WITH CITY CODES, CALIFORNIA MECHANICAL CODE, 2019 CALIFORNIA ENERGY COE CALIFORNIA GREEN BUILDING STANDARDS, NFPA 90 & 91, STATI AND ALL OTHER APPLICABLE CODES AS SHOWN ON SHEET G1.1
	CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND F SURFACES, EQUIPMENT, AREAS, AND PROPERTY THAT MAY BE I AND/OR NEW WORK.
	THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUNECESSARY FOR THE COMPLETION OF THE WORK. ALL MATERIAL APPLICABLE CODES AND GOVERNING REGULATIONS AND SHAND STATE FIRE MARSHALL.
	ALL DRAWINGS ARE CONSIDERED TO BE PART OF THE CONTRAC RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DR CONSTRUCTION, INCLUDING ARCHITECTURAL, STRUCTURAL, AIF ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION MAY BE IS WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMEN AT HIS OWN EXPENSE, AND AT NO EXPENSE TO THE OWNER.
	DO NOT SCALE DRAWINGS - ALL DIMENSIONS AND JOB SITE CON CONTRACTOR AT THE JOB SITE PRIOR TO BID SUBMITTAL, STAR MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, THE ENGIN
i.	CONTRACTOR SHALL COORDINATE ALL DUCT, PIPE AND EQUIPM STRUCTURAL, AND ALL OTHER TRADES.
	ALL DUCTWORK SHALL BE CONSTRUCTED, ERECTED & TESTED OF LOCAL REGULATIONS AND PROCEDURES DETAILED IN THE A THE APPLICABLE STANDARDS ADOPTED BY S.M.A.C.N.A. PROVID & PREFABRICATED SPIRAL LOCKSEAM DUCTS AND FITTINGS.
.	DUCT MATERIALS SHALL COMPLY WITH ANSI/SMACNA 006-2006 H METAL AND FLEXIBLE, 3RD EDITION.
	PROVIDE DUCT MANUAL VOLUME DAMPERS IN EACH BRANCH DU COMPLETE AIR BALANCE OF THE SYSTEM. PROVIDE ADEQUATE
0.	WHERE INTERNAL ACOUSTICAL DUCT LINER IS INDICATED, DUCTLINER HAS BEEN INSTALLED.
1.	ALL DUCTWORK AND PIPING SHALL BE INSULATED CONSISTENT 120.3, 120.4, & 120.7 OF THE 2019 ENERGY EFFICIENCY STANDAR 503.7.1(11) OF 2019 C.M.C.
2.	INSULATION MATERIAL SHALL MEET THE CALIFORNIA QUALITY S
3.	ROOM THERMOSTATS SHALL BE CAPABLE OF BEING SET TO MAI 55 °F. TO 85 °F. AND BE CAPABLE OF OPERATING THE HEATING A SHALL BE ADJUSTABLE TO PROVIDE A TEMPERATURE RANGE OF FULL COOLING BEING SUPPLIED. CONTROLS SHALL HAVE CAPAE TEMPERATURE NOT MORE THAN 70 °F. AND COOLING AT A TEMP
4.	TEMPERATURE CONTROL SYSTEM SHALL OPERATE IN ACCORDA
5.	WALL MOUNTED THERMOSTATS SHALL BE MOUNTED 48" A.F.F. T TEMPERATURE SENSORS SHALL BE WALL MOUNTED 60" A.F.F.
6.	PROVIDE SMOKE DETECTORS IN MAIN SUPPLY AIR DUCTS OF AII SECTION 608.0 2019 CMC.
7.	OUTSIDE AIR INTAKES SHALL BE LOCATED A MINIMUM OF 25 FEE VENTS, COOLING TOWERS, COMBUSTION EQUIPMENT STACKS, A EXHAUST OR OTHER NOXIOUS FUMES, AND OTHER SOURCES OF
8.	HVAC UNITS SHUTDOWN TO BE ACCOMPLISHED USING THE BUIL
9.	SEE PLUMBING DRAWINGS FOR PRIMARY AND SECONDARY CON NO COMBUSTION VENTS, DRYER VENTS, RANGE HOOD VENTS, C
	SEPARATION WALLS.
:1. :2.	MATERIAL EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY ALL OUTLETS FOR FUTURE CONNECTIONS SHALL BE INSTALLED
3.	COORDINATE DUCTWORK, STRUCTURAL CONDITIONS AND ARCH SEE ARCHITECTURAL DRAWINGS FOR ROOF ACCESS AND ADDIT
.3.	SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LO
:5.	ALL CEILING DIFFUSERS SHALL BE 4-WAY THROW UNLESS SHOW
6.	PACKAGED A.C. UNITS : A FULLY INTEGRATED ECONOMIZER MUS DELIVERING OVER 54,000 BTU/HR COOLING.
.7.	AIRCRAFT CABLE SHALL BE PRE-STRETCHED.
8.	ALL H.V.A.C. SYSTEMS SHALL MEET THE CONTROL REQUIREMEN
9.	ALL H.V.A.C. EQUIPMENT AND APPLIANCES SHALL MEET THE REG 120.1-120.4 TITLE 24 ENERGY STANDARDS.
0.	H.V.A.C. EQUIPMENT AND SYSTEMS SHALL MEET THE ACCEPTAN E.E.S. AS SPECIFIED BY THE REFERENCE NONRESIDENTIAL APPI ALL RELATED ACCEPTANCE DOCUMENTS SHALL BE SUBMITTED DURING CONSTRUCTION AND PRIOR TO OCCUPANCY.
1.	A COMPLETE REPORT OF COMMISSIONING PROCESS ACTIVITIES CONSTRUCTION, AND REPORTING RECOMMENDATIONS FOR PO PROJECT SHALL BE COMPLETED AND PROVIDED TO THE OWNER
~	

ISOLATE ALL HVAC REFRIGERANT PIPES SIZE 1-1/4" AND LARGER WITHIN MECHANICAL EQUIPMENT ROOMS. 32. OUTSIDE EQUIPMENT ROOMS THIS PIPING SHALL BE ISOLATED FOR THE GREATER OF 50 FT. OR 100 PIPE DIAMETERS FROM ROTATING EQUIPMENT. THE FIRST THREE PIPE SUPPORTS SHALL HAVE COMBINATION SPRING AND RUBBER ISOLATION HANGERS WITH THE SAME DEFLECTION AS THE EQUIPMENT ISOLATORS. ALL OTHER ISOLATED PIPING WITHIN EQUIPMENT ROOMS SHALL BE ISOLATED WITH A 3/4" MINIMUM DEFLECTION ISOLATOR.

- 33. COOLING DURING ECONOMIZER MODE WHEN ADDITIONAL MECHANICAL COOLING WOULD BE REQUIRED TO MEET ROOM TEMPERATURE SETPOINT. ECONOMIZER TO COME COMPLETE WITH DIRECT DRIVE ACTUATOR. 34.
- C.E.C. SECITON 120.4(a). ALL DUCTWORK SHALL BE SEALED TO A LEAKAGE RATE NOT TO EXCEED 6% OF THE NOMINAL AIR HANDLER 35.

2019 C.E.C. SECTION 140.4(I).

MECHANICAL DEMOLITION NOTES

- PIPING SHALL BE DEMOLISHED AND REMOVED. ABANDONED CONTROLS ACTUATORS. TUBING & WIRING. REMOVED.
- ENGINEER OF ANY DISCREPANCIES.
- CHILLED AND HOT WATER PIPING, DUCTWORK, PNEUMATIC TUBING AND CONDENSATE PIPING PENETRATIONS WHICH ARE NOT BEING REUSED OR WHICH HAVE BEEN DEMOLISHED. WHERE MECHANICAL CURBS & PLATFORMS SPEC SECTION.
- THE WORK.

L NOTES

CODES, 2019 CALIFORNIA BUILDING CODE, 2019 ERGY CODE, 2019 CALIFORNIA FIRE CODE, 2019 & 91, STATE AND LOCAL FIRE DEPARTMENT REGULATIONS, HEET G1.1.

ION AND PROVIDE REPAIR OF ADJACENT EXISTING MAY BE DAMAGED AS A RESULT OF ANYDEMOLITION

ABOR, EQUIPMENT, TRANSPORTATION, AND SERVICES L MATERIALS & WORK SHALL BE IN COMPLIANCE WITH INS AND SHALL MEET WITH THE APPROVAL OF THE CITY

CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO ANY URAL, AIR CONDITIONING, PLUMBING, AND ELECTRICAL. T TO THE ATTENTION OF THE ENGINEER PRIOR TO THE MAY BE ISSUED. ANY WORK PERFORMED IN CONFLICT UIREMENT SHALL BE CORRECTED BY THE CONTRACTOR /VNER.

SITE CONDITIONS SHALL BE VERIFIED BY THE TAL, START OF CONSTRUCTION AND / OR FABRICATION OF THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION. ID EQUIPMENT LOCATIONS WITH PLUMBING, ELECTRICAL,

TESTED IN ACCORDANCE WITH THE MOST RESTRICTIVE IN THE A.S.H.R.A.E. HANDBOOK OF FUNDAMENTALS OR . PROVIDE RECTANGULAR DUCTS OF GALVANIZED STEEL INGS.

06-2006 HVAC DUCT CONSTRUCTION STANDARDS -

RANCH DUCT AND IN EACH MAIN DUCT TO PROVIDE FOR DEQUATE ACCESS AND IDENTIFICATION. TED, DUCT DIMENSIONS ARE NET CLEAR - e.g. AFTER

ISISTENTLY WITH THE REQUIREMENTS OF SECTIONS TANDARDS (E.E.S.) AND TABLES 503.7.1(10) AND

UALITY STANDARD PER SECTION 110.8 OF E.E.S. T TO MAINTAIN SPACE TEMPERATURE SET POINTS FROM EATING AND COOLING IN SEQUENCE. THERMOSTATS RANGE OF UP TO 10°F. BETWEEN FULL HEATING AND AVE CAPABILITY OF TERMINATING ALL HEATING AT A AT A TEMPERATURE NOT LESS THAN 78° F. ACCORDANCE WITH THE BASE BUILDING SEQUENCE OF

48" A.F.F. TO THE HIGHEST OPERABLE PART.

CTS OF AIR MOVING SYSTEMS EXCEEDING 2000 CFM PER

OF 25 FEET AWAY FROM EXHAUST OUTLETS. PLUMBING STACKS, AREAS THAT MAY COLLECT VEHICULAR URCES OF CONTAMINATION.

THE BUILDING'S FIRE ALARM SYSTEM. ARY CONDENSATE DRAINS .

VENTS, OR HEATING DUCTS ARE PERMITTED IN AREA

. COMPLY WITH SECTION 602.2 OF 2019 C.M.C. NSTALLED SO AS TO PERMIT EASY CONNECTION. AND ARCHITECTURAL LAYOUT. AND ADDITIONAL ENERGY CONSERVATION NOTES.

EXACT LOCATION OF CEILING DIFFUSERS AND GRILLES. ESS SHOWN OTHERWISE. MIZER MUST BE PROVIDED FOR EACH SYSTEM

UIREMENTS PER SECTIONS 110.2 AND 120.2 OF E.E.S. THE REQUIREMENTS PER SECTIONS 110.1-110.3, 110.5,

ACCEPTANCE REQUIREMENTS PER SECTION 120.5 OF 2016 ITIAL APPENDIXEMATIFICATE OF ACCEPTANCAEND BMITTED BY CONTRACTOR TO THE CITY INSPECTOR

CTIVITIES UNDERTAKEN THROUGH THE DESIGN, S FOR POST-CONSTRUCTION PHASES OF THE BUILDING HE OWNER OR REPRESENTATIVE.

SYSTEMS CONTAINING ECONOMIZERS: ECONOMIZER TO HAVE INTEGRATED CONTROLS THAT PROVIDE PARTIAL ALL AIR DISTRIBUTION SYSTEM DUCTS AND PLENUS MUST BE INSTALLED, SEALED AND INSULATED PER 2019

AIRFLOW RATE. TO BE CONFIRMED THROUGH FIELD VERIFICATION AND DIAGNOSTIC TESTING DURING CXA PER

FIELD VERIFY AND REVIEW WITH THE ENGINEER EXISTING AND ABANDONED PIPING, DUCTWORK, MECHANICAL EQUIPMENT, CONTROLS AND THERMOSTATS. EXISTING DUCTWORK, MECHANICAL EQUIPMENT, CHILLED WATER, HEATING HOT WATER AND CONDENSATE PIPING, CONTROLS EQUIPMENT AND TUBING WHICH IS NOT INDICATED FOR REUSE SHALL BE DEMOLISHED AND REMOVED. ABANDONED MECHANICAL EQUIPMENT, DUCTWORK AND THERMOSTATS AND CONTROL PANELS SHALL BE DEMOLISHED AND REMOVED. ALL ABANDONED MECHANICAL CURBS AND PLATFORMS INCLUDING BUT NOT LIMITED TO CONCRETE, WOOD & STEEL SHALL BE DEMOLISHED AND

FIELD VERIFY SIZES OF ALL EXISTING DUCTWORK SHOWN TO REMAIN AND BE REUSED. IMMEDIATELY NOTIFY THE PATCH, INFILL AND REPAIR WITH LIKE MATERIALS TO NEW CONDITION ALL EXISTING MECHANICAL EQUIPMENT,

HAVE BEEN DEMOLISHED, THE CONTRACTOR SHALL REPAIR, REFINISH, AND RESTORE ALL SURFACES & ADJOINING SURFACES TO A LEVEL, FLUSH AND UNIFORM APPEARANCE. FOR DEMOLISHED ROOF MOUNTED EQUIPMENT THE CONTRACTOR SHALL PATCH THE ROOF WITH LIKE MATERIALS ACCORDING TO THEIR RESPECTIVE ARCHITECTURAL

THE EXTENDED SCOPE OF DEMOLITION AND NEW WORK WILL REQUIRE CLOSE COORDINATION BETWEEN ALL TRADES. EXISTING UTILITIES TO REMAIN, SUCH AS CABLE TRAYS, CONDUIT, FIRE PROTECTION PIPING, ETC MAY HAVE TO BE RELOCATED OR ALTERED TO INSTALL NEW UTILITIES. CONTRACTOR SHALL TAKE PROVISIONS FOR THIS FACT AND IDENTIFY CONFLICTS AND PROPOSE SOLUTIONS TO THE ARCHITECT BEFORE PROCEEDING WITH

MECHANICAL LEGEND ABBREV. DESCRIPTION DUCTWORK (1ST NUMBER INDICATES SIDE SHOWN

SYMBOL

10 x 6	10 x 6	DUCTWORK (1ST NUMBER INDICATES SIDE SHOWN, DOUBLE OR SINGLE LINE)
	M.V.D.	MANUAL VOLUME DAMPER
	M.O.D.	MOTOR OPERATED DAMPER
	F.S.D.	COMBINATION FIRE AND SMOKE DAMPER
	F. 3 .D.	AUTOMATIC FIRE AND SMOKE DAMPER
	F.C.	FLEXIBLE CONNECTION (DUCTWORK)
<u>}</u> ↓ }		LINED DUCTWORK (OR PLENUM)
		STAINLESS STEEL DUCTWORK (OR PLENUM)
		RECTANGULAR DUCT UP
		RECTANGULAR DUCT DOWN
		DUCT TRANSITION (RECTANGULAR TO ROUND)
HHHHAA		FLEXIBLE DUCTWORK
	S.A.	SUPPLY AIR DUCT
	R.A./O.A.	RETURN AIR DUCT/OUTSIDE AIR DUCT
	E.A.	EXHAUST AIR DUCT
C		
(T) <u>AC-1</u>	T'STAT	PIPE UP THERMOSTAT (NUMBER INDICATES EQUIPMENT OR
(D)	S.D.	ZONE SERVED) SMOKE DETECTOR (DUCT MOUNTED)
	C.H.W.R.	CHILLED WATER RETURN
} CHWS{	C.H.W.S.	CHILLED WATER SUPPLY
→ HHWR{ → HHWS}	H.H.W.R. H.H.W.S.	HEATING HOT WATER RETURN HEATING HOT WATER SUPPLY
	F.S.	FLOW SWITCH
	E.R.	ECCENTRIC REDUCER
$\rightarrowtail $	C.R.	CONCENTRIC REDUCER
	BL.V.	BALANCING VALVE
	B.V.	BALL VALVE
——————————————————————————————————————	BF.V.	BUTTERFLY VALVE
	CH.V.	CHECK VALVE
	C.V. (2W)	CONTROL VALVE (2-WAY)
	C.V. (3W)	CONTROL VALVE (3-WAY)
	F.M.	
	A.F.C.V. F.C.V.	AUTOMATIC FLOW CONTROL VALVE
	P.R.V.	PRESSURE REDUCING VALVE
HD Z	P.I.C.V. (2W)	
	P.S.V.	PRESSURE INDEPENDENT CONTROL VALVE (2-WAY) PRESSURE SUSTAINING VALVE
	P.S.V. G.V.	GATE VALVE
X	GL.V.	GLOBE VALVE
	T.D.V.	TRIPLE DUTY VALVE (COMB. SHUT-OFF, CHECK &
	P.R.V.	BALANCING) PRESSURE RELIEF VALVE
Ç	P.G.	PRESSURE GAUGE WITH GAUGE COCK
	STR.	STRAINER W/ DRAIN VALVE & 3/4" HOSE END & CAP
⊢	B.F.	BLIND FLANGE
U	TH.	THERMOMETER
T	Т.W.	TEST WELL (PETE'S PLUG - PRESSURE AND/OR TEMPERATURE)
	U. A.L.	UNION ACOUSTICAL DUCT LINER
	A.F.F. C.F.M.	ABOVE FINISH FLOOR CUBIC FEET PER MINUTE
	CONC. CONTR.	CONCRETE CONTRACTOR
	D.L. DN.	ACOUSTICAL DUCT LINER DOWN
	EXH.	EXHAUST
	FLR. FT.	FLOOR FEET OR FOOT
	H.O.A. ISO.	HANDS - OFF - AUTOMATIC
\bigcirc	L.O.D.	ISOLATION LIMIT OF DEMOLITION
•	0.A. P.O.C.	OUTSIDE AIR POINT OF CONNECTION
	QTY.	QUANTITY
	REQ'D. RET.	REQUIRED
	SHT. TYP.	SHEET TYPICAL
	U.N.O.	UNLESS NOTED OTHERWISE
	U.T.R. V.F.D.	UP THRU ROOF VARIABLE FREQUENCY DRIVE
	V.T.R.	VENT THRU ROOF
	W/ RTU	WITH ROOFTOP UNIT



STATE OF CALIFORNIA												
Mechanical	Systems											
NRCC-MCH-E										CALIFORNIA E	NERGY (COMMISSION
CERTIFICATE OF CO	MPLIANCE											NRCC-MCH-E
Project Name:					Report	Page:						(Page 4 of 25
Project Address:					Date P	repared:						12/23/2020
F. HVAC SYSTEM	A SUMMARY (DRY & WET	SYSTEMS)										
	oment Sizing (includes air co	,	densers, heat	pumps, VRF, f	furnaces a	nd unit heat	ers)					
01	02		03		04	05	06	07	08	09	10	11
AC-1E2	Unitary AC/ Condensers	AC, air-co	ooled pkg (3 pł	nase)	NA: Load Controls	64 8	64.8	0	65.85	58.7	46.38	72.29
³ If equipment is I ⁴ Authority Havin	ictice to show rcted output c heating only, leave cooling ou g Jurisdiction may ask for loc oment Efficiency (other than	utput and load l d calculations i	blank. If equipr used for compli	nent is cooling iance per <u>§140</u>	g only, leav <u>0.4(b)</u> .	ve heating ou	utput and load bla	unk.	bles.			
01		T denuge Terrin	03	04		05	06)7	08		09
	02		03		Heating M					Cooling Mod		05
Name or Item Tag	Size Categor (Btu/h)	/	Rating Condition (°F)	Efficiency U	Jnit Re Tak	Minimum Efficiency quired per bles 110.2 / Title 20	Design Efficienc	/ Efficiei	ncy Unit	Minimum Efficiency Required pe Tables 110.2 Title 20	r Des	ign Efficiency
AC-1A	>=135,000 and <24	40,000		AFUE		0.80	0.8	-	ER ER	10.8 12.2		12.1 15
AC-1B	>=65,000 and <13	5,000		AFUE		0.80	0.8	_	ER ER	11 12.7		13.1 16
AC-2B	>=240,000			AFUE		0.80	0.8		ER ER	9.8 11.4		10 12
AC-3B	>=65,000 and <13	5,000		AFUE		0.80	0.8		ER	11		12.4

AFUE

AFUE

0.80

0.80

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0.8

0.8

Mechanical Systems NRCC-MCF-E CERTIFICATE OF COMPLIANCE

STATE OF CALIFORNIA

Project Address:

F. HVAC SYSTEM	A SUMMARY (DRY & WET	SYS						
	l to demonstrate compliance <u>;</u> <u>140.4(k)</u> or <u>§141.0(b)2</u> for al							
Dry System Equipment Sizing (includes air condition								
01	02							
Name or Item Tag	Equipment Category per Tables 110.2	Equi						
AC-1A	Unitary AC/ Condensers							
AC-1B	Unitary AC/ Condensers							
AC-2B	Unitary AC/ Condensers							
AC-3B	Unitary AC/ Condensers							
AC-1C	Unitary AC/ Condensers							
AC-1D	Unitary AC/ Condensers							
AC-2D	Unitary AC/ Condensers							
AC-3D	Unitary AC/ Condensers							
AC-1E1	Unitary AC/ Condensers							

Registration Number:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

H. FAN SYSTEMS & AIR ECONOMIZERS

AC-3B

AC-1C

Fan Function

Supply

Fan Function

Supply

AC-1D

02

Fan Function

Supply

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

System

01

Fan Name or

Item Tag

SF

System

Name:

01

an Name or

Item Tag

SE

System

Name:

01

an Name or

SF

Registration Number:

STATE OF CALIFORNIA

Item Tag

Name

Project Address:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Mechanical Systems NRCC-MCH-E CERTIFICATE OF COMPLIANCE

STATE OF CALIFORNIA

AC-1C

AC-1D

Registration Number

>=135,000 and <240,000

>=65,000 and <135,000

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Project Name:						Repo	rt Page:			(Page 8 of 25)		
Project Address:						Date	Date Prepared: 12/23/2020					
H. FAN SYSTE	MS & AIR ECONO	MIZERS										
System Name:	AC-2D	Econor	nizer:1	Fixed Enthalpy	Econon Contr		Designe	ed per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume		
01	02		03	04	•		05	06	07	08		
Fan Name or				Maximum Design Supply	Airflow				Fan Power Pressure Drop A	Adjustment - Table 140.4-B		
Item Tag	Fan Functio	'n	Qty	(CFM)	AIITIOW	HP	9 Unit ²	Design HP	Device	Design Airflow through Device (CFM)		
SF	Supply		1	2400		I	внр	0.92	NA	NA		
Total Syst	em Design Supply A	virflow (CF	M):	2400	Total S	Total System Design (B)HP:		0.92	Maximum System Fan Power (B)HP:	2.26		
System Name:	AC-3D	Econor	nizer:1	Fixed Enthalpy		Economizer Desi Controls:		ed per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume		
01	02		03	04		05		06	07	08		
Fan Name or				Maximum Design Supply	Airflow				Fan Power Pressure Drop A	Adjustment - Table 140.4-B		
Item Tag	Fan Functio	'n	Qty	(CFM)	Airnow	HP Unit ²		Design HP	Device	Design Airflow through Device (CFM)		
SF	Supply		1	2400		BHP		0.92	NA	NA		
Total Syst	em Design Supply A	virflow (CF	M):	2400	Total S	Total System Design (B)HP:		0.92	Maximum System Fan Power (B)HP:	2.26		
System Name:	AC-1E1	Econor	nizer:1	Fixed Enthalpy	Econon Contr		Designe	ed per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume		
01	02		03	04	•		05	06	07	08		
Fan Name or				Maximum Design Supply	Airflow				Fan Power Pressure Drop A	Adjustment - Table 140.4-B		
Item Tag	Fan Functio	'n	Qty	(CFM)	AIITIOW	HP	9 Unit ²	Design HP	Device	Design Airflow through Device (CFM)		
SF	Supply		1	2400			внр	0.92	NA	NA		
Total Syst	em Design Supply A	irflow (CF	M):	2400	Total S	Total System Design (B)HP:		0.92	Maximum System Fan Power (B)HP:	2.26		

Registration Number

CERTIFICATE OF COMPLIANCE

Project Name:

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

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10.8 12.2

11 12.7

12

15

13.1

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Registration Provider: Energysoft

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CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Mechanica	l Systems
NRCC-MCH-E	-
CERTIFICATE OF	COMPLIANCE
Project Name:	
Project Address:	

J. VENTILATIO	ON AND IN	IDOOR AIR QU						
This table is us	ed to demo	onstrate complia						
		ns, only ventialt						
outdoor ventile	ation rates	and airflows ma						
01		Check the bo						
02	\boxtimes	Check this be						
02		Check this be						
03		Check the bo						
Nonresidentia	l and Hotel	/ Motel Ventila						
04								
System Name	AC-1A							
08	09							
	Mechan							
Space Name ot item Tag	Occupancy Type							
Zone A	Lecture/	postsecondary o						
17	Total Syste	m Required Min						
	(04						
System Name		AC-1B						
08		09						

Registration Num	nber:

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name: Project Address:

J. VENTILATION AND INDOOR AIR QU								
	Mechan							
Space Name ot item Tag	Occupancy Type							
Zone 3D	Lecture/ postsecondary c							
17	Total System Required Min							
	04							
System Name	AC-1E1							
08	09							
	Mechan							
Space Name ot item Tag	Occupancy Type							
Zone 1E1	Lecture/ postsecondary c							
17	Total System Required Min							
	04							
System Name	AC-1E2							
08	09							

Registration Number:
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

STATE OF CALIFORNIA	
Mechanical Systems	
NRCC-MCH-E	

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Project Address					Date Prep	ared:			12/23/2020
J. VENTILATIO	ON AND INDOOR AIR QUALITY								
	Mechanica Ventila	tion Required	per <u>§120.1(c</u>)	<u>3</u> 3		Exh. V	Vent per <u>§120.1(c)4</u>		
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people⁵	Required Min OA CFM	Required Min CFM	Dura visit and us any Danai any		trols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶
Zone B1	Lecture/ postsecondary classroom	2120			805.6	0	0	DCV	Provided per <u>§120.1(d)4</u>
Zone bi		2120			805.6	U	0	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				806	18	Ventilation for this !	System Complies?	Yes
	04		05				06	()7
	10.00	System Desi	gn OA CFM	4500	System		2	Air Filtration per §120.1(c) and §141.0(b	
System Name	AC-2B	Airflow ¹ 1520			Transfer	Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))	
08	09	10	11	12	13	14	15	16	
	Mechanica Ventila	tion Required	per <u>§120.1(c</u>)	<u>3</u> 3		Exh. \	Vent per <u>§120.1(c)4</u>		
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		trols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶
Zone B2	Lecture/ postsecondary classroom	4000			1520	0	0	DCV	Provided per <u>§120.1(d)4</u>
ZONE DZ		4000			1520		U	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				1520	18	Ventilation for this	System Complies?	Yes
	04		05				06	()7
		Sustem Desi			System	Docign		Air Filtration per §120).1(c) and <u>§141.0(b)2</u> ²
System Name	AC-3B	System Design OA CFM Airflow ¹ 405		405	Transfer	~	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))	
	09	10	11	12	13	14	15	16	

Registration Number

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Project Name: roject Address:

J. VENTILATION AND INDOOR AIR QUALITY										
	Mechanica Ventila	tion Required	per <u>§120.1(c</u>)	1 <u>3</u> ³		Exh. V	Vent per <u>§120.1(c)4</u>			
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people⁵	I Min OA	Required Min CFM	Provided per Design CFM	DCV or Sensor Cont <u>§120.1(d)5</u> , an		
Zone 1E2	Lecture/ postsecondary classroom	1450			551	0	0	DCV	Provided per <u>§120.1(d)4</u>	
Zone IEZ	Lecture/ postsecondary classroom	1430			221	U	0	Occ Sensor	NA: Not required space type	
17	Total System Required Min OA CFM					18	Ventilation for this S	System Complies?	Yes	

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² Air filtration requirements apply to the following three system types per <u>\$120.1(c)1A</u> : 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 ond energy recovery ventilation systems providing outside cir to occu

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 shall be determined in accordance with the California Building Code. ⁶ <u>§120.2[e]3</u> requires systems serving rooms that are required by <u>§130.1(c)</u> to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation.

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

Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by <u>§130.1(c)</u>.

This table is used to show compliance with mandatory pipe insulation requirements found in <u>\$120.3</u> and prescriptive requirements found in <u>\$140.4(1)</u> for duct leakage testing.

This section does not apply to this project. L. DISTRIBUTION (DUCTWORK and PIPING)

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

K. TERMINAL BOX CONTROLS

Duct Leakage Sealing

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							Ν	IRCC-MCH-
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	Date Prepa	red:						12/23/202
(STEMS)								
mechanical equipment with mandator rations.	ry requirements j	found in <u>§11</u>	<u>0.1</u> and <u>§1.</u>	<u>10.2(a)</u> and	l prescriptive	e requireme	nts found in	<u>§140.4(a</u>
itioners, condensers, heat pumps, VRI	F, furnaces and u	ınit heaters)						
03	04	05	06	07	08	09	10	11
			Equipme	• • •	er Mechanica <u> 140.4</u> (a&b)		(kBtu/h)	
	Smallest Size	Hea	ating Outpu	t ^{2,3}	Cooling C	Dutput ^{2,3}	Load Calculations ^{3,}	
quipment Type per Tables 110.2 / Title 20	Available ¹ §140.4(a)	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, air-cooled pkg (3 phase)	NA: Load Controls	120	120	0	138.82	119.7	114.99	163.13
AC, air-cooled pkg (3 phase)	NA: Load Controls	64.8	64.8	0	66.62	58.7	51.23	75.79
AC, air-cooled pkg (3 phase)	NA: Load Controls	200	200	0	216.1	201.36	69.4	261.31
AC, air-cooled pkg (3 phase)	NA: Load Controls	120	120	0	95.03	94.06	22.11	79.79
AC, air-cooled pkg (3 phase)	NA: Load Controls	200	200	0	160.49	142.17	112.75	165.39
AC, air-cooled pkg (3 phase)	NA: Load Controls	64.8	64.8	0	65.85	58.7	46.38	72.29
AC, air-cooled pkg (3 phase)	NA: Load Controls	64.8	64.8	0	65.85	58.7	46.38	72.29
AC, air-cooled pkg (3 phase)	NA: Load Controls	64.8	64.8	0	65.85	58.7	46.38	72.29
AC, air-cooled pkg (3 phase)	NA: Load Controls	64.8	64.8	0	65.85	58.7	46.38	72.29

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C. COMPLIANCE RESULTS Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance 06 System System Fans/ Summarv Controls erminal Box Ventilatio <u>§110.1</u>, <u>§110.2</u>, Controls <u>§120.1</u> <u>§140.4(k)</u> §140.4(c), <u>§140.4(d)</u> <u>§110.2</u>, <u>§120.2</u>, <u>§140.4(e)</u> (See Table H) (See Table I) (See Table J) (See Table K) (See Table L) (See Table F) (See Table G) AND Yes AND Yes AND Yes AND No AND Mandatory Measures Compliance (See Table Q for Detai

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

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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.

E. ADDITIONAL REMARKS

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STATE OF CALIFORNIA Mechanical Systems

Mechanica NRCC-MCH-E	, eysterns								CALIFOR	NIA ENERGY COMMISSION															
CERTIFICATE OF	COMPLIANCE									NRCC-MCH-E															
Project Name:					Repor	rt Page:			(Page 6 of 25)																
Project Address:						Date	Prepared:			12/23/2020															
	MS & AIR ECONO ed to demonstrate of		with pre	escriptive requirements fou	nd in <u>§140</u>).4(c), §:	<u>140.4(e)</u> c	und <u>§140.4(m)</u> for fan s	systems. Fan systems servin	g only process loads are															
exempt from th System Name:	ese requirements c AC-1A	Econom		be included in Table H. Fixed Enthalpy	Econon		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume															
01	02		03	04			05	06	07	08															
									Fan Power Pressure Drop A	Adjustment - Table 140.4-B															
Fan Name or Item Tag	Fan Functio	'n	Qty	Maximum Design Supply (CFM)	Airflow	DW HP Unit ²		Design HP	Device	Design Airflow through Device (CFM)															
SF	Supply		1	4800		BHP		2.43	NA	NA															
Total System Design Supply Airflow (CFM): 4		4800	Total System Desig (B)HP:		- 1 /43		Maximum System Fan Power (B)HP:	4.51																	
System Name:	AC-1B	Econom	izer:1	Fixed Enthalpy		Economizer Des Controls:		d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume															
01	02		03	04			05	06	07	08															
Fan Name or																			Maximum Design Supply	osign Supply Airflow				Fan Power Pressure Drop A	Adjustment - Table 140.4-B
Item Tag	Fan Functio	'n	Qty	(CFM)	AITHOW	HP Unit ²		HP Unit ²		Design HP	Device	Design Airflow through Device (CFM)													
SF	Supply		1	2400		B		BHP		внр		0.92	NA	NA											
Total Syste	em Design Supply A	irflow (CFN	v1):	2400	Total S	Total System Design (B)HP:		0.92	Maximum System Fan Power (B)HP:	2.26															
System Name:	AC-2B	Econom	izer:1	Fixed Enthalpy	Econon Contro		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume															
01	02		03	04			05	06	07	08															
Fan Name or				Maximum Design Supply	Airflow	Airflow HP Unit ²			Fan Power Pressure Drop A																
Item Tag	Fan Functio	n	Qty	(CFM)				Design HP	Device	Design Airflow through Device (CFM)															
SF	Supply		1	10000		E	ЗНР	8.73	NA	NA															
Total Syste	em Design Supply A	irflow (CFN	M):	10000	Total S	System [(B)HP:	Design	8.73	Maximum System Fan Power (B)HP:	9.4															

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STATE OF CALIFORNIA Mechanical Systems

NRCC-MCH-E

Project Address:

Registration Number:

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s table is used to demonstrate compliance with mandatory controls in <u>§110.2</u> and <u>§120.2</u> and prescriptive controls in <u>§140.4(f)</u> and (n) or requirements in <u>§141.0(b)2E</u> for altered ce conditioning systems.												
01	02	03	04	05	06	07	08	09				
System Name	System Zoning	Conditioned Floor Area Being Served (ft ²)	Thermostats <u>§110.2(b)</u> & (c) ¹ , <u>§120.2(a)or</u> <u>§141.0(b)2E</u>	Shut-Off Controls <u>§120.2(e)</u>	Isolation Zone Controls <u>§120.2(g)</u>	Demand Response <u>§110.12</u> and <u>§120.2(b)</u>	Supply Air Temp. Reset <u>§140.4(f)</u>	Window Interlocks po <u>§140.4(n)</u>				
AC-1A	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided				
AC-1B	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided				
AC-2B	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided				
AC-3B	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided				
AC-1C	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided				
AC-1D	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided				
AC-2D	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided				
AC-3D	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided				
AC-1E1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided				
AC-1E2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided				

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¹FOOTNOTES: 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 <u>§140.4(f)</u>

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Mechanical Systems NRCC-MCH-E CERTIFICATE OF COMPLIANCE

Project Name: Project Address:

J. VENTILATIO	ON AND INDOOR AIR QUALITY									
	Mechanica Ventila	tion Required	per <u>§120.1(c</u>	3		Exh. '	Vent per <u>§120.1(c)4</u>			
Space Name ot item Tag	Occupancy Type ⁴	Conditioned# of ShowerFloor Areaheads/(ft²)toilets		# of people⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per <u>§120.1(d)3</u> , <u>§120.1(d)5</u> , and <u>§120.1(e)3</u> ⁶		
Zone 1D	Lecture/ postsecondary classroom	1450			551	0	0	DCV Provided pe §120.1(d)4		
Zone ID	Lecture/ possecondary classicom	1450					0	Occ Sensor	NA: Not required space type	
17	Total System Required Min OA CFM				735	18	Ventilation for this S	System Complies?	Yes	
	04		05				06	()7	
		Custom Desi			<u> </u>	Deri		Air Filtration per §120.1(c) and §141.0(b)2		
System Name	AC-2D	System Desi Airfle	-	735	System Transfer	U U	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))		
08	09	10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3 3					Exh.	Vent per <u>§120.1(c)4</u>			
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		trols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶	
Zone 2D	Lecture/ postsecondary classroom	1450			551	0	0	DCV	Provided per §120.1(d)4	
20110 20	Lecture/ possecondary classicom	1450			551	Ū	0	Occ Sensor	NA: Not required space type	
17	Total System Required Min OA CFM				735	18	Ventilation for this S	System Complies?	Yes	
	04 05						06	()7	
		System Design OA CFM Airflow ¹			System	Dosign		Air Filtration per §120	0.1(c) and <u>§141.0(b)2</u> ²	
System Name	AC-3D			735	Transfer	9	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))		
08	09	10	11	12	13 14 15		16			

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CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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Economizer Designed per <u>§140.4(e)</u> and System Fan Type: Fixed Enthalpy Constant Volume Economizer: Controls: 04 07 08 05 06 Power Pressure Drop Adjustment - Table 140.4-E Maximum Design Supply Airflow HP Unit² Design HP Design Airflow through (CFM) Device Device (CEM) BHP 4000 1.34 Maximum System Fan Total System Design Total System Design Supply Airflow (CFM): 4000 1.34 3.76 (B)HP: Power (B)HP: Economizer Designed per <u>§140.4(e)</u> a Fixed Enthalpy System Fan Type: Constant Volume Economizer:1 Controls: (m) 04 07 05 06 08 Power Pressure Drop Adjustment - Table 140.4-E Maximum Design Supply Airflow HP Unit² Design HP Design Airflow through (CFM) Device Device (CFM) 6000 BHP 2.98 Maximum System Fan Total System Design 5.64 Total System Design Supply Airflow (CFM): 6000 2.98 (B)HP: Power (B)HP: Economizer Designed per <u>§140.4(e)</u> and Fixed Enthalpy System Fan Type: Constant Volume Economizer:1 Controls: (m) 03 04 07 05 06 08 n Power Pressure Drop Adjustment - Table 140.4-B Maximum Design Supply Airflow HP Unit² Design HP Design Airflow through (CFM) Device Device (CFM) BHP 2400 0.92 Total System Design Maximum System Fan Total System Design Supply Airflow (CFM): 0.92 2.26 2400 (B)HP Power (B)HP:

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CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E

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Date Prepared: ΔΗΤΥ nce with mandatory ventilation requirements in <u>§120.1</u> and <u>§120.2(e)3B</u> for all nonresidential, high-rise residential and hotel/motel Iltion systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required nay be shown on the plans or the calculations can be presented in a spreadsheet. box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table. box if the project included Nonresidential or Hotel/Motel spaces ox if the project included new or altered high-rise residential dwelling units. ox if the project is using natural ventilation in any nonresidential or hotel/mctel spaces to meet required ventilation rates per $\frac{\$120.1(c)}{10}$ tion Systems ir Filtration per <u>§120.1(c)</u> and <u>§141.0(k</u> ystem Design OA CFM System Design 1824 Provided per <u>§120.1(c)</u> (NR and Airflow¹ Transfer Air CFM Hotel/Motel)) 10 11 12 13 14 16 Exh. Vent per <u>§120.1(c)4</u> nical Ventilation Required per §120.1 conditioned # of Shower # of DCV or Sensor Controls per §120.1(d) Conditioned# of Shower# of Provided per DesignFloor Areaheads/people5Min OA(ft2)toiletsCFMCFM <u>§120.1(d)5</u>, and <u>§120.1(e)3</u> ⁶ Provided per DCV §120.1(d)4 3600 classroom 1368 NA: Not required Occ Sensor space type n OA CFM 1824 18 Ventilation for this System Complies? Yes Air Filtration per <u>§120.1(c)</u> and <u>§141.0(b</u> System Design OA CFM System Design 806 Provided per <u>§120.1(c)</u> (NR and Airflow¹ Transfer Air CFM Hotel/Motel)) 10 11

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CALIFORNIA ENERGY COMMISSION NRCC-MCH-E Report Page: Date Prepared: (Page 15 of 25) 12/23/ ical Ventilation Required per §120 Exh. Vent per <u>§120.1(c)4</u> rea heads/ # of Min OA heads/ people⁵ CFM Min CFM CFM CFM CFM Conditioned # of Shower # of DCV or Sensor Controls per §120.1(d)3 <u>§120.1(d)5</u>, and <u>§120.1(e)3</u> ⁶ Floor Area heads/ (ft²) Provided per DCV <u>§120.1(d)4</u> classroom 1450 NA: Not required Occ Sensor space type OA CFM Ventilation for this System Complies? 735 18 Yes Air Filtration per §120.1(c) and §141.0(b) System Design OA CFM System Design 735 Provided per <u>§120.1(c)</u> (NR and Airflow¹ Transfer Air CFM Hotel/Motel)) 16 13 14 Exh. Vent per <u>§120.1(c)4</u> ical Ventilation Required per §120.1(c) DCV or Sensor Controls per §120.1(d)3
 Conditioned
 # of Shower
 # of
 Required
 Required
 Provided per Design

 Floor Area
 heads/
 people5
 GFM
 Min OA
 Provided per Design
 CFM
 <u>§120.1(d)5</u>, and <u>§120.1(e)3</u> ⁶ Provided per DCV <u>§120.1(d)4</u> 1450 classroom NA: Not required Occ Sensor space type OA CFM 735 18 Ventilation for this System Complies? Yes 05 Air Filtration per <u>§120.1(c)</u> and <u>§141.0(b)2</u> System Design OA CFM System Design 735 Provided per <u>§120.1(c)</u> (NR and Transfer Air CFM Airflow¹ Hotel/Motel)) 10 11 12 13 14 16

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CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 2 of 25) 12/23/20)istributic **Cooling Towers** <u>§120.3</u>, §110.2(e)2 Compliance Results <u>§140.4(l)</u> (See Table M) AND Yes AND DOES NOT COMPL COMPLIES

STATE OF CALIFORNIA
Mechanical Systems

Mechanical Systems						
IRCC-MCH-E				CALIFORNIA ENERGY COMMISSION		
CERTIFICATE OF COMPLIANCE				NRCC-MCH-E		
This document is used to demonstrate compliance for m	echanical systems that are within	the scope of the permit applicati	ion and are demonstra	ating compliance using the prescriptive		
bath outlined in <u>§140.4</u> , or <u>§141.0(b)2</u> for alterations.						
Project Name:		Report Page:		(Page 1 of 25)		
Project Address:		Date Prepared:		12/23/2020		
A. GENERAL INFORMATION						
01 Project Location (city)		04 Total Conditioned Floo	r Area	21370		
02 Climate Zone	10	05 Total Unconditioned Fl	oor Area	0		
03 Occupancy Types Within Project:		06 # of Stories (Habitable	Above Grade)	1		
Office (B)	etail (M)	Non-refrigerated Warehouse (S)				
□ Hotel/ Motel Guest Rooms (R-1) □ S	chool (E)	Healthcare Facility (I)	Healthcare Facility (I)			
□ High-Rise Residential (R-2/R-3) □ R	elocatable Class Bldg (E)	🛛 Other (write in)		See Table J		
3. PROJECT SCOPE						
This table Includes mechanical systems or components t <u>5140.4</u> , or <u>§141.0(b)2</u> for alterations.	hat are within the scope of the pe	rmit application and are demons	trating compliance us	ing the prescriptive path outlined in		
01		02	03			
Air System(s)	Wet Syste	m Components	Dry System Components			
Heating Air System	Water Economi	zer	Air Econ	omizer		
Cooling Air System	Pumps		Electric	Resistance Heat		
Mechanical Controls	Mechanical Controls 🛛 System Piping			Fan Systems		
Mechanical Controls (existing to remain, alt or new)	ered Cooling Towers		Ductwo	rk (existing to remain, altered or new)		
	Chillers		Ventilati	on		
	Boilers		Zonal Sv	stems/ Terminal Boxes		

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STATE OF CALIFORNIA
Mechanical Systems
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voject Name:

Project Address:				Date Prepared: 12/23/2020										
F. HVAC SYSTEM	. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)													
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						
			Heat	ing Mode			Cooling Mode							
Name or Item Tag	Size Category (Btu/h)	Rating Cond tion (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency						
AC-2D	>=65,000 and <135,000		AFUE	0.80	0.8	EER IEER	11 12.7	13.1 16						
AC-3D	>=65,000 and <135,000		AFUE	0.80	0.8	EER IEER	11 12.7	13.1 16						
AC-1E1	>=65,000 and <135,000		AFUE	0.80	0.8	EER IEER	11 12.7	13.1 16						
AC-1E2	>=65,000 and <135,000		AFUE	0.80	0.8	EER IEER	11 12.7	13.1 16						
G. PUMPS								•						
G. PUMPS														

his section does not apply to this project.

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STATE OF CALIFORNIA Mechanical Systems

wicchanne	ui Systems											
NRCC-MCH-E									CALIFOR	NIA ENERGY COMMISSION		
CERTIFICATE OF	CERTIFICATE OF COMPLIANCE NRCC-MCH-E											
Project Name:						Repor	rt Page:			(Page 9 of 25)		
Project Address	:					Date	Prepared:			12/23/2020		
H. FAN SYSTE	I. FAN SYSTEMS & AIR ECONOMIZERS											
System Name:	AC-1E2	Econor	nizer:1	Fixed Enthalpy	xed Enthalpy Control		Designed per <u>§140.4(e)</u> and (m)		System Fan Type:	Constant Volume		
01	02		03	04			05	06	07	08		
					Airflow				Fan Power Pressure Drop A	Adjustment - Table 140.4-B		
Fan Name or Item Tag	Fan Function I ()ty I		HP Unit ²		Design HP	Device	Design Airflow through Device (CFM)					
SF	Supply		1	2400		E	ЗНР	0.92	NA	NA		
Total System Design Supply Airflow (CFM): 2-				2400	Total S	Total System Design (B)HP:		0.92	Maximum System Fan Power (B)HP:	2.26		

FOOTNOTES: Computer room economizers must meet requirements of <u>§140.9(a)</u> and will be documented on the NRCC-PRC-E document. ² The unit used for HP must be consistent for all fans within a system.

е оғ califori echanica с-мсн-е	al Systems							CALIFORNIA		
TIFICATE OF	COMPLIANCE								NRCC-MCH-I	
ject Name:					Report Pa	ge:			(Page 13 of 25	
ject Address	:				Date Prep	ared:			12/23/2020	
ENTILATIO	ON AND INDOOR AIR QUALITY									
	Mechanica Ventila	tion Required	 per §120.1(c)	3 ³		Exh.	Vent per <u>§120.1(c)4</u>			
ace Name t item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)		# of people⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per <u>§120.1(d)3</u> , <u>§120.1(d)5</u> , and <u>§120.1(e)3</u> ⁶		
Zone 3B	Lastura (nortsosandaru elastroam	ure/ postsecondary classroom 800 304 0 0		0	DCV	Provided per <u>§120.1(d)4</u>				
Zone 3B	Lecture/ possecondary classroom			0	Occ Sensor	NA: Not required space type				
17	Total System Required Min OA CFM				405	18	Ventilation for this S	System Complies?	Yes	
	04 05						06	C)7	
		System Design OA CFM			System	Design		Air Filtration per §120.1(c) and §141.0(b)2 2		
tem Name	AC-1C	Airfle		1824	Transfer	<u> </u>		Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))		
08	09	10	11	12	13	14	15	1	.6	
	Mechanica Ventila	tion Required	per <u>§120.1(c</u>)	<mark>3</mark> 3		Exh. '	Vent per <u>§120.1(c)4</u>			
ace Name t item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	#of Shower heads/ toilets	# of people⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		trols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶	
Zone 1C	Lecture/ postsecondary classroom	3600			1368	0	0	DCV	Provided per <u>§120.1(d)4</u>	
zone ic	Lecture/ postsecondary classroom	5000			1308	0	0	Occ Sensor	NA: Not required space type	
17	Total System Required Min OA CFM				1824	18	Ventilation for this S	System Complies?	Yes	
	04		05				06	C)7	
		System Desi	gn OA CEM		System	Design		Air Filtration per §120		
tem Name	AC-1D	Airfl		735	Transfer	-	0		<u>.20.1(c)</u> (NR and Motel))	
08	09	10	11	12	13	14	15	1	6	

Registration Number:

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Duele et Addue en	
Project Name:	
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NRCC-MCH-E	
Mechanical Systems	
STATE OF CALIFORNIA	
en banding thereby thereby standards - 2015 Non-esidential com	μı
CA Building Energy Efficiency Standards - 2019 Nonresidential Com	nli
Registration Number:	



state of california Mechanical S	ystems					
NRCC-MCH-E					CALIF	DRNIA ENERGY COMMISSION NRCC-MCH-E
Project Name:				Report Page:		(Page 20 of 25)
Project Address:				Date Prepared	1:	12/23/2020
L. DISTRIBUTION		and PIPING)				
	•		owing duct systems:	AC-2D	Duct leakage testing triggered for these system	s? No
11	No		<u> </u>	duct systems serving healthcar		
12	Yes				nstant volume, single zone, space-conditioning syst	
13	Yes			ess than 5,000 ft ² of condition		
14	No	· ·	÷ .		nore than 25% of the total surface area of the enti	e duct system:
			Outdoors			
			In a space directly un	der a roof that has a U-factor g	reater than the u-factor of the ceiling, or if the roo	f does not meet the
					vents or openings to the outside/ unconditioned	
			In an unconditioned o	crawl space		
			In other unconditione	ed spaces		
15		The scope of the	project includes exter	nding an existing duct system, v	which is constructed, insulated or sealed with asbe	stos.
16					mented to have been previously sealed as confirm e Nonresidential Appendix NA2.	ed through field verification
17	Yes	Duct system shal	l be sealed in acordan	ce with the California Mechani	cal Code	
The answers to the	e questions belo	w apply to the foll	owing duct systems:	AC-3D	Duct leakage testing triggered for these system	s? No
11	No	The scope of the	project includes only	duct systems serving healthcar	e facilities	
12	Yes	Duct system prov	vides conditioned air t	o an occupiable space for a cor	stant volume, single zone, space-conditioning sys	em.
13	Yes	The space condit	ioning system serves l	ess than 5,000 ft ² of condition	ed floor area.	
14	No	The <u>combined</u> su	Irface area of the duct	s in the following locations is m	nore than 25% of the total surface area of the enti	e duct system:
			Outdoors			
				-	reater than the u-factor of the ceiling, or if the roc vents or openings to the outside/ unconditioned	
			In an unconditioned of			•
			In other unconditione			
15		The scope of the	project includes exter	nding an existing duct system, v	which is constructed, insulated or sealed with asbe	stos.
10					mented to have been previously sealed as confirm	
16					e Nonresidential Appendix NA2.	-
17	Yes	Duct system shal	l be sealed in acordan	ce with the California Mechani	cal Code	
Registration Numbe	er:			Registration Date/Time		egistration Provider: Energysoft

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STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

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Project Nan	ne:			Report Page:			((Page 24 of 25)		
Project Add	ress:			Date Prepared:				12/23/2020		
O. DECLA	RATION	OF RE	QUIRED CERTIFICATES OF ACCEPTANCE							
•	 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, Eutecti Salt, Clathrate Hydrate Slurry (CHS), Gryogenic or Encapsulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to 'Yes". 									
۲	\bigcirc	\RCA-I	MCH-16-A Supply Air Temperature Reset Controls							
\bigcirc		\RCA-I	MCH-17-A Condenser Water Temperature Reset Con	trols						
۲	\bigcirc	RCA-I	MCH-18-A Energy Management Control Systems							
\bigcirc		NRCA-MCH-19-A Occupancy Sensor Controls								
\bigcirc	• NRCA-MCH-20 Multi-Family Ventilation									
\bigcirc	NRCA-MCH-21 Multi-Family Envelope Leakage									
Selections These docu	have beel Iments m	n mad ust be	QUIRED CERTIFICATES OF VERIFICATION e based on information provided in previous tables oj completed by a HERS Rater and provided to the build at https://www.energy.ca.gov/title24/2019standard	ling inspector during construction. The	e final doc	uments must be created by a HE				
Yes	N	b		Form/Title		_ · ·		spector		
			NRCV-MCH-04-H Duct Leakaage Test NOTE: Must be	completed by a HEPS Pater			Pass	Fail		
			NRCV-MCH-24 Enclosure Air Leakaage Worksheet No	1 7	itar					
			NRCV-MCH-27 High-rise Resdential NOTE: Must be c							
		-	NRCV-MCH-32 Local Mechanical Exhaust NOTE: Must							
		, ,	The visit of 2 courrent meeting exhaust note. Mus							
Q. MAND	ATORY N	/EASI	JRES DOCUMENTATION LOCATION							
This table i	is used to	indica	te where mandatory measures are documented in th	e plan set or construction documenta	tion.					
01 02										
			ory Measures documented through MCH	Yes		Plan sheet or construction	document lo	ocation		
Mandatory	/ Measure	es Note	e Block			M-Shee	ts			

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12 Yes Duct system prov Yes The space conditi 13 14 No The <u>combined</u> รเ The scope of the 15 The scope of the 16 and diagnostic te 17 Yes Duct system shal Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name: Project Address:

Selections	have b	een made based on information pro
These do	cuments	must be provided to the building in
https://w	ww.ene	rgy.ca.gov/title24/2019standards/.
Yes	No	
٠	\bigcirc	NRCA-MCH-02-A - Outdoor Air m MCH-02-A can be performed in c applicable) since testing activitie
٠	\bigcirc	NRCA-MCH-03-A - Constant Volu move to "Yes'. If Constant Volum applicant should move this form
\bigcirc	۲	NRCA-MCH-04-A - Air Distributio
۲	\bigcirc	NRCA-MCH-05-A - Air Economize
•	\bigcirc	NRCA-MCH-06-A Demand Contro required to employ demand cont ventilation flow rates based on m setpoints.
\bigcirc	۲	NRCA-MCH-07-A Supply Fan Vari
\bigcirc	۲	NRCA-MCH-08-A Valve Leakage 1
\bigcirc	۲	NRCA-MCH-09-A Supply Water T
\bigcirc	۲	NRCA-MCH-10-A Hydronic Syster
۲	\bigcirc	NRCA-MCH-11-A Automatic Dem
۲	\bigcirc	NRCA-MCH-12-A FDD for Packag
\bigcirc	۲	NRCA-MCH-13-A Automatic FDD
\bigcirc	٠	NRCA-MCH-14-A Distributed Ene not automatically move to "Yes". scope permit applicant should m

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STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

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CERTIFICATE OF COMPLIANCE

CERTIFICATE OF COM	PLIANCE						NRCC-MCH
Project Name:				Repo	ort Page:		(Page 19 of 2
Project Address:				Date	Prepared:		12/23/202
. DISTRIBUTION	(DUCTWOR	(and PIPING)					
The answers to the	questions be	ow apply to the fo	llowing duct systems:	AC-1C		Duct leakage testing triggered for these systems?	No
11	No	The scope of th	e project includes only o	duct systems serving he	ealthcare	facilities	
12	Yes	Duct system pro	ovides conditioned air to	o an occupiable space f	for a cors	stant volume, single zone, space-conditioning system.	
13	Yes	The space cond	itioning system serves le	ess than 5,000 ft ² of co	onditione	d floor area.	
14	No	The <u>combined</u> s	surface area of the ducts	in the following locati	ions is mo	ore than 25% of the total surface area of the entire duct	system:
			Outdoors				
						eater than the u-factor of the ceiling, or if the roof does	not meet the
					has fixed	vents or openings to the outside/ unconditioned spaces	
			In an unconditioned c				
ĭ			In other unconditione	•			
15						hich is constructed, insulated or sealed with asbestos.	
16						nented to have been previously sealed as confirmed thro Nonresidential Appendix NA2.	ugh field verificatior
17	Yes		all be sealed in acordance	·		••	
			llowing duct systems:	AC-1D	vicendine	Duct leakage testing triggered for these systems?	No
11	No		e project includes only o		ealthcare		
12	Yes					stant volume, single zone, space-conditioning system.	
13	Yes		itioning system serves le				
14	No					ore than 25% of the total surface area of the entire duct	system:
			Outdoors				,
			In a space directly und	der a roof that has a U-	-factor gr	eater 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 h	has fixed	vents or openings to the outside/ unconditioned spaces	
			In an unconditioned c	rawl space			
			In other unconditione	d spaces			
15		The scope of th	e project includes exten	ding an existing duct s	system, w	hich is constructed, insulated or sealed with asbestos.	
16						nented to have been previously sealed as confirmed thro	ugh field verificatior
						Nonresidential Appendix NA2.	
17	Yes	Duct system sha	all be sealed in acordand	ce with the California N	Vlechanic	al Code	

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Date Pi	repared:		1	2/23/2020
TES OF ACCEPTANCE				
on provided in previous tables of this document. If ar ing inspector during construction and can be found o ırds/2019_compliance_documents/Nonresidential_L	online at		dditional Re	emarks.
Form/Title		Systems To Be Field Verified	Field In Pass	spector Fail
Air must be submitted for all newly installed HVAC u d in conjunction with MCH-07-A Supply Fan VFD Acc ivities overlap.				
Volume Single Zone HVAC NOTE: This form does no olume Single Zone HVAC Systems are included in the form to "Yes".	· · ·			
oution Duct Leakage				
mizer Controls				
ontrol Ventilation Systems must be submitted for all controlled ventilation (refer to <u>\$120.1(c)3</u>) can var on maintaining interior carbon dioxide (CO2) concer	y outside		•	
Variable Flow Controls				
age Test				
ter Temperature Reset Controls				
ystem Variable Flow Controls				
Demand Shed Controls				
ckaged Direct Expansion Units				
FDD for Air Handling Units and Zone Terminal Units	Acceptance			
d Energy Storage DX AC Systems Acceptance NOTE: 1 Yes". If Distributed Energy System DX AC Systems ar Ild move this form to 'Yes".				

e answers to th	e questions be	ow apply to the following duct systems:	AC-2B	Duct leakage testing tr					
11	No		The scope of the project includes only duct systems serving healthcare facilities						
12	Yes	Duct system provides conditioned air	Duct system provides conditioned air to an occupiable space for a constant volume, single zon						
13	Yes	The space conditioning system serves less than 5,000 ft ² of conditioned floor area.							
14	No	The <u>combined</u> surface area of the du	cts in the following locations is	more than 25% of the total					
		Outdoors							
			nder a roof that has a U-factor 40.3(a)13 or if the roof has fix	-					
		In an unconditioned	l crawl space						
		In other unconcition	ned spaces						
15		The scope of the project includes ext	ending an existing duct system	, which is constructed, insul					
16		The scope of the project includes an and diagnostic testing in accordance							
17	Yes	Duct system shall be sealed in acorda	nce with the California Mecha	nical Code					
e answers to th	e questions be	ow apply to the followirg duct systems:	AC-3B	Duct leakage testing tr					
11	No	The scope of the project includes only	y duct systems serving healthc	are facilities					
12	Yes	Duct system provides conditioned air	to an occupiable space for a c	onstant volume, single zone					
13	Yes	The space conditioning system serves	s less than 5,000 ft ² of conditio	oned floor area.					
14	No	The <u>combined</u> surface area of the du	cts in the following locations is	more than 25% of the total					
		Outdoors							
			nder a roof that has a U-factor 40.3(a)13 or if the roof has fix	*					
		In an unconditioned	l crawl space						
		In other unconcition	ned spaces						
15		The scope of the project includes ext	ending an existing duct system	, which is constructed, insul					
16		The scope of the project includes an and diagnostic testing in accordance	<i>c</i> ,	•					
17	Yes	Duct system shall be sealed in acorda	nce with the California Mecha	nical Code					

Report Page: Date Prepared:

Registration Number: Registration Date/Time: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

CERTIFICATE	OF COMPLIAN	ČE					
Project Nam	e:		Report Page:				
Project Addr	ess:		Date Prepared:				
M. COOLIN	NG TOWERS						
This section	does not app	ly to this project.					
N. DECLAR	ATION OF R	QUIRED CERTIFICATES OF INSTALLATION					
These docu	ments must be	e based on information provided in previous tables of th provided to the building inspector during construction o pv/title24/2019standards/2019_compliance_documents	and can be found online at				
Yes	Yes No Form/Title						
۲	\bigcirc	NRCI-MCH-01-E - Must be submitted for al buildings					
		·					

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

Registration Provider: Energysoft Report Generated: 2020-12-23 11:40:46

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

	NRCC-MCH-
	(Page 18 of 25
	12/23/202
testing triggered for these systems?	No
ngle zone, space-conditioning system.	
the total surface area of the entire duc	t system:
u-factor of the ceiling, or if the roof does	s not meet the
gs to the outside/ unconditioned space	5
ted, insulated or sealed with asbestos.	
iced, insulated of sealed with asbestos.	
been previously sealed as confirmed thr	ough field verification
	ough field verification
been previously sealed as confirmed thr Appendix NA2.	
been previously sealed as confirmed thr	ough field verification
been previously sealed as confirmed the Appendix NA2. testing triggered for these systems?	
been previously sealed as confirmed thr Appendix NA2.	
been previously sealed as confirmed the Appendix NA2. testing triggered for these systems? ngle zone, space-conditioning system.	No
been previously sealed as confirmed the Appendix NA2. testing triggered for these systems?	No
been previously sealed as confirmed the Appendix NA2. testing triggered for these systems? ngle zone, space-conditioning system.	No t system:
been previously sealed as confirmed the Appendix NA2. testing triggered for these systems? ngle zone, space-conditioning system.	No t system:
been previously sealed as confirmed the Appendix NA2. testing triggered for these systems? ngle zone, space-conditioning system. The total surface area of the entire duc u-factor of the ceiling, or if the roof does	No t system:
been previously sealed as confirmed the Appendix NA2. testing triggered for these systems? ngle zone, space-conditioning system. The total surface area of the entire duc u-factor of the ceiling, or if the roof does	No t system:
been previously sealed as confirmed the Appendix NA2. testing triggered for these systems? ngle zone, space-conditioning system. The total surface area of the entire duc u-factor of the ceiling, or if the roof does	No t system:
been previously sealed as confirmed the Appendix NA2. testing triggered for these systems? ngle zone, space-conditioning system. the total surface area of the entire duc u-factor of the ceiling, or if the roof does gs to the outside/ unconditioned spaces	No t system:

Registration Provider: Energysoft Report Generated: 2020-12-23 11:40:46

CALIFOR	NIA ENERGY C	
		NRCC-MCH-E
	(Page 22 of 25)
		12/23/2020
be changed, please explain why in Tabl	e E Additiona	l Remarks.
	Field In:	spector
	Pass	Fail

CERTIFICATE OF CON					CALIFORNI	NRCC-MCH-			
Project Name:				Report Page:		(Page 17 of 25			
Project Address:				Date Prepared	1:	12/23/202			
,-						,			
L. DISTRIBUTION	(DUCTWOR	K and PIPING)							
The answers to the	questions be	ow apply to the fol	lowirg duct systems:	AC-1A	Duct leakage testing triggered for these systems?	No			
11	No	The scope of the	e project includes only	duct systems serving healthcar	e facilities				
12	Yes	Duct system pro	vides conditioned air to	o an occupiable space for a cor	stant volume, single zone, space-conditioning system.				
13	Yes	The space condi	tioning system serves l	ess than 5,000 ft ² of condition	ed floor area.				
14	No	The <u>combined</u> s	urface area of the duct	s in the following locations is n	nore than 25% of the total surface area of the entire du	ct system:			
			Outdoors						
					reater than the u-factor of the ceiling, or if the roof doe				
requirements of <u>§140.3(a)1B</u> or if the roof has fixed vents or openings to the outside/ unconditioned spaces									
			In an unconditioned o	crawl space					
			In other unconditione	ed spaces					
15					which is constructed, insulated or sealed with asbestos.				
16					mented to have been previously sealed as confirmed the Nonresidential Appendix NA2.	rough field verification			
17	Yes	Duct system sha	II be sealed in acordan	ce with the California Mechani	cal Code				
The answers to the	e questions be	ow apply to the fol	lowirg duct systems:	AC-1B	Duct leakage testing triggered for these systems?	No			
11	No	The scope of the	e project includes only	duct systems serving healthcar	e facilities				
12	Yes	Duct system pro	vides conditioned air to	o an occupiable space for a cor	stant volume, single zone, space-conditioning system.				
13	Yes	The space condi	tioning system serves l	ess than 5,000 ft ² of condition	ed floor area.				
14	No	The <u>combined</u> s	urface area of the duct	s in the following locations is n	nore than 25% of the total surface area of the entire du	ct system:			
			Outdoors						
				-	reater than the u-factor of the ceiling, or if the roof doe l vents or openings to the outside/ unconditioned space				
			In an unconditioned o	crawl space					
			In other unconcitione	ed spaces					
15		The scope of the	e project includes exter	nding an existing duct system, v	which is constructed, insulated or sealed with asbestos.				
16					mented to have been previously sealed as confirmed the Nonresidential Appendix NA2.	nrough field verification			
17	Yes	Duct system sha	and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2. Duct system shall be sealed in acordance with the California Mechanical Code						

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601

CERTIFICATE OF CO	VIPLIANCE				NRCC-MCH-				
Project Name:			Report Page:		(Page 21 of 25				
Project Address:			Date Prepared	d:	12/23/202				
. DISTRIBUTION	(DUCTWOR	K and PIPING)							
The answers to the	e questions be	low apply to the following duct systems:	AC-1E1	Duct leakage testing triggered for these systems?	No				
11	No	The scope of the project includes only	duct systems serving healthcar	e facilities					
12	Yes	Duct system provides conditioned air t	o an occupiable space for a cor	stant volume, single zone, space-conditioning system.					
13	Yes	The space conditioning system serves	less than 5,000 ft ² of conditione	ed floor area.					
14	No	The combined surface area of the duct	s in the following locations is m	nore than 25% of the total surface area of the entire due	t system:				
		In a space directly un	der a roof that has a U-factor g	reater than the u-factor of the ceiling, or if the roof doe	s not meet the				
		requirements of §140	ements of <u>§140.3(a)1B</u> or if the roof has fixed vents or openings to the outside/ unconditioned spaces						
		In an unconditioned	crawl space						
		In other unconcition	ed spaces						
15			The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.						
16		The scope of the project includes an ex and diagnostic testing in accordance w		mented to have been previously sealed as confirmed th e Nonresidential Appendix NA2.	rough field verification				
17	Yes	Duct system shall be sealed in acordan	Duct system shall be sealed in acordance with the California Mechanical Code						
The answers to the	e questions be	ow apply to the following duct systems:	AC-1E2	Duct leakage testing triggered for these systems?	No				
11	No	The scope of the project includes only	duct systems serving healthcar	e facilities					
12	Yes	Duct system provides conditioned air t	o an occupiable space for a cor	stant volume, single zone, space-conditioning system.					
13	Yes	The space conditioning system serves	less than 5,000 ft ² of conditione	ed floor area.					
14	No	The combined surface area of the duct	s in the following locations is m	nore than 25% of the total surface area of the entire due	t system:				
		Outdoors							
			-	reater than the u-factor of the ceiling, or if the roof doe I vents or openings to the outside/ unconditioned space					
		In an unconditioned	crawl space						
		In other uncondition	ed spaces						
15		The scope of the project includes exter	nding an existing duct system, v	which is constructed, insulated or sealed with asbestos.					
16		The scope of the project includes an ex and diagnostic testing in accordance w	<i>c</i> ,	mented to have been previously sealed as confirmed th e Nonresidential Appendix NA2.	rough field verification				
17	Yes	Duct system shall be sealed in acordan	Duct system shall be sealed in acordance with the California Mechanical Code						

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Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Provider: Energysoft Report Generated: 2020-12-23 11:40:46

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CALIFORNIA ENERGY COMMISSION
NRCC-MCH-E
Report Page: (Page 25 of 25)
Date Prepared: 12/23/2020
ete.
Documentation Author Signature:
Signature Date: 12/30/2020
CEA/ HERS Certification Identification (if applicable):
Phone:
858-368-8630
Iding design or system design identified on this Certificate of Compliance (responsible designer)
es for the building design or system design identified on this Certificate of Corrpliance conform to the requirements
e consistent with the information provided on other applicable compliance documents, worksheets, calculations, application.
ith the building permit(s) issued for the building, and made available to the enforcement agency for all applicable b be included with the documentation the builder provides to the building owner at occupancy.
Responsible Designer Signature: 9. Outpre
Date Signed:
2020-12-23
License: 32824
Phone:
858.368.8630
il a

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

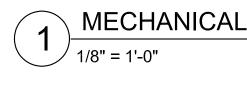
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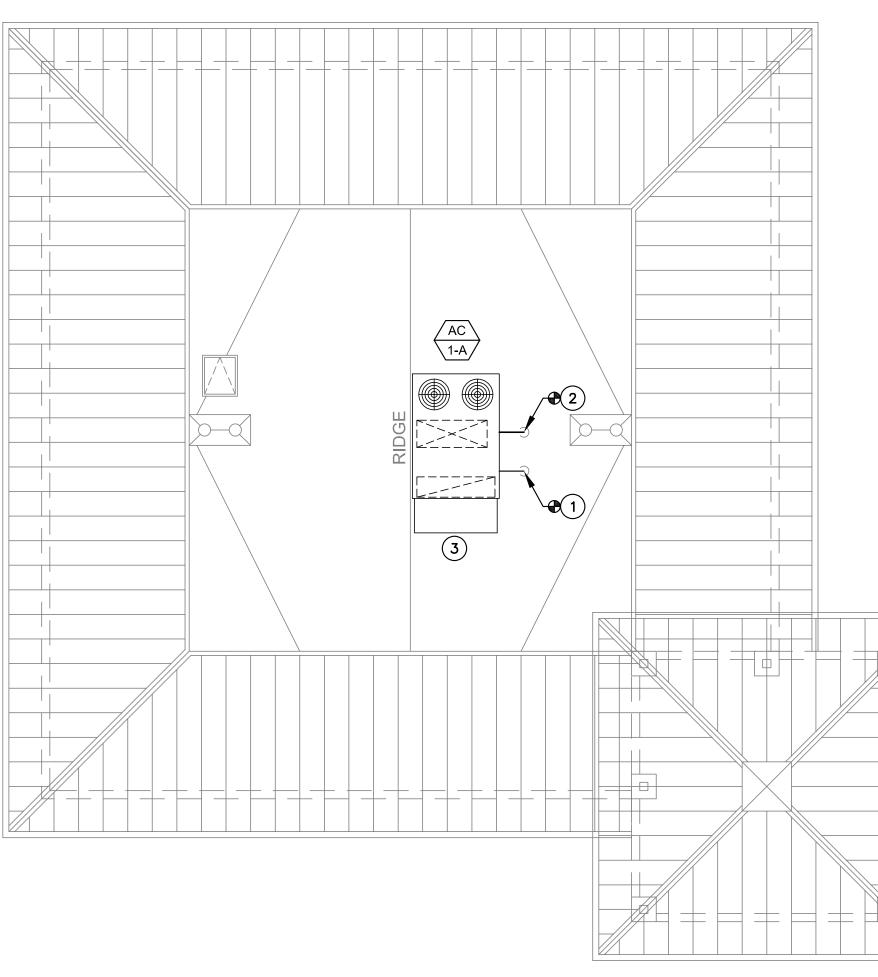


	GAS ROOFTOP PACKAGED AC UNITS																							
UNIT	MANUFACTURER			000			COOLING			HEATING			ELECTRI	CAL			POWER	EXHAUS	Γ		UNIT	CURB ADAPTER	EXISTING	
NO.	& MODEL NO.	SERVICE	C.F.M.	OSA (CFM)	E.S.P. (IN. WC)	TOTAL (MBH)	SENSIBLE (MBH)	E.E.R. / S.E.E.R.	INPUT (MBH)	OUTPUT (MBH)	A.F.U.E. (%)	INDOOR MOTOR B.H.P.	V./PH./HZ.	M.C.A.	M.O.P.	V./PH./HZ.	H.P.	F.L.A.	M.C.A.	M.O.C.P.	WEIGHT LBS	ADAPTER WEIGHT LBS	CURB WEIGHT LBS	REMARKS
AC 1-A	TRANE YHD-150	BUILDING A	4,800	1,200	0.75	152.39	119.70	12.1 / 15.0	150.00	120.00	80	2.43	460/3/60	30	40	460/3/60	2	6.5	8.1	14.6	2,800	200	220	1234681011
AC 1-B	TRANE YHC-074	BUILDING B	2,400	360	0.75	73.60	58.70	13.1 / 16.0	80.00	64.80	80	.92	460/3/60	18	20	460/3/60	N/A	N/A	N/A	N/A	1,170	130	100	1234671011
AC 2-B	TRANE YSD-300	BUILDING B	10,000	3,300	1.00	281.98	201.36	10.0 / 12.0	250.00	200.00	80	8.73	460/3/60	56	70	460/3/60	6	14.3	17.9	32.2	2,800	N/A	250	1235681011
AC 3-B	TRANE YHC-120	BUILDING B	4,000	2,500	0.75	113.97	94.06	12.4 / 15.2	150.00	120.00	80	1.34	460/3/60	22	25	460/3/60	2	4.5	5.6	10.1	1,700	300	200	1234681011
AC 1-C	TRANE YHD-180	BUILDING C	6,000	1,500	1.00	180.52	142.17	12.0 / 15.0	250.00	200.00	80	2.98	460/3/60	33	45	460/3/60	2	6.5	8.1	14.6	3,000	N/A	220	123568911
AC 1-D	TRANE YHC-074	BUILDING D	2,400	800	0.75	73.60	58.70	13.1 / 16.0	80.00	64.80	80	.92	460/3/60	18	20	460/3/60	N/A	N/A	N/A	N/A	1,170	130	100	1234671011
AC 2-D	TRANE YHC-074	BUILDING D	2,400	800	0.75	73.60	58.70	13.1 / 16.0	80.00	64.80	80	.92	460/3/60	18	20	460/3/60	N/A	N/A	N/A	N/A	1,170	130	100	1234671011
AC 3-D	TRANE YHC-074	BUILDING D	2,400	800	0.75	73.60	58.70	13.1 / 16.0	80.00	64.80	80	.92	460/3/60	18	20	460/3/60	N/A	N/A	N/A	N/A	1,170	130	100	1234671011
AC 1-E1	TRANE YHC-074	BUILDING E (AREA 1)	2,400	800	0.75	73.60	58.70	13.1 / 16.0	80.00	64.80	80	.92	460/3/60	18	20	460/3/60	N/A	N/A	N/A	N/A	1,170	130	100	1234671011
AC 1-E2	TRANE YHC-074	BUILDING E (AREA 2)	2,400	800	0.75	73.60	58.70	13.1 / 16.0	80.00	64.80	80	.92	460/3/60	18	20	460/3/60	N/A	N/A	N/A	N/A	1,170	130	100	1234671011

1 VERTICAL DUCT DISCHARGE PACKAGED DX AC UNIT. 2 ELECTRICAL TO PROVIDE FUSED DISCONNECT. 3 PROVIDE THERMOSTAT INSTALLED AT 48" AFF. 4 PROVIDE WITH CURB ADAPTER. 5 NO CURB ADAPTER. 6 FURNISH WITH FACTORY PROVIDED CO2 MONITORING FOR DEMAND CONTROL VENTILATION 7 PROVIDE WITH UNIT WITH MODULATING ECONOMIZER WITH FAULT DETECTION & DIAGNOSTIC SYSTEM. 8 PROVIDE WITH UNIT WITH MODULATING ECONOMIZER AND POWER EXHAUST WITH FAULT DETECTION & DIAGNOSTIC SYSTEM. (9) UNIT MOUNTED CARRIER PREMIER LINK MODULE TO BE REMOVED AND RE-INSTALLED IN REPLACEMENT UNIT. CONTRACTOR SHALL REWIRE PER DISTRICT'S DIRECTION TO MATCH EXISTING MONITORING. 10 EXISTING UNIT THERMOSTAT TO BE REPLACED. CONTRACTOR TO INSTALL NEW WIFI THERMOSTAT "VENSTAR T2900SCH" AND CONNECT TO DISTRICT 2.4 GHZ WIFI NETWORK. PROVIDE ANY NECESSARY INTERFACE CARDS. (11) EXISTING SMOKE DETECTORS DUCT MOUNTED OR UNIT MOUNTED SHALL BE REMOVED AND RE-INSTALLED. PROVIDE NECESSARY HARDWARE FOR UNIT SHUT DOWN. COORDINATE WITH FIRE ALARM VENDOR.







MECHANICAL ROOF PLAN - BLDG A

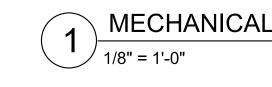


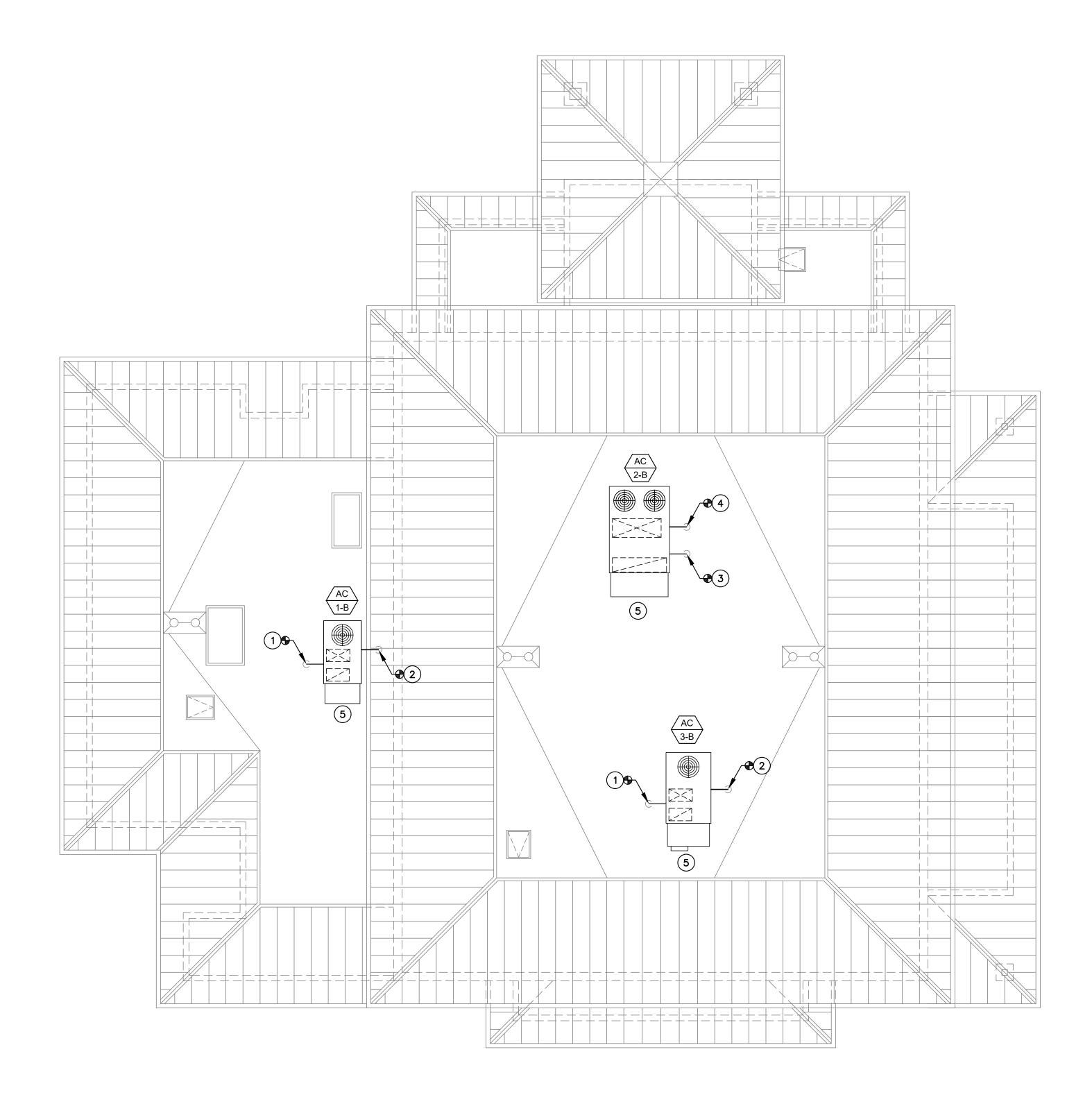
 CONNECT NEW 1" CONDENSATE DRAIN TO EXISTING MAIN.
 CONNECT NEW 3/4"" GAS TO EXISTING MAIN.
 RTU OUTSIDE AIR INTAKE. REFER TO SCHEDULE SHEET M-1.1.

NOTES:









MECHANICAL ROOF PLAN - BLDG B

3 CONNECT NEW 1-1/4" CONDENSATE DRAIN TO EXISTING MAIN. (4) CONNECT NEW 1"" GAS TO EXISTING MAIN.

- 2 CONNECT NEW 3/4" GAS TO EXISTING MAIN.

- (1) CONNECT NEW 1" CONDENSATE DRAIN TO EXISTING MAIN.

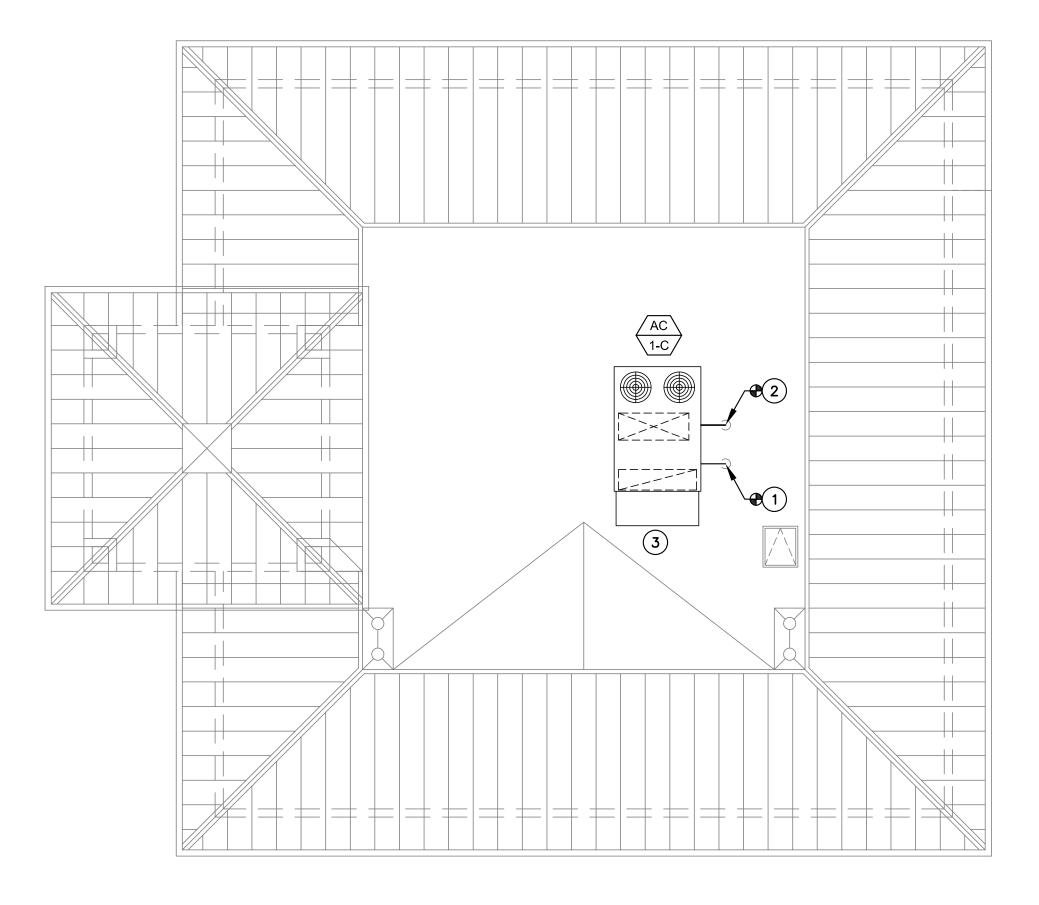
NOTES:

5 RTU OUTSIDE AIR INTAKE. REFER TO SCHEDULE SHEET M-1.1.





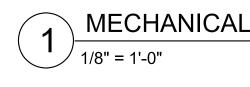


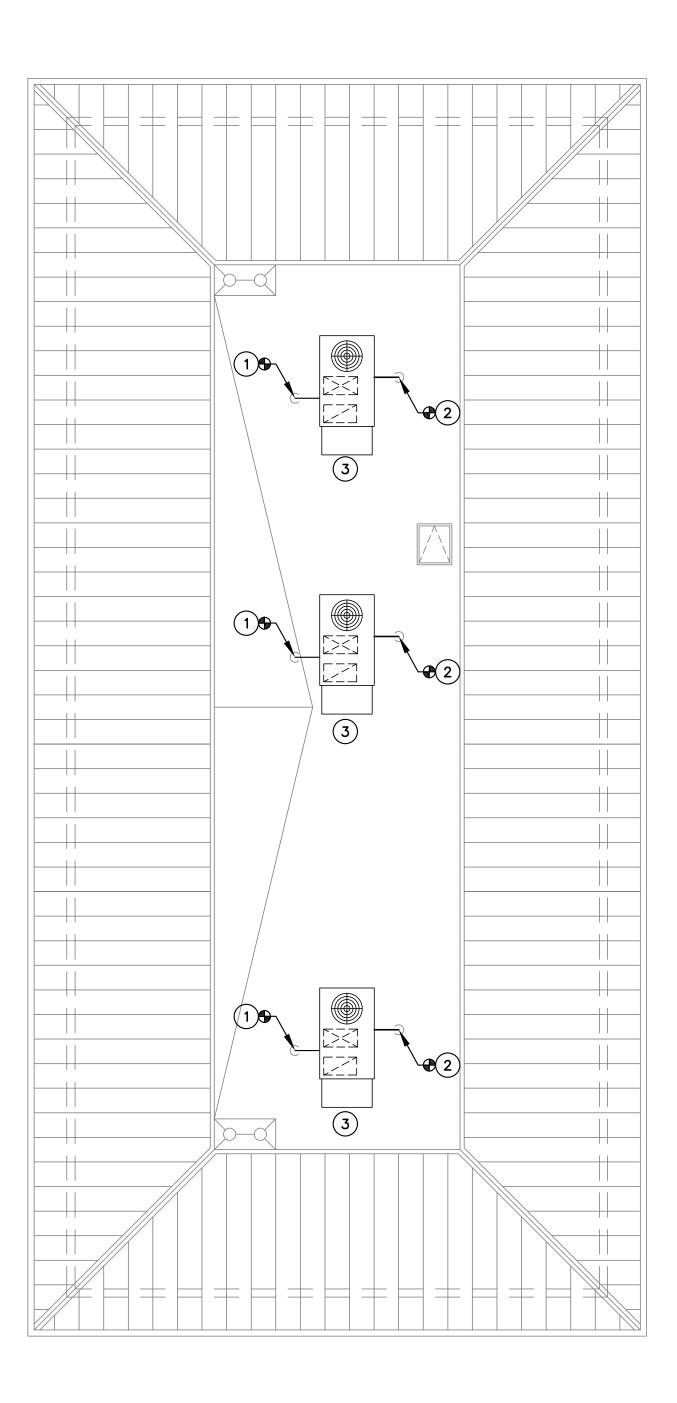


1 CONNECT NEW 1" CONDENSATE DRAIN TO EXISTING MAIN. (2) CONNECT NEW 1" GAS TO EXISTING MAIN. 3 RTU OUTSIDE AIR INTAKE. REFER TO SCHEDULE SHEET M-1.1.

NOTES:





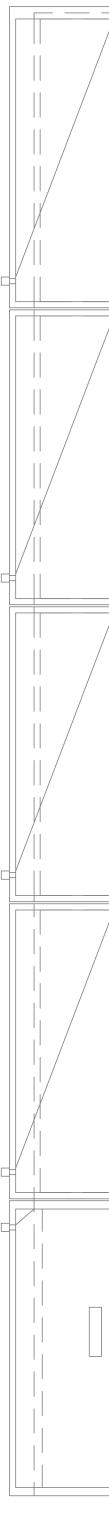


MECHANICAL ROOF PLAN - BLDG D

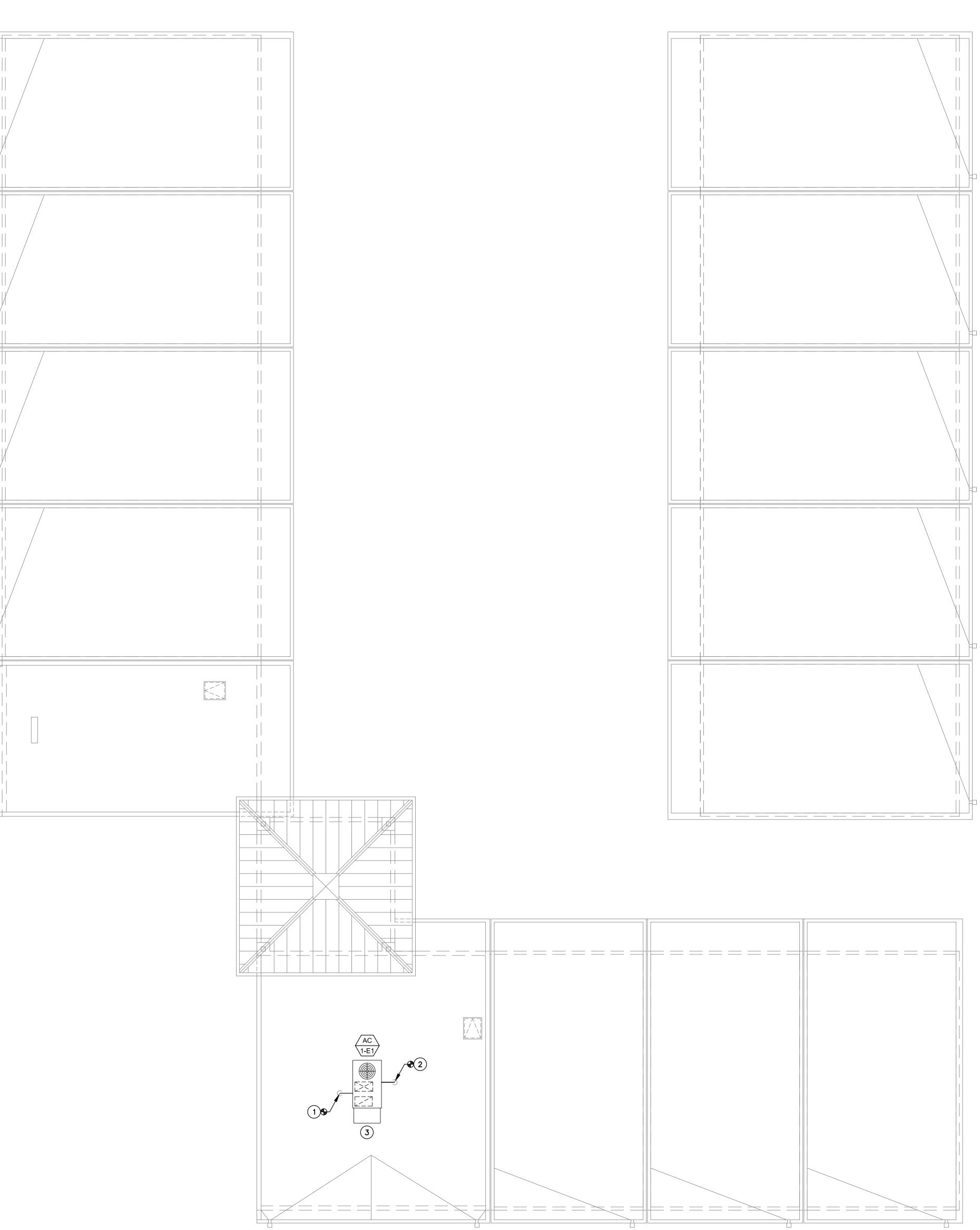
 CONNECT NEW 1" CONDENSATE DRAIN TO EXISTING MAIN.
 CONNECT NEW 3/4"" GAS TO EXISTING MAIN.
 RTU OUTSIDE AIR INTAKE. REFER TO SCHEDULE SHEET M-1.1.

NOTES:







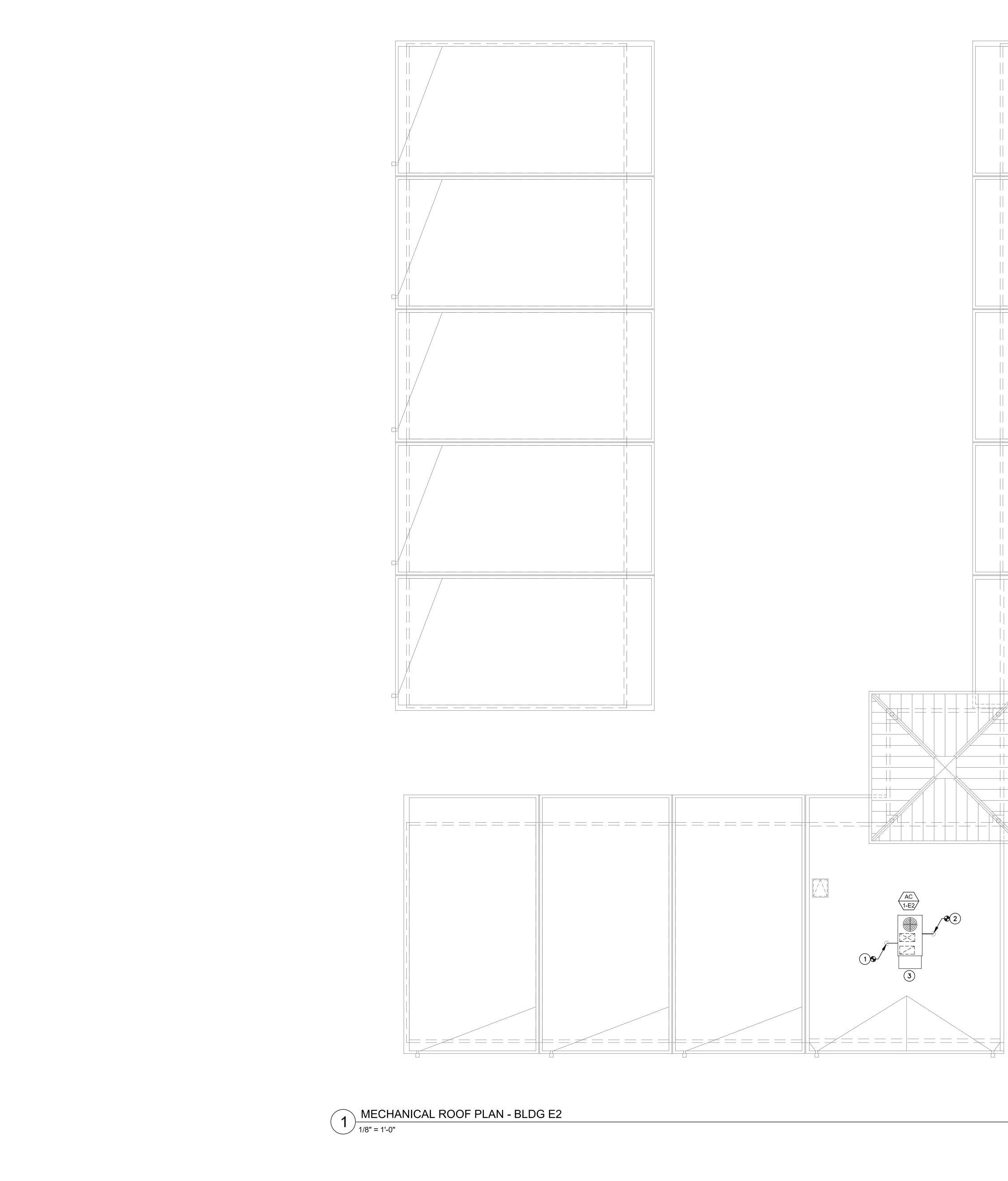


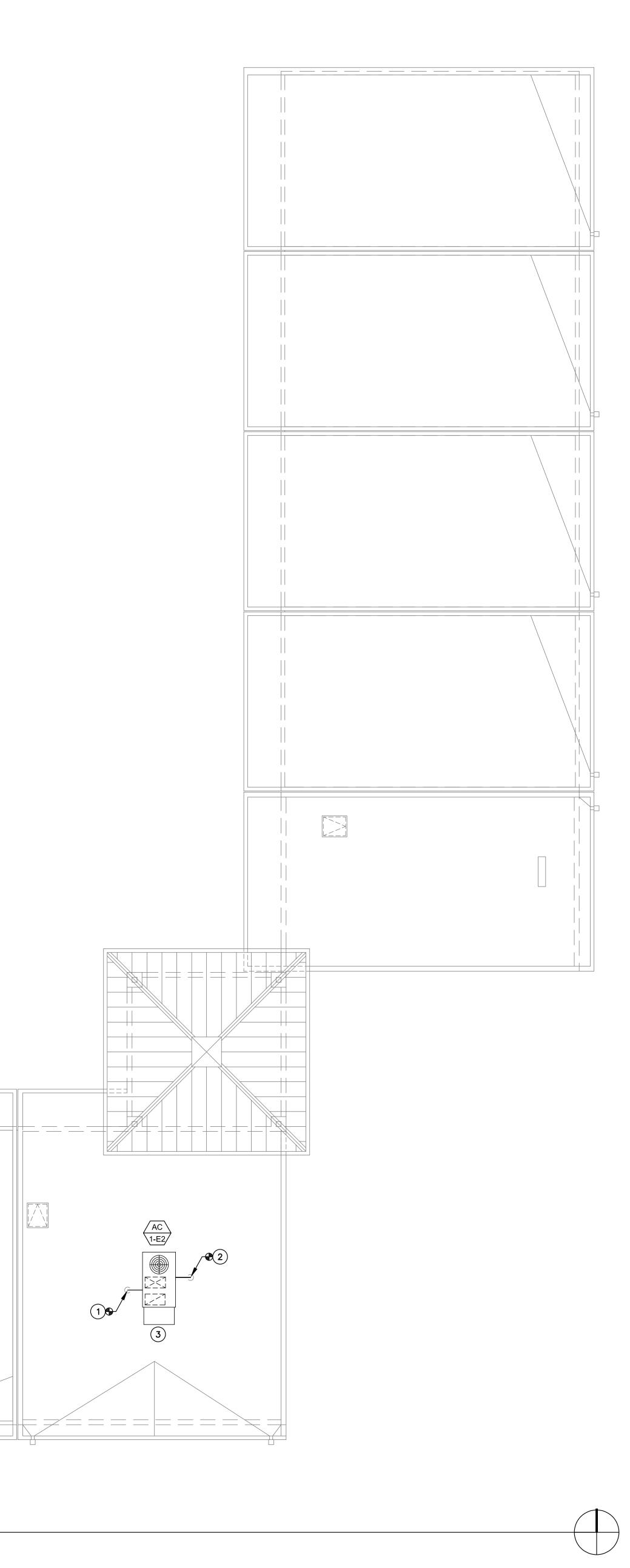
NOTES: (1) CONNECT NEW 1" CONDENSATE DRAIN TO EXISTING MAIN.

3 RTU OUTSIDE AIR INTAKE. REFER TO SCHEDULE SHEET M-1.1.

(2) CONNECT NEW 3/4"" GAS TO EXISTING MAIN.

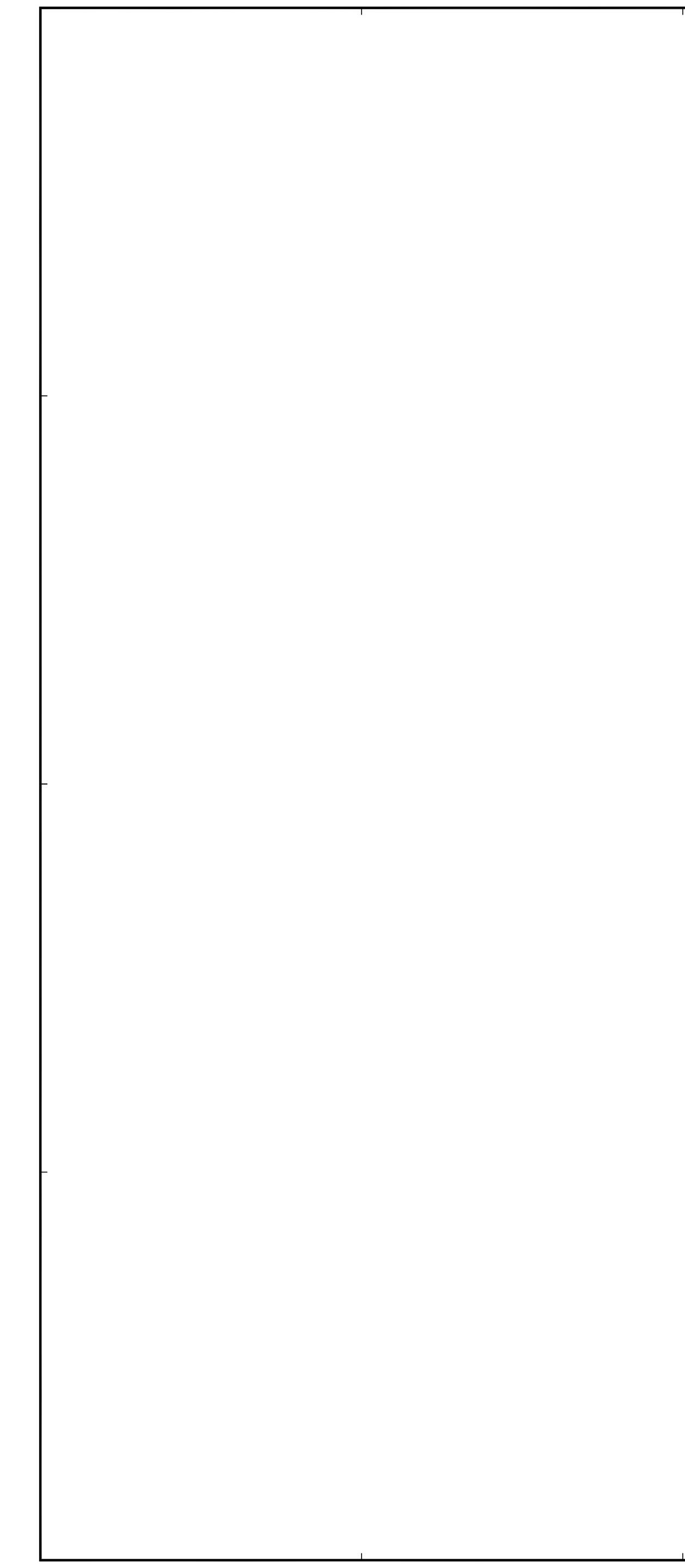


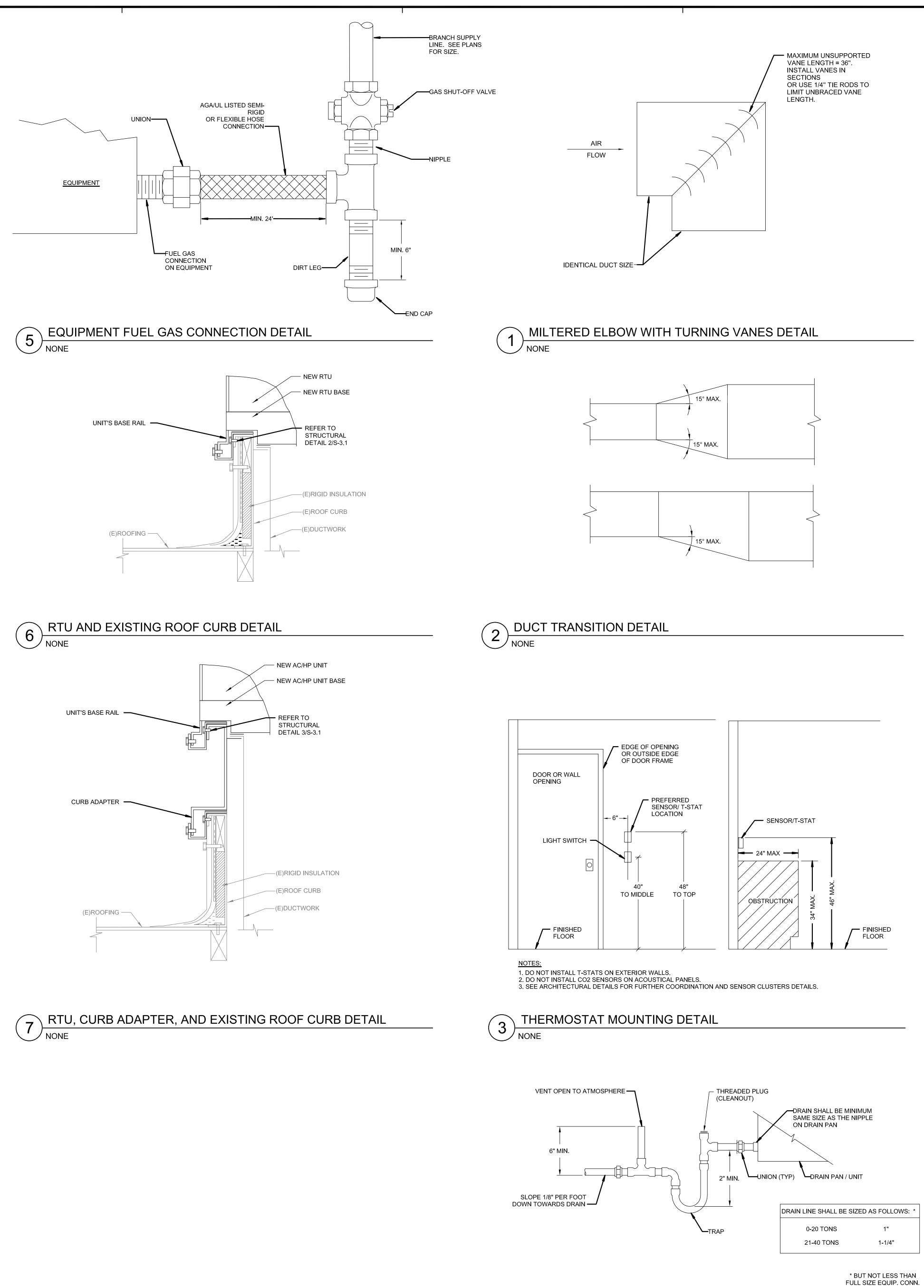




NOTES: (1) CONNECT NEW 1" CONDENSATE DRAIN TO EXISTING MAIN. (2) CONNECT NEW 3/4"" GAS TO EXISTING MAIN. 3 RTU OUTSIDE AIR INTAKE. REFER TO SCHEDULE SHEET M-1.1.









ABBREVIATIONS

А	AMPERE (AMPS)
AC	ALTERNATING CURRENT
AF	AMPS-FRAME (RATING)
AIC	AMP INTERRUPTING CURRENT
AM	AMMETER
AS	AMP SWITCH (FUSED SWITCH RATING)
AT	AMPS-TRIP (RATING)
AUG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BLDG	BUILDING
С	CONDUIT
CB	CIRCUIT BREAKER
CO	CONDUIT ONLY
CT	CURRENT TRANSFORMER
CU	COPPER
CFOI	CONTRACTOR FURNISHED OWNER INSTALLED
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
DWG	DRAWING
EΧ	EXISTING
FLA	FULL LOAD AMPS
FVR	FULL VOLTAGE REVERSING
FVNR	FULL VOLTAGE NON-REVERSING
GFI	GROUND FAULT INTERRUPTER
GRD/GND	GROUND
HID	HIGH INTENSITY DISCHARGE
НОА	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
-	
HZ	HERTZ
KΨ	KILOWATT
LCL	LONG CONTINUOUS LOAD
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MCM (KCM)	THOUSAND CIRCULAR MILS
MECH	MECHANICAL
NC	NORMALLY CLOSED
NF	NON-FUSED
NO	NORMALLY OPEN/NUMBER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
0F01	OWNER FURNISHED OWNER INSTALLED
	POLE
PH	PHAGE
POC	POINT OF CONNECTION
PRS	PVC COATED RIGID STEEL (CONDUIT)
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE DUCT
SWBD	SWITCHBOARD
typ	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
\checkmark	VOLT
VA VA	VOLTAMPERES
VM .	VOLTMETER
ÝL VL	VERIFY LOCATION
Ŵ	
WP	WEATHERPROOF (NEMA TYPE 3R)
ΨT	WATERTIGHT
XP	EXPLOSION PROOF (RATED FOR AREA HAZARD)

ELECTRICAL SYMBOL LEGEND

DISTRIBUTION EQUIPMENT								
─≪ ≫─	DRAW OUT TYPE EQUIPMENT							
$\langle\!\langle \neg \rangle\!\rangle$	VACUUM CIRCUIT BREAKER, RATING AS NOTED.							
$\ll \widehat{} $	AIR INTERRUPTER SWITCH AND FUSE							
_\	AIR INTERRUPTER							
	FUSE							
	POWER TRANSFORMER, RATING AS NOTED							
$\ll \frown \gg$	POWER CIRCUIT BREAKER DRAWOUT							
مر ه ک	AUTOMATIC TRANSFER SWITCH. SEE SCHEDULE							
\bigcirc	AMMETER							
\checkmark	VOLTMETER							
<u></u>	CIRCUIT BREAKER 200AMP FRAME 200AMP TRIP 3 POLE NC 10,000 AMPS INTERRUPTING CURRENT							
	FUSED SWITCH 200AMP SWITCH 200AMP FUSE 3 POLE							
(\underline{M})	UTILITY COMPANY METER							

POWER	२
	DUPLEX RECEPTACLE, FLOOR MOUNTED
ŧ	DUPLEX RECEPTACLE, WALL MOUNTED, +18" A.F.F. (U.O.N.)
HORZ.	RECEPTACLE, WALL MOUNTED HORIZONTALLY, +18" A.F.F.
₽	FOURPLEX RECEPTACLE, WALL MOUNTED, +18" A.F.F. (U.O.)
Φ^{LCD}	PROVIDE (2) DUPLEX RECEPTACLE CEILING MOUNTED I TO PROJECTOR. FIELD VERIFY EXACT LOCATION PRIOR
÷	SINGLE RECEPTACLE, WALL MOUNTED +18'' A.F.F. (U.O.N.)
−⊖c	SINGLE RECEPTACLE (CLOCK HANGER TYPE) WALL MO
	SWITCH CONTROLLED DUPLEX RECEPTACLE +18" U.O.N.
⊖ _{GFI}	DUPLEX GROUND FAULT INTERRUPTING RECEPTACLE +18
Θ	DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT +18" A.F.
⊖ _{wp}	DUPLEX RECEPTACLE IN WEATHERPROOF ENCLOSURE
⊖ _{wp/L}	DUPLEX RECEPTACLE IN WEATHERPROOF "LOCKING" EN (SEE TYPICAL DETAILS E3 SERIES SHEETS AND SPECIF
φ.	DUPLEX RECEPTACLE (ORANGE) ISOLATED GROUND W
	FOURPLEX RECEPTACLE (ORANGE) ISOLATED GROUND (U.O.N.)
J J	JUNCTION BOX, CEILING OR WALL MOUNTED
	FUSED DISCONNECT SWITCH, WHERE SHOWN NF = NON-FUS
SM	MANUAL MOTOR STARTER WITH OVERLOAD PROTECTION
	MOTOR CONNECTION, NUMERAL INDICATES HORSEPOWER
$\begin{pmatrix} AC \\ 1 \end{pmatrix}$	MECHANICAL EQUIPMENT TAG (SEE MECHANICAL DRAWI
	CONDUIT AND WIRE, CONCEALED IN CEILING OR WALL
/-~	CONDUIT AND WIRE, CONCEALED IN OR UNDER FINISHED OR UNDER FINISHED GRADE.
٩	FLEXIBLE CONDUIT CONNECTION
	BRANCH CIRCUIT HOMERUN TO PANEL. SLASHES INDICA CONDUCTORS. EQUIPMENT GROUND WIRE NOT INDICATED #12 CONDUCTORS ARE MINIMUM, NO HASH MARKS = MIN (
	3/4" CONDUIT STUBBED FROM DEVICE TO ABOVE ACCE CEILING
*8	BRANCH CIRCUIT HOMERUN, NUMBER INDICATES INCREA CONDUCTOR SIZE, CONDUCTORS SHALL REMAIN AS INDI FOR SIZE THROUGHOUT THE ENTIRE CIRCUIT.
o	CONDUIT DROP.
•	CONDUIT RISER.
	PANELBOARD, SURFACE MOUNTED.
	PANELBOARD, RECESSED

| + | STEP-DOWN TRANSFORMER DISTRIBUTION SWITCHBOARD

GENERAL PROJECT NOTES

- 1. UNLESS WHERE OTHERWISE NOTED, ALL WORK INDICATED ON
- THESE DRAWINGS SHALL BE CONSIDERED NEW WORK.
- 2. UNLESS WHERE OTHERWISE NOTED, ALL DIMENSIONS ARE TO BE CENTERLINE OF THE DEVICE.
- 3. "GENERAL NOTES" SHOWN ON AN INDIVIDUAL DRAWING APPLY TO ALL WORK SHOWN ON THAT SHEET. "KEY NOTES" ONLY APPLY TO SPECIFIC ITEMS WHERE ANNOTATED AT SPECIFIC LOCATIONS. SOME KEY NOTES MAY NOT APPLY TO ANY SPECIFIC ITEMS.
- 4. UNLESS SPECIFICALLY SHOWN ON THESE PLANS, NO STRUCTURAL MEMBER SHALL BE CUT, NEITHER DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT.

MEP COMPONENT ANCHORAGE NOTE

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 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7- 16 CHAPTERS 13, 26, AND 30:

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

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

- A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND 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 NOTE

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 SECTIONS 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):

- OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.
- OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM*)*

1.0.N.) A.F.F. (U.O.N.)

(U.O.N.)

ITED LOCATE ADJACENT PRIOR TO ROUGH-IN.

O.N.)

L MOUNTED +7'-Ø'' A.F.F. (U.O.N.)

LE +18" A.F.F. (U.O.N.)

8" A.F.F. (U.O.N.)

BURE +18" A.F.F. (U.O.N.) NG" ENCLOSURE +18" A.F.F. (U.O.N.) PECIFICATIONS FOR REQUIRED TYPE).

ND WALL MOUNTED +18" A.F.F. (U.O.N.)

OUND WALL MOUNTED +18" A.F.F.

N-FUSED.

CTION +48" A.F.F. OR ON EQUIPMENT (U.O.N.)

POWER.

PRAWINGS FOR DESCRIPTION)

SHED FLOOR

DICATE NUMBER OF CATED U.O.N.

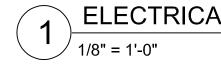
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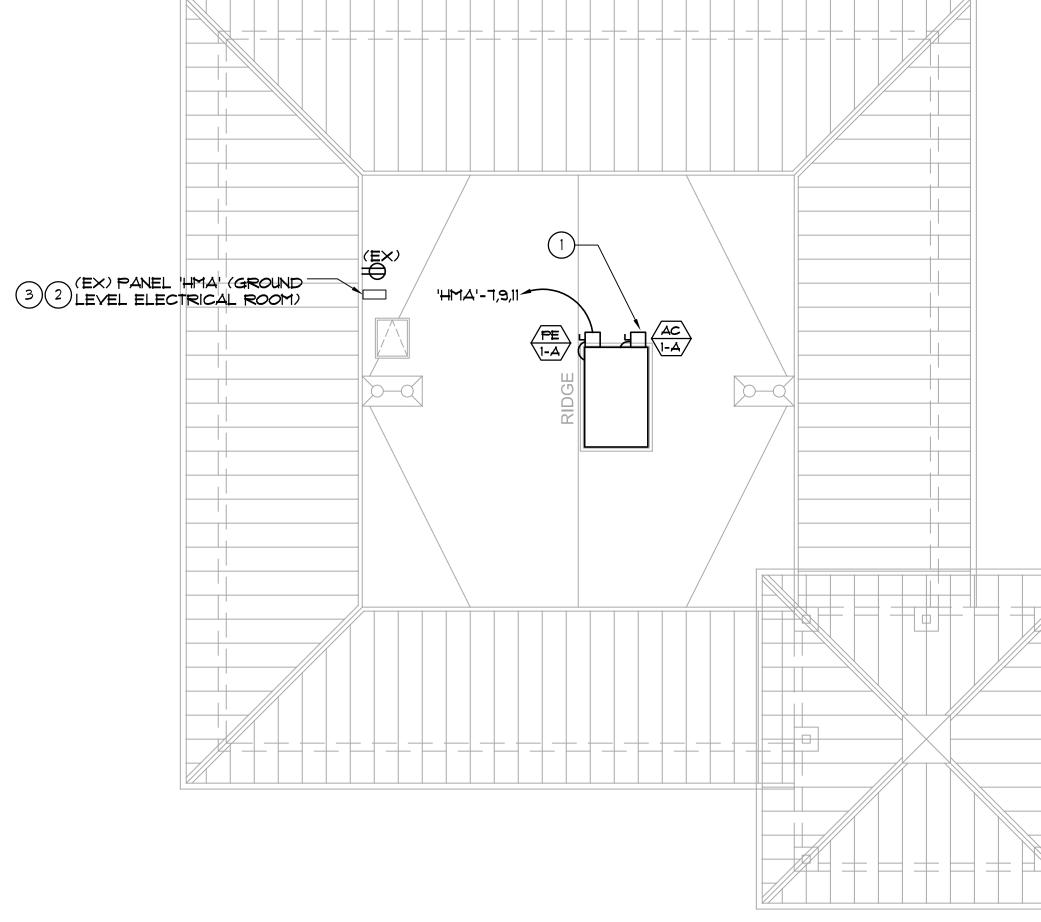
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ELECTRICAL ROOF PLAN - BLDG A

GENERAL NOTES

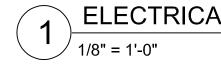
- 1. REFERENCE MECHANICAL PLANS FOR EXACT EQUIPMENT LOCATIONS PRIOR TO ROUGH-IN.
- 2. WHERE DRAWINGS SHOW EXISTING CONDITIONS, THEY HAVE BEEN DERIVED FROM EXISTING DRAWINGS AND/OR SITE INVESTIGATIONS, AN ATTEMPT HAS BEEN MADE TO SHOW ALL EXISTING ELECTRICAL EQUIPMENT LOCATIONS AND CHARACTERISTICS THAT WOULD AFFECT NEW WORK, AS ACCURATELY AS POSSIBLE, HOWEVER THIS DOES NOT RELIEVE THE ELECTRICAL CONTRACTOR FROM RESPONSIBILITY OF A THOROUGH SITE INVESTIGATION, PRIOR TO SUBMITTING FINAL BID, TO ASCERTAIN ALL EXISTING CONDITIONS AND LIMITATIONS.
- 3. COORDINATE THE POINT OF CONNECTION FOR EACH AC UNIT WITH MECHANICAL CONTRACTOR.
- 4. REFER TO MECHANICAL EQUIPMENT SCHEDULE ON EG.7 FOR DISCONNECT SWITCH AND FUSES REQUIREMENTS FOR ALL NEW AC UNITS.
- 5. FIELD VERIFY EXACT PANEL, CIRCUIT, CONDUIT AND CONDUCTOR INFORMATION FOR EACH EXISTING UNIT.
- 6. ALL NON-HVAC ITEMS ATTACHED TO THE EXISTING UNITS SHALL BE CAREFULLY DISCONNECTED AND REMOVED. RE-INSTALL IN AN ALTERNATE LOCATION. UPON COMPLETION OF NEW UNIT INSTALLATION, THE ITEMS SHALL BE TRANSFERRED AND REINSTALLED ON THE NEW UNIT IN THE SAME LOCATION AS REQUIRED. REPLACE EXISTING FLEX CONDUIT AS REQUIRED.
- 7. FIELD VERIFY EXACT LOCATION PRIOR TO DISCONNECT SWITCH INSTALLATION. COORDINATE WITH MECHANICAL CONTRACTOR AS REQUIRED.

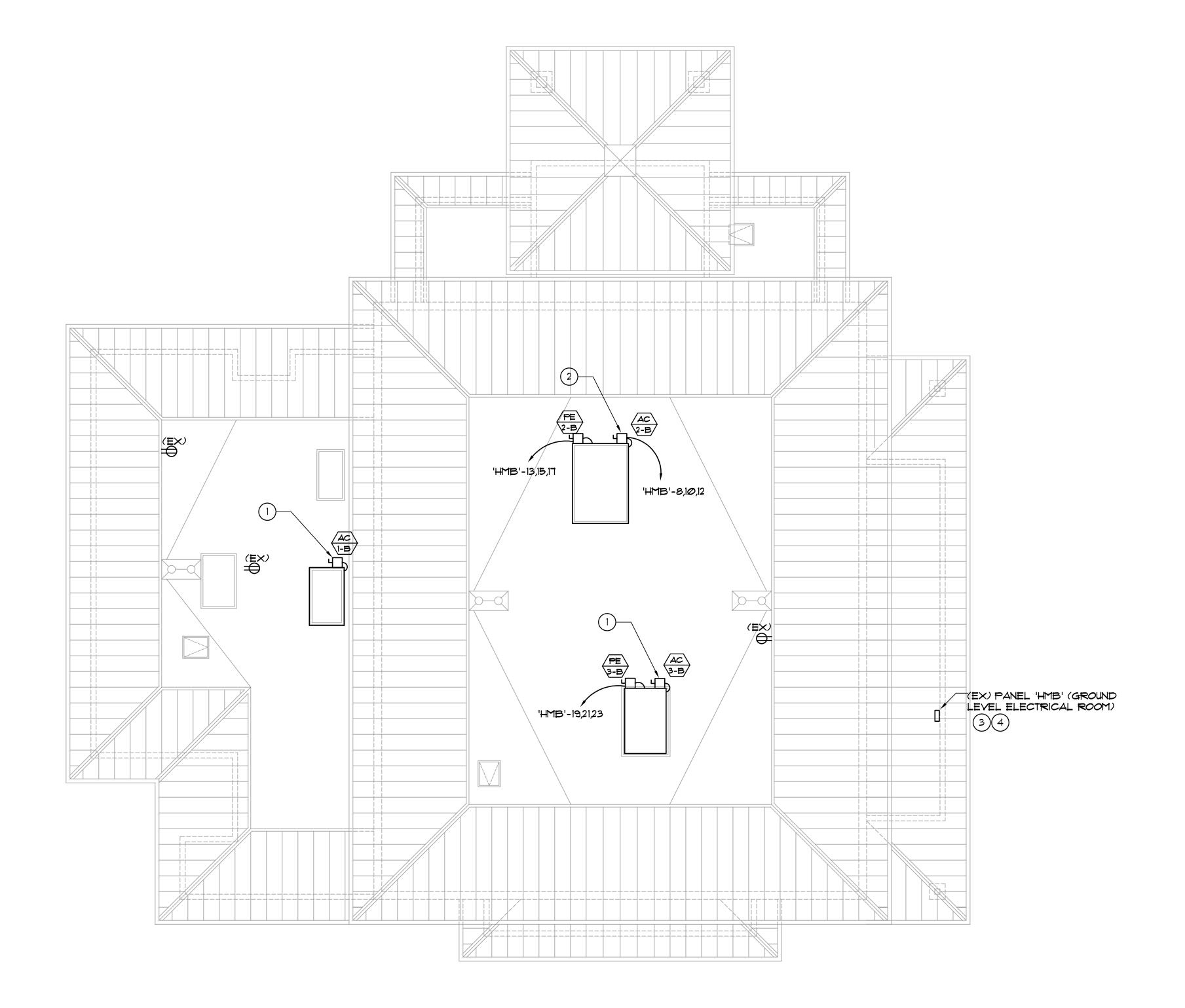
KEY NOTES

- 1 DISCONNECT AND REMOVE EXISTING ELECTRICAL CONNECTION TO EXISTING AC UNITS BEING REMOVED, INCLUDING DISCONNECT SWITCH, WP J-BOX DUPLEX RECEPTACLE AND FLEX CONNECTOR CONDUIT. EXISTING WIRING SHALL BE SAFED-OFF PROTECTED AND RE-INSTALLED. PROVIDE NEW DISCONNECT SWITCH AND FUSES PER HVAC SCHEDULE. EXTEND EXISTING FEEDER TO NEW DISCONNECT AND AC UNIT AS REQUIRED.
- 2 PROVIDE (1) 20/3P BREAKERS IN EXISTING SPACE #1, #9, #11. MATCH EXISTING BREAKER TYPE AND RATING.
- 3 DISCONNECT AND REMOVE EXISTING 40/3P BREAKER FEEDING UNIT 'AC-1A' AT CIRCUIT #2, #4, #6. REPLACE WITH A 50A/3P BREAKER. MATCH EXISTING BREAKER TYPE AND RATING.









ELECTRICAL ROOF PLAN - BLDG B

GENERAL NOTES

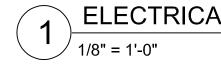
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- 3. COORDINATE THE POINT OF CONNECTION FOR EACH AC UNIT WITH MECHANICAL CONTRACTOR.
- 4. REFER TO MECHANICAL EQUIPMENT SCHEDULE ON EG.7 FOR DISCONNECT SWITCH AND FUSES REQUIREMENTS FOR ALL NEW AC UNITS.
- 5. FIELD VERIFY EXACT PANEL, CIRCUIT, CONDUIT AND CONDUCTOR INFORMATION FOR EACH EXISTING UNIT.
- 6. ALL NON-HVAC ITEMS ATTACHED TO THE EXISTING UNITS SHALL BE CAREFULLY DISCONNECTED AND REMOVED. RE-INSTALL IN AN ALTERNATE LOCATION. UPON COMPLETION OF NEW UNIT INSTALLATION, THE ITEMS SHALL BE TRANSFERRED AND REINSTALLED ON THE NEW UNIT IN THE SAME LOCATION AS REQUIRED. REPLACE EXISTING FLEX CONDUIT AS REQUIRED.
- 7. FIELD VERIFY EXACT LOCATION PRIOR TO DISCONNECT SWITCH INSTALLATION. COORDINATE WITH MECHANICAL CONTRACTOR AS REQUIRED.

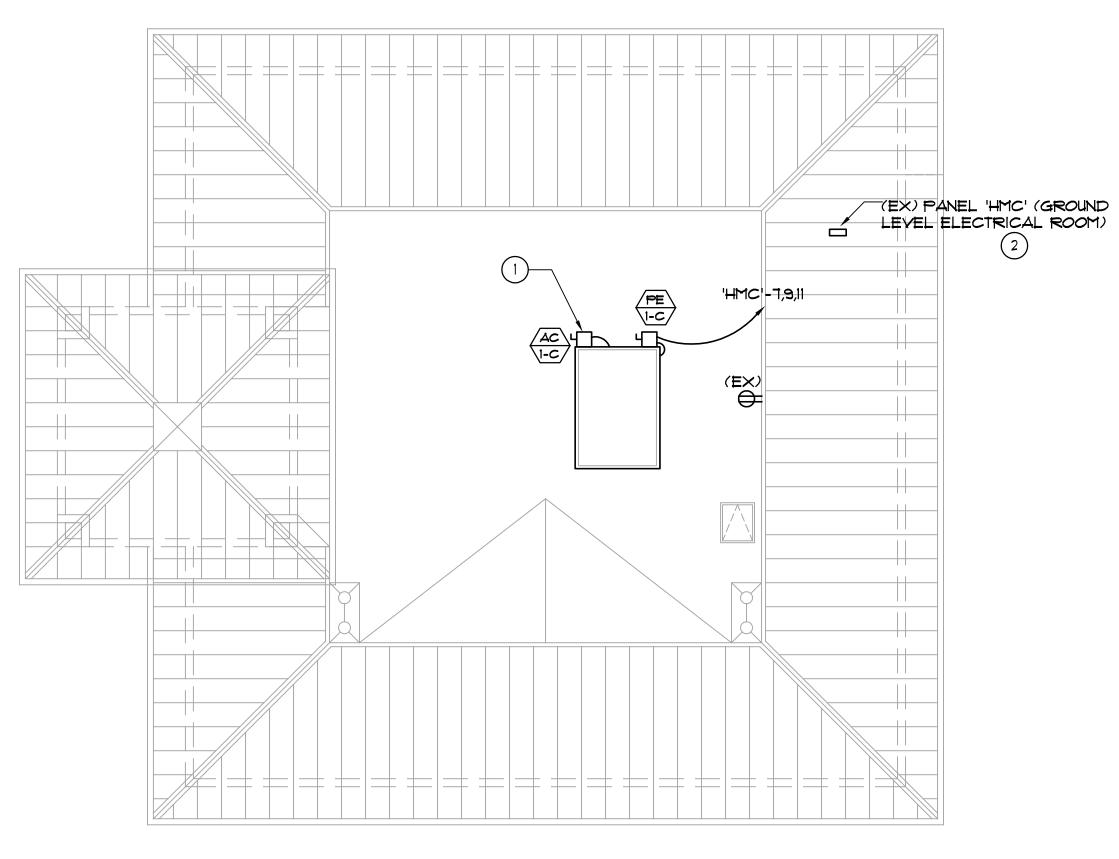
KEY NOTES

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- 2 DISCONNECT AND REMOVE EXISTING ELECTRICAL CONNECTION TO EXISTING AC UNITS BEING REMOVED, INCLUDING DISCONNECT SWITCH, WP J-BOX DUPLEX RECEPTACLE AND FLEX CONNECTOR CONDUIT. EXISTING WIRING SHALL BE REMOVED COMPLETELY BACK TO SOURCE. PROVIDE NEW DISCONNECT SWITCH, FUSES, CONDUIT AND WIRING PER HYAC SCHEDULE. CONNECT NEW CONDUCTORS TO NEW 80A/3P BREAKER AT PANEL 'HMB', DISCONNECT SWITCH AND AC UNIT AS REQUIRED.
- (3) PROVIDE (1) 40/3P BREAKERS IN SPACE #13, #15, #17 AND (1) 20/3P BREAKER IN SPACE #19, #21, #23. MATCH EXISTING BREAKER TYPE AND RATING.
- (4) DISCONNECT AND REMOVE EXISTING 10A/3P BREAKER FEEDING UNIT "AC-2B' AT CIRCUIT #8, #10 AND #12. REPLACE WITH A 80A/3P BREAKER. MATCH EXISTING BREAKER AND RATING.









ELECTRICAL ROOF PLAN - BLDG C

GENERAL NOTES

- 1. REFERENCE MECHANICAL PLANS FOR EXACT EQUIPMENT LOCATIONS PRIOR TO ROUGH-IN.
- 2. WHERE DRAWINGS SHOW EXISTING CONDITIONS, THEY HAVE BEEN DERIVED FROM EXISTING DRÁWINGS AND/OR SITE INVESTIGATIONS, AN ATTEMPT HAS BEEN MADE TO SHOW ALL EXISTING ELECTRICAL EQUIPMENT LOCATIONS AND CHARACTERISTICS THAT WOULD AFFECT NEW WORK, AS ACCURATELY AS POSSIBLE, HOWEVER THIS DOES NOT RELIEVE THE ELECTRICAL CONTRACTOR FROM RESPONSIBILITY OF A THOROUGH SITE INVESTIGATION, PRIOR TO SUBMITTING FINAL BID, TO ASCERTAIN ALL EXISTING CONDITIONS AND LIMITATIONS.
- 3. COORDINATE THE POINT OF CONNECTION FOR EACH AC UNIT WITH MECHANICAL CONTRACTOR.
- 4. REFER TO MECHANICAL EQUIPMENT SCHEDULE ON EG.1 FOR DISCONNECT SWITCH AND FUSES REQUIREMENTS FOR ALL NEW AC UNITS.
- 5. FIELD VERIFY EXACT PANEL, CIRCUIT, CONDUIT AND CONDUCTOR INFORMATION FOR EACH EXISTING UNIT.
- 6. ALL NON-HYAC ITEMS ATTACHED TO THE EXISTING UNITS SHALL BE CAREFULLY DISCONNECTED AND REMOVED. RE-INSTALL IN AN ALTERNATE LOCATION, UPON COMPLETION OF NEW UNIT INSTALLATION, THE ITEMS SHALL BE TRANSFERRED AND REINSTALLED ON THE NEW UNIT IN THE SAME LOCATION AS REQUIRED. REPLACE EXISTING FLEX CONDUIT AS REQUIRED.
- 7. FIELD VERIFY EXACT LOCATION PRIOR TO DISCONNECT SWITCH INSTALLATION. COORDINATE WITH MECHANICAL CONTRACTOR AS REQUIRED.

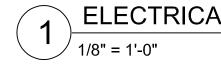
KEY NOTES

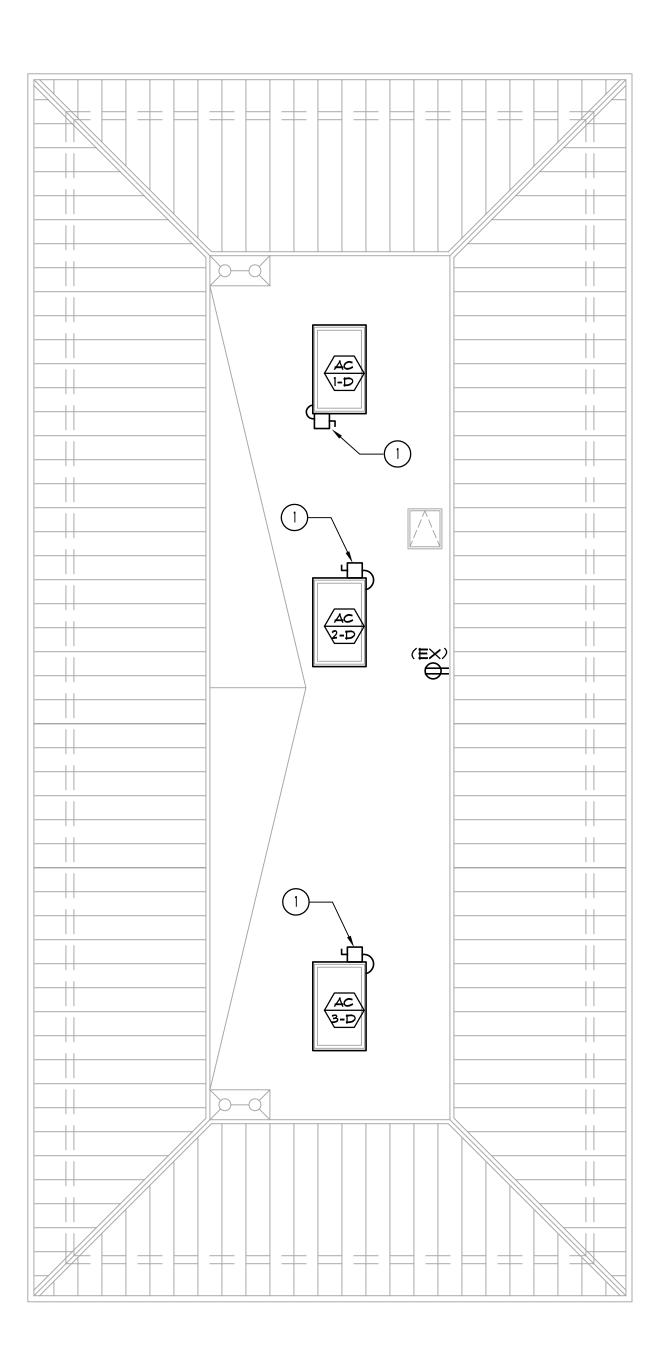
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- 2 PROVIDE (1) 200/3P BREAKERS IN SPACE #1, #9, #11. MATCH EXISTING BREAKER TYPE AND RATING.

(2)









ELECTRICAL ROOF PLAN - BLDG D

GENERAL NOTES

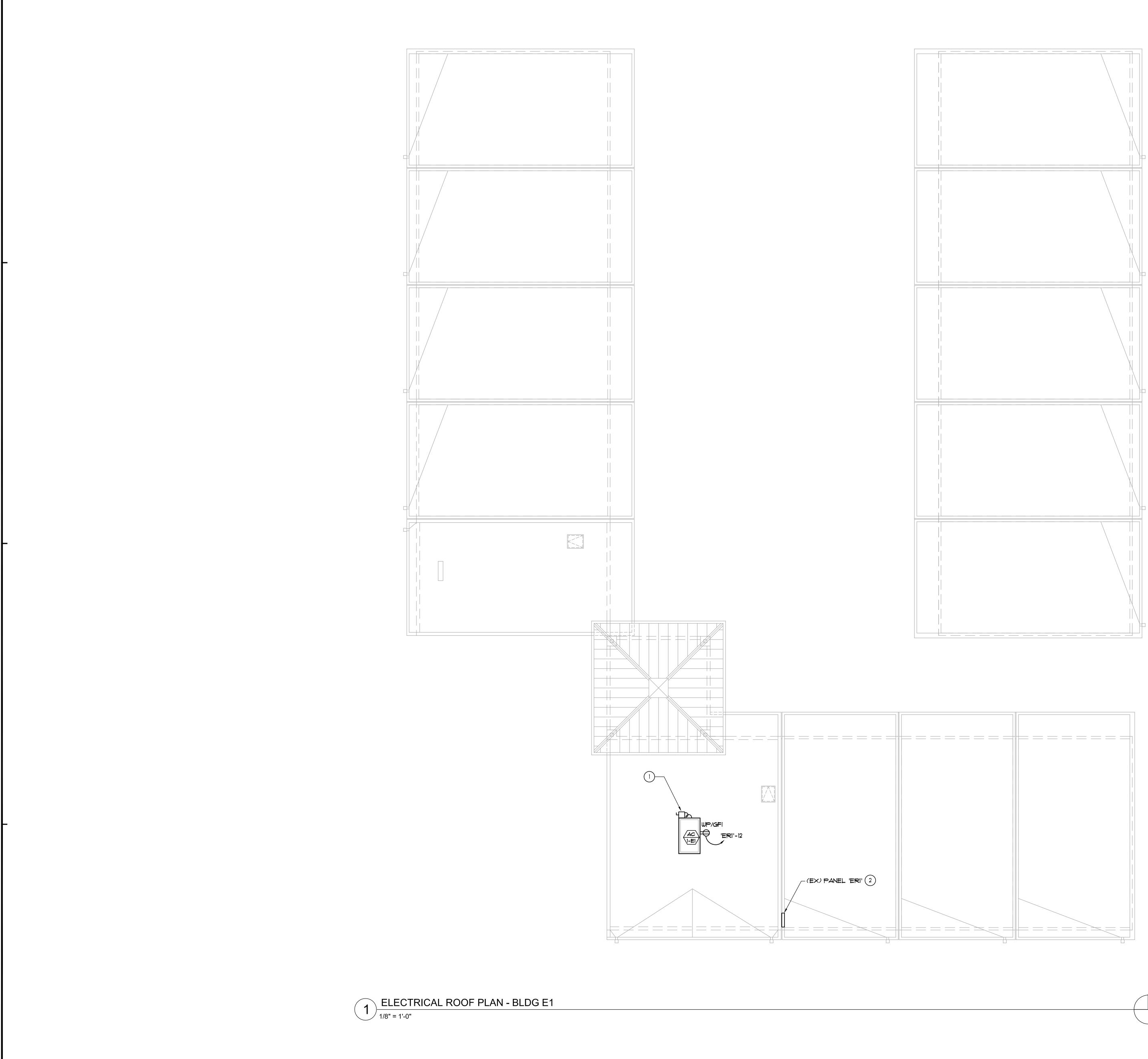
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- 3. COORDINATE THE POINT OF CONNECTION FOR EACH AC UNIT WITH MECHANICAL CONTRACTOR.
- 4. REFER TO MECHANICAL EQUIPMENT SCHEDULE ON EG.7 FOR DISCONNECT SWITCH AND FUSES REQUIREMENTS FOR ALL NEW AC UNITS.
- 5. FIELD VERIFY EXACT PANEL, CIRCUIT, CONDUIT AND CONDUCTOR INFORMATION FOR EACH EXISTING UNIT.
- 6. ALL NON-HVAC ITEMS ATTACHED TO THE EXISTING UNITS SHALL BE CAREFULLY DISCONNECTED AND REMOVED. RE-INSTALL IN AN ALTERNATE LOCATION. UPON COMPLETION OF NEW UNIT INSTALLATION, THE ITEMS SHALL BE TRANSFERRED AND REINSTALLED ON THE NEW UNIT IN THE SAME LOCATION AS REQUIRED. REPLACE EXISTING FLEX CONDUIT AS REQUIRED.
- 7. FIELD VERIFY EXACT LOCATION PRIOR TO DISCONNECT SWITCH INSTALLATION. COORDINATE WITH MECHANICAL CONTRACTOR AS REQUIRED.

KEY NOTES

1 DISCONNECT AND REMOVE EXISTING ELECTRICAL CONNECTION TO EXISTING AC UNITS BEING REMOVED, INCLUDING DISCONNECT SWITCH, WP J-BOX DUPLEX RECEPTACLE AND FLEX CONNECTOR CONDUIT. EXISTING WIRING SHALL BE SAFED-OFF PROTECTED AND RE-INSTALLED. PROVIDE NEW DISCONNECT SWITCH AND FUSES PER HVAC SCHEDULE. EXTEND EXISTING FEEDER TO NEW DISCONNECT AND AC UNIT AS REQUIRED.





GENERAL NOTES

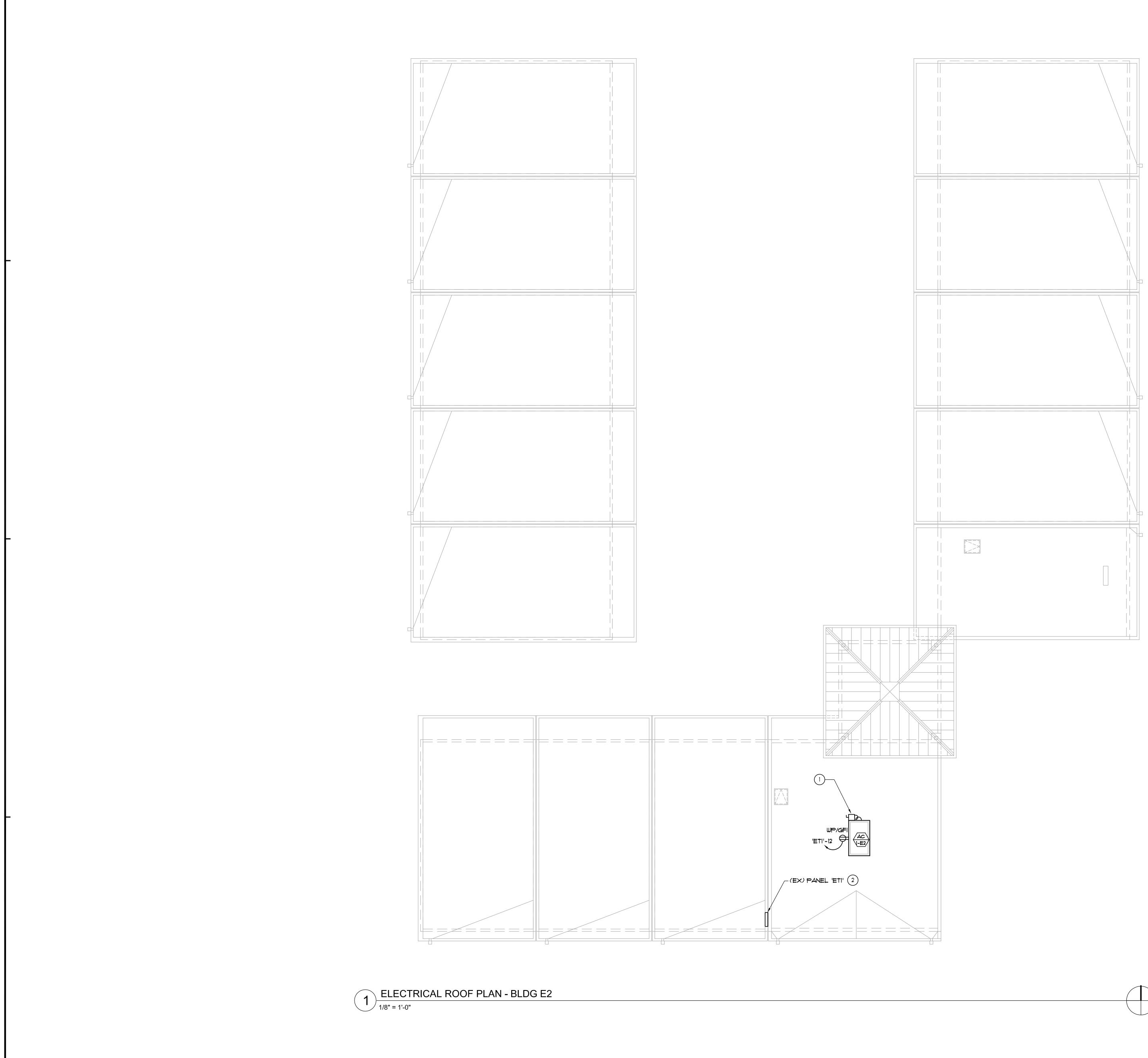
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2 PROVIDE (1) 200/1P BREAKER IN EXISTING SPACE #12.





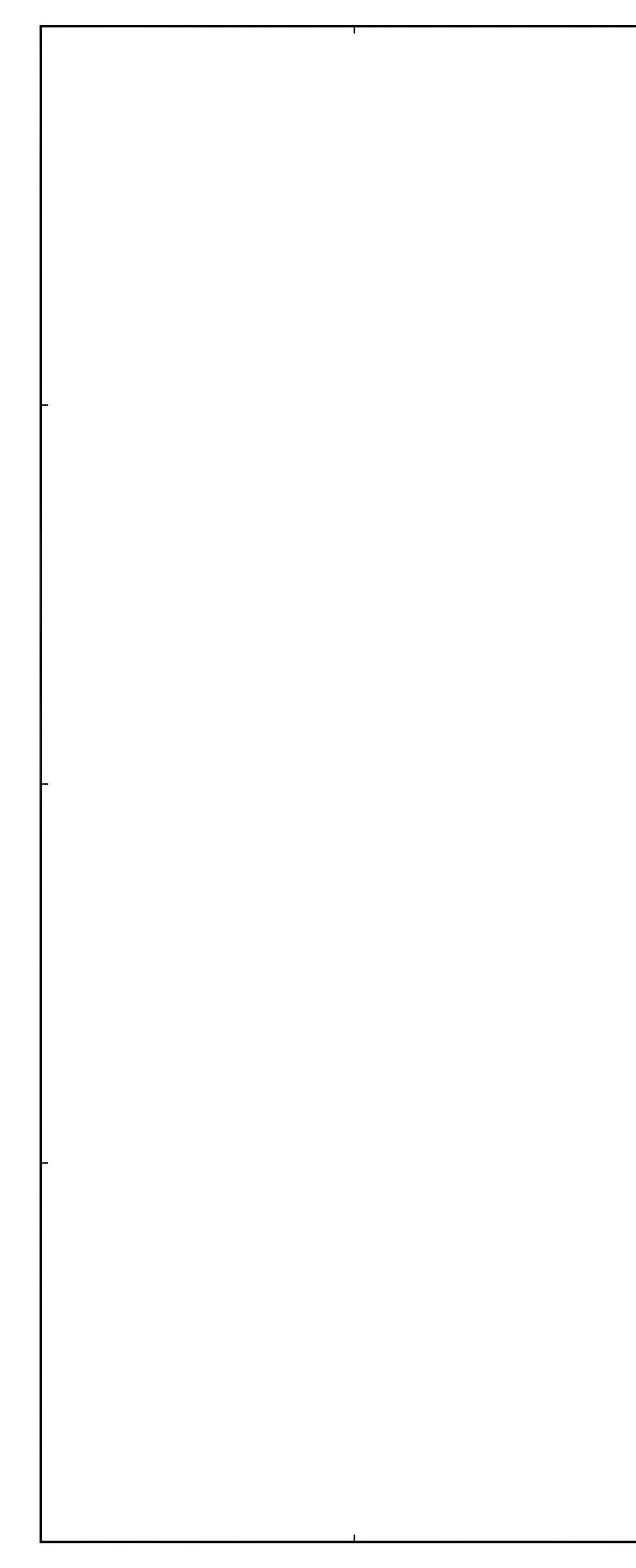
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- (2) provide (1) 20A/IP breaker in existing - SPACE #12.





MECHANICAL EQUIPMENT SCHEDULE					MECHANICAL EQUIPMENT SCHEDULE						
VOLTAGE/ PHASE	CONDUIT/ WIRE	FUSE DISC. SWITCH	PANEL	REMARKS	MARK	VOLTAGE/ PHASE	CONDUIT/ WIRE	FUSE	DISC. SWITCH	PANEL	REMARKS
48ØV/3PH	3/4"C. 4 #12, 1 #12 GND.	14.6 30A/3P/3R	SEE PLAN	8.1 MCA		480V/3PH	EXISTING	4Ø	60A/3P/3R	EXISTING 30	МСА
						480V/3PH	EXISTING	2Ø	304/3P/3R	EXISTING 18	МСА
480V/3PH	1"C. 4 #8, 1 #10 GND.	32.2 6ØA/3P/3R	SEE PLAN	17.9 MCA	AC 2-B	480V/3PH	1-1/4"C. 4 #4, 1 #8 GND.	٦Ø	100A/3P/3R	EXISTING 56	МСА
48ØV/3PH	3/4"C. 4 #12, 1 #12 GND.	10.1 30A/3P/3R	SEE PLAN	5.6 MCA	AC 3-B	480V/3PH	EXISTING	25	304/3P/3R	EXISTING 22	МСА
480V/3PH	3/4"C. 4 #12, 1 #12 GND.	14.6 30A/3P/3R	SEE PLAN	8.1 MCA		480V/3PH	EXISTING	45	60A/3P/3R	EXISTING 33	МСА
						480V/3PH	EXISTING	2Ø	304/3P/3R	EXISTING 18	МСА
						480V/3PH	EXISTING	2Ø	304/3P/3R	EXISTING 18	МСА
					AC 3-D	480V/3PH	EXISTING	2Ø	304/3P/3R	EXISTING 18	MCA
						48ØV/3PH	EXISTING	2Ø	304/3P/3R	EXISTING 18	MCA
						48ØV/3PH	EXISTING	2Ø	30A/3P/3R	EXISTING 18	MCA
					┨ ┣────						
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	VOLTAGE/ PHASE 480V/3РН 480V/3РН 480V/3РН	VOLTAGE/ PHASE CONDUIT/ WIRE 480V/3PH 3/4°C. 4 *12, 1 *12 GND. 480V/3PH 1°C. 4 *8, 1 *10 GND. 480V/3PH 3/4°C. 4 *12, 1 *12 GND.	VOLTAGE/ PHASE CONDUIT/ WIRE FUSE DISC. SWITCH 480V/3PH 3/4"C. 4 #12, 1 #12 GND. 14.6 30A/3P/3R 480V/3PH 1"C. 4 #8, 1 #10 GND. 32.2 60A/3P/3R 480V/3PH 3/4"C. 4 #12, 1 #12 GND. 10.1 30A/3P/3R	VOLTAGE/ PHASE CONDUIT/ WIRE FUSE DISC. SWITCH PANEL 480V/3PH 3/4"C. 4 #12, 1 #12 GND. 14.6 30A/3P/3R 6EE PLAN 480V/3PH 1"C. 4 #8, 1 #10 GND. 32.2 600A/3P/3R 6EE PLAN 480V/3PH 3/4"C. 4 #12, 1 #12 GND. 10.1 300A/3P/3R 6EE PLAN	VOLTAGE/ PHASE CONDUIT/ WIRE FUSE DISC. SWITCH PANEL REMARKS 480V/3PH 3/4°C. 4 *12, 1 *12 GND. 14.6 30A/3P/3R 6EE PLAN 8.1 MCA 480V/3PH 1°C. 4 *8, 1 *10 GND. 32.2 60A/3P/3R 6EE PLAN 11.9 MCA 480V/3PH 3/4°C. 4 *12, 1 *12 GND. 10.1 30A/3P/3R 6EE PLAN 5.6 MCA	VOLTAGE/ PHASE CONDUIT/ WIRE FUSE DISC. SWITCH PANEL REMARKS MARK 480V/3PH 3/4'C. 4 *12, 1 *12 GND. 146 300/3P/3R SEE PLAN 6.1 MCA (VOLTAGE/ PHASECONDUIT/ WIREFUSEDISC. SWITCHPANELREMARKSMARKMARKVOLTAGE/ PHASE480V/3PH3/4'C. 4 #12, 1 #12 GND.14.6 $30A/3P/3R$ $3EE$ PLAN 8.1 MCA $\langle \frac{AC}{1-8} \rangle$ $480V/3PH$ 480V/3PH1'C. 4 #0, 1 #10 GND. 322 $60A/3P/3R$ $3EE$ PLAN 11.3 MCA $\langle \frac{AC}{2-B} \rangle$ $480V/3PH$ 480V/3PH3/4'C. 4 #12, 1 #12 GND.10.1 $30A/3P/3R$ $3EE$ PLAN 56 MCA $\langle \frac{AC}{2-B} \rangle$ $480V/3PH$ 480V/3PH3/4'C. 4 #12, 1 #12 GND.14.6 $30A/3P/3R$ $3EE$ PLAN 56 MCA $\langle \frac{AC}{2-B} \rangle$ $480V/3PH$ 480V/3PH3/4'C. 4 #12, 1 #12 GND.14.6 $30A/3P/3R$ $3EE$ PLAN 81 MCA $\langle \frac{AC}{2-B} \rangle$ $480V/3PH$ 480V/3PH3/4'C. 4 #12, 1 #12 GND.14.6 $30A/3P/3R$ $3EE$ PLAN 81 MCA $\langle \frac{AC}{2-B} \rangle$ $480V/3PH$ 480V/3PH3/4'C. 4 #12, 1 #12 GND.14.6 $30A/3P/3R$ $3EE$ PLAN 81 MCA $\langle \frac{AC}{2-D} \rangle$ $480V/3PH$ 480V/3PH3/4'C. 4 #12, 1 #12 GND.14.6 $30A/3P/3R$ $3EE$ PLAN 81 MCA $\langle \frac{AC}{2-D} \rangle$ $480V/3PH$ 480V/3PH3/4'C. 4 #12, 1 #12 GND.14.6 $30A/3P/3R$ $3EE$ PLAN 81 MCA $\langle \frac{AC}{2-D} \rangle$ $480V/3PH$ 480V/3PH3/4'C. 4 #12, 1 #12 GND.14.6 $30A/3P/3R$ $3EE$ PLAN 81 MCA $\langle \frac{AC}{2-D} \rangle$ $480V/3PH$ 480V/3PH3/4'C. 4 #12, 1 #12 GND. <td< td=""><td>VOLTAGE/ PHASECONDUIT/ WIREFUSEDISC. SWITCHPANELREMARKS$480V/3PH$$3/4'C. 4$ #2, 1 #2 GND.146$30A/3P/3R$$6EE$ PLAN8.1MCA$480V/3PH$$3/4'C. 4$ #2, 1 #2 GND.146$30A/3P/3R$$6EE$ PLAN8.1MCA$480V/3PH$$1'C. 4$ #3, 1 #0 GND.$32.2$$60A/3P/3R$$6EE$ PLAN119MCA$480V/3PH$$3/4'C. 4$ #2, 1 #2 GND.$32.2$$60A/3P/3R$$6EE$ PLAN119MCA$480V/3PH$$3/4'C. 4$ #2, 1 #2 GND.$101$$30A/3P/3R$$6EE$ PLAN56MCA$480V/3PH$$3/4'C. 4$ #2, 1 #2 GND.$146$$30A/3P/3R$$6EE$ PLAN8.1MCA$480V/3PH$$3/4'C. 4$ #2, 1 #2 GND.$146$$30A/3P/3R$$6EE$ PLAN8.1MCA$480V/3PH$$3/4'C. 4$ #2, 1 #2 GND.$146$$30A/3P/3R$$6EE$ PLAN8.1MCA$480V/3PH$$146$$30A/3P/3R$$6EE$ PLAN8.1MCA$480V/3PH$$EXISTING$$480V/3PH$$146$$30A/3P/3R$$6EE$ PLAN8.1MCA$480V/3PH$$EXISTING$$480V/3PH$$146$$30A/3P/3R$$6EE$ PLAN8.1MCA$480V/3PH$$EXISTING$$480V/3PH$$146$$30A/3P/3R$$6EE$ PLAN8.1MCA$480V/3PH$$EXISTING$$480V/3PH$$146$$30A/3P/3R$$6EE$ PLAN8.1MCA$480V/3PH$$EXISTING$$480V/3PH$$146$$30A/3P/3R$$6EE$ PLAN</td><td>VOLTAGE/ PHASECONDUIT/ WIREFUSEDISC. SWITCHPANELREMARKS$4e0V/3FH$<math>3/4'C. 4 *12, 1*12 GND.14.6$30A/3F/3R$$4EE PLAN$$e1MCAAC_{1-A}$$4e0V/3FH$<math>Existing$4e0$$4e0V/3FH$<math>1'C. 4 *2, 1*10 GND.32.2$60A/3F/3R$$8EE PLAN$$1'3MCAAC_{1-A}$$4e0V/3FH$<math>Existing$20$$4e0V/3FH$<math>1'C. 4 *2, 1*10 GND.32.2$60A/3F/3R$$8EE PLAN$$56MCAAC_{2-9}$$4e0V/3FH$<math>Existing$20$$4e0V/3FH$<math>3/4'C. 4 *12, 1*12 GND.10.1$30A/3F/3R$$8EE PLAN$$56MCAAC_{2-9}$$4e0V/3FH$<math>Existing$20$$4e0V/3FH$<math>3/4'C. 4 *12, 1*12 GND.10.1$30A/3F/3R$$8EE PLAN$$56MCAAC_{2-9}$$4e0V/3FH$<math>Existing$45$$4e0V/3FH$<math>3/4'C. 4 *12, 1*12 GND.14.6$30A/3F/3R$$8EE PLAN$$56MCAAC_{2-9}$$4e0V/3FH$$Existing$$45$$4e0V/3FH$$20A/3F/3R$$8EE PLAN$$81MCAAC_{2-9}$$4e0V/3FH$$Existing$$20$$Ae_{2-9}$$4e0V/3FH$$Existing$$20$$Ae_{2-9}$$4e0V/3FH$$Existing$$20$$Ae_{2-9}$$4e0V/3FH$$Existing$$20$$Ae_{2-9}$$4e0V/3FH$$Existing$$20$$Ae_{2-9}$$4e0V/3FH$$Existing$$20$$Ae_{2-9}$$4e0V/3FH$$Existing$$20$$Ae_{2-9}$$4e0V/3FH$$Existing$<t< math=""></t<></math></math></math></math></math></math></math></math></math></math></math></td><td>VOLTAGE/ PHASECONDUIT/ WIREFUSEDISC. SWITCHPANELREMARKS$480V/3PH$<math>3/4'C. 4 *2, 1*0 GND.146$30A/3P/3R$$9EE$ PLANB_1 MCAARK<math>VOLTAGE/PHASE$WIRE$FUSEDISC. SWITCH$480V/3PH$<math>3/4'C. 4 *2, 1*0 GND.122$60A/3P/3R$$9EE$ PLANB_1 MCA$AC$$460V/3PH$Existing$40$$60A/3P/3R$$480V/3PH$<math>1'C. 4 *0, 1*0 GND.322$60A/3P/3R$$9EE$ PLANB_1 MCA$AC$$460V/3PH$$Existing$$20$$30A/3P/3R$$480V/3PH$<math>3/4'C. 4 *2, 1*0 GND.101$30A/3P/3R$$9EE$ PLANB_1 MCA$AC$$460V/3PH$$Existing$$1'0$$100A/3P/3R$$480V/3PH$<math>3/4'C. 4 *2, 1*0 GND.101$30A/3P/3R$$9EE$ PLANB_1 MCA$AC$$460V/3PH$$Existing$$1'0$$100A/3P/3R$$480V/3PH$<math>3/4'C. 4 *2, 1*0 GND.101$30A/3P/3R$$9EE$ PLANB_1 MCA$AC$$460V/3PH$$Existing$$20$$30A/3P/3R$$480V/3PH$<math>3/4'C. 4 *2, 1*0 GND.146$30A/3P/3R$$9EE$ PLANB_1 MCA$AC$$460V/3PH$$Existing$$20$$30A/3P/3R$$480V/3PH$<math>3/4'C. 4 *2, 1*0 GND.146$30A/3P/3R$$9EE$ PLANB_1 MCA$AO$$A60V/3PH$$Existing$$20$$30A/3P/3R$$480V/3PH$<math>3/4'C. 4 *2, 1*0 GND.146$30A/3P/3R$$AEE$$AE$$AO$$AO$$AOV/3PH$$Existing$$20$$30A/3P/3R$</math></math></math></math></math></math></math></math></math></math></td></td<>	VOLTAGE/ PHASECONDUIT/ WIREFUSEDISC. SWITCHPANELREMARKS $480V/3PH$ $3/4'C. 4$ #2, 1 #2 GND.146 $30A/3P/3R$ $6EE$ PLAN 8.1 MCA $480V/3PH$ $3/4'C. 4$ #2, 1 #2 GND.146 $30A/3P/3R$ $6EE$ PLAN 8.1 MCA $480V/3PH$ $1'C. 4$ #3, 1 #0 GND. 32.2 $60A/3P/3R$ $6EE$ PLAN 119 MCA $480V/3PH$ $3/4'C. 4$ #2, 1 #2 GND. 32.2 $60A/3P/3R$ $6EE$ PLAN 119 MCA $480V/3PH$ $3/4'C. 4$ #2, 1 #2 GND. 101 $30A/3P/3R$ $6EE$ PLAN 56 MCA $480V/3PH$ $3/4'C. 4$ #2, 1 #2 GND. 146 $30A/3P/3R$ $6EE$ PLAN 8.1 MCA $480V/3PH$ $3/4'C. 4$ #2, 1 #2 GND. 146 $30A/3P/3R$ $6EE$ PLAN 8.1 MCA $480V/3PH$ $3/4'C. 4$ #2, 1 #2 GND. 146 $30A/3P/3R$ $6EE$ PLAN 8.1 MCA $480V/3PH$ 146 $30A/3P/3R$ $6EE$ PLAN 8.1 MCA $480V/3PH$ $EXISTING$ $480V/3PH$ 146 $30A/3P/3R$ $6EE$ PLAN 8.1 MCA $480V/3PH$ $EXISTING$ $480V/3PH$ 146 $30A/3P/3R$ $6EE$ PLAN 8.1 MCA $480V/3PH$ $EXISTING$ $480V/3PH$ 146 $30A/3P/3R$ $6EE$ PLAN 8.1 MCA $480V/3PH$ $EXISTING$ $480V/3PH$ 146 $30A/3P/3R$ $6EE$ PLAN 8.1 MCA $480V/3PH$ $EXISTING$ $480V/3PH$ 146 $30A/3P/3R$ $6EE$ PLAN	VOLTAGE/ PHASECONDUIT/ WIREFUSEDISC. SWITCHPANELREMARKS $4e0V/3FH$ $3/4'C. 4 *12, 1*12 GND.14.630A/3F/3R4EE PLANe1MCAAC_{1-A}4e0V/3FHExisting4e04e0V/3FH1'C. 4 *2, 1*10 GND.32.260A/3F/3R8EE PLAN1'3MCAAC_{1-A}4e0V/3FHExisting204e0V/3FH1'C. 4 *2, 1*10 GND.32.260A/3F/3R8EE PLAN56MCAAC_{2-9}4e0V/3FHExisting204e0V/3FH3/4'C. 4 *12, 1*12 GND.10.130A/3F/3R8EE PLAN56MCAAC_{2-9}4e0V/3FHExisting204e0V/3FH3/4'C. 4 *12, 1*12 GND.10.130A/3F/3R8EE PLAN56MCAAC_{2-9}4e0V/3FHExisting454e0V/3FH3/4'C. 4 *12, 1*12 GND.14.630A/3F/3R8EE PLAN56MCAAC_{2-9}4e0V/3FHExisting454e0V/3FH20A/3F/3R8EE PLAN81MCAAC_{2-9}4e0V/3FHExisting20Ae_{2-9}4e0V/3FHExisting20Ae_{2-9}4e0V/3FHExisting20Ae_{2-9}4e0V/3FHExisting20Ae_{2-9}4e0V/3FHExisting20Ae_{2-9}4e0V/3FHExisting20Ae_{2-9}4e0V/3FHExisting20Ae_{2-9}4e0V/3FHExisting$	VOLTAGE/ PHASECONDUIT/ WIREFUSEDISC. SWITCHPANELREMARKS $480V/3PH$ $3/4'C. 4 *2, 1*0 GND.14630A/3P/3R9EE PLANB_1 MCAARKVOLTAGE/PHASEWIREFUSEDISC. SWITCH480V/3PH3/4'C. 4 *2, 1*0 GND.12260A/3P/3R9EE PLANB_1 MCAAC460V/3PHExisting4060A/3P/3R480V/3PH1'C. 4 *0, 1*0 GND.32260A/3P/3R9EE PLANB_1 MCAAC460V/3PHExisting2030A/3P/3R480V/3PH3/4'C. 4 *2, 1*0 GND.10130A/3P/3R9EE PLANB_1 MCAAC460V/3PHExisting1'0100A/3P/3R480V/3PH3/4'C. 4 *2, 1*0 GND.10130A/3P/3R9EE PLANB_1 MCAAC460V/3PHExisting1'0100A/3P/3R480V/3PH3/4'C. 4 *2, 1*0 GND.10130A/3P/3R9EE PLANB_1 MCAAC460V/3PHExisting2030A/3P/3R480V/3PH3/4'C. 4 *2, 1*0 GND.14630A/3P/3R9EE PLANB_1 MCAAC460V/3PHExisting2030A/3P/3R480V/3PH3/4'C. 4 *2, 1*0 GND.14630A/3P/3R9EE PLANB_1 MCAAOA60V/3PHExisting2030A/3P/3R480V/3PH3/4'C. 4 *2, 1*0 GND.14630A/3P/3RAEEAEAOAOAOV/3PHExisting2030A/3P/3R$	VOLTAGE/ PHASE CONDUIT/ WIRE FUSE DISC. SWITCH PANEL REMARKS 480V/3PH 3/4/C. 4 *0.1 *0.2 GND. 146 304/3P/3R 6EE PLAN 31 MCA 1 MARK VOLTAGE/ PHASE WIRE FUSE DISC. SWITCH PANEL 30 480V/3PH 3/4/C. 4 *0.1 *0.2 GND. 146 304/3P/3R 6EE PLAN 1 MCA 1 480/3PH Existing 40 604/3P/3R Existing 8 480//3PH 1/C. 4 *0.1 *0.0 GND. 322 604/3P/3R 6EE PLAN 19 MCA 1 480/3PH Existing 480/3PH Existing 20 304/3P/3R Existing 6 480//3PH 3/4/C. 4 *0.1 *0.2 GND. 1/0.1 304/3P/3R 6EE PLAN 54 MCA 480//3PH Existing 25 304/3P/3R Existing 20 480//3PH 3/4/C. 4 *0.1 *0.2 GND. 1/4.1 304/3P/3R 6EE PLAN 54 MCA 480//3PH Existing 20 304/3P/3R Existing 20

KEY NOTES

DEXISTING DUCT SMOKE DETECTOR TO BE DISCONNECT AND REMOVED FROM EXISTING FIRE ALARM CIRCUIT. PROTECT DETECTOR AND EXISTING WIRING IN PLACE. TEMPORARILY EXTEND EXISTING CIRCUIT FROM THE LAST ACTIVE DEVICE TO THE NEXT ACTIVE DEVICE TO MAINTAIN FIRE ALARM CIRCUIT CONTINUITY. TEST TO ENSURE PROPER FUNCTIONALITY. RE-INSTALL DUCT SMOKE DETECTOR IN DUCT WORK WHEN DUCT WORK IS COMPLETED AND NEW UNIT IS SET AND EXTEND EXISTING WIRING TO NEW UNIT FOR UNIT SHUT OFF AS REQUIRED. RE-TEST FIRE ALARM SYSTEM UPON COMPLETION OF FIRE ALARM WORK. EXISTING DUCT SMOKE DETECTOR: NOTIFIER #DNR. CSFM LISTING #3240-1653:0209

