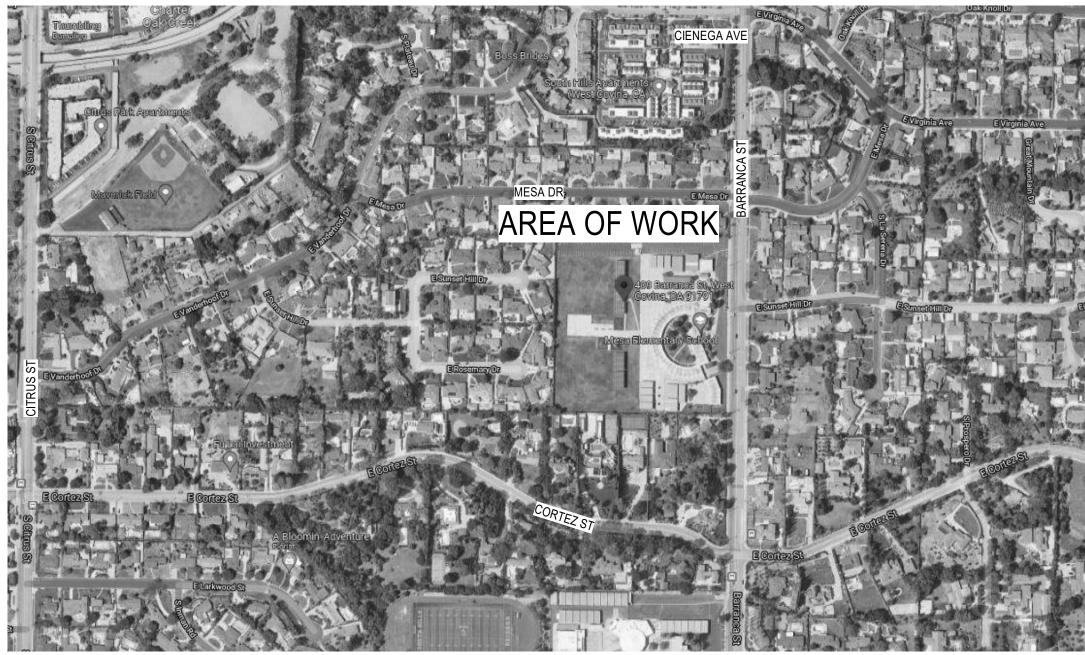
MESA ELEMENTARY SCHOOL 409 S. BARRANCA ST. WEST COVINA, CA 91791 COVID 19- COVINA VALLEY DISTRICT HVAC REPLACEMENT **100% CONSTRUCTION DOCUMENTS** 11/04/2022 DLR GROUP PROJECT NUMBER: 75-22605-00

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TOTAL: 39 SHEETS

PROJECT DIRECTORY

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DSA APPLICATION # A# 03-122232

LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS

(Application No. <u>03-122232</u> _____ File No. <u>19-25</u> HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

1) DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS, AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND

2) COORDINATION WITH MY PLANS AND SPECIFICATIONS, AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

THE STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341 AND 4-344"

> ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET \rightarrow For each discipline (see sheet index for list of disciplines) THIS DRAWING OR PAGE

ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN INTENT, AND	
HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.	
SIGNATURE DATE	
ARCHITECT OR ENGINEER DELEGATED RESPONSIBILITY FOR THIS PORTION OF THE WORK	
WORK	
PRINT NAME	

DESIGN ANALYSIS DATA

OF TITLE 24, PART 1. (TITLE 24, PART 1, SECTION 4-317(b))

I FIND THAT:

JESSE MILLER

LICENSE NUMBER

- RISK CATEGORY: III

- SITE CLASS: D

- S_S = 1.675

- S₁ = 0.61

- S_{MS} = 2.01

- S_{M1} = *null

 $-S_{DS} = 1.34$

- S_{D1} = *null

- SEISMIC DESIGN CATEGORY: E OR F

PRINT NAME

C-32306

1. WIND DESIGN CRITERIA (CBC 1603A.1.4) - STRUCTURAL DESIGN PARAMETERS

- WIND DESIGN SPEED: V;110 MPH

- WIND EXPOSURE CATEGORY: B (PER ASCE 7-16) 2. EARTHQUAKE DESIGN CRITERIA (CBC 1603A1.5)

- I_P (IMPORTANCE FACTOR) = 1.25 - F_P (CONTROLLING HOR. SEISMIC FORCE) = 2089.48 LBS 3. DESIGN LOAD BEARING VALUES OF SOILS (CBC 1603A1.6) - ALLOWABLE SOIL BEARING PRESSURE: 1,500 PSF - ALLOWABLE LATERAL BEARING PRESSURE: 100 PSF MIN.

> MECHANICAL ENGINEER DLR GROUP 700 FLOWER ST 22ND FLOOR LOS ANGELES, CA 90017 CONTACT: TONG FANG (DONNA) ZHAO PH: 213.444.0610 DZHAO@DLRGROUP.COM

SCOPE OF WORK

COPE OF WORK SHALL BE AS FOLLOW EXISTING HVAC SYSTEM REPLACEMENT AT CLASSROOM BUILDINGS AND MPF

APPI ICABLE CODES

AFFLI	UF	
2019 CAFILC (2018 INTER 2019 CALIFC (2017 NATIO 2019 CALIFC (2018 IAPMC 2019 CALIFC (2018 IAPMC 2019 CALIFC (2018 INTER 2019 CALIFC (2018 INTER 2019 CALIFC 2019 CALIFC 2019 CALIFC 2019 CALIFC 2019 CALIFC 2019 CALIFC 2016 ASME / (PER 2019 C NOTE: CAL/C ADOPTION	DRNIA NATI(DRNIA	ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR A BUILDING CODE (CBC), PART 2, TITLE 24 CCR DNAL BUILDING CODE, VOL. 1 & 2, AND 2019 CALIFORNIA AMENDMENTS) A ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS) MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR FORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS) A PLUMBING CODE (CPC), PART 5, TITLE 24 TITLE CCR FORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS) A PLUMBING CODE (AND 2019 CALIFORNIA AMENDMENTS) A ENERGY CODE (CEC), PART 6, TITLE 24 CCR FIRE CODE (CFC), PART 6, TITLE 24 CCR DNAL FIRE CODE (AND 2019 CALIFORNIA AMENDMENTS) A EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR DNAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS) A EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR DNAL EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR DNAL EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR DNAL EXISTING BUILDING CODE (CEBC), PART 12, TITLE 24 CCR DNAL EXISTING BUILDING CODE (CEBC), PART 12, TITLE 24 CCR DNAL EXISTING BUILDING CODE (CEBC), PART 12, TITLE 24 CCR DNAL EXISTING BUILDING CODE (CEBC), PART 12, TITLE 24 CCR DNAL EXISTING BUILDING CODE (CEBC), PART 12, TITLE 24 CCR DNAL EXISTING BUILDING CODE (CEBC), PART 12, TITLE 24 CCR DNAL EXISTING BUILDING CODE (CEBC), PART 12, TITLE 24 CCR DNAL EXISTING BUILDING CODE FOR ELEVATORS AND ESCALATORS ART 2 CH 35) ACE EVATOR UNIT ENFORCES CCR TITLE 8 AND USES THE 2004 ASME A17.1 BY ARDS FOR ACCESSIBLE DESIGN
NFPA 13 NFPA 14 NFPA 17 NFPA 17A NFPA 20 NFPA 22 NFPA 24 NFPA 72 NFPA 80 NFPA 2001 UL 300 UL 464		STANDARD FOR INSTALLATION OF SPRINKLERS SYSTEMS (CA AMENDED) STANDARD FOR INSTALLATION OF SAND PIPE AND HOSE SYSTEMS (CA AMENDED) STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS STANDARD FOR INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED) STANDARD FOR FIRE DOORS AND OTHER OPENINGS PROTECTIVE
UL 521 UL 1971 ICC 300	-	STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED

DSA GENERAL NOTES

- 1. 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 (DSA), AS REQUIRED BY SECTION 4-338(b), PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR). NOT WITH STANDING OTHER PROVISIONS OF THE PROJECT SPECIFICATIONS, COMPLY WITH ALL PROVISIONS OF THE CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR), SECTION 4-338, FOR ALL ADDENDUM AND CONSTRUCTION CHANGE DOCUMENTS.
- 2. CONSTRUCTION CHANGE DOCUMENTS MUST BE SIGNED BY ALL THE FOLLOWING: ARCHITECT OR ENGINEER HAVING GENERAL RESPONSIBLE CHARGE OF THE PROJECT, AND STRUCTURAL ENGINEER OF RECORD OR DELEGATED PROFESSIONAL ENGINEER (WHEN APPLICABLE). 3. SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS (ACCESSIBILITY, STRUCTURAL ENGINEER, AND FIRE/LIFE/SAFETY) SHALL BE CONSIDERED AS A CONSTRUCTION CHANGE DOCUMENT, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION IN ACCORDANCE WITH DSA IR A-6 AND
- SECTION 4-338(b), PART 1, TITLE 24, CCR. SUBSTITUTIONS SHALL BE FOR ANY MATERIALS, SYSTEMS OR PRODUCT THAT WOULD OTHERWISE BE REGULATED BY DSA 4. A DSA-CERTIFIED PROJECT INSPECTOR WITH CLASS 3 CERTIFICATION. EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE ARCHITECT AND BY THE DIVISION OF THE STATE ARCHITECT, SHALL PROVIDE CONTINIOUS INSPECTION OF THE WORK. THE DUTIES OF THE PROJECT INSPECTOR ARE DEFINED
- IN SECTION 4-342, CALIFORNIA BUILDING ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR). 5. A DSA-ACCEPTED TESTING LAB, EMPLOYED BY THE DISTRICT (OWNER), SHALL CONDUCT ALL REQUIRED TESTS AND INSPECTIONS OF THE WORK. 6. THE DSA-CERTIFIED PROJECT INSPECTOR AND DSA-ACCEPTED TESTING LAB SHALL BE EMPLOYED AND PAID BYTHE OWNER (DISTRICT) AND APPROVED BY ALL OF THE FOLLOWING: ARCHITEC OR ENGINEER HAVING GENERAL RESPONSIBLE CHARGE OF THE PROJECT; STRUCTURAL ENGINEER OF RECORD; AND DIVISION OF THE STATE ARCHITECT (DSA). THE INSPECTOR OF RECORD FOR THIS PROJECT SHALL BE CLASS 3 OR BETTER
- 7. ALL WORK SHALL CONFORM TO 2019 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR). 8. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT 9. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24. CCR. A CONSTRUCTION
- CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(C), PART 1, TITLE 24, CCR 10. FABRICATION AND INSTALLATION OF DEFFERED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTURAL SYSTEMS TO BE INSTALLED HAVE ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND APPROVED BY DSA. LIST DEFFERED SUBMITTAL ITEMS FOR THIS PROJECT. (IF THIS PROJECT HAS NO DEFFERED SUBMITTAL ITEMS, PLEASE INDICATE AS SUCH.
- 11. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES. 12. THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND PROCESS FOUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL
- PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH THE ENERGY CODE. 13. LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT) 14. MECHANICAL SYSTEM ACCEPTANCE TEST MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1.
- 15. ENVELOPE AND PROCESS EQUIPMENT ACCEPTANCE TESTS SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR, ENGINEER/ARCHITECT OR RECORD OR THE OWNER'S AGENT.
- 16. A LISTING OF CERTIFIED ATT CAN BE FOUND AT HTTPS://WWW.ENERGY.CA.GOV/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TESTING-TECHNICIAN-CERTIFICATION-PROVIDER-PROGRAM/ACCEPTANCE.COM 17. THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR UNTIL THE CONSTRUCTION/INSTALLATION OF THE SPECIFICED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA. 18. PROJECT INSPECTORS WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED. 19. FABRICATION AND INSTALLATION OF DEFFERED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND
- ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND APPROVED BY THE DSA. LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT. (IF THIS PROJECT HAS NO DEFERRED SUBMITTAL ITEMS, PLEASE INDICATE AS SUCH) 20. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH
- ALL LOCAL ORDINANCES.

2005 (R2010) 2003 ADDITION 1999 ADDITION 2002 (R2010) 2017 ADDITION

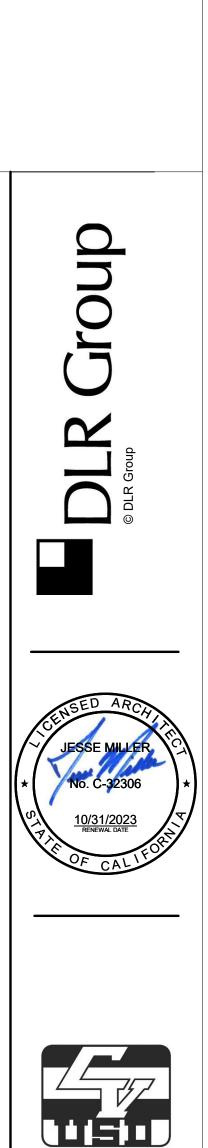
2016 ADDITION 2013 ADDITION 2016 ADDITION 2017 ADDITION 2017 ADDITION 2013 ADDITION

(CA AMENDED)

2016 ADDITION 2016 ADDITION

2016 ADDITION

2015 ADDITION



Ζ Σ

100% CONSTRUCTION DOCUMENTS 11/04/2022 REVISIONS

75-22605-00 DSA A#03-122232 DSA File #: 19-25 COVER SHEET

G0.

	A		В
GENE	RAL ABBREVIATIONS	ARCH	ITECTURAL ABBREVIAT
# &	NUMBER AND		
@	AT	A/E AB	ARCHITECT/ENGINEER AIR BARRIER
ADA ADDN	AMERICANS WITH DISABILITY ACT ADDITION OR ADDITIONAL	ABS ACC	ASBESTOS ADA ACCESSIBLE
AFF AFG	ABOVE FINISHED FLOOR ABOVE FINISHED GRADE	ACR ACT	ACRYLIC ACOUSTIC CEILING TILE
AHJ ALT	AUTHORITY HAVING JURISDICTION ALTERNATE	AD ADJ	ACCESS DOOR ADJUSTABLE
ANSI APPROX	AMERICAN NATIONAL STANDARDS INSTITUTE APPROXIMATE	ADJT ADMIN	ADJACENT ADMINISTRATION
ARCH	ARCHITECTURAL	AEC AL	AUTOMATED EXTERNAL DEFIBRILLATORS
BLDG BSMT	BUILDING BASEMENT	ALUM AP	ALUMINUM ACCESS PANEL
CL	CENTER LINE	APC ASPH	ACOUSTIC PANEL CEILING ASPHALT
CLG CM	CEILING CENTIMETER	AUTO AVG	AUTOMATIC AVERAGE
CONC CONN(S)	CONCRETE CONNECTION(S)	AWP	
CONST CONT	CONSTRUCTION CONTINUOUS	B.O. BCS	BOTTOM OF BABY CHANGING STATION
CONTR CTR	CONTRACT(OR) CENTER	BD BLK	BOARD BLOCK
D	DEPTH	BLKG BLKHD	BLOCKING BULKHEAD
DEG DEMO DIA	DEGREE DEMOLISH OR DEMOLITION DIAMETER	BM(S) BOT BRDG	BEAM(S) BOTTOM BRIDGING
DIM DIV	DIAMETER DIMENSION SPECIFICATION DIVISION	BRG BRKT	BRACKET
DN DTL	DOWN DETAIL	BT BT BTWN	BATHTUB BETWEEN
DTL DWG(S)	DRAWING(S)	CAB	CABINET
E	EAST	CBD	CHALKBOARD
EA EC	EACH ELECTRICAL CONTRACTOR	CER CF	
EL ELEC	ELEVATION ELECTRICAL	CFCI CFMF	CONTRACTOR FURNISHED CONTRACTOR INSTALLED COLD-FORMED METAL FRAMING
ENG EQ	ENGINEER EQUAL	CG CI	CLEAR FLOAT GLASS CAST IRON
EQUIP EQUIV	EQUIPMENT EQUIVALENT	CIG CIP	CLEAR INSULATING GLASS CAST IN PLACE
EXST EXT	EXISTING EXTERIOR	CJ CJA	CONTROL JOINT CONTROL JOINT ABOVE
FIN	FINISHED	CLO CLR	CLOSET CLEAR
FL FT	FLOOR FEET	CMU COL	CONCRETE MASONRY UNIT COLUMN
FUT	FUTURE	COM COMB	COMMON COMBINATION
GC GOVT	GENERAL CONTRACTOR GOVERNMENT	COMM COMPR	COMMUNICATIONS COMPRESSIBLE
H	HEIGHT	CONF CONFIG	CONFERENCE CONFIGURATION
HORIZ HT	HORIZONTAL HEIGHT	CORR CP	CORRIDOR COVER PLATE
i.e.	THAT IS	CPT CR	CARPET CHAIR RAIL
IBC IN	INTERNATIONAL BUILDING CODE INCH	CS CSTJ	COUNTERSINK CONSTRUCTION JOINT
INT	INTERIOR	CSWK CT	CASEWORK CERAMIC TILE
LB(S)	POUND(S)	CTG CTIG	CLEAR TEMPERED FLOAT GLASS CLEAR TEMPERED INSULATING GLASS
M	THOUSAND METER	CU CU	COPPER COMBINATION UNIT
MAX MC	MAXIMUM MECHANICAL CONTRACTOR	CV CY	CONDOM VENDOR CUBIC YARD
MECH MEZZ	MECHANICAL MEZZANINE	CYL	CYLINDER
MFR MIN	MANUFACTURER MINIMUM	DB DBL	DECIBEL DOUBLE
MISC MM	MISCELLANEOUS MILLIMETER	DC DEPR	DUST COLLECTOR DEPRESS(ION)(ED)
N	NORTH	DEPT DET	DEPARTMENT DETENTION
N/A NIC	NOT APPLICABLE NOT IN CONTRACT	DF DG	DRINKING FOUNTAIN DOOR GRILLE
NTS	NOT TO SCALE	DIAG DPFG	DIAGONAL DAMPROOFING
DC DPP	ON CENTER OPPOSITE	DR DSN	DOOR DOWNSPOUT NOZZLE
OVHD	OVERHEAD	DW DWL(S)	DISHWASHER DOWEL(S)
PAR PENT	PARALLEL PENTHOUSE	DWR	DRAWER
PLYWD	PLYWOOD	EB EE	EXPANSION BOLT EACH END
QTΥ	QUANTITY	EEW EEWS	EMERGENCY EYE WASH EMERGENCY EYE WASH SHOWER
REQ(D) REV	REQUIRE(D) REVISION(S)	EFF EJ	EFFICIENCY EXPANSION JOINT
RM RND	ROOM ROUND	ELAS ELEV	ELASTOMERIC ELEVATOR
S	SOUTH	EMER ENCL	EMERGENCY ENCLOSURE
SCHED SECT	SCHEDULE SECTION	ENTR ERF	ENTRANCE EPOXY RESIN FLOORING
SHT SIM	SHEET SIMILAR	EUI EW	ENERGY USE INTENSITY EACH WAY
SPEC STD	SPECIFICATION(S) STANDARD	EWC EXP	ELECTRIC WATER COOLER EXPANSION
STL STOR	STEEL STORAGE	EXP	EXPOSED
STRUCT SYM	STRUCTURAL SYMETRICAL	F F.O.	FABRIC FACE OF
TEMP	TEMPORARY	FAB FB	FABRICATE(D) FACE BRICK
TYP	TYPICAL	FD FDN	FLOOR DRAIN FOUNDATION
UNEX UNFIN	UNEXCAVATED UNFINISHED	FE FEC	FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET
UNO	UNLESS NOTED OTHERWISE	FF FH	FINISH FLOOR FIRE HYDRANT
VERT VEST	VERTICAL VESTIBULE	FHC FIG	FIRE HOSE CABINET FIGURE
VIF	VERIFY IN FIELD	FIX FLASH	FIXTURE FLASHING
W W/	WEST WITH	FLASH FLEX FLG	FLASHING FLEXIBLE FLOORING
W/O	WITHOUT	FLM FLUOR	FULL LENGTH MIRROR FLUORESCENT
		FO FOC	FINISH OPENING FACE OF CONCRETE
		FOF FOM	FACE OF CONCRETE FACE OF FINISH FACE OF MASONRY
		FOM FOS FOW	FACE OF MASONRY FACE OF STUD FACE OF WALL
		FOW FP FR	FACE OF WALL FIREPROOFING FIRE RESISTANT
		FRP	FIBERGLASS REINFORCED PANEL
		FRT FS FSS	FIRE RESISTANCE TREATED FLOOR SINK FOLDING SHOWER SEAT
		FSS FTG EVC	FOLDING SHOWER SEAT FOOTING FIRE VALVE CABINET
		FVC FWC	FIRE VALVE CABINET FABRIC WALL COVERING
		G	GROUT
		GA GAL GAL V	GAUGE GALLON GALVANIZED
		GALV GB GD	GALVANIZED GRAB BAR GARBAGE DISPOSAL
		GD GEN	GARBAGE DISPOSAL GENERAL CROSS EL COR AREA
		GFA	GROSS FLOOR AREA

EVIATIONS

С

SOAP DISPENSER SECRETARY SQUARE FEET SPANDREL GLASS

SECURITY HOLLOW METAL

SANITARY NAPKIN DISPOSAL

SANITARY NAPKIN VENDOR

SOUND PRESSURE LEVEL

STORM SHELTER AREA

STAINLESS STEEL SHELF

SOUND TRANSMISSION CLASS

SINGLE SHOWER

SEALANT

SQUARE

STONE

STAIR

STAGGERED

STRINGER

SUBFLOOR

SURFACE

TREAD

TOP OF

TANGENT

TOWEL BAR

TACK BOARD

TERRAZZO

SUSPENDED

SHEET VINYL FLOORING

TONGUE AND GROOVE

TINTED FLOAT GLASS

TENANT IMPROVEMENT

TINTED INSULATING GLASS

TOILET TISSUE DISPENSER TINTED TEMPERED FLOAT GLASS TINTED TEMPERED INSULATING GLASS

UNDERWRITERS LABORATORIES

VOLITILE ORGANIC COMPOUND

WATER CLOSET/LAVATORY COMBINATION

TEMPERED GLASS

TILT MIRROR UNIT

THRESHOLD

THICK(NESS)

TOILET TOP OF PAVING TRANSVERSE TERRAZZO TILE

TACK WALL

URINAL UTILITY SHELF

UTILITY

VAPOR BARRIER

VENTED COVE BASE

VENEER PLASTER VINYL TILE

WATER CLOSET

WALL COVERING

WOOD FLOORING

POLISHED WIRE GLASS WROUGHT IRON WALK OFF MAT WASTE RECEPTACLE

WELDED WIRE FABRIC

WEATHER RESISTANT BARRIER

VINYL WALL COVERING

VINYL BASE

VINYL FLOOR

VOLUME

WIDE WALL BASE

WOOD

WINDOW

WARM WHITE

YARD

TOILET COMPARTMENT PARTITION

SOLID SURFACE

STAINLESS STEEL

SHEET METAL

10112		
GL	GLUE LAMINATED	SD
GL GMP GR	GLASS GUARANTEED MAXIMUM PRICE GUARD RAIL	SECY SF SG
GR GRS	GRADE GRADE GALVANIZED RIGID STEEL	SGL SH
GWB GYP	GYPSUM WALL BOARD GYPSUM	SHM SLNT
HC HD	HOLLOW CORE HAND DRYER	SM SND SNV
HDF HDR	HAND DRYER HIGH DENSITY FIBERBOARD HEADER	SPL SQ
HDWD HDWR	HARDWOOD HARDWARE	SS SSA
HM HR	HOLLOW METAL HOUR	SSS SST ST
HR HS HSS	HANDRAIL HARDWARE SET HOLLOW STRUCTURAL SHAPE	ST STAG'D
HVAC	HEATING VENTILATING AND AIR CONDITIONING	STC STGR
IAW ID	IN ACCORDANCE WITH INSIDE DIAMETER	SUBFL SURF SUSP
IF IIP IJ	INSIDE FACE INSULATED INFILL PANEL GLASS ISOLATION JOINT	SVF
IJS INC	IN JOIST SPACE INCLUDE(ING)	T T&G
INSUL	INSULATION	T.O. TAN
JAN JBE JCT	JANITOR JOIST BEARING ELEVATION JUNCTION	TB TBD TCP
JFB JST	JOINT FILLER BOARD JOIST	TERR TFG
JT	JOINT	TG TH
KCJ KD	KEYED CONSTRUCTION JOINT KNOCKDOWN	THK TI
KH KIT	KITCHEN HOOD KITCHEN	tig TMR Toil
L LAB	ANGLE LABORATORY	TOP
LAM LAV	LAMINATED	TT TTD
LBR LDG	LUMBER LOADING	TTG TTIG
LF LG	LINEAR FOOT LENGTH (LONG)	TW UL
lg Lin Lino	LAMINATED GLASS LINEAR LINOLEUM	UR US
LING LKR LOC	LINGLEOM	UTIL
LONG LSC	LONGITUDINAL LIFE SAFETY CODE	VB VB
LTG LV	LIGHTING LOUVER	VCB VF
LVT	LUXURY VINYL TILE	VOC VOL VP
MAG MAINT MAN	MAGNETIC MAINTENANCE MANUAL	VT VWC
MAS MATL	MASONRY MATERIAL	W
MB MBD	MOP BASIN MARKER BOARD	WB WC
MBH MC	MOP/BROOM HOLDER MEDICINE CABINET	WC WCL WD
MEMB MH MR/S	MEMBRANE MANHOLE MIRROR WITH SHELF	WDF WDW
MTD MTG	MOUNTED MOUNTING	WG WI
MUL	MULLION	WOM WR
NC NFPA	NOISE CRITERIA NATIONAL FIRE PROTECTION ASSOCIATION	WRB WW
NOM	NOMINAL	WWF YD
O to O OA OFCI	OUT TO OUT OVERALL OWNER FURNISHED CONTRACTOR INSTALLED	
OFF OFOI	OFFICE OWNER FURNISHED OWNER INSTALLED	
OH OPG(S)	OPPOSITE HAND OPENING(S)	
OSHA OTB	OPERATIONAL SAFETY AND HEALTH ADMINISTRATION OPEN TO BELOW	
OVFL P	OVERFLOW	
PAN B PB	PANIC BOLT PARTICLE BOARD	
PC PCD	PRECAST CONCRETE PAPER CUP DISPENSER	
PCT PD	PORCELAIN CERAMIC TILE PANIC DEVICE	
PERF PERP PG	PERFORATED PERPENDICULAR PATTERN GLASS	
PG PIC PIG	PATTERN GLASS PORTABLE INSTRUMENT CONNECTION PATTERN INSULATING GLASS	
PL PL	PLATE PROPERTY LINE	
PL PLAM	PLASTIC LAMINATE PLASTIC LAMINATE	
PLBG PR PREFAB	PLUMBING PAIR PREFABRICATED	
PROJ PS	PROJECT(OR) (ION) PROJECTION SCREEN	
PT PT	POINT POINT OF TANGENCY	
PTD PTD/R	PAPER TOWEL DISPENSER COMBINATION TOWEL DISPENSER/RECEPTACLE	
PTN PVC	PARTITION POLYVINYL CHLORIDE	
PWL	SOUND POWER LEVEL	
QTR RND	QUARTER ROUND	
R RAD	RISER RADIUS	
RB RC BCD	RUBBER BASE REMOTE CONTROL	
RCP RD REF	REFLECTED CEILING PLAN ROOF DRAIN REFERENCE	
REF REFL REM	REFERENCE REFLECTED REMOVABLE	
RESIL	RESILIENT RESILIENT FLOORING	
RF RFM	RUBBER FLOOR RECESSED FLOOR MAT	
RH RI&C	ROBE HOOK ROUGH IN AND CONNECT	
S SAT	SINK SPRAYED ACOUSTIC TREATMENT	
SAW SB	SOUND ABSORBING WALL UNITS SPLASH BLOCK	
SC SC	SOLID CORE SHOWER CURTAIN	
SCD SCH	SEAT COVER DISPENSER SHOWER CURTAIN HOOK	
SCR SCT	SHOWER CURTAIN ROD STRUCTURAL CLAY TILE	

GENERAL SYMBOLS

????	DETAIL NUMBER CROSS REFERENCE SHEET NUMBER
XX A4.XX	BUILDING ELEVATION
XX XX A12.X XX XX	INTERIOR ELEVATION
	SIMILAR OR TYPICAL REFERENCE
? SIM'	WALL SECTION
?	DETAIL REFERENCE
? ???? ????	BUILDING SECTION
X	SHEET NOTE
?	REFERENCE KEYNOTE
?	COLUMN GRID LINE
ROOM NAME	ROOM NUMBER/NAME
x <u>xx-x</u> x	REVISION NUMBER
LEVEL XX XXX'-XX"	LEVEL ELEVATION
TYP FF EL= 100'-0"	FINISH FLOOR ELEVATION
100'-0"	SPOT ELEVATION

	EARTH
	GRAVEL
	SAND
å D	CONCRETE
4 	PRECAST CONCRETE
	STEEL
	STONE
	CONCRETE MASONRY UNIT
	BRICK VENEER
	STEEL (LARGE SCALE)
	GYM FLOOR
	WOOD (CONTINUOUS BLOCKING)
	WOOD (NON-CONTINUOUS BLOCKING)
	WOOD (TRIM/FINISH)
	GLASS
 	SHINGLES
	PLYWOOD (LARGE SCALE)
	GYPSUM WALL BOARD
	BLANKET INSULATION
	RIGID INSULATION
	SPRAY FOAM INSULATION
	MINERAL WOOL INSULATION
	PROTECTION BOARD
	CARPET (LARGE SCALE)
	ACOUSTIC TILE (LARGE SCALE)
	TILE (LARGE SCALE)

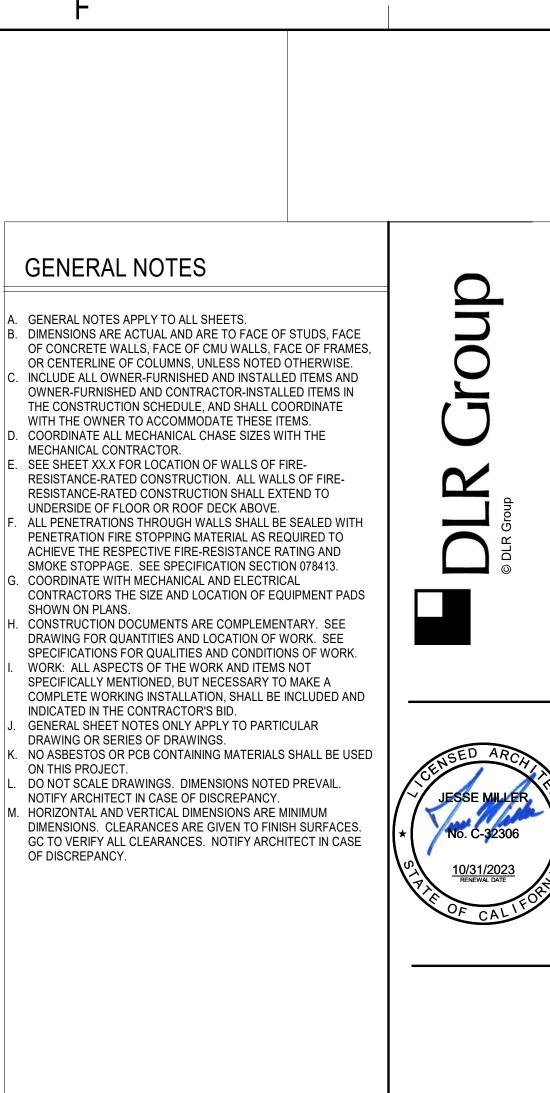
SITE SYMBOLS

	PROPERTY LINE		A
	LOT LINE		C
	EASMENT LINE		N
	BUILDING LINE, EXISTING	•	Н
 X	BUILDING LINE, NEW W/DOOR		F
$\overline{\Delta}$	OPENING AND STRUCTURAL STOOP	CO	г С
	PRIMARY CONTOUR, EXISTING	-	-
100	PRIMARY CONTOUR, NEW		C
99	SECONDARY CONTOUR, EXISTING		Т
99	SECONDARY CONTOUR, NEW	PIV	V
1% SLOPE DOWN	SLOPE, PAVEMENT		P
	DRAINAGE DITCH OR SWALE		R
	STREET CENTERLINE	▼ FH	F
	CURB, THICKENED EDGE	×	P
	CURB, EXISTING	●	L -
	CURB, NEW		T
	PAVING CONTRACTION JOINT		Т
KCJ	PAVING KEYED CONSTRUCTION JOINT	•	S
KCT	PAVING TIED CONSTRUCTION JOINT	•	S
EJ	PAVING EXPANSION JOINT	0	S
<u>-xx xx xx xx</u>	FENCE, SECURITY	• 00	S
<u>x x x x</u>	FENCE, BARBED WIRE	⊗ ^{QC} ∞ ^{X"}	C
-000	FENCE, CHAIN LINK		T
	FENCE, WOOD	\bigcirc^{\wedge}	Т
	SEED LIMIT	£ . }	S
	SOD LIMIT	2 mm	
	FOUNDATION DRAIN, NON-PERFORATED	Level and	С
- — — FD — — — —	FOUNDATION DRAIN, PERFORATED	\mathbf{X}	D
— — — PSD — — —	SUBDRAIN, PERFORATED	///\ /~\	~
S	SANITARY SEWER	1_1	S
FM	FORCE MAIN	<u> </u>	С
W	WATER		
F	FIRE		
G	GAS		
HPS	HIGH PRESSURE STEAM		
MPS	MEDIUM PRESSURE STEAM		
LPS	LOW PRESSURE STEAM		
UGE/UGT	UNDERGROUND ELEC/TELEPHONE		
— - — OHP— - —	OVERHEAD POWER		
—— НОТ ———	LAWN SPRINKLER HOT LINE		
LAT	LAWN SPRINKLER LATERAL		

ARCHITECTURAL SYMBOLS

XX/A11.X XX/X/A11.X XX	CASEWORK ELEVATION
Α110 Π	DOOR NUMBER
A124	INTERIOR WINDOW NUMBER
~?	EXTERIOR WINDOW / CURTAIN WALL NUMBER
(XX. X. XX)	WALL TYPE
APC-1 CEILING TYPE 9' - 0" CEILING HEIGHT	CEILING TYPE

	AREA INLET
0	CURB INLET
•	MANHOLE
(HEAD WALL
	FLARED END
• ^{CO}	CLEAN OUT
]	CAP
	THRUST BLOCK
M	VALVE
PIV	POST INDICATOR VALVE
\supset	REDUCER
FH	FIRE HYDRANT
•	POWER POLE
-•	LIGHT POLE
	TELEPHONE MANHOLE
۵	TELEPHONE BOX
	SPRINKLER HEAD, 360°
	SPRINKLER HEAD, 270°
	SPRINKLER HEAD, 180°
	SPRINKLER HEAD, 90°
QC	QUICK COUPLING
Э ^{Х"}	TREE, EXISTING DECIDUOUS
ð ^x '	TREE, EXISTING CONIFER
N. N	SHADE TREE
E WWW S	ORNAMENTAL TREE
	DECIDUOUS TREE
$\langle $	SHRUB
27	CLIPPED SHRUB



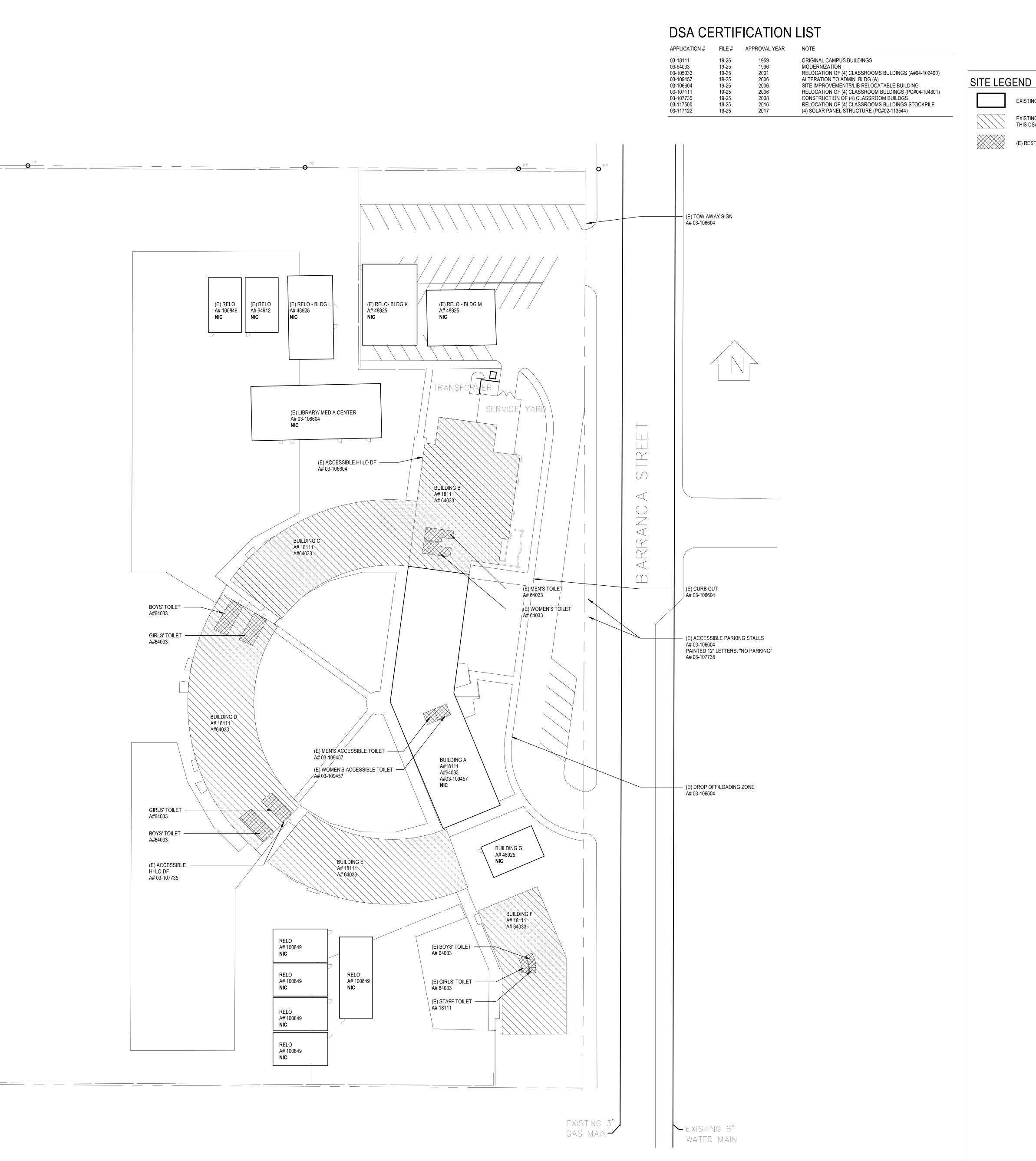


100% CONSTRUCTION DOCUMENTS 11/04/2022 REVISIONS

75-22605-00 DSA A#03-122232 DSA File #: 19-25 GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

G1.1

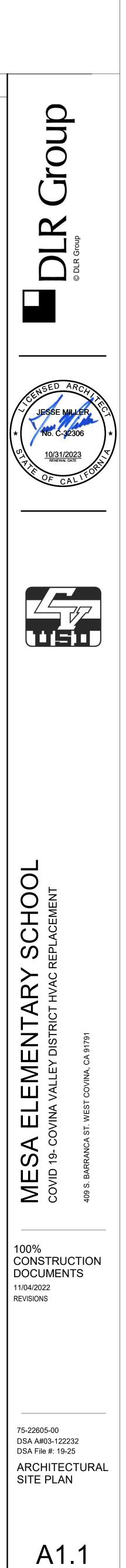
	A	В
1		
		O ^{pp}
2		
3		
4		
Autodesk Docs://75-22605-00 CVUSD - District Wide HVAC Replacement/75-22605-00_CVUSD_Mesa ES_AR_2020.rvt 11/2/2022 10:39:36 AM C1		
Autodesk Docs://75-22605-00 C 11/2/2022 10:39:36 AM		ARCHITECTURAL SITE PLAN SCALE: 1" = 30'-0"



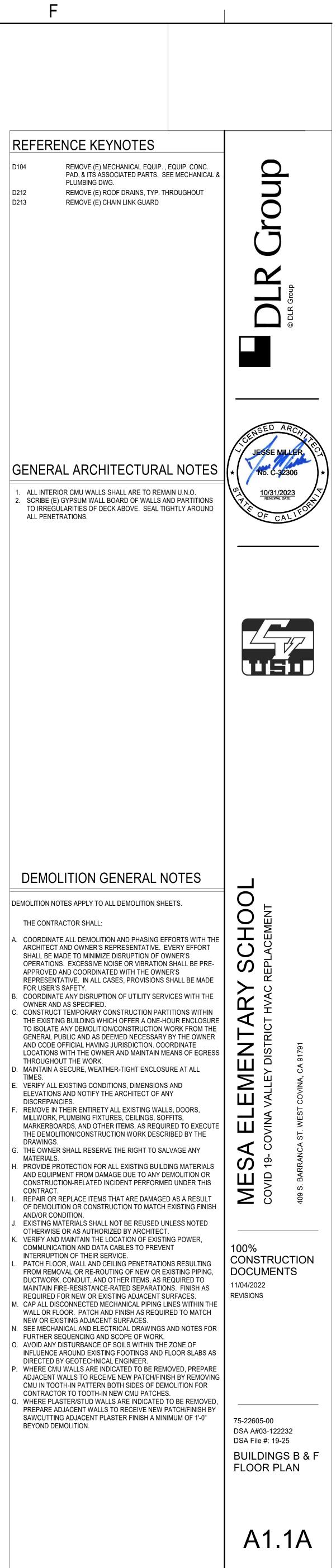
EXISTING BUILDING NOT IN SCOPE

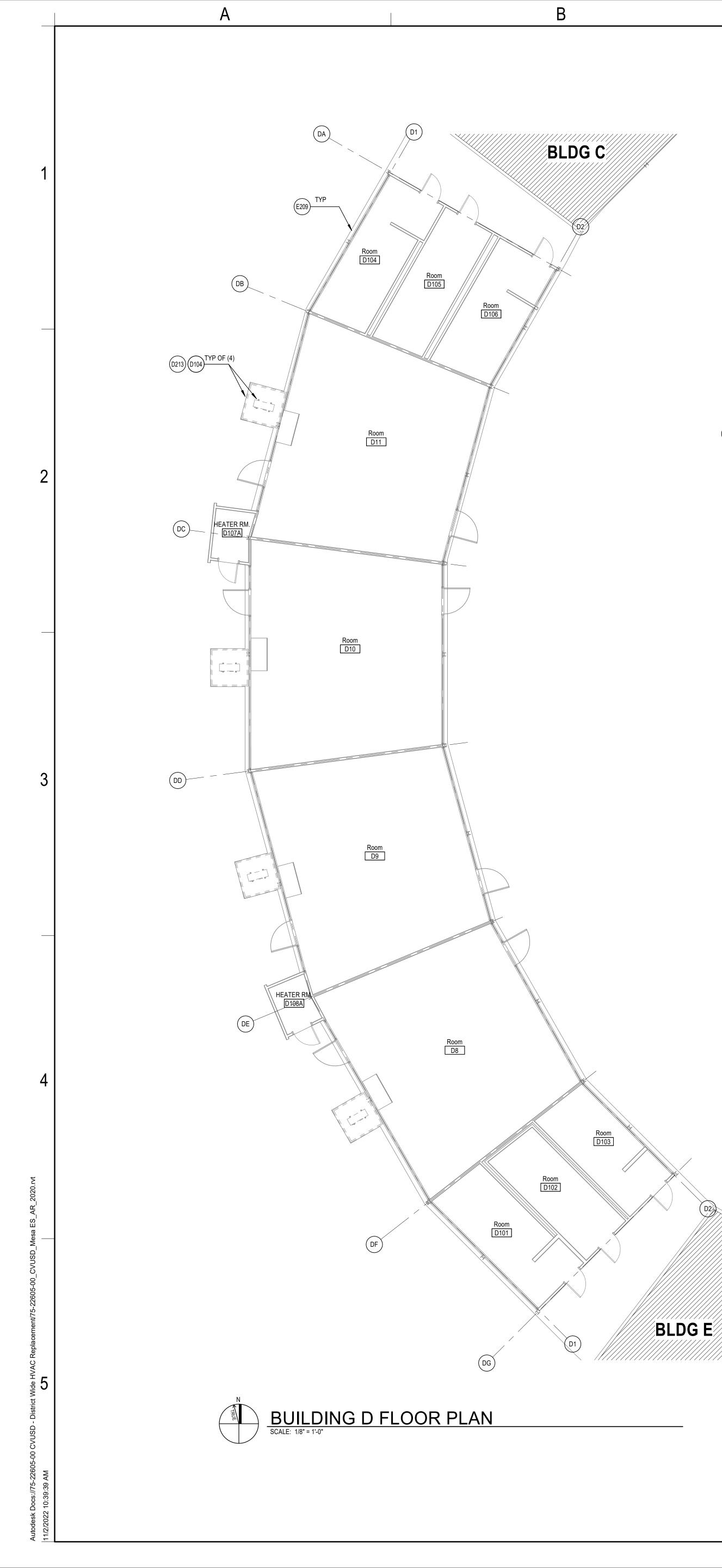
EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION

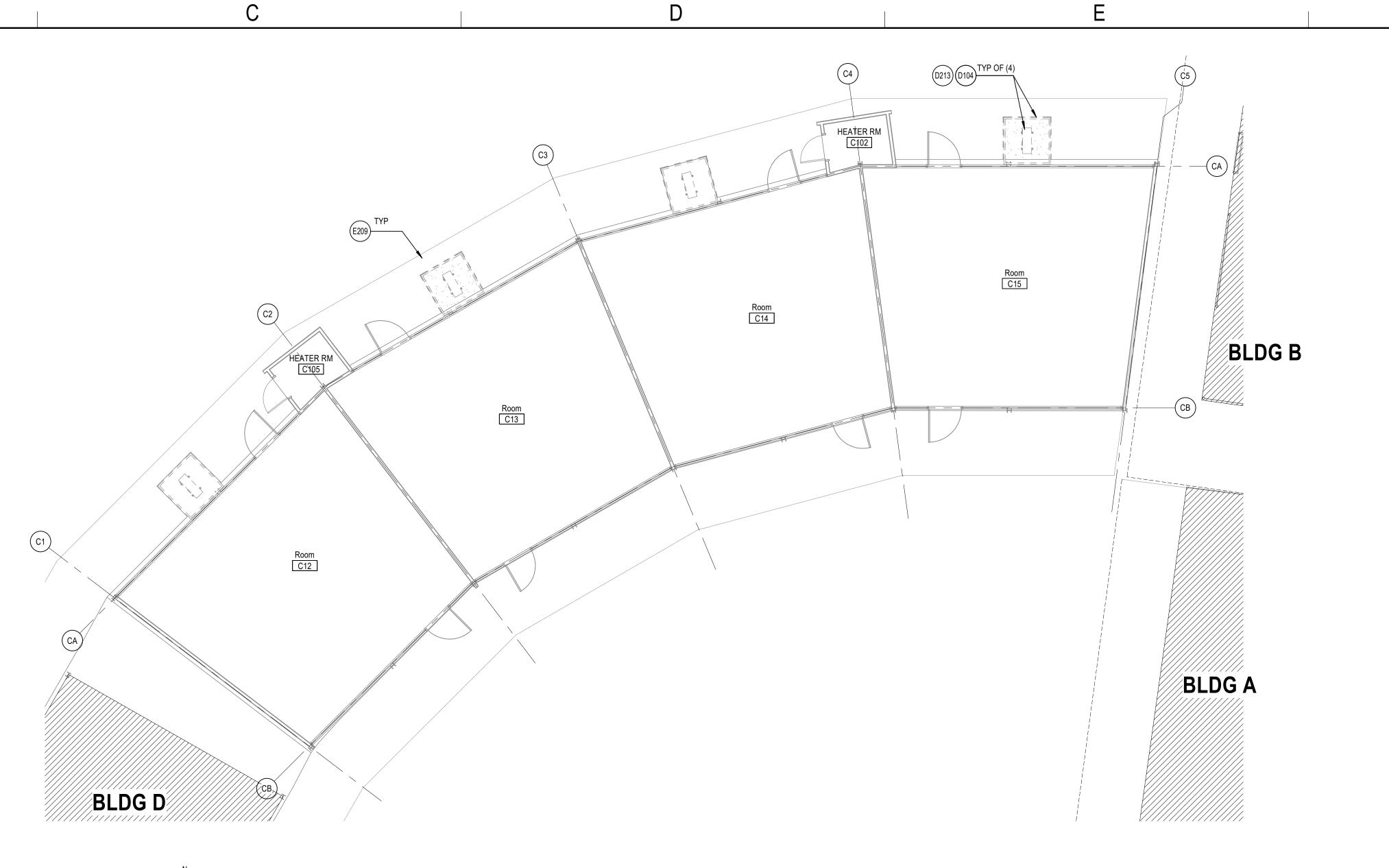
(E) RESTROOMS - NOT IN SCOPE



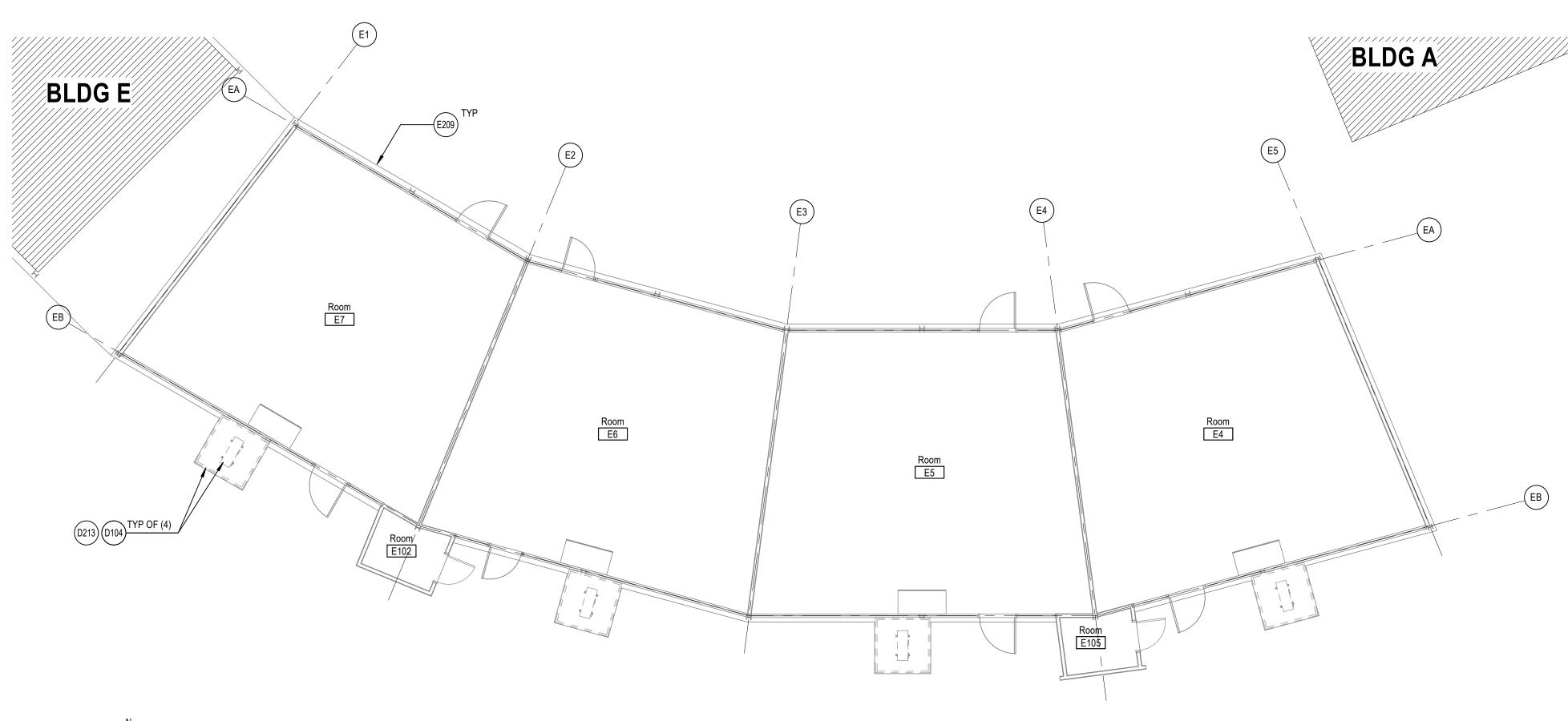




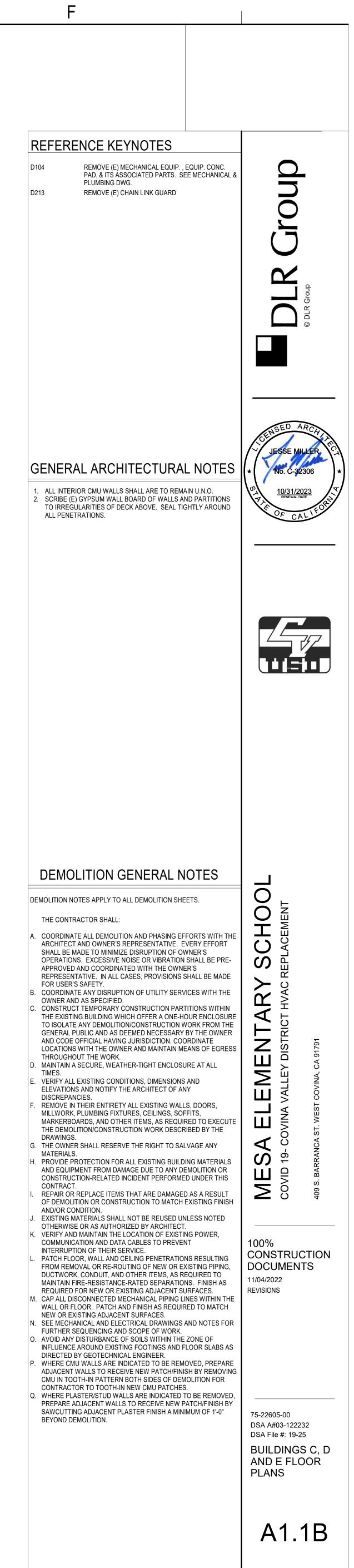


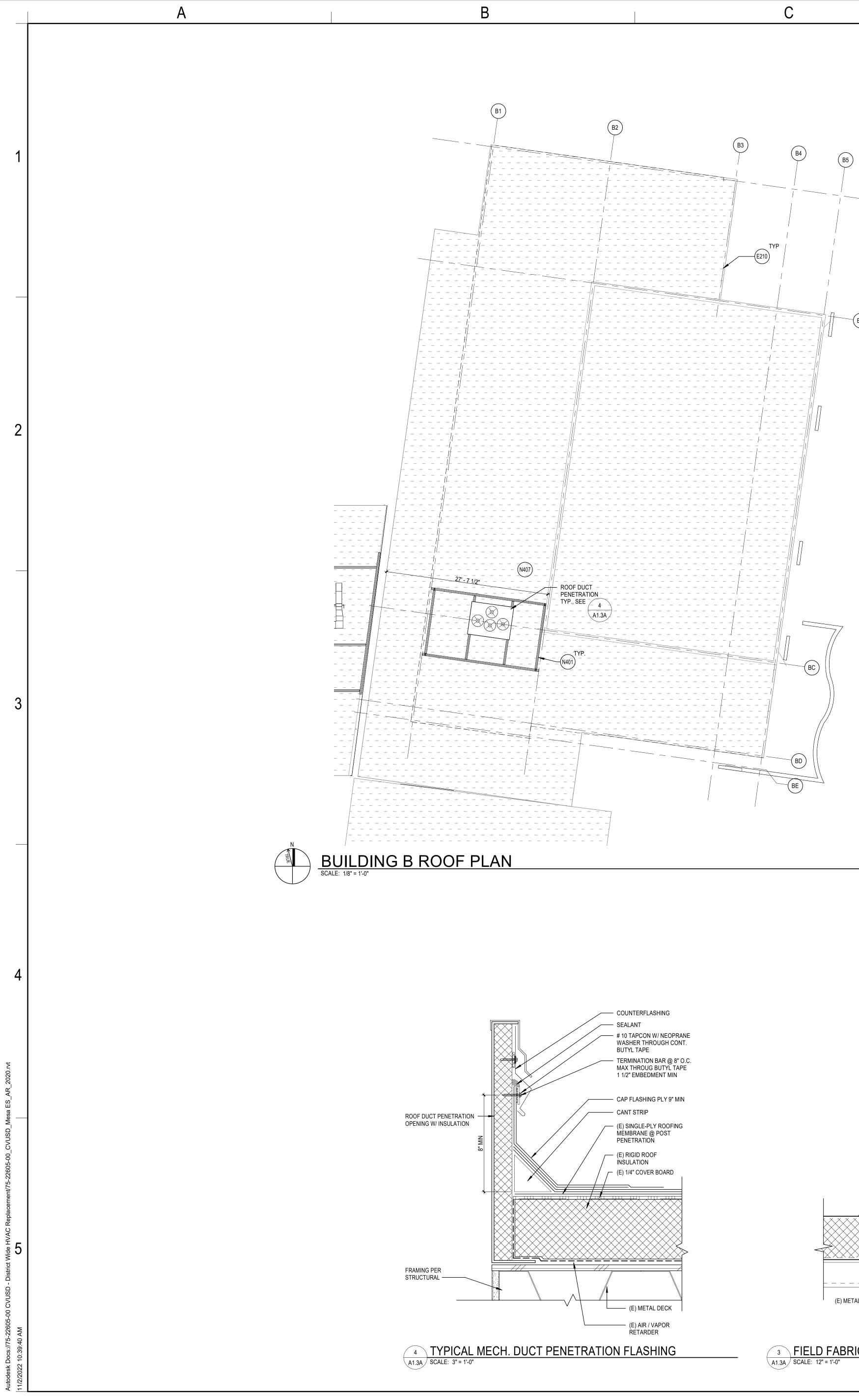




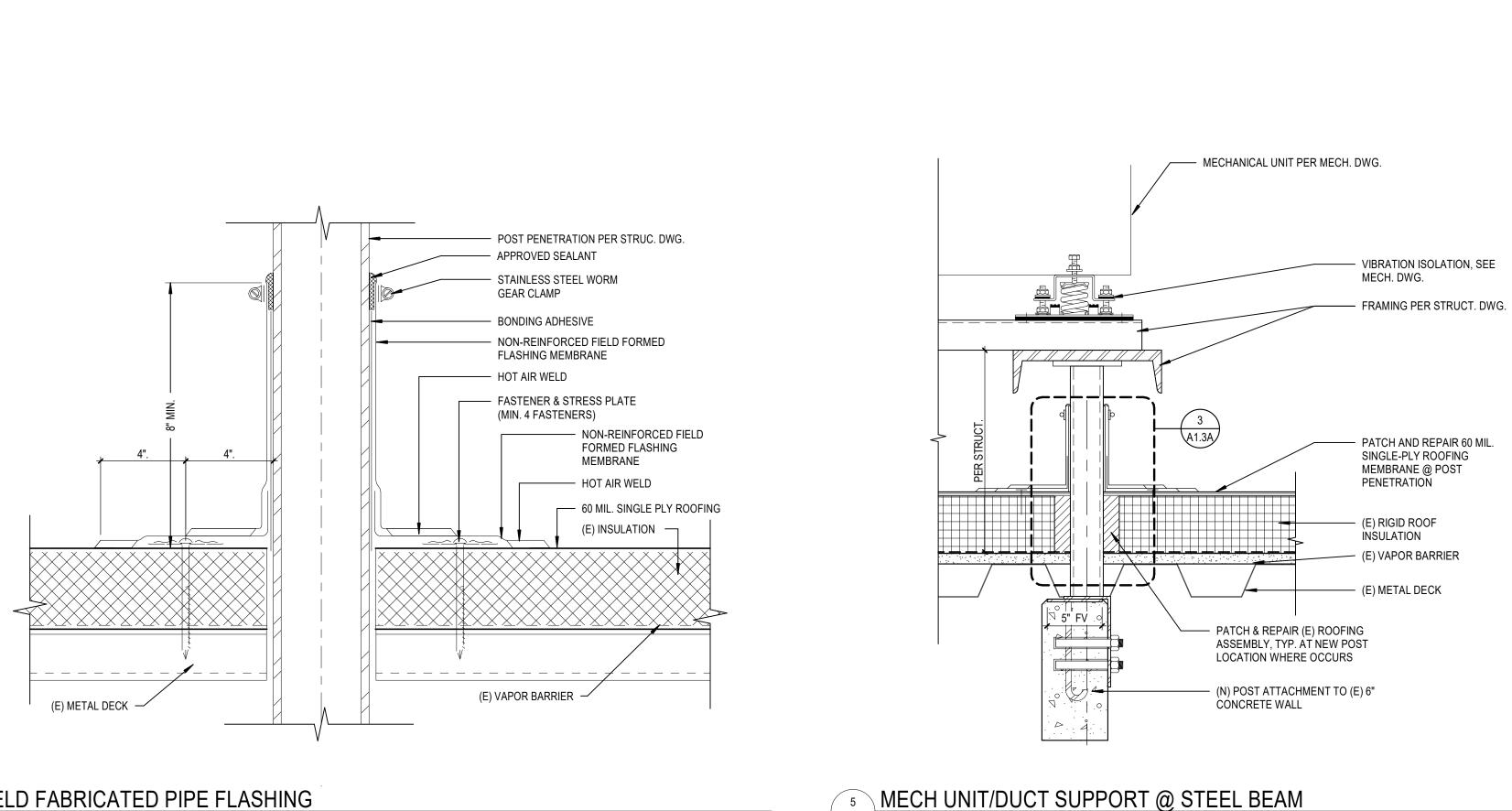


BUILDING E FLOOR PLAN SCALE: 1/8" = 1'-0"

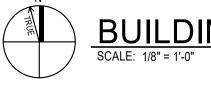






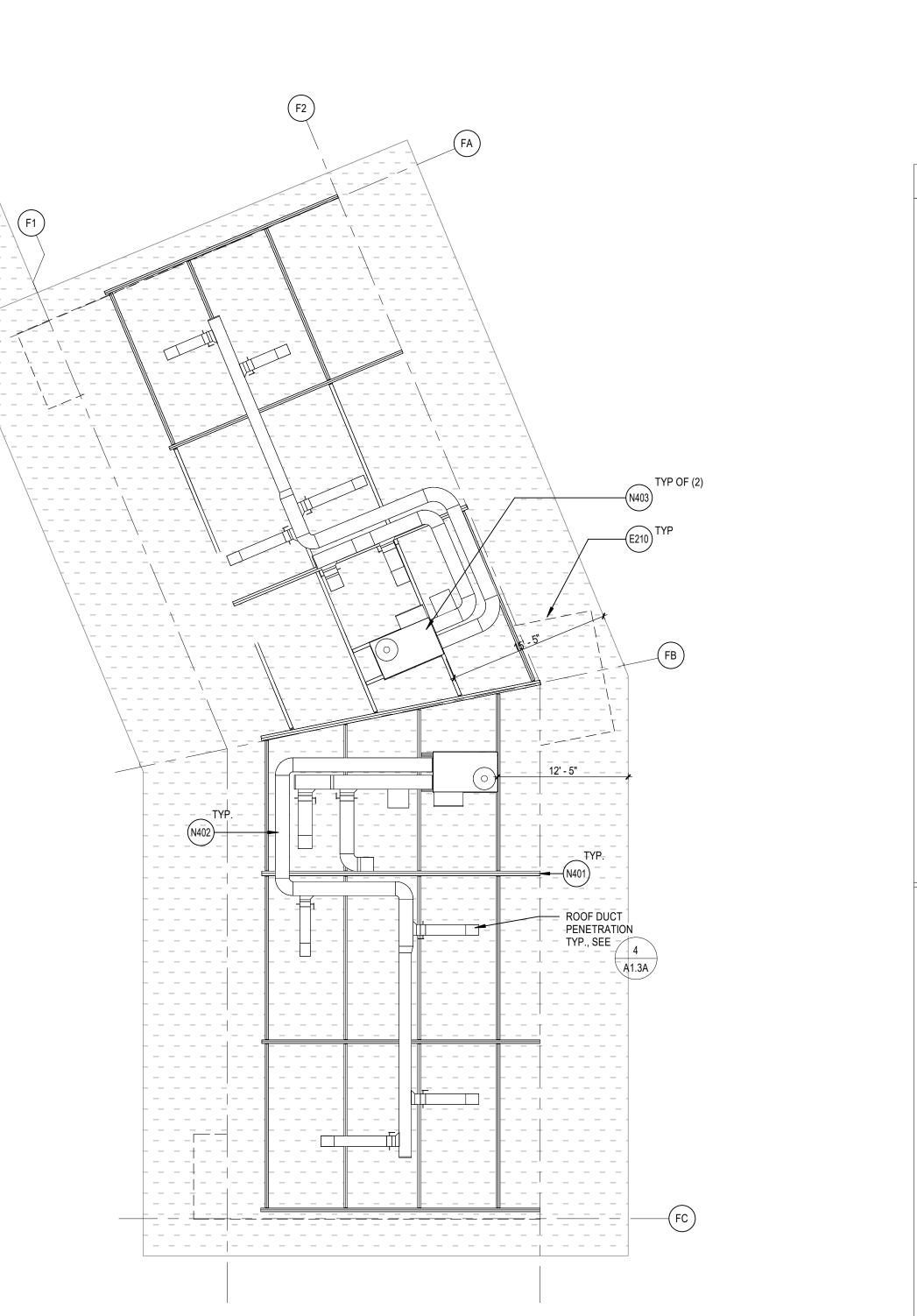


A1.3A SCALE: 1 1/2" = 1'-0"



-(ba)

_ _ _



BUILDING F ROOF PLAN SCALE: 1/8" = 1'-0"

A. COORDINATE THE SIZE AND LOCATION OF ROOF DUCT PENETRATIONS FOR MECHANICAL AND ELECTRICAL THIS DRAWING. AND STRUCTURAL DRAWINGS.

E210

N401

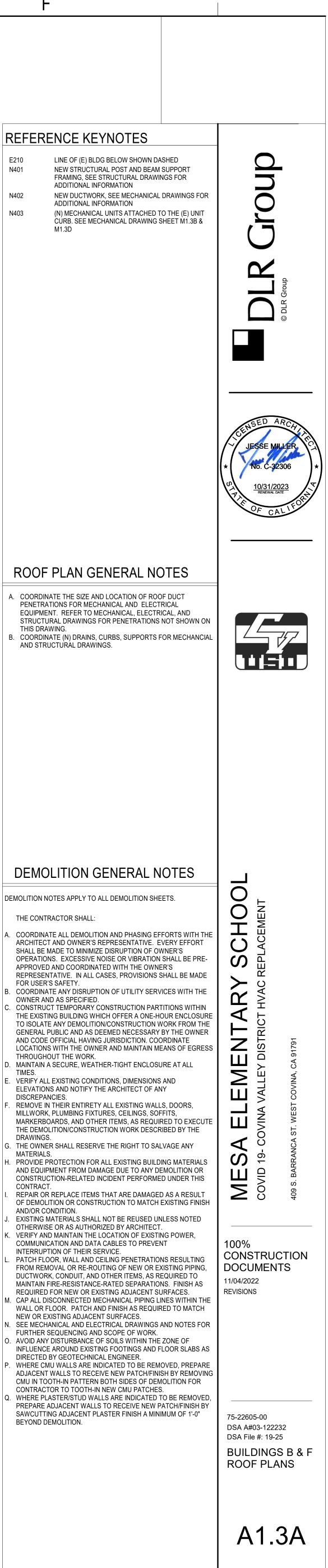
N402

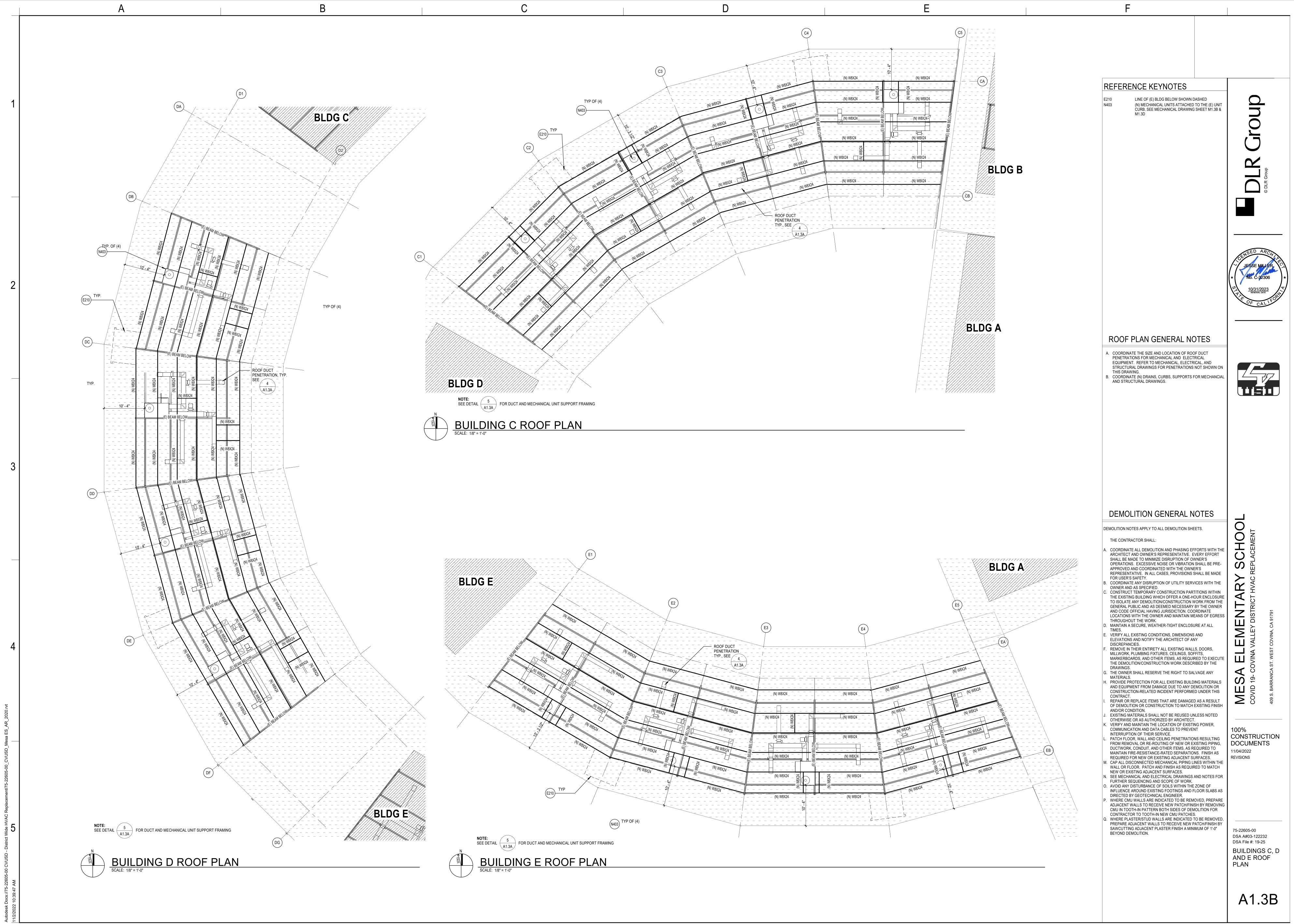
N403

M1.3D

DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.

- THE CONTRACTOR SHALL: SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S APPROVED AND COORDINATED WITH THE OWNER'S FOR USER'S SAFETY. OWNER AND AS SPECIFIED. THROUGHOUT THE WORK. TIMES. E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. MILLWORK, PLUMBING FIXTURES, CEILINGS, SOFFITS, DRAWINGS. MATERIALS.
- CONTRACT. AND/OR CONDITION. OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
- COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
- NEW OR EXISTING ADJACENT SURFACES.
- DIRECTED BY GEOTECHNICAL ENGINEER.
- BEYOND DEMOLITION.



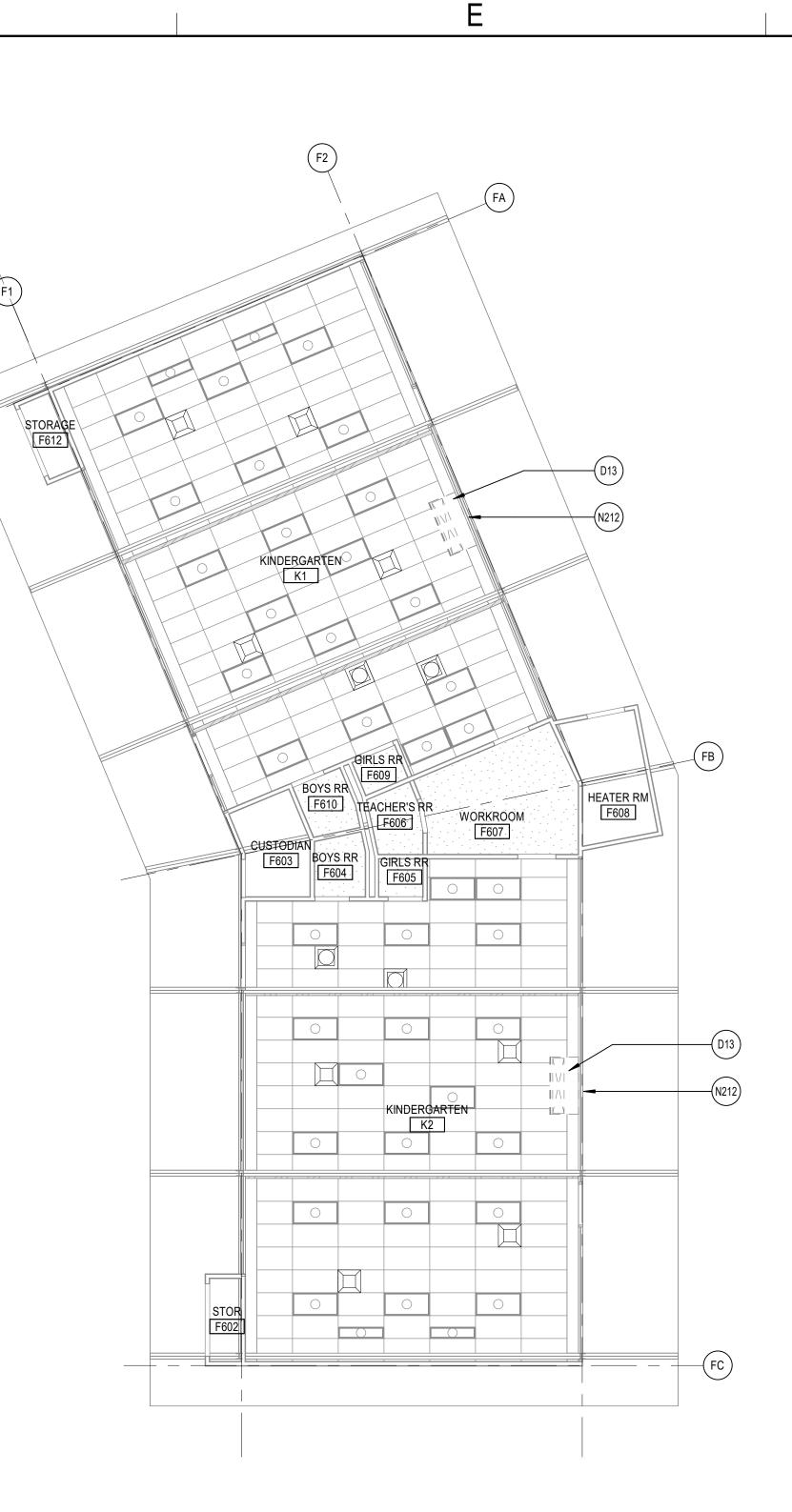




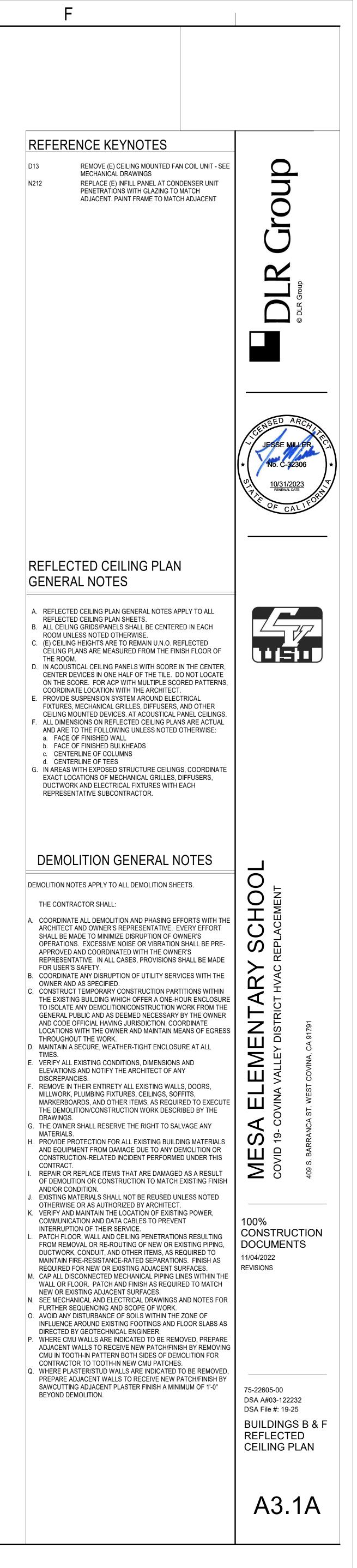


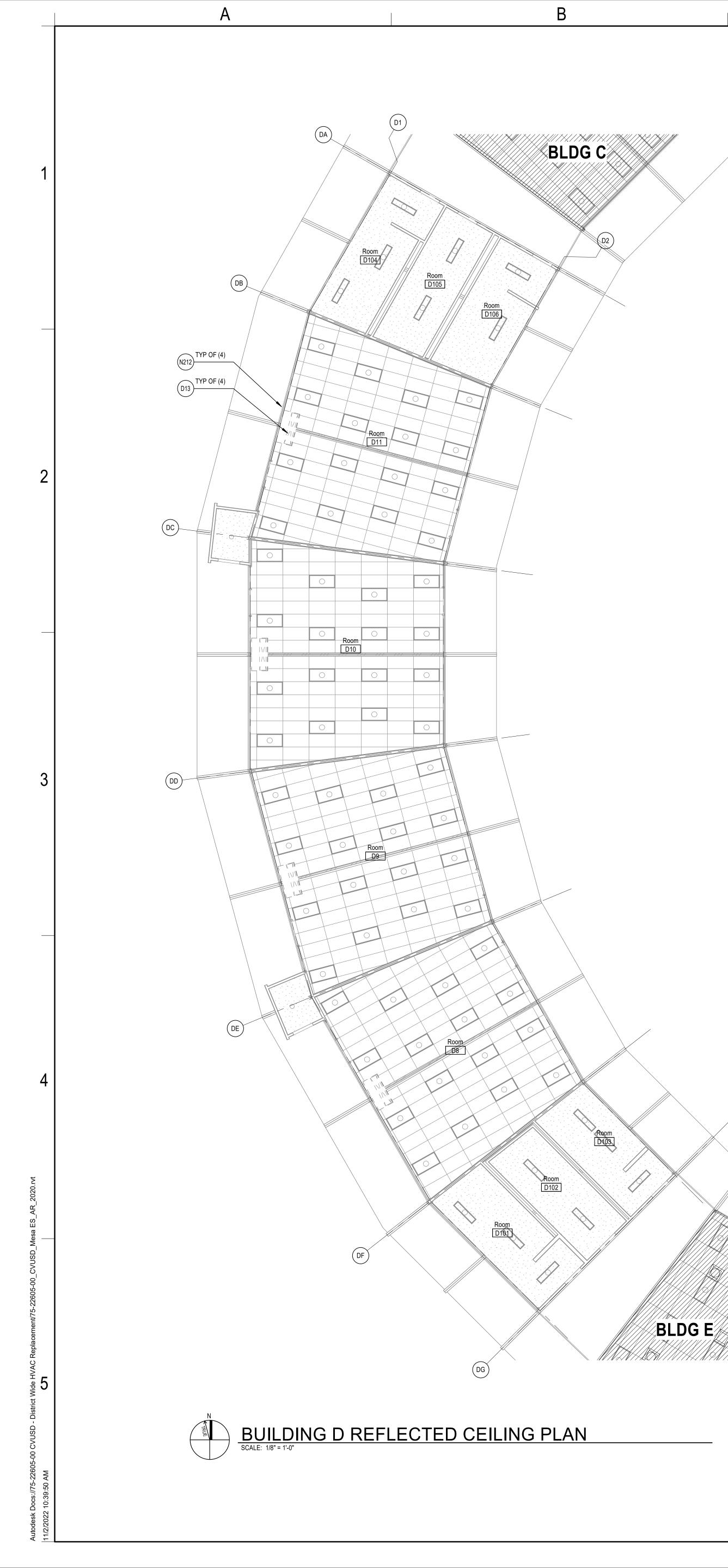


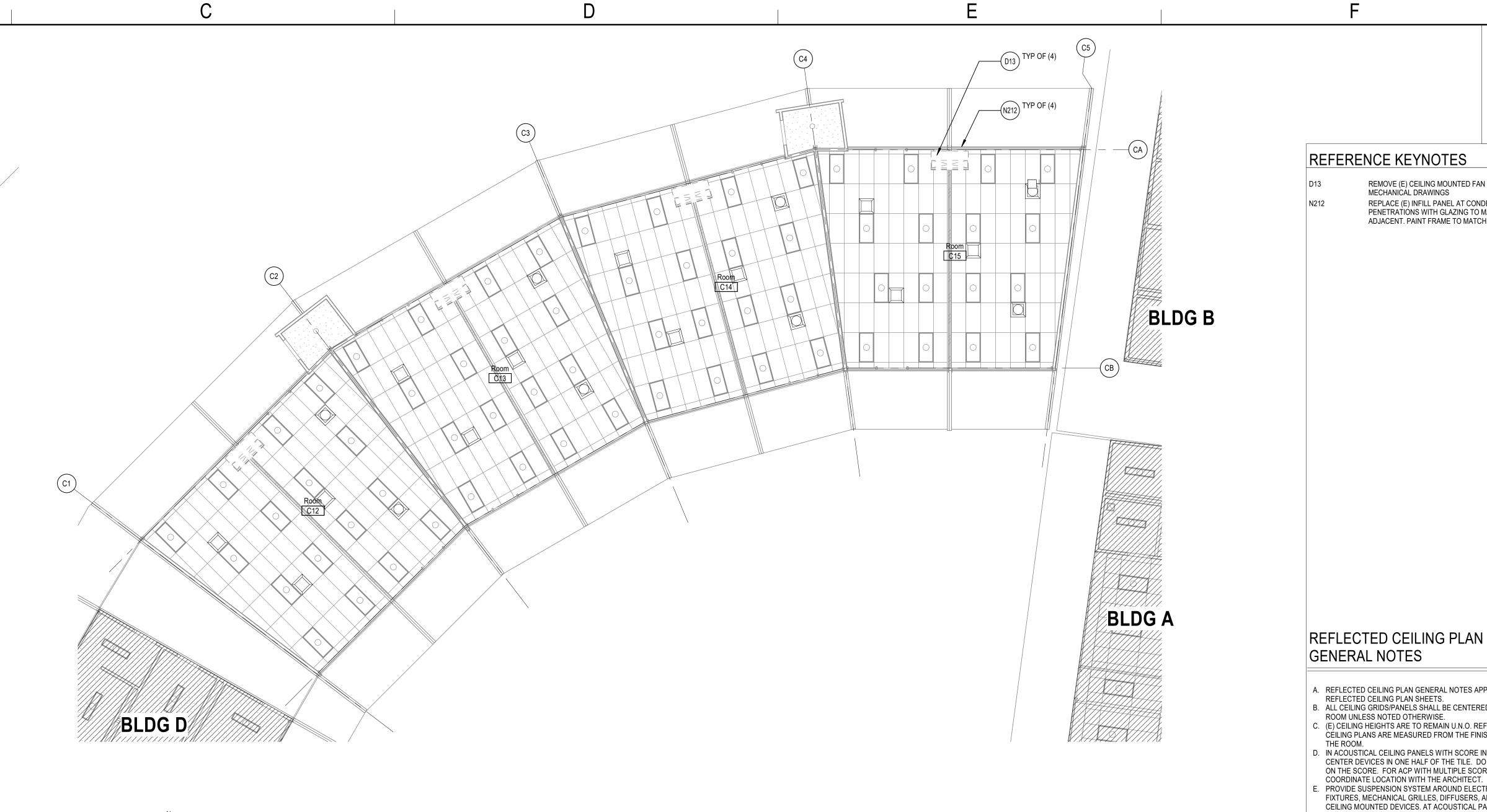
D



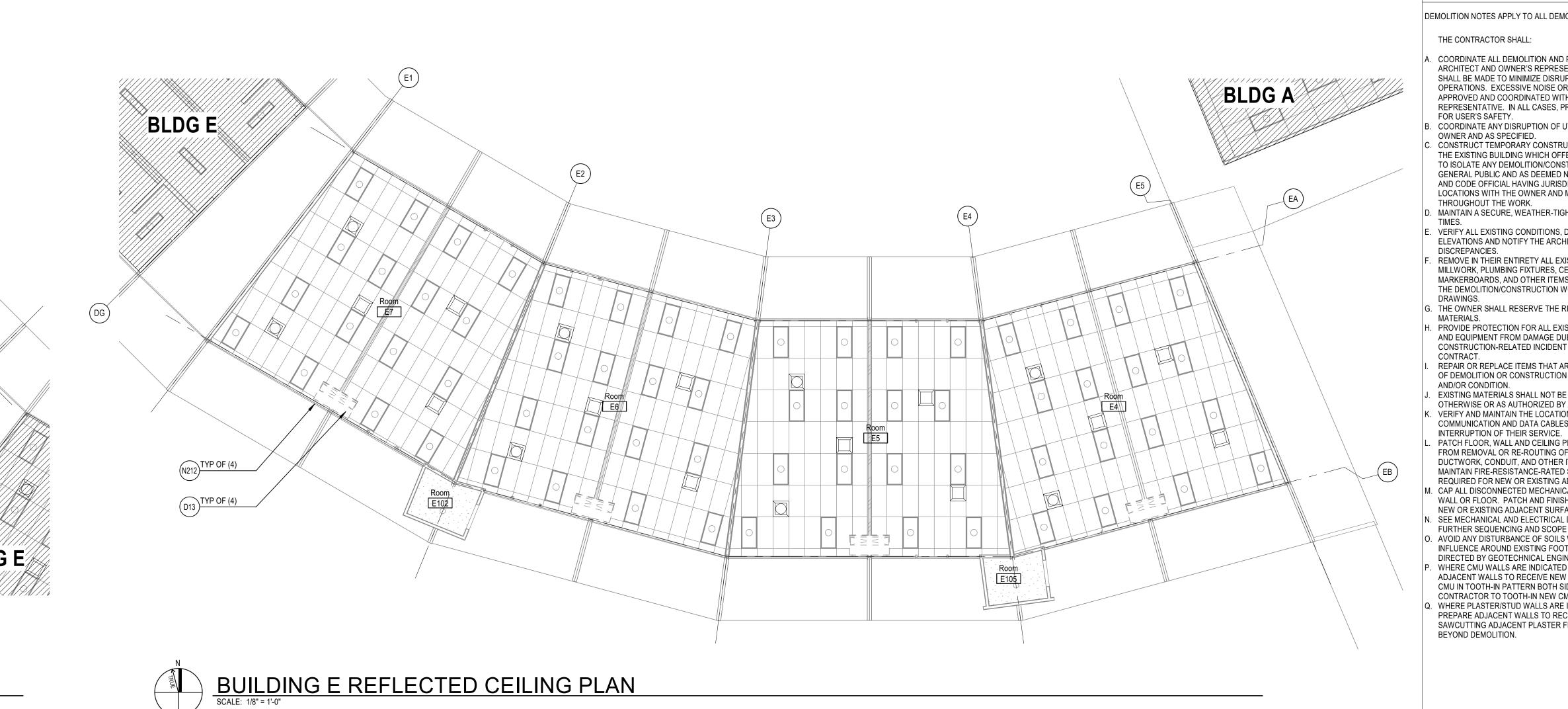
BUILDING F REFLECTED CEILING PLAN

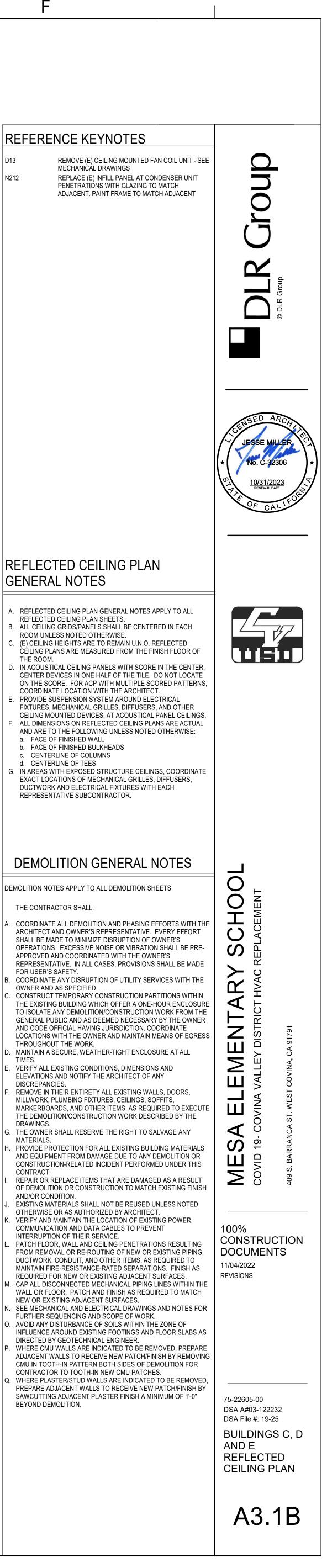












		A	В
	GENERAL		POST-INSTALLED ANCHORS
	 THE DRAWINGS REPRESENT THE FINISHED STRUCTURE, NOT THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK AND CONNECTIONS HAVE BEEN COMPLETED. THE RESEARCH, DESIGN, SAFETY, ADEQUACY, AND INSPECTION OF ERECTION BRACING, SHORING, GUYING, TEMPORARY SUPPORTS, ETC, IS THE RESPONSIBILITY OF 		 UNO, THE FOLLOWING APPLIES TO ALL POST-INSTALLED ANCHORAGE INTO HARDENED CONCRE OR MASONRY WHICH INCLUDES TYPES SUCH AS EXPANSION, WEDGE, SLEEVE, ADHESIVE / EPO> SHOT-PIN, SCREW AND UNDERCUT. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED.
	THE CONTRACTOR.		3. CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER OF RECORD PRIOR TO USING POST-
	 THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS AND METHODS, SEQUENCES OF CONSTRUCTION, OR CONSTRUCTION TECHNIQUES USED TO PERFORM THE WORK. OBSERVATION VISITS TO THE SITE WILL NOT INVOLVE REVIEW OF THESE ITEMS. 		INSTALLED ANCHORS FOR MISSING, DAMAGED OR MISPLACED CAST-IN-PLACE ANCHORS.4. CARE SHALL BE GIVEN TO AVOID CONFLICTS WITH EXISTING REBAR WHEN DRILLING HOLES. HOL
	TO SAFETY PRECAUTIONS AND PROGRAMS. OBS		 SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS. MAINTAIN A MINIMUM OF 2 INCHES FROM EXISTING REINFORCEMENT, CONDUIT, POST-TENSIONIN (WHERE OCCURS), ETC. USE NON-DESTRUCTIVE TESTING TO LOCATE PRIOR TO DRILLING, CORII OR SHOOTING PINS INTO THE EXISTING CONCRETE OR MASONRY. FOR INSTALLATION DEEPER T
1	REVIEW OF THESE ITEMS.4. CONTRACTOR IS TO ESTABLISH AND VERIFY OPE BY OTHER TRADES PRIOR TO SUBMITTAL OF SHO		 3 INCHES USE GROUND PENETRATING RADAR OR X-RAY METHODS. 6. ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE ICC-ES REPORTS, INCLUDING, BUT
	 CONSTRUCTION MATERIAL AND EQUIPMENT LOADS PLACED ON THE STRUCTURE DURING THE CONSTRUCTION PROCESS SHALL NOT EXCEED THE DESIGN LIVE LOAD OF THE STRUCTURE NOTED IN THESE DRAWINGS. THE ENGINEER SHALL NOT BE RESPONSIBLE TO INVESTIGATE, NOR APPROVE, THE STRUCTURE FOR CONSTRUCTION MATERIAL OR EQUIPMENT LOADING. ERECTION OR CONSTRUCTION LOADS ARE NOT TO BE APPLIED UNTIL PROPER STRUCTURAL FRAMING CONNECTIONS ARE MADE, AND ALL TEMPORARY BRACING IS IN PLACE. THE CONTRACTOR SHALL DESIGN AND PROVIDE TEMPORARY BRACING OF THE STRUCTURE WHERE NECESSARY FOR CONSTRUCTION LOADS. 		 NOT LIMITED TO, ALL ANCHOR SPACINGS, EMBEDMENTS AND EDGE DISTANCES. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAY THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE AND INSTALLATION TEMPERATURES.
		RUCTION METHODS UNLESS NOTED OTHERWISE. S WHERE THEY OCCUR, AND THEY MAY NOT BE CUT WN, CONSTRUCTION SHALL CONFORM TO SIMILAR	8. EMBEDMENT REFERS TO THE FINAL INSTALLED EFFECTIVE DEPTH "Hef". ALL ANCHORS SHALL HA EMBEDMENT NOTED OR EMBEDMENT AS RECOMMENDED BY MANUFACTURER WHERE NO EMBEDMENT IS SHOWN. REQUIRED ANCHOR HOLE DEPTH FOR INSTALLATION MAY BE DEEPER.
	7. DO NOT SCALE DRAWINGS. CONTRACTOR IS TO	VERIFY ALL DIMENSIONS RELATIVE TO	9. IF THE FULL ANCHOR EMBEDMENT DEPTH, SPACING OR EDGE DISTANCE CANNOT BE ACHIEVED, NOTIFY THE ENGINEER.
	MUST BE REPORTED TO THE ENGINEER PRIOR T		10. ALL PERSONNEL INSTALLING POST-INSTALLED ANCHORS SHALL BE TRAINED BY THE MANUFACTURER ON PROPER INSTALLATION TECHNIQUE. TRAINING DOCUMENTATION FROM THE MANUFACTURER SHALL BE AVAILABLE UPON REQUEST.
	 WHERE DISCREPANCIES OCCUR BETWEEN GENERAL NOTES, PLANS, DETAILS, AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN, UNLESS APPROVED OTHERWISE BY THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND SPECIFICATIONS. THE CONTRACTOR SHALL ESTABLISH AND VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO SLEEVES, CHASES, HANGERS, INSERT ANCHORS, HOLES, AND OTHER ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK. DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, SLABS, STEEL DECKS, ETC) WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER. 		11. INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH AC AND IN ACCORDANCE WITH ACI 318. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED
			 THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION. 12. EXPANSION BOLTS IN CONCRETE SHALL BE ONE OF THE FOLLOWING: a. HILTI KWIK BOLT TZ2 CONCRETE ANCHORS (ICC ESR-4266) b. DEWALT POWER-STUD+SD1 (ICC ESR-2818), POWER STUD +SD2 (ICC ESR-2502) c. SIMPSON STRONG-TIE STRONG-BOLT 2 WEDGE ANCHORS (ICC ESR-3037)
	10. IF THE ENGINEER'S SEAL AND SIGNATURE IS NOT AFFIXED TO THESE DRAWINGS, THESE DRAWINGS ARE INTENDED FOR PRELIMINARY PURPOSES ONLY AND SHALL NOT BE USED FOR CONSTRUCTION.		 13. SCREW ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING: a. HILTI HUS-EZ SCREW ANCHOR (ICC ESR-3027)
2	11. STRUCTURAL JOINT DIMENSIONS SHOWN ON PLANS AND DETAILS (EXPANSION, SEISMIC, SEPARATION, ETC) INDICATE THE MINIMUM CLEAR DISTANCE REQUIRED. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS AND INFORMATION.		 b. DEWALT SCREW BOLT+, SCREW ANCHOR (ICC ESR-3889) c. SIMPSON STRONG-TIE TITEN HD SCREW ANCHORS (ICC ESR-2713)
	 THESE DRAWINGS, SPECIFICATIONS, AND THE C CALIFORNIA BUILDING CODE (CBC), AS ADOPTED HEREAFTER REFERRED TO AS THE BUILDING CC 2. MATERIAL SPECIFIC DESIGN STANDARDS LISTED 	O AND AMENDED BY THE CITY OF COVINA, CA DDE.	 14. ADHESIVE ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING: a. HILTI HY-200 SAFE SET SYSTEM ADHESIVE ANCHORS (ESR-3187) (FAST CURE APPLICATIC b. HILTI RE-500 V3 ADHESIVE ANCHORS (ESR-3814) c. HILTI RE-100 ADHESIVE ANCHORS (ICC ESR-3829) (STANDARD CURE APPLICATIONS) d. DEWALT AC200+ ADHESIVE ANCHORS (ICC ESR-4027) (FAST CURE APPLICATIONS) e. DEWALT PURE 110+ ADHESIVE ANCHORS (ICC ESR-3298) (STANDARD CURE APPLICATIONS) f. SIMPSON STRONG-TIE SET-3G ADHESIVE ANCHORING SYSTEM (ESR-4057) g. SIMPSON STRONG-TIE AT-XP ADHESIVE ANCHORING SYSTEM (ESR-2508) (STANDARD CURE APPLICATIONS)
	EDITION APPROVED BY THE AUTHORITY HAVING ISSUANCE.	JURISDICTION ON THE DATE OF THE PERMIT	15. ANCHORS ARE NOT TO BE INSTALLED UNTIL CONCRETE OR GROUT HAS REACHED IT'S DESIGN STRENGTH. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE WITH A MIN. AGE OF 21 DAY
	 RISK CATEGORY EXISTING DEAD LOADS 	III	16. MASONRY CELLS SHALL BE FULLY GROUTED AND CURED FOR INSTALLATION OF POST-INSTALLE ANCHORS.
	ROOF - TOTAL 5. EXISTING LIVE LOADS	15 PSF (INCLUDES STRUCTURE SELF WEIGHT)	17. USE INSTALLATION PROCEDURES FOR CRACKED CONCRETE CONDITIONS. DO NOT CORE DRILL I ANCHOR HOLES WITHOUT ENGINEER APPROVAL.
	 2. EXISTING LIVE LOADS ROOF LIVE LOAD 7. WIND LOADS BASIC WIND SPEED (3 SECOND GUST), V 	20 PSF 101 MPH	18. PROVIDE GALVANIZED CARBON STEEL ANCHORS AT DRY INTERIOR LOCATIONS AND STAINLESS- STEEL TYPE 304 OR 316 AT EXTERIOR / DAMP INTERIOR LOCATIONS. ANCHORS SHALL BE CLEAN FREE OF DEBONDING SUBSTANCES.
	NOMINAL WIND SPEED, Vasd EXPOSURE CATEGORY TOPOGRAPHIC FACTOR, Kzt AIR DENSITY FACTOR, Ke	79 MPH C 1.0 1.0	19. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHAL SEALED OR FLASHED.
	INTERNAL PRESSURE COEFFICIENT, GC _{pi} 8. SEISMIC LOADS	+/- 0.18	20. ADHESIVE / EPOXY ANCHORS ON THIS PROJECT ARE NOT DESIGNED TO SUPPORT OR INTENDED RESIST SUSTAINED TENSION LOADS.
	SITE LATITUDE SITE LONGITUDE SITE CLASS IMPORTANCE FACTOR, I₀	34.0579 -118.295 D 1.25	
3	MAPPED SPECTRAL RESPONSE ACCELERATIONS S _S = 1.973 S ₁ = 0.701 DESIGN SPECTRAL RESPONSE ACCELERATIONS S _{DS} = 1.578		
	SEISMIC DESIGN CATEGORY	S _{D1} = 0.794 D	
	EXISTING SEISMIC FORCE RESISTING SYSTEM: UNITS C, D, E & F		
	STEEL MOMENT FRAME UNIT B STEEL CONCENTRICALLY BRACED FF	(REMAIN UNALTERED) RAMES (REMAIN UNALTERED)	
	STRCUTUR	AL SHEET LIST	
	SHEET NUMBER SHEET NAME		
	S0.1 GENERAL STRUCTUR S0.2 GENERAL STRUCTUR	RAL NOTES RAL NOTES & SPECIAL INSPECTIONS	
	S1.0 ISOMETRIC VIEW		-
	S1.1 ROOF FRAMING PLAN S1.2 ROOF FRAMING PLAN		
	S1.3 ROOF FRAMING PLAN	N - UNIT D	
	S1.4ROOF FRAMING PLANS1.5ROOF FRAMING PLAN		-
	S1.5ROOF FRAMING PLANS1.6ROOF FRAMING DETA		
I			

RDENED CONCRETE , ADHESIVE / EPOXY,

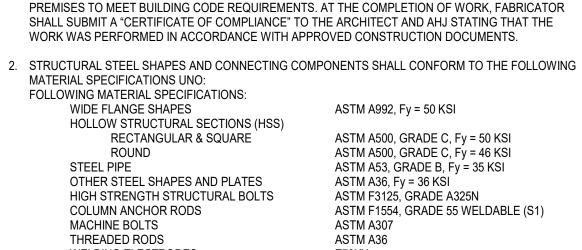
DUSING POST-ANCHORS.

- ING HOLES. HOLES
- . POST-TENSIONING DRILLING, CORING ATION DEEPER THAN
- REQUIREMENTS INCLUDING, BUT

WRITING BY THE ONSTRATING THAT ALUES OF THE ESR SHOWING INSTALLATION ONS. ADHESIVE

NCHORS SHALL HAVE WHERE NO MAY BE DEEPER.

- TATION FROM THE
- EAD ORIENTATION
- FIED THROUGH ACI L BE SUBMITTED TO
- R-2502)
- CURE APPLICATIONS) LICATIONS) CATIONS) JRE APPLICATIONS)
- S ER-263) 8) (STANDARD CURE HED IT'S DESIGN
- IN. AGE OF 21 DAYS. POST-INSTALLED
- NOT CORE DRILL FOR
- AND STAINLESS-SHALL BE CLEAN AND
- AIR FINISHES AS IEMBRANES SHALL BE
- ORT OR INTENDED TO



1. FABRICATOR QUALIFICATIONS: FABRICATOR SHALL BE AISC CERTIFIED OR AN "APPROVED

FABRICATOR" IN ACCORDANCE WITH THE BUILDING CODE AND APPROVED BY THE AHJ. IN LIEU OF

TO PROVIDE INSPECTION/TESTING SERVICES FOR WORK COMPLETED ON THE FABRICATOR'S

THE PREVIOUS, FABRICATOR SHALL INCLUDE IN THEIR BID THE SERVICES OF A SPECIAL INSPECTOR

ASTM A992, Fy = 50 KSI

ASTM A36, Fy = 36 KSI

ASTM A496, Fy = 70 KSI

ASTM A108, Fu = 65 KSI

ASTM A108, Fu = 65 KSI

ASTM A307

ASTM A36

E70XX

ASTM F3125, GRADE A325N

ASTM A500, GRADE C, Fy = 50 KSI

ASTM A500, GRADE C, Fy = 46 KSI

ASTM A53, GRADE B, Fy = 35 KSI

ASTM F1554, GRADE 55 WELDABLE (S1)

STRUCTURAL STEEL

- WELDING ELECTRODES DEFORMED BAR ANCHORS (DBA) WELDED HEADED STUDS (WHS) WELDED THREADED STUDS (WTS)
- 3. CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE BUILDING SYSTEM AT ALL TIMES DURING THE ERECTION PROCESS. ELEMENTS HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR TEMPORARY LOADING DURING CONSTRUCTION. INVESTIGATION OF THE STRUCTURAL ELEMENTS FOR ADEQUACY DURING THE STEEL ERECTION AND CONSTRUCTION PROCESS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO PROVIDE TEMPORARY SUPPORTS AS REQUIRED TO MAINTAIN STABILITY.
- 4. COLUMNS AND BEAMS WITH BASE, CAP OR END PLATES SHALL HAVE SQUARE CUT OR MILLED ENDS. 5. NON-METALLIC, NON-SHRINK, CHLORIDE FREE GROUT UNDER ALL COLUMN BASE PLATES AND BEAM BEARING PLATES SHALL CONSIST OF A PRE-MIXED PRODUCT COMPLYING WITH ALL REQUIREMENTS OF ASTM C1107. THE 28-DAY COMPRESSIVE STRENGTH OF THE GROUT SHALL BE TWICE THE FOUNDATION REQUIRED CONCRETE COMPRESSIVE STRENGTH, 5,000 PSI MINIMUM.
- 6. UNO, ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER, SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. ALL DAMAGED GALVANIZING SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A780. STAINLESS AND WEATHERING STEELS, WHERE SPECIFIED, ARE EXEMPT FROM THIS REQUIREMENT.
- COAT STEEL BELOW GRADE WITH COLD-APPLIED ASPHALT EMULSION PER ASTM D1187.
- 8. ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE, SECTION 10. REFER TO DRAWINGS FOR LOCATIONS OF AESS. 9. WHERE CONNECTIONS ARE NOTED TO BE SLIP CRITICAL (EXAMPLE: A325-SC), BOLTS SHALL BE TIGHTENED TO THE MINIMUM PRETENSION FOR FULLY TIGHTENED BOLTS BY ONE OF THE AISC
- APPROVED METHODS. SLIP-CRITICAL BOLTS SHALL HAVE CLASS "A" FAYING SURFACES. 10. ALL BOLTS (HIGH STRENGTH, ANCHOR BOLTS, EXPANSION BOLTS, ADHESIVE ANCHORS, ETC.) SHALL BE INSTALLED WITH STEEL NUTS AND WASHERS. NUTS AND WASHERS FOR HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A563 AND TO ASTM F436, RESPECTIVELY.
- 11. WELDING PROCEDURES, ELECTRODES, AND WELDER QUALIFICATIONS SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE D1.1, AISC STANDARDS, AND LOCAL CODE REQUIREMENTS.
- 12. ALL WELDS SHOWN ON THE DRAWINGS SHALL BE SHOP WELDS, UNO. WHERE SHOWN, FIELD WELDING SHALL BE USED. CONTRACTOR MAY SUBSTITUTE FIELD WELDS FOR SHOP WELDS AT THEIR DISCRETION. SHOP DRAWINGS SHALL CLEARLY NOTE ALL WELDING USING AWS A2.4 SYMBOLS.
- 13. WHERE CONTINUOUS ANGLES OR BENT PLATES ARE INDICATED, PROVIDE A CONTINUOUS BUTT WELD OR FULL PENETRATION WELD AT THE SPLICE POINTS, UNO. THE STEEL FABRICATOR MAY SUBMIT AN ALTERNATE BOLTED CONNECTION DETAIL FOR APPROVAL. 14. COORDINATE WITH ALL OTHER TRADES WHICH STEEL INTERACTS. THIS INCLUDES BUT IS NOT
- LIMITED TO COORDINATING WITH MASONRY, PRECAST CONCRETE, CAST-IN-PLACE CONCRETE, JOIST, AND METAL DECK SUPPLIERS. <u>SUBMITTALS</u>
- 1. THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION/ERECTIONS/INSTALLATION. THESE ITEMS ARE IN ADDITION TO ANY SUBMITTAL REQUIREMENTS SPECIFIED ON THESE PLANS OR IN THE PROJECT SPECIFICATIONS.
- STRUCTURAL SUBMITTALS PROD SHOP TEST CALCS DEFERRED ITEM DWGS RESULTS DATA SUBMITTAL STRUCTURAL STEEL - YES CONCRETE MATERIALS YES YES -GROUT YES --STEEL DECK YES YES -COLD FORMED STEEL YES YES EPOXY AND EXP ANCHORS YES -WELD FILLER MATERIAL YES YES -ANCHORAGE FOR MECH/ELEC YES EQUIPMENT
- 2. "PROD DATA" SUBMIT ADEQUATE DOCUMENTATION THAT THE PRODUCT PROPOSED TO BE USED MEETS THE REQUIREMENTS ON THESE PLANS AND THE PROJECT SPECIFICATIONS. "SHOP DWGS" - SUBMIT COMPLETE SHOP DRAWINGS SUFFICIENT TO SHOW QUANTITIES AND KINDS OF MATERIALS, METHODS OF ASSEMBLY, AND ALL DATA REQUIRED FOR FABRICATION, ERECTION, AND INSTALLATION. THE PURPOSE OF THESE DRAWINGS IS TO DEMONSTRATE THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT DOCUMENTED HEREIN. SUBMITTALS CONSISTING OF DRAWINGS TAKEN DIRECTLY FROM THESE PLANS WILL NOT BE APPROVED.
- 4. "TEST RESULTS" SUBMIT RESULTS FOR ANY TESTING REQUIRED BY BUILDING CODE OR THESE PI ANS 5. "CALCS" - SUBMIT CALCULATIONS AND THE CORRESPONDING SHOP OR ERECTION DRAWINGS SIGNED AND SEALED BY A DESIGN PROFESSIONAL AUTHORIZED TO PERFORM WORK IN THE
- PROJECT JURISDICTION. 6. "DEFERRED SUBMITTAL" - SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. ONCE REVIEWED, CONTRACTOR SHALL FORWARD TO THE PLAN CHECK AUTHORITY (DIVISION OF STATE ARCHITECTS) FOR REVIEW AND APPROVAL. FABRICATION AND/OR INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT OCCUR UNTIL APPROVAL OF

THE PLAN CHECK AUTHORTIY IS RECEIVED.

STRUCTURAL RENOVATION SCOPE

- 1. PROJECT STRUCTURAL SCOPE IS LIMITED TO THE FOLLOWING: a. SEOR TO ITEMIZE ELEMENTS WITHIN THE STRUCTURAL SCOPE HERE.
- EXISTING CONDITIONS
- 1. CONTRACTOR IS TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING, ALL WORK AND MATERIALS NECESSARY TO INSTALL NEW WORK IN EXISTING BUILDING(S) SHALL BE INCLUDED. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND SHALL CONTACT THE
- ENGINEER IF ANY DISCREPANCIES ARE FOUND BEFORE PROCEEDING. NOTIFY ENGINEER IMMEDIATELY IF EXISTING CONDITIONS DO NOT MATCH, OR SEEM IN CONFLICT WITH, INFORMATION SHOWN ON DRAWINGS.
- 3. DIMENSIONS INDICATED ON PLAN AS FIELD VERIFY, OR "FV", ARE DIMENSIONS THAT MAY BE REQUIRED FOR FABRICATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF DIMENSIONS IN THE FIELD NECESSARY FOR FABRICATION OF MEMBERS AND PRIOR TO SUBMISSION OF SHOP DRAWINGS.
- 4. CONTRACTOR TO PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT TO REMAIN FROM DAMAGE DUE TO DEMOLITION OR CONSTRUCTION OPERATIONS PERFORMED UNDER THIS CONTRACT.
- 5. THE SEQUENCE OF CONSTRUCTION SHALL BE THE RESPONSIBILITY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY GUYS, BRACING, AND OTHER SUPPORTS AS NEEDED TO SAFELY RESIST ALL GRAVITY AND LATERAL LOADS TO WHICH THE EXISTING OR PROPOSED STRUCTURE MAY BE SUBJECTED, INCLUDING LOADS FROM ERECTION EQUIPMENT AND ERECTION OPERATIONS, AND WIND OR SEISMIC FORCES COMPARABLE IN INTENSITY FOR WHICH THE STRUCTURE IS DESIGNED. LOAD VERIFICATION OF EXISTING MEMBERS TO RECEIVE TEMPORARY SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR'S ENGINEER.
- 6. ALL ERECTION AND CONSTRUCTION PROCEDURES SHALL MEET THE REQUIREMENTS OF ALL APPLICABLE CODES AND ORDINANCES.
- ALL FRAMING CONNECTIONS TO EXISTING STRUCTURE SHALL BE FIELD VERIFIED PRIOR TO SHOP DRAWING PRODUCTION AND FABRICATION. FIELD VERIFIED DIMENSIONS SHALL BE INCLUDED ON FIRST SHOP DRAWING SUBMITTAL AND NOTED AS SUCH.
- 8. EXISTING UTILITY LINES SHALL BE PROBED PRIOR TO CONSTRUCTION OF FOUNDATIONS. NOTIFY ENGINEER IF THE TOP OF ANY UTILITY PIPE COMES WITHIN 3'-0" OF THE BOTTOM OF ANY FOUNDATION. DETERMINE THE LOCATION OF ALL NEW AND EXISTING UNDERGROUND UTILITIES IN AND ADJACENT TO THE AREA OF WORK PRIOR TO EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES WHICH MAY RESULT FROM FAILURE TO EXACTLY LOCATE, PROTECT, AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES.
- 9. EXCAVATION UNDER OR NEAR IN-PLACE FOOTINGS WHICH DISTURBS THE COMPACTED SOIL BENEATH THE FOOTINGS IS NOT PERMITTED.
- 10. CONTRACTOR SHALL LOCATE REBAR IN EXIST. CONSTRUCTION PRIOR TO DRILLING OF HOLES AND SHALL TAKE CARE NOT TO DAMAGE EXIST. BARS. IF DAMAGE TO EXIST. REBAR OCCURS DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE. REPAIR PROCEDURES NOT DETAILED IN THE CONTRACT DOCUMENTS WILL REQUIRE PREPARATION BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED AND MUST BE APPROVED BY THE ENGINEER.
- EXISTING DOCUMENTATION
- 1. THE FOLLOWING DOCUMENTS WERE USED TO REPRESENT EXISTING STRUCTURE IN THE CONSTRUCTION DOCUMENTS. NOT ALL ELEMENTS AND INFORMATION HAS BEEN PROVIDED. COPIES OF THE EXISTING DRAWINGS MAY BE AVAILABLE AT THE CONTRACTOR'S REQUEST. ARCHITECTURAL DRAWINGS DATED FEBRUARY 11, 1959 BY D. STEWART KERR
 - ARCHITECTS, INC. STRUCTURAL DRAWINGS DATED FEBRUARY 11, 1959 BY EUGENE D. BIRNBAUM AND ASSOCIATES STRUCTURAL ENGINEERS.
- DEMOLITION
- 1. DEMOLITION OF EXISTING STRUCTURE TO BE REMOVED SHALL BE PERFORMED BY THE CONTRACTOR USING MEANS NECESSARY TO PREVENT DAMAGE TO THE EXISTING STRUCTURE TO REMAIN. DAMAGE TO THE EXISTING STRUCTURE TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE USING METHODS REVIEWED BY THE STRUCTURAL ENGINEER. IF EXISTING CONDITIONS DIFFER FROM THOSE SHOWN IN THE CONTRACT DOCUMENTS CONTACT THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- 2. SHORING OF THE EXISTING STRUCTURE SHALL BE PROVIDED BY THE CONTRACTOR AND DESIGNED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

ABBREVIATIONS

ABC

AFF

AHJ

ALT

AR

ANCH

BOD

BLDG

BLKG

BM(S)

BOF

BOL

BOS

BOT

BRBF

BRG

CANT

CIP

CJP

CLR

COL

CMU

COMP

CSTJ

CTR

DBA

DEG

DIA

DIAG

DIM

DTL

EBF

ELEC

FI FV

EN

FWP

ENG

EOD

EOR

EQ

EW

EXP

EXT

FD

FTG

FV

GA

GC

GLB

GR

н

HC

HS

IMF

INC

INT

JBE

JST

JT

K

ANCHOR

ADDL

REINFORCING BAR SIZE, SHEET METAL SCREW SIZE AT (SPACING) DIAMETER ANCHOR BOLT AGGREGATE BASE COURSE ADDITIONAL ABOVE FINISHED FLOOR AUTHORITY HAVING JURISDICTION ALTERNATE

APPROX APPROXIMATE ANCHOR ROD ARCH ARCHITECTURAL BOTTOM OF BOTTOM OF DECK BUILDING BLOCKING BFAM(S) BOTTOM OF FOOTING BOTTOM OF LINTEL BOTTOM OF STEEL

BOTTOM BUCKLING RESTRAINED BRACED FRAME BEARING BTWN BETWEEN

CFMF COLD-FORMED METAL FRAMING CAST-IN-PLACE CONTROL JOINT COMPLETE JOINT PENETRATION CENTERLINE CLEAR

CONC CONCRETE CONNECTION(S) CONN(S) CONST CONSTRUCTION CONT CONTINUOUS CONTR CONTRACT(OR) CONSTRUCTION JOINT

CENTER

DEFORMED BAR ANCHOR DCW DEMAND CRITICAL WELD DEGREE DIAMETER DIAGONAL DIMENSION DEAD LOAD DITTO DETAIL DWG(S) DRAWING(S) DWL(S) DOWEL(S)

EXISTING FACH ECCENTRICALLY BRACED FRAME EACH END EACH FACE EXPANSION JOINT ELEVATION ELECTRICAL ELEVATOR EMBED EMBEDMENT, EMBEDDED EDGE NAILING ENGINEERED WOOD PRODUCT ENGINEER

EOS EDGE OF SLAB EQUAL EQUIP EQUIPMENT EQUIV EQIUVALENT EACH WAY EXPANSION EXTERIOR

STRENGTH OF CONCRETE SPECIFIED COMPRESSIVE STRENGTH OF MASONRY FLOOR DRAIN FDN FOUNDATION FRT

> FOOTING FIELD VERIFY YIELD STRENGTH

GALV GB GRADE BEAM GRADE

HEIGHT

HDR HEADER HORIZ HORIZONTAL HEADED STUD INSIDE DIAMETER

> INCH INCLUDE(ING) INTERIOR

JOIST JOINT

KSF

CHANNEL CANTILEVER CONCRETE MASONRY UNIT COLUMN COMPOSITE

DEMOUSH PRESTRESSED PRECAST DOUBLE TEE

EDGE OF DECK ENGINEER OF RECORD

SPECIFIED COMPRESSIVE

FIRE RESISTANCE TREATED FAR SIDE FEET (FOOT)

GAGE, GAUGE GALVANIZED

GENERAL CONTRACTOR GLUE LAMINATED BEAM

PRESTRESSED PRECAST HOLLOW CORE TOF

INSIDE FACE INTERMEDIATE MOMENT FRAME

JOIST BEARING ELEVATION

KIP (1,000 LBS)

KIPS PER SQUARE FOOT

NUMBER NS NEAR SIDE NOT TO SCALE NTS NWC ON CENTER OCBF BRACED FRAME OCCS OUTSIDE DIAMETER OUTSIDE FACE OF OPPOSITE HAND OH OMF OPG(S) OPENING(S) OPPOSITE OPP OWJ OPEN WEB JOIST PAF PCBE ELEVATION PCF

PERPENDICULAR PARTIAL JOINT PENETRATION PLATE POUNDS PER LINEAL FOOT PLWD PI YWOOD PREFAB PREFABRICATED PROJECTION

> POUNDS PER SQUARE INCH PRESERVATIVE TREATED WOOD RADIUS REINFORCED CONCRETE REFERENCE REINFORCE, REINFORCED,

REQUIRE(D) REVISION(S) ROOFTOP UNIT SPECIAL CONCENTRICALLY BRACED

SPECIAL CANTILEVER COLUMN SYSTEM SCHEDULE SUPERIMPOSED DEAD LOAD SELF-DRILLING SCREWS SHORT SLOTTED HOLE

SQUARE FOOT SEISMIC FORCE RESISTING SYSTEM

SLAB ON GRADE SPACE, SPACING SPEC(S) SPECIFICATION(S) STAINLESS STEEL

STANDARD STIFFENER STEEL STRUCT STRUCTURE, STRUCTURAL SYMMETRICAL

> TOP & BOTTOM TONGUE & GROOVE TENSION CONTROL TOP OF CONCRETE WALL TEMPORARY

TOP OF TOP OF BEAM TOP OF CONCRETE TOP OF FOOTING TOP OF STEEL

TOP OF WALL ELEVATION TYPICAL

WITH WITHOUT

WIND FORCE RESISTING SYSTEM WEIGHT WORK POINT

STEEL TEE SECTION WELDED WIRE FABRIC/REINFORCEMENT X-STR EXTRA STRONG

ZRC ZINC RICH COATING

GENERAL SYMBOLS

DETAIL NUMBER ? - SIM CROSS REFERENCE SHEET NUMBER SIMILAR OR TYPICAL REFERENCE WALL SECTION DETAIL REFERENCE BUILDING SECTION **BUILDING ELEVATION** INTERIOR ELEVATION CASEWORK XX/ A11.X ELEVATION KEYNOTE COLUMN GRID LINE ·)____ _ _ ___ ROOM NAME ROOM NUMBER/NAME DOOR NUMBER / INTERIOR WINDOW EXTERIOR WINDOW NUMBER WALL TYPE <?> **REVISION NUMBER** DESCRIPTION



ABBREVIATIONS ARE AS SHOWN IN THE CONTRACT DOCUMENTS WITH THE FOLLOWING EXCEPTIONS:

LB(S) POUND(S) REINFORCING BAR Ld DEVELOPMENT LENGTH HOOKED REINFORCING BAR Ldh DEVELOPMENT LENGTH LINEAR FOOT (FEET) LATERAL FORCE RESISTING SYSTEM LFRS LINEAR LIN LIVE LOAD LONG LEG BACK TO BACK LLBB LLH LONG LEG HORIZONTAL LLV LONG LEG VERTICAL LONG LONGITUDINAL Ls

MECH

MEP

MFR

MISC

MTL

(N)

PERP

PJP

PLF

PROJ

PSF

PSI

PTW

RAD

RC

REF

REINF

REQ(D)

REV(S)

RTU

SCBF

SCCS

SCHED

SDL

SDS

SSH

SECT

SEOR

SF

SFRS

SHT

SIM

SMF

SOG

SPA

SST

STD

STIFF

STL

SYM

T&B

T&G

TCW

TEMP

THRD

TOB

TOC

TOS

TOW

TPE

TSE

TWE

TYP

UNO

VERT

VFY

W/O

WFRS

WGT

WPS WT

WWR

WP

W/

WD

TRANS

SL

MWFRS

MF

REINFORCING BAR LAP SPLICE LENGTH LONG SLOTTED HOLE LSH LAMINATED VENEER LUMBER LVL LW LONG WAY LIGHTWEIGHT CONCRETE LWC MAX MAXIMUM

MECHANICAL MECHANICAL, ELECTRICAL & PLUMBING MOMENT FRAME MANUFACTURER MINIMUM MISCELLANEOUS

METAL MAIN WIND FORCE RESISTING SYSTEM NEW NOT APPLICABLE NOT IN CONTRACT

NORMAL WEIGHT CONRETE

ORDINARY CONCENTRICALLY ORDINARY CANTILEVER COLUMN SYSTEM

ORDINARY MOMENT FRAME

POWDER ACTUATED FASTENER PRECAST CONCRETE, PILE CAP PRECAST CONCRETE BEARING

POUNDS PER CUBIC FOOT

POUNDS PER SQUARE FOOT

REINFORCEMENT, REINFORCING

FRAM

SECTION STRUCTURAL ENGINEER OF RECORD

SHEET SIMILAR SNOW LOAD SPECIAL MOMENT FRAME

STAG'D STAGGERED

THICKNESS

THREADED

TOP OF WALL TOP OF PIER ELEVATION TRANSVERSE TOP OF SLAB ELEVATION

UNLESS NOTED OTHERWISE VERTICAL VERIFY

WOOD

WELDING PROCEDURE SPECIFICATION

XX-STR DOUBLE EXTRA STRONG

	EARTH	
	GRAVEL	no
	SAND	
å	CONCRETE	
	PRECAST CONCRETE	
	STEEL	
	GYM FLOOR	DLR Group
	WOOD (CONTINUOUS BLOCKING)	
	WOOD (NON-CONTINUOUS	
	BLOCKING) WOOD (TRIM/FINISH)	
	GLASS	
	STONE	
	SHINGLES	
	CONCRETE MASONRY UNIT	005500
	STEEL (LARGE SCALE)	STORE LEE ALLO
	PLYWOOD (LARGE SCALE)	
	GYPSUM WALL BOARD	A 6351 al
	BATT INSULATION	STRUCTURAL AND
	RIGID INSULATION	B CALIFOR 3/SI/Z.3
	SPRAY FOAM INSULATION	
	FIRE SAFING INSULATION	
	PROTECTION BOARD	
	CARPET (LARGE SCALE) ACOUSTIC TILE (LARGE SCALE)	
	TILE (LARGE SCALE)	
		SCHOOL



100% CONSTRUCTION DOCUMENTS 11/04/2022 REVISIONS

75-22605-00 DSA A#03-122232 DSA FILE #: 19-25 GENERAL STRUCTURAL NOTES

S0.

REQUIRED STRUCTURAL OBSERVATIONS

- 1. IN ACCORDANCE WITH IBC, SECTION 1704.6, THE OWNER'S REPRESENTATIVE SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO PERFORM STRUCTURAL OBSERVATIONS AS LISTED IN THE BELOW STATEMENT OF REQUIRED STRUCTURAL OBSERVATIONS.
- 2. STRUCTURAL OBSERVATION DOES NOT INCLUDE, OR WAIVE, THE RESPONSIBILITY FOR COMPLETING THE LISTED SPECIAL INSPECTIONS OR INSPECTIONS REQUIRED BY IBC SECTION 110. 3. AT THE CONCLUSION OF THE WORK, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE AHJ A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED
- DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED. 4. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR CONSTRUCTION MANAGER TO NOTIFY THE ENGINEER AS TO WHEN EACH MAJOR PHASE OF CONSTRUCTION IS READY FOR
- OBSERVATION A MINIMUM OF TEN (10) WORKING DAYS IN ADVANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT NAILING, REINFORCEMENT, WELDS, CONNECTIONS, ETC. ARE VISIBLE FOR DESIGNATED STRUCTURAL OBSERVER AT THE TIME
- OF SITE VISIT. PRIOR TO THE FIRST STRUCTURAL OBSERVATION, THE OWNER'S REPRESENTATIVE SHALL COORDINATE A PRE-CONSTRUCTION MEETING BETWEEN THE OBSERVING ENGINEER, ARCHITECT, CONTRACTOR, SUBCONTRACTORS AND OTHER INSPECTORS. THE PURPOSE OF THE MEETING SHALL BE TO IDENTIFY THE STRUCTURAL ELEMENTS AND CONNECTIONS THAT ARE PART OF THE VERTICAL AND LATERAL LOAD RESISTING SYSTEMS AND REVIEW SCHEDULING OF SCHEDULED STRUCTURAL OBSERVATIONS.
- . THE STRUCTURAL OBSERVER SHALL PERFORM OBSERVATIONS AT THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES: CONSTRUCTION STAGES ELEMENTS/CONNECTIONS TO BE OBSERVED

a. AT SUBSTANTIAL COMPLETION OF THE PRIMARY STRUCTURE

STATEMENT OF SPECIAL INSPECTIONS

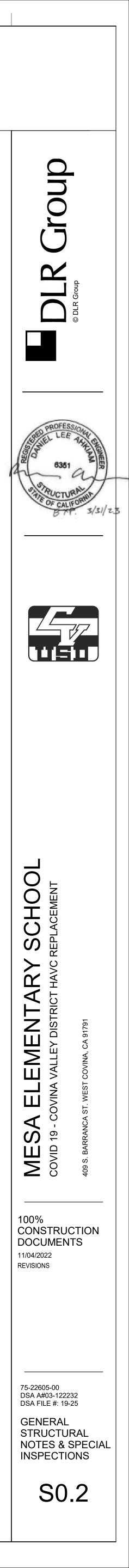
- 2. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL BE RES DEFINING THE ACTIVITIES OF THE INSPECTORS, FOR CERTIFYING THE QUALIFICATIO INSPECTORS WITH THE AHJ, AND TO ATTEND THE PRE-CONSTRUCTION MEETING TO SCOPE OF SERVICES AND THE TESTING OR TEST PROCEDURES THAT ARE REQUIRE IN THE BUILDING CODE.
- 3. THE INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO VERIFY CONFORMANCE APPROVED CONTRACT DOCUMENTS.
- 4. THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO TH REPRESENTATIVE, AHJ AND ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO ENGINEER AND THE AHJ.
- 5. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL COMPL SEAL A FINAL REPORT CERTIFYING THAT TO THE BEST OF THEIR KNOWLEDGE, THE CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS.
- 6. SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION TO THE INSPECTIONS CONDU AHJ AND SHALL NOT BE CONSTRUED TO RELIEVE THE OWNER OR AUTHORIZED AGE REQUESTING THE INSPECTIONS REQUIRED BY IBC SECTION 110. 7. CONTRACTOR RESPONSIBILITY: EACH CONTRACTOR RESPONSIBLE FOR THE CONST MAIN WIND- OR SEISMIC FORCE-RESISTING COMPONENT LISTED IN THE STATEMENT
- INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE AF OWNER'S REPRESENTATIVE ACKNOWLEDGING AWARENESS OF REQUIRED SPECIAL PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. 8. STEEL CONSTRUCTION: SPECIAL INSPECTIONS FOR STRUCTURAL STEEL SHALL BE ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AIS PROVIDE INSPECTION PER IBC SECTION 1704.2.5 FOR STRUCTURAL LOADING-BEARIN AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP. THESE
- PER SECTION 1704.2.5.1. 9. WELDING: WELDING INSPECTION SHALL BE IN COMPLIANCE WITH AWS D1.1. THE BAS WELDING INSPECTOR QUALIFICATIONS SHALL BE AWS D1.1. PROVIDE SPECIAL INSPECTOR ACCORDANCE WITH AISC 360-16 TABLE N5.4-1 THROUGH TABLE N5.4-3.
- 10. STEEL DETAILING: AN INSPECTION OF THE STEEL FRAME SHALL BE PERFORMED TO COMPLIANCE WITH THE DETAILS SHOWN ON THE APPROVED CONSTRUCTION DOCU AS BRACING, STIFFENING, MEMBER LOCATIONS AND PROPER APPLICATION OF JOIN EACH CONNECTION.
- 11. HIGH STRENGTH BOLTING: INSTALLATION OF HIGH STRENGTH BOLTS SHALL BE PER INSPECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. HIGH STRENGTH BOLTING SPECIAL INSPECTION IN ACCORDANCE WITH AISC 360-16 TABLE N5.6-1 THROUGH TA 12. SPRAY-APPLIED FIREPROOFING: PER SECTION 1705.14.
- 13. MASTIC AND INTUMESCENT FIRE RESISTING COATINGS: PER SECTION 1705.15.
- 14. EXTERIOR INSULATION AND FINISH SYSTEM (EIFS): PER SECTION 1705.16.
- 15. FIRE-RESISTANT PENETRATIONS AND JOINTS: PER SECTION 1705.17.
- 16. SMOKE CONTROL: PER SECTION 1705.18.
- 17. EXPANSION BOLT, SCREW ANCHOR AND ADHESIVE ANCHORS: INSTALLATION TO VEI INSTALLATION IN ACCORDANCE WITH ICC-ES REPORTS NOTED PREVIOUSLY OR APP
- 18. HEADED CONCRETE SHEAR CONNECTORS: INSPECTED AND TESTED PER AMERICAN SOCIETY CODE AWS D1.1.

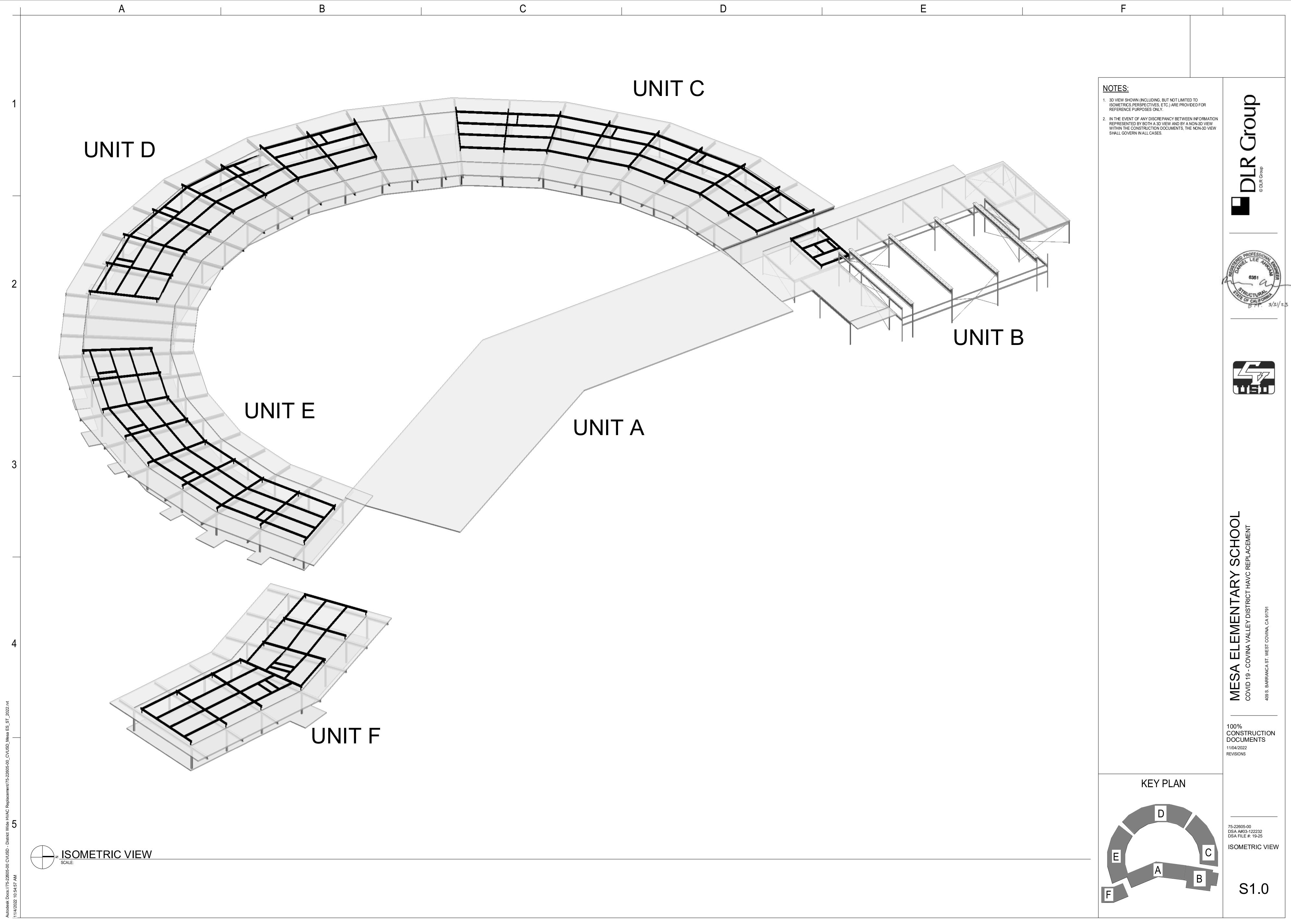
В	С					
STATEMENT OF SPECIAL INSPECTIONS	TMS 402 / 602 — TABLE 3					
	MINIMUM VERIFICATION REQUIREMENTS					
 IN ACCORDANCE WITH IBC, SECTION 1704, THE OWNER'S REPRESENTATIVE SHALL EMPLOY ONE OR MORE QUALIFIED SPECIAL INSPECTORS AND/OR TESTING AGENCIES TO PERFORM STRUCTURAL TESTS AND SPECIAL INSPECTIONS ON THE TYPES OF WORK LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS. 	MINIMUM VERIFICATION	REFERENCE FOR CRITERIA				
2. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL BE RESPONSIBLE FOR	LEVEL LEVEL LEVEL 1 2 3	TMS 60	2			
DEFINING THE ACTIVITIES OF THE INSPECTORS, FOR CERTIFYING THE QUALIFICATIONS OF THE INSPECTORS WITH THE AHJ, AND TO ATTEND THE PRE-CONSTRUCTION MEETING TO DEFINE THEIR SCOPE OF SERVICES AND THE TESTING OR TEST PROCEDURES THAT ARE REQUIRED AS OUTLINED	Prior to construction, verification of compliance of submittals.	Art. 1.5				
IN THE BUILDING CODE.	Prior to construction, verification of fm and fAAC, except where specifically exempted by the Code.NRRR	Art. 1.4E	3			
 THE INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO VERIFY CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS. 	During construction, verification of Slump flow and Visual Stability Index (VSI) when self-consolidating NR R R grout is delivered to the project site.	Art. 1.5 & 1	.6.3			
I. THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO THE OWNER'S REPRESENTATIVE, AHJ AND ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE	During construction, verification of f'm and f'AAC for every 5,000 square feet (465 square meters). NR NR R	Art. 1.4E	3			
IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND, IF UNCORRECTED, TO THE ENGINEER AND THE AHJ. 5. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL COMPLETE, SIGN AND	During construction, verification of proportions of materials as delivered to the project site for premixed or preblended mortar, prestressing grout, and grout other NR NR R	Art. 1.4E	3			
SEAL A FINAL REPORT CERTIFYING THAT TO THE BEST OF THEIR KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS.	than self-consolidating grout. a. R = Required, NR = Not Required					
3. SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE						
AHJ AND SHALL NOT BE CONSTRUED TO RELIEVE THE OWNER OR AUTHORIZED AGENT FROM REQUESTING THE INSPECTIONS REQUIRED BY IBC SECTION 110.	AISC 360 — TABLE N5.6-1 INSPECTION TASKS PRIOR TO BOLTING	AISC 360 — TABLE N5.6-1				
2. CONTRACTOR RESPONSIBILITY: EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A	INSPECTION TASKS PRIOR TO BOLTING QC QA					
MAIN WIND- OR SEISMIC FORCE-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL						
INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE AHJ AND THE	HE AHJ AND THE					
OWNER'S REPRESENTATIVE ACKNOWLEDGING AWARENESS OF REQUIRED SPECIAL INSPECTIONS	Fasteners marked in accordance with ASTM requirements	Fasteners marked in accordance with ASTM requirements O O Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be O O				
PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT.	excluded from shear plane)	excluded from shear plane) O O				
ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360-16.	Proper bolting procedure selected for joint detail	0	0			
PROVIDE INSPECTION PER IBC SECTION 1704.2.5 FOR STRUCTURAL LOADING-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP. THESE INSPECTIONS SHALL BE AT CONTRACTOR'S EXPENSE IF THE FABRICATOR IS NOT AN APPROVED FABRICATOR	Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	preparation, if specified, meet applicable requirements				
PER SECTION 1704.2.5.1.	Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	Р	0			
9. WELDING: WELDING INSPECTION SHALL BE IN COMPLIANCE WITH AWS D1.1. THE BASIS FOR	Proper storage provided for bolts, nuts, washers, and other fastener components					
WELDING INSPECTOR QUALIFICATIONS SHALL BE AWS D1.1. PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH AISC 360-16 TABLE N5.4-1 THROUGH TABLE N5.4-3.	 O - Observe these items on a random basis. Operations need not be delayed pending these inspections. P - Perform these tasks for each bolted connection. 					
10. STEEL DETAILING: AN INSPECTION OF THE STEEL FRAME SHALL BE PERFORMED TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE APPROVED CONSTRUCTION DOCUMENTS, SUCH AS BRACING, STIFFENING, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT	AISC 360 — TABLE N5.6-2	AISC 360 — TABLE N5.6-2				
EACH CONNECTION.	INSPECTION TASKS DURING BOLTING					
1. HIGH STRENGTH BOLTING: INSTALLATION OF HIGH STRENGTH BOLTS SHALL BE PERIODICALLY	INSPECTION TASKS DURING BOLTING	QC	QA			
INSPECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. HIGH STRENGTH BOLTING. PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH AISC 360-16 TABLE N5.6-1 THROUGH TABLE N5.6-3.	Fastener assemblies placed in all holes and washers and nuts are positioned as required	0	0			
2. SPRAY-APPLIED FIREPROOFING: PER SECTION 1705.14.			0			
	Fastener component not turned by the wrench prevented from rotating	0	0			
ASTIC AND INTUMESCENT FIRE RESISTING COATINGS: PER SECTION 1705.15. Fasteners are pretensioned in accordance with the RCSC Specification, progressing systematically from the most rigid point toward the free edges						
4. EXTERIOR INSULATION AND FINISH SYSTEM (EIFS): PER SECTION 1705.16.	O - Observe these items on a random basis. Operations need not be delayed pending these	O - Observe these items on a random basis. Operations need not be delayed pending these inspections.				
5. FIRE-RESISTANT PENETRATIONS AND JOINTS: PER SECTION 1705.17.	P - Perform these tasks for each bolted connection.					
6. SMOKE CONTROL: PER SECTION 1705.18.	AISC 360 — TABLE N5.6-3					
17. EXPANSION BOLT, SCREW ANCHOR AND ADHESIVE ANCHORS: INSTALLATION TO VERIFY	INSPECTION TASKS AFTER BOLTING					
INSTALLATION IN ACCORDANCE WITH ICC-ES REPORTS NOTED PREVIOUSLY OR APPROVED EQUAL.	INSPECTION TASKS AFTER BOLTING		QA			
18. HEADED CONCRETE SHEAR CONNECTORS: INSPECTED AND TESTED PER AMERICAN WELDING	Document acceptance or rejection of bolted connections	Р	Р			
SOCIETY CODE AWS D1.1.	O - Observe these items on a random basis. Operations need not be delayed pending these	O - Observe these items on a random basis. Operations need not be delayed pending these inspections.				
	D. Deufermentlererer terster fan en els helteret en de					

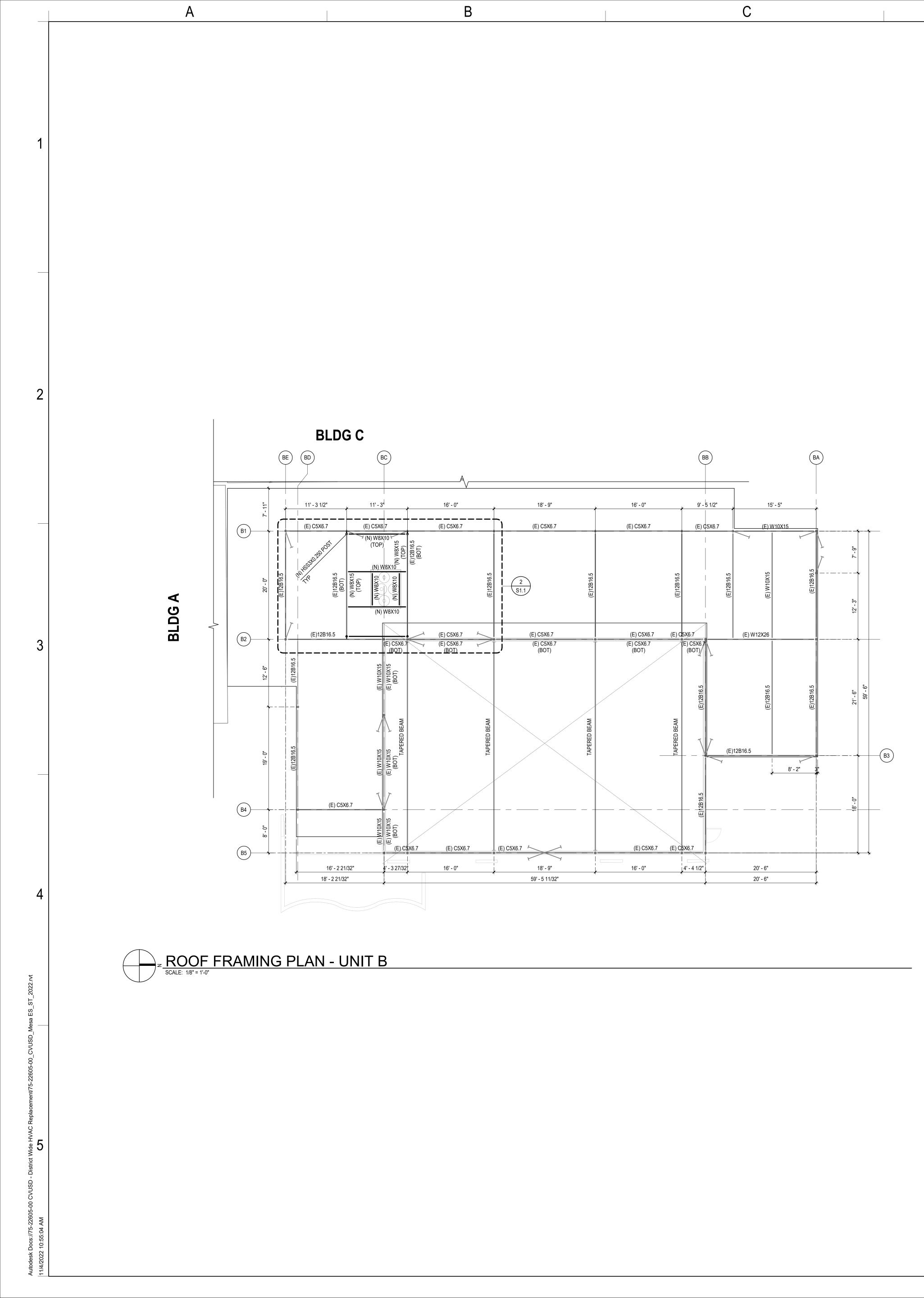
P - Perform these tasks for each bolted connection.

D		
AISC 360 — TABLE N5.4-1		
INSPECTION TASKS PRIOR TO WELDING	QC	QA
Welder qualification records and continuity records Welding procedure specifications (WPS) available Manufactures continues for welding consumables available	P P	0 P
Manufacturer certifications for welding consumables available Material identification (type / grade) Welder identification system [a]	Р 0 0	Р О О
 Fit-up of groove welds (including joint geometry) Joint preparations Dimensions (alignment, root opening, root face, bevel) 		
 Cleanliness (condition of steel surfaces) Tacking (tack weld quality and location) Backing type and fit (if applicable) 	0	0
Fit-up of CJP groove welds of HSS T-, Y- and K-joints without backing (including joint geometry)		
 Joint preparations Dimensions (alignment, root opening, root face, bevel) Cleanliness (condition of steel surfaces) 	Р	0
Tacking (tack weld quality and location) Configuration and finish of access holes	0	0
 Fit-up of fillet welds Dimensions (alignment, gaps at root) Cleanliness (condition of steel surfaces) 	0	0
Tacking (tack weld quality and location) Check welding equipment	0	
 The fabricator or erector, as applicable, shall maintain a system by which a welder w member can be identified. Stamps, if used, shall be the low-stress type. 		
O - Observe these items on a random basis. Operations need not be delayed pending the P - Perform these tasks for each welded joint or member.	se inspectio	ons.
AISC 360 — TABLE N5.4-2 INSPECTION TASKS DURING WELDING		
INSPECTION TASKS DURING WELDING Control and handling of welding consumables	QC	QA
Control and handling of weiding consumables Packaging Exposure Control	0	0
No welding over cracked tack welds Environmental conditions	0	0
Wind speed within limits Precipitation and temperature	0	0
 WPS Followed Settings on welding equipment Travel Speed 		
 Selected welding materials Shielding gas type / flow rate Preheat applied 	0	0
 Interpass temperature maintained (min. / max.) Proper position (F, V, H, OH) 		
 Welding techniques Interpass and final cleaning Each pass within profile limitations 	0	0
Each pass meets quality requirements Placement and installation of steel headed stud anchors	P	P
O - Observe these items on a random basis. Operations need not be delayed pending the P - Perform these tasks for each welded joint or member.	se inspectio	ons.
AISC 360 — TABLE N5.4-3		
INSPECTION TASKS AFTER WELDING INSPECTION TASKS AFTER WELDING	QC	QA
Welds cleaned Size, length and location of welds Welds meet visual acceptance criteria	0 P	O P
 Welds meet visual acceptance criteria Crack prohibition Weld / base-metal fusion 		
 Crater cross section Weld profiles Weld size 	Р	Р
Undercut Porosity		
Arc strikes k-area [a]	P P	P P
Weld access holes in rolled heavy shapes and build-up heavy shapes [b] Backing removed and weld tabs removed (if required)	P P	Р Р Р
Repair activities Document acceptance or rejection of welded joint or member No prohibited welds have been added without the approval of the EOR	P P O	Р Р О
 [a] When welding of doubler plates, continuity plates or stiffeners has been performed in the web k-area for cracks within 3 inches (75 mm) of the weld. 	-	•
[b] After rolled heavy shapes (see Section A3.1c) and built-up heavy shapes (see Section inspect the weld access hole for cracks.		·
O - Observe these items on a random basis. Operations need not be delayed pending the P - Perform these tasks for each welded joint or member.	se inspectio	ons.
ANSI / SDI QA/QC— TABLE 1.3	<u>.</u>	
TASK	QC	QA
 A. Welding procedure specifications (WPS) available B. Manufacturer certifications for welding consumables available C. Meterial identification (type / grade) 	0	0
 C. Meterial identification (type / grade) D. Check welding equipment O - Observe these items on an intermittent basis. Operations need not be delayed pending 	O O g these insp	O O Dections.
P - Perform these tasks prior to final acceptance for each item or element.		
ANSI / SDI QA/QC— TABLE 1.4 INSPECTION OR EXECUTION TASKS DURING WELDING		
TASK	QC	QA
 A. Use of qualified welders. B. Control and handling of welding consumables C. Environmental conditions (wind speed, moisture, temperature) 	0 0 0	0 0 0
 C. Environmental conditions (wind speed, moisture, temperature) D. WPS followed O - Observe these items on an intermittent basis. Operations need not be delayed pending 	0	0
P - Perform these tasks prior to final acceptance for each item or element.		
ANSI / SDI QA/QC— TABLE 1.5 INSPECTION OR EXECUTION TASKS AFTER WELDING	_	
TASK	QC	QA
 A. Verify size and location of welds, including support, sidelap, and perimeter welds B. Welds meet visual acceptance criteria C. Verify repair activities 	P P P	Р Р Р
 Verify repair activities D. Document acceptance or rejection of welds O - Observe these items on an intermittent basis. Operations need not be delayed pending 	P	P
P - Perform these tasks prior to final acceptance for each item or element.		
ANSI / SDI QA/QC— TABLE 1.6 INSPECTION OR EXECUTION TASKS PRIOR TO MECHANICAL FA	STENING	
TASK	QC	QA
 A. Manufacturer installation instructions available for mechanical fasteners B. Proper tools available for fastener installation C. Proper storage for mechanical fasteners 	0	0 0 0
 C. Proper storage for mechanical fasteners O - Observe these items on an intermittent basis. Operations need not be delayed pending P - Perform these tasks prior to final acceptance for each item or element. 		-
P - Perform these tasks prior to final acceptance for each item or element. ANSI / SDI QA/QC— TABLE 1.7		
INSPECTION OR EXECUTION TASKS DURING MECHANICAL FAS		
TASK A. Fasteners are positioned as required B. Easteners are installed in accordance with manufacturar's instructions	QC 0	QA 0
 B. Fasteners are installed in accordance with manufacturer's instructions O - Observe these items on an intermittent basis. Operations need not be delayed pending B. Perform these tasks prior to final accordance for each item or element. 	O g these insp	O Dections.
P - Perform these tasks prior to final acceptance for each item or element. ANSI / SDI QA/QC— TABLE 1.8		
INSPECTION OR EXECUTION TASKS AFTER MECHANICAL FAS		
TASK A. Check spacing, type, and installation of support fasteners	QC P	QA P
B. Check spacing, type, and installation of sidelap fasteners C. Check spacing, type, and installation of perimeter fasteners D. Verify repair activities	P P P	Р Р Р
 D. Verify repair activities E. Document acceptance or rejection on mechanical fasteners O - Observe these items on an intermittent basis. Operations need not be delayed pending 	P	P

P - Perform these tasks prior to final acceptance for each item or element.



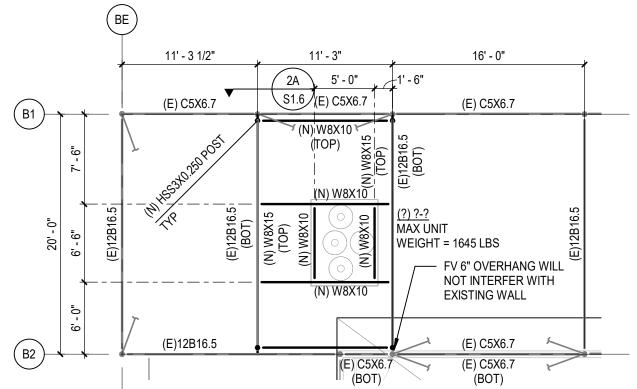




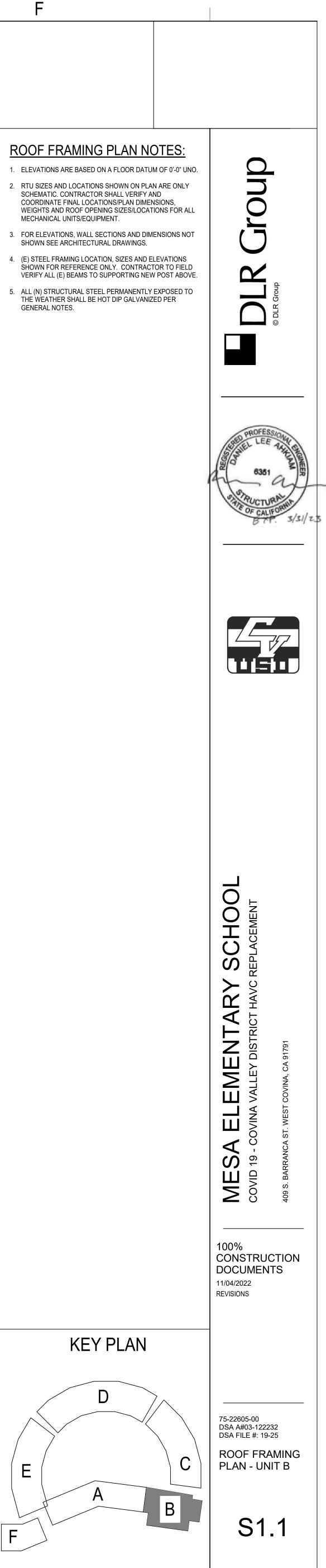
ROOF FRAMING PLAN - UNIT B

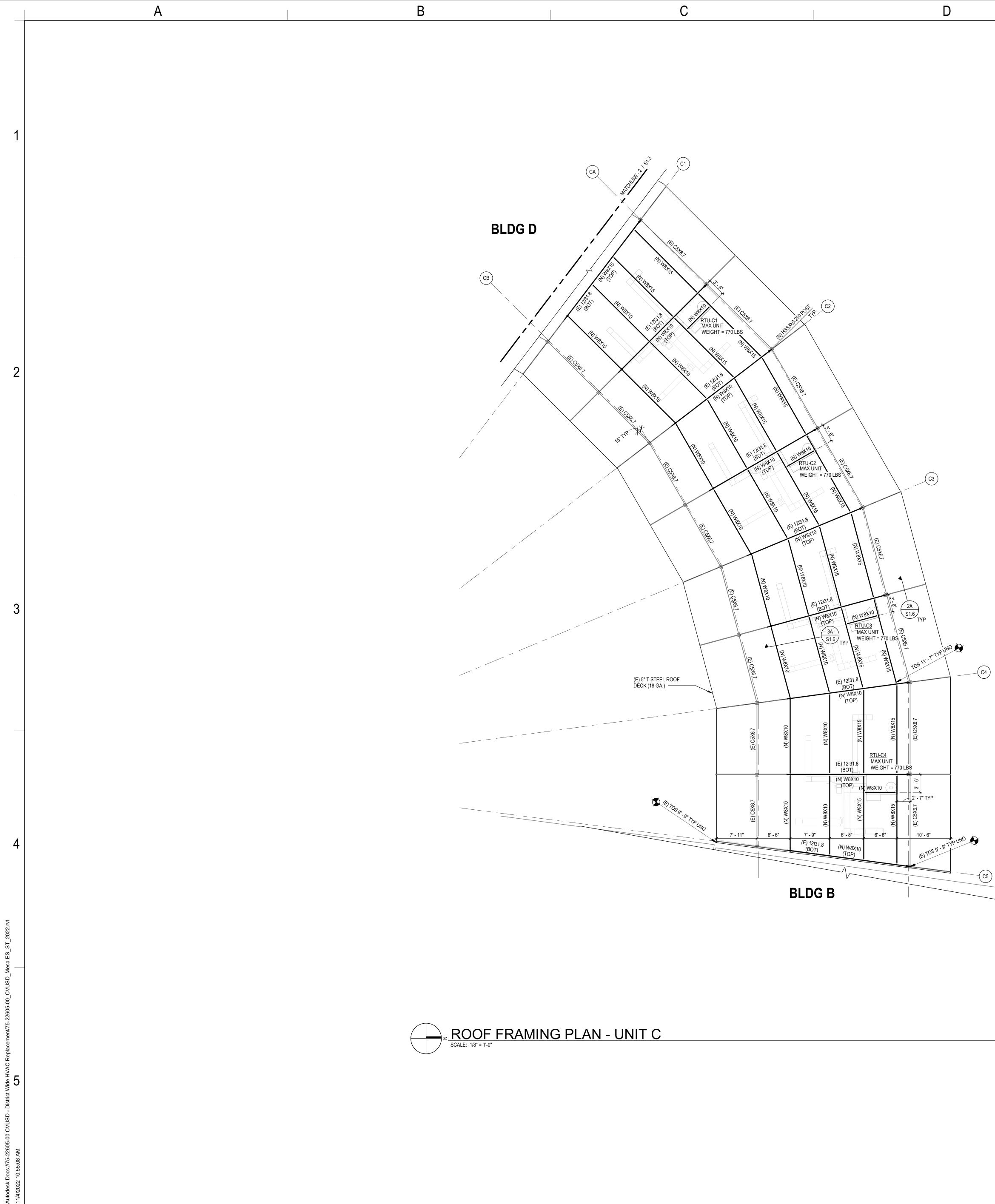
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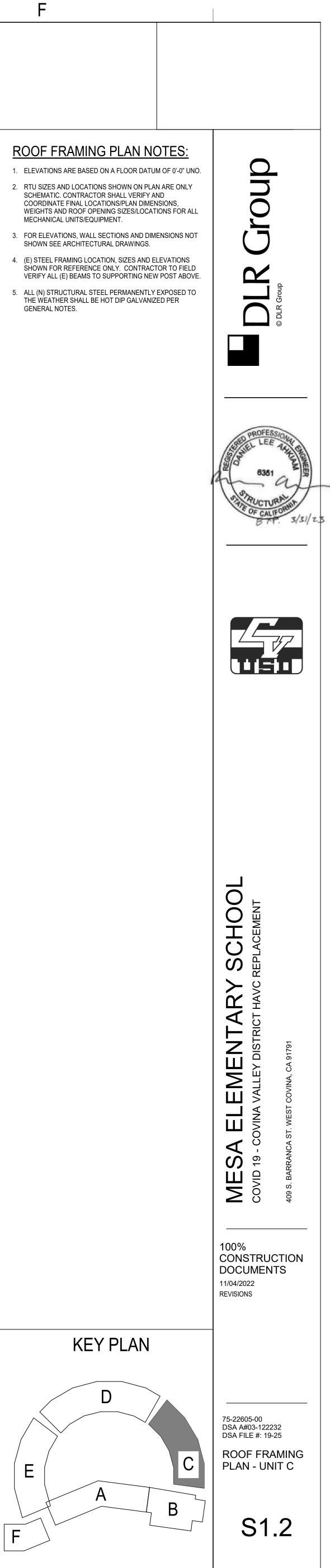
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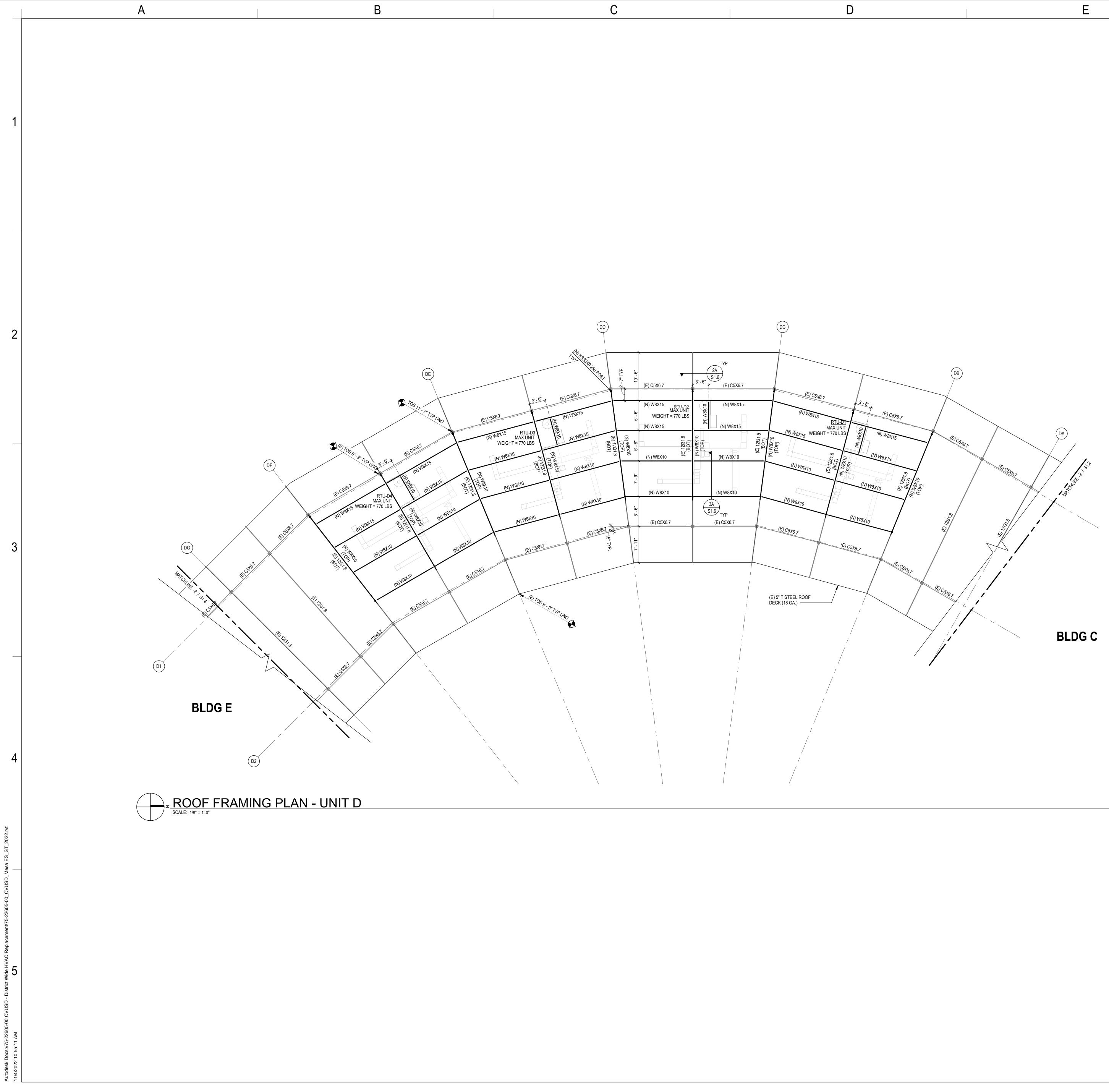




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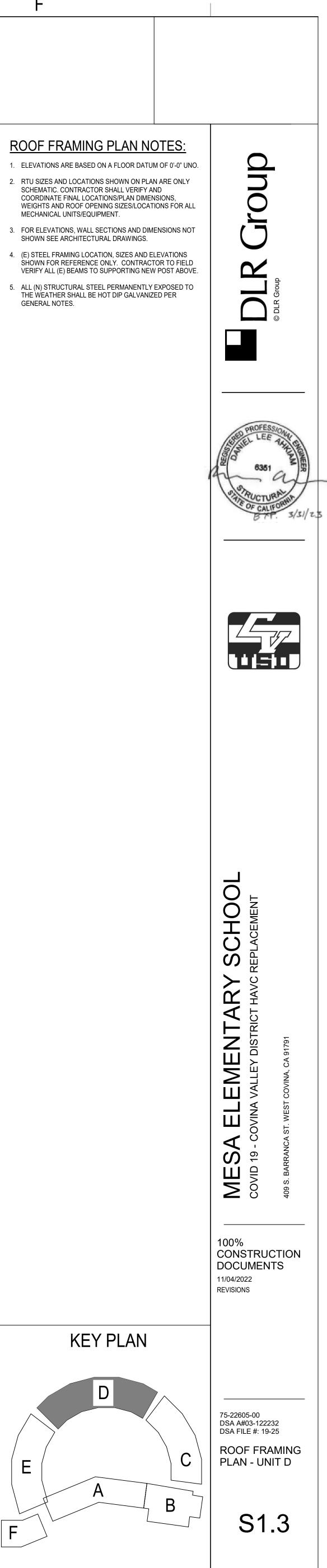


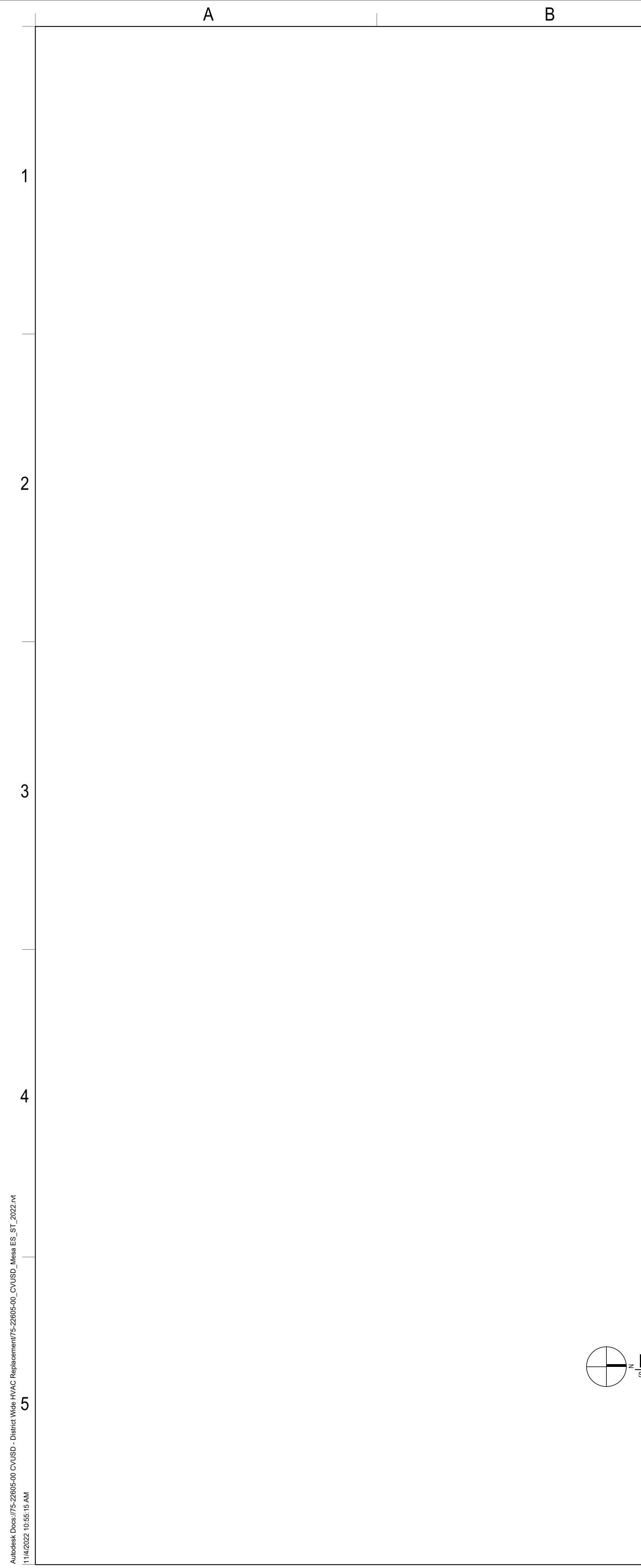
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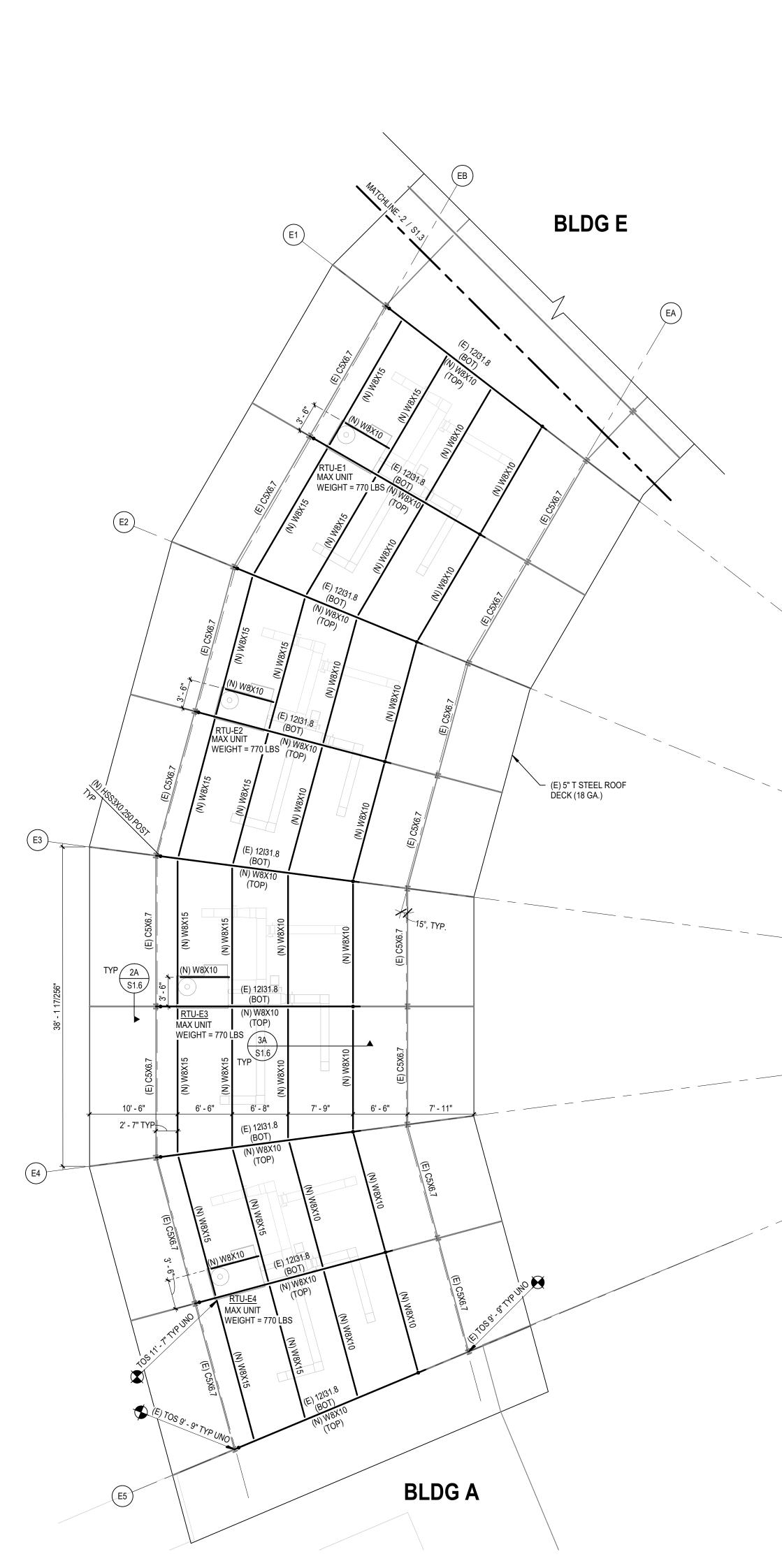
- MECHANICAL UNITS/EQUIPMENT.

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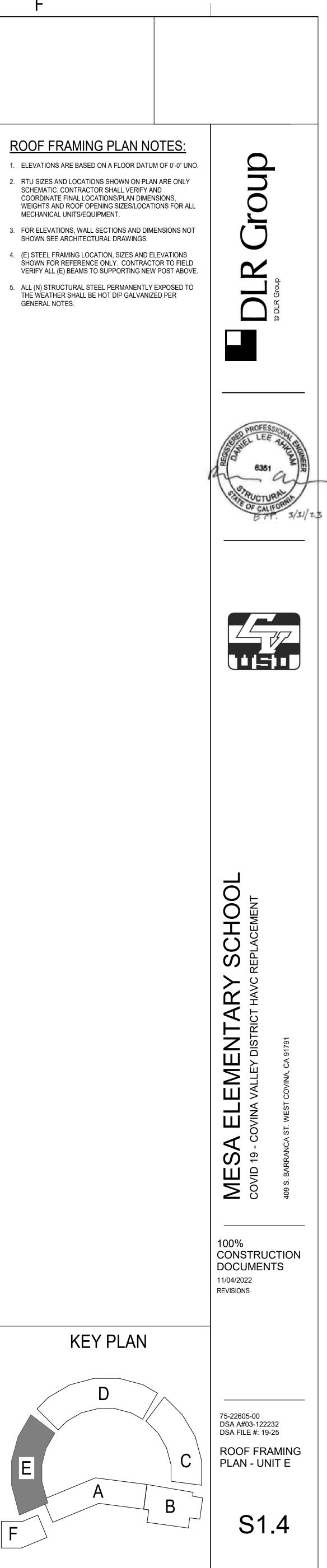
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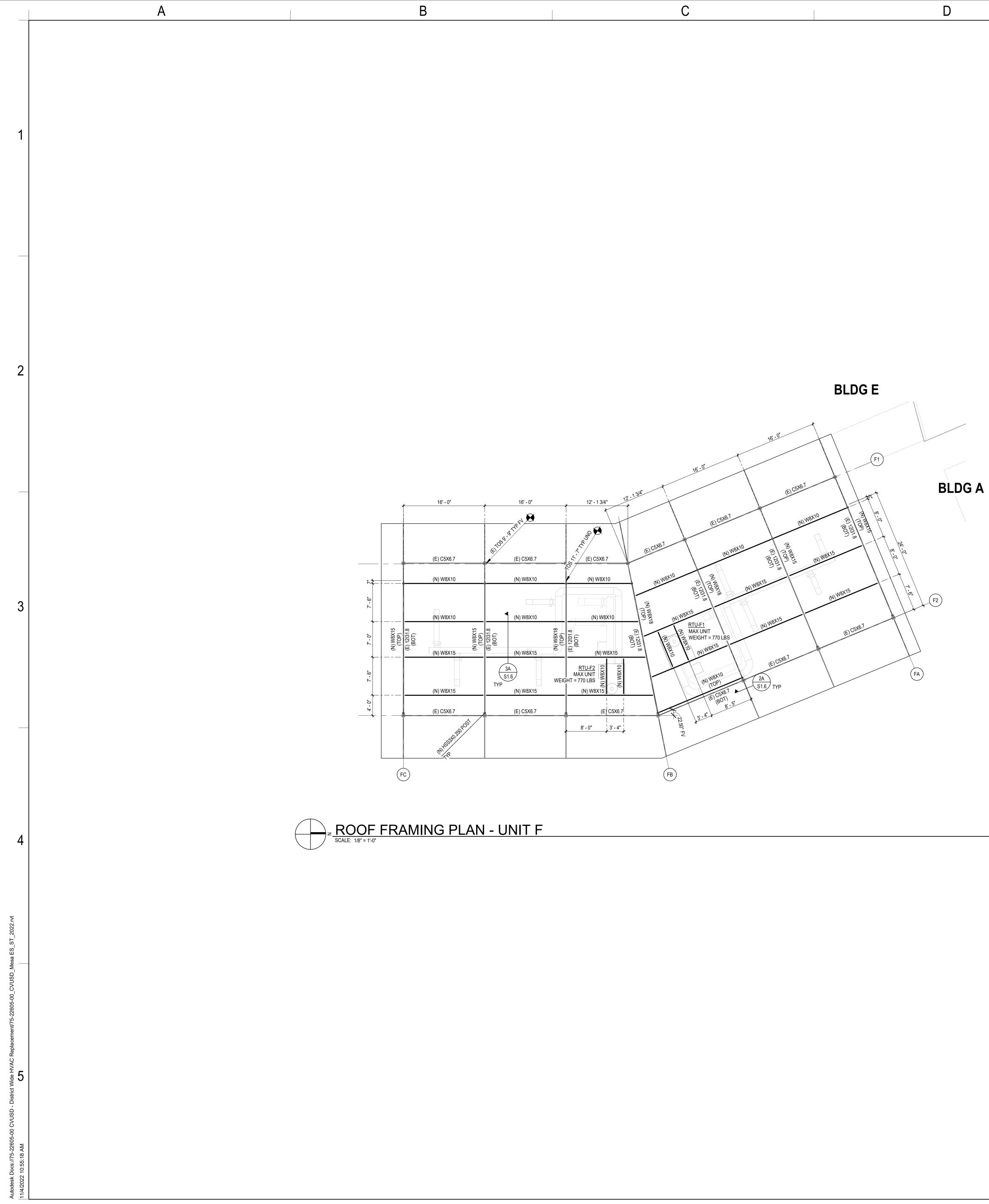
ROOF FRAMING PLAN - UNIT E

- MECHANICAL UNITS/EQUIPMENT.

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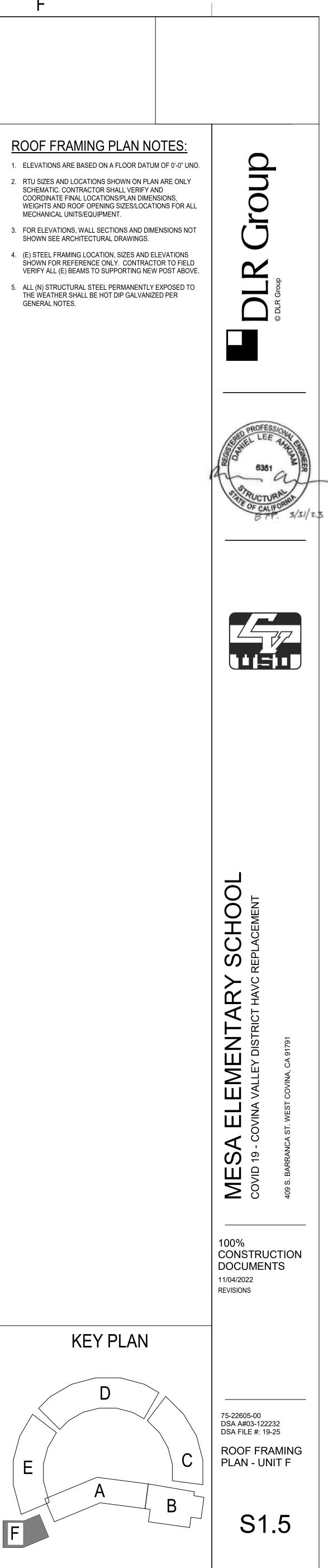


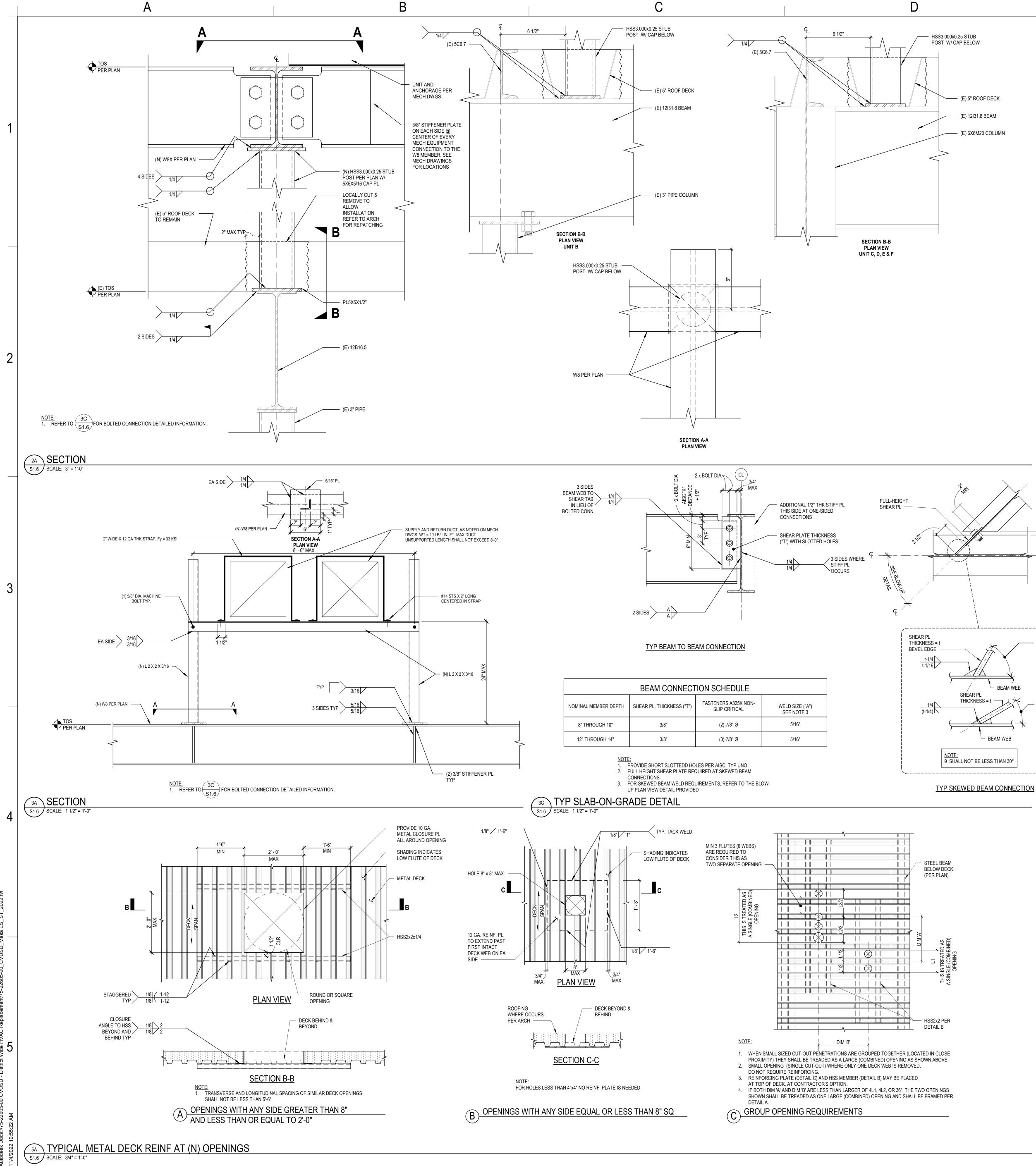


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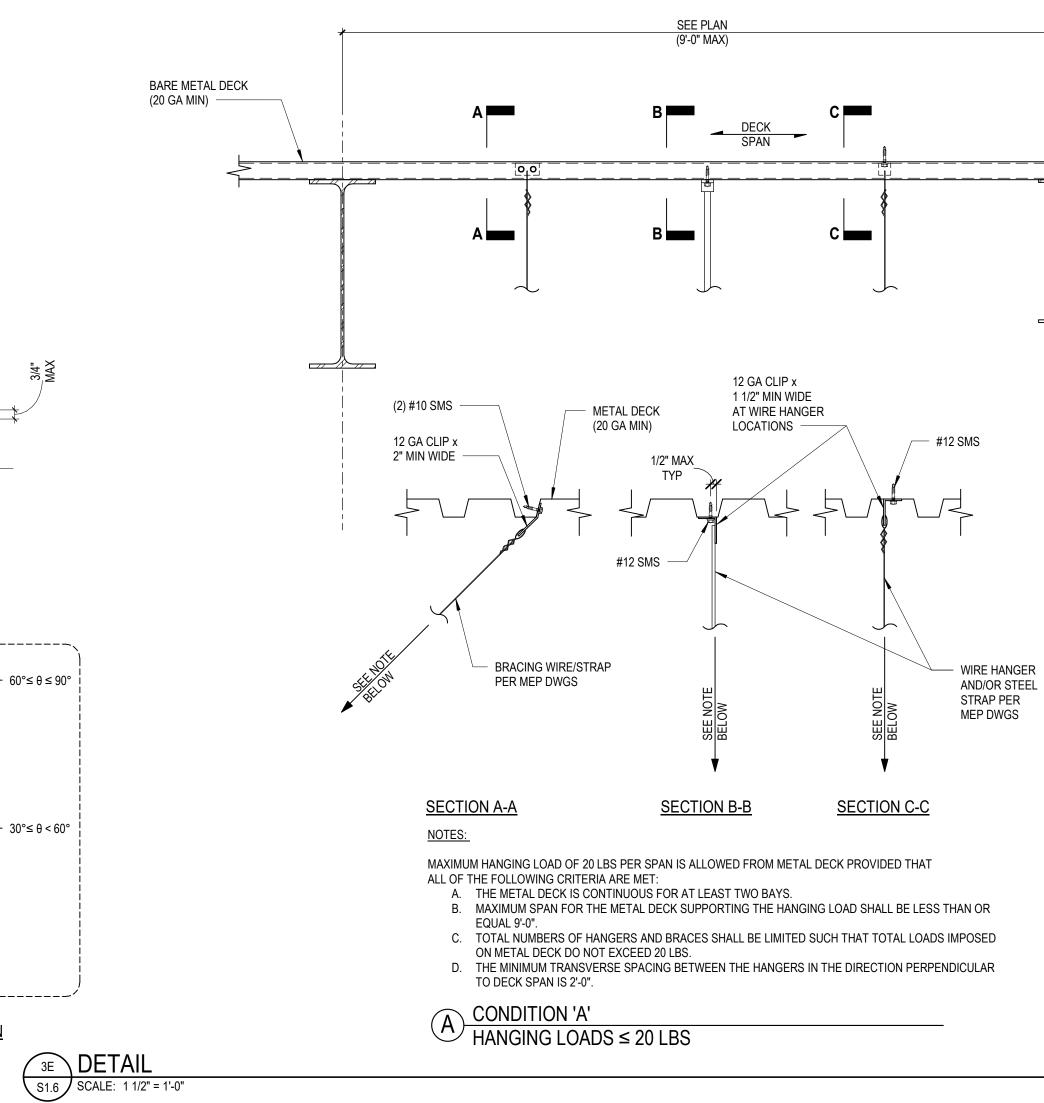
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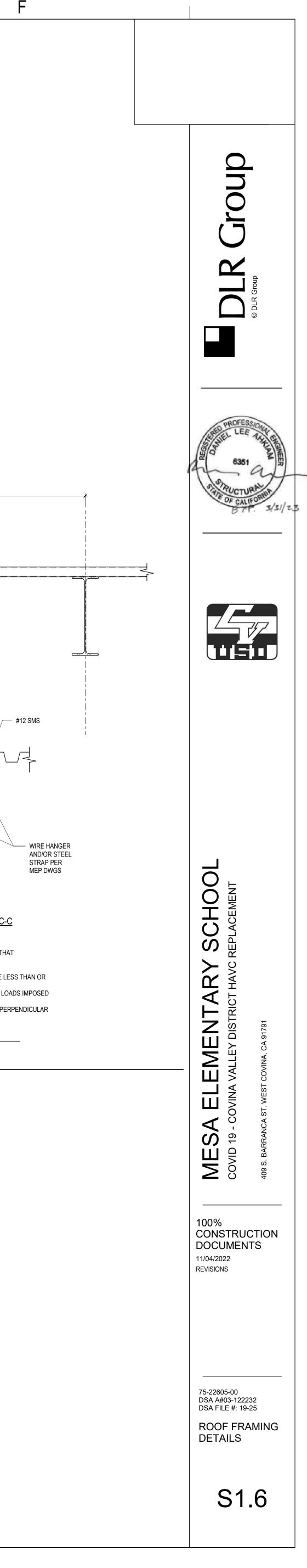




BEAM WEB

BEAM WEB





ABBREVIATIONS

	(D) (E) (R) °C °F	DEMOLISHED EXISTING RELOCATED DEGREES CELSIUS DEGREES FAHRENHEIT	HTWS HUM HV HVAC HWR
	Ø A A/C AABC AAV	DIAMETER AMPERE AIR CONDITIONING(ER) ASSOCIATED AIR BALANCE COUNCIL AUTOMATIC AIR VENT	HWS HX HZ IAQ IAW
	ACC ACCU AD ADJ AF AHRI	ACCESSIBLE AIR COOLED CONDENSING UNIT ACCESS DOOR ADJUSTABLE AIR FILTER AIR-CONDITIONING HEATING AND REFRIGERATION	ID IH INSUL KH
	ahu Amb Amba Amp Ap	INSTITUTE AIR HANDLING UNIT AMBIENT AMERICAN BOILER MANUFACTURERS ASSOCIATION AMPERE ACCESS PANEL	LAT LF LG LIN LOX LPG
	AS ASCE ASHRAE ASME AUTO AV	AIR SEPARATOR AMERICAN SOCIETY OF CIVIL ENGINEERS AMERICAN SOCIETY OF HEATING REFRIGERATION AND AIR CONDITIONING ENGINEERS AMERICAN SOCIETY OF MECHANICAL ENGINEERS AUTOMATIC ACID VENT	LPR LPS LTD LV LVG
	B BAS BAT BBO	BOILER BUILDING AUTOMATION SYSTEM BATTERY BOILER BLOW OFF	MA MAINT MAN MATL MAU MAV
	BC BC BDD BF BFF BFV	BALANCING COCK BARE COPPER BACK DRAFT DAMPER BOILER FEED BELOW FINISH FLOOR BUTTERFLY VALVE	MBH MFRG ML MPG MTD
1	BHP BLKG BLKHD BMS BOD	BREAK HORSEPOWER BLOCKING BULKHEAD BUILDING MANAGEMENT SYSTEM BOTTOM OF DUCT	MTG MTWR MTWS N.C. N.O.
	BOT BPIP BTU BTUH	BOTTOM BOILER PLANT INSTRUMENTATION PANEL BRITISH THERMAL UNIT BRITISH THERMAL UNIT PER HOUR	NEC NEMA NO NOM
	C CA CAP CD CENT CF	CONDUIT COMBUSTION AIR CAPACITY CONSTRUCTION DOCUMENTS CENTRIFUGAL CUBIC FEET	O&M OA OD P
	CFH CFM CH CIRC CLR	CUBIC FEET PER HOUR CUBIC FEET PER MINUTE CHILLER CIRCULATING CLEAR	P/T PB PCF PD PERF PERP
	CO CO2 COMB CONV CP CPS	CARBON MONOXIDE CARBON DIOXIDE COMBINATION CONVECTOR CONDENSATE PUMP CYCLES PER SECOND	PG PI PI PL PLBG
	CR CR CRAC CS CS	CONDENSER WATER RETURN CORROSION RESISTANT COMPUTER ROOM AIR CONDITIONING UNIT COUNTERSINK CONDENSER WATER SUPPLY	PNEU PNL POC PR PSI PVC
	CT CTL CU CUH CWR CWS	COOLING TOWER CONTROL CONDENSING UNIT CABINET UNIT HEATER CHILLED WATER RETURN CHILLED WATER SUPPLY	PWR RA RAD RAD RAD
	CYL D DB DB DBL	CYLINDER DIFFUSER DECIBEL DRY BULB DOUBLE	RCP RCU RD REFR REG
	DC DEPT DH DI DIAG	DUST COLLECTOR DEPARTMENT DUCT HEATER DISTILLED WATER DIAGONAL	REM RESP RF RH RH RHC
	DIC DISCH DISTR DSTB EA	DISCHARGE DISCHARGE DISTRIBUTION DISTRIBUTED EACH	RHG RL RPM RS RTU
	EA EAT EDH EER EF EFF	EXHAUST AIR ENTERING AIR TEMPERATURE ELECTRIC DUCT HEATER ENERGY EFFICIENCY RATIO EXHAUST FAN EFFICIENCY	S SA SC SD SD
	EFF EH ELEV EMER ENCL	EFFICIENCY ELECTRICAL HEATER ELEVATOR EMERGENCY ENCLOSURE	SD SE SGL SP SPD SQ
	ENT ESP EST ET EWT EXH	ENTERING EXTERNAL STATIC PRESSURE ESTIMATE EXPANSION TANK ENTERING WATER TEMPERATURE EXHAUST	SS STOR SUSP SV SWP
	EXP F F.V.	EXPOSED FAHRENHEIT FURNACE FIELD VERIFY	T T&B TA TB TC
	FA FAB FCU FD FF FLEX	FACE FABRICATE(D) FAN COIL UNIT FIRE DAMPER FINISH FLOOR FLEXIBLE	TD TEMP THK TOD TS TSP
	FME FPM FS FSD FT	FLOW MEASURING EQUIPMENT FEET PER MINUTE FLOW SWITCH FIRE SMOKE DAMPER FIN TUBE	UC UG UH
	G GA GAL GALV GFI, GFCI	GRILLE GAUGE GALLON GALVANIZED GROUND FAULT CIRCUIT INTERRUPTER	UL UV V VA VA
	GHR GHS GPD GPH GPM GV	GLYCOL-WATER HEATING RETURN GLYCOL-WATER HEATING SUPPLY GALLONS PER DAY GALLONS PER HOUR GALLONS PER MINUTE GATE VALVE	VAC VAV VD VEL VENT
	HCR HCS HGR HID	HOT/CHILLED WATER RETURN HOT/CHILLED WATER SUPPLY HANGER HIGH INTENSITY DISCHARGE	VFD VOL VP VSMP W
	HP HP HP HPR HPS	HORSE POWER HEAT PUMP HIGH PRESSURE HIGH PRESSURE STEAM RETURN HIGH PRESSURE STEAM SUPPLY	W WB WC WCC WFMD
	HR HTG HTR HTWR	HOUR HEATING HEATER HIGH TEMPERATURE HOT WATER RETURN	WH WLR WLS WP WT
: [

ABBREVIATIONS

HIGH TEMPERATURE HOT WATER SUPPLY HUMIDIFIER HEATING VENTILATING UNIT HEATING VENTILATING AND AIR CONDITIONING HEATING WATER RETURN HEATING WATER SUPPLY HEAT EXCHANGER HERTZ (FREQUENCY) INDOOR AIR QUALITY IN ACCORDANCE WITH INSIDE DIAMETER INTAKE HOOD INSULATION KITCHEN HOOD LEAVING AIR TEMPERATURE LINEAR FOOT LENGTH (LONG) LINEAR LIQUID OXYGEN LIQUIFIED PETROLEUM GAS LOW PRESSURE STEAM RETURN LOW PRESSURE STEAM SUPPLY LINED TRANSFER DUCT LOUVER LEAVING MIXED AIR MAINTENANCE MANUAL MATERIAL MAKEUP AIR UNIT MANUAL AIR VENT THOUSAND BTU PER HOUR MANUFACTURING MOTORIZED LOUVER MEDIUM PRESSURE GAS MOUNTED MOUNTING MEDIUM TEMP HOT WATER RETURN MEDIUM TEMP HOT WATER SUPPLY NORMALLY CLOSED NORMALLY OPEN NATIONAL ELECTRIC CODE NATIONAL ELECTRICAL MANUFACTURERS ASSN NUMBER NOMINAL **OPERATION AND MAINTENANCE** OUTSIDE AIR OUTSIDE DIAMETER PUMP PRESSURE/TEMPERATURE TEST PORT PUSH BUTTON POUNDS PER CUBIC FOOT PRESSURE DROP PERFORATED PERPENDICULAR PRESSURE GAUGE POINT OF INTERSECTION PRESSURE INDICATOR PLATE PLUMBING PNEUMATIC PANEL POINT OF CONNECTION PAIR POUNDS PER SQUARE INCH POLYVINYL CHLORIDE POWER **RETURN AIR** RADIUS RADIATOR RADIATED REFLECTED CEILING PLAN RECIPROCATING CHILLER UNIT REFRIGERANT DISCHARGE REFRIGERANT REGISTER REMOVABLE RESPONSIVE RETURN FAN RELATIVE HUMIDITY REFLIEF HOOD REHEAT COIL REFRIGERANT HOT GAS REFRIGERANT LIQUID **REVOLUTIONS PER MINUTE** REFRIGERANT SUCTION ROOF TOP UNIT SMOKE DAMPER SUPPLY AIR SECURITY SMOKE DAMPER SMOKE DETECTOR SOAP DISPENSER STEAM EXHAUST VENT SINGLE STATIC PRESSURE (H2O) SURGE PROTECTION DEVICE SQUARE STAINLESS STEEL STORAGE SUSPENDED SOLENOID VALVE STEAM WORKING PRESSURE THERMOSTAT TOP AND BOTTOM TRANSFER AIR TERMINAL BOX TEMPERATURE CONTROL TRANSFER DUCT TEMPERATURE THICK(NESS) TOP OF DUCT TEMPERATURE SENSOR TOTAL STATIC PRESSURE TEMPERATURE TRANSMITTER UNIT COOLER UNDERGROUND UNIT HEATER UNDERWRITERS LABORATORIES UNIT VENTILATOR VOLT VOLT-AMPERE VALVE VACUUM VARIABLE AIR VOLUME VOLUME DAMPER VELOCITY VENTALATOR(TION) VARIABLE FREQUENCY DRIVE VOLUME VACUUM PUMP VARIABLE SPEED MOTOR CONTROLLER WIDE WATT WET BULB WATER COLUMN

WATER COOLED CONDENSER

WATER HEATER

WATER LOOP RETURN

WATER LOOP SUPPLY

WEATHERPROOF

WEIGHT

WATER FLOW MEASURING DEVICE

B

M0.1	MECHANICAL SYMBOLS, ABB
M0.2	TITLE 24 COMPLIANCE
M0.3	TITLE 24 COMPLIANCE
M0.4	TITLE 24 COMPLIANCE
M0.5	TITLE 24 COMPLIANCE
M1.1	MECHANICAL SITE PLAN
M1.1B	BUILDINGS B AND F MECHAN
M1.1C	BUILDINGS C, D AND E MECH
M3.1B	BUILDINGS B AND F MECHAN
M3.1C	BUILDINGS C, D AND E MECH
M5.1	CONTROLS DIAGRAMS
M7.1	MECHANICAL DETAILS
M7.2	MECHANICAL DETAILS
M7.3	MECHANICAL DETAILS
M7.4	MECHANICAL DETAILS
M7.5	MECHANICAL DETAILS
M8.1	MECHANICAL SCHEDULES

26 AND 30.

- 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:

- COMPONENT.
- FROM A WALL.

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 PRE-APPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2019 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.

SYSTEMS (E):

SHEET INDEX

BREVIATIONS & NOTES

NICAL FLOOR PLAN HANICAL FLOOR PLANS NICAL ROOF PLANS HANICAL ROOF PLAN

MP1.1 MECHANICAL PLUMBING SITE PLAN

EQUIPMENT 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,

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 MANNER

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

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

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.

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

MPX MDX PP E OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP MD PP E OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) #0043-13.

YMBOLS

	POINT OF DISCONNECT - DEMOLITION REMOVE EXISTING
→	POINT OF CONNECTION - NEW CONNECTS TO F
	AREA NOT IN CONTRACT

GENERAL NOTES

- 1 THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERI TO FINAL BID, ALL EXISTING CONDITIONS FOR PLUMBING AND MECHANICA
- 2 WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PF CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTR
- 3 COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, C/ STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
- 4 THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH B THOSE ILLUSTRATED BY THESE DOCUMENTS AS WELL AS THOSE WHICH (REASONABLY ANTICIPATED INCLUDING, BUT NOT LIMITED TO ARCHITECTU ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED (PROJECT
- 5 FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM. AND CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
- 6 INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFA WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WOR CONSISTENT WITH THE SPECIFICATIONS. 7 FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN C
- SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS. 8 LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON TH ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD.
- BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN 1 9 REFER TO MECHANICAL SERIES DRAWINGS FOR GAS AND A.C. CONDENSA
- 10 ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECH EQUIPMENT.

GENERAL HVAC NOTES

- 1 CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT SHALL ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY
- STATE, AND LOCAL CODES. CONDENSATE PIPING SHALL BE TYPE "L" COPI 2 ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PF
- CLASS OF 2" W.G. UNLESS NOTED OTHERWISE. 3 THIS CONTRACTOR SHALL BE REQUIRED TO REPLACE FILTERS ON HVAC E
- AFTER ALL DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND FINAL PUNCH.

ACCEPTANCE TESTING

MANDATORY ACCEPTANCE TESTING PER TITLE 24, PART 6 SHALL BE AS FOLLOWS: AN AABC AGENCY SHALL ACT AS THE ACCEPTANCE AGENT AND PERFORM WORK REQUIRED IN THE FOLLOWING ACCEPTANCE TESTS AS DESCRIBED IN CHAPTER 13 OF THE 2019 NONRESIDENTIAL COMPL MANUAL. THIS SHALL INCLUDE FILLING OUT, SIGNING, AND SUBMITTING APPLICABLE FORMS LISTED HER

NRCA-MCH-02-A – OUTDOOR AIR ACCEPTANCE NRCA-MCH-03-A – CONSTANT VOLUME, SINGLE ZONE, UNITARY AIR CONDITIONER AND HEAT PUMP SYSTEMS. NRCA-MCH-04-A – AIR DISTRIBUTION SYSTEMS ACCEPTANCE

- NRCA-MCH-05-A AIR ECONOMIZER CONTROLS ACCEPTANCE NRCA-MCH-06-A – DEMAND CONTROL VENTILATION SYSTEMS ACCEPTANCE
- NRCA-MCH-07-A SUPPLY FAN VFD ACCEPTANCE NRCA-MCH-08-A – VALVE LEAKAGE TEST NRCA-MCH-11-A – AUTOMATIC DEMAND SHED CONTROL ACCEPTANCE
- NRCA-MCH-12-A FAULT DETECTION & DIAGNOSITCS (FDD) FOR PACKAGED DIRECT EXPANSION UN NRCA-MCH-13-A – AUTOMATIC FAULT DETECTION & DIAGNOSITCS (FDD) FOR AIR HANDLING UNITS & TERMINAL UNITS ACCEPTANCE
- NRCA-MCH-16-A SUPPLY AIR TEMPERATURE RESET CONTROLS ACCEPTANCE NRCA-MCH-18-A – ENERGY MANAGEMENT CONTROL SYSTEM ACCEPTANCE

MECHANICAL MANDATORY MEASURES

EQUIPMENT AND SYSTEMS EFFICIENCY

ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STADARD ESTABLHISHED IN THE APPLIANCE EFFIC STANDARDS SHALL COMPLY WITH THAT STANDARD.

PIPING, EXCEPT THOSE CONVEYING FLUIDS WITH A DESIGN OPERATING TERMPERATURE BETWEEN 60° 105°F, OR WITHIN SPACE-CONDITIONING EQUIPMENT CERTIFIED UNDER, §110.1 OR §110.2, SHALL BE INS IN ACCORDANCE WITH §120.3.

ALL AIR DISTRIBUTION SYSTEM DUCTS AND PLENUMS ARE REQUIRED TO BE INSTALLED, SEALED, AND INSULATED IN ACCORDANCE WITH THE CALIFORNIA MECHANICAL CODE (CMC) SECTIONS 601, 602, 603, 6 AND ANSI/SMACNA-006-2006 HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE 3RD EDITION

VENTILATION

CONTROLS SHALL BE PROVIDED TO ALLOW OUTSIDE AIR DAMPERS OR DEVICES TO BE OPERATED AT T VENTILATION RATES AS SPECIFIED IN THESE PLANS.

ALL GRAVITY VENTILATING SYSTEMS SHALL BE PROVIDED WITH AUTOMATIC OR READILY ACCESSIBLE MANUALLY OPERATED DAMPERS IN ALL OPENINGS TO THE OUTSIDE.

AIR BALANCING: ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH THE ASSOCIATED AIR BALANCE COUNC (AABC) NATIONAL STANDARDS.

GRAVITY OR AUTOMATIC DAMPERS INTERLOCKED AND CLOSED ON FAN SHUTDOWN SHALL BE PROVIDI THE OUTSIDE AIR INTAKES AND DISCHARGES OF ALL SPACE CONDITIONING AND EXHAUST SYSTEMS. FANS USED FOR VENTIALATION SHALL OPERATE CONTINUOUSLY DURING OCCUPIED HOURS.

THE MINIMUM OUTDOOR AIR LISTED OR THREE COMPLETE AIR CHANGES SHALL BE SUPPLIED TO THE E BLDG. DURING THE ONE HOUR PERIOD IMMEDIATELY BEFORE THE BLDG. IS NORMALLY OCCUPIED.

CONTROLS

PROVIDES MECHANICAL COOLING.

EACH SPACE CONDITIONING ZONE SHALL BE CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL RESPONDS TO THE SUPPLY OF HEATING AND COOLING ENERGY WITHIN THAT ZONE §120.2(a). WHEN US CONTROL HEATING. THE THERMOSTATIC CONTROL MUST BE ADJUSTABLE UP TO 55°F OR LOWER. FOR COOLING, THE THERMOSTATIC CONTROL MUST BE ADJUSTABLE UP TO 85°F OR HIGHER. WHEN USED T CONTROL BOTH HEATING AND COOLING, THE THERMOSTATIC THE CONTROL MUST BE ADJUSTABLE FROM TO 85°F AND ALSO PROVIDE A DEAD BAND OF AT LEAST 5°F WITHIN WHICH THE SUPPLY OF HEATING AN COOLING IS SHUT OFF OR REDUCED TO A MINIMUM.

EACH SPACE CONDITIONING SYSTEM SERVING BUILDING TYPES SUCH AS OFFICES AND MANUFACTURIN FACILITIES (AND ALL OTHERS NOT EXPLICITLY EXEMPT FROM THE REQUIREMENTS OF SECTION 112 (D)) BE INSTALLED WITH AN AUTOMATIC TIME SWITCH WITH AN ACCESSIBLE MANUAL OVERRIDE THAT ALLC OPERATION OF THE SYSTEM DURING OFF-HOURS FOR UP TO 4 HOURS. THE TIME SWITCH SHALL BE CA OF PROFGRAMMING DIFFERENT SCHEDULES FOR WEEKDAYS OR WEEKENDS. INCORPORATE AN AUTOI HOLIDAY "SHUTOFF" FEATURE THAT TURNS OFF ALL LOADS FOR AT LEAST 24 HOURS, THEN RESUMES 1 NORMALLY SCHEDULED OPERATION; AND HAS PROGRAM BACKUP CAPABILITIES THAT PREVENT THE LC

THE DEVICES PROGRAM AND TIME SETTING FOR AT LEAST 10 HOURS IF POWER IS INTERRUPTED. SYSTEM WITH DDC TO THE §110.2(c) ARE ALSO REQUIRED TO HAVE AUTOMATIC DEMAND SHED CONTRO EACH SPACE CONDITIONING SYSTEM MUST BE PROVIDED WITH CONTROLS THAT CAN AUTOMATICALLY OFF THE EQUIPMENT DURING UNOCCUPIED HOURS. WHEN SHUT DOWN, THE CONTROLS SHALL AUTOMATICALLY RESTART THE SYSTEM TO MAINTAIN A SETBACK HEATING THERMOSTAT SETPOINT, IF SYSTEM PROVIDES MECHANICAL HEATING AND SETPU COOLING THERMOSTAT SETPOINT, IF THE SYSTE

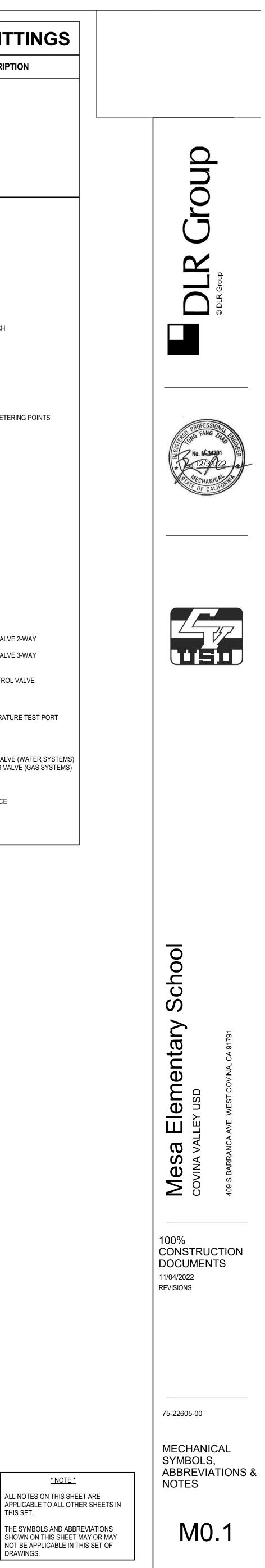
THERMOSTATS SHALL HAVE NUMERIC SETPOINTS IN DEFREES FAHRENHEIT (F) AND ADJUSTABLE STOPS ACCESSIBLE ONLY BY AUTHORIZED PERSONNEL.

С

(GEN	AL	S١

.S	HV	AC SYMBOLS
I REMOVED FROM	SCHEMATIC	3D DESCRIPTION
ECTS TO EXISTING	جـــــ FEA ـــــــ ک	FEA GAS FLUE EXHAUST AIR
		EA GENERAL EXHAUST AIR
		GEA GREASE EXHAUST AIR
LD VERIFYING, PRIOR HANICAL SYSTEMS.		SMOKE EXHAUST AIR
TION, PREVENT G DRAIN OPENING		
CONSTRUCTION. CHTS, CABLE TRAY,	∠ та {	TA TRANSFER AIR
BOTH EXISTING AND WHICH CAN BE	∠ CA Z	CA COMBUSTION AIR
HITECTURAL, DLVED ON THIS		
M, AND SHALL TE, AND LOCAL CODES, DDE AND	→ SA →	SA SUPPLY AIR
MANUFACTURER'S ND WORKMANSHIP		DIFFUSER (SUPPLY)
IOWN ON THE		GRILLE (RETURN)
NS. D ON THE DRAWING, E FIELD. WORK SHALL		GRILLE (EXHAUST)
NCE IN THE FIELD. NDENSATE DRAIN		
O MECHANICAL		LINEAR DIFFUSER (SLOT)
		r AIR FLOW MEASURING STATION r BACKDRAFT DAMPER
IPMENT. CONTRACTOR	RD RD	r → BAROMETRIC RELIEF DAMPER DIFFERENTIAL PRESSURE SENSOR
RED BY FEDERAL, 'L" COPPER.		
		r GRAVITY DAMPER P MOTORIZED DAMPER
TED AND PRIOR TO THE		r PRESSURE REDUCING DAMPER ► SECURITY BARS
	SP - SP	static pressure sensor
1		r → VOLUME DAMPER r → REMOTE VOLUME DAMPER
	F ▲ F F	FIRE DAMPER
	s A s	SMOKE DAMPER
THE		ROUND DUCT UP
. COMPLIANCE TED HEREIN.		RECTANGULAR DUCT UP
PUMP		OVAL DUCT UP
		ROUND DUCT DOWN
SION UNITS UNITS & ZONE		RECTANGULAR DUCT DOWN
		OVAL DUCT DOWN
		MITERED ELBOW WITH VANES
		MITERED ELBOW WITHOUT VANES
ES		RADIUSED ELBOW
-		
		TEE WITH VANES
EEN 60°F AND		
L BE INSULATED		RADIUSED TEE
D, AND 02, 603, 604, 605, EDITION.		
	<u>}</u>	DUCT WITH INSULATION
ED AT THE	 	DUCT WITH LINING
SSIBLE		DUCT IS FABRIC
) THE		FLEXIBLE DUCT
COUNCIL		FLEXIBLE DUCT TRANSFER DUCT
PROVIDED ON TEMS.	0	DUCT SMOKE DETECTOR
O THE ENTIRE	← ←	SUPPLY ARROW RETURN ARROW
ED.	دد د ار	EXHAUST ARROW
ONTROL THAT	UC 100	DOOR UNDERCUT ARROW WITH CFM
/HEN USED TO ER. FOR	D-1	DIFFUSER, REGISTER OR GRILLE TAG NECK SIZE (00"x00" - SQ / RECT) (0"Ø ROUND) AIR FLOW (CUBIC FEET PER MINUTE)
USED TO ABLE FROM 55°F TING AND	200 CFM	TYPICAL DUCT - SIZE AS INDICATED
ACTURING		(WIDTH x DEPTH) SIZE INDICATED FREE AREA
112 (D)) SHALL AT ALLOWS L BE CAPABLE		MECHANICAL EQUIPMENT TAG
N AUTOMATIC SUMES THE T THE LOSS OF	<u> </u>	CARBON DIOXIDE SENSOR - WALL MOUNTED
CONTROLS.	© ₀₂	CARBON DIOXIDE SENSOR - CEILING MOUNTED
TICALLY SHUT	୍ର ତ୍ୱ	CARBON MONOXIDE SENSOR - WALL MOUNTED CARBON MONOXIDE SENSOR - CEILING MOUNTED
OINT, IF THE E SYSTEM	P ®	HUMIDISTAT - WALL MOUNTED HUMIDISTAT - CEILING MOUNTED
LE STOPS	<u>\$</u> 2	NITROGEN DIOXIDE SENSOR - WALL MOUNTED
	ଷ୍ _{ପ2} ମୁ	NITROGEN DIOXIDE SENSOR - CEILING MOUNTED PRESSURE SENSOR - WALL MOUNTED
	®	PRESSURE SENSOR - CEILING MOUNTED
	<u>ହ</u> ୭	TEMPERATURE SENSOR - WALL MOUNTED TEMPERATURE SENSOR - CEILING MOUNTED
	Ω	

PIPING VALVES AND FITTIN					
SCHEMATIC	3D	DESCRIPTION			
∂		PIPE DROP			
→		PIPE RISE			
; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	$\left\{ \left(\overline{c} \right) \right\}$	PIPE TEE DOWN			
→−−		PIPE TEE UP			
∠ ►		CONCENTRIC REDUCER			
		ECCENTRIC REDUCER			
(
		PIPE CAP			
		PIPE ALIGNMENT GUIDE			
≻−−−× −−→		PIPE ANCHOR			
├───		FLOW DIRECTION			
		EXPANSION JOINT			
→ KX3 → √		FLEXIBLE CONNECTION			
, , , , , , , , , , , , , , , , , , ,		UNION			
		DIRECTION OF PIPE PITCH			
<u> </u>		AQUASTAT			
		EXPANSION LOOP			
,,∎		BALANCING VALVE			
		BALANCING VALVE W/ METERING POIN			
کاھ⊢		BALL VALVE			
<u>ک</u> ا		BUTTERFLY VALVE			
	ـــــــــــــــــــــــــــــــــــــ	CHECK VALVE			
⊘ ?		STEAM TRAP			
$\longleftarrow \blacksquare$	ند الم	GATE VALVE			
		CIRCUIT SETTER			
, ₩		MANUAL AIR VENT			
		AUTOMATIC AIR VENT			
, , , , , , , , , , , , , , , , , , ,		PLUG VALVE			
×		PRESSURE GAUGE			
	B	SOLENOID VALVE			
, ≱ ~ ,		ANGLE VALVE			
		AUTOMATIC CONTROL VALVE 2-WAY			
		AUTOMATIC CONTROL VALVE 3-WAY			
		AUTOMATIC FLOW CONTROL VALVE			
		STRAINER			
		PRESSURE AND TEMPERATURE TEST			
		THERMOMETER			
		PRESSURE REDUCING VALVE (WATER			
		PRESSURE REGULATING VALVE (GAS			
		RELIEF VALVE			
	_	FLOW MEASURING DEVICE			
	╶───┸ᠿᠮ────	BACKFLOW PREVENTER			
<i>∠</i> II⊢~⟨		UNION			



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STATE OF CALIFORNIA Mechanical Systems

CERTIFICAT	TE OF COMPLIANCE								NRCC-MCH		
	ment is used to demonstrate compliance for ined in <u>§140.4</u> , or <u>§141.0(b)2</u> for alteratior		al systems that are v	within the sc	cope	of the permit applicat	tion and are	demonstrating com	pliance using the prescriptive		
Project Na	ime:		CVUSD Mesa Report Page:						(Page 1 of		
Project Ad	dress:		409 S Barr	ranca Ave Dat	te Pi	repared:			8/11/202		
A. GENEI	RAL INFORMATION	0									
01 Proje	ect Location (city)		West Covina		04	Total Conditioned Floo	or Area		17040		
02 Clima	ate Zone	111 112	10			Total Unconditioned F	loor Area		0		
03 Occur	pancy Types Within Project:	W.			06	# of Stories (Habitable	Above Grad	de)	1		
□ Office	e (B)	Retail (M)				Non-refrigerated War	ehouse (S)	20			
🗌 Hotel	I/ Motel Guest Rooms (R-1)	School (E)			Healthcare Facility (I)		50 L			
High-	Rise Residential (R-2/R-3)	Relocatab	ole Class Bldg (E)		\boxtimes	Other (write in)		2	See Table J		
1.1.2.2.2.2.2.2	ECT SCOPE Includes mechanical systems or component	ate that are	within the scope of t	the permit a	nnli	cation and are demon	strating com	ppliance using the p	rescriptive path outlined in		
	r <u>§141.0(b)2</u> for alterations.	its that ure	within the scope of t	the permit u	hhi	cation and are demon.	strating con	iphunce using the pi	escriptive path batimea in		
	01			02			1		03		
	Air System(s)		Wet	System Cor	mpo	nents		Components			
\boxtimes	Heating Air System		Water Ecc	onomizer				Air Economizer			
\boxtimes	Cooling Air System		Pumps					Electric Resistance	e Heat		
	Mechanical Controls		System Pi	ping				Fan Systems			
Mechanical Controls (existing to remain, altered or new)			Cooling To	owers				Ductwork (existir	ng to remain, altered or new)		
			Chillers					Ventilation			
		-	Boilers					Zonal Systems/ Te			

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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STATE OF CALIFORNIA Mechanical Systems

CALIFORM	IA ENERGY COMMISSION
	NRCC-MCH-E
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System Equi	ipment Sizing (includes air cond	ditioners, condensers, heat pumps, \	/RF, furnaces and u	unit heaters)						
01	02	03	04	05	06	07	08	09	10	11
RTU-E1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.29	22.5	0	24.15	23.5	31.67	28
RTU-E2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	23.2	22.5	29.7	26.7
RTU-E3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	23.2	22.5	29.7	26.7
RTU-E4	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.29	22.5	0	23.67	23	31.67	27.5
RTU-F1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	14.47	24.5	0	27.82	27.5	34.46	33.2
RTU-F2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	14.47	24.5	0	28.3	28	34.7	33.6

§140.4(a). Healthcare facilities are excepted. ²It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.

³ If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank. ⁴ Authority Having Jurisdiction may ask for load calculations used for compliance per <u>§140.4(b)</u>.

01	02	03	04	05	06	07	08	09
			Heati	ing Mode			Cooling Mode	
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
FCU/CU-B1	>=135,000 and <240,000		СОР	3.2	3.5	EER IEER	10.6 11.6	12 12.9

HSPF

Registration Number:

RTU-C1

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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STATE OF CALIFORNIA Mechanical Systems

CERTIFICATE OF CO	OMPLIANCE									NRCC-MCI
Project Name:					CVUSD Me	sa Repo	rt Page:			(Page 7 of
Project Address:				409 S I	Barranca Av	ve Date	Prepared:			8/11/20
-										
H. FAN SYSTEM	IS & AIR ECONO	MIZERS				-				<u>.</u>
System Name:	RTU-C3	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econor Contr		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume
01	02		03	04			05 06		07	08
Free Niesers and				Mariana Davias Carala	A 1-61				Fan Power Pressure Drop	Adjustment - Table 140.4
Fan Name or Item Tag	Fan Function Qty		Maximum Design Supply (CFM)	AITTIOW	HP Unit ²		Design HP	Device	Design Airflow throug Device (CFM)	
SF	Supply		1	1600		1	внр	0.91	NA	NA
Total Syster	m Design Supply /	Airflow (CF	: M):	1600	2003.100.4000	System (B)HP:	CONTRACTOR DURING THE CONTRACTOR	0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-C4	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econor Contr		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume
01	02	•	03	04		6	05	06	07	08
5 N				Martine Data Carda				Fan Power Pressure Drop /	Adjustment - Table 140.4	
Fan Name or Item Tag	Fan Functio	on	Qty	Maximum Design Supply (CFM)	AITTOW	W HP Unit ²		Design HP	Device	Design Airflow throug Device (CFM)
SF	Supply		1	1600		1	внр	0.91	NA	NA
Total Syster	m Design Supply A	Airflow (CF	·M):	1600	1754/17 1876 1970	System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-D1	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econor Contr		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume
01	02	·	03	04		ĺ.	05	06	07	08
Fan Name or	745			Maximum Design Supply	Airflow				Fan Power Pressure Drop /	Adjustment - Table 140.4
Item Tag	Fan Functio	on	Qty	(CFM)	AITTOW	HP	Unit ²	Design HP	Device	Design Airflow throug Device (CFM)
SF	Supply	30 - S	1	1600		I	внр	0.91	NA	NA
Total Syster	m Design Supply A	Airflow (CF	·M):	1600		System (B)HP:		0.91	Maximum System Fan Power (B)HP:	

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STATE OF CALIFORNIA Mechanical Systems

E. ADDITIONAL REMARKS

roject Name: roject Address:														NRCC-MCH-
roject Address:														(Page 2 of 36
Poject Address: 409 S Barranca Ave Date Prepared:													8/11/2023	
COMPLIANCE RE	SULTS				1			2						
able C will indicate if IOT COMPLY" or "CO												table b	y the user. If this to	able says "DOES
01	02		03		04		05		06		07		08	09
System AND §110.1, §110.2, §140.4	Pumps <u>§140.4(k)</u>	AND	Fans/ Economizers <u>§140.4(c)</u> , <u>§140.4(e)</u>	AND	System Controls <u>§110.2</u> , <u>§120.2</u> , <u>§140.4(f)</u>	AND	Ventilation §120.1	AND	Terminal Box Controls <u>§140.4(d)</u>	AND	Distribution <u>§120.3</u> , <u>§140.4(I)</u>	AND	Cooling Towers §110.2(e)2	Compliance Result
See Table F) ((See Table G)		(See Table H)	e	(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)]
Yes AND		AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		COMPLIES
			Mandatory	Measu	res Complian	ce (See	Table Q for D	etails)				COMP	LIES	ðu:

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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

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STATE OF CALIFORNIA Mechanical Systems

NRCC-MCH-E			CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE		~	NRCC-MCH-E
Project Name:	CVUSD Mesa	Report Page:	(Page 5 of 36)
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y System Equipment	Efficiency (other than Package	Ierminal Air Conditi	oners (PTAC) and	Package Terminal	Heat Pumps (PTHP	'))		
01	02	03	04	05	06	07	08	09
			Heati	ng Mode			Cooling Mode	
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficier
RTU-C2	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-C3	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-C4	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-D1	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-D2	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-D3	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-D4	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-E1	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-E2	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-E3	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-E4	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-F1	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3
RTU-F2	<65,000		HSPF	7.7	8.2	SEER	13.0	14.3

This section does not apply to this project.

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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STATE OF CALIFORNIA **Mechanical Systems**

IRCC-MCH-E										NRCC
Project Name:	JIVIPLIANCE				CVUSD Me	Reno	rt Page			(Page
Project Address:					Barranca A	1.00	154			8/2
	IS & AIR ECON	OMIZERS		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
System Name:	RTU-D2	Econon	nizer:1	NA: <=54 kBtu/h cooling	Econor		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volur
01	02		03	04		05		06	07	08
Fan Name or			2.	Maximum Design Supply Airflow		2	50		Fan Power Pressure Drop	Adjustment - Table 1
Item Tag	Fan Functi	on	Qty	(CFM)		HP Unit ²		Design HP	Device	Design Airflow the Device (CFM
SF	Supply		1	1600		BHP		0.91	NA	NA
Total Syster	n Design Supply	Airflow (CF	M):	1600	Total S	System (B)HP:	CONCERNMENT OF A CONCERNMENT OF	0.91	Maximum System Fan Power (B)HP:	
System Name:	KIU-U3 Fconomizer:		NA: <=54 kBtu/h cooling	Econon Contre		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volur	
01	01 02 03		03	04	.0	05	06	07	08	
Fan Nama an				Mauluum Daalan Cumalu				Fan Power Pressure Drop	Adjustment - Table 1	
Fan Name or Item Tag	Fan Functi	on	Qty	Maximum Design Supply Airflow (CFM)		HP	Unit ²	Design HP	Device	Design Airflow th Device (CFM
SF	Supply	6	1	1600		ВНР		0.91	NA	NA
Total Syster	n Design Supply	Airflow (CF	M):	1600	Total S	System (B)HP:		0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-D4	Econon	nizer:1	NA: <=54 kBtu/h cooling	Econon Contre		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volur
01	02	<u></u>	03	04	Î	-	05	06	07	08
Fan Name or	747 - 1474 - 1474			Maximum Design Supply	Airflow				Fan Power Pressure Drop	Adjustment - Table 1
Item Tag	Fan Functi	on	Qty	(CFM)	AIITIOW	HP	Unit ²	Design HP	Device	Design Airflow th Device (CFM
SF	Supply	3 	1	1600		E	знр	0.91	NA	NA
Total Syster	n Design Supply	Airflow (CF	M):	1600	Total S		Design	0.91	Maximum System Fan Power (B)HP:	

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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

Registration Provider: Energysoft Report Generated: 2022-08-11 14:41:53

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E
CERTIFICATE OF COMPLIANCE

CERTIFICATE OF COMPLIANCE Project Name: Project Address:

CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E (Page 3 of 36)

Dry System Equi	oment Sizing (includes air co	onditioners, condensers, heat pumps, VR	F, furnaces and u	unit heaters)						
01	02	03	04	05	06	07	08	09	10	11
					Equipme		er Mechanic <u>§140.4</u> (a&b		(kBtu/h)	
			Hea	ating Outpu	t ^{2,3}	Cooling (Dutput ^{2,3}	Load Calculations ^{3,4}		
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 / Title 20	Smallest Size Available ¹ §140.4(a)	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)
FCU/CU-B1	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	94.83	160.55	0	140.04	118.37	177.06	149.2
RTU-C1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.29	22.5	0	24.15	23.5	31.67	28
RTU-C2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	23.2	22.5	29.7	26.7
RTU-C3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	23.2	22.5	29.7	26.7
RTU-C4	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.29	22.5	0	23.67	23	31.67	27.56
RTU-D1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.29	22.5	0	23.57	23	29.7	28.12
RTU-D2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	24.04	23.5	29.7	28.12
RTU-D3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	24.04	23.5	29.7	28.12
RTU-D4	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	24.04	23.5	29.7	28.12

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409 S Barranca Ave Date Prepared:

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

System

Name:

Fan Name or

Item Tag

SF

System

Name:

01

Fan Name or

Item Tag

SF

System

Name:

01

Fan Name or

Item Tag

SF

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

System

Name:

Fan Name or

Item Tag

SF

System

Name:

01

Fan Name or

Item Tag

SF

System

Name:

01

Fan Name or

Item Tag

SF

01

Project Address:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

H. FAN SYSTEMS & AIR ECONOMIZERS

RTU-E1

02

Fan Function

Supply

02

Fan Function

Supply

02

Fan Function

Supply

Total System Design Supply Airflow (CFM):

Total System Design Supply Airflow (CFM):

RTU-E3

Total System Design Supply Airflow (CFM):

RTU-E2

01

Project Address:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

H. FAN SYSTEMS & AIR ECONOMIZERS

FCU/CU-B1

02

Fan Function

Supply

02

Fan Function

Supply

02

Fan Function

Supply

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Total System Design Supply Airflow (CFM):

Total System Design Supply Airflow (CFM):

RTU-C2

Total System Design Supply Airflow (CFM):

RTU-C1

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

exempt from these requirements and do not need to be included in Table H.

Economizer:1

03

Qtv

1

03

Qty

1

03

Qty

Economizer:1

Economizer:1

Economizer:1

Economizer:1

03

03

Ot

1

Registration Date/Time:

CVUSD Mesa Report Page:

Economizer Designed per §140.4(e) and

05

HP Unit²

BHP

05

HP Unit²

BHP

05

HP Unit²

BHP

Total System Design

Registration Date/Time:

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(B)HP:

CVUSD Mesa Report Page:

409 S Barranca Ave Date Prepared:

Economizer

Controls:

05

HP Unit²

BHP

05

HP Unit²

BHP

05

HP Unit²

BHP

Total System Design

(B)HP:

Total System Design

(B)HP:

Controls:

Economizer Designed per §140.4(e) and

Economizer Designed per §140.4(e) and

Total System Design

(B)HP:

Controls:

Total System Design

(B)HP:

Economizer

Controls:

Total System Design

(B)HP:

Economizer

Controls:

(m)

06

Design HP

0.91

0.91

06

Design HP

0.91

0.91

06

Design HP

0.91

0.91

Designed per §140.4(e) and

06

Design HP

0.91

0.91

06

Design HP

0.91

0.91

06

Design HP

0.91

0.91

(m)

(m)

(m)

Designed per §140.4(e) and

(m)

Designed per §140.4(e) and

409 S Barranca Ave Date Prepared:

Controls:

NA: Special OA filtration

4472

NA: <=54 kBtu/h cooling

04

Maximum Design Supply Airflow

(CFM)

4472

04

Maximum Design Supply Airflow

(CFM)

1600

04

Maximum Design Supply Airflow

(CFM)

1600

1600

NA: <=54 kBtu/h cooling

1600

NA: <=54 kBtu/h cooling

1600

NA: <=54 kBtu/h cooling

1600

Economizer:¹ NA: <=54 kBtu/h cooling

Maximum Design Supply Airflow

(CFM)

1600

04

Maximum Design Supply Airflow

(CFM)

1600

04

Maximum Design Supply Airflow

(CFM)

1600

1600

08

08

08

08

08

08

Report Version: 2019.1.003 Schema Version: rev 20200601

System Fan Type:

07

Device

Maximum System Fan

Power (B)HP:

System Fan Type:

07

Device

Maximum System Fan

Power (B)HP:

System Fan Type:

07

Device

Maximum System Fan

Power (B)HP:

System Fan Type:

07

Device

Maximum System Fan

Power (B)HP:

System Fan Type:

07

Device

Maximum System Fan

Power (B)HP:

System Fan Type:

07

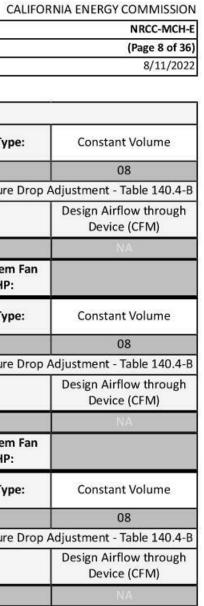
Device

Maximum System Fan

Power (B)HP:

Report Generated: 2022-08-11 14:41:53



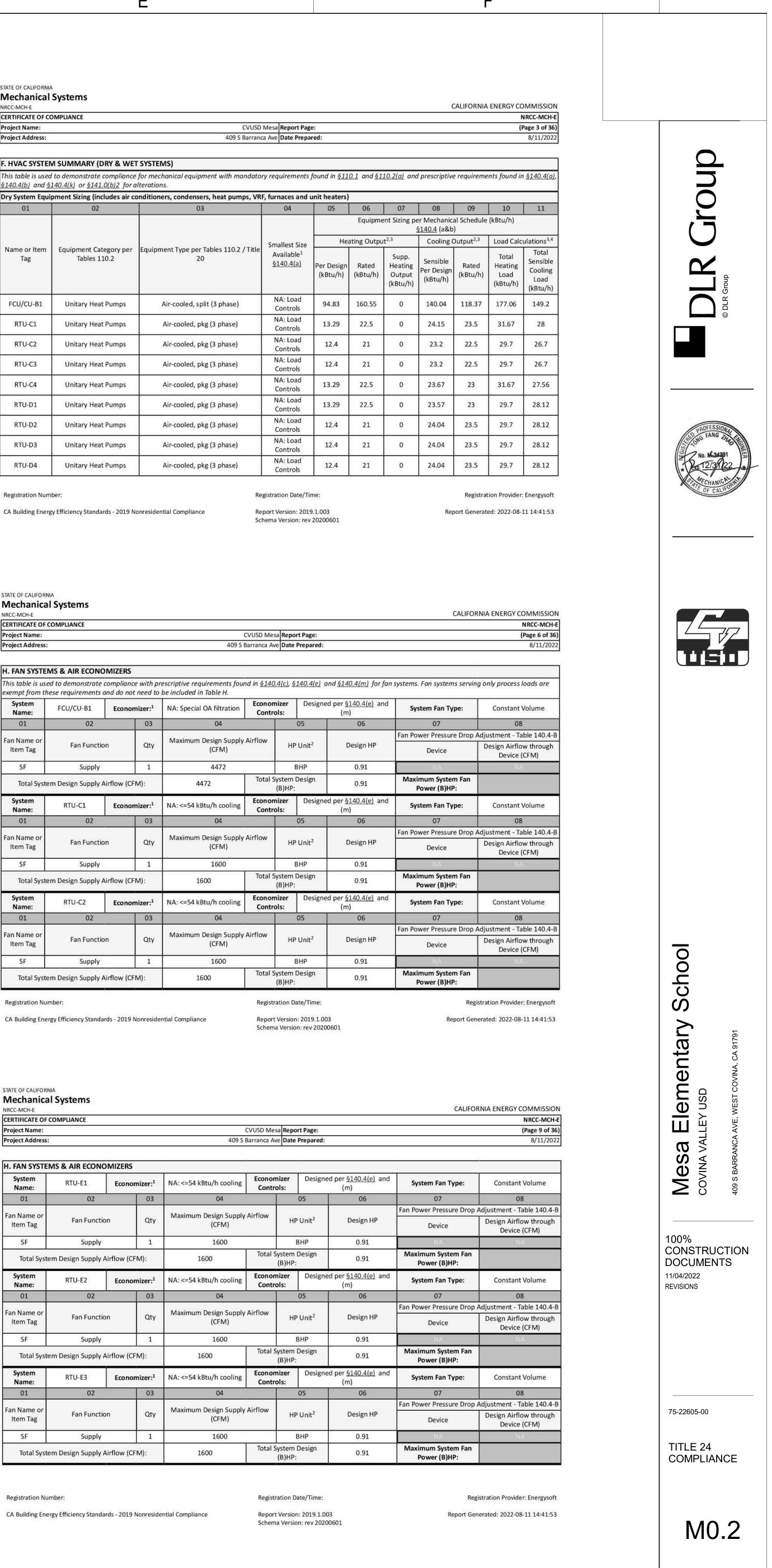


	8		
В	e g		

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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Registration Provider: Energysoft

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В

CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E

STATE OF CALIFORNIA **Mechanical Systems** NRCC-MCH-E

CERTIFICATE OF COMPLIANCE Project Name: Project Address:

						-				intee men
Project Name:					CVUSD Me		184			(Page 10 of 36
Project Address:	1			409 S I	Barranca Av	/e Date	Prepared:			8/11/202
H. FAN SYSTEI	MS & AIR ECONC	MIZERS			<u>.</u>					<u>.</u>
System Name:	RTU-E4	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econor		Designe	ed per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume
01	02		03	04		05		06	07	08
Free Norman				Marian Davia Comb				Fan Power Pressure Drop	Adjustment - Table 140.4-	
Fan Name or Item Tag	Fan Functio	on	Qty	Maximum Design Supply Airflow (CFM)		HP Unit ²		Design HP	Device	Design Airflow through Device (CFM)
SF	Supply		1	1600		E	внр	0.91	NA	NA
Total Syste	em Design Supply A	Airflow (CF	M):	1600 Total :			Design	0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-F1	Econor	nizer:1	NA: <=54 kBtu/h cooling Contr			Designe	ed per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume
01	02		03	04		.C.	05	06	07	08
For Norma or						rflow			Fan Power Pressure Drop /	Adjustment - Table 140.4-
Fan Name or Item Tag	Fan Functio	on	Qty	Maximum Design Supply (CFM)	AITTIOW	HP Unit ²		Design HP	Device	Design Airflow through Device (CFM)
SF	Supply		1	1600		BHP		0.91	NA	NA
Total Syste	em Design Supply A	Airflow (CF	M):	1600	Total S	System I (B)HP:	m Design 0.91		Maximum System Fan Power (B)HP:	
System Name:	RTU-F2	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econor 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 Namo er				Maximum Docigo Supplu	Airflow				Fan Power Pressure Drop /	Adjustment - Table 140.4-
Fan Name or Item Tag	Fan Functio	on	Qty	(CFM)	Maximum Design Supply Airflow (CFM)		Unit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply	i i i	1	1600	(E	знр	0.91	NA	NA
Total Syste	Total System Design Supply Airflow (CFM):			1600	Total S	System l (B)HP:		0.91	Maximum System Fan Power (B)HP:	

¹ 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.

Registration Number:

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Mechanical Systems NRCC-MCH-E

CERTIFICATE OF COMPLIANCE Project Name:

STATE OF CALIFORNIA

Project Name:				CVUSD Mes	a Report Pa	ge:			(Page 13 of 3
Project Address			409 S	Barranca Ave	Date Prep	ared:			8/11/20
<i>by</i>				00					
J. VENTILATIO	ON AND INDOOR AIR QUALITY								
MPR	Assembly- multiuse	3550		150	2250	0	0	DCV	Provided per §120.1(d)4
MPK	Assembly- multuse	5550		150	2250	U	U	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM		A		2250	18	Ventilation for this	System Complies?	Yes
	04		05				06		07
		System Desi			Suctor	Design		Air Filtration per §12	0.1(c) and <u>§141.0(b)</u> 2
System Name	RTU-C1	Airfl		225	and the second	Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))	
08	09	10	11	12	13	14	15		16
-	Mechanical 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			# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per <u>§120.1(d)3</u> §120.1(d)5, and <u>§120.1(e)3</u> ⁶	
Classroom	Lastura / nortegendary elasoream	920		15	225	0	0	DCV	Provided per §120.1(d)4
Classroom	Lecture/ postsecondary classroom	920		12	225	0	U	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
	04		05	16			06		07
		System Desi	an OA CEM	5	Suctor	Design	~	Air Filtration per §12	0.1(c) and §141.0(b)2
System Name	RTU-C2	Airfl	75 () () () () () () () () () (225		Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))	
08	09	10	11	12	13	14	15		16
	Mechanical 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	Provided per Design CFM		ntrols per <u>§120.1(d)3,</u> nd <u>§120.1(e)3</u> ⁶

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Registration Date/Time:

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STATE OF CALIFORNIA Mechanical Systems

Registration Number:

CERTIFICATE OF	COMPLIANCE								NRCC-MCH		
Project Name:				CVUSD Mes	a Report Pa	ge:			(Page 16 of 3		
Project Address			409 S	Barranca Ave	e Date Prep	ared:			8/11/202		
			0.1 100003 2000000						200 - 200 - 201 -		
J. VENTILATIO	ON AND INDOOR AIR QUALITY										
Classroom	Lecture/ postsecondary classroom	920		15	225	0	0	DCV	Provided per <u>§120.1(d)4</u>		
Classroom	Lecture/ possecondary classroom	920		15	225	0	U	Occ Sensor NA: Not request space type			
17	Total System Required Min OA CFM		a. A.		225	18	Ventilation for this	this System Complies? Yes			
	04	05				06	()7			
		System Desi			C	Desian		Air Filtration per §120.1(c) and §141			
System Name	RTU-D3	Airfl		225		Design Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))			
08	09	10	11	12	13	14	15		16		
1	Mechanical Ventila	tion Required	per <u>§120.1(c</u>)	<u>3</u> ³		Exh. ۱	/ent 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		
Classroom	Lecture/ postsecondary classroom	920		15	225	0	0	DCV	Provided per §120.1(d)4		
Classioon	Lecture/ postsecondary classicon	520		15	225	0	U	Occ Sensor	NA: Not required space type		
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes		
	04		05			10	06)7		
		System Desi			Sustam	Design		Air Filtration per §120).1(c) and §141.0(b)2		
System Name	RTU-D4	Airfl	Table 1	225		Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))			
08	09	10	11	12	13	14	15		16		
	Mechanical Ventila	tion Required	per <u>§120.1(c</u>)	3 ³		Exh. \	/ent per <u>§120.1(c)4</u>				
Space Name ot item Tag	Occupancy Type ⁴	Conditioned # of Shower # of Required Required Provided per Design DCV or Sensor Cont		trols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶							

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

CERTIFICATE OF COMPLIANCE Project Name: Project Address:

conditioning syster	Weeks was repeated and a representation	nce with manu	atory controls in <u>§110.2</u> and	1 <u>9120.2</u> unu p	nescriptive com	(1015 111 <u>9140.4())</u> unu (11) or	requirements in	1 <u>9141.0(b)2E</u> Joi uiter
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 §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset <u>§140.4(f)</u>	Window Interlocks p <u>§140.4(n)</u>
FCU/CU-B1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-C1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-C2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-C3	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-C4	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-D1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-D2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-D3	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-D4	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-E1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-E2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-E3	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided

CVUSD Mesa Report Page: 409 S Barranca Ave Date Prepared:

Registration Number:

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D

CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E

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STATE OF CALIFORNIA

CERTIFICATE OF	COMPLIANCE								NRCC-MCH		
Project Name:				CVUSD Mesa	Report Pa	ge:			(Page 14 of 3		
Project Address	:		409 S	Barranca Ave	Date Prep	ared:			8/11/20		
					·						
J. VENTILATIO	ON AND INDOOR AIR QUALITY										
Classroom	Lecture/ postsecondary classroom	920		15	225	0	0	DCV	Provided per §120.1(d)4		
Classiooni	Lecture/ possecondary classicon	920		15	225	U	U	Occ Sensor NA: Not rec space ty			
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies? Yes			
	04		05				06		07		
		Sustan Dasi			C	Destau		Air Filtration per §120.1(c) and			
System Name	RTU-C3	System Desi Airfl		225		Design Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))			
08	09	10	11	12	13	14	15		16		
	Mechanical Ventila	per <u>§120.1(c</u>)	3 ³	-	Exh. ۱	/ent 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	DCV or Sensor Controls per <u>§120.1(d)3</u> §120.1(d)5, and <u>§120.1(e)3</u> ⁶			
Classroom		920	120		225	0		DCV	Provided per §120.1(d)4		
Classroom	Lecture/ postsecondary classroom	920		15	225	0	0	Occ Sensor	NA: Not required space type		
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes		
	04		05				06	20	07		
		System Desi			Sustam	Design		Air Filtration per §120	0.1(c) and §141.0(b)2		
System Name	RTU-C4	Airfl		225		Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))			
08	09	10	11	12	13	14	15		16		
	Mechanical Ventila	tion Required	per <u>§120.1(c</u>	<u>3</u> 3		Exh. \	/ent 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	DCV or Sensor Controls per <u>§120.1(d</u> <u>§120.1(d)5</u> , and <u>§120.1(e)3</u> ⁶			

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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CERTIFICATE OF	COMPLIANCE								NRCC-MCH-
Project Name:				CVUSD Mes	3 C 1992/2 7				(Page 17 of 36
Project Address			409 S	Barranca Ave	Date Prep	ared:			8/11/202
	ON AND INDOOR AIR QUALITY								
J. VENTILATIC	IN AND INDOOR AIR QUALITY							1	B. Constant and the state of th
Classroom	Lecture/ postsecondary classroom	920		15	225	0	0	DCV	Provided per §120.1(d)4
classiooni	Ecclure, postocontairy classiooni	520		15	223	Ŭ	Ū	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				225 18		Ventilation for this	System Complies?	Yes
	04	05					06		7
		System Desi		Sustor	n Design		Air Filtration per §120	.1(c) and §141.0(b)2	
System Name	RTU-E1	Airfl		225		Air CFM	0	Provided per <u>§120.1(c)</u> (NR an Hotel/Motel))	
08	09	10	11	12	13	14	15	1	.6
	Mechanical 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		rols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	920		15	225	0	0	DCV	Provided per §120.1(d)4
Classroom	Lecture/ possecondary classicom	920		13	225	0	U	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
	04		05				06	C	17
		System Desi	an OA CEM		Sustan	n Design		Air Filtration per §120	.1(c) and §141.0(b)2
System Name	RTU-E2	Airfl	7. S.	225		r Air CFM	0		<u>20.1(c)</u> (NR and Motel))
08	09	10	11	12	13	14	15	1	.6
	Mechanical 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	tion Required per <u>§120.1(c</u> Conditioned # of Shower Floor Area (ft ²) toilets		# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		rols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶

Registration Number:

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CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 13 of 36) /2022

STATE OF CALIFORNIA Mechanical Systems

Wiechanical Syster	115							
NRCC-MCH-E							CALIFORNIA ENERGY COMMIS	
CERTIFICATE OF COMPLIAN	CE			87				NRCC-N
Project Name: CVUSD Mesa Report Page:								(Page 12
Project Address: 409 S Barranca Ave Date Prepared:								8/11
I. SYSTEM CONTROLS							-	
RTU-E4	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
				1 2 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5				

Auto Timer RTU-F1 EMCS Single zone <= 25,000 ft² Setback Included Provided Hour Timer Switch Auto Timer Included RTU-F2 Single zone <= 25,000 ft² Setback EMCS Provided 4 Hour Timer Switch 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 §140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY

occupancies. For	alteration		tems being altered	within the sc	ope of the	permit app	lication nee	ed to be documented in th	high-rise residential and hotel/motel his table. In lieu of this table, the required
01		Check the box if the	project is showing	ventilation of	calculations	on the pla	ns, or attac	thing the calculations inst	ead of completing this table.
02	\boxtimes	Check this box if the	e project included I	Vonresidentia	al or Hotel/	Motel space	es.		
02		Check this box if the	e project included i	new or altere	d high-rise	residential	dwelling u	nits.	
03		Check the box if the	e project is using na	atural ventilat	tion in any	nonresiden	tial or hote	l/motel spaces to meet r	equired ventilation rates per §120.1(c)2.
Nonresidential a	nd Hotel/	Motel Ventilation Sys	stems						
	0	4		05				06	07
		System Desi			Suctor	Design		Air Filtration per §120.1(c) and §141.0(
System Name		FCU/CU-B1	Airfle		2250		Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))
08		09	10	11	12	13	14	15	16
		Mechanical Ver	ntilation Required	per <u>§120.1(c</u>)	<u>3</u> 3		Exh.	/ent per <u>§120.1(c)4</u>	
Space Name ot item Tag	c	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	Conditioned # of Shower Floor Area heads/		# of beople ⁵ Required Min OA CFM		Provided per Design CFM	DCV or Sensor Controls per <u>§120.1(d</u> <u>§120.1(d)5</u> , and <u>§120.1(e)3</u> ⁶

Registration Number:

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STATE OF CALIFOR	NIA								
Mechanica	al Systems								
NRCC-MCH-E								CALIFORNIA	ENERGY COMMIS
CERTIFICATE OF	COMPLIANCE								NRCC-N
Project Name:				CVUSD Mes	a Report Pa	ge:			(Page 15
Project Address			409 S	Barranca Av	e Date Prep	ared:			8/11,
J. VENTILATIO	ON AND INDOOR AIR QUALITY					**	ñ		
					225			DCV	Provided per §120.1(d)4
Classroom	Lecture/ postsecondary classroom	920		15	225	0	0	Occ Sensor	NA: Not require space type
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
	04		05				06	07	
		Curta Davi			<i>c</i> .			Air Filtration per §120).1(c) and §141.0(b
System Name	RTU-D1	System Desi Airfl		225	System Design 0 Transfer Air CFM			<u>20.1(c)</u> (NR and 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>	2	
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)			Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Con <u>§120.1(d)5</u> , ar	trols per <u>§120.1(d):</u> nd <u>§120.1(e)3</u> ⁶
Classroom		920		15	225	0	0	DCV	Provided per §120.1(d)4
Classroom	Lecture/ postsecondary classroom	920		15	225	0	U	Occ Sensor	NA: Not require space type
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
	04	04 05		14: 	- 21	1. I I I I I I I I I I I I I I I I I I I	06	()7
		Curtary Davi			C			Air Filtration per §120).1(c) and §141.0(b
System Name	RTU-D2	System Desi Airfl		225	System Design 0 Transfer Air CFM		Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))		
08	09	10	11	12	13	14	15		16
	Mechanical Ventila	tion Required	per §120.1(c)	33	234	Exh	Vent per §120.1(c)4		

Registration Number:

STATE OF CALIFORNIA

Space Name

ot item Tag

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Occupancy Type⁴

Regist	ration Date/Time:
Repor	Version: 2019.1.003
Schen	a Version: rev 20200601

Required

Min OA CFM

Provided per Design

CFM

of people⁵

onditioned # of Shower

toilets

Floor Area heads/

(ft²)

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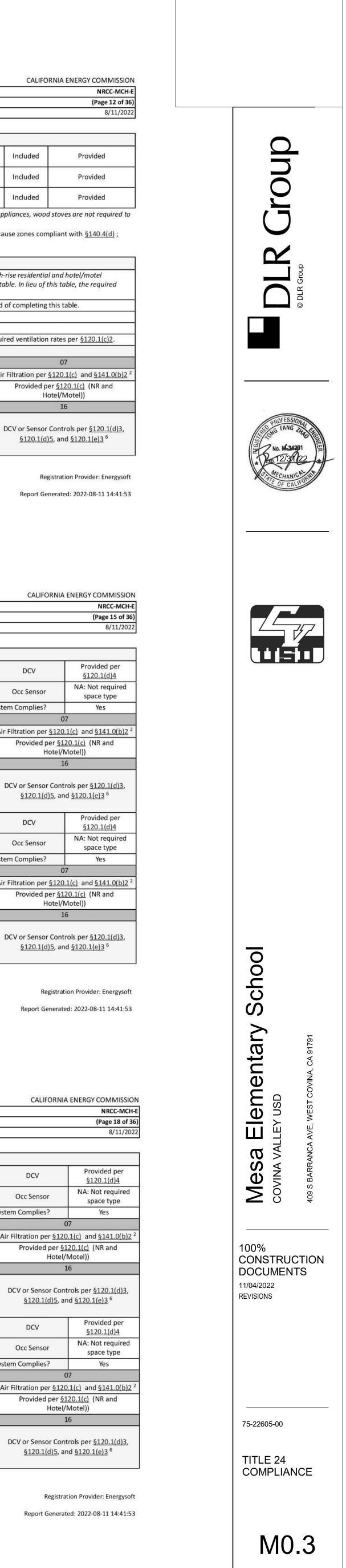
Mechanica NRCC-MCH-E	al Systems							CALIFORNIA	ENERGY COMMISSIC
CERTIFICATE OF	COMPLIANCE								NRCC-MCH
Project Name:				CVUSD Mesa	a Report Pa	ge:			(Page 18 of 3
Project Address			409 S	Barranca Ave	Date Prep	ared:			8/11/202
J. VENTILATIO	ON AND INDOOR AIR QUALITY								
Classroom		920	020		225		0	DCV	Provided per §120.1(d)4
Classroom	Lecture/ postsecondary classroom	920		15	225	0	U	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM		225 18			18	Ventilation for this	System Complies?	Yes
	04	05 06					06	C)7
		System Desi	σn ΟΔ CEM		System	Design		Air Filtration per §120).1(c) and <u>§141.0(b)2</u>
System Name	RTU-E3	Airfl		225		Air CFM	0		. <u>20.1(c)</u> (NR and Motel))
08	09	10	11	12	13	14	15	1	.6
	Mechanical 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
Classroom	Lecture/ postsecondary classroom	920		15	225	0	0	DCV	Provided per §120.1(d)4
Classicon	Lecture, postsecondary classicolin	520		15	225	Ū	U	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM			19	225	18	Ventilation for this	System Complies?	Yes
	04		05			8	06	C)7
		System Desi	an OA CEM	2	Sustam	Design	25	Air Filtration per §120).1(c) and <u>§141.0(b)2</u>
System Name	RTU-E4	Airfl		225		Air CFM	0	Provided per <u>§120.1(c)</u> (NR an Hotel/Motel))	
08	09	10	11	12	13	14	15	1	.6
	Mechanical 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 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

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CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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Mechanica	l Systems							CALIEOPHI	A ENERGY COMMISSI
CERTIFICATE OF	COMPLIANCE							CALIFORNIA	NRCC-MC
Project Name:				CVUSD Mes	a Report Pa	ge:			(Page 19 of
Project Address:			409 S	Barranca Ave	Date Prep	ared:			8/11/20
J. VENTILATIO	ON AND INDOOR AIR QUALITY			¥.		()			
				45				DCV	Provided per §120.1(d)4
Classroom	Lecture/ postsecondary classroom	920		15	225 0 0	U	Occ Sensor	NA: Not required space type	
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
	04		05				06)7
		System Desi			Curtom	n Design		Air Filtration per §120.1(c) and §141.0(b	
System Name	RTU-F1	Airfl		225		· Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))	
08	09	10	11	12	13	14	15		16
	Mechanical Ventila	tion Required	per <u>§120.1(c</u>)	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 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
Classes	Lastura / anticena dami alegore em	1215		15	225	0	0	DCV	Provided per §120.1(d)4
Classroom	Lecture/ postsecondary classroom	1215		12	225	0	0	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM			1	225	18	Ventilation for this	System Complies?	Yes
	04		05			0	06	1)7
		System Desi		2	Suctor	n Design	~	Air Filtration per §120).1(c) and <u>§141.0(b)</u> 2
System Name	RTU-F2	Airfl	(E.S.) ()	225		Air CFM	0		120.1(c) (NR and Motel))
08	09	10	11	12	13	14	15	5	16
	Mechanical 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

Registration Number:

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STATE OF CALIFORNIA

CERTIFICATE OF CON	VPLIANCE			NRCC-MCH				
Project Name:			CVUSD Mesa Report Page:	(Page 22 of 3				
Project Address:			409 S Barranca Ave Date Prepared:	8/11/20				
				50 (2005) 1000				
L. DISTRIBUTION	(DUCTWOR	(and PIPING)						
		1	In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does	s not meet the				
			requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned space					
			In an unconditioned crawl space					
			In other unconditioned spaces					
15		The scope of th	e project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.					
16			e project includes an existing duct system that is documented to have been previously sealed as confirmed the testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	ough field verificatio				
17	Yes	Duct system sh	all be sealed in acordance with the California Mechanical Code					
The answers to the	e questions bel	ow apply to the fo	Illowing duct systems: RTU-C3 Duct leakage testing triggered for these systems?	No				
11	No	The scope of th	e project includes only duct systems serving healthcare facilities					
12	Yes	Duct system pro	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.					
13	Yes	The space conc	litioning system serves less than 5,000 ft ² of conditioned floor area.					
14	No	The combined	surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duc	t system:				
			Outdoors					
			In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does 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 crawl space					
			In other unconditioned spaces					
15		The scope of th	e project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.					
16			e project includes an existing duct system that is documented to have been previously sealed as confirmed the testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	ough field verificatio				
17	Yes	Duct system sh	all be sealed in acordance with the California Mechanical Code	~				
The answers to the	e questions bel	ow apply to the fo	Illowing duct systems: RTU-C4 Duct leakage testing triggered for these systems?	No				
11	No	The scope of th	e project includes only duct systems serving healthcare facilities					
12	Yes	Duct system pro	ovides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.					
13	Yes	The space conc	litioning system serves less than 5,000 ft ² of conditioned floor area.	2				
14	No	The combined	surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duc	t system:				
			Outdoors					

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STATE OF CALIFORNI	A
Mechanical	Syste

CERTIFICATE OF COM	PLIANCE			NRCC-MCH				
Project Name:		CVUSD Mesa Report Page: (Pa						
Project Address:		409 S Barranca Ave Date Prepared: 8/						
L. DISTRIBUTION	DUCTWOR	K and PIPING)						
			In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does requirements of $\frac{\$140.3(a)1B}{a}$ or if the roof has fixed vents or openings to the outside/ unconditioned spaces					
			In an unconditioned crawl space					
			In other unconditioned spaces					
15		The scope of t	he project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.					
16			he project includes an existing duct system that is documented to have been previously sealed as confirmed thro testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	ugh field verificatio				
17	Yes	Duct system sh	Duct system shall be sealed in acordance with the California Mechanical Code					
The answers to the	questions be	low apply to the f	ollowing duct systems: RTU-E1 Duct leakage testing triggered for these systems?	No				
11	No	The scope of the project includes only duct systems serving healthcare facilities						
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.						
13	Yes	The space con	ditioning system serves less than 5,000 ft ² of conditioned floor area.					
14	No	The combined	surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct	system:				
			Outdoors					
			In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does 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 crawl space					
			In other unconditioned spaces					
15		The scope of t	he project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.					
16			he project includes an existing duct system that is documented to have been previously sealed as confirmed thro testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	ugh field verificatio				
17	Yes	Duct system sh	nall be sealed in acordance with the California Mechanical Code					
The answers to the	questions be	low apply to the f	ollowing duct systems: RTU-E2 Duct leakage testing triggered for these systems?	No				
11	No	The scope of t	he project includes only duct systems serving healthcare facilities					
12	Yes	Duct system p	rovides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.					
13	Yes	The space con-	ditioning system serves less than 5,000 ft ² of conditioned floor area.					
14	No	The combined	surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct	system:				
			Outdoors					

Registration Date/Time:

Registration Number:

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CENTRICALE OF	COMPLIANCE									NRCC-M
Project Name:					CVUSD Mesa	a Report Pag	e:			(Page 20 of
Project Address	5:			409	S Barranca Ave	Date Prepa	ared:			8/11/2
						•				
J. VENTILATI	ON AND INDOOR	AIR QUALITY	-		10					
cl			1005			225			DCV	Provided per §120.1(d)4
Classroom	Lecture/ postsec	ondary classroom	1235		15	225	0	0	Occ Sensor	NA: Not require space type
17	Total System Requi	ired Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
Examples of sp and open area	paces which require is in warehouses, lib	lighting occupancy s	ensors include	offices 25	50ft ² or smalle	er, multipur	pose rooms		ipancy sensing zone com ssrooms, conference roo xcepted by <u>§130.1(c)</u> .	7.0
K. LERIVIINA	BOX CONTROLS									
	pes not apply to this	project.								
This section do	oes not apply to this									
This section do	ION (DUCTWORK	and PIPING)	pipe insulatior	n requiren	nents found ii	n <u>§120.3</u> aı	nd prescript	ive requirements found	l in <u>§140.4(l)</u> for duct led	akage testing.
This section do L. DISTRIBUT This table is us	TION (DUCTWORK	and PIPING)	pipe insulatior	n requiren	nents found ii	n <u>§120.3</u> ai	nd prescript	ive requirements found	l in <u>§140.4(I)</u> for duct lea	ıkage testing.
This section do L. DISTRIBUT This table is us Duct Leakage	TION (DUCTWORK sed to show complic Sealing	and PIPING)			nents found in FCU/CI			ive requirements found		akage testing. No
This section do L. DISTRIBUT This table is us Duct Leakage	TION (DUCTWORK sed to show complic Sealing	Cand PIPING)	wing duct syste	ms:	FCU/CI	U-B1	Duct	leakage testing trigger		
This section de L. DISTRIBUT This table is us Duct Leakage The answers t	TION (DUCTWORK sed to show complic Sealing o the questions belo	C and PIPING) ance with mandatory ow apply to the follo The scope of the p	wing duct syste project includes	ms: only duc	FCU/CI	U-B1 ving health	Duct care faciliti	leakage testing triggere		
This section de L. DISTRIBUT This table is us Duct Leakage The answers t 11	TION (DUCTWORK sed to show complic Sealing o the questions belo No	C and PIPING) ance with mandatory ow apply to the follo The scope of the p	wing duct syste project includes des conditione	ms: only duc	FCU/Cl t systems ser n occupiable s	U-B1 ving health space for a	Duct care facilitie constant vo	leakage testing triggere es lume, single zone, space	ed for these systems?	

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Outdoors

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

Registration Provider: Energysoft Report Generated: 2022-08-11 14:41:53

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

ERTIFICATE OF COM	IPLIANCE						NRCC-MCH	
roject Name:				CVUSD Mesa	Report Page:		(Page 23 of 3	
roject Address:			40	9 S Barranca Ave	Date Prepared:		8/11/202	
DISTRIBUTION	(DUCTWOR	K and PIPING)					÷	
						eater than the u-factor of the ceiling, or if the roof do vents or openings to the outside/ unconditioned space		
In an unconditioned crawl space								
		In other unconditioned spaces						
15		The scope of t	ne project includes extend	ing an existing d	uct system, w	hich is constructed, insulated or sealed with asbestos		
16	8 8			The second state of the second state of the		nented to have been previously sealed as confirmed t Nonresidential Appendix NA2.	hrough field verificatio	
17	Yes	Duct system sh	all be sealed in acordance	with the Califor	nia Mechanic	al Code		
e answers to the	questions be	low apply to the fo	ollowing duct systems:	RTU-D:	1	Duct leakage testing triggered for these systems?	No	
11	No	The scope of t	ne project includes only du	ict systems servi	ng healthcare	facilities	87	
12	Yes	Duct system pr	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.					
13	Yes	The space con	e conditioning system serves less than 5,000 ft ² of conditioned floor area.					
14	No	The combined	surface area of the ducts i	n the following l	ocations is mo	ore than 25% of the total surface area of the entire de	uct system:	
			Outdoors					
						eater than the u-factor of the ceiling, or if the roof do vents or openings to the outside/ unconditioned space		
			In an unconditioned cra	wl space				
			In other unconditioned	spaces				
15		The scope of t	ne project includes extend	ing an existing d	uct system, w	hich is constructed, insulated or sealed with asbestos	3	
16						nented to have been previously sealed as confirmed t Nonresidential Appendix NA2.	hrough field verificatio	
17	Yes	Duct system sh	all be sealed in acordance	with the Califor	nia Mechanic	al Code	*	
ne answers to the	questions be	low apply to the fo	ollowing duct systems:	RTU-D	2	Duct leakage testing triggered for these systems?	No	
11	No	The scope of t	ne project includes only du	ict systems servi	ng healthcare	facilities		
12	Yes	Duct system pr	ovides conditioned air to	an occupiable sp	ace for a cons	tant volume, single zone, space-conditioning system.	\$0.	
13	Yes	The space con	ditioning system serves les	s than 5,000 ft ²	of conditione	d floor area.	18	
14	No	The combined	surface area of the ducts i	n the following l	ocations is mo	ore than 25% of the total surface area of the entire d	uct system:	
			Outdoors					

Registration Number:

Registration Date/Time: Report Version: 2019.1.003

Registration Provider: Energysoft Report Generated: 2022-08-11 14:41:53

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

STATE OF CALIFORNIA

Mechanical Systems CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE NRCC-MCH-E CVUSD Mesa Report Page: 409 S Barranca Ave Date Prepared: (Page 26 of 36) Project Name: Project Address: 8/11/2022 L. DISTRIBUTION (DUCTWORK and PIPING) In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of $\frac{5140.3(a)1B}{a}$ or if the roof has fixed vents or openings to the outside/ unconditioned spaces In an unconditioned crawl space In other unconditioned spaces 15 The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification 16 and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2. Yes Duct system shall be sealed in acordance with the California Mechanical Code 17 RTU-E3 Duct leakage testing triggered for these systems? No "he answers to the questions below apply to the following duct systems: The scope of the project includes only duct systems serving healthcare facilities 11 No 12 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. 13 Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area. No The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: 14 Outdoors In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces In an unconditioned crawl space In other unconditioned spaces The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. 15 The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification 16 and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2. Yes Duct system shall be sealed in acordance with the California Mechanical Code 17 The answers to the questions below apply to the following duct systems: RTU-E4 Duct leakage testing triggered for these systems? No No The scope of the project includes only duct systems serving healthcare facilities 11 12 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area. 13 No The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: 14 Outdoors

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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

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Mechanical S	ystems						
NRCC-MCH-E	e.					CALIFORNIA	ENERGY COMMISSION
CERTIFICATE OF CON	IPLIANCE						NRCC-MCH-E
Project Name:				CVUSD Mesa	Report Page:		(Page 21 of 36)
Project Address:		409 S Barranca Ave			Date Prepared	:	8/11/2022
					î.		
L. DISTRIBUTION	(DUCTWORK	and PIPING)		1			
						reater than the u-factor of the ceiling, or if the roof does vents or openings to the outside/ unconditioned spaces	
	In an unconditioned crawl space						
			In other unconditione	ed spaces			
15		The scope of	the project includes exter	nding an existing o	duct system, v	hich is constructed, insulated or sealed with asbestos.	
16						nented to have been previously sealed as confirmed thro Nonresidential Appendix NA2.	ough field verification
17	Yes	Duct system s	hall be sealed in acordan	ce with the Califo	rnia Mechanio	cal Code	
The answers to the	questions belo	w apply to the	following duct systems:	RTU-C	21	Duct leakage testing triggered for these systems?	No
11	No	The scope of	the project includes only	duct systems serv	ing healthcar	e facilities	

Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area. 13 No The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: 14 Outdoors In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces In an unconditioned crawl space In other unconditioned spaces The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. 15 The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification 16 and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2. 17 Yes Duct system shall be sealed in acordance with the California Mechanical Code he answers to the questions below apply to the following duct systems: RTU-C2 Duct leakage testing triggered for these systems? No No The scope of the project includes only duct systems serving healthcare facilities 11 12 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. 13 Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area.

Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.

No The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: 14 Outdoors Registration Date/Time:

Registration Number:

12

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Provider: Energysoft Report Generated: 2022-08-11 14:41:53

CALIFORNIA ENERGY COMMISSION

STATE OF CALIFORNIA Mechanical Systems

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

NRCC-MCH-E CERTIFICATE OF COMPLIANCE NRCC-MCH-E (Page 24 of 36) Project Name: CVUSD Mesa Report Page: Project Address: 409 S Barranca Ave Date Prepared: 8/11/202 L. DISTRIBUTION (DUCTWORK and PIPING) In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the equirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces In an unconditioned crawl space In other unconditioned spaces The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. 15 The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2. 17 Yes Duct system shall be sealed in acordance with the California Mechanical Code Duct leakage testing triggered for these systems? The answers to the questions below apply to the following duct systems: RTU-D3 No No The scope of the project includes only duct systems serving healthcare facilities 11 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. 12 13 Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area. 14 The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: No Outdoors In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces In an unconditioned crawl space In other unconditioned spaces 15 The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification 16 and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2. Yes Duct system shall be sealed in acordance with the California Mechanical Code 17 he answers to the questions below apply to the following duct systems: RTU-D4 Duct leakage testing triggered for these systems? No No The scope of the project includes only duct systems serving healthcare facilities 12 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area. 13 No The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: 14 Outdoors Registration Date/Time:

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003

CVUSD Mesa Report Page:

409 S Barranca Ave Date Prepared:

Registration Provider: Energysoft

Schema Version: rev 20200601

Report Generated: 2022-08-11 14:41:53

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

CERTIFICATE OF COMPLIANCE

Project Name:

Project Address:

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E

(Page 27 of 36)

8/11/2022

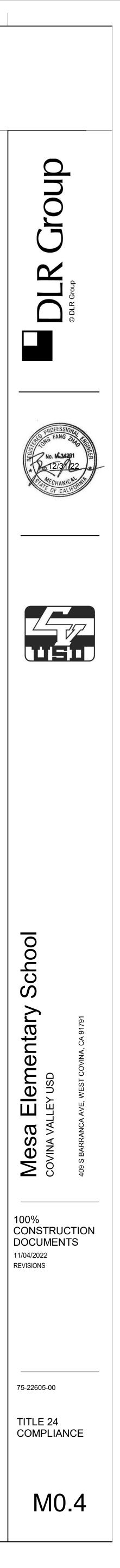
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					r greater than the u-factor of the ceiling, or if the roof does ed vents or openings to the outside/ unconditioned spaces			
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15		The scope of t	e scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.					
16			ope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification of the second second second and the second s					
17	Yes	Duct system shall be sealed in acordance with the California Mechanical Code						
e answers to th	e questions bel	ow apply to the f	ollowing duct systems:	RTU-F1	Duct leakage testing triggered for these systems?	No		
11	No	The scope of t	he project includes only d	uct systems serving healtho	are facilities			
12	Yes	Duct system p	rovides conditioned air to	an occupiable space for a d	onstant volume, single zone, space-conditioning system.			
13	Yes	The space conditioning system serves less than 5,000 ft ² of conditioned floor area.						
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:						
			Outdoors					
					greater than the u-factor of the ceiling, or if the roof does ed vents or openings to the outside/ unconditioned spaces			
			In an unconditioned cr	awl space				
			In other unconditioned	d spaces				
15		The scope of t	he project includes extend	ding an existing duct system	, which is constructed, insulated or sealed with asbestos.			
16					cumented to have been previously sealed as confirmed thronic Nonresidential Appendix NA2.	ugh field verificatio		
17	Yes	Duct system s	hall be sealed in acordance	e with the California Mecha	nical Code			
e answers to th	e questions bel	ow apply to the f	ollowing duct systems:	RTU-F2	Duct leakage testing triggered for these systems?	No		
11	No	The scope of t	he project includes only d	uct systems serving healtho	are facilities			
12	Yes	Duct system p	rovides conditioned air to	an occupiable space for a d	onstant volume, single zone, space-conditioning system.			
13	Yes	The space con	ditioning system serves le	ss than 5,000 ft ² of condition	ned floor area.			
14	No	The combined	surface area of the ducts	in the following locations is	more than 25% of the total surface area of the entire duct	system:		

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time: Report Version: 2019.1.003

Schema Version: rev 20200601



STATE OF CALIFORNIA				
Mechanical Systems			CALIFOR	NIA ENERGY COMMI
Project Name:	409	CVUSD Mesa Report Page: S Barranca Ave Date Prepared:		NRCC- (Page 28 8/11
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15	In other unconditioned sp The scope of the project includes extending	paces g an existing duct system, which is constructe		0.5000
16 17 Yes	and diagnostic testing in accordance with p	procedures in the Reference Nonresidential A		i through field verific
his section does not apply to this p				
Selections have been made based o These documents must be provided	n information provided in previous tables of to the building inspector during constructio	on and can be found online at	changed, please explain why in Tab	le E Additional Rema
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Registration Number: CA Building Energy Efficiency Standard	ls - 2019 Nonresidential Compliance	Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601		stration Provider: Energ erated: 2022-08-11 14:
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STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E			CALI	FORNIA ENERGY CON
CERTIFICATE OF COMPLIANCE Project Name: Project Address:		CVUSD Mesa Report Page: 409 S Barranca Ave Date Prepared:		NR (Pag
		es of this document. If any selection needs to	he changed please explain why in	Table F Additional Re
These documents must be provi	ded to the building inspector during constru 24/2019standards/2019_compliance_docu	iction and can be found online at		Field Inspect
NRCA-MCH-05-A - Air Economiz			RTU-C1 CARRIER 4-TON; RTU-C2 CARRIER 4-TON; RTU-C3 CARRIER 4-TON; RTU-C4 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-D2 CARRIER 4-TON; RTU-D3 CARRIER 4-TON; RTU-D4 CARRIER 4-TON; RTU-E1 CARRIER 4-TON; RTU-E3 CARRIER 4-TON; RTU-E3 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-E4 CARRIER 4-TON;	Pass
Registration Number: CA Building Energy Efficiency Stan	dards - 2019 Nonresidential Compliance	Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601		Registration Provider: E Generated: 2022-08-11
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CA Building Energy Efficiency Stand STATE OF CALIFORNIA Mechanical Systems		Report Version: 2019.1.003	Report	Generated: 2022-08-11 FORNIA ENERGY COM NR (Page
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	Mechanical Systems NRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name: Project Address: L. DISTRIBUTION (DUCTWORK at a second secon	NRCC-MGHE ERRTIFICATE OF COMPLIANCE Project Name: Project Address: 409: In a space directly under i requirements of §140.3(a) In a nucconditioned craw in other unconditioned craw in other unconditioned craw in other unconditioned craw in other project includes an existing and diagnostic testing in accordance with p 15 The scope of the project includes an existing and diagnostic testing in accordance with p 17 Yes Duct system shall be sealed in acordance with p M. COOLING TOWERS In section does not apply to this project. M. COOLING TOWERS In Section does not apply to this project. M. COOLING TOWERS In Section shave been made based on information provided in previous tables og these documents must be provided to the building inspector during construction these://www.energy.ca.gov/title24/2019standards/2019_compliance_docume. NRCI-MCH-01-E - Must be submitted for all buildings State OF CALIFORNIA Mechanical Systems NRC-MCH-E ZET ENTIFICATE OF COMPLIANCE Project Address: ZA Bu	Mechanical Systems VersionAnt VersionAnt	Methodical Systems CALLEDK Decidation Concretations Concretations Experimental and the selection of the programment of the programmente programment of the programment of the programment of

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STATE OF CALIFORNIA Mechanical Systems

CERTIFICATE OF COMPLIANCE					NRCC-MCH
Project Name:	CVUSD Mesa	Report Page:			(Page 29 of 3
Project Address:	409 S Barranca Ave	Date Prepared:			8/11/20
O. DECLARATION OF REQUIRED CERTIFICATI	ES OF ACCEPTANCE				
Selections have been made based on information These documents must be provided to the buildin https://www.energy.ca.gov/title24/2019standard	g inspector during construction and can be	found online at	changed, please explain why in 1	able E Additio	nal Remarks
	Form/Title		Systems/Spaces To Be Field	Field Inspector	
	Formy rule		Verified	Pass	Fail
NRCA-MCH-02-A - Outdoor Air must be submitte conjunction with MCH-07-A Supply Fan VFD Acce	승규가 방법에 가장 이렇는 것이 있는 것을 수 있다. 이 가장 않는 것 같은 것이 같은 것이 없는 것이 없다. 것이 없는 것이 없다. 것이 없는 것이 없 않는 것이 없는 것이 없 않이 않이 않이 않이 않이 않는 것이 없다. 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없다. 것이 없는 것이 없다. 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없다. 것이 없는 것이 없 않이	Devise 1923 and 2021 Devision of a superconduct restriction of the second s	CARRIER 4-TON; RTU-C2 CARRIER 4-TON; RTU-C3 CARRIER 4-TON; RTU-C4 CARRIER 4-TON; RTU-C4 CARRIER 4-TON; RTU-D2 CARRIER 4-TON; RTU-D3 CARRIER 4-TON; RTU-D4 CARRIER 4-TON; RTU-E1 CARRIER 4-TON; RTU-E2 CARRIER 4-TON; RTU-E3 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-F1		

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.1.003 Schema Version: rev 20200601	Report Generated: 2022-08-11 14:41:

Registration Date/Time:

STATE OF CALIFORNIA Mechanical Systems

Registration Number:

VRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name: CVUSD Mesa Report Page:	CALIF	ORNIA ENERG	NRCC-MC
			NRCC-MC
Project Name: CVUSD Mesa Report Page:			
			(Page 32 of
Project Address: 409 S Barranca Ave Date Prepared:			8/11/2
0. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE			
		able E Additio	n el Demende
Selections have been made based on information provided in previous tables of this document. If any selection needs to be These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/			
Form/Title	Systems/Spaces To Be Field	Field In	spector
i onny nac	Verified	Pass	Fail
NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to <u>§120.1(c)3</u>) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.	FCU/CU-B1A & B1B; RTU-C1 CARRIER 4-TON; RTU-C2 CARRIER 4-TON; RTU-C3 CARRIER 4-TON; RTU-C4 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-D2 CARRIER 4-TON; RTU-D3		

Registration Number:	
CA Building Energy Efficiency Standards - 20	19 Nonresidential Compliance

STATE OF CALIFORNIA

Mechanical Systems

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

CARRIER 4-TON; RTU-E2

CARRIER 4-TON; RTU-E3

CARRIER 4-TON; RTU-E4

CARRIER 4-TON; RTU-F1

CARRIER 4-TON; RTU-F2

Systems/Spaces To Be Field

Verified

FCU/CU-B1A & B1B; RTU-C1 CARRIER 4-TON; RTU-C2 CARRIER 4-TON; RTU-C3

CARRIER 4-TON;

NRCC-MCH-E		
CERTIFICATE OF COMPLIANCE		2
Project Name:	CVUSD Mesa	Report Page:
Project Address:	409 S Barranca Ave	Date Prepared:
O. DECLARATION OF REQUIRED CERTIFIC	CATES OF ACCEPTANCE	
These documents must be provided to the bu	tion provided in previous tables of this docume ilding inspector during construction and can be dards/2019_compliance_documents/Nonreside	found online at
	Form/Title	
NRCA-MCH-18-A Energy Management Contro	ol Systems	

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	CARRIER 4-TON; RTU-E4
	CARRIER 4-TON; RTU-D2
	CARRIER 4-TON; RTU-D3
	CARRIER 4-TON; RTU-D4
	CARRIER 4-TON; RTU-E1
	CARRIER 4-TON; RTU-E2
	CARRIER 4-TON; RTU-E3
	CARRIER 4-TON; RTU-E4
	CARRIER 4-TON; RTU-F1
	CARRIER 4-TON; RTU-F2
	CARRIER 4-TON;
	ik.
P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION	
There are no NRCV forms required for this project.	
47 14 1	
Q. MANDATORY MEASURES DOCUMENTATION LOCATION	
This table is used to indicate where mandatory measures are documented in the	e plan set or construction documentation.

Compliance with Mandatory Measures documented through MCH Yes M-Sheets	01		02
Mandatory integrates note block	Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	Yes	M-Sheets

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

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

Registration Provider: Energysoft Report Generated: 2022-08-11 14:41:53

STATE OF CALIFORNIA
Mechanical System

Project Name:

Project Address:

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

Abhijit Rege

DLR Group

City/State/Zip:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

ocumentation Author Name:

esponsible Designer Name:

TONG FANG ZHAO

700 FLOWER STREET

LOS ANGELES CA 90017

DLR GROUP

City/State/Zip:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

of Title 24, Part 1 and Part 6 of the California Code of Regulations.

1. The information provided on this Certificate of Compliance is true and correct.

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

plans and specifications submitted to the enforcement agency for approval with this building permit application.

Mechanical Systems

CERTIFICATE OF COMPLIANCE

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

NRCA-MCH-11-A Automatic Demand Shed Controls

These documents must be provided to the building inspector during construction and can be found online at

https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title

Mechanical Systems NRCC-MCH-E CERTIFICATE OF COMPLIANCE

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

These documents must be provided to the building inspector during construction and can be found online at

Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".

https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title

NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes'. If Constant FCU/CU-B1A & B1B; RTU-C1

CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E (Page 30 of 36) 8/11/2022

Field Inspector

Systems/Spaces To Be Field

Verified

CARRIER 4-TON; RTU-C2 CARRIER 4-TON; RTU-C3 CARRIER 4-TON; RTU-C4 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-D2 CARRIER 4-TON; RTU-D3

CARRIER 4-TON; RTU-D4

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CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 35 of 36) 8/11/2022 y selection needs to be changed, please explain why in Table E Additional Remarks.

Field Inspector

Pass Fail

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

Date Signed: 2022-08-11

License:

Phone:

M-34291

Registration Provider: Energysoft Report Generated: 2022-08-11 14:41:53

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

ocumentation Author Signature:

Signature Date:

2022-08-11

(949)-701-8533

Responsible Designer Signature:

alege

For Thes

CVUSD Mesa Report Page: 409 S Barranca Ave Date Prepared:

2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)

inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Registration Provider: Energysoft Report Generated: 2022-08-11 14:41:53

Systems/Spaces To Be Field Field Inspector Verified Pass Fail FCU/CU-B1A & B1B; RTU-C1

CARRIER 4-TON; RTU-C2 CARRIER 4-TON; RTU-C3 CARRIER 4-TON; RTU-C4 CARRIER 4-TON; RTU-E4 CARRIER 4-TON; RTU-D2 CARRIER 4-TON; RTU-D3

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CARRIER 4-TON; RTU-E2

CARRIER 4-TON; RTU-E3

CARRIER 4-TON; RTU-E4

CARRIER 4-TON; RTU-F1

CARRIER 4-TON; RTU-F2

CARRIER 4-TON;

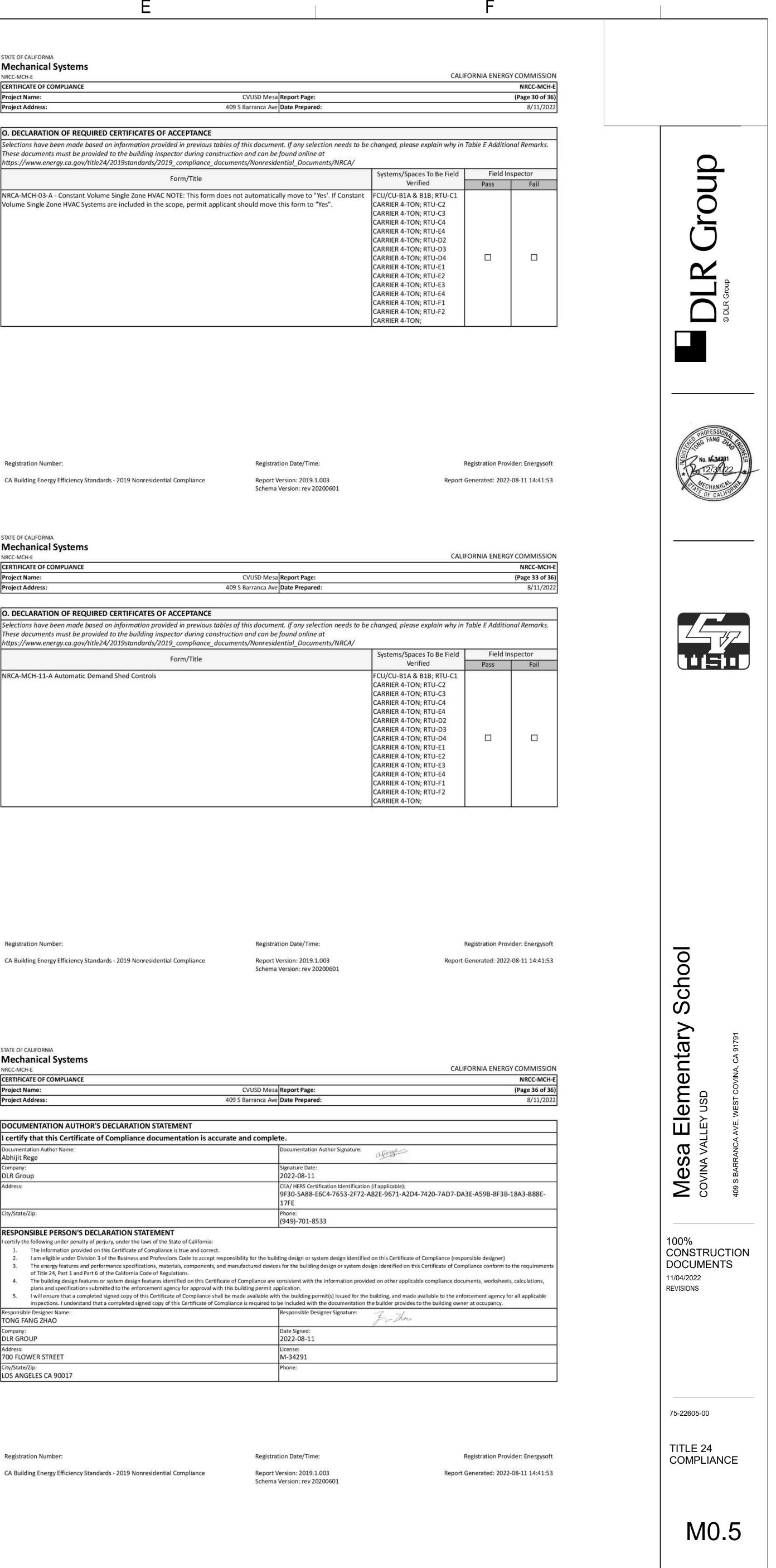
CARRIER 4-TON; RTU-E4
CARRIER 4-TON; RTU-F1
CARRIER 4-TON; RTU-F2
CARRIER 4-TON;
di-

CVUSD Mesa Report Page:

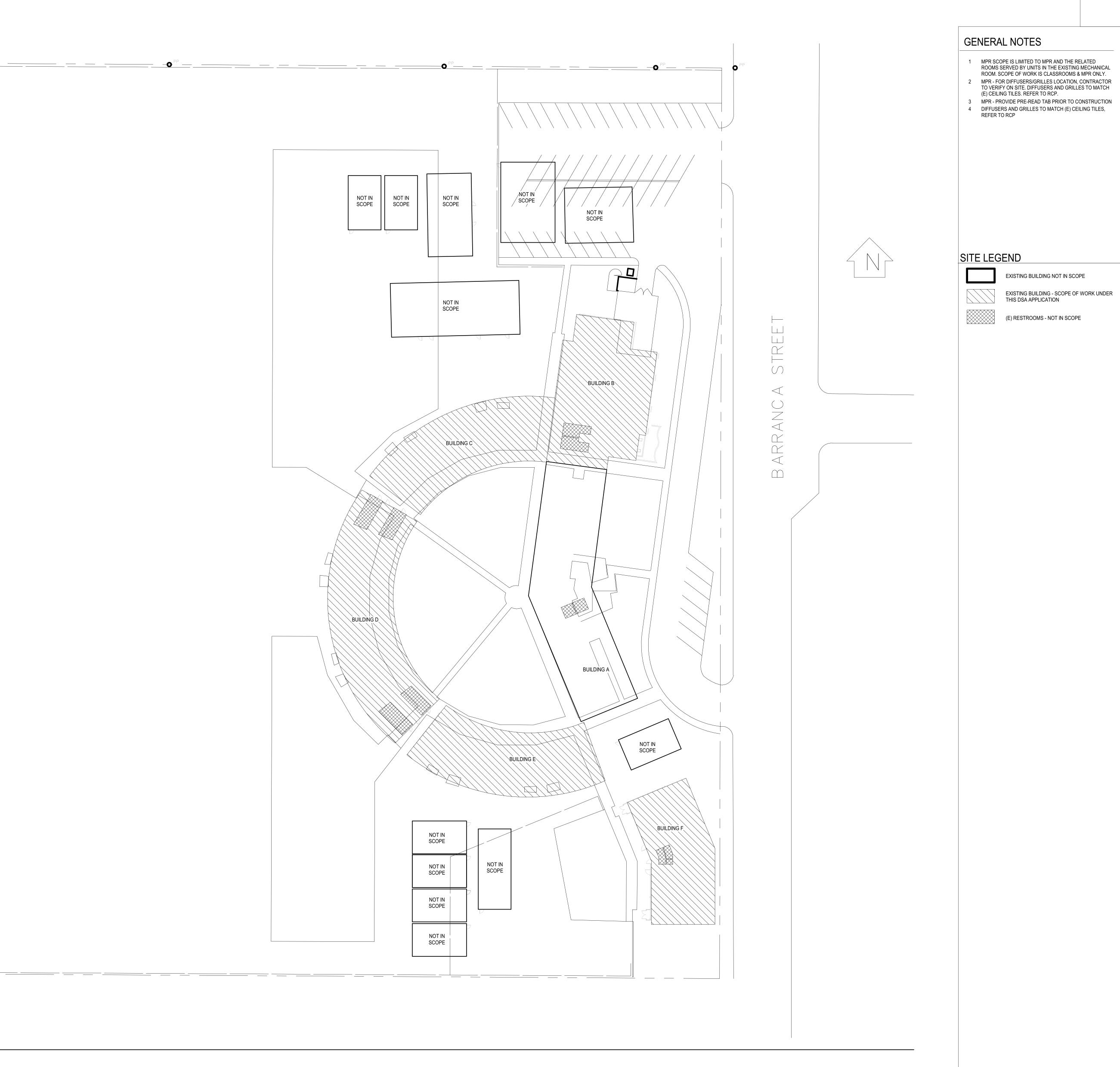
409 S Barranca Ave Date Prepared:

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

CVUSD Mesa Report Page: 409 S Barranca Ave Date Prepared:



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1			.O PP
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05-00_CVUSD_Mesa ES_MEP_2022.r			
strict Wide HVAC Replacement/75-226			
Autodesk Docs://75-22605-00 CVUSD - District Wide HVAC Replacement/75-22605-00_CVUSD_Mesa ES_MEP_2022.rvt 10/21/2022 4:51:22 PM 5		SCALE: 1" = 30'-0"	NICAL SITE PLAN



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MPR - FOR DIFFUSERS/GRILLES LOCATION, CONTRACTOR TO VERIFY ON SITE. DIFFUSERS AND GRILLES TO MATCH (E) CEILING TILES. REFER TO RCP.

EXISTING BUILDING NOT IN SCOPE







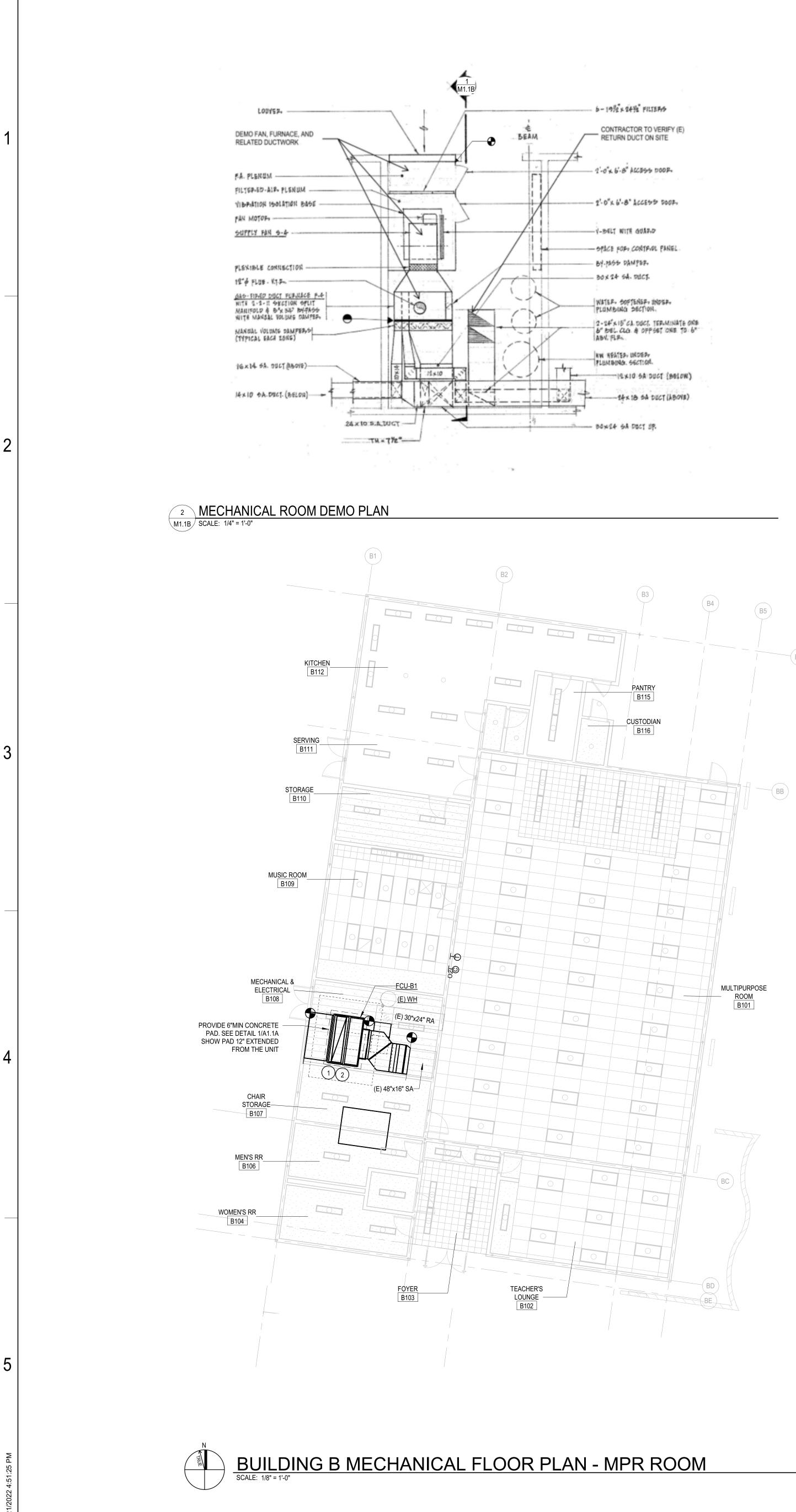


100% CONSTRUCTION DOCUMENTS 11/04/2022 REVISIONS

75-22605-00

MECHANICAL SITE PLAN

M1.1



В

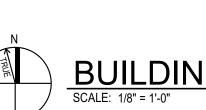
Α

12 × 10 54. DUCT -FLUE PIPE -DR.AFT HOOD -12×12 ACCESS PANEL (TYPICAL BA. ZONE) DIAL THER, MOMBIER. (TYPICAL SA. ZONE) DUCT STAT (TYPICAL EA. LONG) . MANUAL VOLUME DAMPER. (TYPICAL EA ZONE)

14× 18 54. DUCT .

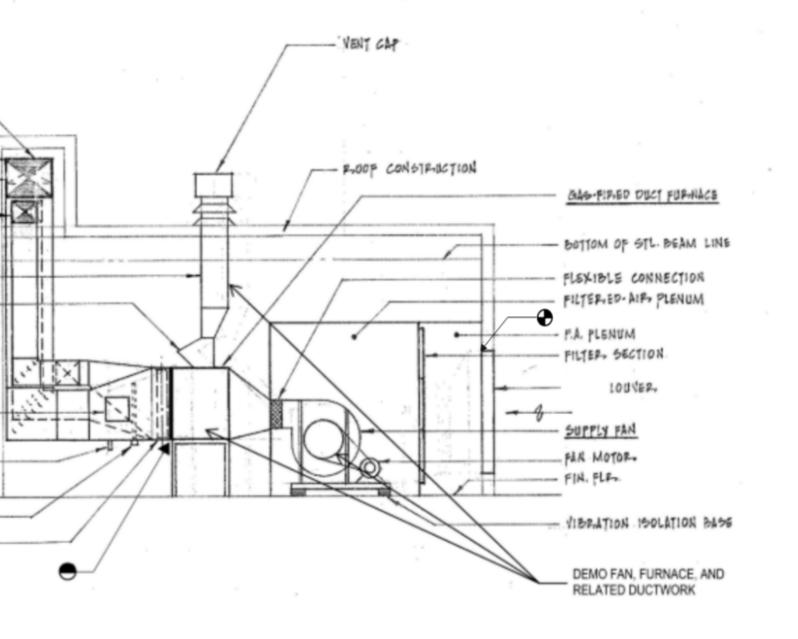
SA REGISTER -----



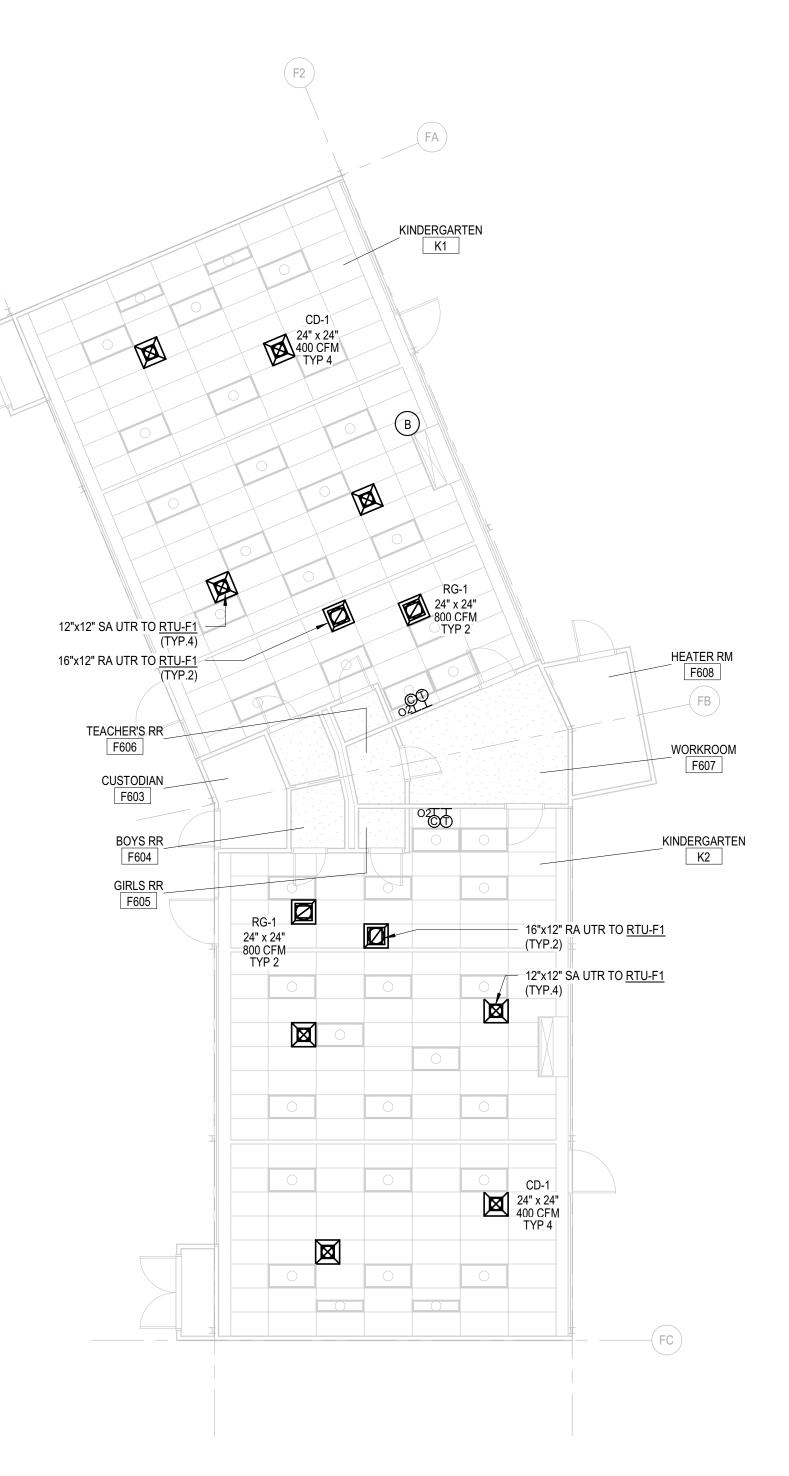


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BUILDING F MECHANICAL FLOOR PLAN

DEMO NOTES

LOCATIONS ON SITE.

GENERAL NOTES

KEY NOTES

ON ROOF.

A MPR DEMO (E) EQUIPMENT AND SA & RA DUCTWORK IN THE SCOPE AREA UP TO POC, ALONG WITH ALL THE SUPPORTS, PIPING, OTHER COMPONENTS."

B DEMOLISH EXISTING OUTDOOR CONDENSING UNIT AND INDOOR FANCOIL UNITS, ALONG WITH RELATED CONCRETE PADS, PIPING, CONDUIT, FENCE, SUPPORTS AND OTHER APPURTENANCES. REFER TO ARCH PLANS OR SPECS FOR FILLING HOLES AND MATCHING WALL. TYPICAL FOR CLASSROOMS. CONTRACTOR TO VERIFY

1 MPR SCOPE IS LIMITED TO MPR AND THE RELATED ROOMS SERVED BY UNITS IN THE EXISTING MECHANICAL ROOM. SCOPE OF WORK IS CLASSROOMS & MPR ONLY. 2 MPR - FOR DIFFUSERS/GRILLES LOCATION, CONTRACTOR TO VERIFY ON SITE. DIFFUSERS AND GRILLES TO MATCH (E) CEILING TILES. REFER TO RCP. 3 MPR - PROVIDE PRE-READ TAB PRIOR TO CONSTRUCTION 4 DIFFUSERS AND GRILLES TO MATCH (E) CEILING TILES, REFER TO RCP

1. PROVIDE RL/RS PIPING UP THRU (E) PENETRATION TO CU-B1

2. PROVIDE 1" CD TO DRAIN TO (E) FLOOR SINK.









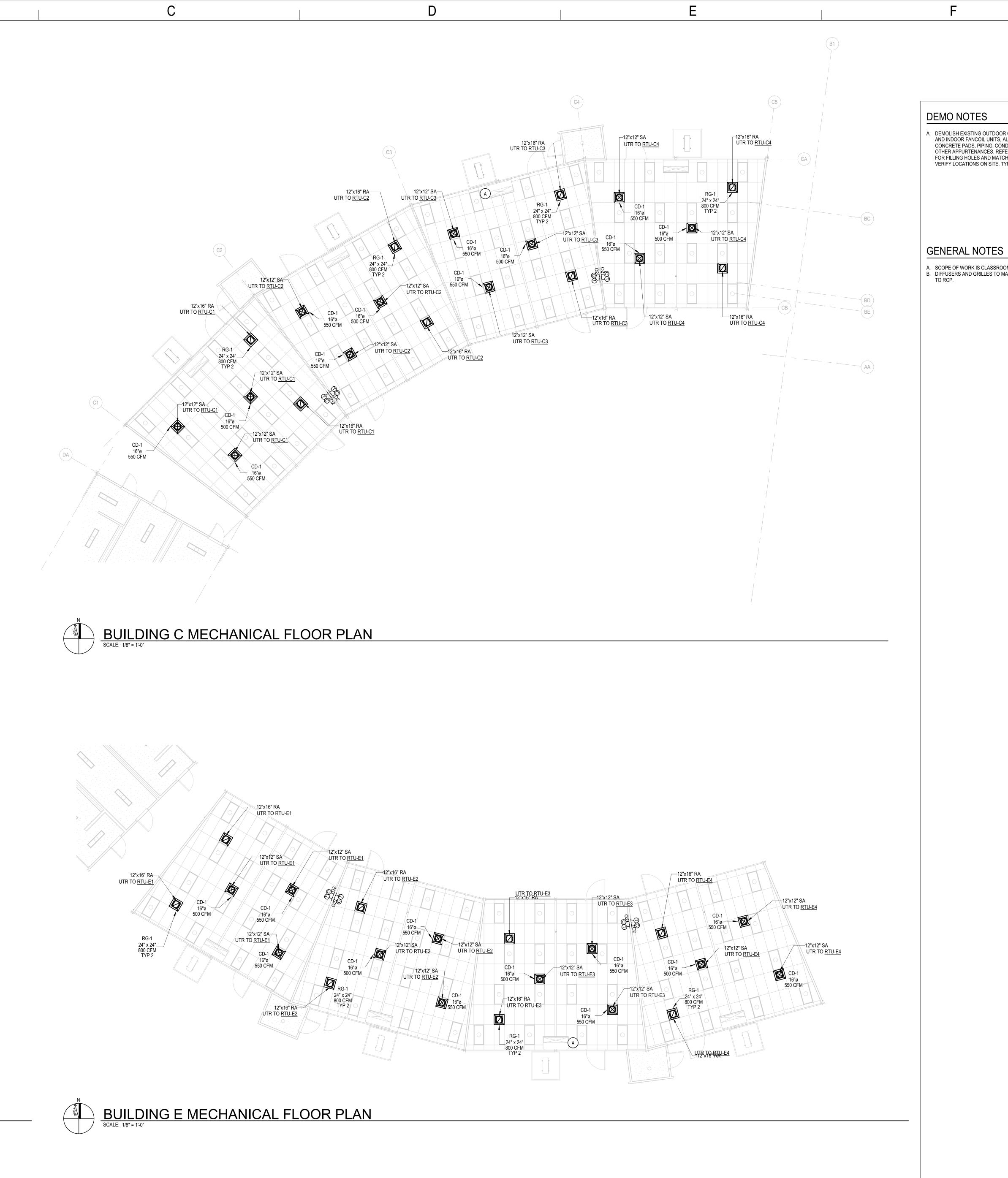
100% CONSTRUCTION DOCUMENTS 11/04/2022 REVISIONS

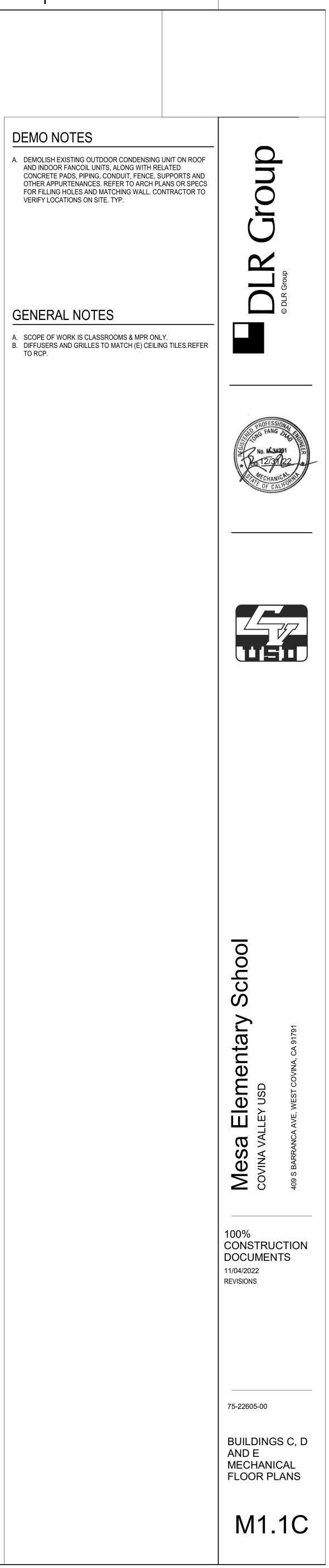
75-22605-00



M1.1B







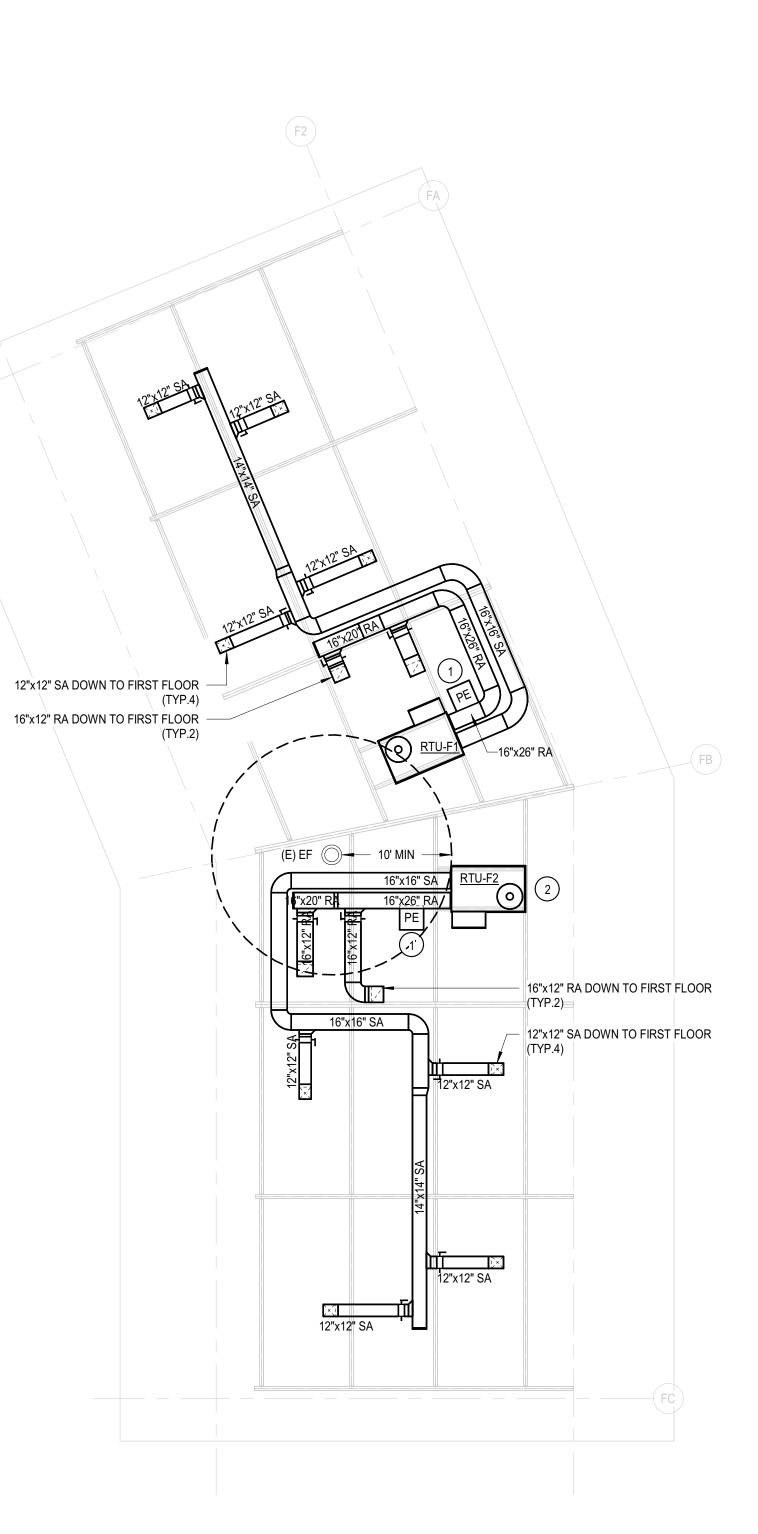
В Α BUILDING B MECHANICAL ROOF PLAN SCALE: 1/8" = 1'-0"



С



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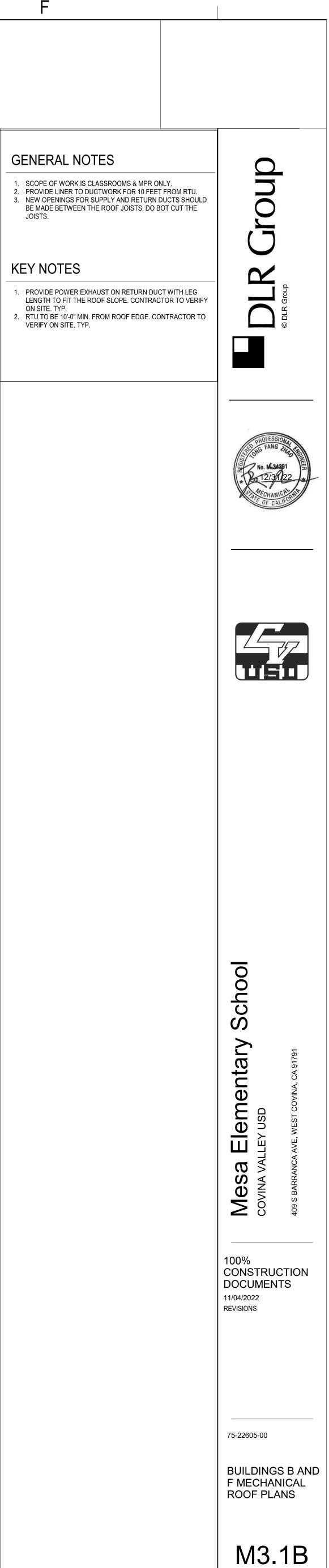


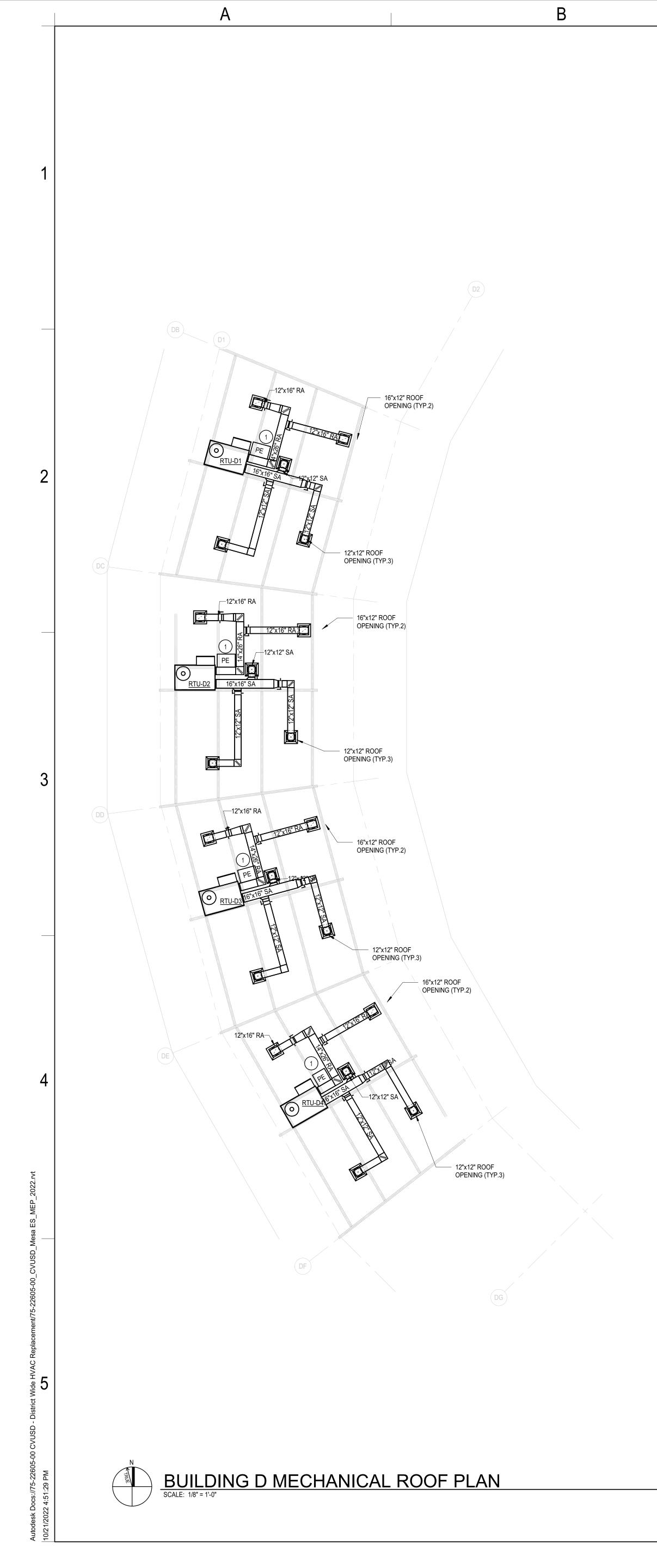
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BUILDING F MECHANICAL ROOF PLAN

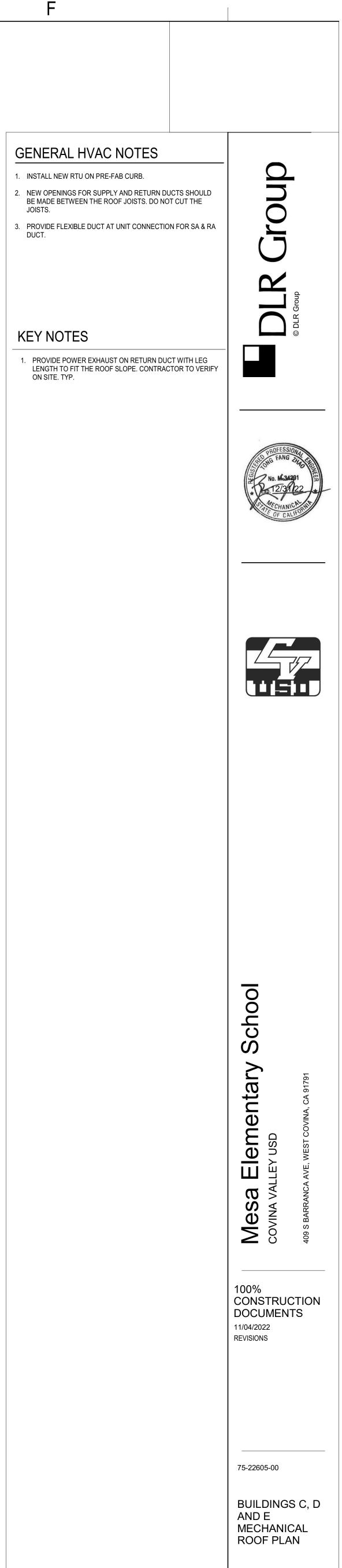
GENERAL NOTES

KEY NOTES

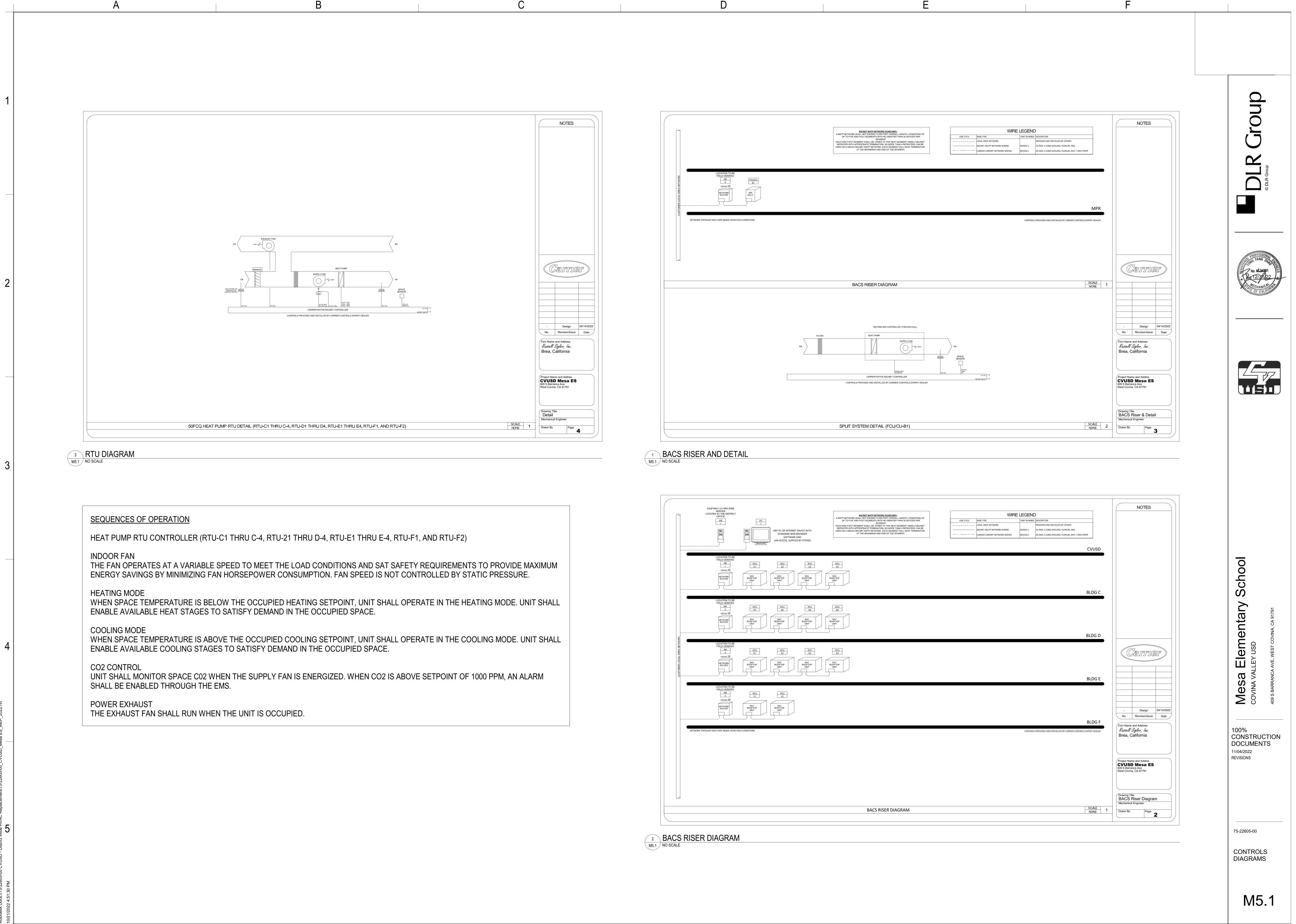


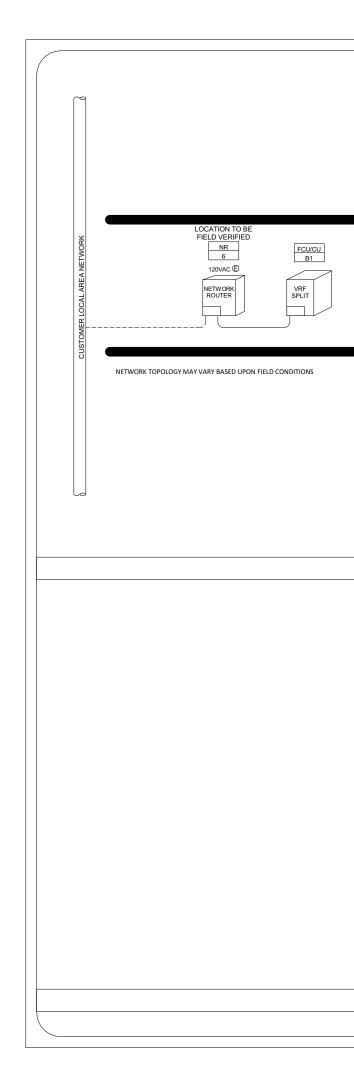






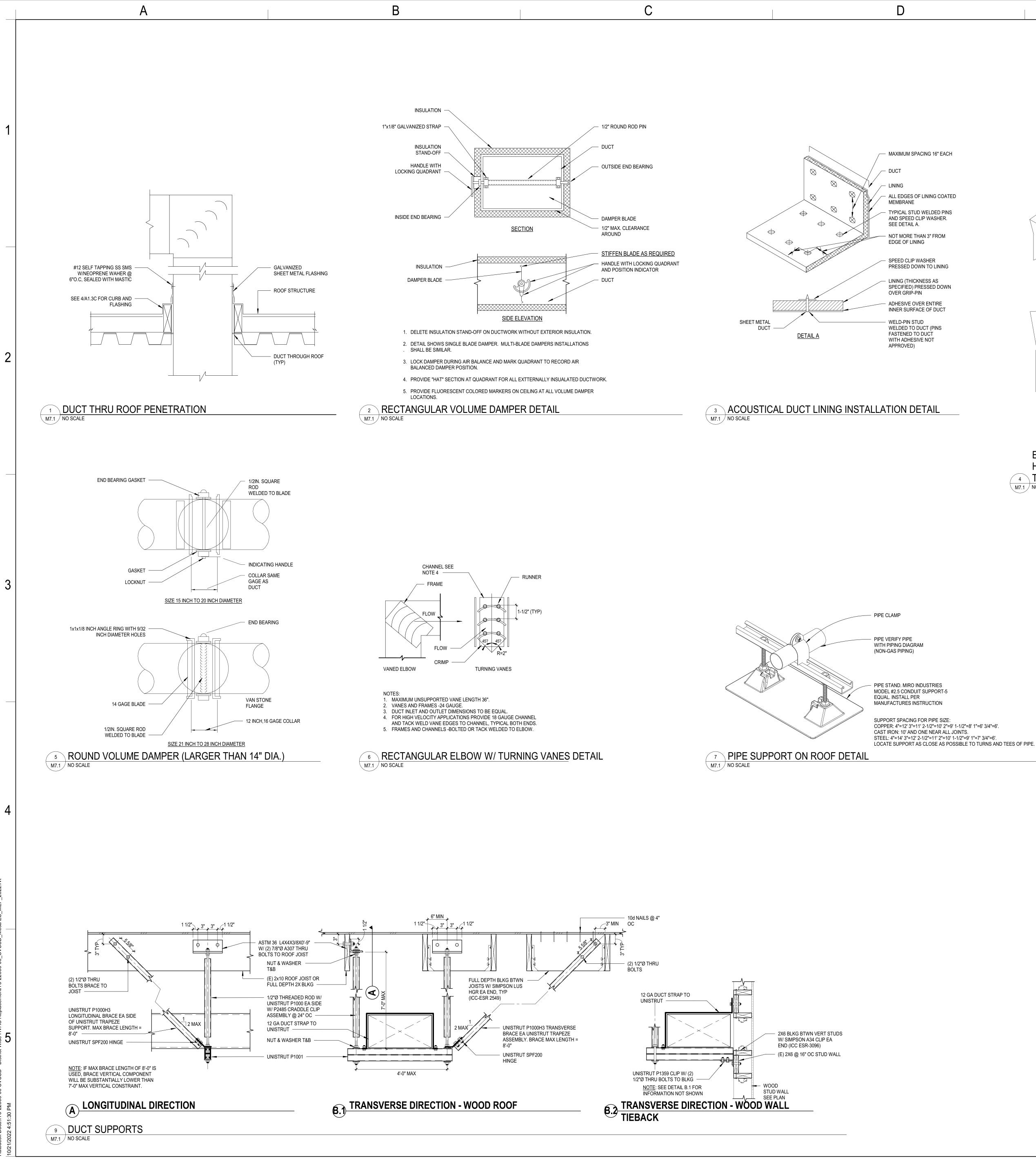
M3.1C





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	BACNET MSTP NETWORK GUIDELINES: A MSTP NETWORK SHALL NOT EXCEED 10,000 FEET OVERALL LENGTH, CONSISTING OF UP TO FIVE 2000 FOOT SEGMENTS WITH NO GREATER THAN 30 DEVICES PER SEGMENT. EACH 2000 FOOT SEGMENT SHALL BE JOINED TO THE NEXT SEGMENT USING A BACNET REPEATER WITH APPROPRIATE TERMINATION. NO MORE THAN 4 REPEATERS CAN BE USED ON A SINGLE BACNET MSTP NETWORK. EACH SEGMENT WILL HAVE TERMINATION AT THE BEGINNING AND END OF THE SEGMENT.	LINE STYLE	WIRE TYPE LOCAL AREA NETWORK BACNET MS/TP NETWORK WIRING CARRIER COMORT NETWORK WIRING	ELEGEND PART NUMBER DESCRIPTION PROVIDED AND INSTALLED BY OTHERS 042002-S 24 AWG 2 COND SHIELDED, PLENUM, ORG 003336-S 20 AWG 3 COND SHIELDED, PLENUM, WHT / GI	RN STRIPE		NOTES
				CONTROLS PROVIDED AND INSTALLED BY CARRIER CON	MPR Irols expert dealer		
	BACS RISER DIAGRAM				SCALE NONE 1		
R	RETURN AIR CONTROLLER (TCB-IFDA1GUL)	SA SPACE SENSOR SAT(A) SAT(A)	21 VAC			Russell Brea, C	Design Revision/Issue e and Address <i>Sigler, Inc.</i> California me and Addres D Mesa ES anca Ave ta, CA 91791
	SPLIT SYSTEM DETAIL (FCU/CU-B1)				SCALE 2	Drawing T BACS Mechanica Drawn By	

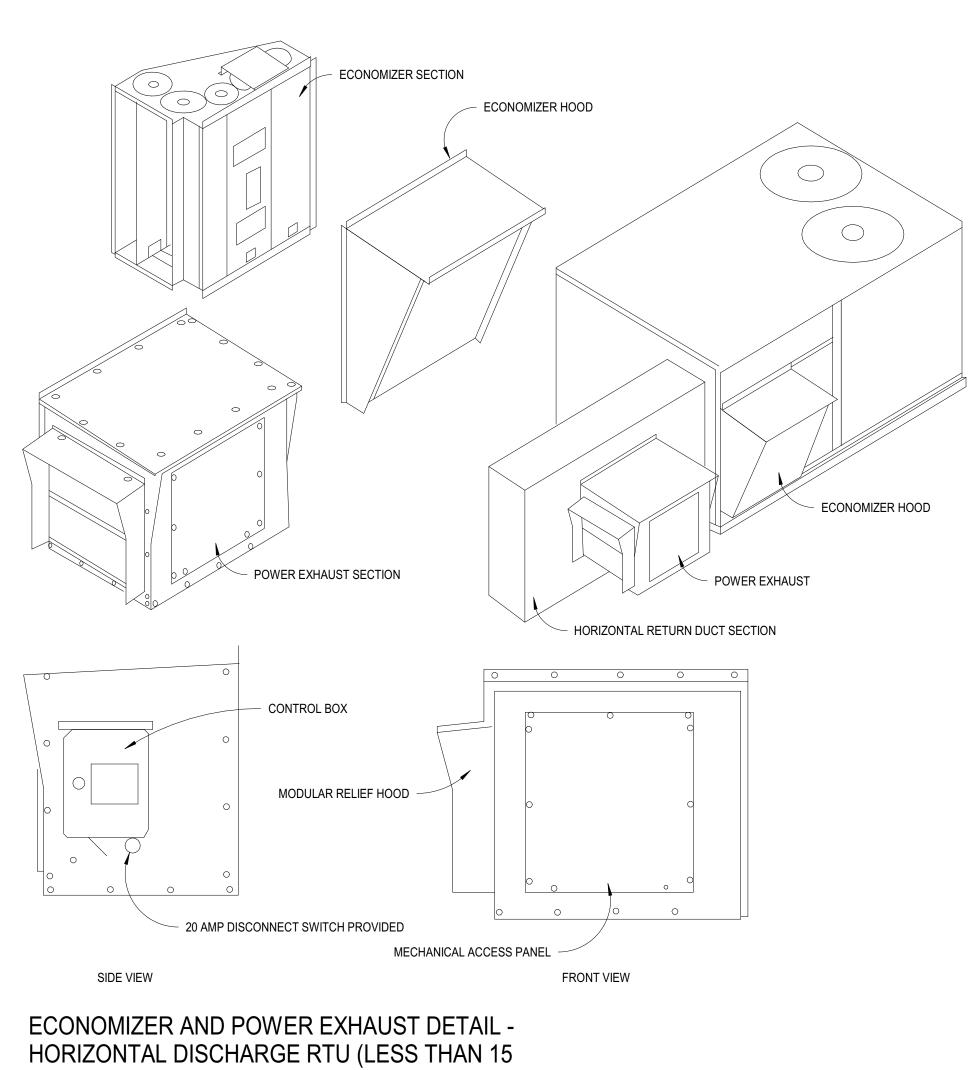


ALL EDGES OF LINING COATED TYPICAL STUD WELDED PINS AND SPEED CLIP WASHER. PRESSED DOWN TO LINING SPECIFIED) PRESSED DOWN

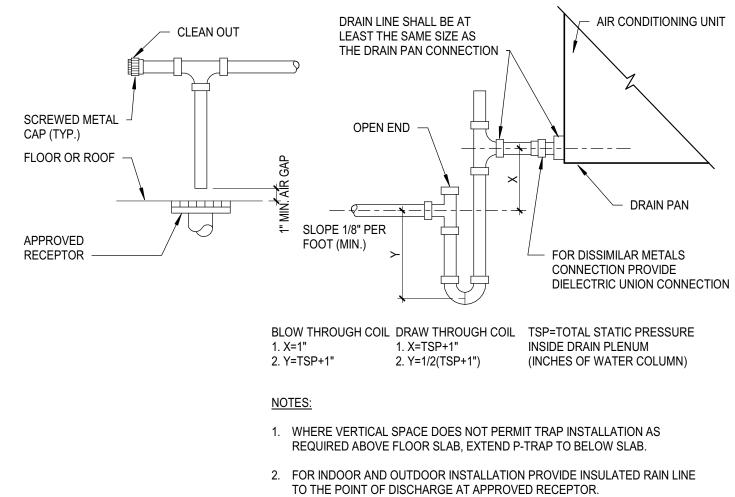




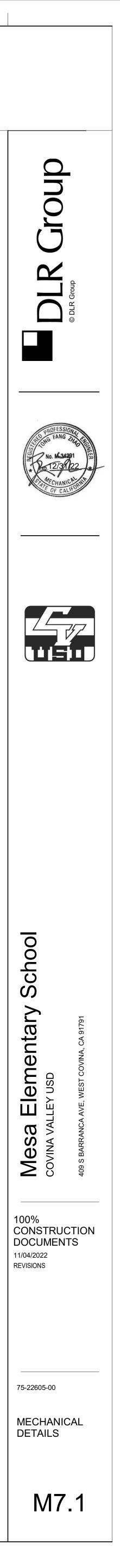


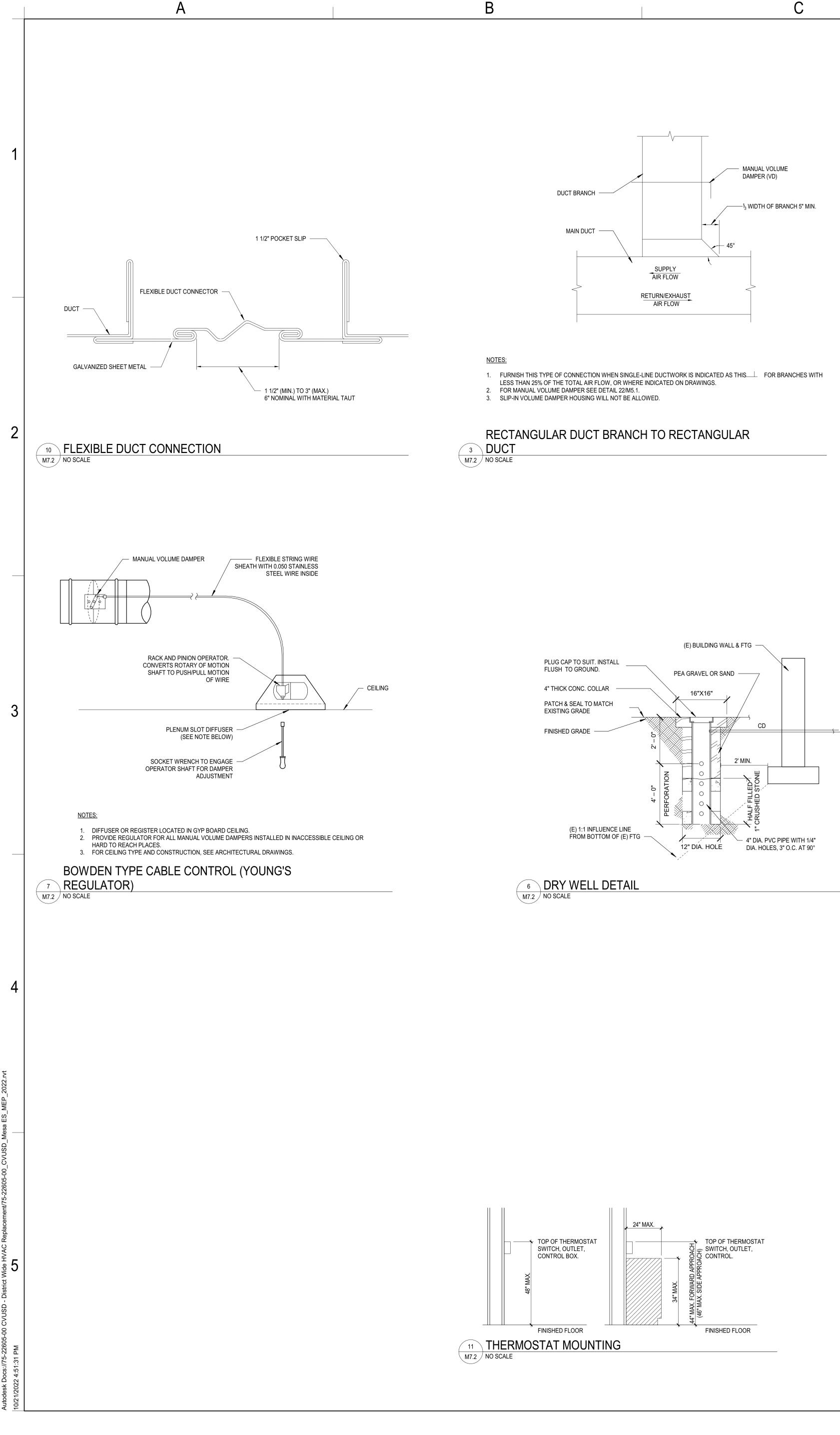


4 TONS) M7.1 NO SCALE

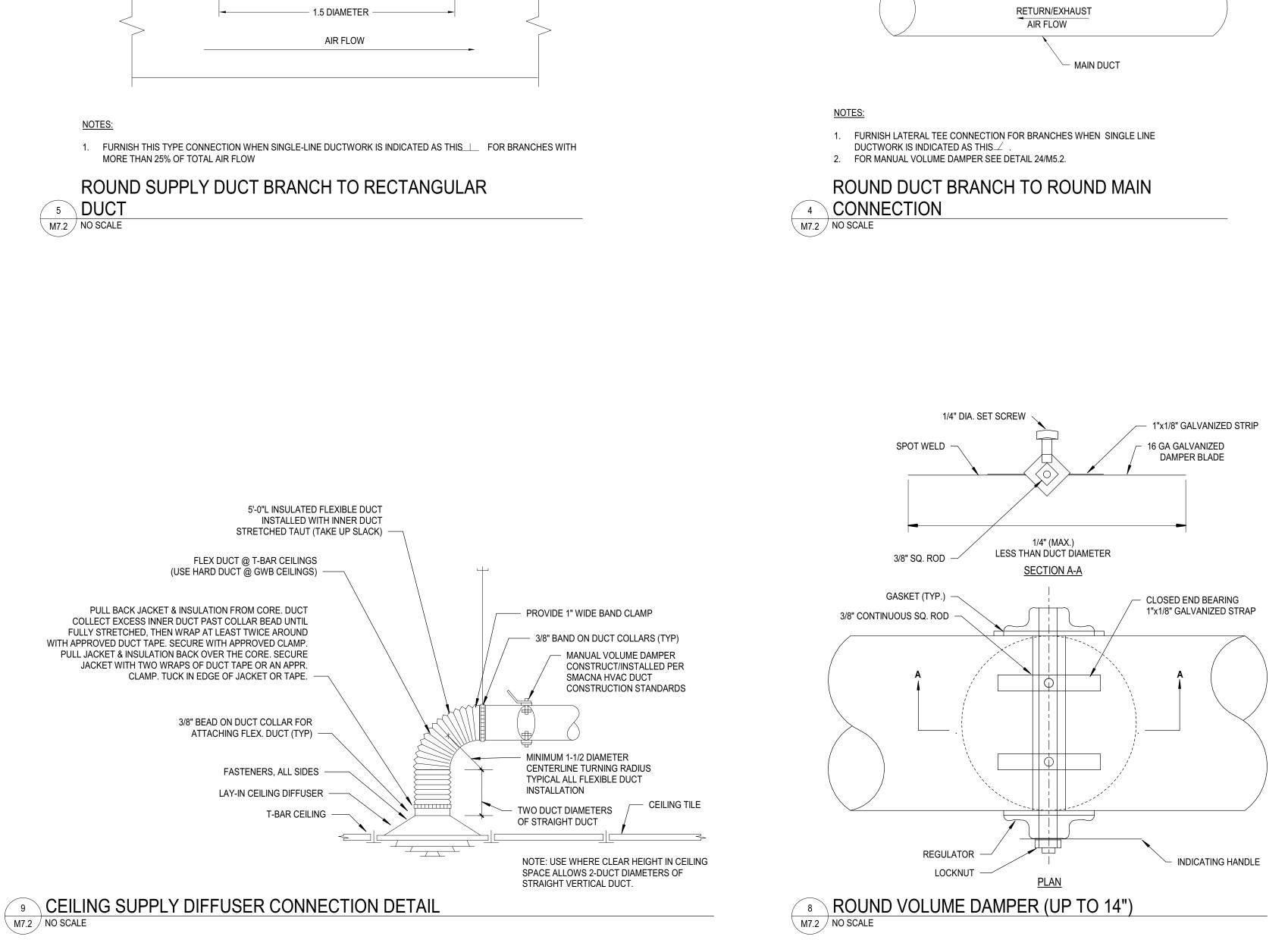


8 CONDENSATE DRAIN CONNECTION DETAIL M7.1 NO SCALE

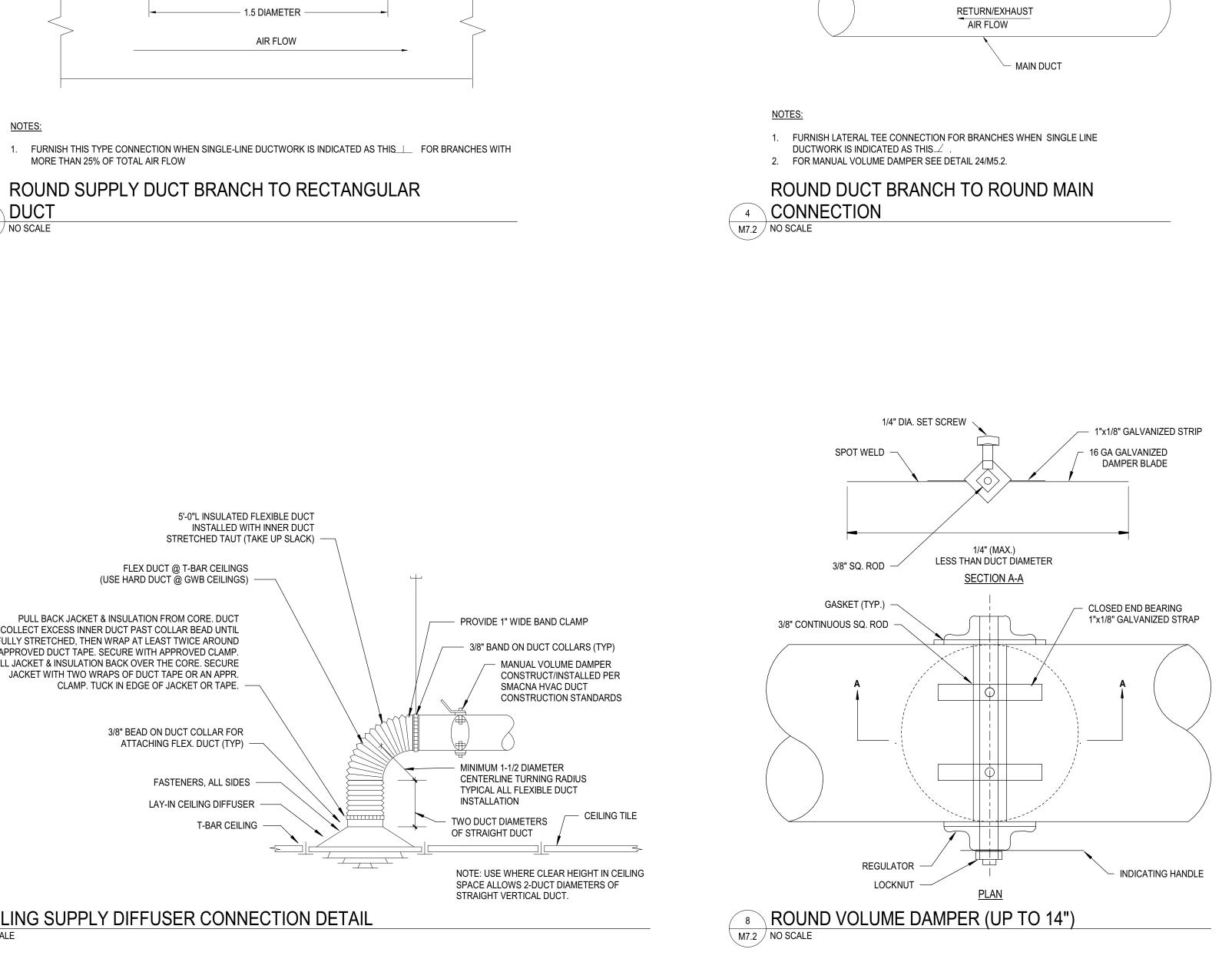


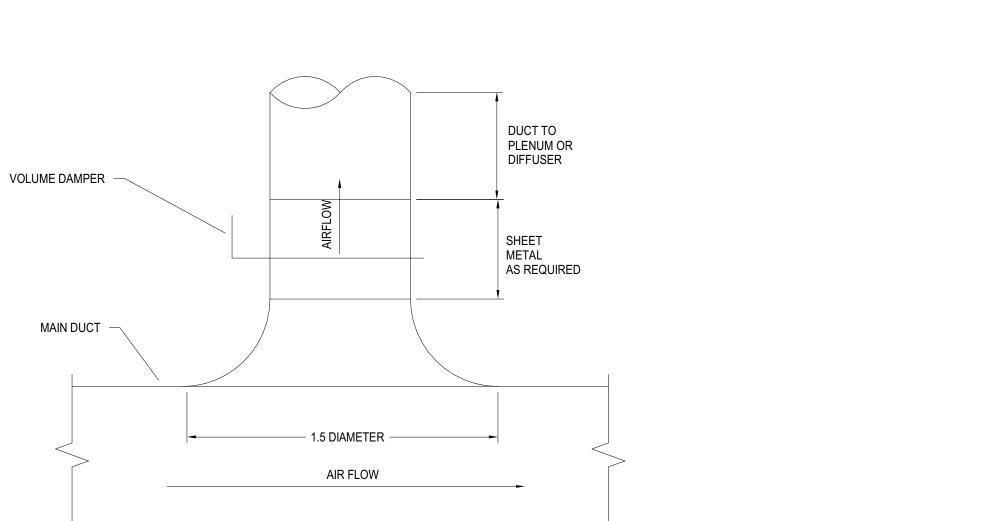


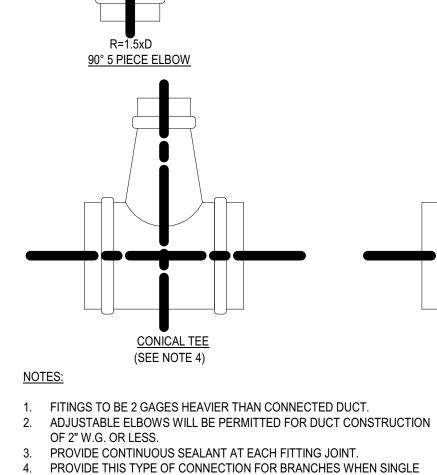
<u>SCEILING SUPPLY DIFFUSER CONNECTION DETAIL</u>











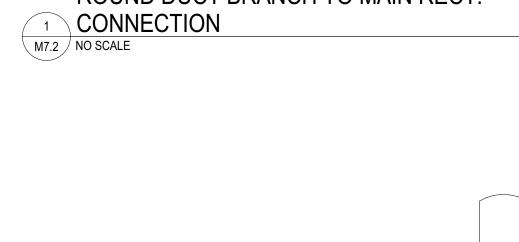
LINE DUCTWORK IS INDICATED AS THIS

² ROUND DUCT FITTINGS

M7.2 NO SCALE

LINE DUCTWORK IS INDICATED AS THIS_____

5. PROVIDE THIS TYPE OF CONNECTION FOR BRANCHES WHEN SINGLE



SUPPLY

AIR FLOW

45° (MAX.)

MANUAL VOLUME DAMPER

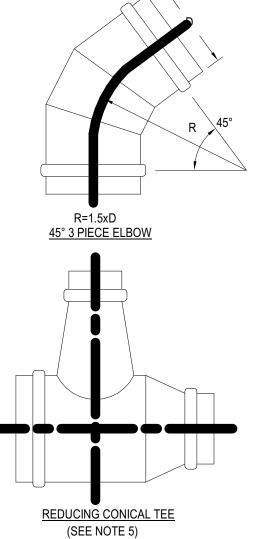
1. FURNISH THIS TYPE CONNECTION WHEN SINGLE-LINE DUCTWORK IS INDICATED AS

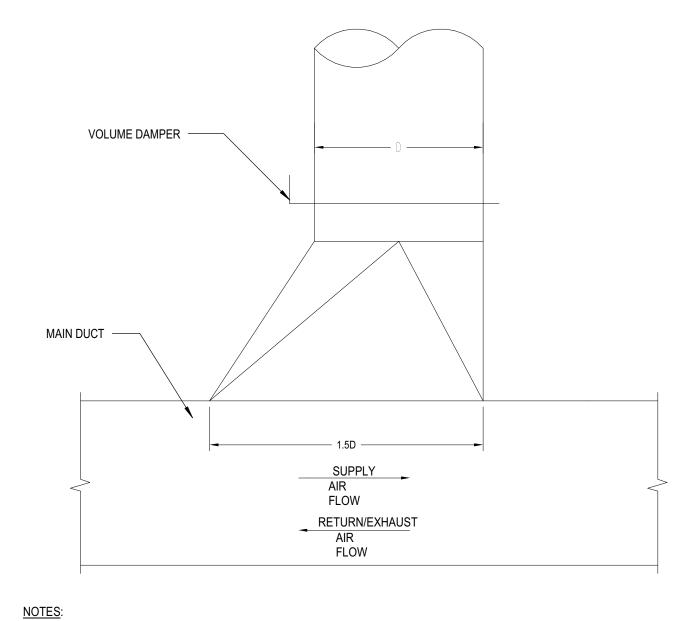
2. PROVIDE FLUORESCENT COLORED MARKERS ON CEILING AT ALL MANUAL VOLUME

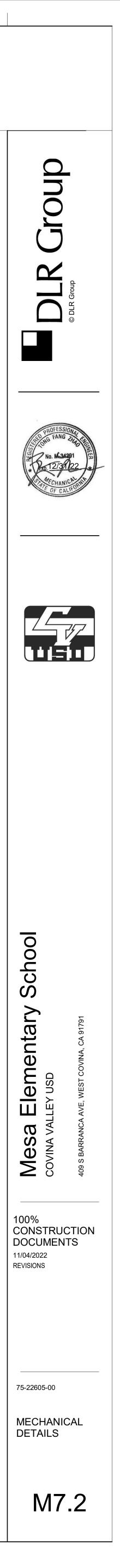
THIS $__$ FOR BRANCHES WITH LESS THAN 25% OF TOTAL AIR FLOW.

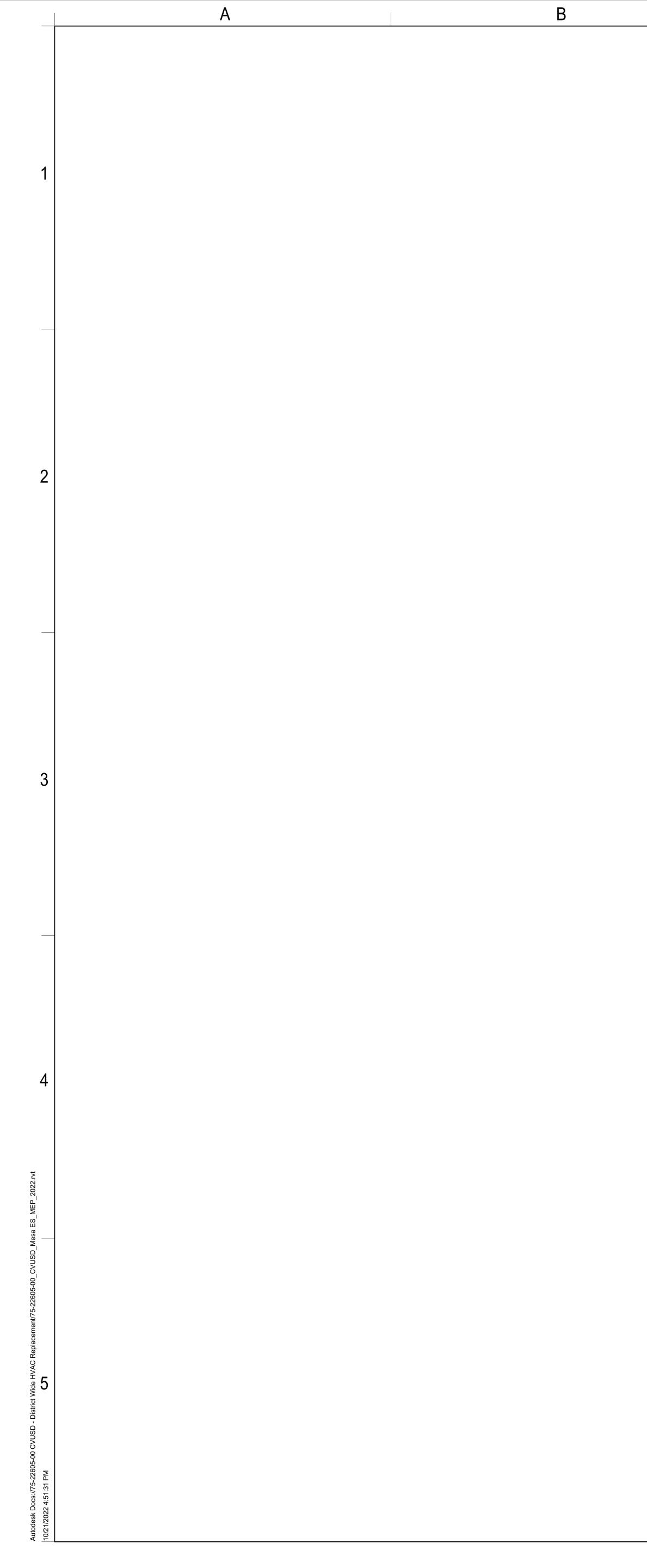
ROUND DUCT BRANCH TO MAIN RECT.

DAMPER LOCATION.



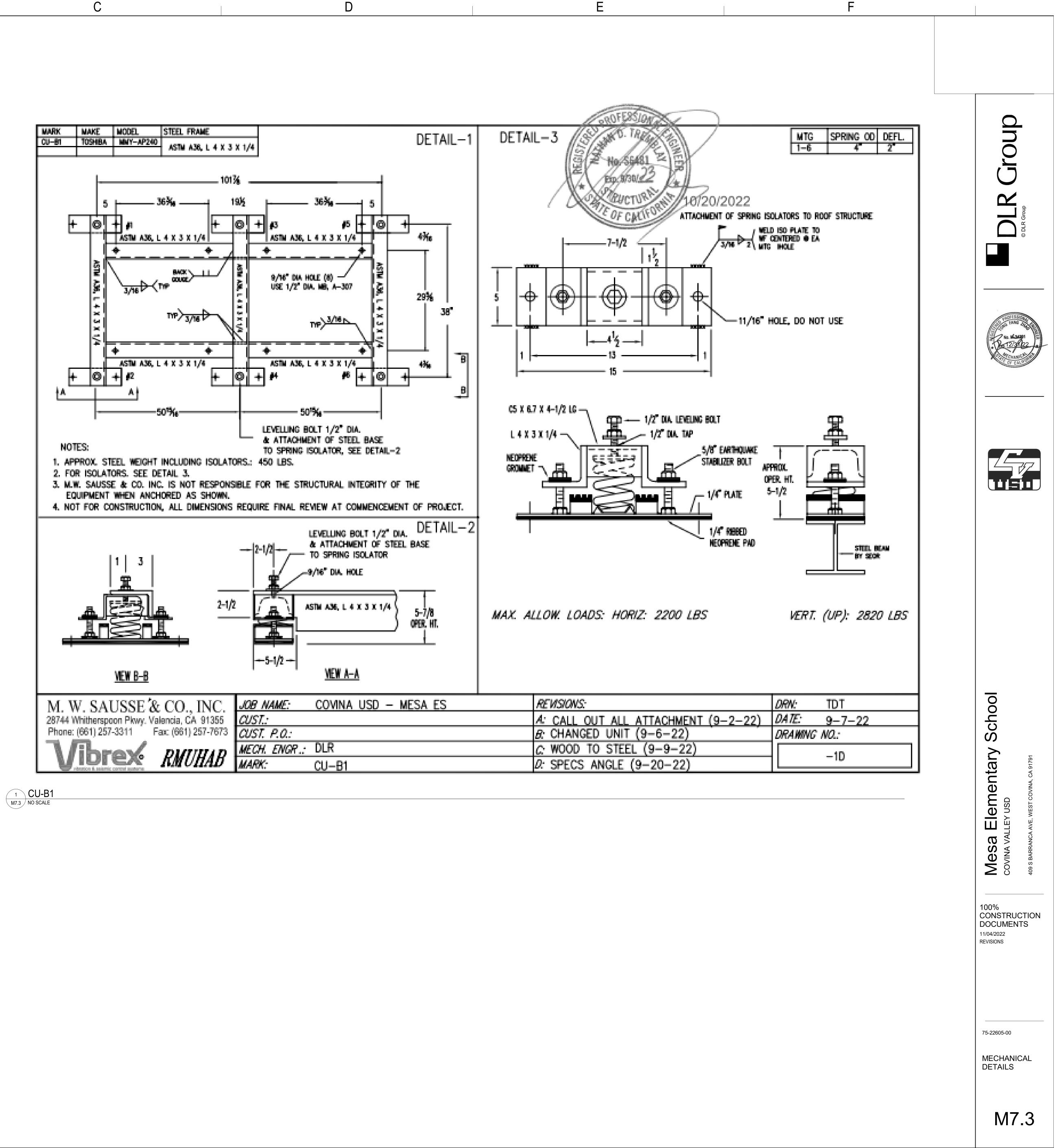




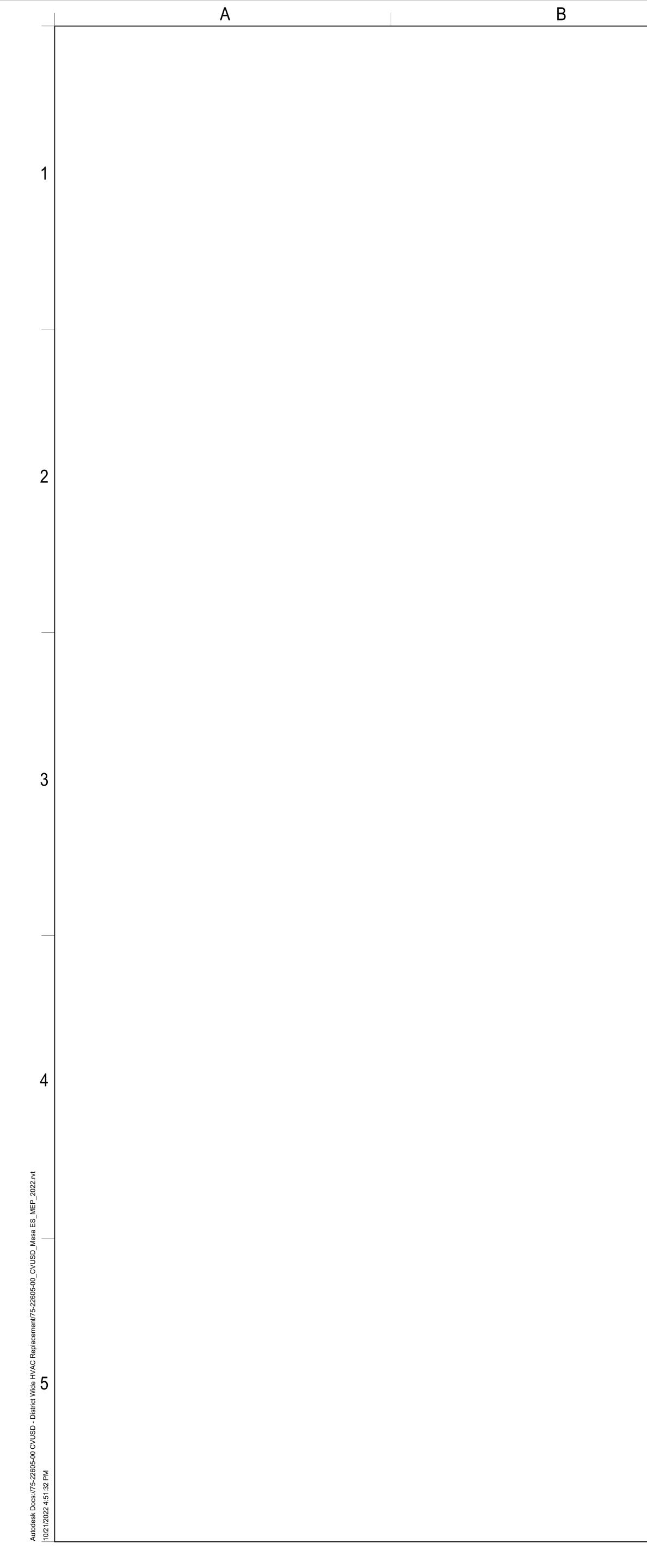


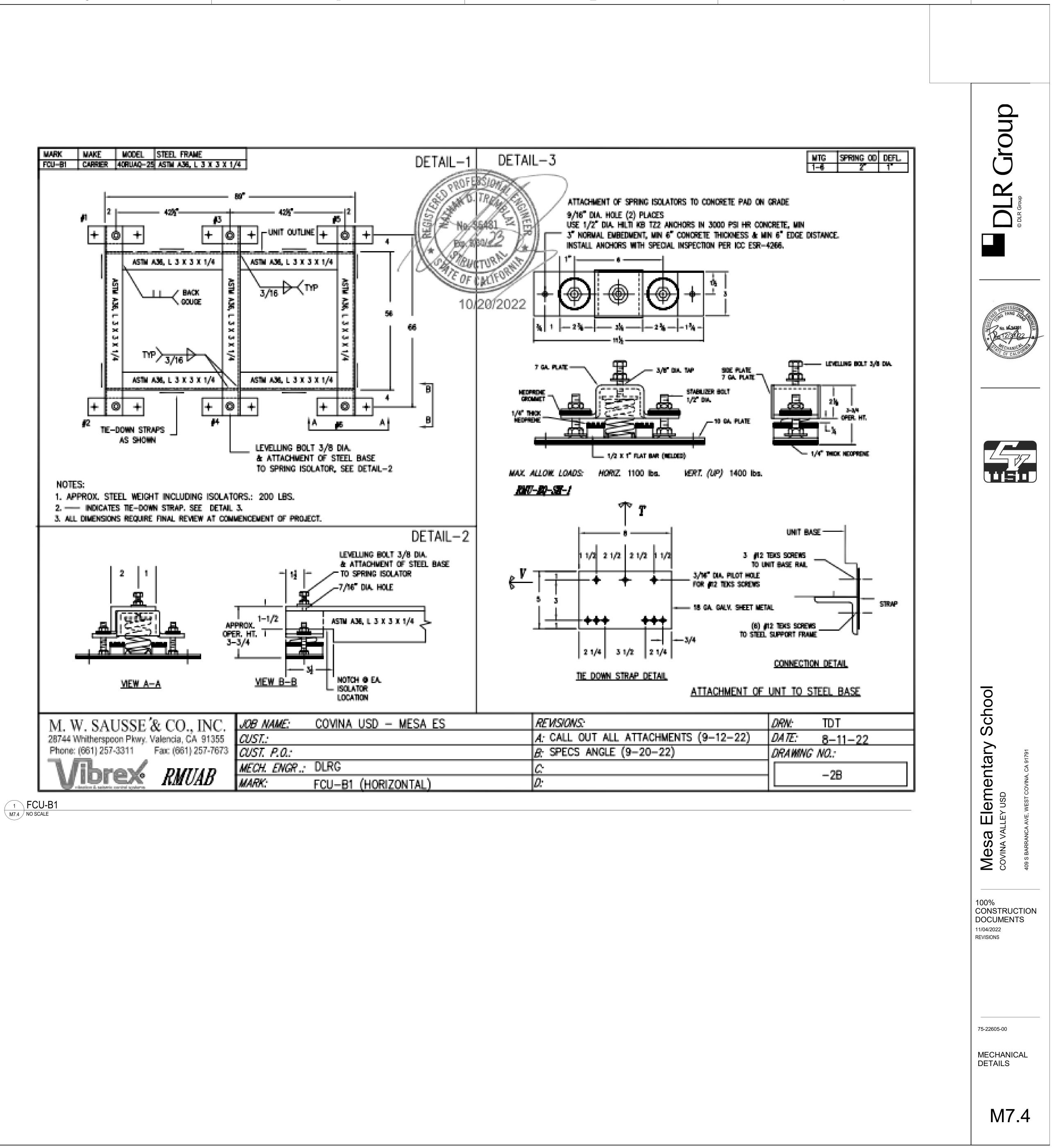
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MESA ES	REVISIONS:	DRN: TDT
	A: CALL OUT ALL ATTACHMENT (9-2-22)	DATE: 9-7-22
	B CHANGED UNIT (9-6-22)	DRAWING NO.:
		-1D
	D: SPECS ANGLE (9-20-22)	

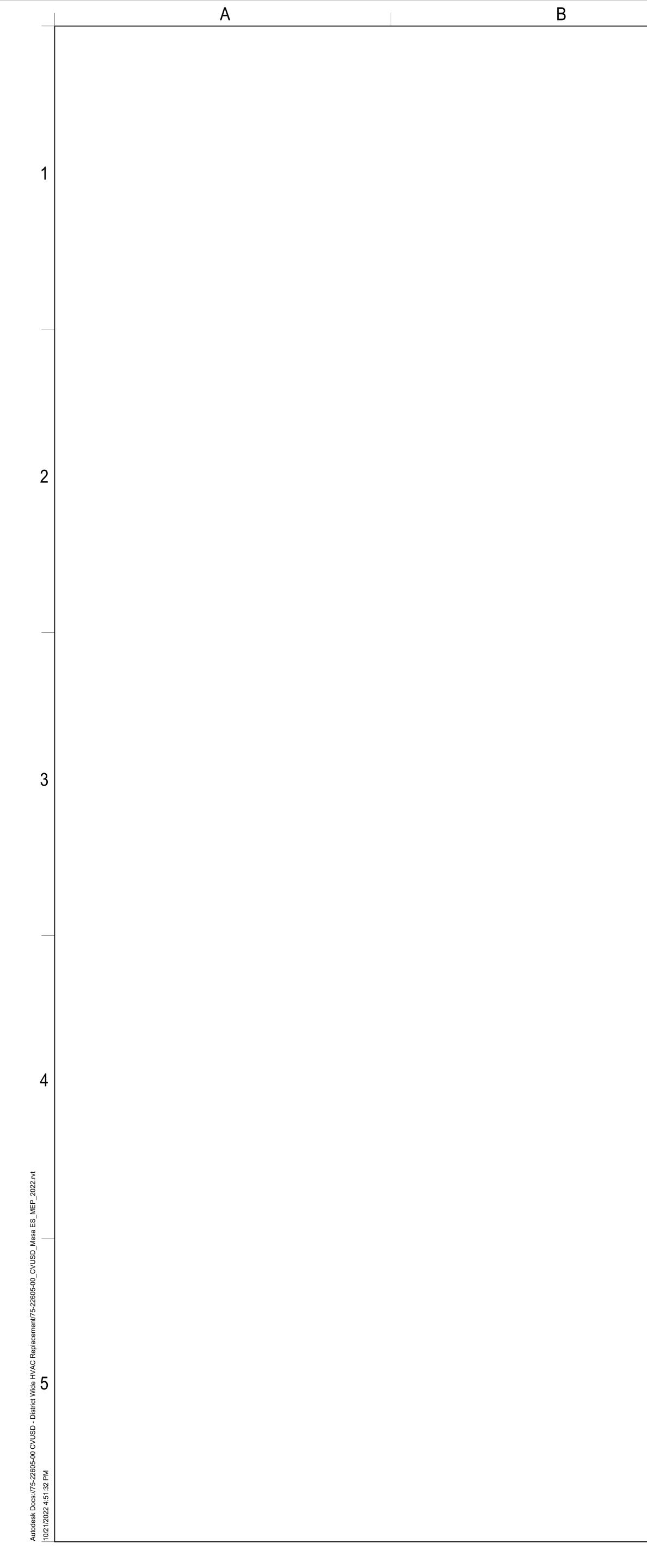




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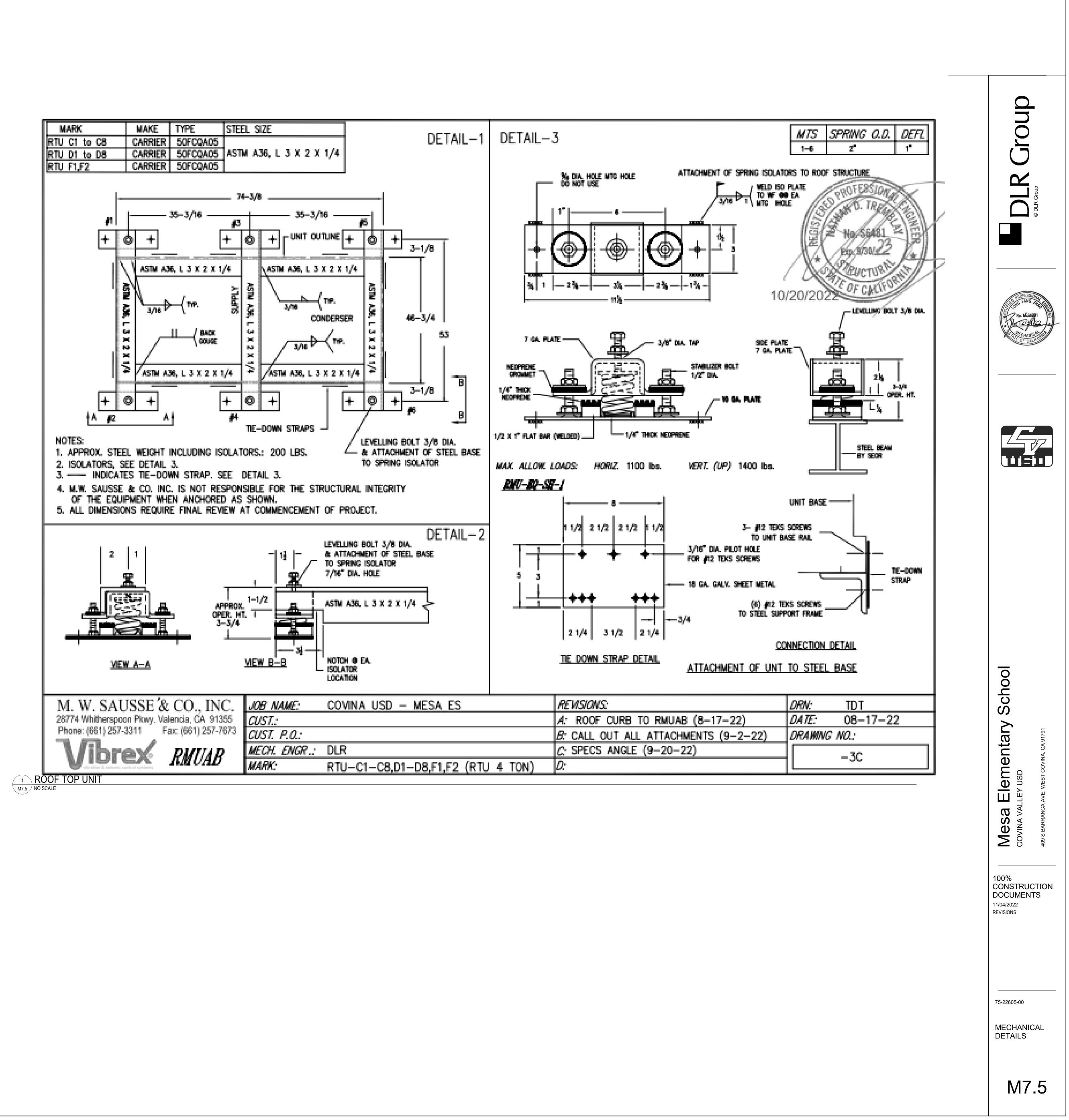
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				MESA E.S. EXIST	ING UNIT																					NE		Т											
TAGS	MAKE	MODEL	CAPACITY (TONS)	HEATING & GAS INPUT/OUTPUT		CTRICAL E CIRCUIT)	WEIGHT	ECONOMIZER	PC	OWER EXHAUST		IG DIREC REPLACEI T2			ET COOLING	CAPACITY	AIRFL	.OW (CFM)		SEER	C		IEW MERV RATING		•	ELECTRICA	L	WEIGHT	OUTSIDE AIF HOOD WEIGH	\	OMIZER		POW	ER EXHAUS	Г		ROOF CURB WEIGHT (LBS)	TOTAL WEIGHT (LBS)	UNIT DIMENSIONS (L" X W" X H")
			(1010)	(BTU/HR)	V/PH	MCA FLA	A (LDO)		GHT EXIS		(LBS)	Y/N		NOMI TO	NAL TOT N (BTU	AL SENSIBL IH) (BTUH)			_ ((MBH)	NATING	(W" X H" X D")	V-PH	MCA	MOCP	LBS	(LBS)	REQUIRED	WEIGHT	REQUIRED?	MODEL #	MCA	МОСР	WEIGHT	(LBS)	(LBS)	
RTU-D1 THRU RTU-D4 (BLDG. D)	SANYO	CH3622 (36THS22)	3.0	36000	208/1	17.5	5 218	- 0	1 (NO 0	218	N	50FCQA05A2A3	4	471	70 35070	1600	350	1	14.3	11.32	34.1	13	2 (16X25X2)	208-1	34	50	475	12	NO	NA	YES	PCD-SRT120	CA 7.1	12.8	152	NA	636	75 X 47 X 34
RTU-C1 THRU RTU-C4 (BLDG. C)	SANYO	CH3622 (36THS22)	3.0	36000	208/1	17.5	5 218	- 0	1 (NO 0	218	N	50FCQA05A2A3	4	471	70 35070	1600	350	1	14.3	11.32	34.1	13	2 (16X25X2)	208-1	34	50	475	12	NO	NA	YES	PCD-SRT120	CA 7.1	12.8	152	NA	636	75 X 47 X 34
RTU-F1 & RTU-F2 (BLDG. F)	SANYO	CH3622 (36THS22)	3.0	36000	208/1	17.5	5 218	- 0	1 (NO 0	218	N	50FCQA05A2A3	4	471	70 35070	1600	350	1	14.3	11.32	34.1	13	2 (16X25X2)	208-1	34	50	475	12	NO	NA	YES	PCD-SRT120	CA 7.1	12.8	152	NA	636	75 X 47 X 34
RTU-E1 THRU RTU-E4 (BLDG. E)	SANYO	CH3622 (36THS22)	3.0	36000	208/1	17.5	5 218	- 0	1 (NO 0	218	N	50FCQA05A2A3	4	471	70 35070	1600	350	1	14.3	11.32	34.1	13	2 (16X25X2)	208-1	34	50	475	12	NO	NA	YES	PCD-SRT120	CA 7.1	12.8	152	NA	636	75 X 47 X 34
CU-B1 (BLDG. B)	CARRIER	38AKS024	20		208/3	93.4 150) 1350				1350	N	MMY-AP240S6HT9F	-UL 20)					22.7	11.95				208/3	45.4+45.4	50+50	1368		NO	NA	NO	NA	NA	NA	NA		1368	104 X 31 X 73
FCU-B1 (BLDG. B)	REZNOR	PGBL 300L/X		400000/320000	230/3		1196				1196	N	40RUQA25T3A5		2345	600 166000	7440	1500	1.6			234.5	13		208/3	30	50	720		NO	NA	NO	NA	NA	NA	NA		720	89 X 29 X 57

NOTES:

PROVIDE MECHANICAL UNIT WITH INTEGRAL CONVENIENCE RECEPTACLE.
 ALL ROOFTOP UNITS SHALL BE PROVIDED WITH UNPOWERED CONVENIENCE OUTLET.

Α

FOR CLASROOMS, ALL ROOFTOP UNITS ARE HORIZONTALLY DISCHARGED CONFIGURATION, UNO. FIELD VERIFY PRIOR TO ORDERING.
 PROVIDE HINGED ACCESS PANEL FOR ALL ROOFTOP UNITS.
 FINAL WEIGHT (LBS) IS SUMMATION OF RTU WEIGHT AND OUTSIDE AIR HOOD.

SCCR RATING SHALL BE MINIMUM OF 10KA FOR RTUS FOR CLASSROOMS AND MPR FCU-B1. AND 25KA FOR MPR CU-B1.

DIFFUSER AND GRILLE SCHEDULE

MARK NO.	MANUFACTURER & MODEL NO.	TYPE	OVERALL DIMENSIONS	NECK SIZE	CFM RANGE	MAX NC	MAX SP	NOTES
CD-1	TITUS	CEILING	24"x24"	6"Ø	0 - 110	25	0.1	
	PAS	SUPPLY		8"Ø	111 - 190	25	0.1	
				10"Ø	191 - 280	25	0.1	1,2,3
				12"Ø	281 - 350	25	0.1	1,2,0
				14Ø	351 - 450	25	0.1	
				16"Ø	451 - 550	25	0.1	
RG-1	TITUS	CEILING	24"x24"	6"Ø	0 - 100	20	0.1	
	PAR	RETURN		8"Ø	101 - 175	20	0.1	
				10"Ø	176 - 275	20	0.1	4.0.0
				12"Ø	276 - 380	20	0.1	1,2,3
				14"Ø	381 - 500	20	0.1	
			16"Ø	501 - 570	20	0.1		

NOTES: 1. OBTAIN ARCHITECT'S APPROVAL FOR COLOR AND FINISH. 2. MATCH THE BORDER TYPE TO THE CEILING. 3. PROVIDE FLAT BLACK INTERNAL FINISH.

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DUCT SIZING SCHEDULE *** FOR LOW VELOCITY SUPPLY, RETURN AND EXHAUST

CFM RANGE	ROUND DUCT DIAMETER OR EQUIVALENT RECTANGULAR DUCT	CFM RANGE	ROUND DUCT DIAMETER OR EQUIVALENT RECTANGULAR DUCT
0-110	6" OR 8" X 4"	1400-1900	18" OR 24" X 12"
101-180	8" OR 10" X 6"	1900-2500	20" OR 24" X 14"
181-270	10" OR 10" X 8"	2500-3300	22" OR 32" X 14"
271-400	10" OR 12" X 8"	3300-4100	24" OR 36" X 14"
401-600	12" OR 12" X 10"	4100-5000	26" OR 40" X 16"
601-900	14" OR 16" X 10"	5000-6200	28" OR 48" X 16"
901-1400	16" OR 18" X 12"	6200-7500	30" OR 48" X 18"
REMARKS:	· · ·		

DUCT SIZES INDICATED ARE INSIDE DIMENSIONS WHICH MAY BE ALTERED BY CONTRACTOR TO OTHER DIMENSIONS TO AVOID INTERFERENCES AND CLEARANCE REQUIREMENTS. USE EQUAL FRICTION METHOD, 0.1"WG PER 100FT. OF DUCT TO DETERMINE DUCT SIZES.

VERIFY ALL DIMENSIONS AT THE SITE, MAKE ALL FIELD MEASUREMENTS AND SHOP DRAWINGS NECESSARY FOR FABRICATION AND ERECTION OF SHEET METAL WORK. MAKE ALLOWANCES FOR BEAMS, PIPE OR OTHER OBSTRUCTION AND FOR WORK BY OTHER TRADES AND NOTIFY THE ARCHITECT IN THE EVENT OF ANY POTENTIAL INTERFERENCE. MAKE AN INITIAL VERIFICATION OF BEAM PENETRATIONS SHOWN ON STRUCTURAL DRAWINGS AND ADVISE OF ANY POTENTIAL INTERFERENCES.

	AIR	VELOCITY GU	IDELINES (FPN)								
LOCATION	NOISE CRITERIA (NC)											
LUCATION	40	35	30	25	20	15						
MAIN SUPPLY DUCT	1700	1500	1000	800	700	600						
MAIN RETURN DUCT	1200	1000	750	600	500	400						
DUCT TO GRILLE SUPPLY	600	500	400	300	250	200						
DUCT TO GRILLE RETURN	600	500	400	300	250	200						

1,2,3

DUCT SIZING *** MEDIUM PRESSURE DUCTWORK

CFM	ROUND DUCT (IN)			ECTANGULAR DUC (IN) (W IS DUCT WIDTH)		
		WX4	WX6	WX8	WX10	WX12
UP TO 150	6	8	6	х	х	х
151-280	8	10	10	8	х	х
281-500	10	Х	16	12	10	х
501-800	12	Х	х	16	12	х
801-1200	14	Х	Х	22	16	14

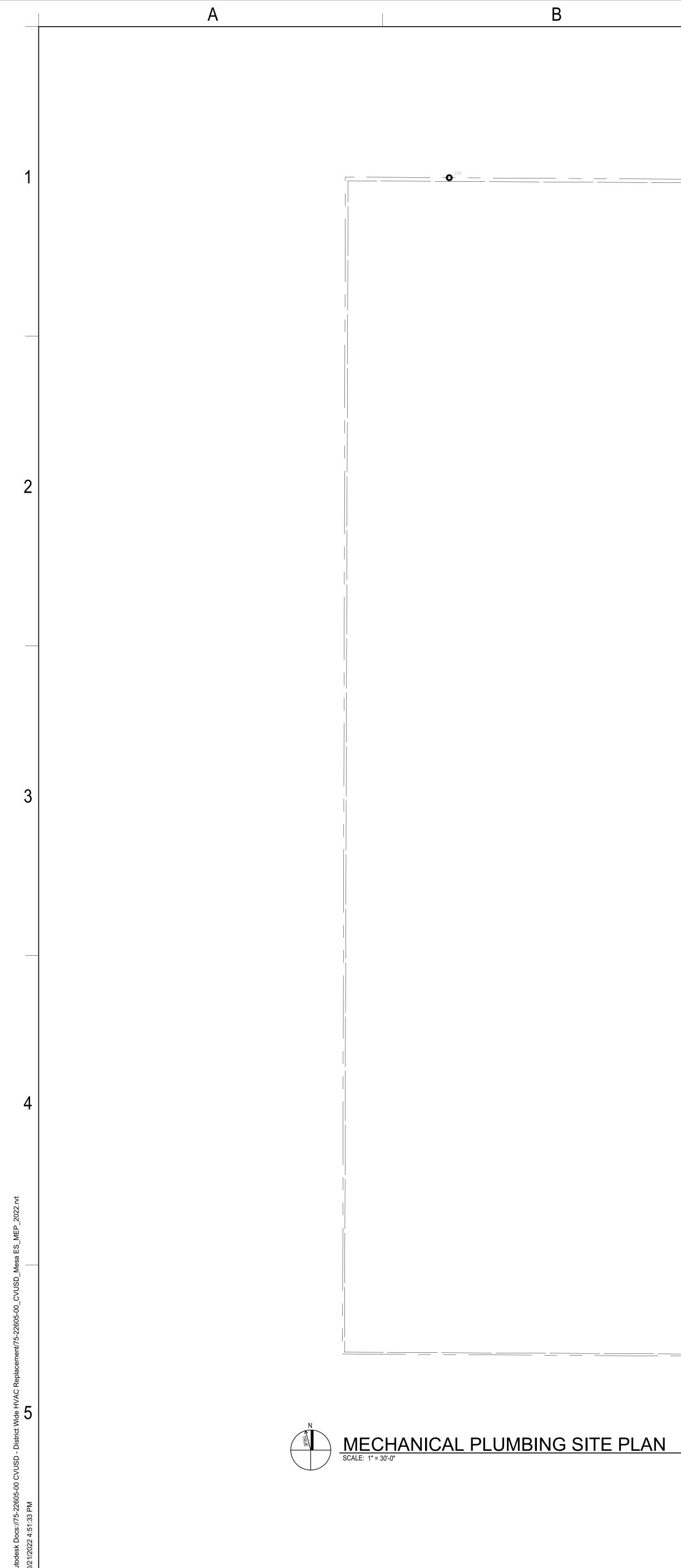
REMARKS:

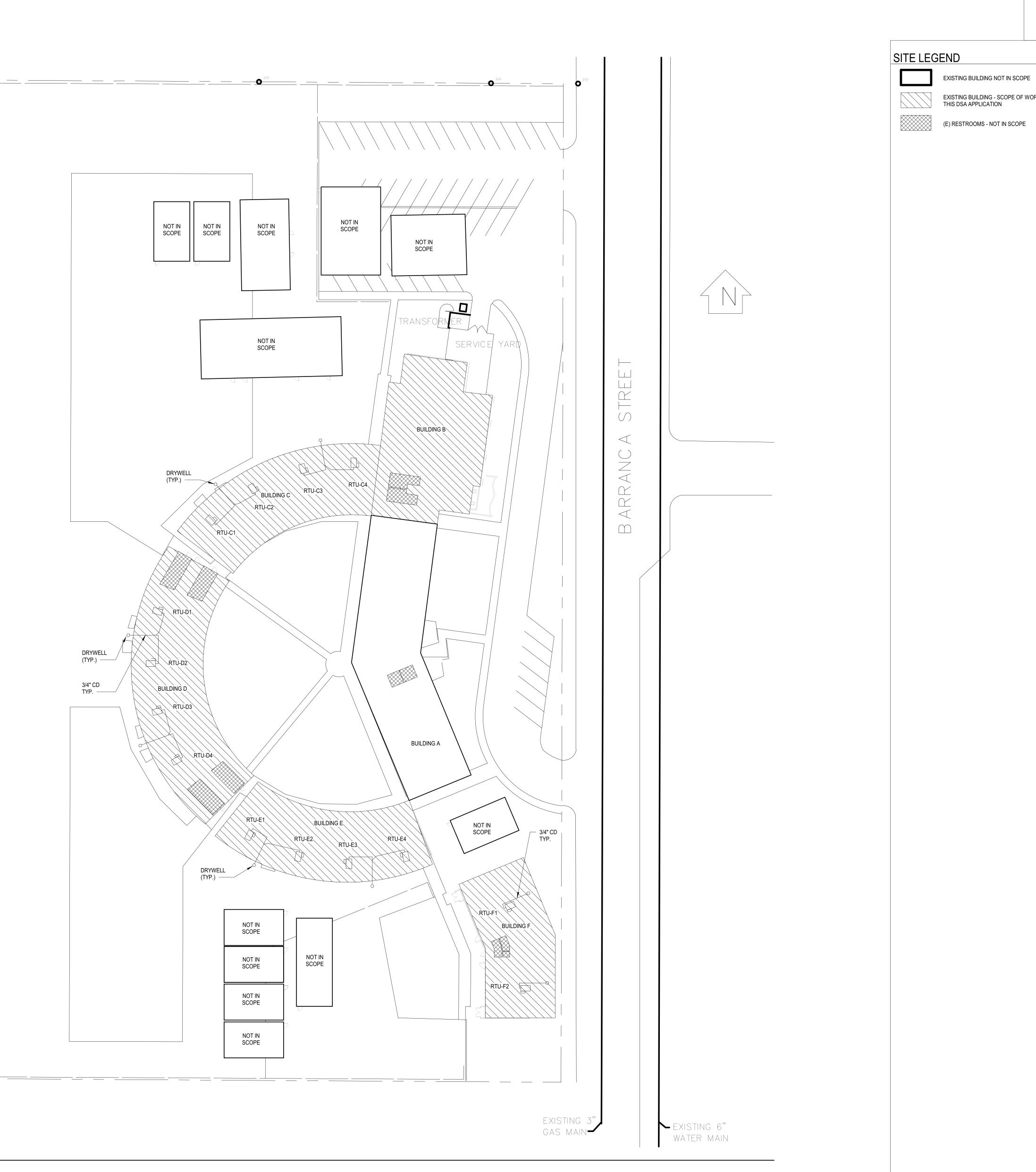
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DUCT SIZES INDICATED ARE INSIDE DIMENSIONS WHICH MAY BE ALTERED BY CONTRACTOR TO OTHER DIMENSIONS TO AVOID INTERFERENCES AND CLEARANCE REQUIREMENTS. USE EQUAL FRICTION METHOD, 0.1"WG PER 100FT. OF DUCT TO DETERMINE DUCT SIZES.

VERIFY ALL DIMENSIONS AT THE SITE, MAKE ALL FIELD MEASUREMENTS AND SHOP DRAWINGS NECESSARY FOR FABRICATION AND ERECTION OF SHEET METAL WORK. MAKE ALLOWANCES FOR BEAMS, PIPE OR OTHER OBSTRUCTION AND FOR WORK BY OTHER TRADES AND NOTIFY THE ARCHITECT IN THE EVENT OF ANY POTENTIAL INTERFERENCE. MAKE AN INITIAL VERIFICATION OF BEAM PENETRATIONS SHOWN ON STRUCTURAL DRAWINGS AND ADVISE OF ANY POTENTIAL INTERFERENCES.

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ONS !") 4	ANCHORAGE DETAIL REFERENCE 1/M7.5	Ğ
4 4 4	1/M7.5 1/M7.5 1/M7.5	© DLR Group
73 7	1/M7.3 1/M7.4	
		No. M. 34201 * Pro 12/3/122 * Con 12/3/122
		chool
		Mesa Elementary School covina valley usd
		C USD VUSD WEST COVINA, C
		Mesa Elementar covina valley usd 409 s barranca ave, west covina, ca 91791
		100% CONSTRUCTION DOCUMENTS 11/04/2022 REVISIONS
		75-22605-00 MECHANICAL SCHEDULES
		M8.1

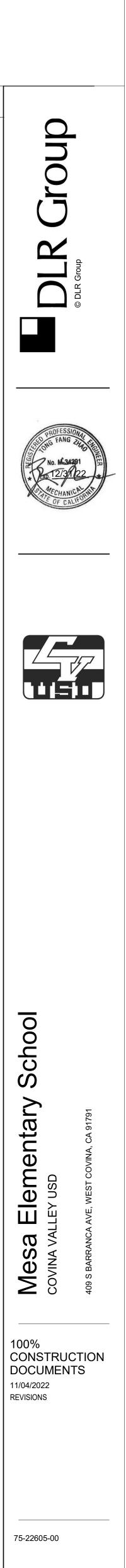




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EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION



MECHANICAL PLUMBING SITE PLAN

MP1.1

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.					Α				В	
CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESIDEND IN THE 31 DE SECTION SI 1314 113 THOREMONE MIX 124 ADM ADS 26 HIG MAPTIENTS 13, 32 AMD 32 1. ALL PERMANENT EQUIPMENT AND COMPONENTS SERVICES SUCH AS ELECTRICAL COMPONENTS SERVICES SUCH AS ELECTRICAL COMPONENTS OF THIS PERMANENTLY ATTACHED 'E G. HARD WIRED'TO THE BULDING UTLITY SERVICES SUCH AS ELECTRICAL BUMPONT THIS PERMANENTLY ATTACHED 'S HALL BLOTRICAL CONNECTIONS EXCEPT PLUGS FOR 1. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER TO MASS LOCATED 4 FEET OR MORE ABOVE THE FOLLOWING MICHANICAL AND E ECTRICAL COMPONENTS SHALL BE POSITIVE'Y ATTACHED TO THE STRUCTURE TO BE MASS LOCATED A TEET OR MORE ABOVE THE FOLLOWING MICHANICAL AND E ECTRICAL COMPONENTS SHALL BE POSITIVE'Y ATTACHED TO THE STRUCTURE DUT MASS LOCATED A TEET OR MORE ABOVE THE FOLLOWING MICHANICAL AND E ECTRICAL COMPONENTS SHALL BE POSITIVE'Y ATTACHED TO THE STRUCTURE DUT MASS LOCATED A TEET OR DEMOSPHERE AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT, FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGTUDINAL DIRECTIONS: A COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED A FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTIVE SUPPORT THE ADDROC THESE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGTUDINAL DIRECTIONS: A COMPONENTS WEIGHING LESS THAN 400 POUNDS, ON IN THE CASE OF DISTIBUTED SYSTEMS LESS STRUAD SPOUNDS PER FOOT, WHICH ARE SUSPENDED THE MACHORAGE OF ALL MECHANICAL ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE PROVAL OF THE DESIGN PROFESSIONAL IN REVEL THAT DIRECTIVE AND REVERTING SYSTEM ARCONS DOTION PHING, DUCTWORK, AND ELECTRICAL DISTIBUTION SYSTEM ARCONS DIVID PHING, DUCTWORK, AND ELECTRICAL DISTIBUTION SYSTEM ARCONS DOTION PHING, DUCTWORK, AND ELECTRICAL DISTIBUTION SYSTEM ARCONS DIVID PHING, DUCTWORK, AND ELECTRICAL DISTRUCTURE CONSERVENT THE ADDOLOX SYSTEM AR						02/02/2020		REVISED: 02/14/2020		
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY TATTACHED (E.G. HARD WIRED) TO THE BULDING UTLITY SERVICES SUCH AS ELECTRICIT, GAS OR WATER, "PERMANENTLY TATACHED SHALL LICU DE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110 20 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE 3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT HICK: IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE STRUCTURE UN THEONOT DEVOISTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ASOVE THESE COMPONENTS SHALL HAVE FLEXIBLE CONVECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTYORK, PIPMIG, AND CONDUIT, FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGTUDINAL DIRECTIONS: A COMPONENT'S WEIGHING LIES THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT. B. COMPONENT'S WEIGHING LIES THAN 400 POUNDS OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HAND FROM A VALL THE ANACOF OR FLOOR OR HAND FROM A VALL THE ANACOF OR FLOOR OR HAND FROM A VALL THE ANACOF OR FLOOR OR HAND FROM A VALL THE ANALOF OR AND ELECTRICAL DISTRIBUTION SYSTEM BRACENT DO COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE PROLECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANACHORED IN ACCORDANCE WITH THE AROVE REQUIREMENTS. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACEND TO COMPONENTS SHALL BE SUBJECT TO THE SPECIES INSPECTION WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANACHORED NOTE PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACEND ROTE		CONSTRUCTION	DOCUMENT	S. THE FOLLOW	ING COMPON	IENTS SHALL BE ANCHORED OR E	BRACED TO MEET THE	E FORCE AND DISPLACEMENT		
1 THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA. 1 COMPONENTS METERFERNESS IN SOFE DABOXE: THESE COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DE NONNENTS SHALL BAY ELEXIBLE CONNECTIONS ROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT, FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGTUDINAL 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 200 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR LOOR OR HUND 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 OHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENT AND E CUPRENT HAVE DEED AND MACHORED IN ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENT 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 3.45 CERTICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13 3.45, 3.5.6, 3		2. TEMPORA SERVICES 110/ 220 VC	RY, MOVABLI SUCH AS EL	E OR MOBILE EC ECTRICITY, GAS ACLES HAVING /	QUIPMENT TH SOR WATER. ' A FLEXIBLE CA	"PERMANENTLY ATTACHED" SHAÌ ABLE.	L INCLUDE ALL ELEC	TRICAL CONNECTIONS EXCEPT PLUGS FOR		
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 HUND 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 ENCINEER 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 SYSTEM BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 16.5, 13.66, 13.68, 13.68, ADD 2019 CGC, CSTIONS 16.17.1.24, 1617A.125 AND 1617A.126. THE METHOD OF SHOWING BRACING AND ATTACHEMENTS TO THE STRUCTURE FOR THE DENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACELOS OF SHOWING BRACING AND ATTACHEMENTS TO THE STRUCTURE FOR THE DENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACELOS. MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEM SOL THE HANCING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANCING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANCING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANCING AND BRACING OF THE DISTRUMING SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANCING AND BRACING OF THE DISTRUMING SWITH. THE ADVINE SHALL DUCTS		THE ADJAG	CENT FLOOR G MECHANIC ITH THE REF	OR ROOF LEVE AL AND ELECTR ERENCES NOTE	EL THAT DIREC	CTLY SUPPORT THE COMPONENT NENTS SHALL BE POSITIVELY ATT ESE COMPONENTS SHALL HAVE I	IS REQUIRED TO BE I ACHED TO THE STRU FLEXIBLE CONNECTIO	RESTRAINED IN A MANNER APPROVED BY D CTURE BUT NEED NOT DEMONSTRATE DES DNS PROVIDED BETWEEN THE COMPONENT	DSA. SIGN	
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 ASSC 7-16 SECTION 33.3 SD EFINE IN ASSC 7-16 SECTIONS 13.65, 13.66, 13.67, 13.68, AND 2019 CBC, SECTIONS 1617A, 1.24, 1617A, 1.25 AND 1617A, 1.26. THE METHOD OF SHOWING BRACING AND ATTACHEMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPROVED INSTALLATION GUIDE (E.G. OSHPD OPM FOR 2013 CBC COR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE (E.G. OSHPD OPM FOR 2013 CBC COR LATER), COPIES OF THE BRACING OF THE DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPROVED INSTALLATION GUIDE (E.G. OSHPD OPM FOR 2013 CBC COR LATER), COPIES OF THE BRACING OF THE DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPROVED INSTALLATION GUIDE (E.G. OSHPD OPM FOR 2013 CBC COR LATER), COPIES OF THE BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURE AND INFORMATION AND BRACING OF THE DISTRUCTURE TO SUPPORT THE HANGING AND BRACING OF THE DISTRUCTURE TO SUPPORT THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGING AND B		A. COMPONE LEVEL TH. B. COMPONE	ENTS WEIGHI AT DIRECTLY ENTS WEIGHI	NG LESS THAN SUPPORT THE NG LESS THAN	400 POUNDS / COMPONENT 20 POUNDS, C	AND HAVING A CENTER OF MASS	LOCATED 4 FEET OR	LESS ABOVE THE ADJACENT FLOOR OR RC	OOF	
PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BACED 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 ATTACHEMENTS 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 HANGING AND BRACING OF THE BRACE LOADS. MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E): MP MD PP E OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. MP MD PP E OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) # 00043-13		THE ANCHORAG	GE OF ALL ME	ECHANICAL, ELE ARGE OR STRU	CTRICAL AND	NEER DELEGATED RESPONSIBILI	TY AND ACCEPTANCE	BY DSA. THE PROJECT INSPECTOR WILL V		GE
THE METHOD OF SHOWING BRACING AND ATTACHEMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS. MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E): MP MD PP E OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. MP MD PP E OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) # 00043-13		PIPING, DUCTW	ORK, AND EL	ECTRICAL DIST	RIBUTION SYS	STEMS SHALL BE BRACED TO CON				2
MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E): MP MD PP E OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. MP MD PP E OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) # 00043-13	_	THE METHOD O BRACING AND A SYSTEM INSTAL DISTRIBUTION S	F SHOWING E TTACHMENT LATION GUID	BRACING AND A S ARE BASED O DE OR MANUAL S	TTACHEMENT IN A PREAPPF SHALL BE AVA	IS TO THE STRUCTURE FOR THE ROVED INSTALLATION GUIDE (E.G NILABLE ON THE JOBSITE PRIOR T	IDENTIFIED DISTRIBU ., OSHPD OPM FOR 20 O THE START OF AND	TION SYSTEM ARE AS NOTED BELOW. WHE 113 CBC OR LATER), COPIES OF THE BRACIN DURING THE HANGING AND BRACING OF T	IG	S⊦
MP MD PP E OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. MP MD PP E OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) # 00043-13			PING (MP), M	ECHANICAL DU	CTS (MD), PLU	JMBING PIPING (PP). ELECTRICAL	DISTRIBUTION SYSTE	:MS (E):		E0.1
MP MD PP (E OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) # 00043-13									TAILS.	E2.1
2		MP	MD	PP	E		TH THE APPLICABLE (DSHPD PRE-APPROVAL (OPM#)		E6.1
2										
2										

TAGS
CU-B1 (BLDG. B)
FCU-1 (BLDG. B)
CU/FCU-C1 (BLDG. C)
CU/FCU-C2 (BLDG. C)
CU/FCU-C3 (BLDG. C)
CU/FCU-C4 (BLDG. C)
CU/FCU-D1 (BLDG. D)
CU/FCU-D2 (BLDG. D)
CU/FCU-D3 (BLDG. D)
CU/FCU-D4 (BLDG. D)
CU/FCU-E1 (BLDG. E)
CU/FCU-E2 (BLDG. E)
CU/FCU-E3 (BLDG. E)
CU/FCU-E4 (BLDG. E)
CU/FCU-F1 (BLDG. F)
CU/FCU-F2 (BLDG. F)
GENERAL NOTES 1
2
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1		
	,	
~	/	

<u>POWER</u>

				ADD	REVIATIONS	ADL	BREVIATIONS
	CIRCUIT HOME RUN	RECEP	TACLES: MOUNT 18-INCHES AFF, UNO				
— — O	CONDUIT TURNING UP	DIAGON	IAL LINE THROUGH SYMBOL OR DENOTED 'AC'	(D)	DEMOLISHED	KV	KILOVOLT
			res mount device above counter.	(E)	EXISTING	KVA	KILOVOLT AMPERES
۳ L	CONDUIT TURNING DOWN		INDICATED AS 'MOUNT ABOVE COUNTER' MOUNT	(R)	RELOCATED	KW	KILOWATT
C	CONDUIT STUB-UP		M OF BOX 2-INCHES ABOVE TOP OF BACKSPLASH	Ø	PHASE		
	CONDUIT SLEEVE	OR 6-IN EXISTS	CHES ABOVE COUNTERTOP IF NO BACKSPLASH			LT	LIGHT
		EVIOLO		A	AMPERE	LTG	LIGHTING
® C	CONDUIT SEAL	LABELS	SHALL BE MACHINE PRINTED, UNO	AC	ABOVE COUNTER		
\frown c	CONDUIT CONCEALED IN CEILING OR WALLS, POWER	Ю	SIMPLEX RECEPTACLE	AF	AMP FRAME (CIRCUIT BREAKER)	MCA	MINIMUM CIRCUIT AMPACITY
× (CONDUIT CONCEALED IN CEILING OR WALLS.			AIC	AMPERE INTERRUPTING CAPACITY	MCB	MAIN CIRCUIT BREAKER
	OTHER (* = SEE ABBREVIATIONS)	\Rightarrow		AL	ALUMINUM	MCC	MOTOR CONTROL CENTER
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, POWE		DUPLEX RECEPTACLE, GFI TYPE	AMP	AMPERE	MH	MANHOLE
*		0.	DUPLEX RECEPTACLE, MOUNT ABOVE COUNTER	AP	WIRELESS ACCESS POINT	MLO	MAIN LUGS ONLY
-	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND,	=	DUPLEX RECEPTACLE, GFI TYPE, MOUNT ABOVE COUNTER	AT	AMP TRIP (CIRCUIT BREAKER OR FUSE)	MOCP	MAXIMUM OVERCURRENT PROTECTION
C	OTHER (* = SEE ABBREVIATIONS)	-		ATS		MRTS	MOTOR RATED TOGGLE SWITCH
г Е	EXPOSED CONDUIT, POWER	=	FOURPLEX RECEPTACLE	AV	AUDIO-VIDEO, AUDIO-VISUAL AMERICAN WIRE GAUGE	MSB	
* F	EXPOSED CONDUIT.	=	FOURPLEX RECEPTACLE, GFI TYPE	AWG	AMERICAN WIRE GAUGE	MTD	MOUNTED MOUNTING
	OTHER (* = SEE ABBREVIATIONS)	\Rightarrow	FOURPLEX RECEPTACLE, MOUNT ABOVE COUNTER	DAC		MTG	
	FIRE RATED SLEEVE		FOURPLEX RECEPTACLE, GFI TYPE,	BAS		MTS	MAIN TRANSFER SWITCH
	I INLINATED SLEEVE		MOUNT ABOVE COUNTER	BJ		N1	
-	TRANSFORMER			BKR BMS	BREAKER	N	
L I		= ∏ ∐	DUPLEX RECEPTACLE, FLUSH IN CEILING	RM2	BUILDING MANAGEMENT SYSTEM	N.C.	
XXX B	BRANCH CIRCUIT PANELBOARD		FOURPLEX RECEPTACLE, FLUSH IN CEILING	C	CONDUIT	N.O. NF	NORMALLY OPEN NON-FUSED
N N	MOUNT 72-INCHES TO TOP	НШ	DUPLEX RECEPTACLE, HORIZONTALLY MOUNTED	CCATV	CONDUTT CABLE TELEVISION		NON-FUSED NIGHT LIGHT
	DISTRIBUTION PANELBOARD MOUNT	-	DUPLEX RECEPTACLE, HORIZONTALLY MOUNTED DUPLEX RECEPTACLE, HORIZ. MTD, GFI TYPE	CATV CB	CABLE TELEVISION CIRCUIT BREAKER	NL	
	72-INCHES TO TOP	HIII LXD	DUPLEX RECEPTACLE, HORIZ. MTD, GETTYPE DUPLEX RECEPTACLE, HORIZ. MTD, ABOVE COUNTER	CB CCTV	CLOSED CIRCUIT TELEVISION	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
			, ,	CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	OFCI OS&Y	OUTSIDE SCREW AND YOKE
E	EQUIPMENT CABINET, AS NOTED	H	DUPLEX RECEPTACLE, HORIZ. MTD, GFI TYPE, MOUNT ABOVE COUNTER	CFCI	CINCLUT	0301	OUTSIDE SOILLIN AND TORE
XXX			MOONT ABOVE OCONTER	CTL	CONTROL	D	POLE(S)
			WEATHER RESISTANT GFI DUPLEX RECEPTACLE,	CU	COPPER	PA	PUBLIC ADDRESS
	SWITCHBOARD	≓⊟ _R	ROOF MOUNT 18-INCHES ABOVE ADJACENT	0	COFFER	PB	PULL BOX
			STRUCTURE WITH A WEATHERPROOF, IN-USE COVER	DB	DECIBEL	PH	PHASE
N N	MOTOR STARTER OR DRIVE		WEATHER RESISTANT GFI DUPLEX RECEPTACLE,	DC	DIRECT CURRENT	PIV	POST INDICATOR VALVE
ГР г	DISCONNECT SWITCH	≡	MOUNT 18-INCHES AFF WITH A WEATHERPROOF,	DISC	DISCONNECT	PNL	PANEL
			IN-USE COVER	DISC	DISCONNECT DISTRIBUTION PANELBOARD	PWR	POWER
⊠y c	COMBINATION STARTER / DISCONNECT SWITCH		STD DUPLEX RECEPTACLE TO SERVE ELECTRIC	DW	DISHWASHER		TOWER
			WATER COOLER, MOUNT AT HEIGHT PER C EQUIPMENT MANUFACTURER'S INSTALLATION CUIDELINES WIRE TO GECLIBKE IN PANEL BOARD			RCP	REFLECTED CEILING PLAN
CT C	CURRENT TRANSFORMER ENCLOSURE		GUIDELINES. WIRE TO GFCI BKR IN PANELBOARD.	ECS	EMERGENCY COMMUNICATION SYSTEM	RECPT	RECEPTACLE
			DUPLEX RECEPTACLE TO SERVE TELEVISION,	EGB	ELECTRICAL GROUNDING BUSBAR	REGPT	REFERENCE
M	METER	⇒ _{TV}	MOUNT AT SAME HEIGHT AND WITHIN 8-INCHES	EGB	ESTIMATED MAXIMUM DEMAND	RESP	RESPONSIVE
GEN G	GENERATOR	IV	OF ADJACENT TV OUTLET	EMGB	ELECTRICAL MAIN GROUNDING BUSBAR	NLOF	
				EP	EXPLOSION PROOF	SCCR	SHORT CIRCUIT CURRENT RATING
ATS A	AUTOMATIC TRANSFER SWITCH			ER	EXISTING (TO BE) RELOCATED	SD	SMOKE DAMPER
		-	DUPLEX RECEPTACLE, EMERGENCY	ERMS	ENERGY REDUCTION MAINTENANCE SWITCH	SEC	SECONDARY
⊥ S	SYSTEM GROUND ELECTRODE	_	,	EWC	ELECTRIC WATER COOLER	SPD	SURGE PROTECTION DEVICE
⊢T) T	THERMOSTAT		FOURPLEX RECEPTACLE, EMERGENCY			SWBD	SWITCHBOARD
-		\Rightarrow	DUPLEX RECEPTACLE, LOWER SWITCH	FA	FIRE ALARM	01100	
ÎΝ	MUSHROOM SWITCH	-	DUPLEX RECEPTACLE, SWITCHED	FAA	FIRE ALARM ANNUNCIATOR	TBB	TELECOMMUNICATIONS BONDING BACKBONE
		T.		FACP	FIRE ALARM CONTROL PANEL	TC	TIME CLOCK
MH E	ELECTRICAL MANHOLE	\Rightarrow	RANGE RECEPTACLE, MOUNT 8-INCHES AFF	FC	FOOT CANDLE	TGB	TELECOMMUNICATIONS GRONDING BUSBAR
HH E	ELECTRICAL HAND HOLE	$ \textcircled{3} \rangle$	SPECIAL RECEPTACLE, DEEP WELL BOX	FLA	FULL LOAD AMPS	TMGB	TELECOMMUNICATIONS MAIN GRONDING BUSE
				FS	FLOW SWITCH	TO	TELECOMMUNICATIONS OUTLET
M N	MOTOR CONNECTION, HORSEPOWER AS INDICATED	•	FLUSH FLOOR OUTLET BOX UNO	FSD	FIRE SMOKE DAMPER	TR	TELECOMMUNICATIONS ROOM
	FUSE AND SWITCH ASSEMBLY	$\bigcirc - \bigcirc$	FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE UNO			TS	TAMPER SWITCH
S _F 「		$\sim \sim \sim$	MULTI-DEVICE FLOOR BOX WITH DUPLEX	G	EQUIPMENT GROUNDING CONDUCTOR	TV	TELEVISION
S _T N	MANUAL CONTROLLER WITH THERMAL OVERLOAD	\rightarrow \rightarrow	RECEPTACLE AND TELECOMMUNICATIONS	GEN	GENERATOR	-	-
			OUTLETS	GFI, GFCI	GROUND FAULT CIRCUIT INTERRUPTER	UG	UNDERGROUND
s _M N	MANUAL CONTROLLER W/O THERMAL OVERLOAD	∟∩∩		GFPE	GROUND FAULT PROTECTION OF EQUIPMENT	UPS	UNINTERRUPTABLE POWER SUPPLY
B C	CIRCUIT BREAKER ENCLOSURE	ΗŪ	USB ONLY RECEPTACLE	GND	EQUIPMENT GROUNDING CONDUCTOR		L
		=0	RECEPTACLE WITH USB PORTS			V	VOLT
PB F	PULL BOX			НН	HANDHOLE	VA	VOLT-AMPERE
_		J	FLUSH JUNCTION BOX, CEILING MOUNTED	HOA	HAND-OFF-AUTOMATIC	VFD	VARIABLE FREQUENCY DRIVE
é E	EQUIPMENT CONNECTION	-	JUNCTION BOX FOR FUTURE PROJECTOR POWER	HP	HORSE POWER		
	CABLE TRAY, LADDER TYPE OR RUNWAY	\frown	MOUNT 24-INCHES ABOVE SUSPENDED CEILING			W	WIRE
<u> </u>	,	Ч	MOUNT TIGHT TO CEILING AT EXPOSED STRUCTURE	IC	INTERCOM	WA	TELECOMMUNICATIONS WORK AREA
	CABLE TRAY		LABEL BOX COVER 'PROJECTOR POWER'	IG	ISOLATED GROUND	WG	WIRE GUARD
r		\sim				WP	WEATHER-PROOF (NEMA 3R)
C		(Y	JUNCTION BOX ABOVE SUSPENDED CEILING	JB	JUNCTION BOX		
 N	MULTI-OUTLET ASSEMBLIES		WITH FLEX CONNECTION				
<u></u> N	MULTI-OUTLET ASSEMBLIES MOUNT 18-INCHES AFF, UNO	Ø		00		XFMR	TRANSFORMER
<u></u> N		∕ ⊘ ⊢①	WITH FLEX CONNECTION FLUSH JUNCTION BOX, WALL MOUNTED		THOUSAND AMPERE INTERRUPTING CIRCUIT	XFMR	TRANSFORMER
<u></u> N N V	MOUNT 18-INCHES AFF, UNO WHERE DENOTED 'AC', MOUNT ABOVE COUNTER	Ø		KAIC	THOUSAND AMPERE INTERRUPTING CIRCUIT	XFMR	TRANSFORMER
	MOUNT 18-INCHES AFF, UNO		FLUSH JUNCTION BOX, WALL MOUNTED		THOUSAND AMPERE INTERRUPTING CIRCUIT	XFMR	TRANSFORMER

PUSHBUTTON STATION: MOUNT 42-INCHES AFF UNO

• SWITCH, PUSH BUTTON, SINGLE

SWITCH, PUSH BUTTON, DOUBLE SWITCH, PUSH BUTTON, TRIPLE

MESA E.S. AC UNIT REPLACEMENT

		EXIS	TING U	NIT											Ν	EW UNIT					
				ELECTRICAL				DIRECT				El	ECTRICAL				PC	WER EXHAU	ST		NOTES
V/PH	MCA	FLA	МОСР	PANEL/ CKT#	FEEDER SIZE	DISCONNECT	TAGS	REPLACEMENT? Y/N	CFM	V-PH	MCA	MOCP	FEEDER SIZE	DISCONNECT	REQUIRED?	Model#	MCA	МОСР	FEEDER SIZE	DISCONNECT	
209/2	02.4	67.0	100		2#2/0 1#4CND 2"C	150	CU-B1A (BLDG. B)	N		208/3	45.4	50	3#6, 1#10GND-1"C	60A (50A FUSE)	NO	NA	NO	NA	NIA	NA	PROVIDE WIRE TAP ON EXISTING FEEDER
208/3	93.4	67.9	100	HBM-19,21,23	3#2/O 1#4GND-2"C	150	CU-B1B (BLDG. B)	N		208/3	45.4	50	3#6, 1#10GND-1"C	60A (50A FUSE)	NO	NA	NO	NA	NA	NA	PROVIDE WIRE TAP ON EXISTING FEEDER
208/3	20.875	16.7	30	HBM-20,22,24	3#10, 1#10GND-0.75"C	30	FCU-1 (BLDG. B)	Y	6,430	208/3	30	50	3#6, 1#10GND-1"C	60A (50A FUSE)	NO	NA	NO	NA	NA	NA	
208/1	21.875	17.5	30	HDB-1,3		30	RTU-C1 (BLDG. C)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	
208/1	21.875	17.5	30	HDB-5,7	4#8, 1#8GND-1"C	30	RTU-C2 (BLDG. C)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	
208/1	21.875	17.5	30	HDB-2,4	4#8, 1#8GND-1"C	30	RTU-C3 (BLDG. C)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	
208/1	21.875	17.5	30	HDB-6,8	4#8, 1#8GND-1 C	30	RTU-C4 (BLDG. C)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	
208/1	21.875	17.5	30	HDB-9,11	4#8, 1#8GND-1"C	30	RTU-D1 (BLDG. D)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	
208/1	21.875	17.5	30	HDB-10,12	4#8, 1#8GND-1 C	30	RTU-D2 (BLDG. D)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	
208/1	21.875	17.5	30	HDC-9,11	4#8, 1#8GND-1"C	30	RTU-D3 (BLDG. D)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	
208/1	21.875	17.5	30	HDC-10,12	4#0, 1#00ND-1 C	30	RTU-D4 (BLDG. D)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	
208/1	21.875	17.5	30	HDC-2,4	4#8, 1#8GND-1"C	30	RTU-E1 (BLDG. E)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	
208/1	21.875	17.5	30	HDC-6,8	4#0, 1#00ND-1 C	30	RTU-E2 (BLDG. E)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	
208/1	21.875	17.5	30	HDC-1,3	4#8, 1#8GND-1"C	30	RTU-E3 (BLDG. E)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	
208/1	21.875	17.5	30	HDC-5,7	4#0, 1#00ND-1 C	30	RTU-E4 (BLDG. E)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	
208/1	21.875	17.5	30	HF-1,3	4#6, 1#6GND-1"C	30	RTU-F1 (BLDG. F)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	
208/1	21.875	17.5	30	HF-5,7	4#0, 1#00ND-1 C	30	RTU-F2 (BLDG. F)	Y	1,600	208/1	34	50	-	60A (50A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#8, 1#8GND-1"C	30A (20A FUSE)	

CONTRACTOR TO FIELD VERIFY CIRCUITING AND FEEDER INFORMATION PRIOR TO EQUIPMENT REMOVAL. CONTRACTOR TO PROVIDE REQUIRED ADJUSTMENTS AS NEEDED.

PROVIDE MECHANICAL UNIT WITH INTEGRAL CONVENIENCE RECEPTACLE. FEED FROM SPARE 20A/1P BREAKER IN NEAREST PANEL. ROUTE 2#12+1#12GND IN 1/2" EMT CONDUIT FROM PANEL TO RECEPTACLE. POWER NO MORE THAN 10 RECEPTACLES ON ONE CIRCUIT. FIELD VERIFY EXACT LOCATION OF NEAREST PANEL AND ROUTE OF NEW CIRCUIT FROM PANEL TO UNIT RECEPTACLE.

CONTRACTOR TO DEMOLISH POWER CONNECTION FROM ALL ROOF TOP UNITS. DEMOLITION TO CONSIST OF REMOVAL OF POWER CONNECTION, CABLING, AND CONDUIT BACK...

FIELD COORDINATE EQUIPMENT MANUFACTURER FOR FAULT CURRENT LIMITING FUSE TYPES

--**)**--**-----**

GENERAL SYMBOLS POINT OF DISCONNECT - DEMOLITION REMOVED FROM EXISTING POINT OF CONNECTION - NEW CONNECTS TO EXISTING AREA NOT IN CONTRACT

ENERAL NOTES

PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL. UNLESS SPECIFICALLY SHOWN ON THESE DRAWINGS, NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED, OR NOTCHED WITHOUT PRIOR AUTHORIZATION IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD AND DSA.

HEET INDEX

ELECTRICAL SYMBOLS, ABBREVIATIONS & NOTES

- ROOF ELECTRICAL PLAN
- ELECTRICAL DETAILS

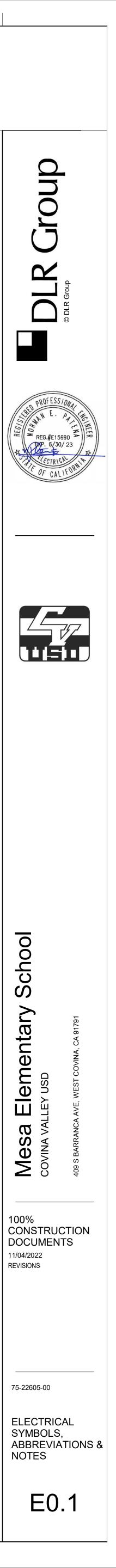
ABBREVIATIONS

HAND DRYER, INSTALL HAND DRYER SPECIFIED IN DIV. 11

<u>* NOTE *</u> ALL NOTES ON THIS SHEET ARE APPLICABLE TO ALL OTHER SHEETS IN THIS SET.

THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE APPLICABLE IN THIS SET OF DRAWINGS.

ABBREVIATIONS

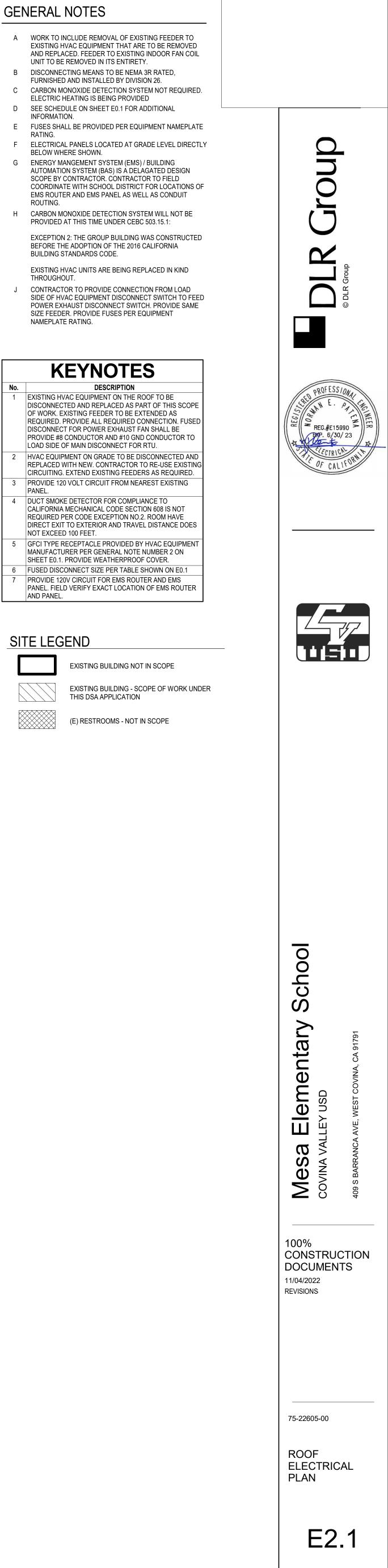




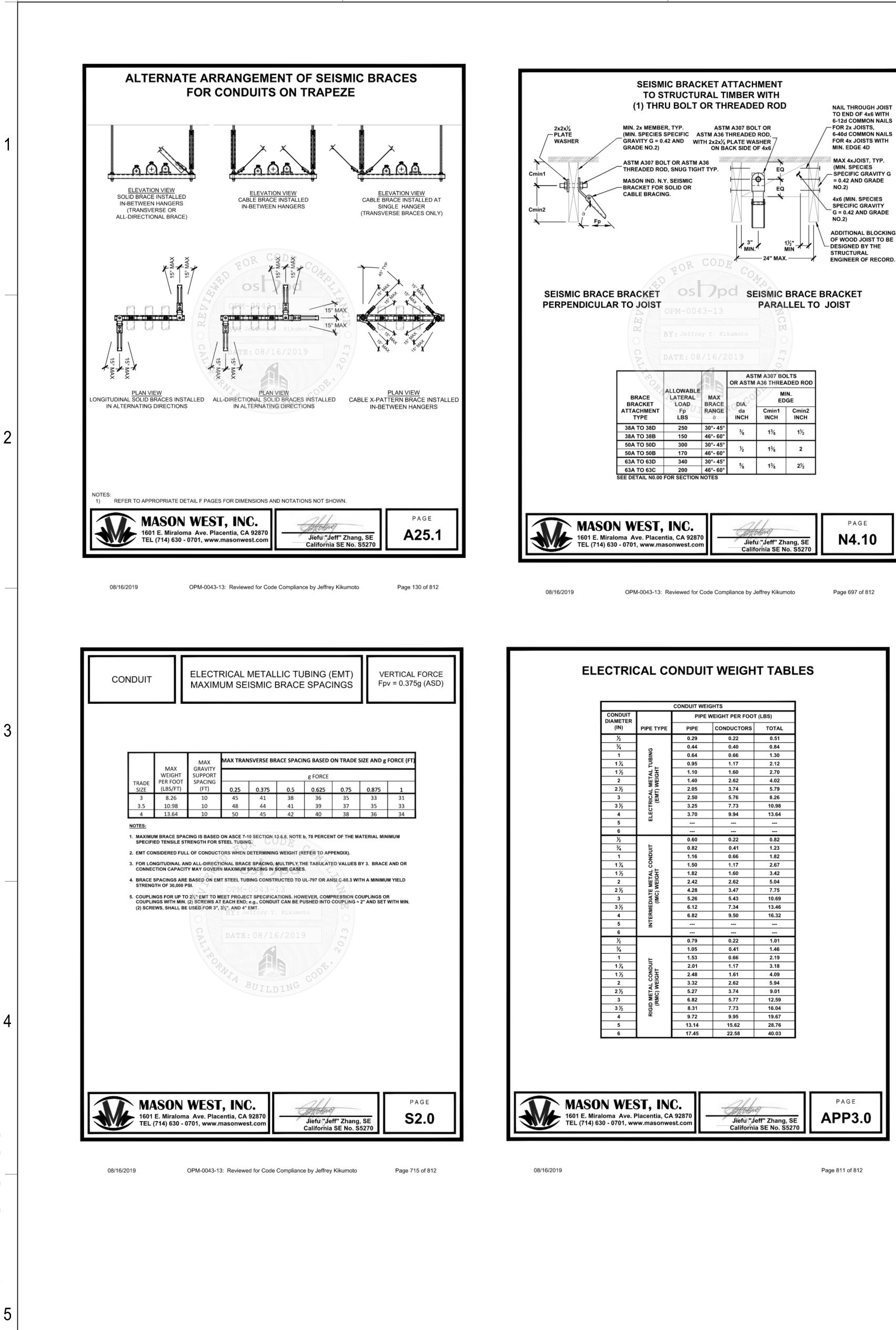
GENERAL NOTES

Ε

- INFORMATION.
- RATING.
- BELOW WHERE SHOWN.
- ROUTING.
- BUILDING STANDARDS CODE.



EXISTING BUILDING NOT IN
EXISTING BUILDING - SCOPE THIS DSA APPLICATION
(E) RESTROOMS - NOT IN SC

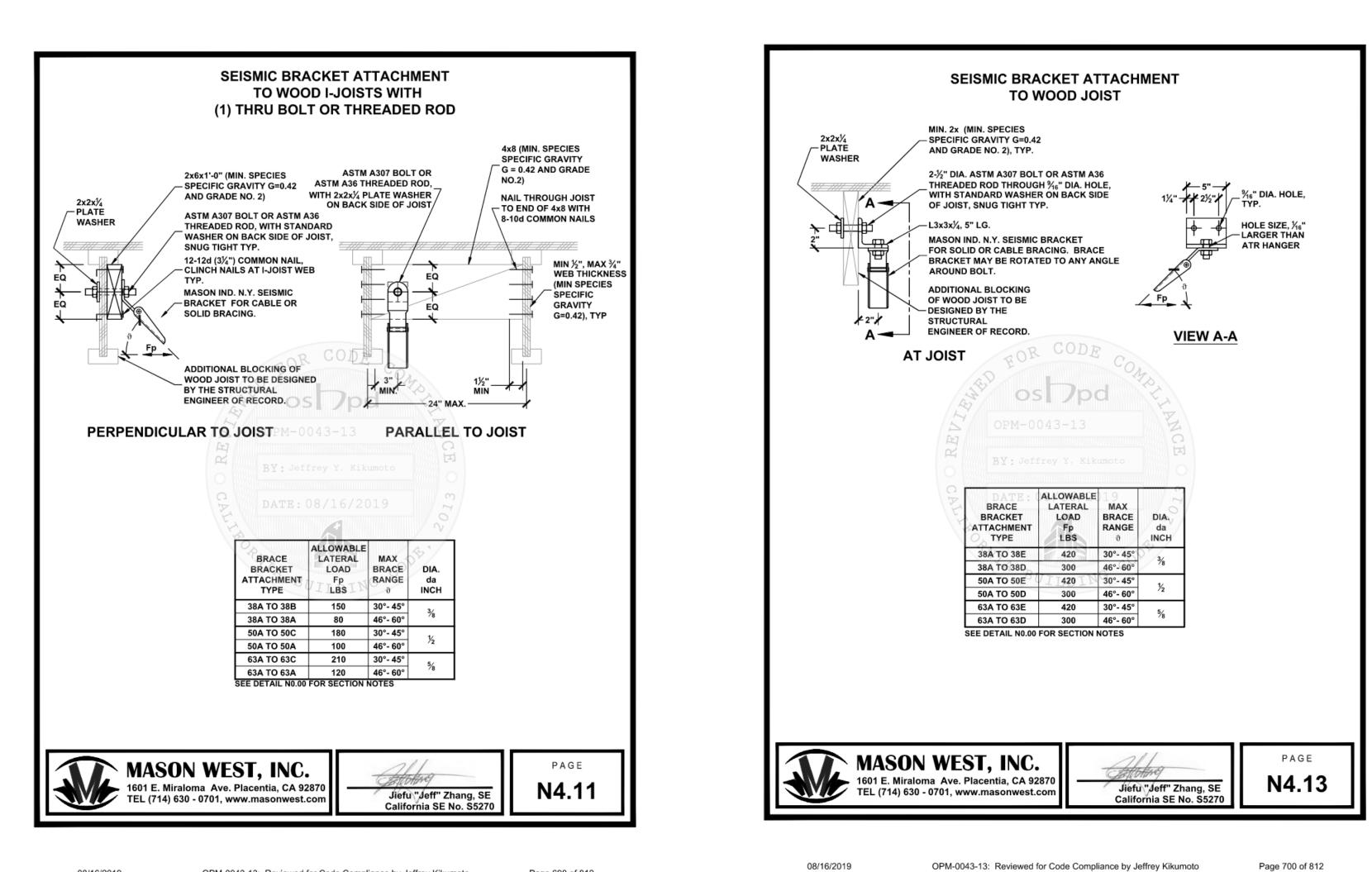


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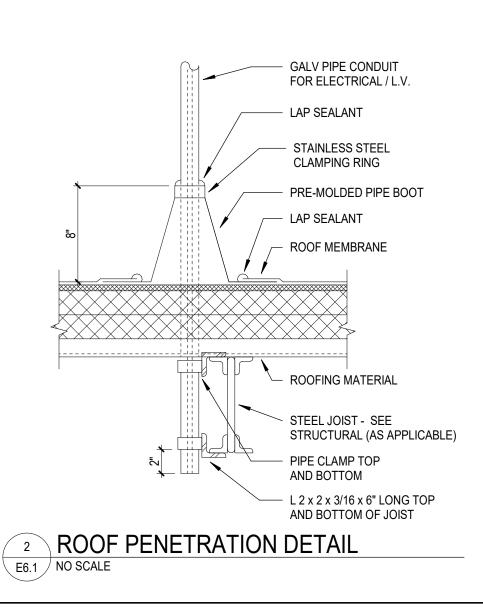
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08/16/2019



CONDUIT DIAMETER (IN)	CONDUIT WEIGHTS							
		PIPE V	(LBS)					
	PIPE TYPE	PIPE	CONDUCTORS	TOTAL				
1/2		0.29	0.22	0.51				
3⁄4	0	0.44	0.40	0.84				
1	N	0.64	0.66	1.30				
1 1⁄4	ED.	0.95	1.17	2.12				
1 1/2	Ϋ́Υ,	1.10	1.60	2.70				
2	EIG /EIG	1.40	2.62	4.02				
2 1/2	⊿ ≤	2.05	3.74	5.79				
3	RICAL METAL T (EMT) WEIGHT	2.50	5.76	8.26				
3 1/2	CTR (3.25	7.73	10.98				
4	ELECTRICAL METAL TUBING (EMT) WEIGHT	3.70	9.94	13.64				
5	ш							
6								
1∕₂		0.60	0.22	0.82				
3⁄4	1n	0.82	0.41	1.23				
1	ND	1.16	0.66	1.82				
1 1⁄4	8 _.	1.50	1.17	2.67				
1 1⁄2	BHT	1.82	1.60	3.42				
2	VEIC	2.42	2.62	5.04				
2 1/2	DIATE METAL (IMC) WEIGHT	4.28	3.47	7.75				
3	.VIQ	5.26	5.43	10.69				
3 1/2	MEL	6.12	7.34	13.46				
4	I I I I I I I I I I I I I I I I I I I	6.82	9.50	16.32				
5	INT							
6								
1/2		0.79	0.22	1.01				
3⁄4		1.05	0.41	1.46				
1	F	1.53	0.66	2.19				
1 1⁄4	ID METAL CONDUIT (RMC) WEIGHT	2.01	1.17	3.18				
1 1⁄2	0 HD	2.48	1.61	4.09				
2	AL (3.32	2.62	5.94				
2 1/2	C) EL	5.27	3.74	9.01				
3	ID METAL CONE (RMC) WEIGHT	6.82	5.77	12.59				
3 1/2	RIGI	8.31	7.73	16.04				
4	Ľ.	9.72	9.95	19.67				
5		13.14	15.62	28.76				
6		17.45	22.58	40.03				

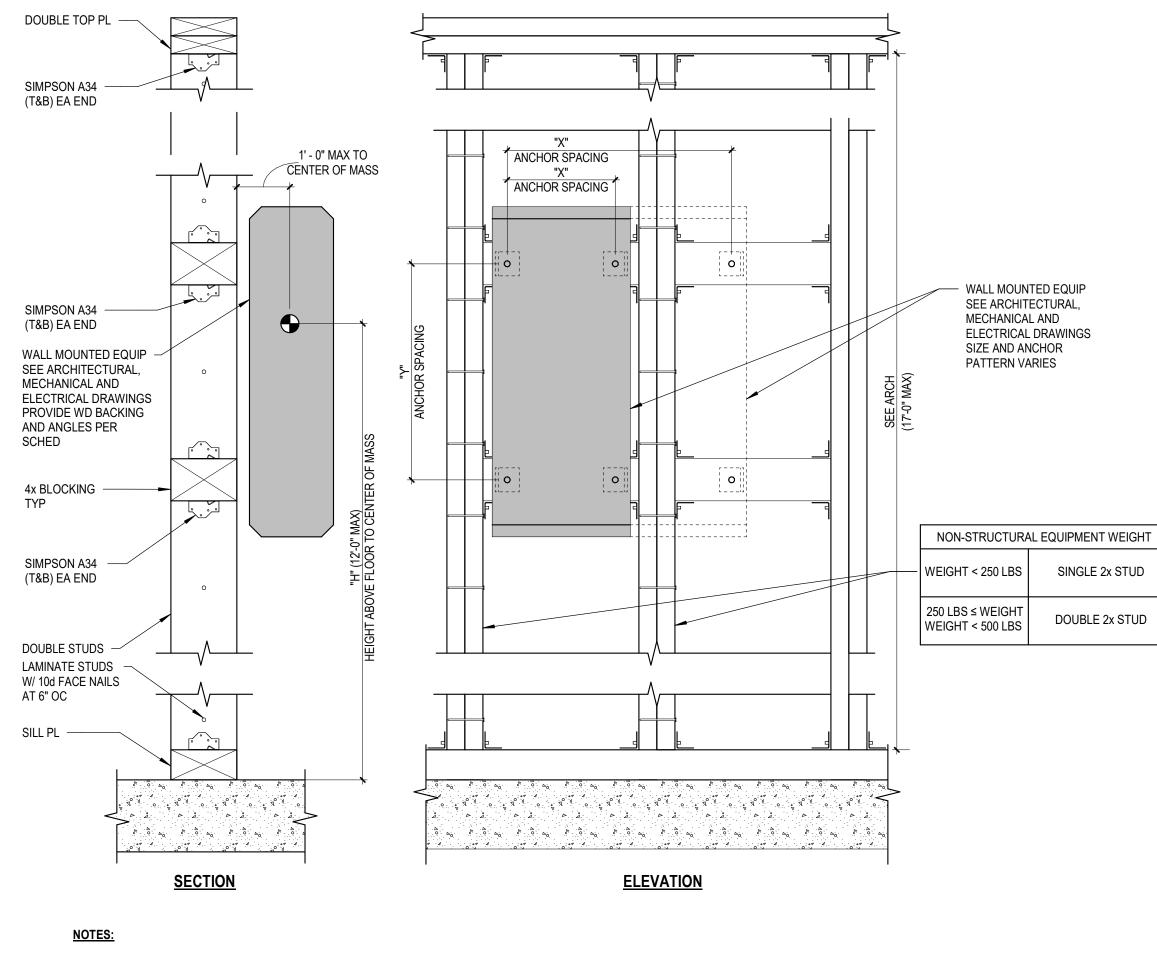


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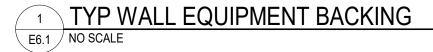
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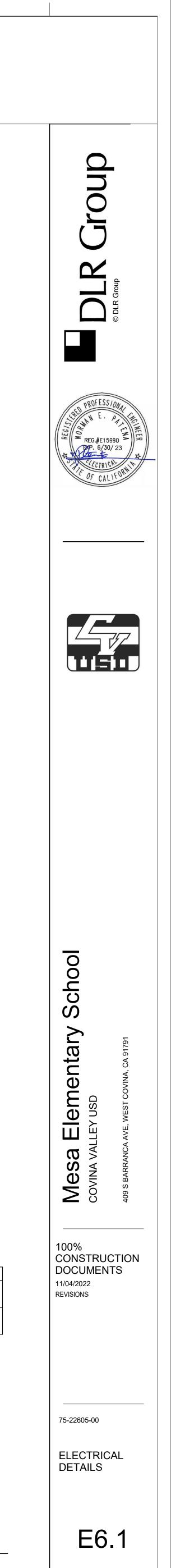
OPM-0043-13: Reviewed for Code Compliance by Jeffrey Kikumoto

08/16/2019



. MAXIMUM WEIGHT OF EQUIPMENT UNIT NOT TO EXCEED 500 LBS. 2. COORDINATE EXACT LOCATIONS WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS.





SINGLE 2x STUD DOUBLE 2x STUD