

BEN LOMOND ELEM. SCHOOL

621 E. COVINA BLVD COVINA, CA 91722

COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT

100% CONSTRUCTION DOCUMENT

05/05/2022

DLR GROUP PROJECT NUMBER: 75-22605

DSA APPLICATION #

A# 03-122228

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-122228 INC:
REVIEWED FOR
SS FLS ACS
DATE: 02/16/2023

DLR Group
© DLR Group

LICENSED ARCHITECT
JESSE MILLER
No. C-32306
10/31/2023
STATE OF CALIFORNIA

USG

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COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT
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REVISIONS

75-22605
DSA A#03-122228
DSA File #: 19-25

COVER SHEET

G0.1

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Statement of General Conformance

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS

(Application No. 03-122228 File No. 19-25)

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

I FIND THAT:

ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET FOR EACH DISCIPLINE (SEE SHEET INDEX FOR LIST OF DISCIPLINES)

THIS DRAWING OR PAGE

ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN, AND

HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.

05/05/2022

SIGNATURE DATE

ARCHITECT OR ENGINEER DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE

JESSE MILLER

PRINT NAME

C-32306 10/31/2023

LICENSE NUMBER EXPIRATION DATE

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

PRINT NAME

LICENSE NUMBER EXPIRATION DATE

DESIGN ANALYSIS DATA

- WIND DESIGN CRITERIA (CBC 1603A.1.4) - STRUCTURAL DESIGN PARAMETERS
 - RISK CATEGORY: II
 - WIND DESIGN SPEED: V=110 MPH
 - WIND EXPOSURE CATEGORY: B (PER ASCE 7-16)
- EARTHQUAKE DESIGN CRITERIA (CBC 1603A.1.5)
 - SEISMIC DESIGN CATEGORY: D
 - SITE CLASS: D
 - S₁ = 1.646
 - S₂ = 0.9
 - S_{MS} = 1.975
 - S_{M1} = 1.020
 - S_{M2} = 1.317
 - S_{M3} = 0.980
 - I_e (COMPONENT IMPORTANCE FACTOR) = 1.0
- DESIGN LOAD BEARING VALUES OF SOILS (CBC 1603A.1.6)
 - ALLOWABLE SOIL BEARING PRESSURE: 1,500 PSF
 - ALLOWABLE LATERAL BEARING PRESSURE: 100 PSF MIN.

SCOPE OF WORK

SCOPE OF WORK SHALL BE AS FOLLOWS:
REMOVAL OF EXISTING SPLIT SYSTEM UNITS INCLUDING GROUND MOUNTED CONDENSING UNITS AND ALL ASSOCIATED CONDUITS, PIPING, SUPPORTS, ETC. REPLACEMENT WITH NEW ROOF MOUNTED HVAC UNITS AT ALL CLASSROOM BUILDINGS TO INCLUDE: NEW CURBS, CONTROLS ELECTRICAL, ROOF PATCHING, FLASHING, CEILING TILES, WINDOW GLAZING, AND MISC SITE WORK AS REQUIRED.
IN ADDITION REMOVAL AND REPLACEMENT OF EXISTING MFR UNIT WITH NEW HVAC SYSTEM.
REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL SCOPE AS REQUIRED

APPLICABLE CODES

- 2019 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR
- 2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
- 2019 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
- 2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
- 2019 CALIFORNIA MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
- 2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
- 2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
- 2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
- 2018 INTERNATIONAL EXISTING BUILDING CODE AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CAL GREEN), PART 11, TITLE 24 CCR
- 2019 CALIFORNIA REFERENCED STANDARDS CODE (CEBC), PART 12, TITLE 24 CCR
- TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
- 2016 ASME A17.1 CSA B44-13 SAFETY CODE FOR ELEVATORS AND ESCALATORS
- (PER 2019 CBC PART 2 CH 35)
- NOTE: CALIFORNIA ELEVATOR UNIT ENFORCES CCR TITLE 8 AND USES THE 2004 ASME A17.1 BY ADOPTION
- 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
- NFPA 13 - STANDARD FOR INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED) 2016 ADDITION
- NFPA 14 - STANDARD FOR INSTALLATION OF SAND PIPE AND HOSE SYSTEMS (CA AMENDED) 2016 ADDITION
- NFPA 17 - STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS 2016 ADDITION
- NFPA 17A - STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS 2017 ADDITION
- NFPA 20 - STANDARD FOR INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION 2017 ADDITION
- NFPA 22 - STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION 2016 ADDITION
- NFPA 24 - STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES (CA AMENDED) 2016 ADDITION
- NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED) 2016 ADDITION
- NFPA 80 - STANDARD FOR FIRE DOORS AND OTHER OPENINGS PROTECTIVE 1999 ADDITION
- NFPA 2001 - STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CA AMENDED) 2015 ADDITION
- UL 300 - STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT 2015 ADDITION
- UL 464 - AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES 2003 ADDITION
- UL 521 - STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS 1999 ADDITION
- UL 1971 - STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED 2002 (R2010)
- ICC 300 - STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS 2017 ADDITION

DSA GENERAL NOTES

- 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.
- 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).
- SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS (ACCESSIBILITY, STRUCTURAL ENGINEER, AND FIRE 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.
- 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 CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE PROJECT INSPECTOR ARE DEFINED IN SECTION 4-342, CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR).
- A DSA-ACCEPTED TESTING LAB, EMPLOYED BY THE DISTRICT (OWNER), SHALL CONDUCT ALL REQUIRED TESTS AND INSPECTIONS OF THE WORK.
- THE DSA-CERTIFIED PROJECT INSPECTOR AND DSA-ACCEPTED TESTING LAB SHALL BE EMPLOYED AND PAID BY THE OWNER (DISTRICT) AND APPROVED BY ALL OF THE FOLLOWING: ARCHITECT 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.
- ALL WORK SHALL CONFORM TO 2019 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
- A DSA-ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
- 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).
- FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND APPROVED BY DSA. LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT. IF THIS PROJECT HAS NO DEFERRED SUBMITTAL ITEMS, PLEASE INDICATE AS SUCH.
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH THE ENERGY CODE.
- LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT).
- MECHANICAL SYSTEM ACCEPTANCE TEST MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1, 2021.
- ENVELOPE AND PROCESS EQUIPMENT ACCEPTANCE TESTS SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR, ENGINEER/ARCHITECT OR RECORD OR THE OWNER'S AGENT.
- A LISTING OF CERTIFIED ATT CAN BE FOUND AT <https://www.energy.ca.gov/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TESTING-TECHNICIAN-CERTIFICATION-PROVIDER-PROGRAM/ACCEPTANCE>
- THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR UNTIL THE CONSTRUCTION INSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA.
- PROJECT INSPECTORS WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED.

VICINITY MAP



PROJECT DIRECTORY

OWNER
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GENERAL ABBREVIATIONS

#	NUMBER
&	AND
@	AT
ADA	AMERICANS WITH DISABILITY ACT
ADDN	ADDITION OR ADDITIONAL
AF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
ALT	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
BLDG	BUILDING
BSMT	BASEMENT
CL	CENTER LINE
CLG	CEILING
CM	CENTIMETER
CONC	CONCRETE
CONN(S)	CONNECTION(S)
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CTR	CENTER
D	DEPTH
DEG	DEGREE
DEMO	DEMOLISH OR DEMOLITION
DI	DIAMETER
DIM	DIMENSION
DIV	SPECIFICATION DIVISION
DN	DOWN
DTL	DETAIL
DWG(S)	DRAWING(S)
E	EAST
EA	EACH
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
ELEC	ELECTRICAL
ENG	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EXT	EXISTING
EXT	EXTERIOR
FN	FINISHED
FL	FLOOR
FT	FEET
FUT	FUTURE
GC	GENERAL CONTRACTOR
GOVT	GOVERNMENT
H	HEIGHT
HORIZ	HORIZONTAL
HT	HEIGHT
i.e.	THAT IS
IBC	INTERNATIONAL BUILDING CODE
IN	INCH
INT	INTERIOR
LB(S)	POUND(S)
M	THOUSAND
M	METER
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MILLIMETER
N	NORTH
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OPP	OPPOSITE
OVHD	OVERHEAD
PAR	PARALLEL
PENT	PENTHOUSE
PLYWD	PLYWOOD
QTY	QUANTITY
REQ(D)	REQUIRE(D)
REV	REVISION(S)
RM	ROOM
RND	ROUND
S	SOUTH
SCHED	SCHEDULE
SECT	SECTION
SHT	SHEET
SM	SIMILAR
SPEC	SPECIFICATION(S)
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
TEMP	TEMPORARY
TYP	TYPICAL
UNEX	UNEXCAVATED
UNFN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
W	WEST
WTH	WITH
W/O	WITHOUT

GENERAL ABBREVIATIONS

AE	ARCHITECT/ENGINEER
AB	AIR BARRIER
ABS	ASBESTOS
ACC	ADA ACCESSIBLE
ACR	ACRYLIC
ACT	ACOUSTIC CEILING TILE
AD	ACCESS DOOR
ADJ	ADJUSTABLE
ADJT	ADJACENT
ADMN	ADMINISTRATION
AEC	AUTOMATED EXTERNAL DEFIBRILLATORS
AL	ALUMINUM
ALUM	ALUMINUM
AP	ACCESS PANEL
APC	ACOUSTIC PANEL CEILING
ASPH	ASPHALT
AUTO	AUTOMATIC
AVG	AVERAGE
AWP	ACOUSTIC WALL PANEL
B.O.	BOTTOM OF
BCS	BABY CHANGING STATION
BO	BOARD
BLK	BLOCK
BLKG	BLOCKING
BLKHD	BULKHEAD
BM(S)	BEAM(S)
BT	BOTTOM
BRG	BEARING
BRKT	BRACKET
BT	BATHUB
BTWN	BETWEEN
CAB	CABINET
CB	CHALKBOARD
CER	CERAMIC
CF	CUBIC FEET
CFI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CFMF	COLD-FORMED METAL FRAMING
CG	CLEAR FLOAT GLASS
CI	CAST IRON
CIG	CLEAR INSULATING GLASS
CP	CAST IN PLACE
CJ	CONTROL JOINT
CJA	CONTROL JOINT ABOVE
CL	CLOSE
CLF	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMM	COMMUNICATIONS
COMPR	COMPRESSIBLE
CONF	CONFERENCE
CONFIG	CONFIGURATION
CORR	CORRIDOR
CP	COVER PLATE
CPT	CARPET
CR	CHAIR RAIL
CS	COUNTERSINK
CSTJ	CONSTRUCTION JOINT
CSWK	CASWORK
CT	CERAMIC TILE
CTG	CLEAR TEMPERED FLOAT GLASS
CTI	CLEAR INSULATING GLASS
CJ	COMBINATION UNIT
CV	CONDOM VENDOR
CY	CUBIC YARD
CYL	CYLINDER
DB	DECIBEL
DBL	DOUBLE
DC	DUST COLLECTOR
DEPR	DEPRESSION(ION/ED)
DEPT	DEPARTMENT
DET	DETENTION
DF	DRINKING FOUNTAIN
DG	DOOR GRILLE
DAG	DIAGONAL
DPFG	DAMP PROOFING
DR	DOOR
DSN	DOWNSPOUT NOZZLE
DW	DISHWASHER
DWL(S)	DOUBLE(S)
DWR	DRAWER
EB	EXPANSION BOLT
EE	EACH END
EEW	EMERGENCY EYE WASH
EEWS	EMERGENCY EYE WASH SHOWER
EFF	EFFICIENCY
EJ	EXPANSION JOINT
ELAS	ELASTOMERIC
ELEV	ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOSURE
ENTR	ENTRANCE
ERF	EPoxy RESIN FLOORING
ES	EMERGENCY USE INTENSITY
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXP	EXPANSION
EXP	EXPOSED
F	FABRIC
F.O.	FACE OF
FAB	FABRICATE(D)
FB	FACE BRICK
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIG	FIGURE
FIX	FIXTURE
FLASH	FLASHING
FLEX	FLEXIBLE
FLG	FLOORING
FLM	FULL LENGTH MIRROR
FLUOR	FLUORESCENT
FO	FINISH OPENING
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FOW	FACE OF WALL
FP	FIREPROOFING
FR	FIRE RESISTANT
FRP	FIBERGLASS REINFORCED PANEL
FRT	FIRE RESISTANCE TREATED
FS	FLOOR SINK
FSS	FOLDING SHOWER SEAT
FTG	FOOTING
FVC	FIRE VALVE CABINET
FWC	FABRIC WALL COVERING
G	GROUT
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GD	GARBAGE DISPOSAL
GEN	GENERAL
GFA	GROSS FLOOR AREA
GL	GLUE LAMINATED
GLS	GLASS
GMP	GUARANTEED MAXIMUM PRICE
GR	GUARD RAIL
GR	GRADE
GRS	GALVANIZED RIGID STEEL
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
HC	HOLLOW CORE
HD	HAND DRIVER
HDF	HIGH DENSITY FIBERBOARD
HDR	HEADER
HDWR	HARDWOOD
HDWR	HARDWARE
HM	HOLLOW METAL
HR	HOUR
HR	HANDRAIL
HS	HARDWARE SET
HSS	HOLLOW STRUCTURAL SHAPE
HVAC	HEATING VENTILATING AND AIR CONDITIONING
I	IN ACCORDANCE WITH
ID	INSIDE DIAMETER
IF	INSIDE FACE
IF	INSULATED INFILL PANEL GLASS
IS	ISOLATION JOINT
IS	IN JOIST SPACE
INC	INCLUDE(ING)
INCL	INSULATION
JAN	JANITOR
JBE	JOIST BEARING ELEVATION
JCT	JUNCTION
JFB	JOINT FILLER BOARD
JST	JOIST
JT	JOINT
KCJ	KEYED CONSTRUCTION JOINT
KD	KNOCKDOWN
KH	KITCHEN HOOD
KIT	KITCHEN
L	ANGLE
LAB	LABORATORY
LAM	LAMINATED
LAV	LAVATORY
LBR	LUMBER
LDG	LOADING
LF	LENGTH (LONG)
LG	LAMINATED GLASS
COM	COMMON
LNO	LINOLEUM
LKR	LOOKER
LOC	LOCATION
LONG	LONGITUDINAL
LSC	LIFE SAFETY CODE
LTG	LIGHTING
LV	LUXURY VINYL TILE
LVT	LUXURY VINYL TILE
MAG	MAGNETIC
MAINT	MAINTENANCE
MAN	MANUAL
MAS	MASONRY
MATL	MATERIAL
MB	MOP BASIN
MBD	MIRROR BOARD
MBH	MOP/BROOM HOLDER
MC	MEDICINE CABINET
MEMB	MEMBRANE
MH	MANHOLE
MRS	MIRROR WITH SHELF
MTD	MOUNTED
MTG	MOUNTING
MUL	MULLION
NC	NOISE CRITERIA
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NOM	NOMINAL
O to O	OUT TO OUT
OA	OVERALL
OFI	OWNER FURNISHED CONTRACTOR INSTALLED
OFF	OFFICE
OFI	OWNER FURNISHED OWNER INSTALLED
OH	OPPOSITE HAND
OP(S)	OPENING(S)
OSHA	OPERATIONAL SAFETY AND HEALTH ADMINISTRATION
OTB	OPEN TO BELOW
OVFL	OVERFLOW
P	PAINT
PAN B	PANIC BOLT
PB	PARTICLE BOARD
PC	PRECAST CONCRETE
PCD	PAPER CUP DISPENSER
PCT	PORCELAIN CERAMIC TILE
PD	PANIC DEVICE
PERF	PERFORATED
PERP	PERPENDICULAR
PG	PATTERN GLASS
PIC	PORTABLE INSTRUMENT CONNECTION
PIG	PATTERN INSULATING GLASS
PL	PLATE
PL	PROPERTY LINE
PL	PLASTIC LAMINATE
PLAM	PLASTIC LAMINATE
PLBG	PLUMBING
PR	PAR
PREFAB	PREFABRICATED
PRQJ	PROJECT(OR) (ION)
PS	PROJECTION SCREEN
PT	POINT
PT	POINT OF TANGENCY
PTD	PAPER TOWEL DISPENSER
PTDR	COMBINATION TOWEL DISPENSER/RECEPTACLE
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PWL	SOUND POWER LEVEL
QT	QUARRY TILE
QTR RND	QUARTER ROUND
R	RISER
RAD	RADIUS
RB	RUBBER BASE
RC	REMOTE CONTROL
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFERENCE
REFL	REFLECTED
REM	REMOVABLE
RESIL	RESILIENT
RF	FIRE RESISTANT FLOORING
RF	RUBBER FLOOR
RFM	RECESSED FLOOR MAT
RH	ROBE HOOK
R&C	ROUGH IN AND CONNECT
S	SINK
SAT	SPRAYED ACOUSTIC TREATMENT
SAW	SOUND ABSORBING WALL UNITS
SB	SPLASH BLOCK
SC	SOLID CORE
SC	SHOWER CURTAIN
SCD	SEAT COVER DISPENSER
SCH	SHOWER CURTAIN HOOK
SCR	SHOWER CURTAIN ROD
SCR	STRUCTURAL CLAY TILE
SD	SOAP DISPENSER
SECY	SECRETARY
SF	SQUARE FEET
SG	SPANDREL GLASS
SGL	SINGLE
SH	SHOWER
SHM	SECURITY HOLLOW METAL
SLT	SEALANT
SM	SHEET METAL
SND	SANITARY NAPKIN DISPOSAL
SNV	SANITARY NAPKIN VENDOR
SPL	SOUND PRESSURE LEVEL
SQ	SQUARE
SS	SOLID SURFACE
SSA	STORM SHELTER AREA
SST	STAINLESS STEEL SHELF
SST	STAINLESS STEEL
ST	STONE
ST	STAIR
STAGD	STAGGERED
STC	SOUND TRANSMISSION CLASS
STRGR	STRINGER
SUBFL	SUBFLOOR
SURF	SURFACE
SUSP	SUSPENDED
SVF	SHEET VINYL FLOORING
T	TREAD
T&G	TONGUE AND GROOVE
T.O.	TOP OF
TAN	TANGENT
TB	TOWEL BAR
TBD	TACK BOARD
TCP	TOILET COMPARTMENT PARTITION
TERR	TERRAZZO
JST	TINTED FLOAT GLASS
TG	TEMPERED GLASS
TH	THRESHOLD
THK	THICK(NESS)
TI	TENANT IMPROVEMENT
TKH	TINTED INSULATING GLASS
TMR	TILT MIRROR UNIT
TOIL	TOILET
TOP	TOP OF PAVING
TRANS	TRANSVERSE
TT	TERRAZZO TILE
TTD	TOILET TISSUE DISPENSER
TTG	TINTED TEMPERED FLOAT GLASS
TTIG	TINTED TEMPERED INSULATING GLASS
TW	TACK WALL
UL	UNDERWRITERS LABORATORIES
URINAL	URINAL
US	UTILITY SHELF
UTIL	UTILITY
VB	VAPOR BARRIER
VB	VINYL BASE
VCB	VENTED COVE BASE
VCL	VINYL FLOOR
VOC	VOLATILE ORGANIC COMPOUND
VOL	VOLUME
VP	VENEER PLASTER
VT	VINYL TILE
VWC	VINYL WALL COVERING
W	WIDE
WB	WALL BASE
WC	WATER CLOSET
WCL	WALL COVERING
WCL	WATER CLOSET/LAVATORY COMBINATION
WD	WOOD
WDF	WOOD FLOORING
WIDW	WINDOW
WG	POLISHED WIRE GLASS
WI	WROUGHT IRON
WOM	WALK OFF MAT
WR	WASTE RECEPTACLE
WRB	WEATHER RESISTANT BARRIER
WW	WARM WHITE
WWF	WELDED WIRE FABRIC
YD	YARD

GENERAL SYMBOLS

	DETAIL NUMBER		EARTH
	CROSS REFERENCE SHEET NUMBER		GRAVEL
	BUILDING ELEVATION		SAND
	INTERIOR ELEVATION		CONCRETE
	SIMILAR OR TYPICAL REFERENCE		PRECAST CONCRETE
	WALL SECTION		STEEL
	DETAIL REFERENCE		STONE
	BUILDING SECTION		CONCRETE MASONRY UNIT
	SHEET NOTE		BRICK VENEER
	REFERENCE KEYNOTE		STEEL (LARGE SCALE)
	COLUMN GRID LINE		GYM FLOOR
	ROOM NUMBER NAME		WOOD (CONTINUOUS BLOCKING)
	REVISION NUMBER		WOOD (NON-CONTINUOUS BLOCKING)
	LEVEL ELEVATION		GLASS
	FINISH FLOOR ELEVATION		SHINGLES
	SPOT ELEVATION		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		AREA INLET
	LOT LINE		CURB INLET
	EASMENT LINE		MANHOLE
	BUILDING LINE, EXISTING		HEAD WALL
	BUILDING LINE, NEW WOOD OR OPENING AND STRUCTURAL STOOP		FLARED END
	PRIMARY CONTOUR, EXISTING		CLEAN OUT
	PRIMARY CONTOUR, NEW		CAP
	SECONDARY CONTOUR, EXISTING		THRUST BLOCK
	SECONDARY CONTOUR, NEW		VALVE
	SLOPE, PAVEMENT		POST INDICATOR VALVE
	DRAINAGE DITCH OR SWALE		REDUCER
	STREET CENTERLINE		FIRE HYDRANT
	CURB, THICKENED EDGE		POWER POLE
	CURB, EXISTING		LIGHT POLE
	CURB, NEW		TELEPHONE MANHOLE
	PAVING CONTRACTION JOINT		TELEPHONE BOX
	PAVING KEYED CONSTRUCTION JOINT		SPRINKLER HEAD, 360°
	PAVING TIED CONSTRUCTION JOINT		SPRINKLER HEAD, 270°
	PAVING EXPANSION JOINT		SPRINKLER HEAD, 180°
	FENCE, SECURITY		SPRINKLER HEAD, 90°
	FENCE, BARBED WIRE		QUICK COUPLING
	FENCE, CHAIN LINK		TREE, EXISTING DECIDUOUS
	FENCE, WOOD		TREE, EXISTING CONIFER
	SEED LIMIT		SHADE TREE
	SOD LIMIT		ORNAMENTAL TREE
	FOUNDATION DRAIN, NON-PERFORATED		DECIDUOUS TREE
	FOUNDATION DRAIN, PERFORATED		SHRUB
	SUBDRAIN, PERFORATED		CLIPPED SHRUB
	SANITARY SEWER		
	FORCE MAIN		
	WATER		
	FIRE		

IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APP: 03-122228 INC:
 REVIEWED FOR:
 SS FLS ACS
 DATE: 02/16/2023

DSA Certification List

APPLICATION #	FILE #	APPROVAL YEAR	NOTE
03-12576	19-25	1955	ORIGINAL CAMPUS BUILDINGS
03-59617	19-25	1994	MODERNIZATION
03-43653	19-25	1981	RELOCATABLE CLASSROOM BLDG.
03-49745	19-25	1986	2 RELOCATABLE CLASSROOM BLDGS.
03-100338	19-25	2005	ALTERATION TO MULTIPURPOSE BLDG.
03-107073	19-25	2007	2 RELOCATABLE CLASSROOM BLDGS.
03-114877	56-9	2012	2 RELOCATABLE CLASSROOM BLDGS.
03-107581	19-25	2018	LIB/MEDIA CENTER RELOCATABLE

SITE LEGEND

-  EXISTING BUILDING NOT IN SCOPE
-  EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION
-  (E) RESTROOMS - NOT IN SCOPE



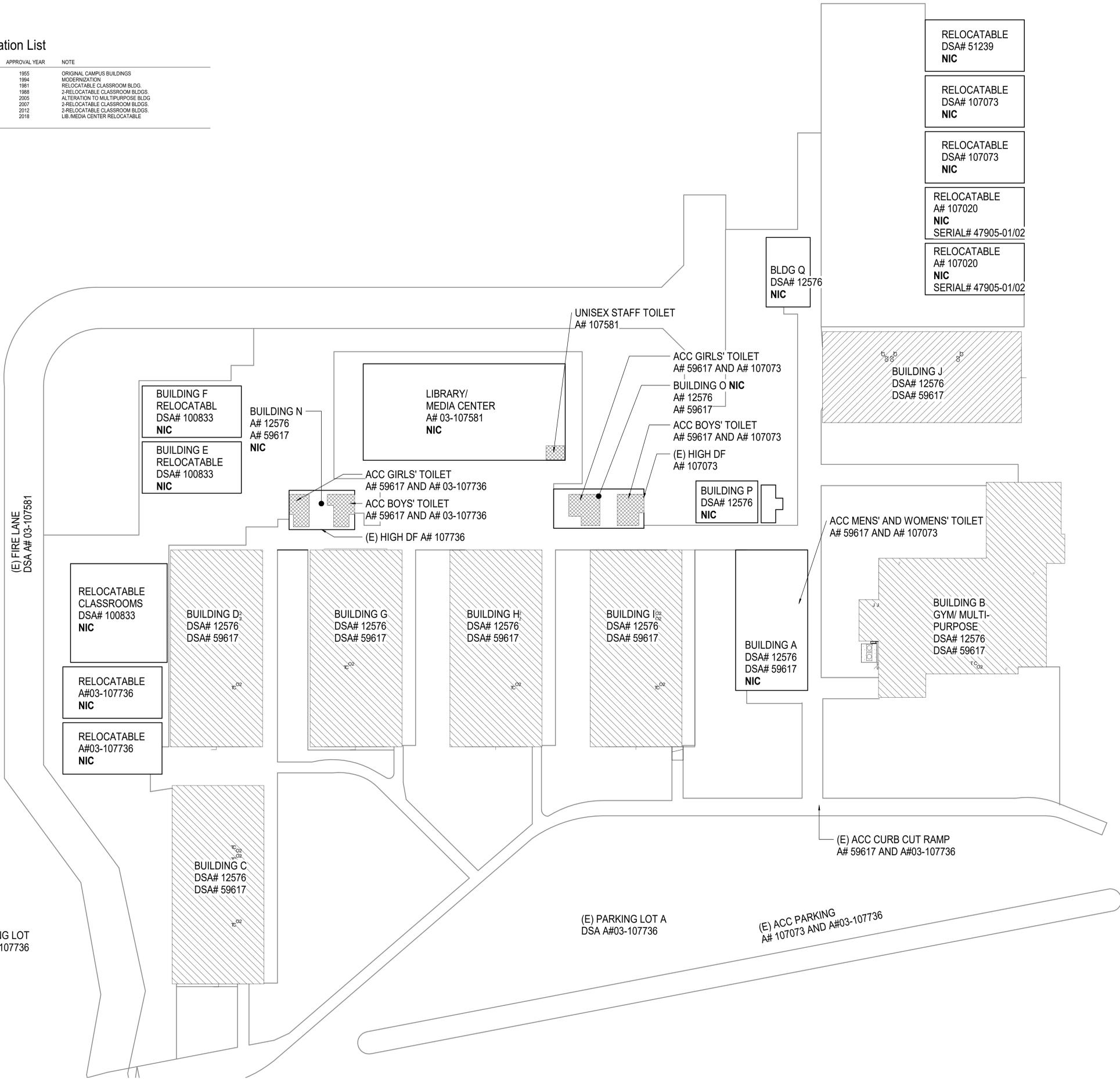
BEN LOMOND ELEM. SCHOOL
 COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT
 681 E. COVINA BLVD COVINA, CA 91722

100%
 CONSTRUCTION
 DOCUMENT
 05/05/2022
 REVISIONS

75-22605
 DSA A#03-122228
 DSA File #: 19-25
 ARCHITECTURAL
 SITE PLAN

1
2
3
4
5

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SITE PLAN
 SCALE: 1" = 20'-0"

REFERENCE KEYNOTES

KEYNOTES
D190 REMOVE (E) LADDER
N158 NEW MECHANICAL EQUIPMENT ON NEW 6" THK. TOP LEVELED CONCRETE PAD & PLACED 6" FROM EDGE OF PAD. SEE MECH DWGS.

GENERAL ARCHITECTURAL NOTES

- ALL INTERIOR CMU WALLS SHALL REMAIN U.N.O.
- NOT USED
- FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS, I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS WHERE OCCURS
- GYPSUM BOARD SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE SHOWN ON DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.
- NOT USED
- SCRIBE GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS.
- MAINTAIN (E) SEISMIC BRACING FOR SUSPENDED CEILING OR AS SHOWN ON THE DRAWINGS.

DEMOLITION GENERAL NOTES

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
 - COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
 - CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
 - MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
 - VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
 - REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
 - THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
 - PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
 - REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
 - EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
 - VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
 - PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
 - CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
 - SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
 - AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL INSPECTOR.
 - NOT USED
 - WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.

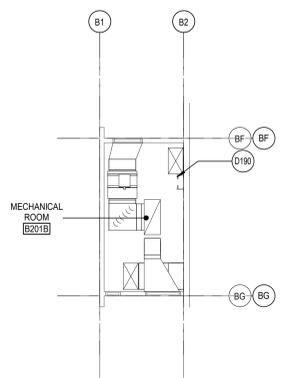
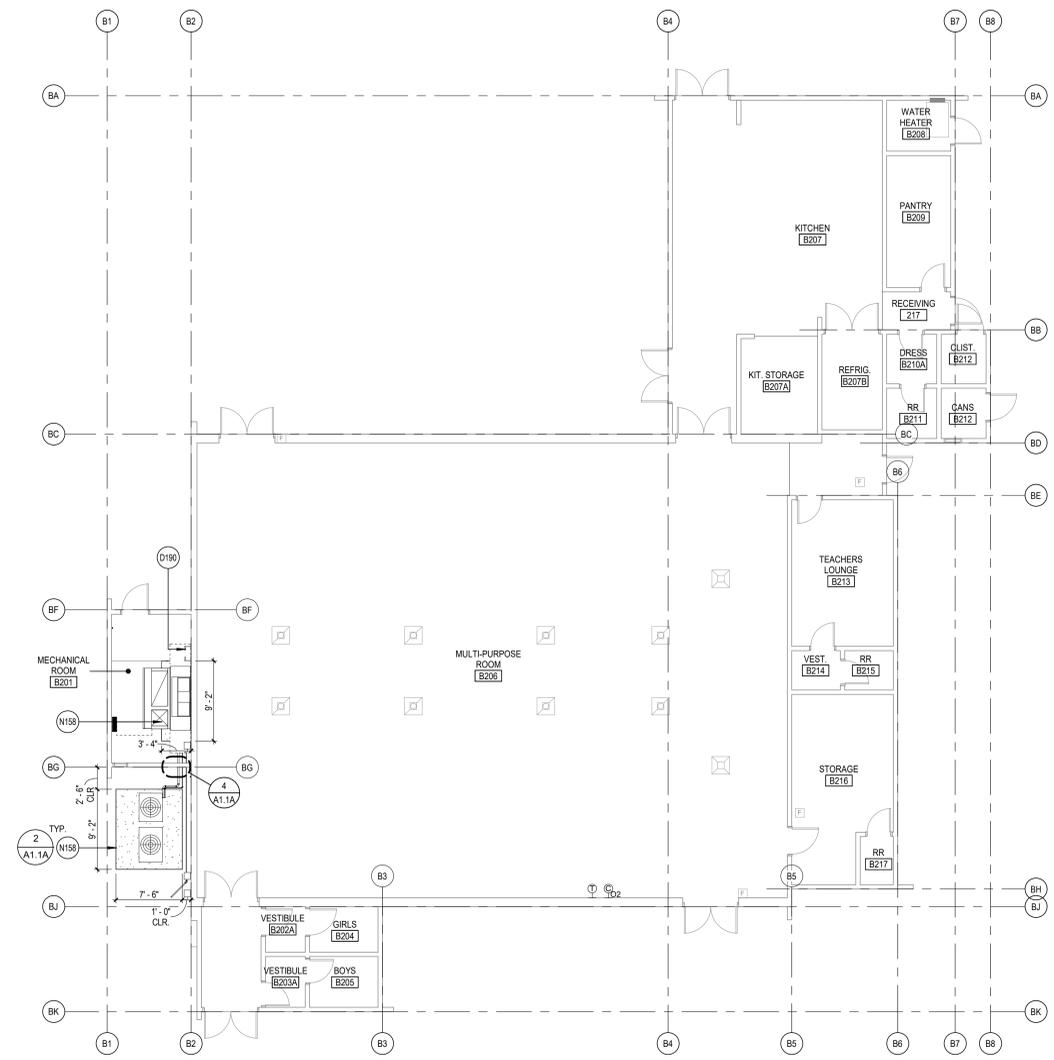


BEN LOMOND ELEM. SCHOOL
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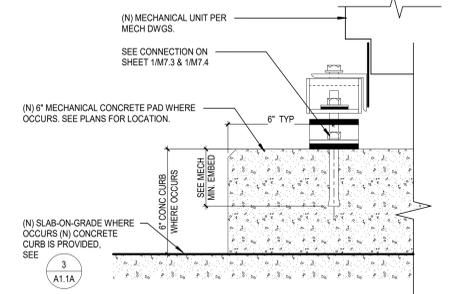
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 DSA AH03-122228
 DSA File #: 19-25
**BUILDING B
 FLOOR PLANS**

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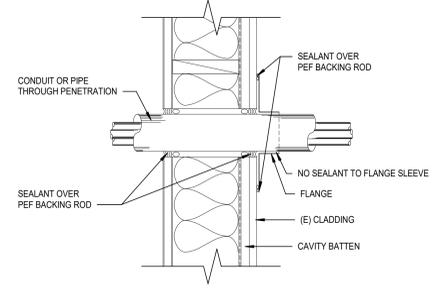


BLDG B -MEZZANINE LEVEL
 SCALE: 1/8" = 1'-0"

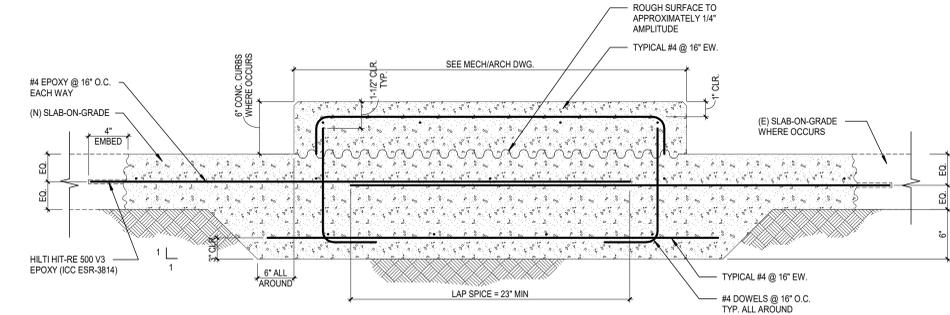
BUILDING A AND B FLOOR PLANS - MPR
 SCALE: 1/8" = 1'-0"



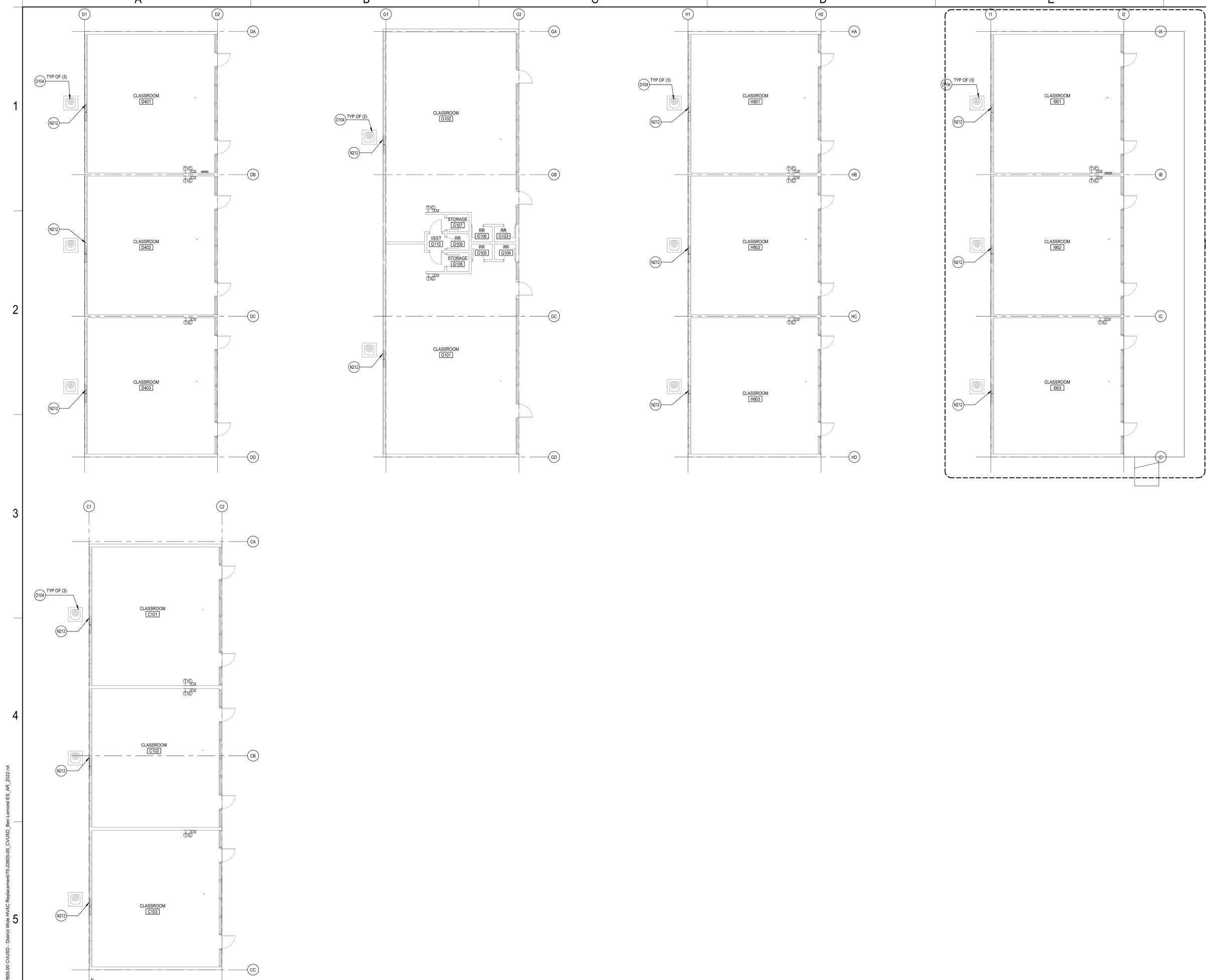
MECH. ANCHORAGE AT CONC. CURB
 SCALE: 3/4" = 1'-0"



EXTERIOR WALL PENETRATION
 SCALE: 3/4" = 1'-0"



TYPICAL MECH. EQUIPMENT CONCRETE PAD AT (E) SLAB-ON-GRADE
 SCALE: 1/12" = 1'-0"



IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APP: 03-122228 INC.
 REVIEWED FOR: SS FLS ACS
 DATE: 02/16/2023

REFERENCE KEYNOTES

- KEYNOTES**
- D104 REMOVE (E) MECHANICAL EQUIP., EQUIP. CONC. PAD, & ITS ASSOCIATED PARTS. SEE MECHANICAL & PLUMBING DIV. CONTRACTOR TO PATCH AND REPAIR AREA OF DEMO WITH (N) ASPHALT, (N) CONCRETE OR (N) LANDSCAPING TO MATCH ADJACENT SURFACE.
 - N212 REPLACE (E) INFILL PANEL AT CONDENSER UNIT PENETRATIONS WITH GLAZING TO MATCH ADJACENT. PAINT FRAME TO MATCH ADJACENT.

GENERAL ARCHITECTURAL NOTES

1. ALL INTERIOR CMU WALLS SHALL REMAIN U.N.O.
2. NOT USED
3. FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS, I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS WHERE OCCURS
4. GYPSUM BOARD SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE SHOWN ON DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.
5. NOT USED
6. SCRIBE GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS.
7. MAINTAIN (E) SEISMIC BRACING FOR SUSPENDED CEILING OR AS SHOWN ON THE DRAWINGS.

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- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
 - B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
 - C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
 - D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
 - E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
 - F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
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 - H. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
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 - J. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
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 - O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL INSPECTOR.
 - P. NOT USED
 - Q. WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SMOOTHING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



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75-22605
 DSA A#03-122228
 DSA File #: 19-25
 BUILDINGS CDGH
 AND I FLOOR
 PLANS

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BUILDINGS C, D, G, H AND I FLOOR PLANS
 SCALE: 1/8" = 1'-0"

REFERENCE KEYNOTES

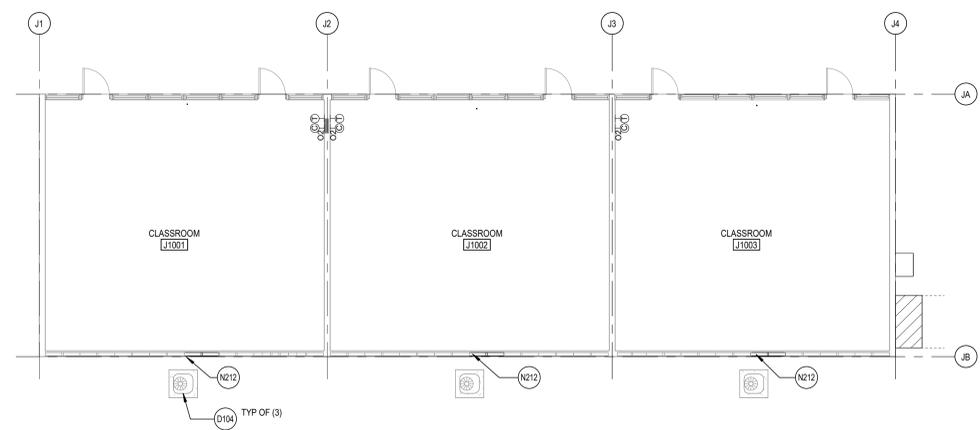
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 - P. NOT USED
 - Q. WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWN CUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



BUILDING J FLOOR PLANS
 SCALE: 1/8" = 1'-0"



BEN LOMOND ELEM. SCHOOL
 COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT
 681 E. COVINA BLVD COVINA, CA 91722

100%
 CONSTRUCTION
 DOCUMENT
 05/05/2022
 REVISIONS

75-22605
 DSA A#03-122228
 DSA File #: 19-25
**BUILDING J
 FLOOR PLANS**

A1.1D

ROOF PLAN GENERAL NOTES

- A. (E) ROOF CURBS TO REMAIN U.N.O., SEE MECHANICAL DRAWINGS SHEET M1.3C FOR ADDITIONAL INFORMATION.
- B. COORDINATE THE SIZE AND LOCATION OF WALL PENETRATIONS FOR MECHANICAL AND ELECTRICAL EQUIPMENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING.
- C. (E) DRAINS, CURBS, VENTS AND STACKS TO REMAINS.

DEMOLITION GENERAL NOTES

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
 - B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
 - C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
 - D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
 - E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
 - F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
 - G. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
 - H. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
 - I. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
 - J. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
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 - L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
 - M. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
 - N. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SCHEDULING AND SCOPE OF WORK.
 - O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL INSPECTOR.
 - P. NOT USED.
 - Q. WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.

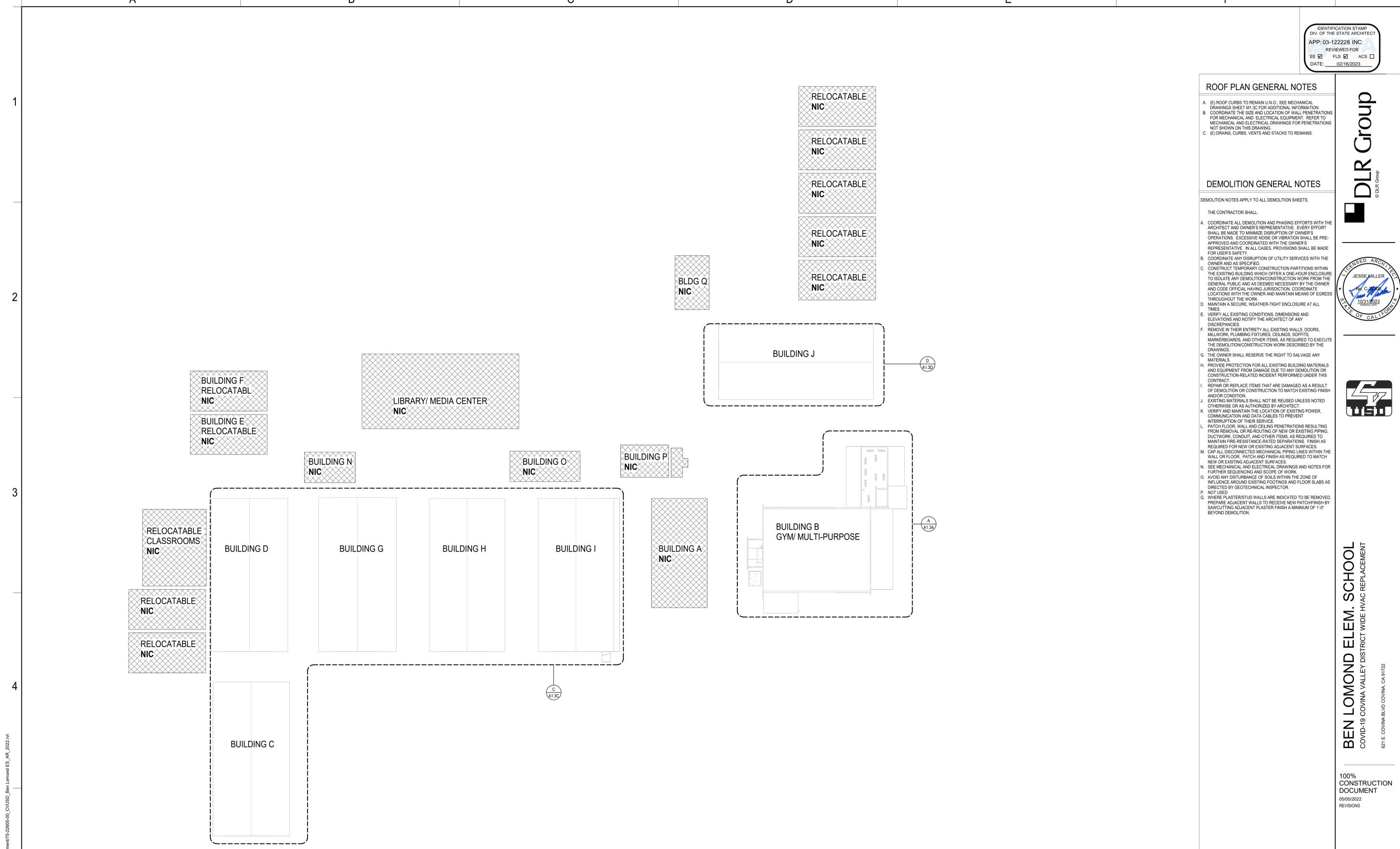


BEN LOMOND ELEM. SCHOOL
 COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT
 687 E. COVINA BLVD COVINA, CA 91722

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75-22605
 DSA A#03-122228
 DSA File #: 19-25
**OVERALL ROOF
 PLAN**

A1.3



OVERALL ROOF PLAN
 SCALE: 3/8" = 1'-0"

REFERENCE KEYNOTES

KEYNOTES

ROOF PLAN GENERAL NOTES

- A. (E) ROOF CURBS TO REMAIN U.N.O., SEE MECHANICAL DRAWINGS SHEET M1.3C FOR ADDITIONAL INFORMATION.
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 - L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
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 - P. NOT USED.
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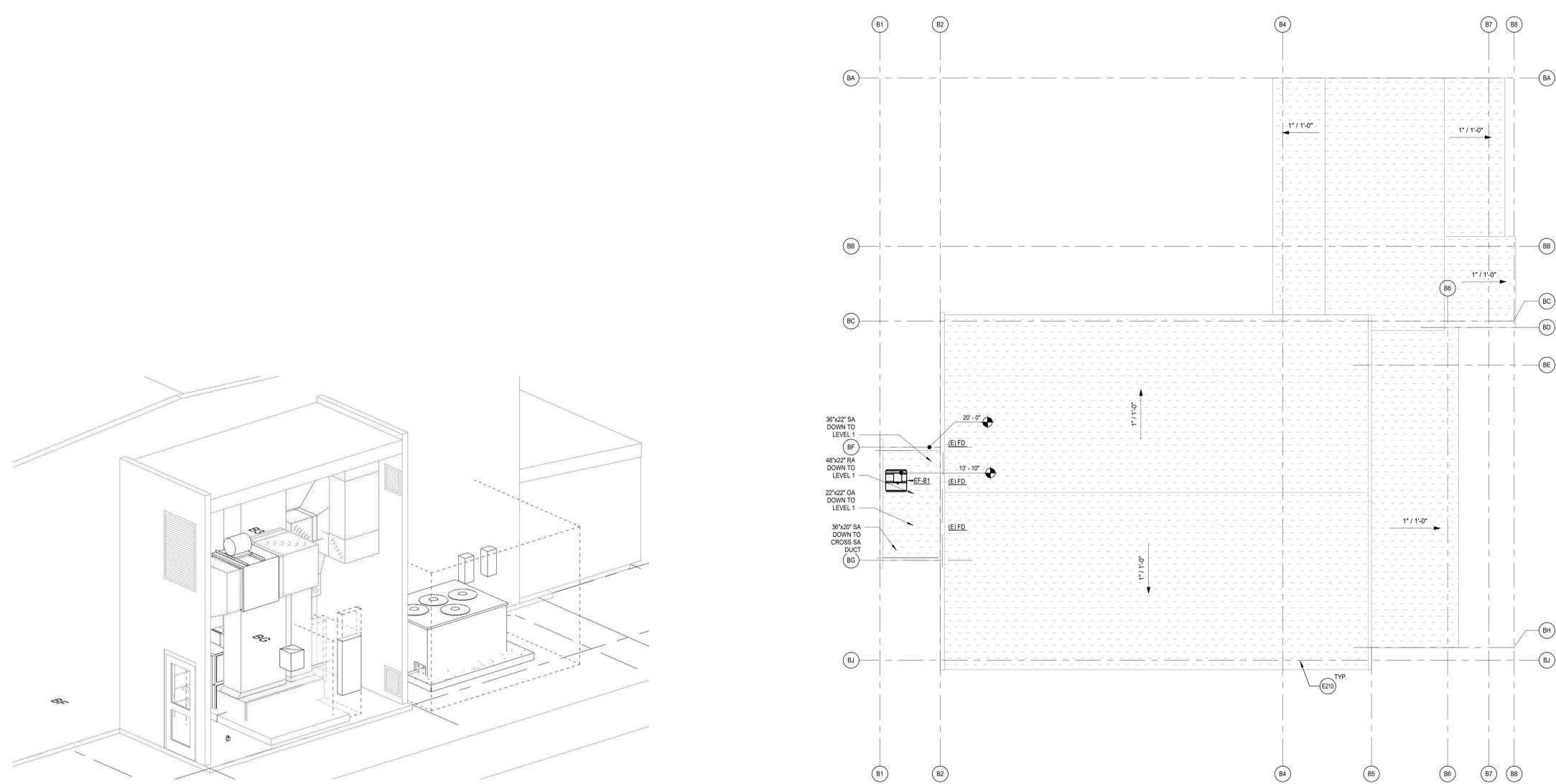


BEN LOMOND ELEM. SCHOOL
 COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT
 687 E. COVINA BLVD COVINA, CA 91722

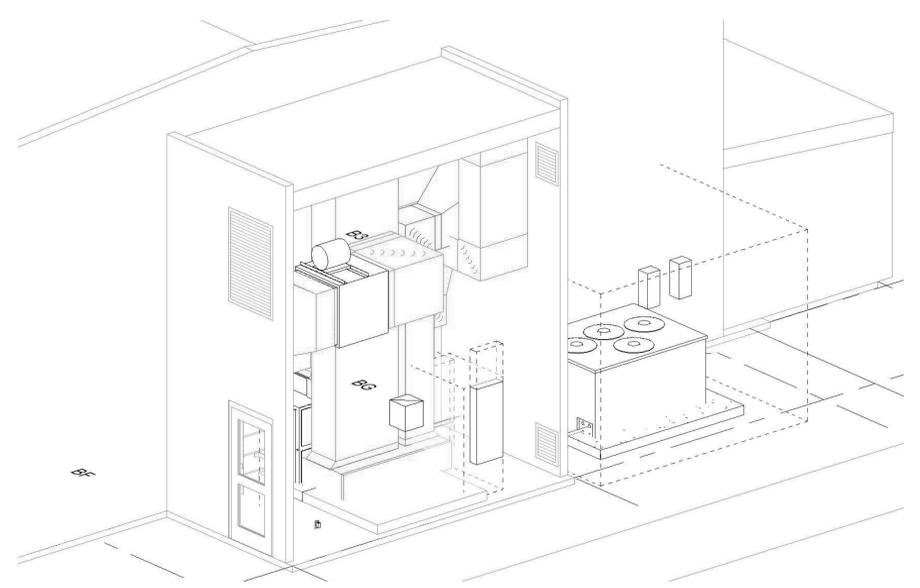
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 CONSTRUCTION
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 REVISIONS

75-22605
 DSA A#03-122228
 DSA File #: 19-25
BUILDINGS B
 ROOF PLAN

A1.3A



BUILDINGS B ROOF PLANS
 SCALE: 1/8" = 1'-0"



AXON VIEW AT BUILDING B
 SCALE: 3/4" = 1'-0"

IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APP: 03-122228 INC.
 REVIEWED FOR
 SS FLS ACS
 DATE: 02/16/2023

REFERENCE KEYNOTES

- KEYNOTES
- E210 LINE OF (E) BLDG BELOW SHOWN DASHED
 - N403 (N) MECHANICAL UNITS ATTACHED TO THE (N) UNIT CURBS. SEE MECHANICAL DRAWING SHEETS M7.3, M7.4 AND M7.5
 - N518 (N) ROOF PATCHING IN AREA OF WORK

ROOF PLAN GENERAL NOTES

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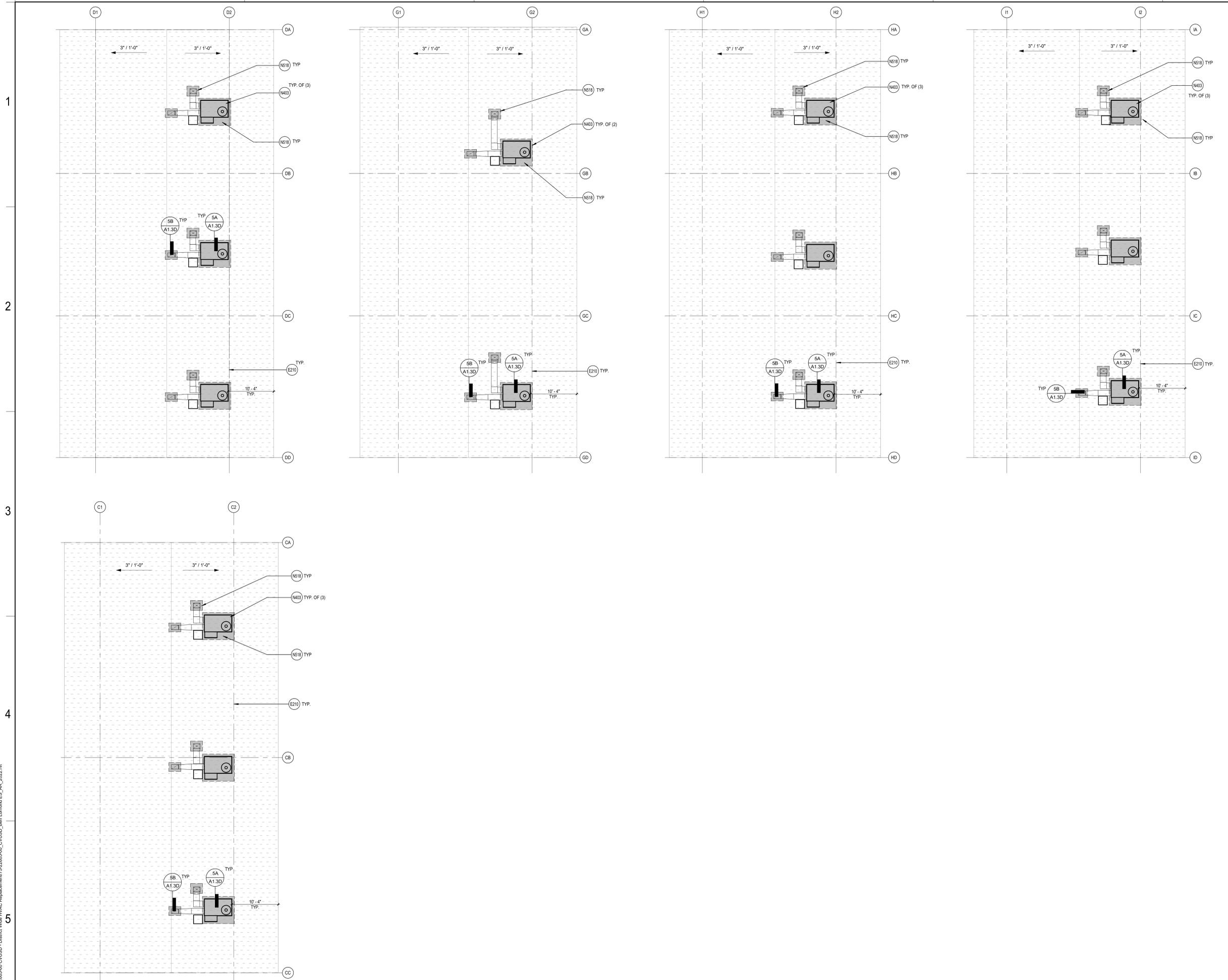


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75-22605
 DSA A#03-122228
 DSA File #: 19-25
 BUILDINGS CDGH
 AND I ROOF
 PLANS

A1.3C



BUILDINGS C, D, G, H AND I ROOF PLANS
 SCALE: 1/8" = 1'-0"

Autodesk Docs/75-22605-00_CVUSD - District Wide HVAC Replacement/75-22605-00_CVUSD_Ben Lomond ES_AR_2022.rvt
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REFERENCE KEYNOTES

KEYNOTES	KEYNOTES
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ROOF PLAN GENERAL NOTES

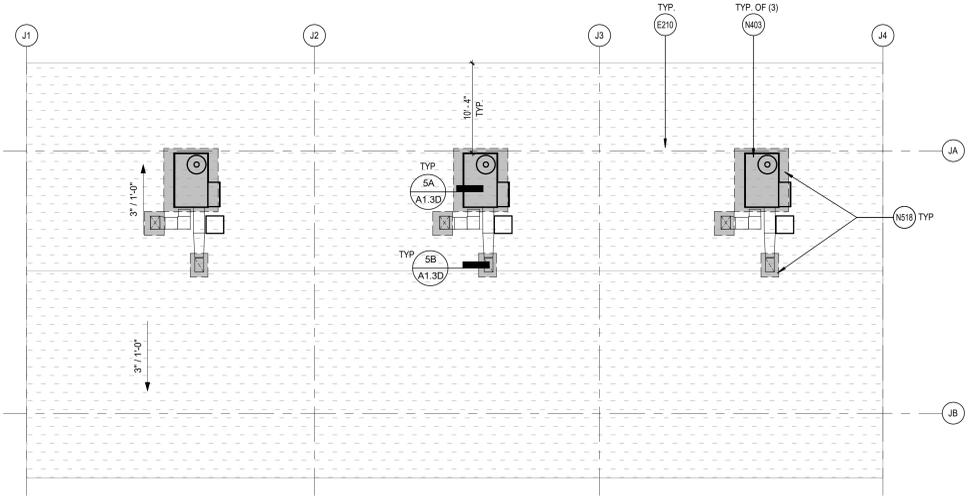
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DEMOLITION GENERAL NOTES

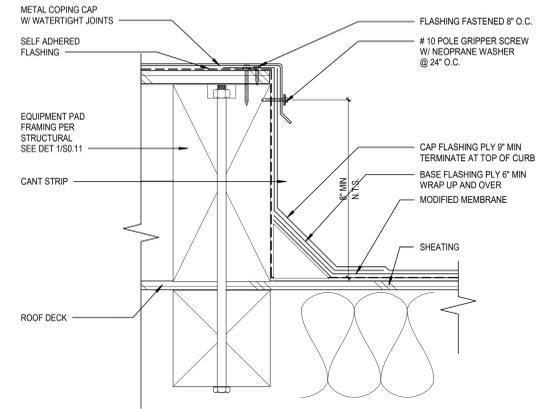
DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.

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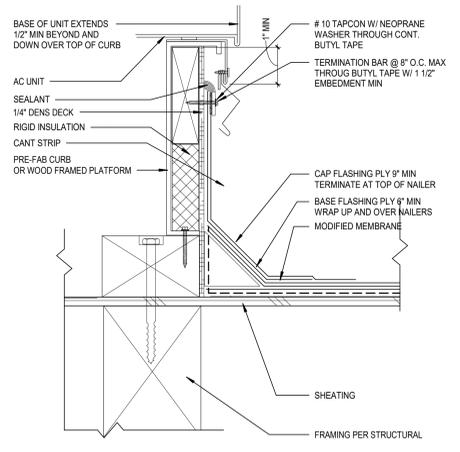
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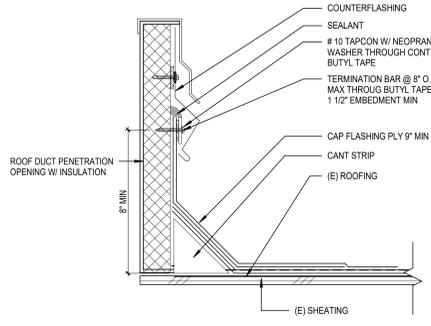
BUILDINGS J AND Q ROOF PLANS
 SCALE: 1/8" = 1'-0"



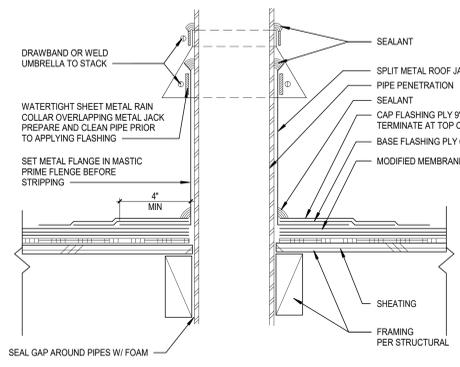
4E MOD BITUM - EQUIPMENT PAD
 A1.3D SCALE: 3" = 1'-0"



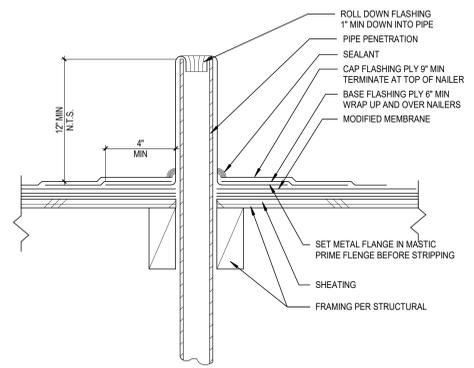
5A MOD BITUM - ACU CURB FLASHING
 A1.3D SCALE: 3" = 1'-0"



5B TYPICAL MECHANICAL DUCT PENETRATION FLASHING
 A1.3D SCALE: 3" = 1'-0"



5D MOD BITUM - PIPE PENETRATION FLASHING
 A1.3D SCALE: 3" = 1'-0"



5E MOD BITUM - VENT PIPE FLASHING
 A1.3D SCALE: 3" = 1'-0"



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75-22605
 DSA A#03-122228
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BUILDINGS J AND Q ROOF PLANS

A1.3D

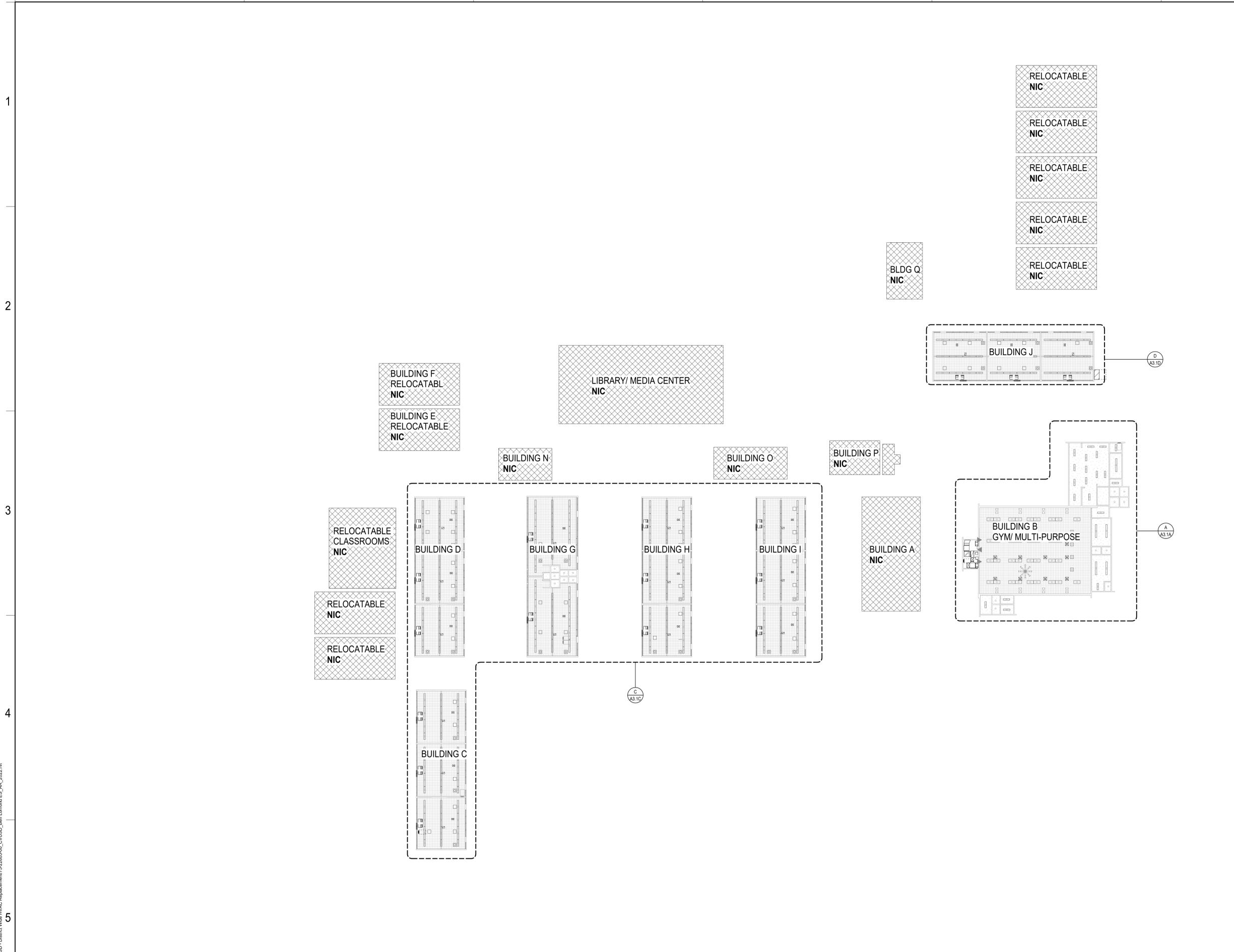
Autodesk Docs: /75-22605-00_CVUSD - District Wide HVAC Replacement/75-22605-00_CVUSD_Ben Lomond ES_AR_2022.rvt
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**REFLECTED CEILING PLAN
 GENERAL NOTES**

- A. REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS.
- B. ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE.
- C. (E) CEILING HEIGHTS ARE TO REMAIN U.N.O. REFLECTED CEILING PLANS ARE MEASURED FROM THE FINISHED FLOOR OF THE ROOM.
- D. IN ACOUSTICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR ACP WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH THE ARCHITECT.
- E. PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, AND OTHER CEILING MOUNTED DEVICES AT ACOUSTICAL PANEL CEILINGS.
- F. ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE ACTUAL AND ARE TO THE FOLLOWING UNLESS NOTED OTHERWISE.
 - a. FACE OF FINISHED WALL
 - b. FACE OF FINISHED BULKHEADS
 - c. CENTERLINE OF COLUMNS
 - d. CENTERLINE OF TEES
- G. IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.

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OVERALL REFLECTED CEILING PLAN
 SCALE: 3/4" = 1'-0"

REFERENCE KEYNOTES

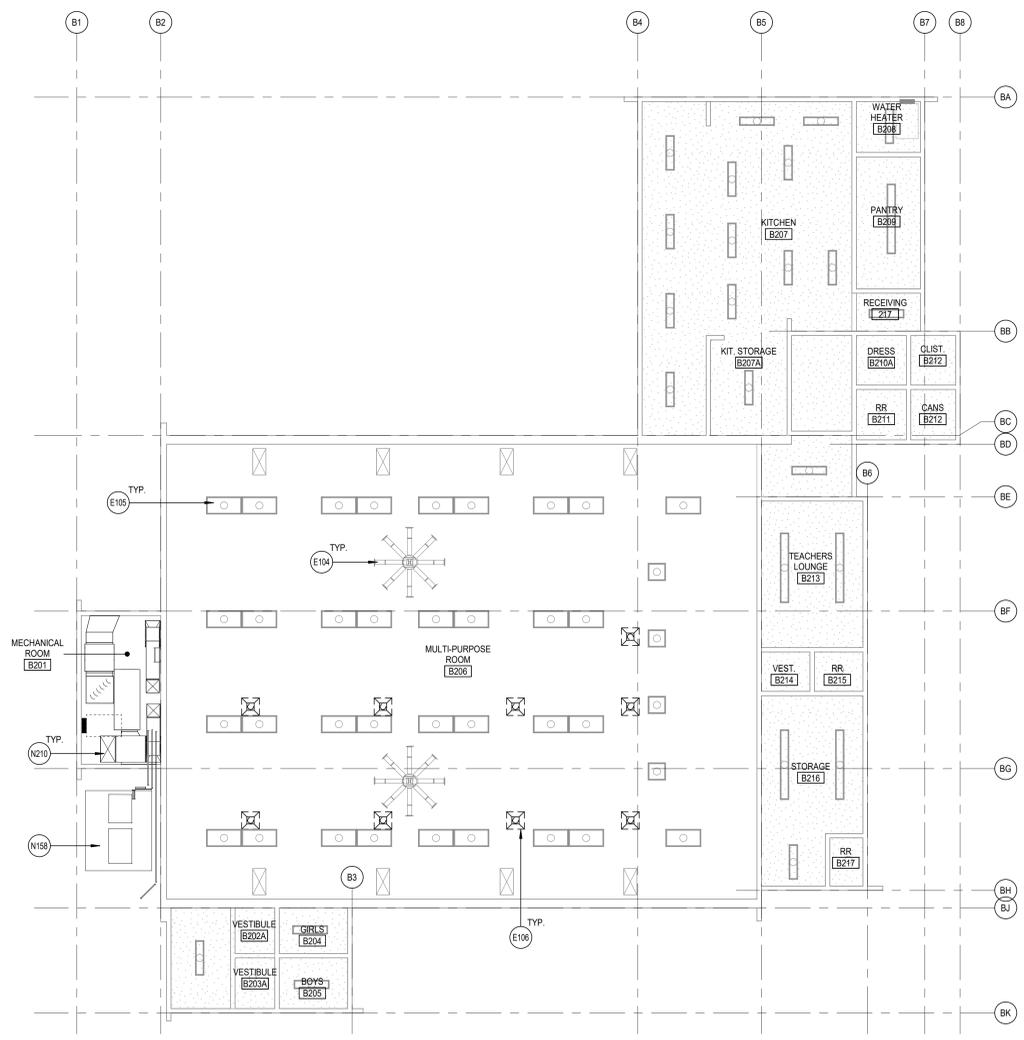
KEYNOTES	KEYNOTES
E104	(E) CEILING FAN TO REMAIN, PROTECT IN PLACE
E105	(E) LIGHT FIXTURES TO REMAIN, PROTECT IN PLACE
E106	(E) DIFFUSERS AND GRILLES, REFER TO MECHANICAL DRAWINGS
N158	NEW MECHANICAL EQUIPMENT ON NEW 6" THK. TOP LEVEL CONCRETE PAD & PLACED 6" FROM EDGE OF PAD. SEE MECH DWGS.
N210	REPLACE (E) DUCTWORK, REFER TO MECHANICAL DRAWINGS

REFLECTED CEILING PLAN
 GENERAL NOTES

- REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS.
- ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE.
- (E) CEILING HEIGHTS ARE TO REMAIN U.N.O. REFLECTED CEILING PLANS ARE MEASURED FROM THE FINISHED FLOOR OF THE ROOM.
- IN ACOUSTICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR ACP WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH THE ARCHITECT.
- PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, AND OTHER CEILING MOUNTED DEVICES AT ACOUSTICAL PANEL CEILINGS.
- ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE ACTUAL AND ARE TO THE FOLLOWING UNLESS NOTED OTHERWISE.
 - FACE OF FINISHED WALL
 - FACE OF FINISHED BULKHEADS
 - CENTERLINE OF COLUMNS
 - CENTERLINE OF TEES
- IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.

DEMOLITION GENERAL NOTES

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
 - COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
 - CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
 - MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
 - VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
 - REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILINGS, SOFFITS, MARKERS/BOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
 - THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
 - PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
 - REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
 - EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
 - VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
 - PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
 - CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
 - SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
 - AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL INSPECTOR.
 - NOT USED.
 - WHERE PLASTER/STUCCO WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



BUILDINGS A AND B REFLECTED CEILING PLANS
 SCALE: 1/8" = 1'-0"

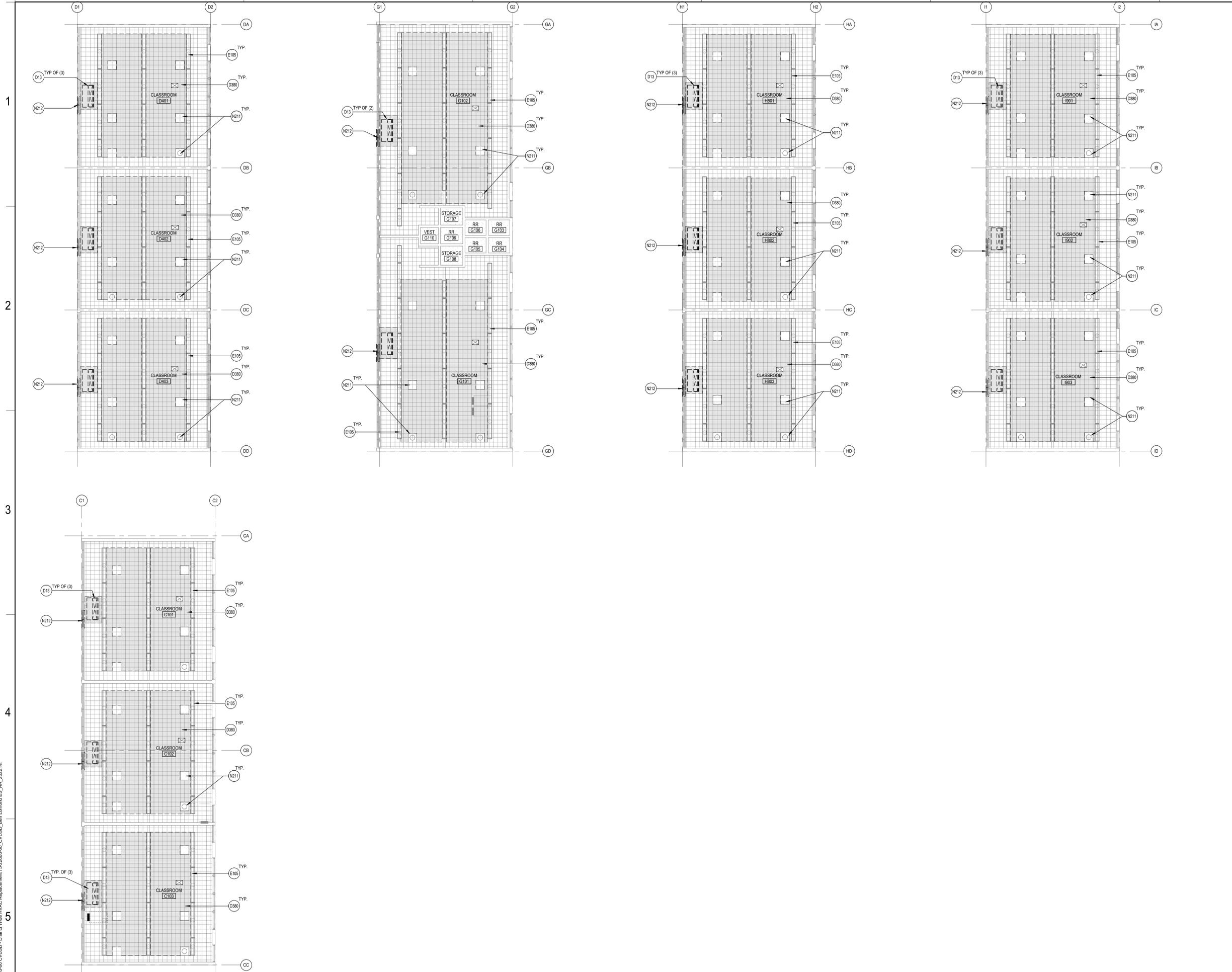


BEN LOMOND ELEM. SCHOOL
 COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT
 681 E. COVINA BLVD COVINA, CA 91722

100%
 CONSTRUCTION
 DOCUMENT
 05/05/2022
 REVISIONS

75-22605
 DSA A#03-122228
 DSA File #: 19-25
BUILDINGS B
REFLECTED CEILING PLANS

A3.1A



AREA C - REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-122228 INC.
REVIEWED FOR: SS FLS ACS
DATE: 02/16/2023

REFERENCE KEYNOTES

KEYNOTES	KEYNOTES
D13	REMOVE (E) CEILING MOUNTED FAN COIL UNIT INCLUDING ALL SUPPORTS, CONDUITS, CONDENSATE LINES, ETC. - SEE MECHANICAL DRAWINGS
D380	DEMO (E) CEILING TILES TO ALLOW FOR MECHANICAL DUCT WORK INSTALLATION. REPLACE WITH (N) SIMILAR TO EXISTING
E105	(E) LIGHT FIXTURES TO REMAIN, PROTECT IN PLACE
N211	REPLACE (E) DIFFUSERS AND GRILLES TO MATCH (E) CEILING TILES. REFER TO MECHANICAL DRAWINGS
N212	REPLACE (E) INFILL PANEL AT CONDENSER UNIT. PENETRATIONS WITH GLAZING TO MATCH ADJACENT. PAINT FRAME TO MATCH ADJACENT

REFLECTED CEILING PLAN GENERAL NOTES

- REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS
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BEN LOMOND ELEM. SCHOOL
COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT
67 E. COVINA BLVD COVINA, CA 91722

100%
CONSTRUCTION
DOCUMENT
05/05/2022
REVISIONS

75-22605
DSA A#03-122228
DSA File #: 19-25

BUILDINGS CDGH
AND I REFLECTED
CEILING PLANS

A3.1C

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REFERENCE KEYNOTES

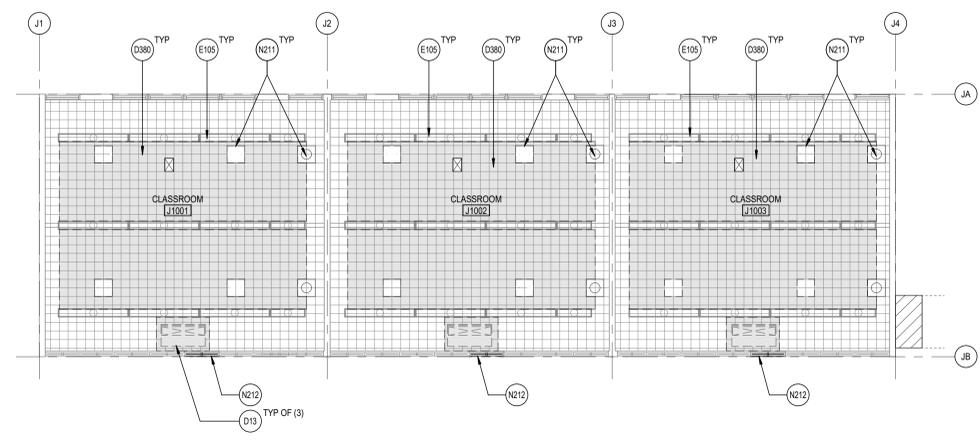
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 - P. NOT USED
 - Q. WHERE PLASTER/STUCCO WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



BUILDINGS J AND Q REFLECTED CEILING PLANS
 SCALE: 1/8" = 1'-0"



BEN LOMOND ELEM. SCHOOL
 COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT
 681 E. COVINA BLVD COVINA, CA 91722

100%
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75-22605
 DSA A#03-122228
 DSA File #: 19-25

BUILDINGS J AND Q REFLECTED CEILING PLANS

A3.1D

ABBREVIATIONS

ABBREVIATIONS

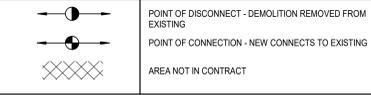
SHEET INDEX

Table of abbreviations with symbols and descriptions, including terms like DEMOLISHED, EXISTING, RELOCATED, etc.

Table of abbreviations with symbols and descriptions, including terms like HIGH TEMPERATURE HOT WATER SUPPLY, HUMIDIFIER, etc.

Table of sheet index with symbols and descriptions, including terms like MECHANICAL SYMBOLS, ABBREVIATIONS & NOTES, etc.

GENERAL SYMBOLS



GENERAL NOTES

- 1 THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING, PRIOR TO FINAL BID... 2 WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION...

GENERAL HVAC NOTES

- 1 CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT... 2 ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE...

HVAC SYMBOLS

Table of HVAC symbols with columns for Schematic, 3D, and Description, including items like GAS FLUE EXHAUST AIR, GENERAL EXHAUST AIR, etc.

PIPING VALVES AND FITTINGS

Table of piping valves and fittings with columns for Schematic, 3D, and Description, including items like PIPE DROP, PIPE RISE, PIPE TEE DOWN, etc.

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...

ACCEPTANCE TESTING

MANDATORY ACCEPTANCE TESTING PER TITLE 24, PART 6 SHALL BE AS FOLLOWS:
NRCAMCH-02A - OUTDOOR AIR ACCEPTANCE
NRCAMCH-03A - CONSTANT VOLUME, SINGLE ZONE, UNITARY AIR CONDITIONER AND HEAT PUMP SYSTEMS...

MECHANICAL MANDATORY MEASURES

EQUIPMENT AND SYSTEMS EFFICIENCY
ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS SHALL COMPLY WITH THAT STANDARD.
PIPING, EXCEPT THOSE CONVEYING FLUIDS WITH A DESIGN OPERATING TEMPERATURE BETWEEN 60°F AND 105°F...
VENTILATION
CONTROLS SHALL BE PROVIDED TO ALLOW OUTSIDE AIR DAMPERS OR DEVICES TO BE OPERATED AT THE VENTILATION RATES AS SPECIFIED IN THESE PLANS...

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-122228 INC.
REVIEWED FOR
DATE: 02/16/2023



Ben Lomond Elementary School
COVINA VALLEY USD
681 E COVINA BLVD., COVINA, CA 91722

DSA Submitted Set
1/13/2023
REVISIONS

75-22605-00

MECHANICAL SYMBOLS, ABBREVIATIONS & NOTES

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NOTE
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.

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
 Project Name: CVUSD Ben Lomond Report Page: (Page 1 of 39)
 Project Address: 621 E Covina Blvd Date Prepared: 7/19/2022

A. GENERAL INFORMATION

01 Project Location (city)	Covina	04 Total Conditioned Floor Area	19700
02 Climate Zone	10	05 Total Unconditioned Floor Area	0
03 Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade)	1
<input type="checkbox"/> Office (B)	<input type="checkbox"/> Retail (M)	<input type="checkbox"/> Non-refrigerated Warehouse (S)	
<input type="checkbox"/> Hotel/ Motel Guest Rooms (R-1)	<input type="checkbox"/> School (E)	<input type="checkbox"/> Healthcare Facility (H)	
<input type="checkbox"/> High-Rise Residential (R-2/R-3)	<input type="checkbox"/> Relocatable Class Bldg (E)	<input checked="" type="checkbox"/> Other (write in)	See Table J

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

01 Air System(s)	02 Wet System Components	03 Dry System Components
<input checked="" type="checkbox"/> Heating Air System	<input type="checkbox"/> Water Economizer	<input checked="" type="checkbox"/> Air Economizer
<input checked="" type="checkbox"/> Cooling Air System	<input type="checkbox"/> Pumps	<input type="checkbox"/> Electric Resistance Heat
<input type="checkbox"/> Mechanical Controls	<input type="checkbox"/> System Piping	<input checked="" type="checkbox"/> Fan Systems
<input checked="" type="checkbox"/> Mechanical Controls (existing to remain, altered or new)	<input type="checkbox"/> Cooling Towers	<input checked="" type="checkbox"/> Ductwork (existing to remain, altered or new)
<input type="checkbox"/> Chillers	<input type="checkbox"/> Boilers	<input type="checkbox"/> Zonal Systems/ Terminal Boxes

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20200601
 Report Generated: 2022-07-19 14:35:20

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
 Project Name: CVUSD Ben Lomond Report Page: (Page 4 of 39)
 Project Address: 621 E Covina Blvd Date Prepared: 7/19/2022

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11
RTU-H1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.74	26.15	55.22	69.3
RTU-H2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.73	26.15	53.28	68.55
RTU-H3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.74	26.15	55.12	69.12
RTU-J1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.59	26.15	55.22	55.15
RTU-J2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.57	26.15	53.28	53.97
RTU-J3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.58	26.15	55.12	54.43
RTU-I1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.74	26.15	55.22	69.3
RTU-I2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.73	26.15	53.28	68.55
RTU-I3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.74	26.15	55.12	69.12

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

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20200601
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CERTIFICATE OF COMPLIANCE NRCC-MCH-E
 Project Name: CVUSD Ben Lomond Report Page: (Page 7 of 39)
 Project Address: 621 E Covina Blvd Date Prepared: 7/19/2022

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	RTU-C2	Economizer:	NA: <=54 kbtu/h cooling	Economizer Controls:	Designed per §140.4(a) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	Design Airflow through Device (CFM)
SF	Supply	1	1200	BHP	0.91		
Total System Design Supply Airflow (CFM):			1200	Total System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:

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STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

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

01	02	03	04	05	06	07	08	09
System Summary §110.1, §110.2, §140.4	AND	Pumps §140.4(b)	AND	Fans/Economizers §140.4(c), §140.4(e)	AND	System Controls §110.2, §120.2, §140.4(f)	AND	Ventilation §120.1
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)	COMPLIES

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

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

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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
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	>=65,000 and <135,000		COP	3.3	3.5	EER / IEER	11 / 12.2	12 / 12.9
RTU-C1	<=65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-C2	<=65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-C3	<=65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-D1	<=65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-D2	<=65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-D3	<=65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-G1	<=65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-G2	<=65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-H1	<=65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-H2	<=65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-H3	<=65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-I1	<=65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-I2	<=65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-I3	<=65,000		HSPF	7.7	13	SEER	13.0	14.3

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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	RTU-D2	Economizer:	NA: <=54 kbtu/h cooling	Economizer Controls:	Designed per §140.4(a) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	Design Airflow through Device (CFM)
SF	Supply	1	1200	BHP	0.91		
Total System Design Supply Airflow (CFM):			1200	Total System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 This table is used to demonstrate compliance for mechanical equipment with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b), and §140.4(c) or §141.0(b)2 for alterations.

01	02	03	04	05	06	07	08	09	10	11
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)	Heating Output ^{2,3}		Cooling Output ^{2,3}		Load Calculations ⁴		
FCU/CU-B1	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	55.01	93.14	0	118.93	118.88	237.94	208.79
RTU-C1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.74	26.15	55.22	69.3
RTU-C2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.73	26.15	53.28	68.55
RTU-C3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.74	26.15	55.12	69.12
RTU-D1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.74	26.15	55.22	69.3
RTU-D2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.73	26.15	53.28	68.55
RTU-D3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.74	26.15	55.12	69.12
RTU-G1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.79	26.15	71.83	96.92
RTU-G2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	29.79	26.15	71.8	96.87

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G. PUMPS
 This section does not apply to this project.

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

System Name:	FCU/CU-B1	Economizer:	NA: Special OA filtration	Economizer Controls:	Designed per §140.4(a) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	Design Airflow through Device (CFM)
SF	Supply	1	7440	BHP	0.91		
Total System Design Supply Airflow (CFM):			7440	Total System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:

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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	RTU-C1	Economizer:	NA: <=54 kbtu/h cooling	Economizer Controls:	Designed per §140.4(a) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	Design Airflow through Device (CFM)
SF	Supply	1	1200	BHP	0.91		
Total System Design Supply Airflow (CFM):			1200	Total System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
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Ben Lomond Elementary School
 COVINA VALLEY USD
 621 E COVINA BLVD, COVINA, CA 91722

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 REVISIONS

75-22605-00

TITLE 24
 COMPLIANCE

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System Name	RTU-H3	Economizer:1	NA: <=54 kbtu/h cooling	Economizer Controls:	Designed per §140.4(e) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B Device	Design Airflow through Device (CFM)
SF	Supply	1	1200	BHP	0.91		
Total System Design Supply Airflow (CFM):			1200	Total System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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System Name	System Zoning	Conditioned Floor Area Being Served (ft ²)	Thermostats §110.2(b) & (c)1, §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(a)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
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-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-G1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-G2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-H1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-H2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-H3	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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Space Name of 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 §120.1(d)3, §120.1(d)5, and §120.1(e)3 ⁶
Classroom	Lecture/ postsecondary classroom	910		15	225	0	0	DCV Provided per §120.1(d)4 NA: Not required space type
Total System Required Min OA CFM					225	18	Ventilation for this System Complies?	Yes

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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System Name	RTU-J3	Economizer:1	NA: <=54 kbtu/h cooling	Economizer Controls:	Designed per §140.4(e) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B Device	Design Airflow through Device (CFM)
SF	Supply	1	1200	BHP	0.91		
Total System Design Supply Airflow (CFM):			1200	Total System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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RTU	Zone	Area	Control	Timer	Control	Control	Control	Control
RTU-J1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-J2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-J3	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-I1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-I2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-I3	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided

FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.
 *Notes: Controls with a * require a note in the table 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)

System Name	System Design OA CFM Airflow ¹	225	System Design Transfer Air CFM	0	Air Filtration per §120.1(c) and §141.0(b)2 ²
FCU/CU-B1					Provided per §120.1(d)4 (NR and Hotel/Motel)

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Space Name of 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 §120.1(d)3, §120.1(d)5, and §120.1(e)3 ⁶
Classroom	Lecture/ postsecondary classroom	905		15	225	0	0	DCV Provided per §120.1(d)4 NA: Not required space type
Total System Required Min OA CFM					225	18	Ventilation for this System Complies?	Yes

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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System Name	RTU-I3	Economizer:1	NA: <=54 kbtu/h cooling	Economizer Controls:	Designed per §140.4(e) and (m)	System Fan Type:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B Device	Design Airflow through Device (CFM)
SF	Supply	1	1200	BHP	0.91		
Total System Design Supply Airflow (CFM):			1200	Total System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:

FOOTNOTES: Computer room economizers must meet requirements of §140.5(a) and will be documented on the NRCC-PRC-E document.
 The unit used for HP must be consistent for all fans within a system.

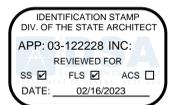
Registration Number: Registration Date/Time: Registration Provider: Energysoft
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System Name	System Design OA CFM Airflow ¹	225	System Design Transfer Air CFM	0	Air Filtration per §120.1(c) and §141.0(b)2 ²
RTU-C1					Provided per §120.1(c) (NR and Hotel/Motel)

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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Space Name of 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 §120.1(d)3, §120.1(d)5, and §120.1(e)3 ⁶
Classroom	Lecture/ postsecondary classroom	890		15	225	0	0	DCV Provided per §120.1(d)4 NA: Not required space type
Total System Required Min OA CFM					225	18	Ventilation for this System Complies?	Yes

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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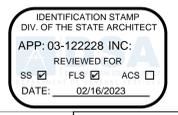
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TITLE 24 COMPLIANCE

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TITLE 24
COMPLIANCE

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STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E
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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: TONG FANG ZHAO
Signature: [Signature]
Signature Date: 2022-07-19
Address: 700 S FLOWER STREET
City/State/Zip: LOS ANGELES CA 90017
Phone: 213-444-0610

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:

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

Responsible Designer Name: TONG FANG ZHAO
Signature: [Signature]
Date Signed: 2022-07-19
Company: DLR GROUP
Address: 700 FLOWER STREET
City/State/Zip: LOS ANGELES CA 90017
License: M-34291
Phone: 213-444-0610

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
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Q. MANDATORY MEASURES DOCUMENTATION LOCATION
This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

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

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

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector	
		Pass	Fail
NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to 3.10.1.1.1) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO ₂) concentration setpoints.	FCU/CU-B1; RTU-C1; RTU-C2; RTU-C3; RTU-D1; RTU-D2; RTU-D3; RTU-G1; RTU-G2; RTU-H1; RTU-H2; RTU-H3; RTU-J1; RTU-J2; RTU-J3; RTU-I1; RTU-I2; RTU-I3	<input type="checkbox"/>	<input type="checkbox"/>
NRCA-MCH-11-A Automatic Demand Shed Controls	FCU/CU-B1; RTU-C1; RTU-C2; RTU-C3; RTU-D1; RTU-D2; RTU-D3; RTU-G1; RTU-G2; RTU-H1; RTU-H2; RTU-H3; RTU-J1; RTU-J2; RTU-J3; RTU-I1; RTU-I2; RTU-I3	<input type="checkbox"/>	<input type="checkbox"/>
NRCA-MCH-16-A Supply Air Temperature Reset Controls	FCU/CU-B1; RTU-C1; RTU-C2; RTU-C3; RTU-D1; RTU-D2; RTU-D3; RTU-G1; RTU-G2; RTU-H1; RTU-H2; RTU-H3; RTU-J1; RTU-J2; RTU-J3; RTU-I1; RTU-I2; RTU-I3	<input type="checkbox"/>	<input type="checkbox"/>
NRCA-MCH-18-A Energy Management Control Systems	FCU/CU-B1; RTU-C1; RTU-C2; RTU-C3; RTU-D1; RTU-D2; RTU-D3; RTU-G1; RTU-G2; RTU-H1; RTU-H2; RTU-H3; RTU-J1; RTU-J2; RTU-J3; RTU-I1; RTU-I2; RTU-I3	<input type="checkbox"/>	<input type="checkbox"/>

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION
There are no NRCV forms required for this project.

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: 2022-07-19 14:35:20
Registration Provider: Energysoft

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Audodesk Docs/75-22605-00 CVUSD - District Wide HVAC Replacement/75-22605-00 CVUSD_Ben Lomond_ES_MEP_2022.rvt
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IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APP: 03-122228 INC:
 REVIEWED FOR
 SS FLS ACS
 DATE: 02/16/2023

GENERAL NOTES

A FOR SYMBOLS AND ABBREVIATIONS SEE DRAWING M0.1

SITE LEGEND

-  EXISTING BUILDING NOT IN SCOPE
-  EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION
-  (E) RESTROOMS - NOT IN SCOPE



Ben Lomond Elementary School
 COVINA VALLEY USD
 681 E COVINA BLVD, COVINA, CA 91722

DSA Submitted Set
 1/13/2023
 REVISIONS

75-22605-00

OVERALL
 MECHANICAL
 FLOOR PLAN

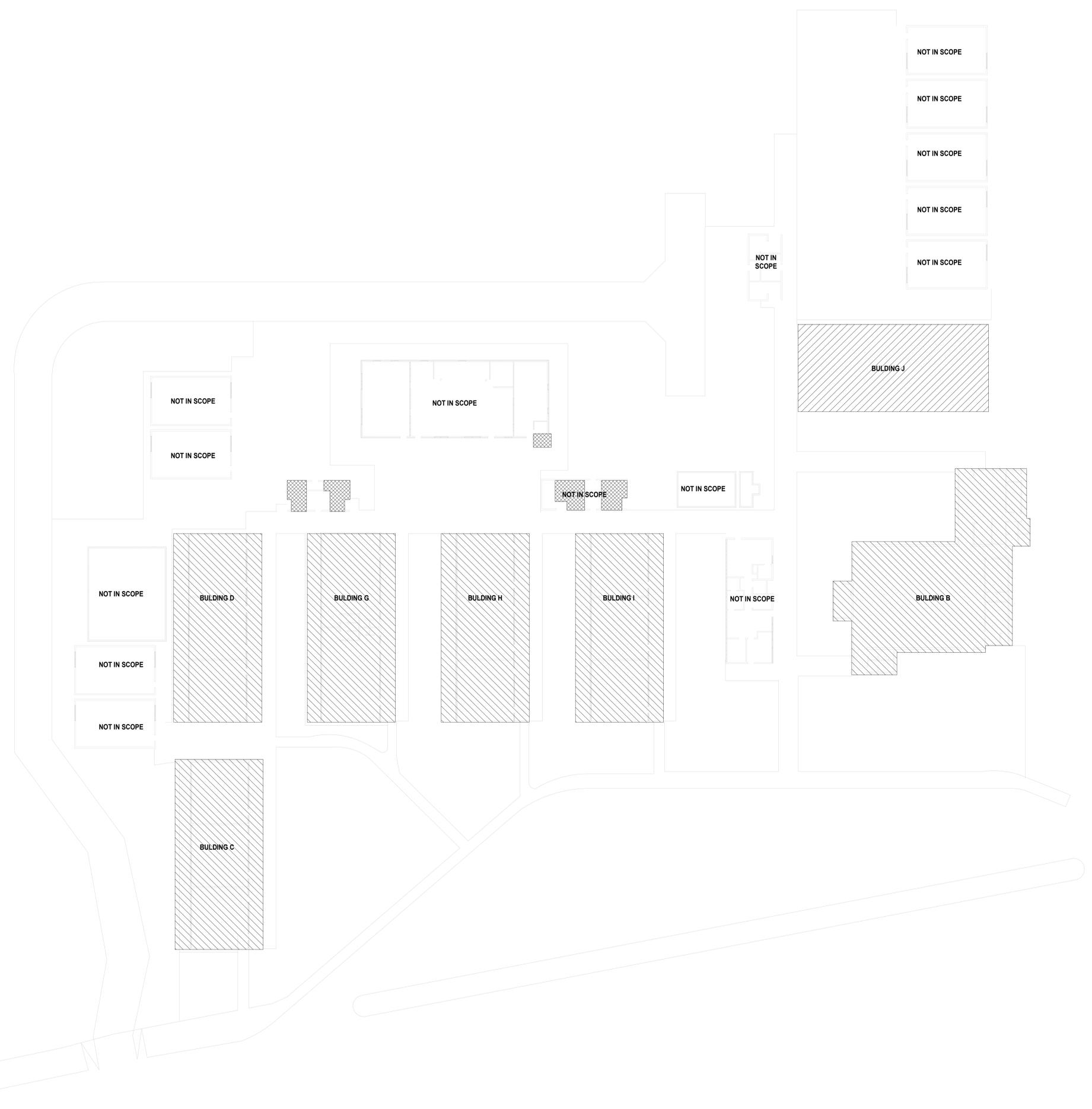
M1.1

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OVERALL FLOOR PLAN
 SCALE: 3/8" = 1'-0"

Autodesk Docs/75-22605-00 COVUSD - District Wide HVAC Replacement/75-22605-00 COVUSD_Ben Lomond ES MEP_2022.rvt
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DEMO NOTES - MPR ONLY

- A. REMOVE EXHAUST FAN, FURNACE AND RELATED DUCT, WIRING, MOTOR, SUPPORTS AND OTHER APPURTENANCES TO POC IN MECHANICAL ROOM. REMOVE GAS PIPING IN MECHANICAL ROOM AND CAP AT FLOOR.

GENERAL NOTES

1. SCOPE OF WORK IS CLASSROOMS & MPR ONLY.
2. EXISTING DUCTWORK IN MPR TO REMAIN.
3. PROVIDE 1" LINEAR TO NEW SA & RA DUCT IN MECHANICAL ROOM.
4. PROVIDE FLEXIBLE DUCT AT UNIT CONNECTION FOR SA & RA DUCT.

KEY NOTES

1. (E) FIRE DAMPER TO REMAIN. TYP.
2. (E) SA DUCTWORK TO REMAIN.
3. (E) RA DUCTWORK TO REMAIN.
4. (E) OSA LOUVER & DAMPER TO REMAIN TO BE READY TO CONNECT TO DUCTWORK. CONTRACTOR TO VERIFY DAMPER CONDITION ON SITE PRIOR TO BID.
5. RLRS PENETRATE WALL ABOVE GRADE. CONTRACTOR TO VERIFY LOCATION ON SITE. PROVIDE PHP PIPE SUPPORT.
6. (E) DIFFUSERS & GRILLES. CONTRACTOR TO VERIFY LOCATIONS ON SITE.



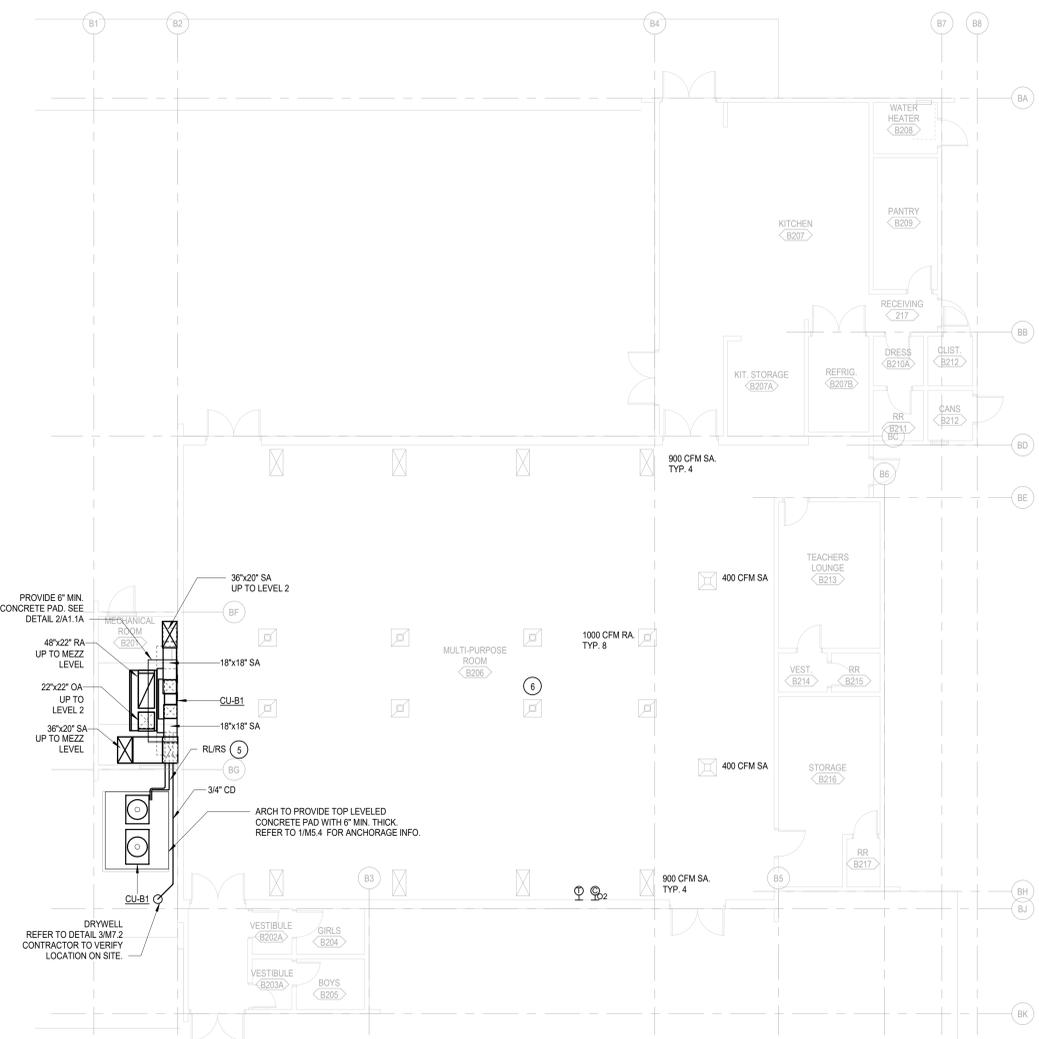
Ben Lomond Elementary School
 COVINA VALLEY USD
 681 E COVINA BLVD, COVINA, CA 91722

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 1/13/2023
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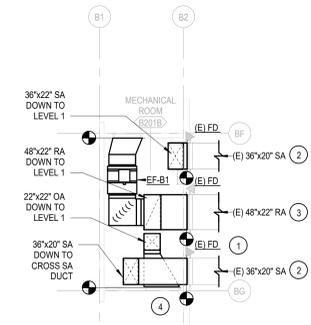
75-22605-00

BUILDING A AND B
 - MECHANICAL
 FLOOR PLAN

M1.1A



BUILDING A AND B MECHANICAL FLOOR PLAN - MPR
 SCALE: 1/8" = 1'-0"



BLDG B - MEZZ LEVEL
 SCALE: 1/8" = 1'-0"

DEMO NOTES

- A. DEMOLISH EXISTING OUTDOOR CONDENSING UNIT AND INDOOR FANCL. UNITS, ALONG WITH RELATED CONCRETE PADS, PIPING, CONDUIT, FENCE, SUPPORTS AND OTHER APPURTENANCES. REFER TO ARCH PLANS OR SPECS FOR FILING HOLES AND MATCHING WALL. TYP.

GENERAL NOTES

- 1. SCOPE OF WORK IS CLASSROOMS & MPR ONLY.
- 2. DIFFUSERS AND GRILLES TO MATCH (E) CEILING TILES. REFER TO RCP.



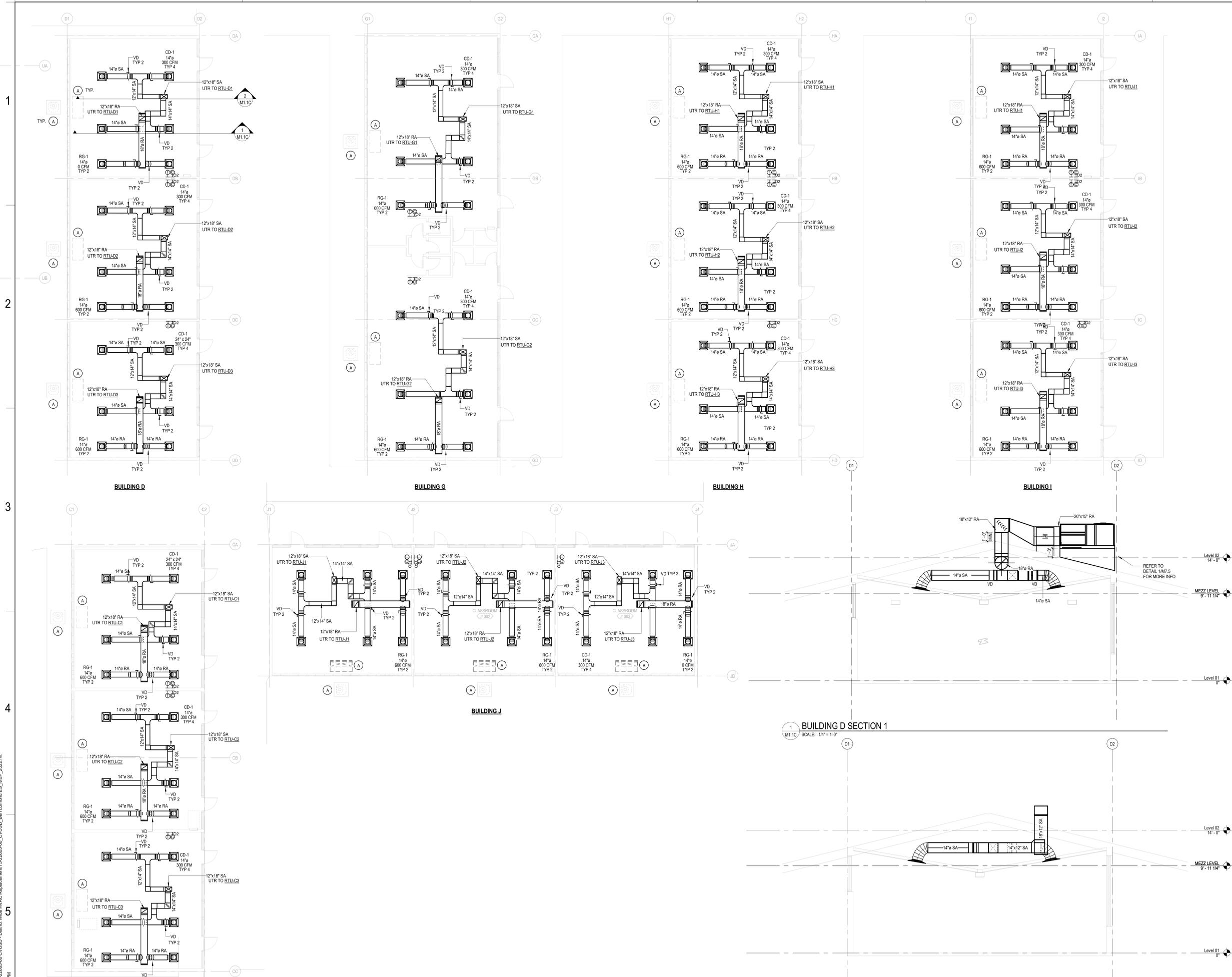
Ben Lomond Elementary School
 COVINA VALLEY USD
 601 E COVINA BLVD, COVINA, CA 91722

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 1/13/2023
 REVISIONS

75-22605-00

BUILDINGS C, D, G, H, I AND J
 MECHANICAL FLOOR PLANS

M1.1C



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 1/26/2023 3:32:22 PM

BUILDINGS C, D, G, H, I AND J MECHANICAL FLOOR PLANS
 SCALE: 1/8" = 1'-0"

BUILDING D SECTION 2
 M1.1C SCALE: 1/4" = 1'-0"

GENERAL NOTES

- SCOPE OF WORK IS CLASSROOMS & MPR ONLY.
- PROVIDE LINER TO DUCTWORK FOR 10 FEET FROM RTU.
- PROVIDE FLEXIBLE DUCT AT UNIT CONNECTION FOR SA & RA DUCT.

KEY NOTES

- PROVIDE POWER EXHAUST ON RETURN DUCT WITH LEG LENGTH TO FIT THE ROOF SLOPE. CONTRACTOR TO VERIFY ON SITE. TYP.
- RTU TO BE 10'-0" MIN. FROM ROOF EDGE. CONTRACTOR TO VERIFY ON SITE. TYP.
- RTU IS LESS THAN 10'-0" FROM ROOF EDGE. ARCH TO PROVIDE PROTECTION GUARDS. TYP.

DLR Group
 © DLR Group



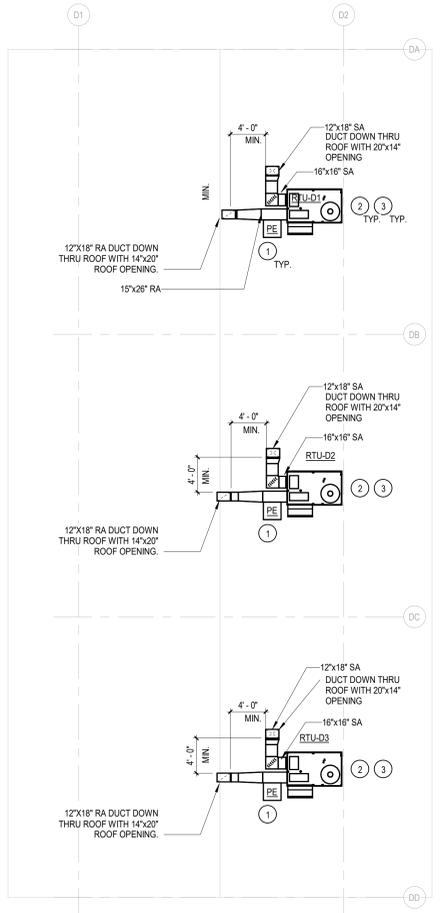
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 COVINA VALLEY USD
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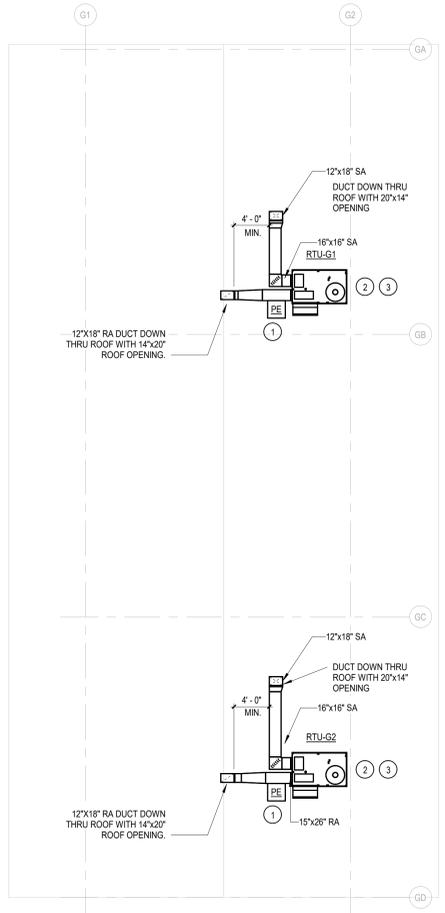
75-22605-00

BUILDINGS C, D,
 G, H, I AND J
 MECHANICAL
 ROOF PLANS

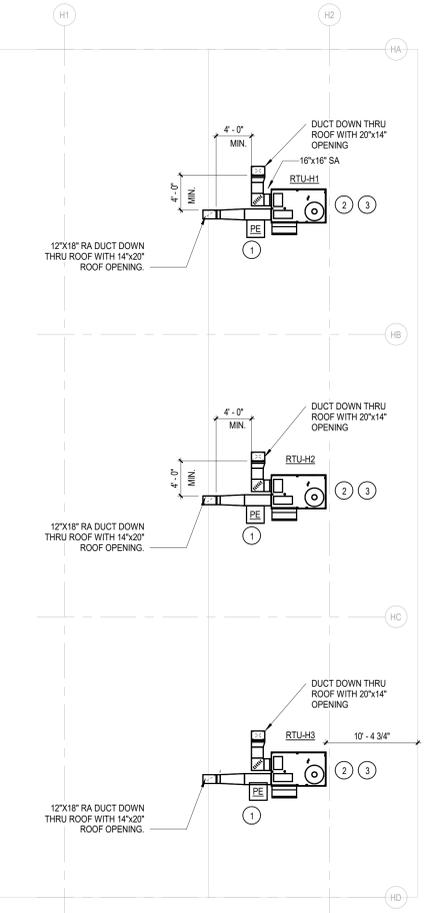
M1.3C



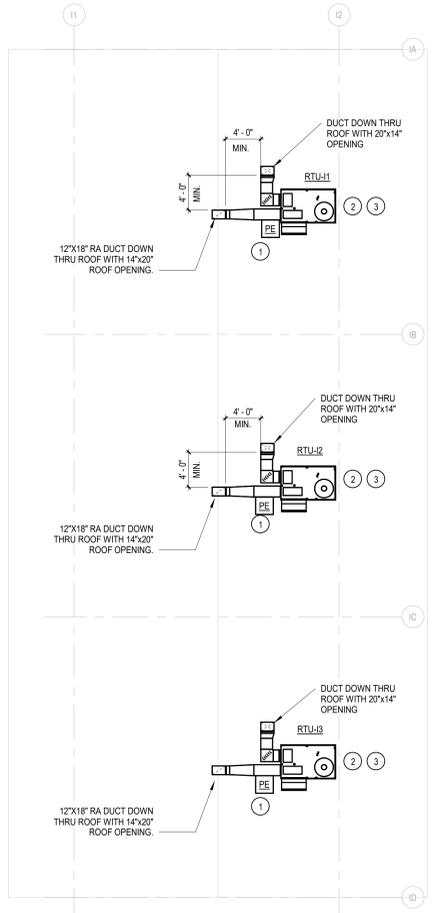
BUILDING D



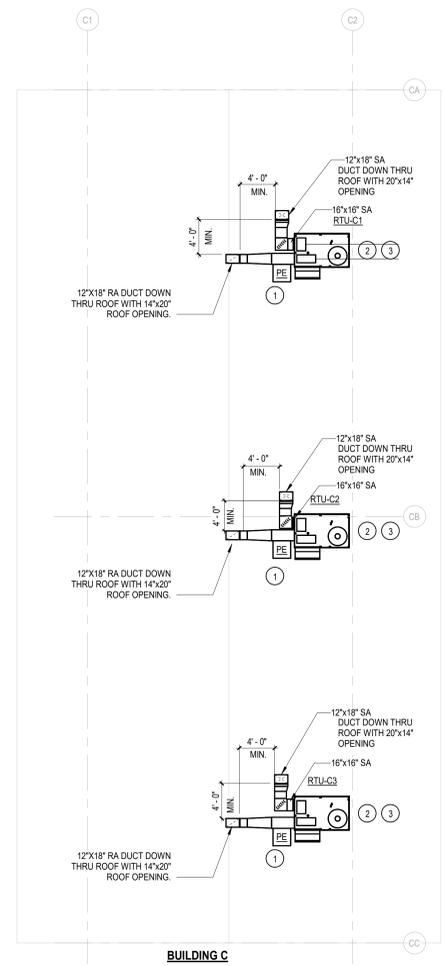
BUILDING G



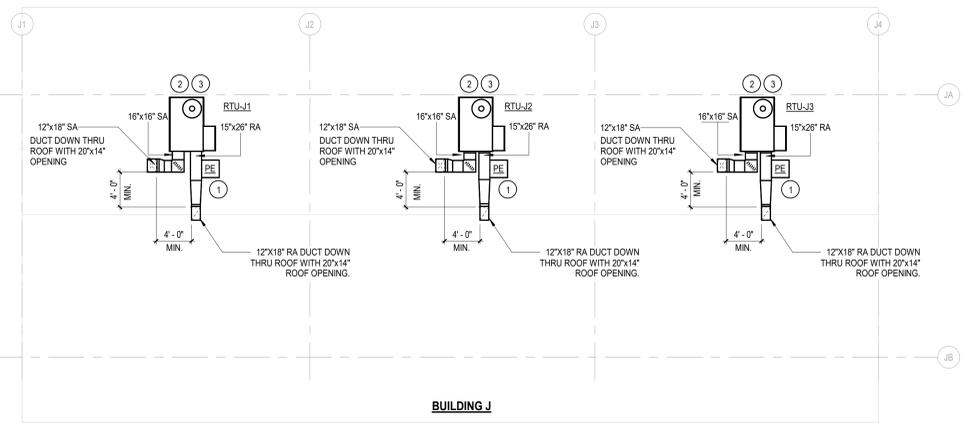
BUILDING H



BUILDING I



BUILDING C

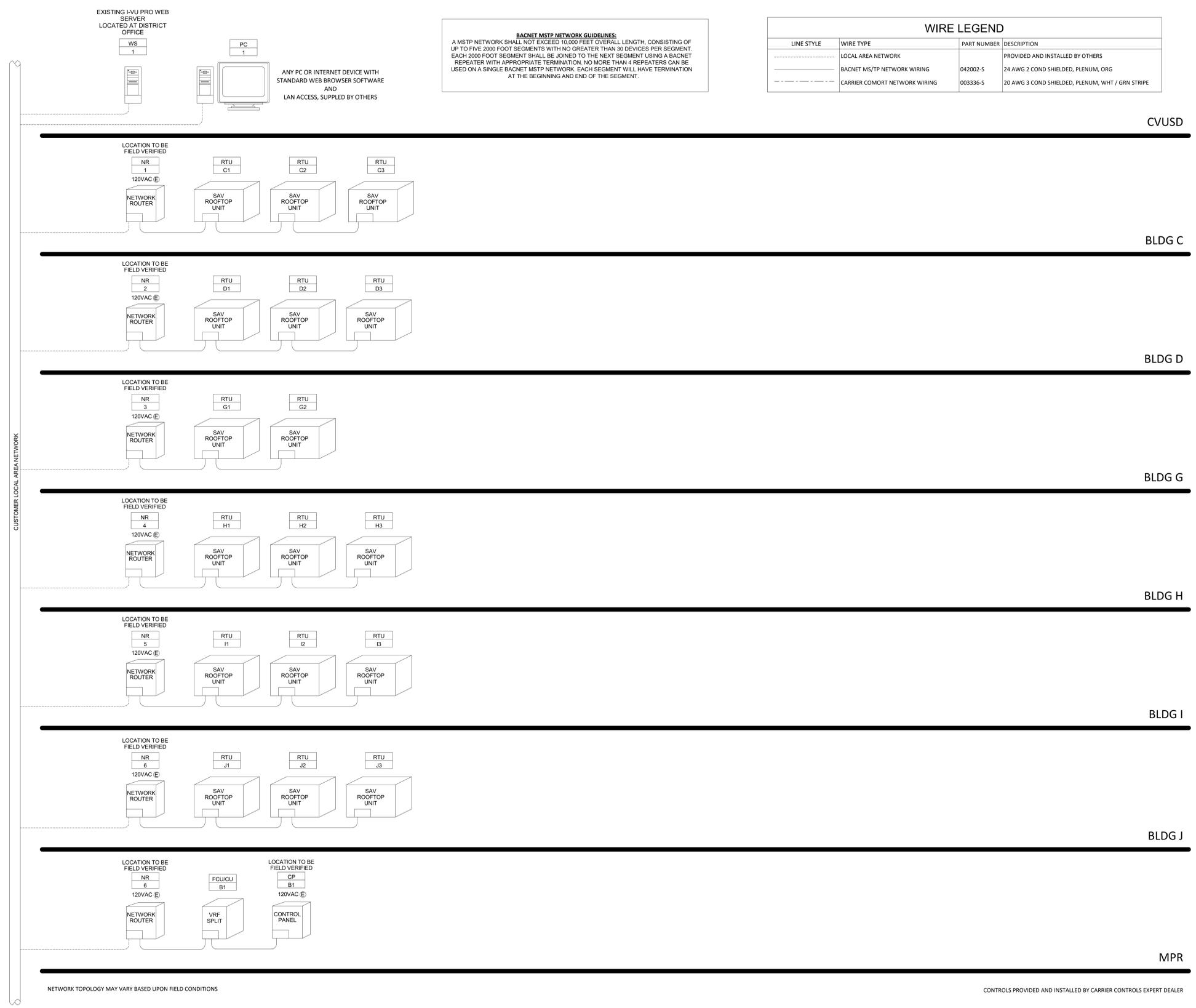


BUILDING J

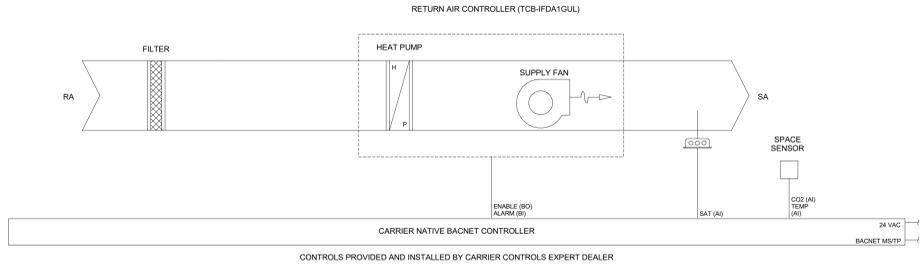
OVERALL ROOF PLAN
 SCALE: 1/8" = 1'-0"

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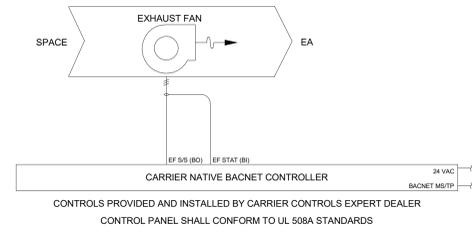
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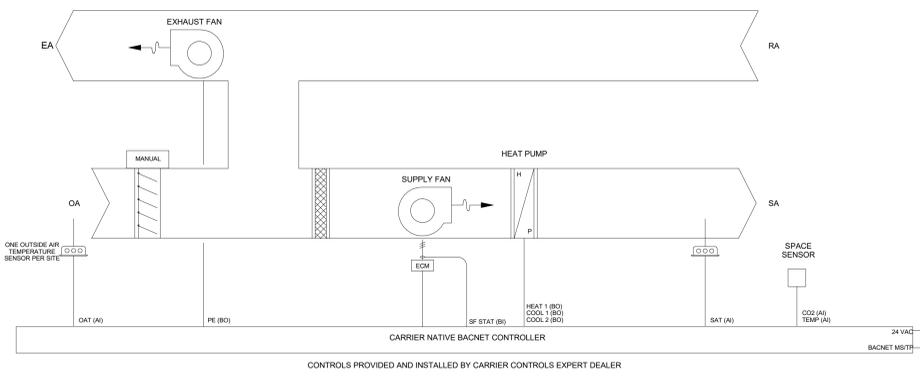
BACS RISER DIAGRAM
 MS.1
 NO SCALE



SPLIT SYSTEM DETAIL (FCU/CU-B1) SCALE NONE 1



EXHAUST FAN DETAIL (EF-B1) SCALE NONE 2



50FCQ HEAT PUMP DETAIL (RTU-C1 THRU RTU-C3, RTU- D1 THRU RTU-D3, RTU-G1 THRU RTU-G2, RTU-H1 THRU RTU-H3, RTU-I1 THRU RTU-I3, AND RTU-J1 THRU RTU-J3)

SEQUENCES OF OPERATION
 SEQUENCE OF OPERATION FOR CVUSD BEN LOMOND ES
 HEAT PUMP RTU (RTU-C1, RTU-C2, RTU- D1 THRU RTU-D3, RTU-G1 THRU RTU-G3, RTU-H1 THRU RTU-H3, RTU-I1 THRU RTU-I3, AND RTU-J1 THRU RTU-J3)

INDOOR FAN
 THE FAN OPERATES AT A VARIABLE SPEED TO MEET THE LOAD CONDITIONS AND SAT SAFETY REQUIREMENTS TO PROVIDE MAXIMUM ENERGY SAVINGS BY MINIMIZING FAN HORSEPOWER CONSUMPTION. FAN SPEED IS NOT CONTROLLED BY STATIC PRESSURE.

HEATING MODE
 WHEN SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT, UNIT SHALL OPERATE IN THE HEATING MODE. UNIT SHALL STAGE AVAILABLE HEAT STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE.

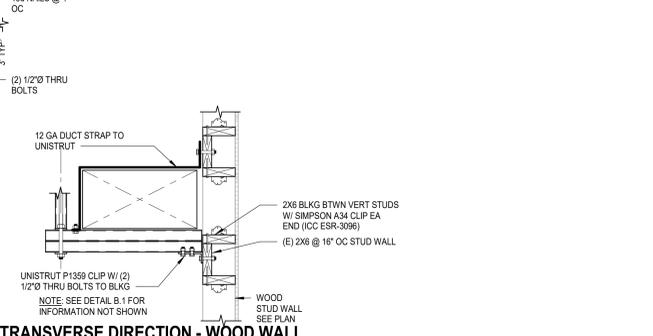
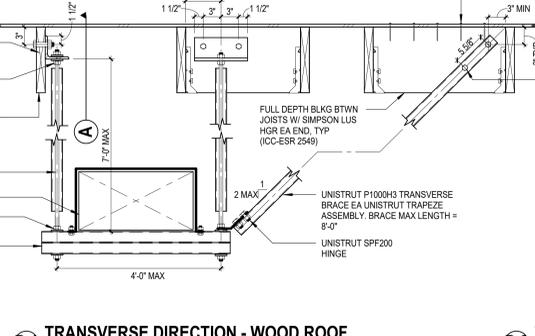
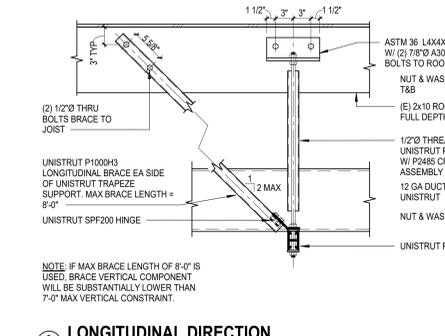
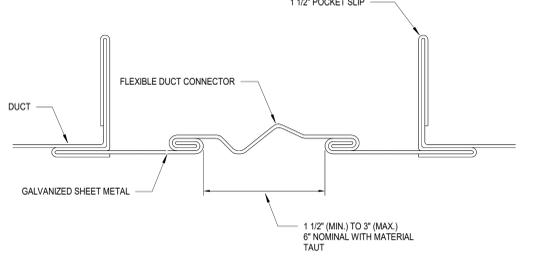
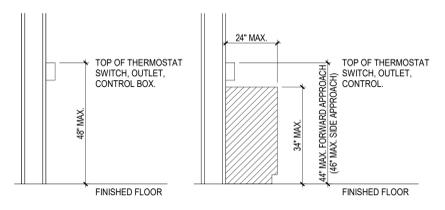
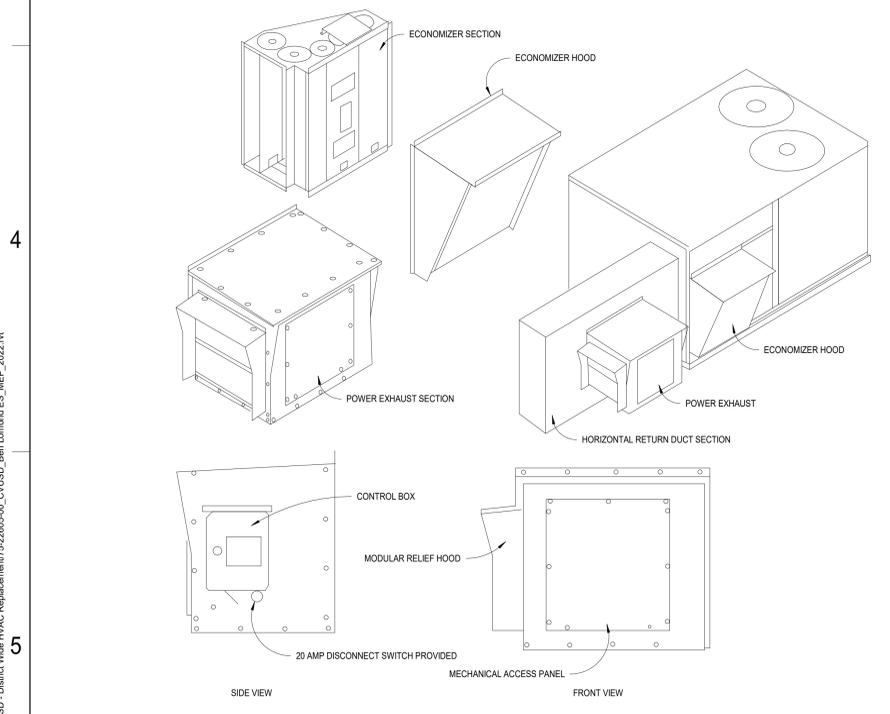
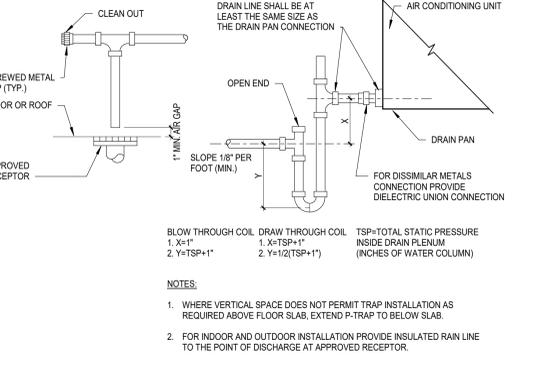
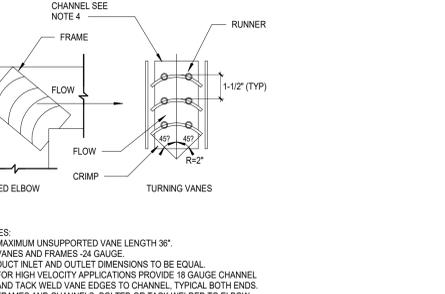
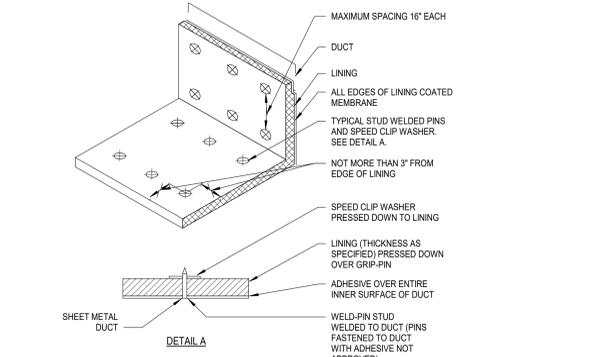
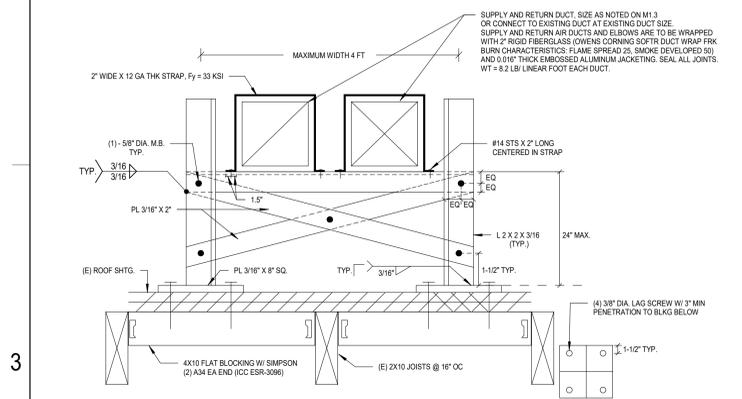
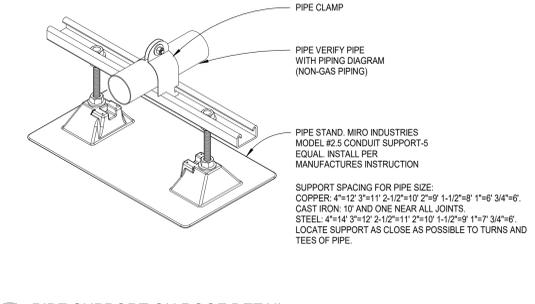
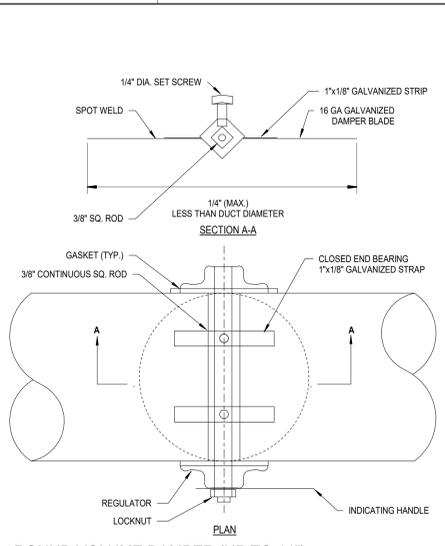
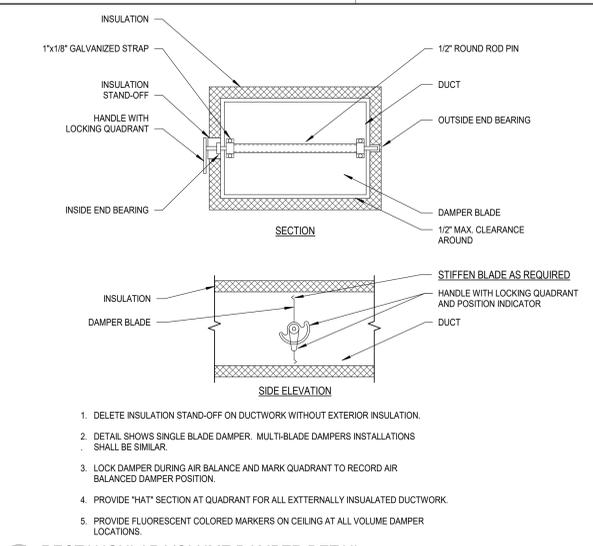
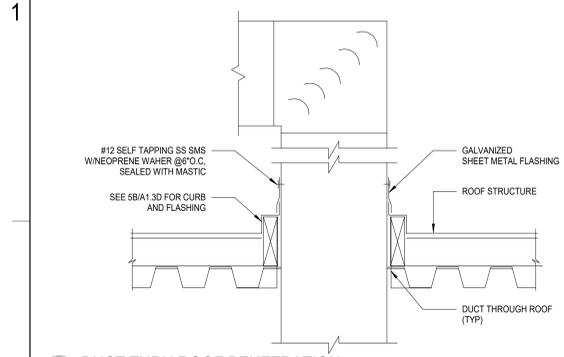
COOLING MODE
 WHEN SPACE TEMPERATURE IS ABOVE OCCUPIED COOLING SETPOINT, UNIT SHALL OPERATE IN THE COOLING MODE. UNIT SHALL ENABLE AVAILABLE COOLING STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE.

CO2 CONTROL
 UNIT SHALL MONITOR SPACE CO2 WHEN THE SUPPLY FAN IS ENERGIZED. WHEN CO2 IS ABOVE SETPOINT OF 1000 PPM, AN ALARM SHALL BE ENABLED THROUGH THE EMS.

POWER EXHAUST
 THE EXHAUST FAN SHALL RUN WHEN THE UNIT IS OCCUPIED.

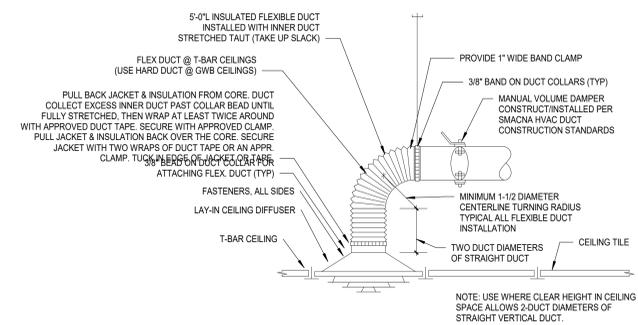
BACS DETAIL
 M5.2 NO SCALE

Autodesk Docs/75-22605-00 CVUSD - District Wide HVAC Replacement/75-22605-00 CVUSD - Ben Lomond ES MEP_2022.rvt
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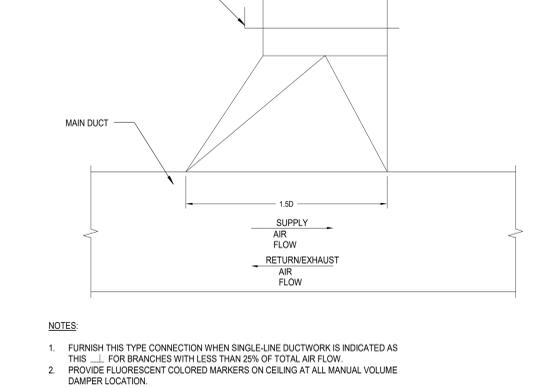


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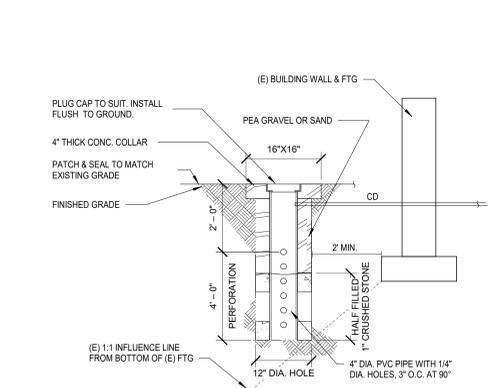
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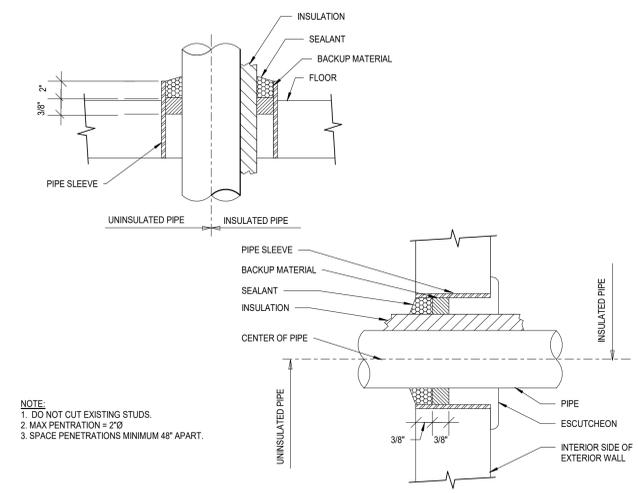
1 CEILING SUPPLY DIFFUSER CONNECTION DETAIL
 M7.2 / NO SCALE



2 ROUND DUCT BRANCH TO MAIN RECT. CONNECTION
 M7.2 / NO SCALE

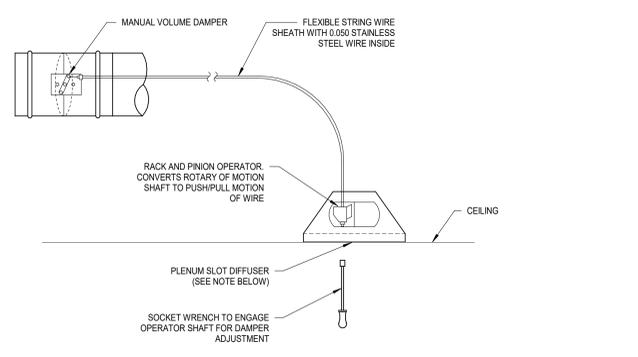


3 DRY WELL DETAIL
 M7.2 / SCALE: 1/4" = 1'-0"

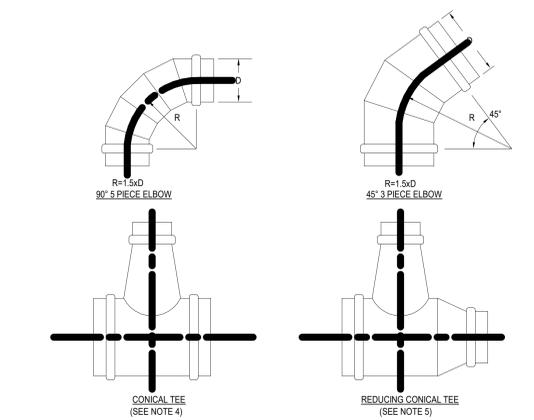


4 PIPE PENETRATION DETAILS
 M7.2 / NO SCALE

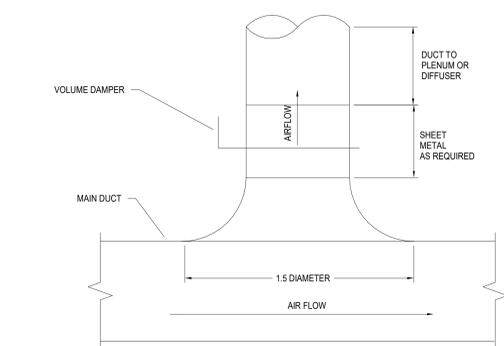
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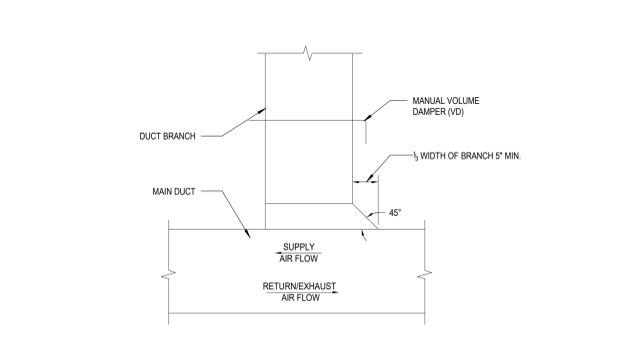
5 BOWDEN TYPE CABLE CONTROL (YOUNG'S REGULATOR)
 M7.2 / NO SCALE



6 ROUND DUCT FITTINGS
 M7.2 / NO SCALE

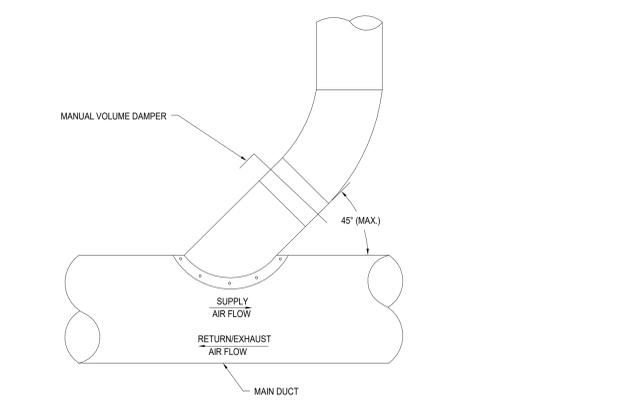


7 ROUND SUPPLY DUCT BRANCH TO RECTANGULAR DUCT
 M7.2 / NO SCALE

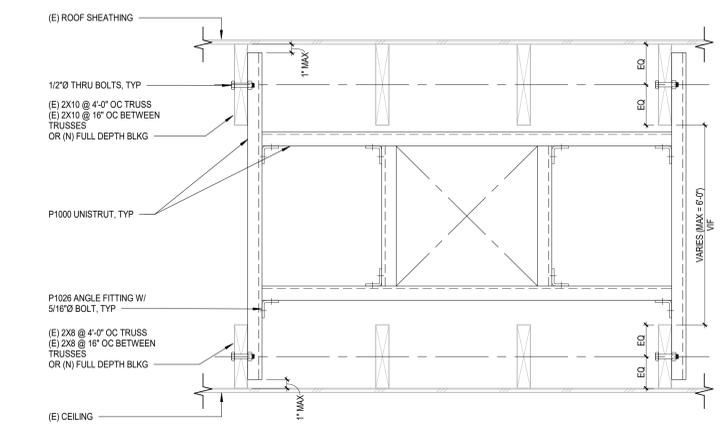


8 RECTANGULAR DUCT BRANCH TO RECTANGULAR DUCT
 M7.2 / NO SCALE

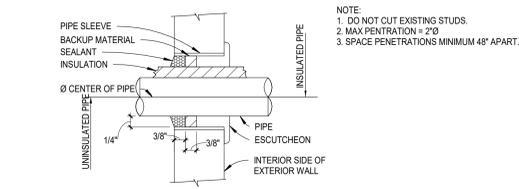
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9 ROUND DUCT BRANCH TO ROUND MAIN CONNECTION
 M7.2 / NO SCALE



10 DUCT SUPPORT IN CEILING SPACE
 M7.2 / NO SCALE



PIPE THRU WALL PENETRATION DETAIL
 SCALE: 1/8" = 1'-0"

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MARK	MAKE	MODEL	STEEL FRAME		DETAIL-1	DETAIL-3	MTG	SPRING OD	DEFL.
FCU-B1	CARRIER	40RUQA-16	ASTM A6, L 3 X 3 X 1/4				1-6	2"	1"

DETAIL-1

DETAIL-3

NOTES:

- APPROX. STEEL WEIGHT INCLUDING ISOLATORS: 200 LBS.
- INDICATES TIE-DOWN STRAP. SEE DETAIL 3.
- ALL DIMENSIONS REQUIRE FINAL REVIEW AT COMMENCEMENT OF PROJECT.

DETAIL-2

VIEW A-A **VIEW B-B**

TIE-DOWN STRAP DETAIL **CONNECTION DETAIL**

M. W. SAUSSE & CO., INC. 28744 Whitherspoon Pkwy. Valencia, CA 91355 Phone: (661) 257-3311 Fax: (661) 257-7673	JOB NAME: COVINA USD - BEN LOMOND ES CUST.: CUST. P.O.: MECH. ENGR.: DLRG MARK: FCU-B1 (HORIZONTAL)	REVISIONS: A: ADDED WELDING (7-21-22) B: VERT TO HORIZ (7-25-22) TDT C: CALL OUT ALL ATTACHMENTS (9-2-22) D: SPECS ANGLE (9-26-22)	DRN: JO DATE: 6/24/22 DRAWING NO.: -2D
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1 FCU-B1
 M7.3 SCALE: 12" = 1'-0"

MARK CU-B1	MAKE TOSHIBA	MODEL MMY-AP144	STEEL FRAME ASTM A36, L 4 X 3 X 1/4	DETAIL-1	DETAIL-3	MTG 1-6	SPRING OD 4"	DEFL. 2"
---------------	-----------------	--------------------	--	----------	----------	------------	-----------------	-------------

DETAIL-1

ATTACHMENT OF SPRING ISOLATORS TO CONCRETE PAD ON GRADE

1 1/16" DIA. HOLE (2) PLACES
 USE 5/8" DIA. STAINLESS HILTI KB T22 ANCHORS IN MIN 3000 PSI HR CONCRETE,
 MIN 3-1/4" NOMINAL EMBEDMENT, MIN 6" CONCRETE THICKNESS & MIN
 6" EDGE DISTANCE. INSTALL ANCHORS WITH SPECIAL INSPECTION PER ICC ESR-4266.

DETAIL-3

NOTES:

- APPROX. STEEL WEIGHT INCLUDING ISOLATORS: 450 LBS.
- FOR ISOLATORS, SEE DETAIL 3.
- M.W. SAUSSE & CO. INC. IS NOT RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE EQUIPMENT WHEN ANCHORED AS SHOWN.
- NOT FOR CONSTRUCTION, ALL DIMENSIONS REQUIRE FINAL REVIEW AT COMMENCEMENT OF PROJECT.

DETAIL-2

LEVELLING BOLT 1/2" DIA.
& ATTACHMENT OF STEEL BASE
TO SPRING ISOLATOR

DETAIL-2

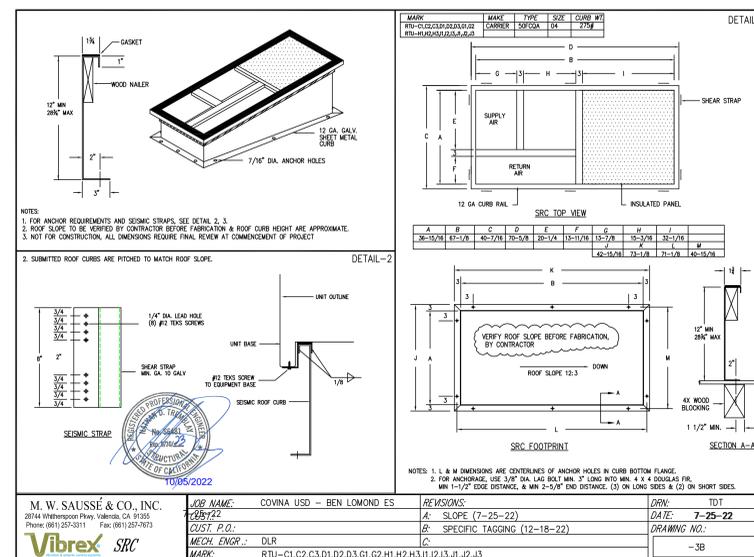
VIEW B-B

VIEW A-A

MAX. ALLOW. LOADS: HORIZ: 2200 LBS VERT. (UP): 2820 LBS

M. W. SAUSSE & CO., INC. 28744 Whitherspoon Pkwy, Valencia, CA 91355 Phone: (661) 257-3311 Fax: (661) 257-7873 	JOB NAME: COVINA USD - BEN LOMOND CUST.: CUST. P.O.: MECH. ENGR.: DLR MARK: CU-B1	REVISIONS: A: RENAME HP TO CU-B1 (9-2-22) B: CHANGED UNIT (9-6-22) C: SPECS ANGLE (9-20-22) D:	DRN: TDT DATE: 9-6-22 DRAWING NO.: -1C
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1 CU-B1
 M7.4 NO SCALE



1 RTU CURB
 M7.5 NO SCALE



Ben Lomond Elementary School
COVINA VALLEY USD
681 E COVINA BLVD, COVINA, CA 91722

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ELECTRICAL SYMBOLS, ABBREVIATIONS & NOTES

E0.1

ABBREVIATIONS

(D)	DEMOLISHED
(E)	EXISTING
(R)	RELOCATED
Ø	PHASE
A	AMPERE
AC	AC ABOVE COUNTER
AF	AMP FRAME (CIRCUIT BREAKER)
AC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
AMP	AMPERE
AP	WIRELESS ACCESS POINT
AT	AMP TRIP (CIRCUIT BREAKER OR FUSE)
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO/VIDEO, AUDIO-VISUAL
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BJ	BONDING JUMPER
BKR	BREAKER
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
GFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CR	CIRCUIT
CTL	CONTROL
CU	COPPER
DB	DECIBEL
DC	DIRECT CURRENT
DISC	DISCONNECT
DP	DISTRIBUTION PANELBOARD
DW	DISHWASHER
ECS	EMERGENCY COMMUNICATION SYSTEM
EGB	ELECTRICAL GROUNDING BUSBAR
EMD	ESTIMATED MAXIMUM DEMAND
EMGB	ELECTRICAL MAIN GROUNDING BUSBAR
EP	EXPLOSION PROOF
ER	EXISTING TO BE RELOCATED
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH
EWC	ELECTRIC WATER COOLER
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FC	FOOT CANDLE
FLA	FULL LOAD AMPS
FS	FLOW SWITCH
FSD	FIRE SMOKE DAMPER
G	EQUIPMENT GROUNDING CONDUCTOR
GEN	GENERATOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFPE	GROUND FAULT PROTECTION OF EQUIPMENT
GND	EQUIPMENT GROUNDING CONDUCTOR
HH	HANDHOLE
HOA	HAND-OPERATED
HP	HORSE POWER
IC	INTERCOM
IG	ISOLATED GROUND
JB	JUNCTION BOX
KAIC	THOUSAND AMPERE INTERRUPTING CIRCUIT
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
LT	LIGHT
LTO	LIGHTING
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MH	MANHOLE
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MRTS	MOTOR RATED TOGGLE SWITCH
MSB	MAIN SWITCHBOARD
MOUNTED	MOUNTED
MTG	MOUNTING
MTS	MAIN TRANSFER SWITCH
N	NEUTRAL
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NF	NON-FUSED
NL	NIGHT LIGHT
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OS&Y	OUTSIDE SCREW AND YOKE
P	POLE(S)
PA	PUBLIC ADDRESS
PB	PULL BOX
PH	PHASE
PIV	POST INDICATOR VALVE
PNL	PANEL
PWR	POWER
RCP	REFLECTED CEILING PLAN
RECPT	RECEPTACLE
REF	REFERENCE
RESP	RESPONSE
SCCR	SHORT CIRCUIT CURRENT RATING
SD	SMOKE DAMPER
SEC	SECONDARY
SPD	SURGE PROTECTION DEVICE
SWBD	SWITCHBOARD
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TC	TIME CLOCK
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TO	TELECOMMUNICATIONS OUTLET
TR	TELECOMMUNICATIONS ROOM
TS	TAMPER SWITCH
TV	TELEVISION
UG	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT
VA	VOLT-AMPERE
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
WA	TELECOMMUNICATIONS WORK AREA
WG	WIRE GUARD
WP	WEATHER-PROOF (NEMA 3R)
XFMR	TRANSFORMER

POWER

	CIRCUIT HOME RUN
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	CONDUIT STUB-UP
	CONDUIT SLEEVE
	CONDUIT SEAL
	CONDUIT CONCEALED IN CEILING OR WALLS, POWER
	CONDUIT CONCEALED IN CEILING OR WALLS, OTHER (* = SEE ABBREVIATIONS)
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, POWER
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, OTHER (* = SEE ABBREVIATIONS)
	EXPOSED CONDUIT, POWER
	EXPOSED CONDUIT, OTHER (* = SEE ABBREVIATIONS)
	FIRE RATED SLEEVE
	TRANSFORMER
	BRANCH CIRCUIT PANELBOARD
	MOUNT 72-INCHES TO TOP
	DISTRIBUTION PANELBOARD MOUNT 72-INCHES TO TOP
	EQUIPMENT CABINET, AS NOTED
	SWITCHBOARD
	MOTOR STARTER OR DRIVE
	DISCONNECT SWITCH
	COMBINATION STARTER / DISCONNECT SWITCH
	CURRENT TRANSFORMER ENCLOSURE
	METER
	GENERATOR
	AUTOMATIC TRANSFER SWITCH
	SYSTEM GROUND ELECTRODE
	THERMOSTAT
	MUSHROOM SWITCH
	ELECTRICAL MANHOLE
	ELECTRICAL HAND HOLE
	MOTOR CONNECTION, HORSEPOWER AS INDICATED
	FUSE AND SWITCH ASSEMBLY
	MANUAL CONTROLLER WITH THERMAL OVERLOAD
	MANUAL CONTROLLER W/O THERMAL OVERLOAD
	CIRCUIT BREAKER ENCLOSURE
	PULL BOX
	EQUIPMENT CONNECTION
	CABLE TRAY, LADDER TYPE OR RUNWAY
	CABLE TRAY
	MULTI-OUTLET ASSEMBLIES
	MOUNT 18-INCHES AFF. UNO WHERE DENOTED AC, MOUNT ABOVE COUNTER
	DIVIDED SURFACE RACEWAY
	MOUNT 18-INCHES AFF. UNO WHERE DENOTED AC, MOUNT ABOVE COUNTER
	PUSHBUTTON STATION, MOUNT 42-INCHES AFF. UNO
	SWITCH, PUSH BUTTON, SINGLE
	SWITCH, PUSH BUTTON, DOUBLE
	SWITCH, PUSH BUTTON, TRIPLE

GENERAL SYMBOLS

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

GENERAL NOTES

SHEET INDEX

E0.1	ELECTRICAL SYMBOLS, ABBREVIATIONS & NOTES	1	PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL.
E2.1	ROOF ELECTRICAL PLAN	2	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.
E5.1	ELECTRICAL DIAGRAMS AND SCHEDULES		
E6.1	ELECTRICAL DETAILS		

APPLICABLE CODE: 2019 CBC 02/02/2020 REVISED: 02/14/2020

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA-APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30.

- 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 110V 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 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:

- 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.
- COMPONENTS WEIGHING LESS THAN 25 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

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

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2019 CBC SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

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

NOTE
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.

IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APP: 03-122228 INC.
 REVIEWED FOR:
 SS FLS ACS
 DATE: 02/16/2023

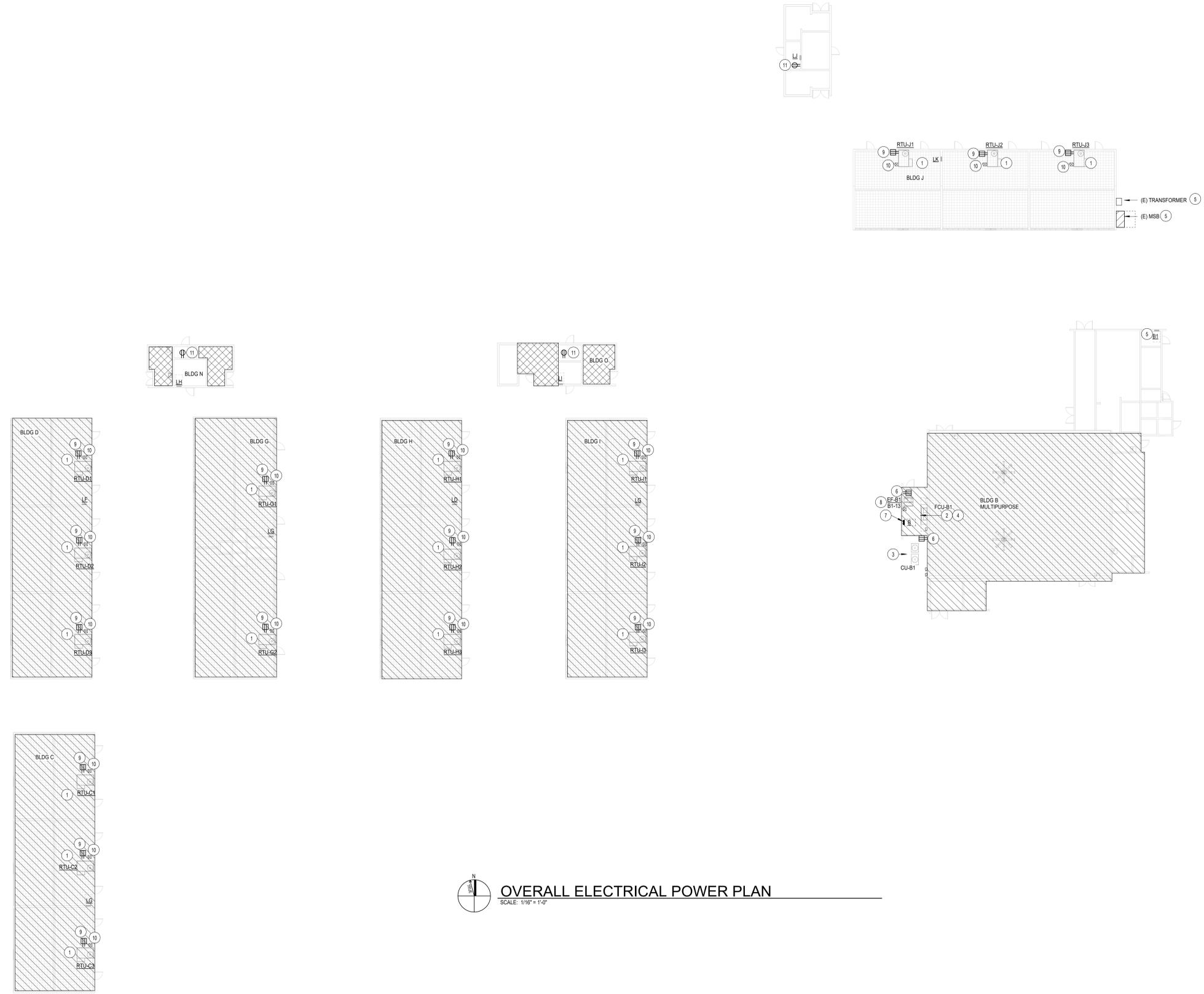
- GENERAL NOTES**
- A WORK TO INCLUDE REMOVAL OF EXISTING FEEDER TO EXISTING HVAC EQUIPMENT THAT ARE TO BE REMOVED AND REPLACED. FEEDER TO EXISTING INDOOR FAN COIL UNIT TO BE REMOVED IN ITS ENTIRETY.
 - B DISCONNECTING MEANS TO BE NEMA 3R RATED, FURNISHED AND INSTALLED BY DIVISION 26.
 - C CARBON MONOXIDE DETECTION SYSTEM NOT REQUIRED. ELECTRIC HEATING IS BEING PROVIDED.
 - D SEE SCHEDULE ON SHEET ES.1 FOR ADDITIONAL INFORMATION.
 - E FUSES SHALL BE PROVIDED PER EQUIPMENT NAMEPLATE RATING.
 - F ELECTRICAL PANELS LOCATED AT GRADE LEVEL DIRECTLY BELOW WHERE SHOWN.
 - G ENERGY MANGEMENT SYSTEM (EMS) / BUILDING AUTOMATION SYSTEM (BAS) IS A DELEGATED DESIGN SCOPE BY CONTRACTOR. CONTRACTOR TO FIELD COORDINATE WITH SCHOOL DISTRICT FOR LOCATIONS OF EMS ROUTER AND EMS PANEL AS WELL AS CONDUIT ROUTING.
 - H CARBON MONOXIDE DETECTION SYSTEM WILL NOT BE PROVIDED AT THIS TIME UNDER CEBC 503.15.1.
 EXCEPTION 2: THE GROUP BUILDING WAS CONSTRUCTED BEFORE THE ADOPTION OF THE 2016 CALIFORNIA BUILDING STANDARDS CODE.
 EXISTING HVAC UNITS ARE BEING REPLACED IN KIND THROUGHOUT.
 - J CONTRACTOR TO PROVIDE CONNECTION FROM LOAD SIDE OF HVAC EQUIPMENT DISCONNECT SWITCH TO FEEDER POWER EXHAUST DISCONNECT SWITCH. PROVIDE SAME SIZE FEEDER. PROVIDE FUSES PER EQUIPMENT NAMEPLATE RATING.

KEYNOTES

No.	DESCRIPTION
1	EXISTING HVAC EQUIPMENT AT GRADE TO BE DISCONNECTED AND REPLACED AS PART OF THIS SCOPE OF WORK WITH ROOF TOP EQUIPMENT. EXTEND EXISTING FEEDER AS REQUIRED. SEE TABLE ON SHEET ES.1 FOR OTHER INFORMATION. PROVIDE ALL REQUIRED CONNECTION.
2	EXISTING HVAC EQUIPMENT AT GRADE TO BE DISCONNECTED AND REPLACED AS PART OF THIS SCOPE OF WORK. PROVIDE NEW FEEDER PER TABLE ON SHEET ES.1. PROVIDE ALL REQUIRED CONNECTION.
3	NEW HVAC EQUIPMENT AT GRADE. PROVIDE NEW FEEDER PER TABLE ON SHEET ES.1. PROVIDE ALL REQUIRED CONNECTION.
4	DUCT SMOKE DETECTOR FOR COMPLIANCE TO CALIFORNIA MECHANICAL CODE SECTION 909 IS NOT REQUIRED PER CODE EXCEPTION NO.2. ROOM HAVE DIRECT EXIT TO EXTERIOR AND TRAVEL DISTANCE DOES NOT EXCEED 100 FEET.
5	EXISTING ELECTRICAL EQUIPMENT TO REMAIN AND TO BE PROTECTED IN PLACE.
6	PROVIDE 120 VOLT CIRCUIT FROM SPARE BREAKER. PROVIDE TANDEM BREAKER AS REQUIRED.
7	(N) PANELBOARD B AT GRADE LEVEL. 277/480 VOLTS, 3-PHASE, W-WIRE, 225 AMP BUS. REFER TO SHEET E6.1 FOR PANELBOARD MOUNTING DETAIL. PROVIDE UNDERGROUND TRENCHING FROM SWITCHBOARD MSB AS REQUIRED. FIELD COORDINATE EXACT ROUTING WITH SCHOOL DISTRICT.
8	SIZE 1 MOTOR STARTER FOR EXHAUST FAN. PROVIDE ALL REQUIRED CONNECTIONS.
9	GFCI TYPE RECEPTACLE PROVIDED BY HVAC EQUIPMENT MANUFACTURER. FOR CIRCUITING, SEE TABLE PROVIDED ON SHEET ES.1. GENERAL NOTE NO.2. PROVIDE WEATHERPROOF COVER.
10	FUSED DISCONNECT SIZE PER TABLE SHOWN ON ES.1.
11	PROVIDE 120V CIRCUIT FOR EMS PANEL AND EMS ROUTER. FIELD VERIFY EXACT LOCATION OF EMS PANEL AND EMS ROUTER.

SITE LEGEND

	EXISTING BUILDING - NOT IN SCOPE
	EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION
	(E) RESTROOMS - NOT IN SCOPE



OVERALL ELECTRICAL POWER PLAN
 SCALE: 1/16" = 1'-0"

DLR Group
 © DLR Group



Ben Lomond Elementary School
 COVINA VALLEY USD
 681 E COVINA BLVD, COVINA, CA 91722

DSA Submitted Set
 1/13/2023
 REVISIONS

75-22605-00

ROOF
 ELECTRICAL
 PLAN

E2.1

Autodesk Docs/75-22605-00 CVUSD - District Wide HVAC Replacement/75-22605-00 CVUSD_Ben Lomond ES MEP_2022.rvt
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GENERAL SINGLE LINE NOTES

- OVERCURRENT DEVICES OF ENTIRE DISTRIBUTION SYSTEM SHALL MEET STATED FAULT CURRENT VALUES WITH FULLY RATED EQUIPMENT.
- CONDUCTOR LENGTHS INDICATED ON THE SINGLE LINE DIAGRAM ARE FOR FAULT CURRENT CALCULATIONS ONLY. ACTUAL LENGTH SHALL BE DETERMINED BY FIELD CONDITIONS AND ACTUAL ROUTES OF FEEDERS.
- REFER TO SWITCHBOARD SCHEDULES AND DISTRIBUTION PANEL SCHEDULES FOR ADDITIONAL REQUIREMENTS. WHERE A DISCREPANCY EXISTS BETWEEN EQUIPMENT ON THE SINGLE LINE DIAGRAM AND THE DETAILS SCHEDULES, THE ITEM OR ARRANGEMENT WITH BETTER QUALITY, GREATER QUANTITY, OR HIGHER COST SHALL BE USED.
- ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

KEYNOTES

- | No. | DESCRIPTION |
|-----|---|
| 1 | FUSED DISCONNECT TO BE PROVIDED BY CONTRACTOR. |
| 2 | VARIABLE FREQUENCY DRIVE WITH ON/OFF SWITCH TO BE PROVIDED UNDER DIVISION 23. |
| 3 | CONTRACTOR TO MATCH EXISTING BREAKER. |

PANEL: B

LOCATION: MECHANICAL ROOM B201
 BUS RATING: 225.0 A
 MAIN BREAKER: 225

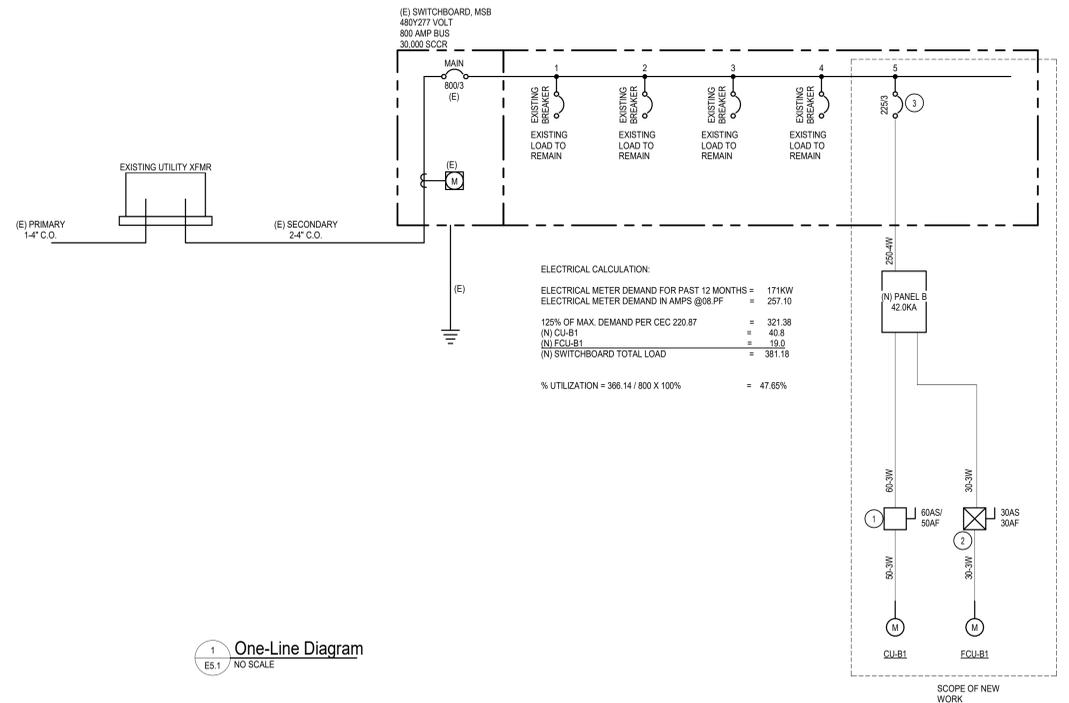
VOLTS: 480Y/277
 PHASES: 3
 WIRES: 4
 SCRR: 42

MOUNTING: SURFACE
 FED FROM:
 INTEGRAL SPD: Type 1
 LUG ACCESSORIES: SEE ONE-LINE

CKT	CIRCUIT DESCRIPTION	BKR TRIP	P	BKR TYPE	LOAD TYPE	PHASE A (VA)	PHASE B (VA)	PHASE C (VA)	LOAD TYPE	BKR TYPE	P	BKR TRIP	CIRCUIT DESCRIPTION	CKT
1														2
3	CU-B1	50	3	M		9,090	9,090	9,090						4
5														6
7														8
9														10
11														12
13														14
15	FCU-B1	30	3	M		4,207	4,207	4,207						16
17														18
19														20
21														22
23														24
25														26
27														28
29														30
TOTAL LOAD:						13267 VA	13267 VA	13267 VA						
TOTAL AMPS:						48.0 A	48.0 A	48.0 A						

LOAD TYPE	LOAD DESCRIPTION	CONNECTED LOAD (VA)	DEMAND D.	ESTIMATED DEMAND (VA)	DEMAND FACTOR NOTES	BKR TYPE	PANEL TOTALS
L	LIGHTING	0 VA	0.00%	0 VA	CONTINUOUS LOAD @ 125%	G = GFCI (5mA)	CONNECTED LOAD: 40 kVA
R	RECEPTACLES	0 VA	0.00%	0 VA	FIRST 10KVA @ 100%, REMAINDER @ 50%	GP = GFP (30mA)	
K	KITCHEN	0 VA	0.00%	0 VA	NON-DWELLING KITCHEN LOADS, NEC ART. 220	ST = SHUNT TRIP	ESTIMATED DEMAND: 47 kVA
M	MOTOR	38692 VA	117.89%	46710 VA	LARGEST MOTOR, NEC ART. 430	LO = LOCK OUT	CONNECTED CURRENT: 48.0 A
C	COOLING	0 VA	0.00%	0 VA			EMD CURRENT: 56.2 A
H	HEATING	0 VA	0.00%	0 VA			
O	OTHER	0 VA	0.00%	0 VA			
S	SPARE	0 VA	0.00%	0 VA			

NOTES:
 APPROX. WEIGHT = 124 LBS



FEEDER SCHEDULE - COPPER

MARK (AMPS)	# SETS	Ø & N	GND	CONDUIT SIZE		
				MARK SUFFIX	-4W	-3W
15	1	12	12	3/4"	3/4"	3/4"
20	1	12	12	3/4"	3/4"	3/4"
25	1	10	10	3/4"	3/4"	3/4"
30	1	10	10	3/4"	3/4"	3/4"
35	1	8	10	3/4"	3/4"	3/4"
40	1	8	10	3/4"	3/4"	3/4"
45	1	6	10	1"	3/4"	3/4"
50	1	6	10	1"	3/4"	3/4"
60	1	4	10	1-1/4"	1"	3/4"
70	1	4	8	1-1/4"	1"	3/4"
80	1	3	8	1-1/4"	1-1/4"	1"
90	1	2	8	1-1/4"	1-1/4"	1"
100	1	1	8	1-1/2"	1-1/2"	1-1/4"
110	1	1	6	1-1/2"	1-1/2"	1-1/4"
125	1	1	6	1-1/2"	1-1/2"	1-1/4"
150	1	10	6	2"	1-1/2"	1-1/4"
175	1	20	6	2"	1-1/2"	1-1/4"
200	1	30	6	2"	2"	1-1/2"
225	1	40	4	2-1/2"	2"	1-1/2"
250	1	250	4	2-1/2"	2"	1-1/2"
300	1	350	4	3"	2-1/2"	2"
350	1	500	3	3-1/2"	3"	2-1/2"
400	1	600	3	3-1/2"	3"	2-1/2"
400	2	30	3	2"	2"	1-1/2"
450	2	40	2	2-1/2"	2"	1-1/2"
500	2	250	2	2-1/2"	2-1/2"	2"
600	2	350	1	3"	2-1/2"	2"
700	2	500	10	3-1/2"	3"	2-1/2"
800	2	600	10	3-1/2"	3"	2-1/2"
1000	3	400	20	3"	3"	2-1/2"
1200	3	600	30	3-1/2"	3-1/2"	3"
1800	4	600	40	3-1/2"	3-1/2"	3"
2000	5	600	250	4"	3-1/2"	3"
2500	6	600	350	4"	3-1/2"	3"
3000	8	500	400	3-1/2"	3"	2-1/2"
4000	10	600	500	4"	3-1/2"	3"

ABBREVIATIONS:
 Ø PHASE
 N NEUTRAL
 GND EQUIPMENT GROUNDING CONDUCTOR
 -4W FOUR WIRE - GROUND (3Ø GND)
 -3W THREE WIRE - GROUND (3Ø GND @ 2Ø N, GND)
 -2W TWO WIRE - GROUND

NOTES:
 1. CONDUCTOR AMPACITIES ARE BASED ON NEC TABLE 310.15(B)(16).
 2. CONDUIT SIZES ARE BASED ON A MAXIMUM FILL RATIO OF 40%.
 3. SCHEDULE SHALL BE USED FOR FEEDERS AND BRANCH CIRCUITS WHERE APPLICABLE.
 4. ALL FEEDERS AND BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUNDING CONDUCTOR. SCHEDULE IS VALID FOR TYPE THHN, THWN-2, AND XHHW-2 CONDUCTORS. SEE SPECIFICATIONS FOR CONDUCTOR TYPES REQUIRED.
 5. SCHEDULE IS VALID FOR TYPE EMT, IMC, FMC, LPAC, HDPE, AND RNC-40 RACEWAYS. SEE SPECIFICATIONS FOR RACEWAY APPLICATIONS. OPTIONAL CONFIGURATIONS (1 OR 2 SETS) ARE GIVEN FOR SOME SIZES.
 6. NOT ALL SIZES USED.

Ben Lomond AC UNIT REPLACEMENT

TAGS	EXISTING UNIT							NEW UNIT													NOTES		
	V/PH	MCA	FLA	MOCP	PANEL/ CKT#	FEEDER SIZE	DISCONNECT	TAGS	DIRECT REPLACEMENT? Y/N	CFM	V/PH	MCA	MOCP	PANEL/ CKT#	FEEDER SIZE	DISCONNECT	REQUIRED?	Model#	MCA	MOCP		FEEDER SIZE	DISCONNECT
NA	-	-	-	NA	NA	NA	NA	CU-B1A (BLDG. B)	N	-	480/3	23	30	B-1,3,5	3#10, 1#10GND-0.75°C	30A (30A FUSE)	NO	-	-	-	NA	-	-
NA	-	-	-	NA	NA	NA	NA	CU-B1B (BLDG. B)	N	-	480/3	23	30	B-7,9,11	3#10, 1#10GND-0.75°C	30A (30A FUSE)	NO	-	-	-	NA	-	-
NA	-	-	-	NA	NA	NA	NA	FCU-B1 (BLDG. B)	N	8,000	480/3	19	30	B-13,15,17	3#10, 1#10GND-0.75°C	30A (20A FUSE)	NO	-	-	-	NA	-	-
CU/FCU-C1 (BLDG. C)	240/1	22.875	18.3	30	LG-4,6	2#10, 1#10GND-0.75°C	30	RTU-C1 (BLDG. C)	Y	1,200	240/1	26	30	LG-4,6	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-C2 (BLDG. C)	240/1	22.875	18.3	30	LG-1,3	2#10, 1#10GND-0.75°C	30	RTU-C1 (BLDG. C)	Y	1,200	240/1	26	30	LG-1,3	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-C3 (BLDG. C)	240/1	22.875	18.3	30	LG-5,7	2#10, 1#10GND-0.75°C	30	RTU-C1 (BLDG. C)	Y	1,200	240/1	26	30	LG-5,7	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-D1 (BLDG. D)	240/1	22.875	18.3	30	LH-4,6	2#10, 1#10GND-0.75°C	30	RTU-D1 (BLDG. D)	Y	1,200	240/1	26	30	LH-4,6	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-D2 (BLDG. D)	240/1	22.875	18.3	30	LH-8,10	2#10, 1#10GND-0.75°C	30	RTU-D2 (BLDG. D)	Y	1,200	240/1	26	30	LH-8,10	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-D3 (BLDG. D)	240/1	22.875	18.3	30	LH-12,14	2#10, 1#10GND-0.75°C	30	RTU-D3 (BLDG. D)	Y	1,200	240/1	26	30	LH-12,14	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-G1 (BLDG. G)	240/1	22.875	18.3	30	LH-5,7	2#10, 1#10GND-0.75°C	30	RTU-G1 (BLDG. G)	Y	1,200	240/1	26	30	LH-5,7	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-G2 (BLDG. G)	240/1	22.875	18.3	30	LH-9,11	2#10, 1#10GND-0.75°C	30	RTU-G2 (BLDG. G)	Y	1,200	240/1	26	30	LH-9,11	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-H1 (BLDG. H)	240/1	22.875	18.3	30	LI-1,3	2#10, 1#10GND-0.75°C	30	RTU-H1 (BLDG. H)	Y	1,200	240/1	26	30	LI-1,3	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-H2 (BLDG. H)	240/1	22.875	18.3	30	LI-5,7	2#10, 1#10GND-0.75°C	30	RTU-H2 (BLDG. H)	Y	1,200	240/1	26	30	LI-5,7	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-H3 (BLDG. H)	240/1	22.875	18.3	30	LI-9,11	2#10, 1#10GND-0.75°C	30	RTU-H3 (BLDG. H)	Y	1,200	240/1	26	30	LI-9,11	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-I1 (BLDG. I)	240/1	22.875	18.3	30	LI-2,4	2#10, 1#10GND-0.75°C	30	RTU-I1 (BLDG. I)	Y	1,200	240/1	26	30	LI-2,4	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-I2 (BLDG. I)	240/1	22.875	18.3	30	LI-6,8	2#10, 1#10GND-0.75°C	30	RTU-I2 (BLDG. I)	Y	1,200	240/1	26	30	LI-6,8	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-I3 (BLDG. I)	240/1	22.875	18.3	30	LI-10,12	2#10, 1#10GND-0.75°C	30	RTU-I3 (BLDG. I)	Y	1,200	240/1	26	30	LI-10,12	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-J1 (BLDG. J)	240/1	22.875	18.3	30	LI-2,4	2#10, 1#10GND-0.75°C	30	RTU-J1 (BLDG. J)	Y	1,200	240/1	26	30	LI-2,4	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-J2 (BLDG. J)	240/1	22.875	18.3	30	LI-7,9	2#10, 1#10GND-0.75°C	30	RTU-J2 (BLDG. J)	Y	1,200	240/1	26	30	LI-7,9	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
CU/FCU-J3 (BLDG. J)	240/1	22.875	18.3	30	LI-6,8	2#10, 1#10GND-0.75°C	30	RTU-J3 (BLDG. J)	Y	1,200	240/1	26	30	LI-6,8	-	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)	-
-	-	-	-	-	-	-	-	EF-B1	NA	120	12.25	30	B1-13	-	30A (15A FUSE)	-	-	-	-	-	-	-	

GENERAL NOTES:
 1. CONTRACTOR TO FIELD VERIFY CIRCUITING AND FEEDER INFORMATION PRIOR TO EQUIPMENT REMOVAL. CONTRACTOR TO PROVIDE REQUIRED ADJUSTMENTS AS NEEDED.
 2. 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.
 3. 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.
 4. CONTRACTOR TO DEMOLISH POWER CONNECTION FROM CONDENSING UNITS, FAN COIL UNITS AND CONDENSATE PUMPS. DEMOLITION TO CONSIST OF REMOVAL OF POWER CONNECTION, CABLING, AND CONDUIT BACK TO SOURCE UNLESS NOTED OTHERWISE.
 5. FIELD COORDINATE EQUIPMENT MANUFACTURER FOR FAULT CURRENT LIMITING FUSE TYPES



Ben Lomond Elementary School
 COVINA VALLEY USD
 621 E COVINA BLVD. COVINA, CA 91722

DSA Submitted Set
 1/13/2023
 REVISIONS

75-22605-00

ELECTRICAL DIAGRAMS AND SCHEDULES

E5.1

ALTERNATE ARRANGEMENT OF SEISMIC BRACES FOR CONDUITS ON TRAPEZE

BRACE ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD LBS	MAX BRACE RANGE	DIA. INCH
38A TO 38E	250	30°-45°	1/2
38A TO 38B	150	40°-60°	1/2
50A TO 50D	300	30°-45°	1/2
50A TO 50B	170	40°-60°	1/2
63A TO 63D	340	30°-45°	1/2
63A TO 63C	200	40°-60°	1/2

NOTES:
 1) REFER TO APPROPRIATE DETAIL F PAGES FOR DIMENSIONS AND NOTATIONS NOT SHOWN.

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SEISMIC BRACKET ATTACHMENT TO STRUCTURAL TIMBER WITH (1) THRU BOLT OR THREADED ROD

SEISMIC BRACE BRACKET PERPENDICULAR TO JOIST

SEISMIC BRACE BRACKET PARALLEL TO JOIST

BRACE ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD LBS	MAX BRACE RANGE	DIA. INCH	Cmin1 INCH	Cmin2 INCH
38A TO 38B	150	40°-60°	1/2	1 1/2	1 1/2
50A TO 50C	180	30°-45°	1/2	1 1/2	2
63A TO 63C	200	40°-60°	1/2	1 1/2	2 1/2

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SEISMIC BRACKET ATTACHMENT TO WOOD I-JOISTS WITH (1) THRU BOLT OR THREADED ROD

PERPENDICULAR TO JOIST

PARALLEL TO JOIST

BRACE ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD LBS	MAX BRACE RANGE	DIA. INCH
38A TO 38B	150	30°-45°	1/2
38A TO 38A	80	40°-60°	1/2
50A TO 50C	180	30°-45°	1/2
50A TO 50A	100	40°-60°	1/2
63A TO 63C	210	30°-45°	1/2
63A TO 63A	120	40°-60°	1/2

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SEISMIC BRACKET ATTACHMENT TO WOOD JOIST

AT JOIST

BRACE ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD LBS	MAX BRACE RANGE	DIA. INCH
38A TO 38E	420	30°-45°	1/2
38A TO 38D	350	40°-60°	1/2
50A TO 50E	420	30°-45°	1/2
50A TO 50D	300	40°-60°	1/2
63A TO 63E	420	30°-45°	1/2
63A TO 63D	300	40°-60°	1/2

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SEISMIC BRACKET ATTACHMENT TO WOOD JOIST

AT JOIST

BRACE ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD LBS	MAX BRACE RANGE	DIA. INCH
38A TO 38E	420	30°-45°	1/2
38A TO 38D	350	40°-60°	1/2
50A TO 50E	420	30°-45°	1/2
50A TO 50D	300	40°-60°	1/2
63A TO 63E	420	30°-45°	1/2
63A TO 63D	300	40°-60°	1/2

NOTES:
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ELECTRICAL CONDUIT WEIGHT TABLES

CONDUIT DIAMETER (IN)	CONDUIT WEIGHTS		
	PIPE WEIGHT PER FOOT (LBS)	CONDUCTORS	TOTAL
1/2	0.29	0.22	0.51
3/8	0.44	0.40	0.84
1	0.64	0.66	1.30
1 1/2	0.95	1.17	2.12
1 3/4	1.10	1.40	2.50
2	1.40	2.62	4.02
2 1/2	2.05	3.74	5.79
3	2.90	5.76	8.26
3 1/2	3.25	7.73	10.98
4	3.70	9.94	13.64
5	---	---	---
6	---	---	---
1/2	0.60	0.22	0.82
3/4	0.82	0.41	1.23
1	1.16	0.66	1.82
1 1/2	1.90	1.17	2.67
1 3/4	1.92	1.60	3.42
2	2.42	2.62	5.04
2 1/2	4.28	3.47	7.75
3	5.26	5.43	10.69
3 1/2	6.12	7.34	13.46
4	6.82	9.50	16.32
5	---	---	---
6	---	---	---
1/2	0.79	0.22	1.01
3/4	1.05	0.41	1.46
1	1.53	0.66	2.19
1 1/2	2.91	1.17	3.18
1 3/4	2.48	1.61	4.09
2	3.32	2.62	5.94
2 1/2	5.27	3.74	9.01
3	6.82	5.77	12.59
3 1/2	8.31	7.73	16.04
4	9.72	9.95	19.67
5	15.14	15.62	28.76
6	17.45	22.58	40.03

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ROOF PENETRATION DETAIL

TYP WALL EQUIPMENT BACKING

NOTES:
 1. MAXIMUM WEIGHT OF EQUIPMENT UNIT NOT TO EXCEED 600 LBS.
 2. COORDINATE EXACT LOCATIONS WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS.

NON-STRUCTURAL EQUIPMENT WEIGHT
 WEIGHT < 250 LBS SINGLE 2x STUD
 250 LBS < WEIGHT WEIGHT < 500 LBS DOUBLE 2x STUD

2 E6.1 NO SCALE

1 E6.1 NO SCALE